HISTORY OF SOY SAUCE

(160 CE TO 2012):

EXTENSIVELY ANNOTATED

BIBLIOGRAPHY AND SOURCEBOOK

醤
油

Also known as: Shoyu, Tamari Shoyu (Japanese); Jiang You (Chinese); Ketjap / Kecap (Indonesian), Kicap (Malaysian), Kanjang / Ganjang (Korean); Including Worcestershire Sauce

Compiled

by

William Shurtleff & Akiko Aoyagi

SOYINFO CENTER

2012

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Phone: 925-283-2991 Fax: 925-283-9091
www.soyinfocenter.com info@soyinfocenter.com

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DEDICATION AND ACKNOWLEDGMENTS

This book is dedicated to the Mogi family and to Kikkoman, pioneer and leader in soy sauce worldwide.

Part of the enjoyment of writing a book lies in meeting people from around the world who share a common interest, and in learning from them what is often the knowledge or skills acquired during a lifetime of devoted research or practice. We wish to give deepest thanks...

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This book, no doubt and alas, has its share of errors. These, of course, are solely the responsibility of William Shurtleff.

■ This bibliography and sourcebook was written with the hope that someone will write a detailed and well-documented history of this subject.

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INTRODUCTION

Soy sauce: Worldwide, soy sauce is the most widely used and best known product made from the soybean. It is the defining flavor for many of the cuisines of East and Southeast Asia. Soy sauce arrived in many Western countries before the soybean, and before it was generally understood that the soybean was one of its main ingredients. We believe that soy sauce has *the* most interesting history of the many different soyfood products.

Etymology of soy sauce in English:

The words "soy," "soya" and "soja," and the term "soy sauce" came into English from the Japanese word *shōyu* via the Dutch. Thus, the name of the soybean was derived from the name of the sauce made from it.

The first European language document in which the words for "soy" or "soy sauce" appeared was Dutch. Why?

After 1633 (when the Portuguese were expelled from Japan by the Tokugawa shogunate), the Dutch were the only Europeans allowed to trade with Japan. Their trading activities, conducted by the Dutch East India Company (VOC), were limited to a tiny artificial island named Deshima in Nagasaki harbor in the south of Japan, far from the capital at Edo (today's Tokyo). Among the goods the VOC exported from Japan were shoyu (soy sauce), miso, and saké.

At first they exported these goods to VOC trading posts in Asia, but in 1737 they began exporting small amounts (via Batavia, today's Jakarta, Indonesia) to Amsterdam, Netherlands, where they were auctioned to international merchants.

All of the early Dutch documents that mention shoyu are handwritten letters, the originals of which are located at the VOC archives at The Hague, Netherlands. Soyinfo Center hired a Dutch researcher (Herman Ketting, who could read handwritten Dutch documents from the 1600s) to find and copy as many of these early documents as possible. We helped him to get on the trail by sending him 6-8 early citations from books on the history of Kikkoman.

The Dutch merchants who exported shoyu in kegs from Japan did their best to spell it as it sounded – phonetically. Here is how that spelling evolved – based on documents now at Soyinfo Center; each appears in this book:

1647 Oct. – soije
1651 June – sooje
1652 July – soij
1652 Aug. – soije
1652 Oct. – soije
1652 Oct. – zoije
1654 July – soijo
1655 Aug. – soija
1656 March – soeije
1657 Aug. – soija
1659 Aug. – soija
1660 June – soije
1665 Feb. – soija
1669 Feb. – soija
1669 Feb. – soija
1674 Nov. – sooij
1675 Nov. – soija
1676 March – soija
1676 June – soija
1678 Nov. – soija
1680 June – soije

The link from Dutch to English and other European languages was probably forged on the docks and in the warehouses of Amsterdam, as British and other European merchants bid at auction for a liquid seasoning (*shoyu*) made in Japan with a variety of exotic but similar Dutch names.

These merchants gave their new sauce a name which they hoped would catch on in their own language and also help it to sell. Then they started to distribute it widely; by Dec. 1750 it had reached North America – arriving first in New York Harbor bearing the name "India Soy."

Here are the earliest known names for soy sauce in various Western languages other than Dutch:

English:

1679 – *saio* (John Locke, in his journal).

1688 – Soy (William Dampier, in his log). This was the spelling that caught on in English. For the next 250 years, soy sauce was usually called "soy" in English.

1696 – Souy (John Ovington).

1727 – Soeju (Engelbert Kaempfer; he lived in Japan on Deshima from Sept. 1690 to Nov. 1692).

1744 – Chinese Soy, Japan Soy (White's China and Flint-Glass Warehouse, London, ad).

1750 – Indian Soy (Rochell & Sharp, ad, New York City).

1752 – Japan Soy (Berto Valle, ad, London).

1754 – India Soy (John Breues, merchant from Perth, probably Scotland).

1754 – soy of Japan (Society of Gentlemen, London).

1756 – Joppa soy (G. Pastorini, ad, London).

1769 – Soye, East-India Soye (William Stork, North America).

1795 – soy-sauce (C.P. Thunberg).

1803 – soy sauce (Susannah Carter).

1804 – Soy, Sooju (James Mease, Pennsylvania).

1810 – Chinese Soy, Japanese Soy (James Mease, Pennsylvania).

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1832 – Canton Soy (John Remond, ad, Massachusetts).
1866 – Shoyu, Sh'taji (James C. Hepburn, Japanese and English Dictionary).

French:
1753 – la Sauce Sooju (*Histoire générale des voyages*... Vol. 11).
1765 – le soui, le soi (Denis Diderot).
1790 – la sauce soja (Jean Baptiste de Lamarck).
1796 – sauce de soya (Karl Peter Thunberg).

German:
1785 – Sooju, Soy (Charles Bryant).
1801 – Indianische Soya (Philipp A. Nemnich).
1822 – Soya, indische Soya (Joseph Koenig).

Italian:
1907 – Il shoyu (Ruata & Testoni).
1912 – Shoyu (L. Settimj).
1919 – shoyu (G.E. Mattei).

Latin:
1705 – Soia (Samuel Dale).
1712 – Sooju (Engelbert Kaempfer; he lived in Japan from Sept. 1690 to Nov. 1692)
1730 – Soia (Joseph P. de Tournefort).

Portuguese:
1603 – Xōyu (Compania de Iesus; earliest Jesuit dictionary of Japanese).
1882 – soiia, soja, ketjap (Gustavo d'Utra, Brazil).
1938 – Shoju, Soyu, Shiyu, tao-yu (Abreu Velho, Angola).

Spanish:
1910 – Salsa de la haba soya (C.F. Langworthy; translation of his American USDA bulletin).
1912 – choyou, salsa de soja (Adolfo C. Tonellier, in Argentina).

Brief chronology of soy sauce.

160 CE – *Simin Yueling [Monthly Ordinances for the Four Classes of People]*, by Cui Shi mentions *qingjiang*, the earliest known ancestor of today's soy sauce, made in China from *jiang*.

544 CE – *Qimin Yaoshu* [Important Arts for the People's Welfare], by Jia Sixie (of China), the world's earliest encyclopedia of agriculture, gives the earliest known description of how to make soy sauce.

1568 Oct. 25 – An entry in the unpublished Tamon-in Diary (*Tamon-in Nikki*) mentions taking shoyu to a Buddhist monk. This appears to be the first time the contemporary characters for shoyu are used in Japan (Iino 2001, p. 23). This diary was kept at a monastery in Nara City, Japan.

1596 – Soy sauce in China starts to be made with a significant proportion of wheat or barley (*Bencao Gangmu*). This book is the first to describe in detail how to make soy sauce on a home scale. However before the 20th century, most soy sauce made in China contained little or no wheat or barley.

1597 – The contemporary characters for shoyu appear in the *Ekirinbon Setsuyōshū*, an early Japanese dictionary written by a Japanese Buddhist priest and published during the Muromachi period (Yokotsuka 1985, p. 205).

1603 – The word "shoyu" (spelled *Xōyou*) and the word "tamari" are first mentioned in a Western language (Portuguese) in *Vocabulario da Lingoa de Iapam*, a Jesuit dictionary published in Nagasaki, Japan.

1630 to 1704 – At some time during this period the earliest ancestor of the company that later became Noda Shoyu Co., then Kikkoman Corporation, began making soy sauce in Noda, Japan. Fruin (1983, p. 1, 16, 18) gives the date as 1661 - and we agree. On 7 Jan. 1930 when Dorsett and Morse, of the U.S. Department of Agriculture, visited the Noda Shoyu Co., Ltd. in Noda, they wrote: "According to their literature, Kikkoman Shoyu was first brewed by Mr. Saheiji Mogi, in the second year of Meiwa (corresponding to the year 1704) in Noda-Machi, Japan" (Log of the Dorsett –Morse Expedition, p. 3465).

1647 Oct. 16 – Japanese soy sauce (shoyu) is now being exported from Nagasaki, Japan, by the Dutch East India Company. In the earliest known handwritten letter (in Dutch) it is called *soije (Int Comptoir Nagasaekij)*.

1679 – The famous English philosopher John Locke writes in his journal (not published until 1829): "Mango and saio [shoyu] are two sorts of sauces brought from the East Indies."

1680 – Indonesian-style soy sauce is first mentioned in the West. "And now we have a new Sawce called Catch-up from East-India, sold at a Guiney [Guinea] a bottle" (Petyt 1680, p. 285). Ketjap is the word for soy sauce in the Dutch East Indies (today's Indonesia). Here begins the long and tangled confusion between soy sauce and ketchup. The Indonesian word *ketjap / kecap* is probably derived from *ke chiap / kicap / kitjap* which originated in the Hokkien / Southern Min Chinese sub-dialect of Zhangzhou / Chiang-chiu / Changchew.

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1682 – "I do not doubt but you London Gentlemen, do value it [chocolate] above all your *Anchoves*,... your *Soys*, your *Ketchups* and *Caveares* [Caviars] (Chamberlayne 1682, p. 18). "Soys" refers to soy sauces and "Ketchups" probably refers to soy sauces from the Dutch East Indies (today's Indonesia).

1688 – Dampier, while traveling in Tonquin (today's North Vietnam) writes in his log (not published until 1705): "The Nuke-Mum [*nuoc-mam*, fish sauce]... is also very savory, and used as a good sauce for Fowls, not only by the Natives, but also by the *Europeans* who esteem it equal with *Soy* [sauce]." This is the earliest English-language document seen that uses the word "Soy" (regardless of capitalization) to refer to soy sauce.

1690 – "Catchup, a high East-India Sauce" – says *A New Dictionary of the Terms Ancient and Modern of the Canting Crew* (printed in London).

1696 – John Ovington, in *A Voyage to Suratt, in the Year, 1689...*, writes, in the chapter on "The English Factory at Surat" [British India], at the section on "Several Sorts of Indian Dishes": "Bambou and Mangoe Achar [pickle], Souy the choicest of all Sawces are always ready to whet the Appetite." This is the earliest English-language document seen that uses the word "Souy" to refer to soy sauce.

1705 – Dale, writing in Latin in a book on pharmacology, mentions soy sauce, which he calls "Soia." The bean from which soy sauce is made is also used to make a condiment called *Ketchup*.

1708 – It is reported: that "*Soia* of which Ketchup is made, is the Seed of an *Indian Phaseolus* (*Philosophical Transactions*, 1808, p, 2266).

1711 – *Soy* comes in Tubs from Jappan [Japan], and the best *Ketchup* from *Tonqueen* [the northern part of today's Vietnam]; yet good of both sorts, are made and sold very cheap in *China* (*Account of the trade in India,* by Lockyer, p. 128-29).

1712 – An ad in the *Daily Courant* (London, Dec. 30 p. [2]) states: "There is lately brought over from the East Indies [probably today's Indonesia] a great parcel of Soy [sauce], commonly call'd Ketchup,..."

1725 – Mrs. Hay (p. 18) describes the earliest known attempt to make Indonesian-style soy sauce ("To make a Ketchup for Sauce") using walnuts as the main ingredient and without understanding that real soy sauce is made using soybeans.

1728 – "Mushroom-Ketchup" is first mentioned, as Westerners try to make soy sauce using Western ingredients and without understanding that real soy sauce is made using soybeans (Bradley 1728, p. 140). The transformation from "ketjap" (Indonesian soy sauce) to ketchup" began at about this time. Oyster ketchup was first mentioned in 1777 (by Charlotte Mason) and Tomato Ketchup in 1800 (by James Morton).

1737 – The first soy sauce (made in Japan) is exported to the Netherlands by the Dutch East India Co. (VOC). During the 24 years from 1737 to 1760, approximately 46,000 liters of soy sauce were exported as "official trade freight" from Deshima, Nagasaki, Japan, to the VOC's Batavia headquarters, and about 15,600 liters (about one-third of the total) were then shipped from Batavia to the Netherlands (Yamawaki 1992).

1739 – An Officer from the Custom-house while inspecting a ship "lately arriv'd from China, had the misfortune to break a Jar of Soy of considerable Value... Soy is a rich Ketchup, the best made in India, and gives the highest Gust of any sauce in the World" (*General Evening Post* {London}, Aug. 14, p. [2], col. 3). Note: The word "India" may refer here to the Dutch East Indies, today's Indonesia.

1747 – *The Art of Cookery,...* by Mrs. Hannah Glasse of England, contains a recipe for homemade ketchup (p. 156) in which mushrooms are the main ingredient. She concludes: If "you put to a Pint of this Ketchup a Pint of Mum, it will taste like foreign Ketchup."

1750 Dec. 17 – Soy sauce, called "Indian Soy," the first soy product in the British colonies of North America, arrives in New York City. Sold in pint bottles, it is announced in a classified ad by Rochell & Sharp in the *New-York Gazette Revived in the Weekly Post-Boy* (p. 3). It was probably sold to affluent retail customers for home use. By 1776 soy sauce is being sold in port cities up and down the East Coast of British North America. But much of it is made in Savannah, Georgia, by Samuel Bowen.

Here is a list of the earliest known dates that soy sauce was sold in various British colonies in North America

1768 – Soy made by Samuel Bowen sold in Savannah, Georgia at the Collector's. The advertised price on 30 Nov. 1768 is 3 shillings 6 pence per bottle or 1 pound 16 shillings for 12 bottles (a 15% saving).

1770 – Soy made by Samuel Bowen sold in Newport, Rhode Island.

1773 – Bowen's Patent Soy sold in Charleston, South Carolina.

1774 – India Soy sold by N. and W. Coffin in Boston, Massachusetts.

1774 – Bowen's Patent Soy sold in Philadelphia,

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Pennsylvania.

1776 July 4 – Declaration of Independence by the British Colonies of North America.

1778 – India Soy sold in Burlington, New Jersey.

1785 – India soy sold in Baltimore, Maryland.

1786 – Japan soy sold in New Haven, Connecticut.

1812 – East India Soy sold in Portland, Maine.

1818 – Japan soy sold in Alexandria, Virginia.

1837 – Canton Soy sold in Keene, New Hampshire.

1751 – Soy sauce is being imported by England from China – but not from Japan (*A General History of the Several Nations of the World,...* p. 343).

1752 Nov. 6 – "Catchup" (probably soy sauce) is now being sold in the port city of New York (Smith, *New York Gazette*).

1766 May – Samuel Bowen, a former British sailor, starts to sell Bowen's Patent Soy which he has made on his plantation at Thunderbolt, a few miles east of Savannah, Colony of Georgia. He also starts to export this soy sauce to England. Later in 1766 he is awarded a gold medal for his sauce and other Chinese products by the Society of Arts, Manufactures, and Commerce in London. He applied for a British patent on 6 June 1767 and was issued the patent on July 1 of that year (*Georgia Gazette*, 1766, May 28, p. 1. Hymowitz & Harlan 1983, p. 374-78).

In 1768 he starts to sell his soy sauce in port cities along the east coast of British North America.

1768 – Soy cruets, special bottles for serving soy sauce at table, are now made in England (*Bath & Bristol Chronicle*).

1770 Nov. 26 – An ad by Richard Curson in the *New-York Gazette* is the earliest document seen in which both soy sauce and catchup appear in the same shipment and ad in the British colonies of North America. This "catchup" was probably Indonesian-style soy sauce.

1774 Feb. – Samuel Bowen exports 3 dozen bottles of soy sauce from Savannah, Georgia (*Georgia Gazette*, Feb. 9. p. 2, col. 2).

1783 – Quin's Sauce is now being made commercially in England; soy sauce was long a major ingredient (Dorsey 1783, Ad).

1795 – Charles Peter Thunberg (in his *Travels in Europe, Africa, and Asia made between the years 1770 and 1795*, Vol. IV, p. 107) states: "The traffic in *Soy*, on the other hand, is more considerable [than that of tea], and as the tea produced in this country is reckoned inferior to that of China, so the soy is much better than that which is brewed in China. For this reason, soy is not only exported to Batavia [today's Jakarta], in the wooden barrels in which it is made, but likewise sold from thence to Europe and to every part of the East Indies."

1804 – San Jirushi Corp. starts to make tamari shoyu in Kuwana, Japan.

1805 – "33. Dolichos Soja... The *Soja* [soy sauce] of the Japanese, which is preferred to the *Kitjap* of the Chinese, is prepared from these seeds and is used in almost all of their dishes, instead of common salt (Miller 1807).

1813 – It is first stated that soy sauce can be shaken in a glass to determine its quality. "Soy should be chosen of a good flavour, not too salt or too sweet, of a good thick consistence, of a dark brown colour and clear; when shaken in a glass, it should leave a coat on the surface, of a bright yellowish brown colour; if it does not, it is of an inferior kind, and should be rejected" (*Oriental Commerce*, by William Milburn, p. 519-20).

1821 – "There is a joke amongst seamen, that soy is made from beetles or cockroaches." This incorrect information appears in 76 subsequent documents. Yet this 1821 American encyclopedia entry begins: "Sooju, or Soy [sauce], is a dark coloured sauce, which is prepared from the seeds of the Chinese plant *Dolichos soja"* (Willich 1821, Vol. 3, p. 264-65).

1823 – "Soy" and "Indian catsup" are the same, and both are made from the "dolichos or Soy bean" (Vignoles, p. 104).

1830 – Harvey's Sauce is now being made commercially in England using soy sauce as an ingredient (Dolby 1830).

1835 – "*Sooja* is the name of a Japanese sauce, prepared from the seeds of a species of Dolichos now made into a distinct genus and called *Soja hispida*. The *Soja* of Japan is preferred as a sauce to the *Kitjap* of China; both, however, are imported into England in large quantities, and are here known as Soy" (Burnett 1835, Vol. 1, p. 666).

1837 – Worcestershire sauce starts to be made at 68 Broad St., Worcester, England by Lea and Perrins (Keogh 1997). Soy sauce was the major secret ingredient in Worcestershire sauce.

1838 – The earliest known recipe for "Tomato soy" appears in *The Virginia Housewife*, by Mary Randolph. Surprisingly, neither "soy" nor "soy sauce" are even mentioned in the body of the recipe. This is an early example of the confusion about the difference between soy sauce and ketjap / ketchup. The term "Tomato soy" might be called an "intermediate form" between soy sauce and ketchup.

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1843 – Waterston (in his *Cyclopaedia of Commerce*..., p. 627) states that genuine soy "is imported from Canton but the best is brought from Japan by way of Batavia."

1873 – Kikkoman brand soy sauce is exhibited at the International Exhibition held in Vienna, Austria, where it is awarded a gold medal (*Japan's Industries*... 1910, p. 163-65).

1873 – Concerning the etymology of "ketjap / ketchup": *Chinese-English Dictionary of the Vernacular or Spoken Language of Amoy*,... by Carstairs Douglas states (p. 46) that the terms *kōe-chap* and *kê-chiap* refer to the "brine or salt of pickled fish." We (tentatively) believe that these terms were taken by seafaring Chinese to the Dutch East Indies (today's Indonesia) where, in Malay, they came to be pronounced ketjap and were applied to Indonesian-style soy sauce. To this day, the name for Indonesian soy sauce is unchanged, although it is now written *kecap* – but pronounced *ke-chup*.

From the 1600s to the late 1800s soy sauce was imported from East Asia to Europe and America bearing two different names: Soy and kechup (also spelled catsup, catchup, ketchup, ketchap, kitjap, etc.).

See also Schlegel and Cordier (1894, Part III, p. 140-43) who cite Douglas 1873 and conclude: This "is surely the origin of *Ketchup*, another name for soy" [sauce].

1874 – The first accurate and detailed description of how to make soy sauce on a commercial scale in a European language is given by J.J. Hoffman (in German). While living and teaching in Japan, he is the first Westerner to make a scientific study of the shoyu-making process.

1879 – Saheiji Mogi, of Noda, Japan, registers Kikkoman, his family's pride and flagship brand of shoyu (Japanese-style soy sauce), as a brand name in California – six years before it is granted the same legal protection in Japan. He is soon exporting small wooden kegs, bound with bamboo hoops (18 liters or 4.76 gallons capacity) of Kikkoman shoyu to California and the Western United States where it is prized by the growing number of Japanese immigrants (Fruin 1983, p. 59-60).

1882 – Earliest document seen that mentions Korean-style soy sauce, which it calls "soy" (Griffis 1882, p. 270).

1889 Dec. 8 – Earliest document seen that mentions "teriyaki" appears in a description of dining in Tokio [Tokyo] in the *Detroit Free Press*. It states that "... salmon soaked first in soy sauce and then broiled, but eaten cold. This is called teriyaki" (Stearns, p. 16).

1891 – The earliest known manufacturer of shoyu in Hawaii or the United States is started in Honolulu, Oahu, by Jihachi Shimada; the company name and brand name are unknown. The company closed soon after it started (Morita 1915, p. 260).

1893 – Exports of soy sauce from Japan are now significant and increasing. "Soy [sauce]. The total value of the latest export is 41,029 yen, and chiefly exported to Hawaii" (p. 247). Exports of Soy [sauce] from Japan to the United States "rose from 7,862 catties [1 catty weighs 1.33 lb] worth 261 yen in 1887 to 9,744 catties worth 1,146 yen in 1881" (p. 429-30) (Japan. Dep. of Agriculture and Commerce, Bureau of Commerce. *General View of Commerce & Industry in the Empire of Japan*).

1893 – The earliest English-language document seen that mentions tamari (Japan, Dep. of Agriculture and Commerce. *A Descriptive Catalogue of the Agricultural Products, Exhibited in the World's Columbian Exposition*).

1893 – HVP soy sauce is now being made from hydrolyzed vegetable protein by Maggi in Europe (Koenig).

1897 – Yamamori Jozo-sho (Yamamori Brewery) starts to make Yamamori Shoyu (soy sauce) in San Jose, California. It is the first company to make soy sauce in the continental United States.

1905 – Sugita Jozo-sho (Sugita Brewery) is now making Sugita Shoyu in San Jose, California. It is the second company to make soy sauce in the continental United States, and also in San Jose!

1905 – Yamajo Soy Co. (Yamajo Shoyu Seizo-sho) starts to make shoyu in Honolulu, Oahu. Established by Mr. Nobuyuki Yamakami, it is the first successful shoyu manufacturer in Hawaii. By 1909 it was renamed Hawaiian Soy Co. Ltd. (Hawaii Shoyu K.K.).

1908 – Kurt Heppe, in his pocket dictionary of terms used in cookery states (p. 313): "Soy – a ketchup of the Soy bean."

1910 Sept. – More than half of all soy sauce now exported from Japan is Kikkoman brand shoyu. It has been "chiefly instrumental in making Japanese soy known and appreciated in foreign countries.

"The 'Kikkoman' firm owns at present six soy breweries, with a total of 4,200 hands and eight sets of boilers and steam engines. The yearly output is about 11,800,000 gallons, of which 2,800,000 gallons are exported to foreign countries, the principal destinations being Honolulu, Portland, San Francisco, Seattle, Los Angeles, Tacoma, Denver, Chicago, London, Paris, Berlin, Vienna, and China ports" (*Japan's Industries*... 1910, p. 163-65).

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1915 – *Scientific American Cyclopedia for Formulas*, by Albert A. Hopkins states: "Japanese soy is usually preferred to that of China, because it is free from the treacly [molasses-like] flavor which distinguishes the latter.

1915 – *Shiro shoyu* (pale or light-colored soy sauce) is first mentioned by Takahashi et al. in Japan.

1918 – Oriental Show-You Co. is started in Detroit, Michigan, by Shinzo Ohki, a Japanese man, who begins by importing shoyu and tea from China.

1920 – Oriental Show-You Co. is now selling "genuine imported Japanese soy sauce" (*Chicago Daily Tribune*, March 28, p. C13).

1922 – La Choy starts to import fermented soy sauce from China in wooden barrels to use as a seasoning in their Asian food products.

1940-1990s – The term "soy sauce" gradually replaces "soy" as the English-language name for this sauce.

1942 – Showa Shoyu Brewing Co. is founded in Glendale, Arizona, by John Tadano. They make Japanese-style soy sauce to replace imports from Japan cut off by World War II (SoyaScan Interview with Mary Tadano and Michiko Tadano).

1943 Sept. – La Choy Food Products, Inc. and Oriental Show-You Co. are purchased by Beatrice Creamery Co. (*Wall Street Journal*, Sept. 28, p. 24).

1950 – Earliest known document that mentions hoisin sauce, which it calls (*hoy sien jeung* – in Cantonese); soy sauce is an important ingredient in this "famous red sauce" which is widely served with Peking roast duck (Feng 1950, p. 32).

1955 – A.E. Staley Co. is now the largest U.S. maker of soy sauce; they make the non-fermented HVP type. "While it is conceded that the Staley product has less bouquet than the long-fermented oriental type, it is estimated that the U.S. production is now larger than the approximately 3 million pounds [about 305,500 gallons or 1,156.4 kiloliters] imported last year from the Orient" (*Soybean Digest*, Dec. 1955, p. 14-15).

1955 – Bragg Liquid Aminos are now being made in the United States from hydrolyzed vegetable protein (HVP) without added salt or fermentation (Federal Trade Commission 1955).

1957 – Kikkoman International Inc. is established and is soon rooted in San Francisco. The company focuses on selling their soy sauce to a largely non-Japanese market in the United States (Fruin 1983, p. 274).

1958 – Spray-dried soy sauce is now being made in Japan. Its first use may have been to season instant noodles / ramen (Motoyama 1958).

1960 – Earliest document seen that mentions *kecap manis / ketjap manis* (Indonesian sweet soy sauce; Huang 1960).

1961 – Japanese soy sauce makers, which used only whole soybeans before World War II, now use large amounts of defatted soybean meal instead (Hayashi 1961, p. 18).

1964 Oct. – Noda Shoyu Co. is renamed Kikkoman Shoyu Co. Ltd. (Fruin 1983, p. 243).

1965 – Diamond Teriyaki Sauce starts to be made in Honolulu, Hawaii. This is the world's earliest known commercial teriyaki sauce. It is made from soy sauce, mirin (sweet sake) and a flavor enhancer.

1973 June 16-17 – Kikkoman opens a modern soy sauce plant in Walworth, Wisconsin. This is Kikkoman's first soy sauce plant in the Western world. The decision to build this plant was made in March 1971 (*Times*, Walworth, Wisconsin).

1977 – Earliest document seen that mentions *inyu*, Taiwanese black bean sauce – a type of fermented black bean sauce made from soybean koji (Jan et al. 1977).

1979 March – Dr. Danji Fukushima of Kikkoman first refers to the five different types of Japanese shoyu by name, including *saishikomi shoyu* and *shiro shoyu* (*J. of the American Oil Chemists' Society*, p. 357-62). *Saishikomi* (twice-brewed soy sauce) originated in about 1780 and is made mostly in Yamaguchi prefecture, just north of Kyushu, Japan.

1980 Oct. – Kikkoman Shoyu Co. is renamed Kikkoman Corporation (Fruin 1983, p. 243; Kikkoman Annual Report 1995, p. 22).

1983 Dec. – "Introduction of Soybean to North America by Samuel Bowen in 1765," by T. Hymowitz and J.R. Harlan is published in *Economic Botany*. This landmark article also documents the following facts: (1) Samuel Bowen was the first person to manufacture soy sauce in North America; he made this sauce in Savannah, Colony of Georgia, from soybeans he had introduced from China and grown on his plantation, Greenwich, in Savannah. (2) From 1770 to 1775 he exported more than 800 gallons of this soy sauce to

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England. For this sauce he was awarded a gold medal from the Society Arts, Manufactures and Commerce in England. All information about Samuel Bowen in this book is based on the superb research of Hymowitz and Harlan.

1992 – *Edo jidai shōyu no kaigai yushutsu* [Exports of shoyu from Japan during the Edo period], by Teijirō Yamawaki uncovers the fascinating story of how the Dutch exported shoyu from Japan to the Western world. A landmark publication – in Japanese, with a lengthy English summary done by the Kikkoman Institute for International Food Culture (KIIFC, Noda, Japan). We are deeply grateful for this English summary.

1997 Oct. – Kikkoman Foods Europe B.V. starts to make soy sauce at its first plant in Europe – at Hoogezand-Sappemeer, the Netherlands.

1999-2003 – Japanese food historian Ryoichi Iino writes *The History of Shoyu* in four parts, published online in *Food Culture* (KIIFC).

2005 Nov. – San Jirushi Corp. is purchased by Yamasa Corp.

Alphabetical list of names of soy sauce (useful for searching digital / electronic text)

Bean sauce, bean-sauce
Bentang
Benteng
Black soy sauce
Cantonese soy
Canton soy
Ch`au yau
Ch`au you
Chiang yu, chiang-yu
China soy
Chinese sauce
Chinese soy
Chu-yau
Concentrated sweet soy sauce
East India soy
East India soye, East-India soye
Ganjang
Gan jang, gan-jang
Genuine Japan soy
Genuine tamari
Heavy soy sauce
India ketchup
Indian black soy sauce
Indian soy
India soy
Indonesian sweet soy sauce
Inyu
Japanese shoyu
Japanese soy
Japan soy
Japan soya
Javanese soya sauce
Javanese soy sauce
Jeow yau
Jiang you, jiang-you
Joppa soy
Kanjan
Kanchang
Kan chang, kan-chang
Kanjang
Kan jang, kan-jang
Kecap manis
Ketjap
Ketjap benteng manis
Ketjap katjang soya
Ketjap manis
Ketjap sauce
Kicap
Kicap kacang soya
Kicap cair
Kicap pekat
Kitjap
Koikuchi, koikuchi shoyu
Moromi
Murasaki
Mushroom soy
Mushroom soy sauce
Pak yau, pak-yau
Real China soy
Real India soy
Real Indian soy
Real Japan soy
Real tamari
Red soy sauce
Saio
Saishikomi, saishikomi shoyu
Sang chau
See yau
See you
See yow
See yu
Shang-ch`au
Shee yau
Sheng-ch`ou
Shioyu
Shiro shoyu, shiro shōyu
Shitaji
Sh`taji
Shoja
Shoya

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Shoyu, shoyu koji
Shōyu, shōyu koji
Shoyu sauce, shoyu-sauce
Shrimp soy sauce
Siyau
Soeju
Soja
Soja sauce, soja-sauce
Sooju
Souy
Soy
Soyabean sauce
Soya bean sauce, soya-bean sauce
Soya sauce, soya-sauce
Soybean sauce
Soy bean sauce, soy-bean sauce
Soy cruets, crewets, crewits, creuits, cruetts, cruits
Soy frames, soy stands
Soy of Japan
Soye
Soysauce
Soy sauce, soy-sauce
S'ya
Soyu
Soyu sauce, soyu-sauce
Sweet Indonesian soy sauce
Sweet soya sauce
Sweet soy sauce
Syou
Syou sauce
Tamari
Tamarted
Tamari shoyu, tamari shōyu
Tamari soy
Teriyaki
Thick black soy sauce
Thick sweet soy sauce
Toyo
Tsiang yu, tsiang-yu
Usukuchi, usukuchi shoyu
Worcester sauce
Worcestershire sauce

ABOUT THIS BOOK

This is the most comprehensive book ever published about the history of soy sauce. It has been compiled, one record at a time over a period of 35 years, in an attempt to document the history of this subject. It is also the single most current and useful source of information on this subject.

This is one of more than 100 books compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyinfo Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features detailed information on:

- 78 different document types, both published and unpublished.
- 7,151 published documents - extensively annotated bibliography. Every known publication on the subject in every language.
- 585 original Soyinfo Center interviews and overviews never before published.
- 728 unpublished archival documents.
- 985 commercial soy products.

Thus, it is a powerful tool for understanding the development of this subject from its earliest beginnings to the present.

Each bibliographic record in this book contains (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English language publications together with an English translation of the title, month and issue of publication, and the first author's first name (if given). For most books, we state if it is illustrated, whether or not it has an index, and the height in centimeters.

For commercial soy products (CSP), each record includes (if possible) the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as advertisements, articles, patents, etc.) are also given.

A complete subject/geographical index is also included.

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ABBREVIATIONS USED IN THIS BOOK

A&M = Agricultural and Mechanical
Agric. = Agricultural or Agriculture
Agric. Exp. Station = Agricultural Experiment Station
ARS = Agricultural Research Service
ASA = American Soybean Association
Assoc. = Association, Associate
Asst. = Assistant
Aug. = August
Ave. = Avenue
Blvd. = Boulevard
bu = bushel(s)
ca. = about (circa)
cc = cubic centimeter(s)
Chap. = Chapter
cm = centimeter(s)
Co. = company
Corp. = Corporation
Dec. = December
Dep. or Dept. = Department
Depts. = Departments
Div. = Division
Dr. = Drive
E. = East
ed. = edition or editor
e.g. = for example
Exp. = Experiment
Feb. = February
fl oz = fluid ounce(s)
ft = foot or feet
gm = gram(s)
ha = hectare(s)
i.e. = in other words
Inc. = Incorporated
incl. = including
Illust. = Illustrated or Illustration(s)
Inst. = Institute
J. = Journal
J. of the American Oil Chemists' Soc. = Journal of the American Oil Chemists' Society
Jan. = January
kg = kilogram(s)
km = kilometer(s)
Lab. = Laboratory
Labs. = Laboratories
lb = pound(s)
Ltd. = Limited
meg = microgram(s)
mg = milligram(s)
ml = milliliter(s)
mm = millimeter(s)
N. = North
No. = number or North
Nov. = November
Oct. = October
oz = ounce(s)
p. = page(s)
photo(s) = photograph(s)
P.O. Box = Post Office Box
Prof. = Professor
psi = pounds per square inch
R&D = Research and Development
Rd. = Road
Rev. = Revised
RPM = revolutions per minute
S. = South
SANA = Soyfoods Association of North America
Sept. = September
St. = Street
tonnes = metric tons
trans. = translator(s)
Univ. = University
USB = United Soybean Board
USDA = United States Department of Agriculture
Vol. = volume
V.P. = Vice President
vs. = versus
W. = West
°C = degrees Celsius (Centigrade)
°F = degrees Fahrenheit
> = greater than, more than
< = less than

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Chronological Order The publications and products in this book are listed with the earliest first and the most recent last. Within each year, references are sorted alphabetically by author. If you are interested in only current information, start reading at the back, just before the indexes.

A Reference Book: Like an encyclopedia or any other reference book, this work is meant to be searched first - to find exactly the information you are looking for - and then to be read.

How to Use the Index: A subject and country index is located at the back of this book. It will help you to go directly to the specific information that interests you. Browse through it briefly to familiarize yourself with its contents and format.

Each record in the book has been assigned a sequential number, starting with 1 for the first/earliest reference. It is this number, not the page number, to which the indexes refer. A publication will typically be listed in each index in more than one place, and major documents may have 30-40 subject index entries. Thus a publication about the nutritional value of tofu and soymilk in India would be indexed under at least four headings in the subject and country index: Nutrition, Tofu, Soymilk, and Asia, South: India.

Note the extensive use of cross references to help you: e.g. "Bean curd. See Tofu."

Countries and States/Provinces: Every record contains a country keyword. Most USA and Canadian records also contain a state or province keyword, indexed at "U.S. States" or "Canadian Provinces and Territories" respectively. All countries are indexed under their region or continent. Thus for Egypt, look under Africa: Egypt, and not under Egypt. For Brazil, see the entry at Latin America, South America: Brazil. For India, see Asia, South: India. For Australia see Oceania: Australia.

Most Important Documents: Look in the Index under "Important Documents -."

Organizations: Many of the larger, more innovative, or pioneering soy-related companies appear in the subject index – companies like ADM / Archer Daniels Midland Co., AGP, Cargill, DuPont, Kikkoman, Monsanto, Tofutti, etc. Worldwide, we index many major soybean crushers, tofu makers, soymilk and soymilk equipment manufacturers, soyfoods companies with various products, Seventh-day Adventist food companies, soy protein makers (including pioneers), soy sauce manufacturers, soy ice cream, tempeh, soynut, soy flour companies, etc.

Other key organizations include Society for Acclimatization (from 1855 in France), American Soybean Association, National Oilseed/Soybean Processors Association, Research & Development Centers (Peoria, Cornell), Meals for Millions Foundation, and International Soybean Programs (INTSOY, AVRDC, IITA, International Inst. of Agriculture, and United Nations). Pioneer soy protein companies include Borden, Drackett, Glidden, Griffith Labs., Gunther, Laucks, Protein Technologies International, and Rich Products.

Soyfoods: Look under the most common name: Tofu, Miso, Soymilk, Soy Ice Cream, Soy Cheese, Soy Yogurt, Soy Flour, Green Vegetable Soybeans, or Whole Dry Soybeans. But note: Soy Proteins: Isolates, Soy Proteins: Textured Products, etc.

Industrial (Non-Food) Uses of Soybeans: Look under "Industrial Uses ..." for more than 17 subject headings.

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Pioneers - Individuals: Laszlo Berezeller, Henry Ford, Friedrich Haberlandt, Artemy A. Horvath, Englebert Kaempfer, Mildred Lager, William J. Morse, etc. Soy-Related Movements: Soyfoods Movement, Vegetarianism, Health and Dietary Reform Movements (esp. 1830-1930s), Health Foods Movement (1920s-1960s), Animal Welfare/ Rights. These are indexed under the person's last name or movement name.

Nutrition: All subjects related to soybean nutrition (protein quality, minerals, antinutritional factors, etc.) are indexed under Nutrition, in one of more than 70 subcategories.

Soybean Production: All subjects related to growing, marketing, and trading soybeans are indexed under Soybean Production, e.g., Soybean Production: Nitrogen Fixation, or Soybean Production: Plant Protection, or Soybean Production: Variety Development.

Other Special Index Headings: Browsing through the subject index will show you many more interesting subject headings, such as Industry and Market Statistics, Information (incl. computers, databases, libraries), Standards, Bibliographies (works containing more than 50 references), and History (soy-related).

Commercial Soy Products (CSP): See "About This Book."

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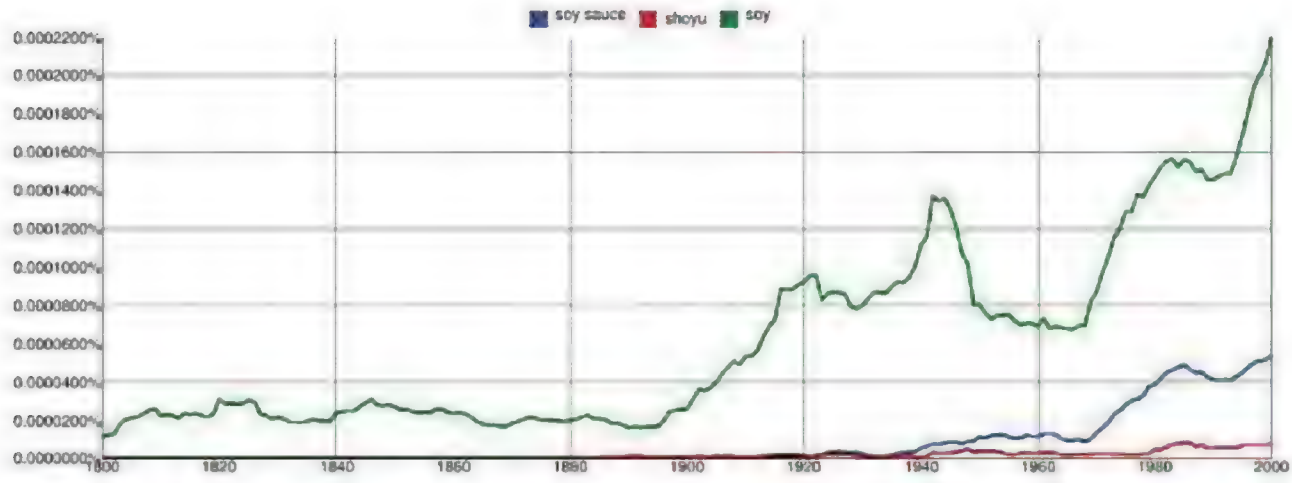
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Soyinfo Center
P.O. Box 234,
Lafayette, CA 94549 USA
Phone: 925-283-2991 Fax: 925-283-9091
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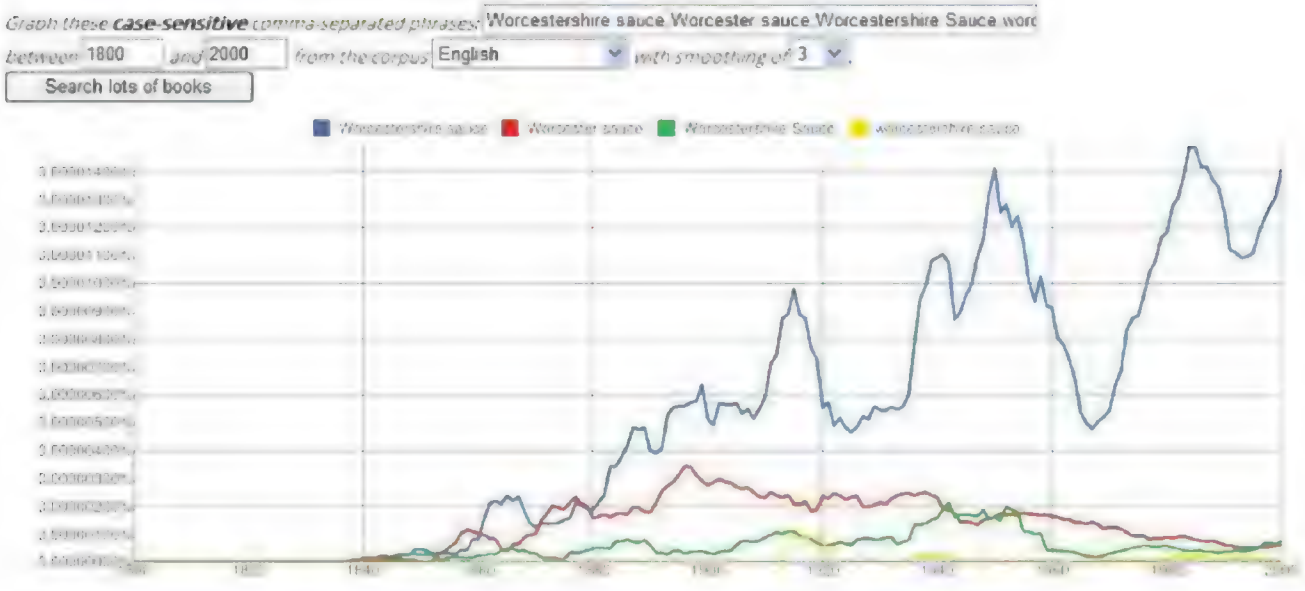
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HISTORY OF SOY SAUCE

1. Liu Xi, comp. 150 AD. Shiming [Expositor of names]. China. Passage on soy reprinted in C.N. Li 1958 #46, p. 57, and #221, p. 234. [Chi]

• ***Summary:*** Wade-Giles reference: *Shih Ming*, by Liu Hsi. Later / Eastern Han dynasty. *Shu* (the simplified character) means soybeans (*shu*, the early, more complex character).

In Chapter 13, fermented black soybeans (*shi*) are mentioned twice. The first states: *Shi* is also written as *shi* (a Chinese character with the same pronunciation / sound that refers to something delectable and highly desirable). It is used to blend / harmonize the five flavors. *Shi* is necessary for this blending to succeed. It helps to make things sweet and delectable. That's why the people of Qi [a region in today's Shandong province near the birthplace of Confucius] call it *shi* (fermented black soybeans). Because it sounds just like *shi* (delicious / delectable) (See Huang 2000, p. 337). The second reference to *shi* in Chapter 13 is in a recipe for dry-roasted meat. "Marinade meat in malt sugar, honey, and *shizhi* (fermented black soybean extract; literally "juice from *shi*"), and roast it until it has the consistency of dried meat" (see Huang 2000, p. 360). (Translated by H.T. Huang, PhD, Feb. 2002). Dr. Huang adds: By the late Han period, *shi* was a popular food product. The fact that it was traded extensively makes it clear that it was considered a culinary necessity of daily life. The second reference is interesting in terms of the origin of soy sauce. *Shizhi* was an extract, probably made by boiling *shi* in water; so it was something like miso soup without the added vegetables, etc. *Shizhi* is also mentioned several times in the *Qimin Yaoshu* (6th century A.D.), but it is not mentioned in any other work in between. It was a precursor of soy sauce but it would have lacked the richness of soy sauce.

Note: This is the earliest document seen (Nov. 2011) that mentions fermented black soybean extract / sauce, which it calls *shizhi*.

Huang (2000) discusses the different types of ferments (*qu, koji*) listed in this work and, throughout Chinese food history (p. 167, 261, 150-68). The *Shiming* says "when *hai* is soupy, it becomes *tan*. Thus *hai* can be construed as a thick meat sauce (or a paste), and *tan* a thin one" (p. 334). This work says that fermented black soybeans (*shi*) are "delectable and highly desirable. It was a popular food product. In fact, the extensive trade in *shi* during the Han-Wei Period [202 BC to 265 AD] leaves no doubt that it was considered a culinary necessity of daily living" (p. 337). Fermented black soybean sauce (*shizhi*) was apparently a well-known flavoring agent during the Han. The *Shiming* states: "Roast-dry meat: marinate meat in sugar, honey, and *shizhi* and roast it until it has the consistency of dried meat" (p. 360). The *Shiming* discusses different types of pasta (both non-filamentous and filamentous) including one with sesame seeds (*huma*) sprinkled over it (p. 468, 472s, 480, 484). Gives a good history of malt sugar made from various cereals (p. 457-58); one type (*i*) is mentioned in the *Shiming*.

Hagerty (1917, p. 33): "The Shih Ming, or Explanation of Terms, by Liu Hsi of the After Han Dynasty period says: 'The Shih, or Bean relish, has an excellent taste, having all five flavors harmonized together. This sauce is necessary in order to complete the flavor of the food and make it taste good. For this reason the people of Chi state pronounce the character for shih (Cc), the name for bean relish, the same as the character (Cc) (?) which denotes "excellent."'"

Wilkinson (2000, p. 66, 790): The chapter titled "Dictionaries" states that China's first etymological dictionary, the *Shiming*, compiled by Liu Xi, appeared circa +200. Liu used rhyming puns plus the literary and spoken languages of his day, to trace the origins of 1,500 words in 27 categories. This is a major work.

2. Cui Shi. 160 AD. Simin yueling [Monthly ordinances for the four classes of people]. China. Passage on soy reprinted in C.N. Li 1958 #45, p. 56. [Chi]

• ***Summary:*** Wade-Giles reference: *Ssu Min Yüeh Ling*, by Ts'ui Shih. Later / Eastern Han. A detailed description, lunar month by month, of the activities of a well-to-do household. An early and important agricultural treatise of the late Han dynasty (2nd century A.D.). The following is based on the translation by Hsu Cho-yun (1980, p. 217-23). 1st month [February]: The first day of the first month is called the New Year. One can make various sauces (or pastes). During the first ten days of the month, roast / fry soybeans (*dou*); in the second ten days, boil soybeans. Chopped soybeans (or groats) are made into *modu* (W.-G. *mo-tu*) (a type of jiang—apparently fermented, salted soy paste), which, by the conjunction of the 6th and 7th month, should be used for making pickled melons, fish sauces, meat sauces, and basic [liquid / clarified] soy sauce (*qingjiang;* W.-G. *ch'ing chiang*). 2nd month: On the day of the spring equinox [March 20], thunder will be first heard. One can plant spiked millet, soybean (*dadou*), female hemp (which does not yield fiber), and sesame (*huma;* "foreign hemp"). One can sell millet, panicled millet, soybeans, hemp, and wheat seed. 3rd month: When it rains, it is time to plant hemp and sesame. When the mulberry turns red, one can plant soybeans. 4th month: One can plant millet, spiked millet, soybeans and lesser [azuki] beans (*daxiaodou*), and sesame. 5th month: On the day of the summer solstice [June 21-22], present wheat and fish to ancestors and deceased parents; offer sacrifice and follow the procedures for food preparation, purification and cleansing. When timely rains fall, one can plant sesame

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and male hemp. One can prepare elm sauce and minced meat sauce. One sells [soy] beans, lesser [azuki] beans (*daxiaodou*), and sesame.

6th month: One can sell soybeans, buy oats and wheat, and collect plain white silk.

7th month: On the sixth day, the five grains (*wugu*) and the mill should be ready. One can sell lesser [azuki] beans and [soy] beans, buy wheat, and collect raw silk and white silk.

8th month: One can make *mo-tu* preserve [perhaps fermented soybean] paste and collect leaves of beans.

9th month: Soy is not mentioned.

10th month: One harvests the five grains. One should purchase spiked millet, [soy] beans and lesser [azuki] beans, and hempseed.

11th month: The winter solstice arrives. Buy spiked millet, [soy] beans, lesser [azuki] beans, and hempseed. 12th month: Soy is not mentioned. (Translated by H.T. Huang, PhD, Feb. 2002).

H.T. Huang adds: The four classes of people (in descending order of importance) referred to the scholars / government officials, farmers, artisans / laborers, and merchants. Scholars were the highest class because they ran the country. The merchants were the lowest class because it was felt they did not produce anything. This system lasted from antiquity until about 1949. Ordinances, usually issued by a high official (up to the emperor or king), were executive orders, suggestions, or exhortations as to what the people should or should not do, often in connection with food, crops, or daily living.

H.T. Huang (2000, p. 347, 359, 362-64, 371-72) argues convincingly that the *qingjiang* (clear chiang or "clarified soy sauce") made during the 1st month is a liquid soy condiment, similar to today's soy sauce, obtained as a by-product of *chiang*. *Mo-tu* has also been interpreted as fermented soybean paste by Miao Ch'i-Yü ed. (1981, p. 23) and Hung Kuang-Chu (1984, p. 93).

Fukushima (1989, p. 3). This document describes the first liquid soy sauce. "The liquid products which belong to the category of soy sauce did not appear in the literature before the later Han dynasty (about 25-220 A.D.). There is a description of the liquid product which was made by separating the liquid portion from the chiang in *Ssu-ming Yüeh-ling* (*Shimin-Getsurei* in Japanese), published by Ts'ui Shih (*Sai Shoku* in Japanese) in the later Han dynasty. This liquid was called *chiang ch'ing*, which means 'clear chiang.'"

Bray (1984, p. 56, 630): Monthly Ordinances of the Four Sorts of People. Later Han, c. +160. By Ts'ui Shih. Translated by Herzer (1963, in German). Our present version of this book is based almost exclusively on passages cited in the *Qimin Yaoshu* (+544).

Bo (1982): This work states, "On New Year's Day, make various types of chiang, meat chiang and ch'ing chiang." The term "ching" means "refined" or "clear." This ch'ing chiang must be today's filtered soy sauce. In the Ch'ing dynasty (1644-1912) this same term was used to refer to soy sauce. Even today a lot of people along the Yellow River or in the countryside of eastern north China still refer to soy sauce as "ch'ing chiang." Also, up until recently, in restaurants and hotels in Beijing, there were typically two white ceramic pots. On the one containing soy sauce was written "ch'ing chiang" and on the one with vinegar, "kao ts'u." Also, in Korea they used to call soy sauce "ch'ing chiang."

Bray (1981): Almanac of agricultural practice, household management, and ritual for landowning class. With planting instructions. Based on a reconstruction of the text by Shi Shenghan. Also parts appeared in the *Ch'i-min yao-shu*. The original work is lost.

Shih Shêng-han (1962), in his translation and interpretation of the *Qimin Yaoshu*, includes a lengthy analysis of the sources from which it is drawn. On pages 21-23 is a detailed discussion (with one long excerpt) of this book (*Simin Yueling*) and its author. The excerpt states that in the 5th month, one may sell soybeans and azuki beans (*daxiaodou*), and sesame, and buy barley and wheat.

Note 1. This is the earliest document seen (May 2012) that mentions soy sauce, which it calls *qingjiang*.

Note 2. This is the earliest document seen (May 2011) that clearly mentions sesame seeds, which it calls *huma*. Bray (1984, p. 425) says that "sesame did come to China from the West in or just after Han times." Address: Anhui province, China.

3. Cao Zhi (W.-G. Ts'ao Chih). 220-232 AD. [Poem mentioning shu (soybeans), shih (fermented black soybeans), and fermented black soybean sauce (shih-yu)]. China. [Chi]*

• ***Summary:*** Qin dynasty or Three Kingdoms? Hagerty (1917, p. 33): "Tsao Chih (Footnote: See Giles, C.B.D., p. 756), a famous poet who lived AD 192-232, makes mention of the [soy] bean in a poem as follows: 'Make a fire of the stalks and cook the beans. They are both from the same root.' The Shu bean is cooked and also salted."

Bo (1982): Ts'ao Chih, a famous poet during the Three Kingdoms period (220-280 A.D.) wrote a famous poem in praise of fermented black soybean sauce: "Cook soybeans to make kan. Strain shih (fermented black soybeans) with water to make fermented black soybean sauce" (*shih-yu*). From this poem it is clear that fermented black soybean sauce became a very important seasoning in the diet of the ruling class. Fermented black soybean sauce is still widely produced in the area south of the Yellow River and in the Choko? River area. Even the poor peasants in the countryside often make fermented black soybeans (*tou-shih*) and fermented black soybean sauce. In the Kosei Shokuryo area, fermented black soybean sauce is often sold as a commercial product. In the southern part of Fukien (Fujian) province, they call soy-nugget sauce "shih-yu." The pronunciation is very similar

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to that of the Japanese term "shoyu." It is said that Japanese shoyu came into the country at Yahama or Osaka from Senshu? in Fukien Province of China. Or it is said that it is deeply related to niiro/niira tamari, which was produced in Aichi prefecture, central Japan, until the Taisho period. In issue No. 20 of the Hong Kong Consumer Association publication Hsüan-Tsu ("Selections"), they call soy sauce "shih-yu."

Note: This is the earliest document seen (March 2001) that mentions fermented black soybean sauce, which it calls *shih-yu*. Address: China.

4. Jia Sixie. 544 AD. Qimin yaoshu [Important arts for the people's welfare]. China. Passage on soy reprinted in C.N. Li 1958 #66, p. 66-67, and #295, p. 216-20. Translated by Shih Sheng-han 1958, 1962. [Chi]

• ***Summary:*** Wade-Giles reference: *Ch'i Min Yao Shu* (QMYS) by Chia Ssu-hsieh. Northern dynasties–Northern Wei (AD 386–534; established by nomadic people from the northern steppes). This is the world's earliest encyclopedia of agriculture. H.T. Huang (2002) adds: "This is the most important book on agriculture or food technology ever published in China. At a remarkably early date it gives both general information and great detail about agriculture and food processing." The QMYS is divided into 10 books / fascicles (*juan*), and subdivided into more than 91 consecutive parts.

In his Preface, Jia Sixie states that the material in his book comes from four sources: (1) The Chinese classics; (2) Contemporary books, proverbs, and folk songs; (3) Information gathered from experts; and (4) His personal experience ("original material").

A partial English-language translation of the "original material" and commentary by Shih Shêng-han was published in 1958 (2nd ed. 1962). The numbered text below is based on the 1962 translation titled "A preliminary survey of the book *Ch'i Min Yao Shu:* An agricultural encyclopaedia of the 6th century." 2nd ed. Peking, China: Science (Kexue) Press. x + 107 p.

Book 2. General comments. The best time to plant soybeans (*dadou*) and oilseed hemp (*youma*) depends on the climate and soil condition. "Realization of the importance of proper choice of season and soil." These two factors are the key to agricultural success. A table (p. 33) shows: Best, medium, and latest time for various operations: Planting spring soybeans: Best time–First ten days of the 2nd month. Medium–First ten days of the 3rd month. Latest time–First ten days of the 4th month. Also gives such times for azuki beans, male and female hemp, and sesame seeds. For making jiang: Best time–12th and 1st month. Medium–2nd month. Latest–3rd month. Making *shi* (fermented black soybeans): Best–4th and 5th month. Medium–20th day of 7th month until 8th month. Latest–None. In addition: Large dark-red beans (*da chidou*) should be planted in the 3rd lunar month, and harvested in the 6th month (See Li 1958 #385).

Note 1. The scientific- and common name of dark-red beans is unclear; it may well be another name for azuki beans.

Chapter 4. Millets. It is best to plant millets on new fields (without a previous crop), or on a field where the previous crop was soybeans. Best, medium, and least suitable soil / ground for planting various crops. Spiked millet: Least suitable–Following turnips or soybeans. Panicled millets–Medium soil–Following soybeans. 1.3 Amount of seeds to be sown at different seasons: Soybeans: Best time–8 *sheng/mou* (= 220 ml/508 square meters). Medium time–10. Latest time–12.

Chapter 6, "Soybeans" (*dadou*):

Note 2. The first third (approximately) of this section is quotations from four early Chinese works and commentaries on them: (1) The *Erya* (Literary expositor) (ca. 150 BC) says: "*rongshu* is the same as *renshu*." Sun Yan's commentary on the *Erya* explains that *rongshu* is the soybean (*dadou*).

(2) According to the *Guangya* by Zhang Yi (Ancient dictionary: Enlargement of the *Erya*) (230 AD), soybeans (*dadou*) are called *shu;* azuki beans (*xiaodou*) are also called *da. Hudou* is *jiangdou*. Dr. Huang adds: The true identity of *hudou* is unknown.

(3) The *Guangzhi* by Guo Yigong (Extensive records of remarkable things) (+390) says: When you plant the azuki bean (*xiaodou*), you can get three crops a year. The flavor is good. *Baidou* ("white bean") is coarse, large, and edible. *Cidou* ("prickly bean") is also edible. *Judou* ("millet bean") has a seedling which is like that of the azuki bean (*xiaodou*). The flowers are purple. It can be used for flour (*mian*). It is grown in a place called Zhuti within Jianin (in today's Sichuan). Of soybeans (*dadou*), we have the yellow *luodou* ("drop bean"), the *yudou* ("imperial bean," in which the bean is elongated), the *yangdou* ("poplar bean"), whose leaves are edible, and the *hudou* ("foreign bean"), which comes in green (*qingdou*) and yellow (*huangdou*) varieties.

(4) According to the *Bencao* (probably *Shennong Bencao Jing; Benjing*) (Classical pharmacopoeia of Shennong, the Heavenly Husbandman) (100 AD), when Zhang Qian (W.-G. Chang Ch'ien) traveled to foreign lands, he brought *hudou* ("foreign bean") seeds back to China.

Note 3. Zhang went west along what is now called the Silk Road during the Former / Western Han dynasty, was gone for 11 years, and returned to China in 126 BC. The *hudou* is now generally thought not to be a soybean.

The *Qimin Yaoshu* then begins: So now (i.e., Later Wei), we have two kinds of soybeans (*dadou*), black and white, as well as *changshao* ("long tip") and *niujian* ("cow path") varieties. There are three kinds of azuki beans (*xiaodou*): The green (*ludou*), the red (*chixiaodou*), and the white (*baixiaodou*) varieties. There are also the yellow Korean bean (*huang gaolidou*), the black Korean bean (*hei*

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gaolidou), the *yandou* ("swallow bean") and the *bidou;* all are varieties of soybeans (*dadou*). Then there are *wandou, jiangdou,* and *laodou;* all are varieties of azuki beans (*xiaodou*).

Note 4. This is the earliest document seen (Aug. 2011) that mentions Korea in connection with soybeans.

Note 5. This is the earliest Chinese-language document seen (Jan. 2005) that uses the word *baixiaodou* to refer to white azuki beans.

Spring soybeans (*dadou*)*:* Plant them at the same time as the early grains; the middle of the 2nd lunar month is best. Use 8 *sheng* of seeds per *mou.* The second best planting time is the first third of the 3rd lunar month; use 10 *sheng* per *mou.* The latest you can plant them is the first third of the 4th lunar month; use 12 *sheng* per *mou.* If you meet with late germinating weather, you can plant in the 5th or 6th lunar month, but you must increase the amount of seed used.

The soil should not be overly fertile. After land has been harvested in the previous autumn, it can be planted sparsely. If the soil is too rich, you may get luxuriant growth but fewer pods. Harvest the crop late. The pods do not drop. If you harvest too early, the seeds will not be full. Use a drill to plant, so the seeds will be placed deep in the soil. The seedlings will be sturdy and have deep roots to reach the moisture in the soil. Pierce (?) once, plow once, and hoe several times.

Mow / cut when all the leaves have fallen. When some leaves are left, it is harder to cut the stems. After mowing, quickly plow stubs under the soil. The soybean stubs dry out easily. If you do not plow them under, the soil will not retain moisture.

To produce [soybeans] for animal feed (*jiao*), use a wheat field as a base, and plant 3 *sheng* of seeds per *mou.* Broadcast the seeds and use a plow to form a narrow and shallow channel; level it plane. If the weather is dry, the stems will be coarse and sturdy, and the leaves sparse. If there are too few seeds, the seedlings will not grow tall; if the seeds are placed too deep, the seedlings will not be able to emerge from the soil.

If the soil is too damp, first plow deeply, then broadcast the seeds away from the plowed furrows and level the soil. Do not do this if the soil is not too damp.

In the 9th month, if you see leaves close to the ground turning yellow and about to fall, immediately harvest the crop. Even if the leaves do not turn yellow, they can easily start to rot. If you do not harvest, the wind will quickly strip the leaves, and the rain will rot the stem. The crop will be ruined.

Book 2, "Cultivating cereal grains." The best way to improve the soil is to plow under green beans (*lüdou,* probably *Dolichos* species rather than mung beans or green gram). Azuki beans or sesame seeds (*huma*) are next (Note 6. Sesame seeds are not a legume and do not enrich the soil). It's best to broadcast these densely in the 5th or 6th month, then plow them under [as green manure] in the 7th or 8th or eighth month. In the yield of spiked millet planted the next spring should be 10 *sheng* per *mou.* The effect is as good as adding the excreta of silk worms or well-rotted compost. Varieties of crops. The Chinese and English names of 7 cereal crops and the number of varieties of each recorded in the QMYS are given; soybeans are not in this list. Fertilizing the ground: Succession of crops. This table is similar to a previous one but: For soybeans: Most favorable forerunner–Spiked millet. For azuki beans the best forerunner is spiked millet or wheat. The QMYS was the first book to state that using green manure is "the best thing to do." The best preceding crops for plowing under as green manure are Dolichos beans (*lüdou*) or azuki beans. The next best crops are hemp, foxtail millet (*su; Setaria italica*), or sesame seeds. The least desirable are rapeseed / colza (*wujing*) or soybeans (*dadou*).

Note 7. This is the earliest document seen (Jan. 2008) worldwide that mentions rapeseed.

Harvesting and storing crops. Soybeans: In the 9th month, when the lower leaves become yellow and fall, reap quickly. Different harvest dates are given for azuki beans and sesame seeds.

Chapter 8 (Li 1958, p. 217)–Hemp: Be careful not to plant soybeans (*dadou*) mixed with hemp.

Chapter 10–Barley or wheat: Upland (high) fields are good for cultivating cereal grains or beans. Note 8. This is the earliest document seen (May 2010) that gives basic formulas for soy ingredients such as jiang, soy sauce, etc.

5. Jia Sixie. 544 AD. Qimin yaoshu [Important arts for the people's welfare (Continued)]. China. Passage on soy reprinted in C.N. Li 1958 #66, p. 66-67, and #295, p. 216-20. Translated by Shih Sheng-han 1958, 1962. [Chi]

• ***Summary:*** Wade-Giles reference: *Ch'i Min Yao Shu* (QMYS) by Chia Ssu-hsieh. Chapter 72–*Shi* (unsalted / bland fermented black soybeans, or salted / savory fermented black soybeans). Most of the following is based on the translation of Huang (2000, p. 337-38). The QMYS gives four methods for making *shi,* however one of them is for making *shi* from wheat, which is of little interest or importance compared with the *shi* made from soybeans. Of the three methods based on soybeans, the first and most extensive is for unsalted / bland fermented black soybeans (*danshi*)–as follows: The incubation must be carried out in a shady, warm hut [incubation room] with a very clean floor. For making bland fermented black soybeans, dig a pit about 2-3 feet deep on one side of the room. The hut should have a thatched roof–*not* a tiled roof. Tightly seal any windows and the door with mud so that no draft, mice, or insects can enter. Cut a small opening [through the door] just big enough for one person to pass through. Cover it tightly with a thick straw mat when not in use. Ideally the incubation room should be kept as warm as your arm pit. The best

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time to make bland fermented black soybeans is late spring (4th moon) or early summer (5th moon). Next best is early fall (7th to 8th moon). You can make it at other times but remember that when the weather is too hot or cold it will be difficult to maintain the desired incubation temperature.

Take cleaned, winnowed soybeans (*jing yangbou*). Boil 10 *dan* (1 *dan* = 40 liters) of them with water in a large pot until they feel soft when pressed between the fingers. Drain and cool until the beans reach the right temperature, warm in winter and cold in summer, when touched by your hand. Then arrange them in conical piles on the floor of the incubation room.

Examine the piles twice a day. Put your hand inside any pile. When the inside feels as warm as one's armpit, stir the pile so that the beans on the outside are moved to the outside and vice versa. After 4-5 such stirrings, the pile should be warm both inside and outside and a white coat [mycelium] should have begun to appear. Now press down the tip of the pile each time it is stirred. After 4 more stirrings, the height of the pile should be reduced to 6 inches. A yellow coat [mainly *Aspergillus* spores] should start to appear. Then spread the soybeans to a height of about 3 inches and allow them to incubate undisturbed for 3 days. A rich yellow coat should now cover the beans. Take the molded beans [soybean koji] outside the hut, winnow to remove the loose coat of yellow spores, then soak in water, place in a basket, rinse thoroughly with water, and air dry on a mat.

Dig a pit 2-3 feet deep on one side of the hut. Line it with straw mats and fill it loosely with millet husks. Place beans in pit. Have a worker stamp on them until they are as compact as possible. Cover beans with a mat, then place more husks on top of it. Trample these down also. The fermented beans (*shi*, bland fermented black soybeans) will be ready after about 10 days in summer, twelve days in fall, or 15 days in winter. If the incubation period is too short, the color of the beans will be too light, but if too long, a bitter flavor will develop... After being dried in the sun, the [unsalted] fermented soybeans may be kept for a year without spoiling.

Dr. Huang notes: The method for making *danshi* may well have been developed before the other three. This is normal, because it is used in medicine. That is probably why it is listed first in the QMYS.

Note 1. This is the earliest existing document seen (Jan. 2011) that mentions unsalted / bland fermented black soybeans (*danshi*). The process is characterized by a warm temperature and use of rice straw close to the soybeans–which probably makes this product intermediate between unsalted soybean koji and Japanese natto.

Note 2. This is the earliest document seen (May 2003) which describes a specific process for cleaning soybeans–winnowing. This is also the earliest document seen (Jan. 2005) that uses the word "winnowing" in connection with cleaning soybeans. Typically, freshly harvested (uncooked) soybeans are winnowed by tossing them into the air to separate the beans from the pods and chaff.

Note 3. The question arises: How can 40 liters of soybeans, which double in size to 80 liters after being boiled in water, fit into a pit 2-3 feet deep that is already filled loosely with millet husks. The answer: (1) The pit must have a large surface area, while still fitting in one side of a hut; (2) The loosely-packed millet husks (good insulation) will compress when the beans are added, then trampled underfoot.

The second method for making shih (salted fermented black soybeans) from soybeans first appeared in the *Shijing* (Food canon (#1)) (+530?)–which see.

The third method is for making bland fermented black soybeans (*danshi*) at home–as follows: You can make any amount. Wash the beans (*dou*) well. Soak for 1 night. The next morning, steam them as you would rice. To make one picul (*dan*), after it is cooked, cover it with fresh rushes / straw, just as if you were making glutinous rice koji (*nuqu*; W.-G. *nü ch'ü*). After 14 days, the beans should be covered with a yellow coat (*huangyi*). Winnow the coat [to remove some of the yellow spores, which could make the product bitter]. Dry the beans then soak in water until soft. Place beans in an earthenware urn. Dig a hole in the ground big enough to hold the urn. Make a wood fire in the hole. Place the urn in the fire. On top of the beans in the urn, put at least 3 inches of mulberry leaves. Cover urn tightly, then seal the mouth with mud (*ni*). After 10 days it should be ripe. Pour out the contents and dry in the sun until half-dry. Then steam and sun-dry it 3 more times. It should now be ready. (Translated by H.T. Huang, PhD, May 2002). Dr. Huang notes: The process for making *shi* involves a two-stage fermentation: (1) Aerobic culture of airborne wild molds on the surface of cooked soybeans; (2) The enzymes from the molds hydrolyze (digest or "break down") the soybean constituents under aerobic conditions. Partial hydrolysis of the soy proteins create flavor compounds.

Note 4. This is the earliest document seen (May 2010) that gives a recipe for making fermented black soybeans at home.

Huang (2000, p. 285-87) notes that Chapter 71 contains 23 recipes for making vinegar (*zuo* or *cu*; W.-G. *tso* or *ts'u*). One of these (recipe 17) is a flavored vinegar made with azuki beans (*xiaodou*), plus panicum millet and wine.

6. Jia Sixie. 544 AD. Qimin yaoshu [Important arts for the people's welfare (Continued)]. China. Translated by Shih Sheng-han 1958, 1962. [Chi]

• ***Summary:*** Continued: Wade-Giles reference: *Ch'i Min Yao Shu*, by Chia Ssu-hsieh. This is the world's earliest encyclopedia of agriculture.

Letter from Dr. H.T. Huang, 1991. Aug. 4. In the inestimable classic of the 6th century A.D., the *Ch'i Min Yao Shu*, which describes the making of every conceivable type

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of processed food (even the making of yogurt) that was of importance, tofu is not mentioned at all. This indicates that tofu had not yet gained the stature of one of the "useful arts" for the people's welfare by the 6th century AD (See also Huang 2000, p. 313-14).

Fukushima (1989, p. 2-3). "The first document in which soybeans appeared as a substitute for meat in chiang was the *Ch'i-min Yao-shu* (*Saimin-Yojutsu* in Japanese) by Chia Ssu-hsieh (Ka Shikyo in Japanese), the world's oldest encyclopedia of agriculture, published in 535 AD in China." (Note: The above statement is not true; as of Nov. 2002, five Chinese documents, from 166 B.C., mention soybean jiang before the *Ch'i-min Yao-shu*.) Two processes for making shih (fermented black soybeans) are described in the *Ch'i-min Yao-shu*. One is the process described earlier in the *Shi-ching* by Hsie Feng (which survives only in the *Ch'i-min yao shu*). In the second process, first described in the *Ch'i-min yao-shu*, soybeans are winnowed, cooked, drained, and cooled. They are piled, the temperature is measured, and then they are stirred. The last 3 steps are repeated 3 times until they are spontaneously molded. They are then spread and furrowed to make soybean koji. This is winnowed, washed, drained, dried, moistened, piled, fermented, and dried to give unsalted soybean shih (p. 8).

Yu (1987, p. 25): Discusses skills of farming, crop rotation, plowing, care of livestock, fish culture, and food processing in the middle and lower reaches of the Yellow River. Note: This is the earliest document seen (Nov. 2002) that discusses fish culture (fish farming, aquaculture); however soybeans were not used as fish feed.

Wang and Fang (1986): In this 6th century book on Chinese technology, the product chiang-ching was mentioned. The characters show that the product was related to chiang and was probably the origin of chiang-yu (soy sauce). But the method of preparing soy sauce was first described in the 16th century *Pen-ts'ao kang-mu by Li Shih-chen*. (Note: For an excellent discussion of the much earlier origins of soy sauce in China, see Huang, 2000, p. 358-74.) Also in this book more than 20 methods of preparing *tsu* (Chinese-style vinegar made from grains such as millet, rice, or sorghum) are discussed. The grain is cooked, mixed with *ch'ü* (koji), packed in a sealed container, and allowed to ferment for 3 weeks.

Yokotsuka (1986, p. 198) cites this as the earliest document seen that mentions a liquid soy sauce. He states that the *Chi-Min Yao-Shu* (532-549) discussed *ch'ü* (mold-cultured cereals made from crushed wheat or wheat flour made into balls or cakes, or cooked rice), Chiang (made from soybeans or wheat), Shi (mold-cultured soybeans with or without salt), and Shi-tche (the saltwater extract of shi).

7. Jia Sixie. 544 AD. Qimin yaoshu [Important arts for the people's welfare (Continued)]. China. Translated by Shih Sheng-han 1958, 1962. [Chi]

• ***Summary:*** Continued: Wade-Giles reference: *Ch'i Min Yao Shu* (*QMYS*), by Chia Ssu-hsieh. Francesca Bray (1984) in her superb book on agriculture in China (*Science and civilisation in China. Vol. 6, Biology and biological technology, Part II: Agriculture, Joseph Needham series*) offers many important insights into the QMYS. She cites it as: Essential Techniques for the Peasantry. Northern Wei, c. +535. By Chia Ssu-Hsieh. Textual references are to the 1957 ed. of Shih Sheng-Han. Bray devotes a long section (p. 55-59) to discussing this work and its context in detail. It is the "earliest Chinese agricultural treatise to have survived in its entirety. It is a long and impressive work, logical and systematic in its arrangement, comprehensive and detailed in its treatment, and a model for all subsequent Chinese agronomists." She translates the introduction. A long work, it is divided into ten books comprising 92 chapters and over 100,000 characters. It quotes from more than 160 other works, sometimes at great length. Our present versions of the *Fan Shengzhi Shu* [The book of Fan Shengzhi (on agriculture)] (10 BC) and the *Simin Yueling* [Monthly ordinances for the four classes of people] (160 AD) are based almost exclusively on passages cited in the *Qimin Yaoshu*. "Almost half of the book consists of quotations, but the main body of the text is from" Jia Sixie's own hand. "Little is known about the author except that he served as a middle-ranking official; however it is generally assumed that his agricultural experience was based on conditions in the Shantung area." The work describes in depth "the practical details of running an agricultural estate, cultivating both subsistence and commercial crops and directing a number of household manufactures and culinary preparations." The book also gives a detailed description of hemp cultivation (Bray, p. 535).

Adzuki beans are also referred to frequently, especially in connection with cultivation of green manures. With the development of printing in China in the early Song dynasty, it was one of the first agricultural works to be printed by imperial order (Bray, p. 53).

Concerning soybeans (Bray, p. 514-15): "The soybean was probably the most important legume grown in China, but it was by no means the only one. 'Lesser beans' (*hsiao tou* or *ta*) came, according to the *Ch'i Min Yao Shu*, in three varieties, red, green and white (Fig. 239). The term *hsiao tou* can probably be identified with the adzuki bean, *Phaseolus angularis* (Willd.) Wight, which is native to China and Japan."

Note: This is the earliest document see that clearly mentions the azuki bean.

Bray (1981): Northern Chinese agricultural methods and crops, with extended sections on preserving, brewing, exotic plants, etc. With the Nongshu perhaps the most fundamental work. This document, which arrived in Japan during the late 700s, was a key link in the transmission from China to Japan of food preparation techniques. It described how to make

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fermented black soybeans. Lists varieties of soybeans and how to grow them. It says Chang Chien brought soybeans to China.

8. Jia Sixie. 544 AD. Qimin yaoshu [Important arts for the people's welfare (Continued)]. China. Translated by Shih Sheng-han 1958, 1962. [Chi]

• ***Summary:*** Continued: Wade-Giles reference: *Ch'i Min Yao Shu* (*QMYS*), by Chia Ssu-hsieh. Bo (1982): This is the world's earliest document describing techniques for processing agricultural products. The production methods for soybean chiang and shih (fermented black soybeans) are described in detail. In these descriptions, the author frequently used the terms "tou-chiang-ch'ing" (literally "soybean chiang refined") and "chiang ch'ing" (literally "chiang refined"), but unfortunately he didn't describe how these products were made. These terms are almost surely related to the term "ch'ing chiang" used in the *Ssu Min Yüeh Ling* by Ts'ui Shih of the Later Han. Shih was made from soybean koji. Using only soybeans (instead of soybeans and wheat, as for chiang) hydrolyzes the protein more efficiently, and was thus well suited for making fermented black soybean sauce (*kuki-jiru*). Thus this book contains about 70 recipes for using fermented black soybean sauce, many more than for soy sauce. Yet the book does not explain now to make fermented black soybean sauce.

The *Ch'i-min yao-shu* quotes from an even earlier non-extant work, the *Shih ching* (*The Classic of Food;* date and authorship unknown), giving the *Shih ching's* recipe for making "one thousand year bitter soy wine."

Sato (1963, p. 9), in his book titled "Documents on Soy Nuggets, Chiang, Miso, and Shoyu," cites this as the third earliest Chinese document seen on the subject. Called the *Seimin Yojutsu* in Japanese, it was translated into Japanese in 1959 by Nishiyama Kakekazu and Kumadai Yukio. It is written entirely in Chinese characters (*Kanbun*).

Shih Sheng-han (1958). The first English-language (partial) translation of this book; revised 2nd ed. in 1962. For details see these two works. The section titled "Fish-pond" (1958 and 1962, p. 72) states: "There is a whole chapter (62) on fish-pond management... But the source and the calculations of the quotation are dubious. Anyhow we can infer from this chapter that fish-pond management was started in China earlier than the 6th century."

9. Jia Sixie. 544 AD. Qimin yaoshu [Important arts for the people's welfare (Continued)]. China. [Chi]

• ***Summary:*** Continued: This record concerns information on soy sauce, based on the research and writing of H.T. Huang (2000). The section titled "Fermented soy sauce, jiangyou" (p. 358-78) contains an excellent, detailed discussion of this subject. In its food processing chapters, the *Qimin Yaoshu* (QMYS) mentions 3 seasoning agents that have been considered the ancestors of soy sauce: *jiangqing* (W.-G. *chiang ch'ing*), *shizhi* (W.-G. *shih chih*), and *shiqing* (W.-G. *shih ch'ing*). *Jiangqing* (which is "clarified jiang," is *qingjiang* with the two characters in reverse order and probably means the same thing) is used as a condiment in five recipes–in chapters 70, 76, 77, and 87. Much more popular is *shizhi* (aqueous extract of fermented black soybeans / fermented soybeans) which is used in at least 26 recipes–in chapters 76, 77, 80, 82, 87, and 88. Finally there is *shiqing* (clarified fermented black soybeans / fermented soybeans), which is used in 3 recipes–in chapters 76 and 77. Unfortunately the QMYS gives no indication of how *jiangqing* or *shiquing* were prepared, although in the recipe for a fish and vegetable stew this is, luckily for us, a brief statement on how *shizhi* was obtained by boiling fermented black soybeans (*shi*) in water. In Chapter 76 (p. 465) we read:

Shizhi: Cook [fermented black soybeans] in a separate pot of water. Let it boil once. Strain off the fermented black soybeans, and after the soup settles, decant the clear solution. Do not stir the water during cooking, lest you muddy the decoction so that it will not clarify after straining. When cooking *shizhi*, stop the process as soon as the water reaches the light brown color of amber. Do not allow it to become too dark lest the juice be bitter (Huang, p. 359).

In examining the recipes in the QMYS it is easy to get the impression that these 3 types of soy sauce are used interchangeably. Is it possible that they were simply different names for the same product? The answer is no. There are two cases in which both *jiangqing* and *shiquing* are used in the same recipe, and another case in which *shizhi* and *shiquing* are used to cook the same dish. These examples leave no doubt that these are the names of three different types of soy sauce.

A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." The seasonings based on jiang (fermented soybean paste) are used in 7 recipes: Jiang itself in 2, and soy sauce made from jiang (*jiangqing*) in 5 recipes. However the seasonings based on fermented black soybeans (*shi*) were used in 48 recipes (far more): Fermented black soybeans in 20 recipes, fermented black soybean sauce named *shizhi* in 26, and fermented black soybean sauce named *shiqing* in 2.

Note: This is the earliest document seen (April 2012) that mentions the soy condiments or seasonings *jiangqing* or *shiqing*.

10. Sun Simo. 655? AD. Qianjin yaofang [A thousand golden remedies]. China. Passage on soy reprinted in H.T. Huang 2000. Undated. [Chi]

• ***Summary:*** Wade-Giles reference: *Ch'ien Chin Yao Fang*, by Sun SSu-Mo. Tang dynasty. Huang (2000, p. 614) gives the date as Tang, between +150 and +659 (p. 614). This work and its supplement have survived and together they form a veritable encyclopedia of the medical and pharmaceutical

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arts of Tang dynasty China. In this work, an entire chapter (Chap. 26) is devoted to diet therapy (p. 136). It mentions that dried young soybean sprouts (*dadou huangjuan*) have medicinal properties (p. 296). It also mentions fermented black soybeans (*shi*) (p. 341). Also mentions malt sugar (*yi*) (p. 460).

Bo (1982): In the literature of the T'ang dynasty it is not rare to use soy sauce for medicinal purposes. In the third volume of this work it is said, "If a dog bites a person, apply 2-3 tou-chiang-ch'ing (literally, "soybean chiang refined") compresses a day. The fourth volume of this work states, "For pain in the fingers and toes, warm chiang ch'ing ("chiang refined") and honey and apply as a compress.

Williams (1988): The author was a well-known alchemist who lived 581-682, during the early T'ang dynasty. For a translation see: Nathan Sivin. 1977. Science & Technology in East Asia. New York: Science History Publications.

11. Meng Shen. 670 AD. Shiliao bencao [Compendium of diet therapy (Materia dietetica)]. China. Passages on soy reprinted in H.T. Huang 2000. [Chi]

• ***Summary:*** Wade-Giles reference: *Shih Liao Pên Ts'ao*, by Mêng Shên. Tang dynasty.

Huang (2000) notes that this book emphasizes the relationship between nutrition and health, and the medicinal properties of foods. It was the first of the *Bencao* compilations devoted to diet therapy (p. 116, 135-36). It mentions that dried young soybean sprouts (*dadou huangjuan*) have medicinal properties (p. 296). It gives a recipe for cooking fermented black soybeans (*shi*) similar to that from the *Xinxiu Bencao* (Newly improved pharmacopoeia) (+650) (p. 341). It also discusses fermented black soybean sauce (*shizhi;* W.-G. *shih chih*), noting that an excellent product comes from Shan prefecture and describing briefly how it is made: The fermented black soybean sauce (*shizhi*) from Shan prefecture is better than ordinary fermented black soybeans (*shi*). To make it, allow cooked soybeans to ferment to the yellow mold stage of soybean koji. For each *tou* (pint) [of soybean koji], add 4 pints of salt and 4 ounces of pepper. [Note: Some water was probably also added]. It will be half done after 3 days in spring, two days in summer, and 5 days in winter. Add 5 ounces of raw ginger to give it a clean, delicate flavor (p. 360-61). This work also mentions mung beans (p. 298) and malt sugar (*yitang*, p. 460).

Hagerty (1917, p. 4) states: "The Shih liao pên ts'ao (Materia Medica, by Mêng Shen of the T'ang Dynasty, second half of the 7th century), says: 'The Ta tou [soybean] has a cold effect upon the human system. When mixed with rice and pounded into a powder, it may be used as a remedy for reducing all kinds of inflammatory swellings. It is used as a remedy for swellings or inflammation in the region of the reproductive organs of both male and female. This remedy is prepared in the form of a poultice made by wrapping the bean paste in cotton cloth and applying to the diseased part. It is also a specific for poison from eating certain herbs. According to this work, if these beans are boiled into a liquid form, and the mixture taken, it will eradicate all poison from the system and cure gastric fever, paralysis, pains, difficulty in passage of urine and other bladder troubles. It is also good for improper circulation of the blood, improper functioning of the heart, liver, kidneys, stomach, and bowels, and also a remedy for chills. When mixed together with the ashes of burned mulberry twigs and water, and boiled, it is used as a remedy for dropsy and swelling of the bowels. The yellow bean is a specific for paralysis, pains in thighs, improper functioning of the heart, liver, kidneys, stomach, and bowels, and constipation. It is also used to increase the lung power (?), make the body plump, and beautify the complexion. These beans are also cooked until they are of an oily consistency, mixed with hog's fat, and taken in the form of pills in order to fatten and increase the strength of the body. This may also be used as a remedy to cure hoarseness.

"'To prepare a remedy, take one "Shêng" (Chinese pint) of fresh Ta tou beans, forty-nine green bamboo sprouts about four inches (Chinese) long, and one "fen" (one-tenth of an inch) wide. Boil thoroughly in water, and take two doses, one during the day and the other at night–and also after each meal. Another method of utilizing these beans consists of washing them thoroughly, and grinding into a meal and combining with chicken's eggs. This is eaten as a food and will cause man to live a long life. When first eaten they will cause the body to become heavy, but after eating constantly for one year, they will cause the body to become light and also increase the power of the male reproductive organs.'"

Hagerty continues his translation on p. 78 concerning fermented black soybeans (See also Bretschneider, Botanicon Sinicum 1:45): "The Shen-chou-fu, Liquid bean relish, is very much better than the ordinary bean relish and gives the following directions for its manufacture: Take some Ta tou beans [soybeans] and steam until yellow, to each *tou* or peck, add four *sheng* or pints of salt, four *liang* or ounces of pepper. If made in the spring, let it stand for three days; if made in the summer let it stand for two days; if made in the winter let it stand five days, when it is half ripe. Now add five *liang* or ounces of fresh ginger and let it stand in order to clarify. The best method is to bury the vessel containing this mass in horse manure. When Ta tou [soybeans] cannot be obtained, the good bean relish can be used as a substitute."

Note: This is the earliest document seen (Nov. 2005) that mentions cotton cloth.

12. Wang Tao. 752 AD. Waitai miyao [Secret formulary from the outer terrace]. China. Passage on soy reprinted in H.T. Huang 2000, p. 371. [Chi]

• ***Summary:*** Wade-Giles reference: *Wai T'ai Mi Yao*, by Wang T'ao. Tang dynasty. Huang (2000, p. 371) also

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translates the title as "Important prescriptions from a distant post" and notes that this book advises: For ulcers, apply soy sauce (*qingjiang;* W.-G. *ch'ing chiang*) and sulphur powder.

Bo (1982): This work advises, "Use *chiang ch'ing* and a special powder to cure gout." From this we see that during the T'ang dynasty the word *chiang ch'ing* (soy sauce) was still being used.

Needham & Lu (1962, p. 460-61) note that plant biochemists have long realized that saponins are valuable for use as detergents because "they have no deleterious effects upon the most delicate textile fabrics." Although their detergent power may be weaker than that of modern detergents, they are better for use on silks than modern fat-based soaps. In the *Waitai Miyao*, a interesting chapter titled "Bath beans" (*zaodou;* W.-G. *tsao tou*) is entirely devoted to washing and cosmetic preparations for personal hygiene. The author begins by quoting from the *Qianjin Yifang* (Supplement to *A Thousand Golden Remedies*, by Sun Simo) (about +680) about the use of beans in secret formulas for washing and bathing. Wang Tao then gives about 220 recipes involving many kinds of saponin detergent. Many of these are medicated detergents, which have drugs and perfumes added. There are two especially for face washing, five for hair washing, and eight for bath soap. Among those is a powder, *doumo*, prepared from the soybean "in which saponins must certainly have been contained."

13. Su Sung [or Kou Tsung-shih]. 1061. Tu jing bencao [Illustrated pharmacopoeia, or Pharmaceutical natural history]. China. [Chi]*

• ***Summary:*** Wade Giles reference: *T'u Ching Pen-Tsao*. In "Translations Concerning the Pai Ta Tou (Soy bean) from the Chih Wu Ming Shih T'u K'ao," Hagerty (1917, p. 6-8) notes that the *T'u ching* (*T'u ching pên ts'ao*), states: "The Ta tou huang chüan (gives Chinese characters = Yellow soybean + roll or coil), or Bean sprouts, and Shêng ta tou, or Fresh [Raw] soy beans, are grown in the marshy land in the vicinity of Tai-shan mountain. At present they are grown everywhere. The Huang chüan, or Bean sprouts, are grown from the Shêng tou (Fresh bean) and also are called Nieh [character: fresh sprouts (see p. 35)]. When these sprouts are grown they should be dried in the sun and preserved in this manner. The name used by the Fang Shu, or Medical Prescription books, is Huang chüan p'i [characters]. At present the sprouts are generally given to women after childbirth to purify their milk and increase their strength.

"The Ta tou, or Soy bean, has two varieties, white and black. These black beans are used medicinally, but the white variety is not. The very small variety is called the Hsiung tou [characters] (Male bean), and is considered to have excellent medicinal virtues, and may be made a constant article of diet without any bad effects upon the system. It is also employed medicinally in many ways. The fluid made from this bean is very cooling to the human system, and is good for the cure of cinnibar [cinnabar, mercuric sulfide, HgS] poisoning and all forms of poisoning from eating herbs, etc. When made into Fu [character], or Bean curd, it has a cold effect upon the human system and excites the temper. If it is fried and eaten, it has a heating effect. If they are soaked in wine they make a good remedy for the cure of colds. When made into Shih [character], or Bean relish [fermented black soybeans], it is very cooling to the system. The Huang chüan, or Bean sprouts, and Chiang [character; Chinese miso], or Soy sauce, both have a uniform or even effect upon the system.

"If bean food is eaten by oxen, it has a warm effect upon their systems, but if eaten by horses, the effect upon them is cooling. Although one article of food, it produces different effects. Generally speaking, it is also suitable to use medicinally. As a cure for poison from eating Wu t'ou (Aconite), it is better than the 'Hsien fang,' or Fairies' prescription. If the Huang, or yellow variety [of soy bean], is ground into a powder and eaten, it will satisfy the hunger during the time of famine. If these bean foods are eaten too freely during a short period, the body will become heavy, but if eaten for a long period you will feel as usual.

"The ancient prescription books had a purple soup which was a good remedy for purifying the blood, curing colds, relieving general oppressiveness of the body, etc. This remedy will have good effect if taken two days after childbirth. Another prescription is made as follows: Take five 'Shêng,' or pints, of selected Wu tou [characters], or Black [soy] beans, wash clean and soak in one and one-half 'tou,' or peck measures, of wine. Fry the beans and wait until the smoke is gone and dip the whole in wine. When the wine has turned into a red-purplish color then remove the beans. The measure of the dose which may be taken can be regulated according to your needs. The ordinary dose is three 'chan,' or cups, during the day and night.

"N.B.–Balance (about six rows of characters) of Fu fang, or Medical Prescriptions, is omitted."

Joseph Needham. 1986. Science & Civilisation in China. Vol. 6, Part 1, p. 281. The "emperor Jen Tsung, ordained in +1057 another pandectal treatise, entrusting its preparation" to four highly qualified men, including "the outstanding scientific thinker and statesman Su Sung... A new procedure was now adopted, an imperial rescript being sent to all the prefectures and *hsien* cities of the empire instructing governors and magistrates to have drawings made of the most important drug plants of their regions. In due course, more than a thousand of these reached the capital." This measure was intended to improve the drawings of the previous century and restore the lost iconography of the Thang [T'ang] dynasty. "But the upshot was two treatises rather than one." The first compilation by Chang Yü-Hsi was published in +1060. "Su Sung in his turn brought out in +1061 the *Pên Ts'ao T'u Ching* (Illustrated Pharmacopoeia, or Pharmaceutical Natural History), not all pictures but containing much text different from Chang's, as we know

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from the later pandects, which always quote them separately. Both these works were greatly appreciated–and not in China only." Footnote e: The title of this work "was often afterwards quoted inverted as *Thu Ching Pên Ts'ao*, even by high authorities, but wrongly according to evidence from the Sung bibliographies."

Letter from Dr. H.T. Huang, expert on the history of Chinese food and agriculture. 1996. Sept. 29. "The earliest document with an illustration of the soybean is probably the illustrated *Hsin Hsiu Pên Ts'ao* (New, Improved Pharmacopoeia), +659. Illustrations to this work are now lost, but some are preserved in the *T'u Ching Pên Ts'ao* of +1061 and later in the *Ch'ung Hsiu Cheng-Ho Ching-Shih Cheng-Lei Pei-Yung Pên Ts'ao*, generally known as *Cheng Lei Pên Ts'ao* (CLPT), +1249 (final version), which remains available today. The entry on soybean (*Dadou*) in the CLPT includes a picture of the plant. A copy is attached."

Huang (2000, p. 296-97). This work "states that the 'white sprouts from the mung bean, *lüdou*, are considered a delicacy among vegetables'" (Footnote: C.N. Li 1958, p. 272), suggesting that they were superior to soybean sprouts.

14. Tang Shenwei, comp. 1082. Zhenglei bencao [Reorganized pharmacopoeia]. China. Passage on soy reprinted in C.N. Li 1958 #299, p. 220-221. [Chi]

• ***Summary:*** Wade-Giles reference: *Chêng Lei Pên Ts'ao*, compiled by T'ang Shên-Wei. Song dynasty. Needham (1986, p. 561) says that the full title of this work (in W.-G.) is *Ching-Shih Chêng Lei Pei-Chi Pên Ts'ao*. This important work discusses the medicinal properties of foods. Chapter 25 states that the soybean (*dadou*) can be used to make sprouts. When these sprouts are dried, they are called "yellow curls" (*huangjuan*). You can also use the [undried] sprouts as food.

Chapter 25 also contains a long passage from the *Bencao Tujing* (Illustrated pharmacopoeia) (+1061) on dried soybean sprouts ("yellow curls"), fresh soybean sprouts, and mature dry soybeans (which see).

Chapter 25 states that fermented black soybean sauce (*shizhi;* W.-G. *shih chih*) from Shan or Shanzhou (same as today's Shaanxi province) can be kept for years without deterioration. Note 1. This passage suggests that this type of *shizhi* was a fermented product which would keep as long as today's soy sauce. If this is true, then *shizhi* would be a precursor of the soy sauce (*jiangyou*) that originated in China in the late Song dynasty (Huang 2000, p. 361).

The next passage appears in a much later book titled *Sannongji*, by Zhang Zongfa (W.-G. *San Nung Chi*, by Chang Tsung-Fa) (Records of the three departments of agriculture) (+1760). Young soybean plants (*doumiao*) grow to a height of 1-2 feet (*chi*). The leaves are round with a pointed tip; their color is green (*qing*) and they have hairs (*mao*) on the surface. One stem divides into branches. In the fall, white flowers appear; they are white or purple, and grouped together. The pods (*jia*) are more than an inch (*cun*) long, and they typically contain 3-4 seeds, or at least 1-2 seeds. The seeds fill the pods. The pods grow separately from the leaves. The varieties are early, middle, and late. The pods are either large or small, round or flat. The colors of the seeds are yellow, white, red (*chi*), black, spotted / speckled (*ban*), or dark brown. You can [use the seeds to] make jiang or fermented black soybeans (*shi*), tofu (*fu*) or sprouts (*ya*). You can press them to give yield oil (*you*). You can roast / fry (*chao*) them to give nuts (*guo;* soynuts). You can make candy from grain sweetener (*tangmo*). It has many uses. The pods are called *jia*. The leaves are called *huo*. The stems are called *qi*. The seeds are called *dou*. (Translated by H.T. Huang, PhD, Jan. 2003).

Note 3. This is the earliest document seen (Feb. 2003) that mentions red (*chi*) soybeans.

Also mentions malt sugar (*yitang*) and gluten (Chap. 25). (See Huang 2000, p. 296, 460 [malt sugar], 498 [gluten], 611). This work was enlarged in +1116 and retitled *Chêng-Ho Hsin-Hsiu Ching-Shih Chêng-Lei Pei Yung* (New revision of the classified and consolidated armamentarium pharmacopoeia of the Chêng-Ho reign period). It was then re-edited +1204 in Jurchen Chin, and definitively republished +1249 in Yuan; later reprinted many times. See also Hummel (1941).

15. Tang Shenwei, comp. 1082. Jingshi zhenglei beiji bencao [The classified and consolidated armamentarium of pharmaceutical natural history]. China. Passage on soy reprinted in C.N. Li 1958 #299, p. 220-221. [Chi]

• ***Summary:*** Wade-Giles reference: *Ching-Shih Chêng Lei Pei-Chi Pên Ts'ao*, compiled by T'ang Shên-Wei. Song dynasty. See *Zhenglei Bencao* (1082).

16. Luo Yuan. 1174. Erya yi [Wings for the *Literary Expositor* (Ancient Chinese dictionary of classical terms)]. China. Passage on soy reprinted in C.N. Li 1958 #106, p. 81. [Chi]

• ***Summary:*** Wade-Giles reference: *Erh Ya I*, by Lo Yüan. This is a relatively important work. The section titled "Soybeans" (*shu*) begins by stating that *shu* is the same as *dou* (soybeans). There are many varieties. This book then cites and repeats the information about soybeans in many earlier Chinese-language documents that discuss or mention *shu* including: (1) *Guangya* (Ancient dictionary: Enlargement of the *Erh Ya*) (+230). (2) *Guangzhi* (Extensive records of remarkable things) (+390). (3) *Lüshi chunqiu* (Master Lü's spring and autumn annals) (-0239). (4) *Shijing* (Book of odes) (-1000).

Then this book continues: As Confucius said, to eat soybean congee (*chuoshu*, literally "suck soybeans") and drink water (*yinshui*) is a joy [which makes one content]. This is called "filial piety" [to be satisfied with what you have]. It does not depend on the abundance of your material possessions.

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According to the *Hanshu* [also called *Qian Hanshu*] (History of the Former Han dynasty) (+76), this year the people are hungry so they have to be satisfied with eating half of their food as soybeans (*shu*) [which were not highly regarded]. They say the army is lacking in grain, and so they mix soybeans (*shu*) with other grains to use as rations–which means even the poor are not lacking in righteousness. So the use of soybeans is extensive.

Then there are several characters that mean various kinds of pastry and cakes. In making pastry and cakes, today they like to use rice. Certain names are given to those made by steaming with millet and those made with soybeans (*dadou*); they complement each other. They also use broken pieces of soybeans (*douxiao*). They also use soybeans to make fermented black soybeans (*shi*). According to the *Chuci* (W.-G. *Ch'u Tz'u*) (Poems of the state of Ch'u) (-0250), the characters *daku* meaning "extremely bitter" or "great bitterness" appear. It has been said that *daku* means "fermented black soybeans" (*shi*) [probably by Wang Yi, 2nd century A.D.]. And it has been said [in the *Qimin Yaoshu*] that you can take the "juice" from fermented black soybeans to obtain fermented black soybean extract (*shizhi;* literally "juice from *shi*"). And you can mix and blend this extract with different flavors such salty taste, vinegar, pepper, ginger, malt sweetener, and honey. In the *Yangshenglun* [Discourse on nurturing life...] (+223), Xi Kang says that eating soybeans (*dou*) makes the stomach feel heavy. (Translated by H.T. Huang, PhD, Aug. 2002).

Dr. Huang notes: Confucius was a very frugal man who found joy in simple things. Compare the attitude of this book with that of the *Xunzi* (Book of Master Xun) (-240) which depicts soybean congee as the ultimate hardship food. For more on fermented black soybean extract, see Huang (2000, p. 359-60).

17. Lin Hong. 1200? Shanjia qinggong [Basic needs for rustic living]. China. Passage on soy reprinted in C.N. Li 1958 #303, p. 221-22. Undated. [Chi]

• ***Summary:*** Wade-Giles reference: *Shan Chia Ch'ing Kung*, by Lin Hung. Southern Song dynasty. Japanese reference: *Sanka Seikyo / Sankaseikyo*, by Rinko. An important work. The section titled "Swanlike yellow bean sprouts" states (see Huang 2000, p. 296): Several days before the 15th day of the 7th moon, people soak black soybeans (*heidou*) in water then allow them to sprout as follows: Spread grain chaff on a tray, top the layer with sand, plant the beans in the medium, then press surface with a wooden board. When beans are sprouted [remove board and] cover tray with an [inverted] pail. Remove pail each morning so that sprouts are exposed briefly to the sun. This will enable sprouts to grow evenly and be protected from sun and wind. On the 15th day, display tray in front of the ancestral tablet. After three days, remove tray and wash sprouts clean. Grill sprouts with oil, salt, vinegar and spices to give a savory dish. They are especially good when rolled in a sesame pancake. Because the sprouts are light yellow, and are shaped like the neck of a swan [goose], they are called "swanlike yellow bean sprouts" (*Ehuang dousheng*). Huang (2000, p. 296) notes that this is the "earliest documentation we have on the preparation and use of soybean sprouts as a food" is in this book. A footnote (Huang, p. 296) states: "The 15th day of the 7th month is the Summer Festival *Zhongyuan* when offerings are made to the ancestral spirits. A long soybean sprout with a yellow tip may resemble the neck of a swan with a yellow beak, hence the name Swan-like bean sprout. Except for the step of exposing the germinating beans to sunlight, this recipe is basically similar to those given in later works, in which the beans are always kept in the dark to prevent the generation of chlorophyll and the emergence of a bitter taste."

Note 1. This is the earliest document seen (Feb. 2007) that uses the term *heidou* to refer to black soybeans.

Huang (2000, p. 301) states that this work describes two dishes containing tofu: One, named Snow and Red Cloud Soup, is prepared by cooking tofu with hibiscus flowers; the other, Tofu à la *Su Dongpo* [named after the great Song dynasty poet (W.-G. Su Tung-P'o), who lived 1036-1101] is made from yew nuts, scallions, oil and soy sauce.

Huang (2000, p. 354) says that this work contains at least nine recipes in which *jiang* is used, including the celebrated Tofu à la *Su Dongpo* mentioned above.

Huang (2000, p. 358) notes that the earliest references to the term *jiangyou* [soy sauce; the same characters used to write the Japanese word *shoyu*] occur in two works of the late Song dynasty. This work (which may be the first of the two) gives four recipes in which *jiangyou* is used to flavor various vegetables and seafood. A footnote summarizes the recipes, with page numbers from the 1985 modern Chinese version: Soy sauce, ginger threads, and a little vinegar are used as a dressing for lightly cooked young chives (p. 34). A stir fry of spring bamboo shoots, bracken leaves and fish or shrimp is seasoned with soy sauce, sesame oil, salt and pepper (p. 47). Soy sauce is used with sesame oil, pepper and salt to flavour young bamboo shoots, mushrooms and Chinese wolfberry seeds (p. 66). Soy sauce and vinegar are used to season blanched shoots of the daylily [day lily; genus *Hemerocallis*].

Huang continues (p. 358): Neither work tells us how the *jiangyou* was prepared. This does not necessarily mean that soy sauce first originated during the Song. Rather, it means rather that by the time of the Song, *jiangyou* had become the accepted name for the liquid seasoning derived from *shi* or *jiang*. Most scholars agree that soy sauce is almost as old as soy *jiang*, but opinions differ as to what it was called before it became known as *jiangyou* during the Song. A footnote (p. 358) cites three Chinese-language works from the 1980s that discuss this issue.

A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing

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dynasties." Jiang itself is used in 9 recipes, soy sauce called *jiangyou* in 3 recipes, and soy sauce called *jiangzhi* (W.-G. *chiang chih*) in 1 recipe. Note 2. This is the earliest Chinese-language document seen (April 2012) that uses the word *jiangyou* (one of two documents) or the word *jiangzhi* to refer to soy sauce.

It is surprising that the sauce made from *jiang* should have been called *jiangyou* at all. Throughout the history of the Chinese language *you* has always meant the oily (or greasy), water insoluble substance derived from animal, vegetable, or mineral sources, for example, *zhuyou* (lard), *niuyou* (butter), *chaiyou* (rapeseed oil), *xiangyou* (sesame oil), *tongyou* (tung oil), *shiyou* (petroleum) etc. *Jiangyou* (or *shiyou*) is the one, notable exception. It is an aqueous solution (or suspension) of a variety of substances and by no stretch of the imagination can it be construed as a *yu* (oil). Nevertheless, the term *jiangyou* (soy sauce) gained acceptance in the Song dynasty and is now firmly ensconced in the language, perhaps as an indication of its very special role in the daily life of the Chinese. Thus, we have a surprising situation in which an English translation, 'soy sauce' (sauce prepared from the soybean) is a more rational name for the product than its Chinese original, *jiangyou* (oil derived from *jiang*) (p. 358).

Note 3. This is the earliest document seen (Aug. 2007) that mentions sesame oil, which it calls *xiangyou*.

Question: If soy sauce were made from whole soybeans (which contain about 16-20% oil), why wouldn't that oil rise to the top of the soy sauce, whence it would have to be skimmed off before the soy sauce could be used? Dr. Huang answers (Oct. 2002): There should have been a lot of oil on top of the soy sauce. However in the early Chinese literature, some of which goes into great detail about the process, there is no mention of any oil atop the soy sauce. In the old process, which used mixed cultures of microorganisms, I suspect much of the oil is simply hydrolyzed by lipase enzymes. The oil may have started to appear in modern times when they began to use pure cultures.

Fukushima (1989, p. 4): "The first appearance of the name of chiang-yu was in *Shan-chia Ch'ing-kung* (*Sanya-Seikyo* in Japanese) by Lin Hung (*Rin Ko* in Japanese) in the Sung dynasty (960-1127 AD)."

Bo (1982): It was recently discovered that the term "chiang-yu," written with the same characters as the Japanese term "shoyu," and both meaning soy sauce, was used for the first time in China (or the world) in this work, written during the Sung dynasty. Shoyu was used either in recipes that didn't contain meat, or in side dishes. It was an important seasoning to be sprinkled on foods.

18. Wushi zhongkuilu [Madam Wu's recipe book]. 1200? China. Passage on soy reprinted in H.T. Huang 2000, p. 358. Undated. [Chi]

• ***Summary:*** Wade-Giles reference: *Wu Shih Chung Khuei Lu*. Also known as *Chung Khuei Lu*. Author unknown; reputed to be Madam Wu. Southern Song dynasty. Huang (2000, p. 358) notes that the earliest references to the term *jiangyou* [soy sauce] occur in two works of the late Song dynasty. This work describes the use of *jiangyou* in cooking meat, crab, and vegetables. A footnote summarizes the recipes, with page numbers from the 1987 modern Chinese version: Soy sauce is used to marinate sliced raw meat before stir-frying (p. 8). Crab is cooked in wine, soy sauce, vinegar, wine fermentation lees and sesame oil (p. 10). Soy sauce, sesame oil, vinegar and pepper are mixed as a dressing for various vegetables (p. 21).

A full-page table (Huang 2000, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." Only seasonings based on jiang (fermented soybean paste) are used in this book; none are based on soy nuggets (*shi*). Jiang itself is used in 5 recipes, and soy sauce made from jiang (*jiangqing*) in 3 recipes.

Note: This is the earliest Chinese-language document seen (April 2012) that uses the word *jiangyou* to refer to soy sauce (one of two documents).

19. Buddhist monk Kakushin returns to Japan during the Sung dynasty from China having learned how to make Kinzanji miso (Early event). 1228.

• ***Summary:*** In *The Book of Miso*, by Shurtleff and Aoyagi (1976, p. 219-20) we read: "The origins of modern shoyu can be traced more clearly to the mid 1200s when the Japanese priest Kakushin [1207-1298] returned from China, having learned there the technique for preparing Kinzanji miso. Establishing himself at Kokoku-ji temple near the town of Yuasa (in today's Wakayama prefecture, just south of Osaka), he began to teach the local people both Buddhist meditation and the method for preparing his miso specialty. According to non-documented oral tradition, he soon discovered that the liquid which settled to the bottom of the miso kegs made an excellent seasoning, so he decided to alter the process slightly by increasing the proportion of water in the basic mixture. After the regular fermentation period, the excess liquid was ladled off and briefly heated to stop fermentation... Kakushin's creation, too, came to be known as *tamari*, deriving its name from the verb *tamaru*, meaning 'to accumulate,' as 'water accumulates into ponds,' and by 1260 it was being produced for home consumption in the nearby towns of Yuasa and Hiromachi... By 1290, the first Yuasa tamari was said to have been sold commercially, and soon even poets began to sing the praises of this new delicacy, calling it *murasaki* or 'deep purple,'..."

In "Chronology of Soybeans," by Akio Saito (1985, *Daizu Geppo* (*Soybean Monthly News*), Jan. p. 12-14–in Japanese) we read: 1228–The Buddhist monk Kakushin returned from Sung dynasty China having learned the method for making fermented Kinzanji miso. While fermenting the miso, he discovers that the liquid which

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gathers on the bottom of the vats can be used as a tasty seasoning. This tamari is considered the first soy sauce in Japan. Kinzanji miso is a type of *namémiso* (Finger Lickin' Miso) made from roasted soybeans and barley koji. To these are added eggplant, white melon (*shiro uri*), etc., and the mixture is fermented.

20. Wu Zimu. 1275. Mengliang lu [Dreams of the former capital]. China. Passage on soy reprinted in C.N. Li 1958 #121, p. 86. [Chi]

• ***Summary:*** Wade-Giles reference: *Mêng Liang Lu*, by Wu Tzu-Mu. This important work is a description of Huangzhou, the capital, towards the end of the Southern Song dynasty. The "Different bureaus" section states that they have fields of rice, wheat, and soybeans (*dou*) used [perhaps as forage] mainly to feed horses belonging to the various government agencies.

The "Street vendors on mats" section describes foods they are selling in Hangzhou–capital of the Southern Song dynasty, including bean-flavored water (*douershui*) and sweet soybean soup (*gandoutang*), honeyed jujubes, fruits, and cooked meats.

The "Market that sells things at dawn" section states that in the summer they sell various things including young soybean congee (*douzizhou*). Note 1. Young soybeans might refer to green vegetable soybeans.

The "Miscellaneous products" section states that children are selling different kinds of foods, including two unknown varieties of soybeans (*qidou* and *fadou*, "law + bean"), brownish-green soybeans (*geqingdou*), salted young soybeans (*yandouer*, maybe green vegetable soybeans), and sugared yellow young soybeans (*douer huangtang*), and cooked soybeans ground to make a cake (*doutuan*).

The section on "Noodle shops" says that these shops sell different kinds of soups and dishes, including pan-fried tofu (*doufu*), fried fish, cooked vegetables, fried eggplant. These are shops where the common people get an inexpensive meal.

The section on "Produce" mentions grains but concentrates on beans, starting with soybeans of different colors: black (*doudahei*), purple (*dazi*), white (*dabai*), yellow (*dahuang*), and green (*daqing*). Also mentions various non-soy beans including white (flat) beans, black (flat) beans, white azuki beans (*baixiao*), red azuki beans (*chixiao*), mung beans (*lüdou*), and many others. (Translated by H.T. Huang, PhD, Sept. 2002). Dr. Huang adds: The word "former" in the title indicates that author apparently moved away from Southern Song territory, perhaps northward into that controlled by the Yuan (Mongol) dynasty, which began in 1260. Note 2. This is the earliest document seen (Sept. 2004) that uses the term *doudahei* ("bean large black") to refer to black soybeans, or the term *dabai* ("large white") to refer to white soybeans.

Huang (2000): In Lin An (present-day Hangzhou, capital of the Southern Song dynasty), "tofu soup and grilled tofu [pinyin: *jian doufu;* W.-G.: *chien toufu*] were sold in a wine shop, and a food stall specializing in vegetarian stews also sold grilled tofu" (p. 301). Fermented black soybeans (*shi*) are mentioned (p. 341). A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." In this book, jiang (fermented soybean paste) is used in two recipes and fermented black soybean sauce (*shizhi*) is used in one recipe.

This book also "states that 'things that people cannot do without every day are firewood, rice, oil, salt, soybean paste (*jiang*), vinegar, and tea.' It is clear that by the time of the Song, edible oil had advanced to the position as one of the proverbial 'seven necessities' of life" (Huang p. 436). Vegetable "oil pressing establishments were seen in the southern capital of Hangzhou" (p. 441). Northerners loved to use hemp oil for frying food. Wheat gluten (*fu*) was widely served during the Southern Song; names of four dishes served in a pasta restaurant are given (p. 500).

Wilkinson (2000, p. 854) cites this as *Record of the splendors of the capital city*, by Wu Zimu (no date given). These are reminiscences of the Southern Song capital of Lin'an (Huangzhou) modeled after *Menghualu*.

Talk with H.T. Huang. 1995, Dec. 28. The *chiang* mentioned by this work would definitely have been soybean chiang: that is what the word meant, starting a century or two before the beginning of the Christian era.

Letter from H.T. Huang, 1994 April 12, followed by talk of 1995 Dec. 28. The "seven necessities" of life are first mentioned in this book, in chapter 16, p. 136 in the 1982 edition. They are: firewood, rice, oil, salt, *chiang*, vinegar, and tea." Yet according to another respected source, the original version of the book mentioned eight necessities, the eighth being wine, which was widely used both for drinking and as a condiment in cooking. Today, however, all the modern editions of this book include only seven necessities, omitting wine. Later the list was standardized seven (see Chai Hao 1771), and the term "seven necessities of life" became popular in China during the Yuan dynasty (1279-1368). In the Yuan dynasty there were several famous dramas; this period saw the start of Chinese dramatic literature. The words were put together in rhymes of seven characters, and at least one of these mentioned the "seven necessities." They couldn't accommodate eight necessities in the rhyme, so since the Yuan it has always been standardized at seven.

Letter from H.T. Huang, PhD, expert on the history of Chinese food and agriculture. 1993. June 5. This book (1982 edition, p. 136) lists *fu* (gluten) with lamb casserole, dragon (shrimp) *fu*, parched *fu* in five flavors, and grilled *fu*. At this time, *fu* (gluten), used as a synonym for *mien chin*, seems to be widespread in the Southern Sung, China.

Note 3. This work was re-issued in 1982 by Commerce Publishers, Beijing. It is part of a series titled "Culinary

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Classics of Ancient China."

Note 4. This is the earliest document seen (Feb. 2010) that mentions grilled tofu. It is also the earliest Chinese-language document seen (Nov. 2009) that mentions Chinese-style grilled tofu, which it calls *jian doufu.*

21. Tamari-style shoyu is sold commercially from Yuasa in the Kishu area of Japan (in today's Wakayama prefecture) (Early event). 1290.

• ***Summary:*** *The Book of Miso*, by Shurtleff and Aoyagi (1976, p. 219-20) states that when the Japanese priest Kakushin returned from China [in 1228], he established himself at Kokoku-ji temple, near the town of Yuasa. By 1260 tamari "was being produced for home consumption in the nearby towns of Yuasa and Hiromachi... By 1290, the first Yuasa tamari was said to have been sold commercially, and soon even poets began to sing the praises of this new delicacy, calling it *murasaki* or 'deep purple,' a synonym for the finest shoyu, used to this day." A nine-line poem about tamari follows.

In "Chronology of Soybeans," by Akio Saito (1985, *Daizu Geppo* (*Soybean Monthly News*). Jan. p. 12-14–in Japanese) we read: 1228–The Buddhist monk Kakushin returns to Japan from Sung dynasty China having learned the method for making fermented Kinzanji miso. While fermenting the miso in Japan, he discovers that the liquid which gathers on the bottom of the vats can be used as a tasty seasoning. This tamari is considered the first soy sauce in Japan...

1288-1292–Tamari-style shoyu is sold from Yuasa in the Kishu area (in today's Wakayama prefecture).

22. Saito, Akio. 1292. [Chronology of soybeans, 122 B.C. to A.D. 1292] (Document part). In: Akio Saito, 1985. Daizu Geppo (Soybean Monthly News). Jan. p. 12-14. [Jap; eng+]

• ***Summary:*** 122 B.C.–It is said that Lord Liu An of Huai-nan (*Wainan O Ryuan*) invented tofu. Therefore is sometimes called "Wainan."

300 A.D.–By this time in Japan people are using fermented foods such as kuki, sake, vinegar, sushi, and hishio made from herbs (*kusa-bishio*) and grains (*koku-bishio*). Kuki is a bean-based product related to miso, natto, or tamari.

630 A.D.–Igunami no Otasuki is sent as a student from Japan to T'ang dynasty China (*Kentoshi*). It is thought that foods like tofu were brought back to Japan by such student monks when they returned [but there are no records of this].

701 A.D.–The Taiho Law Codes (*Taiho Ritsuryo*) are established, and they call for the establishment of the Hishio Tsukasa (Bureau for the Regulation of Production, Trade, and Taxation of Hishio and Misho), located in the Imperial Palace as an annex to the emperor's kitchen (*daizenshoku*). Soybeans were definitely used to make these fermented foods and seasonings such as hishio (like Chinese chiang), fermented black soybeans (*shi, kuki*), and misho (a forerunner of miso; the term "miso" had not yet been coined).

741 A.D.–Two new Buddhist temples are added to each feudal domain (*kuni*): Kokubunji is for monks and Kokubunniji is for nuns. It is said that from this time, fermented black soybeans (*tera nattô*, or *shiokara nattô*) spread throughout Japan. They are made from soybean koji, which is soaked in salted water and dried.

794–The capital of Japan is relocated to Kyoto from Nara. The Heian period (794-857) begins.

794-1190–Salted pickles (*shio-zuke*), hishio pickles (*hishio-zuke*), miso pickles (*miso-zuke*), and sake lees pickles (*kasu-zuke*) are eaten. The pickles were made by various methods. But only during and after the Muromachi period (1338-1573) were the various pickles made often.

802–Sakanoue no Tamuramaro (758-811) recommends that farmers in Tanzawa grow soybeans as an emergency food.

840–Each feudal domain (*kuni*) is encouraged to plant millet, barnyard millet, barley, wheat, soybeans, azuki beans, and sesame seeds.

901–The Chinese character *so* in the present word *miso* appears for the first time in the *Sandai Jitsuroku.*

927–The *Engishiki* is completed by Fujiwara no Tokihira (871-811) and others. In this book it is written: "In the feudal domain of Omi 60 koku of soybeans [1 koku = 47.6 gallons or 180 liters], in the domain of Tanba 30 koku, in the domain of Harima 20 koku, in the domain of Misa 10 koku, and in the domain of Iyo 10 koku are recommended (*susumu*). It seems that the soybean was an important crop in those days. Soybeans, rice, wheat, sake, and salt are given as the raw materials for making misho (a product resembling miso). The places famous for making misho are Omi, Hida, Yamato, etc. There are 27 misho shops in the Nishi no Kyo area of Kyoto. It is stated in the *Engishiki* that in order to make 1.5 koku of hishio you need 3 koku of soybeans, 1.5 koku of salt, 0.15 koku each of rice, wheat, and sake, and 0.043 koku of non-glutinous rice (*uruchi-mai*). Hishio at that time would seem to resemble today's kidamari; it would seem to have been very salty.

1068?–Salty natto (*shiokara nattô;* probably fermented black soybeans) appears for the first time in the book *Shin Sarugakki*, by Fujiwara no Akihira (lived 989-1066). In this book the lifestyle, manners, and customs of the time are described.

1083–Stringy natto (*itohiki nattô*) is discovered accidentally in Oshu (northeast Japan) during the conquest of Oshu by Minamoto (Hachimantaro) Yoshiie (lived 1041-1108). It is said that the natto was made when cooked soybeans were placed in a sack strapped over the back of a horse. The warmth of the horse caused the fermentation. There are so many legends like this on in the northeast prefectures (*Tohoku Chiho*) of Japan that it seems possible

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that natto was originally made there.

1183–Tofu is first mentioned in a document from the Great Kasuga Shrine (*Kasuga Taisha*) in Nara. The characters used to write the word tofu then were different from the characters used today. It seems that this tofu was very hard.

Note: See Diary of Hiroshige NAKAOMI, entry of 1183.

1192–The Kamakura period and shogunate begins as Minamoto no Yoritomo (1147-1199) becomes the first head shogun.

1228–The Buddhist monk Kakushin returns to Japan from Sung dynasty China having learned the method for making fermented Kinzanji miso. While fermenting the miso in Japan, he discovers that the liquid which gathers on the bottom of the vats can be used as a tasty seasoning. Note 1. This tamari is considered the first soy sauce in Japan. Kinzanji miso is a type of *namémiso* (Finger Lickin' Miso) made from roasted soybeans and barley koji. To these are added eggplant, white melon (*shiro uri*), etc., and the mixture is fermented.

1288-1292–Tamari-style shoyu is sold from Yuasa in the Kishu area (in today's Wakayama prefecture).

Note 2. This document contains the earliest clear date seen for the cultivation of soybeans in Japan (A.D. 802, and 840), and for the appearance of the term "tamari" in Japan (1228).

Note 3. This is the earliest document seen (Sept. 2000) that mentions sesame seeds (802 A.D.). Address: Norin Suisansho, Tokei Johobu, Norin Tokeika Kacho Hosa.

23. Jujia biyong shilei quanji [Essential arts for family living (encyclopedia)]. 1301. China. Passage on soy reprinted in H.T. Huang 2000, p. 352. Undated. [Chi]

• ***Summary:*** Wade-Giles reference: *Chü Chia Pi Yung Shih Lei Ch'üan Chi*, author probably unknown or maybe by Hsiung Tsung-Li (pinyin Xiong Zongli). Late Yuan (Mongol) dynasty.

Huang (2000, p. 352) states that this book "presents two methods for making jiang from soybeans, one for *shu huang jiang* (ripe yellow soy paste) and the other for *sheng huang jiang* (raw yellow soy paste). The names are actually misleading since the 'ripe' and the 'raw' refer to the manner in which the beans are treated before mixing with wheat flour for the first fermentation and do not refer to the quality of the final product. In the *shu* or 'ripe' case, the beans are roasted and ground into flour; in the *sheng* or 'raw' case the beans are soaked overnight and boiled until soft and tender. The product from the first fermentation is called *huangzi* ['yellow child,' soybean koji] and well as *jianghuang* ['jiang yellow']."

Huang (2000, p. 355-56) gives an interesting full-page table which compares the processes for making the following types of jiang: Soybean (*dou*), wheat (*mien*), sweet flour (*tianmien*), azuki bean (*xiaodou*), jack bean, barley (*damai*), and elmnut (*yuren*). Each of the processes except one is based on the *Jujia Biyong* (ca. 1350); the process for making sweet flour jiang is based on the *Bencao Gangmu* (The great pharmacopoeia) (+1596).

A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." Only seasonings based on jiang (fermented soybean paste) are used in this book; none are based on fermented black soybeans (*shi*). Jiang itself is used in 17 recipes, and soy sauce made from jiang (*jiangqing*) in 1 recipe.

Huang (2000, p. 297) notes that this is the earliest document seen to use the term *douya*, which, in English, is the modern term–"bean sprouts." Mung beans (*lüdou*) are the preferred beans for making such sprouts. A long quotation describes the process in detail and gives a recipe.

Huang (2000, p. 255) quotes a passage describing the process for making *jufu* (also known as *jubing*), from dairy milk curds. Its says to coagulate cow's milk by adding vinegar, just as when making tofu (*doufu*). When the dairy curds are fully formed, drain in a silk bag and press with a stone. Add salt and store in a jar.

Letter from Dr. H.T. Huang, 1996, Sept. 29. "I am glad you brought up the question of when vegetarian mock meat dishes were first prepared in China; it is one that requires further research. The earliest examples of mock meat dishes I have found so far were made with *mien-chin* (wheat gluten)." Gluten is used "in a recipe for mock lung sausage and one for mock eel." The book contains 4 vegetarian recipes using *mien chien* (wheat gluten), found on pages 132-34. These are vegetarian versions of grilled liver, barbecued liver, mock fermented beans (*doushi* = fermented black soybeans), and mock fish.

Note 1. This is the earliest document seen (Dec. 2005) concerning roasted soy flour.

Note 2. This is the earliest document seen (Aug. 2002) concerning a meatless sausage.

Huang (2000, p. 194-95) notes that this book contains probably the earliest account of the process for making red ferment [*hong qu;* red fermented rice] and a red wine.

Note: This is the earliest document seen (Nov. 2011) that mentions fermented red rice, which it calls *hong qu*.

Bray (1984, p. 623): Translates the title as "Collection of certain sorts of techniques necessary for households (encyclopedia)." Published in Yuan, +1301. Probably by Hsiung Tsung-Li. Ed. Ming, +1560, T'ien Ju-Ch'eng. Partly reprinted in Shinoda & Tanaka (1973), "A Collection of Chinese Dietary Classics." Also discusses hemp oil, which was widely used in traditional China, was considered to have an offensive smell, and was rated lowest of all the cooking oils, but it was a good lamp oil as it did not smoke or hurt the eyes" (p. 51).

Bo (1982): This book mentions wheat chiang. It also

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gives a detailed description of the method for making fermented black soybean sauce: Two months after September, heat clear sesame oil, stir in 3 *tou* [unit of measure] of good fermented black soybeans (*shi*), mix, steam, and cool. Sun dry then steam again. After repeating this process 3 times, mix in 1 *tou* of white salt and put everything in a large cauldron with 3-4 tou of hot water. Add 1 *ry* each of three spices, 5 *kin* each of white onion and (?). Simmer down to two-thirds the volume and store in a container. From this it is clear that fermented black soybean sauce was a kind of soy sauce with flavorings and spices.

24. Wang Zhen. 1313. Wangzhen nongshu [Wang Zhen's agricultural treatise]. China. Passage on soy reprinted in C.N. Li 1958 #131, p. 92-93, and #307, p. 222-23. Illust. Also published in 1956 by Zhonghua Press, Beijing. (Pinyin: Wang Zhen. Nongshu). [Chi]

• ***Summary:*** Wade-Giles reference: *Wang Chên Nung Shu*, by Wang Chên. The title of this illustrated Yuan (Mongol) dynasty book is also given as simply *Nongshu*, since Wang Zhen is the author. There are three numbered sections titled "Principles of agriculture and sericulture;" soy is mentioned in each.

No. 1. The subsection titled "Annual agricultural activities" states: In the second month, plant soybeans. In the eighth month, mow the soybean stems (*yi doujiao;* i.e., harvest the soybeans). In the ninth month, when you might get frost, it is time to harvest soybeans (*dadou*).

No. 2. The subsection titled "Methods of planting #6" lists all the common seeds that can be planted in a field; these include panicum millet, setaria millet, paddy rice, hemp, barley, wheat, soybeans (*dadou*), and azuki beans (*xiaodou*).

It then describes four different planting methods: (1) Broadcasting (*manzhong*), drill planting in rows (*louzhong*), *guazhong*, and planting in difficult places *ouzhong*. For broadcasting: Carry a container of 2,000 cc (2 *dou*) capacity containing the seed grain under your left arm. Using your right hand, take a handful of seed from the container as you walk and, every three steps, scatter it over the prepared field, trying to get even distribution, so that the young plants will be neither too crowded nor too sparse. This was the method used in northern China during the Qin, Han, and Jin dynasties (221 B.C. to A.D. 420). Another method more often used in northern China was drill planting in rows, which is described in the *Qimin Yaoshu* (+544). A special machine (perhaps pulled by oxen) was used to compact the earth, while drilling holes in it. A person walked behind and stamped the holes with his feet. Today (+1313) they use a seed-drill (see Bray 1984, p. 256-57) which automatically plants the seeds in rows. "One man is needed to lead the ox and one to hold the drill, shaking it as he walks so the seed falls by itself." The *ouzhong* method is used near the hilly areas, where there are steep rocky hillsides or city walls. You apply fertilizer and irrigate [by hand].

No. 3. The subsection titled "Organic fertilizers #8" quotes the *Qimin Yaoshu:* To enrich the field, mung beans (*lüdou*) are best. Next best are azuki beans (*xiaodou*) and sesame seeds (*huma*). It's best to plant in the 5th to 6th months. In the 7th to 8th months you kill them [probably by plowing under as green manure]. In the spring, if you plant cereals [after the legumes], you will get 10 piculs per mou. It's as good as using the droppings of silkworms, as well as other excreta [from both farm animals and humans]. Note: Shows Chinese awareness of growing legumes before cereal grains to increase the yield of the cereals. (Translated by H.T. Huang, PhD, Sept. 2002).

The section titled "Soybeans" (*dadou*, also called *bidou*) states: There are three kinds of soybeans (*dadou*): white, black, and yellow. The *Guangya* (+230) says the soybean (*dadou*) is *shu*. The *Erya* (200 B.C.) says that "*rongshu* is the same as *renshu*." Then comes a long quotation about when to plant soybeans. Black soybeans are good for relieving hunger and also as a reserve against famine years. In years of abundance you can use them as fodder / feed (*liaoshi*) for cattle and horses. Yellow soybeans (*huangdou*) can be used to make tofu (*doufu*), and to make jiang and related materials [perhaps such as soy nuggets and soy sauce]. White soybean congee (*baidouzhou*) can be used as a supplemental food. The three soybean varieties (*sandou*) have different colors and different uses, but they are all beneficial grains.

Huang (2000, p. 441-57) states that this is the earliest Chinese document seen which contains a description of an oil press (*youzha;* used to press oil from seeds–in this case sesame seeds). He translates the long passage describing the wedge press, notes that the illustration which accompanies it bears no relationship to the description, then examines why the oil press was developed so much later in China than it was in Mediterranean civilizations–where olive oil was being pressed by the 6th century BC. The most common wedge press was made from large tree trunks, slotted and hollowed out. The seeds were roasted in a large pan over a stove, crushed, then pressed, using wedges hit by a hammer or mallet. A photo (p. 449, from Hommell 1937, p. 91) shows a wedge press. Note: This is the earliest document seen (Nov. 2003) that mentions a wedge press–but not in connection with soybeans.

Bray (1984, p. 628) cites this as *Nung Shu* (Agricultural Treatise). Published in Yuan, +1313. By Wang Chên. Textual references are to the 27 chüan Palace ed. of 1783, prefaced 1774. However it is indexed under *Wang Chên Nung Shu* and refers to many ingenious early Chinese agricultural implements. Concerning woodblock printing (p. 49): The development of printing during the Song dynasty enabled the Chinese government to disseminate both old and newly commissioned agricultural works. Thus, the number of agricultural works published in China increased exponentially from the Song on. Woodblock printing also made possible the use of illustrations, yet relatively few

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Chinese agronomists used this new technology. The great pioneer in this field was Wang Chên, author of this book in 1313. Sadly, "most subsequent authors were content to simply crib their illustrations, if any," from this book. The book devotes a special section to the preparation and weaving of hemp (p. 535).

Concerning soybeans (Bray, p. 514): "Black soybeans are a food for times of dearth; they can supplement [cereals] in poor years, and in good years they can be used as fodder for cattle and horses." Of the various kinds of soybeans, "although some were thought to be fit only for fodder except in times of famine, others were considered to make wholesome porridges and gruels."

Concerning kaoliang, Bray says (p. 449) that the word *kao liang* (literally "tall millet") first appears in this document, but the plant was more commonly known in pre-modern times as *shu shu* ("Szechwan millet").

Bo (1982): This work states, "Soybeans are the grain that helps the world. Tofu and chiang ryo? are made from them. The latter product, used in the recipes in the book, must be soy sauce."

Bray (1981): A practical handbook on the essentials of agriculture and sericulture in south China. With the *Qimin Yaoshu* perhaps the most fundamental work. The text (except for capitalization and commas) is identical to that in Hagerty 1917.

Perkins (1969): Beancake is not mentioned in the 1313 edition of this book.

Needham (1965), in *Science and civilisation in China. Vol. 4, Physics. Part II: Mechanical engineering*, in the section on oil mills (p. 206-10), states that Wang Zhen first describes the horizontal wedge press used for pressing oil from Chinese oilseeds. However soybeans are not specifically mentioned.

Hagerty (1917, p. 17): Cited as "Nung Shu (Treatise on Husbandry), by Wang Cheng." "The Ta tou bean includes three varieties, Pai, or White, Hei, or Black, and Huang, or Yellow. The Pai tou, or White bean, is utilized for making congees or gruels, but all kinds may be mixed and used for food" (See: Bretschneider, E. 1882. *Botanicon Sinicon*. 1:81).

25. Ni Zan. 1360. Yunlintang Yinshi Zhidu Shi [Dietary system of the Cloud Forest Studio]. China. [Chi]
• ***Summary:*** Wade-Giles reference: *Yün Lin T'ang Yin-shih Chih-tu Chih*, by Ni Tsan. Yuan dynasty. Huang (2000) states that this book mentions only one dairy product, milk curds (*rufu;* W.-G. *jufu*), a name that would later be used to refer to fermented tofu (p. 256).

Concerning the history of soy sauce, Huang observes (P. 362): The role of fermented black soybeans as a precursor to soy sauce is further emphasized in the very first specific reference we have to the making of *jiangyou* (soy sauce). Found in this book written by the famous Yuan painter Ni Zan, it says: "For every official peck of yellow soybean koji (*huangzi*), have ready 10 catties of salt and 20 catties of water. On a *fu* day, mix them [in a jar] and incubate." Note 1. *Huangzi* is soybeans covered with a mycelium of *Aspergillus* mold used as a substrate for making fermented black soybeans (*shi*). A *fu* day is one of the 3 *geng* days during the summer, based on the calendrical system according to 'celestial stems' and 'earthly branches.' Essentially, it means that the operation should be carried out when the weather is warm.

A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." Only seasonings based on jiang (fermented soybean paste) are used in this book; none are based on fermented black soybeans (*shi*). Jiang itself is used in 3 recipes, soy sauce made from jiang (*jiangyou*) is used in 1, and another type of soy sauce made from jiang (*jiangshui*) is used in 2 recipes. Note 2. This is the earliest document seen (April 2012) that uses the word *jiangshui* to refer to a type of soy sauce.

Also discusses mantou and cooked noodles (p. 476, 484n1). Address: China.

26. Han Yi. 1365? Yiya yiyi [Remnant notions from *I Ya*]. China. Undated. [Chi]
• ***Summary:*** Wade-Giles reference: *I Ya I I*, by Han I. H.T. Huang (2000, p. 322, 617) who cites this book gives its date as "the late Yüan." Note 1. The Yüan (Mongol) dynasty in China lasted AD 1260-1368. Note 2. This is the earliest document seen (May 2010) worldwide that mentions soymilk. Dr. Huang states that this is also the earliest Chinese-language document seen (Oct. 2003) that mentions soymilk, which it calls *doufujiang*. As of Oct. 2003 *doujiang* is the modern Chinese word for soymilk, but that word does not appear in this document. While discussing the preparation of a thick puree (*fu*, the same character as in *doufu / tofu*) of poppy seed and mung bean powder, this book mentions in passing that the poppy seed extract should be cooked in a way similar to that for cooking *doujiang*.

Dr. Huang comments: The statement above implies that soymilk must have been known in China for quite a long time. It also implies that although soymilk had been readily available, it was not itself of much interest as a food or beverage. It probably did not become popular in China until the late Qing (Manchu) dynasty (1644-1912), when the sale of *doujiang* by hawkers became a sight common enough to prompt an artist named Yao Chih-Han [sic, Yao Wenhan] to record the scene in a drawing now owned by the National Palace Museum in Taipei, Taiwan. An excellent reproduction of this illustration appears in Huang's book (p. 323). During the Qing, the Chinese apparently discovered that prolonged, slow heating rendered soymilk more digestible by and acceptable to adults. Infants, however, have plenty of the enzyme lactase which enables them to hydrolyze lactose

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(milk sugar). Lactose is an alpha-galactoside. Therefore, by inference, infants should be able to hydrolyze the alpha-galactosides (raffinose and stachyose) found in soymilk. However, Chinese traditionally did not feed soymilk to their infants–probably because adults could not tolerate it. Surprisingly, this discovery is never mentioned in the literature: it seems to have been treated like a trade secret. However, western researchers (see footnote 2) later found, that during slow heating, the oligosaccharides are gradually hydrolyzed.

Huang (p. 322) then gives several possible reasons for soymilk's lack of popularity in early China: (1) It had an unpleasant beany taste, especially when made using the cold-extraction method. (2) The presence of protease inhibitors (lipoxygenase) and oligosaccharides (complex sugars that cause flatulence) make soymilk less than easily digestible. Cooking the soymilk inactivates the lipoxygenase. A major advantage of making tofu from the cooked soymilk is that most of the flatulence-causing oligosaccharides go off in the whey.

In one footnote on this page, Huang adds that the term next appears in the literature in the *Bencao Gangmu Shi Yi* (Supplemental Amplification of the *Bencao Gangmu*) (+1765, p. 365).

In a second footnote on this page, Huang notes that after prolonged heating, up to 90 minutes, significant amounts of stachyose and raffinose are removed from soymilk (Pires-Bianchi et al. 1983).

Note 3. The term "alpha-galactoside" appears (as of Nov. 2003) in only 3 records in the SoyaScan database (two in 1965 and one in 1988). However the term "alpha-galactosidase" (the enzyme absent in the human digestive tract) is found in 8 records from 1965 to 1998. In 1970 it was found that most of the oligosaccharides (complex sugars which cause flatulence in adults) in soymilk can be eliminated by adding a commercial preparation of alpha-galactosidase to the milk. This enzyme hydrolyzes (breaks down) the oligosaccharides into simple sugars, which the body can digest.

A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." Only seasonings based on jiang (fermented soybean paste) are used in this book; none are based on soy nuggets (*shi*). Jiang itself is used in 10 recipes, soy sauce made from jiang (*jiangyou*) is used in 1, and another type of soy sauce made from jiang (*jiangshui*) is used in 1 recipe.

Page 52 mentions *fu cha* (tossed gluten salad) and *chien fu* (pan-fried gluten slices). Address: China.

27. Kuei An hsien chih [Gazetteer for the Kuei An district]. 1368-1662. China. [Chi]*

• ***Summary:*** Ming dynasty. Bo (1982): Jiang-you (soy sauce) sauce is mentioned in volume 12, is part 19 of the section on food and drink.

28. Liu Ji. 1370. Doneng pishi [Routine chores made easy]. China. [Chi]

• ***Summary:*** Wade-Giles reference: *To Nêng P'i Shih* by Liu Chi. Ming dynasty. Huang (2000) states: This is the earliest of at least 13 food canons and recipe books in premodern China. "Premodern" refers to the period from the start of the Ming to the end of the Qing dynasty (1368-1912). The author was a distinguished official of the early Ming (p. 129-130). The book contains a brief recipe for making fermented black soybeans (p. 340) and for making jiang (p. 353, 357).

A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." Jiang (fermented soybean paste) is used in 5 recipes, and fermented black soybean sauce (*shizhi*) in 1 recipe.

The book also mentions preparation of meat and fish pastes (*jiang*) including those made from five kinds of fish, yellow sparrow, pork, lamb, mutton, and shrimp. Many of these recipes were copied verbatim from two earlier works (p. 386, 387n). Also mentions the use of soybean jiang to preserve meat or fish (p. 414n). Address: China.

29. Shijô ryôri-sho [Cookbook of the Shijo School]. 1384. Japan. [Jap]*

• ***Summary:*** This book mentioned "tare-miso," "usu-tare," and "tare usu," which are soy sauces similar to tamari.

30. Oogusa ryôri-sho [Cookbook of the Ogusa School]. 1467-1614. Japan. [Jap]*

• ***Summary:*** Developed by one of Kyoto's two leading cooking school families. It mentioned soy sauce frequently.

31. Honcho bunsho 1487. Japan [Jap]*

• ***Summary:*** Yokotsuka (1985, p. 205) states: According "to such books as *Honcho bunsho* (AD 1487), *Shijoryu hochosho* (AD 1489) and others (AD 1504, 1537), Taremiso or Usudare seems to have been the name for the liquid drained off or press-filtered from the boiled mixture of miso or *sho* [*hishio*] and salt water." But the word *shoyu* (written with the same characters as *chiang-yu* [*jiangyou*] in Chinese) did not appear in any of these books. Address: Japan.

32. Tajimi Teiken. 1489. Shijôryû hôchôsho [Cookbook of the Shijo school?]. Japan. [Jap]*

• ***Summary:*** This famous cookbook mentioned "tare miso," "usu tare," and "surimiso."

Yokotsuka (1985, p. 205) states: According "to such books as *Honcho-bunsho* (AD 1487), *Shijoryu-hochosho* (AD 1489) and others (AD 1504, 1537), Taremiso or Usudare seems to have been the name for the liquid drained off or press-filtered from the boiled mixture of miso or *sho* [*hishio*] and salt water." But the word *shoyu* (written with the same characters as *chiang-yu* [*jiangyou*] in Chinese) did not

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appear in any of these books.

33. ôkusa-ke ryôri-sho [The house of okusa cookbook]. 1532. Japan. [Jap]*
• ***Summary:*** According to Yokotsuka (1980), the word *shoyu*, written with the characters used today, was first used in a cooking book in this work. The next major event with shoyu in Japan was when a brewer in Noda sent tamari to Kawanakajima.

This book also contains a detailed recipe for making Natto Miso Soup (*nattô-jiru*, a special type of miso soup that contains diced natto), which became popular during this period.

Letter (e-mail) from Naomichi Ishige, Japanese natto expert. 2007. March 20. The title of this book is *ôkusa-ke ryôri-sho*. The "nattô" used to make nattô-jiru (natto miso soup) is actually kuki, or fermented black soybeans (*shiokara natto, tera natto);* it is not *itohiki nattô*. This cookbook was reprinted in a modern version in 1932 (Dec. 15) in Tokyo by Zokugunsho-rui Ju Kanseikai (Ohta Yoshimara [person]).

Note: This is the earliest document seen (Dec. 2011) that mentions *nattô-jiru* [Natto Miso Soup] or miso soup of any type.

34. Rokuon nichiroku [Early Japanese dairies kept by head priest at Rokuon-in temple in Kyoto]. 1536. Japan. [Jap]*
• ***Summary:*** Iino (2001, p. 22-23) states: "The next [actually the first real] reference to shoyu is an entry in the *Rokuon-nichiroku* for June 28, 1536, in which the writer mentions preparing shoyu. An entry for the previous day mentions preparing *hishio*, which suggests that shoyu and *hishio* were prepared separately. In addition, an entry for August 14 of the same year mentions putting *sho* in a cask, as if it were intended as a gift.

"*Tou-miso* prepared at the Tamon-in was usually ready for consumption in about sixty days; the koji being incubated in the latter half of June, followed by the addition of brine within a week after incubation, and the refining process in the middle of August7. This sho referred to in the *Rokuon-nichiroku* was probably the end product of the batch of shoyu prepared on June 28."

"The *Rokuon-nichiroku* consists of a collection of diaries kept by the head priest at the Rokuon-in temple, a smaller temple within the larger Shokokuji temple. The Rokuon-in was located in the center of Kyoto, then the nation's capital, while the Tamon-in was in Nara. Because of its location, the Rokuon-in was likely to have been influenced by Chinese culture earlier than the Tamon-in, and may well have begun manufacturing soy sauce before the Tamon-in, and give the name shoyu to it. In any event, it is apparent that soy sauce was already being manufactured in Japan by the middle of the sixteenth century."

"An entry in the *Rokuon-nichiroku* for September 8, 1599 mentions a breakfast menu that included a dish of *matsutake* mushrooms simmered in soy sauce. Subsequent entries also refer to dishes made by simmering various foods in soy sauce."

Note: This diary contains (as of April 2012) the earliest known written (but unpublished) reference to word "shoyu" in Japan. Address: Japan.

35. Iida Ichirobei of Shimôsa makes tamari shoyu and sends it to the Takeda family in Koshu. This is the beginning of Noda Shoyu (Early event). 1558.
• ***Summary:*** In *The Book of Miso*, by Shurtleff and Aoyagi (1976, p. 221-22), in the section titled "The development of shoyu," we read: "The area of Shimousa, about 30 miles northwest of Tokyo and already famous as a center of miso production, was to become the birthplace of the product now known as shoyu. In 1561, in the town of Noda, Iida Ichiro Heibei made a new variety of tamari-shoyu from hishio and presented it to the samurai Takeda Shingen, already known for his interest in miso. The flavorful product soon became known by its elegant name: Kawanakajima Goyo Tamari-Shoyu. It was first produced commercially in Shimousa in 1574."

In "Chronology of Soybeans," by Akio Saito (1985. *Daizu Geppo* (*Soybean Monthly News*). Jan. p. 12-14–in Japanese) we read:

1558–Iida Ichirobei of the feudal domain of Shimôsa (*Shimôsa no kuni;* today's Noda city in Chiba prefecture) makes tamari shoyu, called Kawanaka-jima Goyo Tamari, and sends it to the Takeda family in Koshu. This is the beginning of Noda Shoyu. It is said that the taste of shoyu gave a great boost to the energy of Takeda's army. At about this same time Takeda Shingen (lived 1521-1573) starts to use dried-frozen tofu (*kori-dofu*) for his army in Kawanaka-jima after tasting the delicious kori-dofu from Sahtobei?

36. Tokitsugu kyôki [Diary of Tokitsugu Yamashina]. 1559. Japan. Japanese summary by Kawakami 1978. [Jap]
• ***Summary:*** This diary contains (as of April 2012) the 2nd earliest known written (but unpublished) reference to word "shoyu" in Japan. One volume mentions *shirozake* (white sake, close relative of Amazake).

The diaries of five Yamashina family members are famous in Japan. The first word in each diary title is the given name of that family member; *kyoki* means "diary." The Noritoki Kyoki (1405-1410) is 3 volumes, 783 pages. The Norioki Kyoki (1410-1417) including one of the former volumes is 27 pages. The Tokikuni Kyoki (1474-1493) is 4 volumes plus 1 unfinished, 1,125 pages. The Tokitsugu Kyoki (1527-1571) is 6 volumes, 2,801 pages. The Tokitsune Kyoki (1576-1600) is 10 books, with total pages not given.

Iino (2001, p. 23) states: "Later [after the *Rokuon-nichiroku*], an entry in the *Tokitsugu-kyoki* for August 27, 1559 mentions putting *shoyuu* in a small cask for use as a gift. There is a strong likelihood that the *sho* and *shoyuu*

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placed into casks for use as gifts were not *tare-miso* [a by-product of the miso-making process], but were in fact soy sauce."

37. Hôchô kikigaki [Transcribed instructions for cooking]. 1560-1580. Published in the *Gunsho Ruijû*. Japanese summary by Kawakami, p. 136. [Jap]
• ***Summary:*** A *hôchô* is a Japanese kitchen knife; *kikigaki* means "listening and writing." According to Kawakami and Kimura (1985, p. 36-37) the term *shiokara nattô* ("salty natto") appears in the work titled *Gunsho Ruiju* [compiled about 1819-20] (*Katsuji-hon*, page 344, lower section, line 5). The authors think that this is the earliest document that mentions *tera nattô* or non-stringy natto [fermented black soybeans]. But after that time, the same food appears to be called *ko no daizu* or *kaori no daizu* ("fragrant soybeans"), and that term first appeared in the *Hôchô Kikigaki*, a cookbook that was published about 1560-1580 and that is part of the *Gunsho Ruiju* (Katsuji-hon, page 800, upper section, line 6).

This book also gives recipes using *tare miso*, made by mixing miso and water. Mentions chiang. Also contains a very early possible footnote reference to soy sprouts, *Moyashitaru mame*.

38. Nôin Eshun. 1568. Tamon-in nikki [Tamon-in diary]. Nara, Japan. See entry for May 21 and Oct. 25. English-language summary by Kodama & Yoshizawa 1977, p. 427. Japanese summary by Kawakami 1978, p. 222. [Jap; eng]
• ***Summary:*** This diary was kept from about 1539 to 1596 (58 years) at the Tamon-in monastery inside the Kofuku-ji temple in Nara City, Japan.

Concerning soy sauce: Iino (2001, p. 23) states: "By the second half of the sixteenth century, shoyu was being written using the same characters as those used today. An entry in the *Tamonin-nikki* for October 25, 1568 mentions taking shoyu to Choinbo, a Buddhist monk. This appears to be the first time the contemporary characters were used. An entry in the same diary for August 24, 1582 uses different characters to refer to soy sauce. By this stage it seems that the Tamon-in had also started using the term shoyu when referring to *tou-miso*."

Iino (2003, p. 9): In this diary shoyu made from a second pressing of the moromi (*niban shoyu*) is referred to as *tou-miso niban* (second tou-miso) and its production is discussed. This can be seen in several places, including the entry for the date of the 17th year of Tenmon (1548) Jan. 1.

Concerning natto: Letter (e-mail) from Naomichi Ishige, Japanese natto expert, 2007, March 30. The entry for 21 May 1568 mentions *netaru-natto*. The entry was written by Nôin Eshun, who was the chief priest at Tamon-in, a monastery that belonged to Kofuku-ji in Nara. Kawakami et al. (1978) understood *netaru natto* to mean what we now call *itohiki natto*.

Note 1. This is the earliest Japanese-language document seen (Jan. 2012) that uses the term *netaru natto* to refer to natto.

This diary also describes in detail a heating method to kill the microorganisms in saké (Japanese rice wine). It was almost identical with the process invented by Pasteur in France in 1865 (300 years later) for low-temperature pasteurization of wine and milk. The Japanese process was later used on soy sauce.

39. Gao Lian. 1591. Yinzhuan fushijian [Compendium of food and drink]. China. Passage on soy reprinted in H.T. Huang 2000, p. 297, 324, 340, 373. [Chi]
• ***Summary:*** Wade-Giles reference: *Yin Chuan Fu Shih Chien*, by Kao Lien (who lived 1574-1624). Ming dynasty. Huang (2000) discusses: Processes for making sprouts from yellow soybeans (*dahuangdou*) and broad beans (*handou*) (p. 297; Footnote: The identity of *handou* is uncertain; it could be either broad beans (*candou, Vicia faba*) or peas (*wandou, Pisum sativum*)). Mention of tofu (p. 324). Brief recipe for making fermented black soybeans (*shi*, p. 340).

A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." Seasonings based on jiang (fermented soybean paste) are used in 27 recipes: jiang itself in 20, soy sauce made from jiang (*jiangyou*) in 5 recipes, soy sauce named *jiangzhi* in one recipe, and soy sauce named *jiangshui* in one recipe. Seasonings based on fermented black soybeans (*shi*) are used in only 5 recipes: Fermented black soybeans (*shi*) in 4 recipes, and fermented black soybean sauce named *shizhi* in 1.

Huang adds (p. 373): Soy sauce (*jiangyou*) started to rival jiang in importance during the Ming [1368-1644], and by the early years of the Qing [1644-1912] had surpassed it in culinary usage. This book is the last Ming entry in the table. Huang also discusses: Use of red ferment (*hongqu*) to make red rice wine (p. 196).

Huang (personal communication, 5 June 1993), gives the date of this document as +1591, and notes that pages 148-49 mention *fu cha* (tossed gluten salad) and *chien fu* (pan-fried gluten slices). This information is repeated from an earlier book by Han I written ca. +1350.

Bo (1982): This Ming dynasty book contains may recipes that use soy sauce. Partly reprinted in Shinoda & Tanaka (1973), "A Collection of Chinese Dietary Classics."

40. Li Shizhen, comp. 1596. Bencao gangmu [The great pharmacopoeia]. China. Passage on soy reprinted in C.N. Li 1958 #311, p. 224-26. [Chi]
• ***Summary:*** Wade-Giles reference: *Pên Ts'ao Kang Mu*, by Li Shih-Chên (lived 1518-1593). Ming dynasty. This classic work was completed in 1578, but not published until 1596. It describes almost 2,000 animal, vegetable, and mineral drugs and gives over 8,000 prescriptions. A rich source

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of information, it is still very useful. All foods mentioned are considered as medicines, based on the ancient Chinese saying: "Food and medicine have the same origin." The title might also be translated as "Collected essentials of herbs and trees. Illustrated compendium of materia medica with commentaries."

Soybeans and soyfoods are discussed in two chapters of this book. Chapter 24 contains sections on soybeans, soybean sprouts, and yellow soybeans, in that order. Chapter 25 has sections on fermented black soybeans, yellow molded soybeans (Jap. soybean koji), tofu and yuba (*doufu pi*), jiang, and soy sauce. Concerning yuba: If a film should form on the surface of soymilk when it is heated in the process of making tofu, it should be lifted off and dried to give yuba (*doufu pi*), which is itself a delicious food ingredient (Huang 2000, p. 303, 323).

Note. This is the earliest Chinese-language document seen (May 2012) that mentions yuba, which it calls *doufu pi*.

The first part of each section is titled "Explanation of names"; when these simply repeat material we have translated from earlier Chinese documents, we will not re-translate it. Another part of each section explains each food / medicine in terms of its "nature" or "vital energy" (*qi*, hot, warm, neutral, cool, and cold) and "flavor " (*wei*, bitter, sour, sweet, pungent, salty).

The section titled "Soybeans" (*dadou*) begins by stating that soybeans are considered a "middle class drug / medicine" according to the *Shennong Bencao Jing* (*Benjing*) (Classical pharmacopoeia of Shennong, the Heavenly Husbandman) (+100). This section has four parts: (1) "Explanation of names." The soybean is *shu*. The pods are called *jia*. The leaves are called *huo*. The stems are called *qi*. (2) "Explanation of uses." After quoting information from earlier Chinese sources, he states: The different soybean varieties are black, white, yellow, spotted / speckled (*ban*), green, and striped. The black ones are also called *wudou*. They are used for both medicine and food, and for making fermented black soybeans (*shi*). The yellow ones are good for making tofu (*fu*), for pressing to obtain oil, or for making jiang. But the other soybean varieties can also be used to make tofu and can be cooked for food. They are usually planted before summer. The young plants (*miao*) grow to a height of 3-4 feet. The leaves are pointed. In the fall they have small white flowers which come in clumps about one inch across. The plants wither in the frost. According to the *Lüshi Chunqiu* (Master Lü's spring and autumn annals) (239 B.C.), when soybeans are in season, the stems are long and the branches are short. The pods come in groups of 27. The more branches there are, the more nodes. The large soybeans (*shu*) are round; the small soybeans (*shu*) are oval. The early varieties tend to grow like vines. The leaves float. The nodes are further apart. The pods are smaller and not solid. The later varieties have fewer nodes, less space between nodes, and they are less solid. According to the *Fan Shengzhi Shu* (The book of Fan Shengzhi [on agriculture]) (10 B.C.), if you plant soybeans in early summer, you should not plant them deep because the flowers do not like too much sun; they will rot and the roots will be scorched. One should adjust the depth of planting according to the variety. [After harvesting] store soybean seeds in a level, shady place in a bag. Take them out 15 days after winter begins; then you can use them for planting. Soybeans can be stored quite easily for one full year, so they can be kept in preparation for a famine year.

(3) Black soybeans–nature and flavor (*heidadou qiwei*): They are sweet, neutral, and nontoxic. Prolonged ingestion will make you / your internal organs feel heavy. When raw, they are warm. When cooked, they become cold–according to *Zhibo* (a person) cited in the *Huangdi Neijing Suwen* (Yellow Emperor's classic of internal medicine: Questions and answers) (200 B.C.). Chang Qi (another person) says: When soybeans are raw they are neutral, but when they are roasted they become hot, and when they are boiled they become cool (*han*). When made into fermented black soybeans they become cold (*leng*). When used to make jiang or soy sprouts ("raw yellow curls") they are neutral. When cattle eat them, they are warm [i.e. they have a warming effect on the cattle]. When horses eat them, they are cold. So even though it is one substance, when it is eaten in different ways, it has different effects.

(4) "Inventions" (*faming*): Explains the complex pharmacology and medicinal effects of soybeans on the five internal organs–such as the kidney, liver, etc.

The section titled "Soybean sprouts" (*dadou huangjuan* or "soybean yellow curls") has two parts: (1) "Explanation of names." These are sprouted [soy] beans (*dounie*). Allow the black soybean to sprout until it is 5 inches (*cun*) long. Then dry it; this is called *huangjuan* ("yellow curls"). It becomes very small when dried. (2) Nature and flavor (*qiwei*): Sweet, neutral, nontoxic. Note 1. This is the earliest document seen (April 2003) that uses the term *dounie* to refer to "sprouted soybeans."

The section titled "Yellow soybeans" (*huang dadou*)–explanation of food uses–is divided into three parts: (1) "Explanation of names." Similar to the passage above stating that yellow soybeans are good for making tofu (*fu*), for pressing to obtain oil, for making jiang, etc. (2) Nature and flavor (*qiwei*): Sweet, warm, nontoxic. (3) Soybean oil (*douyou quiwei*) nature and flavor: Pungent, sweet, and hot (*re*); slightly toxic. Note 2. This is the earliest document seen (Feb. 2003) that uses the term *huang dadou* to refer to yellow soybeans.

Note 3. This is the earliest Chinese-language document seen (Sept. 2006) that uses the term *douyou* to refer to soybean oil.

Note 4. Is fermented tofu (*furu*) mentioned in this work? After looking carefully through the Chinese document, Dr. H.T. Huang says (2002) he cannot find any mention of it, after another long search. Moreover, he does not

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mention this book in the section of his Needham series book about fermented tofu (2000, p. 325-28). However Dr. Masaaki Yasuda, a professor in Okinawa, who has spent his professional career studying tofuyo, a type of fermented tofu, disagrees. When asked by Wm. Shurtleff about this specific point he replied (e-mail of 11 Nov. 2011): "You will find mention of fermented tofu in the Special Issue of *Honso Komoku* (*Bencao Gangmu*) by Li Shih-Chen in 1596. Maybe you only checked 'the main issues' of this book, but actually he also published other special issues that were not included in the main issues. You will find the fermented tofu using the key word *furu*, not fermented tofu nor *rufu*. *Furu* in this book clearly refers to the fermented tofu that you are searching for. Of course I read it myself in this book; I did not hear it from anyone else."

Red azuki beans (*chixiaodou*) are also mentioned in this book; a listing of alternative names, with commentaries, is given. (See Li 1958 #393).

White beans (*baidou*) are also mentioned as follows: White beans (*baidou*) are mentioned in the Song dynasty. They are also called *fandou*. The seedlings can be used as a vegetable. They are good eaten raw. In eastern Zhejiang the flavor is especially good. They can be used to make jiang and tofu (*fu*). In the north, the watery white beans (*shui baidou*) are similar but is not as good. White beans are also called *fandou*. They can be used to complement congee / gruel (*zhou*) and cooked rice served as a main dish (*fan*). According to the author (Li Shizhen) *fandou* is the same as white azuki beans. Some white beans have a yellow color. The beans are about the size of mung beans (*lüdou*). Plant them in the 4th or 5th month. The leaves of the seedlings are like those of red azuki beans (*chixiaodou*) and can be eaten. The pods are like those of azuki beans (*xiaodou*). One kind of pod comes with leaves like those of the soybean (*dadou*). They can be cooked like rice and used to make tofu (*fu*). They are of the same category. Nature and flavor (*qiwei*): It is sweet, neutral, and nontoxic. (See Li 1958 #467). (Translated by H.T. Huang, PhD, May 2003). Dr. Huang adds: The white bean (*baidou*) could well be the white azuki bean.

41. Li Shizhen, comp. 1596. Bencao gangmu [The great pharmacopoeia]. China. Passages on soy reprinted in C.N. Li 1958 #140, p. 95-96, and #311, p. 224-26. [Chi]

• ***Summary:*** Continued: Wade-Giles reference: *Pên Ts'ao Kang Mu*, by Li Shih-Chên (lived 1518-1593). The following information on soybeans and soyfoods appears in Chapter 25 of the *Bencao Gangmu*.

The section titled "Fermented black soybeans" (*dadou shi*) is divided into four parts: (1) "Explanation of names." The word *shi* (different character but same pronunciation) also means something delectable and highly desirable. According to the *Shuowen Jiezi* (Analytical dictionary of characters) (+121), you get fermented black soybeans by adjusting salt and incubating soybeans (*shu*). (2) "Explanation of uses" gives a long, detailed description of how to make fermented black soybeans. See Huang 2000, p. 340-41. *Shi* can be made from various types of soybeans. When made from black soybeans, they make good medicine. There are two kinds of *shi* [both made by a mold fermentation]: unsalted / bland fermented black soybeans (*danshi*), and salted / savory fermented black soybeans (*yanshi*).

To make unsalted / bland fermented black soybeans (*danshi*): In the 6th month, take 2-3 *dou* (20-30 liters) of black soybeans. Winnow until clean then soak overnight in water. Steam the beans thoroughly then spread on a mat. When almost cool, cover beans with artemisia leaves. Examine them every 3 days. When they are covered, but not luxuriantly, with a yellow coating [of mold], dry them in the sun, then winnow until clean. Add enough water to wet the soybeans, so that when scooped by hand, there will be wetness between the fingers. Place them in an earthenware jar (*weng*) and pack them down tightly. Cover with a 3-inch layer of mulberry leaves. Seal mouth of jar with mud, then let stand in the sun for 7 days. Remove beans from jar and dry them in the sun for an hour. Wet them again and put them back in the jar. Repeat this process [from wetting and sunning] 7 times. Finally, steam the beans, cool, dry, and store in the jar.

To make salted / savory fermented black soybeans (*yanshi*): Take 1 *dou* (10 liters) of soybeans, soak in water for 3 days, steam thoroughly and spread on a mat (as before). When the beans are covered with a yellow coating [of mold], winnow, soak in water, drain off the water, and dry in the sun. For every 4 catties of beans (1 catty weighs about 1.33 pounds), mix in 1 catty of salt, plus half a catty of finely-cut strips of ginger. Place mixture in an earthenware jar. Season with pepper (*jiao*), orange peel, perilla, fennel, and almonds. Add water until it is one inch (*cun*) above surface of mixture. Top contents with leaves, then seal the mouth. Sun the jar for a month; then the savory fermented black soybeans will be ready.

Huang (2000, p. 341) notes that the process described above is identical in principal to that in the *Qimin Yaoshu* (Important arts for the people's welfare) (+544), reiterated about 350 years later in the *Sishi Zuanyao* (Important rules for the four seasons) (+900).

(3) Unsalted / bland fermented black soybeans nature and flavor (*danshi qiwei*): Bitter (*ku*), cold (*han*) and nontoxic. (4) Puzhou fermented black soybeans (*Puzhou shi*) nature and flavor: Salty (*yan*), cold (*han*), nontoxic. Note 1. Puzhou is a place in Shanxi province, China, noted for its distinctive fermented black soybeans. This is the earliest document seen (Feb. 2003) that mentions *Puzhou shi*.

The section titled "Yellow soybean koji" (*douhuang*, "bean yellow") describes the soybeans covered with yellow mold; they are the first step in making salty fermented black

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soybeans and are not a consumer food product. This section is divided into two parts: (1) "Explanation of names." Describes how to make *douhuang*. According to Li Shizhen (the author of this book): Take one *dou* (bushel) of black soybeans. Steam until cooked through. Spread on a mat and cover with rushes–as if you were making jiang. Allow the soybeans to mold until they have a yellow coating. Dry, then grind. (2) Nature and flavor (*qiwei*): Sweet, warm, nontoxic.

Dr. Huang offers a comparison of danshi and douhuang (Feb. 2003 Feb): Unsalted / bland fermented black soybeans (*danshi*) is an end product, which is largely free of molds when it is sold; it was traditionally used in Chinese medicine. Dr. Huang has never seen or tasted *danshi*, never heard of it being used in food, and never seen it for sale in the USA. *Danshi* is made by a two-stage fermentation. In the first stage, after the soybeans are covered with a yellow coat of mold, they are winnowed, soaked in water, rinsed to remove most of the white mold and its yellow spores, then sun dried. In the second stage, the beans are packed tightly into a container and incubated for 10-15 days depending on the season. This stage enables the enzymes to act on the soybeans, digesting some–but not all–of the soy proteins. If the incubation is too long, some of the excessive peptides resulting from digestion of soy proteins may give the *danshi* a bitter taste. By comparison, yellow soybean koji (*douhuang*) is an intermediate stage of soybean processing not normally sold, but used to make jiang.

(C) The section titled "Tofu": The first clear recipe for making tofu in China appears in chapter 25 of this book (Huang 2000, p. 303). Li says that the process for making tofu (*doufu*) originated with the Prince of Huai-Nan, Liu An. Black [soy] beans, soybeans, white [soy] beans, mud beans, peas, mung beans, etc. can all be used. There are six steps: 1. Soak the soybeans [in water]. 2. Grind the beans [to give a slurry]. 3. Filter the milk [to remove the insoluble residue {okara}]. 4. Cook the milk [for an adequate time]. 5. Add nigari / bittern (*yen lu*), leaf of the mountain alum tree (*shan fan*), or vinegar to coagulate the milk. 6. Collect the curds.

Note 2. This is the earliest document seen (Jan. 2010) that describes the basic process for making tofu, either at home or on a commercial scale.

Li Shizhen continues: One can also obtain curds by mixing the hot milk in a container with gypsum powder. Various salty, bitter, sour, or pungent materials can also be used to coagulate the soymilk.

Note 3. This is the earliest document seen (Oct. 2002) that mentions nigari. Li (1958) adds: "Vital energy and flavor (*chiwei*, of tofu): Sweet, salty, cold / cooling, slightly toxic." Huang adds (p. 303) that although Li gives no details about the tofu-making process, we can surmise that the procedure used in his time is very similar to that used today in the Chinese countryside. Huang (p. 304-05) reprints line drawings (from Hung Kuang-Chu 1984, p. 58-60) of the traditional process for making tofu still used in China, and notes that the same curding agents or coagulants listed by Li Shizhen (bittern, mountain alum, vinegar, and gypsum) are still in use today.

42. Li Shizhen, comp. 1596. Bencao gangmu [The great pharmacopoeia (Continued)]. China. Passages on soy reprinted in C.N. Li 1958 #140, p. 95-96, and #311, p. 224-26. [Chi]

• ***Summary:*** Continued: Wade-Giles reference: *Pên Ts'ao Kang Mu*, by Li Shih-Chên (lived 1518-1593). The following information on soybeans and soyfoods appears in Chapter 25 of the *Bencao Gangmu*.

The section titled jiang, Li (1958, p. 95-96) states: Explanation of the name: According to the *Shiming* by Liu Xi (+150), jiang is like a military general (*jiang*) who directs and can control the poison in food. It is just like a general controlling the evil elements in the population. Explanation of the method: [Li] Shizhen says there are different varieties of *mianjiang* (which is sweet); it can be made from barley, wheat, sweet jiang (*tianjiang*), or bran jiang (*fujiang*). Bean jiang (*doujiang*) also comes in different varieties such as that made from soybeans (*dadou*), azuki beans (*xiaodou*), or peas (*wandou*, *Pisum sativum* L.) and soy sauce (*douyou*, literally "bean oil)."

Note 1. Soy sauce is classified here as a subcategory of bean jiang. This is the earliest document seen (April 2012) that uses the word *douyou* to refer to soy sauce.

To make soy sauce (*douyou*), take 3 *dou* of soybeans (1 *dou* is about 1 pint, so 3 pints of dry soybeans weigh about 2.43 pounds). Boil in water until soft. Mix with 24 catties of wheat flour (1 catty = about 1.33 pounds, so 24 catties weigh about 31.92 pounds). Allow them to become molded. For every 10 catties, add 8 catties of salt and 40 catties of well water. Blend to a slurry. Then collect the sauce [which separates].

Note 2. This is the earliest document seen (April 2012) that describes a method for making Chinese-style soy sauce, and the first describing a significant amount of wheat (or wheat flour or barley) is mixed with the soybeans before fermentation begins. The ratio by weight of wheat to soybeans in this early Chinese soy sauce is about 13 to 1, whereas the ratio in modern (early 21st century) Japanese soy sauce is about 1 to 1. How could the early Chinese make so much wheat flour stick to such a relatively small amount of boiled soy beans? Maybe the soybeans were mashed, mixed with the wheat flour and shaped into cakes before letting the cakes become molded (See Wang and Fang 1987).

To make soybean jiang (*dadou jiang*), dry-roast soybeans (*dou*) then grind to a flour. For every *dou* (pint) add 3 *dou* of flour. Blend well and shape into cakes. Allow it to stand until it becomes moldy. For every 10 catties, add 5 catties of salt. Then cover it with well water [in a container], and sun it and collect it.

Concerning the use of soybeans in wine, Chapter 25

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contains a section on "wine" (*jiu*) which refers to a type of soy wine called *doulinjiu* (W.-G. *tou-lin chiu;* "bean soak wine") which is made by percolating regular Chinese wine (fermented from cereal grains) through roasted black soybeans. A recipe is given and it is stated that the *Congshu Jicheng Chubian* (Collected collecteana) (+1473), having 3,467 volumes, says that it cures post-partum white sickness, apparently an affliction suffered after the birth of a child.

Also describes how to make jiang from azuki beans (*xiaodou*) or from barley (*damai*).

Vital energy and flavor (*qiwei*, of jiang): Salty, cold / cooling, nontoxic. *Mienjiang* [made with wheat and soybeans] is salty. Bean jiang (*doujiang*), sweet jiang (*tianjiang*), soy sauce (*douyou*), barley jiang (*damaijiang*), and bran jiang (*fujiang*) are all salty and sweet [because they are made with wheat, which is hydrolyzed to sugars].

Huang (2000, p. 357) states that this book is the first to introduce the process for making sweet wheat-flour jiang (*tianmian jiang*). The process for making soybean jiang described in the *Bencao Gangmu* is very similar to that described in the *Jujia Biyong* (Essential arts for family living) (ca. +1350).

Huang (2000, p. 363) gives the process for making soy sauce, which appears in the *Bencao Gangmu* as an appendage to the section on jiang, titled "soybean oil" (*douyou*) which was obviously a synonym for soy sauce (*jiangyou*). Take 3 *dou* (1 dou = about 10 liters) of soybeans; boil in water until soft. Blend in 24 catties of wheat flour. Incubate until the mixture is covered with yellow mold. Mix 10 catties of the yellow jiang substrate with 8 catties of salt and 40 catties of well water. Ferment in an earthenware jar in the sun until the product is ready. Huang comments that although the passage does not explain how the soy sauce is separated from the fermented mash, it is absolutely clear that we have here a process based on jiang and the product can rightfully be called soy sauce (*jiangyou*).

Concerning the use of soybeans in wine, Chapter 25 contains a section on "wine" (*jiu*) which refers to a type of soy wine called *doulinjiu* (W.-G. *tou-lin chiu;* "bean soak wine") which is made by percolating regular Chinese wine (fermented from cereal grains) through roasted black soybeans. A recipe is given... birth of a child [see above].

Huang also discusses from the *Bencao Gangmu:* Koji (*qu*) for making rice wine (*jiu*, p. 158). Malt sugar (*i*, p. 158). Red ferment [red rice koji] (p. 192-202). Malt sugar (*i t'ang*, p. 460).

Huang (2000) cites this (p. 621) as *The Great Pharmacopoeia* [or Pandects of Natural History]. Ming, +1596. Paraphrased and abridged translation: Bernard E. Read and associates (1-7). Textual references are to the 1975 edition published by Renmin Weisheng, Peking. It mentions dried young soybean sprouts (*dadou huangjuan* or "yellow curls") as having medicinal properties.

Wilkinson (2000, p. 662) translates the title as *Collection of Materia Medica*, gives the publication date as 1602, and notes that Li lived 1518-1593.

43. Li Shizhen, comp. 1596. Bencao gangmu [The great pharmacopoeia]. China. See p. 360-71. 1965 ed., reprint of 1885 edition, Peking. Also reprinted in 1916 by Shanghai Hong Pao Chai Book Co., Shanghai. [Chi]

• ***Summary:*** Wade-Giles reference: *Pên Ts'ao Kang Mu*, by Li Shih-Chen (lived 1518-1593). The author: Bretschneider (1882, in *Botanicon Sinicum*, p. 54-55) notes: "Li was born at K'i Chou in Hu pei probably in the first quarter of the 16th century, and died toward the close of the same century. His literary name was *Tiang pi*. He wrote under the pseudonym *Pin hu*. As was the case with the majority of early Chinese physicians of note, Li Shi chen was not a professional medical man, but a civil functionary and a magistrate of the district of P'eng k'i (T'ung ch'uan fu, Sz' ch'uan [Szechuan]). Besides this, his principal work, Li left several medical treatises. "Li began compilation of this work in 1552, and after 26 years' labour he completed it in 1578. He wrote out the manuscript three times before he was satisfied to give it out as complete. The author died before it was published, and his son, Li Kien yüan, presented the manuscript to the Emperor, in 1596, who ordered it to be printed."

The work: Called *Honso Komoku* in Japanese, this is the most famous of the many Chinese herbals, and the most important Chinese work on materia medica and natural history. Also called a botanical encyclopedia, it is the first treatise of its kind in which the material is treated critically. Bretschneider (1882, p. 55) adds: "Several editions have been successively issued. The earliest now extant is, it seems, that of Shun chi 15 (A.D. 1658). All editions which I have had an opportunity of examining are printed on indifferent paper and are full of misprints, which make the book very inconvenient for reference... The preface is followed by a general index of the 52 books (chapters) of the work, enumerating the 16 divisions and the 62 classes under which the whole matter is arranged... It begins with a critical review of the 42 capital works on Materia media published" previously.

Concerning the year of publication: Huang (2000, p. 621) says 1596. Yokotsuka (1986, p. 198) says 1590 and cites this as the earliest Chinese work to mention *chiang-yu* and *tao-yu* (the liquid separated from soybean chiang). Wai (1964) says 1596. Reischauer and Fairbank (1960, p. 308) say it was completed in 1578. Li (1958) says 1578. Merrill & Walker (1938) say 1590. Bretschneider (1881) says: Completed in 1578 but published in 1596 or 1597.

Talk with H.T. Huang, 1992, March 23. The most current, and one of the best, editions of this work was published in 1982 in Beijing by The People's Health Press (2,977 pages). It is edited and extensively annotated by Liu Heng-ju. He compared several of the most important

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extant versions, and where they differ (e.g. where a word is written differently in different versions), he explains these differences in footnotes, and explains why he chose the word or text that he did for his basic text. There is no English translation of the *Pen-ts'ao kang-mu*, one of the great scientific works in China (and worldwide) because: (1) It is a huge book which would take a lifetime to translate; (2) A vast amount of research would be required for an accurate translation; and (3) The cost of the translation and publication, and the relatively limited demand for the finished work would probably make the venture unprofitable for a commercial publisher. Perhaps the Chinese Academy of Traditional Medicine would be able to undertake such a translation, working jointly with English-speaking Western scholars.

In the section on soybeans, this work refers to a type of soy wine called *tou-lin chiu* ("bean soak wine") which is described as a sake-like fermented alcoholic beverage made from black soybeans. A recipe is given and it is stated that the *Ts'ung-shu chi-ch'eng ch'u-p'ien* (1473) said that it cures post-partum white sickness, apparently an affliction suffered after the birth of a child.

Wang and Fang (1987) write: The method of preparing chiang-yu (soy sauce) was first described in this work. Cooked soybeans were mixed with wheat flour, pressed into cakes, and left in the room until the cakes were covered with yellow mold growth. The molded cakes, or *ch'ü*, were mixed with salt and water and aged in the sun. After pressing, the liquid was known as chiang-yu. Li also described how to make a similar sauce (*shi-tche*) by boiling fermented black soybeans.

Needham (Botany, 1986, p. 318g): "The soya-bean, *Glycine Soja*, *ta tou*, was considered an antidote for indigestion and poisoned conditions of the intestinal tract, but Li Shih-Chen found that this never had any effect unless *kan ts'ao* (*Glycyrrhiza glabra*) was given with it (chap. 24, p. 4a)."

Fukushima (1979, p. 5-6): "The chiang-yu described in *Pen-ts'ao Kang-mu* (*Honso-Komoku* in Japanese), published in 1590 by Li Shih-chen (*Ri Jichin* in Japanese) in the Ming (*Min* in Japanese) dynasty, was also made with koji [*ch'ü*] manufactured by using soybeans and cereals (Fig. 4). (In this process soybeans were cooked in water, mixed with wheat, and spontaneously molded to form koji. Salt water was mixed in with a paddle, then the mash was insulated and aged. Finally it was filtered to make chiang-yu). The ratio of soybeans to wheat in the koji making was 3:2. This ratio is very close to that used in making regular Japanese shoyu, which is made by using equal amounts of soybeans and wheat."

Wai (1964) notes that this book infers that soybean curd [tofu] was invented by Liu An.

Sato (1963, p. 20), in his book titled "Documents on Soy Nuggets, Chiang, Miso, and Shoyu," cites this as the fourth earliest Chinese document seen on the subject. It was translated into Japanese by Suzuki Shintai.

Morohashi (1955) translated parts of the *Bencao* related to [soy] bean oil (*douyu*), bean sprouts (*douya*, *dounieh*), fermented black soybeans (*doushi*), tofu (*doufu*), [soy] bean flour (*doufen*), bean soak wine (*doulinjiu*), soybeans (*dadou*–production; there are black, white, yellow, dark brown, green, and speckled soybeans).

44. Ekirinbon setsuyôshû [Early Japanese dictionary]. 1597. Japan. [Jap]*

• ***Summary:*** This dictionary contains (as of April 2012) the earliest known published reference to shoyu (soy sauce) in Japan, written with the characters used today. Prior to this, other characters were used: Hishio / chiang, mame-bishio, etc. Written by a Japanese priest between 1469 and 1503, it was widely circulated in manuscript form and used by the common people. Modern rendering by Kawakami 1978, p. 220. It also mentions amazake and ko (the early term for amazake).

Note: This is the earliest Japanese-language document seen that mentions amazake, which it calls "amazake" and "ko." This is also the earliest document seen (March 2001) concerning the etymology of amazake.

Yokotsuka (1985, p. 205; 1986, p. 198) gives the title and date as "Ekirinbon-Setsuyoshu (1598)" and notes that the word shoyu [written with the same Chinese characters as chiang-yu / jiangyou, the Chinese word for soy sauce] first appeared in this book.

Akio Saito (1985) states that this book was published in 1521.

Fukushima (1989, p. 9): "The word 'shoyu' first appeared in *Ekirinbon-Setsuyoshu*, a Japanese dictionary published in 1597 during the Muromachi period."

Iino (2001, p. 23): "Next [after the *Tamonin-nikki* entries of 1568 and 1582] we find an entry for shoyu (using contemporary characters) in the *Ekirinbon-setsuyoshu* (1597). The oldest of these dictionary-like *setsuyoshu* is thought to be the *Bunmeibon-setsuyoshu*. Following its publication, similar volumes appeared successively, but none of these contains any reference to shoyu. The entry in the *Ekirinbon-setsuyoshu* appears to be the first reference to shoyu in a *setsuyoshu*. By this stage it seems clear that soy sauce was in common use, both in name and in practice."

45. Saito, Akio. 1599. [Chronology of soybeans in Japan, 1336 to 1599, the Ashikaga/Muromachi period] (Document part). In: Akio Saito. 1985. Daizu Geppo (Soybean Monthly News). Jan. p. 14. [Jap; eng+]

• ***Summary:*** 1350–Dengaku (Oden) is mentioned in the records of the Gion shrine in Kyoto.

1444 June–The present characters for "tofu" appear in the *Kagakushu* encyclopedia.

1450–The suribachi (a serrated earthenware grinding

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bowl or mortar) becomes popular among the common people, therefore miso soup becomes popular.

1469–In the feudal domain of Sanuki (*Sanuki no kuni*) the Sakade Salt Farm (*Sakade Enden*) starts operation.

1500–In the published collection of Japanese poems and songs titled *Shichijû-ichiban shokunin-zukushi uta awase*, there is a drawing of a lady in a black kimono and white headband sitting cross legged on a low platform on a street and selling large and small pieces of cut tofu.

1521–The present characters for the word "shoyu appear for the first time in the book *Ekirinbon Setsuyoshu*.

1526–In a memorandum by Munenaga is written: "Late in the night, sitting by the sunken open-hearth fireplace together, and eating many Dengaku tofu" (*Yo mo fuke, irori-be ni hiza o narabe, Dengaku tofu o do kasanari.*) It seems that at the end of the Muromachi period, people spread miso on tofu, grilled it over a fire, then ate it.

1535–In Kishu (today's Wakayama prefecture), Akagiri Umataro? (Zenuemon/Yoshiuemon?) starts selling Yuasa Shoyu, which is derived from Kinzanji miso.

1558–Iida Ichirobei of the feudal domain of Shimôsa (*Shimôsa no kuni;* today's Noda city in Chiba prefecture) makes tamari shoyu, called Kawanaka-jima Goyo Tamari, and sends it to the Takeda family in Koshu. This is the beginning of Noda Shoyu. It is said that the taste of shoyu gave a great boost to the energy of Takeda's army. At about this same time Takeda Shingen (lived 1521-1573) starts to use dried-frozen tofu (*kori-dofu*) for his army in Kawanaka-jima after tasting the delicious kori-dofu from Sahtobei?

1559–The book *Tokitsugu Kyoki* by Yamashina Tokitsugu (lived 1507-1579) states that Tokitsugu sent a small keg of shoyu to Nagahaki kyoku. It seems that at the end of the Muromachi period, shoyu is becoming popular.

1560 May–Oda Nobunaga (who lived 1434-1582) wins the war over Imagawa Yoshimoto (1519-1560) in Okehazama. At about this time people start use the technique of frying to prepare the side dishes to their meals (*fukushoku-hin*) for the first time.

1573-91–Shoyu making starts on the island of Shodo-shima.

1574–Tanaka Chobei of the feudal domain of Shimousa (today's Chiba prefecture) Ichikawa starts making shoyu.

1587–Maruo Magouemon of Hanshu Tatsuno makes shoyu using Mikazuki soybeans.

1591–Akagiri Saburobei of Yuasa in Kishu-han (today's Wakayama prefecture) starts to use Shoyu Kaisen, a ship of at least 200 koku [9,520 gallons] capacity to transport his shoyu to other feudal domains (*kuni*) for sale.

1594–The term *koma-dofu* appears in the Rokuon Diary of Ginkakuji. "Rokuon" means "deer garden." *Koma-dofu* is a very firm tofu which originated in Korea. Address: Norin Suisansho, Tokei Johobu, Norin Tokeika Kacho Hosa.

46. Companhia de Iesus [Society of Jesus (Jesuit)]. 1603. Vocabulario da lingoa de Iapam, com a declaraçáo em Portugues, feito por alguns padres, cirmaós da Companhia de Iesu [Vocabulary of the language of Japan, with definitions in Portuguese, produced by some fathers and brothers of the Society of Jesus]. Nagasaki, Japan. 403 p. [Por; Jap]
• ***Summary:*** At the bottom of the title page is written: "Com licença do ordinario, & Superiores em Nangasaqui no Collegio de Iapam da Companhia de Iesus. Anno M.D. CIII." The "Licença" or license by Francisco Pasio is dated 2 Jan. 1603. A romanized version of each Japanese word is given, followed by a brief explanation in Portuguese. In Japanese, this book is known as *Nippo Jisho, Nagasaki-han.* In 1960, Iwanami Shoten published a facsimile edition in Japan, titled *Nippo Jisho: Vocabulario da lingoa de Iapam*, compiled by Tadao Doi (822 p., 22 cm), then in 1980 they published a Japanese translation (xxxiv + 862 p., 27 cm). Kawakami (1978) has summarized some soy-related portions. Iwai (1953, p. 11) notes that this dictionary was compiled by Joao Rodrigues–but this is controversial.

Soy-related terms in this dictionary, and a translation of their definitions from Portuguese, through Japanese, into English, are as follows:

Abura ague. 1. Abura agueno mono. Abura-agé [deep-fried tofu] or abura-agé mono. Things which are deep-fried in oil. Note 1. This is the earliest document seen (April 2001) that mentions fried tofu.

Aburidôfu. Slice tofu, which is made from beans like raw cheese, broil in a fire.

Amazaqe [Amazake], a still-bubbling fermented liquid that has not yet completely become sake; or sweet sake. Note 2. This is the earliest Portuguese-language document seen that mentions amazake, which it calls "Amazaque."

Azzuqi or azzuqui [azuki beans]. "*Hus feijoes pequenos como lentilhas*" means "Beans that resemble green peas (endo). Azzuqigai is rice porridge (o-kayu) that contains azuki beans. Azzukimochi is mochi that contains azuki beans. Note 3. This is the earliest European-language document or Portuguese-language document seen (Jan. 2005) that mentions azuki beans, which it calls *Azzuqi* or *Azzuqui*.

Cabe [Kabe]. Same as tofu. A type of food which is made from ground beans. This is a woman's word. Note 4. This is the earliest document seen (Feb. 2004) that uses the word "cabe" (or "kabe") to refer to tofu.

Côji [Koji], a yeast used in Japan to make sake, or mixed with other things. Note 5. This is the earliest European-language document seen (July 2000) that mentions the word for koji.

Daizzu [Daizu]. Mame. Graos, ou feijoes de Iapao [grain, seed, kernel, or Japanese beans].

Dengacu [Dengaku]. Dancing monks (Bôzos). Or tofu which is skewered, and on top of each slice is spread miso; then it is broiled.

Fanben [Hanben]. A type of food which is made by

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broiling tofu and simmering it with miso.

Icchô. A way of counting some types of food, such as tofu.

Miso. A kind of mixture which is made with *graos* [grains, seeds, kernels], rice, and salt to season Japanese soups.

Note 6. This is the earliest European-language (or Portuguese-language) document seen (March 2009) that mentions miso, which it calls *Miso.*

Misocoxi [*Misokoshi*], a bamboo strainer used for straining miso. Note 7. This is the earliest document seen (March 2011) that mentions a *misokoshi.*

Misoya, a shop that sells miso.

Misoyaqijiru [*Miso-yaki-jiru*], a type of soup (*Xiru*) made with tofu and finely sliced daikon radish. Note that the word tofu was written as "Tofus" in the dictionary but should be written "Tôfus."

Misôzzu, which should properly be called Zosui, is a healing food made from vegetables, rice, miso, etc. and served to those who are old, weak, or sick. Another meaning of this term is a type of porridge [*kayu*] containing a mixture of rice, vegetables, and other things.

Nattô, a type of food made by a brief boiling of grains / seeds [*graos* is the word used, but soybeans are actually employed], which are then put into an incubation chamber (muro).

Nattôjiru, a soup (*Xiru*) made from natto. Note 8. This is the earliest Portuguese-language document seen (Jan. 2012) that mentions *natto* or *Nattôjiru.* However recall that the "natto" used in Nattôjiru may well be fermented black soybeans.

Saqe (sake, saké).

Tamari, a very savory liquid taken from miso which can be used for seasoning foods [when cooking] or at table. Note 9. This is the earliest document seen (April 2012) that mentions tamari.

Tôfu*–Taufu. A type of food. It is made into the shape of a cheese by crushing soybeans. * Note: The sound of the Japanese character for bean (mame) is "tou." But at that time "taufu" was the typical pronunciation. In other documents it is the same, for example the *Iitsugu Kyoki* (Iitsugu Diary) written during the Tensho period (1573-1586), with entries in 1588, 1591, and 1600. Sometimes they used the characters for "T'ang" (as T'ang dynasty in China) and "cloth," although they were also pronounced as "taufu." In this 1603 Portuguese dictionary there appear a number of tofu terms written in the "open sound form" (kaionke): Cabe [Kabe = wall], Dengacu [Dengaku], Fanben, Icchô [One cho or cake of tofu], Vdondôfu, and Yudofu. One exception is the term Aburidôfu.

Tôfuya–Taufuya, a shop which makes and sells that cheese-like thing (tofu), which is made by grinding soybeans that have been soaked in water until they are soft.

Vdondôfu [Udon-dôfu]. Tofu which is made like udon (Japanese-style wheat noodles) and cooked.

Xôyu [Shoyu, or soy sauce], a liquid which corresponds to vinegar except that it is salty. It is used for seasoning foods. It is also called *sutate.* The character *su* means "bamboo mat" [as in "sudare"] and the character *taté* means "to stand up." Note 10. This is the earliest Portuguese-language document seen (April 2012) that mentions shoyu or soy sauce, which it calls Xôyu.

Yudôfu–Yudaufu: A food made from thinly sliced tofu, served next to a *kakejiru*-type sauce [which is then poured over the top].

The following terms are not mentioned: Agé (but abura-agé is), Daitokuji natto, Edamame (or Eda mame or Yeda mame), Fu (or gluten or wheat gluten), Hamanatto or Hamana-natto, Hiya-yakko, Kinako, Koya-dofu (or Kori-dofu), Okara, Soi*, Soj*, Shoyu, Tonyu, Unohana, Yaki-dofu, Yuba, Zoy*.

Note 11. This is the earliest dictionary of the Japanese language compiled by Europeans. It is also the earliest document seen (Feb. 2001) concerning soybeans or soybean products in connection with (but not yet in) Europe or Portugal, and the first such document to mention miso or natto.

Note 12. This is the earliest European-language (or Portuguese-language) document seen that mentions tofu, which it calls *Cabe, Tôfu,* or *Taufu.*

Michael Cooper (1974, p. 222-23), in his excellent biography of Rodrigues, states that in the preface to this celebrated work, the "compilers promised to produce shortly a supplement containing additional terms and words inadvertently admitted from the dictionary. The supplement appeared the following year, and the Bodleian Library, Oxford, possesses a copy of both the *Vocabulario* and its supplement bound together in one volume. The dictionary runs a formidable total of 330 folios, while the supplement extends to 71 more folios, each page carrying two columns of text. The value of this great dictionary, containing a total of 32,798 entries, is considerable." "Whether or not Joao Rodrigues had a hand in the compilation of the *Vocabulario* is still a debatable point... Thus until further evidence appears, the identity of the principal European collaborators must remain conjectural." Address: Nagasaki College of Japan.

47. **Product Name:** [Higeta Shoyu].
Foreign Name: Higeta Shôyu.
Manufacturer's Name: Choshi Shoyu.
Manufacturer's Address: Choshi, Japan.
Date of Introduction: 1616.
Ingredients: Soybeans, wheat, water.
Wt/Vol., Packaging, Price: Keg
How Stored: Shelf stable.
New Product–Documentation: Chamberlain, Basil Hall; Mason, W.B. 1901. Handbook for travellers in Japan:

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Including the whole empire from Yezo to Formosa. 6th ed., revised. London: John Murray; Yokohama, Shanghai, Hongkong, Singapore: Kelly & Walsh, Ltd. ix + 577 + 94 p. In the ads at the back is a full page advertisement (p. 49) for "Higeta Soy, manufactured by G. Tanaka, Chôshi, Shimôsa, Japan." An illustration shows the Higeta trade mark. "Higeta Soy dates from 1615 A.D. (Second year of Genwa). Higeta Soy is honoured with the distinguished patronage of the Imperial Household. Higeta Soy was awarded the superior medal at the World's Fair at Chicago, and gold and other superior medals by the Home Exhibitions.

Fruin, W. Mark. 1984. "History of Higeta Shoyu Co." 4060 Amaranta Dr., Palo Alto, California 94306. 4 p. May 15. Unpublished manuscript. Higeta shoyu is one of the oldest brands of soy sauce in Eastern Japan, tracing its history back to the Hamaguchi brothers who migrated at the beginning of the 17th century from Hiromura in Wakayama prefecture (across the river from Yuasa, the birthplace of shoyu in Japan) to Choshi on the eastern tip of the Miura Peninsula, which curves around the top of Tokyo Bay. The Black Current, which runs northward from Wakayama to Choshi, carried the Hamaguchi brothers' ships. They had the foresight to transport shoyu from its place of origin in western Japan to the newly opened vistas in the 17th century of Tokyo and the Kanto plain hinterland.

Around 1615 the elder of the two Hamaguchi brothers established Hiroya, a food distribution company in Tokyo (then Edo), while the younger brother ventured into the manufacture of Yuasa shoyu. For the next several centuries, Yamasa was noted as a good but local shoyu, indistinguishable from other local brands except for the access to the Tokyo market, which it enjoyed through Hiroya.

In 1914 the elder Hamaguchi joined with two other Choshi families, Tanaka Genba and Fukui Kichibei, to form the Higeta Shoyu Co. Ltd. Each family continued to produce their own brands of shoyu but around 1925 Higeta, which had been Tanaka Genba's brand, became the sole company brand. An ambitious plan of expansion of expansion was drafted to leapfrog Higeta over Yamasa its local rival.

Akio Saito. 1985. [Chronology of soybeans in Japan]. *Daizu Geppo* (Soybean Monthly News). Jan. p. 14-16. 1616– Tanaka Genba of Kamiusa no Kuni is advised to make tamari shoyu as a side business by Sanagi Kyurouemon of Settsu. The latter runs a sake factory and has a wholesale seafood products shop in Edo. This is the beginning of Choshi Shoyu and Higeta Shoyu.

1895–Around this time the number of small shoyu makers decreased dramatically as Kikkoman, Yamasa, and Higeta increasingly used advanced industrialized methods.

Note: This is one of the earliest brands of commercial soy sauce seen made by any company in Japan.

48. Vliet, Jeremias van. 1637. [Re: Request for provisions]. Letter to Nicolaes Coeckenbacker, head of Dutch office at Firando [Hirado Island, near Nagasaki, Kyushu, southern Japan], June 11. p. 555-65 See p. 565. Handwritten, with signature. [Dut]

• ***Summary:*** This request includes: 10 pots of sugarloaf, 50 candlesticks dismantled into parts, 50 lacquered plates with legs and gilded flowers, 10 Kegs Murasaki to hawk among the Moors (*10 Balien Moersackjen om onder de Mooren te venten*). Note 1. Murasaki (literally "purple") is an ancient poetic synonym for soy sauce.

Bibliographic reference in Dutch: NA, VOC 1125, overgekomen brieven en papieren (11-6-1637) 555vo-565vo. The letter is a contemporary hand-written copy, written in a letter-book for the administration on Deshima.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 1125 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 1125].

Note 2. This is the earliest Dutch-language document seen (April 2012) that uses the word "Moersackjen" [murasaki] to refer to soy sauce.

Note 3. The Dutch word for "murasaki" also appears in at least two other letters written requesting provisions during the late 1630s, but in each case "murasaki" seems to be a solid, ordered in units of pieces or bales (such as indigo), as follows: (1) 1638 May 5. NFJ 277, p. 319. Letter from the prince of Tonkin to the president of the VOC settlement at Firando. "8 pieces of murasaki or violet (*8 stucx mourasacquij ofte violeth*). (2) 1638 July 15. NFJ 277, p. 472. Letter from Henrick Nachtegael in Siam to the honourable mister president Nicolaes Couckenbacker at Firando. "Twenty bales of murasaki to sell and use as a present (*Twintich baelen moersacquij om te vercoopen ende te verschencken*).

Note 4. Assuming "Moersackjen" refers to soy sauce: This is the earliest document seen (Feb. 2012) concerning soybean products (soy sauce) in Siam. This document contains the earliest date seen for soybean products in Siam (1637); soybeans as such have not yet been reported. Address: In India at the office in Siam (*India op het comptoir Siam*).

49. Ryôri monogatari yorozu kikigaku [Many tales of cooking I have heard and recorded]. 1643. Japan. [Jap]*

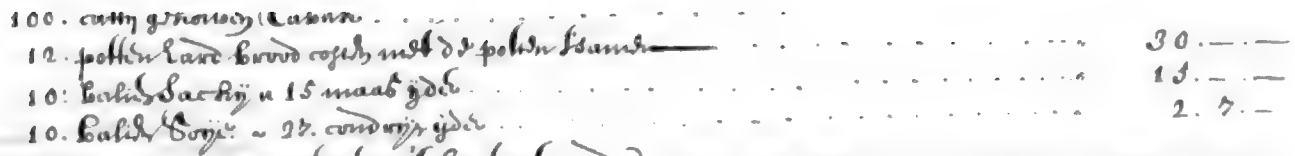
• ***Summary:*** This famous printed book by an unknown author is the earliest Japanese book that specialized in cooking. Therefore it was widely quoted in many subsequent cookbooks. Recipes include miso soup and taremiso.

Some Japanese authors cite the Japanese title as simply *Ryôri monogatari* however the eminent scholar T. Yokotsuka (1985, p. 206) cites it as *Ryôri monogatari yorozu kikigaku*.

The names of the volumes include *Ryôri Taikan, Nihon*

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Ryôri Taikan, Zokugun Shoruiju Inshokubu, Shokumotsu Koza.

Note: This is the earliest document seen (Jan. 2008) worldwide, and the earliest Japanese-language document seen (Jan. 2008) that mentions dried-frozen tofu or frozen tofu, which it calls *kôri-dôfu*. Miyashita, who cited this early reference, gave the book's date as 1624.

Concerning shoyu: Iino (2001, p. 21) contains a "Table of ingredients used in *tou-miso* and shoyu during the Edo period." The entry for *Ryori Monogatari* (compiled in 1643) states that *Masaki shoyu* is made from the following ingredients: Soybean 19.6%. Wheat / barley 22.5%. Salt 15.7%. Water 39.2%.

In the section on "Foods, Sake," is a section on "Quick preparation of amazake. Wash 1 *sho* (1.8 liters) of cooked and dried glutinous rice (*domyoji*) in hot water and drain. Mix in 1 sho of koji and 1.5 sho of water; grind in a suribachi very well. Strain in a strainer (*suino*), then simmer in a pot, while stirring. It will become good amazake. Adding white sugar is good."

In the section titled "Man Kiki Gaki" is a description of "How to make Shirokawa Amazake. Crack by grinding 3 sho white rice, steam well and cool. Mix in 5 sho of koji, 5 sho of water, and knead well. Strain in a strainer (*suino*). Discard the pulp and keep the liquid to make amazake. Mix it occasionally. In summer it takes 3 days and in winter 5 days until it is ready."

50. **Product Name:** [Unknown brand of shoyu].
Manufacturer's Name: Unknown shoyu company.
Manufacturer's Address: Choshi, Chiba-ken, Japan.
Date of Introduction: 1645.
New Product–Documentation: Ad in The East. 1968. Fruin. 1984. History of Five Japanese Shoyu Companies. Soya Bluebook. 1987. p. 94. Address: Kakigaracho 1-23-8, Nihonbashi, Chuo-ku, Tokyo 103, Japan.

Note 1. This is the earliest known commercial soy product made in Japan (Jan. 2007; one of two products).

Note 2. This is the earliest record seen (July 2011) concerning the ancestor of Yamasa Shoyu.

Note 3. The Yamasa Corporation USA website (printed 3 July 2011) under "Company history," states: "In 1645, company founder Gihei Hamaguchi began brewing soy sauce in Choshi, Japan, under the Yamasa name." "Yamasa Corporation began exports of soy sauce to the U.S. over 130 years ago" (i.e., before 1881).

Note 4. The early history of the company now named Yamasa Shoyu is shrouded in mist. We can find no early document which states that the name "Yamasa Shoyu" existed before 1854. And at that time it was the name of a brand of shoyu, not the name of a company.

51. In't Comptoir Nagasaekij [In the office of Nagasaki]. 1647. Letter to Taiwan / Formosa, Oct. 16. Unpaginated. Handwritten, with signature. [Dut]
• ***Summary:*** Shipped and loaded in the sailing ship (*fluijtschip*) the *Zwarte Beer* [literally "black bear"] sailing from this place with a Bill of Lading of the chiefs [of this office] to Taiwan (*Taijoan*) in consignment send to the honorable Pieter Antonisz, Maritime (*Overwater*), President of the Island of Formosa (*Eijlants Formosa*).

The list of provisions sent includes: "12 pots of hard bread costs together with the pots–f 30:--:--. 10 kegs (*balien / taru*) of sake (*sackij*) of 15 *maas* a piece–f 15:--:--. 10 kegs (*balien*) of Soy [sauce] at 27 *condrijn* a piece–f 2:-7:--. (See above).

Bibliographic reference in Dutch: NA, NFJ 847, Journal (16-10-1647).

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 847. Boekhoudkundig journaal [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 847. Journal of bookkeeping].

Note 1. This is the earliest Dutch-language document seen (April 2012) that clearly mentions shoyu or soy sauce, which it calls *Soije*.

Note 2. A *maas* and a *condrijn* are old units of Asiatic currency of account used in China and Japan. The VOC glossary says: 1 *maas* = 7 or 8 stuivers, but in Siam 1 *maas* = 9 stuiver. A *condrijn* is smaller than a *maas*. The symbol "f" stands for guilder, the basic Dutch monetary unit. "f 2:07:8" is read "two guilders, 7 stuivers and 6 pennigen." One gulden (singular of guilder) = 20 stuivers. One stuiver = 12 pennigen.

Note 3. In 1624 the Dutch established their first trading post on Formosa. They had their colonial capital at Tayoan City (source of the modern name "Taiwan," and site of present day Anping).

Note 4. This is the earliest document seen (July 2007) concerning involvement by the Dutch or the Dutch East India Co. (VOC) with soyfoods (soy sauce) or soybeans.

Note 5. This is the earliest document seen (April 2012) concerning soy sauce trade (imports or exports). In this case exported from Japan to today's Taiwan.

Note 6. This factory (trading post) on Deshima Island in Japan was owned by the Honorable Dutch East India

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Company (VOC). Deshima was a small island in Nagasaki harbor, on Japan's southernmost main island of Kyushu. In 1600 the Dutch first made contact with Japan when the Dutch ship *De Liefde* drifted ashore in Usuki Bay in northeastern Kyushu. Many of the original 110 crewmembers had died and only 6 of those remaining could walk ashore unassisted. Two of the survivors went on to earn important places in Japanese history: William Adams and Jan Joosten.

In 1616 European ships were limited to the two ports of Nagasaki and Hirado (an island off the northwest coast of Kyushu, just northwest of Nagasaki).

In 1633 the Tokugawa shogunate (upset at Portuguese Christian missionaries intent on making converts and instigating revolts) adopted a policy of national isolation which continued for 221 years until 1854.

In 1639 the Portuguese were expelled. This left only the Dutch among the Europeans still trading with Japan and their representatives were moved in 1641 from Hirado to the tiny artificial island of Deshima / Dejima built by the shogunate in Nagasaki harbor, where they were kept as virtual prisoners. During this time Japan maintained contact with only two other nations: China and Korea. Chinese merchants were also allowed to trade at Nagasaki, but under strict controls.

By 1639 the Japanese had so successfully closed their doors to the outside world that subsequently Japan all but dropped out of the consciousness of Europeans. The only important exception was the annual Dutch vessel from the East Indies to the Dutch trading post on the island of Deshima in Nagasaki harbor.

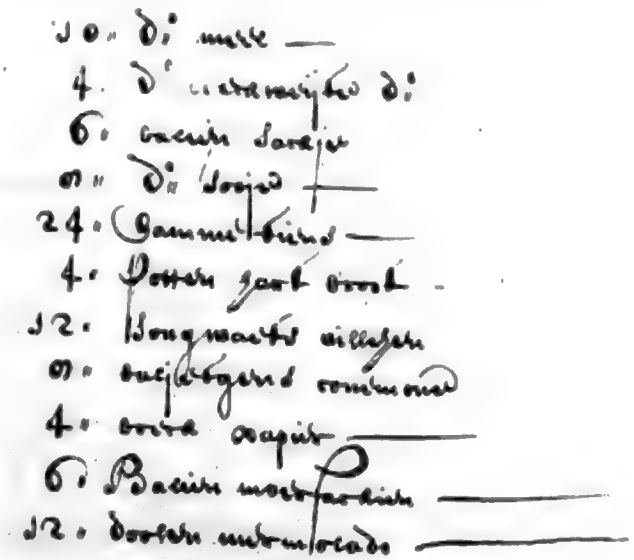
During the 1600s and 1700s, the Dutch expanded their network of trading posts throughout Asia, they continued to order provisions from Japan via their tiny but very important trading post at Deshima. Address: Deshima, Nagasaki, Japan.

52. Yorozu kikigaki hiden [Secrets of things heard and written]. 1650. Japan: Publisher unknown. 102 p. 2 volumes. Japanese summary by Kawakami 1978, p. 158. [Jap]

• ***Summary:*** Within the 54 sections, 34 sections concern food preparation, preservation, etc. Includes how to make shoyu, natto, dried-frozen tofu (kori-dofu), and miso. Between 1650-1673, nine printings were made. Each successive publication became more compact and more popular.

53. Craijers, E. Hendrick; Westerwolt, Volckerus; Momme, Hendrick. 1651. [Re: Request for silver]. Letter to Pieter Sterthenius, president of the Deshima factory [Nagasaki, Kyushu, southern Japan], June 30. p. 48-52. See p. 52. Handwritten, with signature. [Dut]

• ***Summary:*** *This re*quest for silver includes: 10 bales of flour, 4 bales of buckwheat, 6 kegs of sake (*sackje*), 8 kegs of soy [sauce] (*balien* [*taru*] *sooje*), 24 little hams, 4 jars of hard bread,... 8 kegs of pickled vegetables (*kônomoro* [*kô-no-mono*]), 4 books of paper, 6 kegs of soy [sauce] (*moersackien* [*murasaki*]; a poetic synonym for soy sauce), 12 boxes of marmalade (see below).



Bibliographic reference in Dutch: NA, NFJ 284, ontvangen brieven (30-6-1651). On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 284 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 284].

Note 1. This is the earliest Dutch-language document seen (April 2012) that uses the word "sooje" to refer to soy sauce.

Note 2. About the recipient: In *Pieter van Dam's Beschryvinghe van de Oostindische Compagnie*, by F.W. Stapel is an entry for Pieter Sterthenius. He was Council of Justice in Batavia and thereafter in 1651 for one year president of the Dutch merchant settlement in Japan. From 1655 to 1658 he was director of Bengal. In 1658 he went back home to the Netherlands as commander of the return fleet. This letter is a contemporary handwritten copy, in a letter-book for the administration on Deshima. It was sent on the ship *Coninck van Polen*. Address: Supreme merchant and head of the settlement at Siam (*Oppercoopman en opperhooft des comptoirs Siam*).

54. Creijers, Henrick; Westerwolt, Volckerus; Rijck, Jan van. 1652. [Re: Request for Japanese silver to keep the commerce going]. Letter to Adriaen van der Burch, director of commerce at the Deshima factory [Nagasaki, Kyushu, southern Japan], July 3. p. 73-77. See p. 77. Handwritten, with signature. [Dut]

• ***Summary:*** This request for silver and provisions includes: Two stones to grind wheat, 20 bales of wheat,... 3 bales of buckwheat, 10 kegs of sake (*balien sackij*), 8 kegs of soy

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[sauce] (*balien soij*), 2 pots sugarloaf, 6 kegs of pickled vegetables (*kônomoro* [*kô-no-mono*]), 12 *sonwats vissen* (*sonquat* = Japanese New Year), 20 boxes of marmalade, 6 bales umeboshi (*omebus;* salted or pickled plums).



Bibliographic reference in Dutch: NA, NFJ 285, ontvangen brieven (3-7-1652) 73-77. On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 285 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 285].

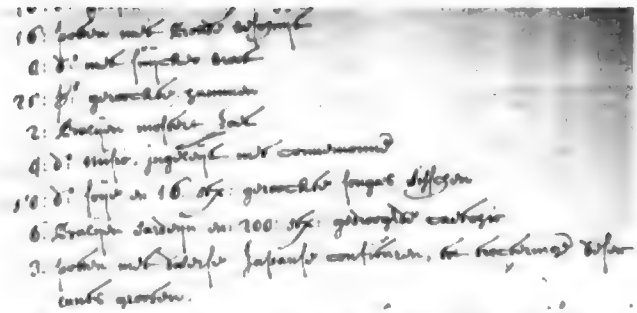
Note 1. This is the earliest Dutch-language document seen (April 2012) that uses the word "soij" to refer to soy sauce. The pronunciation of this word is remarkably similar to that of "soy."

Note 2. Henrick Creijers = Hendrick Craijers.

Note 3. This is the earliest document seen (May 2010) that clearly mentions soybean products (soy sauce) in Siam. This document contains the earliest clear date seen for soybean products in Siam (1652); soybeans as such have not yet been reported. Address: Siam.

55. Keijser, Jacob; Grevenraet, Joannes; Brummel, Luder; Baron, Henrick. 1652. [Re: Request for provisions for the settlement]. Letter to Adriaen van der Burch, director of commerce at the Deshima factory [Nagasaki, Kyushu, southern Japan], Aug. 14. p. 93-100. See p. 98-99. Handwritten, with signature. [Dut]

• ***Summary:*** This request includes: 80 to 90 kegs of good sake (*balijen goede sackij*), 50 piculs of wheat meal, 150 bales of white rice for the settlement and the ships, 70 bales of little beans (*boontjens*) for the settlement and the ships.



40 bales of peanuts (*cadjangh*) for the settlement and the ships, 10 bales of barley for the settlement and the ships, 16 pots of round rusk, 4 pots with sugarloaf, 25 piculs of smoked hams, 2 kegs of mustard seed, 4 kegs of miso (*misio*), preserved with pickled vegetables (*connemonne* [*kô-no-mono*]), 15 kegs soy [sauce] (*soije*) and 16 pieces of dried katsuo (*caetchio* [*katsuobushi*]), 2 pots with various Japanese candied fruits to treat native leaders. As much rice as they need before they are back in Japan, because wheat is expensive in Tonkin.

Bibliographic reference in Dutch: NA, NFJ 285, ontvangen brieven (14-8-1652) 93-100. On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 285 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 284].

Note 1. Henrick Creijers = Hendrick Craijers. Note 2. 1 picul is about 125 pounds, the amount a man can carry with a yoke.

Note 3. This is the earliest Dutch-language document seen (March 2009) that mentions miso, which it calls "misio."

Note 4. This is the earliest document seen (May 2010) concerning soybean products (soy sauce) in Tonkin [in today's Vietnam]. This document contains the earliest date seen for soybean products in Tonkin [in today's Vietnam] (1952); soybeans as such have not yet been reported. Address: Written on the ship Taiwan moored on the river of Tonkin [in today's north Vietnam] before the bar.

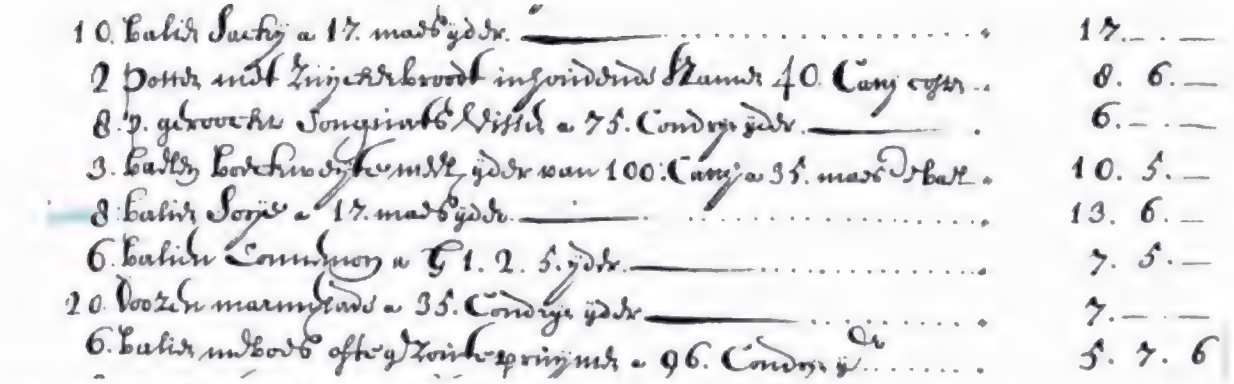
56. In't Comptoir Nagasaekij [In the office of Nagasaki]. 1652. Letter to Taiwan / Formosa, Oct. 22. Unpaginated. Handwritten, with signature. [Dut]

• ***Summary:*** Shipped and loaded in the sailing ship (*fluijtschip*) the *Trouw* [literally "faithful / true"] sailing from this place with a Bill of Lading of the skipper Christiaen de Groeve and the second merchant Mijndert Messteecker to Tayoan (*Taoijan*) in consignment send to the honorable Nicoales Verburgh [Island of Formosa].

The list of provisions sent includes: "12 kegs (*balien*) of sake (*sackij*) of 17 *maas* a piece–f 17:--:--. 8 kegs (*balien*) of Soy [sauce] (*Soije*) at 27 *maas* a piece–f 13:-6:--. 6 kegs

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umeboshi (*mebos* [salt pickled plums]) of 96 *condrijn* a piece–f 5:-7:-6 (see above).

Bibliographic reference in Dutch: NA, NFJ 851, Journal (22-10-1652).

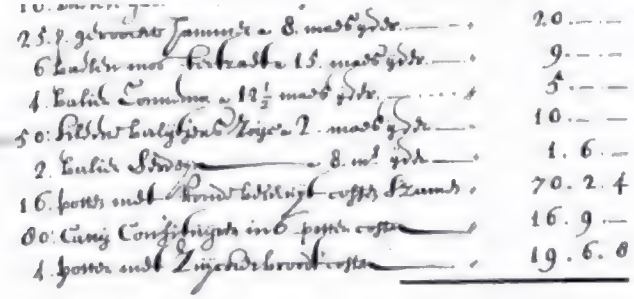
Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 851. Boekhoudkundig journaal [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 851. Journal of bookkeeping]. Address: Deshima, Nagasaki, Japan.

57. In't Comptoir Nagasaekij [In the office of Nagasaki]. 1652. Letter to Tonkin [today's Hanoi, Vietnam], Oct. 27. Unpaginated. Handwritten, with signature. [Dut]

• ***Summary:*** Shipped and loaded in the yacht (*jacht*) *Taijouan* [Tayoan / Taiwan] sailing from this place with a Bill of Lading of the skipper Hendrick Volckmans and the second merchant Abraham Stuijlingh directly to Tonkin (*Tonckijn*) in consignment send to the merchant Jacob Keijser head of the Company's trade.

The list of provisions sent includes: "25 smoked hams of 8 *maas* a piece–f 20:--:--. 6 bales mustard seed of 15 *maas* a piece–f -9:--:--. 4 kegs of pickled vegetables (*kô-no-mono, Connemon*) of 12½ *maas* a piece–f -5:--:--. 50 little kegs (*kleene balijtjens*) of Soy [sauce] (*Zoije*) of 2 *maas* a piece–f 10:--6:--. 2 kegs of sardines (*Serdeijn*) of 8 *maas* a keg–f -1:-6:--. 16 pots of round Dutch rusk costs total–f 70:-2:-4. 80 catties (1 cattij = 625 gm) candied fruit in 6 pots costs–f 16:-9:--. 4 pots of sugarloaf costs f 19:-6:-8 (see below).

Bibliographic reference in Dutch: NA, NFJ 851, Journal



(27-10-1652).

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 851. Boekhoudkundig journaal [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 851. Journal of bookkeeping].

Note 1. This is the earliest Dutch-language document seen (April 2012) that uses the term "Zoije" to refer to soy sauce. Address: Deshima, Nagasaki, Japan.

58. Caesar, Cornelius. 1654. [Re: Order for provisions]. Letter to Honourable Hapart at the Deshima factory [Nagasaki, Kyushu, southern Japan], July 18. p. 46-56. See p. 53. Handwritten, with signature. [Dut]

• ***Summary:*** This order for provisions includes: 25 smoked hams, 4 kegs of miso (*4 balies miso*), 4 kegs of soy [sauce] (*4 ditos soijo*), 6 large kegs of the very finest pickled vegetables (*connemon van de alderbeste*), 25 bales of white stamped rice.

Note 1. This is the earliest Dutch-language document seen (March 2009) that uses the word "miso" to refer to miso.

Note 2. This is the earliest Dutch-language document seen (April 2012) that uses the word "soijo" to refer to soy sauce.

Bibliographic reference in Dutch: NA, NFJ 286, ontvangen brieven (16-7-1654). On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 286 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 286].

Note: About the sender: In *Pieter van Dam's Beschryvinghe van de Oostindische Compagnie*, by F.W. Stapel is an entry for Cornelius Ceasar. In 1609 he was born in Goes, a commune in Zeeland province, southwest Netherlands. By 1635 he was already a merchant in the VOC service. In 1636 and 1637 he was a merchant in Quinam [Cochin China]. Then he was a merchant in Taiwan and in

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Japan. In 1641 he became supreme merchant. From 1646-1651 he was back in Holland. In 1651 he became Council of Justice in Batavia. From 1653 to 1656 he was Governor of Formosa. In 1657 he died in Batavia. This letter is a contemporary handwritten copy, in a letter-book for the administration on Deshima. Address: Governor of Taiwan and the Council of Formosa.

59. Coijett, Fredrick; Schedel, Fredrick; Dammans, R.; Alphen, Pieter van; Pedel, Thomas. 1655. [Re: List of provisions ordered]. Letter to Honourable Leonard Winnix on Deshima (Nagasaki, Japan), Aug. 3. p. 1-13. See p. 8. Handwritten, with signature. [Dut]

• ***Summary:*** In this letter (p. 8) is an order for provisions: 12 Japanese hams, 25 bales of white stamped rice, 6 kegs of good pickled vegetables (*connemon* [*kô-no-mono*]), 4 kegs of miso (*Balijen Miso*), 4 kegs of soy [sauce] (*Soija*), 4 bales of buckwheat, 8 Japanese room-mats (*camermatten*), 5 to 6 ordinary tea kettles.

Bibliographic reference in Dutch: NA, NFJ 287, ontvangen brieven (3-8-1655) 1-13. On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 287 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl, The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 287].

Note: This is the earliest Dutch-language document seen (April 2012) that uses the word "Soija" to refer to soy sauce. This soon becomes by far the most widely used spelling of "soy sauce" in Dutch; of the 11 letters that mention soy sauce (and that we have seen) written in the 21 years between Aug. 1657 and Nov. 1678, all but one ask for "Soija." "Soije" was a distant second. Address: Fort Zeeland (Casteel Zeelandia) on Taiwan.

60. Sterthemius, Pieter. 1656. [Re: Order for provisions]. Letter to E. Joan Boucheljon, head of the Deshima factory [Nagasaki, Kyushu, southern Japan], March 8. Unpaginated. Handwritten, with signature. [Dut]

• ***Summary:*** Order for: 8 little kegs of good soy [sauce] (*8 balietges goede soeija*), 2 kegs of pickled vegetables (*connemonne* [*kô-no-mono*]), 2 kegs of good sake (*sackje*),... 2 sake kettles (*sackie ketels*).

Bibliographic reference in Dutch: NA, NFJ 355, ontvangen brieven (8-3-1656). On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 355 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl, The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 355. The pages are not numbered]. This letter is written in a letter-book for the administration on Deshima.

Note 1. This is the earliest Dutch-language document seen (April 2012) that uses the word *soeije* to refer to soy sauce or shoyu.

Note 2. This trading post was established by the Portuguese in 1537, by the English at Hooghly in 1651, and by the Dutch at Chinsura in 1656; the towns were united as Hooghly-Chinsura in 1865.

Note 3. This is the earliest document seen (Nov. 2010) concerning soybean products (soy sauce) in India. This document contains the earliest date seen for soybean products in India (1656); soybeans as such have not yet been reported.

Note 4. About the sender: From 1655 to 1658, Pieter Sterthemius was director of the VOC's Bengal settlement. On 17 December 1659 he went back home to the Netherlands as a commander of nine ships.

About the recipient: In *Pieter van Dam's Beschryvinghe van de Oostindische Compagnie*, by F.W. Stapel the entry for E. Joan Boucheljon appears under Jan Boucheljon. In 1641 he left Holland and sailed as an assistant writer to Asia. He worked mostly in Japan, where he was head of the VOC settlement on Deshima. Three times (in 1655, 1657, and 1659) he was a member of the Council of Justice in Batavia. In Holland, he was known as someone with a good reputation. On 24 Jan. 1661 he returned home to Holland as commander of two ships: the *Kalf* and the Venenburg. Address: Director of the Bengal Settlement [on the Hooghly (Hooghly-Cinsura) in today's West Bengal, northeastern India, on the Hugli River].

61. Indijck, Hendricq; Kettingh, Pieter; Stouthart, Adrien. 1657. [Re: Order for provisions]. Letter to the Deshima factory [Nagasaki, Kyushu, southern Japan], July 8. p. 5-9 See p. 9. Handwritten, with signature. [Dut]

• ***Summary:*** "For the provision of this settlement [Cambodia] we request... 20 kegs sake (*sackie*), with drinking utensils / accessories, a little soy [sauce] (*wat soija*), and vegetable pickles (connemonne [kô-no-mono]) to treat the Japanese and other merchants from time to time."

Bibliographic reference in Dutch: NA, NFJ 288, ontvangen brieven (8-7-1657) 41. On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 288 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl, The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 288].

Note 1. This is the earliest document seen (Feb. 2012) concerning soybean products (soy sauce) in Cambodia; soybeans as such have not yet been reported.

Note 2. About the sender: In *Pieter van Dam's Beschryvinghe van de Oostindische Compagnie*, by F.W. Stapel is an entry for Hendricq Indijck. He was supreme merchant in Cambodia and after that he became, three times,

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head of the trading post in Japan. In Cambodia he was succeeded by Pieter Kettingh. This letter is a contemporary handwritten copy, in a letter-book for the administration on Deshima. The letter was received on 10 Aug. 1657 by the yacht (*jacht*) *Erasmus*. Address: Head (*Opperhofd*), Dutch factory in Cambodia.

62. Coijett, Fredrick; Schedel, Fredrick; Dammans, Reijnier; Pedel, Thomas; Valentijn, Jacobus. 1657. [Re: List of provisions ordered]. Letter to [illegible] on Deshima (Nagasaki, Japan), Aug. 3. p. 1-5. See p. 4. Handwritten, with signature. [Dut]

• ***Summary:*** In this letter (p. 8) is an order for provisions: With the return ships, you must send for the use of this settlement and otherwise the following: 10 to 12,000 bales of new rice. 500 bales of wheat. 800 pairs of cotton dress coats for the for the slaves of the factory based on the model / pattern sent with the skipper of the *Domburgh / Domburg;* they must be more suitable than the last ones. 150 piculs [1 picul = about 125 lb] of good Japanese tobacco, to fill all cargo space available. 20 bales of white stamped rice. 8 hams. 6 kegs of pickled vegetables (*connemonne* [*kô-no-mono*]). 6 kegs of good sake (*sackie*). 3 kegs of miso (*missouw*). 3 kegs of soy [sauce] (*soija*). 2 pairs of scales [for weighing] with their accessories.

Note: This is the earliest Dutch-language document seen (March 2009) that uses the word "missouw" to refer to miso.

Bibliographic reference in Dutch: NA, NFJ 288, ontvangen brieven (8-7-1657) 1-5. On microfilm. Received 19 July 1657. Sent with the ship *Domburgh / Domburg*.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 288 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 288]. Address: Fort Zeeland (Casteel Zeelandia) on Taiwan.

63. Coijet, Fredrik; Oetgens, Johan; Pedel, Thomas; van Iperen, Thomas; Harthouwer, D. 1658. Lijst met handelswaar [Re: List of commodities ordered]. Letter to Joan Boucklejou on Deshima (Nagasaki, Japan), July 30. p. 25-33. See p. 28. Handwritten, with signature. [Dut]

• ***Summary:*** In this letter (p. 28) is an order for provisions: "20 bags of white stamped rice. 6 kegs of pickled vegetables (*6: balien connemonne* [*kô-no-mono*]). 3 kegs of miso (*missoe*). 3 kegs of soy sauce (*soija*). 3 kegs of umeboshi (*mebos* [salt pickled plums]). 6 kegs of sake (*sackij*). 12 pieces of smoked ham." Also information about copper weights. On p. 33 are the names of the writers.

Note 1. This is the earliest Dutch-language document seen (March 2009) that uses the word "missoe" to refer to miso.

Note 2. This is the earliest document seen (Dec. 2006) concerning umeboshi salt plums.

Bibliographic reference in Dutch: NA, NFJ 289, ontvangen brieven (30-7-1658) 28. On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 289 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 289].

Note 1. This is probably a list of goods for Goijet's table, because he requested the same sort and amount of provisions on 7 Aug. 1659. Address: Governor of Formosa, Fort Zeelandia (Casteel Zeelandia) on Formosa [in today's Taiwan].

64. Coijet, Fredrik; Oetgens, Johan; Pedel, Thomas; van Iperen, Thomas; Harthouwer, David. 1659. Des provisen voor de Tafel van den Gouverneur [Re: Order of provisions for the governor's table]. Letter to Wagenaar, head of the trading station, Nagasaki (*opperhooft en den Raadt des Nagasakkisen Comptoir*) [Deshima, in Kyushu, southern Japan] and the councillors of this place, Aug. 7. p. 40-41. See p. 41. Handwritten, with signature. [Dut]

• ***Summary:*** In the postscript of this letter (p. 41) is an "order for provisions for the Governor's table. Will Your Excellency please send us: 6 kegs of pickled vegetables (*6: balien connemonne* [*kô-no-mono*]). 3 little kegs (*balitjes*) of the best soy sauce (*soija*). 2 kegs of miso (*missoe*). 1 keg of umeboshi (*mebos* [salt pickled plums]). 6 kegs of good sardines (*sardeijn*), mostly little ones. 20 pieces of smoked ham. 6 pieces *songuats* fishes. 50 sets of three finest dishes or plates of a certain size (*drielingen*). 30 sets of four finest dishes or plates of a certain size (*quarten* [*kwarten*]). 100 fine flat dishes (*pieringen*). 50 fine flat dishes (*pieringen*) of the smallest." At the end of the postscript are the names of the writers.

Bibliographic reference in Dutch: NA, NFJ 290, ontvangen brieven (7-8-1659) 41. On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 290 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 290]. Address: Governor of Formosa, Fort Zeelandia (Casteel Zeelandia) on Formosa [in today's Taiwan].

65. Rijck, Jan van. 1660. [Re: Order of provisions for private use]. Letter to Joan Boucheljon, president and head of the trade and other business, Nagasaki [Deshima, in Kyushu, southern Japan], June 29. Unpaginated. Handwritten, with signature. [Dut]

• ***Summary:*** The provisions ordered include: 200 catties (1 catty = 625 gm or 1.3 lb) uncut tobacco, 50 catties

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cuttle-fish (*Zeekath*), 200 pieces *Cantjo* (*Cantio*), 3 kegs of pickled vegetables (*connemon* [*kô-no-mono*]), 3 kegs soy [sauce] (*soije*), 20 kegs of sake (*sackie*), 30 bales of wheat, 6 Japanese coats with double linings, 6 smoked hams, 6 smoked *songuadts / songuat* fishes, 4 copper candle holders.

Bibliographic reference in Dutch: NA, NFJ 291, ontvangen brieven (29-6-1660). On microfilm.

About the recipient: E. Joan Boucheljon is mentioned as Jan Boucheljon in *Pieter van Dam's Beschryvinghe van de Oostindische Compagnie*, by F.W. Stapel. In 1641 he left Holland and sailed as an assistant writer to Asia. He worked mostly in Japan, where he was head of the settlement in 1660. Three times (in 1655, 1657, and 1659) he was a member of the Council of Justice in Batavia. In Holland he was known as someone with a good reputation. On 24 Jan 1661 he returned home to Holland as a commander of two ships: the *Kalf* and the *Venenburg*.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 291 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl, The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 291]. Address: Siam.

66. **Product Name:** [Shoyu].
Foreign Name: Shôyu.
Manufacturer's Name: Takanashi Hyozaemon XIX.
Manufacturer's Address: Noda, Japan.
Date of Introduction: 1661.
Ingredients: Soybeans, wheat, water.
Wt/Vol., Packaging, Price: Bottle.
New Product–Documentation: Noda Shoyu K.K. (Morio ICHIYAMA, ed.). 1955. Noda Shoyu Keizai Shiryo. Noda: Noda Shoyu Research Dept. p. 1.

Mark Fruin. 1983. Kikkoman: Company, Clan, and Community. p. 1, 16, 18, 21. "Takanashi Hyôzaemon XIX, whose descendants help manage Kikkoman today, began brewing shoyu, or natural soy sauce, in 1661 in the town of Noda... Using a work force of twenty that included fifteen contract laborers, he produced 3,000 gallons his first year."

Note: This is the earliest commercial soy sauce seen made by any company that later became Kikkoman. Although Kikkoman states on the label of each bottle of its soy sauce that the company originated in 1630, we can find no evidence indicating such an early date. The first shoyu made by a member of the Mogi family dates from the 1760s.

67. **Product Name:** [Miso].
Foreign Name: Miso.
Manufacturer's Name: Mogi Shichizaemon I.
Manufacturer's Address: Noda, Japan.
Date of Introduction: 1662.
New Product–Documentation: Mark Fruin. 1983. Kikkoman: Company, Clan, and Community. p. 16. In 1662 Mogi Shichizaemon started with the manufacture of miso, the rice or soybean paste similar to shoyu in fermentation technology. This is the earliest known soyfood product made by a member of the Mogi family, whose descendants now run Kikkoman.

68. Verdonck, -. 1664. [Re: Order for provisions]. Letter to the Deshima factory [Nagasaki, Kyushu, southern Japan], Aug. Handwritten, with signature. [Dut]
• ***Summary:*** Order for some small kegs of soy [sauce].

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); inventaris nummer 295 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl, The Archives of the Dutch Factory in Japan (NFJ); record number 295]. Address: Head (*Opperhofd*), Dutch factory in Tonking [Tonkin, in today's northern Vietnam].

69. Speelman, Cornelis; Lange, Pieter de; Huijberts, Pieter; Carpentier, Roelant de. 1665. [Re: Request for copper and provisions]. Letter to E. Jacob Gruijse, supreme merchant and head of the Council (*oppercoopman end opperhooft en aen den Raet*) at the Deshima factory [Nagasaki, Kyushu, southern Japan], Feb. 28. Unpaginated. Handwritten, with signature. [Dut]
• ***Summary:*** This request includes: 2,500 chests of copper, 60 kegs of Japanese camphor. No tea because we do not like it and it is very foul. 1,500 pieces of porcelain after the specifications of last year, but the bowls were much too coarse; they must be snow-white, 6 to 8 kegs of soy [sauce] (*balities Soija*) and 2 to 3 kegs pickled vegetables (*connemonne* [*kô-no-mono*]). As many walking canes (*rottangs*) as last year if they are beautiful.

Bibliographic reference in Dutch: NA, NFJ 295, ontvangen brieven (28-2-1665). On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 295 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl, The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 295]. Address: In the Company's castle Geldria at Pulicat / Palghat (*Casteel Geldria tot Paliacatta*) (in today's Tamil Nadu, Coromandel Coast, southeastern India).

70. Maetsuyker, Joan. 1668. [Re: Request for a decision concerning private merchandise]. Letter to Heren XVII ("17 Lords," leaders of the Dutch East India Company, VOC), Netherlands, Dec. 19. [Dut]
• ***Summary:*** The Governor-General and the Council in Batavia requested a decision from the "Heren XVII" about private merchandise from Japan imported into Batavia. Mostly this private merchandise consists of saké (*sacky*), murasaki [soy sauce], (*moersacky*), pickled vegetables

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(*connemonne* [*kô-no-mono*]), etc. This merchandise is imported in little quantities, but with great frequency. The Governor-General and the Council in Batavia advises the Heren XVII to permit this private merchandise, because small quantities were imported... so there is no disadvantage to the VOC. They are goods sent by people in Japan to their friends in Batavia.

Bibliographic reference in Dutch: W. Ph. Coolhaas, Generale Missiven van Gouverneurs-Generaal en Raden aan Heren XVII, RGP grote serie deel 3 ('s-Gravenhage 1968) 663. The pages with the quotation is folio 274v-275v.

Note 1. This is the earliest letter seen that mentions "murasaki" written to the Heren XVII or to the Netherlands.

Note 2. If *moersacky* refers to soy sauce, this is the 2nd earliest document seen (April 2012) concerning soybean products (soy sauce) in Indonesia; soybeans as such have not yet been reported. Address: Governor-General in Batavia [today's Jakarta, Indonesia].

71. Pavilioen, Anthonio; Caulier, Jaques; Carpentier, Roelant d'; Broeck, Pieter van den; Duijcker, Hendrick; Outhoorn, Hendrick van; Sonhuis, Johan B.; Huijsman, Johannes. 1669. [Re: Order for provisions]. Letter to Governor-General Joan Maetsuyker [Maatsuijcker] and the Councillors of the [Dutch East] Indies [Heren Raden van Indië] in Batavia [Dutch East Indies], Feb. 1, p. 424-35. See p. 433r. Handwritten, with signatures. [Dut]

• ***Summary:*** This order for provisions includes: "30 kegs sake (*sakkij*), 12 kegs of soy [sauce] (*balije soija*), 12 kegs of miso (*missoe*)."

Bibliographic reference in Dutch: NA, VOC 1270, OBP (1-2-1669) 424r-435vo. On microfilm. This letter is part of the correspondence in the series *Overgekomen Brieven en Papieren* (OBP)–letters and papers sent from Batavia and other factories to the headquarters of the VOC in the Netherlands. This is an important and voluminous part of the VOC archive.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.02; inventaris nummer 1270, 424r t/m 435va. [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.02; record number 1270].

About the sender: In *Pieter van Dam's Beschryvinghe van de Oostindische Compagnie*, by F.W. Stapel is an entry for Anthonio Paviljoen. From 1659 to 1665 he was commander of Jaffanapatnam in Ceylon. From 1665 to 1676 he was governor (head) of the VOC's settlements on the Coromandel Coast, along the east coast of southern India. From 1668 he was extraordinary councillor and from 1676 to 1678 ordinary councillor of the Council of the Indies (*Heren Raden van Indië*). In 1678 he was fired by the Heren XVII.

Nagapatnam (Now {2007} usually spelled Nagapattinam, formerly Negapatnam, Nagappattinam), which was one of these settlements on the Coromandel Coast, in today's southeast Tamil Nadu, 160 miles (275 km) south of Madras. It was occupied by the Dutch from 1660 to 1781.

About the recipient: In 1635 Joan Maetsuyker was appointed pensionary (*pensionaris*) to the Council of Justice of Batavia, in 1646 councillor of the Council of the Indies, from 1646 to 1650 governor of Ceylon and from 1653 to 1678 governor-general.

Note 3. Paliacatta (also spelled Paliacatte; today's Pulicat), long the chief Dutch settlement and headquarters of the VOC factories on the Coromandel Coast, was a Dutch post from 1610. Pulicat was a small walled town on the coast. At its center was the Dutch Fort Geldria, with its permanent garrison of soldiers, and its cannon and armory to protect the various Company trading posts along the Coromandel Coast. Inside the fortress was the governor's two-story residence, magnificent and solidly constructed. Pulicat became British in 1825. It is located in today's Tamil Nadu, at the south end of Pulicat Lake.

This letter has been collated into Casteel Geldria (Fort Geldria) in Palliacatta on 1 Nov. 1670 by Joannes Huijsman, the secretary. Address: Fort Geldria, Palliacatta / Paliacatta [in today's southern India].

72. Veliers, Joan; Tierens, Jacob; Indijck, Dirck; Schellinger, Gerrit; Noortman, Pieter. 1669. [Re: Arrival of Honorable Dutch East India Company ships in Bengal]. Letter to Governor-General Joan Maetsuijcker [Maetsuyker] and Council in Batavia [Dutch East Indies], Feb. 11, p. 1697r to 1704vo. See p. 1698r. Handwritten, with signature. [Dut]

• ***Summary:*** Mentions the arrival of Hon. Dutch East India Company (VOC) ships in Hooghly, Bengal. The cargo contains large quantities of gold, bar-copper and tin, plus 15 pairs of porcelain bottles (*flessen*), 6 pairs of water pots, 6 pairs of *Jacquans*, 12 kegs of sake (*sackij*), 8 kegs of soy [sauce] (*balien Soija*), 4 pairs of lacquered leather canisters (*Cannassers*, made of basket wicker), 50 pairs of lacquered inkpots, 2 kegs of mum (a kind of beer brewed in Brunswick, Germany), 1 little elephant 147 cm (4.8 feet) high.

Bibliographic reference in Dutch: NA, VOC 1273, OBP (11-2-1669) 1967r-1704vo. On microfilm. The letter is written in a letter-book for the administration of the 'Heren XVII' (the directors of the VOC in the Netherlands). The letter is in a manifest (list of cargo) of the ships Rammekens, Buiksloot, Zwarte Leeuw, Zwaan and Tulp. Special attention: This letter is written to give the governor-general information about the cargo received in Bengal from Japan. The ships transported their cargo from Japan via the Strait of Malacca (between the southern Malay Peninsula and the island of Sumatra) to Bengal.

Location: Nationaal Archief, Den Haag, De Archieven van de Verenigde Oost-Indische Compagnie (VOC); inventaris nummer 1273 [National Archives, Prins Wilhem

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Alexanderhof 20, The Hague, www.nationaalarchief.nl. The Archives of the Dutch East India Company (VOC); record number 1274].

Note 1. This trading post was established by the Portuguese in 1537, by the English at Hooghly in 1651, and by the Dutch at Chinsura in 1656; the towns were united as Hooghly-Chinsura in 1865.

Note 2. This is the earliest document seen (July 2006) concerning soybean products (soy sauce) in Bengal (a former part of British India, as of Oct. 2010 divided between India and Bangladesh. Hooghly is now in West Bengal, India). This document contains the earliest date seen for soybean products in Bengal (Feb. 1669); soybeans as such have not yet been reported.

Note 3. About the recipient: In 1635 Joan Maetsuijcker (usually spelled Maetsuyker) was appointed pensionary (*pensionaris*) to the Council of Justice at Batavia, and in 1646 councillor of the Council of the Indies (Heren Raden van Indië). From 1646 to 1650 he was governor of Ceylon and from 1653 to 1678 he was governor-general. Address: Director, Hooghly [Hooghly-Cinsura in today's West Bengal, northeastern India, on the Hugli River].

73. Pavilioen, Anthonio; Meersche, Jacob van der; Welsingh, Isaac; Exbusier, Jacob; Buijtendijck, Reijnier van; Hervendoncq, Joris. 1670. [Re: Order for goods from Batavia for use by the Honorable Dutch East India Company in Nagapatnam]. Letter to Governor-General Joan Maatsuijcker [Maetsuyker] and the Councillors of the Indies [Heren Raden van Indië] in Batavia [Dutch East Indies], Feb. 13, p. 550r to 574r. See p. 572r. Handwritten, with signatures. [Dut]

• ***Summary:*** On p. 572r (the recto [front] of folio [page] 572) we read: "Our order for commodities and other items for the use of the Honorable Company. Gold from Japan and from other places with which Coromandel has commerce each year. A list of merchandise: 8 little pints (*pintjes*) of fine oil of cloves, cinnamon, mace, etc. 12 *leggers* (a legger is a large keg of 400 liters capacity) of Spanish wine. 20 kegs of Mum. 2 kegs of good Dutch butter. 20 leggers of wine-vinegar. 9 aums (an aum is a keg of 153.6 liters capacity) of good olive oil. 30 kegs of sake (*Zakkij*) from Japan. 12 kegs of soy [sauce] (*baliën Soija*) from Japan. 6 kegs of miso (*missoe*) from Japan.

Bibliographic reference in Dutch: NA, VOC 1274, BBP (13-7-1670) 550r-574r. On microfilm.

This letter has been collated into Casteel Geldria (Fort Geldria, the headquarters of the VOC factories on the Coromandel Coast) in Palliacatta on 1 Nov. 1670 by Joannes Huijsman, the secretary. The letter is part of a thick bundle of correspondence in the series *Overgekomen Brieven en Papieren* (Letters and papers sent from Batavia and other factories to the headquarters of the VOC in the Netherlands).

This long letter is about management and commerce. The first three folios discuss ships that have arrived. Two folios deal with a political question in the area around Masulipatnam. Folios 552 to 562 discuss merchandise supplied from several districts to Nagapatnam by ship and from the interior, and commerce problems in some districts. Folio 563 is about the weight of the coin used in Pulicat. Folio 565 is about timber. Etc.

Location: Nationaal Archief, Den Haag, De Archieven van de Verenigde Oost-Indische Compagnie (VOC); toegangsnummer 1.04.02; inventaris nummer 1274, folios 550-574 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl. The Archives of the Dutch East India Company (VOC); inventory number 1.04.02; record number 1274, folios / pages 550-574].

Note: This is the earliest document seen (May 2010) that clearly mentions soybean products (soy sauce and miso) in Indonesia; soybeans as such have not yet been reported. Address: Fortified town of Nagapatnam [in today's southern India].

74. Li Yu. 1670. Xianqin eji [Random notes from a leisurely life]. China. [Chi]

• ***Summary:*** Wade-Giles reference: *Hsien Ch'in Ngo Chi*, by Li Yü. Qing dynasty. Huang (2000, p. 129, 131, 297, 616) notes that this celebrated food canon and recipe book from premodern China discusses properties of food and gastronomy. It contains six chapters (60 pages), each dealing with one aspect of civilized life. The chapter on food and drink, which has been issued as a separate booklet in the Chinese Culinary Classics Series, is a scholarly discussion of the culinary virtues of three categories of food, in order of importance as seen by the author: vegetables, grains, and meat and fish. Huang's section titled "Soybean sprouts" quotes from the first category: "Among vegetables, the purest are bamboo shoots, mushrooms, and bean sprouts (*douya*).

Morohashi (1955) gives a modern rendering which states: "As soon as white meat is cooked, a little soy sauce (*jiangyou*) should be added."

75. [List of goods to be provided from the various Dutch factories in Asia]. 1671. Colombo, Dec. 20. Unpublished manuscript. [Dut]

• ***Summary:*** An order from Japan for the year 1672 for the table of the Governor. Includes 12 kegs of soy [sauce].

Location: Nationaal Archief, Den Haag, De Archieven van de Verenigde Oost-Indische Compagnie (VOC); inventaris nummer 13511 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl. The Archives of the Dutch East India Company (VOC); record number 13511]. On microfilm.

Note 1. Colombo, a seaport in the Sinhalese kingdom, was settled by Arabs in the 8th century AD, occupied in 1517 by the Portuguese, captured in 1656 by the Dutch, then taken over in 1796 by the English, who first called the island Ceylon.

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Note 2. This is the earliest document seen (Nov. 2010) concerning soybean products (soy sauce) in Ceylon; soybeans as such have not yet been reported. Address: Colombo [in today's Sri Lanka].

76. Maetsuyker, Joan. 1674. [Re: List of ships ready to sail for the Netherlands]. Letter to Heren XVII ("17 Lords," leaders of the Dutch East India Company, VOC), Netherlands, Nov. 18. [Dut]

• ***Summary:*** The ship named "Sticht Uijtrecht" will sail for the chamber of Amsterdam. Private merchandise of Willem van Achterveld, sergeant: Includes: 2 crates [with bottles] Spanish wine and mum. 1 crate of brandy. 1 little barrel of soy [sauce] (*1 vaatie met sooij*)...

Bibliographic reference in Dutch: NA, VOC 1297, OBP (18-11-1674) f.142r.

Note: This is the earliest Dutch-language document seen (April 2012) that uses the word "sooij" to refer to soy sauce.

Location: Nationaal Archief, Den Haag, De Archieven van de VOC; toegangsnummer 1.04.02; inventaris nummer 1297 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the VOC; access number 1.04.02; record number 1297]. Address: Governor-General in Batavia [today's Jakarta, Indonesia].

77. Governor General and Council of the Indies (*Indië*). 1675. Generale missive [General missive]. Letter to Heren XVII [directors of the VOC] in the Netherlands, autumn. 3 p. Handwritten. [Dut]

• ***Summary:*** "Specification of the goods which several persons take along with them on the ships for the respective chambers of Amsterdam, Zealand, Delft, Rotterdam and Enkhuizen. Homeward shipped on request and permitted by the Governor General and the Council of the Indies with written decree to take along with them the following goods."

"The ship *Ternate* for the chamber of Amsterdam." Note 1. For some ships, lists of private goods are mentioned. But soy [sauce] is mentioned only in the list of private goods for Joan Putmans, the merchant on the ship ternate. On folio / page 225 we read: "2 chests (*kelders*) with Japanese porcelain pots in one of them and candy or candied fruit in the other. 1 chest (*kelder*) with Japanese Soy [sauce] (*Japanse Soija*), 25 pots with *atchian / atchiar* [maybe atjar pickles] and diverse candied fruit, 1 picul tea [1 picul = about 125 lb], 20 catties bird nests in a little basket of cane / canister" [1 catty = 625 gm]."

Note 2. The goods owned by Joan Putmans are being shipped as "private trade freight" (Japanese: *waki nimotsu*) rather than as "official trade freight" (*motokata / compania nimotsu*). It is not known how much soy sauce he was shipping or in what type of containers it was packaged. Dutch research Herman Ketting, PhD thinks there is a good chance that Putmans used the soy for himself or gave it to friends and relatives in the Netherlands.

Note 3. About the sender: The Governor and the Council of the Indies send a General Letter for the Heren XVII with every homeward bound fleet. This letter is a contemporary handwritten copy. The letter is written in a letter-book for the administration of the Heren XVII, who are the administrators of the Dutch East India Co. (VOC).

Note 3. Herman Ketting, who found this letter, writes (16 July 2007): "So far as I can see now, the cargo lists in the General Missive are the only lists of the VOC, which mentioned the soy [sauce] shipped yearly to the Netherlands. They were made for the Heren XVII and the administration of the VOC-chambers. So I think the soy loaded in the ships bound for the Netherlands, actually arrived in the Netherlands."

Note 4. If this soy sauce did actually arrive in the Netherlands, this would be the earliest document seen (July 2007) showing soy sauce in the Netherlands, or in Europe.

Bibliographic reference in Dutch: NA, VOC 1307, Generale Missiven (najaar 1675) 224r.-226r.

Location: Nationaal Archief, Den Haag, Archieven van de Verenigde Oost-Indische Compagnie (VOC); toegangsnummer 1.04.21; inventaris nummer 1307 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 1307]. Address: Batavia [today's Jakarta, Indonesia].

78. Hase, François de; Fentsel, Herman Pit, Jan. 1676. [Re: Order for provisions]. Letter to Joan Camphuijs, chief merchant and director (*oppercoopman en opperhooft*) and to the Council of the Company of Merchants in Japan [Deshima factory, Nagasaki, Kyushu, southern Japan], March 17. Unpaginated. Handwritten, with signature. [Dut]

• ***Summary:*** We request Your Excellency to send with the return ships via the Straits of Malacca... lacquered ware. Also: "50 usual hams, 6 kegs of miacose sake *sackie*, 4 kegs of soy sauce (*Soija*), 3 kegs of pickled vegetables (*connemon* [*kô-no-mono*]), 2 kegs *mineranskij* (*ameneranskij?*), 2 kegs of umeboshi (*mebos* [salt pickled plums]). Note: This means that the soy sauce was also sent via Malacca to Bengal.

Bibliographic reference in Dutch: NA, NFJ 307, ontvangen brieven (17-3-1676). On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 307 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 307].

Note: This trading post was established by the Portuguese in 1537, by the English at Hooghly in 1651, and by the Dutch at Chinsura in 1656; the towns were united as Hooghly-Chinsura in 1865. Address: Director, Hooghly [Hooghly-Cinsura in today's West Bengal, northeastern

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India, on the Hugli River] (Houglij in Bengalen).

79. Hoorn, J. van. 1676. [Re: Order for provisions]. Letter to the Deshima factory [Nagasaki, Kyushu, southern Japan], June 30. Unpaginated Handwritten, with signature. [Dut]
• ***Summary:*** "General request for merchandise and necessities, which are required from Japan this year for several settlements in Asia as for the fatherland (*vaderlandt / patria*).

For Batavia: 100 kegs of several provisions such as: 40 kegs sake (*sackij*), 20 kegs soy [sauce] (*Soija*), 15 kegs pickled vegetables (*connemon* [*konmono*]), 10 kegs salted, pickled plums (*meboos* [*umeboshi*]), 10 kegs miso (*missauw*).

For Ceylon (*Chijlon*): 48 kegs of provisions as follows: 20 kegs of good sake, 12 kegs soy [sauce] (*Soija*), 8 kegs pickled vegetables, 4 kegs salted, pickled plums [*umeboshi*], 4 kegs *ameneranskij*.

Note 1. This is the earliest document seen (June 2010) concerning soybean products (soy sauce) in Ceylon; soybeans as such have not yet been reported.

For Coromandel (*Choromandel*): As many kegs of Japanese provisions as is specified hereafter for Bengal.

For Bengal: 17 kegs of provisions as: 6 kegs sake, 4 kegs soy [sauce], 3 kegs pickled vegetables, 2 kegs *Ammeneranskij*, 2 kegs salted, pickled plums [*umeboshi*].

For Malacca: Provisions: 2 kegs each of Soy (*Soija*), pickled vegetables, miso (*missouw*), salted, pickled plums [umeboshi], and *ameneranskij*.

Note 2. This is the earliest document seen (May 2010) concerning soybean products (soy sauce) in today's Malaysia. This document contains the earliest date seen for soybean products in Malaysia (June 1676); soybeans as such have not yet been reported.

For Surat (*Zuratta*): 9 kegs of provisions such as sake, pickled vegetables, and soy [sauce] (*Soija*).

Bibliographic reference in Dutch: NA, NFJ 307, ontvangen brieven (30-6-1676). On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 355 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl, The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 355. The pages are not numbered]. This letter is written in a letter-book for the administration on Deshima.

Note 3. It seems that soy [sauce] is always mentioned in lists of provisions for the table of VOC governors or directors, and their guests; this was written in one letter (see Coijet 1659, Aug. 7).

Note 4. This is a special letter. Part of it contains information from a letter written in the Netherlands by the directors in Holland (Heren XVII). The rest of the information comes from settlements in Asia and was collected and written in Batavia, then sent to Japan. Address: Batavia castle (Batavia in't Kasteel) [today's Jakarta, Indonesia].

80. Breving, Abert; Haas, Dirk de; Schim, Isaac; Bank, C. 1678. [Re: Unable to comply with order for provisions]. Letter to Rijcklof van Goens, Governor-General and the Council of the [Dutch East] Indies in Batavia [today's Jakarta, Indonesia], Nov. 4. Unpaginated, Handwritten, with signature. [Dut]
• ***Summary:*** There was a request from governor-general Rijckloff van Goens in Batavia to transport Sake (*Sakki*) and Soy [sauce] (*Soija*) in waterproof vats, so that the liquids will be well preserved. Albert Brevinck in Japan answers: "That is impossible because we are lacking good vats (*vaten*). For this reason we request that you send vats of first rate quality to Japan. This year we will send the sake for Batavia and Ceylon in good double-walled kegs (*balien*) to help preserve the sake."

Bibliographic reference in Dutch: NA, NFJ 309, verzonden brieven (4-11-1678). On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 309 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl, The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 309. The pages are not numbered]. This letter is written in a letter-book for the administration on Deshima.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); inventaris nummer 309 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl, The Archives of the Dutch Factory in Japan (NFJ); record number 309].

Note: About the sender: In *Pieter van Dam's Beschryvinghe van de Oostindische Compagnie*, by F.W. Stapel is an entry for Albert Breving under Albert Brevinck. In 1671 he was already head of the settlement in Japan, but after that he was transferred to Tonkin. From 1677 to 1679 he was again head of the settlement in Japan. In 1681 he was Council of Justice and he refused a request to once again become head of the settlement in Japan.

About the recipient: Rijckloff van Goens lived 1619-1682. In 1631 he began his VOC service. In 1655 he was back at home in the Netherlands. In 1656 he was appointed to extraordinary Council of the [Dutch East] Indies. In 1660 he became governor of Ceylon. From 1675 to 1678 he was director-general in Batavia, and after that until 1681 he was governor-general. He died in Nov. 1682 at home in the Netherlands. Source: *Bewind en beleid bij de VOC... 1672-1702*, by Femme S. Gaastra (Zutphen 1989). Address: Nagasaki [Japan].

81. Locke, John. 1679. Journal. In: Lord [Peter] King,

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ed. 1829. The Life of John Locke, with Extracts from his Correspondence, Journals, and Common-place Books. xi + 407 p. See p. 133-34. 28 x 23 cm. [Eng]

• ***Summary:*** This section of Locke's journal, written in 1679, was not published until 1829. In the section titled "Extracts from the Journal of Locke," it is noted by Lord King that in 1679 John Locke wrote in his journal directions for some foreigner about to visit England. Among his description of the foods and condiments which ought to be enjoyed in London, Locke noted: "Puddings of several sorts and creams of several fashions, both excellent, but they are seldom to be found, at least in their perfection, at common eating-houses. Mango and saio are two sorts of sauces brought from the East Indies."

Note 1. The word "saio" almost certainly refers to *shoyu* and was cited as such by both Yule and Burnell in Hobson-Jobson (1886, p. 651, "Soy") and the *Oxford English Dictionary* (1919, "Soya"). If so, this is the earliest English-language document seen (April 2012) that mentions soy sauce, which it calls *saio*.

Note 2. This is the earliest document seen (Feb. 2012) concerning soybean products (soy sauce) in England, or in the East Indies; soybeans as such have not yet been reported.

Note 3. This is the earliest document seen (Oct. 2003) concerning soy sauce in international trade–imported to England, perhaps from British India, to which it was shipped–probably from Japan. Yet the big question is: How did the soy sauce get to British India and where was it made?

John Locke was an English philosopher who lived 1632-1704. After his death, "his papers, correspondence, and manuscripts, came into the possession of Sir Peter King, his near relation and sole executor." Lord King, the 7th baron, lived 1776-1833.

The *Oxford English Dictionary* defines East Indies as "A geographical term, originally including Hindustan, Further India, and the islands beyond [including today's Indonesia]. Opposed to the West Indies or Central American Islands, and now usually restricted to the Malay archipelago." The term was used as early as 1598.

Webster's New Geographical Dictionary (1988) defines East Indies as "1. also East India. Collective name, applied loosely and vaguely, to India, Indochina, and the Malay Archipelago. 2. In better usage, politically, the Republic of Indonesia, formerly the Netherlands East Indies. See Indies. But some writers used to include the islands of the Malay Archipelago."

Talk with Ted Hymowitz, 2003, Sept. 4. Early imports of soy sauce to England were transported in amphoras (resembling the ancient Greek jars or vases); they were sealed with wax at the top. Address: London.

82. Goens, R. van; Speelman, Cornelius; Both, Balthasar; Hurrt, Anth.; Blom, Dirk; Outhoorn, W. van; Camphuijs, Joan. 1680. [Re: Sending sake and soy sauce in casks and pots]. Letter to the Deshima factory [Nagasaki, Kyushu, southern Japan], June 30. Unpaginated. Handwritten, with signature. [Dut]

• ***Summary:*** Van Goens etc. request that the sake (*sakij*) and soy [sauce] (*soije*) be poured into well-made casks before shipping. They advise for sake and soy [sauce] as well as for pickled vegetables (*konnemon* [*kô-no-mono*]), umeboshi (*mebos*, [salt pickled plums]), etc. to send them in pots (*potten*). Every pot must be placed in a keg and the space between the pot and the keg must be filled up with straw, so there is no danger of the pots breaking in the kegs.

Van Goens etc. will send pots made in the Netherlands for the shipping of the sake and soy. At Coromandel [on the coast of southeast India] the merchants are annoyed at the bad quality of the sake in the kegs; this is caused by the native wood of which the kegs are made.

Another summary (by Cynthia Viallé): "Batavia informs Deshima that it is sending Dutch tubs to hold the sake and soy [sauce]. The tubs should be cleaned first and prepared to contain the sake and soy."

An appendix to this letter: For Batavia: Four aums of Soy [sauce] in aums and half aums [Note: 1 aum is a measure of capacity (a barrel) of about 177 liters]. Twenty pots put in kegs with pickled vegetables (*konnemon*) and miso (*missou*). Twelve pots of umeboshi as before with fruits. If possible we want them as good as the Japanese send to their friends who live in Batavia, because those are better than the fruits they usually send to us.

For Coromandel: 6 quarter kegs of miso (*missouw*). 10 kegs of Soy [sauce] (*Zoija*). 10 kegs of pickled vegetables. 12 double kegs of saké (*Zackij*). 10 kegs of *omenaranski* [meaning unclear]. 4 kegs of umeboshi.

For Ceylon [today's Sri Lanka]: 15 single kegs of Soy [sauce]. 6 double kegs of saké (*sackij*). 12 kegs of pickled vegetables. 20 kegs of umeboshi. 12 kegs *omenaranski* [meaning unclear]. 6 kegs of miso (*missouw*).

Bibliographic reference in Dutch: NA, NFJ 311, ontvangen brieven (30-6-1680). On microfilm. The first page of this letter is torn off.

About the sender: Rijckloff van Goens lived 1619-1682. In 1631 he began his service (as a boy) in the VOC (Dutch East India Company). In 1655 he returned home to the Netherlands. In 1656 he was appointed to the extraordinary Council of India (the Dutch East Indies). From 1660 he was governor of Ceylon. From 1675-1678 he was director-general in Batavia, and after that until 1681 he was governor-general. He died in Nov. 1682 at home in the Netherlands.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); inventaris nummer 311 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); record number 311]. Address: In the castle (*kasteel*) Batavia [today's Jakarta, Indonesia].

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83. Petyt, William. 1680. Britannia languens, or A discourse of trade: shewing the grounds and reasons of the increase and decay of land-rents, national wealth, and strength,... London: Printed for Tho. Dring... and Sam Crouch. [8] + 303 + [9] p. See p. 285.

• ***Summary:*** Apparently trade with France has been prohibited, since French goods are inexpensive and popular, resulting in a negative balance of trade for England.

The section about trade and imports states (p. 284-85): "Now suppose they are forbid [sic] to go to this particular Shop, and will Religiously observe the Prohibition; yet they may and will furnish us with the same things from other Ports; they will bring us more Silks, Laces, and Baubles from *Italy, Flanders, Holland, &c...* "... our *Importers* will find out new trifles and gewgaws [geegaws] for our silly people: How suddenly do we find all the Women and Children of any account in *England* in *Amber* Neck-laces? Which at the rate they are sold at, must cost *England* at least 100,000*l.* [pounds sterling]. And now we have a new Sawce called Catch-up from *East-India*, sold at a Guiney [Guinea] a Bottle."

Note 1. This is the earliest document seen (March 2012) that contains the word "Catch-up" (regardless of capitalization) or that mentions catch-up (regardless of the many ways in which it is spelled, such as ketchup, catsup, catchup, ketchop, ketchap., etc.). "Soy" [sauce] is not mentioned.

Note 2. "East-India" in this context probably refers to the East Indies and to today's Indonesia.

Note 3. A guinea was a gold coin whose price was fixed at 1 pound and 1 shilling.

Note 4. This is the earliest document seen (Aug. 2011) that gives the price of Catchup in England. So, a bottle of Catchup was very expensive at that time, and this was the main reason that so many British cooks tried to develop recipes for it.

Note 5. William Petyt lived 1636-1707. The preface is signed Philanglus, his pseudonym. Address: [England].

84. Shixian hongmi [Guide to the mysteries of cuisine]. 1680. China. Passage on soy reprinted in H.T. Huang 2000, p. 325-27. [Chi]

• ***Summary:*** Wade-Giles reference: *Shih Hsien Hung Mi.* H.T. Huang (2000, p. 623) states that this book is attributed to Wang Shizhen (Wade-Giles: Wang Shih-Chên) but more probably was written by Zhu Yizun (W-G: Chu I-Tsun).

Huang states (p. 324) that frozen tofu (*dong doufu;* W.-G. *tung toufu*) is first mentioned in Chinese in this work. The section titled "Frozen tofu" states: In the depths of winter, place a cake of tofu (*doufu*) outdoors in a basin of water overnight. The water will freeze even though the tofu itself may not. However the beany flavor will be lost in the water, leaving the flavor of the tofu much improved. Another way is to freeze the tofu itself without the water. When thawed, it will look like a little beehive. Wash it well. Heat it in a soup base or fry it in oil. It will be an unusual dish regardless of how it is cooked. Huang adds that this same description of the process is repeated in the *Yang Xiaolu* (1698). Note: Dr. Huang states (March 2004) that the term *dong doufu* almost always refers to tofu that has been frozen, then thawed and dried. However he has never seen an early description of how it was thawed and dried. In addition, he has never heard the term *bing doufu* ("ice tofu"), meaning "frozen tofu."

Huang (2000) states (p. 325) that pressed tofu (*doufugan*, "tofu + dry") is first mentioned indirectly in this work in connection with the preparation of smoked tofu (*xun doufu;* W.-G. *hsün toufu*), which is first mentioned in Chinese in this 1680 book. The section titled "Smoked tofu" states: Press tofu until it is as dry as possible. Soak it in brine, wash well, then dry it in the sun [to give *doufugan*]. Spread sesame oil over the surface, then smoke it. Another method is to soak tofu in brine, wash well, then dry it in the sun. Boil it in soup stock, then smoke it.

When William Shurtleff saw pressed tofu (*doufugan*) prepared in Taiwan and China during the 1970s, it was always pressed using either a hand-turned screw press or a lever-press with huge stones. He never saw it being dried in the sun. Perhaps the efficiency of the screw press in removing moisture from the tofu made the sun-drying unnecessary. Note that sun-drying takes extra time and exposes the warm tofu to unwanted microorganisms.

Huang (2000, p. 326) translates the earliest known account of making fermented tofu*: To make Fujian (W.-G. Fukien) style fermented tofu (*doufuru*, W.-G. *tou fu ju*), press tofu until it contains a little moisture as possible or wrap it in fine cotton paper and desiccate it in fresh ashes. Cut cake into thick square pieces and place them in rows on a bamboo steamer pad. After all steamer tiers are filled, cover steamer. [The best time to make it] is in the 2nd or 3rd month in spring or 9th or 10th month in autumn. Place steamer in an airy place. After 5 or 6 days, surfaces [of tofu] will be covered with a hairy growth, which may gradually turn black or greenish red. Wipe hair off tofu squares with a piece of paper. Save it, making sure not to damage the skin. For [the tofu from] each *dou* of beans, prepare 3 catties of soy sauce and 1 catty of fried salt. (If soy sauce is not available, use 5 catties of salt.) Grind 8 ounces of fresh red ferment spiced with clean peppercorn, fennel and licorice, then mix powder with salt and wine. Place tofu in a jar, add wine sauce mixture, then seal mouth of urn with clay. Allow urn to stand for 6 months; an excellent flavour will result."

(Footnote: *The original passage is interspersed with notes that describe a variation of the process as it was practiced in Zhejiang (W.-G. Chekiang). These notes make the text somewhat confusing to read, so they were left out in the translation. However, from these notes we can reconstruct the Zhejiang process as follows: After the steamer is filled with tofu squares, steamed them. Place the steamer, while still hot, on a bed of rice straw and

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cover completely with rice husks–in a place with little air movement. Remove tofu squares after 5-6 days. Press down and flatten the hairy growth. [This will help to keep the product fresh.] Then layer the squares in a jar. Sprinkle a pinch of salt on each piece of tofu until all surfaces are evenly salted. For each layer of tofu there should be a layer of salt. When salt is dissolved, each piece is heated in the sun by day and marinated in sauce mixture [as indicated in the Fujian process]. Continue sunning and marinating until all sauce is used up. Soak layered tofu in a jar with wine. Then seal mouth of urn with clay. Allow the urn to stand for 6 months and an excellent flavour will result).

Note: This is the earliest document seen (Feb. 2007) that mentions fermented tofu, which it calls *doufuru*.

Huang (2000, p. 326) continues by noting: Two other passages in the *Shixian Hongmi* are also of interest in this connection. One describes a method for making *zao rufu* (W.-G. *tsao ju fu*), i.e. fermented tofu (*furu*) aged with a fermented mash [rice wine dregs]: Transfer ripened *rufu* or samples that are too salty in layers to a new vessel. Line fermented mash or residue between layers and allow material to age. A product with a unique flavor is obtained. The other deals with the making of *doufu fu* (W.-G. *tou fu fu*), a deep fried 'stinky' dewatered tofu: Take good quality [pieces of] tofu and grill in oil. Then cover with a cloth screen to keep out flies and other insects. When a "stinky" odour is developed, fry the pieces again in hot "boiling" oil. The flavor is excellent.

Note: This "stinky" tofu is probably *chou doufu*. If it is, this is the earliest document seen (Oct. 2011) that mentions a type of *chou doufu* ("stinky tofu").

Huang (2000, p. 326-27) comments further: Two interesting points emerge from these passages. First, by the time that the *Shixian Hongmi* (+1680) was published, *furu* and *rufu* had apparently become synonyms for fermented tofu. The word *fu* could now mean a gel or custard made from any edible suspension or emulsion of food material, and *ru* any type of dairy or soy milk derived product. Second, although the word *zha* (W.-G. *cha*) was not used, there is no question that the frying in "boiling oil" shown in the second passage indicates that deep frying was a common method of cookery during the Ming dynasty.

Huang (2000, p. 341) states that this book contains an interesting recipe in which fermented black soybeans (*shi*) are stewed with pieces of pressed tofu (*doufugan*) and bamboo shoots.

A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." Seasonings based on jiang (fermented soybean paste) are used in 49 recipes: jiang itself in only 8, soy sauce made from jiang named *qingjiang* in 1 recipe, soy sauce named *jiangyou* in a whopping 37 recipes, soy sauce named *jiangzhi* in 2 recipes, and soy sauce named *jiangshui* in one recipe. Seasonings based on fermented black soybeans (*shi*) are used in only 6 recipes: Fermented black soybeans (*shi*) in 4 recipes, and fermented black soybean sauce named *shizhi* in 2.

Talk with H.T. Huang. 2001. Feb. 20. This 1680 book contains a recipe titled Soy Sauce Pressed Tofu (*Jiangyou Fugan*) which states: Cut pressed tofu (*doufugan*) into pieces. Mix 1 catty of soy sauce with 2 catties of water. Filter the liquid mixture then boil it. Filter it again to remove any remaining residue. Now add to the liquid: mushrooms and 4 different spices (*dingxiang, baiqi, dahuixiang*, and *guipi* [cassia bark, *Cinnamomum cassia*]), and tofu. Boil for several minutes. Remove from heat and allow to stand for half a day. The color still will not be very dark. Remove tofu from liquid and dry it. After 1 night, repeat the process of boiling and soaking several times. Note: This yields a highly seasoned tofu with a long shelf life at room temperature.

Note: This is the earliest document seen (Feb. 2004) that recommends adding mushrooms or spices / seasonings to soy sauce to enhance its flavor.

85. [Manifest (cargo-list) of goods imported to Batavia in 1681 by two Chinese junks]. 1681. Colombo. p. 860r-61r. See p. 860r. Feb. 7 and 28. Unpublished manuscript. [Dut]
• ***Summary:*** Two Chinese trading junks had arrived from Japan in 1681. On Feb. 7, the junk of captain Quanjock arrived with: 22 straw Calmus (Sweet flag) roots... 1 wicker basket (*canasser*) of medicine and one of tea, 681 kegs and pots containing pickled vegetables (*connemon* [*kô-no-mono*]), soy [sauce] (*soij*) and miso (*missoij*).

Note: This is the earliest Dutch-language document seen (March 2009) that uses the word "missoij" to refer to miso.

On Feb. 28 the junk of captain Lunsincqua arrived with: 40 little bureaus, 5 double kegs and 6 single kegs of camphor, 200 kegs and pots containing chestnuts (*carthanjen*), soy [sauce] (*Zoija*), and pickled vegetables (*connemon* [*kô-no-mono*]).

Bibliographic reference in Dutch: NA, VOC 1354, OBP (7 and 28-2-1681) 860r-861r. On microfilm. This letter is part of the correspondence in the series *Overgekomen Brieven en Papieren* (OBP)–letters and papers sent from Batavia and other factories to the headquarters of the VOC in the Netherlands. This is an important and voluminous part of the VOC archive.

Location: Nationaal Archief, Den Haag, De Archieven van de Verenigde Oost-Indische Compagnie (VOC): inventaris nummer 1354, folio 860 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch East India Company (VOC): record number 1354, folio / page 860]. On microfilm. Address: Colombo [in today's Sri Lanka].

86. Schinne, Isaac van; Cansius, Hendrik; Jonge, Constantin Ranst de; Buijtenhem, Hendrik van; Sweers, Balthasar; Dijck, Pieter van. 1681. [Re: Sending provisions]. Letter to

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the Governor-General and the Council in Batavia [today's Jakarta, Indonesia], Oct. 31. Handwritten, with signature. [Dut]

• ***Summary:*** The Deshima factory is sending 1,000 pairs of cotton stockings, all the porcelain, also the soy [sauce] (*Soija*), saké (*Sackij*), miso (*Misou*), pickled vegetables (*Konnemon* [*Kô-no-mono*]), and umeboshi (*Mebos* [salt pickled plums]), all of the best quality we can get, just as you ordered.

Note: This is the earliest Dutch-language document seen (March 2009) that uses the word "Misou" to refer to miso.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 312 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 312]. Address: Deshima factory, Nagasaki [Japan].

87. Chamberlayne, John. 1682. The natural history of coffee, thee, chocolate, tobacco, in four several sections;... London: Printed for Christopher Wilkinson. 36 + [4] p. See Sect. III, p. 18. 21 cm.

• ***Summary:*** In "The natural history of chocolate. Sect. III" we read (p. 18): "... and I do not doubt, but you *London* Gentlemen, do value it above all your *Cullises* and *Jellies;* your *Anchoves, Bononia Sawsages,* your *Cock,* and *Lambstones,* your *Soys,* your *Ketchups* and *Caveares* [Caviars], your *Cantharides,* and your *Whites* of *Eggs,* are not to be compared to our rude *Indian;* therefore you must be very courteous and favourable to this little Pamphlet, who tells you most faithful Observations."

Note 1. This is the earliest document seen (July 2010) that contains the word "Ketchups" (or "ketchup," regardless of capitalization) and the 2nd earliest document seen (April 2012) that mentions ketchup (regardless of the many ways in which it is spelled, such as catchup, catsup, ketchop, ketchap., etc.).

Note 2. John Chamberlayne lived 1666-1723. The title page states: "Collected from the writings of the best physicians, and modern travellers."

Note 3. A "cullis" is a broth of broiled meat strained, or a kind of jelly. "Bononia" is the Roman name of several cities, including Bologna, Italy–whence comes today's Bologna (pronounced baloney) sausage. "Soys" refers to soy sauces. "Cantharides" is more commonly called "Spanish fly." The meaning of "our rude *Indian*" is unclear.

88. Kurokawa Dôyû. 1686. Yôshû fushi [Topography of Yamashiro near Kyoto, based on Yoshu in ancient China]. Kyoto: Shorin Mohe. 10 volumes. Japanese summary by Kawakami 1978, p. 266. [Jap]

• ***Summary:*** OCLC / WorldCat cites this book as follows: Title: Yôshû fushi. Author: Dôyû Kurokawa (who died in 1691). Publisher: [Kyoto]: Shorin Mohe. Year of publication [1686]. Available in Japanese in Microform or microfilm.

Describes shoyu making.

Yokotsuka (1985, p. 205) states: "And in a book (*Yoshufushi*, AD 1686), shoyu was defined as a common Shi-ju (Shi-tche in Chinese)..." Note: "Shi" refers to fermented black soybeans." Therefore the juice from *shi* would be similar to today's tamari, which is soy sauce made with little or no wheat.

Fukushima (1989, p. 9) states that the *Yoshu-Fushi* (Kurokawa, 1682) describes miso and shoyu. Yokotsuka (1991, p. 332) states: "The method of preparing salted and unsalted *douchi* [fermented black soybeans] is described in the book *Yoshufushi* (1686) and elsewhere.

Iino (2003, p. 8) quotes from this 1684 book: "... though *Sakai-joyu* (Sakai soy sauce) was once available only from liquor shops in Izumi (modern-day Osaka) and remains very popular, soy sauce is now made by liquor shops in Kyoto, as well as made by hand at home making the purchase of *Sakai-joyu* unnecessary." "In the first half of the Edo Period (17th century), soy sauce was made in all regions of Japan and could be purchased anywhere. In addition, soy sauce was made by hand in the large majority of houses"–This is made clear by this references in this book. "The method for making soy sauce is first recorded in the *Yôshu Fushi*. The method described calls for a malt to be made from boiled soybeans and roasted barley. Salt and water are added to the malt and the entire mixture placed in a large barrel. The mixture is to be stirred two or three times a day with a pole resembling an oar. After a minimum of 70 days, the *moromi* (dregs [mash]) is to be placed in a sack cloth. A stone is to be placed on top of the sack and the liquid squeezed out. This liquid can then be boiled with other ingredients to create a variety of dishes." Iino then comments: "This explanation shows us that the method for producing soy sauce varied little form the way it is made today, though rather than wheat, barley was used and heat was not applied to the extracted liquid."

89. Rakka Yajin Danshoken. 1686. Shogei shokan: Ryôri no bu [A small sample of various skills: Cookery section]. Japan: Nakamura Magobei in Kyoto, Honya Kiyobei in Edo (Tokyo), and Okada Saburo in Osaka. 66 p. Japanese summary by Kawakami 1978. [Jap]

• ***Summary:*** Pronunciation of the author's name is not clear. This book contains many interesting recipes but almost all were copied from the *Ryôri Monogatari* (1643) and the *Edo Ryôri-shu*. It describes methods for making Maruyama Hishio and tamari, plus a rich miso soup recipe. It is not clear whether or not he copied these recipes.

90. Nihon Saiji-ki 1687. Japan. [Jap]*

• ***Summary:*** Iino (2003, p. 8) states that this 1687 book mentions the shoyu production process, noting that barley was used in place of rice. Iino comments: "It seems that it

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took some time for wheat to be established as the proper mate for soybeans in the production of soy sauce." Address: Japan.

91. Nihon saijiki 1687. Japan. [Jap]*
• ***Summary:*** Iino (2001, p. 21) contains a "Table of ingredients used in *tou-miso* and shoyu during the Edo period." The entry for *Nihon saijiki* (compiled in 1687) states that *Shoyu* is made from the following ingredients: Soybean 19.2%. Wheat / barley 19.2%. Salt 19.2%. Water 42.3%. Address: Japan.

92. Dampier, William. 1688. Voyage round the world. In: William Dampier. 1705. Voyage Round the World. The Supplement of the Voyage Round the World, Describing the Countreys of Tonquin, Achin, Malacca, &c. their Product, Inhabitants, Manners, Trade, Policy, &c. London: Printed for James Knapton, at the Crown in St. Paul's Church Yard. See vol. II. Part I, p. 26-28.
• ***Summary:*** While traveling in Tonquin (today's north Vietnam) the author writes: "The *Nuke-Mum* [fish sauce]... is also very savory, and used as a good sauce for Fowls, not only by the Natives, but also by the *Europeans*, who esteem it equal with *Soy* [sauce]. I have been told that *Soy* is made partly with a fishy Composition... tho' a Gentleman... told me that it is made with wheat and a Sort of Beans mixt with Water and Salt" (p. 28).

Note 1. First cited by Yule and Burnell (1886, p. 651, and 1903, p. 858; both give the year as 1688), and the *Oxford English Dictionary* (1919, Soy). Captain Dampier–a "swashbuckling buccaneer"–lived 1652-1715.

Note 2. This is the earliest English-language document seen (April 2012) that uses the word "Soy" (regardless of capitalization) to refer to soy sauce. The passage on soy sauce, although written in 1688, was not published until 1705.

Note 3. The word "padusoy" (also spelled "paduasoy," derived from the French *pou-de-soie*) starts to appear in British publications as early as 1663. It has nothing to do with the soybean or soy [sauce]. The suffix "soy" refers to silk, and "padusoy" refers to a corded silk fabric (or a garment made from it). By May 1774 it began to be advertised and sold in the British colonies of North America. Typical sentences: "A piece of black padusoy." "One pound of this silk will make five yards of padusoy." "A white padusoy coat and breeches, with a pink-colour'd waistcoat."

93. Saikaku Ihara. 1688. Nihon Eitaigura Japan. [Jap]*
• ***Summary:*** Iino (2003, p. 8) states that in this 1688 book, the author "presents two stories about the makers of soy sauce. The first story is that a small miso and soy sauce manufacturer in Echigen Tsuruga thought that by using his talents to produce a product at low cost, he could enlarge his business. However, as his business grew, customers



dwindled, feeling out of place in the large establishment. In the end, his business failed. The second story is about the soy sauce merchant Kiheiji who walked around town selling his soy sauce from wooden buckets attached to a pole carried on his shoulders. In these two stories, Saikaku discusses the selling of soy sauce from the point of view of a large merchant as well as that of one who sells soy sauce from door to door."

An illustration shows a slanting overhead view of the inside of a shop where soy sauce and miso are sold retail. The small sign hanging outside above the door reads: Soy Sauce and Miso Retailer. Address: Japan.

94. E.B. 1690. A new dictionary of the terms ancient and modern of the canting crew.... London: Printed for W. Hawes, P. Gilbourne and W. Davis. [184] p. 18 cm. [Eng]*
• ***Summary:*** "Catchup, a high East-India Sauce." Note 1. This is an English-language slang dictionary.

Note 2. This is the 3rd earliest English-language document seen (April 2012) that mentions Catchup (regardless of spelling), which was probably Indonesian soy sauce.

Note 3. At this time, "East India" (or more commonly) "the East Indies" had two meanings: (1) A collective name, applied loosely and vaguely, to India, Indochina (today's

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Vietnam and Cambodia), and the Malay Archipelago (today's Indonesia and Malaysia). (2) In better usage, politically, a name applied to today's Indonesia, formerly the Netherlands East Indies or Dutch East Indies. Address: Gent., England.

95. Jinrin kinmô zui [Illustrated encyclopedia of life in the Edo period]. 1690. Kyoto, Japan. Reprinted in 1990 by Heibonsha (Tokyo); edited by Asakura, Haruhiko. [Jap]
• ***Summary:*** The following page numbers refer to the 1990 reprint edition published in Tokyo by Heibonsha. The compiler of this remarkable work is unknown. At the bottom of almost every page (up to p. 293) are one or two half-page illustrations. Pages 317-31 are footnotes, followed by a syllabary index (a e u e o, ka ki ku ke ko).

The original edition was divided into seven volumes, including: 2. Noh drama. 3. Producers (farmers, woodcutters, fishermen, etc.). 4. Merchants (sellers). 5. Craftspeople. 6. Various and other jobs. 7. Entertainers. At the end is a long section of footnotes and annotations.

Page 121. The illustration is titled *Kuzune-hori* (Digging kuzu root). Yoshino kuzu is the best known in Japan.



Page 142. Shoyu is a famous product of Sakai. Produced in Osaka and Sakai, it is shipped to various places (no illustration).

Page 144. The right illustration is titled *Koji-shi* (Koji maker). Miso makers, manju (steamed bun) makers, and many others use koji. The illustration shows a man carrying four koji trays (*koji-bune*) filled with koji; he is about to put them into the incubation room (*muro*, which has a rounded top) where the koji will ferment. The text mentions a "thin board" (*usuita*), which may be a second type of koji tray, shown on the ground at right, lacking either one or both ends. The volume of koji is measured by the standardized size of the koji tray.

Page 144. The left illustration is titled *Miso-ya* (Miso shop). It shows two men mixing or pounding something (either koji, cooked soybeans and water before fermentation, or miso after fermentation) in a wooden mortar (*usu, suribachi*) using long wooden spatulas or pestles. They use a wooden spatula (*sekkai*) as their store sign. Behind the men to the left is a vat of fermenting miso with stones on top for pressure. Two wooden scoops in a rectangular wooden "boat" are used for scooping and measuring koji, cooked soybeans, and/or salt. The text says: "Miso makes a good seasoning and helps keep people healthy. A day cannot go by without it."

Page 152. The illustration, titled *Kome-ya* (Rice shop), shows a man unloading a bale of rice (wrapped in rice straw) from the back of his horse. Nearby is a rice merchant, standing on a low platform near two other bales of rice. The text notes that the shop sells the "five grains" (*go-koku*), which include soybeans (*daizu*).

Page 160. The left illustration, titled *Yakidofu-shi* (Grilled tofu man), shows a man making grilled tofu over a rectangular brazier. In his right hand is a fan, with which he fans the coals beneath several cakes of tofu. In his left hand is a skewer with two prongs that pierce a cake of tofu. In front of his brazier is a wooden pail, which may be used to store cakes of tofu in water. At the front left is a sloping tray on which slices of tofu are drained. The maker of grilled tofu can found in market places, temple gatherings, festivals, and wherever people gather around. Note: This is the earliest Japanese-language document seen (Feb. 2010) that mentions grilled tofu, which it calls *yaki-dôufu*.

Page 162. The illustration, titled *Ko-ya* (Flour shop), shows three people turning a large hand-turned stone mill in which various types of flour (including soy flour, *daizu no ko*, which is probably roasted soy flour [kinako]) are ground. Ropes from the ceiling hold up the t-shaped end of a push-pull device used to help turn the heavy upper stone.

Page 166. The right half of the illustration (not shown) is titled *Seller of Tataki natto in Kyoto*. To make this natto, dice stringy (*itohiki*) natto finely, then shape into a thin, flat square. Mix in finely chopped greens and tofu. It is an inexpensive, fast food. It is sold by walking street vendors from the end of September until February, especially at Tomikoji-dori, Shijo-agaru machi (probably in Kyoto).

The other illustration shows two men in front of a shop. Each is carrying a shoulder pole on one shoulder; from each end are suspended containers used to hold food. Each is also wearing straw sandals (*waraji*). The man on the right carries containers that are shaped like boxes with the long edges oriented vertically. A sliding panel may be used to open each box. Inside are either utensils and the ingredients for making tataki-natto, or bowls of tataki-natto ready to eat.

Note: This is the earliest document seen (Jan. 2012) that contains the word *itohiki* or the term "Tataki natto" in connection with natto.

Page 225. The left half of the illustration is titled *Horo*

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miso, which is a kind of miso. The character for *Ho* means "law" or "dharma." The man on the left has cylindrical wooden containers (*magemono*, shaped like traditional Japanese steamers) suspended from each end of his shoulder pole. Atop each is a bamboo mat (*sudaré*). The text states: This miso is made with black soybeans (*kuro mame*). The men who sell it all wear orange robes dyed with persimmons. They never put down the merchandise. Its container was covered and they carried it using a shoulder pole to keep it clean. When they had to put it down, they placed it with one side leaning against something. If anyone stepped over it, the seller demanded that that person buy it. To make *horo miso*, cook black soybeans, then drain off and squeeze out the liquid. The result is a very firm miso with a low water content. Originally it was used in temples, but later it came to be used by the common people.

Note: Naomichi Ishige, a scholar of and expert on Japanese food history, writes (personal communication, March 2008): "To make *horo miso*, mix miso, minced walnut, sesame, and Japanese *sansho* pepper, then saute the mixture with vegetable oil in a pan. People eat *horo miso* with rice, or have it as a relish when they drink sake.

"In the *Jinrin kinmo zui*, the reason tataki natto is thin and formed is because people thought that type of natto could be easily dissolved in miso soup. However, its rectangular shape does not relate to the way of cooking.

"I am not sure how the peddler in the picture put his goods in a box that he carried. I only imagine that he wrapped a rectangular tataki-natto in a bamboo sheath and stored it in the box.

"When peddlers began to sell granulated itohiki natto, they put the itohiki-natto into a bamboo basket. They ladled up the quantity needed by a rice scoop (*shamoji*) and sold it. Or, they wrapped the itohiki-natto in a straw parcel and sold the parcel." See also letter about natto history from Ishige sensei to Shurtleff, dated 16 March 2008.

Page 225. The right illustration is titled *Tofu-shi* (Tofu maker). The text states: Among the craftsmen, tofu makers rise the earliest each morning. Some sell deep fried tofu pouches (*aburaagé*). The book *Kuni Hana Manyoki* mentions the places named Maruyama and Reizan where the craftsmen lived. There may have been a lot of tofu makers who lived in this area. The illustration shows a tofu maker in his shop, sitting at the end of a firm pole used as a lever press to press the soymilk out of the okara in the pressing sack (which is placed on a rack) into the wooden vat below. It will then be curded to make tofu. Also visible in the tofu shop are a wooden tofu forming box with 3 holes in each side, and four hanging *noren* curtains.

Page 291. The illustration is titled *Yaku-harai* (Driving out bad luck). The text mentions *setsubun* (the evening of the last day of winter, just before the first day of spring, also celebrated by some as New Year's Eve–according to the old lunar calendar) and roasted soybeans (*iri-mamé*). On the evening of setsubun, Japanese wished to be cleansed of all bad spirits and bad luck. So they scattered roasted soybeans (with coins?) and cried out a slogan wishing for long life. This kept them very busy. Note: New Year's Eve and Day are not traditional Japanese concepts; they were imported from China and the West during the 20th century. Address: Japan.

96. Onna chôhô-ki 1692. Japan. [Jap]*
• ***Summary:*** According to Ryoichi Iino (2003, p. 10) the term *oshidashi* was used in this book to indicate / refer to soy sauce.

97. Yaoya-shû [Collection of various things]. 1693. Japan: Publisher unknown. Volumes 1-3 have 54, 48, and 46 pages respectively. Japanese summary by Kawakami 1978, p. 152. [Jap]
• ***Summary:*** The three parts of the book discuss (1) processing foods, (2) cooking, and (3) mochi and confectionery (*kashi*). This is mostly a copy of *Gorui Nichiyo Ryôri Shinan-sho*, but the sequence of the material and the wording has been changed. Some new things have been added. Includes discussions of Nara Horin Miso, quick production of shoyu, and quick preparation of amazake, and Ukeire Tofu. It is not known what the latter is.

98. Hitomi, Hitsudai 1695. [Honcho shokukan. See Pen chao shih chien]. [Chi]*
• ***Summary:*** Yokotsuka (1985, p. 206; 1986, p. 198) cites this as "*Honcho Shokukan* (1692)" but apparently does not cite it in his bibliography in either case.

The Japanese title can be translated as "Japan's food dictionary" or "Our country's food model." Written during the Edo period, the book is most about tea. The section about sushi states: Mix fish meat into cold rice, then mix in a little vinegar.

99. Hitomi, Hitsudai. 1695. Pen chao shih chien / Ben zhao shi jian [A mirror of food in this dynasty. 12 vols.]. Osaka?: Hiranoya Katsuzaemon. 22 cm. Widely referred to as *Honchô Shokkan* in Japanese. Modern rendering by Morohashi 1955, trans. p. 13. Complete modern translation into Japanese by Isao Shimada (1976: Tokyo: Heibonsha). [Chi]*
• ***Summary:*** This book, written by a Japanese man in Japan, yet entirely in Chinese, contains early references to yuba, frozen tofu, natto, shoyu, and miso. When the Japanese read the Chinese characters for yuba, *doufu-lao*, they pronounced them *tôfu no uba*. *Lao* or *uba* means "old woman" or "wet nurse."

The book states that the word "natto" is derived from *nassho*, meaning "temple kitchen" or literally "place of offering, perhaps because the food was offered to Buddha before being offered to the monks." It also contains the earliest known written mention of natto's medicinal or

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healing effects, together with recipes for preparing natto miso soup (*natto-jiru*).

Note: Recall that this *natto-jiru* may well be made with fermented black soybeans rather than itohiki natto.

Saito (1985, p. 15-16) notes: "In 1695 Dr. Hitomi Hitsudai, a Japanese physician, age 74, writes the *Honcho Skokkan* and talks about the good and bad points of daily foods from his medical viewpoint. The 12 volume book is written entirely in Chinese. He writes: 'Soybean: Makes one feel calm, relaxes the stomach, and is good for the intestines. Miso: One should not be without it. Natto: Makes one feel calm, conditions the stomach, enhances a good appetite, and detoxifies poisons. Tofu: Nowadays tofu in Edo is pretty good. Among the various types, Nishiki-dofu and Kezo-in-dofu are famous... But it cannot compete with the tofu made in Kyoto. Shoyu: Inactivates any poisoning from eating food, drinking alcohol, or taking medicine.' The above is taken from the translation into Japanese by Shimada Isao."

T. Yokotsuka (1985, p. 206; 1986, p. 198) cites this as *Honcho Shokukan* (1692) but apparently does not cite it in his bibliography in either case.

Needham (1986, p. 581) cites this as *Pên Ts'ao Shih Chien* (Materia Medica in Tasteful Verse, by Chu Lun). Ch'ing dynasty, 1739. Partly translated by Swingle. But Needham does not discuss its content.

Fukushima (1989, p. 9) states that the *Honcho-Shokkan* (Hitomi, 1695) describes miso and shoyu.

Concerning shoyu: Iino (2001, p. 21) contains a "Table of ingredients used in *tou-miso* and shoyu during the Edo period." The entry for *Honcho-shokukan* (compiled in 1695) states that *Shoyu* is made from the following ingredients: Soybean approximately 22%. Wheat / barley approx. 22%. Salt approx. 22%. Water approx. 34%.

Iino (2003, p. 8) states: "In the first half of the Edo Period (17th century), soy sauce was made in all regions of Japan and could be purchased anywhere. In addition, soy sauce was made by hand in the large majority of houses"– This is made clear by a reference in this 1695 book (*Honchô-Shokkan*), which also mentions the shoyu production process, noting that barley was used in place of wheat. On p. 9 Iino adds that detailed instructions for making *niban shoyu* (soy sauce from a second pressing of the moromi with salt water) are also described in this book. Iino then comments: "It is clear that with the beginning of soy sauce production, use was also made of the dregs [shoyu presscake] to make *niban shoyu*."

100. Endo Genkan. 1696. Chanoyu kondate shinan [Instructions concerning menus for tea ceremony cookery]. Yamaoka Shirobei (Kyoto) and Maedaya Tokubei (Edo). 8 volumes averaging 70 pages per volume. Japanese summary by Kawakami 1978, p. 100. [Jap]

• ***Summary:*** For each day of the month various menus are given with descriptions on how to make them for tea ceremony cookery. Contains the first appearance of awase-joyu, using shoyu. A second edition was published in 1837 by Nakamura Sanshido in Osaka.

101. Ovington, John. 1696. A voyage to Suratt, in the year, 1689. Giving a large account of that city, and its inhabitants, and of the English factory there. London: Printed for Jacob Tonson. 606 p. See p. 385, 397. See also Oxford University Press edition (1929), edited by H.G. Rawlinson, A voyage to Surat in the year 1689. p. 231. [Eng]

• ***Summary:*** Concerning soy sauce: In the chapter on "The English Factory at Surat," at the section on "Several Sorts of Indian Dishes," the author is describing Palau [rice pilaf], baked fowl, and beef or mutton cabob roasted on a spit, seasoned with sweet herbs and basted with oil and garlic. He concludes: "Bambou and Mangoe Achar [pickle], Souy the choicest of all Sawces, are always ready to whet the Appetite."

Note 1. This is the earliest English-language document seen (April 2012) that uses the word "Souy" to refer to soy sauce.

Note 2. This soy sauce was probably made in Japan and shipped from there to India in wooden kegs or vats. In 1796 Thunberg states that Japanese shoyu was shipped to India in vats. Noda Shoyu (1955) states: "According to Dr. Iwao, whose source of information was the Japanese-Dutch Hague Archives in the Netherlands (*Waran Haagu Bunshokan*. Probably Nederlandse Vereiniging van Bibliothecarissen, Documentalisten en Literatuuronderzoekers (NVB)), in 1668 the Japanese sent 12 kegs of shoyu to Coromandel, India (a coastal region of southeast India on the Bay of Bengal), in 1670 to the island of Ceylon, in 1677 to Coromandel again, in 1679 and 1681 to Surat in northwest India and to Coromandel..."

Concerning the peanut or groundnut: Page 77 states: "Sometimes they feast with a little Fish, and that with a few Pindars [peanuts or groundnuts] is esteemed a splendid banquet. These Pindars are sown under ground, and grown there without sprouting above the surface." Note 3. This is the earliest document seen (Jan. 2005) that mentions the peanut, or that uses the word "Pindars" to refer to peanuts. This is also the earliest citation in the *Oxford English Dictionary* for pindars (also spelled pinda, pinder, pindal, pinda, or pindel). In the Congo, the term is *mpinda*. It was carried by negroes to America and was used in the West Indies and southern USA for the peanut or groundnut. Note 4. This is the earliest document seen (Sept. 1996) that mentions both soybeans and peanuts.

Note 5. *Webster's New Geographical Dictionary* (1988) defines Surat (also formerly spelled "Suratte") as a city in southeast Gujarat on the coast of western India, on the Tapti River near its mouth 150 miles north of Bombay. It was a chief seaport of India by the late 1500s. In 1608 an English factory was established there, the first in India and the

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beginning of the British Empire in India. Surat was the seat of British Indian government until 1687. It began to decline in the early 1800s. A photo (frontispiece) facing the title page shows "Surat: The fort from the river bridge."

The subtitle reads: "Likewise a description of Madeira, St. Jago, Annobon, Cabenda and Malemba (upon the coast of Africa), St. Helena, Johanna, Bombay, the city of Muscatt, and its inhabitants in Arabia Felix [the Arabian Peninsula], Mocha, and maritime towns upon the Red-Sea, the Cape of Good Hope, and the island Ascention [Ascension]. To which is added an Appendix, containing: I. The history of a late revolution in the Kingdom of Golconda [in south central India]. II. A description of the Kingdoms of Arraacan and Pegu. III. An account of the coins of the Kingdom of India, Persia, Golconda, &c. IV. Observations concerning the silk worms.

Note 6. Ovington lived 1653-1731. First cited by Yule & Burnell (1886, p. 651; and 1903, p. 859), and the *Oxford English Dictionary* (1919, Soy).

Note 7. The Coromandel Coast in southeast India extends from Point Calimere northwards to the mouths of the Krishna River; to the east is the Bay of Bengal. It has a low shoreline with no good harbors, and is beaten by heavy seas year-round, but especially during the northeastern monsoon (October to April). The chief ports are (as of 1999) Nellore, Madras, Pondicherry, Cuddalore, Tranquebar, and Nagapattinam. Address: M.A. Chaplain to his Majesty.

102. Gu Zhong. 1698. Yang xiaolu [Guide to nurturing life]. China. [Chi]

• ***Summary:*** Wade-Giles reference: *Yang Hsiao Lu*, by Ku Chung. H.T. Huang (2000, p. 627) gives the date of this document as +1698. In the section titled "Products associated with tou fu," Huang states: (1) (p. 324) A recipe for making frozen tofu, first mentioned in the *Shixian Hongmi* (Guide to the Mysteries of Cuisine) (+1680), is repeated in this book. (2) (p. 325) that both pressed tofu (*doufugan*) and smoked tofu (*xun doufu*) are mentioned in this book.

In the section titled "Fermented soybeans (*shi*)," Huang states that wheat flour is used as an ingredient in a recipe for making fermented black soybeans (*shi*).

In the section titled "Fermented soy sauce, *chiang yu*," Huang states (p. 363): About 100 years after the *Bencao Gangmu* (The great pharmacopoeia) (+1596), the next description of the process for making soy sauce (*jiangyou*) appears in this book, in the form of three sketchy recipes, one of which states: Cook yellow soybeans (*huangdou*) or black soybeans (*heidou*) until soft. Mix the soybeans and their cooking water with white [wheat] flour and knead to form a dough. Shape into flat or convex cakes. Cover with artemisia leaves until a good growth of yellow mold appears; then grind these cakes. Incubate the meal in a jar with brine. Warm in the sun to give [a thin] soybean jiang (*doujiang*). Filter through a tightly-woven bamboo sieve placed over a wide-mouthed vat. The jiang (soy paste) stays in the sieve while the soy sauce (*jiangyou*) is collected below.

Note: This is the 2nd earliest document seen (April 2012) that describes the use of a significant amount of wheat (or wheat) flour in making Chinese soy sauce.

A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." Seasonings based on jiang (fermented soybean paste) are used in 25 recipes: jiang itself in 14, and soy sauce made from jiang named *jiangyou* in 11 recipes. Seasonings based on fermented black soybeans (*shi*) are used in only 1 recipe, which uses fermented black soybeans itself.

Huang adds (p. 373): During the Ming dynasty, soy sauce (*jiangyou*) started to rival *jiang* [which had a consistency like applesauce] in importance; by the early years of the Qing dynasty, soy sauce had surpassed jiang in culinary usage.

Huang notes (personal communication, 5 June 1993) that page 21 contains recipes for deep-fried gluten and smoked gluten.

Bo (1982): Describes the method for making chiang-yu (soy sauce).

103. Saito, Akio. 1699. [Chronology of soybeans in Japan, 1600 to 1699, the early Tokugawa/Edo period] (Document part). In: Akio Saito. 1985. Daizu Geppo (Soybean Monthly News). Jan. p. 14-16. [Jap; eng+]

• ***Summary:*** 1600–Komakabe?, the name of a type of tofu, appears in the *Diary of Oyudono no Kami* (*Oyudono Kami no Nikki*). The very firm tofu called *kata-dofu* that is presently sold in Kochi prefecture (on the southern part of the island of Shikoku) originated from Komakabe.

1601–Daté Masamune (DAH-tay Mah-sah-MU-nay; lived 1567-1636) of Sendai establishes the Goenso-gura and starts making miso. This is the first time that an organized method has ever been used to make miso in Japan. The purpose of this is to make miso for the army and to store salt. According to some theories, the date was 1645 rather than 1601.

1603–In *Nippo Jisho*, a Japanese-Portuguese dictionary, tofu (called "taufu") is mentioned. It says that tofu is a food that is made from powdered / ground beans and that looks like freshly made cheese.

1605–Tokugawa Ieyasu commands the monks at Daifukuji temple to make Hamana Natto. Note 1. This is the earliest document seen (Nov. 2011) that mentions "Hamana Natto" (or "Hamanatto," regardless of capitalization). This document contains the earliest date seen for Hamanatto–1605! Note 2. This is the earliest document seen (Nov. 2011) stating that Hamanatto [fermented black soybeans] were made at Daifukuji temple in Hamamatsu.

1616–Tanaka Genba of Kamiusa no Kuni is advised to make tamari shoyu as a side business by Sanagi Kyurouemon of Settsu. The latter runs a sake factory and has a wholesale

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seafood products shop in Edo. This is the beginning of Choshi Shoyu and Higeta Shoyu.

1619–At about this time shoyu in quantity is brought from the Kyoto-Osaka area (*Kansai*) to Edo by Taru Kaisen and Hishigaki Kaisen. Note 1. A "Kaisen" is a ship that has a carrying capacity of at least 200 koku (= 9,520 gallons or 36,000 liters). That shoyu is regarded as the best quality and it soon takes over the entire Edo shoyu market.

1624-1644–Konpura Nakama (The union of merchants who go to Dejima / Deshima, an island in Nagasaki Bay) starts to export shoyu through the Dutch East India Company (*Higashi Indo Gaisha*) to Europe and Southeast Asia. It is said that in Europe this shoyu even reached the dining table of Louis XIV. Note 2. This document contains the earliest date seen for soybean products (shoyu) in Europe and Southeast Asia (probably Indonesia, 1644); soybeans as such had not yet been reported by that date. [Question: What is the source of these two dates?]

1626–Sendai Han (*daimyo* domain) starts to monopolize the selling of salt for the first time in the history of Japan. Because of this, all other Hans start to do likewise. Makabeya Ichibei of Kokubunji-cho in Sendai starts to sell Sendai Miso. He continues to sell his miso to the Han government for several generations.

1642–Because of famines in various provinces (*kuni*), the people were advised to eat coarse grains (*zakkoku*) and banned from eating rice. The sale of tofu, udon (wheat noodles), soba (buckwheat noodles), and *manju* (steamed glutinous rice cakes with a sweet azuki-jam filling) were also prohibited.

1645–The Ako Han starts a salt farm. Hatcho miso starts to be made in Mikawa, Okazaki. Hamaguchi Gihei of Hiromura in Kishu goes to Choshi and starts making shoyu. This is the beginning of Yamasa Shoyu.

1649 Feb.–The Tokugawa government (*bakufu*) passes a law to control the lives of farmers. Called Kanno Jorei (*Keian no Ofuregaki*), it states that farmers must plant soybeans and azuki beans between their rice fields and farms. Azé-mame (soybeans grown on the raised footpaths between rice fields) may have started from this forceful edict.

1652 May–Various farmers in Waksa, Kohama-han, Enshiki-gun? protest the heavy soybean tax increase. The farmland tax is often paid with soybeans. The leaders of the protest are killed.

1657 Jan. 18-19–A large fire (called *Sodefuri Kaji*) burned Edo (today's Tokyo). Laborers came from throughout Japan to reconstruct the city. To feed them, many sellers of pre-cooked, ready-to-eat food sprung up in Edo.

1666–Maruo Magouemon? Chotoku? of Hanshu Tatsuno makes Usukuchi Shoyu (light-colored soy sauce). After this, Tatsuno Shoyu's main product becomes Usukuchi Shoyu.

1681–The government bans the withholding or monopolizing of crops (such as rice, barley, or soybeans) following a year with a bad harvest.

1695–Dr. Hitomi Hitsudai, a Japanese physician, age 74, writes the *Honcho Skokkan* and talks about the good and bad points of daily foods from his medical viewpoint. The 12 volume book is written entirely in Chinese. He praises the therapeutic virtues of soybeans, miso, natto, tofu, and shoyu. A translation into Japanese was later made by Shimada Isao.

1695–At about this time, tofu is sold by vendors sitting by the road. We do not know for sure when tofu was first sold by walking street vendors, but it is guessed that this may have taken place in about 1837-1853 when the book *Morisada Manko* was written by Kitagawa Morisada.

1696–There is famine throughout Japan. In eastern Japan, especially in Tsugaru Han, half of the population dies of starvation.

1696–One of the greatest scholars of agriculture during the Edo period, Miyazaki Yasusada (1623-1697), write *Nôgyo Zensho* (Encyclopedia of Agriculture). In it he described the many different colors, sizes, and shapes of soybeans cultivated at that time.

1697–Koikuchi shoyu, similar to the type made today, starts to be made from tamari shoyu in Choshi.

1698–After a big fire in Edo, sellers of Dengaku (skewered grilled tofu with a sweet miso topping) start to appear. Address: Norin Suisansho, Tokei Johobu, Norin Tokeika Kacho Hosa.

104. Jones, John. 1701. The mysteries of opium reveal'd. London: Printed for Richard Smith. [v] + 371 p. See p. 349-50, 358.

• ***Summary:*** Chapter 36, titled "Of the use of the panacea, &c. to stop fluxes." states (p. 349-50): "III. The Vehicle in Vomiting should be small in Quantity, pleasant, comfortable and warming, lest you should by either Quantity or Quality give any offence to the Stomach; pleasing it answers the same Intent with the Opiate it self, and has often good Effect without Opium for, indeed, every Pleaser is proportionably an Opiate, and Opium is only such in an intense and permanent manner; therefore the Vehicle must be agreeable, as Wine, Hippocras, or Wine burnt with Spices, Rosemary, &c. or the best Cordials, or Wine with some Ketchup, Caviare, or Anchovis, or a little old Cheese dissolved in it upon the Fire...."

Chapter 38, titled "Of the use of the panacea, &c. as a The tillative [for Titillation]" states (p. 358): "IV. The Regimen. As to Diet, it must be Nourishing, Warming, Comforting, and Titillating, with realishing [relishing] and high Sauces, Oisters [Oysters], Anchovy, Caviare [Caviar], Cockles, Ketchup, Mango's, Garlick, Onions, Leeks, Bears Garlick, Rocket, Sives, Shelot, Ginger, Aromaticks, Roots of Satyrion, Feaverfew, Goats-beard, Silver-weed, Skirrets, Parsnips, and Artichoaks" [Artichokes].

Note 1. This is the earliest English-language document seen (Sept. 2008) that contains the word "Ketchup" (spelled that way, regardless of capitalization).

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Note 2. The author believes this diet will help to counteract the effects of opium. Address: Chancellor of Landaff, a Member of the College of Physicians in London: And formerly Fellow of Jesus-College in Oxford.

105. Chikamatsu Monzaemon. 1703. Sonezaki no shinchû [The love suicides at Sonezaki]. Japan. [Jap]*
• ***Summary:*** Iino (2003, p. 9): In this 1703 book, Chikamatsu's first novel set in current times, "the hero, Tokubei, is an apprentice in the Hirano soy sauce shop. He instructs an employee to make the rounds of regular customers carrying casks of *kijoyu*" [raw / unheated soy sauce]. Iino comments: "With such an explanation, it seems that this soy sauce must have been pure and undiluted, even though diluted soy sauce was also being made" [at this time in history]. Address: Japan.

106. Dale, Samuel. 1705. Pharmacologiæ, seu manuductionis ad materiam medicam supplementum:... [Pharmacology, or a food as a supplement to medicines:...]. Londini (London): Sam. Smith & Benja. Walford. 12 + 389 p. + 67 p. See p. 183-84. 16 cm. See also 1751, Ed. 5, p. 238. [95* ref. Lat]
• ***Summary:*** The information on soy sauce appears in Section XIX, titled "De Herbis flore papilionaceo seu Leguminosis: De Leguminosis Scandentibus," under the heading "I. De Phaseolo. Pag. 318 pro 2da Specie Phaseoli adde."

Page 184 states "3. Soia *Offic.* [probably Officinarum] Phaseolus Japonicus ex quo Japonesium Soia, qui intinctus species est, conficitur *Herm.* Species Phaseoli parvi albi, è Japonia allata, è qua conficiunt condimentum *Ketchup* dictum, duum generum, liquidum nimirum & solidum.

Hujus notitiam debemus Botanico erudito D. *Paulo Hermanno* nuper defuncto, qui eam doctissimo amico nostro D. *Gulielmo Sherrard* [Sherard], LL.D. communicavit, sub titulo suprascripto, unde nos habuimus.

English translation: "I. About Phaseolus. Page 318 for two species of Phaseolus [See Note 1 below]. 3. Soy sauce which is kept in stock at the pharmacist's [apothecary's or druggist's or chemist's] laboratory. The Japanese bean from which Japanese soy sauce is made. The latter is a kind of dip. The bean is the Hermann-type [see Paul Hermann, below] of a small white bean brought from Japan: from it they make a condiment called *Ketchup* [Ketjap, Kecap], of two kinds, one clearly liquid and one solid. I owe the notice of this to the erudite Paul Hermann, recently deceased. He communicated this to our most learned friend D. Gulielmo Sherard LLD, under the title written above, whence we have gotten it."

Note 1. The term "Soia" was first used by John Ray (Joannis Raii) in his *Historia Plantarum*, published 1704 in London in 1704 by Smith and Walford, who also published Samuel Dale's Book. On page 438 Ray states: "28. Phaseolus *Japonicus* fructo albo, ex quo *Soia* conficiunt *Japonenses* D. *Sherard.*"

Note 2. This is the earliest Latin-language document seen (April 2012) that mentions soy sauce, which it calls *Soia*.

Note 3. This is the earliest document seen (April 2003) that uses the word "papilionaceo" (or any related word starting with the prefix "papilion" which means "butterfly" in Latin) in connection with the soybean.

Note 4. This passage by Dale raises several questions. (1) It is not clear what sentence starting with "Page 318..." means, since there is nothing related to Phaseolus on page 318 of this book or of any other book we know of published before 1705. (2) Both Dale and Ray refer to Sherard as their source, yet we do not know to which document by Sherard they are referring. (3) Paul Hermann first published information about the soybean in 1717 in his *Musaeum Zeylanicum*. How did he know about the soybean in 1705, and in what way did he communicate this information to Sherard, who then communicated it to Dale? (4) It is not clear what the term Soia *offic.* refers to and is an abbreviation of. Note that Linnaeus (1747) miswrites this as "Soja officinarum" (this was the first time that the term "Soja" was used in connection with the soybean) but gives the page as 238. The author's name on the title page is written "Samuelis Dale." He lived 1659?–1739.

Note 5. Talk with Prof. Ted Hymowitz, Univ. of Illinois. 2006. Sept. 1. This document shows clearly and irrefutably that Dale considered *Ketchup* to be a type of soy sauce: he listed it "taxonomically" under soy. Soia *Offic.* is a pre-Linnean taxonomic name, not a pharmaceutical name. It is curious that "soy" is not listed in the 1710 edition of this book. However the Soia entry in 1718 edition is exactly the same as is this 1705 first edition. Address: England.

107. Dampier, William. 1705. Voyage round the world. The supplement of the voyage round the world, describing the countreys of Tonquin, Achin, Malacca, &c. their product, inhabitants, manners, trade, policy, &c. London: Printed for James Knapton, at the Crown in St. Paul's Church Yard. See vol. II. Part I, p. 26-28. See also 1729 and 1906 editions. [Eng]
• ***Summary:*** The passage on soy sauce, written by Captain Dampier in 1688 (as indicated by a note in the margin reading "An. 1688"), makes this the earliest document seen (April 2012) that contains the word "soy," used to refer to what is now called "soy sauce." He begins by describing the process used by the natives in Tonquin (Tonkin, today's northern Vietnam) for using shrimps, small fish, salt, and water to make what is today called nuoc-mam in an earthen vessel or jar. "The masht Fish that remains behind is called *Balachaun*, and the liquor pour'd off is called *Nuke-Mum*. The poor people eat the *Balachaun* with their Rice. 'Tis rank scented, yet the taste is not altogether unpleasant: but rather savory, after one is a little used to it. The *Nuke-Mum* is of a pale brown colour, inclining to grey; and pretty clear. It is also very savory, and used as a good sauce for Fowls, not

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only by the Natives, but also by the *Europeans*, who esteem it equal with *Soy*. I have been told that *Soy* is made partly with a Fishy composition, and it seems most likely by the taste: tho a Gentleman of my acquaintance, who was very intimate with one that sailed often from *Tonquin* to *Japan*, from whence the true *Soy* comes, told me, that it is made only with Wheat, and a sort of Beans mixt with Water and Salt."

Note 1. This is the earliest English-language document seen (Jan. 2000) that mentions soy sauce in connection with Japan.

Note 2. First cited by Yule and Burnell (1886, p. 651. They cite the 1729 London ed.; and 1903, p. 858), and the *Oxford English Dictionary* (1919, Soy). Dampier lived 1652-1715.

About this book: It was first published in 1697 in London. A second edition was published the same year, a third edition (corrected) in 1698-1703. Tonquin refers to northern Vietnam, called Tonquin when it was part of French Indochina. Achin is today's Aceh (Atjeh), a region on the northern tip of Sumatra, Indonesia, whose main town is Banda Aceh (formerly Kutaranja). Malacca is a coastal town in today's Malaysia on the Straight of Malacca near Sumatra. This document contains no clear reference to soya in Tonquin (today's North Vietnam). Address: London.

108. Grimston, William Grimston. 1705. The lawyer's fortune: or, love in a hollow tree. A comedy. London: Printed for Bernard Lintott. [8] + 84 + 4] p.

• ***Summary:*** On page 26 is a dialogue: "Enter favourite.

"Fav. Mistress, shall I put any mushrooms, Mangoes or Bamboons into the Sallet [Salad]?

"Bon. Yes I prithee, the best thou hast.

"Fav. Shall I use Ketchop or Anchovis [Anchovies] in the gravy?

"Bon. What thou wilt." Address: Viscount.

109. King, William. 1708. The art of cookery, in imitation of Horace's Art of poetry. With some letters to Dr. Lister, and others: Occasion'd principally by the title of a book publish'd by the Doctor... London: Printed for Bernard Lintott. 165 p. See p. 3, 45, 47.

• ***Summary:*** Page 3: "Consider, dear Sir, in what uncertainties we must remain at present; you know my Neighbour Mr. Greatorix is a learned Antiquary, I shew'd him your Letter, which threw him into such a Dubiousness, and indeed Perplexity of Mind, that the next day he durst not put any Catchup in his Fish Sauce, nor have his beloved Pepper, Oyl and Limon [Lemon] with his Partridge...."

Page 45: This piece is a dialog, adapted (with only small changes) from: Grimston, William Grimston. 1705. *The Lawyer's Fortune: or, Love in a Hollow Tree. A Comedy.* However four words are spelled or capitalized differently.

"Fav. Mistress, shall I put any Mushrooms, Mangoes, or Bamboons into the Sallad?

"Bon. Yes I prithee, the best thou hast.

"Fav. Shall I use Ketchop or Anchovies in the gravy?

"Bon. What you will."

Page 47: "There is a Scene of the greatest Horror, and most moving to Compassion of any thing I have seen amongst the Moderns; Talks of no Pyramids of Fowl, or Bisks of Fish is nothing to it, for here we see an innocent Person, unless punish'd for his Mother's and House-keeper's Extravagancy, as was said before in their Mushrooms, Mangoes, Bamboons, Ketchup, and Anchovies, reduc'd to the Extremity of Eating his Cheese without Bread, and having no other Drink but Water."

Note the three different spellings in one book: Catchup, Ketchop, and Ketchup–suggesting a new word in the English language.

Note 2. A bisk (also spelled bisque) is a thick and rich cream soup, of French origin, made from seafood. Address: By the Author of the Journey to London.

110. *Philosophical transactions, giving some account of the present undertakings, studies, and labours of the ingenious in many considerable parts of the world.*1708. An account of a book entitled X. Samuelis Dale *Pharmacologiæ seu Manuductionis ad Materiam Medicam Supplementum:...* 25:2253-66. For the years 1706 and 1707. See p. 2266.

• ***Summary:*** "The Star of the Earth, (so call'd,) in a famous Receipt against the biting of Mad-Dogs, he proves to be the *Coronopus* and not the *Sesamoides Salamanticum Magnum*, which some mistake it for. *Soia* of which *Ketchup* is made, is the Seed of an *Indian Phaseolus,...*" Address: [England].

111. Yamato hongusa 1708. Japan. [Jap]*

• ***Summary:*** Iino (2003, p. 8) states that in the section titled *Shauyu* (another term for shoyu or soy sauce), this 1708 book "states that soy sauce can be made from either soybeans and barley and soybeans and wheat." Address: Japan.

112. Kaibara, Ekiken. 1709. Yamato honzô [Japanese materia medica. 2 vols.]. Japan. 23 cm. Reprinted in 1932-1936 by Shunyôdô in Tokyo. [Jap]*

• ***Summary:*** The author, Ekiken Kaibara, lived 1630-1714. Nagata (1960, p. 75) states that E. Kaibara (1709, *Yamato Honzô*) described that autumn soybeans of high quality had been produced in Omi province–today's Shiga prefecture.

Kotzsch (1981, p. 43) states: "Another probable influence on Ishitsuka [the founder of macrobiotics in Japan] was Kaibara Ekken, a philosopher and writer and a popularizer of Confucian thought and ethics, who lived from 1630 to 1714. He wrote on a wide variety of subjects, including philosophy, education, ethics and natural history. His work *Yôjôkun* (*Rules for the Nourishing of Life*) is a practical manual of hygiene and health care... While Ishitsuka does not cite it in his own work, nor does Ohsawa

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mention it in his autobiography, it most likely had an influence on Ishitsuka's thought."

Adachi (1982) notes that tamari (written with the characters for bean + oil) was mentioned.

Saito (1985) notes: "Kaibara Ekken (1630-1714) writes *Yamato Honso*, in which he discusses the shapes and use of the 1,362 products from Japan, China, and other countries. He notes that among the five crops (*go-koku*), soybeans are the second most widely produced after rice."

Kotzsch (1985, p. 18) noted: "In case of illness one should first try fasting or a very simple diet as a cure. If that fails then acupuncture, moxibustion (burning pellets of plant fiber on the appropriate *tsubo*, key energy spots) and herbal remedies may be tried as a last resort."

Note: This is the earliest document seen (Jan. 2009) connected with macrobiotics.

113. Useful transactions [in philosophy, and other sorts of learning], for the months of May, June, July, August and September, 1709... Translated into English from the Dutch. Part 3. 1709. London: Printed for Bernard Lintott. 80 p.
• ***Summary:*** The Introduction states (p. 53): "In many parts of Lapland, Fish is their Subsistence, which they dress with great perfection of Shrimps, Oysters, Anchovy and Ketchup. The Body is serv'd to the Master, and the dried heads are Food for the Cattle."

114. Howard, Henry. 1710. England's newest way in all sorts of cookery, pastry, and all pickles that are fit to be used. Adorn'd with copper plates,... 3rd. ed. with additions of beautifying-waters, and other curiosities. London: Printed for and sold by Chr. Coningsby,... 220 p. See p. 155-56.
• ***Summary:*** The section titled "Fowls and Rabbets, &c. when in Season" lists (p. 155-56) the many different birds and rabbits in England and when each is in season. It then gives a recipe (p. 156): "To make Gravy. Slice lean Beef, and lay it in a Stew-pan with a bit of Butter, and a slice of Bacon; cover it very close; and when it is done add a Ladle-full of Jelly-broth, so keep it for use; and when you have occasion add some Catchup." Address: Free-Cook of London, and late Cook to his Grace the Duke of Ormond, and since to the Earl of Salisbury, and Earl of Winchelsea [England].

115. Lockyer, Charles. 1711. Account of the trade in India: Containing rules for good government in trade... London: Printed for the author, and sold by Samuel Crouch. [12] + 340 p. See p. 128-29. 19 cm.
• ***Summary:*** Mr. Lockyer visited Sumatra, Canton, and India during the early 18th century. In Chapter 5, titled "Canton in China," he gives precautions to observe when buying each of various goods there: "Soy comes in Tubs from *Jappan* [Japan], and the best Ketchup [soy sauce] from *Tonqueen;* yet good of both sorts, are made and sold very cheap in *China*. Buy none but what is right, which you are likelier to meet with among the Merchants than Shop-keepers. The best way is to agree by the Catty; for the Tubs are seldom or never full: But if they will not hearken to it, try which are the heaviest, and refuse all that are not likely to contain the Quantity they ought; draw it off immediately, and secure it in Bottles: Therefore in your Passage thither save as many as you can: for I know not a more profitable commodity.

Note 1. *Tonqueen* refers to Tonkin, which is the northern part of today's (Feb. 2010) Vietnam. France assumed sovereignty over all of Vietnam after the Sino-French War (1884-1885). The French colonial government then divided Vietnam into three different administrative territories. They named the territories: Tonkin (in the north), Annam (in the center), and Cochinchina (in the south). The great majority of the Vietnamese regarded their country as a single land and fought for much of the next 90 years to achieve unification.

Note 2. A catty is a Chinese unit of weight; 1 catty = 1.33 lb. weight avoirdupois.

116. Terajima Ryôan, comp. 1711. Wakan sansai zue [Collection of Japanese and Chinese diagrams and drawings of all things]. Japan. 40 books, 106 sections. Japanese summary by Kawakami 1978, p. 269. Translation into modern Japanese titled *Wakan Sansai Zukai* published by Heibonsha in Toyo Pocket Library series. [Jap; eng+]
• ***Summary:*** This is Japan's oldest encyclopedia, written in *kanbun*, the Japanese transcription of Chinese writing. It is a Japanese compilation, which originated in Japan and is not a Japanese translation of a Chinese work. When cited in Chinese, the title in pinyin is: *Hehan sanchai tuhui* (W.-G. *Ho Han San Ch'ai T'u Hui*). The author's nickname (*aza*) is Shojun; his artist's name (*go*) is Kyorindo. The work contains many illustrations, although they were generally primitive and not very accurate.

In volume 105 (*Jozorui*), which is about brewing and fermented foods, a clear distinction is made between miso, shoyu, and tamari.

The section on yuba states: "Tofu film is made on the surface while making tofu. It looks like yellow paper. If you stir too much, the film will not form properly. If you wish to obtain the film, add coagulant and boil the milk. The wrinkled look of the film resembles (the skin of) an old woman. If you remove too much film, the yield of tofu decreases and the tofu becomes hard to eat." Yuba is referred to as *doufu-p'i*, the present Chinese term. When the text notes that yuba "resembles (the skin of) an old woman," it seems to imply that the earlier term *lao* or *uba* was used because of the similarity of yuba and an old woman's face.

T. Yokotsuka (1985, p. 206) cites this as "*Wakan sansaizue* (1715)" but apparently does not cite it in his bibliography.

Fukushima (1989, p. 9) states that the *Wakan Sansai Zue* (Narushima, 1712) describes miso and shoyu.

Ebine (1989, p. 91-93) gives the date of this work as

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1712, and states that volume 105 describes the preparation of "tama-misho" using broad beans (*Vicia faba; Japanese: soramame*), and a "whitish misho" using soybeans. For each of these Ebine gives a flowchart. Rice or barley are soaked in water, steamed, and fermented to make rice koji, which is mixed with salt, and then the salted koji is mixed with broad beans that have been cooked and dehulled. The mixture is formed into balls, which are wrapped with rice straw, hung under the rafters over a fireside for several weeks, crushed in a mortar, then mixed with water to make tama-misho. To make whitish misho from soybeans and rice: 10 parts of soybeans are soaked in water, dehulled by brushing, and cooked. The hulls are first removed from the cooker, then the cooked beans are removed, formed into balls, and the balls are sliced. Meanwhile, about 14 parts of rice are polished, soaked in water, steamed, cooled, and allowed to mold spontaneously to yield 16 parts of rice koji. The rice koji, sliced soybean balls, and 1.3 parts of salt are mixed, pounded, packed into vats, and fermented for 10 days to yield the whitish misho.

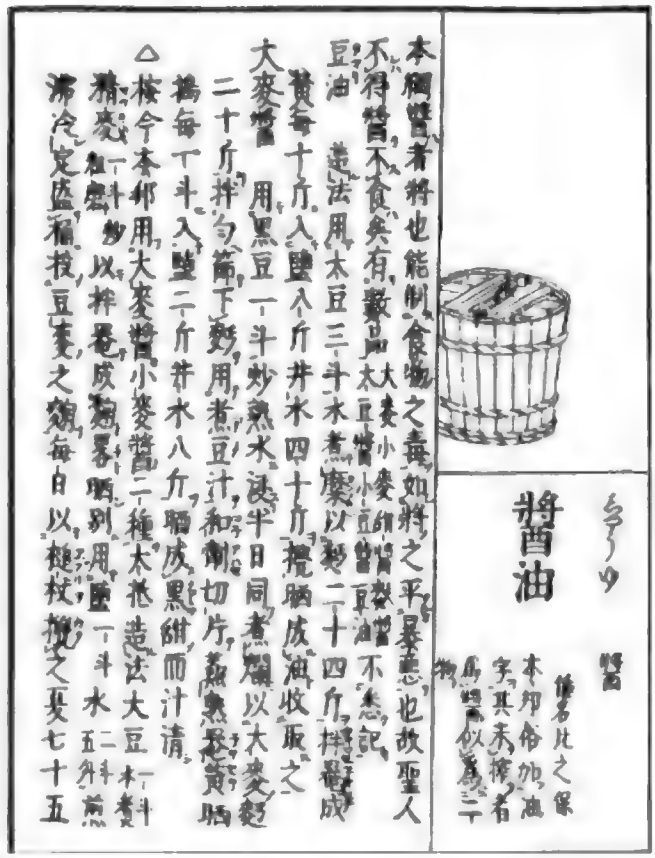
C.N. Li (1958): Making Fermented Products, Fermented black soybean sauce (*shizhi;* W.-G. *shih chih*). Note: Shih is often used at meals to harmonize the five flavors. People used to use it during this dynasty. Nowadays, if people do not use chiang, they do not use shih; they use soy sauce (*chiang-yu*), not fermented black soybean sauce (*shizhi*).

Modern rendering by Morohashi (1955). He translated p. 5 (roasted flour), p. 17 (fermented black soybean sauce). Confection of soy flour and *ame* = *Ame chimaki*. In "Making Fermented Foods." Morohashi (1955) translated p. 5. *tou i* (*mame ame*). In: vol. 10, p. 63.

Concerning shoyu: Iino (2001, p. 21) contains a "Table of ingredients used in *tou-miso* and shoyu during the Edo period." The entry for *Wakan-sansai-zue* (compiled in 1712) states that *Shoyu* is made from the following ingredients: Soybean 18.2%. Wheat / barley 28.2%. Salt 19.2%. Water 45.5%.

Iino (2003, p. 8) notes that this 1712 book "states that soy sauce made from wheat is suitable for the public and soy sauce made from barley is of low quality." Iino comments (p. 8-9): "Put simply, the soy sauce sold in shops was made from wheat because that made from barley was inferior."

On the same page, Iino shows a full page reproduction of the page titled "shoyu" in this book. It gives: "An explanation of soy sauce production with an illustration of the proper sort of barrel to be used." Iino notes (p. 9): "Another method for producing soy sauce requires a heating process. The *Wakan Sansai Zue* states: '... Squeeze the *moromi* to extract the oil [sic, liquid]. If the color is light, the flavor will not be good. Boil the oil [liquid], place it in a pail and leave it over night to darken the color and improve the flavor. Mix the dregs [presscake] again with salt water and extract the oil [liquid]. This [second pressing] is called *niban shoyu* (second soy sauce), and the flavor is very much inferior.'"



117. *Daily Courant* (*London*).1712. For sale by the Candle... (Ad). Dec. 30. p. [2], col. 2.4.

• ***Summary:*** "There is lately brought over from the East-Indies, a great parcel of Soy [sauce], commonly call'd Ketchup, neat and fine as ever came to England, to be sold Wholesale or Retale [Retail], very Cheap, at Mr. Jonathan Clark's China-seller in King-street near Guild-hall, at Mr. William Emerson's China-seller at the Angel and Tea-Canister over-against Gutter lane in Cheapside, and at Mr. Joseph Rose's China-seller in Leicester Fields."

See next page, top.

Note: The very interesting statement that Soy [sauce] is commonly called Ketchup. Indeed, the Malay / Indonesian word for soy sauce today (July 2010), spelled ketjap or kecap, is identical in pronunciation to the western word spelled "ketchup" or "catsup."

118. Kaempfer, Engelbert. 1712. Amoenitatum exoticarum politico-physico-medicarum, fasculi v. [Exotic novelties, political, physical, medical. Vol. 5]. Lemgoviae, Germany: W.W. Meyerei. See p. 834-35, 837-40. Illust. p. 838. Reprint of original edition published in 1983 by Steiner (Wiesbaden). [Lat]

• ***Summary:*** This is Kaempfer's first major work, his most famous, and his first to mention the soybean. Kaempfer was

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There is lately brought over from the Eaſt-Indies, a great parcel of Soy, commonly call'd Ketchup, near and fine as ever came to England, to be Sold by Whole ſale or Retale, very Cheap, at Mr. Jonathan Clark's China-ſeller in King-ſtreet near Guild-hall, at Mr. William Emerſon's China-ſeller at the Angel and Tea-Caniſter over-againſt Gutter lane in Cheapſide, and at Mr. Joſeph Roſe's China-ſeller in Leiceſter Fields.

born on 16 September 1651 at Lemgo, Germany. [Lemgo is presently a city in North Rhine-Westphalia, 44 miles southwest of Hannover.] He lived and traveled in Japan from 23 September 1690 to November 1692 and made many interesting observations. This book, written in Latin, was published in Lemgo in 1712, some 16 years after his homecoming.

The fifth fascicle of the 900 page book, which contains a description of the plants of Japan, includes a full-page illustration (drawing; p. 838), by Kaempfer, of a soybean plant with details of the flower parts and their names. This is the earliest illustration of a soybean plant published in the Western world. Also contains a description of the plant, and descriptions of how to make miso and shoyu. He called the soybean "Daídsu" and wrote the Chinese characters before the romanized name in the sequence "zu" "dai" from left to right. The actual Japanese spelling is "daizu." Note 1. This is the earliest document seen (June 2001) written by a European or Westerner in which Chinese characters are used to write the name of the soybean or related products.

Kaempfer's description of the soybean in Latin (p. 837-40) begins: "Daídsu, vulgo & literatis; & ob excellentiam *Mame*, i.e. legumen, dictus. Phaseolus erectus, siliquis Lupini, fructu pisi majoris candido..."

Translated into English, this reads: "Daidsu–as people and scientists call it, is also called 'mame' for its excellence. An upright bean, a leguminous plant like the lupin, with whitish fruit somewhat larger than peas. A bean, similar to the afore-mentioned, but four feet high and with more branches and leaves, with upright stem, irregular branches and with hairs. It stretches forth leaves like the garden bean, but with more pubescence on the under side of the leaf. In the month of August it bears on pedicels in the axil of the leaves several bluish white flowers with a large standard, which resemble those of lentils. These tiny blossoms are followed by pods measuring 1½ inches long, which are covered with heavy hairs (pubescence) resembling those of the yellow lupin. The pods contain two, and more rarely three seeds, similar to garden peas in size, shape and taste, but laterally somewhat compressed, and with a chestnut brown eye (hilum).

"This legume supplies to the Japanese kitchen vital elements, for they make from it the following: 1–A kind of pap that they call miso, which is added to dishes instead of butter. Butter is unknown under this strip of heaven. 2–And then the famous so-called shoyu (*Sooju*), a sauce which is poured over if not all dishes, at least over all cooked and fried meals. I add the processing methods for both.

"To produce miso, one takes one measure of mame or phaseolus Daidsu (phaseolorum *Daids*) which is cooked with water for a long time and then brayed or ground and mixed into a soft pap. Under continued braying, common salt is added, in summer four parts, in winter three. If less salt is added, one gets the product quicker, but shelf life is shorter. After reducing has been repeated, one mixes the pap with *koos* [he probably meant koji] or dehulled rice (Oryza), and mixes the total by repeated braying. This rice in preparation has been boiled a little in the steam of unsalted water. One lets the mixture cool down and remain in a warm cellar one or two days and nights to ripen. This mixture, which has the texture of a pap or spread, is put into a bowl that recently contained the popular *sacki*, a rice wine. Before using, one lets the bowl stand one or two months untouched. Koos lends to the product an agreeable taste, and its production requires, like that of the Germans' 'polenta,' the experienced hand of the master. Those therefore who make it are held in high esteem, and they sell it ready made.

Note 2. This is the earliest Latin-language document seen (March 2009) (and the earliest document published in Europe) that mentions miso, which it calls *Miso*. It is also the earliest document seen (March 2009) that compares miso to butter.

"To make shoyu (*Sooju*) one uses the same beans just as thoroughly cooked. And *muggi*, which is barley or wheat fermented (with wheat the product becomes darker) which has been coarsely ground. One mixes equal units with ordinary salt, or only one unit with half of it. The beans are blended with the prepared grain, and one lets the mixture stand in a warm place under cover a day and a night for fermentation. Then the salt is added, one stirs the mass and mixes with water, normally two units to half. When this has been done, the well covered mass is stirred once (better two or three times) the next day and each subsequent day by means of an oven rake. This work is continued for two or three months, then the mass compressed and filtered and the liquid preserved in wooden containers. The older it becomes, the clearer and better it will be. The squeezed mass is again filled up with water and newly stirred and some days after

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豆大 *Daidſu*, vulgo & literatis; & ob excellentiam *Mame*, i. e. legumen, dictus. Phaſeolus erectus, ſiliquis Lupini, fructu piſi majoris candido.

Phaſeolus priori ſimilis, ſed tetrapedalis & plenior, caule erigitur torté ramoſo, inæqualiter tereti & hirſuto; *Folia* exhibens phaſeoli hortenſis, dorſo aſperiùs piloſo. *Floſculos* menſe Auguſto intra ſinus foliorum explicat uni pediculo inſidentes pluſculos, in albo cœruleos, pumilos, floribus Ervi pares, vexillo petalisque rectis, vix expanſis: Quos *ſiliquæ* excipiunt copioſæ ſeſcunciales, pilo longo aſperæ, ſiliquis Lupini fl. lut. ſimiles, ſemina continentes duo, rariùs tria, piſo hortenſi formâ magnitudine & ſapore paria, quadantenus tamen compreſſa, umbilico badio. Hoc legumen in coquina Japonicâ utramque replet paginam; Ex eo namque conficitur: tum puls *Miſo* dicta, quæ ferculis pro conſiſtentiâ & butyri loco additur, butyrum enim hôc cœlô res ignota eſt; tum *Sooju* dictum celebre embamma, quod niſi ferculis, certè frictis & aſſatis omnibus affunditur. Utriusque conficiendi modum appono:

Pro *Miſo* elaborando recipiunt menſuram unam *Mame*, ſive phaſeolorum *Daidſ*, quos aquâ diutiſſimè & ad omnimodam mollitiem percoctos in pultem molliculam contundunt. Pulti, ope iterandæ contuſionis, permiſcent Salis communis menſuras æſtate quatuor, hyeme tres; quò minus ſalis additur, eò productum obtinetur lautius, ſed minùs durabile. Mox æquali phaſeolis quantitate, unam addunt & repetitâ contuſione permiſcent menſuram *Kooſ*, i. e. Oryzæ degluptæ, in vapore aquæ dulcis parum coctæ, & poſtquam refrixerit, in cellâ calidâ unum vel duos dies noctesque, ad ſitum usque contractum, repoſitæ. Mixturam hanc (quæ pultis vel cataplaſmatis conſiſtentiam exhibet) vaſi immittunt ligneo, quod nuper cereviſiam popularem *Sacki* dictam continuerat; & ante uſum uno vel duobus menſibus intactum ſervant. *Koos* pulti gratiam ſaporis tribuit, & in elaborando, velut polenta Germanorum, expertam requirit manum magiſtri; Quapropter ſunt, qui in eo elaborando operam unicè collocant & paratam venundant.

Pro *Sooju* conficiendo recipiunt eosdem phaſeolos ad aliqualem mollitiem coctos; *Muggi*, i. e. frumenti, perinde hordei an tritici (à tritico productum magis nigricat) craſſè contriti; & Salis communis partes æquales, ſive ſingulorum menſuram unam. Phaſeolos cum frumento contrito miſcent, & in loco calido mixturam uno die ac nocte reponunt coopertam, ut efferbeat. Tum maſſam ollæ fictili immiſſam ſale prædicto obruunt, affundendo aquæ

aquæ communis menſuras duas cum dimidiâ: quo facto, maſſam probè operculatam poſtridie ac ſequentibus diebus ſingulis ad minimum ſemel (ſatiùs bis vel ter) rutabulo agitant. Labore duobus vel tribus menſibus continuato, maſſam filtrant & exprimunt, liquorem vaſis ligneis aſſervantes; qui quo antiquior fuerit, eò clarior eſt & melioris notæ. Maſſam ita emulſam, affuſâ aquâ, denuo irrigant & ab agitatione aliquot dierum exprimunt.

黒豆 *Siuku*, vulgo *Kuro mame*, i. e. Phaſeoli nigri. Phaſeoli *Daidſu* ſpecies ſive varietas, fructu nigro.

Idem fructu nigricante, pumilo medicinali; cujus grana tria vel quatuor in pulverem redacta propinantur aſthmaticis.

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treatment pressed again.

Note 3. This is the earliest document seen (April 2012) that uses the word *koos* to refer to koji, or that uses the word *Sooju* to refer to shoyu (soy sauce).

Paragraph 3 reads as follows in the original Latin: "Hoc legumen in coquina Japonicâ utramque replet paginam; Ex eo namque conficitur: tum puls *Miso* dicta, quæ ferculis pro consistentiâ & butyri loco additur, butyrum enim hôc coelô res ignota est; tum *Sooju* dictumcelebre embamma, quod nisi ferculis, certè frictis & assatis omnibus affunditur. Utriusque conficiendi modum appono:"

On page 834 Kaempfer lists the Gokoku (five chief cereal grains): *come* [*kome*], Oryza in genere: quinque grana Japoniis *go kokf* secundum excellentiam dicuntur: *come*, Oryza; o muggi, Hordeum; *ko muggi*, Triticum; *daidsu*, Phaseoli facie Lupini [Soja hispida]; *sjodsu* seu *adsuki*, Phaseoli vulgaribus similes [Adzuki, azuki, or Phaseolus radiatus, L.].

On page 836 are botanical descriptions, each with 1-2 Chinese characters (read from right to left), of: Broad beans (*Sora mame*), sword beans (*Natta mame* [*nata mame*]), peanuts (*Nankin mame or Nankino*), and cowpeas (*Sasagi* [*sasage*], *Shiro Sasangi*).

On p. 837 is a detailed botanical description (in Latin) of the azuki bean, starting with a Chinese character: "Too, vulgo Atsuki [Adzuki], Phaseolus hirsutus..." Note 4. This is the earliest Latin-language document seen (Jan. 2005) that mentions azuki beans, which it calls *sjodsu*, *adsuki*, or *atsuki*.

On page 840 are shorter descriptions (in Latin) of "Siuku, vulgo Kuro mame [Black soybean], i.e. Phaseoli nigri. Phaseoli Daidsu species sive varietas, fructo nigro," and "Katz, vulgo Kudsu [Kudzu], Kudsu Kádsura."

Note 5. This is the earliest document seen concerning soya in connection with (but not yet in) Germany. Other early authors to cite it were Linnaeus (1747, p. 222, and 1753, p. 727), Osbeck (1771, p. 253), Linnaeus (1772, p. 171), de Candolle (1885, p. 331), Yule & Burnell (1886, p. 651), and Blasdale (1899).

Note 6. This is the earliest document seen (June 2001) by or concerning Englebert Kaempfer in connection with soybeans.

Note 7. This is the earliest document seen (Sept. 2003) that mentions lupins.

Note 8. This is the earliest document seen (May 2003) that mentions both lentils and soybeans.

An illustration, which is thought to show Engelbert Kaempfer riding on a horse in Japan, was sent to Soyfoods Center by Herr Deubel of Germany. Address: Lemgo, Germany.

119. Burnet, Thomas. 1715. A second tale of a tub: or, The history of Robert Powel, the puppet-show-man. London: Printed for J. Roberts. x + xlii + 219 + [5] p. See p. 201. 20 cm.

• ***Summary:*** The long section titled "The history of Robert Powel" states (p. 201): "... Mr. Powel comes in, and tells them with a solemn Face; 'Gentlemen, I am extremely grieved that my cook let fall a bottle of *Catchup*, by which means you can have no dinner to day, but if you will honour your Friend Powel next Week with your Companies, you shall see the nicest Entertainment I can provide for you;...'"

Note: This is a satire on the 1st earl of Oxford. Sir Thomas Burney lived 1694-1753. Address: [England].

120. Zoshu seiho 1716. Japan [Jap]*

• ***Summary:*** Yokotsuka (1985, p. 206), who cites this book as "*Zoshu-seiho* (1716)," states that it is about the development of and formulas for commercial shoyu during the Edo period. Address: Japan.

121. Strother, Edward. 1718. Euodia: or, A discourse on causes and cures. In two parts. 2nd ed, carefully corrected with additions. London: Printed for Charles Rivington. [16] + 200 + [16] p. 8vo.

• ***Summary:*** Page 28 states: "A Diet of *Fetids*, (as Stale Meats, Onions, Garlick, Mangoes, Catchups, &c.). Of *Acrids*, (as Mustard,...Ginger). Of *Aromatics*, (as Nutmeg...).

Note: Edward Strother, M.D., lived 1675-1737. Address: M.D. [England].

122. *Pasquin* (*London*).1723. Pasquin to Marforio. Jan. 23. p. [1-2], col. 2,3.

• ***Summary:*** There are now many fictitious kings and pretenders in England, even though King George is the sole monarch. One of these is the King of Beggars, who is content to be the King of Vermin. "... they say he never eats *Veal* without *Oranges*, or *Fish* without *Catchup Sauce*."

123. Smith, Robert. 1723. Court cookery: or, The compleat English cook. Containing the choicest and newest receipts for making soops, pottages, fricasseys, harshes [hashes], farces... London: Printed for T. Wotton. [8] + 112 + [8] + 82 + [14] p. 8vo.

• ***Summary:*** "Ketchup" is called for as an ingredient in the following recipes: To dress Snipes (p. 24): "...; pour in some Ketchup, and when they are enough, squeeze in the Juice of a Quarter of a Lemon;..." To hash chickens (p. 27): "; when they are boil'd enough, add these to the Yolks of six Eggs, with a little Nutmeg, Vinegar and Ketchup, and a good piece of Butter; warm all these together, and Pour them into a Soop-Dish, and serve them."

To stew tench (p. 47): "When the Fish is enough, put in Oysters, Capers, Ketchup, and Lemon: Garnish your dish with crispt Bread."

To stew flounders (p. 48): ": when just done, pour off the Liquor into a Sauce-pan, and melt your Butter with it; put in a piece of Anchovy, a bit of Shalot, Mushrooms, and Ketchup; draw it thick;..."

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To make an excellent sauce for salmon (p. 49): "; take a quarter of a Pint of the Liquor, and draw your Butter with it; mince into it an Anchovy wash'd clean, some Lemon-Juice and Nutmeg, half a Pint of Shrimps; two Spoonfuls of White-wine, with Ketchup and Mushrooms."

To broil mullets (p. 50): "For the Sauce, take some clarify'd Butter, a little Flower [Flour], Capers, Ketchup, a Faggot of Herbs, Salt, Pepper, Nutmeg, and Orange-Juice, and serve them." Address: Cook (under Mr. Lamb) to King William, as also to the Dukes of Buckingham, Ormond, D'Aumont (the French Ambassador) and others of Nobility and Gentry [England].

124. Thedens, Johannes. 1724. Diary. In: Paul van der Velse and Rudolf Bachofner, eds. 1992. The Deshima Diaries Marginalia, 1700-1740. Tokyo: Japan-Netherlands Institute. xxiii + 595 p. See p. 287 (#196).

• ***Summary:*** 1724 April 29–This entry describes the return trip, largely by ship, from Edo to Nagasaki. Departing from Itami, they passed Nishinomiya and arrived at Hyôgo, where they went ashore and visited a little temple named Sjacote, which means "ladle." After they had dined, the village elder "showed us his sake distillery and his soy press which had a large capacity." Address: Opperhoofd (Chief of the Dutch factory), Deshima, Nagasaki, Japan.

125. Kaempfer, Engelbert. 1727. The history of Japan,... Its metals, minerals, trees, plants, animals, birds and fishes;... Together with a description of the Kingdom of Siam 1690-1692. (translated by J.G. Scheuchzer from the original edition of April 1727. 2 vols.). London: Printed for the translator. See vol. I, book I, chapter IX, p. 121-22. [1 ref. Eng]

• ***Summary:*** In Chapter IX, "Of the fertility of the country as to plants," the section titled *Gokokf* [*Goku-fu*] ("five grains," p. 121-22) states: "The chief produce of the Fields, which contributes most to the sustenance of Life, is by the Japanese comprehended under the name of *Gokokf*, that is, the *five Fruits of the Fields*. 'Tis by their good or bad growth they estimate the value of the Ground, the fruitfulness of the Year, and the wealth of the Possessor. They make up the chief dishes at their meals, and make good the want there is of Flesh-meat, which Custom and Religion forbid them to eat." Note 1. This is the earliest English-language document seen (Dec. 2003) that uses the term "Flesh-meat" to refer to meat.

The five grains (*Gokokf*) are: (1) *Kome* or Rice (from which "they brew a sort of strong fat Beer, call'd *Sacki*..."). (2) *Oomugi* or Barley. "They feed their Cattle and Horses with it: Some dress their Victuals with the Flower [Flour], and make Cakes of it." (3) *Koomuggi* or Wheat. (4) *Daidsu* or Daidbeans. (5) "*Adsuki* [azuki] or *Sodsu* [shôzu, shôdzu = small + bean] that is Sobeans" [azuki].

Concerning soybeans: "4. *Daidsu*, that is, *Daidbeans*, is a certain sort of Beans, about the bigness of Turkish Pease, growing after the manner of Lupins. They are next to the Rice in use and esteem. Of the Meal of these Beans is made what they call *Midsu*, a mealy Pap, which they dress their Victuals withal, as we do with Butter. What they call *Soeju*, is also made of it, which is a sort of an *Embamma*, as they call it, which they eat at meals to get a good stomach. This *Soeju* is exported by the Dutch, and brought even into *Holland*. I have describ'd their way of making it in my *Amoenitates Exoticae*, p. 839, where the Plant it self bearing these beans is figur'd and describ'd."

Note 2. *Midsu* clearly refers to miso, and *Soeju* to shoyu. This is the earliest English-language document seen (March 2009) that mentions miso, or miso in connection with Japan. It is also the earliest English-language document seen (March 2009) that compares miso with butter. *Midsu* has almost the same pronunciation (phonetics), and the same etymology and meaning as the today's word "miso." Since spelling did not become fixed until the 18th century, this could be considered the earliest occurrence of "miso" in an English-language document.

Note 3. This is the earliest English-language document seen (April 2012) that uses the word *Soeju* to refer to soy sauce. It is clearly Kaempfer's spelling of the Japanese word *shoyu*.

The author continues (p. 121-22): "5. *Adsuki* or *Sodsu*, that is Sobeans. They grow likewise after the manner of Lupins, and are black, not unlike *Lentils*, or the Indian *Cajan*. The flower [flour] is bak'd with sugar into *Mansje* [*Manju*] and other Cakes."

Note 4. This is the earliest English-language document seen (March 2006) that clearly mentions azuki beans. It is also the earliest English-language document seen (March 2006) that uses the word "Adsuki" or the word "Sodsu" to refer to azuki beans. Cooked and mashed or ground dry into flour are mixed with sugar to make *an* or "sweetened azuki bean paste." This is used as a filling for the popular steamed Japanese sweet bun named *manju*.

Besides the several sorts of *Gokokf* just mentioned, the following Plants are comprehended under the same name: *Awa*, Indian Corn, (*Panicum Indicum Tabern*), *Kibi*, or *Milium vulgare nostras*, *Millet: Fije*, or *Panicum vulgare juba minore semine nigricante:* And in general all sorts of Corn and *Mami* [Mamé = beans], that is pease and pulse. Azuki beans, though usually red, also occasionally have black or white seedcoats.

In the Introduction to this book, the translator explains that it was first published in English, after Dr. Kæmpfer's death in 1716, thanks to Sir Hans Sloane, who purchased all of Kæmpfer's plates, drawings, and manuscript memoirs as they were about "to be disposed of." Sloane added them to his library, which the translator believes is "the completest of its kind in Europe," with an extensive collection of Books of Physik, Natural History and Travels." "This History of Japan was by the Author divided into five Books."

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Note 5. Kaempfer lived 1651-1716. John Gaspar Scheuchzer lived 1702-1729. His first translation was this one, in 1727. The title page states that the original was "Written in High-Dutch by Engelberus Kaempfer, M.D., Physician to the Dutch Embassy to the Emperor's Court; and translated from his Original Manuscript, never before printed, by J.G. Scheuchzer, F.R.S. and a member of the College of Physicians, *London*. With the Life of the Author, and an Introduction. Illustrated with many copper plates."

Note 6. In 1986 a 3 volume edition was published in Glasgow, Scotland by James Maclehose and Sons. This book contains no mention of soybeans in Siam (Thailand).

Note 7. This is the earliest English-language document seen (Nov. 2007) that mentions Lupins (or "lupin" or "lupine" or "lupines").

Note 8. This is the earliest English-language document seen (Dec. 2000) that mentions the *Goku-fu* or "five grains" and includes the soybean among them.

Note 9. This is the earliest English-language document seen (June 2008) that mentions lentils; it compares them with adsuki [azuki] beans. Address: M.D., Physician to the Dutch Embassy to the Emperor's Court [in Japan].

126. Three great historical stages in the transformation of ketjap into ketchup (Early event). 1728. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** The two words sets of "ketjap" and "ketchup, catsup, catchup" and their corresponding seasonings have histories that are intertwined and difficult to separate.

So far as we can tell, the Indonesian word "ketjap" meant, and still means, "Indonesian-style soy sauce." It was a fermented food based on soybeans. The etymology of the word probably traces its origin to southern China, where it can refer to various kinds of sauces.

The transformation from "ketjap" to "ketchup" began in about 1728. Before this time, both products were fermented soybean condiments from Asia. Since the mid-1600s, soy sauce had been imported from Asia to Europe. Initially, Japanese shoyu (soy sauce) was imported from the port of Nagasaki in Japan to the Netherlands by the Dutch East India Co. The Dutch, who purchased *shoyu* eventually standardized the name as "Soy." In 1750 this "Soy" was first imported into the United States.

Neither the Dutch nor the European and American consumers of "Soy" had any idea of how this sauce was made in Japan, but they knew it was expensive and tasty. So they began to see if they could make it in Europe–using European ingredients. Their initial experiments focused on using vinegar seasoned with mushrooms or walnuts. They were unaware of soybeans at the time and had no access to them. So the first big change was the European ketchup was made without soybeans. The second big change was that European ketchup not a fermented product–although it was aged. The third big change was that the European products were lower-cost imitations, trying to match the flavor and aroma, color and consistency of a more expensive imported product, by trial and error. The fourth big change was the change in name: shoyu (from Japan) was called "Soy" and "ketjap" (probably from Java) was called "ketchup," "catsup," "catchup, etc.

One interesting hint of the basic similarity of Soy and ketchup was the way they were list in advertisements (usually retail ads) in Europe and the United States. Even though 20-50 items might appear in the ad, Soy and ketchup would almost always be listed together, one below the other in the list.

Over the period of about 250 years Soy remained basically the same product, whereas "ketchup" evolved in major ways. The early ketchups were rarely associated with the tomato, yet today the word "ketchup" is generally understood to mean "tomato ketchup."

127. Swift, Jonathan. 1730. A panegyric on the Reverend D-n S-t [i.e. Dean Swift]; in answer to the libel on Dr. D-y [i.e. Delany]... In: Jonathan Swift. 1735. The Works of Jonathan Smith. 4 vols. Dublin [Ireland]: G. Faulkner. Vol. II, p. 291-92. [Eng]

• ***Summary:*** The section titled "Poems on several occasions" includes a poem titled "A Panegyrick on the D–n, in the Person of a lady in the *North*" (p. 281+). Written in 1830 it includes these lines (p. 291-92): "Then *Gluttony* with greasy Paws,

"Her Napkin pinn'd up to her Jaws,
"With watry Chaps, and Wagging Chin,
"Brac'd like a Drum her oily Skin;
"Wedg'd in a spacious Elbow-Chair,
"And on her Plate a treble Share,
"As if she ne'er could have enuff;
"Taught harmless Man to cram and stuff.
"She sent her Priests in Wooden Shoes
"From haughty *Gaul* [France] to make Ragous,
"Instead of wholsome Bread and Cheese,
"To dress their Soupes and Fricassyes [fricassees];
"And, for our home-bred *British* Cheer,
"Botargo, Catsap, and Caveer."

Note 1. This is the earliest English-language document seen (Feb. 2006) that contains the word "catsap." This quotation is found in the 1735 edition of Swifts *Works*.

Note 2. "Dean" refers to "Dean Smith," another name by which Jonathan Swift was known. Vol. II is Swift's poetical writings. *Caveer* is caviar. *Botargo* is a fish-based relish made of the roe of the mullet or tunny. Or the spawn of a mullet pickled. Address: England.

128. Tournefort, Joseph Pitton de. 1730. The compleat herbal: or the botanical institutions of Monsr. Tournefort, Chief Botanist to the late French King... translated [by J. Martyn] from the original Latin. With large additions, from

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Ray. Gerard. Parkinson. and others. Vol. II. London: Printed for J. Walthoe... See p. 481. No. 81. Reproduced from John Ray 1704. [2 ref. Lat; Eng]

• ***Summary:*** "80. Phaseolus Japonicus niger. Butyri vices supplens Deysumisi boondi, *D. Sherard. Raii Supp.* 438. *Black Japanese Kidney-bean supplying the place of Butter.*"

Note 1. This citation and the one that follows were reproduced from William Sherard's 1704 unpublished manuscript titled *Autograph observations on the first two volumes of John Ray's Historia Plantarum* (2 volumes in 1), p. 438. But Tournefort made a small error in transcribing Ray's text. Ray actually wrote *Deysu-Misi-boondi* D. *Sherard.* This text almost certainly refers to "Daizu-Miso-beans," thus stating that black soybeans are used to make miso. Early Europeans occasionally considered miso to be a type of butter.

"81. Phaseolus Japonicus fructo albo, ex quo *Soia* conficiunt Japoneses, *D. Sherard. Raii Supp.* 438." *Japanese kidney bean with a white fruit, out of which the* Japanese *make their* Soia.

Note 2. This is the 2nd earliest English-language document seen (Feb. 2006) that uses the term "Kidney-bean" (or kidney bean) or the term "Japanese Kidney-bean" to refer to the soybean. Address: France.

129. Bradley, Richard. 1732. The country housewife and lady's director, in the management of a house, and the delights and profits of a farm... with the best method of making ketchup, and many other curious and durable sauces. 6th ed, with additions. London: Printed for D. Browne and R. Woodman. vii + 188 + [12] p. See Part I, p. 142-43. Part II, p. 150, 156. Illust.

• ***Summary:*** This book mentions the word "Ketchup" or the term "Mushroom Ketchup" at least 12 times. In Vol. 1 (p. 142-43), under the month of September, is the same recipe, "To make Mushroom Ketchup" that appeared in the original 1728 edition.

The recipe, titled *"Ketchup,* in Paste. From *Bencoulin* in the *East-Indies"* states (Part II, p. 150): "There is a Kidney-Bean, we have here, which has a fine relish in it, as the *Indians* say, but in fact there is none but what they give it by Art. This Bean, when it is full ripe, is taken out of the Shells, and boiled to a Pulp, and that Pulp strained till it becomes like Butter; then they put some of all the Spices into it, in Powder, as, Nutmeg, Cloves, Mace, and Pepper, Garlick, and Orange-Juice, or some Mango Pickle. This being well mix'd together, makes an agreeable Sauce, when it is put in any warm Liquor."

Note 1. "Kidney-Bean" almost certainly refers to the soybean. This is the 3rd earliest English-language document seen (Feb. 2006) that uses the term "Kidney-bean" to refer to the soybean. The first two were Férnandez (1704) and Tournefort (1730).

Note 2. This is the earliest document seen (May 2010) that mentions a relative of Indonesian-style soy sauce (*kécap*) or that describes its preparation. Bradley wrote the Malay / Indonesian word *kécap* as Ketchup, thus starting a confusion that has lasted to the present. However, unlike soy sauce, this Ketchup has the consistency of a paste, is not fermented, and contains no salt. In today's Indonesia (May 2010), the word *kecap* (ketchup), used alone, means "soy sauce;" *kecap manis* is sweet soy sauce. *Kecap asin* is salty soy sauce. But *kecap ikan* is a brown salty liquid produced by autolysis of fish or fish material, i.e., the degradation of fish material by enzymes in that material.

Note 3. Since this sauce contains no salt or sugar, it could not have lasted for long unless sterilized and sealed. That may explain why "this recipe appears to have had no influence on subsequent cookery writers" (Andrew F. Smith. 1996. *Pure Ketchup,* p. 13).

Note 4. Bencoulin (today spelled Bengkulu, formerly also spelled Bengkoelen, Benkoelen, or Benkulen) was a settlement on the southwest coast of Sumatra, established by the British in 1684, at which time it was the only British settlement in Southeast Asia; a fort was built a few years later. An early center of the British pepper and spice trade, it was ceded to the Dutch in 1824 in exchange for Melaka. Andrew Smith (1996, p. 13) observes: "The provenance of this recipe establishes that the British were introduced to some ketchups in what is today Indonesia."

In Part II (Vol. 2, p. 156-57) is a recipe titled "To dress a calf's head in a grand dish. From Mrs. E. Sympson. Take a large Calf's-Head, and divide it,... Take then the harsh'd [hashed] part, and with some of the Liquor it was boil'd in, put a Glass of White Wine, a little Mushroom Ketchup, a little Nutmeg grated, and a little Mace beat fine, some Pepper and Salt, some grated Lemon-Peel, and stew them together with a bunch of sweet Herbs, and some Butter. When it is enough, put in a little Juice of Lemon, and thicken it with Cream and Butter,..."

Note 5. This book went through many editions in London. The 1st edition appeared in 1726 (Printed for James Woodman and David Lyon). The 2nd edition appeared in 1727 (Printed for James Woodman and David Lyon). The 6th edition appeared in 1732 (Printed for D. Browne and T. Woodman). The recipe for ketchup apparently first appeared in the 6th edition. Richard Bradley lived 1688-1732. Address: Prof. of Botany, Univ. of Cambridge, and F.R.S.

130. Miyake, Yarai. 1732. Mankin sangyo bukuri [How to produce daily household necessities]. Japan: 6 volumes (satsu). Japanese summary by Kawakami 1978, p. 258. [Jap]

• ***Summary:*** Volume 6, which is about food and drink, emphasizes methods of production, and describes how to make shoyu, sake, vinegar, konnyaku, and many other foods. The book was also known under the title *Machikata Bantaku Shobai Shiho Taisei* ("All houses in the town area business method collection").

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T. Yokotsuka (1985, p. 206) cites this as "*Mankin sangyo bukuri* (1731)" but does not cite it in his bibliography.

Fukushima (1989, p. 9) states that the *Mankin-Sangyotai* (Miyake, 1732) describes how to make miso and shoyu.

Iino (2003, p. 9) states that the *Mankin Sugiwai-bukuro* (1732) discusses only the soy sauce production method using wheat (not barley) and soybeans. Iino comments: "With the beginning of the 19th century, the large bulk of soy sauce seems to have been produced using wheat." In column 2 of page 9 he adds that this books also gives a description of the method for making *kijoyu* (raw / unheated soy sauce). Iino then comments that from this description we learn that, "while *kijoyu* was very flavorful and could be kept for a long time, the high cost of production made selling *kijoyu* difficult. Therefore a blend of approximately 7-8 liters of *modoshi* [modoki = imitation?, a dilutor?] for every 18 liters of moromi was being sold." Address: Kyoto, Japan.

131. Harrison, Sarah. 1733. The house-Keeper's pocket-book, and compleat family cook. Containing above three hundred curious and uncommon receipts in Cookery,... London: Printed for T. Worrall,... 233 p.

• ***Summary:*** In the Introduction (p. 2-3): "I therefore advise you to lay in a store of Spices, bought at some noted reputable Grocers, as Nutmegs, Cloves, Mace,... Pickl'd Walnuts, Pickl'd Cucumbers, Cucumbers in Mango, Anchovies, Olives, Pickl'd Mushrooms, or Mushrooms dry'd and powder'd, or Kitchup, or Mushroom Juice, or Mushroom Kitchup; but if you have a Garden, then most of the sweet Herbs may be gathered at any time,..."

On page 50 we read: "Some will put an Anchovy or Mushroom-ketchup into this Sauce, which will make it very rich."

Note 1. This is the earliest document seen (Oct. 2010) that mentions anchovy ketchup (regardless of spelling).

Note 2. This is the 2nd earliest English-language document seen (July 2010) which mentions the word "Ketchup" (or the word "Catsup") preceded by a noun used as an adjective (Mushroom), or that mentions the term "Mushroom-Ketchup" (regardless of hyphenation or capitalization). The earliest document was Bradley 1732. Address: Mrs., Devonshire.

132. A collection of above three hundred receipts in cookery, physick, and surgery: For the use of all good wives, tender mothers, and careful nurses. By several hands. 5th ed. To which is added a second part,... 1734. London: Printed for the executrix of Mary Kettilby. viii + 9-272 + [4] p. Index. [Eng]

• ***Summary:*** The word "Catchup" [ketchup] appears in two recipes in this book, the first two recipes in "Additions to Part I" (p. 170-71). "To make catchup that will keep good twenty years. Make a Gallon of strong stale Beer; one Pound of Anchovies, wash'd, and clean'd from the Guts; half an Ounce of Mace; half an Ounce of Cloves; a quarter of an Ounce of Pepper; three large Races of Ginger; one Pound of Shallots; one Quart of flap Mushrooms, well rubb'd and pick'd: Boil all these over a slow Fire, 'till 'tis half wasted; then strain it thro' a Flannel Bag; let it stand 'till 'tis quite cold; then bottle and stop it very close. This is thought to exceed what is brought from India; and must be allow'd the most agreeable Relish, that can be given to Fish Sauce: One Spoonful to a Pint of melted Butter, gives Taste and Colour, above all other Ingredients. *Note*, That the stronger and staler the Beer is, the better the Catchup will be."

Note 1. This is the earliest document seen (July 2010) that contains the term "twenty years" or the term "keep good twenty years" in connection with how long ketchup made using a certain recipe will keep.

Note 2. This recipe appeared (with minor changes) in many subsequent cookbooks. The basic ingredients here appear to be stale beer, anchovies, mushrooms, and shallots. It might be called an "anchovy and mushroom catchup."

Note 3. This recipe states clearly that real Catchup [Ketjap; soy sauce] was brought from India–a key statement in trying to understand the origin of catchup / ketchup and its relationship to soy [sauce]. The word "India" here may well refer to "The Indies."

"To make Catchup of Mushrooms. Take a Stew-pan full of the large flap Mushrooms, and the Tips of those you wipe for Pickling; set it on a slow Fire, with a Handful of Salt; they will make a great deal of Liquor, which you must strain, and put to it a quarter of a Pound of Shallots, two Cloves of Garlick, some Pepper, Ginger, Cloves, Mace, and a Bay-leaf; boil, and scum it very well; when 'tis quite cold, bottle, and stop it very close."

Note: This is the earliest English-language document seen (Feb. 2008) that contains the word "Catchup" (regardless of capitalization). Note that this home-made type is thought to be better than that imported from India (the East Indies).

133. Swift, Jonathan. 1735. Miscellanies, in prose and verse. Volume the fifth. Which with the other Volumes already published in England, compleats the Author's Works. London: Printed for Charles Davis. See p. 141. [Eng]

• ***Summary:*** The section titled "Poems on several occasions" includes a poem titled "A Panegyrick on the D–n, in the Person of a lady in the *North*." Written in 1830 it includes these lines (p. 141): "Then *Gluttony* with greasy Paws,

"Her Napkin pinn'd up to her Jaws,
"With watry Chaps, and Wagging Chin,
"Brac'd like a Drum her oily Skin;
"Wedg'd in a spacious Elbow-Chair,
"And on her Plate a treble Share,
"As if she ne'er could have enuff;
"Taught harmless Man to cram and stuff.

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"She sent her Priests in Wooden Shoes
"From haughty *Gaul* [France] to make Ragous,
"Instead of wholsome Bread and Cheese,
"To dress their Soupes and Fricassyes [fricassees];
"And, for our home-bred *British* Cheer,
"Botargo, Catsap, and Caveer."

Note 1. This is the earliest English-language document seen (Feb. 2006) that contains the word "catsap."

Note 2. *Caveer* is caviar. *Botargo* is a fish-based relish made of the roe of the mullet or tunny. Or the spawn of a mullet pickled.

Note 3. "D–n" refers to "Dean" which refers to "Dean Smith," another name by which Jonathan Swift was known. Address: England.

134. The gentleman's companion: or, Tradesman's delight. 1735. London: Printed for J. Stone, and sold by G. Strahan. 257 + [27] p. 17 cm.
• ***Summary:*** The recipe for "A sauce for Pike or Tench" states (p. 171): "Take a quarter of a Pint of Claret, as much Water, an Anchovy or two, an Onion, some whole Pepper, Mace, Nutmeg and Ginger, a piece of Horse-radish, and Lemon-Peel. Let it boil a good while over the Fire, beat two or three Yolks of Eggs with Gravy and the Juice of a Lemon, and a little Salt; add a little Catchup if you have any, and as much Butter as you please; then stir them together over the Fire till it is thick." Address: [England].

135. *The Political State of Great Britain.*1736. Poisonous mushrooms. 53:32. Jan.
• ***Summary:*** "... Mr. Williams and his Wife... having gathered some Mushrooms, dressed and eat [sic] them, and went to Bed seemingly in good Health; but the next Morning Mrs. Jenkins was found dead by her Husband's side, and he so dangerously ill, that he survived her but four Hours, notwithstanding he had immediate Help: A Dog which belonged to them having licked the Dish after they had supp'd, was found dead in an Outhouse. There are a Sort of Mushrooms that when you break them are spungy [spongy], with small Holes in them; these are bad: The right Sort, when broke, have a fine Red on the Inside, which scraped makes Ketchup."

136. *London Spy Revived (England).*1737. On Saturday next, May 21, will be published, for the Use of all Families, in Three Sheets in Quarto (... in blue Paper), to be continued Weekly, 'till the whole is completed, which will be in about twenty Weeks, at the Price of Three Pence each Number. (No.!) of... (Ad). May 18. p. [3], col. 2.1.
• ***Summary:*** *"The Whole Duty of a Woman: or, An Infallible Guide to the Fair Sex..."*

"To which will be added... Rules and Receipts for making all the choicest Cordials for the Closet; Brewing Beers, Ales, &c. making all Sorts of English Wines, Cyder, Mum, Mead, Metheglin, Vinegar, Verjuice, Catchup, &c. With some fine Perfumes, Pomatums, Cosmeticks and other Beautifiers."

137. Ship Enckhuizen in Nagasaki loaded with soy [sauce]. 1737. *
• ***Summary:*** Herman Ketting is working with William Shurtleff, trying to find when the Dutch East India Company (VOC) first imported soy sauce from Japan to the Netherlands. Ketting writes (20 June 2007): The citation gives the following information: On 13 October 1737 a ship named Enckhuizen (which we know was in Asia at that time) was in Nagasaki loaded with 75 double barrels of Soy [sauce] marked with a "Z." The 75 Barrels were shipped from Nagasaki to Batavia, the VOC's headquarters. Of this total, 35 barrels were bound for mainland Holland [Netherlands].

This was surely not the first shipment of soy [sauce] to Holland, because I have sent you some information about the ship Westerwik which lay off the Cape of Good Hope [South Africa] with some tainted soy the same year. In the meantime I have found a letter sent to Holland which informed the Herren XVII that soy is being sent to Holland in June 1737. If you like, I will send you this information [from the General Missives] in the usual format.

138. Ogle, George. 1737. The miser's feast. The eighth satire of the second book of Horace imitated. A dialogue between the author and the poet laureat [laureate]. London: Printed for R. Dodsley. 26 p. See p. 16.
• ***Summary:*** This short work is in verse, and every line is in quotation marks: "(Cambridge! my alma mater, candid proctor
"Who gave me, by my proxy, name of doctor)
"Then oyster liquor, an improvement rare!
"More sav'ry far, than catchop or cavare [caviar];"

Note: George Ogle lived 1704-1746. Address: Esq. [England].

139. Ship Westerwijk lying off the Cape of Good Hope with a cargo of tainted soy [sauce]. 1738. *
• ***Summary:*** Herman Ketting is working with William Shurtleff, trying to find when the Dutch East India Company (VOC) first imported soy sauce from Japan to the Netherlands. Ketting writes (4 June 2007): Most important is perhaps the record about the Ship Westerwijk (1738) lying off the Cape of Good Hope [South Africa] with a cargo of tainted soy [sauce]. This record has a distinctive inventory number (VOC 9149) and therefore is probably more extensive than the other records. So it may contain some references to soy being imported to Asia from Holland.

140. Governors General and the Council of the Indies (Indië). ed. 1739. Generale missiven [General missives].

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In: Willem P. Coolhaas and Jurrien van Goor, comp. 2004. Generale Missiven van Gouveneurs-General en Raden aan Heren XVII der Verenigde Oostindische Compagnie: Deel X: 1737-1743. 's-Gravenhage: Nijhoff. Book X. 1159 p. (Letters to the Heren XVII of the Dutch East India Company). [Dut]

• ***Summary:*** On page 253 (31 Jan. 1739) "zoya" is mentioned twice and "Japans soja" once: "Ship *Enkhuyzen / Enkhuisen / Enckhuizen*. Soy [sauce] (*Zoya*) for Hoorn and Enkhuizen f139:12:-8."

"Ship *Schellack*. 4 chests (kelders) of Soy sauce for Delft and Rotterdam f139:12:-8."

"With the fleet of 1739 in total, 36 chests (kelders) of Japanese Soy (*Japanse soja*) f 1231:--:--.

Note 1. Enthuizen, Hoorn, Delft, and Rotterdam were harbor towns and early "chambers" (*kamers*) of the Dutch East India Co. (VOC), from which overseas trade with the East Indies was conducted. The other two early chambers were Amsterdam and Zeeland.

Note 2. The symbol "f" stands for guilder, the basic Dutch monetary unit. "f 2:07:8" is read "two guilders, 7 stuivers and 6 pennigen." One gulden (singular of guilder) = 20 stuivers. One stuiver = 12 pennigen.

Note 3. This is the earliest Dutch-language document seen (April 2012) in which the word *Zoya* is used to refer to soy sauce.

Note 4. The General Missives are letters written by the Governors General and the Council of the Dutch East Indies (*Indië*) and sent to the Heren XVII [the directors of the VOC] in the Netherlands. Items in the General Missives are the demand for men and materials for Indies, the number and quality of ships in the Indies, questions about management and information concerning the cargo sent with the fleet to the Netherlands. Address: Batavia, Netherlands.

141. Valckenier, A. 1739. [Re: Merchandise loaded from Batavia, Dutch East Indies]. Letter to Heren XVII ("17 Lords," leaders of the Dutch East India Company, VOC), Netherlands, Jan. 31. p. 2000-01 [Dut]

• ***Summary:*** Loaded merchandise is listed according to their place of origin. For example merchandise from Coromandel.

Batavia's collection: 11,500 pounds of tin from Malacca. f. 3942:-4:-. 30,500 pounds of copper, Japanese, by staffs. f. 13,944:12:-. 36 crates with bottles of Japanese soy sauce (*Zoija Japance*) f. 1231:16:-8. 45,000 pounds of spiaulter (an alloy / mixture of lead and tin) f. 150,606:-6:-8. 4,209 pounds of black ebony f. 90:-3:-.

Bibliographic reference in Dutch: NA, VOC 2422, OBP (21 Jan. 1739) 2001vo.

Location: Nationaal Archief, Den Haag, De Archieven van de VOC; toegangsnummer 1.04.02; inventaris nummer 2422 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl. The Archives of the VOC; access number 1.04.02; record number 2422].

Note 1. The symbol "f." stands for guilder, the basic Dutch monetary unit. "f 2:07:8" is read "two guilders, 7 stuivers and 6 pennigen." One gulden (singular of guilder) = 20 stuivers. One stuiver = 12 pennigen.

Note 2. A. Valckenier was Governor General in Batavia from 1737 to 1741.

Note 3. An alloy of lead and tin is commonly called either old pewter, tin pewter, or solder. Address: Governor-General, and the Councils of the Indies, in Batavia [today's Jakarta, Indonesia].

142. *General Evening Post* (*London*). 1739. London, August 16. Aug. 14. p. [2], col. 3.2.

• ***Summary:*** "A few Days since an Officer belonging to the Customhouse being a little too curious in rummaging aboard the Prince of Wales [a ship], lately arriv'd from China, had the Misfortune to break a Jar of Soy of considerable Value, which the Proprietors will oblige him to make good. Soy is a rich Catchup, the best is made in India, and gives the highest Gust of any Sauce in the World."

Note 1. Soy [sauce] is being imported from China to England; it is very expensive.

Note 2. Soy and Ketchup are closely related; soy is richer–probably in flavor and perhaps also in consistency–than Catchup. Since neither Soy sauce nor ketchup were made at this time in today's India, the word "India" is probably used here in its broad sense to refer to the East Indies, and to today's Indonesia where ketchup was made and is still made. Today "ketjap / kecap"–pronounced exactly like "Catchup" / "Ketchup"–is the Indonesian and Malay word for soy sauce.

Note 3. The Soy was imported in a jar rather than in a wooden keg or cask. How big and what shape was this jar? Was it made in China? Of what material was it made? Earthenware? Porcelain? Glass?

143. *The Political State of Great Britain*. 1739. An officer over-diligent. 57:145. Aug.

• ***Summary:*** "About this Time an Officer belonging to the Custom-house being a little too curious in rummaging aboard the *Prince of Wales* [a ship], lately arrived from China, had the Misfortune to break a Jar of Soy of considerable Value, which the Proprietors will oblige him to make good. Soy is a rich Ketchup, the best is made in India, and gives the highest Gust of any Sauce in the World."

Note: The word "India" may refer to the East Indies, today's Indonesia (Oct. 2010).

144. Harrison, Sarah (Mrs.). 1739. The house-keeper's pocket-book and compleat family cook: Containing about seven hundred curious and uncommon receipts... 2nd ed., corrected and improv'd with the addition of four hundred genuine receipts sent to the author by several worthy persons. London: Printed for R. Ware. iv + [4] + 263 + [17] p. See p. 2, 34-35, 38. Illust. 18 cm (12mo).

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• ***Summary:*** In Chapter 1, page 2 states: "I therefore advise you to lay in a Store of Spices, bought at some noted reputable Grocers... neither ought you to be without Shallots, Onions, Pickled Mushrooms, or Mushrooms dry'd and powder'd, or Kitchup, or Mushroom Juice, or Mushroom Kitchup;..."

Note 1. This is the only place in this book that the word "Kitchup" (spelled like this) or the term "Mushroom Kitchup" appear; no recipes call for their use.

Note 2 This is the earliest English-language document seen (July 2010) that mentions the term "Mushroom-Kitchup" (regardless of hyphenation or capitalization).

However the word "ketchup" and the term "Mushroom-ketchup" appear in two recipes:

Chap. XV. To dress a calves-head in a grand dish (p. 34-35): "Take a large Calves-head and divide it, and wash it well:... then cut the Flesh off one side of the Head in slices, liked harsh'd [hashed] Meat,... take the harsh'd Part with some of the Liquor it was boiled in; put a Glass of white Wine, a little Mushroom-ketchup, a little Mace beat fine, some Nutmeg grated, a little grated Lemon-peel, and some sweet Herbs, and stew them all together;..."

Beef steaks with oysters (p. 38): "Some will put an Anchovy or Mushroom-ketchup into this Sauce, which will make it very rich."

Note 2. Sarah Harrison fl. 1733-1777. Address: Devonshire, England.

145. De vergadering van het Haags Besogene [Meeting of the Haags Besogene]. 1740. The Hague, Netherlands. Unpaginated. [Dut]

• ***Summary:*** The meeting of the Haags Besogene starts 20 Oct. 1740. The committee works on the 24th four-year (quadrennial) account of the Dutch East India Co (VOC).

Monday, 24 Oct. 1740, in the morning. Proceeding with the reading and control of the delivery books to be sold and delivered goods and merchandise, from 1 June 1737 until 15 May 1738, item from 16 May 1738 until 15 May 1739, and finally from 16 May 1739 until 31 May 1740.

Monday, 24 Oct. 1740, after midday. Started with the reading and control of the accounts and merchandise, which on 17 May 1736 were stockpiled in the warehouse of this chamber [Amsterdam] and four years ago were received from the [Dutch East] Indies (Indië [Batavia]). Items that since 31 May 1736 were delivered from the stock according to the journal of bookkeeping and the ledger and the part of the stock lying unsold in the Company's warehouses:... Japanese Soy [sauce] (*Japanse Soija*); received as before–30 kelders. Note 1. A kelder is a chest; in this case it contains bottles of soy sauce.

Bibliographic reference in Dutch: NA, VOC 4472, Haags Besogene (20 t/m 24-10-1740).

Location: Nationaal Archief, Den Haag, De Archieven van de Verenigde Oost-Indische Compagnie (VOC): toegangsnummer 1.04.21; inventaris nummer 4472. Notulen van het Haags Besogene [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl. The Archives of the Dutch East India Co. (NFJ); access number 1.04.21; record number 4472. Notes of the Haags besogene].

Note 2. This is the earliest document seen (June 2007) showing soy sauce in the Netherlands. This document contains the earliest date seen for soy in the Netherlands (31 May 1736).

Note 3: The Haags Besogne prepared the meetings of the Heren XVII [the 17 directors who made the most important decisions]. To prepare those meetings, the Haags Besogne had to deal with the letters received from Batavia and the chambers in Holland and Zealand. The Haags Besogne also controlled the different bookkeeping journals, and they saw every letter, report or bookkeeping document in the administration of the VOC; they made many abridgements of or notes about them. On the basis of the findings, the Haags Besogne gave advice to the Heren XVII. After that, the Heren XVII made their decisions. So we can found in the archive of the Haags Besogne some information from books or sources which are lost. There is only one problem: there is no index to or register on the notes of the Haags Besogne. So a researcher must be familiar with the notes of the Haags Besogne. Address: The Hague, Netherlands.

146. The laird and farmer, a dialogue upon farming, trade, cookery, and their method of living in Scotland, balanc'd with that of England. 1740. London: Printed for the author. viii + 118 p. See p. 112. 20 cm.

• ***Summary:*** In Chapter 16, "Receipts of cookery" is a recipe titled "To stew carp about three or four pound" which states (p. 112). "Cover them with a small Gravy, and a Pint of Red-Wine, four Anchovies, one Onion, Pepper, Mace, and Nutmeg to your Taste; let them stew half an Hour, then turn them, and stew while you think they be enough, then take them up, and thicken your Sauce with the Yolk of three or four Eggs, about a Quarter of a Pound of Butter, four Spoonfuls of *Ingie Siy*, or Catchup, and about half a Lemmon, and pour it over them in the Dish."

Note 1. The meaning of the term *Ingie Siy* is unclear: Two possibilities are "India soy" or "English soy," both referring to soy sauce.

Note 2. A "laird" is the owner of a small estate in Scotland. Address: Author of the Familiar Catechism ["a True Scotsman"].

147. Atkyns, Arabella (pseud.). 1741. The family magazine: in two parts. Part I. Containing useful directions in all the branches of housekeeping. Part II. Containing a compendious body of physick. 2 vols. in one. London. xiv + 123 + 324 p. See p. 96-98.

• ***Summary:*** The section on "General observations" states (p. 27): "Eschalots, Onions, dry'd Orange and Lemon Peel,

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Anchovies, Olives, Mushrooms, Katchup, pickled Walnuts, Mango, pickled Cucumbers, Capers &c. should likewise be always at hand."

148. Moxon, Elizabeth. 1741. English housewifry, exemplified in above four hundred receits: never before printed:... Leeds, England: Printed by J. Lister,... [4] + 209 + [23] p. See p. 26, 189-90. Illust. (7 unnumbered leaves of plates). 21 cm.

• ***Summary:*** Recipe 51. To make brown frickasy of rabbets [fricassee of rabbits] states (p. 26): "Take your Rabbet and cut the Leg in three Pieces, and the remainder of your Rabbet the same Bigness, and beat it thin with a paste Pin, and so fry them in Butter over a quick Fire; when they are fried put them into a stew Pan with a little Gravy, put in a spoonful of Catchup and grate in a little Nutmeg, then shake it up with a little Flower [Flour] and Butter..."

Recipe 411. To make Catchup states (p. 189-90): "Take your large Mushrooms when they are fresh gathered, cut of the dirty Ends, so break them small with your Hands, put them in a Stone Bowl, adding a handful or two of Salt, let them stand all Night; if you don't get Mushrooms enough at once, with a little Salt they will keep a Day or two whilst you get more, so put them in a stew Pot, and set them in an Oven with Household Bread; when they are enough strain from them the Liquor, and let it stand to settle, then boil it with a little Mace, Jamaica and whole black Pepper, two or three Shallots, boil it over a slow Fire for an Hour, when it is boiled let it stand to settle, and when it is cold bottle it; if you boil it well it will keep a Year or two; you must put in Spices according to the Quantity of your Catchup; you must not wash them [the mushrooms], nor put to them any water."

Note: This recipe would probably soon be named "Mushroom catchup."

149. Eales, Mary. 1742. The compleat confectioner: or, The art of candying and preserving in its utmost perfection. 3rd ed. To which is added, a 2nd part: containing A curious collection of receipts in cookery, pickling, family physick, &c... London: Printed for R. Montagu. 100 p. + 103 p. See p. 21-23. 18 cm. [Eng]

• ***Summary:*** Part II contains two ketchup recipes based on anchovies (small fish). The first, "To make a Katch-up," states (p. 21-22): "Take a wide-mouth'd Bottle, put into it a Pint of the best White-wine Vinegar, then put in ten or twelve Cloves of Eschallot peel'd and bruis'd; then take a Quarter of a Pint of the best White Wine, boil it a little, and put to it twelve or fourteen Anchovies wash'd and cut small, dissolve them in the Wine, and, when cold, put them in the Bottle; then take another Quarter of a Pint of White Wine, and put in it Mace, sliced Ginger, a few Cloves, a Spoonful of whole Pepper; let them boil a little; when almost cold, slice in near a whole Nutmeg, some Lemon-peel, and two or three Spoonsful of Horse Radish, then stop it close, and shake it once or twice a Day; then use it. You may add to it the clear Liquor which comes from Mushrooms." Note: This recipe is similar to that in E. Smith (1727).

The second, "To make Katch-up that will keep good twenty years," reads (p. 22-23): "Take a Gallon of strong stale Beer, one Pound of Anchovies wash'd and clean'd from the Guts, half an Ounce of Mace, half an Ounce of Cloves, a quarter of an Ounce of Pepper, three large Races of Ginger, one Pound of Eschallots, and one Quart of flap Mushrooms well rubb'd and pick'd; boil all these over a slow Fire till it is half wasted, and strain it thro' a Flannel Bag; let it stand till it is quite cold, then bottle and stop it very close. This is thought to exceed what is brought from India, and must be allow'd to be the most agreable [agreeable] Relish that can be given to Fish Sauce. One Spoonful to a Pint of melted Butter is sufficient to give both Taste and Colour beyond any other Ingredients.

"Note. *The stronger and staler the Beer is, the better the Katch-up will be.*

Note 1. This 2nd recipe states clearly that real Katch-up [Ketjap; soy sauce] was brought from India–a key statement.

Andrew F. Smith (1996, p. 16) adds: "Subsequently, many other ketchups were made with fish and seafood products. Recipes for making ketchup from cockles, mussels, and oysters were also common. Cockle ketchup was simply cooked cockles, strained and combined with 'savoury spices.' If the cockle ketchup were to be used for making white sauce, 'sherry, lemon-juice and peel, mace, nutmeg, and white pepper' were added; if the recipe were for brown sauce, 'Port, anchovies, and garlick' were mixed in."

Note: Part 2 has a special title page: "Originally published in 1718 under the title Mrs. Mary Eales's Receipts." Address: By the late Mrs. Eales, Confectioner to King William and Queen Ann.

150. Harrison, Sarah (Mrs.). 1743. The house-keeper's pocket-book and compleat family cook: Containing about seven hundred curious and uncommon receipts... 3rd ed., corrected and improv'd with the addition of four hundred genuine receipts sent to the author by several worthy persons. London: Printed for R. Ware. iv + 268 + [36] P. See p. 2. Illust. 18 cm (12mo). *

• ***Summary:*** "I therefore advise you to lay in a Store of Spices,... neither ought you to be without... Kitchup, or Mushroom Juice."

Note 1. Sarah Harrison fl. 1733-1777. Note 2. Andrew F. Smith (1996, p. 14) states: "Presumably, due to the general availability of commercial ketchups, she did not even bother to offer recipes but recommended purchasing them from a reputable grocer, such as the 'Chandler's Shop.' If ketchups were commonly available in shops by 1743, it suggests that the printed references to ketchup lagged far behind that of common usage." Address: Devonshire, England.

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151. Haywood, Eliza Fowler. 1743. A present for a servant maid: or, The sure means of gaining love and esteem... The whole calculated for making both the mistress and the maid happy. London: Printed and publish'd by T. Gardner. [4] + 76 p. 8vo.
• ***Summary:*** In the section on Fish (p. 59+) are two recipes that call for Ketchup. Salmon (p. 59-60): "Wash it, and let it bleed well in the Water... take out the Liver when about three Parts done, and braid it with Ketchup, which, mingled with Butter, will make exceeding rich Sauce."

Fresh cod (p. 60): "The Sauce for this cannot be too rich, and it you are allowed it, spare neither Ketchup, the Body of a Lobster or Crab, Oysters and Shrimps;..." Address: [England].

152. White's China and Flint-Glass Warehouse. 1744. Classified ad: To be sold at seven pence per pound,... *Daily Advertiser* (*London*). May 16. p. [5], col. 2.8.
• ***Summary:*** "Where likewise is sold at the lowest Prices,... Japan and Chinese Soy [sauce], India Ink and Fans, the finest Havanna [Havana, Cuba] and Spanish Snuffs, Lavender, Orange-Flower, Hungary, Honey, and Sanspareil Waters, &c."

Note: This is the earliest English-language document seen (April 2012) that uses the term "Chinese Soy" to refer to soy sauce. Address: Opposite the King's Arms Tavern in New Bond-street [London].

153. Ellis, William. 1744. The modern husbandman: or, The practice of farming. Vol. 3 of 4. Containing the months of July, August and September. London: Printed for and sold by T. Osborne. See p. 117-18. [Eng]
• ***Summary:*** The chapter titled "Of potatoes" states (p. 117-18) that there are many ways to cook and serve them: "A Third Way. Others, when they are boiled, have a Sauce ready to put over them, made with Butter, Salt, and Pepper; others use Gravy Sauce, others Ketchup, some eat them boiled with only Pepper and Salt, others cut the large ones in Slices, and fry them with Onions, or stew them with Salt, Pepper, and Ale, or Water."

Note: Vol. 1 is Jan. to March. Vol. 2 is April to June. Vol. 3. July to Sept. Vol. 4 is Oct. to Dec.

154. Brouwer, David. 1744. Diary. In: Leonard Blussé, Cynthia Viallé, et al, eds. 2004. The Deshima Diaries Marginalia, 1740-1800. Tokyo: Japan-Netherlands Institute. xl + 898 p. See p. 50, 63 (#180).
• ***Summary:*** 1744 Oct. 7–"The *compradoors* asked whether I wanted to buy the regular provisions. I replied that I was willing to buy provisions at the prices they charged others. They replied that the *sake* they supplied us was especially brewed for the Company and that the barrels of soy [sauce] given to us are bigger than the regular ones. I ordered provisions amounting to 1,903 taels or f3,806." Address: Opperhoofd (Chief of the Dutch factory), Deshima, Nagasaki, Japan.

155. Notulen van het Haags Besogene [Notes of meeting of the Haags Besogene]. 1744. The Hague, Netherlands. Unpaginated. Oct. 19-22. [Dut]
• ***Summary:*** Monday 19 Oct. 1744. The committee starts to work on the 25th four-year (quadrennial) account [of the Dutch East India Co (VOC)] and has agreed to come together for that purpose during the morning from 9 until 12 and after midday from 3:30 until 5:30 p.m...

Thursday 22 Oct. 1744. Started with the reading and control of the account of goods and merchandise which on 31 May 1740 were stockpiled in the warehouse of this chamber [Amsterdam] and which 4 years ago were received from the Indies (*Indië* [Batavia]). Items that according to the journal of bookkeeping and the ledger have been delivered from the stock since that time and the part of the stock from 15 May 1744 has lain unsold in the Company's warehouses. The findings are stated below:

"... Japanese Soy [sauce] (*Japanse Soija*): from the years 1738 and 1739 were stockpiled–30 kelders. Added to this, received from the Indies (*Indië*) during the past four years–61 kelders.

Total in stock as of 15 May 1744–91 kelders. Note 1. A kelder is a chest; in this case it contains bottles of soy sauce.

Bibliographic reference in Dutch: NA, VOC 4472, Haags Besogene (19 t/m 22-10-1744).

Location: Nationaal Archief, Den Haag, De Archieven van de Verenigde Oost-Indische Compagnie (VOC); toegangsnummer 1.04.21; inventaris nummer 4472. Notulen van het Haags Besogene [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl. The Archives of the Dutch East India Co. (NFJ); access number 1.04.21; record number 4472. Notes of the Haags besogene].

Note 2. A careful examination (by a Dutch PhD researcher at the Hague) of the records VOC shipments arriving in Holland from Batavia finds no evidence that soy sauce was delivered to intermediaries for the Dutch or other markets. For goods such as pepper, sugar, coffee and tea, the Haags Besogne always noted how much was delivered. But for soy sauce they did not. Therefore the soy sauce was probably consumed by VOC directors and their servants.

Note 3. Soy was delivered by VOC ships and stored in VOC warehouses. The inspectors of the warehouses never mentioned that this soy had been delivered to a private merchant. Our reached his conclusion after comparing the note about soy and, for example, a note about pepper. Address: The Hague, Netherlands.

156. Harley, Edward. 1744. The Harleian miscellany: or, A collection of scarce, curious, and entertaining pamphlets and tracts, as well in manuscript as in print, found in the late Earl of Oxford's library. Vol. 1 of 8. London: Printed for T.

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Osborne. See p. 520. Index. 27 x 21 cm.
• ***Summary:*** In "The natural history of chocolate. Sect. III" (p. 518-20) we read (p. 520): "... and I do not doubt but you *London* Gentlemen, do value it above all your Cullisses and Jellies; your Anchoves, *Bononia* Sausages, your Cock and Lamb stones, your Soys, your Ketchups and Caveares [Caviars], your Cantharides, and your Whites of Eggs, are not to be compared to our rude *Indian;* therefore you must be very courteous and favourable to this little Pamphlet, which tells you most faithful Observations."

Note 1. The pamphlets were selected and edited by William Oldys. Dr. Johnson supplied the preface. Edward Harley, Earl of Oxford, lived 1689-1741.

Note 2. This passage first appeared in Chamberlayne 1682. It is identical except for several changes of spelling, punctuation, and use of italics. Address: Earl of Oxford, Oxford, England.

157. Salmon, Thomas. 1744. Modern history: or, The present state of all nations. Describing their respective situations, persons, habits, and buildings; manners, laws and customs, religion and policy;... Plants, animals, and minerals. 3rd ed. Vol. 1 of 3. London: Printed for T. Longman.... And J. Rivington,... 844 p. See p. 35. 38 cm.
• ***Summary:*** In Chapter 11, on "The empire of China," a section titled "Other goods imported from China" states (p. 35): "Besides tea, our merchants also bring from China, quicksilver, vermillion, china-root, rhubarb, raw and wrought silks, copper in bars like sticks of sealing wax, camphire [camphor], sugar candy, fans, pictures, lacquered ware, porcelane or china-ware [porcelain], soy, borax, lapis lazuli, galingal,..." Address: Viscount.

158. [Re: Journal of the first bookkeeper in Amsterdam. Items purchased from the VOC]. 1745. Amsterdam, Netherlands. p. 222 [Dut]
• ***Summary:*** In Amsterdam, 31 March 1745. The following persons purchased Soy [sauce] worth a total of f. 1456:-9:- (*aan Soija guldens*).

Entry No. 250: About 70 crates with bottles (*fleskelders*) sold and delivered at several prices as before folio 189.

Entry No. 321: Sacharias Tielman, according to the delivery book fo. 189, 20 crates with bottles, f430:-9:-.

Entry No. 103 [in ledger]: Nicolaas Fremjin, 20 crates with bottles, f421:-8:-.

Entry No. 311: Jan Leonard Apol, 10 crates with bottles, f207:-4:-.

Entry No. 78: Blote and Knibbe, 10 crates with bottles, f202:-4:-.

Entry No. 367: Jacob Gudmanson, 10 crates with bottles, f194:-4:-.

Total: 70 crates with bottles, f1456:-9:-.

Bibliographic reference in Dutch: NA, VOC 7145, journaal van de opperboekhouder (31 maart 1745) 222.

Location: Nationaal Archief, Den Haag, De Archieven van de VOC; toegangsnummer 1.04.02; inventaris nummer 7154 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl. The Archives of the VOC; access number 1.04.02; record number 7154.].

Note 1. This is the earliest document seen (Jan. 2012) that gives a price for soy sauce; that price is in Dutch guilders. We are not told the volume of each bottle or how many bottles per crate.

Note 2. The symbols "f" and "f." stand for guilder, the basic Dutch monetary unit. "f2:07:8" is read "two guilders, 7 stuivers and 6 pennigen." One gulden (singular of guilder) = 20 stuivers. One stuiver = 12 pennigen.

Note 3. Items records above are not all that a person or persons purchased. For example, Blote and Knibbe bought, in addition to soy [sauce], cloves, coffee, tea, brown pepper, cinnamon, borax, gum resin, and gum olibanum [for incense].

Note 4. The journal of the first bookkeeper is arranged by product type, whereas the ledger of the first bookkeeper is arranged by the surname of the buyer. Address: Amsterdam.

159. The accomplish'd housewife: or, the gentlewoman's companion: containing I. Reflections on the education of the fair sex; with Characters for... 1745. London: Printed for J. Newbery.... [16] + 431 + [13] p. Illust. 12vo.
• ***Summary:*** The section titled "General directions for small families" states (p. 177-78): "... nor should you be without Onions or Shalots [Shallots], nor dry'd Lemon and Orange Peel; Olives, Anchovies, Catchup and Pickles of every Sort: When these Things are provided you are prepared for any of the following Dishes..." Address: [England].

160. Barbe (William). 1747. Classified ad: William Barbe at the Sugar Loaf in George's-Lane, almost facing Checquer-Lane, sells... *Dublin Journal* (*The*) (*Dublin, Ireland*). Sept. 29. p. [3], col. 2,4.
• ***Summary:*** "... all Kinds of Goods in the Grocery Way: He has also by him Pickles of Various Kinds, Anchovies, Olives, Katchup, &c." Address: The Sugar Loaf in George's-Lane, almost facing Checquer-Lane [Dublin].

161. Glasse, Hannah (Mrs.). 1747. The art of cookery, made plain and easy: Which far exceeds any thing of the kind ever yet published... by a lady. London: Printed for the author, and sold at Mrs. Ashburn's, a china-shop... [16] + ii + [3]-166 p. 29 cm. (folio). [Eng]
• ***Summary:*** Ketchup is mentioned on the following pages: 57-58, 61, 74, 86-89, 92-94, 97, 100, 121-23, 155-56.

The recipe "To broil mackrel [mackerel] whole" (p. 89) concludes: "Let your sauce be plain butter, with a little Ketchup or Wallnut-pickle."

"Chap IX. For captains of ships" begins (p. 121-22): "To make a ketchup to keep twenty years. Take a Gallon of

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strong Stale Beer, one Pound of Anchovies washed from the Pickle, a Pound of Shallots peeled, half an Ounce of Mace, half an ounce of Cloves, a quarter of an Ounce of whole Pepper, three or four large Races of Ginger, two Quarts of the large Mushroom Flaps rubbed to Pieces. Cover all this close, and let it simmer till it is half wasted, then strain it through a Flannel Bag, let it stand till it is quite cold, then bottle it. You may carry it to the *Indies;* a Spoonful of this to a Pound of fresh Butter melted, makes fine Fish Sauce. Or in the room of Gravy-Sauce, the stronger and staler the Beer is, the Better the Ketchup will be."

To ragoo artichoke bottoms (p. 123): "Take twelve Bottoms, soften them in warm Water, as in the foregoing Receipts, take half a Pint of Water, a Piece of the strong Soop [sic] as big as a small Wallnut, half a Spoonful of the Ketchup, five or six of the dried Mushrooms, a Tea Spoonful of the Mushroom-powder, set it on the Fire, shake all together, and let it boil softly two or three minutes. Let the last Water you put to the Bottoms boil; take them out hot, and lay them in your Dish, pour the Sauce over them, and set them to Table hot."

To bake fish (p. 123): "Butter the Pan, lay in the Fish, throw a little Salt over it, and Flour, put a very little Water in the Dish, an Onion, and a Bundle of Sweet Herbs; stick some little Bits of Butter, or the fine Dripping, on the Fish. Let it be baked of a fine light-brown; when enough, lay it on a Dish before the Fire, and skim off all the Fat in the Pan, strain the Liquor, and mix it up either with the Fish-Sauce, or Strong Soop, or the Ketchup."

"Chap. XIX. To make anchovies, vermicella, ketchup, vinegar, and to keep artichokes, French beans, &c." (p. 155+) states: To make ketchup (p. 156): "Take the large Flaps of Mushrooms, pick nothing but the Straws and Dirt from it, then lay them in a broad earthen Pan, strow [sic] a good deal of Salt over them, let them lie till next Morning; then with your hand brake [break] them, put them into a Stew-pan, and let them boil a Minute or two, then strain them thro' a coarse Cloth; and wring it hard. To take out all the Juice, let is stand to settle, then pour it off clear, and run it thro' a thick Flannel Bag, (some filter it thro' brown Paper, but that is a very tedious Way) then oil it, to a Quart of the Liquor put a quarter of an Ounce of whole Ginger, and half a quarter of an Ounce of whole Pepper, boil it briskly a quarter of an Hour, then strain it, and when it is cold, put it into Pint Bottles; in each Bottle put four or five Blades of Mace, and six Cloves, cork it tight, and it will keep two Years. This gives the best Flavour of the Mushrooms to any Sauce, if you put a to Pint of this Ketchup a Pint of Mum, it will taste like foreign Ketchup."

Another way to make ketchup (p. 156): "Take the large Flaps and salt them as above, boil the Liquor, strain it through a thick Flannel-Bag; to a Quart of that Liquor put a Quart of Stale Beer, a large Stick of Horse-radish cut in little Slips, five or six Bay leaves, an Onion stuck with twenty or thirty Cloves, a quarter of an Ounce of Mace, a quarter of an Ounce of Nutmegs beat, a quarter of an Ounce of black and white Pepper, and a quarter of an Ounce of All-Spice, four or five Rases of Ginger, cover it close, and let it simmer very softly, till about one third is wasted, then strain it thro' a Flannel-Bag, and when it is cold bottle it in Pint Bottles, and cork it close, it will keep a great while. You may put Red Wine in the Room of Beer; some put in a Head of Garlick; but I think that spoils it. The other Receipt you have in the Chapter for the Sea."

Andrew F. Smith (1996, p. 15) states: "Hannah Glasse, author of the most successful cookbook published in England during the second half of the eighteenth century, featured several ketchup recipes in the first edition of her *Art of Cookery Made Plain and Easy* (1747). Her two mushroom ketchup recipes diverged from Bradley's in significant ways. Glasse's first recipe required salt. As previously discussed, salt encouraged [??] fermentation. She also reported that if "mum" (beer) were added to the recipe it would then taste like 'foreign' ketchup. Her second mushroom recipe, 'Another Way to make Ketchup,' used stale beer, horseradish, bay leaves, onions, nutmeg, allspice, and white and black pepper. Some cooks replaced the stale beer with garlic and red wine, but Glasse believed these additives ruined the ketchup." Address: England.

162. Notulen van het Haags Besogene [Notes of meeting of the Haags Besogene]. 1748. The Hague, Netherlands. Unpaginated. Oct. 25. [Dut]

• ***Summary:*** Started with the reading and control of the account of goods and merchandise, which on 15 May 1744 are stockpiled in the warehouses of this chamber [Amsterdam] and which have been received during the last four years from the Indies (*Indië* [Batavia]). Items that according to the journal of bookkeeping and the ledger have been delivered from the stock since 31 May 1748 and that part of the stock lying unsold in the Company's warehouses.

"... Soy [sauce] (*Soija*): According to the list closed on 15 May 1744 were stockpiled–91 kelders. And received from the Indies (*Indien*) during the past four years–72 kelders."

Total: 163 kelders. Note 1. A kelder is a chest; in this case it contains bottles of soy sauce.

"From that is delivered during this time: 106 chests (kelders).

"On account of the filling of half empty bottles (*flessen*) and broken bottles: 4 chests (kelders).

"For the benefit of inns and yachts used: 2 chests (kelders). Total: 163 chests (kelders) [So the books balance].

Bibliographic reference in Dutch: NA, VOC 4474, Haags Besogene (25-10-1748).

Location: Nationaal Archief, Den Haag, De Archieven van de Verenigde Oost-Indische Compagnie (VOC); toegangsnummer 1.04.21; inventaris nummer 4474. Notulen van het Haags Besogene [National Archives, Prins Wilhem

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Alexanderhof 20, The Hague, www.nationaalarchief.nl. The Archives of the Dutch East India Co. (NFJ); access number 1.04.21; record number 4474. Notes of the Haags besogene]. Address: The Hague, Netherlands.

163. Carter, Charles. 1749. The London and country cook: or, Accomplished housewife. 3rd. Revised and much improved by a gentlewoman; Many years housekeeper to an eminent merchant in the city of London. London: Printed for Charles Hitch,... Stephen Austen,... and John Hinton. vii + 363 p. See p. 1, 36-37, 73-74, 101-02, 119-20, 169. Illust. • ***Summary:*** "Catchup" is mentioned as follows: To broil mackrel [mackerel] whole (p. 1):" "Let your sauce be plain butter, but with a little catchup or wallnut-pickle."

To make anchovy sauce (p. 36-37): "Take a pint of gravy, put in anchovy... "You may add a little juice of lemon, catchup, red wine, and wallnut liquor, just as you please.

"Plain butter melted thick, with a spoonful of wallnut-pickle, or catchup, is good sauce, or anchovy: In short, you may put as many things as you fancy into sauce: all other sauces for fish you have in the *Lent* chapter."

To hash a calf's head (p. 73-74): "... flour the meat before you put it in, and put in a few mushrooms, a spoonful of the pickle, two spoonfuls of catchup, and a few truffles and morels; stir all these together..."

To dress sweetbreads (p. 101-02): "... or make a very rich gravy with mushrooms, truffles and morels, a glass of white wine, and two spoonfuls of catchup. Garnish with cocks combs forc'd and stew'd in the gravy.

"*Note,* You may add to the first, truffles, morels, mushrooms, cocks combs, palates, artichoke bottoms, two spoonfuls of white wine, two of catchup, or just as you please."

To make catchup, that will keep good twenty years (p. 119-20): "Take a gallon of strong stale beer; one pound of anchovies, wash'd and clean'd from the guts; half an ounce of mace; half an ounce of cloves; a quarter of an ounce of pepper; three large races of ginger; one pound of shallots; one quart of flap mushrooms, well rubb'd and pick'd; boil all these over a slow fire, 'till 'tis half wasted; then strain it through a flannel bag; let it stand 'till 'tis quite cold; then bottle and stop it very close. This is thought to exceed what is brought from *India;* and must be allow'd the most agreeable relish, that can be given to fish sauce: one spoonful to a pint of melted butter, gives taste and colour, above all other ingredients.

"*Note,* That the stronger and staler the beer is, the better the catchup will be."

To make catchup to keep twenty years (p. 169): "Take a gallon of strong stale beer, one pound of anchovies washed from the pickle, a pound of shallots peeled, half an ounce of mace, half an ounce of cloves, a quarter of an ounce of whole pepper, three or four large races of ginger, two quarts of the large mushroom flaps rubbed to pieces. Cover all this close, and let it simmer till it is half wasted, then strain it through a flannel bag, let it stand till it is quite cold, then bottle it. You may carry it to the *Indies;* a spoonful of this to a pound of fresh butter melted, makes fine fish-sauce. Or in the room of gravy-sauce. The stronger and staler the beer is, the better the catchup will be." Address: Cook to his Grace the Duke of Argyle, &c..

164. Moxon, Elizabeth. 1749. English housewifery, exemplified in above four hundred and fifty receipts, giving directions in most parts of cookery;... Leeds, England: Printed by J. Lister,... 224 + [22] p. Illust. Index. 12vo. • ***Summary:*** Recipe No. 14. To fry beef steaks (p. 13): "; pour out the Fat, and put them in your Pan with a little Gravy, and Onion shred very small, a Spoonful of Catchup and a little salt; thicken it with a little Butter and Flower [Flour] the Thickness of Cream."

No. 35. Veal cutlets another way (p. 24-25): "; fry them in Butter over a quick Fire: when they are [cooked] enough put from them the Fat they are fried in, and put to them a little small Gravy, a Spoonful of Catchup, a Spoonful of white Wine or Juice of Lemon, and grate in some Nutmeg; thicken them with Flower and butter;..."

No. 38. To make a calve's head hash (p. 26-27): "Take a Calve's Head and boil it, when it is cold take one half of your Head and cut off the Meat in thin Slices, put it into a Stew-pan with a little brown Gravy, put to it a Spoonful or two of Walnut-pickle, a Spoonful of Catchup, a little Claret, a little shred Mace, a few Capers shred, or a little Mango; boil it over a Stove, and thicken with Butter and Flower;..."

No. 52. To make a brown fricasey of Rabbets (p. 33): "; when they are fried put them into a Stew-pan with a little Gravy, a Spoonful of Catchup, and a little Nutmeg; then shake it up with a little Flower and Butter."

No. 73. To stew pigeons (p. 44-45): "... and let them stew whilst your Pigeons be enough; then take part of the Gravy, an Anchovie shred, a little Catchup, a small Onion or a shalot, and a little Juice of Lemon for Sauce,..."

No. 229. To make sauce for salmon and turbot (p. 228): "; take the Gravy that drains from the Salmon or Turbot, an Anchovie or two, a little Lemon peel shred, a Spoonful of Catchup, and a little Butter, thicken it with Flour the thickness of Cream, put to it a little shred Parsley and Fennel;..."

No. 418. To make Catchup (p. 202-03): "Take large Mushrooms when they are fresh gathered, cut of [off] the dirty Ends, break them small in your Hands put them in a stone Bowl with a handful or two of Salt, and let them stand all Night; if you don't get Mushrooms enough at once, with a litle Salt they will keep a Day or two whilst you get more, so put them in a stew Pot and set them in an Oven with Household Bread; when they are enough strain from the Liquor, and let it stand to settle, then boil it with a little Mace, Jamaica and whole black Pepper, two or three Shallots

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boil it over a slow Fire for an Hour, when it boiled, let it stand to settle, and when it is cold bottle it; you must put in Spices according to the Quantity of your Catchup; you must not wash them, nor put to them any Water."

No. 463. To make minc'd collops (p. 223): "Take two or three Pound [sic] of any tender Part of Beef, (According as you would have the Dish in Bigness)... fry it a little whilst it be a light brown, then put to it a Gill [¼ pint or 118.29 ml] of good Gravy and a Spoonful of Walnut Pickle, or a little Catchup:..." Address: [England].

165. Palmer (Thomas). 1750. Classified ad: For sale by the Candle, at the King's Head Coffee-House in Sweeting's Alley. *General Advertiser* (*London*). March 6. p. [3], col. 2.5.

For *SALE* by the *CANDLE*,
At the King's Head Coffee-Houſe in Sweeting's-Alley,
To-morrow the 7th of March, at Five in the Afternoon,
THE FOLLOWING GOODS,
VIZ.

50 Bags of Cayen Cocoa	in Coal Harbour
10 Hogſheads of fine Carracca	
65 Bags of Marigoo	
100 Bags of Salt Petre	in the Eaſt-India Company's Warehouſe.
10 Ditto of Jambee Pepper	
68 Tubs and Cheſts of Tea	
1 Cask of Arrack	
3000 Rattans	
4 Cheſts of Tea (Duty paid)	
10 Bags of Cocoa for home Conſumption	
11 Cheſts of Quickſilver, Salt of Amber, Gum Senica, Coral, Iſinglaſs, Sago, and Sallop,	
6000 Cups and Saucers	
240 Bowls	
48 Enamelled Plates	
96 Diſhes	
5 Sets of China	
222 Half-pint Baſons	
240 Pint Ditto	
6 Dozen of Soy	
10 Bales of Coffee	
10 Bags of Sago	
15 Caſks of Spaniſh Juice	

And 27 Reams of Writing Paper.

The Cocoa to be ſeen at Coal-Harbour; and all the reſt of the Goods (except thoſe in the Eaſt-India Company's Warehouſe) at Tho. PALMER's in Broadſtreet, from Th 9 Morning to the Time of Sale; Catalogues to be had at the Place of Sale, and of
THOMAS PALMER, *Broker.*

• ***Summary:*** "240 Pint Basins. 6 Dozen of Soy [sauce]. 10 Bales of Coffee. 10 Bags of Sago." Address: Broker, Broadstreet.

166. *Amsterdam: Avec Privilege de Nos Seigneurs, les Etats de Holland et de West-Frise.* 1750. Pais Bas (Pays Bas): D'Amsterdam 14e 5. Octobre [The Netherlands: Amsterdam, Oct. 5]. 80:Oct. 6. [Fre]

• ***Summary:*** This periodical has no page numbers. However on the 4th page of this issue, in the right column is a description of articles from the East Indies (*des Indes-Orientales*), from Batavia, which arrived at Texel on the 26th of last month. These include 591,964 units of brown pepper, 257 units of ginger conserves, 4 kegs of Arak, 26 cases of soy [sauce] from Japan (*Caves Soya du Japon*), and 44 silk robes from Japan (*Robbes de Soye du Japon*).

167. Homoed, Hendrik van. 1750. Diary. In: Leonard Blussé, Cynthia Viallé, et al, eds. 2004. The Deshima Diaries Marginalia, 1740-1800. Tokyo: Japan-Netherlands Institute. xl + 898 p. See p. 126, 134, 138 (#156-57).

• ***Summary:*** In the section titled "Arrival of the *Haarlem* and the *Zuiderburg*," at 1750 Oct. 17–"On behalf of his master and the incoming governor, Kawachi-no-kami, the secretary, gave me a present consisting of sixty barrels of *sake*, sixty barrels of soy and two presentation trays heaped with fresh fish. I expressed my gratitude most humbly..." Address: Opperhoofd (Chief of the Dutch factory), Deshima, Nagasaki, Japan.

168. Rochell & Sharp. 1750. Classified ad: Just imported by the last ships from London,... *New-York Gazette Revived in the Weekly Post-Boy* (*New York City*). Dec. 17. p. 3.

Juſt imported by the laſt Ships from *London*, and to be ſold cheap by ROCHELL & SHARP, at Mr. *Seabring's*, Baker, in *Wall ſtreet*,
Superfine & middling Broad Cloths, Bearſkins,
Naps & Forreſt Cloths, Shalloons, Garlix, Tandems, double Stuffins, 3d, and 3-4 & 7-8 Checks, Sheeting, dy'd Sibſias, French Vitry, Oznabrigs, Sail Cloth, fine thyſon, Green & Bohea Tea, Pepper, Pewter, China, Toys, Ribbands, Calicoes of ſundry ſorts, Women's ready made Cloaks, Pickles, Durham Muſtard, Suits of Cloaths with Trimmings anſwerable, pickled Muſhrooms in Quart Bottles, Sallad Oil in do. pickled Onions in Quart do. Pint do. of Indian Soy, Bottles of Weſton's ſuperfine Scotch Snuff, Bladders of do. Cutlery, ſix neat Saddles with Trimmings, and ſundry other Goods at reaſonable Rates

• ***Summary:*** "... and to be sold cheap by Rochell & Sharp, at Mr. Seabring's, Baker, in Wall Street, Superfine & middling Broad Cloths, Bearskins,... Pickles, Durham Mustard,... pickled Mushrooms in Quart Bottles, Sallad Oil in do. [ditto = same] pickled Onions in Quart do. Pint do. of Indian Soy [sauce], Bottles of Weston's superfine Scotch Snuff..." This ad also appeared in this newspaper on 24 Dec. 1750, p. 3 and 7 Jan. 1751, p. 4.

Note 1. This is the earliest document seen (July 2011) concerning soybean products (soy sauce) in the British colonies of North America (now the United States), or in New York. This document contains the earliest date seen for soybean products in the British colonies of North America or in New York (Dec. 1750); soybeans as such have not yet been reported. At least 66 different ads for soy sauce appeared in New York City newspapers before 1800!

Note 2. This is the earliest English-language document seen (April 2012) that uses the term "Indian Soy" to refer to soy sauce; it was probably imported from the Indies, the East Indies, or India. To date, 103 documents in the SoyaScan database contain the term "Indian Soy" (regardless of capitalization) but only the earliest ones have been given the keyword for "India." The term "Indian Soy" was the earliest name given to soy sauce imported to the British colonies

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of North America. But what does it mean? Where was it made? It was probably typical Japanese-style soy sauce (*shoyu*), made in Japan and exported from there by the Dutch East India Company (VOC), probably via Batavia (today's Jakarta), to Amsterdam–where it was purchased at auction by merchants who brought it by sailing ship to North America.

Note 3. This is the earliest document seen (July 2006) that mentions Durham Mustard, a famous product made in the city of Durham, in northern England. "In 1720 Mrs. Clements discovered a method for extracting the full flavour from mustard seed by grinding the seed in a mill and subjecting to similar processes used in the making of flour from wheat" (Durham city website).

169. Li Hua-Nan; Li Diao-Yuan. 1750? Xingyuan lu [Memoir from the garden of awareness]. China. Undated. [Chi]

• ***Summary:*** Wade-Giles reference: *Hsing Yüan Lu*, by Li Hua-Nan, compiled by his son Li Tiao-Yuan. Qing dynasty.

H.T. Huang (2000, p. 324), in the section on frozen tofu, states that dried frozen tofu is first mentioned in this work, which suggests: Allow a whole batch of thinly sliced frozen tofu squares to thaw slowly, then store them in a cool place so they can be used in the summer.

Huang (2000, p. 327), in the section on "Making of fermented tofu" states: "Technically the most interesting accounts of the making of *furu* are found in the *Xingyuan lu* (1750). Five recipes are presented, representing two types of methodology. One uses ground wheat *ferment* as shown in the translation given below: 'First prepare yellow wheat *ferment* as previously described and comminute it to a fine powder. Take ten catties of fresh tofu and two catties of salt. Cut the tofu into thin rectangular pieces. Sprinkle a layer of salt over a layer of tofu. Allow the tofu to soak in the brine [that is generated]. After five or six days remove the tofu but keep the juice for later use. Arrange the tofu pieces neatly in a steamer and steam until they are well cooked. Hang the steamer with its contents in an empty room for half a month when the tofu becomes covered with luxuriant fungal growth. After scraping off the hairy surface the pieces are air dried. Now treat the tofu with dry yellow *ferment* as follows. Decant the salty juice from the soaking step and mix in dried *ferment* to form a paste. Spread a layer of tofu over a layer of *ferment* paste and cover with a layer of fragrant (i.e., sesame) oil. Add a few whole pieces of fagara. Place the stacks in a crock and seal the mouth securely with mud. Warm the crock in the sun during the day. After a month the product will be ready for the table."

Huang adds (p. 327): "The other methodology uses the mash left from the fermentation of wine from grains."

Huang (2000, p. 341-42) also notes that the process for making fermented black soybeans (*shi*) described in the *Bencao Gangmu* (The great pharmacopoeia) (1596) is repeated in four recipes in this book. Although the first stage, the production of soybean koji (molded soybeans) remains unchanged, "a variety of additional materials such as fagara, sugar, wine, melon juice, melon meat, melon seeds, liquorice [licorice], mint, magnolia bark, fritillary corm [fritilaria: bulbous herbs of the lily family] etc. have been included in one or more recipes for the second stage incubation." These herbs and spices gave each product its own unique fragrance and flavor. One of the four recipes calls for the use of wheat flour. Huang observes that when the amount of wheat flour is large, the process becomes very similar to that for making soybean jiang.

In addition (Huang 2000, p. 363-64) translates the detailed method for making soy sauce, which is presented as a method for making *qingjiang* ("clear jiang"): Clean and wash one *dou* of yellow soybeans. Boil beans until soft and the color has turned red. Blend beans and cooking water uniformly with 24 catties white wheat flour. Form into cakes, arrange on bamboo or willow [leaf] trays, then cover with rice straw. Place trays in a wind-free room, and incubate for 7 days or until a good growth of mycelium appears. Remove the straw. Place trays in the sun during the day; bring them indoors at night. Repeat the procedure for 14 days. If it rains during the day, trays should be placed in the sun for addition days until the total of 14 days is attained. This is how to make the yellow koji for jiang (*jianghuang*).

For each *dou* of yellow koji for jiang, measure 5 *dou* of well water into an earthenware crock. Measure exactly 15 catties of raw salt into a bamboo basket, and hang the basket in the well water [inside the crock] until all the salt dissolves in the water. Discard any residue in the basket. Mix the yellow koji into the water; let it warm in the sun for 3 days. On the morning of the 4th day, remove earthenware crock from sun and stir contents well with a wooden paddle. Two days later, remove from sun and stir again. Repeat this procedure 3-4 times. After about 20 days, the "clear jiang" (*qingjiang*, or soy sauce) should be ready for use.

To separate the soy sauce (*qingjiang*), use a finely woven cylindrical bamboo tube that is open at both ends. People in southern China call this a "circular sieve for jiang" (*jiangchou*). It is widely available in local markets of the capital [Beijing]. The same markets also sells various sizes of covers for the crocks. When the jiang / mash is ready [it has a consistency resembling that of applesauce], push the woven bamboo tube down into its center until the bottom of the tube rests securely on the bottom of the crock. Remove the jiang inside the tube so that the bottom of the crock is clearly visible. Place a brick atop the tube to prevent it from floating upwards. Liquid soy sauce will flow from the jiang mash into the tube. The next morning the tube should be filled with liquid. Use a bowl to transfer this clear soy sauce into a clean crock. Cover the crock with a piece of cloth to prevent flies from falling in. Warm the crock in the sun for half a month. To make more soy sauce, increase the amount of raw materials. After the sauce is ready, you can also use a

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sieve to collect the soybeans that float to the top of the mash. When half-dried, these beans make delicious fermented black soybeans or "fermented bean relish" (*doushi*).

A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." Seasonings based on jiang (fermented soybean paste) are used in 10 recipes: jiang itself in 4, soy sauce made from jiang named *qingjiang* in 5 recipes, and soy sauce made from jiang named *jiangyou* in 1 recipes. A seasoning named *douyou* is used in 8 recipes. Note: This is the earliest document seen (April 2012) in which a soy-based seasoning named *douyou* (W.-G. *tou yu*) is mentioned. Huang states (p. 371) that *douyou* is written with the Chinese characters for bean + oil.

Wilkinson (2000, p. 646) states that this book (late 18th century) is the first Chinese collection of recipes from a regional cuisine–that of Sichuan.

Fukushima (1989, p. 6): "The general manufacturing methods of soy sauce in the Ch'ing (Shin in Japanese) dynasty are recorded in *Ch'ing-yuan Lu* (sic. *Hsing-yuan Lu; Seienroku* in Japanese), written by Li Hua-nan (Ri Kanan in Japanese). Cooked soybeans and uncooked wheat were the raw materials used in koji making. The resultant koji was mixed with brine. After aging, the soy sauce was collected by pressing a deep bamboo colander into the aged mash and ladling out the liquid which had accumulated."

Bo (1982): Describes the method for making chiang-yu (soy sauce).

170. Watkinson (John). 1750? John Watkinson, grocer, tea-dealer, &c. next door to the coffee-house, in Newbrough, Scarbrough, sells the following articles at the lowest prizes, viz. (Leaflet). York? [North Yorkshire], England. 1 p. Undated.

• ***Summary:*** The long, 5-column list of items sold includes: "Sago, and Sago Powder,... Anchovies, Capers, Olives (French or Spanish), Pickled Mushrooms, Pickled Walnuts, Pickled Gerkins, India Soy Ketchup." Address: Newbrough, Scarbrough [England].

171. A general history of the several nations of the world, from the flood, to the present times: With genealogies of the respective sovereigns that have reigned, in a chronological series:... 1751. London: Printed for D. Browne. iv + 544 + [10] p. See p. 343. Index.

• ***Summary:*** Page 343: "Goods imported from China are, first, Tea; Green only is drunk in India, Persia, and the Eastern Nations: Bohea is not valued by them. Besides Tea, our Merchants also bring from China Quick-silver [mercury], Vermillion, China-Root [a root of the genus Smilax], Rhubarb, Raw and Wrought Silk, Copper in Bars like Sticks of Sealing-Wax, Camphire, Sugarcandy, Fans, Pictures, Lacquered-Ware, Porcelane [porcelain, a ceramic material] or China-Ware, Soy [sauce], Borax, Lapis-Lazuli, Galingal and Tutanaque, which is a sort of coarse Tin, and-Several other kind of Merchandizes are purchased there as cheap as in the Countries that produce them."

Note: Under Japan (p. 388+): "Produces Tea, Gold Dust, Copper, and Cotton. Their Manufactures are Arms, Cabinets, and other lacquered Ware, Pagods [sic], and other Images." Soy is not mentioned under Japan. Therefore this is an early document stating that soy sauce is imported by England from China–but not from Japan.

172. Dale, Samuel. 1751. Pharmacologia, seu manuductio ad materiam medicam:... [Pharmacology, or eating as a supplement to the materia medica:... 5th ed]. Lugduni Batavorum [Leiden]: Impensis Gerardi Potuliet. See p. 238. 26 cm. [117* ref. Lat]



• ***Summary:*** The information on soy sauce appears in the section on medicinal plants under the heading "I. De Phaseolo... A. 3. Soia. *Offic.* [probably officinarum] Phaseolus Japonicus, ex quo Japonensium Soia, qui intinctus species est, conficitur. *Herm.* Species Phaseoli parvi, albi, è Japonia allata, è qua conficiunt condimentum *Ketchup* dictum, duum generum, liquidum nimirum & solidum.

"Phaseolus erectus siliquis Lupini, fructu pisi majoris candido, *Kemph. Amoen. Exot.* 837.

Hujus notitiam debemus Botanico erudito D. *Paulo Hermanno* defuncto, qui eam doctissimo nuper amico nostro D. *Gulielmo Sherrard* [Sherard], LL.D. communicavit, sub titulo suprascripto, unde nos habuimus.

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This entry is the same as that in the original 1705 edition except for the addition of a middle paragraph from Kaempfer's *Amoenitatum Exoticarum* and small changes in the positions of several words. The author's name on the title page is now written Samuelis Dalei, M.L. Also near the bottom of the title page is written "Ex scriptis Hermanni Boerhaave locupletata. Indice Gallico, Germanico, Belgico, aucta."

A full-page illustration (engraving) shows a oval portrait of Samuel Dale, M.L. (see previous page).

173. Glasse, Hannah (Mrs.). 1751. The art of cookery, made plain and easy: Which far exceeds any thing of the kind ever yet published... by a lady. 4th ed., with additions. London: Printed for the author, and sold at the Bluecoat-Boy... at Mrs. Ashburn's china-shop... [2] + iv + [16] + 334 p. See p. 308-09. 1 leaf of plates. 21 cm. (8vo). [Eng]

• ***Summary:*** Chapter XIX, titled "To make anchovies, vermicelli, catchup, vinegar,..." has 2 recipes for homemade catchup (p. 308-09).

"To make Catchup: Take the large Flaps of Mushrooms, pick nothing but the Straws and Dirt from it [sic], then lay them in a broad earthen Pan, throw a good deal of Salt over them, let them lye till next Morning, then with your Hand break them, put them into a Stew-pan, let them boil a Minute or two, then strain them through a coarse Cloth, and wring it hard. To take out all of the juice, let it stand to settle, then pour it off clear, run it through a thick Flannel Bag (some filtre it through brown Paper, but that is a very tedious Way) then boil it; to a Quart of the Liquor put a Quarter of an Ounce of whole Ginger, and Half a Quarter of an Ounce of whole Pepper. Boil it briskly a Quarter of an Hour, then strain it, and when it is cold, put it into Pint Bottles. In each Bottle, put four or five Blades of Mace, and six Cloves, cork it tight, and it will keep two Years. This gives the best Flavour of the Mushrooms to any Sauce. If you put to a Pint of this Catchup, a Pint of Mum, it will taste like foreign Catchup."

Note 1. Mum is a type of malt liquor (beer, alcoholic) originally brewed in Brunswick, Germany, widely used in Germany, and imported in large quantities into England in the 17th and 18th centuries. This recipe uses salt, but no sweetener, to help it keep. "Foreign Catchup" probably referred to soy sauce imported from the Dutch East Indies.

"Another way to make Catchup: Take the large Flaps, and salt them as above; boil the Liquor, strain it through a Flannel Bag. To a Quart of that Liquor put a Quart of stale Beer, a large stick of Horseraddish cut into little Slips, five or six Bay-leaves, an Onion stuck with twenty or thirty cloves, a Quarter of an ounce of Mace, a Quarter of an Ounce of Nutmegs beat, a Quarter of an ounce of Black and White Pepper, a Quarter of an Ounce of All-Spice, and four or five Races [Roots] of Ginger. Cover it close and let it simmer very softly till about one Third is wasted; then strain it through a Flannel Bag, when it is cold bottle it in Pint Bottles, cork it close, and it will keep a great while. You may put Red in the room [place] of Beer; some put in a Head of Garlick, but I think that spoils it. The other Receipt you have in the Chapter for the Sea."

In Chapter XI, "For captains of ships," the first recipe (p. 240) is "To make Catchup for twenty Years: Take a Gallon of strong Stale Beer, one Pound of Anchovies washed from the Pickle, a Pound of Shalots [Shallots] peeled, Half an Ounce of Mace, Half an Ounce of Cloves, a Quarter of an Ounce of Whole Pepper, three or four large Races of Ginger, two Quarts of large Mushroom flaps rubbed to Pieces. Cover all this close, and let it simmer till it is Half wasted, then strain it thro' a Flannel Bag, let it stand till it is quite cold, then bottle it. You may carry it to the *Indies*. A Spoonful of this to a Pound of fresh Butter melted, makes fine Fish-Sauce: Or in the room of Gravy-Sauce. The stronger and staler the Beer is the better the Catchup will be."

Note 2. Hannah Glasse lived 1708-1770. Address: England.

174. Valle (Berto). 1752. Classified ad: Just arrived from Italy in twenty-eight days, in the *Ruby*, Capt. Peter Mauger. *Daily Advertiser* (*London*). Feb. 24, col. 2.9.

• ***Summary:*** Also "... Morelles, new Provence Olives, Spanish and Lucca ditto [Olives], Japan Soy [sauce], Russia Cavear [Caviar] and Butargo, new Gorgona Anchovies, fine small Capuchin Capers,... French, Hungary and Lavender Water...."

Note: This is the earliest document seen (April 2012) that uses the term "Japan Soy" to refer to soy sauce. Address: In the Hay-Market, St. James's [London].

175. Thompson (Reuben Warren). 1752. Classified ad: Just imported,... *New-York Gazette Revived in the Weekly Post-Boy* (*New York City*). June 29, p. 2.

• ***Summary:*** "... cruet-frames for vinegar, oil, mustard,..." Soy is not mentioned.

176. Notulen van het Haags Besogene [Notes of meeting of the Haags Besogene]. 1752. The Hague, Netherlands. Unpaginated. Oct. 19. [Dut]

• ***Summary:*** On the first page of notes of the meeting concerning the stock in the warehouses we read:

"Thursday, 19 Oct. 1752: Started with the reading and control of the account of goods and merchandise, which on 31 May [1752] were stockpiled in the warehouses of this chamber [Amsterdam] and which have been received during the last four years from the Indies (*Indië* [Batavia]). Items that according to the journal of bookkeeping and the ledger have been delivered from the stock since 31 May 1752 and that part of the stock lying unsold in the Company's warehouses.

"... Japanese Soy [sauce] (*Japanse Soija*): According to

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the list closed on 31 May 1748 were stockpiled–51 *kelders*. And received from the Indies (*Indien*) during the past four years–51 *kelders*."

Total: 102 *kelders*. Note 1. A kelder is a chest; in this case it contains bottles of soy sauce.

"From that is delivered during this time: 39 chests (kelders).

"According to the list closed on 31 May 1752, in stock: 45 chests (kelders).

"Provided for consumption in inns and yachts: 3 chests (kelders).

"In disuse, broken and empty: 15 chests (kelders). Total: 102 chests (kelders) [So the books balance].

Bibliographic reference in Dutch: NA, VOC 4475, Haags Besogene (19-10-1752).

Location: Nationaal Archief, Den Haag, De Archieven van de Verenigde Oost-Indische Compagnie (VOC): toegangsnummer 1.04.21; inventaris nummer 4475. Notulen van het Haags Besogene [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl. The Archives of the Dutch East India Co. (NFJ); access number 1.04.21; record number 4475. Notes of the Haags besogene]. Address: The Hague, Netherlands.

177. Smith (Richard). 1752. Classified ad: Just imported, and to be sold... *New-York Gazette, or Weekly Post-Boy* (*New York City*). Nov. 6. p. 3.

• ***Summary:*** "Choice Cheshire Cheese, the best and genuine Sort of Florence Oil by the Bettee,... Anchovies, Capers, Olives, Raisins, Currans [Currants], Pearl and French Barley, Sago,... Flower of Mustard, Catchup, red-Herrings,..."

Note: This same ad, published on the same date in the *New-York Mercury* reads "Florence Oyl, by the Betty" and "Currants."

Note 3. A "Bette" (often spelled "Betty") is a straw-covered Chianti flask, used at this time to export oil. The Oxford English Dictionary suggests the word is an American usage. Address: At the corner of the Meal-Market.

178. Eales, Mary. 1753. The compleat confectioner: or, The art of candying and preserving in its utmost perfection. To which is added a second part... 5th ed. London: Printed for C. Hitch, and A. Millar. [8] + 100 + [6] + 103 p. See p. 22-23. 8vo. [Eng]

• ***Summary:*** Part II contains two ketchup recipes based on anchovies (small fish). The first, "To make a Katch-up," states (p. 21-22): "Take a wide-mouth'd Bottle, put into it a Pint of the best White-wine Vinegar, then put in ten or twelve Cloves of Eschallot peel'd and bruis'd; then take a Quarter of a Pint of the best White Wine, boil it a little, and put to it twelve or fourteen Anchovies wash'd and cut small, dissolve them in the Wine, and, when cold, put them in the Bottle; then take another Quarter of a Pint of White Wine, and put in it Mace, sliced Ginger, a few Cloves, a Spoonful of whole Pepper; let them boil a little; when almost cold, slice in near a whole Nutmeg, some Lemon-peel, and two or three Spoonsful of Horse Radish, then stop it close, and shake it once or twice a Day; then use it. You may add to it the clear Liquor which comes from Mushrooms." Note: This recipe is similar to that in E. Smith (1727).

The second, "To make a Katch-up that will keep good twenty years," reads: "Take a Gallon of strong stale Beer, one Pound of Anchovies wash'd and clean'd from the Guts, half an Ounce of Mace, half an Ounce of Cloves, a quarter of an Ounce of Pepper, three large Races of Ginger, one Pound of Eschallots, and one Quart of flap Mushrooms well rubb'd and pick'd; boil all these over a slow Fire till it is half wasted, and strain it thro' a Flannel Bag; let it stand till it is quite cold, then bottle and stop it very close. This is thought to exceed what is brought from India, and must be allow'd to be the most agreable [agreeable] Relish that can be given to Fish Sauce. One Spoonful to a Pint of melted Butter is sufficient to give both Taste and Colour beyond any other Ingredients.

"Note. *The stronger and staler the Beer is, the better the Katch-up will be.*

Note 1. This 2nd recipe states clearly that real Katch-up [Ketjap; soy sauce] was brought from India–a key statement.

Note 2. This recipe was later lifted by Hannah Glasse and was subsequently reprinted in other cookbooks.

Note: Part 2 has a special title page: "Originally published in 1718 under the title Mrs. Mary Eales's Receipts." The first part is a reissue with cancel title page of the 1733 edition, which was titled: "Mrs. Mary Eales's receipts." The second part entitled: "A curious collection of receipts in cookery,..." has a separate title page, pagination and register, and is a reissue with a different title page, of the 1742 edition. Address: By the late Mrs. Eales, Confectioner to King William and Queen Ann.

179. Early soy cruets and soy frames made in England (Early event). 1753.

• ***Summary:*** The earliest known soy cruets were made in 1753 by Thomas Betts at London, England. The entry reads: "1753. 1 Pr. [pair] Cut Soy Cruits. 6 shillings."

At 1755 we read: "1 P. [pair] Cut Soy Cruits. 5 shillings... 3 Soy Cruits Stopt. [Stoppered]. 7 shillings 6 pence." Source for both dates: Buckley, Francis. 1928. "Great names in the history of English Glass. V. Thomas Betts." *Glass* (Redhill, Surrey, England) 5(7):299-300. July.

Early cruets made in Sheffield, England: One entry appears as follows: "Round 6-bottle Soy Frame, by Richard Morton. Date 1776." It is accompanied (p. 272) by an elegant illustration showing the six multi-faceted cut-glass bottles (cruets) for holding soy sauce in the metal "soy frame" on a dining table. Another design on the same page is dated 1778. Two more designs for "soy frames" dated 1778 appear on p. 404. Source: Bradbury, Frederick. 1912. *History of Old*

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Sheffield Plate. London: Macmillan and Co., Ltd. xiii + 539 p.

180. Gentlewoman. 1753. Compleat family companion: or, the whole art of cookery made plain and easy:... London: Printed for the author. 128 p. 12vo.
• ***Summary:*** In the section titled "Boiling fish" we read (p. 15): (1) Salmon: "... take out the Liver when about three Parts done, and braid it with Kitchup, which, mingled with Butter will make exceeding rich Sauce."

(2) Fresh cod: "The sauce for this cannot be too rich, and if you are allowed it, spare neither Kitchup, Body of a Lobster, or Crab, Oysters and Shrimps;..." Address: [England].

181. Histoire générale des voyages, ou, Nouvelle collection de toutes les relations de voyages par mere et par terre [A general history of voyages: or, New collection of all the accounts of voyages by land and by sea. Vol. 11]. 1753. Paris: Didot, Libraire. 722 p. See pages 707-08. [Fre]
• ***Summary:*** This seems to be a French-language summary and translation of parts of *Amoenitatum exoticarum,...* by S. Kaempfer 1712 (p. 707-08). "On distingue plusieurs autres sortes de Haricots; une, entr'autres, dont les Japonnois font une espece de bouillie, qui leur tient lieu de Beurre, & dont ils font une sauce fameuse, qui se sert avec les viandes rôties. Ils nomment la bouillie *Miso*, & la sauce *Sooju*.

Translation: They distinguish several other sorts of beans. From one of these they make a sort of pap, which takes the place of butter for them, and from which they make a famous sauce, which they serve with roasted meats. They call the pap "Miso," & the sauce "Sooju."

Note 1. This is the earliest French-language document seen (April 2012) that mentions miso, which it calls "la bouillie *Miso*."

Note 2. This is the earliest French-language document seen (Feb. 2010) that mentions soy sauce, which it calls "la sauce *Sooju*."

182. Breues, John. 1754. The fortune hunters: shewing, (from experience) 1. How people may improve their fortunes, and raise themselves in London, by different and quite opposite ways... London: Printed for the author; and sold by J. Robinson,... xii + 164 p. 8vo.
• ***Summary:*** The recipe "To make clear Gravy, and a Ragoo [Ragout] Breast of Veal" states (p. 90-91). "Take three pounds of gravy-beef, four ounces of lean bacon, a small piece of lemon peel, one middle siz'd onion... Take a large breast of veal, roast it half done very brown, then take it from the fire, cut off the two ends and brisket, cut them in handsome pieces, put them amoungst your gravy in a stew-pan, then put in two anchovies, two cloves, a bit of lemon peel, fix black pepper corns, all ties in a bit of rag, stew them amoungst your gravy and veal, to which you are to add two spoonfuls of India soy, which being covered very close, let them stew one hour over a slow fire; then put them in the mid-piece of veal..."

Note: This is the earliest document seen (April 2012) that uses the term "India Soy" to refer to soy sauce. It was probably imported from India on British or Dutch ships; it may well have been made in Japan, but could have been made in China. In the Early American Newspapers (EAN) online database (produced by Readex, a division of NewsBank), there are (March 2006) at least 1,300 issues / records that contain the term "India Soy" or "India-Soy" from Nov. 1770 to Nov. 1844. Only a representative sample of these records has been entered into this database. And only the earliest ones have been given the keyword for "India." Address: Late of Perth [probablt Scotland], Merchant.

183. Society of Gentlemen. 1754. A new and complete dictionary of arts and sciences; comprehending all the branches of useful knowledge, with accurate descriptions... Vol. 2 of 4. London: Printed for W. Owen. 1084 p. See p. 985.
• ***Summary:*** The entry for "Drug" states (p. 985): "a general term for goods of the druggist and grocery kinds, especially for those used in medicine and dying [dyeing]. The principal drugs in medicine make the greatest part of the wholesale trade in the druggist and spicery ways. Some are produced in France, England &c. but the greatest part is brought from the Levant, and the East Indies. The chief drugs imported into this kingdom, are from the East-Indies, being as follows, alum, china-root, camphor, rhubarb, musk, vermillion, soy of Japan, ketchup,..."

Note: This is the earliest English-language document seen (April 2012) that uses the term "soy of Japan" to refer to soy sauce made in Japan.

"Ketchup" may well have referred to soy sauce made in the Dutch East Indies (today's Indonesia). Address: [England].

184. Relfe (John). 1755. Classified ad: Just imported from London in the Beulah, Captain Ritchie,... *Pennsylvania Gazette* (*Philadelphia*). Sept. 25. p. 3.
• ***Summary:*** "... bandanoes, secle-soy and silk lungee remals,... paduasoys, broad-cloths,... snuff boxes, cruet stands, &c. &c. &c." Note 1. Both "secle-soy" and "paduasoys" are types of silk cloth, and have nothing to do with soy sauce–which is not mentioned in this ad.

Note 2. This is the earliest English-language document seen (March 2006) that mentions "cruet stands."

Note 2. The French word for "silk" is *soi*, which often ended up being written "soy" in other languages. Address: Front-street, near Chestnut-street.

185. Glasse, Hannah (Mrs.). 1755. The art of cookery, made plain and easy: Which far exceeds anything of the kind ever

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yet published... by a lady. 5th ed., with additions. London: Printed and sold at Mrs. Ashburn's China-Shop. vi + [20] + 334 p. 20 cm. Facsimile edition reprinted in 1983 by Prospect Books, London. [Eng]

• ***Summary:*** "Catchup" is mentioned on the title page (Chap. XIX) and on pages 4, 19-20, 26-29, 32-34, 40, 44.

Different sorts of sauce for a pig (p. 4): "Others take Half a Pint of good Beef Gravy, and the Gravy which comes out of the Pig, with a Piece of Butter rolled in Flour, two Spoonfuls of Catchup, and boil them all together;..."

To make gravy for soops, &c. (p. 19-20): "It is a fine Thing in a House, and will serve for Gravy, thicken'd with a Piece of Butter, Red Wine, Catchup, or whatever you have a mind to put in, and always ready for Soops of most Sorts." Address: England.

186. Pastorini (G.). 1756. Classified ad: Just arrived from Italy,... *Public Advertiser* (*London*). April 26. p. [3], col. 2.1.

• ***Summary:*** "A parcel of fine dry'd Italian Vipers and new Narboun Honey,... with fine Joppa Soy, Indian Mangoes, green and white,..."

Note: This is the earliest document seen (April 2012) that contains the term "Joppa soy." We are aware of only one other document (a Feb. 1760 ad by this same importer) that contains this term. The meaning of the word "Joppa" in this connection is unknown. It is may well be a type of soy sauce, but we cannot be sure. Address: At the Two Civet Cats and Olive Tree, New Bond-street, near Grosvenor-street [London].

187. Notulen van het Haags Besogene [Notes of meeting of the Haags Besogene]. 1756. The Hague, Netherlands. Unpaginated. Oct. 20. [Dut]

• ***Summary:*** On the first page of notes of the meeting concerning the stock in the warehouses we read:

"Wednesday, 20 Oct. 1756. Started with the reading and control of the account of goods and merchandise, which on 31 May 1756 were stockpiled in the warehouses of this chamber [Amsterdam] and which have been received during the last four years from the Indies (*Indien* [Batavia]). Items that according to the journal of bookkeeping and the ledger have been delivered from the stock since 31 May 1756 and that part of the stock lying unsold in the Company's warehouses.

"... Japanese Soy [sauce] (*Japanese Soija*): According to the list closed on 31 May 1752 there were stockpiled–45 kelders. And received from the Indies (*Indien*) during the past four years–60 kelders."

Total: 105 kelders. Note 1. A kelder is a chest; in this case it contains bottles of soy sauce.

"From that is delivered during this time: 93 chests (kelders).

"Provided for consumption in inns and yachts: 2 chests (kelders).

"In disuse, broken and empty: 10 chests (kelders). Total: 105 chests (kelders) [So the books balance].

Bibliographic reference in Dutch: NA, VOC 4477, Haags Besogene (20-10-1756).

Location: Nationaal Archief, Den Haag, De Archieven van de Verenigde Oost-Indische Compagnie (VOC); toegangsnummer 1.04.21; inventaris nummer 4477. Notulen van het Haags Besogene [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch East India Co. (NFJ); access number 1.04.21; record number 4477. Notes of the Haags besogene]. Address: The Hague, Netherlands.

188. Osbeck, Per. 1757. Dagbok ofwer en Östindisk resa åren 1750, 1751, 1752. Med anmärkingar uti naturkunnigheten, främmande folkslags språk, seder, hushållning, m. m. [Voyage to the East Indies in the years 1750, 1751, 1752...]. Stockholm: Tryckt hos L.L. Grefing. 4 + 376 + [16] p. Illust. 14 cm. German edition published in 1765, English in 1771. [Swe]*

• ***Summary:*** See the English translation of the book made in 1771. Page 358: *Dolichos sinensis*–by the Chinese called Ta-o–Diadelphia decandria.

Note: Osbeck lived 1723-1805. A photostat copy of the original is in the library of the Arnold Arboretum and in the rare book room of the University of Illinois (Champaign / Urbana).

189. Phillips, Sarah (Mrs.). 1758. The ladies handmaid Or, A compleat system of cookery; on the principals of elegance and frugality. London: Printed for J. Coote. 4 + 19 + 472 p. See p. 135-36. Illust.

• ***Summary:*** To stew a turkey (p. 135-36): "Bone your turkey and fill it with a forcemeat made thus... put in a quart of good beef and veal gravy, wherein was boil'd spice and sweet herbs, cover it close and let it stew half an hour; then put in a glass of red wine, one spoonful of catchup, a large spoonful of pickled mushrooms, and a few fresh ones, if you have them, a few truffles and morels, a piece of butter as big as a walnut rolled in flour; cover it close and let it stew half an hour longer..." Address: Of Duke-Street, London.

190. *Journal de Commerce* (*Brussels*).1759. D'Amsterdam. Arrivée & chargement des vaisseaux des Indes Orientales [From Amsterdam: Arrival and loading of vessels from the East Indies]. 5:198-202. Sept. See p. 199. [Fre]

• ***Summary:*** Lists the cargo on six vessels, including (p. 199): "26 Futailles Soya de Japan" [26 kegs of soy (sauce) from Japan].

Note: The various reference to the word *Soye* concern silk, not soy sauce.

191. Johnson, Mary. 1759. Madam Johnson's present: or, Every young woman's companion, in useful and universal

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knowledge. Digested under the following heads:... 2nd ed. London: Printed for J. Fuller. iv + 192 + [20] p. Illust. 12vo.
• ***Summary:*** In the section on "Bak'd meats" the recipe for Calf's-Head states (p. 101-02): "add thereto a Lump of Butter roll'd in Flour; and the Sage in the Brains chopped fine; two Spoonfuls of red wine, and one of Catchup; boil them all together: then beat the brains well, and mingle them with the Sauce; pour it into the Dish, and serve it up."

Note: First published in 1753 as *Young woman's companion*. Address: No. 81 Fleet-Street, London..

192. Pastorini (Rebecca). 1760. Classified ad: Just arrived.... *Public Advertiser* (*London*). Feb. 26. p. [4], col. 1.6.

Juſt arrived,

And to be ſold by REBECCA PASTORINI, at the Italian Warehouſe, the Two Cats and Olive-Tree, in New Bond-ſtreet, near Grofvenor-ſtreet, London;

A Parcel of exceeding fine new Norbonne Honey; likewiſe a Parcel of ſmall new Portugal Hams, new Bologna Sauſages, and Dutch Tongues, Weſtphalia and Engliſh Hams, new French Lucca and Spaniſh Olives, ſuperfine Provence Oil, Florence and Lucca ditto, new Maccarooni and Vermicelli, with all other Sorts of Paſte, new Parmeſan and Swiſs Cheeſe, new Gorgona Anchovies, ſuperfine Pine Capers, the beſt common Sort ditto, right fine Joppa Soy, and China Pepper, fine India Mangoes, India Vinegar and Lemon Pickle, India Birds Neſts, and Lock Soy for rich Soups, all Sorts of Italian Beans, Spaniſh Peaſe and Lentiles for Soups, right French Soup Strainers, fine French White-Wine and Burgundy Vinegar, fine Garlick, Tarignon Elder, and diſtilled Vinegar; with all other Sorts of common Ditto, very beſt ſuperfine Flour of Muſtard, and Muſhroom Powder, Pickle Muſhrooms, and fine Engliſh Catchup, fine old Cyprus, Frontiniac, and Burgundy Wine, Florence ditto, to be ſold wholeſale and retail, at the loweſt Price.

Note. Dr. Giovanni's Remedy for the Teeth to be ſold here and no where elſe.

• ***Summary:*** "A parcel of exceeding fine new Norbonne [Narbonne] Honey; likewise... right fine Joppa Soy, China Pepper, fine India Mangoes, India Vinegar and Lemon Pickle, India Birds Nests and Lock Soy for rich Soups, all Sorts of Italian Beans, Spanish Pease and Lentiles [Lentils] for Soups,... Pickle Mushrooms and fine English Catchup,...."

Note 1. Narbonne honey is made in the Aude département of south-western France, where it is considered to be of very high quality. It is made by bees who feed on the dense, abundant rosemary flowers, which give its special flavor. It is very light in color, almost white at times, and (even in France) is expensive.

Note 2. This is the earliest document seen (April 2012) that contains the term "Lock Soy" (regardless of capitalization). No clue as to its meaning is given. However we later learn that it is a type of rice vermicelli which (apparently) does not contain any ingredient made from the soybean. Address: Italian Warehouse, the Two Cats and Olive Tree, New Bond-street, near Grosvenor-street, London.

193. Montague, Peregrine. 1760. The family pocket-book: or, Fountain of true and useful knowledge... London: Printed for Henry Coote.... 162 p. See p. 58, 140, 146. [Eng]

• ***Summary:*** Four recipes concern ketchup: (1) Excellent true British Ketchup (p. 58): "Take green Walnuts, beat them in a Marble Mortar, and strain out the Juice, let it stand twelve Hours, then take a Quart of the Juice that's fine, fix British Herrings, and a little of the Herring-pickle, cut the Herrings small, and put 'em in a Pan, and add to 'em a little Mace, about 20 Cloves, and half an Ounce of Jamaica Pepper: boil all together on a slow Fire, for half an Hour, then strain it thro' a Cloth, put it again into the Pan, and add to it twenty or thirty Shellots [Shallots], and half a Pint of Vinegar, let it boil till the Shellots be tender, then put it in a Bason to cool, and when cold, let it run tho' a close Cloth of its own Accord, and it will take of all the Scum and Fat; bottle it for Use. If green Walnuts are not to be had, make use of a Pint of Walnut-Pickle; but in this Case the Vinegar is to be omitted."

Note: This is actually a recipe for homemade walnut ketchup. Moreover, this is the earliest document seen (July 2010) that contains a recipe for walnut ketchup.

(2) To hash Chickens (p. 140): "Cut six chickens into quarters,... add these to the Yolks of six Eggs, with a little Nutmeg, Vinegar and Ketchup, and a good Piece of Butter; warm all these together, and pour them into a Soop-dish [sic], and serve them up."

(3) How to stew Tench (p. 146): "When the Fish is enoaga [enough], put in Oysters, Capers, Ketchup and Lemon: Garnish your Dish with Crisp bread."

(4) How to make an excellent Sauce for Salmon (p. 146): "Put into the Liquor of the Salmon, when you boil it, Salt, Vinegar, and Mace: take a Quarter of a Pint of the Liquor, and draw your Butter with it, mince it into an Anchovy wash'd clean, some Lemon-juice and Nutmeg, half a Pint of Shrimps, two spoonfuls of white Wine, with Ketchup and Mushrooms." Address: Gent. [Gentleman], of Grange Abbey in Oxfordshire [England].

194. Keen (William). 1762. Classified ad: To be sold... *New-York Mercury* (*New York City*). Nov. 29. p. 2.
• ***Summary:*** "... pickles of all sorts, viz. wall-nuts [walnuts], mangoes, cucumbers, beans, onions, mushrooms, kitchup, peaches, capers, and anchovies;..."

Note: This is the earliest English-language document seen (Feb. 2006) that contains the word "kitchup" (like "ketchup"). Address: Grocer and Confectioner, at the two green cannisters, in Hanover-Square, next door to Mr. Perry, watch-maker.

195. Gelleroy, William. 1762. The London cook: or, The whole art of cookery made easy and familiar, containing a great number of approved and practical receipts in every branch of cookery... Dublin [Ireland]: Printed by T. and J. Whitehouse. iv + [20] + 245 p. See p. 207. Illust. 17 cm. [Eng]
• ***Summary:*** "Catchup" is mentioned on pages 19-21, 25-27, 42-44, 46, 50, 54, 81, 104, 161.

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How to bake a turbot (p. 19): "Bake it of a fine brown, then lay it in your dish; stir the sauce in your dish all together, pour it into a sauce pan; shake in some flour; let it boil, then stir in two large spoonfuls of catchup, and a piece of butter. Let it boil and then pour into basons" [basins].

How to broil mackrel whole (p. 20-21): "Clean them, gut them, cut off their heads, pull out the row at the neck end... rub them with yolks of eggs, strew crumbs of bread over them and broil them. For sauce take plain butter, with a little walnut pickle or catchup." Address: Late cook to her Grace the Dutchess of Argyle. And now to the Right Hon. Sir Samuel Fludyer Bart. [Baronet] Lord Mayor of the City of London.

196. Gelleroy, William. 1762. The London cook: or, The whole art of cookery made easy and familiar, containing a great number of approved and practical receipts in every branch of cookery... London: Printed for S. Crowder. iv + 486 p. Illust. 20 cm. [Eng]
• ***Summary:*** "Catchup" is mentioned on pages 27-29, 35-37, 50, 60-61, 65, 70, 76, 111, 142-43, 223-24.

How to bake turbot (p. 27): "Bake it of a fine brown, then lay it in your dish; stir the sauce in your dish all together, pour it into a sauce-pan; shake in some flour; let it boil, then stir in two large spoonfuls of catchup, and a piece of butter. Let it boil and then pour into basons" [basins].

How to broil mackrel whole (p. 29): "Clean them, gut them, cut off their heads, pull out the row at the neck end... rub them with yolks of eggs, and strew crumbs of bread over them and broil them. For sauce take plain butter, with a little walnut pickle, or catchup." Address: Late cook to her Grace the Dutchess of Argyle. And now to the Right Hon. Sir Samuel Fludyer Bart. [Baronet] Lord Mayor of the City of London.

197. Ekeberg, Karl Gustaf. 1764. Om Chinesiska Soyan [On Chinese soy sauce]. *Kongliga Vetenskaps Academiens Handlingar* (*Transactions of the Royal Academy of Sciences, New Series, Stockholm*) 25:38-40. Jan/March. [Swe; eng+]
• ***Summary:*** A detailed description in Swedish of how the Chinese make soy sauce, written with the intent that Europeans would start making it themselves.

"The natives of nearly all of the Indies (India) use for their cooking a sauce which they have prepared in advance. This sauce serves the purpose of both economizing and making the food better tasting. The inhabitants of the Moluccan Islands [later part of Indonesia] and the islands lying around the Strait prepare, by rotting of small fish, a sauce which in taste and smell doesn't differ much from anchovies, rather than [using] the soy [sauce] that more recently has become known in Europe.

"The Chinese, who are not inferior to any other people of the world when it comes to home economy or the ability to imitate what they have seen, although not the inventors of soy sauce themselves, have tried to imitate their neighbors the Japanese, whose soy sauce surpasses that of the Chinese, be it more in price than in taste (goodness). They favor using it in the preparation of several dishes, and especially for dipping meat, fish, and vegetables into, lavishly and differently from other sauces.

"I have the honour to herewith to describe how Chinese soy sauce is prepared, because it has come to be used by us and we ought to be able to produce it ourselves.

"I have previously remarked in a short account of Chinese home economics in the country, that they have a type of small bean called Pactau ["white bean" = white soybean] among their grains. It differs only in size from the Caravance bean (*Caravancer*) usually used as nourishment on board during the voyage home. These Pactau beans are the main ingredient of the soy sauce, and since both types of beans resemble one another fairly closely in taste, and since the Caravance beans do not differ very much from our Turkish beans (*Turkika Boner*), I do not doubt that soy sauce could be prepared from the latter [Turkish beans], if not from our own field-beans. The Chinese prefer, when short of their Pactau beans, to prepare the sauce from a type of lesser blackish-green bean, which they call Hactau. Our native beans ought to be tried, therefore, in case the crop of Pactau beans, imported for experimenting, should fail.

"Thirty-five pounds [actually skalpund; 1 skalpund = 425 gm] of these beans, are cleaned then boiled for 2 or 3 hours in a covered kettle in clean water over a slow fire, until they can be easily mashed between the fingers. Water is added little by little so that the beans do not burn. The beans are removed and spread out on wide, shallow containers (trays) so that the water can run off, and while they are still damp they are rolled in a fine flour (which is ground from the same kind of bean) until they are covered on all sides. They are then placed on smaller trays or loosely woven mats and stacked one and a half inches (literally "thumbs"), one above the other, then placed in an open and loosely woven basket, which is wrapped in a mat or cloth, so that they can ferment and grow moldy during a period of three or four days. Then the cloth is removed and air let in, so that they should become withered and somewhat dried by the time they are left in strong solar heat (or in any other warm area) so that they can dry until they become so hard that they shatter when hit with a hammer and the pieces fly around.

"The flour and the mold are now separated from the beans by rubbing them between the hands. Then the beans are placed in a large or several smaller jars (earthen vessels) and covered with a clear (salt) pickling brine, prepared from 20 pounds of nice clean salt and 100 pounds of clean spring water. The vessels are placed open in the sun during the day, but are closed at night to keep out the cold and the dampness. Otherwise they are placed in a warm area for six whole weeks, to draw [until their whole substance has been well extracted]. When it is observed that the pickling brine

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has become dark brown and strong, it is poured off, and brought to a boil several times to increase the strength. Some people add sugar, ginger and other spices to it, according to taste, while it is cooking. They then let the sauce stand with the spices for a few days, before the spices are removed by straining."

Note 1. The author, Carl Gustaf Ekeberg (written like this on title page) lived 1716-84. He was captain of a ship in the Swedish East India Company's service. He arrived in Canton on 24 August 1766, but had previously visited in 1762. Beckmann (1798, p. 344) gives an English translation of the latter half of this document, starting at "Thirty-five pounds..." Note 2. This is the earliest Swedish-language document seen that uses the term *Caravancer* to refer to soybeans.

Note 3. This is the earliest document seen (July 2001) stating that sugar and/or spices are sometimes added to soy sauce during the last stage of processing.

Note 4. This is the earliest journal article seen (Oct. 2001) that mentions soy.

Note 5. This periodical started publication in 1739 in Stockholm. Address: Captaine vid Ostindiska Compagniet (Captain with the East India Company).

198. **Product Name:** [Shoyu. Brand named Jôjû Shoyu in 1772].
Foreign Name: Shôyu.
Manufacturer's Name: Takanashi Hyozaemon XXII (Renamed Mogi Hyozaemon in 1764).
Manufacturer's Address: Noda, Japan.
Date of Introduction: 1764.
New Product–Documentation: Noda Shoyu K.K. (Morio ICHIYAMA, ed.). 1940. Noda Shoyu K.K. Nijunen-shi [Twenty-year history of Noda Shoyu, Inc.], p. 473. The Jôjû brand of shoyu (of which the logo is shown) was introduced in Anei 1 (1772).

Mark Fruin. 1983. Kikkoman: Company, Clan, and Community, p. 18. "In 1764 the eldest son of Takanashi Hyozaemon, now the XXII, married the daughter of Mogi Shichizaemon V. As was often the case when marriage was tied to business, he married into her family, assuming her family's name an occupation. In the year of their marriage, 1764, the adopted son-in-law (*muko-yôshi*) and his bride established a shoyu factory on the advice and with the financial support of the bridegroom's natural family, the Takanashis, who had been making shoyu in Noda since 1661. This was the first Mogi family to venture into shoyu manufacture, but two years later, in 1766, the bride's father, Mogi Shichizaemon, whose ancestors had established the first Mogi household in Noda in 1630, added the manufacture of shoyu to the manufacture of miso, which his family had begun in 1662." Fruin (p. 73) says that by 1909 this shoyu was sold under the Kamigata brand, but Ken Mogi of Kikkoman says that Kamigata (the brand introduced by Takanashi Hyozaemon in Anei 1 = 1772) should be pronounced Jôjû, not Kamigata.

199. Tiaodingji [The harmonious caldron]. 1765-1860? China. Undated. [Chi]
• ***Summary:*** Wade-Giles reference: *T'iao Ting Chi*. Qing dynasty. This is a collection of recipes starting in about the year 1750. Huang (2000) says that this undated work was compiled during the Qing dynasty, between 1760 and 1860. Compiler unknown. The original hand-written manuscript is in the Beijing Library. First printed in a 1986 edition by Hsing Po-T'ao, published by Commerce Publishers in Beijing (p. 625). This is the most comprehensive of the pre-modern food canons. A massive tome covering 871 pages and containing 2,700 recipes, it includes about 250 entries on fermentations and food processing. Parts of it were said to be in circulation before 1765, but other parts perhaps no earlier than 1860. There is great interest in the origin of this book among Chinese food historians, since many of the recipes in it are identical to those in the *Suiyuan Shidan* [*Recipes from the Sui Garden*], By Yuan Mei (W.-G. *Sui Yuan Shih Tan*, by Yüan Mei). The questions arise: Which book is earlier? Who copied whom? Regardless, this is a book we cannot ignore (p. 132). This massive Qing recipe book does not mention soy sprouts (p. 297).

In Chapter 3, "Meats," it uses jiang (fermented soybean paste) in 58 recipes, regular soy sauce called *qingjiang* (W.-G. *ch'ing chiang*) in 4 recipes, called *jiangyou* (W.-G. *chiang yu*) in 138 recipes, and called *jiangshui* (W.-G. *chiang shui*) in 2 recipes, and fermented black soybeans (*shi*) in 2 recipes.

In Chapter 7, "Vegetables," it uses jiang in 33 recipes, regular soy sauce called *jiangyou* (W.-G. *chiang yu*) in 66 recipes, called *jiangzhi* (W.-G. *chiang chih*) in 1 recipe, and called *jiangshui* (W.-G. *chiang shui*) in recipe, and fermented black soybeans (*shi*) in 1 recipe. In this recipe book, which may be considered the summation of culinary arts in China in the 19th century, there are 212 entries for soy sauce (under various names) versus only 91 for jiang. Soy sauce had come to be the more widely used seasoning, but jiang was still important–as it is today (p. 372-73). Fish jiang and shrimp jiang are mentioned (p. 387n). Page 86 describes various ways of preparing *mianjin* (W.-G. *mien-chin*) (wheat gluten) (Huang 2000, p. 502).

200. Diderot, Denis. 1765. Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers: Soui, ou soi [Encyclopedia, or rational / systematic dictionary of the sciences, arts, and trades/crafts: Soy]. Paris: Briasson. See vol. 15, p. 403. Published from 1751-1765 in 17 volumes or fascicles. [Fre]
• ***Summary:*** "Soui, or soi, singular masculine (Cuisine) is a type of sauce that the Japanese prepare, and which is very much sought after by the peoples of Asia, and by the Dutch, which import it from Japan. It is a type of extract or of liquid

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which goes well with all types of meats, and above all with partridge and ham. Then one adds to it mushroom sauce, lots of salt, pepper, ginger, and other spices which give it a very strong flavor, and which help to prevent the resulting sauce (*liqueur*) from spoiling. It will keep for many years in bottles that are well corked, and a small quantity of this liquid mixed with ordinary sauces, enhances them and gives them a very agreeable flavor. The Chinese also make soy (souï), but that of the Japanese is regarded as superior. It is said that the reason for this is that the meats are much more succulent in Japan than in China."

The text in French reads: "*SOUI, ou SOI, s.m.* (*Cuisin.*) *c'est une espece de sauce que les Japonnois préparent, & qui est très recherchée par les peuples de l'Asie, & par les Hollandois qui en apportent de ce pays; c'est une espece d'extrait ou de suc qui se tire de toute sorte de viandes, & sur-tout des perdrix & du jambon. On y joint du suc de champignons, beaucoup de sel, de poivre, de gingembre, & d'autres épiceries qui lui donnent un goût très fort, & qui contribuent à empêcher que cette liqueur ne se corrompe. Elle se garde pendant un grand nombre d'années dans des bouteilles bien bouchées, & une petite quantité de cette liqueur mêlée avec les sucs ordinaires, les releve, & leur donne un goût très-agréable. Les Chinois font aussi du souï, mais on regarde celui du Japon comme supérieur: ce qui vient, dit-on, de ce que les viandes sont beancoup* [*sic, beaucoup*] *plus succulentes au Japon qu'à la Chine.*"

Note 1. Diderot, the French encyclopedist, lived 1713-1784.

Note 2. This is the 2nd earliest French-language document seen (Jan. 2010) that refers to soybeans or soyfoods.

Note 3. This is the earliest French-language document seen (April 2012) that uses the words *le Soui* or *le soi* to refer to soy sauce. The text seems to imply that soy sauce had been introduced to France by this time, however we cannot be sure of this. If that were the case, this would be the earliest document seen (Jan. 2010) concerning soybean products (soy sauce) in France; soybeans as such have not yet been reported.

Note 4. This is the earliest Western-language document seen (Feb. 2004) that recommends adding seasonings (such as mushroom sauce, salt, pepper, ginger, or other spices) soy sauce to enhance its flavor. This idea may have been a French innovation.

Note 5. The earliest publication seen that cites this early document (Diderot 1765) was by Shigeru Otsuka, in his book *A Journey into the World of Shoyu* (1987, p. 75). But 14 years earlier, in his chapter titled "All About Shoyu" in *The Kikkoman Way of Fine Eating* (1973, p. 10), when discussing how Europeans got to know about shoyu, he wrote: "It was the great misfortune of the Portuguese that they did not know it. The Dutch traders that followed them, however, did notice shoyu, and began to export it to Europe. It was about 100 years later that Louis XIV of France began to prize shoyu as a secret ingredient in the luxurious court fare of the time." Note that Louis XIV reigned from 1643 to 1715, more than 50 years before Diderot wrote this passage. We know of no document which states that Louis XIV ever used shoyu. And when we asked Mr. Otsuka for his source concerning Louis XIV's use of shoyu, he was unable to give any source. Dr. Yokotsuka of Kikkoman (1983) thinks the original source was Dr. Obata. Address: France.

201. *Georgia Gazette* (*Savannah*). 1766. Savannah, May 28. No. 140. May 28. p. 1. [Eng]

• ***Summary:*** "The following articles were entered for exportation at the Custom-house for Christmas and Lady-Day quarters, viz. includes: Rice, 8626 barrels and 218 half barrels–Rough Rice, 1870 bushels–Corn, 5965 bushels–Pease, 100 bushels–Pine lumber, 1,097,101 feet–Shingles 1,944,000... Raw Silk, 712 lb. 8 oz.–Philozel [Filozel], 4897 lb... Indico [Indigo], 55,926 lb.–Barrels of Pork, 551... Salop Powder, 608 lb.–Soy [sauce], 10 gallons."

Imports include "Rum, 26,756 gallons–Sugar, 147 cwt. [hundredweight] 2 qrs [quarters] and 25 lb.–Negroes, 245–Flour, 229 barrels and 20 kegs..."

Note 1. The last two products (salop powder and soy sauce) were made by Samuel Bowen at his plantation near Savannah, Georgia, for export to England. Was there time for Bowen to make this soy sauce in Savannah? He married in April 1765 and at about the same time probably gave the soybeans he had brought from China to Henry Yonge to plant in the latter's farm. By 14 May 1765 Bowen owned a plantation of his own.

Note 2. This is the earliest document seen (June 2011) concerning soybean products (soy sauce) in Georgia. This document contains the earliest date seen for soybean products in Georgia (28 May 1766); soybeans as such had not yet been reported by that date.

Note 3. This is the earliest document seen (June 2007) concerning the manufacture of soy sauce in the United States or its export from the United States.

Note 4. This is the earliest document seen (April 2012) that contains industry or market statistics for soy sauce production in a certain geographical area.

Note 5. This is the earliest English-language document seen (April 2012) published in North America that uses the word "Soy" by itself to refer to soy sauce.

Note 6. Lady-Day refers to Annunciation, March 25, observed as a church festival in commemoration of the announcement of the Incarnation of Jesus Christ to the Virgin Mary.

202. **Product Name:** Bowen's Patent Soy (Soy Sauce).
Manufacturer's Name: Samuel Bowen.
Manufacturer's Address: Thunderbolt near Savannah, Colony of Georgia.

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Date of Introduction: 1766. May.
Wt/Vol., Packaging, Price: Quart jar.
How Stored: Shelf stable.
New Product–Documentation: *Georgia Gazette* (Savannah). 1766. "Savannah, May 28." No. 140. May 28. p. 1. "The following articles were entered for exportation at the Custom-house for Christmas and Lady-Day quarters... Soy [sauce], 10 gallons."

Note 1. This is the earliest known commercial soy product made outside of Asia, or in the Western world, or in the British colonies of North America (in an area that later became the United States), or in the Colony of Georgia (which later became the state of Georgia). This is also the earliest know soy sauce and fermented soy sauce made in the Western world, and the earliest soy product made by Samuel Bowen.

Note 2. In 1766 Bowen also made a type of vermicelli, but it is not clear whether or not it contained soybeans as an ingredient.

British Patent granted to Samuel Bowen. 1767. "New invented method of preparing and making sago, vermicelli and soy from plants growing in America, to be equal in goodness to those made in the East Indies." Issued July 1. Applied 6 June 1767. Bowen, an Englishman, probably learned the process for making soy sauce while in China sometime between 1759 and 1763. "He claimed that he was a prisoner in China for nearly 4 years and was carried 2,000 miles from place to place through the interior of the country." Here is a simple chronology: 1764–Bowen arrives in Savannah, The Province / Colony of Georgia. 1765 April. Bowen marries in Savannah and at about the same time (spring) gives his "Chinese vetches" (the soybeans he had brought from China) to Henry Yonge to plant on the latter's farm. 1765 May 14. Bowen purchases his own tract of land / plantation land at Thunderbolt, a few miles east of Savannah, and by Sept. he owns slaves, one of whom tried to run away.

1765 fall. Bowen's soybeans probably mature on Yonge's farm. He uses some of these soybeans to make soy sauce.

1766 March 25. Before Lady's Day (March 25) Bowen had entered 10 bottles of soy sauce at the Custom House in Savannah for export to England. In 1767 he patented this soy sauce and on 16 Jan. 1769 the American Philosophical Society for the Promotion of Useful Knowledge, in Philadelphia, Pennsylvania, received samples of 6 bottles of soy [sauce] from Samuel Bowen (Lesley 1884). There are numerous other records during the 1770s of Bowen's soy sauce, which he advertised in the *South Carolina Gazette* (29 Nov. 1773) as "Bowen's Patent Soy."

This chronology raises some interesting questions. The questions are by William Shurtleff and the answers (mostly educated guesses) are by Prof. Ted Hymowitz (Oct. 2005).

1. What quantity of Chinese vetches did Bowen bring from China to Savannah? What kind of soybeans were they> Did he give all of these to Yonge to plant, or did he use some to make soy sauce, and perhaps set some aside is case of crop failure or failure of the seeds to mature in Savannah? Ans: Ted has no idea as to the amount of soybeans brought over by Bowen, but he imagines roughly 10-30 lb. He guesses that they were Maturity Group II (adapted to Pennsylvania), black and small. Small black soybeans appear to withstand changes in temperature and to store much better than yellow or large beans. PB1 is a very popular local variety in India; it germinates quite well under adverse conditions.

2. What is the earliest these soybeans could have produced mature seed for Bowen to use to start making his first batch of soy sauce in Savannah? Ans: If planted in April on Yonge's farm, these non-adapted beans probably matured in 90-100 days or mid-July. The replanted beans (planted entirely on Bowen's plantation) would mature in October (90 days). Depending on frost conditions, a third harvest might be ready in late December (85 days). Beans harvested in October would give him to time to make Chinese-style soy sauce, ready for export in March.

3. Bowen may have had a conflict or difficult choice: What proportion of the soybeans that matured on Yonge's farm would he keep as seed for planting, what proportion would he use to make soy sauce, and what proportion (if any) would he set aside in case of crop failure? One lb of soybeans planted would yield about 40-70 lb of soybeans harvested. Bowen may have been smart enough to set aside say 10% of his original beans in case Yonge's original planting failed–for any reason. With each successful harvest, he would probably have set aside a progressively smaller percentage in case of crop failure.

4. Did Bowen use any wheat in his soy sauce, or only soybeans, salt, water, and koji starter? Typical Chinese soy sauce in the 1760s did not use wheat. It would have taken about 50-60 lb of soybeans to make 10 gallons of Chinese-style soy sauce–the amount he first exported. Ans: Ted wonders if Bowen might have used rice (widely grown in coastal Georgia) instead of wheat.

5. Assuming he learned how to make soy sauce in China, where and in what form did he get the *Aspergillus oryzae* spores he would have needed to make soy sauce in Georgia. How did he transport these back to Georgia?

6. For how long did Bowen ferment and age his soy sauce, and in what kind of vessels? In warmer climates, such as that of Savannah, where the sauce is made Chinese-style in earthenware vats set outdoors and exposed to the sun, it can be ready in as little as 3-4 months (H.T. Huang 2000, p. 366). Assuming that he used the soybeans from Yonge's first crop, he would have had 5-6 months–adequate time to make a good product.

203. *General Evening Post* (*London*). 1766. London. June 5. p. [2], col. 2.8.
• ***Summary:*** "We hear that the Society of Arts, Manufactures

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and Commerce, have presented Samuel Bowen, Esq., with a gold medal, for introducing several Chinese manufactories [including soy sauce] in his Majesty's province of Georgia."

204. **Product Name:** [Shoyu].
Foreign Name: Shôyu.
Manufacturer's Name: Horikiri Monjiro.
Manufacturer's Address: Nagareyama (near Noda), Japan.
Date of Introduction: 1766.
New Product–Documentation: Mark Fruin. 1983. Kikkoman: Company, Clan, and Community. p. 18. In 1766 Horikiri Monjirô from Nagareyama began making shoyu. "His wife was the second daughter of Mogi saheiji III, who would himself begin soy sauce brewing in a few more years."

205. **Product Name:** [Shoyu].
Foreign Name: Shôyu.
Manufacturer's Name: Mogi Shichizaemon V.
Manufacturer's Address: Noda, Japan.
Date of Introduction: 1766.
New Product–Documentation: Mark Fruin. 1983. Kikkoman: Company, Clan, and Community. p. 18. "In 1764 the eldest son of Takanashi Hyozaemon, now the XXII, married the daughter of Mogi Shichizaemon V. As was often the case when marriage was tied to business, he married into her family, assuming her family's name an occupation. In the year of their marriage, 1764, the adopted son-in-law (*muko-yôshi*) and his bride established a shoyu factory on the advice and with the financial support of the bridegroom's natural family, the Takanashis, who had been making shoyu in Noda since 1661. This was the first Mogi family to venture into shoyu manufacture, but two years later, in 1766, the bride's father, Mogi Shichizaemon, whose ancestors had established the first Mogi household in Noda in 1630, added the manufacture of shoyu to the manufacture of miso, which his family had begun in 1662."

206. Ryorikata banhô [Many methods for cooks]. 1766? Japan: Publisher unknown. 60 p. Japanese summary by Kawakami 1978, p. 165. [Jap]*
• ***Summary:*** This manual, by an unknown author, describes how to make various foods, rather than how to prepare recipes. It discusses shoyu, barley hishio, Kinzanji miso, kiku hishio (it is not known what "kiku" means), hishio, natto, toko miso, uzu-miso, and amazake.

207. Kastens, Herman Christiaan. 1767. Diary. In: Leonard Blussé, Cynthia Viallé, et al, eds. 2004. The Deshima Diaries Marginalia, 1740-1800. Tokyo: Japan-Netherlands Institute. xl + 898 p. See p. 311-12 (#73, 77).
• ***Summary:*** In the section titled "Diary kept by Deputy Christ during the absence of Kastens," at 1767 April 9–"A small *wangkang* without its top mast, which had stranded off the island of Koshiki on 25 January, arrived in the roadstead. It had departed from the Chinese harbor of Zoesio on November 17 last year. It was destined for Lionton. Its cargo consisted merely of 56,200 *ganting miso* beans [soybeans used to make miso] and 9,000 catties of oil."

Note: A *ganting / gantung* is a measure of weight. It is not clear what kind of oil this is.

1767 May 6–"Today the *wangkang* which arrived here on 9 April got a top mast. It sold part of its cargo of *miso* beans to cover its expenses." Address: Opperhoofd (Chief of the Dutch factory), Deshima, Nagasaki, Japan.

208. *Georgia Gazette* (*Savannah*). 1767. Savannah, April 15. No. 186. April 15. p. 2. [Eng]
• ***Summary:*** "The following articles, being the produce of this province, were entered at the Custom-house for exportation, from the 5th day of January last, to the 5th day of April instant... Salop-Powder, 100 lb.–Soy [sauce], 3 dozen bottles."

209. *New-York Gazette or The Weekly Post-Boy* (*New York City*). 1767. Savannah, (in Georgia) April 1. April 23. p. 3. [Eng]
• ***Summary:*** "Week before last was cleared out for the West-Indies, in the snow *Harriot*, one hundred pound weight of salop powder, and three dozen bottles of soy [sauce], the produce of this province, made by Mr. Samuel Bowen."

Note 1. A snow is a sailing ship with 3 masts.

Note 2. This is the earliest document seen (Dec. 2008) concerning soybeans or soyfoods (soy sauce) in connection with (but not yet in) the West Indies or the Caribbean. If Bowen's soy sauce actually arrived in the West Indies, this would be the earliest document seen (Dec. 2008) concerning soybean products (soy sauce) in West Indies or Caribbean. And this document would contain the earliest date seen for soybean products in West Indies or Caribbean (1767); soybeans as such have not yet been reported.

210. *London Magazine or, Gentleman's Monthly Intelligencer*. 1767. Savannah in Georgia. 26:237-38. May. [3 ref. Eng]
• ***Summary:*** Three letters or articles are reprinted here in succession: (1) Yonge, Henry. 1766. Re: Certificate to the Society for the encouragement of Arts, Manufactures, and Commerce, London. Letter to Dr. Peter Templeman, Secretary to the Society, London, Dec. 23. 1 p. Reprinted in *Gentleman's Magazine* (London), May 1767, p. 253.

(2) Yonge, Henry. 1767. "An account of the Luk Taw, or Chinese vetches, introduced into Georgia from China by Mr. Samuel Bowen, as appears by a certificate* to the Society of Arts, &c. from Henry Yonge, Esq; Surveyor General of Georgia." *Gentleman's Magazine* (London) 37:253. May.

(3) Templeman, Peter. 1767. [Letter of thanks for Chinese vetches to Samuel Bowen in Georgia from the

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Secretary of the Society for the encouragement of Arts, Manufactures, and Commerce, London]. *Gentleman's Magazine* (London) 37:253. May. Note: At the bottom of this letter is written: "Strand, London. April 30, 1767."

211. Bowen, Samuel. 1767. New invented method of preparing and making sago, vermicelli and soy from plants growing in America, to be equal in goodness to those made in the East Indies. *British Patent* 878. July 1. Application filed 6 June 1767. Hymowitz and Harlan (1983, p. 376) shows the first 2 pages of the patent.

• ***Summary:*** "To the King's most excellent majesty. The Humble Petition of Samuel Bowen of the Province of Georgia in America, Merchant, Sheweth, THAT Your Petitioner hath found out and Invented a Method of preparing & making Sago, Vermicelli, & Soy [sauce], from the Plants growing in America, which he has now brought to such great perfection as to be equal in Goodness to those made in the East Indies; That he has erected Machines for carrying on the said Manufactory, In which he has been encouraged to proceed by the Lords for Trade and Plantations... That in regard he is the First and True Inventor thereof and that the same hath never been practised by any other person or persons whatsoever

Your Petitioner therefore most humbly
Prays Your most Sacred Majesty to
Grant unto him Your Royal Letters
Patent, under the Great Seal of
Great Britain, for the sole Benefit
and Advantage of his said Invention,
within that part of Your Majesty's Kingdom... Whitehall June 6th 1767.

Note 1. This is the earliest patent seen (May 2005) that mentions soybeans or a soybean product–in this case, soy sauce. The next was in 1905, more than 135 years later. Full text given in Colonial Records of the State of Georgia. Vol. 39. Entry Books, Letters, Memorials, Petitions, etc. 1733-1783. Typed under the authority of John B. Wilson, Secretary of State. U.S. Government Aid through W.P.A. Project No. 3990. 1937.

Note 2. No description of any of the processes is given. The key point is that Bowen's soy sauce is as good as those imported from Asia. The sago was originally intended to relieve diarrhea among scorbutic sailors. It absorbed all the moisture, but contained almost no vitamin C. The source for this document is a book reporting a summary of patents (Hymowitz, pers. comm. 12 March 1988).

212. Christie's. 1767. Catalogue of an auction, 30 Nov. 1767. London, England: Mr. Christie's.

• ***Summary:*** In this catalog, we read: A gentleman "lately returned from India" has decided to sell his "Dressing Boxes, fine India paper, Muslin, Soy [sauce], [and] fine Batavia Arrack."

Note: Cited by–Wall, Cynthia Sundberg. 2006. The prose of things:... Chicago, Illinois: University of Chicago Press. 316 p. See p. 169. Address: London.

213. *New-York Gazette or The Weekly Post-Boy* (*New York City*).1768. Charles-Town (South Carolina) Dec. 29. March 7. p. 2. [Eng]

• ***Summary:*** "Feb. 9... Mr. Bowen, who has received a medal from the society of arts in London, for his introducing the manufacture of Vermicelli, Sago, Salop, Soy [sauce], &c. in the province of Georgia, is arrived here from London, in his way to that province, and we are told has obtained a royal patent for manufacturing those commodities there, to be imported into Great-Britain; and that the government has contracted with him to supply the royal navy, hospitals, &c. with these necessaries."

This article also appeared in the *Boston Post Boy* [Massachusetts] (March 21, p. 2) and the *Boston News-Letter and New England Chronicle* (March 24, Supplement p. 1).

Note: This is the earliest document seen (Aug. 2011) concerning soy in connection with (but not yet in) South Carolina.

214. *Bath and Bristol Chronicle* (*England*).1768. To be sold by hand, at Sadler's-Arms, the Upper End of Stall-Street, Bath (Ad). 8(418):4. Col. 1. Oct. 20.

• ***Summary:*** "... the Stock in Trade from a Glass-Cutter, from London; consisting of a great Variety of cut, engraved and gilt Glasses; fine Pyramids, cut Decanters... Tumblers, Soy Cruets, Chandeliers, Bottles,..., which will be sold at Prime Cost."

Note 1. This is the earliest document seen (April 2012) that mentions "Soy Cruets" (regardless of spelling)–to be used for soy sauce.

Note 2. Bristol is a city in southwestern England on the Avon River near the Bristol Channel–From early times a place of commerce and active in medieval trade.

Note 3. The glass-cutter in London was apparently Christopher Haedy and Family (Buckley 1925, p. 122-23).

215. Bowen (Samuel). 1768. Classified ad: By the King's Royal Patent, granted to Samuel Bowen, for his sago powder, soy, and vermicelli. *Georgia Gazette* (*Savannah*) No. 270. Nov. 30. p. 3, col. 2.

• ***Summary:*** "Approved of by the Royal Society of Arts and the College of Physicians as equal in goodness to those articles usually imported into Great-Britain by the East-India Company, in consequence of which Mr. Bowen has the honour of supplying the royal navy with Sago, also several of the outward-bound East-India and African ships.

"The Sago Powder will be of great utility at sea as well as on shore. One pound will make a mess of wholesome nourishing food for 20 men. It is of a light and nourishing substance, proper for fluxes and other disorders of the

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bowels, also in consumptive and many other cases.

Directions for preparing Sago Jelly: Mix one large spoonful of the powder with a pint of boiling water, and it becomes a jelly. Then give it what taste you please with wine, spice, sugar, &c. N.B. Dilute the powder first with two spoonfuls of cold water.

"Sold at the Collector's at the following prices, viz. Sago Powder at 2s. [shillings] per pound, with directions how to use it; and Soy [sauce] at 3s. 6d. [3 shillings 6 pence; there are 12 pence per shilling and 20 shillings per pound] per bottle, or 1£ 16s. [1 pound 16 shillings = 36 shillings, a 15% saving] per dozen.

"Savannah, in Georgia, 30th November, 1768.

Note 1. This is the earliest English-language publication or article seen with the word "soy" (or any variation of soy) in the title. Note that this "soy" refers to soy sauce.

Note 2. The article below this one (unrelated to Bowen) is titled "To Be Sold, A good plantation... Also, ten young likely working negroes. One third of the purchase money is to be paid down, or within two or three months after the delivery of the premises; credit will be given for two or three years, or more if required..."

Note 3. This is the earliest non-patent document seen (Sept. 2001) that discusses a patent related to soy.

Note 4. This ad also appeared in the Dec. 7 (p. 3) and Dec. 21 (p. 4) issues of this newspaper. Address: Savannah, Georgia.

216. Barrell (Joseph). 1768. Classified ad: To be sold at the lowest rates... *Boston Evening Post*. Dec. 12. p. 3.
• ***Summary:*** "A Parcel of very neat Glass and China Ware, just imported,... labell'd and plain Cruits for Oil, Vinegar, Ketchup, Soy [sauce], & Cayan [cayenne pepper];..."

Note 1. Barrell is selling glass ware (including cruits / cruets), not soy sauce. Yet the ad implies that Bostonians knew what "Soy" was, and that some would probably use their cruits to store and dispense it.

Note 2. This is the earliest document seen (May 2011) concerning soy in connection with (but not yet in) Massachusetts.

Note 3. This ad also appeared in the Dec. 19 (p. 4) and Dec. 26 (p. 4) issues of this newspaper. Address: Store No. 3 on the South Side of the Town-Dock [Boston].

217. "Sample of Chinese Vetches [soybeans], six bottles of Soy and six pounds of powdered sago presented with a letter from S. Bowen of Georgia." These soybeans were distributed on March 3 to eight local farmers (Early event). 1769. Jan. 16.
• ***Summary:*** This entry appears under the date "1769. Jan. 16" (p. 24-25) in the following document: Lesley, J. Peter. 1884. *Early proceedings of the American Philosophical Society for the Promotion of Useful Knowledge, compiled by one of its secretaries from the manuscript minutes of its meetings from 1744 to 1838* [APS]. Philadelphia, Pennsylvania: Press of McCalla & Stavely. 875 p.

The "Chinese vetches" are soybeans, and the "six bottles of soy" refers to soy sauce, which was made in Savannah, Georgia, by Samuel Bowen–the first man to introduce soybeans to what is now the United States. Soybeans and soy sauce are also discussed on pages 32-33, and 35 of this book.

An important follow-up entry appears under the date "1769, March 3, College. [29 present, incl. Bartram]. The S. Bowen's Communication Committee then reported, that thanks be returned 'especially for his ingenious account of the Chinese Vetches...' The Other Committee [Natural History and Chemistry] were recommended to 'make some experiments on' the respective qualities of the samples of Soy & Sago, & report. Ordered that some... Vetches be distributed to... Pemberton, J. & J. Bartram [John and Johnny], J. Morgan, J. Rhea, Abel James, T. Clifford, J. Gibson & G. Roberts."

Thus Samuel Bowen's soybean seeds were distributed to eight farmers; all probably lived in Pennsylvania. They received the seed in time for planting in 1769 and were asked to report on their results. It seems extremely likely that at least one of the 8 farmers (incl. John Bartram) grew the soybeans during 1769–however we can find no direct evidence that they actually did. Ted Hymowitz has searched everywhere for these reports, but can find none. He says (Nov. 2005) they may be buried somewhere in the APS archives in Philadelphia.

Yet we do have indirect evidence. In 1804 James Mease wrote in *The Domestic Encyclopedia:* "The Soy-bean bears the climate of Pennsylvania very well. The bean ought therefore to be cultivated." Who planted these soybeans in Pennsylvania between 1769 and 1804, and from where were they obtained? Probably one of the 8 farmers (including John Bartram), who got them from Samuel Bowen. Ted has found proof (in a book compiled by a descendant of Bartram) that John Bartram grew soybeans in Philadelphia, but we are not told when. Both John Bartram (lived 1699-1777) and James Mease (1771-1846) were members of the American Philosophical Society, however Mease was age 6 when Bartram died.

Note 1. This is the earliest document seen (July 2011) concerning soybeans in Pennsylvania–or in Philadelphia. This document also contains the earliest date seen for soybeans in Pennsylvania (16 Jan. 1769). This may be the earliest document seen (July 2011) concerning the cultivation of soybeans in Pennsylvania–but we cannot be sure.

In the 1700s Philadelphia, a port city on the Delaware River, was the largest city in the American colonies. According to Benjamin Franklin, the population of Pennsylvania was about one-third English, one-third German, and one-third Scots-Irish.

218. *Georgia Gazette* (*Savannah*). 1769. Savannah, April 26.

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No. 291. April 26. p. 3.
• ***Summary:*** "Entered for exportation at the Custom-House in Savannah... from the 5th day of January last to the 5th day of April instant... Sago powder, 12,089 lb. Soy [sauce], 5 dozen [bottles]."

219. Stork, William. 1769. A description of East-Florida, with a journal, kept by John Bartram of Philadelphia, botanist to His Majesty for the Floridas; upon a journey from St. Augustine up the River St. John's, as far as the lakes. With explanatory botanical notes... The third edition, much enlarged and improved. London: Sold by W. Nicoll; and T. Jeffries. [4], viii, 40, [2], xii, 35, [1] p. Illust. maps. 30 cm. [2 ref]
• ***Summary:*** This book is divided into two parts, each of which is paginated separately. At the beginning of the 2nd part is "The introduction to the journal" of John Bartram. When talking about the importance of new plants and naturalists to the American colonies he states (p. ii): "I cannot touch upon this subject without mentioning Mr. John Ellis, Fellow of the Royal Society, and agent for West-Florida... It is to this very ingenious gentleman that I am indebted for the following catalogue of plants that may be useful in America, in which, to avoid confusion in the botanical names, Mr. Ellis hath given both the generical and the specifick or trivial names of the plants, with the page referred to in the celebrated Dr. Linnaeus's 2nd edition of his Species of Plants..."

There follows (p. iii on) a 4-column table in which numerous plants are listed under the following column headings: (1) The "Latin names"–genus and species. (2) "2d Ed. Lin. Sp."–The page on which this plant is mentioned in the 2nd ed. of Linnaeus' *Species Plantarum*. (3). English names. (4) Observations.

On p. v we read: "Dolichos soja Linn. Lin. Sp. 1023. A kind of kidbean called Daidsu. Used for making Soye* or Indian Ketchup. See Kaempfer, Amoenitatis, 837.

"* The method of preparing East-India Soye or India Ketchup. Take a certain measure, for instance a gallon, of that sort of kidney-beans, called Daidsu by the Japonese, and Caravances by the Europeans; let them be boiled till they are soft; also a gallon of bruised wheat or barley, (but wheat makes the blackest Soye) and a gallon of common salt. Let the boiled caravances be mixed with the bruised wheat, and be kept covered close a day and a night in a warm place, that it may ferment. Then put the mixture of the caravances and wheat, together with the gallon of salt, into an earthen vessel, with two gallons and a half of common water, and cover it up very close. The next day stir it about well with a battering machine or mill (Rutabulum) for several days, twice or thrice a day, in order to blend it more thoroughly together. This work must be continued for two or three months, then strain off and press out the liquor, and keep it for use in wooden vessels; the older it is the clearer it will be, and of so much more value. After it is pressed out, you may pour on the remaining mass more water, then stir it about violently, and in some days after you may press out more Soye."

Note 1. This is the earliest American document seen (Dec. 2005) that uses the term "Dolichos soja" or the word "Daidsu" or "kidbean" to refer to the soybean.

Note 2. This is the earliest English-language document seen (April 2012) that uses the word "Soye" to refer to soy sauce, or the term "East-India Soye" or the term "India Ketchup" to refer to soy sauce from the East Indies, probably the Dutch East Indies (today's Indonesia). The ideas that soy sauce is a type of ketchup, and that this soy sauce comes from the Indies (India) are extremely interesting in trying to understand the origin of the word "ketchup" (regardless of spelling) and the early relationship between soy [sauce] and ketchup.

Note 3. This is the earliest English-language document seen (April 2012) that uses the term "bruised wheat or barley" in connection with the process for making soy sauce. This term and this descriptive recipe would be repeated in more than 20 publications–even though the recipe will not work, since it contains no koji, and many must have wondered just how they are supposed to make "bruised wheat or barley."

Note 4. John Ellis (ca. 1705-1776), an Irish naturalist living in London, was active in studying the plants of the American colonies and in introducing new plants to them. He was also a commercial agent, representing a number of American colonies in London. In 1769 Ellis was the commercial agent for West Florida in London. Notice that his is a list of plants "that may be useful in America." He does not say they are already growing in America.

Note 5. Ellis does not mention koji (grains or beans covered with a white mycelium of *Aspergillus* mold), and does not understand its importance in making soy sauce. Kaempfer, from whom Ellis got his instructions for preparing soy sauce, did not mention koji either in connection with soy sauce. However Kaempfer did mention *koos* (by which he probably meant koji), in the previous paragraph of his 1712 classic, in which he described how to make miso.

Note 6. This is the earliest English-language document seen (March 2006) that uses the word "Caravances" (using this or any related spelling) to refer to soybeans.

Note 7. Also included in Ellis's catalog are: Safflower, *Sesamum Orientale* [sesame seeds], locust tree or St. John's Bread (*Ceratonia Siliqua*), true opium poppy, tallow tree of China, true rhubarb, sago palm-tree, true bamboo cane, East India mango-tree, paper mulberry tree, arnotto [anatto], etc.

Note 8. This is the earliest English-language document seen (Aug. 2007) that uses the word "Sesamum" or the term *Sesamum Orientale* to refer to sesame seeds, or that gives their scientific name; it says (p. iii): "Latin name: *Sesamum Orientale*. 2d Ed. L. Sp. [2nd edition of Linnaeus' *Species plantarum*]: p. 883. English names: Oyly grain.

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Observations: Propagated in the Levant [countries of the eastern Mediterranean] for oyl, which does not soon grow rancid by keeping."

Note 9. William Stork, a German botanist and member of the Royal Society (London), had this treatise published in London as a promotion of Florida as an attractive place for settlers by describing the climate, soil, flora, and fauna. He emphasized its agricultural potential for cultivating rice, cotton, silk, sugar, and other profitable crops. According to Prof. Ted Hymowitz (March 2006), Stork lived in St. Augustine, Florida, in 1765, and then went to England. Address: [England].

220. *Georgia Gazette* (*Savannah*). 1770. Savannah, April 25. No. 342. April 25. p. 3, col. 1.

• ***Summary:*** "Entered for exportation at the Custom-House in Savannah, from the 5th day of January, to the 5th day of April, 1770... Sago, 2642 lb. Soy [sauce], 13½ doz. [dozen]... Hemp, 660 lb." Note: Sago powder is made from the root of a sweet potato.

221. Bowen (Samuel). 1770. Classified ad: By the King's Royal Patent, granted to Samuel Bowen, for his sago powder, soy, and vermicelli. *Newport Mercury* (*Rhode Island*). June 4. p. 4.

• ***Summary:*** The text of this ad is the same as that with the same title published on 30 Nov. 1768 in the *Georgia Gazette*, except for the last paragraph, which reads: "The Sago Powder and Soy [sauce] may be had at Mr. Jacob Polock's Store on the Long Wharf and at Mr. Nathaniel Bird's in Thames-Street, Newport" [Rhode Island].

This ad also appeared in the July 9 issue of this newspaper (p. 3).

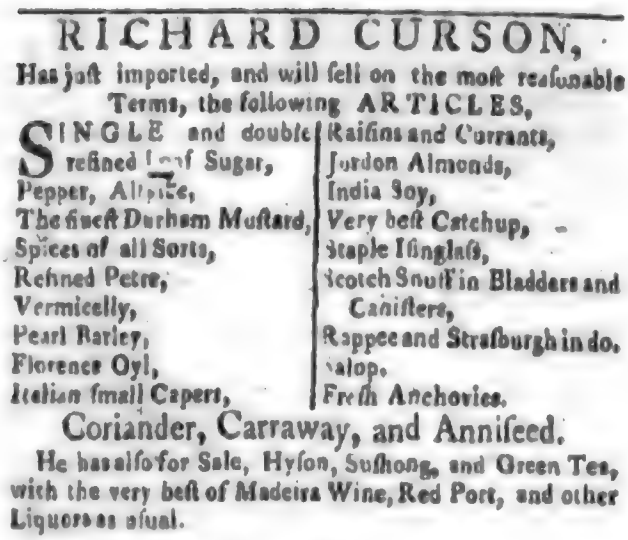
Note: This is the earliest document seen (Aug. 2011) concerning soybean products (soy sauce) in Rhode Island. This document contains the earliest date seen for soybean products in Rhode Island (June 1770); soybeans as such have not yet been reported.

222. Curson (Richard). 1770. Classified ad: Has just imported and will sell on the most reasonable terms, the following articles.... *New-York Gazette; and the Weekly Mercury* (*New York City*). Nov. 26. p. 3.

• ***Summary:*** "... Single and double refined Loaf Sugar, Pepper, Allspice, the finest Durham Mustard,... Vermicelly [Vermicelli], Pearl Barley, Florence Oyl, Italian small Capers, Raisins and Currants, Jordon [Jordan] Almonds, India Soy [sauce], very best Catchup, Staple Isinglass,..."

Note 1. This ad also appeared in the Dec. 3 (p. 4), Dec. 10 (p. 3), Dec. 17 (Supplement p. 1), and Jan. 7 (1771, Supplement p. 1) issues of this newspaper.

Note 2. "Florence Oyl" refers to olive oil.



RICHARD CURSON,

Has just imported, and will sell on the most reasonable Terms, the following ARTICLES,

SINGLE and double refined Loaf Sugar,
Pepper, Allspice,
The finest Durham Mustard,
Spices of all Sorts,
Refined Petre,
Vermicelly,
Pearl Barley,
Florence Oyl,
Italian small Capers,
Raisins and Currants,
Jordon Almonds,
India Soy,
Very best Catchup,
Staple Isinglass,
Scotch Snuff in Bladders and Canisters,
Rappee and Strasburgh in do.
Salop,
Fresh Anchovies.

Coriander, Carraway, and Anniseed.

He has also for Sale, Hyson, Sushong, and Green Tea, with the very best of Madeira Wine, Red Port, and other Liquors as usual.

223. Amiel (John). 1770. Classified ad: At his store in Smith-street,... *New-York Gazette; and the Weekly Mercury* (*New York City*). Dec. 17. p. 4.

• ***Summary:*** "... English double and single refin'd Sugars. America, lump, and muscavado Sugars... Olives, Capers, Anchovies, Florence oyl, Ketchup, India soy [sauce], Oatmeal,..."

This ad also appeared in the Jan. 14 (1771, Supplement p. 1) issue of this newspaper.

Note 1. John Amiel and his son ran more ads for soy sauce in America before 1780 that anyone else.

Note 2. "Muscavado: Unrefined sugar; the raw material from which loaf and lump sugar are procured by refining. Muscovado is obtained from the juice of the sugar cane by evaporating and draining off the liquid part called melasses" [molasses] (*Webster's Dictionary*, 1828). Address: Smith-street.

224. Bradley, Martha. 1770. The British housewife: or, The cook, housekeeper's, and gardiner's companion... 2 vols. London: Printed for S. Crowder and S. Woodgate. See p. Vol. 1, p. 6. Microform: History of women, reel 16, no. 89.

• ***Summary:*** Chapter II, titled "Of foreign Articles pickled, or otherwise preserved" begins: "Next to the Provisions themselves, the Cook will have Occasion to recollect that what those Things are which serve to give them Flavour, or to eat with them as Additions in Sauce... Of these there is a vast Number, but the greater part of them are prepared at Home. Some we receive from other Countries. The former Kind will be treated of hereafter in their Places, according to the Times they are in Season.

"The latter, or foreign, we shall speak of here. These are principally six, Anchovies, Capers, Caviar, Cayan Pepper, Mangoes, and Soy [sauce]. Of these we shall give some Account..."

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Note: There are subsequent articles on Anchovies, Capers, Caviar, and Cayan Pepper, but none on Mangoes, or Soy. Address: Late of Bath [England].

225. Ellis, John. 1770. Directions for bringing over seeds and plants, from the East-Indies and other distant countries, in a state of vegetation: Together with a catalog of such foreign plants as are worthy of being encouraged in our American colonies for the purposes of medicine, agriculture and commerce. London: Printed and sold by L. Davis. 41 p. 25 cm. [1 ref]

• ***Summary:*** In this, his first booklet, Ellis tells how to pack seeds to prevent them from spoiling on long sea voyages. He depended especially on packing the seeds in beeswax. One page (26) is a 4-column table in which numerous plants are listed under the following column headings: (1) The "Latin names"–genus and species. (2) "2d Ed. Lin. Sp."–The page on which this plant is mentioned in the 2nd ed. of Linnaeus' *Species Plantarum*. (3). English names. (4) Observations.

The last entry is: "Dolichos soja Linn. Lin. Sp. 1023. A kind of kidney-bean called Daidsu. Used for making Soye* or India Ketchup. See Kæmp. Amoenitat. [Kaempfer Amoenitatis], 837.

"* The method of preparing East-India Soye or India Ketchup.

Take a certain measure, for instance a gallon, of that sort of kidney-beans, called Daidsu by the Japonese, and Caravances by the Europeans; let them be boiled till they are soft; also a gallon of bruised wheat or barley, (but wheat makes the blackest Soye) and a gallon of common salt. Let the boiled caravances be mixed with the bruised wheat, and be kept covered close a day and a night in a warm place, that it may ferment. Then put the mixture of the caravances and wheat, together with the gallon of salt, into an earthen vessel, with two gallons and a half of common water, and cover it up very close. The next day stir it about well with a battering machine or mill (Rutabulum) for several days, twice or thrice a day, in order to blend it more thoroughly together. This work must be continued for two or three months, then strain off and press out the liquor, and keep it for use in wooden vessels; the older it is the clearer it will be, and of so much more value. After it is pressed out, you may pour on the remaining mass more water, then stir it about violently, and in some days after you may press out more Soye."

Note 1. This information by Ellis, in a different context but in identical form and with only a few words changed, first appeared in Stork 1769.

Note 2. John Ellis (ca. 1705-1776), an Irish naturalist living in London, who was active in studying the plants of the American colonies and in introducing new plants to them. He was also a commercial agent, representing a number of American colonies in London.

226. Young, Arthur. 1770. A six months tour through the north of England: containing, an account of the present state of agriculture, manufactures and population, in several counties of this kingdom:... Vol. 4 of 4. London: Printed for W. Strathan.... Also in 1770: Dublin: Printed for P. Wilson.... See letter XLIII (starting p. 381).

• ***Summary:*** On page 587 Young starts a list of the towns where he spent the night, the name of the inn where he stayed, and brief comments. Page 590-91: "*Glenwelt*. Angel. Armstrong's. Very civil, but not clean, extremely cheap. Boiled fowl with catchup sauce, and roast potatoes 8*d*. a head."

Note 1. He begins the list by observing (p. 587): "It is of consequence to know, that in the remotest parts of the kingdom a traveller will meet a reception, in most respects different from what he will find in foreign countries; a decent bed; clean sheets; plenty of fewel [fuel]; wholesome provisions; and generally a civil landlord. As to the prices at some of the following places, I add them as a matter of curiosity, to show, that the north *yet continues, beyond all comparison*, cheaper than the south, in most of the points in which an inn can indicate it."

Note 2. This book was also reprinted in Dublin in 1770 in three volumes. The exact same quotation appears in Vol. 3, p. 383 (Letter XLIII). Address: [England].

227. Murphy (George). 1771. Classified ad: Pickles and Catsup... *Public Register or the Freeman's Journal* (*Dublin, Ireland*). Jan. 1. p. [4], col. 1.9.

• ***Summary:*** "... of the best Colour and Flavour, are sold by George Murphy, at the Ship and Sugar-Loaf in Capel-street, opposite A[?]ley-street,–He has a choice Parcel of Pickled Mushrooms." Address: Ship and Sugar-Loaf, Capel-street [Dublin].

228. Curson & Seton. 1771. Classified ad: Have just imported in the Ship Beulah, from London, a fresh assortment of groceries,... *New-York Gazette; and the Weekly Mercury* (*New York City*). March 25. p. 3.

• ***Summary:*** "New raisins and currants, nutmegs, mace, cinnamon, cloves, Florence oyl,... Italian small capers, catchup, soy [sauce], sago, salup, rappee and Scotch snuffs,..."

This ad also appeared in the April 1 (p. 1) and April 15 (Supplement p. 2) issues of this newspaper.

229. Curson and Seton. 1771. Classified ad: Have just imported per the Earl of Dunmore, from London,... a full assortment of groceries,... *New-York Gazette; and the Weekly Mercury* (*New York City*). June 3. p. 2.

• ***Summary:*** "... White and brown sugar candy, Saltpætre [saltpeter], Soy [sauce] and ketchup,... French bur [burr] mill-stones."

This ad also appeared in the June 24, July 1, and July 8 issues of this newspaper (Supplement p. 1). Address:

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Hunter's Quay.

230. Martin (James). 1771. Classified ad: To be sold,... cheap for cash. *Newport Mercury* (*Rhode Island*). June 24. p. 3.
• ***Summary:*** "Pork in Barrels, dressed Deerskins, Indigo, Bowen's Sago Powder and Soy [sauce]: Inquire at Mr. John Miller's."

A larger version of this ad (with the same text except that the word "Rice" is added after "Indigo,") appeared in 1771 in the Aug. 19 (p. 4), Sept. 2 (p. 4), and Sept. 16 (p. 4) issues of this newspaper. As before, the location of James Martin's shop is not given.

In a search for "James Martin" or "Martin + soy" in the Early American Newspapers (EAN) database from 1771 to 1800 we can find no other records for this merchant in any state (actually in any British colony). So we cannot be sure that James Martin lived in Newport or in Rhode Island.

Talk with Prof. Ted Hymowitz, Univ. of Illinois. 2006. Aug. 1. The items sold by James Martin all came from the southern provinces. The soy [sauce] is clearly made by Samuel Bowen of Savannah, Georgia. The rice almost certainly was grown in Georgia or South Carolina. The pork was salt pork. Since Martin does not give his address in the ad, he was probably a merchant or a seaman who sold goods while sailing up and down the Atlantic coast. If a seaman / sailor, he would buy goods in the South, put them in his dunnage (the extra allowance of space for his personal baggage on the ship), then sell them in shops as he traveled north. Since he paid for the ads, he probably sold the goods on consignment.

More broadly: Although merchants in retail stores in port cities along the Atlantic seaboard advertised in early American newspapers, we don't know how they got their soy sauce. They could have gotten their Bowen Soy directly from Samuel Bowen (which Ted doubts) or from one of the many merchants or traders who sailed up and down the coast. Most of the trade among the British colonies of North America was along the waterways at this time. So these traders could have purchased his Bowen Soy from Samuel Bowen in Savannah (Georgia) or Charlestown (South Carolina), and taken it northwards by boat. A peddler might have appeared at a retail store and showed his wares. The shopkeeper would place his order, including perhaps some bottles of "Bowen Soy," and then he might have advertised his "Bowen Soy." Bowen's Soy was probably transported either by professional traders / agents going up and down the coast, or as dunnage (which was a major way goods were transported by water, including across the oceans).

231. Webster (George). 1771. Classified ad: Has for sale the following articles,... *New-York Journal; or, the General Advertiser* (*New York City*). Aug. 1. p. 403.
• ***Summary:*** "... Fine hyson, congo, Soushong, breakfast, green and bohea teas,...

Sorted pickles: Cucumbers, beans, peppers, mushrooms, buttons, Walnuts, peaches, mangoes, Nasturtium and onions. Ketchup and India soy [sauce]. Florence oil in betties and bottles."

Note: The meaning of the word "Ketchup" is unclear. Since the word meaning "soy sauce" in Malay / Indonesian is pronounced that way (but also spelled in various other ways, such as ketchap or kecap) it probably refers to soy sauce made in the Dutch East Indies (especially today's Indonesia). However it could possibly refer to a similar product from southern China or elsewhere in Southeast Asia. If this Ketchup was soy sauce made in the Dutch East Indies, was it the sweet, thick type (*kecap manis*) made only in Indonesia, or the salty type (*kecap asin*) made by Chinese throughout Asia? In early American newspapers, advertisements in which both the word "soy" [sauce] and the word "ketchup" appear can be grouped into three periods: (1) From 1771 to 1790–When the word "Ketchup" is mentioned, it appears without an adjective preceding it, immediately before or after the word "soy." For example: "Ketchup and India soy." "India soy and ketchup." "Catsup and India Soy" (1785). (2) From 1781 to 1783–"Ketchup" still appears without an adjective preceding it, and it is mentioned near the word "soy" but not immediately before or after it. For example: "Ketchup, French and Spanish olives, Salad oil, India soy [sauce],..." (3) 1783 on–Ketchup has an adjective preceding it, indicating that it was probably a less-expensive imitation of soy sauce imported from the Dutch East Indies. For example: Mushroom Ketchup."

This ad also appeared in the Aug. 8 (p. 405) and Aug. 15 (p. 412) issues of this newspaper. Address: Grocer, Next door to Alderman Lott's, in Leary's-Street.

232. Amiel (John). 1771. Classified ad: Has imported in the ship Lady Gage, Capt. Kemble from London;... *New-York Gazette; and the Weekly Mercury* (*New York City*). Oct. 14. p. 4.
• ***Summary:*** "... Double refin'd loaf Sugar. Single, Do. Do. [ditto = refined loaf sugar]... White and brown sugar candy... India soy [sauce] and catchup. Fine French and Spanish olives, by the case, jar, or bottles,... Wholesale and retail,..."

Note: This is the earliest document seen (Sept. 2007) that mentions "olives" or "Spanish olives." Address: Smith-street.

233. Amiel (John). 1771. Classified ad: Has imported in the Ship Lady Gage, Capt. Kemble from London;... *New-York Journal; or, the General Advertiser* (*New York City*). Oct. 14. p. 469.
• ***Summary:*** "... White and brown sugar candy, India soy [sauce] and ketchup. Fine French and Spanish olives. Pickled walnuts,..."

This ad also appeared Oct. 31 (p. 476), Nov. 14 (p. 491), Dec. 12 (p. 514), Dec. 19 (p. 517), and Jan. 9 (1772, p. 532)

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issues of this newspaper. Address: Smith-Street.

234. Jarvis (James and Arthur). 1771. Classified ad: Have just open'd a variety of glass, viz. *New-York Gazette: and the Weekly Mercury* (*New York City*). Dec. 16. p. 1.
• ***Summary:*** "... root glasses, plain and with loops; blue and white soy crewets and stands, with gilt labels; common do. elegant cut sallad bowls with trifle dishes..."

This ad also appears in the Jan. 6 (p. 3) issue of this newspaper. The "soy crewets" are used at the table to dispense soy sauce. Address: Glass and Earthen Store, Between Burling's and Beekman's Slips, in the Fly.

235. Ellis, John. 1771. A catalogue of such foreign plants as are worthy of being encouraged in our American colonies for the purposes of medicine, agriculture and commerce. Philadelphia, Pennsylvania. From a pamphlet by John Ellis, F.R.S. Presented by the Honorable Thomas Penn, Esq. to the American Philosophical Society thro' the hands of Samuel Powell, Esq. See p. 255-66. 25 cm. *
• ***Summary:*** Note 1. This pamphlet is mentioned in the minutes of the "Early proceedings of the American Philosophical Society for the Promotion of Useful Knowledge" on 1770 Oct. 19. However Ellis is not mentioned as its author (Lesley 1884, p. 58). It was then published in the Transactions of the American Philosophical Society, held at Philadelphia, for Promoting Useful Knowledge, 1771 (or 1772), i, 255-66 (See p. 259, Dolichos soja Linn.).

Note 2. John Ellis (ca. 1705-1776), an Irish naturalist living in London, was active in studying the plants of the American colonies and in introducing new plants to them. He was also a commercial agent, representing a number of American colonies in London. He may have published this pamphlet in England.

236. Eckeberg, Charles Gustavus [Ekeberg, Karl Gustaf]. 1771. A short account of the Chinese husbandry. In: Peter [Per] Osbeck. 1771. A Voyage to China and the East Indies... Translated from the German by John Reinhold Forster. Vol. 2. London: Printed for Benjamin White. 367 p. See p. 267-317. [Eng]
• ***Summary:*** For details, see Osbeck 1771. Address: Captain of a ship in the Swedish East India Company's service.

237. Osbeck, Per. 1771. A voyage to China and the East Indies, by Peter Osbeck ... Together with a voyage to Suratte, by Olof Toreen ... and an account of the Chinese husbandry, by Captain Charles Gustavus Eckeberg. Translated from the German by John Reinhold Forster. Vol. 1. London: Benjamin White. See vol. 1, p. 73, 77, 218, 253, 304-05. Original edition published in 1757 in Swedish. [Eng]
• ***Summary:*** Note 1. All of the following passages were written in 1751.

In Canton, China: "Fish cut to pieces were carried about for sale on little tables, which hung on poles as described above: the same was done with bacon, and *Fdaufu* [tofu], a dish which is like our sweet cheese, but which was prepared of *Chinese* beans (*Dolichos Chinensis*)" (p. 218).

Note 2. This is the earliest English-language document seen (Feb. 2004) that uses the word "Fdaufu" or "fdou-fu" to refer to tofu.

China: "Soya, or the *Tyong-yao* [*jiangyou*] of the *Chinese*, (*Dolichos Soja* Linn.) the *Japan Soya* is better and dearer than the *Chinese*. For its preparation see *Kæmph.* Amoen. p. 839, and likewise *Soja Dolichos, Flor. Zeylan.* 354. It was sold the katty for three kanderins" (p. 253).

Note 3. This is the earliest English-language document seen (Feb. 2007) that uses the word "Soya" in connection with the soybean or with soy sauce.

Note 4. This is the earliest English-language document seen (April 2012) that uses the word "Japan Soya" to refer to soy sauce, probably made in Japan. As of Feb. 2012, the term "Japan Soya" (referring to soy sauce) appears in this database three times from 1771 to 1907.

"Fdau-fu, or *Tou-fu* [tofu], which has been mentioned on page 218, was sold by pieces in several places. The *Chinese* shewed me a sort of small pease, which they call *U-ang-teo* [huangdou = "yellow bean"], and of which cheese [tofu] is said to be made, though the name gives reason to conjecture that it has been made from *Tao*, which are the *Chinese* beans, or *Callvanses.*" (p. 305).

Non-soy: "Spain, March the 6th, 1751. On my arrival at Cadiz [a seaport and province in southwest Spain], I saw the *Hedysarum coronarium*, or French honey suckle, in plenty. The Spaniards call it *Soya*, and the French *Saint Foin* (Note: What we call St. Foin in England is *Hedysarum Onobrychis;* the *Hedysarun Coronarium* is planted for ornament in our gardens); it was brought to town in great bundles as food for the cattle (p. 77).

Note 5. This plant called Soya in Spain is probably not the soybean.

"Callvanses (*Dolichos Sinensis*) (Footnote: *caule erecto ramosissimo, pedunculis erectis multifloris, leguminibus pendulis; Chinensibus Tao*). They are planted on dry hills, and treated like dwarf kidney beans. They do not grow high, and therefore do not much want to be supported; this however is done in some places, and especially where they stand in the open fields... These beans are of the smallest kind, and are quite white except the germen [hilum], which is black, but white in the middle. The *Europeans* buy them in great quantities, and make use of them in their return from China instead of pease. They have thin husks and are very palatable. A katty, which answers to a pound we use for grocery, was sold for two kandarin, or about three stivers" (p. 304). [Note 6. According to *Index Kewensis* and *Hortus III, Dolichos sinensis* (later named *Vigna sinensis* and now named *Vigna unguiculata subsp. sesquipedalis*) is the yard-

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long bean or asparagus bean, a subspecies of the cowpea.]

"Lack-Tao [Luk Taw or mung bean] (Footnote: *Phaseolus Max, Mungo Persarum*) is the *Chinese* name of another sort of beans, or pease, which are much less than our wild vetches. The plant itself grows like the former... With these pease they feed the parrots. Among the many seeds which I brought to *Sweden*, was a kind of small green pease, which was so nicely eat up by the worms at my arrival, that nothing but the husks were left, which served as a nidus [nest or breeding place] to the little beetles, with which they were almost filled" (p. 304-05).

The author: Peter Osbeck, a Swede, lived 1723-1805. He was a pupil of the great Linnaeus and he generally used botanical terms used by Linnaeus. In 1750 he set out on a journey to China as chaplain to a Swedish East Indiaman, *The Prince Charles*, which visited Java and southern China, and returned to Gothenburg, Sweden, on 26 June 1752. Osbeck was a zealous naturalist and brought home a rich collection of natural objects, chiefly Chinese specimens, for during his long stay at Whampoa and Canton he had ample opportunity to collect. All of his collections he placed in the hands of Linnaeus, who described the plants in his *Species Plantarum*, published a year after Osbeck's return. Osbeck's original account of his voyage appeared in 1757 in his native language, Swedish, titled *Dagbok öfver en ostindisk resa*.

The book: Linnaeus is indebted to this book for the greater part of the Chinese plants and animals he described. All of the 244 Chinese specimens collected by Osbeck belong to the neighborhood of Canton. Most of the plants Linnaeus knew from China were those collected by Osbeck, but Linnaeus seems to have been under the mistaken impression that Osbeck's plants came from India, a place that Osbeck never visited. Strangely, most of the systematic botanists who compiled general systematic works on botany after Linnaeus (Lamarck, Willdenow, Sprengel, de Candolle, Kunth, etc.) incorrectly referred to Linnaeus rather than to his source, Osbeck (Bretschneider 1880, p. 88-91).

Bretschneider (1880, p. 116) notes: "The third account of Swedish naturalists in China translated by John Reinhold Forster, is a treatise on *Chinese Husbandry* by Charles Gust. Eckeberg. Eckeberg was Captain of a Ship in the Swedish E.I. [East India] Company's service. We know from Sparrmann's brief account of his voyage to China that Eckeberg was captain of the Navarcha and that his ship arrived in Canton Aug. 24 in 1766. It was at this place that Eckeberg made his observations on Chinese husbandry, on which subject he subsequently published a very interesting account, of which I shall give an abstract. It seems that Eckeberg had previously visited Canton, about 1762."

Note 7. This is the earliest English-language document seen (Oct. 2010) that uses the word "husbandry" in connection with animals. Address: A Swede and pupil of Linnaeus, he traveled in China, arriving in 1751.

238. Amiel (John). 1772. Classified ad: At his store in Smith-Street sells... *New-York Journal; or, the General Advertiser* (*New York City*). April 30. p. 609.

• ***Summary:*** "... Jordon [Jordan] almonds, almonds in shell, best Durham mustard, loose, do. [ditto = Durham mustard] in bottles, India soy [sauce], and Ketchup, Italian and other capers, olives, anchovies, Florence [Italy] oyl..."

This ad also appeared in the May 7 (p. 615) issue of this newspaper, and in the May 18 (Supplement p. 2) issue of the *New-York Gazette; and the Weekly Mercury*. Address: Smith-Street.

239. Smith Richards. 1772. Classified ad: Grocer and confectioner... *Rivington's New-York Gazetteer* (*New York City*). May 13. p. 2.

• ***Summary:*** "... Jordon [Jordan] almonds, almonds in the shell, best Durham mustard, loose, do. [ditto = Durham mustard] in bottles, India soy [sauce] and ketchup,..."

An illustration shows a tea canister (on which is written "Hyson, Souchong, Congo") flanked by two bullet-shaped sugar loaves. This ad also appears in 1773 in the May 13 (p. 2), June 17 (Supplement p. 2), and Sept. 9 (p. 4) issues of this newspaper. Address: At the Sign of the Tea Cannister and two Sugar Loaves, Queen-street.

240. Amiel (John). 1772. Classified ad: Has just imported, a complete assortment in the grocery way,... *New-York Journal; or, the General Advertiser* (*New York City*). May 14. p. 619.

• ***Summary:*** "... Florence oil, pepper, India soy [sauce] and ketchup. Almonds..."

This ad also appeared in the May 21 (p. 628) and May 28 (p. 636) issues of this newspaper. Address: Smith-Street.

241. Roosevelt (John J.). 1772. Classified ad: Has for sale at his store... imported in the last vessels from Europe, the most elegant and extensive variety... *New-York Journal; or, the General Advertiser* (*New York City*). June 11. p. 647.

• ***Summary:*** "Jelly glasses. Soy cruets. Carroffs [Carafes]. Wine and water glasses..."

This ad also appeared in the June 18 (p. 649), the June 25 (p. 659), July 2 (p. 661), July 9 (p. 670), and July 16 (p. 678) issues of this newspaper. A slightly revised version also appeared in 1773 in *Rivington's New-York Gazetteer* (Dec. 16, p. 4). Address: Maiden-Lane.

242. Tuder (Samuel). 1772. Classified ad: Has just imported by the Samson, Capt. Coupar, from London, and has for Sale,... *New-York Journal; or, the General Advertiser* (*New York City*). Aug. 13. p. 699.

• ***Summary:*** "... Pearl barley. Soy [sauce] and ketckup [sic, ketchup]. White and brown sugar candy."

This ad also appeared in the Aug. 20 (p. 703), Aug. 27 (p. 712), and Sept. 3 (p. 719) issues of this newspaper. It also

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appeared in the Sept. 7 and 14 and Oct. 12 and 19 issues of the *New-York Gazette; and the Weekly Mercury*. Address: Burnet-Street, near the Fly-Market.

243. Clark (John, Jun. [Jr.]). 1772. Classified ad: Begs leave to acquaint his friends and the publick, that he has opened a grocery shop,... *New-York Gazette; and the Weekly Mercury* (*New York City*). Aug. 17. p. 1.
• ***Summary:*** "... Florence oyl, salt petre, catchup, soy [sauce], nutmegs, mace, cinnamon, cloves, sago, pearl and Scotch barley, rice, indigo,..." This ad also appeared in the Aug. 24 (Supplement p. 2) and Sept. 7 (Supplement p. 2) issues of this newspaper. Address: At the upper end of Leary's-street, opposite Mr. John Leary's.

244. Amiel (John). 1772. Classified ad: Has just imported in the Earl of Dunmore, Capt. Lawrence,... *New-York Journal; or, the General Advertiser* (*New York City*). Oct. 1. p. 741.
• ***Summary:*** "... Fine Florence oil. India soy [sauce] and ketchup. Fine Turkey figs..."

This ad also appeared in the Oct. 10 (p. 748) issue of this newspaper, and in the Nov. 2 (Supplement p. 2), and Nov. 9 (Supplement p. 1) issues of *New-York Gazette; and the Weekly Mercury*. Address: Smith-Street.

245. **Product Name:** [Kihaku Shoyu].
Foreign Name: Kihaku Shôyu.
Manufacturer's Name: Mogi Shichirouemon.
Manufacturer's Address: Noda, Japan.
Date of Introduction: 1772.
New Product–Documentation: Noda Shoyu K.K. (Morio ICHIYAMA, ed). 1940. Noda Shoyu K.K. Nijunen-shi [Twenty-year history of Noda Shoyu, Inc.]. p. 467. The Kihaku brand of shoyu (of which the logo is shown) was introduced in Anei 1 (1772).

Mark Fruin. 1983. Kikkoman: Company, Clan, and Community. p. 18. "By 1768 the first of this series of marriage-business alliances, that of Takanashi Hyôzaemon's son to Mogi Shichizaemon's daughter, was recognized as a separate household in the Mogi line. By 1772 Mogi Shichirôuemon, head of the newly formed Kashiwa household, had accumulated enough know-how, experience, and capital to disassociate himself formally from his paternal household and establish himself as an independent householder and shoyu brewer. By 1781, therefore, when a shoyu manufacturing guild was established in Noda, two of the original seven members were Mogis (Shichizaemon and Shichirôuemon); by 1782, one year later, Mogi Saheiji, head of the oldest branch of the Mogi line, had added shoyu fermentation to his already established ventures in grain sales and miso manufacture, making the Mogi's proportion of representation in the guild three out of seven. By 1822 two more Mogi families had been added, and a Mogi majority within the guild was secured." Page 73 notes that by 1909 the four major brands manufactured by the Noda shoyu cartel were Kikkoman, Kihaku, Kamigata (Joju), and Kushigata. Page 96-97 describes the struggle between the Kikkoman and Kihaku brands as the one to represent the new Noda Shoyu Co.

246. Ellis, John. 1772. A catalogue of such foreign plants as are worthy of being encouraged in our American colonies for the purposes of medicine, agriculture, and commerce. *Transactions of the American Philosophical Society* 1:255-66. See p. 259. (Held at Philadelphia, for Promoting Useful Knowledge). [1 ref]
• ***Summary:*** A facsimile copy of a catalogue by John Ellis is reproduced in the *Transactions of the American Philosophical Society, Held at Philadelphia for Promoting Useful Knowledge*. It begins: "From a pamphlet by John Ellis, F.R.S. [Fellow of the Royal Society]. Presented by the Honorable Thomas Penn, Esq; to the American Philosophical Society thro' the Hands of Samuel Powell, Esqr."

In the section title 'Foreign plants' (p. 327), numerous plants are listed in a 4-column table: The Latin name, the page on which it is mentioned in the 2nd ed. of Linnaeus' Species Plantarum, the English names, and observations.

"Dolichos soja Linn. Lin. Sp. 1023. A kind of kidbean called Daidsu. Used for making Soye* or Indian Ketchup. See Kaempfer, Amoenitat.

"* The method of preparing East-India Soye or India Ketchup. Take a certain measure, for instance a gallon, of that sort of kidney-beans, called Daidsu by the Japonese, and Caravances by the Europeans; let them be boiled till they are soft; also a gallon of bruised wheat or barley, (but wheat makes the blackest Soye) and a gallon of common salt. Let the boiled caravances be mixed with the bruised wheat, and be kept covered close a day and a night in a warm place, that it may ferment. Then put the mixture of the caravances and wheat, together with the gallon of salt, into an earthen vessel, with two gallons and a half of common water, and cover it up very close. The next day stir it about well with a battering machine or mill (*Rutabulum*) for several days, twice or thrice a day, in order to blend it more thoroughly together. This work must be continued for two or three months, then strain off and press out the liquor, and keep it for use in wooden vessels; the older it is the clearer it will be, and of so much more value. After it is pressed out, you may pour on the remaining mass more water, then stir it about violently, and in some days after you may press out more Soye."

Note 1. This is the earliest American document seen that uses the term "Dolichos soja" or the word "Daidsu" to refer to the soybean.

Note 2. John Ellis (ca. 1705-1776), an Irish naturalist living in London, was active in studying the plants of the American colonies and in introducing new plants to them. He was also a commercial agent, representing a number of American colonies in London. In 1770 Ellis was the

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commercial agent for West Florida in London.

Note 3. Ellis does not mention koji (grains or beans covered with a white mycelium of Aspergillus mold), and does not understand the importance of koji in making soy sauce.

Note 4. This document was first cited by Hymowitz. 1986. Bibliography of early, previously uncited publications on soybeans in the United States. 2 p. Unpublished.

Note 5. Also included in the catalog are: Safflower, *Sesamum Orientale* [sesame seeds], locust tree or St. John's Bread (*Ceratonia Siliqua*), true opium poppy, tallow tree of China, true rhubarb, sago palm-tree, true bamboo cane, East India mango-tree, paper mulberry tree, arnotto [anatto], etc.

Note 6. This is the earliest English-language document seen (July 2003) that refers to sesame seeds or gives their scientific name; it says (p. 256): "Latin name: *Sesamum Orientale*. 2d Ed. L. Sp. [2nd edition of Linnaeus' *Species plantarum*]: p. 883. English names: Oily grain. Observations: Propagated in the Levant [countries of the eastern Mediterranean] for oil, which does not soon grow rancid by keeping."

247. Smith, Mary. 1772. The complete house-keeper, and professed cook. Calculated for the greater ease and assistance of ladies, house-keepers, cooks, &c. &c. Containing upwards of seven hundred practical and approved receipts,... Newcastle, England: Printed by T. Slack, for the author. 398 p.

• ***Summary:*** Soy sauce is called for as an ingredient in the following recipes: Pigeons in scallop shells (p. 114; "add to it a little butter and flour, and a spoon full of Indian soy, let it just simmer,..."). A peregoe turkey (p. 130-31; "put it in a stew-pan with some good brown gravy, a quarter of a pound of butter, a little flour, a little India soy or catchup, some lemon juice,..."). Note 1. India soy and catchup are viewed as being interchangeable. The word "India" probably refers to the East Indies–today's Indonesia.

A calf's head a la turtle (p. 141; "put it in a stew-pan with a quart of brown gravy, one anchovy, some Indian soy, Cayen [cayenne] pepper, salt, mace,...").

To make a calf's head hash (p. 141; "put it in a stew-pan with some good brown gravy, half an anchovy, three blades of mace, a few mushrooms, a few force-meat balls, some hard eggs, a little Indian soy, and Cayen pepper,...").

To make brown veal collops (p. 156; "put them into a stew-pan with some brown gravy, a bit of anchovy, a little butter and flour, a little Indian soy, or catchup, some force-meat balls, truffles, morels, and a little Cayen pepper..."). Note 2. The word "collop," which refers to slices of meat (typically veal or bacon) or fish, may derived from the French *escalope* or the Swedish *kallop*. In Elizabethan times, Shrove Monday, also known as Collop Monday, was traditionally the last day to cook and eat meat before Lent, which was then a period of fasting from meat.

Veal olives (p. 156-57; "put some brown gravy in a stew-pan with a little catchup, a few pickled mushrooms and force-meat balls, Indian soy and Cayen pepper,..." Note 3. Both catchup and Indian soy are used.

Veal sweet-breads *A-la-daube* (p. 158-59); "when they are done, strain the liquor into a stew-pan and skim off the fat, put to it a spoon full of India soy and a little lemon juice, thicken it up with a little butter and flour,..."). Note 4. *Daube* means "stew" in French.

Note 5. Note that soy sauce is called both "Indian soy" and "India soy." Address: Newcastle, Late House-Keeper to Sir Walter Blackett, Bart. and formerly in the Service of the Right Hon. Lord Anson, Sir The Sebright, Bart. and other Families of Distinction, as House-Keeper and Cook.

248. *South-Carolina Gazette* (*Charleston*).1773. Classified ad: Bowen's patent sago,... Nov. 29. p. 3, col. 2.

• ***Summary:*** "So much and generally esteemed in the Royal Navy and the African trade, as an Antiscorbutic, and the only Cure for the Flux [diarrhea], sold by Z. [Zephaniah] Kingsley, at his Store in Bedon's Alley. Its Uses are so well known as to need no Recommendation, being approved of by the Royal Society, the Royal College of Physicians, and the Society for the Encouragement of Arts, Manufactures, and Commerce.–Its good Effects are likewise vouched by Captain Cooke, of His Majesty's Ship *Endeavour*, Mr. Banks and Dr. Solander, during their Voyage round the World in the same ship, as appears by their Report since their Return.

"Likewise to be Sold at the same Place, Bowen's Patent Soy [sauce]."

Note 1. This soy sauce was made in Georgia by Samuel Bowen.

A notice in the same newspaper of 23 June 1772 (p. 3, col. 1) states that Samuel Bowen arrived in Charles-town [Charleston], South Carolina, on the ship Montagu from London.

Note 2. This is the earliest document seen (Aug. 2011) concerning soybean products (soy sauce) in South Carolina. This document contains the earliest date seen for soybean products in South Carolina (Nov. 1773); soybeans as such had not yet been reported by that date.

Note 3. Ads with very similar text to this one subsequently appeared in the newspapers of several port cities where Bowen's sago and soy sauce were sold. Bowen apparently sent the ad with his product. But who paid for publication of the ad? The retailer, Bowen, or both? Whoever paid, this seems like an innovative marketing technique. Address: South Carolina.

249. A collection of scarce, curious and valuable pieces, both in verse and prose; chiefly selected from the fugitive productions of the most eminent wits of the present age. 1773. Edinburgh, Scotland: Printed by W. Ruddiman. [4] +

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iv + 412 p.
• ***Summary:*** One of the pieces is this book is adapted (with only small changes) from: Grimston, William Grimston. 1705. *The Lawyer's Fortune: or, Love in a Hollow Tree. A Comedy.* However seven words are spelled or capitalized differently.

On page 161 is a dialogue: "... and Mrs. Favourite the house-keeper makes these most important enquiries

"Fav. Mistress, shall I put any mushrooms, mangoes, or bamboons into the sallad?

"Bon. Yes, I prithee, the best thou hast.

"Fav. Shall I use ketchop or anchovies in the gravy?

"Bon. What you will."

Note: This book was edited by Walter Ruddiman (lived 1719-1781).

250. *Pennsylvania Chronicle* (*Philadelphia*). 1774. Classified ad: Bowen's sago,... Jan. 10-17. p. 421.
• ***Summary:*** "So much and generally esteemed in the Royal Navy and in the African Trade, as an Antiscorbutic, and the only Cure for the Flux [diarrhea], is, by special appointment, sold by sold by Speakman and Carter, chemists and druggists, on the North Side of Market-street, between Second and Third-streets, Philadelphia.

"The Uses whereof are so well known in England as to need no Recommendation, being approved of by the Royal Society, the Royal College of Physicians, and the Society for the Encouragement of Arts, Manufactures, and Commerce; by Dr. Fothergill, and several other Persons of Reputation.

"Its good Effects are likewise vouched by Capt. Cooke, of the King's Ship *Endeavour*, Joseph Banks, Esq.; and Dr. Solander, during their Voyage round the World in the same ship, as appears by their Report since their Return.

"N.B. At the same place may be had, Bowen's Patent Soy [sauce]."

Note: This ad first appeared on 29 Nov. 1773 in the *South-Carolina Gazette*. But key parts of the text have been changed here for a Philadelphia audience. This ad also appeared in 1774 in the March 7 (Supplement p. 2) and April 11 (Supplement p. 1) issues of *Dunlap's Pennsylvania Packet or, the General Advertiser* (Philadelphia).

251. Leary (John and William). 1774. Classified ad: At their grocery store,... have for sale the following articles, on the most reasonable terms, wholesale and retail. *New-York Gazette; and the Weekly Mercury* (*New York City*). Jan. 31. p. 2.
• ***Summary:*** "... Florence oyl, salt petre [salt-petre; saltpeter], isinglass, catchup, soy [sauce], nutmegs, mace, cloves..."

This ad also appeared in the Feb. 7 (p. 4) and Feb. 14 (Supplement p. 2) issues of this newspaper. And in the Feb. 10 issue (p. 4) of *Rivington's New-York Gazetteer*. Address: Opposite Messrs. Campbell and Gault's, in Maiden Lane.

252. *Georgia Gazette* (*Savannah*). 1774. Savannah, February 9. No. 540. Feb. 9. p. 2, col. 2.
• ***Summary:*** "Entered for exportation at the Custom House in Savannah, from the 10th last to the 5th January 1774:... Sago powder, 100 lb. Soy [sauce], 3 dozen bottles."

253. Amiel (John, jun. [Jr.]). 1774. Classified ad: Has imported in the ship Earl of Dunsmore, Captain Lawrence, from London, and for sale at the lowest rates, at his store in Smith-street,... *New-York Gazette; and the Weekly Mercury* (*New York City*). April 25. p. 2.
• ***Summary:*** "... Extraordinary fine sallad oyl, loaf sugar,... soft shelled almonds, India soy [sauce] and ketchup, orange flower water,..."

This ad also appeared in the May 2 (p. 4) and May 16 (Supplement p. 2) issue of this newspaper. Address: Smith-street.

254. Milbourn (William). 1774. Classified ad: Has just imported per the Earl of Dunmore, Capt. Lawrence,... *Rivington's New-York Gazetteer* (*New York City*). April 28. p. 2.
• ***Summary:*** "... Silver, ebony, and japan'd [japanned = lacquered or varnished] cruit frames, with neat cut silver top glasses, Neat small frames for soy [sauce], &c., Silver and metal watches,..." Address: In Dock-street, near Coenties Market.

255. *Georgia Gazette* (*Savannah*). 1774. Account of sundry goods entered for exportation at the port of Savannah, from the 15th November, 1773, (when the first vessel with rice of the crop 1773 was cleared out) to the 5th April, 1774. No. 552. May 4. p. 3, col. 1.
• ***Summary:*** "Ground nuts, 12 bushels. Sago powder, 7001 lb. Soy [sauce], 3 dozen quart bottles." Note 1. Samuel Bowen is exporting these products to England. Note 2. This is the earliest American document seen (Aug. 2005) that mentions both soy and peanuts.

256. *Georgia Gazette* (*Savannah*). 1774. Savannah, May 25. No. 555. May 25. p. 2, col. 2.
• ***Summary:*** "Entered at the Customhouse by Mr. Samuel Bowen, on board the Susannah, Capt. Clarke, bound for Cowes, 20,000 lb. of sago, 200 gallons of soy [sauce], and 200 lb. of vermicelli paste: And for the Society of Arts, by their orders, 1000 lb. of ground nuts, 500 lb. of benny [benne or sesame seeds], and a ten gallon keg of sassafras blossoms."

Note 1. Cowes is a port town on the northern tip of the Isle of Wight, off the southern coast of England, near Southampton and Portsmouth. The "soy" refers to soy sauce.

Note 2. This is the second earliest English-language document seen (July 2003) that refers to sesame seeds, which it calls benny. It is the earliest document seen (April 2012)

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concerning sesame seeds in connection with Samuel Bowen: he exported them and apparently grew them. Address: Savannah, Georgia.

257. *Felix Farley's Bristol Journal* (*England*).1774. For sale, a very elegant Stock of Plated Goods,... Cooper's-Hall in King-street, Bristol. June 4. p. 3, col. 1.
• ***Summary:*** "The Whole consisting of a beautiful Variety of: Tea Urns,... Crewet Frames with ground Glass Castors and Silver Tops: Soy ditto;..."

Note: This is an early reference to Soy Crewet [Cruet] Frames, plated metal frames used to hold bottles of soy sauce at the table. The frames are the property of a manufacturing company [unnamed], going to dissolve a partnership, consigned by the arbitrators to "J. Sketchley, Licensed and Sworn Broker and Auctioneer."

258. Coffin (Nathaniel and William). 1774. Classified ad: Imported from London, and to be sold cheap for cash, in fine order,... *Boston News-Letter.* Dec. 1, p. 3.
• ***Summary:*** "... French olives, Spanish ditto, Anchovies, Capers, Catchup, India Soy [sauce], Salid Oil, fine Mustard..."

This ad also appeared in the Dec. 5 (p. 4) and Dec. 12 (p. 4) issues of this newspaper.

Note: This is the earliest document seen (May 2011) concerning soybean products (soy sauce) in Massachusetts. This document contains the earliest date seen for soybean products in Massachusetts (June 1771); soybeans as such have not yet been reported. At least 24 different ads for soy sauce appeared in Boston newspapers before 1829–the year that soybeans first appeared in and were cultivated in Massachusetts! Address: King-street, near Oliver's Dock [Boston, Massachusetts].

259. *Georgia Gazette* (*Savannah*).1774. An account of the exports from the port of Savannah between the 5th April 5 and the 10th October, 1774. No. 585. Dec. 21, p. 3, col. 2.
• ***Summary:*** "Sago powder, 20,683 lb. [pounds]. Soy [sauce], 200 gallons. Ground nuts, 1000 lb. Vermicelli, 200 lb. Benny seed, 500 lb. Sassafras blossoms, 10 lb."

Note: This is the last newspaper article seen (Sept. 2009) indicating that Samuel Bowen was still in Georgia.

260. Long, Edward. 1774. The history of Jamaica: or General survey of the antient and modern state of that island. Vol. 3 of 3. London: Printed for T. Lowndes. See p. 786-87, 903, 905. Reprinted in 2003 by McGill-Queen's University Press in 3 separate volumes. Vol. 3 is 400 p. [1 ref]
• ***Summary:*** Chapter VIII is titled "A synopsis of vegetable and other productions of this island, proper for exportation, or home use and consumption. Of exotics, cultivable for one or other of these purposes; and of its noxious and useful animals &c."

One page 786-77 we read: "125. Calavances, or red bean.–*Phaseolus*. 7. Browne, p. 293 [sic, p. 292] [Browne, Patrick. 1756. *The Civil and Natural History of Jamaica*, p. 292].

"This is sown at any time after rains; and, in six weeks time, the fruit is large enough to eat green. It is a hardy plant, very much cultivated, thrives in every soil; and the bean is esteemed a wholesome, strengthening food.

"The Chinese have a white sort, called *tao*. They plant it on dry hills. The Europeans buy, of this sort, great quantities for sea-store on their return from China. The East-India soye is prepared in the following manner (Footnote: Ellis, John. 1772. *A Catalogue of such Foreign Plants as Are Worthy of Being Encouraged in our American Colonies...*).

"Take a certain measure; for instance, a gallon, of calavances; let them be boiled till they are soft; also a gallon of bruised wheat, and a gallon of common salt. Let the boiled calavances be mixed with the bruised wheat, and be kept covered close a day and a night in a warm place, that it may ferment. Then put the mixture of calavances and wheat, together with the salt, into an earthen vessel, with two gallons and an half of common water; and cover it up very close. The next day stir it about well with a battering stick, or a churn (the barrel-churn, which is made with slips of board, placed perpendicular to the sides within, about three inches in breadth, and running the length of the barrel, mounted on an axis, at each end placed on a frame, and turned with a windlass-handle, would answer best for this purpose), and for several days, twice or thrice a day, in order to blend it more thoroughly together. This work, must be continued for two or three months; then strain off and press out the liquor, and keep it for use in kegs, or small barrels. The older it is, the clearer it will be, and of a proportionably higher, value. After it is pressed out, you may pour more water on the remaining mass, then stir it about violently; and, in some days after, you may press out more soye."

Note 1. Because the step of making koji using molds prior to fermentation is poorly understood, the product resulting from the above process would probably not resemble soy sauce.

Note 2. This entry is followed (on p. 787) by shorter entries for other pulses, each based on Browne (*Phaseolus*) for: 126. Black-eyed pea. 127. Cuckhold's increase. 128. Sugar bean. 129. Broad bean. 130. The pigeon pea or Angola pea. It is preceded (on p. 786) by entries for: 123. Kidney-bean. 124. Lima bean.

Note 3. Browne (1756, p. 292-93) does mention Phaseolus and Calavances, but he does not mention anything related to soybeans, soy sauce, or East-India soye. Long's detailed description of how to make "East-India soye" [soy sauce] is taken, almost verbatim, from Stork (*A Description of East-Florida, with a Journal, Kept by John Bartram of Philadelphia...* 1769, p. v, footnote). Stork, in turn, took his description of how to make soy sauce from Kaempfer

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(*Amoenitatum exoticarum*... fasculi v. 1712, p. 837-40).

Also in Vol. 3 (=Book III), Chap. IX is a 4-column table (p. 903-05) titled "A Catalogue of such foreign Plants as might be introduced, and cultivated, in Jamaica, with great propriety." The last plant on the table is (p. 905): "Luktau: This is a small species of *phaseolus*, or kidney-bean, growing in China, and lately introduced by Mr. Samuel Bowen into Georgia, from whence the seeds might easily be obtained. He says, that where grass is scarce, this furnishes an excellent fodder for cattle, as it may easily be made into hay; that it rises from 18 inches to 2 feet high, and produces four crops in the year; it is therefore very deserving of a trial in different parts of Jamaica, as there are some, no doubt, where it might be found to thrive extremely well."

Note 4. This is the earliest document seen (Dec. 2008) concerning soy in connection with (but not yet in) Jamaica. Address: Jamaica.

261. Mason, Charlotte (Mrs.). 1775. The lady's assistant for regulating and supplying her table: Being a complete system of cookery, containing one hundred and fifty select bills of fare... 2nd ed., corrected and considerably enlarged. London: Printed for J. Walter. vi + 471 + [19] p. Index. 22 cm.
• ***Summary:*** The section on "Spices" (p. 309+) contains a short subsection titled "Soy" (p. 319) which states: "Soy [sauce] comes from the East Indies; it is made from mushrooms which grow in the woods. They are of a purplish colour, and are wrinkled on the surface like a morel. They gather them in the middle of the day, and wash them in salt and water; and then lay them in a dish, mash them with their hands, and sprinkle them with salt and beaten pepper; the next day the liquor is pressed off, and some * galangals and spices added to it; it is boiled up until it is very strong, and then some more salt is sprinkled into it. In this manner it will keep many years." Footnote: "* Galangals is a root which grows in the East Indies."

Note 1. This is the earliest document seen (Jan. 2010) which states that the main ingredients in soy [sauce] are mushrooms and salt.

Note 2. This is the earliest edition of this cookbook seen (May 2010) in which soy is mentioned. This entry on soy is found unchanged in all subsequent editions (to 1805). So the author never did realize that that main ingredient in soy [sauce] is soybeans!

Note 3. This recipe or process for making soy sauce is unlike any we have ever seen. Also, we have never heard of using mushrooms as a major ingredient in soy sauce–much less as the main ingredient. What was her source of this unusual information? The typical ingredients are soybeans, wheat or barley, salt, and water. In the two-step fermentation, the wheat is first fermented with a mold to make koji. Then the wheat koji is mixed with the other ingredients and fermented in a vat. After 1-3 years the liquid soy sauce is filtered, then pressed off. However, as early as 1680, the Chinese were adding mushrooms to soy sauce as a seasoning (see *Shixian hongmi* [Guide to the mysteries of cuisine]), and by 1765 Diderot, in his *Encyclopedia* under "Soy" noted that mushroom sauce and other seasonings were often added to soy sauce to enhance its flavor and shelf life. *Florence Lin's Chinese Vegetarian Cookbook* (1976, p. 220) stated that soy sauce comes in different flavors, such as "mushroom soy sauce."

Note 4. The term "East Indies" at this time applied loosely and vaguely to India, Indochina, and the Malay archipelago (incl. mainly today's Indonesia and Malaysia). Address: [England].

262. Hall and Co. 1776. Classified ad: Foreign China. *Chester Chronicle or Commercial Intelligencer* (*Chester, England*). Feb. 15. p. [3], col. 1.5.
• ***Summary:*** "Likewise Mother-of-Pearl beads and spoons, fish and counters, and Indian ink and Indian soy [sauce], &c." Address: Auctioneers, at the Mitre, in Eastgate-street.

263. Amiel (John, Junr. [Jr.]). 1776. Classified ad: Has for sale as usual, at his store in Smith Street. *New-York Gazette: and the Weekly Mercury* (*New York City*). May 16. p. 3.
• ***Summary:*** "... Florence Oil, Sago, Fig and Powder blue, and Starch, India soy [sauce] and Ketchup, Kites-foot Tobacco,..."

This ad also appeared in the May 23 and 30 (p. 4) issues of this newspaper. Address: Smith Street.

264. Agricola Sylvan. 1776. Article XIV. To make Soy or India Ketchup. *The Farmer's Magazine, and Useful Family Companion. Consisting of Practical Essays,... on the Different Branches of Husbandry,...* 1(7):268. Oct. London: Printed for R. Snagg,... [2 ref]
• ***Summary:*** "Boil a gallon of that sort of kidney-beans, called Daidsu by the Japonese, and Caravances by the Europeans, (the *Dolichos Soja* of Linnæus, Sp. Plant. 1023–Kæmp. Amoenit. 837) till they are soft; then take the caravances, and mix with them a gallon of bruised wheat, or barley, (but wheat makes the blackest Soy) and a little common salt, and let the whole be kept closely covered for a day and a night in a warm place to ferment; then put the mixture into an earthen vessel with ten quarts of water, and cover it up very close. The next day stir it about very well with a battering machine or mill, twice or thrice, in order to blend it more thoroughly together, and continue this for two or three months, when the liquor must be strained and pressed out, and kept in wooden or glass vessels for use; the older it is, the clearer it will be, and consequently of more value. After it is pressed out, more water may be added to the mass, and having stirred it about violently as before, for some days, more Soy may be pressed out."

Note: This is an annual periodical. "Agricola Sylvan" is a pseudonym. Address: Gentleman.

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265. Burton (William). 1776. Classified ad: To be sold... The following articles, viz. *New-York Gazette; and the Weekly Mercury* (*New York City*). Nov. 11. p. 3.
• ***Summary:*** "... Capers, Mangoes, Walnuts, Anchovies, India Soy [sauce], Ketchup, Florence Oil, Vinegar, Pepper, Mustard,..."

This ad also appeared in the Nov. 18 and 25 (p. 4), and 2, 9, and 23 (p. 4), and in 1777 in the Jan. 20 and Feb. 10 (p. 4) issues of this newspaper. Address: Water-Street, between the Coffee House and the Old-Slip Bridge.

266. Amiel (John, jun. [Jr.]). 1776. Classified ad: Has just opened for sale, at his store, the lower end of Smith-street,... *New-York Gazette; and the Weekly Mercury* (*New York City*). Nov. 25. p. 2.
• ***Summary:*** "... Pearl barley, Scotch ditto, trouffles [truffles] and morrels [morels], East-India soy [sauce] and ketchup, Florence oil in bottles and betties,..." Many types of pickles are also listed.

Note 1. This is the earliest English-language document seen (April 2012) that uses the term "East-India soy" (regardless of capitalization or hyphenation) to refer to soy sauce from the East Indies, probably from India. In the Early American Newspapers (EAN) online database (produced by Readex, a division of NewsBank), there are at least 35 issues / records that contain the term "East India Soy" (or "East-India Soy") from Nov. 1776 to Nov. 1829.

Note 2. This ad also appeared in the Dec. 2 (p. 2), and Dec. 9 and 16 (p. 4) issues of this newspaper. Address: Smith-street.

267. The Parliamentary register, or, History of the proceedings and debates of the House of Commons... during the second session of the fourteenth Parliament of Great Britain. Vol. 4 of 17. 1776. London: Printed for J. Almon. See p. 49.
• ***Summary:*** "On board the [ship] *Resolution*. 20 casks of cut tobacco... 6 jars of sallad oil. 44 half chests of ditto [sallad oil]. 43 barrels of anchovies... 6 cases of flour of mustard. 144 small cases of pickles. 1 cask of ketchup. 9 cases of portable soup."

These cargoes were sent to Boston [Massachusetts] and consigned to order. No tea, grocery, or drugs were sent. The cargo was shipped and afterwards relanded. The five ships mentioned were said to be sent under the order of General Howe [in 1776, at the time of the American Revolution]. Address: [England].

268. McKenzie's Store. 1777. Classified ad: Are to be sold on the lowest terms,... *New-York Gazette; and the Weekly Mercury* (*New York City*). April 21. p. 4.
• ***Summary:*** "... French white wine vinegar, India Soy [sauce] and ketchup, Anchovies and walnuts,..."

This ad also appeared in the April 28 (p. 4) issue of this newspaper. Address: Water-Street, No. 1092, the corner of Irish Street.

269. Moor [Moore] and Neale. 1777. Classified ad: At their store... on the most reasonable terms,... *New-York Gazette; and the Weekly Mercury* (*New York City*). Aug. 18. p. 4.
• ***Summary:*** "... Pickles in assortment, ketchup, soy [sauce], and cayanne [cayenne] pepper,..."

This ad also appeared in the Aug. 25 (p. 2) issue of this newspaper. Address: Irish street, in Water-street.

270. Langton (James). 1777. Classified ad: Just imported in the Marlborough, George Dawson, Master, and to be sold by James Langton on board said vessel, lying at Chestnut-street wharf,... *Pennsylvania Ledger; or the Philadelphia Market-Day Advertiser*. Dec. 13. p. 2.
• ***Summary:*** "... Pickles and soy [sauce] in small cases;..."

This ad also appeared in the Dec. 24 (p. 1), Dec. 31 (p. 6), and Jan. 7 (1778, p. 4) issues of this newspaper. Address: Market-street, Philadelphia.

271. Mason, Charlotte (Mrs.). 1777. The lady's assistant for regulating and supplying her table, being a complete system of cookery... 3rd ed. London: J. Walter. 436 + [17] p. Index. 21 cm.
• ***Summary:*** The section on "Spices" (p. 290+) contains a short subsection titled "Soy" (p. 299) which is identical to that in the 2nd edition of 1775.

The recipe "To bake a collar of fish (p. 236-37) states: "; add to it... a few mushrooms, two spoonfuls of catchup, or half a one of soy,..."

The word "catchup" appears in this early cookbook at least 62 times, and "walnut catchup" appears at least nine times–so by 1777 catchup has become a widely-used condiment in England.

The section on "Catchup" (p. 297-99) contains the following recipes: Catchup of mushrooms. Another way. To make catchup. Catchup of walnuts. Another walnut catchup. Catchup of the shells. Oyster catchup. English catchup. Next comes the recipe for Soy (p. 299). Here are several of the homemade Catchup recipes given: "To make Catchup: Put the peel of nine Seville oranges to three pints of the best white-wine vinegar; let it stand three or four months; pound two hundred of walnuts, just before they are fit for pickling; squeeze out two quarts of juice, put it to the vinegar; tie a quarter of an ounce of cloves, the same of mace, a quarter of a pound of eschalot, in a muslin rag; put it into the liquor; in three weeks, boil it gently till near half is consumed; when cold bottle it."

"Catchup of Walnuts: Bruise a hundred or two of walnuts, just before they are fit to pickle; squeeze out the juice, let it stand all night, pour off the clear; to every quart, one pound of anchovies; boil it; when the anchovies are

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dissolved strain the liquor; add half a pint of red wine, a gill of vinegar, ten cloves of garlic; mace, cloves, and nutmeg, half a quarter of an ounce each, pounded; let this simmer till the garlic is tender."

"Another Walnut Catchup: Take a hundred of the largest nuts fit for pickling, cut them in slices; put to them a quarter of a pound of eschalots cut through the middle: put them into a stone mortar and beat them fine; add to them half a pound of salt, a pint and a half of the best vinegar; let them stand a week in an earthen pan, stirring them every day; then put them in a flannel bag, and press the liquor from them; add a quarter of a pound of anchovies: boil them up in the liquor, scum it, and run it through a flannel bag, and add to it two nutmegs sliced, some mace, and whole pepper: when cold bottle it.

"Catchup of the Shells [a kind of walnut catchup]: "It is a very good way to pour common vinegar upon green walnuts; let it stand two, three, or four months, as it may be wanted; only, as the vinegar shrinks, keep filling the jar up; then take the liquor and boil it up as before mentioned: the walnuts will bear covering with vinegar three or four times, if done with care. The shells of green walnuts will do, in seasons when there is not a plenty of walnuts.

"Oyster Catchup: Boil small oysters in their own liquor, till the goodness is out; to every pint of clear liquor, half a pint of red wine, the same of white; mace, black, and Jamaica pepper, a quarter of an ounce each; pour it boiling hot on one dozen of eschalots, half the rind of a lemon, a piece of horse-radish; when cold mix it with the oyster liquor; bottle it."

Note: This is the earliest English-language document seen (March 2012) that contains the term "Oyster catchup" (regardless of spelling or capitalization)

"English Catchup: Take a quart of white-wine vinegar, put into it ten cloves of garlic, peeled and bruised; take also a quart of white port, put it on the fire; and when it boils, put in twelve or fourteen anchovies washed and pulled to pieces; let them simmer in the wine till they are dissolved; when cold, put them to the vinegar; then take half a pint of white wine, and put into it some mace, some ginger diced, a few cloves, a spoonful of whole-pepper bruised; let them boil a little; when almost cold, slice in a whole nutmeg, and some lemon-peel, with two or three spoonfuls of horse-radish; stop it close, and stir it once or twice a day. It will soon be fit for use. It must be kept close stopped."

Catchup also appears in recipes on pages 132-33, 143, 148-49, 153, 156-58, 164, 167, 169, 171, 173, 213, 220, 237-38, 253, 255, 257, 274, 308-09, 318, 320. Catsup is not mentioned.

Interesting non-soy ingredients. The word "almonds" appears 54 times in this book and the word "almond" 31 times. Almond recipes include: Almond pudding (p. 345, 350). Almond fraze (p. 362, with "half a pound of Jordan almonds"). Almond tarts (p. 365, 366). Almond cheesecakes (p. 368). Almond custard (p. 371). Almond cake (p. 374). Almond loaves (p. 382). Almond cream (p. 414, or pastachia [pistachio] cream, to be mixed with a pint of dairy cream). Almond soup (p. 205).

Quotation on the title page, near the bottom: "The most refin'd understanding and the most exalted sentiments do not place a 'woman above the little duties of life.' Mrs. Griffith." Address: A professed housekeeper, who had upwards of thirty years experience in families of the first fashion [England].

272. Weston, Richard. 1777. The universal botanist and nurseryman: containing descriptions of the species and varieties of all the trees, shrubs, herbs, flowers, and fruits, natives and exotics, at present cultivated in the European nurseries, green-houses and stoves, or described by modern botanists; arranged according to the Linnæan system, with their names in English... Illustrated with elegant engravings. 2nd ed. Vol. 2 of 4. London: Printed for J. Bell,... 396 p. Illust. [1 soy ref]

• ***Summary:*** Page 283: "Dolichos Soja. indicus, caule erecto, flexuoso racemis axillaribus erectis, leguminibus pendulis hispidis subdispermis, fructu pisi majoris candido.

"*Indian Soye Dolichos.*

"The method of making Indian Soye, from the seed of this species of Dolichos, may be seen in Kæmp. Amoen. [Kaempfer Amoenitates 1712] p. 537.

Note: This botanical description in Latin is adapted from that of Linnaeus 1747. "Indian Soye" refers to soy sauce. Address: Esq.

273. Johnston (John) and Co. 1778. Classified ad: Sells wholesale and retail... *Pennsylvania Ledger; or the Philadelphia Market-Day Advertiser.* Jan. 17. p. 4.

• ***Summary:*** "... Pickles in cases, containing walnuts, catchup, French beans, and cucumbers;..." Address: Corner of Market and Water-streets [Philadelphia].

274. Moore and Neale. 1778. Classified ad: To be sold... *New-York Gazette; and the Weekly Mercury* (*New York City*). Jan. 19. p. 4.

• ***Summary:*** "... Pickles. Ketchup and soy [sauce]. Brown sugar..." Address: Irish street, in Water-street.

275. Kerr (Samuel) and Co. 1778. Classified ad: At their store and wine cellar,... have now for sale, at the lowest prices,... *Pennsylvania Evening Post* (*Philadelphia*). Jan. 24. p. 37.

• ***Summary:*** "... French beans and mangoes in bottles. East India soy [sauce]. Ketchup, olives and capers. Best Durham mustard."

This ad also appeared in the Jan. 27 (p. 44) and Jan. 29 (p. 47) issues of this newspaper. Address: Front-Street, the sixth house above Chestnut-street.

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276. Langton (James). 1778. Classified ad: Lately imported and to be sold... *Pennsylvania Ledger; or the Philadelphia Market-Day Advertiser.* Feb. 18. p. 3.
• ***Summary:*** "... Cucumbers, walnuts, cabbage, onions, and soy [sauce] in small cases;..."

This ad also appeared in the Feb. 21 (p. 1), March 14 (Supplement p. 2), April 1 (p. 4), May 2 (p. 3), and May 20 (Supplement p. 1) issues of this newspaper. Address: At the store formerly kept by Mr. Gibson, Market-street.

277. Kerr (Samuel) and Co. 1778. Classified ad: Have now for sale... *Pennsylvania Ledger; or the Philadelphia Market-Day Advertiser.* Feb. 21. p. 4.
• ***Summary:*** "... In bottles: Cucumbers, french beans, mangoes; East-India soy [sauce]; ketchup; olives; capers;..." Address: Store and wine cellar in Front-Street; the sixth house above Chestnut-street, (lately occupied by John Mitchell).

278. Hillman (John). 1778. Classified ad: Has for sale,... *Royal Gazette* (*New York City*). March 7. p. 2.
• ***Summary:*** "... English pickles by the box,... cucumbers, anchovies, mangoes and capers, soy [sauce] and ketchup, best pearl barley,..."

This ad also appeared in the March 14 (p. 4) issue of this newspaper. Address: No. 345, lower End of Smith-Street, New-York [City].

279. Burton (William). 1778. Classified ad: To be sold... The following articles, viz. *New-York Gazette; and the Weekly Mercury* (*New York City*). April 6. p. 4.
• ***Summary:*** "... Florence oil, India soy [sauce], Ketchup, anchovies, Spanish and French olives,..."

This ad also appeared in the June 1 and July 27 (p. 4), and in the April 12 (1779, p. 4) issues of this newspaper. Address: Water-street, between the Coffee-House and Old-slip bridge.

280. Kerr (Samuel) and Co. 1778. Classified ad: Have now laid in a fresh assortment of goods... *Pennsylvania Ledger; or the Philadelphia Market-Day Advertiser.* April 18. p. 1.
• ***Summary:*** "... Anchovies; East-India soy [sauce]; Ketchup; Pickled walnuts, onion, cucumbers, girkins and mangoes;..."

Note: This is the earliest English-language document seen (March 2006) that contains the term "girkins" (regardless of the spelling). A girkin (also spelled gherkin or gerkin) is a small, oblong, prickly cucumber of West-Indian origin that is used chiefly for pickling.

This ad also appeared in the April 25 (p. 4) and May 20 (Supplement p. 1) issues of this newspaper. Address: Front-Street, between Chestnut and Market-street [Philadelphia].

281. Amiel (John, jun. [Jr.]). 1778. Classified ad: Has removed to Hanover-Square,... where he has for sale:... *Royal Gazette* (*New York City*). May 23. p. 1.
• ***Summary:*** "... A variety of English and India pickles, Soy [sauce] and Ketchup, anchovies, basket salt, Florence oil..."

This ad also appeared in the May 27 and 30, June 6, 13, 17 and 20, July 4 and 25, and Aug. 12, 19 and 29 issues of this newspaper. Address: No. 852, Hanover-Square, opposite the Commodore's.

282. Young (John). 1778. Classified ad: Has for sale on the most reasonable terms, the following articles, viz. *New-York Gazette; and the Weekly Mercury* (*New York City*). June 29. p. 4.
• ***Summary:*** "... White castile and turpentine soap, Ketchup and India Soy [sauce], Playing cards by the quantity or single pack,..."

This ad also appeared in the Aug. 10 (p. 2) issue of this newspaper. Address: In Water-street, between the Coffee-House bridge and the Fly Market.

283. Webster (George). 1778. Classified ad: Has for sale, the following articles:... *Royal Gazette* (*New York City*). Aug. 5. p. 2.
• ***Summary:*** "... Cases of London pickles,... 1 bottle of anchovies,... 1 ditto of white wine vinegar, 1 ditto of India soy [sauce], 1 ditto of ketchup. All compleat and fit for Sea. Many of the above articles are put up in small packages fit for the gentlemen of the navy and army."

This ad also appeared in the Sept. 9 (p. 1) issue of this newspaper. And in the Aug. 17 (p. 2) issue of the *New-York Gazette; and the Weekly Mercury* (New York City). Address: Grocer, at the Sign of the Tea-Canister, in Water-Street, No. 1077.

284. Kerr (Samuel). 1778. Classified ad: Has now for sale. *Royal Gazette* (*New York City*). Aug. 19. p. 4.
• ***Summary:*** "The Co-partnership of Samuel Kerr, and Company, late of Philadelphia [Pennsylvania], being dissolv'd,..." Kerr has "purchased Mr. John Davan's whole stock-in-trade and has now for sale, wholesale and retail,... Pickles, Ketchup, India soy [sauce], Neats Tongues,..." Address: No. 207 Queen-street, near the Fly-Market.

285. McElroy (Archibald). 1778. Classified ad: To the public. The subscriber has removed from Burlington into the house in Bristol, formerly kept by Mr. Charles Bessonet... and hath for sale... *New-Jersey Gazette* (*Burlington, NJ*). Nov. 11. p. 4.
• ***Summary:*** "... McElroy "has laid in a large stock of liquors of all sorts. He proposes keeping of a reputable Inn, for the accommodation of genteel travellers,...

"... Bristol Beer, by the dozen; Taunton Ale; London Porter; Wine; India Soy [sauce]; Pickles. N.B. A Hosteler is wanted."

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Note: This is the earliest document seen (July 2011) concerning soybean products (soy sauce) in New Jersey. This document contains the earliest date seen for soybean products in New Jersey (Nov. 1778); soybeans as such have not yet been reported. Address: Bristol, New Jersey.

286. Whitworth, Charles; Davenant, Charles (Sir). 1778. Scarce tracts on trade and commerce, serving as a supplement to Davenant's works. London: Printed for Hooper and Davis. Illust.
• ***Summary:*** Apparently trade with France has been prohibited, since French goods are inexpensive and popular, resulting in a negative balance of trade for England.

The chapter "On Trade" states (p. 426): "Now suppose they are forbid [sic] to go to this particular shop, and will religiously observe the prohibition, yet they may and will furnish us with the same things from other ports; they will bring us more silks, laces, and baubles from Italy, Flanders, Holland, &c... our importers will find out new trifles and gewgaws [geegaws] for our silly people. How suddenly do we find all the women and children of any account in England in amber necklaces? which at the rate they are sold at must cost England at least 100,000*l.* [pounds sterling] and now we have a new sauce called Catchup from East-India, sold at a guinea a bottle.

Note: This document is a reprint of and almost identical to Petyt 1668, however there are small changes in capitalization, spelling, and use of italics. Address: [England].

287. Mason, Charlotte (Mrs.). 1778. The lady's assistant for regulating and supplying her table, being a complete system of cookery... 4th ed. improved, to the present time. London: Printed for J. Walter. 446 + [18] p. Index. 17 cm.
• ***Summary:*** The section on "Spices" (p. 293+) contains a short subsection titled "Soy" (p. 303) which is identical to that in the 3rd edition of 1777. Address: [England].

288. Long (Joshua). 1779. Classified ad: New Minorca honey, very fine and cheap;... *Morning Chronicle and London Advertiser* (*England*). April 13. p. [1], col. 3.7.
• ***Summary:*** Also "... real Russia Rein Deer [Reindeer] Tongues, very fine new Olives, genuine Japan Soy [sauce], Cheroquee Sauce [Cherokee Sauce], cold drawn Castor Oil, real French Mareschall Powder....

Note 1. This is the earliest document seen (April 2012) that uses the term "genuine Japan soy" to refer to soy sauce.

Note 2. This is the earliest document seen (Oct. 2010) that uses the term "Cheroquee Sauce."

Note 3. Although we searched the Web and old French dictionaries, and consulted a French translator, we have been unable (May 2011) to determine the meaning of "real French Mareschall Powder." Address: Warehouse, No. 73, Cheapside, London.

289. Webster (George). 1779. Classified ad: Has received by the last vessels from London,... *Royal Gazette* (*New York City*). May 29. p. 1.
• ***Summary:*** "... an assortment of articles in the grocery way, such as pickles,... Cases of London pickles, 1 bottle anchovies,... 1 ditto mangoes, 1 ditto gurkins, 1 ditto capers, 1 ditto onions, 1 ditto sallad oil, 1 ditto white wine vinegar, 1 ditto Indian soy [sauce], 1 ditto ketchup–All compleat and fit for sea.

"Many of the above articles are put up in small Packages, fit for the Gentlemen of the Army and Navy."

This ad also appeared in the Aug. 28 (p. 3), Sept. 11 and 22 (p. 2) issues of this newspaper. And in the Nov. 29 and Dec. 20 (p. 4) issues of the *New-York Gazette; and the Weekly Mercury* (New York City). Address: At the Sign of the Tea-Cannister and Three Sugar Loaves, in Water-Street, No. 1063, between Burling and Beckman's Slips.

290. Walker (Emanuel). 1779. Classified ad: Just imported in the last ships from London,... *New-York Gazette; and the Weekly Mercury* (*New York City*). Aug. 30. p. 3.
• ***Summary:*** "... capers and anchovies, India soy [sauce] and ketchup, rough almonds in the shell,..." Address: No. 1, Mill-Street.

291. Amiel (John, junior). 1779. Classified ad: Has imported from London, for sale,... *Royal Gazette* (*New York City*). Sept. 15. p. 1.
• ***Summary:*** "... Raisins, currants and prunes, India soy [sauce] and ketchup, India mangoes with a variety of English pickles,..." Address: No. 852, Hanover-Square, opposite the Commodore's.

292. Meals (Joshua), & Co. 1779. Classified ad: To be sold on the lowest terms,... *Royal Gazette* (*New York City*). Sept. 15. p. 2.
• ***Summary:*** "... With a general assortment of Spices and Pickles, Soy [sauce] and Ketchup.

This ad also appeared in the Sept. 25 (p. 4) issue of this newspaper. And in the Sept. 20 (p. 3) and Sept. 27 (p. 4) issues of the *New-York Gazette; and the Weekly Mercury* (New York City). Address: No. 191, Water-Street, between the Coffee-House and the Fly-Market.

293. Carver, Jonathan. 1779. The new universal traveller. Containing a full and distinct account of all the empires, Kingdoms, and states, in the known world... London: Printed for G. Robinson,... [2] + iii + 664 + [6] p. Illust. (Plates). Maps.
• ***Summary:*** The section on "China" states (p. 16): "The commodities imported from China, are teas, porcelane, quicksilver, vermillion, and other fine colours; china root, raw and wrought silks, copper in bars of the size of sticks

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of sealing wax, camphire [camphor], sugar candy, fans, pictures, lacquered wares, soy, borax, lapis lazuli, galingal, rhubarb, gold, with many things made of mother of pearl." Note: This list is largely copied from Thomas Salmon 1744.

The section on "India" states (p. 60-61): "Their sauces consist chiefly of pickles, made of bamboos, garlic, and mangoes; besides which, the composition known in England by the name of soy, is likewise in general esteem. The grand meal in this country is in the evening, the middle of the day, as in other hot climates, being generally devoted to sleep." Address: Esq., Author of Travels through the Interior Parts of North America.

294. Encyclopaedia Britannica; or, A dictionary of arts, sciences, &c. On a plan entirely new: by which, the different sciences and arts are digested in the form of distinct treatises or systems, comprehending the history, theory, and practice of each, according to the latest discoveries and improvements... 2nd ed.: Dolichos. 1779. Edinburgh: Printed for J. Balfour and Co. 10 volumes publ. 1778-1783. See vol. 4, p. 2511-12.

• ***Summary:*** "Dolichos... 2. The soja is a native of Japan, where it is termed *daidsu;* and, from its excellence, *mame;* that is, 'the legumen or pod,' by way of eminence. It grows with an erect, slender, and hairy stalk, to our height of about four feet. The leaves are like those of the garden kidney-bean (*See *Phaseolus*). The flowers are of a bluish white, and produced from the bosom of the leaves, and succeeded by bristly hanging pods resembling those of the yellow lupine, which commonly contains two, sometimes three, large white seeds. There is a variety of this kind with a small black fruit, which is used in medicine. Kempfer [Kaempfer] affirms that the seeds of this when pounded and taken inwardly, give relief in the asthma. This legumen is doubly useful in the Japanese kitchens. It serves for the preparation of a substance named *miso*, that is used as butter; and likewise a pickle celebrated among them under the name of *sooju* or *soy* [sauce]. To make the first, take a measure of mame, or the beans produced by the plant: after boiling them for a considerable time in water, and to a proper degree of softness, they beat or bray them into a softish pulse: incorporating with it, by means of repeated braying, a large quantity of common salt, four measures in summer, in winter three. The less salt that is added, the substance is more palatable: but what it gains in point of taste, is loses in durability. They then add to this mixture a certain preparation of rice, to which they give the name of *koos;* and, having formed the whole into a compost, remove it into a wooden vessel which had lately contained their common ale or beverage named *sacki*. In about two months it is fit for use. The koos give it a grateful taste: and the preparing of it, like the polenta of the Germans, requires the skilful hand of an experienced master. For this reason there are certain people who make it their sole business to prepare the koos, and who sell it ready made for the purpose of making miso: a substance which cannot fail to be greatly valued in those countries, where butter from the milk of animals is unknown. To make sooju, or soy, they take equal quantities of the same beans boiled to a certain degree of softness; of muggi, that is corn, whether barley or wheat, roughly ground; and of common salt. Having properly mixed the beans with the pounded corn, they cover up the mixture, and keep it for a day and a night in a warm place, in order to ferment; then, putting the mass into a pot, they cover it with the salt, pouring over the whole two measures and a half of water. This compound substance they carefully stir at least once a-day, if twice or thrice the better, for two or three months: at the end of which time, they filtrate and express the mass, preserving the liquor in wooden vessels. The older it is, the better and the clearer: and if made of wheat instead of barley, greatly blacker. The first liquor being removed, they again pour water upon the remaining mass; which, after stirring for some days, as before, they express a second time, and thus obtain an inferior sort of soy."

Note 1. The descriptions of how to make miso and soy sauce are based on those of Englebert Kaempfer, published in 1712 in Latin in his book *Amoenitatum exoticarum...* and first written in Japan in 1690-92.

Note 2. This is the earliest English-language document seen (March 2009) that contains the word *miso*. While some miso (though usually described as a paste) has a consistency like butter, and a few types have a yellow color resembling that of butter, the Japanese have never used miso like butter. Rather they use it as a base for soups, sauces, and stews. The misunderstanding that miso "is used as butter" probably comes from the following statement by Englebert Kaempfer in his book *The history of Japan...* (1727). "Of the Meal of these Beans is made what they call *Midsu*, a mealy Pap, which they dress their Victuals withal, as we do with Butter." Concerning its etymology, the word "miso" seems to have come into English from the German *Midsu*, and into German from the Japanese *miso*.

Note 3. This is the earliest English-language document seen (April 2012) that uses the word "sooju" to refer to shoyu or soy sauce. Kaempfer used the same term (written *Sooju*) in 1712 in his book *Amoenitatum exoticarum...* which was written in Latin.

Note 4. This is also the earliest English-language document seen (Oct. 2006) that uses the term "the soja" as a singular noun to refer to the soybean.

Note 5 This is the earliest document seen (Dec. 2002) which states that soybeans can be used to give relief from asthma or other allergic conditions. Address: Edinburgh, Scotland.

295. *New-York Gazette; and the Weekly Mercury* (*New York City*).1780. Classified ad: To be sold. April 10. p. 4.

• ***Summary:*** "... a neat assortment of pickles, catchup, soy

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[sauce], mustard, &c... Enquire of the Printer."

296. Richards (William). 1780. Classified ad: Philadelphia, June 16. The public are hereby notified... to be sold... *Pennsylvania Packet, or the General Advertiser* (*Philadelphia*). July 15. p. 4.
• ***Summary:*** "... Manna, Opium, Rhubarb, Senna, Sago,... fine India soy [sauce], best Mustard, Sweet Oil, and Corks of all sorts."

Note: This is the earliest document seen (Sept. 2007) that mentions the term "Sweet Oil," but it is not clear what it means. Address: Market street, at the sign of the Spread Eagle, near the Court-House.

297. Will of Philip Thomas Lee. 1780. http://gustonhall.org/probate/LEE79.PDF. 3 p. Printed March 23, 2004.
• ***Summary:*** In the Charles County, Maryland, Register of Wills, 1785-1791, pages 246-60, we read on p. 253: "2 Glass soy bottles–d .3.0."

Note: It is unclear whether these bottles contain soy sauce or not. If they do: This is the earliest document seen (May 2011) concerning soybean products (soy sauce) in Maryland. This document contains the earliest date seen for soybean products in Maryland (July 1780); soybeans as such had not yet been reported by that date. Address: Anne Arundel County, Maryland.

298. Burton (William). 1780. Classified ad: To be sold... *Royal Gazette* (*New York City*). Aug. 2. p. 4.
• ***Summary:*** "... Pickles in the best order, Consisting of:... Mushrooms, Anchovies, Gerkins, East-India Mangoes,... Samphire, French and Spanish Olives, India Soy [sauce], Ketchup, Fine Sallad Oil,..."

Note: Samphire is a plant that grows on rocks near the sea shore; it is used for pickling. Address: No. 912, Water-Street, between the Coffee House and the Old-Slip.

299. Leslie (Mr.). 1780. Classified ad: Groceries,... *Royal Gazette* (*New York City*). Aug. 30. p. 2.
• ***Summary:*** "... fine bloom Raisins of the Sun in Jars, India Soy [sauce], Anchovies, India Mangoes, Gerkins,... sold Wholesale or Retail."

300. Lente (Christopher L.). 1780. Classified ad: Has for sale... *Royal Gazette* (*New York City*). Nov. 18. p. 3.
• ***Summary:*** "... Florence Oil, Vinegar, Anchovies, Ketchup, India Soy [sauce], Pickles of all sorts,..." Address: At the Tea Cannister, and Sugar Loaves, No. 345, Smith-street.

301. Smith (Hugh), & Co. 1780. Classified ad: Beg leave to inform their friends and the public... *Royal Gazette* (*New York City*). Nov. 22. p. 1.
• ***Summary:*** "... Walnuts, Anchovies, Mangoes, Ketchup, French and Spanish olives, Sallad oil, India soy [sauce], Queen's sauce [Quin's Sauce?],..."

Note: This is the earliest document seen (May 2006) that mentions "Queen's sauce." Address: No. 21 Little Dock Street.

302. Folgham's Case and Inlaid Cabinet Manufactory. 1780? The following articles are sold on the most reasonable terms, wholesale, retail, and for exportation. London: Folgham's. 1 p. Undated.
• ***Summary:*** Near the bottom of column 2, under "Silver and plated goods": "Scalloped, round, and oval Crewet and Soy Frames." Address: No. 81 Fleet-Street, London..

303. Trotter (William) and Co. 1780? List of sweet-meats, groceries, wines, &c. &c. sold by William Trotter and Co. Edinburgh (Leaflet). Edinburgh, Scotland. 1 p. Undated.
• ***Summary:*** In the 3-column listing, the section on "Pickles" includes: "Capers,... Mushrooms, Kidney Beans, Walnuts, Anchovies, Ketchup, Indian Soy, Vinegars (French, Tarragon, Chiloe or Elder), Lemon Pickle,..."

Note: Chiloé is a province on the west coast of Chile. Address: Edinburgh, Scotland.

304. Crookshanks and Spiers. 1781. Classified ad: To be sold at the store... A general assortment of European and East India goods:... *Royal Georgia Gazette* (*Savannah*). Feb. 22. p. 4.
• ***Summary:*** "... English walnuts, anchovies, India soy [sauce], ketchup, capers, sweet oil..." Address: No. 21 Little Dock Street.

305. Long (Jos.). 1781. Classified ad: Just arrived a parcel of fine new Cuisse d'Oyes. *Morning Chronicle and London Advertiser* (*England*). May 11. p. [1], col. 2.7.
• ***Summary:*** Also "... fine new dates, Japan Soy [sauce], Indian Curry Powder, Kian Pepper [Cayenne Pepper], and Mushroom Powder, all warranted genuine and unadulterated;... the only real Cheroquee Sauce [Cherokee Sauce], Zoobditty Match, &c... real French Marescall Powder;..." Address: No. 73, Cheapside, London.

306. Gracie (George). 1781. Classified ad: Has for sale. *New-York Gazette; and the Weekly Mercury* (*New York City*). June 11. p. 3.
• ***Summary:*** "... Mushrooms, capers, India soy [sauce], queen's sauce, ketchup, French olives, Spanish olives,..." Address: No 8, Fly-Market.

307. Hoffman (Nicholas). 1781. Classified ad: Has for sale,... *New-York Gazette; and the Weekly Mercury* (*New York City*). June 18. p. 4.
• ***Summary:*** "... anchovies, olives, and soy [sauce], capers, gerkins,... spices and cayan pepper,..." Address: No. 4, Water-Street, opposite the Superintendent's Office.

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308. Burton (William). 1781. Classified ad: Has for sale at his store... *New-York Gazette; and the Weekly Mercury* (*New York City*). Sept. 10. p. 1.
• ***Summary:*** "... A general assortment of Pickles in the best order, consisting of: Mushrooms, India mangoes, French and Spanish olives, Gerkins,... samphire, anchovies, India soy [sauce], kitchup, sallad oil, best white wine vinegar, common ditto,..." Address: No. 9, Water-Street, between the Coffee House and the Old-Slip.

309. Dunscomb (Daniel). 1781. Classified ad: At his store,... has for sale. *New-York Gazette; and the Weekly Mercury* (*New York City*). Oct. 1. p. 4.
• ***Summary:*** "... Girkins, fine India soy [sauce], ketchup, best Maccaba snuff,..." Address: No. 164, Water-street, between Beekman and Burling's slips.

310. Lente and Thomas. 1781. Classified ad: Most thankfully acknowledge the favours of their Friends and Customers,... *Royal Gazette* (*New York City*). Oct. 31. p. 3.
• ***Summary:*** "... Pickles: Anchovies, Mushroom, Gerkins, Walnuts, Capers, Olives, &c. by the bottle or case, India Soy [sauce], Ketchup, and Florence Oil." Address: No. 32, Hanover-Square.

311. Cecil & Wood. 1781. Classified ad: Imported in the Georgia Packet, Capt. Haist, from London, and to be sold reasonably for cash, produce, or government bills of exchange,... A general assortment of European and East India goods. *Royal Georgia Gazette* (*Savannah*). Nov. 22. p. 2.
• ***Summary:*** "... sweet oil in pint bottles, catsup and mushrooms, linseed oil in jugs,..."

Note: This is the earliest English-language document seen (Feb. 2006), published in America, that contains the word "catsup." It is also the earliest document seen (Jan. 2006) in which the word for soy sauce from the Dutch East Indies is spelled "catsup." It appears in a United States newspaper about two years before the end of the revolutionary war. Address: At their Store on the Bay.

312. Knox and Cowan. 1781. Classified ad: Have imported in the fleet from England,... *Royal Gazette* (*New York City*). Dec. 8. p. 1.
• ***Summary:*** "... Also, Groceries, viz... Pickles of all kinds, India Soy [sauce], Ketchup, best Florence Oil, best white wine Vinegar, Mustard;..." Address: No. 234, Queen-Street.

313. McCormick (Daniel). 1782. Classified ad: Public auction. *New-York Gazette; and the Weekly Mercury* (*New York City*). Jan. 20. p. 3.
• ***Summary:*** "... To-morrow, at the [Merchants] Coffee House,... And 9 chests London pickles, Containing mangoes, walnuts, girkins, anchovies, capers, oil, ketchup and soy" [sauce].

314. Child & Harrison. 1782. Classified ad: Sales by auction,... to-morrow, 11 o'clock, near the bridge,... *New-York Gazette; and the Weekly Mercury* (*New York City*). March 4. p. 3.
• ***Summary:*** "... 3000 wt. of good ship bread, 9 crates assorted queen's ware, 8 boxes mustard, 4 boxes Indian soy [sauce], 4 chests bohea tea, 2 trunks of nutmegs, 5 boxes wax candles, 3 ditto spermaceti ditto, &c &c."

315. Lente and Thomas. 1782. Classified ad: have for sale... *Royal Gazette* (*New York City*). April 17. p. 2.
• ***Summary:*** "... Best Sallad Oil, India Soy [sauce] & Ketchup, White Wine, Tarragon, Elder, and Garlick Vinegars." Address: No. 32, Hanover-Square.

316. Meals (Joshua) and Co. 1782. Classified ad: To be sold,... *Royal Gazette* (*New York City*). Nov. 9. p. 4.
• ***Summary:*** "... Pickles, Soy [sauce], Ketchup, Mushrooms, Olives, Capers,..." Address: No. 191, Water-Street, between the Coffee-House and the Fly-Market.

317. **Product Name:** [Shoyu: Named Kikkoman Shoyu in 1784].
Foreign Name: Kikkôman Shôyu.
Manufacturer's Name: Mogi Saheiji.
Manufacturer's Address: Noda, Japan.
Date of Introduction: 1782.
New Product–Documentation: Noda Shoyu K.K. (Morio ICHIYAMA, ed). 1940. Noda Shoyu K.K. Nijunen-shi [Twenty-year history of Noda Shoyu, Inc.]. p. 466. The Kikkôman brand of shoyu (of which the logo is shown) was introduced in Tenmei/Temmei 2 (1784).

Fruin, W. Mark. 1983. Kikkoman: Company, Clan, and Community. p. 18. By 1782 "Mogi Saheiji, head of the oldest branch of the Mogi line, had added shoyu fermentation to his already established ventures in grain sales and miso manufacture, making the Mogi's proportion of representation in the [Noda shoyu manufacturing] guild three out of seven."

318. Gwilt and Goodwyn. 1783. Classified ad: Intending for England shortly,... *Royal Gazette* (*New York City*). Jan. 11. p. 3.
• ***Summary:*** "... For Cash only,... The very best Durham Mustard, India Soy [sauce],..." Address: No. 234, Queen-Street.

319. Lente (Christopher Lewis). 1783. Classified ad: Lente's Store... has for sale. *Royal Gazette* (*New York City*). Feb. 5. p. 1.
• ***Summary:*** "... Ready made French and English Mustard, Florence and Lucca Oil, India Soy [sauce] and Mushroom Ketchup, French and Spanish Olives, Pickles,..."

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Note: Lucca is a province of Tuscany, Italy (about 38 miles northwest of Florence), long known for its fine olive oil. Address: No. 32, Hanover-Square.

320. Lente (Christopher Lewis). 1783. Classified ad: Has for sale... *Royal Gazette* (*New York City*). Aug. 2. p. 1.
• ***Summary:*** "... Assorted pickles:... India Mangos [Mangoes], India Soy [sauce], and Ketchup, Anchovies and Capers,..." Address: No. 32, Hanover-Square.

321. Dorsey (John, Jun. [Jr.]). 1783. Classified ad: At his grocery store... has for sale. *Independent Gazetteer* (*Worcester, Massachusetts*). Aug. 23. p. 3.
• ***Summary:*** "... Sweet Oil in jugs, and tap, English and Country Ketchup, Fine India Soy [sauce], and Quin's Sauce.

"Waters: Aniseed, Cinnamon, Clove, Orange, Citron, Lemon, Cholic, and bitter... Girkins, Colley Flower [Cauliflower],..."

Note: This is the earliest document seen (April 2012) that mentions "Quin's Sauce." Soy [sauce] was often used as an ingredient in homemade recipes, and probably in most commercial recipes. Address: Third-street, one door below Arch-street.

322. Thomas (William). 1783. Classified ad: Has now for sale,... *Independent Journal* (*New York City*). Dec. 1. p. 3.
• ***Summary:*** "... Spices of all sorts, also Anchovies, Gerkins,... Capers, Soy [sauce], Ketchup, Coratch,..."

Note: This is the earliest document seen (Feb. 2006) that mentions the word "Coratch." Address: No. 6, Queen-street.

323. Lente (Christopher Lewis). 1783. Classified ad: Has for sale. *Independent Journal* (*New York City*). Dec. 25. p. 4.
• ***Summary:*** "... English and foreign Flour of Mustard, India Soy (sauce), Mushroom Ketchup,..." Address: No. 32, Hanover-Square.

324. Bryant, Charles. 1783. Flora diætetica: Or history of esculent plants, both domestic and foreign. In which they are accurately described, and reduced to their Linnæan generic and specific names. With their English names annexed, and ranged under eleven general heads. London: B. White. 379 p. See p. 297, 300-01. [2 ref]
• ***Summary:*** In Chapter VII. Leguminous plants. Section I. Pods and seeds of herbaceous plants (p. 297), there is a listing for "3. Dolichos soja. East India Kidney Bean." Pages 300-01 contain full details: "Dolichos soja. Indian Kidney Bean. Lin. Sp. pl. 1023. This is a perennial and a native of India. It sends up an erect, slender, hairy stalk, to the height of about four feet, furnished with leaves much like those of the Common Kidney Bean, but more hairy underneath. The flowers are produced in erect racemi, at the bosoms of the leaves; they are of the pea-kind, of a bluish white color, and are succeeded by pendulous, hairy pods, resembling those of the Yellow Lupine, each containing three or four oval, white seeds, a little larger than peas.

"This plant is much cultivated in Japan, where it is called *Daidsu*, and where the pods supply their kitchens for various purposes; but the two principal are with a sort of butter, termed *Miso*, and a pickle, called *Sooju* or *Soy* [sauce].

"The Miso is made by boiling a certain quantity of the beans for a considerable time in water, till they become very soft, when they are repeatedly brayed with a large quantity of salt, till all is incorporated. To this mass they add a certain preparation of rice, named Koos [probably koji; Kaempfer introduced this term in 1712], and having well blended the whole together, it is put into a wooden vessel, where in about 2 months it becomes fit for use, and serves the purposes of butter. The manner of preparing the Koos is a kind of secret business, and is in the hands of some certain people only, who sell the Koos about the streets, to those who make Miso.

"In order to prepare Sooju they take equal quantities of beans, wheat, or barley-meal, and boil them to a pulp, with common salt. As soon as this mixture is properly incorporated, it is kept in a warm place for twenty-four hours to ferment; after which the mass is put into a pot, covered with salt, and a quantity of water poured over the whole. This is suffered to stand for two or three months, they never failing to stir it well at least once a day, if twice or thrice it will be the better; then the liquor is filtered from the mass, and preserved in wooden vessels, to be used as occasions require. This liquor is excellent for pickling anything in, and the older it is the better."

Note 1. Bryant's account is largely based on that of Engelbert Kaempfer in his book *Amoenitatum Exoticarum*, written in Japan in 1690-92, and published in 1712. Bryant's book has an excellent, extensive index. It is the earliest English-language document seen (May 2006) that contains a detailed botanical description of the soybean.

Note 2. This is the earliest document seen (Oct. 2010) concerning soybeans (but only wild perennial relatives of soybeans) in India; cultivated soybeans have not yet been reported.

Note 3. This is the earliest English-language document seen (April 2009) that uses the term "East India Kidney Bean" (singular or plural, regardless of capitalization or hyphenation) to refer to the soybean.

Note 4. This is the earliest English-language document seen (March 2009) that uses the term "a sort of butter" to refer to miso.

Also discusses: Several species of edible seaweeds [sea vegetables]: "13. *Fucus saccharinus–Sweet Fucus or Sea Belts. Lin. Sp. pl.* [*Species plantarum*] *1630. Fucus alatus sive phafnagoides. Bauh. Pin. 364* [*Caspar Bauhin. 1623. Pinax Theatri Botanici*].

"*14. Fucus palmatus–Handed Fucus. Lin. Sp. pl. 1630.*

"*15. Fucus digitatus–Fingered Fucus. Hud. Flo. Ang.*

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579 [*William Hudson. 1762, 1798. Flora Anglica*]. *Fucus arboreus polyschides edulis. Bauh. Pin.*

"16. Fucus esculentus–Edible Fucus Hud. Flo. Ang. 578 (p. 90-91, 100-01).

"39. *Ulva lactuca* or Green laver. Lin. Sp. pl. 1632. *Muscus marinus lactucæ similis. Bauh. Pin. 364* (p. 117-18).

Amaranthus oleraceus or Esculent Amaranth from India (p. 119). *Arachis hypogæa* or American Ground Nut [Peanut] (p. 298-99). *Cicer arietinum* or Chich Pea [Chick Pea] (p. 299; it "grows naturally among the corn in Spain and Italy, and it is much cultivated in these places for the table... It is much cultivated in Barbary [the Mediterranean coast of north Africa], by the name of *Gravances*, and is counted one of their best sorts of pulse"). *Ervum lens* or Lentil (p. 301-02; it "is a common weed in the cornfields of France... *Lentils* are a strong, flatulent food, very hard of digestion, and therefore seldom used now but to boil in soups, in order to thicken them"). *Lotus tetragonolobus* or Square-podded Pea [Winged Bean]. Lotus ruber, siliqua angulosa Bauh. Pin. 332 (p. 302-03). *Lupinus albus* or White Lupine (p. 303-04). *Ceratonia siliqua* or Carob tree (St. John's bread, p. 309-10). Coffea Arabica or Arabian coffee (p. 311). Coffea occidentalis or American coffee (p. 311-12). *Coix lacryma Jobi* or Job's tears (p. 332). *Polygonum fagopyrum* or Buck Wheat (p. 343). Ginkgo or Maiden-hair tree (p. 377-78). Bread fruit tree (378-79). Some of these are described in detail in separate records.

Note 5. This is the earliest Western document seen (Jan. 2005) that discusses sea vegetables (p. 117-18).

Note 6. This is the earliest document seen (June 2006) that mentions *Coix lacryma Jobi* or Job's tears.

Note 7. This is the earliest English-language document seen (June 2008) that gives a scientific name for lentils (*Ervum lens*).

Note 8. This is the earliest English-language document seen (June 2008) that mentions the chick pea (which it calls "Chich Pea") or gives its scientific name (*Cicer arietinum*).

Near the front of the book, a section titled "Terms explained" (xiii-xvi) is a glossary that gives concise definitions of the following botanical terms: Annual, biennial, perennial, sessile, serrated, crenated, pinnated or winged, peduncle, spike, spicula, panicle, spadix, racemus, umbel, calyx, catkin, petal, glume, arista or awn, floret, germen or seed bud, pericarpum, capsule, stamina, styles, stigma, summit. Address: Norwich, England.

325. Muscovy Company. 1783. General tariff of [t]he customs for all ports and frontiers of the Russian Empire, except Astrachan, Orenburgh, and Siberia, as settled by the commissioners of commerce, 1782. London: Printed for the Russia Company by T. Spilsbury. 99 p. See p. 46. [Eng]
• ***Summary:*** On page 46 we read: "Soy [sauce] or Ketchup, in common-sized bottles, each–20 Cop."

Note 1. Two units of Russian currency are given: "Ro." and "Cop."–the first being larger than the latter. "Cop." may stand for "Copper."

Note: OCLC Worldcat gives the date of this document as 1783. However Gale ECCO gives the date as 1678–which seems to us impossible.

326. Revere (Paul). 1784. Classified ad: Has imported in the Rosamond, Capt. Love,... a very elegant assortment of plated ware,... *Independent Chronicle and the Universal Advertiser* (*Boston*). Jan. 8. p. 4.
• ***Summary:*** "... Festoon, Castor and Soy Frames [for soy sauce at the dining table],..." Address: Directly opposite the Liberty Pole, South End, Boston.

327. Lyon and Longstreet. 1784. Classified ad: Have for sale, wholesale and retail, at their grocery-store,... *Independent Gazetteer* (*Worcester, Massachusetts*). July 10. p. 3.
• ***Summary:*** "... India soy [sauce], cayan [cayenne] pepper, black do. [pepper]..." Address: West side of Third-street, one door from Arch-street.

328. Bethune (Alexander). 1784. Classified ad: Has for sale on the most reasonable terms,... *South-Carolina Gazette and General Advertiser* (*Charleston*). Sept. 2-4. p. 1.
• ***Summary:*** "... Black and cayan pepper, ginger, saltpetre,... Ketchup, India soy [sauce], lemon pickle, costatch [coratch] & quince sauce." Note: This is the earliest document seen (Feb. 2006) that mentions "quince sauce." Address: Grocery, Wine and Spirit Store, No. 113, Broad-street.

329. Pressey's Warehouse. 1784. Classified ad: New Muscadine raisins. *Morning Post and Daily Advertiser* (*London*). Dec. 17. p. [1], col. 3.9.
• ***Summary:*** Likewise, "Cashew Nuts, Ground Nuts,... Vermecelli [Vermicelli], India Mangoes, Soy [sauce], Cherokee Sauce, India Curey [Curry], Jordan Almonds, Seltzer, Spa, and Pyrmont Water.

"The Nobility may be assured the above are all fresh, and may be depended on to be of the finest quality."

Note 1. This is the earliest document seen (Oct. 2010) that uses the term "Cherokee Sauce." The meaning of this term is unclear, as are its ingredients. Address: Henrietta-street, Covent-Garden [London].

330. Skill and Son. 1784. Great Italian and Foreign Warehouse,... (Ad). *Morning Post and Daily Advertiser* (*London*). Dec. 17. p. [1], col. 3.2.
• ***Summary:*** "Cheese merchants and oilmen to their Imperial and Most Faithful Majesties; and to their royal highnesses The Duke of Clarence, and Duchess of Cumberland;..."

"Curious rich sauces, superior to any thing of the kind ever sold, for fish, game, wild fowl, stews, hashes, ragouts, venison, etc."

Essence of Anchovies, Imperial Sauce, Zoobditty Match,

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Sauce Espagnole, Cherokee Sauce, Mushroom Ketchup, Quince Sauce [Quin's Sauce?], Oyster Ketchup, Camp Sauce, Sauce Piquante, India Soy [sauce], Coratch, Sauce Royal, Walnut Ketchup, Lemon Pickle, Cavice.

"And every other Sauce in use at the most Fashionable Tables."

Note: This is the earliest document seen (Aug. 2011) that mentions "Cavice." We have been unable to find a description or definition of it, but it seems to be a liquid seasoning; by 1845 Harvey's sauce was considered an acceptable substitute. Address: No. 15, Strand, near Charing-Cross, London.

331. Glasse, Hannah (Mrs.). 1784. The art of cookery made plain and easy; which far exceeds any thing of the kind ever yet published... A new ed. London: Printed for W. Strahan, J. Rivington and Sons, L. Davis, W. Owen, T. Longman, B. Law, T. Payne, B. White, J. Robson, J. Johnson, G. Robinson, [and ten others]. vi + [20] + 409 + 26 p. See p. 324-25. [Eng]

• ***Summary:*** Chapter 19, titled "To make anchovies, vermicelli, catchup, vinegar, and to keep artichokes, French beans, etc." (p. 319-25) contains a receipt [recipe] titled "To dress White-bait" which states (p. 324-25): "Take your white-bait fresh caught, and put them in a cloth with a handful of flour, and shake them about till they are separated and quite dry; have some hog's lard boiling quick, fry them two minutes, drain them, and dish up with plain butter and soy."

Note 1. The last word, "soy," refers to soy sauce. It does not appear in the index, and we can find no other use of it in this book.

Note 2. This is the earliest document seen (Dec. 2003) published outside of East Asia that contains a soy-related recipe. It is also the earliest Western cookbook seen (April 2012) that uses soy [sauce] in a recipe.

Note 3. On pages 347-48 is a recipe titled "How to make ice cream." This modern-style recipe uses 12 ripe apricots for its basic flavor.

Note 4. Hannah Glasse lived 1708-1770. Note 5. Kendra Van Cleave of the Schlesinger Library, Radcliffe Inst., Harvard University, Cambridge, Massachusetts, looked for (and did not find) this recipe in both the index and the appropriate section of the following editions of this book–all of which are owned by the Schlesinger library: 1747, 1748, 1751, 1755, 1765, 1767, 1770, 1774, 1778, and 1781.

Note 6. As of April 2001 OCLC lists no microfilm edition of this 1784 edition of this book. Address: England.

332. Byrne, Dorsten, and Colburn. 1785. Classified ad: Have imported in the ship Edward, Capt. Coupar, from London,... *Independent Journal* (*New York City*). Jan. 5. Supplement p. 2.

• ***Summary:*** "... A general assortment of pickles, Quin's sauce, Mushroom ketchup, Florence oil, India soy [sauce], Mustard in ¼, ½, & 1 lb. bottles,..." Address: No. 2, opposite the Fly-Market.

333. Grocery Store. 1785. Classified ad: For sale,... for cash only. *South-Carolina Gazette and General Advertiser* (*Charleston*). March 15. p. 4.

• ***Summary:*** "... sweet oil, catchup, soy [sauce], almonds,..." Address: Elliott street, Corner of Beadon's Alley, Charleston.

334. Priddy's Italian Warehouse. 1785. Classified ad: Parmesan Cheese, &c... *Morning Post and Daily Advertiser* (*London*). March 29. p. [3], col. 2.1.

• ***Summary:*** "Just imported... Curry Powder, Kyan [Cayenne] Pepper, Indian Soy [sauce], Mangoes, Fish Sauces,..." Address: No. 14, Poland-street, nearly opposite Great Marlborough-street [London].

335. Lente (Christopher Lewis). 1785. Classified ad: Has for sale. *Independent Journal* (*New York City*). April 16. p. 1.

• ***Summary:*** "Pickles, &c. for sauces: India and English mangoes, Mushroom and Samphire, Walnuts & Gerkins, Thonfish & Truffels in Oil, Anchovies, Capers, and Luira Olives, Florence and Luira Virgin Quin's Sauce, India Soy [sauce], and Ketchup, Rose and Orange Flower Water, Tarragon Vinegar, Garlic ditto [Vinegar], Ravigotte ditto, Cibulette ditto, Plain Wine do. [Vinegar] in bottles."

Note: Thonfish may refer to a tunny (French: thon, German: Thunfisch), a fish of the genus *Scomber*, the Spanish mackerel (*Webster's Dictionary*, 1828). Address: No. 33, Hanover-Square.

336. Long (Joshua). 1785. Classified ad: Just arrived, a Parcel of fine French Pomatums, hard and soft... *Times* (*London*). April 28. p. 1, col. 4. RiceVerm

• ***Summary:*** "... also West India Pickles of all Sorts; the same from the East Indies, as mangoes, Limes, Pickalilly, and Mountain cabbage; Lemon Pickle, Lime Juice, Lime Rob, &c... Vermicelli and Maccaroni [Macaroni], Lock Soy, &c. real Japan Soy [sauce], Kian Pepper [Cayenne Pepper], and real East India Currie Powder."

"N.B. An exceeding fine Parcel of real cold drawn Castor Oil."

Note 1. This is the earliest document seen (April 2012) that uses the term "real Japan Soy" to refer to soy sauce.

Note 2. This is the 2nd earliest document seen (April 2012) that uses the term "Lock Soy." Notice that in this list of items advertised, "Lock Soy" comes immediately after "Vermicelli and Macaroni." Most early publications that describe "Lock Soy," starting with *A Voyage to Cochinchina, in the Years 1792 and 1793*, by John Barrow (published 1806, p. 315) state that it is type of rice vermicelli; made in today's south central Vietnam (Cochinchina around Da Nang) and in China. In Cochinchina it is perfectly

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transparent, whereas "The Chinese Lock-soy is opaque." It (apparently) does not contain any ingredient made from the soybean.

Letter (e-mail) from Andrea Nguyen, Vietnamese-born food writer from Santa Cruz, California. 2010. May 4. Lock Soy could well be Soi Loc–a type of noodle made from tapioca in the area of Da Nang, Vietnam. Squiggly and chewy, it resembles worms. Soy is a misspelling of *soi*, which means "strands." Loc refers to "tapioca." If this explanation is correct, it used mostly with sweets and does not contain any soy ingredients.

As of May 2011, the term "Lock Soy" appears in this database 17 times from 1760 to 1911.

Note 2. This is also the earliest document seen (Aug. 2011) that uses the term "real Japan soy" to refer to soy sauce. As of Feb. 2007, the term "Japan Soy" (referring to soy sauce) appears in this database 42 times from 1785 to 1873.

Note 3. This is also the earliest document seen (Dec. 2005) in the *Times* (London) that uses the term "Soy" (with or without capitalization) to refer to soy sauce.

Pomatum is a synonym for "pomade," a perfumed ointment, especially a fragrant hair dressing. Address: No. 73, Cheapside, London.

337. Burgess. 1785. Classified ad: Spruce Beer Brew-House. *Morning Herald and Daily Advertiser* (*London*). May 3. p. [1], col. 3.7.

• ***Summary:*** "... where may be had curious Rich Sauces for Fish, Gravies, Made Dishes, Beefstakes [sic], &c. viz.

"Fine Oyster Ketchup. Ditto [Fine] Anchovie [Anchovy] Ketchup. Ditto Walnut Ketchup. Ditto Zobdity Match. Genuine Cayenne Pepper. Genuine Gorgona Anchovies... Cherokee Sauce. Quin's Sauce and Coratch. Lemon Pickle. Finest Parmesan Cheese." Address: Burgess's Italian and Salad Oil Warehouse, No. 107, Corner of the Savoy Steps, Strand [London].

338. Stenson (William). 1785. Classified ad: Has for sale,... *Maryland Journal* (*Baltimore*). May 10. p. 2.

• ***Summary:*** "Wines... London porter, Liverpool beer, Taunton ale, wine and cider vinegar, spermaceti oil, Florence ditto [oil], catsup and India soy [sauce].

"Waters.–Anise-seed, cinnamon, clove, orange, citron and cholic, liquors of all sorts."

Teas and sundries.–... Cayenne and black pepper, ginger, race and ground, sago, whole and ground,...

Note 1. This is the earliest document seen (May 2011) that clearly refers to soybean products (soy sauce) in Maryland. This document contains the earliest clear date seen for soybean products in Maryland (May 1785); soybeans as such had not yet been reported by that date.

Note 2. This is the earliest English-language document seen (Jan. 2006) that contains the word "race" to define a form of ginger; it means "gingerroot."

Note 3. The meaning of the word "cholic" as a type of flavored water is (after considerable research) unclear. Address: Grocery-store in Market-Street, near the Market-House.

339. Young's. 1785. Classified ad: Sallad oil, vinegars, and Montipolciano wines. *Times* (*London*). June 8. p. 4, col. 4.

• ***Summary:*** "... Just Imported... India Soy [sauce], Mangoes, Ketchup." Plus many kinds of oil, vinegar, and fine "Cyders [ciders], sold by the Hogshead, Gallon, or in Bottles."

This same ad appears on June 11 (p. 2, col. 3).

Note: This is the earliest document seen (Jan. 2007) in the *Times* (London) that uses the term "India Soy" to refer to a type of soy sauce. Address: New Italian Warehouse, No. 5, Cambridge-street, Golden-square [London].

340. Pressey's. 1785. Classified ad: Henrietta-street, Covent-garden. *Times* (*London*). Oct. 25. p. 4, col. 4.

• ***Summary:*** "The Nobility and Gentry are most respectfully informed, that at Pressey's Warehouse, Henrietta-street, facing Archer's Poplin Ware Rooms, they may be supplied with all Kinds of Grocery and Foreign Goods, in a greater Variety that at any House in Town, all of which may be depended on to be of the first Quality, and latest Importation, viz. Muscadine Raisins, in small Boxes,... London Almonds, Preserved Limes, Du Roy Plumbs, Spanish Grapes, great Variety of Foreign Liquors, Preserved Citrons, Apricots, Truffles, Morrells, Campions, Parmesian Cheese, American Essence of Spruce, Cocoa Nuts,... Pistatia-Nuts [pistachio], Seltzer, Pyrmont, and Spa Waters,... Arrack, Old Hock, Patna Rice, East India Curry, Japan Soy [sauce], Cherokee Sauce, Cavica Sauce,... Maccaroni [Macaroni], Vermicelli, Cashew Nuts, new Dates, Lemon Pickle, Plain and Figured India Papers, Tamarinds, Lentils, Qoobity Mutch [Zoobditty Match?], Oyster Ketchup, India Mangoes, Lock Soy, and other Goods. Spermaceti and Wax Candles..."

Note 1. Patna was a former Indian state in northeast India on the right bank of the Ganges River 290 miles (467 km) west of Calcutta. In 1764 it came under British control. Today (2005) it is a city, the capital of Bihar state.

Note 2. This is the earliest document seen (Dec. 2005) that uses the word "Cavica" to refer to the name of a sauce. Elizabeth David (1970, p. 11) believes that it, or its relatives "caveach," "cavice," or "scabeche," may have been the ancestors of the word "catsup."

Note 3. This is the earliest English-language document seen (Jan. 2006) that contains the term "Qoobity Mutch." Later modified into "Zoobditty Mutch" and "Zoobditty Match," it probably refers to a type of sauce.

Note 4. This is the earliest English-language document seen (June 2009) that contains the term "Cherokee Sauce"–also spelled "Cherekey." Address: Henrietta-street, Covent-garden [London].

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341. Bryant, Charles. 1785. Carl Bryant's Verzeichniss der zur Nahrung dienenden so wohl einheimischen als auslandischen Pflanzen. 2 v. [Flora diaetetica: Or history of esculent plants, both domestic and foreign. 2 vols.]. Leipzig: Bey Weidemanns Erben und Reich. See Vol. I, Part I (Erster Theil), p. 478-80. 21 cm. [Ger]

• ***Summary:*** This is largely a German translation of Engelbert Kaempfer's book *Amoenitatum Exoticarum*, written in Japan in 1690-92, and published in 1712.

The section titled "Dolichos Soja. *Indian Kidney Bean. Linn.* Spec. plant. 1023.–Sojabohne" (p. 478-80) discusses the soybean (also called "Daidsu") and various soy products, including miso, koji (*Koos*), and soy sauce (*Der Sooju*).

Note 1. This is the earliest German-language document seen (March 2009) that mentions miso, which it calls "Miso." The actual text reads: "*... aber macht man Suppen und eine Art Butter daraus, welche Miso heisst,...*"

Note 2. This is the earliest German-language document seen (April 2012) that mentions soy sauce, which it calls "Sooju" or "Soy." The actual text reads: "*Dieser lezten Bereitung legt man den Namen Sooju oder Soy bei.*" "*Der Sooju wird folgender Gestalt zubereitet;...*"

The chapter on legumes (p. 474-75) also discusses: (1) Arrachis Hypogaea. American ground nut. (2) Cicer arietinum. The chich pea, or Garavances. French: Pois Chiche. (3) Dolichos Soja. East Indian kidney beans. Sojabohne.

Note 3. The term "East Indian" probably refers to the Dutch East Indies–today's Indonesia.

(4) Ervum Lens. Lentil. (5) Lotus edulis. (6) Lotus tetragonolobus. Square podded crimson pea. Spargelerbsen. Viereckiger Schotenklee. (7) Lupinus albus. (8) Phaseolus vulgaris. Common kidney bean. French: Faseole. Haricot commun blanc. (9) Pisum sativum. (10) Pisum Americanum. (11) Pisum maritimum. 12. Vicia Faba. Common garden bean

Note 3. Charles Bryant died 1799. Address: Norwich.

342. Sake shoyu denjuki [Information about sake and shoyu]. 1785. Japan [Jap]*

• ***Summary:*** Yokotsuka (1985, p. 206), who cites this book as "*Sake shoyu denjuki* (1785)," states that it is about the development of and formulas for commercial shoyu during the Edo period. Address: Japan.

343. Shôyu denjuki [A record of initiation into shoyu]. 1785. Japan. [Jap]*

• ***Summary:*** Early book on shoyu production.

344. Young's New Italian Warehouse. 1786. Classified ad: Tuberose roots, Great Britains, &c. *Morning Post and Daily Advertiser* (*London*). Jan. 23. p. [1], col. 2.3.

• ***Summary:*** "Foreign and English Vinegars, and Fish Sauces, Anchovy, Ketchup: Truffles and Morels, Truffle and Mushroom Powder, Cayenne Pepper, India Soy, Mangoes,..." Address: No. 3, Cambridge-street, Golden Square.

345. Thomas (William). 1786. Classified ad: Has now for sale,... *Daily Advertiser, Political, Historical, and Commercial* (*New York City*). April 25. p. 3.

• ***Summary:*** "... Tamarinds and Pickles, French and Spanish olives, Anchovies and capers, Mushrooms, India soy [sauce], Ketchup, coratch and Quin's sauce." Address: No. 242. Queen-street, between Wall and King-street.

346. Young. 1786. Classified ad: Italian wines, cyder, perry, Parmesan cheese, &c, &c. *Times* (*London*). June 10. p. 1, col. 1.

• ***Summary:*** "Respectfully acquaints the Nobility, Gentry, and Public, that he has now a most excellent assortment of Cyders, of the first Quality, and of his own Growth, in Bottles and Casks, which are so rich and full flavoured of the Apples as to distinguish itself; also fine soft old Perry. Carmigniano Nice, and other Italian, or Summer Wines,... Gorgona Anchovies, particularly fine; Capers of all sorts; India Soy [sauce], Mangoes, French and Spanish Olives, new Lucca and Florence Oil for Sallad, Vinegars and Fish Sauces of all kinds, for use of the table and kitchen, Mushrooms and Wallnut [walnut] Ketchup, Cayenne Pepper, and Curry Powder...; and all will be sold on terms more considerably reduced than in any other Italian Warehouse in Town."

Note 1. This is the earliest English-language document seen (Jan. 2006) that contains the term "Wallnut Ketchup" (or "Walnut Ketchup").

Note 2. Perry (chiefly British) is the expressed juice of pears often made alcoholic by fermentation and sometimes effervescent by carbonation or by fermentation in a closed container. Address: Italian Warehouse, No. 5, Cambridge-street, Golden-square [London].

347. Powell (William). 1786. Classified ad: Assortment of groceries to be sold... *Connecticut Journal* (*New Haven*). June 14. p. 3.

• ***Summary:*** "At the store formerly occupied by Mr. Joseph Howell... Mersailles [Marseilles] and Florence sweet Oil. Japan Soy [sauce]. English Kitchup."

Note 1. This is the earliest document seen (March 2011) concerning soybean products (soy sauce) in Connecticut; soybeans as such have not yet been reported.

Note 2. This is the earliest document seen (June 2007) that contains the term "Florence sweet oil," suggesting that this sweet oil might be olive oil. Address: Head of the Long-Wharf.

348. Pressey's Grocery Warehouse. 1786. Classified ad: Patna Rice. *Morning Post and Daily Advertiser* (*London*). Nov. 15. p. [4], col. 1.9.

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• ***Summary:*** "The Nobility and Gentry are most respectfully informed, that they may be supplied with any quantity of fine Patna Rice...

"He has likewise a large quantity of fine Indian Mangoes, Bamboo Pickles, Japan Soy [sauce], true Curry Powder, Chili Vinegar, Cheroke Sauce [Cherokee Sauce],... preserved East and West India Ginger, preserved Tamarinds, Calcari Paste, Lack Soy, Batavia and Goree Arrack,... Zoobditty Match,..."

This ad also ran on Nov. 17, p. [4], col. 2.7. Address: Henrietta-street, Covent-garden [London].

349. Ellison (Henry). 1786. Classified ad: Has for sale.... *State Gazette of South-Carolina* (*Charleston*). Dec. 25. p. 1.
• ***Summary:*** "... Anchovies, India Soy [sauce], Ketchup, Jamaica Rum..." Address: Grocery Store, No. 9, Bedon's Alley.

350. Raffald, Elizabeth. 1786. The experienced English housekeeper: For the use and ease of ladies, housekeepers, cooks, &c. written purely from practice, and dedicated to the Hon. Lady Elizabeth Warburton, whom the author lately served as housekeeper: consisting of near nine hundred original receipts... 10th ed. London: Printed for R. Baldwin. iii + 384 + [14] p. Illust. (4 leaves of plates). 12vo.
• ***Summary:*** Part III includes many recipes (on 53 pages) that call for the use of Catchup. For example: To make the corner dish (p. 16): "two spoonfuls of mushroom catchup, Chayan and salt,..." To make a Sauce for the Cod's Head (p. 21): "... then take the meat out of your lobster, pull it in bits, and put it in your butter, with a meat spoonful of lemon pickle and the same of walnut catchup, a slice of the end of a lemon,..."

To make a very nice Sauce for most sorts of Fish (p. 28): "Take a little gravy,... put in a whole onion, one anchovy, a spoonful of catchup, and a glass of white wine, thicken it with a good lump of butter rolled in flour, and a spoonful of cream;..."

351. Saikaku. 1786. Kôshoku ichidai onna Japan. [Jap]*
• ***Summary:*** Iino (2003, p. 9): In this 1786 book "we find reference to *kijoyu* (raw [or unheated] soy sauce) where it states: 'Add kijoyu to *tôzatsuke nasu* (pickled eggplant).'" Address: Japan.

352. Long. 1787. Classified ad: Portable desserts. *Times* (*London*). Jan. 3. p. 3, col. 4.
• ***Summary:*** "The Nobility and Gentry only are informed, that Long has imported a large quantity of neat boxes of curious fruits, much handsomer and genteeler for presents than Guimaroen plumbs, and come at nearly the same price:... preserved, East and West-India Ginger; candied ditto for the pocket when shooting or hunting... real Tapioca, Lock Soy, Japan Soy [sauce], and all kinds of rich sauces, &c. &c. together with a large variety of India goods, at his warehouse, No. 73, Cheapside, who being the original importer can afford them on lower terms and of superior quality than any shop in town." Address: No. 73, Cheapside, London.

353. Powell (William). 1787. Classified ad: To be sold... Groceries. *Connecticut Journal* (*New Haven*). Feb. 14. p. 4.
• ***Summary:*** "... Capers and Sallad Oil, Japan Soy [sauce], English Ketchup... Black Pepper, Cayan [Cayenne] do. [ditto = Pepper], Alspice, Race Ginger, Ground do. [Ginger],..." Address: State-Street, New-Haven.

354. Burgess. 1787. At Burgess's Italian and Salad Oil Warehouse... (Ad). *World and Fashionable Advertiser* (*London*). Feb. 17. p. [1], col. 3.5.
• ***Summary:*** "Superfine Sallad Oil,... West India Pickles, genuine Cayenne Pepper, Bengal Currie Powder, Japan Soy, Lemon Pickle, Oyster Ketchup, Shalot Ketchup, variety of Vinegars, Devonshire Sauce, with the greatest variety of rich Sauces for Fish, Gravies, made dishes,..." Address: No. 107, corner of Savoy Steps, Strand [London].

355. Pressey's. 1787. Classified ad: New pistachio nuts. *Times* (*London*). May 31. p. 4, col. 2.
• ***Summary:*** "Just landed... Jordan Almonds, dryed Dates, Japan and Patna Rice, Bengal Currie Powder, Lock Soy, Japan Soy [sauce], Parmesan Cheese... Chili and French Vinegars, Bambo [bamboo] Achar and Bambo Pickle, Green and Yellow Mangoes, with and without shell, Minorca Honey, Zobditty [Zoobditty] Match... high flavoured Batavia and Goa Arrack, with a great variety of other foreign goods, at Pressey's Warehouse..."

A very similar ad appeared in the June 7 issue (p. 4, col. 3).

Note: This is the earliest English-language document seen (Jan. 2006) that contains the term "Zobditty Match." Later modified into "Zoobditty Mutch" and "Zoobditty Match," it probably refers to a type of sauce. Address: Henrietta-street, Covent-garden [London].

356. Pressey's. 1787. Classified ad: Preserved East and West-India green ginger. *Times* (*London*). June 2. p. 4, col. 3.
• ***Summary:*** "Just landed... Bengal Currie Powder, Lock Soy, Japan Soy [soy], East India Bervits [Bervitte?, Bervitty?], Rosolio Maraschin from Java, Cashew Nuts, Bengal Paddy, fine high flavoured Batavia and Goa Arrack,... Mandive and Tapioca, Parmasan [Parmesan] Cheese,... Pipe, and Ribbon Maccaroni [Macaroni], new Pistachio Nuts, Hickary [Hickory] Nuts, true Arquebusade Water, Cherokee Quin, Cavice and Wood's Sauce,... Barbadoes Cane Spirit, Rotterdam Geneva, a variety of Foreign Liquors... at Pressey's Warehouse... where the Nobility and Families may depend on being supplied with goods of the very first quality."

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This ad also appeared in the June 9 issue (p. 4, col. 3) and the June 16 issue (p. 4, col. 3).

Note 1. Geneva is a highly aromatic bitter gin, originally made in the Netherlands.

Note 2. This is the earliest document seen (Dec. 2005) that uses the word "Cavice" to refer to the name of a sauce. Elizabeth David (1970, p. 11) believes that it, or its relatives may have been the ancestors of the word "catsup." Address: Henrietta-street, Covent-garden [London].

357. Pressey's. 1787. Classified ad: Mangoes and bambo achar. *Times* (*London*). June 12. p. 4, col. 3.

• ***Summary:*** "The Nobility and Gentry are most respectfully informed, that they may be supplied at Pressey's warehouse,... Bambo Achar, Bambo Pickle, true Bengal Currie Powder, fine Patna Rice of the pincushion sort... from the East India Company's warehouses; Japan Soy [sauce], Turmerick [Turmeric], East India Bervitty, China Lock Soy, Zoobditty Match, high flavoured Batavia and Goa Arrack..."

Note 1. This is the earliest document seen (Jan. 2007) in the *Times* (London) that contains the term "China Lock Soy." It probably refers to rice vermicelli; notice that it is listed among the sauces and pickles.

Note 2. This is the earliest English-language document seen (Dec. 2005) that contains the term "Zoobditty Match." According to the University of Wolverhampton online trade dictionary, this is: "A form of sauce or pickle, apparently originating in India, but Advertised around 1800 by tradesmen like Burgess... According to the expert on wine labels, N.M. Penzer [see *The Book of the Wine Label*], the term appears to be a corruption of two Indian terms, 'joobitty' (tasty) and 'machli' (fish)." Thus it may have been a tasty fish sauce. Address: Henrietta-street, Covent-garden [London].

358. Williams and Company. 1787. Classified ad: Just come in, great choice of fine Nankeen. *Times* (*London*). Nov. 26. p. 1, col. 4.

• ***Summary:*** "... the greatest variety of real old japanned Stick Fans; fine carved Ivory stick and sandlewood [sandalwood] Fans; curious Italian ditto, mounted in the neatest manner;... preserved Ginger and Sweetmeats, Japan Soy [sauce], fine India Matting... All the said goods will be sold cheap, for ready money." Address: No. 2, St. James's-street, Pall-mall [London].

359. Mason, Charlotte (Mrs.). 1787. The lady's assistant for regulating and supplying the table, being a complete system of cookery, &c... Sixth edition, enlarged, corrected, and improved, to the present time. London: Printed for J. Walter, at Homer's-Head, Charing Cross. [20] + 484 + [20] p. See p. 278-79, 317.

• ***Summary:*** The section on "Kechup" contains a recipe titled "Soy" [sauce] (p. 317) which states: "Soy comes from the East Indies: it is made from their mushrooms, which grow in the woods. They are of a purplish colour, and are wrinkled on the surface like a morell [morel]. They gather them in the middle of the day, and wash them in salt and water: and then lay them in a dish, mash them with their hands, and sprinkle them with salt and beaten pepper; the next day the liquor is pressed off, and some * galangals and spices added to it: it is boiled up till it is very strong, and then some more salt is sprinkled into it. In this manner it will keep many years."

Footnote: * Galangals is a root which grows in the East Indies.

To bake a Collar of Fish (p. 247-48): "For sauce–take the water the eel was boiled in, and the bones of the eel, with the fins, &c. of the other fish: put them into a saucepan, with a bunch of sweet herbs, an onion, some mace, cloves, and white pepper; let these stew till reduced to a quarter of a pint; strain it: add to it three or four spoonfuls of fish-cullis, a few truffles and morells [morels], a few mushrooms, two spoonfuls of ketchup, or half a one of soy, a piece of butter rolled in flour; season it with a little salt, and give it a boil;..."

The word "ketchup" appears in this early cookbook at least 65 times, and "walnut ketchup" appears at least four times–so by 1787 ketchup has become a widely-used condiment in England.

For example: Pigeons in Fricandeau (p. 278-79): "When they are drawn, truss them with their legs in their bodies, lard them with bacon, slit them, then fry them in butter of a fine brown; then put them into a stew-pan, with a quart of good gravy, a little lemon-pickle, a little colouring, a tea-spoonful of walnut-ketchup, some chyan [cayenne pepper], and a little salt, with a few truffles and morells, and some yolks of hard eggs; lay the pigeons in the dish, and pour the sauce with the ingredients over them."

A section titled "Ketchup" (p. 315-17) appears just before the "Soy" recipe. There are ten recipes for home-made ketchup: Ketchup of mushrooms. Another way. To make ketchup. Ketchup of Walnuts. Another walnut ketchup. Another walnut ketchup. White ketchup. Ketchup of the shells [of walnuts]. Oyster ketchup. English kechup.

Here are several of the most basic ketchup recipes given.

"To make Ketchup: Put the peel of nine Seville oranges to three pints of the best white-wine vinegar; let it stand three or four months; pound two hundred of walnuts, just before they are fit for pickling; squeeze out two quarts of juice, put it to the vinegar; tie a quarter of an ounce of cloves, the same of mace, a quarter of a pound of eschalot, in a muslin rag; put them into the liquor; in three weeks, boil it gently till near half is consumed; when cold bottle it."

"Ketchup of walnuts: Bruise a hundred or two of walnuts, just before they are fit to pickle; squeeze out the juice, let it stand all night, pour off the clear; to every quart one pound of anchovies; boil it; when the anchovies are dissolved, strain the liquor; add half a pint of red wine, a gill

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of vinegar, ten cloves of garlic: mace, cloves, and nutmeg, half a quarter of an ounce each, pounded; let this simmer till the garlic is tender."

"Another Walnut ketchup: Pound walnuts in a mortar, squeeze out the juice, let it stand to settle, pour off the clear; to every pint add a pound of anchovies; of mace, cloves, and Jamaica pepper, each half a quarter of an ounce; boil all together till the anchovies are dissolved, then strain it off, put in a good handful of eschalots, and boil it up again; to every quart of this liquor put half a pint of vinegar. It will keep for years; and two or three spoonfuls, in melted butter, makes excellent fish sauce."

"White Ketchup: Take one quart of white wine, one pint of elder vinegar, and one quart of water; half a pound of anchovies with their pickle, half a pound of horse-radish scraped, one ounce of eschalots bruised, one ounce of white pepper bruised, one ounce of mace, a quarter of an ounce of nutmegs cut in quarters; boil all together till half is consumed, then strain it off: when it is cold, bottle it for use. It is proper for any white sauce, or to put into melted butter."

"Oyster Ketchup: Boil small oysters in their own liquor, till the goodness is out; to every pint of clear liquor put half a pint of red wine, the same of white; mace, black, and Jamaica pepper, a quarter of an ounce each; pour it boiling hot on one dozen of eschalots, half the rind of a lemon, a piece of horse-radish: when cold, mix it with the oyster-liquor; bottle it."

"English ketchup: Take a quart of white wine vinegar, put into it ten cloves of garlic, peeled and bruised; take also a quart of white port, put it on the fire; and when it boils, put in twelve or fourteen anchovies washed and pulled to pieces; let them simmer in the wine till they are dissolved; when cold, put them to the vinegar, then take half a pint of white wine, and put into it some mace, some ginger sliced, a few cloves, a spoonful of whole pepper bruised, let them boil a little; when almost cold, slice in a whole nutmeg, and some lemon-peel, with two or three spoonfuls of horse-radish; stop it close, and stir it once or twice a day. It will soon be fit for use. It must be kept close stopped."

Note: This 6th edition was the last real edition ever published. So the author never corrected her apparently mistaken recipe for "Soy."

Interesting non-soy ingredients. The word "almonds" appears 54 times in this book and the word "almond" 31 times. Almond recipes include: Almond pudding (p. 345, 350). Almond fraze (p. 362). Almond tarts (p. 365, 366). Almond cheesecakes (p. 368). Almond custard (p. 371). Almond cake (p. 374). Almond loaves (p. 382). Almond cream (p. 414, or pastachia [pistachio] cream, to be mixed with a pint of dairy cream). Almond soup (p. 205). Address: A professed housekeeper, who had upwards of thirty years experience in families of the first fashion [England].

360. Priddy's Foreign Warehouse. 1788. Classified ad: French Pomatums, Cheese.... *World* (*London*). March 19. p. [1], col. 3.7.

• ***Summary:*** "... just landed; real Gorgona Anchovies, Quin Sauce, Coratch Cavice, India Soy [sauce], Lemon Pickle and all Sorts of Fish Sauces,..."

Note: This is the earliest English-language document seen (Dec. 2012) that uses the term "Quin sauce" to refer to "Quin's sauce." Address: No. 14, Poland-street [London].

361. *Independent Journal* (*New York City*).1788. Soy. March 22. p. 3.

• ***Summary:*** "Many of our readers may perhaps not be disappointed to know the method of making the celebrated Eastern pickle, known by the name of Soy [sauce]–It is prepared from kidney-bean of India. To a quantity of these beans boiled to a certain degree of softness, they add an equal quantity of pounded barley, or rather wheat; and having properly mixed them, cover up the mass for a day and a night in order to ferment; having then put the whole into a pot, they cover it with salt, pouring over it a proper quantity of water.

"This compound they stir carefully at least once a day, but if twice or thrice the better, for two or three months, at the end of which time filtrate and express the mass, preserving the liquor in wooden vessels. A second quantity of liquor [water] poured on these ingredients, and stirred for some days as before, will yield an inferior kind of soy– We received this account from an ingenious and curious gentleman, long resident in India for the mere purpose of philosophic investigations."

Note 1. This article also appeared in the *Providence Gazette and Country Journal* [Rhode Island] (5 April 1788, p. 3), and *New-Hampshire Gazette and General Advertiser* (23 April 1788, p. 1).

Note 2. This appears to be an original description. Yet, it is surprising to read that soy sauce was made at this time, or in this way, in India.

362. Priddy's Foreign Warehouse. 1788. Classified ad: Foreign pomatums, cheese, hams, &c. &c. *Times* (*London*). March 31. p. 1, col. 2.

• ***Summary:*** "... Essence of Anchovies; French and Spanish Olives; India Soy; Lemon Pickle; and all sorts of Fish Sauces, and curious Vinegars, Pickles, Oil, &c." Address: No. 14, Poland-street [London].

363. Mayer (John G.). 1788. Classified ad: Has for sale at the most reduced prices.... *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). July 22. p. 2.

• ***Summary:*** "... Best hyson tea, loaf sugar, muscovado do. [ditto = sugar], coffee,... olive oil, pickled walnuts, anchovies, capers, Indian soy [sauce], ketchup,..." Address: No. 52, Bay.

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364. Thomas (William). 1788. Classified ad: Has for sale.... *Daily Advertiser* (*New York City*). Aug. 8. p. 1.
• ***Summary:*** "... English trebled refined sugar,... Queen's sauce, India Soy [sauce], ketchup, anchovies, olives, capers,..." Address: No. 243, Queen-street.

365. Bankes, Thomas. 1788. A new and authentic system of universal geography, antient and modern: All the late important discoveries made by the English, and other... Vol. 1 of 2. London: Printed for C. Cooke. 623 p. See p. 122.
• ***Summary:*** In the chapter on Japan, Section IV states (p. 122): "Their articles of exportation are wrought silk and cotton, rice, soy, Japan ware, porcelain, gold, silver, copper,..."

Other titles: "New, Royal, and Authentic System of Universal Geography..." Address: Rev., Vicar of Dixton, Monmouthshire [Wales].

366. Williams and Company. 1789. Classified ad: No. 2.–St. James's-street. *Times* (*London*). Feb. 10. p. 3, col. 4.
• ***Summary:*** "Mr. Williams, who has had the honour of serving the first Personages and most of the Nobility and Gentry, begs leave to acquaint them, especially his former customers,... the said collection is said to be the most curious ever seen together in England, and for the conveniency of the Nobility, Gentry, &c. they are placed in the first floor... Indian Matting, preserved Ginger, Japan Soy [sauce], &c. the above goods are all marked at lowest prices for ready money." Address: No. 2, St. James's-street [London].

367. Pressey's. 1789. Classified ad: New Patna rice. *Times* (*London*). May 22. p. 4, col. 4.
• ***Summary:*** "The Nobility are very respectfully informed, that they may be supplied with beautiful new Patna Rice, in small bags and casks, by the last ships from India, of very superior quality; likewise Curry, Batavia Arrack 12*s.* per gallon, Japan Soy [sauce], Masulipatam Snuff, preserved Ginger..." This ad also appeared in the May 27 issue (p. 3, col. 4). Address: Warehouse, Henrietta Street, Covent Garden [London].

368. China Warehouse. 1789. Classified ad: China Warehouse selling off a prime cost. *Times* (*London*). May 25. p. 3, col. 4.
• ***Summary:*** "A great Variety of Foreign China... Salt Spoons, India Paper Hangings, India Fishing Lines, fine India Ginger, India Soy; also a quantity of real India Nankeens, Muslins, and some very fine India Long Cloth..." Address: No. 15, Shug Lane, near the Haymarket [London].

369. Burgess. 1789. Classified ad: For families going into the country. Delicacies for the table. *Times* (*London*). July 27. p. 1, col. 2.
• ***Summary:*** "To the Curious in Fish Sauce and Gravies. Burgess's new invented Sauce Picante, to eat with all kinds of cold meats, and directions given for using it. His Original and Superior Essence of Anchovies, so much approved of for Anchovy Sauce. Also the finest flavoured Gorgona Anchovies, for bread and butter, and for making Sandwiches, &c."

"Japan Soy [sauce], and Lemon Pickle. Fine Capoot Capers." Also many types of hams, tongues, pickles and vinegar. This ad also appeared in the Aug. 3 issue (p. 1, col. 2). Address: No. 107, Corner of Savoy Steps [London].

370. Stuart (James). 1789. Classified ad: Has for sale,... at his grocery,... *New-York Daily Gazette* (*New York City*). Sept. 16. p. 897.
• ***Summary:*** "... Quin-Sauce, India Soy [sauce], Ketchup, Mustard, Allspice, Cayenne and black Pepper,..." Address: No. 10, Smith street.

371. Burgess (J.). 1789. Classified ad: Delicacies for the table. *Times* (*London*). Dec. 22. p. 2, col. 1.
• ***Summary:*** "Wild Boar Heads, cooked in the true Epicurean flavour, are landed in high perfection... New Rein Deer Tongues... Dutch Geese Smoaked,... Welch Smoaked Salmon,... English and Hambro' Sour Crout [Sauerkraut].

"Likewise his Sauce Royal, he can recommend to families, for Stewing all kinds of Carp, Tench, Eels, Barbel, Pike, &c.

"Japan Soy [sauce] and Lemon Pickle. Fine Capoot Capers. Superfine Lucca and Florence Oils, for Sallads. Genuine Cayenne Pepper.

"Best American Spruce Beer, for Table use..."

Note: This is the earliest English-language document seen (Feb. 2006) that contains the term "Sauce Royal." By May 1792 this sauce was being imported into the British colonies of North America. Address: Warehouse, No. 107, Strand, near Exeter Change [London].

372. *SoyaScan Notes.* 1789. Terms used in the *Times* (London) to refer to soy sauce (Overview). 23 Jan. 2007. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** In descending order of frequency, terms with two or more appearances are: Japan Soy–10. Lock Soy (probably a type of rice vermicelli, not soy sauce)–8. India Soy–5. China Lock Soy (probably vermicelli)–2. Lack Soy (probably rice vermicelli)–1. China Lack Soy (probably rice vermicelli)–1.

Note: The prevalence of the term "Japan Soy" indicates (1) That this type of soy sauce was probably most popular, and (2) That it was probably purchased from Dutch merchants; they were the only Europeans allowed to trade with Japan during the 1780s.

373. Ellis, John. 1789. A catalog of such foreign plants as are worthy of being encouraged in our American colonies

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for the purposes of medicine, agriculture and commerce. *Transactions of the American Philosophical Society* 1:325-36. See p. 327. (Held at Philadelphia, for Promoting Useful Knowledge. Second edition corrected). [1 ref]
• ***Summary:*** "From a pamphlet by John Ellis, F.R.S. [Fellow, Royal Society]. Presented by the Honorable Thomas Penn, Esq. to the American Philosophical Society through the hands of Samuel Powell, Esq."

"Dolichos soja Linn. Sp. 1023. A kind of kidbean called Daidsu. Used for making Soye* or Indian Ketchup. See Kaempfer, Amoenitat.

"* The method of preparing East-India Soye or India Ketchup. Take a certain measure, for instance a gallon, of that sort of kidney-beans, called Daidsu by the Japonese, and Caravances by the Europeans; let them be boiled till they are soft; also a gallon of bruised wheat or barley (but wheat makes the blackest Soye) and a gallon of common salt. Let the boiled caravances be mixed with the bruised wheat, and be kept covered close a day and a night in a warm place, that it may ferment. Then put the mixture of the caravances and wheat, together with the gallon of salt, into an earthen vessel, and with two gallons and a half with common water, and cover it up very close. The next day stir it about well with a battering machine or mill (*Rutabulum*) for several days, twice or thrice a day, in order to blend it more thoroughly together. This work must be continued for two or three months, then strain off and press out the liquor, and keep it for use in wooden vessels; the older it is the clearer it will be, and of so much more value. After it is pressed out, you may pour on the remaining mass more water, then stir it about violently, and in some days after you may press out more Soye."

Note: In 1770 Ellis was the commercial agent for West Florida in London. His first book, published in 1770, was titled *Directions for Bringing Over Seeds and Plants... with a Catalogue of Such Foreign Plants as are Worthy of Being Encouraged in Our American Colonies...* It told how to pack seeds (often in beeswax) to prevent them from spoiling on long sea voyages.

First cited by Hymowitz. 1986. Bibliography of early, previously uncited publications on soybeans in the United States. 2 p. Unpublished. \

374. **Product Name:** [Kimbue Soy Sauce].
Foreign Name: Kimbue Shôyu.
Manufacturer's Name: Fueki Shoyu Co. Ltd.
Manufacturer's Address: 660 Kamiigusa, Kawashima-cho, Hiki-gun, Saitama prefecture, Japan.
Date of Introduction: 1789.
New Product–Documentation: Product with Label (Soken Gentle Tamari) purchased at Open Sesame in Lafayette, California. 1991. Feb. 16. "Low Sodium Wheat Free Soy Sauce." Since 1789. Ingredients: Whole soybeans, well water, sea salt. "Soken Gentle Tamari... is brewed by the Kimbue Co., makers of fine soy sauce for over 200 years."

375. Mayer (John G.). 1790. Classified ad: Hyson Tea, at 8*s.* 6*d.* for sale... *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Jan. 9. p. 4.
• ***Summary:*** "... Basket salt, India soy [sauce], Mushroom ketchup, Salled [Salad] oil..." Address: At the white store on Cochran's wharf.

376. Alting, Willem Arnold. 1790. [Re: Request for provisions]. Letter to Hendrik Casper Romberg (Chief) and Petrus Theodorus Chasse, Deshima factory [Nagasaki, Kyushu, southern Japan], June 23. Handwritten, with signature. [Dut]
• ***Summary:*** In the future, we request that your honourable sirs do not send the demand for fruits that we normally claim from Japan, except for Soy [sauce] (*Soija*) and Saké (*Sackij*). [i.e., please continue to send soy and sake].

Bibliographic reference in Dutch: NA, NFJ 410, ontvangen brieven (23-6-1790). No page or folio numbers. Contemporary hand-written letter in a letter-book for the administration on Deshima.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 410 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl, The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 285]. Address: Governor-General, and the Council, Batavia [today's Jakarta, Indonesia].

377. Governor-General and the Council. 1790. [Re: Provisions]. Letter to the Deshima factory [Nagasaki, Kyushu, southern Japan], June 23. Handwritten, with signature. [Dut]
• ***Summary:*** Batavia informs Deshima that in the future no preserved fruits [such as *umeboshi*] need to be sent to Batavia, only the soy [sauce] and sake requested. The tubs should be cleaned first and prepared to contain the sake and soy.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); inventaris nummer 410 [National Archives, Prins Wilhem Alexanderhof 20, The Hague, www.nationaalarchief.nl, The Archives of the Dutch Factory in Japan (NFJ); record number 410]. Address: Batavia [today's Jakarta, Indonesia].

378. Romberg, Hendrik Casper. 1790. Diary. In: Leonard Blussé, Cynthia Viallé, et al, eds. 2004. The Deshima Diaries Marginalia, 1740-1800. Tokyo: Japan-Netherlands Institute. xl + 898 p. See p. 628-29 (#122, 127).
• ***Summary:*** In the section titled "The arrival of the *Zuiderberg*," at 1790 Sept. 1–"The five men went aboard... I ordered *sake* and soy for the Company." Address:

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Opperhoofd (Chief of the Dutch factory), Deshima, Nagasaki, Japan.

379. Tunno (George). 1790. Classified ad: Takes the liberty to inform his friends and the public that he has imported... from London, a general assortment of European & East India goods... *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Sept. 16. p. 4.
• ***Summary:*** "... Sallad and neats foot oil. Ketchup, India soy [sauce], mangoes, walnuts, gerkins, anchovies, picallilla [piccalilli] and mustard."

Note: Piccalilli is a British take on an Indian relish of chopped pickled vegetables and pungent spices. According to the Oxford English Dictionary, the word originated in 1758 when Hannah Glase described how "to make Paco-Lilla, or Indian Pickle."

380. Burgess (J.). 1790. Classified ad: Double Dutch hyacinths, Jonquils, &c. *Times* (*London*). Oct. 1. p. 4, col. 3.
• ***Summary:*** "J. Burgess most respectfully informs the Nobility and Families in general, that he This Day landed eleven thousand Double Dutch Hyacinths..."

"Burgess's original and superior Essence of Anchovies, which will keep good for years in any climate. To be used at table in the same manner as India Soy [sauce]."

"Also his Sauce Piquante... Zoobditty Match, Lemon Pickle, Chilly Vinegar, and genuine Cayenne Pepper." Address: No. 107, Strand, corner of Savoy Steps [London].

381. Shirtliff, Austin & Strobel. 1790. Classified ad: Have just opened a large and very elegant assortment of the most fashionable fancy goods... in the dry goods line, imported in the Powhatan, captain Jeffrey, from London... *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Oct. 8. p. 4.
• ***Summary:*** "... Pickles consisting of: Gerkins. Walnuts. Beans. India melon mangoes. Capers. Mushrooms. Onions. French and Spanish olives. Anchovies. Japan soy [sauce], ketchup. Coratch. Quins sauce. Florence oil. Best Durham mustard..." Address: No. 19, Broad-street.

382. Anthony (Joseph, Junior). 1790. Classified ad: Has imported in the last ships from London, a large and general assortment of silver, plated-ware, jewellery & cutlery:... which are immediately from the manufactories. *Pennsylvania Packet, and Daily Advertiser* (*Philadelphia*). Dec. 23. p. 1.
• ***Summary:*** "... Punch ladles and strainers. Asparagus and sugar tongs. Soy frames [for soy sauce], cake baskets and waiters. Table, chamber and bracket candlesticks." Address: No. 76, On the South Side of Market street, between Second and Third streets, Philadelphia.

383. Briggs, Richard. 1790. The English art of cookery, according to the present practice;... A new edition. Cork, Ireland: Printed by J. Connor. xxiv + 24 + 534 p. See p. 217.
• ***Summary:*** The recipe for "Peregoe Turkey" states (p. 217): "Take a turkey about eight or nine pounds weight, draw and singe it, season the inside... roast it one hour and a half, baste it a little with the wine, and then with butter; put the rest of the wine into a stew-pan, with a little good brown gravy, some butter mixed with flour, a spoonful of India soy or mushroom ketchup, a little pepper and salt, and the juice of half a lemon; stew it for fifteen minutes,..."

Note: India soy [sauce] and mushroom ketchup are considered interchangeable. Address: Many years cook at the Globe-Tavern, Fleet-street; the White-Hart Tavern, Holborn; and now at the Temple Coffee-House, London.

384. Lamarck, Jean Baptiste... de. 1790. Dictionnaire encyclopédique méthodique. Botanique. Vol. 2. Dolic du Japon, Dolichos soja Lin. [Systematic and encyclopedic dictionary. Botany. Vol. 2. The Soybean, Dolichos soja]. Paris: Chez Laporte, Imprimeur-Libraire. 774 p. See p. 299. [1 ref. Fre]
• ***Summary:*** Plants are listed by French names. The author lists the soybean under Dolic, as follows: "28. Dolic du Japon, *Dolichos soja. Lin. Dolichos caule erecto flexuos, racemis axillaribus eredis, leguminibus pendulis hispidis subdispermis.* Lin. Thunb. Fl. Jap. 282.

"*Phaseolus erectus, siliquis Lupini, fructu pisi majoris candido.* Kæmpf. Amoen Exot. 837. t. 838. Japonicè; daidsu s. mame. Phaseolus Japonicus. Raj. Suppl. 438. n°. 28 [John Ray. 1704. *Historia plantarum. Vol. 3. Supplementum.* See p. 438].

The original French reads: "Sa tige est droite, haute d'un pied & demi, striée ou cannelée dans sa partie supérieure, & abondamment chargée de poils rousseâtres. Ses feuilles sont composées de trois folioles ovales, obtuses, velues, molles, soutenues sur des pétioles communs velus & striés. Les fleurs font petites, purpurines, disposées dans les aisselles des feuilles sur des grappes droites, velues, & fort courtes. Les gousses sont longues d'un pouce & demi, pendantes, un peu comprimées, pointues, dispermes, & couvertes de poils rousseâtres fort abondans. Cette plante croît au Japon, dans les Indes orientales, & est cultivée au Jardin du Roi. Les Japonois préparent avec ses semences une sorte de bouillie qui leur tient lieu de beurre, & dont ils font une sauce fameuse, qui se sert avec les viandes rôties; ils nomment la bouillie *miso*, & la sauce *sooja* ou *soja*."

In English, this means: "Its stalk is straight, a foot and a half high, striped or fluted in its upper part and abundantly covered with reddish or russet hairs. Its leaves are comprised of 3 oval leaflets, obtuse (rounded at the free end), hairy, soft, several leaves are borne on petioles that are hairy and striped. The flowers are small, purplish, arranged on the axils of the leaves, in straight clusters which are hairy and very short. The pods are an inch and a half long, pendant, slightly compressed (not round), pointed, dispermes, and covered

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with very abundant reddish hairs. This plant grows in Japan and the East Indies, and is cultivated at the Royal Garden (*Jardin du Roi*). It is an annual, and I have seen a living plant specimen. Using its seeds, the Japanese prepare a sort of paste [miso], which they use in place of butter, and that is also used to make a famous sauce, which is served with roasted meats. They call the paste *miso* and the sauce *sooja* or *soja*.

Note 1. This is the earliest (and only) French-language document seen (Jan. 2010) that uses the term *"Dolic du Japon"* (regardless of capitalization or hyphenation) to refer to the soybean.

Note 2. This is the earliest French-language document seen (April 2012) that uses the term *la sauce soja* to refer to soy sauce.

Note 3. Merrill stated incorrectly that Lamarck called the soybean "Phaseolus max" following Linnaeus. Address: Former officer in the Regiment de Beaujolais, Royal Academy of Sciences.

385. Loureiro, Joao de. 1790. Flora Cochinchinensis: sistens plantas in regno Cochinchina nascentes. Tomus II. [The flora of Cochin China, setting forth the plants in the kingdom of Cochin China. Vol. 2.]. Ulyssipone [Lisbon], Portugal. p. 433-884. See p. 441-42, 522-24. 27 cm. [Lat]

• ***Summary:*** In the section titled "Diadelphia. Decandria" (p. 441-42) we read: "Sp. 13. Dolichos Soja. Dau nanh. Hoam téu [huang-tou = yellow bean]. Writing in Latin, he gives a botanical description of the plant, describes its habitat as Cochin China and China, and cites as sources Thunberg, Kaempfer, and Rumphius. Then he adds: "Uses: These seeds, having been boiled or lightly toasted, are quite acceptable to both the stomach and the palate. From them is made the famous Japanese soy sauce called Soia, which the Chinese and Cochin Chinese frequently use for cooking food and stimulating the appetite. There is also produced a white food resembling coagulated milk (*lactis coagulati*) and called Teu hu or Tau hu [tofu] by the Chinese; it is the most widely used food among them. Although it is rather bland by itself, if the appropriate condiments are added, it becomes a food which is neither unpleasant nor unhealthy."

The author: Ioannis (Joao) de Loureiro was born in Portugal in 1715. Somewhere between 1735 and 1743 he arrived in Cochin China (today's Vietnam) as a Jesuit missionary. Living at Hué, the capital, near the sea coast, he tells us that he had no access to European medicines. So he was obliged to depend entirely on native medicinals, and by investigating them he was necessarily induced to study the local flora and to make botanical collections. Thus he developed a herbarium of nearly 1,000 species. In 1779 he went to Canton to do botanical research for 3 years, living within a factory. He left for Lisbon in 1782, and died in 1794 or 1796. He was one of the most prominent botanical collectors of the 1700s, giving rich descriptions of economical and medicinal uses.

The book: Volume 1 was first published in 1789; the set was reissued 3-4 years later edited by Willdenow, with added notes. It describes 1,257 plants (Bretschneider 1880, p. 129-46).

Note 1. This is the 2nd earliest document seen (May 2010) concerning soybeans in Vietnam, or the cultivation of soybeans in Vietnam. This document contains the 2nd earliest date seen for soybeans in Vietnam, or the cultivation of soybeans in Vietnam (1790). The source of these soybeans is unknown.

Note 2. This is the earliest Latin-language document seen (Feb. 2004) that uses the word "Teu hu" or "Tau hu" to refer to tofu.

Also discusses: *Dolichos tetragonolobus* (p. 437. Winged bean? Habitat: Cochin China and China). The genus *Arachis* (p. 522-24), with two species: *Arachis asiatica* and *Arachis africana*. He notes (p. 524) that Linnaeus calls the latter *Arachis hypogoea* [peanut]. Address: Portugal.

386. Miller, Philip; Chazelles, Laurent Marie. 1790. Dictionnaire des jardiniers,... Supplement: Dolichos soja [The gardener's dictionary,... Supplement]. Paris: Chez Guillot, Libraire de Monsieur. See Vol. 1, p. 415. [Fre]

• ***Summary:*** Entries for the 27 species in the genus *Dolichos* begin on p. 410. On p. 415 we read: "24. *Dolichos soja. Linn. sp. 28. Thumb. flor. Jap. p. 282."* The *Dolic de Japon* bears pendant pods, covered with coarse hairs, each containing two white seeds, like large peas, from which the Japanese make a sauce, which they call Soy / Soja, for seasoning their foods.

The French text begins: *"Dolic du Japon. La tige de cette plante annuelle est flexueuse, érigée, très-hérissée et longue d'un pied. Ses feuilles sont ternées, elues et pédonculées. Ses fleurs sont propres et en grappes axillaires... les gousses sont pendantes, hérissées, et renferment deux semences blanches, comme de gros pois, dont les Japonois font une sauce pour assaisonner leurs mets, et qu'ils nomment Soja."*

387. Yuan Mei. 1790. Suiyuan shidan [Recipes from the Sui garden]. China. [Chi]

• ***Summary:*** Wade-Giles reference: *Sui Yüan Shih Tan*, by Yüan Mei. Qing dynasty.

H.T. Huang (2000, p. 323-24), in the section titled "Products associated with tou fu," states that this is the earliest document seen that mentions fresh tofu curds. In a recipe for "Hibiscus Tofu" (*fuyong doufu*) the famous Qing dynasty gastronome says (p. 100): Place fresh tofu curds (*funao* = "tofu brain") in well water and heat to boiling three times to remove the beany flavor. Suspend the curds in chicken soup and heat again to boiling. Before serving, garnish with laver / nori (*Porphyra*, a sea vegetable) and pieces of shrimp. Later, fresh tofu curds were also called

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"tofu flowers" (*douhua* or *doufu hua*).

Concerning frozen tofu, Huang states (p. 324) that a recipe in this book states: Boil the thawed tofu in water to remove the remaining beany flavor, then simmer it in a soup base.

Huang also states (p. 325, 364) that both pressed tofu (*doufugan*) and smoked tofu (*xun doufu*) are mentioned in this book.

Concerning fermented tofu, Huang (2000, p. 327) notes: By the middle of the Qing dynasty local varieties of *furu* had begun to win national fame, such as the *furu* of Suzhou [in southern Jiangsu; W.-G. Su-chou or Soochow, formerly Wuhsien] and the white *furu* of Guangxi [or Guangxi Zhangzu, an autonomous region in southeast China; W.-G. Kuangsi]. The *Suiyuan Shidan* says:

'*Rufu:* The ones from the [shops] near the front of the Temple of General Wên in Suzhou are particularly good. The colour is black, and the flavour is clean. There are two types, a wet and a dry. The product with some shrimp paste in it is also attractive, but may have a slight fishy taste. The white *furu* from Guangxi (Kuangsi) is also outstanding, especially that made by the family of the official Wang Ku."

A full-page table (Huang, p. 372) shows the "Usage of soy condiments in food recipes from the Han to the Qing dynasties." Seasonings based on jiang (fermented soybean paste) are used in 48 recipes: Jiang itself in 15, soy sauce made from jiang named *qingjiang* in a 24 recipes, soy sauce named *jiangyou* in 2 recipes, soy sauce named *jiangzhi* in 1 recipe, and soy sauce named *jiangshui* in 6 recipes. Fermented black soybeans (*shi*) are used in 2 recipes, and a new type of soy sauce named *qiuyou* (W.-G. *ch'iu yu*) is used in a whopping 62 recipes. Note: This is the earliest document seen (April 2012) in which a soy-based seasoning named *qiuyou* is mentioned. Huang states (p. 371) that *qiuyou* is written with the Chinese characters for autumn + oil, implying a sauce harvested in autumn.

Wilkinson (2000, p. 647–48). This was the most famous recipe book of its day, yet *wok* dishes accounted for only 16% of the recipes. Yuan Mei (lived 1716-1798) was one of China's four most famous "literati gourmands;" they exerted a considerable influence on the development of a higher cuisine, especially when they compiled their own cookbooks..."

Letter from Dr. H.T. Huang, 1996. Sept. 29. "Page 103 mentions mock roast goose made with yam wrapped in *tou fu p'i* (yuba)."

Dr. H.T. Huang, expert on the history of Chinese food and agriculture (personal communication, 5 June 1993), gives the date of this document as +1790, and the English translation of the title as "Recipes from the Sui Garden." He notes that page 107 contains three recipes for gluten.

Newman (1989) states: "The idea of freezing bean curd is not new. Iced Bean Curd is one of Yuan Mei's recipes from the Xi Yuan Cookery Book written near the end of the 18th century. This book by a poet, government official and author, is a very comprehensive volume of over 300 recipes, only some are about tofu. One difference is that the Iced Bean Curd recipe is meant to be served hot, the doufu in it is first frozen then prepared for use."

Bo (1982): In this work Yuan Mei states that it is more graceful for a writer to use the term "ch'ing chiang" instead of "chiang-yu" when referring to soy sauce.

Hummel (1944, p. 955-56): Yüan Mei lived 1716-1798. A poet, literary critic, and essayist, he was a native of Ch'ien-t'ang (Hangchow). Resigning (1748) from his post as magistrate of Chiang-ning, he retired (1749) to his newly acquired "Garden of Contentment," Sui-yüan, near Nanking. From 1784-1795, spent in alternate travel and quiet seclusion, he came to be known as one of the most skillful poets of his time.

Reichl (1985): Yuan Mei has been called the "the 18th century philosopher of the table." His sayings are widely quoted. For example: "A great cook cannot with the utmost application produce more than four great dishes a day." Address: China.

388. Young's Foreign Warehouse. 1791. Classified ad: At eighteen-pence per pound, the very best Parmesan Cheese, chiefly of the Honey-comb Kind. *Times* (*London*). April 6. p. 2, col. 2.

• ***Summary:*** "Five thousand pounds of the above Cheese is just landed at Young's Foreign Warehouse... Hams, Tongues, genuine India Soy [sauce], Mangoes, &c. at the lowest prices for ready money."

"N.B. His Essence of Anchovies and other Sauces may be depended on at all times, as being the most genuine and pure, he being the real inventor." Address: No. 44, New Bond-street [London].

389. Ball's Italian and Oil Warehouse. 1791. Classified ad: Just received at Ball's Italian and Oil Warehouse,... *World* (*London*). May 23. p. [2], col. 4.7.

• ***Summary:*** "... rich Sauces, viz. Essence of Anchovies, Lemon Pickle, Cavice, Corrater, India Soy [sauce], Quin Sauce, Zoobditty Mak [sic],..."

"Spruce Beer, 4*s*. per dozen; Seltzer and Pyrmont Waters of the spring filling, just received."

The term seltzer water is a genericized trademark that derives from the German town Selters, meaning "water from Selters," where naturally carbonated water has been commercially bottled and shipped into all parts of the world at least since the 18th century. Address: No. 76, New Bond-street (six doors from Oxford-street) [London].

390. Thomas (William). 1791. Classified ad: Has for sale,... *New-York Daily Gazette* (*New York City*). June 2. p. 1.

• ***Summary:*** "... Fresh India soy [sauce], quins sauce, ketchup, and pickled mushrooms..." Address: No. 243,

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Queen-street.

391. Hugget (S.). 1791. Classified ad: Has for sale, imported by Captain Gardner from London. *New-York Daily Gazette* (*New York City*). June 22. p. 3.
• ***Summary:*** "... Capers in quart bottles. Quin sauce. Ketchup. Essence of Anchovies. Pickled Lemons. Cavice and India Soy [sauce], Havannah [Havana] Sugars, in boxes..." Address: No. 42, Broadway.

392. Burgess (J.). 1791. Classified ad: Delicacies for the table. At Burgess's Italian Warehouse. *Times* (*London*). Aug. 20. p. 3, col. 1.
• ***Summary:*** "Imports, and sells wholesale, retail, and for exportation, J. Burgess begs to inform Noblemen and Gentlemen's Families, he has received a large cargo of fine Parmesan Cheese..."

Under the centered heading "Zoobditty Mutch" are listed: "Walnut Ketchup, of the finest quality. Quin's Sauce. Devonshire Sauce. Cavice. Lemon Pickle. Japan Soy [sauce]. Cherokee Sauce. Fine Capoot Capers, of the best quality, such as will keep. Bengal Currie Powder, with a Receipt [recipe] how to use it."

Note: This long ad, which takes up nearly one newspaper column, has these other centered headings: To the curious in Sallad Oil. Vinegars. Rich sauces. Burgess's Genuine Essence of Anchovies. Burgess's new-invented Sauce a L'Espagnole. Burgess's Sauce Piquante for cold meats. Sauce Royal. Sauce for stewed beef. Pickles. Best mustards. Hams and Tongues. Neats' tongues. True Swiss Arquebu Ade. Seltzer and Pyrmont Waters. Essence of American Spruce. To the Curious in Lamp Oil.

This ad also appeared in the Aug. 29 issue (p. 1, col. 4) and in the Sept. 1 issue (p. 1, col. 3). Address: No. 107, Corner of Savoy Steps, Strand [London].

393. Erving's (John) Grocery-Store. 1791. Classified ad: Just imported on the ship Union, Capt. Barnard... a great variety of delicate sauces, viz. *Argus* (*The*) (*Boston, Massachusetts*). Sept. 9. p. 3.
• ***Summary:*** "Essence of Anchovies, Royal Sauce, Japan Soy [sauce], Quin Sauce, Chilly Vinegar.... Cavices.... Lemon Pickle, Oyster Ketchup, Devil's Paste, E.I. [East Indies = India] Currie Powder, Cerach, Yellow ditto [Yellow Cerach], Elder Vinegar, Cherokee Sauce, Tartarian Ketchup, Zoobditty Mach."

Note: This is the earliest English-language document seen (Feb. 2006) that mentions the word "Cerach" or the terms "Royal Sauce," "Oyster Ketchup" (in North America), "Yellow Cerach," "Tartarian Ketchup," or "Zoobditty Mach." Mr. Erving apparently liked to coin names for commercial products. Address: No. 42, Marlborough-Street [Boston].

394. Skill and Son. 1791. To families town or country.... (Ad). *Morning Chronicle* (*London*). Sept. 21. p. [1], col. 4.6.
• ***Summary:*** "Cheese merchants and oilmen to their Imperial and Most Faithful Majesties; and to their royal highnesses The Prince of Wales, The Duke of Clarence, and Duchess of Cumberland;..."

"To the Curious in Fish Sauce: Skill and Son's Rich and Incomparable Essence of Anchovies, for Fish Sauce, to be used in the same manner as India Soy, or mixed with plain melted butter."

"Skill's Rich Imperial Sauce... for stewing Eels, Carp, Tench...

"Coratch Sauce, for Steaks, Chops, and Cutlets

"Skill's Newly Invented Camp Sauce, or Essence of Beef..."

"Skill's Newly Invented Mint Sauce, made sweet purposely to eat with Venison, Roast Lamb, &c..."

"Real India Soy, Cavice, Quin Sauce, Zobditty Match, Walnut, Mushroom, and Oyster Ketchups [Walnut Ketchup, Mushroom Ketchup], Lemon Pickle, and all kinds of Rich Sauces, that are in use at the most Fashionable Tables."

Note: This is the earliest document seen (April 2012) that contains the term "real India soy." But what does it mean? Why use the word "real?" Where and how was it made, and from what ingredients? Address: Great Italian and Foreign Warehouse, No. 15, Strand, near Charing-Cross, London.

395. Long (Joshua). 1791. Classified ad: Joshua Long, senior, presents his respects to the Nobility and the Gentry... *Times* (*London*). Nov. 11. p. 1, col. 3.
• ***Summary:*** "... and solicits the honour of their command, at No. 83, in Lombard-street, near the Mansion House, where they may depend upon having every article of the best quality and on the same low terms he used to sell at his late Warehouse, No. 73, Cheapside [London], particularly... new fine Tamarinds, East and West India preserved Ginger, Sweet Meats and Pickles, real Japan Soy [sauce], Mangoes, &c. genuine Cayenne and Chilly Pepper; real Bengal Currie Powder, and all sorts of rich sauces..."

"N.B. Foreign Sweetmeats, preserved Ginger, and Curiosities of all sorts bought and sold." Address: No. 83, Lombard-street, near the Mansion House, London.

396. Tessier, -; Thouin, M. 1791. Encyclopédie méthodique. Agriculture: Cabiou [Methodic encyclopedia. Agriculture: Manioc]. Paris: Chez Panckoucke. See vol. 2, p. 429-30. [Fre]
• ***Summary:*** The entry for "Cabiou" (p. 429-30) states: It is the thickened juice of the manioc... it lasts a long time and can replace Soya [soy sauce]. See Manioc. (*"il se conserve long-temps, & remplace le Soja. Voyez Manioc.* (*M. Reynier*)").

Note 1. Cabiou is a condiment used to season stews (*ragoûts*) and roast meat (*le rôti*); it is made with the

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thickened juice of the manioc.

Note 2. This vol. 2 of the agricultural encyclopedia goes from the letters Bab to Cen. Address: 1. Mr. l'Abbé Tessier, Docteur-Regent de la Faculté de Médecine, de l'Académie Royale des Sciences, de la Société Royale de Médicine, France.

397. Reed (John Van). 1792. Classified ad: Has opened a general retail grocery store. *Federal Gazette, and Philadelphia Evening Post.* Jan. 21. p. 3.
• ***Summary:*** "... Mushroom ketchup, India Soy [sauce], Quins Sauce, excellent with beef, &c., Lemon Pickle,..." Address: In Water, No. 33, South, second door above Chestnut street.

398. Burgess (J.). 1792. Classified ad: Genuine rich sauces, for fish, made dishes, hashes, beef-steaks, &c &c. *Times (London).* Jan. 27. p. 1, col. 1.
• ***Summary:*** A large ad: "The great reputation which J. Burgess has gained by his Sauces (he being the inventor of them) has induced many Persons to give the same Names to Articles entirely different, and of very inferior Quality, which is not only an imposition, but a great disappointment to Families in general..."

Concerning anchovies: "N.B. None are genuine but what are labelled with the Words, 'Burgess's Genuine and Superior Essence of Anchovies, No. 107, Corner of Savoy Steps, Strand, London."

The long list of imported goods includes: "Zoobditty Mutch. Walnut Ketchup. Oyster Ketchup. Mushroom Ketchup. Lemon Pickle. Fine Japan Soy [sauce]. Quin Sauce. Morells and Truffles, dry. Green Truffles. Artichoke Bottoms... Potted Lampries [Lampreys] from Hamburg. Bologna Sausages. Sour Crout. Gruyer Cheese... Chapzugar Cheese. Marole Cheese. Stilton ditto. Dried Sprats. Fine Red Herrings. Neats Tongues, nicely pickled..." Address: No. 107, Corner of Savoy Steps, Strand [London].

399. Burgess (J.). 1792. Classified ad: Genuine rich sauce, for fish, made dishes, hashes, beef-steaks, &c. &c. *Observer (London).* Feb. 5. p. 1.
• ***Summary:*** "Bengal Currie Powder, with a receipt for using it. Zoobditty Mutch. Walnut Ketchup. Oyster Ketchup. Mushroom Ketchup. Lemon pickle. Fine Japan soy [sauce]. Quin's Sauce..." Address: No. 107, Corner of Savoy-steps, Strand, London.

400. Burgess. 1792. Classified ad: At Burgess's Italian Warehouse. *Observer (London).* April 1. p. 1.
• ***Summary:*** "Burgess's original and superior Essence of Anchovies, to be used at table in the same manner as India Soy [sauce]."

"Zoobditty Mutch, Lemon Pickle, Chilly Vinegar, and Genuine Cayenne Pepper, and the Essence of Cayenne Pepper." Address: Corner of Savoy Steps, Strand [London].

401. Cooke (Joseph). 1792. Classified ad: Just received by the late arrivals from Europe, large and general assortment of silver plate, jewellery [jewelry] & cutlery and Japanned wares, &c. *Mail; or Claypoole's Daily Advertiser (Philadelphia, Pennsylvania).* April 21. p. 4.
• ***Summary:*** "... Snuffers, snuffer-trays and ink-stands. Gravy, table, dessert and tea spoons; a variety of salts, with blue linings, soy frames [for soy sauce]; cake baskets and waiters; punch bowls & strainers." Address: Goldsmith and Jeweller [Jeweler], at the Federal Manufactory and European Repository, Wholesale and Retail Warehouse, No. 38, south side of Market-street, between Front and Second streets, Philadelphia.

402. Callender's (Joseph) store. 1792. Classified ad: Just imported, in the ship Mary, Capt. Davis, from London, and to be sold (At a small profit). *Columbian Centinel (Boston, Massachusetts).* May 12. p. 72.
• ***Summary:*** "A great variety of delicate sauces, viz.– Anchovies, Essence of do. [ditto = Anchovies], pickled Walnuts, pickled Onions, Cherokee Sauce, Cavices, Oyster Catchup, Zoobditty Match, Lemon Pickle, East-India Mangoes, Morrells, Truffles, Corach, Capitons, of a superior quality, Quin Sauce, Japan Soy [sauce], Sauce Royal, Currie Powder, Devil's Paste, Tarragon Vinegar,... Mushroom Catchap [Catchup]." Address: South-side the Market House.

403. Commissioners of His Majesty's Customs. 1792. Classified ad: For sale, by order... *Times (London).* May 31. p. 4, col. 4.
• ***Summary:*** The goods to be sold are divided into two types: For exportation, and for home consumption. The latter includes: "China Ware, Wine, Soy [Sauce], Haerlem [Haarlem] Oil, Sugar,... Human Hair,... Tobacco." Address: His Majesty's Warehouse, Long Room, Custom-House, London.

404. Colhoun (John). 1792. Classified ad: For sale,... *City Gazette and Daily Advertiser (Charleston, South Carolina).* Sept. 29. p. 1.
• ***Summary:*** "... sallad oil in quart and pint bottles; Japan soy [sauce], Quin's fish sauce, mushroom ketchup, lemon pickle,..." Address: No. 42, Broad-street.

405. Mayer (John G.). 1792. Classified ad: Has received per the ship *Hanbury*, and brig *Betsey* from London, a general assortment of pickles,... *City Gazette and Daily Advertiser (Charleston, South Carolina).* Oct. 25. p. 1.
• ***Summary:*** "... girkins, walnuts and mangoes pickled, anchovies, mushroom keptchup [sic, ketchup], walnut ditto [walnut ketchup], Quin's fish sauce, Japan soy [sauce], London porter in hampers,..." Address: No. 129, Broad-

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street, near the Exchange.

406. Dorsey (John). 1792. Classified ad: Imported by the late arrivals from London, Sheffield, Birmingham, &c. A general and extensive assortment of silver and plated wares, fine cutlery, Japann'd and hard wares:... *Federal Gazette, and Philadelphia Evening Post.* Oct. 26. p. 3.
• ***Summary:*** "... Candlesticks and branches, from the bracket to the largest size, entire new patterns; egg and soy frames [for soy sauce], wax winders, dish rings and crosses,..." Address: No. 22, North Third Street.

407. Scot (James). 1792. Classified ad: Has received by the ships Amiable and Sovereign from London, a fresh supply of groceries... *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Nov. 3. p. 4.
• ***Summary:*** "... Oyster ketchup, India soy [sauce], mushroom ketchup, essence anchovies, quins sauce and corash." Address: No. 48, Bay.

408. Farley, John. 1792. The London art of cookery, and housekeeper's complete assistant: On a new plan... 7th ed. London: Printed for J. Scatcherd and J. Whitaker. vi + [26] + 467 p. See p. 271. [Eng]
• ***Summary:*** In the chapter on "Pickling," the recipe for "Soy" [sauce] states (p. 271): "This article comes from the East Indies, and is made from their mushrooms, which grow in the woods. They are of a purplish colour, and are wrinkled on the surface like a morell [morel: a type of mushroom]. They gather them in the middle of the day, and wash them in salt and water. They then lay them in a dish, mash them with their hands, and sprinkle them with salt and beaten pepper. The next day the liquor is pressed off, and some galangals (a root which grows in the East Indies) and spices added to it. It is boiled up till it be very strong, and then some more salt is sprinkled into it. In this manner it will keep many years."

In the same chapter there are also recipes for Walnut catchup and for Mushroom catchup (p. 255). The word "catchup" appears in this book on 59 different pages. Address: Principal cook at the London Tavern.

409. Phillips, Catharine. 1792. Considerations on the causes of the high price of grain, and other articles of provision, for a number of years back, and propositions for reducing them:... London: Printed and sold by James Philipps. [vi] + 90 p. See p. 28.
• ***Summary:*** The widespread "use of East India tea" tends to increase the prices of provisions. Both milk and butter are used with it, which also increases their prices. "On the other hand, however, it may be observed, that the general use of tea certainly supersedes the use of much malt liquor and spirits, and thereby tends to keep down the prices" (p. 27).

The great waste of provisions in many families of high rank also tends to tends "to advance the prices of provisions."

Suppose then a number of hams are stewed for their essence, and the flesh after stewing, thrown away, or given to the dogs, will not this appear a very condemnable waste of good meat? To say nothing of the extravagant luxury of such ketchups, would not many poor people be glad of the meat from which it was extracted?" (p. 28).

Note: The author apparently believes that ketchup is a meat extract, that it is very costly to make, and that the meat is typically discarded after the ketchup is extracted. Address: [England].

410. Hugget (S.). 1793. Classified ad: Has for sale,... of the latest importations from Europe:... *New-York Daily Gazette* (*New York City*). Jan. 10. p. 2.
• ***Summary:*** "Fish sauce: India Soy [sauce], Catsup, Cavice. Pickles: East-India Mangoes, Walnuts, Mushrooms, Olives. Preserves:..."

Note the three unusual types of "Fish sauce." Address: Number 42, Broadway.

411. Hemmij, Gijsbert. 1793. Diary. In: Leonard Blussé, Cynthia Viallé, et al. eds. 2004. The Deshima Diaries Marginalia, 1740-1800. Tokyo: Japan-Netherlands Institute. xl + 898 p. See p. 667 (#30).
• ***Summary:*** 1793 April 3–"On behalf of the first retainer of the Lord of Tsushima, Sukezaemon presented me with some dried fish and a barrel of soy [sauce]. I dutifully reciprocated." Address: Opperhoofd (Chief of the Dutch factory), Deshima, Nagasaki, Japan.

412. Erving's (John) Grocery Store. 1793. Classified ad: To be sold,... *Mercury* (*The*) (*Boston, Massachusetts*). Aug. 9. p. 4.
• ***Summary:*** "Pickles: Pickle Peppers. Pickle Cucumbers. Pickle Walnuts. Pickle Mangoes pr. jar. Mushroom Ketchup. Quin Sauce. Fish Sauce. India Soy [sauce]. Stone pickle Pots." Address: No. 42, Marlborough-Street [Boston].

413. Lazenby, Mrs. [Elizabeth]. 1793. Classified ad: Articles worthy public attention. *Times* (*London*). Nov. 1. p. 1, col. 2.
• ***Summary:*** "... who succeeded her late Husband in the above Oil and Candle Business, thinks it a duty incumbent on her to return thanks for the great favours conferred by the Nobility, Gentry, &c. both before and since his demise; having laid in a variety of Articles for the Winter Season, hopes to be honoured with a continuance of their generous encouragement.

"Harvey's Sauce for Fish is sold, by appointment only, at Lazenby's Warehouse."

Note 1. This is the earliest document seen (April 2012) that mentions "Harvey's Sauce" (or "Harvey Sauce")–which was later said by several commentators to use soy sauce as an ingredient. However, it was basically an anchovy sauce.

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Note that "Harvey's" is spelled with an apostrophe.

In *Spices, Salt and Aromatics in the English kitchen*, Elizabeth David (1970, p. 11) states: "A recipe for this sauce [Harvey's], mentioned in cookery books and lists of necessary stores throughout the nineteenth century, is given in a cookery dictionary of 1832 (Footnote: *The Cook's Dictionary* by Richard Dolby, late cook at the Thatched House Tavern, St. James St. New edition, 1832 [Note: Also in 1830 ed., which see]). Ingredients were anchovies, walnut pickle, soy and shallots, plus a whole ounce of cayenne, three *heads* of garlic, a gallon of vinegar and cochineal for colouring. The whole lot was mixed together, stirred two or three times, every day for a fortnight, strained through a jelly bag until perfectly clear, bottled and corked down. Harvey's, like its rival Worcestershire sauce commercially launched in 1838, was used as a condiment to flavour other less ferocious compounds."

According to Heer (1966): Commercial manufacture of Harvey's Sauce was started in 1776, and remained a family business until taken over by Crosse & Blackwell in 1919. Nestlé purchased the company after World War I. Address: Lazenby's Warehouse, No. 6, Edward-street, Portman-square [London].

414. Pilgrim (Joseph). 1793. Classified ad: Humbly presents his respects to his friends and customers,... *Baltimore Daily Intelligencer*. Nov. 7. p. 1.
• ***Summary:*** "... also, a variety of pickled Cucumbers, Walnuts, Catsup, India Soy [sauce], Anchovies, Olives, Almonds and Raisins,... He will be happy to serve his friends and the citizens in general, either at their homes, or at his shop... and earnestly requests a continuance of their kind patronage,..." Address: Calvert-street.

415. Baker (Samuel). 1793. Classified ad: The subscriber informs his friends and the public, that he has for sale... *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Nov. 30. p. 4.
• ***Summary:*** "... Wine glasses, Ketchup, japan soy [sauce], Raisins, currants..." Address: No. 18, Tradd-street.

416. Davey (A.W.). 1793. Classified ad: Who has at the Repository by retail,... *Baltimore Daily Intelligencer*. Dec. 26. p. 3.
• ***Summary:*** "... New-England and West-India Rum, India Soy [sauce], Catsup,..." Address: Exchange-Broker.

417. Loureiro, Joao de. 1793. Flora Cochinchinensis: sistens Plantas in regno Cochinchina nascentes. Vol. 2. Dolichos soja [The flora of Cochin China. Vol. 2.]. Denuo in Germania edita cum notis Caroli Ludovici Willdenow; Bernolini [Berlin], impensis. See p. 537-38. Edited by Willdenow, with added notes. Also published by the Acad. Sci. of Lisbon. [Lat]

• ***Summary:*** The first edition of this important work was published in 1790. The content of this 1793 edition concerning *Dolichos soja*, published in Berlin and edited by Willdenow, is almost identical to that of the 1790 edition. The text has been re-set to fit on the smaller pages, and some abbreviations have been written out. In the chapter titled "Diadelphia. Decandria" we find: Arachis (p. 430-31; incl. Arachis Asiatica and Arachis Africana, also called Arachis Hypogoea). Phaseolus radiatus (p. 435). Dolichos Soja (p. 537-38).

By unusual coincidence, the earliest known recorded feeding of cow's milk to a human infant (by Underwood) also occurred in 1793. Address: Portugal.

418. Hill (Thomas). 1794. Classified ad: Liquors and groceries... for cash only. *South-Carolina State Gazette and Timothy's Daily Advertiser* (*Charleston*). May 6. p. 1.
• ***Summary:*** "... Saltpetre, black pepper, Cayen ditto [= Cayenne pepper]. Ginger in root and ground... Pickolillie [Piccalilli], chou chou, red cabbage, Mangoes, mushroom ketchup, Walnut ketchup, japan soy [sauce], Essence anchovies, Coratch, Zeobditto [Zoobditty] match, Quin sauce, Cinnamon water, citron ditto."

Note: A very similar ad by Hill appeared 2 weeks later in the *South-Carolina State Gazette and Timothy's Daily Advertiser* (Charleston) on 20 May 1794 (p. 4). Address: No. 10, Tradd-street, Directly opposite to Williams's coffee house and Bedon's alley.

419. Burgess (J.). 1794. Classified ad: To families leaving town. *Times* (*London*). May 20. p. 2, col. 9.
• ***Summary:*** "Burgess's original and superior Essence of Anchovies, to be used at Table in the same manner as India Soy" [sauce]. The list of imported goods includes: "Curry Powder, with a Receipt [Recipe] for using,... Zoobditty Mutch, Lemon Pickle, Chilly Vinegar, genuine Cayenne Pepper..." Address: Burgess's Warehouse, Corner of Savoy Steps, Strand [London].

420. Watson (James) & Co. 1794. Classified ad: Lead in sheet and bars... *American Minerva* (*New York City*). Sept. 19. p. 1.
• ***Summary:*** "... India Soy [sauce] per doz. or single bottle,..." Address: No. 157, Pearl street.

421. Baker (Samuel). 1794. Classified ad: For sale... *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Dec. 10. p. 2.
• ***Summary:*** "... Girkins, Pickled walnuts, Mushroom ketchup, India Soy [sauce], Loaf and brown sugar..." Address: No. 18, Tradd-street [Charleston].

422. Bradford (Charles). 1794. Classified ad: Has just received by the *Major Pickney* a choice assortment of

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groceries and pickles,... *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Dec. 11. p. 1.
• ***Summary:*** "... Mushroom ketchup. India soy [sauce]. Lemon pickle... Zant currants." Address: Corner of Church & Queen streets.

423. Barney and Hollins. 1794. Classified ad: Sales by auction. *Federal Intelligencer* (*Baltimore, Maryland*). Dec. 23. p. 1.
• ***Summary:*** "... sweet oil; catsup; quin's sauce; India soy [sauce], in bottles; Stoughton's bitters;..." Address: Auctioniers [Auctioneers].

424. Thunberg, Charles-Pierre. 1794. Voyage en Afrique et en Asie, principalment au Japon, pendant les années 1770-1779. Traduis de Suédois [Voyage to Africa and to Asia, especially to Japan, during the years 1770-1779. Translated from Swedish]. Paris: Chez Fuchs, Librarie. xii + 532 p. 20 cm. [Fre]
• ***Summary:*** Chapter 10, written by Thunberg in Sept. 1775, discusses Japan, Nagasaki (Nangasaki), and the Dutch trade to Batavia [today's Jakarta]. On page 298-99: The goods which they buy in Nagasaki consist mainly of rice, porcelains, umbrellas, silk kimonos, lacquer works, soy [sauce] (*soja ou soui*), copper, and large earthenware pots.

Soy [sauce], which is exported in little kegs, is a liquid or the quintessence of different aromatic ingredients which is good for stimulating the appetite, and is added in small quantities to sauces.

The last sentence in the original French: "*Le soja que l'on exporte en petits barils, est une liqueur ou quintessence de différens ingrédiens aromatiques propre à exciter l'appétit, en en ajoutant une petite quantité aux sauces.*"

Note 1. This is the earliest French-language document seen (April 2012) that uses the word *soui* to refer to soy sauce.

Note 2. Carl Peter Thunberg lived 1743-1828. Address: Chevalier de l'Ordre de Wasa, Professeur de botanique à l'Université d'Upsal [Sweden].

425. Ticknor (E.). 1795. Classified ad: Begs to inform his friends and the public, that he has taken the store.... Lately occupied by Mr. John Erving, where he intends to keep constantly on hand a complete assortment of West-India goods and groceries,... *Columbian Centinel* (*Boston, Massachusetts*). March 21. p. 4.
• ***Summary:*** "... East-India Soy [sauce], Essence of Anchovies,... Sauce Royal, Sauce Corach, Sauce Fish and Quin,... Pickled walnuts, Confectionery of all kinds–Hemp." Address: No. 42, Marlboro Street.

426. Scot (James). 1795. Classified ad: Has imported in the ship *Federalist*, from London,... *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). June 24. Supplement p. 2.
• ***Summary:*** "... Mushroom ketchup, japan soy [sauce], lemon pickle and Quin's sauce." Address: No. 48, Bay.

427. Skill and Son. 1795. To families leaving town,... (Ad). *Telegraph* (*London*). Aug. 10. p. [1], col. 3.7.
• ***Summary:*** "Rich Fish Sauces and Gravies."

"Skill's newly invented and delicious Camp Sauce, for enriching Game, Hashes, Ragouts, &c. and to eat with all kinds of Cold Meat, Chops, and Beef Steaks."

"Essence of Anchovies, for Anchovy Sauce; to be boiled either in melted Butter, or used as India Soy" [sauce].

"Coratch Sauce, to eat with Chops, Cutlets, Steaks, Minced Veal, Hashes, &c.

"Mint Sauce, made sweet purposely to eat with Venison, Roast Lamb, &c. in lieu of Currant Jelly.

"India Soy, warranted to be genuine and to please; imported by the East India Company."

Note: Where did Britain's East India Company first take this soy sauce on board? Where was it originally made?–almost certainly not in India.

"Quin Sauce, Oyster Ketchup, Cavice, Walnut Ketchup, Cherokee Sauce, Zoobditty Match, Mushroom Ketchup, and every other kind used at the most fashionable tables." Address: At their Italian and French Warehouses, No. 15, Strand, near Craven Street, London.

428. *British Critic: A New Review*. 1795. Thunberg's Travels. Vol. IV. 6:473-81. Nov. See p. 478. [Eng]
• ***Summary:*** This magazine is publishing long excerpts from Thunberg's *Travels*. Before each is a short introduction (p. 478): "Though soy-sauce is very commonly used in this country, its composition is but little known. It is a considerable article of commerce in Japan, and we here find it thus described.

"'Soy-sauce, which is every where and every day used throughout the whole empire, I might almost say in every dish, and which begins even to be made use of in Europe, is prepared from Soy Beans (*Dolichos Soja*) and salt, mixed with barley or wheat..." p. 121 of Thunberg.

429. Jacks (James). 1795. Classified ad: Has imported per the Flora and Romulus, from London, a large and general assortment of plate, watches, jewellry [jewelry], &c. *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Dec. 14. p. 3.
• ***Summary:*** "... Plated goods;... A great variety of Castors, Liquor and Soy Frames [for soy sauce]." Address: Jeweller, No. 112, Broad-street.

430. Horace, -; Clubbe, William. 1795. Six satires of Horace: in a style between free imitation and literal version. Ipswich [England]: Printed and sold by George Jermyn. xx + 136 p. See p. 117. 25 cm.

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• ***Summary:*** Fundanius.

"For course the first, two haunches were assign'd,
"Kill'd in the forest, in a southern wind;
"So said our host, and so I shou'd suppose.
"If I might form my judgment by my nose:
"A dish to whet the appetite stood by
"With Lettuce, Radishes and Celery:
"On either side were various sauces seen,
"As Katchup, Soy, Anchovies and the Quirt."

Note: Horace (65-8 B.C.) was a Roman poet and satirist.
Address: LL.B., Vicar of Brandeston, Suffolk.

431. Thunberg, Charles Peter. 1795. Travels in Europe, Africa, and Asia, made between the years 1770 and 1779. In four volumes. Vol. IV. Containing travels in the empire of Japan, and in the islands of Java and Ceylon, together with the voyage home. 3rd ed. London: Printed for F. and C. Rivington. xix + 310 p. See p. 37, 88, 107, 121-22, 177. Index. 21 cm. [Eng]

• ***Summary:*** In the chapter on Japanese foods, we read (p. 37): "Rice, which is here exceedingly white and well-tasted, supplies, with the Japanese, the place of bread; they eat it boiled with every kind of provisions. *Miso* soup, boiled with fish and onions, is eaten by the common people, frequently three times a day, or at each of their customary meals. *Misos* are not unlike lentils, and are small beans, gathered from the *Dolichos soja.*" Note 1. The latter sentence, which is incorrect, led many subsequent early writers to believe that the seeds of the soy bean were called miso, or that miso was a type of small bean. Rather, miso is a paste made from soy beans.

In the chapter on Japanese agriculture, we read (p. 88): "Of Beans, Peas, and Lentils, many sorts are cultivated, both the larger (*Phaseoli*) and the smaller (*Dolichos*). Of *Daidsu* Beans (Dolichos *Soja*) the meal is used for dressing victuals, and the expressed juice for making Soy; as is likewise the whole Bean for the soup called *Miso*, which is a daily dish with the common people. *Atsuki* [Azuki] Beans likewise (*Phaseolus radiatus*) are ground to meal, of which small cakes are made with sugar."

Note 2. This is the 2nd earliest English-language document seen (Jan. 2005) that clearly mentions azuki beans, which it calls *Atsuki Beans*. It is also the earliest English-language document seen (March 2006) that uses the word *Atsuki* to refer to azuki beans.

Note 3. It is not clear what Thunberg means by "meal" when he says "the meal is used for dressing victuals."

In the chapter on Commerce, after discussing the tea trade, Thunberg writes (p. 107): "The *Tea Trade* is confined entirely to the inland consumption, the quantity exported amounting to little or nothing. The traffic in *Soy* [sauce], on the other hand is more considerable; and as the tea produced in this country is reckoned inferior to that of China, so the soy is much better than that which is brewed in China. For this reason, soy is not only exported to Batavia [Jakarta], in the wooden barrels in which it is made, but likewise sold from thence to Europe and to every part of the East Indies. In some places in Japan too the soy is reckoned still better than in others; but, in order to preserve the very best sort, and prevent its undergoing a fermentation, in consequence of the heat of the climate, and thus being totally spoiled, the Dutch at the Factory [at Desima / Dezima / Dejima] boil it up in iron kettles, and afterwards draw it off into bottles, which are then well corked and sealed [by applying bitumen / coal tar to the stopper]. This mode of treatment renders it stronger and preserves it better, and makes it serviceable for all kinds of sauce. The *Silk trade* is indeed in a very flourishing state in the empire..."

In the chapter titled "Residence at Dezima [1776], Previous to my Return Home," the author writes (p. 121-22): "Soy-sauce, which is every where and every day used throughout the whole empire, I might almost say in every dish, and which begins even to be made use of in Europe, is prepared from Soy Beans (*Dolichos Soja*) and salt, mixed with barley or wheat. For this purpose, they cultivate this species of bean in several places, although it grows in great plenty wild. Scarcely any kind of legumen [legume] is more copiously used than this. The seeds are served up in soups, once or twice a day all the year round, to people of distinction or otherwise, to the poor and to the rich. *Soy* is prepared in the following manner: The beans are boiled till they become rather soft; afterwards an equal quantity of pounded barley or wheat is added. These ingredients being mixed together, are set in a warm place, and covered up for four and twenty hours, that they may ferment. An equal quantity of salt is then added to the mixture, and twice and a half as much water is poured upon it. After it has been mixed in this manner in an earthen vessel, it must stand well covered two or three whole months together, during which period it is necessary however at first for it to be stirred about several times in the day for several days together. The liquor is then pressed and strained off, and kept in wooden vessels. Some provinces furnish better soy than others: but exclusively of this, it grows better and clearer through age. Its colour is invariably brown, and its chief excellence consists in the agreeable salt taste which it possesses."

While in Colombo, Ceylon, in 1777 the author stated that "the *Dolichos pruriens* grew here tolerably common, with its hairy pods, the hairs of which attaching themselves to the hands, occasion much itching, which is allayed by oil, or decoction of rice, and are celebrated as a Vermifuge." Note 4. This plant appears in the index as "Dolichos Soja."

Note 5. This is the earliest English-language document seen (March 2009) that contains the term "Miso soup."

Note 6. On the title page, the author's name is given as Carl Peter Thunberg, rather than Karl Peter. Of the four volumes, only vol. IV bears a date, which is 1795. The translator's name is not given, not even in the "Translator's

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preface" nor in any record on WorldCat / OCLC online bibliographic database. The original text was written in 1776. Yule & Burnell (1886, p. 651, and 1903, p. 859) state: "1776. An elaborate account of the preparation of Soy is given in *Thunberg's Travels*, E.T., [vol.] iv. 121-122;"

Note 7. This is the earliest English-language document seen (Feb. 2008) that contains the word "Soy Beans" (or "Soy-Beans") (p. 121-22).

Note 8. This is the earliest English-language document seen (April 2012) that contains the term "Soy-sauce" (or "soy-sauce"). The *Oxford English Dictionary* says (incorrectly): "1818 Todd (transl. Thunberg), Soy-sauce is prepared from soy-beans (*dolichos soja*) and salt, mixed with barley or wheat."

Note 9. Lewis and Murakami (1923, p. 223) state: "The third English edition of Charles Peter Thunberg's *Travels* (London 1796) contains an English-Japanese vocabulary of approximately 1,500 words; this was probably the first English-Japanese vocabulary ever published. It seems to have been unknown to our author [Ranald MacDonald] and his scholars." Address: Prof. of Botany, Univ. of Upsal [Uppsala], Sweden.

432. Loring (Israel). 1796. Classified ad: Sea-stores, put up by the subscriber at his store,... *Argus, or Greenleaf's New Daily Advertiser* (*New York City*). Jan. 19. p. 3.
• ***Summary:*** "Merchants and masters of vessels, who may favour him with their orders, may depend upon having them faithfully executed with the best articles,... Essence of anchovies, kitchup, East India soy [sauce], capers, pickles..." Address: No. 19, Front-Street.

433. Hrabowski's (J.S.). 1796. Classified ad: Fresh bloom hyson tea. *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Sept. 15. p. 1.
• ***Summary:*** "... India Mangoes and Soy [sauce]. Walnut and Mushroom Ketchup..." Address: No. 45, Broad-Street.

434. Glasse, Hannah (Mrs.). 1796. The art of cookery made plain and easy; which far exceeds any thing of the kind ever yet published. London: J. Fairburn. xl + 419 p. See p. 173-74. Index. 22 cm. Facsimile edition reprinted in 1971. [Eng]
• ***Summary:*** On the title page, after the table of contents, we read: "in which are included, One Hundred and Fifty new and useful Receipts [recipes], not inserted in any former edition."

In Chapter X, "Fish," the last receipt [recipe], "To dress White-bait," is almost identical to that in the 1784 edition–except it is in a different chapter and it lacks two commas. It states (p. 173-74): "Take your white-bait fresh caught and put them in a cloth with a handful of flour, and shake them about till they are separated and quite dry; have some hog's lard boiling quick, fry them two minutes, drain them and dish up with plain butter and soy."

Note 1. The last word, "soy," refers to soy sauce. It does not appear in the index, and we can find no other use of it in this book.

Note 2. "Price: five shillings, bound."

Note 3. Chapter XIV, "For Lent, or a fast dinner..." (p. 205-64) contains several recipes in which almonds are pounded to a paste in a mortar then mixed with other ingredients and used in place of or with dairy milk or cream, including Almond soup (p. 209-10), Almond fraze (p. 218, sweet pancakes with pounded almonds, sweet cream, eggs, sugar, and grated white bread, pan-fried in butter), How to make a hedge-hog (p. 224; with 2 lb of almonds instead of meat), Almond pudding (two types, p. 243-44), and Ipswitch almond pudding (p. 251). In other chapters, almonds are also used to make Almond cheesecakes (p. 319), Almond custards (p. 320), Almond butter (p. 321), Almond cream (p. 324), and Almond rice (p. 339). In these Lenten recipes, eggs, butter, cream, and cheese are used quite often and liberally. Meat is never used, but eels, fish (flounder, herring, salmon, scate / thornback), and shellfish (crawfish, lobsters, mussels, oysters) are all used.

Note 4. This is the earliest English-language document seen (Jan. 2005) that contains the term "Almond butter" (p. 321) or gives a recipe: "Take a quart of cream, put in some mace whole, and a quartered nutmeg, the yolks of eight eggs, well beaten, and three quarters of a pound of almonds well blanched, and beaten extremely small, with a little rose-water and sugar; and put all these together, set them on the fire, and stir them till they begin to boil; then take it off, and you will find it a little cracked; so lay a strainer in a cullender [colander] and pour it into it, and let it drain a day or two, till you see it is firm like butter; then run it through a cullender, and it will be like little comfits, and so serve it up."

Note 5. Other interesting ingredients and recipes: Walnut catchup (p. 156). Sago puddings (p. 244, 254). To boil sago [for the sick] (p. 268). To make catchup to keep twenty years (for captains of ships, using mainly strong stale beer, large mushrooms, pickled anchovies, shallots, mace, cloves, pepper, and ginger–no tomatoes or soy, p. 271). To make catchup (two ways, using mainly mushrooms, salt, red wine, and spices–no tomatoes or soy, p. 371-72). Note 6. This is the earliest document seen (Jan. 2006) that contains a recipe for a type of "catchup" in which mushrooms are the main solid ingredient. Address: England.

435. Thunberg, Karl Peter. 1796. Voyages de C.P. Thunberg. Tome second [Voyages of C.P. Thunberg. Vol. 2]. Paris: Benoit Dandre. iv + 544 p. See p. 3, 4, 145, 266-68. [Fre]
• ***Summary:*** An early traveler to East Asia who mentioned soyfoods was the Swedish doctor and prof. of botany at the Univ. of Uppsala, Carl P. Thunberg. In Chapter 20 titled "Japanese Foods" he states (p. 267-68): "Three times a day, with each meal, the people eat miso soup prepared with fish and leeks. These miso [he apparently thought miso was the

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name of a legume: see Thunberg 1796 in English] closely resemble lentils. They are the small dolic beans of Japan (*ce sont de petites fèves de* dolic *du Japon*).*" (Footnote: * "*Dolichos soja*. Lam. Diction. [Lamarck 1790. Dictionary] No. 28)."

"Miso or soy sauce (*Le miso ou la sauce de soya*) constitute the principal food of the Japanese. People of all levels, great or small, rich or poor, eat them several times a day year-round. Here is how they are prepared. The beans are cooked until they are just soft, then they are mixed with an equal quantity of barley or wheat, and the mixture is allowed to ferment for 24 hours in a warm place. Now an equal quantity of salt and 2½ times the amount of water. The mixture is put in an earthen pot, which is well closed and left for 2½ months; it is stirred during the initial days. After the necessary time the liquid is pressed out and stored in wooden kegs. The inhabitants of certain provinces make better 'soya' than those in others. Moreover, the longer it ages, the tastier and clearer it becomes. It is always brown and its principal flavor is a pleasant saltiness. The Japanese also eat fish, boiled or fried in oil" (p. 267-68).

"The tea of Japan is inferior to that of China. However, Japanese 'soya' [soy sauce] is preferable to that of the Chinese. It is shipped in numerous vats to Batavia [today's Jakarta, Indonesia], India, and Europe. The Dutch have found a way of protecting it from the effects of heat and of preserving the fermentation. They boil it in an iron pot, funnel it into bottles, and seal the mouths with pitch. This liquid retains all its 'force' and can be mixed with all other sauces." Note: All this took place long before Appert's invention of canning in 1809 and Pasteur's invention of pasteurization in 1862. In fact pasteurization had been practiced in Japan for 200 to 300 years before this time.

In Chapter 23, "The State of Agriculture in Japan," the author notes (p. 291): The Japanese plant a great deal of rapeseed, and the seed furnishes an excellent oil for lamps. In Japanese, the plant is named *na tanne* and the oil *na tanne abra* or *na tanne no abra* (sic, *natane abura*). "Soy flour (*La farine des fèves de daidsou* (Footnote: *Dolichos soïa*)) is used in various dishes. The liquid that is pressed out is used to make soy sauce (*du soya*). The roots are put in a soup named *miso*, which the people use daily for nourishment. Small cakes are also made with the flour of azuki beans (*la farine de haricots d'atsouki* (Footnote: *Phaseolus radiatus*)) mixed with sugar." Note 1. This is the earliest French-language document seen (Jan. 2005) that mentions azuki beans, which it calls *haricots d'atsouki*.

Pages 314-15 state: "Their soy sauce (*sauce de soya*), which has been introduced by many Europe countries, is made with soybeans (*se fait avec des fèves-soya* (Footnote: *Dolichos soya*)), barley or wheat, and salt. Although these beans come spontaneously and abundantly in many places, the consumption which they make of this flour causes them to take particular care with the plant's cultivation."

Note 2. This is the earliest French-language document seen (April 2012) that uses the term *sauce de soya* to refer to soy sauce. Address: France.

436. Winterbotham, William. 1796. An historical, geographical, commercial, and philosophical view of the United States of America, and of the European settlements in America and the West-Indies. First American edition with additions and corrections. Vol. 3 of 4. New York, NY: Printed by Tiebout & O'Brien for J. Reid,... 547 p. See p. 402, 269-70.

• ***Summary:*** The section titled "General description of Georgia" states (p. 269-70): "The rice plant has been transplanted, and also the tea plant, of which immense quantities are consumed in the United States, was introduced into Georgia by Mr. Samuel Bowen, about the year 1770, from India [sic, China]. The seed was disseminated, and the plant now grows, without cultivation, in most of the fenced lots in Savannah."

Note: This last sentence, if true, is quite surprising and remarkable."

In the section on "General Information" is a 3-column table giving a list of plants including (p. 402): "Latin names: Dolichos soja. English names: A kind of kid-bean, called daidsu. Observations: Used for making soye,* or Indian ketchup. See Kæmpff. Amoenitat [Kaempfer, Amoenitatum 1712].

The asterisk (*) refers to a long paragraph at the bottom of the table titled "The method of preparing East-India soye, or India ketchup." This paragraph is identical to that which first appeared in William Stork (1769) except for a few differences in spelling and capitalization. Address: Rev.

437. Yuan Mei. 1796. Suiyuan shidan [Recipes from the Sui garden]. In: Sui-yüan Ch'uan-chi, 38 pen, Chu-i-t'ang Shu-chu edition. Shanghai, 1921. [Chi]*

• ***Summary:*** This Qing dynasty book consists of more than 300 recipes, categorized either according to main ingredients (seafood, meat, tofu) or to specialties (dimsum, sweet cakes, etc.). It is the most comprehensive Chinese cookbook before cookery writing became popular in China in the 20th century. The author, Yuan Mei (lived 1716-1798), above all a poet and government official, was also a gourmet and bon-vivant who had 4-6 concubines. He may have been the ranking poet of his times, yet to many Chinese he is remembered for this cookbook, which has had a far-reaching influence down to the present day. Yuan was extremely fond of bean curd, for he lauded it as "far superior to bird's nest" if it was "well flavored" (Shih-tan, p. 4). His chapter on bean curd, consisting of 9 recipes, showed that he spared neither time, trouble, nor ingredients to flavor his bean curd. His most famous tofu recipe is titled Perfect Wang's Eight Treasure Bean Curd. Arthur Waley wrote a book titled Yuan Mei (1956, Allen & Unwin), which gives this book's publication

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date as 1796.

Sui Yüan is a sobriquet for Yüan Mei, after his garden of contentment. Hummel (1944:955-56): Yüan Mei lived 1716-1798. A poet, literary critic, and essayist, he was a native of Ch'ien-t'ang (Hangchow). Resigning (1748) from his post as magistrate of Chiang-ning, he retired (1749) to his newly acquired "Garden of Contentment," Sui-yüan, near Nanking. From 1784-1795, spent in alternate travel and quiet seclusion, he came to be known as one of the most skillful poets of his time. His discourse on cooking, written in a vein of charming banter, has been translated into several Western languages. "Tan" means list.

Bo (1982): In this work Yüan Mei states that it is more graceful for a writer to use the term "ch'ing chiang" instead of "chiang-yu" when referring to soy sauce.

438. *Times* (*London*).1797. Classified ad: Japan Soy.–For sale. March 13. p. 1, col. 4.
• ***Summary:*** "... at No. 34, Fish street... near the Monument; Genuine Japan Soy [sauce], in casks from 10 to 60 gallons, at 16*s.* per gallon, for ready money only." Address: [England].

439. Brown (T.). 1797. To families, resident in Chelsea, Pimlico, Battersea, Wandsworth, Kensington, and Knightsbridge (Ad). *Observer* (*London*). Nov. 26. p. 1.
• ***Summary:*** "Genuine wines, now on sale, in fine condition, at Brown's New Tea Warehouse, the Chinese and Tea Plant, Paradise Row, Chelsea,... Fish Sauces of all sorts. Perfumery and Confectionary. New Anchovies, Capers, Japan Soy [sauce], Cayenne Pepper, Oils, Vinegars, &c.;..."

Note: This is the earliest British newspaper seen (Oct. 2009) in which the term "Japan soy" is mentioned. Address: Paradise Row, Chelsea, London.

440. Encyclopaedia Britannica; or, A dictionary of arts, sciences, and miscellaneous literature... 3rd ed... greatly improved. 18 vols. 1797. Edinburgh: Printed for A. Bell and C. Macfarquhar.
• ***Summary:*** In vol. 6, part 1 (D-E), the entry for Dolichos (p. 81) states: 2. The soja is a native of Japan, where it is termed *daidsu:* and, from its excellence, *mame:* that is, "the legumen or pod," by way of eminence. It grows with an erect, slender, and hairy stalk, to the height of about four feet. The leaves are like those of the garden kidney-bean *. The flowers are of a bluish white, and produced from the bottom of the leaves, and succeeded by bristly hanging pods resembling those of the yellow lupine, which commonly contain two, sometimes three, large white feeds. There is a variety of this kind, with a small black fruit, which is used in medicine. Kempfer [Kaempfer] affirms, that the seeds of this when pounded and taken inwardly give relief in the asthma. This legumen is doubly useful in the Japanese kitchens. It serves for the preparation of a substance named *miso*, that is used as butter; and likewise a pickle celebrated among them under the name of *sooju* or *soy* [sauce]. To make the first, they take a measure of mame, or the beans produced by the plant: after boiling them for a considerable time in water, and to a proper degree of softness, they beat or bray them into a softish pulse; incorporating with it, by means of repeated braying, a large, quantity of common salt, four measures in summer, in winter three. The less salt that is added, the substance is more palatable; but what it gains in point of taste, it loses in durability. They then add to this mixture a certain preparation of rice, to which they give the name of *koos* [*koji*]: and having formed the whole into a compost, remove it into a wooden vessel which had lately contained their common ale or beverage named *sacki*. In about two months it is fit for use. The koos gives it a grateful taste; and the preparing of it, like the polenta of the Germans, requires the skillful hand of an experienced master. For this reason there are certain people who make it their sole business to prepare the koos, and who sell it ready made for the purpose of making miso: a substance which cannot fail to be greatly valued in those countries where butter from the milk of animals is unknown.

"To make sooju or soy, they take equal quantities of the same beans boiled to a certain degree of softness; of muggi, that is corn, whether barley or wheat, roughly ground; and of common salt. Having properly mixed the beans with the pounded corn, they cover up the mixture, and keep it for a day and a night in a warm place, in order to ferment; then putting the mass into a pot, they cover it with the salt, pouring over the whole two measures and a half of water. This compound substance they carefully stir at least once a-day, if twice or thrice the better, for two or three months: at the end of which time, they filtrate and express the mass, preserving the liquor in wooden vessels. The older it is, the better and the clearer; and if made of wheat instead of barley, greatly blacker. The first liquor being removed, they again pour water upon the remaining mass; which, after stirring for some days, as before, they express a second time, and thus obtain an inferior sort of soy."

For Sakki (*saké*) see vol. 9, part 1 (p. 71, under Japan). Address: Edinburgh, Scotland.

441. Lettsom, John Coakley. 1797. Hints designed to promote beneficence, temperance, and medical science. Vol. 1. London: Printed by H. Fry, for C. Dilly. v + 273 p. See p. 205-06. Illust.
• ***Summary:*** Page 205-06: "It has been observed, that as charitable institutions multiply, so do public dinners; and many amiable characters eat and drink themselves into disease, to prevent it in their fellow creatures; and, pity it is, that a benevolent and cordial heart, should suffer under a virtuous influence! Let such calmly reflect and calculate a dinner of this kind.–First, we find rich turtle, or mock turtle soup, which when cold would suspend a spoon,–then succeed boiled salmon, or cod's head, or turbot floating in thick lobster, shrimp, or oyster sauces.–After these have

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removed or diminished the sensation of hunger, a firm piece of boiled ham, and roasted and boiled chicken, are presented to excite new desires; and too often are plentifully admitted to remove them: these good things heightened in taste and flavour, by cayenne, black pepper, salt, soy, catchup, mustard and horse radish, beget thirst; and dilution, like the water-engine, when a house is in flames, is brought in aid, to extinguish the fire excited in the stomach." Address: [England].

442. Skill. 1798. Provisions for exportation,... (Ad). *Star (London)*. Jan. 22. p. [1], col. 4.

• ***Summary:*** "Skill's Fish Sauces."

"Skill's newly invented Camp Sauce." "Essence of Anchovies." "Sauce des Epicures." "Lemon Pickle." "Sauce a la Suisse."

"Quin Sauce, to eat with Turbot, and all kinds of Fish."

"Sauce a l'Imperiale."

"Cavice Sauce a la Militaire, Walnut Ketchup, Indian Soy, Oister Ketchup [Oyster Ketchup], Cherokee Sauce, Mushroom Ketchup, Zoobditty Match, and every other sort used at the most fashionable tables, in bottles, 2*s*. 18*d*. and 3*s*. 6*d*. each, and in cases with partitions, containing twelve sorts of the above Sauces, at only one Guinea each." Address: At his Italian and French Warehouse, No. 15, Strand, near Craven Street, London.

443. Beckmann, Professor [Johann?]. 1798. Account of the methods employed in Japan and China to prepare soy, with some observations on the bean from which it is produced. *Philosophical Magazine (The) (London)* 1:342-45. Sept. [4 ref]

• ***Summary:*** "This article [soy sauce], which is a brown saline liquor, imported to Europe from the East Indies, is employed for seasoning various kinds of dishes, and improving the taste of different sauces. It is brought from Japan in small wooden vessels, and also from China and other parts of India in glass flasks, several of which are packed together in a wooden box. The use of it has been long general in the East Indies; where it is placed on the table at each meal, instead of salt, for the purpose of dipping in it flesh, fish, and other kinds of food.

"The Japanese are said to be the inventors of this article; and, at present, their soy is preferred to any other; though it is asserted by connoisseurs that this preference arises more from the price than the goodness. In my opinion, it was first introduced in the European commerce in the present century; for it is not to be found in the old catalogues of goods; in Saavary's or Ludovici's dictionaries, nor in the old books on cookery. The first account of the method of preparing it after the Japanese manner was published by Kempfer [Kaempfer].

"Before I give a description of this method, it may not be improper to inform the reader that the people in India, instead of our common kidney beans, cultivate and use as food another species of a familiar kind, called in botany *dolichos*, and which comprehends several species. Among these there is one called *dolichos soya*. The plant is all over rough; and its weak stem rises to the height of a man. Its flowers, which are small, scarcely appear above the calyx, and are a blueish or almost violet color. The rough husks contain for the most part only two seeds, which in form, size and taste differ very little from our garden pease, except that they are flatted, shaped somewhat like an egg, and have a black speck at the place where they begin to germinate*. (Footnote: * *Hilum fuscum*. The first description and figure of this plant was given by Kempfer in his *Amoenitat. exot.* p. 837, 838. Both these, however, were improved and rendered more complete by Bergius in *Abhandlungen der Schwedisch. Akad.* xxvi. p. 281. The latest descriptions are those of Thunberg in his *Flora Japonica*, p. 282.; and Jacquin in *Collectanea ad botanicam et hist. nat.* vol. i. p. 46).

"These seeds form the principal component part of soy. In Japan they are first boiled, and then mixed with the same quantity of barley or wheat meal (the latter is for the purpose of giving the soy a darker colour); and the mixture, being covered up, is deposited for twenty-four hours in a warm place, where it ferments. The same quantity of common salt, with the like quantity and half as much water, is thrown over it; and the whole mass, for the space of two or three months, is stirred round daily with a chocolate stick, and closely covered immediately after. At the expiration of that period it is strained or squeezed through a linen cloth, and the liquor, which is preserved in wooden vessels, becomes always clearer and better the longer it is kept. The mass which remains is again subjected to a like process by having water poured over it, and, being stirred round for some days, as before, is then strained.

"Of the preparation in China the following account has been given by Eckberg [sic, Ekeberg or Eckeberg], a Swede:" Beckmann then translates the last half of Ekeberg's 1764 Swedish-language article titled "Om Chinesiska Soyan" (On Chinese Soy Sauce), which see.

"From what has been above said, it may be readily perceived that the preparation of soy in Europe would be attended with no difficulty if it were possible to cultivate the beans. Bergius, however, gives his countrymen little hope that this can be done; and chiefly for this reason, that the plant blows so late in green-houses, that the summer is gone before the fruit can ripen. But this is often the case with exotics which are reared by our gardeners in hot-houses. As they only begin to blow when their nourishment decreases and occasions a stoppage of their growth, the same thing may happen too late in too fertile a soil, or when they have a superfluity of nourishment. On the other hand, when they are transplanted into soil somewhat poorer, and into an open place where they have less shelter, they do not grow so quick and so long; but they blow earlier. And hence it happens, that many exotics planted in the open air produce ripe seeds,

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which could never be obtained from them while they were preserved as curiosities and favourites of the gardener in green-houses. I consider it, therefore, as an experiment worth making, to plant these beans in the open fields: and I am inclined to think that in many summers they would produce ripe seeds, especially as Jacquin says expressly that they throve well at Vienna [Austria] in the open air.

"Should my conjecture, however, be not realised, this would not, at any rate, be the case with that of Bergius, who is of opinion that a kind of soy might be obtained from our peas and beans by the same or a similar process: but indeed it would have this great fault, that it would be too cheap, and too soon become common."

Note 1. The author is probably the German Johann Beckmann (lived 1739-1811). He spoke English, taught mathematics, physics, and natural history at the Lutheran St. Peter's Gymnasium in St. Petersburg, and is best known as the author of that fascinating bedside book *The History of Inventions*. A trained botanist and student of Linnaeus, he first visited Linnaeus in 1765 (See W. Blunt. 1971. p. 166, 172, 174, 175). He also wrote a book on botany, and on the history of inventions and discoveries.

Note 2. This is an excellent, accurate description of both soy sauce and the soybean. It is difficult to tell whether it is compiled from other writings (most likely, see footnote), or whether Beckmann visited India and described (in the third paragraph above) the soybeans that he actually saw growing there. If the latter were true, this would be the earliest document seen (Oct. 2010) concerning soybeans in India, or the cultivation of soybeans in India. And this document would contain the earliest date seen for soybeans in India or the cultivation of soybeans in India (1798; one of two documents–the other being Roxburgh 1832).

Note 3. This is the second earliest English-language publication or article seen with the word "soy" (or any variation of soy) in the title. Note that this "soy" refers to soy sauce. Address: England.

444. Long (Joseph). 1798. Classified ad: Tamarinds in the shell. *Times* (*London*). Dec. 19. p. 1, col. 3.
• ***Summary:*** "Joseph Long, late of No. 73, Cheapside [London], begs leave to inform the Nobility and Gentry, that he has received by the last Fleets a fresh supply... Guava Jelly and Jam, preserved Nutmegs and Cloves, preserved Ginger 5*s*... West India and other Pickles, Kian Pepper [Cayenne], and East India Curry Powder, both warranted genuine, unadulterated and wholesome; Genuine Japan Soy [sauce], real Gorgona Anchovies, Mangoes, &c. Cocoa Nuts, Cashew Nuts, and Cashews ready roasted for the table. Genuine Cherokee and other rich Sauces for Fish, Fowl, Game, &c." Address: Foreign Warehouse, No. 83, Lombard-street [London].

445. Pressey's. 1798. Classified ad: Bombay mangoes, leeches, arrack, India ink.... *Times* (*London*). Dec. 26. p. 1, col. 3.
• ***Summary:*** "... China Paper, white and coloured, Japan Soy [sauce], Lack Soy for Curries, Curry Powder,... Savil Jam,... The Nobility and Gentry are requested to apply at Pressey's Warehouse..."

Note: As of April 2012, the term "Lack Soy" (referring to soy sauce) appears in this database three times from 1798 to 1801. The closely related term "Lock Soy" (also referring to soy sauce) appears in this database nine times from 1785 to 1911. It seems very likely that the two words (Lack and Lock) are somehow related. Address: Warehouse, Henrietta Street, Covent Garden [London].

446. Briggs, Richard. 1798. The English art of cookery, according to the present practice; being a complete guide to all housekeepers, on a plan entirely new;... A new edition. Dublin: Printed for P. Byrne. xxiv + 24 + 533 p. 12vo.
• ***Summary:*** In the chapter on "Fish" the recipe for "White bait" states (p. 75): "Take your white bait fresh caught,... have some hogs-lard boiling hot, and fry them quick two minutes, put them on a sieve to drain before the fire, and dish them in a hot dish, with plain butter in a boat and soy in a crewet."

Note: First published as "New Art of Cookery." Address: Many years cook at the Globe-Tavern, Fleet-street: the White-Hart Tavern, Holborn; and now at the Temple Coffee-House, London.

447. Sequeira, I., Jr. 1798. A new merchant's guide: Containing a concise system of information for the port and city of London:... London: Printed for the author. [18] + 244 p. Illust. 22 cm.
• ***Summary:*** The section titled "East-India articles paying customs, &c." lists the items in alphabetical order (p. 235): "Pickles,... Rose-wood furniture, Soy [sauce], Shawls, Sugar brown,..."

Note 1. The author's full name is Joao Henriques de Sequeira.

Note 2. The meaning of the term "East-India" is not clear. It was probably a collective name, applied loosely and vaguely, to India, Indochina, and the Malay Archipelago. Address: [England].

448. Stavorinus, Johan Splinter. 1798. Voyages to the East-Indies. Translated from the original Dutch by Samuel Hull Wilcocke. 3 vols. London: Printed for G.G. and J. Robinson. vi + 534 p. See vol. 1, p. 360. [Eng]
• ***Summary:*** In Chapter 29, as part of a discussion of Dutch trade with Japan, the translator adds the following footnotes not found in the original text (see p. v-vi): Two Dutch ships go yearly to Japan. They also export "a trifling amount in soy [sauce], china, lacquered ware, and large silk nightgowns. The private trade of the Dutch officers and ships' crews to

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Japan, is also very considerable, as well as profitable; they carry out, camphor, china-root, saffron, Venice treacle, Spanish liquorice, ratans, spectacles, looking glasses, watches, manufactured glass, and unicorns' horns (the horn of the menodon monoceros), and receive in return, soy, silks, silk nightgowns, china, lacquered ware, fans, and fine rice" (p. 360).

There are also extensive notes by the translator about the Dutch forts and trading posts / factories in Asia including those on the coast of Coromandel, Negapatnam [Nagapatnam, the head settlement], Sadraspatnam [Zadraspatam, Sadrangapatnam], Pulicat, Sadras, Palicol [Palikol, Katira], Bemelipatnam, Geldria, Surat; In Japan: Decima [Deshima], Nangasakki [Nangasaki, Nangasacqui, Nangasacky, Nangasackij, Nagasaki]. Address: Rear Admiral in the service of the States General.

449. Pressey's. 1799. Classified ad: Patna rice, gram, dohl [dahl, dal], cotton seed,... *Times* (*London*). April 8. p. 2, col. 1.

• ***Summary:*** "... beetle nuts, lychees, lack, soy [Lack Soy, Lock Soy?], Bengal curry powder, Bombay mangoes,... preserved nutmegs, ginger, fruit of the palm tree, five-finger fruit from Canton [China], Mandarin and Bengal oranges, preserved West-India ginger, papaws,... sweet and tart tamarinds, Gwaya [Guava] jelly, Saveljam, casada bread, ochra seed and powder, pure cold-drawn castor oil, long pepper, arrowroot powder, cashew nuts, Pinder's kurganney seed, cocoa nuts, du roy plums... with a greater variety of Foreign Produce than any other Warehouse in Town. The Nobility and Gentry are requested to apply at Pressey's..." Address: Henrietta-street, Covent-garden [London].

450. Ball's Italian and Oil Warehouse. 1799. Classified ad: Potted charr and fresh laver. *Times* (*London*). April 25. p. 2, col. 2.

• ***Summary:*** "Ball has just received from the Lakes a parcel of fresh Potted Windermere Charr [Char, a type of fish] in the highest perfection; also Branston Laver [a sea vegetable; Japanese–nori]. Lately landed... Sour Crout, Bengal Curry, India Soy and Mangoes, Patna Rice. Rich Sauces of all kinds for fish, game, gravies, hashes, &c. that will keep in any climate." Address: No. 76, New Bond-street [London].

451. Hickson (William). 1799. To the nobility and gentry– Hickson's Prepared Gorgona Anchovies... (Ad). *Observer* (*London*). May 26. p. 1.

• ***Summary:*** "Extraordinary fine old Soy [sauce], and Cayan Pepper [Cayenne]. Hickson's rich Sauces and Pickles."

This ad also appeared in the issue of June 9, June 16, July 7 (all p. 1). Address: Oil and Italian Warehouse, No. 170, Strand, near Surry-street.

452. Skill. 1799. Provision and merchant oilman... (Ad). *Star* (*London*). June 5. p. [1], col. 4.8.

• ***Summary:*** "Incomparable and luxurious fish sauces and gravies."

"Sauce a la Militaire, Cavice, Walnut Ketchup, Indian Soy, Oyster Ketchup, Cherokee Sauce, Mushroom Ketchup, Zoobditty Match, and every other sort used at the most fashionable tables, in bottles, at 2*s.* and 3*s.* 6*d.* each, and in cases with partitions, containing twelve sorts of the above Sauces, at only one Guinea each." Address: At his Italian and French Warehouses, No. 15 and 16, Strand, opposite St. Martin's Church, London.

453. Ticknor (Elisha). 1799. Classified ad: To be sold,... a general assortment of West-India goods and groceries,... *Columbian Centinel* (*Boston, Massachusetts*). Nov. 23. p. 3.

• ***Summary:*** "... Corks, Catchup Mushroom, ditto, ditto English [Catchup Mushroom English], East-India Soy [sauce], Essence of Anchovies,..." Address: At the sign of the Bee-Hive, No. 42, Marlboro-street, Boston.

454. Marston (John). 1799. Classified ad: Has for sale, *Commercial Advertiser* (*New York City*). Nov. 28. p. 3.

• ***Summary:*** "... Best English Mustard, Mushroom and Oyster Ketchup, India Soy [sauce], Quin, Cheroque and Fish Sauces, Lemon Pickle and Corach... All orders for Ship Stores thankfully received and punctually attended to." Address: No. 83 Water-street.

455. Long's Foreign Warehouse. 1799. Classified ad: Tamarinds in the shell, as they grow. *Times* (*London*). Dec. 10. p. 1, col. 3.

• ***Summary:*** "... Guava Jelly and Marmalade; preserved Oranges, and Orange and Pine Apple [pineapple] Jam; Pine Apples, and Preserved Mangoes... East India pickled Mangoes, Bamboo Achar, &c. preserved Ginger, 4*s.* a pound;... genuine Japan Soy [sauce],... real Gorgona Anchovies, real India Currie Powder..." Address: No. 83, Lombard-street [London].

456. Marshal, Ebenezer. 1799. The history of the union of Scotland and England... Edinburgh: Printed for P. Hill; London: Printed for Longman & Rees. vii + 259 p. See p. 233-34.

• ***Summary:*** Chapter 5, pages 233-34: "The alteration, which, in consequence of the Union, was produced in the manners, dress, and living of the Scots, is this described by the author, who wrote twenty years after the great and important event. 'Where I saw the gentleman, lady, and children, dressed clean and neat, in homespun stuffs of her own sheep's growth, and women's spinning, I see, now, the ladies dressed in French or Italian silks and brocades, and the laird [a small landowner in Scotland] and his sons in English broad cloth. Where I saw the table served in Scots clean fine linen, I see, now, Flemish and Dutch diaper and damask. And

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where, with two or three substantial dishes of beef, mutton, and fowl, garnished with their own wholesome gravy, I see, now, served up, several services or of little expensive ashets [platters], with English pickles, yea, Indian mangoes and catchup or anchovy sauces." Address: Rev., Cockpen [south of the town of Bonnyrigg in Midlothian, Scotland].

457. Nemnich, Philip Andreas. 1799. An universal European dictionary of merchandise, in the English, German, Dutch, Danish, Swedish, French, Italian, Spanish, Portuguese, Russian, Polish, and Latin languages. London: Printed for J. Johnson in St. Paul's Church Yard, I. Remanat in High Holburn, & W. Remnant in Hamburgh. 437 p. 28 x 22 cm. [Eng]
• ***Summary:*** Terms related to merchandise and trade from twelve languages are defined in English. The 12 languages are Dutch, Danish, Swedish, German, French, Italian, Spanish, Portuguese, Russian, Polish, and Latin. In the section on German terms (the book is unpaginated) and the section on Danish terms, the term "Soya" is defined simply as "Soy" [sauce]. Swedish: "Sojaböner; soy." Russian: "Soja; soy." Latin: "Soia; soy." Neither the terms "Soy* or "Soj* appear in Dutch, French, Spanish, or Polish. Philipp Andreas Nemnich lived 1764-1822. Address: London.

458. Pressey (George). 1800. Classified ad: George Pressey tenders his grateful thanks... *Times* (*London*). Jan. 11. p. 2, col. 1.
• ***Summary:*** "... to the Nobility, Gentry, and Public at large, for their distinguished patronage through a long series of years. Aided by their protection, his own experience, and extensive connections, he is able to draw from varied resources, the most rare and select articles. In his Catalogue, which for extent defies competition, no expense or trouble is spared to supply the minutest deficiency. In Sauces, and other compound articles, the greatest attention is paid to arrive at such rich and elegant flavours as may please the most fastidious palate."

"Japan Soy and fine Essence of Anchovies... Bombay Mangoes, West India Pickles, Piccalilly,... genuine Cold Drawn Castor Oil, from Barbados; Cayenne Pepper, Arrow Root Powder, East India Currie Powder, Thisco Thomas's, Pinders, Cashew, Cocoa and Suwarrow Nuts;..." Address: Warehouse, Henrietta-street, Covent-garden [London].

459. Vinton (David). 1800. Classified ad: Morocco pocket-books. *Providence Journal and Town and Country Advertiser* (*Rhode Island*). March 26. p. 1.
• ***Summary:*** "... Cayenne Pepper-Sauce in bottles, per dozen. Basket blown Salt, Capers, India Japan Soy [sauce], per gallon or bottle. Stomachic Bitters, of a fine flavour, in bottles..." Address: At the corner store, No. 7, Market-Square.

460. Stuart (James). 1800. Classified ad: Has removed from no. 17 to no. 10 William-Street... and has for sale.... *Prisoner of Hope* (*New York City*). May 24. p. 19.
• ***Summary:*** "... Brown stout and London Porter by the cask or doz [dozen]. India soy (sauce), walnut katchup, anchovies and capers. Orange flower and rose waters. Demyjohns [Demijohns] and Florence oil."

Note: A demijohn is a narrow-necked bottle of glass or stoneware holding from one to 10 gallons that is enclosed in wickerwork and has one or two wicker handles. Address: No. 10 William-Street, corner of Slote Lane.

461. Hickson (W.). 1800. Warehouse for Hickson's Prepared Gorgona Anchovies... (Ad). *Observer* (*London*). Sept. 7. p. 1.
• ***Summary:*** "... Cavear, Fresh Laver; Preserved Ginger, Tamarinds, Sweetmeats, Soy [sauce], Curry,..."

462. Pressey (George). 1800. Classified ad: New fruit–Just landed,... *Times* (*London*). Oct. 30. p. 1, col. 1.
• ***Summary:*** "... Jar and Sun Raisins, Jordan Almonds, preserved Ginger, Limes, Papaws... Fruit of the Palm Tree, Mandareen [Mandarin] Oranges, Gevava [Guava] Jelly... Mangoes, Pinders [groundnuts], Cashew, Hickery [Hickory] and Cocoa Nuts, Yams, Edders or Cocoas, Cassada [Cassava] Bread, Creme De Noyau, red and white,... Gorgona Anchovies, real Japan Soy [sauce], French and Spanish Olives, with a more extensive assortment of Foreign Produce than any other house in town.

"George Pressey, impressed by a thorough sense of gratitude, returns his sincere thanks to the Nobility and Gentry for the liberal patronage he has so long experienced, and begs leave to assure them that exertion which first drew their attention shall ever remain unwearied to merit the continuance of their favours." Address: Foreign Warehouse, Henrietta-street, Covent-garden [London].

463. Thompson (Hugh). 1800. Classified ad: Has received by the late arrivals from London.... for cash or approved paper. *Federal Gazette and Baltimore Daily Advertiser.* Nov. 4. p. 3.
• ***Summary:*** "Plated goods:... bread baskets; soy frames [for soy sauce]; candlesticks and branches, goblets, waiters, tea and coffee urns, cruit frames; tea kettles with silver edges: also best gilt and metal watch chains;..." Address: Frederick-street.

464. Provision Store. 1800. Classified ad: For sale by wholesale and retail,... *Commercial Advertiser* (*New York City*). Nov. 17. p. 3.
• ***Summary:*** "Sauces: Fish, Cherokee, Corach, Quin, Oyster Ketchup, Mushroom do. [ditto = Ketchup], Walnut do. [Ketchup], India Soy [sauce], Pickles: Walnuts, Mangoes, Gherkins, Cucumbers..." Address: 251 Broadway.

465. Catnach (Donald). 1800. Classified ad: Has for sale by

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wholesale and retail... *Philadelphia Gazette and Universal Daily Advertiser.* Dec. 29. p. 1.
• ***Summary:*** "... Capers and Olives in bottles. East-India Soy [sauce] and Ketchup of the first quality... Hempseed and Filberts." Address: Fruiterer. Corner of Market and Third Street.

466. Communications to the Board of Agriculture; on subjects relative to the husbandry and internal improvement of the country. Vol. II. 1800. London: Board of Agriculture. Printed by W. Bulmer. 501 p. See p. 193-96. Illust.
• ***Summary:*** Section IX (p. 193-94) is titled "Copy of a letter from Mr. Campbell, at Fort Marlborough, with an account of seeds sent by him, by the *Queen* Indiaman."

He writes: "Those which go by the Queen are, the cordage palm; the caminium; the copaya, or oil-nut of the Malays; the teak; the soy bean of Japan; and the catupa, a delicate fruit lately discovered." "The adjoined catalogue contains short notices and references to works in which these plants are amply treated of."

He encourages the Board to distribute and test these seeds worldwide, and not only to British colonies. The letter is signed Charles Campbell. Fort Marlborough, 17 May 1798.

On pages 194-96 is an addendum titled "Account of seeds sent in the *Queen* Indiaman." On p. 196 we read:

"*Dolichos Soja*, the Soy Bean.

"This pulse is exotic to the West coast [of Sumatra], and seems to have been imported by the Chinese colonists.

"It is little cultivated here; and never, I believe, with a view to prepare the condiment from it.

"Much of the sauce sold in Europe, under the name of Japan Soy, is manufactured at Batavia [today's Jakarta], by a very simple process. Satisfactory information will, I believe, be found respecting this, in Kempfer's *Amoenitates* [sic, Kaempfer's *Amoenitatum exoticarum*... (1712)], a work I regret the want of.

Note 1. This is the earliest English-language publication seen (Aug. 2008) that contains the word "soy bean" (or "soy beans").

Note 2. Fort Marlborough was in Bengkulu, Sumatra (in today's Indonesia).

467. Matsudaira, Fumai? 1800. Yotsu no toki no hana [Flowers of the four seasons]. Japan. Publisher unknown. 2 large volumes. Japanese summary by Kawakami 1978, p. 157. [Jap]
• ***Summary:*** These two volumes of writing on cookery contain information on tea ceremony cuisine (*kaiseki ryori*) menus, including grilled tofu (*yaki-dôfu*), Simmering Tofu (*Yu-dôfu*), Miso no Sashimi, Natto Miso Soup (*Natto-jiru*), and Yamabuki Shoyu. The author, Matsudaira, lived 1751-1818.

Note: This is the earliest document seen (Dec. 2011) that mentions *nattô-jiru* [Natto Miso Soup] in connection with sticky natto.

468. Pennant, Thomas. 1800. Outlines of the globe. Vol. III: The view of India extra Gangem, China and Japan. London: Printed by Luke Hanford, and sold by John White. xi + 284 + [21] p. See p. 75, 283. Index.
• ***Summary:*** The author traveled in the countries he lists in his itinerary.

In the section on "Tonquin" we read (p. 75): "Fish is in equal abundance. The delicate sauce we call *Soya* is made here of one species" [of fish, sic]. The 1st Appendix (after p. 279), titled "A list of articles imported from the East Indies," lists under "Goods manufactured" (p. 283): "Soy [sauce]. Sago. Shawls." Address: Esq., Downing, England.

469. Pressey (George). 1801. Classified ad: A third cargo of new fruit just landed. *Times* (*London*). March 5. p. 1, col. 1.
• ***Summary:*** "... China Lack Soy [opaque rice vermicelli], for curries: French Harricoes [Haricots], Capers and Olives: Pistachio, Pinders, Thisco Thomas's, Cashew, Beetle, and other curious Nuts; Prime Pickled Mangoes... Essence of Anchovies, Japan Soy [sauce], Lemon Pickle, with all kinds of Fish and Game Sauces, compounded to please the most fastidious palate..." Address: Foreign Warehouse, Henrietta-street, Covent-garden [London].

470. Hickson. 1801. Warehouse for Hickson's Prepared Gorgona Anchovies... (Ad). *Observer* (*London*). May 24. p. 1.
• ***Summary:*** "... German Sausages, Cavear, India Soy [sauce], Kian [Cayenne], Tamarinds, Capers, Olives,... India Pickle, Piccalili,... Sauces and Pickles in cases for Families and Sea Service."

471. Workman (James). 1801. Classified ad: Alexandria... articles lately imported from London. *Washington Federalist.* July 29. p. 3.
• ***Summary:*** "... castors, soy frames [for soy sauce],... Essence of anchovies, quin sauce, cherokee sauce, lemon pickles,..."

Note: This is the earliest document seen (March 2011) concerning soy in connection with (but not yet in) Washington, DC. Address: Royal street.

472. Mason, Charlotte (Mrs.). 1801. The lady's assistant for regulating and supplying the table: Being a complete system of cookery, &c... A new [8th] edition, enlarged, corrected, and improved, to the present time. London: J. Walter. 422 + 25 + [24] p. Index. 21 cm. *
• ***Summary:*** "Soy is made from mushrooms which grow in the woods [in the East Indies]."

473. Nemnich, Philipp Andreas. 1801. Zweyter Theil des der

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Hamburgischen Commerz-Deputation gewidmeten Waaren-lexicon in zwoelf Sprachen [Part two of a dictionary of merchandise in twelve languages, dedicated to the Hamburg Commerce Deputation]. Hamburg: Printed by Conrad Mueller. viii + [5] + p. 578-992. 21 cm. [Ger; Eng]
• ***Summary:*** Terms related to merchandise and trade from twelve languages are defined in German. The 12 languages are Dutch, Danish, Swedish, English, French, Italian, Spanish, Portuguese, Russian, Polish, and Latin.

In the section where English terms are translated to German (p. 637) the term "India soy" is defined as "Indianische Soya." Philipp Andreas Nemnich lived 1764-1822.

Note 2. This is the earliest German-language document seen (April 2012) that uses the term "Indianische Soya" to refer to soy sauce.

474. Jacks (James). 1802. Classified ad: New assortment of goods, imported in the ship Birmingham Packet, capt. Cochran, from London.... *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Feb. 17. p. Supplement 1.
• ***Summary:*** "... Plated goods:... Liquor Frames. Soy Frames [for soy sauce]. Toast Racks and Egg Cups." Address: Watch-Maker and Jeweller [Jeweler], No. 125, Broad-street, the third door from the State Bank.

475. Cooper and Simpson. 1802. Fish sauces, &c. of superior quality, prepared by Cooper and Simpson, at their Italian oil and fish-sauce warehouse (Ad). *Observer* (*London*). March 14. p. 1.
• ***Summary:*** "The universal approbation their rich sauces have so long experienced, and the decided preference they have obtained at the most fashionable tables, induces them to present to the Nobility, Gentry, &c. the following list of the most approved now used:... Coratch, Quin's Sauce, Lemon Pickle, Oyster Ketchup, Chili Vinegar...."

"Sold in bottles at 2*s.* 6*d.* each; or in Mahogany Boxes, containing Four and Six Bottles, at 10*s.* 6*d.* and 15*s.* 6*d.* each.–Genuine Cayenne Pepper, Indian Soy [sauce], Mushroom and Walnut Ketchup, Anchovies, Capers, &c."

This ad also appeared in the April 4 issue (p. 3). Address: No. 179, corner of Fetter-lane, Fleet-street [London].

476. Stuart (James). 1802. Classified ad: Has for sale.... *New-York Gazette and General Advertiser* (*New York City*). May 20. p. 2.
• ***Summary:*** "... Gunpowder, teas by the chest or lb.: Hyson, Young hyson, Hyson skin, Souchong, Bohea,... London, Durham, and American mustard, 1st, 2d, and 3d quality playing cards, Cayenne pepper, olives, anchovies, Indian soy [sauce] and ketchup,..." Address: No. X, William street.

477. Commissioners of his Majesty's Customs. 1802. Classified ad: For sale, by order of the Honourable the Commissioners. *Times* (*London*). Dec. 6. p. 1, col. 2.
• ***Summary:*** The section titled "For home consumption" includes: "Tea, Coffee, Nutmegs, Brandy, Rum, Geneva, Cordials, Wine, Cambric, Muslin, Calico,... Cardamoms, China, Soy [sauce], Musk..." This ad also appeared in the Dec. 8 issue (p. 1). Address: Custom-House, London.

478. Simpson (R.). 1802. Fish sauces, &c. of superior quality, prepared by R. Simpson, (late Cooper and Simpson), at his Italian oil and fish-sauce warehouse (Ad). *Observer* (*London*). Dec. 12. p. 1.
• ***Summary:*** "R. Simpson respectfully informs the Nobility, Gentry, &c. that he continues to prepare his superior rich sauces, which, for convenience and utility, stand unrivalled."

"... Quin's Sauce, Coratch, Lemon Pickle, Chili Vinegar,... Indian Soy [sauce], Mushroom, Walnut, Oyster and Apple Catsup, &c." Address: No. 179, corner of Fetter-lane, Fleet-street [London].

479. Mollard, John. 1802. The art of cookery made easy and refined: Comprising ample directions for preparing every article requisite for furnishing the tables of the nobleman, gentleman, and tradesman. 2nd ed. London: Printed for the author, and sold by J. Nunn. xxiv + 314 + [21] p. See p. 130, 265. Illust. 22 cm.
• ***Summary:*** The recipe for "Oyster sauce for beef steaks" states (p. 130): "Blanch a pint of oysters, and preserve their liquor; then wash and beard them, and put their liquor into a stewpan with india soy and ketchup, a small quantity of each, and a quarter of a pound of fresh butter. Set them over a fire, and when nearly boiling thicken with flour and water; season to the palate with a little cayenne pepper, salt, and lemon juice; strain it to the oysters, and stew them gently fire minutes."

The recipe for "Anchovie [anchovy] sauce for fish" (p. 265) states: "Put half a pound of fresh butter into a stewpan, add to it three spoonfuls of anchovie liquor, walnut and mushroom ketchups a spoonful of each, the juice of half a lemon, a little cayenne pepper, a tea spoonful of india soy if approved, a sufficient quantity of flour and water to make it of a proper thickness. Make the mixture boil, and skim it clean." Address: Cook, lately one of the proprietors of Freemasons' Tavern... now removed to Dover St., Piccadilly [London].

480. Pinkerton, John. 1802. Modern geography: A description of the empires, kingdoms, states, and colonies; with the oceans, seas, and isles; in all parts of the world: Including the most recent discoveries, and political alternations. Digested on a new plan... With numerous maps. Vol. II. London: T. Cadell Jun. and W. Davies; and T.N. Longman and O. Rees. viii + 835 p. See p. 110, 170. Maps. Index. 29 cm.

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• ***Summary:*** On page 83 is a detailed map of China. In the chapter titled "China proper" (p. 83), the subsection on "Botany" states (p. 110): "Besides the multitude of vegetables that are cultivated as articles of human food, and which are probably natives of India, Japan, and the neighbouring islands, the following are found in a truly wild state in China, viz. three species of dolichos, *kidney bean;* d. sinensis, *calavanses;* d. soya from the beans of which the true Indian soy is made; and d. cultratus..."

In the section on "Japan" (p. 152-), in Chapter IV, "Natural geography," the subsection on Botany states (p. 170): "The vegetable treasures of Japan are numerous, and have been ably explored by Kæmpfer and Thunberg... There are several points of resemblance between the floras of China and Japan, and this similarity has probably been strengthened by a mutual interchange of useful vegetables; if indeed both countries have not rather derived some of their most valuable plants from Cochin-China, or the Philippine islands: the ginger, the soy bean, black pepper, sugar, cotton, and indigo, though perhaps natives of the more southern regions of Asia, are cultivated here with great success and in vast abundance." Note: Pinkerton lived 1758-1826. Address: [England].

481. Willich, Anthony Florian Madinger, ed. 1802. The domestic encyclopedia; or, a dictionary of facts and useful knowledge. Comprehending a concise view of the latest discoveries, inventions, and improvements, chiefly applicable to the domestic economy. Vol. 3 of 4. Philadelphia, Pennsylvania: William Young Birch and Abraham Small. See vol. II, p. 357. This is a 5-volume work. A second edition was published in 1821.
• ***Summary:*** The entry for "Ring-Worm or Tetter (*Herpes miliaris*)" states (Vol. 3, p. 497): "These pustules never suppurate and cannot be easily cured; often breaking out at certain periods of the year, even after having been apparently removed. The usual application, in this affection [bodily condition, disease, malady] is the common *black or writing-ink;* but frequent friction or embrocation of the eruption with mushroom catsup, has sometimes been attended with success." Address: Britain.

482. Knox (George). 1803. Classified ad: Has for sale, wholesale and retail. *Mercantile Advertiser* (*New York City*). Jan. 13. p. 1.
• ***Summary:*** "... Capers, Olives, Anchovies, Mushroom and Walnut Ketchup, Quin Sauce,..." Address: No. 23, Broadway.

483. Grubbens, Michael af. 1803. Chinesiska soyans beredningss-sätt [Method of preparing the Chinese soy]. *Kongliga Vetenskaps Academiens nya Handlingar* (*Transactions of the Royal Academy of Sciences, New Series, Stockholm*) 24:1-7. Jan/March. [1 ref. Swe]*
• ***Summary:*** A complete English translation of this article appeared in: (1) *The Philosophical Magazine* (London). 1804. Vol. 19, p. 260-63; (2) *Repertory of Arts, Manufactures, and Agriculture* (London). 1804. 5(39):357-61. Oct. 1. Second Series. (3) *Journal of Natural Philosophy, Chemistry and the Arts* (London). 1804. Vol. 9, p. 237-41. Dec.; (4) in the *Archives of Useful Knowledge* (Philadelphia, Pennsylvania) 1(2):219-23. Oct. 1810, edited by Dr. James Mease.

The one reference in this article is to a article by Ekeberg in *Kongliga Vetenskaps Academiens Handlingar* (Transactions of the Royal Academy of Sciences, Stockholm), which in Grubbens' opinion describes the making of soy sauce incorrectly.

Note 1. Michael Grubb (1728-1808) was born (and died) in Sweden. He was a successful merchant, connected with the Swedish East India Company (founded 1731). He went to China for the first time in 1749 and stayed in Canton for a couple of years building up the business activities. 1766-1768–He was director of the Company. 1768–He was ennobled and henceforth called Michael af Grubbens. 1777–He was elected member of the Royal Academy of Sciences in Stockholm.

Note 2. The word in the journal title means "New," indicating a New Series. Address: Sweden.

484. Bryden (James). 1803. Classified ad: London draught porter for sale [in hogsheads]... *Republican, or Anti-Democrat* (*Baltimore, Maryland*). May 2. p. 4.
• ***Summary:*** "... Fontagniac Wine in casks. India Soy [sauce] for fish sauce, at 9*s* and 4*d* each bottle. The above may be had low for cash or approved paper." Address: At the Fountain Inn, Light Street.

485. Hickson (W.). 1803. Hickson's Prepared Gorgona Anchovies... (Ad). *Observer* (*London*). Aug. 21. p. 1.
• ***Summary:*** "... Ketchup, India Soy [sauce], Curry Powder, Mangoes, Kian [Cayenne],..." Address: Sauce Warehouse, 170, next the Panorama, Strand.

486. Brantingham (Joseph) and Co. 1803. Classified ad: Have for sale... *Evening Post* (*New York City*). Sept. 1. p. 3.
• ***Summary:*** "... Cassia, Cloves, Quin's Sauce, Cherokee do. [ditto = Sauce], Harvey's Sauce, India Soy [sauce], Essence of Anchovies, Mushroom and Walnut Ketchup, Olives,..." Address: Wine Cellar and Grocery Store, No. 141 Broadway.

487. Tait, Wilson & Co. 1803. Classified ad: Have received per the ships Isabella and Washington, from London... *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Oct. 20. p. 3.
• ***Summary:*** "... Sauces: India Soy [sauce], Essence of Anchovies, Mushroom and Walnut Ketchup, Cavis, Raspberry Vinegar,..." Address: Corner of Broad and Church streets, opposite the South-Carolina Bank.

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488. Carter, Susannah. 1803. The frugal housewife: or, Complete woman cook... New York, NY: Printed and sold by G. & R. Waite. 216 p. Illust. Index. 17 cm.

• ***Summary:*** "Soy" [sauce] is used as an ingredient in the following 4 recipes: To boil skate ("serve it up with butter and mustard in one basin, and anchovy or soy sauce in another," p. 49). To boil soals [soles] ("Serve them up with anchovy sauce, and butter melted plain; or with shrimp, soy, or muscle sauce," p. 49). To boil plaice and flounders ("or butter melted with a little catchup or soy," p. 49-50). To boil a pike, or jack ("Sauce.–Anchovy, shrimp, or soy sauce; or melted butter or catchup," p. 53).

Note 1. This is the earliest English-language document seen (April 2012) that contains the term "soy sauce" (without a hyphen).

The word "catchup" appears 13 times in this book; neither the word "catsup" nor the word "ketchup" ever appears. "Catchup" is never preceded by an adjective (such as "walnut catchup" or "mushroom catchup"). The amount called for is almost always 1 "spoonful" or 2 "spoonfuls." It is almost always used in a sauce or gravy for fish or meat. Alternatives listed after it (so considered less preferable or widely available) are soy sauce (once) and walnut pickle (once). Alternatives listed before it before (so considered preferable or more widely available) are soy [sauce] (once), walnut pickle (once), and walnut liquor (once). In one case it is used together with a spoonful of walnut pickle. From the above observations we can surmise that "catchup" was probably ketjap (soy sauce) from the Dutch East Indies. The word "soy" did not appear in the English name because, at this time, no Englishmen (and probably no Dutchmen or other Westerners) knew that ketjap was made from soybeans.

Note 2. This book was "first published as early as 1765 in London and Dublin (Ireland), and was first reprinted in American in 1772. One of the earliest American-printed cookbooks... it made no mention of colonial cooking or common American ingredients. It wasn't until 1803 that 'an appendix containing several new receipts adapted to the American mode of cooking' was added." This was probably added "by the American publisher to attract American readers, and to respond to the best seller of the day [strongly influenced by Carter's book], Amelia Simmons' *American Cookery* (1796),... the first cookbook authored by an American" (MSU introduction). Address: [Clerkenwell, London, England].

489. Sugino Bakuka. 1803. Shinsen hôchô kakehashi [Newly selected kitchen knife ladder]. Osaka Shorin: Akamatsu Kyubei and Asano Yahei. 176 p. Japanese summary by Kawakami 1978, p. 79. [Jap]

• ***Summary:*** Cooking know-how for family use including descriptions of how to make shoyu, vinegar, miso, etc. Contains many illustrations of how to set the table, etc. The author wrote this more for family than for professional use.

490. Sugino, Hakuka. 1803. Shinsen hôchô kakehashi [New edition vegetable knife bridge]. Osaka, Japan: Akamatsu Kuhe; Asano Yahe. 5 + 18 + 62 + 3 leaves. Illust. (woodcuts). 26 cm. On double leaves, oriental style (*fukurotoji*). [Jap]*

• ***Summary:*** Iino (2003, p. 9): The 1803 issue of this publication "gives instructions for making homemade soy sauce. It states that by adding *modoki* the soy sauce loses its qualities for preservation making it susceptible to both mold and worms. By adding stock, acidity is increased, affecting the flavor. Therefore it states that *modoki* must not be added when making homemade soy sauce." Address: Japan.

491. Driver (J.). 1804. For sale at the house of J. Driver, Chapel Row (Ad). *Sydney Gazette and New South Wales Advertiser (NSW, Australia)*. March 18. p. 1.

• ***Summary:*** "Preserved Fruit of all kinds 1*s.* 6*d.* per lb.

"Fine India Soy [sauce]. Best Green Tea 6*s.* per lb."

Note 1. This is the earliest document seen (March 2010) concerning soybean products (soy sauce) in Australia or Oceania. This document contains the earliest date seen for soybean products in Australia or Oceania (18 March 1804); soybeans as such have not yet been reported.

Note 2. This is the earliest of 230 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "India Soy." The newspaper in which this term appears most frequently is *The Argus* (Melbourne) (70 times). By category: 225 are advertising and 5 are news. By decade: In 1840-49 the term appears in the most ads or articles (95), followed by 1850-59 (66). Address: Chapel Row, [Sydney].

492. Grubbens, M. de. 1804. Method of preparing Chinese soy. *Philosophical Magazine (The) (London)* 19(75):260-63. First quarter. [1 ref. Eng]

• ***Summary:*** "Extracted from the Memoirs of the Academy of Sciences at Stockholm for 1803, first quarter, by M. Lindbom, Captain of the Swedish Mines." (Footnote: *From the *Annales de Chimie*, No. 148).

"The Transactions of the Swedish Academy for the year 1761 contain a description of the method of preparing soy [sauce], by the late captain Ekeberg; but as this description is incomplete as well as incorrect, since the real Chinese soy will not be obtained by following it, I am fully persuaded that M. Ekeberg never saw, nor was acquainted with, the true process for preparing this substance. There is reason to believe that he gave his description from the accounts of the Chinese, who are not always ready to speak the truth, as I observed during the five years I resided in China... but as I have now procured a very correct account of it [manufacturing soy], I think it my duty to communicate it to the Academy.

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"Soy is prepared from a kind of beans, which are whiter and smaller than those of Turkey, the farina of wheat, salt, and water. The proportions are 50 pounds of beans, 50 pounds of salt, 60 pounds of farina of wheat, and 250 pounds of water." Note: Farina here refers to finely ground wheat meal, a little coarser than wheat flour.

"After the beans have been well washed, they are boiled with well water in an open pot for some hours, or until they become soft enough to be kneaded with the fingers. During the boiling they must be always covered with water that they may not be burnt. Care must be taken not to boil them too much: if they are diluted, too much of the substance remains in the juice. When the beans are boiled they are put into large flat wooden tubs, or, as the Chinese do, into vessels made of thin broad splinters of bamboo, two inches and a half in depth and five feet in diameter. In the latter they are spread out to the depth of two inches. When they are sufficiently cooled to be touched with the hand, the farina of wheat is added, and well mixed with them; and this is continued till the whole farina is exhausted. When the mass becomes too dry for the farina to adhere to the beans, a little warm juice is added.

"When the whole is well mixed, the mass is spread out in the tubs above mentioned, taking care that the strata are not more than an inch or an inch and a half in thickness. The mass is then covered, by placing over it a lid which exactly closes it. When it is observed that the mass becomes mouldy, and that heat is disengaged from it, which takes place in the course of two or three days, the cover must be raised up, by placing two rods below it, in order that the air may have freer access. In the mean time a rancid odour is exhaled. If the mass assumes a green colour, it is a sign that every thing goes on well; if it begins to grow black, the cover is raised a little more, in order that the mass may be more in contact with the air. When the mass becomes completely black it is entirely spoiled.

"As soon as it is observed that the whole mass is green and mouldy, which is generally the case in eight or ten days, the cover is removed, and the mass is exposed for some days to the air and the sun.

"When the whole mass has become hard like a stone, it is cut into small fragments, which are thrown into an earthen pitcher, and 250 pounds of water, in which 50 pounds of salt are dissolved, are poured over them. The whole is well stirred; and the height which the water occupies in the pitcher is noted. In case one pitcher is not sufficient, the mass is put into several, taking care that each be proportioned to the quantity of the matter.

"When the pitcher is thus filled it is placed in the sun. The matter must be regularly stirred and shaken every morning and evening, but at night care must be taken to put the cover on it to preserve the mass from the cold. This cover is made convex on the outside that the rain may more readily run off from it, and it is employed also in the day time, when it rains. The greater the heat of the sun, the more the preparation of the soy is accelerated. This operation in general is undertaken only in summer, and yet it continues for two or three months.

"In proportion as the mass decreases by evaporation, well water is added, and this is continued till the salt water has entirely dissolved both the farina and the beans. The pitcher is then left some days longer in the sun, in order that the solution may be so much the more perfect, as on this depends the good quality of the soy, and even during this time the matter must be stirred every day.

"When the mass has become very succulent and oily, the whole is poured into bags, which are pressed to squeeze out the soy, which is then pure, and ready to be employed. It is not boiled, as M. Ekeberg asserts. It is then put into bottles, which are well closed. The Chinese, who deal in this article, put it into large pitchers. The soy before it is squeezed out is of a dark brown colour, but it afterwards becomes black.

"The Chinese prepare from the refuse that remains two other kinds of soy. The first time they add 150 pounds of water and 30 pounds of salt; having squeezed this mass, they again pour over it 100 pounds of water and 20 pounds of salt, proceeding always in the same manner as above described.

"The last two kinds are not strong, but very salt [sic, salty]; especially that of the last extraction, the colour of which is also clear. These two kinds are the commonest in China. The difference between them is as 8, 4, 1.

"In the year 1759 I prepared in this manner, in my lodgings at Canton, all the soy which I employed. I even brought some bottles of it to Sweden: it was succulent, oily, moderately salty, and entirely different from that usually sold in Europe: in regard to its taste it was equal to that of Japan, which is generally considered as the best.

"This description is the more certain, as I always executed the preparation myself: I will even venture to assert, that it is that used to obtain soy of the best quality.

"M. Ekeberg asserts that the soy is boiled, and that sugar, ginger, and other spiceries are added: but this is void of foundation and cannot be true, since a Chinese pound of soy does not cost more than two *canderins* Chinese money, which are equal to one and a third skilling Swedish." This was the usual price during my residence in China, and there is no reason to believe that these ingredients were employed in the preparation of it. Besides, soy has no taste either of sugar or of spiceries; the prevailing taste is that of salt."

493. Farebrother (Mr.). 1804. Sales by auction: An elegant extensive assortment of plated goods... (Ad). *Times (London)*. May 5, p. 3, col. 4.

• ***Summary:*** "... comprising in plated, cruet, soy [sauce], and liquor frames, waiters, ice pails, bottle castors,... The whole taken under execution by the Sheriff of Middlesex." Address: His great room, 16 Old Bond-street [London].

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494. Phillips (H.). 1804. Sales by auction: French Nankin and Canton porcelane [porcelain] (Ad). *Times* (*London*). May 29. p. 3, col. 3.
• ***Summary:*** "India soy [sauce], and various East India articles, equally curious and useful;... the whole lately imported from India by the Exeter East Indiaman."

Note 1. Nankin is Chinese porcelain decorated in blue on a white ground. Note 2. A very similar ad appeared in the July 4 issue (p. 4). Address: New Bond-street [London].

495. Lord (Mr.). 1804. To be sold by auction by Mr. Lord, at his warehouse in Sydney, on Monday the 20th instant, at eleven in the forenoon... George-street, at 12 o'clock... (Ad). *Sydney Gazette and New South Wales Advertiser* (*NSW, Australia*). Aug. 12. p. 2.
• ***Summary:*** "The residue of the investment imported by Captain Withers–Experiment: Consisting of... pickles of different kinds, comprising coratch, ketchup, capers, anchovies, and quin sauce...."

Note 1. This is the earliest of 2,417 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "ketchup." The newspaper in which this term appears most frequently is *The Argus* (Melbourne) (873 times). By category: 1,936 are advertising, 417 are news, and 64 are detailed lists, results, or guides. By decade: In 1850-59 the term appears in the most ads or articles (481), followed by 1860-69 (360).

Note 2. It is not clear what ingredients this ketchup contains or where it was made (it was probably made in England). Ketjap / Kecap is the Malay / Indonesian word for "soy sauce." Address: [Sydney].

496. Hickson (William). 1804. As when a Fleet, deep-laden from the Shores... (Ad). *Observer* (*London*). Sept. 23. p. 3.
• ***Summary:*** This poem continues: "Of burning Hindostan, unlades its Stores.

"The joyful Merchants spread the news abroad,
"And advertise for sale the precious load:"
"Prepared Anchovies, Essence, India Soy [sauce],
"T'obtain each Sauce the best is his employ;..." Address: Strand [London].

497. Grubbens, Michael von. 1804. Of the manner of preparing China soy. *Repertory of Arts, Manufactures, and Agriculture* (*London*) 5(39):357-61. Oct. 1. Second Series. [1 ref]
• ***Summary:*** "From the Memoirs of the Academy of Sciences of Stockholm." "The Transactions of the Academy of Sciences for the year 1764 contain a description, by the late Captain Ekeberg, of the preparation of China soy [sauce]; but as that description is not only incomplete, but even inaccurate, (for by following it the genuine China soy cannot be obtained), I am persuaded that M. Ekeberg never saw, nor was acquainted with, the method employed for preparing it. I presume that he gave this description from the accounts of the Chinese, which are not always to be depended on, as I found, by experience, in the five years of my residence among them...."

For a complete translation which is fairly similar, see the earlier article: Grubbens, M. de. 1804. "Method of preparing Chinese soy." *Philosophical Magazine* (The) (London) 19(75):260-63. First quarter.

In the present translation, the word "kidney-beans" is used rather than "beans." "Soy is made of a species of kidney beans."

Note: This is the earliest document seen (April 2012) that uses the term "China soy" to refer to soy sauce–probably made in China.

498. Owen (Joseph). 1804. Sales by auction: The valuable genuine finished and unfinished stock in trade (Ad). *Times* (*London*). Oct. 23. p. 4, col. 2.
• ***Summary:*** "... roast-racks, cruet- and soy frames, gilt salts...." Address: Watchmaker and Jeweller (bankrupt), No. 25, Holborn Hill [London].

499. Thompson (Mr.). 1804. To merchants, silversmiths, and jewellers (Ad). *Observer* (*London*). Oct. 28. p. 1.
• ***Summary:*** "To be sold at auction, by Mr. Thompson, at Tom's Coffee-house, Cornhill, on Tuesday next, the 30th instant... at Eleven o'Clock, the truly valuable and genuine stock-in-trade of a Goldsmith and Jeweller, retiring from Business, which will be sold without reserve; consisting of... silver and plated articles in patent table and bracket candlesticks, tea pots, milk ewers, fish slices, cruet and soy frames, gilt salts, table and tea spoons,..." Address: Auctioneer, 62, Watling-street, Cheapside [London].

500. Fitch & McNeal. 1804. Classified ad: Have for sale... *Evening Post* (*New York City*). Dec. 27. p. 2.
• ***Summary:*** "... Eng. [English] Fish Sauces: Anchovies, Walnut Ketchup, Mushroom do. [ditto = Mushroom Ketchup], India Soy [sauce], Quins Sauce." Address: No. 131 Pearl-street.

501. Grubbens, Michael de. 1804. The method of preparing Chinese soy. *Journal of Natural Philosophy, Chemistry and the Arts* (*London*) 9:237-41. Dec.
• ***Summary:*** A symbol after the author's name is linked to a footnote which states: "Extracted from the Memoirs of the Academy of Sciences of Stockholm for 1803, by M. Linborn, and inserted in the Annales de Chimie, Vol. L. from which the present translation is made."

For the full text of the translation, which is fairly similar, see the earlier article: Grubbens, M. de. 1804. "Method of preparing Chinese soy" [sauce]. *Philosophical Magazine* (The) (London) 19(75):260-63. First quarter.

In the present translation, the word "haricots" is used

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rather than "beans." "Soy is prepared with a species of haricots."

502. **Product Name:** [Tamari, and Miso].
Foreign Name: Tamari, and Miso.
Manufacturer's Name: Minato-ya. Renamed Sato Shinnosuke Shoten in 1909, then San-Jirushi Brewing Corp. in 1963.
Manufacturer's Address: Ooaza Senba, Kuwana-cho, Kuwana-gun, Ise-no-kuni, Japan.
Date of Introduction: 1804.
Ingredients: Soybeans, water, salt.
Wt/Vol., Packaging, Price: Wooden kegs.
How Stored: Shelf stable.
New Product–Documentation: San Jirushi advertisements in 1980s. Talks with Steve Earle and Michael Fountain. Letter from Steve Earle. 1988. March 7. The best source seen up to this time on the early history of San Jirushi. The product was originally called tamari, not "tamari-shoyu."

Note: This is the earliest record seen (Feb. 2012) concerning San Jirushi of Kuwana, Japan.

503. Mease, James. 1804. Soy. In: A.F.M. Willich, ed. 1804. The Domestic Encyclopedia. Philadelphia, PA: William Young Birch and Abraham Small. See Vol. V, p. 12-13.
• ***Summary:*** This work is subtitled: "First American edition; with additions applicable to the present situation of the United States: by James Mease." Material added by Mease appears in square brackets ["Crotchets"].

"SOY [sauce], or Sooju, a species of liquid condiment, which is imported from India, and is used as a sauce for fish. It is prepared from the leguminous fruit of the Soja (*Dolichos soja*, L.) a native of Japan.

"The pods are first boiled till they become soft; when equal parts of them, and of *muggi* (wheat or barley that has been coarsely ground), are thoroughly mixed... This preparation is then kept in a close [sic, closed] vessel, and a warm place, for twenty-four hours, in order to ferment; after which, the mass is put into a pot, and covered with a large portion of common salt, when two *measures* and a half of water are poured over the whole. The compound is stirred, once at the least, every day for the space of two or three months, and at the end of that period, it is filtered; the expressed liquor being preserved in wooden vessels. Fresh water is next added to the same mass; which, after stirring it occasionally for several days, is at length strained; and the liquor, though of an inferior kind, thus rendered fit for use.

"*Soy* possesses a strongly saline taste, but has only a slight aromatic flavor: it is chiefly used at the tables of the luxurious; and is one of these artificial stimulants of the palate, which deserves no commendation, especially for vitiated or relaxed habits.

"[The Soy-bean bears the climate of Pennsylvania very well. The bean ought therefore to be cultivated.]." Note 1.

SOY, or Sooju, á species of liquid condiment, which is imported from India, and is used as a sauce for fish. It is prepared from the leguminous fruit of the Soja *(Dolichos soja*, L.) a native of Japan.

The pods are first boiled, till they become soft; when equal parts of them, and of *muggi* (wheat or barley that has been coarsely ground), are thoroughly mixed.... This preparation is then kept in a close vessel, and a warm place, for twenty-four hours, in order to ferment; after which, the mass is put into a pot, and covered with a large portion of common salt, when two *measures* and a half of water are poured over the whole. The compound is stirred, once at the least, every day, for the space of two or three months, and at the end of that period, it is filtred; the expressed liquor being preserved in wooden vessels. Fresh water is next added to the same mass; which, after stirring it occasionally for several days, is at

A portrait of James Mease, M.D., appears in the following book: True, Rodney H. 1939. *Sketch of the History of the Philadelphia Society for Promoting Agriculture:... 150th anniversary... Memoirs Vol. 6.* Philadelphia, Pennsylvania: Philadelphia Society for Promoting Agriculture. ix + 228 p. Portrait is facing p. 29.

Note 2. This is the earliest document seen (July 2011) that clearly refers to the cultivation of soybeans in Pennsylvania. This document also contains the earliest clear date for the cultivation of soybeans in Pennsylvania (1804). However soybeans were probably grown in Philadelphia in 1769 (See Lesley 1884). Mease probably learned that the soy-bean grows well in Philadelphia from John Bartram, who also lived in Philadelphia and was also a member of the American Philosophical Society.

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Note 3. This document by Mease was first cited in: Piper, C.V.; Morse, W.J. 1916. "The soy bean, with special reference to its utilization for oil, cake, and other products." *USDA Bulletin* No. 439. Dec. 22. See p. 7.

Note 4. This is the earliest English-language document seen (Feb. 2007) that contains the term "Soy-bean" (or "Soy-beans"), or "the Soja." The term "Soy-bean" is the earliest close ancestor / cognate of the modern American word "soybean." By what thought process did Mease coin this term? Did he think: The Soy-bean is the bean used to make Soy [sauce]?

Note 5. This is the earliest English-language document seen (April 2012) with the word "Soy," used alone to refer to soy sauce, in the title.

Note 6. Hymowitz (1991) reports that the soybeans referred to by Mease were those introduced by Samuel Bowen. Dr. James Mease, a physician, scientist, and author, was born on 11 Aug. 1771 in Philadelphia. He was a leader in the organization of the Pennsylvania Horticultural Society and in 1802 was elected to the American Philosophical Society. Mease obtained his information that "The Soy-bean bears the climate of Pennsylvania very well" from the writings Charles Thomson, one of the secretaries of the American Philosophical Society for the year 1770. The last sentence in this 1804 article is a paraphrase of Thomson's Preface to the *Transactions of the American Philosophical Society* (Vol. 1, p. VII) for the year 1770.

In 1805 Mease, age 23, was the secretary of the Philadelphia Society for Promoting Agriculture, in Philadelphia; in 1844 he was chosen president. In 1810 he was secretary of the Agricultural Society of Philadelphia. On 19 Sept. 1991 Dr. Ted Hymowitz of the University of Illinois sent a photocopy of an oval illustration (painting) of a portrait of James Mease, M.D. Address: M.D., Fellow of the American Philosophical Society, Philadelphia, Pennsylvania.

504. Pinkerton, John. 1804. Modern geography: A description of the empires, kingdoms, states, and colonies; with the oceans, seas, and isles: in all parts of the world: Including the most recent discoveries, and political alternations. Digested on a new plan... The article America, corrected and considerably enlarged, by Dr. Barton, of Philadelphia. With numerous maps. Vol. II. Philadelphia: John Conrad & Co.; Baltimore: M. & J. Conrad & Co.;... [ii] + 698 p. See p. 85, 130. Index. 23 cm.

• ***Summary:*** The information about soy in this book is very similar to that in the 1802 edition, although it appears on different pages. In Chapter 4, on the natural geography of China, the section on "Botany" (p. 85) states: "The following are found in a truly wild state in China, viz. three species of dolichos, *kidney bean;* D. sinensis, *calvances;* D. soya, from the beans of which the true Indian soy is made; and D. culeratus: dioscorea alata, *yam;* cucurbita sinensis, China gourd; nicotiana tabacum, tobacco; and convolvolutus battatas, *sweet potato.*

In another Chapter 4, on the natural geography of Japan, the section on "Botany" (p. 130) states: "... the ginger, the soy bean, black pepper, sugar, cotton, and indigo, though perhaps natives of the more southern regions of Asia [Cochin-China] are cultivated here [in Japan] with great success and in vast abundance."

Note 1. Pinkerton lived 1758-1826.

Note 2. This is the earliest document seen (March 2001) that mentions wild soybeans. Address: [England].

505. Gourgas (Jacob). 1805. Classified ad: Received per Polly, from London, and Venus from Liverpool.... *Repertory (The)* (*Boston, Massachusetts*). Jan. 18. p. 4.

• ***Summary:*** "... an elegant assortment of the best English Plated Ware, consisting of: Tea Setts, cake and break Baskets, Castors, Soy Frames [for soy sauce], Candlesticks,..." Address: English Agent, No. 13, Old State House.

506. Dana (Dexter). 1805. Classified ad: For sale,... *Boston Gazette*. Jan. 21. p. 4.

• ***Summary:*** "... Cream De Noyeau, East-India Soy [sauce], East-India Curry, Mushroom Ketchup, Sweet Oil, in flasks & botls. [bottles], Ising-Glass [Isinglass]..." Address: No. 4, South-side Market-House.

507. Ticknor (Elisha) & Co. 1805. Classified ad: To be sold... a general assortment of W.I. [West-India] goods & groceries. *New-England Palladium* (*Boston, Massachusetts*). Dec. 20. Supplement p. 4.

• ***Summary:*** "... Corks, Catchup (Mush. Eng. [Mushroom English]), Catshup (do American [ditto = Mushroom American]), East-India Soy [sauce], Essence Anchovies, Essence of Spruce, Flour (superfine), Garlic, Ginger (Race),... Hemp-Seed..."

Note: This is the earliest English-language document seen (Feb. 2010) that uses the spelling "Catshup" to refer to Catsup. Address: Sign of the Bee Hive, No. 42, Marlboro-street, Boston.

508. Mason, Charlotte (Mrs.). 1805. The lady's assistant for regulating and supplying the table, being a complete system of cookery, &c... A new [9th] edition, enlarged, corrected, and improved, to the present time. London: Printed by Thomas Gillet... iv + [16] + 422 + 26 + [20] p. Index. 22 cm.

*

• ***Summary:*** "Soy is made from mushrooms which grow in the woods [in the East Indies]."

509. McKoy (John M'Koy). 1806. Classified ad: Lisbon lemons, almonds, and oranges... *American Citizen* (*New York City*). June 6. p. 1.

• ***Summary:*** "... 40 boxes Olives, Capers and Anchovies,

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India soy [sauce], Mushroom Ketchup, Cayenne Pepper, London and Durham Mustard, West India Ginger, preserved in loaf sugar." Address: No. 148 Broadway, corner Liberty-street.

510. Cartee. 1806. Classified ad: Takes liberty, for the better information of his friends and customers,... *Providence Gazette* (*Rhode Island*). July 26. p. 1.
• ***Summary:*** "... Pepper Sauce, Soy [sauce], Catsup, Raisins, Currants,..." Address: His old Stand, near the Market.

511. Hunter, Alexander. 1806. Culina famulatrix medicinæ: or, Receipts in modern cookery, with a medical commentary, written by Ignotus, and revised by A. Hunter. 3rd ed. York, England: Printed by T. Wilson and R. Spence, High-Ousegate: For J. Mawman. 284 p. See p. 23, 40.
• ***Summary:*** The recipe for "Hare soup" (p. 23) states: "Then strain off the gravy, and put to it two spoonfuls of soy [sauce], or three of mushroom or walnut catchup. Cayenne pepper to the taste."

The recipe for "A sauce for boiled carp, tench, or turkey" (p. 39-40) reads: "To a quarter of a pound of butter, put a pint of cream, and one anchovy pounded. Heat together gently, and put in half a spoonful of India soy, with lemon juice to the taste. When sufficiently heated, take half an ounce of butter, and some flour, which stir into the sauce to make it thicker. Walnut, or mushroom catchup, will, when soy is not to be had, supply its place."

Note: In the 1810 edition of this book, soy appeared in the same recipe on p. 25-26.

The recipe for "Fish sauce" (p. 59-60) states: "A gill of mushroom pickle; a gill of walnut pickle; six anchovies pounded; two cloves of garlic; and half a tea-spoonful of Cayenne pepper. Boil all together, and bottle when cold. When used, shake the bottle, and put the required quantity into some melted butter.

"Obs. Such is the variety of fish sauces, that the cook can have no difficulty in fixing upon one that has the desired properties. This, by some, is called Quin's sauce. In this branch of cookery, I believe every cook has his nostrum, of which, part may be his own invention, and part may be derived from tradition."

Note: This early recipe for Quin's sauce, which is a store-sauce, contains no soy [sauce]. Address: [England].

512. Shecut, John Linnaeus Edward Westridge. 1806. Flora carolinæensis; or, A historical, medical, and economical display of the vegetable kingdom: according to the Linnæan, or sexual system of botany. Being a collection or compilation of the various plants hitherto discovered and made known by the several authors on botany, &c. 2 vols. Charleston, South Carolina: Printed for the author by J. Hoff. 584 p. See vol. 1, p. 514. [1 ref. Eng]
• ***Summary:*** This book, about the flora of Carolina, was written for the purpose of stimulating an interest in the study of botany and simplifying the Linnaean system for beginners.

In Vol. 1, page 514 the genus Dolichos is described. Concerning that genus Shecut says: "There are 24 species, mostly exotic, growing in the Indies." [probably the Dutch East Indies]. The 3rd member of the genus listed is the soybean–today's Glycine max.

"3. Dolichos Soja, *Soy*, or *Sooja*, a native of Japan, though bearing this climate; and is the bean, the leguminous fruit of which affords the liquid condiment called Indian Soy [sauce]. Kempfer [Kaempfer] affirms that the seeds of this species give relief in the Asthma."

Note: Given that the title refers to a flora of the Carolinas, the author seems to be saying that the soybean either grows or will grow in South Carolina. However the sentence at the end of the subtitle appears to say something altogether different; therefore we cannot be sure. Or, Shecut may have read James Mease (1804), who states: "[The Soy-bean bears the climate of Pennsylvania very well. The bean ought therefore to be cultivated.]." In the same article, Mease says of soy sauce: "SOY, or Sooju, a species of liquid condiment, which is imported from India,..." From Mease, Shecut he may have adopted the phrases "bearing this climate" and "liquid condiment called Indian Soy." It is possible that this is the earliest document seen (Aug. 2011) concerning soybeans in South Carolina, or the cultivation of soybeans in South Carolina–but this is not at all clear. And all things considered–we think it is unlikely that Shecut observed the soybean growing in South Carolina.

John Shecut lived 1770-1836. Address: Charleston, South Carolina.

513. *Spirit of the Journals* (*The*). 1806. The tears of the crewets: On taxing salt and vinegar. For 1805. p. 77-78.
• ***Summary:*** (From the Morning Chronicle): This poem, with pairs of rhyming lines, begins: "Two sulky Salt-cellars contriv'd to meet / A pensive Pepper-box in Downing Street, / And there conven'd in factious consulation. / The motley Crewets of Administration."

The poem continues later: "Salt to his porridge George had got before, / Nor car'd what suff'rings public porridge bore. / 'What honest humble sauce can long enjoy / His fair security?' cried gloomy Soy; / 'Catchup, perchance, may 'scape the luckless hour, / So many Mushrooms now have place and pow'r;..."

Note: Crewets (also spelled cruets) are glass bottles for serving soy [sauce]–or oil or vinegar–at the table. If salt and vinegar are taxed, then catchup (often made with mushrooms) may escape the tax and become ever more popular. Address: [England].

514. Linzee & Cunningham. 1807. Classified ad: Glass. *Columbian Centinel* (*Boston, Massachusetts*). Jan. 21. p. 3.
• ***Summary:*** "... Salad Bowls, Salts, Oil, Vinegar and Soy

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Cruits [for soy sauce], Mustard Pots..." Address: No. 50, India-Wharf.

515. Murdock's (George) Grocery Store. 1807. Classified ad: To be sold... *Repertory (The) (Boston, Massachusetts)*. May 1, p. 4.
• ***Summary:*** "... Canary & Hemp Seed. Cork, velvet. Catchup, mushroom. India Soy [sauce]. Essence Anchovies. Filberts, Shagbarks..." Note: Shagbarks are the sweet, edible, somewhat aromatic nuts of the shagbark hickory tree that grows in the USA. Address: No. 14, Market Square.

516. Ashburn, Addison. 1807. The family director; or, Housekeeper's assistant: Containing upwards of three hundred original receipts, in pastry, pickling, preserving, collaring, making wines, &c. Coventry, England: Printed for the author, by N. Merridew. Sold by Longman, Hurst, Rees, and Orme, London; the Author, at Meriden; N. Merridew, Coventry;... xx + 180 p. See p. 152. 19 cm.
• ***Summary:*** In the midst of the recipes for making different types of catsup, is a recipe titled "To make carrack," which states (p. 152): "Take a pint of Indian Soy [sauce], a quart of mushroom Catsup, a quart of walnut liquor, half a pound of anchovies, with the bones, a pint of vinegar, some shalots [shallots], three or four cloves of garlic; let it simmer over a slow fire, for half an hour; then run it through a flannel bag, and when cold bottle it in pint-bottles, with a clove of garlic in each bottle. N.B. It will keep seven years."

Also includes (p. 150-54) home recipes for: Mushroom catsup (how to make). Mushroom catsup another way. To make white catsup. To make cucumber catsup. To make Quin Sauce [Quin's Sauce] (calls for walnut pickle, mushroom catsup, but not soy). Walnut catsup. Address: Meriden [England].

517. Farley, John. 1807. The London art of cookery, and housekeeper's complete assistant, on a new plan. Made plain and easy to the understanding of every housekeeper, cook, and servant in the kingdom... 11th ed. London: Printed for Scatcherd and Letterman; G. Wilkie and J. Robinson; W.J. and J. Richardson; Longman, Hurst, Rees, and Orme;... 368 p. 20 cm. Reprinted in 1988 by Southover Press (Lewes, East Sussex, England).
• ***Summary:*** In the section on "Pickling" is a subsection titled "Soy" [sauce] (p. 212 of 1988 reprint) which states: "This article comes from the East Indies, and is made from their mushrooms, which grow in the woods. They are of a purplish colour, and are wrinkled on the surface like a morel. They gather them in the middle of the day, and wash them in salt and water. Then they lay them in a dish, mash them with their hands, and sprinkle them with salt and beaten pepper. The next day the liquor is pressed off, and some galangals (a root grown in the East Indies) and spices are added to it. It is boiled up till it be very strong, and then some more salt is sprinkled into it. In this manner it will keep for many years."

Note: This early recipe is completely wrong; the main ingredient in soy [sauce] has always been soybeans–never mushrooms. Address: Principal Cook at the London Hotel.

518. Miller, Philip. 1807. The gardener's and botanist's dictionary: Containing the best and newest methods of cultivating and improving the kitchen, fruit, and flower garden and nursery; of performing the practical parts of agriculture; of managing vineyards, and of propagating all sorts of timber trees... The whole corrected and newly arranged..., by Thomas Martyn Vol. II. London: Printed for F.C. & J. Rivington. 2 vol. in 4. Unpaginated. 38 cm. 20 plates. [9 ref. Eng]
• ***Summary:*** The plants are arranged alphabetically in the book by genus, but not alphabetically within one genus by species. "33. Dolichos Soja: *Lin. spec.* 1023. *syst.* 659. *Reich.* 451. *fl. zeyl. n.* 534. *mat. med.* 171. *Kaempf. amoen.* t. 838. (Phaseolus). *Thunb. jap.* 282. *Lour. cochinch.* 441. *Rumph. amb.* 5. t. 140. (Cadelium). *Stems flexuose, racemes axillary, erect, legumes pendulous, hispid, containing about two seeds.*"

Three pages later, under "33," is a description of the plant and its uses. "Stem round at bottom and smooth; above striated, very hirsute, a foot and more in height. Leaves petioled, hirsute: leaflets petioled, ovate, obtuse with a point, entire, the middle one on a longer petiole and larger, an inch in length: petiole striated, hirsute, a finger's length. Flowers in short, erect, hirsute racemes: subsessile, from three to five together. Corollas purple, scarcely larger than the calyx.*

"Native of the East Indies, Ceylon, Japan, &c.

"The seeds, which are usually called *Miso* [sic] in Japan, are put into soups, and are the most common dish there, insomuch that the Japanese frequently eat them three times a day. The *Soja* [soy sauce] of the Japanese, which is preferred to the *Kitjap* of the Chinese, is prepared from these seeds, and is used in almost all their dishes, instead of common salt. The Chinese also have a favourite dish made of these seeds, called *Teu hu* or *Tau hu* [tofu], which looks like curd, and though insipid in itself, yet with proper seasoning as [is] agreeable and wholesome.**"

Footnotes: "*Thunb. and Linn. **Thunb. and Loureiro."

Note 1. This is the earliest English-language document seen (April 2012) that uses the word *"Soja"* or "The *Soja"* (regardless of capitalization or italics) to refer to shoyu or soy sauce.

Note 2. Miller associates the word "Kitjap" with Chinese rather than with Indonesian soy sauce, a point of key historical interest.

Glycine javanica: "*Java Glycine. Lin. spec.* 1024. *Reich.* 453. *Thunb. in Linn. trans.* 2. 340. *Leaves ternate; stalk villose; petioles rough-haired; bractes lanceolate minute.*

"Stem twining, as in *Phaseolus*, with yellow, reflex hairs scattered over it. Leaves of *Phaseolus*. Pedicels yellow,

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with close hairs. Stipules, to the petioles oval-oblong, to the peduncles lanceolate. Peduncles the length of the leaves, terminated by an ovate-oblong, close spike of nodding violet-coloured flowers, with very minute bractes between them.– Native of the East-Indies*; and near Nagasaki in Japan, where it is called *Fajo Mame*, and flowers in september and october [sic].**" Footnotes: "*Linn spec. **Thunberg."

On the title page, the subtitle reads: "To which are now first added a complete enumeration and description of all plants hitherto known, with their generic and specific characters, places of growth, times of flowering, and uses both medicinal and economical. The whole corrected and newly arranged, with the addition of all the modern improvements in landscape gardening, and in the culture of trees, plants, and fruits, particularly in the various kinds of hot houses and forcing frames: with plates explanatory both of them, and the principles of botany. By Thomas Martyn, B.D., F.R.S. Regius Professor of Botany in the University of Cambridge."

This elegant set of large books consists of 4 volumes, plus 2 volumes of plates. The soybean appears only in volume 2. Miller gives the most detailed botanical description of the soybean in English up to this time.

Note 2. Philip Miller was head of the famous Chelsea Physic [botanic] Garden in England. Among his many students was William Aiton, who introduced the soybean to England.

Note 3. This is the earliest English-language document seen (Oct. 2004) that uses the term "twining" to describe wild perennial ancestors of the soybean.

Note 4. This is the earliest English-language document seen (Feb. 2004) that uses the word "Teu hu" (or "teu-hu"), or the word "Tau hu" (or "Tau-hu") to refer to Chinese-style tofu.

Note 5. This is the earliest English-language document seen (Feb. 2004) that uses the word "curd" in connection with tofu.

Note 6. This is the earliest English-language document seen (Jan. 2004) that uses the word "leaflets" (or "leaflet") in describing the soybean plant.

Note 7. This is the earliest English-language document seen (July 2001) that uses the word "petiole" (or "petioles" or "petioled") in connection with the soybean plant. *Webster's Dictionary* defines petiole (derived from New Latin for little foot), a word first used in 1753, as "a slender stem that supports the blade of a foliage leaf," i.e., the stem of a leaf.

Webster's Dictionary defines stipule (derived from New Latin *stipula*, which is derived from the Latin word meaning "stalk"), a word first used in about 1793, as "either of a pair of appendages borne at the base of the leaf in many plants." Address: F.R.S., Gardener to the Worshipful Company of Apothecaries at their Botanic Garden in Chelsea [England] and a Member of the Botanic Academy at Florence.

519. Rundell, Maria Eliza Ketelby. 1807. A new system of domestic cookery: Formed upon principles of economy, and adapted to the use of private families. By a lady. A new ed., corrected. London: John Murray; Boston, Massachusetts: W. Andrews. [21] + xxx + 351 p. Illust. Index. 17 cm.

• ***Summary:*** "Soy" [sauce] is mentioned as an ingredient in the following recipes: To broil cod sounds ("a tea-spoonful of soy," p. 9). To dress fresh sturgeon ("Sauce; butter, anchovy, and soy." p. 10). Baked carp (p. 12). Perch and tench ("serve with melted butter and soy," p. 12). Stewed lobster, a very high relish (p. 20). To stew tongue ("season with soy, mushroom-ketchup," p. 42). Mock turtle (p. 54-55). To boil turkey (p. 81-82). Gravy soup (p. 102). Hare soup (p. 104). Hessian soup and ragout (Use the soy for the ragout, p. 104-05). An excellent sauce for carp, or boiled Turkey ("a large spoonful of real India soy," p. 113).

"Camp vinegar. Slice a large head of garlick; and put it into a wide mouthed bottle, with half an ounce of Cayenne, two tea-spoonfuls of real soy, two of walnut-ketchup, four anchovies chopped, a pint of vinegar, and enough cochineal to give it the colour of lavender-drops. Let it stand six weeks; then strain off quite clear, and keep in small bottles sealed up" (p. 120).

Note 1. Three *heads* of garlic. Cochineal is a red dye consisting of the dried bodies of female cochineal insects.

The word "ketchup" is used repeatedly in recipes throughout this book, And, in the section on "Ketchups" (p. 168+) there are homemade recipes for: Pontac Ketchup, for Fish. Mushroom Ketchup. Mushroom Ketchup another way. Walnut Ketchup of the finest quality. Cockle Ketchup (p. 169-70).

Note: This is the earliest document seen (July 2010) that mentions "Cockle Ketchup" (regardless of the spelling of "ketchup").

Lemon Ketchup, or Pickle.

The word "maigre" was fairly common at this time. In the Roman Catholic Church, it referred to days on which abstinence from [red] meat was ordered, or to food (especially soup) that contained no meat or meat juices, and was suitable for maigre days. Fish or seafood, eggs and dairy products were acceptable. Rundell mentions "maigre" five times: In the introduction, titled "Miscellaneous observations for the use of the mistress of a family," she states (p. 20): "Those who require maigre dishes will find abundance in this little work; and where they are not strictly so, by suet or bacon being directed in stuffings, the cook must use butter instead; and where meat gravies, (or stock as they are called) are ordered, those made of fish must be adopted.

Four recipes have "maigre" in the title: Cod sounds to look like small chickens ("A good maigre-day dish. Wash three large sounds nicely, and boil in milk and water...; when cold, put a forcemeat of chopped oysters, crumbs of bread, a bit of butter, nutmeg, pepper, salt, and the yolks of two

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eggs: spread it thin over the sounds and roll up each in the form of a chicken, skewering it; then lard them as you would chickens, dust a little flour over, and roast them in a tin oven slowly. When done pour over them a fine oyster sauce. Serve for side or corner dish," p. 9. Note 2. A "sound" is the air bladder of a fish. This is an early red-meat alternative!). Soup maigre (calls for half a pound of butter and two yolks of eggs, p. 106). Another [soup maigre] (p. 106). Very fine forcemeat-balls, for fish soups, or fish stewed, on maigre days ("Beat the flesh and soft parts of a middling lobster, half an anchovy,... the yolk of a hard egg,... two table-spoonfuls... of oyster liquor, two ounces of butter warmed, and two eggs long beaten: make into balls, and fry of a fine brown in butter," p. 125).

Note 3. Maria Eliza Ketelby Rundell (1745-1828) wrote this book to teach her married daughters the art of household management and cookery. First published in Britain in 1806, this book had many errors and sold out quickly. "The first American edition, published in 1807 (and possibly pirated) sold well, fulfilling a similar need for a domestic manual suited to upper class families. It went through 37 American editions, effectively replacing all 18th century cookbooks as being rather old-fashioned, almost more in language than in content,...'" The last American imprint appeared in 1844, and the last British imprint in 1846 (MSU biography). Address: [Bath, England].

520. Ryôri no sho [The book of cooking]. 1807. Japan. 50 p. Unpublished. Japanese summary by Kawakami 1978, p. 187. [Jap]

• ***Summary:*** This is not the book's true name, but a tentative name applied after it was written. It is not a recipe book but a book on how to make foods, including shoyu and miso. The author was a person who could experiment with shoyu production. A lot of old things are mentioned. The book must be a collection of writings about what the author has heard and also quotations from other books.

521. Sinclair, John. 1807. The code of health and longevity: or, A concise view, of the principles calculated for the preservation of health, and the attainment of long life... 4 vols. Edinburgh, Scotland: Printed for Arch. Constable & Co... 772 + 18 p. See Vol. 1, p. 463. Illust. [30+* ref]

• ***Summary:*** Section V, titled "The seasonings, or condiments, with which various sorts of foods are usually accompanied" (p. 453+) states (p. 463): "7. There are various combinations of the condiments above detailed, with other articles, but the two principally used are known under the names of catchup and soy. The first is prepared from the juice of mushrooms, submitted to a putrefactive fermentation, and in that state, salt, vinegar, and aromatics, are added to it, when it becomes fit for use. Soy [sauce] is a preparation from seeds produced in the East Indies, submitted to fermentation in a strong solution of common salt. It possesses, therefore, a saline taste, with little aromatic flavour. Both these articles ere better calculated to please the palate, than to promote health.

"It is justly remarked, that seasonings and sauces ought not to be much indulged in by young stomachs, and strong healthy bodies, who require no spur to their appetite, nor help to digestion. But these helps should be reserved for age, deficiency of stomach, and other infirmities, otherwise that benefit and assistance will not be received from them, which might have been experienced, had the use of them been forborn when they were not necessary *.

Footnote: "* Mainwaring on the Preservation of Health, p. 63."

Note: Sir John Sinclair lived 1754-1835. Address: Sir, Bart. [baronet], Charlotte-Square, Edinburgh [Scotland].

522. The new encyclopædia; or, universal dictionary of arts and sciences: Dolichos soja. 1807. London: Printed for Vernor, Hood, and Sharpe. See vol. VII. Dol. (p. 417-418). [2 ref. Eng]

• ***Summary:*** "3. Dolichos Soja is a native of Japan, where it is termed *daidsu;* and, from its excellence, *mame;* that is, the *legumen* or *pod*, by way of eminence. It grows with an erect, slender, and hairy stalk, to the height of about 4 feet. The leaves are like those of the garden kidney-bean. See Phaseolus. The flowers are of a bluish white; are produced from the bosom of the leaves, and succeeded by bristly hanging pods resembling those of the yellow lupine, which commonly contain two, sometimes 3, large white seeds. There is a variety with a small black fruit, which is used in medicine.

"Kempfer [Kaempfer] affirms, that the feeds when pounded and taken inwardly give relief in the asthma. This legumen [legume] is doubly useful in the Japanese kitchens. It serves for the preparation of a substance named miso, that is used as butter; and likewise of a pickle celebrated among them under the name of sooju or soy [sauce]. See these articles."

Note: This is the earliest English-language document seen (Feb. 2008) that has the word "Soja" in the title.

523. Lazenby, E. [Elizabeth]. 1808. Classified ad: Harvey's Sauce for fish, game, &c. *Times* (*London*), June 4, p. 3, col. 4.

• ***Summary:*** "E. Lazenby respectfully informs the Nobility and Gentry, the above admired article is prepared only at her Warehouse... and (by appointment) may be had of J. Baxter, Edinburgh; Bell, Scarborough; Gregson, Liverpool; Getty, Manchester; Terry, Brighton; Lomers, Southampton; Elliott and Leedham, Bath; Fishlake, Salisbury, &c. E.L. at the same time begs to recommend her genuine Essence of Anchovies...

"In consequence of the spurious imitations of the above Sauce, E.L. begs to observe, none can possibly be genuine without Mr. Harvey's signature on the label of each bottle."

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Note: This is the 2nd earliest document seen (Dec. 2007) in the *Times* (London) that mentions "Harvey's Sauce" (or "Harvey Sauce")—or that mentions spurious imitations of it or the genuine sauce with his signature. Address: Warehouse, No. 6, Edward-street, Portman-square [London].

524. MacDonald, Duncan. 1808. The new London family cook: or, Town and country housekeeper's guide... London: Albion Press. Printed for James Cundee, Ivy-Lane. iv + 6-634 p. See p. 137. Illust. ([10] leaves of plates). 22 cm.
• ***Summary:*** Quin's sauce (p. 137). "Put two spoonfuls of Quin's sauce into a little rich melted butter.

"The mode of preparing Quin's Sauce will be given amongst the pickles."

Soy [sauce] is mentioned on 5 pages in this book (p. 143, 165, 198, 320, 368).

There are recipes for Mushroom ketchup (p. 319, and mushroom ketchup is used as an ingredient on 8 pages). Walnut ketchup (p. 320, and walnut ketchup is used as an ingredient on 5 pages). Ketchup to keep twenty years (p. 320, "It is, by many, preferred to the best Indian soy"). Oyster ketchup (p. 320).

Quin's sauce for fish (p. 321. Put to a quart of walnut pickle, six anchovies; the same number of bay-leaves and shalots; some cloves, mace, and whole pepper: boil the whole together till the anchovies are dissolved; when cold, put in half a pint of red wine, and bottle it up. Two spoonfuls of this, in a little rich melted butter, make an admirable sauce).

Another way [of making Quin's Sauce] (p. 321. "Put half a pint of mushroom ketchup, a quarter of a pint of pickled walnut liquor, three anchovies, two cloves of garlic pounded, and a quarter of a tea-spoonful of Cayenne pepper into a bottle; shake it well, and keep it for use").

Note: Soy [sauce] is not used in either of these two recipes for Quin's Sauce. Address: Head Cook at the Bedford Tavern and Hotel [Covent Garden, London].

525. Nicholson, William. 1808. A dictionary of practical and theoretical chemistry, with its application to the arts and manufactures... London: Printed for Richard Philipps. 826 p. Illust. [20 p. and 13 leaves of plates, some folded]. 22 cm.
• ***Summary:*** The entry for "Soy" on an unnumbered page begins: "We find in the Memoirs of the Swedish Academy [Grubbens 1803] the following account of the mode in which this kind of sauce is prepared.

"The ingredients are 50 lbs. of a small, white bean, the fruit of the dolichos soja, 50 lbs. of salt, 60 lbs. of wheat flour, and 250 lbs. of water.

"After having well washed the beans, they are boiled in well-water in an open vessel for some hours, or until they have become so soft as to be worked between the fingers. During the boiling they must be kept covered with water, to prevent their burning; and care must be taken not to boil them too much, because in that case too much of their substance would remain in the water of decoction.

"The beans, being thus boiled, are taken out, and put into large shallow wooden vessels, which in China are made of thin staves of bamboo, two inches and a half in depth, and five feet in diameter. In these they are spread out to the depth of two inches, and when they are cold enough to be worked with the hand, the wheat flour is gradually thrown in, and mixed with the beans, till the whole of the before-mentioned quantity has been used. When the mass becomes too dry, so that the flour does not mix well with the beans, a little of the hot water of the decoction is added..." Address: [England].

526. Rundell, Maria Eliza Ketelby. 1808. A new system of domestic cookery: Formed upon principles of economy, and adapted to the use of private families. By a lady. A new ed., corrected. London: Printed for John Murray; J. Harding; and A. Constable and Co., Edinburgh. xxx + 351 p. Illust. Index. 17 cm.
• ***Summary:*** Soy" [sauce] is mentioned as an ingredient in exactly the recipes on exactly the same pages as in the original 1807 edition.

"Ketchup" is mentioned on pages 11 (walnut ketchup), 20, 34, 37, 42 (mushroom ketchup), 43, 46, 49, 50, 54-56, 73, 76, 84, 88, 99, 103, 105, 111, 116, 117-18, 120, 126, 176, 183, 184 (cockle ketchup). Neither "catsup" nor "catchup" are mentioned.

Note: Maria Eliza Ketelby Rundell lived 1745-1828. Address: [Bath, England].

527. Grubbens, Michael de. 1809. Method of preparing the Chinese soy. *Tradesman, or Commercial Magazine* 2(9):197-200. March.
• ***Summary:*** Below the title is written: "Extracted from the Memoirs of the Academy of Sciences at Stockholm for 1803, first quarter, by M. Lindbom, Captain of the Swedish Mines."

The article begins: "The transactions of the Swedish Academy for the year 1761 contain a description of the method for preparing soy, by the late captain Ekeberg; but as this description is incomplete as well as incorrect, since the real Chinese soy will not be obtained by following it, I am fully persuaded that M. Ekeberg never saw nor was acquainted with, the true process for preparing this substance. There is reason to believe that he gave his description from the accounts of the Chinese, who are not always ready to speak the truth, as I observed during the five years I resided in China,..."

528. Young (John). 1809. Classified ad: Has for sale,... *American (The)* (*Providence, Rhode Island*). Sept. 1. p. 3.
• ***Summary:*** "... Currants, soft shelled Almonds, excellent Bottle and Flask Oil, Table Salt in baskets, India Soy [sauce], Catsup, Loaf and other Sugars, Olives, Capers,..." Address:

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At the first corner Store south of the Market.

529. Tichnor (Elisha) & Co. 1809. Classified ad: To be sold... a general assortment of West-India goods & groceries. *Boston Gazette*. Nov. 27. p. 3.
• ***Summary:*** "... Corks (Velvet). Catchup, Mash. [sic, Mush. = Mushroom], English. Demijohns. East India Soy [sauce]... Rape Seed., Sauce, Quin..." Address: Sign of the Bee-Hive, No. 42, Marlboro' St., Boston.

530. *New York Medical and Philosophical Journal and Review*.1809. Review: A View of the Nervous Temperament;... by Thomas Trotter, M.D. Vol. 1. p. 233-62. See p. 250. [1 ref]
• ***Summary:*** This is a book review. Dr. Trotter has sought to find what causes such a temperament. Traditionally physicians have looked at mental, emotional, or hereditary causes. Trotter now asks what kinds foods and drinks, consumed by those with a predisposition to a nervous temperament, lead to such a temperament and to dyspepsia. He has found that these include alcohol, tea, coffee, hot spices and peppers. Those interested in good health are advised to avoid highly seasoned or hot foods and luxurious living (p. 247). "Of themselves, they yield nothing of the nourishing principle. Soy [sauce], catchup, and all the warm sauces, increasing daily in number, have the same pernicious effects" (p. 250).

Note: By the mid-1800s, this group of substances would be grouped together by U.S. health reformers and called "stimulants."

531. Norris (William, Jun. [Jr.]). 1810. Classified ad: Chocolate and segars [cigars].... *Federal Republican and Commercial Gazette (Baltimore, Maryland)*. Jan. 24. p. 1.
• ***Summary:*** "... Smyrna Dates, Olive Oil in black bottles and Flasks, Mushroom Ketchup and India Soy [sauce] in bottles, Raspberry Brandy and Arrack in bottles,..." Address: Tea Dealer and Grocer, No. 64, Market Street.

532. Bradford (William B.). 1810. Classified ad: English mustard. *Boston Patriot*. Oct. 17. p. 4.
• ***Summary:*** "... Cassia and Pimento; English Catshup [Catsup]; India Soy [sauce]; Anchovies; Capers;..." Address: South side of the Market House [New York City].

533. Mease, James, ed. 1810. Archives of useful knowledge, a work devoted to commerce, manufactures, rural and domestic economy, agriculture and the useful arts: Chinese soy. Philadelphia, Pennsylvania: David Hogan. See vol. 1. No. 2, p. 219-23. Oct. [4 ref]
• ***Summary:*** In this introduction to an article by M. de Grubbens titled "Method of Preparing the Chinese Soy," Dr. Mease writes: "The agreeable flavour which the Chinese and Japanese *Soy* [sauce] communicates to fish is well known. But the high price of the article confines its use to few persons. Hence it has always been an object to discover the peculiar mode of preparing it. Several processes, particularly those by Professor Beckmann, M. Ekeberg, and by Sir Tilloch, have been published; which have been copied into various periodical publications, and Encyclopedias.

"It will be seen however, that the following method, carries internal evidence of coming nearer to the truth than any other, and is therefore recommended to our readers. The Editor has the satisfaction to assure them that the Bean, *Deliches Soyae* [sic, *Dolichos*], bears the climate of Pennsylvania well; there is therefore nothing to prevent our enjoying the agreeable condiment, of which it is the basis, except our own indifference. Accounts of the trials of the recipe will be thankfully received."

M. de Grubbens' article is "extracted from the *Memoirs of the Academy of Sciences at Stockholm* for 1803, first Quarter, by M. Lindbom, captain of the Swedish mines." Note 1. For a translation, see de Grubbens 1804. de Grubbens lived for 5 years in China. He prepared soy sauce in 1759 in Canton and brought some bottles of soy that he made to Sweden. Mease lived 1771-1846.

Note 2. This is the earliest English-language document seen (April 2012) that uses the term "Japanese *Soy*" (or "Japanese soy") to refer to Japanese-style soy sauce.

Note 3: This is the earliest English-language document seen (Jan. 2007) that contains string "Soya" or the word "Soyae" in connection with soybeans. The word "Soyae," used as the species name of the soybean may have been a mistake or typographical error, just as the genus name "Deliches" was also an error; neither one was never used again. Mease may have intended to write *Dolichos soja* L., although the correct scientific name of the soybean at this time (1810) was *Soja hispida* Moench. Address: Secretary to the Agricultural Society of Philadelphia, Pennsylvania.

534. Encyclopaedia Britannica; or, A dictionary of arts, sciences, and miscellaneous literature... 4th ed.: Sooju, or Soy. 1810. Edinburgh: Printed by Andrew Bell, the proprietor; And for Vernor, Hood, and Sharpe, London. See Vol. IX, p. 471. Vol. XII, p. 699, Vol. XIX, p. 471.
• ***Summary:*** See Dolichos (p. 699, under "Materia Medica, &c," VIII. Leguminous plants. Sect. 1. Pods and seeds of herbaceous plants). "Dolichos soja, East India kidney bean."

Vol. XII, p. 699. Leguminous plants. Sect. 1. Pods and seeds of herbaceous plants.

Arrachis hypogæa, American ground nut.

Cicer arietinum, the chick pea.

Dolichos soja, East India kidney bean.

Ervum lens, lentil.

Lotus edulis, incurved podded bird's-foot trefoil. *L. tetragonolobus*, square-podded crimson pea.

Lupinus albus, white flowering lupine.

Phaseolus vulgaris, common kidney bean. *P.V.*

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coccineus, scarlet-flowering kidney bean. *P. albus*, white-flowering kidney bean.

Pisum sativum, common garden pea. *P. umbellatum*, crown pea. *P. quadratum*, angular-stalked pea. *P. maritimum*, sea pea.

Vicia faba, common garden bean. Sect. 2. Pods and seeds of trees. Address: Edinburgh, Scotland.

535. Proteus the Younger. 1810. The Heroad: In a series of original satires. London: Printed for the author, by T. Plummer, Seething-Lane, and sold T. Hughes, Ludgate Hill. [iii] + 208 p. See p. 113.

• ***Summary:*** The chapter titled "The noble passenger" (p. 97-119) describes how a wealthy but miserly man, with his servant, boarded a ship at Portsmouth, England. A storm blew them out to sea, then from Lymington toward St. Johns. The man told his servant to economize in buying the items listed below, because they were expensive. We read (p. 113): "His lessens on economy began; 'Those half-starv'd hens remaining in yon coop, When once recovered of the pip and roupe, By getting a strange cock, as hens oft do, Will lay us eggs, and hatch us chickens too. The mustard, catsup, vinegar, and soy [sauce], The thyme, the balm, the sage, and cellery, The tripe, the eggs, the butter, and the cheese, With what remains of sugars, coffees, teas; You must collect with more than common care, As all these articles are very dear; The empty bottles and the hampers save, Be vigilant and see we nothing leave.'"

Mushroom catchup is mentioned on p. 23, 38, 40, 55, 63, 86, 94, 119, 157, 170, and 182. Walnut catchup is mentioned on pages 23, 38, 40, 42, 50, 94, 118, 182 and 240. Catchup alone is mentioned on pages 48, 52, 79-80, 82, 86, 92, 101, 121, 173, 182, 195-97, 203, 208, 214, 236-37, 239. Address: Censor in ordinary to Neptune [England].

536. Welles (A. & G.). 1811. Classified ad: Have received by the recent arrivals from London and Liverpool,... *New-England Palladium* (*Boston, Massachusetts*). Jan. 8. p. 4.

• ***Summary:*** "... Silver & plated ware: Liquor Frames; Soy Frames [for soy sauce]; Bottle Stands; Egg Cups;..." Address: No. 55, Cornhill, Boston.

537. Bradford (John) & Co. 1811. Classified ad: New grocery store. *New-England Palladium* (*Boston, Massachusetts*). Nov. 12. p. 4.

• ***Summary:*** "... English Catshup [Catsup], India Soy [sauce], Pepper Sauce, Anchovies,..." Address: No. 16, Dock-Square.

538. Ukiyo burô. 3 vols. 1811. Japan. [Jap]*

• ***Summary:*** According to Ryoichi Iino (2003, p. 10) the term *oshidashi* was used in this book to indicate / refer to soy sauce.

539. Virey, Julien-Joseph. 1811. Traité de pharmacie: Théorique et pratique [Treatise on pharmacy: Theory and practice]. Paris: Rémont and Ferra. 613 p. See Vol. 1, Book 1, p. 107. [Fre]

• ***Summary:*** In Book 1, in section 85 (p. 103) on Legumes, is a subsection titled "Dolic" which states: The *D. Soja*, L. of Japan, has excellent seeds. A sauce is made with the soybean (*le soja*) which is very highly esteemed in Europe.

Note: Julien-Joseph Virey lived 1775-1846. Address: Head Pharmacist, Military Hospital of Paris.

540. Dana (Nathaniel). 1812. Classified ad: Has just received a fresh supply of W.I. [West India] goods & groceries,... *Portland Gazette, and Maine Advertizer*. July 13. p. 1.

• ***Summary:*** "... Real Cinnamon, Cassia, Citron, East India Soy [sauce], Catsup, Curry Powder, Cayenne..."

Note: This is the earliest document seen (May 2011) concerning soybean products (soy sauce) in Maine. This document contains the earliest date seen for soybean products in Maine (July 1812); soybeans as such have not yet been reported. Address: Kinsman's Building, Preble Place, nearly opposite Portland Bank.

541. Packer (Mrs. Sarah). 1812. Recently imported. On sale, at the warehouse of Mrs. Sara Packer, Pitt-street (Ad). *Sydney Gazette and New South Wales Advertiser* (*NSW, Australia*). Aug. 8. p. 4.

• ***Summary:*** "... the following unexceptionable Articles, for sterling money, at very reduced Prices:... catsup 4*s*. 9*d*. per ditto" [bottle].

Note 1. This is the earliest of 3,076 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "catsup." The newspaper in which this term appears most frequently is *The Argus* (Melbourne) (1,222 times) followed by *The Mercury* (Hobart) (1,162). By category: 2,603 are advertising, 417 are news, and 56 are detailed lists, results, or guides. By decade: In 1860-69 the term appears in the most ads or articles (1,559), followed by 1880-89 (342).

Note 2. It is not clear what ingredients this catsup contains or where it was made (it was probably made in England). Ketjap / Kecap is the Malay / Indonesian word for "soy sauce."

542. Marshal. 1813. Prices: Marshal's sale, held by Passmore and Sperry, Auct., part of the cargo of the British prize schooner *Ellen* (Ad). *Grotians Philadelphia Public Sale Report*. April 12. p. 2.

• ***Summary:*** After the terms of payment, a table of articles is given: "5 tons Liverpool Coal, 84 cents per bushel. 2½ bbls. [barrels] Gunpowder, 51 cents per pound... 4 boxes Indian Soy [sauce], $6.75 per dozen–In pint bottles and of a good quality. 4 do. [ditto = boxes] Mushroom Ketchup, Soy and Anchovies do. [ditto = Ketchup], $8.25 per dozen–In pint

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bottles and of a good quality."

Note 1. This is the earliest document seen (Jan. 2006) in which soy sauce is used as an ingredient in a commercial sauce having "Soy" as part of the name; it is mixed with anchovies. By 1836 a related product, made in England, would start to be sold as Lea & Perrins Worcestershire Sauce.

543. *Boston Daily Advertiser.*1813. Classified ad: Prize goods. On Monday next, will be offered for sale... the following elegant goods. Aug. 14. p. 3.
• ***Summary:*** "... Plated snuffer trays, silver Gadroon mounts, Plated Glass Cruits [for soy sauce], Plated Toaste [Toast] Racks, Glass soy Frames with new regent Glasses, Plated Candlesticks with slides,..." Address: At the Long Room, Cornhill Square.

544. Stiles & Williams. 1813. Classified ad: Java coffee, Japan soy, spices, &c. *Baltimore Patriot & Evening Advertiser.* Oct. 1. p. 3.
• ***Summary:*** "... 50 mats old Java. Coffee. 2 dozen bottles Japan Soy [sauce], a scarce and delicious Catsup. A few bottles Curry and old Arrack."

Note: What a surprising and interesting definition of "Japan Soy!" Address: Corner of Market and South Streets.

545. Keizai yôroku 1813. Japan. [Jap]*
• ***Summary:*** Iino (2003, p. 9) notes that this 1813 book "states that the highest quality soy sauces are made using wheat as the flavor harmonizes well with the soybeans." Iino comments that this supports "the idea that wheat, rather than barley, made for a better soy sauce. Therefore, it is thought that the switch from soy sauce made with barley to that made with wheat had been completed by the 18th century." Address: Japan.

546. Milburn, William. 1813. Oriental commerce; containing a geographical description of the principal places in the East Indies, China, and Japan, with their produce, manufactures, and trade... Vol. II. London: Black, Parry & Co. See p. 519-20.
• ***Summary:*** The subtitle continues "... including the coasting or country trade from port to port; also the rise and progress of the trade of the various European nations with the Eastern world, particularly that of the East India Company, from the discovery of the passage round the Cape of Good Hope to the present period; with an account of the company's establishments, revenues, debts, assets, &c at home and abroad. Deduced from authentic documents, and founded upon practical experience obtained in the course of seven voyages to India and China."

"Soy [sauce]: Is prepared in China and Japan, from a particular species of bean, in the following manner:–the beans are boiled till they become rather soft, to which an equal quantity of wheat or barley is added, and set in a warm place to ferment; the same quantity of salt is then put to the mixture, and three parts as much water added to it. After being properly mixed, it is left to stand, well covered, for two or three months; it is then pressed, and strained off, and kept in wooden vessels. Some places produce better soy [sauce] than others, but exclusively of that, it grows better and clearer through age; its colour is invariably brown. Japan soy is esteemed superior to the Chinese, and is an article of trade from thence to Batavia [Jakarta]. The Dutch, in order to preserve the best sort, and prevent its fermenting, boil it up, and afterwards draw it off into bottles, which are then well corked and sealed.

"Soy should be chosen of a good flavour, not too salt or too sweet, of a good thick consistence, of a dark brown colour and clear; when shaken in a glass, it should leave a coat on the surface, of a bright yellowish brown colour; if it does not, it is an inferior kind, and should be rejected." Note: This is the earliest document seen (Aug. 2003) which states that soy can be shaken in a glass to determine its quality. It is also the first which states that good-quality soy, "when shaken in a glass," "should leave a coat on the surface, of a bright yellowish brown colour..."

"The following are the quantities imported and sold at the East India sales, in the years 1804 to 1808 inclusive, together with sale amount and average price per gallon" [see table below]:

1804: None.

1805: 443 gallons worth £317 (March Sale) and 1125 gallons worth £642 (September Sale), for a total of 1568 gallons worth £959 (average 12 shillings 5 pence per gallon).

1806: 807 gallons worth £477 (September Sale): (average 11 shillings 10 pence per gallon).

1807: None.

1808: 2148 gallons worth £2022 (September Sale): (average 18 shillings 10 pence per gallon).

252 gallons of soy are allowed to a ton. Note: Total sold during the 5 years: 4523 gallons worth £3458. Address: Of the Honourable East India Company's Service.

547. Murdock (George) & Co. 1814. Classified ad: For sale... *Boston Gazette.* April 7. p. 3.
• ***Summary:*** "... A great variety of Fish Sauces, such as India Soy [sauce], Essence of Anchovies, Walnut Catchup, Tarragon Vinegar, Mushroom Catchup, &c." Address: No. 14, Market Square.

548. Beauchamp, J. 1814. Articles plated upon steel: J. Beauchamp respectfully informs the public... (Ad). *Repository of the Arts, Literature, Manufactures, Commerce, Manufactures, Fashions and Politics* 11(65): Unnumbered page near end of volume. May.
• ***Summary:*** This unnumbered page is titled "Advertisements for May 1814."

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"J.B. manufactures, in Silver and Plated.... Bread and Cake Baskets, Wine Coolers, Epergnes Plateaux, Urns, Kettles, Tea Sets, Liquor, Cruet, Soy, and Egg Frames, Bottle Stands, and an infinitude of other articles..."

Note: In other words, he makes Liquor Frames, Cruet Frames, Soy Frames, and Egg Frames.

549. Dana (Nathaniel & Luther). 1814. Classified ad: Has just received a fresh supply of West India goods & groceries.... *Eastern Argus* (*Portland, Maine*). June 9. p. 4.
• ***Summary:*** "... Citron. East India Soy [sauce]. Catsup. Curry Powder. Cayenne..." Address: Kinsman's Buildings, Middle-Street.

550. Tokaidôchû hizakurige 1814. Japan. [Jap]*
• ***Summary:*** According to Ryoichi Iino (2003, p. 10) the term *oshidashi* was used in this book to indicate / refer to soy sauce.

551. Rundell, Maria Eliza Ketelby. 1814. A new system of domestic cookery: Formed upon principles of economy, and adapted to the use of private families. By a lady. New York, NY: Published by R. M'Dermut & D.D. Arden. xxiii + 20-316 p. Illust. Index. 17 cm.
• ***Summary:*** "Soy" [sauce] is mentioned as an ingredient in the following recipes: To broil cod sounds ("a teaspoonful of soy," p. 32). To dress fresh sturgeon ("Sauce; butter, anchovy, and soy," p. 33). Baked carp, or Black fish (p. 34). Perch ("serve with melted butter and soy," p. 34). Stewed lobster, a very high relish (p. 41). To stew tongue ("season with soy, mushroom ketchup," p. 61). Mock turtle (p. 71-72). To boil turkey (p. 96-97). Gravy soup (p. 115). Hessian soup and ragout (Use the soy for the ragout, p. 117-18). An excellent sauce for boiled Turkey ("a large spoonful of real India soy," p. 125).

"Camp vinegar. Slice a large head of garlick; and put it into a wide mouthed bottle, with half an ounce of Cayenne, two tea-spoonfuls of real soy, two of walnut-ketchup, four anchovies chopped, a pint of vinegar, and enough cochineal to give it the colour of lavender-drops. Let it stand six weeks; then strain off quite clear, and keep in small bottles sealed up" (p. 131).

Ketchup is mentioned on pages 34 (walnut ketchup), 41, 55-57, 61 (mushroom ketchup), 62, 64, 67-68, 70, 72-73, 87, 88, 91, 93, 98, 102, 115, 116, 118, 122, 127-130, 136, 185, 186. Address: [Bath, England].

552. Hotel des Americains. 1815. Classified ad: Paris. *Times* (*London*). Jan. 14. p. 1, col. 1.
• ***Summary:*** "... where the following articles may always be had:... wax candles, Cayenne pepper, curry powder, India soy [sauce], ketchup, essence of anchovy, and English sauce of every description... The English language is spoken in the above place." Address: Magasin de Provence, Rue St. Honoré, No. 147.

553. Bevan (Mr.). 1815. Sales by auction. At his rooms in George street (Ad). *Sydney Gazette and New South Wales Advertiser* (*NSW, Australia*). Sept. 23. p. 1.
• ***Summary:*** "On Wednesday of the 4th of October next, at Eleven o'Clock....

"... Fine Cheeses, a quantity of Valentia Raisins [Valencia],... Sallad Oil [Salad], French Olives, Soy [sauce], Capers, Loaf Sugar and Irish Linen. The above may be viewed prior to the Day of Sale, and may be had by Private Contract." Address: George street [Sydney].

554. Morrison, Robert. 1815-1823. A dictionary of the Chinese language in three parts. 6 vols. Macao, Printed at the Honourable East India company's press by P.P. Thomas. 30 cm. [Eng; Chi]
• ***Summary:*** S.W. Williams, in "A Syllabic Dictionary of the Chinese Language," starts his preface by noting the great importance of this very early Chinese dictionary. "This work will ever remain a monument to his industry and scholarship; and its publication in six quarto volumes by the East India Company at an outlay of $60,000 was a just appreciation of its merits. Since then, many similar works have been published, dictionaries both of the general language and its chief dialects."

Part 1. Chinese and English arranged according to the radicals. Part 2. Chinese and English arranged alphabetically. In Part 2, Vol. 1 (published in 1819), page 739 (#9187) gives 3 characters for *she* [shih = fermented black soybeans], pronounced shuh. *Tow she* is a condiment made from pulse, used in cooking. *She yew* or *Tsëang yew* is soy [sauce].

Note: This is the earliest English-language document seen (Nov. 2011) that mentions fermented black soybeans, which it calls *she* or *Tow she*.

Page 860 (#10365) gives 2 characters for *tow* [pronounced doe]. "A generic name for pulse, beans, and so on. Page 882 (#10622) gives 2 characters for *Tseang* [chiang; like soft Japanese miso]. "A kind of pickle; certain mode of preserving meat, rice, and pulse. *Tseang yew* is soy [sauce].

Part 3. English and Chinese (published in 1822). Page 398 gives "SOI, or Soy" followed by the two characters for "tseang yew" [soy sauce]. Note 1. Illustrations show each of these characters (see next page).

Vol. 3, Part 1 (published in 1823) gives Chinese and English arranged according to the radicals. On p. 397 is the 151st radical, *Tow*. Two early original forms of the radical are shown, each resembling a vessel with a lid. "Name of an ancient vessel to contain food, and used in the rites of sacrifice; a certain measure. Grain; leguminous plants, beans, or peas. Name of an office, of a place, and of a district. A surname." Characters containing this radical are shown on pages 397-98: *she*–"A sort of pulpy substance made of pulse [shih; fermented black soybeans]. *wan*–"A substance

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expressed from pulse: soy. Also read Yuh."

Note 2. The author, Rev. Robert Morrison (lived 1782-1834), a minister, was the first Protestant missionary in China. He was a Scotchman, though born at Morpeth in Northumberland, England. In 1807 he was sent by the London Mission to try to start a mission in China. But the British East India Company opposed missionary activity. So he traveled via the USA and reached Canton in 1808. Once there, the Company was glad to enlist his great linguistic talents, and he was appointed translator to their factory at Canton. Thus, it was at their expense (£15,000) that his great Chinese dictionary was published in 1822. He had previously published complete translations of the New and Old Testaments. A condensed (2 volumes in 1) edition was published in 1865 in London. He also established the Anglo-Chinese College at Malacca for English and Chinese literature, with a view to the propagation of Christianity. He died in 1834 at Canton, but he was buried at Macao in the Christian cemetery.

Note 3. This is the earliest English-language document seen (March 2001) that mentions fermented black soybeans, which it calls *tow she*.

Note 4. *Webster's New Geographical Dictionary* (1988) defines Macao (Portuguese Macau) as a Portuguese overseas territory consisting of the Macao peninsula (located at the mouth of the Pearl River just south of Canton and about 40 miles west of Hong Kong) and the two small islands of Taipa and Colôane. It was settled by the Portuguese in 1557; from 1717 until the 1800s, Macao and Canton were the only Chinese ports open to European trade. Its independence was declared by Portuguese in 1849 but not recognized by Chinese as Portuguese territory until 1887. It was for many years a haven for missionaries and traders. Portugal agreed in 1987 to return Macao to Chinese sovereignty in 1999. Address: D.D.

555. Stewart, J.A. 1815. The young woman's companion: or, Female instructor. Being a sure and complete guide to every requirement essential in forming a pleasing companion, a respectable mother, and a useful member of society. Interspersed with moral and religious essays... Oxford, England: Printed and published by Bartlett and Newman. 768 p. Index.

• ***Summary:*** As the title explains, this book is about much more than cookery. The last major part of the book is titled "Directions to female servants" (p. 615+). The first chapter within it, titled "Cookery in all its branches" (p. 622-715), contains most of the recipes. However subsequent chapters on Preserving (p. 715+), Pickling (p. 719+), and Brewing (719+) also contain recipes.

Soy [sauce] is used as a seasoning in the following recipes: To stew tongue (p. 647). Mock turtle (p. 654). Mock turtle, another way (p. 655). To boil turkey (p. 664). Gravy soup (p. 676-77). An excellent sauce for carp, or boiled turkey (p. 681; "... add a large spoonful of real Indian soy. If that does not give it a fine colour, put a little more").

Note: This is the earliest English-language document seen (April 2012) that contains the term "real Indian soy." But what does it mean? Why use the word "real?" Where and how is it made, and what are the ingredients?

Mushroom catchup is mentioned on pages 647, 651, 654, 655-56, 665, 677-79, 687, 720 (in Pickling chapter). Walnut catchup on pages 638, 655, 682, 687, 720. Catchup alone is mentioned on pages 644-45, 648, 650, 652-53, 662, 665, 675, 683. "Catsup" is not mentioned. Address: Oxford [England].

556. Tuckey, James Hingston. 1815. Maritime geography and statistics: or, A description of the ocean and its coasts, maritime commerce, navigation, &c. &c. &c. Vol. III. London: Printed for Black, Parry, and Co. Booksellers to the Hon. East-India Company. vii + 567 p. Index.

• ***Summary:*** "The exports from Japan by the Dutch Company are copper in bats and camphire, each ship's cargo consisting of 6750 pickle [piculs] of the former, and 364 boxes* of camphire, of 125 lbs. each; all of which are purchased on the Company's account only.

"The articles permitted to be purchased by the individuals of the crew are tea, soy [sauce], porcelain, silk and rice." Address: A commander in the Royal Navy.

557. Webster, Thomas. 1815. The encyclopædia of domestic economy: Comprising such subjects as are most... 2 vols. New York, NY: Harper & Brothers. 1,238 p. See Vol. II, Nos. 4932, 5072. From the last London edition. With notes and improvements by Meredith Reese. Illust. 24 cm.

• ***Summary:*** In Vol. II: No. 4263. "Rice is boiled to a kind of paste, and drawn out into threads forms a transparent substance used to thicken soups, and is known by the name of China lock soy. There is a kind that is opaque, and which is less esteemed."

Recipe No. 4932 calls for "a tea-spoonful of soy [sauce], and a little mustard." Catsup is also called for in recipe No. 4871.

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"5072. Soy.–This sauce, much used for fish, comes from Japan and is called there soja [sic, shôyu]. It is made from the seeds of a plant called *Dolichos soja*. Some is also brought from China, but the Japanese is best. It is supposed to be extensively counterfeited in this country. When genuine, it is of an agreeable flavour, neither too salt [sic, salty] nor too sweet, of a thick consistence and clear brown colour. When shaken in a glass, it should leave a coat on the surface of a bright yellowish-brown colour."

Note: This is the 2nd earliest documnt seen (April 2012) that uses the word "soja" to refer to soy sauce.

Note: Thomas Webster lived 1773-1844.

558. Murdock (George). 1816. Classified ad: New garden seeds. *Boston Daily Advertiser.* March 19. p. 1.
• ***Summary:*** "... A great variety of fish Sauces, such as Reading Sauce, East India Soy [sauce], Essence of Anchovies–English Catchup, &c." Address: No. 14, Market Square.

559. *Asiatic Journal.*1816. Goods declared for sale at the East-India House. 2:223. Aug.
• ***Summary:*** "On Thursday, 8 August–Prompt 1 November."

"Privilege.–Redwood -... Safflower–Soy–Cajaputa Oil..."

"Private-Trade.–Hides–Horns–Soy–Rhubarb–Cubebs–Gambogium..."

560. Encyclopædia Perthensis; or, Universal dictionary of arts, sciences, literature, &c. 2nd ed: Soy, or sooju. 1816. Edinburgh: Printed for John Brown. 23 volumes. See vol. XXI. Soy. (p. 197-98). [1 ref. Eng]
• ***Summary:*** "Soy [sauce], or Sooju, n.s., a celebrated pickle, much used by the Japanese, made from the *mame* or beans of the *Dolichos Soja.* (See Dolichos, No. 3). To make it they take equal quantities of the beans boiled to a certain degree of softness; of *muggi,* or corn, whether barley or wheat, roughly ground; and of common salt. Having properly mixed the beans with the pounded corn, they cover up the mixture, and keep it for a day and a night in a warm place, to ferment; then putting the mass into a pot, they cover it with the salt, pouring over the whole two measures and a half of water. This compound substance they carefully stir at lest once a day, for two or three months; after which, they filtrate and express the mass, preserving the liquor in wooden vessels. The older it is, the better and the clearer; and if made of wheat at instead of barley, greatly blacker. The first liquor being removed, they again pour water upon the remaining mass; which, after stirring for some days, as before, they express a second time, and thus obtain an inferior sort of soy."

561. Rundell, Maria Eliza Ketelby. 1816. A new system of domestic cookery: Formed upon principles of economy, and adapted to the use of private families. By a lady. A new ed., corrected. London: John Murray; Boston, Massachusetts: W. Andrews. [11] + xxx + 354 p. Illust. Index. 17 cm. *
• ***Summary:*** In the 1816 United States edition of this book, ketchup is mentioned on 37 pages, as follows: 38 (walnut ketchup), 45 (walnut-ketchup), 57-58, 60-61, 63, 65-66, 68, 71-72, 74, 76 (walnut ketchup, mushroom ketchup), 77 (mushroom ketchup), 91-92, 95, 97 (mushroom ketchup), 102 (mushroom ketchup), 106, 117, 119 (mushroom ketchup), 120, 122 (walnut ketchup), 126 (mushroom ketchup), 131 (mushroom ketchup), 132-133 (walnut ketchup), 134, 135 (walnut ketchup), 140 (mushroom ketchup, walnut ketchup), 189, 190 (mushroom ketchup, homemade; walnut ketchup, homemade; cockle ketchup, homemade).

Note: Tomato / tomata ketchup is not mentioned. Address: [Bath, England].

562. Simpson, John. 1816. A complete system of cookery, on a plan entirely new: Consisting of a extensive and original collection of receipts,... with bills of fare for every day in the year;... London: Printed for W. Stewart. 568 p. Index. 18 cm.
• ***Summary:*** The recipe for "Breast of veal à la flamond" (p. 63) ends: "... put the veal on the dish and the sauce over it: add a few drops of soy to colour the sauce."

The recipe for "A cow's heel stewed, &c." (p. 475) ends: "... season it with a little Cayenne pepper and salt, and about half a tea spoonful of soy; put a few egg balls, and forced meat balls."

Mushroom catsup is mentioned on p. 469, 470-71, 475-76. Walnut catsup is mentioned on p. 471, 475-76. Catsup alone p. 465. Catchup is not mentioned. Neither soy nor catsup are listed in the index. Address: [England].

563. Wilby (Francis) & Co. 1817. Classified ad: Elegant China, glass and japanned ware, and musical instruments. *Boston Daily Advertiser.* Jan. 16. p. 3.
• ***Summary:*** "... Sheffield plated goods: Teapots, Sugar Basons [Basins] and Cream Ewers, Liquor, Castor and Soy Frames [for soy sauce], Candlesticks, Salts, Spoons,..." Address: Auct'rs [Auctioneers], in the Assembly Room, at the Exchange Coffee-House.

564. Murdock (George). 1817. Classified ad: New garden seeds. Just received from London. *Boston Gazette.* March 6. p. 4.
• ***Summary:*** "... Likewise a variety of Fish Sauces, such as East India Soy [sauce], Essence of Anchovies, Reading Sauce, &c." Address: No. 14, Market Square.

565. Adamson (Mr.). 1817. Sales by auction: To oil and colourmen, and others (Ad). *Times (London).* April 17. p. 4, col. 4.
• ***Summary:*** "The stock and utensils in trade of an Italian Oil

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and Colour-shop... linseed, sperm, seal, and Florence oils, India soy [sauce], indigo,..." Address: 58, Fenchurch-street [London].

566. Lewis (Mr.). 1817. To be sold by auction, by Mr. Lewis, on the 17th instant, at the premises of Capt. Fergusson, the following Goods; viz.–(Ad). *Hobart Town Gazette and Southern Reporter (Tasmania, Australia)*. May 10. p. 2.
• ***Summary:*** "Europe Pickles (by Gordon & Emnet). Vinegar, Mustard, & Catsup. Real China Soy [sauce]. Pepper & Sago..."

Note 1. This is the earliest document seen (April 2012) that uses the term "Real China Soy" to refer to soy sauce–probably made in China.

Note: This is the earliest of 283 documents seen (April 2012) in the Australian Newspapers database that contains the term "China Soy" or the term "Real China Soy." The newspaper that mentions this term most frequently is *The Mercury* (Hobart) (256 times). By category: 279 are advertising and 4 are news. By decade: In 1890-99 the term appears in the most ads or articles (207), followed by 1880-89 (51).

567. Byron, George Gordon (Lord). 1817. Beppo: A Venetian story. In: Ernest Hartley Coleridge, ed. 1905. The Poetical Works of Lord Byron. London: John Murray, Albemarle St. See p. 418-19.
• ***Summary:*** Beppo was written in 1817 (between Sept. 6 and Oct. 12) while Byron was living in Venice. It was published on 28 Feb. 1818. The poem opens with Byron talking about the dissoluteness of Venice, even during Lent, and the blandness of the Lenten dishes, which could be made interesting if they were seasoned with soy sauce–which they are not:

"VI. This feast is named the Carnival, which being / Interpreted, implies 'farewell to flesh'- / So called, because the name and thing agreeing, / Through Lent they live on fish both salt and fresh. But why they usher Lent with so much glee in, / Is more than I can tell, although I guess / 'Tis as we take a glass with friends at parting, / In the Stage-Coach or Packet, just at starting.

"VII. And thus they bid farewell to carnal dishes, / And solid meats and highly spiced ragouts, / To live for forty days on ill-dressed fishes, / Because they have no sauces to their stews; / A thing which causes many "poohs" and "pishes," / And several oaths (which would not suit the Muse), / From travellers accustomed from a boy / To eat their salmon, at the least, with soy;

"VIII. And therefore humbly would I recommend / 'The curious in fish sauce,' before they cross / The sea to bid their cook, or wife, or friend, / Walk or ride to the Strand, and buy in gross / (Or if set out beforehand, these may send / By any means least liable to loss), Ketchup, Soy [sauc], Chili-vinegar, and Harvey [Sauce]. Or by the Lord! a Lent will well neigh starve ye."

Note: From this poem it seems quite clear that soy sauce was available in Venice in Oct. 1817. Therefore, this is the earliest document seen (Feb. 2001) concerning soybean products (soy sauce) in Italy. This document contains the earliest date seen for soybean products in Italy (Oct. 1817); soybeans as such had not yet been reported by that date. Address: England; Italy.

568. Lewis (Mr.). 1817. Sale by auction–By Mr. Lewis. The remains of the valuable Cargo, recently imported on the Brig Jupiter, from Bengal... (Ad). *Hobart Town Gazette and Southern Reporter (Tasmania, Australia)*. Nov. 15. p. 2.
• ***Summary:*** "Europe Pickles (by Gordon & Emnet). Vinegar, Mustard, & Catchup. Real China Soy [sauce]. Pepper & Sago..."

569. Encyclopaedia Britannica; or, A dictionary of arts, sciences, and miscellaneous literature. 5th ed. Illustrated with nearly six hundred engravings. Enlarged and greatly improved. 20 vols. 1817. Edinburgh: Printed at the Encyclopaedia Press for Archibald Constable. Illust. 28 cm.
*
Address: Edinburgh, Scotland.

570. Kitchiner, William. 1817. Apicius redivivus; or, The cook's oracle: wherein especially the art of composing soups, sauces, and flavouring essences is made so clear and easy, by the quantity of each article being accurately stated by weight and measure, that every one may soon learn to dress a dinner, as well as the most experienced cook; being six hundred receipts [recipes], the result of actual experiments instituted in the kitchen of a physician, for the purpose of composing a culinary code for the rational epicure, and augmenting the alimentary enjoyments of private families; combining economy with elegance; and saving expense to housekeepers, and trouble to servants. London: Printed for Samuel Bagster. Unpaginated. First edition. 15 cm.
• ***Summary:*** Since the pages are unnumbered, it is sometimes difficult to describe exactly where references to soy are found. In the chapter on "Roasting," at the end of No. 62 is a "Recipe to sauce for wild fowls" which contains this ingredient: "Sauce à la Russe*, (the older the better), 1 tablespoonful." A footnote on that page states: "* By à la Russe we suppose cavice, or coratch, or soy [sauce], is meant."

In the chapter on "Broths, gravies, and soups," at the top of the 6th page we read: "culinary scribes indiscriminately cram into almost every dish, anchovies*, garlick, bay leaves, and that hot, fiery spice, Cayenne pepper." A footnote on the same page explains the asterisk (*) after "anchovies": "* Soy, cavice-coratch, anchovies, curry powder, browning, catsup, pickle liquor, beer, and wine, are occasionally very convenient auxiliaries to soups, &c.:"

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The recipe for "Plain browning (No. 322) Is a very convenient article in the kitchen, to add to those soups or sauces where it is supposed the deep brown of its complexion denotes the strength and savouriness of the composition, and it is a very good substitute for what is called 'India, or Japan Soy.' Put half a pound of moist sugar and a tablespoonful of water into a clean iron saucepan..."

Recipes in the book that call for "Soy" [sauce] as an ingredient include: Mackarel broiled (No. 169; "send it up with fennel sauce in a boat, or plain butter with mushroom catsup or soy in it"). Mackarel roe sauce (No. 266). Cream sauce for fish (No. 277). Camp vinegar (No. 403). Fish sauce (No. 425).

The "Original receipt for Quin's sauce (No. 424) does not contain soy sauce in this edition, although it does in later editions. However it does state: "Obs. [Observations]– The above is copied from this celebrated epicure's original receipt now lying before me, for which I am indebted to Wm. Blachford. Esq., of Gray's Inn: it authenticity may be fully relied on. This sauce is prepared, as here described, by Messrs. Ball, 81, New Bond St., London." Note 1. In early recipes for prepared sauces, such as Worcestershire, soy was considered a secret ingredient, and was therefore not revealed."

Note 2. Tom Jaine, expert on early culinary history, of Prospect Books (England) thinks (Dec. 2007) that "Obs.–" stands for "Observation(s)."

The section titled "The magazine of taste" (No. 463, near back of book) contains a list of 28 "flavoring materials" which will enable "the thorough-bred *gourmand*" to develop a mahogany "sauce box" containing bottles of favorite ingredients. No. 15 is "Soy (436)." This refers to soy sauce; No. 436 is a recipe for making it at home. The other materials include: Pickles, brandy, curacao, salad sauce, pudding catsup, sauce superlative or double relish, walnut pickle, mushroom catsup, vinegar, oil, mustard, curry powder, etc.

Turning to No. 436 we read: "SOY. (No. 436.). To a small teacupful of water add half a pound of treacle, or moist or lump sugar; set it on the fire in an iron pot till it boils to a dark brown colour, keep stirring it, and take great care, or it will burn: when it is become quite thick, add to it a quarter ounce of salt, and gradually as much water as will reduce it to the consistency of soy; mix well together and boil up for 5 minutes. The addition of a quarter of a pint of good strong beef glaze (Footnote: See No. 187) to three quarters of a pint of the burnt sugar will very much improve it: those who like a goût [taste] of acid may add vinegar.

"Obs.–This will hardly be told from what is commonly called "*genuine India soy*," and will answer every purpose that is used for. Burnet treacle, or sugar, and Chili vinegar, garlick, and pickled fish appear to be the bases of almost all the sauces that are now sold in the oil-shops. Although indefatigable research and experiment has put us in possession of all these compositions, it would not be quite fair to enrich the cook at the expense of the oilman, &c." Note 3. The meaning of "Burnet treacle" is unclear. Burnet is a common herb. Treacle mustard is a plant. And treacle is the British word for molasses.

Concerning catsup: "Mushroom catsup" (No. 439) is mentioned 30 times in this book. After the basic recipe we read: "Excellent mushroom catsup may be had at Butler's herb and seed shop, opposite Henrietta Street, Covent Garden [central London]. "Walnut catsup" (No. 438) is mentioned 8 times. Also mentioned are: Oyster catsup (No. 441), Cockle and muscle [sic] catsup (No. 442), Tomata catsup [tomato catsup] (No. 443), White catsup (No. 444), Cucumber catsup (No. 445), and Pudding catsup (No. 446). The word "catchup" does not appear in this book.

The author–who name does not appear on the title page of this first edition–lived 1775?-1827. He was a nonpracticing Scottish physician. Address: England.

571. Raffles, Thomas Stamford. 1817. The history of Java. 2 vols. London: Black, Parbury & Allen. Vol. 1, xlviii + 479 p. Vol. 2, cclx + 291 p. See vol. I, p. 98. Oxford in Asia Historical Reprints, Oxford Univ. Press, 1978.

• ***Summary:*** In the section titled "Cooking" (Vol. I, p. 98) we read: "The Chinese prepare from the *gédelé* [*kédelé* = soybean] a species of soy [sauce], somewhat inferior to that brought from Japan.

A passage on rice cultivation (Vol. I, p. 116-17) states: "Besides the annual crop of rice which is raised on the *sáwah* lands, a variety of plants are raised upon them as a second or light crop within the same year. Among these are several species of *káchang* or bean... Among the most important are... *kédéle* [soybeans]..." "Together with rice are deposited the seeds of other vegetables, which arrive to maturity at different periods, chiefly after the rice harvest. The most common and useful among these is cotton... Next to this are various leguminous and other plants, which do not interfere with rice. No less than six or eight kinds of vegetables are sometimes in this manner seen to shoot up promiscuously in a single field."

The section on Java's "Oil-giving plants" (p. 123) states: "Of the oil-giving plants there are many. The *káchang góring* of the Malay countries, or, as it is indifferently termed by the Javans, *káchang chína*, *pénden*, or *tána* [peanut] is cultivated almost exclusively for the purpose of obtaining its oil... It is never employed as an article of food by itself; but what remains of it after the oil is expressed, forms an ingredient for the seasoning of rice... The oil is obtained by grinding the seeds between two grooved cylinders, and then separating it either by expression or boiling. The former is chiefly used by the Chinese, and yields as a refuse the oil-cakes, which I formerly observed were employed as manure in some of the gardens near Batavia."

Raffles (lived 1781-1826) was lieutenant-governor of

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Java from 1811 to 1816. He acquired and founded Singapore on 6 Feb. 1819. A 2nd edition was published in 1830 in London by J. Murray. Address: Lieutenant-Governor of Java.

572. Rundell, Maria Eliza Ketelby. 1817. A new system of domestic cookery: Formed upon principles of economy, and adapted to the use of private families. By a lady. 3rd ed. New York, NY: Robert M'Dermut. 317 p. Illust. Index. 18 cm. *
• ***Summary:*** In this new 1817 United States edition of this book, soy is mentioned as follows: To broil cod sounds (p. 36): "... season a little brown gravy with pepper, salt, a teaspoonful of soy, and a little mustard;..."

To dress fresh sturgeon (p. 37): "Sauce butter, anchovy, and soy."

Baked carp, or black fish (p. 38): "Pour the liquor from it, and keep the fish hot while you heat up the liquor with a good piece of butter rolled in flour, a tea-spoonful of mustard, a little Cayenne, and a spoonful of soy. Serve the fish on the dish, garnished with lemon, and parsley, and horse-radish, and put the gravy into the sauce-tureen."

Perch (p. 38): "Put them into cold water, boil them carefully, and serve with melted butter and soy."

Stewed lobster, a very high relish (p. 45): "Pick the lobster, put the berries into a dish that has a lamp, and rub them down with a bit of butter, two spoonsful of any sort of gravy, one of soy, or walnut-ketchup, a little salt and Cayenne, and a spoonful of port;..."

To stew tongue (p. 65): "Boil it tender enough to peel: when done, stew it in a moderately strong gravy: season with soy, mushroom ketchup, Cayenne, pounded cloves, and salt if necessary."

Mock turtle (p. 75-76): "... simmer till the meat is quite tender. About ten minutes before you serve, put in some basil, chives, parsley, Cayenne pepper, and salt to your taste; also two spoonfuls of mushroom ketchup, and one of soy..."

To boil turkey (p. 100): "Have ready a fine oyster-sauce made rich with butter, a little cream, and a spoonful of soy, if approved; and pour it over the bird:..."

Gravy soup (p. 119): "Boil vermicelli a quarter of an hour; and add to it a large spoonful of soy, and one of mushroom ketchup."

Hessian soup and ragout (p. 121-22): "For the *Ragout*, cut the nicest part of the head, the kernels, and part of the fat of the root of the tongue, into small thick pieces. Rub these with some of the above seasoning, as you put them into a quart of the liquor, kept out for that purpose before the vegetables were added; flour well, and simmer them till nicely tender. Then put a little mushroom and walnut ketchup, a little soy, a glass of port wine and a tea-spoonful of made mustard: and boil all up together before served."

An excellent sauce for boiled turkey (p. 129): "Rub half a pound of butter with a tea-spoonful of flour, put to it a little water, melt it, and add near a quarter of a pint of thick cream, and half an anchovy chopped fine, not washed; set it over the fire: and as it boils up, add a large spoonful of real India soy. If that does not give it a fine colour, put a little more."

Camp vinegar (p. 135): "Slice a large head of garlic; and put it into a wide-mouthed bottle, with half an ounce of Cayenne, two teaspoonfuls of real soy, two of walnut-ketchup, four anchovies chopped, a pint of vinegar, and enough cochineal to give it the colour of lavender drops. Let it stand six weeks; then strain off quite clear, and keep in small bottles sealed up."

Ketchup is mentioned on 37 pages, as follows: 38 (walnut ketchup), 45 (walnut-ketchup), 57-58, 60-61, 63, 65-66, 68, 71-72, 74, 76 (walnut ketchup, mushroom ketchup), 77 (mushroom ketchup), 91-92, 95, 97 (mushroom ketchup), 102 (mushroom ketchup), 106, 117, 119 (mushroom ketchup), 120, 122 (walnut ketchup), 126 (mushroom ketchup), 131 (mushroom ketchup), 132-133 (walnut ketchup), 134, 135 (walnut ketchup), 140 (mushroom ketchup, walnut ketchup), 189, 190 (mushroom ketchup, homemade; walnut ketchup, homemade; cockle ketchup, homemade).

Note: Tomato / tomata ketchup is not mentioned. Address: [Bath, England].

573. Beeler (Louis). 1818. Classified ad: Just received. *Alexandria Herald* (*Virginia*). Jan. 28. p. 4.
• ***Summary:*** "... Also, fresh Zaan-currants, ground nuts, palm nuts of a new kind,... cloves, cinnamon, nutmegs, mace, Japan soy [sauce] or East India catsup, almond oil, English mustard...."

Note 1. This is the earliest document seen (Sept. 2011) concerning soybean products (soy sauce) in Virginia. This document contains the earliest date seen for soybean products in Virginia (Jan. 1818); soybeans as such have not yet been reported.

Note 2. The idea that soy [sauce] is a type of catsup [regardless of spelling] from the East Indies continues to persist.

574. Bruce (Wm.). 1818. Classified ad: Has for sale. *New-York Daily Advertiser* (*New York City*). Aug. 6. p. 1.
• ***Summary:*** "... Mushroom and Walnut Ketchup. Harvey & Quin Sauce. India Soy [sauce]. Old Java Coffee..." Address: 139 Broadway, near City-Hotel.

575. Patison (James). 1818. Classified ad: At his wholesale and retail store. *City Gazette and Daily Advertiser* (*Charleston, South Carolina*). Nov. 2. p. 3.
• ***Summary:*** "... Curry Powder, India Soy [sauce], Walnut, Cauliflowers,... Mushroom Ketchup, Anchovies, Capers; Sallad Oil, in pint bottles. Harvey's Sauce, Camp Sauce, Quin's ditto [Sauce]... Shipped by one of the first houses in London." Address: No. 41, East-Bay.

576. Abel, Clarke. 1818. Narrative of a journey in the interior

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of China: And a voyage to and from that country in the years 1816 and 1817;... London: Printed for Longman, Hurst, Rees, Orme, and Browne. xvi + 420 p. Illust. Index.
• ***Summary:*** Lord Amherst's embassy to the court of Pekin [Peking] sailed from London in Feb. 1816. August. Page 72. "The men who navigate and probably live in these junks, subsist chiefly on millet rendered gelatinous by immersion in hot water. With this they eat a savoury preparation of vegetables cut into small stripes, and preserved in a kind of soy [sauce]. At their meals each takes a basin of millet to himself, but the savoury dish is common to many. In eating they bring the basin close to the lips, and shovel its contents by means of their chop-sticks into their mouths till they are fully crammed; then wedging in a morsel of the piquant vegetable, masticate the whole together."

In the chapter on "Plants," in August (p. 86): "Immediately after quitting Tien-sing, the country exhibited much of the same characters of wildness and flatness which they possessed from Ta-koo to that place. The chief difference consisted in an addition to the kinds of cultivated plants. Besides millet and beans [probably soybeans], the *Sida tiliæfolia*, one of the hemp plants of the Chinese, the *Sesamum Orientale*, from which they extract an esculent oil, and the *Ricinus communis*, castor-oil plant, continually occurred in patches, or in fields."

Page 124: "Of the plants cultivated as vegetables, the principal were the *Solanum melongena*, two species of *Capsicum**, the Sweet Potatoe, several species of Gourds and Cucumbers, one or two species of *Phaseolus*, or kidney-bean [one may possible have been the soy bean], of which they boil the young plants, and above all, the vegetable called by the Chinese *Petsai*, a species of cabbage.

The peanut is discussed on p. 170. Address: F.L.S., Chief Medical Officer and Naturalist to the Embassy [England].

577. Ellis, Henry. 1818. Journal of the proceedings of the late embassy to China: Comprising a correct narrative... Philadelphia: Printed and Published by A. Small. vii + 9-392 p.
• ***Summary:*** This embassy sailed from London in Feb. 1816.

"7th of August" (p. 62-63): "It appeared that the payment for the service in which the boat was now employed depended upon satisfaction being given, in which case the owner would be rewarded, otherwise he would be punished. On the former embassy the owners were liberally remunerated by Kien-Lung. Millet and some vegetables dressed with soy [sauce], were the principal food of the boat's crew. The praises that all travellers have given to the Chinese for regularity and arrangement are well deserved: though there be noise in their mode of loading and unloading boats, there is no confusion; every man seems to know his duty, and to execute it cheerfully."

"7th of September" in Tien-sing (p. 155): "Great variety of articles were sold in every shop, and, except the druggists, I observed few shops appropriated to the sale of one commodity only. A black mass, looking like caviare [caviar], proved to be soy mixed with salt, with something to give the mixture consistency." Address: Third Commissioner of the Embassy.

578. Golownin, Capt. Vasilii Mikhailovich [Golovnin, Mikhaiforich]. 1818. Narrative of my captivity in Japan, during the years 1811, 1812 & 1813; with observations on the country and the people. To which is added an account of voyages to the coast of Japan, and of negotiations with the Japanese, for the release of the author and his companions, by Captain Rikord. 2 vols. in 1. London: Printed for Henry Colburn. 348 p. See p. 58, 66. No index. 22 cm.
• ***Summary:*** In Vol. II: The author, a Russian, was confined to a prison. Page 58: "... our cages were cleaned out, and our coverlets and night-dresses aired in the sun during our absence. Food was brought to us every morning, noon, and evening. At each meal we received thick boiled rice instead of bread. It was dealt out to us in portions which were more than sufficient for Mr. Chlebnikoff and me;... In addition to the rice, we were served with soup made of sea-cabbage and other wild plants, such as sweet cabbage, wild garlic, and water angelica; to which, for the sake of rendering it savoury, pickled beans (Japanese *misso* [miso]) and some pieces of whale fat were added."

Page 66: "We were now supplied with better food: we were frequently treated with a kind of pudding, which the Japanese call tufa [tofu]: fine beans were boiled with our rice, forming a dish which is considered a great delicacy in Japan;..."

Page 198: "Our food in Matsmai [Matsumae] was incomparably better than it had been in Chakodade [Hakodate]... The fish were fried in oil of poppies, and were seasoned with grated radish [daikon] and soy [sauce]."

Note: This is the earliest document seen (Feb. 2001) concerning soya in connection with (but not yet in) Russia or Eastern Europe.

579. Homespun, Priscilla [pseudonym]. 1818. The universal receipt book: Being a compendious repository of practical information in cookery, preserving, pickling, distilling, and all the branches of domestic economy,... 2nd ed. with great additions. Philadelphia, Pennsylvania: Published by Isaac Riley. 378 p. See p. 45-46, 151, 223. Index. 18 cm.
• ***Summary:*** In the chapter "Select receipts in cookery," a recipe titled "An excellent Catsup which will keep good more than twenty years" (p. 45-46) states: "Take two gallons of stale strong beer, or ale, the stronger and staler the better; one pound of anchovies..." half an ounce each of cloves and mace, ¼ ounce of pepper, "six large roots of ginger, one pound of eschalots [shallots], and two quarts, or more of flap mushrooms, well rubbed and picked. Boil these ingredients over a slow fire for one hour, then strain the liquor through

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a flannel bag, and let it stand till quite cold, when it must be bottled and stopped very close with cork and bladder, or leather. One spoonful of this catsup to a pint of melted butter, gives an admirable taste and colour, as a fish sauce, and is by many preferred to the best Indian soy" [sauce].

Surprisingly, this exact same recipe appears in the chapter on page 151, in the chapter "Select receipts in pickling, &c."

In the chapter "Select receipts in distilling, &c." is a recipe (p. 223) for "Camp Vinegar. This, which is a kind of universal sauce is thus directed to be made. Peel a large head of garlic, cut it in thin slices, and put it in a bottle with a wide mouth; then add half an ounce of Cayenne pepper, two table spoonsful each of India soy, and walnut liquor or ketchup, four or five chopped anchovies, twenty grains of cochineal, and a pint of white wine vinegar. When it has stood six weeks, being frequently shaken in the mean time, pour or strain off the clear liquid, and keep it in small bottles closed or sealed up with wax."

Who was Priscilla Homespun? In his excellent book *Pure Ketchup* (1996), Andrew F. Smith states (p. 20) that the original 1814 edition of this book was attributed to Richard Alsop, a wealthy poet, and brother-in-law of the publisher Isaac Riley. Alsop died before Riley reprinted the 2nd edition "of the cookbook four years later under the pseudonym of 'Priscilla Homespun.'"

580. Wrightson's new triennial directory of Birmingham,... 1818. Birmingham, England: Printed and published by R. Wrightson. 198 p. See p. 136-37.

• ***Summary:*** A full page display ad (unpaginated, between pages 136 and 137) reads: "Waterhouse & Ryland, Silver plate manufactory, Hill Street, Birmingham. The following articles in plated or silver. Table services, dishes, water-plates, tureens, salts, &c. Epergnes & plateaus. Liquor, cruet, pickle & soy-stands, candle-stickes & branches. Bread, cake, flower & fruit baskets,... Tea & coffee Setts, waiters & trays." Illustrations show: (1) Two silver plated objects. (2) The royal coat of arms, with a lion and a unicorn on each side, and a lion standing on a crown at the top.

581. *Times* (*London*).1819. Law report. Court of King's-Bench, Guildhall, Wednesday: Lazenby v. Hallett and Hardy. Jan. 14. p. 3, col. 2.

• ***Summary:*** "This was an action brought by Mrs. Elizabeth Lazenby, the proprietor of an anchovy sauce, generally denominated 'Harvey's Fish Sauce,' to recover damages of Messrs. Hallett and Hardy, wholesale druggists, for vending a certain spurious sauce of their making, under the same name, to the manifest injury of her... who was the only person acquainted with the secret by which the said sauce was made."

Few things are better known in the city of London than this genuine anchovy sauce. Mrs. Lazenby is the sister of the original inventor, Mr. Harvey, "who, unfortunately for her interests, had not taken out any patent to secure his invention. Mr. Harvey had been the occupier [owner] of an inn at Bedfont, known and frequented by every *bon-vivant* who had ever traveled on the western road; and the means which had rendered his house so celebrated, was the exquisiteness of his wines and the pungency of his sauces." He had disclosed the secret only to his sister. Mrs. Lazenby found out about the fraud when a delivery boy, age 13, accidentally delivered counterfeit labels to her. She then traced the defendants through their printer, a Mr. Cox.

"The Jury, without hesitation, returned a verdict for the plaintiff–Damages 40*s*." Address: Edward-street, Portman-square [London].

582. *Port Folio* (*The*) (*Philadelphia and London*).1819. On China. 7(2):91-111. Feb. See p. 105-06. See p. 462.

• ***Summary:*** The article begins: "The following letter from a gentleman of this city [Philadelphia, Pennsylvania?], now abroad, is the result of careful observation, during a long residence among the people whom it professes to describe."

Page 105: "The Chinese make great use of beans, not only to feed their sheep and cattle, but also as food for themselves, in what they call, *thow foo* [doufu; tofu], and *foo chack*, [yuba], a kind of flummery [soft jelly or porridge], exceedingly palatable and nourishing."

Note: This is the earliest English-language document seen (Jan. 2012), and the earliest European document seen (May 2010), that mentions yuba or, this case, dried yuba sticks or rolls, which it calls *foo chack* [Chinese; also spelled elsewhere *foo jook, fooh jook* or *fuchu*, "bamboo yuba"]. The yuba is rolled so it looks like a bamboo shoot at each end then folded to form a "V." It is often cooked in a sweet broth, and eaten as a sweet soup; the dried yuba becomes soft, delicate and subtly sweet thin sheets.

"Soy [sauce] is likewise made from beans, with the aid of molasses and salt. The beans are boiled until nearly all the water evaporates and they begin to burn; they are then placed in large jars exposed to the sun, water and molasses are poured upon them and stirred well every day until the liquid is completely impregnated with their flavour; it is then strained off, salted, boiled and skimmed, until perfectly clarified. It will keep any length of time. Many persons have thought that gravy was employed in this condiment, which is not the case, it being entirely a vegetable composition, and certainly very wholesome and agreeable. There are many qualities of it, and it requires much care and attention to make the best. Japanese soy is most esteemed, and is vastly superior to any made in China. Many shopkeepers have large platforms on the roofs of their houses, where a number of jars are placed, for the purpose of making this article of which there is an enormous consumption, since neither rich nor poor can breakfast, dine, or sup without it. It is sauce for every sort of food, gives zest to every dish, and is the *sine*

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qua non of a Chinese meal."

583. *P.P.F. DeGrand's Boston Weekly Report.*1819. Shipping news: Abstract of foreign arrivals. June 5. p. 1.
• ***Summary:*** "May 31st. Ship *Levant*, [Captain] Cary, of Boston, from Canton, 128 days.–1530 boxes sugar;... 2 boxes China; 1 tub Candy; 1 box Japan Soy [sauce]."

In the same issue of this newspaper (p. 3) is a section titled "Consignees of Foreign arrivals," which shows that the 1 box of Japan Soy has been consigned to "Adventures."

Note: The meaning of the word "Adventures" is not clear. Most of the goods were assigned, by name, to various merchants or their companies. Of the many types of merchandise that arrived from May 29 to June 2, this is the only lot assigned to "Adventures."

584. *Port Folio (The) (Philadelphia).*1819. On China. 7(2):91-111. Feb. Series 4. See p. 105-06.
• ***Summary:*** "The Chinese make great use of beans, not only for their sheep and cattle, but also as food for themselves, in what they call, *thow foo* [tofu], and *foo chack* [*foo jook;* dried yuba sticks] a kind of flummery exceedingly palatable and nourishing. Soy [sauce] is likewise made from beans, with the aid of molasses and salt. The beans are boiled until nearly all the water evaporates and they begin to burn; they are then placed in large jars exposed to the sun, water and molasses are poured upon them and stirred well every day until the liquid is completely impregnated with their flavour; it is then strained off, salted, boiled and skimmed, until perfectly clarified. It will keep any length of time. Many persons have thought that gravy was employed in this condiment, which is not the case, it being entirely a vegetable composition, and certainly very wholesome and agreeable. There are many qualities of it, and it requires much care and attention to make the best. Japanese soy is most esteemed, and is vastly superior to any made in China. Many shopkeepers have large platforms on the roofs of their houses, where a number of jars are placed, for the purpose of making this article of which there is an enormous consumption, since neither rich nor poor can breakfast, dine, or sup without it. It is sauce for every sort of food, gives zest to every dish, and is the *sine qua non* of a Chinese meal."

585. *Blackwood's Edinburgh Magazine.*1819. The tent. 30(5):627-736. Sept. See p. 726.
• ***Summary:*** On p. 726 the Doctor says, "between two enormous mouthfuls of broiled herring superbly seasoned under the guidance of our master Celt, with Harvey sauce and Cayenne,..."

Note: This is the earliest English-language document seen (April 2012) that contains the term "Harvey sauce" (spelled without an apostrophe).

586. Stearns (Wm.). 1819. Classified ad: Fresh fruit, &C.–for Thanksgiving. *Essex Register (Salem, Massachusetts).* Nov. 20. p. 1.
• ***Summary:*** "... English Mustard; Soye [soy sauce]; Catshup [Catsup]; Harveys [sic, Harvey's] and Quin Sauce; Basket Salt; Table do [ditto = Salt]." Address: No. 2, Union street Building.

587. Stevens (W.). 1819. Sales by auction: Stock of oils, pickles, sauces, etc. (Ad). *Times (London).* Nov. 26. p. 4, col. 4.
• ***Summary:*** The fixtures and goods of Messrs. Agar and Brown (of No. 31 Walbrook) include: "240 jars and bottles of pickles, 160 dozen of sauces, comprising Indian soy [sauce], essence of anchovies, walnut and mushroom catshup [catsup], Harvey's and Quin's sauces, elder vinegar,... 5 half hogsheads of mushroom ketchup... May be viewed 1 day previous to sale; and catalogs had on the premises, and of Mr. W. Stevens..." Address: Auctioneer and appraiser, 36, Old Jewry [London].

588. *Asiatic Journal.*1819. Goods declared for sale at the East-India House. 8(47):519. Nov.
• ***Summary:*** "For sale 12 November–Prompt 11 February."

"Licensed and Private-Trade... China Ink–Rouge–Pickled Salmon–Soy."

589. Hickson (Samuel) and Co. 1819. Classified ad: Westphalia hams,... *Times (London).* Dec. 2. p. 1, col. 2.
• ***Summary:*** "The greatest variety of sauces and pickles, genuine Cayenne pepper, China soy [sauce], French and Spanish olives..." Address: Foreign Warehouse, 72, Welbeck-street [London].

590. Price. 1819. Classified ad: Westphalia hams, &c. *Times (London).* Dec. 11. p. 1, col. 5.
• ***Summary:*** "Price most respectfully acquaints the Nobility and Gentry, that he has just received... sallad oil, Gorgona anchovies, French capers, essence [of] anchovies, India soy [sauce], with a variety of other rich fish sauces." Address: Italian warehouse, 3, Haymarket, opposite the Opera house [London].

591. Golownin, Capt. Vasilii Mikhailovich [Golovnin, Mikhaiforich]. 1819. Recollections of Japan, comprising a particular account of the religion, language, government, laws and manners of the people, with observations on the geography, climate, population & productions of the country, with observations on the country and the people. To which is added an account of voyages to the coast of Japan, and of negotiations with the Japanese, for the release of the author and his companions, by Captain Rikord. Vol. II. London: Printed for Henry Colburn. 302 p. See p. 157, 213. No index. 22 cm.
• ***Summary:*** Page 157: "... many kinds of beans, which are

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a favorite dish of the Japanese; they sometimes eat them merely boiled in water, sometimes in treacle or soy [sauce]; small beans are often boiled with thick rice, and pass for a great delicacy. The Japanese soy is also prepared of beans, and turned sour in casks. They say that three years are required for preparing the best soy."

Page 213: Footnote: "The imports by the Dutch ships at Nangasaki, consisted, in 1775, of sugar, elephant's teeth, Japan wood for dying, tin, lead, bar-iron, fine chintzes, Dutch cloths of various colours and fineness, silks, spices, tortoise-shell, saffron, Venice treacle, Spanish liquorice, canes, optical glasses, watches, and the sea-unicorns' horns from Greenland, which bear a high value in Japan. The exports were copper, raw camphor, lackered wood work, porcelain, silks, rice and soy" [sauce]. Address: Russian Navy.

592. Good, John Mason; Gregory, Olinthus; Bosworth, Newton. 1819. Pantologia: A new cabinet cyclopædia,...: Soy. London: Printed for J. Walker;...; Edinburgh and Dublin. See Vol. 10, Q–Soy, last page, last entry. [Eng]
• ***Summary:*** "Soy [sauce], or Sooju, a species of liquid condiment, which is imported from India, and is used as a sauce for fish. It is prepared from the leguminous fruit of the soja (*dolichos soja*, Linnéus) a native of Japan.

"The pods are first boiled, till they become soft; when equal parts of them, and of muggi (wheat or barley that has been coarsely ground) are thoroughly mixed. This preparation is then kept in a close vessel, and a warm place, for twenty-four hours in order to ferment; after which the mass is put into a pot, and covered with a large portion of common salt, when two measures and a half of water are poured over the whole. The compounds is stirred, once at least, every day, for the space of two or three months; and, at the end of that period, it is filtered; the expressed liquor being preserved in wooden barrels. Fresh water is then added to the same mass; which, after stirring it occasionally for several days, is at length strained; and the liquor, though of an inferior kind, thus rendered fit for use.

"Soy possesses a strong saline taste, but has only a slight aromatic flavour: it is chiefly used at the tables of the luxurious; and is one of those artificial stimulants of the palate, which deserves no commendation, especially for vitiated or relaxed habits."

Note: This entry is copied from: Mease, James. 1804. "Soy." In: A.F.M. Willich, ed. 1804. *The Domestic Encyclopedia*. Philadelphia, Pennsylvania: William Young Birch and Abraham Small. See Vol. V, p. 12-13. Address: 1. Esq., F.R.S., Member of the American Philosophical Society, and of the Linnean Society of Philadelphia; 2. LL.D., Of the Royal Military Academy, Woolwich,...; 3. Mr., of Cambridge.

593. Rees, Abraham, ed. 1819. The cyclopedia; or, universal dictionary of arts, sciences, and literature: Dolichos soja. London: Longman, Hurst, Rees, Orme & Brown. See vol. XII. Dol. N.P. (Unpaginated). [2 ref. Eng]
• ***Summary:*** "Of the upright kinds [of Dolichos], *D. soja*, Linn. Sp. Pl. 1023. Jacq. Ic. Rar. t. 145, a native of Japan and the East Indies, is famous for its seeds, a great article of food in China and Japan. They are made into a kind of jelly or curd [tofu], esteemed very nutritious, and rendered palatable by adventitious seasoning; or they are prepared with salt, so as to produce the liquid well known at our tables by the name of Soy [sauce]. The flowers of this species are small and unornamental."

First cited by Hymowitz, 1986. Bibliography of early, previously uncited publications on soybeans in the United States. 2 p. Unpublished.

Note 1. This is the earliest English-language document seen (Feb. 2004) that mentions tofu in connection with Japan.

Note 2. This is the earliest English-language document seen (Feb. 2004) that uses the word "jelly" in connection with tofu.

Note 3. This is the earliest English-language document seen (Nov. 2002) that uses the term "upright" to describe the soybean plant.

Note 4. This is the earliest English-language document seen (Dec. 2003) with the word "nutritious" (or "nutrition," "nutritional," "nutritive," or "nutrients") in the title that also mentions soy.

Note 5. Sylvester Graham is said to have obtained much of his information about milling, bread baking, and early diets from this encyclopedia (McCance & Widdowson 1956, p. 49).

594. Cooper (Thomas). 1820. Classified ad: Superior double refined loaf sugar, &c. *Salem Gazette* (*Massachusetts*). Jan. 7. p. 1.
• ***Summary:*** "... English Ketchup, American do. [= ditto: American Ketchup], East India Soy [sauce], Wax Candles..." Address: No. 5, Derby Square.

595. Price. 1820. Classified ad: Parmasan cheese, &c. *Times* (*London*). July 10. p. 1, col. 2.
• ***Summary:*** "Price most respectfully acquaints the Nobility and Gentry, that he has just received... new salad oil, maccaroni [macaroni], vermacelli, French olives, capers, Gorgona anchovies, essence of anchovies, true India soy [sauce], with a variety of other rich fish-sauces,..." Address: Italian warehouse, 3, Haymarket, opposite the Opera house [London].

596. Robins (Messrs.). 1820. Sales by auction: The elegant and fashionable stock of massive chased plate and plated articles,... (Ad). *Observer* (*London*). Aug. 6. p. 1.
• ***Summary:*** "The plate consists of... epergnes, waiters, liquor, cruet and soy frames, bottle stands, chased cups and

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salts,..." Address: Covent-garden [London].

597. Crawfurd, John. 1820. History of the Indian Archipelago. Containing an account of the manners, arts, languages, religions, institutions, and commerce of its inhabitants. 3 vols. Edinburgh: Printed for Archibald Constable and Co.; London: Hurst, Robinson, and C. See vol. 1, p. 197-98, 370. Vol. 3, p. 319.
• ***Summary:*** Note: "Indian Archipelago" probably refers to today's Indonesia and Malaysia.

In Vol. 1, the chapter on "Useful arts" states (p. 197): "This preparation, called by the Malays *blachang*, and by the Javanese *trasi*, is a mass composed of small fish, chiefly prawns, which has been fermented, and then dried in the sun. This fetid preparation, so nauseous to a stranger, is the universal sauce of the Indian islanders, more general than soy [sauce] with the Japanese. No food is deemed palatable without it."

Continuing on p. 198: Dampier describes it with perfect accuracy, as follows: "Baluchaun is a composition of a strong savour, yet a very delightsom dish to the natives of this country. To make it, they throw the mixture of shrimps and small fish into a sort of weak pickle, made with salt and water, and put it into a tight earthen vessel or jar. The pickle being thus weak, it keeps not the fish firm and hard, neither is it probably so designed, for the fish are never gutted. Therefore, in a short time they turn all to a mash in the vessel; and when they have lain thus a good while, so that the fish is reduced to a pap, they then draw off the liquor into fresh jars, and preserve it for use. The masht fish that remains behind is called balachaun, and the liquor poured off is called nuke-mum [nuoc-mam]. The poor people eat the balachaun with their rice. 'Tis rank scented, yet the taste is not altogether unpleasant, but rather savory, after one is a little used to it. The nuke-mum is of a pale brown colour, inclining to grey, and pretty clear. It is also very savory, and used as a good sauce for fowls, not only by the natives, but also by many Europeans, who esteem it equal with soy."* (Footnote: *"Dampier's Voyages, Vol. II, p. 28").

The chapter titled "Husbandry of the materials of food" notes (p. 370): "The whole class of leguminous plants are called by the generic name *Kachang*.

"The most commonly cultivated as green crops, are two broad leaved plants called *Kachang Kadale*, (*Phaseolus max.*) [soy bean] and *Kachang Ijo*, (*Phaseolus radiatus.*) The *Kachang Ijo*, or green pulse, is a superior grain to the last, but is more delicate, and requires more care in the culture. The Chinese colonists manufacture Soy from it [sic], and it is for their consumption chiefly that it is raised. Of the *Kadale* ten seeds are considered a good return, and of the other about seven may be an average."

In vol. 3, the chapter titled "Intercolonial commerce" states (p. 319): "The specific commodities which Japan is either capable of affording, or actually does afford, for exportation, are gold, silver, copper, tutenague [tutenag: zinc], iron, camphor, ambergris, tea, rice, soy [sauce], wrought silks, lacquered-ware, and earthenware." Address: F.R.S., Late resident at the court of the Sultan of Java.

598. M'Donogh, Felix. 1820. The hermit in London: or, Sketches of English manners. New York, NY: H. Colburn. Printed for Everet Duyckinck. 368 + iv p. See p. 307. No index.
• ***Summary:*** Chapter 54, "Conversation," states (p. 307): "'A little Harvey sauce, if you please; yes, Sir, I dined with the noble Baronet; a sumptuous repast; but might have been better conducted;..."

Note: In the 1st ed. (1919, 5 vols., 17 cm), the author's name appears on the title page.

599. Virey, Julien-Joseph. 1820. Histoire naturelle des médicamens, des alimens et des poisons, tirés des trois règnes de la nature [Natural history of medicines, of foods, and of poisons, drawn from the three kingdoms of nature]. Paris: Rémont and Ferra. xii + 570 p. See p. 281. Index. [Fre]
• ***Summary:*** In the section on "Legumes" is a subsection titled "Dolic" (p. 281) which states: The *D. Soja*, L. of Japan, has excellent seeds. A sauce is made with the soybean (*le soja*) which is very highly esteemed in Europe. Address: Medical doctor at the Faculty of Paris.

600. Hind (John). 1821. Sales by auction: To oil and colourmen... (Ad). *Times* (*London*). Dec. 10. p. 4, col. 3.
• ***Summary:*** "The stock &c., comprises... French olives and pickles, essences of spruce and anchovies, India soy [sauce], whole and ground ginger,..." Address: Cannon-street, St. George's, Middlesex [England].

601. Gray, Samuel Frederick. 1821. A supplement to the pharmacopoeia: Being a treatise on pharmacology in general;... A new and improved edition, considerably enlarged. London: Printed for Thomas and George Underwood. xxxiii + 480 + [48] p. Index. 21 cm.
• ***Summary:*** Chapter 1, "Vegetables," notes (p. 115): "Dolichos soja. Seeds used to make soy [sauce], and are also eaten in soup."

The long section on "Simple substances" states (p. 199, last entry): "Lock-soy. Rice boiled to a kind of paste, and drawn out into threads: the Cochin-chinese is transparent; the Chinese opaque and less esteemed; used to thicken soups."

The section on "Compounds.–6. Watery compounds" gives a recipe (p. 324) for: "Quin's sauce. Soy 8 lb, walnut katchup, mushroom katchup ana 2 gall. [gallons], anchovies 8 lb, Cayenne pepper 8 oz., garlic 1 lb." 2nd recipe: Distilled vinegar 1 gall, soy 1 lb, allspice 8 oz. Distilled vinegar 1 gall., soy 1 lb, allspice 8 oz.

Next comes a recipe for homemade soy sauce (p. 324): "Soy. Seeds of dolichos soja (peas or kidney beans may be

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used for them) 1 gall., boil till soft, add bruised wheat 1 gall, keep in a warm place for 24 hours, then add common salt 1 gall., water 2 gall., put the whole in a stone jar, bung it up for two or three months, shaking it very frequently, press out the liquor: the residuum may be treated afresh with water and salt, for soy of an inferior quality.

"2. Seeds or beans 35 lb, stew in a little water for 2 or 3 hours, till they can be bruised between the fingers; drain on a sieve, roll them while moist in flour of the same seeds, spread them upon strainers placed one upon another in a hamper, cover with a blanket for 3 or 4 days, or till the seeds are quite mouldy [soybean koji], then expose them to the sun or a fire until they are so hard that the mouldy crust may be rubbed off; now pour upon them water 100 lb, and add common salt 20 lb, let the whole stand in a warm place for six weeks, pour off the now brown liquor and evaporate gently to a proper consistence: some add spice."

Note: This is the earliest document seen (Aug. 2009) that mentions soy flour ("flour of the same seeds").

In the same chapter and section (p. 325) are two interesting recipes that contain no soy:

"Katchup. Mushrooms 4 lb, common salt 2 lb, sprinkle the salt over them, when the juice is drawn out add pimento 8 oz, cloves 1 oz., boil for a short time, and press out the liquor: what remains may be treated again with salt and water for an inferior kind. Black pepper, mace, and ginger, are usually added."

Walnut katchup. Green shells of walnuts 1 bushel, common salt 6 lb, let them remain for two or three days stirring them occasionally that the air may turn them black, press out the liquor, add spices to the palate of the country, and boil it. Are all used for sauces.

"2. Juice of young walnuts by the press, to a gallon add anchovies 2 lb, shallotts 1 lb, clove, mace, black pepper ana 1 oz. and a clove of garlic, boil a little, and bottle."

In the chapter on "Compounds.–8. Medicated vinegars" is a recipe (p. 334) for "Camp vinegar. Garlick sliced 8 oz. Cayenne pepper, soy, walnut katchup ana 4 oz. anchovies chopped no. 36, vinegar 1 gall., cochineal q. s. to colour it a deep red; infuse six weeks, then strain." Address: Lecturer on the materia medica, pharmaceutical chemistry, and botany.

602. Kitchiner, William. 1821. The cook's oracle: containing receipts for plain cookery on the most economical plan for private families: Also, the art of composing the most simple, and most highly finished broths, gravies, soups, sauces, store sauces, and flavouring essences: The quantity of each article is accurately stated by weight and measure; the whole being the result of actual experiments instituted in the kitchen of a physician. 3rd ed., which is almost entirely re-written. London: Printed for A. Constable & Co., Edinburgh, and Hurst, Robinson, & Co., Cheapside. xvi + 464 p. 18 cm.
• ***Summary:*** The section titled "The magazine of taste" (No. 463, p. 371) contains a list of 28 "flavoring materials." No. 15 is "Soy" [sauce]. The others are the same as in the 1817 first edition.

After the word "Soy" is printed (No. 436) which should mean, according to the format of the book, that recipe No. 436 is a recipe for making soy sauce at home. However, when we look for No. 436 we are surprised to find that it is missing. Clearly recipe No. 436 for "Soy" has been removed since the 1817 edition (probably because the result tasted almost nothing like real soy sauce) but the cross reference on p. 371 was not.

The recipe for Browning (No. 313) "Is a very convenient article to colour those Soups or Sauces... It will commonly be told from what is commonly called *'genuine Japanese Soy**,' for which it is a very good substitute." (Footnote: *"'By the best accounts I can find, Soy is a preparation from the seeds of a species of the *Dolichos*, prepared by a fermentation of the farina of this seed in a strong lixivium of common salt.'–Cullen's *Mat. Med.*" [*Lectures on the Materia Medica*, vol. i, p. 430]). "Browning" is made by simmering half a pound of pounded Burnt Sugar with water, stirring well. "Then add to it an ounce of salt, and dilute it by degrees with water, till it is the thickness of Soy;..."

Several other recipes in the book call for "Soy" [sauce] as an ingredient: Mackarel roe sauce (No. 266). Shrimp sauce (No. 283). Liver sauce for fish (No. 288). Camp vinegar (No. 403). Fish sauce (No. 425). Sauce superlative (No. 429). A note to this latter recipe states that one purpose is to enable "the good Housewives of Great Britain to prepare their own Sauces..."

In the Introduction, the author lists (in approximately chronological order) the title and date of publication of about 250 English recipe books that he has consulted. There are 14 books from 1513 to 1599, and 39 books from 1600-1699, and 90 books from 1700-1799, and 52 from 1800 to 1819.

Note 2. This book was first published in 1817, with the title *Apicius redevivus; or, The cook's oracle*... The author–who name does not appear on the title page of this 3rd edition–lived 1775?-1827. Address: [England].

603. Willich, Anthony Florian Madinger. 1821. The domestic encyclopedia: Or a dictionary of facts and useful knowledge. Chiefly applicable to rural & domestic economy. 2nd American edition, with additions, by Thomas Cooper. Esq, M.D.: Sooju or soy. Philadelphia, Pennsylvania: Abraham Small. See vol. 3, p. 264-65.
• ***Summary:*** "SOOJU, or Soy [sauce], is a dark coloured sauce, which is prepared from the seeds of the Chinese plant *Dolichos soja*, which has an erect and hairy stem, erect bunches of flowers, and pendulous bristly pods, each containing about 2 seeds.

"There is a joke amongst seamen, that soy is made from beetles or cockroaches. This probably originates in the seeds of the plant from which the sauce is manufactured, having some fancied resemblance in shape and colour to

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SOOJU, or Soy, is a dark coloured sauce, which is prepared from the seeds of a Chinese plant *Dolichos soja*, which has an erect and hairy stem, erect bunches of flowers, and pendulous bristly pods, each containing about two seeds.

There is a joke amongst seamen, that soy is made from beetles or cockroaches. This probably originates in the seeds of the plant from which the sauce is manufactured, having some fancied resemblance in shape and colour to a beetle. These *seeds* are used in China and Japan as food; they are

a beetle. These *seeds* are used in China and Japan as food; they are made into a kind of jelly or curd [tofu], which is esteemed very nutritious, and which is rendered palatable by seasonings of different kinds [see A. Rees 1819]. The liquid which we know by the name of *soy* is thus prepared. After the seeds have been boiled, until they become soft, they are mixed with an equal weight of wheat or barley meal, coarsely ground. This mixture is fermented; and a certain portion of salt and water being added, the whole is allowed to stand for two or three months, care being taken to stir it every day: and by the end of that time it is ready for use.

"Soy is chiefly prepared in China and Japan; but that imported from Japan is considered preferable to any other. The quantity annually vended at the East India Company's sales is from 800 to 2000 gallons; at an average price of sixteen or eighteen shillings per gallon.

"The Soy-bean bears the climate of Pennsylvania very well. The bean ought therefore to be cultivated."

Note 1. This is the earliest document seen, published in America, that mentions tofu. Willich got his definition of tofu from *The cyclopedia; or, universal dictionary of arts, sciences, and literature* (see Dolichos soja) edited by Abraham Rees (1819).

Note 2. This is the earliest document seen (Feb. 2001) that mentions the words "beetles" or "cockroaches" as an ingredient in the production of soy sauce. This idea is, of course, totally incorrect.

Note 3. This is the earliest document seen (Oct. 2010) that gives statistics for the amount of soy sauce sold per unit of time in England, or the sale price per unit volume.

Note 4. According to the *Oxford English Dictionary*, the "East India Company is a company formed for carrying on an East Indian trade, especially the English company incorporated in 1600 and described in its charter as 'The Company of Merchants of London trading to the East Indies', which from 1773 exercised political power in the East, and had the chief part in the administration of the affairs of Hindustan, till 1858, when the government was assumed by the Crown." Address: USA.

604. Kitchiner, William. 1822. The cook's oracle: Containing receipts for plain cookery on the most economical plan for private families... From the latest London edition, which is almost entirely re-written. Boston, Massachusetts: Published by Munroe and Francis. viii + 9-380 p. Index. 18 cm. [30+* ref]

• ***Summary:*** The title page states that these recipes are the "result of actual experiments instituted in the kitchen of a physician." The chapter titled "Fish sauces" includes several references to other recipes (p. 92): "Soy [sauce], No. 436. Mushroom catsup, No. 439."

The chapter on "Broths and soups" states (p. 99): "We again caution the Cook to avoid *Over-Seasoning*, especially with predominant flavors, which, however agreeable they may be to some, are more extremely disagreeable to others... Zest 255, Soy 436, Cavice, Corach, Anchovy, 433... Catsups 432...."

In the chapter on "Fish," the section titled "To dress them maigre" lists various sauces for maigre [meatless] dishes (p. 188): "Obs. [Observations]–Mushroom Catsup, No. 439,.... Anchovy and Soy,–or Oyster Catsup, No. 441, variously combined and thickened with flour and butter, are convenient substitutes."

The chapter on "Gravies and sauces" has a recipe (p. 243) for "Mackerel roe sauce" (No. 266). The last line reads: "Mushroom catsup, Walnut pickle, or Soy, may be added."

The same chapter has a recipe (p. 244) for "Anchovy sauce" (No. 270). The first note (2nd paragraph) states: "Obs.–Foreigners make this Sauce with good Brown Sauce No. 329, or White Sauce No. 364, instead of melted Butter,–and add to it Catsup,–Soy,–and some of their flavoured Vinegars, as Elder or Tarragon,...."

The same chapter has a recipe (p. 247) for "Shrimp sauce" (No. 283). The first note ends: "... strain off the liquor to melt the butter with, and add a little Lemon Juice,–Cayenne,–and Essence of Anchovy,–or Soy,–Cavice, &c.–but *the Flavour of the Shrimp is so delicate*, it will be overcome by any of those additions."

The same chapter has a recipe (p. 249) for "Liver sauce for fish" (No. 288) which can be seasoned with "... a little Essence of Anchovy No. 433, or Soy, or Catsup No. 439."

The same chapter has directions (p. 257-58) for "Browning" (No. 322) which begins: "Is a very convenient article to colour those Soups or Sauces, of which it is supposed their deep brown complexion denotes the strength and savouriness of the composition." "Walnut Catsup" is sometimes used." "It will hardly be told from what is commonly called 'genuine Japanese SOY*,' for which it is a very good substitute." Footnote: *"By the best accounts I can find, *Soy* is a preparation from the seeds of a species of the *Dolichos*, prepared by a fermentation of the farina [flour]

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of this seed in a strong lixivium of common salt."- *Cullen's Materia Medica.*

In the same chapter is a recipe (p. 281) for "Camp vinegar" (No. 403) whose ingredients include: "Soy, two tablespoonsful. Walnut Catsup, four tablespoonsful. Six anchovies, chopped..." Plus cayenne pepper and minced garlick [garlic]. "Steep all for a month in a pint of best Vinegar, frequently shaking the bottle: strain through a tammis [tamis; cloth strainer], and keep it in small bottles, corked as tight as possible."

The same chapter has a recipe (p. 288) for "Fish sauce" (No. 425) which calls for two wineglasses each of Port and Walnut pickle, and four of Mushroom catsup, 6 anchovies, pounded, 6 "Eschallots sliced and pounded; a tablespoon of Soy, and half a drachm [dram, a small unit of weight] of Cayenne pepper." "Obs. This is commonly called *Quin's Sauce*, and was given to me by a very sagacious Saucemaker."

Note: This is the earliest document seen (Feb. 2008) stating that soy sauce is an ingredient in Quin's Sauce, a popular store sauce.

In this same chapter ("Gravies and sauces") is a section titled "The Magazine of Taste" (No. 463, p. 303-04) which begins: "This is a convenient auxiliary to the Cook. It may be arranged as a pyramidical *Epergne* [a stand or tiered center dish] for a *Dormant* in the centre of the table, or Travelling Store Chest." It consists of a Sauce Box containing four 8-ounce bottles, sixteen 4-ounce bottles, and eight 2-ounce bottles. Of these 28 "useful flavoring materials." No. 15 is "Soy" [sauce] (No. 436) in a 4-ounce bottle.

The chapter titled "Made dishes" has a recipe (p. 321-22) for "Savory salt beef baked" (No. 496). For gravy, use strong Consomme, "Soy, or Browning, see No. 322,..."

This book mentions "Catsup" on pages 169-70, and 185. It mentions "Walnut Catsup" on pages 161, 243, 254, 265-66, 281, 287, 291, 292, 319, 329. It mentions "Mushroom Catsup" on pages x, 92, 125, 160, 165, 187-88, 191, 208, 220, 224, 226, 235, 243, 246, 252, 254, 259, 261, 263, 266-67, 274, 287-88, 287-88, 291-92, 304, 323, 331-32, and 357.

Note: Kitchiner's name does not appear on the title page nor in the book. Address: M.D., England.

605. Koenig, Joseph. 1822. Geist der Kochkunst: Ueberarbeitet und herausgegeben von C.F. von Rumohr. 2 Nachdruckaufl. [Spirit of the culinary art. Edited and published by Carl Friedrich von Rumohr]. Stuttgart and Tuebingen: J.G. Cotta'schen Buchhandlung. vii + 202 p. See p. 157, 161-62. 21 cm. [Ger]

• ***Summary:*** In this book the art historian C.F. von Rumohr (lived 1785-1843) conjectures that the Garum sauce of the Romans was an imitation of the East Indian sauce (*Sulze*) made from soybeans.

In a modern (2005) facsimile edition of this book, the word "Soya" appears on page 157 (about half way down under *Gartenschwämme,–Champinjons* [Mushrooms]). The latter text reads: From mature *Gartenschwämmen* mushrooms the English prepare a superior seasoning sauce, which German cookbooks have confused with Indian Soya (*mit der indischen Soya verwechselt haben*).

The word "Soya" also appears 3 times on page 161 and on the top line of page 162.

Note 2. This is the earliest German-language document seen (April 2012) that uses the term *indische Soya* to refer to soy sauce.

606. *London Gazette (The)*. 1823. [Partnership between William Perrins and James Perrins is dissolved]. No. 17889. Jan. 21. p. 111.

• ***Summary:*** "Notice is hereby given, that the Partnership subsisting between William Perrins and James Perrins, of Evesham, in the County of Worcester, Chemists and Druggists, was this day dissolved by mutual consent; and that the business will be carried on by the said James Perrins alone, who will receive or pay all bills due to or from the said concern.–Witness our hands this 2d day of December 1822."

Note 1. A typed statement in one of the Lea & Perrins historical scrapbooks (Fair Lawn, New Jersey) states: "The partnership between Mr. William Perrins of Evesham and Mr. John Wheeley Lea to carry on the Chemists and Druggists business at 68 Broad Street, Worcester, was announced 1st January 1823 in Number 17889 of *The London Gazette*, published January 21st 1823. Eventually in 1837, The Original and Genuine Lea & Perrins Worcestershire Sauce was produced commercially, a small quantity having been made up some years previously from the recipe of a Nobleman of the County, and after a period of maturation, the potentialities of the Sauce were recognized by the partners. Lea & Perrins Worcestershire Sauce became popular almost at once,..."

Note 2. Letter from Jessica Portz, Rare Books & Special Collections, University of Minnesota at Minneapolis. 2001. June 4. A careful examination of this issue (21 Jan. 1823) and of all issues from Jan. 1 to March 1, 1823, reveals no announcement of a partnership between Mr. Perrins and Mr. Lea. Further investigation reveals "that *The London Gazette* lists only the *dissolution* of partnerships and does not announce the formation of partnerships. At least this was the case in 1823." An index to the journal for 1823, which is attached, shows this clearly.

Note 3. The two men said to have started making Lea & Perrins Worcestershire sauce in 1837 were John Wheeley Lea and William Henry Perrins. How are the William Perrins and James Perrins above related to the William Henry Perrins of Worcestershire sauce fame? If the two William Perrins are one and the same person, how did the dissolution of this partnership relate to his formation of a partnership with John Wheeley Lea?

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Note 4. If the two William Perrins are one and the same person, this is the earliest document seen (Feb. 2012) related to Lea & Perrins Worcestershire sauce. Address: London, England.

607. Phillips (Mr.). 1823. Sales by auction: A small cellar of wines of a lady of rank deceased (Ad). *Times* (*London*). Jan. 25. p. 4, col. 6.
• ***Summary:*** After the names of the wines and liquors: "... and a few cases of fine Indian Soy [sauce]... May be tasted at the time of sale,..." Address: 73, New Bond-street [London].

608. Lea and Perrins. 1823. Catalog of drugs and chemicals sold by Lea & Perrins, Broad-Street, Worcester [England]. Worcester, England. 2 p.
• ***Summary:*** Contents: Drugs. Domestic Articles, Spices, etc. Essences, Oils, etc., Patent Medicines.

Under domestic articles is listed "India Soy" [sauce].

Note 1. The latter product was probably Japanese shoyu, exported from Japan, whence the Dutch or British East India Company shipped it to England.

Note 2. This document is *not* the original 1823 document, nor a photocopy or facsimile reproduction of that document. Rather it is a recent computer printout of an "extract from Lea & Perrins' catalogue published in January 1823." It may well be inaccurate. Address: Broad-Street, Worcester, England.

609. Thornton (Mr.). 1823. Sales by auction: Household furniture, fowlingpiece,... (Ad). *Times* (*London*). Feb. 14. p. 4, col. 4.
• ***Summary:*** "Comprising press and fourpost bedsteads and bedding,... 12 cases India soy [sauce], various culinary articles,..." Address: 23, Fenchurch-street [London].

610. Chown (Mr.). 1823. Sales by auction: Superb stock of jewellery and silver-plated articles,... (Ad). *Manchester Guardian* (*England*). May 3. p. 1.
• ***Summary:*** "A most splendid and elegant assemblage of silver-plated articles (silver mountings), comprising... epergnes, tureen sets of beef steak and other covered dishes; soy frames, cruet and spirit do. [ditto = frames], with rich cut glass castors." Address: Appraiser, No. 3, King-street.

611. *Times* (*London*).1823. Sales by auction: India soy, Italian sauces,... (Ad). May 7. p. 4, col. 5.
• ***Summary:*** "About 220 dozens of India Soy; Reading and Italian fish sauce,..." Address: Welbeck-street, Cavendish-square [London].

612. Tawell, Apothecary, &c. 1823. Classified ad: Medicine chests completely fitted.–Physicians' and family prescriptions accurately dispensed. *Sydney Gazette and New South Wales Advertiser* (*NSW, Australia*). May 29. p. 2S.
• ***Summary:*** "... mushroom and walnut ketchup; essence of anchovies, shrimp sauce, soy [sauce], Cayenne pepper, sallad oil,..." Address: No. 18, Pitt-street, Sydney.

613. Chace (John B.). 1823. Classified ad: Has recently received... *Rhode-Island American, and General Advertiser* (*Providence*). July 1. p. 4.
• ***Summary:*** "... Mushroom and Walnut Catsup–Anchovy, Reading, Cavice and Quin Sauce, for 'wild fowl, game, hashes, beefsteaks, &c. and for enriching gravies'..."

614. Gibbens (George M.). 1823. Classified ad: J. Mathewson & Sons cheese, fresh grapes, old coffee. *American Federalist Columbian Centinel* (*Boston, Massachusetts*). Nov. 15. p. 4.
• ***Summary:*** "... India Soy [sauce] and Currie Powder–..." Address: No. 1, Summer-street.

615. Encyclopaedia Britannica; or, A dictionary of arts, sciences, and miscellaneous literature. 6th ed... enlarged and improved, 20 vols. 1823. Edinburgh: Printed for A. Constable. Illust. (582 plates). 28 cm. *
Address: Edinburgh, Scotland.

616. Kitchiner, William. 1823. The cook's oracle: Containing receipts for plain cookery on the most economical plan for private families... 5th ed. London: Constable & Co. 484 p. Index. 18 cm. [30+* ref]
• ***Summary:*** The title page states: "The whole being the result of actual experiments instituted in the kitchen of a physician. The whole work has been carefully revised by the author of 'The Art of Invigorating Life by Food,' &c. '*Miscuit utile dulci.*'"

The section titled "The magazine of taste" (No. 463, p. 334-35) contains a list of 28 "useful flavoring materials." No. 15 is "Soy" [sauce] (No. 436).

Note: William Kitchiner lived 1775?-1827. Address: M.D., England.

617. Kitchiner, William. 1823. The cook's oracle: Containing receipts for plain cookery on the most economical plan for private families... 2nd American ed. from the latest London edition, which is almost entirely re-written. Boston, Massachusetts: Published by Munroe and Francis. 424 p. Index. 18 cm. [30+* ref]
• ***Summary:*** This book seems to be based on the 4th London edition (see p. iii-iv). The soy related recipes are almost identical to those in the 1822 American edition, and are even on the same pages. There are four minor differences in this 1823 edition: (1) All recipe numbers are in parentheses. (2) This book is 44 pages longer. (3) A few words in the recipes have been changed. (4) The "Catsup" recipes are somewhat different. This book mentions "Walnut Catsup" on pages 161, 254, 257, 265-66, 281, 292, 319, 329, 428. It mentions

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"Mushroom Catsup" on pages x, 92, 125, 160, 165, 171, 187-88, 191, 222, 224, 226, 228, 235, 252, 254, 261, 263, 266-67, 274, 287-88, 292, 304, 315, 320, 323, 340, and 373. It mentions "Catsup" only on pages 169-70, and 185.

Note: Kitchiner's name does not appear on the title page nor in the book. Address: M.D., England.

618. Niemeyer, Augustus Hermann. 1823. Travels on the Continent and in England. London: Printed for Sir Richard Phillips and Co. viii + 104 p. 23 cm.
• ***Summary:*** "In these, as also in soy and other rich sauces, which are manufactured by wholesale, a great trade is carried on from London to all parts of the world. The sauces [including soy sauce], mustard, oil, and vinegar stand in ornamental frames for the use of the guests" (p. 315). Address: Germany.

619. Vignoles, Charles Blacker. 1823. Observations upon the Floridas. New York, NY: E. Bliss & E. White. 197 p. See p. 99, 104.
• ***Summary:*** Page 99: "The following list of productions capable of being raised in Florida, has been made out with some pains, and it is believed all these stated are profitable and practicable articles... Dolichos, or Soy bean."

Page 104: "The dolichos or soy bean is said to produce in China, four crops annually: from this kidney bean is prepared the soy or Indian catsup. In the south of Spain and many parts of the Mediterranean this bean, or a variety of it, forms a large portion of the food of the lower class of people: it is there called *caravances:* as an article of subsistence for negro slaves this is nutritious, and apparently raised in the greatest abundance with facility."

Note: The author says that "soy" and "Indian catsup" are the same and are both made from the soybean. Very interesting. Address: Civil and topographical engineer.

620. Walkinshaw, Timothy. 1824. On the cookery of the French (Letter to the editor). *London Magazine* 10:178-80. Aug. See p. 180.
• ***Summary:*** Ends with a poem titled "Le cuisinier français *versus* Dr. Kitchiner." The last stanza (No. 5) begins: "If we don't want our veal done to choke us, / Nor ivory fowls on our dish: / If gendarmes in all shapes should provoke us, / And we like Harvey's sauce with our fish:..." Address: Button-maker and Alderman, Aldermanbury, London.

621. James (T.H.) & Co. 1824. Sales by auction: On Wednesday next, at T.H. James & Co.'s stores, 96, George-street, at 12 o'clock... (Ad). *Sydney Gazette and New South Wales Advertiser (NSW, Australia).* Nov. 11, p. 3.
• ***Summary:*** "Britannia metal tea-sets, liquor and cruet frames,... India soy [sauce] and fish sauces, mustard, pickles, basket salt,..." Address: [Sydney].

622. Cooke, John Conrade. 1824. Cookery and confectionary. London: Printed by B. Bensley, Bolt Court, for W. Simpkin and R. Marshall. xxiii + 213 p. See p. 25-26. Illust. 20 cm.
• ***Summary:*** Page 25: "109. A mixture to help any sauce to be used with cold game and meat. One quart of mushroom ketchup, one quart of walnut pickle, half a pint Indian soy [sauce], one pint of French vinegar, ten anchovies, six cloves of garlic, twelve shalots pounded, one spoonful of Cayenne pepper, one ditto of white pepper, ground, six blades of mace, three nutmegs, grated, eight bay leaves, one lemon, sliced, and a sprig of sweet basil: boil all these ingredients one hour, strain off the liquor, bottle, and cork it tight."

Page 26. "113. Camp vinegar. A quarter of an ounce of Cayenne pepper, four heads of garlic, chopped, half a drachm of cochineal, three spoonfuls of soy, three ditto of walnut ketchup, one quart of vinegar; mix all together, and let it stand in a warm place a month, then strain it off." Address: Brighton, England.

623. Crayon, Geoffrey (pseud. for Washington Irving). 1824. Tales of a traveler. 2 vols. London: John Murray; Philadelphia, Pennsylvania: H.C. Cary & Lee. 19 cm.
• ***Summary:*** In Vol. II, in the chapter titled "The Inn at Terracina," we read (p. 75): "The Englishman's servant, too, had turned the kitchen topsy-turvy in his zeal to cook his master a beefsteak; and made his appearance, loaded with ketchup, and soy [sauce], and Cayenne pepper, and Harvey sauce, and a bottle of port wine, from that warehouse the carriage, in which his master seemed desirous of carrying England about the world with him." Note: This is the earliest English-language document seen (Dec. 2007) that contains the term "Harvey sauce" (spelled without an apostrophe).

The chapter titled "Wolfert Weber" is discussing his remarkable wife (p. 279): "The influence of her taste was seen, also, in the family-garden, where the ornamental began to mingle with the useful; whole rows of fiery marigolds and splendid hollyhocks bordered the cabbage-beds, and gigantic sunflowers lolled their broad jolly faces over the fences, seeming to ogle most affectionately the passers-by." Note: Sunflowers are also mentioned on pages 282 ("she began to languish for some more interesting occupation than the rearing of sunflowers,...") and 379.

Note: Washington Irving (1783-1859) wrote this book under the pseudonym of Goeffrey Crayon. Address: Gent. [New York, USA].

624. Golownin, Capt. Vasilii Mikhailovich [Golovnin, Mikhaiforich]. 1824. Memoirs of a captivity in Japan, during the years 1811, 1812, and 1813, with observations on the country and the people. 3 vols. 2nd ed. London: Printed for Henry Colburn and Co. Vol. 1, iv + 315 p. No index. 22 cm.
• ***Summary:*** In vol. 1, p. 135-36, a footnote states: "Our food in Chacodade [Hakodate] was at first extremely bad.

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It usually consisted of boiled rice, a kind of soup made of warm water with grated radish; a handful of finely chopped young onions with boiled beans; or instead of the onions and beans, two pickled cucumbers or radishes. Instead of the radish soup, we sometimes had puddings made of bean meal [tofu?] with rancid stockfish or whale oil. Perhaps twice in the space of fifty days we were supplied with fish, receiving each the half of a kind of plaice (Pleuronectes), with soy [sauce]."

In vol. 1, chapter 4, on p. 206, the author is describing his life and food in the prison where he is being held. Page 198: "Our food in Matsmai [Matsumae, a town on the southwest tip of Hokkaido, Japan; the oldest town on Hokkaido] was incomparably better than it had been in Chakodade... The fish were fried in oil of poppies, and were seasoned with grated radish and soy [sauce]." Note: The grated radish was probably *daikon*. Capt. V. Golownin lived 1776-1831.

625. Titsing, Isaac. 1824. Bereiding van de Soija [Preparation of soy sauce]. *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen* 3:159-60. Published in Batavia. [Dut]

• ***Summary:*** "The preparation of soy sauce (*soija*) is simple, and is performed in the following way:

"One takes a *gantang* (a local Malay unit of measure equivalent to 3.125 kg of rice, or about a gallon) of boiled miso-beans (*gestoofde miso-boonen*). A gantang of boiled wheat or barley groats (*gestoofde tarw of gort*), and as many roasted and ground (*gebrande en gemalen*) wheat or barley groats as one deems to be sufficient to give it the necessary color. One then mixes these three together and encloses the mixture in a cupboard to let it mold, for which 8 days are required. After this mixture has become completely green from the mold, it is taken out of the cupboard and allowed to dry in the sun for one full day.

"Next one takes 2½ gantang of boiled water and one gantang of pure salt, which one dissolves in the water completely; after this it is allowed to stand for 24 hours, until the dirt from the salt has sunk and the water has turned cold. The pure water is then strained off, followed by the addition of the above-mentioned molded substance, which is then stirred with a shovel for 14 days.

"One uses wheat or barley groats for this. The difference is that when the soy sauce (*soija*) is made out of barley groats, it will be much thinner, whereas that made from wheat will be much thicker, have more body, and look like ink.

"The soy sauce (*soija*), which the Chinese call *ketjap* is used like a very delicious and tasty salt with roasted flesh foods, both in Batavia [Jakarta] and in the Netherlands."

Note: The previous sentence is very interesting! In 1824, in the capital of today's Indonesia, the Chinese called soy sauce *ketjap*. Mr. Titsingh [Titsing] lived 1744-1812. He wrote a lot about the Dutch East Indies and Japan. Note that in 1880, Mr. A. Paillieux, in the appendix to his long and excellent article on the soybean in *Bulletin de la Societe d'Acclimatation* (Oct. p. 594-95), gives a French translation of this article but cites the original year of publication as 1781, Vol. III. We believe the date should be 1824 instead.

The resulting soy sauce product is more like Chinese-style soy sauce [*kecap asin*] than Indonesian-style soy sauce, which typically includes sugar plus various herbs and spices. It is very interesting that Titsingh chooses to use the word *soija* (based on the Japanese word *shoyu* = soy sauce) rather than the local Malay word *ketjap* to describe how *ketjap* is made. Address: Netherlands.

626. Wallace, Robert Grenville. 1824. Memoirs of India: Comprising a brief geographical account of the East Indies; A succinct history of Hindostan... Designed for the use of young men going out to India. London: Longman, Hurst, Rees, Orm, Brown and Green. xii + 504 p. See p. 193-94. Index.

• ***Summary:*** "Alligators and noxious reptiles are very numerous near Batavia and the river Caiman takes its name form the number of the former in it."

"The trade of Batavia is considerable. Opium, camphor, benzoin, pewter, iron,... from China [come], porcelain, teas, silks, nankeens, alum, borax, brimstone, cinnabar, mother-of-pearl, paper, sweetmeats, and tobacco; from Japan, copper, sabre blades, camphor, soy, and curious articles of furniture varnished, and flowered with mother-of-pearl. The exports are pepper, sugar, coffee, rice, and arrack, with other indigenous varieties. Batavia arrack is the best in the world."

627. Day (W.) and Son. 1825. Sales by auction: Consignment of fine Havana cigars... (Ad). *Times* (*London*). Jan. 24. p. 8, col. 5.

• ***Summary:*** "... real India Soy [sauce], Old Wines, Ale, and Stout, for absolute sale." Address: 11, Bishopsgate-street [London].

628. Smith (William). 1825. Display ad: Proprietor of the Agricultural and General Seed Store. *Courrier de la Louisiane* (*New Orleans*). April 18. p. 4, col. 3.

• ***Summary:*** "French olives, capers and anchovies... walnut and mushroom ketchups, and pepper sauce.

"Fine prepared Sauces, for Fish, Game, or Meats, including Quin's, Harvey's, Reading and Cavice Sauces; India soy [sauce] and essence of anchovies."

Note: This is the earliest document seen (May 2011) concerning soybean products (soy sauce) in Louisiana. This document contains the earliest date seen for soybean products in Louisiana (18 April 1825); soybeans as such have not yet been reported. Address: No. 43, Bienville-street, adjoining the Post-Office, New Orleans].

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629. Rose (Mr.). 1825. Sales by auction: Under a distress for rent (Ad). *Times* (*London*). Sept. 26. p. 4, col. 5.
• ***Summary:*** "Fish Sauces, Pickles, Olives, India Soy [sauce], &c. in bottles. Also a quantity of sauces in casks,..." Address: Church-court, Old Jewry [London].

630. Spark (A.B.). 1825. On sale, at the Stores of A.B. Spark, George-street... (Ad). *Sydney Gazette and New South Wales Advertiser* (*NSW, Australia*). Oct. 20. p. 1.
• ***Summary:*** "A few chests of Valetta's Hyson, Chulan, and Souchong Teas,... segars [cigars], vermicelli and soy [sauce];..." Address: George-street [Sydney].

631. Smith (J.J.). 1825. Classified ad: Essence of anchovies without colour. *Times* (*London*). Dec. 27. p. 4, col. 4.
• ***Summary:*** "In consequence of the general opinion that the Essence usually sold is coloured with red lead, &c....." Also: "... real India soy [sauce], treble refined sperm oil of finest quality..." Address: Oil and Italian Warehouse, 3, Clare street, near Lincoln's inn fields [London].

632. *Bulletin des Sciences Naturelles et de Geologie*.1825. Continuation du second mémoire sur les genres Phaseolus et Dolichos; par le doct. Gaetan Savi [Continuation of the second memoir of the genera Phaseolus and Dolichos; by Gaetan Savi]. 4:346-48. Deuxième Section du Bulletin Universel des Sciences et de l'Industrie,... [1 ref. Fre]
• ***Summary:*** In the "Botanical" section is a 3-page (p. 346-48) French-language summary of an Italian-language article by Gaetano Savi (Prof. of Botany at Pisa), published in *Nuovo Giornale de' Letterati* (May and June, No. 15, p. 106).

At the top of p. 348 we read: The genus *Soja* has but one species, *Soja japonica*, Savi: it was *Dolichos Soja* of Linnaeus. The Japanese ferment the seeds of this species with rice and wheat to make a sauce used to season various foods.

633. Grubbens, M. de. 1825. Method of preparing Chinese soy. *Economist and General Adviser* (*The*) (*London*) 2:24+. [Eng]
• ***Summary:*** Note: The text of this document is the same as the following: Grubbens, M. de. 1804. "Method of preparing Chinese soy." *Philosophical Magazine* (The) (London) 19(75):260-63. First quarter–except that the first paragraph is not included.

634. Normanby, Constantine Henry Phipps. 1825. Matilda: A tale of the day. 2 vols. 2nd ed. London: Henry Colburn. v + 379 p. (both volumes). See Vol. 1, p. 160. 19 cm.
• ***Summary:*** On pages 159-60 we read that Sir James sent "her to his courier for his English comforts, in a canteen as big as the trunk in which Iachimo hides himself. Cocoa paste, essence of coffee &c. were not very serviceable at dinner, but some Harvey's sauce was hailed with great glee; though, as there was no fish, there arose some difficulty whether to apply it to *fricandeau, fricassé, pâté mêlée*, or *poulet rôti*. The sight of all these English comforts, however, gave a new turn to Mrs. Hobson's feelings about the comparative merits of the two countries" [England and France].

Note 1. Iachimo is a character in *The Tragedy of Cymbeline*, by William Shakespeare. He hides in a chest to gather details of Imogen's room.

Note 2. This is a work of fiction. Address: Marquess.

635. Blackberd (Gilbert) and Co. 1826. Gilbert Blackberd,... begs to inform his friends and the public,... that he has re-opened the above shop (Ad). *Manchester Guardian* (*England*). Feb. 25. p. 2.
• ***Summary:*** His shop now sells: "... spices, best pickling vinegar, flour of mustard, fine basket salt, salad and other oils, split and whole boiling peas, lemon pickle, Indian soy [sauce], catsups, sauces, anchovies, capers, olives, pickles,..." Address: Druggists, Seedsmen, &c. at the Golden Head, No. 22, Market-place, near the Exchange, Manchester.

636. *Scotsman* (*Edinburgh*).1826. Classified ad: Sale by public auction of valuable household effects, for behoof of creditors. March 11. p. 157.
• ***Summary:*** "A quantity of goods belonging to an estate now winding up, consisting of numerous articles suited for Household purposes, viz... Bottle Stands, Wine Strainers, Salts, Liquor and Soy Frames, Corks, Tea and Coffee Sets, Tea and Coffee Urns,..." Address: The Shop, No. 23, Waterloo Place, Edinburgh.

637. Malcolm (J.). 1826. Has lately received from the first House in London, a supply of drugs, patent medicines, perfumery, pickles, &c, &c. *Sydney Gazette and New South Wales Advertiser* (*NSW, Australia*). April 26. p. 4.
• ***Summary:*** "Pickles.–Walnuts, olives, fish sauce, capers in half pint and pint bottles, mushroom ketchup in ditto and ditto, Indian soy [sauce], fine anchovies,..."

Note: This is the earliest of 144 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "Indian Soy." The newspaper that mentions this term most frequently is *The Brisbane Courier* (39 times). By category: 119 are advertising and 25 are news. By decade: In 1830-39 the term appears in the most ads or articles (35), followed by 1870-79 (34). Address: No. 95, Pitt-street [Sydney].

638. Webb (Michael, jun. [Jr.]). 1826. Classified ad: Prime St. Croix rum, brandy, &c. *Salem Gazette* (*Massachusetts*). July 7. p. 4.
• ***Summary:*** "... Few cases Anchovies, India Soy [sauce] and various sauces for fish and gravies,..."

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639. Remond (John). 1826. Classified ad: New York oysters. Westphalia hams, &c. *Salem Gazette* (*Massachusetts*). Dec. 5. p. 4.

• ***Summary:*** "... 12 dozen Curry Powder. A quantity of Walnut and Mushroom Catsup [in bottles]. East India Soy [sauce]. Also, his winter supply of Celery–..." Address: No. 8, Derby Square.

640. Johnstone, Christian Isobel (Christian Jane). 1826. The cook and housewife's manual: Containing the most approved modern receipts for making soups, gravies, sauces, ragouts, and made-dishes... By Mrs. Margaret Dods [pseud.]. Edinburgh, Scotland: Printed for the author. 366 p. Illust. Index. 20 cm.

• ***Summary:*** In Chapter 5, "Broths, soups, and gravies," has a recipe for "The best beef gravy,–or Jus de boeuf" which says (p. 71): "This may easily be enriched into *savoury brown gravy or sauce, or reduced* to brown soup by adding, after it is strained, water or weak broth, and a glassful of mixed soy [sauce] and mushroom catsup, with a French roll previously soaked in broth, and served in the tureen;..." The same chapter has a recipe for "Ox-head soup, *called Hessian Soup and Ragout,*" which concludes (p. 88): "Observations.–Soy, forcemeat balls, wine, &c. are all ordered for this ragout in some approved books of cookery; but we consider such expensive ingredients quite out of place in a preparation, which is cheap, good and savoury, but never can be elegant."

Chapter 6, titled "Fish" has a recipe (p. 118) "To broil cod sounds" which is seasoned with "a tea-spoonful of made mustard, and one of soy."

The same chapter, in a recipe "To dress sturgeon" comes with this: "Sauce.–oyster or lobster sauce, or melted butter, with a little soy and essence of anchovy."

The same chapter on fish tells how to "Stuff and bake carp, pike, and haddock" (p. 123-24): "Strain and add to the sauce a tea-spoonful of made mustard, and one of Chili vinegar, a glass of red wine, and a little soy, with mace, pepper, and salt to taste."

The same chapter has a recipe for "Lobster pie,–*a maigre dish*" (p. 126-27): "A little soy, wine, Cayenne, and catsup will make this pie more relishing." Note: Lobster pie was considered "maigre" because it contained no meat–only shellfish.

Also "An excellent salt fish pie *maigre*" (p. 127-28): "Make a sauce of chopped hard boiled yolks of eggs, melted butter, a little made mustard, and essence of anchovy, or soy, and pour it over the pie."

Also "Lobster haut gout.–H. Jekyl, Esq." (p. 130): "Take a little well-flavoured gravy,–for example, the jelly of roast veal, a few tiny bits of butter, a spoonful of soy, or walnut catsup, or of any favourite flavoured vinegar, and a spoonful of red wine. Stew the cut lobster in this sauce for a few minutes."

Chapter 7, "Sauces, essences, &c." has a section titled "Vinegaret for cold meat or fowl." Within it is (p. 170-71): "Carach Sauce.–Mix pounded garlic, Cayenne, soy, and walnut pickle in good vinegar."

Also, in the section on "Sauces of shell-fish, and fish sauces" is a recipe for "Anchovy sauce." At the end of it (p. 171-73): "Observations.–This is a sauce which ought to be piquante. The cook is therefore at liberty to make whatever additions she pleases;–Cayenne, soy, essence of anchovy, lemon pickle, horse-radish, mustard, shalot [shallot], nasturtiums, vinegars; in short the whole circle of the pungent and sharp flavours may be pressed into the service."

In that same section: "An excellent store English fish sauce" (p. 174-75): "This is an expensive but very rich fish sauce... A tea-spoonful of the above will convert two ounces of melted butter into a well flavoured extemporaneous sauce; or it may be mixed on the plate like essence of anchovy, soy, &c."

In this same chapter (p. 176-77): "Quin's* Fish Sauce, a Store Sauce.–Two glasses of claret, and two of walnut pickle, with four of mushroom catsup; six pounded anchovies with their pickle, and six shalots pounded; a half glass of soy, black, and Cayenne pepper. Let this simmer slowly by the side of the fire till the bones of the anchovies dissolve. Strain it off, and when cold bottle for use." The footnote (* p. 176) refers to Quin as a "great man" who is no longer living. "As a mere untravelled practical Englishman, and moreover of the old school, Quin, no doubt, ranks high in the lists of gastronomy; but he is completely distanced by many moderns, both in love for and knowledge of the science."

In the same chapter is a section titled "Flavoured vinegars," within which is a recipe (p. 191) for: "Camp Vinegar.-Six chopped anchovies, four spoonfuls of walnut catsup, two of soy, and a clove of garlic chopped very fine. Steep these for a fortnight in a pint of white wine vinegar, and strain and bottle for use."

In Chapter IX, "Made dishes" we learn how "To hash a calf's head" (p. 224-25): "A brown hash may be made as above, by using fried onion, catsup, soy, a little red wine, &c.;..."

Mistress Margaret Dods is a pseudonym for Christian Isobel Johnstone who lived 1781-1857.

Note: The website www.scottishamericansociety.org/ id12.html in a section on "Haggis History" (Feb. 2008) states: "In 1826, Meg Dods produced the *Cook's and Housewife's Manual*. She was the landlady of the Cleikum Inn, in St. Ronan's, near Peebles [Scotland]; which housed the gatherings of the Cleikum Club, one of the many dining clubs which flourished at the time. Sir Walter Scott was among the founders [in 1826], and its members celebrated the national literature and the national spirit (literal and figurative) and took a gentle, nostalgic, antiquarian interest in old Scots customs. Mistress Dods is a mysterious figure about whom rumours abound. It is quite firmly believed by many in the food world that Scott was the author of her

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cookery book. Others question her very existence or suppose her to have been Scott's mistress... Meg included haggis in her suggested Bill of Fare for St. Andrew's day, Burns' Clubs, or other Scottish National Dinners. Her book gives two haggis recipes." Each is described. Address: Of the Cleikum Inn, St. Roman's [member of the Cleikum Club].

641. *Journal des Connaissances Usuelles et Pratiques*.1826. Économie domestique: Manière de préparer le Soya chinois [Domestic economy: How to prepare Chinese soy sauce]. 3(14):129-32. [1 ref. Fre]

• ***Summary:*** This excellent, detailed description begins as follows: Soy sauce (*Le Soya*) is made with a species of small bean named *dolichos soya*, smaller and whiter than the broad bean of Turkey (*le fève de Turquie*), plus soft wheat flour (*farine de froment*), salt, and water, which are used in the following proportions: 50 pounds (*livres*) of the beans, 50 pounds of salt, 60 pounds of soft wheat flour, and 250 pounds of water. After the beans have been washed well, they are boiled with well water, in a pot with no lid on, for several hours, or until they are sufficiently softened to be kneaded with one's hands. While they are cooking, they must remain covered with water so they do not burn. One must be careful not to over-boil them lest too much of their substance escape in the broth.

Once the beans have boiled sufficiently, they are spread in large, flat wooden vats or, as the Chinese do it, in jars fashioned with bamboo sections, large and thin; these jars or vats must be two and a half inches deep and five feet in diameter; the beans are spread into them to a depth of two inches. Once they have cooled enough that they can be touched by hand, soft wheat flour is added and all is mixed; the mixing should be continued until the soft wheat flour is absorbed. Should the matter become too dry for the flour to adhere to the beans, then a little broth is added to it.

Once everything is well mixed, the material is poured into the vats we already spoke about, taking care that the layers do not exceed one inch or an inch and a half in depth. A lid is placed on each vat and it is closed tightly. Once one observes that the mixture begins to mold (*moisir*) and that the heat has fully escaped (this will take from two to three days), the lid is lifted slightly, propped up with little round sticks so that air has easier access to the inside. If the matter takes on a green cast, it means that all is going well. Should it begin to blacken, one must then lift the lid more so as to increase the contact with the air. Should it blacken completely, then the lot is considered ruined.

As soon as one has observed the matter turning green and rancid (*rance*) (which will typically take from 8 to 10 days), the lid is removed and the mixture is exposed for several days to the air and to the sun. Once the whole mass [koji] become as hard as a stone, it is broken into small pieces. These are then thrown into a large earthenware jar and 250 pounds of water, in which 50 pounds of salt has been dissolved, is poured unto it; the whole thing is stirred and one makes note of the height reached by the liquid in the container. Should one jar not be sufficient, one can reach for several other jars, taking care that each one remains in proportion to the amount of mixture involved.

Once the jug is filled, it is put out in the sun. The substance is regularly shaken and stirred nights and mornings; at night however, one must take care to put the lid back on in order to ward off the cold. This lid is convex on the outside so that the rain water can drip away more readily. The more intense the heat from the sun rays is, the faster the preparation. In general, this operation is only undertaken during the summer, and it can go on for several months.

As the volume of the mixture decreases through evaporation, well water is added until the water and the salt have completely dissolved the flour and the beans. The earthen jar is left out in the sun for several more days, so that the dissolution can be as perfect as can be; for this will ultimately determine the soya quality. And during that time, one should continue to stir the mixture every day as was done previously.

Once the mixture has become substantial and uniform / smooth (*onctueux*), it is poured in bags, that are strongly pressed so as to extract the soy sauce (*soya*), which is then pure and ready to be used; it is never boiled. It is poured into bottles that are carefully capped. The Chinese, who make a large trade of it, place it in large jugs. Before being expressed, soy sauce is of a brown black color; thereafter it becomes completely black.

With the presscake / lees (*la lie*), the Chinese prepare also two other kinds of soy sauce. They first add 150 pounds of water and 30 pounds of salt; after having stirred this mixture well, they will pour another 100 pounds of water and 20 pounds of salt and proceed for the rest as we described it earlier.

Soy sauce being such a substantial item of trade, it might be useful to introduce into France the bean with which it is made; it is possible that we, ourselves, already have in our possession other beans that could also achieve the goal that we are pursuing.

The Japanese people, who also make great use of soy sauce to season their food, know how to prepare, with this species of bean, a food [miso] that they will use in place of butter, mostly to season prepared foods and meats.

Note 1. This is the earliest French-language document seen (April 2012) that uses the term *Le Soya* to refer to soy sauce.

Note 2. The basic recipe calls for the use of more wheat flour than soybeans (60 pounds vs. 50 pounds). In French, *farine de froment* is softer than *farine de blé*.

Note 3. This Chinese-style soy sauce is not heated before bottling–unlike its Japanese counterpart.

642. *Sydney Gazette and New South Wales Advertiser* (NSW,

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Australia).1827. The selector: Newspaper advertisements–Puffing (Editorial). Jan. 11. p. 4.
• ***Summary:*** This editorial begins: "It is a curious picture of the condition and habits of the country... A foreigner finds it difficult to comprehend the daily amount of actual domestic occurrences" brought to you each morning in the newspaper.

"And of all the fierce competitors for preference, in their thousand and one peculiar occupations and capacities... the improver upon India soy [sauce]..." Address: [Sydney].

643. Lelius, -. 1827. Journal of a voyage from Calcutta to China. *Quarterly Oriental Magazine, Review and Register* (*Calcutta*) 7(14):222-67. June. See p. 257-58.
• ***Summary:*** Pages 257-58: "A Chinese dinner is a curiosity of the first magnitude, and one which it behoves [behooves] every lover of the ludicrous to witness–One of the Hong merchants *Pon Keequa* by name, or as he is more generally termed "the squire," gave a dinner to a select party of the Factory, at which I had the good fortune to be present."

"We at length arrived at the banquetting-room... There were about twenty courses, and dishes innumerable–I counted sixty on the table at one time; they consisted chiefly of small basins or cups of the most beautiful China-ware, and were arranged in three rows down the centre of the table. We were given to understand, I know not with what truth, that we had the happiness to partake of stewed pigeons' eggs, wild cat, fricassied [fricasseed] frogs, dried worms (particularly recommended as a *bonne bouche* for wine at dessert), sea slugs, sharks, and fins, and a variety of other delicacies,* to which European prejudice might be inclined to apply another term, but which, whatever they may really have been, were rendered extremely palatable by the application of a little Japan soy [sauce],+ or 'essence of cockroach,' the finest I ever tasted."

+ Footnote: +"Soy is really made of a small species of Bean peculiar to Japan; though this may be a bold assertion, considering that the prejudice is so much in favor of Cockroaches."

644. Leathern (Messrs.) and Co. 1827. Sales by auction: Forfeited and other property (Ad). *Times* (*London*). Nov. 28. p. 4, col. 6.
• ***Summary:*** "... a quantity of India Soy [sauce], matting, &c.,..." Address: 60, Sun-street, Bishopsgate [London].

645. Domestic economy, and cookery, for rich and poor: Contains an account of the best English, Scotch, French, Oriental, and other foreign dishes... by a lady. 1827. London: Longman, Rees, Orme, Brown, and Green. iv + 691 p. Index. 19 cm.
• ***Summary:*** The chapter on "Domestic economy and cookery" states (p. 13): "Where samphire, dulse, laver, or shell-fish is found, the poor ought to be instructed to gather and preserve it for a little commerce, and to make their own salt. Cheap as it is, the very carriage is of consequence to them; and, if they made the salt, they might make excellent soy [sauce] of dulse, either for themselves or for sale." Note 1. Samphire is the name given to a number of very different, edible, succulent plants that grows in salt-sprayed regions along the sea coast of northern Europe.

Note 2. This is the earliest document seen (Feb. 2008) that recommends using sea vegetables or shell-fish for making soy [sauce].

Soy [sauce] is also mentioned on pages 54 (Salad sauce), 164 (Camp vinegar), 273 (Another recipe for anchovy and butter), 277 (Forte excellente), 302-03 (Oyster, cockle, or muscle soup, with mushrooms), 470 (Describes Lock Soy {"Rice boiled to a paste, and drawn into threads"} but omits the word "Soy").

"Ketchup" or "ketchups" are mentioned on pages 19, 20, 54, 63, 161, 164, 170-74 (mushroom ketchup, walnut ketchup), 220, 223, 239, 254, 268, 275-77, 284, 303, 307, 325, 327, 331, 354-55, 374, 383, 441, 456, 473, 518, 555, 680. Address: [England].

646. Johnstone, Christian Isobel (Christian Jane). 1827. The cook and housewife's manual: Containing the most approved modern receipts for making soups, gravies, sauces, ragouts, and all made-dishes... By Mrs. Margaret Dods [pseud.]. 2nd ed. Edinburgh, Scotland: Oliver & Boyd. 525 p. Illust. 18 cm. *
• ***Summary:*** Mistress Margaret Dods is a pseudonym for Christian Isobel Johnstone who lived 1781-1857.

647. Kitchiner, William. 1827. The cook's oracle: Containing receipts for plain cookery on the most economical plan for private families... A new edition. London: Printed for Cadell and Co., Edinburgh; Simpkin and Marshall, and G.B. Whittaker, London; and John Cumming, Dublin. 491 p. Index. 18 cm. [30+* ref]
• ***Summary:*** This book is "the result of actual experiments instituted in the kitchen of William Kitchiner, M.D. Author of..." The titles of his seven books are given.

Soy [sauce] is mentioned often: Fish sauces (p. 99). To add zest to broths and soups (p. 108). In sauce for maigre fish dishes (p. 209-210). Mackarel roe sauce (p. 275 [Mackerel]). Anchovy sauce (p. 276). Shrimp sauce (p. 279). Liver sauce for fish (p. 282).

In the chapter on "Gravies and sauces" the recipe for "Browning" (p. 291-92) states: "It is a convenient article to colour those *Soups and Sauces*, of which it is supposed their deep brown complexion denotes the strength and savouriness of the composition." Burnt Sugar is a favourite ingredient. "When employed for Culinary Purposes, this is sometimes made with strong Gravy, or Walnut Catsup... It will hardly be told from what is commonly called 'genuine Japanese Soy,' * [footnote refers to "Cullen's *Mat. Med.* vol. i, p. 430] (for which it is a very good substitute)."

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To make "Browning": "Put half a pound of pounded Lump Sugar, and a table-spoonful of water, into a clean iron saucepan, set it over a slow fire, and keep stirring it with a wooden spoon till it becomes a bright brown colour, and begins to smoke; then add to it an ounce of salt, and dilute it by degrees with water, till it is the thickness of Soy; let it boil, take off the scum, and strain the liquor into bottles, which must be well stopped;..."

Camp vinegar (p. 320).

In the chapter on "Store sauces," the recipe (p. 328) for "Fish sauce.–(No. 425)" includes "a tablespoonful of Soy" and concludes: "Obs. [Observations]–This is commonly called Quin's Sauce, and was given to me by a very sagacious Saucemaker."

The section titled "The magazine of taste" (No. 463, p. 346) contains a list of 28 "useful flavoring materials." No. 15 is "Soy" [sauce] (No. 436).

Catsup (incl. mushroom catsup, oyster catsup, walnut catsup, cockle and muscle catsup) is mentioned on pages 103, 151, 176, 180, 189, 209, 210, 214, 225, 231, 244, 256, 276, 285, 287, 291, 292, 302, 303, 334, 335, 336, 337, 271, 381, 390, 419, and 426. "Mushroom ketchup" appears on page 90. Address: M.D., England.

648. Nahuijs van Burgst, Huibert Gerhard. 1827. Brieven over Bencoolen, Padang, het rijk van Memang-Kabau, Rhiouw, Sincapoera en Poelo-Pinang, Tweede, vermeerderde druk [Letters from Bencoolen [Begkulu], Padang,... 2nd printing]. Breda: Hollingérus Pijpers. xxi + 288 p. 22 cm. [Dut]

• ***Summary:*** Ketjap (soja) is mentioned on page 62.

Note 1. This is very interesting. The writer seems to be saying either that in Indonesia (1) Ketjap and soy sauce are identical; or that (2) Ketjap (Indonesian soy sauce) is made from soybeans.

Note 2. This is a biographical description of the author's travels in today's Indonesia, Singapore, and Malaya. Address: Colonel, Ridder van de Militaire Willemsorde.

649. Roberts, Robert. 1827. The house servant's directory: or A monitor for private families... Boston, Massachusetts: Munroe and Francis; New York: Charles S. Francis. 180 p. No index. 27 cm.

• ***Summary:*** The section titled "On trimming the cruet stand and casters" states (p. 37-38): "... you should remember to examine it very day to see if all the cruets are clean, and full of every thing that is necessary to have in them, such as mustard, oil, vinegar, catsup, soy [sauce], black pepper, and cayenne, or other sauces that you may have bottles for; therefore you should always see that all your casters are furnished with all your articles daily,..."

Note: "This book is an American milestone. It is the first book of any kind written by an African American to have been published in the United States by a major publisher." The author (lived 1777-1860) was born in Charleston, South Carolina. "He led a successful life as a valued servant, an active, prominent member of Boston's African-American community, a prosperous owner of property, and a father." In 1825 Roberts became "butler to Christopher Gore (1758-1827), a prominent Boston attorney, statesman and diplomat who served as senator and governor of Massachusetts" (MSU introduction). Address: Boston, Massachusetts.

650. Smith (J.J.) and Co. 1828. Classified ad: Sperm oil, candles, essence of anchovies, spices, &c. *Observer* (*London*). Jan. 27. p. 1.

• ***Summary:*** "... real India soy [sauce], 2*s.* 6*d.* a bottle.–Allowance to Tavern-keepers and the Trade." Address: Sign of the Blue-coat Boy, 3, Clare-street, near Lincoln's-inn-fields [London].

651. *Hobart Town Crier* (*Tasmania, Australia*).1828. Classified ad: Families in want of the following useful and valuable articles... April 19. p. 2.

• ***Summary:*** "... are most particularly invited to inspect the same, at the Royal Exchange Auction Mart, where they will be sold retail: -

"Very elegant liquor, cruet, and soy frames, plated with silver edges, and cut glass bottles,..."

652. Friend and Phipp. 1828. Sales by auction: To wholesale druggists, oil and colour men... (Ad). *Times* (*London*). May 28. p. 4, col. 4.

• ***Summary:*** "... 10 lbs. Opium, 30 gross Dutch Drops, 40 dozen Indian Soy [sauce], quantity of fine Essential Oils,..." Address: 80, Bishopsgate-street [London].

653. Pitman (T.G.). 1828. On sale, No. 10, George-street,... (Ad). *Sydney Gazette and New South Wales Advertiser* (*NSW, Australia*). June 23. p. 4.

• ***Summary:*** "Soy [sauce], curry powder, cider." Address: George-street [Sydney].

654. Remond (J.). 1828. Classified ad: Oysters, hams, celery, &c. *Salem Gazette* (*Massachusetts*). Nov. 28. p. 3.

• ***Summary:*** "... A quantity of India Soy [sauce] and Curry Powder, Walnut, Mushroom and Tomato Catsup, 50 pots pickled Nuts..." Note: Three types of catsup are advertised. This is the earliest English-language document seen (Feb. 2006) that mentions "Tomato Catsup." Address: No. 8 1-2, Derby Square.

655. Blackwell, Henry. 1828. The Sheffield directory and guide: Containing a history of the town, alphabetical list & classification of the merchant manufacturers,... including the neighbouring towns & villages [etc.] Sheffield, England: Printed and published by John Blackwell, High Street. lxxxii + 202 p. See p. 110. Illust. Index. 46 cm.

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• ***Summary:*** The section titled "Alphabetical classification of professions, trades, etc." (p. 110-156) contains many unnumbered pages of advertisements. A full-page ad (on about p. 110) states: "C.F. Younge has also a valuable and extensive stock of silver and silver plated goods, of superior quality. Table services, epergnes, dishes, tureens, liquor, cruet, and soy frames, salts, toast racks,..." Address: Sheffield.

656. *Bulletin des Sciences Agricoles et Economiques.*1828. Manière de préparer le Soya chinois [How to prepare Chinese soy sauce]. 9:333-35. Quatrième Section du Bulletin Universel. [1 ref. Fre]

• ***Summary:*** From *Journal des Connaissances Usuelles et Pratiques,* Vol. 3, no. 14, 1826, p. 123; This detailed description begins as follows: Soy sauce (*Le Soya*) is made with a species of small bean named *Dolichos soya,* smaller and whiter than the bean of Turkey (*le fève de Turquie*), plus wheat flour, salt, and water, which are used in the proportion of 50 pounds (*livres*) of the beans, 50 lb of salt, 60 lb of wheat flour, and 250 lb of water.

657. Gray, Samuel Frederick. 1828. A supplement to the pharmacopoeia: Being a treatise on pharmacology in general;... 4th ed., considerably enlarged, including the alterations in the new London Pharmacopoeia, and the new French medicines. London: Printed for Thomas and George Underwood. lvi + 528 p. Index. 22 cm.

• ***Summary:*** Chapter 1, "Vegetables," notes (p. 37): "***Bitter cassava, J. manihot.*** Root full of an acrid, poisonous, milky juice, separable by expression, or corrected by roasting, thus yielding a nutritive farina; also by boiling the juice which is used as a sauce, and made into soy" [sauce].

The same chapter states: (p. 95): "D. [Dolichos] soya. Seeds used to make soy, eaten in soup."

Chapter 3, "Compound combustibles, not oily," states (p. 166): "Cochin China lock-soy, *Gummi ex oryza arte facta.* Rice boiled to a kind of paste, and drawn out into threads; transparent; used to thicken soups.–China lock-soy, Opaque and less esteemed."

Chapter 11, "Liquid compounds, not oily," gives a recipe (p. 340): "Quin's sauce. Walnut pickle, Port wine, of each 1 pint, mushroom catsup 2 pints, anchovies, eschalots, of each 2 doz., soy ½ pint, Cayenne pepper 2 av. drams; boil gently for ten minutes; strain and bottle.–2 [2nd recipe]. Soy 8 lb, walnut katchup, mushroom katchup of ea. 2 gall [gallons], sprats 8 lb, Cayenne pepper 8 oz. garlic 1 lb.–3. Distilled vinegar 1 gall, soy 1 lb, allspice 8 oz.–4. Walnut pickle ½ a pint, katchup ½ a pint, anchovies no. 6, garlic 6 cloves, Cayenne pepper 3j. Note 1. The first three of these four recipes for Quin's sauce calls for soy as an ingredient.

Note 2. This is the earliest English-language document seen (March 2012) which mentions the word "dram" (or "drams"). The archaic spelling of this word is "drachm." The apothecary symbol resembles the number "3." In the avoirdupois system the dram, as a unit of weight, is 1/16 ounce or 1.771 grams.

Next comes a recipe for homemade soy sauce (p. 340): "Soy. Seeds of dolichos soja (peas or kidney beans may be used for them) 1 gall, boil till soft, add bruised wheat 1 gall, keep in a warm place for 24 hours, then add common salt 1 gall, water 2 gall, put the whole in a stone jar, bung it up for two or three months, shaking it very frequently, press out the liquor: the residuum may be treated afresh with water and salt, for soy of an inferior quality.–2. Strong purl boiled to an half, add red herrings, anchovies, Spanish liquorice, and garlic: when shaken it should leave a yellow brown colour on the sides of the vessel."

On the same page is a recipe for Coratch which includes "Ind. [Indian soy or India soy] soy." On the next page (341) is a recipe for "Kitchiner's double relish: Sauce superlative 4 pints, add ½ a pint of soy or thick browning." In the same chapter, the section on "Impregnated vinegars" has a recipe (p. 350) for "Camp vinegar" that calls for soy.

Chapter 11 also discusses "Colour for browning" (p. 391): "Lump sugar 8 oz, water a table-spoonfull; heat it to a brown colour; add salt 1 oz, and dilute with water to the thickness of Japan soy: used to colour sauces." Address: Lecturer on the materia medica, pharmaceutical chemistry, and botany.

658. Hamilton, Walter. 1828. The East-India gazetteer: containing particular descriptions of the empires, kingdoms, principalities, provinces, cities, towns, districts, fortresses,... 2nd ed. Vol. 1 of 2. London: Printed for Parbury, Allen, and Co. See p. 148. Two (folded) maps. 23 cm. [6 ref]

• ***Summary:*** Under the entry for Batavia: "The Dutch being the only nation that keeps up an intercourse with Japan, a ship is annually despatched from Batavia laden with kerseymeres, fine cloths, clock-work, spices, elephant's teeth, sapan wood, tin and tortoiseshell. The returns from Japan consist principally of ingots of the finest red copper, which is converted into a clumsy sort of coin for paying the native and European troops. Various other articles are smuggled in by the officers such as sabre-blades of an excellent temper, Japan camphor, soy [sauce], china-ware, lacquered ware, and silk goods. The cargo always contains a present for the emperor of Japan, and he in return sends one to the Governor general, consisting usually of...

"A.D. 1619, John Pieterson Coen, the Dutch governor, took the town of Jacatra by assault, and in a great measure destroyed it. He afterwards founded another city, not exactly on the same spot, to which he have the name of Batavia. In 1811 it surrendered at discretion to the British army under Sir Samuel Auchmuty... During the British possession of Batavia, which lasted until 19th August 1816, its condition was greatly improved and even its pestilential atmosphere somewhat ameliorated by the great pains bestowed on the

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draining of the marshes, the cleaning of the town, and the removing of the Europeans to the elevated tracts of the interior."

Note: A kerseymere is a fine woolen cloth with a fancy twill weave. Address: M.R.A.S.

659. Johnstone, Christian Isobel (Christian Jane). 1828. The cook and housewife's manual: Containing the most approved modern receipts [recipes] for making soups, gravies, sauces, ragouts, and all made-dishes; and for pies, puddings, pickles, and preserves; also for baking, brewing... 3rd ed.; in which are given a compendium of French cookery, a new system of fashionable confectionary (sic)... By Mrs. Margaret Dods [pseud.]. Edinburgh: Printed for Oliver and Boyd,... 2 + 1 + 525 p. Illust. 20 cm.

• ***Summary:*** "Soy" is mentioned on 17 pages as follows: Broths, soups and gravies (p. 135. "The best plain browning for soups, sauces, gravies, &c., is red wine, soy, or mushroom or walnut catsup").

Ox-head-soup, called hessian soup, and ragout (p. 154-55. "Obs.–Soy, forcemeat-balls, wine, &c., are all ordered for this ragout in some approved books of cookery; but we consider such expensive ingredients quite out of place in a preparation which is cheap, good, and savoury, but never can be elegant").

To broil cod-sounds (p. 178. "Dish them, and pour a sauce made of browned gravy, pepper, cayenne, salt, a little butter kneaded in browned flour, a tea-spoonful of made mustard, and one of soy").

To dress sturgeon (p. 180. "Sauce,–oyster or lobster sauce, or melted butter, with a little soy and essence of anchovy").

To stuff and bake carp, pike and haddocks (p. 189-90. "Strain and add to the sauce a tea-spoonful of made mustard, and one of Chili vinegar, a glass of red wine, and a little soy, with mace, pepper, and salt to taste. Pour a little of this over the carp, and serve the rest in a tureen"). See also p. 194, 195, 197, 240, 249, 251, 252, 258, 293, 294, 316, 373.

Catsup is mentioned on 90 pages of this book.

"Quin's* fish-sauce, a store-sauce (p. 252. "Two glasses of claret and two of walnut-pickle, with four of mushroom-catsup; six pounded anchovies with their pickle, and six shalots pounded; a half-glass of soy, black and cayenne pepper. Let this simmer slowly by the side of the fire till the bones of the anchovies dissolve. Strain it off, and when cold bottle for use").

Footnote: *"Had this Great Man [Quin] lived now, he would, we think, instead of so much heavy catsup and coarse walnut-pickle, have adopted some delicately-flavoured vinegar as a substitute for about the one-half of these ingredients,–such as eschalot or burnet-vinegar, or even fiery horseradish-tincture. As a mere untravelled practical Englishman, and, moreover, of the old school, Quin, no doubt, ranks high in the lists of gastronomy: but he is completely distanced by many moderns, both in love for and knowledge of the science."

Note: Soy was apparently a traditional ingredient in Quin's sauce.

Mistress Margaret Dods is a pseudonym for Christian Isobel Johnstone who lived 1781-1857. Address: Of the Cleikum Inn, St. Ronan's.

660. *New Bedford Mercury* (*Massachusetts*).1829. Dyspepsia (From the N.Y. London Magazine). March 13. p. 1.

• ***Summary:*** His plump opponent "lifted a sole of seven inches by eleven on his plate, and almost set it a swimming in melted butter, anchovy essence, catsup, and India soy [sauce]. Very queer thought I -..."

661. *Asiatic Journal and Monthly Register for British India and its Dependencies.*1829. Canton (Abstract). 27:47-55. See p. 51.

• ***Summary:*** Abridged from the *Oriental Magazine* [*The Quarterly Oriental Magazine, Review and Register*] (Calcutta): See: Lelius. 1827. "Journey of a voyage from Calcutta to China." 7(14):222-67. June. See p. 257-58.

662. Janvier (Thomas). 1829. Classified ad: Has for sale. *Baltimore Patriot.* Sept. 15. p. 3.

• ***Summary:*** "... Champagne. East India Soy [sauce]. Manufactured Tobacco..." Note: This ad also appeared 8 times in this newspaper during the next 3 months. Address: No. 87 Smith's wharf.

663. Barnes and Thornton. 1829. Sales by auction: Fish sauces and pickles in fine preservation (Ad). *Times* (*London*). Oct. 21. p. 4, col. 4.

• ***Summary:*** "Comprising India Soy [sauce], German Anchovy Sauces, walnut and mushroom catsup,..." Address: 29, Rood-lane [London].

664. Nuttall, Thomas. 1829. Soy bean (Letter to the editor). *New England Farmer* 8(14):105. Oct. 23. Friday.

• ***Summary:*** In this front-page letter dated Oct. 14, Nuttall writes: "As this plant thrives well in this climate, and perfects its seeds, it may not, perhaps, be amiss to say something of its use and history. It is an annual Bean, not much unlike those we commonly cultivate, with an erect stem, showing a slight tendency to twine at the summit only; the flowers are very small for the germs, and reddish in axillary clusters; the legumes are pendulous, hispid with brown bristly hairs, with which the whole plant is more or less clothed–these pods contain 2 or 3 beans when mature, almost of a chocolate brown, and somewhat smaller than any generally cultivated in this country." It belongs to the genus *Dolichos* (*D. Soja*), which also affords us several other edible legumes. It is said to be indigenous to India and Japan, where as well in China and Cochin-China, it is

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very generally cultivated for food and probably preferred for its great productiveness. A single bean produced, and perfectly ripened with us at the Botanic Garden, 182 pods with 2 to 3 beans in each. Whether in this country, where so many fine legumes are cultivated, it might be esteemed for food, is doubtful; the experiment may easily be made. But its principal recommendation at present in [sic, is] only as a luxury, affording the well known sauce called *Soy*, which at this time is only prepared is [sic, in] China and Japan–that of the latter country being usually preferred. The mode of obtaining this sauce, is said to be as follows: -

"After the seeds are boiled until they become soft, they are mixed with an equal weight of wheat or barley flour coarsely ground. This mixture is fermented, and a certain proportion of salt and water being added, the whole is allowed to stand for two or three months, care being taken to stir it every day; and by the end of that time it is ready for use. Its composition then appears to be perfectly harmless, which cannot be said of many other sauces; and among the Asiatics it is considered beneficial in promoting an appetite.

"Yours, respectfully, Thomas Nuttall."

Note 1. Unfortunately Nuttall did not indicate where he obtained his seeds. In 1831 a person known only as "H." received a few soybeans from Nuttall and grew them in Milton, Massachusetts. Nuttall lived 1786-1859.

Note 2. This is the earliest document seen (May 2011) concerning soybeans in Massachusetts, or the cultivation of soybeans in Massachusetts. This document contains the earliest date seen for soybeans in Massachusetts, or the cultivation of soybeans in Massachusetts (1829). The beans were probably planted in about May-July 1829. The newspaper was published in Boston.

Note 3. This is the earliest English-language publication seen (Sept. 2006) with the word "soy bean" (or "soy beans") in the title.

Note 4. This letter was reprinted in the *American Farmer* (Baltimore, p. 260-61) on 30 Oct. 1829 (Vol. 33, No. 11). Address: Botanic Garden, Cambridge, Massachusetts.

665. Janvier (Thomas). 1829. Classified ad: Offers for sale. *Baltimore Patriot*. Nov. 13. p. 1.
• ***Summary:*** "Virginia Hemp. Brazil white Sugar. Champagne. East India Soy [sauce]. Manufactured Tobacco. Spanish Cigars..."

Note: This is the last entry seen in the Early American Newspapers database that mentions "East India Soy." Address: 87 Smith's whf [wharf].

666. Johnstone, Christian Isobel (Christian Jane). 1829. The cook and housewife's manual: A practical system of modern domestic cookery and family management. 4th ed., revised and enlarged. Containing a compendium of French cookery, and of fashionable confectionary, preparations for invalids, a selection of cheap dishes, and numerous useful miscellaneous receipts [recipes] in the various branches of domestic economy. By Mistress Margaret Dods. Edinburgh, Scotland: Oliver & Boyd; London: Simpkin & Marshall. 552 p. See p. 292-93. Illust. 20 cm. The 1st edition was 1826.
• ***Summary:*** In Part III, Chapter 1 is titled "Made-dishes of beef, mutton, veal, venison, hare, and poultry." Soy [sauce] is mentioned in two recipes:

"459. To hash a calf's-head.–Clean and parboil the head; or take what is left of a plainly boiled cold head, and cut it into slices of a rather larger size than for fricassee. Peel and slice the tongue... Season with... a little of any piquant store sauce, and warm up the hash without suffering it to boil... A *brown hash* may be made as above by using fried onion, catsup, soy, a little red wine, &c.; but as all brown made-dishes are expected to be piquant,... seasonings of a more pungent quality are to be used" (p. 292).

"460. Mock-turtle, of calf's-head.–Get a large fat head with the skin on. Scald and clean it well... When the meat has stewed very slowly, rather soaking in the gravy than actually boiling, and is very nearly ready, put to it cayenne to taste, a small glass of catsup, a very little soy, and a couple of spoonfuls of chopped basil, tarragon, chives, and parsley" (p. 293).

On the title page, the author's name is given as "Mistress Margaret Dods;" this is a pseudonym for Christian Isobel Johnstone who lived 1781-1857. Address: Of the Cleikum Inn, St. Ronan's [England].

667. King, Lord. 1829. The life of John Locke, with extracts from his correspondence, journals, and common-place books. London: Henry Colburn. xi + 408 p. See p. 133-34. 30 cm.
• ***Summary:*** In the section titled "Extracts from the Journal of Locke," Lord King notes: "The following directions appear to have been set down for some foreigner about to visit England. They are curious, as affording a comparison with the improvement of the present time. 'England.–1679.'"

Among his description of the foods and condiments which ought to be enjoyed in London, Locke noted: "Puddings of several sorts and creams of several fashions, both excellent, but they are seldom to be found, at least in their perfection, at common eating-houses. Mango and saio are two sorts of sauces brought from the East Indies." Saio almost certainly refers to *shoyu* (Japanese-style soy sauce) and was cited as such by both Yule and Burnell in Hobson-Jobson (1886, p. 651, "Soy") and the *Oxford English Dictionary* (1919, "Soya").

An illustration (engraving) shows a portrait of John Locke. Locke (lived 1632-1704) was an English philosopher. The preface to this work notes that "After the death of Locke, his papers, correspondence, and manuscripts, came into the possession of Sir Peter King, his near relation and sole executor." Lord Peter King King, the 7th baron, lived 1776-1833.

An 1884 edition of this book, with a slightly different

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title (which see), was published in London by George Bell & Sons. Though not a facsimile edition, the passage on soy sauce also appears on page 134. Address: Ockham.

668. **Product Name:** [Kushigata Shoyu].
Foreign Name: Kushigata Shôyu.
Manufacturer's Name: Mogi Shichizaemon.
Manufacturer's Address: Noda, Japan.
Date of Introduction: 1830.
New Product–Documentation: Noda Shoyu K.K. (Morio ICHIYAMA, ed.). 1940. Noda Shoyu K.K. Nijunen-shi [Twenty-year history of Noda Shoyu, Inc.]. p. 471. The Kushigata brand of shoyu (of which the logo is shown) was introduced in Tenpo/Tempo 1 (1830).

Mark Fruin. 1983. Kikkoman: Company, Clan, and Community. Page 73 notes that by 1909 the four major brands manufactured by the Noda shoyu cartel were Kikkoman, Kihaku, Kamigata (Joju), and Kushigata.

669. Crawfurd, John. 1830. Journal of an embassy from the Governor-General of India to the courts of Siam and Cochin China: Exhibiting a view of the actual state of those kingdoms. 2 vols. 2nd ed. London: Henry Colburn and Richard Bentley. See Vol. II, p. 155, 282, 359.
• ***Summary:*** Chapter 2, about Siam, states (p. 155): "The imports from China [to Siam] are very numerous, consisting of what are called in commercial language 'assorted cargoes.' The following is a list of the principal commodities: coarse earthenware and porcelain, spelter, quicksilver, tea, lack-soy (vermicelli), dried fruits, raw silk, crapes, satins and other silk fabrics, nankeens, shoes, fans, umbrellas, writing-paper, sacrificial paper, incense rods, and many other minor articles."

In Chapter 6, about the people of Cochin China (today's Vietnam), we read (p. 282): "They eat vermin, and the flesh of the alligator: hatched eggs with them are a delicacy: and their favourite sauce is a kind of soy [probably nuoc-mam], in part, at least, composed of the juices of putrid fish, and which, both from taste and odour, would be in tolerable to any other people."

Chapter 8, about the Island of Singapore, states (p. 358-59): "The first direct arrival from England to Singapore was in the year 1821; in 1822, four ship cleared out with cargoes for the European market; in 1823, nine; in 1824, twelve; in 1825, fifteen; and in 1826, fourteen ships. The greater number of these were bound for London and Liverpool, but there were some also for Stockholm, Hamburgh [Hamburg], and Bordeaux. The staple imports of this branch are cotton goods, woolens, iron, and spelter [unrefined zinc]. The exports are very various, and may be enumerated as follow: ore of antimony, aniseed, aniseed oil, benjamin [gum benjamin, a balsam or resin from a tree], camphor, cassia, cassia-buds, coffee, cubebs [small spicy berries of the *Piper cubeba* from Java], dragons' blood [a resinous substance, or red juice, extracted from the *Dracoena draco*], elephants' teeth [tusks, ivory], gamboge [a concrete vegetable juice or gum-resin from Cambaja or Cambodja {Cambodia}], horns of cows, deer, and buffalo; hides of ditto, mother of pearl shells, musk, nankins [nankeens, a type of cotton cloth, originally from China], orpiment [sulphuret of arsenic], pepper, Chinese paper, Chinese raw silk, Chinese wrought silk, ratans [small canes, grown in India] and canes; rhubarb, cloves, mace, and nutmegs; pearl sago, Siam sugar, Japan soy [sauce], tin, tortoiseshell, turmeric, gold and silver bullion, and sapan-wood [sappan wood; a red soluble brazilwood obtained from an East Indian tree *Caesalpinia sappan*]. In 1824, and I have seen no later statement, the sworn value of these articles was 1,035,868 Spanish dollars."

Note: This is the earliest document seen (May 2010) concerning soybean products (soy sauce) in Singapore. This document contains the earliest date seen for soybean products in Singapore (1826); soybeans as such have not yet been reported. However, in 1830 soy sauce exported from Singapore was probably made in Singapore from soybeans that were in Singapore at this early date; soybeans may well have been cultivated in Singapore at this time. Address: Esq, FRS, FLS, FGS, &c.

670. Dalgairns, Mrs. 1830. The practice of cookery: Adapted to the business of every day life. 3rd ed. Edinburgh, Scotland: Printed for Robert Cadell, Edinburgh. 552 p. Index.
• ***Summary:*** A book of Scottish cookery. The following recipes call for soy [sauce] as an ingredient: In the chapter on "Fish:" To stew salmon (p. 42). Salmon fritters (p. 43). Cod sounds broiled (p. 48). Dressed skate (p. 49). Boiled carp (p.

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50). Little fish puddings (p. 51-52). Brown fish and sauce (p. 52-53). Baked haddocks (p. 54). To bake mackerel (p. 57). To broil sprats (p. 59). Fish soup cake (p. 66).

Hessian stew (beef) (p. 83-84). Rolled mutton (p. 105). Burdwan stew (p. 166). Another way to stew duck (p. 167). Another sauce for roast beef (p. 191). To make a quart bottle of fish or meat sauce (p. 191). Fish sauce (p. 192). Another poivrade sauce for cold meat (p. 195). Fish sauce (p. 202). Coratch (p. 203; "two tablespoons of Indian soy, one spoonful of walnut catsup,...").

In the chapter on "Gravies, sauces, etc., the recipe To make gravy without meat (p. 187) is especially interesting: "Slice three onions, and fry them brown in a little butter; add them to half a pint of water, and the same of beer, put in some peppercorns, salt, a little lemon-peel, three cloves, a little mace or Jamaica pepper, a spoonful of walnut pickle, and one of mushroom catsup, of soy and essence of anchovy a dessert-spoonful each, a small bunch of sweet herbs, and a quarter of a slice of bread toasted brown on both sides: simmer all together in a closely-covered sauce-pan for twenty minutes, then strain it for use, and when cold, take off the fat. It will taste exactly like a gravy made with meat."

In the chapter on "Vinegars," the recipe for "Harvey's, or camp vinegar" states (p. 406): "Put the following ingredients into two quarts of strong vinegar, three table-spoonfuls of Indian soy, and the same quantity of mushroom catsup, six anchovies, two heads of garlic, a quarter of an ounce of cayenne, and as much cochineal as will colour it; shake it two or three times a-day for a fortnight, then filter, and bottle it for use. Two tea-spoonfuls of this vinegar improves salad sauce, fish and sauce also, and is good in most made dishes."

The following recipes call for "Harvey sauce" (spelled without an apostrophe): Stewed skate (p. 49). Sauce for the fish puddings (p. 51). To broil a cold roasted shoulder of mutton (p. 105-06). Devil [leg of roasted turkey, goose, or fowl] (p. 168).

Many recipes call for catsup, including mushroom catsup, Lobster catsup (p. 189), Fish catsup (p. 203), and walnut catsup (p. 412); "catchup" is not mentioned.

Note: This is the earliest document seen (Oct. 2010) that mentions "Lobster catsup" (regardless of spelling).

671. Dobell, Peter. 1830. Travels in Kamtchatka and Siberia; with a narrative of a residence in China. 2 vols. London: Henry Colburn and Richard Bentley. See vol. 2, p. 324-25. 20 cm.

• ***Summary:*** Note: The first several paragraphs of this are copied from *Portfolio* (1819, p. 105-06).

In Chapter XII of the section titled "A Residence in China," the author is describing Chinese food, especially in the Canton area: "An article of food, of which all classes appear extremely fond, is *thow-foo* [tofu] and *foo-chack*, a sort of flummery [soft jelly or porridge], made from beans, very palatable and nourishing.

Note: The Cantonese term *foo jook* means dried yuba sticks. Perhaps the author was describing the product after the sticks had been broken into pieces and cooked until soft.

Soy, their famous sauce for all kinds of food, is also made from beans. The beans are boiled until all the water is nearly evaporated, and they begin to burn, when they are taken from the fire, and placed in large, wide-mouthed jars, exposed to the sun and air; water and a certain portion of molasses or very brown sugar are added. These jars are stirred well every day, until the liquor and beans are completely mixed and fermented; the material is then strained, salted, and boiled, and skimmed until clarified; and will, after this last process, become of a very deep brown colour, and keep any length of time. Many persons have thought that gravy was used in preparing this condiment; but this appears not to be the case, the composition being entirely a vegetable one, of an agreeable flavour, and said to be wholesome. There are two or three qualities of it; to make the best requires much care and attention. Japanese *soy* is much esteemed in China, on account of the superior manner in which it is made; perhaps they have a particular sort of bean for that purpose. Shopkeepers at Canton who sell soy, have large platforms on the roofs of their houses, where the jars for preparing soy are all arranged, and exposed to the sun; for the consumption of this article is enormous. Neither rich nor poor can dine, breakfast, or sup without soy; it is the sauce for all sorts of food, gives a zest to every dish, and may be said to be indispensable at a Chinese repast.

"In general, very little meat is eaten."

Note: The author spent 7-8 years in China between 1798 and 1820. He died in 1852. Address: Counsellor of the Court of His Imperial Majesty, the Emperor of Russia.

672. Dolby, Richard. 1830. The cook's dictionary, and housekeeper's directory: A new family manual of cookery and confectionery, on a plan of ready reference, never hitherto attempted. London: Henry Colburn and Richard Bentley. iv + 516 p. See p. 446. 22 cm.

• ***Summary:*** In the section on sauces, we read (p. 446): "Sauce (*Harvey*). Chop twelve anchovies, bones and all, very small, with one ounce of cayenne pepper, six spoonsful [spoonfuls] of soy [sauce], six ditto of good walnut pickle, three heads of garlic, chopped not very small, a quarter of an ounce of cochineal, two heads of shalots [shallots], chopped not very small, one gallon of vinegar; let it stand fourteen days, stir it well twice or thrice every day; then pass it through a jelly-bag, and repeat this till it is perfectly clear; then bottle it, and tie a bladder over the cork."

Note 1. Since Harvey Sauce was a commercial product, we have given the complete recipe. This is the earliest document seen (April 2012) stating that soy sauce is used as an ingredient in Harvey sauce. This is also the earliest document seen (April 2012) that describes the use of soy

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sauce as ingredient in a second-generation product.

The book also contains two recipes for Ketchup (p. 298), relatives of expensive imported Javanese soy sauce in those days; kecap / ketjap is the Indonesian word for soy sauce. (1) "Ketchup, *English.*–Peel ten cloves of garlic, bruise them, and put them into a quart of white wine vinegar; take a quart of white port, put it on the fire, and when it boils, put in twelve or fourteen anchovies, washed and cut into pieces; let them simmer in the wine till they are dissolved; when cold, put them to the vinegar; then take half a pound of white wine, and put into it some mace, some ginger sliced, a few cloves, a spoonful of whole pepper bruised; let them boil a little; when almost cold, slice in a whole nutmeg, and some lemon-peel, with two or three spoonsful of horse-radish; add it to the rest, stop it close, and stir it once or twice a day. It will soon be fit for use. Keep it close stopped up."

(2) "Ketchup, *White.*–Take a quart of white wine, a pint of elder vinegar, and one quart of water; half a pound of anchovies, with their liquor, half a pound of scraped horse-radish, an ounce of shalots bruised, an ounce of white pepper bruised, an ounce of mace and a quarter of an ounce of nutmegs cut in quarters; boil all together till half is consumed, then strain it off, and when cold, bottle it for use. It is proper for any white sauce, or to put into melted butter."

Note 2. Neither of these catchup recipes calls for sugar or any other sweetener. The second is strained, whereas the first is not. Both are based on vinegar and wine (or port).

The word "ketsup" appears in three recipes in this book: (1) Calf's head hashed (p. 106, "two spoonsful of ketsup"). (2) Calf's head surprise (p. 108, "two spoonsful of walnut and mushroom ketsup"). (3) Celery sauce, (Brown) (p. 130, "a little ketsup"). Address: Cook at the Thatched-House Tavern, St. James St., London.

673. First annual report of the New York City Temperance Society. 1830. New York, NY: Printed by Sleight & Robinson. 54 + 24 p.

• ***Summary:*** The first appendix to this report is titled "Address delivered at the first anniversary of the New York City Temperance," by David Hosack, M.D.; he is president of the Temperance Society of Hyde Park, Dutchess County, N.Y. In this address, dated May 11, 1830, he states (p. 4): "In hot climates the very liberal use that is made of the fashionable condiments, mustard, soy, catsup, shallots, cayenne pepper, and turmeric, is to be considered in connexion [connection] with the climate and the excessive use of vinous and spirituous liquors, among the sources of those diseases, (particularly of the stomach and bowels,) which so frequently afflict the inhabitants of the torrid zone; but which are improperly ascribed to the heat of the climate as the exclusive cause. That this is not the case it is sufficient to remark, that the women are comparatively healthy and long lived in those climates; not only because they are less exposed to the direct rays of the sun, but by reason of their relative temperance. 'Water is for the most part the drink of the females in hot climates; hence we account for the common fact, that in the West Indies one woman generally survives two or three husbands.'"

The term "vegetable diet," referring to a vegetarian diet, appears on pages 4–5 of this address: "It occurs to me, sir, that good morals and probably our length of days, would be greatly promoted by returning in a greater degree than is the practice of this day, to the vegetable diet of our antediluvian ancestors, for it is not improbable that the excessive use of animal food, and the excess arising out of the arts that have been employed to excite the appetite, have been in part the source of those violent passions that have so much degraded the moral character of man, at the same time, that by more rapidly wearing out the system, they have swelled the catalogue of his diseases, and abridged the period of his existence. As it regards *strength*, animal food, except where the habitual use of it has rendered it so, is not necessary; the rhinoceros, the elephant, the giraffe, the elk, the bull, and the horse, which excel all other quadrupeds in bulk and strength combined, live solely on vegetable food: and indeed, in our own species numerous examples might be cited in which both the body and mind have attained to extraordinary vigor and exertion, in which the individuals referred to lived exclusively upon a vegetable diet. If it be true, as has been observed by some physicians, that life is a forced state of existence, such must inevitably be the result of the inordinate excitement produced by the excessive use of animal food. Indeed, it may be remarked in confirmation of the justness of this observation, that the most remarkable instances of longevity are found, according to Sir John Sinclair, among those nations who live chiefly on a vegetable diet. The excitants or condiments of the table, though grateful and in many instances salutary additions to our food, become sometimes the causes of disease, especially when habitually token at our meals, and in great quantities."

"As an incentive to temperance let it be recollected, that Sir Isaac Newton, when composing his celebrated treatise upon Optics, confined himself to water and a vegetable diet: to this abstemious mode of living, probably may be ascribed the great age, viz. eighty-five years to which he attained." Address: New York City.

674. First report (Part II). Minutes of evidence taken before the select committee of the House of Commons appointed to enquire into the present state of affairs of the East-India Company, and into the trade between Great Britain, the East-Indies, and China;... 1830. London: Printed for Parbury, Allen and Co. p. 246-418. See p. 385.

• ***Summary:*** On 16 March 1830, Mr. John Deans is called in and examined. He has resided constantly in the Eastern Archipelago of the East Indies for upwards of twenty years. For most of the time he lived in Java.

#3609. "Can you give the Committee any information

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with respect to the trade with Japan?–The Dutch are allowed to trade with Japan, and they are only allowed to send two ships. The trade was conducted until two years ago by the Dutch government of Java. I have here a list of the cargoes in the year 1825, both the imports and exports."

#3610. "Will you state the principal items of the trade?–In the Japan trade in 1825 there were two ships, amounting in all to about 1,300 tons; one was 600 and the other was 700 tons... The import cargoes [to the East Indies from Japan] consisted of... sackie and soy [sauce], 14,332 f. [Dutch florins];..."

675. Hogendorp, C.S.W. de. 1830. Coup d'oeil sur l'île de Java et les autres possessions néerlandaises dans l'archipel des Indes [A glance around the isle of Java and the other Dutch possessions in the East Indies]. Brussels: C.J. de Mat. xii + 422 p. Folded color map. 24 cm. [Fre]

• ***Summary:*** Page 158: Under the Malay name of *katjang idjoe*, the Chinese and some indigenous people cultivate a legume which is quite like the pea (*phaseolus radiatus*), from which is made on Java a sort of soy sauce (*soya*), which is called *ketjap*.

Note: Soy sauce in Java is made from the soybean, not from the mung bean (*katjang idjoe*). In Java, soy sauce is, indeed, called *ketjap*.

Page 204: The Europeans burn coconut oil in their lamps; and for this use it is preferable to bean oil (*l'huile de katjang*) [probably soy bean oil].

A long table (p. 396-97) shows the items to be taken on an expedition to Japan in 1827. The items exported from Japan on the return trip will consist mainly of refined copper, camphor, silk cloth,... porcelain, soy sauce (*du soya*), saké (*du sackie*),... Address: Graaf [Count], Knight of the Legion of Honor, Former Resident of Batavia, Buitenzorg, and Crawang.

676. Kitchiner, William. 1830. The cook's oracle; and housekeeper's manual: Containing receipts for cookery and directions for carving... With a complete system of cookery for Catholic families. From the last London edition. New York, NY: Printed by J. & J. Harper. 432 p. Illust. Index. Harper's Stereotype Edition.

• ***Summary:*** This New York edition reflects American tastes, preferences, ingredients, and ways of spelling. The title page states: "William Kitchiner, M.D. Adapted to the American public by a medical gentleman." Soy [sauce] is mentioned on pages 88, 95, 178, 232, 235, 238, 246-47, 271, 278, 292, 310, and 330.

The recipe for Quin's Sauce (p. 278) uses soy [sauce] as an ingredient. This book mentions "mushroom catchup" on pages 88, 154, 178, 197, 217-18, 241-43 (incl. "double mushroom catchup"), 252, 256, 278, 281, 312, 337, 364. It mentions "catchup" (of no special type) on pages 152, 159, 192, 232, 236-37, 283, 284, 302, 329, 422.

It mentions "walnut catchup" on p. 150, 243, 246, 254-55, 271, 282, 308, 318, 432. And "oyster catchup" on p. 178, 285 (No. 441; homemade). The section titled "Catchups" (p. 282-85) has recipes for "Mushroom catchup" (incl. "double catchup"), "Quintessence of mushrooms," "Oyster catchup," "Cockle and muscle catchup," and "Pudding catchup."

It uses the spelling "Catsup" on only page 422–surprisingly in the index entry for the various types listed above.

The recipe for "Mushroom catchup.–(No. 439)" begins: "If you love good catchup, gentle reader, make it yourself,* after the following directions, and you will have a delicious relish for made-dishes, ragoûts, soups, sauces, or hashes.

"A couple of quarts of double catchup, made according to the following receipt, will save you some score pounds of meat, besides a vast deal of time and trouble; as it will furnish, in a few minutes, as good sauce as can be made for either fish, flesh, or fowl." (Footnote: "*The mushrooms employed for preparing ready-made catchup, are generally those which are in a putrefactive state. In a few days after those fungi have been gathered, they become the habitations of myriads of insects.–Accum on *Culinary Poisons*, 12mo. 1820, p. 350"). Address: M.D., England.

677. Siebold, Philipp Franz von. 1830. Synopsis plantarum oeconomicarum universi regni Japonici [Synopsis of the economic plants from the entire empire of Japan]. *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen* 12:1-74. See p. 54-57. Also first table at end. [Lat; Dut]

• ***Summary:*** The English translation of this periodical title is: "Transactions of the Batavian Society of Arts and Sciences." Batavia roughly corresponds to today's Jakarta on the island of Java, Indonesia. This work lists 447 economic plants, including the soybean. The section on Leguminaceæ [sic, Leguminosæ] (p. 54+), mentions plants of the genera *Dolichos* (incl. *D. hirsutus* or Kudsu / Kudzu), *Sooja*, *Phaseolus*, *Pisum*, *Vicia*, *Medicago*, *Arachis*, *Glycyrrhiza*, and *Mimorsa*. There are two species of soybeans: *Sooja Japonica*, the cultivated soybean, and *Sooja nomame*, the wild soybean. The genus and its species and varieties are described as follows (p. 56):

"CLXXVIII. Sooja, Moench. Sieb. (Sooja du Japon).

296 *S. Japonica*, Sieb. *Sooju* vernacular *Daisu*, Japan.

Varieties, grouped by color: a. White seeds. *Daisu*, Japan. b. White fuscis seeds. *Tobimame*, Japan. c. Fuscis seeds. *Sinsjumame*, Japan. d. Black round seeds. *Kuromame*, Japan. a. Black flattened seeds. *Kurotokorosun*, Japan. a. Greenish seeds. *Awomame*, Japan.

Uses: To make *Sooju*, *Miso*, *Toafu* (shoyu, miso, and tofu).

297 *S. nomame*, Sieb. *Nomame ac Jawaraketsmai*, Japan (v.v.). [vidi vivam = I have seen a living plant specimen.] *Plantae sponte crescentis folia adhuc tenera pro potu Thea*

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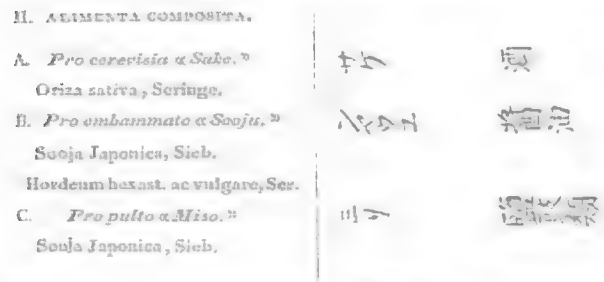
colliguntur.

At the end of this article are two large fold-out tables, each 30 by 18 inches, and each titled "Synoptic Table of Plant Uses." Each table contains six vertical double columns. References to soy appear only in table I. At the bottom right corner of the first is written in Latin: *"Dabam in Insula Dezima mensi Novembris 1827, Dr. von Siebold."* This translates as: "Given [as a letter for delivery] from the island of Dezima [Deshima], November 1827, Dr. von Siebold." The plants are divided into categories by type of use. For example: I. Simple foods: A. Cereal grains. B. Legumes. C. Fruits, etc. Under each category is a numbered list of the scientific names of the Japanese plants in that category, followed by its name written in both katakana and Chinese characters. Soy-based uses include: IA. Simple foods (*Alimenta simplicia*) (columns 1-4): Legumes (Legumina). 1. *Sooja Japonica*, Sieb. Daizu. "Yellow + Bean."

Note 1. This is the second earliest document seen (June 1999) written by a European or Westerner in which Chinese characters are used to write the name of the soybean or related products.

II. Composite foods (*Alimenta composita*) (columns 4-5). B. For the sauce "Sooju." Shoyu. Sooja Japonica, Sieb.

C. For the paste (*pulto*) "Miso." Miso. Sooja Japonica,


II. ALIMENTA COMPOSITA.

A. *Pro cerevisia « Sake. »*
Oriza sativa, Seringe.

B. *Pro embammato « Sooju. »*
Sooja Japonica, Sieb.
Hordeum hexast. ac vulgare, Ser.

C. *Pro pulto « Miso. »*
Sooja Japonica, Sieb.

Sieb. plus rice and barley

D. For the cake (*placenta*) "Toofu." Tôfu. Sooja Japonica, Sieb. Note 2. This is the earliest Latin-language or Dutch-language document seen (Feb. 2004) that uses the word "Taofu" or "Toofu" or "Tôfu" to refer to tofu.

P. For the sprouts (*germinatione artifaali*) "Mogasi." Moyashi. Soja Japonica, Sieb.

Note 3. This is the earliest document seen by Siebold in which the soybean is mentioned. This document also contains the earliest date connected with Siebold and soybeans (Nov. 1827). His name on the title page is written "De. de Siebold."

Note 4. Siebold was born on 17 Feb. 1796 in Würzburg [Bavaria, Germany]. In 1821, as a young ship's doctor, he arrived in Japan, where he worked as a doctor at Deshima near Nagasaki for the Dutch colony.

Also discusses: Column 1 of table 1 also mentions: 13. *Coix lachryma*, P.S., suudama [Job's tears]. 2. *Phaseolus atsuki*, Japon. Azuki. "Red + Small + Bean." 12. *Arachis hypogaea*, L.E. Rakkasei [peanut]. "Fall + Flower + Bean." Column 2 mentions *Sesamum Orientale, P.S., goma [sesame seeds]*. Column 3 mentions the wild soybean (*Sooja nomame*), *Amaranthus oleraceus, A. Japonicus*, and *A. bicolor.* Column 4 also includes sea vegetables (*kaiso*).

Column 5 mentions *ame* [grain syrup], *fu* [wheat gluten cakes], *soba, somen* [wheat noddles], *mochi, konnyaku, kudzu*, and *tokoroten*. III. Medicinal foods (*Medicamina*) (columns 5-6).

678. The cook not mad, or rational cookery: Being a collection of original and selected receipts,... 1830. Watertown, New York: Knowlton & Rice. 120 p. Index. 15 cm.

• ***Summary:*** "Soy" [sauce] is mentioned only once (p. 87): "No. 274. An excellent Ketchup which will keep good more than twenty years." The ingredients (which contain no soy) are: "Two gallons of stale strong beer or ale, the stronger and staler the better; one pound of anchovies, cleansed from the intestines and washed, half an ounce each of cloves and mace, one quarter ounce of pepper, six large roots of ginger, one pound of eschalots, and two quarts or more of flap mushrooms, well rubbed and picked." Boil for an hour, strain through a flannel bag, let stand until cool, bottle and stop "very close with cork and bladder, or leather."

Immediately after the recipe, the writer adds: "One spoonful of this ketchup to a pint of melted butter, gives an admirable taste and colour, as a fish sauce, and is by many preferred to the best Indian soy" [sauce].

679. Ward, Fanny (Mrs. R.). 1830. A child's guide to knowledge,... by a lady. 3rd ed. London: Hurst, Chance, and Co.; Whittaker and Co.; Simpkin and Marshall; and Harvey and Darton. iv + 302 p. See p. 78-79. Index. 16 cm.

• ***Summary:*** Pages 78-79: "Q. What is soy? A. A dark-coloured sauce, made from the seeds of a Chinese plant.

"Q. Is there not a joke among seamen, that soy is made from beetles and cock-roaches? A. Yes: it originates from a fancied resemblance in colour and shape of the seeds to the beetle.

"Q. Where is this esteemed sauce prepared? A. Chiefly in China and Japan; that brought from the latter place is most preferred."

680. Scammell (William). 1831. On sale–By the subscriber (Ad). *Courier* (*Saint John, New Brunswick, Canada*). Jan. 8. p. 4.

• ***Summary:*** "Small Jars East-India Ginger.

"A few dozen India Soy [sauce].

"Madeira and Port, by the doz. [dozen] or otherwise."

Note: This is the earliest document seen (Feb. 2010) concerning soybean products (soy sauce) in New Brunswick, or in Canada. This document contains the earliest date seen for soybean products in New Brunswick or in Canada (Jan.

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1831); soybeans as such have not yet been reported.

681. Grant (S.B.) & Co. 1831. Classified ad: Offer for sale. *Connecticut Courant* (*Hartford*). May 10. p. 4, col. 1.
• ***Summary:*** "10 boxes olives, capers and anchovies. 10 do. [ditto = boxes] Cavice, Reading, India Soy [sauce], Ketchup, John Bull, and other London sauces." Address: South side State House Square.

682. Smith (William O.). 1831. Ann–From London. The subscriber has received by the above vessel–a fresh supply of genuine drugs, medicines, patent medicines; perfumery, pickles,... among which are... (Ad). *Courier* (*Saint John, New Brunswick, Canada*). July 23. p. 1.
• ***Summary:*** "Essence of Gorgona Anchovies, Mushroom and walnut Ketchup, Harvey's Sauce, Browning Sauce, Indian Soy [sauce], Tomato Ketchup, Sallad Oil,..."

Note: William O. Smith ran several subsequent ads for India Soy, Walnut and Mushroom Ketchup, etc. in 1832 in this newspaper. Address: No. 1, North side of the Market-square.

683. *Mirror of Literature, Amusement, and Instruction* (*The*) (*London*).1831. Mode of making soy. 18(509):200-01. Sept. 17.
• ***Summary:*** A long excerpt from *Dobell's Travels.*

684. *Times* (*London*).1831. Mode of making soy. Sept. 23. p. 2, col. 5.
• ***Summary:*** From *Dobell's Travels:* "Soy, the famous sauce for all kinds of food, is made from beans. The beans are boiled until the water is nearly evaporated, and they begin to burn, when they are taken from the fire, and placed in large wide-mouthed jars, exposed to the sun and air; water and a certain amount of molasses or very brown sugar are added. These jars are stirred well every day, until the liquor and beans are completely mixed and fermented; the material is then strained, salted, boiled, and skimmed, until clarified; and will, after this last process, become of a very deep brown colour, and keep any length of time. Many persons have thought that gravy was used in preparing this condiment; but this appears not to be the case, the composition being entirely a vegetable one, of an agreeable flavour, and said to be wholesome. There are two or three qualities of it; to make the best requires much care and attention. Japanese soy is much esteemed in China, on account of the superior manner in which it is made; perhaps they have a particular sort of bean for that purpose. Shopkeepers at Canton who sell soy, have large platforms on the roofs of their houses, where the jars for preparing soy are all arranged, and exposed to the sun; for the consumption of this article is enormous. Neither rich nor poor can dine, breakfast, or sup without soy; it is the sauce for all sorts of food, gives zest to every dish, and may be said to be indispensable at a Chinese repast."

Note 1. This description of the Chinese process for making soy sauce is unusual in several ways: (1) The writer apparently does not know the name of the bean used. (2) The process of making koji, step one of the two-step fermentation process, is not mentioned. (3) Molasses or brown sugar are added before fermentation. (4) Salt is added after fermentation. (5) The sauce is sunned / fermented on a rooftop rather than in a courtyard at ground level.

Note 2. *Dobell's Travels* refers to: Dobell, Peter. 1830. *Travels in Kamtchatka and Siberia; with a Narrative of a Residence in China.* 2 vols. London: Henry Colburn and Richard Bentley. See vol. 2, p. 324-25.

Note 3. The quotation above differs slightly from that of the original.

685. Foss (Ambrose). 1831. Chemist & Druggist (Ad). *Sydney Morning Herald* (*NSW, Australia*). Sept. 26. p. 2, col. 2.
• ***Summary:*** Under "Spices, &c." "Essence of anchovies. Gorgona ditto [anchovies]. India soy and all kinds of fish sauces. Chili vinegar." Address: No. 18, Pitt-street, Sydney.

686. *Sydney Gazette and New South Wales Advertiser* (*NSW, Australia*).1831. Sydney general trade list. Imports. Reports from the 24th to the 31st Instant, inclusive. Nov. 1. p. 2.
• ***Summary:*** October 26.–"Elizabeth (ship), 427 tons, Phillips master, from Canton [China], R. Jones, agent;... 12 packages segars [cigars],... 50 packages sweetmeats, 6 jars soy [sauce], 1 box shirts,..."

687. Willis, Michael. 1831. Cookery made easy: being a complete system of domestic management, uniting elegance with economy... London: Thomas Allman. xvi + 216 p. See p. 48, 50-51, 60, 64. Illust. Index. 20 cm.
• ***Summary:*** In the section on boiling fish (p. 46+), "soy-sauce" is used in the following recipes: Skaite (p. 48. "Drain them well, and serve up with butter and anchovy, or soy sauce"). Soals [Soles], plaice and flounders (p. 48. "Serve with anchovy-sauce, and plain melted butter; or with shrimp, or soy sauce). Pike, or Jack (p. 50-51. "Garnish with sliced lemon and scraped horseradish, and anchovy, shrimp, or soy-sauce; or melted butter and ketchup").

In the section on frying fish (p. 58+), "soy-sauce" is used in the recipe for Flat fish (p. 60. "Serve them with anchovy, or soy-sauce").

In the section on broiling fish (p. 64+), soy [sauce] is used in the recipe for Sturgeon (p. 64. "Use for sauce, butter, anchovy, and soy").

Note 1. Neither of the two recipes for Quin's sauce (p. 182 and 183) use either soy sauce or ketchup as ingredients. They are: Quin's fish sauce, and Quin's game, and meat sauce.

Note 2. Ketchup is mentioned throughout this book: Cheaper calf's head soup (p. 8, with "two spoonfuls of

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walnut-ketchup, two of mushroom-ketchup"). 8. Giblet soup (p. 13). To make browning (p. 20-21). Oyster sauce (p. 26). Sauce for any kind of fish (p. 26). Sweetbreads (p. 31, with mushroom ketchup). Lamb's head (p. 42). Pike, or jack (p. 50-51). Chicken (p. 56). Tench (p. 59). Beef steaks (p. 62). Fillet of veal (p. 68). Knuckle of veal (p. 68). Carp or tench (p. 73). Beef hash (p. 75). Lamb's and pluck has (p. 75). Rabbits, brown (p. 81). Breast of veal (p. 84). Artichoke bottoms (p. 95, with mushroom-ketchup). French beans (with ketchup, p. 96). Celery (with ketchup, p. 96). Florentine hare (p. 103-04). Harrico mutton (p. 106-07). Recipe for walnut ketchup (p. 185). Address: For many years cook at the Thatched-House Tavern [England].

688. Shankey (J.). 1832. Classified ad: Chinese, Persian, and Indian rarities. Direct from East India House, London. *Scotsman* (*Edinburgh*). Feb. 24. p. 1.

• ***Summary:*** "Respectfully informs the Nobility and Gentry that this Superb Collection consists of... Pickled Bombay and Bengal Mangous [Mangoes], fine Chinese Soy and Curry Powder,..."

Note: This ad also appeared in the April 21 issue (p. 1) of this newspaper. Address: 70, Prince's Street, Edinburgh.

689. Remond (John). 1832. Classified ad: Hams, smoked beef, tongues, cheese, &c. *Salem Gazette* (*Massachusetts*). July 3. p. 1.

• ***Summary:*** "... 6 doz Calcutta Curry, just imported. Canton and Japan Soy [sauce]. Cases of Maccaroni [Macaroni]. Jars of Olives. Pickled Walnuts, &c."

Note 1. This is the earliest English-language document seen (April 2012) that contains the term "Canton Soy," which apparently refers to soy sauce made in Canton, China. In the Early American Newspapers (EAN) online database (produced by Readex, a division of NewsBank), there are at least 5 issues / records that contain the term "Canton Soy" from Aug. 1832 to April 1839.

Note 2. This ad last appears in this newspaper on 3 Aug. 1832 (p. 2). Address: No. 8 Derby Square.

690. Goddard (H.N.). 1832. Sales by auction: India mats and matting (Ad). *Times* (*London*). July 5. p. 8, col. 5.

• ***Summary:*** "... foreign preserves, pickles, arrow-root, fine old East India soy [sauce], French olives, &c." Address: 26, Conduit-street, Bond-street [London].

691. Don, George. 1832. A general system of gardening and botany: Containing a complete enumeration and description of all plants hitherto known; ...Founded upon Miller's Gardener's Dictionary, and arranged according to the natural system. Vol. 2. London: C.J.G. and F. Rivington. 875 p. See p. 356-57 (Soja), 220-21 (Glycine). Index at front. 27 cm. [3 ref]

• ***Summary:*** This work was published in 4 volumes between 1831 and 1838. It was "caused to be prepared" by the proprietors of *Miller's Gardener's and Botanist's Dictionary*. The alphabetical arrangement of genera used by Miller was discarded. "It only remained, therefore, to choose between the Linnæan artificial method, and the Natural System of Jussieu; but the numerous advantages of the latter, particularly in an extensive work like the present, were too apparent to leave any doubt in the mind of the Editor as to which he ought to adopt... In the Linnæan artificial method, it often happens, that genera, intimately related, are separated far apart into different classes and orders, merely on account of the difference in the number of their stamens and pistils; a circumstance now found in many instances scarcely to be of sufficient importance, even to separate species, still less genera... The plan of the present work is founded on that of M. de Candolle, in his invaluable works entitled *Regni Vegetabilis Systems Naturale* and *Prodromus*, with such alterations as were rendered necessary by the rapid increase of science, and with numerous additions of new genera and species..." Like Miller, Don classifies soybeans in the genus *Soja*.

"CXC. SOJA (*sooja* is the name of a sauce prepared from the seeds by the Japanese). Moench. meth. 153. Savi, diss. 1824. p. 16. D.C. legum. mem. ix. prod. 2. p. 396.

Note 1. This is the earliest English-language document seen (April 2012) that uses the term "sooja" to refer to soy sauce.

"Lin. Syst. *Diadélphia, Decándria*. Calyx bibracteolate at the base, 5-cleft, the 3 lower segments straight and acute, but the 2 upper ones are joined together beyond the middle. Corolla with an ovate vexillum, which stands on a short stipe, and with an oblong straight keel." Note 2. *A Dictionary of Botany*, by Little and Jones (1980) defines vexillum (plural: vexilla) as "See Banner." Banner is defined as "The broad uppermost petal of a papilionaceous corolla as in the irregular flowers of certain members of the pea family, Fabaceae. Synonym: Standard or vexillum."

"Stamens diadelphous, the tenth one approximate, but certainly distinct. Stipe of ovary not surrounded by a sheath at the base. Style short. Legume oblong, 2-5 seeded, membranous; the seeds intercepted by cellular dissepiments. Seeds ovate, compressed.–A hispid erect herb, with pinnately-trifoliate leaves, and with the flowers either aggregate in the axils of the leaves on short pedicels, or disposed in short peduncalate racemes.

"1 S. híspida (Moench. l. c.) Annual. Hardy. Native of Japan, East Indies, and the Moluccas. Dólichos Soja, Li. spec. 1621. Jacq. icon. rar. t. 145. Soja Japónica. Savi, diss. l. c. Kæmpf. amoen. 837 and 838, with a figure. Corolla violaceous, hardly longer than the calyx.

"The seeds, which are usually called *Miso* [sic, error based on Miller 1807] in Japan, are put into soups, and are the most common dish there, insomuch that the Japanese frequently eat them three times a day. The *Soja* of the

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Japanese, which is preferred to the *Kitjap* of the Chinese, is prepared from the seeds, and is used in almost all their dishes instead of common salt. The Chinese also have a favourite dish made of these seeds, called *ten-hu* [*sic, teu-hu,* i.e. tofu] or *tau-hu,* which looks like curd, and though insipid in itself, yet with proper seasoning is agreeable and wholesome.

"*Var. Beta, pállida* (D.C. prod 2. p. 396.) flowers yellow; seeds white. Roxb. [Roxburgh] hort. beng. p. 55.

"*Hispid* Soja. Fl. [Flowering] July, Aug. Clt. [Cultivated since] 1790. Pl. [Plant] 1½ foot.

"*Cult* [Culture and propagation]. The seeds of this plant only require to be sown in a warm sheltered situation in the month of May."

Under Phaseolus, Don lists a species named *Phaseolus max*, following Linnaeus and Rumphius, but he apparently did not confuse this with the soybean (listed on the same page under Soja hispida), since he noted that the species was not sufficiently known, the seeds were black, about the size of coriander-seeds, and that *Max* is the Spanish name of the plant.

On p. 220 we read: "XCV. Pueraria (in honour of M.N.N. Puerari, a professor at Copenhagen [Denmark]). D.C. ann. sc. nat. 1825. jan. p. 29. Leg. mem.vi. prod.2. p. 240. Lin. syst. Monadélphia, Decándria." Species: *P. tuberosa, P. Wallichii.*

George Don, son of George Don (1764-1814), was a British plant collector and nurseryman, born in Scotland, and lived 1798-1856. He collected plants on various expeditions for the Horticultural Society of London in Brazil, West Indies, and Sierra Leone. One of the most indefatigable and accurate botanists. Philip Miller lived 1691-1771. Note the similarity of the section on food uses of soybean seeds to that of Miller (1807). Address: England.

692. Encyclopædia Americana: A popular dictionary of arts, sciences, literature, history, politics and biography. A new edition. 14 vols.: Soy. 1832. Philadelphia, Pennsylvania: Lea & Blanchard. See vol. 11, p. 502-03.

• ***Summary:*** "Soy; a dark-colored sauce, prepared by the Chinese from the seeds of a sort of bean (*dolichos soja*). The plant has an upright and hairy stem, erect bunches of flowers, and pendulous, bristly pods, each containing about two seeds. The common story that soy is made from cockroaches or beetles, has probably originated from the form and color of these seeds. The process of preparing soy consists in boiling the seeds until they become soft, and mixing with them an equal weight of wheat or barley meal, coarsely ground. This mixture is fermented, and, a certain proportion of salt and water being added, the whole is allowed to stand for two or three months, care being taken to stir it daily: at the end of this time it is ready for use. The seeds are, besides, employed in China and Japan as food: they are made into a kind of jelly or curd, which is esteemed very nutritious, and is rendered palatable by seasoning of different kinds. In Japan, they are put into soups, and are the most common dish of the country, being frequently eaten three times a day. Soy [sauce] is chiefly imported from China and Japan, and that from the latter country is the most highly esteemed. The quantity annually sold in England, at the East India company's sales, is from 800 to 2000 gallons."

Note 1. Much of this information is taken from Willich (1821).

Note 2. The identical information appeared in the 1849 edition of this encyclopedia, in the same volume and pages.

693. Koenig, Joseph. 1832. Geist der Kochkunst: Ueberarbeitet und herausgegeben von C.F. Rumohr [or rather, written by him]. Zweite vermehrte und verbesserte Auflage [Spirit of the culinary art. Revised and prepared by Karl Friedrich von Rumohr. 2nd enlarged and improved edition]. Stuttgart and Tuebingen: J.G. Cotta. xvi + 196 p. See p. 155. 21 cm. [Ger]*

• ***Summary:*** In this book the art historian Carl Friedrich von Rumohr (lived 1785-1843) conjectures that the Garum sauce of the Romans was an imitation of the East Indian sauce (*Sulze*) made from soybeans.

694. Lee, N.K.M. 1832. The cook's own book: Being a complete culinary encyclopedia; Comprehending all valuable receipts... By a Boston housekeeper. Boston, Massachusetts: Munroe and Francis; New York: Charles E. Francis and David Felt; Philadelphia: Carey and Lea, etc. xxxv + 300 p. No index. 19 cm.

• ***Summary:*** The section titled "Broths and soups" states (p. xxiv): "Zest, soy [sauce], cavice, coratch, anchovy, curry powder,... are very convenient auxiliaries to finish soups, &c." "Soy" [sauce] is mentioned as an ingredient in the following recipes: Browning (p. 28-29). Burdwan stew (p. 30). Carp, boiled ("a table-spoonful of soy," p. 44). Cod sounds, broiled (p. 53). Duck, to stew (2) (p. 67). Gravy made without meat (1) (p. 91). Mutton, rolled (p. 122). Perch boiled ("serve with melted butter and soy," p. 138). Red mullet (p. 173). Salmon, stew (p. 180). Sauce (2) ("three large table-spoonfuls of Indian soy or mushroom ketchup," p. 182). Sauce for fish (1) (p. 185). Sauce for fish (2) ("This is commonly called Quin's sauce." p. 185). Sauce for fish (3) (p. 185). Sauce for fish (6) (p. 185). Fish or meat sauce, to make a quart bottle of (p. 185-86). Sauce, liver, for fish (p. 186). Sauce for pike (p. 186). Sauce, Harvey (p. 186-87). Note: This latter recipe, which calls for "six spoonfuls of soy [sauce]," is almost identical to that in Dolby (1830, p. 446).

The recipe for Mutton, cold (p. 122) calls for melted butter, into which should be mixed "mushroom ketchup, lemon pickle, and Harvey sauce, a table-spoonful each."

Sauce poivrade, for cold meat (2) (p. 190). Note 2. Two recipes on p. 190 for "Sauce, Quin's" contain no soy. Sauce for roast beef (2) ("Put into a stone jar one gill of soy," p. 190). Sauce for shrimp (2) (p. 191). Sauce, superlative (p.

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191). Turkey, boiled (p. 227). Vinegar, camp (p. 241).

Note 1. A gill (U.S.) is a measure of volume, generally equal to ¼ U.S. liquid pint (= ½ cup = 4 fl. oz. = 118 ml).

Note 2. This book is generally considered the first alphabetically arranged encyclopedia in the United States. Its sources were mostly British, and the author acknowledges her borrowing. It was one of the most popular cook books in 19th century America (MSU introduction). Address: Boston, Massachusetts.

695. Ellis (R.). 1833. Sales by auction: To amateurs, curiosity and China dealers, earthenwaremen, and others (Ad). *Times (London)*. May 2. p. 4, col. 6.
• ***Summary:*** "... India soy [sauce], &c." Address: 31, Houndsditch [London].

696. *Olio; or Museum of Entertainment (The) (London)*.1833. Mode of making soy. 11(15):255. May 25.
• ***Summary:*** A long excerpt from *Dobell's Travels.*

697. Capen (Henry T.). 1833. Classified ad: Family grocery and wine store. *Eastern Argus Tri-Weekly (Portland, Maine)*. Aug. 5. p. 1.
• ***Summary:*** "... Essence Anchovies; Essence Rose; Walnut, Mushroom and Tomata Ketchup; Pickled Mushrooms and Limes;... Camp, John Bull's, Harvey's, Quin's and Reading Sauces; India Soy [sauce]; Gorgona Anchovies;..." Address: Fore street, Portland.

698. Dolby, Richard. 1833. The cook's dictionary, and housekeeper's directory: A new family manual of cookery and confectionery, on a plan of ready reference never hitherto attempted. London: Colburn and Bentley. xii + 541 p. See p. 469. 21 cm.
• ***Summary:*** In the section on sauces, the author describes (p. 469) how to make Harvey's, a popular sauce. The text is identical to that in the 1830 edition. There is no separate entry for "soy" or "beans, soya" in the body of this dictionary, nor in the 2-page glossary titled "Explanation of some of the terms made use of in the foregoing pages" (p. 533-34).

This new edition has been expanded largely by the addition, at the very front of the book, of a "Bill of fare" for various numbers of persons (in French and English), and of "Plans for laying out the table" (in French only; for different numbers of people in various seasons)–clearly indicating the importance of French in British cookery of this period. Address: Late cook at the Thatched House Tavern, St. James Street.

699. Johnstone, Christian Isobel (Christian Jane). 1833. The cook and housewife's manual: A practical system of modern domestic cookery and family management. 5th ed., revised and enlarged. Containing a compendium of French cookery, and of fashionable confectionary, preparations for invalids, a selection of cheap dishes, and numerous useful miscellaneous receipts [recipes] in the various branches of domestic economy. By Mistress Margaret Dods. Edinburgh, Scotland: Oliver & Boyd; London: Simpkin & Marshall. 476 p. See p. 248-49. Illust. 20 cm. The 1st edition was 1826.
• ***Summary:*** Soy [sauce] is mentioned in two recipes, identical to those in the 1829 ed., but on different pages. "459. To hash a calf's-head" (p. 247-48). "460. Mock-turtle, of calf's-head" (p. 248-49).

Note: Christian I. Johnstone lived 1781-1857. Mistress Margaret Dods is a pseudonym for Christian Isobel Johnstone who lived 1781-1857. Address: Of the Cleikum Inn, St Ronan's.

700. Carolinian, A. 1834. The introduction of exotics. *Southern Agriculturist (The)* 7:629-31. Dec. [1 ref]
• ***Summary:*** The author begins by reflecting on the widely held feeling that times past were better than the present, but that the present generation often thinks–out of vanity–it is more intelligent than those preceding it. "These reflections have occurred to me in looking over a paper, published above seventy years ago [i.e., before 1764], which furnishes a catalogue [sic] of foreign plants, suitable to this country, and recommending their introduction among us. What the fathers did in these respects, the sons can scarcely hope to equal... The wide world appears to have been searched and made tributary to the resources of South-Carolina...

"The paper referred to, contains the following catalogue:–" Seventy-eight plants are listed with both their common American and scientific names. One of these is: "Daidser: a kind of kid bean, *Dolichos soja.*"

Note 1. The author's name may mean simply a person from the Carolinas. This journal was published in Charleston, South Carolina.

Note 2. This is the earliest document seen (May 2004) that contains the word "Daidser," which should probably be "Daizu" or "Daidzu" [Japanese words for "soybean"]. The term "Dolichos Soja" was first used in 1749 by Linnaeus in his *Materia medica, per regna tria naturae.*

First cited by Hymowitz. 1986. Bibliography of early, previously uncited publications on soybeans in the United States. 2 p. Unpublished.

Note 3. The information on soybeans in this publication probably comes from a publication by John Ellis titled "A catalog of such foreign plants as are worthy of being encouraged in our American colonies for the purposes of medicine, agriculture and commerce." Originally published as a pamphlet, it was then reprinted in the *Transactions of the American Philosophical Society* in 1771 or 1772 (1:259). Concerning the soybean it states: "Dolichos soja Linn. Sp. 1023. A kind of kidbean called Daidsu. Used for making Soye* or Indian Ketchup." The four key pairs of similar terms are: (1) "catalogue" and "catalog." (2) "a kind of kid

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bean" and "a kind of kidbean." (3) "Daidser" and "Daidsu." And (4) "Dolichos soja."

701. Shankey (J.). 1835. Classified ad: Chinese, Persian, and Indian rarities. *Scotsman* (*Edinburgh*). Feb. 14. p. 1.
• ***Summary:*** "Mr. Shankey has, for a short time, returned to Edinburgh, and respectfully announces that he is now selling by Private Sale, a large and superb assemblage of Eastern Productions, at No. 70, Prince's Street.

"This splendid Collection of rare and costly articles comprises... Otto of Roses, Chinese Soy, Currie Powder, Preserved Ginger,..." Address: No. 70, Prince's Street, Edinburgh.

702. Ellis and Son. 1835. Sales by auction: Extensive stock of India, foreign and English China and glass.... (Ad). *Times* (*London*). March 18. p. 8, col. 1.
• ***Summary:*** "... fine India soy [sauce],..." Address: 36, Fenchurch-street [London].

703. Balbi, Adriano; Bradford, Thomas Gamaliel, eds. 1835. An abridgement of universal geography, modern and ancient: Chiefly compiled from the *Abrégé de Géographie* of Adrian Balbi. New York, NY: Freeman Hunt, & Co.; Boston, Massachusetts: William D. Ticknor; Philadelphia, Pennsylvania: Desilver, Thomas, & Co. 520 p. Illust. 28 cm.
• ***Summary:*** In the chapter on "Empire of Japan," section 3 titled "Towns" states (p. 418): "Kio, or Meaco [Kyoto, or Miako], was for a long time the Capital, end contains the most remarkable edifices... Meaco is the centre of Japanese commerce and manufactures; silks, tissue, soy [sauce], and lacquered wares are purchased here in their greatest perfection;..."

704. Burnett, Gilbert Thomas. 1835. Outlines of botany: Including a general history of the vegetable kingdom.... Vol. 1. London: John Churchill. viii + 1190 p. See p. 666.
• ***Summary:*** "(2145.) *Sooja* is the name of a Japanese sauce, prepared from the seeds of a species of Dolichos, now made into a distinct genus, and called *Soja hispida*. The *Soja* of Japan is preferred as a sauce to the *Kitjap* of China; both, however, are imported into England in large quantities, and are here known *Soy* [sauce]. In bond it is worth about 6*s.* a gallon; but, after it has been adulterated, it is sold at 3*s.* and upwards a pint. The Japanese make a soup of the seeds, called *Miso*, which is one of their most favorite and common dishes, the natives eating of it three times a day. The Chinese also have a popular dish made of these seeds, called *Teu-hu* or *Tau-hu* [tofu], which looks like curd; and, though insipid in itself, yet with proper seasoning is rendered agreeable and wholesome."

Note: Burnett, like Miller (1807) and Don (1832) before him, associates the word "Kitjap" with Chinese rather than with Indonesian soy sauce, and reports that both are imported into England in large quantities. The Japanese product was clearly called and sold as "soy" in England. But what was the Chinese product called and sold as? Was it sold as "real" ketchup, catsup, catchup, etc.? Address: F.L.S., Prof. of Botany in King's College, London.

705. Dictionnaire de l'Académie française. Sixième edition: Soy [Dictionary of the French Academy, 6th ed.: Soy]. 1835. Paris: Institut de France, and Librairie de Firmin Didot Frères. See Vol. 2, p. 774. [Fre]
• ***Summary:*** Soy, singular masculine noun. Pronounced so-EH (*Soé*). A type of sauce, of which the usage has come from Japan.

Note: This is the earliest French-language document seen (April 2012) that uses the word *Soy* to refer to soy sauce.

706. Taylor and Grignon. 1836. Classified ad: Bengal curry powder. *Times* (*London*). Jan. 11. p. 8, col. 2.
• ***Summary:*** "... beg to call the attention of the nobility and gentry to the above article... Also genuine Indian Soy" [sauce]. Address: Italian warehouse, 2 and 3, Suffolk-street, Pall-mall east [London].

707. Faulkner's Oil and Italian Warehouse. 1836. Classified ad: Fish sauces one shilling per bottle. *Observer* (*London*). Feb. 21. p. 1.
• ***Summary:*** "Reading Sauce 1*s.*, Harvey's ditto 1*s.*, Indian Soy [sauce] 1*s.*, Essence anchovies 1*s.*, Chili Vinegar 1*s.*, Mushroom and Walnut Ketchup 9*d*..." Address: 98, Jermyn-street, corner of York-st., opposite St. James's Church [London].

708. Jones (George) and Co. 1836. Sales by auction: Works of art, antiquity, and curiosity (Ad). *Times* (*London*). March 2. p. 8, col. 5.
• ***Summary:*** "... 20 jars of preserved ginger; 40 bottles of Chinese soy [sauce],..." Very similar ads appear in the March 3, March 24, and May 10 issues. Address: Leicester-street and Princes-street, Leicester-square [London].

709. Wheeler (Mr.). 1836. Sales by auction: Consignment of Indian matting, carpets, &c. (Ad). *Times* (*London*). May 10. p. 8, col. 6.
• ***Summary:*** He will sell at the Auction Mart: "... Bermuda arrow root, India soy [sauce], &c." Address: 28, Leadenhall-street [London].

710. Faulkner's. 1836. Classified ad: Fish sauces, 1*s.* per bottle. *Times* (*London*). May 31. p. 8, col. 2.
• ***Summary:*** "Reading sauce, 1*s.*; Harvey's ditto, 1*s.*; India soy [sauce], 1*s.*; Chili vinegar, 1*s.*; essence of anchovies, 1*s.*; mushroom and walnut ketchup, 9*d.*;..." Address: Oil and Italian warehouse, 98, Jermyn-street, corner of York-street,

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opposite St. James's church [London].

711. Jones (George) and Co. 1836. Sales by auction: Works of art, fine teas, China, &c. (Ad). *Times* (*London*). Oct. 19. p. 8, col. 3.
• ***Summary:*** "... preserved ginger, Indian soy and other sauces,..." Address: Auction Rooms, Leicester-street and Princes-street, Leicester-square [London].

712. Faulkner's. 1836. Classified ad: Reading Sauce, 1*s*. per bottle. *Times* (*London*). Oct. 20. p. 1, col. 4.
• ***Summary:*** "Harvey's ditto [= sauce], 1*s*.; tomata ditto [= tomata sauce], 1*s*.; India soy [sauce], 1*s*.; essence of anchovies, 1*s*.; lemon pickle, 1*s*.;..." Address: Oil and Italian warehouse, 98, Jermyn-street, corner of York-street, opposite St. James's church [London].

713. Stevens (J.C.). 1836. Sales by auction: Natural history and miscellaneous articles (Ad). *Times* (*London*). Dec. 6. p. 4, col. 6.
• ***Summary:*** "... electric battery, books, Indian Soy [sauce], ends of broad cloth,..." Address: 38, King-street, Covent-garden [London].

714. Davis, John Francis (Sir). 1836. The Chinese: A general description of the empire of China and its inhabitants. 2 vols. London: Charles Knight & Co. Vol. 1, iv + 395 p. See vol. 1, p. 303. Illust. Index. 20 cm. Series: Library of Entertaining Knowledge.
• ***Summary:*** Chapter VIII, titled "Manners and customs," contains a long discussion of food and drink in China (p. 298-321) and states: "The following description of a Chinese dinner, from the pen of our friend Captain Laplace of the French navy, although rather a long extract, is given with so much of the characteristic vivacity of his countrymen, and so well conveys the *first impression* of a scene not often witnessed by Europeans, that it is introduced without further apology."

"'The first course was laid out in a great number of saucers of painted porcelain, and consisted of various relishes in a cold state, as salted earthworms, prepared and dried, but so cut up, that I fortunately did not know what they were until I had swallowed them... All these et-cæteras, including among the number a liquor which I recognized to be soy [sauce], made from a Japan bean, and long since adopted by the wine-drinkers of Europe to revive their faded appetites or tastes, were used as seasoning to a great number of stews which were contained in bowls, and succeeded each other uninterruptedly'" (p. 302-03).

The author finds great difficulty holding and using "the two little ivory chop sticks, tipped with silver... I contrived to eat with tolerable propriety a soup prepared from the famous birds'-nests, in which the Chinese are such epicures. This substance thus served up is reduced to very thin filaments, transparent as ising-glass [isinglass], and resembling vermicelli, with little or no taste*." (Footnote: *"It is generally accompanied with pigeons'-eggs, boiled hard, and eaten with soy.") (p. 304).

"Besides this vegetable [pe-tsae or white-cabbage, a species of brassica], the northern provinces consume millet and the oil of sesamum, as general articles of diet. Many of the cottagers were observed to possess the means of independent support, in the patches of cultivation which surrounded their huts, being supplied in many cases with a small and simple mill, worked by an ass, for the expression of the sesamum-oil. The vegetable oils which are used to the southward are obtained from the *Camellia oleifera*, and the *Arachis hypogæa* [peanut] as well as the *Ricinus*." (p. 312).

In Chapter I, titled "Early European intercourse," the famous incident involving James Flint in China (p. 60-63) is described, noting that Flint was "conveyed to a place called Tsien-shan, or Casa Bianca, near Macao, where he was imprisoned, but pretty well treated, though all correspondence was cut off... Mr. Flint remained in prison from March, 1760, to November, 1762, when he was carried by the Chinese to Whampoa, and put on board the ship *Horsendon*, to be conveyed to England."

Note 1. Two editions of this book were published by the same publisher under the same title in 1836. Only the pagination is different. The edition cited above has "The Library of Entertaining Knowledge" written at the top of the title page. The other edition, which lacks this series heading, discusses (in the exact same words cited above) soy on p. 322-23, sesamum [sesame] and peanut oils on p. 332-33, and James Flint on p. 58-62.

Note 2. This is the earliest English-language document seen (Aug. 2007) that uses the word "sesamum" (not as a scientific genus name) to refer to sesame seeds, or the term "sesamum-oil" or "oil of sesamum" to refer to sesame oil.

Note 3. This is the earliest English-language document seen (Sept. 2006) that contains the term "vegetable oils" (or "vegetable-oil" or "vegetable-oils").

Note 4. The author, John Francis Davis, lived 1795-1890. Address: Esq., F.R.S., &c. Late His Majesty's Chief Superintendent in China.

715. Dictionnaire des productions de la nature et de l'art [Dictionary of the productions of nature and of art...]. 1836. Brussels, Belgium: Impremerie de Balleroy. See Vol. 2, p. 237. [Fre]
• ***Summary:*** Soja, Soy sauce (*Le soja*) is a liquid (*liqueur*) prepared with the seeds of the dolic of Japan [soybean]. The dolic is a plant of the leguminous family and of the genus of diadelphia decandria (*diadelphie déandrie*); it contains 16 known species.

Note 1. This is the earliest French-language document seen (April 2012) that uses the term *Le soja* to refer to soy sauce.

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Note 2. The subtitle of this book is: *Qui sont l'objet du commerce tant de la Belgique que de la France* [Which are the object of commerce for both Belgium and France].

716. Murray, Hugh; Crawfurd, John; Gordon, Peter; Lynn, Thomas; Wallace, William; Burnett, Gilbert. 1836. An historical and descriptive account of China: Its ancient and modern history, language,... geology, botany, and zoology. Vol. 3. 2nd ed. Edinburgh: Oliver & Boyd; London: Simpkin, Marshall, & Co. 461 p. Illust. Index.

• ***Summary:*** This comprehensive, almost encyclopedic, book was compiled by reading all accounts of travel in China. Every aspect of China and Chinese life is discussed in 9 chapters. Chapter 8 (p. 331-86) is a "Conspectus of the flora of China... and the important uses to which the important plants are applied by the Chinese.

Page 337-38: "The *lock-soy* of China is a kind of vermicelli made from rice."

Pages 321 and 357 lists many *Dolichos* species, including *D. Soja.*

Pages 357-58: "Many leguminous plants are cultivated by the Chinese both for ornament and use. Peas, beans, haricots, and other pulse, such as some species of dolichos...

"Sometimes whole fields of beans were observed by Staunton; and at others the small spots accidentally left vacant near the edges of banks, or along ridges of corn, the dolichos [soybean] was planted. The seeds of this plant are like those of the kidney-bean, and are usually dressed and eaten like French beans. The pods, however, are from one to two feet in length... From the seeds of the *soja* [soybean] the peculiar savoury sauce known under the name of soy is made, and the *teu-heu* or *tau-hu* [tofu] which is a very popular dish in China, is prepared from the seeds of this plant." Address: 1. F.R.S.E.; 2. Esq.; 3. Esq.; 4. Captain; 5. F.R.S.E., Prof. of Mathematics in the Univ. of Edinburgh; 6. Esq., Late Prof. of Botany, King's College, London.

717. Foster (John). 1837. Classified ad: Has just received an extensive and prime assortment of W.I. [West India] goods & groceries. *New Hampshire Sentinel* (*Keene*). Dec. 7. p. 1.

• ***Summary:*** "... Water, Milk and Sugar Biscuit; Tomato, Walnut and Mushroom Ketchups; Canton Soy [sauce; from China]; Olives;..."

Note: This is the earliest document seen (July 2011) concerning soybean products (soy sauce) in New Hampshire. This document contains the earliest date seen for soybean products in New Hampshire (Dec. 1837); soybeans as such have not yet been reported. Address: Keene.

718. A Lady (Frances H. Green). 1837. The housekeeper's book: Comprising advice on the conduct of household affairs in general. Philadelphia, Pennsylvania. xvi + 217 p. See p. 82, 99. *

• ***Summary:*** "Perch boiled: Put them into cold water, and let them boil carefully; serve with melted butter and soy" (p. 82).

"To make soy: One pound of salt, two pounds of common sugar, fried for an hour and a half over a slow fire; add to this three pints of boiling water, essence of anchovies about half a pint, a few cloves, and a bunch of sweet herbs; boil together till the salt is dissolved; when cold bottle it for use."

Note: In the last recipe, soy is not an ingredient. Address: Philadelphia.

719. **Product Name:** Worcestershire Sauce.
Manufacturer's Name: Lea and Perrins.
Manufacturer's Address: Broad Street, Worcester, England.
Date of Introduction: 1837. January.
Ingredients: Incl. vinegar, soy sauce, anchovies or anchovy sauce.
Wt/Vol., Packaging, Price: Bottle.
How Stored: Shelf stable.
New Product–Documentation: Ad in *Times* (London). 1844. July 19. p. 11, col. 5. "Lea and Perrin's Worcestershire Sauce, prepared from the recipe of a nobleman in the country."

Times (London). 1876. "High Court of Justice, July 26, Chancery Division. (Before the Master of the Rolls.) Lea v. Millar." "It appeared to his Lordship to be established that Messrs. Lea and Perrins' predecessors in business either invented or obtained the recipe for an article to which they gave the name of Worcestershire sauce, and that they were the first persons to sell an article by that name. This was about the year 1836, and within a very few, probably not more than two, years afterwards other people, of whom one Batty seemed to be the first, began to sell an article under the same name. Indeed the name, within a very few years after it was first used by Messrs. Lea & Perrins, appeared to have become a common name in the trade;..."

Berg and Toit. 1938. Farming in South Africa. Oct. p. 392 "The soybean: Its production and industrial use." A black-and-white photo shows two small jars of this sauce. Only the words "Lea and Perrins" are legible. The product is made in England.

Louise Wright. 1975. *The Road from Aston Cross: An Industrial History, 1875-1975.* Imperial House, Leamington Spa, Warwickshire, England: Smedley–HP Foods Ltd. Page 32 states that Mr. Lea and Mr. Perrins "believed in having friendly dealings with their overseas agents. Foremost among them were their New York agents, John Duncan & Sons. Established since 1819 as importers of wines, quality foodstuffs and preserves, they began to handle Worcestershire Sauce in 1840. Soon, they were handling ever-increasing amounts." Page 30 states that the Lea & Perrins partnership in Worcester was created on 1 Jan. 1823 (New Year's Day).

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Note 1. We are not told when Lea & Perrins Worcestershire sauce started to be made commercially, or when the first bottle of Worcestershire sauce was sold–a glaring omission!

Page 31 states: "In 1842, Lea & Perrins sold 636 bottles [of Worcestershire Sauce]. In 1845, a manufactory was set up in Bank Street, Worcester. Ten years later the yearly sales were up to 30,000 bottles of Worcestershire Sauce." In 1897 "it became necessary to build a new factory in Midland Road, Worcester." Page 33 states: "By 1875 the demand for Worcestershire sauce had spread throughout the United States. It was agreed to import the sauce in casks and bottle it in New York." In about 1902 the sauce was first manufactured in New York. In 1910 production was moved to a nine storey building on West Street, New York.

Note 2. This is the earliest known commercial soy product (April 2012) that uses soy sauce as a major ingredient. No doubt there were much earlier products in Japan, China, etc. but we have record of them until 1848 when Inari-zushi originated.

Boston Globe. 1987. Sept. 30. Gives address only.

Letter from J.W. Garnett, Factory General Manager, Lea & Perrins Ltd., P.O. Box 31 Registered Office, Midland Road, Worcester WR5 1DT, England. 1991. Jan. 29. The Lea & Perrins Company of Worcestershire was purchased by HP Foods in 1930 and as such operates as a brand in its own right with general control coming from HP Foods. The Lea & Perrins Worcestershire Sauce is still manufactured in the Midland Road Factory, Worcester, and has been since 1896. "I am certain that Lea & Perrins' Worcestershire Sauce contained soy sauce up to 1940 when supply became extremely difficult due to the Second World War. We have a recipe dated 1948 which records the use of soy sauce as being discontinued, so we assume that it was not re-introduced following the end of Second World War. I'm sorry I cannot be more specific."

"BSN group [B.S.N. Ltd.] purchased HP Foods from Hanson Trust in July 1988. BSN is a large French multinational company; their brands include Evian and Dannon. For details see the book titled *The Road to Aston Cross*, a copy of which I am enclosing with our complements."

Keogh, Brian. 1997. *The Secret Sauce: A History of Lea & Perrins*. Worcestershire, England: Leaper Books. viii + 135 p. Lea & Perrin's Worcestershire sauce "has been produced commercially in Worcester since 1837, basically to the same secret formula and process. It was first made at 68 Broad Street, Worcester, England, in the back of the chemist shop owned by the two men who created it: Mr. John Wheeley Lea (born 1791) and Mr. William Henry Perrins (born 1793). Both men were born in villages in Worcestershire. From the early 1840s it was widely exported (Introduction, p. vii). In Jan. 1823, Lea, an established chemist, took on Perrins as a partner. Their original catalog, dated 1 Jan. 1823, which lists over 300 items from around the world, is still in existence. The catalog includes two ingredients of the sauce to be–anchovies and tamarinds. However the recipe for the sauce and the method for making it must remain a secret. By 1837 Lea and Perrins owned 3 chemist shops; they were now well established and successful chemists.

Worcester lay on the River Severn, which flows southward into the wide Bristol Channel, and which for centuries had been used to carry goods between Bristol and the Midlands. In 1815 the opening of the Birmingham-Worcestershire further increased traffic. In 1850 the Great Western finally brought its railway to Worchester (p. 1-5, 27, 35).

Note 2. During the 1800s, the ingredients used in making Worcestershire Sauce were a carefully kept secret. Forman (1886) was one of the first to state that soy sauce is used as an ingredient in Worcestershire sauce. Rorer (1902) repeated this idea, but in more detail, and for the first time in a cookbook. Fesca (1904) was the first to show this based on chemical analysis in a laboratory. At least 101 documents confirm this fact. During World War II, soy sauce was permanently replaced by HVP as an ingredient in Lea and Perrins Worcestershire Sauce (see Garnett 1991, above).

720. Woodblock print by Hiroshige showing shoyu being made in 19th century Japan. 1837.



• ***Summary:*** Utagawa Hiroshige III (also known as Ando Hiroshige) was a Japanese ukiyo-e artist who lived 1797-1858; the date of print is a guess, based on the dates he lived. The print is part of a series by Hiroshige on Japanese industries.

Note: A black-and-white photo of this print appears in the book titled *The Kikkoman Way of Fine Eating* (1973, p. 19), with the caption "Hiroshige print showing shoyu making (19th century).

Note: We have been unable to find this print, or reference to it, in one large book about Hiroshige and his

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prints. He did, however, create a series of color woodblock prints showing Japanese craftsmen and industries.

721. Randolph, Mary. 1838. The Virginia housewife: or, Methodical cook. Baltimore, Maryland: Plaskitt, & Cugle. 180 p. No index. 18 cm.
• ***Summary:*** The section on "Pickling" (p. 161) begins with the following recipes: "Lemon pickle. Tomato catsup. Tomato marmalade. Tomato sweet marmalade. Tomato soy. Pepper vinegar. Mushroom catsup."

But what is "Tomato soy"? (p. 163). Surprisingly, it contains no soy [sauce], and the word "soy" is not even mentioned in the body of the recipe, only in the title.

Slice a bushel of tomatoes and 3 onions, layer with salt, and allow to stand for 3 days. Then boil the mass in an iron pot all day, stirring constantly.

"The next morning, pass the mixture through a sieve, pressing it to obtain all the liquor you can; and add to it one ounce of cloves, quarter of a pound of allspice, quarter of a pound of whole black pepper, and a small wine glass of Cayenne; let it boil slowly and constantly during the whole of the day–in the evening put it into a suitable vessel to cool; and the day after, bottle and cork it well: place in a cool situation during warm weather and it will keep for many years, provided it has been boiled very slowly and sufficiently in the preparation. Should it ferment, it must be boiled a second time."

Note 1. "This is considered by some to be the first truly American cookbook and by all to be the first regional American cookbook." Mary Randolph lived 1762-1828 (MSU introduction).

Note 2. This is the earliest document seen (May 2012) that contains the term "Tomato soy" or a recipe titled "Tomato soy." Address: Virginia.

722. Ladies Ornamental Hair Emporium. 1839. Classified ad: For sale. *Rhode-Island Republican* (*Newport*). March 13. p. 4.
• ***Summary:*** "... Canton Soy [sauce; from China] and Mushroom Catsup, for sale... Also, Mint, Tanzy, Rose, Orange and Peach Waters."

Note: This ad also appeared in the April 17 issue of this newspaper. The latter is the last entry seen (Feb. 2006) in the Early American Newspapers database that mentions "Canton Soy." Address: 137 Thames-street.

723. *Gentleman's Magazine* (*London*).1839. Obituary: Mr. James Bird. 11:551. May. New Series.
• ***Summary:*** He died on March 26. At Yoxford, Suffolk. Mr. Bird set up "in a stationer's shop and a small circulating library in the village of Yoxford, and with the help of miscellaneous stock in trade... With Hymn-books, Harvey's Sauce, Tea-trays, and Candlesticks."

724. Firth (Robert) and Co. 1839. Classified ad: This day, Wednesday, the 2d of Oct. Messrs. Robert Firth and Co. will sell by Public Auction,... *Bombay Times and Journal of Commerce* (*India*). Oct. 2. p. 625.
• ***Summary:*** "... at their Rooms, an invoice of Damask Table Cloths,... several cases of Insects, Japan Soy [sauce], China Preserves, Lavender Water, Books,..."

725. Bateman, William. 1839. Magnacopia: a chemico-pharmaceutical library of useful and profitable information for the practitioner, chemist and druggist,... 3rd ed. London: Churchill. xii + 379 p. 15 cm.
• ***Summary:*** In the section on sauces (p. 272+): Sauce aristocratique (p. 272): "Pound green walnuts in a mortar, squeeze out the juice through a strainer, and let it stand to settle. Pour off the clear, and to every pint of juice add a pound of anchovies, one drachm each of cloves, mace, and Jamaica pepper (bruised). Boil together till the anchovies are dissolved, strain it off, and put in a good handful of shalots, and boil again. To every pint of the above, add half a pint of best brown vinegar, and three ounces of soy."

Sauce au roi (p. 273): "Take a quart of best brown vinegar, three table spoonfuls each of soy and walnut ketchup, three shalots (cut small), one ounce of cayenne pepper, and four bruised cloves.

"Remark.–Keep these ingredients together for a month, and shake them frequently. Ketchups in sauces are not generally to be approved, except they are made at home, and can be warranted a perfect essence of the fruit, as they tend to thicken every description of cold meat sauces, which makes them unsightly and unsaleable."

Quin sauce (p. 275): "The same as Sauce Aristocratique, leaving out soy."

Harvey's Sauce (p. 275): "Take quin sauce, six ounces; soy, two ounces; cayenne, two drachms; brown vinegar, four ounces."

Piquante sauce (p. 275): "Take two ounces of cayenne pepper, a pint of brown vinegar, and an ounce of soy and port wine."

Isle of Wight sauce (p. 276): "Take a quart of soy, ditto [a quart] of port wine, ditto of brandy, ditto of mushroom ketchup; mixed together."

726. Conversations on nature and art. 1839. Philadelphia, Pennsylvania: Lea & Blanchard. 333 p.
• ***Summary:*** In Chapter 5, p. 97 contains this exchange: "Mrs. C. There is one piece of information which I can add to the account which we have just read; and that is the mode in which the Chinese prepare their bird's-nest soup.

"Henrietta. We should like very much to hear it.

Mrs. C. The soup is served up with pigeons' or plovers' eggs floating on it... There being neither salt nor pepper in the preparation of this dish, it would be quite insipid were it not for vinegar and soy [sauce], which you use at pleasure*

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(Footnote: *Dobell's Kamtchatka). "Esther. I have heard all kinds of strange stories about Soy, and should like very much to know what it is really made of.

"Mrs. C. Soy is made from a species of Dolichos (*D. Soja*). There follows a long excerpt about the mode of making soy from *Dobell's Travels* (1830).

Also discusses: Uses of sea weed (p. 92-94).

727. Graham, John. 1839. A catalogue of the plants growing in Bombay and its vicinity; spontaneous, cultivated or introduced, as far as they have been ascertained. Bombay: Printed at the Government Press. ix + 254 p. See p. 52. 22 cm. [5 ref]

• ***Summary:*** "205. Soja. W. & A. [Wight & Arnott 1834] Diadelphia Decandria. *Sooja*–name of a Chinese sauce prepared from the seeds.

"405. S. [Soja] Hispida W. & A. 762. Dolichos soja. Rox. [Roxburgh] Flora. 3. p. 314. Jacq. [Jacquin] Ic. Rar. t. 145. An annual, hairy plant; flowers small, of a reddish purple; in gardens. In Japan the seeds are called *Miso* [sic, error based on Miller 1807], and are commonly eaten in soups (Don. [1832])

"206. Dolichos. L. Diadelphia Decandria. *Greek*, for long, -tedious: (Odys.) name given in allusion to the habit of the plants, sending forth long shoots. Gaert. *t.* 150. Lam. *t.* 610." The author then gives brief descriptions of Dolichos uniflorus, D. falcatus, and D. sinensis.

The title page reads: "Published under the auspices, and for the use of the Agri-Horticultural Society of Western India. To be continued and completed Printed by special permission, at the Government Press, Bombay." A quote from Linnaeus is on the title page. The author, John Graham, lived 1805-1839. Voigt (1845) notes that Dr. J. Graham was a professor of Botany at Edinburgh, Scotland. Contains a preface giving a short account of the author and a manuscript index of native names. Address: Deputy Post-Master General of Bombay.

728. Medhurst, Walter Henry, comp. 1839. An English and Japanese and Japanese and English vocabulary: compiled from native works. Batavia [Jakarta].

• ***Summary:*** Near the bottom of the title page we read: Printed by lithography. The text of the entire book is handwritten on very thin paper. The pages are unnumbered. The volume is divided into three parts, each with a title written only in Chinese characters. The Introduction begins: "The following compilation is with diffidence offered to the public, principally because the author has never been in Japan and has never had the opportunity of conversing with the natives." Medhurst knows Chinese, but not Japanese, and the text was written by a Chinese person who understands neither English nor Chinese–which explains why the book contains so many errors, as the author acknowledges.

Each page of this dictionary is divided into three vertical columns: (1) The word(s) in English. (2) The Japanese word written in Roman letters (*Romaji*). (3) The Japanese word written in katakana (and sometimes also in kanji).

In section 7, titled "Food consumed by men," page 2 lists "bean flour–*mame no ko*" which is probably roasted soy flour or *kinako*. Page 4, under "drinkables," lists "soy–*s'ya, so e*" which is soy sauce or shoyu.

Note 1. This is the earliest English-language document seen (Dec. 2005) that uses the term *mame no ko*, or the term "bean flour–*mame no ko*" to refer to roasted soy flour.

Note 2. This is the earliest English-language document seen (April 2012) that uses the term word *s'ya* or the word *so e* to refer shoyu or soy sauce.

Walter Henry Medhurst lived 1796-1857. Address: Christian Missionary, Batavia.

729. Ure, Andrew. 1839. A dictionary of arts, manufactures, and mines; Containing a clear exposition of their principles and practice. 2 vols. London: Longman, Orme, Brown, Greene & Longmans. vii + 1334 p. See Vol. 2, p. 1158. A 2nd London edition was published in 1840. [1 ref]

• ***Summary:*** "SOY, is a liquid condiment, or sauce, imported chiefly from China. It is prepared with a species of white haricots, wheat flour, common salt, and water; in the proportions respectively of 50, 60, 50, and 250 pounds. The haricots are washed, and boiled in water till they become so soft as to yield to the fingers. They are then laid in a flat dish to cool, and kneaded along with the flour, a little of the hot water of the decoction being added from time to time. This dough is next spread an inch or an inch and a half thick upon the flat vessel (made of thin staves of bamboo), and when it becomes hot and mouldy, in two or three days, the cover is raised upon bits of stick, to give free access of air. If a rancid odor is exhaled, and the mass grows green, the process goes on well; but if it grows black, it must be more freely exposed to the air. As soon as all the surface is covered with green mouldiness, which usually happens in eight or ten days, the cover is removed, and the matter is placed in the sunshine for several days. When it has become as hard as a stone, it is cut into small fragments, thrown into an earthen vessel, and covered with the 250 pounds of water having the salt dissolved in it. The whole is stirred together, and the height at which the water stands is noted. The vessel being placed in the sun, its contents are stirred up every morning and evening; and a cover is applied at night, to keep it warm and exclude rain. The more powerful the sun, the sooner the soy will be complete; but it generally requires two or three of the hottest summer months. As the mass diminishes by evaporation, well water is added; and the digestion is continued till the salt water has dissolved the whole of the flour and the haricots; after which the vessel is left in the sun for a few days, as the good quality of the soy depends on the completeness of the solution, which is promoted by regular stirring. When it has at length assumed an oily appearance, it

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is poured into bags, and strained. The clear black liquid is the soy, ready for use. It is not boiled, but is put up into bottles, which must be carefully corked. Genuine soy was made in this way at Canton, by Michael de Grubbens. (See *Memoirs of Academy of Sciences of Stockholm* for 1803)."

In Vol. 1, under "Oils," a large table (p. 894-95) titled "List of plants which yield the ordinary Unctuous Oils of commerce" contains four columns: Number (1-41), plants, oils, and specific gravity. The oils include linseed oil, walnut oil, poppy oil, hemp oil, oil of sesamum, olive oil, almond oil, oil of behen or ben, cucumber oil, beech oil, oil of mustard, oil of sunflower, rape seed oil, castor oil, tobacco seed oil, palm kernel oil, grape seed oil, butter of cacao, cocoa nut oil, palm oil, laurel oil, ground-nut oil, piney tallow, oil of juliene, oil of camellia, oil of weld seed, oil of garden cresses, oil of deadly nightshade, cotton seed oil, colza oil, summer rapeseed oil, oil of radish seed, cherry-stone oil, apple seed oil, spindle tree oil, cornil berry tree oil, oil of the roots of cyper grass (*Cyperus esculenta*), henbane seed oil, horse chestnut oil, pinetop oil. Note that soybean oil is not mentioned.

Note 1. This is the earliest English-language document seen (July 2002) that contains the term "Ground-nut oil" (or "Groundnut oil").

Ure was a physician, an M.D. The title page states that this book is "Illustrated with twelve hundred and forty engravings on wood." Vol. I contains pages 1-744, and vol. II, pages 745-1334. Address: London.

730. Australian Auction Company. 1840. Entire cargo of the "Juliet." To be sold by public auction (Ad). *Sydney Gazette and New South Wales Advertiser* (*NSW, Australia*). Jan. 9. p. 3.

• ***Summary:*** "On Monday, the 13th January next,... at 11 o'clock precisely."

"The Entire Cargo of the Barque Juliet from Java consisting of–1,546 Packages superior Black Teas, 7,857 [packages] Superior quality Sugar, 221 baskets fine white ditto [Sugar], 516 Bags Table Rice, 286 Bags Coffee,...125 Casks Arrack [palm wine],... 10 Barrels and 100 cases best Cognac Brandy,... 92 Baskets Salad Oil, 6 Ditto [Baskets] Japan Soy [sauce], 189 Cases French Wines,..."

Note: This is the earliest of 3 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "Japan Soy." Address: The Mart, George-street [Sydney].

731. Kay (T.). 1840. Sales by auction: Important sale of foreign carpets,... (Ad). *Times* (*London*). April 6. p. 8, col. 4.

• ***Summary:*** "... carved ivory chess men, fine old India Soy and currie powder... T. Kay begs to call the attention of the nobility and gentry, hotel and lodging-house keepers, to the above magnificent stock,..." Address: The Mart [London].

732. Faulkner's. 1840. Classified ad: India Soy, 1*s.* 6*d.* per bottle. *Times* (*London*). June 8. p. 7, col. 2.

• ***Summary:*** "Essence of anchovies, 1*s.*; Reading sauce, 1*s.*; Harvey's ditto, 1*s.*; Universal ditto, 1*s.*; King of Oude, 1*s.* 3*d.*;... Cavice, 1*s.*; Ketchup, 9*d.*; Chili Tarragon, and raspberry vinegars, 1*s.*..."

Note 1. This is the earliest document seen (Dec. 2005) in the *Times* (London) that uses the term "King of Oude" to refer to the name of a sauce, apparently coined by Faulkner. Oude (later Oudh) was a place in northern British India.

Note 2. Note that India Soy sells for twice as much as Ketchup–which is probably soy sauce from the Dutch East Indies. Unfortunately we cannot make a reliable price comparison since we are not told the size of the bottle in which each was sold. Address: Sauce and foreign warehouse, 44, Jermyn-street, St. James's [London].

733. Lea, Perrins, & Smith. 1840. Worcestershire Sauce (Ad). *Manchester Guardian* (*England*). Oct. 17. p. 1.

WORCESTERSHIRE SAUCE.—So many sauces, under every variety of name, have been of late contending for public favour, that we have hesitated to extend beyond our own vicinity the introduction of a new one, which has, nevertheless, in a very short time, become much sought after and esteemed in other parts of the kingdom.—The Worcestershire Sauce is prepared by us from the favourite receipt of a nobleman of acknowledged *goût*. It possesses a peculiar piquancy; it is applicable to almost every dish, on account of the superiority of its zest; the diffusible property of its delicate flavour renders it the most economical, as well as the most useful of sauces.

LEA, PERRINS, & SMITH, Worcester and Cheltenham

Sold in Manchester by Messrs. Roach and Co. Market-street; Mr. Yates, Old Exchange, and Mr. Hutchinson, Old Church Yard.

• ***Summary:*** "So many sauces, under every variety of name, have been of late contending for public favor, that we have hesitated to extend beyond our own vicinity the introduction of a new one, which has, nevertheless, in a very short time, become much sought after and esteemed in other parts of the kingdom.–The Worcestershire Sauce is prepared by us from the favourite recipe of a nobleman of acknowledged *goût;* it possesses a peculiar piquancy; it is applicable to almost every dish, on account of the superiority of its zest; the diffusible property of its delicate flavour renders it the most economical, as well as the most useful of sauces.

"Lea, Perrins, & Smith, Worcester and Cheltenham. Sold in Manchester by Messrs Roach and Co., Market-street; Mr. Yates, Old Exchange, and Mr. Hutchinson, Old Church Yard."

Note: This is the earliest document seen (Feb. 2012) that mentions "Worcestershire Sauce," or Lea and Perrins, or "a nobleman" in connection with Worcestershire Sauce. The sauce must have been sold commercially by this time. What happened to Mr. Smith? Address: Worcester and Cheltenham.

734. Allen, R.: Allen, E. 1840. The Midland counties'

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railway companion, with topographical descriptions... Nottingham, England: Printed by R. Allen. 148 p. See p. 143.
• ***Summary:*** Near the rear of the book, a 1/3 page display ad, under "Birmingham" reads (p. 143). "J.R. & I. Sherwood. Plated ware manufacturers, dinner tea, and coffee services, in elegant variety; Candlesticks and branches; Snuffer trays; Liquor, Cruet, and Soy Stands, &c.

"76, Lichfield Street, Birmingham." Four illustrations show various plated wares. Address: 1. Nottingham; 2. Leicester. Both: Proprietors.

735. Goodrich, Samuel Griswold; Bradford, T.S. eds. 1840. A pictorial geography of the world: Comprising a system of universal geography, popular and scientific. Boston, Massachusetts: Otis, Broaders and Co.; New York, NY: Tanner and Disturnell. 1008 p. Illust. 28 cm. *
• ***Summary:*** Watts (1852) states: "Kio, or Meaco [Kyoto, or Miako], was for a long time the Capital, end contains the most remarkable edifices... Meaco is the centre of Japanese commerce and manufactures. Silks, tissue, soy [sauce] and lacquered wares, are purchased here in their greatest perfection,..." Note 1. This passage mentioning soy also appears in the 1856 ed. (p. 472) in the chapter on "Empire of Japan," section 3 titled "Towns."

Note 2. Issued in ten parts. "Illustrated by more than one thousand engravings. With a copious index, answering the purpose of a gazetteer."

736. Holman, James. 1840. Travels in China, New Zealand, New South Wales, Van Diemen's Land, Cape Horn, etc., etc. 2nd ed. London: George Routledge. viii + 519 p. Illust. Forms vol. 4 of the author's *Voyage Round the World.*
• ***Summary:*** Mr. Holman was in southern China in Sept. and Oct. 1830. He visited Macao and Whampoa, but stayed at Canton, where the following events took place.

On the page titled "Mode of preparing soy" (p. 105): "He also sells soy [sauce], both of the kind made in China, and that which is brought from Japan. The latter is considered the best. There is a large manufactory of this article in the island of Honan, opposite Canton; and another at Whampoa.

"Soy is made from the seeds (or beans) of the Dolichos Sooja, and the process of preparing it is as follows:–The beans are first boiled soft, when nearly an equal quantity of wheat or barley flour is added. After this has gone through a regular process of fermentation, a quantity of salt is put in, sufficient to make a brine strong enough to float an egg, using three times as much water as the original quantity of beans. This compound is then left for two or three months, when it is pressed, and strained for use. It improves by age, and is best preserved in earthen jars, and bottles, well sealed."

The page titled "Dine with Tin-Qua" (p. 139) describes his dinner at a Hong merchant's house: "On dinner being announced, we were conducted to a circular table, and each of us provided with a pair of ivory chopsticks mounted with silver, a silver ladle with the handle much curved, a small cup of soy, a saucer or stand for the bowls out of which we were to eat, and an elegant silver cup richly gilt, with two handles, mounted on a stand of similar material, and resembling in form an inverted saucer."

Page 140: "The dinner commenced with a large bowl of birds'- nest soup, from which each person helped himself. We found it very insipid until flavoured with soy, as the necessary condiments of salt and pepper seem to be wholly neglected in Chinese cookery." Also served "was a vegetable soup made of prepared sea-weed from the coast of Japan." This dried weed is called Tay-choey. Address: R.N., F.R.S. [England].

737. Leslie, Eliza. 1840. Directions for cookery, in its various branches. Philadelphia, Pennsylvania: E.L. Carey & Hart. 468 p. Illust. Index.
• ***Summary:*** "Soy" [sauce] is mentioned as an ingredient in the following recipes: To boil trout ("For sauce, send with melted butter, and put some soy into it; or flavour it with catchup," p. 54).

Quin's sauce (p. 172). Since this was also a commercial product, and it contained soy [sauce] we will give the whole recipe: "Pound in a mortar large anchovies, moistening them with their own pickle. Then chop and pound six small onions. Mix them with a little black pepper and a little cayenne, half a glass of soy, four glasses of mushroom catchup, two glasses of claret, and two of black walnut pickle. Put the mixture in a small saucepan or earthen pipkin, and let it simmer slowly till all the bones of the anchovies are dissolved. Strain it, and when cold, bottle it for use; dipping the cork in melted rosin, and tying leather over it. Fill the bottles quite full."

Harvey's Sauce (p. 173). This was one of the most popular commercial sauces. "Dissolve six anchovies in a pint of strong vinegar, and then add to them three table-spoonfuls of India soy, and three table-spoonfuls of mushroom catchup, two heads of garlic bruised small, and a quarter of an ounce of cayenne. Add sufficient cochineal powder to colour the mixture red. Let all these ingredients infuse in the vinegar for a fortnight, shaking it every day, and then strain and bottle for use. Let the bottles be very small and cover the corks with leather."

Tomata soy (p. 224). Although "soy" is in the title of this recipe, no soy sauce is called for as an ingredient. Another suitable title might be "Tomata catchup" (see below). The ingredients: 8 quarts tomatas [tomatoes], salt for layering, 2 ounces cloves, 1 ounce mace, 2 ounces black pepper, 3 "table-spoonfuls of cayenne, all powdered."

The interesting chapter on "Catchups" (p. 174-78) contains detailed recipes for: Lobster catchup. Anchovy catchup. Oyster catchup. Walnut catchup. Mushroom

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catchup. Tomata catchup. Lemon catchup. Sea catchup [with anchovies; keeps well at sea]. All are salty liquids that have been simmered, strained, bottled and corked. None contain "soy." Note: To make "Tomata catchup," mash and squeeze ripe tomatas, then boil with fine salt for 2 hours, stirring frequently. Strain through a fine sieve. Season with mace, cinnamon, nutmeg, ginger, and white or red pepper, all powdered fine. Boil until very thick, then bottle, cork, and seal. This is the earliest recipe seen titled "Tomata catchup."

"Ground-nuts" are used as ingredients in 2 recipes: Cocoa-nut maccaroons [macaroons] (p. 352). Molasses candy (p. 365). Address: Philadelphia.

738. *Manchester Guardian* (*England*).1841. Domestic, miscellaneous, &c.: Chinese dinners. March 31. p. 4.
• ***Summary:*** From Saturday Magazine: "A festival given at Canton by one of the Hong merchants... to a select party of English, is thus described by one of the party. We sat down in number about fifteen... We were told we had the happiness to partake of stewed pigeon's eggs, wild cat, fricassied [fricasseed] frogs, dried worms (particularly recommended as a *bonne bouche* for wine at dessert), sea slugs, sharks fins, and other delicacies, which, whatever they may really have been, were rendered extremely palatable by the application of a little Japan soy [sauce].

Note: It seems surprising that soy sauce from Japan would have been used at a banquet in Canton, China. How would the writer have known where the soy sauce had been made? How interesting if the Chinese were actually importing soy sauce from Japan at this time because they considered it superior to their own. Or perhaps the writer is using "Japan soy" as a generic term for all soy sauce.

739. Siebold, Philipp Franz von; Busk, M.M. 1841. Manners and customs of the Japanese, in the nineteenth century: From recent Dutch residents of Japan, and the German of Dr. Ph. Fr. von Siebold. London: John Murray. xi + 423 p. 20 cm. No index.
• ***Summary:*** This book was compiled from earlier sources, especially those of the first three physicians at Dejima, Japan.

Philipp Franz von Siebold, a learned German, lived 1796-1866. Note Sieb. & Zucc. Siebold's German book titled *Nippon* was published in 1897. Japan is largely an unknown country. Europeans are excluded except for the Dutch factory at Dezima [Dejima]. Siebold, "like his talented and indefatigable predecessors, Kaempfer and Thunberg, held the situation of physician to the factory."

In the chapter on "Banquets" we read (p. 186): "At entertainments of this description, each guest is served with a portion of every dish in a small bowl. Another bowl is placed beside him, and kept constantly replenished with rice, whilst the sauces and other condiments, of which, besides soy [sauce], are salted ginger and salted fish, are handed round by the servants of both sexes, who are in constant attendance."

The chapter on "Husbandry" states (p. 329): "Barley and wheat are likewise grown–the former for feeding the cattle; the latter is little valued, and chiefly used for cakes and soy. This last is made by fermenting together, under ground, wheat, a peculiar kind of bean, and salt. Beans of all sorts, some other vegetables, and various roots, are sedulously cultivated,..."

"Dr. Von Siebold's Japanese museum [at Leyden] is said to be the finest in Europe, and far richer and in every respect superior to the Japanese rooms in the Royal Museum at the Hague." (p. 297). Mrs. M.M. Busk is listed by some as the compiler of this book, but her name does not appear in this 1841 edition.

Note: Soy is not mentioned in this book.

740. Cooley, Arnold James. 1841. The cyclopaedia of practical receipts in all the useful and domestic arts: Being a compendius book of reference for the manufacturer, tradesman, and amateur. London: J. Churchill. vi + 281 p. See p. 207. 20 cm. *
• ***Summary:*** Cover title: "Cyclopedia of 3000 practical receipts."

Page 207 mentions Quin's sauce, Walnut Catsup, and soy [sauce]. Address: "By a practical chemist".

741. Oken, Lorenz. 1841. Allgemeine Naturgeschichte fuer aller Staende. Dritten Bandes dritte Abtheilung [General natural history for all places. Vol. 3. Part 3]. Stuttgart, Germany: Hoffmann'sche Verlags-Buchhandlung. 2135 p. See p. 1661-62, Die Soju-Bohne (P. hispidus). [3 ref. Ger]
• ***Summary:*** This seems to be the second translation of Kaempfer's description of the soybean–(8) Die Soju-Bohne (Ph. mungo, hirtus)–and of miso and soy sauce into German; the first was by Bryant in 1785. Oken cites Kaempfer, Jacquin, and Plenk.

The line that mentions miso and soy sauce reads (p. 1661): *Aus reifen Bohnen macht man ein Gemüse* (*Miso*) *und eine scharfe Brühe* (*Sooju*). Descriptions of how to make miso and soy sauce are then given. Address: Germany.

742. Penny cyclopaedia of the Society for the Diffusion of Useful Knowledge: Soja hispida. 1841. London: Charles Knight & Co. See vol. 22, p. 193-94. [2 ref]
• ***Summary:*** "Soja Hispida (Moench), Soja Japonica (Savi), the Dolichos Soja (Linn), a leguminous plant, native of Japan and the Moluccas, and abundant in the peninsula of India, though probably introduced there. The seeds resemble those of the haricot, French or kidney bean, and are used by the Chinese to 'form a favourite dish, called *ten-hu*, or *tau-hu* which looks like curd, and which, though insipid in itself, yet with proper seasoning is agreeable and wholesome' (Don's *Dictionary*). The Japanese call the seeds *Miso* [sic, error based on Miller 1807] and put them into soup, of which they

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sometimes partake three times a day. They likewise prepare with them the sauce termed *Sooja* which has been corrupted into *Soy*.

"'The beans are boiled until all the water is nearly evaporated, and they begin to burn, when they are taken from the fire, and placed in large wide-mouthed jars, exposed to the sun and air; water and a certain proportion of molasses or very brown sugar are added. These jars are stirred well every day, until the liquor and beans are completely mixed and fermented: the material is then strained, salted, and boiled, and skimmed until clarified, and will after this process become of a very deep brown colour, and keep any length of time. It has been stated that the gravy or juice of meat was used in preparing this condiment, but it appears to be entirely made from vegetable materials. There are two or three qualities of soy. To make the best requires much care and attention. Japanese soy is much esteemed in China on account of the superior manner in which it is made. Shopkeepers at Canton who sell soy have large platforms on the roofs of their houses, where the jars for preparing soy are arranged and exposed to the sun; for the consumption of soy is enormous. Neither rich nor poor can breakfast, dine, or sup without it: it is the sauce for all kinds of food; gives a zest to every dish, and may be said to be indispensable at a Chinese repast.' (Dobell's *Kamschatka.*) Soy is only sparingly used as a sauce in this country. It has the character of being a useful stomachic, but not more so than any of the other condiments when used with moderation."

Note: This is the earliest document seen (May 2004) that uses the word "stomachic" in connection with soy sauce. *Merriam-Webster's Collegiate Dictionary* (1998) defines stomachic (first used as a noun in 1735) as "a stimulant or tonic for the stomach." Address: London, England.

743. Timbs, John. 1841. Popular errors: Explained and illustrated. London: Tilt and Bogue. vii + 376 p. Index. 17 cm.

• ***Summary:*** In Chapter 2, titled "Errors respecting the properties of food," the section titled "Soy from black-beetles" (p. 86) states:

"Sailors have a notion that Soy [sauce] is made from cockroaches; and, however absurd the belief may appear, the reason for it is worthy of investigation. The Chinese at Canton have a large Soy manufactory, and they are particularly solicitous to obtain cockroaches from ships; from which circumstances sailors immediately conclude that it is for the purpose of making Soy from them. But, it is better established that cockroaches are used by the Chinese bait in fishing. The infusion of cockroaches is also used in medicine; and Mr. Webster, surgeon of H.M.S. *Chanticleer,* states that common salt and water, saturated with the juices of the cockroach, has all the odour, and some of the flavour and qualities, of Soy; so that the sailors' notion, after all, may not be far from the truth." Address: Editor... [England].

744. Johnson and Moore. 1842. Ex "Clifton" (Ad). *New Zealand Gazette and Wellington Spectator (Wellington).* Feb. 23. p. 1.

• ***Summary:*** Goods for sale from the sailing ship Clifton include: "... Chili vinegar, Mushroom and Walnut Ketchup, strong vinegar for pickling, India soy [sauce], anchovy, lemon pickle,..."

Note 1. This same ad appeared in at least 8 subsequent issues of this newspaper.

Note 2. This is the earliest document seen (Dec. 2009) concerning soybean products (soy sauce) in New Zealand. This document contains the earliest date seen for soybean products in New Zealand (Feb. 1842); soybeans as such have not yet been reported.

Note 3. This is the earliest of 306 documents seen (Nov. 2009) in the New Zealand Newspapers database (paperspast) that contains the term "India Soy." The term was last used in New Zealand Newspapers on 24 June 1902.

Note 3. This is the earliest of 2,638 documents seen (Nov. 2009) in the New Zealand Newspapers database (paperspast) that contains the word "Ketchup" (regardless of capitalization). The word was last used in New Zealand Newspapers on 2 Oct. 1930.

Note 4. This is the earliest of 39 documents seen (Nov. 2009) in the New Zealand Newspapers database (paperspast) that contains the term "Walnut Ketchup" (regardless of capitalization). The term was last used in New Zealand Newspapers on 28 June 1906.

745. Fell (Alfred) and Co. 1842. Cargo of the Wave to be sold by auction (Ad). *Nelson Examiner and New Zealand Chronicle.* Oct. 22. p. 129, col. 1.

• ***Summary:*** Goods to be sold include: "... Nuts and raisins, India soy [sauce], olive oil, and bottled fruits, Pickles, sauces, mustard, and ketchup." Address: Trafalgar Street.

746. Grinnell, Minturn & Co. 1842. Classified ad: Offer for sale. *New-York Daily Tribune.* Oct. 27. p. 4.

• ***Summary:*** "50 chests Lac Dye. 50 jars Chinese Soy. 100 cases German Soap–48 pipes Olive Oil." Address: No. 78 South-street [New York City].

747. Fell (Alfred) and Co. 1842. Unreserved sale, for the benefit of those whom it may concern (Ad). *Nelson Examiner and New Zealand Chronicle.* Nov. 19. p. 145, col. 1.

• ***Summary:*** "... will submit for competition by public auction, on Wednesday next, the 23d instant, at their Warehouse... Three cases sauces, One case Indian Soy [sauce], Window Glass, 12 by 10.

"Terms at sale, which will commence Twelve o'clock punctually."

Note: This is the earliest of 602 documents seen (Nov.

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2009) in the New Zealand Newspapers database (paperspast) that contains the term "Indian Soy." The term was last used in New Zealand Newspapers on 6 Dec. 1924. Address: Trafalgar Street.

748. A trip home with some home-spun yarns. 1842. London: Saunders and Otley. xvi + 424 p.
• ***Summary:*** Page 75: "... let me refer you to the late celebrated Quin, who was so excessively fond of him" [fish].

Page 76: "... and suggested that I might not like the Quin Sauce, (though in fact it proved excellent)."

749. Lee, N.K.M. (Mrs.). 1842. The cook's own book, and housekeeper's register: Being receipts for cooking every kind of meat, fish, and fowl;... A book of carving; and Miss Leslie's seventy-five receipts for pastry, cakes, and sweetmeats. By a Boston housekeeper. Boston, Massachusetts: Munroe and Francis; New York: Charles S. Francis. xlviii + 300 + 37 p. No index. 19 cm.
• ***Summary:*** The recipes related to soy in this edition are very similar to those in the 1832 edition (which see)–in the same recipes on the same pages. "Soy" [sauce] is mentioned in recipes on pages xxiv, 28-29, 30, 44, 53, 67, 91, 122, 138, 173, 180, 182, 185 (Quin's sauce), 186-87, 190 (Quin's Sauce), 191, 227, 241. Catchup is mentioned throughout the book, including mushroom catchup, walnut catchup. Address: Boston, Massachusetts.

750. Ure, Andrew. 1842. A dictionary of arts, manufactures, and mines; Containing a clear exposition of their principles and practice. New York, NY: D. Appleton & Co. 1340 p. See p. 1164. [1 ref]
• ***Summary:*** At SOY [sauce], the text is identical to that found in Vol. II, page 1158, of the original 1839 edition published in London by Longman, Orme, Brown, Greene & Longmans (vii + 1334 p.). A second London edition was published in 1840. The title page states that this book is "Illustrated with twelve hundred and forty engravings on wood. From the second London edition." It is the first American edition. Many other American editions were published including one in 2 volumes in 1856 (New York: D. Appleton & Co.), which see. The entry for SOY, in Vol. 2, p. 694-95, is also identical to that in the American 1842 ed. Address: London.

751. Faulkner's. 1843. Classified ad: Bottled fruits, assorted, 12*s.* per dozen;... *Times* (*London*). Jan. 24, p. 7, col. 4.
• ***Summary:*** ":... Indian soy [sauce], 1*s.* 3*d.* per bottle; essence of anchovies, shrimps, and lobsters, 1*s.*; Reading sauce, 1*s.*; Harvey's ditto, Mogul or Chatny, King of Oude, Chili vinegar, &c. all 1*s.* each; ketchups, 9*d.*; pickles, various, 1*s.*; curry powder, 1*s.* 3*d.* per packet;..."

Note: This is the earliest document seen (Dec. 2005) that uses the word "Chatny" [probably "Chutney"] to refer to the name of a sauce, apparently coined by Faulkner. Address: Italian and grocery warehouse, 44, Jermyn-street, St. James's, three doors from Duke street [London].

752. Hickson (Samuel) and Son's. 1843. Classified ad: Hickson's sauces and pickles. *Times* (*London*). Feb. 9, p. 2, col. 6.
• ***Summary:*** "The King of Oude's sauce, superior tomata, essence of lobster, essence of shrimps, essence of Gorgona anchovies, Bickson's sauce for fish, gravies, &c., genuine China soy [sauce], mushroom and walnut ketchup, lemon pickle, oyster sauce... Harvey and Reading sauces,... Bruce's Madras curry and mulligatawny pastes, curry powder and chutnee [chutney]..."

Note: "China soy" probably refers to soy sauce made in China. Address: 72, Welbeck-street [London].

753. Lea and Perrin's. 1843. Lea and Perrin's "Worcestershire Sauce" (Ad). *Observer* (*London*). March 5, p. 1.
• ***Summary:*** "Prepared from the recipe of a nobleman in the country. The above celebrated Sauce, has from the time of its introduction, been steadily progressing in public favour; its peculiar piquancy, combined with exquisite flavor, establish it of a character unequalled in sauces. Noblemen and those of acknowledged goût, pronounce it to be 'the only good sauce;' and for enriching gravies, or as a zest for fish, curries, steaks, game, cold meat, &c, especially unrivalled. As a rapidly increasing inquiry is now made for it in all parts of the kingdom, the proprietors beg to state that druggists, grocers, and others may be supplied by their agents:–Messrs. Barclay and Sons, Farringdon-street; Mr. J. Harding, King-street, Stepney; Messrs. Metcalfe and Co., 16 Southampton-row; and by the wholesale oil and Italian warehousemen in London, upon the same terms as at their warehouse at Worcester–Sold retail by the usual venders of sauces in half-pint bottles at 1*s.* 6*d.*, pints 2*s.* 6*d.*, and quarts 5*s.* each, with the proprietors' stamp over the cork of every bottle."

Note: This is the earliest document seen (March 2012) that gives prices for Lea and Perrins' sauce, or that shows them selling it in three sizes of bottles, or that uses the word "celebrated" to describe Lea & Perrin's Worcestershire sauce. Address: Worcester.

754. *Naval and Military Gazette: East India and Colonial Chronicle* (*London*). 1843. Lea & Perrin's 'Worcestershire Sauce' (Ad). April 1, p. 208, col. 2. *
• ***Summary:*** This small ad states: "prepared from the recipe of a nobleman in the country."

Note: This article was cited by the *Oxford English Dictionary* (1989) at "Worcestershire Sauce." Soyinfo Center has not seen it. This periodical was published from 1833 to 1886. The British Library owns only Jan. 1861 to Dec. 1874. Shelfmark: Newspapers9ab. Address: Worcestershire,

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England.

755. Otterson (E.). 1843. Ex Phoebe–(Ad). *Nelson Examiner and New Zealand Chronicle*. April 8. p. 225.
• ***Summary:*** "24 cases consisting of... salad oil, olives, Cayenne pepper, walnut catsup, mushroom catsup, Harvey sauce, Reading sauce...."

756. Watson (William R.). 1843. Drugs, medicines, and select groceries (Ad). *Palladium (The) (Charlottetown, Prince Edward Island, Canada)*. Dec. 28. p. 4.
• ***Summary:*** "Has just received per Acadian from Greenock, and Jane Sprat from Halifax, his winter supply... Mustard, assorted Pickles, do. [ditto = assorted] Sauces, Real Indian Soy, Olives, Capers, &c..."

Note: This is the earliest document seen (Feb. 2010) concerning soybean products (soy sauce) in Prince Edward Island, Canada. This document contains the earliest date seen for soybean products in Prince Edward Island (Dec. 1843); soybeans as such have not yet been reported. Address: No. 14, Cheapside.

757. Lea and Perrins. 1843. Lea and Perrin's "Worcestershire Sauce;" (Ad). *Pictorial Times (England)*.
• ***Summary:*** "prepared from the Recipe of a Nobleman in the Country.–The above celebrated Sauce has, from the time of its introduction, been steadily progressing in public favour; its peculiar piquancy, combined with exquisite Savour, establish it of a character unequalled in the sauces. Noblemen and others of acknowledged gout [taste], pronounce it to be 'the only good sauce;' and for enriching gravies or as a zest for fish, curries, steaks, game, cold meat, &c. especially unrivalled. As a rapidly increasing inquiry is now made for it in all parts of the kingdom, the Proprietors beg to state that druggists, grocers, and others may be supplied by their agents:–Messrs. Barclay and Sons, Farringdon Street; Mr. J. Harding, 59, Ling St., Stepney; Messrs. Metcalfe and Co., 16, Southampton Row; and by the wholesale oil and Italian warehousemen in London, upon the same terms as at their warehouse at Worcester.–Sold retail by the usual venders of sauces in half-pint bottles at 1*s*. 6*d*. pints 2*s*. 6*d*. and quarts 5*s*. each, with the Proprietors' stamp over the cork of every bottle." Address: [Worcester, England].

758. Waterston, William. 1843. A cyclopædia of commerce, mercantile law, finance, and commercial geography:... Edinburgh, Scotland: Oliver & Boyd; London: Simpkin, Marshall, & Co. iv + 684 + 39 + 128 p. 23 cm.
• ***Summary:*** The section titled "Soy" (p. 627) states: "Soy, a peculiar savoury sauce made from the bean of the *Soja*, a species of *Dolichos* growing in the eastern parts of Asia. Genuine soy is well flavoured, thick, brown, and clear; and when shaken in a glass, it should leave a coat on the surface of a bright yellowish brown colour. It is imported from Canton, but the best is brought from Japan by way of Batavia" [Dutch East Indies].

Note 1. Following p. 672 (the end of the basic cyclopædia) is a one-page table titled "Tariff of duties exigible in the United Kingdom." For each imported item there are two rates: (1) From foreign countries, and (2) From British possessions. Tariffs are levied on beans (10 pence/bu), "oil-seed cakes" (1 shilling/ton), and some seeds ("Cole, flax, hemp, rape, sesamum;" 1 pence/qr [pence/quarter; in the UK a "quarter" is usually a quarter of a hundredweight {112 lb} or 28 lbs]).

Note 2. No soybeans or soy cakes were being imported to England at this time. Soy [sauce] is not mentioned. At the end of the book is an alphabetical "Supplement" and three maps of Great Britain.

Note 3. This is the earliest English-language document seen (March 2005) that mentions "rape" seeds (or the rape plant), or that mentions "Cole" a seed very similar or identical to rape seed.

Note 4. This is the earliest English-language document seen (Sept. 2006) that contains the term "oil-seed" (or "oil seed").

Note 5. This is the earliest English-language document seen (Sept. 2005) that contains the term "oil-seed cake" (or "oil-seed cakes" or "oil seed cake"). Address: Accountant, Edinburgh [Scotland].

759. Faulkner's. 1844. Classified ad: Bottled fruits, 12*s*. per dozen:... *Times (London)*. Feb. 21. p. 11, col. 1.
• ***Summary:*** ";... Indian soy [sauce], 1*s*. 3*d*. per bottle. Essences–anchovies, lobsters, and shrimps, 1*s*. Harvey's sauce, 1*s*.; Reading sauce, 1*s*.; King of Oude and Chetna sauces, 1*s*.; Chili, Tarragon, and other vinegars, 1*s*.; ketchup, 9*d*.; pickles, 1*s*. Salad oil, curry powder,... equally cheap."

Note: This is the earliest document seen (Dec. 2005) in the *Times* (London) that uses the word "Chetna" [probably "Chutney"] to refer to the name of a sauce, apparently coined by Faulkner. Address: Grocers and oilmen, 44, Jermyn-street, St. James's, three doors from Duke street [London].

760. Faulkner's. 1844. Classified ad: Westphalia hams, 9*d*. per lb.:... *Times (London)*. June 27. p. 11, col. 4.
• ***Summary:*** ";... India soy [sauce], 1*s*. 3*d*. per bottle. Essences–anchovies, lobsters, and shrimps, 1*s*.; Harvey's sauce, 1*s*.; Reading sauce, 1*s*.; King of Oude and Chetna [Chutney?] sauces, 1*s*.;..." Address: Grocers and oilmen, 44, Jermyn-street, St. James's, three doors from Duke-st. [London].

761. Lazenby (E.) and Son. 1844. Classified ad: Harvey's Fish Sauce. *Times (London)*. June 27. p. 11, col. 4.
• ***Summary:*** "Having numerous complaints from families who are imposed upon by the spurious imitations of their Harvey's Fish Sauce, request purchasers to observe that

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each bottle of the genuine article bears the name of 'William Lazenby' on the back, in addition to the front label used so many years and signed 'Elizabeth Lazenby,' E. Lazenby and Son's Essence of Anchovies continues to be prepared with that peculiar care which has rendered it so justly admired as sauce for salmon, turbot, cod, soles, eels, &c. and is manufactured only at their old-established fish-sauce warehouse..." Address: Fish-sauce Warehouse, No. 6, Edward-street, Portman-square [London].

762. Bell (Lucius) & Co. 1844. Wholesale and retail grocers (Ad). *Globe (The)* (*Toronto, Canada*). July 9. p. 4.
• ***Summary:*** This company in Rochester, New York (on the central southern shore of Lake Ontario), is advertising in a newspaper in Toronto, Ontario, Canada (on the northeastern shore of Lake Ontario). The two cities are about 90 miles apart as the crow flies.

"We propose to keep in Rochester, an assortment of Teas, Coffees, Fruits, Spices, Sugars, &c., embracing every variety and quality that can be found in the finest establishments in the City of New York.

A long list of goods, divided into categories, is given.

"Sauces, &c. Canton Soy [sauce; from China], Mushroom, Walnut and Tomato Catsup, Harvey, Reading, Anchovy, John Bull, Quinn and General Sauce." Address: No. 26, Buffalo St., Second Store East of Arcade Hall, Rochester, New York.

763. Lea and Perrins. 1844. Classified ad: Lea and Perrins' Worcestershire Sauce,... *Times* (*London*). July 15. p. 11, col. 1.
• ***Summary:*** "... prepared from the recipe of a nobleman in the country. 'Great Western Steam-ship, June 6, 1844.–The cabin of the Great Western has been regularly supplied with Lea and Perrins' Worcestershire Sauce, which is adapted to every variety of dish from turtle to beef, from salmon to steaks, to all of which it gives a famous relish. I have great pleasure in recommending this excellent sauce to captains and passengers for its capital flavour, and as the best accompaniment of its kind for a voyage.–(Signed) James Hosken.' Sold wholesale by the proprietors, Messrs. Lea and Perrin, Worcester; Messrs. Barclay and Sons, Farringdon street; and the principal oil and Italian warehousemen in London; and retail by the usual venders of sauces."

Very similar ads appeared in the July 19 issue (p. 11, col. 5) and in the Aug. 23 issue (p. 8, col. 1). In both of these, the name is written "Lea and Perrin's" instead of "Lea and Perrins'" Worcestershire Sauce. Address: [Worcester, Worcestershire, England].

764. Lea & Perrin. 1844. Classified ad: Lea & Perrin's [sic] Worcestershire Sauce,... *Indian Mail (The)* 1(18):574. Oct. 4.
• ***Summary:*** "... prepared from the recipe of a nobleman in the country.

"'Great Western Steam-ship, June 6, 1844.–The cabin of the Great Western has been regularly supplied with Lea and Perrin's Worcestershire Sauce, which is adapted to every variety of dish, from turtle to beef, from salmon to steaks,–to all of which it gives a famous relish. I have great pleasure in recommending this excellent sauce to captains and passengers for its capital flavour, and as the best accompaniment of its kind for a voyage.

"(Signed) 'James Hosken.'

"Sold wholesale by the proprietors, Messrs. Lea & Perrin [sic], Worcester; Messrs. Barclay and Sons, Farringdon street; and the principal Oil and Italian warehousemen in London; and retail by the usual venders of sauces."

This ad also appeared in this same periodical on 6 Dec. 1844 (p. 638).

Note: This is the earliest ad seen (Feb. 2012) for Worcestershire Source outside of England. The new product will soon be sold worldwide, starting in British colonies. Address: Worcester, England.

765. Dodwell and Miles' India and London Civil and Military Agency. 1844. Classified ad: Dodwell and Miles, having an experience of thirty year's service... *Bombay Times and Journal of Commerce* (*British India*). Nov. 20. p. 746, col. 1.9.
• ***Summary:*** "... in the *Civil and Military Department of the Hon. Company's Home Establishment*, they are enabled to afford correct and exclusive information upon the several points of regulation which may affect the service generally;..."

After the section on "Pickles," the section on "Sauces" lists: "Day's City of London, Genuine India Soy, Essence of Anchovies, Tomata, Quin's Sauce, Cherokee Universal, Camp Sauce, Harvey's Reading, Brighton, Lemon Pickle, Mushroom Catchup, Walnut Catchup,... all at 16*s.* in half pints, 32*s.* in pints.

Note: This ad also appeared in the Dec. 7 (p. 786) and 4 Jan. 1845 (p. 10), and 8 Feb. 1845 (p. 92) issues of this newspaper.

766. Butman (Benjamin) & Co. 1844. Classified ad: Wholesale and retail grocers. *Barre Patriot* (*Massachusetts*). Nov. 22. p. 4.
• ***Summary:*** "... Walnut, Mushroom, and Tomato Ketchup–India Soy [sauce]–Canton Preserved Ginger -..."

Note: This is the last entry seen (Feb. 2006) in the Early American Newspapers database that mentions "India Soy." Address: No. 180 Main-street (Opposite American Temperance House), Worcester.

767. Leslie, Eliza. 1844. Directions for cookery, in its various branches. 20th ed. With improvements, supplementary receipts, and a new appendix. Philadelphia, Pennsylvania:

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Carey & Hart. 511 p. Illust. Index.

• ***Summary:*** "Soy" [sauce] is mentioned on the following pages: 172 (Quin's sauce), 173 (Harvey's sauce), and 224 (Tomata soy). Recipes for using or making "catchup" are found throughout the book–including: Lobster catchup (p. 174): "This catchup, warmed in melted butter, is an excellent substitute for fresh lobster sauce at seasons when the fish cannot be procured, as, if properly made, it will keep a year.

"Take a fine lobster that weighs about three pounds. Put it into boiling water, and cook it thoroughly. When it is cold break it up, and extract all the flesh from the shell. Pound the red part or coral in a marble mortar, and when it is well bruised, add the white meat by degrees, and pound that also; seasoning it with a tea-spoonful of cayenne, and moistening it gradually with sherry wine. When it is beaten to a smooth paste, mix it well with the remainder of the bottle of sherry. Put it into wide-mouthed bottles, and on the top of each put a table-spoonful of sweet oil. Dip the corks in melted rosin, and secure them well by tying leather over them.

"In using this catchup, allow four table-spoonfuls to a common-sized sauce-boat of melted butter. Put in the catchup at the last, and hold it over the fire just long enough to be thoroughly heated."

Anchovy catchup (p. 174-75): "Bone two dozen anchovies, and then chop them. Put to them ten shalots, or very small onions, cut fine, and a handful of scraped horseradish, with a quarter of an ounce of mace. Add a lemon, cut into slices, twelve cloves, and twelve pepper-corns. Then mix together a pint of port, a pint of madeira, and a pint of anchovy liquor. Put the other ingredients into the liquid, and boil it slowly till reduced one-half. Then strain it, and when cold put it into small bottles, securing the corks with leather."

Oyster catchup (p. 175): "Take large salt oysters that have just been opened. Wash them in their own liquor, and pound them in a mortar, omitting the hard parts. To every pint of the pounded oysters, add a half pint of white wine or vinegar, in which you must give them a boil up, removing the scum as it rises. Then to each quart of the boiled oysters allow a tea-spoonful of beaten white pepper, a tea-spoonful of pounded mace, and cayenne pepper to your taste. Let it boil up for a few minutes, and then pass it through a sieve into an earthen pan. When cold, put it into small bottles, filling them quite full, as it will not keep so well if there is a vacancy at the top. Dip the corks in melted rosin, and tie leather over each."

Walnut catchup (p. 175-76): "Take green walnuts that are young enough to be easily pierced through with a large needle. Having pricked them all in several places, throw them into an earthen pan with a large handful of salt, and barely sufficient water to cover them. Break up and mash them with a potato-beetle, or a rolling-pin. Keep them four days in the salt and water, stirring and mashing them every day. The rinds will now be quite soft. Then scald them with boiling-hot salt and water, and raising the pan on the edge, let the walnut liquor flow away from the shells into another pan. Put the shells into a mortar, and pound them with vinegar, which will extract from them all the remaining juice. Put all the walnut liquor together, and boil and skim it, then to every quart allow an ounce of bruised ginger, an ounce of black pepper, half an ounce of cloves, and half an ounce of nutmeg, all slightly beaten. Boil the spice and walnut liquor in a closely covered vessel for three quarters of an hour. When cold, bottle it for use, putting equal proportions of the spice into each bottle. Secure the corks with leather."

Mushroom catchup (p. 176): "Take mushrooms that have been freshly gathered, and examine them carefully to ascertain that they are of the right sort. Pick them nicely, and wipe them clean, but do not wash them. Spread a layer of them at the bottom of a deep earthen pan, and then sprinkle them well with salt; then another layer of mushrooms, and another layer of salt, and so on alternately. Throw a folded cloth over the jar, and set it by the fire or in a very cool oven. Let it remain thus for twenty-four hours, and then mash them well with your hands. Next squeeze and strain them through a bag.

"To every quart of strained liquor add an ounce and a half of whole black pepper, and boil it slowly in a covered vessel for half an hour. Then add a quarter of an ounce of allspice, half an ounce of sliced ginger, a few cloves, and three or four blades of mace. Boil it with the spice fifteen minutes longer. When it is done, take it off, and let it stand awhile to settle. Pour it carefully off from the sediment, and put it into small bottles, filling them to the top. Secure them well with corks dipped in melted rosin, and leather caps tied over them.

"The longer catchup is boiled, the better it will keep. You may add cayenne and nutmeg to the spices. The bottles should be quite small, as it soon spoils after being opened."

Tomata catchup (p. 177): "Take a peck of large ripe tomatas [tomatoes]. Having cut a slit in each, put them into a large preserving-kettle, and boil them half an hour. Then take them out, and press and strain the pulp through a hair sieve. Put it back into the kettle, and add an ounce of salt, an ounce of powdered mace, half an ounce of powdered cloves, a small teaspoonful of ground black pepper, the same of cayenne pepper, and eight table-spoonfuls of ground mustard. Mix the seasoning with the tomata pulp; let it boil slowly during four hours. Then take it out of the kettle, and let it stand till next day, in an uncovered tureen. When cold, stir into it one pint of the best cider vinegar. Put it into clean bottles, and seal the corks. It will be found excellent for flavouring stews, hashes, fish-sauce, &c."

Lemon catchup (p. 177): "Grate the peel of a dozen large fresh lemons. Prepare, by pounding them in a mortar, two ounces of mustard seed, half an ounce of black pepper, half an ounce of nutmeg, a quarter of an ounce of mace, and a quarter of an ounce of cloves. Slice thin two ounces of

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horseradish. Put all these ingredients together. Strew over them two ounces of fine salt. Add the juice of the lemons. Boil the whole twenty minutes. Then put it warm into a jar, and let it stand three weeks closely covered. Stir it up daily.

"Then strain it through a sieve, and put it up in small bottles to flavour fish and other sauces. This is sometimes called lemon pickle."

Sea catchup (p. 178): "Take a gallon of stale strong beer, a pound of anchovies washed from the pickle, a pound of peeled shalots or small onions, half an ounce of mace, half an ounce of cloves, a quarter of an ounce of whole pepper, three or four large pieces of ginger, and two quarts of large mushroom-flaps rubbed to pieces. Put the whole into a kettle closely covered, and let it simmer slowly till reduced to one half. Then strain it through a flannel bag, and let it stand till quite cold before you bottle it. Have small bottles and fill them quite full of the catchup. Dip the corks in melted rosin.

"This catchup keeps well at sea, and may be carried into any part of the world. A spoonful of it mixed in melted butter will make a fine fish sauce. It may also be used to flavour gravy."

Note: The word "catsup" is not mentioned. Address: Philadelphia.

768. Morrison, John Robert. 1844. A Chinese commercial guide: Consisting of a collection of details and regulations respecting foreign trade with China. 2nd ed., revised throughout... Macao: Published by the author. vii + 280 p. 24 cm.

• ***Summary:*** Section 6, "Description of the articles of export at Canton" (p. 131+), contains a long description of soy sauce (p. 141): "50. Soy. This is a condiment made from the Dolichos bean, which grows in China and Japan; the name is derived from the Japanese *siyau* [sic, *shôyu*]. To make it the beans are boiled soft, and then an equal quantity of wheat or barley is added; after this has thoroughly fermented, a quantity of salt, and three times as much water as the beans were at first, are added. The whole compound is now left for two or three months, and then pressed and strained. Good soy has an agreeable taste, and if shaken in a tumbler, lines the vessel with a lively yellowish-brown froth; the color of soy in the vessel is nearly black. It improves by age. Japan soy is considered superior to the Chinese, but both are of different qualities, and are probably made of various materials, some of which may be base enough. It is for the most part sent to England and America."

Note 1. This is the earliest English-language document seen (April 2012) that uses the word *siyau* to refer to shoyu or soy sauce.

Note 2. This is the earliest English-language document seen (Feb. 2008) that uses the word "tumbler," or the word "froth," or the term "yellowish-brown froth" in connection with soy sauce.

Note 3. John Robert Morrison lived 1814-1843. Address: LL.D., Hongkong.

769. Okura, Nagatsune. 1844. Kôeki kokusan-kô [Greatly beneficial domestic production ideas. 8 vols.]. Edo [later Tokyo], Japan: Suharaya. Illust. 23 cm. [Jap]*

• ***Summary:*** This is an early multivolume work about farm management and farm production (including production of foods) in Japan. The author, Nagatsune Ohkura, lived 1768 to about 1847.

Iino (2003, p. 9) presents two illustrations from this 1844 book showing soy sauce production.



(1) A woman, standing, facing forward, and wearing a kimono, is roasting soybeans in a large metal wok over a hot fire in a cauldron dais. A man, kneeling on the floor and facing away, appears to be spreading something (perhaps the freshly roasted soybeans) on a straw mat (probably to cool). Four groups of Japanese script characters describe what is happening in the illustration.

(2) A man in the foreground is stirring moromi in one of two wooden barrels (each is about 3 feet tall, 3 feet in diameter, with the staves bound together by three braided bamboo hoops). The stirring tool that he is using is illustrated in the lower right corner; at the bottom tip is attached a circular wooden disk about 6 inches in diameter and ½ inch thick. A man in the background, facing forward, is using a long-handled dipper, held in his right hand, to ladle shoyu out of a woven bamboo colander (partially submerged in one of the wooden barrels described above) and into a wooden keg (about 18 inches tall, 20 inches in diameter with the staves bound together by three braided bamboo hoops) on

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the floor next to the barrel. Three groups of Japanese script characters describe what is happening in the illustration. Address: Japan.

770. Okura, Nagatsune. 1844. Kôeki kokusankô [On profitable local industries / Essay on the nation's benefit]. Japan [Jap]*

• ***Summary:*** In 1978 an enlarged modern edition was published in Tokyo, Japan, as part of the series Nihon nosho zenshu. The new edition contains 8 + 437 + xiii pages, is illustrated, and is 22 cm tall. The original edition is said to have been published in 2 volumes in 1842.

Yokotsuka (1985, p. 206), who cites this book as "*Koeki Kokusanko* (1844)," states that it is about the development of and formulas for commercial shoyu during the Edo period.

Edward E. Pratt, in *Japan's protoindustrial elite* (1999, p. 158) cites this as "Ookura Nagatsune. *Kôeki kokusankô* (1842).

Christie's auction website says that Okura lived from 1766 to 1860. Address: Japan.

771. The United States practical receipt book: or, Complete book of reference, for the manufacturer, tradesman, agriculturist, or housekeeper, containing many thousand valuable receipts, in all the useful and domestic arts, by a practical chemist. 1844. Philadelphia, Pennsylvania: Lindsay & Blakiston. 359 p. Index. 20 cm.

• ***Summary:*** By "A practical chemist." On page 231 is a recipe for "Harvey's Sauce. Quin sauce [Quin's Sauce], 48 parts; soy [sauce], 16 parts; cayenne, 1 part. Mix and steep for one week, then pour off the clear liquid."

On page 287 is a recipe for "Soy. Kidney beans, 1 gallon; wheat (bruised), ½ gallon; malt, (bruised), ½ gallon; salt (bruised), 1 gallon. Mix them, and let them lay together for two or three days, then add boiling water, 2 gallons; red herrings, 1 pound; garlic, 3 ounces; Italian juice, 3 ounces. Let them stand in a jar together for three months." Note: "Kidney beans" was an early misnomer for soy beans.

On page 303 are three recipes for "Quin's sauce"; the first two call for: (1) "Walnut catsup, 2 gallons; mushroom catsup, 2 gallons; soy, 1 gallon; garlic, 1 pound; cayenne, ½ pound; sprats, 6 pounds. Boil for fifteen minutes; strain and bottle." (2) "White vinegar, 1 gallon; soy, 1 pint; mushroom catsup, ½ pint; walnut catsup, ½ pint; allspice, 8 ounces; cayenne, 1 ounce. Mix, and boil or macerate, then strain and bottle."

Other recipes that contain soy [sauce] as an ingredient: "A peculiar sauce" (p. 31; 1 quart). "Isle of White sauce" (p. 55, with mushroom ketchup). "Camp vinegar" (p. 104; 2 oz. with walnut catsup). "Piquante sauce" (p. 218). "Sauce aristocratique" (p. 265, a quarter pint). "Sauce au roy" (p. 266, ½ pint with walnut ketchup).

772. Williams, Samuel Wells. 1844. Ying Hwá Yun-fú Lih-kiái. An English and Chinese vocabulary in the court dialect. Macao: Printed at the offices of the Chinese repository. 440 p. 20 cm. [Eng; Chi]

soy. 豉油 *shí yú.*

• ***Summary:*** Page 267 contains the term for soy sauce and its Chinese characters: "Soy, *shí yú.*" No other listings were seen for soy-related terms, as under bean or beans. But the index (p. 411) lists various characters containing the "bean" radical, including "bean" (pronounced tau or tou) and shi.

豆	Tau Tau Tou^{4}
豈	K'i Hi 'K'i
豉	Shi Shí *Sí*^{n3}
豎	Shú Shu Si^{4}

Note 2. This is the earliest English-language document seen (June 1999) in which Chinese characters are used to write the name of the soybean or related products.

The author, Samuel Wells Williams, lived 1812-1884. The Preface notes that "This Vocabulary is intended to succeed that of Dr. Morrison's in the Canton dialect, and was

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commenced after that book was out of print." The latter work was *Morrison's Dictionary of the Chinese Language*. 3 parts, 6 vols. Macao. 1822.

773. Watson (W.R.). 1845. Select groceries (Ad). *Islander (The) (Charlottetown, Prince Edward Island, Canada)*. Feb. 1. p. 2.
• ***Summary:*** Includes: "... Tarrogan and Chilly Vinegar [Tarragon, Chili], Tomato Sauce, Indian Soy [sauce], Mushroom Catsup,..."

774. Lyons (Samuel). 1845. Ex Kestrel from Hongkong (Ad). *Sydney Morning Herald (NSW, Australia)*. April 1. p. 1.
• ***Summary:*** "Bamboo hats, crackers, silk handkerchiefs, silks, Chinese curiosities, lacquerware, preserves, soy [sauce], and camphor wood trunks."
"12 cases soy, 1 dozen each."

775. Lea and Perrins. 1845. Classified ad: Lea and Perrins' Worcestershire Sauce... *Times (London)*. April 15. p. 11, col. 1.
• ***Summary:*** "... is pronounced by connoisseurs to be the only good sauce for enriching gravies, or as a zest for fish, curries, soups, game, steaks, cold meat, &c., and its rapidly increasing sale has induced the proprietors to open a warehouse in London. The very general and decided approbation bestowed on this sauce having encouraged imitations, the proprietors have adopted Betts's patent metallic capsules, on which are embossed the words 'Lea and Perrins' Worcestershire Sauce,' as a means of protection. Sold wholesale, retail, and for exportation by the proprietors, Vere-street, Oxford-street; Crosse and Blackwell, Soho-square; Barclay and Sons, Farringdon-street; Metcalfe and Co., Southampton-row; and by venders of sauces generally."
Note: This is the earliest document seen (Feb. 2012) that contains the word "imitations" (or "imitation"), or the word "connoisseurs," or the phrase "only good sauce," or the names "Vere-street" or "Crosse and Blackwell," in connection with Lea and Perrins or Worcestershire sauce. Address: [England].

776. Lea & Perrin. 1845. Classified ad: Lea & Perrin's [sic] Worcestershire Sauce... *Supplement to Allen's Indian Mail* No. 36. p. 543. Sept. 2.
• ***Summary:*** "... is pronounced by connoisseurs to be 'the only good sauce' for enriching gravies, or as a zest for fish, curries, soups, game, steaks, cold meat, &c. The approbation bestowed on this sauce having encouraged imitations, the proprietors deem it necessary to caution purchasers to ask for 'Lea and Perrin's [sic] Worcestershire Sauce,' and to observe that the same is embossed on Betts's metallic capsules, which they adopted as a protection to the public. Sold wholesale, retail, and for exportation by the proprietors, Vere-street, Oxford-street; Crosse and Blackwell, Soho-square; Barclay and Sons, Farringdon-street; Metcalfe and Co., Southampton-row; and by venders of sauces generally." Address: Worcester, England.

777. Lea and Perrin. 1845. Classified ad: Lea and Perrin's [sic] Worcestershire Sauce... *Times (London)*. Oct. 11. p. 15, col. 5.
• ***Summary:*** "... is pronounced by connoisseurs to be the only good sauce for enriching gravies, or as a zest for fish, curries, game, steaks, cold meat, &c. The approbation bestowed on this sauce having encouraged imitations, the proprietors deem it necessary to caution purchasers to ask for 'Lea and Perrin's [sic] Worcestershire Sauce,' and to observe that the same is embossed on Betts's metallic capsules, which they have adopted as a protection to the public. Sold wholesale, retail, and for exportation by the proprietors, Vere-street, Oxford-street; Crosse and Blackwell, Soho-square; Barclay and Sons, Farringdon-street; and venders of sauces generally." Address: [England].

778. Acton, Eliza. 1845. Modern cookery, in all its branches: Reduced to a system of easy practice, for the use of private families. 2nd ed. London: Longman, Brown, Green and Longman's. xviii + 576 + 32 p. See p. 136. Illust. Index. 16 cm. [Eng]*
• ***Summary:*** Recipe for "Walnut catsup" (p. 134, 135). Recipe (p. 136) for "Epicurean sauce: Mix well, by shaking them in a bottle, a quarter-pint of Indian soy [sauce], ½ a pint of Chili vinegar, ½ a pint of walnut catsup, and a pint and a half of the best mushroom catsup. These proportions make an excellent sauce, either to mix with melted butter, and to serve with fish, or to add to different kinds of gravy; but they can be varied, or added to, at pleasure.
"Indian soy, ¼ pint; Chili vinegar, ½ pint; walnut catsup, ½ pint; mushroom catsup, 1½ pint.
"*Obs.* [Observations]–A pint of port wine, a few eschalots, and some thin strips of lemon-rind will convert this into an admirable store-sauce. Less soy would adapt it better to many tastes."
Note 1. Eliza Acton lived 1799-1859. Illustrated with numerous woodcuts. Publishers advertisements (32 p.) at end. Note 2. Neither this London edition nor the Philadelphia edition of the same year contains a recipe for Quin's Sauce (as stated on the Internet at www.seafoodfish.com). Address: England.

779. Acton, Eliza; Hale, Sarah Josepha Buell. 1845. Modern cookery, in all its branches: Reduced to a system of easy practice, for the use of private families... From the 2nd London ed. Philadelphia, Pennsylvania: Lea and Blanchard. l + xvii-xxxv, 37-418 p. See p. 116-18. Illust. Index. 21 cm. [Eng]*
• ***Summary:*** This book is identical to the London edition of

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the same year except: (1) The physical size and pagination are different. (2) In the American edition, there is a two-page American preface (in addition to the British preface) which notes that the few changes "which have been made refer chiefly to the preparation of those articles that may be regarded as more strictly American, as Indian corn, terrapins, and some others." Otherwise the receipts (recipes) are identical, but on different pages. "Walnut catsup" (two recipes, p. 116-17). "Epicurean sauce" (with Indian soy [sauce], p. 118). Address: England.

780. Allen, Ann H. 1845. The housekeeper's assistant, composed upon temperance principles.... By an old housekeeper. Boston, Massachusetts: James Munroe and Co. 142 + v p. Index. 19 cm.

• ***Summary:*** This book is dedicated to temperance, which is "the handmaid of religion." Therefore, alcohol is used only a few of the recipes–such as vinegar and mulled wine. "Soy" [sauce] is mentioned as an ingredient in the following recipes: Camp vinegar ("2 teaspoons veal soy," p. 82). Mock turtle ("two spoonfuls of mushroom catsup, and one of soy," p. 99). Hare soup ("and add a spoonful of soy," p. 123-24). Perch and tench ("serve with melted butter and soy," p. 129). Lobsters stewed ("one [spoonful] of soy, or walnut catsup," p. 130). To dress surgeon ("Sauce, butter, anchovy, and soy," p. 132).

The recipe for Molasses candy (p. 29) calls for peanuts as an ingredient: "Flavor with essence of lemon, and stir shelled pea-nuts (ground-nut), or almonds, into it...."

Note: This is the earliest document seen (Jan. 2006) that mentions "veal soy." But what is it?

781. Waters, John. 1846. My uncle, the parson. *The Knickerbocker: Or, New-York Monthly Magazine* 27(1):14-19. Jan. See p. 18-19.

• ***Summary:*** "My uncle, accustomed as he was to the excellent specimens of what has been called *parson's meat*, paused for a moment... while the mutton was hot... But at his own second slice he sent Jim to the pocket of the chaise for a bottle of Worcestershire Sauce; and finding it hardly warm enough for so raw a day, produced a small flat phial with gilt edges and glass stopper that comes to us generally from Smyrna with Attar of Roses, but which was now filled with Cayenne pepper that he used as reinforcement."

The last sentence of the story reads (p. 19): "My father on the contrary, who thought the parson a little too fastidious on the subject of dress, liked the story all the better for the mistake; and the delicate fibre of some thing that I will not call malice, was to him in the narration very like a slight dash of Worcestershire Sauce to the gravy of my Uncle the Parson."

782. Wilkinson (Messrs.). 1846. Sales by auction: Stock of a drysalter, pickle and drug warehouse (Ad). *Times (London)*. April 8. p. 12, col. 5.

• ***Summary:*** "... 60 casks of pickles of different kinds, and 20 pipes of cucumbers in brine, 500 dozens of various pickles in bottle, castor oils, boiled and other oils, vinegar, Indian soy [sauce], lozenges,... seven-horse steam engine,... mill with pair of French burr stones, coppers,..." Address: Ludgate-hill [London].

783. *Chinese Repository*.1846. Statements of the number, tonnage, &c., of the merchant vessels of different nations in the port of Canton, for the year 1845. 15(4):165-71, April. [1 ref]

• ***Summary:*** From the China Mail, Feb. 5th, 1846: A table (No. V, p. 170-71) shows "the quantities and value of merchandise exported from the port of Canton in 181 British vessels... and in 24 Lorchas [3-masted Chinese sailing ships] to the countries and places undermentioned during the year ending 31st December, 1845."

Soy [sauce] 430 piculs. $4,256. (a) Sent to Bombay, Calcutta [British India], or the Cape.

Note: The tables in this article were apparently compiled by Francis C. Macgregor, H.M. Consul.

784. Lea and Perrins. 1846. Worcestershire Sauce testimonials (Ad). *New Zealand Journal (The)* No. 166. May 9. p. 107, col. 1.

• ***Summary:*** "Messrs. Lea and Perrins, proprietors of the Worcestershire Sauce, beg to submit the following Testimonials, as a guarantee to the public of the superior qualities of this sauce, and also to caution purchasers against worthless imitations, by observing their names are affixed to the metallic capsule which secures the cork of each bottle, to imitate which is fraud.

"The Queen's, Cheltenham, Feb. 28th, 1846.

Gentlemen,–I have no hesitation in bearing testimony to the excellent qualities of your 'Worcestershire Sauce,' as the numerous families of the first rank in this kingdom, and from the Continent of Europe, and India, who honour the Queen's by their patronage enable me to speak confidently of the very general estimation in which it is held by them, and from my own experience of its merits and usefulness, I believe it to be, of its kind, quite unequalled.

"I am, Gentlemen, Your obedient servant,

"To Messrs. Lea & Perrins. S.G. Griffith.

"(Copy of a Letter from Mr. J. Cockburn.) January 10th, 1845.

"Sir,–When about to proceed to the West Indies in August last, you favoured me with a bottle of Lea and Perrins' Worcestershire Sauce, on trial; before opening which, I submitted it to the test of a four months' voyage in the Tropics, and on coming home in December, it was opened in the latitude of the Azores, and found in the highest state of preservation. On submitting it to the cook (who is a man of great experience, having been seven years in the

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London Tavern, and eight years at sea) he declared it to be the best sauce ever put into his hands; and I am persuaded, from the fact of its being adapted to all kinds of dishes, that Lea and Perrins' Sauce will go far to supersede the great variety of stores hitherto indispensable on board ships when employed on long voyages.

"I am, sir, your most obedient servant, James Cockburn, Acting Providore R.M.S.P. 'Thames.'

"To Mr. John Osborn, Royal Mail Steam Packet Office, Moorgate Street, London."

Note: This is the earliest ad seen (Feb. 2012) for Worcestershire Source in New Zealand or Australia. Address: [England].

785. E. 1846. Soy (Letter to the editor). *Farmers' Cabinet and American Herd-Book* 10(12):379-80. July 15.
• ***Summary:*** Letter dated 26 June 1846. "Dr. Emerson of this city [Philadelphia] has received from a friend in China, some seeds of the *Dolichos soja*, a plant from which the Chinese and Japanese prepare their celebrated dark coloured sauce called soy [sauce], an article largely consumed by all ranks of people in those populous countries. The consumption is rather limited in the United States, but in England about 1000 gallons are imported annually, in addition to a large quantity counterfeited at home. It is excellent on fish and with soups. The flavour is peculiar, but when once acquired, the taste like that for olives and many other things, becomes very strong. By the Chinese and Japanese *soy* is not only esteemed for its agreeable but for its wholesome qualities. The notion of its being made for cock-roaches is of course a vulgar error."

After giving a brief description of the process for making "soy," the author notes: "The best *soy* comes from Japan. When genuine, it is of an agreeable flavor, neither too salt nor too sweet, of a thick consistence, and clear brown color. When shaken in a glass, it should leave a coat on the surface of a bright yellowish brown color." An alternative method of making soy [sauce] from the seeds of *Dolichos Soja* is then described. Both this and the previous method mention that soy is made by a fermentation process, but they do not mention koji or any other source of microorganisms.

"The seeds or soy-beans are also employed in China and Japan in various ways as food. They are made into a kind of jelly or curd [tofu], which is esteemed very nutricious [nutritious] and is rendered palatable by seasoning of different kinds. In Japan they are put into soups, and are the most common dish of the country, being frequently eaten three times a day."

An editor's footnote to this letter dated June 26 states: "Dr. E. has left with us a few of the *Soy* beans, which will be distributed among those who may incline to plant them. As the season is late, it is doubtful whether they would mature this summer; a few however might be tried, and others left to plant next spring."

Note 1. Hymowitz (1986, personal communication) thinks this may have been Ralph Waldo Emerson. This journal was published in Philadelphia, Pennsylvania. First cited by Hymowitz, 1987. Introduction of the Soybean to Illinois. Economic Botany 41(1):28-32.

Note 2. This is the earliest journal article seen worldwide that refers to tofu–which it calls "a kind of jelly or curd." Address: Philadelphia, Pennsylvania.

786. Earle (C.V.). 1846. Ex "Thomas Lowry," "Angelina," "St. George," and other later arrivals (Ad). *Maitland Mercury & Hunter River General Advertiser (New South Wales, Australia)*. Sept. 19, p. 3.
• ***Summary:*** "To be had at the Medical Chemical Repository, opposite the Angel Inn, West Maitland,

"A various assortment of Drugs and Chemicals required in the medical profession, viz.: -

"Corrosive Sublimate.... Indian Soy [sauce], and Burgess's Essence of Anchovies,..."

"Agent for Lea's celebrated Worcester Sauce, patronized by the Royal Family."

Note: This is the earliest of 3,252 documents seen (Feb. 2012) in the Australian Newspapers database that contains the term "Worcester Sauce" (regardless of capitalization). The newspaper in which this term appears most frequently is *The Mercury* (Hobart) (1,091 times), followed by *The Argus* (Melbourne) (918 times). By category: 2,928 are advertising, 275 are news, and 49 are detailed lists, results, or guides. By decade: In 1860-69 the term appears in the most ads, articles, etc. (734), followed by 1880-89 (512).

787. *Moreton Bay Courier (Brisbane, Queensland, Australia)*.1846. Facts worth knowing. Oct. 31, p. 4.
• ***Summary:*** "Soy [sauce] is not made, as commonly asserted, from cockroaches, but from the beans of the *dolichos soja*, a native of Japan, pickled and fermented with salt."

788. Nichols (R.F.) & Co. 1846. Classified ad: Have in store and for sale the following articles, viz: *New Orleans Commercial Bulletin*. Oct. 31, p. 1, col. 6.
• ***Summary:*** "50 boxes Bitter Almonds.

"50 boxes sweet Shelled Almonds.

"20 boxes French Fruits, in juice.

"4 dozen Worcester Sauce.

"50 boxes Mushroom, Walnut and Tomato Catsups." Address: [New Orleans].

789. *Colonial Times (Hobart, Tasmania, Australia)*.1846. Domestic intelligence: New sauce (Ad). Dec. 11, p. 3.
• ***Summary:*** "We are those who, with Dr. Kitchner, of 'Cook's Oracle' celebrity, lean toward good things, and who, with Apicius of old, and with Quin and other epicures of more modern times, seriously opine that the inventor of a new sauce is worthy of favourable consideration. Now,

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Harvey, Quin, and Burgess, have already immortalised themselves in this particular achievement, as hath, also, the anonymous compounder of the celebrated 'Reading Sauce;' but another aspirant has arisen in the clever inventor of another sauce, entitled 'Worcestershire Sauce,' which, in our epicurean opinion, eclipses all of its precursors. Of what it is compounded surpasseth our knowledge; but this we can safely affirm, that a more delicious condiment has not yet been invented for the gratification of the gustatory organs, nor one better calculated to excite an appetite in this more than warm and relaxing weather. With fish, flesh, fowl, or even 'good red herring,' it is equally good; and we can strongly recommend it to all those who, as wise men, do not despise their stomachs. We perceived by the advertisement, that Mr. Gilbert has a few cases, and perhaps other tradesmen may have a supply."

790. Gilbert (Edward). 1846. On sale at Gilbert's Grocery Store next door to the Liverpool Tea Warehouse (Ad). *Colonial Times* (*Hobart, Tasmania, Australia*). Dec. 12. p. 3.
• ***Summary:*** "... 50 cases pickles. A few cases Worcestershire Sauce."

This ad also appears in *The Courier* (Hobart) on 12 Dec. 1846 (p. 3) and on 16 Dec. 1846 (p. 1).

Note 1. This is the earliest of 8,918 documents seen (Feb. 2012) in the Australian Newspapers database that contains the term "Worcestershire Sauce" (regardless of capitalization). The newspaper in which this term appears most frequently is *The Mercury* (Hobart) (4,395 times), followed by *The Argus* (Melbourne) (1,491 times). By category: 8,728 are advertising, 183 are news, and 6 are detailed lists, results, or guides, and 1 is family notices. By decade: In 1860-69 the term appears in the most ads, articles, etc. (3,205), followed by 1870-79 (2,949).

Note 2. Soy sauce was usually one of the main ingredients in Worcestershire sauce.

791. Lea & Perrins. 1846. Lea & Perrins' Worcestershire Sauce (Ad). *Manchester Guardian* (*England*). Dec. 30. p. 1.
• ***Summary:*** "... so highly esteemed and patronised for fish, hot and cold meats, steaks, gravies, soup, &c. may be obtained of the most respectable dealers in sauces, universally; the wrapper and label of each bottle bearing the names of Lea and Perrins; without which, it cannot be genuine.

"Sold wholesale by Lea and Perrins, Worcester, and 6, Vere-street, Oxford street, London; Barclay and Sons, Crosse and Blackwell, and other Italian warehousemen and merchants, London." Address: Worcester.

792. Herincq, F. 1846. Coup d'oeil sur la culture au Japon. I. Plantes potagères, plantes économiques [A glance at the culture of Japan. I. Vegetable garden plants, economic plants]. *Revue Horticole: Journal d'Horticulture Pratique* (*Paris*) 5:69-75. April/Dec. Series 2. See p. 72-73. [Fre]
• ***Summary:*** Legumes include beans (*haricots, fève*) and their varieties, peas, and above all the *Dolichos soja*, with which the sauces etc. are prepared. Address: France.

793. Lowes and MacMichael. 1847. Sales by auction: Chinese soy (Ad). *Colonial Times* (*Hobart, Tasmania, Australia*). April 2. p. 2.
• ***Summary:*** "Messrs. Lowes and MacMichael will sell by public auction, at the Exchange, on Monday next, at 12 o'clock precisely.

Five cases Chinese Soy [sauce], in the original packages, and of first-rate quality, well worthy of the attention of private families.

Note: This is the earliest of 10 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "Chinese Soy." The newspaper that mentions this term most frequently is *The Courier* (Hobart) (7 times). By category: all 10 are advertising. By decade: In 1840-49 the term appears in the most ads or articles (7), followed by 1850-59 (3). Address: Liverpool Tea Warehouse.

794. *Maitland Mercury & Hunter River General Advertiser* (*New South Wales, Australia*). 1847. Shipping intelligence (From the Sydney Morning Herald). May 1. p. 2.
• ***Summary:*** "Imports. April 27. *Pandora*, barque, 297 tons, Captain Cobb, from China and Manila: Cargo from China–301 chests 600 half-chests and 7 cases congou tea,... 50 boxes soy [sauce],..."

Note: This cargo was for Caucasian clients.

795. Connell & Ridings. 1847. Auction sales: Will sell by auction,... (Ad). *Daily Southern Cross* (*Auckland, New Zealand*). Sept. 18. p. 1, col. 3.
• ***Summary:*** "... at 11 o'clock this day, at their mart, Queen-street:–... China ornaments–China vases, China matting–Chinese toys, Curry powder, Indian soy [sauce], A variety of drapery goods." Address: Queen Street.

796. Lea and Perrins. 1847. Classified ad: Appetite and digestion improved. *Times* (*London*). Oct. 6. p. 7, col. 2.
• ***Summary:*** "Lea and Perrin's Worcestershire Sauce, an exquisite relish for fish, steaks, chops, meat, game, &c., and for flavouring soups and curries. It is acknowledged to contribute to health by its stomachic and digestive properties, is used and recommended by the faculty, and patronised by the nobility and gentry. The universally expressed approbation of this sauce, and the demand for it in every quarter of the globe, having induced imitations of inferior quality, purchasers are respectfully recommended, in order to secure the genuine, to see that the names of Lea and Perrins are upon the label and patent cap of the bottle. Sold by the proprietors, 6, Vere-street, Oxford-street, London, and 68, Broad-street, Worcester;..."

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Note 1. This is the earliest document seen (Feb. 2012) that uses the words "health" or "digestion" or "digestive" or "stomachic" or "nobility" in connection with Lea & Perrins' Worcestershire sauce.

Note 2. This ad also appeared in the issue of 26 Jan. 1848 (p. 11, col. 1). Address: [England].

797. T.W.H. 1847. The soy bean (Letter to the editor). *Farmers' Cabinet and American Herd-Book* 12(3):78-79. Oct. 15.

• ***Summary:*** Letter dated 18 Sept. 1847. "It is a native of Japan and of the Molucca Islands. It thrives well in New England, having been successfully raised in the Botanic Garden, at Cambridge, and elsewhere in Massachusetts... The plant is very productive. Eight of the beans, planted in Milton, Mass., in 1831, yielded a wine pint of seed, weighing eleven and a half ounces. One hundred and ten of the beans, taken promiscuously, weighed half an ounce. In this proportion, the production of the eight beans would be 2530, or more than 316 for one. In 1829, a single bean, in the Botanic Garden in Cambridge, produced 182 pods, which, as some of them contained three beans, was more than 364 for one. Should their qualities as articles of food be found agreeable, these beans will become valuable on account of their great productiveness.

"The inhabitants of Japan, of China, and Cochin China, and of some parts of India, cultivate these beans extensively, and eat them cooked or prepared in various ways. They make a very important article in the cookery of the Japanese, who use them chiefly in two forms. The first, called *Miso*, is a rich paste, of the consistence of butter, the place of which it supplies in various dishes, and is composed of a mixture of the beans and rice stewed and highly seasoned with salt. The second, called *Sooju* [shoyu] by the Japanese, is the celebrated sauce, known in commerce by the name of *Soy* [sauce] and imported in large quantities from the East, the best being brought from Japan. The Japanese method of making *Soy* was described by Kaempfer, in the 'Amoenitates Exoticae,' published in Latin, in 1712. It is as follows:" An 18-line description is then given.

"Kaempfer says that the Japanese use this sauce to season every dish of fried or roasted food. For fish, beef, and mutton, it forms a very savoury as well as a harmless condiment, the flavour of which is much admired by those who have become accustomed to it; and by many it is preferred to the best Chinese catsup."

"The making of *Soy*, as here described, seems to be a very simple process, and the experiment is worth trying. Should it prove successful, the cultivation of the plant in this country, may become profitable. The beans are said to be good when cooked, like common kidney beans; but it is doubtful whether they would ever take the place of our best varieties of them."

First cited by Hymowitz, 1986. Bibliography of early, previously uncited publications on soybeans in the United States, 2 p. Unpublished.

Note 1. This is the earliest document seen (July 2000) published in the United States that contains the word "Miso."

Note 2. This is the earliest document seen (June 2001) that mentions the term "profitable" (or "profit" or "profits") in connection with soybeans in the United States. Address: Cambridge, Massachusetts.

798. Gilbert (Edward). 1847. Important notice to the public (Ad). *Colonial Times (Hobart, Tasmania, Australia)*. Nov. 5. p. 1.

• ***Summary:*** "To the epicure... with the celebrated Worcester Sauce, direct to order from the house of Lea & Perrins. The piquant flavour this Sauce possesses is not to be surpassed by any."

Oct. 8, 1847. Address: Liverpool Tea Warehouse.

799. Lowes and MacMichael. 1847. Will sell by public auction, on Friday, the 26th instant, at 12 o'clock precisely, at the Exchange Rooms, Collins-street,... (Ad). *Courier (The) (Hobart, Tasmania, Australia)*. Nov. 17. p. 3.

• ***Summary:*** "A splendid assortment of Chinese goods, ex 'Adelaide,' direct from Hong Kong, comprising–...

"Nests of clothes baskets, Chinese soy [sauce], Pic-nic and fruit baskets,..."

800. Faulkner's. 1847. Classified ad: Tart fruits. *Times (London)*. Dec. 23. p. 17, col. 4.

• ***Summary:*** ":... Indian soy [sauce], 1*s.* 3*d.* per bottle; Reading, Harvey, Tomato, Chetna [Chutney?], King of Oude, and Universal sauces, 1*s.*" This ad also appeared in the issue of 8 Feb. 1848 (p. 10, col. 6). Address: 44, Jermyn-street, St. James's [London].

801. Waterston, William. 1847. A cyclopædia of commerce, mercantile law, finance, commercial geography, and navigation. New ed. Containing the present tariff and an essay on commerce. London: Henry G. Bohn. iv + 684 + 39 + 128 p. 23 cm.

• ***Summary:*** The section titled "Soy" (p. 627) is identical to that in the 1843 edition. Address: Esq., mercantile agent and accountant [England].

802. Hughes (Wellesley) 1848. Three hundred and six packages grocer oilman's stores, &c.,... (Ad). *New Zealander (Auckland)*. May 31. p. 1, col. 4.

• ***Summary:*** "... consisting of... Chocolate pastes, Indian soy [sauce], Currie powder,..." Address: Auckland.

803. **Product Name:** [Inari-zushi (Vinegared Sushi Rice in Sweetened Tofu Pouches/Agé)].
Foreign Name: Inari-zushi.
Manufacturer's Name: Jukkenten Restaurant.

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Manufacturer's Address: Tokyo, Japan.
Date of Introduction: 1848.
Ingredients: Deep-fried tofu pouches, water, sugar, shoyu, mirin, sushi rice, sweet vinegared gingerroot (gari).
How Stored: Refrigerated.
New Product–Documentation: Shurtleff & Aoyagi. 1975. *The Book of Tofu.* p. 194. "In Japan, the most popular way of serving agé [deep-fried tofu pouches] is in the form of *Inari-zushi.* Packed into lightweight wooden boxes and topped with thin slices of vinegared gingerroot, Inari-zushi are often found at picnics and outings of all kinds where they play much the same role as do sandwiches in the West. Served at most sushi shops, they are very inexpensive and are prepared in a different way by each chef.

"Inari-zushi is said to have originated in Tokyo about 1848, the creation of one Jiro Kichi, chef at the *Jukkenten* restaurant. Kichi peddled his new culinary treats at night through the streets of Tokyo carrying a four-sided paper lantern called an *andon.* On this he painted a red Shinto *torii* gateway, the hallmark of the Inari shrine where the Goddess of rice is said to abide. Since foxes are said to be very fond of agé, and since the fox is the patron animal of Inari shrines, this pictorial symbolism and its curious logic seemed natural and appropriate; Inari-zushi soon spread throughout Japan."

804. *Ainsworth's Magazine: A Miscellany of Romance, General Literature, & Art (London).* 1848. The angler in Norway. 14:148-53. See p. 150.
• ***Summary:*** In describing what a single angler [fisherman] should take with him on his fishing trip to Norway (p. 150): "He must also stow away a bottle of cayenne pepper, one of essence of anchovy, another of soy [sauce], and one or two of Harvey's sauce. Soy, in our opinion, is detestable, and we firmly believe it to be nothing more than the essence of crushed black beetles, so we would suggest Worcestershire, or our friend Soyer's new sauce, and one or two bottles of Chili vinegar."

805. Davis, John Francis. 1848. The Chinese: A general description of the empire of China and its inhabitants. 2 vols. New York: Harper & Brothers. Vol. 1, 383 p. See vol. 1, p. 302-03. Illust. Index. 16 cm. [69 ref]
• ***Summary:*** This 1848 edition is very similar to the 1836 edition except: (1) It was published in the USA by Harper & Brothers. (2) The type has been reset so that, for example, vol. 1 contains 383 pages and vol. 2 contains 440 pages; any particular passage is slightly different in its pagination. Thus, soy [sauce] is mentioned on pages 302 and 303 in this 1848 edition. Sesamum oil and peanut oil (p. 333). Sir John Francis Davis lived 1795-1890. Address: Esq., F.R.S., &c. Late His Majesty's Chief Superintendent in China.

806. Francis, G. 1848. The dictionary of practical receipts: Containing the arcana of trade and manufacture, domestic economy, artistical, ornamental & scientific processes, pharmaceutical and chemical preparations, &c. &c. &c. London: D. Francis; W. Strange. 348 p. See p. 316.
• ***Summary:*** The entry for "Soy, English" states (p. 316): "Take 1 gallon of haricot or white kidney beans, boil till soft, add bruised wheat 1 gallon; keep in a warm place for twenty-four hours, then add common salt 1 gallon, water 2 gallons: put the whole into a stone jar, bung it up for two or three months, shaking it very frequently, then press out the liquor, which is a good imitative [sic, imitation] of Chinese soy."

Note 1. This recipe will not work since neither koji nor soy beans are called for.

Note 2. Apparently soy made in China was well known (and expensive) in England at this time.

807. Morrison, John Robert. 1848. A Chinese commercial guide: Consisting of a collection of details and regulations respecting foreign trade with China. 3rd ed., revised throughout. Canton: Printed at the Office of the Chinese Repository. viii + 310 p. Illust. 22 cm.
• ***Summary:*** Section 6, "Description of the articles of export at Canton" (p. 170-83), contains a long description of "Soy" [soy sauce] (p. 180). It is identical to that found in the 2nd ed. of 1844.

Note: Chapter 3 contains detailed information on money (from many countries), Chinese weights & measures, etc. (incl. Chinese measures of capacity, length, and land measures). Interesting terms in Section 6: Aniseed stars, Chinaware or porcelain (now widely made in Europe), crackers (fire-crackers), peeul / peculs [piculs], caties [catties], lackered ware (the best kind comes from Japan), Nankeens (a kind of cotton cloth, so named from Nanking), paper (that used in books is made from yellow bamboo). Address: LL.D., Hongkong.

808. Williams, Samuel Wells. 1848. The Middle Kingdom: A survey of the geography, government, education, social life, arts, religion, &c., of the Chinese empire and its inhabitants. With a new map of the empire, and illustrations, principally engraved by J.W. Orr. London and New York: Wiley and Putnam. 2 volumes. See vol. I, p. 283, 290; vol. II, 402-03.
• ***Summary:*** In volume 1, in Chapter 6 titled "Natural History of China," the section on legumes (p. 283) states: "The widely diffused and extensive tribe of Leguminosæ holds an important place in Chinese botany, affording many esculent vegetables and valuable products. Peas and beans form important objects of culture, and the condiment called *soy* [sauce] (a word derived from the Japanese *soya*) is prepared chiefly from a species of Dolichos. One of the commonest modes of making this condiment is to skin the beans and grind them to flour, which is mixed with water and powdered gypsum, or turmeric. The common Chinese eat few meals, without the addition of one form or other of the bean curd or bean jelly" [tofu].

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Note 1. This is the earliest document seen (Feb. 2004) that mentions turmeric in connection with tofu. However, Williams seems to be a bit confused here. He starts to describe how the condiment soy sauce is made in China, but he first states (incorrectly), that the dehulled beans are ground to flour which is then mixed with powdered gypsum or turmeric (also incorrect) before the soy sauce fermentation. The powdered gypsum and turmeric are part of the process for making bean curd–in which hot soymilk is curded with gypsum. Typically, to make bean curd in China, soaked (not dry) soybeans are ground to a slurry or paste (not a flour), mixed with water to make soymilk, which is cooked, then mixed with gypsum, which curds the hot soymilk. Firmly pressed tofu can be cooked with turmeric [and often soy sauce] to preserve it and give it a yellow color. Williams' incorrect idea that whole dry soybeans are first ground to a flour before being made into tofu is repeated by many subsequent European writers.

Note 2. This is the earliest English-language document seen (Feb. 2004) that uses the word "flour" in connection with the soy bean.

In a long discussion of the famous *Pun Tsau* [*Pên Ts'ao* or *Ben Cao*] herbal, by Li Shih-chen, the author notes (p. 280) that "The second division of grains contains four families:... 3. That of leguminous plants; and 4. The family of fermentable things, as bean curd, boiled rice, wine, yeast, congee, bread, &c., which, as they are used in medicine and produced from vegetables, seem most naturally to come in this place."

In volume 2, in Chapter 13 titled "Architecture, dress, and diet of the Chinese," the section on "Vegetables eaten by the Chinese" (p. 43) states: "The Chinese have a long list of culinary vegetables, and much of their agriculture consists in rearing them. Leguminous and cruciferous plants occupy the largest part of the kitchen garden; more than twenty sorts of peas and beans are cultivated, and the pods and seeds of two species of Dolichos are eaten, and the beans of another species made into soy by boiling and powdering the kernels, then fermenting them with yeast, and mixing other ingredients according to the taste of the maker or purchaser. Another still more common condiment made from beans, is called bean curd or bean jam, by boiling and grinding them, and mixing the flour with water, gypsum, and the juice of yellow seeds."

Concerning oils and fats (p. 46): "Oils and fats are in universal use for cooking; crude lard or pork fat, castor oil, and that expressed from two species of Camellia and the ground-nut, are all employed for domestic and culinary purposes."

Chapter 20 titled "Commerce of the Chinese," states (p. 402-03): "The silk trade is more likely to increase than any other branch of commerce, after tea, and the Chinese can furnish any amount of raw and manufactured silks according to the demand for them. The best *Soy* is made by boiling beans soft, adding an equal quantity of wheat or barley, and leaving the mass to ferment; a portion of salt, and three times as much water as beans, are afterwards put in, and the whole compound left for two or three months, when the liquid is pressed and strained. The flavor and ingredients of soy vary considerably, even among the people who make it, and much of that exported is supposed to be more or less adulterated." Note: The author apparently does not know what kind of beans are use to make *Soy*. In the 1882 edition of this book, he gives a more accurate description.

Note: This is the earliest document seen (Oct. 2002) concerning soy and adulteration. It speculates that much exported soy [sauce] is adulterated.

Also discusses: *Coix lachryma*, a kind of grass used for weaving floor matting (p. 276). "Hemp is cultivated for its fibres, and the seeds furnish an oil used for household purposes, and medicinal preparations; but the intoxicating substance called *bang*, made from it in India, is unknown in China" (p. 281). Samuel Wells Williams lived 1812-1884. Address: New York. Author of "Easy Lessons in Chinese," "English and Chinese Vocabulary," &c.

809. Wu, Ch'i-chün. 1848. Ta tou [The soy bean]. In: Wu Ch'i-chün, ed. 1848. *Chih Wu Ming Shih T'u K'ao* [Illustrated Treatise on the Names and Natures of Plants]. Published at T'ai-yuan-fu, Shansi, China. 28 cm. [Chi; eng] • ***Summary:*** This treatise, containing 1,714 plates (including two illustrations of soybean plants), is the most important source of Chinese information on native plants.

The sections on the soy bean were translated into English and indexed by W.J. Hagerty in 1917. The translation includes photocopies of plates from the original work. Hagerty, who lived in Berkeley, California, was Chinese Translator for the Office of Crop Physiology and Breeding Investigations, USDA. He drew heavily on Bretschneider 1881, *Botanicon Sinicum*. Wu Ch'i-chün lived 1789-1847.

The translation is divided into two parts, each numbered separately, typewritten and double spaced. Part 1 (Book 1:8-9) is 3 pages translated. Part 2 (Book 1:24-33, titled *Pai ta tou* or "white soy bean") is 98 pages translated and includes a 16-page index to Part 2 only. Pages 1-38 of Part 2 contains numerous translations of the information about soybeans quoted from earlier Chinese texts. Pages 39-75 of Part 2 are extracts concerning beans (both soy beans and other beans) from Chinese gazetteers (*Chih Shêng Chu Shu*). The work concludes with a discussion of individual soyfoods, including many quotes from ancient Chinese documents: Shih or soybean relish [fermented black soybeans] (p. 76-80); Tou fu or bean curd (p. 80-81); Chiang or soy sauce (p. 81-82). The index is on pages 83-98.

In the introduction we read: "The Huang tou is at present commonly called *Mao tou* (characters: 'hair + bean'), or Hairy bean. When this is planted it grows very profusely. The beans are at first eaten as a vegetable, while later they are

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utilized like grain foods. The people cannot go a day without this food."

Both full-page illustrations (line drawings, apparently original) of soybean plants are bound before the title page. They show: (1) An upright soy bean plant, with two sets of flowers, two pods, and roots. Four types of seeds are shown near the bottom of the plate, but with no Chinese characters. At the left of the page, the following is written in four blocks of Chinese characters from top to bottom: *Chih Wu Ming Shih T'u K'ao* (the title of this book). Ta tou (soybean; literally "big bean"). Page number 8. *Ku lei chüan chih I* (Class–grains–Chapter 1).

(2) White soybean, slanting from lower left to upper right, including flowers two pods with outlines of the seeds, and roots. The seeds of five different types of soybean seeds are shown, each accompanied by its Chinese characters: Tea bean, yellow bean, black bean, white bean, and duck's egg green bean. At the left of the page four blocks of Chinese characters are written from top to bottom. The first and last blocks are the same. The second block is *pai ta tou* (white soybean). The third block is page number 10.

Note 1. The first illustration of the soybean plant (and an azuki bean plant) also appears in K.C. Chang, ed. 1977. *Food in Chinese Culture* (p. 178). Note 2. Letter from Dr. H.T. Huang, expert on the history of Chinese food and agriculture. 1999. July 9. He transcribes and translates the Chinese characters on the left of these two illustrations, then adds: "I presume the illustrations were original since they are different from the other illustrations I have seen in the pharmacopoeias."

Note 3. This is the earliest Chinese-language document seen (June 2009) stating that the term *mao tou* is used to refer to both green vegetable soybeans and to regular dry soybeans. Address: Michael J. Hagerty, Berkeley, California. June 1917.

810. Duncan (R.J.). 1849. Ex "Lalla Rookh," Captain Haines, from London (Ad). *New Zealand Spectator and Cook's Strait Guardian* (*Wellington*). March 17. p. 2, col. 2.
• ***Summary:*** Goods to be sold include: "... 1 case Perfumery &c., India Soy and other Sauces, A most excellent assortment of the Best English made Blue Cloth Caps." Address: Wellington.

811. Lea and Perrins. 1849. Appetite and digestion improved: Lea and Perrins' Worcestershire sauce (Ad). *Observer* (*London*). April 15. p. 1.
• ***Summary:*** "... imparts the most exquisite relish to steaks, chops, and all roast meat, gravies, fish, game, soup, curries, and salad, and by its tonic and invigorating properties enables the stomach to perfectly digest the food. Sold by the proprietors, Lea and Perrins, Vere-street, Oxford-street, London; and 68 Broad-street, Worcester; Messrs. Barclay and Sons; Crosse and Blackwell; and other oilmen and merchants in London; and by the principal dealers in sauces generally.–N.B. To guard against imitations, see that the names of 'Lea and Perrins' are *upon the label and patent cap of the bottle.*" Address: London and Worcester.

812. Nathan (David). 1849. Auction sales: Will sell by auction (Ad). *Daily Southern Cross* (*Auckland, New Zealand*). Aug. 24. p. 1, col. 2.
• ***Summary:*** "On Thursday next, August 28th, 1849, at his Rooms, Shortland-st., at 11 o'clock. 5 cases Mustards. 5 ditto [cases] Worcestershire Sauce. 1 ditto Black Draughts." Address: Shortland-st.

813. Hedde, Isidorel; Renard, Éd.; Haussmann, A.; Rondot, Natalie. 1849. Étude pratique du commerce d'exportation de la Chine [Practical study of the business of exporting from China]. Paris: A la Librairie du Commerce, Chez Renard; Canton, China: Chez Reynvaan et Cie.; Batavia: Chez Sanier. 280 p. See p. 188-90. [3 footnotes. Fre]
• ***Summary:*** Item No. 64 is "Soy sauce" (*Soya*). Names: English: soy. Portuguese: soja. Chinese court dialect [Mandarin]: chi-you. Chinese (Cantonese): chi-yaou. Nature and origin of the basic material: Soy sauce (*le soya*) is a seasoning made with the seeds of a species of bean (*haricot*), which grows in China and Japan: it is the *si-yao* of the Japanese, the *you-tao* of the Chinese, the *dolichos soja* of the botanists. It is a member of the legume family. Footnote: The *you-tao* is found among the edible plants of Macao and Canton, and entire fields of it are cultivated on the island of Tchou-san, as well as in the provinces of Fujian (*Fo-kièn*) and Zhejiang (*Tché-kiang*).

Method of manufacture: The manufacture of soy sauce (*du soya*), without being difficult, requires attentive care and practice; Chinese families prepare their soy sauce themselves.

Weigh a certain quantity of black [soy] beans (*haricots noirs*), boil them over a low flame; they must be taken out in time to avoid overcooking. Drain them, then add a certain quantity of wheat or barley flour [the amount is not specified]. Cover the vessel, and leave it for a bit in some warm and humid corner. Fermentation begins, an abundant mold forms, and when it is withered and dried out, wash the beans. Next throw them in a jar with an equal weight of sea salt, three times as much boiling water and some aromatic substances. There is nothing more to do than to place the terrine [a glazed, earthenware cooking dish] in the sun; open it during the day and close it at night or when it rains. One month later, the soy sauce is done, which does not prevent many housekeepers from allowing theirs to age thirty or forty days more. Clarify, drain the mass, and put the liquid in bottles.

Description of the finished product: Soy sauce (*Le soya*) is a clear liquid, brownish-black in color; when shaken in a bottle, it should leave a brownish yellow foam on the walls.

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Its flavor is pleasant and renders it an excellent seasoning.

Soy sauce from Japan is much more esteemed than that of China; its taste, quality, and aroma are so unlike that it is not doubtful that the preparation is different. It appears, besides, that the Japanese use other very common ingredients, they say, in their empire.

Price in Canton (piasters/picul): First grade: 12. Second grade: 10. Third grade: 8. However you can buy a good grade for as little as 5.25 to 7.75 piasters/picul. Churn-ching [Chunking?] sells for 3 piasters a dozen bottles of superior quality soy sauce which is ordinarily sent to British India.

Exportation, destination, and usage: This seasoning has now been adopted throughout almost all of British India, and for the last 20 years [since 1829] it has even been served on the tables of London, Singapore, Pulao Pinang (the first British settlement in Malaya; *Poulo-Pinang*), Manila [Philippines], Batavia [today's Jakarta, Indonesia], and Bourbon [today's island of Réunion / Reunion]–and much is consumed. The usage is expanding in the United States.

A table shows exports of soy sauce (quantity and value) from Canton: In 1844–1,120 piculs worth 9,029 piastres / piasters; 98.9% is sent to England, 0.9% to the USA, and 0.01% to France. In 1845–568 piculs worth 6,380 piasters: 75.7% is sent to England, 13.7% to Denmark, 8.5% to Sweden, 1.6% to the USA, and 0.5% to Germany.

The Chinese consume large quantities of it which they make themselves in their homes; products destined for export come from factories in Henan (a province in central China; W.-G. Honan) and Canton.

Export duties: 4 mèces per picul = 5.05 francs per 100 kg.

Note: This is the earliest document seen (Aug. 2009) concerning soybean products (soy sauce) in Réunion. This document contains the earliest date seen for soybean products in Réunion (1849 or before); soybeans as such had not yet been reported by that date.

Note 2. This is the earliest document seen (April 2007) concerning export duties or tariffs on a soy product–soy sauce exported from China–or soybeans.

Note: This is the earliest French-language document seen (April 2012) that uses the words *chi-you* or *chi-yaou* to refer to soy sauce. Address: Commercial Delegates attached to the French Mission in China.

814. *Knife and Fork* (*The*) (*London*).1849. Gastronomic rambles about London. For 1849, p. 94-96.

• ***Summary:*** In this early "advertorial" we read (p. 95): "Let the student pass with me into Vere Street, Oxford Street, and note particularly the emporium where Lea and Perring's celebrated Worcestershire Sauce is made, and, where the exquisite essence of coffee and dandelion coffee, are sold in great quantities."

815. Pridham, Charles. 1849. A historical, political and statistical account of Mauritius and its dependencies. London: T. and W. Boone. xii + 410 + 16 p.

• ***Summary:*** At the end of this book is a section of ads, numbered separately. On page 14 (lower half) we read: "Worcestershire Sauce testimonials.

"Messrs. Lea and Perrins, proprietors of the Worcestershire Sauce, beg to submit the following testimonials as a guarantee to the public of the superior qualities of this celebrated Sauce, and also to caution purchasers against worthless imitations, by observing their names are affixed to the metallic capsule which covers the cork of each bottle, to imitate which is fraud.

"Testimonials: Caledonian United Service Club, Edinburgh, April 6, 1846.

"Gentlemen–Your Worcestershire Sauce has gained great celebrity in Edinburgh and is in constant use at this hotel. It is highly approved for the very agreeable zest which it imparts to gravies and made dishes, and I have no hesitation in saying that in my opinion it is an excellent sauce. I am, &c..

"James Ellis, Caledonian United Service Club. To Messrs. Lea and Perrins, Worcester.

"'South London News,' Jan. 24.–It is an old but true saying that 'good wine needs no bush,' the same remark applies to the Worcestershire Sauce, prepared by Lea and Perrins. It is only necessary for us to make this one observation, that for flavour and piquancy it exceeds all the other sauces that are now before the public, and has only to be tasted to be appreciated. M. Soyer, the celebrated chef de cuisine at the Reform Club, has given his decided approval of it, and the members of that large and magnificent establishment are among its patrons.

"Sold wholesale, retail, and for exportation, by the proprietors, Vere-street, Oxford-street; Crosse and Blackwell, Soho-square; Barclay and Sons, Farringdon-street, and by venders [vendors] of sauce generally." Address: Canning Place, Kensington, England.

816. Riddell, R.F. 1849. Indian domestic economy and receipt book; comprising numerous directions for plain wholesome cookery, both Oriental and English; with much miscellaneous matter answering for all general purposes of reference connected with household affairs, likely to be immediately required by families, messes, and private individuals, residing at the presidencies or outstations. Bombay: Printed at the "Gentleman's Gazette" Press. xxiv + 506 p. See p. 438. Index. 23 cm. 2nd edition, revised, 1850. Pubished at Madras by The Athenæum Press. 8th ed. published in 1877 in Calcutta.

• ***Summary:*** Page 438 states: "Dolichos Soya Sauce. Take fresh soy 8 ounces, chilli vinegar one pint, garlic vinegar one ounce, syrup eight ounces, port wine or Vin de tinto one pint, salt four ounces, tart acid one ounce, mix the whole together.

"For soup, fish, meat, steaks, &c."

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By the author of "Manual of Gardening for Western India."

Note: This is the earliest English-language document seen (April 2012) that uses the term "Soya Sauce" (regardless of capitalization) to refer to soy sauce. Address: Aurungabad, India.

817. Humphrey, Seym & Co. 1850. Classified ad: Spices, sauce, &c. *Hartford Daily Courant* (*Connecticut*). Feb. 28. p. 3, col. 1.

• ***Summary:*** "Currie powders. Tomato Catsup, made by Mrs. Jeffrey. Mushroom do. [ditto = Catsup]. Anchovies. Sardines. Harvey Sauce. India Soy [sauce]. Reading Sauce. Bordeaux Olive Oil... for sale wholesale and retail."

Note: This ad appeared 15 more times in this newspaper during 1850 from March 1 to April 1. Address: 124 Main street.

818. Troughton (G.). 1850. Grocery, wine & spirit store (Ad). *Head Quarters* (*Fredericton, New Brunswick, Canada*). March 2. p. 4.

• ***Summary:*** "Sauces and pastes: Harvey Sauce,... Lea & Perrin's Worcestershire Sauce.... Tomato Ketchup. Mushroom ditto [Ketchup], Essence of Anchovies,... India Soy [sauce], Gorgona Anchovies,..." Address: Queen Street, Opposite the Stone Barracks, Fredericton.

819. *Maitland Mercury & Hunter River General Advertiser* (*New South Wales, Australia*).1850. Shipping intelligence (From the Sydney Morning Herald). April 17. p. 2.

• ***Summary:*** "Imports. April 14.–*Titania*, schooner, 140 tons, Captain Knight, from Hongkong and Manila: 5 packages silks, 40 half-chests cassia, 60 packages matting.... 30 boxes sweetmeats, 20 boxes soy [sauce], 1 package tea,... 2,400 bags sugar."

Note: This cargo was for Caucasian clients.

820. *New York Daily Times*.1850. Miscellaneous. May 6. p. 2.

• ***Summary:*** "The resolutions to be proposed by the Chancellor of the Exchequer, in accordance with the new Budget...

"In lieu of present custom duties on the following articles of foreign import, duties shall be charged as follows: On apples, 3*d.* per bushel;... sauces not otherwise enumerated, 1*d.* per lb; soy, 6*d.* per gallon;..."

821. Fullalove (James). 1850. Sales by auction: Next Tuesday, Mr. James Fullalove will sell by auction... (Ad). *Manchester Guardian* (*England*). May 11. p. 12.

• ***Summary:*** ";... six dozen essence of anchovies, twelve dozen Harvey's and Reading's sauces, three dozen mustard, Indian soy [sauce], three dozen cayenne pepper, and six half-hogsheads of London vinegar; foreign cigars,..." Address: 104 King-street, Manchester.

822. Hay & Ivey. 1850. Classified ad: The whole cargo of the Martha and Elizabeth from Canton. To dispose of by public auction,... *Courier* (*The*) (*Hobart, Tasmania, Australia*). May 22. p. 1.

• ***Summary:*** "Now landing: comprising an assortment of Teas of a very superior description, purchased in China by a gentleman of great experience expressly for this market; comprising -"

"... Four cases vegetable Macassar oil, in all its purity. Eight cases Chinese soy [sauce]. Three ditto [cases] touch paper.

Note: This is the most recent of 10 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "Chinese Soy." Address: Elizabeth-street [Hobart].

823. Fullalove (W.D.) & Brother. 1850. Will sell by auction, on Friday 31st, 1850... (Ad). *Manchester Guardian* (*England*). May 25. p. 8.

• ***Summary:*** "Under a deed of assignment.- Groceries, tea..."

"... several dozen cayenne pepper, Harvey's sauce, Reading sauce, essence anchovies, mushroom ketchup, India and China soy [sauce], Chili vinegar, &c.; also several dozen British wines, and about 3cwt. choice cigars,... May be viewed the morning of sale."

Note: This is the earliest (and only) document seen (Oct. 2010) that contains the phrase "India and China soy." The use of these two place names together raises several important questions. Was China soy made in China? If so, was it exported from China to England? From which port? Was India soy made in British India? Or was it made elsewhere (where?), shipped to India (or to the Dutch East Indies), and then transshipped from India to England? By what country or organization was it shipped to India? How was it made and from what ingredients? How did the price of the two in England compare? How did the quantity of the two imported to England compare? Which was preferred in England for its taste? Address: The Mart, 73 and 75, King-street, Manchester.

824. Brigham (Mr. J.). 1850. Sales by auction: New goods. Ex "Constantinople" (Ad). *New Zealander* (*Auckland*). July 10. p. 2.

• ***Summary:*** "An assortment of merchandise consisting of–... Cigars, Candles, Pipes, Butter, Worcester Sauce, Blue, &c."

Note: This is the earliest of 11,690 documents seen (Feb. 2012) in the New Zealand Newspapers database (paperspast) that contains the term "Worcester Sauce" (regardless of capitalization). The term was last used in New Zealand Newspapers on 10 March 1931.

825. Somerville (Mark). 1850. Ex *Moa*, On sale by the undersigned (Ad). *New Zealander* (*Auckland*). Sept. 4. p. 1.

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• ***Summary:*** Goods to be sold include: "... Ginger wine, Lemon syrup,... Ground ginger and cayenne, Caraway seeds, India soy [sauce], Mustard in ½ lb. and 1 lb. bottles, Ditto in tins...."

826. Stoughton (Charles). 1850. Classified ad: Sundries... *New Orleans Commercial Bulletin*. Sept. 24. p. 1, col. 5.
• ***Summary:*** "English and American Pickles and Ketchups; Capers and Worcestershire Sauce; Jellies, Jams, Preserves and fresh Fish,..." Address: 94 Camp st. [New Orleans].

827. Minister & Anderson. 1850. Classified ad: Sundries... *New Orleans Commercial Bulletin*. Oct. 2. p. 1, col. 4.
• ***Summary:*** "50 boxes Ketchup, walnut and tomato;... 7 do [ditto = dozen] Worcestershire Sauce; 20 boxes Grant & Williams' Tobacco;..." Address: 21 Poydras [st., New Orleans].

828. Troughton's Grocery, Wine, & Spirit Store. 1850. Constantly on hand, at lowest rates (Ad). *Head Quarters (Fredericton, New Brunswick, Canada)*. Oct. 16. p. 4.
• ***Summary:*** "Sauces and pastes: Harvey's Sauce,... Lea & Perrin's Worcestershire Sauce,... Tomato Ketchup, Mushroom Ketchup, Essence of Anchovies, India Soy [sauce], Gorgona Anchovies,..." Address: Queen Street, Fredericton.

829. Kôto gosui 1850. Japan. [Jap]*
• ***Summary:*** According to Ryoichi Iino (2003, p. 10) the term *oshidashi* was used in this book to indicate / refer to soy sauce.

830. Beasley, Henry. 1850. The druggist's general receipt book: Comprising a copious veterinary formulary,... London: John Churchill. viii + 424 p. See p. 258, 260-61. Illust. Index. 20 cm.
• ***Summary:*** In the chapter on "Beverages, dietetic articles, and condiments" (p. 239+) is a section titled "Culinary vinegars, sauces, &c." (p. 258+). Soy [sauce] is used in the following recipes: "Camp vinegar" (p. 258; 2 recipes, The first includes 2 oz. of soy and 4 oz. of walnut catsup. The second includes "Vinegar a quart, walnut catsup a pint, mushroom catsup 3 tablespoonfuls, garlic 4 heads, cayenne ½ oz., soy 2 tablespoonfuls...").

"Quin sauce" (p. 260. "Mushroom catsup ½ pint, walnut pickle ¼ pint, port wine ¼ pint, 6 anchovies and 6 shallots {both pounded}; soy a tablespoonful, cayenne ½ dr.; simmer together for 10 minutes, strain, and bottle"). "Sauce superlative" (Dr. Kitchiner's) (p. 260-61. "Port wine and mushroom catsup, of each a pint,... a ¼ pint of soy may be added").

The last recipe in the section is: "Soy. Boil a gallon of the seeds of dolichos soja till soft, add a gallon of bruised wheat, keep them in a warm place for 24 hours; add a gallon of salt, and 2 gallons of water, and after keeping them bunged up in a stone jar for 2 or 3 months, press out the liquor."

In this same section are recipes from "Mushroom catsup" and "Walnut catsup," neither of which use soy [sauce] as an ingredient. Address: Uxbridge [England].

831. Beecher, Catharine Esther. 1850. Miss Beecher's domestic receipt book: Designed as a supplement to her treatise on domestic economy. 3rd ed. New York, NY: Harper & Brothers. xiii + 306 p. Illust. Index. 20 cm.
• ***Summary:*** In Chapter VIII, "On the preparation of hashes, gravies, and sauces," is a recipe for "Soy" [sauce]. Surprisingly, it contains no soy [sauce], and the word "soy" is not even mentioned in the body of the recipe, only in the title. Perhaps it looked and tasted somewhat like real soy, although it would have been much sweeter and probably thicker. "Soy. One pound of salt, two pounds of sugar, fried half an hour over a slow fire, add three pints of boiling water, half a pint of essence of anchovies, a dozen cloves, and some sweet herbs. Boil till the salt dissolves, then strain and bottle it." The next 3 recipes are: Tomato catsup. Mushroom catsup. Walnut catsup.

Chapter XXVII, "On setting tables, and preparing various articles of food for the table, notes (p. 245): "*Pickles* are served especially with fish, and *Soy* is a fashionable sauce for fish, which is mixed on the plate with drawn butter."

Peanuts are used as an ingredient in two recipes: To prepare for sugar candies (p. 180). Molasses candy (p. 292).

Note: Catharine Esther Beecher (1800-1878), the elder sister of anti-slavery author Harriet Beecher Stowe, was a "pioneer educator and home economist with a lifelong commitment to solving women's problems through education." Their "brother, Henry Ward Beecher, author and minister, was renowned as the greatest orator of his day" (MSU introduction). Address: Hartford, Connecticut.

832. Dubois de Jancigny, Adolphe Philibert. 1850. Japon, Indo-Chine, Empire Burman (ou Ava), Siam, Annam (ou Cochinchine), Péninsule Malaise, etc., Ceylan [Japan, Indo-China, Burmese Empire (on Ava), Siam, Annam (or Cochinchine), Malay Peninsula, etc., Ceylon]. Paris: Firmin Didot Frères. 2 p. + 666 p. 3 maps (1 folded). No index. 21 cm. [50* ref. Ire]
• ***Summary:*** All references to soy are in the first part of the book, which is about Japan. Page 129 R.3: The dishes are arranged on the table in groups of five. One contains rice, another fish and vegetables seasoned with soy (des légumes confits dans du *soy*,...).

Page 176 R.1: The commercial products most researched are the wax tree (*Rhus succedanea*), bamboo, saké, soy (*du soy; soya*), mustard, silk fabrics,..."

Page 184 L.7: Wheat is one of the principal ingredients of soy, the Japanese sauce, which is so widely used

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throughout the archipelago and is even shipped to Europe.

Note: The table of contents (at end of book) shows that this book is divided into two major parts: (1) Japon [Japan] and Indo-Chine [Indochina]. The latter part is divided into the following geographical sections: Birmah [Burma], Siam, Péninsule Malaise [Malay Peninsula], Provinces anglaises dans l'Indo-Chine [British provinces in Indochina]; Arakan [former name of the Rakhine State of Burma], Martaban (now Mottama, in southeast Burma), Maulmein [Mawlamyine, Moulmein in lower Burma], Amherst [Kyaiikkami, Burma], Ye [Mon State, in Burma], Tavoy [Dawei, Burma], Tenasserim [Tanintharyi Division of Burma], Annam ou Empire Cochinchinois, and Ceylan [Ceylon]. This gives us a nice French definition of "Indochina" at this time.

Also: Page 317 R.1. Ngapi is a fish sauce, a favorite among the people of Burma. Address: Aide de Camp du Roi d'Oude.

833. Rundall, Thomas; Adams, William. 1850. Memorials of the empire of Japon: In the XVI and XVII centuries. London: Printed for the Hakluyt Society (Series 1, No. 8). xxviii + 186 p. 22 cm. Facsimile edition reprinted in 1968 by B. Franklin (New York). [20+ ref]

• ***Summary:*** Contents: Preface–A description of the empire in the 16th century. From... Harleian manuscript #6249. Six letters of William Adams, 1611 to 1617. Notes. Summary of a narrative by His Excellency Don Rodrigo de Vivero y Velasco... of his residence in the empire: A.D. 1608-1610.

The preface states: The Portuguese first arrived in Japan in about 1542; the Spaniards arrived a little later. The first indication of any misunderstanding between the Japanese government [shogun, "Taico Sama"] and the Europeans residing there appears in 1587. In that year the shogun "despatched [dispatched] two imperial commissioners, in rapid succession, to Father Cuello, the vice-provincial of the Portuguese, to demand: 1. Why he and his associates forced their creed [Jesuit Roman Catholicism] on the subjects of the empire. 2. Why they incited their disciples to destroy the national temples? 3. Why they persecuted the bonzes [native priests]? 4. Why they, and the rest of their nation, used for food animals useful to man, such as oxen and cows? [see note M]. Finally, why they permitted the merchants of their nation to traffic in his subjects, and carry them away as slaves to the Indies?" The replies of the vice-provincial are given, showing disdain for the Japanese and their religions (p. x-xi).

On p. xxiv is a detailed discussion of Dutch trade with Japan and the island of Deshima.

The English attempts at trade with Japan failed. "The English retired from Japan in 1623, and a subsequent attempt was made (in 1673) to renew the intercourse; but it proved unsuccessful" (p. xxv).

"The Americans must be placed in the same category with ourselves [the British]. In the year 1837 the *Morrison*, a vessel belonging to citizens of the United States, sailed from Singapore, on an expedition to Japan." It was driven away by cannon fire from isolationist Japan (p. xxviii). Note: In addition to its commercial aims, the ship (headed by Charles W. King) had been attempting to repatriate seven shipwrecked Japanese citizens who had been picked up in Macau. It also carried Christian missionaries such as Samuel Wells Williams.

Letter No. IV by Sir Thomas Smith to William Adams concerns Capt. John Saris of the *Clove*, who anchored near Firando [Hirado] in June 1613.

Unites of currency (p. 88). 10 Condrins = 1 Mas = 6 pence (British). 10 Mas = 1 Taie = 5 shillings.

In the section of the book titled "Notes," Note O (p. 123-24) is about "Produce of the fields" (from E. Kaempfer). One of the five fruits of the field is: "4. *Daidsu*, or *Daid-beans;* from which *soeju* [shoyu], or *soy* [sauce], is made; and which is highly esteemed as an article of food."

Note A A (p. 164-67), titled "Fate of the English factory at Firando," discusses what items the Spaniards, Portuguese, and Dutch tried to import to Japan, and the weak demand for these products. Note: William Adams lived 1564-1620.

834. Love (Andrew). 1851. Classified ad: General importer of European goods. *New Orleans Commercial Bulletin*. Jan. 14. p. 2, col. 6.

• ***Summary:*** "Has just received from the ships Miltiades, from Liverpool, and Lyman, from London, the following Goods, which he offers on the most reasonable terms, viz:

"Pickles and Sauces, the original Worcester Sauce, from the celebrated house of Crosse & Blackwell, London, etc., etc." Address: 106 Poydras St., New Orleans.

835. Hughes (Wellesley). 1851. Ex "Cresswell," from London, and on sale by the undersigned, one hundred and ninety-six packages groceries,... (Ad). *New Zealander (Auckland)*. March 22. p. 1, col. 4.

• ***Summary:*** "... oilman's stores, fruits, &c., &c. consisting of–... Burgess Essence Anchovies. Anchovy Paste. Mushroom Catsup. Lea and Perrin's Worcester Sauce. Brown Vinegar."

Note: Similar ads appeared in the March 23 (p. 1) and March 26 (p. 1) issues of this newspaper. Address: Auckland.

836. Hughes (Wellesley). 1851. Ex "Emma," "Maukin," and "Moa." *New Zealander (Auckland)*. April 30. p. 2.

• ***Summary:*** The goods sold included: "Currie Powder, India Soy [sauce], Ling Fish...." Address: Auckland.

837. Burdick (R.M.) & Co. 1851. Classified ad: P.T. Barnum's menagerie. *Hartford Daily Courant (Connecticut)*. June 9. p. 3.

• ***Summary:*** "Also–Pickles, catsup, Worcestershire sauce,

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capers, sardines, pepper sauce, figs, nuts, prunes, preserved ginger, &c. &c."

This ad also appeared in the June 11, 12, 13, and 19 issues of this newspaper.

Note 1. This is the earliest document (and the earliest ad) seen (Feb. 2012) that mentions Worcestershire sauce in the United States. Note that it has no brand, and is thus sold as a generic commodity. Notice also that it first appears in Hartford, Connecticut, rather than in New York City.

Note 2. R.M. Burdick & Co. is probably a general retail store, and not the importer. Address: 250 Main St.

838. *Freemason's Quarterly Magazine and Review (London)*.1851. Masonic intelligence–Provincial–Worcestershire. p. 202-65. See p. 250.

• ***Summary:*** "I heartily wish, brethern, both for your sakes and my own, that upon the present occasion it were in my power to flavour the *toast* which has just been so eloquently proposed, and so well received, by pouring over it a few drops of your far-famed Worcestershire sauce, which, if we may credit the advertisements, imparts an exquisite relish to everything, and possesses so many tonic and invigorating properties."

839. Somerville (M.). 1851. On sale–Ex "Maukin" (Ad). *New Zealander (Auckland)*. July 26. p. 1.

• ***Summary:*** "... German Matches. Worcester Sauce, (Lea and Perrin's). Castor oil, quarts, pints and half-pints."

Note: This ad also appeared in the 29 July 1851 issue of the *Daily Southern Cross* (p. 2). Address: Corner of Shortland and Queen-streets, Auckland.

840. A housekeeper. 1851. The American matron: or, Practical and scientific cookery. Boston and Cambridge, Massachusetts: James Munroe and Company. 263 p. See p. 162, 165, 205. Index. 19 cm.

• ***Summary:*** In the chapter on "Sauces," the recipe for "A good beef gravy" (p. 162) states: "add a table-spoonful of soy [sauce], or tomato catchup."

In the same chapter, "Forcemeat ingredients" (p. 165) include: "Cloves, soy or catchup, curry."

In the chapter on "Meats," the recipe for "Veal cutlets" (p. 204-05) says: "Make a little gravy by adding a little water and butter to the fry. Dredge in flour, with some soy or catchup."

Note: Soy and catchup are used interchangeably.

The word "catchup" appears on 10 pages in this book including: Chowder (with tomato catchup, p. 173-74). To toast a tautog or black fish ("with a little walnut or tomato catchup," p. 176). Ragout of beef (with "two spoonsful of catchup," p. 198). Breast of veal ragout (with "two table-spoonfuls of catchup," p. 204). Veal fricandeau (with "three table-spoonsful of white wine and two of catchup," p. 205-06). Veal olives (with "a table-spoonful of catchup," p. 206). Roasted or baked liver (with "a little butter, catchup, pepper, and salt," p. 206). Cucumber catchup (homemade, p. 247). Tomato catchup (homemade, p. 247). Address: Salem, Massachusetts.

841. Ellis, Robert. 1851. Official descriptive and illustrated catalogue of the Great Exhibition of the Works of Industry of all Nations. London: Spicer Brothers,... 5 parts (cxcii + 1469 p.). See p. 58, 677-78, 857, 871. Illust. 27 cm.

• ***Summary:*** The section titled "Official illustrated catalogue advertiser" states (p. 58): "The Worcestershire Sauce, prepared by Lea & Perrins, from the recipe of a Nobleman in the country, imparts the most exquisite relish to steaks, chops, and all roast meat, gravies, fish, game, soup, curries, and salad; and by its tonic and invigorating properties enables the stomach to perfectly digest the food. The daily use of this condiment has proved most conducive to health, and established its fame throughout the world. Sold wholesale by the proprietors, Lea & Perrins, 6, Vere-street, Cavendish-square: Crosse & Blackwell, Soho-square; and other merchants, London; and retail by the principal dealers in sauces."

In Vol. 2 (Sections 3-4): The section titled "Class 23.–Works in precious metals, jewellery, etc." under "Collis, George Richmond, Church Street, Birmingham [England]–Manufacturer" states (p. 677-788): "Inkstands. Dish-covers. Soy frame" (p. 678 L.2). The section titled "British possessions in Asia" (p. 857) begins with the "East Indies." "Class III: Agricultural produce" contains a section on "Pulses" (p. 871) which includes "Bhut (*Soja hispida*), from Kêmaon (Kumaon)." The next section, "Roots and Oil Seeds, &c" includes linseed, "Kisto til (Sesamum orientale)–from Calcutta," safflower, etc.

Note: This was the first major international exhibition of arts and industries, held in 1851 in London at the Crystal Palace. A great success in every way, it showed the world's latest achievements at a time when mankind was making progress at a speed never before known. Address: London.

842. Leslie, Eliza. 1851. Miss Leslie's complete cookery: Directions for cookery, in its various branches. 38th ed. Thoroughly revised, with additions. Philadelphia, Pennsylvania: H.C. Baird. 7-528 p. Illust. Index. 19 cm.

• ***Summary:*** Soy [sauce] is used in the following recipes:

Page 44: Salmon baked in slices ("Melt two ounces of butter than has been rolled in flour, in a half pint of water, and mix with it two large glasses of port wine, two table-spoonfuls of catchup, and two of soy." Mix and strain, then pour this over the slices and bake in an oven").

Page 50: To boil fresh cod ("Or you may make a sauce by flavoring your melted butter with a glass of port wine, and a tablespoonful or more, of soy").

Pages 52-53: Fried perch ("Send to table with them in a boat, melted butter flavoured with soy or catchup").

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Pages 53-54: To broil trout ("For sauce, send with them melted butter, and put some soy into it; or flavour it with catchup").

Page 172: Quin's sauce (same as in the 1840 ed. p. 172). Harvey's sauce (same as in the 1840 ed. p. 173; soy sauce is used as an ingredient).

Catchup is mention on 35 pages.

Elizabeth Leslie lived 1787-1858. Address: Philadelphia.

843. Soyer, Alexis. 1851. The modern housewife: Or, ménagère. Comprising nearly one thousand receipts, for the economic and judicious preparation of every meal of the day,... London: Simpkin, Marshall & Co. xvi + 450 p. See p. 84, 103. Illust. 18 cm.

• ***Summary:*** The section on "Condiments" states (p. 84): "Soy is obtained from the seed or fruit of an Indian plant, called *dolichos soja*, or soya; it is produced in a very similar way to ketchup; it enters greatly into use in the variety of sauces [such as Worcestershire sauce] that are made for the table, it being of a very strong, sweet-bitter taste; it should only be used in moderation in cookery."

In the section on Sauces, recipe 181, "Wild fowl sauce," calls for: "Walnut catsup one tablespoonful; the same of Harvey's or Worcestershire sauce, the same of lemon-juice..." (p. 103).

"Harvey sauce" or "Harvey's sauce" (the two terms are used with about equal frequency in this book) is used in small amounts to season at least 20 recipes. (p. 103, 117-18, 127, 223, etc.). Recipe "404. Hashed beef" states that the flavour may be varied with "a few spoonfuls of catsup, Soyer's, Harvey's, Soho, or Reading sauce."

Contains many recipes for catsup, including "mushroom catsup" and "walnut catsup." However the word "catchup" is not mentioned.

Note 1. This is the earliest document seen (March 2012) stating that soy sauce is used as an ingredient in Worcestershire sauce.

Note 2. Alexis Soyer (lived 1810-1858) was a French chef who became the most famous cook in Victorian London. Address: England.

844. Transatlantic rambles; or, A record of twelve months' travel in the United States, Cuba, & the Brazils, by a Rugbæan. 1851. London: George Bell. vii + 168 p. See p. 107-08. 12mo.

• ***Summary:*** "Day and Martin, with an immense picture of the house in Holland, on a large placard, occupied a place on one wall, and Lea and Perrin's Worcestershire attracted attention from the other."

Note: He appears to have seen this in "the Brazils." Address: London.

845. Burdick (R.M.) & Co. 1852. Classified ad: Now is the time to secure truly great bargains. *Hartford Daily Courant* (*Connecticut*). Feb. 12. p. 3.

• ***Summary:*** "... Pickles, Catsup, Pepper Sauce,... Table Oil, Worcestershire Sauce, Corn Starch, Tapioca, Sago, Vermicelli,..." Address: 250 Main St.

846. *New York Daily Times*.1852. New-York City. March 10. p. 1.

• ***Summary:*** The section titled "The label forgeries ended" states: "Some two years ago a Pearl-street importer, named George Raphael, was indicted at the instance of Messrs. Duncan & Sons, who alleged that defendant had sold large quantities of Worcestershire Sauce, with forged labels, in the name of Lea & Perrins, the English manufacturers. The case was finally brought to trial in the Court of Sessions on Monday. James T. Brady appeared as counsel for the defendant. The Jury retired and deliberated for some hours, but returned with a verdict of Not Guilty. The defendant was therefore honorably discharged, and thus ends a two-years' litigation."

Note 1. This is the earliest document seen (Feb. 2012) that mentions "Duncan" or "Duncan & Sons", or that concerns a lawsuit, in connection with Lea & Perrin's Worcestershire sauce, or that mentions this sauce in connection with New York City.

Note 2. This article strongly suggests that Lea & Perrin's Worcestershire sauce was being sold in the United States as early as 1849; the importer at that time was probably Duncan & Sons. Address: New York.

847. Burdick (R.M.) & Co. 1852. Classified ad: Pure cider vinegar,... *Hartford Daily Courant* (*Connecticut*). Aug. 16. p. 3.

• ***Summary:*** "... from farmers, just what every family want for pickling."

"Also–Pickles, Catsup, Pepper Sauce, Worcestershire Sauce." Address: 250 Main St.

848. Sorabjee. 1852. Classified ad: Sorabjee... the successor of Dinshaw Eduljee... *Bombay Times and Journal of Commerce* (*British India*). Nov. 3. p. 708, col. 1.4.

• ***Summary:*** "... begs most respectfully to announce to his Friends, constituents, and the public at large that he has recently landed from the ship 'Seringapatam' a most choice stock of every description of goods, which he has got out on commission..."

"... sauces of all sorts in large pints, sauces in small pints of new kind, viz: piquante, regent, windsor, city of London, onion, coratch, gloucester, india soy, king oude, mogal, chitna, wellington, China soy,... chitney and tomata sauce,..." Address: No. 28 Apollo street.

849. London and New York Pickle and Preserve Warehouse, 1852. Classified ad: Having taken the premises... *New York Daily Times*. Dec. 17. p. 4, col. 2.

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• ***Summary:*** "London Pickles, Sauces, Ketchups, &c. in all the various styles... India Soy [sauce], Currie Powder, and African Cayenne in fancy Chinese packing." George Raphael is the new owner of this large warehouse.

Note: This ad appeared 8 more times in this newspaper during 1852-1853 from Dec. 22 to Jan. 14. Address: 46 Vesey-st., New York City.

850. Day, Charles William. 1852. Five years' residence in the West Indies. 2 vols. London: Colburn and Co., Publishers. See Vol. 1, p. 254. Illust. 20 cm.

• ***Summary:*** "...; but roasted meats or fowls, are always so impregnated with the pyroligneous acid of the wood-fire, as to have a smoky, or baked taste, well known to all travellers in the Highlands of Scotland. Worcestershire sauce is now beginning to be used; but usually the only condiment beyond pepper and salt, will be a bottle of pickled peppers. Greens, or salads, are rarely seen." Address: Esq.

851. Dickens, Charles. 1852. The world here and there: or, Notes of travellers. From "Household Words," edited by Charles Dickens. New York, NY: George P. Putnam. 231 p. See p. 76.

• ***Summary:*** "Rice fields, of course, we pass; rice is a staple article of diet to the Japanese, as to so many other millions of the human race. It is the vegetable food that finds its way into more mouths than any other. There is wheat, also, in Japan, used chiefly for making cakes and soy [sauce]; barley for feeding cattle. The cattle being used as beasts of draught and burden, it is thought improper to kill them, or to deprive the young calves of their milk; the Japanese, therefore, refrain from milk and beef. They eat great quantities of fish, poultry, and venison."

852. Hale, Sarah Josepha Buell. 1852. The ladies' new book of cookery... 5th ed. New York, NY: H. Long & Brother. xvi + 474 p. Index. 20 cm.

• ***Summary:*** The section on seasonings (p. 4) notes that if soups "want flavor, most of the prepared sauces will give it to meat-soups, and anchovy with walnut ketchup and soy [sauce], will add to those of fish, but must be used sparingly."

Soy [sauce] is used as an ingredient in the following recipes: Sago soup ("season it with soy and ketchup," p. 13). Lake and pond fish soup (p. 24-25). Stock for fish soup ("If meant to be *browned*, the onions should be fried, and a good spoonful of mushroom ketchup, or India soy be added," p. 25). Marinade ("a glass of soy," p. 31-32). Cod sounds (p. 35). Baked whitings a la Francaise ("a few drops of soy," p. 46. Note 1. A whiting is a marine food fish). To collop halibut ("a spoonful of soy or fish sauce," p. 48-49. Note 2. To collop is to cut into small pieces or slices). To stew lobsters ("1 [spoonful] of soy or walnut-ketchup," p. 57). Rolled mutton (p. 124). To "devil" turkey (p. 168-69). To hash a duck or goose (p. 172). Rich gravy ("A dessert-spoonful of essence of anchovies or soy will be a great improvement," p. 189). Gravy for fowls without meat ("a tea-spoonful of soy, p. 189). For all sorts of fish ("Take a spoonful of vinegar, one of Indian soy, the same of mushroom catsup and Harvey's sauce with a little Cayenne. Add three large spoonsful of melted butter," p. 203-04). Brown sauce (p. 204). Universal sauces (Nos. 3 and 4, p. 208-09).

Quin's sauce (p. 210). Since this was also a commercial product, we will give the whole recipe: "Mix a quarter of a pint of walnut catsup with half a pint of water, half a glass of soy, and a quarter of a pint of port or raisin wine; add six anchovies, beaten to a paste, or a gill of essence, six sliced shalots [shallots], and a quarter of an ounce of chilies; simmer all slowly for half an hour, then let the mixture stand a few days, when it may be strained and bottled for use."

Salad dressing (Obs. [Observation] 1. "small quantities of soy, cavice, essence of anchovies, or catsup may in turn be used to flavor the compound," p. 248). Another salad dressing ("a tea-spoonful of soy or essence of anchovies," p. 249).

Sarah Josepha Buell Hale lived 1788-1879. Address: [Boston, Massachusetts].

853. Mac Farlane, Charles. 1852. Japan: An account, geographical and historical, from the earliest period at which the islands composing this empire were known to Europeans, down to the present time, and the expedition fitted out in the United States, etc. New York: Putnam. xii + 365 p. Illust. 19 cm. Reprinted in 1856 by S. Andrus & Son (Hartford, Connecticut). Facsimile edition reprinted in 2002 by Ganesha Publishing (London) and Edition Synapse (Tokyo). Series: Japan in English, Vol. 1. [50* ref]

• ***Summary:*** Charles Mac Farlane, a British romantic author, lived 1799-1858. He explains in the Preface that he never traveled to Japan, and that this is a compilation. It is rather superficial, relying heavily on Englebert Kaempfer (1727).

The section on plants states, rather vaguely (p. 243): "Not only the fields and flat country... but likewise the hills and mountains, are made to produce corn, rice, pease, pulse, and numerous edible plants."

The section on domestic manners describes a Japanese feast. The host "drinks a cup of sackee [sake] with each guest... As whets, servants, of both sexes, from time to time, hand round soy [sauce], other sauces, pickled or salted ginger,... which are all eaten with the Chinese chopstick" (p. 288-89). Address: Esq., Canterbury, England.

854. McCulloch, John Ramsay; Vethake, Henry. 1852. A dictionary, practical, theoretical, and historical, of commerce and commercial navigation. 2 vols. Philadelphia, Pennsylvania: Hart, Carey and Hart. See Vol. 2, p. 201, 536, 18 at end.

• ***Summary:*** Nangasacki [Nagasaki] (p. 200-01): The

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Japanese islands are believed to contain 50,000,000 people. All foreigners are rigidly excluded, "with the exception of the Dutch and Chinese; and they are allowed to visit Nangasacki, the former with 2 ships and the latter with 10 junks."

"The Chinese trade with Japan is understood to be conducted from the port of Ningpo, in the province of Chekiang, which is so conveniently situated, that 2 voyages may be performed in the year, even by the clumsy junks of China. The commodities with which the Chinese furnish the Japanese, consist of raw sugar, cow and buffalo hides, wrought silks, consisting chiefly of satins and damasks, eagle and sandal wood, ginseng, tutenague or zinc, tin, lead, fine teas, and, for more than 100 years back, some European broad cloths and camlets. The exports consist of copper, limited to 15,000 piculs, or about 900 tons; camphor, sabre [sword] blades, pearls, some descriptions of paper and porcelain, and some Japan ware, which is either curious or handsome, but not so substantial as that of China."

"The following are the quantities and value of goods exported and imported by the Dutch in their trade with Japan in 1825; the ships employed being one of 600, and one of 700 tons burden. The trade is exclusively carried on with the port of Batavia." A table shows exports to and imports from Nangasacki. Imports from Nangasacki to Batavia, then Holland include: "Sakkie [saké] and soy [sauce]. Value: 14,302 florins.

Soy (p. 536): a species of sauce prepared in China and Japan from a small bean, the produce of the *Dolichos soja*. It is eaten with fish and other articles. It should be chosen of a good flavour, not too salt nor too sweet, of a good thick consistence, a brown colour, and clear; when shaken in a glass, it should leave a coat on the surface, of a bright yellowish brown colour; if it do not, it is of an inferior kind, and should be rejected. Japan soy is deemed superior to the Chinese. It is worth, in bond, from 6*s*. to 7*s*. a gallon. It is believed to be extensively counterfeited.–(*Milburn's Orient. Com.*).

At the end is a long table titled "The new tariff of 1846, together with the tariff of 1842, reduced to ad valorem rates, as far as practicable." On page 18 is "Soy." 1846 = 30. 1842 = 30. Address: 1. Esq.: 2. LL.D. Prof., Univ. of Pennsylvania.

855. Watts, Talbot. 1852. Japan and the Japanese: From the most authentic and reliable sources. With illustrations of their manners, costumes, religious ceremonies, &c. New York, NY: J.P. Neagle. 184 p. Illust. No index.
• ***Summary:*** In the section titled "Customs, manners, &c." the author borrows text from Thunberg (1802, p. 267) without using quotation marks (p. 111): "Ladies do not eat with the men, but by themselves. Rice supplies the place of bread, and is boiled with every kind of provisions. Fish and fowls are very plentiful, and are eaten in abundance; but miso-soup * boiled with fish and onions is the customary food of the common people."

Footnote: *"Misos are small beans, like lentils, the produce of the dolichos soja."

In the chapter titled "Empire of Japan (from Goodrich's Pictorial Geography)" under "Towns" (p. 122) we read: "Kio, or Meaco [Kyoto, or Miako], was for a long time the Capital, end contains the most remarkable edifices... Meaco is the centre of Japanese commerce and manufactures. Silks, tissue, soy [sauce] and lacquered wares, are purchased here in their greatest perfection...."

The chapter titled "The Japanese empire (From Memoirs of a Captivity in Japan, by Captain Golownin, of the Russian Navy)" contains a long excerpt (p. 140) about the mode of making soy [sauce]. "The Japanese soy is also prepared of beans, and turned sour in casks. They say that three years are required for preparing the best soy..." Address: M.D. [USA]. Late in the service of the Hon. D. E. I. [Dutch East India] Company.

856. *Blackwood's Edinburgh Magazine*.1853. Lady Lee's widowhood. Part III.–Chapter X. 73:278-83. March. See p. 280.
• ***Summary:*** In this fictional story, a group of officers and soldiers, in the sleepy town of Doddington, are having a meal at their mess hall in a hotel. An "odour of various compounded perfumes heralded the approach" of Captain Sloperton who "possessed a face and figure that no young female of the middle or lower class ranks could look upon without presently loving him to distraction. The first time the bar-maid of the hotel set eyes on him, she put soy instead of sherry into the soda-water compound she was mixing..."

857. Fox (Chas. E.) & Co. 1853. Coopers' shred isinglass (Ad). *Hartford Daily Courant* (*Connecticut*). April 18. p. 3.
• ***Summary:*** "... Lea & Perrin's Worcestershire sauce. Anchovy paste. Sardines, anchovies. India currie powder. Walnut and Tomato Catsup. Capers, Pickles in jars."

858. Fox (Chas. E) & Co. 1853. Classified ad: For the table–Worcestershire sauce. *Hartford Daily Courant* (*Connecticut*). Nov. 24. p. 10.
• ***Summary:*** "Royal Osborn Sauce. John Bull Sauce. India Soy Sauce. Reading Sauce. Harvey's Sauce. Warwickshire Sauce. Sauce pour Savourer."

Note: This ad also appeared in the Nov. 30 (p. 2) issue.

859. *Putnam's Monthly Magazine* (*New York*).1853. The Potiphars in Paris: A letter from Miss Caroline Pettitoes to Mrs. Settum Downe. 2(11):482-86. Nov. See p. 486.
• ***Summary:*** The letter is written from Paris in October. "He sends Worcestershire sauce to the thief, or a pillow of poppies, and says to him–Friend, all of mine is thine, and all of thine is thy own. This, benighted people of Sennar, is the practice of Christian people."

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Note: This article and passage appeared in a book titled The Potiphar Papers, by George William Curtis, published in 1856.

860. Herbert, Henry William. 1853. American game in its seasons. New York, NY: Charles Scribner. xiii + 343 p. See p. 183. Illust. 19 cm.
• ***Summary:*** The chapter titled "The salmon" describes how to cook and serve this fish (p. 183). In salted water, "let him boil *quantum suff.* Then serve him up, with no sauce save a few spoonsful of the water in which he was cooked, and if you please, the squeeze of a lemon, or, better yet, a lime–but.... eschew the lobster sauce, and the rich condiments, as Reading, Worcestershire or Soy [sauce], for he is rich enough without, and they will but kill his natural flavor, and undo his delicacy." Address: Author [Philadelphia, Pennsylvania].

861. Metropolitan Mechanics' Institute. 1853. A record of the first exhibition of the Metropolitan Mechanics' Institute, held in the east wing of the patent office, February and March, 1853. Washington, DC: H. Polkinhorn, printer. 52 + 14 + 68 + 11 + 8 + 3 p. See p. 7. 23 cm.
• ***Summary:*** In the first 52 pages of this book, under "Catalogue of Articles Deposited for Competition and Premium..." in Class III.–Substances used as food, we read (p. 7): "548, J.B. Kibbey & Co., assorted groceries." These are listed under two groups: American and Foreign. Under Foreign we read: "2 flasks oil, 4 jars anchovie [anchovy] paste, 2 jars shrimp paste, 2 jars English mustard, 2 jars Worcester sauce, 2 jars Harvey sauce, 2 jars John Bull sauce, 2 bottles essence anchovies, 2 bottles India Soy [sauce], 1 bottle essence shrimps, 1 bottle walnut catsup...." Address: Washington, DC.

862. New York Exhibition of the Industry of All Nations. 1853. Official catalogue of the New York Exhibition of the Industry of All Nations, 1853-54. First revised ed. New York, NY: Published by George P. Putnam & Co. for the Association. 224 + 23 p. 19 cm. 1 vol.
• ***Summary:*** In the chapter on objects from Great Britain and Ireland, under "Class 3–Substances employed as food" (p. 102), item 4 states: "Specimens of Worcestershire sauce.–Lea & Perrins, *manu.* [manufacturer], Worcester, England.–*Agents*, John Duncan & Sons, 407 Broadway, New York City."

Note 1. In the original edition of this catalog, the exact same information appears on p. 98.

Note 2. The first major international exhibition of arts and industries was held in 1851 in London at the Crystal Palace. A great success in every way, it showed the world's latest achievements at a time when mankind was making progress at a speed never before known. The next international fair opened only 2 years later in New York City. Held in a huge and very impressive building made mostly of glass and steel (modeled on the Crystal Palace, but larger), it opened in July 1853. An "Official Catalog" and an "Illustrated Record" (with about 500 illustrations) were published. The building housed 5,272 exhibitors, about half of whom came from 23 foreign nations: America 1,467, Germany 639, Great Britain 581, France 418, etc. Unfortunately, the exhibition, though impressive, was a financial failure. It had to close on 1 Nov. 1854 with debts of $300,000. In Oct. 1857 the "fireproof" building caught fire and burned to the ground in less than 30 minutes. Address: New York.

863. Philp, Robert Kemp. 1853. The shopkeeper's guide. London: Houlston & Stoneman. viii + 245 p. See p. 68-69, 77, 80, 82. Index.
• ***Summary:*** Describes the main items that different types of shopkeepers should have in stock. In the section titled "Electro-plated goods" (p. 68-69) is a subsection titled "Plated goods," which contains a long list (p. 69) including: "Salts, gilt inside. Soup and sauce tureens. Soy frames. Spoons and forks."

Under "Papier mache goods" (p. 77): "Card trays. Cruet, soy [sauce], pickle, and liqueur frames. Inkstands."

Under "The chandler and the oilman" (p. 80): "Burgess's essence of anchovies. Harvey's Reading sauce. Cock's ditto [Reading sauce]. Ketchup. India soy. Finest salad oil."

The grocer (p. 80-83): Under sauces (p. 82-83)–"Superior essence of anchovies. Burgess's essence of anchovies. Essence of shrimps. Essence of lobster. Real India soy. Quin sauce. Caviare sauce [Caviar?]. Coratch sauce... Harvey's sauce. Worcestershire sauce... Mushroom ketchup. Walnut ketchup." Address: Editor of the Family Treasury (Late Editor of the "Family Friend"), London, England.

864. Smith (James). 1854. Sale of merchandise and land (Ad). *New Zealand Spectator and Cook's Strait Guardian* (*Wellington*). Jan. 14. p. 2.
• ***Summary:*** "Mr. James Smith has received instructions from the Importers, to sell on Tuesday, 17th January next, without reserve, ex *Northfleet*, from London, the undermentioned desirable Merchandise, viz: -

"Bloater Paste. Worcester Sauce. Capers." Address: [Wellington, New Zealand].

865. *Observer* (*London*). 1854. Public amusements: Japanese exhibition. Feb. 26. p. 1.
• ***Summary:*** "The first direct importation from Japan is now open for exhibition, at the Gallery of the Society of Painters in Water Colours, 5A, Pall-mall East, until 15th March, as the society requires the gallery for their paintings.–Admittance, 1*s*.

"Japan.–Some of the scarce, but noted Japan Soy [sauce], has been forwarded amongst the curiosities now on exhibition at 5, Pall-mall East. On the Continent it is

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esteemed as far superior to that in general use."

This announcement also appeared in the March 5 edition, p. 1.

866. *New York Daily Times*.1854. Business notices. March 1. p. 4.

• ***Summary:*** "Lea & Perrin's Worcestershire Sauce.–Is the only sauce to which a medal has been awarded by the Juries in the Crystal Palace at New York, for foreign exhibitors, and in order to guard the public against numerous counterfeits the proprietors deem it requisite to state that the genuine Sauce can at all times be obtained of the wholesale agents for the United States,

"Messrs. John Duncan & Sons, New York. N.B.–This universally popular condiment not only imparts a piquant relish to all descriptions of food, but by promoting digestion, tends to preserve health."

Note 1. This is the earliest published document seen (Feb. 2012) that mentions a medal awarded to Lea & Perrin's Worcestershire Sauce; it was awarded at an exhibition in New York.

Note 2. This is the earliest document seen (Feb. 2012) concerning Lea & Perrin's Worcestershire Sauce that uses the word "counterfeits" (or "counterfeit," etc.) to refer to imitations. Address: New York.

867. Lea and Perrins. 1854. Classified ad: The only medal awarded by the Jury of the New York Exhibition to English or foreign sauce manufacturers... *Times* (*London*). March 30. p. 11, col. 1.

• ***Summary:*** "... has been obtained, amongst numerous competitors, by Lea and Perrins, for their Worcestershire Sauce, whereby further testimony is afforded of its being the best sauce extant.

"The celebrity of this sauce has extended to every quarter of the globe, and its efficacy in promoting the general health is becoming daily more observed and acknowledged. In the United States it is held to be the most agreeable condiment, and is esteemed for its tonic and invigorating properties, its habitual use enabling the stomach perfectly to digest the food."

"On the continent of Europe these qualities have been testified to, by a gentleman who writes to Lea & Perrins thus–'I have carried a bottle of your Worcestershire Sauce in a tour I have just completed through Spain and Portugal, and I believe I owe my present state of health to its use. Your sauce is stomachic, and I think medicinal. I can with truth say there is nothing in a traveller's baggage so essential to his comfort, at least in these countries, as your sauce.'

"In India also, where it is found at the mess of every regiment, a medical gentleman writes from Madras to his brother in the same profession at Worcester in the following terms,–'Tell Lea and Perrins that their Sauce is highly approved in India, and that it is, in my opinion, the most palatable as well as the most wholesome sauce made.'

"This sauce is suitable for every variety of dish, and the universal demand which its excellence has created, has led to many imitations being offered to the public, under a variety of names, but the genuine may be known by the names of 'Lea & Perrins,' being impressed upon the patent metallic capsule, or patent glass stopper of the bottle, as well as the labels and wrapper.

"Manufactory, 68, Broad-street, Worcester; wholesale and export warehouse, 19, Fenchurch-street, London: and to be obtained also of Crosse and Blackwell, Barclay and Sons, London, and all the principal druggists, grocers, and Italian warehousemen throughout the United Kingdom and abroad.

Note 1. This may be the earliest document seen (Dec. 2005) concerning soybean products (soy sauce [though not mentioned], an ingredient of Worcestershire Sauce) in Spain. This document contains the earliest date seen for soybean products in Spain (1854); soybeans as such had not yet been reported by that date.

Note 2. This is the earliest document seen (Feb. 2012) that uses the word "medicinal" (or "medicine" or "medical") in connection with Lea & Perrins' Worcestershire sauce, or that mentions a letter from a man who has carried a bottle of this sauce "through Spain and Portugal."

Note 3. A graphic from *The Secret Sauce* (1997, p. 95) shows the medal more clearly than does our photocopy of the same medal, which was the only medal awarded in 1853 at the New York Exhibition to a sauce manufacturer. Address: [England].

868. Jones and Bonham. 1854. Sales by auction: This evening.–150 framed and glazed prints,... (Ad). *Times* (*London*). May 3. p. 15, col. 2.

• ***Summary:*** This company "(late George Jones and Son) will sell by auction, at their great Rooms... superior property... 50 dozen sparkling Champagne, 35 baskets of the fine Japanese soy [sauce], superior miscellaneous goods,..."

Note: "Japanese soy" refers to soy sauce made in Japan. Address: [London].

869. Fox (Chas. E) & Co. 1854. Classified ad: For the table -. *Hartford Daily Courant* (*Connecticut*). May 8. p. 2.

• ***Summary:*** "... Capers, Olives, Anchovies, Tomato, Walnut and Mushroom Catsup;... Worcestershire, Royal Osborn, John Bull, Reading, Harvey, India Soy and Warwickshire Sauces, for imparting a zest to fish, chops, steaks, soups, and made dishes."

Note: This ad also appeared in the May 9 issue (p. 3) of this newspaper.

870. *New York Daily Times*.1854. Special notices. Sept. 6. p. 5.

• ***Summary:*** The section titled "Champagne wines..." states: "Lea & Perrin's Worcestershire Sauce, landing ex

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Manhattan, from Liverpool. For sale by John Duncan & Sons, No. 405 Broadway, between Walker and Lispenard sts." Address: New York.

871. Sharland & Co. 1854. On sale by the undersigned, ex *Joseph Fletcher* (Ad). *Taranaki Herald* (*New Zealand*). Oct. 11. p. 1, col. 2.
• ***Summary:*** "1 case Child's Night Lights. 1 do [ditto = case] Lea & Perrin's Worcestershire Sauce." 1 case each "Burgess' Essence Anchovies. Burgess' Reading Sauce. Burgess' India Soy [sauce]. Burgess' Mushroom Ketchup."

872. Weston (Thomas) & Co. 1854. Public auction sales, in the Estate of the late Mr. Wellesley Hughes, stock in trade of groceries, &c. (Ad). *Daily Southern Cross* (*Auckland, New Zealand*). Oct. 31. p. 1.
• ***Summary:*** "Thomas Weston & Co. have received instructions to sell by Auction to-morrow, 1st November, at the premises of the late Mr. Wellesley Hughes, Shortland-street, at 11 o'clock, the stock in trade of groceries, &c., comprising goods lately imported from England... Packages being unbroken.

"3 cases muscatels.

"3 cases jams 2 and 1 lb.

"1 case Worcester sauce.

"16 casks carbonate soda." Address: [Auckland, New Zealand].

873. Badham, Charles David. 1854. Prose Halieutics; or ancient and modern fish tattle. London: John W. Parker and Son. xii + 552 p. See p. 65-75. Chap. 5. Fish Sauces. 20 cm.
• ***Summary:*** All of the relishes of the ancients were liquid sauces. Fermented salted fish sauces have been consumed since ancient times. The earliest reported are garum and alec, which were as highly prized in the Roman and Greek eras as Harvey and Burgess sauces were in England at the time this book was written. The original garum is reported to have been made from the viscera and blood of mackerel (known to the Romans as 'garum sociorum' and to the Greeks as *garon*), but many other types of fish were also used. The ancients produced many kinds of salt, each with its own properties and color. "Besides all of these natural salts, there was a highly aromatized and savoury kind eaten, either as a condiment at table, or as a whet to appetite, and out of this, says Pliny, Garum was made, and owed to it a great share of its celebrity." Many different types of garum were sold to the Latin public, varying greatly in taste, quality, consistency and color. Most were clear, but some "ran thick and turbid." Garum is no longer made in Italy.

The Greeks enjoyed both garum and alec, the latter being thicker than garum and made from anchovies (called aleculæ or halecula). Note: The author is Rev. Badham. Soy is not mentioned.

Note: Wilkinson (2001, p. 298) states that *Liquamen* was the fermented fish sauce of ancient Rome. Gáros [(garos) mistakenly called garum] was the fermented fish sauce widely used in ancient Greece in food preparation. Address: Rev., M.D., Fellow of the Royal College of Physicians, England.

874. Hakura, Yokyu? 1854. Yôshû roku [A record of small provision]. Japan. Publisher unknown. 46 p. Written in Kanbun (Chinese). Japanese summary by Kawakami 1978, p. 156. [Jap]
• ***Summary:*** Mentions red miso (*aka-miso*), how to make a type of miso soup called *shi-yu* or *kuki-yu*, and tofu. Hatcho miso from Mikawa was recommended as red miso.

875. Lea & Perrins' celebrated Worcestershire Sauce (Ad). 1854. In: Charles Pope. 1854. Yearly Journal of Trade. 24th ed. London: Printed for the proprietor. See p. 84 near end.
• ***Summary:*** At the end of this volume, and paginated separately, is *Pope's Yearly Journal of Trade Advertiser* [1854-5]. On page 84 is this half-page ad: "Pronounced by connoisseurs to be the 'only good sauce' and applicable to every variety of dish. Extract of a letter from a medical gentleman at Madras [India], to his brother at Worcester, May, 1851. 'Tell Lea & Perrins that their Sauce is highly esteemed in India, and is, in my opinion, the most palatable as well as the most wholesome Sauce that is made.'

"Sold universally by the principal dealers in Sauces."

Note: This is the earliest document seen (Feb. 2012) related to this sauce that contains (even approximately) these words: "Extract of a letter from a medical gentleman at Madras, to his brother at Worcester..." or "'Tell Lea & Perrins that their Sauce is highly esteemed in India,...'" or "'the most wholesome sauce made.'"

An illustration in the center of this add shows a bottle of the sauce. This is the earliest document seen (March 2012) with an illustration of a bottle of this sauce.

876. *Report of the Commissioner of Patents, Agriculture.* 1854. Preliminary remarks. p. v-vi. For the year 1853.
• ***Summary:*** "Among the foreign products which have been more recently introduced and distributed, and which appear to be adapted for profitable cultivation, we would instance... peas from Japan... Among the products proposed to be introduced from abroad, are rice and the soja bean of Japan, the latter of which is used for making the celebrated 'Soy sauce.'"

Note 1. The author apparently does not realize that the "peas from Japan" and the "soja bean of Japan" are one and the same plant.

Note 2. This is the 2nd earliest English-language document seen (Feb. 2008) that uses the term "soja bean" (or "soja beans") to refer to the soybean.

Note 3. This is the 2nd earliest English-language

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document seen (April 2012) that contains the term "soy sauce" (without a hyphen).

877. Simmonds, Peter Lund. 1854. The commercial products of the vegetable kingdom, considered in their various uses to man and their relation to the arts and manufactures; forming a practical treatise & handbook of reference for the colonist, manufacturer, merchant, and consumer... London: T.F.A. Day. xix + 668 p. See p. 313. Index. 23 cm.

• ***Summary:*** In the section on "Pulse" we read (p. 313). "The well known sauce, Soy, is made in some parts of the East, from a species of the Dolichos bean (*Soja hispida*), which grows in China and Japan. In Java it is procured from the *Phaseolus radiatus*. The beans are boiled soft, with wheat or barley of equal quantities, and left for three months to ferment; salt and water are then added, when the liquor is pressed and strained. Good soy is agreeable when a few years old; the Japan soy is superior to the Chinese. Large quantities are shipped for England and America. The Dolichos bean is much cultivated in Japan, where various culinary articles are prepared from it; but the principal are a sort of butter, termed *mico*, and a pickle called *sooja*.

"1,108 piculs of soy were shipped from Canton in 1844, for London, British India, and Singapore. 100 jars, or about 50 gallons of soy, were received at Liverpool in 1850. The price is about 6*s*. per gallon in the London market."

One page earlier, the section on "Pulse" states (p. 312): Of leguminous grains there are various species cultivated and used by the Asiatics, as the *Phaseolus Mungo* [mung bean], *P. Max* [soya bean], and *P. radiatus* [probably azuki bean], which contains much alimentary matter; the earth-nut (*Arachis hypogaea*), which buries its pods under ground after flowering."

"Captain H. Biggs [sic, Bigge], in a communication to the Agri.-Hort Soc. [Agricultural & Horticultural Society] of India, in 1845 [sic, Aug. 1844], states that of the esculents a large white pea forms the staple of the trade of Shanghae [Shanghai], or nearly so, to the astonishing amount of two and a-half millions sterling. This he gives on the authority of the Rev. Mr. Medhurst, of Shanghae, and Mr. Thoms [sic, Thom], British Consul at Ningpo. These peas are ground in a mill and then pressed, in a somewhat complicated, though, as usual in China, a most efficient press, by means of wedges driven under the outer parts of the framework with mallets. The oil is used both for eating and burning, more for the latter purpose, however, and the cake, like large Gloucester cheese, or small grindstones in circular shape, is distributed about China in every direction, both as food for pigs and buffaloes, as also for manure."

Note 1. The "large white pea" is clearly the soybean.

Note 2. This is the earliest document seen (Aug. 2001) that uses the spelling "Shanghae."

In the chapter titled "Oleaginous plants" we read (p. 512): "In Japan a kind of butter, called *mijo*, [sic, *miso*] is obtained from a species of the Dolichos bean (*Dolichos soja*).

Also discusses: Almonds and almond oil (p. 510, 533). Wheat gluten (221, 234, 264). Hemp and hemp oil (p. 510). Sesame or teel, sesame oil, black til, and gingelie oil (p. 511, 533-34). "The export of linseed and rapeseed cakes from Stettin" (p. 564).

Note 3. Peter L. Simmonds lived 1814-1897.

Note 4. This is the earliest English-language document seen (July 2003) that uses the words "gingelie" or "teel" to refer to "sesame."

Note 5. This is the earliest English-language document seen (Sept. 2006) that uses the word "Oleaginous" or the term "Oleaginous plants" in connection with the soybean. Oil derived from the soybean is also mentioned. Address: England.

878. Woodcroft, Bennet, comp. 1854. Titles of patents of invention: Chronologically arranged from March 2, 1617 to October 1, 1852. 2 vols. London: Printed by G.E. Eyre and W. Spottiswoode. Published at the Great Seal Patent Office. 8 + 1554 p. See p. Vol. 1, 158 in the chronological index, or p. 60 in the alphabetical index at Bowen. Great Britain Patent Office. *

• ***Summary:*** This index concerns patents granted for inventions in Great Britain. Starting in 1624, the British system rewarded and encouraged inventors through the grant to them of limited monopolies. Woodcroft played a key role in the British patent reform campaign that succeeded in 1852 in overcoming the many obstacles that confronted the would-be patentee and requiring that specifications be published with each patent. This book is the first to list all early British patents. It does so in the form of three indexes: a chronological index, a subject index, and a name index of patentees.

Name of Patentee: Samuel Bowen. Progressive Number: 878. Date: 1st July 1767. "A grant unto Samuel Bowen of the province of Georgia in America, merchant, of his new invented method of preparing and making sago, vermicelli, and soy from the plants growing in America, to be equal in goodness to those made in the East Indies; to hold to him, his executors, admors, and assignors, within England, Wales, and town of Berwick-upon-Twere, are also in all His majesty's colonys and plantations abroad for the term of 14 years pursuant to the statute; with a clause to unroll the same within 4 kalendar months from the date hereof. Witness His Majesty at Weston, the first day of July, in the year above."

Note: Also in 1854 Woodcroft authored a book titled "Alphabetical Index of Patentees of Inventions." That book is an author's index to the book mentioned above.

In 1969 the Patent Office of Great Britain issued an *Alphabetical Index of Patentees of Inventions, 1617/1852*, published in New York by A.M. Kelley. It is a reprint of Woodcroft's original book. Bennet Woodcroft lived 1803-

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1879. Address: England.

879. Woodcroft, Bennet. 1854. Alphabetical index of patentees of inventions, from March 2, 1617 (14 James I.) to October 1, 1852 (16 Victoriae). London: Queens Printing Office. 647 p. See p. 60. 15 & 16 Victoriae, Cap. 83. Sec. XXXII. [1 soy ref]

• ***Summary:*** To Samuel Bowen was issued English Patent 878 of 1 July 1767, titled "Making sago, vermicelli, and soy [sauce], from American plants, equal in goodness to those from the East Indies."

Note: A new edition of this book was issued in 1969 by the Great Britain Patent Office. With an introduction and appendix of additions and corrections compiled in the Patent Office Library. By Bennet Woodcroft (lived 1803-1879). Published in London by Evelyn, Adams & Mackay. Address: Superintendent of Specifications, Indexes, &c.

880. Lea and Perrins. 1855. Classified ad: Lea and Perrins' Worcestershire Sauce... *Times* (*London*). Jan. 31. p. 14, col. 5.

• ***Summary:*** "... is universally acknowledged to be the most valuable condiment, and experience has proved its efficacy in promoting digestion and preserving health. Sold by Crosse and Blackwell, Barclay and Sons, and the principal dealers everywhere."

This ad also appeared in the 27 April 1856 issue (p. 14, col. 2) of this newspaper. Address: [England].

881. Browne, D.J. 1855. Report on the seeds and cuttings recently introduced into the United States. Preliminary remarks. *Report of the Commissioner of Patents, Agriculture.* p. x-xxxv. For the year 1854. See p. xv.

• ***Summary:*** "*Japan pea*, also described in last year's report, and has been since cultivated with remarkable success.

"*Soja bean*, (Soja hispida) procured by the Japan Expedition [of Commodore Perry]; two varieties, the 'White' and the 'Red-seeded,' both of which are employed by the Japanese for making *soy*, a kind of black sauce, prepared with the seeds of this plant, wheaten flour, salt, and water. This 'soy,' or 'soja,' which is preferred to the *Kitjap* of the Chinese, is used in almost all their dishes instead of common salt. The soy may be made as follows:

"Take a gallon of beans of this plant and boil them until soft; add bruised wheat, one gallon; keep in a warm place for twenty-four hours; then add common salt, one gill [½ cup], and water, two gallons; and put the whole into a stone jar, and keep it tightly closed for two or three months, frequently shaking it; and then press out the liquor for use.

"The seeds of this plant only require to be sown in a warm, sheltered situation at the time of planting Indian corn, and cultivated as any garden bean."

Note 1. The author of this report apparently did not realize that the Japan Pea and the Soja Bean are one and the same plant. Note 2. This is the earliest American document seen (Jan. 2003) that uses the term "Soja hispida" to refer to the soybean.

Note 3. The "Japan Expedition" refers to that led by the American Commodore Matthew Calbraith Perry (lived 1794-1858).

Note 4. Piper and Morse (1923, p. 40) state concerning the Perry Expedition to Japan in 1854: "The Mammoth may well be the 'white-seeded' soja bean obtained by the Perry expedition. The 'red-seeded soja bean' was, probably, the adsuki bean (*Phaseolus angularis*), as no red-seeded soybean is known." If this were an adzuki bean, this would be the earliest document seen (March, 2003) concerning azuki in the United States.

Note 5. This is the earliest English-language document seen (April 2012) that uses the term "Kitjap" to refer to Chinese soy sauce." Observe the similarity between the words "Kitjap" and "Ketchup"–suggesting that the word "ketchup" may have a Chinese origin.

Note 6. Also discusses: White quinoa (*Chenopodium quinoa*, p. xiii-xiv). White Lupine (*Lupinus albus*, from southern Spain and Germany, xv-xvi). Yellow Lupine (*Lupinus luteus*, from Germany, p. xvi). Chinese yam (*Dioscorea batatas*, from China but more recently from France, p. xvii).

Note 6. This is the earliest document seen (Jan. 2005) that mentions quinoa in the USA. Address: United States Patent Office, Washington, DC.

882. Fox (Chas. E) & Co. 1855. Classified ad: English sauces, pickles, &c. *Hartford Daily Courant* (*Connecticut*). May 16. p. 3.

• ***Summary:*** "Worcestershire Sauce, Royal Osborn do. [ditto = Sauce], Warwickshire do., John Bull do., Napoleon do.; Reading, India Soy and Harvey Sauces for fish, game, soups, steaks, etc... Piccallilli [Piccalilli], India Currie Powder, Mushroom, Walnut and Tomato Catsup."

Note: This ad appeared 12 more times in this newspaper during 1855 from May 17 to May 31.

883. Somerville (M.). 1855. Ex "Rock City" from London (Ad). *Daily Southern Cross* (*Auckland, New Zealand*). June 22, p. 2, col. 5.

• ***Summary:*** "From the celebrated Houses of Crosse & Blackwell, G.F. Coward & Batty and Company. One hundred and fifty cases fancy groceries and oilman's stores... 30 cases Chouchou, Imperial hot and mixed pickles, 6 cases Sauces & Soyer's relish, Indiana Soy [sic, Indian Soy], China Soy, Worcester Ketchup, Harvey, John Bull, &c., in fancy vases and bottles, 20 cases Bottled vinegar, pints, quarts, and fancy decanters,..."

Note 1. This is the earliest of 177 documents seen (Nov. 2009) in the New Zealand Newspapers database (paperspast) that contains the term "China Soy." The term was last used in

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New Zealand Newspapers on 23 April 1906.

Note 2. The meaning of "Worcester Ketchup" is unclear. The text should probably read "Worcester [sauce], Ketchup,..." Address: Auckland.

884. Coleman, Debbie. 1855. Cook book: First volume. 182 p. Unpublished manuscript. July 16. See p. 28, 120.
• ***Summary:*** Recipes for "Mushroom soy" are given on two pages–28 and 120. The process, ingredients, and amount of each ingredient are identical but the wording is slightly different. The recipe on page 28 states: "Break the mushrooms, put them into an iron pot, a layer alternately of salt and mushrooms and let them remain until the next day. Then boil them ¼ of an hour, and strain through a cloth, and add to the liquor, mace, onions, and all kinds of spice. Boil away ½, strain again, bottle, and cork tightly and rosin the corks. The proportions are 1 bu. mushrooms, 1 pt. salt, 6 onions, ½ oz. spices each. This makes 8 pint bottles."

The recipe on page 120 begins: "Break the mushrooms, put them in an iron pot, a layer of mushrooms and of salt alternately and let them remain till the next day. Boil them ¼ of an hour, strain them through a towel..."

Note 1. This is the earliest document seen (April 2012) that contains the term "mushroom soy." Note that "soy" is not used as an ingredient in this sauce, but that the sauce may be intended as an alternative to real "soy" sauce.

Note 2. This is the earliest English-language document seen (April 2012) that mentions a non-soy sauce that resembles soy sauce.

The word "soy" also appears in several other places as follows:

"Ragout:... When it boils, take it off and add 25 oysters, some walnut liquor, India soy, tomatoes and capers" (p. 12).

"Mutton chops–French way:... When thick enough strain it, take off the fat, add a pickled cucumber cut up fine, 2 tablespoonsful of capers, 2 or 3 tablespoonsful of vinegar and 1 small teacupful of tomato soy." Mrs. Camac (p. 16).

"To stew a fillet of veal:... ¼ of an hour before dinner, pour off the gravy, skim off the fat and thicken if necessary with a very little flour and add 3 tablespoonsful of tomato soy... Mrs. Markoe" (p. 17).

The chapter titled "Pickles" begins (p. 24) with a recipe for "Walnut ketchup" followed by a recipe for "Tomato ketchup"–the latter by Mrs. Coleman.

"Bouilli Beef:... Put it into a pot, and nearly fill it with water, a handful of salt, 5 carrots, 5 turnips, 3 onions, some celery, 2 bunches potherb, 3 tablespoonsful tomato soy, a tablespoonful whole allspice, a full teaspoonful mace, a tablespoonful sweet marjoram, 5 cloves and pepper. Put it on at 7 if you dine at 3... H.M." (p. 95). "... add 3 tablespoons of tomatoe soy and pour it over the meat... H.M." (p. 97).

"Tomatoes as soy: Take full grown ripe tomatoes, reject every bad one and cut out every spot; have them perfectly dry, then cut them up, leaving the skins on and fill a large jar; put the jar in a pot of water, till the tomatoes pass readily through a fine colander, then put the strained liquor into a bell-metal kettle with about ½ a tablespoon of salt to every gallon. Put it over a slow fire and let it simmer, simmer, simmer, say 6 hours. About ½ hour before it is done, add spice to your taste say, cloves, mace, allspice. Stew it long enough to extract the flavor from the spice. Bottle it and on the top of each bottle, pour a very little sweet oil. Cork tight and put it away in a dry place.–Mrs. Chapman" (p. 119).

"Another recipe for tomatoes as soy: Take a bushel of tomatoes and ½ peck of onions. Slice them all roughly without peeling. Take a qt. of salt; put the onions and tomatoes in layers in a tub, sprinkling the salt between them. Let it stand 2 or 3 days till it begins to ferment. Then put it on with an oz. cloves, an oz. of allspice and ½ a mustard seed; bottle of Cayenne of ordinary strength into a large iron kettle and let it boil steadily all day, putting it on early in the morning, taking great care it does not burn; then strain it and the next day boil the liquor again till it begins to thicken. Rosin bottle and cork it and it will keep for years" (p. 119).

Note 3. Neither of the last two recipes contain soy, but they were apparently meant as an alternative to real "soy" sauce. Today the resulting product would resemble tomato sauce or tomato ketchup.

Note 4. This unpublished manuscript was dated July 16th, 1865. Some recipes are followed by a woman's name at the lower right; presumably each was developed by that woman, to whom the author gave credit.

The manuscript was self-published as a book in 1938 by Sarah R. Brock (182 p. 23 cm, with index); the author's name is given as Debbie Brown Coleman. The 1938 edition states: "... a book I had printed for family distribution of my mother's [recipes]..." The only library known to own this printed edition is the University of Denver [Colorado], Penrose Library.

885. *Daily Southern Cross (Auckland, New Zealand).*1855. China and the Chinese. July 17. p. 2 (Supplement).
• ***Summary:*** A very interesting lecture was recently delivered at the School of Arts, Sydney [Australia], by Dr. J. Berncastle, on the subject of "China and the Chinese."

"The soy [sauce], which it had been said was made from cockroaches, was made from a pea which was allowed to ferment with salt."

886. Cohen and Harbottle. 1855. Have received instructions from Mr. Thomas Taylor to sell by auction (Ad). *Sydney Morning Herald (NSW, Australia).* July 25. p. 6.
• ***Summary:*** "... at his Stores, 184 George-street, on Tuesday, 31st July, 1855, at half-past 10 o'clock precisely...

"Oilmen's stores and groceries... Herrings in tins, India soy [sauce],..."

887. *New York Daily Times.*1855. Summer watering-

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places: Cold water. A few days' experience at a water-cure establishment. July 28. p. 2.
• ***Summary:*** The section titled "Dinner..." states: "We dine at 1 o'clock; we have no French cookery–no pastry or kickashaws [kickshaws–fancy dishes], but plenty of good beef and mutton, vegetables and fruit... They allow us salad with vinegar, oil and salt; but no pepper, mustard, Worcestershire sauces or other noxious stimulants are suffered to pollute our table."

888. Forester, Frank. 1855. The wigwam in the wilderness. *Graham's American Monthly Magazine of Literature, Art, and Fashion* 47(2):133-46. Aug. See p. 138.
• ***Summary:*** "Alf Arminger... swore that, stewed, with the suspicion of an onion, a whole red pepper pod, a table spoon of Worcestershire sauce, and a gill of Jamaica, in default of port wine, they would not go so bad for supper."

889. Lea & Perrins. 1855. Lea & Perrins' celebrated Worcestershire Sauce (Ad). *Islander (The) (Charlottetown, Prince Edward Island, Canada)*. Oct. 19. p. 4.
• ***Summary:*** "Pronounced by connoisseurs to be the 'only good sauce' and applicable to every variety of dish.

"Extract of a letter from a medical gentleman at Madras [India], to his brother at Worcester. May, 1851. 'Tell Lea & Perrins that their Sauce is highly esteemed in India, and is, in my opinion, the most palatable as well as the most wholesome Sauce that is made.'

"Sold universally by the principal dealers in Sauces.–Wholesale for Exportation by the Proprietors Lea and Perrins, 68, Broad-street, Worcester, and 19, Fenchurch-street, London. Barclay and Sons; Crosse and Blackwell, and other Oilmen and Merchants, London.

An illustration shows a bottle of Lea & Perrins' Worcestershire Sauce.

890. Morrin (W.). 1855. For sale at W. Morrin's grocery, wine & spirit establishment,... (Ad). *Daily Southern Cross (Auckland, New Zealand)*. Oct. 19. p. 2, col. 3.
• ***Summary:*** "... Mustard, vinegar, table salt, Assorted sauces, Chinese soy [sauce], & capers, Maccaroni [Macaroni], Vermicilli [Vermicelli], Isinglass, & gelatine...." Address: Queen-street.

891. *Merchant's Magazine and Commercial Review (New York)*.1855. Mercantile miscellanies. 33(4):520-24. Oct. See p. 523.
• ***Summary:*** In the section titled "Fabricated trade marks" (From the *Mercantile Journal and Statistical Register, Belfast*) we read (p. 523): "Being apt and cunning, the universal Yankee nation, we are told by one of its own trade organs, tries its hand at deception, and hence imitative Champagne, Sheffield cutlery, Rowland's macassar, Cognac brandy, Worcestershire sauce, Belgium cloths, Burton ales, Irish linens, French silks, Scotch shawls, and a thousand other things, are manufactured there, and sold as the 'real originals.'"

892. Browne, D.J. 1855. Agricultural operations of the United States Patent Office. *American Institute of the City of New York, Transactions* p. 587-632. For the year 1854.
• ***Summary:*** In the section on "Legumes" (p. 596) we read (p. 598): "Japan pea, also described in last year's report, and has been since cultivated with remarkable success.

"Soja bean (*soja hispida*), procured by the Japan expedition; two varieties, the 'white' and the 'red-seeded,' both of which are employed by the Japanese for making soy [sauce], a kind of black sauce, prepared with the seeds of this plant, wheat flour, salt and water. This 'soy,' or 'soja,' which is preferred to the kitjap [ketjap, kecap] of the Chinese, is used in almost all their dishes instead of common salt. The soy may be made as follows: take a gallon of the beans of this plant and boil them until soft, add bruised wheat one gallon; keep them in a warm place for twenty-four hours, then add common salt one gill, and water two gallons, and put the whole into a stone jar and keep it tightly closed for two or three months, frequently shaking it, and then press out the liquor for use. The seeds of this plant, to be cultivated, only require to be sown in a warm sheltered situation, at the time of planting Indian corn, and cultivated as any garden bean." Address: Philadelphia, Pennsylvania.

893. Hassall, Arthur Hill. 1855. Food and its adulterations: Comprising the reports of the Analytical Sanitary Commission of "The Lancet" for the years 1851 to 1854 inclusive, revised and extended. London: Longman, Brown, Green, and Longmans. xlviii + 657 p. Illust. Index. 23 cm. [10+* ref]
• ***Summary:*** This is a remarkable, and an important book, very professional and carefully documented, incorporating the relatively new science of microscopy, an early salvo in the "Sanitary Reform" movement and harbinger of the subsequent reforms in the UK and (later) the USA, banning adulteration of foodstuffs and creating pure food and drug laws.

The book is dedicated Sir Benjamin Hall, Bart., M.P., President of the General Board of Health. The dedication begins: "Sir, The fact has at length become recognised that the sanitary condition of the people is the great social question of the day, for it is one that vitally affects the interests, the well-being, and even the safety of every individual throughout these realms, rich and poor, high and low, but especially the latter."

One key fact: That "more persons have died, and still continue to die, from the neglect of proper sanitary precautions, and from living in violation of the fundamental laws and rules of health, than have ever fallen in battle." Adulterated food is an important cause.

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The Commission examined 33 samples of commercial bottled sauces. Five of these were labeled "India Soy" [sauce]. Treacle [molasses] and salt formed the basis of all five of these samples, which may have consisted entirely of these two ingredients only (p. xxii).

The section titled "On sauces, and their adulterations" (p. 506-12) contains detailed information on each sauce mentioned. "A great variety of substances, chiefly vegetable, enter into the composition of the various sauces in use" including "tomato, garlic, sorrel, mushroom and walnut catsup,... the seeds of an Indian plant called *Dolichos soja* or *soya*, of which soy is made;..."

For each of the five samples of India Soy are given: (1) Name and address of business from which sample was purchased. (2) Purchase price: Typically 1 shilling, 6 pence. (3) A description of the article and its adulterants.

"Results of the microscopical and chemical examination of thirty-three samples of the principal sauces, obtained chiefly from manufacturers.

"India soy.

"1st Sample–Purchased of Batty & Co., Pavement, Finsbury-square. Price 1*s.* 6*d.*

"This article is dark, thick, and like syrup; it is made up to a great extent of treacle slightly burned; and judging from the consistence, appearance, and taste, it appears to be little else than treacle very strongly flavoured with salt. Examined with the microscope, there were detected in it numerous oval sporules of the fungus invariably present in treacle. "2nd Sample.–Purchased of Thomas Snelling, 30. Fenchurch-street. Price 1*s.* 3*d.* Appearance, taste, and composition very similar to Sample 1.; it certainly consists in great part of treacle and salt.

"3rd Sample.–Purchased of Kenning & Hale, 5. Poultry, London. Price 1*s.* 6*d.* Composition the same as the previous samples, it consisting chiefly of treacle and salt.

"4th Sample.–Purchased of J. Wingrave & Co., 80. St. Paul's-churchyard. Price 1*s.* 6*d.* Composition apparently the same as in the previous samples, it consisting principally of treacle and salt. 5th Sample.–Purchased of John Burgess & Son, 107. Strand. Price 1*s.* 6*d.* Composition apparently the same as in the previous samples, treacle and salt being the chief ingredients. Neither copper nor lead was detected in this or the above samples.

"By the above observations, we do not mean to imply that the samples of Soy examined may not consist, either in part or entirely, of genuine India Soy; but this we do say, that, if genuine, then is Soy little better than a mixture of treacle and salt, out of which ingredients we undertake to produce an article scarcely if at all distinguishable from the samples referred to."

Harvey's Fish Sauce contained vinegar, catsup, and much salt, but no soy.

Cocks Reading Sauce (p. 508) contained "vinegar, much cayenne and salt, catsup, and perhaps a small quantity of shallots or garlic and soy."

Soyer's Relish (p. 509) was found to contain soy as one of many ingredients.

Page 511 gives a summary of the main findings. "1st. That treacle and much salt formed the bases of the five samples of India Soy examined, if they did not even entirely consist of these two ingredients."

"... every intelligent cook might readily succeed in preparing all the sauces which are ordinarily required for the table, by the exercise of a very slight amount of reflection and ingenuity. In order to aid such endeavours, we introduce a few receipts of some of the more useful and less known sauces:...

"Soy: 'Boil four pounds of the seeds of *Dolichos soya* with water, until they become soft; then add four pounds of bruised wheat; keep the mixture in a warm place for twenty-four hours; then add four pounds of common salt, and eight pounds of water; put the mixture into a stone jar, and cork it up for two or three months; then press out the liquor. The best soy is imported from China.'"

Note 1. Koji is the key ingredient missing from the above recipe.

Note 2. The first long section in this book, titled "Coffee and its adulterations" (p. 3-9) proves that much coffee sold in England is adulterated and that chicory is the most widely used adulterant; soy is not mentioned as an adulterant for coffee, although roasted "beans" are (p. 3, 6-7). The lower the price of the coffee, the more the adulteration (in general). Address: M.D., Chief analyst of the commission, 8. Bennett-street, St. James'-street [London].

894. Hildreth, Richard. 1855. Japan as it was and is. Boston, Massachusetts: Phillips, Sampson and Co.; New York: J.C. Derby. xii + 576 p. Folded map. Index. 21 cm. Facsimile edition reprinted in 1973 by Scholarly Resources (Wilmington, Delaware).

• ***Summary:*** Richard Hildreth (lived 1807-1865) never traveled to Japan, but he read widely from the writings of those who did. He summarizes them and quotes them in this book, which is basically a history (in chronological order, by the date of Hildreth's source).

In Chapter 32 (1690-1692), in the section on tea, the following quotation (probably from Engelbert Kaempfer) appears (p. 312): "'The common sauce for these and other dishes is a little *soy* [sauce], as they call it, mixed with *saki* [*sake*], or the beer of the country.'"

In Chapter 39 (1775-76), in the section on imports and exports, the following summary appears (from C.P. Thunberg) (p. 390-91): "The chief articles of export were copper, camphor and lackered [sic, lacquered] goods; porcelain, rice, saki, soy,* were also exported" (Footnote: *"This sauce, used in great quantities in Japan and exported to Batavia by the Dutch, whence it has become known throughout the East Indies and also in Europe, is made from

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the soy bean (*Dolichos Soia*) [sic], extensively used by the Japanese in the making of soup [sic]. The soy is prepared as follows: the beans are boiled until they become rather soft, when an equal quantity of pounded barley or wheat is added. These ingredients being mixed, the compound is set away for twenty-four hours in a warm place to ferment. An equal quality of salt is than added, and twice and a half as much water. It is stirred several times a day for several days, and then stands well covered for two or three months, when the liquid portion is decanted, strained, and put in wooden casks. It is of a brown color, improves with age, but varies in quality, according to the province where it is made. The Dutch of Deshima cork up the better qualities in glass [sic, porcelain] bottles, boiling the liquor first in an iron kettle, to prevent fermentation, by which it is liable to be spoiled)." Address: Author, Boston, Massachusetts.

895. Warner (Otis) & Co. 1856. Classified ad: Worcestershire sauce, &c. *Hartford Daily Courant* (*Connecticut*). Jan. 5. p. 1.

• ***Summary:*** "Just received, Worcestershire Sauce in pints and half pints. Also pickles in jars and by the gallon; Capers, Pepper Sauce, Tomato Catsup, Olives, Brandy Peaches, &c." Address: 250 Main St.

896. Duncan (John) & Sons. 1856. Sauces of various kinds (Ad). *New York Daily Times*. Feb. 8. p. 8.

• ***Summary:*** "Lexicographers tell us there are various kinds of sauce, some of which are exceedingly appetising, while others are difficult of digestion. The old Colonists, and even our modern Yankees and Virginians, speak in their quaint rustical way of 'garden sass,' under which term they include all culinary vegetables. But there is another kind of sauce which, deriving its name from a palatable condiment, is yet, in itself, directly the reverse of palatable; we mean the sauce of a pert young gentleman or forward miss, in whose education manners have been neglected.

"The third kind of sauce is the best of all inasmuch as it gives zest to the languid appetite and flavor to viands which need its aid. These sauces are variously prepared, and are known under different names; but the one which is most celebrated, for its tonic and invigorating properties, is the Worcestershire sauce, manufactured by Lea & Perrin, and sold by their agents, John Duncan & Sons, No. 405 Broadway, New York.–*Baltimore Patriot*, Feb. 5." Address: New York.

897. Duncan (John) & Sons. 1856. Champagne wines, landing ex *Samuel G. Fox* (Ad). *New York Daily Times*. March 29. p. 8.

• ***Summary:*** "Scotch malt whiskey landing ex *Mary Morris*.

"English cheese landing ex *American Eagle*.

"Lea & Perrin's Worcestershire Sauce, landing ex *Harvest Queen*. For sale by

"John Duncan & Sons, No. 405 Broadway." Address: New York.

898. Hempel, Charles J. 1856. Original communications: Much ado about nothing. Dr. Peters' Review (Letter to the editor). *Philadelphia Journal of Homeopathy* 4(12):738-44. March. See p. 741-42.

• ***Summary:*** "In the February number of the North American Homeopathic Journal, we find an article entitled *'On fatty diseases of the heart,'* by Dr. Peters. This article is an importation, in condensed form, from British soil, together with all of the allopathic absurdities and crudities with which the original composition is tainted. Under the head of *'Diet,'* for instance, the patient is advised to use pepper, mustard, salt and Worcester sauce, in order to aid digestion. This is a good old English and universally recommended allopathic fashion, recommended by Dr. Chambers, and, upon his authority, by his American imitator, Dr. Peters. We do not object to usages like these, but how does such treatment agree with the use of homeopathic doses? How do these quantities of pepper, mustard, salt, and Worcester sauce agree with the *nux vomica* which Dr. Peters prescribes as an accompaniment to these condiments? Is the reader to understand that the nux is to be taken in teaspoonful doses stirred in a mixture of pepper, mustard, salt and Worcester sauce? This is a species of homeopathy which may be acceptable to the most inveterate advocate of allopathy, but which cannot but be rejected by all the thoughtful and enlightened friends of our cause. Spirit of Hahnemann!..." Address: M.D.

899. Duncan (John) & Sons. 1856. Among the various condiments offered to the public as a zest for Soups, Meats, Game, &c.... (Ad). *Hartford Daily Courant* (*Connecticut*). April 3. p. 2.

• ***Summary:*** "... helping digestion and promoting the general health, Lee [sic, Lea] & Perrins' Worcestershire Sauce stands unequaled. The testimony of medical men in Europe and America attest to its virtues. Since the introduction of this sauce into the United States by Messrs. John Duncan & Sons of New York some fifteen years since [i.e., about 1841], the demand has become so large and its use so general, that it is now considered an 'indispensable' on the Breakfast, Luncheon, Dinner and Supper tables."

900. Duncan (John) & Sons. 1856. The only medal awarded by the New York Exhibition to the English or foreign sauce manufacturers... (Ad). *Hartford Daily Courant* (*Connecticut*). April 25. p. 2.

• ***Summary:*** "... has been obtained, amongst numerous competitors, by Lea and Perrins, for their Worcestershire Sauce, whereby further testimony is afforded of its being the best sauce extant.

"The celebrity of this sauce has extended to every

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quarter of the globe....

This also appeared in the July 12 issue (p. 2) of this newspaper.

Note: The text of this long ad is almost identical to the following earlier ad: Lea and Perrins. 1854. "The only medal awarded by the Jury of the New York Exhibition to English or foreign sauce manufacturers..." *Times* (London). March 30. p. 11, col. 1. The ending however reads: "Sole agents for the United States, John Duncan & Sons, 405 Broadway, New York." Address: 405 Broadway, New York.

901. *Dublin University Magazine* (*The*).1856. The fortunes of Glencore. 48:579-94. Nov. See p. 591.
• ***Summary:*** "Chapter XXVII–The villa at Sorrento." This story takes place in Sorrento, a small city in southern Italy. Stevins opened a bag brought by a messenger and "proceeded to litter the table and floor with a variety of strange and incongruous parcels... 'Yarmouth bloaters–Atkinson's cerulean paste for the eyebrows–Worcester sauce–trade returns for Tahiti–a set of shoemaking tools–eight bottles of Darby's pyloric corrector...'"

902. Dickens, Charles. 1856. The grocer's hot pickle's, Harvey's Sauce, Doctor Kitchener's Zest. *Household Words*. Vol. 13. p. 555. *
• ***Summary:*** Note: 19 volumes of this weekly periodical were published from 30 March 1850 to 28 May 1859 in London by Bradbury & Evans. Charles Dickens lived 1812-1870. Address: England.

903. Encyclopædia Britannica, or dictionary of arts, sciences, and general literature: Japan. 1856. Boston, Massachusetts: Little, Brown, & Co.; Chicago, London, Toronto...: Encyclopaedia Britannica, Inc. 820 p. 8th ed. See vol. 12.
• ***Summary:*** In volume 12, under Japan, the section on agriculture (p. 693) states: "Beans and peas of different kinds are cultivated in great abundance, particularly the bean *Dolichos soja*, from which *soy*, a kind of sauce, is prepared by boiling and fermentation, is made."

Note: This encyclopedia has no index. This is the only entry seen for the soybean; it is not mentioned under beans, China, or Indonesia, and there are no entries for Japan pea, soy*, or soya.

904. Faulkner, Alexander. 1856. Faulkner's dictionary of commercial terms: With their synonyms in various languages. Bombay, India: Printed at L.M. D'Souza's Press. iii + 158 + vii p. 18 cm. [1 ref]
• ***Summary:*** "Soy. A peculiar savoury sauce, made from the bean of the *Soja*, a species of *Dolichos*, growing in the Eastern parts of Asia. Genuine soy is well flavoured, thick, brown, and clear; and when shaken in a glass it should have a coat on the surface of a bright yellowish-brown colour. It is obtained from Canton [China]; but the best is exported from Japan, by way of Batavia [Dutch East Indies]. Waterston."

Also discusses: "Ground nuts.–Guz. (Guzerattee) [Gujarati], Hind [Hindi], *Bhoysing*. Groundnuts are now extensively cultivated in the Concans on account of the oil which they afford. They are occasionally exported to England and France.

"Ground nut oil.–Hind. *Bhoysing ka teil*. It is the oil obtained from ground-nuts by expression. It is largely exported from Bombay to France and England."

Note: The Concans or Co'ncan was an extensive maritime district of southwestern India in the province of Bejapore extending 220 miles along the shore from Damaun to Malabar, bounded on the west by the Indian Ocean and on the south by Canara and Sattara [Satara]. Between 16° and 20° north latitude. On today's map, it would be along the coast south of Bombay. A long range of mountains, named the Western Ghats, runs right along the shore of western India from the Gulf of Khambhat to near the southern tip of the continent (Cape of Comorin).

905. Green, Daniel S. 1856. Narrative of the expedition of an American squadron to the China Seas and Japan, performed in the years 1852, 1853, and 1854, under the command of Commodore M.C. Perry, United States Navy. Report upon the agriculture of Japan. *Senate Executive Document* No. 79. 33d Congress, 2nd Session. Vol. 1. p. 52; Vol. 2. p. 85. Also published as House of Representatives Executive Document No. 97. Same Congress, Session, and pages.
• ***Summary:*** Upon his return and at Commodore Perry's request, Dr. Daniel S. Green, surgeon of the expedition, wrote a short "Report upon the agriculture of Japan" from notes and from memory, hoping that it might afford some interest to American farmers. This document marked the introduction of Japanese products to American agriculture.

"Their chief grain is rice, of which they are said to produce the best in all Asia. They also make barley and wheat. The first is used for feeding the cattle; the other [wheat] is not much valued, and is chiefly used for cakes and soy [sauce]. This last is made by fermenting, under ground, wheat with a peculiar kind of bean and salt" (1:52).

"Of beans the Japanese have several sorts, as white and black, runners or climbers, and bush or snap beans; the black-eye or cow pea, and a peculiar hairy-podded bean, growing upon a branching stem, called commonly Japan pea; and also a diminutive one, not much larger than a lentil [probably azuki]. From one of these [Japan pea] the famous *soya* is made, a fermented condiment used for various dishes" (II:85).

Vol. I, p. 369 gives a list of articles received from the Japanese government, from Udono, 4th commissioner, including "1 box, 10 jars of soy."

Note 1. This is the earliest journal article (from an irregular serial) seen (Oct. 2001) that mentions soy.

Note 2. This is the earliest English-language document

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seen (Oct. 2006) that uses the term "black-eye" to refer to the cow pea.

Note 3. This document was published as a book in 1856 in London by Trubner & Co. (624 p.). Compiled by Francis Lister Hawks, the lead author is given as Matthew Calbraith Perry. Address: USA.

906. Hawks, Francis L. comp. 1856. Narrative of the expedition of an American squadron to the China Seas and Japan, performed in the years 1852, 1853, and 1854, under the command of Commodore M.C. Perry, United States Navy,... New York: D. Appleton and Co.; London: Trubner & Co. viii + 296 p. See p. 197, 248.

• ***Summary:*** Introduction (p. 66): "Their [the Japanese] chief grain is rice, of which they are said to produce the best in all Asia. They also make barley and wheat. The first is used for feeding the cattle; the other is not much valued, and is chiefly used for cakes and soy [sauce]. This last is made by fermenting, under ground, wheat with a peculiar kind of bean [soy bean] and salt."

Page 430: A list shows articles received from the Japanese government: "5th. From Udono, 4th commissioner–... 1 box, 10 jars of soy."

Page 443: "All formal business being now concluded to the mutual satisfaction of both parties, the Japanese commissioners invited the commodore and his officers to partake of an entertainment prepared for the auspicious occasion... When all were seated, the servitors brought in a rapid succession of courses, consisting chiefly of thick soups, or rather stews, in most of which fresh fish was a component part. These were served in small earthen bowls or cups, and were brought in upon lacquered stands, and placed, one before each guest, on the tables. Together with each dish was a supply of soy or some other condiment, while throughout there was an abundant quantity of saki–the Japanese national liquor–a sort of whisky distilled from rice. Various sweetened confections, and a multiplicity of cakes, were liberally interspersed among the other articles on the tables."

In describing the shops in Hakodadi [Hakodate] (p. 511): "The provision shops contain rice, wheat, barley, pulse, dried fish, seaweed, salt, sugar, saki, soy, charcoal, sweet potatoes, flour,... There is no public market in the town, as neither beef, pork, nor mutton are eaten, and very little poultry." Address: D.D., LL.D.

907. Kane, Elisha Kent. 1856. Arctic explorations: The second Grinnell expedition in search of Sir John Franklin, 1853, '54, '55. Vol. II. Philadelphia, Pennsylvania. 467 p. See p. 19. Illust.

• ***Summary:*** In the chapter titled "A relishing lunch," in the entry dated Jan. 17, 1855, we read (p. 19): McGary "has foraged out some raw cabbage and spiced it up with curry-powder,... This, with a piece of corn-bread,–no bad article either,–he wants me to share with him. True to my old-times habitude, I hasten to the cabbage,–cold roast-beef, Worcester sauce, a head of endive, and a bottle–not one drop less–of Preston ale, (I never drink any other.)" Address: M.D., U.S.N.

908. Siebold & Comp. 1856. Catalogue raisonné et prix-courant des plantes et graines du Japon cultivées dans l'établissement de von Siebold & Comp. à Leide [Annotated catalogue and current price list of plants and seeds from Japan cultivated at the firm of von Siebold & Co., Leiden, Netherlands]. Leyden [Netherlands] and Bonn: Henry & Cohen. 24 p. 23 cm. [1 ref. Fre]

• ***Summary:*** In the section titled "Seeds of garden and agricultural plants harvested in the fall of 1855 in Japan" is a one-line entry (p. 18) which reads: "28. Soja japonica Savi * à graines blanch, vert et noir. Usage: Pl. à Soy. Un petit paquet: Fr. 1." (Footnote: *"C'est la plante légumineuse, des graines de laquelle les Japonais préparent le Soy (*Sojû*), sauce bien connue aux gourmands.")

Translated into English: "28. Soja japonica Savi *: white, green, or black seeds. Usage: Plant can be used to make soy sauce. (Footnote 4: *"This is a leguminous plant, whose seeds the Japanese use to make Soy (*Shôyu*) sauce, which is well known to connoisseurs of fine food (*gourmands*).")

Note 1. This is the earliest seed catalog seen (Dec. 2003), worldwide, in which soybean seeds are offered for sale–although no prices are given. The original catalog is located at the Department of East Asian Studies, Ruhr-Universitaet Bochum, Universitaetsstrasse 150, 4630 Bochum 1, Germany.

Note 2. Siebold & Co., plant and seed company, was started in 1842 by Philipp Franz von Siebold with Blume and Rodhard; Siebold and Joseph G. Zuccarini first gave the soybean its present genus name, Glycine. They gave the wild soybean its present scientific name *Glycine soja*. M.M. Busk in 1841 wrote: "Dr. Von Siebold's Japanese museum [at Leyden] is said to be the finest in Europe..." For details on Siebold's life and work as a botanist see: Bretschneider (1882–*Botanicon Sinicum*, Part I, p. 126-27).

Note 3. This is the earliest French-language document seen (April 2012) that uses the term *Le Soy* (*Sojû*) to refer to soy sauce.

Note 4. First cited by Prof. Ted Hymowitz, Univ. of Illinois. Personal communication 1 Jan. 1997. Address: Leyden, Netherlands.

909. Smith, J. Jay. 1856. Editor's table: New and valuable trees and fruits. *Horticulturist, and Journal of Rural Art and Rural Taste* (*Albany, New York*) 11:330-31. [1 ref]

• ***Summary:*** "One of the most remarkable catalogs ever published has just appeared in Leyden [Netherlands]; it contains a priced list of the Japanese plants actually cultivated in the nursery of Siebold & Co., of that place"

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[Leyden].

"He also offers seeds of the Soja japonica, the real plant from which the sauce called Soy is prepared."

Note 1. Siebold & Co. was started by Philipp Franz von Siebold; he and Joseph G. Zuccarini first gave the soybean its present genus name, Glycine. They also gave the wild soybean its present scientific name *Glycine soja*. M.M. Busk in 1841 wrote: "Dr. Von Siebold's Japanese museum [at Leyden] is said to be the finest in Europe..." For details on Siebold's life and work as a botanist see: Bretschneider (1882–*Botanicon Sinicum*, Part I, p. 126-27).

Note 2. This is the earliest document seen (March 2002) stating that the soybean was being sold in a seed catalog.

Note 3. First cited by Prof. Ted Hymowitz, Univ. of Illinois. Personal communication 1 Jan. 1997.

To continue: "As is well known, the Dutch monopolize the intercourse of Europeans with Japan, the country most in climate like the British Isles, but resplendent with a vegetation infinitely richer and more varied. Camellia, Cephalotaxus, Cryptomeria, Aucuba, Chimonanthus, Clematis, and Pyrus Japonica, sufficiently indicate how beautiful and hardy is the flora of Japan, to say nothing of Weigela, Forsythia, and the whole race of Moutans. Availing themselves of their commercial privileges, the Dutch have sedulously occupied themselves with the acquisition of everything most worthy of introduction to Europe, and the result is already a total number of 3 or 400 species and varieties offered for sale by the firm mentioned above. Of so curious an assemblage, we are sure that a brief account will be interesting to all lovers of gardens. We shall, however, confine our remarks to what are represented to be hardy races."

These include conifers (4 species) and sycamores (2). "Fruit trees comprehend a very early apricot called *Armeniaca Mume* [later *Prunus mume*], whose early rose-colored flowers are extremely ornamental, while the fruit, owing to the firmness of the flesh, is particularly well adapted for preserving [as *umeboshi* in Japan]... Mention, moreover, is made of a Japanese variety of Peach." Also described are many small flowering trees and shrubs, and some climbing shrubs. "Finally there is a considerable number of herbaceous plants, among which are included several new kinds of *Funkia* and *Lilium*, a Burdock called *Lappa edulis*, the roots of which are eaten like Scorzonera; a couple of Irises; *Polygonatum japonicum* whose roots are a substitute for asparagus; a *Polygonum* called *Sieboldi*, recommended as a green crop for cattle food, as an excellent bee plant, &c. &c.; and the Chinese Yam, which M. Siebold calls *Dioscorea opposita*, and to the hardiness of which he fully testifies." Soja japonica is then mentioned.

"Some of these novelties have already been introduced into England, and are offered for sale by E.G. Henderson. Who will be the first to advertise these interesting articles in America?"

Note 4. This is the earliest English-language document seen (Dec. 2006) that refers to umeboshi salt plums, but it does not mention them specifically.

910. Stretton, Julia Cecelia. 1856. Margaret and her bridesmaids. 3 vols. London: Hurst and Blackett, Publishers. Successors to Henry Colburn. See Vol. 3, p. 275-76.
• ***Summary:*** "Mrs. Banks did all she intended, and welcomed dear Fred, very warmly. But she was disappointed in seeing him enjoy the feast she had prepared for him. He hardly tasted a mouthful of fish, he said it was so woolly; and he turned up his nose at the beefsteak–there was no Worcester sauce to it; and the scalloped oysters had no cayenne pepper in them." Address: Author.

911. Ure, Andrew. 1856. A dictionary of arts, manufactures, and mines; Containing a clear exposition of their principles and practice. Vol. 2. New York, NY: D. Appleton & Co. 998 p. See p. 694-95. 23 cm. [1 ref]
• ***Summary:*** The entry for SOY is identical to that in the 1842 American ed. The title page states: "Illustrated with nearly sixteen hundred engravings on wood. Reprinted entire from the last corrected and greatly enlarged English edition. In two volumes." Volume 1 was xiv + 1118 p. Ure was a physician, an M.D.

In 1863 a work titled "A Supplement to Ure's Dictionary of Arts, Manufactures, and Mines," edited by Robert Hunt, was published in New York by Appleton & Co. It contains no reference to soy [sauce]. Address: Upper Seymour St., London 18, England.

912. Williams, Samuel Wells. 1856. A tonic dictionary of the Chinese language in the Canton dialect. Canton, China: Printed at the office of the Chinese repository. xxxvi + 832 p. See p. 438, 511. 22 cm. [10 ref. Eng; chi]
• ***Summary:*** At the top of the title page, the title is written in Chinese (Cantonese) but printed in Roman letters: *Ying Wá Fan Wan Ts'ût Iu*. This book contains definitions and expansions of 7,850 characters; it focuses on those in general use. Soy-related characters include the following: Page 61–*Fu*. Corrupted, rotten; *tau fu* bean curd.

Page 438–*Shí*. Salted eatables, as beans, oysters, olives, which are afterwards dried and used as relishes; *tau shí* salted beans; *shí yau* soy [sauce]; *mín shí* salted flour and beans used in cooking; *lám shí* stoned and pickled olives; *tau shí kéung* salted beans and ginger–a relish" [like Hamanatto in Japan].

Note 1. This is the earliest English-language document seen (Nov. 2011) that uses the term *tau shí* or the term "salted beans" or the term "salted beans and ginger" to refer to fermented black soybeans.

Note 2. Concerning the term *mín shí* (min shi), Dr. H.T. Huang (expert on Chinese food history, June 2008 personal communication) says it is simply Cantonese for *mian shi*

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(pinyin; or in Wade Giles *mien shih*, characters #4503 + #5805). The characters are the same in Cantonese or in pinyin. The term is used only in Cantonese, where it often refers to "soy paste" or jiang / chiang (character #661). Dr. Huang has not seen the term used in classical texts or heard it in Mandarin or Fujian dialects.

Page 511–*Tau.* Pulse, peas, beans, legumes; *hung tau* red pulse [beans]; *ti tau* ground-nuts; *tau fu* bean curd; *tau fu fa* bean curd jelly [soymilk curds]; *tau fu kon* [pinyin: doufugan] bean curd cakes.

Page 533–*To.* A knife; a sword with one edge; *leung min to* a bean-curd knife.

Page 708–*Yun.* Liver, yellow; *tau fu yun* yellow bean curd cakes.

In the Preface, the author refers to ten earlier Chinese or Cantonese-English dictionaries and related works by Kanghi (*Kanghi Tsz T'ien*, which have been in use throughout the empire for nearly 150 years), Morrison (1827), Medhurst (1842-43), De Guines, Gonçalves, Callery, Klaproth, Bridgman (1841), Williams (1841), and Bonney (1854).

Note 3. This is the earliest English-language document seen (Feb. 2008) that uses the term "tau fu kon" or "bean curd cakes" to refer to tofu.

Note 4. This is the earliest English-language document seen (March 2001) that mentions *shí, tau shí,* or fermented black soybeans, which it calls "salted beans." This is also the earliest document seen (March 2001) concerning the etymology of fermented black soybeans.

Note 5. Note: This is the earliest document seen (Jan. 2012) that contains Cantonese romanization / transliteration. Address: Canton, China.

913. Williams, Samuel Wells. 1856. A Chinese commercial guide: Consisting of a collection of details and regulations respecting foreign trade with China... 4th ed., revised and enlarged. Canton: Printed at the Office of the Chinese Repository. viii + 376 p. Illust. 22 cm. *
• ***Summary:*** Samuel Wells Williams lived 1812-1884. Address: LL.D., Hongkong.

914. *Calcutta Review (The).*1857. Life in the North West [of India]. 28:1-23. March. See p. 17.
• ***Summary:*** "The tiffin consists of an awful 'devil' in which mustard, cayenne, Worcestershire sauce, West India pickle, and other irritating ingredients, are mixed. This awful compound is washed down with 'a cup' and some more brandy-pawnee."

915. *Blackwood's Edinburgh Magazine.*1857. Afoot. 81(498):434-49. April. See p. 445.
• ***Summary:*** "The nobleman who has magnanimously declined the immortality of associating his name with the Worcestershire sauce, how often, when a few drops of the precious condiment have given a relish to our dry chop or cold bone have we wished him all the pleasures which await on good digestion."

916. Turpin (Edward). 1857. Display ad: Choice liquors! *New Orleans Commercial Bulletin.* Oct. 2. p. 3, col. 4.
• ***Summary:*** "Worcestershire Sauce, Lea & Perrins.
"English Pickles, Crosse & Blackwell's."
Note: Turpin sells mostly liquors. Illustrations show several kegs or casks. Address: 129 Common st. [New Orleans].

917. Bowman, Anne. 1857. The common things of every-day life: A book of home wisdom for mothers and daughters. London and New York: G. Routledge. 183 p. See p. 45.
• ***Summary:*** In the section titled "Hashes" we read (p. 45): "Let it boil down to three-fourths of the quantity, then strain off the gravy, and flavour it with a little ketchup or Worcester sauce, put in the sliced meat, and make it hot over the fire, taking care that it does not boil, and serve it with sippets of toasted bread."
Note: Sippets are small sops of fried or toasted bread used to garnish broths, soups, gravy or meat (Glasse 1747). Address: Author.

918. Davis, John Francis (Sir). 1857. China: A general description of that empire and its inhabitants. New ed., revised and enlarged. 2 vols. London: John Murray. Vol. 1, xx + 480 p. See vol. 1, p. 364-65. Illust. Index. 20 cm.
• ***Summary:*** This 1857 edition is very similar to the 1836 and 1848 editions except: (1) It was published in London by John Murray. (2) Parts (unrelated to soy) have been revised and enlarged, and the type has been reset so that, for example, vol. 1 contains 480 pages and vol. 2 contains 428 pages; any particular passage is slightly different in its pagination. Thus, soy [sauce] is mentioned on pages 364 and 365 in this 1857 edition.
Also discusses: Mr. James Flint (p. 46-50). Oil of sesamum and of peanuts (p. 373).
Sir John Francis Davis lived 1795-1890. Address: Bart. [Baronet], K.C.B. [knight commander of the Order of the Bath], F.R.S., Hollywood, Gloucestershire [England]. Late Her Majesty's plenipotentiary in China, and Governor and Commander-in-Chief of the Colony of Hongkong.

919. Ellet, Elizabeth Fries. 1857. The practical housekeeper: A cyclopædia of domestic economy... Comprising five thousand practical receipts and maxims. Illustrated with five hundred wood engravings. Edited by Mrs. Ellet. New York, NY: Stringer and Townsend. 599 p. Illust. Index. 23 cm.
• ***Summary:*** Chapter XXVI, "Condiments," states (p. 135): "Soy [sauce] is obtained from the seed or fruit of an Indian plant, called *dolichos soja*, or *soya;* it is made like ketchup; it enters greatly into use in the variety of sauces that are made for the table, being of a very strong, sweet-bitter taste; it

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should be used in moderation in cookery."

The receipts [recipes] are numbered sequentially. Soy [sauce] or Worcestershire is used as an ingredient in the following receipts: 18. Gravy soup ("a large spoonful of soy and one of mushroom ketchup," p. 161-62). 61. Mock turtle (p. 172-73). 70. Hare soup ("a spoonful of soy or Harvey's sauce," p. 178). 104. Stock for fish soup ("If meant to be browned,... a good spoonful of mushroom ketchup or India soy [should] be added," p. 185). 110. Oyster soup ("add two spoonfuls of soy or any fish sauce," p. 186). 118. Lake and pond fish soup ("but if made solely with water, then use Chili vinegar, soy, mushroom ketchup, or any of the savoury sauces," p. 188). 190. Marinade (Cut large fish into steaks. Then, instead of wine or cider, "a quart of table-beer, a glass of soy, one of essence of anchovies, and one of ketchup, may be used," p. 189-90). 133. To collop halibut ("a spoonful of soy or fish sauce," p. 192).

153. To cook trout ("eat with salt and lemon-juice, or with shrimp or lobster sauce; or a dash of Worcestershire or Harvey sauce; though I think these bad taste." p. 195-96). 254. For all sorts of fish ("Take a spoonful of vinegar, one of Indian soy, the same of mushroom ketchup and Harvey's sauce, with a little cayenne. Add three large spoonfuls of melted butter; stir all well and heat it over the fire," p. 214). 256. Brown sauce ("simmer it in a glass of port wine, with a tablespoonful of soy and walnut ketchup," p. 215). 291. Epicurean sauce ("Indian soy, two ounces; walnut and mushroom ketchup, of each eight ounces; port wine, two ounces," p. 222).

292. Carrack or Indian sauce for cold meat ("Two heads of garlic sliced, five spoonfuls of soy, five spoonfuls of mushroom ketchup, eight spoonfuls of walnut pickle, fifteen anchovies, or five spoonfuls of essence of anchovies, three spoonfuls of mango pickle, one quart of vinegar–mix in a bottle and set in the chimney corner; shake daily for a month," p. 222).

313. Sauce, Harvey ("Chop twelve anchovies, bone and all, very small, with one ounce of cayenne pepper, six spoonfuls of soy, six ditto of good walnut pickle, three heads of garlic chopped not very small, a quarter of an ounce of cochineal, two heads of shalots [shallots] chopped rather large, one gallon of vinegar; let it stand fourteen days, stir it well twice or thrice every day, then pass it through a jelly bag, and repeat this till it is quite clear; then bottle it, and tie a bladder over the cork." p. 225-26).

398. A l'espagnole (or Spanish sauce) ("If it wants flavor, add soy," p. 238). 396. Carachi [a sauce] ("three tablespoonfuls of soy, three of mushroom ketchup, three of walnut pickle, six anchovies dissolved, two or three spoonfuls of mangoe or India pickle liquor, and a pint of the best vinegar, with sufficient cochineal to color," p. 239). 459. Rump of beef stew ("a spoonful or soy and Oude sauce," p. 252). 500. To stew tongue ("season with soy, mushroom ketchup," p. 262). 704. Haricot of mutton (p. 302). 977. Turkey pulled and grilled (or devilled, p. 360).

1153. Camp vinegar ("two teaspoonfuls or real soy, two of walnut ketchup," p. 400-01). 1166. Walnut ketchup (Irish mode, p. 403).

1172. Artificial sauces for fish ("Those most commonly used are soy and anchovy, merely mixed from the cruets into melted butter by each individual of the company... The savory store sauces for fish, as prepared and sold in the shops, are all to a certain degree agreeable to some palates, but anchovy and soy seem the prevailing sort for fish," p. 405). 1173. Store sauces (No. 1. An excellent and not common Pickle, called 'Salade,' {"Pour in a wine-glass of soy"}, Quin's sauce [contains no soy], p. 405-06).

Mackenzie's Perigord pie ("Worcester sauce, good with savory pies, is said to be made on a basic of good walnut ketchup, with additional spices," p. 418-19). Note 1. Perigord is a former province of France, which corresponds roughly to the current Dordogne département in the Aquitaine region of southwest France.

Note 2. Elizabeth Fries Ellet lived 1818-1877. This comprehensive cookbook "captures American culinary arts just prior to the Civil War."

Note 3. This is the earliest English-language document seen (Feb. 2007) that uses word "soya" to refer to the soybean plant; previously it has been used only to refer to soy sauce.

Note 4. This cookbook contains many recipes, especially meat, poultry, and fish recipes, and desserts, credited to Alexis Benoît Soyer (lived 1810-1858). Born in France, Soyer moved in 1830 to London, where he became a famous chef to fashionable society and the author of many popular cookery books. He subsequently worked for Irish famine relief and with the British army in the Crimea. In 1849 he developed a table-top cooking range (*The Magic Stove*, Soyer / Soyer's stove), and in 1857 his Field stove. Soyer died in London in 1858, at age 48.

920. Ockside, Knight Russ; Doesticks, Q.K. Philander. 1857. The history and records of the Elephant Club compiled from authentic documents now in possession of the Zoölogical Society. New York, NY: Livermore & Rudd. 321 p. See p. 123. Illust.

• ***Summary:*** This novel is actually by Edward Fitch Underhill (1830-1898). "Dennis had somewhere heard of ice cream," but when it arrived he did not know how to season it. Perceiving "that other people made use of bottles from the caster stand... He began with pepper, followed it with vinegar, kept on to the Cayenne, added a good quantity of oil, drowned it with ketchup, and then with unusual impartiality, not wishing to neglect any of the bottles, he poured Worcestershire sauce over the whole." Address: 1. M.D.; 2. P.B.

921. Timbs, John. 1857. Popular errors: Explained and

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illustrated. A book for old and young. An entirely new edition. London: Kent and Co. (Late Bogue). viii + 376 p. Index. 17 cm.
• ***Summary:*** In the chapter titled "Errors in science, art, and inventions," the section titled "Soy from black-beetles" (p. 80) is identical to that in the 1841 edition.

Note: At the head of the title page is written: "Things not generally known." John Timbs lived 1801-1875. An 1860 edition, containing only 247 pages, was also published in London by Kent. Address: F.S.A. [Fellow of the Society of Arts/Antiquaries], Author of Curiosities of London,... [England].

922. *Knickerbocker: Or, New-York Monthly Magazine.*1858. Editor's table. 51(1):84-110. Jan. See p. 109.
• ***Summary:*** "'Madame, your coffee, mustard, apples, Worcestershire sauce, and Oolong tea, went by the two o'clock train.'"

923. *Littell's Living Age.*1858. A Chinese state dinner. No. 722. p. 817-19. March 27. [1 ref]
• ***Summary:*** From The Correspondence of The Times: "The same hands that brought them in scattered also an entourage of still smaller basins. These are sauces of every flavor and strength from crushed fresh chillies to simple soy [sauce]. Watch the Chinaman. How cunningly he compounds."

924. Lea and Perrins. 1858. Celebrated Worcester Sauce (Ad). *Age (The) (Melbourne, Australia).* April 27. p. 3, col. 2.
• ***Summary:*** "Pronounced by connoisseurs to be the Only Good Sauce, and applicable to every variety of dish.

"Extract of a letter from a medical gentleman at Madras [India], to his brother at Worcester, May, 1851. 'Tell Lea & Perrins that their Sauce is highly esteemed in India, and is, in my opinion, the most palatable as well as the most wholesome sauce that is made.'

"Extensive frauds. Lea and Perrins have discovered that several of the Foreign Markets have been supplied with spurious imitations of their 'Worcestershire Sauce,' the labels of which closely resemble those of the Genuine Sauce, and in one or more instances with the names of L. and P. forged; they have deemed it their duty to caution the public, and request purchasers to see that the name Lea & Perrins are upon the Wrapper, Label, Stopper, and Bottle.

"L. & P. further give notice, that they will proceed against any one who may infringe upon their right, either by manufacturing or vending such imitations, and have instructed their correspondents in the various parts of the world, to advise them of such infringements.

"Wholesale and for Exportation by the proprietors Lea and Perrins, Worcester, England; Crosse and Blackwell, and other Oilmen and Merchants, London.

Note: This is the earliest document seen (Feb. 2012) that contains the words "Extensive frauds" or the words "spurious imitations" in connection with Worcestershire sauce. Address: [Worcester, England].

925. Duncan (John) & Sons. 1858. "The only good sauce" (Ad). *New York Times.* May 22. p. 8.
• ***Summary:*** "So pronounced by gentlemen of acknowledged *goût* [taste], prepared by Messrs. Lea & Perrins, under the name 'Lea & Perrins' Worcestershire Sauce,' and suitable for soups, fish, meats, game, gravies, curries, &c., imparting a most exquisite flavor, zest and piquancy. For sale by grocers and druggists generally. Beware of imitations." Address: Sole agents for the proprietors, 405 Broadway [New York City].

926. Harrington (W.M.) & Co. 1858. Spring supplies–1858 (Ad). *British Colonist (Halifax, Nova Scotia, Canada).* June 15. p. 1.
• ***Summary:*** "The Subscribers have completed their stock, ex White Star, London, George Bradford, Liverpool, and Roseneath, Glasgow, consisting of–English Pickles and Sauces, Anchovy Paste,... Bengal Chutney, India Soy [sauce], Sallad Oil,..."

927. *Colburn's United Service Magazine (and Naval and Military Journal).*1858. The Karlee Caves and notices of Bombay. Part II. July. p. 419-24.
• ***Summary:*** A British party is traveling near Bombay, India. On page 423 we read: "We were often amused with sundry visits from borahs, or native pedlars [peddlers], who sell us anything we ask for." There follows a bargaining session. Page 424: "We pay him eight annas, which is equivalent to a shilling... We now inspect both baskets, and make the old fellow turn out everything–pomade, jam, pickles, Warren's blacking, dress shirts, boot hooks, hair oil, metal teapots, bridles and currycombs, lead pencils, China silk handkerchiefs, and Worcestershire sauce."

Note: By July 1858 Worcestershire sauce is being sold by pedlars in India.

928. *New York Times.*1858. Outfit for the woods... (Letter to the editor). Aug. 13. p. 2.
• ***Summary:*** "Round Lake, Bartlett's, Tuesday, July 13, 1858. Dear R.: We are finally off for a camping time... The outfit Martin gave us rather surprised me... twenty-five pounds of pork, the same quantity of Indian meal [cornmeal] and wheat flour, bread and biscuits, soda and cream of tartar, West India and maple sugar, Worcestershire sauce and current [currant] jelly, tea and chocolate were stowed away together, filling a champagne-basket full."

929. Perry, Matthew Calbraith. 1858. Japan opened: Compiled chiefly from the narrative of the American Expedition to Japan in the years 1852-3-4. London: The Religious Tract Society. viii + 296 p. See p. 197, 248.

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• ***Summary:*** This book is an abbreviated version of: Hawks, Francis L. 1856. *Narrative of the Expedition of an American Squadron to the China Seas and Japan, Performed in the Years 1852, 1853, and 1854, under the command of Commodore M.C. Perry, United States Navy,...* New York: D. Appleton and Co.; London: Trubner & Co. viii + 296 p.

"Soy" sauce is mentioned on pages 197 and 248.

930. Simmonds, Peter Lund. 1858. A dictionary of trade products, commercial, manufacturing, and technical terms: with a definition of the moneys, weights, and measures of all countries, reduced to the British standard. London: G. Routledge & Co. viii + 422 p. 18 cm.

• ***Summary:*** Two entries are related to the soybean: "Mico, mijo [miso], a vegetable butter or solid oil, made from *Soja hispida*, in Japan."

"Soy, a sauce or flavoring originally made in the East; and said to be produced from a species of *Dolichos* bean." Note: the author is apparently unaware that the sauce is made from soybeans.

The Preface begins: "The present is especially a practical, commercial and industrial age: newspapers, lecturers, popular authors, all lend their efforts towards the diffusion of sound and useful knowledge among the masses; and the commercial and industrial element has become the leading feature of instruction."

Also discusses: Almond oil, almonds, amande, arachis oil ("generally known in commerce as nut oil"), catsup (non-soy: "Catsup, Ketchup, a seasoning or sauce for meat, made of mushrooms, tomatoes, walnuts, or other vegetable substances), earth-nut (see ground-nut; in America called pea-nut), flax, flax-seed, gingelie (Indian name for *Sesamum orientale* or teel seed), gluten, glutinous, ground-nuts (from which oil is expressed), hemp (a fibre), hemp-seed (from which oil is expressed), ketchup (see catsup), lima-bean ("the *Phaseolus limensis*, an esteemed kind of pulse cultivated in the tropics; the perennial kidney-bean, *P. perennis*"), linseed, linseed-meal, linseed-oil, oil (fixed or fat oils vs. volatile or essential oils; solid fats vs. fluid fixed oils), oil-cake ("the marc or refuse after oil is pressed from flax-seed, rape-seed, coconut pulp, &c..."), pea-nut (an American name for the ground-nut), sesame (a plant from which oil is expressed; in India called Gingely, Gingelie, teel or til), siritch (Arab name for sesame oil), soya (see sherbet).

Note 1. This is the earliest English-language document seen (Jan. 2009) that gives "Phaseolus limensis" as the scientific name of the lima bean.

Note 2. Peter L. Simmonds lived 1814-1897. This book is dedicated to Dr. Lyon Playfair, C.B., F.R.S., President of the Chemical Society, etc. Address: F.R.G.S., F.S.S., author, 8 Winchester St., Pimlico [southwest London, England].

931. Dagregister gehouden door de Nederlandse Commissaris in Japan vanaf 17 augustus 1658 tot februari 1859 [Journal with a shipment register by the Director of The Netherlands in Japan from 17 Aug. 1658 to 16 Feb. 1859]. 1859. Deshima, Japan. Jan. 4. Unpublished manuscript. [Dut]

• ***Summary:*** (Freight carried by other ships). Departure of the American clipper *Ann* with captain "Kanto," sailing to Shanghai, China, [from Japan]. Her cargo includes 5,000 piculs pit coal, 100 barrels rapeseed oil, 100 piculs camphor, 12 barrels soy [sauce] (*soja*), plus lacquerware and porcelain.

Bibliographic reference in Dutch: NA, NFJ 1621, dagregister (4-1-1859). On microfilm.

Location: Nationaal Archief, Den Haag, De Archieven van de Nederlandse Factorij Japan (NFJ); toegangsnummer 1.04.21; inventaris nummer 1621 [National Archives, Prins Wilhem Alexanderhof 20, The Hague. www.nationaalarchief.nl. The Archives of the Dutch Factory in Japan (NFJ); access number 1.04.21; record number 1621. The pages are not numbered].

Note: A clipper is a fast sailing ship, especially one with long, slender lines, an overhanging bow, tall masts, and a large sail area. Address: Deshima, Nagasaki, Kyushu, Japan.

932. Duncan (John) & Sons. 1859. Captains of merchant ships (Ad). *New York Times*. April 1. p. 5.

• ***Summary:*** "Be particular that the steward has provided a supply of 'Lea & Perrins' Worcestershire Sauce.' Sold by all respectable grocers and Fruiterers." Address: Sole agents, No. 405 Broadway [New York City].

933. *New-York Daily Tribune*.1859. Baring Brothers & Co.'s circular. Sept. 2. p. 7.

• ***Summary:*** "London, Friday, Aug. 19, 1859–5 p.m. Our Colonial and Foreign Produce markets continue very quiet, and prices generally are without material alteration."

"Drugs–262 cases Calcutta 30 casks Bombay Castor Oil chiefly sold,... 100 kegs Japan Soy [sauce] bought in at 2*l*."

934. Chalmers, John. 1859. An English and Cantonese pocket-dictionary, for the use of those who wish to learn the spoken language of Canton Province. Hongkong: Printed at the London Missionary Society's Press. [ii] + 159 p. See p. 131. 19 cm. [Eng; Chi]

• ***Summary:*** Under "Soy" (noun, p. 131) are the Chinese characters and the Cantonese term for soy sauce, *shi-yau*, with tones shown.

Note 1. *Shi-yau* is, more precisely, "soy nugget sauce."

Under "Bean" (p. 11) is the Chinese character *tau*.

At the top of the title page are four large, bold characters: *Ying Yüeh Tzu Tien*. Address: M.A.

935. Cornwallis, Kinahan. 1859. Two journeys to Japan, 1856-7. 2 vols. London: Thomas C. Newby. Vol. 1, vii + 340 p.; Vol. 2, 340 p. Illust. No index. 19 cm. Facsimile edition reprinted in 2002 by Ganesha Publishing (London) and

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Edition Synapse (Tokyo). Series: Japan in English, Vols. 4-5.
• ***Summary:*** This book appeared five years after the Perry Expedition to Japan captured the interest of the western world. Cornwallis, a young British writer, took advantage of this interest by writing this book–which was later exposed as a forgery (See: Yamigawa, Joseph K. 1941. "Cornwallis Account of Japan a Forgery and its exposure. *Monumenta Nipponica* 4(1):124-32. Jan.). He drew his material partly from the numerous authentic books about Japan already widely available, and partly from his imagination.

Cornwallis said that he first arrived in Japan in July 1856 on an American sloop of war which landed in the harbor of Shimoda. He immediately becomes enchanted by everything about Japan, and depicts it as an almost ideal place.

During a visit to Simoda [Shimoda], he had lunch at the temple of the Russians: "After we had discussed to our satisfaction the birds and the fishes, the rice and the soya, the latter the finest fish sauce in the world, we wound up by eating fruit and drinking saki [sake],..." (p. 34).

The next morning, on board ship after the usual Japanese breakfast, a Russian came on board. "He laughed at our complaints [about the food, and said] that we had better, for our own peace, make up our minds to rest content with a good supply of rice, soya, saki, and a stray chicken or fish now and then, so long as we remained at our present anchorage" (p. 35).

His 2nd journey to Japan supposedly took place in Aug. 1857. This time he was on board an American steam-frigate that went from Shanghae [Shanghai, China], to the "Japanese island of Lew-kew" [in the Ryukyu Islands, also spelled Luchu or Loochoo; a chain of islands extending 600 miles from Taiwan to Kyushu, Japan].

Part / Volume II contains a long history of European exploration of and visits to Japan. With his host, Mr. Noskotoska, he visits Nagasaki and the old Dutch trading post there he calls "Desima" [Dejima, Deshima]. During a visit in Nagasaki to the Noskotsuka home, where he is fascinated by the women (who do not feel embarrassed to be seen naked after bathing) and treated like a king, he was invited to "the mid-day repast" at home. "Here were four small lacquered tables, on each of which lay the accustomed ivory chopstick, the small porcelain cup for tea, and the larger one of lacquer-work for saki [sake, saké], the small glass cruet of soy [sauce], the porcelain spoon, and the silver fork" (p. 105). Address: [England].

936. Majendie, Vivian Dering. 1859. Up among the Pandies: or, A year's service in India. London and New York: Routledge, Warne, and Routledge. xii + 360 p. See Chap. 11, p. 130. 19 cm.
• ***Summary:*** A British lieutenant describes his military service in colonial British India, putting down mutinies, etc. "... we had partaken of a good breakfast, and were in a state of profuse perspiration from hot tea and military ardour, which, conjointly with "Worcestershire sauce" and curry, was burning within us, our existence, which not half an hour ago looked blank and worthless, now assumed such a delightful *couleur de rose*, that...." we looked forward to our march tomorrow towards Lucknow.

Note: The "Pandies" (after a sepoy named Manghal Pandi) were those who started the Indian Mutiny, the great revolt of the Bengal native army in 1857, which led to the transference of Indian government from the East India company to the crown in 1858. Address: Sir, Lieut., Royal Artillery.

937. Oliphant, Laurence. 1859. Narrative of the Earl of Elgin's mission to China and Japan in the years 1857, '58, '59. 2 vols. Edinburgh and London: William Blackwood and Sons. xiv + 492 p. Illust. (coloured lithographs). Map.
• ***Summary:*** Page 60: In Nagasaki, they visit a tea-garden high on a hill above the city. "We have long since taken off our shoes, and now squat in a circle on the floor, and gaze with curiosity, not unmixed with alarm, at the display before us. There is raw fish thinly sliced, and salted ginger; there are prawns piled up with a substance which in taste and appearance very much resembles toffy; there are pickled eggs and rock-leeches, and pieces of gristle belonging to animals unknown, to be eaten with soy [sauce];... but still the experiment is hazardous, and we are relieved at the sight of a bowl of rice as a safe *piece de resistance*."

Pages 67-68: In Macao, at a Chinese restaurant, the author "managed, by the aid of chopsticks, to make a very satisfactory repast off eggs a year old preserved in clay, sharks' fins and radishes pared and boiled into a thick soup, *bêche de mer* or sea-slugs, shrimps made into a paste with sea-chestnuts, bamboo roots, and garlic, rendered piquant by the addition of soy [sauce] and sundry other pickles and condiments, and washed down with warm samshu in minute cups. Dishes and plates were all on the smallest possible scale, and pieces of square brown paper served the purpose of napkins."

Pages 398-99. The author found it very difficult to obtain any statistics about Tientsin or its trade. He finally found a respectable, local Chinese merchant. "The theme upon which he dwelt most feelingly was the excessive poverty of the city of his abode. It exported absolutely nothing, he averred... Among its imports from the south are dried fruits, sugar, glass ware, camlets, woollens [woolens], opium, &c., in small quantities. Numerous cargoes of [soya] beans and bean-cakes are brought over from Neu-chwang [Newchwang] and the Manchurian coast."

In Appendix II a table (p. 491) shows "Trade returns between Shanghai and Japan." Imports from Japan from 1st Jan. to 30th June 1859. Isinglass (Kanting) 1,551 peculs [piculs]. Seaweed, all kinds, 61,561 peculs. Soy [sauce] 562 peculs. Address: Private secretary to Lord Elgin.

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938. Steinmetz, Andrew. 1859. Japan and her people. London and New York: Routledge, Warnes, and Routledge. xv + 447 p. Illust. No index. 22 cm. 2nd ed. 1860. Facsimile edition reprinted in 1973 by Scholarly Resources, Inc. (Wilmington, Delaware). Reprinted again in 2002 by Ganesha Publishing (London) and Edition Synapse (Tokyo). Series: Japan in English, Vol. 1. [30 ref]

• ***Summary:*** The author of this book has apparently not been to Japan; he compiled it from more than 30 major works on Japan (see p. xi-xii). The book is divided into two parts and 7 chapters. The 35 old illustrations add to the color of the book.

In Chapter 3, "Palaces, temples, castles, towns, houses, gardens, vehicles, etc." we read (p. 175): ";... all sorts of vegetables which the season affords, and innumerable other dishes peculiar to Japan, made of seeds and powdered roots, and dressed in many different ways. The common sauce for these and other dishes is soy mixed with saki."

In Chapter 6, "Social and domestic life," is a long quotation from Kaempfer (1727) describing the great yearly festival held on the third day of the third month [*hina matsuri*, dolls' festival]. "... cakes made of mugwort and rice, which they call *futsumotzi* [*sic*, *kusa mochi*], that is, mugwort cakes, are prepared after the following manner:–The mugwort leaves [are finally] "reduced to powder, and mixed with boiled rice and *adsuki*, or red beans, coarsely powdered, and so baked into cakes" (p. 273).

"A Japanese feast usually consists of seven or eight courses... As whets, servants of both sexes, from time to time, hand round soy [sauce], other sauces, pickled or salted ginger, and small, nicely-cut morsels of salted fish, which are all eaten with Chinese chopsticks" (p. 274-75). Andrew Steinmetz lived 1816-1877. Address: Esq., of the Middle Temple, Barrister-at-Law [England].

939. Timbs, John. 1859. Hints for the table: or, The economy of good living. London: Kent and Co. x + 184 p. See p. 80-81, 93. Illust. No index.

• ***Summary:*** The chapter on "Sauces and Gravies" states (p. 80-81): "Nine-tenths of the ketchup sold by grocer-oilmen is a vile compound of liver and the roe of fish, seasoned with pepper and other condiments. If you wish the article genuine [apparently mushroom ketchup], procure the mushrooms, and make it yourself. "India Soy is difficult to purchase genuine; it should be made from an Indian plant called Dolichos soja, or soya; but treacle and salt are the basis of the soy ordinarily sold.

"'Many persons,' observes Mr. Dobell, in his *Travels in China*, 'have thought that gravy was used in preparing soy; but this appears not to be the case, the composition being entirely a vegetable one, and made from beans. Japanese soy is much esteemed in China; probably it is made with a particular bean.* In China the consumption of soy is enormous: neither rich nor poor can dine, breakfast, or sup without soy; it is the sauce for all sorts of food, and may be described as indispensable at a Chinese repast.'" (Footnote: *"Now that Japan is open to our trade, we hope to receive Japan soy with greater certainty").

The chapter on "Salads" notes (p. 93): "The following are excellent salad ingredients: essence of anchovies, soy [sauce], sugar, truffles, flavoured vinegars;..."

Note: The name of the author, J. Timbs, does not appear on the title page.

940. Walsh, J.H. ed. 1859. The English cookery book: uniting a good style with economy, and adapted to all persons of every clime; containing many unpublished receipts in daily use by private families. Collected by a committee of ladies... London: G. Routledge and Co. vii + 375 p. Illust. Index.

• ***Summary:*** The term "Worcestershire sauce" appears on 11 pages in this book: Stewed beef steak ("If without them [carrots and turnips], the gravy must be flavoured with Worcestershire sauce and anchovy...." p. 116). To fry or broil rump or beef steaks ("... then add [to the gravy] a table-spoonful of ketchup (mushroom or walnut), a table-spoonful of Worcestershire sauce, and a little mixed pickle chopped up,..." p. 121). Haricot of mutton ("This will take three hours to stew. Add a little ketchup, or anchovy, or Worcestershire sauce to the gravy before serving." p. 124). Kidneys, fried ("When nearly done throw in some flour to thicken the gravy, which will be favoured by the addition of stock, or hot water flavoured with Worcestershire sauce and the juice of a lemon." p. 128).

Ragout breast of veal ("... strain the gravy through a sieve; skim off all the fat, and take as much of the liquor as is required, and thicken it with flour and butter, and flavour with lemon pickle or juice, walnut and mushroom ketchup, or Worcestershire sauce." p. 134-35). Veal cutlets ("The bone taken out of the fillet with part of the knuckle will boil down and make good stock, browning it in the usual way (see Gravies), and flavouring with a little mushroom ketchup and Worcestershire sauce;... p. 140-41). To fry pork (These "are best when fried in the French fashion, when, however, they require a made-gravy. When this is not at hand" add "a chopped onion and a tea-spoonful of mustard to the flour, and a table-spoonful of Worcestershire sauce or pickle to the water." p. 143). To stew a hare ("... before serving, thicken the gravy with flour and butter, or arrowroot, and add two table-spoonfuls of ketchup, or one with some Reading or Worcestershire sauce, and the juice of half a lemon." p. 152-53). Beef or mutton scalloped ("... adding some good broth or gravy, with some walnut ketchup and a little Worcestershire sauce poured upon it,... p. 161). Cold beef or mutton stewed with peas ("Simmer another hour and a half, then stir in a little Worcestershire sauce, and add flour and butter, with a little flour of mustard, to thicken it." p. 161). To stew carrots brown ("... cut each carrot into as many round

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balls as it will make; put them into a stewpan with a pint of gravy, flavoured with a little pepper, salt, mushroom ketchup, and Worcestershire sauce;..." p. 185). Veal pie ("... then pour in some gravy from the bones, with a little mushroom ketchup, and a very small quantity of Worcestershire sauce; cover with a short crust, or good puff paste, and bake." p. 206). Address: F.R.C.S., author of "A Manual of Domestic Economy," England.

941. Parker (A.J.). 1860. London Club Sauce (Ad). *New York Times*. Feb. 3. p. 8.
• ***Summary:*** "This unrivaled Sauce, manufactured by Parker Brothers, London, can be obtained of their agent in this City, A.C. Parker,... This article is superior to the Worcestershire Sauce and can be obtained at one-half the price."

Note: This ad also appeared on June 24, p. 8. Address: No. 15 Beekman-street [New York City].

942. *Irish Times and Daily Advertiser* (*Dublin*).1860. House of Commons: In committee on customs' acts. March 5. p. 3.
• ***Summary:*** "Mr. Chancellor of the Exchequer [Secretary of the Treasury]–To move the following resolutions:–Articles to be made free of Duty (not under Treaty)... Soy [sauce]; Spa Wine; Spelter or Zinc..."

943. Lea and Perrins. 1860. Classified ad: Sauces.–Connoisseurs have pronounced Lea and Perrins' Worcestershire Sauce... *Times* (*London*). May 14. p. 14, col. 5.
• ***Summary:*** "... one of the best additions to soup, fish, joints, and game. The large and increasing demand has caused unprincipled traders to manufacture a spurious article; but the genuine all bear Lea and Perrins' name on the bottle, label, and stopper. Sold by Crosse and Blackwell, London, and all respectable oilmen and grocers. Sole manufacturers, Lea and Perrins, Worcester." Address: [England].

944. Lea and Perrins. 1860. Sauces.–Connoisseurs have pronounced Lea and Perrins's Worcestershire Sauce one of the best... (Ad). *Observer* (*London*). July 8. p. 8.
• ***Summary:*** "... additions to soup, fish, joints, and game. The large and increasing demand has caused unprincipled traders to manufacture a spurious article; but the 'genuine' all bear Lea and Perrin's name on the bottle, label, and stopper. Sold by Crosse and Blackwell, London, and all respectable oilmen and grocers. Sole manufacturers, Lea and Perrins, Worcester."

Note: This is the earliest reference seen (Feb. 2012) to "Worcestershire sauce" in the *Observer* (London) or the *Manchester Guardian*, as they have been digitized by ProQuest. Address: Worcester, England.

945. *Gardener's Monthly*.1860. Questions and answers. 2(7):212. July.
• ***Summary:*** Page 212: "Lady or calavan pea–J.J.F.–The pea you send is the Japan pea, or *Soja hispida*, a popular bean with the Japanese, of which the celebrated Soy soup [sic, Soy sauce] is made."

Note: This is the earliest document seen (June 2008) that refers to the soybean as either the "Lady pea" or the "calavan pea."

946. Lea and Perrins. 1860. Classified ad: Notice.–Beware of imitations. *Times* (*London*). Aug. 4. p. 13, col. 4.
• ***Summary:*** "Lea and Perrins' Worcestershire Sauce is pronounced by connoisseurs to be the most agreeable addition to every variety of dish. See the names of Lea and Perrins on every label, bottle, and stopper. Sold by Messrs. Crosse and Blackwell, London, and by dealers in sauces generally. Sole manufacturers, Lea and Perrins, Worcester." Address: [England].

947. Lea and Perrins. 1860. Notice.–"Beware of imitations." Lea and Perrins' Worcestershire Sauce is pronounced by connoisseurs to be a most agreeable addition... (Ad). *Observer* (*London*). Aug. 5. p. 1.
• ***Summary:*** "... to every variety of dish. See the names of Lea and Perrins on every bottle, label, and stopper. Sold by Messrs. Crosse and Blackwell, London, and by dealers in sauces generally. Sole manufacturers: Lea and Perrins, Worcester." Address: Worcester, England.

948. Duncan (Jno.) & Sons. 1860. Ask for Lea & Perrins' Worcestershire Sauce (Ad). *New York Times*. Nov. 29. p. 6.
• ***Summary:*** "The most popular and economical condiment known; delicious in soup, gravy, with fish, hot or cold meats, game, &c. The great reputation of this Sauce in all parts of the world has induced many imitations under the name of Worcestershire Sauce. Purchasers desiring the *genuine* will observe the name of Lea & Perrins' upon *each* bottle and wrapper. For sale by all respectable Grocers and Fruiterers." Address: Sole agents, 405 Broadway [New York City].

949. Lennox, William Pitt. 1860. Pictures of sporting life and character. 2 vols. London: Hurst and Blackett, Publishers, successors to Henry Colburn. See Vol. II, p. 228. Illust.
• ***Summary:*** Using a tame decoy, one can "pass an agreeable hour or two, especially with the prospect of seeing the produce served up at dinner with the following sauce:–One glass of port wine, one tablespoon Worcestershire sauce, one ditto lemon juice, four grains of Cayenne pepper, and a shallot, to be scalded, strained, and added to the gravy of the bird." Address: Lord [England].

950. *Pasinomie: Collection des Lois, Decrets, Arretes et Reglements Generaux Qui Peuvent Invoques en Belgique* (*Brussels*).1860. Tarif: Désignation, droits d'entrée, assimilation [Tariff schedule]. 38:330. For 18 Dec. 1857. No.

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510. Reign of Leopold I. [Fre]
• ***Summary:*** There are three columns in this long (p. 329+) tariff schedule. However before explaining them we must explain that when No. 17 in the left column is paired with #12 in the right column (as they now are), they make no sense. So the two columns on this page are not properly aligned. In fact (as we can see from other tariff schedules published at about this time), No. 18 in the left column was intended to be paired with #12 in the right column; in this way they make perfect sense. The following explanation assumes that small change in alignment.

For the soy entry (p. 330) these are: (Col. 1, No. 18). Designation of merchandise: Grains / seeds not specifically subject to other tariffs. (2) Entry duty / tariff: Free (no duty or tariff). (3) Assimilations (*Assimilations*). These are assimilated into spices (*épiceries*): Cardamom, cumin, saffron, soy [sauce] (*le soja*), and vanilla.

Note 1. It is not clear how to translate *le soja*. Is it a grain or seed (the soybean) as described in column 1? If so, then what does that have to do with spices? Or is it a spice (soy sauce) as implied in column 3? Yet it is the only item in its group in column 3 that is not a seed. Looking at the broad historical context, it probably refers to soy sauce, which had probably been imported into Belgium (from the Netherlands) long before this time, whereas soybeans probably had not been. If our guess is correct, then soy sauce may be imported into Belgium duty-free.

Note 2. This is the earliest document seen (May 2006) concerning soy in connection with (but not yet in) Belgium. Address: Brussels, Belgium.

951. Schroeder, Georg. 1860. Handbuch für Zollbeamte und Steuerpflichtige: ein alphabetisch geordnetes Waarenverzeichniss,... [Handbook for customs officers and tax collectors: an alphabetical list of goods,...]. Cassel. 528 p. See p. 101. 8vo. [Ger; Eng]
• ***Summary:*** The entry for *Japanische Soja* (Japanese soy) states (p. 101): a very strong kind of Arrak or Branntwein from Japan [sic].

Note: This is the earliest German-language document seen (April 2012) that uses the term "Japanische Soja" to refer to soy sauce or to Japanese soy sauce.

The entry for *Soja, Soya, Soy* states (p. 218): An Indian liquid for the seasoning of foods. Address: Zoll-Inspektor.

952. Taylor, Charles. 1860. Five years in China: With some account of the Great Rebellion, and a description of St. Helena. New York, NY: Derby & Jackson; Nashville, Tennessee: J.B. McFerrin. xvi + 413 p. See p. 131-32. No index. 20 cm.
• ***Summary:*** Chapter 10, titled "What and how they eat," states: "The most common nuts are cocoa-nuts, walnuts, chestnuts, almonds, filberts, and ground-nuts, or, as they are variously called in different parts of this country [USA]–pea-nuts, ground-peas, goobers or pindars" (p. 131).

The Chinese: "Being very fond of highly-seasoned food, they use many condiments, sauces and catsups. One of these has a taste very similar to that of the celebrated 'Worcestershire sauce'" (p. 132).

Note: Interesting that the word "catsup" is used to describe Chinese soy sauce; the Chinese word may be something like *ket-siap*. Address: M.D. (Formerly [Methodist] missionary to China).

953. Wraxall, Lascelles. 1860. Camp life: or, Passages from the story of a contingent. London: Charles J. Skeet. xii + 307 p. No index.
• ***Summary:*** These are sketches from the Crimean war. Chapter 5 is devoted to military details. "I had just returned to my quarters, jaded with a long day's work, and had hardly completed the preparation for my dinner. These were simple enough in all conscience: for they consisted in uncorking a bottle of Worcestershire sauce, a condiment which entered into every culinary combination. I had, then, just dug a hole in the centre of the slab peas porridge, into which the beneficent liquid would be poured, when I was startled by a heavy tap at the door" (p. 45).

Note: The author's full name is Frederick Charles Lascelles Wraxall. Address: Author, Kensington, England.

954. Somerville (M.). 1861. Ex "Bosworth," from London. For sale at the city mart,... (Ad). *Daily Southern Cross (Auckland, New Zealand)*. March 12. p. 1.
• ***Summary:*** Items from Crosse & Blackwell being sold include "4 cases Lea and Perrin's Sauce" [Worcestershire]. Address: Auckland.

955. Sutton (F.). 1861. F. Sutton begs respectfully to inform his friends... he has greatly enlarged his premises and stock, which now comprises: (Ad). *Hawke's Bay Herald (New Zealand)*. July 6. p. 5.
• ***Summary:*** Items being sold include "Lea and Perrin's Sauce" [Worcestershire]. "Crosse and Blackwell's Sauce, assorted."

Note: A similar ad appeared in this newspaper on July 13, 20, 27, Aug. 6, 13, 20, 27, and Sept. 3. Address: Napier.

956. Debenham and Tewson (Messrs.). 1861. Sales by auction: Friday next.–Without reserve, to realize advances (Ad). *Times (London)*. Sept. 3. p. 12, col. 4.
• ***Summary:*** "... Mangold Wurtzel, and other Seed, Indian soy [sauce],..." Address: 80, Cheapside [London].

957. Duncan (John) & Sons. 1861. Lea & Perrins' celebrated Worcestershire Sauce (Ad). *Hartford Daily Courant (Connecticut)*. Sept. 3. p. 3.
• ***Summary:*** Extract of a letter from a medical gentleman at Madras [India] to his brother at Worcester. May, 1851. 'Tell

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Lea & Perrins that their Sauce is highly esteemed in India, and is, in my opinion, the most palatable as well as the most wholesome Sauce that is made.'

"Pronounced by connoisseurs to be the 'only good sauce' and applicable to every variety of dish.

"The above Sauce is not only the best and most popular condiment known, but the most economical, as a few drops in Soup, Gravy or with Fish, hot and cold Joints, Beef Steak, Game &c., impart an exquisite zest, which unprincipled Sauce manufacturers have in vain attempted to imitate.

"On the Breakfast, Luncheon, Dinner or Supper Table, a cruet containing 'Lea & Perrins' Worcestershire Sauce' is indispensable.

"To appreciate the excellent qualities of this delicious preparation, it is only necessary to purchase a small bottle of the *genuine*, of a respectable grocer or dealer, as many Hotel and Restaurant proprietors seldom place the pure Sauce before their guests, but substitute a genuine bottle filled with a spurious mixture.

"For sale by grocers and Fruiterers everywhere.

"John Duncan & Sons, Union Square and Fourteenth st., New York, Sole agents for the United States. A stock always in store. Also, orders received for direct shipment from England.

"Beware of Counterfeits and Imitations."

An illustration (line drawing) shows the bottle of sauce. This published ad is 4 inches tall by 2.5 inches wide.

Note: This is the earliest document seen (Feb. 2012) that mentions the word "cruet" (or "cruets"), in connection with Worcestershire sauce. However soy cruets and soy frames were being made in England as early as the 1770s (Bradbury 1912). Address: Union Square and 14th st., New York.

958. Bennett (Charles). 1861. Most important sale of a first-class stock of jewellery, watches, plate and plated ware (Ad). *Irish Times and Daily Advertiser* (*Dublin*). Nov. 4. p. 2.
• ***Summary:*** Items to be auctioned include: "Electro-plated ware of the newest designs, and suitable to the present style of entertaining, consisting of dessert stands,... butter coolers, sugar vases, spirit, cruet, egg, and soy frames; toast racks, knife trays, salt celars,..." Address: Auctioneer, 6, Upper Ormond-quay.

959. Duncan (Jno.) & Sons. 1861. A gentleman writes to Lea & Perrins thus: (Ad). *New York Times*. Nov. 29. p. 6.
• ***Summary:*** "'I have carried a bottle of your Worcestershire Sauce in a tour I have just completed through Spain and Portugal, and I believe I owe my present state of health to its use. Your Sauce is Stomachic, and I think medicinal. I can with truth say there is nothing in a traveller's baggage so essential to his comfort, at least in these countries, as your Sauce.' For sale by all respectable grocers and fruiterers." Address: Sole agents, Union-square, late No. 405 Broadway [New York City].

960. Pestonjee Jewanjee & Co. 1861. Classified ad: Fresh supplies!!! Just landed by the undersigned, at their General Depot,... *Bombay Times and Journal of Commerce* (*British India*). Dec. 25. p. 4, col. 3.7.
• ***Summary:*** Under "Crosse & Blackwell: Quality, flavour, and price. Preserved provisions." The section on "Sauces &c." lists: "Reading Sauce, Harvey's John Bull,... Essence of Anchovies, India Soy, King of Oude Sauce,... Lea and Perrin's Worcestershire Sauce, Mushroom Catsup, Walnut ditto,..." Address: No. 1, Military Square, Bombay.

961. Lockhart, William. 1861. The medical missionary in China: A narrative of twenty years' experience. London: Hurst and Blackett, Publishers. xi + 404 p. See p. 63-69. No index. 23 cm.
• ***Summary:*** The author, a Christian medical missionary in Shanghai (he went there with Dr. Medhurst in 1843), describes the daily life of people in China. Chapter 4, which is mainly about food and money, has a long section about "pulse" or "beans," however the soy bean is never mentioned by name.

"Large quantities of *pulse*, a species of round white or yellowish bean, are grown in the north of China, at Shan-tung and Chih-le [Shantung and Chili], and in the south of Mantchouria [Manchuria], the yearly produce of this article is enormous. Its exportation forms a large branch of commerce; and the carrying of the beans, oil, and cakes gives employment to many thousand junks, which bring down their cargoes to Shanghai, Ningpo, and other ports.

"These beans are used chiefly for making oil: the other uses of them are subordinate to this."

He describes how the beans are ground in two different types of stone mills, the latter 30 feet in diameter and pulled by an ox. They are then steamed in baskets, pressed in a long, horizontal wedge press, filtered through straw then cloth, and stored in large baskets "lined with a very tough thin paper glued to the inside of the basket by varnish, and then varnished over. The oil never exudes if the paper has been properly attached to the baskets, each of which will hold 100 pounds of oil, and is the shape of a large flat jar, with a narrow mouth." Note 1. This is the earliest English-language document seen (Nov. 2003) that mentions a "wedge press" in connection with soybeans. It is also the earliest such document seen written by Westerner.

"The bean-cake, or residue after expression of the oil, is largely used as manure, and is found to fatten the land and improve the crops. It is never eaten by cattle.

"*Soy* [sauce] is made from the same bean, which after being slightly boiled in water is placed in the open air, in large jars with basket tops, for the purpose of fermentation. The beans turn brown and soft, and become a brown pultaceous mass. After the soy has drained away or been expressed, it is strained and packed in small jars for sale. No

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use is made of the residue.

Note 2. "Pultaceous" means "having a consistency like that of porridge."

Note 3. This is the earliest English-language document seen (March 2007) that mentions the "residue" left over after making soy sauce.

"*Tau fu*, or pulse-curd, is made by steeping the beans in cold water, when being soft they are ground between two flat stones. A spindle fixed in the centre of the lower passes through the upper stone, in which a hole is made about halfway between the centre and the rim. Through this hole the beans are passed as the upper stone revolves, by means of a handle fixed in the side of its rim. When ground they pass out at the rim as a creamy liquid, which is placed in a vat to settle. The supernatant fluid is afterwards drawn off, and the curd placed on a suspended square of cloth to get rid of more of the liquid. It is then transferred to square wooden frames lined with cloth, and next into a bean press loaded with a large stone. The remaining liquid drains out, leaving behind a thick cake of solid curd, which is cut up into small squares. [Note 4. The writer fails to mention that a coagulant is added to transform the milk into curd.] The curd is also sold after it leaves the filter and before it is pressed, and in both forms is fried with a little oil, and eaten as relish with rice. Sometimes cakes of curd are exposed to the air to ferment, when they become brown and dry, turning partly into soy, and form a tasty combination, much relished by the Chinese, of curd and soy.

"The beans are also given to animals, especially sheep and goats, as we give them brown peas."

"The bean-oil is used for lamps, and also for cooking purposes. It is a pale, thin, clear oil, rather strong in smell, but not disagreeable (p. 69).

"The oil mills are very large establishments, and always at work. In some of them from fifty to sixty buffaloes are kept to perform the work at the stone wheels."

Note 5. This is the earliest document seen (Sept. 2001) concerning the use of soy bean oil in lamps for illumination or lighting.

Note 6. This is the earliest English-language document seen (Sept. 2006) that uses the term "bean-oil" to refer to soybean oil.

Note 7. This is the earliest document seen (July 2002) concerning the feeding of soybeans or soy products to goats. Address: F.R.C.S., F.R.G.S., of the London Missionary Society [England].

962. Smith, George. 1861. Ten weeks in Japan. London: Longman, Green, Longman and Roberts. xv + 459 p. Illust. Index. 23 cm. Facsimile edition reprinted in 2002 by Ganesha Publishing (London) and Edition Synapse (Tokyo). Series: Japan in English, Vol. 11. [20* ref]

• ***Summary:*** This is a very interesting book by a careful observer of Japanese culture. In 1860 he stayed mostly in Nagasaki, Yokuhama (Yokohama), and Yeddo (Edo, later Tokyo). Though he has long experience living as a Christian missionary and bishop in China and Hong Kong, he generally admires the Japanese, yet repeatedly calls them "pagans."

While walking among the shops in Nagasaki, he notes (p. 27): "Soon again we pass the spacious warehouses of the dealers in sauces, condiments and soys, where large jars lie filled with decoctions of pulse and rice, and are left to ferment and become mellow with exposure and age."

In the countryside around Yeddo he observed (p. 235): "The large quantities of rye grown in these parts were explained to us as being used in the manufacture of the celebrated Japanese soy; while rice is the ordinary material employed in making the universal spirituous beverage so often alluded to under the name of sakee" (saké, sake). Note: The word "sakee" appears in at least 19 places in this book.

"The secluded Chinese community who reside in Nagasaki compose a trading guild and factory, subjected for ages to all the past vexatious restrictions experienced by the Dutch." They generally number about 200 persons (p. 32).

The chapter on "Nagasaki" begins (p. 78-79): "The Chinese form no unimportant part of the community in Nagasaki and are regarded with much dislike by the Japanese. In ancient times there was a free intercourse and unrestricted commerce between the two countries. But the change produced by former European difficulties and civil wars in the policy of the Japanese government towards the Spaniards, Portuguese and Dutch, was extended also to the Chinese mercantile strangers. After the severe edicts against the Christian religion and the prohibition of Christian books, the Chinese were detected importing Roman Catholic publications, and incurred the heavy displeasure of the government. In the year A.D. 1688 they were forcibly confined to a small settlement on the edge of the harbour, and subjected to the same restraints as those endured by the Dutch in the neighbouring scene of their imprisonment in Desima (Deshima). In the year A.D. 1780 the Chinese trading guild was removed a couple of hundred yards further back from the harbour to a Budhist [Buddhist] monastery... Rigidly guarded and watched, the Chinese factory shared with the Dutch the humiliation and inconvenience of a common captivity." The Chinese guild is now confined to their factory in the southern suburb, where they are isolated by Japanese guards. "Formerly the Chinese were not allowed to walk into the city... At present they amount to about four or five hundred persons, their number being diminished or increased by the departure or return of their junks trading to Japan." At present, three Chinese junks are annually permitted to make a trading voyage to Japan.

Mr. von Siebold first came to Japan in 1823 and remained in the Dutch factory at Desima until 1830, "devoting himself to literary pursuits and scientific researches into the botany and natural history of the

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country." While studying the "history and geography of Japan, he purchased and published a native map of the empire. In the days of the old regime this audacious act was easily made to bear the appearance of constructive treason; and the colonel was... imprisoned for thirteen months in a solitary room at Desima, and finally banished from the Japanese empire. After an absence of nearly thirty years he returned eight months ago, and has resumed at the age of sixty-four his studies and investigations respecting the country in the hope of being able after three or four years to perfect his observations and on his return to Europe to publish the results of his lengthened researches for the benefit of the scientific world." He now has a lithographed map of Nagasaki, and believes the population is a little over 60,000 (p. 208-09).

A table shows that 35 ships with cargo and 20 in ballast (empty) arrived in Nagasaki during the last 6 months of 1859. During the same period there departed 43 ships with cargo and 9 in ballast. Much of the trade is with China; items include sea weed for jelly, sea slugs for soup, peas and beans (p. 227-28).

Along the Tokaido, near Kanagawa: "The usual crops of wheat, barley, bean, peas and small quantities of still ungathered rape-seed, prevailed..." (p. 271). Address: D.D., Bishop of Victoria, Hong Kong.

963. Tilley, Henry Arthur. 1861. Japan, the Amoor, and the Pacific: With notices of other places comprised in a voyage of circumnavigation in the Russian corvette "Rynda," in 1858-60. London: Smith, Elder and Co. xii + 405 p. Illust. No index. 22 cm. Facsimile edition reprinted in 2002 by Ganesha Publishing (London) and Edition Synapse (Tokyo). Series: Japan in English, Vol. 12.

• ***Summary:*** The section titled "Natural productions" (p. 93-95) states: "... the sauce called Soya, made from bean meal [sic] and salt, flavoured with herbs; different fermentations of rice known as saki [saké]; flax and a kind of nettle (*Urtica Japonica*) from which ropes are made;..."

"The chief food of the people is fish and rice, with eggs, vegetables, vermicelli, sea-weed, and pickled roots, cakes, and sweetmeats, to diversify the diet. Saki, tea, and sugar-water are the only drinks."

Japan is described (p. 56) as a "mysterious land so long a marvel to the rest of the civilized world."

The merchants and trading classes of Japan "are considered contemptible" [the lowest of the six classes] by higher authorities, government employees, and feudal retainers" (p. 61). The pariahs [outcasts] are all those whose business is with dead animals, in skinning them, &c. (p. 82).

Trade with foreign nations begins each year on July 1. Wax, camphor, and seaweed are exported in large quantities from Japan (p. 65).

"The Japanese belong to the Mongolian race, of which they may be considered the first class, as they are certainly superior to the Chinese, both morally and physically" (p. 83).

"Education is widely spread among the people, who are all able to read and write; the bonzes [Buddhist priests] being the chief instructors" (p. 89). Address: [Englishman].

964. Wang Shixiong. 1861. Suixiju yinshipu [Discourse on food and drink from the Random Rest Studio]. China. Passages on soy reprinted in H.T. Huang 2000, p. 319n, 324, 371-73. And in N. Wai, 1964, p. 92. [Chi]

• ***Summary:*** Wade-Giles reference: *Sui Hsi Chü Yin Shih P'u*, by Wang Shih-Hsiung. Qing dynasty.

The section on fermented tofu states: Firm tofu (*doufugan*) is difficult to digest. Children, the elderly, and sick people should not eat it. If you transform firm tofu into fermented tofu (*furu*) it will be good for sick people / patients; it gets better the longer it is aged. (Translated by H.T. Huang, PhD, April 2003).

H.T. Huang (2000, p. 319n, 653) states that the list of tofu products in this book (p. 63) is similar to that published about 11 years earlier (ca. 1850) in: *Hu Ya* (Lakeside elegance), by Wang Rizhen.

Huang (p. 324) states that this is the second earliest known Chinese document to mention pressed tofu sheets (*qianzhang* {W.-G. *ch'ien chang*} or *baiye* {W.-G. *pai yeh*}).

Huang (p. 371-73) states that, according to this book, the first batch of soy sauce, produced during the summer and harvested in the fall, was called *qiuyou* (W.-G. ch'iu yu) ("fall oil"). It is called for by this name in 62 recipes in the book. Huang adds that the term is almost never used today.

The book also describes an unusual use for wheat gluten: If one accidentally swallows a coin, roast some gluten without destroying its shape, grind well, mix with boiled water and drink. If the coin is caught in the throat, it will be coughed up. If it is in the stomach, it will be eliminated with the stool (Huang 2000, p. 501).

Huang (personal communication, 5 June 1993), notes that page 28 states: "*Mien-chin* is made by kneading wheat dough under water. It is cooling, disperses heat, mitigates thirst and dispels anxieties. But it is not easy to digest, and should be chewed well."

Wai (1964, p. 92) translates the section on fermented tofu: "Hardened tofu is difficult to digest, and is not good for children, old people, or patients. Sufu [fermented tofu], which is prepared from tofu and gets better the longer it is aged, is very good for patients." Wai concludes: "Therefore, we may presume that soybean cheese [fermented tofu] was sold long before the Ch'ing [Qing] dynasty." He then describes the ancient process. The cubes of tofu are inoculated with the fungus by arranging them on a large bamboo tray and covering them with rice straw (on which the fungus grows wild).

965. Williams, S. Wells. 1861. Notices of Chinese agriculture and its principal products. *Report of the Commissioner of*

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Patents. Agriculture p. 467-76. For the year 1860. See p. 474.

• ***Summary:*** "Agriculture has held a higher place in the estimation of the Chinese, in comparison with other pursuits, than among any nation of which we have definite knowledge... The fabled founder of agriculture, called Shin-nung [Shennong], *i.e.*, the Divine Husbandman, was likewise one of the five sovereigns, who are regarded as the founders of the black-haired race of China; he flourished during the fourth and fifth centuries after the deluge, and is now worshipped as one of the tutelary gods of the Empire. The ceremony of ploughing a field near Peking is performed every spring by the Emperor or his proxy" (p. 467).

Note 1. This is the 2nd earliest English-language document seen (June 2009) that mentions Shennong or the Divine Husbandman. Describing him as "The fabled founder of agriculture," indicates that he was a legendary / mythical rather than an historical figure.

"A great number of plants are grown in various parts of the country for the oil found in their seeds or nuts, which is consumed in cooking, burning, or in the arts, while the refuse cakes taken from the oil mills are returned to the ground as one of the best manures known. Oil is expressed for these purposes by simple pressure from the ground-nut (*Arachis*) throughout the Southern and Central Provinces, and the nut itself is baked for food." The Chinese also use rape oil, castor oil and the oil of the Sesamum, the Camellia sesanqua, and the oleifera (the latter two are called tea oil), and the croton *Jatropha curcas*.

"The list of leguminous and cruciferous plants cultivated in China is a long one... An emulgent [filtered or milked out] preparation of flour from the Dolichos bean, mixed with ground gypsum or tumeric [turmeric], and a touch of salt, called bean curd [tofu], accompanies every meal; the same materials, differently prepared, are sent abroad as Soy" (p. 474). Note 2. The author is referring here to the soy bean, tofu, and soy sauce. Address: Author of "The Middle Kingdom".

966. Lea & Perrins. 1862. Lea & Perrins celebrated Worcestershire Sauce (Ad). *Quebec Mercury* (*Canada*). Jan. 2. p. 1.

• ***Summary:*** "Pronounced by connoisseurs to be the 'only good sauce' and applicable to every variety of dish.

"Extract of a letter from a medical gentleman at Madras [India] to his brother at Worcester. May, 1851. 'Tell Lea & Perrins that their Sauce is highly esteemed in India, and is, in my opinion, the most palatable as well as the most wholesome Sauce that is made.'

"Extensive frauds. L. & P. having discovered that several of the Foreign Markets have been supplied with Spurious Imitations of the 'Worcestershire Sauce,' the labels of which closely resemble those of the Genuine Sauce, and in one or more instances the names of L. & P. forged, they have deemed it their duty to caution the public, and to request purchasers to see that the name of Lea & Perrins are upon the *Wrapper, Label, Stopper, and Bottle*.

"L. & P. further give notice, that they will proceed against any one who may infringe upon their right, either by manufacturing or vending such imitations, and have instructed their correspondents in the various parts of the world, to advise them of such infringements.

"Wholesale and for exportation by the Proprietors Lea & Perrins, Worcester, England; Crosse and Blackwell, and other Oilmen and Merchants, London.

"Quebec, Nov. 9, 1861.

A small illustration shows a bottle of Lea & Perrins' Worcestershire Sauce.

Note 1. This is the earliest document seen (Feb. 2010) concerning soybean products (Worcestershire sauce, whose main ingredient was soy sauce) in Québec. This document contains the earliest date seen for soybean products in Québec (May 1862); soybeans as such have not yet been reported.

Note 2. This is the earliest document seen (Feb. 2012) in which Lea & Perrins uses the term "will proceed against" to threaten a lawsuit.

Note 3. This ad appears about 20 times in this newspaper from 1862 to 1864.

967. Hassall, Arthur Hill. 1862. Food and its adulterations: Comprising the reports of the Analytical Sanitary Commission of *The Lancet*, for the years 1851 to 1854, inclusive. *North American Review* (*Cedar Falls, Iowa*) 94(194):1-41. Jan. See p. 31.

• ***Summary:*** This is a review of this book, published in 1855 by Longmans (London).

Page 31: "The many sauces which are used as condiments, very largely by the English and to some extent in this country, are also adulterated mixtures. For instance, treacle and salt formed the basis of 5 samples of India Soy examined."

Note: This sentence means that all of the five samples examined were adulterated. Address: M.D., Chief Analyst of the Commission.

968. Simon, Eugène. 1862. Sur un envoi d'animaux et de végétaux du Japan [On a shipment of animals and vegetables from Japan (Letter to the editor)]. *Bulletin de la Societe d'Acclimatation* 9:689-93. Aug. See p. 691-93. [Fre]

• ***Summary:*** This is a long letter addressed to the Secretary General of the Society for Acclimatization. A section titled *"Sur la fabrication du soja* [On the production of soy sauce"] (p. 691-93) states: Soja, or soy sauce, is a condiment which, in Japan, is consumed in considerable quantities. Some years ago it enjoyed marked success in America, England, Holland, and in India, where it had first been introduced. Today, the popularity remains only in America.

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The exportation is weak from the Indies, where it is replaced by another product, and the trade is nearly null in Europe because of the difficulty of making it cross the hot latitudes of the tropics via the tip of South of Africa.

It is nevertheless an excellent product, which could offer the culinary art a resource to be used in many ways, if one could obtain a quality as good as that in the country from which it comes. Actually, nothing could be easier. All one needs to do is to make it locally [in France]. This is a very important industry in Japan. There are more than 6 factories in the city of Nagasaki, and each occupies an average area of 700 to 800 square meters. In total, they produce 1.2 million kg of soy sauce for consumption.

Two types of grain are necessary to make soy sauce. One is a special type of bean called haricot Soja, or soybeans, of which 15 kg are included under #5 in the shipment I have just made to France. The other is ordinary barley (*orge*, not *ble*, wheat). One makes equal parts of beans and wheat. The beans are cooked in an equal volume of water and the wheat is roasted. Then one combines them in a big tub, into which one pours them little by little, while mixing them as much as possible with the aid of a large wooden spatula (pusher). When it all has the consistency of a rather thick paste, one places it in a wooden mold (koji tray) about 1.5 inches deep, 18 inches long, and 8 inches wide. In arranging this cake or this brick in the mold, one must make the upper surface slightly concave. These cakes are then transported into hermetically sealed chambers (the koji room), where it must ferment on shelves around the walls and in the center of the room. All the walls and the openings, with the exception of two window placed at the height of a man, from which one can watch the fermentation from the outside, must be carefully insulated or padded with straw, fixed in the middle of a lattice of bamboo or other wood.

The fermentation starts at the end of very few hours [no inoculation?] but if the temperature of the chamber is very low, one can stimulate the fermentation by placing a small brazier here. However, one must use the brazier only as a last resort; the effect is to brown the cakes. The fermentation lasts for 7 days, during which time one can enter once or twice into the chamber, in order to assure oneself that all is in good condition. When they are well made, the cakes must have a uniform yellowish gold tint. They are then removed and thrown into a large vat, 6 feet deep and 4.5 feet in diameter. Here one adds a saturated salt solution [*sel a chaux* = calcium oxide] in the proportion of 2 kg of solution to 1 kg of cake. One agitates it and mixes it gradually until the vat is full.

One must then leave the vat alone for at least one year, but when one wants an extra fine soy sauce (*soja*), it must be left for 3 years. Regardless of the time, one removes the mash (*pâte*) from the vat, puts it in a hemp sack, or better yet, one of palm filaments, and carries it to the press. The soja which collects during the first turns of the press is the best quality. But because of the high price it would be able to demand, one would not find its sale assured. One therefore renounces this quality, except in the two capitals of Edo (Tokyo) and Miyako (Kyoto), where there live a large number of princes and rich people, who can conveniently pay for it.

In general, only two grades of soy sauce are made. The first is made from all the liquid which one is able to extract by the press, and which is then of a good medium quality. The second is obtained by mixing the presscake with salt water and letting it stand for 6 months; this is only sold to the poor. A jar of soja weighing 214.5 kg sells in Japan for 16-17 French francs. The ordinary soja of the first quality is a liquid of thick consistency and dark brown color. It is almost the only sauce for all Japanese dishes, rich or poor. It always accompanies fish. The Europeans in China or Japan, who have used it a lot or a little, add it to beef or to beef bouillon, to which it imparts a most agreeable color and flavor. The number 10 case of various products, which will be a part of my shipment contains 3 bottles of soja of different qualities under the numbers 18, 19, and 20. No. 18 comes from Miyako (Kyoto), but it is possible that the trip may alter it a little.

Note: This is the 2nd earliest French-language document seen (April 2012) that uses the word *soja* to refer to soy sauce. The French used the word *soja* to refer to soy sauce before they used it to refer to the soybean. Address: French consul in China.

969. Lea & Perrins. 1862. Sauce.–Lea and Perrins Worcestershire Sauce (Ad). *Quebec Mercury* (*Canada*). Nov. 25. p. 2.

• ***Summary:*** "Pronounced by connoisseurs to be the 'only good sauce' and applicable to every variety of dish.

"Extract of a letter from a medical gentleman at Madras [India] to his brother at Worcester. May, 1851. 'Tell Lea & Perrins that their Sauce is highly esteemed in India, and is, in my opinion, the most palatable as well as the most wholesome Sauce that is made.'

"Caution. Lea & Perrins beg to caution the public against spurious imitations of their celebrated Worcestershire Sauce.

L. & P. have discovered that several of the Foreign Markets have been supplied with Spurious Imitations, the labels closely resembling those of the genuine Sauce, and in one or more instances the names of L. & P. *forged*.

"L. & P. will proceed against any one who may manufacture or vend such imitations, and have instructed their correspondents in the various parts of the world to advise them of any infringement of their rights.

"Ask for Lea and Perrins' Sauce. Sold Wholesale and for Export by the Proprietors, Worcester; Messrs. Crosse and Blackwell; Messrs. Barclay and Sons, London; &c. and by Grocers and Oilmen universally.

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"Quebec, Nov. 18, 1862.

A small illustration shows a bottle of Lea & Perrins' Worcestershire Sauce.

970. Chalmers, John. 1862. An English and Cantonese pocket-dictionary, for the use of those who wish to learn the spoken language of Canton Province. 2nd ed. Hongkong: Printed at the London Missionary Society's Press. vi + 163 p. See p. 134. 19 cm. [Eng; Chi]

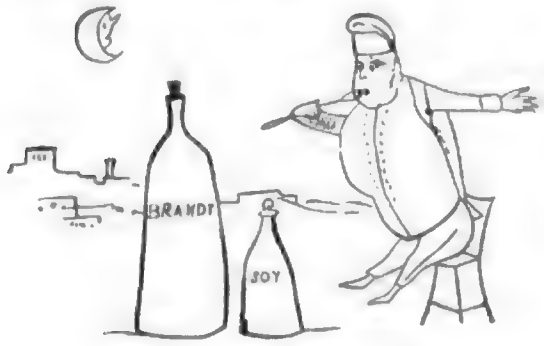
• ***Summary:*** Under "Soy" (noun, p. 134) are the Chinese characters and the Cantonese term for soy sauce, *shi-yau*, with tones shown.

Note: *Shi-yau* is, more precisely, "fermented black soybean sauce." Address: M.A.

971. Lear, Edward. 1862. A book of nonsense. New York, NY: Frederick A. Stokes. 112 p. See p. 64. Illust. 15 cm.

• ***Summary:*** The following limerick appears on page 64 of this original 1862 edition:

"There was an Old Person of Troy,
"Whose drink was warm brandy and soy;
"Which he took with a spoon,
"By the light of the moon,
"In sight of the city of Troy."



Above the poem is an illustration (line drawing) of a big man seated on a little chair placing a spoon to his lips. In front of him, on the ground, are a bottle of brandy and a smaller bottle of soy [sauce]. In the background is the skyline of a city with a half moon overhead.

Edward Lear (1812-1888) was an English painter and nonsense poet. Lines 3 and 4 are indented from the others. A 1912 edition was edited by Lady Strachey. Address: London.

972. Rigg, Jonathan. 1862. A dictionary of the Sunda language of Java. Batavia, Java: Lange & Co. xvi + 537 + v p. 27 cm. Constituting: *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen*, Vol. 29.

• ***Summary:*** The term "Sunda Isles" once referred to the Malay Archipelago; Java, Sumatra, Borneo, and Sulawesi were called the "Greater Sunda Islands." This Sundanese-English dictionary includes the following soy-related words:

"Kachang, a pea, a bean, pulse. *Dolichos* and *Phaseolus* of which the species are very numerous" (p. 182).

"Kadalé, a variety of pulse frequently planted" (p. 183).

Kéchap, Catchup, a dark coloured sauce prepared by the Chinese" (p. 212).

Also mentions: "Kachang taneuh, ground nut, Arachis hypogæa, so called from the seed vessels returning into the earth, and becoming a sort of granulous root" (p. 183). Ragi, which acts as a ferment in preparing Tapai (p. 391). "Tahi-minyak, oil-cake. The refuse of making oil from the ground-nut or kachang taneuh. This oil cake is much used as a valuable manure, especially for sugar cane" (p. 473). "Tapai, a preparation of boiled ketan rice, in which *Ragi* has been mixed and set to ferment for a couple of days. *Tapai* is given as a treat at all native entertainments" (p. 483). About 150 different words for different kinds of rice are also given. Address: Member of the Batavian Society of Arts and Sciences [Jakarta, Dutch East Indies].

973. Ripley, George; Dana, Charles A. eds. 1862. The new American cyclopaedia: A popular dictionary of general knowledge. 16 vols. New York, NY: D. Appleton and Company. 850 p. See Vol. 14, p. 800. 26 cm.

• ***Summary:*** The entry on p. 800 for "Soy" states: (Japanese, *sooja*), a sauce prepared in Japan and China from the small beans of the plant called by McCulloch *dolichos soja*, and by others *soja hispida* or *soja Japonica*. The beans are boiled nearly to dryness, then put in wide-mouthed jars with water and molasses or brown sugar, and exposed to the sun and air. Every day they are well stirred; and when the fermentation is completed the mixture is strained, salted, and boiled, and skimmed until clarified. Japanese soy is considered the best; but there are many deceptions in the article. It is recognized by a peculiar flavor, neither too salt nor sweet; a thick consistence and clear brown color; and particularly by its leaving, when shaken in a glass, a coat of bright yellowish brown upon the sides. It is imported into Europe and the United States to be used with fish.

974. The practical family cookery book: Containing all necessary directions for preparing stylish, medium, and plain dinners. With a separate treatise on preserving, pickling and confectionery, the method of preparing pastry, cakes, and jellies, and the art of breadmaking. 1862. London: Ward and Lock. 64 p. + 60 p. No index.

• ***Summary:*** In Part I of this book: Hare soup ("Strain the soup and season it with a little soy [sauce], Cayenne pepper, Harvey's sauce, and a glass of wine, &c.," p. 5).

In the chapter on "Fish" we read (p. 10): "Melted butter, nicely made, is almost invariably served up with fish; and for sauce, essence of anchovy, soy, catsup, or Chili vinegar."

"Fish-liver sauce: Boil the liver of the fish you are cooking, chop it fine or pound it, and mix it with melted butter. A little catsup, cayenne, or soy [sauce] may be added

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to it" (p. 57).

Harvey's sauce is mentioned on pages 3 and 5. Reading sauce is mentioned on page 3.

Tomata sauce is mentioned on pages 29, 39, 42, and 54.

Catsup is mentioned on many pages including p. 3-5, 10, 13, 15-17, 23, 31, 37-39, 40-42, 44-45, 51, 55-58.

In Part II of this book, in the section on "Sauces" (p. 56): "Piquant sauce is made with two ounces of Cayenne pepper, a pint of pickling vinegar, an ounce of soy [sauce], and the same of port wine."

Page 57: "Sauce aristocratique... To every pint, when cold, add a pint of the best pickling vinegar, and three ounces of soy.

"Quin Sauce is the same, omitting the soy [sauce].

"Harvey's Sauce is made by adding to six ounces of the Quin Sauce two ounces of soy, two drachms of Cayenne, and a quarter of a pint of vinegar.

"Sauce au roy,–Take a quart of the best pickling vinegar, three table spoonsful of soy, and as much walnut catsup,... put al these ingredients into a bottle, and keep them together for a month before using shaking them frequently.

"Isle of Wight sauce is made by mixing quantities of soy, port wine, brandy, and mushroom catsup.

"When catsup is added to sauces, it should always, if possible, be home made, or it can seldom be depended upon.

"Mushroom catsup.–Mushrooms of a large growth, much expanded, and the gills dark-coloured, are generally used for the purpose." A detailed home-made recipe is given, followed by one for "Walnut catsup," whose main ingredient is the juice of unripe walnuts.

975. Messer (Wm.) & Co. 1863. Classified ad: Messer's famed Newhaven Fish Sauce. *Scotsman* (*Edinburgh*). Nov. 14. p. 5.

• ***Summary:*** "The Famed Sauce for all kinds of Fish; and will be found more agreeable to most palates than Essence of Anchovies, Mushroom Catchup, Indian Soy [sauce], or so-called Fish Condiments." Address: Wholesale and Export Pickle, Sauce, and Unfermented Wine Manufacturers, 19 South Niddry Street, Edinburgh.

976. Edmundson (J.) and Co. 1863. J. Edmondson and Co. call attention to the under-mentioned articles, as particularly appropriate for Christmas presents (Ad). *Irish Times and Daily Advertiser* (*Dublin*). Dec. 24. p. 1.

• ***Summary:*** "Tea kettles and tea urns to match, electro silver butter coolers, dish covers, corner dishes, cruet stands, sauce and soy frames, cake baskets,..." Address: 33, 34, 35, 36 Capel Street.

977. Stanton's. 1863. Classified ad: Holiday gifts... *Chicago Daily Tribune*. Dec. 24. p. 4, col. 2.

• ***Summary:*** "All the sauces: Harvey, Reading, Beef Steak, Worcestershire, Essence of Shrimps, Anchovy and Lobster, John Bull, Soho, Chutney, India Soy [sauce], Sultana, Cumberland, Catsups."

Note: This ad also appeared in the Dec. 31 (p. 4) issue of this newspaper. Address: 135 Lake Street.

978. Beasley, Henry. 1863. The druggist's general receipt book: Comprising a copious veterinary formulary; numerous recipes in patent and proprietary medicines... Fourth American from the fifth London edition. Philadelphia, Pennsylvania: Lindsay and Blakiston. xiii + 14-466 p. Index.

• ***Summary:*** In the chapter on "Beverages, dietetic articles, and condiments" is a section titled "Culinary vinegars, sauces, &c." (p. 277-79). Soy [sauce] is used in the recipes for "Camp vinegar" (2 recipes), "Quin sauce," "Epicurean sauce" ("Indian soy 2 oz."), and "Sauce superlative" (Dr. Kitchiner's; ¼ pint soy is optional).

The last recipe in the section is: "Soy. Boil a gallon of the seeds of Dolichos soja till soft, add a gallon of bruised wheat, keep them in a warm place for 24 hours; add a gallon of salt, and 2 gallons of water, and after keeping them bunged up in a stone jar for 2 or 3 months, press out the liquor."

In this same section are recipes from "Mushroom catsup" and "Walnut catsup." Address: Author.

979. Simmonds, Peter Lund. 1863. The dictionary of trade products, commercial, manufacturing, and technical terms: with a definition of the moneys, weights, and measures of all countries, reduced to the British standard. New edition, revised and enlarged. London: Routledge, Warne & Routledge. 463 p. 17 cm.

• ***Summary:*** Two entries are related to the soybean: "Mico, mijo [miso], a vegetable butter or solid oil, made from *Soja hispida*, in Japan."

"Soy, a sauce or flavoring originally made in the East; and said to be produced from a species of *Dolichos* bean, *Soja hispida*."

Peter L. Simmonds lived 1814-1897. Address: F.R.G.S., F.S.S., author.

980. Waterston, William. 1863. A cyclopædia of commerce, mercantile law, finance, commercial geography, and navigation. New ed., corrected and improved, with a supplement by P.L. Simmonds. London: Henry G. Bohn. iv + 672 + 328 p. 23 cm.

• ***Summary:*** The section titled "Soy" (p. 627) is identical to that in the 1843 and 1847 editions. Also discusses hemp and hemp seed oil (p. 362-64).

Note: The book was revised by adding 328 pages of new information onto the back of the previous edition. Address: Mercantile agent and accountant [England].

981. Williams, Samuel Wells. 1863. The Chinese commercial guide: Containing treaties, tariffs, regulations, tables, etc...

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With an appendix of sailing directions. 5th ed. Hongkong: A. Shortrede & Co. xvi + 387 + 266 p. Index. 21 cm. Facsimile edition reprinted in 1966 by Ch'eng-Wen Publishing Co., Taipei, Taiwan.

• ***Summary:*** In the section titled "Description of articles of export" [from China, alphabetical], Chinese characters accompany every entry. On p. 111 is an entry for "Beans and peas" (*tau*) incl. bean cake (*tau ping* or *tau shih* = "bean stones"). "The Chinese cultivate legumes to a greater extent, perhaps, than any other nation."

The manufacture of bean jam [jiang] and bean curd cakes [tofu] for food from the flour employs many people. The cakes used for manure are made by crushing the ripe peas [sic, beans] and boiling the grits soft; the mass is then pressed into cakes in iron hoops, and made solid by means of wedges driven down by heavy mallets. Peas and bean cakes are exported from Yingtsz' [Ying-k'ou, Yingkou?] and Tientzin to Amoy and Swatau [Swatow, Shantou, in Guangdong province]; they comprise one-fourth of all the produce shipped from Tientsin in 1861; and there is little else sent from Yingtsz'. In 1859, about a million piculs [1 picul = 133.33 lb] of the cake were reshipped to the south of China from Shanghai alone, chiefly for the consumption of sugar growers."

In the same section is an entry (p. 139) for: "Soy, *shi yú* [*shiyu* = fermented black soybean sauce], and *tsiáng yú* [*jiangyou* = soy sauce], is a condiment made from the Dolichos bean, which grows in China and Japan; our name is derived from the Japanese *siyau* [*shoyu*]. To make it, the beans are slowly boiled soft, then an equal quantity of wheat or barley flour is added; after this has thoroughly fermented and become mouldy, the beans are washed, and put into jars with their weight in salt, adding some aromatics, and three times as much boiling water as the beans were at first. The whole compound is now left for a month or more, exposed to the sun, and then pressed and strained. Good soy has an agreeable taste, and if shaken in a tumbler, lines the vessel with a lively yellowish-brown froth; its color in the dish is nearly black. There are many qualities of it, and when well made all improve by age. Japan soy is considered superior to Chinese, but both are of different qualities, and are probably made of various materials, some of which may be base enough. It is most commonly sent to England, India, and Europe, to form the basis of other sauces and condiments. It is worth from $4 to $8 per picul and goes chiefly from Canton."

On p. 129 is a section on "Oil" (*yú*), incl. [soy] bean oil (*tau yú*), wood oil (tung), cotton-seed oil, sesamum oil, olive oil, ground-nut oil, cabbage or rape oil, fish oil, etc.

In the same section (p. 149) is an entry for "Vermicelli (Chinese characters) *fun sz*, i.e. flour threads. This article, sometimes called *loksoy* [*lock soy*], manufactured from both rice and wheaten flour, is extensively used among the natives in soups. It is everyway inferior to the European."

Note 1. This is the earliest English-language document seen (Sept. 2006) that uses the term "bean oil" to refer to soybean oil, or that mentions *tau-yú* as the Chinese (Cantonese) name for soybean oil.

Note 2. This is the earliest English-language document seen (Sept. 2006) that uses the term "Dolichos bean" to refer to the soybean. It is also the earliest English-language document seen (Sept. 2006) that repeatedly uses the word "bean" (not preceded by the word "soy" or "soya") to refer to the soybean.

Note 3. This is the earliest English-language document seen (Feb. 2004) that uses the term "bean-cakes" to refer to tofu.

Note 4. This is the earliest English-language document seen (May 2005) that uses the "grits" to refer to coarsely ground soybean flour or pieces.

Note 5. This is the earliest English-language document seen (Sept. 2003) that contains the term "cotton-seed" or term "cotton-seed oil" (each spelled with a hyphen).

Note 6. This is the earliest English-language document seen (Oct. 2006) that that uses the term "crushing" (or "crush," "crushes," "crushed" or "crushings") in connection with soybeans to refer to the process of pressing the beans to yield oil and cake.

This section also discusses (alphabetically): Almonds (but not almond oil), ground-nuts (*hwa sang* characters, ground-nut cake characters hwa sang ping; the "oil is the chief article of export"), gypsum (*shih kau*, used especially in making bean-cakes and curd [tofu], sometimes called bean-macaroni), manure cakes or poudrette (*kang sha*, made from night soil mixed with earth for exportation. "The refuse of ground-nuts, sesamum, rape-seed, and other oleaceous seeds, is prepared for manure and for feeding swine and sheep, and sent from one part of the country to another"), salt, seaweed, sesamum seed, and silk.

A table titled "Rates of freight in steamers to Canton" states (p. 228): "Soy, per tub of 1 picul–$0.75."

In the section on "Foreign commerce with Japan" we read (p. 254): "Camphor, sulphur, porcelain, copper, nut-galls, vegetable wax, cassia, soy, and verdigris, have been furnished at rates and quantities sufficient to export to Europe."

Other sections discuss Chinese, Japanese, and British weights and measures, numerals, coins and currency.

Samuel Wells Williams lived 1812-1884. Address: LL.D., Hongkong.

982. Lea and Perrins. 1864. Sauce.–Lea and Perrins' Worcestershire Sauce. Pronounced by connoisseurs "The only good sauce."... (Ad). *Observer* (*London*), Jan. 24, p. 8.

• ***Summary:*** "None genuine without name on wrapper, label, bottle, and stopper. Sold by Crosse and Blackwell, Barclay and Sons, and grocers and oilmen universally." Address: Worcester, England.

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983. *Times* (*London*).1864. Classified ad: Napoleon, by the Grace of God and the will of the nation... July 30. p. 1, col. 1.
• ***Summary:*** This article describes a lawsuit in France "Between Crosse and Blackwell, manufacturers of sauces and pickles, residing at No. 21, Soho-square, London, county of Middlesex (England)...And William Knight, provision dealer, residing at Boulogne-sur-Mer, defendant,..."

"Considering that it is an established fact" that in Jan. 1864: "The plaintiffs have caused to be seized at Knights divers pickles prepared with vinegar and mustard contained in Jars, labelled Crosse and Blackwell, and bearing the designation of Imperial Mixed Pickle, Girkins, India Pickle, Piccallilli [Piccalilli], Essence of Anchovies; Considering that these jars, with their labels and contents, constitute, on the part of Knight, spurious imitations of the products of the plaintiffs, of which they declare having deposited specimens, with their trade marks, at the Registrars of the Tribunal of Commerce of the Seine, on the 12th of May, 1863, which is not disputed."

The plaintiffs are asking for damages of 600 French francs. "Considering that Crosse and Blackwell declare to release from seizure certain products labelled Lea and Perrins;-"

The plaintiffs apparently won the case, but appear to have been awarded much less money than they asked for.

984. *Argus* (*The*) (*Melbourne, Victoria, Australia*).1864. D'Artagnan, for Sydney. Aug. 8. p. 4.
• ***Summary:*** "73 bags rice, 10 boxes tea,... 3 boxes opium, 24 boxes 20 baskets ginger, 100 jars soy [sauce],... 49 baskets pickles, 5 boxes bean sticks [dried yuba sticks],..."

Note 1. These Chinese foods were probably imported to Australia for the Chinese who had joined the Victoria gold rush, which lasted until the late 1860s.

Note 2. This is the earliest English-language document seen (May 2012) that uses the word "beans sticks" (two words) to refer to what are probably dried yuba sticks.

985. Cre-Fydd. 1864. Cre-Fydd's family fare: The young housewife's daily assistant, on all matters relating to cookery and housekeeping... New ed., revised. London: Simpkin, Marshall, and Co. clx + 340 p. Index.
• ***Summary:*** The author is a woman. The following recipes call for soy [sauce]: Mock turtle soup (p. 6-7). Giblet soup (p. 9). Raviuoli soup [ravioli] (p. 10). Ox-tail soup (p. 12). Ox-cheek soup (à la mode, p. 13). Sheep's head soup (p. 13-14). Gravy (p. 18; "Note.–If mushrooms are not to be had, substitute one tablespoonful of ketchup, to be put in with the soy"). Braised salmon (p. 20-21). Sauce supreme (p. 29). Baked pike (p. 49). Loin of mutton stuffed, and served with rich gravy (p. 59). Loin of mutton stewed with pickles (p. 59-60). Lamb's head and pluck (p. 77). Minced beef with Italian paste (p. 82). Stewed brisket of beef with French beans (p. 83). Brisket of beef, stewed with pickles (p. 83). Stewed calf's liver (p. 110). Roast fowl, with gravy and bread sauce (p. 127-28). Braised fowl and white sauce, with braised beef and chestnuts (p. 132-33; "Note.–If you have no Cre-fydd sauce, use instead a tablespoon of port wine, a teaspoonful of soy, a teaspoonful of brand and a saltspoonful of chutney). Roast gosling, stuffed (p. 138). Braised duck, with turnips (p. 139). Stewed pigeons (p. 142). Braised pheasant and beef, with chestnuts (p. 145). Roast partridges (p. 147). Roast hare (p. 150). Haricot of mutton (p. 259-60). Piquante sauce (To be made in August, p. 283). Superlative mixture (For gravies, stews, &c, p. 287). Store closets, stores, etc. (p. 321-22; "Every good housekeeper will have her store-closets scrumptiously clean, and stocked in moderation with everything likely to be required." Incl. soy, Harvey-sauce, mushroom and walnut ketchups).

Also called for are: Harvey-sauce (11 times). Mushroom ketchup (28 times). Walnut ketchup (3 times).

The following are not mentioned: Worcestershire sauce. Worcester sauce. Address: Great Britain.

986. Oppelt, Gustave Louis. 1864. Traité général théorique et pratique de compatabilité: Commerciale, industriale et administrative [General treatise, theoretical and practical, on compatability: Commercial, industrial and administrative]. Paris: Eugéne Lacroix. vi + 367 p. 25 cm. [Fre]
• ***Summary:*** A long table titled "Revision of the Belgian tariff duties" (p. 236+) contains three columns. For the soy entry (p. 237) these are: (Col. 1, No. 17). Designation of merchandise: Grains / seeds not specifically subject to other tariffs. (2) Entry duty / tariff: Free (no duty or tariff). (3) Assimilations (*Assimilations*). These are assimilated into spices (*épiceries*): Cardamom, cumin, saffron, soy [sauce] (*le soja*), and vanilla.

In short, soy sauce may be imported into Belgium duty-free. Address: Prof. of commercial sciences.

987. Sanderson, J.M. 1864. The complete cook. Plain and practical directions for cooking and housekeeping: with upwards of seven hundred receipts:... Philadelphia, Pennsylvania: J.B. Lippincott. 196 p. Index. 19 cm.
• ***Summary:*** The recipes are numbered sequentially. "Soy" [sauce] is mentioned as an ingredient in the following recipes: 112. Sauce for boiled carp, or boiled turkey ("and as it boils up, add a large spoonful of Indian soy: if that does not give it a fine colour, put a little more," p. 54).

"456. Camp vinegar.–Take four table-spoonfuls of soy, a quarter of an ounce of cayenne pepper, six anchovies, bruised and chopped, walnut pickle a quarter of a pint, a clove of garlic shred fine; steep the whole for a month in a quart of the best vinegar, shake it four or five times a week, strain it through a tamis [strainer], and put it in half-pint bottles, close corked and sealed, or dipped in bottle cement" (p. 125).

Note: Colouring or browning: 322... "dilute by degrees

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with water, till it is of the thickness of soy," p. 95. Soy is mentioned for comparison, but not used as an ingredient in this recipe (322).

The section titled "Catsups" (p. 125-27) begins: "These rank high, and deservedly so, amongst the list of flavourings, particularly mushroom catsup. Includes: Walnut catsup. Oyster catsup. Cockle and muscle catsup. Mushroom catsup. Mushroom catsup without spice. Mushroom powder.

Note: James Sanderson was at one time Chef at the Franklin House in Philadelphia. Most of his recipes were copied, completely or heavily, from well-known English works (MSU introduction). Address: Philadelphia.

988. Richardson. 1865. English mutton and soles for dinner on Monday (Ad). *New York Times*. July 30. p. 5.
• ***Summary:*** "For sale–Crosse & Blackwell's pickles. Lea & Perrin's Worcestershire sauce, Scotch oatmeal, mushroom ketchup, capers, &c." Address: No. 100 William-st., near John [New York City].

989. Brennwald, C. 1865. Rapport général sur la partie commerciale de la Mission suisse au Japon [General report on the commercial section of the Swiss mission to Japan]. Berne, Switzerland: Printed by J.A. Weingart. 155 p. See p. 100-01, 103. [Fre]
• ***Summary:*** The section on Japanese exports mentions miso and soy sauce. Address: Counselor and Secretary of the Legation [to Japan].

990. Graham (Messrs. D.) and Co. 1866. 600 packages of groceries, oil-men's stores, wines and spirits,... (Ad). *Daily Southern Cross (Auckland, New Zealand)*. July 28. p. 2.
• ***Summary:*** "... 3 cases Mushroom Catsup, 2 cases Indian Soy [sauce], 1 case French Olives,..." Address: Vulcan-lane.

991. Phillips and Company, Ld. 1866. Classified ad: Provisions and stores, for town or districts, of guaranteed and quality. *Bombay Times and Journal of Commerce (British India)*. Aug. 25. p. 7.
• ***Summary:*** In the section on "Sauces–Anchovy Essence, Harvey's Sauce, Mushroom and Walnut Catsups, India Soy,... Worcestershire, Lea and Perrins, Worcestershire, Phillip's, pint, Yorkshire relish."

Note: A new brand of Worcestershire sauce (Phillip's) is now being advertised and sold by Phillips & Company, Ltd. in Bombay–for significantly less than the price of Lea and Perrins' sauce. This is the earliest document seen (April 2012) that mentions a brand of Worcestershire sauce made by a company other than Lea and Perrins. Address: Bombay, New Oriental Bank Buildings, and Poona.

992. *Times (London)*.1866. Money-market & city intelligence. Aug. 27. p. 6, col. 4.
• ***Summary:*** "The general sense of what is due alike to the public and the interests of commerce causes the Trade Marks' Act to be enforced in nearly all places with wholesome severity. According to the recent advices from India, the police in June last entered the premises of a printer in Calcutta and seized a large quantity of forged labels of several English manufacturers, among which were those of Allsop and Sons, Lea and Perrins, P. and J. Arnold, Day and Martin, and Crosse and Blackwell. The latter firm immediately commenced a persecution under the Trades' Marks Acts (India), section 485 of the Penal Code, which resulted in the conviction of the offender, and his being sentenced to two years' vigorous imprisonment."

993. Lea and Perrins. 1866. Sauce.--Lea and Perrins' Worcestershire Sauce (Ad). *Observer (London)*. Oct. 28. p. 8.
• ***Summary:*** "This delicious condiment, pronounced by connoisseurs 'the only good sauce,' is prepared solely by Lea and Perrins. The public are respectfully cautioned against worthless imitations, and should see that Lea and Perrins' names are on the wrapper, label, bottle, and stopper. Ask for 'Lea and Perrins" sauce. Sold wholesale and for export by the proprietors, Worcester: Messrs. Crosse and Blackwell, Messrs. Barclay and Sons, London &c.: and by grocers and oilmen universally." Address: Worcester, England.

994. Lindley, John; Moore, Thomas, eds. 1866. The treasury of botany: A popular dictionary of the vegetable kingdom; with which is incorporated a glossary of botanical terms. 2 vols. (Parts I and II). London: Longmans, Green, and Co. xx + 1254 p. See Part I, p. 131, 536-37, 747. Part II, p. 1068, 1075. Illust. 17 cm.
• ***Summary:*** Bean (Part I, p. 131) "Sahuea bean, *Soja hispida*.

Glycine (Part I, p. 536-37) "A small genus of *Leguminosae*, all, excepting one, being slender decumbent [reclining along the ground, but with ascending apex or extremity] or twining herbs, with alternate stalked leaves made up of three to seven leaflets varying much in form, and bearing axillary racemes or fascicles of small yellow or violet pea-flowers. The genus belongs to the tribe *Phaseoleae*, and is most nearly allied to *Teramnus*, from which it is distinguished by its pods being destitute of the hardened hooked style seen in the latter, and by the ten stamens, which are united into a tube, being all, instead of the alternate ones only, anther-bearing. The species are pretty equally distributed through tropical Asia, Africa, and Australia, where a few inhabit extratropical regions.

"The Sooja of the Japanese, *G. Soja*, the only erect species of the genus, a dwarf annual hairy plant, a good deal like the common dwarf kidney or French bean (*Phaseolus vulgaris*), has small violet or yellow flowers, borne in short axillary racemes, and succeeded by oblong two to five-seeded hairy pods.

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"The seeds, like kidney beans in form but smaller, are called Miso [sic, error based on Miller 1807] by the Japanese and are made into a sauce which they call Sooja or Soy. The manner of making it is said to be by boiling the beans with equal quantities of barley or wheat, and leaving it for three months to ferment, after which salt and water is added, and the liquid strained. The sauce is used by them in many of their dishes, and they use the beans in soups. The Chinese cook the beans also in various ways, and the plant is cultivated for the sake of them in various parts of India and its Archipelago.

"Mr. Bentham groups the species in three sections, which some regard as genera: *Soja*, with flowers fascicled on the racemes, and falcate pods with depressions but not transverse lines between the seeds; *Johnia*, with flowers similarly arranged, and straight pods with transverse lines between the seeds; and *Leptocyanus*, with solitary flowers on the racemes, and straight pods. The Glycine or *Wistaria* of gardens is now referred to *Millettia*.

Miso (Part II, p. 747). "A fatty substance obtained from *Soja hispida*.

Soja (or Soya) hispida (Part II, p. 1068) is the only representative of a genus of *Leguminosae* of the tribe *Papilionaceae*, and much cultivated in tropical Asia on account of its beans, which are used for preparing a well-known brown and slightly salt sauce (Soy), used both in Asia and Europe for flavouring certain dishes, especially beef, and supposed to favour digestion. Of late it has been cultivated as an oil-plant. S. hispida is an erect hairy herb, with trifoliate leaves, and axillary racemose flowers, which have a five-cleft calyx, a papilionaceous corolla, ten diadelphous stamens, and an oblong pod which contains from two to five ovate compressed seeds. Modern botanists generally refer the plant to Glycine: which see."

Soy (Part II, p. 1075) "A sauce originally prepared in the East, and said to be produced from the beans of *Soja hispida*.

Note 1. This is the earliest document seen (April 2003) in which the soybean is classified under *Papilionaceae*.

Note 2. This is the earliest English-language document seen (April 2003) that uses the term "oil-plant" to describe the soybean.

Also discusses (in alphabetical order): Agar-agar. Alfalfa. Algæ. Almond. Amande de terre (French, *Cyperus esculentus*). Amaranthus. Arachis [peanuts]. Aspergillus. Bean, under-ground kidney = *Arachis hypogaea*. Cannabis. Chenopodium [Common Goosefoot]. Coix [lachryma, Job's tears]. Cyperus. Earth-nut (*Arachis hypogæa*). Flax. Gingelly oil. Hemp.

Part II: Job's tears. Legume. Leguminosæ. Linseed. Linum. Lupinus (incl. *Lupinus albus*, *L. luteus*). Nut, bambarra ground (The seed of *Voandzeia subterranea*, p. 795). Nut, earth (*Arachis hypogæa*). Oil (incl. sesamum). Oilcake ("The residuum after expressing the oil of various seeds, especially linseed and rape, which is used for cattle feeding, and as a manure"). Oil-plant (*Sesamum orientale*). Pindals, pindars. Psophocarpus. Pueraria. Quinoa (*Chenopodium Quinoa*). Sea-girdles (*Laminaria digitata*). Sea-hangers. Sea-wand (*Laminaria digitata*). Seaware. Seaweeds. Seawrack. Seawracks. Sesame. Sesamum. Tetragonolobus.

"Voandzeia. So called from Voandzou, the name given by the natives of Madagascar to the only known representative of this genus of *Leguminosæ*, the *V. subterranea* of botanists, a creeping annual, with long-stalked leaves composed of three leaflets... It is a native of Africa, and is extensively cultivated in many parts of that continent, from Bambarra and the coast of Guinea to Natal [in today's South Africa], its esculent pods and seeds forming common articles of food among the inhabitants of those regions. Although the plant is not indigenous to the Western Hemisphere, it is commonly found in many parts of South America, such as Brazil and Surinam, whither it has been carried by the negro slaves and has now become naturalised. The pods are sometimes called Bambarra Ground-nuts; in Natal the natives call them Igiuhiuba; while in Brazil they are known by the name of Mandubi d'Angola (showing their African origin), and in Surinam by that of Gobbe.

"Voandzou. The Malagassy name of a genus of *Leguminosae*, called after it *Voandzeia*" (p. 1224).

Note 3. This is the earliest English-language document seen (Nov. 2005) that contains the word "oilcake" (or "oilcakes"). Address: 1. Ph.D., F.R.S., F.L.S., Botanic Garden, Chelsea. Late emeritus Prof. of Botany in University College, London; 2. F.L.S., Curator of the Chelsea Botanic Garden.

995. Blot, Pierre. 1867. Modern and mediæval dinners. *Galaxy (The)* 3(7):717-23. April 1. See p. 722.

• ***Summary:*** "French cookery was simple and rather coarse until the sixteenth century, when Catherine de Medici, wife of Henry II, and niece of Pope Leo X, brought with her Italian cookery, as well as Italian vices, diplomacy, fashions and manners."

French cookery reached its zenith during the reigns of Louis XV [ruled 1715-1774] and Louis XVI [ruled 1774-1792].

"Alexander Dumas [the father] also has some pretensions and has invented many dishes." He devised a salad which is described (p. 722); it was seasoned with "a little soy" [sauce].

996. Duncan's (John) Sons. 1867. Lea & Perrins–Celebrated Worcestershire Sauce (Ad). *Hartford Daily Courant (Connecticut)*. June 11, p. 3.

• ***Summary:*** "Pronounced by connoisseurs to be the 'only good Sauce,' and applicable to every variety of dish." An illustration shows a bottle of the sauce.

Note: This is the 2nd earliest document seen (Feb. 2012)

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that contains an illustration of Lea & Perrins Worcestershire sauce.

997. Hepburn, James C. 1867. A Japanese and English dictionary; with an English and Japanese index. Shanghai, China: American Presbyterian Mission Press. xii + 558 + 132 p. 2nd ed. 1872; Abridged ed. 1873, 1881; 3rd ed. 1886; 4th ed. 1888; 5th 1894; 7th ed. 1903. First edition was reprinted in 1966 and 1983. Index. 24 cm.

• ***Summary:*** This is Hepburn's earliest Japanese-English dictionary. The words are arranged alphabetically by their romanized spelling. Each word is written in three ways. After the romanized word (main entry), written in uppercase letters with diacritical marks (which we have largely omitted below), the same word is written in katakana, then again in Chinese characters. Finally, one or more definitions are given.

Soy-related words and terms in the 1867 edition:

Amazake: Sweet sake, a kind of fermented rice.

Daidz [Daizu]: A kind of large white bean. Soja hispida.

Go: Beans mashed into paste. *Mame no go.*

Gokoku: The five cereals, wheat, rice, millet, beans, *kibi.*

Hiriodz [Hiriodzu, Hiryozu]: A kind of food [made of tofu fried in oil].

Note 1. This is the earliest English-language document seen (May 2012) that contains the term *Hiriodz* (the modern spelling is Hiryozu) which refers to deep-fried tofu treasure balls.

Ireru–*Kono mame was yoku iremash'ta:* these beans are well parched.

Iriru–Mame wo iriru: to parch peas [beans].

Kinako ["yellow flour"]: A kind of food made of beans.

Kiradz [Kirazu]: The refuse left in making *tôfu.*

Koji: Malt made by fermenting rice or barley, in the process of making sake, and soy [sauce].

Koji-buta: A shallow box for holding malt.

Mame: Bean, pea. *Mame no ko:* bean flour.

Miso: A kind of sauce made of [soy] beans.

Natto: A kind of food made of [soy] beans.

Nigari: The brine formed by the deliquescence of salt.

Sashi (verb): Shoyu wo sashi–To season with soy [sauce].

Sashimi: Raw fish cut in thin slices and eaten with soy.

Sh'taji [Sorted after "Shis," Shitaji]: Soy (used only by women). Syn. Note 2. This is the earliest English-language document seen (April 2012) that uses the word "sh'taji" or shitaji" to refer to soy sauce.

Shoyu: Soy, a kind of sauce made of fermented wheat and beans. This is the earliest English-language document seen (April 2012) that uses the word "shoyu" (spelled correctly like this) to refer to soy sauce.

Tofu: A kind of food made of beans.

Umeboshi (*hakubai*). Dried plums. Ume-dzke [Ume-zuke]: Pickled plums. *Ume ga mada unimasen:* The plums are not yet ripe.

Yuba [hot water + leaf]: A kind of food made of beans. Yu-dofu: Boiled tofu.

Note 3. This is the earliest English-language document seen (Oct. 2008) that contains the word "yuba."

The English-Japanese part of this dictionary starts after p. 558 and is titled "An index; or, Japanese equivalents for the most common English words." Separately numbered to p. 132, it includes: "Bean, Mame. Barm, Kôji, tane. Pea, saya yendo [saya-endo]. Soy [sauce], Shôyu."

Terms NOT mentioned include Aburaage, Aburage, Atsu-age, Daitokuji natto, Edamame (or Eda mame or Yedamame), Ganmodoki, Hamanatto, Hiya-yakko, Kori-dofu, Koya-dofu, Nama-age, Okara, Tamari, Tonyu, Unohana, Yaki-dofu.

Note 4. The author apparently did not realize that the various soyfoods he defined (with the possible exception of soy sauce) were made from soybeans.

Note 5. This is the second earliest English-language document seen (June 1999) in which Chinese characters are used to write the name of the soybean or related products.

Note 6. This is the earliest English-language document seen that contains the word "tofu," or the word "natto" (Jan. 2012), or the word "koji" (March 2001).

Note 7. This is the earliest English-language document seen (Feb. 2004) that refers to amazake, which it calls "Amazake."

Note 8. This is the earliest English-language document seen (May 2012) that uses the term "Shoyu" (or "shoyu") to refer to soy sauce.

Note 9. This is the earliest English-language document seen (Dec. 2005) that uses the word "Kinako" to refer to roasted soy flour.

Note 10. This is the earliest English-language document seen (Dec. 2008) that uses the word "Kiradzu" to refer to what is now called "okara," or "soy pulp." Address: Shanghai, China.

998. Knight, Charles, ed. 1867. The English cyclopædia–Natural History. Vol. IV: Soja. London: Bradbury, Evans, & Co. 1291 p. See p. 843.

• ***Summary:*** "Soja, a genus of Plants belonging to the natural order *Leguminosæ.Soja hispida* (Moench), *S. Japonica* (Savi), the *Dolichos Soja* (Linn.), is a native of Japan and the Moluccas, and abundant in the peninsula of India, though probably introduced there. The seeds resemble those of the haricot, French or kidney bean, and are used by the Chinese to 'form a favourite dish, called "ten-hu," or "tau-hu" [tofu], which looks like curd, and which, though insipid in itself, yet with proper seasoning is agreeable and wholesome' [Don 1832]. The Japanese call the seeds 'Miso' [sic] and put them into soup, of which they sometimes partake three times a day. They likewise prepare with them the sauce termed 'Sooja,' which has been corrupted into 'Soy.' Soy is only

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sparingly used as a sauce in this country. It has the character of being a useful stomachic, but not more so than any of the other condiments when used in moderation."

Note: The entry for "Soy" says to see "Soja."

Note: Much of the information in this entry for Soja comes from the *Penny Cyclopaedia of the Society for the Diffusion of Useful Knowledge* (London, 1841. See Soja hispida).

Also in this volume: Sesamum (p. 758). Voandzeia (p. 1224).

999. Simmonds, Peter Lund. 1867. The commercial dictionary of trade products, manufacturing and technical terms:... A new edition, revised and enlarged. London and New York: George Routledge and Sons. viii + 463 p. See p. 353. 17 cm.

• ***Summary:*** The entry for "Soy" is two words longer (and more accurate) than that in the 1858 edition. "Soy, a sauce or flavoring originally made in the East; and said to be produced from a species of *Dolichos* bean, *Soja hispida*.

Otherwise, the contents and page layout of this book seem to be identical to those of the 1858 edition except that a long supplement has been added to the rear, p. 423-63.

Soy-related entries in the supplement: "Midsu [sic, miso], an oily pulp made from beans in Japan, with which food is dressed instead of butter." "Miso, a substance used in Japan as butter by boiling the soy bean (*Soja hispida*), and mixing it with rice, salt, etc.

Other interesting entries in the supplement: Agar-agar, chufas, hasheesh (Arabic word for hemp, hay; also an intoxicating drug made of hemp, which is sold in the form of sweetmeats, paste, and tobacco), mindoubi (a name in Brazil for the ground nut, *Arachis hypogæa*). Peter L. Simmonds lived 1814-1897. Address: F.R.G.S., F.S.S., author, 8 Winchester St., Pimlico [southwest London, England].

1000. *Brisbane Courier* (*Queensland, Australia*).1868. Sauces. Jan. 11. p. 7.

• ***Summary:*** "India Soy [sauce] is difficult to purchase genuine; it should be made from an Indian plant called Dolichos soja, or soya, but treacle and salt are the basis of the Soy ordinarily sold. 'Many persons,' observes Mr. Dobell, in his *Travels in China*, 'have thought that gravy was used in preparing soy, but this appears not to be the case, but the composition being entirely a vegetable one, and made from beans. Japanese soy is much esteemed in China, probably it is made with a particular bean? In China the consumption of soy is enormous; neither rich nor poor can dine, breakfast, or sup without soy; it is the sauce for all sorts of food, and may be described as indispensable at a Chinese repast.'"

Note: This is the earliest of 2 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "Japanese soy."

1001. Sakuma, Yonekichi. 1868. Nikki [Diary]. April 25. Unpublished. [Jap]*

• ***Summary:*** In the first year of Meiji (1868) the author was a passenger on the ship "Scioto" (*Saioto-go*), headed for Hawaii with the first group of Japanese immigrants. He noted in his diary of April 25: "Yokohama departure. Provisions of rice, miso, shoyu."

Note: This is the earliest document seen (April 2011) concerning soybean products (miso and shoyu) in Hawaii. This document contains the earliest date seen for soybean products in Hawaii (April or May 1868); soybeans as such had not yet been reported by that date.

Letter from Mr. Nihei, 1988, Oct. 23, Yonekichi SAKUMA, born on 11 July 1840, came from Chiba prefecture. He went to Hawaii as an immigrant in 1868, and died in 1927 at age 88.

Letter from Paul J. O'Pecko, Reference Librarian, Mystic Seaport Museum, Mystic, Connecticut. 1990. July 3. There were at least two three-masted sailing vessels named Scioto sailing in 1868, but there is no indication that any vessel named Scioto was ever owned by the Pacific Mail Steamship Company. It is possible they may have chartered it.

1002. *Farmers' Cabinet* (*Amherst, New Hampshire*).1868. Classified ads. 66(49):3. June 25.

• ***Summary:*** "Worcestershire sauce, pepper sauce, catsup, mustard, cayenne pepper, &c. at the Old Mill Store, Milford." This ad also appeared in the October 15 (1868, p. 3) issue of this newspaper.

Note: Milford is a town in Hillsborough County, southern New Hampshire. Address: Milford.

1003. Chambers's encyclopædia: A dictionary of universal knowledge for the people: Dolichos. 1868. London: W. and R. Chambers. See vol. III, p. 619.

• ***Summary:*** "Dolichos, a genus of plants of the natural order Leguminosæ [Leguminosae], sub-order Papilionaceæ [Papilionaceae], closely allied to Phaseolus (see Kidney Bean), and chiefly distinguished by the extension of the base of the standard so as to embrace the wings of the corolla at their base. The genus includes a considerable number of species,...: *D. Soya* or *Soja hispida* (the Soy Bean); *D. Catiang*, and *D. uniflorus* (Horse Gram), natives of India; *D. sphaerospermus* (Calavana or Black-eyed Pea), a native of the West Indies."

"The well-known Chinese sauce or ketchup called Soy (q.v.) is made from the Soy Bean."

Note: This entry appears to be saying that "ketchup" is the same as Soy [sauce].

1004. Chambers's encyclopædia: A dictionary of universal knowledge for the people: Soy. 1868. London: W. and R.

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Chambers. See vol. IX, p. 10.

• ***Summary:*** "Soy is a thick and piquant sauce, made from the seeds of the Soy Bean (*Soja hispida*), a plant of the natural order *Leguminosæ*, suborder *Papilionaceæ*, so nearly allied to the genus Dolichos (q.v.) as to be often included in it. It is a native of China, Japan, and the Moluccas, and is much cultivated in China and Japan. It is also common in India, although, probably, not a native of that country. The seeds resemble those of the Kidney Bean, and are used in the same way. The Japanese prepare from them a substance called *Miso*, which they use as butter.

"Soy is made by mixing the beans softened by boiling with an equal quantity of wheat or barley roughly ground. The mixture is covered up, and kept for 24 hours in a warm place, to ferment. The mass is then put into a pot, and covered with salt, the salt used being in quantity about equal to each of the other ingredients. Water is poured over it; and it is stirred, at least once a day, for two months, after which the liquor is poured off and squeezed from the mass, filtered, and preserved in wooden vessels. By long keeping, it becomes brighter and clearer. A Chinese sauce, called *Kitjap* (Ketchup), is often sold in Britain as soy, but is very inferior to the true soy."

1005. Saito, Akio. 1868. [Chronology of soybeans in Japan, 1700 to 1868, the last half of the Tokugawa / Edo period] (Document part). In: Akio Saito. 1985. Daizu Geppo (Soybean Monthly News). Jan. p. 16. Feb. p. 10-11. [Jap]

• ***Summary:*** 1707 May–The Tokugawa shogunate government (*bakufu*) passes a law to lower the prices of goods. Shops selling high-priced tofu are punished. But tofu makers argue that although the price of soybeans has dropped, the prices of other ingredients such as nigari and oil have risen.

1709–Kaibara Ekken (1630-1714) writes *Yamato Honso*, in which he discusses the shapes and use of the 1,362 products from Japan, China, and other countries. He notes that among the five crops (*go-koku*), soybeans are the second most widely produced after rice.

1712–Kaempfer, the German physician and naturalist who stayed in Japan during 1691-1692, writes *Nihon-shi* in the Netherlands. In the book he discusses soybeans and includes a very accurate illustration of the soybean. This draws the attention of other European scholars.

1722–Kinzanji miso becomes popular in Edo (today's Tokyo).

1724 Feb.–The Tokugawa shogunate government commands that various goods, such as sake and shoyu [soy sauce], should be lower in price because the price of rice has decreased.

1726–The amount of shoyu imported to Edo from the Osaka-Kyoto area (*kudari shoyu*) is about 132,000 kegs (*taru*). Note: The average keg held 9 shô = 16.2 liters = 4.28 gallons (U.S.). Thus, 132,000 kegs = 564,960 gallons or 2,138,400 liters.

1730–The amount of shoyu imported to Edo from the Osaka-Kyoto area increases to 162,000 kegs.

1739–A French missionary living in China sends some soybean seeds to France for the first time. Attempts are made to grow them at the botanical garden, but the weather is not good and they fail. Later unsuccessful attempts were made to grow soybeans in Germany in 1786 and in England in 1790. There is another theory which says that the soybean went to Europe through Russia.

1748–The cookbook titled *Ryôri Kasen no Soshi* is published. It is the first cookbook which introduces the present form of tempura batter.

1753–The Swedish naturalist Linne (Linnaeus; 1707-1778) gives the soybean its first scientific name.

1770–Sugita Genpaku (lived 1733-1817) discusses the nutritional value of foods and uses the word *eiyo* (meaning "nutrition") for the first time in Japan.

1782–The book *Tofu Hyakuchin* (One hundred rare and favorite tofu recipes) is written by Ka Hitsujun (his pen name) of Osaka. He introduces about 100 tofu recipes. The next year he publishes a supplementary volume, *Zoku Tofu Hyakuchin*. He divides tofu recipes into five different categories according to their special characteristics, like common, regular, good, very good, and fantastic (*jinjohin, tsuhin, kahin, myohin, and zeppin*). In his jinjohin category, he includes 36 recipes such as *Kinome Dengaku, Kijiyaki, Dengaku*, etc.–showing that these were common recipes of the period. Over the next several years, many books with the word "Hitsujin" at the end of the title appear.

1783-1787–The terrible famine of the Tenmei period (*Tenmei no Dai Kikin*) occurs. It is worst in Oou province, where several hundred thousand people die of starvation. Many farm villages are abandoned.

1788–At about this time the word *nukamiso* first appears.

1802–Takizawa Bakin (lived 1767-1848) writes *Kiryo Manroku*, a travel book, and in it he states: "Gion tofu is not as good as the Dengaku of Shinzaki, and Nanzenji tofu is not better than Awayuki in Edo. He criticizes tofu as a famous product from Kyoto (*Kyoto meibutsu tofu*) in his writing.

1804–Takahashi Fumiuemon (or Bunuemon) on the island of Shodoshima starts making shoyu; he starts selling it in 1805.

1810–Choshi Shoyu receives an order from the Tokugawa Bakufu (*Gozen Goyo-rei*).

1818–There are now 10 miso manufacturers in Edo (today's Tokyo). Yomo Hyobei's miso shop in Shin Izumi-cho (presently Ningyo-cho 3-chome, Nihonbashi, Chuo-ku, Tokyo) has a prosperous business. In some funny poems (*Senryu*) this shop is mentioned: "With sake and miso their name is ringing in the four directions" (*"Sake, miso de sono na mo shiho ni hibiku nari"*). And: "This shop is surrounded by nested boxes for food, and these boxes are used for red

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miso" (*"Jûbako ni torimakaretaru shiho-ga-mise"*). His red miso and his fine sake made with water from a waterfall (*takisui*) are very popular.

1822–Pounded natto (*tataki natto*), an instant food made of chopped natto, sells for about one-fifth the price of tofu on a weight basis. The restaurant Sasa no Yuki in the Negishi area of Edo, becomes well known for its tofu cuisine.

1832–Shoyu production in Noda reaches 23,000 koku (1 koku = 180 liters or 47.6 gallons), compared with only 17,000 koku in Choshi. Thus Noda passes Choshi in shoyu production.

1839–Shibata Kyuo (1783-1839), a follower of Shingaku, writes *Zokuzoku Kyuo Dowa* in which he pens words that later become famous: "In a place where the cuckoo can sing freely, you have to walk 3 *ri* (1 *ri* = 2.445 miles or 3.924 km) to buy your sake and 2 *ri* to buy your tofu" (*Hototogisu jiyu jizai ni naku sato wa, sakaya e san ri, tofu-ya e ni ri*). Shingaku, founded by Ishida Bangai, is a popular teaching of the time combining Shinto, Buddhism, and Confucianism (*Jugaku*). It emphasizes that "to understand heart/mind is the most important thing."

1845–Inari-zushi becomes very popular in Edo. It originated around Hiranaga-cho (presently Sadacho 1-chome, Chiyoda-ku, Tokyo). It is made with deep-fried tofu pouches (*abura-agé*) stuffed with rice or okara and sells for 7 *mon* each.

1851–There are now 140 miso manufacturers in Edo. Half of them are in the Hongo area of Tokyo.

1853–Kitagawa Morisada (born 1810) writes *Morisada Manko*, the story of his life during the Edo period. In it he says of tofu: "In the Kyoto-Osaka area it is soft, white, and delicious, but in Edo [today's Tokyo] it is hard, not white, and not tasty." Of miso he says: "In the Kyoto-Osaka area many people make their own miso each winter, but in Edo people buy red miso and Inaka miso (from the countryside), and nobody makes their own miso." Concerning the sale of natto (*natto-uri*) he says: "Cook soybeans, ferment them overnight, then sell them. In the old days, natto was sold only in the winter, but recently it has also come to be sold in the summer."

1857–Soybean varieties brought back from Japan by the Perry Expedition are distributed to the U.S. Commissioner of Patents.

1858–Eitaro, a Japanese confectionery shop in Nihonbashi, Edo, starts selling Amanatto [sugar-sweetened red beans] made from Kintoki Sasage for the first time. Sasage is a type of cowpea [*Vigna sinensis*].

1864–For the first time shoyu made in the area around Edo (*Kanto shoyu*) is permitted to use the term "highest quality shoyu" *saijo shoyu* to describe the product.

1865–Inflation in Edo. The prices of rice, sake, miso, oil, vegetables, fish, etc. skyrocket. The Tokugawa Shogunate (*Bakufu*) orders people to lower their prices and forbids holding back or buying up goods. Address: Norin Suisansho, Tokei Johobu, Norin Tokeika Kacho Hosa.

1006. White, William Nathaniel; Van Buren, J.; Camak, J. 1868. Gardening for the south: or, How to grow vegetables and fruits. New York, NY: Orange Judd and Co. 444 p. See p. 238.

• ***Summary:*** "Japan pea.–(*Soja hispida*). This is an erect-growing, rough-hairy, annual Leguminous plant, with a woody stem, growing some three feet high, branching near the ground, with ternate leaves, resembling those of the Kidney bean. There are three varieties; those with white, red, and yellow seeds.

"They are planted at the same time with Kidney beans in rows 3 feet apart and 2 feet in the row, leaving but one plant in the hill; cultivate as corn. The peas, when ripe, after soaking over night, are prepared for the table like Kidney beans, and are largely used for preparing the soy sauce of Japan and China." Address: 1, Athens, Georgia.

1007. Lea and Perrins. 1869. Classified ad: Lea and Perrins' Worcestershire Sauce... *Times* (*London*). April 10. p. 2, col. 6.

• ***Summary:*** "Lea and Perrins' Worcestershire Sauce, pronounced by connoisseurs to be 'the only good sauce.' Sold wholesale by Crosse and Blackwell, and retail by grocers and oilmen universally." Address: [England].

1008. Jephson, Richard Mounteney; Elmhirst, Edward Pennell. 1869. Our life in Japan. London: Chapman and Hall. xviii + 428 p. Illust. No index. 23 cm. Facsimile edition reprinted in 2002 by Ganesha Publishing (London) and Edition Synapse (Tokyo). Series: Japan in English, Vol. 14.

• ***Summary:*** This is largely a silly book, that tries to be amusing, but ends up being foolish. It's about Englishmen riding horseback and hunting in Japan, while taking many opportunities to belittle Japanese culture and religion–although there are some parts of Japanese culture that they appreciate. The authors arrived in Japan on 9 May 1866 after having been in Hong-Kong for a year. At breakfast in Japan, one of them, "suddenly changing his tone to one of reckless indifference,... tell the cook to make some more of that grill, with no end of Cayenne pepper and Worcestershire sauce in it!" (p. 62).

"Extreme cleanliness characterises not only their dwellings, but their food, manner of cooking, serving it, &c. As an instance to show how well assured we became of this, we may mention that on more than one occasion, when returning home late at night, we have partaken of the delicate seaweed soup that is hawked about in the streets of every town, and that without any fear of either the materials of the soup itself, or the cups we drank out of, being less clean than at our own table. When you come to consider that the price of the soup rendered it accessible to the meanest coolie,..." (p. 381). Note: This may well have been miso soup with

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wakame.

"They consume little or no meat, except in the form of soups;..." (p. 381).

"The first Japanese dinner we ever went to, caused us more wonderment at the time, and appeared to possess more novelty, than anything we had ever seen before. This was an entertainment given at Nagasaki by some of the chief officers of Prince Satsuma to the British Admiral and his friends" [on 28 July 1866] (p. 382). Every aspect of the 40-course dinner is described in great detail. "The drink was a spirit called *saki*, which is extracted from rice." (p. 383). It is consumed hot.

The Bill of fare, describing briefly each of the 40 courses, is given; it includes "1. Bitter Green Tea (whipped)," hot Saki, seaweed, salted plums, "14. Soup of fish and seaweed," and "27. Soup of Vermicelli, with 'Soy' [probably sauce] and Red Berries." (p. 385-86). Address: Englishmen.

1009. Martens, Georg Matithias von. 1869. Die Gartenbohnen. Ihre Verbreitung, Cultur und Benuetzung. Zweite vermehrte Ausgabe [Garden beans. Their distribution, culture, and utilization. 2nd expanded edition]. Ravensburg, Germany: Druck und Verlag von Eugen Ulmer. 106 p. See p. 103-05. With 12 color plates. 28 cm. [94* ref. Ger]

• ***Summary:*** The author discusses the soybean under the name *Soja hispida* Moench, gives a botanical description of the species, then and gives a classification of 13 varieties that he had secured from various sources, of which he apparently grew but one. He grew that one by his window in Stuttgart, having obtained it from the village of Daguiga, near the city of Aigun [or Ai-hun, in northeast Heilungkiang province] on the Amur River. He planted the seeds on May 23 and they were ripe by Sept. 24. He describes their area of distribution in East Asia, from the 50th north latitude in Siberia down to the Moluccas near the equator, but notes that their center of cultivation is Japan, where they are made into a type of butter named Miso, and a famous sauce named Soja that stimulates the appetite (*eine Art Butter, Miso genannt, und eine berühmte, den Appetit reizende Sauce, die Soja,...*). He considers these two delicacies fit for gourmets and epicures. The sauce was introduced to Europe by the English. In China, the beans are cooked to a white, thick paste (*Brei*), tofu (*Teu hu*), one of the most popular foods there.

In Europe, with suitable care, soybeans can be made to ripen / mature as far north as 53° north latitude, near Berlin. Thus, during the last continental blockade [first, of the British, by Napoleon, based on his 1806 Berlin Decree and 1807 Milan Decree; then in 1807 the British retaliated with their own sort of blockade], which is still an infamous memory, in the lands that at that time were part of the French empire, the soybean was prized and cultivated for a while as a coffee substitute (*als Kaffeesurrogat*). Later the milk vetch (*Kaffeewicke; Astragalus baeticus* L.), the chufa or earth almond (*Erdmandel; Cyperus esculentus* L.), and other coffee substitutes were used, but they have all been long since forgotten–except for chicory [*Cichorium intybus;* the thick roots of this perennial herb are dried, ground, and roasted, then used to flavor or adulterate coffee].

Martens divides the species into 3 subspecies based on the form of the seed, under which the varieties are named according the color and size of the seed. In this, he creates an entirely new system for classifying and naming soybeans.

I. *Soja elliptica* Martens. Seeds oval. 1. *S. elliptica nigra.* Seeds black and elongated; obtained through his son from Shanghai and Paris. 2. *S. elliptica castanea.* Seeds brown and elongated; obtained from Chefoo (China), Venice (Italy), and Berlin. 3. *S. elliptica virescens.* Seeds greenish yellow and elongated; obtained from Shanghai and Paris. 4. *S. elliptica lutescens.* Seeds yellow; brought by Mr. Schottmueller from Chefoo as "true Chinese oilbeans."

II. *Soja sphaerica.* Seeds globose/spherical. 5. *S. sphaerica nigra.* Seeds black, large; obtained from Yokohama and Nagasaki, Japan. 6. *S. sphaerica minor.* Seeds black, small; obtained from Japan and Sumatra. 7. *S. sphaerica virescens.* Seeds greenish; obtained through his son from Yokohama as "Ao mame" and from Shanghai. 8. *S. sphaerica lutescens.* (The *Soja pallida* of Roxburgh). Seeds pea-colored to pea-yellow, large; obtained from Dr. Schuebler in Oslo (Christiana), Norway, as "New Japan peas," under which name they have been recommended and popularized in the United States. 9. *S. sphaerica minima.* Seeds yellow, small; obtained through his son as "Shiro mame" from Yokohama.

III. *Soja compressa.* Seeds compressed. 10. *S. compressa nigra.* Seeds black and flat, the largest of all soybeans; obtained as "Kuro Mame" from Yokohama. 11. *S. compressa parvula.* Seeds black, small; obtained via Schotmueller from Chefoo. 12. *S. compressa virescens.* Seeds greenish; obtained from Chefoo and from Berlin as *Soja ochroleuca* Bouché. 13. *S. compressa zebrina.* Seeds brown banded with black like a zebra; obtained from the Berlin Botanic Garden.

Note 1. This is the earliest document seen (Aug. 2002) which states clearly that soybeans have been (or can be) used as a coffee substitute (*als Kaffeesurrogat*). It is also the earliest German-language document seen (March 2001) that mentions soy coffee.

Note 2. This is the earliest document seen concerning soybeans in Norway. It is not clear whether or not the soybeans were being grown in Norway at this time.

Note 3. This is the earliest German-language document seen (May 2009) that mentions tofu, which it calls *Teu hu.*

Note 4. This is the earliest German-language document seen (April 2012) that uses the term *die Soja* to refer to soy sauce.

Note 4. This is the earliest document seen that (Aug. 1999) that divides the species into 3 subspecies based on the form of the seed, under which the varieties are named

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according the color and size of the seed. Martens is the first to use a number of such terms in connection with the soybean, such as "nigra" "castanea," "virescens," "lutescens," "elliptica," "Soja elliptica," "Soja pallida," etc.

Note 5. This is the earliest document seen (Feb. 2007) that uses the word "nigra" to refer to black soybeans.

Note 6. This is the earliest document seen (July 2001) in any language that contains the word "Chefoo," a port city in Shandong province, presently named Yantai (Wade-Giles: Yen-t'ai), and long associated with soybeans and soybean cake.

Note 7. Also discusses *Psophocarpus tetragonolobus* Dec. (p. 101). Address: Doctor der Naturwissenschaften, Germany.

1010. The Indian cookery book: A practical handbook to the kitchen in India, adapted to the three presidencies; Containing original and improved recipes in every department of Indian cookery... By a thirty-five years' resident. 1869. Calcutta, British India: Wyman & Co. 2 p. + 1 + 123 p. See p. 49, 79, 81. 19 cm. 1st edition.
• ***Summary:*** Recipe 156 for "Rolled mutton" (p. 49) states: "add a tablespoonful each of vinegar, mushroom catsup, soy, and lemon pickle, and a teacupful of port wine;..."

Recipe 312, "To make a quart bottle of fish or meat sauce," directs: "To half a bottle of vinegar put one ounce of cayenne, two cloves of garlic, one tablespoonful of soy, two of walnut, and two of mushroom catsup. Let it stand six days, shaking it frequently: then add the remaining half of the bottle of vinegar, let it stand another week, strain, and put it into small bottles."

Recipe 329, "Jelly for cooked birds, meats, or made dishes" notes: "; then, with a dozen cloves and the juice and rind of a lemon, boil it again, adding a tablespoonful of soy or any other dark-coloured, rich, and well-flavoured sauce;"

"Lea & Perrin's Worcestershire sauce" is mentioned on pages 35 and 76; plain Worcestershire on pages 41 and 45. "Catsup" is mentioned on 9 pages, of which 8 are "mushroom catsup" and 1 is "walnut catsup." "Harvey" sauce is mentioned only once (p. 41).

In 1880 a very similar edition was published but with different pagination (123 p.). The publishers were: Calcutta: Thacker, Spink, and Co. Bombay: Thacker & Co. Madras: Higginbotham & Co. It had a recipe index. Address: Calcutta, India.

1011. Wright, A.S. 1869. Wright's book of 3000 practical receipts: or, Complete book of reference... New York, NY: Dick & Fitzgerald. 359 p. See p. 231. 19 cm. *
• ***Summary:*** Page 231: "Harvey's Sauce. Quin sauce, 48 parts; soy [sauce], 16 parts; cayenne, 1 part. Mix and steep for one week, then pour off the clear liquid."

Note: On spine: *Wright's American book of 3000 practical receipts.* First published in 1852 under title: *The American receipt book.* Address: USA.

1012. *New York Times.*1870. The Chinese. Jan. 2. p. 5.
• ***Summary:*** From the *St. Louis Democrat* [Missouri], Dec. 30. About 250 Chinamen arrived on Tuesday night. "The scene at the depot at the time the train arrived is said to have been ludicrous in the extreme. The word was given to John to 'go ashore,' and at once there was a deafening clamor and confusion of tongues... The chatter resembled that of a council of monkeys, but all were good-natured. After getting on board the [steamer] *Mississippi*, the Celestials 'simmered down,...' and were soon dreaming of their far-away homes across the Pacific, and the wives and children left behind.

"Yesterday the lemon-colored travelers were visited on board the *Mississippi* by thousands of our citizens, who were anxious to see what they looked like." "All wore the national pig-tail..." They were going to work on a railroad in Texas.

It was found necessary to establish a Chinese store in the vicinity of the place of labor. As a result of negotiation, the following goods were bought in Texas: "foo chuck, or bean curd sticks [dried yuba sticks], 10 boxes, or 400 pounds;... 10 boxes soy [sauce], 10 jars catsup,..." "The men are to receive $30 coin per month."

Note 1. This is the earliest English-language document seen (Oct. 2008) that uses the term "foo chuck" or the term "bean curd sticks" to refer to yuba.

Note 2. This entire article is written in a condescending and racist tone.

Note 3. This is a rare example of Chinese consuming "catsup." What is this sauce made from? Is it the traditional Cantonese catsup? Are the yuba and the catsup imported? Probably.

1013. *Times (London).*1870. Worcester Cathedral restoration. July 4. p. 9, col. 3.
• ***Summary:*** Messrs. Lea and Perrin have promised to give 250*l.* [£250] each. Lord Sandys has promised 200*l.*

Note: Although this article does not mention Worcestershire sauce, it shows that one Lord Sandys, probably not the one who is said to have given Messrs. Lea and Perrin the original recipe for Worcestershire sauce, lives in Worcestershire (See Keogh 1997, p. 29-30). Address: [Worcestershire, England].

1014. *Argus (The) (Melbourne, Victoria, Australia).*1870. Tuesday, December 13, 1870. Dec. 13. p. 4-5. See p. 5.
• ***Summary:*** In Melbourne: "Three other cases before the District Court yesterday... Some time was occupied in hearing a couple of cases in which the defendants were charged with selling spurious Worcestershire sauce, bearing an imitation of the label of Lea and Perrins, the well-known manufacturers. James Dunlea and James Nicholson, of 107 Elizabeth-street, and Thomas and Richard Fogarty, of Queensberry-street, Hotham, were charged,

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on the information of Wm. R. Virgoe, jun. [agent for Lea and Perrins], with having on the 20th November last sold certain bottles containing, an article called Worcestershire sauce, together with a forged or counterfeited trade-mark, knowing the same to be the forged or counterfeited trade-mark of Lea and Perrins, used by them in an article known as Worcestershire sauce.

"The evidence showed that the bottle sold by Dunlea and Nicholson was labelled in very close imitation of the genuine, the words 'equal to' being inserted unpretendingly in much the same manner as *à la* was used for Wild's Carlisle ale, but that sold by the Fogarty's shopman was not a close imitation, and in fact the imitation seemed to consist in calling the contents 'Worcestershire sauce.' The defence was that there was no proof of a guilty knowledge on the part of the defendants. After hearing the evidence, the Bench said they did not feel disposed to impose a penalty in these cases. On the one hand, no person who viewed the bottles could come to any reasonable conclusion other than that they were a gross and scandalous imitation; but, on the other hand, the evidence did not show that the defendants had been knowingly aiding and abetting and gaining by the fraud. If any further sales took place the case could be very easily presented to the Bench again with a knowledge of the fraud on the part of the defendants. The facts were beyond dispute, but the great difficulty was in bringing home to the defendants that they had acted with a knowledge of and had profited by the fraud. The cases were, therefore, dismissed."

Note 1. This is the earliest document seen (March 2012) that uses the word "trade-mark" (or "trademark") in connection with Worcestershire sauce.

Note 2. An article titled "Trade-mark prosecutions," describing a different case related to Lea and Perrins' Worcestershire sauce, appeared 3 days later in this newspaper on Dec. 16 (p. 7).

1015. Cowieson's Warehouse. 1870. Classified ad: Sauce. *Scotsman (Edinburgh)*. Dec. 23. p. 1.

• ***Summary:*** "Sauce (Lea & Perrin's Real Worcester), 2*s*. 6*d*...

"Sauce (Harvey's Worcester), 9*s*. Doz.; Indian Soy [sauce], Chutnee, Mixed Pickles...." Address: [Edinburgh].

1016. *Morning Post (New York City)*.1870. Lea & Perrins Sauce. Dec. 23. [1 ref]

• ***Summary:*** Discusses cases against certain parties in this city for manufacturing and selling a counterfeit article of Lea & Perrin's Worcestershire Sauce.

1017. *Press (The) (New York City)*.1870. About Sauce (Letter to the editor). Dec. 26. [1 ref]

• ***Summary:*** "To the editor of *The Press*.

"In the issue of the *Morning Post* of the 23d inst. there is an error in what is stated in reference to the cases against certain parties in this city for manufacturing and selling a counterfeit article of Lea & Perrin's Worcestershire Sauce. The fact that a counterfeit sauce was made and sold in this community was abundantly proven. The man A.A. Smythe, who was the manufacturer of the article, pleaded guilty to the charge, and was sentenced by the Court in May last.

"In reference to the case of Henry Pohl, tried Thursday last, the evidence him showed conclusively that he had been dealing in the counterfeit article and his acquittal was owing to a mere technicality. Thomas R. Patton, who is still under bail, will be tried in due course. John Duncan's Sons, special agents for the sale of Lea & Perrin's Worcestershire Sauce in the United States, intend to prosecute, to the full extent of the law, all persons whom they have or shall hereafter discover engaged in making or selling a counterfeit of Lea & Perrin's Sauce."

1018. Chalmers, John. 1870. An English and Cantonese pocket-dictionary, for the use of those who wish to learn the spoken language of Canton Province. 3rd ed. Hong Kong: London Missionary Society's Press. iv + 146 p. See p. 69. 19 cm. [Eng; Chi]*

• ***Summary:*** On page 69 is the Cantonese term for soy sauce, *shi-yau*. A 5th edition was published in 1878 in Hongkong, and a 7th edition in 1907 in Hongkong.

1019. Croly, Jane Cunningham. 1870. Jennie June's American cookery book: Containing upwards of twelve hundred choice and carefully tested receipts... New York, NY: The American News Company. vii + 379 p. Index. 19 cm.

• ***Summary:*** Soy [sauce] is used as an ingredient in the following recipes: Mock turtle soup (p. 25). Berkshire sauce (p. 101). A sauce for made dishes (p. 101).

The recipe for "Tomato soy" (p. 123-24) contains no "soy" sauce; the word "soy" does not appear in the body of the recipe, only in the title.

Worcestershire sauce is used as an ingredient in two recipes: Calf's head hash (p. 61). Roast ducks ("Make a rich gravy, into which put a table-spoonful of Worcestershire sauce," p. 85-86).

A quotation on the title page by the English author John Ruskin (1819-1900) states: Cookery "means the knowledge of Medea, and of Circe, and of Calypso, and of Helen, and of Rebekah, and of the Queen of Sheba. It means the knowledge of all herbs and fruits and balms and spices–and of all that is healing and sweet in the fields, and groves, and savory in meats–it means carefulness, and inventiveness, and watchfulness, willingness, and readiness of appliance. It means the economy of our great-grandmothers, and the science of modern chemists–it means much testing and no wasting–it means English thoroughness, and French art, and Arabian hospitality, and it means in fine, that you are to be perfectly and always 'ladies'–'loaf givers.'"

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Note: This is a remarkable book by a remarkable woman. Born in England, she was the daughter of a Unitarian preacher, whose "unpopular beliefs reportedly led to the stoning of their house and the impetus for the family's move to the United States in 1841." She became a pioneering American woman journalist, author, feminist (in the woman's club movement), and author of *The History of the Woman's Club Movement in America* (1898) (MSU biography). Address: Author of "Talks on Women's Toppics," etc..

1020. Maclay, Robert Samuel; Baldwin, Caleb C. comp. 1870. An alphabetic dictionary of the Chinese language in the Foochow dialect. Foochow: Methodist Episcopal Mission Press. xxiv + 1107 p. See p. 773. 23 cm (8 vo.). [7 ref. Eng; Chi]

• ***Summary:*** Each Chinese character has a number, in parentheses directly above it. Below it is the Mandarin pronunciation. To the upper right of the first character for a certain sound in the Foochow dialect is written that sound. Tones are given for each character.

In the text below, we give the page number and the Mandarin pronunciation, followed by the Foochow pronunciation in parentheses.

Introduction (p. vii): "The work contains 928 different syllabic divisions or sections, as written in Roman letters and numbered in the text. This of course does not include all the distinctions arising from difference in tone."

Page 95 Chiang (Chiong): "A sauce, pickle, brine or condiment, made of salt and sugar [sic], used in cooking; relishes, seasonings, like oilmen's stores; salted preparations: com., *tién chiong* sweet condiments; *chiong heong* or *chiong hwong taing* a shop where condiments are sold; *chiong e* sauces, condiments; Coll. *tau chiong* a bean relish.

Page 234 Fu (Ho): Corrupted, rotten, spoiled. Coll. *tau ho* bean curd; *ho p'iéng* thin slices of curd; *ho kang* dried bean curd [pressed tofu].

Page 401 Chüan (Kwong): *kwong chiéng* rolls of glutinous rice (in thin crusts of bean-curd).

Page 435 K'o (K'o): To cook thoroughly. *k'o tau ho* to cook bean curd thoroughly.

Page 596 Ya (Nga): A germ, plumule, bud, or sprout. *tau nga* bean sprouts.

Page 763 Ssu [Shu] (Seuk): A general term for edible kinds of pulse.

Page 773 Shih (Sié): Salted eatables, as beans, etc., dried and used as relishes... *sié iu*, soy [sauce]; *iu sié* soy-beans or residual grains; *tau sie kiong* a sauce of salted beans and ginger; *sié iu ch'iong*, a soy [sauce] factory.

Page 783 Shao (Sieu): Coll. *sieu king chio* Sieuhing bean curd.

Page 847 Tou (Tau): Beans, peas, legumes. *tau sié* salt-bean relish; *tau ho* bean curd; *tau kang* (coll. *tau kwang*) cakes of bean curd; *tau nga* bean sprouts, made by covering so as to heat or ferment; *tau ho tea* "curd chopsticks"–the film [yuba] from the surface of the curd [hot soymilk] made into rolls [probably dried yuba rolls]; *tau ho peng* a bean-curd press; *peng tau leng* crushed beans; *tau chio* fermented bean-relish.

Note: This is the earliest document seen (Nov. 2011) that uses the term "fermented bean-relish" or the term "salt-bean relish" (with or without hyphens) to refer to fermented black soybeans (*douchi*).

Soy is also mentioned on pages 157 right side ("to diffuse the soy by tossing"), p. 227 right (flavored with soy), p. 257 right (Sort of pork balls seasoned with soy and unions), p. 365 right ("scalded with seasoning of soy, &c."), p. 557 left ("to fry with a seasoning of oil, soy, etc.").

Note: The word Foochow is also spelled Fuzhou (pinyin), and Fuhtchou. Robert S. Maclay lived 1824-1907. Address: Rev., D.D., of the Methodist Episcopal Mission; 2. Rev., A.M., of the American Board Mission [Foochow, China].

1021. Williamson, Alexander. 1870. Journeys in north China, Manchuria, and eastern Mongolia: With some account of Corea. 2 vols. London: Smith, Elder and Co. Vol. 1, xx + 444 p.; Vol. 2, viii + 442 p. Illust. No index. 19 cm.

• ***Summary:*** This is a travelogue by a man whose purpose is "the distribution of the Scriptures and books and tracts in the Chinese language throughout the interior of North China. While his main interest is religious and moral (he is very critical of idolatry, ancestor worship, opium smoking, *fung shui* / geomancy, etc.), he also records many observations concerning the daily life of the people. Unfortunately the book has no index.

In volume I, Chapter 7, titled "Province of Shan-tung [Shandong], is a section on agriculture which states (p. 110): "Pulse is divided into three classes, each comprehending several varieties. The first is the common pulse, embracing the yellow and black varieties. The one is chiefly used for the manufacture of bean-cake and oil, and the other for feeding cattle. The second class comprises the small blue bean, the Kiang-teu, the small beans, including the variegated, purple, and black, and the Wang-teu, which has a bitter taste. This latter is sown in autumn like wheat, and comes originally from Manchuria. The third class, is the kitchen-bean, embracing the eyebrow bean, the monthly bean, the long-pod pea, and the fragrant bean. From pulse they also make a sauce of excellent quality called 'soy,' and also a bean-curd which is much used for food (Footnote: Regarding the manufacture of bean-cake, bean-oil soy, and bean-curd see *Medical Missionary in China*, p. 63-69. Dr. Lockhart)."

In describing his journey from Peking to Che-foo in November, he states (Vol. 1, p. 202-03): "Here we met many of their extraordinary wheelbarrows moving along on dry ground with a sail set; each barrow having a great wheel in the centre, finely balanced. Those we saw were laden

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heavily, and had a large sheet of cloth set on a frame-work in front; many of these sails were so rigged as to be capable of being raised or reefed at pleasure, the ropes or braces being attached to a hook close to the driver. We have never seen these wheelbarrows without pity; the strain to the men who manage them is enormous: indeed, we have never witnessed human beings under such heavy labour. We met many with fourteen bean-cakes on one barrow, equal to seven small donkey-loads."

Also mentions ground-nuts (p. 113) in Shan-tung. In Shan-si, in the war-torn town of Hoa-chow, he "could get nothing to eat but bean-cake curd [tofu]; and no dishes to eat even that in" (p. 370).

Volume II includes extensive travels in Manchuria. "Pulse [probably the soybean] is grown in all directions, and is one of the most important crops: there are several varieties, as in Shan-tung, and the purposes for which it is used are much the same" (p. 42). "Oil is extracted from several plants, chief among which is the *Sesamum*, which yields an oil used much in cooking. Next is hemp, the oil of which is used both for cooking and in lamps" (p. 43). Castor oil is also used; soy is not mentioned.

In central Manchuria: "Among the agricultural products, pulse stands first in importance as an article of food and of export;... it is sown in May and reaped in October" (p. 64). "We found the poppy under cultivation in all quarters... Natives told us that it was much more profitable than pulse or any kind of grain... Sad is the havoc this drug is making in China, and the worst is yet to come" (p. 65).

Appendix C (p. 437-38) concerns agricultural observations made by the author in 1868 in and around Chefoo. For example, on May 5, rice, pulse, and sesamum are sown. Sept. 7–Sesamum reaping. Oct. 8–"Barley sowing; pulse and yellow beans reaping; peanuts."

Appendix D (p. 439-42) contains two lists of plants collected by the author in 1869. The first is from Shan-tung. Among the Leguminosæ are "Glycine sp." and "Medicago sativa" [alfalfa]. The second is from North China and Manchuria. Under Leguminosæ the peanut is mentioned, but not the soybean.

Note 1. Rev. Alexander Williamson lived 1829-1890.

Note 2. This is the earliest English-language document seen (Feb. 2004) that uses the term "bean-cake curd" to refer to tofu.

Note 3. This is the earliest English-language document seen (March 2007) that uses the term *Medicago sativa* to refer to the scientific name of alfalfa. Address: Rev., B.A., Agent of the National Bible Society of Scotland, Lochwinnoch, near Glasgow, Scotland.

1022. Wood, John George. 1870. The natural history of man: Being an account of the manners and customs of the uncivilized races of men. Vol. 2 of 2. London: George Routledge and Sons. viii + 864 p. See Vol. 2, p. 808, 810. Illust. Index. 25 cm.

• ***Summary:*** One of the nations deemed "a partial civilization" by the author is China. In discussing chopsticks he states (p. 808-10): "The adroitness displayed by the Chinese in the use of these implements is worthy of all admiration. I have seen them pick up single grains of rice with the chopsticks, dip them in soy [sauce], and carry them to the mouth with perfect precision;..."

"As a rule, every Chinaman who can afford so cheap a luxury has his chopstick-case hanging from his girdle." "Sometimes, however, a wealthy man will carry a much more complicated set of table apparatus, a very good specimen of which, kindly lent by Mr. Wareham, is shown in the illustration. First we see a cylindrical case suspended by a strap, and, on examining it, we find that the top and bottom are moveable, and slide up and down the strap. Within this case are the usual chopsticks, the knife, and the toothpick, but beside them there is a spoon for eating soup, a neat little quatrefoil saucer for soy, and a peculiar two-pronged fork, with its prongs united in the middle by a floriated ornament." Address: Rev., M.A., F.L.S., etc., etc.

1023. Yeats, John. 1870. The natural history of commerce. With a copious list of commercial terms and their synonyms in several languages. London & New York: Cassell, Petter and Galpin. xvi + 436 p. See p. 191. Index. 19 cm.

• ***Summary:*** In Part II: The Commercial Products of the Vegetable Kingdom, in Chapter I on Food Plants, in section 7 (p. 191) on Miscellaneous Food Plants, we read: "Soybean (*Soja hispida;* natural order *Leguminosæ*).–A sauce or catsup, as thick as treacle and of a clear black colour, called Soy, which is much esteemed, is made from the beans of this plant by the Chinese, and sent to us from India in considerable quantities. From 500 to 600 gallons are annually imported."

Note 1. This is the earliest English-language document seen (Feb. 2007) that contains the word "soybean" (or "soybeans"), written as one word.

The soybean seems to be a little-understood afterthought in this book. In this chapter it is grouped with onion, truffles, morel, and carrageen or Irish moss. It is not listed under soy, Soja, Dolichos, or Glycine in the chapters on leguminous plants (p. 137) or oleaginous plants (p. 204). Nor is it listed in the index nor in the lengthy etymological appendix.

Note 2. The soy sauce described by Yeats as "catsup, as thick as treacle and of a clear black colour" might be a sweet soy sauce (*ketjap manis*) from the Dutch East Indies. It is certainly not the more widely used Japanese soy sauce (shoyu).

The author, a Doctor of Law (LL.D.) is also a "Fellow of the Geological Society of London, of the Royal Geographical Society, Member of the Society of Arts, etc. Assisted by several gentlemen."

Also in Part II, p. 207 we read: "Sesame oil... is

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frequently used for the adulteration of balsams and volatile oils." Address: Peckham, London, England.

1024. Lowell, James Russell. 1871. My study windows. Boston, Massachusetts: James R. Osgood and Company. 433 p. See p. 25. Jan. No index. 19 cm.
• ***Summary:*** In Chapter 2, titled "A good word for winter," we read (p. 25): "... a discourse on the probability of making missionaries go down better with the Feejee-Islanders by balancing the hymn-book in one pocket with a bottle of Worcestershire in the other..."

Note 1. James Russell Lowell, an American essayist and poet, lived 1819-1891.

Note 2. According to the *Bibliography of American Literature* under Lowell, this book was first published in 1871 by James R. Osgood and Co. of Boston. It went through 4 printings during the period Jan. 20 and August 21 of 1871, each with minor changes but no changes in pagination. Address: A.M., Prof. of Belles-Lettres in Harvard College.

1025. *New York Times.*1871. Proposals (Ad). Feb. 2. p. 7.
• ***Summary:*** "Proposals in duplicate will be received by the undersigned until 12 M [Midnight] Saturday, March 4, for the following Subsistence Stores:... 240 bottles of Worcestershire Sauce, packed 12 in a case, imported 'pints.'... Major W.W. Burns, Chief C.S. Department of East." Address: Army Building, Corner of Houston and Greene sts., New York City.

1026. Stanton & Co. 1871. Classified ad: Direct importation. *Chicago Tribune.* Dec. 21. p. 1.
• ***Summary:*** "India Soy [sauce], Mushroom Catsup, Walnut do. [ditto = Catsup], Kato's Gensis [sic] Sauce,... China Soy, in elegant vases, Royal Table Sauce, in elegant vases, Soho do., John Bull do., Athenæm do." Address: Indiana-Av. & Twenty-Second-St.

1027. Balfour, Edward. 1871. The Cyclopaedia of India and of eastern and southern Asia, commercial, industrial, and scientific; products of mineral, vegetable, and animal kingdoms, useful arts and manufactures. 2nd ed.: Soy [sauce]. Madras, India. Printed at the Scottish and Adelphi presses. See vol. 1, p. 426, 707, 709, 277 (near end of book). 26 cm. Reprinted in 1985 by International Book Distributors, Dehra Dun, India. [6 ref]
• ***Summary:*** Page 426: Bhut, Hind. [Hindi]. Said to be the Soy bean, the Soja hispida.

Butters, vegetable (p. 707): "Mijo of Japan [Miso of Japan]. Butter from Dolichos soja."

Page 709: "Butwas, Hind. Glycine." Note: It is not clear whether or not this refers to the soybean.

The section on "Cochin-China" [today's south Vietnam] states (p. 277, near end of book): "They eat vermin, and the flesh of the crocodile: hatched eggs with them are a delicacy, and their favourite sauce is a kind of soy, in part, at least, composed of the juices of putrid fish, and which, both from taste and odour, would be intolerable to any other people." Address: L.R.C.S.E., Inspector General of Hospitals, Madras Medical Dep. [India].

1028. Merck, Klemens, ed. 1871. Neustes Waaren-Lexikon fuer Handel und Industrie [Newest dictionary of products and commodities for trade and industry]. Leipzig, Germany: Verlag von Otto Spamer. 568 p. See p. 493. [Ger]
• ***Summary:*** Soya is a brown, salty liquid, imported from China and Japan, and used as a seasoning on roasts (*Braten*), sauces, fish, and other foods, but which, in order to be pleasant, must be used sparingly. This article is prepared from a small bean of the legume family named *Dolichos Soya*. The beans are cooked, mixed with roasted wheat in salt water, and allowed to stand for 2 to 3 months. A type of fermentation takes place, and the process apparently resembles that of pickling cabbage or cucumbers. Finally, the liquid is pressed out of the ripened or fermented mass and filtered. The product comes into the trade sometimes in corked glass bottles, and sometimes (from Japan) in small kegs (*Fässchen*). The Japanese product is the better of the two; it is used daily by the people in Japan. The product is, in general, of rather inconsistent quality; the best products are recognized by their aroma and taste. It is presumed that great adulteration takes place with this product. In England, an investigation was undertaken by shaking some of the product in a glass. If a shiny, yellowish-brown film did not form on the surface, the product was considered to be of poor quality. In 1867, England imported 11,493 gallons of this sauce and, of that, exported 2,166 gallons.

Also discusses: *Cyperus esculentus* (*Erdmandeln*, p. 125), peanuts (p. 135), and sesame oil (p. 484).

The full subtitle reads as follows: *Beschreibung der im Handel vorkommenden Natur- und Kunsterzeugnisse, namentlich der Kolonial-, Material-, Droguerie- und Farbwaaren, Mineralien- und Bodenprodukte, chemisch-technischer und anderer Fabrikate. Unter Mitwirkung bewährter Fachmänner bearbeitet von...* [Description of natural and artificial products in commerce, especially of the colonial materials, drugs, and dyestuffs, minerals, and other products of the earth / agricultural products (*Bodenprodukte*), chemical-technical and other manufactured goods. With the assistance of well-known experts].

Note 1. *Bodenprodukte* ("products of the earth") probably includes cultivated agricultural products and noncultivated commercial products such as berries, mushrooms, hay, and perhaps even firewood. Note 2. The 4th edition of this book was published in 1890. Address: [Germany].

1029. Orr, N. (Mrs.). 1871. De Witt's Connecticut cook book

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and housekeeper's assistant, containing... New York, NY: Robert M. De Witt, Publisher. 192 p. See p. 64. Illust. No index. 17 cm.

• ***Summary:*** In the section on "Pickles" is a recipe (p. 64) titled "To make Soy [sauce]. Take two quarts of soja beans (Soja hispida) and boil them until soft, add two quarts of bruised wheat, or wheaten grits; keep them in a warm place twenty-four hours, then add a half teacupful of table salt and one gallon of water. Put the whole into a stone jar and keep it tightly closed for three months, frequently shaking it, and then press out the liquor, and bottle for use.

"This is the real Oriental soy. The seeds of this plant, to be cultivated, only require a sheltered situation and to be grown like any other garden bean. It gives a fine flavor to many sauce and made dishes."

Note: The writer realizes that soy sauce is made with soja beans and wheat, but she is not aware of koji. It is hard to imagine how the resulting product would have looked and tasted.

On the same page is a recipe for "Tomato catsup. Boil and press through a hair sieve, half a bushel of fine ripe tomatoes. Add one quart of vinegar, one teacupful of salt, one tablespoonful of cloves, two of black pepper, one of cayenne pepper, two ounces of allspice and six good sized onions.

"Mix all together and boil three hours. Bottle without straining." Address: [USA].

1030. Smith, Frederick Porter. 1871. Contributions towards the materia medica & natural history of China. For the use of medical missionaries & native medical students. Shanghai, China: American Presbyterian Mission Press, and London: Truebner & Co. vii + 237 p. See p. 88, 202-03. 24 cm.

• ***Summary:*** This book, based in part on the famous *Pen-ts'ao kang-mu* by Li Shih-chen (1578-1597), contains a listing of medicinal plants arranged alphabetically by either their popular English name or scientific name. Chinese characters for the plant name, the romanized Chinese name, and key related terms are also given immediately after the main entry. There is no index. The soy bean is listed under "Dolichos soja (*Hwang-ta-tau;* characters = Yellow + large + bean), (*Mau-tau;* characters = hairy + bean).–The hairy, short pods of this Leguminous plant are eaten, when freed from the valves. They are mixed with vinegar and sesamum-oil, and drank as a cooling draught in summer. The ripe, ovoid, yellow beans are used to make bean-curd (*Tau-fu*), a substance largely consumed by the Chinese when vegetables are not very plentiful. It is the cheese of the Chinaman. The beans are ground and pressed to produce the bean-oil, or pea-oil, as it is sometimes miscalled by foreigners. The beans are said to be laxative, peptic [promoting digestion] and nutrient. Bean sprouts (*Tau-ya*), are the germinating beans of this plant, artificially raised in large quantities for food in winter (p. 88).

Note 1. This is the second earliest English-language document seen (Feb. 2000) that refers to soy sprouts, which it calls "Bean sprouts (*Tau-ya*)...

Note 2. This is the earliest document seen (Feb. 2000) that uses the word "laxative" in connection with soy beans.

Note 3. This is the earliest English-language document seen (Feb. 2004) that uses the term "cheese of the Chinaman" to refer to tofu.

Note 4. This is the earliest English-language document seen (Sept. 2006) that uses the term "pea-oil" ("as it is sometimes miscalled by foreigners") to refer to soybean oil

Also on p. 88, under *Dolichos trilobus* (*Koh*) is a description of kuzu. "The Pachyrizus trilobus is sometimes included under this name... A fibre resembling linen, called (Chinese characters) *Koh-pu* or *Kung koh*, of a yellow color, very fine and durable, and much prized in Hankow, is obtained from the climbing branches. The best of this cloth comes from Wu-chang hien (Hupeh), and from Kwang-sin fu in Kiangsi. The root is eaten, although to some extent deleterious, if not thoroughly cooked. A kind of arrow root (Chinese characters), called *Koh-fen*, is made from the root in Ngan-king fu (Nganhwui), Kwang-sin fu (Kiangsi) and at Teh-ngan fu (Hupeh). Emetic, diaphoretic and antiphlogistic properties reside in the root, which is given in fevers, exanthemata and rashes of all kinds, and in bloody fluxes [excessive abnormal discharge from the bowels]. Every part of the plant is officinal" [medicinal].

Soy sauce (p. 202) is listed under "Soy (*Tsiang-yú*)–The condiment known by this name, derived from a Chinese synonyme used by the Japanese, is a black, thin liquid, having an agreeable, saltish flavour, and frothing up of a yellow colour when very slightly shaken. It is the universal sauce of the Chinese and Japanese, and is largely exported to India and Europe as a convenient menstruum for other flavouring substances used as condiments. The yellow beans of the Dolichos soja are boiled very soft, and mixed with any cereal flour in varying proportions, and allowed to ferment and become mouldy. Salt and tea, or boiling water, are then added, and the mixture is then exposed to the sun and dew of the open air for three weeks or a month, care being taken to avoid rain. The liquid becomes much thicker, darker and more uniform in consistence, and after constant stirring is then strained and kept for use. Bran is sometimes used in making it. Large quantities are both sold from the shops and made at home by the Chinese. It is considered to provoke the appetite, and to correct any injurious quality of food. It is laxative, cooling, and an antidotal, according to Chinese estimation. It is sometimes daubed upon burns, scalds, eczematous and leprous sores."

Note: This is the earliest English-language document seen (April 2012) that uses the term "Tsiang-yú" to refer to the Chinese word for soy sauce.

Under "Maccaroni [Macaroni] (Mien-kin)," following the description of the basic kind made from wheat flour

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(which is "a part of the diet of priests and those fasting from animal food"), we read: "A kind of macaroni, very much like foreign macaroni, is made from bean-curd and called *Tau-kin* (bean + muscle, sinew, or tendon)."

Under "wheat," the author discusses the grain itself, "wheaten flour," and "wheaten starch," but he does not mention wheat gluten. Nor are azuki beans (*hsiao-tou*) listed. Bretschneider harshly criticizes this book: "Of little value, unreliable." But Rev. G.A. Stuart, M.D., in his Chinese Materia Medica (1911) states on the title page "Extensively revised from Dr. F. Porter Smith's Work." Smith lived 1833-1888. He wrote the preface in Nov. 1870 from Hankow, China. Address: Medical missionary (from England) in central China [Hankow].

1031. *New York Times*.1872. Worcestershire sauce–Rival manufacturers in court. Feb. 2. p. 7.
• ***Summary:*** "Yesterday morning Mr. John P. Duncan, of the firm John Duncan's Son, grocer, of Union-square, appeared before justice Dowling, at the Tombs Police, and proferred [proffered] a complaint against Messrs. James Stevens and Edward Cole, composing the firm of Stevens & Cole, carrying on business at No. 500 Washington-street, charging them with forging the trade-mark of 'Lea & Perrin's Worcestershire Sauce' and selling a counterfeit sauce put up in exact imitation of the genuine article, of which Duncan & Son are the sole agents in this country.

"The accused were arrested later in the day and arraigned. They both waived examination, and were committed for trial at the Court of Special Sessions in default of $1,000 bail each. Mr. Duncan stated that his firm intended to prosecute all persons found manufacturing or selling the alleged spurious sauce, and propose to make the complaint against Messrs. Stevens and Cole a test case."

1032. House, E.H. 1872. A Japanese statesman at home. *Harper's New Monthly Magazine* 44(262):589-600. March. See p. 598.
• ***Summary:*** The statesman is Kenzo Hirosawa, who is at home in Yeddo [Edo, today's Tokyo], Japan.

"Raw fish!" The writer forces himself to try it. "But is it utterly revolting and untenable? Hardly so. Do I like it, then? Truly, not too well. But I willingly admit it might be worse, especially as it is deftly mitigated by pungent soy. I do not know its name, but it is like salmon in aspect, and in taste like nothing in my particular prior experience"

1033. *Hartford Daily Courant* (*Connecticut*).1872. A Chinese dinner. May 8. p. 1.
• ***Summary:*** From Saint Paul's Magazine: "'The first course,' writes Laplace, 'was laid out in a great number of saucers of painted porcelain... All these *et ceteras*, including among the number a liquor which I recognized to be soy [sauce], made from a Japan bean and long since adopted by the wine drinkers of Europe to revive their faded appetites or tastes, were used as seasoning to a great number of stews which were contained in bowls, and succeeded each other uninterruptedly.'"

1034. Young, Alexander. 1872. Chinese food and cookery. *Appletons' Journal* (*New York City*) 8(181):291-93. Sept. 14.
• ***Summary:*** "The Chinese pork has a shining, flabby appearance which is not attractive to foreign eyes, and its rank, coarse taste does not invite renewed attention from the wary stranger. Cut into thin slices and fried in soy, which relieves the gross flavor of the meat, it is not absolutely repulsive" (p. 291 R.2).

"Among vegetables, of which there is great variety, peas and beans are in high favor. Some kinds of beans are made into soy [sauce], by boiling and powdering the kernels, and fermenting them with yeast; others are boiled and ground, and mixed with water, gypsum, and the juice of yellow seeds, forming bean-jam" (p. 292 R.6). Note: This "bean-jam" seems to be bean curd / tofu!

"The Chinaman, believing that cookery is the test of civilization, regards the carving processes of European and American society as conclusive proof of barbarism. An Englishman's mode of feeding, he says, allies him to the savages of Formosa; the chief labors of the slaughter-house being transferred to the dinner-table, and the principal work of the kitchen being performed by the stomach. 'In remote ages, before we became civilized,' said a polite Chinaman to a correspondent of the London *Times*, 'we used knives and forks as you do, and had no chopsticks. We still carry a knife in our chopstick-case, but it is a remnant of barbarism–we never use it. We sit down to table to eat, not to cut up carcasses'" (p. 292 C.5).

1035. McBean and Sons. 1872. Classified ad: Co-operative prices. *Times* (*London*). Sept. 19. p. 12, col. 3.
• ***Summary:*** "Sauces, Worcester, Lea and Perrin's..."
"Sauces... India soy [sauce], 8*d.*"

1036. *New York Times*.1872. Bankrupt notices. Sept. 19. p. 7.
• ***Summary:*** "United States District Court, Southern District of New York.–In the matter of William B. Fiske and C.D. Lawrence, bankrupts. Notice is hereby given that the undersigned, assignee in bankruptcy of the above-named bankrupts will sell at public auction" the assets of the bankrupts, including "52 cases Worcestershire sauce... William H. Jackson, Assignee."

1037. Buckle, Thomas Henry; Taylor, Helen. 1872. The miscellaneous and posthumous works of Henry Thomas Buckle. 3 vols. London: Longmans, Green, and Co. See vol. 3, p. 24. 23 cm.
• ***Summary:*** In *Common Place Book* (p. 24) under "1485. The soy [sauce] of the Japanese first used in Europe in the

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eighteenth century," are excerpts from four early sources that discuss soy:

"The Japanese soy is also prepared of beans, and turned sour in casks. They say that three years are required for preparing the best soy" (*Golownin's Captivity in Japan*, 8vo, 1824, vol. iii. p. 157).

"Thunberg (*Travels in Japan*, London, 1795, vol. iv. p. 121) says, 'Soy sauce, which is everywhere and every day used throughout the whole empire, I might almost say in every dish, and which begins even to be made use of in Europe, is prepared from soy beans (*Dolichos Soja*) and salt, mixed with barley or wheat.'"

"In 1679, Locke, in his Journal, mentions at London, "Mango and saio, two sorts of sauces brought from the East Indies" (*King's Life of Locke*, 8vo, 1830, vol. i. p. 249).

"At iv. 107, Thunberg says, 'The soy is much better than that which is brewed in China.' The Chinese highly value the Japanese soy, of which they consume immense quantities (see *Dobell's Travels through Kamtchatka, &c.*, 8vo, 1830, vol. ii. p. 325).

"On Soy, see Crawfurd's *History of the Indian Archipelago*, Edinburgh, 8vo, 1820, vol. i. p. 370."

Henry Thomas Buckle (1821-1862) was an English historian, the author of *History of Civilization in India*.

1038. Doolittle, Justus. 1872. A vocabulary and hand-book of the Chinese language, romanized in the Mandarin dialect. 2 vols. in 3 parts. Foochow: Rozario, Marcal, and Company. London: Trubner & Co. New York: Anson D.F. Randolph & Co. Reissued in 1878. [Eng; Chi]

• ***Summary:*** In vol. 1, part 1, p. 272: "Ketchup, (a kind of sauce) shih yu." Note: The two Chinese characters (2 Cc) are printed to the left of their romanized form "shih yu." "Shih" means "fermented black soybeans." We would translate "shih yu" as "fermented black soybean sauce."

In vol. 2, parts 2 and 3. Page 36: Dip in the soy and eat it (Cc).

Page 79: Insipid like bean curd boiled in water (Cc).

Page 433: Ta tou (Cc), Soja hispida, Mön.

Page 443: "Precious as pearls" says a sign in a "Soy and condiment shop" in Canton.

Page 515: Street names in Peking: (1) Bean Curd Lane [Tofu]; Soy Manufactory Lane.

Page 598: Five grains, incl. soja bean (Cc), shu. Address: Rev.

1039. Hepburn, James C. 1872. Japanese-English and English-Japanese dictionary. 2nd ed. Shanghai: American Presbyterian Mission Press. xxxi + 632 + 201 p. 28 cm.

• ***Summary:*** This is Hepburn's 2nd Japanese-English dictionary. The words are arranged alphabetically by their romanized spelling. Each word is written in three ways. After the romanized word (main entry), written in uppercase letters with diacritical marks (which we have largely omitted below), the same word is written in katakana, then again in Chinese characters. Then comes an abbreviation of the part of speech (n. = noun; v. = verb, etc.). Finally, one or more definitions are given.

This 2nd edition is 162 pages longer than the original 1867 edition; the Introduction is 19 pages longer, the Japanese-English section 74 pages longer, and the English-Japanese section 69 pages longer.

We will not repeat definitions that are identical to those in the 1867 edition. For new spellings, the 1867 spelling will be shown in parentheses. No new soy-related words were found in this 1872 edition. Soy-related words and terms in the 1872 edition: Adzuki (replaces Adzki) [azuki]. Amazake. Daidzu (replaces Daidz) [Daizu]. Hiriodzu (replaces Hiriodz) [Hiryozu]: A kind of food made of *tofu* fried in oil.

Note 1. This is the earliest English-language document seen (May 2012) that contains the term *Hiriodzu* (the modern spelling is Hiryozu) which refers to deep-fried tofu treasure balls.

Kinako.

Kiradzu. Koji: Barm or yeast made by the fermentation of rice or barley, in the process of making sake and soy [sauce]. Koji-buta: A shallow box for holding barm. Miso. Miso wo suru: To rub *miso* in a mortar. Natto.

Nigari. Sashi (verb). Sashimi. Shitaji (replaces Sh'taji).

Note 2. This is the earliest English-language document seen (April 2012) that uses the word "shitaji" [spelled like this] to refer to shoyu or soy sauce.

Shoyu. Tofu: A kind of food made of beans, bean curd. Umeboshi (*hakubai*).

Yuba [hot water + leaf]. Yu-dofu.

The English-Japanese part of this dictionary starts after p. 558 and is titled "An index; or, Japanese equivalents for the most common English words." Separately numbered to p. 132, it includes: "Barm, Kôji; tane." "Soy, Shôyu."

Terms NOT mentioned include Abura-age, Aburaage, Aburage, Atsu-age, Daitokuji natto, Edamame (or Eda mame or Yedamame), Ganmodoki, Hamanatto, Hiya-yakko, Kori-dofu, Koya-dofu, Nama-age, Okara, Tamari, Tonyu, Unohana, Yaki-dofu.

Note 2. The author apparently still did not realize that the various soyfoods he defined (with the possible exception of hiriodzu and soy sauce) were made from soybeans. Address: M.D., LL.D.

1040. Mogi, Fusagoro. 1872. [Scroll from Mogi Fusagoro with preface by Mogi Keizaburo to Shoda Bunuemon on the founding of a Noda Shoyu brewery]. 2 p. Unpublished manuscript. Translated by W.M. Fruin, 1983, p. 307-08. Original in Shoda Shoyu Company Archives, not far from Noda. [Jap; Eng]

• ***Summary:*** Gives a detailed recipe for making shoyu, including the amount of each ingredient and the month in which each step is performed. To make the *best* quality

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shoyu: "Mix together: First year, January, 2 koku (95.2 gallons) of the *best* grains. First year, April, 2 koku. First year, October, 2 koku. Second year, March, 2 koku. Ferment the above mixture for an average of 16½ months from January of the first year and press before November of the second year. Note the importance of starting the shoyu at the coldest time of the year and of not adding all ingredients at the beginning.

Three alternative recipes are given using lower quality grains. The fermentation times are 15 or 19 months from July of the first year. Income and expenses are calculated. Costs of raw materials for 1,200 kegs of the best quality shoyu are 50 koku soybeans for 250 ryo (unit of currency), 50 koku wheat for 167 ryo, and 200 hyo akaho salt for 67 ryo. Note: A hyo is apparently a small sack of salt. Shoda later became famous as a cereal milling company. Nisshin separated off from Shoda. Address: Noda, Japan.

1041. Stoeckhardt, Adolph; Senff, Emanuel. 1872. Untersuchung von chinesischen Oelbohnen [Investigation on Chinese oilbeans (soybeans)]. *Chemische Ackersmann (Der)* 18:122-25. [Ger]

• ***Summary:*** "On a trip to England, Mr. Berndt, a manufacturer of velvet in Deuben [in Saxony], made the acquaintance of an English seaman, who told him many things about Manchuria, in China, where he had often been. He explained, among other things, that in northern China several varieties of beans are cultivated, and from them is obtained an oil (*ein fettes Oel*) which, like our cottonseed oil, is used as a food oil (*Speiseöl*), and also a type of cheese (*eine Art Käse*) [tofu], which is widely used as food. Finally, from this bean, one can make a type of soy sauce (*eine Art Soya*), which can also be used with foods. Later Mr. Berndt shared with me two small samples of these beans, which were sent to him by post from Hongkong through the arrangement of Mr. C. Eckardt; one was yellowish white and one black. The former, egg-shaped, had somewhat the size and color of small, pale peas; the latter was significantly smaller, shiny black, and of somewhat flattened, egg-shaped form. Both belong to the genus (*Gattung*) Phaseolus."

Note 1. This is the earliest German-language document (April 2001) seen that uses *Käse*, the German word for "cheese," to refer to tofu.

A table (p. 122) gives a laboratory analysis, conducted by Assistant Senff, of the two beans. It showed the following percentage composition (Yellowish white / black): Crude oil (ether extract, *Aetherauszug*) 20.53 / 16.88. Nitrogen-containing substances (*stickstoffhaltige Substanzen*) 38.54 / 38.04. Nitrogen-free extract (*stickstofffreie Extractstoffe*) 24.61 / 27.79. Cellulose (*Rohfaser* = crude fiber) 5.13 / 5.53. Minerals (ash) 4.50 / 4.62. Water 6.69 / 7.14. Note 2. This is the earliest document seen (April 2002) that mentions the term "nitrogen-free extract," which includes starch, sugar, gums, and the like. The nitrogen-free extract and fiber soon came to be classed together under the name of carbohydrates. This is also the earliest document seen (Dec. 2001) that clearly mentions fiber in soybeans, or the fiber content of soybeans.

"The composition of these beans is actually of surprisingly high grade, in part because of the high content of oil which takes the place of starch, and also because of the high nitrogen content. The chemical composition of lupine seeds (*Lupinensamen*) has already provoked lively astonishment, since in these, unlike the seeds of other known legumes, we find no starch, but rather a large amount of oil and protein (*eine reichlichere Menge von fettem Oel und Proteinstoffen*). So we are confronted with the Chinese oilbeans (*chinesischen Oelbohnen* = soybeans) in which the unique characteristic of the lupine seeds seem to be expressed in a higher potency, as shown in the following comparison." A table shows that most beans and peas contain 30-35% starch, 1.5-3% oil, and 24-26% protein. Lupine seeds contain no starch, 5-8% oil, and 30-35% protein. But the seeds of the Chinese oilbeans [soybeans] contain no starch, 16-20% oil, and 38-39% protein. The oilbeans are thus shown to be the most protein-rich livestock fodder; they also have a high respiration value (*Respirationswerth*). They seem even more important because these two main components are also suited for the human diet. The use of the oil as food oil (*die Verwendung des Oels als Speiseöl*) is confirmed, and the use of the proteins is not unlikely, since they consist largely of plant casein, through the application of salt and aromatic plants and subsequent fermentation, may well produce a tasty cheese, like that made from milk casein. Note 3. This is earliest document seen (May 2008) that clearly mentions starch in soybeans, and states that they contain none.

Note 4. This is the earliest German-language document seen (May 2008) which refers to soybeans as *chinesischen Oelbohnen* = "Chinese oilbeans."

"The high nitrogen content of the beans may also be confirmed through an analysis of their cake (presscake?). Upon inquiry to professor Völcker [Voelcker] in London I received the answer that he could not state for sure that the beans could be used to make a type of cheese, however he has investigated the oilcake ('Chinese Oilbean Cake') and found the following percentage composition compared to rapeseed cake: oil 5.32 / 8-9. Nitrogen-containing substances 45.93 / 27-28. Nitrogen-free extract 24.52 / 32-25. Cellulose 5.71 / 15-16. Minerals (ash) 5.70 / 6-7. Water 12.82 / 12-15.

"Concerning the preparation of soy sauce (*Soya*), this indispensable table seasoning among the people of India and seafarers, a trusted friend who is very familiar with Oriental trade conditions, informs me that 'according to tradition, certain fungi, fruits, and parts of fish (especially also parts of the crablike sea-spider) are added to it, in a very complicated and long process that lasts several months.' From another source I learned the following: 'Soy sauce (Soya) is prepared

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from an oil-rich bean that grows in China. During the process it is mixed with other ingredients. Thereby a significant percentage of good-tasting oil is obtained and the residue is used as an excellent fodder for cows. Can any of my valued readers provide more specific information on the above?"

Note 5. This is the earliest document seen (May 2008) containing mention of soybean cake in the western world. It also the earliest document seen (May 2008) containing an analysis of the cake.

Note 6. This is the earliest document seen (July 2000) concerning soybeans in Hong Kong. This document contains the earliest date seen for soybeans in Hong Kong (1872). Soybeans were probably also being grown at that time in Hong Kong, but we cannot be certain of this.

Note 7. Mr. Carl Berndt of Saxony, is mentioned several times by Prof. Friedrich Haberlandt in his classic *Die Sojabohne* (1878). In part 1, page 4, Haberlandt states that Carl Berndt, a velvet manufacturer at Hainsberg-Deuben in Saxony, was one of the first people in Germany who attempted to cultivate soybeans. He had no success. "He wrote me about his efforts as follows: 'I had received 8 piculs of those beans [Note 8. A picul is a Chinese unit of weight = 133.33 pounds] (some green and some yellow), which I obtained through an official order of Governor (*des Minister-Präsidenten*) Dr. Weinlich of Shanghai via our local consul. I sent samples of those all over with the request that the recipient inform me of the results of his agronomic trials. Unfortunately I have waited in vain and I assume that the outcome was as unfavorable as it had been in my case and in my neighborhood. Although some gardeners and I managed to raise a few plants and harvest a few seeds, they rotted after being replanted and therefore could not germinate.'" Pages 10-11 of Haberlandt note that the first analysis of the composition of soybean seeds that became known in Germany was carried out by (Mr.) Senff using seeds obtained directly from Japan by Mr. Berndt. The results of this analysis were first published in 1872 in the journal *Chemischer Ackersmann* ("Chemical Farmer," p. 123). The tests showed soybeans to contain on average 38.29% protein and 18.71% oil. Page 14 of Haberlandt describes a letter that Carl Berndt wrote to Prof. Haberlandt. And in part 4, page 79 of Haberlandt states that Carl Berndt conducted soybean trials in 1877 in Deuben with 300 seeds; these trials succeeded beyond all expectations.

Note 9. This is the earliest document seen (Sept. 2002) that mentions the use of ether or any other solvent for extracting soybean oil. The extraction was on a laboratory scale. Ether is a light, volatile, flammable liquid (hydrocarbon), also used as an anesthetic.

Note 10. This is the earliest German-language document seen (Sept. 2006) that mentions soybean oil, which it calls *ein fettes Oel*.

Note 11. This is the earliest German-language document seen (Aug. 2003) that uses the term *Stickstoffhaltige Bestandtheile* to refer to nitrogen-containing constituents / protein in connection with soybeans. Address: Acad. Laborat Tharand.

1042. Syrski, S. 1872. Landwirthschaft in Japan [Agriculture in Japan]. In: Karl von Scherzer, ed. 1872. Fachmaennische Berichte ueber die oesterreichisch-ungarische Expedition nach Siam, China und Japan. (1868-1871) [Expert Reports on the Austro-Hungarian Expedition to Siam, China, and Japan]. Stuttgart: Verlag von Julius Maier. Appendix (Anhang), p. 175-227. See p. 175, 186, 190, 207. Index. 25 cm. [Ger]

• ***Summary:*** Page 186 gives the prices of 1 *shô* (*schio* = 1.825 liters) of various staples. A Tempo is apparently a Japanese unit of currency and a kr. is an Austro-Hungarian unit of currency: Fava beans (*Rossbohnen, Sora-mame*) 4 Tempo (18 kr.), azuki (*Adsuki*) 10 Tempo (45 kr.), soybeans (Daidsu; Dolichos soja) 6 Tempo (27 kr.), Kintoki, with red seeds 5 Tempo (22 kr.) [Note: Kintoki is an abbreviation of "kintoki azuki," which is a large variety of red azuki beans], barley 3 Tempo (13 kr.), wheat 6 Tempo (27 kr.), sesame 10 Tempo (45 kr.). Note: This is the earliest German-language document seen (Jan. 2005) that mentions azuki beans, which it calls *Adsuki*.

Page 190 notes: The pickled beans (*Bohnensulze*), called "Misso" in Japan, is prepared from Daizu, a variety of Dolichos, together with wheat- and barley meal/flour, plus some added salt. The seasoning soy sauce (*Soia*) is likewise made from soybeans (*Daidzu-Dolichos*) and wheat meal with the addition of salt, and sprinkled on many foods... Essentially the diet of Japanese peasants consists of rice and the above-mentioned miso, therefore of an easily digestible carbohydrate (*aus einem leicht verdaulichen Kohlenhydrate*) and a strong nitrogenous substance (*stickstoffhaltigen Substanz*, protein), which is made easily digestible through processing. Concerning the nutritional value of their most important foods, Japanese peasants believe that fish, eggs, and poultry give the most strength (*Kraft*). These are followed by miso and vermicelli made from wheat flour, then rice and potatoes. They believe that buckwheat gives but little strength.

The section titled "Legumes" notes: A green Dolichos variety (*Dolichos unguiculatus* according to Thunberg, called Jaenari in Japanese) is planted in the fields of central Japan in June and harvested at the beginning of October. A Dolichos variety (*Dolichos soia;* called *Daidsu* in Japanese) is planted in southern Japan in April and harvested in July. In central Japan this crop is planted between rows of wheat as they near maturity in May, and harvested in September. The ground is not manured (*nicht gedüngt*); the plants make use of the fertilizer (*Düngungsmaterial*) already applied for the wheat. As a rule, 6 shô of seed-beans yield a crop of 120 shô on a field of 300 tsubo.

Note: Rein (1889, p. 57) states: "According to Scherzer,

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six Shô of seed-beans of the early-ripening Shiro-mame are credited with a crop of 120 Shô on 300 Tsubo of land. This means a harvest of only 20-fold, or, taking account of the seed lost in sprouting, about 12 pods of two beans each to every plant."

"This type of Dolichos, as is well known, is the main ingredient in the seasoning soy sauce (*Soia*) and the aspic or pickle (*Sulze*) miso (*"Misso"*).

"A black variety of Dolichos, called Kuro-mame in Japanese (i.e. black soybeans) is planted in the area around Nagasaki in April on land fertilized with ashes (*auf einem mit Asche gedüngten Boden*), and in central Japan in May two seeds are laid in a hole between the rows of wheat. It is harvested in August or September in southern Japan, and in October in central Japan, and used rather widely as a food."

Note 1. Scherzer lived 1821-1903.

Note 2. This is the earliest document seen (Feb. 2005) concerning soy in connection with (but not yet in) Hungary.

Note 3. This is the earliest document seen (Oct. 1999) that mentions the use of fertilizers for growing soybeans.

Note 4. This is the earliest document seen (Aug. 2001) that mentions carbohydrates in connection with soybeans.

Note 5. This is the earliest German-language document seen (April 2012) that uses the word *Soia* to refer to soy sauce. Address: PhD.

1043. Duncan's (John) Sons. 1873. Caution (Ad). *New York Times*. Sept. 19. p. 7.
• ***Summary:*** "Lea & Perrins' Worcestershire Sauce. Buyers of this sauce are cautioned to avoid the numerous counterfeits and imitations offered for sale. John Duncan's Sons. New-York." Address: Agents for the United States, New York.

1044. *Chicago Daily Tribune*.1873. The Japanese at table. Oct. 12. p. 5.
• ***Summary:*** "From the Far East: If bread is the staff of life with Europeans, so is rice with Asiatics. It is the staple food of the people, and with a little soy [sauce] or pickle, or some other simple condiment, is often the only food of the lower classes in Japan... It is strikingly curious to see them eat for the first time...

"A small table about 9 to 12 inches square and 6 to 9 inches high is placed sometimes in the middle of the feeders, sometimes one to each person. On this table are two or three small dishes,–perhaps one has some slices of cold fish, another some pickles, lily root, green ginger, and horseradish [wasabi], another a little soy, and so on... ever and anon there is a pause to take a slice of fish, which is rendered more palatable by being dipped in the soy."

1045. *Manchester Guardian* (*England*).1873. Commercial markets: London Produce Market, Tuesday. Nov. 5. p. 6.
• ***Summary:*** "Japan Soy [sauce].–410 cases chiefly sold at 12*s*."

1046. *New York Times*.1873. How we live: The way the money goes. Where the extravagance begins–Private life and hotel life contrasted... Nov. 22. p. 4.
• ***Summary:*** The dinner menus of 3 restaurants of different classes are listed. The section titled "House below Union Square" states: "Tuesday, Nov. 18, 1873... Relishes: Assorted pickles, apple sauce, cranberry sauce,... walnut catsup, horseradish, Worcestershire Sauce, olives, chow-chow..."

1047. *Manufacturer and Builder* (*New York*).1873. Notes & queries. 5(11):263-64. Nov. See p. 264.
• ***Summary:*** "[801] Worcestershire sauce [homemade].–This is quite a complex condiment. It is made of wine vinegar, 1½ gallon; walnut catsup, 1 gallon; mushroom catsup, 1 gallon; Madeira wine, ½ gallon; Canton soy [China], ½ gallon; moist sugar, 2½ pounds; salt, 19 ounces; powdered capsicum, 3 ounces; pimento, 1½ ounces, coriander, 1½ oz.; chutney, 1½ oz.; cloves, 3/4 oz.; mace, 3/4 oz.; cinnamon, 2/3 ounce; asafoetida [asafetida], 6½ drachams dissolved in 1 pint brandy 20° above proof. Boil 2 pounds hog's liver for 12 hours in 1 gallon of water, add water continually so as to keep up the quantity of one gallon; mix the boiled liver thoroughly with the water, strain through a coarse sieve, and add this to the above mixture. It is self-evident that no chemical examination could ever detect the presence of half the above organic products."

Note 1. This is the earliest document seen (March 2012) that contains a recipe for Worcestershire sauce.

Note 2. This is the earliest document seen (March 2012) that contains a recipe for Worcestershire sauce in which soy sauce is used as an ingredient.

1048. Balfour, Edward. 1873. The Cyclopaedia of India and of eastern and southern Asia, commercial, industrial, and scientific; products of mineral, vegetable, and animal kingdoms, useful arts and manufactures. 2nd ed.: Soy [sauce]. Madras, India. Printed at the Scottish and Adelphi presses. See vol. 5, p. 517. 26 cm. Reprinted in 1985 by International Book Distributors, Dehra Dun, India. [6 ref]
• ***Summary:*** The section titled "Soy" (p. 517), which is about soy sauce, states: "Tsiang-yu, Chinese. Soya [sic, shoyu / shôyu], Japanese. This well-known sauce is made from the Soja hispida which grows in China and Japan. In Java it is procured from the Phaseolus radiatus, the green gram, haree moong or putchay payroo of India. The beans are boiled soft with equal quantities of wheat or barley, and left for three months to ferment; salt and water are then added when the liquor is pressed and strained. 1,108 piculs of soy were shipped in Canton in 1844, for London, British India and Singapore; 100 jars, or about 50 gallons of soy were received at Liverpool in 1850. Its price is about 6*s*. per gallon in the London market, and the Japan soy is superior to the

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Chinese. Genuine soy is well flavoured, thick, brown, and clear; and when shaken in a glass, it should have a coat on the surface of a bright yellowish-brown colour. It is obtained from Canton; but the best is exported from Japan, by way of Batavia."

Note: This is the earliest English-language document seen (April 2012) that uses the term "Tsiang-yu" to refer to the Chinese word for soy sauce.

"Good soy is agreeable when a few years old, the Japan soy is superior to the Chinese. Large quantities are shipped for England and America. The Dolichos bean is much cultivated in Japan, where various culinary articles are prepared from it, but the principal products are a sort of butter termed mico, and a pickle called sooja. The flavour and ingredients of soy vary considerably, even among the people who make it, and much of that exported is supposed to be more or less adulterated."

Note: This is the earliest document seen (Oct. 2001) concerning adulteration of (or with) a soy product–in this case of soy sauce.

"Peas and beans form important objects of culture, and the condiment called soy (a word derived from the Japanese soya), is prepared chiefly from a species of Dolichos. One of the commonest modes of making this condiment is to skin the beans, and grind them to flour which is mixed with water and powdered gypsum, or turmeric. The common Chinese eat few meals without the addition of one form or other of the 'bean' curd, or 'bean' jelly. The soy was at one time largely used as a condiment in the several countries of Europe but has latterly been displaced with others."

The next entry is "Soy Bean, Anglo-Jap. *Soja hispida*" (which see).

Soy is not mentioned at Bean Curd, Beans, Legumes, or Leguminosae. Address: L.R.C.S.E., Inspector General of Hospitals, Madras Medical Dep. [India].

1049. Balfour, Edward. 1873. The Cyclopaedia of India and of eastern and southern Asia, commercial, industrial, and scientific; products of mineral, vegetable, and animal kingdoms, useful arts and manufactures. 2nd ed.: Soja, Soja hispida. Madras, India. Printed at the Scottish and Adelphi presses. See vol. 5, p. 458. 26 cm. Reprinted in 1985 by International Book Distributors, Dehra Dun, India. [2 ref]

• ***Summary:*** "Soja, a genus of plants belonging to the natural order Leguminosae. Soja hispida (*Moench*), S. japonica (*Savi*), the Dolichos soja, (*Linn.*), is a native of Japan and the Moluccas, and abundant in the peninsula of India, though probably introduced there. The seeds resemble those of the haricot, French or kidney bean, and are used by the Chinese to form a favourite dish called 'ten-hu,' or 'tau-hu' [tofu], which looks like curd, and which, though insipid in itself, yet with proper seasoning is agreeable and wholesome. The Japanese call the seeds 'miso,' and put them into soup, of which they sometimes partake three times a day. They likewise prepare with them the sauce termed 'sooja,' which has been corrupted into 'soy.' Soy is only sparingly used as a sauce in Great Britain. It has the character of being a useful stomachic, but not more so than any of the other condiments when used with moderation.–*Eng. Cyc.*"

"Soja hispida, Moench, W.&A., Grah. *S. japonica*, Savi. *Dolichos soja*, L., Roxburgh. *Garu kulay*, Bengali. Sahuca bean, English. Soy-bean, English. *Bhut*, Punjabi.

"This plant grows in the N.W. Himalaya, in Nepal, at Taong Dong, in China, Japan and the Moluccas. It is found in the Sutlej valley between Rampur and Sungnam at an elevation of 6,000 feet. It is cultivated in many parts in the north of India. This is the well-known Chinese bean, which constitutes such large article of trade between the northern and southern parts of China. Of all vegetable substances, it is richer in nitrogenous or flesh-forming matter than any yet discovered. The Sahuca bean, is the white Soja hispida. *India Museum.*"

Note: This is the earliest English-language document seen (Aug. 2003) that uses the word "nitrogenous" in connection with the soybean–to refer to its protein. Address: L.R.C.S.E., Inspector General of Hospitals, Madras Medical Dep. [India].

1050. Beecher, Catharine Esther. 1873. Miss Beecher's housekeeper and healthkeeper: Containing five hundred recipes for economical and healthful cooking; also, many directions for securing health and happiness. New York, NY: Harper & Brothers, Publishers. 482 p. See p. 35, 110-11. Index.

• ***Summary:*** In Chapter 4, Soups, the introduction titled "General directions" (p. 35) states: "If you flavor with wine, soy [sauce], or catsup, put them into the tureen, and pour the soup upon them, as the flavor is lessened by putting them into the soup-kettle."

Chapter 21, "On setting tables and preparing various articles of food for the table," has an introductory section where we read: "Pickles are served especially with fish, and *Soy* is a fashionable sauce for fish, which is mixed on the plate with drawn butter."

Note: Drawn butter is ghee (also called clarified butter), which is simply melted butter with the upper and lower sediments removed. To make it: Melt butter completely over low heat. Remove from heat and allow to stand for several minutes as the milk solids settle to the bottom. Skim the butterfat off the top, then strain the clear yellow liquid into a container, and serve. Address: New York.

1051. *Collections of the Georgia Historical Society.* 1873. Letters from Sir James Wright: An account of the exports from the Port of Savannah in Georgia to foreign plantations between the 5th January 1772 and the 5th January 1773. 3:157-378. See p. 176. [2 ref]

• ***Summary:*** A table (p. 176) shows exports from the port

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of Savannah, Georgia, to foreign plantations between 5 Jan. 1772 and 5 Jan. 1773. "Soy in quart bottles, 5 dozen. Sago powder, 110 lbs."

First cited by Hymowitz, 1986. Bibliography of early, previously uncited publications on soybeans in the United States. 2 p. Unpublished. \

1052. Douglas, Carstairs. 1873. Chinese-English dictionary of the vernacular or spoken language of Amoy, with the principal variations of the Chang-chew and Chin-chew dialects. London: Truebner & Co. xix + 613 p. 28 cm.
• ***Summary:*** The Preface notes that the written language of China is uniform throughout the whole of China, but it is pronounced differently when read aloud in the different parts of China. Various spoken languages of China have already been studied by Western residents in China: the Mandarin, the Hakka, the vernaculars of Canton and Amoy, etc. The Amoy vernacular is believed to be spoken by 8-10 million people. Chinese characters are not used in this dictionary.

Abbreviations (at start of parentheses): R. = Reading or literary style as to sound or meaning. C. = Chang-chew dialect. Cn. = Chin-chew dialect.

Soy-related terms include: chiap (R. id.). (Cn. tsap; p. 46 L.2) "juice, sap, gravy, etc. kôe-chiap, brine of salt or pickled fish, &c." kê (Amoy = kôe; p. 201 L.7) "Pickled fish or shell fish." kê-chiap (implied; p. 46 L.2).

hû (p. 156 R.3) tâu-hû "bean-curd shaped into squares (from the pulpy 'tâu-hoe'), but not yet pressed. See tâu.

kôe-chiap (p. 242 L.4) "Brine of pickled fish or shell fish."

tâu (p. 480 L.3) "pease or beans, pulse." tau-khe "bean-cake from north China used as manure." tâu-iû "soy [sauce]." tâu-chiù "a thick sauce made from pulse." tâu-sî "salted beans" [fermented black soybeans]. tâu-hoe "soft bean curd not yet pressed or shaped." tâu-chiû or tâu-hû "bean-curd shaped but not yet pressed." tâu-hû-phê "bean curd made into thin sheets [yuba] for wrapping around eatables."

Note: This is the earliest English-language document seen (Oct. 2008) that uses the term *tâu-hû-phê* to refer to yuba.

te tâu-hû "to shape the pieces of 'tâu-hoe' into pieces of 'tâ-hû.'" tâu-koa "bean-curd that has been pressed in a cloth." tâu-jú "bean-curd that has been pressed in a cloth then cut into smaller pieces and salted." tâu-kiâm or tâu-che or tâu-thâu "refuse from manufacture of bean curd" [okara].

Note 1. A new, revised edition of this work was published in 1899 in London by Presbyterian Church of England. A supplement by Douglas and Barclay was published in Shanghai in 1923. In some cases, the 1923 edition is bound at the back of the 1873 edition. The 1873 edition is dedicated to Rev. James Legge, D.D., a Christian missionary and Chinese scholar.

Note 2. This is the earliest English-language document seen (Oct. 2001) that mentions okara, which it calls "refuse from manufacture of bean curd," along with its Chinese vernacular names.

Note 3. This is the earliest English-language document seen (Oct. 2001) that uses the term "cake" or "bean-cake" to refer to ground, defatted soybeans.

Note 4. This is the earliest English-language document seen (Feb. 2004) that uses the many terms such as "tâu-hoe," "tâu-hû-phê," "tâu-koa," or "tâu-jú" to refer to the many uniquely Chinese varieties of tofu.

Note 5. This is the earliest English-language document seen (April 2012) that contains the terms "kôe-chiap" or (by implication) "kê-chiap" to refer to pickled fish or shell-fish. These terms are said by some to be the ancestors of the Malay word *ketjap / kecap* meaning soy sauce.

Note 6. Schlegel (1894, p. 143 footnote) gives the character for *Kê-tsiap* but the 1873 ed. of Douglas' dictionary gives no Chinese characters for any of the words defined. Address: Rev., M.A., LL.D. Glasgow, Missionary of the Presbyterian Church in England.

1053. First Presbyterian Church. 1873. Presbyterian cook book, compiled by the ladies of the First Presbyterian Church, Dayton, Ohio. Dayton, Ohio: Printed by Oliver Crook & Co. 136 + [8] p. No index. 22 cm.
• ***Summary:*** This cookbook contains 2 recipes with "soy" in the title but no soy used as an ingredient. Moreover, soy is not even mentioned in the body of the recipe. Celery soy (p. 40. The main ingredient by far is tomatoes {1 peck = 8 quarts}, followed by onions, and celery). Currant soy (handwritten near back of book on unnumbered page. The main ingredients are 5 lb. ripe currants, 3 lb brown sugar, and ½ pint vinegar).

Note: This is an early charity cookbook, published to benefit a charitable cause. The category began after the Civil War (MSU introduction).

1054. Harland, Marion. 1873. Common sense in the household: A manual of practical housewifery. New York: Scribner, Armstrong & Co. 556 p. Index. 20 cm.
• ***Summary:*** Worcestershire sauce is used as an ingredient in 15 recipes in this book. The first three of those are: Beef soup (brown) ("a teaspoonful of Worcestershire sauce," p. 37). Vermicelli soup (p. 38-39). Giblet soup ("A little Worcestershire sauce is an improvement," p. 40-41).

There is also a recipe for "Imitation Worcestershire sauce" (p. 195) with these ingredients: "3 teaspoonfuls cayenne pepper, 2 tablespoonfuls walnut or tomato catsup (strained through muslin), 3 shallots minced fine, 3 anchovies chopped into bits, 1 quart of vinegar, half teaspoonful powdered cloves." Note: This is the earliest document seen (Feb. 2012) that contains a recipe for Worcestershire sauce or "Imitation Worcestershire sauce."

A recipe for "Green tomato soy" contains no soy sauce used as an ingredient. Moreover, "soy" is not even

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mentioned in the body of the recipe. The ingredients: "2 gallons tomatoes, green, and sliced without peeling, 12 good-sized onions, also sliced, 2 quarts vinegar, 1 quart sugar, 2 tablespoonfuls salt, 2 tablespoonfuls ground mustard, 2 tablespoonfuls black pepper, ground, 1 tablespoonful allspice, 1 tablespoonful cloves." "Mix all together and stew until tender, stirring often... Put up in small glass jars. This is a most useful and pleasant sauce for almost every kind of meat and fish."

Note: "Marion Harland, the pen name of Mary Virginia Terhune (lived 1830-1922), was among the most popular cookery authors of her day." She was also a renowned southern novelist (MSU introduction and biography).

1055. Hepburn, James C. 1873. Japanese-English and English-Japanese dictionary. Abridged by the author. New York: A.D.F. Randolph & Co.; London: Trübner & Co. vi + 330 + 206 p.

• ***Summary:*** "Preface: In order to render the Dictionary more portable and convenient in size, the Author has thought it best to abridge the larger work and bring it out in its present form. In so doing, he has omitted the Chinese and Japanese characters, the synonyms, and the examples showing the use of the words, excepting such as contained a peculiar idiom, and which could not be included in a definition. All the native Japanese words, with the exception of those which were rarely used or obsolete [such as Yu-dofu], have been retained; as, also, all the words derived from the Chinese which are in current use."

"The Second, or English and Japanese, Part, has not been abridged or altered from the original, except in the correction of such typographical errors as were met with."

Note 1. New words in this edition that are not in the 1867 edition are preceded by "**."

Soy-related terms: Adzuki: A small red bean. Amazake: Sweet sake, a kind of fermented rice. Daidzu: A large white bean. Soja hispida. Hiriodzu: A kind of food made of tofu fried in oil.

Kinako: A kind of food made of beans. Kiradzu: The refuse of beans left in making tofu. Koji: Barm or yeast. Koji-buta: A shallow box for holding barm. Miso: A kind of sauce made of beans.

** Moromi: The grounds left in making soy [sauce], used as an article of food.

Note: This is the earliest English-language document seen (April 2012) that contains the word "Moromi." However the definition is poor. The word *moromi*, which is often translated as "mash," is the stage in making soy sauce (it has a consistency resembling apple sauce) before the liquid shoyu (soy sauce) is pressed out, leaving behind the shoyu presscake or residue (which could be called "grounds").

Natto: A kind of food made of beans. Nigari: The brine formed by the deliquescence of salt. Sashimi: Raw fish cut in thin slices and eaten with soy. Shoyu: Soy, a kind of sauce made of fermented wheat and beans. Tofu: A kind of food made of beans. Yuba: A kind of food made of beans.

Terms NOT mentioned include Aburage, Abura-age, Aburaage, Daitokuji natto, Edamame (or Eda mame or Yedamame), Hamanatto, Hiya-yakko, Koya-dofu, Kori-dofu, Okara, Tamari, Tonyu, Unohana, Yaki-dofu.

Note 2. The author apparently did not realize that the various soyfoods he defined (with the possible exception of soy sauce) were made from soybeans. Address: M.D., LL.D.

1056. Heuzé, Gustave. 1873. Les plantes alimentaires [Edible plants. 2 vols.]. Paris: Libraire Agricole de la Maison Rustique. Undated. See Vol. II, p. 381-82. 27 cm. [soy ref. Fre]

• ***Summary:*** Vol. II, Part II concerns "Leguminous plants with pods." In Book 2, titled "Dolic or dolique" (p. 371+), Chapter II (p. 373-83) concerns "Species and varieties." The soybean is in the second major group, "Dwarf dolics" (p. 380), as follows: Variety "15.–Japanese soybean (*Dolic du Japon, Dolichos soja,* Linn.; p. 381-82) states: Synonyms: *Dolic soja, Soja japonica,* Sav. *Dolic à café* [the coffee bean], *Soja hispida,* Moench."

A botanical description in French follows: "The stems, which are from 65 to 100 cm tall, are hispid / hairy, straight, straight, and rust-colored. The leaves have three cordiform folioles, equipped with stipules; flowers violet, sessile [attached directly by the base], in short clusters, straight and axillary [growing from an axil]. The pods are lightly curved, slightly pendulous, very short, bumpy, and covered with rust-colored hairs. The seeds are oval, shiny, compressed, clear nankeen (*nankin clair;* brownish yellow) in color, and almost dull.

This variety is cultivated in China, Japan, and Asia. Its flowers are white, purple, or violet, according to the variety.

The types that are most widely cultivated, after the core / main type [nankeen colored], are two: 1. The black soybean (*Le soja noir, Soja hispida*). 2. The yellow soybean (*Le soja jaune, Soja ochroleuca*).

The Japanese transform the seeds of this dolic into a paste (*miso*), with which they make a sauce (*soja*), which they use to prepare various foods.

This species is an annual; in France it has been called *pois oléagineux* ("oil peas"). It was introduce here from China by Mr. de Montigny. It is cultivated in some points in the departments of Ariège and of Haute-Garonne. It grows rapidly and is quite resistant to drought.

Also discusses: *Dolichos tetragonolobus* L. Synonyms: *Pois carré* (in Europe), *Psophocarpus tetragonolobus* DC. In India it is known as *mourou-kouavré* (p. 377). Gustave Heuzé lived 1816-1907. The book is undated, but the date usually given in catalogs is 1873 (less commonly as 1872). Address: Member of the Central Society of Agriculture of France. Adjunct inspector general of agriculture.

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1057. *American Agriculturist.* 1874. The Japan pea. 33(2):63-64. Feb. With one engraving.

• ***Summary:*** "The Southern seedsmen have advertised and southern journals have had articles in relation to the Japan Pea... we last spring obtained from Mark W. Johnson, dealer in seeds and agricultural implements, Atlanta, Ga. [Georgia], a sample of these peas... This fall we have received a sample of the same pea from L.L. Osment, Cleveland, Tenn. [Tennessee], who says they are 'unsurpassed for table use.'

"The plant grows to a height of three or four feet, and is hairy in all its parts... Mr. Johnson, who sent us the seed, wrote 'not desirable for table use.' Remembering to have seen the same thing some years ago in the garden of a friend near Boston we wrote him for his experience. He writes: 'They may be delicious to the celestial palate, but my wife found them hard to cook and I found them hard to eat–never getting soft no matter how long they were boiled.' Thus far we think the weight of evidence is against their utility as a table vegetable. As an agricultural crop, they are highly promising, at least in localities where the seasons are sufficiently long to mature them. Mr. Johnson speaks highly of the wonderfully prolific character of the pea, and its excellence as a food for stock. It is so much esteemed in some quarters that it has received the rather extravagant name of 'Southern Relief Pea.' Mr. Osment claims it to have produced 200 bushels to the acre. From the manner in which the pods set upon ours we should judge the yield would be very large. This pea is deserving the attention of cultivators as a fodder crop and for plowing in as a fertilizer. As to what the pea is botanically we are not quite sure; it does not belong to the proper Pea (*Pisum*), but is very near the Chinese Soy Pea, and is probably a form of that or a closely related species. The Soy Pea (formerly *Soja hispida*, but now *Glycine Soja*) is cultivated in China, Japan, and other parts of the east, and is used to make the sauce called Soy, which was formerly more used than at present."

A handsome illustration (engraving; p. 64) shows "The Japan Pea" by J.W. Fasel. Note 1. This document contains the earliest illustration seen (Aug. 1996) of the soybean in the USA.

Note 2. This is the earliest document seen (Aug. 2011) that clearly refers to soybeans in Tennessee, or the cultivation of soybeans in Tennessee. This document contains the earliest date seen for soybeans in Tennessee, or the cultivation of soybeans in Tennessee (summer 1873).

Note 3. This is the earliest English-language document seen (Feb. 2002) that uses the terms "Soy Pea" or "Chinese Soy Pea" or "Southern Relief Pea" to refer to the soybean.

Note 4. This is the earliest English-language document seen (March 2008) which states that the scientific name of the Japan pea is probably *Glycine Soja*, previously *Soja hispida*–that is, the soybean.

Note 5. This is the earliest document seen (Jan. 2000) stating that a seed dealer in the USA (Mark W. Johnson in Atlanta, Georgia) is selling soybeans for seed use. Line 1 implies that earlier advertisements exist.

Note 6. This is the earliest English-language document seen (July 2002) that describes "plowing in" soybean plants in the USA for use as a fertilizer [green manure] to improve the soil.

Note 7. Starting with this article, and continuing until after World War II, some writers incorrectly referred to the scientific name of the cultivated soybean as *Glycine soja*, whereas that is actually the scientific name of the wild soybean.

Note 8. This is the earliest document seen (Nov. 1998) that uses the word "promising" in connection with the soybean as an agricultural crop–in any country worldwide.

1058. *Chicago Daily Tribune.* 1874. The courts: Counterfeiting of Worcestershire sauce. March 3. p. 2.

• ***Summary:*** "Worcestershire sauce. John W. Lea, C.W. Lea, and J.D. Perkins [sic, Perrins], copartners as Lea & Perkins [sic, Lea & Perrins], of Worcester, England, and the manufacturers of the well-known 'Worcestershire Sauce,' filed a bill in the United States District Court against Charles Hastings.

"Complaintants assert that they are the original manufacturers of the 'Worcestershire Sauce', and have been for the past thirty years [i.e., since about 1844]. Their sauce is put up in bottles with the name blown in, and with a red label constituting their trade-mark, having their names and the words 'Worcestershire Sauce' printed thereon. A white label, smaller in size, containing directions, is also pasted on each bottle. These wrappers of different character are put around each bottle. They have lately ascertained that one Charles Hastings, of Chicago, is manufacturing an article similar in outward aspect to their own. The labels and wrappers are so much alike that none but an expert would be likely to detect the difference. They claim that their trade and reputation are seriously affected; that the imitation of Hastings is very close, and he is selling his production as genuine. An injunction is therefore asked and an account.

"Filed with the bill are two affidavits... and the other by Henry M. Collyer, counsel in the present case. Hastings has sold his firm his imitations as such, but alleging that it is as good as the original. Mr. Collyer, who is from New York, states that he has been as the attorney for Lea & Perkins [sic, Perrin], engaged for some years in prosecuting infringements of their sauce. Some time ago he visited Hastings at his manufactory, No. 211 South Halsted street, representing himself as desirous of purchasing some of the defendant's sauce. Hastings told him that the price of the cases was $30 for those containing small sized bottles, and $55 for those containing the larger size. Collyer noticed that the bottles were labeled like the genuine, the wrappers identical, and the bottles packed in hay, like Lea & Perkins'. Hastings

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stated that he sold his manufacture as the genuine; that no one would know the difference; that he had sold to Farwell, Steele, & Pratt, to Phil Conley, of the St. Charles Hotel, and others, and thought his article was nearly as good as the original. Collyer however states that the component parts of the imitation are poor and often disgusting, and it does not cost so much as the original."

"Altogether, the imitation, as a bank-detector would say, is a 'very dangerous counterfeit.'"

1059. *Chicago Times*.1874. The U.S. Circuit Court: Worcestershire sauce. March 3. p. 7, col. 5.
• ***Summary:*** "The manufacturers of this palatable article, Messrs. John W. Lea, Charles W. Lea, and James D. Perrens [sic, Perrins], all of whom are subjects of the British crown, filed a bill in this court on yesterday, in which they set forth in a boastful sort of way, that they are the only persons living, who have any show of right to manufacture stuff of this kind. They state that they have been accustomed, for some years past, to manufacture it with great care and in large quantities, and afterward to put it up in bottles, each of which is adorned with an elegant label bearing their firm name and trade mark. No other persons have any right to use these bottles or labels, or any like them, but yet one Charles Hastings, of Chicago, has dared to get up a compound in imitation of the one they prepare, and put it up in bottles similar to theirs, with similar labels, similar directions for use, etc., all of which is unlawful, as they think, and able to do them great injury. They, therefore, ask that he may be compelled to answer their bill; to give an account of all profits he may have made from the manufacture, and to turn the same over to them, and also that he may be enjoined from further trespassing on their just rights."

Note: This is the earliest reference seen (Feb. 2012) to Worcestershire sauce in a Chicago newspaper.

1060. *Grocer (The) (London)*.1874. Sauces: Lazenby, Harvey's, Clarence's (Ads). 25(636):iv, 211-12. March 7.
• ***Summary:*** On page iv are three small (1 by 3 inch) ads for sauces, including the address of each company; none of them claim to contain soy, and the first two warn against inferior imitations. (1) "E. Lazenby & Son's pickles, sauces, & condiments." (2) Harvey's Sauce. Caution. "Bears the label used so many years, signed 'Elizabeth Lazenby.'" (3) Clarence's celebrated sauce. "Pronounced by connoisseurs the only good sauce. It improves appetite and digestion, and is unrivaled for its flavour. Wholesale, Crosse and Blackwell; and may be had of Grocers and Italian Warehousemen." In pints and half-pint bottles.

On pages 211-12 is a buyers' and sellers' directory. Under "Pickle and sauce manufacturers" are listed (with address) J. Burgess, Carter Hales & Co., and Jacob Stower & Son. Under "Sauce manufacturers" is listed only Goodall, Backhouse, & Co.

Note 1. Lea & Perrins does not advertise their Worcestershire sauce in this magazine and they are not mentioned among pickle and sauce manufacturers.

Note 2. An Adulteration Act has been enacted to protect consumers. Isaac Hatch & Co. of Bristol has a large ad for "Adulteration Detectors." This is "A very powerful microscope, so constructed as to show the slightest admixture of any substance with Tea, Coffee, Cocoa, Mustard, Pepper, Spices, and every article of manufacture." One confectioner was charged with selling "adulterated lozenges."

One ad is for "E.M. Bagot's Pure Extract of Meat" (March 14, p. xiii). It is used by the Admiralty, the Royal Victoria Hospital, etc. and is "pronounced to be superior to 'Liebig's Extractum Carnis,' and is considerably less in price." Another ad (March 28, p. 2) is for "Liebig Company's Extract of Meat." "As 'stock' for beef-tea, soups, made dishes and sauces; gives fine flavour and strength. Invariably adopted in households when fairly tried. Caution. Genuine with the fac-simile of Baron Liebig's signature, in blue, across Trade Mark Label." Note: The book *Popular Fallacies Explained and Corrected*, by A.S.E. Ackermann (1923, p. 43) contains numerous quotations arguing that "Liebig's Extract of Meat" and "Beef-tea" possess only slight nutritive properties. They are salty stimulants–not proteid foods.

Another ad (March 14, p. xiv) is for Greenwich sperm candles. The company Wilkie & Soames, of Greenwich, London, S.E., manufactures parrafine [paraffin], sperm, and stearaffine candles, hard soaps, saponified stearine, and tallow oil.

1061. *Grocer (The) (London)*.1874. Price current. Saturday, March 7, 1874. 25(636):209-10. March 7.
• ***Summary:*** "Articles in the following List subject to duty are quoted with the duties paid as annexed..." "Soy" [sauce] is £1 and 5 pence, with a duty of 1 pence.

Also on the list are linseed oilcake, rape oilcake, many different oils and fats (not including oil from soybeans), small pearl sago, sauces, and pickles. Butter is measured in firkins. In the category "Provisions" are butter, Canadian butters, Irish butter, bacon, Irish bacon, ham (beware putrid hams), pickled meats, pork (in barrels), dressed hogs, lard, beef, Australian meats, cheese, American cheese, and eggs. Widely used oils (see Supplement, p. 5) are linseed oil, rape oil, olive oils, Florence oil, refined cotton oil, cocoanut oil, palm oil, fish oils (incl. sperm oil, which is now expensive), colza. Among the seeds (p. 6 and later issues) are "Dutch hempseed," rapeseed, cloverseed, canaryseed.

Note 1. This is the earliest English-language document seen (Nov. 2005) that contains the term "linseed oilcake" or the term "rape oilcake."

Note 2. This is the earliest English-language document seen (Nov. 2005) that uses the term "cotton oil."

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Note 3. This is the earliest English-language document seen (Aug. 2003) that contains the word "hempseed" (or "hempseeds").

1062. **Product Name:** Mellor's Worcestershire Sauce.
Manufacturer's Name: Mellor & Co.
Manufacturer's Address: Malvern, Worcestershire [England].
Date of Introduction: 1874, March.
Wt/Vol., Packaging, Price: Bottle.
New Product–Documentation: Ad in The Grocer (London), 1874, March 28, p. xii, "Mellor's Worcestershire Sauce. Ask for Mellor's Sauce and observe the green guarantee labels on every bottle. Sold by wholesale vendors everywhere. For foreign agents, see names on labels. Registered. The only sauce sold genuine at half price. One-shilling bottles for sixpence. Two-shilling bottles for one shilling." A small illustration (line drawing) shows the bottle.

Note 1. The ad does not state that this brand contains soy sauce.

Note 2. Lea & Perrins does not advertise their Worcestershire sauce in this magazine and they are not mentioned among pickle and sauce manufacturers.

1063. *Chicago Daily Tribune*.1874. The courts: Another imitator of Worcestershire sauce. April 3, p. 3.
• ***Summary:*** "More Worcestershire-sauce troubles. Judging from the suits of infringement of patents brought here, Chicago must be a flourishing place for bogus manufactures. Especially does this appear to be the fact in regard to counterfeits of Lea & Perkin's [sic, Lea & Perrins] 'Worcester Sauce.' About six weeks ago Lea & Perkins filed a bill against a party on Blue Island avenue, and yesterday two more cases were commenced, one against Charles Lutz [Leitz] and William Lewis, the other against Edward Cole."

The complainants state that "Charles Lutz has for some time been engaged in the manufacture of an imitation of their sauce. The labels employed by him... state that the sauce was manufactured by 'Lewis & Co.,' of Worcestershire and London. A circular, which is issued by the spurious firm, states that they are the only manufacturers of the genuine Worcester sauce, and warns the buyer of spurious imitations, designating, with cool effrontery, the original makers, Lea & Perkins [sic], as imitators. An affidavit filed by H.M. Collyer, the counsel" for Lea & Perrins describes how about 6 weeks ago he "formed the acquaintance of this Charles Lutz at No. 85 Washington street. Lutz pretended that he imported all his sauce in bottles from England, and that it was true blue [genuine]." Collyer, however, found that the sauce was made in "the basement of a brick block on the southeast corner of State and Kinzie streets. Here he saw Lutz engaged at work with a large kettle, in which the sauce was made, with barrels to hold it when boiled, and numerous bottles, labels, and boxes for it preparatory to shipment."

"In the case against Cole, it is alleged that he was formerly engaged with a party named Stevens in New York. The labels of that firm set out in glowing colors the excellence of their article, the 'Gold Medal Worcester Sauce,' which is represented as having taken sundry prizes at various places, and as being employed to aid the digestion of majesty herself in England. Stevens appears to be a myth, and Cole, after having been sued in New York, has flown to, what he considers, a more congenial climate in Chicago." But he has now been found and caught again.

1064. *Manchester Guardian* (*England*).1874. Commercial markets: London Produce Market, Thursday, April 24, p. 7.
• ***Summary:*** "Drugs.–54 cases Malabar cardamums, partly sold, at 3*s.* 4*d*... 100 casks China soy [sauce], partly sold, at 1*s.* 6*d.* for thick;..."

1065. Davis, Rebecca Harding, 1874. Earthen pitchers: Chapter XV. *Scribner's Monthly* 7(6):714-21, April. See p. 717.
• ***Summary:*** "'Though I never approved of girls eating meat. It ruins the complexion. "You ought to have spent the day with me. I was putting up tomatoes, canning catsup and soy. Of course, you don't know how to make good soy?'

"'I'm afraid not.'"

1066. Duncan's (John) Sons, 1874. Sauces. Trade-mark: Worcestershire sauce (Ad). *New York Times*, May 16, p. 6.
• ***Summary:*** "Supreme Court–General term. John W. Lea et al. against Sundry Counterfeiters. 'When it is apparent that there is an intention to deceive the public by the use of the name of a place and the word descriptive of an article, such deception will not be protected by the pretense that these words cannot be used in such a manner as to constitute a 'trade mark.'

"'Where words and the allocation of words have, by long use become known as designating the article of a particular manufacturer, he acquires a right to them as a trade-mark, which competing dealers can not fraudulently invade.

"'The essence of the wrong is the false representation and deceit, on proof of which an injunction will issue.'

"The concluding words of the judge's decision are: 'The order appealed from should be modified and the injunction extended so as to prohibit the use of the words 'Worcestershire Sauce' on the bills, labels, and wrappers of the defendant.'

"Lea & Perrins' celebrated Worcestershire Sauce.

"Pronounced by connoisseurs to be the 'only good sauce,' and applicable to every variety of dish."

Extract of a letter from a medical gentleman at Madras [India] to his brother at Worcester, May, 1851. 'Tell Lea & Perrins that their Sauce is highly esteemed in India, and is, in my opinion, the most palatable as well as the most

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wholesome Sauce that is made.'

"Sold Wholesale and for Exportation by the Proprietors, Lea & Perrins, Worcester, England; and Retail by Dealers in Sauces generally throughout the World.

"Ask for Lea & Perrins' Sauce. All parties infringing on the above will be prosecuted by Messrs. Lea & Perrins."

A large illustration of a bottle of Lea & Perrins Worcestershire Sauce, with the label in plain view, appears in the middle of the ad.

Note 1. This is the earliest document seen (March 2012) that mentions the Supreme Court in connection with Worcestershire Sauce.

Note 2. This is the earliest document seen (Feb. 2012) concerning Worcestershire Sauce with this illustration, or with this format or text. Address: New York.

1067. *Chicago Daily Tribune*.1874. The courts: Miscellaneous business transacted yesterday. May 19, p. 2.
• ***Summary:*** "A few months ago, it will be remembered, Lea, Perrin & Co. filed bills in the United States Circuit Court against various Chicago parties for infringements of their Worcestershire sauce. Among the unfortunates who were detected and enjoined from further manufacturing any spurious imitation of the plaintiffs' brand were Charles Leitz [Lutz] and William Lewis.

"Yesterday Leitz, his occupation being gone, filed a bill against his partner, Lewis, for a dissolution of partnership. Leitz states that in February last, he formed a copartnership with Lewis in the business of manufacturing table-sauce, perfumes, soaps, pomades, etc. The firm name was to be 'Charles Leitz, agent for Lewis & Co., London,' and was to continue five years. Complainant was to provide the capital...

"It is now alleged that the business of the firm has never been successful, and that Leitz has lost a good part of the $1,800 contributed by him. Lewis has neglected his duties, overdrawn his share of the profits, and even converted large amounts to his own use out of the goods manufactured for sale..."

1068. Duncan's (John) Sons. 1874. There is no relish in the world which is so universally liked... (Ad). *New York Times*. Dec. 24, p. 6, col. 6.
• ***Summary:*** "There is no relish in the world which is so universally liked as Lea & Perrin's [sic] famous Worcestershire Sauce. Unfortunately, much that is counterfeit and worthless is sold in this country. Messrs. John Duncan's Sons are the most reliable agents for the pure sauce."

Note: This is the earliest document seen (Feb. 2012) that contains the title or opening sentence ("There is no relish...") repeated many times hereafter. However, subsequently it was always deceptively attributed, "From New-York Times," as if were a statement or evaluation of the sauce by the *Times*, whereas, in fact, it is was originally a sentenced published as an advertisement in the *Times* by John Duncan's Sons, the New York agent for Lea & Perrins. Address: New York.

1069. Hoffmann, J.J. 1874. Ueber die Bereitung von Schoju, Sake und Myrin [On the preparation of shoyu, saké and mirin]. *Mittheilungen der Deutschen Gesellschaft fuer Natur- und Voelkerkunde Ostasiens (Yokohama)* 1(6):8-11, Dec. [Ger]
• ***Summary:*** The author was the first Westerner to make a scientific study of the shoyu process, of which he gives an accurate and detailed 2-page description: Soybean sauce (*Bohnensauce- Schoju*)–shoyu–is for the Japanese almost as indispensable as rice and is used as widely as tea or tobacco. The rich man and the beggar use it in the same way, but with differences in quality, as the main seasoning at their meals, and in no household, in fact at no meal may it be absent.

It is made in large factories, and in countless stores in all cities and towns throughout the entire island empire, it is stocked and sold in small wooden kegs.

It is made with soybeans, indeed very high protein, starch-free small soybeans (Dolichos Soja jap. Nagatemame), plus wheat, salt, and water in the same proportions by volume. Small kegs are used to measure the ingredients. The beans and grains are used in the same condition of dryness.

Before the basic raw materials are mixed, the soybeans are cooked in large iron kettles for half a day. The wheat is roasted in large containers (*Steingefaessen*) and then cracked into grits / pieces using a small hand-mills. Then the moist beans are mixed with the wheat grits on a firmly packed clay floor, then to them is added a fermentation starter culture consisting of wheat kernels covered with mold spores. The mixture is filled into rectangular wooden trays each about 2-3 inches deep, and these are placed and stacked in a closed room that resembles a large bakery oven.

Here the wooden trays stay for 3 days, during which time an effort is made to keep the room evenly warm throughout. During the cold seasons of the year the room is heated with a small charcoal burner. In this way the plant seeds gradually become covered with mold spores and develop their capacity to produce diastase enzymes. In cold weather, the room may be kept closed on the 2nd and 3rd days, but on warm days it may be vented using the door and windows during the 2nd and 3rd days to prevent overheating. To determine the suitable temperature, no thermometer is used; the feel of the maker is used instead.

On the 3rd day the contents of the wooden trays are thickly covered with a mycelium of mold. The contents of the trays is now transferred into large wooden vats (each of 20-30,000 liters capacity) and mixed with water and table salt. The contents of each vat is mixed with a wooden plunger as the fermentation proceeds. The process typically begins at the start of winter. The fermentation typically last for 3 to 5 years. The 3-year material is a dirty brown whereas the 5-year material is pure dark-brown in color.

The 3- and 5-year products are then mixed in equal

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proportions. The 5-year material adds its pleasant aroma, but it has a somewhat unpleasant bitter taste. This is masked with the 3-year material which has a nice flavor but less aroma.

This mixture is now filled into sturdy cotton bags, each 2 feet long and ½ foot wide. These are then pressed with a very primitive angle press consisting of a long lever arm weighted at the end by large stones. The shoyu (*Schoju*) from the first pressing is the best and most expensive type, but it is usually not sold as such. Rather it is dispensed preferentially to those with advanced orders. It has the strongest aroma and a beautiful dark-brown color. When put in a glass and shaken it makes a fat-glistening ring.

The shoyu presscake (*Rueckstand*) is mixed with salt water and some days later, after frequent stirring, repressed. This shoyu is very clear with little aroma, so it is mixed with a good dark-brown shoyu and with some sweet sake (*suessem Sake*).

The wooden kegs in which shoyu is sold are everywhere the same having a capacity of 18 liters or 4.76 gallons (1 *to*). In new kegs, the shoyu keeps for only a few months; it keeps longer in older kegs. There are four grades of shoyu. The prices are 6 German marks for grade 1, 4 marks for grade 2, 3 marks for grade 3, and 2 marks for grade 4.

As an article for export, shoyu has not gained much significance, despite great efforts. During shipping there is a buildup of mold which impairs the good flavor and aroma. The best varieties of shoyu are, however, very pleasing to the taste of most Europeans, and at the same time very effective in stimulating the appetite and digestion. For these reasons and because it is completely harmless / safe, shoyu is preferred to many European products [such as meat extracts] that serve the same purpose.

Hoffman then describes how sake is made; yet nowhere in either of these two parts of the long article does he mention the word *koji*, even though he describes it. He learned all of this at the famous shoyu-mirin factory of Mr. Sagamia Monjiro in Nagareyama, 5 German miles north of Yedo / Edo [today's Tokyo].

Note 1. The date on the title page is Nov. 1876, but Hoffmann's paper was not presented until 1878. This is the earliest document seen (Oct. 2001) that is a study of several fermented foods, including one made from soybeans–*shoyu*.

Note 2. This is the earliest document seen (April 2012) that describes how to make soy sauce (actually shoyu) on a commercial scale.

Note 3. This is the earliest German-language document seen (April 2012) that uses the term *Schoju* or the term *Bohnensauce* to refer to shoyu or soy sauce. Address: Prof., School of Medicine, Tokyo Univ., Japan.

1070. Cre-Fydd. 1874. Cre-Fydd's family fare: The young housewife's daily assistant, on all matters relating to cookery and housekeeping... New ed. [7th], revised. London: Simpkin, Marshall, and Co. cxcxvii + 340 p. Index.

• ***Summary:*** The author is a woman. The recipes that call for soy [sauce] in this 1874 edition are identical to (and on the same pages as) those in the 1863 ed, except for: Piquant sauce (p. cxcv). Address: Great Britain.

1071. Williams, Samuel Wells. 1874. A syllabic dictionary of the Chinese language; arranged according to the Wu-Fang Yuen Yin, with the pronunciation of the characters as heard in Peking, Canton, Amoy, and Shanghai. Shanghai, China: American Presbyterian Mission Press. lxxxiv + 1252 p. 28 x 22 cm. [8 ref. Eng; chi]

• ***Summary:*** In this dictionary, the Chinese characters are arranged alphabetically. Each main character, written large, has the pronunciation written below it, and the meaning written in English to the right. Below these are numerous compound words in which the character appears, followed by a definition of each. No pronunciation is given for compounds or combinations of several characters, such as teu-fu [doufu], which makes the dictionary hard to use. The main radical relating to soya is no. 151, Teu, 7 strokes, referring to pulses and sacrificial vessels (p. 874).

Page 145, under fu (rotten, corrupt, spoiled), lists the characters (teu-fu) for "bean curd; low policeman and underlings are named teu-fu-kwan because they live on and are no better than this curd; and also the teachers in low government schools."

Page 764, under shi, lists the characters for "salted beans" [fermented black soybeans], "salted beans and flour," "soy [soy sauce: shi yu in Chinese or shoyu in Japanese], an English word probably derived from this name."

Note: This is the earliest English-language document seen (Nov. 2011) that uses the word "shi" to refer to fermented black soybeans.

Pages 874-75, under teu, list the characters for "legumes of every kind, pea, beans," "bean-curd jelly" [tofu].

Page 968, under tsiang [ch'iang], lists the characters for "a relish made of salt mixed with bean or other kinds of flour, and water, and allowed to remain until cured; it is used as a condiment; relishes, sauces, condiments; salted preparations," "a dry relish," "a shop for sale of oilman's stores, and condiments," "bean sauce, this is the basis of most of the Chinese relishes," "vegetables seasoned in soy."

On page 839, under ta (big), there is no listing for ta-teu, the soybean. On page 252, under hwang (yellow), there is no listing for hwang-teu, the yellow soybean. On page 580, under mao (hair), there is no listing for mao-teu (fresh green soybeans). Thus it seems that the compiler of this dictionary was unaware of the soybean.

Page 1111, under yiu, lists the character for oil in various combinations. When preceded by the character for "fragrant" it refers to "sesamum, gingilie, or benne oil," made from the seeds of *Sesamum orientale*. Soybean oil is not specifically mentioned.

Note: This is the earliest English-language document

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seen (Feb. 2005) that uses the word "benne" to refer to sesame seeds. Address: United States Legation, Peking.

1072. Goode (H.W.) and Co. 1875. Classified ad: Indian condiments. *Times* (*London*). Jan. 12. p. 2, col. 6.
• ***Summary:*** "Nepaul and Cayenne Peppers, Curry Paste, Indian Soy [sauce], Chutnies, Guava Jelly, Pineapple Jam, &c....." This ad also appeared in the May 4 issue (p. 14, col. 1).

Note: The meaning of the word "Indian" could be much broader than it is today (Oct. 2010); it could extend from British India on the west to the Dutch East Indies (today's Indonesia) on the east. Address: Chinese Warehouse, 32, King William-street, London-bridge [London].

1073. Duncan's (John) Sons. 1875. Trade mark: Worcestershire sauce (Ad). *Buffalo Commercial Advertiser* (*New York*). Feb. 4, p. 4, col. 5, Thursday evening.
• ***Summary:*** "Lea & Perrins' celebrated Worcestershire Sauce. Pronounced by connoisseurs to be the 'only good sauce,' and applicable to every variety of dish.

"Extract of a letter from a medical gentleman at Madras [India] to his brother at Worcester. May, 1851. 'Tell Lea & Perrins that their Sauce is highly esteemed in India, and is, in my opinion, the most palatable as well as the most wholesome Sauce that is made.'

"Sold Wholesale and for Exportation by the Proprietors, Lea & Perrins, Worcester, England; and retail by dealers in sauces generally throughout the world.

"Ask for Lea & Perrins' Sauce. At the breakfast table it imparts the most exquisite relish and zest to hot or cold meat, fowl, fish, broiled kidney, &c.

"At the dinner table in soup, with fish, hot joints, game, and in all gravies, it gives a delightful flavor.

"At the luncheon and supper tables it is deemed indispensable to those familiar with its estimable qualities.

"From *New York Times*. There is no relish in the world which is so universally liked as Lea & Perrins famous Worcestershire Sauce." An illustration shows a bottle of the Sauce.

Another small advertisement of "this delectable condiment" is found on page 3, col. 1. The quotation from *The New York Times* is repeated. Address: New York.

1074. Lea and Perrins. 1875. Classified ad: Caution–In consequence of spurious imitations of Lea and Perrins Sauce,... *Times* (*London*). March 15. p. 1, col. 2.
• ***Summary:*** "... which are calculated to deceive the public, Lea and Perrins have adopted a new label bearing their signature, Lea and Perrins, which will be placed on every bottle of Worcestershire Sauce after this date, and without which none is genuine.–Crosse and Blackwell, Soho-square, Agents for the Proprietors.–November 1874."

Note 1. This is the earliest document seen (Feb. 2012) that mentions the plan to use the Lea & Perrins' signature on the labels of their bottles to distinguish their genuine article from imitations. However the signature itself is not shown.

Note 2. This small published ad is the earliest document seen (Dec. 2005) concerning unfair practices or deception in connection with a soy product.

Note 3. This ad also appeared in the April 19 issue (p. 1, col. 1).

1075. Duncan's (John) Sons. 1875. Sauces. Trade-mark: Worcestershire sauce (Ad). *New York Times*. March 26. p. 11.
• ***Summary:*** This ad is identical to that in the *Buffalo Commercial Advertiser* (4 Feb. 1875. p. 4, col. 5). It also appeared in the April 23 issue (p. 8) of the *New York Times*. Address: New York.

1076. Renard, Édouard. 1875. La pêche et la pisciculture dans l'Extrême Orient [Fishing and fish culture in the Far East]. *Bulletin de la Societe d'Acclimatation* 22:281-99. June. [Fre]
• ***Summary:*** Contents: Malaysia and the Indian Archipelago (*Archipel Indien;* probably Dutch East Indies). Cochin China. China. Japan.

Mr. Dabry de Thiersant (p. 292) has written a magnificent work about fish farming (*la pisciculture*) in China, where all fish are classified into two large categories: (1) The cyprinids (family Cyprinidae, *Kia-Yu*) such as carp, etc., which are herbivores and which they raise in artificial ponds and in regular ponds (*les pièces d'eau, dans les étangs*). (2) Marine fish, and even some that live in fresh water, such as pike and perch, are called *Ye-Yu* or wild fish (*poissons sauvage*). These latter are often the bane of Chinese aquaculturists, who use every possible means to get rid of them when they are accidentally introduced into their fish ponds (*viviers*).

Note: This is the earliest European-language document seen (Nov. 2002) concerning fish farming or aquaculture; however soybeans are not mentioned.

In Japan, people of the upper classes (the officers, feudal lords [*daimyo*], etc.) eat carp entirely raw. Removed from the water, it is served on the table on bamboo leaves–still alive. What are our colleagues at the Society for the Protection of Animals going to say about such a barbaric process? When all the meat has been cut from the bones so that only a skeleton is left, these thin slices of fresh carp meat, dipped in shoyu (*trempées dans la soya*), constitute one of the most savory dishes of Japanese epicures (*Lucullus*, p. 295).

Note: Lucullus, a Roman general who lived 117-58 B.C., was known for the splendor of his banquets.

Also discusses: Sea vegetables in Japan–kombu, fucus, and agar (Isinglass) (p. 296-97). Address: France.

1077. Duncan's (John) Sons. 1875. Trade mark:

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Worcestershire Sauce. Lea & Perrins' celebrated (Ad). *Montgomery Weekly Advertiser (Montgomery, Alabama)* Advertiser and Mail section dated Tuesday, July 27. 1st page (unnumbered).

• ***Summary:*** "Pronounced by connoisseurs to be the 'only good sauce.' And applicable to every variety of dish.

"Extract of a letter from a medical gentleman at Madras [India] to his brother at Worcester; May, 1851. 'Tell Lea & Perrins that their Sauce is highly esteemed in India, and is, in my opinion, the most palatable as well as the most wholesome Sauce that is made.'

"Sold Wholesale and for Exportation by the Proprietors, Lea & Perrins, Worcester, England; and Retail by Dealers in Sauces generally throughout the World.

"Ask for Lea & Perrins' Sauce. At the Breakfast Table it imparts the most exquisite relish and zest to Hot or Cold Meat, Fowl, Fish, Broiled Kidney, &c.

"At the Dinner Table in Soup, with Fish, Hot Joints, Game, and in all Gravies, it gives a delightful flavor.

"At the Luncheon and Supper Tables it is deemed indispensable to those familiar with its estimable qualities.

"From *New York Times*. There is no relish in the world which is so universally liked as Lea & Perrins famous Worcestershire Sauce. An illustration shows a bottle of the Sauce.

Note: Inexplicably, the date of the "Advertiser and Mail" section is several days earlier than the date of the *Montgomery Weekly Advertiser*. Address: New York.

1078. *Punch (London)*.1875. Note by a cockney naturalist. 68:77. Aug. 28.

• ***Summary:*** "The common blackbeetles (*Scarabæus niger*), which so abundantly infest the culinary regions of Cockaigne, are alleged to be agreeable, although profuse, in flavour, provided they be delicately larded before crimping, and then fricasseed or simply fried. Care should specially be taken not to injure their antennae, which, when crisp with egg and breadcrumbs, exquisitely tickle the palate of the gourmet, and provoke him to the liveliest of gastronomic feats. There lurks in vulgar minds a savage prejudice against these interesting insects, by reason, very likely, of the popular impression that at times they have been manufactured into Soy [sauce]. But this may be assumed to be mere idle superstition, and Soyer, the great chef, wisely set his face against it, remarking, as he did so, *'Honi Soy qui mal y pense.'*"

1079. Lea & Perrins. 1875. Lea & Perrins' is the only genuine Worcestershire Sauce (Ad). *Atlanta Constitution (Georgia)*. Oct. 3. p. 3.

• ***Summary:*** A tiny ad. Note: This is the earliest reference seen (Feb. 2012) to Worcestershire sauce in a Georgia newspaper.

1080. Kirkland (O.A.) & Co. 1875. Landlord's sale of malt vinegar, Bass & Co.'s ale, bottles, corking machine, etc., being the stock and fixtures of a bottling establishment. *Sun (Baltimore, Maryland)*. Oct. 16. p. 3.

• ***Summary:*** "By virtue of a warrant of distress, issued by Justice McCaffray... 100 gallons English Malt Vinegar, 60 doz. Bass & Co.'s Ale, 50 doz. Philadelphia Ale, 15 gallons China Soy [sauce], 30 gallons Vinegar Garlic,..."

Note: This soy sauce was going to be bottled, then sold. Address: Auctioneers, 79 West Fayette street [Baltimore].

1081. *New York Times*.1875. Life in hotels: A phase of American boarding. Oct. 31. p. 5.

• ***Summary:*** The dinner "bill of fare" [menu] is given to help the reader get a better idea of life in hotels. It includes: "Relishes: Mixed pickles, olives, celery, chow chow, horse-radish, Worcestershire Sauce, currant jelly, lettuce, tomatoes."

1082. Ripley, George; Dana, Charles A. eds. 1875. The American cyclopædia: A popular dictionary of general knowledge. Vol. 13. New York, NY: D. Appleton and Company. See p. 203.

• ***Summary:*** Under the entry for "Pea" we read (p. 203): "The Japan pea, at present widely advertised as a most valuable plant for its seeds and fodder for the southern states, is a species of *soya*, very near the soy pea, *S. hispida*, if not a form of it."

1083. *Notes and Queries (London)*.1876. Lea & Perrins. 5(106):39. Jan. 8. Fifth Series.

• ***Summary:*** "In consequence of Spurious Imitations of Lea & Perrins' Sauce, which are calculated to deceive the public, Lea & Perrins have adopted a New Label, bearing their Signature, thus–...

"Which will be placed on every bottle of Worcestershire Sauce, after this date, and without which none is genuine... Retail by dealers in Sauces throughout the world.– November, 1874."

1084. *Boston Daily Globe*.1876. Worcester sauce (Ad). March 10. p. 8.

• ***Summary:*** "This well-known table sauce for game, steaks, roasts, soups, etc. is manufactured by William Espenmuller, 28½ Indiana Place; is composed of the best and most delicate ingredients, and is said to be superior to all others in the market. It is now mostly used by first class hotels, restaurants and families. The price has been reduced to $1.50 per gallon, delivered to all parts of the city."

Note: This is an early "Worcester sauce" made in the United States.

1085. *New York Times*.1876. The household. April 28. p. 9.

• ***Summary:*** Because of the lively interest in this department

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of *The Sunday Times*, the usual number of receipts [recipes] are printed. They include Tomato catsup, from R.A.M. The receipt for "The Cornish method to marinate shad" includes 1½ tablespoons of Worcestershire sauce, from J.L.V.

1086. *Trade Marks Journal (The) (Great Britain)*.1876. List of applications for the registration of trade marks: Harvey's sauce. 1(9):198-99. June 28.
• ***Summary:*** On 11 Feb. 1876, Walter Lazenby, 18 Trinity St., St. Mary Newington, Surrey (just southeast of London), and 90 & 92 Wigmore Street, Middlesex (just east of London), applied for seven trademarks. Four of these were for "Sauces and condiments," and each was in the form of an entire, decorative label.

The first (No. 2167) reads: "Harvey's Sauce for Fish, Game, Steaks &c. Prepared from the Original Receipt, only at E. Lazenby's Fish Sauce Warehouse, No. 6, Edwards St., Portman Square, London. NB. None is genuine unless signed by me, Elizabeth Lazenby." This Mark has been used for 16 years before 10 Feb. 1876 (i.e., since about 1850).

The 2nd (No. 2168) reads: "E. Lazenby & Son of the original warehouse, No. 6, Edwards St., Portman Sq., now called 92 Wigmore St., and 18 Trinity St., S.E., London. Notwithstanding the change in name of Edwards Street ordered by the Board of Works, every Bottle of the celebrated Harvey's Fish Sauce prepared by E. Lazenby & Son, still bears the label used so many years."

No. 2169 is named "Lazenbys Harveys Sauce," since July 9th 1858. Note: Note: This is the earliest English-language document seen (April 2012) that contains the term "Harveys sauce" (spelled without an apostrophe).

The bottom half of No. 2170 reads: "Harvey's Sauce–Caution: The admirers of this celebrated Sauce are particularly requested to observe that each bottle bears the well-known Label, signed 'Elizabeth Lazenby.' This label is protected by perpetual injunction in Chancery of the 9th July, 1858, and without it none can be genuine."

No. 2173 is "Metropolitan Sauce, for fish, game, steaks, &c... Mathews & Son of St. Paul's Works, London." This Mark not used prior to 13 Aug. 1875.

"Under the Trade Marks Registration Act, 1875." Address: England.

1087. *Times (London)*.1876. High Court of Justice, July 26, Chancery Division. (Before the Master of the Rolls.) Lea v. Millar. July 26. p. 11, cols. 1-2.
• ***Summary:*** "This bill was filed by Messrs. Lea and Perrins, of Worcester, to restrain the defendant from using the name 'Worcestershire' in connection with a sauce made and sold by himself under the style or firm of Richard Millar and Co., such name being claimed by the plaintiffs as exclusively belonging to the sauce manufactured by themselves from a recipe imparted to their predecessors in business by a nobleman of the county about the year 1835."

"The defence was that the name had become common property... The plaintiffs' counsel declined to contest that part of the case any further, and addressed themselves to the subsidiary question, whether the defendants had infringed the plaintiffs' rights by imitating their wrappers and labels. In the result,

"The Master of the Rolls said that he was of the opinion that the plaintiffs' case had wholly failed, and that Messrs. Lea and Perrins would have been better advised if they had not instituted the suit... It appeared to his Lordship to be established that Messrs. Lea and Perrins' predecessors in business either invented or obtained the recipe for an article to which they gave the name of Worcestershire sauce, and that they were the first persons to sell an article by that name. This was about the year 1836, and within a very few, probably not more than two, years afterwards other people, of whom one Batty seemed to be the first, began to sell an article under the same name. Indeed the name, within a very few years after it was first used by Messrs. Lea & Perrins, appeared to have become a common name in the trade:..."

The "plaintiffs' sauce was sold at a shilling, and the defendant's at 6*d.* or 4½*d.* per bottle, according to the conscience of the retail dealer."

No damages appear to have been sustained. The "defendant's article was sold in any inferior class of shops and to a lower class of customers than those who were accustomed to buy Messrs. Lea and Perrins' more expensive compound."

"His Lordship of opinion that that the plaintiffs had not shown due diligence in prosecuting infringers, and... had in November, 1874, adopted a new label bearing their own signature as the distinctive mark, and had in the most public manner abandoned the old label, which they now sought to protect. His Lordship then dismissed the bill with costs." Address: [England].

1088. Rauch, A. 1876. Die Soya [The soybean]. *Fundgrube (Die) (Monatschrift fuer die gesammten praktischen Beduerfnisse und Interessen des taeglichen Lebens, von Dr. A. Rauch, Bamberg)* 3:177-78. Oct. [Ger]
• ***Summary:*** The soybean (*Soya hispida* or *Dolichos Soya;* many German writers use the name "Soja") is a creeping and climbing bean (*rankendes Bohnengewaechs*) that is native in Japan, and in all of southern Asia, especially in China, is likewise widely cultivated, like the common bean in Germany. The seeds, which are distinguished by an especially good taste, are used as very popular food in the countries where soybeans are grown, which is found at almost every meal. They are also part of a significant commercial product, since they are used to make a strong sauce, which is much sought after in fine kitchens / cuisine. In England, for example, each year more than 1,200,000 lb (*12,000 Zentner*) of the beans and significant quantities of the Soya sauce*, which is made in China, are imported.

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Footnote: *"Some sauces sold as 'Soya sauce' in England do not contain any of the actual sauce."

In Europe, various attempts have already been made to acclimatize the soybean. But these have so far been unsuccessful, in that the plants, at best, flower, but never bear seeds. "Previously I received several seeds of various soybean varieties from Japan, from my longtime friend, honorable [Philipp] v. Siebold, who died at an early age. However my attempts to cultivate them was unsuccessful. The plants came up, and some of them bloomed, but so late (in September) that none ripened seeds.

"I was therefore quite astonished to read an article in the *Wiener Landwirthschaftliche Zeitung*, by Dr. Haberlandt, professor at the Royal College of Agriculture in Vienna (*Wiener Hochschule für Bodencultur*); he reported that soybean cultivation at he Agricultural Experiment Garden (*landw. Versuchsgarten*) in Vienna, during the summer of 1875, had completely succeeded." Describes the pioneering work of Friedrich Haberlandt with soybeans in Austria.

Note: Bamberg is a city in Bavaria, in south central Germany on the Regnitz River 30 miles west of Bayreuth. Address: Germany.

1089. Griffis, William Elliot. 1876. The Mikado's empire. New York, NY: Harper & Brothers, Publishers. 625 p. Illust. Index. Map. 23 cm. [25+* ref]

• ***Summary:*** Book 1. History of Japan from 660 B.C. to 1872 A.D. Book 2. Personal experiences, observations, and studies in Japan, 1870-1874.

This is a remarkable book, beautifully written by an American teacher and traveler in Japan who loves the culture and the people, who lived and traveled widely among them in both the countryside and cities during his four years in Japan (29 Dec. 1870 to 25 July 1874), and who speaks Japanese. He has a deep knowledge of many aspects of Japanese history, including the history of Japanese religions (incl. Buddhism). He was invited to Japan to organize a scientific school on the American principle in Fukui, Ichizen, and to give instruction in the physical sciences. This is the 1st of 18 books he wrote about Japan. He returned to Japan in 1926 the receive the Order of the Rising Sun.

Among the Aino [Ainu] in Hokkaido [Yezo] (p. 31): They sit, like the Japanese, on their heels. Their food is mainly fish and sea-weed, with rice, [soy] beans, sweet-potatoes, millet, and barley, which, in Southern Yezo, they cultivate in small plots."

Describing the Japanese origin myth, with the Sun Goddess (Amaterasu), Izanami, Izanagi, etc. (p. 48-49): "The God of Clay and the Goddess of Fresh Water married. Their offspring was Naka musubi. From his head grew the mulberry and silk-worm, and from his navel sprang the five cereals, rice, wheat, [soy] beans, millet, and sorghum." "Reporting the matter in heaven, Amaterasu was angry at Sosanoo, and degraded her (the Moon-goddess) from joint rule, and condemned her to appear only at night, while she, the Sun-goddess, slept. Amaterasu then sent a messenger the second time to see whether the Food-goddess was really dead. This was found to be the case. Out of the dead body were growing, millet on the forehead; silk-worms and a mulberry-tree on the eyebrows; grass on the eyes; on the belly, rice, barley, and large and small beans." Note 1. Large beans are soybeans; small beans are azuki.

Page 208: The native sauce, *shô-yu*, made of fermented wheat and beans, with salt and vinegar, which the cunning purveyors of Europe use as the basis of their high-priced piquant sauces [such as Worcestershire sauce], was made and used as early as the twelfth century. The name of this saline oil (*shô*, salt; *yu*, oil) appears as 'soy' in our dictionaries, it being one of the three words (soy [sauce], bonze, moxa) which we have borrowed from the Japanese." Note 2. The author's derivation is incorrect; *shô* does not mean "salt," but rather *hishio* or *jiang*, which is the mash, having the consistency of applesauce, before the liquid is pressed out.

Page 357: In the cooper shops is a "dazzling array of wood-work, so neat, fresh, clean, and fragrant... There are two coopers pounding lustily away at a great rain-tank, or saké-vat, or soy- tub" [vat]. An illustration shows two coopers at work hooping a vat.

At the pagan temple (p. 381): "Several old women have stands, at which they sell holy [soy] beans, pious pease, and sanctified rice. These are kept ready in tiny earthen saucers. The orthodox buy these, and fling them to the cloud of pigeons that are waiting on the temple eaves, and fly, whirring down, to feed. Ten thousand sunbeams flash from their opaline necks..."

Page 420: "The village houses were built of a frame of wood, with wattles of bamboo smeared with mud, and having a thatched roof. Within, the floor was raised a foot or so above the ground, and covered with mats. When the rooms had partitions, they were made of a frame of wood covered with paper, and made to slide in grooves. In the middle of the floor was the fire-place. From the ceiling hung pot-hooks, pots, and kettles–one for tea, one for rice, another for radishes, beans, or bean-cheese [tofu]. In these villages good-nature and poverty seemed to be the chief characteristics of the people."

Page 426-27: "The seller of fish, vegetables, oil, and bean-cheese, each uttering his own trade trade-cry, ambled on."

Page 455: "Men or women itinerants carry a small charcoal brazier under a copper griddle, with batter, spoons, cups, and shoyu sauce, to hire out for the price of a cash each to the little urchins, who spend an afternoon of bliss making their own griddle-cakes and eating them."

Note 3. This is the earliest English-language document seen (April 2012) that uses the term "shoyu sauce" (regardless of capitalization or hyphenation) to refer to soy sauce.

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Page 496: "... a shop to which the *élite* of the epicures of Yedo [today's Tokyo] resorted daily for the delicacy of eels fried in soy [sauce]. The appetizing odor was wafted" into the neighborhood.

Page 516: "May 1st [1871]–During the past month I have made many excursions on horseback through the country round, staying overnight at the village inns. Sasaki and Iwabuchi have been my companions. I have seen the paper manufactories, oil-presses, the sake breweries, soy-vats...."

Page 542: Jan. 22d, 1872. For dinner: "Rice, bean-cheese, daikon, mushroom, fish, are served."

Azuki beans (red beans, small beans) are also mentioned on pages 454 and 469. The population in 1872 was 33.3 million. On pages 587-88 is a sort of bibliography.

William Elliot Griffis lived 1843-1928.

Note 4. This is the earliest English-language document seen (Jan. 2008) that uses the term "bean-cheese" (hyphenated, with a space before the word "bean") to refer to tofu. Address: A.M., Late of the Imperial Univ. of Tokyo; presently in New York.

1090. Imperial Japanese Commission to the International Exhibition at Philadelphia (1876). 1876. Official catalogue of the Japanese section: And descriptive notes on the industry and agriculture of Japan. Philadelphia, Pennsylvania: Published by the Japanese Commission. 130 p. 24 cm.
• ***Summary:*** The Preface (p. 3) begins: "Never until the year 1873, had Japan participated to any great extent in the various European International Exhibitions. Up to that time she had been merely represented by some of the provincial governments, acting independently of the central Government. However, the Government determined to be worthily represented at the Vienna International Exhibition of 1873...." But Japan was well prepared for the Philadelphia Centennial Exhibition.

Under classes of "Agricultural products" (p. 32, 34): Class 621–Peas, beans, etc. (incl. Soya, adzuki). Class 650–Sea weeds (incl. Vegetable isinglass [agar, kanten]). Class 657–Flour and starch (incl. Kudzu {*Pueraria thunbergiana*}). Class 659–Wines and other kinds of drinks (incl. Sake, Soy {a kind of sauce}).

Page 71 discusses relief painting in lacquer: "The lacquer can even be carved, and, finally, the artisan can incrustate mother-of-pearl shell, ivory, thin metal, or anything he likes into the lacquer. By mixing a sort of paste made of [soy] bean powder, or the white of eggs, with the lacquer, he can thicken it to such an extent as to give it a kind of plasticity, admitting the possibility of making impressions which remain visible after hardening."

In the long chapter titled "Descriptive notes on the industry and agriculture of Japan (p. 37-117) is section on "Agricultural products. Classes 620-21–Cereals, vegetables, etc." (p. 104-06). Beans, generally referring to soy beans, are mentioned many times. "Manures of a mineral nature consist of marls, shells and ashes; those of vegetable origin of inferior kinds of beans and peas or their residues, of [soy bean] oil-cakes, the residues of sake-brewing...."

"The excellent kinds of beans and peas, which are made into a kind of cheese [tofu] and a peculiar mixed dish called 'misso' [miso] afford the necessary nitrogenous substances, and to a certain extent form the substitute for meat; the Soyu [shoyu; soy sauce] also belongs to this kind of food, and is frequently mixed with other dishes. With regard to animal food, it is limited almost exclusively to fish, poultry and eggs. But a change has already been effected to a certain extent in the larger towns, where butcheries have been established. An experiment of sheep farming was commenced one or two years ago" (p. 106).

Note: This is the earliest English-language document seen (April 2012) that uses the word "Soyu" (regardless of capitalization) to refer to shoyu or soy sauce.

Under "Class 657, 658–Flour, starch, etc. we read (p. 110-11): "It has been mentioned above that the various kinds of beans constitute a very important element of the national diet. Some of the preparations made of beans and peas are worthy of a short notice. In preparing the 'Tofu,' white beans are soaked in water, ground between two stones, strained through a sieve and afterwards boiled. The contents of the kettle are then filtered through cotton cloth and the residue pressed out. The liquid [soymilk], which may be considered as an alkaline solution of legumine, is precipitated by successive additions of the bitter lye [nigari] which runs off from sea-salt by deliquation, and which is mostly composed of magnesium salts. The precipitate is legumine with a small percentage of legumine-composits [-composites] and a large proportion of water. The 'yuba' is also made by boiling the above-mentioned legumine solution in an open kettle, with a slight addition of ash-lye. The insoluble skins which form upon the surface of the boiling liquid, are taken off and dried. Another kind of preserved food is the 'misso' [miso]. White beans are first boiled, pounded in a mortar to form a paste, then mixed with fermenting rice and salt, whereupon the whole mixture is placed in tubs and left in some cool place; at the end of a month it is ready for use. In mentioning the various preparations made of beans, the 'Soy' or, as the Japanese call it, 'Soyu' [shoyu] should not be omitted; but as it belongs rather to the produce of fermentation, the process will be described under the head of Class 660 [Alcohol and malt liquors].

One page 112 we read: The soy, or 'soyu,' is made of a small bean, the 'Dolichos soja,' or 'Soya hispida,' to which are mixed wheat, salt and water. The beans are first boiled, and the wheat bruised and steamed; both are then mixed with a small addition of fermenting wheat, placed in flat wooden boxes and kept for several days at a fixed temperature in a special room. At the end of three days, the mass [koji] is all covered with fungi and partly with roots of germination.

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After having been mixed with a salt-lye, which has been prepared hot and allowed afterwards to cool down, and to depose certain impurities, the mashings are now removed to enormous coops [vats] in which they are kept for several years. Experience has shown that the best soy is produced by mixing equal quantities of mashings of three years and five years' standing. This mixture is transferred into bags of thick cotton-cloth, placed in large boxes, and then submitted to pressure–at first only to a slight pressure, which yields the best soy, and afterwards, however, to a gradually increasing pressure, the separation of the last portions being assisted by an addition of salt water.

"The soy forms a very important condiment for all kinds of dishes, and is consumed in large quantities. In 1874 the production amounted to 1,506,402 hectolitres!

An interesting term in the Index (p. 129) is "Bean-cheese," which refers to tofu (p. 110).

Also: Use of hemp (*asa*) for manufacture of cloth (p. 77, 113). The tea ceremony (p. 108). Sea weeds, incl. cultivated nori and Asakusa nori in Tokio bay, kanten or vegetable isinglass, and fu (that resembles carragheen [carrageenan] moss and is used in the sizing of the warp of silk goods) (p. 109). Kudzu (p. 110). Sake (p. 111). Address: Japan.

1091. Kitchiner, William. 1876. The cook's oracle: Containing receipts for plain cookery on the most economical plan for private families. London: Houlston & Sons. 424 p. Index. 18 cm. [30+* ref]

• ***Summary:*** The title page states: (1) These recipes are the "result of actual experiments instituted by the late William Kitchiner, M.D." (2) 56,000 books have been printed. The section titled "The magazine of taste" (No. 390, p. 284) contains a list of 28 "useful flavoring materials." No. 28 is "Soy" [sauce]. The others include: Brandy, curacao, salad sauce, pudding catchup, sauce superlative or double relish, walnut pickle, mushroom catchup, vinegar, oil, mustard, curry powder, etc.

Note: This book was first published in 1817, with the title *Apicius redevivus; or, The cook's oracle...* The 7th edition was published in 1823. This edition may have been published in 1869 rather than 1876; the date is not clear in the book. William Kitchiner lived 1775?-1827. Address: M.D., England.

1092. Morrison, William T. 1876. An Anglo-Chinese vocabulary of the Ningpo dialect. Revised and enlarged. Shanghai, China: American Presbyterian Mission Press. xv + 559 p. See p. 37, 442. 22 cm. [Eng: Chi]

• ***Summary:*** "Bean-curd (p. 37), deo-vu + two Chinese characters; tsiang-deo-vu + three Chinese characters and tones are given.

"Soy [sauce] (p. 442), tsiang-yiu + two Chinese characters and tones.

Note: William T. Morrison lived 1834-1869. Address: Rev., D.D., Formerly missionary in Ningpo.

1093. Philadelphia International Exhibition, 1876. Official catalog of the British section. 1876. London: Printed by George E. Eyre and William Spottiswoode. Part I. 424 p. Published by authority of the Lord President of the Council. 23 cm.

• ***Summary:*** The book contains an interesting chapter titled "Exhibitions–Their origin and progress." Prior to 1851 there had been many local exhibitions worldwide, dating back to Biblical times. The first international exhibition was held in London in 1851. To date there have been five international exhibitions: London (1851, 1862), Paris (1855, 1867), and Vienna (1873). These have been attended by a total of 32,959,097 visitors. The Annual International Exhibitions at South Kensington in 1871, 1872, 1873, and 1874 did not realize the expectations of their promoters; public interest rapidly died out and the scheme was abandoned. The first exhibition of the Japanese Empire was held at Kiôto (Kyoto) and contained the objects destined for the Vienna exhibition of 1873. This Kyoto exhibition opened on 17 April 1872 and was so successful that the original limit of 50 days was extended, and the Exhibition did not close until the end of July. The next year the Mikado (emperor) decreed an exposition on a much wider basis, presenting a comparison between the past and present, and even affording a glimpse into the future of Japan. Note 1. This is the earliest document seen (Aug. 2011) that contains the Japanese word "Mikado," meaning Emperor of Japan.

In terms of classification of products, Agriculture is Department VI, in the agricultural building. Agricultural products are classes 620-629; cereals, grasses, and forage plants are class 620, and leguminous plants and esculent vegetables are class 621. Animal and vegetable products are classes 650-662; preserved meats, vegetables, and fruits, dried or in cans or jars. Meat and vegetable extracts is class 656. Vegetable oils is class 662. Horticulture is Department VII, in the horticultural building.

Note 2. This is the earliest English-language document seen (May 2006) that contains the term "vegetable extracts" (or "vegetable extract"). The context shows that they resemble meat extracts. It would be very interesting to know of what and how they are made, and how they are used. By 1896 a type of soy sauce named "Dr. Lahmann's Japan Soja" was described as a "vegetable extract."

An alphabetical list [directory] of exhibitors includes Crosse & Blackwell (Soho Square, London; classes 656, 660, 662), and Lea & Perrins.

On page 246 is the following: "Cl. [Class] 656, 203. Lea & Perrins, Sauce Manufacturers, Worcester, Worcestershire Sauce. (917) Exhibitors, New York, 1853 (Medal)."

On page 77 begins a "List of articles of produce and manufactures chargeable with duty on being imported into the United States." A table titled "Of articles of produce and

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manufactures chargeable with duty on being imported into the United States" shows (p. 289) that the duty on "Soy" [sauce] is 35 per cent. This is the only reference to soy seen in this book.

Note 3. This is the earliest document seen (April 2001) that contains a directory including listings related to soy. Address: England.

1094. Satow, Ernest Mason; Masakata, Ishibashi, comps. 1876. An English-Japanese dictionary of the spoken language. London: Trübner & Co.; Yokohama, Japan: Lane, Crawford, & Co. xv + 366 p.

• ***Summary:*** Page 295: Soup, n. [noun] (flavored with soy [sauce]) *tsuyu; sui-mono;* (made with miso) *otsuke; miso-shiru; o mi otsuke* (the last used only by women).

Soy, n. shôyu (c).

Note 1. The symbol "(c)" denotes that the word which precedes it is of Chinese origin. However, the word *shôyu* is not of Chinese origin, but rather of Japanese origin.

Note 2. This is the 2nd earliest English-language document seen (April 2012) that uses the term "shôyu" to refer to soy sauce. Address: 1. Japanese Secretary to H.M. Legation at Yedo; 2. Imperial Japanese Foreign Office.

1095. Blavet, A. 1877. Le *Soja Hispida* et le *Cicer Arietinum* [The soybean and the chickpea]. *Moniteur Horticole (Belgium)* No. 1, p. 7, Jan. [Fre]*

• ***Summary:*** Even though not shining among the first rank of the food species, these two legumes are of real interest for our vegetable plots. For some time now, based on favorable trials conducted in France, they have been recommended very seriously to all those who are interested in the important question of food. We believe, therefore, that it would be useful to our readers to give a brief description of these two vegetables which are still almost unknown in our country.

The *Soja Hispida* or *Dolichos Soja* belongs to a genus that is very closely related to the genus *Glycine*, and certain botanists even lump them together. It is an annual hairy (*hispide*) plant, about 1 meter in height when erect. Its leaves are trifoliate, consisting of three leaflets or folioles. Its flowers are violet, arranged in clusters (*en grappes ascillaires*), followed by oblong pods, slightly arched, each containing from 2 to 5 oval seeds, a little compressed. It originated in Asia.

In Japan, in China, and in tropical Asia (I might add in Mexico), these seeds are eaten as a vegetable [green vegetable soybeans]. In these regions, it can be said that the culinary art owes them a lot, because they enter into the preparation of all the sauces. Among other things, they are made into the celebrated Soy [sauce], so sought after by Asiatic gastronomes, and which is also known and used in Europe to enhance the taste of certain dishes, and especially beef, whose digestion it uniquely facilitates. The soybean (*le Soja*) is also said to be an important oil-bearing plant.

In October 1878 we had two soybean plants growing in our plot of vegetables at the Universal Exposition [in Vienna]. One member of our society asked Mr. Vilmorin what he knew about this plant. He replied: About eight years ago [i.e., in 1870] I saw it appear, then it was not spoke about again. Anyway, the visitors [at the Exposition] paid such high honors to our two plants, that all we were left with was the stems [because the visitors had stripped off the pods and seeds].

You know better than anyone how much perseverance and stubbornness it takes to propagate a novelty, regardless of its excellence. You have to convince, particularly at the beginning, you have to overcome the bad will, the habits, the distrust, the jealousy, the incompetence, the conviction that it is impossible to do better... and whatever! This the first year I gave the soybean (*le Soja*) to market gardeners / vegetable growers (*maraîchers*): a certain number of them did not wait for the plant to reach maturity before putting it on the compost pile. They called it an obscenity which took up room unnecessarily. They came to a hasty conclusion / judgment, as you can tell.

Others who thought about it more gave the plant the opportunity to bear fruit, but the failed to write a report about its cultivation.

Finally, only two people understood that this very accommodating legume was not out of place. Yet one must add that this was thanks to the presence of a ship-owner (*armateur*), who had eaten it in Mexico. He was very fond of this product, and it is to this fact that the plant was given the honor of being cultivated on a large scale in one of the châteaus where one of our two gardeners happened to be.

Note: This is the earliest document seen (Feb. 2009) concerning soybeans in Mexico, Central America, or Latin America. It is not clear whether or not these soybeans were cultivated in Mexico (they may well have been) or where they came from (they may well have come from China on a Manila galleon as part of the China trade).

It's the same kind of thinking. Without the laudable perseverance of one of our horticulturists, our excellent Etampes soybean (very early), would never have come to our attention. What if it had been grown by a market gardener who just brought some of it to our market without thinking for years to give it the least extension to its cultivation.

The first year it was sold for 12 francs per liter.

1096. Haberlandt, Friedrich. 1877. Der Anbau der rauhhaarigen Sojabohne [The culture of the hirsute soybean (Continued–Document part II)]. *Landwirthschaftlichen Versuchs-Stationen* 20:247-72. [5 ref. Ger]

• ***Summary:*** Continued from p. 253. Prof. Dr. Kulisz (p. 253, 257) in Tetschen-Liebwerd in Böhmen [Bohemia, now in the Czech Republic] planted 150 seeds of 3 varieties. Despite snow, rain, and frost in May, 98 plants survived, yielding 660 seeds. The tallest plant was not over 50 cm high.

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Dr. Nicolaus Dimitriewicz (p. 253, 257-58), a former student at the Royal College of Agriculture in Vienna, and now a farmer (*Oekonom*) in Bukovina [Bukowina or Bucovina, a former Austrian crownland, now (2005) divided between the Ukraine and Romania]. He received 100 seeds which he sent to 6 farmers he knew in four nearby locations in the district of Kotzman (*des Kotzmaner Bezirks*).

Note 1. As of 1994, Kotzman is the town and district of Kitsman in the southwestern Ukraine, just north of the border with Romania. Also spelled Kotzmann, Cotman, Cozmeni, Kosman, Kozmeny, or Kucmeh, it is located 19 miles northwest of Chernivtsi (also spelled Chernovtsy, Chernowitz, or Czernowitz).

The seeds were planted late, on April 20 or later, and some were killed by frost. Others, protected from the frost, grew fairly well. For example, the second farmer harvested 669 seeds from 19 plants. The 64 plants which survived yielded less than 2.821 kg of seed. Note 2. This is the earliest document seen (Feb. 2001) concerning soybeans in the Ukraine, or the cultivation of soybeans in the Ukraine (one of two documents). This document contains the earliest date seen for soybeans in the Ukraine, or the cultivation of soybeans in the Ukraine (20 April 1876). The source of these soybeans is unknown.

And A. Schnorrenpfeil (p. 253, 258), Administrator of *Gutswirthschaft* at the Agricultural Academy in Proskau (*Landwirtschaftlichen Akademie Proskau*) [now named Proszkow, in today's southwest Poland] in Preussisch-Schlesien [Prussian Silesia, a Prussian province later divided into upper- and lower Silesia]. He planted 50 seeds of two varieties in late April.

Note 3. Proszkow is a market town located 7 miles southwest of Oppeln (now Opole), in southwest Poland at north latitude 50°40'.

Note 4. This is the earliest document seen (Feb. 2005) concerning soybeans in Poland, or the cultivation of soybeans in Poland (one of two documents). This document contains the earliest date seen for soybeans in Poland, or the cultivation of soybeans in Poland (20 April 1876). The source of these soybeans was Prof. Haberlandt in Vienna.

Joh. Stua (p. 263-64), of the Technolog. Laborat. der k.k. [kaiserlich-königliche] Hochschule für Bodencultur [Imperial-Royal College of Agriculture] in Vienna, conducted a detailed nutritional analysis of the yellow Mongolian, yellow Chinese, and brownish-red (*braunrothe*) varieties. The first 3 columns of a full-page table (p. 264) show percentages in air-dried soybeans of (1) the original soybean seed sample, (2) soybeans grown the first year, and (3) soybeans grown the second year. Columns 4-6 show the same information adjusted as if the soybeans had a 10% water content. For each variety, data are given for water, protein, fat, nitrogen-free extract (Stickstofffreie Extractivstoffe), crude fiber, and ash (*Aschenbestandtheile*). Note 5. This is the earliest German-language document seen (Oct. 2004) that mentions red soybeans (actually brownish-red) or that uses the word *braunrothe* to refer to the color of soybeans. In many other documents by or about Prof. Haberlandt, the term "reddish-brown" (*braunrothen*) is used to describe the color of a type of soybean he obtained from China.

Tomaszek (p. 263) wrote Haberlandt that he was astonished by the high oil and protein content of the soybeans he grew and harvested and had analyzed by a chemist at the sugar factory. So he had the analyses repeated by Prof. K. Zulkowski of the technical university at Brünn, and got similar results. Zulkowski found (table, p. 263) that the air-dried seeds of yellow soybeans from China contained 16.99% fat, 40.19% protein, and 6.43% nitrogen. The brownish-red soybeans from China contained 16.68% fat, 44.93% protein, and 7.19% nitrogen. Note 6. This is the earliest document seen (April 2003) that mentions Zulkowski.

These analyses are in close accord with those published by Senff in 1872 (table, p. 265). Soybeans are compared with lupins and other legumes.

On pages 270-71 Haberlandt discusses food uses of soybeans. "The soy sauces, which were imported from India and spread from England over Continental Europe, could in no way awaken a favorable opinion of the flavor of the soybean, for these sauces have a strong flavor of browned (*gebräuntem*) sugar, perhaps also mixed with other ingredients, so that the soybean's own flavor is completely masked (*verdekt wird*). Because of their complete lack of starch, soybeans do not become soft through cooking, so it is necessary to crush and rub the half-soft cooked seeds before their further preparation... Best would be a use [of soybeans] which imitates that of corn kernels (*Maiskörner*), from whose flour the people of southern Europe prepare their beloved dish, Polenta. Soybeans roasted at 160°F taste delicious and surpass all other plants that have heretofore been used as coffee substitutes."

Note 7. Tables from this article are described in a separate record. Address: Mittheilungen aus dem landwirthschaftlichen Laboratorium und Versuchsgarten der k.k. Hochschule fuer Bodencultur in Wien [Vienna].

1097. Brewer, Ebenezer Cobham. 1877. Errors of speech and of spelling. Vol. 1. London: William Tegg and Co. lii + 752 p. See p. 550.

• ***Summary:*** An entry on p. 550 reads: "Ketchup, *ket'.tchup*, sauce made from mushrooms. (E. Ind ketjab)."

Note: This is the earliest document seen (April 2012) that contains the word "ketjab," used as an alternative spelling of "ketchup." Address: Rev., LL.D., Trinity Hall, Cambridge [England].

1098. Eitel, Ernest John. 1877. A Chinese dictionary in the Cantonese dialect. 3 vols. London: Trübner and Co.;

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Hongkong: Lane, Crawford & Co. xxv + 1018 + xcvii p. 25 cm.

• ***Summary:*** Page 122: Tau fu: bean curd.

Page 354: Liang, leung: pickle or soy.

Page 615: Shi yau: soy [sauce].

Note: *Shi-yau* is, more precisely, "fermented black soybean sauce."

Page 707, 710: Tau peng: bean cakes. Tau fü no or tau fü fa: bean-curd jelly [tofu curds]. Tai tau or pak tau: soy-bean, Soja Hispida.

Page 739: Tau fu to: beancurd knife.

Page 783: Tsiang, tseung: pickle, preserve in sauce. Tau tseung: bean sauce. Tseung siu ts'oi: vegetables seasoned with soy.

Page 906: Tseung ün: a soy or pickle factory.

Note: This is the earliest English-language document seen (April 2012) that uses the term "bean sauce" to refer to soy sauce. Address: Hongkong (Ph.D. Tübingen [Baden-Württemberg, Germany].

1099. Henderson, Mary F. 1877. Practical cooking and dinner giving: A treatise... New York, NY: Harper & Brothers, Publishers. 376 p. Illust. Index. 20 cm.

• ***Summary:*** Worcestershire sauce is used as an ingredient in 4 recipes in this book: To bake a fish with wine (p. 103-04). Sauce aux fines herbes (p. 128). Fricassee of chicken ("a teaspoonful of Worcestershire sauce," p. 174). Deviled chicken, with sauce ("two table-spoonfuls of Worcestershire sauce," p. 175).

The section titled "Salads" begins (p. 219): "In an English book it is told of a famous French salad-dresser who began very poor, and made a fortune by dressing salad for dinners in London. He would go from one place to another in his carriage, with a liveried servant, and his mahogany case. This case contained all the necessaries for his business, such as differently perfumed vinegars, oils with or without the taste of fruit, soy [sauce], caviar, truffles, anchovies, catchup, gravy, some yolks of eggs, etc... A Frenchman thinks he cannot eat his dinner without his salad. It would be well if every one had the same appreciation of this most wholesome, refreshing, and at the same time most economical dish." Mary Foote Henderson lived 1842-1931. Address: St. Louis, Missouri.

1100. Houghton, Ross C. 1877. Women of the Orient: An account of the religious, intellectual, and social condition of women in Japan, China, India, Egypt, Syria, and Turkey. Cincinnati, Ohio: Hitchcock and Walden; New York, NY: Nelson and Phillips. 496 p. Illust. Index. [10* ref]

• ***Summary:*** In Chapter 4, "Education" is a long passage quoted from an article in the *Leisure Hour* [date, author, and title not cited] (p. 88-90) which contains "a translation of one of the very few Chinese works designed for the instruction of women." Page 90: "The third important thing is, do not waste rice or flour; be careful of the soy [sauce], vinegar, oil, and salt; in the day of plenty think of a day of want, that when that time comes you may not have to beg."

In Chapter 12, "Woman's position and life in the household," notes (p. 241): "The domestic position of an average Japanese woman is superior to that conceded to her sisters in other Eastern countries. Although she does not enjoy all the rights and privileges secured to a married woman in a Christian land, still she is treated as the companion rather than the slave of her husband, and her likes and dislikes are, to a considerable degree at least, respected. She is, however, without legal rights, and her evidence is not admissible in a court of justice."

Concerning Japanese food (p. 242-43): "A favorite relish is 'soy,' a strong sauce composed of pepper [sic] and fermented black beans."

Illustrations show: (1) A Japanese family at dinner (p. 242). (2) A Japanese lady (p. 243). Address: Rev., A.M., St. Louis, Missouri.

1101. Leunis, Johannes. 1877. Synopsis der Pflanzenkunde: Ein Handbuch fuer hoehere Lehranstalten... Zweite gaenzlich umgearbeitete Auflage... 3 vols. [Synopsis of botany: A handbook for institutions of higher learning... 2nd ed. 3 vols.]. Hannover: Hahn'sche Buchhandlung. See vol. 2, p. 412. [Ger]

• ***Summary:*** Volume 2 (*Zweiter Theil*) is devoted to botany, bound with vol. 1, and arranged by plant families. Under legume family (*Leguminosae, Huelsenpflanzen*) are the papilionaceae (*Schmetterlingsblüter,* p. 374+) within which we find the genus Dolichos (p. 412), which includes *D. pruriens, D. Lablab,* and *D. Soja* (the soybean). Symbols indicate that the genus contains plants with therapeutic or medicinal value (*Apotheker–oder Arzneipflanzen*) and that the soybean alone is a commercial plant (*Handelspflanze*).

Concerning the soybean we read: *Dolichos soja** L. (Footnote 5: *The term Soja or Sooja is used by the Japanese to refer to a sauce {*Tunke*} in which soybeans {*die Soja-Bohnen*} are used) or *Soja japonica*** Savi (Footnote 6: **Japanese)

Note 1. This is the earliest German-language document seen (April 2012) that uses the word *Tunke* to refer to soy sauce.

The Japanese Soybean (*Japanische Sojabohne*). Cultivated in its native Japan and now also throughout all of southern Asia, because the beans taste good and also serve for the preparation of a piquant, brown, thick, sauce, which is very popular on foods, and in India is added to almost all foods and is also imported to Europe and used to improve sauces or extracts (*Brühen*) and also as a sauce for roasts (*Braten-Sauce*); however the Soya that is now in commerce in Europe is not made from soybeans but rather made by us from other materials, namely from molds (*Pilzen*).

Also discusses: Alfalfa (p. 382-83). Lupines (p. 410).

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Voandzeia (p. 411). Almonds (p. 414).

Note 2. Leunis lived 1802-1873. His portrait (an illustration) faces the title page of Vol. 1. This book was published after the author's death by A.B. Frank, lecturer in Botany at Leipzig University. Volumes 1-2, 1230 pages, have no index. Vol. 3, mostly about algae, has an index. Address: PhD, late Prof. of Natural History at the Josephinium in Hildesheim [near Hannover, Germany] (weiland Professor der Naturgeschichte am Josephinum in Hildesheim).

1102. Shôyu shûsetsu [Collected theories on shoyu]. 1877. Japan. [Jap]*

• ***Summary:*** Book on shoyu production showing the wide variation in formulas used. For a translation of several parts, see Fruin 1983 (p. 26-27).

1103. *Boston Daily Globe.*1878. Japanese ways: An entertaining lecture at Horticultural Hall, yesterday, before the Free Religion Association, by Professor E.S. Morse. Feb. 15. p. 5.

• ***Summary:*** Prof. Morse, gave "in an off-hand way his impressions of that country, with whose ways he seems to have fallen in love." "There are many beautiful fish caught on the coasts; and the Professor said that they were excellent eaten raw, and advised his hearers to try some raw fish, sliced, with soy sauce, and see if they did not like it. 'The Japanese use neither butter, milk, bread, nor cheese.'"

"Kindness to animals is a great characteristic; no bird is ever shot at, no animal ever beaten, and on all the highways you will find stones, erected centuries ago, directing men to water their horses here."

1104. *Mittheilungen der Section fuer Acclimatisation des Landwirthschaftlichen Central-Vereins des Herzogthums Braunschweig.*1878. Die Soya-Bohne [The soybean]. 2(1):31-32. Feb. [1 ref. Ger]

• ***Summary:*** Note: Braunschweig (Engl. Brunswick) is a former duchy and capital city in north-central Germany, about 35 miles east of Hannover (Engl. Hanover), now part of Lower Saxony.

One cultural trial with the soybean was conducted by the head man (*Hauptmann*) C. Rambousek of Zborow [Austria]; his report follows: "The soybean (*Soyabohne*) seeds were of two varieties: Brown seeded (from China) and yellow seeded (from Mongolia); both came originally from the Vienna World Exposition (*Wiener Weltausstellung*) [of 1873]. On 2 May [1877] I obtained 60 brown and 60 yellow seeds of *Soya hispida*, which were planted immediately in rows spaced 40 cm apart, with 21 cm. between seeds in each row, in a sandy clay soil relatively rich in humus, over detritus / diluvium. The climate was quite wet.

"All the seeds sprouted, and the plants developed quickly and powerfully. Without needing any support, they grew to a height of 82 cm. Flowering began at the end of June and seemed to continue without end. The initial stage of seed-bearing is enormously rich, an often on branches there were 4-5 pods, with usually 2-3 seeds per pod. The seeds began to ripen in mid-September, and the plants were cut toward the end of October. They yielded 1,759 completely hard brown seed weighing 281 gm, and 2,805 yellow seeds weighing 536 gm. These seeds were the same size and color as those that were planted.

"Because of the high nutritional value of the seeds, as well as the high fodder value of the stems, I am convinced that this oilseed has a solid future as a forage plant."

1105. Lea and Perrins. 1878. In consequence of spurious imitations of Lea and Perrins' Sauce,... (Ad). *Observer (London).* April 28. p. 8.

• ***Summary:*** "... which are calculated to deceive the Public, Lea and Perrins have adopted a new label, bearing their Signature, 'Lea and Perrins,' which signature is placed on every bottle of Worcestershire Sauce, and without which none is genuine. Sold Wholesale by the Proprietors, Worcester; Crosse and Blackwell, London; and Export Oilmen generally. Retail, by dealers in sauces throughout the World."

Note: No signature is displayed. Address: Worcester, England.

1106. Lyon & Turnbull. 1878. Tomorrow (Thursday), the 1st August at Twelve o'clock. Grocer's stock and fittings... (Ad). *Scotsman (Edinburgh).* July 31. p. 12.

• ***Summary:*** Items to be auctioned include: "Lazenby's Chetna [Chutney?] and King of Oude Sauce, Indian Soy [sauce], Capers,..." Address: Auctioneers & Valuators [Edinburgh].

1107. *Mittheilungen der Deutschen Gesellschaft fuer Natur- und Voelkerkunde Ostasiens (Yokohama).*1878. Sitzung in Tenkoin, Yedo, am 22ten Juli 1878 [Meeting in Tenkoin, Tokyo, on 22 July 1878]. 2(16):271. July. [Ger]

• ***Summary:*** "Concerning Dr. Langgaard's communication on tofu, Mr. Kempermann remarks that in his opinion tofu is mainly a food of the wealthy; for the poor seem to place great significance on sugars [carbohydrates], and in times of great shortages of rice, sugar consumption will be considerable.

"Dr. Langgaard remarks that shoyu plays a very insignificant role as a source of nutrients. Shoyu contains a great deal of salt and serves mainly as a seasoning. It is important to mention, concerning shoyu, that, especially when it is used in fresh condition, at one and the same meal, only small quantities can be enjoyed.

"After this, Mr. Netto pointed out that tofu consumption depends on the price of fish. In Kosaka* the poorest people eat tofu when they must forego the enjoyment of fish."

* Note: The meaning of the term "Kosaka" is unclear.

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The only known place by that name is a relatively unknown village in Akita prefecture, in northeastern Japan. Address: Japan.

1108. Atkinson, R.W. 1878. Brewing in Japan. *Nature* (*London*) 18:521-23. Sept. 12. [Eng]

• ***Summary:*** The author, interested in the new science of microbiology, describes a visit to saké breweries situated in Hachioji about 30 miles from Tokiô (Tokyo). This sake contains 12-15% alcohol by weight. He gives a detailed description of how koji is made from tane koji, then how sake is made from koji. He believes the mold used to be *Mucor racemosus*.

"At the present time, when the history of the origin and development of the lower forms of life [microorganisms] is occupying a great deal of attention, any facts which increase our knowledge of the growth of such bodies should be welcomed. In our breweries the growth of the yeast-ferment is tolerably well understood, or, at least, has been well observed and described... Those living in Japan, however, have the opportunity of seeing a mode of fermentation which differs in many particulars from that employed in Europe The subject is now under investigation, and at present I am not able to explain accurately what takes place.

"Saké is the general name given to the alcoholic liquid prepared by the fermentation of rice... This liquid is prepared on the large scale only in certain parts of the country, the most famous district being that near Ozaka [sic, Osaka], one of the Treaty Ports. It is, however, often prepared on the small scale in private houses. The winter is the only season during which brewing operations are conducted."

"The brewing commences with the preparation of the ferment [starter culture]. For this purpose, at the end of the previous brewing season a quantity of a green mould is produced upon rice by exposing steamed rice mixed with a certain proportion of the ash of some tree, and over which the spores of this fungus have been scattered in a well-closed chamber, which I may term the 'fungus chamber.' This is a small room about 7 ft. high by 6 ft. broad, by 8 ft. long, well lined and covered with straw and matting, so that its high temperature may be kept up for a considerable time. In this chamber the rice and spores are left for about ten days, the atmosphere being kept quite moist by the vapour given off from the steamed rice, and at the end of that time the grains are found to be covered with a green fungus full of spores, and apparently the same kind as is found growing upon putrefying organic substances. The temperature of the chamber when examined was 25°C., that of the external atmosphere being 13°C. This product is called, in Japanese, *tane* or seed.

"When prepared at the end of the season it is preserved until the next by being placed in bags, and inclosed in wooden boxes between layers of a mixture of equal parts of lime and wood-ashes.

"When it is required to commence operations, a similar method is adopted to that just described, that is, a quantity of steamed rice is placed on wooden trays in the 'fungus chamber,' but not mixed with any wood-ashes, and then *tane* (spores) is scattered over it, and the chamber kept closed for a period varying from two to four days. At the end of this time the rice-grains are found to be covered with large quantities of fine hair-like threads, the mycelium of the fungus added. In this state it is called 'kôji.'"

"The actual fermentation is divided into three stages, called respectively *beginning*, *middle*, and *end*..." After a fermentation in large tuns of about 15 days, the alcoholic liquid is drawn off and the "residue is placed in bags and subjected to pressure in a lever press, the clear liquid which is expressed being added to that which is clarified. It is now placed in boilers and heated up to about 60°C, after which it is kept in the store vats and carefully sealed up.

"The saké in the store vats contains about 15 per cent. of alcohol, and this fact shows that the fermentation is different from that effected by the *Mucor racemosus*, as described by Fitz. In his experiments he found that the presence of 4½ to 5½ per cent. of alcohol killed the ferment, whilst in the process above described, we find the ferment acting in such a way as to produce 15 per cent."

Note 1. This is the earliest English-language scientific article seen in which koji is discussed in detail.

Note 2. This is the earliest document seen (Sept. 2001) that alludes to enzymes in connection with koji, however neither the word "enzymes" nor "enzyme" are used. Instead the noun "ferment" is used to refer to the active principle in the koji. Address: Prof., Univ. of Tokio (Tokyo), Japan.

1109. *New York Times*. 1878. Information wanted. Dec. 8. p. 9.

• ***Summary:*** "A receipt [recipe] for a sauce of the same quality as Worcestershire sauce."

1110. *Chicago Daily Tribune*. 1878. The courts:... The Worcestershire-Sauce case. Dec. 18. p. 5.

• ***Summary:*** "Worcestershire sauce: Another case of considerable general interest was that of Lea & Perins [sic, Perrin], of London, England, against Frank Deakin, agent of Miller & Co., England. This was a suit to prevent the defendants from infringing complaintants' trade-mark of 'Worcestershire Sauce.'. The case was very bitterly contested, and a very large amount of testimony was taken. The brand of sauce sold by defendant was imported from England, and was marked 'Improved Worcestershire Sauce.'

"The Judge, in deciding the case, said the evidence showed that there had long been known a sauce called Worcestershire sauce, used for a table condiment. It was a generic term used by various persons and probably was first used by some party in Worcestershire, England, to designate has brand of sauce. But sauces of that name were

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manufactured in other places than Worcestershire, and it would not be fair that parties residing in that place should now have a monopoly of the name. The complainants had been aware that the term was used by rival firms, and for years had taken no steps to prevent it, thus giving a tacit acquiescence to the use of such name. Finally, however, they filed a bill against Miller & Co., in London, to prevent the use of the words 'Worcestershire sauce,' but were defeated, their right to the use of such trade-mark being declared invalid. That decree was a bar to any action in this country on the same grounds for the same relief, and the bill would therefore be dismissed."

1111. Ahlburg, H. 1878. Das Koji und die Hefe [Koji and the yeasts: About Eurotium oryzae]. *Mittheilungen der Deutschen Gesellschaft fuer Natur- und Voelkerkunde Ostasiens (Yokohama)* 2(16):252-55. In: Korschelt 1878. Ueber sake... [2 ref. Ger]
• ***Summary:*** Contents: Observed facts. Discussion of the genera *Mucor, Aspergillus (flavus), Botrytis, Eurotium (Oryzae), Monilia flava.* Address: Japan.

1112. Chalmers, John. 1878. An English and Cantonese dictionary, for the use of those who wish to learn the spoken language of Canton Province. 5th ed. Hongkong: Printed by De Souza & Co. xi + 258 p. 18 cm. [Eng: Chi]*
• ***Summary:*** On page 69 is the Cantonese term for soy sauce, *shi-yau.* A 5th edition was published in 1878 in Hongkong, and a 7th edition in 1907 in Hongkong.

1113. Commission Imperiale à l'Exposition Universelle de Paris, 1878. 1878. Le Japon à l'Exposition Universelle de 1878 [Japan at the Universal Exposition of 1878]. Paris: Publiè sous la Direction de la Commission Impériale de Japon. 2 volumes in one. 26 cm. Preface by M. Matsugata. Facsimile edition (preservation photocopy) reprinted in 1998 by BookLab, Inc. [Fre]
• ***Summary:*** Part I (159 p.) is about the geography and history of Japan. Part II (192 p.) is about art, education and teaching, industry, production, agriculture, and horticulture in Japan. The Preface is by M. Matsugata, Head of the Imperial Department of Agriculture and President of the Japanese Commission to the Universal Exposition of 1878.

In Part II, the section on "Fermented beverages–Condiments" contains a long section on "Shoyu" (p. 124-25). It gives a brief description and discusses the ingredients (equal parts dehulled wheat, soybeans, and salt; the best salt comes from Ako in the province of Harima), purifying the salt by dissolving then heating it in water, and stirring the mash (2 or 3 times a day from June to September), aging for 15, 20, or sometimes 30 months to obtain shoyu. The mash in then pressed in cotton sacks, and the resulting liquid is boiled, cooled, allowed to settle, then stored in small wooden tubs. The residue from the first pressing can be used to make a second-grade shoyu, which can be mixed in varying proportions into different grades of shoyu.

Note 1. This is the earliest French-language document seen (April 2012) that uses the term *shoyu* to refer to soy sauce.

In the section on "Agriculture," the subsection on "Cereal grains" (p. 133) discusses both soybeans and azuki beans (*Phaseolus radiatus*). "The soybean (*Le Mame*) or *Soja Hispida* is comprised of several varieties: The green soybean (*l'Awo mame*), the white soybean (*le Shiro mame*), the black soybean (*le Kuro-mame*), the yellow soybean (*le Ki mame*), *Konrinza mame, Ichia mame,* and the saddled soybean (*Kurakake mame*). Some of these different varieties are early maturing and some are late.

"The soybean finds numerous uses, for it can be eaten cooked, ground into flour, or used for the manufacture of shoyu, miso, or tofu. The bean, its seed coat, pod, leaves, and stem serve as feed for horses. Lately it has been used on a trial basis to feed sheep, and the results proved that it was the best feed that one could give to them.

"Tofu is made with two kinds of boiled soybeans: White and yellow. After being pressed and hardened, it will last for a long time. Yuba is a somewhat similar product, made with the same ingredients. Note 2. This is the earliest French-language document seen (March 2004) that contains the word *Tofu.*

"The black soybean speckled with white (*Gan Kui mame* [*Gankui*]) is one of the best varieties to eat."

The azuki (*"L'Azuki ou Phaseolus radiatus"*) includes the early and late types, and comes in several varieties such as the *Hine no Azuki,* the Dainagon Azuki (*le Dai Nagon Azuki*), the White Azuki (*Shiro Azuki*), etc. Sweet azuki bean paste (*L'An*), is widely used in confectionery, is made by mixing the Azuki and sugar. One cake made from it is called *Yokan.* Azuki flour (*farine de l'Azuki*) is used to remove greasy stains from fabric / cloth. The *Yaye Nari,* a green bean (*haricot*), is used in the same ways as the azuki bean (p. 135). Note 3. This is the earliest French-language document seen (Jan. 2005) that uses the word "Azuki."

Also discusses: Sea vegetables (many individual types with both Japanese and scientific names, p. 127-29). Kudzu (*Pueraria thumbergiana* [sic, thunbergiana], starch from the roots and fodder from the leaves, p. 139; fibers used to make cloth, p. 153). Hemp seeds (p. 139). Sesame seeds and sesame oil (*Goma,* p. 145). Peanuts and peanut oil (*Tojin mame,* p. 145). Hemp as a fiber plant (p. 151). Address: Paris, France.

1114. Haberlandt, Friedrich. 1878. Erste Abtheilung [Part 1, pages 10-15 (Document part)]. In: F. Haberlandt. 1878. Die Sojabohne [The Soybean]. Vienna: Carl Gerold's Sohn. ii + 119 p. [4 ref. Ger]
• ***Summary:*** "The value of soybeans results from their high content of the most important nutrients. The first analysis

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that made the composition of these seeds known in Germany was carried out by [Mr.] Senff using seeds obtained directly from Japan by Mr. [Carl] Berndt. The results of this analysis* (Footnote: *See the journal *Chemischer Ackersmann* ("Chemical Farmer") 1872, p. 123) showed that 100 parts of air-dried soybeans have the following composition:" A table (p. 11) based on two samples and their average shows: Water 6.91%, protein 38.29%, oil (*Fett*) 18.71%, nitrogen-free extract 26.20%, crude fiber 5.33%, and ash (minerals) 4.56%.

A second table (p. 11) which compares the nutritional composition of soybeans, common beans (*Fisole*), peas, lentils, fava beans (*Pferdebohne* = *Vicia faba* = "horse beans") and yellow lupins, shows that soybeans have a much higher content of protein (38.29%, followed yellow lupins at 35.32%), oil (18.71% followed by yellow lupins at 4.97%), and ash (minerals, 4.56%, followed by yellow lupins at 3.78%).

"There are few statements in the pertinent literature concerning soybean utilization. But there is no doubt that, in their native countries, they have heretofore been used exclusively as foods. In *Synopsis der Pflanzenkunde* ("Synopsis of Experience with Plant Culture:" 1877, Hannover, Vol 2, p. 413), Dr. Johannes Leunis says that soybeans taste good and are also used to make a thick brown sauce, which is added to almost all foods in India, China, and Japan, and is also an article of commerce in Europe, used to improve sauces and gravies. However the sauce now available in Germany is said to be made of other ingredients rather than soybeans, namely mushrooms. From England, where this soy sauce is imported from India by the firm Grosse [sic, Crosse] & Blackwell in London, its use is spreading to the continent and is available in Vienna. Kaempfer, who describes the soybean plant so excellently in the classic work on his travels, also gives detailed information about its use as foods in Japan, which has since appeared in numerous other writings, such as Oken's *Allgemeine Naturgeschichte aller Stande* ("General Natural History of All Places") [1841] vol. III, part 3, page 1661."

Haberlandt then quotes in their entirety Kaempfer's descriptions of miso and soy sauce (about 200 words each). He also indicates a vague knowledge of tofu.

"It is reported that in China a type of food is made from the oilcakes or perhaps from soybeans directly, that superficially resembles a soft cheese or Quark (a European white unfermented cheese; *nach dem weichen Käse oder dem Quark ähnliche Speise machen*) presumably the original mush is subjected to a fermentation process and then mixed with pepper and other spices. A large part of China's population is said to use this staple food." Note 1. This is also the earliest German-language document seen (Feb. 2004) that uses the word "Quark" in connection with tofu.

He goes on to describe the chemical composition and uses of the oil presscake in China.

Page 14: "Since the oil content (*Oelgehalt*) of the soybean is lower than that of other oilseeds, it must be assumed in advance that its application for the production of oil (*Oelgewinnung*) must be disregarded. This also became evident through a test which Mr. Carl Berndt conducted on the rest of the soybeans that hadn't been used for agronomic trials. He was kind enough to give me the following report: 'Although I should have expected that one could not determine the full quantity of oil from a relatively small quantity of seeds, I was still astonished that there was not more than 6%. The analysis had resulted in 16 to 18%, and therefore the mechanical quantity was estimated at 10-12%.

"'Actually it was quite difficult to locate an oil miller who would clean his mill sufficiently that one received pure oil. Moreover, these people didn't proceed with the interest and care that are necessary, since I found lots of oil in the presscakes, indicating that they had not been pressed sufficiently. In terms of quality, I am more satisfied than I had expected to be. I had someone prepared baked goods where oil was used in the recipe and I could not detect the slightest after-taste. As a cross-check, I had another part of the baked goods prepared with Provenzer oil, but I could not tell the difference between the two.

"'To what extent the [soybean] oil could be used for industrial [non-food] purposes, especially as a mordant (*Beize*) for the dyeing of Turkish-red, which uses very old, spent oil (that is soluble in carbonic potassium) can only be established when a sufficient quantity of oil becomes available.'"

Note 2. This is the earliest document seen (Oct. 2001) concerning special industrial uses of soybean oil as a non-drying oil, as a mordant for dyeing. Address: Hochschule fuer Bodencultur, Vienna, Austria.

1115. *Hamburger Garten- und Blumenzeitung*.1878. Die Sojabohne [The soybean]. 34:238-39. [2 ref. Ger]
• ***Summary:*** The section titled "Feuilleton" (light reading) states that the soybean (Soya hispida Moench), which is a common food in East Asia, is used on the English ships that travel there in the form of a very popular prepared, sharp, mustardlike sauce–according to the *Communications of the Royal Imperial Agricultural Society for Kärnten* (*Mittheilg. der k.k. Landwirthschaftsgesellschaft für Kaernten*) [also called Carinthia, an Austrian crownland; now a state of southern Austria, bordering on Italy and Yugoslavia]. The soybean can be considered as a new crop plant for Kärnten, since in previous years, it has done well at the Agricultural School (*Landesbauschule*) in Ehrenhausen, with abundant yields of pods and seeds. From 20 seeds that were planted, 19 plants grew and yielded 5,800 completely developed seeds that were harvested–a 235-fold increase. The plant that grows like a bushbean is darker than the previous one. The trifoliolate leaves are a little more pointed and longer.

Nothing has yet been communicated concerning their

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taste and utilization. However Prof. Haberlandt's chemical investigations showed they have a greater nutritional value than our other indigenous legumes. Moreover the soybeans grown in Europe have a greater nutritional value than the original Asiatic soybean seeds.

Also discusses: *Prunus mume* Siebold and Zuccarini, the tree fruits from which *umeboshi* are made (p. 238).

1116. Isono, Tokusaburo. 1878. [On shoyu]. Inaugural dissertation at Tokyo Imperial University, Japan. [4] + 25 p. [Eng]*

• ***Summary:*** Discusses the preparation and analysis of shoyu with a description of salt manufacture in Japan. Republished in 1879 in Tokyo by the Dept. of Science in Tokyo Imperial University (*Tokyo Daigaku*). Address: Tokyo.

1117. Isono, Tokusaburo. 1878. On shoyu [Its preparation and analysis, with a description of salt manufacture in Japan]. Inaugural dissertation at Tokyo Imperial University, Japan. 25 p. [Eng]*

• ***Summary:*** Page 4: "Common salt is indispensable as an article of food in Japan as well as... This nigari is used in precipitating to-fu as I stated before on page 3..." Address: Tokyo.

1118. *Proceedings of the American Pharmaceutical Association.*1878. Report on the progress of pharmacy. 25:25-334. See p. 236-37. Held in Sept. 1877 in Toronto, Ontario, Canada.

• ***Summary:*** In the section titled "Materia medica: Vegetable drugs" (p. 116-237), a subsection titled "Useful Plants of the Chinese Province of Shantung" (p. 234+) begins: "From a recent report on the geography and natural history of the province of Shantung, published in Hong Kong, the 'Journal of the Society of Arts' extracts some interesting details, which are copied in "Ph. J. Trans.," July 8th, 1876, p. 26. The following useful plants are mentioned:

Page 236: "*Soja Hispida.*–The bean cheese or bean curd, so common in many parts of China, is made from white or yellow beans steeped in cold water till they are soft, when they are deprived of their skin by pressing them between the fingers, after which, they are reduced to pulp, by pounding them in a mortar or pressing them under a millstone; the pulp is passed through a sieve, and then some *lu-shui*–[nigari] the residuum of sea-salt or nitre, or a gypsum solution is added, which coagulates the albumen; the water is taken off by pressure in linen cloth loaded with stones; this liquid is carefully thrown away, being said to be poisonous. The cake so obtained is salted, and sold fresh in the streets, or dried to the consistence of hard cheese. Flour for food is also made from these beans, as well as sauce or soy.

"This sauce, now extensively used in Great Britain and America, is prepared by steeping the beans in water for one hour; they are then half dried in the sun and mixed with wheat flour and allowed to ferment, being placed for that purpose in a hot damp place. The mould which develops itself in abundance on the beans is scraped off, the beans are then dried and put in salted water, which has been properly boiled and cooled (to expel air). The brown and black color of the sauce so obtained is supposed to be produced by a microscopic fungus resembling the ergot of rye, whose properties the soy is said to possess.

"These kind of beans are very extensively used in the manufacture of the now famous bean cake, which appears to be exported in enormous quantities. The beans being thoroughly crushed under heavy stone wheels turned by mules, are heated under water and the cakes compressed between iron hoops. The pressure is slowly and gradually increased by driving wedges with an enormous stone suspended as a pendulum and acting as a ram. The oil which runs from them into a kind of well, is black and very dense; it has a disagreeable smell, and is used for illuminating purposes, and for calking boats, and being mixed with lime it makes a kind of putty. A foreign firm at Nenchavang [sic, Newchwang], sometime ago, tried to extract oil from the beans by the more powerful and expeditious means of a hydraulic press, but the resistance to a sudden pressure was so great that hardly any oil could be obtained."

The next section (p. 236-37) is titled "*Sesamum orientale, Arachis hypogæa, Cannabis sativa, Ricinus communis*" [sesame, peanuts, hemp, castor]; these are among the oil-producing plants of Shantung province.

1119. Tyree, Marion Fontaine Cabell. 1878. Housekeeping in old Virginia: Containing contributions from two hundred and fifty ladies in Virginia and her sister states,... Richmond, Virginia: J.W. Randolph & English. 528 p. Index. 20 cm.

• ***Summary:*** Soy [sauce] is used as an ingredient in 2 recipes in this book: Roast veal and chicken-bone soup ("Color with a little soy or catsup," p. 79). Mushroom sauce, for fried or broiled fish ("This makes a nice flavoring for any sauce or gravy mixed with soy or lemon pickle," p. 203).

Worcestershire sauce is used as an ingredient in 4 recipes in this book: Clear tomato soup (p. 83). Raw oysters (p. 93). Cat-fish chowder or hog-fish (p. 99). Kidneys grilled (p. 148).

Note: Written by the granddaughter of Patrick Henry, this book contains more than 1,700 "favorite recipes from 250 famous families of Virginia." Address: St. Louis, Missouri.

1120. Wernich, Albrecht Ludwig Agathon. 1878. Geografisch-medicinische Studien nach den Erlebnissen einer Reise um die Erde [Geographical-medicinal studies based on the experiences of a trip around the world]. Berlin: Verlag von August Hirschwald. x + 423 p. See p. 85. No index. 23 cm. [3 soy ref. Ger]

• ***Summary:*** Chapter 5, titled "Japan–Food value and foods"

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contains a long discussion of the soybean (*Dolichos Soja*) and soyfoods (p. 84-87) including tofu (*Bohnenkäse oder Bohnengefaultes*) and shoyu (*Soja oder Schoju*), with two long quotations. Soybeans are rich in protein and almost free of starch. They can be roasted to taste like nuts and used in baked goods.

Endnote No. 35 (p. 411) states that miso soup (*Misoschiru*) or shoyu soup (*Schio-ü-schiru*) are part of the typical Japanese breakfast. Miso is made from beans, barley, and salt; shoyu is made from beans, wheat, and salt. The soup typically contains small amounts of vegetables (such as varieties of potatoes), beans, cabbage and mushrooms, turnips or carrots, onions, etc. weighing a total of about 170 gm. The main dish at breakfast is rice (weighing about 470 gm). Also included are fish or an egg, salt-pickled vegetables, and 100 gm of tea.

Also discusses *Pueraria Thunbergiana* (kuzu, p. 87). Total references: 162. Albrecht Wernich lived 1843-1896. Address: Docent for Special Pathology and Therapy at Berlin University.

1121. *Kogyo Tokei-hyo* (*Census of Manufacturers*).1878--. Serial/periodical. Tokyo: Japanese Ministry of International Trade and Industry (MITI), Research and Statistics Dept. (Tsusho Sangyo Daijin Kanbo Chôsa Tokei-bu). Annual. [Jap]

• ***Summary:*** Contains statistics concerning Japan's industries and commodities. For example, in the report for the year 1987 (published in June 1989) under miso we find "124111 Miso (Including powdered or spray-dried miso). Total production in Japan: 641,337 tonnes. Value in million yen: 138,960. ??" Similar figures are given for each of Japan's 47 prefectures, listed from north to south, starting with Hokkaido and ending with Okinawa. The four largest producing prefectures are Nagano 186,316 tonnes (29% of the total), Aichi 63,294 tonnes, and Shin (?) 34,282, and Aomori 32,145 tonnes.

Note: The powerful and influential publisher, MITI, is called Tsûsan-sho in Japanese. Address: Tokyo, Japan.

1122. *Canada Medical Record (The)* (*Montreal*).1879. "Soy" has always been a mystery to me.... 7:167. March.

• ***Summary:*** "... as I fancy it has been to most other people who have dealt in or used it. I was, therefore, anxious to see a soy factory, and taking a boat one day we proceeded two or three miles up the river to where one was in operation. I found that the principal ingredient or base is a white [soy] bean known as 'paktoh,' which, so far as I could judge, is very like any other small white bean. These are boiled, heavily salted, and put into big earthen jars, holding, perhaps, half a barrel each, where they are allowed to remain for about ten days, during which period fermentation takes place. They are then mashed up with a species of olive [sic], which is picked and boiled, and this mixture is placed into neat cloth bags, into which water is poured and allowed to percolate. The liquid is then taken out, placed in clean jars, and thickened with a heavy-bodied Chinese molasses, and this is soy."

1123. *Sarnia Observer* (*Ontario, Canada*).1879. Farm and garden: Household recipes. May 30. p. 7.

• ***Summary:*** "Worcestershire sauce.–One quart of *thin* tomato catsup made and spiced the usual way, with the addition of cayenne pepper and a sufficient quantity of crushed garlic, added to the catsup while boiling and before it is strained, to give it a decided garlic taste. Then add enough soy sauce–to be obtained at almost any good grocery store–to make the catsup a deep chocolate color; two tablespoonfuls will probably be sufficient."

Note 1. By 1879 "soy sauce" was apparently available "at almost any good grocery store" in the area of Sarnia, in southwestern Ontario. Sarnia is located where the upper Great Lakes empty into the St. Clair River.

Note 2. This is the earliest document seen (Feb. 2010) concerning soybean products (soy sauce) in Ontario, Canada. This document contains the earliest date seen for soybean products in Ontario (May 1879); soybeans as such have not yet been reported.

1124. *Bulletin Trimestriel de la Societe des Sciences, Agriculture et Arts de la Basse-Alsace* (*Strasbourg*).1879. M. Fuehrer lit un compte-rendu d'un mémoire qui a été publié dans la *Wiener Landwirthschafliche Zeitung* par M. le professeur Hecke sur la fève soja [Mr. L. Führer reads a report of an article on the soybean published in the *Wiener Landwirthschafliche Zeitung* by Prof. Hecke]. 13(3):355-62. Meeting of 3 Sept. 1879. M. Rod. Turckheim, residing. [1 ref. Fre]

• ***Summary:*** Gentlemen, I should inform you of the report published in the journal *Wiener Landwirthschafliche Zeitung* by Prof. Hecke on the agronomic trials done in Austria, Bavaria, and Silesia of the bean, introduced following the Universal Exposition of Vienna and known to former botanists by the name Dolichos bean of Japan (*Dolic du Japon*) [the soybean]. The beans of this plant are used in Japan to make a type of sauce that is served as a condiment called *Soja*. The plant was first placed in the botanical system in the genus Dolichos, from which it takes its name, and which is found in Theophrastus, from a variety of beans having very elongated pods. This genus, differing from true beans (*haricots*) only because their carina (*carène*) is not twisted in a spiral, contains 60 species, all exotic, including *Dolichos lablab*, the famous Egyptian lentil for which the patriarch Esau had to give up his right of primogeniture [to his younger brother Jacob]. Our plant had taken the name of *Dolichos soya* within the genus, and later, the genus Dolichos having acquired too many species, it served as a model for a particular genus known as *Soja hispida* [the

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soybean]. Note 1. In botany, the word "carina" refers to the two conjoined lower petals of a bean, pea, or other legume flower that enclose the stamen and style. It is derived from the Latin word *carina*, meaning the hull or keel of a boat.

Soy sauce (*la sauce du soja*) was well known in Europe; it was even stylish (*à la mode*) at the turn of the century [ca. 1800] in London and Paris, but no one there had the plant. It was only after the Universal Exposition of Vienna where Dolichos beans of all [sic, several] countries figured, that the attention of some farmers and notably that of Professor Haberlandt had been called to these beans. Some agronomic trials were done; it was soon recognized that the species or varieties coming from Japan and north China were those that could adapt themselves most easily to the climate of central Europe, and the yellow variety was recognized as being preferable to any other.

Let us also recall that at last April's meeting, our colleague Mr. Wagner made a rather large distribution of seeds coming from his own crop. It will be then possible to obtain exact information on the merit of the new legume.

The journal *Isis*, which also contains an article on soy (*soja*), publishes a table comparing the composition of different edible beans. It compares the water, albumin, non-protein extracted material, and ash content of the soybean, haricot bean, pea, lentil, broad bean / faba bean (*fève*), and lupine.

It is certain that a great number of plants have been extolled for agriculture and we should have expected marvelous results. Yet very few justified the reputation that had been made of them, and in the majority of cases the plants in use for centuries prevailed over their new competitors. But it is not less true that to agronomic trials of exotic plants we owe wine, potatoes, tobacco, and many others. These trials would merit encouragement then, even if of 50 new plants only one succeeds, and could improve our agriculture. It is for this reason that I wish to call the Society's attention to another plant which I mentioned earlier–the *Dolichos lablab* or Egyptian lentil (*le lentille d'Égypte*).

Note 2. Mr. L. Führer is a member of this Society and responsible for publishing the Bulletin and for the "Initiative / Information Commission" (*commission d'initiative*). Address: Basse-Alsace, France.

1125. *Sydney Mail* (*Australia*).1879. Household: Dainty dishes. Oct. 11. p. 596.

• ***Summary:*** "Sauce au diable.–Mix well together the following ingredients: 1 oz. of cayenne, 1 oz. of pounded sugar candy, 6 anchovies, 6 cloves, and 6 small eschalots all pounded, one quart of vinegar, 1½ gill of soy, 1½ gill of mushroom ketchup. Shake often: in ten days it is fit for use. Let it stand for two or three days to get clear, then bottle for use."

1126. Warington, Robert. 1879. Agricultural chemistry in Japan. *Chemical News* (*The*) 40(1039):195-96. Oct. 24.

• ***Summary:*** "In the International Exhibition, now being held at Sydney [Australia], a collection of soils, manures, and agricultural products is shown by the Imperial College of Agriculture in Tokio, Japan. Accompanying the collection is a descriptive catalogue, compiled by Mr. Kinch, the Professor of Chemistry at the College, in which a short account is given of the various products exhibited, with chemical analyses of the majority of them. The catalogue contains in all about 80 analyses of Japanese products. The whole of this important work has been accomplished in the laboratory of the College, under the superintendence of Mr. Kinch, and is certainly highly creditable to the Institution."

The section titled "Soy Bean (*Glycine* [*Soja*] *hispida*)" (p. 195) mentions miso, tofu, and shoyu. Address: M.R.C.S. Eng.

1127. *Chicago Daily Tribune*.1879. Injunction bonds. Nov. 25. p. 12.

• ***Summary:*** Several years ago, Lea & Perrins, "manufacturers of "Worcestershire Sauce,' filed a bill against Deakin here to prevent him from infringing their trade-mark or Worcestershire, to denote a kind of sauce. Deakin's attorney, Mr. C.E. Pope, went to work in a most energetic manner, and collected enough testimony to show that Lea & Perrine [sic, Perrin] had no exclusive use of the above word so as to give them any exclusive right thereto, and, on a final hearing, their bill was dismissed by Judge Drummond for want of equity.

"When the suit was begun a temporary injunction was granted under a bond for $5,000, and subsequently another bond for a like amount was given at the defendant's motion. After the bill was dismissed, Deakin began two suits on these bonds to recover the damages for the issuance of the injunction." Deakin received no compensation.

1128. *Bulletin de la Societe d'Acclimatation*.1879. IV. Bibliographie. II. Journaux et revues. 1879. 3e fascicule.–*Le Soja hispida* [IV. Bibliography. II. Journals and Revues. 1879. 3rd volume of *Le Soja hispida*]. 26:666-71. Nov. [Fre]

• ***Summary:*** This section contains a summary of the main articles from other periodicals that are connected with the work of the Society for Acclimatization. In the *Bulletin de la Société des Sciences de la Basse-Alsace* (1879, Vol. 3) is an article titled *Le Soja hispida*.

"In the meeting of 3 Sept. 1897, Mr. Fuehrer read the report of a scientific treatise published recently by M. Hecke on the agronomic trials conducted in Austria, Bavaria, and Silesia [Part of Austria-Hungary in 1879; part of Poland after 1945] of a legume which would have been introduced following the Vienna World Exposition of Vienna, the *Soja hispida*, and from the seeds of which is made, in Japan, a type of sauce that is served as a condiment.

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"According to this work, soy sauce (*la sauce du Soja*) was well known in Europe, and it would have even been stylish, at the beginning of this century, in London and Paris, but no-one possessed the plant. It was only after the Vienna Exposition that the attention of some agriculturists, and especially that of Professor Haberlandt, were called to this legume. Some cultural trials were conducted: it was quickly recognized that the varieties originating in Japan and northern China could be best adapted to the climate of central Europe, and the yellow variety was recognized as preferable to all others. The good yields produced by the soybean led to its good acceptance by farmers; even more, chemical tests showed that this legume contained one-third more protein than other protein-rich indigenous legumes. And it contained 6 to 10 times more oil. It could even be classified as an oilseed. The author believes that it should be introduced as a food. He took as an example the diet of a family of workers from Silesia, and he concluded that by replacing 3 kg of potatoes (of 9 consumed per day) and 1 kg of rye flour (of 2.21 kg consumed) with only one kg of soybeans, this family would find itself adequately nourished.

"Let's add again, to analyze this treatise, that in 1878 the plant was attacked by the fungus *Septoria sojina*, and by the caterpillars of the Belle-Dame (*Vanessa carduci*) and well as by the nocturnal moth (*Acronycta rumicis; Noctuelle de la Patience*). Rabbits searched avidly for soybeans, chickens like the soaked seeds, and sheep are very fond of the straw, which has 203 times the nutritive value of the straw of peas.

"However, we must note, the introduction of this plant into Europe is not as recent as was thought in Vienna. In April 1854, Mr. de Montigny, the French consul at Shanghai, sent back the first seeds to the Society for Acclimatization in France, and they arrived under the name 'oil peas of China' (*Pois oléagineux de la Chine*). This plant belonged to the legume family and to the genus *Soja* (Moench), a relative of Dolichos; its species was *Soja hispida*. Let us add that in the report that had preceded the creation of the *Jardin du Bois* at Bologne, read at the meeting of 7 May 1858, Mr. F. Jacquemart verified that the naturalization of this legume was complete.

"At this time, in effect, the plant was imported and its cultivation had succeeded. It had been reproduced from seeds produced in France. The role of acclimatization was finished. Now it was up to agriculture and industry to see what role it could play, to study whether it could be used in place of peas, lentils, and haricot beans, or whether it could render services other than those of these similar legumes. Each introduction takes a long time, and many obstacles must be overcome before a newly discovered plant can be claimed a success. We will watch with pleasure as the horticulturists occupy themselves anew with *Soja hispida*. We should add that if Mr. Quihou declares to have tried the cultivation of this legume many times without success (this Bulletin, 1873, p. 489), Mr. Blavet verifies that it has been cultivated for three years at Étampes (Seine-et-Oise) (Footnote: Seeds harvested at the Garden of Hyères and sent by the Society for Acclimatization to the Horticultural Society of Étampes on 29 Nov. 1874). It is found there growing very rustically and giving extraordinary yields; the pods are very easily threshed with a flail, and the pea weevil (*la Bruche des Poids*) has not yet attacked it (*Bulletin de la Société d'Horticulture d'Eure-et-Loire*, 25 Feb. 1879). Note: Eure-et-Loire is a department in north-central France.

"We would not need to return to the numerous studies published on the subject of soya in our *Bulletin*, especially from 1855 on; but since much more will be said about this new plant, perhaps we owe it to our colleagues to save them some research.

"The soybean (*Le Soja*) is an essential oilseed, but one which is also used for food.

"This bean is cultivated on a large scale in the fields of north China, where the climate is quite similar to that of our colder provinces, and much commerce is based on the products made from it:

"1. The oil, which is preferable to colza- and to rape-seed oil (*de Colza et de Navette*). However it has a taste of dry legumes and leaves an aftertaste of beans or peas. Yet, with the addition of a small proportion of lard, it becomes quite similar to commercial second-grade olive oils.

"2. The residues from making the oil, which form soybean cakes, used by the Chinese to fatten their livestock and fertilize their fields.

"3. A food for the poor, quite similar to fresh white cheese, called *fromage à la pie* in France, which is generally fried in oil–including soybean oil.

"4. A seasoning (*assaisonnement*) much appreciated by the rich. In this case, the paté of soybeans (*la pâte de Pois*) [tofu] is subjected to fermentation, after the following have been added to it: pepper, salt, powdered bay/laurel leaves, and powdered thyme and other aromatic substances. During the fermentation, the producer sprinkles soybean oil on the paté. After several days of fermentation, the preparation is ready. It (fermented tofu) is a powerful digestive (aid to digestion) and an aperitif, which no one can resist because it is extremely tasty (Report by Baron de Montgaudry, *Bulletin*, 1855, p. 16)." (Continued). Address: France.

1129. *Journal de la Societe Centrale d'Horticulture de France*.1879. Procés-Verbaux: Séance du 13 Novembre 1879 [Verbal proceedings: Meeting of 13 Nov. 1879]. 1:685-88. Nov. Third Series. See p. 686-87. [3 ref. Fre]

• ***Summary:*** The meeting, presided over by Mr. Hardy, began at 2:00. The correspondence read by the secretary consisted of only one letter from Mr. Blavet, President of the Society of Horticulture at Etampes, to M. Laizier, president of the committee on kitchen-garden crops (*Culture potagère*); he reported on the chemical composition of soybean seeds (*graine du Soja hispida*).

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With respect to Soya (*Soja*), Dr. Baillon gave a lecture (based on a note he wrote) in order to provide information about this plant in response requests, especially from Mr. Vavin as follows: He discussed Englebert Kaempfer's book *Amoenitatum exoticæ* (1712) (about *Daidsu* and *Mame* [soybeans], soy sauce, miso, koji, and saké), Linnaeus, Moench [1794], and Savi (1824).

"At the time of Jacquin [1781, 1786], the soybean was cultivated in Austria. Proposals were made to plant it on a large scale as a oil-yielding plant (*plante oléagineuse*). Since the start of this century, it has been grown in all [sic, many of] the botanical gardens, where it bore seeds very well."

1130. Bryan (C.C.). 1879. Holiday goods (Ad). *Washington Post*. Dec. 16, p. 4, col. 2.
• ***Summary:*** "Finest Dehesa raisins [from Malaga, Spain], finest Layer figs,... Catawba grapes, Malaga grapes,... Mexican beans, Japanese soy sauce, Scotch jams and marmalades." This ad also appeared in the Dec. 18 and 25 issues of this newspaper. Address: Northwest corner 15th and I sts. northwest [Washington, DC].

1131. Atkinson, R.W. 1879. The chemical industries of Japan. No. 2.–Ame. *Transactions of the Asiatic Society of Japan* 7:313-22.
• ***Summary:*** Although *amé* "is best known to foreigners in the form of a sweetmeat much esteemed by children," it is also largely used "in the manufacture of *mirin* and *shoyu*. In a viscous liquid form, sold out of jars in shops, it is called *midzu-ame*, with the best variety of the latter called *awa-ame*.

The basic starch-containing raw material is either millet (Jap. *awa*), or *mochigome* (glutinous rice), or the common kind of rice called *uruchi*. The *ame* made from rice is much sweeter than that made from millet. The late Dr. Ritter wrote in detail of ame in a paper published by the German Asiatic Society in 1874 [See: *Mittheilungen der Deutschen Gesellschaft fuer Natur- und Voelkerkunde Ostasiens* (Yokohama) 1(5):3-5. July]. A detailed description of the process for making ame is then given. Address: B.Sc., London.

1132. Kinch, Edward. 1879. Japan: A classified and descriptive catalogue of a collection of agricultural products exhibited in the Sydney international exhibition by the Imperial College of Agriculture, Tokio, Japan. Tokyo: Agricultural Bureau (Naimushô), Home Dept. 65 p. 20 cm. [Eng]
• ***Summary:*** Each item that was displayed is numbered. All chemical / nutritional analyses give percentage composition unless otherwise stated. The chapter on "Manures "begins (p. 4): "The principal manures used in this country are human excrements both solid and liquid, which are collected with the greatest care and applies to the land whilst in a more or less advanced state of decomposition. The excreta are often made into a compost with dried grass.

The section titled "vegetable manures" (p. 7-13) gives analyses of rape cake (*abura kasu*), malt dust (*ame kasu*), sesamum cake (*goma kasu*), rice beer residues (*sake kasu*), soy [sauce] residues (*shoyu kasu;* water 16.37%, ash 4.96%, organic matter 78.67%), rice cleanings (*nuka*), and barley bran (*fusuma*).

Note 1. This is the earliest English-language document seen (May 2012) that contains the term *shoyu kasu* (in italics, without diacritics) which it defines as "Soy residues," and the earliest that gives its composition.

The chapter on "Foods" begins (p. 16): "By far the most important national food is rice, *Kome;* more than one half of the cultivated land of the Empire is devoted to paddy fields, *Ta*, and besides the rice grown on this irrigated land a considerable quantity is grown on the dry fields, *Katake*." *Mochi-gome* or glutinous rice, is specially used for making the new years' cakes, *Mochi*.

The many kinds of leguminous plants include: Peas, field and haricot beans, vetches, lupins; soy beans *Glycine (soja) hispida, O-mame or Daidzu;* fol. lanceolata (*Midzu-kugiri*); *Phaseolus radiatus, Adzuki* or *Shodzu; P. radiatus v. pendula, Tsura-adzuki; P. radiatus subtriloba, Bundo;* Horse gram, *Dolichos uniflorus, Sasagi;* Gram, *Dolichos umbellatus, Hata-sasagi;* Overlook pea, *Canavalia incurva, Nata-mame;* Ground nut, *Arachis hypogæa, Rakkasho* or *Tojin-mame*.

"Also should be mentioned the sesamum, *Goma*, the oil of which is extensively used in cooking; *Perilla ocymoides, Ye-goma;* and rape, *Brassica sinensis, Abura-na*, which is cultivated for its seed, the oil being used for burning." Also list (with scientific and Japanese names, p. 17-18) the principal root crops, fruits, sea weed and lichens, fungi, and starch.

Next: Chemical analyses of rice, wheat, rye, "red bean–*Adzuki–Phaseolus radiatus* (large variety and small variety)."

Note 2. This is the earliest English-language document seen (March 2006) that uses the word *Shodzu* (or *shôdzu* or *shôzu* or *shodzu* or *shozu*) or the word "red" or the term "red bean" to refer to the azuki bean, or that gives its scientific name as *Phaseolus radiatus*, or that reports the existence of large and small varieties, or that uses the word *Bundo* to refer to a variety of azuki bean.

Then (p. 22-26): "44. Beans. *O-mame, Daidzu. Glycine (soja) hispida.* White round soy bean. Miso mame. Percentage composition (table): Water 11.32, albuminoids 37.75, fat 20.89, fibre 1.50, ash 3.86, starch and soluble cellulose 24.58. Total 100.00.

"This bean is met with in several varieties of different colour and size, but they differ little in composition. It is vegetable which approaches nearest in chemical composition to animal food (meat), containing as it does one fifth of its

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weight of fat and often two-fifths of nitrogenous matter. It is an extremely valuable adjunct to the food of a people who subsist so largely on a purely vegetable diet, of which the bulk is rice so rich in heat producers–starch, and poor in flesh formers–albuminoids.

"*Shoyu*, *Miso*, and *Tofu*, are made from these beans, and enter largely into the food of the nation.

"45. Miso. *Shiro-miso* or white miso. From Osaka. Percentage composition: Water 50.73, fibre 12.93, ash 6.58 (containing 5.4 per cent of common salt), sugar 17.54, albuminoids 5.64, soluble carbohydrates 6.58. Total 100.00. Soluble in water 35.88 per cent.

"46. Miso. *Aka-miso* or red miso. From Osaka. Percentage composition: Water 50.40, fibre 8.25, ash 12.50 (containing 12 per cent of common salt), sugar 0.61, albuminoids 10.08, soluble carbohydrates 18.16. Total 100.00. Soluble in water 34.71 per cent."

Note 3. This is the earliest English-language document seen (March 2009) that uses the term "Shiro-miso" refer to white miso (and vice versa) or "aka-miso" to refer to red miso (and vice versa).

"In the preparation of *Miso* the beans are boiled, pounded in a mortar into a paste and mixed with fermenting rice, *Koji* (see *sake*) in various proportions, and with more or less salt, and the mixture is placed in tubs and left in a cool place for about a month. It will be seen that one variety, white miso, contains much sugar, derived from the *koji*, and little salt; whilst the other variety contains very little sugar and much more salt.

"47. Tofu. Percentage composition: Water 89.29, ash 0.48, fibre 1.01, nitrogenous substances 4.87, non-nitrogenous substances 4.35 (containing 3.32% fat). Total 100.00.

"This food is made by boiling the white soy beans, *Shiro-mame*, in water after they have been soaked, ground and strained through a sieve. The solution is filtered through cotton cloth and the residue pressed; the liquid, containing legumin in solution, is precipitated by the addition of the brine which runs off from sea salt during its deliquescence in the air. The precipitate constitutes *Tofu*."

Note 4. This is the earliest English-language document seen (Oct. 2008) that uses the word "legumin" to refer to the water soluble protein in soybeans than can be precipitated by a coagulant to make tofu.

"48. Kori tofu. Percentage composition: Water 18.75, ash 1.60, nitrogenous substances 48.80, non-nitrogenous substances, chiefly fat 30.85. Total 100.00.

"Prepared from the above [tofu] by exposing it to the air during frost, until it freezes, and afterwards thawing in the sun, by which the greater quantity of the water is removed.

"49. Soy [sauce]. Shoyu. Specific gravity 1.1996. Grams per litre: Total solid residue 359.888, ash 195.168 (principally common salt), sugar 31.034, albuminoids 41.000, free acid expressed as acetic acid 6.200.

Note 5. This is the earliest document seen (Jan. 2008) that uses the term "specific gravity" in connection with soyfoods–in this case soy sauce.

"Manufacture of *Shoyu*. *Shoyu* is made from the soy bean, *Glycine* (*soja*) *hispida q.v.* together with wheat, salt and water. Equal parts of beans and wheat are used. A small part of the wheat is mixed with *Koji* (see *sake*) and allowed to ferment. The remainder is roasted and the beans are also roasted. The roasted beans and wheat are then mixed together with the fermenting wheat, placed in shallow wooden boxes, and kept for some days, at a fixed temperature, in a warm chamber with thick walls, until the whole mass is covered with fungus. It is very important that the temperature of this chamber should be kept at the proper point. By these processes, part of the starch of the wheat is converted into dextrin and sugar, and lactic acid and acetic acid are formed. It is then mixed with salt lye, the proportion used being about 4 *go* of salt to 12 *koku* of water to extract 1 *koku* of the fermented product. The mashings are removed to large vats and there kept for at least 20 months and generally for 3 or 5 years. The better qualities of *shoyu* are kept the longer times. It is found that the best soy is produced by mixing that kept for 5 years with that kept for 3 years. After it has been kept a sufficiently long time, it is strained through thick cotton bags and the residue pressed in the same manner as in *sake* pressing. Before filtering, honey is sometimes added in the proportion of 10 *kin* to 1 *koku* of *Moromi* or mixed soy, in order to give it a sweet taste. Occasionally a sweet sake, obtained by taking 1 *koku* of *koji* to 7 *to* of water and 1 *to* of steamed rice, mixing them together and steaming for two hours, is added instead of honey. The residue obtained on pressing *moromi* is again mixed with salt and water, in the proportion of 8 *to* of salt to 1 *koku* of water and again pressed, this yields and inferior *shoyu*. Sometimes water is added to this second residue and it is again pressed. The residue first obtained is sometimes used as food, and the last residue as manure. One *koku* of the mixture, *moromi*, produces 4 *kuwamme* of residue at the first filtration and about 3.5 *kuwamme* of residue at the second and third. The *shoyu*, after pressing, is allowed to settle for two days in large tanks, and then drawn off and again filtered. *Shoyu* is a very important condiment, it is mixed with a great many kinds of food and is produced and consumed in very large quantities.

"1000 *Go* = 100 *Sho* = 10 *To* = 1 *Koku* = 4.929 Bushels. 1 *Kin* = 1.325 lbs. 1 *Kuwamme* = 8.28 lbs.

Note 6. This description of how shoyu is made contains several major errors.

Finally, there are chapters on alcoholic liquors (with emphasis on sake or "rice beer, sometimes called rice wine"), sweet liqueurs (*mirin*, *homeishiu*, *shiro-zake*), food adjuncts (incl. salt, vinegar, spices, herbs, and perhaps shoyu), edible sea weeds (20 varieties, with both Japanese and scientific names, and an analysis of each), tea, tobacco, fodder, animal

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foods, dye stuffs, oils and waxes, and starch (incl. *kudzu, Pueraria thunbergiana*).

Note 7. This is the earliest document seen (July 2008) concerning soybean products (tofu, dried-frozen tofu, and shoyu) in connection with (but not yet in) Australia.

Note 8. This is the earliest English-language document seen (Aug. 2003) that uses the word "nitrogen" in connection with soy–and with protein.

Note 9. This is the earliest document seen (July 2008) by Edward Kinch (1848-1920) that mentions soy. Kinch was born on 18 Aug. 1848 at Henley-on-Thames, Oxfordshire, England, the 3rd child of Charles Kinch and Emma Plumbe Kinch. He was baptised there on 12 Dec. 1845 in St. Mary's church. Kinch was a chemist, specializing in agricultural chemistry. In 1869 he became assistant professor at the Royal Agricultural College (RAC) in Cirencester (in southwestern England). From 1876 to 1881 he was a professor of agricultural chemistry at the Imperial College of Agriculture in Tokyo, Japan. Then from 1881 to 1915 he was professor of chemistry at the RAC in Cirencester. He married Edith Shirley Huntington in 1889 in Pembroke district, Pembroke, Wales. They had two children, William (born ca. 1886) and Dora Ann (born ca. 1893). He died on 6 Aug. 1920 in Haselmere, Surrey, England.

Note 10. This catalog was displayed at the Sydney International Exhibition, held in Australia in 1879. The Sydney International Exhibition was Australia's first international exhibition, a showcase of invention and industry from around the world. An imposing Garden Palace was constructed in the Botanic Gardens as a home for the exhibition. Address: F.I.C., F.C.S., &c., Prof. of Chemistry, Imperial College of Agriculture, Komaba, Tokio, Japan.

1133. Voss, Johann Heinrich. 1879. Poetische Werke [Poetic works. Vol. 1]. Berlin: Gustav Hempel. 16 cm. [Ger]

• ***Summary:*** Vol. 1 of this book is divided into 3 parts (Theilen): (1) Luise: A long pastoral poem, (2) idylls (*Idyllen*), and (3) songs (*Lieder*). These are followed by a biography of the poet, then annotations on the first 3 parts. Soy sauce is mentioned in Part II, Idyllen, on page 78. A section titled "Der Abendschmaus" (The evening feast or banquet) contains the line:

"Young Calcuttans... with your sharp soy sauce from Jakarta (*Junge Kalkuten herum, mit scharfer Batavischer Soja*)."

Then in the "Annotations to the Idylls (*Anmerkungen zu den Idyllen*)" (p. 96), the poet notes: "Page 78: Soy sauce, a strong sauce, which is prepared in the East Indies from soybean juices, that are simmered then fermented together with brine and spice, is also prepared in Europe from preserved fungi [starter culture]." In German: *"Soja, eine kräftige Tunke, die in Ostindien aus dem gequollenen und in Gährung uebergehenden Sojasafte, mit Salzlake und Gewuerz, in Europe auch aus eingemachten Schwämmen bereitet wird."*

No year of publication is given in this book. It is set in hard-to-read Gothic type [gotische Schrift] (also called black-letter type, Fraktur [die Fraktur], or Sütterlinschrift). The poet was born on 20 Feb., 1751 in Sommersdorf in the area of Wahren near Mecklenburg in what is today eastern Germany. He died in 1826 at the Univ. of Heidelberg. Address: Germany.

1134. Duncan's (John) Sons. 1880. Display ad: Great reduction in price: Lea & Perrins signature on the bottle of the genuine Worcestershire sauce. *San Francisco Chronicle*, Jan. 5. p. 2, col. 4.

• ***Summary:*** Printed to the left of the bottle: "It imparts a most delicious taste and zest to soups, gravies, fish, hot and cold joints.

Printed to the right of the bottle: "Extract of a Letter from a Medical Gentleman at Madras [India], to his brother at Worcester, May, 1851. 'Tell Lea & Perrins that their Sauce is highly esteemed in India, and is in my opinion the most palatable as well as the most wholesome Sauce that is made.'

"Sold and used throughout the world. Travelers and tourists find great benefit in having a bottle with them."

Large illustrations show: (1) The "Lea & Perrins" signature. (2) A bottle of the sauce.

Note 1. This ad appeared in the Jan. 26 and March 1 issues of this newspaper (both on p. 2). After that, no ad for Worcestershire sauce was seen until 1889.

Note 2. This is the earliest document seen (Feb. 2012) that shows the actual "Lea & Perrins" signature in an ad for this sauce. Address: Agents, 26 College Place and 1 Union Square, New York [City].

1135. *New-York Tribune*. 1880. A new vegetable from China. Feb. 8. p. 4.

• ***Summary:*** From The Globe: "Some experiments carried on by two or three Austrian and German horticulturists [including Friedrich Haberlandt of Vienna] have brought into notice an almost forgotten plant which was introduced into Europe from China nearly thirty years ago, but whose existence, and whose products have been undeservedly lost sight of. This is the *Soja hispida*, a species of leguminous plant, somewhat resembling in habit and appearance the well-known pea. Unlike the latter, however, it has two distinct uses–industrial as well as alimentary. It is highly prized in China and Japan, and is said, indeed, to take its scientific title [Soja] from the Japanese name of the sauce–sooja–which is made from its seeds."

Chinese are referred to as "the Celestials."

1136. Carrière, E.-A. 1880. Le soja hispida [The soybean (Soja hispida)]. *Journal d'Agriculture Pratique* 44(14):479-83. April 1. [Fre]

• ***Summary:*** Page 480 notes that in 1874 the *Jardin*

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d'Acclimatation in France received soybeans from Mexico and distributed them to various societies. Illustrations show: (1) A plant, pod, and seed of *Pois oléagineux de la Chine* (soybean; Fig. 35, by L. Rouyer). (2) A plant and pods of *Soja hispida* (soybean) with many pods clustered around the stem, and a cluster of 7 pods to the upper left of the plant (Fig. 36, by Thiebault). (3) A cluster of three leaves of *Soja hispida d'Etámpes* one-fourth its natural size (Fig. 37).

(4) Two large pods and one seed of *Soja hispida d'Etámpes* (full size; Fig. 38).

(5) A dry plant of *Soja hispida d'Etámpes* with pods on the stems, one-ninth its natural size (Fig. 39).

A table (p. 482) compares the composition of different seeds as analyzed by various chemists. The soybean was analyzed by Levallois of *l'Institut agronomique*.

Pages 482-83: A quotation from *Amoenitatum exoticarum* by Engelbert Kaempfer (1712) mentions miso, soy sauce, koji, and sake.

Page 483 states: "Today the soybean is cultivated in Hungary and probably in Austria. One farmer, Mr. Jules-Robert of Seelowitz, in Moravia [a separate crownland of Austria, but after 1945 part of Czechoslovakia], cultivates it on a very large scale (30 hectares or more each year). He lets some of the plants ripen / mature for harvest as seeds (soybeans); he cuts the others before they mature and mixes them with corn (*maïs*), then ensiles the mixture in a semi-dry state." Note 1. This is the earliest document seen (June 2008) that mentions silage or ensilage in connection with soybeans. It is also the earliest document seen (April 2003) that mentions the use of corn and soybeans together to make silage. All of the early research on the use of soybeans in silage was done in France.

The last paragraph states: "Soybean seeds can be ordered from MM. Vilmorin et Cie, 4, quai de la Mégisserie, Paris."

Note 2. Note 2. This document contains the earliest date seen for soybeans in Mexico (1874). It is not clear whether or not these soybeans were cultivated in Mexico (they may well have been) or where they came from (they may well have come from China on a Manila galleon as part of the China trade).

Note 3. Theodore Hymowitz, Prof. of Plant Genetics, Univ. of Illinois, referring to this reference and to the reference from the year 1651 by Francisco Hernandez mentioning the mung bean, writes (8 May 1989): "The existence of soybeans or mungbeans or even the knowledge of these crops in Mexico at that time is of course no surprise to me. From about 1565 and for the next 250 years ships left Acapulco for Manila (Philippines) and returned. All sorts of goods were moved West to the East and vice versa across the Pacific Ocean. Hernán Cortés [Cortes] (1485-1547, the Spanish explorer and conqueror of the Aztec empire in Mexico) started a plant introduction garden in Mexico City in 1621 and requested that seed be sent to him." Hymowitz added by phone (27 May 1989): "There is no log of what was grown in that garden, but there is the account of Cortés' friend, which is at the University of Illinois rare book room. It is in old Spanish, handwritten."

Note 4. The illustrations in this article were reproduced in many later books and articles by other authors. Address: France.

1137. Carrière, E.-A. 1880. Soja hispida [The soybean (Soja hispida)]. *Revue Horticole: Journal d'Horticulture Pratique (Paris)* 52:153-57. April 16. Excerpted from Journal d'Agriculture Pratique, 1 April 1880. [2 ref. Fre]

• ***Summary:*** This is a reprint of an article by the same author first published on 1 April 1880 in *Journal d'Agriculture Pratique* 44(14):479-83. All the five illustrations (line drawings) and one table in the original article are reproduced here. Address: France.

1138. Grisard, Jules. 1880. Extraits des procés-verbaux des séances de la société. Cinquième section. Séance du 6 Avril 1880 [Excerpts of verbal proceedings from meetings of the society. Fifth section. Meeting of 6 April 1880]. *Bulletin de la Societe d'Acclimatation* 27:320. April. [Fre]

• ***Summary:*** The president, Mr. Eug. Vavin, insists on the great interest presented by the soybean (*Soja hispida*) cultivated as a common legume, but he does not believe that the manufacture of cheese [tofu] from the soybean would be of any great interest, especially among members of the Society. Mr. Vavin is convinced that this legume will be widely disseminated and grown within several years, not only because of its fine taste, which will invite research on its uses as a food, but even more because it has the precious advantage of not having been attacked by the broad bean beetle (*bruche* [*Bruchus rufimanus*]).

"Mr. Paillieux observes that this plant can be used in animal feeds; he rejects its use for making [soy] sauce, but believes that it can be used to advantage in the preparation of cheeses, for it contains a large proportion of casein, 35 per cent." Address: Secretary, France.

1139. Duncan's (John) Sons. 1880. Worcestershire sauce: The great sauce of the world (Ad). *Washington Post*. May 13. p. 3.

• ***Summary:*** Below the title of this display ad is the signature "Lea & Perrins." "Signature is on every bottle of genuine Worcestershire Sauce. Imparts the most delicious taste and zest to soups, gravies, fish, hot & cold meats, game &c.

"Extract of a letter from a medical gentleman at Madras [India] to his brother at Worcester. May, 1851. 'Tell Lea & Perrins that their Sauce is highly esteemed in India, and is, in my opinion, the most palatable as well as the most wholesome sauce that is made.'

"Sold and used throughout the world." In the center of the ad is an illustration of a bottle of Lea & Perrins

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Worcestershire Sauce with the front label in plain view. Address: New York.

1140. *Washington Post.*1880. The increasing desire to visit the various countries of the world... May 13. p. 4.
• ***Summary:*** "... and observe the different habits and modes of living, indicates a growing intelligence. The observing traveler will notice the different style of houses, dress, social customs, the change of air, water, cooking etc., at the poles and in the tropics, but all over the world, in every clime, the renowned Lea & Perrins' Worcestershire Sauce will be found the same appetizing and delicious, when used on meats, game, fish, in soups, gravies, etc., retains its original excellence in all countries, and is known and prized everywhere.

Note: This is the earliest reference seen (Feb. 2012) to Worcestershire Sauce in the Washington Post. It seems to be an early "advertorial."

1141. *New York Times.*1880. Ten days in the Arctic: The *Yukon* cruising on the Alaskan coast. May 22. p. 8.
• ***Summary:*** The writer is exploring aboard the U.S. schooner *Yukon*. "The Cape Lisburne folks live in half-underground huts... They wear labrets of bone, ivory, stone, glass &c. One shiftless individual had a pair of Worcestershire sauce bottle stopples in his lower lip instead of the usual form of labret; *'de gustibus non est disputandum'* [there is no disputing about tastes] evidently rules the fashionable world here. Two labrets are the correct thing; one under each corner of the mouth in the lower lip."

Note 1. Cape Lisburne is on the northwest coast of Alaska, on the Chukchi Sea.

Note 2. A labret (a word first used in 1857) is an ornament worn in a perforation of the lip.

1142. Sempolowski, A. 1880. Zur Kultur und Verwerthung der Sojabohne [On the culture and use of soybeans]. *Fuehlings Landwirtschaftliche Zeitung* 29(5):278-81. May. [Ger]
• ***Summary:*** It is well known that Prof. Dr. Fr. Haberlandt, who obtained soybeans in 1873 at the Vienna Exposition (and unfortunately died at too young an age), conducted many soybean trials in order to find varieties that yielded well in Austria and bordering countries. The best varieties proved to be the yellow-seeded ones that originated in Mongolia. Later, in other areas many more trials were conducted.

"I conducted my first trials with soybeans two years ago [i.e., in 1878] at 53-53° north latitude. The yield was satisfactory, however I had to let the harvested plants finish ripening indoors." Further trials were conducted in former years in several places in Posen [Poznan; a very old city and province in west central Poland, part of Prussia 1793-1918]. A table (p. 279) shows where soybeans were grown (at Oswiezem, Twno, Zabikowo, Prusinowo, and Zabikowo), the number of seeds planted, the dates of planting (April 24-May 15) and harvest (Oct. 4-16), the seed spacing, yield (in kilograms and number of seeds), seeds harvested per seed planted (maximum 146 to 1, minimum 22 to 1), and quality of the harvested seed. This table shows the extraordinary fruitfulness of the soybean.

"In China and Japan, soybean seeds are used as food. Almost daily they are enjoyed as vegetables, like our beans (*beinahe tagtäglich als Gemüse, gleich unseren Bohnen, genossen wird*), or they can be used to prepare various sauces, which are known as tasty and digestion-promoting additions to the other dishes and which have been shipped to Europe." The process for making soy sauce is described. Soybeans are used as a source of oil, especially in the provinces of Newchwang and Cheefo, where there are many oil mills. The method for pressing out the oil is still very primitive (see a report on the agricultural part of the Paris Exhibition of 1878; Berlin 1879, page 57). Soybean cake is used as fertilizer on sugar plantations. Cooked soybeans are also tasty, as in a salad with oil and vinegar, or in soup. It must be noted that it takes a long time to cook soybeans until they are soft–at least 24 to 48 hours. A table shows the nutritional composition of soybeans (9.23% water and 33.35% protein). Because the leaves and hulls are also quite nourishing, the soybean has a great future as a fodder plant. Address: Dr.

1143. Lea & Perrin. 1880. Lea & Perrin's [sic] (Ad). *Chicago Daily Tribune.* June 15. p. 8.
• ***Summary:*** "The increasing desire to visit the various countries of the world, and observe the different habits and modes of living, indicates a growing intelligence. The observing traveler will notice the different styles of houses, dress, social customs, the change of air, water, cooking, etc. At the poles, in the tropics, and all over the world, in every clime, the renowned Lea & Perrin's [sic] Worcestershire Sauce will be found the same, appetizing and delicious, when used on meats, game, fish, in soups, gravies, etc. Its retains its original excellence in all countries and is known and prized everywhere."

1144. *Southern Farmers' Monthly (The).*1880. A Chinese vegetable. 3(6):170. June.
• ***Summary:*** "Some experiments recently carried on by two or three Austrian and German horticulturists, have brought into notice an almost forgotten plant which was introduced into Europe from China, nearly thirty years ago, but whose existence and whose products have been undeservedly lost sight of. This is the *Soja hispida*, a species of luguminous [leguminous] plant, somewhat resembling in habit and appearance the well-known pea. Unlike the latter, however, it has two distinct uses–industrial as well as alimentary. It is highly prized in China and Japan, and is said, indeed, to take

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its scientific title from the Japanese name of a sauce sooja–which is made from its seeds... The peas are boiled for about 20 minutes, and furnish a dish which is highly relished, not only by the Celestials, but by Europeans who have tasted it. It is said to resemble in flavor the green pea, but lacks its sweet taste... The sauce has a high reputation among the Chinese and Japanese, not merely as a condiment, but as a medicinal agent. Chemical analysis of the seeds show [sic, shows] them to be very rich in proteine.

"The oil is available for many uses–for burning in lamps or even as a substitute for olive oil. Being somewhat of a siccative [drying] nature, it is not adapted for a lubricant, but is for that reason useful as a substitute for linseed oil in the manufacture of paints and in other similar industrial arts. Finally, to complete the list of virtues of this Celestial pea, the haulm [stem or stalk] gives an excellent fodder for cattle and horses."

Note 1. This is the earliest document seen (June 2001) that mentions the use of soybean oil in paints (or varnishes or enamels). First cited by Hymowitz. 1986. Bibliography of early, previously uncited publications on soybeans in the United States. 2 p. Unpublished. The editor of this periodical in 1880 was L.C. Bryan.

Note 2. This is the earliest document seen (Sept. 2001) concerning the use of soybean oil as a lubricant–for which use it is not suitable.

Note 3. This is the earliest English-language document seen (Aug. 2003) that contains the term "proteine" (or "proteines") in connection with soy.

Talk with Ted Hymowitz. 1991. Sept. 16. After 2½ weeks of searching he has just found that this "Dr. Emerson" was Dr. Gouvenneur Emerson (lived 4 Aug. 1795–8 July 1874), a surgeon on the ship "Superior" that went to China. He received his M.D. degree from the University of Pennsylvania, and was a member of the American Philosophical Society, and of the convention which resulted in the formation of the American Medical Association. He never married. The source of this information is: *Who Was Who in America: Historical Volume, 1607-1896. Rev. ed.* 1967. Published by Marquis Who's Who Inc., Chicago, Illinois. 689 p. See p. 239. Address: Editor, Savannah, Georgia.

1145. Greev, Edward. 1880. What the Japanese eat. *Frank Leslie's Popular Monthly* (*The American Magazine*) 10(2):164-74. Aug.

• ***Summary:*** A very interesting article with many large illustrations. On page 171 we read: "We quitted the dealer in vermicelli, etc., and entered a shop devoted to the manufacture of *tofu* (bean-curd, or cheese), a national dish. It is semi-gelatinous, white, delicious and wholesome. Yuba is another sort of paste food, made from white beans. Misso [miso] is a white bean paste, mixed with fermented rice and salt. It requires a Japanese-trained stomach to digest this.

Note: This is the earliest English-language document seen (March 2009) that uses the term "bean paste" (not preceded by the word "soy" or "soya") to refer to miso.

"Soyu [shoyu] (soy), a sauce made with boiled beans and wheat, was also sold at this establishment. The mess is fermented until it is a mass of fungi, then cooled and salted with hot lye. It is next transferred to enormous vats, in which it is kept for several years, then pressed in bags made of thick cotton cloth. The brown juice that runs from the horrible mass is soyu, and is not only palatable, but wholesome. The Japanese flavor dishes with it, and use it as we do vinegar, for pickling. It tastes like mushroom catsup.

"I had seen the process of soy-making, therefore declined to visit one of those establishments; whereupon my guide took me to a candy factory. As a nation, the Japanese are not large consumers of sugar."

Mentions many other Japanese foods and beverages including saké (rice-wine or rice-beer); he describes how it is made. Illustrations: (1) Seven Japanese men and women seated on tatami mats around a low table having a meal: in the background is a large painted wall. (2) A Japanese butcher's shop, as seen from outside. (3) A salt vender and house servant, carry goods at both ends of a shoulder pole. (4) The *Pelor japonicum*–a curious Japanese fish. (5) A dealer in dried fish with a man carrying goods on a shoulder pole. (6) Japanese entertaining European guests, seated in chairs at a raised table. (7) A rice warehouse near Tokyo. (8) A saké shop at New Year's with a large crowd of men. (9) A Japanese tea house.

1146. *Gardeners' Chronicle* (*London*).1880. The cultivation and uses of the soy bean (Soja hispida). 14:369-70. Sept. 18. [1 ref]

• ***Summary:*** "The cultivation of the Soy Bean (Soja hispida) is being strongly recommended in France as a green vegetable." Planting instructions are given.

"The greatest use to which the plant is put in China and Japan is in the preparation of soy [sauce] and of food from the ripe seeds. The manufacture of shoyu, or soy, is thus described in a descriptive catalog of agricultural products of Japan exhibited at the late Sydney International Exhibition [Australia; held in Oct. 1879]. Equal parts of Beans and Wheat are used..." The koji is made in shallow wooden boxes. "The mashings are removed to large vats, and kept there for at least twenty months, but more often for three or five years, the better qualities being those that are kept for the longer periods. The best soy is produced by mixing that kept for five years with that kept for three years. After it has been kept a sufficiently long time, it is strained through thick cotton bags, and the residue submitted to pressure. Before filtering honey is sometimes added. The residue is again mixed with salt and water and again pressed, the yield being soy of an inferior kind. Sometimes water is added to this second residue, and is again pressed. The residue first

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obtained is occasionally used as food, and the last residue as manure."

Note 1. It seems from the above text (and seems likely in itself) that both shoyu and the catalog describing the shoyu were exhibited at the Sydney International Exhibition of 1879. Address: England.

1147. Paillieux, Auguste. 1880. Le soya, sa composition chimique, ses variétés, sa culture et ses usages [The soybean, its chemical composition, varieties, culture, and uses]. *Bulletin de la Societe d'Acclimatation* 27:414-71. Sept.; 27:538-96. Oct. 28 cm. [73 ref. Fre]

• ***Summary:*** One of the most important and original of the early publications on soya in Europe. Its in-text bibliography on soya was the largest of any published up to that time.

Contents: Part I: Introduction and extracts on soybeans and soyfoods from 30 articles published previously in the *Bulletin of the Society for Acclimatization* from 1855 to 1880 (pages 414-430). 1. Soybean botany (p. 430-31). 2. The soybean in Japan (p. 431-42): Engelbert Kaempfer and his writings on miso and shoyu, information on soya from a document titled *Japan at the World Exposition of 1878* (*Le Japon á l'Exposition universelle de 1878*, written in French by a Japanese, p. 29-33), recipe for making shoyu in France, tofu. 3. Soya in Cochinchine (French Indochina, p. 442-46): Black soybeans. 4. Soya in China (p. 446-51): Soy oil (*Huile de Soya*), tofu (*le fromage de soya, teou-fou*), soy sauce (*tsiang-yeou;* In London, England, it is sold under the name of "India Soy" at Cross & Blackwell, Soho-Square {p. 451}). 5. Soya in Austria-Hungary (p. 452-71): Starting with soybeans at the World Exposition of Vienna in 1873, includes a long, in-depth discussion (with many excerpts) of Prof. F. Haberlandt's book *Le Soja*, published in Vienna in 1878.

Tables in Part I show: (1) The chemical composition (in both their normal and dry states) of Chinese soybeans (*pois de Chine*), tofu (*fromage de pois*), and tofu curds (p. 427). (2) The yield of tofu. 120 gm of soybeans yields 184 gm of tofu (p. 427). (3) The weight and nitrogen content of the different components when tofu is made from soybeans (p. 428). (4) The Japanese names of 23 soybean (*mame*) varieties and a very brief description of their characteristics (p. 435-36; e.g., 1. *Go-guwatsu no mame* {5th month bean}. 2. *Use mame* [*sic*, *Wase mame*] {early}. 3. *Nakate mame* {half season}. 3a. *Okute mame* {late}. 4. *Maru mame* {round}. 5. *Shiro teppo mame* {white, like a pistol bullet} 6. *Kuro mame* {black}. 7. *Kuro teppo mame* {black, like a pistol bullet} 8. *Koishi mame* {small stone}. 9. *Awo mame* {*Ao*, green}. 10. *Kage mame* {shade, shadow}. 11-15. *Aka mame* {red; 1 of same species, two of different species}. 16-18. *Tsya mame* {*Cha*, tea colored}. 19. *Kuro Kura Kake mame* {black saddled}. 20. *Aka Kura Kake mame* {red saddled}. 21-23. *Fu iri mame* {striped, variegated, mottled; see Uzura mame = speckled like quail eggs}). This nomenclature was taken from a Japanese work titled: "Explanation, with figures, of trees and plants recently determined / identified."

(5) The romanized Chinese names of six types of soybeans and a French translation of each (e.g., *Houang-teou = Soya jaune*) (p. 447). (6) Two analyses of soybean seeds, reprinted from *Chemischer Ackersmann*, 1872 (p. 458). (7) The chemical composition of three soybean varieties, including Yellow of Mongolia, Yellow of China, and Reddish-Brown of China; the composition of the original seeds and the first generation seed is given for each type (p. 460-61). (8) The chemical composition of reddish-brown, yellow, and black varieties of soybeans (p. 469-70; data from M. Schroeder, Mach, and Caplan, published by F. Haberlandt). (9) Weight of 1,000 seeds for four generations grown out in Vienna. Original seeds: 81.5 to 105 gm. First generation: 110.5 to 154.5 gm. Second generation: 141.8 to 163.6 gm. Third generation: 116.0 to 151.0 gm.

Contents (continued), Part II. 6. The Soybean, by Count Heinrich Attems (p. 538-60): Soybean culture and harvest, uses, and preparation of whole soybeans. Practical soybean culture trials on a grand scale, in the domain of the archduke Albert, an extract from a booklet by Edmond de Blaskovics titled "The Soybean, Its Culture, Use, and Value as Forage" (Vienna, 1880). Excerpts of six articles on soya from the *Wiener Landwirthschaftliche Zeitung* (*Viennese Agricultural Journal*) (Jan. 1879 to June 1880) (p. 548-54). Excerpts of ten articles on soya from the *Oesterreichisches Landwirtschaftliches Wochenblatt* (*Austrian Agricultural Weekly*) (March 1879 to Feb. 1880) (p. 554-59).

7. The soybean in France (p. 561-76): History (starting with Buffon, who became director of the *Jardin des Plantes* [Royal Garden, also called Jardin du Roi] in 1739), varieties grown, cultivation, utilization (mainly as forage plant for livestock and as an oilseed for oil and meal), accessory uses (miso, Japanese-style soy sauce {*shoyu*}, Chinese-style soy sauce {*tsiang-yeou*}, Japanese-style tofu {*tô-fu*}, Chinese-style tofu {*téou-fou*}, fermented black soybeans {*téou-che*}, and soy coffee {*café de Soja*}, white fermented tofu {*fromage blanc*}, red fermented tofu {*fromage rouge*}, green vegetable soybeans {*des graines fraîches, écossées encores vertes, comme le Haricot flageolet*}, whole dry soybeans {*les graines sèches comme le Haricot blanc ordinare*}).

8. Conclusion and tables showing French analyses of soybeans (p. 576-78). Appendixes (p. 579-96): Summaries of letters to the Society describing 27 cultural experiments with soybeans conducted during late 1880 at various locations in France, Switzerland and Algeria. (Note: Though the publication date of this appendix is given as Oct. 1880, some of the letters are dated as late as 21 Nov. 1880). Reprint of a 2-page letter from Eugene Simon, former French consul in China, on soybean farming in China (p. 591-93). Reprint of a description by Eugene Simon, based on the description of a Chinese, of how tofu is made in China (p. 593-94). A French translation of a 1781 article by Isaac Titsingh on preparation

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of soy sauce in Indonesia (p. 594-95). And some information about soybeans from the ancient Chinese herbal *Pên Ts'ao Kang Mu* (p. 595). Reprints of 2 letters from Eugene Simon in China, on soya and tofu in China. French translation of a 1781 article by Isaac Titsingh on preparation of soy sauce.

Note 1. We find it surprising that this superb work contains no illustrations of a soybean plant, or of any part of the plant, or of any foods made from soybeans; the only illustration (p. 569) is a cross section of an empty pit into which one could put a mixed silage that contained 20% soybean plants. The distance a-b is 3 meters; f-g is 2 meters; e-f is 0.5 meters; a-e is 1 meter; i-h is 0.4 meters.

Note 2. This is the earliest French-language document seen (Dec. 1999) that uses the term *Huile de Soya* to refer to soybean oil.

Note 3. This is the earliest document seen (March 2001) that has a bibliography of more than 50 references concerning soybeans.

Note 4. This is the earliest European-language document seen (Sept. 2004) that mentions the Japanese soybean types *Nakata-mame* or *Okute mame*.

Note 5. This is the earliest French-language document seen (April 2012) that uses the term *tsiang-yeou* to refer to Chinese-style soy sauce. Address: France.

1148. Kinch, Edward. 1880. Contributions to the agricultural chemistry of Japan. *Transactions of the Asiatic Society of Japan* 8(Part 3):369-415. Oct. See p. 392-93, 398-401, 413-15. Reprinted in March 1907 as a monograph. [29 ref]

• ***Summary:*** "Of vegetable manure the principal are seaweed, the residues from different manufactures, e.g. rape cake, sesamum cake, cotton cake and other oil residues, as from camellia seeds, the residues from the manufacture of *shôyu, ame* [*rice syrup*], *sake, shôchu*, indigo etc." (p. 392). [Note that soybean cake is not mentioned].

"The oil cakes, *ame kasu* (malt dust, the residue from the manufacture of ame from rice, millet and malt of wheat or barley) and *shôyu kasu* [The residue from the manufacture of shoyu] are the most valuable. These manures should not be applied in quantity at the seed time in an unmixed state, owing to their fermenting and also attracting and harbouring insects, which attack the seeds and young plants." Rape cake (*Abura kasu*) and Sesamum cake (*Goma kasu*) are also mentioned.

There are original analyses (p. 393) of 6 samples of "Soy [sauce] residues, *Shôyu kasu* Residue from the manufacture of *Shôyu* from beans and wheat." These vary over an extremely wide range. Nitrogen content ranges from 1.27% to 5.20%, and ash is 0.57% to 11.53%.

"Soy bean, sometimes called Japan pea, *Glycine hispida* (Moench) also known as *Soja hispida:* of this many varieties of different colour and size, etc. are met with, but as far as is known, they differ but little in composition. They are known collectively as *Daidzu* or *O-mame;* a common white round variety is known as *Miso-mame* and *Shiro-mame;* other names of varieties are *Awo-mame, Kuro-mame, Ki-mame, Ichiya-mame, Kurakake-mame* and *Korinza* (p. 398).

Note 1. This is the earliest English-language document seen (March 2008) which states clearly that the present scientific name of the Japan pea is *Glycine hispida* (Moench)–that is, the soybean. Actually, however, the correct scientific name since 1873 had been *Glycine hispida* (Maxim.)

"This bean approaches more nearly in its proximate chemical composition to animal food than any other vegetable known. It contains about one-fifth of its weight of fat and nearly two-fifths of nitrogenous matter. It is extensively cultivated in the north of China and also grows in the Himalayas. In China it is compressed for the sake of its oil, and the residual cake is used for food and also extensively as a manure. In Japan it is used in the preparation of *Shôyu, Tôfu, Miso* and also of *Yuba*, and in these various forms enters to a considerable extent into the food of the nation, to which it is a most valuable contribution, supplying as it does the alimentary principles–albuminoids and fat–in which the staple food, rice, is deficient: it also contains a much larger percentage of the necessary mineral matters than does rice. Of late years this bean has been grown experimentally in different parts of Germany, with success. The haulm and leaves which furnish a valuable fodder, and a variety is cultivated specially for that purpose and known as *Kari-mame*.

"The composition of a sample of the white round variety known as *Miso-mame* was found to be: Water 11.32%, ash 3.86%, fat 20.89%, albuminoids 37.75%, fibre 2.00%, starch etc. 24.08%. Total: 100%" (p. 398). Note 2. This and each of the following nutritional analyses appear to be original, not cited from earlier sources.

A table then contains an analysis of each of the following 4 products: Shiro-miso from Osaka, aka-miso from Osaka, to-fu [tofu], and kori to-fu [tofu]. The composition of aka-miso was found to be: Water 50.40%, ash 12.50% (incl. 11.00% common salt), sugar 0.61%, nitrogenous matter 10.08%, fibre 8.25%, soluble carbohydrates 18.16%. Total: 100%.

The composition of to-fu was found to be: Water 89.29%, ash 0.48%, fat 3.32%, nitrogenous matter 4.87%, fibre -, soluble carbohydrates 2.04%. Total: 100%.

The composition of kori to-fu was found to be: Water 18.75%, ash 1.60%, fat 28.80%, nitrogenous matter 48.80%, fibre -, soluble carbohydrates 2.05%. Total: 100%.

There follows a discussion (p. 398-400) of foods that can be made the soy bean (*miso, kôji, tôfu, kôri-dôfu*, and *shôyu* or soy), and a description of how each is made. "*Miso* is made by mixing the boiled beans with *Kôji* (rice ferment used in *sake* brewing) in various proportions, and with more or less salt, and keeping the mixture in tubs in a cool place for about a month. It will be noticed [from the table above]

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that one variety contains much sugar, derived from the *Kôji*, and little salt, and the other much salt and little sugar.

"*Tôfu* is made by pounding the soy beans after soaking in water, then straining through a sieve and boiling in water. The solution is filtered through cotton cloth and the residue pressed; the strained liquor, containing vegetable casein or legumin, is precipitated by brine. *Nigari*, formed by the deliquescence of common salt. The precipitate pressed and cut into cakes is *tôfu*."

Note 3. This is one of the earliest English-language documents seen (Jan. 2004) that uses the word "tofu." This is *the* earliest document seen (Jan. 2004) that uses the word "cakes" in connection with tofu.

Note 4. This is the earliest English-language document seen (Oct. 2008) that mentions "vegetable casein" in connection with soybeans or tofu, or that equates "vegetable casein" with "legumin" (the word Kinch used in 1979), the water soluble protein in soybeans that can be precipitated to make tofu.

"*Kôri-dôfu* is prepared from the above by freezing it and afterwards exposing to the sun, when, in the process of thawing, the greater quantity of the water is removed, leaving a horny spongy residue.

Note 5. This is the earliest English-language document seen (Feb. 2004) that mentions dried-frozen tofu, which it calls "kori to-fu" or *kôri-dôfu*. This is also the earliest document seen (May 2012) that uses the word "spongy" to describe the texture of dried-frozen tofu.

"An example of *shôyu* or soy was found to have a specific gravity of 1.199 and to contain per litre: Total solid residue 359.88 grms., ash 195.16 grms., sugar 31.03 grms., nitrogenous matters 41.00 grms., free acid, expressed as acetic acid 6.20 grms. The ash is chiefly common salt, but contains a quantity of phosphates derived from the mineral matter of the beans and kept in solution by the acetic acid formed."

"The [shoyu] mashings are removed to large vats and there kept for many months, usually twenty, and frequently for 3 or 5 years. The better qualities of *shoyu* are kept the longer times. It is found that the best soy is produced by mixing that kept for five years with that kept for three years. After it has been kept a sufficiently long time, it is strained through thick cotton bags and the residue pressed. Before filtering, honey is sometimes added in the proportion of 10 *kin* to 1 *koku* of *moromi* or crude soy, in order to give it a sweet taste. Occasionally a sweet sake, *ama-sake*, prepared by taking, 1 *koku* of *koji* to 7 *to* of water and 1 *to* of steamed rice, mixing them together and steaming for two hours is added instead of honey. The residue obtained on pressing *moromi* is usually again mixed with salt and water, and pressed; this yields an inferior *shoyu*. Sometimes water is added to this second residue and it is again pressed. The residue first obtained is sometimes used as food and the last residue as manure.

"The *Shoyu* after straining is allow[ed] to settle for two days in large tanks, then drawn off and filtered; before sale it is heated to incipient ebullition, otherwise it quickly goes bad.

"The quantity of nitrogenous matter in solution in *shoyu* appears to increase with the length of time elapsing before filtering the *moromi*."

Note 6. *Webster's Dictionary* defines ebullition as "the act, process, or state of boiling or bubbling up."

Also contains detailed information on and chemical composition of adzuki beans or *shôdzu* (*Phaseolus radiatus*), daikon, sea-weeds (incl. three types of Asakusa nori (*Porphyra vulgaris*), kobu (*Laminaria saccharina*) [konbu, which Thunberg and Kaempfer also discussed], wakame, arame or kokusai, awo-nori or ohashi-nori, hijiki, Irish moss or carrageen, tokoroten-gusa or agar agar, kanten or tokoroten, and funori), and sake.

At the end of the article is the summary of a discussion. Professor Atkinson made some remarks about shôyu. He said that Mr. Isono, a graduate of the University of Tôkiyô, had made analyses of *shôyu moromi* at various periods (after 3, 10, and 20 months), which are printed in full, together with an analysis of Kikkoman shoyu. "It was interesting to observe the disappearance of the glucose, and the gradual increase of the soluble nitrogen from the first sample to the last. The greatest change took place between the third and the tenth months, but, after the removal of the greater part of the glucose and dextrin, converted into alcohol and lost by evaporation, very little alteration occurred, except in the color of the liquid, which became darker."

Note 7. This is one of the earliest English-language documents seen (May 1999) that contains an accurate description of miso; it also contains very early information on the composition of different types of miso.

Note 8. This is the earliest English-language document seen (Dec. 2000) that uses the term "chemical composition" in connection with the soy bean.

Note 9. This is the earliest English-language document seen (Nov. 2003) that uses the term "sesamum cake" to refer to sesame cake.

Note 10. This is the 2nd earliest English-language document seen (April 2012) that uses the term "shôyu" to refer to soy sauce.

Note 11. This is the earliest English-language document seen (July 2001) that contains the word "fibre" in connection with soy beans. The fibre content of one variety of soy bean and one miso variety are given.

Note 12. This is the earliest English-language document seen (July 2003) that uses the Japanese word "Goma" to refer to "sesame."

Note 13. This is the earliest English-language document seen (Nov. 2005) that contains the term "cotton cake."

Note 14. This is the earliest English-language document seen (April 2012) that contains the word "Kikkoman."

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Note 15. This is the earliest English-language document seen (May 2012) that contains the term *shôyu kasu* (in italics, with diacritics) which it defines as "Residue from the manufacture of *Shôyu* from beans and wheat." Address: Prof. of Chemistry, Imperial College of Agriculture, Komaba, Tôkiyô.

1149. Paillieux, Auguste. 1880. Le soya, sa composition chimique, ses variétés, sa culture et ses usages: Le soja en France [The soybean, its chemical composition, varieties, culture, and uses: Soya in France (Document part)]. *Bulletin de la Societe d'Acclimatation* 27:561-76. Oct. [Fre]
• ***Summary:*** Page 561: "Historical–Buffon [Comte Georges-Louis Leclerc de Buffon, lived 1707-1778] became director of the *Jardin des Plantes* [Royal Garden, also called *Jardin du Roi*] in 1739. Shortly thereafter French [Catholic] missionaries in China sent him specimens and seeds of most of the important plants of that country. Soybeans or their seeds were almost certainly among their shipments, and without being able to prove it, we have no doubt on this subject. Be that as it may, we have recovered from the Museum [of Natural History] a sachet which, in 1779, contained soybean seeds. It bears the following dates of harvest: 1834, 1836 to 1841, 1843, 1844, 1846, 1847, 1849, and 1850 to 1855 inclusive. Then 1857 to 1859, 1862, 1865 to 1867, 1870, 1871, 1873, 1874, 1877.

"In fact, soybeans have been cultivated at the Museum very probably since 1740, certainly in 1779, and more recently from 1834 to 1880 without interruption. The plant has always germinated and borne fruit as desired, cultivated like haricot beans (French green beans), without any particular problems. It has proved its hardiness and the small influence which changes in atmospheric conditions have on it.

"Since 1855, the abundant distribution of soybean seeds ceaselessly by the Society for Acclimatization, has allowed soybean agronomic trials to be conducted throughout France. But it is difficult, if not impossible, to obtain information about trials made before 1855.

Mr. Blavet, president of the Horticultural Society of Etampes, has uncovered an interesting document in a brochure titled *Seance publique de la Societe d'Agriculture de l'arrondissement d'Etampes* (Public session of the Agricultural Society of Etampes), for the year 1832, page 84. One chapter bears the title "Report by Mr. C. Brun of Beaumes, member of the Agricultural Society of Etampes, chevalier of Saint-Louis, doctor on the faculty of sciences of France, of some agronomic trials conducted by him in 1821, on various species of cereal grains, on his property of Champ-Rond, near Etampes [Seine-et-Oise], France." A final note says: The heat of the summer of 1821 was so favorable to exotic plants that I saw the following plants bear fruit abundantly in my outdoor garden at Champ-Rond, near Etampes: the Dolichos of China (*le Dolichos de la Chine:* perhaps wistaria), the soybean (*Dolichos Soja*), and Dolichos Lablab (also called hyacinth bean). The Niouelle (?) of Senegal showed here for the first time its long pods (*épis*), etc." Note: This is the earliest document seen (April 2000) that describes the 1821 soybean experiment by Mr. C. Brun of Beaumes.

"The duty of the Museum, as a public-interest organization is to distribute seeds, either as a pure gift or as part of an exchange, to persons who request them. Undoubtedly, therefore, trials have been made at various early dates, but we have no record of them.

"Starting in 1855 a large number of participants received seeds from the *Société d'Acclimatation* and experimented with them. Most of these people did not report the results of their trials, as they were obliged to. Others, however, did, including Messrs. Vilmorin, Delisse, Lachaume, etc. But their cultivation did not lead to any progress, so the soybean was not established a permanent crop in France.

"In 1868 Mr. Chauvin, vice-president of the Society of Horticulture at Côte-d'Or [a department in eastern France], cultivated several soybean varieties there, and the culture has continued there to this day.

"In 1874 the Society of horticulture of Etampes received soybean seeds from the Society for Acclimatization, and began experiments that continued until 1880. One can find them mentioned in the Introduction to the Etampes livestock reports. Their cultivation is direct with great zeal by Mr. Blavet, president of the horticultural society of that area.

During the same period, one Dr. H... brought the best soybean varieties from Japan and cultivated them. He failed in this trial because his soybeans were late-maturing types. He then restricted himself to cultivating yellow soybeans from China. He encountered no more difficulties and he made *Sho* [perhaps shoyu, or Japanese-style soy sauce] by himself for use in his home.

"In 1878 we received seeds of two soybean varieties. One, from Japan, had white flowers and very pale yellow seeds with a greenish hue. The other, from China, was yellow and belonged to the *Houang-téou* ["yellow soybean"] series; they were among the seeds received from Mr. Montigny and other donors, and have been cultivated at the Museum, at Etampes, at Marseilles, and a little bit all over. (Footnote: These varieties look a little different on the outside, but their chemical composition, usage, and cultivation are the same).

"The seeds from Japan give us nice green foliage, but the plants do not mature their seeds. The Chinese variety succeeds in France as it does anywhere else."

In 1879 a yellow variety received directly from China matured well and was harvested at Marseilles. In 1880 Vilmorin-Andrieux & Company introduced into France one of the varieties tested by Haberlandt in Austria, which variety has proven well adapted to French conditions.

On pages 564-65 the author attempts a sober appraisal as to why a plant with such obvious merits, that has been

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known in France for over 140 years, is still virtually unknown. Established institutions such as the Museum of Natural History and the government had taken exasperatingly little interest in aiding the private efforts of the Society to introduce new plants. Chemical analyses, demonstrating the nutritional superiority of the soybean, had been lacking until about 1855, when Frémy [Fremy] confirmed that the soybean contained oil. Messrs. Champion and Lhôte have given an incomplete analysis [published in 1869]. But the classical books on agricultural chemistry, the works of our professors, which make known the chemical composition of the seeds of our typical legumes, omit information on the soybean. There was a general resistance, especially on the part of the establishment, to growing new crops and using new foods. And finally the basic approach of the Society in introducing soya first and foremost as a human food was questioned.

"Our point of departure has not been successful. Soya has been presented simply as a new legume. But it is more difficult to cook than other legumes. The flavor is good, but not superior. Fresh, it takes lots of time to shell. Dry, it requires pre-soaking for 24 hours in water that is not hard. If one is ignorant of its nutritive properties, there would be little incentive to grow it, and one would keep growing the traditional legumes instead.

"The people of Austria-Hungary have been wiser. Having already acquired incontestable proof of the value of soya for livestock fodder, they have no other objectives. They seem at the very least to have considered as secondary the utilization of soya for human nutrition. Therefore as soon as they had enough seed, they cultivated large areas, while we were still cultivating the furrows between the rows in the kitchen garden for use as food.

"The seeds will soon be found in all the good markets of southern Germany. The small farmer will then find them (soybeans) all around him at low prices. In eating them, he will find himself strengthened. Then he, in turn, will plant them himself."

Page 567 continues: "We tried to introduce soya as a food plant for the garden rather than as a fodder and oilseed. We started where we should have finished. If we persist in this direction we shall fail. Soya will fall back into oblivion, while in southern Germany, the Danube provinces, central Russia, and Italy, it will soon be widely grown and serve as a source of riches."

Note: This document contains the earliest date seen for soybeans in France, or the cultivation of soybeans in France (very probably in 1740, certainly in 1779). The source of these soybeans was French missionaries in China. Address: France.

1150. Paillieux, Auguste. 1880. Le soya, sa composition chimique, ses variétés, sa culture et ses usages: Appendice [The soybean, its chemical composition, varieties, culture, and uses: Appendix (Document part)]. *Bulletin de la Societe d'Acclimatation* 27:579-96. Oct. [Fre]

• ***Summary:*** The first appendix contains summaries of letters to the Society describing 27 agronomic trials with soybeans (*Culture expérimentale de Soja or Soya*) conducted during 1880 (using soybean seeds distributed by the Society) at various locations in France, Switzerland, and Algeria. (Note: Though the publication date of this appendix is given as Oct. 1880, some of the letters are dated as late as 21 Nov. 1880). These letters were received from the following people:

1. Charles Coffin, jardinier en chef au château de Brunehaut, near Etampes (Seine-et-Oise)–18 Sept. 1880. 2-3. Oliver Lecq, at Templeuve (Nord)–20 Oct. 1880 and 30 Oct. 1880. 4. M. Boursier, at Chevrières (Oise)–3 Nov. 1880. 5. M.C.T. at Arras (Pas-de-Calais) 12 Nov. 1880. 6. M.D. at Genlis (Côte-d'Or)–12 Nov. 1880. 7. M.J.S. at Sautin, near Péronne (Somme)–14 Nov. 1880. 8. M.G. at Juvigné (Mayenne)–14 Nov. 1880. 9. M.D. at Saint Lager (Rhône)–14 Nov. 1880. 10. M.L. at Fresnoy, near Hesdin (Pas-de-Calais)–15 Nov. 1880. 11. M.D. at Presles-et-Thierny, near Laon (Aisne)–15 Nov. 1880. 12. M.H. at Montpellier (Hérault)–15 Nov. 1880. 13. M.B. at Andenas, commune d'Alluy, near Chatillon-en-Bazois (Nièvre)–16 Nov. 1880. 14. M.P. at Muides, near Mer (Loir-et-Cher [a department in north-central France])–16 Nov. 1880. 15. M.R. at château de Minillet, near Bornel (Oise)–16 Nov. 1880. 16. M.C. at Montgarny (Meuse)–16 Nov. 1880. 17. M.B. at la Chaise, near Barbezieux (Charente)–17 Nov. 1880. 18. M. de S. at Saint-Sulpice-sur-Lèze, near Noé (Haute-Garonne)–16 Nov. 1880. 19. M.B. at Saint-Riquier, near Abbeville (Somme)–18 Nov. 1880. 20. M.D. at Courtivron (Côte-d'Or)–18 Nov. 1880. 21. M.P. at Merville (Haute-Garonne)–19 Nov. 1880. 22. M. de docteur Hénon at Cornières, near Annemasse (Haute-Savoie)–18 Nov. 1880. 23. M.A. Sicard, vice-président de la Société d'horticulture de Marseille (Bouches-du-Rhône)–19 Nov. 1880. 24. M. le docteur Bertherand at Alger [Algiers, Algeria]–19 Nov. 1880. 25. M.L. at Monségur (Gironde)–21 Nov. 1880. 26. M. le docteur Coutaret at Roanne (Loire)–20 Nov. 1880. 27. M.G. at Donneloye (Switzerland {in Canton Vaud, Bezirk Yverdun, southwest Switzerland})–18 Nov. 1880.

Note 1. The report from Dr. Bertherand from Algiers, dated 19 Nov. 1880, reads: "The breeding nursery (*jardin d'essais*) cultivated soybeans (Soya; *Glycine hispida*) many years ago. Soya does rather well here, but its seeds are hard and remain tough. It is possible that it will not be able to compete in the diet with the common haricot for a long time." Note: This is the earliest document seen (Aug. 2009) concerning soybeans in Algeria, or the cultivation of soybeans in Algeria. This document contains the earliest date seen for soybeans in Algeria, or the cultivation of soybeans in Algeria (many years before 19 Nov. 1880; perhaps before 1860 when M. de Montigny is said to have introduced the soybean to Algeria (see Eprémesnil 1860)).

The appendix section ends with: (1) Reprint of a 2-page

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letter from Eugene Simon, former French consul in China, on soybean farming in China (p. 591-93); (2) Reprint of a description by Eugene Simon, based on the description of a Chinese, of how tofu is made in China (p. 593-94); (3) A French translation of a 1781 article by Isaac Titsingh [Titsing] on the preparation of soy sauce in Indonesia (p. 594-95); and (4) Some information about soybeans from the ancient Chinese herbal *Pên Ts'ao Kang Mu* (p. 595). Address: France.

1151. Mene, Édouard. 1880. Des productions végétales du Japon [The vegetable products of Japan]. *Bulletin de la Societe d'Acclimatation* 27:644-66. Nov. [3 soy ref. Fre]
• ***Summary:*** This is part of a longer article, published in several issues, which is an excellent review of earlier publications and work. This part begins with a section on legumes. Among the legumes discussed are *Vicia Faba* (*sora mame, otafuku mame, okakura mame*), *Dolichos unguiculatus* (*sasaghe* [*sasage*, present name: *Vigna unguiculata* (*L.*) *Walp. subsp. unguiculata*], incl. *Jin-roku Sasaghe, Yuhuté Sasaghe, Heritori-yu- roku-Sasaghe*), *Canavalia* (*nata-mame* = *C. incurva* [*sword bean*], *shiro-nata mame* = *C. lineata*), *Haricot* (*Phaseolus vulgaris*, incl. *Ingen mame* and azuki {*Phaseolus radiatus* var. *subtrilobata*}), sesame, etc. The author saw samples on display at the Japanese Ministry of Agriculture and at the Exposition at Champ-de-Mars in France.

"Soy sauce (*Le Shoyu*) (p. 648-49): This condiment, so appreciated by the Japanese, had samples displayed is the class of fermented beverages. It is often made with wheat flour and beans (*haricots*), but more often with boiled soybeans (*pois*).

"Chinese *Soye* or *Soya* (*Le Soye ou Soya chinois*) is the same condiment, but more especially made with red beans (*haricots rouges*). Note: Clearly the author did not realize that soy sauce is made from soybeans (not from haricot beans or peas, nor from azuki beans).

Note: This is the earliest French-language document seen (April 2012) that uses the words *Le Soye* or *Soya Chinois* to refer to soy sauce.

"In Canton, it is made in the following way: the red beans are cooked in water for one hour; thrown in a sieve and drained; next the beans are sprinkled with wheat flour and carefully spread out on a wood plank that is put in a warm and humid place that favors the development of considerable mold; after four or five days the mold is taken off and the beans, after having been dried in the sun for 24 or 48 hours, are washed in cold water; salt and water are added, and the mixture is exposed to the sun for two weeks. It is then boiled for half an hour, adding for flavor a bit of star anise, regular anise, and orange peel; the mixture is then filtered through a basket and finally bottled as *Soya.*"

There follows a short section titled "Peas" (*Pois, Pisum sativum*), including *Endo mame*. Next comes a detailed but somewhat confused discussion of soybeans (*Pois oléagineux, Soja hispida*) and a listing (often repetitive) of many different types and colors, as follows (p. 649-50): "There was also a variety of soybeans (*Pois oléagineux, Soja hispida*), an early soybean (*mamé*), one with large hanging pods covered with red hairs, and one with large, yellowish-white seeds.

"The principal varieties of *Soja* and *Soja hispida* indicated in the watercolors of the Tokyo Bureau of agriculture were: 1. *Soja* with white flowers, a yellowish-white bean of medium size with white pods. 2. Early green *Soja*, a large yellowish-white bean with large pods covered with red hairs. 3. *Soja blanc*, with large yellowish-white seeds. 4. *Grand Soja blanc*, a large, yellowish-white bean with rather long greenish pods. 5. Green *Soja*, a yellowish-white bean of medium size with little green pods and the stem scattered with brown hairs. 6. *Kinoshita-mame*, a small yellow bean with little hairy pods. 7. Red *Soja*, a red bean of medium size with green, velvety leaves and red flowers. 8. Black *Soja*, a black medium-sized bean. 9. *Kouro-hiro mame*, a large black oval bean [*kouro* = *kuro* = black]. There are also varieties called: 10. *Awo-mame*, a large, greenish-white bean [*awo* = *ao* = green]. 11. *Shiro-mame, Kuro-mame, Kuro-kake mame, Kinname* (*Glycine soja*), *Kouringa, and Ichia-mame.*

"In the collection of beans at the Exposition of Champ de Mars the following soybeans were found: 12. *Daizu* (*Soja hispida*), a round yellowish bean of medium size. 13. *Shiro-daizu*, a large yellowish bean [*shiro* = white]. 14. *Oshiro-daizu*, a very large yellowish bean, twice the size of *Shiro-daizu*. 15. *Akayendo*, a medium-sized yellowish bean. 16. *Awo-mame*, a large, greenish-white bean (variety of *Glycine*). 17. *Aokuro-daizu*, a large greenish bean speckled with black. 18. *Thya-iro-mame*, a large, reddish-brown bean (variety of *Glycine*) [*Thya-iro* = *cha-iro* = brown]. 19. *Shiro-mame*, a white bean speckled with grey (variety of *Glycine*). 20. *Aka-daizu*, a large red bean [*aka* = red]... 21. *Kouro-daizu*, a large black bean."

Near the end of this subsection we read (p. 651): "In China, an oil is extracted (*on extrait*) from soybeans (*pois oléagineux*, literally 'oil peas'); it is used for both cooking and illumination. The green or black peas are often used to color rice wine. Mixed with beans (*haricots*) and wheat, they form the base for the manufacture of soy sauce and of tofu (this latter condiment is composed of two species of boiled beans). With soybean seeds (*Avec les graines de Soja*) the Japanese also prepare a sort of pap (*bouillie*) which for them takes the place of butter and which they call *Miso*. The leaves and branches of the soybean serve to nourish goats and sheep." Address: France.

1152. Jevne (C.). 1880. Holiday goods: Bill of fare for ye joyful festivity of ye Xmas '80 (Ad). *Chicago Daily Tribune*, Dec. 5, p. 5, col. 2.
• ***Summary:*** "Pickles, Cross & Blackwell's,... Catsups,

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"Sauces: Worcestershire, Halford, Royal Sultana, John Bull, Chili, India Soy [sauce], Tabasco, Soho, Athenæm, Chutney... Essence of Anchovies, Harvey's Fish Sauce, Reading Sauce, Salad Cream, Salad Dressing, Curry Powders." Address: 110 & 112 Madison-st.

1153. Bishop, Isabella Lucy (Bird). 1880. Unbeaten tracks in Japan: An account of travels on horseback in the interior, including visits to the aborigines of Yezo [Hokkaido] and the shrines of Nikkô and Isé, by Isabella L. Bird. 2 vols. New York, NY: G.P. Putnam's Sons. See vol. I, p. 232, 237-38.
• ***Summary:*** The section titled "Notes on food and cookery" (p. 232-40) states: "Some fish are fried in the oil of the *Sesamum Orientale*, which produces an odour which makes one fly from its proximity. Eels and other dainties are served with soy (*shô-yu*), the great Japanese sauce, of a dark brown colour, made from fermented wheat and beans with salt and vinegar [sic], and with a dash of *saké* added to give it a higher flavour" (p. 232).

Buddhist teachings on the sacredness of life have, in some parts of Japan, been effaced by contact with foreigners. There some people eat wild birds and fowl. "Seaweed is a common article of diet and is dried and carried everywhere into the interior. I have scarcely seen a coolie make a meal of which it was not a part, either boiled, fried, pickled, raw, or in soup" (p. 234). *Brinjal* or egg-plant are among the many vegetables pickled. Confections consist of sugar-coated [azuki] beans, and *yokan*–made from seaweed. Mochi is a small round cake of unbaked rice dough.

"The common people are also fond of 'a pot-boil of birds' in which a little soy and *mirinshu* are added to the water" (p. 237).

"The chief kinds of soup used by the middle classes are bean soup [miso soup], egg soup, and clear soup. The latter is of two kinds, one water and salt, the other water and soy" [sauce]. Among the lower classes there are many kinds, most of which taste like dirty water with a pinch of salt, and contain cubes of bean curd, strips of dried fish, cuttlefish, etc... Carp is used with bean soup only..." (p. 237-38).

Note: This is the earliest English-language document seen (July 2011) that uses the term "bean soup" to refer to miso soup.

In formal entertainments, the highest of the three classes is *san no zen* in which three small tables of eatables are provided to each guest. The first table includes rice, and "bean soup with carp." Each table contains from 8 to 12 bowls or dishes (p. 238).

Note 2. The author, Mr. J.F. Bishop, lived 1831-1904. Note 3. Yezo (also spelled Yezzo, Yeso) refers to Hokkaido, Japan's northernmost main island. Address: Author [England].

1154. Gray, John Henry (Mrs.). 1880. Fourteen months in Canton. London: Macmillan and Co. xiii + 444 p. Illust. No index.
• ***Summary:*** Dedication: "To my husband, John Henry Gray, M.A., LL.D., Archdeacon (late of Hong Kong), whose long residence of Canton, and intimate acquaintance with its inhabitants, enabled me to see and learn so much of their manners and customs."

This book is composed of letters written to the author's mother and friends. The Introduction describes how she left Liverpool on 13 Jan. 1877, arrived in New York, traveled across the USA to San Francisco, embarked on the *S.S. Belgie* for Hong Kong via Yokohama and Tokio, Japan. She stayed in Canton from April 1877 to June 1878, in close contact with the people–especially upper-class ladies.

At a feast, with her husband, in a large hall (p. 83-84): "Immediately in front of each of us were four very small plates containing pepper, salt, soy [sauce], and sugar. Chopsticks, a porcelain spoon with a large bowl and a very short handle, a tiny porcelain wine cup, and a little two-pronged fork were placed before each guest."

Page 86: "Do you remember that Henry said he was determined that I should eat dog, cat, and rat very soon after my arrival in China?" She describes how (unwillingly) she ate a little piece of dog's flesh at one restaurant; she could not bear to touch the other two dishes. A Chinese friend also ate them "and said he did not find them disagreeable" (p. 87).

At another banquet (p. 88-89), many tiny dishes were placed in the centre of the table, including: "Minute plate with soy in it." The many dishes served included: "10. Turtle soup... 11. Hashed dog. 12. Stewed black cat. 13. Fried rat. 14. Maccaroni [Macaroni] soup."

The Grays received an invitation to a luncheon with the Howqua family. Mrs. Gray, who was not feeling well, gives a detailed description of the meal: "Mrs. Howqua rose from her chair, dipped a piece of duck, at least two inches square, which she held in her chopsticks, into the little basins containing soy and mustard, and put the whole as a *bonne bouche* into my mouth" (p. 200).

1155. Special catalogue of the Ningpo collection of exhibits for the international fishery exhibition, Berlin, 1880. Preceded by a description of the fisheries of Ningpo and the Chusan Archipelago. 1880. Shanghai, China: Statistical Dept. 132 p.
• ***Summary:*** In the section titled "International Fishery Exhibition, Berlin, 1880," is a subsection (p. 3) on the "Food" of Ningpo: "The great staple of the food of the fishing population consists of rice, generally the glutinous kind called *Ngo mi*, and fish... The condiments are the black sauce called 'soy,' or a red one made from shrimps pounded in salt water. Salt is largely used, as well as a kind of cheese made from beancurd, and called *toufu*."

Note: This section is translated into German (p. 94) under *Nahrungsmittel;* the words *Soya* and *Tou fu* are used.

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Another subsection (p. 15-16) on "River fishing" with cormorants in Ningpo (on the Ningpo river), China. Under "Feeding" we read: "The young birds are at first fed with a mixture, in equal parts, of beancurd and raw eel's flesh cut fine... At the end of a month the down begins to be covered by the larger feathers, and the quantity of fish-flesh fed to them is increased, while that of beancurd is reduced. A second month elapses, and the young birds, having grown to double their original size, are fit for the market; a male fetches $1 or $2, and a female half as much."

"After fishing two or three hours the birds are allowed to come on board and rest. At the end of the day the hempen ring is loosened or removed altogether, and they are either allowed to fish for themselves, or are fed by the hand of their master. Seizing the birds one after another by the upper mandible, the fisherman thrusts into their throats a handful of small fish and a ball of beancurd, as large as his fist, the ingurgitation of which he helps with the other hand by stroking the neck of the bird, who seems to enjoy it, as he promptly returns for a second supply. The entire scene is most ludicrous."

1156. Walker, Francis A. ed. 1880. International Exhibition, 1876 [at Philadelphia]. 10 vols. Washington, DC: Government Printing Office. 24 cm. No index.
• ***Summary:*** This, the sixth international exhibition and the first held outside of Europe, also celebrated the 100th anniversary of America independence. Unfortunately the many volumes covering this exhibition are extremely poorly organized and difficult to use. They contain no indexes, either for the entire set or for each volume. The table of contents of each volume does not match the actual contents of that volume. Since there seems to be no logical sequence, one must look page by page.

In Vol. I (p. 600), the section on "Animal and vegetable products (used as food or as materials)" includes: Class 650–Sponges, sea weed. Class 655–As musk, civet, ambergris. Class 656–Preserved meats, vegetables, and fruits. Dried, or in cans or jars. Meat and vegetable extracts. Class 662–Vegetable oils.

The next section, "Textile substances of vegetable or animal origin" (p. 600) includes hemp, flax, jute, ramie, and silk. Note: This is the earliest English-language document seen (June 2002) that uses the term "animal origin."

In Vol. IV, Groups III-VII (1880), is a section titled "Group IV. Animal and vegetable products, and the machinery for their preparation" (p. 2) by Ryland T. Brown. In Group IV, under "Reports on Awards" (p. 94-95) we read: "487. Lea & Perrins, Worcestershire, England. Worcestershire sauce. Report.–Commended for the following reasons: 1. Excellent taste. 2. Very carefully prepared." "496. Naga-oka Zenpachim Tokio, Japan. Sauces. Report.–The Shoyu sauce, to be used with meat and fish for the purpose of flavoring gravies and soups, is excellent; the preparation is most careful, and it recommends itself strongly for its purity and flavor."

The 11th volume (bound in 2 volumes) in the series of reports on the International Exhibition of 1876 is titled "Report of the Board on behalf of United States Executive Departments at the International Exhibition, held at Philadelphia, Pennsylvania, 1876." For more details, see the Official Catalog of the British Section in the exhibition. Address: Chief of the Bureau of Awards.

1157. Watt, Alexander. 1880. Electro-metallurgy: Practically treated. 7th ed., enlarged and revised. London: Crosby Lockwood and Co. x + 236 p. See p. 176. Illust. Index. 18 cm. Series: Weale's Rudimentary Series.
• ***Summary:*** The chapter titled "Test for gold" states (p. 176): "85. As lead edges or mounts of cruet-frames, candlesticks, soy-frames, and similar plated goods are very troublesome to electro-plate, except in the hands of a very experienced person, it is frequently advantageous to adopt a plan commonly pursued, namely, to have the edges cast in brass or German silver, the old edges or mounts removed, and the newly-cast edges soldered upon the article." Address: F.R.S.S.A., Lecturer on electro-metallurgy, etc. [England].

1158. Nanrido Eiraku. 1880? Nenjuban saisen: Shirôto ryôri. Sassoku hôchô [Year-round recipes: Speedy cooking for amateurs]. Publisher unknown. Undated. Japanese summary by Kawakami 1978. [Jap]
• ***Summary:*** Written in the Kyoto-Osaka area of western Japan some time during the 1800s, this book quoted the *Tofu Hyakuchin*. It lists daily home recipes, including tofu recipes and some using shoyu. Kirazu, the early term for okara, is mentioned. The recipes are listed according to the season in which they are best prepared.

1159. Wein, Ernst. 1881. Die Sojabohne als Feldfrucht [The soybean as a crop]. *Journal fuer Landwirtschaft* 29:563-613. Supplement (*Ergänzungsheft*). A 50-page supplement at the end of volume 29. Apparently also published as a monograph in 1887 in Berlin. [7 ref. Ger]
• ***Summary:*** This work, which draws heavily on the research of Prof. Friedrich Haberlandt, contains practical instructions for the farmer who wants to grow soybeans and offers a compilation of current research findings.

Contents: 1. Characteristics of the soybean (*Soja*) and its varieties (p. 3-5). 2. General suggestions for the cultivation, growth, care, harvest etc. of the soybeans (*Sojabohnen*) (p. 5-9). Tables show (for yellow soybeans): Emergence of 100 soybeans at various dates in May and June based on depth of planting (p. 7). Depth of planting, weight of the seeds of 100 plants, weight of the straw of 100 plants, and weight of 100 seeds (p. 7).

3. Chemical composition of the soybean plant. Tables give the composition, including maximum and minimum

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values, of the following varieties, based in part on earlier published sources: (1) Soja hispida tumida, Var. pallida, yellow soybean (16 sources). (2) Soja hispida tumida, Var. castanea, brown soybean (8 sources). (3) Soja hispida tumida, Var. atrosperma, black round soybean (2 sources). (4) Soja hispida platycarpa, Var. melanosperma, black oblong soybean (2 sources). Also: (5) Composition of five legumes: peas, beans, lupine, yellow soybean, brown soybean. (6) Composition of straw (5 sources, incl. Schwachöfer of Vienna, Caplan of Vienna, Weiske of Proskau). (7) Composition of soybean hulls (*Hülsen*) (4 sources). (8) Comparison of the composition of soybean hulls and straw with the composition of wheat hay, pea straw, bean straw, and lupine straw based on data from E. Wolff's tables. (9) Composition of the ash of soybean straw based on data from Schwachöfer of Vienna.

4. What yields can be expected from the soybean and which varieties (yellow, brown, or black) are suited to cultivation? Weight of 100 seeds (those planted and those harvested): Soja pallida (15.37 gm / 16.39 gm). Soja castanea (13.81 gm / 13.78 gm). Soja atrosperma (12.26 gm / 11.44 gm). Soja melanosperma (9.19 gm / 7.93 gm). 5. How do soybean yields compare with those of other legumes? 6. What fixed position or rank does the soybean claim in the achievement of maximum yield, and how does one obtain the best seedstock (as for next year's planting). 7. Soil and manuring (*Düngung*, including fertilizer trials with Chili saltpetre / saltpeter [nitrate of soda or sodium nitrate from Chile] {*Chilisalpeter*} and sulphate of ammonia / ammonium sulfate {*schwefelsaures Ammoniak*}). 8. Animals and parasites that harm the soybean. Note: Regular saltpeter is potassium nitrate. 9. Is the cultivation of soybeans in Germany to be recommended? 10. Utilization of soya. 11. Summary of the main results and closing words.

Soya is a superior fodder material. Haberlandt organized field trials in all parts of the Austro-Hungarian empire and many surrounding countries. It should be noted that the introduction of this fodder plant to Germany, primarily in Bavaria, was undertaken by Professors Braungart in Weihenstephan and Lehmann in Munich. Unfortunately, there was bad weather during the early years of attempted introduction.

Concerning harvesting: If you can pull out the plants easily by hand, which is possible when the soil is soft, this is the best way to harvest them. If that is not possible, you can take them out with instruments / tools (*Instrumenten*), which enable you to cut the plants close to the ground, since soybeans have very low pods (*Früchte*)–7-9 cm above the ground. For this reason you should not use mowing machines (*Mähmaschinen*), based on the experience they have had in Hungarian-Altenburg with large-scale cultivation.

The author gives original analyses of the nutritional composition of various soybeans, including oblong black soybeans grown in Munich, Germany, and at the Agronomic Institute in Paris, France.

Section headings include: Is the soybean recommended for cultivation in Germany? Use of the soybean. Miso paste and a brew, the sooju. Preparation of shoyu taken from Haberlandt.

Professor Hecke of Vienna gave the following recipe for the preparation of a puree: Take 1 part soy meal [probably whole soy flour] or soyaschrot and 2 parts fresh potatoes. Cook each separately, then mix to form stiff paste. Add salt and braised (*geschmorte*) onions. The addition of fat and milk is unnecessary since the soybeans contain lots of fat and protein. This dish tastes excellent, like Hecke said (Wein 1881). Franz Mark of Budapest proposed the use of soybean as a coffee substitute. Blaskovics was a soy bean pioneer in Europe (Wein 1888).

Note 1. This material was also published as a book in 1881 by Verlag Paul Parey in Berlin. Ted Hymowitz got a copy from Prof. Dietrich Werner, a German interested in soybean history.

Note 2. The author uses two words, *Soja* and *Sojabohne*, to refer to the soybean. Address: Munich, Germany.

1160. Smith & Dewar. 1881. Sales of household furniture: Saturday, 5th March at one, within 79 George St., entirely without reserve. *Scotsman* (*Edinburgh*). Feb. 26. p. 12.
• ***Summary:*** "Important cellar of high-class bottled wines, champagnes, brandies, whiskies, and liqueurs (the Property of an Edinburgh Gentleman,...) and consisting of over seven hundred dozens."

"Miscellaneous.–Sauterne by Schroder & Schyler, Old Marsala [wine, from around the city of Marsala, Sicily], Old Wedderburn Rum, Old Dry Muscatel in Antique German Flasks, Five Cases Finest Chinese Ginger, Six Jars Chow Chow [a relish made of different vegetables that are pickled in a jar and served cold], Genuine Japan Soy [sauce] from Jeddo [Edo, today's Tokyo]: Quarter Cask Brandy... Cigars.–Two Cases Manila Cheroots and Cigars, 1877."

Note: In legal contracts, the term "without reserve" is frequently used in conditions of sale at public auction, that the property to be offered for sale, will be sold without reserve (i.e., no matter how low the best price offered). Address: Auctioneers & Valuators, 79 George St., Edinburgh [Scotland].

1161. Organov, N. 1881. Soia ili maslichnyi gorokh (Soja hispida *) [Soybean or oil-bearing plant (Soja hispida *)]. *Trudy Imperatorskago Vol'nago Ekonomicheskago Obshchestva, St. Petersburg* (*Transactions of the Imperial Free Economic Society*) 1(2):184-198. Feb. [3 ref. Rus]
• ***Summary:*** The asterisk in the title refers to a footnote (p. 184) which states: Some call this plant "Chinese beans": in Austria they call them "Haberlandt's beans." Haberlandt is responsible for the successful cultivation of such useful soybeans in Germany. Thanks to Haberlandt, soybeans also

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became known in Russia. In 1877, Haberlandt sent about 50 soybeans to I.G. Podoba; from these soybeans we have already (1881) obtained 15 pounds of soybeans. This article is based on a brochure by Haberlandt [his superb book, *Die Sojabohne*, 1878], plus the scarce information from the Russian agricultural literature.

The origin of the soybean is in Asia (India, China, Japan, Mongolia). Large quantities of numerous varieties are cultivated there. Soybeans are also grown in the Caucasus, Tunisia, and Algeria, as well as in southern and central Europe. Many attempts have been made to cultivate soybeans in Europe, but more were unsuccessful. Attempts were made in: Hohenheim [Germany]–unsuccessful. Bamberg [southern Germany], by Dr. A. Rauch, who obtained the seeds from their native country–unsuccessful. Germany, by Carl Berndt, using seeds from Shanghai–unsuccessful. France, where soybeans are more commonly known as *pois oleagineux*. 1872–During the Franco-Prussian War [1870-1872, France lost], Sergeant Otto Wehrman found soybeans in the botanical garden of Montigny near Metz and brought them to Germany, where in 1875 attempts to cultivate them were again made.

In 1877 Prof. Haberlandt (Austria) cultivated soybeans received from Capodistria in Istrien [Istria or Istrian Peninsula; as of 2003 divided between Croatia and, at its base, Slovenia]. In Istria, soybeans were used to make coffee. They were also cultivated in Dalmatia [as of 2003 largely in Croatia] and southern Italy.

Such methods of cultivation resembled experimental gardening of horticultural and hothouse plants rather than scientific research on the acclimatization and growing capabilities of soybean plants.

The soybean plant has been well known and well documented by botanists and travelers since the last [18th] century. Kaempfer called the soybean *Daidzu* or *Mame*. Linnaeus called it *Glycine soja*, Jacquin–*Dolichos soja*, Dr. von Siebold and Zuccarini *Soja Japonica*, Sav. and *Soja hispida*, Mönch. Each name represents a different variety of soybeans [sic].

A footnote (p. 181) states: The famous essay by Kaempfer, titled *Amoenitatum exoticarum politico-physico-medicarum*, describes his travels in Persia and Central Asia in 1712. The essay includes descriptions and uses of soybeans in Japan, China, India, and other places.

Knowledge of and interest in soybeans in Europe expanded during and after the 1873 Vienna World Exhibition. Twenty varieties of soybeans were obtained by Haberlandt, who planted them in 1875 in the Vienna Botanical Garden.

A description of Haberlandt's studies (p. 186) includes favorable growing conditions, a description of planting, and identification of different soybean varieties. In 1876, there were only 7 interested people or organizations who wanted to continue Haberlandt's research on soybean cultivation. However by 1877 Haberlandt's successful results interested more people (up to 160). These people received samples of soybeans from Haberlandt and reported their results back to him. Footnote (p. 187): The results of Haberlandt's experiments and those of the colleagues to whom he sent samples were published in the 1878 brochure [sic, book] *Die Sojabohne: Ergebnisse der...*

Describes the physical appearance of soybeans.

Page 188 proposes uses for the soybean in Europe, as food for people, feed for livestock, soybean oil, coffee, and soy sauce. Quotations from Oken (p. 189-90) discuss various uses of soybeans, including a description Miso (a substitute for butter) and Shoyu (a sauce added to fried meat), and how each is made. In China, soybeans are used to prepare a soft cheese or cottage cheese (tofu). A footnote (p. 188) is a reference to a book: Oken. 1841. *Allgemeine Naturgeschichte für aller Staende*. Vol. 3, p. 1661. Page 190 continues with comments on the great nutritional value of soybeans when used as food. A quotation from Dr. F. Leithner [of Krems, lower Austria, on the Danube River, 38 miles west-northwest of Vienna] describes his positive experiences in preparing soybeans as dinner for his guests. Prof. W. Hecke recommended that soybeans be combined with potatoes to make a kind of porridge. A quotation from Dr. Eduard Mach [of St. Michele, South Tirol] describes the taste of soybeans. Other food uses of soybeans proposed by Haberlandt: a substitute for peas in pea sausages, chocolate substitute.

Three tables (p. 191) show the nutritional value / chemical composition of soybeans. (1) The first analysis of the composition of soybeans (soybean seeds) in Germany was conducted by Senff, who obtained the seeds from Japan [from Mr. Berndt]. Their average chemical composition is given. (2) Mr. A. Tomaszek / Tomasek [in Napagedl in Mähren / Moravia, a region in today's Czech Republic] gives the following composition percentages for two types of soybeans from China, grown by him in 1876: yellow (column 1) and dark red (col. 2). (3) Further analysis by Tomaszek / Tomasek shows extremely high concentrations of fat and nitrogen [protein] for the two types of soybeans shown in table (2).

Three more tables (p. 192) give a more detailed analysis, by the Technical Laboratory in Vienna, of three soybean varieties: yellow (from Mongolia), yellow (from China), and dark red (from China). There are three columns: Original soybean sample, soybeans grown the first year, and soybeans grown the second year. For each variety, data are given for water, protein, fat, nitrogen-free extract, crude fiber, and ash.

A table (top of p. 193) shows the chemical composition of seven types of legumes: Peas, lentils, wild beans, yellow lupins, haricot beans, broad beans [Vicia faba], Chinese beans (soya), and soya beans. For each legume, data are given for water, protein, fat, nitrogen-free extract, crude fiber, and ash. The data for the first five legumes come from

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Emil T. Wolff. The data for the broad beans and Chinese beans (soya) come from J. Kuehn / Kühn. The data for the soya beans come from Zulkowski.

A quotation from Carl Berdt includes details on soybean composition, and discussion of the uses of soybean oil (including in bread). A table (p. 193-94), based on the research of Prof. Völker [Voelcker, of London] gives the percentage composition of dried soybean oil-cake (Chinese oilbean cake). A table (2 columns) by Caplan (p. 194) gives the chemical composition of soybean pods, and of the leaves and stems. Another table (p. 194-95) gives an analysis by Zulkowski of the composition soybean straw and chaff dried at two temperatures: air-dried, and dried at 100°C. A table (p. 196) shows the mineral composition of soybeans.

Pages 197-98 summarize: (1) Cultural trials and harvest information by Attems with Mongolian yellow and Chinese brownish-red soybeans. He was satisfied with the results and sees a future for soybeans. (2) Harvest results of Tomaszek. (3) Harvest results of Prof. Kulisz. Continued.

Note 1. This is the second earliest Russian-language document seen (Nov. 2002) concerning the soybean.

Note 2. This is the earliest Russian-language document seen (Sept. 2006) that mentions soy oil.

Alternate Journal Name entry: Trudy Vol'nogo-Ekonomicheskogo Obshchestva (Scholarly Works of the Free Economical Society).

1162. *New York Times*. 1881. Hints for the household: A chapter upon crabs and lobsters. March 6. p. 9.
• ***Summary:*** "The crab may be served cold in his shell... or he may come to the table mixed with an equal portion of grated cocoa-nut, a saltspoonful of curry powder, a little salt, and a dash of walnut or Worcestershire sauce. The chief dish of the feast shall be a bisque of crab."

1163. *New York Times*. 1881. Healthful–Palatable. March 31. p. 4.
• ***Summary:*** "The chief pleasure of life is the enjoyment of good health, which is largely promoted by wholesome and appetizing food... A legion of articles are presented to the public for flavoring, many of which are deleterious to health and offensive to taste, but the popular Lea & Perrins' Worcestershire Sauce is approved by all. On meats, game, fish and in soups, gravies, etc., it is indispensable. Half a century's test [i.e. since 1831] in the different countries of the world pronounce it the best sauce extant."

1164. Atkinson, R.W. 1881. On the diastase of koji. *Proceedings of the Royal Society of London* 32:299-332. Read by Prof. A.W. Williamson on 10 March 1881. [6 ref]
• ***Summary:*** Contents: Summary. Section I. Preparation of the kôji. II. Action of water on kôji. III. Action of kôji extract upon some carbohydrates: Cane sugar, maltose, dextrin, gelatinised starch. IV. Changes which the rice grain undergoes by the growth of the fungus: Preparation of the kôji, action of water on kôji, change which the rice grain undergoes by the growth of the fungus.

"I feel that some apology is needed for using the Japanese word *kôji*, but as there is no foreign product in any way resembling it, I have thought that there would be less danger of confusion arising by retaining the Japanese word than by using the word 'malt.' As will be seen from the following description, the nature of this substance is quite different from that of malt, so that the use of that word might lead to erroneous impressions."

Extract of *kôji* causes the inversion of cane-sugar. It also effects the hydration to dextrose of maltose and dextrin. Curve A. Extract of *kôji* breaks up the starch molecule into maltose and dextrin; the maltose is quickly hydrated, and the products after some time are dextrin and dextrose" (p. 299).

The substance which the Japanese call *kôji* is widely used as a fermenting agent in Japan, "but it is something differing from such a body as 'barm or yeast,' by which Dr. Hepburn translates *kôji* in his invaluable dictionary. Its principal use is in the production of *saké*, the alcoholic liquid which is everywhere consumed in Japan...

"Another use to which *kôji* is applied is in bread-making. It is also employed in the manufacture of the famous sauce 'Soy' [sauce], which is likewise a product of fermentation, though its preparation is much more complicated, and has not yet received an explanation" (p. 300).

"The Japanese prepare a kind of sweetmeat by the action of malt-extract upon steamed rice or millet, and this product, called *âmé* (*amé*), from the examination of a large number of specimens, was found to contain 68 to 94 per cent. of maltose."

Page 327 notes that Mr. Watanabe is preparing to conduct an investigation into the chemistry of the 'Soy' manufacture. He is aware that "the diastase of *kôji* resembles that of malt in one respect, that its activity is lessened by the presence of certain bodies, such as common salt."

The koji "manufactory" with which Prof. Atkinson is most familiar is the one at Yushima, in Tokio [Tokyo]; Mr. Jihei Kameyama is the proprietor. "It consists of a long arched passage, cut in the thick bed of clay which underlies Tokio at a depth below the surface of 15 to 20 feet." In this manufactory, "there are in all four of these underground passages, only one of which is used during the summer, as very little koji is made during that season. The height is rather less than 4 feet, the breadth about 7 or 8 feet, and from the entrance, reached by descending a vertical shaft, it extends about 25 or 30 feet in one direction, then bends off nearly at right angles for about the same distance."

"That the growth of the [koji] fungus takes place with great vigor is shown not only by the rise in temperature, but by the rapidity with which it removes oxygen from the air." The oxygen is replaced by carbonic acid... The rice contained

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14.2 per cent. of water and the *kôji* 29.5 per cent; thence 85.8 parts of dried rice yielded 76.35 parts of dry *kôji*, that is, 89 per cent., and thus a loss of weight occurs amounting to 11 per cent. of the dry rice used. This loss consists mainly of starch, which is oxidised to carbonic acid and water..."

The large amounts of carbonic acid formed in the underground koji passages must be removed by ventilation. "The only means adopted of effecting a change of air consists of a square shaft about 8 inches in one direction and 6 inches in the other, leading from the anterior end of the passage into the open air above. It will be evident, therefore, that as the ventilation depends upon the difference of temperature between the inner and the outer air, it will be much better in winter than in summer. In fact it is in the spring and early summer that the [work] stoppages occur." Lacking air, "the growth of the fungus must be much less active, and perhaps this is one reason why the production of *kôji* in the summer is almost abandoned."

"The *kôji* prepared in the manner just described consists of grains of rice bound together in lumps by the interlacing threads of mycelium."

Note 1. This is the earliest English-language document seen (March 2002) with the word *koji* in the title.

Note 2. This is the earliest document seen (March 2002) that mentions diastase in connection with koji. However neither the word "enzyme" nor the word "enzymes" appear in this paper. Address: Prof., Analytical and Applied Chemistry, Univ. of Tokio (Tokyo), Japan.

1165. *Toronto Daily Mail* (*Canada*). 1881. The days of salad. A chapter for epicures. April 6. p. 3.
• ***Summary:*** From the London Globe: "The Duke... was a great friend of Dumas the Father–Father of the best novels, travels, cookery books that were ever published." Giorgio Ronconi, the celebrated Duke of Ferrara, sometimes used to retired to Dumas' private chambers in Paris, "where the following salad was always ready for him. Dumas himself describes it as a salad of high fantasy,... And here shall follow the great novelist's recipe for making the salad, or rather the mixture...

"'I place,' says Dumas, 'in my salad bowl for two guests the yolk of an egg, and stir it in oil till it becomes a paste. To this paste I add chervil, minced tunney, pounded anchovies, mustard of Maille, a large spoonful of soy [sauce], gherkins, and the whites of eggs, also minced. Then dilute the whole with the best vinegar I can procure, and my servant stirs it; while over all I cast a pinch of "paprico," an Hungarian pepper. And there,' says the most conceited but delicious novelist that ever lived, 'you,' meaning the world in general, 'possess the salad that so astonished poor Ronconi.'"

Note: Alexandre Dumas (père = father; 1802-1870), of France, is best known for his famous historical novels of high adventure, including *The Count of Monte Cristo* and *The Three Musketeers*.

1166. Hawkins (Robert J.) & Co. 1881. Tomorrow (Thursday), the 1st August at Twelve o'clock. Grocer's stock and fittings... (Ad). *Scotsman* (*Edinburgh*). April 25. p. 2.
• ***Summary:*** "Pickles, Sauces, &c. Piccalilli, Mixed Pickles,... Anchovies, Anchovy (Burgess' Sauce), Cayenne, Currie, Harvey's King of Oude, Lobster and Shrimp Sauces, Real Indian Chutney, Bengal Indian Soy [sauce], Soyer's Relish, Mushroom Catsup,..." Address: Wine & Spirit Merchants, Main Street and Edward Street, Newbridge and Curragh Camp [Ireland].

1167. Renouard, Alfred. 1881. Sur l'introduction du soja hispida en Europe [On the introduction of the soybean to Europe]. *Association Francaise pour l'Avancement des Sciences, Comptes Rendu* 10:945-51. April. Session of 17 April 1881, Algiers. [3 ref. Fre]
• ***Summary:*** Contents: Introduction. History. Cultivation and harvest. Soya as a forage plant. The edible soybean [food uses]. "The *soya*, or rather the *soja hispida* is a plant that is cultivated at many locations in Europe, but whose name is not well known here, and which has only been cultivated for several years. Japan has long known the specialties of its cultivation. There it is well known under the name of *o'mamé* and from it is extracted, from the roasted seeds, the sauce called "japonaise," which is found in the commerce of Europe, where it enjoys a good reputation.

History: At the Exposition of Vienna, in 1873, the Japanese government exhibited, for the first time, the soya as a forage and food plant. Some Austrian scholars, including Prof. Haberlandt of the Institute of Agronomy at Vienna, then studied the composition of this oilseed and perceived that it would make an excellent forage. In 1877 trials started in Austria. In 1871 the Society for Acclimatization in Paris sent several samples of soya seeds to M. Blavet, president of the Horticultural Society of Étampes. He grew the crop and sent samples to other departments and abroad. Later the seed house of Vilmorin coined the name "Soya of Etampes" (*soya d'Étampes*). But it does not seem that these laudable efforts have been crowned with success. Mr. Paillieux of the National Society for Agriculture, Mr. Saint-André, director of the Agronomic Station at Montpellier, Mr. Vavin of the Society for Acclimatization, have all worked with soya and are still working for the propagation of this useful plant.

"In the region of Nord, it is to a Frenchman, who actually lives in Moravia, that we owe the actual propagation of soybean culture: Mr. Julius Robert, who cultivates nearly 3,000 hectares at Seelowitz. Last year he made a gift of several hundred liters of soybeans to the Society of Farmers of Nord. At the instigation of Mr. Corenwinder, several farmers tried them. The results obtained by the first experimenters were, in general, satisfying, but we should not yet make a final judgment as to the plant's definite acclimatization. Nearly 30 farmers from around the town of

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Lille are proposing to plant soybeans again. Free samples, provided to our society by Mr. Olivier Lecq (of Templeuve), an agent for Mr. Robert and those who conducted the first trials, have been rapidly distributed. Today we can consider the soybean as definitely well tested in our department.

"Cultivation and harvest of soybeans: Mr. Yossida [Yoshida], a Japanese man from Tokyo, was sent to the town of Lille by his government to work seriously on cultivation and preparation of flax / linseed. He told us that there were at least 100 varieties of soybean in Japan. A Japanese book titled *Explanation, with Illustrations, of Trees and Plants Newly Determined*, mentioned 25 very distinct varieties of soybeans. The Chinese herbal only cited five varieties, which seems to prove that the soybean is native to Japan.

"In France, we barely know 2 or 3 varieties: the yellow and the brown soybean for temperate climate, and the black for the warm climate. It is the yellow variety that was tried in the department of Nord, and also, by the way, the one that has been cultivated at the Museum since 1790; there we can observe that it comes up well but it does not produce seeds every year" (p. 946).

"In the department of Nord the soybean, can be harvested toward the end of September or during October. However, in warmer countries or regions, the harvest can begin in August or September."

"The harvest ought to be done like that of the like the dwarf bean (*haricot nain*), in the department of Nord, in ripping out the stalks entirely, then suspending them from poles in an open field, the bundles of soybeans tied just above the top of the roots [hung upside down]. The plant thus dries rapidly, if the weather does not pose an obstacle to it. When the soybeans are well dried out, they can easily be stored: they are not attacked by weevils (*bruches*) that cause, as everyone knows, so much damage to beans, peas, lentils, etc."

In 1879 in Austria trials were conducted by Mr. de Blackowicz [Edmund v. Blaskovics] under orders from the Hungarian Ministry of Agriculture. In 1879 he obtained an average yield of 1,699 liters/hectare (range: 237 to 3,262).

Mature and well dried, the soybean constitutes an excellent feed for animals in France. On this subject, comparative experiments on the nutritional value of air-dried soybean pods and dead leaves were conducted in 1879 by Messrs. Weiske, Delmel, and Schulze at the Proskau agronomic station.

In total, 1,000 gm of pods were fed to each of two sheep, from Jan. 8-15 then from Jan. 16-23. One table shows percentage of each nutrient in the pods digested by each sheep (p. 948). A second table shows the percentage of each nutrient in the dead leaves digested by each sheep (p. 949).

"Finally, the soybean has been fed to animals after having been ensiled in a mixture with various forages. The fermentation which these forage crops undergo changes the composition of each. For example, in mixing soya with maize (which contains only 4-5% protein), the protein content of the mixed silage is increased. The following analysis, made in 1879 at Lobozitz (Bohemia) in the agricultural laboratory of the prince of Schwartzenberg, is of a forage composed 80% maize on the stalk and 20% soya on the branches. A table (p. 949) shows: Moisture 8.62%, fatty materials 2.33%, cellulose 43.94%, nitrogen-free extracts 27.56%, proteins 8.75%, and ash 8.80%.

On the farm of Mr. Julius Robert, the cattle being fattened were fed as follows (per head per day). A table (p. 949) shows–in February: Hay 3 kg. Soya and maize ensilage 5 kg. Corn flour 1 kg. Beet peels 40 kg. Chopped straw 6 kg. Salt 80 gm. The amount of soy and maize silage fed in March and April were increased to 8 kg. The next table (p. 950) shows that the cattle gained (on average) 633 kg in Feb., 654 kg in March, and 690 kg in April. The increases in weight gain in March and April must be due entirely to the marked increase in the amounts of soy and maize silage fed during those two months.

The article concludes: "To make from the soybean what the Japanese and Chinese make from it is the least important part of the question; because we think that Europe will leave them with their soy butter (*mizou* [miso]), their sauce (*soyo* [shoyu]) and their cheese [tofu]. It is not surprising that people tried to make cheese; the legumine [a kind of protein] which the soybean contains in large proportion, is, as we know, analogous to casein and undergoes the same chemical reactions. By the way, all these products, except the sauce, are detestable to the European palate.

"Next year I shall give an account of the results obtained during three years of trials in the department of Nord" [in far northern France on the border with Belgium].

Contains eight tables from earlier publications by other authors.

Note: This is the earliest French-language document seen (April 2012) that uses the word *soyo* to refer to soy sauce. Address: The Younger (*fils*), Civil engineer, manufacturer at Lille, secretary general of the Industrial Society of Nord [a department in northern France] (Ingénieur civil, Manufacturier à Lille, Secretaire général de la Société industrielle du Nord).

1168. *Tropical Agriculturist* (*Ceylon*).1881. New and old tropical products. 1(1):2, 71. June 1. [1 ref]

• ***Summary:*** "From a recent Price Current of Messrs. Lewis & Pat of London, we transcribe a list of products" imported from various parts of the world."

A long table has three columns: (1) Imported from China, Japan and the Eastern Islands. (2) Quality. (3) Quotations. The entry for "Soy" [sauce] gives the quality as "Good" and the quoted price as 1*s.* 10*d.*" [1 shilling 10 pence].

1169. Roman, E. 1881. Correspondance: Sur le Soja

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[Correspondence: On the soybean]. *Nature (La) (Paris)* 10(425):115. July 25. Letter. [Fre]

• ***Summary:*** "The soybean (Le Soja or Soya), of which you have spoken in previous issues of *La Nature*, is a very interesting plant and destined to play a major role in our agriculture, but it is not new, and its introduction [to Europe?] should not be attributed to Italy [but rather to France]. The [Natural History] Museum was already in possession of its seeds in 1779, but at that time it was nothing but a curiosity. It has been cultivated there up to 1880 inclusive.

"It is now grown not only in Italy but also in Austria-Hungary, where its cultivation seems to have undergone a major development, and in France at various points, especially at Etampes and at Montpellier. Likewise, I had some planted at Orange [capital of Vaucluse in southeast France] this year.

"This plant is probably destined to play as important a role in the future as the potato. Its qualities, which have already been confirmed in France by many experimenters, leave no room for doubt. *La Revue Horticole* has already published several articles on soya; and Mr. Paillieux has written a brochure on this subject (published by la *Maison rustique*).

"Although it seems incredible, soya a hardy plant in France, especially from the latitude of Paris southward, grows in any soil, even the driest, and can provide us with the following: 1. An excellent forage, that is good for fattening cattle. 2. Seeds similar in shape to small haricot beans, but containing 37% protein, 20% fat, and only 3% starch.

"None of our French legumes has an equal chemical composition. The nutritional composition of soya is much better than that of haricots and lentils. It comes close, in that respect, to that of cheeses and could possibly replace the famous dry pepper sausage (*saucisson aux pois*).

"Cooked with rain water and certain precaution, those beans can make a nice dish similar to haricots.

"From it, the Chinese make milk (*du lait*), various cheeses (*divers fromages*), oil, a condiment (*Indian Soy* [sauce]), etc., etc.

"In France, people have envisioned roasting the seeds to make imitation coffee.

"I immediately tried it to check the idea and, although I am very choosy when it comes to coffee, I recognized that the flavor and properties of this decoction of soya were quite similar to those of an average quality coffee. It goes without saying that a cup of soy coffee, well prepared, is immensely preferable to what we are served under the name of mocha in 75% of publish establishments.

"Mixed with milk, the decoction of soya is, in my opinion, better than the coffee with the best aroma. For some time now, we have been drinking this soy coffee with milk every morning. The awareness of these properties of soya would be very useful to the poorer classes, for it actually costs 1.20 French francs per kg at Vilmorin, and this price will certainly drop by more than half when soya comes to be extensively cultivated.

"You can see from the above that soya is one of the most valuable plants and that its cultivation merits encouragement in France. It is doubtful that, to start with, we will develop all of the applications mentioned above. But we could–and this is the advice given by those who introduced it–cultivate it first for use as forage. Animals are not sensitive to routine; they accept with pleasure anything savory that one offers them, and have already adopted the soybean. Once the plant is extensively cultivated and well known, we will gradually come to take advantage of all of its qualities."

Note: This is the earliest French-language document seen (Oct. 2003) that uses the word *lait* to refer to soymilk. Address: Ingenieur en chef à Périgueux.

1170. Van Buren, Thomas Broadhead. 1881. The food of the Japanese people. Yokohama, Japan: Printed at the Japan Gazette. 19 p. No index. 24 cm.

• ***Summary:*** Contents: Introduction (meat eating countries vs. Japan). Cerealia (cereals). Leguminous plants. Tubers and roots. Herbaceous food-plants. Ame. Leading food plants (with Japanese name, scientific name, and parts eaten; incl. kudzu, udo, konnyaku, and daikon). Sauce.

Most civilized people are and always have been meat-eaters. "So universal has meat-eating been among the dominating races that it has become a generally received opinion that animal flesh is a necessity to a well-developed physique. The praises of beef are sung wherever Occidental civilization has penetrated. It is not only a popular belief, it is as accepted scientific opinion, that a considerable percentage of animal flesh must enter into the nourishment of any well-fed people."

"The food of Japan, with a population of 36,000,000, or about that of Great Britain and Ireland, engaged in every branch of human industry, presents a complete contrast to all this. Here they are essentially vegetarians, animal flesh being largely prohibited by religion, and its general use made impossible by reason of its comparative scarcity and consequent high price." Until a few years ago, their "isolation prevented the introduction of new food-plants adapted to their climate..."

In Japan there are little more than 1,000,000 head of cattle. Of these, only the cows (not more than 600,000) are eaten; male cattle are used only as beasts of burden. Thus in Japan there are less than 2 head to every 100 people, compared with 73 head in the United States. Of the 36,000 cattle slaughtered last year in Japan, "more than one-half were consumed by foreign residents and the foreign naval and merchant marine. The Japanese army and navy also consume considerable beef. It is therefore safe to say, as I have already intimated, that beef does not enter into the food

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of the mass of the people to any appreciable extent. Mutton and pork, outside of the treaty ports, are almost unknown. Of barnyard fowls, geese, and ducks there is a large variety. The wildfowl, consisting of pheasants, quail, woodcocks, grouse, ducks and geese are also abundant, but these, as well as eggs, on account of their high prices, can scarcely be said to enter into the diet of the common people at all, except upon rare occasions. Fish is more largely eaten. The variety of fish is very large... A very considerable percentage of the catch is dried." "At present it may be said that one-half the people eat fish every day, one-quarter two or three times a week, and the balance perhaps once or twice a month.

"Even with these exceptions the food of the masses is fully or even more than 90 per cent. vegetable." The Japanese exhibit "endurance of body and power of intellect to a very considerable degree, while deprived of the usual nutriment held to be essential to such developments."

The main cereals of Japan, in descending order of the quantities produced, are rice, barley, millet, rye, and Indian corn. The three main varieties of millet are extensively cultivated and used: First class is *Setaria Italica* (Italian millet). Second class is *Panicum miliaceum* (Indian millet). Third class is *Panicum frumentacum* (Called "hiye" [hie] in Japan).

"Leguminous plants. Perhaps in no country in the world are beans and pease comparatively so extensively cultivated as in Japan. There are more than 40 varieties. That known as the soy-bean is especially important, as it is rich in those nutritive properties which are wanting in rice, and is invaluable in a country where meat is almost entirely lacking in the diet. The composition of this variety, known as Miso-mame, is as follows (table): Water 11.32%. Ash 3.86%. Fat 20.89%. Nitrogenous matter 37.75%. Gluten 2%. Starch and sugar 24.08%. Its "proximate chemical composition approaches more nearly to animal food than any other known vegetable." Tables showing the composition of lean and fat beef are then given for comparison.

"I know it is held by scientists that, while these plants show a great chemical likeness to beef, the action upon the human body is not the same, being much less valuable. I can only repeat that here is a race of people of good physique, of stalwart and well proportioned, although not tall, frames, and of cheerful dispositions, who daily perform tasks requiring great strength and endurance, who eat almost exclusively this vegetable food, and who, without any of the comforts of our western homes, and undergoing extreme exposure unknown to our people, live about the average lives of the laborers of Europe and America, with a table expenditure of about one-sixth or one-seventh that required by the latter."

All classes of Japanese also consume many algæ and other sea plants, including many species of chondrus and Fucus-laminaria. Instead of sugar they use *ame*, "made from malted barley and rice or millet, the malt converting the starch of the rice or millet into dextrine and maltose, and producing the product varying from a thick sugar or honey up to a hard candy. The food value of this article is very great, and, as it is sold at a low price, its consumption is large. A table shows the composition of two grades of *amé*, first and second (cheaper).

Sauce enters very largely into the preparation of Japanese food for the table. The most widely-used kind is made as follows: "'Shoyu,' known to us as 'soy' [sauce], the one almost exclusively employed is made from wheat and the shoyu bean [soy bean] (ground) in equal proportions of one *sho* each (a sho is about 1 quart, 1 pint, and ½ gill). The materials are mixed and boiled, after which the mass is steamed in a basket or box prepared for the purpose, with a perforated bottom. When the steaming process is finished it is put in a cask and left until a green yeast is produced. The compost is then taken with salt water. After standing a good length of time the liquid is strained, and the sauce is ready for use. It has a rather pleasant flavor, and is said to be the basis of most of the renowned sauces [such as Worcestershire] prepared in England. The refuse is fed to cattle."

Note: This is the earliest English-language document seen (April 2012) that uses the term "shoyu bean" (regardless of capitalization) to refer to the soybean.

The last 6 pages (p. 14-18) contain a "List of plants used for food, or from which food is obtained in Japan." They are arranged by families. For each species is given: Botanical name, Japanese name(s), and remarks. Under Leguminocea [sic, Leguminosae]. Papilionacea [Papilionaceae], we read: *Glycine soja* (S. & Z.), Tsuru mame; No mame, seeds. *Glycine hispida* (Moench) or *Soja hispida* (Miq.), Omame; daidzu, Soy bean; seeds: many varieties. *Dolichos soja* (L.), Japan pea. *Glycine hispida* f. lanceolata, Midzukugiri.

The section on legumes (p. 15) also discusses: (1) *Arachis hypogea* (L.), Rakkasho, Tojinmame, Ground-nut; earth-nut; fruit. (2) *Vicia faba* (L.), Sora mame, Broad beans; seeds = *Faba vulgaris*. (3) *Pisum sativum* (L.), Yendo [Endo], Pea; seeds; two main varieties; midori yendo [endo] and saya yendo [endo], the latter eaten for the pod. (4) *Pueraria thunbergiana* (Benth.), Kudzu, root, starch = *Dolichos hirsutus* (Th.). (5) *Canavalia incurva* (D.C.), Nata mame, seeds = *Dolichos incurvus* (Th.). (6) *Phaseolus radiatus* (L.), Adzuki-Shôdzu, seeds. *Phaseolus radiatus* var. pendulus (Savatier), Tsuru-adzuki, seeds. *Phaseolus radiatus* var. subtrilobatus (Sav.), Bundo-Yayenari, seeds. (7) *Dolichos umbellatus* (Th.), Sasage, Adzuki-sasage, seeds. (8) *Atylosia subthombea* (Miq.), No-adzuki; Hime-kudzu, seeds.

Note 1. This is the earliest English-language document seen (Jan. 2005) that uses the term "broad beans" (or "broad bean") to refer to *Vicia faba*.

Note 2. This is the earliest English-language document seen (March 2006) that uses the word "Yayenari" (or "Yaye-nari" or "Yaenari" or "Yae-nari") to refer to a variety of azuki beans. Address: United States Consul General of

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Japan. Kanagawa.

1171. *New York Times.*1881. Editorials [Vegetable food in Japan]. Sept. 10. p. 4. col. 6.

• ***Summary:*** "So universal has meat-eating become among the dominating races, remarks our Consul-General at Yokohama, that the praises of beef are sung wherever Occidental civilization has gone, and it is not only a popular belief, but an accepted scientific opinion, that any well-fed people must use animal food considerably; to have meat to eat frequently is reckoned the best proof that the common laborer in a country is well favored. Japan, with a population of 36,000,000, equal to that of the United Kingdom, engaged in very diversified industry, presents a complete exception to the rule as to food. The scarcity of animal food in consequence of the nonintercourse policy, and its almost unnecessary prohibition by the religious faith, have made a nation of vegetarians, except as to fish, which is not forbidden as 'flesh.'

"There are now in the country hardly more than 1,000,000 cattle; of these, as emasculation is not practiced, the males being used for breeders, only 600,000 cows can be looked to as food, and there are less than 2 head to each 100 people, against 73 head in this country. Of the 36,000 head slaughtered in 1880, the foreign residents and the foreign marine consumed more than half. Outside of the treaty ports mutton and pork are almost unknown; there is an abundance of fowls, both wild and barn-yard, but the common people cannot pay for them. The supply and variety of fish, however, are very large, over 200 kinds being used as food, and the Government is actively working to increase both. Already probably one-half the people eat fish once a day, one-quarter several times a week, and the rest several times a month. Still the food of the masses is more than nine-tenths vegetable, and the list of this has been made long by their necessity-sharpened wits. Of cereals, rice is the most important, occupying more than half the tilled area in the Summer; barley, millet, wheat, rye, and corn rank next in the quantity produced."

"Beans and peas are more extensively cultivated in Japan than anywhere else, and there are over 40 varieties. One–the soy bean or Nirva-mume–contains 20 per cent fat and 60 of nitrogenous matter, starch, and sugar, and closely approaches meat both in composition and in its action on the body. The sweet potato, being very prolific and cheap, ranks next to rice in importance, 16,000,000 bushels being the last reported production... A surprisingly large list of wild plants and sea-weeds is utilized as food. The place of sugar is considerably supplied by a preparation made from millet or rice and malted barley, the starch of the rice or millet being converted by the malt, and the product varying from a thick sugar or honey up to hard candy, being cheap and in large consumption.

"Sauce, so-called, enters very largely into use with food plants; its name is shoyu, known to us as soy [sauce]. The kind almost exclusively used is made from wheat and the shoyu bean ground in equal parts. It is boiled and steamed, then left to ferment; after being then dried in the sun it is allowed to stand awhile in a cask of salt water, is then strained and is ready for use, the refuse being fed to cattle. Its flavor is pleasant, and it is said to be the basis of most of the celebrated sauces put up in England. The proof of the pudding being in the eating, it is interesting to note the testimony that the Japanese–a race of good proportion, physique, and strength, whose comforts are much less and whose exposure is much greater than in case of Western nations–live an average life, in length and health fully up to that of the European or American, with a table expenditure of not more than one-sixth or one seventh that of the latter."

Note 1. Much of this editorial is borrowed from a recently published booklet titled *The Food of the Japanese people*, by Thomas B. Van Buren (1881). However both the meaning and source of the meaningless term *Nirva-mume*, which is said refer to the soy bean, remain a complete mystery.

Note 2. This is the earliest article on soy seen (Aug. 2002) in the *New York Times*. It is also the earliest document seen (Aug. 2002) that is an example of major media coverage of soyfoods in North America.

1172. *Gardener's Monthly and Horticulturist.*1881. The soy bean. 23(275):337. Nov.

• ***Summary:*** "This–the Soja hispida–has been under culture in American gardens ever since Commodore Perry's memorable expedition to Japan. But no one seems to have known the use of it, and so it soon disappears, as, in the usual way of cooking it, any ordinary bean is better. Among Mr. Dreer's Japan collection at the State Fair [probably Pennsylvania] we noted that it again appeared, and we are moved to give the following from the Gardener's Chronicle, as showing how to use it:

"'The greatest use to which the plant is put in China and Japan is in the preparation of soy [sauce] and of various kinds of food from the ripe seeds. The manufacture of shoyu, or soy, is thus described in a descriptive catalogue of agricultural products of Japan, exhibited at the late Sydney International Exhibition [Australia; held Oct. 1879]. Equal parts of beans and wheat are used; a small part of the wheat is mixed with koji, which is an alcoholic [sic] preparation from rice, and allowed to ferment; the remainder is roasted, and the beans are also roasted. The roasted beans and wheat are then mixed together with the fermenting wheat, placed in shallow wooden boxes, and kept for some days at a fixed temperature in a warm chamber with thick walls, until the whole mass is covered with fungus. It is very important that the temperature of this chamber should be kept at the proper point. By these processes part of the starch of the wheat is converted into dextrine and sugar, and lactic acid and acetic

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acid are formed. It is then mixed with salt lye. The mashings are removed to large vats, and kept there for at least twenty months, but more often for three or five years, the better qualities being those that are kept for the longer periods. The best soy is produced by mixing that kept for five years with that kept for three years. After it has been kept a sufficiently long time, it is strained through thick cotton bags, and the residue submitted to pressure. Before filtering, honey is sometimes added. The residue, after pressing, is again mixed with salt and water, and again pressed, the yield being soy of an inferior kind. Sometimes water is added to this second residue, and it is again pressed. The residue first obtained is occasionally used as food, and the last residue as manure. (See *Gardeners' Chronicle*, vol. xiii., new series, pp. 178, 209, 242.)

"'Shoyu, or soy, is a very important condiment; it is mixed with a great many kinds of food, and is produced and consumed in very large quantities. Regarding the use of the soy bean as a vegetable in Japan, the writer of the foregoing remarks on soy says: 'It is the vegetable which approaches nearest in chemical composition to animal food (meat), containing, as it does, one-fifth of its weight of fat, and often two-fifths of nitrogenous matter. It is an extremely valuable adjunct to the food of a people who subsist so largely on a purely vegetable diet, of which the bulk is rice, so rich in heat producers–starch, and poor in flesh formers–albuminoids.'"

1173. Penhallow, D.P. 1881. Meiso [Miso]. *Kansas City Review of Science and Industry* 5(7):437-41. Nov.

• ***Summary:*** "It is well known that the Japanese are a rice-eating people, with whom this article, meiso, is perhaps, the most important of all their foods, but it is not so generally known that the flesh of animals could hardly be considered a regular article of food until within the past few years, and even now, with the great mass of the people, meat is seldom used. Thus for centuries, these people have lived almost wholly without that which western people consider so important a source of nitrogen. It seems, however, that the demands of nature were recognized and met by obtaining from the vegetable kingdom what they failed to secure from the animal, and thus it is we find them consuming enormous quantities of beans prepared in a great variety of ways. Some of the important preparations from beans are cheese, or tofu–a white, curdy mass strongly resembling cottage cheese, unflavored with salt, and held in high estimation. It is prepared in a variety of ways, but almost invariably forms a part of every meal as a constituent of soup. Cake–a stiff, jelly-like confection made by straining boiled [azuki] beans and incorporating with a large proportion of sugar. Pickles–beans in the pod and frequently on the stem [edamame], pickled in a strong brine; they are eaten without further preparation. Sugared beans–roasted beans enveloped in a heavy coating of sugar, and sold as a confection. Shoyu, or Soy–a liquid of dark color and salty flavor, made by fermenting a mixture of salt, beans, and roasted wheat or barley. It is largely eaten with fish and rice. There are other modes of preparation which we will pass over with the exception of meiso, which forms the subject of this article.

"The pasty mass manufactured and sold under this name constitutes one of the most important of the preparations from beans, and enters largely into the diet of all classes as a basis for soup, or, in various forms, as a sauce for fish and meat. In composition it consists of:

"Salt–4.5 *to* = 2.30 bushels.

"White [soy] beans–1 *koku* = 5.13 bushels.

"Rice–4 *to* = 2.05 bushels.

"Salt.–The salt employed is of a very crude sort. It is obtained from sea water by evaporation under the influence of solar heat, and as no attempts are made to secure any special degree of purity, it is consequently contaminated with other salt's and its specific value thereby lessened. Sticks, straw–especially from the coarse bags in which it is transported–and dirt are also always to be found, and as no efforts to cleanse or purify, beyond removal of the larger fragments of straw, etc., are made at the factory, the product into which such salt enters has a rather uninviting appearance. It is always used dry.

"Beans.–The ordinary white [soy] beans appear to be used in preference to any others. They are prepared by boiling for about six hours, when the fire is drawn and they are allowed to cool in the boiler. The next morning they are removed from the boiler and placed in mash boxes which measure 10 x 3 x 1 feet, where they are thoroughly reduced and mixed with the rice and salt by means of a round pole used as a pestle.

"Rice.–White rice, or that which has been well cleaned, is soaked in cold water for two days. It is then well drained and transferred to a boiler containing fresh water, when it is steamed for three hours. While yet hot, it is taken to a warm room and allowed to remain under the influence of a warm, moist air for four days, when the whole is found to be covered with an abundant growth of fungus.

"The room in which this operation is performed usually measures about 10 x 20 feet, is constructed of mud walls–eight or ten inches in thickness, and is made as close as possible with the exception of one small window to admit light for the workmen, and a door through which to enter. The only moisture in the room is that which comes from the moist rice, but a constant temperature of 80°F. is maintained by means of a large charcoal fire at each end of the room. It is regarded that a warm, moist air, undisturbed by draughts, is quite essential to the success of the operation, though darkness is not deemed requisite, the absence of windows being more a matter of economy than anything else. The production of the fungus is usually regarded as the critical part of the whole manufacture, and failure sometimes occurs. No reason could be obtained from the Japanese why the

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subsequent fermentation is dependent upon the presence of the fungus; that its production is an essential part of the process was all the information that could be obtained.

"At the end of four days, the rice is taken out into a large airy room and spread upon straw mats, 3 x 6 feet, and allowed to cool for one and a half hours. It is then transferred to small trays which measure 18 x 8 x 8½ inches, for convenience in handling, when it is allowed to cool as rapidly as it can. Whether the rice now dries or remains moist appears to be a matter of indifference. As soon as thoroughly cooled, it is incorporated with the salt and beans. It is generally customary, however, to prepare the rice in large quantities once in four days, and thus have a stock always on hand. In that case, as soon as cooled, it is mixed with the salt and placed in large storage vats, where it is tamped solid by the feet, and will then keep without trouble for two months.

"When all the ingredients have been thus prepared, they are placed, cold, in the mixing boxes already described, and thoroughly incorporated into a stiff, pasty mass by means of a long mixing rod. This mixture is then placed in large vats having a capacity of about seventeen koku or eighty-seven bushels. Here it is packed solid by the feet and allowed to undergo a very slow fermentation. Every effort is made to keep the temperature of the mass down as low as possible, and if, during the summer, the heat of fermentation gets too great, the whole mass spoils. It is then mixed with roasted wheat and by further fermentation converted into shoyu or soy. Sometimes the mixture fails to ferment properly, when it is taken out and mixed with a fresh portion of beans. The fermentation is allowed to continue six months in summer und eight months in winter, at the end of which time the meiso is ready for the market.

The result of these various operations is a stiff, pasty mixture of repulsive appearance and disagreeably sour odor, and though it would hardly find favor with Americans or Europeans, possibly excepting epicures, it seems to be in great demand with the Japanese.

"The factory where these facts were obtained employs six men, and the annual produce amounts to from 900 to 1,000 *koku*, equal to 4,617 to 5,130 bushels. The cost of the various ingredients and the finished product is as follows: *"

"Beans, 1 *koku*–5.13 bu–6 yen.

"Rice, 1 *koku*–10 yen.

"Salt, 1 *koku*–5.40 yen.

"Total cost of meiso per koku–7.13 yen.

"Market price per koku–13.20 yen.

Footnote (*): "Prices for 1880; probably somewhat higher at present. Yen, gold, is equal to the U.S. dollar." Continued. Address: Prof., late of the Imperial Agricultural College of Japan [Tokyo].

1174. Penhallow, D.P. 1881. Meiso [Miso] (Continued–Document part II). *Kansas City Review of Science and Industry* 5(7):437-41. Nov.

• ***Summary:*** Continued: "The mouldy rice, prepared as described, constitutes the yeast of the Japanese, and is used for all the purposes, including bread-baking, for which we would employ ordinary yeast. Its production is, therefore, of considerable importance, as upon it depends the manufacture of meiso, saki (fermented liquor), vinegar, and shoyu. It, therefore, becomes evident that, the principal interest of this entire manufacture centers in the fungus which develops upon the rice, because of the variety of forms which may be developed from its spores under different conditions of warmth and moisture, and also exposure to the air.

"In order to obtain some satisfactory evidence on this interesting subject, the various products–mouldy rice, meiso, yeast, and vinegar–were submitted to microscopical examination. A sample of meiso was taken from a vat where fermentation had been in progress for some time. It was noticed that the temperature was so low that the whole mass felt cold to the hand, and thus whatever fermentation was in progress, must have been going on at a very slow rate. On examination, there appeared numerous spore-like bodies, similar in form and size to the spores from the mouldy rice, which they doubtless were. In addition, there were many short and irregularly branched filaments in all stages of growth from the spore. Nothing was seen which could be called yeast-plant proper, or *S. cerivisiae* [*Saccharomyces cerevisiae*].

"A sample of freshly made vinegar showed the liquid to contain a very large number of spermatia-like bodies, while masses of the true vinegar-plant were also numerous. The cells of these measured one seven-thousandth of an inch in diameter. No true yeast-plant was to be found, though this may possibly have been due to the degree of saccharine exhaustion as well as the low temperature of the fermentation A sample of vinegar, containing a good surface growth of the vinegar-plant, was kept for three weeks, in the hope that fruit might appear and thus furnish one more link in the chain of evidence; but none appeared, although the net-work of cells constantly and rapidly increased, and further observations were interrupted by departure for home.

"Yeast made in the ordinary way, but using the mouldy rice to start the ferment, showed the familiar forms of the true yeast-plant. The fungus on the mouldy rice proved to be our old friend *Penicilleum* [*Penicillium*].

"These observations furnish us with a practical illustration of the fact that these vegetable structures of low degree of organization, are not necessarily constant in form and structure, but are liable to vary greatly under different conditions of temperature, moisture, and exposure, and that they are associated with fermentation of varying rapidity as well as with products which are more or "less dissimilar. They furnish one instance of the effect which environment has upon the individual.–*The Kansas City Review* [of Science and Industry. 1881. Vol. 5, No. 7, p. 437-41. Nov.].

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Address: Prof., late of the Imperial Agricultural College of Japan [Tokyo].

1175. *Tropical Agriculturist (Ceylon)*.1881. The soy bean, a new feeding stuff. 1:567. Dec. 1.

• ***Summary:*** This is reprinted from *British Mail [Masl]*. "Mr. Wamford [Warnford] Lock has drawn attention to the soy bean of China and Japan, Glycine soya (Soja hispida), sufficiently familiar as the source of the eastern sauce of that name, and affording a valuable oil (bean oil), which is the subject of an article in the new 'Industrial Encyclopaedia.' It is attracting considerable attention among Continental agriculturists, and has recently been experimented on with regard to its value as a food for milch cows and fat cattle. As a forcing food for milch cows, the soy bean is superior to grains; for fat cattle, it is less adapted, and ranks second to grains.

"The plant can be cultivated in Central and Eastern Europe, and similar localities, especially in unfavourable years, when other crops are backward. For growth as a field crop it is recommended to be sown in rows 18 in. apart in the middle of May.

"The qualities of the beans grown in diluvial [deposited by a flood] and alluvial [deposited by running water] soils are shown by the following analyses [alluvial given in parentheses]:–Water 15.20 (19.50), fat 16.21 (17.94), protein 28.63 (25.94), non-nitrogenous extractive matter 30.84 (33.16), fibre 4.38 (4.45), mineral matter 4.74 (8.82).

"The straw or haulm of the plant is practically worthless for neat cattle, but the husks and leaves, mixed with mashed food, or even alone, are readily eaten. It has also been found that the chopped beans, soaked for 12 hours in water containing a little salt, are greedily taken by cattle, and that few pass through undigested.

"According to M. Roman, a French savant, the cultivation of the soja or soya, has of late years been largely developed in Austria-Hungary, Italy, and parts of France. This plant is extensively cultivated by the Chinese, who make a cheese and various dishes from its fruit. When roasted the seeds form an excellent substitute for coffee, and altogether M. Roman thinks that the plant will pay better than the potato. At present the retail price of the soja beans is sixpence per pound, but as the plant becomes more extensively cultivated, they will no doubt be reduced in price."

Note 1. This journal is published by the Dept. of Agriculture, Peradeniya, Ceylon.

Note 2. This is the earliest English-language document seen (March 2001) that uses the term "substitute for coffee" in connection with soy coffee.

Note 3. This is the earliest English-language document seen (Aug. 2003) that uses the word "protein" in connection with soybeans.

1176. Henderson, Peter. 1881. Henderson's handbook of plants. New York, NY: Peter Henderson & Co. 412 p. See p. 95, Glycine. Index. 27 cm. [1 ref]

• ***Summary:*** "Glycine: from *glykys* sweet: referring to the taste of the roots of some of the species. *Linn. Diadelphia-Decandria.* Nat. Ord. *Fabaceæ.*

"A small genus, nearly all of which are tender climbing plants, producing axillary flowers, singly or in racemes, white, yellow, or rose; they are only adapted for greenhouse culture. There is one species, *G. soja*, that is a hardy annual, a native of Japan, that produces seeds like small kidney beans, which the Japanese use in large quantities, either in soup, or in making a sauce called sooja or soy, this sauce being used in many of their dishes. The *Wistaria* was formerly incorrectly called Glycine."

Note 1. This is the earliest document seen (Dec. 2004) by Peter Henderson or his company that mentions the soybean. However, there is no indication that he is selling any of the plants or seeds described in this book.

Note 2. This book is divided into two parts: (1) A description of different plants, listed alphabetically, and (2) a useful "Glossary of botanical and general horticultural terms and practices, with synopses of the natural orders, etc." Includes terms such as: Corolla, dicotyledons, papilionaceous, soil, and sowing. Peter Henderson lived 1822-1890. Written on the title page: "Author of *Gardening for Profit, Practical Floriculture, Gardening for Pleasure,* etc. etc." A description of each book is given on p. 412.

Also discusses: Sesamum. Bene Plant. *S. Orientale*, a native of the East Indies, "is the Bene Plant of our gardens, and of domestic medicine, being used with excellent results in severe cases of dysentery. It is now grown for that purpose in the vicinity of New York and other large cities... In the Southern States and in Africa this species was, and is yet to some extent, considerably grown for the oil the seed yields, which oil will keep many years without acquiring any rancid taste or smell. When first made it is quite heating, and is used as a stimulant; but after two or three years it becomes quite mild, and is used as a salad oil. The seeds are used by the negroes for food, which they prepare in various ways. In Japan, the oil is used as we use butter in cooking." Address: 35 Cortland St., New York.

1177. McBryde, John M. 1881. Experiments with corn and other crops. *Report of the Experimental and Other Work of the School of Agriculture, Horticulture & Botany of the University of Tennessee* 2:142-76. See p. 172. For the session 1880-81.

• ***Summary:*** The section titled "Soja bean" (p. 172) states: "This plant (*Soja hispida*) is, according to some, a comparatively recent import from Spain. The plant is really a native of the East Indies [Southeastern Asia, incl. India, Indonesia, Malaysia, and the Malay archipelago], where it is largely grown as a staple article of food. It is beginning to

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attract attention in several countries of Europe.

"This bean is an essential ingredient of the celebrated Soja Sauce. The seed contains about 34 per cent. of albuminoids and the straw about 9 per cent. It is therefore regarded as 'the vegetable which approaches nearest in chemical composition to animal food (meat) containing, as it does, one-fifth of its weight of fat and about two-fifths of nitrogenous matter.'

"A small quantity of seed was procured last spring and planted on April 27th, in drills 2½ feet apart. They came up very well" and the plants stood the drought well. The yield, in view of the drought and abundant weeds, "was a remarkably good one. The plant is both hardy and prolific, and will probably give a heavy crop in a favorable season."

Note 1. The soybean may have been grown in Spain at this time.

Note 2. This is the earliest English-language document seen (April 2012) that uses the term "Soja Sauce" (or "soja sauce") to refer to soy sauce.

Note 3. Other crops discusses in this article: Indian corn, dhurra, sorghum, drooping sorghum, Johnson grass or Means' grass, rye, barley, upland rice, millets, buckwheat, teosinte, prickly comfrey, tobacco. Address: Prof. of Agriculture, Horticulture and Botany, Knoxville, Tennessee.

1178. Paillieux, Auguste. 1881. Le soya, sa composition chimique, sa culture et ses usages [The soybean, its chemical composition, culture, and uses]. Paris: Librairie Agricole de la Maison Rustique (26 Rue Jacob). 126 p. 28 cm. [42 ref. Fre]

• ***Summary:*** This is largely a reprint in book form of Paillieux's excellent article by the same title published in the September and October 1880 issues of the *Bulletin de la Societe d'Acclimatation*. The arrangement of text on the pages is somewhat different from (and clearer than) the earlier publication, and it contains small amounts of new information–as on p. 87-88.

Note 1. This is the first book about the soybean published in French and the second book on the soybean published in the western world; the first was by Haberlandt in 1878. This book contains only one unimportant illustration, the same one found in the preceding articles.

2. In France (Dec. 2011) there is "une Rue Paillieux" at Crosne. Since it is on the same page on the Web as Nicolas Auguste Paillieux–http://jacques. colliard.pagesperso -orange.fr/ JournalFamille/ Salats_MJEa.h tml–it is probably the same Auguste Paillieux. Address: Membre de la Societe d'Acclimatation, France.

1179. Phares, David Lewis. 1881. Farmer's book of grasses and other forage plants, for the southern United States. Starkville, Mississippi: Published by the author. J.C. Hill, printer. 148 p. See p. 19. 22 cm.

• ***Summary:*** "Glycine hispida Japan pea: This bean (it is not a pea) came under my observation some twenty-five years ago [i.e. in about 1856], as the Japan Pea. It was then cultivated to a limited extent for a few years; but ceased to attract attention till the close of our civil war: when it was again widely sold as the Southern Relief Pea. The catalogues name it Soja hispida. Though not a climber, it may be the Dolichos Soja, or Soy bean of China and Japan.

"In this country, this bean is probably not esteemed so highly as it should be either for the table or for forage. Few people bring it to the table more than once; for when prepared as other beans it is inedible and disgusting. But when the ripe seeds are soaked from twelve to twenty-four hours they may be cooked so as to afford a most delicious and nutritious dish. The soaking changes the shape of the bean from globose to oblong."

"This is probably the Sooja or Miso of Japan so much used in soups in that country. The soy or sauce made from these seeds is used three times a day, as salt with us, in nearly all dishes. The favorite Chinese curd-like dish, *Teu hu*, also is made of these beans."

Phares lived 1817-1892. He resided in Mississippi in 1881, and says that he observed soybeans being cultivated in about 1856, but it is not clear that they were being cultivated in Mississippi, either in about 1856 or at the time this letter was written. Later documents (Riley 1909) prove that soybeans were grown in Mississippi as early as 1857.

Note 1. This is the earliest American document seen that uses the term "Glycine hispida" to refer to the soybean.

Note 2. This is the earliest document seen (April 2008) that mentions the soybean in connection with the U.S. Civil War. Address: A.M., M.D., Prof. of Biology, A&M College of Mississippi, Sanitary Commissioner for the State at large of Mississippi.

1180. Thurber, Francis Beatty. 1881. Coffee: From plantation to cup. A brief history of coffee production and consumption. New York, NY: American Grocer Publishing Co. xiv + 416 p. No index.

• ***Summary:*** This book contains a very long Appendix that covers many different subjects unrelated to coffee. In the section titled "Chinese notes" (p. 279+) is a subsection on "Canton manufactures–Sweetmeats, preserved ginger, soy, etc." which includes the following (p. 294): "'Soy' has always been a mystery to me, as I fancy it has been to most other people who have dealt in or used it. I was therefore anxious to see a soy factory, and taking a boat one day we proceeded two or three miles up the river to where one was in operation. I found that the principal ingredient or base is a white bean known as 'paktoh,' which, so far as I could judge, is very like any other small white bean. These are boiled, heavily salted, and put into big earthen jars, holding, perhaps, half a barrel each, where they are allowed to remain for about ten days, during which period fermentation takes place. They are then mashed up with a species of olive [sic].

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which is picked and boiled, and this mixture is placed into neat cloth bags, into which water is poured and allowed to percolate. The liquid is then taken out, placed in clean jars, and thickened with a heavy-bodied Chinese molasses, and this is soy. Thinned down with water, the Chinese use it as a sauce, and although when thick it is rather disagreeable than otherwise, when thin it has certainly a toothsome flavor and gives a zest and relish to meats, fish, etc. Most of the soy manufactured here is shipped to England, where it is used in large quantities as a base for the manufacture of sauces."

Note: Maybe the soy sauce used to make Worcestershire sauce in England came from Canton! In what other sauces was it used in England at this time?

1181. Wein, Ernst. 1881. Die Sojabohne als Feldfrucht: Zusammenstullung der vorliegenden Cultur- und Duengungsversuche fuer den praktischen Landwirth [The soybean as a crop: Compilation of the existing cultivation and fertilizer trials for the practical farmer]. Berlin: Verlag von Paul Parey. 50 p. [7 ref. Ger]

• ***Summary:*** This book is identical in content to a 50-page article also published in 1881 in *Journal für Landwirthschaft* (29:563-613)–which see for table for contents and details. However a dedication page states that the book is dedicated to the director of the Bavarian agricultural research station, Dr. Julius Lehmann. A forward notes that it was written in Munich, i.e., South Germany. Address: Munich, Germany.

1182. *Rural New-Yorker.*1882. Notes from the experimental grounds of the Rural New-Yorker [The Hairy Soja Bean]. 41:9-10. Jan. 7.

• ***Summary:*** A large, excellent illustration (line drawing, by W. Scranton of the *Rural New Yorker*) shows three leaves, several clumps of pods, 3 seeds, and the upper stems of soja bean plant.

"The Hairy Soja Bean ["Hairy" is based on the German term "rauhaarigen"], of which an original sketch is now presented,... was first brought to our notice by Professor Geo. H. Cook of the Rutgers Scientific School of New Brunswick, New Jersey... he says that when in Munich in 1878, he saw the Soja Bean in cultivation as a new crop, and probably a desirable addition to our forage products. It was seen in the grounds of the Bavarian Agricultural Experiment Station, and was in very vigorous growth. The gentleman in charge gave him a few seeds; and seeds of several other varieties of the same plant were procured at Vienna by Mr. James Neilson. Both planted them and gathered crops of the different kinds in 1879. The following is a translation of a part of a paper sent out from the Bavarian Experiment Station to those who were growing and testing the capabilities of the new plant: "Two years ago Professor Haberland [Haberlandt], of Vienna, an untiring botanical experimenter, introduced to us a plant whose pleasant-tasting seeds are rich in albumen and fat in very digestible forms. This plant is the Hairy Soja Bean (Soja hispida, Moench). Professor Haberland found samples of the seed at the Vienna Exposition among the agricultural products of China, Japan, Mongolia, Transcaucasia and India... Its seeds, boiled or roasted, have a pleasant taste, and form an almost daily part of the food in India, China and Japan."

Experiments were made in various parts of Bohemia, Moravia [both in the Czech Republic as of Jan. 1993], Southern Austria, Styria [the capital of Graf in today's Austria], Hungary and Upper Silesia in 1876. The next year 135 trials were made under various climatic influences from the well-ripened seeds from these crops. Professor Schwackerhofer, of Vienna, has analyzed the original and the harvested seed, and the Soja straw.

The article then summarizes two articles on soybeans, one from *La Nature* in France (July 1881) and another from *Gardener's Chronicle* in London (18 Sept. 1880).

"Seeds of the Soja Bean were sent to us by Mr. James H. Gregory [seedsman] of Marblehead, Massachusetts, at our request, last winter." The Rural New-Yorker grew them, and concluded: "While the leaves and stems were quite green our cattle eat them with evident relish but the relish was less apparent as they ripened–and they were refused entirely after being cut and dried. From the above test we should never raise the Soja Bean as a fodder plant. Many kinds of the cow-pea, as may be seen from our reports in these columns during 1880, will yield five times the amount of vine and leaves."

1183. *Otago Witness (New Zealand).*1882. Gleanings. Jan. 21. p. 7.

• ***Summary:*** "M. Roman, a French engineer, states that the cultivation of the interesting plant, the soja or soya, has been largely developed in Hungary and in various parts of France. He thinks that it may in the future become as important an article of food as the potato. It grows in any soil, even the driest; and the plant is an excellent fodder for cattle. The seeds are very nutritious and have the form of small kidney beans. An agreeable soup [miso soup] may be made of them. The Chinese use them for various kinds of cheese [tofu, fermented tofu], to make a condiment with oil [soy sauce? The second character in basic Chinese word for "soy sauce," *jiang-you,* means "oil"], &c. In France the seeds are roasted like coffee, and M. Roman says the decoction of the soja bean is very similar to that of average coffee."

Note 1. This article also appeared (again in the "Gleanings" section) in the May 6 (p. 7) issue of this newspaper.

Note 2. This is the earliest document seen (March 2010) concerning soybeans (the soja or soya) in connection with (but not yet in) New Zealand.

1184. Kraevskii, -. ed. 1882. Peterburskago sobranii sel'skikh khoziaev: 16-go fevralia 1882 goda [St. Petersburg

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meeting of agriculturists: 16 Feb. 1882]. *Golos ("Voice")* (*St. Petersburg, Russia; Newspaper*) No. 72. March 18. p. 5. [Rus]

• ***Summary:*** This full-page article begins: Head of the meeting: "Our colleague, K.A. Skachkov, who is well acquainted with China and its agriculture, will present his report about the soybean and its use in Chinese agriculture."

K.A. Skachkov: He notes the previous mention of soybeans by A.V. Sovetov. Soybeans are considered "new" only in Europe; they have existed for centuries in China and Japan, where they are well documented in monographs on soybeans. He discusses soybeans in northern China (methods of cultivation, climate, yield) and uses of soybeans in China and Japan such as soy sauce (*tsiap yu*), jiang (after processing soybeans to make jiang, which is fermented, the jiang is used to pickle the roots of vegetables which, being well salted, are eaten between meals and called *jiang-tsai*), soybean prices in Russia, and various types of tofu (*age-dofu, yaki-dofu,* etc.). He notes that in China soybeans are not sold in raw form (?), but can be obtained from factories.

After the talk, the head of the meeting asks if there are any questions or comments; various Russian participants (not only Skachkov) answer the questions. First, K.A. Skachkov comments on the preparation of tofu; the "60-day" soybean is best planted during the latter half of June in Russia.

E.I. Ragozin, asks: "What are the practical uses of the soybean for us [in Russia]? How can it be used in our agriculture? Can it be used only as feed for livestock or can it play a more important role? It is very interesting to discuss the theoretical possibilities of soybeans, but in my opinion it would be better to put them to use." A.V. Sovetov replies that, as he has discussed in a previous report, the soybean can be used as both livestock feed and human food. "It is of high nutritional value and contains twice as much nitrogen as meat, but only 18% fat. The answer to the question of how soybeans can be assimilated into Russian agriculture (and how successfully it can be bred here) lies in numerous experiments and trials of actually growing this plant here. Podoba has already proven that it can be grown in the far southern region of Russia (Tavricheskaia), as has Chernoglazov in the Poltavskaia region and Levanda in the Kiev region. However, I do not known how far north soybeans can be grown, although I have heard of trials in the Voronezhkaia region."

A.S. Ermolov: "My cultivation of soybeans in the Voronezhkaia region was not successful. I know that they are not acclimatized to withstand frost." Again A.V. Sovetov replies that soybeans can handle a light spring frost, but an early fall frost kills soybean plants just as it does pea plants. As Podoba reports, it can survive temperatures 2-3°C below zero. Discusses successful times and temperatures for soybean cultivation.

A.S. Ermolov: "Nevertheless, the soybean plant is fairly easily acclimatized. I talked about this matter with Friedrich Haberlandt, who agrees with me. It is just a matter of obtaining the right varieties."

Head of the meeting: "I would like to add that with time and patience, plants can be gradually acclimatized to almost any environment." A.V. Sovetov, in agreement, adds: Cucumbers and pumpkins, which are warm-weather plants, have been acclimatized to the colder climates of northern Russia. Likewise with beans. E.I. Ragozin adds that he cultivates beans here in the St. Petersburg region.

A.S. Ermolov concludes that soybeans can be cultivated perfectly well in at least *southern* Russia. However, he still questions how soybeans can be used in Russia. None of the other agriculturists at this meeting have told the society how they use the soybeans they grow, so Ermolov suggests listening to the ideas Sovetov has and will present.

A.V. Sovetov: Soybeans can be used to make: Soybean broth, a substitute for beans or peas, soybean potato cakes, a mixture with rice or corn. Soybeans have a very high nutritional value. They can also be used as a feed for livestock, or as food for the army or navy.

Head of the meeting: Difficulties in cultivating this plant should not prevent us from trying.

E.I. Ragozin: Would it be possible for me to obtain and attempt to cultivate the 60-day bean plant? A.V. Sovetov: Of course, but this 60-day bean plant is not a soybean plant, so the previous statements may not apply to it. Head of meeting: Closing remarks.

1185. J.R.F. 1882. The soy bean (Soja hispida). *Garden (The)*. July 29. p. 93.

• ***Summary:*** "A good deal of attention has lately been directed to this plant in consequence of the enormous extent to which it is cultivated in China for the sake of the small seeds which it produces, and which are known as Soy Beans. These vary considerably in size, shape, and colour, according to the variety of the plant which produces them... These seeds contain a large quantity of oil, which is expressed from them in China and used for a variety of purposes. The residue is moulded with a considerable amount of pressure into large circular cakes, 2 ft. or more across, and 6 in. or 8 in. thick. This cake is used either for feeding cattle or for manuring the land; indeed, a very large trade is done in China with Bean cake (as it is always called) for these purposes. The well-known sauce called soy is also prepared from seeds of this Bean. The plant generally known as Soja hispida is by modern botanists referred to Glycine Soja."

An excellent illustration shows a mature soy bean plant bearing many pods, plus a close-up of three pods to the lower right of the plant. Address: England.

1186. D'Utra, Gustavo. 1882. Soja [Soya]. *Jornal do Agricultor (Brazil)* 4(7):185-88. Sept. 16. [Por]

• ***Summary:*** The name of this plant comes from the Japanese. The soybean was cultivated at the Bahia School

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of Agriculture in 1882. He notes that Soja and Daidsu are Japanese names, that the Japanese use soybeans to make a paste called miso, which can be used as a substitute for butter, and a sauce called sooia or soja, which can be used to season meat.

The Chinese also use the soybean (*a soja, Dolichos sinensis*), also known as the bean of the Indies (*feijao das Indias*) a food known as *kitjap* [soy sauce].

Sr. Dias da Silva Junior (the editor of this journal) has distributed soybean seeds free of charge.

Note 1. This is the earliest document seen (May 2009) concerning soybeans in Brazil or South America, or the cultivation of soybeans in Brazil or South America or Latin America. This document contains the earliest date seen for soybeans in Brazil or South America or Latin America, or the cultivation of soybeans in Brazil or South America or Latin America (1882). The source of these soybeans is unknown.

Note 2. This is the earliest Portuguese-language document seen (April 2012) that uses the word *sooia* or the word *soja* or the word *Kitjap* to refer to soy sauce. Address: Engenheiro-Agronomo, Rio de Janeiro, Brazil.

1187. Fox & Co. 1882. English sauces! (Ad). *Hartford Daily Courant* (*Connecticut*). Sept. 20. p. 2, col. 4.

• ***Summary:*** "L. & P. [Lea & Perrins] Worcestershire Sauce, Bengal Chutney Sauce, Harvey Sauce, Anchovy Sauce, Mushroom Sauce, India Soy [sauce], John Bull Sauce. Wholesale and retail." Geo R. Clark, Jas. H. Parker [proprietors].

Note: This ad also appeared in the Sept. 22 (p. 2) issue of this newspaper. Address: 17 Central Row.

1188. Mene, Édouard. 1882. Des productions végétales du Japon [The vegetable products of Japan]. *Bulletin de la Societe d'Acclimatation* 29:466-90. Sept. See p. 477-90. [40 soy ref. Fre]

• ***Summary:*** This excellent review of earlier publications and work, which is largely about the soybean, contains 40 references to earlier publications, many of them from the *Journal of the Society for Acclimatization* and from early European botanists. Much of the information is taken from earlier issues of this periodical and from the book *Le Japon a l'Exposition universelle de 1878.*

Contents: The soybean (*Soja hispida, O mame: Daizu*, p. 477). The wild soybean (Glycine hispida, Soja hispida, p. 477; it is found in the wild in the coastal regions of the island of Kyûshû. Called *Tsuru-mame* and *Nô-mame* by Franchet and Savatier. Soybeans in the catalog of the Japanese Universal Exposition of 1878: No. 24–The black soybean (*Kuro-mame*), No. 25–The white soybean (*Shiro-mame*), No. 26–The green soybean (*Ao-mame*), No. 37–The black soybean speckled with white (*Gankui-mame*). Where the soybean is cultivated: Not only on the island of Japan, but also in India, on the island of Ceylon, on the Malacca peninsula (i.e., Malay Peninsula), on the Philippine islands, in Borneo, Java, in the Kingdom of Siam, in Cochin China, at Tong-King [Tonkin, formerly in North Vietnam] and throughput China, but mainly in Mongolia and in the provinces of Honan, Shengking [Liaoning], Shantung, and Shansi.

Note 1. This is the earliest document seen (May 2010) concerning soybeans in Malaysia, or the cultivation of soybeans in Malaysia. This document contains the earliest date seen for soybeans in Malaysia, or the cultivation of soybeans in Malaysia (1882). The source of these soybeans is unknown.

Note 2. This is the earliest document seen (May 2010) concerning soybeans in the Philippines, or the cultivation of soybeans in the Philippines. This document contains the earliest date seen for soybeans in the Philippines, or the cultivation of soybeans in the Philippines (1882). The source of these soybeans is unknown.

Note 3. This is the earliest document seen (May 2010) concerning soybeans in Siam (renamed Thailand in 1938), or the cultivation of soybeans in Siam. This document contains the earliest date seen for soybeans in Siam, or the cultivation of soybeans in Siam (1882). The source of these soybeans is unknown.

Note 4. This is the 2nd earliest document seen (May 2010) concerning soybeans in Siam Vietnam, or the cultivation of soybeans in Vietnam. This document contains the 2nd earliest date seen for soybeans in Vietnam, or the cultivation of soybeans in Vietnam (1882). The source of these soybeans is unknown.

The Chinese exposition (class 73) contains samples of all the varieties of soya cultivated in the provinces of the empire: No. 2991 and 3000–Green, white, black, yellow, striped / streaked / variegated (*panachés*), and red soybeans. Source: Chinese customs at Newchwang. No. 3014-3016–Yellow, black, and green soybeans. Source: Customs at Tientsin [Tianjin]. No. 3058 to 3061–Yellow, green and black soybeans., from the customs at Chefoo [Yantai]. No. 3091. Yellow soybeans, from the customs at Chinkiang [Zhenjiang]. No. 3103 to 3109–White, red, black, and yellow soybeans from the customs at Shanghai. No. 2135 to 3128–White, black, red, and green soybeans from the customs at Wenchow [Wenzhou]. No. 3152 to 3156–White, green, and black soybeans from the customs at Takow [Kao-Hsiung].

At the Japanese exposition (class 74, condiments and stimulants) are samples of miso and shoyu from Tokyo and the province of Hizen, especially the town of Nagasaki.

The Chinese exposition also contains in class 74 (condiments and stimulants) samples of soy sauce [*soye, soya*] called *Tsiang-yeou* from the Chinese customs at Chefoo, Ning-po, Wenchow, and Canton. The Chinese often add aroma in the form of star anise, green anise, and orange rind. Chinese soy sauce is made with yellow soybeans called *Houang-téou.*

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Descriptions of how to make shoyu, miso, tofu, and soybean oil based on earlier European publications (p. 479-83).

In France, Mr. Vilmorin and Dr. Adrien Sicard (of Marseilles), both of whom are involved with soybean cultivation, have prepared soy cheese (*fromage de Soja*) numerous times. Dr. Sicard has made both the white cheese and the red cheese; the latter is rolled in a powder made by grinding red sandalwood (*santal; Pterocarpus santalinus*), mace, and cinnamon (p. 482).

In China, quite a few soy oil factories are found at Calfond in Henan, at Tsinan in Shantung, and at Tayeurn in Shanxi. But the center of soy oil production in China is Ning-po in Zhejiang / Chekiang. From the port of Ning-po and from a port on the island of *Tcheou-chan* [*Zhoushan?*] a large number of junks, carrying only soy oil, depart. Two other manufacturing centers are Newchwang and Chefoo (p. 483).

There follows a long section on the introduction and acclimatization of the soybean in Europe (p. 484-89) based on earlier European documents.

The next section, about kudzu (*Pueraria Thunbergiana*, p. 489-90) cites 9 early references, including *Le Japon a l'Exposition universelle de 1878*, vol. II, p. 153). Address: France.

1189. Lea and Perrins. 1882. In consequence of imitations of Lea & Perrins' Sauce... (Ad). *Illustrated Sporting & Dramatic News (The)*. Oct. 14.

• ***Summary:*** "... which are calculated to deceive the Public, Lea & Perrins beg to draw attention to the fact that each Bottle of the Original and Genuine Worcestershire Sauce bears their Signature, thus [the Lea & Perrins signature is written].

"Sold wholesale by the Proprietors, Worcester; Crosse and Blackwell, London; and Export Oilmen generally. Retail by Dealers in Sauces throughout the World."

Note: This ad, containing an illustration of a bottle of Lea & Perrins Worcestershire Sauce, is 2.5 inches wide and 2.75 inches high.

1190. Giliaranskii, V.P. 1882. Monografiya Kitaiskago maslichnago gorokha "Soja hispida" [Monograph on Chinese oil-bearing pea plant *Soja hispida*]. *Trudy Imperatorskago Vol'nago Ekonomicheskago Obshchestva, St. Petersburg (Transactions of the Imperial Free Economic Society)* 3(3):269-71, Nov.; 3(4):435-50. Dec. [10 ref. Rus]

• ***Summary:*** Part I (Nov.): Soybeans were introduced to Russia to increase the country's food production. Discusses the nutritional value of soybeans. Haberlandt introduced the cultivation of soybeans to Europe, and his trials proved that soybeans could be successfully grown in various European countries. However Podoba was the first who practically / experimentally proved the success of soybean in Europe. Podoba also installed a laboratory partner named Fein in southern Russia. The first popularizer was A.V. Sovetov, who initiated further projects and data collection.

Giliaranskii began his work in 1881 when he received 5 soybean seeds from his director, Nikolai Pavlovich Ill'inu, who also allowed Giliaranskii to use his equipment and laboratory. In 1880 the Asian Department of Foreign Ministry (of Russia) obtained soybean samples by demand. In the same year, crop information about soybeans was received from the Consulate.

In the text, Giliaranskii then cites five documents that were helpful to him in compiling this article: (1) Organov, N. 1881. *Soia ili maslichnyi gorokh (Soja hispida *)* [Soybean or oil-bearing plant (Soja hispida *)]. *Trudy Imperatorskago Vol'nago Ekonomicheskago Obshchestva, St. Petersburg* (Scholarly Works of the Imperial Free Economical Society 1(2):184-198. Feb.; 1(3):304-325. March). (2) The publications of Dr. Bretschneider, who was on a mission to Peking. (3) La Planta Soja hispida, by Geerts, a report from a mission to Japan. Chapters 3 and 4 from Part 1; Chapters 4 and 5 from Part 2 (translation from French), including much information about soy sauce and miso. (4) The famous book: Haberlandt, Friedrich, 1878. *Die Sojabohne: Ergebnisse der Studien und Versuche ueber die Anbauwuerdigkeit dieser neu einzufuehrenden Culturpflanze* [The soybean: Results of studies and trials on the potential for growing this newly introduced crop plant]. Vienna, Austria-Hungary: Carl Gerold's Sohn. ii + 119 p. (5) *Oesterreichische Monatsschrift für den Orient* (Vienna). 1881. *Die japanische Sojabohne als Nahrungsmittel* [The Japanese soybean as a source of food]. 7(12):204-05. Dec. 15.

Part II (Dec.): Chapter 1. Oil of soybean seeds (*Maslo semian soi*). Bretschneider discusses the taste and use of soybeans in Russia. Karl Brendt is mentioned again. Giliaranskii states: "My yield included 40 *zolotnik* (1 *zolotnik* = 4.26 gm) of oil, produced from the variety of seeds received from Mr. Podoba. The oil was extracted using sulfuric ether. I had about 4 lb of soybeans, which I ground in a coffee mill. Then I immersed the flour in ether in a test tube for 4-5 days. Almost all of the oil was extracted. I also extracted the oil using carbon bisulphide, but the yield was 1.5% less than with sulfuric ether.

"I also tried to extract the oil using petroleum ether, but again the yield was unsatisfactory. In addition, the petroleum ether dissociates from the soybean oil, thus changing the latter's smell and taste. The product known as *rigolen*, which has a boiling point of 35°C, would be the best solvent of all, it is impossible to obtain in St. Petersburg.

"The oil I extracted using sulfuric ether had a clear, heavy yellow color, similar to olive oil in color and viscosity... however as time passes, under certain conditions, it becomes black in color." Through his experiments, Giliaranskii proved that soybean oil contains nitrogen. Sato and his experiments are mentioned (p. 436-37).

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A table (p. 437-38) gives the percentage composition of soybean cake (water, protein, fat, nitrogen-free extract, cellulose, ash), with two columns based on the research of Völcker (1872) and J. Küehn (see Pott 1889, p. 490). Soybean oil cakes, known in English as "bean-cakes," are an important export from the port of Newchwang to southern China, especially to Syamou (?). Discusses the price of soybeans.

Chapter 2. Uses of soy sauce (in China, as well as Europe). Methods of preparing soy sauce are described in numerous Chinese and Japanese publications, but also in European publications such as: (1) *Etude pratique du commerce d'exportation de la Chine*, by N. Rondot (1848, Renard, p. 188). (2) *Chinese Commercial Guide*, by W. Williams (1863, Hong Kong, p. 139). (3) Newspaper article by K.A. Skachkov in *Golos* [Voice] (No. 72, 1882). The main ingredients used in making soy sauce are yellow soybeans (*Soja hispida*, Shiro-daizu or Teppo-mamé or Shoyu-mamé), wheat koji, salt, and water. A detailed description of the process is given. Amazake is sometimes added to soy sauce to give variation in the flavor. Kinch's analysis of Geerts' data (p. 443) gives the relative density of soy sauce as 1.199. The density of soy sauce solids is 359.88 gm/liter. A table (p. 443) gives the density (in gm/liter) of soy sauce constituents as follows: Ash 195.16. Sugars 31.03. Albumen 41.00. Acids 6.20.

Chapter 3. Sauce *miso* or *dai-dzu-ko*. Describes seven different types of Japanese miso and how each is made: 1. Original miso or *shiro miso*–white with little salt. 2. *Chu-miso*–very salty. 3. *Aka-miso*–red, prepared with koji. 4. *Nagoya-miso*. 5. *Kinzanji-miso*–made with soybeans, eggplant and gingerroot. 6. *Mugi-miso*–made with barley and soybeans. 7. *Kogane-miso*–a type of *aka-miso*. A table (p. 445) compares the nutritional composition of *shiro-miso* and *aka-miso*.

Chapter 4. Tofu. Chinese name: doufu. English name: bean-curd. Japanese name: tofu. Yellow soybean varieties (*Gogwatsu-mamé*, *Wase-mamé*, and *Natsu-mamé*) are widely used in Japan to make tofu. A table (p. 447-48) gives the percentage composition of tofu, with two columns based on the research of Kinch (1880) and Geerts (1876). Tofu is seen as an excellent alternative for dairy cheeses.

Chapter 5. Preparation and composition of dried-frozen tofu (kori-tofu) and other types of tofu (dried cheeses). A table gives the nutritional composition of kori-tofu (based on Kinch 1880). Also discusses *agé-tofu*, *abura-tofu*, and yuba. Describes the method for preparing yuba, which is eaten in soups in Japan. Several tables were summarized by Nikitin in Russian (1900) and German (1901). Address: USSR.

1191. Paillieux, Auguste. 1882. Yaye nari.–*Phaseolus radiatus* L. [Azuki bean, or Yaye nari]. *Bulletin de la Societe d'Acclimatation* 29:641. Nov. [Fre]

• ***Summary:*** Mr. Paillieux, vice-president of the Society, is presiding at the meeting on 6 June 1882. He offers the members present the seeds of various edible plants, about which he gives the following information: "The Yaye nari belongs to a race of beans which are very esteemed in Japan and which bear the name Azuki, *Phaseolus radiatus* of Linnaeus. The varieties of Azuki are numerous. I cultivate the summer (*Natsu*) azuki, which is early and red. I have given up on the autumn (*Aki*) azuki, which is late. This spring, for the first time, I planted the white (*Shiro*) azuki.

To these names one must add those cited by the Japanese author of *Japan at the Universal Exposition of 1878*, that is to say the Hine [Hime] no azuki, Dai nagon [Dainagon] azuki, and the Yaye nari. *An*, a sweetened bean paste widely employed in confectionery, is made with the azuki and sugar. The cake or confection named *yokan*, according to several authors, is also made with the azuki. Azuki flour is also used to remove fat or grease from fabrics.

"I have eaten a puree of summer azuki and I found it very delicious. It does not have a flavor like our Haricot beans, but more like a mixture of Haricots and lentils.

"I received from my helpful correspondent a sweetened dish named *yokan*, and I had some prepared for me by Mr. Mamoz. It is rather tasty, and it could be a popular confectionery product if it could be sold at a low price, however sugar is very expensive in France.

"I have not yet tasted the Yaye nari, of which I present some seeds to you today. Last year I planted only a few bunches, but the importance of its culture in Japan and China is without doubt. Seeds have been sent to M. Vilmorin Andrieux and Co., and to Mr. Faivre, of Beaune. It seems to mature earlier than the summer azuki. I believe therefore that it is now time to plant the seeds I am offering to you. I would be very grateful if you would let me know next year what results you obtained.

"I would like to take this occasion to say several words about an operation that is very widely used in Japan and in China. I believe it is applied to both the soybean and to the azuki.

"Be that as it may, in Japan, the azuki is soaked in water and then allowed to sprout, in a warm dark place, in earthenware vessels. Then they are washed with a large quantity of water to remove the seed coats, and the sprouts are consumed under the name of Moyashi ("eye and legs"). It goes without saying that one cooks them first in salted water and then in shoyu. They are rather tasty, and this is an easy way to provide a fresh vegetable in winter.

"I am indebted for this information to Dr. Hénon, Abbot David and Abbot Perny, and of course Mr. Eugène Simon; they have told me that the etiolation of germinating seeds is widely practiced in China and yields a good food." Address: France.

1192. *Indian Agriculturist (The)* (*Calcutta*). 1882. The Japan Pea in India. Dec. 1. p. 454-55. [2 ref]

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• ***Summary:*** "If all accounts of this vegetable be true, it is a most important addition to the stock of Indian food, and fodder plants." An American paper writes of it: -

"'The Japan Pea is the most productive as well as good food for all kinds of stock; horses, cattle, sheep, and hogs will eat the peas, stems, and leaves, if harvested before fully matured, and cured like all other hay, with as much relish as they do corn. Then, there is no pea for the table–it is soaked in water the night before cooking–that has a more exquisite flavour. They grow on a stout bushy stalk from two to three feet high, somewhat resembling the cotton plant. The main stalk, as well as the branches of the limbs, are literally loaded with small pea-pods, filled with little yellow peas, similar in colour, size, and flavour, to the English garden pea. The way to get the greatest yield is to plant in hills two and-a-half feet each way, allowing but one stalk to the hill to remain after the first working. That will give you 6,960 stalks to the acre, and on ordinary land, cultivated the same as corn, will average at the lowest estimate a pint of shelled peas to the stalk, or a fraction over 108 3/4 bushels per acre. With high cultivation and good soil, it would be an easy matter to double that yield: besides, there is no other crop that will yield more hay to the acre. It is a sure cropper, neither wet not dry weather materially interferes with the quantity or quality of the yield.'

"In a paper on the Soy bean, as the Japan pea is sometimes called, Mr. Kinch, Professor of Chemistry at the Royal Agricultural College, Cirencester, says, that it is worth more than a passing notice, as it is the vegetable which approximates most nearly, in its chemical composition, to animal food:

"'The Soy bean is extensively cultivated in the north of China, whence it is exported to the southern provinces: it is here pressed for the sake of its oil, and the residual cake largely used as food for man and beast, and also as manure. In Japan it is known by names signifying the bean, and from it are made not only *soy* [sauce] but a paste, known as *miso*, which is in constant request at nearly every meal, *tofu* or bean cheese, and other foods used to a less extent. This bean cheese is also well known in China, and is obtained by extracting the legumin from the beans with water, and precipitating it with brine. These foods are most valuable additions to the dietary of the Oriental nations, and especially of the Japanese, who use so little animal food; they tend to supply the deficiencies of the staple food, rice, nitrogenous matter, fat, and also in mineral constituents. The Buddhist priests, who are strictly forbidden the use of animal food, consume considerable quantities of these beans, principally in the form of *miso*. The soy bean first attracted attention in Europe in the year 1873, when specimens from Japan, from China, and from India were shown at the Vienna International Exhibition. Dr. Forbes Watson, Reporter on the products of India, called attention to it in the catalogue of the exhibits of the India Museum. Since then, numerous experiments have been made on the European continent on its growth, and also feeding experiments with the bean and its straw, on different kinds of animals, have been prosecuted. Such experiments have been carried on by Woolling and Wein at Munich; by Haberlandt, Lehman, Harz, Stahel, Zimmerman, Siewert, Wieske, and others, at various stations in Germany, Austria, and Hungary; and experiments have also been made in France and in Italy... The kinds most suited for cultivation there are the yellow, brown, round black, and long black varieties, especially the first three named.'"

"'Taking into account the great richness of these beans in valuable food constituents, their easy digestibility, the value of the straw, and the great probability of some variety being able to be acclimatized without great trouble, this *soja hispida* is worth consideration. The bean would form an exceedingly useful addition to the food of the poorer classes, as a substitute for a portion of the animal food which in the kitchens of the labouring classes is so wastefully cooked. One use it has already found, not altogether to be recommended, *viz.*, after roasting, as an adulterant of, and substitute for, coffee.'"

Note: This is the earliest English-language document seen (Feb. 2004) that uses the term " bean cheese" by itself (with a space before the word "bean," and where it is not preceded by the words "soy," "soya," "soja," etc.) to refer to tofu. Address: India.

1193. *Waikato Times* (*Waikato, New Zealand*).1882. Gleanings: The soy bean. Dec. 7. p. 3.

• ***Summary:*** "A recent number of the *Agricultural Students Gazette* (Royal Agricultural College, Cirencester [England]) contains an article by Prof. E. Kinch on the Soy bean (*Soja hispida*). This bean, of which there are a dozen or more varieties known in the East, is very largely used as an article of food in Japan and China, where it is manufactured not only into soy [sauce], now exported in considerable quantities to Europe, but also into bean cheese [tofu] and other forms of food..."

"Prof. Kinch is trying to grow one of the varieties in the Botanic Garden at Cirencester, and though our climate is probably too uncertain, and the temperature often too low for most of the varieties to attain perfection, if any of them could be acclimatized, a valuable leguminous crop would be added to our present list."

1194. Mason, Francis. 1882-1883. Burma, its people and productions: or, Notes on the fauna, flora, and minerals of Tenasserim, Pegu, and Burma. 2 vols. Rewritten and enlarged by W. Theobald. Hertford, England: Published by order of the Chief Commissioner of British Burma, by S. Austin & Sons. 19 cm.

• ***Summary:*** The previous edition of this work was published in 1860. This edition is greatly enlarged and expanded. In

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Volume II (published in 1883), on page 513, in the section on Leguminosae, under *Glycine* we read that *Glycine soja* is cultivated in Ava. "Erect. Flowers in small axillary clusters. Pods 1-1½ in. long, almost falcate. Seeds 3 lines long, slightly compressed, pale-coloured.

"The word 'soja' is a variation of the Japanese 'soya,' whence our word 'Soy,' for a sauce prepared in China and Japan from the seeds of one or more species of *Dolichos* or allied genera."

Note 1. Pickering (1879, p. 763) states: "Westward, *S. hispida* was observed by Mason in Burmah."

Note 2. This is the earliest document seen (May 2010) that clearly refers to soybeans in Burma or the cultivation of soybeans in Burma. This document contains the earliest clear date seen for soybeans in Burma or for the cultivation of soybeans in Burma (1883). The source of these soybeans is unknown.

Note 3. Ava is a ruined city on the Irrawaddy River, in Sagaing division, 6 miles southwest of Mandalay. Founded in the 14th century, it was the capital of Burma for 400 years. In 1783 it was replaced by Amarapura, but was again the capital from 1823 to 1837.

Ground nuts (*Arachis hypogæa*) [peanuts] are mentioned under "Order Leguminosae" (p. 491). The Burmese name is given as Mye-leh. "Indigenous to South America, but cultivated all over the East for its edible kernels and the oil extracted from them, which is excellent" (p. 500). In the index of vernacular names of Burmese plants, the name of the peanut is given as "Myeh-peh" (p. 713). Address: Rev. D.D., M.R.A.S.

1195. Figuier, Louis; Gautier, Emile. 1882. Le soya [The soybean]. *L'Année Scientifique et Industrielle (Paris)*. p. 391-93. [Fre]

• ***Summary:*** For a long time, French agriculturists have worked to introduce this new leguminous plant which has distinct advantages over its close relatives, the haricot bean and the pea.

The soya, or soja, is of Chinese or Japanese origin. For more than a century, the Museum of Natural History in Paris has possessed specimens. The Society for Acclimatization has spread / disseminated the seeds throughout France, but distrust and apathy have always led to the abandonment of the cultivation of this plant, which nevertheless grows very well in our climate.

More intelligently, Austria tried importing this plant in 1873, and it had soon spread throughout Austrian territory. In Italy and Bavaria it was also grown here and there.

A brief botanical description of the plant is given.

In China and Japan the soybean is used in various forms as a food. An oil is extracted from it which, in part, serves domestic needs. But the two principal forms in which it is used are *shoyu*, a type of sauce or condiment, and *to-fu* [tofu] or *téou-fou* of the Chinese, which has the appearance and certain qualities of *fromage à la pie* (the French term for a fresh dairy cheese resembling cream cheese).

Many people believe that the Chinese eat a diet composed only of rice; however it is clear that they also have their "cheese." An interesting brochure by Mr. Vallieux contains all of the information necessary to make tofu (*fromage de soja*). Doctor Picard has perfected this process and has arrived at a type of tofu (*fromage de soja*) that resembles Roquefort cheese [probably fermented tofu].

The dry seeds of the soybean (*de soja*) can be eaten as such, just like haricot beans; they furnish an excellent purée, and offer non of the inconveniences of haricots.

They can also be roasted, in the guise of coffee. The aroma and the properties of the decoction of roasted soybeans would be completely analagous to those of coffee of medium quality, very superior, consequently, to all that are served under the name of coffee in many public establishments.

The pods, stems and leaves are fed to cattle and horses. Eaten like green clover growing in the fields, these parts of the plant produce very rapid fattening; this is easily explained when one examines the chemical composition of the plant.

Cultivation of soybeans is possible throughout the southern part of France; but in the north and in countries which are somewhat cold, they require a great deal of care and attention.

In summary, because of its completely unique nutritive qualities, the soybean is a plant whose cultivation should be expanded as much as possible.

1196. Griffis, William Elliot. 1882. Corea: The hermit nation. New York, NY: Charles Scribner's Sons. xxiii + 462 p. See p. 270. Illust. Map. Index. 23 cm. 8th ed. 1907. [99* ref]

• ***Summary:*** An excellent, early history of Korea by a fine historian. Contents--3 parts: I. Ancient and medieval history. II. Political and social Korea. III. Modern and recent history.

Chapter 30, "Housekeeping, diet, and costume" states (p. 270): "Among the poorer classes, a cooked fish is rarely seen on the table; for no sooner is it caught than it is immediately opened and devoured. The raw viands are usually eaten with a strong seasoning of pepper or mustard, but they are often swallowed without condiment of any sort. Often in passing along the banks of a river, one may see men fishing with rod and line. Of these some are nobles who are not able, or who never wish to work for a living, yet they will fish for food and sport. Instead of a bag or basket to contain the game, or a needle to string it upon, each fisher has at his side a jar of diluted pepper, or a kind of soy [sauce]. No sooner is a fish hooked, than he is drawn out, seized between the two fingers, dipped into the sauce, and eaten without ceremony. Bones do not scare them. These they eat, as they do the small bones of fowls."

Note: This is the earliest document seen (April 2012)

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that mentions Korean soy sauce, which it calls simply "soy." Address: Ithaca, New York. Formerly of the Imperial Univ. of Tokio, Japan.

1197. Hanausek, T.F. 1882. Die Sojabohne [The soybean]. *Irmischia Botanische Monatschrift. II* No. 7. p. 44-45. [13 ref. Ger]
• ***Summary:*** In 1867 11,493 gallons of soy sauce were imported to England, and England then exported 2,166 gallons. Address: Dr., Germany.

1198. Merck, Klemens. 1882. Klemens Merck's Warenlexikon fuer Handel, Industrie und Gewerbe. Dritte, gaenzlich umgearbeitete Auflage [Klemens Merck's dictionary of products and commodities for trade, industry and commerce. 3rd completely revised edition]. Leipzig: Verlag von G.A. Gloeckner. lvi + 687 p. See p. 539-40. Forword by Prof. Dr. Carl Birnbaum. Index. 24 cm. [Ger]
• ***Summary:*** The entry for "Soya" (p. 539-40) is almost identical to that in the 1871 edition, with these differences: (1) The opening line begins: "Soya, is a brown, sharp liquid, imported from China and Japan..." (2) At the end, no import or export figures are given. Rather, this 1882 entry ends: "The product is listed in the Tariff Schedule (see end of book) under No. 25p 1."

Also discusses: *Cyperus esculentus* (Erdmandeln, p. 118), peanuts (p. 118-19), sesame seeds (p. 525-26), and sesame oil (p. 526).

The full subtitle in German reads as follows: *Beschreibung der im Handel vorkommenden Natur- und Kunsterzeugnisse unter besonderer Beruecksichtigung der chemisch-technischen und anderer Fabrikate, der Droguen- und Farbewaren, der Kolonialwaren, der Landesprodukte, der Material- und Mineralwaren. Herausgegeben unter Mitwirkung von Dr. C. Birnbaum, Lorenz Brauer, Dr. Paul Degener, etc.* (Description of Natural and Manufactured Products in Commerce / Trade, with Special Consideration for Chemical-Technical and Other Products, Drugs, Dyestuffs, Products from the Colonies, Agricultural Products, Household Goods, and Minerals. Published in Cooperation with Dr. C. Birnbaum,...).

In 1884 a second, slightly revised printing of the 3rd edition appeared. The page numbers cited above did not change. Address: [Germany].

1199. Smith, John. 1882. A dictionary of popular names of the plants which furnish the natural and acquired wants of man, in all matters of domestic and general economy. Their history, products, & uses. London: Macmillan and Co. ix + 457 p. See p. 386. 23 cm.
• ***Summary:*** "Soy (*Glycine Soja*, better known as *Soja hispida*), a small, erect, trifoliate, hairy plant of the Bean family (Leguminosæ), native of India and China. It is cultivated for its seeds, which are made into the sauce called Soy in India, and the residue or cake is extensively used for manure in China." Note: The residue from making soybean oil is widely used for manure in China, but the residue from making soy sauce is usually too salty for that use.

Also discusses (alphabetically): Agar-agar (see Ceylon moss), almond tree, Ceylon moss (seaweed), Cyperus (incl. *C. esculentus*. "The taste of the roots when roasted is compared to potatoes. It is by some used as a coffee substitute), dulse (*Rhodomenia palmata*, seaweed), earth pea or ground nut (*Arachis hypogæa;* an allied plant is *Voandzeia subterranea*), flax (incl. linseed oil), Fucus (genus of sea-weeds), gingilie oil (from *Sesamum indicum*), Goa bean (the seeds of *Psophocarpus tetragonolobus* are so called in India), hemp (*Cannabis sativa*, the seeds are used for feeding caged birds), Job's tears (*Coix lachryma*), kelp (see Fucus), linseed oil (see flax), lupin (*Lupinus albus*, also yellow lupin and blue lupin), medick or lucerne (*Medicago sativa*) [alfalfa], quinoa (*Chenopodium quinoa* or *C. anthelminticum*), seaweeds (plants of the order Algæ), and sesamum (the seeds of *Sesamum indicum*).

The author, John Smith, lived 1798-1888. Address: A.L.S.

1200. Spon, Edward N.; Spon, Francis N. 1882. Spons' encyclopaedia of the industrial arts, manufactures, and commercial products. Vol. 5: Soy. London and New York: E. & F.N. Spon. p. 1537-2142. See p. 1814. Edited by Charles G. Warnford Lock.
• ***Summary:*** In the section titled "Spices and condiments" we read: "Soy.–This useful condiment [soy sauce], said to form the basis of almost all the popular sauces [such as Worcestershire sauce] made in Europe, is prepared by the Chinese and Japanese from the fruit of *Glycine Soja* [*Soja hispida*], which holds an important place among the oil-yielding plants, and has been described under the article on Vegetable Fatty Oils (p. 1378). The condiment is prepared by boiling the beans with an equal quantity of roughly-ground barley or wheat, and leaving it covered for 24 hours to ferment; salt is then added in quantity equal to the other ingredients, water is poured over, and the whole is stirred at least once daily for two months, when the liquid is poured and squeezed off, filtered, and preserved in wooden vessels, becoming brighter and clearer by long keeping. Its approximate value in the London market is 2s. 3d. to 3s. a gallon for Chinese, and 2s. 4d. to 2s. 5d. for Japanese. [Note: The Chinese sauce is more expensive]. It is not specified in the trade returns, but doubtless forms the chief item in the unenumerated spices imported from China."

Note 1. This is the earliest English-language document seen (Sept. 2003) that contains the term "fatty oils"–which refers to edible oils that are liquid at room temperature (see also p. 1360).

Note 2. This is the earliest English-language document seen (Sept. 2006) that contains the terms "oil-yielding" or

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"oil-yielding plants" in connection with the soybean.

Also discusses: Varnish–Hempseed oil (p. 2024). Address: England.

1201. Williams, Samuel Wells. 1882. The Middle Kingdom: A survey of the geography, government, literature, social life, arts, and history of the Chinese empire and its inhabitants. Revised ed. 2 vols. New York, NY: C. Scribner's Sons. 2 vols. Illust. 24 cm.

• ***Summary:*** In volume 1, in Chapter 6 titled "Natural History of China," the section on legumes (p. 365) states: "The leguminosæ hold an important place in Chinese botany, affording many esculent vegetables and valuable products. Peas and beans are probably eaten more in China than any other country, and soy is prepared chiefly from the Soja or Dolichos. One of the modes of making this condiment is to skin the beans and grind them to flour, which is mixed with water and powdered gypsum, or turmeric. It is eaten as a jelly or curd, or in cakes, and a meal is seldom spread without it in some form."

In Chap. 13 titled "Architecture, dress, and diet of the Chinese," the section on "Vegetables eaten by the Chinese" (p. 773) states: "The Chinese have a long list of culinary vegetables, and much of their agriculture consists in rearing them. Leguminous and cruciferous plants occupy the largest part of the kitchen garden; more than twenty sorts of peas and beans are cultivated, some for camels and horses, but mostly for men. Soy is made by boiling the beans and mixing water, salt, and wheat, and producing fermentation by yeast; its quality is inferior to the foreign. Another more common condiment, called bean curd or bean jam, is prepared by boiling and grinding black beans and mixing the flour with water, gypsum, and turmeric."

In volume 2, Chapter 20 titled "Commerce of the Chinese," states (p. 396): "*Soy* is a name derived from the Japanese *sho-ya;* it is made by boiling the beans of the *Dolichos soja,* adding an equal quantity of wheat or barley, and leaving the mass to ferment; a layer of salt and three times as much water as beans are afterward put in, and the whole compound stirred daily for two months, when the liquid is pressed and strained. Another method of making the condiment has already been mentioned in Volume I., p. 365."

Samuel Wells Williams lived 1812-1884. Address: Prof. of the Chinese Language and Literature at Yale College, Author of Tonic and Syllabic Dictionaries of the Chinese Dictionary.

1202. *Washington Post.*1883. Talmage on evolution: "An anti-Bible, anti-science, anti-commonsense doctrine." Jan. 15. p. 1.

• ***Summary:*** In the Brooklyn Tabernacle, New York, on the morning of Jan. 14, Rev. T. DeWitt Talmadge, preached upon "Evolution," using the biblical text of I Timothy, verses 6 and 20. Nowadays the air is filled with talk of evolution as advocated by Charles Darwin and Herbert Spencer.

"A dinner is given at Delmonico's last November in honor of the great original discoverer of evolution. And the guests sat around the table eating beef and turkey and roast pig; according to the doctrine of evolution eating their own relations, slicing their own cousins, picking the bones of their own uncles, and thrusting the carving fork into the bosom of their own blood relations, dashing Worcestershire sauce and bedaubing mustard all over members of their own family...." Address: New York.

1203. *Los Angeles Times.*1883. The city. March 11. p. 0_4.

• ***Summary:*** "Chutney sauce, Worcestershire sauce, and a great variety of such things always to be had at Burch & Boal's, opposite the postoffice."

Note: This is the earliest document seen (Feb. 2012) in the *Los Angeles Times* that mentions "Worcestershire sauce."

1204. Chernoglazov, L.A. 1883. K voprosu o Kitaiskom maslichnom gorokhe [On the question of the Chinese oil-bearing pea plant]. *Trudy Imperatorskago Vol'nago Ekonomicheskago Obshchestva, St. Petersburg (Scholarly Works of the Imperial Free Society)* 1(3):305-09. March. [Rus]

• ***Summary:*** Contents: Soybeans are successful in Russia. Success in Penza, Russia. Appropriate climate. Soybeans noted for excellent acclimatization ability. Appropriate soil for soybeans. Author's method of cultivating soybeans. Planting soybeans and their growth. Harvesting soybeans. Uses of soybeans: Food, chaff, straw, enrichment of soil. Preparation of foods from soybeans: Soy sauce, miso, soup, flour, bread, potato pancakes. The writer prepared these foods from soybeans, then fed them to his co-workers. Note: He also sent these foods to this periodical to have them analyzed for their nutritional value. However, before the analyses could be conducted, the expiration date had passed. Conclusion: Incl. use of soybeans as a food for the army.

Note: Alternate Journal Name entry: Trudy Vol'nogo-Ekonomicheskogo Obshchestva (Scholarly Works of the Free Economical Society). Address: Butenkovskaya Station, Poltavskaya region [Ukraine].

1205. Geerts, A.J.C. 1883. Observations on Kinch's list of plants used for food. *Transactions of the Asiatic Society of Japan* 11(Part 1):31-35. April. [3 ref. Eng]

• ***Summary:*** Note 1. Geerts is referring to the article by Kinch titled "List of plants used for food or from which foods are obtained in Japan," on pages 1-30 of this issue of this periodical.

"Prof. Kinch seems not to have been acquainted with the list of 447 economical plants, published in 1826 by Ph. Fr. von Siebold in the *Transactions of the Batavian Society of Arts and Sciences* [*Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen*], Vol. XII.

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under the title of *'Synopsis plantarum oeconomicarum universi regni Japonici,'* for Mr. Kinch mentions only the more imperfect list given by Thunberg in his *Flora Japonica*. Further, several articles written on the subject of economic Japanese plants, published by von Siebold in the Journal of the Royal Dutch Society for the Advancement of Horticulture, during the years 1844-45-46, etc., might be perused with advantage by those who wish to study the practical side of Japanese economic plants.

"In Karl von Scherzer's work, *Fachmaennische Berichte ueber die oesterreichisch-ungarische Expedition nach Siam, China und Japan*, Stuttgart, 1872, there is an extensive article by Dr. S. Syrski, on Japanese horticulture and economic cultivated plants, pp. 175-220. Several interesting observations on the mode of culture, time of sowing, planting, and harvesting, will be found there."

"As a preliminary catalogue Mr. Kinch's list may be useful for those persons who do not possess the botanical literature on the Japanese flora, but as a practical indication for horticulturists the list is deficient. Note 2. Chinese characters (or katakana) are given for each for the following Japanese terms.

"For instance the plant *Dai-dzu* or *O-mame*, the Soja hispida, Moench, has in Japan five distinct cultivated varieties and eleven or perhaps more sub-varieties, viz:

"I. White or slightly yellow beans, Haku-dai-dzu. 1. Very early variety with very small bean. Harvest in July. *Goguwatsu-mame* 2. Early variety with small white bean, *Wase-mame* or *Natsu-mame*. These [first] two varieties are also called *Bai-to* or *Tofu-mame* and serve especially for preparing *To-fu* [tofu]. 3. Middle early variety with somewhat larger round beans, *Nakate-mame*. Much used for preparing miso. 4. Late variety with round and hard beans, *Okute-mame*. 5. Late variety, with smaller, perfectly round and hard beans, *Maru-mame*. Can be kept a very long time and is much used as food for horses. 6. Late variety, with large, perfectly round, and very hard beans, *Teppo-mame* or *Aki-mame*. Is much valued for the preparation of *Shoyu* [soy sauce].

II. "Black beans, *Koku-dai-dzu* or *Kuro-mame*. 1. Middle late variety, with round, small, hard, black beans, *Kuro-mame*. 2. Middle late variety, with round, large black beans, *Kuro-teppo-mame*. 3. Late variety, with flat, elliptic, black beans, *Go-ishi-mame* or *Kuro-torokusun* or *Hachi-buname* or *Tamba-kuro-mame*. These kinds [in category II.] are eaten in a boiled mixed with sugar as *entremets*.

"III. Brown beans, *Katsu-dai-dzu*. 1. Round reddish brown beans, *Aka-mame*. According to the size the Japanese distinguish even six subvarieties of this brownish Soya-bean. The reddish kinds are far less cultivated than the white and black varieties. 2. Light brownish-red and round beans, *Cha-mame*. According to the more or less intense colour the Japanese distinguish three sub-varieties of *Cha-mame*. They are rarely cultivated. [Both these types] are eaten with sugar in a boiled state" (p. 34).

Note 3. This is the earliest English-language document seen (Oct. 2004) that mentions red or reddish soybeans (actually brownish-red).

Note 4. This is the earliest English-language document seen (Feb. 2007) that contains the word "Soya-bean" or ("Soya-beans").

"IV. Greenish or blue-greenish beans, *Sei-dai-dzu* or *Aö-mame*. 1. Round, middle-sized greenish beans, *Aö-mame*. The Japanese distinguish two sub-varieties, viz., α. *Sei-hi-to* with the epidermis only of a green colour, but white inside [and] Beta. *Nikuri-Sei*, which are outside and inside of a greenish colour. 2. Light green round beans, *Kagemame*. [All] are only cultivated in the provinces of Ise, Iyo, Harima, Idzumo [Izumo], Omi. Eaten with sugar in a boiled state.
Note 5. This is the earliest English-language document seen (Oct. 2004) that uses the term "light green" to describe the color of a soybean.

"V. Spotted beans, *Han-dai-dzu* or *Fu-iri-mame*. 1. Greenish, flat, oblong beans with a black spot at the navel. *Kuro-kurakake-mame*. Relatively rare and only cultivated in Nagato [an old province on the southwest tip of Honshu, Japan; as of 2003 part of Yamaguchi prefecture], Idzumo [Izumo] and the environs of Kiyoto [Kyoto]. 2. Yellowish-green, flat, and slightly oblong beans, with a dark brown spot at the navel. *Aka-kura-kake-mame*. Rare. 3. Yellowish-green beans with many dark spots. *Furi-mame* or *Udzura-mame*. Rare. Cultivated in Harima province."

Note 6. This is the earliest English-language document seen (Oct. 2004) that uses the term "Yellowish-green" to describe the color of a soybean.

Note 7. This is the earliest English-language document seen (Sept. 2004) that uses the word "spots" (or "spotted" or "spotting") or the term "reddish brown" to describe the color of soybean seeds.

Note 8. This is the earliest English-language document seen (June 2009) that discusses the color of many soybean varieties.

Note 9. This is an excellent, original article, which gives the names of many Japanese soybean varieties for the first time in English or any other European language. That information is largely derived from Iinuma (1861 and/or 1874).

1206. *Brisbane Courier* (*Queensland, Australia*).1883. Imports (A special charge is made on consignees' announcements inserted in this column). June 9. p. 4.
• ***Summary:*** "Venice, s. [steamer], from Hongkong: 46 cases merchandise,... 47 boxes soy [sauce],... 1 bag seaweed,... 18 packages preserved ginger, 5 boxes bean curd, 15 boxes sauce, 8 baskets ginger,... 10 boxes bean cake,... 5 boxes bean stick" [dried yuba sticks].

Note 1. Bean cake, which is apparently a food, is probably fermented tofu, but could possibly be dried frozen

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tofu. If it is fermented tofu, this is the earliest English-language document seen (Oct. 2011) that mentions fermented tofu, which it calls "bean cake."

Note 2. These goods are clearly for Chinese customers in Australia.

Note 3. This is the earliest document seen (Jan. 2010) that clearly mentions yuba being imported or exported.

1207. Kenny, W.J. 1883. Account of a secret trip to the interior of Korea [in 1875]. *Transactions of the Asiatic Society of Japan* 11(Part II):141-47. Sept. [Eng]
• ***Summary:*** Translated from the Japanese. Page 142: 19 March 1875 near Pusan. "The food was rough and coarse, and assailed my nose with such a stench that indicated that it was putrid. One glance at it was quite sufficient to create a bitter taste in the mouth. To give a specimen or two of the dishes–one was herrings and shrimps pickled in salt (the latter cut in small pieces), exceedingly offensive to the smell. The soup or broth, made of bean sauce (Daidzu [soybeans] {a large French bean [sic]} and wheat are boiled, then mixed together, pounded and made into lumps; these are piled up, with straw between, for several weeks, after which they are again taken out, and, when dried, are ready for use), is thick like mud. With the exception, perhaps, of the pickled shrimps, I could not bring myself to eat any of these dishes." Note: This bean sauce may have been Korean-style miso, *doenjang*, however it does not typically contain wheat as an ingredient.

Page 144-45: March 27... "In this house I stopped about a fortnight. Their food was rice or pulse, sometimes mixed, half and half, with wheat; and as to vegetables (they rarely used cultivated vegetables, but generally picked young shoots of wild herbs), they steam them, dip them into vinegar and soy [sauce], and then use them. During the fortnight or so I remained at this house I never saw them eating meat once. It is 'said that even the middle and higher classes find it difficult to eat meat, and can only eat salt fish. The articles of food are for the most part rancid in smell. They make no particular change in their garments for inside and outside wear. Their bodies and limbs are impregnated with filth; their clothing is a nest of vermin."

1208. Dohme & Duffy. 1883. Positive facts (Ad). *Atlanta Constitution* (*Georgia*). Nov. 10. p. 8.
• ***Summary:*** "We have just received a very large stock of the following goods:... China Soy [sauce], Mushrooms, Prince Albert Sauce,... Walnut, Tomato, Worcestershire and Mushroom Sauces,..."

Note: This ad also appeared in the Nov. 11, 13, 14, and 17 issues of this newspaper. Address: 88 Whitehall Street [Atlanta].

1209. Elgin, -; Kincardine, -. 1883. Customs tariff of China: Printed copy forwarded to the Department by Consul-General Denny of Shanghai. *Monthly Consular and Trade Reports* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*) No. 36. p. 384-92. Dec. [Eng]
• ***Summary:*** The section titled "II. Tariff on exports" gives the duty on "Beans and pease" and on "Bean cake" (p. 387), Seaweed, Sesamum seed, and Soy (p. 389).

Under "Rules," section IV (near bottom of page 390) discusses "* The export of pulse and bean cake from Tangchaw and Newchwang, under the British flag is prohibited. From any other ports they may be shipped, on payment of the tariff duty, either to other ports of China or to foreign countries."

The footnote states: "Pulse and bean cake may henceforth be exported from Tangchow and Newchwang, and from all other ports in China open by treaty, on the same terms and conditions as are applied to other produce by the regulation bearing the date of 5th December last:..." regulation

Note: The title on this issue is: "Consular Reports on Commerce, Manufactures, etc." Address: Shanghai, China.

1210. Leunis, Johannes. 1883-1885. Synopsis der Pflanzenkunde: Ein Handbuch fuer hoehere Lehranstalten [Synopsis of botany: A handbook for institutions of higher learning. 3d ed. 2 vols.]. Hannover, Germany: Hahn'sche Buchhandlung. Vol. 1, xv + 994 p. Vol 2, xxii + 1002 p. See vol. I, p. 836. Vol. II, p. 130-32. [Ger]
• ***Summary:*** In the section on Phaseolus: "51. Soja* Moench. *Soja or Sooja is the Japanese name of the sauce (*Tsuke*) for which soybeans [Soja-Bohnen] are used.

Soja hispida [hispida means rough] Moench. (S. japonica [japonica means Japanese]). Savi (Dolichos Soja, L.). The Japanese soybean. An annual, upright plant, indigenous to Japan and now cultivated throughout eastern Asia, because the beans are equal in protein to lupins, taste good, and are also used for the preparation of a piquant or pungent, brown, thickish sauce, which is used in India with almost all meals, and is also sold in Europe to improve broths and as a grilling, roasting, or baking sauce. However the soy sauce (*Soja*) presently sold commercially in Europe is not made from soybeans, but rather from other materials, namely from fungi / mushrooms (*Pilzen*), and it is made by us. The plant also grows in our climate although it often does not bring its seeds to ripeness / maturity. Therefore recommendations to grow it are uncertain.

"52. Dolichos L." Address: Germany.

1211. Giliaranskii, V.P. 1883. Monografia kitaiskogo maslichnogo goroxa (Soja hispida) [Monograph of Chinese oil-bearing pea plant (Soja hispida)]. St. Petersburg, Russia: Printing House of "Obschestvennaya Pol'za" Union. 48 p. 20 cm. [1 ref. Rus]
• ***Summary:*** Contents: Foreword. Part I: Natural history of *Soja hispida*. 1. Soybean history (including I.G. Podoba's

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experiments). 2. Plant description. 3. Soybean varieties. 4. Summary table of soy varieties cultivated in Japan. 5. Cultivation of soybeans. 6. Physical and physiological properties of soybean seeds. 7. Chemical composition of soybean seeds.

Part II: Soybean processing and utilization. 1. Soybean oil. 2. *Shoyu* [soy sauce]. 3. *Mi-so* [miso] sauce. 4. Vegetable cheese *to-fu* [tofu]. 5. Dried vegetable cheese *Kori-tofu* [dried-frozen tofu] and other varieties of *tofu*. Address: First Class Technologist/Production Engineer, St. Petersburg, Russia.

1212. Koenig, Franz Joseph, ed. 1883. Chemie der menschlichen Nahrungs- und Genussmittel. Vol. 2. Zweite sehr vermehrte und verbesserte Auflage [The chemistry of human foods and food adjuncts (stimulants / enjoyables). Vol. 2. 2nd ed.]. Berlin: Verlag von Julius Springer. xviii + 816 p. See p. 371-72, 387. Illust. Index. 25 cm. [5 ref. Ger]
• ***Summary:*** In the section on "Legumes" is a subsection titled "Soybeans" (*Sojabohne*) (p. 371-72) which begins with short summaries of Haberlandt (1878) and Wein (1881). The first table, based on calculations by Wein, shows that, on a per hectare basis, soybeans yield about 1/3 more protein and about ten times as much vegetable oil as common beans or peas. The second table gives the average chemical composition of 43 soybean varieties analyzed by König, and first published in detail in Vol. 1, p. 103-04. The range: Protein 26.5 to 40.0%. Oil 14 to 19%. The third table gives the average analysis of the ash found by Edward Kinch in 1882. The soybean is unique among legumes in its combination of a high oil content with an even higher protein content. Moreover, its straw makes a nutritious fodder for cattle. "The soybean is therefore highly recommended for cultivation in Germany, and efforts should be made to find ways of producing good-tasting foods from it."

In China and Japan, soybeans have long been used to make human foods such as miso (*Misobrei*), shoyu (*Soohu*), and tofu (*Tofu*). The fourth table gives the nutritional composition of five soy products as determined by Edward Kinch: White miso, red miso, fresh tofu, frozen tofu, and soybean cake. While some of these products may not be suited to German tastes, E. Wein has used soybeans to prepare a tasty German dishes, including a soup like that made from beans and peas, a salad like that made from garden beans, or by cooking soybeans with potatoes or rice, a purée, which resembles Italian "Polenta" and has been called "Sojenta" by Haberlandt (1878). The taste of dishes made from soybeans reminds one of somewhat of almonds or chestnuts, but even more of garden beans. A soybean flour (*Mehl*), similar to the flour made from beans and peas, has already been made for kitchen use from soybeans (see p. 387).

The section titled "Legume flours" (*Leguminosenmehle*) (p. 387) contains a table that gives the nutritional composition of such commercial flours: Bean flour (*Bohnenmehl*), pea flour (*Erbsenmehl*), lentil flour (*Linsenmehl*), and soybean flour (*Sojabohnenmehl*). The latter contains: Water 10.23%, protein 25.69%, oil / fat 18.83%, carbohydrate 38.12%, cellulose (*Holzfaser*) 2.75%, ash 4.36%. On a moisture-free basis: Nitrogen 4.58%, carbohydrate 42.45%.

Also discusses: Lecithin in egg yolks (not in soy, p. 223, 233). Composition of vegetable oils, incl. olive, linseed, poppyseed, hempseed, rapeseed, white sesame, black sesame, cottonseed, peanut, palm kernel, coconut (p. 325). Lupins (yellow or blue, p. 373-75). Almonds (p. 495, 497). Agar-Agar (p. 496-97). Peanuts (p. 495, 497). Coffee substitutes (not incl. soy, p. 607). Address: Head, Agricultural-Chemical Experiment Station, Muenster in Westphalia, Germany (Vorsteher der Agric.-Chem. Versuchsstation Muenster in Westphalia).

1213. Okoshi, Narinori. 1883. A sketch of the fisheries of Japan (Fisheries exhibition literature). London: William Clowes and Sons, Ltd. 43 p. See p. 22, 24. Index. 22 cm.
• ***Summary:*** Section VI, titled "Fish cookery" (p. 22) begins: Cookery of fish is almost an art in Japan." In the first mode of preparing raw fish, "the flesh of the fish is cut in thin slices and arranged on a plate very neatly in the form of waves,... and it is served with sauce (shoyu), mashed raw turnips [grated daikon], horse-radish [wasabi], and generally some fresh vegetables cut in small pieces and sea-weed."

"The most essential element of our cookery of either fish or vegetables is the sauce known here under the name of Japanese shoya, properly called *shoyu*, which is extracted from beans and koji; hard dried fish [katsuobushi] is also greatly used" (p. 24).

Note 1: This paper was presented on 23 Oct. 1883 at the International Fisheries Exhibition, London. Also gives statistics on sea vegetables (p. 8-9, 11-12, 14).

Note 2. This is the earliest English-language document seen (April 2012) that uses the word "shoya" or the term "Japanese shoya" to refer to shoyu or soy sauce. Address: Member of the Japanese Consulate in London [England].

1214. Pogson, Frederick. 1883. Manual of agriculture for India. Calcutta, British India: Thacker, Spink and Co. 296 p. See p. 280-81. Index. [1 ref]
• ***Summary:*** Chapter 14, "Field pea crops, including the Japan pea" states (p. 184): "The Japan pea assumes the form of a bush from two to three feet in height. In the plains it should be sown after the rains cease. Drills should be made three feet apart, and a single seed should be sown at every three feet; the spot where the seed is sown being manured as for beans. The botanical name of the Japan pea is *Soya Hispida*. It is half pea and half bean in appearance, with singular leaves, and pods somewhat like the pods of the *Cajanus sativa* or *Urhur Dall* [*Dahl*] of the next chapter."

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In the Appendix (p. 267+) is a section titled "Japan pea" which states (p. 280-81): "A small supply of this pea-bean was received by the writer in the spring of 1882. It was freely distributed in Dehra, but failed entirely as a hot-weather crop. A few seeds sown at Mussoorie grew to the height of two feet, and bore pods very much resembling those of the *Urhur Dall* (*Cajanus sativa*). At the writer's request a supply of the seed was sent to Simla, and the result is given beneath.

"'The Government of India has decided on the cultivation of the Japan pea being extended in this country, and with this view it has suggested that further experiments should be made in suitable places. This bean or pea has its natural habitat in China and Japan, it also grows in Mongolia, and in India in the Himalayas, and within the last few years it has been cultivated experimentally in several European countries, under the name of the Soy bean. It is a vegetable, which approaches most nearly in its proximate chemical composition to animal food. The Soy bean first attracted attention in Europe in the year 1873, when specimens from Japan, from China, and from India were shown at the Vienna International Exhibition. Dr. Forbes Watson, reporter on the products of India, called attention to it in the catalogue of the exhibits of the India Museum. Since then numerous experiments have been made on the European continent on its growth, and also feeding experiments with the bean and its straw on different kinds of animals have been prosecuted. Such experiments have been carried on by Woolling and Wein at Munich; by Haberlandt, Lehman, Harz, Stahel, Zimmerman, Siewert, Wieske, and others at various stations in Germany, Austria, and Hungary; and experiments have also been made in France and in Italy.

"'In Japan it is known by names signifying THE bean, and from it are made not only soy [sauce] but a paste, known as *miso*, which is in constant request at nearly every meal, *tofu* or bean cheese, and other foods used to a less extent. This bean cheese is also well known in China, and is obtained by extracting the legumin from the beans with water and precipitating it with brine. These foods are most valuable additions to the dietary of the Oriental nations, and especially the Japanese, who use so little animal food. They tend to supply the deficiencies of the staple food, rice, in nitrogenous matter [protein], fat, and also in mineral constituents. The Buddhist priests, who are strictly forbidden the use of animal food, consume considerable quantities of these beans, principally in the form of *miso*.'–*Vide 'Simla Argus,' 18th November, 1882*."

Note: Simla was a hill station in British India. The *Argus* was a periodical published at Simla, a hill station in British India in the 1880s. The Simla Argus Press published a few books at the same place and time. Address: Lieutenant, Her Majesty's Bengal Army. Dehra Doon; Honorary Member Agri-Horticultural Society of India.

1215. Royal Gardens, Kew (England). 1883. Official Guide to the Museums of Economic Botany. No. 1. Dicotyledons and gymnosperms. London: Printed by Eyre and Spottiswoode, for H.M. Stationery Office. 153 p. See p. 43. 19 cm.

• ***Summary:*** "No. 174. Soy Beans (Glycine Soja, Sieb. and Zucc.). An annual cultivated largely in India and China. From the seed the Chinese prepare a sauce known as Soy; a quantity of oil is also expressed from them, and the residue after the expression of the oil is extensively used for feeding cattle, as well as for manuring the land in China. It is made into large circular cakes similar to that exhibited, weighing about 60 lb."

Note: This is the earliest edition of the *Official Guide to the Kew Museums* or the *Official Guide to the Museums of Economic Botany* (Kew, England) in which the soy bean is mentioned. It is not mentioned in the 1871 or 1875 editions. Address: Kew, England.

1216. Scheube, Botho. 1883. Die Nahrung der Japaner [The food of the Japanese]. *Archiv fuer Hygiene* p. 352-83. [3 soy ref. Ger]

• ***Summary:*** In the Japanese diet, rice plays the most important role. From a special type of glutinous rice, the Japanese prepare their beloved rice cakes, called mochi, which are found in every house during the New Years festival. The Japanese bake no bread, yet *Fu* (made from wheat gluten) could be considered a kind of bread. The process for making it is described.

Legumes, beans and peas, also are important in the Japanese diet. Countless types are cultivated, but the most important is the remarkable soybean (*Sojabohne–Glycine hispida*), on account of its richness in nitrogen [protein] and fat, and its relatively low starch content. The most important foods made from soybeans are tofu, miso, and shoyu; a detailed description is given of the process by which each is made. Two analyses of shoyu, by Ogata and by Kinch, give its composition. Beans and peas are also eaten as vegetables by the Japanese, and bean meal [probably kinako] is used in the preparation of many kinds of cakes.

On pages 361-67 are many tables containing descriptions of the diets consumed by various individual Japanese persons, usually for three days or three meals. For each is given: The age and approximate weight of the person, the foods consumed, and the weight (in grams) of each food consumed each day. Tofu (*Bohnenkäse*), miso soup (*Miso-Suppe*), and wheat gluten cakes (*fu*) appear with rice (and/or sushi or mochi) and tea in most diets. The word *Bohnensauce* (p. 362) appears to refer to shoyu (soy sauce).

Botho Scheube lived 1853-1923. Address: Docent, Univ. of Leipzig, Germany.

1217. *New York Times*.1884. History of Worcestershire sauce. Feb. 9. p. 3.

• ***Summary:*** "From the *London World:* Although inferior in

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money-making power to a pill, a sauce, too, can make the guineas roll briskly in, and notably has this been the case with Lea & Perrins's Worcestershire. A scrutiny of the label will show that it is prepared 'from the recipe of a nobleman in the county.' The nobleman is Lord Sandys, and Messrs. Lea & Perrins's connection with the sauce came about rather curiously.

"Many years ago Mrs. Grey, author of 'The Gambler's Wife' and other novels, well known in their day, was on a visit at Ombersley Court, when Lady Sandys chanced to remark that she wished she could get some very good curry-powder, which elicited from Mrs. Grey that she had in her desk an excellent recipe, which her uncle, Sir Charles, Chief-Justice of India, had brought thence and given her. Lady Sandys said that there were some clever chemists in Worcester, who perhaps might be able to make up the powder; at all events, when they drove in after luncheon they would see.

"Messrs. Lea & Perrins looked at the recipe, doubted if they could procure all the ingredients, but said they would do their best, and in due time forwarded a packet of the powder. Subsequently the happy thought struck some one in the business that the powder might, in solution, make a good sauce. The experiment was made, and by degrees the thing took amazingly. All the world, to its remotest ends, now knows of Worcestershire sauce as an article of commerce; and, notwithstanding that, in common with most good things, it is terribly pirated, an enormous trade is done in it. The profits, I am told, amount to thousands of pounds a year, and I cannot but suppose that liberal checks, bearing the signature of Lea & Perrins, have passed from that firm to Mrs. Grey, to whom it is so indebted for its prosperity."

Note: This is the earliest document seen (Feb. 2012) that mentions Lord Sandys in connection with Lea & Perrins or Worcestershire sauce. Note that it was published in the USA where people knew little about Lord Sandys or about the history of this product or its manufacturer.

1218. *Brisbane Courier* (*Queensland, Australia*).1884. Imports (A special charge is made on consignees' announcements inserted in this column). April 8. p. 4.
• ***Summary:*** "Suez, A.C.J. and S.S.S. Company's s. [steamer], from Hongkong direct: 2,432 bags rice, 50 cases oil, 50 cases Chinese oil, 10 cases China oil,... 10 boxes bean curd,... 8 boxes salt beans [probably salted black soy beans; fermented black soybeans],... 54 boxes sauce,... 5 boxes bean sauce [perhaps soy bean sauce],..."

Note: The ambiguous term "bean sauce" is used in 4 issues of this Australian newspaper from 8 April 1884 to 8 March 1897.

1219. *Times* (*London*).1884. Japan at the health exhibition. Aug. 28. p. 2, cols. 4-5.
• ***Summary:*** "The last foreign court completed at the International Health Exhibition [in London] is that of Japan." In a few days, a Japanese restaurant will be opened. "Two Japanese cooks have accompanied the Commissioners, and here the visitor will be able to make the acquaintance of some of the dishes which find a place on the *menus* of the Parisians of the East. Sweet-tasting bamboo sprouts, sweetmeats and confectionary of fanciful appearance; *saké*, 'the wine of the country,' a fermented drink made of rice and containing 11 to 12 per cent. of alcohol, the nutritious *miso* made from soy beans and fermenting rice [koji], frozen tôfu [sic, dried frozen tofu] or bean curds, tangle [kombu], salted mushrooms, dried shrimps, cured bonito, laver [nori], various edible sea-weeds, orange vinegar, and several soys [soy sauces], are among the good things which those who are adventurous in dietary may enjoy."

1220. *Times* (*London*).1884. The Health Exhibition Japanese restaurant. Sept. 17. p. 4, col. 6.
• ***Summary:*** The Nippon Rioriya, modeled after the eating houses in Tôkio, is hard to find at the exhibition. "Taking advantage of the concession to European prejudices the Commissioners have made in providing spoons, instead of obliging him to drink his soup like tea from the bowl, the adventurous diner-out will find that he has before him a savoury compound called on the card *misoshiru* [miso soup]. This is made, as the root word denotes, from *miso*, a fermented mixture of soy beans, wheat, and salt." He may also enjoy "a piece of plump sole stewd in soy" [sauce], the "brown soy-coloured beans and strips of *kikurage*, or ear-shaped mushrooms," the *wanmori* which includes "pieces of a soaked *fu*, a kind of biscuit made from the glutinous part of wheat flour. The gravy in which these *pièces de résistance* are floating is thickened with a transparent starchy substance, obtained from the root of a climbing plant (*Pueraria Thunbergiana*), called by the Japanese *kuzu*."

"One other relish must be noticed, the sliced root of the burdock, salted and preserved in *miso*."

1221. International Health Exhibition, London, 1884. The Health Exhibition Literature. Vol. XVII. London: William Clowes and Sons, Ltd. 749 p.
• ***Summary:*** Also cited as: (1) "Catalogue of the exhibits of Japanese Food Products at the International Health and Education Exhibition, held in London, 1884." (2) "Japan. International Health Exhibition A. Descriptive catalogue..." (3) "London. International Health Exhibition, London. 1884. The Health Exhibition Literature. Vol. XVII."

A map of the "International Health Exhibition, London, 1884" (p. 537-38), which was held at the Royal Albert Hall in South Kensington, on Exhibition Road near the High St. Kensington Station; gives an overview of the hall and surrounding roads and railway stations. The title of the section related to food is "Japan. A descriptive catalogue of the exhibits sent by the sanitary bureau of the Japanese

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Home Department," prepared under the direction of K. Nagai, Commissioner, and J. Murai, Assistant Commissioner. There follows a 2-page Introduction by Kiuichiro Nagai, dated Sept. 1884. Then a table of contents of five groups: Group I is food. Then a table of Japanese weights and measures. Pages 545-71 begin: the "Descriptive catalogue." Group I–Food. Detailed information and / or chemical analyses are given of the following: are given: (7) Soy bean (*Glycine hispida*) *O-mame*. (7A) Phaseolus radiatus. Adzuki. (192) Dried fruit of *Lagenaria vulgaris–Kan-pio* [*kanpyo*], cook with soy sauce. Mushroom (*Agaricus campestris*). *Shii-take* [*Shiitake*], cook with soy sauce. Kanten, vegetable isinglass, cook with soy sauce. Frozen konniaku [konnyaku]. Minoboshi daikon, cook with soy sauce. Fu, nama-fu, yaki-fu (roasted) (Wheat gluten). Kuzu starch. Buckwheat soba, cook with soy sauce. (203) Hijiki sea weed (*Cystoseira* species), cook with soy sauce. (204) Ogo sea weed (*Gigartina* sp.), cook with soy sauce. (205) Wakame sea weed (*Alaria pinnatifida*), cook with soy sauce. (206) Agar-agar (*Gelidium corneum*. Tengusa). Use to make tokoroten or kanten. (207) Tangle (*Laminaria japonica*). Kombu [konbu]. (208) Laver, dried (*Porphyra tenera*). *Asakusa-nori*. (209) Awonori, dried (*Enteromorpha compressa*).

(210) Frozen bean-curd. *Kôri-tôfu*. "Preparation.–It is made by steeping soy beans in water and then grinding them, after which the refuse is removed by boiling and dissolving it in a little oil. This refuse is called 'Kiradzu' [kirazu] or 'Unohana.' The liquid remaining after taking away such refuse [soymilk] is put into a kettle and again boiled. Upon the surface of the water [sic, soymilk] there forms a thin substance [film] like wet paper; this is skimmed off and dried. It is called 'Yuba' (lit., bean-curd skin), the taste of which is very agreeable. When it [the soymilk] begins to bubble up brine is sprinkled over it in order to stop the bubbles, and it is put into a special wooden box, then thrown into a cotton cloth bag and coagulated into long square shapes, which is bean-curd."

Three tables follow: (1) "Analysis of bean curd" [tofu]. (2) "Analysis of dried bean-curd" [dried frozen tofu]. (3) "Analysis of refuse of bean-curd" [okara].

Note 1. In the description of making tofu (above), yuba is removed during the tofu-making process. If this description is correct, and also applies to the process used for making tofu in China, it could help explain the origin of the unusual Chinese term "bean curd skin" (*doufu pi* or *fu pi*).

(211) Yuba (Skin of bean curd; "Yuba is made during the process of making bean curd, and is a thin, yellow, transparent substance)."

Note 2. This is the earliest English-language document seen (May 2012) that uses the term "bean-curd skin or the term "Skin of bean curd" to refer to yuba.

(213) Somen (Vermicelli), cook with *shioyu* (soy sauce).

Note 3. This is the earliest English-language document seen (April 2012) that uses the term *shioyu* to refer to shoyu / soy sauce.

(228) Umeboshi (Salted and dried plums). (229) Miso (a fermented substance made from soy beans and yeast [koji]). *Miso-ai, Sansho-miso, shoga-miso, wasabi-miso, togarishi-miso, goma-miso* [*sesame miso*], *keshi-miso, katsuwo-miso*. (229a) Konomono [*Kô-no-mono*] (Vegetables pickled in fermenting mixture of bran and salt (incl. Nukamiso-dzuke (pickled in salt and bran), Takuwan-dzuke (radishes pickled in salt and bran), Shiwodzuke (salted), Shio-oshi (salted and pressed), Kasudzuke (pickled in sake residue), Misodzuke (pickled in miso), &c.)). Takuwandzuke [Takuan pickles]. (229b) Kasu-zuke (mentions miso soup). (230-35) Shoyu (Soy) and how it is made [p. 21 of section]. Chemical analysis of Kikkoman shoyu. Eight chief brands of shoyu. (236) Mirin (a kind of sweet liquor), with koji. Sembei [senbei], with miso. (242) Yokan, three varieties. (246) Midzu-ame [mizuame]. Frozen mochi.

Class III–Prepared animal substances. Dried cod fish, cooked with soy [sauce]. Beef tsukudani, cooked with soy [sauce].

Class IV. Beverages. Sake (wine), made with koji (yeast). "Koji (yeast) is used for brewing Sake in Japan, almost like malt used for brewing beer in western countries,..."

Class VI. Cookery practically demonstrated. Nippon Ryoriya (Japanese restaurant), incl. misoshiru (miso soup), and konomono. Address: England.

1222. International Health Exhibition, London. 1884. (210) Frozen bean-curd. Kôri-tôfu (Document part). In: International Health Exhibition, London. 1884. *The Health Exhibition Literature*. Vol. XVII. London: William Clowes and Sons, Ltd. 749 p. See p. 560-61.

• ***Summary:*** "It is made by freezing common bean-curd. Bean-curd is made of *Daidzu Glycine* (*soja*) *hispida* and contains a largo quantity of vegetable albumen. This is one of the most frequent kinds of food of the middle and lower classes of the people of Japan; it contains an abundance of nourishment, and Hygeists recommend its use. However, bean-curd is indigestible as in passing through the process of freezing, it undergoes a change. Ordinary bean-curd is not a safe eatable to remove to a distance, as it spoils very readily: therefore, frozen bean-curd only is exhibited here with explanation of the ingredients of the common curd.

Preparation.–It is made by steeping soy beans in water and then grinding them, after which the refuse is removed by boiling and dissolving it in a little oil. This refuse is called "Kiradzu" or "Unohana." The liquid remaining after taking away such refuse is put into a kettle and again boiled. Upon the surface of the water there forms a thin substance [yuba] like wet paper; this is skimmed off and dried. It is called "Yuba" (lit., bean-curd skin), the taste of which is very agreeable. When it begins to bubble up brine is sprinkled over it in order to stop the bubbles, and is put into a special

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wooden box, then thrown into a cotton cloth bag and coagulated into long square shapes, which is the bean-curd.

"Analysis of bean curd: Nitrogen 0.76%. Fat 2.36%. Water 90.37%. Ashes [ash] 0.76%.

"Analysis of dried bean-curd [moisture free]: Nitrogen 8.09%. Fat 24.59%. Ashes [ash] 7.79%.

"Analysis of refuse of bean curd [kirazu or unohana]: Albumen 3.664%. Fat 0.837%. Glucose 0.266%. Starch 2.630%. Cellulose 2.896%. Other non-nitrogenous substances 6.156%. Water 85.660%.

"Use.–Bean curd is prepared for eating by boiling it or holding it over a fire; it is usually eaten with soy [sauce] and various condiments. It easily digests and is suitable food for adults, for infants, or for invalids, but it cannot be preserved for more than a day or two, owing to its perishable nature, whereas frozen bean curd does not easily spoil and can be preserved for a length of time, but it is indigestible and furnishes less nourishment than the unfrozen." Address: England.

1223. International Health Exhibition, London. 1884. (230-235) Shoyu (soy) (Document part). In: International Health Exhibition, London. 1884. *The Health Exhibition Literature.* Vol. XVII. London: William Clowes and Sons, Ltd. 749 p. See p. 565.

• ***Summary:*** "Shoyu is a mixture of soy beans, wheat, salt and water; the quantity of soy beans and of wheat being the same. The mode of preparing it, is to thoroughly boil, after washing in a cask with water, 50 *koku* of [soy] beans and to parch about 50 *koku* of wheat, in a pan for a little while, and thoroughly boil it after grinding on stone mill. When these two substances are mixed together and kept in *Oka-muro* (a warm room) for about four days the substances are converted into a yellow flower-like matter; this is yeast [sic, koji]. This yeast is then thrown into a mixture of 120 *koku* of water and of 6 *kuwanme* of salt. It is afterwards thoroughly cooled, boiled in a large kettle, and stirred with a bamboo instrument twice a day in summer and once a day in winter. After the lapse of three years the sediment is poured into a bag, then put into a small tub, and is submitted to strong pressure by means of a bar, at the end of which hangs a heavy stone. The fluid expressed is poured into a kettle and submitted to a heat of not more than 80°C; it is again removed to a large tub and set away for a night, when it becomes of a deep black colour and acquires a very delicious taste.

"Use.–Shoyu is one of the most valuable foods, and is in daily use. Mixed with several kinds of food it imparts to them a delicious flavour. It is universally liked and is really indispensable in the Japanese kitchen. The quantity of shoyu annually consumed in Japan is extremely large, and of late years the article has been exported.

Analysis of Kikkoman Shoyu from Noda (province Shimosa) by Isono Tokusaburo B.Sc.–1,000 c.c. of Shoyu contains following constituents:–Specific gravity 1.199. Total residue 421.706. Ashes 175.864. Chlorine 94.001. Glucose 53.226. Dextrin 54.710. Alcohol 1.650. Volatile Acid 1.920. Fixed Acid (as SO_3 [sulfite]) 13.031 Nitrogen 17.208

"The following eight are the chief kinds of Sho-yu:–1. Sho-ji. 2. Sashimi. 3. Yamasa. 4. Yamajin. 5. Yamada. 6. Yigamisa [Jigamisa]. 7. Yamadai. 8. Yamataka." Address: England.

1224. *Gardeners' Chronicle* (*London*).1884. Japanese food vegetable products. 22:781-82. Dec. 20. New Series.

• ***Summary:*** "The Japanese Commission at the late International Health Exhibition have produced an excellent catalog of their exhibits, which contains a great deal of valuable information on the production and uses of the specimens in question. In the first group, devoted to food products, a series of analyses is given of the principal grains and pulses, fungi, cucurbitaceous fruits, &c."

"*Kori-tôfu: Frozen Bean Curds.*–It is made by freezing common Bean curd, which is made of Daidzu (Glycine [Soja] hispida), and contains a large quantity of vegetable albumen. This is one of the most frequent kinds of fruit of the middle and lower classes of the people of Japan; it contains an abundance of nourishment, and hygeists [hygienists?] recommend its use. Bean curd is indigestible, but in passing through the process of freezing it undergoes a change. Owing to the Bean curd spoiling very readily, it is not suitable for carrying long distances. It is made by steeping Soy Beans in water and then grinding them, after which the refuse is removed by boiling and dissolving it in a little oil. The liquid remaining after taking away such refuse, is put into a kettle and again boiled. Upon the surface of the water a thin substance, like wet paper, forms, this is skimmed off and dried and known as 'Yuba,' the taste of which is very agreeable. When it begins to bubble up brine is sprinkled over it in order to stop the bubbles and it is put into a special wooden box and afterwards thrown into a cotton-cloth bag and coagulated into long square shapes, which is the Bean curd.

"Bean curd is prepared for eating by boiling it, or holding it over a fire. It is usually eaten with soy [sauce] and various condiments; it is easily digestible and is suitable food for adults, infants, or invalids, but it cannot be preserved for more than a day or two owing to its perishable nature, whereas frozen Bean curd can be preserved for a length of time, but it is indigestible and furnishes less nourishment than the kind first named. The "yuba" or skin of the Bean curd is used as a food adjunct, with boiled Rice, by most persons, by boiling or warming over a fire and salting it."

Other Japanese foods described in detail in this early article are Ginkgo biloba (Ginnan, the fruit of the maidenhair tree), Lagenaria vulgaris (Kau-pio, a dried fruit), Agaricus campestris (Shii-take [Shiitake] mushrooms), Gelidium corneum (Agar-agar or Kanten), Frozen Kouniaku [Konnyaku], Katakuri Starch, Kuzu Starch (from the root of

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Pueraria Thunbergiana), Warabi Starch, Hijiki (Cyrtoseira sp.), Ogo (Gigartina sp.), Wakame (Alaria pinnatifida), Tangre [Tangle] or Kombu (Laminaria japonica. "It is used as a food by boiling with soy, sugar, mirin, &c., or served in soup"), Laver, dried–Asakusa-nori (Porphyra vulgaris) [Note that items from Hijiki to Laver are sea vegetables], Umeboshi: Salted and dried plums.

Continued in the issue of 10 Jan. 1885.

Note 1. This is the earliest English-language document seen (Feb. 2004) that uses the terms "frozen," or "Kori-tôfu," or "Bean Curds," or "Frozen Bean Curds" to refer to frozen tofu.

Note 2. This is the earliest document seen (Jan. 2010) concerning the use of soya in infant foods or infant feeding.

Note 3. This is the earliest English-language document seen (Dec. 2006) that uses the word "Umeboshi" or the term "Salted and dried plums" to refer to umeboshi salt plums.

Note 4. As of 1975, the scientific name of the shiitake mushroom was *Lentinus edodes*. It had been cultivated and used as human food for centuries in China and Japan. It is not used much in most developing countries, nor in the West where the common champignon *Agaricus bisporus* (*A. brunnescens*) is the mushroom of commerce. One important advantage of shiitake is that it can be cultivated on wood.

Note 5. This is the earliest English-language document seen (Oct. 2008) that uses the term "vegetable albumen" to refer to soy protein.

1225. Hills & Smith. 1884. Christmas! (Ad). *Hartford Daily Courant* (*Connecticut*). Dec. 22. p. 2.
• ***Summary:*** "Imported Sauces–Bengal Hot Chutney, Anchovy, Reading, London Club, John Bull, Beef Steak, Worcestershire and China Soy [sauce]. Catsups–Mushroom, Walnut, Shrewsbury and Tomato."

Note: This ad also appeared in the Nov. 11, 13, 14, and 17 issues of this newspaper. Address: 368 Asylum Street (Batterson's Block).

1226. Cohn, Ferdinand. 1884. Ueber Schimmelpilze als Gaehrungserreger [On molds as instigators of fermentation]. *Jahres-Bericht der Schlesischen Gesellschaft fuer Vaterlaendische Cultur* (*Breslau/Wroclaw*) 61:226-30. For the year 1883. [Ger]
• ***Summary:*** In this lecture, presented on 31 May 1883, Prof. Cohn named the species *Aspergillus oryzae*. A synonym is *Eurotium oryzae* Ahlburg. Thom and Raper (1945, p. 261) note that "The name *E. oryzae* with an incomplete description for the saké organism was published by Korschelt, in Dingler's Polytechnisches Journal 230:330. 1878, as taken from a letter from 'Herr Ahlburg.'"

On page 227 Cohn notes: "In the winter of 1883 I obtained some grains of tane kosi [sic, tané koji] (the so-called mother-yeast of the Japanese rice wine, saké) from Shinkizi [Shinkiji] Nagai, a native of Tokyo who was staying in Breslau as a student of agriculture. I prevailed upon this intelligent and industrious young man, under my supervision, to make sake using the tané koji and methods he had learned in Japan. After a number of unsuccessful trials, we met with excellent success. The Japanese methods are, although used for hundreds of years, so rational, that they can hardly be improved based on a scientific understanding of the process. Tane Kosi are grains of rice which are overgrown with the mycelium and spore bodies (*Fruchttraegern*) of *Aspergillus oryzae*, the splendid rice mold with its greenish-yellow conidia."

"Another fermentation product made by *Aspergillus oryzae* is the well-known soy sauce (*Sojasauce*). This was also prepared at our institute by Mr. Shinkizi Nagai using the Japanese method. This soy sauce was prepared from soybeans (*Sojabohne, Dolichos Soja*) that have recently been cultivated here. Soybeans are different from our typical beans in that they have a very low content of starch and are very rich in fat and 'Cheese-stuff' (literally *Kaesestoff*, Legumin, vegetable casein) [i.e., protein]. Because of this fact, the soybean is used to make cheese [tofu] in Japan."

A detailed description of the process for making soy sauce is then given.

Note 1. This is the earliest German-language document seen (April 2012) that uses the term *Sojasauce* to refer to soy sauce.

Note 2. Breslau is the German name for Wroclaw, a city in southwest Poland. Address: Prof., Dr.

1227. Ebihara, Kôjirô 1884. Yûeki shôyu seizôhô hiketsu [Secrets of making wholesome / profitable shoyu]. Tokyo: Chinkôdô. 32 p. 18 cm. [Jap]*
Address: Japan.

1228. Hanausek, Thomas Franz. 1884. Die Nahrungs- und Genussmittel aus dem Pflanzenreiche: Nach den Grundsaetzen der wissenschaftlichen Waarenkunde fuer die Praxis und zum Studium [Foods and food adjuncts (stimulants / enjoyables) from the vegetable kingdom: On the principles of scientific study of food products in practice and theory]. Kassel: Verlag von Theodor Fischer. xiv + 485 p. See p. 99. Incl. 100 illust. and tables. 19 cm. Vol. 5 in the series *Allgemeine Waarenkunde und Rohstofflehre*. [8 soy ref. Ger]
• ***Summary:*** This book describes how to analyze commercial products (chemically, microscopically, etc.) to determine their composition and to detect adulteration. Chapter III (p. 75-105) is titled "The legumes and their starches" (*"Die Huelsenfruechte und ihre Stärke"*). Section 8 (p. 99-103) within that chapter is titled "The soybean" ("Die Sojabohne"). The author discusses soy sauce and how to tell when it is adulterated, miso and how it is made in Japan, and the use of the soybean as a coffee substitute. He gives the weight of seeds according to data from Haberlandt,

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lists different varieties according to a classification by Harz (1880, 1885), describes the shape and structure of the seeds, gives a microscopic analysis of the shape of the cells in a cross-section of the seed coat. An illustration (line drawing of a microscopic image, p. 101) shows a "Cross section through the soybean," with the following cell types labeled: pa = palisade cells (*Pallisadenzellen* {*Palisadenzellen*}), s = hour-glass cells (*Säulenzellen*), p and p' = outer and inner parenchyma layer (*Aeussere und innere Parenchymschicht*), h = hyalin stria (*hyaline Streifen*), gew = seed tissue (*Samengewebe*). Starch-bodies are missing.

Note 1. This is the earliest document seen (Feb. 2002) that describes use of a microscope to examine soybean cells or that contains an illustration of those microscopic cells.

The author presents a chemical analysis and description of the seeds. He notes that no trace of starch can be found in soybeans, a characteristic shared by lupins, one of the infallible criteria for detecting both, and an indication of the high nutritional value of the soybean. Peanut seeds are also discussed on p. 103.

On pages 417-31 Hanausek gives a detailed analysis of coffee substitutes. On page 424, in the subsection on "Coffee substitutes made from the seeds of legumes," he notes that this type is rarely found any more, but that the soybean may be used.

Note 2. Under the term "Genussmittel" (food adjuncts {stimulants / enjoyables}), Hanausek includes: Tobacco, tea, cocoa, coffee, kola nuts, cacao, Guarana* (paste from the seeds of the shrub or bush *Paullinia sorbilis Mart.* (*P. Cupana Kth.*) used in north Brazil), Tschan (Chan)* (made from the fruits of a type of sage plant in Guatemala), betel nuts, opium, and hashish. (* = not in a German dictionary).

Hanausek lived 1852-1918. Address: Krems an der Donau (Krems on the Danube), Austria.

1229. King, Lord. 1884. The life and letters of John Locke, with extracts from his journals and common-place books. London: George Bell & Sons. viii + 503 p. See p. 133-34. Index. 18 cm. Original edition 1829.

• ***Summary:*** In the section titled "England.–1679," Locke described–apparently for a foreigner about to visit England–various foods and condiments which ought to be enjoyed in London: "Puddings of several sorts and creams of several fashions, both excellent, but they are seldom to be found, at least in their perfection, at common eating-houses. Mango and saio are two sorts of sauces brought from the East Indies."

Note 1. Saio almost certainly refers to *shoyu*. For details, see original 1829 ed. The author's full name is "Lord Peter King King" or "Peter King, 7th baron King."

Note 2. John Locke, an English philosopher, lived 1632-1704. Address: Ockham [England, 24 April 1829].

1230. Lesley, J. Peter, ed. 1884. Early proceedings of the American Philosophical Society for the Promotion of Useful Knowledge, compiled by one of its secretaries from the manuscript minutes of its meetings from 1744 to 1838. Philadelphia, Pennsylvania: Press of McCalla & Stavely. 875 p. See p. 24-25, 29, 32-33, 35. Illust. Index (p. 713-875). 24 cm.

• ***Summary:*** Minutes: "1769. Jan. 16 at the College [with 41 present, including Bartram]. "Sample of Chinese Vetches, six bottles of Soy and six pounds of powdered sago presented with a letter from S. Bowen of Georgia." (p. 24).

"1769. Jan. 20 at the College. (37 present). The sago, Soy & Vetches 'lately introduced into Georgia by S. Bowen' with his letter & description were 'deferred until the laws were passed and committees formed.'"

"1769. Feb'y 3. At the college. (24 present)... The Soy and Sago of S. Bowen were referred to the Com. Nat. Hist. & Chem. [Committee of Natural History and Chemistry], and the Vetches [soybeans] to the Com. Husb. & Am. [Committee of Husbandry and American] Improvements."

"1769. March 3. College. [29 present, incl. Bartram]. The S. Bowen's Communication Committee then reported, that thanks be returned 'especially for his ingenious account of the Chinese Vetches...' The Other Committee [Natural History and Chemistry] were recommended to 'make some experiments on' the respective qualities of the samples of Soy & Sago, & report. Ordered that some... Vetches be distributed to... Pemberton, J. & J. Bartram, J. Morgan, J. Rhea, Abel James, T. Clifford, J. Gibson & G. Roberts." Thus Samuel Bowen's soybean seeds were distributed to eight farmers; all probably lived in Pennsylvania. It seems extremely likely that at least one of the 8 farmers grew the soybeans during 1769.

At the meeting of 1769 April 21, Mr. S. Bowen of South Carolina [sic, Georgia] was elected a new member of the Society (p. 35).

The first three presidents of this illustrious society were: Benjamin Franklin (Jan. 1769 to April 1790), David Rittenhouse (Jan. 1791 to June 1796), and Thomas Jefferson (Jan. 1797 to Jan. 1814).

Concerning Monsieur Le Comte de Buffon of Paris: On 1768 Sept. 20 he was proposed as a corresponding member, then on 1768 Oct. 18 chosen as a member (p. 17-19). In 1779 he sent the Society the first 2 volumes of his *Histoire Naturelle des Oiseaux* (Natural History of Birds). On 1787 Sept. 21 he sent a letter of thanks for election and certificate of membership. Also mentioned are Col. Henry Laurens (p. 72, 152), and James Mease (p. 14, 232, 288, 320, etc.).

On 1768 Dec. 20 two societies were merged and given a new name: "The American Philosophical Society, held at Philadelphia, for promoting Useful Knowledge" (p. 20-21).

Note 1. This document contains the earliest date seen for soybeans in Pennsylvania (16 Jan. 1769), and (probably) for the cultivation of soybeans in Pennsylvania (spring 1769). The source of these soybeans was Samuel Bowen

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of Georgia, who brought them from China, and had them planted in Georgia in May 1765.

Note 2. The editor of this publication, Peter Lesley, lived 1819-1903. The Society, among whose founders in 1743 were Benjamin Franklin and John Bartram, met in Philadelphia for the purpose of promoting useful knowledge.

Note 3. In 1982, while reading through this book in search of something else, Jack Harlan, professor of agronomy at the University of Illinois (Urbana-Champaign), chanced to read the entry in the minutes for 16 January 1769. His curiosity was piqued, for he knew that the earliest date of the introduction of soybeans from China to North America was generally thought to be 1804. Who was this S. Bowen? Why was his name not better known? Harlan mentioned his accidental discovery to his colleague and former student, Theodore Hymowitz, also a professor of agronomy at the same university. Hymowitz was also intrigued. Working together, they pieced together the fascinating, and previously unknown story of how Samuel Bowen introduced the soybean to North America in 1765 (see *Economic Botany*, Dec. 1983, p. 371-79). Address: Librarian of the Society, Philadelphia.

1231. Lincoln, Mary Johnson. 1884. Mrs. Lincoln's Boston cook book: What to do and what not to do in cooking. Boston, Massachusetts: Roberts Brothers. xiv + 536 p. Illust. Index. 20 cm.

• ***Summary:*** Worcestershire sauce is used as an ingredient (often optional) in 8 recipes in this book: Mock turtle soup (p. 137-38). Fish chowder (p. 155-56). Remnants of cooked fish (p. 169-70). Scalloped oysters (p. 177). Devilled lobster (p. 183). Tartar sauce (Hot for broiled fish, p. 194). Veal cutlets (p. 240-41). Salamis of game (p. 270).

In the section titled "Explanation of terms used in cookery" is the earliest definition of soy [sauce] found in a U.S. cookbook (p. 506): "Soy. A Japanese sauce prepared from the seeds of *Dolichos Soja*. It has an agreeable flavor and a clear brown color. Used to color soups and sauces."

In the section on "Bread and bread making" we read (p. 42): "*Health-Food Flour.*–A still better method of converting wheat into flour, and one which is indorsed by leading scientists and physicians, has been recently introduced by the Health Food Company of New York. Only the choicest kinds of wheat are used. The outer husk is first removed by moistening the grain, and subjecting it to a gentle rubbing by what is termed the 'attrition process.' This softens the woody fibre of the outer bran, which is easily removed by sifting, but does not affect the hard gluten coats. The grains are dried, then pulverized into various grades by a compressed cold-air blast, which dashes the grains into atoms with tremendous force. This is called *whole-wheat flour*, the name indicating that the whole of the gluten, or nutritive part of the flour, is retained. It is not sifted like other flours, but pulverized into all the varieties of *crushed wheat, coarse granulated and fine granulated wheat;* each variety, even the finest flour, containing all that is valuable as food. Bread made with this flour has been found, after repeated trial, to be sweet and agreeable to the taste, light and spongy in texture, with none of the objectionable features of Graham bread, and answering fully all the demands of perfect nutrition.

"Cheap inferior Graham flour, made of poor flour mixed with bran, is worse than no food at all." "The Arlington, the Franklin, and some other brands of whole-wheat flour, are highly indorsed by those familiar with them."

Note: Perhaps the most influential cookbook published in America before 1900, and "one of the most innovative, original cookbooks of all time, and precursor and predecessor of the most-enduring American cookbook, Fannie Farmer's *Boston Cooking School Cook Book* (1896)." "One reviewer at the time wrote: 'It is the trimmest, best arranged, best illustrated, most intelligible, manual of cookery as a high art, and as an economic art, that has appeared.'" "Lincoln's methods, often referred to as 'scientific cookery,' required cooks to understand systematic measurements, nutrition, digestion, and the chemistry of cooking, as well as the basics of keeping an orderly kitchen and serving as a gracious hostess."

Mary Johnson Lincoln lived 1844-1921. In the late 1870s, when her husband suffered from failing health, she "worked as a domestic to maintain an income... It was at this time that the Woman's Education Association (WEA) of Boston decided to establish a cooking school–the Boston Cooking School–which would become the most famous of the first American cooking schools." Lincoln wrote that the determining influence in its organization "'was the return of Mrs. Sarah T. Hooper... who had seen the work at the South Kensington School on her way through London, and came home filled with enthusiasm to have similar work in Boston, especially for the benefit of the poor and those who would work out as cooks.' Hooper, an active member of the WEA, became the first president, and hired Joanna Sweeney and Maria Parloa to teach classes." Lincoln soon became a teacher as well (MSU biography). Address: Boston Cooking School, Boston, Massachusetts.

1232. Yûeki shôyu seizô-hô hiketsu [Secrets of making fine, profitable shoyu]. 1884. Japan. [Jap]*

1233. *Gardeners' Chronicle* (*London*).1885. Japanese food vegetable products. 23:51. Jan. 10. New Series.

• ***Summary:*** This is the conclusion of an article begun in the 20 Dec. 1884 issue. "Soy. Two preparations from the Soy Bean (Glycine soja), besides that already referred to, deserve mentioning–namely, miso, a fermented substance; and shoyu, or soy itself. The first is a curious preparation, described as follows:–There are many ways of making miso, differing very little from each other; the kind containing the largest quantity of yeast is considered the best. The usual mode

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is after soaking Soy Beans in water for about two hours to put them into a suitable vessel and steam them; then, after mixing them with salt and yeast, they are removed to wooden plates; then the ingredients are very evenly mixed, the liquid is put into casks, and is then left untouched for upwards of a year. Another method is to soak a quantity of yellow Soy Beans in water for a night, then boil them in a large kettle, and as soon as the water in the kettle has evaporated, and the beans show a reddish-yellow colour, they are removed to a mortar and pounded, after which they are placed on mats. When they are thoroughly cooled they are shaped into balls as large as hand-balls, cut with a knife into flat pieces about an eighth of an inch thick, and placed on mats shaped like scales of fish. As soon as mould appears upon them they are taken, crushed into small pieces, and exposed to the rays of the sun for a day or two. When nearly dry, salt and water are added to them, and the whole is pounded in a mortar and then left in a cask for a month or two, and sometimes longer, when the preceding process will be repeated. Finally, if it is sealed up in casks it will never deteriorate. It is in prime condition when three years old. It forms one of the most necessary articles of food in Japan, and has been used from time immemorial, both by nobles and men of inferior rank. It is made into a soup, and is one of the courses served up as a principal article of everyday diet. The mode of preparing the soup is to rub the miso around an earthen bowl, into which a suitable quantity of water has been poured. It is then filtered through a sieve, and vegetables added according to taste; the whole is then boiled and served up. Miso is also used to give an agreeable flavour by mixing it with other food, and it is likewise mixed with condiments, as Japanese Pepper, Ginger, Horse-Radish, Chillies, Sesame, Poppy seeds, &c.

"Soy [sauce] or *Shoyu*, is perhaps the chief product of the Soy Bean. It consists of a mixture of these Beans, Wheat, salt, and water. The mode of preparing it is to thoroughly boil, after washing in a cask with water, fifty parts of Beans, and to parch about fifty parts of Wheat in a pan for a little while and thoroughly boil it, after grinding on a stone mill: when these two substances are mixed together and kept in a warm room for about four days, the substances are converted into a yellow flour-like matter: this is yeast. This yeast is then thrown into a mixture of salt and water, and afterwards thoroughly cooled, then boiled in a large kettle, and stirred with a Bamboo instrument twice a day in summer, and once a day in winter. After the lapse of three years, the sediment is poured into a bag then put into a small tub and submitted to strong pressure by means of a bar at the end of which hangs a heavy weight. The fluid expressed is poured into a kettle and submitted to a heat of not more than 80°; it is again removed to a large tub and set away for a night, when it becomes a deep black colour, and acquires a very delicious taste.

"Soy is one of the most valuable foods, and is in daily use; mixed with several kinds of food it imparts to them a delicious flavour. It is universally liked, and is really indispensable in the Japanese kitchen. The quantity annually consumed in Japan is extremely large, and of late years the article has been exported."

1234. Furukawa, Sakae. 1885. Shôyu ryakuki [Note on shoyu]. *Tokyo Iji Shinshi (Tokyo / Tokei Medical Journal)* No. 360. p. 231-35. Feb. 21; No. 361. p. 260-63. Feb. 28. [Jap]
Address: Igaku-shi (M.D.), Japan.

1235. *Tropical Agriculturist (Ceylon)*.1885. Japanese vegetable food products. 4:695-96. March 2. [1 ref]
• ***Summary:*** This is a reprint of a two-part article originally published in *Gardeners' Chronicle* (London; 20 Dec. 1884 and 10 Jan. 1885). It describes: Fruit of the maidenhair tree (*Ginkgo biloba*), *Langenaria vulgaris* or kau-pio [kanpyo, kampyo?], *Agaricus campestris* or Shii-take [shiitake] mushrooms, agar-agar or kanten, frozen kouniaku [konnyaku], katakuri starch, kuzu starch, warabi starch, umiboshi [umeboshi]: salted and dried plums, kasadyuke (kasuzuke, made from white melons), and two preparations from the Soy Bean: miso, and shoyu or soy itself. For details, see the original articles. Address: London.

1236. Grisard, Jules. 1885. Cinquième section. Séance du 10 Mars 1995 [Fifth section. Meeting of 10 March 1885]. *Bulletin de la Societe d'Acclimatation* 32:321-25. May. [Fre]
• ***Summary:*** Mr. Paillieux gives a lecture on two subjects: Shoyu (*Le Shoyu*) and *Le Haricot radié* (which appears to be a confused mixture of the green mung bean and the red azuki bean). "In 1880 I published in this bulletin an extended article about the chemical composition, varieties, culture, and uses of the soybean (*du Soya*)... Today I would like to call your attention again to *Shoyu*, a precious sauce which the Japanese could not live without, and to provide the means to taste it by distributing to each of you some small flasks that contain a sufficient quantity of it.

"You do not have to thank me for my generosity; these flasks were given to me by MM. J. de Vigan and Company, a large house importing Japanese and Chinese products..."

"I beg you not to confuse *Shoyu* with *India-Soy*, which is sold in London and even in Paris: the latter is only a poor imitation.

Note: Where and how is India-Soy made? What are the major differences in sensory qualities between the two sauces?

"*Shoyu* is not a condiment in the sense that we normally attach to this word. It does not have a pungent, heating taste like pepper, mustard, chili peppers, etc. To the contrary, it is refreshing. MM. de Vigan can speak of it with reason and precision, for they consume a bottle a week of it, as much for their children as for themselves.

"The Japanese put *Shoyu* on all that they eat, and according to all appearances, we would be tempted in France

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to make an immoderate usage of it when we begin to use it.

"I shall not speak to you of Japanese cuisine, which to me is strongly suspect, but I shall tell you that for me *Shoyu* can, in many cases, replace meat stock, quite a unique thing, but that explains itself perhaps by the notable proportion of fat that soybeans contain.

"A teaspoon of Shoyu in an ordinary broth makes it much better. It does wonders in *court-bouillon* for the cooking of fish. It combines advantageously with beefsteak stock. In a salad with cold meat, it has a very good effect. Finally, it is incomparable in scrambled eggs (*oeufs brouillès*).

"The house Potel and Chabot, whose chef is our colleague Mr. Lhermitte, served the table of the Japanese mission in 1878. He assures me that Shoyu is excellent in bean salads and unsurpassed with eggs, whatever the mode of preparation.

"You see that it is not necessary to be Japanese to multiply the uses of Shoyu. When a first-rate chef (*cordon-bleu*) has it, his/her cooking is transformed and becomes so much better that one does not perceive the use made of the famous sauce, at a moderate dose.

"Here, gentlemen, is a recipe for preparing Shoyu, made in France by my excellent correspondent Dr. Hénon who had learned it in Japan:

"'Take two parts naked barley or wheat and three parts soybean (*Daïdzu (Soya)*). Next soak for a day and a night in soft (non-calcareous) water. Then steam until completely cooked. The grains need not pop open but must be tender. Mix the two grains then spread them out in beds 2-3 cm high in wooden trays that are kept in a place that is fairly warm, neither too dry nor too humid. The grains will mold in 12-15 days, according to the season. The best time is spring or autumn. The mold must be greenish blue, thick and resembling velvet.

"'The big red or black molds are worthless; discard them as soon as they appear. When the grains are completely covered with mold and form a solid mass, expose them to the sun. When they are dry, rub them between the hands and sift them to get rid of the powder (mold spores?) produced by the moldy debris (*la poussière produite par les débris des moisissures*). At this time, take two parts salt for three parts molded grains; place in barrels or earthenware vases with a sufficient quantity of water to cover all with 3-4 inches of liquid.'"

"'Stir the mixture up from time to time and wait three to six months, then filter the sauce through a sieve. It can be stored in casks or bottles for several years, and for my taste, replaces broth or meat stock quite well in cooking.

"'I do not know,' adds my correspondent, 'how much Shoyu is exported from Japan or how much is consumed in that country, but it is the basis of Japanese cuisine. It replaces butter, oil, fat, and meat stock. All beans, fish, and pasta ordinarily are accompanied by Shoyu. There is not a village, no matter how small it may be, that does not Shoyu makers in it. In addition, it is made often in particular houses.

"'During my sojourn in Japan, the price of Shoyu varied, according to its quality, from 8-12 *sen* (40-60 centimes) per *sho*, that is, 1.80 liters.'

"I published two other procedures, practiced in industry, that present notable differences with the household recipe that I just gave you.

"In one it is said that the grains ought to ferment in hermetically-sealed chambers, with the exception of two windows placed at the height of a man which allow surveillance of the operation.

"In the other, they prescribe a particular preparation of the salt destined for production of Shoyu.

"I do not give you the text of these documents. They are rather drawn out and are found in the report I published on soybeans. I do not want to abuse your kind attention."

At the end of the meeting, Mr. Paillieux distributed Shoyu to the attendees. Address: Secretary, France.

1237. *Brisbane Courier* (*Queensland, Australia*).1885. Imports (A special charge is made on consignees' announcements inserted in this column). June 23. p. 4.
• ***Summary:*** "De Bay, s. [steamer], from Hongkong:... 30 cases 20 boxes, 10 packages and 38 bundles tea, 10 cases eggs, 4 boxes opium, 50 cases oil, 2,693 bags and 2 boxes rice, 5 boxes wine, 1 box beans,... 2 boxes beansticks [probably dry yuba sticks],... 29 cases soy [sauce],... boxes bean cake [fermented tofu],... 4 boxes bean sauce,... 4 boxes sauce beans, 4 packages ginger,..."

Note: This is the earliest English-language document seen (May 2012) that uses the word "beansticks" to refer to what are probably dried yuba sticks.

1238. *New York Times*.1885. Wants to get his judgment. July 3. p. 1.
• ***Summary:*** "Chicago, July 2.–Five or six years ago Lea & Perrins, an English firm, manufacturers of Worcestershire sauce, filed a petition to prevent Frank Deakin from infringing on their trade mark. For a time they obtained an injunction, but it was dissolved, Judge Drummond holding the trade mark invalid. Deakin subsequently, after many vicissitudes, obtained a decree for over $9,000 against Lea & Perrins. Their sureties on the injunction bond not having been able to collect the amount, he has filed a creditor's bill against Lea & Perrins, their New-York agents, and all the leading wholesale grocery firms of this city, to reach any money the grocers may owe to Lea & Perrins for goods bought of the latter. Among the defendants are Franklin MacVeagh, the new Government Director of the Union Pacific Railway; L.C. Pardee, and C. Jevre."

1239. Balfour, Edward. 1885. The Cyclopædia of India and of eastern and southern Asia, commercial, industrial,

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and scientific; products of mineral, vegetable, and animal kingdoms, useful arts and manufactures. 3rd ed.: Glycine hispida, Bentham. London: Bernard Quaritch. See vol. 1, p. 1213. 26 cm.

• ***Summary:*** Soja hispida, Moench, from Glykys, sweet, the roots and leaves of most of the species being so. An annual herb of India, China, and Japan: the main ingredient of the Soja condiment. G. Soja, Sieb, is said to be distinct from G. hispida.

There follows a detailed description of *Glycine Sinensis* [Wisteria or Wistaria], considered one of the most beautiful plants in Chinese gardens. Address: 2 Oxford Square, Hyde Park, London [England]. Founder of the Madras Muhammadan Library; of the Government Central Museum, Madras; of the Mysore Museum, Bangalore [India].

1240. Balfour, Edward. 1885. The Cyclopædia of India and of eastern and southern Asia, commercial, industrial, and scientific; products of mineral, vegetable, and animal kingdoms, useful arts and manufactures. 3rd ed.: Leguminosae. London: Bernard Quaritch. See vol. 2, p. 697-98. 26 cm.

• ***Summary:*** "Leguminosae is a name of the Fabaceae or bean tribe, *q.v.* Leguminous and cruciferous plants occupy the largest part of the Chinese kitchen garden; many sorts of peas and beans are cultivated, and the pods and seeds of two species of dolichos are eaten, and the beans of another species made into soy by boiling and powdering the kernels and then fermenting them with yeast, and mixing other ingredients, according to the taste of the maker or purchaser. Peas and beans form important objects of culture, and the condiment called soy (a word derived from the Japanese Soya) is prepared chiefly from a species of dolichos. One of the commonest modes of making this condiment is to skin the beans and grind them to flour, which is mixed with water and powdered gypsum or turmeric. The common Chinese eat few meals without the addition of one form or other of the bean-curd or bean-jelly. The soy was at one time largely used as a condiment in the several countries of Europe, but has been displaced for others. See Fabaceae. ['The bean tribe, leguminous plants.' Soy is not mentioned.]" Address: 2 Oxford Square, Hyde Park, London [England]. Founder of the Madras Muhammadan Library; of the Government Central Museum, Madras; of the Mysore Museum, Bangalore [India].

1241. Balfour, Edward. 1885. The Cyclopædia of India and of eastern and southern Asia, commercial, industrial, and scientific; products of mineral, vegetable, and animal kingdoms, useful arts and manufactures. 3rd ed.: Soy [sauce]. Bentham. London: Bernard Quaritch. See vol. 3, p. 715. 26 cm.

• ***Summary:*** This entry is shorter than and different, in parts, from its counterpart in the 1873 edition. New text: "Chinese use Soja hispida pulse when ripe for the manufacture of an oil, and give the remnant of the grain, together with stalks and leaves of the plant, as a food for cattle. Its cultivation has become general in Syria [sic, Styria], Dalmatia [in Croatia], and Hungary. In the two former countries, the grain, after being allowed to ripen, is threshed out and roasted, and then employed for making coffee. In China, the grains are soaked till they swell and become soft, and then cooked like the small sort of beans. In other places, the seeds are set in a very damp, watery soil, and kept in darkness until they sprout up into a long white stalk, 4 or 5 inches high, which is then cut and served up after the manner of a salad. A sort of cheese, consumed in quantities by the poorer people both in China and Japan, is made from Soja hispida.

Note: This appears to be the earliest document seen (June 2007) concerning soybeans in Syria, or the cultivation of soybeans in Syria. However, Balfour got his information about Syria, Dalmatia, and Hungary from Friedrich Haberlandt's classic book *The Soybean* (*Die Sojabohne*), the only early work in which Dalmatia and Hungary are both discussed. The third place, however, is Styria (Steiermark in German), not Syria! The next earliest reliable document concerning cultivation of soybeans in Syria was published in 1975, and describes soybean trials in Syria in April 1974. Address: 2 Oxford Square, Hyde Park, London [England]. Founder of the Madras Muhammadan Library; of the Government Central Museum, Madras; of the Mysore Museum, Bangalore [India].

1242. Kenney-Herbert, A.R. (Arthur Robert; pseudonym "Wyvern"). 1885. Culinary jottings. A treatise in thirty chapters on reformed cookery for Anglo-Indian exiles, based upon modern English, and continental principles,... 5th ed. Madras, India: Higginbotham & Co.; London: Richardson and Co. x + 553 p. Index. First edition published in late 1878 or 1879, 4th ed. was 1883.

• ***Summary:*** The need for "... a more modern description than that time-honoured and, in its day, excellent work *'Indian Domestic Cookery'* [Riddell 1849] must have been long felt by the busy housewife of Madras" (p. 1)

"All native cooks dearly love the spice box, and they all reverence 'Worcester Sauce.' Now, I consider the latter too powerful an element by far for indiscriminate use in the kitchen, especially so in India where our cooks are inclined to over-flavour everything. If in the house at all, the proper place for this sauce is the cruet-stand where it can be seized in an emergency to drown mistakes, and assist us in swallowing food that we might otherwise decline" (p. 16). Note: Throughout this book (it is mentioned on 7 pages) it is called "Worcester Sauce."

"Amongst sauces I consider 'Harvey' the best for general use; Sutton's 'Empress of India,' is a strong sauce with a real flavour of mushrooms; Moir's sauces and "Reading sauce" are very trustworthy, and there are others

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which, no doubt, commend themselves to different palates, but I denounce 'Worcester sauce' and 'Tapp's sauce' as agents far too powerful to be trusted to the hands of the native cook. Sutton's essence of anchovies is said to possess the charm of not clotting, or forming a stoppage in the neck of the bottle. I have a deep respect for both walnut and mushroom ketchup, soy [sauce], and tomato conserve" (p. 28).

This book contains three chapters titled "Sauces." All of the recipes are written in prose form rather than in modern recipe form with a list of ingredients followed by the process. Yet recipe names and amounts are given.

"Harvey sauce" is mentioned on 8 pages, always favorably. "Ketchup" is mentioned on 26 pages; of these 19 mention "mushroom ketchup" and 3 mention "walnut ketchup."

Note: The author, under his real name, also wrote a popular book on vegetarianism (1904-1907). Address: Colonel, Ooyacamund [Udagamandalam, a popular hill station in the Nilgiri Hills, in today's southeast Indian state of Tamil Nadu],.

1243. Koibuchi, Chûho. 1885. Shôyu kashizeisoku [Tax regulations concerning shoyu used in making Japanese-style confections]. Kôfu [Yamanashi prefecture], Japan: Published by the author. Unpaginated (7 chô) 19 cm. [Jap]*
• ***Summary:*** Note: This may include the use of shoyu in making rice crackers (*o-senbei*).

1244. Mene, Édouard. 1885. Des productions végétales du Japon [The vegetable products of Japan]. Paris: Au Siège de la Société Nationale d'Acclimatation. 592 p. Index. 24 cm. [34 soy ref. Fre]
• ***Summary:*** The title page states in small letters: *Extrait du Bulletin de la Société Nationale d'Acclimatation*, indicating that much of the material in this book is based on articles previously published in this French-language Bulletin. However many other early books on Japanese agriculture have also been consulted and are carefully cited.

In the Introduction, the author explains that he was appointed by the Society for Acclimatization to prepare this report on the vegetable products of Japan which had been exhibited at the Universal Exposition of Paris in 1878–in two parts. Those displayed by the Japanese firm Trocadero, and those displayed in the galleries of the palace at Champ-de-Mars. The author and many others were deeply impressed by this exhibition.

Grains (class 69, p. 31): Wheat or rice are mixed with beans or peas and fermented to make shoyu and miso. Shoyu is one of the most widely used condiments in Japanese cuisine. The method of production is described briefly. Among the condiments displayed in class 74 were a number of flasks of shoyu from Tokyo.

Legumes (p. 40-47): Discusses soybeans, tofu, azuki beans (*Phaseolus radiatus* var. *subtrilobata*, p. 42-44; incl. yayenari, red, white, black, and yellowish azuki, Dainagon azuki, azuki flour, an, yokan), shoyu, soybeans (*Pois oléagineux. Soja hispida*, p. 45-46; incl. Kuro-mame {Black soybeans}, various colors and shapes of dry soybeans {green, yellowish, large yellowish, greenish black, brownish red, white, large red}).

There is also a special, long section on soybeans (*Soja hispida. O mame: Daizu;* p. 270-83) and soyfoods. In the Japanese exposition, the display of useful products (*tableau des productions utiles*) designates: No. 24. *Kuro-mame.* Black-seeded soybeans, the size of an average sized haricot bean. No. 25. *Shiro-mame.* White-seeded soybeans, spotted / flecked / speckled / mottled (*tachetées*) with gray. No. 26. *Ao-mame.* Greenish-seeded soybeans. No. 34. *Gankui-mame.* Black-seeded soybeans, flecked with white.

The soybean (*Le Soja*) is cultivated in Japan, India, Ceylon, the Malacca peninsula [today's Malaysia], the Philippine islands, Borneo, Java, the kingdom of Siam, Cochin China, Tongkin (*Tong-King*), and throughout China, primarily in Mongolia and in the provinces of Henan / Honan, Liaoning (*Shenking*), Shandong / Shantung, and Shanxi / Shansi (*Chan-si*).

The Chinese exposition (class 73) contained samples of all the varieties of soya cultivated in all the provinces of the empire. Nos. 2991 to 3000. Green, white, black, yellow, striped or variegated, and reddish soybeans, provided by the Chinese customs office at Newchwang. Nos. 3014-16. Yellow, black, and green soybeans from the customs office at Tientsin. Nos. 3058-61. Yellow, green, and black soybeans from customs at Yantai / Chefoo. No. 3091. Yellow soybean from customs at Chinkiang. Nos. 3013-19. White, red, black, and yellow soybeans from customs at Shanghai. Nos. 3125-28. White, black, red, and green soybeans from customs at Wenzhou / Wenchow. Nos. 3152-56. White, green, and black soybeans from customs at Kao-hsiung (*Takow*).

The soybean is one of the plants most widely used in Japan and China for both food and industrial purposes. As indicated previously, shoyu, miso, and tofu are indispensable to the Japanese diet. Samples of these products were displayed in the Japanese exhibit in class 74 (condiments and stimulants); they came from Tokyo and from the province of Hizen, mainly from the town of Nagasaki. In the Chinese exhibit, also in class 74, were samples of (*soye*) or (*soya*) which are similar to Japanese shoyu but are called *Chiang-yu* (*Tsiang-yeou*) in China. They were provided by the customs offices at Yantai / Chefoo, Ning-po, Wenzhou / Wenchow, and Canton. For aroma, the Chinese often add star anise, green anise, and orange peel. Chinese soy sauce is made from yellow soybeans (*Houang-téou*).

Note: This is the earliest French-language document seen (April 2012) that uses the term *Chiang-yu* to refer to soy sauce.

Note: This is the earliest document seen (Jan. 2006)

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describing a soy sauce made with star anise, green anise, orange peel or other spices or herbs outside of Indonesia.

A detailed description of the method for making Japanese shoyu is given, excerpted from the book *Le Japon à l'Exposition universelle de 1878* [Japan at the Universal Exposition of 1878] (1878, vol. II, p. 124). Additional excerpts concerning shoyu, miso, and tofu are taken from: Simon 1862, Kaempfer 1712, *Bulletin of the Society for Acclimatization* 1880 (p. 248), and Champion 1866.

In France, Mr. Vilmorin and Dr. Adrien Sicard (of Marseilles), who are both involved with soybean cultivation, have prepared soy cheese (*fromage de Soja*) numerous times. Dr. Sicard has made both the white cheese [probably tofu] and the red cheese; the latter is rolled in a powder made by grinding red sandalwood (*santal; Pterocarpus santalinus*), mace, and cinnamon (p. 276).

One of the most important soy products is the oil, which is obtained from the seeds–especially the large yellow soybeans that the Chinese call *Houang-téou*. The Japanese do not make soy oil (*huile de Soja*) but in China manufacture of this product gives rise to considerable commerce. Fremy (1855) found that soybean seeds contain 18% oil. The oil is a drying oil, yellow in color and with a special odor and a taste of dried legumes, similar to that of peas. It is used in cooking and illumination. In China, quite a few soy oil factories are found at Calfond in Henan, at Tsinan in Shantung, and at Tayeurn in Shanxi. But the center of soy oil production in China is Ning-po in Zhejiang / Chekiang. From the port of Ning-po and from a port on the island of *Tcheou-chan* [*Zhoushan?*] a large number of junks, carrying only soy oil, depart. Two other manufacturing centers are Newchwang and Chefoo. There follows a detailed description (p. 276-77) of how soy oil is obtained from soybeans.

Another common use is as fermented black soybeans (*Chi*) which (according to Stanislas Julien) contain soybeans mixed with ginger and salt. Kiu-tsee is a fermented soy product made in Canton; it contains red rice, soybeans, and the leaves of *Glycosmis citrifolia*. The Chinese also make a pasta and a sort of vermicelli from soybean seeds named *Hou-mi-téou*.

The stems and leaves make excellent forage. Black soybean seeds are often mixed with chopped soybean hay and fed to horses and mules in northern China and Manchuria.

In Japanese and Chinese medicine, black soybean seeds, ground and made into a decoction, are used to combat asthma attacks.

There follows a long history (p. 277-83) of the introduction of the soybean to Europe (starting at the Jardin des Plantes in Paris, in 1740 or 1779) and its acclimatization, based largely on articles from the *Bulletin of the Society for Acclimatization*. It includes a summary of the work of Prof. Haberlandt in central Europe.

Also discusses: Japanese plum trees (*Prunus mume*) and umeboshi salt plums (p. 52-54, 466-67). Sesame seeds and sesame oil (p. 54-55). Amaranths (p. 63-64). Job's tears (*Coix lacryma;* p. 214-15). Kudzu, kuzu powder, and kuzu cloth (*Pueraria Thunbergiana;* p. 283-85). Peanuts and peanut oil (*Arachis hypogæa, Tojin-mame;* p. 286-87). Sesame seeds and sesame oil (*Sesamum indicum, Goma;* p. 518-20). Hemp and hemp oil (*Cannabis sativa, Asa;* p. 558-59). Address: Médecin de la Maison de Santé de Saint-John de Dieu [Paris, France].

1245. Official report of the Calcutta International Exhibition, 1883-84. 2 vols. 1885. Calcutta: Bengal Secretariat Press. See Vol. I, Part I, p. 270. 23 cm.

• ***Summary:*** On the title page: "Compiled under orders of the Executive Committee."

In Vol. I, Part I (which is 489 pages), page 270 states: "(6) Glycine Soja, (S. & Z.)–The Soy Bean.

"This is known in the vernacular as *Gari-kulay*, Beng. [Bengali]; *Bhat, bhatwan*, Hindi; *Tsu dza*, Naga. This plant is densely clothed with fine ferruginous hairs, is sub-erect; met with in the tropical regions and the outer Himalaya, from Kumaon to Sikkim, the Khasia and the Naga Hills to Upper Burma. Dr. Stewart mentions a field of bhat having been observed in Bissahir in the Panjab [Punjab; probably in today's Pakistan], altitude 6,000 feet. The plant is chiefly met with in a state of cultivation. Dr. Roxburgh first saw it from seed received from the Moluccas in 1798."

Note 1. The reference to "Dr. Stewart" almost surely refers to John Lindsay Stewart who wrote important books in 1867, 1869, and 1874 (plus at least 6 scientific articles) on the plants of the Punjab and north-west India. Two of these books have now been scanned in "full view" but we can find no statement resembling the one above attributed to Dr. Stewart. In 1864 Dr. Stewart was appointed the first Conservator of Forests in the Panjab. He died on 5 July 1873 in Dalhousie at age 41.

"De Candolle views it, and apparently correctly, as a native of Cochin China, Japan, and Java. But he remarks that "it is of modern introduction into India." "There are no common Indian names" for it. This seems to be a mistake; the plant is well known in India under the names given above. In Manipur and the Naga Hills it is one of the most abundant of pulses. Its Naga name is *Tsu dza*, a name not unlike *Soja*, but at the same time it may be viewed as related to the old Chinese name *Shu*. The Soya most likely reached India from China, passing by way of Assam. But while it cannot be said to be wild on the Naga hills, from the existence of so large a percentage of Japan and Java plants on those hills, the Soya might quite probably have had its most western home on the mountain tracts bordering on Assam. The importance of these hill tracts in settling questions of the nativity of cultivated Indian and Chinese plants has not been fully appreciated, and we might fairly anticipate that many statements at present accepted as facts

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will be considerably modified with an extended knowledge of the wild and cultivated plants of the Assam and Chinese frontier. The thorough exploration of this region is very desirable.

Note 2. This document contains the 2nd earliest date seen for the cultivation of soybeans in north east India (1885).

Note 3. This is the earliest document seen (Sept. 2010) concerning the cultivation of soybeans in Manipur, or in Nagaland, both North East Indian states which shares a long border with Assam.

"This pulse is an important article of food in Tibet. It is made in India into a sauce called "Soy." The advisability of extending its cultivation on the Himalayan tracts was pressed on the Government of India in 1882 by Professor Kinch, and the attention of local Governments also was called to it."

Note 4. This is the earliest document seen (Sept. 2010) concerning soybeans in Tibet, or the cultivation of soybeans in Tibet. This document contains the earliest date seen for soybeans in Tibet, or the cultivation of soybeans in Tibet (1909). The source of these soybeans is unknown–as, unfortunately, is the author's source of this information about soybeans in Tibet. Note that the lowest elevations in Tibet are about 12,000 to 15,000 feet, and the summer temperatures are quite cold. It seems unlikely that soybeans would grow under these conditions.

Note 5. Is it possible that soya is really "an important article of food in Tibet?" If so, what is the author's source of information? We have seen no such source? Is it cultivated there? In what form is it consumed? Roasted soy flour might be used like *tsampa* (roasted barley flour).

In the section on "The oils, oil-seeds, soap..." we read (p. 305): "Very extensive collections of oilseeds were shown, especially those collected by the Chamber of Commerce, Bombay... The following may be enumerated as the most interesting and useful oils:..." Among the 71 oils listed, No. (36), page 308 is: "*Glycine Soja*, (*Sieb.*).–The Soy Bean. Large quantities of this seed are annually consumed in the manufacture of an edible oil."

Other oils include: "(9) *Arachis hypogæa*, (*Linn.*).–The Ground-nut or Earth-nut. This may be described as a modern industry; the oil, as a substitute for olive oil, having within the past 30 or 40 years developed in an almost unprecedented manner." France is a major importer of the nuts.

On the last two pages of Vol. I, Part I is a "Vernacular notice," whose "Translation" is given. It begins: "It is hereby brought to the notice of the general public that an Exhibition of all things worthy to be shown from all countries of the world will be held in Calcutta on the Maidan from the 4th of December 1883 till the 1st of March 1884." The frontispiece shows an aerial view of the Exhibition.

Note 6. Maidan, which means literally "open field," is the largest urban park in Calcutta. As of Oct. 2010 it still exists, is widely used, and is the home to numerous play grounds, including the famous cricketing venue Eden Gardens, several football stadia, and the Kolkata Race Course.

"(26) *Cocos nucifera*, (*Linn.*).–The Cocoa-nut." "(68) *Sesamum indicum*, (*Linn.*).–Gingelly or Sesame Oil." Address: Calcutta, Bengal [British India].

1246. Paillieux, Auguste; Bois, D. 1885. Le potager d'un curieux. Histoire, culture et usages de 100 plantes comestibles, peu connues ou inconnues: Soya [The inquisitive person's kitchen garden. History, culture, and uses of 100 edible, little-known or unknown plants]. Paris: Librairie Agricole de la Maison Rustique. 294 p. See p. 261-65. 2nd ed. 1892. 3rd ed. 1899. p. 575-625. [1 soy ref. Fre]

• ***Summary:*** The five-page section on Soya (p. 261-65) discusses its use primarily as a vegetable. For more about its broader uses, see Paillieux's 1881 book titled *Le soya, sa composition chimique, sa culture et ses usages*. This section discusses: Englebert Kaempfer's writings: "In Japan, this plant is named *Daidsu* and surnamed *Mame*, that is to say a food grain *par excellence*." Cultivation trials with four varieties conducted by the Society for Acclimatization: (1) Soybean from China, cultivated in Hungary, imported by MM. Vilmorin-Andrieux and Co. The seed color is pale yellow and the hilum is brown. This is the earliest maturing variety we have seen. (2) Soybean of Etampes. These seeds were distributed in 1874 by the Society for Acclimatization. The seeds are light yellow and the hilum is white. The plant is beautiful, very strong and very productive, but a little late in maturing. (3) The green soybean, originating from Japan, has rather roundish green seeds and a brown hilum. Its is not as early as the soybean from China, mentioned above. (4) The light green soybean, with a white hilum, has somewhat flattened seeds. It has come to us from both Japan and China. Its pods mature rather late. Vilmorin is importing more varieties, including a brown one. The variety in their 1880 catalog seemed a bit late.

There follow instructions for planting, cultivating, and harvesting soybeans (*Soya*). When the soybeans are fully developed, but before the pods begin to dry, they should be picked. At this stage they are as good as fresh flageolets–though the pods are a bit difficult to remove.

In the dried state, soybean seeds make a good food. Their taste is sweet and very agreeable. We have prepared them like ordinary white haricot beans. They should be soaked for 24 hours before cooking in water that is not hard, or in distilled water. For best results, add 3 grams per liter of soda crystals [sodium bicarbonate].

Soya is without doubt the best of all the coffee substitutes. Many housewives serve a mixture of coffee and chicory each morning for breakfast. But [ground] roasted soybeans need not be mixed with anything. It gives a good coffee *au lait* whose aroma resembles that of Mocha–though it is not as strong. The soybean is cultivated in Tyrol [Tirol]

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and the Istrian Peninsula under the name of "coffee bean," and we suppose this is also the case in Dalmatia and the south of Italy.

Mr. Heuzé in his book *Edible Plants* (*Plantes alimentaires*) gives the soybean the name *Dolic à café* (the coffee bean) and says that it is cultivated in some points in the departments of Ariège and of Haute-Garonne; we have not been able to verify this. Recently we learned from Mr. Faivre, of Beaune, that the soybean had been introduced, about 12 years ago, at Allery, a commune in Saône-et-Loire [in east central France] by Father Cretin (*M. l'abbé Crétin*), and that its seeds were used like coffee beans by many families in the country.

Mr. Faivre, an ardent and generous propagator / spreader of soya, sent us some seeds of the plant cultivated at Allery. They are brown and identical to those recently imported by Vilmorin. Finally, the engineer and head of one of our departments wrote us that he enjoys Soya each morning for breakfast, and that he prefers it to Mocha. He recommends roasting the seeds lightly.

If gardeners will set aside a little space for Soya each year in their gardens, they will obtain, at no extra expense, the coffee needed each morning by their families.

There is much more we know and could say about Soya. Worldwide, it occupies a place equal to wheat, corn, and potatoes. Indeed, it makes an excellent forage. It contains 18% oil. The cake, which remains after the oil is extracted, makes a powerful fertilizer. Under various forms, these seeds become part of the daily food of hundreds of millions of people. They are also used to feed animals, especially millions of horses and mules.

As numerous analyses have demonstrated, they constitute the richest and most complete food that one can desire. We recommend to the reader the recent work, done with great care by Pettet and Schou, in *Revue des Industries Chimiques et Agricoles* (1882).

Contents: Introduction. Discussion of individual plants arranged alphabetically by their French names. For each plant is given, below the French name: Scientific name, early sources, and plant family. Some of the plants discussed include: Amaranth (*Amarantus oleraceus*). *Glycine apios* (legume family). The peanut (*Arachis Hypogaea; Arachide, Pistache de terre*) (p. 20-23). Daikon or Japanese radish (*Raphanus Sativus*, L. var; *Daikon ou radis du Japon*). Azuki bean (*Phaseolus Radiatus; Haricot radié*) (p. 102-07; The section titled "A Java" mentions seasoning a dish with *Ketjap*, which it calls *la sauce noire*, or "black sauce"). Glutinous yam (*Dioscorea Batatas; Igname*). Konnyaku (*Amorphophallus Rivieri; Koniaku*). Kudzu (*Pueraria Thunbergiana; Kudzu*) (p. 154-64). White melon of Japan (*Cucumis Melo; Shiro uri; Melon blanc de Japon*). Myoga (*Zingiber mioga; Mioga*). Udo (*Aralia cordata; Oudo*). White quinoa (*Anserine Quinoa; Chenopodium quinoa; Quinoa blanc*) (p. 242-45). Chufa (*Cyperus esculentus; Souchet comestible, Souchet sultan, Amande de terre*) (p. 256-61). Soya (*Dolichos Soja; Soja hispida Moench; Glycine Soja; Soya*) (p. 261-65). Bambarra groundnuts (*Voandzeia subterranea; Voandzou*) (p. 272-74). Table of contents (by both French name and scientific name). Address: 1. Member of la Société nationale d'Acclimatation; 2. Préparateur au Muséum. Member of the Société Botanique de France.

1247. The sacred books of China; The texts of Confucianism, translated by James Legge. Part III. The Li Ki, I-X. 1885. In: Max Mueller, ed. 1885. The Sacred Books of the East, translated by various scholars. Vol. XXVII. Oxford, England: At the Clarendon Press. [Eng]

• ***Summary:*** Vol. 27 of this series contains parts I-X of the *Li Ki*, and vol. 28 contains parts XI-XLVI. In vol. 27, page 27 states: "The rules for bringing in the dishes for the entertainment are the following:—The meat cooked on the bones is set on the left, and the sliced meat on the right; the rice is placed on the left of the parties on the mat, and the soup on their right; the minced and roasted meat are put outside (the chops and sliced meat), and the pickles and sauces inside;"

Note 1. Sauces apparently refers to those made with soy (See Swann 1950, p. 434 footnote).

Note 2. An index to all the Sacred Books of the East was published in 1988 in Deli, India, by Motilal B/Vanarsidass.

1248. Welch, Adonijah Strong. 1885. Report on the organization and management of seven agricultural schools in Germany, Belgium, and England. Washington, DC: Government Printing Office. 107 p. See p. 73-77. Made to Hon. George B. Loring, U.S. Commissioner of Agriculture.

• ***Summary:*** The last section is titled "The Royal Agricultural College at Cirencester, England," where the author visited on 8 Feb. 1884. The subsection titled "Work of the laboratory" (p. 73) describes seven types of current original research, including: "7. On the soy bean (Soja hispida), its chemical composition and value as a food.

"The following is a detailed account of Prof. Edward Kinch's description and analyses of the soy bean of China. I append his entire report of the results of this interesting investigation, because it not only shows the character of the work done in his laboratory, but indicates that this bean may be profitably grown in some parts of the Western States. Indeed, the same bean was grown on the experimental grounds of the Iowa Agricultural College last year, and showed a very large yield."

Prof. Kinch's report, titled "The Soy bean," states: "This bean, sometimes known as the Japan pea and China bean, is the seed of the *Soja hispida*, Miquel (*Glycine hispida*, Moench; *Dolichos Soja*, Linné; *Glycine Soja*, Jaquin), a plant of the natural order Leguminosæ,..." suborder Papilionaceæ, and tribe Phaseolæ. Its natural habitat appears to be China and Japan; it also grows in Mongolia and in India, in

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the Himalayas, and within the last few years it has been cultivated experimentally in several European countries. This bean is worth more than a passing notice, as it is the vegetable which approaches most nearly in its proximate chemical composition to animal food. This will be seen later on. There are a great number of varieties of the soy bean known, which differ to some extent in the shape, size, and especially in the color of the seed, and in a few minor particulars, but which seem to vary comparatively little in chemical composition. Dr. C.O. Harz has classified the principal varieties as follows:

"Group I.–*S. hispida platycarpa. 1. olivaeea. 2. punctata. 3. melanosperma* (*a. vulgans. b. nigra. c. renisperma. d. rubro-cincta*). *4. platysperma. 5. parvula.*

"Group II.–*S. hispida tumida. 6. pallida* (*Roxburgh*). *7. castanea. 8. atrosperma.*

"These names sufficiently indicate the nature of the variety as far as the seed is concerned. The soy bean is extensively cultivated in the north of China, whence it is exported, to the southern provinces; it is here pressed for the sake of its oil and the residual cake largely used as a food for man and beast, and also as a manure.

"In Japan it is known by names signifying the bean, and from it are made not only soy [sauce] but a paste known as *miso*, which is in constant request at nearly every meal, *tofu*, or bean cheese, and other foods used to a less extent. This bean cheese is also well known in China, and is obtained by extracting the legumin from the beans with water and precipitating it with brine. An analysis of it is given below.

"These foods are most valuable additions to the dietary of the Oriental nations, and especially of the Japanese, who use so little animal food; they tend to supply the deficiencies of the staple food, rice, in nitrogenous matter, fat, and also in mineral constituents.

"The Buddhist priests, who are strictly forbidden to use animal food, consume considerable quantities of these beans, principally in the form of *miso*. The soy bean first attracted attention in Europe in 1873, when specimens from Japan, from China, and from India were shown at the Vienna International Exhibition. Dr. Forbes Watson, reporter on the products of India, called attention to it in the Catalogue of the Exhibits of the Indian Museum. Since then numerous experiments have been made on the European Continent on its growth, and also feeding experiments with the bean and its straw on different kinds of domestic animals have been prosecuted. Such experiments have been carried on by Wolling and Wein, at Munich; by Haberlandt, Lehman, Harz, Stahel, Zimmerman, Siewert, Wieski, and others, at various stations in Germany, Austria, and Hungary, and experiments have also been made in France and in Italy.

"The proximate chemical composition of some of the different varieties, grown in different places, is now given and compared with some other foods of vegetable and animal origin."

Table 1, titled "Percentage composition of the soy bean," gives the percentage of six constituents (water, nitrogenous matter [protein], fat, carbohydrates, fiber, and ash) in seven different types of soy beans: Pale yellow (from Japan, China, Germany &c., India), brown, round black, and long black.

"It has been shown by Levallois (*Comptes-Rendus*) that the soybean contains a special variety of sugar, many of its properties resembling mellitose; this constitutes about 10 per cent, of the soluble carbohydrates. Of the nitrogenous matters nearly all is in the form of albumenoids; a small quantity, about 1 per cent., appears as a peptone-like body, and about one-tenth to two-tenths per cent. is non-albuminoid."

Table 2, titled "Percentage composition," compares the percentage content of the six constituents listed above for six foodstuffs: Peas, [common] beans, lupins, lentils, lean beef, and fat mutton.

"These analyses show the greater richness of the soy beans in nitrogenous matter and in fat than the common bean and pea, and that, when the water is equalized, it more nearly approaches meat in proximate composition. The only leguminous seed of common occurrence, which contains more oil than this bean, is the earth-nut or ground-nut, *Arachis hypogæa*, which is now so largely cultivated abroad for its oil and its cake. In order to compare the soy bean straw with hay and with other straws of like nature, the following average analyses are given:

Table 3 (untitled) compares the percentage content of the six constituents listed above for six feeds: Meadow hay, bean straw, pea straw, lentil straw, soy bean straw, soy bean hulls.

"A special variety of *Soja hispida* is cultivated in some parts of Japan as a fodder crop and cut just as the pods are fully formed. The hay made from this is much relished by horses, cattle, and sheep. A sample of a crop grown on the Imperial College of Agriculture Farm, Komaba, Tokiyo, gave on analysis: Water 15.0%, nitrogenous matter 19.8%, fiber 35.9%, ash 6.8%, carbohydrates and fat 22.5%. Total 100.0%.

"It will be seen that this hay exceeds even lentil straw in the amount of nitrogenous matter it contains." Continued. Address: LL.D., Ames, Iowa.

1249. Zhang Zhidong; Miao Chuansun. 1885. Shun tian fu zhi [Gazetteer for the Peking metropolitan area (Shun Tian)]. China. Revised ed., 1889. [Chi]

• ***Summary:*** Wade-Giles reference: *Shun T'ien Fu Chih*, by Chang Chih-tung and Miao Ch'üan-sun. Qing dynasty. Hummel (1944): The author (1837-1909) was an official and reformer, native of Nan-p'i, Chihli. In 1877 he completed his term of office in Szechuan and returned to Peking, where he was engaged until 1881 as chief editor of the gazetteer of the Peking metropolitan area, entitled Shun-t'ien-fu chih, 130 + 1 chüan. The work was later completed under the chief editorship of Miao Ch'üan-sun and was printed in 1885. A

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revised edition appeared in 1889.

Bo (1982): In the 50th volume of this work, it is said that "ch'ing chiang" is soy sauce.

1250. Hills & Smith. 1886. Olives! (Ad). *Hartford Daily Courant* (*Connecticut*). Jan. 7. p. 4.
• ***Summary:*** "Imported Sauces! Worcestershire, Watkins, Anchovy, China Soy [sauce], Reading, John Bull, Harvey, London Club, Cashmere Chutney, Indian Mangoe Chutney."

Note: This ad also appeared in the Jan. 8 and 15 issues of this newspaper. Address: 368 Asylum Street (Batterson's Block).

1251. Scott, J. George (Shway Yoe). 1886. The Chinese brave. *Asiatic Quarterly Review* (*London*) 1(1):222-245. See p. 227. Jan.
• ***Summary:*** The Chinese are fighting the French. From Aug. to Nov. of 1884 "there was a seemingly endless stream of Chinese marching on the north-east frontier of Tongking" (p. 222).

Page 227: "The men lived in tents, or more often in rough and ready thatched huts built of branches of trees.... From ten to thirty men lived in each hut, and each section had its cooking pots, meals, and other arrangements in common, the fireplace being the primitive three bricks... The braves lived far from badly, according to their modest ideas of good living... Vegetable gardens sprang up in the neighbourhood. Numbers of peddlers with refreshment stalls followed the troops and ministered to the wants of the epicure by the supply of the bean-curd [tofu], the salt fish, and brews of different kinds of vegetables, from nettles to bamboo shoots, in which the peasant delights. The officers had their ragouts of chickens and ducks; their jars of soy [sauce], and peanut, and other oils; their bottles of wine, mostly in old champagne quarts, with Chinese labels of a magniloquence calculated to convert a teetotaller. On the whole, the Chinese armies were far from badly off."

1252. Sunshine, Susan. 1886. Woman and home: Silk stockings as lares and penates. *Los Angeles Times*. June 13. p. 3.
• ***Summary:*** "Deviled crabs: Take cooked crabs and pick the meat up fine; make a mayonnaise salad dressing, with plenty of mustard and vinegar and cayenne pepper, a pinch of tyme [thyme] and a little finely chopped onion; season with Worcestershire sauce, mix with your meat,..."

1253. Forman, Allan. 1886. New York's China-town: A dinner in Mong Sing Wah's restaurant. *Washington Post*. July 25. p. 5.
• ***Summary:*** This restaurant is at 18 Mott Street. The proprietor is a "Celestial Delmonico." "The only condiment is seow [Cantonese: *shi-yau* or *si-yau*, meaning "fermented black soybean sauce"], a sort of Celestial cousin to Worcestershire sauce, and, in fact, its probable original. The evolution of Worcestershire sauce was somewhat as follows: Seow was taken from China to India, where hot spices were added to tickle the palates and livers of the English East Indians, who relished Chili sauce, army powder and red pepper. There it was known as soy [sauce]. From the East Indies to England, where it was still more spiced and flavored and patriotically called Worcestershire sauce. But the average Chinaman uses but little flavoring in his food, he prefers the natural taste."

Includes 4 illustrations, three of the restaurant and one titled "Position of the hand while using the chop sticks."

Note: This is the earliest English-language document seen (Sept. 2008) that mentions "chop-suey." The Chinese host orders "Chow-chop-suey" and several other dishes with Chinese names at the restaurant.

1254. Tamari, Kizo. 1886. Vegetables in Japan. *Transactions of the American Horticultural Society* 4:77-80. For the year 1886.
• ***Summary:*** "Peas and beans are so numerous in varieties that they can not be easily described. Besides common cultivated peas and beans, we have asparagus beans with long and tender pods, ensiform beans [shaped like a sword blade], many kinds of kidney beans and soy beans (*soya hispida*), etc. Some [such as soy beans] are used green, in pod, and the seeds are mostly used for making different kinds of cakes [confections] or as parched beans [soynuts]. The most important crop among our pulse is the soy bean. The annual product is about the same as that of wheat, viz.: eleven and one-half [11.5] million bushels. This large amount is consumed in three different forms in our culinary uses, viz.: miso, shioyu [shoyu] and tofu. The first and second are made of the beans, wheat or barley, common salt and water; the first in the form of paste, and the second a liquid, commonly called Japanese sauce. The third is a white mass, made by coagulating extract juice of the bean with a solution of epsom [sic, Epsom] salts. This is called Chinese cheese by the English.

"Tofu is very extensively and commonly used, especially among those living apart from the seacoast, and where they can not get fresh fish, this is cooked and used as a substitute for fish. This bean is exceedingly rich in nitrogenous substances. It contains about thirty-seven per cent. of albuminoids, or over three times as much as wheat, barley, or oats, and one and a half times as much as peas or beans. So far, our people are the most extensive consumers of pulse of any people in the world. It seems to me that it is caused by the demand for nitrogenous food, which was almost excluded from animal food besides fishes on our table."

Note 1. The latter refers to the fact that Buddhism in Japan prohibits the consumption of four-legged creatures.

Note 2. This volume is a report of the seventh annual

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meeting, held at Cleveland, Ohio, September 7th to 10th, 1886. Address: Japan.

1255. *Brisbane Courier* (*Queensland, Australia*).1886. Imports (A special charge is made on consignees' announcements inserted in this column). Nov. 20. p. 4.
• ***Summary:*** "Tannadine, from Hongkong: 10 baskets and 6 chests bean sticks [probably dried yuba sticks],... 1 basket bean curd [tofu], 10 baskets [soya] bean sauce, 3 baskets salt bean [probably fermented black beans / fermented black soybeans],... 6 boxes preserved plums,... 4 boxes beans,... 15 chests soy [sauce], 1 chest Joss sticks,..."

1256. *Chemist and Druggist* (*London*).1886. 55 253. A.D.–Sauce... 29:723. Nov. 27.
• ***Summary:*** "Sauce similar to some of the popular relishes may be made as follows:–Boil 24 lbs. of hog's liver for twelve hours with 10 gallons of water, frequently renewing the water. Chop the liver, work with the water, strain, and mix with the following: White vinegar 15 gallons. Walnut ketchup 10 gallons. Mushroom ketchup 10 gallons. Madeira wine 5 gallons. Table salt 25 lbs. Canton soy [China] 4 lbs. Allspice, powdered, 1 lb. Coriander, powdered, 1 lb. Mace, powdered, ½ lb. Cinnamon, powdered, ½ lb. Asafoetitda [Asafoetida] (dissolved in brandy) ¼ lb."

1257. Church, Arthur Henry. 1886. Food-grains of India. London: Published for the Committee of Council on Education by Chapman and Hall, Ltd. 180 p. See p. 140-44. Illust. Index. 27 cm. 35 plates, with Fig. 26 being of the soybean. South Kensington Museum science handbooks. With 23-page supplement, 1901. Reprinted in New Delhi, India in 1983 by Ajay Book Service. [17 ref]
• ***Summary:*** "The soy-bean, *Glycine Soja*, Sieb. and Zucc. *Synonyms*–Soja hispida (Moench.); Dolichos Soja (Linn.); Soja angustifolia (Miq.). *Hind.* [Hindi]–Bhat, Bhatwan. *Punjab* [Panjabi]–Bhút. *Beng.* [Bengali]–Gari-kulay. *Naga*–Tsu-dza.

"This important bean is the seed of Glycine Soja, a small, sub-erect, trifoliate, hairy annual, with pods generally 3 to 4-seeded. It belongs to the natural order Leguminosae, sub-order Papilionaceae, tribe Phaseoleae, and sub-tribe Glycineae; 5 genera are included in this sub-tribe. Glycine contains about 12 species, chiefly Australian, but 3 are Indian, namely *G. javanica*, *G. pentaphylla*, and our present species.

"The soy-bean forms a considerable article of food in China and Japan. Since 1873 it has been successfully grown, as an experiment, in some of the warmer parts of Europe. It is widely spread in the outer Himalaya, and tropical regions from Kumaun to Sikkim, and the Khasir [Khasia / Khasi Hills], and the Naga Hills to Upper Burma. It is often cultivated, rather largely in Busti and Gorakhpur [in today's Uttar Pradesh], Patna, and Purniah [Purnea] Districts [both in today's northeast India].

"This crop is generally grown by itself; the seeds are sown from June to September; the harvesting takes place between November and January. It is consequently a kharif crop. The seeds should be placed at a depth not exceeding 1 to 1½ inch; 18 plants may be left, after weeding and thinning, to the square yard. A peaty soil, or one rich in organic matter, suits the plants best; a calcareous soil is also favourable to its growth. Sulphate of potash is a good manure, nitrogen may be supplied either as nitrate of soda or, in the case of soils poor in organic matter, in the form of rape or mustard cake, but it is rarely needed, while large applications of nitrogenous manure exert a distinctly injurious effect upon the yield of beans. So far as we know, this very important, vigorous, and productive pulse is not attacked by any insect or parasitic fungus."

A full-page illustration (p. 141) shows the upper part of a soy-bean plant, with flowers and a lengthwise cross section of one of the pods.

"Very few vegetable products are so rich as this bean at once in albuminoids and in fat and oil, the former constituent amounting to 35 per cent., and the latter to 19. The cultivation of the pale large-seeded varieties should be extended."

A table titled "Composition of soy-beans" (p. 143) shows that the seeds contain 35.3% protein, 18.9% fat, 4.6% ash, 11.0% moisture. "The nutrient-ratio is here about 1:2, while the nutrient-value is 105. Potash forms nearly one-half, and phosphorus-pentoxide one-third of the ash of the soy-bean. Ripe soy-beans require long soaking, preferably in warm water, in order to render them soft.

"In China and Japan three preparations are extensively made from the soy-bean. Soy sauce is the best known of these, but more important are the soy or bean cheeses, and a kind of paste. The beans are sometimes pressed for the sake of the oil they yield; the residual cake forms an extremely rich cattle food, containing as it does 40 per cent. of flesh-formers and 7 per cent. of oil. The soy-bean may also be grown as a fodder plant. If cut just when the pods are fully formed it makes an excellent hay, superior to that of the lentil."

Note 1. This is the earliest English-language document seen (Feb. 2004) that uses the word "cheeses" or the term "bean cheeses" or (by implication) "soy cheeses" to refer to tofu.

Webster's New Geographical Dictionary (1988) defines Bengal (earlier Bengal Presidency) as a former province in northeast British India, and now a region encompassing West Bengal, India, and Bangladesh. The capital was Calcutta, located on the Hooghly River about 90 miles from its mouth. Calcutta is now the capital of West Bengal, India. Dhaka (Dacca) is the capital of Bangladesh. Bangladesh was formerly East Bengal (part of India, 1700s-1947), then East Pakistan, 1947-1971. It became Bangladesh in 1971.

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This one of the earliest document seen (March 2001) that clearly refers to soybeans growing in Burma, but it is not clear whether these are cultivated or wild soybeans.

Page 127 discusses "The Pea-Nut. *Arachis hypogaea.* L." Six local vernacular names are given. "This plant is probably of American origin, although it has long been cultivated in India, on the West Coast of Africa, and in many other tropical countries. There is a similar plant, *Voandzeia subterranea* [Bambara groundnut], allied to Vigna, which grows under the same conditions." The composition of pea-nuts (in 100 parts and in 1 pound) is given. "Half the weight of pea-nuts is oil... Pea-nuts, after the greater part of the oil has been extracted by pressure, yield a cake well adapted for feeding cattle." An excellent full-page illustration (line drawing, p. 126) shows the pea-nut plant with seeds growing under ground and details of flowers and seeds.

Note 2. This is the earliest document seen (March 2001) that mentions *Voandzeia subterranea. Webster's Third New International Dictionary* has an entry for "voandzeia: [NL, from Malagasy *voandzou*]. A genus of tropical creeping herbs (family Leguminosae) with trifoliate leaves and small axillary flowers." We later learn that one species, *Voandzeia subterranea* (L.) Thouras, is called the Bambara groundnut. The Bambara are a Negroid people of Upper Niger.

Note 3. This is the earliest English-language document seen (Oct. 1999) that contains the term "nitrate of soda" (as a fertilizer) in connection with soy-beans. It was later renamed "sodium nitrate."

Note 4. This is the earliest document seen (Oct. 2002) that uses the word "kharif" to refer to the rainy season in South Asia.

Note 5. A long, positive review of this book appeared in the *Times of India* (25 Dec. 1886, p. 4), which mentioned that even though Church had never been to India, he derived his knowledge from reliable sources. The word "soy-beans" appeared twice in the review. Address: Prof. of Chemistry, Royal Academy of Arts, London.

1258. Gordon Cumming, C.F. (Constance Frederica). 1886. Wanderings in China. 2 vols. New edition. Edinburgh and London: William Blackwood and Sons. Illust. Index. 21 cm. • ***Summary:*** The author is a Protestant Christian; she praises Christian mission work in China and sees all Chinese (except Christian converts) as heathens and idolaters. She traveled in Hong-Kong and China in late 1878 and 1879. Each entry is dated, like a journal.

Volume I: In describing a Chinese feast on the island of Nantai, she notes that beef is prohibited by Confucianism on utilitarian grounds; however sea-weed and "almonds with bean curd" are among the many delicacies served. All manner of delicate little dishes "were scattered about the table for the guests to play with between courses, and each was provided with a tiny silver plate for mustard, soy [sauce], or any other condiment" (p. 220-23). A footnote on delicacies of old states that in the late 1500s at Launceston, England, porpoise was served with furmenty [frumenty; a dish of wheat boiled in milk and usually sweetened and spiced], almond-milk, sugar, and saffron (p. 222).

She describes a vegetarian meal at Kushan Monastery, noting that butter is considered as unfit for food, and milk is fit only when curdled and sweetened (p. 260).

Volume II: In a delicious vegetarian dinner at the Tien-Dong Buddhist Monastery, "pea-nuts" were served on the first tray. "Of course the whole was entirely vegetable [vegetarian], though some portions of corn-husk and other things tasted so very much like meat and preserved fish that we found it difficult to persuade ourselves that such was not the case" (p. 39). From vendors with portable street ovens in Peking: "Bean pudding in a crust of mashed potatoes, fried in oil, seemed to be in great demand..." (p. 281).

"But the favorite food here [Peking] is a cake made of bean curd. Common small beans are ground between two granite millstones like a hand quern. As the upper stone is turned, water is poured on, and a creamy white fluid oozes out, which flows into a tub, and is boiled with salt. The froth is skimmed off, and the curd is tied up in a cloth, put under pressure, and so formed into square cakes [tofu], which really taste rather like our own curds. They are generally, however, fried in oil, or else eaten with soy, which is a sauce obtained from the same bean when fermented." (p. 282).

"Every now and again among the curious vehicles dragged noisily along the street, came a gigantic wheelbarrow, laden with wicker oil jars. It seems that the manufacture of oil from the yellow and white pulse bean is one of the great industries of Northern China, and thousands of junks are annually employed in transporting the oil and bean-cake to the Southern Provinces. The beans are first crushed in oilmills, whose revolving stone wheels are turned by bullocks. Some mills are so large as to employ about sixty bullocks. The beans are then steamed, and when very hot are (by a somewhat elaborate process) subjected to great pressure whereby the oil is expressed. It is filtered through a cloth, and is then generally poured into large jar-shaped baskets, each made to contain a hundred pounds of oil. They are lined with tough paper, which is glued to the wicker-work by a strong varnish, and is quite oil-proof. The narrow mouth of the jar is then covered with the same varnish paper, and no further packing is required even for a sea voyage. The oil, which is clear and pale, is used both for lamps and for cooking purposes.

"The bean-cake which remains after the oil has been expressed, is used as manure for the land, but is never given to cattle, who, however, are largely fed on the bean itself. As the aforesaid very popular pulse curd and soy sauce are both prepared from the same bean, it must be allowed that it holds an important place among the vegetable products of the land" (p. 283).

Miss Constance Frederica Gordon Cumming, a woman,

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lived 1837-1924. A portrait photo of the author appears as the frontispiece of each volume. Address: Author and world traveler.

1259. Hepburn, James Curtis. 1886. A Japanese-English and English-Japanese dictionary. 3rd ed. Tokyo: Z.P. Maruya & Co., Limited. Yokohama, Shanghai, Hongkong & Singapore: Kelly & Walsh, Limited. London: Trübner & Co. 962 p. 22 cm.

• ***Summary:*** "During the fourteen years which have elapsed since the publication of the last edition of this Dictionary [in 1867], the Author has kept it constantly before him, correcting errors, improving and enlarging the definitions, and adding new words and illustrations, according as his time and other important engagements allowed him. But owing to the amazing changes and rapid advancement of the Japanese in every department, he has found it difficult to keep pace with the corresponding advance of the language in the increase of its vocabulary. He has endeavored, however, to collect these words, examine, classify and define them. Many, no doubt, have escaped his notice. Still there is an addition of more than ten thousand words to the Japanese and English part."

New soy-related definitions in this edition, not found in or changed from the 1867 edition: Aburage: Anything fried in oil or grease, especially fried *tofu*. [fried tofu].

Amazake: Sweet *sake*, a kind of drink made of fermented rice.

Azuki: A small red bean, Phaseolus radiatus. Daizu: A kind of large white bean, Soja hispida.

Hiriôzu: A kind of food make of *tôfu* fried in oil. Kinako: A flour made of beans.

Kirazu: The refuse of beans left in making *tôfu* [okara].

Note 1. This is the earliest purely English-language document seen (Aug. 2011) that uses the word "Kirazu" to refer to what is now called "okara" or "soy pulp."

Koji: Barm or yeast made by the fermentation of rice or barley in the process of making *sake* or *soy* [sauce].

Miso: A kind of sauce made of beans, wheat and salt. Miso wo suru: To rub miso in a mortar.

Sake: A fermented liquor brewed from rice. Sake wo kamosu: To brew sake. Sake ni yô: To be drunk. Sake no uye ga warui hito: One who behaves disorderly because of drink. Sake ni oboreru: To be addicted to drink [alcohol].

Shoyu: Soy, a kind of sauce made of fermented wheat and beans. Syn. [Synonym]: Shitaji.

Tamari: Soy, shôyu. Note 2. This is the earliest English-language document seen (April 2012) that uses the word "Tamari" to refer to a type of Japanese soy sauce.

Tofu: A kind of food made of beans, bean curd.

Unohana: The Deutzia scabra; also refuse of beans from making tofu. Yuba: A kind of food made of beans, the skin of bean curd.

Terms listed unchanged from the 1867 edition include Natto, and Yu-dofu.

No listing is given for: Daitokuji natto, Edamame [Yedamame], Hamanatto, or Okara.

The "English and Japanese dictionary," which starts on page 771-73, contains the most important English words with numerous examples. Included are: Bean: Mame. Spec. Azuki, sora-mame, daizu, endo, ingen, sasage. Bean pod: Mame no saya. Bean curd: Tôfu.

Soy: Shôyu.

Note 3. This is the earliest English-language document seen (Oct. 2001) that uses the word *Unohana* to refer to okara. Address: M.D., LL.D., Yokohama, Japan.

1260. Kew (England) Royal Botanic Gardens. 1886. Official Guide to the Museums of Economic Botany. No. 1. Dicotyledons and gymnosperms. 2nd ed., revised and augmented. London: Printed by Eyre and Spottiswoode, for H.M. Stationery Office. 173 p. See p. 48 for soy. 19 cm.

• ***Summary:*** In the section titled "Leguminous order (*Leguminosæ*)" (p. 43-65), Case 28, No. 174 (p. 48) is about "Soy Beans (*Glycine Soja*, Sieb. and Zucc.). An annual, cultivated largely in China and India. From the seed the Chinese prepare a sauce known as Soy; a quantity of oil is also expressed from them, and the residue, after the expression of the oil, is extensively used for feeding cattle, as well as for manuring the land in China. It is made into large circular cakes similar to that exhibited, weighing about 60 lbs."

Also mentioned in this section are Sunn hemp of India, lupins, indigo, tragacanth, ground nuts, gram or chick pea, lentils, (*Pueraria Thunbergiana*, the Ko of China or Kuzu of Japan), ordeal beans of Old Calabar, green gram of India (*Phaseolus Mungo*), and Bambarra ground nut (*Voandzeia subterranea*). Address: Kew, England.

1261. Kihara, Hakushô. 1886. Sake shôyu tsukurioke yôsekihyô [Chart showing the volumes of various sizes of containers (kegs) for sake, shoyu]. Tokyo: Takasaki Shûsuke. 176 p. 20 cm. [Jap]*

• ***Summary:*** Note: At this time, both sake and shoyu were sold in wooden kegs called *oke* in Japanese.

1262. Lanessan, J.-L. de. 1886. Les plantes utiles des colonies françaises [Useful plants of the French colonies]. Paris: Impremerie Nationale. 990 p. See p. 710. [Fre]

• ***Summary:*** Dau-nanh is the name of the soybean in Cochin China. Gives a botanical description of "*Dolichos Soia* or *Soja* L.–Annual, erect, fuzzy stalk, simple with ascending branches; ternate, oval velvety leaves; purplish flowers in simple bunches, axillary; calyx with five sharp divisions, the upper ones shorter:... oblong wings; slightly carinate; ten stamens, nine shorter; hispid hanging pod; whitish oval beans.

"In Japan they prepare with these beans and some

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meat broth a sauce of great renown, *Sooju* or *Soja*, that the Chinese and Vietnamese also use to stimulate their appetite. They also make a white purée resembling coagulated milk, called *Teu-hu* [tofu] in China, where it is highly appreciated. Although it is rather insipid, it is neither disagreeable nor indigestible."

Note: Meat broth is not used in preparing shoyu, which acquires a hearty, meaty flavor through the fermentation process. Address: Professeur Agrege d'Histoire Naturelle a la Faculte de Medecine de Paris, France.

1263. Rein, Johann Justus. 1886. Japan: Nach Reisen und Studien, im Auftrage der Koeniglich Preussischen Regierung dargestellt [Japan: Travels and researches undertaken at the cost of the Prussian government. Vol. II.]. Leipzig, Germany: Verlag von Wilhelm Engelmann. 679 p. See p. 5, 65-70, 123-27, 185, 649. Illust. Indexes (1 German and Latin, 1 Japanese). 2nd ed. 1905. [9 ref. Ger]

• ***Summary:*** A superb book, showing the high German art of studying other cultures. The many illustrations are either beautiful wood engravings (*Holzschnitte*), real photographs, or actual samples of paper or textiles (glued in). In the chapter on "Food plants" (*Nährpflanzen*), the following is a partial contents of the section on "Pulse or leguminous plants" (*Hülsenfrüchte oder Leguminosen*, p. 65-71): Introduction to crops cultivated in Japan. 1. The ground-nut and ground-nut oil. 2. The soybean: "Among the pulse of Japan (and not the less of China), the soy-bean ranks first in extent, variety of use, and value: and chemical analyses prove the empirical judgment is well founded. In point of nutriment, the soy-bean is of all vegetables the nearest to meat. It contains nearly two-fifths of its weight in legumin rich in nitrogen, and nearly one-sixth in fat. The soy-bean is to the inhabitants of Japan what their *garbanzos* (chick-peas) are to the Spanish, and their *feijao preto* (black beans) to the Brazilians. The author then describes the characteristics of the soy-bean, the work of Haberlandt with soy-beans in Austria, and the yields that he and his co-workers obtained.

"In Japan the varieties of soy-bean are distinguished–according to colour, as white (more properly yellowish), black, brownish red, green, and spotted; according to duration of growth [maturity] as early-ripening, middle-ripening, and late-ripening; according to form, as spherical, ellipsoidal, kidney-shaped, and compressed laterally; and according to use, as to those which serve primarily in making Shôyu (soy), Tôfu (bean-cheese), and Miso (a sort of sauce), and those eaten in any plain shape."

Soy-bean varieties in Japan include: 1. "White (pea-yellow) soy-beans, Japanese Shiro-mame or Haku-daidzu. To this division belongs an early-ripening sort with very small seeds, called Goguwatsu-mame [Go-gatsu], or 'five-months-kind,' because it ripens in the fifth month of the old Japanese calendar, our July; also another small-seeded, early-ripening variety, the Wase-mame or Natsu-mame, that is, early and summer-bean. These two are also called Tôfu-mame, because they are used chiefly in making Tôfu. Another sort serves to produce Miso. It is called Nakate-mame, 'middle-late bean,' its time of maturity occurring half-way between that of the early and late kinds. Its seeds are round and somewhat larger. The late ripening varieties, Okute-mame (late-bean), Maru-mame (bullet-bean), and Teppô-mame (gun-bean), or Aki-mame (autumn-bean) have, as their names indicate, mostly bullet-shaped seeds, which become harder and larger than the early ones. The variety last named is used in making Shôyu, while Maru-mame is valuable as horse-feed.

2. Black soy-beans, Japanese Kuro-mame or Koku-daidzu. These are eaten boiled with sugar, as an entrée, or as a relish to rice. There is a middle-late sub-species, with round, elliptical seeds, Kuro-mame, in short, and another like it with big, bullet-shaped beans is called Kuro-teppô-mame. And again there is a late-ripening sort with flat, elliptical seeds under several names.

3. Brown soy-beans, Japanese Katsu-daizu (thirsty soy-bean) are much less grown than the white and black sub-species, and are used like the latter. They are distinguished as Aka-mame, red soy-beans, round, reddish-brown in colour, in different varieties, and Cha-mame, tea beans, three light-brown sorts of small extent and significance.

4. Greenish or bluish green soy-beans, Japanese Ao-mame or Sei-daizu, are eaten mostly boiled and with sugar, like the black and brown-red varieties. And, with the brownish sorts, they are much less widely grown than the black and yellowish. The Japanese distinguish the following sub-species of Aö-mame [sic, Ao-mame]:–(a) Sei-hito,–epidermis green, inside a whitish yellow. (b) Nikuri-sei,–greenish throughout. Both sub-varieties run from roundish-ellipsoidal to a bullet roundness, are of medium size, and remind one of green peas. (c) Kage-mame, with pale green, round beans. 5. Speckled soy-beans, Japanese Fuiri-mame or Han-daidzu. This group is not important. Its cultivation is confined to a small area, in a few provinces. Its sub-varieties are known as:–(a) Kuro-kura-kake-mame, with a black spot on the saddle (eye), otherwise greenish; flat and with the outline of an egg. (b) Aka-kura-kake-mame, with a brown spot on the saddle (eye), otherwise yellowish-green, flat and drawn out long. (c) Fuiri-mame or Udzura-mame, speckled or spotted soy-bean, yellowish-green with many dark flecks. A rare variety, grown only in a few places, especially in Harima.

"Early-ripening soy-beans are sown as early as April in Southern Japan, in Central Japan during May. Those that ripen in autumn need much more warmth, and are sown, as a rule, one month later... Late-ripening Daidzu is also a favourite for planting along the edge of fields and on the new-built dykes of rice-fields."

Returning to the work of Haberlandt: "At the end of his above-mentioned treatise, Haberlandt summed up in five noteworthy propositions, the results of his experiments with

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the soy-bean and of its chemical analysis. His conclusions are as follows:

"(a) The acclimatization of the early-ripening sorts, particularly those with yellow and reddish brown seeds, appeared to have fully succeeded in Central Europe.

"(b) The seeds obtained were larger, heavier, and handsomer than those from Eastern Asia, the chemical composition, however, remaining unchanged.

"(c) The soy-plant resists light spring frosts better than our young beans, and endures greater dryness in summer than most leguminous plants, though otherwise much like other kinds of beans.

"(d) It is distinguished by heavy crops, besides furnishing, in its stems and leaves, either green or dried, a nourishing feed, of which cattle are very fond.

"(e) In their high percentage of protein and fat, they far excel all other pulse in nutritive quality; and when properly prepared are second to none in flavour.

"After such favourable judgments, it might have been expected that the soy-bean, at least in the warmer regions of the Austro-Hungarian monarchy, would soon become popular and generally cultivated. The result, however, was quite otherwise. The hopes which he had aroused in behalf of this plant seem to have disappeared with Haberlandt, who died in 1878.

3. Azuki beans (many varieties are named and described).

Two tables (p. 73-74) show the following: (1) Analysis of 10 different numbered samples of soybeans, empty pods, and straw and leaves. Eight are from Haberlandt's book *Die Sojabohne* [The Soybean] (1878), two are from Caplan, and one each from Mach, Senff, Levallois, and Kinch. (2) Comparative composition of 9 different legumes, including soybeans, azuki beans, common peas, broad beans / faba beans, lentils, yellow lupins, and peanuts. The soybean has by far the most crude protein, is second in fat (after peanuts), and is average in (minerals).

Foods made from soybeans (p. 123-27): Shoyu (*Shôyû, die japanische Bohnensauce, auch Soja*). Miso (made with rice koji [*Kôji oder fermentierender Reis*]). Tofu (*Tôfu, Bohnenkäse*, made with *Shio-no-nigari* (*Salzbitter*)) incl. dried-frozen tofu (*Kori-tôfu, gefrorener oder Eis-Tôfu*).

"Kori-tôfu, frozen or ice-Tôfu, is the spongy, horn-like substance that remains when common Tôfu is allowed to freeze and then thawed and dried in the sun, thus getting rid of most of its water. By Yuba [Yuba] is meant a third preparation, consisting of brownish, tough skins (*Häuten*), made by boiling the dissolved legumine of the Tôfu-process, with the addition of some wood-ashes, and then taking away in succession the skins that rise" (p. 126-27; see Rein 1889).

Note 1. This is the earliest German-language document seen (Oct. 2008) that contains the word Yuba.

The section on "Oil plants and their products" (p. 176-89) gives details on 13 plants and the oil obtained from them, including: 1. Rapeseed oil. 2. Mustard oil. 3. Camellia oil. 4. Cottonseed oil. 5. Peanut oil. 6. Sesame oil. 7. Perilla oil (*Perilla ocymoides*). 11. Hempseed oil. Soybean oil is not one of these. However a table (p. 185) gives the average composition of various Japanese oilseeds (Source: E. Wolff et al.; Ollech 1884): Rapeseed, peanuts, cottonseed, sesame (brown and white), hemp seeds, shelled beech-nuts, and soybeans.

Note 2. Volume 1 was published in 1881. The title of volume 2 is Land-und Forstwirtschaft, Industrie und Handel. Johann Justus Rein lived 1835-1918.

Note 3. This is the earliest German-language document seen (Feb. 2004) that uses the term "kori-tôfu," or "gefrorener Tôfu," or "Eis Tôfu" to refer to dried-frozen tofu.

Note 4. Also discusses: Ame, midzu-ame, and barley malt syrup (p. 121-22). Fu, or baked wheat gluten cakes. Hemp, hempseed, and hempseed oil (p. 88, 177, 184-85). Kudzu (p. 75, 199, 217). Peanuts and peanut oil (p. 176-81, 185). Sea-weeds–especially marine algae (p. 93-96). Sesame seeds and oil (p. 88, 176-78, 181-82, 185). Address: Prof. of Geography, Univ. of Bonn, Germany.

1264. Yule, Henry; Burnell, Arthur Coke. 1886. Hobson-Jobson: Being a glossary of Anglo-Indian colloquial words and phrases, and of kindred terms; etymological, historical, geographical, and discursive. London: John Murray, Albemarle Street. xlviii + 870 p. See p. 651 ("soy"). 23 cm. [1166* ref. Eng]

• ***Summary:*** "Soy, s. A kind of condiment once popular. The word is Japanese *si-yau* [sic] (A young Japanese fellow-passenger gave the pronunciation clearly as shô-yu–A.B.), Chinese [Cantonese] *shi-yu*. It is made from the beans of a plant common in the Himalaya and E. Asia, and much cultivated, viz. *Glycine Soja*, Sieb. and Zucc. (*Soya hispida*, Moench.) boiled down and fermented."

The authors then quote passages relating to soy from Lord King's *Life of John Locke* (1679), Dampier (1688), Ovington (1690), Kaempfer (1712), and Thunberg's Travels (1776).

Yule lived 1820-1889. A small illustration shows Arthur Burnell (lived 1840-1882).

Contents: Dedication to Sir George Yule, C.B., K.C.S.I. Address: 1. Living in Palermo; 2. Madras Civil Service, one of the most eminent modern Indian scholars.

1265. *Mataura Ensign* (*Otago, New Zealand*).1887. The household. 6(636):2. Jan. 21

• ***Summary:*** "Worcestershire Sauce–Mix together 1½ gallons white wine vinegar, 1 gallon walnut catsup, 1 gallon mushroom catsup, ½ gallon Maderia [Madeira] wine, ½ gallon Canton soy [sauce; from China], 2½ pounds moist sugar, 19 ounces salt, 3 ounces powdered capsicum, 1½ ounces each of pimento and coriander, 1½ ounces chutney.

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3/4 ounce each of cloves mace and cinnamon, and 6½ drams of assafoetida [asafoetida] dissolved in 1 pint brandy 20 above proof. Boil 2 pounds hog's liver for 12 hours in 1 gallon of water, adding water as required to keep the quantity; then mix the boiled liver thoroughly with the water; strain it through a coarse sieve. Add this to the sauce."

1266. Tahara, R. 1887. Shôyu bunseki setsu [Theory of shoyu analysis]. *Yakugaku Zasshi (J. of the Pharmaceutical Society of Japan)* No. 61. p. 80-89. March. [Jap]
• ***Summary:*** The earliest study on the flavor of shoyu, and a very early study on the composition of shoyu.

1267. Hills & Smith. 1887. Relishes! (Ad). *Hartford Daily Courant (Connecticut)*. April 8. p. 4.
• ***Summary:*** "Imported Sauces: Worcestershire, Reading, John Bull, China Soy [sauce], Harvey, Beefsteak, Essence Anchovy, London Club, Mango Chutney and Cashmere Chutney, Mushroom Catsup, Walnut Catsup and Shrewsbury Catsup." Address: 368 Asylum Street (Batterson's Block).

1268. *Chemist and Druggist (London)*.1887. Trade report. 30:590-93. May 14. See p. 593.
• ***Summary:*** This section begins: "Note to Retail Buyers:–It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk." Commodities are listed alphabetically by name. These are prices on the London market.

"Soy is still selling steadily at 1*s.* 4*d.* per gallon for good China."

1269. Osawa, Kenji; Ueda, Keiji. 1887. Shokumotsu shôka no ryôhi (zokkô) [The quality of digestion of foods (continuation)]. *Chugai Iji Shinpo (Medical News, Foreign and Domestic, Tokyo)* No. 177. p. 16-21. Aug. [Jap]*
• ***Summary:*** A digestion experiment with tofu continued for two days, October 28-29, 1885. The subject, K.U., weighed 51.45 kg at the beginning and 49.36 kg at the end of the experiment. The diet consisted of tofu with some shoyu and starch. The following percentages of the basic nutrients were digested: Protein 96.1%. Fat 97.4%. Carbohydrates (incl. fiber) 88.4%. Ash 72.4%. Address: Physiological Institute, University of Tokyo.

1270. *Chemist and Druggist (London)*.1887. Trade report. 31:326-29. Sept. 10. See p. 329.
• ***Summary:*** This section begins: "Note to Retail Buyers:–It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk." Commodities are listed alphabetically by name. These are prices on the London market.

"Soy.–China has advanced to 1*s.* 3*d.* per gallon on the spot lately; while sales have been made 'to arrive' at 1*s.* 5½*d.* per gallon."

1271. Kellner, O.J. 1887. Zusammensetzung Japanischer landwirthschaftlicher und technischer Producte und Materialien [Composition of Japanese agricultural and technical products and materials]. *Mittheilungen der Deutschen Gesellschaft fuer Natur- und Voelkerkunde Ostasiens in Tokio (Yokohama)* 4(35):205-22. Sept. See p. 205, 208-09. [Ger]
• ***Summary:*** The introduction (p. 1) contains a list of publications on agricultural chemistry and chemical nutritional physiology published by this laboratory under Dr. Kellner's direction. These include investigations of seeds, hay, straw, manures, and technical products (alcoholic drinks and shoyu).

A large table (p. 8, probably based on Kellner's research) gives the German name, botanical name, Japanese name, and nutritional composition of 12 leguminous seeds and oilseeds (on a dry-weight basis, plus their ash), including soybeans (*Sojabohne, Soja hispida, daizu*), shelled peanuts (*Erdnuss, Arachis hypogaea, Nankin mame*), and sesame seeds (*Sesam, Sesamum orientale, goma*).

A discussion of the soybean (p. 209) notes that it is widely cultivated in Japan and also used to make a variety of other products that resemble those made from milk. Soybeans are not often consumed directly, but are used in the preparation of tofu (*Bohnenkäse*), miso, and shoyu sauce. A small table gives the nutritional composition of three additional soybean varieties that are used for shoyu production. They all contain less protein and more fat than the soybean from the previous large table.

Another large table (p. 215) gives the German name, botanical name, Japanese name, and nutritional composition of 12 plants purchased at a market in Tokyo, including: kuzu (-, *Pueraria Thunbergiana, kudzu*), peanuts (*Erdnuss, Arachis hypogaea, Tojin-mame*), and soybeans (*Sojabohne, Soja hispida, kari mame*). The soybeans contain 13.67% water. Their dry matter contains 18.11% raw protein, 3.07% ether extract [crude oil], 39.16% crude fiber, etc.

Other large tables gives the composition of kudzu (p. 217), kombu (*Laminaria japonica*, p. 219), okara (*Tofukuchen, Tofurückstände*, p. 221), and various alcoholic beverages (p. 221, including sake [made from koji], mirin, shirosake (white sake), white Kofu wine, and Sakurada beer brewed in Tokyo). A small table (p. 221) gives a nutritional analysis of three samples of shoyu, including the specific gravity (density relative to water), dry matter, organic matter, ash, and acid (as acetic acid). Address: PhD, Tokyo.

1272. *Chemist and Druggist (London)*.1887. The manufacture of Japan soy. 31:613. Nov. 12.
• ***Summary:*** "At a recent meeting of German chemists a Mr. Erich communicated a paper on the preparation of Japan soy, a product of which the details of manufacture are as yet imperfectly known. Soy has been manufactured in Japan for

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over a thousand years, and forms a very considerable article of consumption in that country and throughout the East. There are many factories of the condiment in the country, one of the largest being at Tokio, where considerably over one million gallons are specially prepared for export every year. The principal ingredients known to be used in the manufacture of soy are a very hard long-awned variety of barley, common salt, soya beans (*Dolichos soya*), a specially prepared ferment, and water. The soy beans are roasted like coffee, the barley is partly roasted and partly malted. The roasted parts of the barley and the beans are soaked in cold water, cooled, and preserved by the addition of a liberal dose of common salt. To this are added first a diastase solution, and afterwards a specially prepared ferment, which causes an extremely slow fermentation, but without any considerable formation of carbonic dioxide or alcohol. The degree of strength of the soy depends upon the time used in the process of manufacture, which varies from one to three years. If kept cool and out of the light soy can be kept good for a very long time, but the action of light and the free access of air cause fermentation."

1273. *Chicago Tribune*.1887. Dishes for the dinner: Astrological character of Greek and Roman gastronomy. Nov. 27. p. 28.
• ***Summary:*** Contains various recipes in sentence-style format. One describes how to prepare birds in jelly. "A tablespoon of Indian soy [sauce] will add to the brightness of the color."

1274. *Scientific American*.1887. The manufacture of Japan soy. 57(24):373. Dec. 10.
• ***Summary:*** "At a recent meeting of German chemists a Mr. Erich communicated a paper on the preparation of Japan soy, a product of which the details of manufacture are as yet imperfectly known. Soy has been manufactured in Japan for over a thousand years, and forms a very considerable article of consumption in that country and throughout the East. There are many factories of the condiment in the country, one of the largest being at Tokio, where considerably over one million gallons are specially prepared for export every year. The principal ingredients known to be used in the manufacture of soy are a very hard long-awned variety of barley, common salt, soya beans (*Dolichos soya*), a specially prepared ferment, and water. The soy beans are roasted like coffee, the barley is partly roasted and partly malted. The roasted parts of the barley and the beans are soaked in cold water, cooled, and preserved by the addition of a liberal dose of common salt. To this are added first a diastase solution, and afterward, a specially prepared ferment, which causes an extremely slow fermentation, but without any considerable formation of carbonic dioxide or alcohol. The degree of strength of the soy depends upon the time used in the process of manufacture, which varies from one to three years. If kept cool and out of the light, soy can be kept good for a very long time, but the action of light and free access of air cause fermentation."

1275. Gillette, Fanny Lemira. 1887. White House cook book: A selection of choice recipes... Chicago, Illinois: R.S. Peale & Co. 521 p. + [5] leaves of plates. Illust. Index. 26 cm.
• ***Summary:*** Worcestershire sauce is used as an ingredient in 9 recipes: Game soup (p. 26). Fish soup (p. 38). Baked halibut (p. 49). Roast wild duck (p. 85-86). Roast beef pie with potato crust (p. 103). Roast loin of veal (p. 111-12). Pork tenderloins (p. 129-30). Fish sauce No. 2 (p. 139). Brown sauce (p. 142). "Soy" [sauce] is not mentioned.

Peanuts are mentioned in 4 recipes: German custard. Roast chestnuts. Nut molasses candy. Candy roly poly.

Note: The term "White House" in the book's title is a marketing ploy; the book contains no information about White House cookery except for a few photos of White House First Ladies. Later editions, however, were co-authored by White House steward Hugo Ziemann. Fanny Lemira Gillette lived 1828-1926 (MSU introduction). Address: New York City.

1276. Hepburn, James C. 1887. A Japanese-English and English-Japanese dictionary. Abridged by the author. Second edition. Revised and enlarged. Tokyo: Z.P. Maruya & Co., Limited. Yokohama: Kelly & Walsh, Limited. London: Truebner & Co. vi + 330 + 962 p. 16 cm.
• ***Summary:*** Soy-related definitions include: Dengaku: A kind of food made of baked *tôfu*.

Go: [Soy] Beans mashed into paste for making *tôfu;* also used by dyers to limit colors. Mame no go: [Soy] bean paste.

Go-koku [Gokoku]: The five cereals–wheat, rice, millet, beans, and sorghum.

Hitashi-mono [Hitashimono]: Beans or vegetables boiled or steeped in *shôyu* [shoyu].

Irimame: Parched peas [sic, parched soybeans = soynuts].

Kirazu: The refuse of beans left in making *tôfu*.

Mamemaki: The ceremony of scattering parched [soy] beans about to drive out evil spirits on the last evening of the old [lunar] year.

Toshi-koshi [Toshikoshi]: The crossing from the old to the new year; the ceremonies observed on the last day of the year.... when parched [soy] beans are scattered after sundown to drive off noxious influences and evil spirits. The parched beans used this evening, if kept and eaten when the first thunder of the new year is heard, are supposed to protect against lightning.

Tsui-na (*oni yarai*): The ceremony of driving evil spirits out of the house by scattering parched beans about on the last evening of the old year.

Yô-kan [yokan]: A kind of confectionery made of sugar and [azuki] beans.

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Yuba: A kind of food made of beans.

James Curtis Hepburn lived 1815-1911. Address: M.D., LL.D., Tokyo, Japan.

1277. Parloa, Maria. 1887. Miss Parloa's kitchen companion: A guide for all who would be good housekeepers. Boston, Massachusetts: Published by Estes and Lauriat, for The Clover Publishing Co. 966 + [10] p. Illust. 22 cm. 19th ed.
• ***Summary:*** The section on "Relishes" states (p. 91): "Soy is a sauce made in China and Japan, it is a thick reddish-brown liquid, and is used in many fish sauces."

In the section on "Cereals," the subsection titled "Graham" (p. 93-94) says: "Graham is one of the most uncertain of the bread materials with which we have to deal. A large part of it is made by mixing a poor quality of flour with coarse bran. In buying graham, select that containing a rather fine bran, which does not separate readily from the flour when shaken in the hand. The Health Food Company [of Battle Creek, Michigan] makes an excellent graham; and when there is any doubt as to the quality of the ordinary graham, it would be wise to purchase that sold by this company." Note: This company was founded and run by Dr. John Harvey Kellogg. This is the earliest document seen (Jan. 2009) concerning the pioneering work of Dr. J.H. Kellogg with health foods.

Under "Olive Oil" (p. 96): "Unless you have a good cool cellar, it will be best to buy oil in small quantities... oil loses its fine flavor if the bottle be opened often. Rae's Lucca oil is very reliable;..."

The chapter on "Soups" states (p. 109): Maigre soups are those made without meat, and are especially appropriate for fast days. Some of them are good enough for any season, and make a pleasant change from meat soups.

Under the recipe for "Pearled wheat mush" (p. 581): "The Health Food Company sells a nice quality of pearled wheat."

Under the recipe for "Granulated-wheat muffins" (p. 809): "Mix together in a sieve, and rub through it, three cupfuls of fine-granulated wheat meal, such as is made by the Health Food Company, four table-spoonfuls of sugar,..."

The recipe for "Green tomato soy," which is a type of homemade ketchup, does not call for "soy" [sauce] as an ingredient. It is followed by two recipes for "Tomato ketchup"–which also use no soy. Address: Founder of the original cooking-school in Boston; Principal of the School of Cookery in New York; and author.

1278. Smithsonian Institution Board of Regents. 1887. Annual report of the Board of Regents of the Smithsonian Institution. Part II. Washington, DC: The Institution. xviii + 771 p. See p. 73-74. Illust. Index.
• ***Summary:*** Part II is "United States National Museum." Otis T. Mason is curator of this museum (p. 63). Under "Report of the Department of Ethnology," accessions are listed by country. Under "Japan," is a list of 304 "Japanese articles used chiefly in the former times. (Following mainly Dr. Klemm's classification, Smithsonian Report, 1873.)." Both the Japanese name of these items and a translation of that name are enumerated. These include various kitchen utensils:

"113. Saji, wooden spoon... 125. Suribachi, a bowl for rubbing Miso, (fermented mixture of soy beans, wheat, and salt)... Misokoshi, a [bamboo] sieve for filtering miso. 154. Misoshiru wan, Miso soup bowl. 155. Hira, flat wooden bowl for fish and vegetables... 167. Shoyutsugi, Shoyu pourer... 182. Misoshiruwan (see No. 154)." Address: Rev. and author [England].

1279. Cornwell (G.G.) & Son. 1888. Sauces (Ad). *Washington Post.* Jan. 22. p. 2.
• ***Summary:*** "Anchovy Sauce. Harvey Sauce. John Bull Sauce. Soho Sauce. Shrimp Sauce. Indian Soy Sauce. Worcester Sauce... Halford Sauce. Tobasco Pepper Sauce. Mushroom Catsup. Walnut Catsup. Shrewsbury Tomato Catsup. Gordon and Dilworth Tomato Catsup."

Note: This ad appeared 17 more times in this newspaper during 1888 from Jan. 24 to Feb. 12. Address: [1412 and 1414 Pa. {Pennsylvania} Av., Washington, DC].

1280. *Good Housekeeping.*1888. Housekeeping in foreign lands. IX. In China–the native plan. 6(9):216-27. March 3.
• ***Summary:*** From Fan Qui: "The tables are about six inches higher than those used by us, and the diners sit closely packed round like sardines in a box. Before each guest is placed a pair of chopsticks, a spoon and a saucer of soy, a sauce prepared by fermenting peas or beans. No table-cloth is ever used, and napkins are unknown. In the center stands a huge bowl of rice, with a ladle in it, and the other dishes are placed round it in bowls."

1281. *Good Housekeeping.*1888. Housekeeping in foreign lands. XI. Dining with Chinese Mandarins. 6(13):306-07. April 28.
• ***Summary:*** From Fan Qui: "The table was laid only on one side, facing the improvised theater, and before each guest's seat was a pair of ivory chop sticks, a porcelain spoon, and a round, enameled dish about a foot in diameter, divided into six or seven compartments, containing small delicacies such as bamboo shoots, young garlic, *kway chee* or melon seeds salted, and other nicknacks [knickknacks] to eat during dinner. In front of each guest also was a small bowl of soy, a sauce made from the soy bean, somewhat resembling catsup, which is to be seen on every Chinese table, and in which the viands are dipped from time to time as the meal progresses."

1282. Lecerf, Ch. 1888. Sur la valeur alimentaire du Soya hispida [On the nutritional value of the soybean (Continued–Document Part II)]. *Bulletin de la Societe de Medecine*

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Pratique de Paris p. 442-49. Meeting of April 26. Presided over by M. Laburthe. [Fre]

• ***Summary:*** Continued from page 444: Finally, this bean is the base of a sort of sauce that has now jumped the boundaries of Asia and whose consumption is widespread among the well-to-do classes (*les classes aisées*) of North America, England, and Holland. This is the *Tsiang-yeou* [*pinyin: jiangyou*] of the Chinese, the *Shoyu* of the Japanese, the *Ketjap* of Batavia and Java, the India-Soy of the Americans and the English, and the *Zoya* of the Dutch. This product is a liquid of a darker or lighter brown, depending on the quality, obtained by the fermentation of cakes (*gâteaux* [of koji]) made of grilled barley and boiled soybeans. These cakes, after fermentation, are dissolved in water with salt, and left alone for 2 and even 3 years [for a 2nd fermentation], then pressed in sacks. The liquid that flows out is *Shoyu;* it has a taste and a smell that are reminiscent of meat extracts. In Japan it replaces butter, oil, fat and meat sauces. Everything–vegetables, fish, noodles–is ordinarily seasoned with *shoyu*. It is the object of an important industry: in Nagasaki, there are more than 10 factories that produce 1,200,000 kg/year for consumption. The most sought-after quality is that of Tokio (Yédo). It is from this city that originates the sketch that I have the honor to present you.

Composition: According to analyses communicated by Mr. Pellet to the Academy of Sciences in May 1880, here are the composition of two soybeans, the first from China and the second harvested in France. Table 1 (p. 445) gives the percentage of macro- and micronutrients in each. The Chinese soybeans contain 16.4% lipids (*matières grasses*), 35.5% protein (*matières proteiques*), and 4.8% ash (*cendres*) vs. 14.12%, 31.75%, and 5.15% for the French. Table 2 (p. 446) gives the composition of the ash for the two soybeans as follows: phosphoric acid, potash, lime / limestone, and magnesia. It shows that the phosphoric acid and potash represent about 75% of the weight of the ash. Table 3 (p. 446) compares the composition of 100 soybeans harvested at Nice and analysed by Levallois, with the composition of 100 grains of wheat analysed by Isidore Pierre. The soybeans contain about 2.8 times as much nitrogen (protein).

To the analyses done by Mr. Pellet, we must add some slight corrections: according to the analyses made by Mr. Müntz, at the Agronomic Institute (*l'Institut agronomique*), the starchy and sugary materials [carbohydrates] have been increased to 6.40%, the nitrogenous materials [protein] to 36.67% and the fatty materials to 17.00%.

The sugary material, contained in the soybean (*Soya*), constitutes a particular sugar that, like cane sugar, only reduces to Fehling's solution / liquid after having been inverted by sulfuric acid, as Levallois discovered as well.

Its rotary power is much higher than that of cane sugar. Exact degree measurements are given.

Let us now compare the compositions of wheat, beans, potatoes, according to Boussingault, with that of soybeans. Table 4 (p. 446-47) gives percentages of starch and sugared principles, nitrogenous materials, fatty materials, water, potash, and phosphoric acid.

This comparison shows the superiority of soybeans over these vegetable products, even over wheat, for if the ash of it appears richer in phosphoric acid, we must take into account that wheat furnishes 2.41% ash while soybeans give more twice the weight of ash, 5.15%.

The liquid prepared with soybeans in Japan, *shoyu*, was analyzed at the official laboratory in Tokio (no. 1 [on table 5]). I duplicated the analysis (no. 2) to reassure myself that shipment [to France] had not altered its composition. Table 5 (p. 447) shows, nearly identical values for the two sauces, in terms of density, dry extract, ash, nitrogenous materials, salt (NaCl), phosphoric acid, and potash.

As these analyses show, *shoyu* contains about a third of its weight in solid matter, half of which is formed of minerals. Of the latter (minerals), table salt (NaCl) is found in the proportion of 9/11 [i.e., 82% of the minerals is NaCl], phosphoric acid 2%, and potash 3%. Nitrogenous materials represent about a tenth of the total solid matter.

Conclusions: The analyses that I just cited make the considerable value of soybeans from a nutritional point of view stand out. Its richness in protein (*matières protéiques*), in fact [make it] a vegetable meat (*une chair végétale*), and this meat would be superior, as a concentrated food, to [real] meat. In fact, here is a comparison of percentage compositions (*compositions centésimales*) of soybeans and beef that has had its fats and oils removed [probably in the laboratory]. Table 6 (p. 447) compares water, protein, fat, potash, and phosphoric acid.

These figures need no commentary; they are quite eloquent by themselves and make comprehensible how in Japan a handful of this bean suffices to nourish a vigorous man.

One could, advantageously use soybean flour as a powerful food, in a small volume, with debilitated individuals. It is, like milk, a type of complete food, joining the plastic element, represented by protein, the respiratory element, fat, and salts, in which phosphoric acid and potash dominate.

The almost total absence of starchy materials, and the insignificant quantity of sugar that this grain contains, indicates it quite naturally as the best base for bread or rusks for the use of diabetics.

I have the honor to present to the Society some samples of bread and rusks made with soybeans.

Finally, *Shoyu*, that combines a significant proportion of nitrogenous materials [protein] with a rather strong quantity of sodium chloride, could be usefully administered to consumptives [people having tuberculosis], who would find there, beside highly nutritious materials, to compensate for / offset the weakening caused by the loss of salt (*déchloruration*) to which they are subject.

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Note: This is the earliest document seen (March 2010) which is of practical importance concerning the use of soy in diabetic diets.

Discussion: Mr. Roussel–Could Mr. Lecerf please give us some information about the cultivation of soya and tell us if this plant can be acclimatized in France.

Mr. Lecerf–The Soya grows rather well in the same geographical area as corn / maize. The essential requirement for it to bear seeds, is that neither light nor heat be obstructed. Fertilizer is not necessary for it. Even fresh manure is harmful to it, it grows well in all types of terrain, and all atmospheric variations support its growth.

It is planted from the middle to the end of April. It yields about 600 to one [600 seeds from every seed planted]. It is harvested about the end of October. One indispensable precaution is to space the plants from 0.25 to 0.5 meters apart, according to the richness of the soil, by putting several seeds in the same hole, but not to let them develop as a single clump.

Mr. Duchaussoy–I am very happy with the communication by our colleague. I have cultivated Soya for several years. The first year, the harvest had been average, but the second year I harvested almost nothing. I attribute this to the cold, humid weather. Has Mr. Lecerc not observed that the odor of the Japanese *liqueur* [soy sauce] recalls that of the extract of belladona? [deadly nightshade, which is dark purple; he is being sarcastic].

Mr. Lecerf–The odor of this *liqueur* made from Soya, which the Japanese call Shoyu, is somewhat reminiscent of buckwheat bread, or better still of meat extracts.

Mr. Bardet–I would like to ask Mr. Lecerf if it is not possible to modify the color of the bread [which is too dark], and if there is no butter in the bread [i.e., did he add some butter to his soy bread to make it taste better, or is he "buttering up" the whole subject].

Mr. Lecerf–This bread, being made with only soy flour, could not have its color modified by the addition of other types of flour, which would detract from its value as a bread that contains little or no starch.

Mr. Léon Petit–The bread that was presented to us had an excellent flavor. Mr. Lecerf has accomplished a true *tour de force* in masking the bitter taste, so difficult to avoid when one uses Soya flour–a taste due to the oil contained in the seeds.

1283. Petit, Léon. 1888. L'huile de soya. Son emploi en médecine comme purgatif à petite dose [Soy oil. Its use in medicine in small doses as a purgative]. *Bulletin de la Societe de Medecine Pratique de Paris*, p. 449-52. Meeting of April 26. Presided over by M. Laburthe. [Fre]

• ***Summary:*** Kaempfer first introduced soybean seeds into Europe from Japan, where they are used to make *miso* and *shoyu* (a black and limpid liquid). These two are indispensable condiments in the Japanese diet. They also make a vegetable cheese, tofu, which is usually eaten fresh, and of which the people are very fond.

In Cochin China, soya occupies a major place in the culinary art. The Chinese do not consume milk; instead, they crush the soybean and obtain from it a liquid, rich in casein and oils, which they use like we use the milk from cows' goats, or sheep. From it, they also make white cheeses, red cheeses [fermented tofu], and a sauce, *Tsiang-Yéou* (*jiangyou* or soy sauce), which are greatly appreciated. For my part, I have had the occasion to taste this condiment several times and I admit that I do not share, in this regard, the enthusiasm of the Chinese. Much more, *soya* enters in the preparation of a ferment used for making spirits and wines.

Nothing could be easier than obtaining soybeans; in France, they germinate as easily as haricots. They contain 30-35% protein and make excellent forage.

The soybean has been tested as a forage plant, either alone or mixed with hay, oats, barley, sugar beets, etc. Mr. Paillieux, a distinguished agriculturalist, even conducted various trials in using the soybean for human food.

He cooked the seeds, like one cooks haricot beans, after they had been soaked in distilled water. He also roasted soybean seeds to make a sort of coffee. He successfully reproduced the various Japanese and Chinese food preparations. He even tried to make a flour by grinding the beans, but this flour degenerated [rancidified] because of the large quantity of oil and fat that it contains.

It is possible that if this oil were extracted, the soybean oilcake (*le tourteau de Soya*) could be ground / reduced into flour which would contain more than 40% nitrogenous materials [protein] and would have no bad [after]taste. But unfortunately, this flour would have a rather high net cost, because of the manipulations that its production would necessitate, unless a use for soybean oil, which is the object of an enormous traffic in China, is found. This very limpid oil, which has a beautiful yellow color like olive oil, leaves a little acrid taste in the mouth which is not disagreeable. It possesses very obvious drastic qualities. I had a liter at my disposition, and I observed that with a minimum dose of 10 gm, you obtain a very energetic purging [like diarrhea], without any type of abdominal pain / colic (*colique*). I hope, before long, to receive a certain quantity of soybean oil that I shall place at the disposition of those of our colleagues who would like to test it as a purgative.

Note: The writer is the only person ever to ascribe a "purging" or "purgative" property to soy oil.

There follows a question and answer session. Mr. Terrier asks: Can Mr. Lecerf provide us with some information about the use of this oil in China and Japan? Mr. Petit responds: I believe that the Chinese and Japanese use this oil only for therapeutic purposes. Soy sauce (*La liqueur de Soya*) is widely employed in England as a condiment. Mr. Lecerf adds: I know nothing about how the Chinese and Japanese use soy oil as a medical substance; but, as I

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said, this oil is of the highest rank among the oils consumed throughout China. I would say to Mr. Petit that the *India Soy*, which the English consume, is a product which contains only a small proportion of soybeans; it is made with considerable quantities of barley and rice [sic], and it comes from China. However *Shoyu*, which I present to you, is originally from Edo [Tokyo, Japan]. Like that from Batavia [Jakarta] (Ket-Jap [ketjap, kecap]), it is made with from equal parts wheat and soybeans (*Soya*).

Mr. Gillet de Grandmont asks: Very precise and extensive information on the cultivation of soybeans can be found in the *Annals* [*Bulletin*] *of the Society for Acclimatization*. This bean, which I have tried to use for food, does not soften easily upon cooking; it always retains a very disagreeable, acrid taste. I could hardly stand it, except consumed in the form of a salad after cooking.

Mr. Lecerf replies: In the fresh state [as green vegetable soybeans], soybeans are not hard and their taste is even agreeable. In the dry state, it is easy to render them less tough, by adding a small quantity of sodium bicarbonate [baking soda] to their cooking water, and by taking care to soak them in water 24 hours in advance. Address: M.D., 2 Rue Casmir-Delavigne, Paris.

1284. *Chicago Tribune*.1888. Breakfast and dinner: Hints for preparing delicate salads, sauces, and soups. May 6. p. 14.
• ***Summary:*** "An East India sauce is recommended and approved for fish. Mix well together a gill [½ cup] of Indian soy [sauce], a gill of Chili vinegar, half a pint of walnut catsup, and a pint of mushroom catsup. Shake it vigorously, and place it in small bottles,..."

1285. Suchi, Tokutaro. 1888. Shibô no eiyôtaki kôyô [Digestion experiments with rice and tofu]. *Tokyo Igakkai Zasshi* (*J. of the Tokyo Medical Society*) 2(9):457-62. May; 2(10):511-20. June? [Jap]
• ***Summary:*** K. Oshima (1905, p. 153) reports that T. Suchi, age 21 and in good health, conducted these experiments upon himself. "The amount of fresh rice and fresh tofu eaten per day was exactly the same in both experiments. In cooking the tofu 40 cubic centimeters of shoyu and 10 gm of sugar were used each day. In experiment No. 17 the tofu used was fried in rapeseed oil by the investigator himself, the amount of oil thus used being carefully weighed." Urine and feces were collected and analyzed.

Digestion experiment No. 16 continued for 7 days, Nov. 18-24, 1887. Suchi weighed 41.30 kg at the beginning and 41.51 kg at the end. The diet consisted of rice and tofu. Suchi digested 95.2% of the protein (*tanpakushitsu*) in the diet, 96.5% of the fat, 98.3% of the carbohydrates, and 77.2% of the ash.

Digestion experiment No. 17 continued for 6 days, Nov. 29 to Dec. 4, 1887. Suchi weighed 41.42 kg at the beginning and 41.47 kg at the end. The diet consisted of rice, tofu, and vegetable oil. Suchi digested 94.2% of the protein in the diet, 93.9% of the fat, 99.5% of the carbohydrates, and 78.9% of the ash.

Note: This is the earliest Japanese-language document seen (Aug. 2003) that uses the term *tanpakushitsu* to refer to protein in connection with soybeans. Address: Physiological Institute, Tokyo University.

1286. Lea and Perrins. 1888. Lea & Perrins Sauce (Ad). *Chicago Tribune*. June 1. p. 8.
• ***Summary:*** "Lea & Perrins, the original and genuine Worcestershire Sauce, has been before the public over half century [i.e., since at least 1838]. Like all popular favorites, it has long been the standard of comparison and the pattern for counterfeiters, who not being able to imitate its excellence, offer to the public, imitations in bottling, labels and style of putting up.

"They dare not counterfeit the signature of Lea & Perrins, which is on the red label of every genuine bottle, and of which this is a facsimile." The signature is shown in large script.

"To be sure of obtaining the genuine article, see that the above signature is on the label."

1287. *Journal de Medecine de Paris*.1888. Revue des sociétés savantes: Pains, biscottes et liqueurs de Soya hispida [Review of learned societies: Soy bread, biscuits, and soy sauce]. 14(23):912-14. June 3. Meeting of April 26. [Fre]
• ***Summary:*** Mr. Lecerf presented samples of bread, biscuits, and sauce obtained by him from the soybean. He briefly describes soybean cultivation and yields. He then answers questions by Mr. Duchausoy about shoyu, by Mr. Bardet about soy bread (which contains only soy flour and no butter; the only oil or fat in the bread is that contained naturally in the flour).

The British consume large amounts of soy sauce which they call *India soy*. The shoyu presented here originated in Edo, Japan; like that of Batavia [Jakarta, in today's Indonesia] (called *Ket-Jap*), it is made with a mixture of equal parts wheat and soybeans.

Mr. Gillet de Grandmont says that the soybean is hard to soften by boiling and has a very disagreeable flavor. Mr. Lecerf replies that fresh soybeans are not hard and their flavor is not disagreeable. Dry soybeans should be soaked for 24 hours, then cooked in water that contains baking soda. Address: Paris, France.

1288. *Chicago Tribune*.1888. An eel dinner in a Tokio cafe. An appetising meal that is manipulated with chop sticks. June 9. p. 16.
• ***Summary:*** From Rumah in St. Louis Globe Democrat: "A specialty of Tokio houses of refreshment is eel houses." "We celebrated a recent anniversary day by an eel dinner at a famous eel house."

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"The feast began with a soup or stew of eels, the bottom of the bowl being filled with a delicate white curd [tofu], and the flavor of the dish being as mild and evasive as flaxseed tea... The plain broiled eels are called white eels, and after them came black eels, or eels dipped in soy [sauce] before and during the broiling. They acquire a rich brown tint and a most piquant flavor by this treatment, and the soy, or bean sauce, with which the Japanese always improve their fish and birds, might be used in the same way in other countries. Japanese soy is the foundation of Worcestershire sauce, and is much better before it is charged with all the spices and cayenne that convert it into the English condiment."

1289. *Law Journal (The) (England)*.1888. The Birmingham Vinegar Brewery Company v. The Liverpool Vinegar Company: Chancery Division, North J., June 11. 23:99-100. Notes of cases, June 23.

• ***Summary:*** "Trade-name–Unauthorized use–Injunction.

"This was a motion by the plaintiffs for an order restraining the defendant company and one Holbrook from selling or representing any goods manufactured by the defendant company as being 'Holbrook's Worcestershire Sauce.'..."

"The plaintiffs and their predecessors in business were manufacturers of sauces, and in the year 1870 they engaged the defendant Holbrook as their traveller. In the year 1875 they manufactured and sold a sauce (at the suggestion of the defendant Holbrook) under the name of 'Holbrook's "Worcestershire Sauce,' and the sauce had acquired a reputation in the market under that name. This arrangement continued down to December, 1887, when Holbrook left the employ of the plaintiffs and entered into some arrangement with the defendant company, under which he assigned to the defendant company the right to use his name in connection with sauces manufactured by them.

"The defendant company had recently issued advertisements, stating that they were the sole proprietors of 'Holbrook's Worcestershire Sauce,' and that they had purchased from Holbrook the right to manufacture the sauce bearing his name.

"The plaintiffs now moved for an interlocutory injunction."

Note: A sauce with this same name was being advertised and sold as recently as 1966 (*Pacific Islands Monthly*, PIM, Vol. 37, p. 52. "Holbrooks Worcestershire Sauce"), 1980 (Rainbow's End: A Memoir of Childhood, War and an African Farm [in Rhodesia], 2008, p. 118. "Holbrook's Worcestershire sauce"), and 1999 (*Drum: A Magazine of Africa for Africa*, p. 109. "Holbrooks Worcestershire Sauce").

1290. Kellner, O.J. 1888. Researches on the composition and digestibility of Japanese feeding stuffs. *Bulletin of the College of Agriculture, Tokyo Imperial University* 1(2):1-45. July. See p. 25-29, 39-45. [3 ref. Eng]

• ***Summary:*** Section "V. Hay of soy beans (karimame)" (p. 25-29) describes experiments feeding soy bean hay to sheep (rams). "This hay is considered the best coarse fodder in this country. It is usually cured, when the pods have developed their normal size but the leaves are still green. A specimen of such hay was examined in 1883 by Mr. *M. Ota.*"

In part "II. Soy bean (daizu)" (p. 39-45), Kellner notes: "Although the soy beans are somewhat expensive owing to their principal utilization as human food (tofu, miso and shoyu), it may happen that small proportions of them are resorted to in the feeding of the live-stock, for the purpose of supplementing the protein of a ration otherwise too poor in that nutrient." Soy beans, apparently raw, were fed to sheep. Feces ejected, water drunk, and live weights were measured. The article concluded: "The specimen of soy beans examined by us contains the following proportions of digestible nutrients, percent of the dry matter: Crude protein 34.30, fat 18.25, fiber 9.09; nitrogen-free extract 19.65; the last 2 total 28.74.

"Of all raw vegetable products, earth nuts perhaps excepted, the soy beans are the richest in the most valuable nutrients, protein and fat, and contain them in a highly digestible form."

Note 1. This is the earliest English-language document seen (April 2008) that uses the term "human food" in connection with soy beans.

Note 2. This is the earliest English-language document seen (Aug. 2003) that contains the term "crude protein" (or "crude-protein" or "crude proteins") (one of two documents). Address: Dr., Prof. of Agricultural Chemistry, Imperial College of Agriculture and Dendrology, Komaba, Tokyo, Japan.

1291. Egasse, M. 1888. Le soja et ses applications économiques et thérapeutiques: Matière médicale et therapeutique [Soja and its economic and therapeutic applications: Medical and therapeutic subject-matter]. *Bulletin General de Therapeutique Medicale, Chirurgicale, Obstetricale et Pharmaceutique* 115:433-48. Nov. 30. [28 ref. Fre]

• ***Summary:*** This is a review of the literature, especially the use of soy in diabetic diets. The author was one of the first Westerners to suggest the therapeutic use of soybeans in diabetic diets. Illustrations show: (1) A soy bean plant (from Vilmorin 1883, p. 434). (2) Two views of a soy bean and a cross section of soy bean seed (both from Blondel, p. 435). Discusses (with 11 tables) the work with soybeans of Haberlandt in Austria-Hungary, Steuff in Germany, Schroeder (a chemist) in Napagedl [in Mähren / Moravia, a region in today's central Czech Republic], Capan [sic, Caplan] in Vienna, Pellet in France, P. Muntz, A. Levallois, Stingl and Morawski, E. Kaempfer, Eug. Simon, Champion, L'hôte and Champion, Mr. Lecerf, Mr. Dujardin-Beaumetz

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and Mr. Bourdin at Reims (soy bread), and Mr. Lailleux in Algeria.

Blondel (1888) reports the absence of starch in all parts of the soybean seed (p. 435).

"Soybeans are used above all to prepare foods: in Japan, miso and shoyu (*le sooju*), in China an imitation of milk (*une imitation du lait* [soymilk]) and a cheese (*un fromage* [tofu]) greatly appreciated by the common people" (p. 441).

"Throughout China, soybeans (*les graines du soja*) are also used to prepare a milklike / lacteal emulsion (*une émulsion leiteuse*) which replaces milk and which is obtained by crushing the seeds, soaking them in water, and simply passing the liquid through a fine sieve. The [soy] milk, this liquor (*liqueur*), only looks like [dairy] milk, but since [dairy] milk is extremely rare, this liquor supplements the milk [i.e., soymilk supplements dairy milk] from the alimentary point of view" (p. 443). Note: This is the earliest French-language document seen (Oct. 2003) that uses the term *une imitation du lait* or *une émulsion leiteuse* to refer to soymilk.

"The applications of soybean seeds for the feeding of diabetics is not numerous. Yet we know, via an oral communication from Mr. Lailleux, former intern at the hospital in Algiers, that a certain number of diabetic Arabs under treatment at the hospital of Dey, in Algiers, have seen, under the influence of a dietary regimen based on soybean pap, that not only did the content of sugar in their urine diminish by a considerable proportion, but also the condition of their sores was improved, a condition which like all of its type had resisted other treatments employed. If this fact can be verified again, either with soy pap or soy bread, the therapy would have found in soybeans an aid of great utility in the ordinary treatment of diabetes mellitus, which is so difficult for most patients to stand, especially because they must abstain from starches for which they generally show such a strong appetite" (p. 447). Address: France.

1292. *Bayerische Gewerbe-Zeitung* (*Nuremberg*).1888. Japanische Soja [Japanese soy sauce]. No. 23. p. 538-40 [Dec.]. [Ger]

• ***Summary:*** Under the trade name of "Japanische Soja," a peculiar product has also recently become known in Germany. Used as a seasoning with different dishes, it is said to enhance their good taste and nutritive value, and also to stimulate ones appetite. It is a slightly thick, dark reddish-brown liquid with a piquant, pleasant, salty and aromatic taste.

The main constituent of this product is the meal of the soybean (*das Mehl der Sojabohne*), an East Asian plant that sometimes grows wild and is sometimes cultivated. Its kidney-shaped seeds are used daily in Japan in the food of the poorer classes (The soybean has also found practical uses in Germany) or they can be prepared as soya extract or gravy (*Sojabrühe*) which is added to many foods instead of butter or meat.

The production of shoyu (*Soja*) is successful even in large factories, as well as in small shops, and the process is apparently thousands of years old. A measure of the extraordinary amounts of shoyu used in Japanese households is that fact that one company, which is widely known in Europe, at its head factory in Japan employs about 2,000 workers who produce about 1 million gallons = 4,543,500 liters of shoyu. This company, named Tokyo Shoyu Kaisha, in addition to its head factory in Tokyo, has some 48 distilleries (*Brennerien*) throughout the country and a steamship to carry their products to the capital. After many years of effort, it has found a way to preserve the product so it is suited for export to foreign countries, despite many previous unsuccessful attempts.

The way of manufacturing shoyu, about which there have previously been only sketchy reports, is essentially as follows: Dehulled soybeans are dried, then roasted like coffee beans, so they do not lose their aroma during transport. A very hard type of wheat is used in unpolished form; part of it is roasted with the soybeans. A specific quantity of fresh wheat is malted (*gemalzt*), and from this an infusion (*Aufguss*) is prepared, similar to that in our distilleries. In a separate vat, the roasted beans and wheat are combined with cold water and soaked for a long time, during which an artificially very low temperature and the abundant addition of cooking salt [NaCl], the fermentation is allowed to proceed. After a certain time, the diastase solution, which is prepared from the malt, is added to the whole; it is stirred now and then, and left alone. As soon as a certain stage of development is reached, which usually can be recognized from experience by the color of the condiment, a special kind of yeast (*Hefe*) (unknown outside Japan) is added. Under the prevailing conditions, namely of low temperature and high salt content, this yeast causes a very slow fermentation– supposedly without the development of carbonic acid and without alcohol as an end product.

According to the difference in the content of the extract and in the quality of the raw materials, three kinds [of moromi] are manufactured: The lowest quality is allowed to ferment for one year, the middle quality for two years, and the highest quality for three years. During this time the vats [of moromi] remain untouched [and are not stirred].

After being separated from the dregs / sediment (*Bodensatz*), the soy sauce (*Soja*) is ready for use. It is stored in cool rooms in tightly-closed porcelain bottles (*Flaschen*); it stays good for several years. With the entrance of air or light, a slow fermentation continues but without recognizable changes during many weeks. Through the slow fermentation in a strong salt solution, according to several chemical analyses, the rather considerable protein of the [soy] beans and barley is made soluble. The dark color is caused by the strong roasting of these materials. In recent years, public attention has been drawn from various sides to

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the agricultural value of soy sauce, and its introduction or importation for general use has been recommended. With potatoes, as in Japan with rice, it can form a true food of the people. To that end, it should be made available in small quantities to purchase for only a few pennies. In addition, it seems that, because of its ability to stimulate and promote digestion, it can improve the taste of soups and sauces, all kinds of meat and fish, vegetables, etc. It is better suited than the often-used strong spices, whose sharpness / harshness is not good for everybody.

Either during cooking or at the table, add soy sauce to the dishes according to taste.

In order to avoid the formation of a thin film of salt [sic, yeasts] on the surface of bottled soy sauce (even though it is not detrimental), you should store bottles of soy sauce lying on their sides [rather than upright].

Note 1. A line at the end of this article states that its source was *F.A. Günther's Bäcker- und Konditor-Zeitung*.

Note 2. King Ludwig II of Bavaria (lived 1845-1886; reigned 1864-1886) was actively involved in the craft movement that gave rise to this periodical. He sponsored a trade museum and annual prizes for the best hand-crafted articles. He is famous for the beautiful castles he had built in Bavaria: Neuschwanstein, Herrn Chiemsee, and Lindenhoff. Address: [Bavaria, Germany].

1293. *Bayerisches Industrie- und Gewerbeblatt (Munich)*.1888. Japanische Soja [Japanese shoyu]. 20(52):721-23. [Ger]

• ***Summary:*** This is a nearly (but not exactly) identical reprint of an article by the same title in: *Bayerische Gewerbe-Zeitung* (Nuremberg). No. 23. p. 538-40. Only a few words and indentations are different.

Note: A line at the end of this article states that its source was the *Bayerische Gewerbe-Zeitung* (Nuremberg). Address: [Germany].

1294. Hirano, I. 1888. Shôyu bunseki seiseki [Results of shoyu analysis]. *Yakugaku Zasshi (J. of the Pharmaceutical Society of Japan)* No. 71. p. 72-74. [Jap]
Address: Tokyo Eisei Shikensho.

1295. Tawara, R. 1888. Shôyu shiken seiseki [Results of an experiment with shoyu]. *Eisei Shiken Iho (Bulletin of the Imperial Hygienic Laboratories)* 3:63-71. [Jap]*

1296. Filet, G.J. 1888. Plantkundig woordenboek voor Nederlandsch-Indië. 2nd ed. [Dictionary of plants for the Netherlands Indies. 2nd ed.]. Amsterdam, Netherlands: J.H. de Bussy. See p. 127, no. 3127. 23 cm. First ed. was 1876 (362 p.) published in Leiden by G. Kolff. [Dut]

• ***Summary:*** Each plant is given a number, starting with 1 for "Aantigan." The short passage on the soybean reads: "3127. *Kadeleh of kadaleh S. M. & J.* [*S. = Sundaneesch. M. = Maleisch. J. = Javaansch*] = *Soya hispida Mönch, Nat. fam. der Papilionaceæ. Gr.* [*Groeiplaats*] *Op Java en elders in tuinen, uit Japan overgebracht; zaadplant. Gebr.* [*Gebruik*] *De zaden dienen tot bereiding der Soya of Këtjap.*"

This can be translated as follows: "No. 3127. Named kadeleh or kadaleh in Sundanese, Malayan, and Javanese. Scientific name: Soja hispida Moench. Member of the natural family Papilionaceæ. Places of growth: On Java and elsewhere in gardens, imported from Japan; a seed plant. Uses: The seeds are used for the preparation of soy sauce or ketjap."

Note: Filet lived 1825-1891. The only other species of the genus Soja mentioned in this book is Soja Wightii (*Tjijhe-badak*), No. 8846 (p. 297). Address: Oud-Officier van Gezondheid van het N.-I. Leger.

1297. Kamiyama, Yoshimotsu. 1888. Sake shôyu okerui yôryô kokusûhyô [Chart showing the volume (in koku) of various kegs and other containers for sake and shoyu]. Matsuyama: Kôyôsha. 53 p. 16 cm. [Jap]*

1298. Leuillieux, Abel. 1888. Le "Soya hispida," sa valeur alimentaire, ses indications ["Soya hispida," the soybean: Its nutritional value and indications]. Paris: Imprimerie de A. Davy. 53 p. 8vo. [21 ref. Fre]

• ***Summary:*** Contents: 1. Historical and botanical description. Soya (*Le Soya*) in Japan: Miso (according to Kaempfer), shoyu (*Le Sooju, Shoyn*), soybean varieties (23, soy oil, tofu), Japan at the exposition of 1878, practical recipe in France by the correspondent of the Horticultural Society of Paris (*Société d'Horticlture de Paris*), soy cheese or tofu (*fromage de daizu* (*To-ju*)), soya in China, soy oil, fermented tofu (*Le fromage de Soya, Teou-Fou*) (white fermented tofu, red fermented tofu), soya in Cochinchina (black soybean), soya in France (history), preparation of soya for the table. Letter from Maurice Dupuy (chemist at Vienna, June 1888, to M. Lecerf; nutritional value of Soya hispida, nutritional composition of 2 samples). Conclusions. Bibliography. Address: M.D. Faculté de Médecine, Paris; Former student at the Industrial and Agronomic Institute of Nord [Ancien élève de l'institut industriel et agronomique du Nord].

1299. White, Sallie Joy. 1888. Housekeepers and home-makers. Boston: Jordan, Marsh & Co. vii + 260 p. No index.

• ***Summary:*** The Preface states: The 26 chapters in this book have all appeared previously in *The Boston Herald*. The author gives special thanks "to my devoted teacher and friend, Mrs. Mary A. Lincoln, under whose training I learned so much that has been of inestimable value to me in my housekeeping experience."

In the chapter "About breads" (p. 10-22) we read (p. 19-20): "For those who like hygienic food, I will give here the rule for 'Dr. Trall's Perfect Bread.' Some of you may

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not know that Dr. Trall was, for a long time, the apostle of 'plain living;' and that although he did carry his notions to the extreme, as any early advocates of a movement are pretty sure to do, yet he did have a very good influence on the American people in regard to better and more careful preparation of food. This 'perfect bread' is nothing more nor less than the hard Graham rolls which are used by hygienists. It is perfectly healthful, and is highly relished by those who have become accustomed to it, whose appetites are healthful and natural, and who require or crave 'no spice but hunger.' It is made by simply mixing cold water, the colder the better, with good Graham or whole-wheat flour,..." Another recipe for a "fine Graham Bread follows (p. 20-21).

Chapter 4, titled "Cereals and health foods" (p. 28-45) indicates that many of America's early health food products and recipes were based on cereal grains, and special ways of processing them. "Health foods" are mentioned on pages 28, 31-32, 34-36. Products made by "The Health Food Company" of New York are highly praised and mentioned on pages 30 ("The best grain preparations are without much question those prepared by the Health Food Company"), 31 ("The Health Foods, as they have come to be understood, are the new methods of preparing cereals used by the Health Food Company of New York, and introduced by them"), 69 ("The whole wheat that is prepared by the Health Food Company of New York makes very nice gems..."), and 208 ("These [whole wheat crisps] are made from the fine granulated wheat flour that is prepared by the Health Food Company, and are at once healthful and palatable").

Whole-wheat flour is mentioned on pages 20, 31-32, 34, 41, 69, and 208.

In chapter 10, "Made-over dishes" [how to use leftovers] (p. 94-106) the author states that seasoning is the key to success. Worcestershire sauce is mentioned on pages 96-98, 101, and 103. Chapter 19 is titled "Pickles and catsups" (p. 179-99). Catsup is mentioned on pages 100 (walnut catsup), 103, 190, 194 (tomato catsup; "Lemon, oyster, and mushroom catsups are delicious:..."), 195 (mushroom catsup), 196 (grape catsup), and 197.

On pages 191-92 is a recipe for "Tomato soy" which (despite the name) uses no soy sauce or other soy ingredients, and which "is not unlike piccalilli" ("Green-tomato sauce").

1300. *Pharmaceutische Centralhalle fuer Deutschland.*1889. Japanische Soja [Japanese soy sauce]. 30(3):44-45. Jan. 17. New series: Vol. 10. Extracted from Bayerisches Industrie- und Gewerbeblatt. [1 ref. Ger]

• ***Summary:*** Japanese soy sauce (*Japanische Soja*) is a thick, dark-brown liquid, with a piquant, pleasant, salty taste and an aromatic fragrance. Coming from Japan, it has recently been recommended as an addition to meals, not only to make foods taste better but also to enhance their nutritional value.

In Japan, soy sauce is made in large factories, the largest of which employ 2,000 workers. A description of the process is given. For the best quality soy sauce, the fermentation process should take three years.

1301. Jackson, John R. 1889. Notes on new and little-known vegetable oils. *Chemist and Druggist* (*London*) 34:114-15. Jan. 26.

• ***Summary:*** Many new vegetable oils have come to the writer's attention during the past 2-3 years. None should be condemned until it is thoroughly tested for possible valuable properties that could be utilized. Liverpool is the main port at which they arrive from around the world.

One of these "*Glycine Soja*, Sieb. and Zucc. This is an annual leguminous plant largely cultivated in India and China, the seeds of which are known as Soy beans, and are the source of the well-known sauce of that name. About 17 per cent of oil is obtained from them in China by simple pressure; this oil is described as having an agreeable flavour and odour, and is similar to most of the sweet oils used for culinary purposes. At one time it was used largely in China for burning in lamps, but the introduction of petroleum from America has much diminished its use. It is a drying oil, and as such might be found useful as a substitute for linseed oil." Address: A.L.S. [Associate of the Linnaean Society], Curator of the Museum, Royal Gardens, Kew [England].

1302. *San Francisco Chronicle.*1889. Classified ad: Lea & Perrins' sauce. Jan. 31. p. 2, col. 3.

• ***Summary:*** "Lea & Perrins, the original and genuine Worcestershire Sauce, has been before the public over half a century. Like all popular favorites, it has long been the standard of comparison and the pattern for counterfeiters, who not being able to imitate its excellence, offer to the public imitations in bottling, labels and style of putting up.

"They dare not counterfeit the signature of Lea & Perrins, which is on the red label of every genuine bottle and of which this is a facsimile" (the signature is written in large cursive script).

"To be sure of obtaining the genuine article, see that the above signature is on the label. [American Analyst]."

Note: An illustration near the bottom of the ad shows the "Lea & Perrins" signature.

1303. Osawa, Kenji. 1889. Shôka shiken tsuika [Additional investigations on digestion]. *Chugai Iji Shinpo* (*Medical News, Foreign and Domestic, Tokyo*) No. 211. p. 6-8. Jan. [Jap; eng+]

• ***Summary:*** Experiment no. 18 was a digestion experiment with rice and tofu, plus small amounts of starch (kuzu powder), shoyu, and sugar. It was conducted for 3 days, June 20-22, 1887. A table shows the amount and nutritional composition of each food used. The following percentages of the basic nutrients were digested: Protein 95.2%, Fat 94.8%, Carbohydrates 98.8%, Ash 83.4%. The author concluded

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that mixed foods (except for fat) are more easily digested than single foods. Address: Physiological Institute, Tokyo University.

1304. Stift, A. 1889. Beitrag zur Kenntniss der Sojasauce [Contribution to the knowledge of soy sauce]. *Zeitschrift fuer Nahrungsmittel-Untersuchungen und Hygiene (Oesterreichische Chemiker-Zeitung)* 3(1):33-34. Jan. [Ger]
• ***Summary:*** The following figures for soy sauce are the result of three analyses, based on the method used by B. Proskauer for meat peptones: Solids / dry matter 34.52%. Fat 0.31%. Of those: Organic matter 11.18%. Ash 23.34%.

Protein 4.50%: Of those: Insoluble protein 0.09%, soluble protein 2.08%, peptone {*pepton*} 0.96%.

In 100 parts ash are found: Table salt (NaCl, *Kochsalz*) 2.20%, potassium 7.05%, phosphoric acid 0.73%, sulfuric acid 2.80%.

The table salt content (NaCl) comes from the moromi mash (*der Maische*), but the amount still tolerable to the palate is not surpassed. Soy sauce is really a condiment (*Genussmittel*), but because of its high protein content, it has a certain nutritional value.

Therefore it would be desirable if more attention were given to the planting of soybeans in our regions (*Gegenden*), especially since we have all the conditions necessary for this plant to flourish. Address: Assistent.

1305. *Medical Record (New York)*.1889. Soya bread in diabetes. 35(14):386. April 6. Whole No. 961. [1 ref]
• ***Summary:*** "Dr. Lecerf has used bread made from Soya flour in a number of cases of diabetes and regards it as a valuable addition to the dietary in this disease, and as far superior to gluten bread (*Journal de Medicine de Paris*, December 9, 1888). *Soya hispida* is a leguminous plant growing in Japan and the far East, the grain of which is used by the natives in the preparation of sauces [including soy sauce] and to make a sort of vegetable cheese [tofu]. It contains a large proportion of fat, which takes the place in great measure of the starch in other grains. The bread made from it resembles rye-bread, has an agreeable taste, and is quite digestible. It has a tendency to cause diarrhoea [diarrhea] at first, but patients soon become accustomed to its use and can then take it without any inconvenience."

1306. Tahara, J.; Kitao, M. 1889. Notes sur la composition du shoya. Sur les matières azotées dans la sauce japonaise dite "Shoya" [Notes on the composition of shoyu. On the nitrogenous materials in the Japanese sauce called "Shoya"]. *Revue Internationale des Falsifications* 2:159-61. April 15. German-language summary in Chemisches Central-Blatt 1889(1):732. [1 ref. Fre]
• ***Summary:*** The sauce well known as "Shoya" [sic, shoyu] is indispensable in the culinary art of Japan. Mr. T. Isono, in his 1878 thesis on shoyu, reported that it is a clear, dark brown liquid, having a sweet and salty taste and a particular savory aroma. The relative density ranges from 1.15 to 1.23. All foods in Japan, whether of animal or vegetable origin, are prepared with the aid shoyu, without the addition of sea salt; however the latter is a major ingredient in shoyu. The annual production of shoyu in Japan is about 3-4 million *koku* (1 koku = 180.4 liters, thus 540-720 million liters) and each Japanese consumes, on average, 60-100 cc/day.

A table shows that 13 samples of shoyu, examined at a laboratory in Tokyo, were found to have the following average composition by weight: Solids (dry residue) 36.71%, nitrogen 1.33%, glucose 3.80%, dextrin 1.30%, acids (calculated as acetic acid) 0.72%, ash 19.45%, sea salt 15.86%, phosphoric acid 0.48%. Maximum and minimum values are also given for each nutrient.

"As far as we know, research on shoyu (*Shoya*) conducted to date is limited to qualitative analyses. Furthermore, Mr. Isono has measured the alcohol and nonvolatile acids. We propose to determine whether the shoyu contains nitrogen in the form of proteinaceous materials which come from the beans used in its manufacture, or whether these substances have already undergone a partial alteration during the fermentation period.

"To this end, we obtained the best quality shoyu, made by the House of Yamoguchi [Yamaguchi] in Shimosa prefecture" [just northeast of Tokyo]. The product had a specific gravity of 1.26 at 21°C. The reaction was distinctly acid.

A second table shows the results of the qualitative analysis, 100 gm calculated by weight: Solids (dry residue) 32.58%, total nitrogen 1.18%, glucose 2.76%, dextrin 1.30%, alcohol 0.43%, volatile acids (calculated as acetic acid) 0.16%, non-volatile acids (calculated as acetic acid) 0.83%, inorganic salts 17.47%.

A third table gives an analysis of the ash by weight: sodium chloride (table salt) 87.26%, sulfuric acid 2.84%, phosphoric acid 2.65%, magnesium 3.90%, calcium traces, potassium traces, ash 19.45%, sea salt 15.86%, phosphoric acid 0.48%.

In addition, ammonia and amines were found in shoyu, plus a new aromatic substance that crystallizes and contains nitrogen. It melts at 213°C. 100 cc of shoyu contains total nitrogen 1.18%, proteins 0.55% and of the new aromatic substance 0.46%; it will be discussed in a future article.

Most Japanese believe that shoyu is very nutritious article of food, rich in protein. The above tests show that view to be erroneous, since it contains only 3.4% protein. However shoyu is indispensable to Japanese cuisine.

Note: This is the earliest document seen (July 2001) that uses the word "Shoya" to refer to soy sauce. Since the word was spelled this way twice in the title and at least 13 times in the body of this French-language article, it appears not to have been a typographical error. "Shoya" was subsequently used by only one other author (Loges 1910), but in that case

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to refer to soybeans. Address: Tokyo.

1307. **Product Name:** Gawne's Worcestershire Sauce.
Manufacturer's Name: Gawne (W.).
Manufacturer's Address: Dunedin, New Zealand.
Date of Introduction: 1889. May.
How Stored: Shelf stable.
New Product–Documentation: Ad in *Southland Times* (Otago, New Zealand). 1889. May 4. p. 3. This ad in the "Wanted, &c." section states: "Gawne's Worcestershire sauce. Equal to imported, at half the price, try it. H. Hawson, Agent for Invercargill [New Zealand]."

Ad in *Southland Times* (Otago, New Zealand). 1891. March 6. "H. Hawson, importer. Wine, spirit, and general merchant. Tay and Wood Streets, Invercargill. Agent for... W. Gawne, Dunedin, Sauce manufacturer."

Ad in *Mataura Ensign* (Otago, New Zealand). 1900. Sept. 6. p. 5. "What the newspapers say about Gawne's Worcestershire Sauce." The company, named "Messrs. W. Gawne & Co.," is located at George St., Dunedin. This is the last ad seen for this sauce.

1308. Hawson (H.). 1889. Wanted, &c.: Gawne's Worcestershire sauce,... (Ad). *Southland Times* (*Otago, New Zealand*). May 4. p. 3.
• ***Summary:*** "... Equal to imported, at half the price, try it."

Note 1. This is the earliest document seen (Feb. 2012) that mentions Gawne's Worcestershire Sauce, made in Dunedin, New Zealand. Does it use soy sauce as an ingredient? If so, how and from what manufacturer does it obtain that soy sauce.

Note 2. This ad appeared in this newspaper on May 4, 11, 18, 28, 29, June 1, 6, and 26, 1889.

Note 3. This in one of at least 506 issues of New Zealand newspapers from 1891 to 1900 that mention "Gawne's Worcestershire." In Sept. 1900 the company, named "Messrs. W. Gawne & Co.," was located at George St., Dunedin. Address: Agent for Invercargill [New Zealand].

1309. *Pharmaceutische Centralhalle fuer Deutschland*.1889. Zur Kenntnis der Sojasauce [Toward a knowledge of soy sauce (Abstract)]. 30(21):330-31. May 23. New series: Vol. 10. [2 ref. Ger]
• ***Summary:*** A German-language summary of the following German-language article: Stift, A. 1889. *"Beitrag zur Kenntniss der Sojasauce* [Contribution to the knowledge of soy sauce"]. *Zeitschrift für Nahrungsmittel-Untersuchungen und Hygiene* (Oesterreichische Chemiker-Zeitung) 3(1):33-34. Jan.

1310. Kellner, O.J.; Mori, Y.; Nagaoka, M. 1889. Researches on the manufacture, composition, and properties of "koji." *Bulletin of the College of Agriculture, Tokyo Imperial University* 1(5):9-33. July. [10 ref. Eng]
• ***Summary:*** A detailed analysis. *"Koji* i.e. steamed rice or barley upon which is developed the mycelium of special fungus plays an essential part in various manufacturing processes peculiar to Japan and China. It is used as a saccharifying substance in the preparation of rice wine (*sake*) and alcohol (*shochiu*) and seems likewise to be the chief active ingredient which brings about the slow fermentation as well in the manufacture of *miso*, a food adjunct very common in Japan, as in the preparation of *shoyu*, a peculiar sauce also largely consumed in the country.

"... we prepared koji from rice and barley in the following way, which is generally adopted in the koji works, and which has already been described by O. Korschelt (1878), and R.W. Atkinson (1881)." Address: Dr., Prof. of Agricultural Chemistry, Imperial College of Agriculture and Dendrology, Komaba, Tokyo, Japan.

1311. Lecerf, Ch. 1889. Le soya, sa valeur alimentaire et son emploi thérapeutique [The soybean. Its food value and therapeutic applications]. In: Compte Rendus, Congrès International de Thérapeutique et de Matière Médicale. 1889. Paris. 347 p. See p. 296-302. Meeting of Aug. 3. Therapeutic section. [4 ref. Fre]
• ***Summary:*** The soybean (*Le Soya or Soja*) is a legume of the group *Phaséolées*, widely cultivated in China, Japan, and the Far East, where it serves as a foundation of the food of the indigenous people.

The Dutch traveler Kaempfer, in 1712, first reported on this plant, which he designated under the Japanese name Daïdsu. After that it was named: *Dolichos soja* by Linnaeus, *Soja hispida* by Moench, and *Glycine hispida* by Siebold. A detailed botanical description is given. It is an annual herbaceous plant, having slender stems about 80-90 cm in height. Its leaves are trifoliate with a special pattern of veins (*imparipennées- trifoliolées*), its leaflets / folioles are hairy and oval but pointed on the ends. Its flowers are small, papilionaceous corolla, varying in color from white to purple; they are disposed in axillary groups, etc.

The type that I have just described is the one that acclimatizes itself most easily to the European regions where the cultivation of corn / maize is possible. In Japan and China, there are numerous varieties of soya, having brown, black, or greenish seeds. In these countries, each of these varieties has a special use: One kind is used to make tofu (*le Téou-fou*), a kind of cheese of which the Chinese people are very fond. Another is used in the preparation of Shoyu, a kind of sauce which is (so to speak) indispensable to the Japanese. Yet another kind is employed by the Chinese to make Cantonese wine starter (*Kiu-tsée;* [from China]) a solid ferment, which is used in making wines and artificial brandies.

All that is known about the various uses of Soya, about the trials that have been made concerning the acclimatization of this plant in Europe, as well as the chemical composition

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of the plant and its seeds, can be found in an excellent monograph by Mr. A. Paillieux [1881].

In April 1888, in a communication to the Society for Practical Medicine (*Société de médecine pratique*), I called to the attention of the medical corps the services that this legume could render to diabetics and to invalids, and presented samples of bread made with soya flour.

I am happy to note that my idea did not remain without a response / an echo. Our learned president, Prof. Dujardin-Beaumetz, was kind enough to present to the Academy of Medicine (on 29 May 1888) the soya bread (*pains de Soya*), which I made with no flour other than non-soy flour; he was kind enough to conduct trials with this bread in his department at the Cochin hospital [a famous hospital in Paris].

Later, Mr. Blondel published (*Journal de pharmacie et de chimie*, 5th series, vol. 18, p. 537) a very interesting study on the structure of soybean seeds., and demonstrated the almost complete absence of starch in their tissues. Then Mr. Egasse, in an excellent article in *Bulletin général thérapeutique* (30 Nov. 1888) summarized the various works concerning Soya and its economic and therapeutic applications.

Not much attention was given to Soya [in Europe] until after the Exposition of Vienna in 1873, to which the Japanese brought numerous samples. Professor Haberlandt and Count Cettems were the principal popularizers, and even though they recommended its cultivation mainly from the viewpoint of feeding and fattening livestock, they opened the door to the idea that the seed could be of service if it were introduced as a human food.

In France, the Society for Acclimatization encouraged cultivation trials with Soya, which it sought to popularize; but in spite of the numerous trials that were made and of which the majority gave excellent results, its cultivation continued only in and around Étampes (Seine-et-Oise).

The analyses [of the chemical composition] of soybean seeds that have been made in Austria, Germany, and France are numerous. The writer then gives the composition (in two large tables on p. 299) of three samples of soybeans (from China, Hungary, and Etampes) and their ash as conducted by Mr. Pellet and published in the *Comptes Rendus des Seances de l'Academie des Sciences* (Paris) (1880, vol. 40, p. 1177).

The analyses of Mr. A. Muntz was based on French samples, whose content of starch and sugar was rather high. They contained 6.4% (p. 299).

The sweet material (*matière sucrée*) of the soybean was studied by Mr. Levallois, who also made comparative analyses of the proportion of phosphoric acid and nitrogen contained in wheat and in soybeans. His latter results are given in the form of a short table.

If we compare the chemical composition of Soya, according to the analyses of Mr. A. Muntz, and that of beef that has been defatted (as in a laboratory) according to the analyses of M. Lehmann, we see that the Soya contains more of the useful nutrients / principles than the meat. A table (p. 300) compares the amylaceous and sweet materials, proteins, fats, phosphoric acid, and water for the two foodstuffs.

Soya is therefore a precious plant, which, in a small volume, offers a large nutritive value. Its low starch content makes it very useful in diabetic diets.

The oil contained in the soybean seed, even though it is said that the Chinese use it as an edible oil, is a laxative and has a taste that is not very agreeable; this taste would make it hard to use, even as a substitute for castor oil. It is the oil, above all, which makes it difficult to make bread from Soya flour, and which gives this flour a disagreeable taste, which even cooking does not diminish noticeably. This oil is not, strictly speaking, a drying oil as is often said; it is a mixture of resin, fixed oil, and essential oil (*de résin, d'huile fixe et de huile essentielle*).

With the flour, from which most of the oil has been removed, I have succeeded in making a bread that is not disagreeable. It stays fresh for 4 to 5 days, and has the great advantage for sick people over gluten bread of having a good crumb (the soft, white part of a loaf, other than the crust), not to mention the insignificant amount of starch that it contains.

This bread, cut into slices and dried in a drying stove, furnishes biscuits; finally the flour, mixed with egg yolks, enables us to makes wafers / thin waffles than can be sweetened with saccharine.

Soya bread, in appearance, has a great similarity to rye bread; its color darkens gradually as it ages. And it is easily digested, provided, as Mr. Dujardin-Beaumetz advises, one does not consume more than 250 gm per day.

In using this bread, a certain accommodation must be made; during the first few days it has a mild laxative effect, but this diminishes as one gets used to it.

Many sick people, having previously used gluten bread, have switched to Soya bread basted on its good taste. Then they discovered the additional advantages of a bread that absorbs and retains moisture well, and that stays fresh and soft for rather a long time. Note: At mealtimes, many French people used to dunk their bread (which is served next to the meal) into a hot, tasty liquid (soup, milk, coffee, gravy, etc.) and use it like a utensil to move or push other foods around, and clean the plate at the end of the meal.

The trials conducted to date do not yet allow us to say for sure, in diabetes mellitus, what the action of Soya is on the production of sugar. But we can affirm, already, that the quantities of glucose (*glycose*) do not increase when Soya bread is substituted for gluten bread. A fact that appears to remain constant with diabetics who use Soya, is a decrease in the volume of urine excreted in 24 hours.

If, by virtue of their low starch content, Soya preparations are useful to diabetics, the relatively large proportions of proteins and of phosphates which they contain make them a substantial food which can render a service to

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debilitated persons.

Discussion: Mr. Constantin Paul says–Concerning Soya biscuits, sweetened with saccharine, recently recognized as good for the feeding of diabetics, I would like to call the attention of the Congress to the services which can be rendered, in the diets of the sick, by the use of saccharine in general, so convenient to use to console the diabetics that that they do not have completely suppress all sweets...

Mr. Stokvis adds that saccharine has been recently used in Holland and he would like to make the same observation as Mr. Paul. As long as saccharine is used in a sufficiently alkaline milieu, no stomach problems are observed. Address: Pharmacist, Paris.

1312. *Pharmaceutische Centralhalle fuer Deutschland.*1889. Offene Correspondenz [Open correspondence]. 30(47):698. Nov. 21. New series: Vol. 10. [Ger]

• ***Summary:*** Mr. W. in The Hague (Netherlands) is looking for a supplier of soybeans. An extract of soybeans is on the market under the name of "Soya Japan" [probably Japanese shoyu / soy sauce] or "Kefo" and is used as an ingredient in or seasoning for soups. One supplier of this Soya extract is Gehe & Co. in Dresden.

1313. *Los Angeles Times.*1889. The housekeeper. Nov. 27. p. 7.

• ***Summary:*** The third recipe, for "Green tomato sauce," calls for Worcestershire sauce as an optional ingredient.

1314. T. de L. (Terrien de Lacouperie). 1889. Ketchup, catchup, catsup. *Babylonian and Oriental Record* 3(12):284-86. Nov. [11 ref]

• ***Summary:*** "My attention was called lately by my friend Col. Sir Henry Yule, to this word for which a Chinese origin has been suggested." After arguing in detail that W.H. Medhurst's *English and Chinese Dictionary* (Shanghai 1847) cannot be trusted, he concludes: "The Cantonese *Kwai-tchap* might be the antecedent of the English word, but it results from the unsatisfactory evidence of various sorts here adduced, that the etymology is altogether theoretical. My impression is that the word may have a Chinese origin, but not from China. It may have come from Australasia or the Malay peninsula, where the Chinese colonists of southern China are so numerous. The expression may have been made there, with a local acceptation unknown in the mother country."

Note: *Webster's Dictionary* defines catsup (pronounced KECH-up or KACH-up, derived from the Malay *kêchap* = a spiced fish sauce, and first used in 1690) as "a seasoned tomato puree." Under ketchup, *Webster's Dictionary* simply states "var. of Catsup" without giving a year of earliest known usage.

1315. Stearns, Frederick. 1889. A Japanese dinner: An elaborate and somewhat curious affair of many courses. Dainty dishes served in rare and most exquisite porcelains: A cup of tea made from priceless leaves–The menu in detail. *Detroit Free Press.* Dec. 8. p. 16.

• ***Summary:*** The writer was invited to dine with a Japanese gentleman in Tokio at a "beautiful new tea house, called *Kan-toku-tei* (lofty virtue), in the midst of one of the finest and oldest landscape gardens of Tokio. This garden is over 250 years old." The first-class Japanese dinner was laid for four persons. Since the writer was unable to sit on his heels or to use chopsticks, the dinner was served on a Western style and he used "that vulgar utensil called a fork."

Each dish and the vessel in which it was served are described. Three little piles of zests were served with one course: Yellow chrysanthemum petals, bruised and moistened with salted water; horse radish; and small cucumbers very thinly sliced and pickled in brine. Several of the foods were dipped "into a little cup of soy [sauce], adding at the same time one or more of the zests."

Another course "consisted of young bamboo shoots (resembling somewhat our asparagus) cooked in soy sauce and mirin. With these were... salmon soaked first in soy sauce and then broiled, but eaten cold. This is called teriyaki."

Note: This is the earliest English-language document seen (April 2012) that contains the word "teriyaki." It does not contain the term "teriyaki sauce."

The next course, a soup, included "a greenish sea weed called nori,..."

"The only criticism I would make upon Japanese food is that it is too much salted to suit foreign palates. But for daintiness of appearance, pretty decorations and exquisite porcelains it would be difficult to find a parallel." Address: Yokohama, Japan.

1316. Kellner, O. [Oskar Johann]; Nagaoka, M.; Kurashima, Y. 1889. Researches on the manufacture and composition of "miso." *Bulletin of the College of Agriculture, Tokyo Imperial University* 1(6):1-24. Dec. [12 ref. Eng]

• ***Summary:*** Contents: Introduction. Raw material and preparation of miso: Soy beans, koji from rice or barley, common salt. The chemical processes during the ripening of miso (incl. chemical composition of fresh substance and dry matter, which include nitrogenous substances or albuminoids, ether extract [crude fat], carbohydrates, crude fibre, ash, solubility, water). Varieties, composition, and nutritive properties of miso: (1) "Shiro miso, white miso, is characterized not only by its white colour but also by its low content of salt and by the short time it will keep good"–no longer than 10 days; 4 days fermentation time. (2) "Yedo miso, so called from the former name of the metropolis" [Yedo/Edo, now Tokyo]; 20 days. (3) "Inaka miso, country miso, is the richest in salt and is prepared with the help of barley koji"; 11-12 months. (4) "Sendai miso derives its

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name from the city of Sendai in Miyagi prefecture where it is widely prepared, but is frequently also termed *Aka miso* (red miso)"; 8-15 months. (5) Other sorts of miso which are only of local importance. Four are consumed mostly in miso soup: Sano miso, Nagaseyama miso, Mikawa or Sanshiu miso [Sanshu miso]. Four others can be consumed uncooked and used as condiments: Kinzanji miso ("named after a Buddhist temple and prepared by fermenting a mixture of soy beans, barley koji, salt, starch-sugar {*amé*}, slices of egg plant {*Solanum melongena*}, and ginger roots"), Sakura miso ("quite similar to the preceding, but sweeter on account of an admixture of large quantities of starch-sugar or raw cane sugar"), Tetsuka miso [Tekka miso] ("is common miso with the addition of sesamum oil, roasted soy beans, and slices of the roots of burdock {*Arctium Lappa*"}), Kogo miso ("is prepared like common miso but with an addition of rice bran").

The introduction begins: "Miso, e.g. a food prepared from a mixture of soy beans, rice or barley, common salt, and water, by slow fermentation, seems to have been known in Japan since remote times. Its manufacture, like so many other useful processes, appears to have been taught to the Japanese by Chinese or Koreans. At least the *Sandai jitsu roku*, tells us, that a Chinese priest named *Jingo* transmitted more than 1000 years ago a small quantity of miso to the then Emperor of Japan, and the name *'Korei shiwo'* sometimes, though not frequently used instead of the word 'miso,' points to its introduction from Korea, where indeed, as well as in China, miso is still a favorite food.

"In Japan miso is very widely consumed, especially by the lower classes, who enjoy it as a sort of food adjunct to the vegetables of which their daily diet consists. Although it is eaten throughout the whole country, it seems to be especially favoured in the north-eastern provinces. Statistics on its consumption do not exist at present and may also be difficult to compile, as in the countryside it is made by families themselves [at home], and only in large communities are special miso works [factories] established. Assuming, however, 10 monme (37.5 grms.) to be the lowest quantity daily consumed per head, and 20 millions out of the 39 [million] of the whole population to eat miso every day, a yearly amount of nearly 30 million kilograms of miso is arrived at, for the preparation of which more than half the yearly produce of soy beans (2.3 million koku [335,000 tonnes] in 1883) is needed. Although these figures are certainly too low, they surely indicate the importance of this food in the nutrition of the Japanese people."

Tables show: (1) The composition of three different types of soy beans that make good shoyu and good miso, and the weight of 1000 grains/seeds of each (p. 3). (2) The composition of four different types of sea salt: Ajino from Bizen, Ako from Harima, Mitajiri from Suwo, and Giotoku from Shimosa [Shimôsa] (p. 4). (3) The composition of soy beans and of barley, and amount of each used in making miso (p. 6). (4) The composition of the fermenting miso after 50, 85, 120, and 150 days, on a fresh (as-is) basis (p. 7) and a dry-matter basis (p. 8). (5) Changes in nutrients in the soy beans and in the barley during fermentation (p. 11). (6) Changes in the miso during fermentation (p. 13). (7) Temperature of the original mixture and length of fermentation for four types of miso: Shiro miso, Yedo miso, Inaka miso, and Sendai miso (p. 15). (8) Composition of five types of miso (p. 19). (9) Proportion of raw materials, age, temperature of the beans when mixing them with the other ingredients, and price per *kin* (=0.601 kg) of the same four types of miso.

Note 1. Dr. Kellner published three subsequent articles in this journal but none concerned soybeans: (1) "Manuring experiments with paddy rice" (Bulletin No. 8, June 1890); (2) "Manuring experiments with paddy rice. (Third year)" (Bulletin No. 11, July 1892); (3) "Comparative experiments on the effects of various phosphatic fertilizers on upland soil, and analysis of rice grain" (Bulletin No. 12, March 1893).

Note 2. This is the earliest English-language document seen (Sept. 2002) that contains statistics on the production or consumption of soyfoods (in this case miso), in Japan.

Note 3. This is the earliest document seen (Sept. 2002) that contains statistics on miso by geographical area.

Note 4. This is the earliest English-language document seen (Aug. 2001) that mentions the word "nutrition" in connection with soy.

Note 5. This is the earliest document seen (March 2009) that mentions "Inaka miso" [made at home in the countryside], or "Tetsuka miso" [Tekka miso], or "Yedo miso" [Edo miso], or "Sendai miso" [a dark rice miso made in and around the city of Sendai], or "Kinzanji miso," or "Sanshiu miso" [Sanshu miso, a soybean miso made in central Japan].

Note 6. The parallel Japanese title of this English-language periodical is *Tôkyô Nôrin Gakkô. Gakujutsu hôkoku*. Address: Dr., Prof. of Agricultural Chemistry, Imperial College of Agriculture and Dendrology, Komaba, Tokyo, Japan.

1317. Belohoubek, Anton. 1889. Das shoyn [Shoyu]. *Zeitschrift fuer das Gesamte Brauwesen* 12(21):433-37. Extracted from "Archiv Zmedelsky" (Prague). German summary in Chemisches Central-Blatt 1890(1):132. [2 ref. Ger]

• ***Summary:*** Soy sauce or shoyu (*shoyn*) is the name used by people in England to refer to a liquid seasoning prepared from soybeans in India, China, and Japan. In recent years it has come to be imported into Europe. A description of the process for making soy sauce is given.

Soy sauce was found to have the following composition: Protein (*Eiweissstoffe*) 1.058%, peptone 3.115%, other nitrogen-containing organic compounds 3.035%, crude / unrefined fat 0.609%, sugars 2.467%, dextrin 4.966%,

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ethyl alcohol 1.602%, volatile acids (calculated as acetic acid) 0.110%, non-volatile acids (calculated as lactic acid) 0.665%, ash 16.263%, water 66.162%. Address: Professor from Prague [Czechoslovakia].

1318. Allen, Grant. 1889. Falling in love, with other essays on more exact branches of science. London: Smith, Elder & Co. 356 p. See p. 205. 22 cm.

• ***Summary:*** The chapter titled "Food and Feeding" states (p. 205): Foods that taste bitter, pungent, fiery, or acrid are usually poisonous or bad for humans to eat. The fore part of the tongue warns us. If so, then why do we purposely use such things as mustard, pepper, curry-powder, and vinegar? Because, in small quantities, used as condiments, they act as agreeable stimulants. "Still, very young children dislike all these violent stimulants, even in small quantities; they won't touch mustard, pepper, or vinegar, and they recoil at once from wine or spirits. It is only by slow degrees that we learn these unnatural tastes, as our nerves get blunted and our palates jaded; and we all know that the old Indian who can eat nothing but dry curries, devilled biscuits, anchovy paste, pepper-pot, mulligatawny soup, Worcestershire sauce, preserved ginger, hot pickles, fiery sherry, and neat cognac, is also a person with no digestion, a fragmentary liver, and very little chance of getting himself accepted by any safe and solvent insurance office. Throughout, the warning is a useful one; it is we who foolishly and persistently disregard it. Alcohol, for example, tells us at once that it is bad for us; yet we manage to dress it up..."

"The middle region of the tongue is the part with which we experience sensations of taste proper–that is to say, of sweetness and bitterness. In a healthy, natural state all sweet things are pleasant to us, and all bitters... unpleasant. The reason for this is easy enough to understand. It carries us back at once into those primæval tropical forests, where our 'hairy ancestor' used to diet himself upon the fruits of the earth in due season. Now, almost all edible fruits, roots, and tubers contain sugar; and therefore the presence of sugar is, in the wild condition, as good a rough test of whether anything is good to eat as one could easily find. In fact, the argument cuts both ways: edible fruits are sweet because they are intended for man and other animals to eat; and man and other animals have a tongue pleasurably affected by sugar because sugary things in nature are for them in the highest degree edible. Our early progenitors formed their taste upon oranges, mangoes, bananas, and grapes; upon sweet potatoes, sugar-cane, dates, and wild honey. There is scarcely anything fitted for human food in the vegetable world (and our earliest ancestors were most undoubted vegetarians) which does not contain sugar in considerable quantities."

"But besides the natural sweets, we have also taken to producing artificial ones. Has any housewife ever realised the alarming condition of cookery in the benighted generations before the invention of sugar? It is really almost too appalling to think about. So many things that we now look upon as all but necessaries–cakes, puddings, made dishes, confectionery, preserves, sweet biscuits, jellies, cooked fruits, tarts, and so forth–were then practically quite impossible. Fancy attempting nowadays to live a single day without sugar: no tea, no coffee, no jam, no pudding, no cake, no sweets, no hot toddy before one goes to bed; the bare idea of it is too terrible."

Note: Grant Allen lived 1849-1899. Address: The Nook, Dorking [Surrey, England].

1319. *Jahresbericht ueber die Fortschritte der Pharmakognosie, Pharmacie und Toxicologie (Jahresbericht der Pharmazie).*1889. Ueber die Zusammensetzung der Sojasauce [On the composition of soy sauce (Abstract)]. 49:506. (Vol. 24 New Series). [3 ref. Ger]

• ***Summary:*** A German-language summary of three publications from the year 1889 on the composition soy sauce: (1) Stift, A. 1889. "*Beitrag zur Kenntniss der Sojasauce* [Contribution to the knowledge of soy sauce"]. *Zeitschrift für Nahrungsmittel-Untersuchungen und Hygiene* (Oesterreichische Chemiker-Zeitung) 3(1):33-34. Jan. In German

(2) Tahara, J.; Kitao, M. 1889. "Notes sur la composition du shoya. Sur les matières azotées dans la sauce japonaise dite "Shoya" [Notes on the composition of shoyu. On the nitrogenous materials in the Japanese sauce called 'Shoya']." In French.

(3) Belohoubek, Anton. 1889. "Das shoyn [Shoyu]." *Zeitschrift fuer das Gesamte Brauwesen* 12(21):433-37. Address: Goettingen.

1320. Kellner, O.J.; Mori, Y[ôtarô]. 1889. Untersuchungen ueber die Ernaehrung der Japaner [Investigations on the nutrition of the Japanese]. *Zeitschrift fuer Biologie* 25:102-22. [16 ref. Ger]

• ***Summary:*** The Japanese practice a near-vegetarian diet and consume very little meat. In 1882 only 36,288 cattle were slaughtered and the 37 million inhabitants consumed less than 1 kg per capita each year. The authors found that rice constitutes about 50% of the total vegetable food of the Japanese, followed by barley and wheat (27%), other small grains such as millet and buckwheat (13.9%), with green vegetables, roots, tubers, etc. making up the remainder. Soybeans, which are rich in protein and fat, are not widely consumed as such directly, but are made into other unique foods such as tofu and miso, and a tasty sauce, shoyu. Miso is made in almost every household in Japan. The process for making miso, tofu (*Bohnenkäese*), and shoyu is described (p. 103-04).

A table (p. 121) gives the chemical composition of various Japanese foods (on a moisture-free basis), including soybeans cooked with shoyu, and tofu (*Bohnenkäese*).

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Address: Tokyo, Japan.

1321. Koenig, Franz Joseph, ed. 1889. Kaeufliche Saucen und Speisegewuerze [Commercial sauces and food seasonings (Document part)]. In: F.J. Koenig, ed. 1889. Chemische Zusammensetzung der menschlichen Nahrungs- und Genussmittel. Vol 1. Chemische Zusammensetzung... Ed. 3 [Chemical composition of human foods and stimulants. Vol. 1. Chemical composition... 3d ed.]. Berlin: Verlag von Julius Springer. 1161 p. See p. 241-42. [21 ref. Ger]

• ***Summary:*** A table at the beginning of this section (p. 241) gives the weight (gm) of the contents of one bottle, the retail price (German marks), and the chemical composition of 7 such sauces, including "Harvey-Sauce," Japanese shoyu (*Japanisch Soya*, 550.4 gm, DM2.75), and Indian shoyu (*India-Soya*, 272.2 gm, DM1.25).

More about commercial sauces: The following information about Japanese shoyu or Shoya or Soy ("*Japanisch Soya*" [*oder Shoya, oder Soy*]) comes from a lecture at the Chemical Association (*Chemiker-Verein*) in Hamburg published in the *Officielle Zeitung d. allg. Ausstellung für Kochkunst und Volksernaehrung in Düsseldorf* (1887, No. 4) and from a report titled *Japan. International Health Exhibition A. Descriptive catalogue etc.* (London 1884, p. 21), by Nagai and Murai.

The ingredients or raw materials are: Barley or also wheat (*Gerste oder auch Weizen*), table salt, yeast (*Hefe*), water, and above all, a bean which is cultivated for this purpose, the soybean (*die Sojabohne: Dolichos Soya* or *Soya japonica*) which gives the sauce its characteristic aroma.

The dehulled beans are dried, then in the same way as coffee beans, roasted in ovens scattered throughout the country, since when fresh they cannot be transported well without losing their aroma.

The barley is a long-grained, very hard variety, which can be used without being dehulled. A portion of it is roasted, just like the beans. In the main factory in Tokyo a portion of the fresh barley is now allegedly malted (*gemalzt*) and from it an infusion (*Aufguss*) is prepared, just like in our distilleries. The roasted beans and the barley are then poured into another large vat with cold water and allowed to soften for a long time, while it is kept at an artificially low temperature, and later a high content of table salt (NaCl) is added to the infusion to protect it from spoilage (*Zersetzung*). After a while the diastase solution, prepared from the malt, is mixed in (whether warm or cold, we could not find out), then the entire content is left alone, although it is stirred once in a while. As soon (based on experience) as the time comes, when the seasoning has attained the right color, the varieties of yeast (*Hefe*) are added. Under the given conditions (very low temperature) as well as the high salt content, a very slow fermentation (*Gährung*) takes place. It runs its course supposedly without carbonic acid development and without alcohol in the end product. Depending on the composition and raw materials, three types of soy sauce are made: The lowest quality requires a one-year fermentation, the middle quality two years, and the third three full years, during which time the vat remains unstirred.

The soy sauce is then drawn off, leaving the dregs behind, and is ready for use. Stored in a cool place in porcelain bottles in the absence of air and light, it keeps for several years; however in the presence of air and light, slow fermentation takes place, [lowering its quality] without noticeable changes in week-long intervals.

A second table (p. 242) from Nagai and Murai shows the relative density and chemical composition of Japanese shoyu from two different sources: (1) "Tokio Shoy und Kwaisha" in Tokyo, and (2) "Kikkoman Shoya" [sic, Shoyu] from Noda, Shimousa Prov. Details of the composition of the ash of sample 1 are given; no alcoholic content could be detected.

In Japan, shoyu serves as a seasoning for almost all foods and forms a widespread food for the people (*Volksnahrungsmittel*), which must partially take the place of meat. Address: Prof. and Head, Agricultural-Chemical Experiment Station, Muenster in Westphalia, Germany (Professor und Vorsteher der Agric.-Chem. Versuchsstation Muenster i. W., Germany).

1322. Matthews, Charles George; Lott, Francis Edward. 1889. The microscope in the brewery and malt-house. London: Bemrose & Sons. 198 p. See p. 85, 184-85. Illust. Index.

• ***Summary:*** This book is dedicated to Mon. Louis Pasteur. In Chapter 6, "The moulds or microscopic fungi," states (p. 85): "The only distinct industrial purposes to which mould-growths are applied, are in connection with this power of forming Alcoholic ferments. It appears besides, that moulds may give rise to a species of Diastase, as for instance, in the preparation of the Japanese 'Koji,' made from steamed rice on which a yellow dust–the spores of a fungus–is placed, and subsequently allowed to vegetate. 'Koji' is capable of liquefying gelatinized starch, and setting up a fermentation in it, giving rise to a kind of Beer–the Japanese 'Saké' Koji is also used in breadmaking and as a source of 'Soy' [sauce]. The mould giving rise to these spores is called Eurotium Oryzæ" [Aspergillus oryzae].

In the Glossary we read: "Eurotium Oryzæ, a mould, the spores of which are found in Kôji, the Japanese ferment" (p. 184).

"Kôji, macerated rice containing fungus spores, used by the Japanese as a ferment in making Saké, and bread; also in the manufacture of 'Soy'" [sauce]. Address: 1. F.C.S. [Fellow of the Chemical Society], F.I.C. [Fellow of the Institute of Chemistry], etc.; 2. F.I.C., A.R.S.M., etc. [England].

1323. Rein, Johann J. 1889. The industries of Japan. Together with an account of its agriculture, forestry, arts, and

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commerce. London: Hodder and Stoughton. xii + 570 p. See p. 6, 55-59, 62-63, 105-08, 157. Illust. Indexes (English and Latin; Japanese). 26 cm. [3 ref. Eng]

• ***Summary:*** This book is a translation of volume II of his superb book *Japan nach Reisen und Studien*, published in 1886. The result of many years of study, including a stay in Japan, it is based on travels and researches undertaken at the cost of the Prussian government. On page 6, the author discusses the *Gokoku* (five chief cereals) and the introduction of agriculture to Japan. "As Tokugawa Ieyasu, the founder of the last Shôgun [shogun] dynasty, emphasizes in the twelfth of his 'Eighteen Laws,' the introduction of agriculture into Japan is ascribed to the sun-goddess *Tenshô Daijin* (Amaterasu). She was, to the old Japanese, Janus and Ceres in one. Her temple, at Yamada, in Ise, was the great national sanctuary, which had to be cared for according to law, and built anew every twenty-one years out of consecrated Hinoki-wood (*Chamæcyparis obtusa* S. and Z.) 'in order that the land might have peace and thrive.' By Gokoku (five chief cereals) were meant rice, barley and wheat, Italian millet, other kinds of millet, and beans–in fact, the principal *Kokurui*, that is, cereals and pulse. The term Go-koku, however, did not meant the same thing in all ages. Thus we find in Kaempfer, *Amoenitatum exoticarum* (1712, p. 834), Kome (*Oryza*), O-mugi (*Hordeum*), Ko-mugi (*Triticum*), Daidsu (*Dolichos soja*, L.), and Adzuki (*Phaseolus radiatus*, L.) mentioned as Gokoku. Later the idea was extended farther, and included all important food-plants belonging to the group of cereals and pulse."

"The Emperor Shinnung [Shen Nung] had introduced and spread the practice of agriculture in China, about the year 2700 B.C. For this he was deified after death, and a temple was dedicated to him in Peking. In the park-like surroundings of this temple, the emperor of China since then, at the time of the spring equinox, annually ploughs a piece of land and sows it with go-koku." Note 1. This is the second earliest document seen (Dec. 2000) that gives an early date (2700 B.C.) for Shen Nung. It is the earliest document seen (Dec. 2000) that weakly links Shen Nung with soybeans, which were probably one of the Gokoku.

Soy-bean is described in the chapter on "Food Plants," under "Pulse or Leguminous Plants." "Among the pulse of Japan (and not the less of China), the soy-bean ranks first in extent, variety of use, and value; and chemical analyses prove the empirical judgment is well founded. In point of nutriment, the soy-bean is of all vegetables the nearest to meat. It contains nearly two-fifths of its weight in legumin rich in nitrogen, and nearly one-sixth in fat. The soy-bean is to the inhabitants of Japan what their *garbanzos* (chick-peas) are to the Spanish, and their *feijao preto* (black beans) to the Brazilians. The author then describes the characteristics of the soy-bean, the work of Haberlandt with soy-beans in Austria, and the yields that he and his co-workers obtained. Note 2. This is the earliest English-language document seen (June 2008) that uses the word "garbanzos" (or "garbanzo") to refer chick peas.

"In Japan the varieties of soy-bean are distinguished–according to colour, as white (more properly yellowish), black, brownish red, green, and spotted; according to duration of growth [maturity] as early-ripening, middle-ripening, and late-ripening; according to form, as spherical, ellipsoidal, kidney-shaped, and compressed laterally; and according to use, as to those which serve primarily in making Shôyu (soy), Tôfu (bean-cheese), and Miso (a sort of sauce), and those eaten in any plain shape." Soy-bean varieties in Japan include: 1. "White (pea-yellow) soy-beans, Japanese Shiro-mame or Haku-daidzu. To this division belongs an early-ripening sort with very small seeds, called Goguwatsu-mame [Go-gatsu], or 'five-months-kind,' because it ripens in the fifth month of the old Japanese calendar, our July; also another small-seeded, early-ripening variety, the Wase-mame or Natsu-mame, that is, early and summer-bean. These two are also called Tôfu-mame, because they are used chiefly in making Tôfu. Another sort serves to produce Miso. It is called Nakate-mame, 'middle-late bean,' its time of maturity occurring half-way between that of the early and late kinds. Its seeds are round and somewhat larger. The late ripening varieties, Okute-mame (late-bean), Maru-mame (bullet-bean), and Teppô-mame (gun-bean), or Aki-mame (autumn-bean) have, as their names indicate, mostly bullet-shaped seeds, which become harder and larger than the early ones. The variety last named is used in making Shôyu, while Maru-mame is valuable as horse-feed.

2. Black soy-beans, Japanese Kuro-mame or Koku-daidzu. These are eaten boiled with sugar, as an entrée, or as a relish to rice. A species like it with big, bullet-shaped beans is called Kuro-teppô-mame. 3. Brown soy-beans, Japanese Katsu-daizu (thirsty soy-bean) are much less grown than the white and black sub-species, and are used like the latter. They are distinguished as Aka-mame, red soy-beans, round, of red-brown colour, in different varieties, and Cha-mame, tea beans, three light-brown sorts of small extent and significance. 4. Greenish or bluish green soy-beans, Japanese Ao-mame or Sei-daizu, are eaten mostly boiled and with sugar, like the black and brown-red varieties. And, with the brownish sorts, they are much less widely grown than the black and yellowish. The Japanese distinguish the following sub-species of Ao-mame:–(a) Sei-hito,–epidermis green, inside a whitish yellow. (b) Nikuri-sei,–greenish throughout. Both sub-varieties run from roundish-ellipsoidal to a bullet roundness, are of medium size, and remind one of green peas. (c) Kage-mame, with pale green, round beans. 5. Speckled soy-beans, Japanese Fuiri-mame or Han-daidzu. This group is not important. Its cultivation is confined to a small area, in a few provinces. Its sub-varieties are known as:–(a) Kuro-kura-kake-mame, with a black spot on the saddle (eye), otherwise greenish; flat and with the outline of an egg. (b) Aka-kura-kake-mame, with a brown spot on the

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saddle (eye), otherwise yellowish-green, flat and drawn out long, (c) Fuiri-mame or Udzura-mame, speckled or spotted soy-bean, yellowish-green with many dark flecks. A rare variety, grown only in a few places, especially in Harima. Note 3. This is the earliest English-language document seen (Sept. 2004) that uses the word "speckled" (or "speckling" or "specks"), or the word "flecks," or the term "light-brown" to describe the color of soybean seeds.

"Early-ripening soy-beans are sown as early as April in Southern Japan, in Central Japan during May. Those that ripen in autumn need much more warmth, and are sown, as a rule, one month later... Late-ripening Daidzu is also a favourite for planting along the edge of fields and on the new-built dykes of rice-fields."

Note 4. This is the earliest English-language document seen (June 2009) which states that there are early-, medium-, and late-ripening varieties of soybeans.

"At the end of his above-mentioned treatise, Haberlandt summed up in five noteworthy propositions, the results of his experiments with the soy-bean and of its chemical analysis. His conclusions are as follows:

"(a) The acclimatization of the early-ripening sorts, particularly those with yellow and reddish brown seeds, appeared to have fully succeeded in Central Europe.

"(b) The seeds obtained were larger, heavier, and handsomer than those from Eastern Asia, the chemical composition, however, remaining unchanged.

"(c) The soy-plant resists light spring frosts better than our young beans, and endures greater dryness in summer than most leguminous plants, though otherwise much like other kinds of beans.

"(d) It is distinguished by heavy crops, besides furnishing, in its stems and leaves, either green or dried, a nourishing feed, of which cattle are very fond.

"(e) In their high percentage of protein and fat, they far excel all other pulse in nutritive quality; and when properly prepared are second to none in flavour.

"After such favourable judgments, it might have been expected that the soy-bean, at least in the warmer regions of Austro-Hungary, would soon become popular and generally cultivated. The result, however, was quite otherwise. The hopes which he had aroused in behalf of this plant seem to have disappeared with Haberlandt, who died in 1878.

"As I know from a reliable source, people soon became convinced that it was possible to cultivate with certainty the early-ripening yellow sorts. The crops from these, however, are unsatisfactory. It is so difficult to boil them soft that they have no sale and cannot be turned to due account."

The seeds of certain wild kinds of beans also serve for food, incl. Tsuru-mame or No-mame (*Glycine soja*, S. and Z.) and No-adzuki (*Atylosia subrhombea*, Miq.). (p. 62).

Tables (both based on other sources) show: (1) Analyses of soy-beans (*Glycine hispida*, Moench) (p. 62). Gives the nutritional composition of 8 varieties, plus the empty pods, and the straw and leaves. (2) Comparative "analyses of various pulse" (p. 63), including *Glycine hispida* (*Daidzu*–soy-beans), *Phaseolus radiatus* (*adzuki*), *Pisum sativum* (*Yendo*–peas), *Vicia faba* (*Sora-mame*), lentil, yellow lupine, and ground-nut.

Pages 105-08 contain accurate, detailed discussions of shoyu, miso (which "does not spoil, and is said to be at its best when three years old"), and tofu.

A table titled "Average composition of various Japanese oil-seeds according to E. Wolff and others" (p. 157) includes the composition of ground-nut [peanut], sesame (brown, or white), hemp-seed, and soy-beans.

Also discusses: Adzuki (*Phaseolus radiatus*, p. 60, 108). Algae, marine, used as food [sea vegetables] (p. 77, 80-82). Ame, midzu-ame, and barley malt (p. 103-04). Arachis hypogæa (p. 56, 153-54). Fu (wheat gluten, p. 108). Hemp (*Cannabis sativa*, p. 75, 157, 165-66). Kudzu (p. 65, 160, 184). Sesame seeds (Benni-seed, gingeli, p. 154-55). Address: Prof. of Geography, Univ. of Bonn [Germany].

1324. Rein, J.J. 1889. Shoyu (Document part). In: J.J. Rein. 1889. The Industries of Japan. Together with an Account of its Agriculture, Forestry, Arts, and Commerce. London: Hodder and Stoughton. xii + 570 p. See p. 105-07. [3 ref. Eng]

• ***Summary:*** "6. Shôyû, the Japanese bean-sauce, also called Soja, English Soy, both being corruptions of the Japanese name, is a dark-brown fluid with a pleasant aromatic odour and a peculiar salty taste. It foams up yellow when shaken, and leaves behind on the side of the glass a clear shining line of a fatty appearance, so that the Japanese designation "soy-oil" (Shô = soy, yû = oil) is quite appropriate. Its specific gravity, which Kinch gives as 1.199, may vary not inconsiderably according to the method of its production...

For the manufacture of Shôyu as I became acquainted with it in Kiôto (Kyoto), they use wheat (Ko-mugi), light-yellow Soja-beans (Shiro-mame), common salt (Shio or Shô), and water (Midzu); the first two in equal parts, three parts of water, and five or six parts of salt. In other places they take equal volumes of all four components. A small portion of the wheat is brought to fermentation with Kôji (rice-ferment); the rest is roasted to a delicate light-brown in iron pans over a fire of coals and then ground in little hand-mills. The Soja-beans are boiled soft for about half a day with a little water, in iron kettles, and after that pounded to mush. Flour, bean-mush, and the fermenting wheat are now thoroughly mixed, poured into little wooden boxes, and exposed to fermentation for three days in a suitable room, at as uniform a temperature as possible (25°C.), whereby the mass becomes covered with mould-fungus" (See also Hoffmann 1874).

"All through winter, for several minutes every day, the paste or porridge in these vats is vigorously and thoroughly stirred. In the warm season, when the fermentation takes

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place more rapidly and the solid parts collect on the surface, it is only necessary to stir it from twice to four times daily. This is done with a sort of wooden shovel with a long handle, to use which the workman stands on the edge of the butt.

"A common proverb says, the more rats have found their death in the butts, the better the Shôyû. This, though not to be taken literally, expresses the long time required for making Shôyû. This period varies, in fact, from twenty months to five years, beginning in autumn as a rule, after the Soya-bean harvest. In this slow and peculiar fermentation process a considerable proportion of starch is converted into dextrine and sugar, besides which lactic acid and acetic acid are formed. The paste, at first thick, becomes thinner and more fluid, while its grey hue gradually changes to a muddy brown, and at last to a pure dark-brown. This last and the agreeable aroma accompanying it, together with a bitter taste, are developed generally between the third and fifth year. The Shôyû which is most prized for its odour and taste is obtained only by mingling equal quantities of three-year and five-year product. The mixture is put into strong, coarse, close-woven bags of wool or hemp-linen, which have been rendered closer still by being dipped in Shibu (which see). These bags, 60 to 70 cm. long and 18 cm. wide, are filled loosely, and then laid lengthwise and crosswise on top of each other in a large square box. Then a heavy wooden cover is put on, and a simple lever-press applied, one in which the long arm of 4 or 5 m. is weighted with stones. The expressed Shôyû flows through a hole in the bottom of the box into a bamboo cane, and through this to a cask sunk in the ground, and is then ready for use. As in oil refining, the first stuff produced is the most valuable. By continued pressure with increased weight a second quality is obtained, and at last a third, clear-flowing and less aromatic, as the dregs are mixed with salt-water and then squeezed again. Shôyû reaches the market in wooden barrels containing one To (20 liters). According to Hoffmann, the price was 1.5 yen (six shillings) for a To of the best sort, from three to four shillings for the second, and two shillings for the last.

"The delightful aroma and pleasing taste of Shôyû are quickly lost in a long sea-voyage, through the formation of mould. In good condition, however, Shôyû proves an excellent means of sharpening the appetite and assisting digestion. It is, on this account, as Chief Staff-surgeon Hoffmann justly remarks, much preferable to European preparations that are supposed to effect the same result, being perfectly harmless to the human system." Note 3. This is the earliest English-language document seen (April 2012) that uses the term "bean-sauce" to refer to soy sauce. Address: Prof. of Geography, Univ. of Bonn.

1325. Rein, J.J. 1889. Tofu, kori-tôfu, and yuba (Document part). In: J.J. Rein. 1889. The Industries of Japan. Together with an Account of its Agriculture, Forestry, Arts, and Commerce. London: Hodder and Stoughton. xii + 570 p. See p. 107-08. [3 ref. Eng]

• ***Summary:*** "8. Tôfu, called in English bean curd, in German and French, less appropriately, *Bohnenkaese* and *fromage de pois*, is a valuable article of food made in Japan and China from yellow Soja-beans. It consists of fresh coagulated legumine [legumin], so that the English term suits it better than the German. Its preparation is simple.

"The yellow Soja-beans are put to soak, in cold water for from twelve to twenty-four hours, or a shorter time in warm, and then ground between the stones of a hand-mill, water being added to assist maceration. It becomes thus a thin mass, in which the quantity of water exceeds that of the beans about ten times. This is next filtered or pressed through a fine sieve, and the remnant put through the mill a second time. Ten volumes of this filtered stuff are now diluted with three volumes of hot water, and heated to boiling-point. This is done in a kettle, which is only about half filled. When cool again, the mass is filtered through a woollen sack, and the process ends with pressing it under the lever.

"As in our soups from leguminous plants, the legumine is now found dissolved in the filtrate. To coagulate and separate it, there is added Shio-no-nigari (salt-bitter), i.e. brine from sea-salt, consisting principally of chloride of magnesium. Care is taken to have the precipitation take place slowly and quietly. (In China, according to St. Julien, burnt gypsum is also added.) When the liquor has cleared it is dipped out carefully, while the stuff precipitated is placed in four-cornered wooden forms with punctured, movable walls, which are lined with cloth. This is folded together over the Tôfu, a board is laid on top, and the Tôfu pressed out with a moderate weight of stones. Finally, the soft greyish mass is cut into tablets with broad latten [resembling brass] knives, and put away under water. In summer this suffices only for a short time. To be kept longer, it is put up in Shôyu, or pickled, etc.

"Kori-tôfu, frozen or ice-Tôfu, is the spongy, horn-like substance that remains when common Tôfu is allowed to freeze and then thawed and dried in the sun, thus getting rid of most of its water. By Yuba is meant a third preparation, consisting of brownish, tough skins, made by boiling the dissolved legumine of the Tôfu-process, with the addition of some wood-ashes, and then taking away in succession the scums that rise."

Note 1: This is the earliest English-language document seen (Feb. 2004) that uses the term "frozen Tôfu" or "ice-Tôfu" to refer to dried-frozen tofu.

Note 2. This is the earliest English-language document seen (Oct. 2008) that uses the word "scums" to refer to yuba. Address: Prof. of Geography, Univ. of Bonn.

1326. Whitney, William Dwight, ed. 1889. The century dictionary: An encyclopedic lexicon of the English language. 6 vols. New York, NY: The Century Co. See vol. I, p. 488.

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• ***Summary:*** This dictionary contains three entries related to the soy-bean in Volume 1. At the entry for "bean" we read: "Sahuca or soy beans, the seeds of *Glycine Soja*, largely cultivated in India and China, from which the sauce known as *soy* is made.

"bean-cake, n. A large cheese-shaped compressed cake of beans after the oil has been expressed, used largely in northern China as food for cattle, and in the sugar-plantations of southern China as manure."

"bean-curd, n. A thick white jelly resembling blanc-mange [blancmange], made of beans, much eaten by the natives of northern China, Corea [Korea], and Japan."

Note 1. This is the earliest document seen concerning soybean products (bean-curd) in Korea; soybeans as such have not yet been reported.

Note 2. This edition of *The Century Dictionary*, published from 1889-1891, is the earliest edition listed in the *National Union Catalog*. Address: Prof. of Comparative Philology & Sanskrit in Yale Univ.

1327. G. [Greshoff, M.?]. 1890. De Soja-boon en hare beteekenis als voedingsmiddel voor Nederlandsch-Indie [The soybean and its significance as a food for the Netherlands Indies]. *Tijdschrift voor Land- en Tuinbouw en Boschkultuur in Nederlandsch Oost-Indie* 5(10):347-56. Jan. 1. [5 ref. Dut]

• ***Summary:*** In the Netherlands Indies, the soybean (*De soja*), which is called *katjang kadeleh* and *katjang djepoen*, plays a very important role in the production of the sauce known as *ketjap*. However real soy sauce (*soja*) is of much greater importance to the Japanese and Chinese. The Chinese have carried their tradition of soy sauce usage and consumption abroad. The natives of Java use unripe beans, whereas the Chinese use well-ripened beans.

Chemical analyses over recent years have proven the superior nutritional value of the soya bean. No other legume has given such a favorable analysis. This shows how the experience makes the right choice ages before theory had its say about such things. It is as if every reputable chemical food analyst has to issue their own personal analysis of the soya bean in order not to embarrass themselves. According to the Japanese Yossyda [Yoshida?], there are 100 varieties of soya in cultivation in his homeland. Geerts describes 16 different kinds in his monograph. Analyses are given of several soybean varieties. The first, by Geerts and Dewars (Dutch) analyzed 7 varieties: yellow soybeans from Japan (*Wase-mamé*) and China, black soybeans from Japan (*Kuro-mamé*) and China, green soybeans from Japan (*Ao-mame*), Nakaté from Japan, a yellow soybean cultivated in south Russia. One analysis is given by Meissl and Böcker (German), and one by Church (British). Then seven analyses by Church are given of other common legumes from India. Then follows Church's analyses of rice, Indian wheat, corn / maize (*Djagoeng [jagung]*), and common sorghum (*Sorghum vulgare; Djagoeng tjeutriek*)–followed by a short explanation.

Experience has shown that in colder climates, the starch content of soybeans rises, while the content of other nutrients drops. This is why major areas of soybean cultivation (as promoted for 15 years by Haberlandt) have been limited to central Europe.

The soybean is said to contain an enzymatic substance which rapidly converts starch to sugar, and to which the high value of soy sauce is attributed. But tests have yet to prove this. Then follows an essay on the caloric value of soy compared to other foods, and how to calculate this correctly. Church's methods of determining the nutrient value of foods are described as too limited.

Among vegetable foods, the soybean is very digestible. According to the latest research by Ladd, comparing the digestibility of various proteins (*eiwitstoffen*), soybean is 75% versus 64% for flour and 54% for grains. Because soya is very low in starch, it is a perfect food for diabetics. At a recent congress for doctors in Paris, soy bread was promoted and given much attention. Prof. Stokvis told the congress how a baker named Koehler bakes soy bread and soy cookies of high quality.

The soybean is also appropriate, because of its nutritional composition, as a food for children and the sick. It is up to an enterprising person to bring it onto the market. Also, soy sauce would be a good commercial product if manufactured in Europe. But the most important point is that soya is an excellent food and, as such, is not given the recognition it deserves in the Netherlands Indies. It is an inexpensive vegetable meat. It deserves to be cultivated, because it can serve as a good, low-cost source of protein for a large number of people. It is appropriate for use in institutions, orphanages, and the army and navy, and deserves experimentation on a large scale. The indigenous people of the Netherlands Indies are used to eating the bean unripe, and not very well cooked–and they are persistent in serving it like this, which has led to the rejection of soy in many important circles.

Glycine soja is a very good secondary crop, next to rice. There is no need to emphasize this, since the Inspector of the Civil Medical Service has brought to the attention of the Netherlands Indies government and its officials, in a very professionally written piece, the advantages of soya cultivation.

"I can't give you any indications about the basis on which the soybean ("katjang kadeleh") will best thrive. There are so many questions concerning the growth and function of the so-called root nodules (*wortelknolletjes*) of the *Papilionaceae* and the microorganisms that live therein. It has been determined that these plants, which include the soybean (*de soja*) are capable of creating free nitrogen and assimilating it."

Note 1. This is the earliest document seen (June 2010) concerning soybean root nodules and nitrogen fixation in

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Europe.

The author closes with the wish that the import of soya will prove to be a blessing for Java. [Note 2. This could mean either importation of soybeans from China, or more widespread introduction of soybean culture to Java, or import from Java to the Netherlands.] For about a year he has been trying to bring soy to the attention of the Netherlands, an attempt he wants to repeat again under the favorable auspices of a small official publication circulated to those who are interested.

Note 3. Paerels 1913 (p. 288) and Kempski 1923 (p. 79) both cite F.A. von Stuerler as the author of this article, but at the end of the article, the author's name is written simply as "G." On the same line is written: "B. Nov. 1889."

Note 4. This is the earliest Dutch-language document seen (Feb. 2001) that has the word "Soja" (or "Soja-boon" or "Sojaboon") in the title.

Note 5. This is the earliest Dutch-language document seen (Aug. 2003) that uses the word *eiwitstoffen* (or *eiwitstoff*) to refer to proteins in connection with soybeans.

1328. T. de L. (Terrien de Lacouperie). 1890. Etymology of ketchup. *Babylonian and Oriental Record* 4(3):71-72. Feb. [1 ref]

• ***Summary:*** This is a response to a letter from Rev. Hilderic Friend, who was a missionary in China and who wrote a work on the Folklore of Plants. Friend denies the Chinese origin of the word ketchup, though the Chinese spelling is kwai-tchap. "In perusing the sections about meals and plants in the anonymous work, *A comparative vocabulary of the Barma, Maláya, and T'hai* (of J. Leyden; Serampore, 1810) since my note was published, I have found two terms, Nos. 2199 and 1144, where appear words which may be connected with the antecedent of *ketchup*, if not its antecedent itself. In Siamese *luk kachap* (read *katchap*) where *luk* is the auxiliary numerative, is a sort of sweetmeat; and *p'hak kachiap*, same remarks about reading and *p'hak*, is a species of *crotalaria*.

"Should this surmise be verified, the word originated in Siam has received its Chinese garb from the Chinese there; it has been spread by them in the Indian Archipelago, and even carried as far as China and Japan. The Europeans, then, must have learned it in Indonesia."

1329. Furukawa, Sakae. 1890. Shôyu oyobi seishu-chû tôbun no shiken-hô [A method of testing for sugars in shoyu and sake]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 97. p. 168-73. March 26. [Jap]
Address: Igaku-shi (M.D.), Japan.

1330. Furukawa, Sakae. 1890. Shôyu no seishitsu [On the nature and character of shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 102. p. 494-99. Aug. 26. [Jap]

• ***Summary:*** Largely about the chemical composition of shoyu. Address: Gakushi.

1331. *Chemisches Central-Blatt.* 1890. Japanische Sojabohne [Japanese soybeans (Abstract)]. 1890(25):1013. Dec. 17. [1 ref. Ger]

• ***Summary:*** A German-language summary of the following German-language article: *Bayerische Gewerbe-Zeitung* (Nuremberg). 1888. "Japanische Soja" (Japanese soy sauce). No. 23. p. 538-40. It also cites four other articles on the same subject, for comparison.

1332. Shimada, Kôichi. 1890. Shôyu no hyôjun [Standards for shoyu]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 11(10):149-50. Dec. [Jap]

• ***Summary:*** This study was conducted on 10 brands of regular shoyu. When sugar or barley malt syrup are added to the shoyu, the contents of these are listed separately. Maximum, minimum, and average figures are given for each nutrient. Only the average figures are translated here. Specific gravity 1.205. Solids 38.01%. Grape sugar/glucose 4.29%. Free acid (lactic) 1.04. Nitrogen 1.28 (Range 0.51 to 1.56). Inorganic salts 20.27 (range 17.47 to 23.61). Sodium chloride 17.81 (range 15.25 to 21.76), phosphate 0.47. Salt as a percentage of solids 46.84.

1333. Chamberlain, Basil Hall. 1890. Things Japanese: Being notes on various subjects connected with Japan. London, K. Paul, Trench, Trübner & Co.; Tokyo, the Hakubunsha, Ginza; etc. ii + 408 p. Index. 21 cm. 2nd ed. 1891. Slightly revised edition published 1905. Reprinted in 1970 by Charles E. Tuttle Co., Inc. (Rutland, Vermont, and Tokyo). [50+* ref]

• ***Summary:*** The author, who arrived in Japan in 1873 and was first introduced to the mysteries of the Japanese language by a dear old samurai, has lived through the transition stage of modern Japan.

This book is arranged alphabetically by subject. An extensively revised 2nd edition was published in 1891. Food (p. 122-25): "The following is a specimen of the bill of fare at a Japanese banquet. The reader must understand that everything is served in small portions, as each guest has a little table to himself, in front of which he squats on the floor:–Preliminary course, served with sake:–*suimono*, that is, a kind of bean-curd [tofu] soup;... *sashimi*, minced raw fish; *hachi-zakana*, a fine, large fish, either boiled with salt or boiled with soy [sauce]; *uma-ni*, bits of fish or sometimes fowl, boiled with lotus-roots or potatoes in soy and in a sort of liqueur called *mirin*;...

"First course (*Zembu*):–*Shiru*, soup which may be made of bean-curd [tofu], of fish, of sea-weed or of some other material;... *aemono*, a sort of salad made with bean sauce [miso] or pounded sesamum seeds;..."

"It is the custom, too, to set food before a guest, at whatever time of day he calls. On such occasions soba is

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in request–a sort of buckwheat vermicelli, served with soy [sauce] and the sweet liqueur called *mirin;* or else *shiruko,* that is, rice-cakes [mochi] with a sauce made of red beans [azuki] and sugar."

On Buddhism and vegetarianism in Japan (at Food, p. 122-23): Beans are a constant part of the daily diet. Buddhism has left its impress here, as on everything in Japan. To Buddhism was due the abandonment of a meat diet, now over a thousand years ago. The permission to eat fish, though that too entailed the taking of life, which is contrary to strict Buddhist tenets, seems to have been a concession to human frailty. Pious frauds, moreover, came to the rescue. One may even now see the term 'mountain whale' (*yama-kujira*) written up over certain eating-houses, which means that venison is there for sale. The logical process is this:–A whale is a fish. Fish may be eaten. Therefore, if you call venison 'mountain whale,' you may eat venison. Of course no actual prohibition against eating flesh, such as existed under the old *régime*, exists now. But the custom of abstaining from it remains pretty general; and though beef and pork were introduced at the time of the late revolution,... recent statistics show that meat-eating is again on the wane."

There are also interesting sections on Kaempfer, Engelbert (p. 187-88), Perry (Commodore) (267-69), and Siebold, Philipp Franz, Freiherr (p. 320-22).

For an excellent, later book with the same title, written by a Japanese in English, see Mock Joya (1960). Address: Prof. of Japanese and Philology in the Imperial Univ. of Tokyo, Tokyo [Japan].

1334. Fesca, Max. 1890. Beitraege zur Kenntniss der japanischen Landwirtschaft. I. Allgemeiner theil [Contributions to an understanding of Japanese agriculture. I. General part]. Tokyo: Printed by Seishi-Bunsha for the Kaiserlichen Geologischen Reichsanstalt. x + 277 p. No index. 25 cm. Also published as vol. 1 of 2 volumes bound in one (Paul Parey, 1893). [1 ref. Ger]

• ***Summary:*** Fesca, a sophisticated German agricultural chemist, looks at Japanese agricultural practices, and finds many of them inefficient. Contents: Foreword. Weights and measures in the Japanese and decimal systems. Natural factors: The climate, the soil. The soil as an economic factor of production: Land prices, crop rotations, etc. Techniques for using the soil: Soil improvement, fertilizers.

Various legumes, and especially the soybean, grow in the temperate (*gemaessigte*) Zone northeast of Tokyo (p. 43-44). Two large tables (p. 134-35) show the amount of rice land per capita and the amount of dry land per capita in each province. The five provinces with the most rice land per capita are: Kaga (5.01), Noto, Bizen, Ugo, Awa (on Shikoku).

In the section on crop rotations, soybeans are mentioned on pages 171-72, 175-77.

A table (p. 190) compares various crops (including soybeans) with rice in terms of their profitability to the farmer. Soybeans are less profitable. Tobacco is the most profitable, followed by indigo, cotton, and potatoes–all of which are more profitable than rice.

Soy is discussed most in the chapter on fertilizers (p. 222-25, 266). A large table (p. 222) gives the chemical composition of four traditional fertilizers, including sake lees (*sakekasu*), shoyu dregs (*shoyukasu*) and okara (*tofukasu*). Shoyu dregs, okara, and cooked soybeans are all discussed in detail on p. 224, based (in part) on analyses conducted previously by Kellner, also a German. "Cooked soybeans are widely used as a fertilizer; they are a concentrated source." Soybeans (p. 232). Also discusses: Sesame and peanut cake (p. 226). Kudzu (p. 231).

Bound at the back are two large color fold-out maps: (1) Showing the provinces and the six vegetation zones of the Japanese islands. (2) Showing the value of land in each province (in yen/cho). Address: Tokio [Tokyo].

1335. Gorkom, K.W. van. 1890. Supplement op De Oost-Indische Cultures, in betrekking tot handel en nijverheid [Supplement to East-Indian crops: In relation to commerce and industry]. Amsterdam, Netherlands: J.H. de Bussy. vii + 303 p. See p. 283-87. Supplement to the 1884 publication of the same title. 25 cm. [2 ref. Dut]

• ***Summary:*** The section titled "Kadelé" (Soybeans) discusses the cultivation of soybeans (also called *katjang djepoen* [Japan beans], Soya, *Glycine hispida*, or *kadelé boontjes*) on Java and the experimental culture in Europe. Interest is shown in the cultivation of soybeans as a food for diabetics.

Soya is cultivated in Java both for its seed and for its green leaves which are used as animal feed. The small soy beans are roasted by the indigenous people or, in the form of cakes / patties (*tetempé* [tempeh]), eaten like bean-cheese (*boonen-kaas* [tofu]). (*"De kadele boontjes worden door de inlanders geroosterd of, in den vorm van koeken* (*tetempé*), *als boonen-kaas gegeten"*).

The author considers that Indonesian soy sauce (*kétjap*) is inferior to Japanese soy sauce. Nutritionally, soya is rich in proteins (*proteïnestoffen*) (± 38%) and fat (± 21%), and low in starch and sugar.

In Germany and Austria, many years have been spent in developing and cultivating varieties of soybeans adapted to the European climate. Dr. Haberlandt, professor at the University of Vienna, distinguished himself for this work, even to the extent that a variety was named after him. In the experimental gardens at the National Agricultural in Wageningen [Netherlands], a field of soya is cultivated, but the results are not yet satisfactory. Yields are low, especially during the dry and warm summers, when the plant flowers abundantly, but the seeds don't have time to develop properly. The author hopes that through continued experiments, a suitable variety will be developed.

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The soya bean has received attention from the medical profession because of its composition. Dr. Le Cerf of Paris was one of the first to try using soya with diabetic patients. He introduced soya bread instead of an almond bread and was successful with it. Dr. Stokvis, a professor in Amsterdam, recommended soy bread (see *Nederlandsch Tijdschrift voor Geneeskunde* No. 10), and the chemical analyses published by Mr. L.C.W. Cox in the same journal (issue No. 19) supported the recommendation. Patients were content with the bread, although they did not find it very appetizing. The author states that if rye or wheat flour could be used together with soy flour, they would yield a very digestible and nutritious food. For this reason also he recommended experiments aimed at acclimatizing soya to Europe.

Dr. Sollewijn Gelpke has published a work titled "The Yield and Cultivation of Dryland Crops," in which he writes that the cultivation of soya is quite easy and in Java takes place on sawahs (wet rice fields) and clay, in contrast to peanuts (*katjang-tanah*), which is grown on tegals and sand. [Note: A tegal is a dry (not irrigated) field, near the rice fields, but used for vegetables and other secondary crops.] Soya beans are sun-dried, soaked in water for 24 hours, then sown on land that has first been flooded with water. Otherwise they are sown by poking holes in the ground and dropping in the seeds. Gelpke says that soya is so appealing to the indigenous people that, if the soil is hard, he just opens the surface with a crowbar and sows his seeds. This way of cultivation is seen especially on the heavy clay soils of Java.

In the Netherlands it is not well known that soya is cultivated in Java, because it could be imported for less money than is currently the case. The author has samples of the beans and has noticed that the seeds from European experiments are smaller in size than those grown in Java.

Various laboratory analyses are given. It is noted that a soya flour coming from Hungary is used for the production of soy bread, baked by Mr. Koehler of Amsterdam. Mr. Cox studied this bread. The author believes that the sugar content of this bread is high enough to make it unsuitable for diabetic patients, and notes the presence of starch and dextrin. Morawski and Harz have confirmed that ripe soya beans don't contain starch, whereas unripe beans do.

Note 1. Kempski (1923) says: "see van Gorkom's Oost-Indische Cultures, neu herausgeg. von Prinsen-Geerligs, Verlag de Bussy, Amsterdam, 1913, Vol. III, p. 283/86."

Note 2. This is the earliest Dutch-language document seen (Aug. 2003) that uses the word *proteïnestoffen* (or *proteïnestoff*) to refer to proteins in connection with soybeans. Address: Dr., Former Head Inspector of Crops, Dutch East Indies (Oud-Hoofd-Inspecteur der Cultures in Nederlandsch Oost-Indië).

1336. Henderson, Peter. 1890. Henderson's handbook of plants and general horticulture. New ed. New York, NY: Peter Henderson & Co. 528 p. Illust. Index. 27 cm.

• ***Summary:*** Soy is mentioned in two places in this book: The main entry is under "Soja" (pronounced So'ja) (p. 417), which states: "From *sooja*, the name of a sauce made from the seeds in Japan. Nat. Ord. *Leguminosæ*.

"*S. hispida* is a climbing annual plant allied to (*Dolichos*). It is much cultivated in tropical Asia on account of its beans, which are used for preparing a well-known brown and slightly salt [sic] sauce (Soy) used both in Asia and Europe for flavoring certain dishes, especially beef, and supposed to favor digestion. Of late it has been, to some extent, cultivated as an oil plant."

The second entry is under "Bean" (p. 45). In the middle of a long alphabetical listing of many types of beans we read: "Sacred Bean, the common name for *Nelumbium*. Sahuca Bean, the seeds of *Soja hispida*. St. Ignatius's Bean, the seed of *Strychnos multiflora*...

Note 1. This is the earliest document seen that uses the word "Sahuca" in connection with the soy/soja bean.

Note 2. This book contains hundreds of illustrations of plants discussed in the book; unfortunately the soybean is not illustrated.

Note 3. Pages 527-28 are advertising matter. Peter Henderson lived 1822-1890. Address: 35 Cortland St., New York.

1337. Hosie, Alexander. 1890. Three years in Western China; A narrative of three journeys in Ssu-ch'uan, Kuei-chow, and Yun-nan [1882-84]. London: George Philip & Son. New York: Dodd, Mead. xxxiv + 302 p. Illust. Index. 23 cm. 2nd edition published in 1895.

• ***Summary:*** In pinyin, these three provinces are now written: Sichuan (northernmost of the three), Yunnan (southern), and Guizhou (southeastern). The author, an excellent observer and writer, was stationed in Western China by the British government from 1882 to 1884. Throughout this travelogue, on 18 separate pages, he reports that [soy] beans were being grown, usually with other local crops such as barley, buckwheat, ground-nuts, hemp, maize, millet, oats, opium poppies, rape, and wheat.

On the way to Ch'ung-King [Chongqing] in Sichuan province: "My men, who for the last few days had been unable to procure rice, and had subsisted for the most part on bean-curd, rejoiced to find themselves in a valley of their own province where paddy, maize, tobacco, hemp, and beans were well advanced..." (p. 68).

Near Ch'ung-King: "The hill-sides were also covered with [soy] beans, which seemed to thrive well on a scanty soil." The greenery, houses, and restaurants "invite the traveller to tarry for a moment and enjoy their cool shade. As pack animals are usually turned loose to forage for themselves, the peasantry, whose lands adjoin the high-road, have hit upon a novel plan to prevent their depredations. Wheat and beans were thickly sprinkled with feathers.

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which, as might naturally be supposed, are not a pleasant sauce" (p. 72).

In the city of Hou Chou in Sichuan province: "A special industry of the city is the manufacture of a soy [sauce], which is famous, not only in Ssu-ch'uan, but in other provinces. Chinese soy, as is well known, is imported to England in large quantities, and is, I believe, used in the manufacture of sauces. In China itself there is amongst foreigners a decided prejudice against soy, and a fresh arrival is often solemnly assured that it is made of boiled down cockroaches; yet, to the best of my information, it contains nothing more deleterious than the juice of a bean" (p. 164).

The city of Nei-chiang [Neijiang] in Sichuan province exports "bean-sauce" [probably soy sauce], opium, grass-cloth, and several other things. Sugar cane and ground-nuts cover the hill slopes (p. 169). A fold-out map at the back shows the author's route.

Also discusses: Ground-nuts [peanuts] (p. 83, 169) and the sweet cooking oil extracted from them (p. 83). Women who wore coarse hempen clothes (p. 152). Address: H.B.M. Consular Service, Wenchow, China.

1338. Kellner, O[skar Johann]; Mori, Y[ôtarô]; Nagaoka, M[uneshige]. 1890. Beitraege zur Kenntniss der invertirenden Fermente [Contributions to the knowledge of inverting enzymes]. *Hoppe-Seyler's Zeitschrift fuer Physiologische Chemie* 14(3):297-317. [13 ref. Ger]
• ***Summary:*** This article contains a long analysis of the role of koji and its enzymes (*Koji-Ferment*) in the fermentation process that creates rice wine (saké). The process of making koji from spores is described, as well as the quantitative changes which take place with the development of the mycelium on two substrate (rice or barley) at various temperatures. The work of Prof. Atkinson is discussed at length.

On pages 306-08 Kellner gives the results of his experiments on the effects of koji extracts on various carbohydrates: cane-sugar, milk sugar (lactose), maltose, inulin (a tasteless white polysaccharide), and starch. (Note: In chemistry, inversion, is the conversion of dextrorotary sucrose into a levorotary mixture of glucose and fructose). Before the inversion, there is 4.04% reducing sugar, expressed as dextrose (optical rotation 20.9°); after the inversion there is 7.46% (optical rotation 8.4°). Kellner summarizes these results on p. 310 as follows: "From our investigations, one can conclude that koji contains a powerful inverting ferment [enzyme], which transforms cane sugar into dextrose and levulose, maltose into dextrose, and starch into dextrin, maltose, and dextrose. However milk sugar and probably also inulin are not transformed. Therefore the koji enzyme (*Koji-Ferment*) is entirely different from the diastase of malt; it is also probably different from the invertin (*Invertin* = invertase) of beer yeasts, which easily inverts cane sugar to dextrin and maltose–according to Mr. J. Kjeldahl. Kellner then repeats the experiments on carbohydrates using yeast extracts (p. 311-13) and confirms that the latter give different results than koji extracts. He then coins the term "Invertase" (p. 313) to refer to the inverting enzyme in *Eurotium Oryzae* Ahlb. (later renamed *Aspergillus oryzae*, the koji mold).

On p. 316 Kellner explains: In addition, koji is frequently used in a mixture with considerable amounts of table salt (*Kochsalz* = NaCl), steamed soybeans, and other materials (*Stoffen*) for the preparation of miso (a food {*Nahrungsmittel*} very widely found throughout Japan) and shoyu (a sauce which is also known in Europe); it seems to be used here mainly as the carrier of a slow, often years long fermentation. "Since miso contains only 6-12% salt and shoyu contains about 150-160 grams of salt per liter, and since this salt limits the action of soluble ferments, we have investigated how the transformation of soluble starch takes place through invertase the presence of various amounts of salt." A table (p. 317) shows two experiments. The percentage of table salt in the mixture is increased from zero to 20% in five or six steps. As the percentage of salt increases, the reducing sugar (expressed as dextrose) decreases moderately, while the relative activity of the invertase decreases dramatically. Fehling's solution is used in the experiment. Address: Japan.

1339. Merck, Klemens. 1890. Klemens Merck's Warenlexikon fuer Handel, Industrie und Gewerbe. Beschreibung der im Handel vorkommenden Natur- und Kunsterzeugnisse, unter besonderer Berueecksichtigung der chemisch-technischen und anderer Fabrikate, der Drogen- und Farbwaren, der Kolonialwaren, der Landesprodukte, der Material- und Mineralwaren. Vierte, wesentlich vermehrte auflage [Merck's dictionary of products and commodities for trade, industry and commerce. 4th ed.]. Leipzig, Germany: Verlag von G.A. Gloeckner. viii + 722 p. + 48 p. See p. 576. 25 cm. [Ger]
• ***Summary:*** The entry for "Soya" (p. 576) is almost identical to that in the 1882 edition. Soya is also mentioned under Beans (*Bohnen*, p. 78-79). The title page states that this book was compiled in cooperation with Messrs. Lorenz Brauer, Paul Degener, and others. Edited/published (*Herausgegeben*) von Dr. G. Heppe.

Also discusses: Peanuts (p. 150). Sesame seeds and sesame oil (p. 562). Address: [Germany].

1340. Purdy, Charles W. 1890. Diabetes: its causes, symptoms, and treatment. Philadelphia and London: F.A. Davis. viii + 184 p. See p. 87. Index. Physicians' and students' ready reference series, No. 8. [2 soy ref]
• ***Summary:*** In Section VI, "Treatment of diabetes mellitus," the soya bean is mentioned (p. 87): *Soja*, or Japanese bean, owing to its high nutritive properties and its low percentage of starch, is likely to enter largely into the diabetic diet of the

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future. It has recently been much cultivated in some parts of Europe, especially in Hungary. Its composition is as follows: Nitrogen, 36.6 per cent.; fatty matter, 17 per cent.; starchy matter, 6.4 per cent.

"A sauce is made from *soja* which bears the name of *miso* and *soju* [shoyu]. A kind of cheese [tofu] is made from it, and very much prized in Japan as a table-luxury. (Footnote: See Egasse 1888, p. 433-38).

"In Europe the soja has already been utilized for food of men and animals, and recently the attempt has been made to make bread of it. This is very difficult because of the large proportion of oil which it contains. This oil is very purgative [sic], and hence it becomes necessary to rid the meal of it in order to render it fit for domestic usages. Lecerf in Paris and Bourdin in Rheims have succeeded in rendering the bread made from this meal very well supported by the stomach.

"This bean, which, as the analysis shows, is more nutritive than meat, serves for nourishment to a great country like Japan, under the forms of sauce, of cheese, of farina, and even of *real* artificial milk" (Footnote: Therapeutic Gazette, March 15, 1890, p. 150).

Gluten is also mentioned several times (p. 84-85): "First in importance ranks the question of bread in the construction of any diabetic diet-list. The withdrawal of this article from the list is usually the most serious deprivation the patient has to encounter. In consequence of this fact, an almost endless number of breads have been placed upon the market, which are *claimed* to be free, or nearly free, from starch, and are hence named diabetic breads. Now, I do not hesitate to say that most breads which have been put upon the market with such claims are 'a snare and a delusion,' and have unquestionably shortened the lives of hundreds of diabetic patients. Most samples of so-called 'diabetic flour,' from which the starch is claimed to have been eliminated, 'or nearly so,' contain from 30 to 70 per cent. of that article... But Dr. Chas. Harrington, of Boston, has rendered us under perpetual obligations to him for fearlessly exposing the most of these deceptions, by publishing a careful analysis of most of them in detail. It may first be noted that his analysis of home-made bread gives the proportion of contained starch as 44.99 per cent. The Graham wafer, made of Graham flour, contains 58.45 per cent. of starch. The gluten flour, of Farwell & Rhines, of Watertown, N.Y., contains 67.17 per cent. of starch... The gluten flour of the New York Health Food Company contains 66.18 per cent. of starch. Bread made of this flour would contain 35 per cent. of starch... The Boston Health Food Company's diabetic flour, No. 1, sold as absolutely non-starchy, contains 62.94 per cent. of starch. Bread made of this flour would contain 30 per cent. of starch." Address: M.D., Queen's University [Kingston, Ontario, Canada].

1341. Watt, George. 1890. A dictionary of the economic products of India. Vol. 3. London: W.H. Allen & Co.; Calcutta, India: Office of the Superintendent of Government Printing. 534 p. See p. 509-11. Index (in Vol. 7). 25 cm. [14 ref]

• ***Summary:*** Contents related to the soy bean: *Glycine* (p. 509-10). *Glycine hispida*, Maxim. (p. 510-11): Synonyms, vernacular, references, habitat, oil, medicine, food and fodder, chemistry, the bean, oil.

Under Glycine: "Reference having been made to the authorities of the Calcutta Herbarium on the subject of G. soja, Sieb. et Zucc., being, as shown in the Flora of British India, a native of this country, Dr. Prain kindly went into the subject very carefully. He writes: 'We have not, from any part of India, any specimens of G. soja proper. The Khasi Hills plant is more erect, more hispid, and has larger legumes than the Himalayan, and indeed resembles G. hispida, Maxim., quite as much as it does the Indian cultivated "G. soja," which, indeed, it connects with G. hispida. It is, in fact, the plant most like the wild G. soja, S. et Z., which no one ever professes to have found wild in India, while it is also the one most like G. hispida, Maxim. (which has never been found wild anywhere). It is the plant collected by Dr. Watt and myself in the Naga Hills.'

"The writer noted on his Naga Hill specimens that they were found in a semiwild state, and that the plant was known to the Angami Nagas as *Tsu Dza*, a name not unlike soja. Throughout India, the soy bean is cultivated, black and white seeded forms being met with, which vary to some extent, but all preserve the specific characters of G. hispida. Plants raised at Saharanpur from Japanese seed have larger and broader leaves than the usual Indian forms. The fact that this cultivated plant possesses, even among the aboriginal tribes, names which are original, i.e., in no way modern derivatives, points to an ancient cultivation, if, indeed, it may not be accepted as an indication of its indigenous nature. (Editor.)"

"Vern[acular]–Bhat, bhatwan, ram kurthi (Hind. [=Hindi or Hindoostanee]); Bhut (Punj. [= Panjabi]); Gari-kulay (Beng. [=Bengali]); Hendedisom horec (black-seeded), Pond disom, horec (white-seeded variety) (Santal); Tzu-dza (Naga); Bhatnas, bhatwas (Nepal); Seta, kala botmas (Parbat.); Musa, gya (Newar); Khajuwa (Eastern Terai); Bhut (Kumaun).

References: The author cites 17 early references concerning soya and, using information from these.

This brief bibliography on soya is one of the best and worst seen. Its is good in that it cites a host of previously uncited publications. It is bad in that the references are so abbreviated as to often be incomprehensible; and some of them are incomplete or incorrect.

Habitat: "Extensively cultivated throughout India and in Eastern Bengal, Khasia hills, Manipur, the Naga hills, and Burma, often found as a weed on fields or near cultivation."

Medicine: "A decoction of the root is said to possess astringent properties." Food and fodder: "The Soy-bean forms an important article of food in China and Japan. Since

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1873, it has been successfully grown in the warmer parts of Europe. It is also widely spread, in a cultivated state, over a great part of the Himálaya [Himalaya] and the plains and lower hills of India. On the plains the crop is generally grown by itself, as a *kharif* crop; the seeds are sown from June to September, and the harvesting takes place from November to January.

"The bean is eaten in India in the localities where cultivated. The Rev. A. Campbell states that in Chutia Nagpur it is generally used roasted and ground as *satu*, or simply roasted in the form of *atá*. In other parts of the country it is also eaten in the form of *dal*. In China and Japan three preparations are made from the soy-bean, namely soy-sauce, soy-cheese, and a kind of paste. The last two of which are manufactured by crushing and pressing the seeds."

Note 1. An extensive "List of works consulted" (bibliography) appears in Vol. I (1889, p. xiii-xxii), followed by a list of contributors (p. xxiii-xxvi) and list of abbreviations (p. xxvii-xxxiii).

Note 2. This is one of earliest documents seen (March 2005) that clearly refers to the cultivation of soybeans in Burma.

Sir George Watt lived 1851-1930. This 7-volume work, published from 1889 to 1896, is arranged alphabetically by product. An extensive bibliography is in vol. 1, and the index comprises vol. 7. Address: M.B., C.M., C.I.E., Reporter on Economic Products with the Government of India.

1342. Whitney, William Dwight, ed. 1890. The century dictionary: An encyclopedic lexicon of the English language. New York, NY: The Century Co. See the entry for "Soy" in Vol. 5, p. 5790.

• ***Summary:*** This dictionary contains three entries related to the soy-bean in Volume 5: (1) "Soy (soi), noun. [Also *sooja;* = F. *soy, soui* = G. Sw. Dan. *soja* (NL. *soja, soya);* Jap. *si-yan*, Chinese *shi-yu*, soy.] 1. A kind of sauce prepared in the East from the soy-bean (see def. 2). It is eaten with fish, cold meat, etc. There are two or three qualities of soy [sauce], but the Japanese soy is reckoned the best.

'I have been told that *soy* is made with a fishy composition, and it seems most likely by the Taste; tho' a Gentleman of my Acquaintance who was very intimate with one that sailed often from Tonquin [Tonkin, in today's Vietnam] to Japan, from whence true *Soy* comes, told me that it is made only with Wheat, and a sort of Beans mixt with Water and Salt.' Dampier, Voyages, II, 28.

'From travellers accustom'd from a boy / To eat their salmon, at the least, with *soy*.' Byron, Beppo, vii.

2. The soy-bean or -pea, *Glycine Soja* (*Soja hispida*, etc.). It is an annual leguminous plant with stout nearly erect or somewhat climbing stems covered with rusty hairs, bearing trifoliate leaves and from their axils two or three pods 1½ or 2 inches long. The seeds are made into the above sauce and variously used in cookery; an oil is also expressed from them, and the residue is extensively used in China for feeding cattle and as a fertilizer. The plant is native from northern India to Japan. The cultivated plant differs somewhat from the wild, and by some authors is distinguished as *Glycine hispida*. Also *Sahuca bean*.

(2) soy-bean (soi'bên), noun. See *soy*, 2.

(3) soy-pea (soi'pê), noun. See *soy*, 2.

Note 1. James Platt (1899) says: The word "Soy" has been badly treated by all our dictionaries. The best is the 'Century,' where it is traced to 'Japanese *siyan*, Chinese *shiyu*,' but even that involves two errors. One is a misprint ('*siyan*' should be *siyau*); the other is that it accounts for only half the English word.

Note 2. "Miso" is not mentioned in this dictionary. Address: Prof. of Comparative Philology & Sanskrit in Yale Univ.

1343. *Chicago Daily Tribune*.1891. Society event in Chinatown. Reception and dinner for Lee Yun, who is Hip Lung's relative. Jan. 24. p. 3.

• ***Summary:*** "For the first time in the history of Chinatown a birthday party was given last night, to which only a select few were invited. The festivities were held in Ki Yung's restaurant... The party was given for Lee Yun, a brother-in-law of Hip Lung, the 'boss' Chinaman of Chicago, and was pronounced a success."

A sumptuous banquet, such as only a Chinese epicure could devise, was spread for twenty. The menu of 14-16 courses, which is given, includes: "Duck, chicken, Canton cake, almond sauce, soy sauce, rice wine, tea, and opium."

1344. *Manchester Guardian* (*England*).1891. The Wesley centenary: Unveiling the statue in London. Address by Archdeacon Farrar. March 3. p. 8.

• ***Summary:*** "... this unsavoury mass of tag, rag, and varieties–(laughter)–before them that they could give them as much Naseby pepper and Worcester sauce as they would have stomach for.–(Applause)."

1345. Duncan's (John) Sons. 1891. Display ad: The original and genuine (Worcestershire) Lea & Perrins' sauce. *San Francisco Chronicle*. May 14. p. 6, col. 2.

• ***Summary:*** Printed to the left of the bottle: "Extract of a Letter from a Medical Gentleman at Madras [India], to his brother at Worcester, May, 1851. 'Tell Lea & Perrins' that their Sauce is highly esteemed in India, and is in my opinion, the most palatable as well as the most wholesome Sauce that is made.' Printed to the right of the bottle: "It imparts a most delicious taste and zest to soups, gravies, fish, hot & cold meats, game, Welsh-rarebits, &c.

"Beware of imitations; see that you get Lea & Perrins' [signature].

"Signature on every bottle of Original & Genuine."

Large illustrations show: (1) A bottle of the sauce, (2)

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The "Lea & Perrins" signature.

Note 2. This is the earliest document seen (Feb. 2012) concerning Worcestershire Sauce that mentions the words "Welsh-rarebits" (or "Welsh-rarebit"). Address: New York [City].

1346. **Product Name:** Shoyu (Brand Unknown).
Manufacturer's Name: Unknown. Company founded by Jihachi Shimada.
Manufacturer's Address: Honolulu, Oahu, Hawaii.
Date of Introduction: 1891, June.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1905-06. Not listed. Also not listed in 1907 or 1909.

Morita, Sakae. 1915. *Hawaii Nihonjin Hatten-shi* (History of the Progress of Japanese in Hawaii). Hawaii: Waipahu Shin Eikan. 866 p. See p. 260. "The first Japanese who lived in Hawaii and brewed shoyu there was Jihachi Shimada, who originally came from Yamaguchi-ken, Japan. He started in June 1891 and tried to make shoyu on a large scale. But bad transportation made it difficult for him to expand his market. This plus lack of capital forced him to quit."

Note 1. This is the earliest known soyfood product manufactured by a Japanese in the Western world. It is not known where the soybeans used to make this shoyu were grown.

Nihei, Takao. 1978. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi" (A history of Japanese sake, miso, and shoyu in Hawaii: Miso and shoyu). *Nippon Jozo Kyokai Zasshi* 73(7):542-49. Gives founder's name and city. No longer in business. Letter from Takao Nihei. 1988. July 19. "There was a record showing that Mr. Shimada was the first to make shoyu in Hawaii. But he closed soon after he started. The company name and address are unknown. Therefore I think that the first person who succeeded was Mr. Nobuyuki Yamakami (Yamashiro)." Letter from Takai Nihei. 1988. Sept. 1. "Although it is written in many Hawaiian Japanese Immigration Histories that Haruhachi SHIMADA was the first person to make shoyu in Hawaii, I think the original source of that information may be the book *Hawaii Nihonjin Hatten-shi* Sakae MORITA (1915), brewing/fermentation industry section, see above." Other books (all in Japanese) repeating this information were *Dainihon Kaigi Iminshi* by Fuji Shugoro (1937, Vol. 2, p. 21-22), *Nihon Bunka Koshoshi* (1955, Vol. 5, p. 409), *Hawaii Nihonjin Iminshi* (1969, p. 211).

Note 2. In 1891, Hawaii was not part of the United States. It was first annexed in 1898, and became a state in 1959.

1347. Parker & Co. 1891. Pate de Foie Gras, Truffles du Perigord (Ad). *Hartford Daily Courant* (*Connecticut*). Sept. 9. p. 2, col. 6.

• ***Summary:*** "Crosse & Blackwell's Mushroom Catsup. Crosse & Blackwell's Walnut Catsup. Crosse & Blackwell's India Soy [Sauce]. Crosse & Blackwell's Essence of Anchovies."

"Successors of Fox & Co. Wholesale and retail grocers." Address: No. 17 Central Row.

1348. Rita. 1891. The ladies' column. *Bush Advocate* (*Hawke's Bay, New Zealand*). Oct. 3. p. 7.
• ***Summary:*** One section reads: "Indian soy [sauce].–Indian and Japanese soy prepared from the dolicas saja [sic, Dolichos soja], termed by them 'soga' [sic, shoyu, soya?]. A good imitation is made as follows: Take one gallon or haricot or kidney beans; boil till soft; add bruised wheat one gallon. Keep in a warm place 24 hours, then add one gallon common salt, 2 gallons water; put the whole in a strong jar, bung it up for two or three months, stirring frequently, then press out the liquor."

Note: This same recipe appeared in the *Evening Post* (New Zealand) on 27 Feb. 1892.

1349. Turner, Fred. 1891. New commercial crops for N.S. Wales: The cultivation of the soy bean (*Soja hispida*, Moench.). *Agricultural Gazette of New South Wales* 2(11):648-50. Nov.
• ***Summary:*** "The soy bean is indigenous in India, Japan and China. There are numerous varieties of the plant cultivated in those countries, including both tall and dwarf-growing kinds, but it is the large-seeded varieties of the latter which I would particularly recommend for cultivation in this Colony, because they are not only more easily managed, but, generally speaking, are more productive to any given area than the tall growing kinds. The dwarf soy is an annual hairy growing plant, growing about 2 feet high, with trifoliate leaves, and small flowers borne is short axillary racemes. These are succeeded by oblong three or four seeded hairy pods. As will be seen from the engraving of the plant, it is a good deal like the ordinary dwarf kidney bean in its habit of growth, but differs materially in the superior quality of the pulse which it yields. The very productive and pulse yielding plant has been cultivated in Asiatic countries probably from time immemorial, but only within the past twenty years or so has it attracted the attention of European cultivators. In the southern parts of Europe, the cultivation of the dwarf kinds have proved a great success, and in France they are said to be an important crop.

"Some of our leading seedsmen have now become aware of the value of the soy bean, and seeds are now obtainable in Sydney. The plant has already been grown in a small way in a few places in this Colony, and has proved itself well adapted to our climate, so that there is no risk in attempting its cultivation here, in suitable places, on a large scale."

Note 1. This is the 2nd earliest document seen (March 2010) that clearly refers to the cultivation of soybeans in

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Australia or Oceania. This document contains the 2nd earliest clear date seen for cultivation of soybeans in Australia or Oceania (Nov. 1891). The source of these soybeans is unknown.

"Moreover it is not only a vigorous growing and a heavy yielding pulse plant, but it appears to keep remarkably free from both insects and fungoid pests." Note 2. This is the earliest English-language document seen (Aug. 2007) that uses the word "fungoid" to refer to fungal.

"Having eaten the seeds of the soy bean, I can say that they are an excellent addition to the pulse yielding plants we have already under cultivation. As regards their chemical composition I cannot do better than quote the analyses of Professor Church and Dr. Forbes Watson. 'Although there are a number of varieties of the soy bean, the chief differences between them lying in the size, shape, and colour of the seeds, yet these varieties are not distinguished by definite differences in chemical composition. That composition entitles the soy bean to the highest place, even amongst the pulses, as a food capable of supplementing the deficiencies of rice, and of other eminently starchy grains. Very few vegetable products are so rich as the bean at once in albuminoids and in fat or oil, the former constituent amounting on the average to 35 per cent, and the latter to 19 per cent. The cultivation of the pale large seeded varieties should be extended."

Facing this first page is a full page illustration of a soy bean plant, titled *Soja hispida*, Moench. "Soy Bean." with an enlarged pod (A) and seed (B). It has been copied from an 1882 issue of *The Garden* (July 29, p. 93) then modified slightly.

Two tables are titled "Composition of soy bean." The first, by Professor Church, shows the composition in 100 parts [percentage] and in 1 lb. The second by Dr. Forbes Watson, shows the composition with husk and husked.

"'The nutrient ratio here is about 1.2 while the nutrient value is 105. Potash forms early one-half and phosphorus pentoxide one-third of the ash of the soy bean. The beans are sometimes pressed for the sake of the oil they yield; the residual cake forms an extremely rich cattle food, containing as it does 40 per cent. of flesh-formers [albuminoids = proteins], and 7 per cent of oil.'"

"The soy bean can be grown nearly all over that portion of the Colony where late spring or early autumn frosts do not occur, and with irrigation it might prove a valuable plant to grow in the interior. A good guide to go by is to cultivate the plant in those parts where the kidney bean will flourish, and this is over an immense area of New South Wales. The soybean is rather an exhausting crop, therefore it should be an alternating one. It would do very well to follow after a root crop. To obtain the best results it should be grown on a moderately light, well drained, and well worked soil that is rich in organic matter. The plant will grow well enough on other kinds of soil provided that they are drained, and well worked, and, if not naturally fertile, some suitable manures are applied. If well rotted farm-yard manure is not available, then sulphate of potash, or nitrate of soda, might be used with advantage. If farm yard manure is applied to the land, it should be ploughed in some time previous to sowing the crop, or it might have a tendency to cause a too rank growth of the plants, at the expense of the yield of beans. Commercial manures may be used on the land when it is prepared to receive the crop.

"Sowing the seed. From the Hunter to the Tweed Rivers, it would be possible to obtain two crops in the year by sowing in October, then again in December if there is a sufficient amount of moisture in the soil. South of the Hunter River, however, it will be hardly likely that more than one crop can be harvested during the year. The seed for this should not be sown before the middle of October, or the beginning of November, according to situation. It would perhaps be as well to state that the young plants are very susceptible to frost, 2° Fahr. being quite enough to blacken them." Gives more details on sowing, then a paragraph on harvesting.

The last section is titled "Uses: The beans can be picked from the plants whilst green, and cooked and eaten without previous preparation. Ripe soy beans should, however, be steeped in warm water for some time before they are cooked, otherwise they will remain almost as hard as they were before cooking. In China and Japan the soy bean cheese [tofu] and a kind of paste [miso] are important articles of food. In those countries also soy sauce is made from the beans, which is not unknown to European palates. The sauce is said to be made in the following way. Boil the beans with equal quantities of wheat or barley, and leave it for three months to ferment, after which salt and water are added, and the liquid strained. Soy sauce is extensively used in Asia, and to some extent in Europe for flavouring certain dishes, especially beef, and it is supposed to favour digestion."

1350. Thanet, Octave. 1891. Letters from a self-made cook. *Atlanta Constitution* (*Georgia*). Dec. 13. p. 11.
• ***Summary:*** Contains various recipes in sentence-style format. One is titled "How to make brown sauce." For a darker color, add "a teaspoonful of China soy [sauce]...."

1351. Chamberlain, Basil Hall. 1891. Things Japanese: Being notes on various subjects connected with Japan... 2nd ed. revised and enlarged. London: Sampson Low, Marston and Company, Ltd.; Hongkong, Shanghai, Yokohama, and Singapore, Ltd.: Kelly & Walsh, Ltd. [8] + 503 p. Index. 1st ed 1890 (408 p.). Slightly revised edition published 1905. Reprinted in 1970 by Charles E. Tuttle Co., Inc. (Rutland, Vermont, and Tokyo). [14 ref]
• ***Summary:*** This book is arranged alphabetically by subject. Festivals (p. 154): "*Setsubun* is the name of a movable feast occurring sometimes late in January, sometimes early in

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February, on the eve of the first day of spring, old calendar. Beans [roasted soybeans] are scattered about the house on the evening of this day in order to scare away demons, and of these beans each person present eats one more than the number of the years of his age."

Food (p. 168): Same as in the 1890 ed.

Sun, moon and stars (p. 394): There are three great nights of the lunar year for moon viewing. "The 15th night of the 8th moon, which is no other than our harvest moon at the full, is celebrated by an offering of beans and dumplings and of bouquets of eulalia-grass [*susuki*] and lespedeza blossom. This moon is termed the 'bean moon.'"

Note: In *Chado: The Way of Tea*, a translation of the Japanese classic *Sado-sai-jiki*, and various other Japanese books we learn that the full moon on the 15th night of the 8th lunar month is the brightest and most widely viewed one of the year and is called *meigetsu* (literally "bright moon"). Aesthetic appreciation of the full autumn moon originated in China as early as the Han dynasty (202 BC to AD 220). Moon-viewing became popular in China during the Tang dynasty (618-907) and this tradition was transmitted to the Japanese court in Kyoto in about the 8th century; the aristocracy called this festival *Otsukimi* ("moon viewing") and celebrated it, outdoors, by composing poems, listening to music, etc. Today that date falls in mid-September. In both Japan and the West, this is the "harvest moon" and its celebration a pre-harvest festival.

However it is the *next* full moon, about a month later, on the 13th day of the 9th lunar moon that is called the "bean moon" (*mame-meigetsu*). It is indeed, as Chamberlain says, celebrated by an offering of beans (*edamamé*, or green vegetable soybeans) and dumplings (glutinous rice steamed with chestnuts). In some parts of Japan the edamamé are mashed, sweetened with sugar, then used to coat rice-flour dumplings. This *mame-meigetsu* is still celebrated at the Kitano Tenmangu Shrine in northwest Kyoto.

Tea (p. 403): Other tea-like infusions: "*Mugi-yu*, an infusion of parched barley; *Mame-cha*, a similar preparation of beans. *Fuku-ja*, or 'luck tea,' is made of salted plums, sea-weed, and xanthoxylon seeds, and is partaken of in every Japanese household on the last night of the year."

Concerning red beans [aduki]: Birthdays (p. 56): "Birthdays are not much observed in Japan, except that rice mixed with red beans [azuki] is eaten on the auspicious day."

Festivals (p. 154-55): Dec. 13.–This day is called *Koto-hajime*, that is, "the beginning of things," because such preparations for New Year as house-cleaning, decorating, and the pounding of rice for cakes (*mochi*), are then taken in hand. People eat *o-koto- jiru* on this day,–a kind of stew whose ingredients are generally red beans [azuki], potatoes, mushrooms, sliced fish, and a root called konnyaku."

Jan. 15-16.–The end of the New Year holidays. The 16th is the *Hokônin no Yado-iri*, or Prentices Holiday Home. Rice-gruel mixed with red beans [azuki] is eaten."

N.B. *Azuki-meshi*, that is, rice mixed with red beans, is eaten on the 1st, 15th, and 28th of each month, these being the so-called *san-jitsu*, or "three days." On the 30th, people eat buckwheat vermicelli (*misoka-soba*).

Overview of Japanese commerce: "The chief progress made during the past thirty years has been in industrial developments" (p. 433). A large table show imports to Japan in 1890 (p. 434): The top five imports (with the value in million yen) are: Textiles and textile fabrics 20.49. Rice 12.30. Sugar 8.48. Raw cotton and wool 5.74. Kerosene oil 4.95. "Oil cake" [mostly soybean cake] is another major import, but grouped with oils, oil wax, and paints in oil 0.41.

Exports from Japan (p. 434-35): The top five are: Raw silk, waste silk, and cocoons 16.75. Tea 6.28. Copper 5.36. Silk piece goods and silk manufactured goods 3.64. Coal 3.10. Also seaweed 0.68.

The top five ports for exports and imports are (p. 435): Yokohama 73.0. Kobe 49.0. Nagasaki 7.7. Osaka 3.80. Shimonoseki 1.77.

Japan's leading trading partners (imports + exports) are: Great Britain 32.5. USA 26.7. Hongkong 14.8. China 14.0. France 12.2. Address: Emeritus Prof. of Japanese and Philology in the Imperial Univ. of Tokyo, Tokyo.

1352. Rathgen, Karl. 1891. Japans Volkswirtschaft und Staatshaushalt [Japan's economy and national budget]. Leipzig: Duncker & Humblot. xx + 785 p. See p. 328, 331, 397, 445, 611-12. In: Staats- und Socialwissenschaftliche Forschungen. Vol. 10. No. 4. [2 ref. Ger]

• ***Summary:*** Wheat flour is an important component in the production of shoyu (p. 328).

"Production of soybeans by year was as follows. (Note 1. 1 cho = 2.45 acres and 1 koku = 180 liters or 47.6 gallons): 1878 was 414,961 cho and 1,642,183 koku. 1881 was 427,557 cho and 2,175,337 koku. 1884 was 440,647 cho and 2,323,435 koku. 1887 was 466,315 cho and 3,253,790 koku (p. 330). The large increase in numbers is due mainly to a 76% increase in yields during this 9 year period. This must be difficult since most soybeans are grown around the edges of fields, on paddy bunds and in very small plots.

"Soybeans are grown throughout Japan, but they are concentrated in Tokyo plain and the prefectures bordering on its north. In 1887 the following 12 prefectures accounted for 56% of Japan's total production: Kanagawa, Saitama, Chiba, Ibaraki, Tochigi, Gunma, Nagano, Niigata, Yamagata, Fukushima, Miyagi, and Iwate. Note 2. This is the earliest document seen (Jan. 2005) that gives soybean production or area statistics for Japan.

"This exceptionally nutritious bean appears in all possible forms in Japanese cooking, as a vegetable, boiled in sugar, as tofu ("als Tofu (Bohnenkäse)" = bean cheese), and as the main component of fermented miso soup (*Miso-Suppe*) and of soy sauce (*Soja-Sauce*).

"During the period 1870-74, the price of soybeans

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averaged 3.015 yen/koku. In 1875 it was 4.46 yen and in 1886 3.98 yen, with a high of 7.11 yen/koku in 1882."

"Since 1885, with the introduction of use taxes, new production statistics have begun to be kept on the shoyu industry. In 1887/881 some 1,180,188 koku of shoyu was taxed from 11,687 businesses, averaging 101 koku per factory. By comparison, the amount of shoyu taxed in 1888-89 was 1,304,551 koku from 10,634 businesses, averaging koku per factory. As with sake breweries, the number of plants has diminished from 13,682 in fiscal year 1885/86 to 10,634 in the fiscal year 1888/89. Although shoyu factories are found throughout Japan, there are certain regions of concentration. Chief among these is Chiba prefecture, which in 1887/88 had 689 factories and a production of 121,816 koku, averaging 177 koku/factory. The capital of the industry is the city of Choshi. Other major shoyu producing prefectures are Ehime (555 plants, 73,525 koku), Hyogo (544 plants, 73,168 koku), Okayama (580 plants, 64,389 koku), Fukuoka (381 plants, 58,022 koku), Ibaraki, Aichi, Kanagawa, and Saitama.

On p. 611-12 is a detailed discussion of Japan's shoyu tax. Shoyu production was already being taxed in 1875. Then law 10, enacted on 8 May 1885, which went into effect of 1 July 1885, reinstated the tax. This tax is similar to the sake tax. A yearly license costing 5 yen is required and a tax of 1 yen/koku of shoyu produced is levied. Government tax revenues from shoyu grew from 640,379 yen during the partial year 1885/86 to 1,215,254 in 1889/90.

Rathgen lived 1856-1921. Address: Leipzig, Germany.

1353. *Vierteljahresschrift ueber die Fortschritte auf dem Gebiete der Chemie der Nahrungs- und Genussmittel*.1891. Japanische Soja [Japanese soy sauce (Abstract)]. 5:161-62. For the year 1890. [1 ref. Ger]

• ***Summary:*** A German-language summary of the following German-language article: *Bayerische Gewerbe-Zeitung* (Nuremberg). 1888. "Japanische Soja" (Japanese soy sauce). No. 23. p. 538-40.

1354. *Brisbane Courier* (*Queensland, Australia*).1892. Imports (A special charge is made on consignees' announcements inserted in this column). Jan. 7. p. 3.

• ***Summary:*** "Taiyuan, s. [steamer], from Hongkong:... 3,260 bags rice, 16 packages tea,... 5 cases preserved ginger, 7 boxes beans, 10 cases oil, 23 boxes shamsho, 2 boxes bean curd,... 5 boxes soy [sauce], 2 boxes eggs,..."

1355. Gawne (W.). 1892. Why buy a small bottle of Lea and Perrin's [sic] Sauce when you can buy a large bottle of Gawne's Worcestershire Sauce,... (Ad). *New Zealand Tablet* (*National*). Jan. 15. p. 16.

• ***Summary:*** "... of equal quality, and nearly double the quantity, for about half the price... It has a peculiar Relish and Piquancy; is a thorough Appetiser and Tonic, and will agree with the most Delicate Stomach. Gawne's Worcestershire Sauce is all that the most exacting connoisseur could wish, and should find a place in every household."

1356. Brooks, William P. 1892. Division of Agriculture. *Massachusetts* (*Hatch*) *Agricultural Experiment Station, Bulletin* No. 18. p. 41-104. April.

• ***Summary:*** The section titled "Report on trial of miscellaneous crops" (p. 97-104) includes many varieties imported from Japan: Oats (3 varieties). Millet, *Panicum crus-galli*. Millet, *Panicum miliaceum*. Hemp. Flax. Wheats. Japanese varieties of beans.

All the beans "belong to two distinct classes, known to the Japanese respectively as *'Adzuki'* or *'Shodzu,'* the latter name meaning 'small bean' and *'Omame'* or *'Daidzu,'* both the latter names meaning 'large bean.' The beans of the first class are a distinct species, *Phaseolus radiatus* and are used by the Japanese almost entirely in confections. They are characterized by a remarkably thin skin, and are generally boiled, put through a sieve, and variously sweetened and colored although also prepared in other ways. An enormous quantity of these confections is eaten by persons of all ages and classes.

"The beans belonging to this class have been sometimes incorrectly designated Soja beans by American writers." It grows fairly well but is "much poorer in albuminoids [proteins] and fat than the soja bean."

A table compares the nutritional composition of a red adzuki bean raised in Massachusetts in 1890 with a kidney bean (*Phaseolus vulgaris*).

"Whether the beans of this class [adzuki] will prove valuable here may be doubtful. They are certainly unusually attractive in appearance; but it is not likely that the Japanese bean confections, which nearly all foreigners in Japan regard as decidedly flat and insipid, will ever come into favor here."

"The beans of the second class (*'Daidzu'*), belong to a distinct genus and by some authorities are named *Soja hispida*, whence the common designation soja (sometimes soya) bean; by other authorities, the species is named *Glycine hispida* which name, probably, has the claim of priority. The name 'soja' or 'soya' has undoubtedly been taken from the name 'soy' given to a sauce (used extensively as a condiment), in the manufacture of which this bean is largely used. The name given to the Japanese variety of this sauce is *'shoyu.'* This bean is also extensively used in many ways in Japan as human food, and is also largely employed as food for horses and cattle.

"It has been said that this bean is the richest known vegetable substance. 'In point of nutriment the soy bean is of all vegetables nearest to meat,' says Rein [1886]. A sample of beans grown here in 1890 has been submitted to analysis, with results shown below:"

A table titled "Soya Bean. *Glycine hispida*. shows: Dry

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matter: 11.53%. Crude protein: 34.49%. Crude fat 16.45%. Nitrogen free extract 26.29%. Crude fibre: 4.40%. Ash: 6.55%.

Several of the varieties which I have had under cultivation, having been taken from northern Japan (Sapporo), ripen seed here with as great certainty as the kinds of corn under cultivation. It is believed that some of these varieties will prove valuable grain crops. The yield, it is true, cannot be expected to equal that of corn; but the grain is far richer, and because of the high percentage of protein it contains it is fitted to take the place of bran, cotton-seed meal and linseed meal for which our dairymen yearly pay out so much money.

"It should further be remembered that if the results of modern investigations on this point are not misleading, this plant must be able to take most of its nitrogen from the air which must vitally affect the question of its economy as a farm crop. Most of our crops are nitrogen consumers. This, being a nitrogen gatherer, should enable the farmer to dispense in large measure with purchased nitrogenous fertilizers."

Details of cultivation of red and white adzuki beans, kindly sent by Prof. Georgeson of the Kansas Experiment Station, are given. The red yielded 27.3 bushels per acre.

Six varieties of soya beans were also tested: Eda (8.37 bu/acre), Kuiske [Kiyusuke] (14.26), Medium Early White (23.25), Medium Black (22.8), Medium White (19.5), Medium Green (30.2). The first two were sent by Prof. Georgeson, the last four imported from Sapporo, Hokkaido [Japan], by Brooks. The yields in bushels per acre are given after each variety name in parentheses. Medium Early White had previously yielded as high as 35 bushels per acre. "I believe that crops of about 30 bushels per acre of this variety may be safely anticipated." Address: Agriculturist.

1357. Coupin, Henri. 1892. La soya [The soybean]. *Nature (La) (Paris)* 20:203-04. Aug. 27. [Fre]

• ***Summary:*** An overview of the soybean. This plant is utilized in China and Japan for human food and for animal feed, for making bread, cheese [tofu], for extracting an oil [soy oil], etc. Why would we not do the research necessary to raise such a precious plant in France? Many trials have already been conducted and have succeeded rather well; we will return to that later, but first we must see how the soybean is utilized in Japan and China.

The soybean (*Glycine Soya*) belongs to the legume family. A botanical description is given.

In Japan, the soybean is one of the most widely used plants. It is known under the name of either *mame* or *daizu*, and it is widely used to make a sort of paste, named *miso* (*le Miso*). The process for making miso is described. [Note: However koji is not mentioned so it will not work]. It ferments for 1-2 months, and then is ready for food use. It is part of the breakfast of many Japanese.

The second product made from soybeans is a condiment, a liquid named *Shoyu*. It is a sort of dark brown syrup which serves as a sauce to season dishes, especially fish. The manufacture of shoyu is a very important industry in Japan. In the city of Nagasaki alone there are as many as ten factories, and each makes more than 1.2 million kilograms per year of shoyu. A description of how shoyu is made is given using equal quantities of boiled soybeans and roasted wheat, plus salt. 1.8 liters sells for 40-50 centimes.

The third product made from soybeans is a cheese called tofu (*le To-fu* or *fromage de Daizu*). The process for making tofu is described. It can be eaten fresh, but unfortunately it retains the taste of raw beans, which is not very agreeable.

In China the soybean is known as *Yeou-teou*, but ice it is not ordinarily cultivated on a large scale, as it is in Japan. According to Eugene Simon: Each person makes his or her own cheese [tofu]. Very also, often, each one makes his oil, if not at home, then at least at one of his parents' homes or in the neighborhood; it is distributed by the head of the family.

There is a variety of black soybean which constitutes the principle food of animals; horses and mules eat the seed in nature. People use mainly the white soybean (*la Soya blanche*): from it they extract an oil [soy oil], which is the object of an enormous trade and which occupies the top rank among the oils used in China. As in Japan, the Chinese also make tofu. According to Paillieux and Bois, in the entire Chinese empire, only the Tartars use daily milk; the [Han] Chinese do not consume it at all. They use soymilk instead. The soybean is solid milk. Not all legumes contain legumine, as the soybean does. Describes how to make soymilk from soybeans.

Trials for the acclimatization of soybeans in Europe are rather numerous. In 1875, the first ones were conducted by F. Haberlandt and Blaskovics in Austria-Hungary. In France, Buffon received soybean seeds and cultivated them at the Museum [of Natural History]. One of the problems with the soybean is that its seed mature very late. However some varieties mature their seeds earlier than others.

An illustration [non-original] shows a soybean plant. At the bottom of the column on page 1, we read: See No. 425, of 25 July 1881, p. 115 [an article by E. Roman]. Address: Ingenieur en chef à Périgueux.

1358. *Vegetarian Messenger (Manchester, England)*.1892. Japanese agriculture. Aug. p. 226. [1 ref]

• ***Summary:*** An article in the *Times* (London) summarizes a recent USDA report on this subject. "All kinds of leguminous plants are raised in abundance in almost every part of the empire, beans being largely used in the manufacture of soy, a kind of sauce."

1359. Georgeson, C.C.; Burtis, F.C.; Shelton, W. 1892. Test of some Japanese beans. *Kansas Agricultural Experiment Station, Bulletin* No. 32. p. 232-38. Dec. 1891.

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• ***Summary:*** "Two species of Japanese bean have been grown here at the Station for two years past. These are the soy bean (*Glycine hispida*), and the adzuki–the mungo, of India (*Phaseolus radiatus*). Both of them have given promise of much usefulness in this country. They have been subjected to severe tests concerning their endurance of this climate, and have come out triumphantly. Having seen these beans grown in Japan, and noted the very important part they take in the diet of the Japanese, the writer became anxious to try them here, which has been done with gratifying success."

The Soy Bean. "The United States Department of Agriculture made an effort to introduce it [the soy bean] years ago, and several enterprising seedsmen have from time to time made attempts in the same direction; but with the result that it has been generally successful only in the South because the varieties introduced were too late to mature in the latitude of the Northern States. Knowing this, pains were taken to procure some of the earliest varieties grown in Japan. A few dozen beans of each of several kinds arrived in the spring of 1890. They were planted in the latter part of May and matured seed before frost, in a little over three months' time. The amount planted being so small, no attempt was made to estimate the yield, but they appeared to be very productive. One thing in their favor was proved that first season–their ability to withstand drouth...

"The seed thus raised was planted in the latter part of May, in 1891, and harvested early in September, with yields ranging for the several varieties from 12½ to nearly 19 bushels of beans per acre. These yields would under more favorable conditions have been considerably larger...

"The bean takes its common name, 'Soy,' from a sauce manufactured from it, which in commerce goes by the name of 'Soy,' though the Japanese name for this sauce is 'Shoyu.' The beans are boiled and mixed with certain proportions of rice and salt, and the compound is then allowed to undergo a process of fermentation, which results in the delicious brown sauce so common in Japan, and which forms the basis of the best sauces in this country. The term 'soja,' often applied to this bean, is misleading, inasmuch as the species named by Siebold and Zuccarini *Glycine soja* is not cultivated there, or at least rarely cultivated, though it is wild in the south; and later this species was confounded with the cultivated species, *G. hispida* Moench, whence the origin of the term 'soja,' as applied to the cultivated bean. The soy bean is a native of Japan, and it has been cultivated there from a very remote period, as is testified by the numerous and strongly-differentiated varieties which have been developed. The Japanese cultivate it extensively, and it is to them an important article of food. It takes to a very large degree the place of meat in their diet, and it is altogether too costly and precious an article to be fed to live stock, except when it on rare occasions is grown as a hay crop. They use the beans ripe, and, properly cooked, they make a palatable and highly-nutritious dish. Sometimes they are eaten green when nearly full grown; they are then boiled in the pods and shelled at the meal.

"In this country they will likely be of most value as a fodder plant, though they compare favorably with navy beans for table use; they are, however, more glutinous and less starchy than navy beans, and on this account may not suit the taste of all persons."

"The following four kinds are early enough to be depended upon to mature seed in this latitude every year." *Eda-mame:* yield, 12.6 bushels beans (at 60 pounds per bushel) per acre. *Yellow Soy Bean:* yield, 14.57 bushels per acre. *Yamagata Cha-daidzu* (tea-colored bean, from Yamagata): yield, 18.8 bushels per acre. *Kiyusuké Daidzu* (Kiyusuke is the name of a person): yield, 18.23 bushels per acre.

"As has been stated, all of these yields would have been larger if the weather had permitted the saving of the crop in better shape."

Pages 237-38 give detailed information on "The adzuki (*Phaseolus radiatus*)," including white-podded and black-podded varieties. Mrs. Nellie S. Kedzie, Professor of Household Economy, tested the adzuki beans in recipes and found them to be "a very good bean for cooking purposes." Baked in the old-fashioned way, the adzuki is "sweeter that the ordinary white bean; so less sugar or molasses is needed in baking. I found this bean especially nice for making bean soup."

Photos (p. 232) show yellow soy bean, Yamagata-Cha-daidzu, and white podded adzuki plants.

Note 1. This is the earliest document seen (Sept. 2005) that contains a photo of the soy bean or of the adzuki.

Note 2. This is the earliest document seen (Oct. 2004) that mentions the soybean variety *Kiyusuké Daidzu* (spelled that way). Address: 1. M.Sc., Prof. of Agriculture, and Superintendent of Farm; 2. B.Sc., Asst. in Agriculture; 3. Foreman of the farm. All: Kansas State Agricultural College, Manhattan, Kansas.

1360. Chisholm, George Goudie. 1892. Handbook of commercial geography. 3rd ed., revised. London: Longmans, Green, and Co. 515 p. See p. 72-73, 344. Illust. Maps. Index.
• ***Summary:*** In the Chapter I. "Commodities directly or indirectly on climate," in Section A. "Products of the temperate zone," is a subsection titled Pulses which states (p. 72-73): "167. The chief pulses of commerce are common peas and beans, chick-peas, and soya beans."

"In warm countries, where butcher-meat is little consumed, this [chick-peas] and other pulses are in fact an almost essential part of the regular diet, since they supply elements of food not contained in sufficient quantity in grain and fruits. It is for this reason that soya beans are largely consumed in two other warm countries, China and Japan, as well as in India. According to Decandolle this bean is indigenous in Cochin-China, Java, and Japan. It is now very

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extensively cultivated throughout Eastern Asia, and is made (along with other pulses) into a great variety of preparations for use as human food. Soya [sauce], an extract from soya-beans, is also exported to Europe, and especially to England, to be used as an ingredient in soups and sauces, but much of the so-called soya is manufactured in Europe itself from various mushrooms [sic]. Oil can also be expressed from the beans, and in some parts of Central Europe the cultivation of this bean as food for cattle has been tried."

In the section on "Countries," under Asia–Japan we read (p. 344): "787. Besides rice, the principal food-crops are wheat, barley, and soya beans."

"788. Japanese agriculture leaves little room for live stock. Sheep have only recently been introduced in small numbers experimentally. The number of horses is about a million and a half, that of cattle one million, as against nearly two millions of the former and upwards of ten millions of the latter in the British Isles, which have a rather smaller population. Japan is thus altogether without, or very poorly supplied with, some important products. It has no native wool, no milk, butter, or cheese, and a comparatively small supply of leather, which has to be replaced for different purposes by various other materials." Address: London.

1361. Giles, Herbert Allen. 1892. A Chinese-English dictionary. London: Bernard Quaritch; Shanghai, Hongkong, Yokohama & Singapore: Kelly and Walsh, Ltd. xlvi + 1416 p. 31 cm. [4 ref. Eng; chi]

• ***Summary:*** This massive volume, weighing almost 12 lb, contains more than 1,450 pages and 13,848 Chinese characters. Contents: Dedication (to the Honourable C.P. Chater). By the same author (17 books). Preface: Number of characters, the characters numbering, duplicate characters, phonetic arrangement, orthography, the tones, the dialects (Beneath the number attached to each character will be found its rhyme (R) as given in the *P'ei-wên-yün-fu*. The romanization of each character is given in Cantonese, Hakka, Foochow, Wênchow, Ningpo, Peking, Mid-China, Yangchow, and Ssuch'uan {Szechwan} dialects, as well as in Korean, Japanese, and Annamese, each being distinguished by its initial letter), the definitions, the entries, etymology, grammar, difficulty of Chinese, personal. Philological essay (incl. tones, ranging from 4 to 9, in ten dialects). Table of sounds.

Examples of soy-related characters:

Chiang (p. 122, No. 1220). "A soy made by mixing salt with bean-flour. Sauce. Pickled food." Fourteen compounds using this character are given, including: Bean sauce, soy. Pickled bean curd [fermented tofu]. Bean sauce. Soy [sauce] is of two kinds, the clear and the thick. Dry relishes. Soy colour–a dark reddish drab. He won't use money for vinegar to buy soy.

Ch'ih (p. 205, No. 1996). "Salted fruits, etc., dried and used as relishes." Four compounds incl.: Salted beans. Soy. sauce.

Ch'ou (p. 259, No. 2521). "Sweet-smelling; strong-smelling. Stinking. *Ch'ou fu*. "stinking bean-curd; noxious."

Note 1. This is the earliest English-language document seen (Oct. 2011) that mentions *Ch'ou fu* which it translates as "stinking bean-curd." This is also the earliest document seen (Oct. 2011) that uses the term "stinking bean-curd."

Fu (p. 458, No. 3686). "Rotten; putrid; worthless." Eleven (p. 458, No. 3686). "Rotten; putrid; worthless." Eleven compounds and sayings include: Bean curd, see No. 11,417. Bean curd officials–a term of contempt applied to certain of the poorer classes of official servants who are compelled to feed largely on this cheap food. Also explained as flabby or unenergetic officials. A Mongol name for cheese. A kind of milk made from beans (*rufu* = milk + fu) [Note: Probably fermented tofu, *not* soymilk].

Huang (p. 522, No. 5124). Yellow. Compounds: Yellow beans [soja].

Mao (p. 778, No. 7,679). "Hair, down, feathers." But the word "Hairy beans" = edamame does not appear here.

Shih (p. 988, No. 9999). See No. 1996.

Ta (p. 1,036-37, No. 10,470). "Great." But the word "Great bean" = soybean does not appear here.

Tou (p. 1,127, No. 11,417). "Beans; pulse." See also No. 11,412. Thirty compounds, incl.: Bean-sprouts. Bean-curd. A cheap restaurant (a bean-curd restaurant). Bean-cake. Bean oil. Big bean, black bean, or yellow bean = the soja bean (*Glycine hispida*, Max.), used for making bean-curd, soy, oil, etc. Ground-nuts.

Yu (p. 1,316-17, No. 13,409). "Oil, fat, grease." 45 compounds incl. Sesamum-seed oil. Linseed. Wood oil. An oil factory. Oil dregs. But "bean-oil" = soybean oil does not appear here.

Note 2. This is the earliest English-language document seen (Aug. 2007) that contains the term "sesamum-seed oil." Note 3. Herbert Giles lived 1845-1935.

Note 4. Unfortunately, the pronunciation of the compounds is not given (as in Mandarin).

Note 5. This is the earliest English-language document seen (Oct. 2001) that uses the term "bean-flour" to refer to soy bean flour.

Note 6. This is the earliest English-language document seen (Oct. 2011) that uses the term "pickled bean curd" to refer to fermented tofu.

Note 7. This is the earliest English-language document seen (Oct. 2002) that uses the term "Wood oil" to refer to what would later be called "China wood oil" or "tung oil," a pale yellow drying oil obtained from the seeds of tung trees (any of several trees of the genus *Aleurites*), and used mainly in quick-drying varnishes and paints, and for waterproofing. Address: H.B.M. [Her Britannic Majesty's] Consul at Ningpo [Zhejiang province, China].

1362. Klinkert, Hillebrandus Cornelius. 1892. Nieuw

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maleisch-nederlandsch zakwoordenboek [New Malay-Dutch pocket dictionary]. Leiden, Netherlands: E.J. Brill. 400 p. 19 cm. [Dut]
• ***Summary:*** This dictionary writes Indonesian and Malay words using Latin characters and defines them in Dutch. Soy-related entries include: (1) bidjan, widjen, or lenga (sesame). (2) katjang (bean), including katjang botor, katjang hidjau (small green beans [mung beans]), katjang kedelai [soybean], katjang parang (sword-shaped), katjang peroet-hajam (very long and thin), katjang tanah (peanut), katjang goreng (fried peanuts). (3) kedelai (the name of a legume with black seeds, from which soya etc. is made. In Java, called *kedele*). (4) ketjap (soy = *soija*). (5) ragi (a type of yeast = *gist*). (6) tapé (Jav. tapeh = *tapai*).

The following soy-related words do NOT appear: tahu or tao-hoe (tofu), taoge (sprouts), tautjo (Indonesian miso), tempe (tempeh). Note: H.C. Klinkert lived 1829-1913. Address: Leiden, Netherlands.

1363. Kojima, T. 1892. Jimawari shôyu bunseki [Analysis of local shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 125. p. 701. [Jap]
• ***Summary:*** The local shoyu is from Choshi in Chiba prefecture, and Otsu in Saitama prefecture. Address: Yakugaku Kyoshi-bu, Ika-daigaku, Japan.

1364. Paillieux, Auguste; Bois, D. 1892. Le potager d'un curieux: Histoire, culture et usages de 250 plantes comestibles, peu connues ou inconnues. Dieuxième édition [The inquisitive person's kitchen garden: History, culture, and uses of 200 edible, little-known or unknown plants. 2nd ed.]. Paris: Librairie Agricole de la Maison Rustique. xii + 589 p. See p. 502-49. Illust. Index. 24 cm. [2 ref. Fre]
• ***Summary:*** Contents of section on soy: Introduction: Work of the Society for Acclimatization with soy, structure of this book, excerpts on soy from past issues of the *Bulletin the Society for Acclimatization*. Botany of the soybean. 1. Soy in Japan: Kaempfer's writings, including miso and shoyu, Japan at the World's Fair of 1878, miso, shoyu, tofu. 2. Soy in Cochin China: Black soybeans, various foods. 3. Soy in China: Soy oil, tofu and fermented tofu, soy sauce, other uses. 4. Soy in Austria-Hungary. 5. Soy in France: Historical, varieties, cultivation, utilization.

The author's full name is Nicolas-Auguste Paillieux (lived 1812-1898; he died on 8 Feb. 1898 at age 85). An illustration (non-original line drawing; p. 503) shows a mature soybean plant bearing many pods, plus a close-up of three pods to the lower right of the plant (from an original in J.R.F. 1882). Note: Desire Bois lived 1856-1946.

Also discusses (listed alphabetically): arachide (peanuts, p. 26-28), haricot mungo (azuki, p. 201-09), kudzu or ko (p. 271-84), quinoa (p. 460-66), souchet comestible (chufa, p. 498-502, with illustration). Address: 1. Member of the Societe Nationale d'Acclimatation 2. Asst. de la Chaire de Culture, Museum d'Histoire naturelle de Paris.

1365. Suda, Katsusaburô. 1892. Kansai shôyu bunseki seiseki [Analysis of shoyu from Kansai (the Kyoto-Osaka area of southwest Japan)]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 128. p. 1000-03. [Jap] Address: Kyoto, Japan.

1366. Takahashi, Saburo. 1892. Gyo shôyu seibun [Constituents of fish shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 129. p. 1127-30. [Jap]
• ***Summary:*** Soybeans (*daizu*) are mentioned. Address: Kure, Kyushu, Japan.

1367. Tokyo Eisei Shiken. 1892. Kaki shôyu no seibun [Constituents of oyster shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 124. p. 594-96. [Jap] Address: Atsugan, Hokkaido, Japan.

1368. Watt, George. 1892. A dictionary of the economic products of India. Vol. 6:1. Pachyrhizus to rye. London: W.H. Allen & Co.; Calcutta, India: Office of the Superintendent of Government Printing. 594 p. See p. 365-66. Index (in Vol. 7). 25 cm. [65* ref]
• ***Summary:*** For *Phaseolus mungo* (green gram) (called *mung* in India), see p. 187-93. Varieties include Var. glaber, Var. Wightianus, Var. radiatus (called *urd* or *mash* in India). Since *mung* belongs to the same species as *urd / mash*, "the resemblance between the two is very great. The most popular distinction between the two, as met with in the field, lies in the fact that *mung* had dark green, and *urd* yellowish green, leaves, but the chief difference is in the shape of the grain, that of the latter being much larger and longer than that of *mung*." *Mung*, which is cultivated throughout India, comes in three colors, with green (*harri-mung*) being the typical and most common.

For *Prunus amygdalus* (almond), see p. 342-44. For *Pueraria tuberosa*, see p. 363.

For pulses (leguminous seeds), see p. 364-68. They include *Cajanus indicus* (pigeon pea, *arhar dal* in Hindi & Bengali), *Cicer arietinum* (the common gram or chicken-pea, *chena* or *chola* in Hindi & Bengali), *Dolichos biflorus* (the horse gram, *kurti-kalai* in Bengali, *kulthi gahat* in Hindi), *Dolichos lablab* (the Indian bean, *sim* or *makham-sim* in Bengali, *sim* in Hindi), *Glycine hispida*, Maxim. (the soya bean, *gari-kulay* in Bengali, *bhat* or *bhatwan* in Hindi), *Lathyrus sativus* (the jarosse or gesse, *khesari* in Bengali), *Lens esculenta* (the lentil, *masuri* in Hindi), *Phaseolus actinifolius* (*moth* or *mothi* in Hindi), *Phaseolus mungo* and var. *glaber* (green gram, *mung* or *mug* in Hindi), *Phaseolus mungo* var. *radiatus* (*mash-kolai* in Bengali, *urd mash* in Hindi), *Phaseolus trilobus* (*mungani* in Bengali), *Phaseolus vulgaris* (the kidney bean, French bean, or haricot; cultivated for the sake of its young pods by Europeans; scarcely, if

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ever, used by the natives). *Pisum arvense* (the grey pea or field pea, *desi mattar* in Hindi & Bengali), *Pisum sativum* (the common pea, *mattar* or *gol mattar* in the North-West Provinces), *Vigna Catiang* (*chowli* in Hindi, *barbati* in Bengali, and *urohi mahorpat* in Assamese). Note: This is the earliest English-language document seen (June 2008) that uses the scientific name *Lens esculenta* to refer to lentils.

Concerning the soya bean (p. 365-66): "This plant, densely clothed with fine ferruginous [rust colored] hairs, is sub-erect. It is met with in the tropical regions and the outer Himálaya, from Kumáon to Sikkim, and the Khásia and the Naga Hills to Upper Burma. Dr. Stewart mentions a field of *bhat* having been observed in Bisahir in the Panjáb, at an altitude of 6,000 feet. Dr. Roxburgh first saw it grown from seed received from the Moluccas in 1798.

"DeCandolle [De Candolle] considers Soya, and apparently correctly, as a native of Cochin China, Japan, and Java. But he remarks that 'it is of modern introduction into India.' 'There are no common Indian names' for it. This seems to be a mistake; the plant is well known in India under the names given above. In Manipur and the Naga Hills it is one of the most abundant of pulses. In the Naga Hills it is known as *tsu dza*, a name not unlike *Soja*, but at the same time it may be related to the old Chinese name *Shu*. The Soya most likely reached India from China, passing by way of the mountain tracts of Assam. The importance of these hills in settling questions of the nativity of cultivated Indian and Chinese plants has not been fully appreciated, and we might fairly anticipate that many statements at present accepted as facts will be considerably modified with an extended knowledge of the wild and cultivated plants of the Assam and Chinese frontier. Soya is an important article of food in Tibet. It is made in India into a sauce called 'Soy.' The advisability of extending its cultivation on the Himálayan tracts was pressed on the Government of India in 1882 by Professor Kinch, and the attention of local Governments also was called to it, but it does not appear to have made much progress."

Note: Most of Watt's information about the soya bean and soy sauce came from: "Official report of the Calcutta International Exhibition, 1883-84. 2 vols." Address: M.B., C.M., C.I.E., Reporter on Economic Products with the Government of India.

1369. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*). 1892. Shôyu no seibun [Composition of shoyu]. No. 124. p. 596-97. [Jap]
Address: Naimusho, Eisei Shikensho, Tokyo, Japan.

1370. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*). 1892. Shôyu bunseki seiseki [Analysis of shoyu]. No. 125. p. 700. [Jap]
Address: Osaka, Japan.

1371. Law, James Thomas. 1892? Law's grocer's manual: A practical guide for tea and provision dealers, Italian warehousemen, chandlers, shipstore dealers, bakers, confectioners, fruiterers, and general shopkeepers. Liverpool, England: J.T. Law. 842 p. See p. 251. 20 cm. *
• ***Summary:*** In the section on Spices, p. 251 states: "Soy forms the chief base of nearly all the bottled sauces and relishes on the market."

A second edition of this book was published in 1902 in London by Gilbert & Rivington (1171 p.). A third edition was published in 1931 in London by W. Clowes & Sons (xiii + 774 p.; edited and revised by C.L.T. Beeching). A fourth edition was published in 1950 in London by William Clowes & Son (xv + 814 p.; edited and revised by W.G. Copsey). Note: James Thomas law lived 1790-1876. Address: Liverpool.

1372. *New York Times*. 1893. A sale of bottles. March 14. p. 4.
• ***Summary:*** From the *Manufacturer* (Philadelphia): "Messrs. Craven Brothers of the Salem Glass Works, Salem, New Jersey, are about shipping five carloads of glass bottles to England by a steamer of the White Star Line. This, it is stated, is the first time that bottles manufactured in this country will be brought into competition with the English-made article in its own market. The first shipment will include 1,000 gross [1 gross = 12 dozen = 144] of long-necked bottles [i.e., 144,000 bottles]. They will be packed in boxes made to hold 2 gross each. The order was received by cable from Lea & Perrin, manufacturers of Worcestershire sauce."

Note: This article is largely about protective duties and tariffs, to which it is opposed.

1373. *Temps* (*Le*) (*Paris*). 1893. On lisait dans *l'Avenir de Diego Suarez* du 2 mars cet avis: [One can read in *l'Avenir de Diego Suarez* of March 2 this opinion:]. April 8. p. 2, cols. 2-3. No. 11641. [1 ref. Fre]
• ***Summary:*** The governor has received from Mr. de Mahy a box of soya bean seeds (*une boîte de graines du haricot* soya), with which one can make cheeses [tofu] that last a long time.

This cheese made from soya is called "to-fu." The process for making tofu is described is some detail. In winter it can be [frozen and] dried. In this state it can be kept for a long time.

Soya cheese (*Le fromage de soya*) is a very important food in China. Only the Tartars / Mongols have continued to use milk. The Chinese do not consume it. The soybean takes its place for them. This seed is a sort of solid milk.

The soybean (*La soya*) which is cultivated in Japan, in China, in the Indies [Dutch East Indies, today's Indonesia], in Cochin-China [today's South Vietnam], in Tonkin [today's North Vietnam], etc. is used for more than just making tofu.

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It is used in these countries in a great variety of ways to make human foods and seasonings. Transformed by cooking in water into a pap (*bouillie*) which is mixed with salt and polished rice, one obtains miso, which is served at breakfast [as the seasoning in miso soup] by many Japanese.

Mixed with barley and submitted to fermentation, after adding additional water and being pressed, one obtains a syrupy liquid, called shoyu, a unique sauce used to season almost all Japanese foods (*mets*), and which is employed in such large quantities that the factories of the city of Nagasaki make more than 1,200,000 kilograms of it each year. Finally, an oil is extracted from the soybean which is the object of an important trade and which serves for both human consumption and in industry.

1374. *St. Louis Post-Dispatch.*1893. A dainty salad. May 7. p. 35.

• ***Summary:*** Written for the Sunday Post-Dispatch: "The fashionable flower of the day, says the *Naturalist,* is used in Japan as a salad plant. The chrysanthemum is cut from the stem as soon as it is in its earliest bloom, boiled in water, and dressed with vinegar, a light wine, salt and a kind of liquid [soy sauce / shoyu] distilled from the soya bean."

1375. *Natuur* (*De*).1893. Soja [Soya]. 42(20):233-34. May 13. [Dut]

• ***Summary:*** This Dutch-language periodical appears inside a German-language periodical titled *Die Natur* (Halle). The author of this article (whose initials "CKN" appear at the end) discusses: The soybean plant, named *Glycine Soya* or *Dolichos Soja* or (in Dutch) *de Sojaboon,* which is widely used for food in Japan (where it is called *Mame* or *Daizu*) and China. Food products made from the soybean in Japan: Miso, shoyu (soy sauce), to-fu [tofu] or "kaas van Daizu;" a brief description is given of how each is made. Soybeans in China, where it is called "Yeou-teou," and where they make a cheese (*Soja kaas*), oil (*eigen olie*), and milk (*melk*) which resembles cow's milk. Black soybeans (*zwarte Soja*) are widely used. Proteins in the soybean, including legumine. In Europe, by 1881, the soybean was known in Italy, Austria, Hungary, and France (especially at Etampes and Montpelier); from the seeds, people learned to obtain oil, milk, cheese, an excellent cattle feed, and a vegetable for humans–similar to the French bean but much better (*en een groente voor den mensch, gelijkende op onze spersiebonen, maar veel beter*). Soybeans are used by doctors to treat people suffering from diabetes.

In France, the seeds are roasted like coffee beans; the result is a good-tasting coffee substitute (*dure koffie,... een even goed smakend surrogaat verkrijen*).

A large illustration (engraving) shows a soybean plant bearing many pods. In the lower left corner is one large pod. In the lower right is written "Al Clement," which appears to be the artist's name.

Note 1. This is the earliest Dutch-language document seen (March 2001) that mentions soy coffee.

Note 2. This is the earliest Dutch-language document seen (June 2009) that mentions green vegetable soybeans, which it calls *"een groente voor den mensch,..."*

Note 3. This is the earliest Dutch-language document seen (Oct. 2003) that mentions soymilk, which it calls *melk.*

Note 4. This is the earliest Dutch-language document seen (Oct. 2003) that mentions oil from the soybean, which it calls *olie.*

1376. White, W. Hale. 1893. On the use of soya beans in diabetes mellitus. *Practitioner* (*London*) 1(5):321-32. May. [14 ref]

• ***Summary:*** The article begins: "The use of preparations of soya beans in diabetes mellitus has been steadily gaining ground lately, and I have myself given the biscuits to every case of diabetes I have had under my care for the last three years. It is such an advantage to be able to vary the monotonous food of patients suffering from this disease that I thought the soya beans ought to be more widely known, and that therefore some description of the vegetable, together with an account of a few of the cases I have watched, might be of interest, especially as there is no doubt that we have in the soya bean an article of diet which is of the greatest benefit to sufferers from diabetes."

"The best account of the plant from which the beans are derived, and of the uses to which they are put, is given by Egasse" (1888).

"Soy sauce, which is imported into England, is used in enormous quantities in Japan. The Dutch call it *zoya,* the Chinese call it *tsiang-yeou,* the Japanese call it *shoyu, sooju,* or *soja,* and in Batavia and Java it is known as *ketjap.* This liquid is obtained by fermentation of cakes of roasted barley and boiled soya beans. After fermentation salt is added, the whole is kept two or three years, and then the sauce is squeezed out of the mass. In Japan it is used largely in cooking, and for many purposes replaces butter" (p. 323).

"Dujardin-Beaumetz, when speaking at the Académie de Médecine in 1888, advised the use of soya beans in diabetes. He is said to have mentioned them again at the Medical Congress at Berlin in 1890, and in 1891 he briefly referred to them and recommended a bread prepared from them as a food for persons suffering from diabetes.

"English abstracts of the articles I have mentioned soon appeared. A short account of Lecerf's may be found in the *Pharmaceutical Journal;* and that of Egasse is abstracted in the *Therapeutic Gazette* published in America." (p. 323).

"It as been found that soya beans mixed with oats for a very nutritive food for horses.

"Out of several cases of diabetes which I have treated with soya bean biscuits, I have taken at random three appended cases, which followed each other consecutively in the wards of Guy's Hospital [London]. They illustrate well

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the effects of the treatment.

"At Guy's Hospital the usual diabetic diet consists of gluten bread 6 oz., two eggs, butter 2 oz., two almond biscuits, milk 1 fl. oz., cooked meat 12 oz., greens, watercress, tea, and soda-water."

In England, Prof. John Attfield (19 Sept. 1890) published the following analysis of soya bean flour: Nitrogenous material 41.14 per cent. Fatty material 13.70 per cent. Cellulose, starch and sugar 30.35 per cent. Phosphate material 4.81 per cent. Other mineral matter 0.52 per cent. Moisture 9.38 per cent. (p. 324).

A table (p. 324) shows an analysis of soya bread, soya biscuits, and soya flour published by Robert Saundby in 1891.

Case I–Alfred Smith, age 33, admitted into Guy's Hospital 15 Oct., 1890, for diabetes. He had been there twice before in April 1889 and Sept. 1889 for the same disorder. On the 2nd occasion, on admission, he was passing 5,040 grains of sugar a day. After a stay of seven weeks, during which he was dieted with gluten bread and the ordinary diabetic diet, he left passing 640 grains a day–only 13% as much. Describes the positive effect of replacing gluten bread with 22 soya biscuits. "While taking soya biscuits this patient gained two stone in weight" (1 stone = 14 avoirdupois pounds or about 6.35 kg; 8 stones = a hundredweight in the Imperial system). "When discharged on this occasion, he was passing about 300 grains of sugar a day" compared with 600 grains on a previous occasion when treated with gluten bread. "We may therefore confidently say that the improvement was rapid and marked on soya bean diet... The biscuits produced no diarrhoea [diarrhea] nor other ill effect." A large table with 6 columns shows the patient's daily progress from Oct. 15 to Dec. 20: Date, urine passed (fluid oz.), grains of sugar per oz. of urine, specific gravity of the urine, total sugar passed in 24 hours, weight of patient (p. 327-29).

Case II was the same patient as in Case I, readmitted in April 1891. A table shows his daily progress (p. 329-30).

Case III was George Killick, age 18, admitted to Guy's Hospital on 29 Nov. 1890 and discharged on Jan. 19. A full-page table shows his daily progress. "We learn, therefore, that in this case also, the soya bean diet was quite as efficient as the gluten bread diet, if not more so, in reducing the quantity of sugar in the urine, and in diminishing the amount and specific gravity of the excretion.

"The general health of the patient improved considerably, and the treatment produced no disagreeable results." Address: M.D., Physician to, and Lecturer on Materia Medica and Therapeutics, Guy's Hospital, London.

1377. *Chemist and Druggist* (*London*).1893. The manufacture of soy in China. 43:38-39. July 8.

• ***Summary:*** "The manufacture of soy [sauce] and beancurd [tofu] is one of the most flourishing industries in the prefecture of Wênchow, China. The method is not supposed to be a secret, but the native manufacturers do not encourage inspection by foreigners. The beans used in the industry are principally white beans from Chinkiang. Besides these little else is required than a large amount of salt and flour, and an unlimited supply of fresh water.

"There are five large manufacturers in Wênchow, who work under licenses issued by the provincial Government and (as salt is a Government monopoly) are subject to periodical inspection of their premises by excisemen. The largest manufacturer at Wênchow takes out a license for 8 salt 'passes,' each 'pass' representing 368 bags of 85 1/3 lbs., or 2,243 cwt. [1 cwt (British) = hundredweight = 112 pounds] of salt every year. For each 'pass' obtained the manufacturer is permitted to set up 36 vats, to each of which, again, are annexed two feeding-vats. The vats are arranged at the bottom of a reservoir: the salt is stored in a similar reservoir at the back of the premises, where it is allowed to stand and drain for one year, Chinese salt being mostly unclarified sea-salt. Each vat is provided with an impervious cover.

"The beans, having been carefully washed, are placed in a cauldron holding 133 1/3 lbs. They are boiled for six hours, and then simmered and cooled through another eighteen hours. The broth is drawn off for use later on in the process, while the mash is mixed with flour (apparently wheat flour) at the rate of 213 lbs. of flour for each cauldron of mash. The resultant mixture is placed in large shallow baskets of bamboo, fitting each upon a wooden frame. These frames are piled one on the top of the other to a great height, and are left in the sun for five to eight days. When the mash emits a yellow exudation and turns yellow it is ready for further manipulation. It is now placed in the vats, and over it is poured a mixture of 2 parts of salt to 5 parts of water.

"To this clarified brine is added the bean-broth, and with this mixture the mash (now dry) is beaten up, and left to ferment. As it dries in the sun the process is repeated, and so on throughout the hot season (say, July to September), care being taken to cover the vats during rain. After three months or so a yellow oil appears, each vat producing about 667 lbs. of the oil. To this oil are added 2,400 lbs. of brine (but no bean-broth) thickened by 10 per cent. of salt, and the result is the soy [sauce] of commerce. Of this there are six grades, the prices of which per catty (1 1/3 lb.) are respectively 96 cash, 80 cash, 56 cash, 40 cash, 24 cash, and 20 cash–1,040 cash to the dollar (2*s.* 10*d.*). The soy [sauce] of one year can be used in that year, but it is considered always better to give it a second summer's fermentation."

Note 1. This is the earliest English-language document seen (May 2003) that contains statistics on the production or consumption of soyfoods (in this case soy sauce) in China.

Note 2. The ratio of wheat to soybeans in making this soy sauce is apparently 213 to 133.3, or 1.6 to 1. It is not clear whether the 133.3 pounds refers to dry or to washed

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soybeans, however the weight should not be much different.

1378. Hawson (H.). 1893. See what the newspapers say about Gawne's Worcestershire sauce (Ad). *Southland Times (Otago, New Zealand)*. July 29. p. 2.
• ***Summary:*** Contains a long list of praiseful testimonials from the following New Zealand newspapers: *Southland Times, Evening Star, Otago Workman, Taieri Advocate, New Zealand Tablet, Globe, Southern Standard, Cromwell Argus, Oamaru Mail, Otago Daily Times, West Coast Times, Palmerston and Waikonaiti Times, Christchurch Press, and Dunstan Times.*

Messrs. Gawne and Co., George street, Dunedin–which [as of Feb. 2010 is the second-largest city in the South Island of New Zealand, and the principal city of the region of Otago] make this sauce.

"Why buy a small bottle of Lea and Perrin's Sauce when you can buy a large bottle of Gawne's Worcestershire Sauce?" It is locally made and sells for about half the price of the imported article. Address: Agent [New Zealand].

1379. Parker & Co. 1893. Imported sauces (Ad). *Hartford Daily Courant (Connecticut)*. Sept. 30. p. 4.
• ***Summary:*** "L. & P. [Lea & Perrin's] Worcestershire Sauce. Mushroom Catsup. Walnut Catsup. Essence of Anchovies. Sayer's Sultana Sauce. Harvey Sauce. China Soy [sauce]. Green Mango Chutney. Sliced Chutney. Chasmere [sic, Cashmere] Chutney. Bengal Hot Chutney. Tobasco Pepper Sauce [Tabasco], etc., etc."

"Successors of Fox & Co. Wholesale and retail grocers." Address: 17 Central Row.

1380. *St. Louis Post-Dispatch (Missouri)*.1893. Use of the soya bean. Nov. 12. p. 20.
• ***Summary:*** "The use of the Soya bean in the dietary of diabetics has recently attracted much attention. Heretofore the bean has been used only for culinary purposes, the Japanese using a liquid called sooju [shoyu] or soja [soy sauce], a condiment which they prepare by fermenting the seeds of the Soya bean. The Japanese name of the plant is Daidsu [Daizu]. Linnaeus, the great botanist, called it *Dolichos Soja.*"

The Japanese call the beans Mame, and make 'miso' or sooju from them. The preparations are used principally in cooking meat. In China an emulsion [soymilk] is made from the oil of the beans [sic, from the whole beans]. It forms a white liquid and is drunk in the districts in which milk is too dear for the poor to buy it. The Chinese also make a kind of cheese [tofu] from the beans. Soy sauce is exported to and used in many European countries. The Dutch call it 'Zoya.' In the East Indies it is known as 'Ket Jay' [sic, 'Ket Jap'] (probably the source of 'catchup' or 'ketchup'). This liquid is obtained by fermentation of cakes of roasted barley and boiled soya bean. After [the first] fermentation salt is added. The whole is kept for two or three years and then the sauce is squeezed out of the mass.

"Bread and biscuit, made from the flour of the beans, have been highly recommended for diabetics on account of the low proportion of starch and the high proportion of fat and proteid. They are said to be pleasant to the taste. Dr. W. Hale White, writing from Guy's Hospital, London, where he has used the bread and biscuit for some time, says: 'They are to patients suffering from diabetes not only a good substitute for gluten bread, but they form a pleasant change from it, and many patients much prefer the taste of them to gluten bread.'"

1381. Ball, James Dyer. 1893. Things Chinese: Being notes on various subjects connected with China. 2nd ed., revised and enlarged. London: Sampson Low, Marston and Company, Ltd.; Hongkong, Shanghai, Yokohama, and Singapore, Ltd.: Kelly & Walsh, Ltd. 5 + 497 + xiv p. Index. [8 ref]
• ***Summary:*** This book is arranged alphabetically by subject. In the section on "Food" (p. 183+) we read (p. 186): "Chinese food, like French, does not consist of roasts, but of a multitude of made-up dishes. Peanut oil and soy [sauce] are added to them, and soups and broths are much taken. The Chinese, as far as their own food is concerned, are born cooks."

Page 188: "We give a few Chinese receipts which we have translated from a Chinese Cookery Book:... Chicken with the liquor of fermented rice... Take gelatinous rice, which has been fermented with yeast and water added, and cook with this for two hours, afterwards add the juice expressed from fresh ginger, soy, sesamum, and oil, of each a little. Mix together with boiled peanut oil. Dish and add fragrant herbs."

Peanut oil is mentioned on pages 186, 188, 288 (for use in lamps). The author lived 1847-1919. Address: Author, H.M. Civil Service, Hongkong.

1382. Bretschneider, Emil V. 1893. Botanicon sinicum. Notes on Chinese botany from native and Western sources. II. *J. of the Royal Asiatic Society, North China Branch. Series 2*. 25:i-ii, 1-468. For the year 1890-91. See pages 35-36, 137-39, 162-65. [200+* ref. Eng]
• ***Summary:*** The single most important early work on Chinese botany written by a Westerner. Bretschneider, an M.D., lived 1833-1901. Contents: Corrigenda and addenda to Part I. Introduction (p. 1). Notes on Chinese, Japanese and European works consulted (p. 4). Plants mentioned in the *Rh ya* (p. 20). Plants mentioned in the *Shi king*, the *Shu king*, the *Li ki*, the *Chou li* and other Chinese classical works (p. 137). General remarks by Dr. E. Faber (p. 402). Classification of Chinese names of plants (p. 411). Index of Chinese names (p. 435). Index of European names (p. 461).

Pages 35-36 state: "29.–*Jung shu* is the same as *Jen shu.*

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Kuo P'o:–This is the plant called *Hu tou* (foreign bean).

"Hing Ping:–Fan Kuang as well as She Jen and Li Sün all explain the above names of the *Rh ya* by *hu tou*. But they were mistaken. As *jung* is likewise a term for foreigners [western barbarians] they concluded that *jung shu* and *hu tou* are the same. Cheng Hüan and Sun Yen identified the *jung shu* correctly with the *ta tou* or great bean. [Comp. infra, 355, *Shi king*.]

"The *ta tou* is the *Soja hispida*, Moench, or soy bean. The *hu tou*, or foreign bean, is the *Faba sativa* [sic, *Vicia faba*], or common bean [sic, broad bean], one of the cultivated plants introduced from Western Asia into China, in the second century B.C., by the famous general Chang K'ien [Chang Ch'ien, traveled 139-115 B.C.].

Chapter 2, "Plants Mentioned in the Shi King, the Shu King, the Li Ki, the Chou Li and Other Chinese Classical Works," begins with a discussion of cereals or grains (*ku*). "The term *wu ku* [*wugu*] (Cc = Chinese characters given) or five kinds of grain seems to be the oldest classification of grain. It is attributed to the Emperor Shen Nung. The ancient commentators enumerated these five kinds as follows (Cc): 1. *tao*, Rice. 2. *mai*, comprising Wheat and Barley. 3. *tsi*, *Panicum miliaceum*, the common Millet. 4. *shu*, *Panicum miliaceum*, the glutinous variety [of Millet]. 5. *shu*, the Soy bean, *Soja hispida*. Note 1. This is the earliest English-language document seen (Aug. 2002) which mentions the *wu ku* ("five grains") and states that the soy bean (*shu*) is one of them. Since the classification of the *wu ku* are attributed to Shen-Nung, it is the earliest English-language document that links him with the soy bean.

"Some commentators have *liang*, *Setaria italica*, instead of *tsi*, others substitute *ma*, hemp, *Cannabis sativa*, for *tao*, rice." Mencius and the *Li ki* both use the term *wu ku*.

"The ancient Chinese term 'the five kinds of grain' is also usual in Japan. We read in [Kaempfer's] *Amoen. exot.*, 834, under *come* [rice]..." The soy bean is included. The *Chou li* mentions the six kinds of grain, or *liu ku*, which did not include the soy bean, and the nine kinds of grain, or *kiu ku*, which listed the soy bean, *ta tou*, as number six and the adzuki bean as number 7.

Pages 164-65 state: "355.–In the *Shi king* we have the term *jen shu*, which Legge translates as 'large beans.' 468:–Hou Tsi planted large beans [dadou = soy beans] which grew luxuriantly. Note: This is the earliest English-language document seen (June 2003) that mentions Hou Tsi in connection with soy beans.

"In the *Rh ya* [29] *jen shu* is given as a synonym of *jung shu*. Sun Yen identifies it with the *ta tou* or great bean, which latter name seems to appear first in Fang Cheng-chi's book on husbandry [1st century B.C.] This is the soy bean, *Soja hispida*, Moench [See *Pên ts'ao kang mu*, XXIV, 1.] A good drawing of the plant is found in *Chi wu ming shi I'u k'ao*, I, 8. This bean has always been considered by the Chinese as the most important of the cultivated leguminous plants. It is grown in numerous varieties all over the Empire, especially in the north, and is much esteemed for the oil yielded by its seeds. The name great bean refers to the plant, not to the seeds, which are small, of the size of a pea.

"The soy bean is also largely cultivated in Japan. It is described and figured under the Chinese characters meaning "great bean" in *Amoen. exot.*, 838, and *So moku*, XIII, 18-21.

"The soy bean is much employed in China and Japan for preparing the so-called 'bean-curd' and the sauce called 'soy.' The first is prepared by macerating the beans in water and milling them together with the water. The liquid pap is filtered. To this fluid is added gypsum, in order to coagulate the casein, and also chloride of magnesium. The coagulated casein or bean-curd is of a jelly-like appearance. Soy is made by boiling the beans, adding water, salt and wheat, and producing fermentation by yeast.

"Bean-curd and soy were most probably known to the Chinese in the classical period, although no distinct mention is made of these condiments in the classical writings. The ancient term *tsiang*, which Legge translates by 'sauce,' includes, we may suppose, soy. [See *Li ki*, I, 459-461 'Diet of the Ancient Chinese.'] Confucius *Analects*, 96. Biot translates the *tsiang* mentioned in the *Chou li* by 'mets delicats.' I,70:–Pour les mets delicats on emploie cent vingt objects differents. Compare *Pên ts'ao kang mu*, XXV, 26, on the preparation of the *tsiang*. At Peking the common name for soy is *tsiang yu* (*tsiang* oil). [S.W.] Williams [*Dictionary* (1874), 764] states that the English word soy is probably derived from *shi yu*, in Japanese *si yu*. [I should think rather from the characters pronounced *sho yu* in Japanese. See Hepburn's *Dictionary* (*1867*).] The character *shi* written with another radical replacing the "bean" radical to the left of the main character, in the *Shuo wen* is explained there by 5 characters, made of salt and beans [I cannot understand what the third character here is intended to mean]. See also *Pên ts'ao kang mu*, XXV, 2, under *ta tou shi*.

"As to the bean-curd, *tou fu*, it appears from the quotations in *Pên ts'ao kang mu*, XXV, 7, that this term and the mode of making bean-curd are first mentioned in the *Huai nan tsz'* [2nd century B.C.], but it was no doubt much earlier known in China." Address: China.

1383. Duthie, John F. 1893. Field and garden crops of the North-Western Provinces and Oudh, with illustrations. Part (volume) III. Roorkee: Dep. of Land Records and Agriculture, N-W. Provinces and Oudh (India). Printed at the Thomason Civil Engineering College Press. x + 65 + xix p. + unnumbered plates. See p. 3, 45 and plate LXXXV. [6 soy ref]

• ***Summary:*** "Glycine hispida, Maxim. See plate LXXXV. Soy bean or Japan pea; bhat (N.-W. Himalaya); kajuwa (Tarai); bhatnas, bhatwas (Nepal and N. Tirhoot).

"Natural order *Leguminosæ*. An annual clothed with ferruginous [rust-colored] hairs. Stems stout, suberect, or

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climbing. Leaves trifoliolate, on long petioles. Flowers small, reddish. Pods 2-3 seeded, axillary, linear oblong, recurved, and densely pubescent.

"The *Glycine Soja*, under which name the soy bean is described in the Flora of British India, is another species, and has been identified with *G. ussuriensis* of Regel, which grows quite wild in Mandchuria [Manchuria], whereas this plant has nowhere been found as unmistakably wild...

"In these provinces its cultivation is confined to the lower slopes of the Himalaya and to a few of the neighboring plains districts. It is grown in poor soils during the rainy season, and represents a very inferior variety of the Japan pea, which under proper cultivation is a much more robust plant, with broader leaves and larger pods and seeds...

"The plant affords excellent fodder for all kinds of stock, if harvested before it is fully matured. From the seed a preparation called *miso* is largely used in China and Japan; and the green pods yield the well known sauce" [sic].

Plate LXXXV, drawn by H. Hormushi, is an excellent illustration of the cultivated soy bean plant (Glycine hispida, Maxim.) showing young and old leaves, flowers, and slightly hairy stems. An inset shows five different views and parts of the flower.

The author acknowledges his indebtedness to Dr. Watt's most useful "Dictionary of the Economic Products of India" and Prof. Church's "Food Grains of India." Address: Director, Botanical Dep., Northern India.

1384. Fesca, Max. 1893. Beitraege zur Kenntniss der japanischen Landwirtschaft. II. Specieller theil [Contributions to an understanding of Japanese agriculture. II. Special part]. Berlin: Paul Parey. ix + 929 p. See 187-203, 872-73. Also published as vol. 2 of 2 volumes bound in one (Paul Parey, 1893). [7 ref. Ger]

• ***Summary:*** The chapter on the legumes (*Die Huelsenfruechte*, p. 187-203) is partly a review of the literature, with emphasis on soybeans (*Daizu, Omame, Sojabohne*). He begins by noting that for a nation like Japanese, where the people live predominantly on plant foods (*Pflanzenkost* = vegan diet), legumes are of major importance for the nutrition of the people, in that they offer a substitute for meat. They also supply important nitrogen to the soil. A table (p. 188) shows soybean production and yield in Japan from 1879 to 1887. The area increased from 441,699 *cho* to 466,315. Note: 1 *cho* = 2.45 acres Production increased from 2,280,135 *koku* to 3,253,790. Note: 1 *koku* = 180 liters or 47.6 gallons. Yield increased from 5.1 *cho/koku* to 7.69. Soybeans like the climate of northeastern *Yezzo* [Hokkaido]. A table (p. 190) gives the date of planting, date of harvest, and days to maturity at Hakodate, Sapporo, and Nemuro (all on Hokkaido). Also discusses: Soy sauce (*Shoyusauce;* p. 190), dates for other locations, and fertilizer (*Düngung*) needs (p. 191-92, incl. phosphoric acid, potash, wood ashes, straw, and superphosphate). A table (p. 193) shows soybean area (in *cho*), production, and yield in 1887 in 6 parts of Japan (Yezzo, northern Japan, central Japan [which had by far the greatest planted area and production], western Japan, Shikoku, Kyushu).

Also discusses: The extraordinarily high nutritional value of the soybean (p. 196), yellow lupins (p. 196), defatted soybean cake (*Daizukasu*, p. 196), shoyu or soy sauce, *Shoyubohne*, and koji (p. 197-99), tofu, *Bohnenkäse*, and *Tofumame* (p. 199), Kori-Tofu and E. Kinch (p. 199).

His analysis of shoyu presscake (*Shoyukasu*) and okara (*Tofukasu*) showed that they contained respectively: Water 53.6 and 85.7%. Ash: 6.7 and 0.5%. Crude protein: 12.6 and 3.8%. Crude fat: 13.7 and 1.4%. Nitrogen-free extract: 6.7% and 5.4%. Crude fiber (*Rohfaser*): 6.7 and 3.2%. *Tofukasu* is a rather good livestock feed, and it is also eaten by poor people. The shoyu presscake, although richer in nutrients than okara, is used, at most, only in small amounts in feeds and then it must be cooked. Living yeast cells in the koji can easily cause stomach diseases and problems, and the presscake also has a high salt content. Note: This is the earliest German-language document seen that mentions okara (Oct. 2001), which it calls *Tofukasu*.

Miso (4 types; p. 200-02): (1) White miso (*Shiro-Miso:* Low salt content and short shelf life; keeps for 10 days); made with rice koji. Fermented for 3-4 days. (2) Edo Miso (*Yedo-Miso*): Higher salt content, shelf 5-4 months up to 1 year. Made with rice koji. Fermented for 10 days in summer, 30 days in winter. (3) Farmhouse miso (*Inaka-Miso*): Very high salt content. Shelf life: About a year; made with barley koji. Fermented for about 11-12 months. (4) Sendai miso, also known as Red miso (*Sendai-miso: auch Aka-Miso genannt*): Red color and high salt content. Shelf life: several years. Made mostly with barley koji. Fermented for 1½ to 2 years.

Azuki (*Phaseolus radiatus*, with planted area, production and yield for 1883 and 1884, p. 203).

A table (p. 873) shows a valuation of Japan's agricultural production for about 17 major crops (Source: *Japan's Volkswirtschaft und Staatshaushalt*). For each crop, the annual production (in koku), the worth per unit, and the value of the total crop in yen are given. The most valuable crops are: Rice: 40 million koku, 200 million yen. Dehulled barley (*beschalte Gerste*): 7 million koku, 14 million yen. Naked barley (*nakte Gerste*): 5 million koku, 12.5 million yen. Soybeans (*Sojabohnen*): 3 million koku, 12 million yen. Wheat (*Weizen*): 3 million koku, 12 million yen. Address: Prof., Dr., Germany.

1385. Flagg, Chas. O.; Towar, J.D. 1893. Agricultural Division. *Rhode Island Agricultural Experiment Station, Annual Report* 5:129-62. For the year 1892. See p. 149-52, 156-57. [4 ref]

• ***Summary:*** The section titled "Forage Plants" (p. 149-62) states: "From Dr. O.C. Wiggin of Keysville, Va. [Virginia],

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was received a small package of Soja beans and two varieties of cowpeas... six varieties of Japanese beans [including two soja bean varieties, Yamagata Cha daidzu, and Kiyusuke daidzu, see p. 157] were received from the Kansas Experiment Station."

"Soja or Soya Bean. (Soja hispida, natural order Leguminosæ)." According to *Henderson's Hand-book of Plants* (p. 417) "'This is a climbing annual plant allied to (*Dolichos*) ("cow-pea"). It is much cultivated in tropical Asia on account of its beans, which are used for preparing a well-known brown and slightly salt [sic] sauce (Soy) used both in Asia and Europe for flavoring certain dishes, especially beef, and supposed to favor digestion.'

"We believe this plant worthy of trial by those who desire a variety of crops for soiling and especially as, in common with all the *Leguminous* plants, it is rich in nitrogenous elements. It could easily be cut and stored as ensilage...

"During the early winter a variety of this bean was extensively advertised by a party in Missouri as 'Cole's Domestic Coffee Berry,' and offered for sale at the extravagant price of $3.50 per pound. Its wonderful merit as a substitute for coffee was set forth in a 'dodger' with 'testimonials' attached. The seed can be purchased of J.M. Thorburn & Co., No. 15 John St., New York, or other large seed dealers, in small quantities, at 15 cents (15 cts.) per pound."

A table (p. 151) gives the composition of soja beans, red clover, and cowpea plants. Values for the soja bean plant are based on three analyses, two grown at the Massachusetts Experiment Station in 1889 and cut August 20th and August 30th, the third grown at the South Carolina Experiment Station and cut in full bloom August 5th 1889."

Another small table (p. 152) gives the fertilizer constituents of the above soja bean plant cut in full bloom: Moisture 7.05%, Nitrogen 2.37%, Potash 1.315%, Phosphoric acid 0.58%. The crop from one acre of soja beans cut and weighed green (27,769.5 lb) has the following fertilizing values, based on the value of each constituent: Vines $34.54, Roots $4.99, Total: $39.53.

"For many years the idea has been prevalent among the farmers of southern New England that it does not pay to sow clover... This condition of things is unfortunate for our agriculture in the light of the discovery within recent years that the *leguminous* plants are able to use the nitrogen of the atmosphere for their growth through the medium of *bacteria* infesting a *nodular* growth upon the their roots. All the clovers, peas, beans, lupines, vetches, spurry, serradella, and sainfoin belong to this class and are generally cultivated for their seeds, for fodder or for green manuring. None other of our ordinary field and garden plants, grasses, cereals, root crops, vines, etc., have yet been shown to posses any such ability to assimilate atmospheric nitrogen, hence are dependent for their growth upon the supply of nitrogen within the soil and rain water, or supplied by the farmer in manure or fertilizers. When purchased, nitrogen is the most expensive element, costing more than three times as much per pound as potash and more than twice as much as phosphoric acid, hence true economy should direct the prudent farmer to invest his money in *phosphoric acid, potash* and the *seeds* of *leguminous plants* in so far as he can use such crops for market, for feeding or for green manuring" (p. 155).

A table titled "Summary of analyses of leguminous crops" (p. 157) compares the composition of soja beans, cowpeas, and three types of "Japanese beans" (Yamagata Cha daidzu, Kiyusuke daidzu, and Black Podded Adzuki). The two "daidzu" beans are actually types of soja beans.

Note 1. This is the earliest English-language document seen (Sept. 2004) that uses the term "Cole's Domestic Coffee Berry" to refer to the soybean.

Note 2. This is the earliest document seen (Aug. 2011) concerning soybeans in Rhode Island, or the cultivation of soybeans in Rhode Island. This document contains the earliest date seen for soybeans in Rhode Island, or the cultivation of soybeans in Rhode Island (1892). The source of these soybeans was Dr. O.C. Wiggin (of Keysville, Virginia), and the Kansas Agricultural Experiment Station.

Note 3. This is the earliest document seen (Jan. 2000) that mentions J.M. Thorburn & Co. in New York, or Mr. Cole in Missouri, as seedsmen for soja beans.

Note 4. This is the earliest English-language document seen (June 2007) that uses the word "nodular" or the word "bacteria" (or "bacterium") in connection with root nodules.

Note 5. The authors apparently do not realize that Yamagata Cha-daidzu and Kiyusuke daidzu are the names of soja bean varieties (see table p. 157). Address: 1. B.Sc., Director of the Station, Agriculturist, and President of the Board; 2. B.Sc., Asst. Agriculturist. Both: Providence, Rhode Island.

1386. Henry, Augustine. 1893. Notes on economic botany of China. Shanghai, China: Printed at the Presbyterian Mission Press; Kilkenny, Ireland: Boethius. 68 p. See p. 13-14. 18 cm. Facsimile edition printed in 1986 by Boethius Press, Kilkenny, Ireland. [Eng]

• ***Summary:*** The book begins: "Missionaries and others living in the interior, are often in a position to make enquiries concerning the natural production of China, the results of which would be of great service to science. I intend to publish a few notes, pointing out the direction in which such work might be done as regards articles derived from the vegetable kingdom."

The author focuses on the vegetable products of Shêng-king [Liaoning, a province in northeast China whose capital is Mukden]. The soja bean is a staple of Newchwang trade.

"7. The Soja bean, *Glycine hispida*, Max. is noted for its numerous varieties and manifold uses. *Ta-tou* is the book-

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name of the *species;* but in the colloquial the varieties have each a distinct name, and these have not been very well made out for China. In Japan there are five great varieties, the white or yellowish, green, black, brown, and spotted, divided into sixteen sub-varieties, according to difference in form (which varies from spherical to flattened elliptical) size and colour. These sub-varieties differ in their use, time of arriving at maturity, etc. In China the chief kinds are *Huang-tou* [Yellow soybean] and *Hei-tou* [black soybean]: and perhaps the following sorts mentioned in the Paris Ex. C. [Exhibition Catalogue?] as occurring at Newchwang, are simply varieties of the Soja bean, viz., *Pai-tou* [*white soybean*], *Ch'ing-tou* [green soybean] and *Ma-tou* ["sesame bean"]. Information is wanted about these varieties. The Soja bean is the most important of the legumes cultivated in China; from its seeds *bean-oil* is produced; the refuse in the manufacture of which, *bean-cake,* is largely used in the South for manuring the sugar plantations. From certain varieties *bean-curd, soy* and *bean-sprouts* are prepared...

"For Sheng-king we wish descriptions and uses of the different varieties of the Soja bean, distinguished according to the local names."

Also discusses other species of beans and peas cultivated in China (p. 12-13; each is accompanied by two Chinese characters): 1. *Pien-tou,* the *lablab* bean, of which there are two varieties, one with purple, the other with white flowers. Botanists call this species *Dolichos lablab,* L.

2. *Kang-tou, Vigna sinensis Hassk,* the "chow-lee" of India [cowpea].

3. *Tao-tou* ([jack bean], literally "sword bean"), *Canavalia ensiformis,* D.C., the "over-look" pea of the West Indian negroes.

4. *Tsan-tou* ("silkworm bean"), *Vicia Faba,* L, the common bean, the broad bean.

5. *Wan-tou, Pisum sativum,* L., the common garden pea.

6. *Phaseolus mungo,* L. This haricot includes in China two if not more very distinct varieties. (a). *Lu-tou* ("green bean"), the Chinese vermicelli pea [mung bean]; the small seeds of this are ground into flour and are used for making the kind of vermicelli known as *Fên-t'iao.* (b). *Ch'ih-hsiao-tou* ("red small bean"), small red haricots [azuki].

8. Besides the foregoing there are several other species of beans cultivated to a small extent, among which may be mentioned the *Man-tou* of Hupeh, *Phaseolus chrysanthus,* Sav. and lentils, *Ervum Lens,* L. which is called at Ichang *Chin-mai-wan.*

Note 1. This is the earliest English-language document seen (April 2003) that uses the term "lablab bean."

Also: kudzu (*ko,* p. 57-59), which is said to grow all over China, especially in the vicinity of Kiukiang.

Note 2. The edition published in Ireland in 1893, having the same title, has E. Charles Nelson as the 2nd author. It has vx [15] pages of front matter plus 6 unnumbered pages. And it is 21 cm tall, rather than 18. According to OCLC / Worldcat (Oct. 2010) the edition published in Ireland is owned by 44 libraries worldwide, compared with only 2 for the Shanghai edition. Address: I.M. Customs, Shanghai, China.

1387. Japan, Dep. of Agriculture and Commerce, Agricultural Bureau. 1893. A descriptive catalogue of the agricultural products exhibited in the World's Columbian Exposition. Tokyo: Printed at the Seishibunsha. 115 p.
• ***Summary:*** The World's Columbian Exposition was a World's Fair held in Chicago, Illinois, to celebrate the 400th anniversary of Christopher Columbus's arrival in the New World in 1492.

Discusses 38 commercial products, with most divided into basic information and products made from the crop. Includes: Rice ("The manures applied to rice fields" include "green manures, farm yard manures, composts, ordures, fish manures, Sake kasu, Shoyu kasu, rape seed cake, and soy bean [cake] {p. 11}), barley ("It is much used as the material for making miso. Miso is prepared by pounding together boiled soy bean, salt, and the Koji {yeast}* prepared from common barley or naked barley; and is one of the most common articles of food in Japan." (Footnote: *"Eurotium oryzae). It [barley] is also used for making *ame* {p. 23}).

Wheat ("Wheat is used principally for preparing soy [sauce], vermicelli, onmen [sic, somen?], undon [sic, udon], and several kinds of confectionary" {p. 27}. It is also used for making *fu* or wheat gluten; "Roast 'fu' is used as food by boiling it with soup, soy, mirin, etc." {p. 29}), naked barley (*Hordeum nudum; hadakamugi*), Job's tears (*Coix lacryma; hatomugi*), soy bean (*Soja hispida; daidzu*), adzuki (*Phaseolus Radiatus,* [*azuki*]), sasage (*Dolichos Umbellatus*), haricot bean (*Phaseolus vulgaris*), peas, buckwheat ("Sobakiri" and "Kôri-soba" are both seasoned with soy sauce {p. 46}), rape seed (*Brassica chinensis, natane*) and rape seed oil (*natane abura*), sesame seeds (yellow {*kigoma*}, white {*shirogoma*}, and black {*kurogoma*} are displayed) and sesame oil (made from only yellow and white sesame), yegoma (*Perilla occimoides*), hemp, shiitake, chilli (*Capsicum Longum; tôgarashi;* "The fresh unripe fruit and leaves of certain varieties are eaten by cooking them with soy, sugar, "Katsuwobushi" [katsuobushi].* etc." {p. 103}). Also discusses: Dried daikon (p. 109-11), konjak flour (*Conophallus konjak; konniak-ko, konnyaku;* "For cooking, it is cut into small pieces and boiled with soy, soup, mirin, sugar etc." {p. 112}), kampio (*Lagenaria vulgaris; kampio* [*kampyo, kanpyo*]; "It is used as an article of food by boiling with water, soy, sugar, mirin etc." {p. 113}), wine.

Concerning the soy bean: In 1887, the total area of arable land devoted to soy bean cultivation is 4,633,152 *tan* (1 *tan* = 0.245 acre; thus 1,142,472.2 acres or 462,352.16 hectares). The total production of soy bean in the Empire was estimated to be 3,253,790 *koku* (1 *koku* = 180 liters, and 1 bushel = 35.2390 liters; thus 585,682,200 liters = 16,620,284

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bushels).

Note 1. From the above figures, a yield of 14.53 bushels per acre can be calculated.

From 1887 to 1891 the price of soybeans per *koku* ranged from 4.180 yen in 1888 to 5.319 yen in 1890. Four specimens of soybeans were exhibited: Green soy bean (*awo-daidzu*). Black soy bean (*kuro-daidzu*). Common soy bean.

"Daidzu or soy bean is extensively used in Japan to prepare various kinds of foods indispensable for the daily meal, such as 'soy' or 'shôyu,' 'tamari' (a kind of soy), tofu, and miso. It is also largely used as a food for horses and manure [bean cake].

Note 2. This is the 2nd earliest English-language document seen (April 2012) that mentions tamari, which it calls "tamari" (not "tamari shoyu").

A analysis of the percentage composition of 3 kinds of soy beans analyzed by the Sanitary Experiment Station at Tokio is given; Green soy beans have the highest crude protein content (42.85% with 12.28% water). White soy beans (*shiro-daidzu*) have the highest ash content (5.00% with 13.46% water). Black soy beans have the highest fat content (18.26%, and the 2nd highest crude protein content 40.25%, with 11.09% water). Soy bean (*Itachi-daidzu*) from Saitama prefecture.

Although daizu is abundantly produced in Japan, since its daily consumption by all classes of people is great, it is now imported from China and Korea in large quantity. However imported soy bean is never used to make first class shoyu or soy, since the imported beans are inferior to those produced in Japan.

A table shows the quantity (in *kin*) and value (in *yen*) of soy bean exported from Japan from 1887 to 1891; 2.1 million *kin* were exported in 1889.

Four specimens of soy sauce are on display. Two brands (the trade marks are shown) are made by Mr. Mogi Shichiroyemon, and two are made by Mr. Mogi Saheiji. All are made at Noda-machi, Chiba prefecture, Japan. Brands (a) and (c) are of the first quality; brands (b) and (d) are of the second quality.

A table shows the amount of shoyu made in Japan each year from 1887 to 1891; the amount ranges from 1,304,551 *koku* in 1888 to 1,157,982 *koku* in 1890. Since 1 *koku* = 180 liters, the amount made in 1888 is 234,819,180 liters. The total number of shoyu manufacturers in 1889 was 10,682. A table shows the price (in yen) of various brands and quantities of shoyu from 1887 to 1892. A brief description of the process for making shoyu is given. The word "barm" is used instead of koji. Either barley or wheat can be used with daizu to make the barm. The "mixture is kept for about 25 months, stirring it occasionally with a paddle, say twice a day during winter and three times in summer, and when it is fermented to the required degree, soy is extracted by means of a soy press. The clear liquid thus obtained is pasteurized by heating to about 130° F. and when entirely cooled, it is transferred into casks."

As shoyu is manufactured from daizu, wheat, etc., "it naturally contains a large quantity of albuminous matter. Shoyu is used in Japan as table salt is in Europe and America; consequently it is indispensable for daily use for cooking fish, meat, vegetables, etc. It has a remarkable merit when applying it in the place of sauces (like 'worcestershire') for beefsteak, fry, stew, etc. It answers better than salt when used with cold meat.

"Japanese soy or 'Shoyu' has long been exported to various parts of Europe where those who once taste it never fail in extolling its flavour. It is said that in Holland, Japanese soy has been used by many people from long years ago and highly esteemed by them." A table shows the chemical composition of shoyu.

"Since the fine flavour of Japanese soy has recently become known to people abroad, several trial consignments were made both to Europe and America, and the result, though it has obtained a high reputation among them, still it has not yet become a leading article of export." A table shows the annual amount and value of shoyu exported from Japan from 1887 to 1891. It ranges from 1,302.71 *koku* worth 11,091 in 1887 to 3,749.01 *koku* worth 41,028 yen in 1891. Thus the exports are growing rapidly.

Three specimens of tamari are one display, one dilute and one concentrated. The first two are made and sold by Mr. Ishima Mosaku. The 3rd (regular tamari) is made and sold by Mr. Morimoto Chôhachi. All are made at Yokkaichi in Miye [Mie] prefecture. Tamari is made chiefly in the prefectures of Miye, Aichi and Gifu [in central Japan]. Tamari is very similar to shoyu except that no wheat is used in manufacturing tamari.

Tofu (bean curd): "Tofu is one of the most favourite foods of Japanese and sold in all places both in towns and villages. The specimen here exhibited is called Yakidofu and is prepared by roasting partially dried 'Tofu' over a charcoal fire." "As 'Tofu,' sometimes called bean curd, being a coagulated vegetable albumen of soy beans, it contains a large proportion of nutritious matter, most important to human life, especially, to those who subsist mainly upon vegetables." The price of this Yakidofu is 18 yen per 10 dozen.

Note 3. This is the earliest English-language document seen (May 2012) that mentions grilled tofu, which it calls *Yakidofu*.

A specimen of Kôri-tôfu or frozen bean curd is displayed; it is made in Minami Adzumi-gun, Nagano prefecture. "As it can be preserved for many years it is a suitable for provision for vessels undertaking long voyages."

Concerning adzuki: There are both red adzuki and white adzuki. Early varieties are sown in the spring; late varieties [called aki-adzuki in the autumn]. "It is mostly used for preparing "An"–a pulpy mixture of boiled Adzuki flour and

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sugar, and in that state is largely used for making various kinds of confectionary." It is also used to make "Sarashi-an or refined flour of 'adzuki," and "shiruko–a juice prepared by boiling the flour with a suitable quantity of water and adding sugar..." Note 4. Shiruko could be described as adzuki bean soup with mochi (rice cake).

Concerning rape seed: "Rape was formerly cultivated to a great extent but since the introduction of Kerosene Oil, the acreage of its cultivation has been much diminished, yet it is grown in nearly all parts of Japan and forms one of the important farm crops."

1388. Japan. Dep. of Agriculture and Commerce, Bureau of Commerce (Nôshômushô Shôkôkyoku). 1893. General view of commerce & industry in the empire of Japan. Tokyo: Printed by M. Onuki. ii + 491 p. See p. 22, 37, 67, 247, 324, 345, 349-51, 429-30, 440-41, 469-70, 474. Index.

• ***Summary:*** Name of organization with diacritics is: Nôshômushô Shôkôkyoku. Pages 21-22: A list of all the 71 commodities exported from the port of Kobe in 1891 whose value exceeded ¥10,000. The largest by far was rice (5.5 million yen), followed by tea, matches, and camphor. Also: Kanten or colle vegetable [agar] 408,615. Rape seed oil 114,572. Sea weeds 22,372. Cut sea-weeds 17,765. Soy [sauce] 11,483 yen.

Page 37: After the "Restoration of Meiji," a new port was opened at Kobe, near Osaka. Its principal articles of merchandise were "rice, salt, sugar, tea, soy,..."

On pages 61-67 are tables of Japanese weights and measures and comparative tables with those of the empire of Great Britain, including both troy and avoirdupois. These show Japanese units for length (9 units; the standard is the shaku), area of land (6), capacity (5), and weight (6; the standard is the kwan). In 1885 the Government of Japan joined the Universal Metric Convention, and in 1891 established the present system of weights and measures.

Page 67: Industrial pursuits can be classified into original ones (that existed from ancient times, having first been introduced from China and Corea [Korea]) and those introduced from the West. Original industries include "salt making, sugar making, Sake brewing, soy brewing, oil producing,..."

Page 247: Exports (Class 22) include "Soy. The total value of the latest export is 41,029 yen, and chiefly exported to Hawaii."

Page 324: A table shows imports (both weight and value) of "Oil-cake" from 1887 to 1891, from China, Korea, and Other.

Page 345: Class II–Duty free goods includes "Oil cake."

Page 349: Class II–Duty free goods, includes "All kinds of Mush-rooms, excepting Shiitake, Confectionaries, all kinds of Liquors, Vinegars, Soy [sauce], Oils, and Prepared Tobacco... Sea-weeds excepting Kobu [Kombu, seaweed],..."

Pages 429-30: "Table of the total quantity [weight in picul or catty] and value [in yen] of the commodities exported from Japan to the United States." Soy [sauce] rose from 7,862 catties worth 261 yen in 1887 to 9,744 catties worth 1,146 in 1891.

Page 440-41: Chapter 7, "Commercial and industrial unions in Japan," lists the 2,013 "trade unions" of businesses in the same general field. One of these, "Liquor and soy," has 106 members.

Pages 469-70, 474: Table III lists "Industrial corporations." One class, "Soy and miso," has 4 members and capital of 75,500 yen. Address: Tokyo, Japan.

1389. Kaeufliche Saucen [Commercial sauces (Document part)]. 1893. In: F.J. Koenig, ed. 1893. Chemie der Menschlichen Nahrungs- und Genussmittel. Zweiter Theil. Ihre Herstellung, Zusammensetzung und Beschafftenheit, ihre Verfaelschungen und deren Nachweis. Dritte Auflage [The Chemistry of Human Foods and Stimulants. Vol. 2. Their Production, Composition and Properties, their Falsification and Proof of that. 3rd ed.]. Berlin: J. Springer. xvi + 1385 p. See p. 194-95. [3 ref. Ger]

• ***Summary:*** The most widely available sauce is Japanese shoyu (die "Japanisch Soya," or *Shoya*, or Soy), which, in Japan, is made by a fermentation process from barley or wheat (for the malting {koji} phase), table salt, yeasts, water, and mainly out of a soybean variety (*Dolichos Soya* or *Soya japonica*) cultivated especially for this purpose. The soybean has an excellent aroma for this purpose. The composition of the soybeans used for this purpose (according to Kellner 1887) are given.

For details on the art of making Japanese shoyu, see Vol. 1, p. 241.

Shoyu is a very important foodstuff / seasoning (*Nahrungsmittel*) in Japan; it is enjoyed with almost all dishes and must partially take the place of meat. Each year in Japan about 540 to 720 million liters are manufactured; the Japanese enjoy, on average, 60-100 cc of shoyu (*Shoya*) per day.

The next section is basically a summary of Tahara and Kitao (1889) Nagai and Murai found the composition of Japanese shoyu to be as follows (in gm per 100 cc): dry matter 35.17, total nitrogen 8.93, sugars 4.44, dextrin 4.56, alcohol 0.14, volatile acids = acetic acid 0.16 gm, non-volatile acids = lactic acid 1.08 gm, ash 14.67 gm, specific weight (relative density) at 21°C 1.199.

A large table at the bottom of p. 195 gives a detailed nutritional analysis of nine commercial sauces by C. Söllscher and F.J. König. These nine include: Essence of Anchovies, Harvey-Sauce, Japanese Soya (shoyu), Indian Soya, Beefsteak Sauce, and Maggi's Suppen- und Speisegewürze (Seasoning for Soups and Foods). The contents of a typical bottle and the relative price are also given: Japanese Soya is the most expensive (2.75) and Beefsteak Sauce is the least expensive (1.50).

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Note: This is the earliest document seen (April 2012) that mentions an HVP sauce product (Maggi's).

1390. Koenig, Franz Joseph. ed. 1893. Chemie der menschlichen Nahrungs- und Genussmittel. Zweiter Theil. Ihre Herstellung, Zusammensetzung und Beschafftenheit, ihre Verfaelschungen und deren Nachweis. Dritte Auflage [The chemistry of human foods and food adjuncts (stimulants / enjoyables). Vol. 2. Their production, composition and properties, their falsification and proof of that. 3rd ed.]. Berlin: Verlag von Julius Springer. xvi + 1385 p. See p. 194-95, 389, 486-90, 529-30, 1044-53, 1071. Illust. Index. 24 cm. [12 ref. Ger]

• ***Summary:*** Summaries of early studies on the chemical composition of soybeans and various soyfoods, including some original studies. Discusses (p. 194-95) commercial sauces, including Japanese shoyu (*"Japanisch Soya oder Shoya oder Soy"*). See separate entry.

Discusses (p. 1044-51) adulteration of coffee and coffee substitutes. Under "Coffee made from legumes" (p. 1051) we read: "The soybean (compare p. 486) is also used for the preparation of a coffee substitute." A table (p. 1053, based on Kornauth) compares the composition of 12 roasted seeds and fruits used to make coffee substitutes, including chicory, barley, figs, soybeans, white lupins, and chufa.

An illustration (p. 1071) shows different cellular layers of the soy bean sprout leaves (*Keimblätte*)–after an illustration by J. Moeller.

Also discusses: Peanuts (*Erdnusse, Arachis*, p. 322, 373, 385, 389, 494, 621, 686, 1051). Sesame seeds (p. 322, 385, 372, 389, 408, 494). Almonds (p. 322). Hemp (p. 322, 385, 493). Lupins (p. 372, 385, 389, 490-91, 1050, 1053, 1068-69). Chufa (*Erdmandel, Cyperus esculentus*, p. 1051, 1053). Address: PhD, Prof. (who teaches but does not have a faculty seat or voting rights) at the Royal Academy and Head of the Agricultural-Chemical Experiment Station at Muenster, in Westphalia, Germany (ordentlicher Honorarprofessor der Koeniglichen Akademie und Vorsteher der agric.-chemischen Versuchsstation Muenster i. W.).

1391. Sagot, Paul Antoine; Raoul, Edouard François Armand. 1893. Manuel pratique des cultures tropicales et des plantations des pays chauds [Practical manual for tropical crops]. Paris: Augustin Challamel. xxxii + 734 p. See p. 151-55. [Fre]

• ***Summary:*** In the chapter titled *Légumes et Culture Potagère*, there is a section on soybeans and soyfoods written by Edouard Raoul titled "Soja hispida Moench, Pois Soja, Pois oléagineux de Chine, Daïzou des Japonais." It discusses the widespread culture of soybeans in southern Asia, China, and Japan. "The seed is very rich in oil and in casein soluble in water. Its consistency, especially before maturation, is very tender and fine. Unfortunately it does not have much taste of its own. The pod is very small and contains only 2-3 seeds. It is not easily opened. I prefer soybean seeds having a color that is clear fawn-colored or tawny (*fauve*) or greenish, to those which are black."

"The plant must be sown from very fresh seeds. The germination (in Europe) is often very unequal, and many of the seeds don't develop... Some seeds sent by me to French Guiana (*la Guyane*) have been cultivated by Mr. Bar au Maroni, and have borne fruit, but I don't have precise details on their vegetation or ease of utilization."

Brief descriptions are then given of miso, shoyu, tofou (tofu), *kouri-tofou* [dried-frozen tofu], "which is nothing but tofu dried using heat" [sic], and *uba* (yuba, "a product very rich in nitrogenous materials (proteins) and fats"), followed by a list of the names of the best-known Japanese soybean varieties, and a discussion of the difference between *Glycine hispida* Moench (*Kuro mame* [black soybeans], *no mame, kuzu, yama-daizou* [wild soybeans]), and *Glycine soja* Siebold et Zuccar. (*kiu mame* and *tsourou-mame*). Typical analyses of the stems and leaves, seeds, and entire plants are given based on research conducted by M. Joulie. A comparison of the nutritional value of soya and wheat is given based on the research of Wechler in Austria and Messrs. Fremy, Muentz, and Pellet in France. Dr. Menudier uses soy flour in diabetic diets.

Also discusses: Winged beans (p. 149-50; *Psophocarpus tetragonolobus* Dec., *Dolichos tetragonolobus* L., *Pois carré*). Peanuts (p. 150-51; *Arachide, Arachis hypogæa*). Bambarra groundnuts (p. 151; *Voandzou, Voandzeia subterranea* Dup. Th.).

Note 1. This is the earliest document seen (May 2009) concerning soybeans in French Guiana, or the cultivation of soybeans in French Guiana. This document contains the earliest date seen for soybeans in French Guiana, or the cultivation of soybeans in French Guiana (1893). The source of these soybeans was Prof. E. Raoul, who was apparently in France.

Note 2. This is the earliest French-language document seen (Feb. 2004) that mentions dried-frozen tofu, which it calls "kouri-tofou." Note 3. Sagot lived 1821-1888.

Note 4: This is the earliest document seen (Nov. 2003) concerning general information on soybean production in the tropics.

Note 5. Notice that "kuzu" is given as a name for the wild soybean in Japan. Address: 1. Docteur en Médecine, Ancien Chirurgien de la Marine, Ancien Professeur d'Histoire Naturelle a l'École Normale Speciale de Cluny; 2. Pharmacien en Chef du Corps de Santé des Colonies, Professeur du Cours de Productions et Cultures Tropicales a l'École Coloniale.

1392. Westeroode, W. de Wolff van. 1893. Inlandsche plantennamen [Indigenous plant names (in the Dutch East Indies); Glycine Soja ("kadeleh")]. *Teysmannia* (*Batavia* [*Jakarta*]) 4:23-30. See p. 25-26. [Dut]

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• ***Summary:*** Mentions Glycine Soja ("kadeleh"). The Ngoko-Javanese is *"kadele"* or *"kedele,"* the *kromo-"kedang-soel"*, the same in East as in Central Java. The soy (kedele) beans deserve a precise pharmacological investigation in view of the surprising results given by the soy product ketjap [Indonesian soy sauce] against persistent malaria, which cannot be cured by other means. Address: Indonesia.

1393. Flett (W.H.), Limited. 1894. Classified ad: To Messrs. Lea and Perrins, Worcester. *Times* (*London*). Feb. 3. p. 1, col. 3.

• ***Summary:*** "We the undersigned, W.H. Fleet, Limited, of Everton-valley, Liverpool, hereby express our Regret at having Used a Label for our Worcestershire Sauce having on it two medallions or circles containing representations of game, and a border with diagonal lines, which you consider to be an infringement of your rights in respect of the labels registered by you as Trade Marks, and we undertake not to use it again, or any other, in infringement of your rights. And in consideration of your abstaining from legal proceedings against us, we are willing that you should publish this our apology in such a manner as you may think fit.

"Dated the 9th day of January, 1894. (Signed) W.H. Flett, Limited. J.A. Shearer, Secretary." Address: Liverpool [England].

1394. Morrell, Dora M. 1894. Relishes: Cooking them at table–Variety and abundance. *Los Angeles Times*. Feb. 11. p. 21.

• ***Summary:*** The last recipe, for "Deviled almonds," calls for "two tablespoonfuls of Worcestershire sauce."

1395. Schlegel, Gustave; Cordier, Henri. 1894. The Chinese bean-curd and soy and the soya-bread of Mr. Lecerf. I. Tofu. *T'oung Pao* (*General Newspaper*) 5:135-46. March. [11 ref. Eng]

• ***Summary:*** "Of late these Chinese preparations have again attracted the notice of Europeans. The *Temps* in France published last November [sic, April 8, 1893] a note upon the subject after an article in the *Avenir de Diego-Suarez* of 2 March 1893, and Dr. Vorderman, of the civil medical service in Java and Madura... We will add to these notices what is written about the subject by the Chinese themselves.

"I. Tao-fu or Bean Curd. According to 'Collected Omissions of *Sieh-choh*' nothing had been ever heard of the confection of bean-curd before or after the period of the three dynasties of antiquity (B.C. 2205-250), and it was only mentioned for the first time in the work of *Liu-ngan* [*Liu An*] king of Hoai-nan [Huai Nan] of the Han (second century before our era) Cf. Mayers, Chinese Readers Manual, No. 412, Cap. 24."

"The *Tao-fu* or Bean-curd was also called 'Leguminous milk', and was prepared by boiling curds or milk from beans.

"It is further related that when *Shi-tsih* [pinyin: Shi Ji] was governor of *Ts'ing-yang* [pinyin: Qing Yang] (Latitude 30°45', Longitude 115°26') he, in order to purify himself and to rouse the population, did not permit himself the use of meat, but bought every day in the market several pieces of bean curd, so that the townpeople called these curds 'The little slaughtered sheep.'

"The bean of which this curd is prepared is known in science by the name of *Soja hispida*, and has been imported in the form of a meat-sauce from Japan to Europe under its japanese name of *Sho-yu*, the corrupted japanese pronunciation of the chinese *tsiang yu* or 'relish-oil' which this sauce bears in some parts of China, and which has been further corrupted by the Dutch into *Soja*, by which name (also written *soya* and *soy*) it became known all over Europe. We will return to this by and by.

"According to Dr. Vorderman (loc. cit. p. 354) the soy-beans are distinguished in light-colored (cream-color, straw-yellow, light ochre-yellow and amber-yellow), brown and black. The first two sorts are roundish, the last either roundish or oblong, as they come from the one or the other variety of the plant. Accordingly, the plant with roundish seeds is called *Soja hispida, tumida* and that with oblong seeds *Soja hispida, platycarpa*, amounting, with the differences in color, to four varieties: 1. Soja hispida, tumida Beta pallida; 2. Soja hispida, tumida Beta atrospuma [atrosperma]; 3. Soja hispida, tumida Beta castanea; 4. Soja hispida, platycarpa Beta melanosperma.

"No. 2 and 4 are black and serve especially for the fabrication of Soy or Ketchup, whilst No. 1 (pale-yellow) and No. 3 (brown) are used for other culinary purposes.

"Since the Vienna [Austria] exhibition of 1873, when several samples of Chinese, Japanese and Indian soybeans were exhibited, their great nutritive proprieties and richness of azote [nitrogen] and fat have been shown by chemical analysis, and the culture of this plant has been largely introduced into Europe, especially in Hungary." Note 1. This is the earliest English-language document seen (July 2003) that contains the word "soybeans"–spelled as one word.

König in his work *Die menschlichen Nahrungs und Genussmittel*, 2nd Ed., Vol. II, p. 372, gives an analysis of the composition of 4 types of soybeans. "Dr. Vorderman says that he has not been able to detect amylum [starch] in the Soybeans of Java, China and Annam in applying the reaction of jodium [iodine] upon the section of the bean. The texture of the cotyledons consists principally of oblong, radiating parenchyme-cells, about five times longer than broad.

Note 2. This is the earliest English-language document seen (Oct. 2004) that uses the word "cotyledons" in connection with soybeans.

"II. *Tao-kan* or Preserved Bean Curd. The Chinese make of the Soy-beans two preparations, one called in Java *Tao-hu* and the other *Tao-toa*. They both consist of leguminous cheese, obtained from the light-brown beans, principally

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those obtained from Annam. But at present many Chinese in Batavia prefer the so much cheaper *kadele putih* grown in the *Preanger* and the *Ommelanden* (circumjacent territory of Batavia).

"These lightcolored beans are macerated during five hours in rainwater, when they swell up to about twice or thrice their original size. After having been cleansed from accidental dirt or admixtures, they are ground in a stone handmill, very much resembling that in which Europeans ground colors. One Chinese turns the mill, whilst the other throws the macerated beans, still in their husk, with a little water into the mill, so that the stuff runs as a white, thin mass, by a small gutter, into a tub prepared for its reception. This mass is then heated upon the fire in a large iron open cauldron, until it reaches the boiling-point. The froth is skimmed, and the fluid strained, after boiling, through a cotton cloth, in which a white, doughy residu [sic, residue = okara] remains, having a peculiar oily smell, and which serves as food for ducks and fowl.

"The filtrated fluid, which has a milkwhite color, is mixed, whilst it is being cooled, with a certain proportion of common Madura-salt or with a little calcined gypsum. Note 2. This is the earliest English-language document seen (Oct. 2003) that refers to soymilk, which it calls the "milk from beans" and "The filtrated fluid, which has a milkwhite color..."

"This gypsum is imported from China in the form of large lumps of radiated gypsum. As it is specially used for preparing the leguminous cheese of the soybeans, it is called by traders in Batavia by the Malay-Chinese hybrid word *Batu-tao* i.e. 'bean-stone.'\ "The salt (or, as in China, the chloride of magnesium) and gypsum change the juice, by precipitation of the legumine [legumin], into a white, gelatineous [gelatinous] mass, which, when sufficiently cooled, obtains a certain consistency, allowing it to be cut into flat square pieces. This can, however, not be done for after two hours after the precipitation. These squares are then laid upon plantain-leaves protected by a white cotton cloth against dust, and hawked about in the streets.

"They have an unpleasant raw bean-flavor, but when mixed with other victuals, this taste is lost. It is used as well in the preparation of Chinese victuals, as in that of the so-called Indian rice-dish.

"In order to preserve the *tao-fu* for continuous use, it is made to *tao-koa* (or dried beans) by the following method.

"The *tao-fu*, cut into flat squares, is plunged into a decoctum of *Curcuma longa*, which colours it intense yellow. These yellow cakes are then wrapped up in white square pieces of cotton, laid between boards and exposed to a certain pressure. Generally they are at the same time stamped with Chinese characters.

"By this pressure a good deal of water is lost, but the cakes can be preserved much longer.

"Dr. Vorderman says that both *tao-fu* and *tao-koa* can be successfully used in the nourishment of feeble children, who refuse to take eggs. *Tao-koa* is also imported from China, but these cakes are much larger than those prepared in Java, and are always stamped with Chinese characters."

Note 2. This is the earliest document seen (Aug. 2002) that mentions Liu An of Huai Nan in connection with tofu.

Note 4. This is the earliest English-language document seen (Aug. 2010) that uses the word "Tao-fu" (or "Tao fu"), or the word "Tao-hu" (or "Tao hu"), or the word "Tao-kan" (or Tao kan") to refer to Chinese-style tofu.

Note 5. This is the earliest English-language document seen (Sept. 2004) that uses the term "pale-yellow" or the term "straw-yellow" to describe the color of soybean seeds.

Note 6. An article in this same issue, titled "The Chinese in Boston" [Massachusetts], notes that presently "1,000 Chinese live in Boston, of which 700 work in the 180 laundries, and about 300 are merchants and traffickers, all dwelling on Harrison Ave. Here one also finds 63 gambling dens (or houses of ill repute) and several others where opium is smoked–visited in part by the most vile class of Americans." We wonder if there wasn't at least one tofu shop in Boston at this time. Address: 1. Professeur de Chinois à l'Universite de Leide [Leiden]; 2. Professeur à l'Ecole spéciale des Langues orientales vivantes et à l'Ecole libre des Sciences politiques à Paris.

1396. Schlegel, Gustave; Cordier, Henri. 1894. The Chinese bean-curd and soy and the soya-bread of Mr. Lecerf. III. Tao-yu or soy oil. *T'oung Pao* (*General Newspaper*) 5:135-46. March. See p. 140-43. [10 ref. Eng]

• ***Summary:*** This section is not about soybean oil, but about various types of Chinese soy sauce. "But the Soy-bean does not only serve for the preparation of beancurd, but also for the renowned condiment and sauce known as *Soya*, not only in the far east, but also over all Europe and America. It is known by the name of *Shi* which is explained in the *Yih-ya* as being a homonyme of the word *Shi* or 'taste' and was known by the people of *Thsi* because it is a combination of the five tastes.

Note: This is the earliest English-language document seen (Nov. 2011) that uses the word *Shi* to refer to fermented black soybeans.

"In the dictionary *Shwo-wen* [*Shuowen*] (about A.D. 100) the condiment is described as 'Salt-mixed dark pulse.' Bretschneider (Botanicon Sinicum, II. 165, Shanghai 1892) says he cannot understand what the character (dark) is intended to mean.

"If he had looked up the word in our Dutch-Chinese dictionary published in 1884, i.v. *Soya*, he would have found its explication given according to the *Tan-yuen-luh*, written by *Yang-shin*, one of the most prominent scholars of the Ming-dynasty (Wylie, Notes, p. 130), who says: '*Shi* is properly a bean; it is mixed with salt and *darkly* shut up into jars and pots, wherein it is fermented; this is why it is

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called dark pulse.' In fact, this is the way the Soya is made. The beans are first boiled soft, mixed with an equal quantity of wheat or barley, and left to ferment; a portion of salt, and three times as much water as beans, are afterwards put in, and the whole compound left for two or three months, when the liquid is pressed and strained.

"As we have said above, the mass is fermented in large stone covered jars, and any-one who has visited Canton will have, if not seen, at least smelled the disagreeable stench emanating from the large jars with fermenting Soy in the Soymakers-lane.

"The Chinese say that the character *Shi* does not occur in the nine classics, but that in the commentary of the 'Great bitter, the salt and the sour of the Nine discussions of Sung-yuh,' the 'Great bitter' is explained as being the *Shi* or Soy: and that in the Chapter on Aliments in the Annals is spoken of a thousand measures of salted soybeans (*shi*): whilst, according to the History of Aliments of the former Han-dynasty, soy was sold in (the capital) Chang-ngan by a certain *Fan Shau-ung*, who was on that account called the Soy-Fan."

"In the Elegies of Thsoo (Wylie, Notes, 181) 4th Century B.C., is equally spoken of the Great bitter, the salt, the sour, the pungent and the sweet, where, according to the commentary, the great bitter is the Soy, the pungent are Pepper and Ginger and the sweet Sugar and Honey: and that it means that the juice of the Soybean was mixed with Pepper and Ginger, and that the salt and sour was mixed with Sugar and Honey, so that the pungent and sweet flavor was produced.

"In the book 'Antiquities of Wu-lin' (Wylie, Notes, p. 45), written during the southern Sung-dynasty (13th century), we find mentioned among the victuals in the market: birdsnests (?), gingered soy (*shi*) and honied and gingered soybeans.

"This is the native soy; but the *Poh-wuh chi* (Wylie, Notes, p. 153), published in the latter part of the 3d century, says that Soy is also prepared in foreign countries. The beans are steeped in bitter wine and afterwards dried very hard; they are then boiled in and again dried, which process is thrice repeated. Afterwards the mass is mixed with a proportional quantity of powdered pepper. This species of Soy is called in China *Khang-pih* (Man-strengthening) because it pushes down the humours and composes them.

Bretschneider thinks that though the character *Shi* does not occur in the Classics, Soy was very probably known in olden times under the name of *Tsiang* [chiang or jiang] which occurs in the *Li-ki*, the *Chow-li* a.o. The common name for Soy in Peking, he says, is *Tsiang-yu* or *Tsiang* oil. This name, imported into Japan, but pronounced there *Sho-yu*, from which our word Soya has been corrupted, was first imported by the Dutch from Japan to Europe.

"But this supposition is not supported by Chinese authorities, who describe the *Tsiang* as a salted condiment or sauce made from all sorts of meat, fishes, fruits, etc., but never from beans.

"According to the *Fan-tsze-ki-jen* the *Tsiang* was introduced from *Toung-hai*, the modern *Hoai-ngan fu*. The first quality cost 200 pieces a pound; the middling sort one hundred, and the inferior quality thirty. This condiment was so expensive that we read in the Annals that a thousand jars of briny *tsiang* were put upon a par with a state of a thousand carriages.

"In the *Ping-tsih* are mentioned Briny Tsiang of stewed chicken, Briny Tsiang of stewed fishroe (Footnote: With reference to this condiment, we may mention the *Ké-tsiap*, brine of pickled fish or shell-fish, prepared in Fuhkian [Fujian, W.-G. Fukien] {Douglas [1873], Dict. of the Amoy dialect}, and which is most surely the origin of the word *Ketchup*, another name for soy [sauce]. It has nothing to do with the Malay, though the malay word *Ketjap* 'to taste' has a family-air.), of stewed turtles, of hashed fish mixed with mustard, and of the fat of the elk.

"In old *Nan-yueh* people ate *Tsiang* made of the *Kow-fruit*, a kind of mulberry according to some, but the betelpepper according to others.

"A condiment was also made of the peony roots of the elmseeds which was called *Mut*, of bitter squash and of the bottle-goard [gourd].

"In like wise a sauce was made of the *Yu-tsih* fish, and even of salted bees, crabs, shrimps, or rather lobsters, and ant-eggs. But not a single writer speaks of *tsiang* made of beans, and more particularly of the soyabean" (p. 143).

Note: This is the earliest English-language document seen (Feb. 2007) that contains the word "soyabean" (or "soyabeans"), written as one word. Address: 1. Professeur de Chinois à l'Universite de Leide [Leiden]; 2. Professeur à l'Ecole spéciale des Langues orientales vivantes et à l'Ecole libre des Sciences politiques à Paris.

1397. *Western Druggist.*1894. Queries and comment. 16(3):104-08. March. See p. 106.

• ***Summary:*** "67. Canton Soy or Soja.–L.S.S. (Chicago, Ill. [Illinois]) asks the composition of 'soja,' a condiment in much favor amongst Scandinavians. Genuine canton soy or soja, according to the Scientific American Cyclopedia, is a species of black sauce imported from China, prepared with white haricots [sic] (?), wheat flour, salt and water. A spurious preparation is made in the manner described below. The soja bean mentioned (soja hispida or dolichos soja) is described in the Dispensatory. It contains a starch-converting ferment, and this gives the explanation of the preceding formula.

"No. 2.–Soy bean–gal. 1

"Wheat, bruised–gal. 1

"Salt–gal. 1

"Water–enough

"Boil the soja seeds in water till soft, add the wheat,

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keep in a warm place for twenty-four hours; add the salt, and 2 gallons of water, and, after keeping bunged up in a stone jar for two or three months, press out the liquor."

1398. *American Druggist and Pharmaceutical Record*.1894. Queries and answers: Worcestershire sauce. 24(14):171. April 5. Whole No. 293.
• ***Summary:*** "J.F.G.–The *Scientific American* says that this is quite a complex condiment. It is made of wine vinegar, 1½ gals.; walnut catsup, 1 gal.; mushroom catsup, 1 gal.; Madeira wine, 1 gal.; Canton soy [sauce; from China], ½ gal.; moist sugar, 2½ lbs.; salt, 19 ozs.; powdered capsicum, 3 ozs.; pimento, 1½ ozs.; coriander 1½ ozs.; chetney [chutney], 1½ ozs.; cloves, ¼ oz.; mace, 3/4 oz.; cinnamon, ¼ oz.; asafoetida [asafetida], 6½ drms [drams]. Dissolve in 1 pt. brandy 20° above proof. Boil 2 pounds hogs' liver for 12 hours in 1 gal. of water; add water continually so as to keep up the quantity of 1 gal.; mix the boiled liver thoroughly with the water, strain through a coarse sieve, and add this to the above mixture. It is self-evident that no chemical examination could ever detect the presence of half the above ingredients."

Note: Soy sauce is an ingredient, as are two types of Western-style catsup.

1399. *Times* (*London*).1894. The cereal crops of Japan. April 9. p. 12, cols. 2-3.
• ***Summary:*** "A report has been made to his Government by M. Sienkiewicz, the French Minister at Tokyo, upon the cereal crops of Japan, which comprise rice, barley, wheat and rye." Although only one-eighth of the total area of Japan is cultivated, it produces (in ordinary years) enough food to feed the population of more than 40 million people. "Wheat and barley are largely employed in the manufacture of *shoyu*, or Japanese sauce, and also for making pastry." Most of the article discusses rice, including huge exports (at high prices) and imports (at low prices).

1400. Shimada, Koichi. 1894. Kansai shôyu oyobi tamari shiken seiseki [Results of tests on shoyu and tamari from Kansai, or Western Japan]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 146. p. 297-327. April. [Jap]
• ***Summary:*** Early information on the chemical composition of soy sauce in Japan. The term "tamari" (with furigana attached) is written with the characters "kuki" plus "sho or chiang." Very revealing.

1401. Parker & Co. 1894. Lee [sic, Lea] & Perrin's Worcestershire Sauce (Ad). *Hartford Daily Courant* (*Connecticut*). May 23. p. 5.
• ***Summary:*** "Harvey Sauce, Mushroom Catsup, Walnut Catsup, India Soy [sauce], etc.

"Successors of Fox & Co. Wholesale and retail grocers."

Note: This ad also appeared in the June 2, 5, 9, and 12 issues of this newspaper. Address: No. 17 Central Row.

1402. Thompson (T.) and Son Co. 1894. We might give you a much longer list than this one... (Ad). *Evening Star* (*Toronto, Canada*). June 21. p. 4.
• ***Summary:*** Groceries:... "Tomato Catsup 10¢, large bottle. Worcestershire Sauce 8¢ bottle. Epps' Cocoa 10¢ package."

Note: This is the earliest document seen (Feb. 2012) that mentions Worcestershire sauce (one of whose main ingredients was soy sauce) in Canada.

1403. *Manchester Guardian* (*England*).1894. Commercial markets: London produce market, Thursday, July 6. p. 3.
• ***Summary:*** "Drugs.–The sales went very quiet. Rhubarb again cheaper... Cardamoms firmer... Jamaica honey... Jamaica beeswax... Cape aloes... Gamboge...: China soy at 10*s.* to 11*s.*"

1404. Parker & Co. 1894. Sauces! (Ad). *Hartford Daily Courant* (*Connecticut*). Aug. 30. p. 4.
• ***Summary:*** "Lea & Perrin's Worcestershire, Harvey's, Halford's, Sultana, Indian Soy [sauce].

"Catsup: Mushroom, Walnut, Shrewsbury, Snider's."

Note: This ad also appeared in the Aug. 31, Sept. 1 and Sept. 5 issues of this newspaper. Address: 17 Central Row.

1405. Carpenter, Frank G. 1894. Li's banquet: A dinner with the premier in one of his palaces. How a Chinese state dinner is served. *Los Angeles Times*. Oct. 21. p. 13.
• ***Summary:*** This banquet took place in Tien-Tsin, China. The dinner was given in honor of General John W. Foster, our ex-Secretary of State, who was then on a trip around the world. As is the custom, no women were present at the banquet.

"All of the Chinese dishes were served in such shape that they could easily be taken up with chopsticks. In place of salt, each man has a little bowl of Japanese soy into which he dipped his food before eating it."

1406. Lea and Perrins. 1894. Classified ad: Lea and Perrin's sauce. *Times* (*London*). Nov. 20.
• ***Summary:*** "Original and genuine Worcestershire. Purchasers should see that every bottle bears the signature of Lea and Perrins.

"Lea and Perrins' signature is now printed in Blue Ink Diagonally across the outside wrapper of every bottle of the original and genuine Worcestershire sauce.

"The most economical in use.

"Beware of imitations."

Note: These four messages are repeated over and over until they fill up an entire column. The bottom four lines read: "The original and genuine Worcestershire Sauce sold wholesale by the proprietors, Worcester. Crosse and

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Blackwell, Ltd., London, and export oilmen generally. Retail everywhere." Address: [England].

1407. *Eisei Shiken Iho* (*Bulletin of the Imperial Hygienic Laboratories*).1894. [Analysis of Kansai (southwest Japan) shoyu and tamari]. 9:90-. [Jap]*
• ***Summary:*** JTULM says (2001/08): This serial owned by Faculty of Pharmaceutical Sciences Library, University of Tokyo. Phone: 03-5841-4746.

1408. Murai, Junnosuke. 1894. Shôyu bunsekihyô [Tables of shoyu analyses]. *Eisei Shiken Iho* (*Bulletin of the Imperial Hygienic Laboratories*) 8:35-45. (Journal also called Tokio Eiseisiken Iho. Edited by Naimu-sho Eisei-kyoku). [Jap]
• ***Summary:*** Investigated the composition of 40 samples of soy sauce. Discusses shoyu nitrogen, albumins, and peptones. Address: Tokyo Eisei Shikensho, Tokyo, Japan.

1409. Cavendish, Alfred Edward John; Goold-Adams, Henry Edward. 1894. Korea and the sacred white mountain: Being a brief account of a journey in Korea in 1891. London: George Philip & Son. 224 p. Illust. (40 original, many color). Maps. Index.
• ***Summary:*** This book is an amplification of the author's diary kept during a stay of a few weeks in Korea. Soy is mentioned as follows: Page 12: "Chefoo is the watering-place for Korea, Pekin, Tientsin, and Shanghai, but the foreign portion of it is very small, with three indifferent boarding-houses, but good pears and good bathing, if you do not mind a naked fisherman or two about. The chief exports appear to be straw plait for hats and bean-cake for manure."

Page 33-34: Korean ponies, which carry foreign travelers and their belongings, are very small. The forage ration consists of about 2 lbs. of beans and millet boiled in water, and the whole poured hot into a trough; the average feed is two gallons of this mixture, given three times a day, and supplemented by 2 lbs. of chopped straw (rice or millet)." "Other means of transport are found in donkeys, cattle, and coolies."

Page 48: Beans are becoming largely grown in Korea, for the demand for them in Japan is increasing, as they are used in the manufacture of Bean-curd, Miso, and Soy [sauce], while the Japanese are growing instead mulberries for sericulture. Wheat, barley, and rice, the latter of two kinds, one of which grows in dry soil, are also increasing, the export of these in 1890 being–barley, 5,260,533 lbs., value $50,341; beans, 87,950,800 lbs., value $1,004,762; wheat, 5,869,466 lbs., value $60,381; rice, 116,622,000 lbs., value $2,057,868."

Page 54. "Besides flax, maize, and cotton, there were fields of the small millet (*Setaria italica*), substitute for porridge, and of the tall millet, Susu or Kaoliang (*Holcus Sorghum*), with stems 8 to 12 feet high and as thick as a man's thumb, turning to golden yellow or bright mahogany colour; from the latter kind the Koreans make the coarse cloth of which their rough garments are composed, when they do not use Manchester shirtings; also fields of beans, food for cattle and men, and the foundation of Japanese soy [sauce] and our Worcestershire sauce."

Pages 146-47: "He produced some samshu, a muddy fluid which smelt and tasted like Kaffir beer, with strong spirit in it; this peculiar taste is due to the bean-water [water in which soy beans have been boiled] which they mix with the spirit distilled from rice or millet. We were given a bottle of this liquor by the head-man, and the cook bought another of Chinese make, which was quite clear and less diluted with bean-water."

Pages 195-96: "Whilst waiting in the inn to-day, I had plenty of opportunities of observing the nauseous smell of the food greedily devoured by the Koreans. Five or six little dishes, containing various preparations of meat or fish, chillies, [soy] beans, cabbage, rice, &c., were ranged on a little table a foot high, and gave forth a most evil odour. A Korean likes his viands very highly seasoned, and in eating takes a little of every dish into his mouth, that he may enjoy the pleasant mingling of the different flavours." Note: At least one of these dishes probably contained Korean-style soy sauce or miso–but we cannot be sure.

Bean or beans (usually noted in passing as a crop with other crops) are mentioned on pages 66, 67, 68, 134, 138, 150, 191, 194, 199. Address: 1. Captain, F.R.G.S., 1st Argyll and Southern Highlanders, now in Edinburgh; 2. Captain, R.A..

1410. Engler, Adolf; Prantl, L.K. 1894. Die Natuerlichen Pflanzenfamilien nebst ihren Gattungen [The natural plant families, together with their genera]. Leipzig: Verlag von Wilhelm Engelman. 396 p. See vol. 3, Part 3, p. 360-61, 392 (Fig. 131 B-D). [Ger]
• ***Summary:*** "390. Glycine L. (*Soja* Savi, *Johnia* W. et Arn., *Notonia* W. et Arn., *Leptocyamus* Benth., *Bujacia* E. Mey.)... There are about 15 varieties in tropical Africa, Asia, and Australia...

"Uses: *G. hispida* Maxim., the Japanese soybean is grown throughout East Asia for the pleasant tasting seeds; they serve also for the preparation of a pungent brown sauce, which in South Asia accompanies almost all meals and is also imported to Europe. The plants also thrive in Germany and are recommended for cultivation, however they do not always ripen in our climate, so their cultivation is unsure."

Illustrations (p. 362, Fig. 131) show (B) the leaves and flowers of a soybean plant (¼ size), and (C) an enlarged soybean flower (3 times normal size).

Also discusses the peanut (p. 324-25) with an excellent five-part illustration. Address: 1. Prof. der Botanik und Direktor des botan. Gartens in Berlin; 2. Prof. der Botanik und Direktor des botan. Gartens in Breslau.

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1411. Japanese Bureau of Agriculture (Norinsho). 1894. The fisheries of Japan. *Bulletin of the United States Fish Commission* 13:419-435. For the year 1893.
• ***Summary:*** The short section titled "Utilization of algæ" (p. 434-35) was compiled and arranged from the 1893 "Descriptive Catalogue of Exhibits Relating to the Fisheries of Japan at the World's Columbia Exhibition" by Hugh McCormick Smith.

It notes of amanori (*Porphyra vulgaris*): "The weed is but seldom eaten fresh and nearly always is made into thin sheets like paper, and dried for preservation. This is heated over the fire and eaten with broth, or by itself with a little [soy] sauce. It is also used for various other culinary purposes."

Company name with diacritics is: Nôrinshô.

1412. Nagai, Sôji. 1894. Sake shôyu kokusû sanshutsu shinpô [A new method of calculating the number of koku (a Japanese unit of volume) of sake and shoyu]. Iiyamachi, Nagano-ken, Japan: Published by the author. 75 p. 20 cm. [Jap]*
• ***Summary:*** One *koku* is approximately 278.3 liters. One koku was originally defined as a quantity of rice, historically defined as enough rice to feed one person for one year (one masu is enough rice to feed a person for one day). A koku of rice weighs about 150 kilograms or 330 pounds. Address: Iiyamachi, Nagano-ken, Japan.

1413. Ranhofer, Charles. 1894. The epicurean: A complete treatise of analytical and practical studies on the culinary art,... making a Franco-American encyclopedia. New York, NY: Published by the author. 1183 p. Illust. Index. 28 cm.
• ***Summary:*** The recipes in this book are numbered sequentially. "Soy" (sauce) is used as an ingredient in 2 recipes: 545. "Soya sauce (*Sauce Soya*). Reduce one pint of velouté (No. 415) or espagnole (No. 414) with two gills of essence of either chicken, game, or fish, and when the sauce is of a sufficient consistency, add to it two tablespoonfuls of soya sauce, and two ounces of fresh butter; beat slowly with a whip" (p. 317).

557. "Victoria sauce (*Sauce à la Victoria*) ("a teaspoonful of vinegar, the same of soya sauce," p. 319).

The following recipe for pompano fish has "soya" in the title but neither "soya" nor "soy" are used as an ingredient, nor are they mentioned in the body of the recipe. 1226. Pompano à la soya (*Pompano à la soya*) (p. 452).

Worcestershire sauce is used as an ingredient in 8 recipes: 299. Chicken okra gumbo. 332 Ox tail soup à la Soyer. 451. English sauce. 632. Tartar sauce, English style (also calls for Harvey sauce). 1396. Minced tenderloin à la Beckman. 1571. Sweetbreads, English style, with brown English sauce. 1591. Mutton chops Soyer. 1721. Minion fillets à la Landgrave.

"This book is simply the best way to answer any question about how the upper classes were dining in late Victorian America. It is the magnum opus of the great Chef, Charles Ranhofer, who ruled the kitchen at the famed Delmonico's restaurant in New York City. This is a huge treatise: 1183 pages, 800 illustrations, over 3000 recipes. By and large, the recipes are in the classic French tradition. However American recipes are not neglected... This opus shows well why Delmonico's was the premier dining room of its day" (MSU introduction).

For an excellent history of Delmonico's Restaurant and business operations in New York see www.steakperfection.com/ delmonico/ history.html. The business (a small cafe and pastry shop) was started in 1827 by two Swiss-born brothers at 23 William St. in New York City. But the restaurant opened in 1830 in the adjoining building at 25 William Street; the cafe and pastry shop continued to thrive next door. The restaurant featured a bill of fare (called a menu today), which was itself new. Address: Chef of Delmonico's, Madison Square [New York City].

1414. Saunders, William. 1894. Report of the Superintendent of Gardens and Grounds. *Report of the Secretary of Agriculture*. p. 365-394. For the year 1893. See p. 378, 387.
• ***Summary:*** In the section titled "Notes in miscellaneous plants (p. 365+), there is a subsection on "Soy bean" (p. 378) which states: "*Glycine soja* is a low-growing annual plant resembling the well-known kidney or bush bean of the gardens. The seeds of this species are used by the Japanese and Chinese in the manufacture of the sauce which they call soy, or soja. This is said to be made by boiling the seeds or beans in water together with millet, wheat, or other grains, the mixture being allowed to ferment, and afterwards refined and stored for use. Soy is a thick, black liquid resembling molasses, but not so tenacious. This sauce is a favorite accompaniment to other food dishes in China and Japan. The leaves [sic, seeds] furnish a valuable oil, and the resulting cake is used for feeding animals and for manure to the fields of sugar cane in Southern China. These beans have frequently been recommended as a substitute for the coffee bean, but they are a poor substitute for it–about equal to scorched wheat or rye."

In the section titled "Interrogatories and Replies" (p. 385+) is a letter (p. 387) from "E.P.D. (Massachusetts)" who asked: "Can you inform me if the soja or Japan bean is cultivated in this country? It is said to be valuable as an article of food, being more nutritious than meat.

"Reply–The soja bean has been grown more or less, chiefly as a novelty, in this country for many years–for half a century at least–but having gained recognition as being of special importance. It has been recommended for the oil contained in it as a substitute for coffee, etc. It is said to be used in Japan mainly as an ingredient in a sauce called soy. Seeds can be obtained from most of the large seed stores in this country." Address: Superintendent of Gardens and

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Grounds [USDA, Washington, DC].

1415. Whitehead, Jessup. 1894. The American pastry cook: A book of perfected receipts.... 7th ed. Chicago, Illinois: Jessup Whitehead & Co., Publishers. 225 p. See p. 180, 199. Illust. Index.

• ***Summary:*** The chapter titled "The hotel book of salads" states (p. 180) that d'Albignac was a Frenchman living in London. One day, while dining alone in one of the most famous taverns in London, a young dandy of good family came to his table and said: "Sir, it is said that your nation excels in the art of making salads; will you be so good as to oblige us by mixing one." He consented and, "after a little hesitation, ordered all that he thought necessary for his expected masterpiece." With good luck he succeeded.

Before long he was invited to "mix a salad in one of the finest houses in Grosvenor Square, London." With good luck he succeeded again. Before long he became "known as the fashionable salad maker and soon had a gig, in order to keep his appointments, with a servant to bring his mahogany case containing all the ingredients–such as vinegars of different flavors, oils with or without a fruity taste, soy [sauce], caviare [caviar], truffles, anchovies, ketchups, gravies, and even hard-boiled eggs.

"Later he got cases made to order, furnished them completely and sold them by hundreds. In short he came to realize a fortune of more than eighty thousand francs."

In the same chapter, recipe 718 for "Garlic vinegar" (p. 181) calls for "1 teacupful of walnut ketchup."

In the same chapter, under "750. Fish salad" we read (p. 199): "But table sauces, ketchups, soy, and essence of anchovies, can be added to the dressings according to taste.

"Of India soy Savarin says: 'It seems likely the Roman *garum* was a foreign sauce; perhaps even the "soy" which we get from India, and which is known to be got by the fermentation of a mixture of fish and mushrooms'" [sic].

Note: The author does not realize that soy [sauce] is made from soy beans and, in East Asia, never contains fish or mushrooms. It always contains salt, and koji, made by growing filamentous molds on wheat or soybeans. Address: Chicago, Illinois.

1416. Kellner, O.J. 1895. Ueber die Bereitung von Sake, Shoyu, und Miso [On the preparation of sake, shoyu, and miso]. *Chemiker-Zeitung* 19(6):97-98; 19(7):120-21. Jan. 19. [6 ref. Ger]

• ***Summary:*** The first installment of this article gives details on the production of sake in Japan. The process can be divided into 4 steps: The production of a diastatic ferment (koji), the culturing of the yeast (*Hefezüchtung*), the main fermentation, and separation of the fermented liquid (sake). A detailed description is given of the preparation of both koji starter (the ash of camellia wood is used) and koji. The koji, make in koji cellars, contains a very powerful, inverting ferment (*ein sehr kräftiges, invertirendes Ferment*), whose effect goes further than the diastase of malt. The finished sake, which contains 11-14% alcohol, is consumed hot. Sake makers in Japan, like beer makers in earlier times in Germany, are very conservative and will hardly allow the introduction of a thermometer into their operations.

Shoyu or "Bohnen-Sauce" is called Soja or Shoja in Germany. About one-fourth of the wheat is finely pulverized. It is fermented in vats for various times ranging from 8 months to 5 years. Then the liquid is pressed out in cotton sacks. Finally the press-cake is mixed with salt water, and re-pressed to yield a lower quality product. The finished product consists of a mixture of soy sauces of different ages to improve the flavor and aroma. The best soy sauce is made from equal parts of 3-year and 5-year soy sauce. The press-cake is used for fertilizer.

A nutritional analysis of shoyu is given. Its relative density ranges from 1.182 to 1.193. In 1888-89 in Japan 10,634 shoyu plants produced 1.3 million koku [1 koku = 180 liters or 47.6 gallons, so 1.3 million koku = 234 million liters or 61.88 million gallons]. Per capita consumption was about 5.5 liters per year.

Concerning miso, the author discusses rice miso first, then barley miso, implying that the former is more widely used. He notes that miso can be made in only 4 days by incubating it hot. He then gives nutritional analyses of 5 types of miso that he made in 1889. "According to my estimation, at least 30 million kg, over half of the yearly soybean harvest, is used in miso production... Those soybeans that are not used for shoyu and miso production, serve largely for the production of tofu (*Bohnenkäese*)." The tofu is coagulated with a solution obtained from sea salt that is rich in magnesium chloride [i.e. nigari]. Address: Privy Councillor (Hofrath), Japan.

1417. Woodward & Co. 1895. Sauces. Ketchups (Ad). *Hartford Daily Courant* (*Connecticut*). Jan. 24. p. 12.

• ***Summary:*** "Sauces: Lea & Perrin's Worcestershire, quarts 75¢, pints 45¢, ½ pints 25¢. Holbrook's Worcestershire, pints 35¢, ½ pints 18¢. A 1 International 40¢. Tabasco 45¢." Halford's. Sultana, Chili, Anchovy.

Ketchups: Shrewsbury's, Snider's, Flacus, "Crosse & Blackwell's Mushroom, pints 40¢, Walnut 40¢,... India Soy [sauce], Paprica [Paprika],..." Address: 217 Main Street, Hartford, Connecticut.

1418. *Manchester Guardian* (*England*).1895. London produce market. Thursday, Jan. 25. p. 3.

• ***Summary:*** "Drugs.–Auctions very interesting. Vanilla was in good demand... Rhubarb flat... Cardamoms chiefly sold... Dragons blood reeds... China soy sold at 8 3/4*d.* to 10½*d.*"

1419. Mell, P.H. 1895. Experiments on foreign seeds. *Alabama Agricultural Experiment Station, Bulletin* No. 60.

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p. 25-32. Jan. See p. 32.

• ***Summary:*** The section titled "Soja or soya or soy bean (*Glycine hispida*) (p. 32) begins with a long quotation from "The Treasury of Botany" by Lindley and Moore (1866). The author then notes: "This plant is valuable for man and stock and the results of the experiments conducted at Auburn show that it can be easily grown in Alabama. The forage cured from it [hay] is excellent, and stock eat it with relish. Two varieties of the seeds have been tested and both have yielded favorable results.

"The soja bean is not a new plant in the United States since it has been grown with marked success in some of the Middle and Western states for several years; it is however new to the South.

"The Experiment Station has a small quantity of the seeds for distribution among the farmers of Alabama. Efforts will be made to give the seeds as wide a distribution as possible."

Note: This is the earliest document seen (March 2011) concerning soybeans in Alabama, or the cultivation of soybeans in Alabama. This document contains the earliest date seen for soybeans in Alabama, or the cultivation of soybeans in Alabama (Jan. 1895). Address: Botanist and member of Experiment Station Council, Auburn, Alabama.

1420. Martin, Ernest. 1895. Le Tao-fu (soya), son origine, ses propriétés, son acclimatation [Tofu (soya): Its origin, properties, and acclimatization]. *Revue Scientifique* (*Revue Rose*) 3(5):144-46. Feb. 2. Series 4. [Fre]

• ***Summary:*** A French-language review of the literature on tofu, including a brief discussion of soy sauce and soybeans. The Soya hispida (Family: Papilionacées; Glycine Phaseolus) is an oilseed (*graine oléagineuse*) that originated in China. According to the research of Prof. Schlegel at the University of Leiden, it was first mentioned in the work of Liu-An, king of Huai-nan, of the Han dynasty, in the 2nd century before the Christian era. From this period, the seed was boiled and a milk-like liquid [soymilk] was extracted which had the reputation of possessing beneficial properties.

When the soybean (*le soya*) was imported to Europe, it was in the form of a sauce made in Japan and sold by the Dutch who were the first [sic] European navigators to arrive in Japan. Note: Portuguese navigators arrived in and traded with Japan before the Dutch.

Its name was *sho-yu*, which is nothing but the corruption of the Chinese characters *tsiang-yu*, which signifies savory oil [sic]. From sho-yu, the Dutch made the word "soya" or "soy" the name by which the bean is known in Europe.

Discusses: The shape and color of soybeans. The Exposition of Vienna [Austria] in 1873. König's discovery that soybeans contain 31-33% protein. The research of Vorderman and Pellet. Tao-Kan, Tao-Hu (tofu in Java), and Tao-Koa. Tofu exported from Annam. How Chinese in Batavia make soymilk and tofu (curded with gypsum); use of the residue [okara] for feeding to penned poultry, such as chickens and ducks. Further processing of tofu to extend its shelf life. Preparation of soy sauce. Many uses of tofu in Chinese therapy. Shi-tsih as the founder of the vegetarian diet. Writings of Montigny, the French consul general. Soy bread in diabetic diets. Mr. Desvilles. Soybean trials and acclimatization in France. Composition of soybeans grown in France.

"From the viewpoint of practical utility, we conclude that the acclimatization of species of the vegetable and animal kingdoms, which was formerly the goal of multiple costly tests, has now lost much of its importance. The ease of communications and the rapidity with which exotic shipments can be made often provide the same results.

"However we must continue to be attentive to failures of acclimatization, for they have much to teach us. One of the most interesting problems of science is that of mutations. The work of the mutationists (*tératologistes*), and especially of Dareste, on the production of artificial anomalies, has led to new proof that the variability of animal organization is much greater than one would be tempted to believe–and this variability extends also to plants... Such research can help elucidate the problem of the origin of races, which has heretofore remained in the deepest obscurity despite the work of savants such as Is. Geoffroy Saint-Hillaire, Darwin, and Quatrefages.

"Thus there is nothing surprising in the transformations manifested in living things which, transplanted from afar, find themselves placed in telluric [terrestrial] and climatological conditions completely different from those of their original habitat. Examples of this transformation multiple with each new day;" they include the opium poppy, rhubarb, some legumes, numerous varieties of bamboo. "What is the reason for these laws of transformation and degeneration that extend over each of the large kingdoms of nature? The problem is posed but has not been seriously addressed.

"As for the soybean (*graine de soya*), we have shown that it undergoes this transformation in a very sensitive manner: in it, the protein molecule progressively gives way to the starch (*amylacée*) molecule. At the heart of the plant organism, a special synthesis is accomplished: its chemical composition is modified in proportions such that it becomes inappropriate for the goal targeted by its cultivation in Europe."

1421. Kellner, O.J. 1895. Die Bereitung von Miso in Japan [The preparation of miso in Japan]. *Chemiker-Zeitung* 19(13):265. Feb. 13. [3 ref. Ger]

• ***Summary:*** This is an answer to questions from Dr. Hanausek to *Chemiker-Zeitung*. Kellner wrote his first major article on miso in 1893. There are 4 basic types of miso in Japan: 1. Shiro miso (white miso) is made from large-seeded soybeans (*grosskörnigen Sojabohnen*), rice koji, and salt.

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The ingredients are mixed at 70-90°C, and the product is ready after 3-4 days of fermentation. It will not keep longer than 10 days. Note 1. This is the earliest document seen (Oct. 2001) worldwide that mentions "large-seeded soybeans." The next document to use that term appeared in 1936 in the USA.

2. Yedo miso (named after the early name for Tokyo) is made from the same ingredients as Shiro miso. The ingredients are mixed at 35-45°C, and a part of the salt is added in a cooled solution after the mixing. The fermentation takes about 10 days in summer, 30 days in winter. The miso will keep for 4 to 15 months at room temperature.

3. Inaka miso (countryside or peasant's miso). Less expensive barley koji is used in place of rice koji. The soybeans are steamed for a very long time until they attain the desired reddish color. The fermentation takes 11-12 months, and the finished miso will keep for about 1 year. This type contains the most salt. To accelerate the fermentation, mix the ingredients while the soybeans are still hot.

4. Sendai miso (named after the city of Sendai) is substantially different in preparation from the other types. The cooked beans are rubbed to a paste, formed into prismatic pieces [*prismatische Stuecke*], and hung up with straw cords to dry for 1 to 1½ months. Then they are washed with lukewarm water, pulverized, sifted through a fine sieve, mixed with barley koji, salt, and cold water, and mashed in a mortar. The mass is put in the fermentation vat and roughly every 2 months reworked in the mortar. The fermentation, for which a cool room is used, is first ended after 1 to 1½ years, and the finished miso has a fine aroma, sweet taste, and reddish color. Because of the latter it is widely referred to as "red miso."

In the production of special types of miso, the following ingredients may be added to the basic ingredients before the fermentation: Glucose or cane sugar, gingerroot, slices of eggplant, Japanese burdock, roasted soybeans (*geröstete Sojabohnen*), rice bran, sesame oil. Moreover, many families, for use in their homes, prepare a miso using the press-cake that is left over after making shoyu and that has not been washed with salt water. It is used in place of steamed soybeans, and it is permeated with a fermentation-instigating power. In place of koji, dehulled barley may be used. In commercial miso production, only rice- or barley koji is used.

Note 2. This is the earliest German-language document seen that refers to soynuts, which it calls (*geröstete Sojabohnen*). Address: Prof., Dr., Moeckern [near Leipzig], Germany.

1422. Wehmer, Carl. 1895. *Aspergillus oryzae*, der Pilz der japanischen Saké-Brauerei [*Aspergillus oryzae*, the mold of Japanese sake breweries]. *Zentralblatt fuer Bakteriologie. Series 2.* 1(4/5):150-60. Feb. 23; 1(6):209-20. March 11. [40 ref. Ger]

• ***Summary:*** The first detailed description of *Aspergillus oryzae*. Address: Privatdozenten an der Technischen Hochschule, Hannover.

1423. *Boston Daily Globe*.1895. Our cooking school. March 10. p. 27.

• ***Summary:*** "Worcestershire sauce: One and a half gallons of white wine vinegar, 1 gallon of walnut catsup, one gallon of mushroom catsup, ½ gallon of Madeira wine, ½ gallon of Canton soy [sauce; from China], 2½ pounds of moist sugar, 19 ounces of salt, 3 ounces of powdered capsicum, 1½ ounces chutney, 3/4 ounce each of cloves, mace and cinnamon and 6½ drachms assafoetida [asafoetida, a spice] [drams; 1 dram = 1/16 ounce = 1.772 gm], dissolved in 1 pint of brandy 20 above proof. Boil 2 pounds of hog's liver for 12 hours in 1 gallon of water, adding water as required to keep up the quantity; then mix the boiled liver thoroughly with the water; strain it through a sieve. Add this to the sauce. Cayenne pepper may be added to it." From: Weaver, Olneyville, Rhode Island.

A second recipe, with a modification, is given by J.H. (of Fall River, Massachusetts), who has used it for over 10 years. It includes: "Canton soy, ½ gallon;..." The modifications include: "Indian soy, 1 ounce;... The Indian soy is an imported article; it is sometimes imitated by boiling one gallon of dwarf kidney beans in water till soft, adding 1 gallon of bruised wheat, keeping in a warm place for 24 hours, then adding a gallon of salt and 2 gallons of water, and keeping 2 or 3 months, in a tightly corked jar, after which the liquor is pressed out."

Note 1. Following the above instructions for homemade "Indian soy" will not work at all; the result will not even vaguely resemble soy sauce. Note 2. This is the earliest document English-language document seen (Feb. 2012) that uses the term "dwarf kidney beans" in connection with soybeans or soy sauce.

1424. *Evening Star* (*Toronto, Canada*).1895. The label on the bottle: Crosse & Blackwell, and Lea & Perrin may be heard from. Said to be on the trail of those who refill bottles: An effort to be made to stop the fraud. March 21. p. 1.

• ***Summary:*** "There is a species of fraud that has been practiced generally all over, that will likely before long be suppressed, for steps have already been taken in that direction, not only in Toronto, but also in other parts of the province."

An Englishman is here in the interest of several English sauce and pickle manufacturers, who think that their bottles and their labels are being too freely used to hold bulk articles of an inferior quality.

The label and the bottle: You have noticed in restaurants and hotels, even of good name, that the bottles containing Worcester sauce, and Crosse & Blackwell's pickles have

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labels that look as though they had been roughly handled," and that the contents of the bottle is of inferior quality.

Many of the people who fill these trade-marked bottles are apparently unaware that what they are doing is illegal. The Englishman is making a list of the names and addresses of the proprietors of such establishments.

1425. Hills & Co. 1895. Macaroni! (Ad). *Hartford Daily Courant* (*Connecticut*). April 8. p. 12.
• ***Summary:*** "Sauces... we carry ten times the best assortment. Lea & Perrin's Worcestershire 28¢, 45¢, and 75¢. Holbrook's Worcestershire 22¢, 35¢, and 65¢. Mango Chutney. Sliced Mango... also China Soy [sauce], Brands A 1, Reading, Walnut and Mushroom, Chile,..."

Also sells many types of "catsup," incl. Van Camp's. Address: 368 Asylum Street.

1426. *Evening Star* (*Toronto, Canada*).1895. Ketchups–pickles. Recipes for making choice relishes. July 13.
• ***Summary:*** Recipes are given for: Cold tomato ketchup. Tomato soy. Neither recipe calls for soy as an ingredient.

1427. Inoue, M. 1895. Note on nukamiso. *Bulletin of the College of Agriculture, Tokyo Imperial University* 2(4):216-18. Aug.
• ***Summary:*** Nukamiso (which is unrelated to miso) is rice-bran in a state of lactic fermentation that is used for pickling and softening certain vegetables such as daikon (Japanese white radish) and egg-plant. Nukamiso is prepared in barrels by almost every family in Japan.

The article concludes: "It may be that *nukamiso* will gradually find its way into other countries, as our soya-sauce or *shoyu* has done."

Note 1. This is the earliest English-language document seen (April 2012) that uses the term "soya-sauce" to refer to soy sauce.

Note 2. The parallel Japanese title of this English-language periodical is *Tôkyô Teikoku Daigaku. Nôka Daigaku. Gakujutsu hôkoku.* Address: Nôgakushi [Tokyo, Japan].

1428. Miyoshi, Manabu. 1895. Anwendung japanischer Soja und deren Gemisch fuer Pilz Kultur [Use of Japanese soya and mixtures of it for culturing molds]. *Botanical Magazine* (*Tokyo*) 9(104):361-65, 403-04. Oct. 20. [2 ref. Jap; ger]
• ***Summary:*** The first part of this article (p. 361-65) is in Japanese. The second part is a 1½-page German-language summary of the article, apparently by the author. Address: Prof., Botanical Institute, Tokyo Imperial University, Japan.

1429. Bowie (Robert). 1895. Sutter's Buildings (Ad). *Timaru Herald* (*Canterbury, New Zealand*). Nov. 30. p. 2, col. 3.
• ***Summary:*** "Has just landed ex 'Tokomaru' and 'Ionic' 54 cases new and seasonable goods, including Crosse and Blackwell's goods in great variety. Also Gorgona Anchovies,... Potted Meats, China Soy [sauce], Barrilla Ash Soap,..."

Note: This is the earliest document seen (Feb. 2010) in the New Zealand Newspapers database that contains the term "China soy."

1430. Prinsen Geerligs, H.C. 1895. Eenige Chineesche voedingsmiddelen uit Sojaboonen bereid [Some Chinese foods made from soybeans]. *Pharmaceutisch Weekblad voor Nederland* 32(33):1-2. Dec. 14. Summarized in Teysmannia (1897) 7:413-15. [5 ref. Dut; eng]
• ***Summary:*** Contents: Introduction. Tofu or bean cheese (*Tao-hoe of boonenkaas*). Chinese soja or Fao-ijoe (boonenolie; soybean oil). Japanese soya (soy sauce; In Japanese: Shoijoe; in Chinese: Sex-sze-ijve). Taucho or bean paste (*Fao toio of boonenbrei*).

In the section on tofu, soymilk is mentioned twice.
Note 1. This is the earliest Dutch-language document seen (Oct. 2003) that uses the term *melkachtige, vettige vloeistof* ("milky, fatty liquid") or *gefiltreerde melkachtige vleistof* ("filtered milky liquid") to refer to soymilk.

Note 2. This is the earliest document seen (March 2009) that mentions Indonesian-style miso, which it calls "Fao toio." This would later be spelled tao-tjo, taotjo, tauco, or taucho.

At the end of the section on tofu, the author continues: Another widely used bean preparation is soy sauce (de Soja), of which two kinds exist: the Japanese and the Chinese Soja. The first-mentioned has already been repeatedly described, for example by König (1889, p. 241), further by J.J. Hoffman in his "Contributions to the Knowledge of the Language, Geography, and Ethnology of the Netherlands Indies" (*Bijdragen tot de Taal-, Land- en Volkenkunde van Nederl. Indië;* Vol. V, p. 192), and recently by G. Schlegel in T'oeng pao [T'oung Pao 1894] (Part 5, No. 2) and O. Kellner in *Chemiker Zeitung* (1895, p. 120). While I could not find anything in the literature about the preparation of Chinese soy sauce (*Soja*), I have copied the following from the manufacturers themselves.

Chinese Soja or Fao-ijoe (bean oil). For this, only black varieties of the *Soja hipida* [*sic, hispida*] *humida Beta atrosperma* or *Soja hipida platycarpa Beta melanosperma* have been used. Their seeds are cooked and the water poured off, after which the beans are left in the sun for half a day to dry. Now they are cooled on big trays of woven bamboo out of the sun, then covered with leaves of a *Hibiscus* variety. On the beans there will always appear a type of mold, the *Aspergillus Oryzae* to be precise, which, at least on Java, appears every time again on moist soybeans exposed to the open air, but strangely enough does not appear on other foods. The beans are allowed to stand until the mold sporulates, which can be seen by the green color of the mold threads (hyphae), then they are dried again for some days

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and then put in a strong salt solution that has been cooled. This mixture is put in the sun for 8 days and afterwards it is boiled. The salt solution is then poured off from the beans and saved. The beans are boiled again and the water is added to the first salt solution. This process is repeated as many times as it takes to extract the residue completely.

"The decoction is strained through a fine sieve, boiled again, and the sugar from the areng palm, star anise (not the leaves), and some other herbs (which are available from Chinese druggists as "soya herbs") are added. Finally, this dark brown, pleasantly aromatic liquid is boiled down until salt crystals start to appear on the surface, indicating that the liquid is completely saturated with salt. After cooling, the soy sauce (*soja*) is ready to use. It yields a spice which is used together with all different kinds of foods as a pleasant condiment, and in the Chinese, Javanese, and even the European kitchen on Java it is an irreplaceable ingredient.

"Soy sauce is sold in several quality grades, of which the best is a thick sauce with a special aroma. The lesser kinds are thinner and are made by diluting the thick soy sauce with salt water, while in the very low-grade kinds, instead of the pleasantly sweet-tasting palm sugar, the bitter, sour-smelling unassimilated molasses from sugar factories is used.

Note 3. This is the earliest document seen (May 2010) that describes the preparation of a sweet Indonesian-style soy sauce quite similar to *ketjap manis* (which seems to have been first created about 1960), yet the writer does not mention its name.

"The Chinese soy sauce appears as a black colored, thick, clear liquid in which sometimes a viscous sediment can be found. When diluted with water it turns turbid or cloudy, but after adding salt this cloudiness disappears. Here is an analysis of one of the most common varieties: Specific gravity 1.254, saccharose and glucose 15.60%, nitrogen containing substances (*stikstofhoudende stof*) soluble in alcohol 4.87%, nitrogen containing substances not soluble in alcohol 2.62%, nitrogen-free substances soluble in alcohol 0.25%, nitrogen-free substances (*stikstofrije stof*) not soluble in alcohol 0.75%, salt 17.11%, other ash components 1.65%, water 57.12%, Total 100%.

"The substances insoluble in nitrogen consist (except for peptone) mainly of legumin, which is soluble in strong salt solutions (compare Beilstein, *Handbuch Organische Chemie*, III, p. 1275) and will precipitate when diluted. This protein product (*eiwitstof*) has, by repeated precipitation with alcohol and renewed dilution in water and salt, been cleaned and could be recognized as a legumin. The elementary analyses gave these figures: Carbon 51.6, hydrogen 7.1, nitrogen 15.9.

"Furthermore, the dilution in water was precipitated by ammonium sulfate, magnesium sulfate and sodium sulfate and not by a large quantity of sodium chloride.

"The nitrogen containing substances soluble in alcohol were leucine, tyrosine and aspartic acid, all breakdown products of legumin, plus a little ammonia. Nitrogen-free extraction substances are almost not present and consist of a little pectin and the black coloring agent from the skin of the soybeans, which gives the black color to the soya.

"Just like Kellner (*Chemiker Zeitung* 1895, p. 121) remarks, the composition of the soya is very similar to the one of meat extract, by which the big importance of this condiment in countries, where mainly vegetable type food is consumed, can be readily explained. Very peculiar moreover is the way in which during the preparation of the soya the heavily digestible protein substances, which are locked into the thick skinned cells of the soya, have been converted into an easily digestible, very delicious food.

"One lets the boiled beans mold by means of the *Aspergillus oryzae*, which above all has the quality of changing amylodextrine and starchy substances into sugars followed by carbonic acid and water breakdown. We can say that a microscopic investigation of a molded soybean shows that the mold threads (hyphae) penetrate the cell walls of the complete soybean and partly dissolve them so the contents will be more readily available. When the mold has used up all that food, as shown by its fructification, the beans are put into a strong solution of salt water so that the legumin will dissolve, producing a thick fluid liquid. At the same time, the broken down substances of the legumin will dissolve pepton [peptone], leucine, tyrosine and ammonia, next to the aromatic substance that will start to form in this stage. The continued manipulations, addition of sugar, herbs, etc., are of course of minor importance, but principally the clever way in which the mold is being used to dissolve the cell walls is highly interesting. This, like so many Chinese preparations, is completely empiric and no Chinese would have the slightest notion of what all this molding is about."

This article describes the first attempt to identify the tempeh mold. In the section on Indonesian miso (taucho), the author notes: "In a similar way, in Java, other molds are used to make leguminous seeds into more digestible foods. Thus the presscake, which remains after making peanut oil and would be indigestible without further preparation, is subjected to the action of molds. In central and eastern Java *Chlamydomucor Oryzae* [now known as *Amylomyces rouxii*] is used, whereas in western Java an orange mold of the family Oospore (Neurospora) is used. In the former case, the food is called 'bongkrek,' and in the latter 'ontjom.' If soybeans are molded with *Chlamydomucor* the spice is called 'tempets' [sic, tempeh]. In the preparation, the seeds are boiled, spread, mixed with a little molded cake from a former batch, and left alone for a while until the mass is bound into a solid white cake.

"All the aforementioned molds have the ability to break starch and pectin substances down into sugars, by which means the cell walls are opened and the seeds made more easy to digest.

"In the case of the starch-containing peanut presscakes, the breakdown of starch into sugars, followed by the use

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of the resulting sugars, proceeds so rapidly that the cakes become warm and within 1 day about 5% of their weight will disappear.

Kagok Tegal 28.9.95.

Note 4. This is the earliest document seen (Feb. 2004) written only in Dutch that mentions tofu, which it calls "Taohoe" or "boonenkaas." Earlier documents written in Latin and Dutch also mentioned tofu.

Note 5. This is the earliest document seen written only in Dutch that mentions Indonesian miso, which it calls *Fao toio* or *boonenbrei*, and *tao tsioe*.

Note 6. This is the earliest document seen stating that Hibiscus leaves are used in Indonesia to make soyfoods–in this case soy sauce.

Note 7. This is the earliest document seen (April 2012) that mentions "bongkrek"–but the explanation is incorrect.

Note 8. This is the earliest document seen (Sept. 2011) that mentions "ontjom." Address: Java, Indonesia.

1431. Agricultural Society of Japan (*Dai Nihon Nokai*). 1895. Useful plants of Japan: Described and illustrated. Vol. 1. Tokyo: Agricultural Society of Japan. 233 p. See p. 5-6. 22 cm. [Eng]

• ***Summary:*** Discusses five varieties of *Glycine hispida* (p. 5-6) including: 21. Black soy-bean, Jap. *Kuro-mame*. "The beans have black skin. They are eaten either boiled or parched and also used to make *miso* (a kind of sauce with solid consistency), cakes, and *natto* (a cooked beans eaten as relish to rice)."

Note 1. The writer fails to mention that both miso and natto are fermented foods.

Note 2. This is the earliest English-language document seen (Jan. 2012) stating that natto is eaten with rice, or as a relish to rice.

22. White soy bean, Jap. *Shiro-mame*. Similar to No. 21 but the beans have yellowish-white skins. "Numerous varieties as to size, form, or duration of growth occur, and all are eaten either boiled or parched. Many important services are due to this bean. They are used to make malt [koji], *miso* (a kind of sauce), *shôyû* (bean sauce), and *yuba* (a kind of food). The *mamenoko* (bean flour) [probably roasted soy flour or *kinako*] is made of the beans and is eaten with *dango*, etc. It yields a dye called *Mame-no-go*. Oil is also pressed out from these beans. They are used in many other different ways."

Note 3. This is the earliest English-language document seen (Dec. 2005) that uses the word *mamenoko* to refer to roasted soy flour.

23. Green bean, Jap. *Ao-mame*. Similar to No. 21 but with larger seeds of greenish color. "One variety with green colour both of the skin and albumen called *Konrinzai* occurs, and is used to make *Aomame-no-ko* (green bean flour).

24. Jap. *Goishi-mame*. The seed of this variety is flat and black. Eaten boiled.

25. *Gankui-mame*. "Closely allied to the preceding. The beans are larger and thinner in the middle, and eaten principally boiled."

Also discusses: Job's tears (*Coix lachryma*, Jap. *Tômugi, Hatomugi*, p. 5. The grain is pounded in a mortar, cleaned, and "consumed as meal and *mochi*. An infusion of the parched and ground grains is used instead of tea, and is called *Kosen*)." Five varieties of adsuki beans (*Phaseolus radiatus*, p. 7-8).

Pea-nut (*Arachis hypogæa*, Jap. *Tôjin-mame, Nankin-mame*, p. 9. "They are eaten parched or used in confectionery, or to extract oil. A variety with larger nuts about 3 times bigger was introduced from America in 1873").

Kudzu (*Pueraria thunbergiana*, Jap. *Kudsu, Makudsu*, p. 69-70, 92. "The largest roots are about 3-4 ft. [long] and about the thickness of a man's arm. In winter they are taken, and an excellent starch is prepared from them. It is used for food or paste. The vine is used to make baskets, and its fibre is taken for cloth. The leaves are used to feed cattle").

Sesame (*Sesamum indicum*, Jap. *Goma*, p. 84. "There are three varieties, black, white, and brown colored. The latter variety is the best to take oil. The oil is principally used for dressing food. The grilled seeds are used to add to cakes, salads, etc."). Address: Tameike 1, Akasaka, Japan.

1432. Atwater, W.O. 1895. Methods and results of investigations on the chemistry and economy of food. *USDA Office of Experiment Stations, Bulletin* No. 21. 222 p. See p. 193-94.

• ***Summary:*** In the section on "Food Consumption" a subsection titled "Japanese Dietaries" (p. 193-94) states: "The legumes are little eaten in their natural state but form the basis of a number of prepared foods and relishes, such as miso, tofu, and shoyu, all of which are made from the soja bean. The miso is prepared from cooked beans, which are rubbed to a thick paste and fermented with the ferment used in the preparation of the rice wine. Tofu, or bean cheese, is essentially the legumin of the soja bean, which is first extracted with water and then precipitated by the addition of the mother liquor (magnesium chlorid), obtained from the evaporation of sea water in the manufacture of salt. The cheese is eaten fresh. The shoyu sauce is prepared from a mixture of cooked and pulverized soja beans, roasted and pulverized wheat, wheat flour, salt, and water. The mixture is fermented with the above-mentioned rice ferment for 1½ to 5 years in casks. This sauce is used very largely by all classes." Address: Prof. of Chemistry in Weslyan Univ. Director of the Storrs (Connecticut) Agric. Exp. Station, and Special Agent of the U.S. Dep. of Agriculture.

1433. Holcombe, Chester. 1895. The real Chinaman. New York: Dodd, Mead & Company. xx + 350 p. Illust. No index. 21 cm.

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• ***Summary:*** An accurate and sympathetic portrayal of China and her people in 1895, with 77 full-page black-and-white photos. "One of the most common sights in any city or town of China is that of a boy or girl with three or four pieces of cash in one hand and a couple of dishes of coarse pottery in the other going, with great dignity and importance, to purchase the materials for the family dinner, and the fuel with which to cook it. The bill of expenditures would run somewhat as follows: Charcoal, one cash; rice or flour, two cash; cabbage, one cash. On occasions of prosperity another cash would be spent for oil or soy [sauce], and on very rare and exceptional festive days still another would be invested in purchasing about a teaspoonful of weak alcohol, to be drank hot with the meal" (p. 315-16).

"Their daily food consists of rice steamed, cabbage boiled in an unnecessarily large amount of water, and for a relish, a few bits of raw turnip, pickled in strong brine. When disposed to be extravagant and reckless of expense, they buy a cash worth of dried watermelon seeds, and munch them as dessert... In certain parts of the empire wheat flour, oat, or cornmeal takes the place of rice. With this variation the description answers with entire accuracy for the food consumption of the great masses of the Chinese people..." (p. 312).

"The inn was better than average, and was supplied with all the varieties of food which the region afforded... Six meals and lodging for three men were furnished for less than nine cents! But, to tell the truth, the bill of fare was wholesome, but simple in the extreme" (p. 314-15).

Pages 10-12 discuss opium and the opium war from the Chinese viewpoint. Pages 73-77 discuss the difficult role of women in China. Address: For many years Interpreter, Secretary of Legation, and Acting Minister of the United States at Peking [China].

1434. Miyoshi, Manabu. 1895. Die Durchbohrung von Membranen durch Pilzfaeden [Penetration of membranes by mold filaments]. *Jahrbuecher fuer wissenschaftliche Botanik (Berlin)* 28(2):269-89. [39 ref. Ger]

• ***Summary:*** Japanese shoyu was first used by Prof. Miyoshi of this Institute as a liquid cultural medium for various molds. He recommended a mixture of 50 parts water, 20 parts Japanese shoyu, 5 parts raw sugar, and 25 parts concentrated cooked onion juice.

Note: This is the earliest document seen (Sept. 2001) that describes the industrial uses of soybeans or soy products (shoyu) as a culture medium (for growing microorganisms). Address: Prof., Botanical Institute, Tokyo Imperial University, Japan.

1435. Bennett, John E. 1896. Pickle-making: An industry whose importance few appreciate. *Los Angeles Times*, Jan. 27, p. 6.

• ***Summary:*** An early study of the rapidly growing pickle-making industry and market in Los Angeles–with many statistics. The great staple of this industry is sauer kraut [sauerkraut]. The Foster Preserving Co., established 2 years ago, produces about 250 barrels/year of catsup and Worcestershire sauce. The Los Angeles Preserving Company, a new firm located on San Pedro street near Ninth street, makes about 500 gallons/year of Worcestershire sauce.

Lea & Perrin's Worcestershire sauce, "which made the estates of each of its manufacturers worth millions of dollars," comes into Los Angeles because of its good reputation, although its price is higher than that of locally made products.

Note: It would be very interesting to know the ingredients used in the catsup and Worcestershire sauce made by the Foster Preserving Co. Is soy sauce used in either?

1436. Prinsen Geerligs, H.C. 1896. Einige chinesische Sojabohnenpraeparate [Some Chinese soybean preparations]. *Chemiker-Zeitung* 20(9):67-69, Jan. 29. (Exp. Station Record 8:72). [3 ref. Ger]

• ***Summary:*** This is a German translation of the author's 1895 Dutch article, but with two mistakes concerning tempeh corrected. He changed the name of the mold from *Chlamydomucor Oryzae* to *Rhizopus Oryzae* and he changed the name of the product from "tempets" to "tempeh." He added in conclusion that "it was finely sliced and enjoyed, mold and all." But he continued, apparently mistakenly, to refer to tempeh as a Chinese soyfood.

He also improved his description of Chinese-style soybean paste, which he now calls *Tao-tjiung* (*Bohnenbrei*) [*doujiang*], and says has much similarity with the miso of the Japanese (p. 68 R.7).

Note 1. These two articles by Prinsen Geerligs ushered in the era of scientific research on tempeh by European microbiologists and food scientists.

Note 2. This is the earliest document seen (Sept. 2011) that contains the word "tempeh"–spelled with an "h" on the end.

Note 3. It is also the earliest German-language document seen (Sept. 2011) that mentions tempeh, which it calls "tempeh."

Note 4. This is the earliest German-language document seen (Oct. 2003) that uses the term *milchweisse Flüssigkeit* ("milk-white liquid") to refer to soymilk. Address: Java, Indonesia.

1437. Corson, Juliet. 1896. A Lenten dinner: Good things that can be made in the lean season even. *New York Times*, March 8, p. 27.

• ***Summary:*** "Soya, or soy, is a favorite table sauce, which was first brought to England by officers returning from India. Small pieces of fish, poultry, and vegetables are preserved in this sauce, with the double effect of keeping them entirely sweet and making them tender... being remembered that the

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Chinese soya is sweet and spicy, but less peppery than the cassareep of the West Indies. The Japanese is salter [sic, saltier] and less spicy and sweet than the Chinese."

Note: "Cassareep is a thick black liquid made from cassava root, often with additional spices, which is used as a base for many sauces and especially in Guyanese pepperpot. Besides use as a flavoring agent, it also acts as a preservative" (Source: Wikipedia, Sept. 2010).

1438. Wehmer, Carl. 1896. Aspergillus Wentii, eine neue technische Pilzart Javas [Aspergillus Wentii, a new type of technical mold from Java]. *Zentralblatt fuer Bakteriologie. Series 2.* 2(5):140-51. March 27. [8 ref. Ger]

• ***Summary:*** Contents: General and background. The mold. 3. Physiology of the mold. 4. Comparison with similar mold varieties. 5. Diagnosis: *Aspergillus Wentii* [Wehmer] nov. spec.–a new species of mold.

This new species of mold was observed by Went in the preparation of Chinese-style soy sauce (*Tao Yu*, see vol. 1, p. 248) and Chinese-style soybean paste (*Tao-tjiung* or *Bohnenbrei*) according to the method practised in Java, and was described by Wehmer (XIX.) in 1896. It appears spontaneously on the boiled Soja beans that have been covered with *Hibiscus* leaves, and affects a loosening and disintegration of the firm tissue of the bean.

Ten illustrations on p. 151 show different stages and parts of the mold.

Note: This is the earliest document seen (Feb. 2009) that contains the term Tao-tjiung, a term, and perhaps a product, that appears to be between *doujiang* (Chinese-style miso) and *tao-tjo* (Indonesian-style miso). Address: PhD, Privatdozenten an der Technischen Hochschule, Hannover.

1439. Parker & Co. 1896. Groceries. New goods just received (Ad). *Hartford Daily Courant* (*Connecticut*). April 1, p. 10.

• ***Summary:*** "Pate de Foie Gras, Truffles du Perigord... Crosse & Blackwell's Mushroom Catsup. Crosse & Blackwell's Walnut Catsup. Crosse & Blackwell's India Soy [Sauce]. Crosse & Blackwell's Essence of Anchovies,..." Address: 17 Central Row.

1440. Trimble, Henry. 1896. Recent literature on the soja bean. *American J. of Pharmacy* 68:309-13. June. [12 ref]

• ***Summary:*** One of the best early reviews of the literature, especially the Japanese and European literature, published in the United States. This paper introduced several new soyfoods (such as *natto* and *kori-dofu*) to the United States Contents: Introduction. Nutritional composition of the soja bean based on analyses of 5 samples from China, Hungary, France, and Japan. Diastatic enzyme / ferment "present in the soja beans to a greater extent than in many other leguminous seeds (see Güssmann 1890). Composition of etiolated soja shoots [sprouts]. The oil [of the soja bean]. Starch content. Sugar content. Use of soybeans as food in Japan. Miso. Natto. Tofu. Kori-dofu. Introduction of the soja bean to the United States in about 1888. Ability to obtain nitrogen from the air.

"The immediate excuse for the appearance of this paper is the fact that a number of contributions have recently appeared on the soja bean, notably from the College of Agriculture, Imperial University of Japan."

"The oil may be extracted by pressure or by means of solvents [in the laboratory]; it is said to possess some laxative properties, is of a yellowish brown color, and has a slightly aromatic odor; it is intermediate between the drying and non-drying oils." The following constants, based on Stingl and Morawski (*Chemiker Zeitung*, 1886, p. 140) are given: "Specific gravity at 15°C: 0.924. Point of solidification: 8-15°C. Fusing point of the fatty acids: 27-29°C. Point of solidification of fatty acids: 23-25°C. Temperature rise: 59°C. Iodine number: 121.3. Iodine number of the fatty acids: 122. Saponification number: 192.5. Note: Trimble actually got these constants from *J. of the Society of Chemical Industry*, 31 May 1893, p. 453-54, which summarised an Italian-language article by De Negris and Fabris (1891), whose values confirmed those obtained by Stingl and Morawski.

Trimble (p. 311-12) gives a good, detailed description of natto based entirely on Yabe (1894). Parts of his summary perceptive: "Yabe found in this substance four kinds of microbes present, and he believes the chemical decomposition of the proteids to be due to one or more of these microbes... A chemical investigation by the author just mentioned [Yabe] revealed tyrosine, peptone, guanine, leucin and xanthine. The total proteids amounted to considerably more in the *natto*, when allowance is made for moisture, than existed in the original bean, and the artificial product is also considered to be much more digestible."

Concerning tofu and soymilk: "A still more interesting preparation of the soja bean than either of the preceding [miso and natto] is *tofu*. This has been described and investigated by M. Inouye (*Bulletin Imp. College of Agriculture*, Vol. 2, No. 4 [1895]). The beans are first soaked for about twelve hours in water, and then crushed between two millstones until a uniform pulpy mass is obtained. This is then boiled with about three times its weight of water, and filtered through cloth. The liquid filtrate is white and opaque, very closely resembling cow's milk, while the odor and taste remind one of fresh malt. On standing, the liquid becomes sour from the formation of lactic acid, and a coagulation of the casein takes place. The freshly boiled and filtered liquid is coagulated either by the addition of a portion of the sour liquid which has been set aside from a previous lot, or it is treated with about 2 per cent of a concentrated brine, such as is obtained as mother liquor from the preparation of sea salt."

"Somewhere about the year 1888 the soja bean was introduced into the United States. It has been tried in a

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number of State Experiment Stations, and is gradually working into favor in the Southern States. In Kansas the plant has been found to withstand considerable drought... The plant is valuable for forage or soiling. The beans have been produced in South Carolina to the amount of 10 to 15 bushels per acre. On account of their richness in oil they have been used as a substitute for cotton-seed meal in feeding cattle, with very satisfactory results.

"The plant is believed to have, in common with most leguminosæ, the power of obtaining some of its nitrogen from the air, and hence, of acting as a soil renovator."

Note 1. This is the earliest document seen (March 2002), published in the USA, that contains the word *tofu*, or *kori-dofu* [dried-frozen tofu], or that discusses soymilk.

Note 2. This is the earliest English-language document seen (March 2003), published in the USA, that uses the word "crushed" or one of its cognates (crushing, crushers, etc.) in connection with soybeans.

Note 3. This is the earliest U.S. document seen (Sept. 2002) that mentions the use of a solvent for extracting the oil from soybeans.

Note 4. This is the earliest English-language document seen (March 2008) that contains the term "iodine number" (regardless of hyphenation or capitalization).

Note 5. This is the earliest English-language document seen (March 2008) that contains the word "drying" in connection with soy oil and its iodine number, or that states that soy oil is intermediate between the drying and non-drying oils. Address: USA.

1441. Yeo, I. Burney. 1896. Food in health and disease. New and rev. ed. Philadelphia, Pennsylvania: Lea Brothers. viii + 592 p. See p. 383-84, 394, 399. Illust. Index. 19 cm. Reprinted in 1897, 1901

• ***Summary:*** In Part II, "Food in disease," Chapter 3 is titled "Food in diabetes." In a review of the literature, "Soya bread" is mentioned on pages 383-84. A nutritional analysis of soybean flour by Prof. Attfield appears on p. 384.

Table II, "Article permissible [in diabetic diets] in small quantities" (p. 394) includes: "English sauces.–Worcester, Harvey, anchovy, Indian soy, etc. 1 tablespoonful."

The section on "Diabetic dietaries" contains "5.–Dujardin-Beaumetz's" (p. 399) which begins: "He adopts with little modification the dietary of Bouchardat. He strongly recommends... *the use of soya bread.*"

The author (who lived 1835-1914) mentions gluten on pages 7, 9, 67, 69, 71-76, 165, 173, 379, 381-384, 396, 398, 399, 404, 538, and 554. Address: M.D., F.R.C.P., Prof. of Clinical Therapeutics, King's College, London; Physician to King's College Hospital [London, England].

1442. *Boston Daily Globe*.1896. Banquets in China. Here is a list of the proper dishes to be served. There must not be less than 37 courses on such an occasion. Sept. 20. p. SM40.

• ***Summary:*** From *Woman* magazine, by Miss J.E. Budgett-Meakin: "One night I was a guest at a regular Chinese feast of 37 courses, and here is the bill of fare:" 2-5 "... boiled fowl dipped in soy sauce."

Courses 1-20 were "the preliminaries, which were duly disposed of or sampled, according to taste by means of chop-sticks, little bowls of soy sauce being provided wherein to dip such of the provisions as seemed to require more flavor."

1443. Parker & Co. 1896. Imported sauces! (Ad). *Hartford Daily Courant* (*Connecticut*). Oct. 3. p. 4.

• ***Summary:*** This ad is almost identical to that which appeared in the 30 Sept. 1893 (p. 4) issue of this newspaper.

Note: This ad also appeared in 1896 in the Oct. 6, 7, 8 and 9 issues of this newspaper. Address: 17 Central Row.

1444. Hearn, Lafcadio. 1896. A living god. *Atlantic Monthly* 78(470):833-41. Dec.

• ***Summary:*** Part I of this article is about Shinto shrines (*miya, yashiro*), their architecture and philosophy. The typical shrine is a windowless building of unpainted timber with a very steep overhanging roof. Part II is about customs in traditional Japanese villages. Quarreling between people of the same community was not allowed; Japanese know how to live without quarreling. Japanese generally fight only to kill. Also, a peasant girl, before marriage, enjoyed far more liberty than was permitted to city girls. No objection was raised to her having a lover if the relationship was honest and based on good intentions. But if, after marriage, she had an extramarital affair, she and her parents would be shamed by all villagers. She would be stripped, driven in mockery through every street of the village, then sentenced to banishment for 5 years–after which she was free to return to her husband and village.

Part II (p. 837-41) tells how Gohei Hamaguchi (who lived on the Japanese coast long before the Meiji era) protected nearby villagers from a huge tidal wave (*tsunami*) by setting fire to his own newly harvested rice, to which the straw was still attached in the field. The fire attracted the villagers away from the beach as they ran up the hill to put out the fire–and thereby saved their lives. Their village by the bay had been totally destroyed. Grateful for their lives, the villagers declared him a god, called him Hamaguchi Daimyôjin, built a temple in their village to his spirit, and worshipped him there with prayer and offerings.

Note 1. Koji Okamoto, an officer of the Yamasa Shoyu Co., sent this article to Soyfoods Center in Feb. 1995. However the article was in a different format. On the left page was the original English, and on the left page was a Japanese translation, with difficult words or ideas explained in footnotes. The name of the author and the last four paragraphs are omitted! A separate Japanese-language article sent by Mr. Okamoto (See his letter to Soyfoods Center dated 8 Nov. 1984) gives the name of the hero as

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the 7th Gihei [sic. Gohei] Hamaguchi of Yamasa, and says that he is related to the Hamaguchi family that started the famous shoyu company at Yamasa. The article adds: After the tidal wave, realizing that in order to protect the villagers from future tidal waves, he would have to construct a strong embankment, he did so at his own expense. After the project was completed, the villagers proposed building a shrine for him. He, of course, turned down their request. The embankment still remains solid and protects the villagers at Arita-gun, Wakayama-ken, Japan. Gihei wanted to conceal his act of setting fire.

Note 2. His kind act was discovered not by a Japanese but by the famous British author Lafcadio Hearn (lived 1850-1904; Japanese name: *Koizumi Yakumo*), who wrote *Kaidan*, a well-known Japanese-language book of ghost stories. He also collected Buddhist proverbs and assembled 100 of the most representative sayings in his 1899 book, *In Ghostly Japan* (*Rei no Nihon*) which expressed the viewpoint that "all things are merely dreams." Born in Greece in 1850, Hearn lived in Ireland as a youngster and later traveled in the USA, where he worked as a journalist for various newspapers. In 1886, Hearn visited Japan as a reporter and was so captivated by Japanese culture that in 1890 he moved there to teach English. Six years later he became a naturalized Japanese. He married Koizumi Setsu, raised a family, and continued to teach and write until his death in 1904.

Note 3. Gihei's name became famous in London earlier than in Japan. This story of the tidal wave is said to have appeared in Japanese elementary school textbooks before World War II. Address: Japan.

1445. Chicago City Directories, Shinzaburo Mogi, Kikkoman, Shinzo Ohki, Oriental Show-You Co. 1896-1923. Chicago, Illinois.

• ***Summary:*** The Chicago city directory shows no listings in 1896, 1902, or 1904 for Mogi or Yamato. In 1914 Shinzaburo Mogi is president of Yamato Importing Co., 824, 36 S. State in Chicago. S. Nakinura also works there. They import silks. In 1916 Shinzaburo Mogi is still president but the address is now 3rd floor, 319 West Adams. S. Kurihara is secretary. Mr. Mogi's residence is at 6050 Blackstone Ave. Mr. Tanba and Oriental Show-You are not listed.

In 1923 Shinzaburo Mogi is treasurer of Oriental Show You Co. and resides at 6210 Dorchester Ave. The listing for Oriental Show-You Co. shows Shinzo Ohki, president, Earlie Diffendarfer, vice president (residence: Columbia City, Indiana), Mitsuji Kiyohara, secretary, and Shinzaburo Mogi, treasurer. Soy mfgrs, 208 N. Wab Av. The listing for Yamato Importing Co. shows S. Mogi, president, S. Kitazawa, vice president, N. Kimura, secretary, T. Kinchi, treasurer. Whol[esale] dry goods, 305 W. Adams. Address: Chicago, Illinois.

1446. **Product Name:** [Dr. Lahmann's Japan Soja].
Manufacturer's Name: Dr. Heinrich Lahmann.
Manufacturer's Address: Germany.
Date of Introduction: 1896.
How Stored: Shelf stable.
New Product–Documentation: Ad in Ellen Goodell Smith. 1896. *The Fat of the Land and How to Live on It.* A description of "Japan Soja" is given on p. 164-65. A full-page ad (p. 258) is titled "Pure. Vegetable. Nutritive." by The Hygienic Supply Co. (F. Witte), 203-205 Park Ave., Baltimore, Maryland. They are "Importers of German health goods and books" including Dr. Lahmann's Japan Soja, which "Is a pure vegetable extract, which is far superior to Meat Extract. It can be used for making soups, or may be added to other foods in order to make them more appetizing. Price per jar, $1.00." Other German imports include Dr. Lahmann's Vegetable Milk (for infants), Dr. Lahmann's Vegetable Extract, and Dr. Lahmann's Nutritive Cocoa.

Note 1. According to *Vegetarisches Kochbuch mit Gesundheit Regeln*, by Carlotto Schultz (1886), Dr. H. Lahmann of Stuttgart is an authority on the feeding of infants and problems related to indigestion. Note 2. Strittmatter (1915, p. 56) says that H. Lahmann M.D. lives in Munich, Germany.

Note 3. Janet Barkas in *The Vegetable Passion* (1975, p. 100) states that Dr. Heinrich Lahmann was an early, influential vegetarian in Germany. "Lahmann traced many illnesses to an over-reliance on meat and unnatural medications." He was one of the first German physicians to use natural healing methods. He was the author of at least 3 major books, his sanitorium generated much enthusiasm, and, at the turn of the century, he founded a vegetarian society in Dresden.

Note 4. This is the earliest known commercial soy product made in Germany.

1447. Farmer, Fannie Merritt. 1896. The Boston Cooking-School cook book. Boston, Massachusetts: Little, Brown and Company. xxx + 567 p. + [21] p. of advertisements. Illust. Index. 19 cm. See also the 1911 and 1918 eds.

• ***Summary:*** This book is dedicated to Mrs. William B. Sewall, President of the Boston Cooking-School. A dedication, by the English author John Ruskin (1819-1900), is the same as that found on the title page of Croly (1870).

In the Preface, Fannie states: "During the last decade much time has been given by scientists to the study of foods and their dietetic value, and it is a subject which rightfully should demand much consideration from all. I certainly feel that the time is not far distant when a knowledge of the principles of diet will be an essential part of one's education. Then mankind will eat to live, will be able to do better mental and physical work, and disease will be less frequent." She hopes that this cook book will "be looked upon as a compilation of tried and tested recipes" and "that

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it may awaken an interest through its condensed scientific knowledge which will lead to deeper thought and broader study of what we eat."

Chapter 1, titled "Food," begins by discussing proteids, carbohydrates, fats and oils, mineral matter (which furnishes the necessary salts), and water. "The chief office of proteids is to build and repair tissues. They can furnish energy, but at greater cost than carbohydrates, fats, and oils. They contain nitrogen, carbon, oxygen, hydrogen, and sulphur or phosphorus, and include all forms of animal foods (excepting fats and glycogen) and some vegetable foods. Examples: milk, cheese, eggs, meat, fish, cereals, peas, beans, and lentils. The principal constituent of proteid food is albumen. Albumen as found in food takes different names, but has the same chemical composition; as, albumen in eggs, fibrin in meat, casein in milk and cheese, vegetable casein or legumen in peas, beans, and lentils; and gluten in wheat. To this same class belongs gelatine" (p. 2).

"One of the greatest errors in diet is neglect to take enough water;..." (p. 2).

"The average daily ration of an adult requires 3½ oz. [99.3 gm] proteid, 3 oz fat, 10 oz. starch, 1 oz. [28.38 gm] salt, 5 pints [10 cups] water" (p. 3).

"To keep in health and do the best mental and physical work, authorities agree that a mixed diet [from both the animal and vegetable kingdoms] is suited for temperate climates, although sound arguments appear from the vegetarian... Brain workers should take their proteid in a form easily digested. In consideration of this fact, fish and eggs form desirable substitutes for meat." But the working man needs meat (p. 3-4).

Chapter 2, titled "Cookery," begins (p. 17): "Cookery is the art of preparing food for the nourishment of the body... Progress in civilization has been accompanied by progress in cookery."

Three recipes have the word "peanut" in the title: Peanut cookies (p. 408). Salted peanuts (p. 445). Peanut nougat (p. 449). And Pistachio bisque uses peanuts as an ingredient.

Worcestershire Sauce is used in recipes throughout this book: Oxtail soup (p. 108-09). Cecils with tomato sauce (p. 188). Salmi of Lamb (199; "or one cup cold lamb gravy seasoned with Worcestershire, Harvey, or Elizabeth Sauce"). Veal cutlets (p. 202; its Brown sauce is seasoned with "salt, pepper, lemon juice, and Worcestershire Sauce"). Tartar sauce (p. 244). Sardine canapés (p. 462; "sardines (from which the bones have been removed) rubbed to a paste, with a small quantity of creamed butter and seasoned with Worcestershire Sauce and a few grains of cayenne"). Devilled bones (p. 471; also calls for "1 tablespoon Walnut Catsup").

Blanquette of Lamb (p. 199) also calls for "one tablespoon Mushroom Catsup." Thus, "catsup" is called for in only two recipes; "ketchup" is not mentioned.

"Fannie Farmer (1857-1915), the author of this book, is perhaps the best known of the great American culinary authorities of the turn of the 19th to 20th centuries. And this book is arguably the best known and most influential of all American cookbooks. It has been in print from its appearance in 1896 until the present day... The publishers, Little, Brown, evidently afraid of losing money on a cookbook, required Fanny to pay for the first printing herself;..." By the time she died in 1915 more than 360,000 copies had been sold. By 1946 some 2.5 million copies had been printed, and by 1990 about 4 million.

When Fannie was 30, she was encouraged "to enroll in the Boston Cooking School to train as a cooking teacher. The school, established in 1879 by the Woman's Education Association of Boston, fostered a more intellectual, scientific approach to food preparation and diet, and in turn, elevated the role of women not just as cooks, but as educated cooking teachers and authorities on proper diets for the healthy and sick. As a post-Civil War institution founded by reformers and philanthropists, the school gave women of modest means an entry into professional work at a time when more women needed employment and few had career options... Mary Johnson Lincoln, one such woman who began working following her husband's financial demise, served as president of the school from 1879 to 1885." Fannie "completed the two-year program in 1889 as one of the best students; she stayed on as Assistant Principal and became Principal in 1891."

Fannie Merritt Farmer lived 1857-1915. This book, her first cookbook, is actually an extensively revised version of Mary J. "Lincoln's popular work, *Mrs. Lincoln's Boston Cook Book*, published 12 years earlier" in 1884. "Some initially criticized the book for appropriating Mrs. Lincoln's schools recipes without acknowledgement. Nevertheless, the book stood on its own as thoroughly modern:..." (MSU biography). Address: Principal of the Boston Cooking School.

1448. Nishimura, Eijuro. 1896. Miso shôyu jôzôhen [Miso and shoyu fermentation]. Tokyo: Hakubunkan. 316 p. See p. 18. 20 cm. Series: Tsuzoku nichiyo kagaku zensho, no. 11. [Jap]*

• ***Summary:*** More than 90% of the protein in soy beans is in the form of albuminoids.

Note: This is the earliest book in WorldCat / OCLC that has miso as a subject or title word.

1449. Skeat, Walter William. 1896. A concise etymological dictionary of the English language. 4th ed., further revised with enlarged supplement. New York, NY: Harper & Brothers, Publishers. xii + 633 p. See p. 453-54, 611.

• ***Summary:*** The etymology of the word "Soy" states (p. 453-54): "Soy, a sauce. (Japanese.) Also *sooja*, 'which has been corrupted into 'soy;' Eng. Cycl. Japanese *shóyu*, soy, sauce: though the name is now given to the bean (*Dolichos*

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soja) whence *soy* is made."

In Appendix 6, "Distribution of words according to the languages from which they are derived," is a section (p. 611) "19. Words of Asiatic origin, but neither Aryan nor Semitic." Under "Japanese" are listed only two words: "japan, soy." Address: Rev., Litt.D, LL.D., Elrington and Bosworth Prof. of Anglo-Saxon in the Univ. of Cambridge [England].

1450. Smith, Ellen Goodell. 1896. The fat of the land and how to live on it. Special chapters on nuts and vegetable oils, and how to use them in cooking; milk; bakeries; feeding infants and various other subjects relating to the problem. Amherst, Massachusetts: Press of Carpenter & Morehouse. 251 + [12] p. Portrait. Illust. Index. 20 cm. At top of title page: "A practical cook and text book for general use."
• ***Summary:*** A remarkable and wholistic vegetarian (actually vegan) cookbook by a medical doctor (M.D.). A photo (frontispiece), facing the title page, shows a portrait of Dr. Ellen Smith. Dedication: "To the millions of thinkers who think in new directions, and to other millions who do not stop to think whether they should 'live to eat' or eat to live' this book is dedicated." Facing the table of contents are three quotations from Buddhist and Christian scriptures on the importance of not killing.

The Preface begins: "This book *is* because of the agitation and discussion upon the various phases of the food question. The title indicates its character to be vegetarian; this word however is a misnomer, but as none better has yet been coined, we will simply state that we are vegetarians because we think nature designed us to subsist on the 'fat of the land,' and not on the flesh and blood of beasts, or of any living, sentient creature."

"To be a health and dietetic reformer in the early days of this movement meant much sacrifice and often personal abuse" (p. 10).

"With no desire to set aside the work of the scientists, we accord 'honor to whom honor is due,' and may success attend their gigantic efforts, that seem to be heroically directed toward healing, protecting, and preparing the animal world and their products for human consumption" (p. 11).

This chapter, after listing many of America's major problems, concludes: "From a vegetarian standpoint, these unhealthful conditions of mind and body are largely propagated, nourished and developed and developed from the never ending supply of slaughtered flesh and its stimulating–not nourishing–accompaniments. The moral and physical health of millions is thus undermined, and from such material is created generation after generation of imperfect human beings;..." (p. 11).

Chapter 5, titled "Milk, cream, butter, etc." begins: "Milk, cream, butter, salt and sugar are admissible in hygienic and vegetarian dietary, but in most of the recipes here given are not included... [but] in all cases salt can be added if desired, or milk substituted for water."

Chapter 6, titled "Vegetable oils," notes: "Those at present extensively used for culinary purposes are obtained from the olive, cocoanut and cotton seed." It is almost impossible to obtain olive oil unadulterated. "The *American Analyst* tells us that 'Two-thirds of the olive oil sold in the markets of the world is born in the cotton fields of the southern states" (p. 57). "At Manheim, Germany, cocoanuts have for many years been made into butter for general culinary use... [It] keeps indefinitely and even when exposed to the air *will not become rancid* like animal fat. This butter is also manufactured in England... It is now manufactured in America by the Pure Food Co., Chicago, Illinois" (p. 58). Chapter 6 concludes prophetically: "One need not be a vegetarian or even a hygienist to use these vegetable oils, for these are thousands of families using them, who also use animal food, finding economy in health and purse by so doing." Note 1. This is the earliest document seen (March 2005) that contains the term "Pure Food," probably in connection with the growing "pure food movement" in the USA

Chapter 10, titled "Nuts, their culture and use in cooking," (p. 141-56) discusses almonds (now largely grown in California), walnuts, pecans, Brazil nuts, and peanuts. Peanut oil is largely exported to foreign countries and doubtless returns, with olive oil, under the name of "Pure Olive Oil." "It is said that America uses 4,000,000 bushels of peanuts yearly at a cost to the consumers of $10,000,000. Very rarely do we find these nuts on the table as an article of food, but they are consumed between meals by everybody, from the shoeless and hatless street waif to the gray-haired millionaire." "Unbelievers tell us that a vegetable diet lacks proteids or tissue building elements, and hence that vegetarians are not properly nourished. Science has demonstrated that proteids are abundant in the grains," nuts, and other foods (p. 148-49). The section titled "Nuts as food" (p. 149-53) begins: "Nuts are not only superior to flesh as an article of diet, but may be used in many forms of cookery, either whole, chopped, grated, crushed or ground into a paste or meal." "The pine nut, sold under the name of pegnolia [pignolia], is an excellent nut for cooking." Two sub-sections are titled "Nut substitute for milk" (using cocoanuts, pecans, peanuts, Brazil nuts, etc.) and "Nut butter" (one of the latest novelties). There are recipes for sandwiches with "almond nut butter," and "Peanut sandwiches" spread with a "form of nut butter which flavors so strongly of peanuts that it will make an excellent substitute for dairy butter to spread the bread and hold the crushed nuts in place." Note 2. This book contains no recipe for making peanut butter at home.

Chapter 11, "Salads," contains a long section titled "Japan Soja" (p. 164) which clearly refers to Japanese soy sauce: "A jar of the extract of Japan soja was received too late for careful testing or experiment. But coming from a German vegetarian laboratory [Dr. Lahmann's] and said to be free from injurious substances, it may prove to be a useful

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addition to the table. Following is a description of the Soy-bean from which it is made.

'Japan Soja, a substitute for flesh meat extracts such as Bovinine, etc. etc. The soy-bean or pea is a small erect herb, ("Glycine soja," or "soja hispida") of the bean family, "Papilionacees" of India and China, cultivated for its seeds; composed of 38% proteids, 17 to 20% fat, 5% cellulose and 4% ashes. The hygienist loses nothing by declining flesh meat extracts of any sort, but substantially gains by adopting Japan Soja, a safe and far more palatable flavoring for various dishes. It may not only be so employed in the preparation of dishes, prior to serving, but subsequently and similarly to Worcestershire sauce, etc.'

The odor and flavor of this preparation is very delicate and may readily supply a need in the dietary of those who are making a change from an animal to a vegetable diet."

The next (and last) paragraph of Chapter 11 (p. 165) notes that commercial samples of "Bromose and nut butter... manufactured in vegetarian laboratories and guaranteed free from animal fat" were "received at 'the eleventh hour,' too late for critical experiment... Crushed nuts, nut butter and nut meal of home make were used in all preceding recipes containing nuts."

Chapter 12, titled "Condiments and seasonings" (p. 167-71) argues against the use of salt, spices (including pepper, mustard, ginger, etc.), and commercial condiments. "Salt destroys natural flavor and gives its own flavor to all food... Salt also induces unnatural thirst,..." Instead, why not grow and use "sweet herbs" and "aromatic seeds." "Why may not sweet marjoram, sweet basil, rosemary and lavender, lemon verbena, rose and geranium leaves lend their exquisite flavors to our food? Thyme, parsley, sage and mints of various kinds..." Note 3. This general attitude may explain why Japanese soy sauce, a commercial condiment, was not considered a condiment and included in this chapter.

A "Directory" (p. 246) lists 13 sources of "pure food products" including: "Health foods: Dr. J.H. Kellogg, Battle Creek, Michigan. Nut preparations: Sanitas Food Co., Battle Creek, Michigan... Vegetable milk, etc.: Hygienic Supply Co., 203-05 Park avenue, Baltimore, Maryland... Readshaw's Forest Mills Graham Flour (Original) and cereals, Dansville, New York."

A full-page ad (p. 255) describes products made and sold by the Sanitas Food Company (Battle Creek, Michigan) titled "Pure Products of Nuts." These include Bromose, Nuttose, Nut-Butter [probably peanut butter], and Nut-Meal.

A full-page ad (p. 258) is titled "Pure. Vegetable. Nutritive," by The Hygienic Supply Co. (F. Witte), 203-205 Park Ave., Baltimore, Maryland. They are "Importers of German health goods and books" including Dr. Lahmann's Japan Soja, which "Is a pure vegetable extract, which is far superior to Meat Extract. It can be used for making soups, or may be added to other foods in order to make them more appetizing. Price per jar, $1.00." (Note 4. According to *Vegetarisches Kochbuch mit Gesundheit Regeln*, by Carlotto Schultz {1886}, Dr. H. Lahmann of Stuttgart is an authority on the feeding of infants and problems related to indigestion.) Other products imported from Germany by this company include Dr. Lahmann's Vegetable Milk (for infants), Dr. Lahmann's Vegetable Extract, and Dr. Lahmann's Nutritive Cocoa.

Note 5. This is the second earliest English-language document seen (April 2010) that contains the term "Vegetable Milk." This non-soy product is an emulsion made from almonds and nuts.

Page 259 contains an ad for *Health-Culture: A Journal of Practical Hygiene* by The Health-Culture Co., 341 Fifth Ave., New York.

Page 260 contains an ad for *Food, Home and Garden*, a periodical edited by Rev. Henry S. Clubb of the Vegetarian Society of America, 310 Chestnut St., Philadelphia, Pennsylvania.

Note 6. Notice that this book contains no chapter on main dishes or entrees; unleavened Graham bread (made with "entire wheat flour") was considered the best main dish. Very few the many recipes call for the use of dairy products, eggs, animal fats, or honey, and in each case they are optional. Chapter 13, "Pudding, pastries and cakes," convincingly questions the need for this entire category of foods, but those who *must* have such sweets are encouraged (p. 176-77) to use water instead of milk, vegetable fats instead of animal fats and dairy products, reduce the number of eggs and the amount of sugar used by one-half or more, and gradually eliminate spices and salt. Chapter 14, "Milk and the cow" makes a strong case for not using these animal products.

A woman cited several times (p. 68, 177) as an authority on foods is Mrs. Emma P. Ewing. Address: M.D., Pansy Park, Dwight, Massachusetts.

1451. Tokio Nurseries Co. 1897. General catalogue of plants, bulbs, seeds, &c. &c. Tokio, Japan. v + 53 p. 25 cm. [Eng]
• ***Summary:*** In the section titled "Vegetable seeds" (p. 45-50) is a subsection on "Pulse" (p. 47-48). The first entry is: "Soya Hispida, glycine hispida, soy bean, wide cultivation of this bean in the East, is used in the preparation of Japanese Soy [sauce], of Vegetable Bean Cheese [tofu], as well as Green fodder and manure. Thus the bean forms one of the staple products of Japan.

"'Early Variety,' sow April, crop in June. $1.20 per 10 lbs. $12.00 per 100 lbs.

"'Late Variety,' sow May, crop in August, eaten only when fully boiled down. $2.00 per 10 lbs. $18.00 per 100 lbs."

Other species of pulse listed are: *Phaseolus Mungo var. subtrilobata* ([azuki], 4 varieties; "'Common,' a very hardy productive one, sending out bushy crowns. The beans are crushed and made into sweets. $1.00 per 10 lbs."

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Also: White, Black-Eyes, New Prolific), *Phaseolus Mungo var. radiatus* ([mung beans]; "green podded, which when smashed is made into sweets, June-Sept., $1.50 per 10 lbs."), broad beans, peas ("Ordinary pisum sativum, also used in the preparation of viscous soy" [sauce]), red pea, *Dolichos Lablab, Mucuna Capitata,* French beans, Speckled Partridge ("correct botanical name is not yet identified"), *Canavalia ensiformis.*

"Cable address: Nurseries Co., Tokio. Headquarters for lily bulbs, Cycas revoluta, Japanese plants and seeds." On the cover are two photos: (1) A horse pulling a two-wheeled cart loaded with boxes. (2) People packing things into trays and baskets outdoors.

Note 1. This is the earliest Japanese seed catalog seen (Dec. 2004) that mentions soybeans.

Note 2. This is the earliest Japanese seed catalog seen (Dec. 2004) that contains one or more photographs.

Note 3. This is the earliest English-language document seen (April 2012) that mentions a non-soy sauce made from peas that resembles soy sauce. Address: Komagome, Denchu, Tokio, Japan.

1452. Williams, Thomas A. 1897. The soy bean as a forage crop. *Farmers' Bulletin* (*USDA*) No. 58, p. 1-19. March. Revised (very slightly) in 1899. [7 ref]

• ***Summary:*** Contents: General characteristics and origin. Varieties. Conditions of growth. Methods of culture. Harvesting. Yield. Chemical composition. Digestibility. Value and uses: As a soiling crop, as a silage crop, as a hay crop, as a pasture plant, as a soil renewer, value of the bean for feed. Summary. Appendix–Soy beans as food for man.

In the letter of transmittal printed at the front of this bulletin, F. Lamson-Scribner (USDA Agrostologist) says: "For reasons set forth in the body of this bulletin [see p. 4], the name 'soy' has been adopted to 'soja,' by which it has been generally known.

"In 1875 Professor Haberlandt began an extensive series of experiments with this plant in Austro-Hungary, and in a work published in 1878 he gave the results of his studies and strongly urged the cultivation of the soy bean as a food plant for both man and beast. Although he succeeded in exciting a great deal of interest in its cultivation while making his experiments, and distributed a considerable amount of seed, very little seems to have come of it; for at his death, which occurred in 1878, the interest flagged, and the soy bean has failed to obtain the place as a staple crop which he prophesied for it."

"It is only within the last 15 years that it [the soy bean] has received much attention as a forage crop." Robert C. Morris of Illinois grew soy beans in 1896.

"The term 'soy' applied to this bean is derived from a Japanese word 'shoyu,' denoting a certain preparation from the seeds which is a favorite article of diet in that country. The term 'soja' is often used in connection with this plant, but Professor Georgeson, who spent some time in Japan, and who, since his return to this country, has experimented extensively with this plant, says [1892, "Test of some Japanese beans"]: 'The term *soja*, often applied to this bean, is misleading, inasmuch as the species named by Siebold and Zuccarini *Glycine soja* is not cultivated there (Japan), or at least rarely cultivated, though wild in the south...'" (p. 3-4). Note 1. Prof. Georgeson played an important role in changing the name of this plant to soy bean from soja bean.

"Varieties (p. 5-7): The different varieties of soy bean are distinguished largely according to the color, size, and shape of the seed, and the time required for the plants to reach maturity. They also differ more or less in the habit of growth and in the character and degree of the hairiness of the various parts of the plant. The names applied to the varieties here in the United States usually refer to the time of reaching maturity and the color of the seed; as, for example, 'Early White,' 'Medium Late Green,' 'Medium Black,' etc. The early varieties generally fruit heavier in proportion to the size of the plant than the later ones, and hence are better to grow for seed, while the medium or late varieties are better for forage on account of the larger yield of fodder that may be obtained.

"The 'Early White' soy bean is an excellent variety to grow when a crop of seed is desired, particularly in the North, where the growing season is likely to be short... 'Medium Early Green' is one of the best varieties to plant for hay, as it yields heavily and retains its leaves well. For soiling or for ensilage 'Medium Early Green,' 'Medium Early Black,' or the 'Late' green or black varieties may be used, according to the length of the season and the time at which the crop is to be used. In the New England States the 'Medium Early Green' variety is generally preferred, while in the Central States 'Medium Early Black' seems to be the favorite... For green manuring the large medium or late varieties are best; 'Medium Late Black' being excellent for this purpose."

Harvesting: The "best forage will be obtained by cutting just as the pods are forming... In harvesting a crop for the seed, the plants may be pulled by hand or cut with a scythe or mower and gathered into small piles, which should be relatively high and of a small diameter, so that the plants may dry out readily. Thrashing can be done with a flail or with the thrashing machine. Very good results can be had with common grain thrashers by taking out a portion or all of the concaves and substituting blanks."

The subsection titled "As a pasture plant" (p. 16) states: "In some parts of the country, particularly in the South, the soy bean crop is often pastured. Although hogs are perhaps most frequently used, all kinds of stock can be pastured on it. The crop can often be fed in this manner to great advantage. The labor and expense of harvesting is saved and the droppings from the animals are of great value to the land. Young stock, particularly sheep and hogs, can be very

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profitably pastured on this crop. Many farmers maintain that by this method of feeding the land is benefited as much as if the crop had been plowed under, and they obtain the pasturage in addition."

The subsection titled "As a soil renewer" (p. 16-17) states: "Leguminous plants, through the aid of the root tubercle organisms, are able to add to the available nitrogen of the soil... When the soy bean was first introduced into the United States it did not form root tubercles, owing to the absence of the tubercle organism from the soil, and it has been grown for several years in some localities without the appearance of any tubercles. In other cases the tubercles have developed in great abundance after a short time. At the Massachusetts (Hatch) Station the medium green soy bean produces great numbers of the tubercles. (See fig. 5.) At the same station it was found that a liberal application of nitrates interfered with the development of the tubercles."

"Value of the bean for feed: There is no crop so easily grown that is so rich and can be used to such good advantage in compounding feeding rations as the soy beans. Excepting the peanut, there is no other raw vegetable product known which contains such high percentages of protein and fat in such a highly digestible form.

"For feeding to animals the beans should be ground and the meal used with some less concentrated feeding stuffs. Comparatively few experiments have as yet been made in the United States to test the feeding value of soy-bean meal. Professor Brooks, in Massachusetts, found that it compared very favorably with cotton-seed meal. Cows fed on soy-bean meal gave richer milk and produced a better quality of butter than when fed on cotton-seed meal, but on the latter the cream was richer. Professor Georgeson obtained excellent results in feeding hogs on a ration of which soy-bean meal was a prominent constituent" (See Bulletin No. 61 of the Kansas Station).

Excellent illustrations (line drawings, some made from photos, p. 4-7, 17) show: (1) A young seedling soy bean (½ size). (2) (a) flowering branch of a soy bean plant (reduced 2/3). (b) one of the flowers (enlarged). (c) pods of a soy bean plant (reduced 2/3). (3) Extra early soy bean, leaves and roots at age 7 days (¼ size). (4) Medium black soy bean, leaves and roots at age 7 days (¼ size). (5) Roots of a soy bean plant, showing tubercles.

Tables show: (1) Composition of soy bean at four different stages of growth. (2) Chemical composition of the various kinds of forage made from the soy bean (incl. hay and ensilage). (3) Total amounts in pounds of food constituents produced on an acre of land by soy bean and fodder corn (proteins are flesh formers; fat, fiber, and extract matter are fat and heat producers). (4) Digestibility of soy-bean forage.

An appendix to this article is titled "Soy Beans as Food for Man," by C.F. Langworthy (which see).

Note 2. This is the earliest document seen (Jan. 2003) that uses the word "mower" or the word "concaves" in connection with soybean production.

Note 3. This is the earliest English-language document seen (Jan. 2003) that uses the word "machine" (thrashing machine) in connection with a specific machine for soybean production.

Note 4. This is the earliest document seen (Aug. 2004) that mentions the soybean varieties Medium Early Black, Medium Early Green, or Medium Late Black.

Note 5. This is the earliest document seen (Oct. 2004) which gives details on use of soy bean as a good "pasture plant" or a pasture plant well suited for use in fattening hogs.

Note 6. This is the earliest English-language document seen (Oct. 2004) that uses the words "pasturage," "pasture," or "pastured," or the term "pasture plant," in connection with soybeans. Address: Asst. Agrostologist, Div. of Agrostology, USDA.

1453. *Otago Witness* (*New Zealand*).1897. Pater's chat with the boys. April 1. p. 51.

• ***Summary:*** The section titled "Japan: Past and present" states: "Twenty years ago she [Japan] was an isolated nation, untalked of among the nations of the west: but she is now a great military, manufacturing, and commercial power, combining the maritime instincts of Britain with the go-aheadism of America, and so becoming the combined John Bull and Yankee of the Pacific. So afraid have the United States become of the competition of the lively Japs that one of the planks in the last election was exclusion of the Jap and his products." These protectionist measures are bound to fail for two reasons, which are given.

Japan is facing labour troubles and a rise in the cost of living, as a table shows. If 100 "is taken as the unit of cost of living in 1872," then "the figures below show the amount of advance since [to about 1897]:–Rice 100 to 161. Miso 100 to 189. Shoyu 100 to 158. Firewood 100 to 141. Charcoal 100 to 150. Cotton 100 to 150. Rent 100 to 228–or an average increase of 64 per cent., while wages have gone up only 33 per cent., or little more than half as much."

1454. Loew, Oscar. 1897. Ueber die Bereitung der Shoyu-Sauce [On the preparation of soy sauce]. *Mittheilungen der Deutschen Gesellschaft fuer Natur- und Voelkerkunde Ostasiens (Yokohama)* 6(60):474-76. [1 ref. Ger] Address: Prof. of Agricultural Chemistry, Imperial University of Tokyo.

1455. *Washington Post.*1897. Saucemakers win a suit. June 24. p. 2.

• ***Summary:*** "The English papers contain an account of a motion made last month in the suit of Lea & Perrins against Courtenay, before Mr. Justice Romer last month, seeking an injunction restraining the defendants from holding themselves out as 'the original makers of Worcestershire

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sauce,' the advertisement complained of reading that the Messrs. Courtenay were 'the only producers of the original and genuine Worcestershire sauce at a reasonable price, and manufactured from the original recipe. Upon the argument the Judge at once held that this advertisement could not go on. The defendants' counsel admitted it was indefensible, and the defendants gave an undertaking to discontinue its use."

Note: To give an undertaking to do something is to formally promise to do it, as before a judge or a court of law.

1456. Curtis, Minnel Wakeman. 1897. Experiment of American family in Japanese housekeeping. *San Francisco Chronicle*. June 27. p. 1.

• ***Summary:*** "At noon they unpacked their rice and dried fish, and took their tiffin seated in the open doorway. The former dish was eaten dark with shoyu sauce; the latter, soaked and delicately fried, looked exactly like squares of coarse white lace."

"... with hot sweet potatoes, cutlets, and turbans of fish and squares of pressed rice coated with shoyu, together with other delicacies,..."

Note: A "turban" is a rolled stuffed fillet of fish.

1457. Nishimura, Y. 1897. The chemistry of soja sauce manufacture. *Bulletin of the College of Agriculture, Tokyo Imperial University* 3(3):191-206. June. German summary in Chemisches Central-Blatt 1897(2):817. [5 ref. Eng]

• ***Summary:*** Contents: Introduction. Preparation of wheat and soja bean. Preparation of soja koji. Chemical processes during the ripening of soja sauce wort (*moromi*). Microscopical examination. The production of the flavour. Suggestion for the improvement of manufacture.

"The manufacture of soja sauce forms one of the important industries of Japan and the export of the article [is] increasing from year to year. (Footnote: Every Japanese uses daily in place of common salt from 50 cc. to 80 cc. of this sauce as a food condiment.) The production in 1893 was 2,307,844 hectoliters (=1,279,238 koku). The number of brewers was now nearly 10,000. One of the factories in Tokio alone employs 250 workmen and manufactures annually 45,000 hectoliters."

This is a detailed description of the process for making koji, moromi, and soja sauce, and an attempt to improve the process and product, and to reduce the fermentation time. Making soja sauce consists of four principal stages: Preparation of the wheat and soja bean, preparation of the soja koji, the ripening process, and pressing and boiling. "Soja sauce is prepared from wheat (sometimes also from barley), the soja bean,* and a salt solution by a slow process, which requires from one to two years and sometimes more. (Footnote: *"The so-called yellow soja bean (*itachi*) which principally serves for the manufacture of soja sauce is rather small and has a certain lustre... All materials for my investigation were obtained from the great soja sauce factory, *Asamasa*, at Nakano near Tokio)."

"It was clear to me that the whole ripening process consisted principally in the action of the powerful enzymes of *Aspergillus oryzae* upon the carbohydrates and proteids in the soja bean and wheat, and further in the development of an agreeable flavour" (p. 19).

"As the present method of manufacture of soja sauce requires much time and therefore a considerable amount of unremunerative capital, it seemed to me of great importance to find some way by which the process could be shortened. Two points seemed to me worthy of consideration. 1. To hasten the action of enzymes. 2. To produce the agreeable taste and flavour in the same measure as the enzyme action is hastened" (p. 200).

First the author crushed freshly prepared moromi so as to increase the surface area acted upon by the enzymes. Then he diluted the moromi with an equal amount of water and heated the mixture to a temperature of 30-35°C for 1 week. But the normal flavour of good soja sauce had not developed. "The colour of the mixture was dark brown and its taste decidedly sour. To the mixture just mentioned was added 2% cane sugar and 2 c.c. of thick sake yeast for 300 grams of the mixture, and this was again digested at 30-50°C for 12 days. In this case the flavour was more agreeable and the taste not sour." The author also recommended the direct addition of alcohol in the form of sake or *nigori* (crude sake) to improve the flavour. In this way he was able to make soja sauce with a good odour and taste in 5 weeks. He then tried making soja sauce with germinated [sprouted] soja beans, but no real advantage was gained.

Microscopical examination demonstrated that "the membranes of the cells of the wheat-endosperm and of the seeds of the soja bean, had been attacked and partially dissolved; only the husk of the wheat had resisted completely. This action must be due to the powerful enzyme derived from the *Aspergillus oryzae* developed during the preparation of the koji." "The mycelium observed was mostly due to *Aspergillus* and *Penicillium*. The small elliptic yeast cells observed resembled *Saccharomyces exigus* while the large kind of yeast resembled the sake yeast" (p. 203). Bacteria were observed during the summer on the surface of the moromi, but could never be found alive in its interior.

The gradual production of alcohol seems to affect the development of flavour.

The article concludes: "I hope that the manufacture of soja sauce will be improved, however, not only by adopting the measure I propose, but also by introducing steam power and other modern appliances."

Note 1. This is the second earliest English-language document seen that contains statistics on the production or consumption of soyfoods (in this case soy sauce) in Japan.

Note 2. The parallel Japanese title of this English-language periodical is *Tôkyô Teikoku Daigaku. Nôka Daigaku. Gakujutsu hôkoku*. Address: Nôgakushi.

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1458. Langworthy, C.F. 1897. Soy beans as food for man. *Farmers' Bulletin (USDA)* No. 58. p. 20-23. July 7. Revised (very slightly) in 1899. [1 ref]

• ***Summary:*** Describes and gives the nutritional composition of various Japanese soyfoods, including natto, miso (white, red, or Swiss), tofu, frozen tofu, yuba, shoyu. Many of his descriptions of soyfoods are based on Trimble (1896).

"Tofu, or bean cheese, is prepared as follows: The beans are soaked in water for about twelve hours, and crushed between millstones until of a uniform consistency. The ground material is then boiled with about three times its bulk of water for about an hour, and filtered through cloth. The filtrate is white and opaque, having somewhat the appearance of milk. It has, however, the taste and smell of malt. This milky liquid, to some extent, resembles cow's milk in composition, as is shown by the following table:" The table, titled "Comparison of the composition of soy-bean milk and cows' milk," shows that the two liquids (soy / cow) have the following composition: Water 92.53% / 86.08%, albuminoids 3.02% / 4.00%, fat 2.13% / 3.05%, etc.

"The protein in soy-bean milk is precipitated by adding the mother liquor obtained in the manufacture of salt from sea water, which contains considerable magnesium chloride. The precipitate is filtered off and formed into cakes with the hands. It is eaten in the fresh state or frozen. In the latter case it loses part of its water."

"Though these soy-bean products are prepared chiefly in Japan and other eastern countries, their manufacture has been attempted to some extent in Switzerland and elsewhere..."

"Bean sausages in considerable variety are prepared in Germany, and formed part of the ration of the German soldier in the Franco-Prussian war. So far as can be learned, these are always made from ordinary varieties of beans and not from soy beans...

"Under the name of coffee beans, soy beans are eaten to some extent in Switzerland as a vegetable, and dried and roasted are also used as a coffee substitute. Their use for this latter purpose is not unknown in America. The attempt has recently been made by certain dealers to place the soy bean on the market as a new substitute for coffee and to sell it under other names at an exorbitant price.

"Bulletin No. 98 of the North Carolina Experiment Station recommends soy beans as a palatable vegetable when prepared as follows: Soak the beans until the skins come off and stir in water until the skins rise to the surface and then remove them. Boil the beans with bacon until soft, season with pepper, salt, and butter, and serve hot. If the beans are green the preliminary soaking may be omitted. No other references to the use of soy beans for human food in the United States have been found."

Note 1. This is the earliest English-language document seen (Oct. 2003) that contains the term "soy-bean milk." It is also the earliest U.S. government document or USDA document seen (May 2006) that uses the term "soy-bean milk" (or any other term containing the word "milk") to refer to soymilk.

Note 2. This is the earliest document seen (Jan. 2005) concerning the work of the USDA with nutrition (or home economics) and soybeans. Address: Office of Experiment Stations, USDA, Washington, DC.

1459. *Times (London)*.1897. Section K.–Botany: Bacteria and cheese. Aug. 21. p. 6, col. 6.

• ***Summary:*** "It is not impossible that the much more definite results obtained by investigations into the manufacture of the vegetable cheeses of China and Japan will aid bacteriologists in their extremely complex task. These vegetable cheeses are made by exposing the beans of the leguminous plant *Glycine*–termed soja-beans–to bacterial fermentations in warm cellars, either after preliminary decomposition by certain mould-fungi, or without this. The processes vary considerably, and several different kinds of bean-cheeses are made, and known by special names. They all depend on the peculiar decompositions of the tissues of the cotyledons of the soja-bean, which contain 35-40 per cent of proteids and large quantities of fats. The softened beans are first rendered mouldy, and the interpenetrating hyphae render the contents accessible to certain bacteria, which peptonize and otherwise alter them."

Soy [sauce] is a "brine extract of mouldy and fermented soja beans,..."

1460. Jerrold, Julian. 1897. A Chinese dinner in New York. *Illustrated American (The)*. Sept. 4. p. 312-13. *

• ***Summary:*** "A Chinese dinner is the most civilized dinner in the world. There is a certain New York epicure who delights to demonstrate this by giving Chinese dinners to little parties of his chosen friends. Such a dinner, in twelve courses, he gave the other day, in the restaurant of Ma Hung Low, in Mott street. This dinner may be described as a lesson in Chinese civilization, and an effective example of how to dine both wisely and well.

"The guests were eleven, making, with the host, the accepted Chinese dinner number of twelve,...

"The shark-fin rolls, in spite of their forbidding name, were a gelatinous mixture rolled in eggs, very light and digestible, but needing the relish of the red 'soy' sauce [red soy sauce] into which one was expected to dip them."

Note: This is the earliest English-language document seen (April 2012) that contains the term "red soy sauce."

"The stuffed chicken wings were a marvel of delicacy, but the addition of 'soy' obscured their distinctive flavor to any but a Chinese palate subtilized by a thousand years of discrimination."

1461. *Epicure: A Journal of Taste (The)*.1897. Notes from the Brussels Exhibition. 4(46):354. Sept.

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• ***Summary:*** At the Brussels International Exhibition: "Another firm exhibiting is the Birmingham Vinegar Brewery Company, who show a pyramid of bottles of Holbrook's Worcestershire Sauce, 20 feet high by 20 feet square."

1462. *New-York Tribune*.1897. Dinner at the Japanese legation: There are some peculiarities in the menu, though not many. Oct. 17. p. C14.
• ***Summary:*** "Chickens, too, are served in a peculiar way. They are cut up into small squares, fried and then dressed with a sauce called 'shoyu,' which the Japanese say is the origin of the so-called Worcestershire sauce."

1463. *Star (Canterbury, New Zealand)*.1897. In a Japanese inn. Oct. 23. p. 8.
• ***Summary:*** From *St. James's Budget:* The writer, who stayed in a traditional Japanese inn (*hatoga*), described eating a meal there. "The European traveller will be confronted with a variety of surprises." Of the soups, he liked the *wan mori* (clear soup) best. "*Chawan mushi*, or soup with eggs in it, thick and custard-like, containing minced meats, fish, vegetables, &c.: and miso shiru, or bean soup [miso soup], are also palatable.

"It is only within the last few years that the Japanese have begun to eat meat. Now, however, in most of the inns on the main roads *ushi nabe* will appear on the menu. This dish is composed of beef cut up small, stewed and served *aux fines herbes*, together with a liberal admixture of soy [sauce]. *Tori nabe*, or stewed fowl, is a similar dish and most appetizing. Soy gives a strong flavouring also to another esteemed dish, *unagi meshi*, or eels and rice."

1464. *Consular Reports [USA]*.1897. Tariff of Canada, 1897. 55(205):151-232. Oct. See p. 159. [Eng]
• ***Summary:*** This new Canadian tariff comes with an index. Page 159: "67. Pickles, sauces and catsups, including soy [sauce], thirty-five per cent ad valorum."

1465. *Current Literature: A Magazine of Contemporary Record*.1897. Table Talk: Concerning eating and drinking. 22(5):444. Nov. [1 ref]
• ***Summary:*** "A Chinese Dinner in New York–Julian Jerrold–Illustrated American.

"A Chinese dinner is the most civilized dinner in the world. There is a certain New York epicure who delights to demonstrate this by giving Chinese dinners to little parties of his chosen friends. Such a dinner, in twelve courses, he gave the other day, in the restaurant of Ma Hung Low, in Mott street. This dinner may be described as a lesson in Chinese civilization, and an effective example of how to dine both wisely and well.

"The guests were eleven, making, with the host, the accepted Chinese dinner number of twelve,...

"The shark-fin rolls, in spite of their forbidding name, were a gelatinous mixture rolled in eggs, very light and digestible, but needing the relish of the red 'soy' sauce into which one was expected to dip them."

"The stuffed chicken wings were a marvel of delicacy, but the addition of 'soy' obscured their distinctive flavor to any but a Chinese palate subtilized by a thousand years of discrimination."

Note: This appears to be a "digest" with reprints or excerpts of selected current literature.

1466. Trimble, Henry. 1897. The soy bean. *American J. of Pharmacy* 69:584-93. Nov. [11 ref]
• ***Summary:*** Much of this material is derived from Williams and Langworthy (1897). Illustrations (p. 585, from Williams, p. 5) show: (a) flowering branch of a soy bean plant (reduced 2/3), (b) one of the flowers (enlarged), (c) pods of a soy bean plant (reduced 2/3).

One table (p. 588) shows the chemical composition of various kinds of forage made from the soy bean (fresh or air-dry substance, or water-free substance): Fodder (early bloom to early seed), soy-bean hay, straw, straw (hulls and vines after threshing), soy-bean seed, soy-bean meal (18.9% / 21.0% fat), soy-bean ensilage, corn and soy-bean ensilage, millet and soy bean ensilage.

Another table (p. 591) shows the composition of the following "Soy-bean food products": Fresh tofu, frozen tofu, natto, yuba, white miso, red miso, Swiss miso, and two types of shoyu. For each is given the percentage of water, protein, fat, nitrogen-free extract, fiber, and ash [minerals].

Note: This is the earliest English-language document seen (Sept. 2011) that contains the term "soy-bean food" or "soy-bean food products." It is also the earliest document seen (Sept. 2011) concerning the etymology of the word "soyfoods." Address: USA.

1467. Witherspoon's. 1897. Christmas delicacies: See our window (Ad). *Press and Horticulturist (Riverside, California)*. Dec. 11. p. 6.
• ***Summary:*** "Some very dainty imported fruits, Mushrooms in glass, Tobasco sauce [Tabasco], India chutney, India soy [sauce], Jordon's imported almonds" [Jordan's]. Address: 711 Main Street [Riverside]. Phone: 72.

1468. Angell, Stephen H. 1897. Soya as food and fodder. *Consular Reports [USA]* 55(207):551-52. Dec. [2 ref. Eng]
• ***Summary:*** A remarkable article about all aspects of soybeans and soyfoods. It begins: "The following is a translation from an article by M. Henri Fortune, the well-known French agriculturist. 'There exists a plant extensively cultivated throughout China, Japan, Cochin China, and Tonquin, of which the culture on clay and flinty clay lands would be an excellent experiment for agriculturists and persons interested in the progress of agriculture. This plant

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acclimatizes perfectly in Belgium.

"'It is employed in the above countries as a food and for divers other purposes. Transformed by cooking into a pulp, which is mixed with salt and rice, we obtain the 'miso,' which constitutes the regulation breakfast of the Japanese. I have eaten this preparation in Yedo [Edo, Tokyo] in 1892, and I found it excellent in taste and very nourishing.

"'Mixed with barley, fermented with water and pressed, this product yields a sirup known as the "soya," which is, so to speak, the unique sauce for all and every Japanese dish, and is employed in such large quantities that the works in the town of Nagasaki have a yearly production of 2,000 tons. The soya also yields a very superior quality of oil, which advantageously replaces olive oil.'"

"'The bread made from the flour of the soya is as good as cake without sugar, and is very appetizing, and is not to be compared with gluten bread, which constipates.'" Fortune believes that 'soya bread is twice as nourishing as wheaten bread, five times as poor in starch, and ten times as rich in fatty materials, and, once its qualities are fully known, the soya may be pronounced the bread of the future.' He recommends the use of soya in bread and biscuits for diabetic diets.

"'In China, the soya replaces milk, which the Chinese do not drink at all. To make this milk, the grain must be crushed, put in a sieve, water slowly poured over it, and a product obtained having all the qualities of milk.

"'The cheese made from soya is delicious. The grain is softened in water and pounded in a mortar. The pulp compressed in a cloth gives two parts; that which is hard is used to feed poultry, etc., and the other, which passes through the cloth, is albumen, and is put on the fire, the curds separated with the aid of rennet, and, when coagulated, a little salt is added.'"

Of green vegetable soybeans he writes: "'We have a project in hand to call together the principal Paris restaurant keepers this winter, to allow them to partake of this new vegetable, which will advertise it throughout the world under the patronage of such substantial connoisseurs.

"'In a few years hence, one will buy soya at the grocers, as to-day one buys beans. It is an excellent substitute for hay, and keeps horses in good condition, and cows, when fed on it, will yield at least 20 per cent more milk daily than when fed on ordinary hay.

"'The soya produces per hectare (2.471 acres) from 2,500 to 3,000 kilograms (5,512 to 6,614 pounds) of seed, especially if phosphate fertilizers are sufficiently employed.'"

Note: This is the earliest document seen (Feb. 2001) concerning soybeans in Belgium, or the cultivation of soybeans in Belgium. This document contains the earliest date seen for soybeans in Belgium, or the cultivation of soybeans in Belgium (Dec. 1897). The source of these soybeans is unknown. Address: Commercial Agent, Roubaix, France July 13, 1897.

1469. Read, Sheridan P. 1897. Flour in China and Japan. *Consular Reports [USA]* 55(207):519-25. Dec. See p. 523. [Eng]

• ***Summary:*** Page 523: "In the northern provinces, where rice is not grown and can only be purchased by the well to do, wheat is the most common cereal, but it is of a very poor quality."

"The wheat is ground by a very primitive process. The mill consists of two light stones, which are turned by aid of a blindfolded mule. The flour is coarse and dark, chiefly used in the form of vermicelli, and, when steamed, makes a good substitute for rice, and when mixed with a little broth, flavored with a dash of soy [sauce], it forms a very savory dish."

Wheat flour is also used for making rolls which are lightened with leaven, and these are cooked by steaming, as are the many varieties of patties containing minced meat, molasses, or a kind of jam. The steamer consists of sieves, fitting tightly one upon another, which are covered and placed over the kettle in which the meat or other food is being cooked.

"The ordinary Chinese, whether in city or village, takes his breakfast at the tea house or restaurant. It consists almost entirely of these meat rolls or patties; the latter are dipped in vinegar, soy, or a solution of red pepper, when eaten." Address: Consul, Tientsin [China] (24 June 1897).

1470. **Product Name:** Yamamori Shoyu [Soy Sauce].
Manufacturer's Name: Yamamori Jozo-sho (Yamamori Brewery).
Manufacturer's Address: 561 North 6th Street, San Jose, California.
Date of Introduction: 1897.
New Product–Documentation: Note: This is the second earliest known soyfood product made by a Japanese in the Continental USA, and the earliest known soy sauce and fermented soy sauce produced in the continental USA.

Zaibei Nippon-jin Nenkan (*The Japanese-American Yearbook*). 1905. No. 1. Published by Mr. Kyutaro Abiko, of Nichibei [Shinbun], Japanese-American News. Page 24. Under the category heading "Jozosho" (Breweries), lists Yamamori Jozo-sho, 561 North 5th Street, San Jose, California. Then page 137 states: "In recent years a person named Yamamori started a new shoyu brewery and engaged in it enthusiastically." An unnumbered page in the same 1905 edition states that there are currently two shoyu breweries in San Jose. This must mean Yamamori and Sugita.

Nichibei Shinbun-sha. 1906. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Directory entry p. 38. "Yamamori Shoyu Jozo-sho, 561 N. 6th St., San Jose.

Washizu, Shakuka. 1930. *Zaibei Nihonjin shi kan* (*A History of Japanese in America*). Page 38. "The origin

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of shoyu production (by Japanese in America)." In about 1897 Mr. Kohei Yamamori started making shoyu in San Jose, California (on North 6th St.). Eventually the business failed, but in about 1907 many other shoyu makers started in various other parts of the country. Talk with Ken Mogi, 1984, April 20. The California First Bank in San Francisco has a library of Japanese-American history. A 1930 article states that Mr. Yamamori (Yama = mountain, Mori as in Morioka) started brewing soy sauce in San Jose on North Sixth St. The company name is not given.

1471. Fullständigaste Svensk-Amerikansk Kokbok–Swedish-English cookbook. 1897. Chicago, Illinois: The Engberg-Holmberg Publishing Co. 378 p. Illust. Index. 20 cm.
• ***Summary:*** "Soy" [sauce] is used as an ingredient in 3 recipes: Veal steak ("beef tea and a few drops soy," p. 32-33). Brown jelly for roastbeef ("color it with some soy," p. 307). Swedish caviar ("two spoonfuls dark soy and salt," p. 317).

A recipe titled "To make soy" (p. 309) states: "When in the spring, meat and pork is taken up to be smoked, the brine may be used for soy. Boil the brine, and when it curdles and looks clear, strain it. Then boil 4 ox feet with ginger, cloves, strong pepper (½ ounce), a pound of onions, a bunch of tarragon, thyme and marjoram. When the feet feel soft there is about ½ gallon brine left, which strain and allow to cool. Boil 3 pounds of lump sugar. Put the brine in it, and boil a while."

Worcestershire sauce is used as an ingredient in 4 recipes: Fricasse [Fricassee] of beef (p. 27). Goose with turnips (p. 50-51). Pigeons on the spit (p. 59-60). White cabbage with pork (p. 201-02). Address: Chicago, Illinois.

1472. Hosie, Alexander. 1897. Three years in Western China; A narrative of three journeys in Ssu-ch'uan, Kuei-chow, and Yun-nan [1882-84]. 2nd ed. London: George Philip & Son. New York: Dodd, Mead. xxvii + 302 p. See p. 68, 164. Illust. Map. Index. 22 cm. First edition published in 1890.
• ***Summary:*** The contents and pagination of this book are largely the same as those of the first edition (1890). Bean curd [tofu] is discussed on p. 68, and soy sauce on p. 164. Also contains a fold-out map showing the author's route. Address: M.A., F.R.G.S., H.B.M. Consular Service, Newchwang, China.

1473. Japan. Dep. of Agriculture and Commerce, Bureau of Commerce (Noshomusho Shokokyoku). 1897. General view of commerce & industry in the empire of Japan. Tokyo: Printed by Y. Yamaguchi. 315 p. See p. 22-23, 234. Also published in 1900 in Paris by M. de Brunoff)
• ***Summary:*** Name of organization with diacritics is: Nôshômushô Shôkôkyoku. Page 5: "The treaty ports or towns open to foreign trade are: Yokohama and Tokyo, on the Bay of Tokyo. Kobe and Osaka on the Bay of Osaka. Niigata, on the western coast of Honshiu [Honshu]. Hakodate, on the Tsugaru Strait. Nagasaki, on the south-western coast of Kiushu [Kyushu]. Kelung, Tamsui, Takow, and Taiwan on the western coast of Taiwan. Ten partially opened ports in Japan and three in Corea [Korea] are also listed.

On pages 18-22 are tables of Japanese weights and measures and comparative tables with those of the empire of Great Britain, including both troy and avoirdupois.

Agriculture and mining (p. 22-23): Agriculture has been the leading pursuit of the people since earliest times and in the greater part of the cultivated area rice is grown; other principal food crops are wheat, barley, and soya beans. Industries not imported from the west include "salt making, sugar making, sake brewing, soy brewing, oil producing,... (p. 23).

Imports–Class II.–Duty free goods (p. 228) includes: "Grain, including rice, paddy, wheat, barley, oats, rye, peas, beans [incl. soya beans], millet, Indian corn. Flour and meal prepared from the above. Oil cake [when imported from Manchuria, this was typically soya bean cake].

Exports–Class II.–Duty free goods (p. 232-34) includes: "All kinds of mushrooms, excepting Shiitake. Confectionaries, all kinds of liquors, Vinegars, Soy [sauce], Oils, and Prepared Tobacco... Sea-weeds excepting Kobu [Kombu, seaweed],..." Address: Tokyo, Japan.

1474. Krafft, Guido. 1897. Die Pflanzenbaulehre. Sechste, neuarbeitete Auflage [Instruction in plant cultivation. 6th ed.]. Berlin: Verlagsbuchhandlung Paul Parey. viii + 279 p. Illust. (incl. many color). Index. 23 cm. Series: Lehrbuch der Landwirtschaft auf wissenschaftlicher und praktischer Grundlage. 2nd Bd. [2 ref. Ger]
• ***Summary:*** In Chapter 2, "Legumes (Cultivation of protein-rich seeds)," section 7 (p. 80-81) is about the soybean (*Die Sojabohne*) also called the hirsute Soya (*rauhhaarige Soja*) or the "Haberlandts bean" (*Haberlandt's-Bohne*) (*Soja hispida* Mönch). Discusses: Botanical description, color of seeds, two important German-language publications about soybeans (Wein 1881 and Haberlandt 1878), widely cultivated in China and Japan, bears seeds in Europe only in areas which in 20-25 weeks accumulate 2500 to 3000°C heat units (*Wärmeansprüchen*), description and chemical composition of yellow soybean seeds, used as food to make [soy] sauce and cheese [tofu] in China and Japan, a source of oil in Europe, and a feed for cattle, imported also as soya cake and meal (*Sojakuchen, Sojaschrot, Sojamehl*), best soil for cultivation, planting time, care, flowering, typical yields of seeds (62-72-75 kg/ha) and straw. A non-original illustration (line drawing) shows a soybean plant with many pods growing thickly on the stem, plus an enlarged view of a cluster of about 7 pods to the upper left of the plant. The soybean is also mentioned on p. 64. Also discusses Lupines (p. 80-85).

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Chapter 3, Oilseeds (*Ölfrüchte;* the cultivation of oil-containing seeds, p. 81+) mentions: Peanuts, almonds, white sesame, brown sesame. It discusses: rapeseed (p. 82-83). Address: PhD, Professor der Land- und Forstwirtschaft an der k.k. technischen Hochschule in Wien (o. ö. Professor der Land- und Fortswirtschaft and der k.k. technischen Hochschule in Wien).

1475. Lafar, Franz. 1897. Technische Mykologie. Ein Handbuch der Gaerungsphysiologie... Erster Band: Schizomyceten-Gaerungen [Technical mycology. A handbook of fermentation physiology... Vol. 1: Schizomycetic fermentations]. Jena: Verlag von Gustav Fischer. xiii + 362 p. See p. 290, 305-15. Illust. No index. 25 cm. Foreword by Prof. Dr. Emil Chr. Hansen (Carlsberg-Laboratorium, Kopenhagen [Copenhagen]). [7 ref. Ger]
• ***Summary:*** The introduction gives a detailed early history of the discovery of fermentation, microorganisms and *Mikrozymen / Mikrozyma* (microzymes) (including the work of Needham, Spallanzani, Franz Schulze, Theodor Swann, Schröder and Dusch, Louis Pasteur, and Béchamp), its relation to spoilage, the development of fermentation theory, and the nature of the fermentation organisms.

In Chapter 31, "Cheese fermentations and related decompositions," section #179 is titled "Natto and miso." These fermented foods are both made from the soybean (*Soja-Bohne*). For natto: The fermentation results in a partial transformation of the proteins into amides, peptones, guanin, xanthin, and tyrosin. The resulting mass is called natto in Japan, and is sold commercially. Note: Even though the word "enzymes" is not used, the author describes their action. This is the earliest document seen (July 2003) describing the action of enzymes produced during a soybean fermentation. At the end of the same section, koji, shoyu, tofu, nukamiso, taohu, and tao-yu (Chinese-style tofu and soy sauce) are mentioned--with 7 partial references.

Chapter 33, titled "The binding of free nitrogen by bacteria" (p. 303-17) discusses this relatively new idea in depth, including the discovery of root nodules on legumes, the origin and function of the nodules, and the nodule bacteria; Soybeans are mentioned on p. 303. Chapter 36, titled "Nitrogen-fixing bacteria" (p. 335-43) gives more details.

Note 1. Although there are many in-text citations, the bibliography for this volume appeared in Vol II, published in 1901-1907. An English-language translation of this volume was published in 1910.

Note: This is the earliest document seen (Sept. 2002) concerning the early history of microbiology and the discovery of enzymes. Address: Unestablished university lecturer (*Privatdozent*) for Fermentation-Physiology, Technical High School. Assistant at the Physiological Laboratory of the Royal Experiment Station for the Fermentation Industry at Hohenheim near Stuttgart [Germany].

1476. Porter, Noah, ed. 1897. Webster's international dictionary of the English language. Springfield, Massachusetts: G&C Merriam Co. 2011 p. 30 cm.
• ***Summary:*** "Soy (soi) n[oun]. (Chinese shôyû) 1. A Chinese or Japanese liquid sauce for fish, etc., made by subjecting boiled beans (esp. soja beans), or beans and meal, to long fermentation and then to long digestion in salt and water. 2. (Bot[anical]). The soja, a kind of bean. See Soja."

"Soja (sôja or sôya). n[oun]. (Bot.) An Asiatic leguminous herb (Glycine Soja) the seeds of which are used in preparing the sauce called *soy.*"

"Catchup, or catsup (Probably of East Indian origin because it was originally a kind of East Indian pickles). A table sauce made from mushrooms, tomatoes, walnuts, etc. (Written also *Ketchup*)."

Note: At the entries for Ketchup and for Catsup, it says, "See Catchup." Address: Springfield, Massachusetts.

1477. Scott, Charles Payson Gurley. 1897. The Malayan words in English. New Haven, Connecticut: The American Oriental Society. 93-144, 49-124 p. See p. 64-67. Index. 25 cm. [73* ref]
• ***Summary:*** The word "ketchup" is discussed in detail (p. 64-67). It is a well-known name for various kinds of sauces. The word *catchup*, which first appears in English in 1690, is defined as a "high East Indian Sauce." This word is found in Malay as *kechap* or *kichap*, and in Dutch transliteration as *ketjap*. It is also found in Lampong as *kichap* and in Sundanese as *kechap*. In Malay dictionaries from 1884 to 1895 it is defined as soy [sauce], Japanese soy [sauce], or indigenous / native soy [sauce]. The earliest Sundanese entry found (Rigg 1862) states: "*Kéchap*, Catchup, a dark coloured sauce prepared by the Chinese."

But what is soy? The word comes from the Japanese *shô-yu* (Hepburn 1867). The Chinese form, in Mandarin, is *sh'-yiu* (Williams 1874) or *shi-yu* (Doolittle 1872), Canton *shi-yau* (Chalmers 1870; Williams 1856), Ningpo *tsiang-yiu* (Morrison 1876). The Chinese forms are probably original.

Other words that have come into English from Malay or other languages of the Malay archipelago (Javanese, Lampong, Sundanese, etc.) include: agar-agar (a sea-weed), amuck (frenzied, homicidal rage), bantam (a dwarf fowl), batik (spotted cloth), catchup (see ketchup), cockatoo (a parrot), compound (from campong, a village), gecko (a lizard), gingham (cotton cloth), gong (instrument of sound), gutta-percha (a gum or resin produced by a tree), junk (a boat), kachang (a legume), ketchup (a condiment), lorikeet (a parrot), lory (a parrot), orang-utan (primate animal), padi (rice), picul (a weight), rattan (part of palm stem used for walking sticks and wickerwork), sago (pith of a palm), sambal (a curry).

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Oriental Society vol. 17 (1896) and vol. 18 (1897).

1478. *Tropical Agriculturist* (*Ceylon*).1898. The soy beans. 17(7):460. Jan. 1. [1 ref]
• ***Summary:*** "The Madras Government sends us a paper showing how Surgeon-Lieutenant -Colonel W.G. King, Sanitary Commissioner for Madras, addressing the District Medical and Sanitary Officer, Vizagapatam, the Deputy Collector of Bellary and the Tahsildar of [nearby] Saidapet [Tamil Nadu], on 8th September 1897, says:

"I have the honour to forward herewith __ oz of soy beans, with the request that you will kindly cause them to be sown in any suitable place where they can be carefully watched as to progress of growth, and that you will oblige me by stating the nature and amount of crop obtained and whether you think the beans can be grown successfully in your district from the experience so obtained. I need not remind you that the 'Soy bean' is probably the most nutritious form of readily assimilable pulse at present known, and that, should it prove possible to introduce it widely in this Presidency, it would prove of great advantage in jail administration and also to the poorer classes generally... In asking you to kindly undertake the experiment, I may state that it was only after long and persistent search in India and Burma that I have ultimately obtained specimen."

"Very few vegetable products are so rich as this bean at once in albuminoids and in fat or oil, the former constituent amounting on the average to 35%, and the latter to 19... In China and Japan three preparations are extensively made from the soy bean. Soy sauce is the best known of these, but more important are the soy or bean cheeses, and a kind of paste. The beans are sometimes pressed for the sake of the oil they yield; the residual cake forms an extremely rich cattle food, containing as it does 40 per cent. of flesh-formers and 7 per cent. of oil. The Soy bean may also be grown as a fodder plant. If cut just when the pods are fully formed, it makes an excellent hay, superior to that of the lentil."

1479. *Otago Witness* (*New Zealand*).1898. A Chinese dinner in New York. Jan. 6. p. 52.
• ***Summary:*** "A Chinese dinner is the most civilised dinner in the world." The feast began at 2 o'clock and there were ivory chopsticks at every diner's place–and never a knife or fork in sight. There were many courses. "The shark-fin rolls, in spite of their forbidding name, were a gelatinous mixture rolled in eggs, very light and digestible, but needing the relish of the red 'soy' sauce into which one was expected to dip them."

"The stuffed chicken wings were a marvel of delicacy, but the addition of 'soy' obscured their distinctive flavour to any but a Chinese palate subtilised by a thousand years of discrimination."

1480. Grange Wholesale Supply Co., Ltd. 1898. Grocery specials (Ad). *Evening Star* (*Toronto, Canada*). Feb. 15.
• ***Summary:*** "Worcestershire sauce. Lorimer's imported, 9¢ bottle." Address: 126 King St. East, Toronto.

1481. *Chicago Daily Tribune*.1898. Great is kaffir corn... Value of the soy bean. March 21. p. 4.
• ***Summary:*** "There is still another food coming into cultivation in Kansas and Nebraska that will have an important effect probably on agriculture in those states. The food is the soy bean, a Japanese product that was brought to this country in 1890. This bean has the peculiar property of being able to supply certain qualities that are lacking in all varieties of corn as a fattening product. It is a little black bean that has been grown for centuries in Japan, and takes its name from a sauce into which the beans are made in that country. None of the ordinary fodder plants of this country compare with the soy bean in nutritive qualities. As a food it is equally attractive to human beings as to live stock. It compares favorably with the ordinary bean for table use."

Then summarizes the following experiment in which 12 pigs were fed rations based on varying proportions of Kaffir corn and soy beans: Georgeson, C.C.; Burtis, F.C.; Otis, D.H. 1896. "Feeding experiments." *Kansas Agric. Exp. Station, Bulletin* No. 61. p. 147-60. Nov.

1482. *Times* (*London*).1898. "Holbrook's Worcestershire sauce," Limited. United States of America and Canadian rights (Ad). March 31. p. 3, col. 1.
• ***Summary:*** This is subscription for shares in a new company. "Share capital: £100,000, divided into 50,000 cumulative six per cent preference shares of £1 each–£50,000 and 50,000 ordinary shares of £1 each–£50,000. Total £100,000." The names of the directors and bankers are given. Address: [England].

1483. *Times* (*London*).1898. The money market. March 31. p. 4, cols. 2-4.
• ***Summary:*** "Holbrook's Worcestershire Sauce (Limited) (United States of America and Canadian rights) has been formed with a share capital of £100,000... to acquire the trading rights in the sale of 'Holbrook's Worcestershire Sauce' for the United States of America and Canada from the Birmingham Vinegar Brewery Company, 1897 (Limited)."

1484. *New York Times*.1898. To stop customs frauds: Unusual instructions for United States consuls at foreign shipping ports. Appraisers to have facts. April 28. p. 4.
• ***Summary:*** The U.S. Treasury Department and State Department are working "to stop undervaluations of imports at the Port of New York."

"Consuls at Hongkong and other Chinese ports are directed to forward at frequent intervals price lists or quotations on the following enumerated articles: Birds' nests, lichees preserved in tin, bamboo shoot, shrimp sauce, oyster sauce, plum sauce, bean sauce, soy sauce, preserved ginger,

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beansticks [dried yuba sticks], and dried mushrooms."

1485. *Boston Daily Globe*.1898. Housekeepers' column: Tried and true recipes from experienced cooks. May 26. p. 8.
• ***Summary:*** "This is how I make Worcestershire sauce, and I find it keeps many years and is always appreciated. If you save the vinegar from other pickles, such as walnuts, it takes the place of white wine vinegar, and makes the sauce a better color. I strongly advise you to save the vinegar from all your pickles in future. Proceed to make your sauce in this way:

"Pound half an ounce of cayenne pepper, half an ounce of shallot, and one-eighth of an ounce of garlic, in a marble mortar, adding gradually a quart of white wine vinegar, then press it through a hair sieve. Add a quarter of a pint [a gill] of Indian soy [sauce], then bottle and cork for use. If you find the method too tedious, after pounding the dry ingredients, put them into a jar and pour the vinegar boiling onto them. Cover closely and let it stand till the vinegar has well extracted the flavor of the ingredients, and before bottling add the soy. This sauce improves by keeping. Mrs. English."

Note: This recipe, by the same writer (Mrs. English), under the titled "Worcestershire sauce" appeared in the 8 Feb. 1899 issue (p. 8) of this newspaper.

1486. Dujardin-Beaumetz, Prof. 1898. The soya bean: A vegetarian treasure. *Vegetarian (The) (London)*. July 23. p. 468.
• ***Summary:*** From *Health News:* The Soja, or Soya bean, is the Japanese bean (*Glycine soja*), cultivated in certain countries of Europe, and more particularly in Hungary, since 1875. This bean, which contains extremely little starch, and has been employed in the dietetic treatment of diabetes by Lecerf, contains a very large amount of albuminoid matter (flesh formers); and, on referring to the different analyses published by Steuff, Capan, Pellet, and Muntz, we find the following percentage of alimentary principles contained in the bean:–Albuminoid matter, 36.67 per cent.; fatty matter, 17.60 per cent. If this analysis is compared with that of meat, the Japanese bean has a decided advantage over beef.

"From an alimentary point of view, the soya bean serves several uses. A sauce is made from it, which bears the name of *stiso* [*miso?*] and *soju* [shoyu], but the most curious and interesting point in the application of soja to dietetics, is a kind of cheese made from it–it is the *pea or bean cheese* [tofu], very much prized in Japan.

"In Europe, the soya bean has been utilized as the food of men and animals, and in the last few years the attempt has been made to make bread of it, which is a matter of considerable difficulty, by reason of the large proportion of oil which this bean contains. This oil, as Leon Petit has shown, is very purgative, and might replace castor oil in medical practice. Hence it becomes a necessary to rid the meal of this oil, in order to render it fit for domestic use. Lecerf, in Paris, and Bourdin, in Rheims, have succeeded in rendering the bread made from this meal very well borne by the stomach.

"Here, then we have a bean which is more nutritive than meat, and which serves for nourishment to a great country like Japan, under the different forms of sauce, of cheese, of farina, and even of an artificial milk. The advantage which the Vegetarian dietary may derive from such a food is evident." Address: Physician to the Cochin Hospital, Paris.

1487. *Manchester Guardian (England)*.1898. Books of the week. Aug. 16. p. 9.
• ***Summary:*** This is a book review of *Gleanings of Cookery*, by a Mother and Daughter. London: Horace Cox. 8vo. pp. 149.

"Perhaps the most conspicuous example of unsatisfactory flavourings is to be found in the recipe of Julienne soup, which includes ketchup and Worcester sauce, whereas the soup in question should, when finished, be perfectly clear and something like the colour of sherry."

1488. Fesca, M. 1898. Die Sojabohne [The soybean]. *Tropenpflanzer (Der) (Berlin)* 2(8):233-46. Aug. [7 ref. Ger]
• ***Summary:*** The author writes about the importance of soybeans for the German colonies. This is primarily a review of earlier writers, such as O. Kellner and E. Kinch. "The soybean is one of the most important cultivated plants in East Asia. In Japan and most parts of China, it is by far the most important legume. It is also cultivated in India..." In Japan, 385,000,000 kg of soybeans are produced on 430,000 to 450,000 ha of land. This is 8½ to 9% of Japan's total agricultural land and 19% of the land not planted to rice. Large amounts of soybeans are also planted around the edges of fields and on the tops of dams. The yield of soybeans in Japan for 1892-94 was 880–900 kg/ha. The soybean is one of the main crops in Shantung province, China, according to travelers Williamson and von Richthofen; it is used extensively for oil. An excellent 5-part illustration (p. 235) shows the cultivated- and the wild soybean plant, with close-ups of the pods, seeds, and flowers.

The author then discusses *Shoyu*. Through a long, slow fermentation process some of the starch is transformed into dextrin and sugar, then lactic and acetic acids are formed. Aromatic compounds are also formed but little is known about their amount or composition. The fermentation breaks down proteins. He then gives Kellner's analysis of the composition of shoyu. According to E. Kinch, one liter of shoyu contains 31.03 gm of sugar and 41 gm of nitrogenous substances.

The author praises tofu as a fine protein source and cites E. Kinch's 1879 analysis of the composition of tofu and dried-frozen tofu [*Kori-Tofu*].

He gives analyses of the composition of shoyu presscake (*Shoyuruechstande*) and okara (*Tofurueckstande*). Of the shoyu presscake he says: "Unfortunately the high content of

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salt (NaCl; 3-5%) makes it unusable for man or beast. It can, however, be used as a fertilizer." Address: Prof., Dr.

1489. Great Atlantic and Pacific Tea Co. 1898. Today's marketing (Ad). *Washington Post.* Sept. 24. p. 7.
• ***Summary:*** "Courtenay's Worcestershire Sauce at ½ usual price." Note: This company also goes by the name "Great A. and P. Tea Co." Address: Main store: 501-503 7th St. N.W. [Washington, DC].

1490. Takamuku, T. 1898. Shôyu kôji no enchiimu narabini moromi no jukusei ni tsukite [On the enzymes of shoyu koji and the ripening of moromi (mash)]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 19(8):787-803. Nov. [Jap]
• ***Summary:*** The title on the English-language table of contents reads: "On the Enzyme of Soja Kôji and the Process of Soja Sauce Ripening."

1491. Bishop, Isabella L. Bird (Mrs.). 1898. Korea and her neighbors: A narrative of travel, with an account of the recent vicissitudes and present position of the country. 2 vols. London: John Murray; New York, NY: Fleming H. Revell Co. Vol. 1: x + 261 p. Illust.
• ***Summary:*** In Vol. 1: Preface, p. vi: "It must be evident to all who know anything of Korea, that a condition of tutelage, in some form or another, is now absolutely necessary to her existence as a nation. The nominal independence won for her by the force of Japanese arms is a privilege she is not fitted to enjoy, while she continues to labour under the burden of an administration that is hopelessly and superlatively corrupt."

Page xi: The author made four visits to Korea between Jan. 1894 and March 1897 as part of her larger plan to study the characteristics of the Mongolian races. Her first journey produced the impression that Korea was the most uninteresting country she ever travelled in.

Soy [sauce] is mentioned–Pages 141-42: If, while traveling, no "clean room" existed in an inn, "I had a room in the women's quarters at the back, remarkable only for its heat and vermin, and the amount of ang-paks, bundles of dirty clothes, beans rotting [fermenting] for soy [sauce and paste], and other plenishings which it contained,..."

Page 177: "A quart of rice, which when cooked is of great bulk, is a labourer's meal, but besides there are other dishes, which render its insipidity palatable. Among them are pounded capsicum, soy [sauce], various native sauces of abominable odours, kimchi, a species of sour kraut [*kimchi*], seaweed, salt fish, and salted seaweed fried in batter. The very poor only take two meals a day, but those who can afford it take three and four."

Page 179: Koreans are omnivorous, and they waste nothing. "Cooking is not always essential. On the Han I saw men taking fish off the hook, and after plunging them into a pot of red pepper sauce, eating them at once with their bones. Wheat, barley, maize, millet, the Irish and sweet potato, oats, peas, beans, rice, radishes, turnips, herbs, and wild leaves and roots innumerable, seaweed, shrimps, pastry made of flour, sugar, and oil, *kimchi*, on the making of which the whole female population of the middle and lower classes is engaged in November, a home-made vermicelli of buckwheat flour and white of egg, largely made up into a broth, soups, dried persimmons, spongecakes, cakes of the edible pine nut and honey, of flour, sugar, and sesamum seeds, onions, garlic, lily bulbs, chestnuts, and very much else are eaten. Oil of sesamum is largely used in cooking, as well as vinegar, soy [sauce], and other sauces of pungent and objectionable odours, the basis of most of them being capsicums and fermented rotten [soy] beans!"

Page 182: The inn, if inn it was, gave me a room 8 feet by 6, and 5 feet 2 inches high. *Ang-paks*, for it was the family granary, iron shoes of ploughs and spades, bundles of foul rags, seaweed, ears of millet hanging in bunches from the roof, pack-saddles, and worse than all else, rotten beans fermenting for soy [sauce and paste], and malodorous half-salted fish, just left room for my camp-bed."

Note: The author does not mention Korea's very popular soybean pastes–such as doenjang or kochujang. She may well have used the word "soy" to refer to both soy sauce and soy pastes.

Bean or beans are mentioned: Page 18: "Hides, [soy] beans, dried fish, *bêche de mer*, rice, and whale's flesh are among the principal exports. It was not till 1883 that Fusan was officially opened to general foreign trade, and its rise has been most remarkable."

Page 39: In the market booths are to be seen "rice, millet, maize, peas, beans,..."

Page 85: In 1894 they paid taxes on barley, beans, rice, and cotton.

Page 100: "... they conveniently export their surplus produce, chiefly beans, tobacco, and rice, and receive in return their supplies of salt and foreign goods."

Page 112: In the Han River valley: "Every valley has its streamlet, and is barred across by dykes of mud from its head down to the Han–rice, with tobacco, beans, hemp, and cotton, being the great articles of export."

Page 119: "Ma-Kyo is the river port of Che-chön... "It exports rice, beans, and grain from the very rich agricultural country on both sides of the river,..."

Page 123: "When full grown a bull can carry from 350 to 500 lbs. They are fed on boiled beans, cut millet stalks, and cut pea haulm, and the water in which the beans are boiled."

Page 138: Korean ponies "are fed three times a day on brown slush as hot as they can drink it, composed of beans, chopped millet stalks, rice husks, and bran, with the water in which they have been boiled."

Page 147: "There is much wet rice along the route, as well as dry rice, with a double line of beans between every two rows,..."

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Page 149: "It is a most fertile tract, and could support a large population, but not being suited for rice, is very little cultivated, and grows chiefly oats, millet, and beans, which are not affected by the strong winds."

Page 150: "There the villagers could not or would not take us in. They said they had neither rice nor beans, which may have been true so late in the spring."

Page 185: "A smaller valley contains about 3,000 acres of rice land only, and on the slopes surrounding all these are rich lands, bearing heavy crops of wheat, millet, barley, cotton, tobacco, castor oil, sesamum, oats, turnips, peas, beans, and potatoes."

Page 186: "In wheat, barley, or rye fields the sowing is in October, and the harvest in May or June, after which beans, peas, and other vegetables are sown."

Page 187: "Grain, peas, and beans are threshed out with flails as often as not in the roadway of a village...."

Page 189: The village "has several schools, and exchanges rice and beans for foreign cottons at Won-san,..."

Page 217: Newchwang "is a city of 60,000 souls, the growth of its population having kept pace with its rapid advance in commercial importance since it was opened to foreign trade in 1860. Several British steamers with big Chinese characters on their sides were at anchor in the tideway, and the river-sides were closely fringed with up-river boats and sea-going junks, of various picturesque builds and colours, from Southern China, steamers and junks alike waiting not only for cargoes of the small beans for which Manchuria is famous, but for the pressed bean-cake which is exported in enormous quantities to fertilise the sugar plantations and hungry fields of South China."

Page 218–Concerning Newchwang: "'Peas,' really beans (Footnote: *Glycene hispides* [sic, *Glycine hispida*] {Dr. Morrison}), are its chief *raison d'être*, and their ups and downs in price its mild sensations. 'Pea-boats,' long and narrow, with matting roofs and one huge sail, bring down the beans from the interior, and mills working night and day express their oil, which is as good for cooking as for burning."

Page 235–Muk-den [Mukden] is a busy place, and does a large and lucrative trade, specially in grain, beans, and furs."

Seaweed is mentioned on pages 38, 140, 142, 177, 179, 182, 198-99. Kimchi: p. 98, 147, 177. Address: F.R.G.S., Geographer, Great Britain.

1492. Brinkley, Frank; Nanjô, F.; Iwasaki, Y.; Mitsukuri, K.; Matsumura, J. 1898. An unabridged Japanese-English dictionary: With copious illustrations. Tokyo: Sanseido. xxvi + 1687 p. Illust. [Jap; Eng]

• ***Summary:*** For each entry, the romanized word comes first, followed by the word written in hiragana and then in kanji (Chinese characters). Note: The authors often use the word "bean" when they should use the word "soybean." Soy related:

"Aburage: Bean-curd fried in oil.

"Amazake: Sweet *sake;* a kind of drink made of fermented rice. Syn. [Synonym]: Hitoyozake, Kozake.

"Ame: A honey-like jelly made of flour of various grains; starch-sugar.

"Ammochi: Mochi stuffed or covered with boiled and crushed pea-beans [sic, azuki beans] mixed with sugar.

"Azuki [bot.] Mungo.

"Azuki meshi: Rice and red pea beans mixed and boiled for food.

Azuki mochi: Same as Am-mochi.

"Dengaku: (2) (Coll.) *Tôfu* baked and covered with sweetened miso. *Dengaku wo yaku:* to bake or prepare *dengaku*.

"Dengaku-dôfu: See above.

"Daizu (Bot.) Soja bean.

"Edamame: (1) (lit.) Branch bean. (2) (coll.) [Soy] Beans boiled in pods on the stalks.

"Gobuzuke: Dried radish chopped into pieces of about 5 *bu* (of half an inch) in length and cooked with soy [sauce] and sugar.

"Gusokuni: Lobster chopped into transverse pieces and cooked with sugar and soy.

"Hachihaidôfu: *Tôfu* chopped into small pieces and boiled in a soup composed of four cups full of water, two of soy, and two of sake.

"Hitasu–Shôyu ni hitasu: To steep in soy.

"Hiyayakko: *tôfu* served cold.

"Ikanago-shôyu: Soy prepared in Sanuki [on Shikoku island], from a kind of fish called *Ikanago*.

Irimame: Parched peas or [soy] beans. *Irimame ni hana ga saku* (coll. Prov.) (lit.) blossoms on parched peas; something regarded as impossible.

"Iritori: Fowls boiled with a mixture of sugar, soy and *mirin* until the sauce is fully absorbed.

"Iritsuke: Any fish roasted or boiled in a pan until the sauce or soy is fully absorbed.

"Kabayaki: (1) A way of roasting fish. (2) Eels cut open on the dorsal line, covered with soy mixed with sugar, and roasted. (3) Unagi no kabayaki: Roasted eels.

"Kenchin: (Modern Chin.) (1) Black beans malted and fried, and eaten with soy or table salt. (2) A soup containing various vegetables and *tôfu* mixed together and fried.

"Kigaracha-meshi: Rice boiled with water and a small quantity of *sake* or soy (so called from its yellowish color).

"Kijiyaki: The flesh of bonito or tunny-fish covered with soy and sugar, and baked.

"Kinako: [Soy] Bean flour (of yellowish or greenish color).

"Kinome-dengaku: *Tôfu* or the fruit of the egg plant covered with a pasty mixture of *miso*, sugar, and the buds or leaves of the *sanshô*, and baked.

"Kiuri-momi: Cucumber chopped fine and seasoned

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with salt, vinegar and soy.

"Kôji: Yeast, barm [sic]. *Kôji wo nekasu:* To make yeast [sic, kôji].

"Kokushô: A soup prepared with *miso* and the flesh of *koi* [carp] (*cyprinus haematoperus*).

"Kombumaki: Roasted or cooked fish wrapped in a piece of *kombu*, tied and boiled with sugar and soy.

"Kuromame: (Bot.) Black soy bean.

"Kyarabuki: The stems of the *fuki* boiled with soy.

"Mamemaki: A ceremony of scattering parched peas [sic, soybeans] about in an occupied house to drive out evils spirits, celbrated on the last night of December, or the early part of January (o.s.) [old style] crying aloud the while *fuku wa uchi* (fortune inside), *oni wa soto* (devils outside). Syn. Oniyarai, Setsubun.

"Mame-no-ko: [Soy] Bean flour used for covering or sprinkling over *mochi, dango.* Syn. Kinako.

"Miso: A kind of sauce made of wheat, [soy] bean, and salt. *Miso wo tsukeru:* (a) (lit.) to spoil (as one's coat) with miso. (b) (fig. coll.) to disgrace one's self; *Tonda miso wo tsuketa:* (coll.) have met with a shocking failure.

"Misokoshi: A miso strainer.

"Misomame: (Bot.) Soja bean, Glycine.

"Misoshiru: A kind of soup made with miso.

"Moromi: The grounds or lees left in making soy or *sake* and used as food.

"Moromi-sake: A kind of sake with rice grounds not separated from the liquid. Syn. Doburoku, Nigorizake.

"Murasaki: Another name for the sardine, or for soy.

Namaage or Nama-age: Not listed.

"Nattô: A kind of food made of boiled [soy] beans (usually sold in small packages made of rice straw).

"Nigari: The brine left by the deliquescence of salt.

"Nigashio: Same as Nigari.

"Oborodôfu: (1) A *tôfu* boiled down until it is almost dry and relished with soy and sugar. (2) A kind of *tôfu* [sic, unpressed tofu curds].

"Omame: (Bot.) Soy bean.

"Satsuma-iri: Food prepared by cooking a mixture of parched rice and finely chopped sweet potato, and relishing it with soy and sugar.

"Shitaji: Soy. See *Shôyu.*

"Shôyu: A kind of sauce made by pressing a fermented mixture of calcined barley meal, boiled [soy] beans, yeast, water, and salt; soy. Syn. Shitaji, tamari.

"Shôyu no moromi: Soy before it is pressed.

"Suiri: Cooked with vinegar. *Iwashi no suiri:* A sardine cooked with a mixture of vinegar and soy. Syn. Suni.

"Sukimi: Flesh of fish sliced thin, and eaten relished with soy and *wasabi* or horse-radish.

"Sukiyaki: Roasting sliced meat or flesh with soy, in a shallow pan. Note: This is the earliest document seen (April 2012) that contains the word "sukiyaki."

"Sumiso: A kind of sauce made by rubbing together *miso* and vinegar in a mortar [suribachi].

"Suribachi: An earthenware vessel used in rubbing *miso;* a mortar.

"Sushi: (1) Fish seasoned with vinegar. (2) A general name for food made of boiled rice and fish, eggs, vegetable, etc, seasoned with vinegar and soy. As an affix the form is changed to *zushi. Inari-zushi:* food made of fried *tôfu* stuffed with a kind of *chirashi-zushi.*

"Tamari: Soy before it is pressed [sic].

"Tekkamiso: A kind of food made by roasting *miso* mixed with parched beans, chopped burdock, and a little oil.

Temae: (1) One's own side. *O temae miso wa shio ga karai:* (coll.) Self approbation is disgusting.

"Teriyaki: Flesh of fish baked with a kind of sauce composed of soy, *mirin,* and sugar.

"Tôfu: A kind of food made from bean curd hardened by mixing with a small quantity of the brine left after the deliquescence of salt [nigari]. In composition the form changes into dôfu. *Tôfu ni kasugae:* (Prov.) (lit.) an iron clamp to connect pieces of tofu; no effect. Yaki-dôfu: Baked [grilled] *tôfu.*

"Tsukuru: To pickle in sake, brine vinegar, etc. *Shôyu wo tsukete yaku:* To bake [grill] seasoned with soy. Syn. Hitasu, uruosu.

"Uchimame: The soy bean flattened with hammer and boiled in soup.

"Udondôfu: Tôfu cut into udon like pieces, and eaten boiled in a soup made of cups of soy, two of *sake* in four cups of water.

"Yuba: The skin of bean curd used as food. Syn. Uba.

"Yudôfu: Boiled *tôfu."* Address: 1. Captain, R.A., Editor of the *Japan Mail;* 2. M.A., Bungakuhakushi; 3. Nôgakushi.

1493. Chamberlain, Basil Hall. 1898. A handbook of colloquial Japanese. 3rd ed. London: Sampson Low, Marston, & Co.; Tokyo: The Shuyeisha, Ichigaya; Yokohama, Shanghai, Hongkong, Singapore: Kelly & Walsh, Ld. ix + 567 p. 19 cm.

• ***Summary:*** Page 241: Court words, used by the Imperial Family, include: For miso they say *"o mushi* (lit. honourably steamed). English: bean sauce." For tôfu they say *"o kabe.* English: Bean-curd." O-kabe belongs also to the language of women.

Page 451: A poem of 31 syllables (5, 7, 5, 7, 7) says: Hototogisu / Jiyû jizai ni / Kiku sato wa,–/ Saka-ya ni san ri, / Tôfu-ya ni ni-ri!" Translation: "The village where one may listen undisturbedly to the cockoo's song is–three leagues from the grog shop, and two from the bean-curd shop!"

Anglo-Japanese vocabulary: soy [sauce], *shôyu, shitaji.*

Japanese-English vocabulary: "kabe, (with honorific prefix *o*), the Court word for tôfu, bean-curd."

Page 517: "miso, a kind of bean sauce."

Page 520: "mushi, (with honorific prefix *o*), the Court word for miso, bean sauce."

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Page 538: "shôyu, soy (our word comes from the Japanese)."

Page 546: "tôfu, bean-curd: tôfu-ya, a shop for or seller of bean-curd." Address: Emeritus Prof. of Japanese and Philology in the Imperial Univ. of Tokyo, Tokyo.

1494. Fruwirth, Carl. 1898. Anbau der Huelsenfruechte [Cultivation of legumes]. Berlin: Verlagsbuchhandlung Paul Parey. xii + 274 p. See p. 11-13, 19, 47, 214-19 (Die Sojabohne), 264, 272-73. Illust. No index. 19 cm. [5 ref. Ger]

• ***Summary:*** Contents: Vernacular names in other countries. Botanical characteristics. Varieties, types (*Varietäten, Sorten*). Natural history. Uses and significance. Demands placed on the soil and climate (*Wärmesumme* or "heat units"). Use of fertilizers. Preparing the soil. Planting and seed. Harvest and yields. Animal pests. An illustration (p. 215) shows the leaves and buds of a soybean plant (*Glycine hispida*).

Concerning varieties and types: In addition to the yellow-seeded form, soybeans (*Sojas*) with brown and with black seeds are also cultivated in Europe, and both likewise belong to the Soja tumida group. However the distribution of these latter two is insignificant. Haage and Schmidt, the seedsmen in Erfurt, sell a green-seeded form named Bluish-green Soybean (*Blaugrüne Soja*). 100 seeds weigh 8-13 gm. One liter of seeds weighs 712-717 gm. Individual seeds are 7-8.2 mm long, 5-5.5 mm wide, and 3.2-4 mm high.

Yield: The yield obtained in Hungarian Altenburg was 1,600 to 2,100 liters of seed and 1,300 to 1,600 kg of straw per hectare. The yield in Bavaria (*Bayern*), based on many trials, averaged 2,400 kg/ha of seed. Haberlandt calculated the yield, based on trial plots with small areas, at 1,685 kg/ha. The range in yield is considered to be 700 to 3,000 kg/ha of seeds and 1,200 to 3,000 kg/ha of straw.

A table (p. 266-73) gives the composition on an as-is and moisture-free basis of all legumes discussed in this book.

Note: Karl Fruwirth was born in 1862. Address: Professor at the Royal Agricultural Academy (an der Koenigliche Landwirtschaftlichen Akademie), Hohenheim [Württemberg, Germany].

1495. Gifford, Daniel L. 1898. Every-day life in Korea: A collection of studies and stories. Chicago, New York, Toronto: Fleming H. Revell Co. 231 p. See p. 20, 53. Illust. Map. No index. 20 cm.

• ***Summary:*** Page 20: "Beans are used for food–put sparingly into the rice kettles, or decomposed for a peppery sauce which furnishes one of their side dishes. Again they are mixed with chopped straw and boiled in water, forming a hot mixture that is the sole food of cattle and horses in Korea. Beans are also an article of export." Note 1. These beans are soybeans and the peppery sauce is probably *kochujang*.

Page 53: "The heaping bowl of rice is then discussed, either with the brass spoon or chop-sticks. And the chop-sticks descend every now and then upon the contents of the little side dishes, the brine-soaked 'mu,' or turnip, the bits of dried fish or meats, a species of sauerkraut [*kimchi*] composed of cabbage, shrimp, ginger, onion, red pepper, salt, etc., with an occasional dip into the bean sauce [soy sauce] (à la Worcestershire). For liquid food he drinks cold water, or the water in which the rice has been cooked."

Note 2. In 1898 Pyeng-yang [Pyongyang] was "by far the most important city in the north of Korea,..." As of 2009, it is the capital of North Korea. Address: Rev., Mendota, Illinois. Formerly eight years a missionary in Pyeng-yang [Pyongyang], Korea.

1496. *Proceedings of the American Pharmaceutical Association.*1898. Report on the progress of pharmacy. 46:582-1120. See p. 857-60.

• ***Summary:*** In the section titled "Materia medica," under "Vegetable drugs," we read: "*Soy Bean-Food Value, etc.*– Referring to his paper on the soja bean (see Proceedings 1896, 634), in which he gave a summary of the literature on this valuable food product, Prof. Henry Trimble reproduces in the abstract a recent paper entitled "The Soy Bean as a Forage Crop," by Thomas A. Williams, with an appendix on "Soy Beans as Food for Man," by C.F. Langworthy, published in *Farmer's Bulletin*, No. 58, issued by the U.S. Department of Agriculture. While not adding anything new to the knowledge of the digestive ferment, which was prominently discussed in the summary above referred to, there is much valuable information that is of interest to the pharmacist.

Discusses *Glycine hispida*, soy bean, Prof. Haberlandt, yuba, shoyu, tofu, frozen tofu, natto, and miso.

See: Trimble, Henry. 1897. "The soy bean." *American J. of Pharmacy* 69:584-93. Nov.

1497. Simmonds, Peter Lund. 1898. The dictionary of trade products, manufacturing and technical terms, moneys, weights, and measures of all countries. New ed., revised & enlarged. London and New York: George Routledge and Sons, Ltd. viii + 510 p. 20 cm.

• ***Summary:*** This book consists of a reprint of the body of his 1867 book *Commercial Dictionary of Trade Products*, plus a different preface and a shorter supplement (p. 423-510). New soy-related entries in the Supplement include: "Pea oil, a fixed oil obtained in China by pressing the seeds of *Dolichos soja*. "Soy bean (*Glycine soja*. This pulse, a native of the far East, is now grown in Thibet, Assam, and other parts India)." "Tofu, the oil-cake of beans and peas in Japan and China, used for soups and sauces.

New non-soy entries in the Supplement include: Alfalfa, earth-pea (*Voandseia* [*sic, Voandzeia*] *subterranea*), ginguba (a name in Angola for the ground-nut), yaourt [yogurt] (a name among the Turks for fermented milk).

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Note 1. This book has no date on the title or copyright pages. The most recent date seen in the Supplement is 1891 (p. 500–Telescope). Note 2: Peter L. Simmonds lived 1814-1897. Address: F.L.S., F.R.C.I., Vice-President of the City of London College, 16 Whittingstall Road, Fulham [England].

1498. Tokio Nurseries Co. 1898. General catalogue of plants, bulbs, seeds, &c. &c. Tokio, Japan. v + 37 p. 25 cm. [Eng]
• ***Summary:*** In the section titled "Vegetable seeds" (p. 32-35) is a subsection on "Pulse" (p. 33-34). The entries concerning soybeans and other beans are very similar to those in the 1897 edition. However the prices in this English-language catalogue are all given in Japanese yen. A note at the bottom of each page states: "Yen is equivalent to about 50 cents U.S. currency, 2 shillings or 2½ francs." Address: Komagome, Denchu, Tokio, Japan.

1499. Trabut, Louis. 1898. Le soja [The soybean]. *Algerie. Service Botanique. Informations Agricoles. Bulletin* No. 16. 7 p. [7 ref. Fre]
• ***Summary:*** The author, who demonstrates a good knowledge of American and European publications on the soybean, has cultivated soybean varieties at Alger (Algiers) and Rouïba since 1896. The soybean resists dryness well. "Soya (*le Soja*) has remained a curiosity and is not well known among agriculturists. This is explained by the large diversity of soybean races having very different needs, and also by their very varied aptitudes and uses. This is not astonishing, for soya is cultivated in the country of its origin in both temperate and tropical zones, and is used for the feeding of animals, which eat it in the form of grain, hay, and green forage. It plays a major role in the human diet, providing abundant nutrition in the form of sauce, vegetable milk (*lait végétal*) or cheese [tofu], oil, flour, and bread. Soya completes rice, which is lacking in nitrogen. It is very widely used, furnishing, at a low price, a food which replaces meat or fish." Note 1. This is the earliest French-language document seen (Oct. 2003) that uses the term *lait végétal* to refer to soymilk.

"We have made the mistake of presenting soya as a rival to the haricot bean: the comparison turned out to be advantageous for the latter legume (haricot) and soya was rejected.

"In Algeria we think that, for the moment, soya must be looked at primarily as a forage plant. Very remarkable for its richness in nitrogenous materials and fat, it can be very useful in the feeding of animals, for fattening and for the production of dairy milk. Its role in the human diet is less evident, however the indigenous people might find a precious resource in this legume. The soya would perfectly complement 'bechna' [probably a local grain] and barley, which are used to make a flat cake which, is too low in nitrogenous materials."

"At this station the maximum yield has been obtained from a large yellow soybean obtained directly from China. On an area of 10 ares (1,000 square meters or 0.1 hectare) the yield has been 30 tonnes/ha of green forage giving about 70 quintals (7,000 kg) of dry forage." Note 2. This is the earliest document seen (Jan. 2001) that uses the word "quintals" (or quintal") in connection with soybeans. Note: 1 quintal = 100 kg.

"The yield of the seed had been high enough that cultivation of soybeans can be considered profitable. The early varieties have given the following yields in kg/hectare at the Rouïba Station in 1896/1897: Chocolate dwarf 1370 (not watered)/1735 (watered). Compact green 2980/1735. Yellow early 2500/1785. The spring of 1896 was very rainy, while the spring of 1897 was very dry and it was necessary to water the crop.

On page 7 is a brief description of miso, shoyu, and tofu (made by coagulation of soymilk).

Concerning nodulation: "Until this year, the numerous varieties of soya which I have cultivated at the station did not show any trace of nodulation on the roots; it is therefore evident that in our soils the special microbe which determines these nodules or tumors is not present. In Jan. 1897 I contacted Prof. Kirchner (at the School of Agriculture at Hohenheim), who is especially interested in the rhizobium of soya, and I asked him to send me several nodules in order to allow me to introduce to the soya crops here the microbe which assimilates atmospheric nitrogen. All the pots that were inoculated produced soybeans whose roots were covered with nodules the size of peas. It was not formerly possible to appreciate the influence of the nodules on the development of the plant. Field trials concerning this point will be made during 1898." An illustration (non-original, p. 2) shows a soybean plant (from an original in Carrière 1880). Address: Algeria.

1500. Yamamoto, Masami. 1899. Seishu, gyûnyû, shôyu-chû no horumuarudehiido bôfu no kôryoku jikken seiseki [Results of experiments on the antiseptic power of the formaldehyde in sake, milk, and shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 206. p. 313-25. April. [Jap]

1501. Hills & Co. 1899. Catsups, pickles and sauces (Ad). *Hartford Daily Courant* (*Connecticut*). May 30. p. 14.
• ***Summary:*** "In these lines we leave nothing that's good, to be wished for–Sauces: Watkins' Nonpareil, Reading, Essence Anchovies, Halford, Beefsteak, Brand's A-1, Harvey, John Bull, China Soy [sauce], Mushroom, Walnut, Lee [sic, Lea] & Perrin's Worcestershire, Colonel Skinner, Major Grey, Sweet Louchnow, Ripe Mango, Sweet Mango, Bengal Chutney." Address: Grocers, Batterson Bldg.

1502. Fesca, M. 1899. Ueber die Landwirtschaft in Shantung [On agriculture in Shantung, China]. *Tropenpflanzer* (*Der*)

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(*Berlin*) 3(6):246-57. June. See p. 249-50, 255. [2 ref. Ger]
• ***Summary:*** Among the legumes in Shantung province, the soybean plays a predominant role. It is used for human and animal food, for making soy sauce (*Shoyusauce*), and above all for oil. The large exports from Tshifu [Chefoo] of soybeans, soybean oil, and soybean cake in 1896 amounted to 1,567,147 Haikuan taels (6,258,588 German Marks), and accounted for about one-fourth of all exports.

The soybean is one of the legumes with the highest oil content, averaging 17.5% and ranging up to 20%. Peanuts, however, contain 45% oil, and they are sometimes grown in Shantung for their oil. Also discusses sesame seeds and hempseeds. Address: Prof., Dr.

1503. Blasdale, Walter C. 1899. A description of some Chinese vegetable food materials and their nutritive and economic value. *USDA Office of Experiment Stations, Bulletin* No. 68. 112 p. See p. 32-36. [19 ref]
• ***Summary:*** "According to Prinsen-Geerligs [*Chemiker-Zeitung*, 20 (1896) 67-69], 'tao hu,' or bean cheese, is prepared from the seeds of the white variety of soy bean. These are allowed to soak for three hours in water, are then reduced to a thick paste, and the mass cooked. The cooked mass is strained through a coarse cloth. The filtrate consists of a milky-white liquid containing protein and fat. As soon as this becomes cool some material is added (for instance, crude salt containing magnesium chlorid [chloride]), which precipitates the proteid material, the fat being inclosed in the coagulated mass. The coagulated material is pressed and kneaded into small cakes. The cakes may be dipped for a few moments into a saline solution of curcuma. Variations in the process give rise to a number of varieties of bean cheese. This is essentially the method used by the Chinese of San Francisco in the preparation of the bean cheese used by them. It is sold either in the form of a freshly precipitated curd or in the form of small square cakes obtained by compressing the former material. It is usually cooked in peanut oil before being eaten and, in the author's opinion, is a palatable food. A partial analysis of one of the cakes gave 81.35 per cent. fat 5.19 per cent, and ash 0.80 per cent.

"The filtrate from the cooked soy beans resembles milk, and, on heating, a skin [yuba], not unlike that formed on milk, rises to the surface of it."

A large number of varieties of the soy bean are in cultivation in China and Japan, but only two were found in the Chinese markets in San Francisco, a yellow and a black variety. Aside from a difference in color, the two forms apparently do not differ materially from each other. The yellow variety is known as 'wong tau,'and is designated by the characters 'yellow' + 'bean,' while the black is known as 'hak tau,' and is designated by the characters 'black' + 'bean.'

"Both varieties obtained from the Chinese market in San Francisco grew readily in Berkeley, attaining a height of about 3 feet, and in spite of a very dry season produced an abundant crop of seeds... The composition of the seeds of the two varieties is shown in Table 10 (p. 33), the average composition of American-grown soy beans being quoted also for purposes of comparison." On a dry-weight basis, the original black soy beans contained, on average, 0.35% more protein (39.62% vs. 39.27%) and 0.72% less fat (18.77% vs. 19.49%) than the yellow soy beans. The soy beans grown in Berkeley (average of 8 analyses) contained 38.1% protein and 19.00% fat.

Photos show: (1) The upper portion of a plant of the black soy bean (p. 33).

(2) "Mature plant of yellow soy bean" (showing only the pods and stems, no leaves, p. 35). Address: Instructor in Chemistry, Univ. of California.

1504. *San Francisco Chronicle.*1899. A San Franciscan's impressions of the Orient. Aug. 20. p. 3.
• ***Summary:*** George A. Newhall, Vice-President of the San Francisco Chamber of Commerce, visited Asia where he was officially commissioned to promote international trade. His first stop was in Yokohama, Japan where "he was received with the greatest cordiality by Kahe Otani, president of the Yokohama Chamber of Commerce, member of the House of Parliament,..." Mr. Otani "has two houses, one of modern European style, the other a typical Japanese dwelling, and it was in the latter that the repast was offered." Mr. Newhall removed has shoes and refused a chair that was offered to him.

"The numerous courses were served by served by dainty little soft-footed Japanese maidens all of the food being in elaborate lacquered bowls and served on lacquered trays richly ornamented with gold. The courses were as follows:

"1. Sweetmeats with rice, molded in different shapes, representing birds, flowers and beasts.

"2. Entree of meat and vegetables, with soye sauce.

"3. Fish-tai, baked and served cold with piquant Japanese sauce."

"The banquet lasted seven hours, from 3 to 10 P.M., and Mr. Newhall heroically sat it out, using chopsticks,..."

1505. *Washington Post.*1899. An interesting case settled: Decision regarding the customs duty on a proprietary sauce brought here in an unfinished state. Aug. 31. p. 7.
• ***Summary:*** "From the *New York Tribune:* An order was filed in the United States District Court on August 4 discontinuing, by consent of both parties, the suit of the United States vs. John Duncan's Sons. This simple incident terminated a remarkable episode in the administration of the customs laws.

"About sixty years ago [i.e., in about 1839] this firm became the American agents for the firm of Lea & Perrins, of Worcester, England, manufacturers of the well-known proprietary preparation called Worcestershire sauce.

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"About twenty-two years ago [i.e., in about 1877] a change of practice was begun by Lea & Perrins and John Duncan's Sons, by which, instead of sending over here the sauce finished, bottled, labeled and ready for use, it was sent over in a partly manufactured condition in casks, and the Messrs. Duncan finished the sauce here according to a formula furnished them by the English house, and bottled and put it up for sale. This course had certain obvious advantages. It saved the firms from paying duty on bottles, labels, straw and finishing expenses, and avoided breakage. The article which was brought over was an incomplete material for the sauce, and was, of course, of no use to anybody who was not acquainted with the formula for finishing it. It was never furnished by Lea & Perrins to anybody but the Duncans, and consigned only to them. It was, therefore, one of the class of merchandise for which or tariff law provides that in determining the valuation upon which to assess duty the government officers shall ascertain the cost of production and make suitable addition to represent the manufacturers' profit.

"Lea & Perrins had furnished the United States consul with a statement of their cost of production, giving as much detail as was consistent with the inviolability of their proprietary secret. A suit was brought against the importers. They defended it, putting in an answer denying that the goods had been undervalued, and alleging good faith on their part. The attorney general directed the discontinuance of the suit on the Messrs. Duncan filing an affidavit similar to the declaration made by Lea & Perrins, on the other side, that the invoices in question had fully covered the market value of the importation. The suit was discontinued without costs, without payment of one dollar by the Messrs. Duncan, and upon the motion of the government's officers themselves.

"Lea & Perrins' Worcestershire sauce is apparently more popular than ever, and it is difficult for the manufacturers to keep up with the demand."

Note: It seems likely that Lea & Perrins imported soy sauce from East Asia, then transshipped it from England to New York, probably in the original wooden casks in which it had been sent from Asia.

1506. Duncan's (John) Sons. 1899. Display ad: Lea & Perrins' Sauce: The original Worcestershire. *San Francisco Chronicle*. Sept. 4. p. 10.
• ***Summary:*** A large illustration shows a gentleman seated at a dining table, with white tablecloth and fine dinnerware. He is wearing pince-nez spectacles and looking up at a waiter who is standing near him, holding a tray upon which is one lone bottle of Worcestershire sauce. He utters the words: "That's it." Below the illustration is written: "Beware of imitations." Address: Agents, New York.

1507. Omako, M. 1899. "Ramuko" su oyobi shôyu no sekiri, korera oyobi chôchi fusu no sankin ni taisuru sakkin ryoku ni tsuite [The bacteriocide power of soda-water, vinegar, and shoyu against the bacilli of cholera, typhoid fever, and dysentery]. *Tokyo Iji Shinshi (Tokyo Medical Journal)* No. 1119. p. 1-6. Sept. 16. [6 ref. Jap]
• ***Summary:*** Nakazawa (1950) translates the title of this article as "The antiseptic power of lemonade vinegar and shoyu on the bacillus of dysentery, cholera, and typhus."

Note: Wine is said to have been first made by the Babylonians about 3,000 B.C. But vinegar existed as much as 5,000 years before that. It is mentioned in the Bible. It is produced naturally after a wine fermentation when bacteria called acetobacters convert the alcohol to acetic acid. The English word "vinegar," first used in the 14th century, is derived from the French *vin aigre*, or sour wine. In German it is *essig*, and in Italian *aceto*, which is where the name acetic acid comes from. Address: Osaka, Japan.

1508. *Boston Daily Globe*.1899. Housekeepers' column: Tried and true recipes from experienced cooks. Sept. 27. p. 10.
• ***Summary:*** "Worcestershire sauce. Pound in a mortar ½ ounce of cayenne pepper, ½ ounce of garlic, and pour over 1 quart of boiling vinegar (or, if you have it, walnut pickle vinegar). When nearly cold add a gill [¼ pint] of Indian soy [sauce], and bottle. Cork tightly, and, after six weeks, the sauce will be fit for use. Mrs. A.S."

Note: With two small exceptions, this recipe is the same as that by Mrs. English, first published in the 26 May 1898 issue (p. 8) of this newspaper.

1509. *Boston Daily Globe*.1899. Housekeepers' department: Tried and true recipes contributed by the women of New England. Oct. 15. p. 27.
• ***Summary:*** "Yorkshire relish: Yorkshire relish should always be made as soon as walnuts can be gathered... Pick your walnuts in dry weather, bruise them thoroughly, scatter salt over them, and stir daily for three days. Press out all the juice you can, and to every pint of the liquor add half a pint of Indian soy [sauce], and three pints of good vinegar, one ounce of shallots, half an ounce of cayenne pepper, and half an ounce of garlic. Pound the dry ingredients in a mortar before mixing all together. Stir and pour into small bottles for use. Cork tightly, as this sauce will not mature under four or six months. Mrs. L."

1510. Ralphs (Geo. A.). 1899. Our motto–"Large value at little cost" (Ad). *Los Angeles Times*. Dec. 7. p. 3.
• ***Summary:*** "1 large bottle catsup–10¢. 1 large bottle pickles–10¢. 1 large bottle mustard–5¢. 1 large bottle Worcestershire Sauce–10¢." Address: 601 S. Spring [Los Angeles, California]. Phone: Main 516.

1511. Platt, James. 1899. "Soy." *Notes and Queries (London)* 4:475. Dec. 9. 9th Series. [2 ref]

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• ***Summary:*** "This word has been badly treated by all our dictionaries. The best is the 'Century,' where it is traced to 'Japanese *siyan*, Chinese *shiyu*,' but even that involves two errors. One is a misprint ('*siyan*' should be *siyau*); the other is that it accounts for only half the English word.

"To explain this, I must draw a distinction between three kinds of Japanese. (1) In Japanese as written with the native character *soy* would not be *siyau*, but *siyau-yu*. (2) In the Romanised Japanese this is simplified to *shoyu*. (3) Colloquially this is still further reduced by dropping the final vowel, to *shoy* or *soy* (*sh* in Tokio, *s* in some other dialects). Of this monosyllable only the *so* represents the classical *siyau*; the final consonant (*y*) is a relic of the termination *yu*. Hence my remark that the 'Century' accounts for only half the English word. The English word is derived from the Japanese, the latter from the Chinese. The Chinese form given by the 'Century' is Northern Mandarin. At Shanghai it becomes *sze-yu*, at Amoy, *si-iu*, at Canton *shi-yau* [fermented black soybean sauce]. The first element is defined by Williams, in his 'Dictionary,' p. 764, as 'Salted beans, or other fruits, dried and used as condiments'; the second element merely means 'oil' (Williams, p. 1111)."

1512. T. 1899. "Soy." *Notes and Queries* (*London*) 4:526. Dec. 23. 9th Series. [2 ref]
• ***Summary:*** Responding to notes on "Soy" in this periodical (9 Dec. 1899, p. 475) the author states: "In Java called *Soya*. Query, from Soya, in Java?"

1513. Haury, Alfred. 1899. Die Schimmelpilze und ihre industrielle Anwendung [Molds and their industrial application]. *Oesterreichische Chemiker-Zeitung* 2(23):605-11. Dec. Series 2. [24 ref. Ger]
• ***Summary:*** Discusses three genera of molds: *Penicillium*, *Aspergillus*, and *Mucor*. Gives details and a review of the literature on the use of *Aspergillus* species of mold for the production of saké, koji, soy sauce, miso, and various other East-Asian foods. In 1896 a book titled *Les moisissures* (*The molds*), by Calmette was published in Brussels, Belgium; he discussed sake, the chemical composition of koji, and the action of its diastase enzyme. "It was a Japanese named Jokichi Takamine who first had the idea of using koji in place of malt in American and European distilleries. In 1889 in the USA he was issued a patent on the process for using koji (or a mixture of koji and moto) in a fermentation to make of product containing 15-18% alcohol. The process was first tested in practice at Peoria, Illinois, is a distillery of the Distilling and Feeding Co., but not with the results that all the world had expected. Both Delbrueck (1894) and Saare (1895) had the opportunity to the process on the spot in 1894; in the opinion of Delbrueck koji is suited for use in place of malt in the saccharification of starches. For the production of koji, Takamine uses an inexpensive wheat bran instead of the typical rice. The process is then described in detail.

Aspergillus oryzae plays a key role in the production of two East-Asian foods: soy sauce (*Shoyu-Sauce*) and miso. The former is made with wheat, soybeans, salt, and water; miso is made from soybeans, koji, salt, and water. For details see Kellner's publication "On Saké, Shoyu and Miso." In Java, another species of Aspergillus, namely *A. Wentii* is used to make their soy sauce (*Sojasauce*), according to Prinsen-Geerligs.

Also discusses the use of Mucor species, such as *Amylomyces rouxii*, in the production of spirits or brandy from dehulled rice. In 1892 Calmette was head of the Pasteur Institute in Saigon; today he is director of the Pasteur Institute in Lille, France. He has taken considerable interest in Mucor species, and published the results of his research in his 1896 book. Colette has a factory at Seclin near Lille. Colette and Boidin have formed the Amylo Society (*Société d'Amylo*) in Lille. Address: Chemist, Austria.

1514. Kano, S.; Iishima, S. 1899. Honpo-san shizenbutsu oyobi shikohin 18 shu no kyûshû ni tsuite [Digestion experiments on 18 Japanese foods]. *Gun-i Gakko Gyofu Koku Nobu* (*Bulletin of the Army Medical College*) No. 3. p. 101-33. [Jap]
• ***Summary:*** These human digestion experiments with single food materials were conducted at the Army Medical College in Tokyo. They are summarized in English by Oshima (1905, p. 168-73). Most of the experiments used shoyu as a seasoning. Experiment #89 used *kingyo fu* (a gluten preparation) and raw red azuki (adzuke) beans. #92 used tofu. #93 use tofu cake or okara. #94 used yuba. #97 used kuzu starch (made from *Pueraria thunbergiana*). Address: Army Medical College, Tokyo.

1515. Breitenstein, H. 1899. 21 Jahre in Indien: Aus dem Tagebuche eines Militaerarztes. Erster Theil: Borneo [Twenty-one years in the Indies: From the diaries of a military doctor, Part I: Borneo]. Leipzig, Germany: Th. Grieben's Verlag (L. Fernau). viii + 264 p. See p. 69. Index. [Ger]
• ***Summary:*** A section about food states (p. 69): Of the countless spices (*Gewuerzen*) (Hass-Karl speaks of 199 from the plant kingdom alone), for example Kerry, Ketjab [Ketjap] (Soja) I can only say the same; they are magnificent. Address: M.D., Karlsbad.

1516. Chamberlain, Basil Hall; Mason, W.B. 1899. A handbook for travellers in Japan: Including the whole empire from Yezo to Formosa. 5th ed., revised and augmented. London: John Murray; Yokohama, Shanghai, Hongkong, Singapore: Kelly & Walsh, Ltd. ix + 577 + 53 p. "With 28 maps and plans and numerous illustrations." Index.
• ***Summary:*** Contents: Introduction. Routes: 1. Eastern Japan. 2. Routes connecting Tokyo and Kyoto. 3. Central

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Japan. 4. Western Japan and the Inland Sea. 5. The island of Shikoku. 6. The island of Kyushu. 7. Northern Japan. 8. The island of Yezo [Hokkaido]. 9. Luchu and Formosa. Glossary.

Page 10: Provisions: "Curry-powder will often help to make insipid Japanese dishes palatable, and *shôyu* (soy [sauce]) adds a zest to soups." "The following Japanese articles of food are considered palatable by most foreigners: *Kaseteira* [*Kasutera*], sponge cake. *Miso-shiru*, bean-soup [miso soup],... *Sakana no tempura*, fish fritter. *Unagi-mesihi*, layers of rice with eels done in soy. *Yokan*, sweet bean-paste" [azuki].

Gods and Goddesses (p. 56): Toyo-Uke-Bime, also called Uke-Mochi-no-Kami, is "the Shinto Goddess of Food or of the Earth. The *Nihongi*, one of the two principal sources of Japanese mythology and early history..." The Moon God killed the Goddess of Earth. From the body of the murdered Earth sprang cattle and horses, millet, silkworms, rice, barley, and [soy] beans, which the Sun-Goddess decreed should thenceforth be the food of the human race. In the *Kojiki* version of the myth, it is Susa-no-o who slays the Goddess of Food, and there are other differences of detail."

Eastern Japan (p. 225): "Tenjin-yama or Minato (Inn, Suiryo-kwan). This prettily situated place contains a few sake breweries and soy manufactories, the produce of which is shipped in junks to Tokyo;..."

Mountains of central Japan (p. 281): "Narada (accommodation at a Buddhist temple)" consists of but a few households; the people are isolated and poor. "Rice, *sake*, and soy [sauce] are with them luxuries to be indulged in on rare occasions, their ordinary food consisting only of millet and potatoes."

Central Japan (p. 334): "Yuasa (Inn, Edo-ya) is a dull town, noted for its manufacture of soy."

Central Japan (p. 336): "There is a current belief to the effect that Koya-san is so precipitous that such luxuries as bean-curd (*tôfu*) cannot he carried up to it, but that the priests place coppers on the temple balustrade, with which the crows fly off to Kumano and bring back bean-curd in return."

Central Japan (p. 389-90): Kasuga no Miya (a Shinto temple). The oratory "is now used by the townspeople on the evening of the Setsubun (3rd February) for the performance of the ceremony of scattering [roasted soy] beans to expel evil spirits."

Central Japan (p. 403): Matsudô. "Travellers will remark the great industry and economy practised in the agriculture of this district, even the ridges between the rice-fields being sown with beans or barley." Note 1. Soy beans were often planted on such ridges, then harvested as green vegetable soybeans.

Note 2. The last 53 pages of this book are advertisements. Address: 1. F.R.G.S., Emeritus Prof. of Japanese and Philology in the Imperial Univ. of Tokyo, Tokyo; 2. Corresponding member of the Royal Scottish Geographical Society, and late of the Imperial Japanese Dep. of Communications.

1517. Douglas, Carstairs. 1899. Chinese-English dictionary of the vernacular or spoken language of Amoy, with the principal variations of the Chang-chew and Chin-chew dialects. New edition. London: Presbyterian Church of England. xix + 612 p. 27 cm. [2 ref]

• ***Summary:*** The Preface begins: "The vernacular or spoken language of Amoy, which this dictionary attempts to make more accessible than formerly, has been also termed by some 'The Amoy Dialect' or 'The Amoy Colloquial;' and it particularly coincides with the so-called 'Hok-kien Dialect,' illustrated by the Rev. Medhurst in his quarto Dictionary under that title."

On page 58, under the character for *chiang–chiu* a sort of sauce or condiment. *tau chiu* sauce made from beans and flour. *chiu-chheng* the thinner part of *tau chiu*. *koan-kiu-chiu* this sauce seasoned with cayenne pepper. *chiu-liau* various sorts of vegetables preserved in *tau chiu*. *chiu-koe* pumpkins so preserved. *chiu-kiu* ginger so preserved. *chiu-mia-chia* wheaten dough balls in this sauce.

On page 156, under the character for *hu–tau-hu* bean curd shaped into squares (from the pulpy "tau-hoe"), but not yet pressed. See *tau*.

On page 176, under the character for *iu* meaning oil or fat. On the last line of the right column–*tau-iu* soy [sauce]. *e-tau-iu* dark-colored soy. *seng-iu* the common oil from ground-nuts. *moa-iu* oil from hemp-seed.

On page 423, under the character for *shi–si* salted vegetables and fruits. *tau-si* pickled and salted beans [soybeans]. *tau-si-pe* black beans [soybeans] boiled, dried, and kept till mouldy, to be made into soy [sauce]. *tau-si-phoh* beans from which soy has been made, broken down small. *mi-si* (Cantonese) = *tau-chiu* (Amoy), sort of salted sauce.

On page 480, under the character for *tou–tau* peas or beans; pulse. *tau-khe* bean cake from North China, used as manure. *tau-iu* soy (see iu). *tau-chiu* a thick salt sauce made from pulse. *tau-si* salted beans [fermented black soybeans]. *tau-hoe* soft bean curd not yet pressed or shaped. *tau-chiu* same. *tau-hu* bean curd shaped but not yet pressed. *tau-hu-phe* same, but made into thin sheets for wrapping around eatables. *teh tau-hu* to shape the *tau-hoe* into pieces of *tau-hu*. *tau-koa* bean-curd that has been pressed in a cloth. *tau-ju* same cut into smaller squares and salted. *tau-kiam* (Cantonese) same. *tau-che* refuse from manufacture of bean-curd [okara]. *tau-thau* same. *the-tau* = lok-kha-seng, the Arachis, ground-nut, or pea-nut, from which oil is made. *tho-tau* same.

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "pickled and salted beans" to refer to fermented black soybeans.

Note 2. The first edition of this book was published in 1873. In 1970 the Ku-T'ing Book Store in Taipei published a photoreprint of the 1899 London edition; it was bound with

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a Supplement photoreprinted from the 1923 Shanghai ed. (612 p., 27 cm). Carstairs Douglas lived 1830-1877. Address: Rev., M.A., LL.D. Glasgow, Missionary of the Presbyterian Church in England.

1518. Duncan's (John) Sons. 1899. Its only a ? [question] of sauce. New York, NY: John Duncan's Sons. [8] p. Illust. (color). 12 cm. *
• ***Summary:*** Advertisement in verse for Lea & Perrins' Worcestershire Sauce.

1519. Fraser, Hugh (Mrs.). 1899. A diplomatist's wife in Japan: Letters from home to home. 2 vols. London: Hutchinson & Co. See vol. 1, p. 231, 233, 238. Chap. XI. With 250 Illust. 24 cm. [Eng]
• ***Summary:*** The author's maiden name is Mary Crawford. These letters, written in a poetic, flowery style during a three years' residence in Tokyo, Japan (April 1889 to April 1892), describe many aspects of Japanese life. Chapter XI, written in Nov. 1889, begins with a description of a Japanese mushroom hunting party in the autumn woods of Kyoto. After the mushrooms (the most prized at *matsu-také*) are gathered, they are cooked over a little fire in the woods. "Then begins the business of roasting the mushrooms, in which everybody helps; and great enthusiasm is shown over the delicious odour they give out. 'Ii nioi! Ii nioi de gozaimasu!' (Good smell! Honourably good odour!) exclaim the ladies, as they deftly peel off the outer skin of the toasted fruit, which is then shred into small pieces, flavoured with *shoyu* (soy) and vinegar, and eaten with *o'hashi*, the honourable chop-sticks."

During his visit to Japan, there was an attempt on the life of the young Russian prince Cesarévitch. There was a great outpouring of sympathy and condolences and love from Japanese people of all ranks "to the boy who lay healing of his wound in Kobe Harbour. The poor sent the most touching gifts–the rice and shoyu, the fish and barley flour, which would have fed the little family for a year;..." Address: Tokyo, Japan.

1520. Heuzé, Gustave. 1899. Les plantes alimentaires des pays chauds et des colonies. 2 ed. [Edible plants of the tropics and colonies, 2nd ed.]. Paris: Librairie Agricole de la Maison Rustique. xii + 381 p. See p. 174-78. 19 cm. Series: Cours d'Agriculture Pratique. [Fre]
• ***Summary:*** The soybean is referred to in French as "Dolic du Japon ou soja." An illustration (non-original, p. 175; by Thiebault, from Carrière 1880) shows the soybean plant (titled *Dolic du Japon ou soja*) and a cluster of pods. Its scientific names are Soja japonica, Sav. or Soja hispida, Moench. Synonyms are Dolic soja, and Dolic à café. A botanical description is given. "Varieties which are most widely cultivated are the yellow soybean (le soja jaune; Soja ochroleuca) and the black soybean (le soja noir; Soja hispida). A sub-race named *soja d'Étampes* is the most widely appreciated in France. It is very productive but it needs 4-5 months to ripen its seeds. The soybean is an annual; it was introduced to France from China by de Montigny under the name *pois oléagineux*. It is successfully cultivated in China, Japan, the Indies, the Moluccas, etc. It is rather easily sold in the green state at various markets. Its principal merit is its ability to resist drought. It needs as much heat as haricots...

"The Japanese transform the seeds of this legume into a puree (tofu; *ten-hu*) or a paste (*miso*) with which they make a sauce (soja), which they use to prepare various seasonings named *shoyu* or *sooju* and *tofu* or *daïzu*.

"Soybean seeds germinate very irregularly and very late in Europe, especially in their second year of existence. An analysis of the soybean seed on a moisture-free basis, conducted by Mr. Joulie, is given.

"The soybean is richer than wheat in fatty and proteinaceous materials. When one prepares dry soybeans, it is useful to soak them in water for 8-10 hours before cooking, for they are naturally very hard. They are also eaten in the shelled green state.

"The varieties with branches [les variétés à rames] are not yet cultivated in Europe." Gustave Heuzé lived 1816-1907. Address: Membre de la Société Nationale d'Agriculture. Inspecteur Générale Honoraire de l'Agriculture.

1521. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*).1899. Shôyu no kanteihô ni tsuite [On the evaluation of shoyu]. 2:424. [Jap]

1522. Langworthy, C.F. 1899. Appendix: Soy beans as food for man. *Farmers' Bulletin* (*USDA*) No. 58 (Revised ed.). p. 20-23. [1 ref]
• ***Summary:*** This part of Bulletin 58 is identical to the original July 1897 edition. Address: Ph.D., Office of Experiment Stations, USDA, Washington, DC.

1523. Paillieux, Auguste; Bois, D. 1899. Le potager d'un curieux: Histoire, culture et usages de 250 plantes comestibles, peu connues ou inconnues. Troisième édition entièrement refaite [The inquisitive person's kitchen garden: History, culture, and uses of 250 edible, little-known or unknown plants. 3rd ed. completely redone]. Paris: Librairie Agricole de la Maison Rustique. xvi + 678 p. See p. 575-625. Illust. Index. 25 cm. [2 ref, Fre]
• ***Summary:*** The information about soy in this 1899 third edition is very similar to that in the 1892 second edition, but the page numbers are different. Contents of section on soy: Introduction: Work of the Society for Acclimatization with soy, structure of this book, excerpts on soy from past issues of the *Bulletin the Society for Acclimatization*. Botany of the soybean. 1. Soy in Japan: Kaempfer's writings, including

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miso and shoyu, Japan at the World's Fair of 1878, miso, shoyu, tofu. 2. Soy in Cochin China: Black soybeans, various foods. 3. Soy in China: Soy oil, tofu and fermented tofu, soy sauce, other uses. 4. Soy in Austria-Hungary. 5. Soy in France: Historical, varieties, cultivation, utilization.

The author's full name is Nicolas-Auguste Paillieux (lived 1812-1898; he died on 8 Feb. 1898 at age 85). An illustration (non-original line drawing; p. 576) shows a mature soybean plant bearing many pods, plus a close-up of three pods to the lower right of the plant (from an original in J.R.F. 1882). Note: Desire Bois lived 1856-1946.

Other related or interesting subjects (listed alphabetically): Adzuki (p. 224). Amande de terre: See Chufa. Amarantus / Amarante (p. 14-16). Arachide / Arachis hypogæa (p. 32-35). Chufa / *Cyperus esculentus / souchet comestible* (p. 571-75). Daikon (p. 173). Gado-gado [Salad with peanut dressing] (p. 224). Gobo (p. 45). Jinenjo (p. 246). Katakuri (p. 336). Koniaku [konnyaku] (p. 289). ko / kudzu (p. 300-315). Mioga (p. 396). Moyashi (p. 226). *Phaseolus radiatus* / azuki (p. 222-24). Pistache de terre: See arachide. Quinoa (p. 523-25). Udo (p. 448). *Voandzou / Voandzeia subterranea* (p. 650-53). Wasabi (p. 420). Yama gobo (p. 496). *Zingiber mioga* (p. 396). Address: 1. Honorary member of the Council of the Societe Nationale d'Acclimatation 2. Asst. de la Chaire de Culture, Museum d'Histoire naturelle de Paris.

1524. Saito, Akio. 1899. [Chronology of soybeans in Japan, 1868 to 1899, first half of the Meiji period] (Document part). In: Akio Saito. 1985. Daizu Geppo (Soybean Monthly News). Feb. p. 11-12. [Jap]

• ***Summary:*** 1871 July–A brewing tax (*jozo-zei*) and patent tax are levied on clear sake (*seishu*), unclear sake (*dakushu*), and shoyu. But in 1875 the two taxes on shoyu are discontinued because shoyu is considered one of the necessities of life.

1873–At about this time a sincere farmer, Itoi Mosuke, of Akita prefecture finds a special type of soybean and names it Itoi-mame. Later the name changes to Ani and they are cultivated all over Akita prefecture.

1873 May–The Japanese government exhibits soybeans at the exposition in Vienna, Austria. And the USA becomes interested in soybeans. Also at this expo, Kikkoman uses glass bottles for their shoyu for the first time.

1875–At about this time, shoyu becomes so popular overseas that a German-made fake shoyu appears.

1877–There are now 40-50 miso shops in Tokyo, centered in Hongo (which comprises the areas of Yotsuya, Fukagawa, Shiba, Shinagawa, Ooi, Oshima, etc.).

1877 Feb.–Dried-frozen tofu (*kôri-dôfu*) is purchased as an army supply for the Seinan no Eki war.

1877 Aug.–The first domestic exposition is held in Japan, at Ueno Park, Tokyo. Kikkoman shoyu wins an award.

1878–The quick method of miso fermentation (*miso no sokujo-ho*) is mentioned in a government report.

1878–The first official government statistics on soybean cultivation in Japan start to be compiled. This year the area is 411,200 hectares and production is 211,700 tonnes [yield = 514 kg/ha].

1879–The price of high-quality miso in Tokyo is 4 *sen* per kg. In 1980 the price is 303 yen/kg–or about 7,575 times higher. Note: From now on prices from the Meiji era come from a book titled *History of Lifestyle of the Meiji, Taisho, and Showa periods as seen from prices of the day* (*Nedan no Meiji Taishi Showa Fuzoku Shi*). It is published by the Weekly Asahi (*Shukan Asahi*).

1882–Around this time many small shoyu manufacturers appear and quite a few bad quality shoyu products are on the market. Shoyu loses considerable consumer confidence.

1885–The price of 1 keg (*taru*, 16.2 liters or 9 *sho*) of shoyu at this time is as follows: Highest grade (*jo no jo*) (Kikkoman) 1 yen, 40 sen; Middle upper grade (*jo no chu*) (3 makers including Yamasa) 1 yen 38 sen; Lower upper grade (*jo no ge*) (Kamibishi) 1 yen 25 sen; Upper middle grade (*chu no jo*) (Fujita) 1 yen 25 sen; Lower middle grade (*chu no ge*) (Chigusa) 1 yen 17 sen; Lower grade (*ge*) (Kinka) 80 sen. Yamaguchi Yoshibei of Yamasa Shoyu starts to sell Worcestershire Sauce, called "Mikado Sauce."

1885 May–The government reinstates the tax on shoyu to raise money for the army.

1887–Soybean production in Japan tops 400,000 tonnes (419,700 tons) for the first time.

1890–The Tokyo-Area Shoyu Brewers' and Wholesalers' Union (*Ichifu Rokken Shoyu Jozo-ka Tokyo Tonya Kumiai Rengokai*) forms a cartel for the first time because of a 50% increase in the price of their raw materials.

1891–Mogi Kenzaburo of Kikkoman (1st generation) starts to use a special press (*gendo maki assaku-ki*) invented by Yamazaki Izuko to press the shoyu out of the moromi mash more efficiently and quickly.

1893–In recent years the import of soybeans to Japan has increased rapidly, and this year it reaches 96,000 tonnes. These soybeans are grown mainly in Manchuria. The average price of 2 liters of high-quality shoyu in Tokyo is 10 sen. (In 1982 it is 584 yen, or 5,840 times more than in 1893).

1894–Around this time miso soup is recognized for its value as a protein food. Dr. Sito Nesaku, an agricultural specialist, says that miso is a farm household's milk.

1894–Yabe Kikuji (1868-1936) calls natto "Japanese cheese" and presents the first academic paper on natto bacteria in Japan.

1895–Around this time the number of walking vendors of tofu, natto, and boiled whole soybeans (*ni-mame*) increased, as did the production of dried-frozen tofu (*kori-dofu*). The number of small shoyu makers decreased dramatically as Kikkoman, Yamasa, and Higeta increasingly used advanced industrialized methods. Recipes and methods

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for making miso pickles (*miso-zuke*) using carrots, daikon, udo, and ginger are given in women's magazines such as *Jokan, Katei Zasshi* and *Jogaku Kogi*.

1896–Around this time the importation of salt starts, as shoyu makers in Noda and Chiba buy 15,000 tons of salt from England.

1897–Soybean imports this year increase to about 140,000 tonnes, which is one-fourth of Japanese consumption. Domestic soybean production is 400,000 tonnes.

1899–Mogi Keizaburo of Kikkoman of Kikkoman (1st generation) starts using a boiler for the first time in the shoyu industry. Address: Norin Suisansho, Tokei Johobu, Norin Tokeika Kacho Hosa.

1525. Schulz, Carlotto. 1899. La table du végétarien: Choix, préparation et usage rationells des aliments. 700 recettes suivie des règles d'hygiène [The vegetarian table: Choice, preparation, and rational usage of foods. 700 recipes following the rules of hygiene]. Paris and Brussels: La Société végétarienne de France; Georges Balat, éditeur à Bruxelles. 395 p. Illust. General index. Recipe index. [Fre]
• ***Summary:*** Contains an introduction on vegetarianism by the author. Soy is not mentioned in the index. However, a table (p. 18) titled "Seasonal vegetables" (*Légumes de saison*) includes fresh soybeans (*soja frais*) for August and September.

The section titled "Throughout the year" (what to eat) (p. 20), under "dry legumes" includes: Fèves–Soja. Haricots–Arachides (peanuts). Lentils–Lentils of Egypt. Pois cassés–Chick peas.

An advertisement by a company named *Dépôt Central Végétarien* ("Central Vegetarian Depot") in Brussels includes: Soybean extract, an excellent condiment (*Extrait de Fêves de Soya, condiment excellent*). Note: This extract is probably soy sauce.

1526. *Boston Daily Globe*.1900. Housekeepers' column: Tried and true recipes from experienced cooks. Jan. 16. p. 10.
• ***Summary:*** "Three recipes for Indian soy [sauce]: (1) Boil 1 gallon of dolichos soja (if this cannot be had haricot or kidney beans will answer), in sufficient water until soft. Add 1 gallon bruised wheat and keep in a warm place for 24 hours; then add 1 gallon salt, and 2 gallons water and keep for two or three months in a tightly stoned jar; after which press out the liquor.

"2. Soys, 1 gallon, water to cover. Boil till soft, then add bruised wheat, 1 gallon; water, 2 gallons. Bung up in a stoneware jar for two or three months (shaking very frequently), press and filter. If the genuine soys (black Indian beans) be unobtainable, peas, kidney, or haricot beans may be substituted without disadvantage.

"3. This, the common base of most sauces, is made from the seeds of glycine soja, which is cultivated in the far east. The method of manufacture is practically a secret, but I give a formula for an excellent imitation; Mix 4 lbs extract of malt in warm water, so that the resulting sirup [syrup] should measure 1 gallon. Add 5 lbs treacle, 4 lbs salt and 2 pints of mushroom juice. Heat gently to facilitate mixing; set aside for 14 days and decant."

1527. *Manchester Guardian* (*England*).1900. Food preservatives inquiry. Jan. 16. p. 11.
• ***Summary:*** "Other experiments were made to test the effect of the quantities of preservative mentioned on the digestion of breadcrumbs as compared with the effect of other condiments, such as vinegar, Worcester sauce, small quantities of alcohol, and infused tea,..."

1528. Aso, K. 1900. The chemical composition of the spores of *Aspergillus oryzae*. *Bulletin of the College of Agriculture, Tokyo Imperial University* 4(1):81-96. Feb. [5 ref. Eng]
• ***Summary:*** "Our knowledge of the chemical composition of the spores of fungi is still very scanty, and as regards their ash, no analysis whatever has thus far been made." The spores of *Aspergillus oryzae* "can easily be obtained in any quantity in Japan, as the rice grains covered with the mycelium and the spores of this fungus form an article of commerce under the name of *Tane-Koji* or *Koji-dané*. I have preferred however to collect the spores myself, in order to obtain them in a pure state.

"Aspergillus oryzae plays a great part in several industries in Japan, being used not only in the manufacture of Sake or rice wine, but also in that of Shoyu or Soja-sauce, and of Miso."

Note: This is the earliest English-language document seen (April 2012) that uses the term "Soja- sauce" (or "soja-sauce") to refer to soy sauce.

"This fungus contains powerful enzymes, a diastase, a maltase, invertase and a peptase. Oxydases appear to be present only in traces."

In the section titled "Preparation of samples" (p. 82) the author describes how he prepared and collected the spores: "Tane-kôji was prepared roughly milled rice without mixing any ash [in sake factories the ash of oak leaves is typically mixed with the rice substrate]; and when the rice grains became covered with innumerable spores, they were brought out from the cellar and the spores were separated from the rice grains and the mycelium by tapping on the bottom of the culture boxes (*kôji-buta*) inverted on a sheet of paper." These spores "were then sifted with a very fine silk sieve to remove all impurities... This sample was exposed to air in a balance room for two weeks and kept in a bottle."

Two tables (p. 83) show the organic constituents in 100 parts of air-dry spores, and 100 parts of dry matter. The latter contains 5.151% ash, whose composition is discussed in more detail on pages 93-96. A table (p. 95) shows the ash

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content and composition of winter wheat, paddy rice (not whitened), oats, soy-bean, rice (not whitened), and spores of Aspergillus. The latter is by far the richest in ash, potash, and phosphoric acid. In conclusion, the author expresses "much thanks to Dr. O. Loew, formerly professor in this college..."

Note: This is the earliest English-language document seen (Jan. 2006) that uses the term "Soja-sauce" (regardless of capitalization) to refer to soy sauce. Address: Nógakushi, Japan.

1529. Gomilevskii, V.I. 1900. O kitaiskom bobe (Soja hispida) i ego znachenii dlya rysskogo khozyaistva [The Chinese soybean (Soja hispida) and its meaning in Russian economy]. St. Petersburg, Russia: Printing House of "Obschestvennaya Pol'za" Union. 32 p. 22 cm. [17 ref. Rus]
• ***Summary:*** Contents: I. Research of Gil'desgeim proved that soybeans could replace meat in daily diet. More than 20 varieties of soybeans from Japan and China were introduced to Central Europe and Russia in 1873 at the World Exposition in Vienna. Soybeans were first recognized in Russia by agricultural writers Yaroshevskii and Semnalovskii in an article in their journal (name of which is not stated) and later in another article in the *Zemledel'cheskaya Gazeta*. During about the same time articles were written by I.G. Podoba and Mel'nikov. In the 1884 exhibition in Odessa, various Russian regions presented soybeans in various stages of development and soybeans which can be used as coffee substitutes. Soybeans were also cultivated in Kiev, now part of Ukraine.

II. Description of soybeans. Different varieties of soybeans in Europe (*Soja hispida* praecox is recommended for cultivation in Russia). III. Composition of soybeans. Use of soybeans as meat substitutes for poor people and the army. Soybeans as substitutes for coffee. Soybeans used in tofu, miso and spicy sauces for meat. Recipes: food uses of soybeans: soybean flour for bread, soybeans for soybean oil. IV. Composition of soybeans. Use of soybeans as feed for cattle, dairy cows, pigs and horses.

V. Characteristics of the soybean: How it stands hot and cold weather, uniqueness, not a demanding plant (needs little fertilizer), prefers southern climates/latitudes. VI. Cultivation of soybeans: Type of soil, preferred temperatures and time of year for planting, spacing between seeds and rows. VII. Soybean maintenance. VIII. Harvesting of soybeans. IX. Harvesting/gathering of soybeans. X. Conclusion: Soybeans have a bright future in Russia, they may help fight hunger in the poor regions, as well as provide an excellent source of nutrition and energy for the army and the marines. Address: St. Petersburg, Russia.

1530. Sempolowski, A. 1900. Ueber den Anbau der Sojabohne [On soybean culture]. *Fuehling's Landwirthschaftliche Zeitung* 49(5):193-96. March 1. [Ger]
• ***Summary:*** "The soybean first aroused great interest in Europe after the Vienna World Exposition in 1873, where a large collection of soybean varieties from China, Japan, India, etc. were exhibited. Professor Haberlandt in Vienna and others subsequently conducted a large series of agronomic trials with the soybean in various locations from Austria and Germany. These, however, showed that the cultivation of this fodder plant in the districts concerned is not worth recommending since the soybean matured either very late or not at all. At that time I also conducted soybean agronomic trials in the province of Posen and in Russian Poland: these, too, gave negative results in those vegetation areas. The farmers were discouraged from cultivating the soybeans and pretty soon the once-popular fodder plant was indeed forgotten.

"However, in more recent years, there arose a new, eager apostle of the soybean, the farmer J. Owsinski [Owinsky, Ovinski] from the province of Podolia. He had been working for a long time in East Asia, allegedly, and there he learned about new, earlier-ripening varieties of this fodder plant. For cultivation, he recommends two varieties above all: one black- and one brown-seeded. Since the soybean still continues to have a great reputation, publicity, especially in Russia, as an excellent fodder plant, I decided to conduct another agronomic trial with these two new varieties at agricultural research station at Sobieszyn (in Russian Poland). I wanted to answer two questions: First the time required for the soybean to mature in our climate, and second the value of the entire plant as fodder.

According to Owsinski, the soybean took 100 days to come to vegetative maturity in southwest Russia and 110 days in western Russia, corresponding to late varieties of oats or blue lupins. The brown-seeded soybean is said to ripen in 100 days in southwest Russia and 108-110 days in western Russia, however the yield is low and the seeds shatter easily.

In East Asia soybeans are used to make soy sauce ("Shoya, Soohu, or Soy"), miso, and natto--the last two being fermented foods. A table shows the nutritional composition of soybean cake on a dry weight basis (41.73% protein, and 7.18% fat).

On 14 May 1898 the author planted his trial field with soybeans. On Sept. 22 he harvested 30 plants of brown-seeded soybeans, including 200 gm of seeds; 100 seeds weighed 22.07 gm. The plants were 26-36 cm high and on each stem were 13-17 pods. The time to maturity was 140 days. On Oct. 5 he harvested 23 plants of black-seeded soybeans, including 208 gm of seeds; 100 seeds weighed 16.01 gm. The plants attained a height of 30-55 cm, and on each stem were 12-56 pods. The time to maturity was 173 days.

On 17 May 1899 the author planted a larger quantity of brown-seeded soybeans at the rate of 643 kg/ha in rows 40 cm apart. The time to maturity was 130 days. At the same time on another test plot he planted black-seeded soybeans

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in rows 50 cm apart. The harvest took place on Oct. 7 and the time to maturity was 170 days, but the seeds were not completely ripe and had to be dried for another week. A table shows the nutritional composition of these two varieties. Brown: 39.03% crude protein and 18.55% fat. Black: 37.62% crude protein and 20.87% fat.

"When we consider the protein and fat content of the seeds, we must acknowledge that the soybean, compared with other crops, has a very high nutritional value. However, farmers must be urgently advised to treat the new, allegedly early-ripening varieties with great caution, since they have not yet been sufficiently tested to be recklessly praised and their cultivation widely expanded."

Note: This document contains the earliest clear date seen for soybeans in Russia, or the cultivation of soybeans in Russia (14 May 1898). This is also the earliest document seen that describes soybean breeding in Russia. The source of these soybeans was Owinski, who apparently obtained them from East Asia. Address: Dr., Sobieszyn [Russian Poland?].

1531. *New York Times.*1900. A missionary exhibit: Oriental curios to be seen soon at Museum of Natural History. March 4. p. X8.

• ***Summary:*** It is chiefly an exhibit of curios from Asia, collected by various missionaries. The Japanese department is one of the most complete. "There are specimens of Japanese food supplies, beans of different kinds, rice, dried edible mushrooms grown in an oak grove [probably shiitake],... long, transparent strips of a tempting looking stuff which is labeled 'seaweed'; a bottle of [soy] sauce made of fermented wheat and beans; a cake made of wheat flour and looking much like ordinary bread but with odd black lines running through it [*fu*, or dried wheat gluten cake with nori]; a stick for stirring bean curd [tofu];..."

Note: An almost identical article appeared in this newspaper on June 12, p. 2. It describes the exhibit that this article is announcing.

1532. *Washington Post.*1900. Dinner a la Japanese: A repast that is certainly picturesque and may be digestible. May 20. p. 22.

• ***Summary:*** From the Boston Evening Transcript: "In each course there are half a dozen dishes and the host tells what they are. First suimono, a bean soup [sic. clear soup, often with tofu];... sashimi, raw fish cut into thin slices and covered with ice. This is dipped into rich sauce called soy, and is really very good."

1533. Langworthy, C.F. 1900. Vegetable cheese. *Sanitary Home* (*Fargo, North Dakota*) 2(3):55-57. May.

• ***Summary:*** "It is commonly believed that the Japanese, Chinese, and other oriental peoples live almost exclusively on rice, eating little or no meat... In the course of centuries the Japanese and Chinese have evolved the art of preparing substances resembling dairy products from vegetable sources. It is well known that beans, peas, and other legumes contain large amounts of protein... The soy bean, which is perhaps the principal legume grown in Japan and China, is less suited for food in its natural state."

"Though the soy bean is not relished when cooked in the ordinary way, the Chinese and Japanese prepare very satisfactory foods from it in ways which are unknown to western cooks. Bean cheese or bean curd, called by the Japanese tofu and by the Chinese tao hu, is one of the most important of these products and is prepared as follows: The soy beans are soaked in water for about 12 hours and crushed between mill stones until of a uniform consistency. The ground material is then boiled with about three times its bulk of water for an hour or more and filtered through cloth. The filtrate is white in appearance and has somewhat the appearance of milk. It has the taste and smell of malt. Analysis shows that it resembles cow's milk in composition. When heated a film forms on the surface which in appearance suggests cream. This is dried and eaten under the name of yuba. As soon as the soy bean milk becomes cool, some material is added; for instance, crude sea salt, containing magnesium chlorid [chloride], which precipitates the proteid material, the fat being inclosed in the coagulated mass. The coagulated material is pressed and kneaded into small cakes or cheeses. These are sometimes dipped in saline solutions of curcuma to color them. The bean cheese cakes are sometimes eaten fresh or may be cooked in different ways. Often when practicable they are frozen. This removes a considerable part of the water present. As shown by analysis, the fresh bean cheese contains about 5 per cent of protein and 3 of fat. Ordinary cheese made of milk contains about 28 per cent protein and 36 per cent fat.

"Miso resembles tofu to some extent. It is prepared from cooked soy beans, which are rubbed to a thick paste and fermented with rice wine ferment. Shoyu is a thick sauce prepared from a mixture of cooked pulverized soy beans, roasted and pulverized wheat, wheat flour, salt, and water. The mass is fermented with rice wine ferment in casks for from one to five years being frequently stirred. The resulting product is a moderately thick, brown liquid, in odor and taste, not unlike a good quality of meat extract, though perhaps a trifle more pungent. Throughout the East it is eaten in large quantities with rice and other foods and is an important source of protein. Under the name of soy sauce, it has been known to Europeans in India for many years, and is not unknown in the United States. Most of the soy bean products are fermented; that is, they are prepared with the aid of micro-organisms. The micro-organisms break down the cell walls and similar materials and thus the cell contents are rendered more accessible to the digestive juices at the same time peculiar and pleasant flavors are developed. The manufacture of these products is of very ancient origin

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and affords an interesting, practical illustration of the use of bacteria for economic purposes.

"The Chinese residents of San Francisco and other cities consume large quantities of these soy bean products and it is stated on good authority that soy bean cheese is manufactured in this country, though doubtless it is seldom, if ever, eaten by any except the Chinese."

Note 1. This periodical was later named *North Dakota Farmer.*

Note 2. This is the earliest English-language document seen (Feb. 2004) that uses the term "soy bean cheese" or "bean cheese cakes" to refer to tofu.

Note 3. This is the earliest document seen (June 2011) concerning soybeans in connection with (but not yet in) North Dakota.

Note 4. This is the earliest English-language document seen (Oct. 2003) that contains the term "soy bean milk."

Note 5. Dr. E.F. Ladd was a nationally-known pioneer in food safety and sanitation in the United States. He published this periodical, *Sanitary Home*, in Fargo and distributed it free of charge like an extension publication before the extension service was created; North Dakota State Univ. paid the printing and mailing expenses. Interested in home safety, he rewrote technical publications in a language homemakers could understand. He did much work with North Dakota food purity and chemical purity laws. Address: PhD, Office of Experiment Stations, Dep. of Agriculture, Washington [DC, USA].

1534. *Boston Daily Globe.*1900. Housekeepers' department: Tried and true recipes contributed by the women of New England. June 24. p. 27.

• ***Summary:*** "Three recipes for Indian soy [sauce]: 1. Boil 1 gallon of Dolichos soja (if this cannot be had haricot or kidney beans will answer), in sufficient water until soft. Add 1 gallon bruised wheat and keep in a warm place for 24 hours; then add a gallon of salt and 2 gallons of water, and keep for 2 or 3 months in a tightly stoned jar; after which press out the liquor.–M. Note 1. A close relative of this recipe was published on 10 March 1895 (p. 27) in this newspaper, however the key ingredient (dolichos soja = soy beans) was not mentioned.

"2. Soya [soy beans], 1 gallon water to cover. Boil till soft, then add bruised wheat, 1 gallon; water, 2 gallons. Bung up in a stoneware jar for two or three months (shaking very frequently), press and filter. If the genuine soys (black Indian beans) be unobtainable, peas, kidney, or haricot beans may be substituted without disadvantage.–J.B. Note 2. Without salt, this recipe will quickly spoil.

"3. This, the common base of most sauces, is made from the seeds of glycine soja, which is cultivate in the far east. The method of manufacture is practically a secret, but I give a formula for an excellent imitation: Mix 4 lbs extract of malt in warm water, so that the resulting syrup should measure 1 gallon. Add 5 lbs treacle, 4 lbs salt and 2 pints of mushroom juice. Heat gently to facilitate mixing; set aside for 14 days and decant. L.E."

Note 3. Basic problems with all three of these recipes: (1) They do not understand *koji* (roasted wheat covered with fragrant *Aspergillus oryzae* mold), which is a major, essential ingredient in any soy sauce. (2) They add much too much salt. (3) Soybeans were widely available in the United States by 1900 from almost any agricultural experiment station.

Note 4. This is a slightly improved version of the same 3 recipes that appeared in this newspaper on 16 Jan. 1900, p. 10.

1535. *New-York Tribune.*1900. Typical Chinese feast. Dinner of thirty-seven courses given in San Francisco. July 13. p. 7.

• ***Summary:*** This Chinese dinner, which was recently given in San Francisco, is described by a participator. It included "boiled fowl dipped in soy sauce."

1536. Abel, Mary Hinman. 1900. Beans, peas, and other legumes as food. *Farmers' Bulletin* (*USDA*) No. 121. 32 p. See p. 9-11. Illust. Revised Nov. 1904. Corrected March 1906. [1 ref]

• ***Summary:*** A section titled "Soy Bean (*Glycine hispida*)" (p. 9-11) briefly describes the soybean plant and the rich nutritional composition of its seeds. The first paragraph is quoted from USDA Farmers' Bulletin 58.

Starting with paragraph 2: "This leguminous plant, probably native in China, is the most important legume of China and Japan... In the Orient this bean and the various food products made from it are so largely consumed that it is perhaps the most important food plant next to rice. The soy bean is eaten to a small extent boiled like other beans, but in China and Japan it is elaborated into a variety of products, all of which have a high percentage of protein, and when eaten in connection with the staple food, rice, which is so deficient in that constituent [protein], helps to make a well-balanced dietary. Some one of these products is eaten at perhaps every meal and by rich and poor alike, especially in the interior of these countries, where sea food is not obtainable.

"One of the most important of these preparations is shoyu, and it is the only one that has been introduced to any extent into other countries, where it is known as soy sauce...

"There are also several varieties of bean cheese or similar products made from this legume which are very important foods. These are natto, miso, and tofu. Natto is made from soy beans that have been boiled for several hours until very soft, small portions of the still hot mass being then wrapped securely in bundles of straw and placed in a heated, tightly closed cellar for twenty-four hours. Bacteria, probably from the air or the straw, work in the mass, producing an agreeable change in its taste.

"For tofu, the soy bean, after soaking and crushing, is boiled in considerable water and filtered through cloth.

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To the resulting milky fluid 2 per cent of concentrated sea brine is added, which, probably by virtue of the calcium and magnesium salts present, precipitates the plant casein, which is then pressed into little snow-white tablets. It is made fresh every day. Tofu is sometimes cooked in peanut oil before it is eaten. In natto and miso the action of minute organisms plays an important part. In tofu there is no such action. The composition of a number of these products is as follows:"

A table (p. 11) shows the nutritional composition of food products made from soy beans, including fresh tofu, natto, white miso, red miso, Swiss miso, and shoyu (2 samples).

An illustration (non-original line drawing, p. 10) shows a soy bean plant with a cluster of 7 pods to its upper left (slightly changed from an original in Carrière 1880, p. 154).

This bulletin also discusses (with an illustration of each): The bean–Broad or Windsor bean (*Vicia faba*). Kidney bean (*Phaseolus vulgaris*). Lima bean (*Phaseolus lunatus*). Scarlet runner (*Phaseolus multiflorus*). Frijole (*Phaseolus spp.*). Cowpea (*Vigna catjang*). Lablab bean (*Dolichos lablab*) and other common varieties. Locust bean (*Ceratonia siliqua*).

The pea–Field pea (*Pisum arvense*). Garden pea (*Pisum sativum*). Chick-pea or gram (*Cicer arietinum*).

The lentil (*Lens esculenta*). The peanut (*Arachis hypogæa*).

Note 1. This is the earliest English-language document seen (Aug. 2011) that uses the term "milky fluid" to refer to soymilk.

Note 2. Mary Hinman Able was not an employee of the USDA or of the federal government. She was a pioneer in the fields of nutrition, nutrition education, home economics, and popularizing science for the general public. Between 1904 and 1913 she wrote several farmers bulletins for the USDA. From 1909 to 1915 she was editor of the *Journal of Home Economics*.

1537. Gawne (W.) and Co. 1900. What the newspapers say about Gawne's Worcestershire Sauce (Ad). *Mataura Ensign¼* (*Otago, New Zealand*). Sept. 6. p. 5, col. 6.
• ***Summary:*** "'Evening Star,' 22nd June, 1889, says: 'Messrs W. Gawne and Co., of George St., Dunedin, have sent us a sample of Worcestershire Sauce manufactured by them, which is in no respect inferior to the imported article, so long celebrated for Flavoring Sauces, and as an agreeable addition to grills, fish, and steaks. We can safely recommend it as a valuable addition to our rapidly developing local manufactures. The bottles are neatly labelled and ornamental, not only for home use, but for exportation and we hope the manufacturers will realise a demand equal to the merits of the savoury article they have produced.'"

Note: This is the last ad seen for this sauce. Address: George St., Dunedin, New Zealand.

1538. *North Otago Times* (*New Zealand*). 1900. The industries of Japan. Oct. 13. p. 2 (Supplement).
• ***Summary:*** "Agriculture is the chief pursuit of the people of Japan, and in the greater part of the cultivated area rice and the principal food crops, wheat, barley, and soya beans, are grown."

"The industries of the Japanese empire may be distinguished as 'original' and 'imported.' The original industries which existed from early times are those of... vegetable wax, salt, sugar, sake, soy [sauce], oil, tobacco, indigo, and raw silk."

1539. Prescott, Augusta. 1900. Thanksgiving dishes and how to serve them. *San Francisco Chronicle*. Nov. 25. p. 26.
• ***Summary:*** Contains various recipes in sentence-style format. "Oysters on the half-shell. Place shells on a plate of cracked ice, over which scatter watercresses; in the center lay a lemon shell, in which serve this sauce: One teaspoonful freshly grated horseradish, two teaspoonfuls lemon juice, one teaspoonful catsup, dash of paprika, one-half teaspoonful of salt and one-half teaspoonful Worcestershire sauce."

1540. Sack, J. 1900. Samenstelling van Indische voedingsmiddelen: Tweede serie (LI-C) [Composition of Indonesian foods: Second series (51-100)]. *Bulletin van het Koloniaal Museum te Haarlem* No. 23. p. 85. Nov. Fold-out table bound at the end of No. 23. [3 ref. Dut]
• ***Summary:*** This is the second such table published in this Bulletin. The first table by J. Sack was published in Bulletin No. 22 (March 1900). Dr. M. Greshoff supervised the work. The composition of fifty Indonesian foods is given, with two lines of notes in one wide column after each. Each food is numbered: 51-100. Soy-related foods are: 56. Black soybeans (*Katjang kadelé itam; zwarte soja*). 76. Tempeh (*Tempé*). 81. Japanese shoyu (*Japansche soja*).

Also discusses: 57. *Katjang poetih* (Poetih [putih] means "white." A note says this is a type of soybean but we think it is a species of *Vigna*). 58. Katjang ketjipir (*Psophocarpus tetragonolobus*). 67. Sesame seeds. 82. Agar-agar. Address: Assistent bij het Laboratorium, van het Koloniaal Museum te Haarlem [Netherlands].

1541. Sack, J. 1900. Samenstelling van één honderd Indische voedingsmiddelen [Composition of one hundred Indonesian foods]. *Bulletin van het Koloniaal Museum te Haarlem* No. 23. p. 68-73. Nov. [Dut]
• ***Summary:*** This is a detailed summary of information published in two fold-out tables by J. Sack, published in Bulletin No. 22 (March 1900) and No. 23 (Nov. 1900). Here, however, the 100 foods are listed in a different sequence–alphabetically by Indonesian name.

Soy-related foods are: 33 and 34. Soybeans (*Katjang kadelé; Glycine*). 35. Black soybeans (*Katjang kadelé itam*). 84. Japanese shoyu (*Soja; Japansche*). 90. Tempeh (*Tempé*).

Also discusses: 1. Agar-agar (*Eucheuma*). 36. Winged beans (*Katjang ketjipir; Psophocarpus tetragonolobus*). 43.

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Peanuts (*Katjang tanah; Arachis*). 81. Sesame seeds (*Sesamzaad; Sesamum*). Address: Assistent bij het Laboratorium, in het Laboratorium van het Koloniaal Museum te Haarlem [Netherlands].

1542. **Product Name:** [Light House brand Soy Sauce, Chiang, Fermented Tofu].
Foreign Name: Jiang-yu, Dou-jiang, Furu.
Manufacturer's Name: Yeo Hiap Seng.
Manufacturer's Address: Chang-chou, Fukien [Fujian] province, China.
Date of Introduction: 1900.
How Stored: Shelf stable.
New Product–Documentation: Letter from Alan Yeo. 1982. April, and YHS news release. 1990. Oct. Yeo Hiap Seng traces its origins to the year 1900 when the patriarch of the Yeo family, Mr. Yang (in the Amoy dialect, his name was pronounced Yeo Keng Lian) purchased a small company named "Hiap Seng" in the city of Chang-chou (pinyin: Zhang Zhou), Fukien (Fujian) province, China. "Hiap Seng" means "unite to succeed." Yeo Keng Lian changed the company's name to reflect his family's ownership. He worked as a manufacturer and retailer of fermented soybean seasonings: soy sauce (*jiang-you*), Chinese-style miso (*dou-jiang*), and fermented tofu (*furu*). All three products were sold from day one under the "Light House" brand. By working together, the family did succeed. Their soy sauce, fermented in the traditional Chinese way in wooden vats and earthenware jars, was of superior quality and the business prospered. The original plant was located near the center of Chang-chou. In about 1920 a second plant was established in the eastern part of the city, and in the late 1920s a third plant was set up in the southern part of the city. Each of the three fermented soy products were produced in all three plants; the second and third plants also produced some pickled vegetables.

In 1935, during the Japanese invasion of China, when life was difficult and unsettled in Fukien province, Yeo Keng Lian sent his eldest son, Yeo Thian In, to Singapore to investigate possibilities there. The son founded the Yeo Hiap Seng Sauce Factory at 410 Outram Road, Singapore 3. He was joined shortly by the rest of the family.

Note 1. This is the earliest known commercial soy product (with a brand name) made in China.

Note 2. This is the earliest known commercial soy product made or sold by Yeo Hiap Seng. It is also the earliest record seen (Oct. 2001) concerning Yeo Hiap Seng.

1543. Boorsma, P.A. 1900. Scheikundig onderzoek van in Ned.-Indie inheemsche voedingsmiddelen. De sojaboon [Chemical analysis of some indigenous foodstuffs in the Netherlands Indies. The soybean]. *Geneeskundig Tijdschrift voor Nederlandsch-Indie* 40:247-59. [18 ref. Dut]
• ***Summary:*** Contents: Literature review. Introduction (Boorsma is living in Java). Chemical composition of indigenous soybeans: Table giving figures (based on Boorsma's original research) for large black, large yellow, small yellow, unripe or immature black soybeans, soy protein (*eiwit in de soja*) or legumine, the oil (*De vette olie*), analysis of the ash, starch, the black soybean (*zwarte kedeleh*), use of soybeans in Java and Japan. Japanese soy preparations (*Japansche soja preparaten*): Shoyu (soja) made with koji, tofu, yuba, miso and natto. Indigenous (Chinese) preparations: Tempeh (*tempe kedeleh*), Indonesian soy sauce (*Ketjap–Bataviasche soja*), tofu and pressed tofu (*Tao-hoe en Tao-koan*), Indonesian miso and fermented black soybeans (*Tao-tjo en Tao-dji*).

Note 1. This is the earliest document seen (Jan. 2012) in any language that mentions "Tao-dji."

Note 2. This is the earliest Dutch-language document seen (Jan. 2012) that mentions fermented black soybeans, which it calls *Tao-dji*.

Note 3. This is the 2nd earliest document seen (March 2009) that mentions Indonesian-style miso, which it calls "Tao-tjo." This is the earliest Dutch-language document seen (Feb. 2009) that uses the word "Tao-tjo" to refer to Indonesian-style miso.

The section titled "Japanese soy preparations" (p. 251-53) includes descriptions of koji, tofu, dried frozen tofu, yuba, miso and natto, as follows: Tofu is the Japanese name for a yellow-white to gray mass, which is prepared by macerating the finely ground up soybeans with water; an initial [natural] fermentation, which occurs alongside, creates enough acid to precipitate part of the protein. Then a short heating, causes as much fat as possible to bind to the protein, so that the liquid after filtration has a milky appearance. Through the addition of the highly alkaline magnesium concentrate, a by-product of making sea salt, the protein is precipitated, separated out by hand and shaped into cakes–which contain lots of water, protein and fat. As a side dish or in the preparation of soup, tofu is used a lot. To remove most of the water, it is common to freeze and dry the cakes in the sun afterward. Then they are called kori-tofu.

Yuba is an even fattier product obtained by the evaporation of the cream layer, that aggregates on the surface of the just mentioned bean milk.

In Japan, most soybeans are processed into cheese types, called miso and natto [which the author confuses in the following].

The cooked beans, that have been formed into a firm dough are fermented again with koji, kitchen salt and water. The temperature and the amount of kitchen salt, that one uses, affect the nature of the product [miso] and the speed of fermentation. Finally the mass is cooked for a long time in the brine, separated and shaped into cakes. The resulting vegetable cheese [natto] is then wrapped in bundles, of about 500 grams, of straw, and left to its own for a few days in a heated space; where, according to Loew [sic, Yabe 1895,

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p. 438-39] the microbes attached to the straw cause an additional post-fermentation.

The reason for the somewhat extensive attention [in this writing] to the latter, is that the native soybean (katjang kedeleh) preparations of the Dutch East Indies are, more or less, patterned after the Japanese.

This excellent article contains a 4½-page description (the best seen to date, p. 253-58) of the traditional process for making soybean tempeh (*Tempe kedeleh*). The soybeans are parboiled, soaked in water for 2-3 days, drained, steamed in a steamer (*koekesan*), spread in a layer several centimeters thick on woven bamboo trays in shelves, and covered completely with banana leaves. They are then inoculated with the *bijang*, which is the "mold containing residues of a previous preparation." This is mixed in here and there, then the trays are covered lightly with banana leaves so as to let in some air. "Rampant growth of the mold soon begins. In the evening the mass is molded a little and after two 24-hour periods one will obtain a coherent cake, which is cut into pieces and taken as is to the market."

The cotyledons are stuck together by a dense mycelium, which has grown into a somewhat white covering. According to Prinsen Geerligs (cited above), the name of the mold is *Chlamydomucor Oryzae*.

During the two days of rampant mold growth, a radical conversion takes place in the components of the seeds: a lot of water, carbonic acid, and heat start to develop... A thermometer inserted into the fermenting mass shows a temperature 10-12ºC above that of the environment.

As the preparation is finished, the banana leaves are taken away; the temperature drops slowly to normal, the rampant mold growth stops, and the mass dries out slightly. In this condition, the tempeh can be kept for several days without spoiling.

When the rampant mold growth is allowed to continue for a third day, simply by leaving the banana leaves in place, the conversion will soon become much stronger as noted by the formation of ammonia. Also poisonous products start to form; a monkey, given a little bit [of overripe tempeh] among his other foods that day was vomiting violently one hour later. Thus we should admit that the stories about poisonings caused by various sorts of tempeh [such bongkrek, made from coconut presscake] probably have some foundation. But there is little fear of this from soybean tempeh.

After microscopic examination, Boorsma concluded that Prinsen Geerligs and others were wrong in stating that (1) the mold hyphae penetrate and dissolve the hard soybean cell walls, and (2) cellulose is decreased during tempeh (*tempe*) fermentation. He studied the chemical and compositional changes at four stages during a 3-day tempeh fermentation; a table shows his findings. He observed that fats and soluble carbohydrates decreased substantially, while nitrogen decreased only slightly. He also discussed the hydrolysis of soybean lipids, and why tempeh is easier to digest than whole soybeans.

Note 4. This is the earliest Dutch-language document seen (Sept. 2011) that uses the term *tempe kedele* or the word *tempe* to refer to tempeh.

Note 5. This is the earliest document seen (Jan. 2012) that describes how to make tempeh on a commercial scale.

On page 258 Boorsma briefly discusses Ketjap (which he called *Bataviasche soja*, or Jakarta soy sauce) and Tao-hoe and Tao-koan (tofu and firm tofu), based on information from Prinsen-Geerlings (for both) and Vorderman (for firm tofu). For each he gives a nutritional composition. On page 259 Boorsma briefly discusses *Tao tjo* and *Tao-dji* (Indonesian-style miso and fermented black soybeans). Note 6. This is the earliest Dutch-language document seen (Dec. 1999) that uses the term *Tao tjo* to refer to Indonesian-style miso or tauco / taucho.

Note 7. This is the earliest document seen (April 2001) that contains the term *Tao-koan*.

Note 8. This is the earliest Dutch-language document seen (Jan. 2012) that contains the word *natto*.

Note 9. This is the earliest Dutch-language document seen (Oct. 2008) that mentions yuba, which it calls *Yuba* and describes as *een nog vetrijker product dat verkregen wordt bij uitdampen van de roomloog, die zich bij de zooeven genoende boonenmelk aan de oppervlatke verzamelt."*

Note 10. Boorsma was a Dutch naturalist who lived in Indonesia in the early 1900s. Address: Netherlands.

1544. Fraser, Hugh (Mrs.). 1900. A diplomatist's wife in Japan: Letters from home to home. 3rd ed. London: Hutchinson & Co. 709 p. See p. 190. Chap. XI. [Eng]
• ***Summary:*** See the 1899 edition, which contains the identical text but on different pages. Note: A revised edition, titled *A Diplomat's Wife in Japan: Sketches at the Turn of the Century*, edited by Hugh Cortazzi, was published by Weatherhill in New York in 1982. Mrs. Fraser died in 1922. Address: Tokyo, Japan.

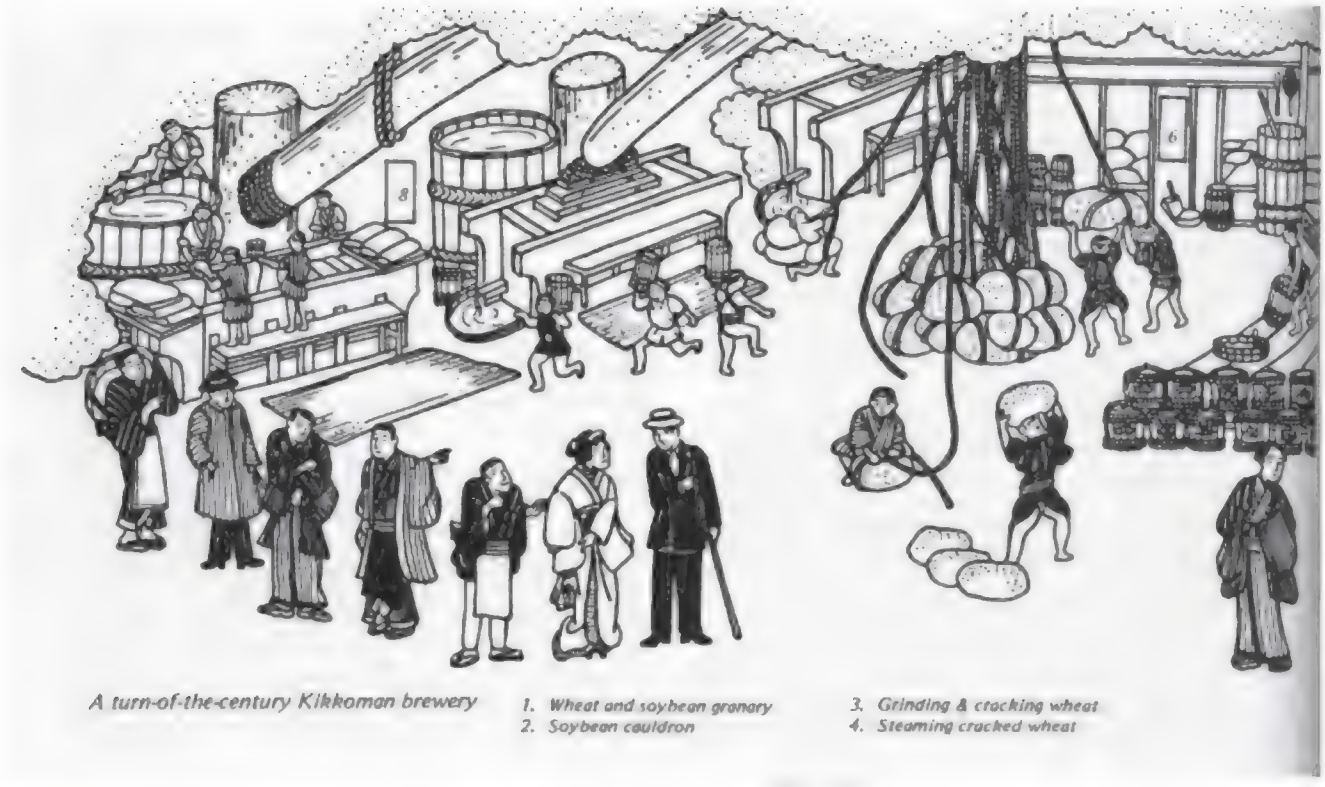
1545. Illustrations of a Noda Shoyu (later Kikkoman) soy sauce brewery at the turn of the century (1900). 1900.
• ***Summary:*** This line drawing by Akiko Aoyagi, based on a Japanese color illustration, appears in *The Book of Miso*, by Shurtleff & Aoyagi (1976, p. 222-23; see next page). The color illustration (also shown) appears in Kikkoman Foods Inc. (1973, p. 10).

Important steps (and places) in the process of making shoyu are numbered as follows: (1) Wheat and soybean granary. (2) Soybean caldron. (3) Grinding and cracking wheat. (4) Steaming cracked wheat. (5) Koji incubation room. (6) Salt storeroom. (7) Moromi-filled vats. (8) Pressing shoyu from moromi. (9) Making kegs. (10). Branded kegs.

1546. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*).1900. Chôshi shôyu jôzô no genkyô to

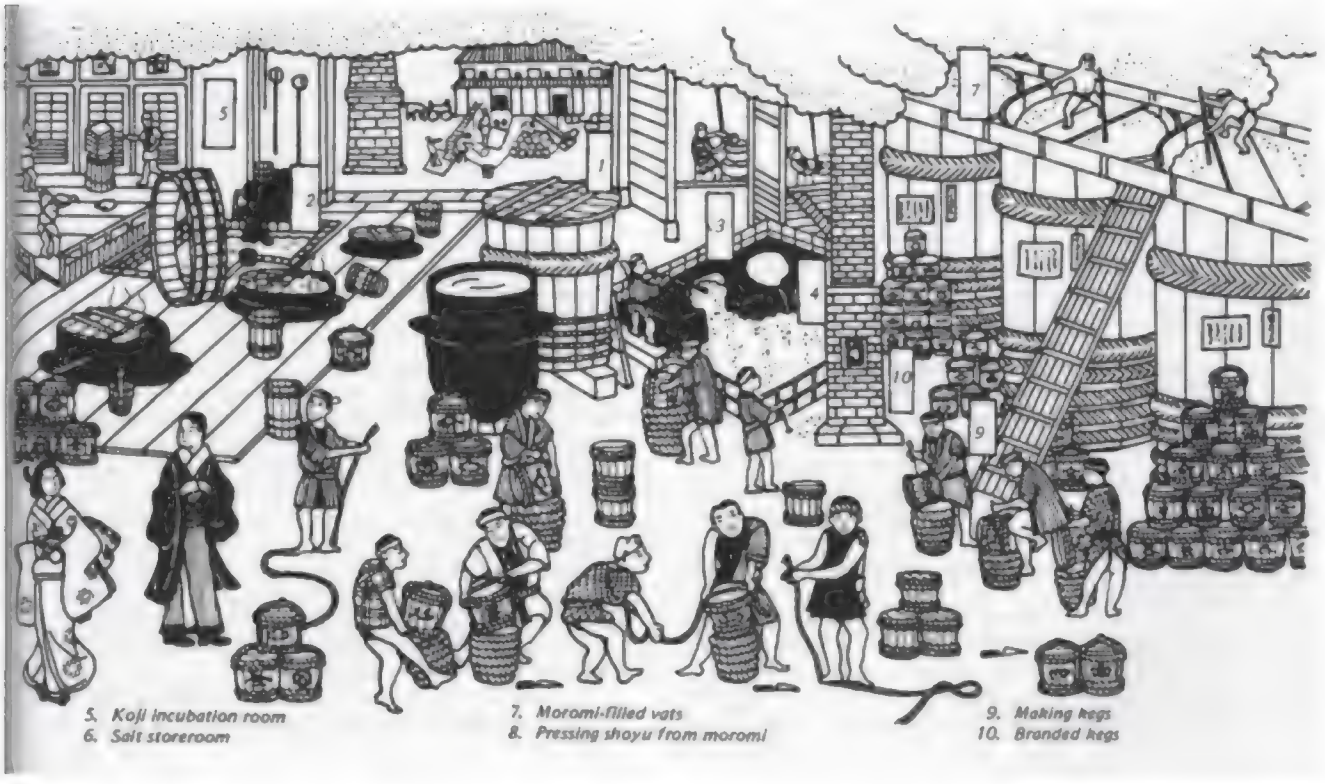
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A turn-of-the-century Kikkoman brewery

1. *Wheat and soybean granary*
2. *Soybean cauldron*
3. *Grinding & cracking wheat*
4. *Steaming cracked wheat*



5. *Koji incubation room*
6. *Salt storeroom*
7. *Moromi-filled vats*
8. *Pressing shoyu from moromi*
9. *Making kegs*
10. *Branded kegs*

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yushutsu [Present status of Choshi shoyu and its export]. 3:788. [Jap]

1547. VanBuskirk, J.D. 1900. Some common Korean foods. *Transactions of the Korea Branch of the Royal Asiatic Society* 14:1-8.

• ***Summary:*** Table 1, "Korean food products," based on statistics published in the 1917 report by the Bureau of Agriculture of the Government General, shows Korean production in millions of bushels: Rice 61. Barley 25. Millet 19. Wheat 8. Beans and peas 18. Since exports and imports of foodstuffs are relatively small compared to the amount produced, and the number of animals fed is not large, "these figures should give us a good idea of the amount of food eaten."

Rice is sometimes cooked with peas or beans (incl. soy beans) mixed in (called *pat-pap* or *kong-pap*). But the cooking takes longer and the beans are often not well cooked, and thus less digestible (p. 3).

The section titled "Bean and pea foods" (p. 4-5) gives the name of each food in Korean characters and discusses: (1) Bean curd (*tu-bu*), equivalent to Japanese tofu, is curded with the "concentrated mother liquid from sea water" [Jap. nigari]. The bean residue (*pi-ch'i*) left over from making tofu is also sometimes eaten. Bean curd "is not generally eaten without further preparation; it is commonly added to soups and stews and often made into omelets with eggs; another palatable food is made by cooking the bean curd for a short time in bean sauce (*chang*) and serving this with sesame oil, pepper and onions; it is called *to-bu cho-rim*. Bean curd may be eaten without further cooking served in sauce."

Pea curd (*mook*) is similar to beancurd in composition but made from peas using a very different process.

"Bean Sauce (*kan-chang*) is somewhat like the Japanese 'sho-yu' but is more salt and not sweetened. Soy beans are thoroughly boiled, mashed, made into cakes and partially dried. These cakes (*me-ju*) are stored for months and allowed to mold and slowly ferment: when ripe they are broken up and soaked in salt water for a long time, then strained, the solid part being dried and used as a condiment (*toin-chang*). The liquid is boiled and the coagulated protein scum frequently removed; when sufficiently concentrated the liquid sauce is cooled and stored. This is the indispensable condiment for Koreans.

Note 1. This is the earliest English-language document seen (April 2012) that uses the term *kan-chang* to refer to Korean soy sauce.

"Another bean sauce (*ko-cho-chang*) is made by taking about equal parts of the fermented bean cakes, rice, and salt, with a large amount of red pepper, the mixture being soaked in a small amount of water till ripe. This too is very important as a condiment."

Note 2. This is the earliest document seen (March 2009) that clearly mentions a Korean-style miso, which it calls "ko-cho-chang,"–today commonly called "red pepper sauce."

"'Kong-cha-ban' is made by boiling beans in the bean sauce; they do not swell but are hard, brittle, and very salty. Sugar and sesame oil may be added when serving them.

"Sprouted beans (*kong-na-mul*) are very common. The beans are soaked in water and allowed to sprout. When the sprouts are quite long both beans and sprouts are boiled and served–sauce is generally added."

Kim-chi, a fermented food made from cabbage or sliced turnips, is sometimes served with added bean sauce.

Among animal foods: "'Mut-chim' is dried fish soaked in water, then shredded; it is then soaked in bean sauce. Sesame oil and pepper are added; it is then allowed to stand for a shot time." Address: M.D..

1548. Zavitz, C.A. 1900. Co-operative experiments in agriculture. *Ontario Agricultural and Experimental Union, Annual Report* 21:6-37. For the year 1899. See p. 9, 16, 31-32.

• ***Summary:*** A table (p. 7) shows the number of distinct experiments in agriculture, number of experimenters, and number of satisfactory reports each year for 1886, 1888, and 1891-99. For 1886 these numbers were 1, 12, and 8. For 1888 they were 1, 90, and 40. For 1891 they were 12, 203, and 126. For 1895 they were 15, 1699, and 513. For 1899 they were 23, 3485, and 739. Thus, during these 14 years the Union made remarkable progress.

A table titled "List of experiments for 1899" (p. 9), under "Grain crops" includes "Testing three varieties of Japanese beans–3 plots."

In a long "List of experimenters" we read (p. 16) that the Japanese beans were grown by: (1) F.B. Doud, Branchton, Brant Co. (2) Simon Miller, Unionville, York Co. (3) Jno. D. Neilson, Thedford, Lambton Co. (4) O.A.C., Guelph,

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Wellington Co.

In the section titled "Conclusions" (p. 31-32), table 15 shows the results (based on 4 tests) of testing three leading varieties of Japan [soy] beans: Medium Green (estimated value 72), yielded 2.6 tons/acre of straw and 22.4 bu/acre of grain. American Coffee Berry (estimated value 100), 1.4 tons/acre of straw and 21.3 bu/acre of grain. Extra Early Dwarf (estimated value 86), 1.1 tons/acre of straw and 12.7 bu/acre of grain.

The text immediately below the table explains: "The Soy beans [sic] (Glycine hispida) is a leguminous plant native of Japan and China, and ranks very high from a chemical point of view. The plant is an annual, erect in growth and branches profusely. There are a large number of varieties, nearly all of which are too late for the conditions of Ontario. The different varieties are distinguished largely by the time required for the plants to mature and by the color of the seed; the yellow, the green, and the black, being the most common. The Soy beans are used for green fodder, silage, hay, pasture, and as a soil renovator, and the grain is used as a feed for live stock. These beans have been used as a food for man from the earliest times in Japan and China, and more recently in the European countries. They are not used as a food by themselves, but are made into different complex forms, of which five are quite common among Japanese, namely: natto, tofu, miso, yuba, shoyu.

"Conclusions.

"1. The Soy beans gave very good results in the Union experiments in 1899.

"2. The medium green Soy beans which gave the largest yield of grain per acre of the three varieties tested over Ontario in 1899, is the latest of the three varieties.

"3. The American Coffee Berry was the most popular variety with the experimenters when yield, time of maturity, etc., were all taken into consideration."

Note 1. This is the earliest report seen (Aug. 2002) in this periodical concerning soy beans. C.A. Zavitz is also secretary of the Ontario Agricultural and Experimental Union, and a member of its Committee on Agriculture (appointed at the last annual meeting).

Note 2. This is the earliest document seen (Jan. 2012) that mentions natto in Canada. Address: B.S.A., Director of Co-operative Experiments in Agriculture, O.A.C. [Ontario Agricultural College], Guelph [Ontario, Canada].

1549. Speer, Robert E. 1901. The "morning calm" country–Korea: The country which Russia covets and which Japan must have. *American Magazine (The)* (*Frank Leslie's Popular Monthly*) 52(2):174-86. June. See p. 182.

• ***Summary:*** Page 182: "At the inns along the road you order your meal as 'a table of rice,...' It is brought on a low, pretty, four-legged table and set down on a floor before you. On it are rice, in a copper bowl, cucumber soup, an omelette, salt fish, shredded cabbage in salt water, salted shrimps, hard bean sauce made out of the pressed bean extract, of which great quantities are said to be shipped from China and Korea as the basis of Worcestershire sauce. But perhaps this is a fable. There are many such told in Asia."

Note: The term "hard bean sauce" probably refers to Korean-style soy sauce. But the meaning of the word "hard" is unclear.

1550. *Washington Post.* 1901. All palates pleased: Cosmopolitan variety in the Washington restaurants. July 14. p. 20.

• ***Summary:*** The section titled "Many Chinese eating rooms" notes the "The Flowery Kingdom is represented by a dozen or more restaurants in different parts of the city... The popular dish in these restaurants in the 'chop-suey.'" The ingredients, which are listed, "are mixed by the Oriental chef and placed in a great bowl-shaped cooking utensil [a wok], in which a strange colorless oil is heating. A dash of inky-black liquid, Chinese 'soy' [sauce], is poured into the mixture, which fries and sputters during the continuous stirring; then five minutes' cooking and the dish is ready."

"'Chow mein' is a rare dish, and costs the consumer exactly $1." The ingredients "remain forever a mystery."

1551. *Otago Witness (New Zealand).* 1901. Notes on rural topics: The soja bean. Sept. 18. p. 8.

• ***Summary:*** From *Agricola:* "The soja bean is a fodder plant that is thought very highly of in Canada and the United States, where it has been in cultivation for about five to seven years [sic, 135 years]. This leguminous fodder plant is a native of China and Japan, and though I have not seen it growing I gather from various reports that it has many good points to recommend it. Mr. Kinsella referred to it recently in his paper upon ensilage, and mentioned it as one of the substitutes for maize when a heavy green crop is desired in a climate unsuitable for maize. It was said a year or two ago that the soja bean plant had gained much favor with farmers in America, not as the result of a boom, but entirely upon account of its merits, and it was strongly recommended a few years ago as a suitable crop for the dry climate of Australia, but I cannot say whether it has caught on there or not. So many flattering things have been said about it that one is inclined to think it may prove to be no better than some other wonderful plants that have been boomed with disastrous results.

"A few years ago the Massachusetts Experiment Station gave the bean a trial, and reported it to be the richest known vegetable substance, being four times richer than maize corn. A hundred pounds of the latter contains 4½ lb of fat, while the same weight of soja beans contains nearly 19 lb of fat. An American farmer says that he has threshed 100 bushels per acre on a rich river flat. Another says it is certainly a grand forage plant, and withstands drought or excessive moisture. It is said to be well adapted for making ensilage, or

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silage, because it gives a heavy bulk of growth and being of such an oily nature is difficult to make into hay as it cures–that is, dries into hay, very slowly. It appears there are two varieties–the mammoth [Mammoth] and the dwarf [Dwarf]–and both are said to be so hardy as to be able to hold their own against flood, frosts, drought, grass and weeds. The bean itself is small, no larger than the vetch seed, smooth skinned, but not so hard as the horse bean. This bean, ground fine, is largely used in China and Japan in making the sauce called 'soy.'"

Note: This article is largely compiled from other articles previously published in New Zealand.

1552. Duncan's (John) Sons. 1901. Lea & Perrins' Sauce: The original and genuine Worcestershire (Ad). *American Kitchen Magazine* 16(1):p. xxv. Ads section at end. Oct.
• ***Summary:*** A ¼-page ad. "Beware of imitations. All successful cooks use Lea & Perrins' Sauce to get the most delicious flavor for soups, fish, meats, gravy, game, salads, etc. Signature on every bottle–Lea & Perrins."

An illustration shows a French-looking chef, with a pointed mustache, goatee, and white top hat (toque), in a kitchen pouring Worcestershire sauce from a bottle into a spoon over a dish on a plate. Address: New York.

1553. *New York Times*.1901. From city highways and byways: How to make chop suey. Nov. 3. p. SM7.
• ***Summary:*** "W.E.S. Fales, who for several years was Vice Consul at Amoy, China, is a cook of superexcellence. Said he: 'There is a growing taste on the part of New Yorkers for Chinese dishes. Chinese restaurants have sprung up all over the city, and they are well patronized, especially at night. The dish mostly in demand is chow chop suey, a delicious concoction, if properly prepared."

The recipe concludes: "The See Yu sauce [Mandarin: Shiyou or Shih-yu is fermented black soybean sauce] which is eaten with this delectable dish can be procured at any Chinese grocery."

1554. D.A.R. 1901. Katjang-Kedelihpraeparaten [Soyfoods]. *Orgaan van de Vereeniging van oud Leerlingen der Rijks Landbouwshool* (*see Landbouwkundig Tijdschrift*) 13(161):242-45. Dec. [Dut]
• ***Summary:*** The author wrote an article in the April issue of this magazine about soybean cultivation. Now he will discuss how soybeans are used to make foods. As mentioned in the previous article, soya beans as such are not good to eat, even boiled or roasted; they need to be processed so as to digest the indigestible protein; then this protein can be absorbed by the digestive enzymes of the stomach and intestines.

As Japan is *the* soya country, we will start with the product that is most popular there, soy sauce, which has also earned its place in Europe. It is made from equal parts of roasted soybeans and wheat, 1-3 parts water, and much salt. The koji is fermented for a long time. Prof. Dr. M. Fesco [sic, Fesca], who provided much of this information, said it takes about 20 weeks to 5 years. The longest and slowest fermentation gives the best quality product. In Japan, every housewife makes her own soya sauce and there is competition for the best homemade soy sauce. Late-ripening protein-rich soybeans, called shoyu-mame, are used. In Java, the residue from soy sauce is used a lot, along with peanut presscake, for fertilizing sugar-cane fields.

In the Netherlands Indies, ketjap [Indonesian-style soy sauce] is made solely by the Chinese. Also called Tao-yoe, it is prepared by covering cooked soybeans with hibiscus (*waroe*) leaves. The age and variety of the leaves is very important. The mold that grows produces substances [enzymes] that digest legumin [soy protein]. More of the process is described.

Note 1. This is the earliest document seen (Feb. 2009) that contains the term Tao-yoe. H.T. Huang (e-mail of 25 Feb. 2009) states: "Tao-Yoe sounds like Cantonese for *Douyou* (pinyin) or *tou yu* (W.-G.) which in Mandarin mean soy sauce, and which first appeared in about 1750 in the *Xingyuan Lu* (*Hsing Yüan Lu*). See Huang 2000, p. 371-73.

Star anise (Hades manies) is also added to Indonesian soy sauce. Some Chinese have gained a reputation for their knowledge of the different additives (*boemboengs*). 61. kg of soybeans (1 gantang or 10 katties) can yield 3 bottles of number 1 ketjap (which retails for 50 Dutch cents per bottle), plus 3 bottles of 2nd extraction ketjap (each 40 cents), plus 3 bottles of ketjap no. 3 (which is little better than salt water with a light brown tint; each 20 cents).

The Japanese also use soybeans to make tofu (*tofoe*). Precipitated with magnesium chloride, it is a greyish-white tough, or sometimes yellow product. Although containing 90% water, it is a concentrated food. A table (based on analyses by E. Kirch [sic, Kinch] of Tokyo) shows the composition of tofu and kori-tofu; the latter is made by freezing tofu then thawing it. Tofu is a good product for vegetarians, but beware than it can act as a laxative because of the magnesium chloride.

Note 2. This is the earliest Dutch-language document seen (Sept. 2011) that uses the term "Katjang-Kedelihpraeparaten" in the title to mean "Soyfoods."

Note 3. This is the earliest Dutch-language document seen (Feb. 2004) that mentions dried-frozen tofu, which it calls "kori-tofu."

1555. Lafar, Franz. 1901-1907. Technische Mykologie. Ein Handbuch der Gaerungsphysiologie... Zweiter Band: Eumyceten-Gaerungen [Technical mycology. A handbook of fermentation physiology... Vol. 2: Eumycetic fermentations]. Jena: Verlag von Gustav Fischer. x + 507 p. (p. 365-871). See p. 638, 640, 674-76. Illust. No index. 25 cm. Foreword by Prof. Dr. Emil Chr. Hansen (Carlsberg-Laboratorium, Kopenhagen). [5 ref. Ger]

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• ***Summary:*** This book is continually paginated with Vol. 1, so the first numbered page is 365. Part 15 (chapters 56-58) is titled "Morphology, physiology, and classification of the technically important higher Ascomycetes and related forms" (p. 627-704). Chapter 56, by Prof. Dr. Carl Wehmer (*Dozent an der Technischen Hochschule zu Hannover* [Germany]), "Morphology and classification of the families of the Aspergilli (*Aspergillaceen*)" discusses (p. 627+): Eighteen illustrations of Aspergillus conidiospores (p. 632-33). *Aspergillus Oryzae* (Ahlburg) Cohn (=*Eurotium Oryzae* Ahlburg), which is widely used in Japan to make saké, soy sauce (*Soja-Sauce*), and miso (p. 638-39, with illust.). *Aspergillus Wentii* (Wehmer), which is used in Java to make Tao-Yu (Chinese-style soy sauce) using cooked soybeans covered with *Hibiscus* leaves (p. 640).

Chapter 57, also by Prof. C. Wehmer, titled "Chemical effects of the Aspergilli (*Aspergillaceen*)," discusses (p. 674+): Saccharification of starches, diastase and diastatic enzymes, Takamine's research using Aspergillus to make diastase (Takadiastase) and its efficiency compared with similar enzymes of different origins, koji extract which contains amylase and other enzymes, use of *A. oryzae* to make saké, shoyu, and miso (p. 675-76).

This book also discusses: Zygospore production (p. 379). Sporulation and Aspergillus (p. 387-89, with illust.). Morphology and classification of the Mucorales, zygomycetes, zygospores (p. 420-21). The genus Mucor, sporangia, Rhizopus (p. 424-27, illust.). Mucorales used in the spirits industry, Mucor rouxii, Chinese yeasts (p. 436-37). Ragi/raggi and tapé (*tapej*) (p. 441). Decomposition of proteins and their derivatives, protease (p. 690-91). Film-forming surface yeasts and their accompanying phenomena, *Mycoderma* (p. 732-33). Invertase (p. 828). Other enzymes discussed in this chapter include maltase, melibiase, lactase, trehalase, raffinase, and amylase. Address: Prof. of Fermentation Technology and Bacteriology at the Imperial-Royal Technical College at Vienna [o. ö. {obiger Oesterreichischer} Professor der Gaerungsphysiologie und Bakteriologie an der k.k. {kaiserlich-königliche} Technischen Hochschule zu in Wien].

1556. Bie, H.C.H. de. 1901. De landbouw der inlandsche bevolking op Java [The agriculture of the indigenous people in Java]. *Mededeelingen uit 's Lands Plantentuin* (*Buitenzorg*) No. 45. 143 p. See p. 97, 99, 138-43. [Dut]

• ***Summary:*** The soybean is discussed in the chapter titled "Cultivation of crops other than paddy rice: Cultivation of secondary crops (*Palawidja*)." Soya bean is one of the secondary foods served with rice, but it is mostly used to make soy sauce and tempeh (*tempe*). One variety of soybean, which originally came from Japan, is widely grown as a second crop on the wet rice fields (*sawahs*), and it is easy to cultivate at altitudes of 1,200 to 1,500 feet above sea level. It is called *katjang kedele* in Central and East Java, but *katjang djepoen* in Sunda or West Java (*de Soedalanden*). A description of the plant and the method of cultivation in Java is then given. It is planted much more on wet rice fields than on dry (non-irrigated) fields (*tegalans*) near the rice fields used for vegetables and secondary crops. Usually the soybean seeds are planted right after the paddy stumps have been cut away, but sometimes they are planted just before or during the paddy harvest, and pressed into the earth under the feet of the paddy cutters. They are rarely weeded, excepted when the crop is suffocated by tall weeds. At harvest, the plants are pulled completely out of the ground and bound into bunches. At night they are stored under a specially-constructed roofed shelter in the field, and during the day they are sun-dried on bamboo structures or on the ground. This takes at most 3-4 days, if the plants are really ripe and the weather is good, after which the bunches are put on bamboo mats in heaps and threshed. To protect the seeds from damage, one preferably uses piece of banana tree branches which still have woody veins. The woody plant stems and branches are removed together with the soybean pods and burned on the sawah fields. Poor people first sort out the pieces good enough for fuel and take these home. Immature green leaves are fed to animals. Sometimes soybeans are planted on the dikes of the paddy fields at the same time as or a few days later than the paddy rice. The fresh seeds from this harvest are then planted in the sawah fields after the paddy is harvested. Soybeans planted in this way are called *katjang apitan*.

There are two varieties of soya: one has an ivory yellow seed coat and the other is black. The latter is used almost exclusively to make soy sauce; the former to make pastry and condiments for rice or as a vegetable (*sayur; sajoer*). Soya is cooked with salt in the green pod and eaten as a snack.

The indigenous people do not occupy themselves with the production of soya (soy sauce) or *ketjap* or other products made from soybeans such as *taoetjo* [*tao tjo, tauco, taucho* = Indonesian style miso], *taoehoe* [*tao hoe, tahu* = tofu], *taoekwa* [*tao koan, taokoan or takoa* = fermented tofu], and *taoetji* [*tao dji, tausi* = fermented black soybeans]. The work is too involved and takes too long before the product is ready to be sold. Most people are too inexperienced and there is not enough of a market for the product.

The only food that most people make out of soybeans is tempeh (*témpé*), which plays the same role in Central and East Java as does ontjom in Sunda or West Java, and is prepared similarly. The tempeh-making process is described. It takes place indoors, out of the light. It is sometimes cut into smaller pieces. It is usually eaten pan-fried after being soaked in a solution of tamarind and salt. It is also cooked with vegetables.

Most soybean seeds are sold to the Chinese, who export them or process them to make soy sauce and other products. To make soy sauce, the seeds are roasted to aid in removing

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the hulls. Some people pound the seeds instead. They are cleaned, boiled in water, drained, spread on flat bamboo trays (*tampah* or *njiroe*) and dried daily for a week in the wind. They are washed again then soaked for 30-40 days in salt water which has been boiled then cooled. This mash is mixed thoroughly and strained through a cloth. To the black liquid is added a boiled and cooled mixture of cane sugar and water, then the mixture is boiled until its volume is reduced by 20%. If the solid residue removed by filtering still tastes salty, it is put into water, kneaded and strained again. A sugar solution is added and all is boiled down as before to make second-grade ketjap.

To make *taoetjo* (*tauco, taucho* or Indonesian-style miso), the soybeans are soaked in fresh water, the hulls are removed, the seeds boiled and spread on bamboo trays to cool. Rice or glutinous rice flour is roasted until golden brown, then mixed with the seeds and set aside for 2-3 days to ferment between hibiscus (*waroe*) leaves on flat trays. When the mass has molded, it is sun dried for a few days until very hard. Note: This is the soybean koji used making taucho.

Remove the leaves and put this mass of soybean koji into salt water. On the third or fourth day, add some yeast (*gist*) and some cane sugar syrup. Continue the soaking and fermentation in salt water for 2-3 seeks. Place it [in crocks] daily outside in the dew, taking care that no rain gets on it.

To stimulate the fermentation, take steamed rice or glutinous rice that is only half cooked. Add *ragi* starter and allow it to ferment for 2-3 days until a sweet, alcoholic flavor develops. This kind of fermented rice is called *peujeum* in West Java, or *tapé* in Central or East Java. Now add this fermented rice to the soybeans in salt water to enhance both the fermentation and the product.

After 3-4 weeks the soybeans should be very soft like porridge; then the taucho is ready to be used. It is eaten raw with cooked or raw vegetables, or mixed with meat or rice dishes; other condiments are also made from it.

Another product that the Chinese make out of soybeans is tofu (*tahoe* or *tauwhoe*). Soaked soybeans are ground and the puree is mixed with fresh water. Then a milky liquid (*melkachtige vloeistof*) is filtered off and coagulated. The Chinese use a coagulant called *tjiogo* (gypsum or calcium sulfate), which is specially imported from China and is not always available, even to the Chinese apothecary. It is first burned, then cooled before being added to the milky liquid. The white mass which is precipitated is called tofu. A similar product can be made from mung beans. Address: Batavia (Jakarta), Java.

1557. Chamberlain, Basil Hall; Mason, W.B. 1901. Handbook for travellers in Japan: Including the whole empire from Yezo to Formosa. 6th ed., revised. London: John Murray; Yokohama, Shanghai, Hongkong, Singapore: Kelly & Walsh, Ltd. ix + 577 + 94 p. "With 28 maps and plans and numerous illustrations." Index.

• ***Summary:*** This 6th edition is quite similar to the 1899 5th edition, but with some important changes, and 41 pages of additional advertisements at the rear. In the concise English-Japanese dictionary (p. 21-22): Beans–mame, Soy–shôyu, shitaji.

Eastern Japan: Chôshi (Inn, Daishin): "Chôshi is noted for its soy, the manufacture of which may be seen at Tanaka Gemba's establishment, the oldest and largest, which supplies the Imperial Household."



In the ads at the back is a full page advertisement (p. 49) for "Higeta Soy, manufactured by G. Tanaka, Chôshi, Shimôsa, Japan." An illustration shows the Higeta trade mark. "Higeta Soy dates from 1615 A. D. (Second year of Genwa).

"Higeta Soy is honoured with the distinguished patronage of the Imperial Household.

"Higeta Soy was awarded the superior medal at the World's Fair at Chicago [Illinois], and gold and other superior medals by the Home Exhibitions.

"Higeta Soy has an excellent flavour and is very nutritious, being made of the best kind of bean, wheat, rice, and table salt." A table gives a nutritional analysis.

"Higeta Soy, not being acrid, is suited for ladies and children.

"Higeta Soy can be preserved even in hot countries, if kept in a dark place. This fact has been proved by many years' experience." Detailed directions for use are given.

Note: This is the earliest document seen (Feb. 2012) that mentions "Higeta" in connection with soy sauce. Address: 1. Emeritus Prof. of Japanese and Philology in the Imperial Univ. of Tokyo, Tokyo; 2. Corresponding member of the Royal Scottish Geographical Society, and late of the Imperial Japanese Dep. of Communications.

1558. Kander, Lizzie Black, comp. 1901. The "Settlement" cook book: Compiled by Mrs. Simon Kander,... Containing many recipes used in "settlement" cooking classes,... 6th ed. Milwaukee, Wisconsin. xxv + 470 p. Illust. Index. 20 cm.

• ***Summary:*** Worcestershire sauce is used as an ingredient

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in about 20 recipes. The first 4 of these are: Tartar sauce (p. 92). Baked trout (p. 99). Steak for the oven (p. 115). Stuffed peppers No. 4 (p. 168).

The word "vegetarian" appears in the title of two recipes: Nut butters for sandwiches–vegetarian (p. 240). Vegetarian chicken (p. 240).

Peanut butter is used as an ingredient in Cheese mixture for sandwiches (p. 236). Peanuts are used in at least 25 recipes; almonds are used in 6.

This is a "charity cookbook" published "for the benefit of the 'settlement,' 601 Ninth Street, Milwaukee. Price: $1.20 postpaid." Address: Milwaukee, Wisconsin.

1559. Wehmer, Carl. 1901. Die Pilzgattung *Aspergillus* in morphologischer, physiologischer und systematischer Beziehung unter besonderer Beruecksichtigung der mitteleuropaeischen Species [The mold genus Aspergillus, from morphological, physiological, and systematic points of view, with special attention to the middle European species]. *Memoires de la Societe de Physique et d'Histoire Naturelle de Geneve* 33(4):1-157. [225* ref. Ger]
Address: Hannover, Germany.

1560. Faber's. 1902. Faber's (Ad). *San Francisco Chronicle*. Jan. 17. p. 14.
• ***Summary:*** "Worcestershire sauce–2 bottles 30¢. Lea & Perrins' and Marshall's."

1561. Makino, T. 1902. Observations on the flora of Japan. *Botanical Magazine (Tokyo)* 16(179):34-35. Jan. 20. [42 ref. Eng]
• ***Summary:*** Gives numerous early references concerning Glycine Soja, Dolichos Soja Linn., Soja hispida Moench, Glycine hispida Maxim., Soja japonica, Sooja japonica Sieb., and Daidsu. Habitat: Japan, widely cultivated, having various forms. There are not any wild forms in Japan. "Soja" was derived from "Shoyu" or Soy, a kind of sauce made of boiled seeds of this plant and fermented wheat, commonly used by Japanese.

Glycine (Soja) ussuriensis, Glycine Soja, Soja angustifolia, Johnia javanica, Glycine javanica, Phaseolus lathyroides. This species is never in cultivation and the seed grains are useless hence the specific name "Soja" given to it is very inappropriate. Probably a variety of the preceding species.

1562. Boehmer (L.) & Co. 1902. Wholesale catalogue: 1902-1903. Yokohama, Japan. 44 p. Illust. 26 cm. [Eng]
• ***Summary:*** The section titled "Plants and seeds of economic value" (p. 30+) gives the first detailed information seen (Dec. 2004) in Japanese seed catalog about the different varieties of soy-beans as follows: In large letters near just below the section title we read: "We are in a position to fill special contracts for the following food-, fodder-, vegetable-, and other plants, which are used in the textile and other industries."

After describing 3 types each of rice and millet the text continues: "Soy-bean. Dolichos soya L. Jap. nom. [Japanese name(s)] Daidzu and O-mame. These Jap. soybeans have been well acclimatized in Central Europe and there yield very fine crops." Three types, based on seed color, are described:

(1) "The white Soy-bean. Jap. nom. Shiro Mame. The following varieties are recommendable: Five-months bean. Goguwatsu Mame. Ripening in July. Summer bean. Wase or Natsu Mame. Small seeded, early. Middle-late bean. Nakate Mame. Larger in seed than the foregoing. Late bean. Okute Mame. Bullet bean. Maru Mame. Very valuable as horse feed. Gun bean. Teppo Mame. This kind is principally used to make the famous Soyu-sauce" [shoyu, soy sauce].

Note: This is the earliest document seen (April 2012) that uses the term "Soyu-sauce (regardless of capitalization or hyphenation) to refer to soy sauce.

(2) "The black Soya-beans. Kuro Mame. Round middle-late bean. Kuro-Teppo Mame. Green Mame. Nicuri [Nikuri] Sei. Green throughout. Pale green–Kaje [Kage] Mame. Round seeds."

(3) "Speckled Soya-beans. Jap. nom. Fuiri Mame. Green and black bean. Kuro-Kura Kake-Mame. Green and brown bean. Aka-Kura Kake-Mame. Flat and long bean. Yellow-green bean. Fuiri Mame. Marked with many dark spots."

Other food legumes on this page include: Sword bean–Dolichos incurva, nata mame. Ray-fruited dwarf bean–*Phaseolus radiatus*, adsuki [azuki], small pealike bean of very fine fine flavor and therefore very popular. *Phaseolus typicus*–Oku Adzuki–Very large seeded bean. *Phaseolus pendulus*–Kuro Adsuki–Black fruited. Shiro Adsuki–White fruited. Tsuru Adsuki–Twining bean. *Phaseolus subtrilobatus*–Bundo [Yayenari], bearing each from 4 to 6 hanging pods. Also (p. 31): *Pueraria Thunbergi*–Kudzu.

Note 1. The above information on soybean varieties and other economic plants appears to have been taken in large part from any of three books about Japan by Johann J. Rein published from 1884 to 1889, especially his 1889 book.

Photos show: (1) A characteristic Japanese garden, with many stone lanterns and trees, and people walking along the stone pathways around the central pond. (2) A Japanese woman seated, packing bulbs into baskets. (3) The company's packing department, showing many Japanese and European workers and trays of bulbs. (4) A bamboo-walk in Japan.

Note 3. The title page of this catalog states: "Nurserymen & exporters. The only European nursery firm established in Japan. Established in 1882. Cable address: Boehmer Yokohama." It suggests that the company's main business is in "lily-bulbs, iris, peonies, and other Japanese flower roots." Page 1 states that this is the first Boehmer catalog in which "photo-arto-prints" appear. Page 3 notes:

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"Prices are quoted and will be charged in Yen and Sen. 1 ¥ = 100 sen. The value of the Yen is subject to slight fluctuations, but about equal to 0.50 Gold $; 2 shillings; 2 Mark; 1 Rubel [sic, Ruble]; 2.50 Frcs. [French francs]; 1.20 Fl. [Florins, probably Austria-Hungary], etc." Address: Nos. 5 and 28 Bluff, Yokohama, Japan.

1563. *Vegetarian Messenger* (*Manchester, England*).1902. Price list. Jan. p. 12.
• ***Summary:*** Lists prices for foods: beans, peas, lentils; prepared foods; biscuits; Plasmon; tea and coffee substitutes; nuts; jams; bottled fruit; oils; butter and lard substitutes [margarines and shortenings]; soaps; and cookery appliances, etc.

All are available for purchase from the Vegetarian Society's Food Stores at 19 Oxford St., Manchester, England.

The foods in the category "Prepared foods" are of special interest, since most are meat alternatives and would soon be called "health foods." Those known to be made (or imported) by the International Health Association Ltd. (renamed Granose Foods Ltd. in 1926), are followed by an asterisk: Dr. Nichol's Food of Health, Dr. Allinson's Food (packed it tins), Fromm's Extract (jar), Maggi's Soups (packet), Granose Flakes* (packet), Granose Biscuits* (packet), Avenola (packet), Bromose* (tin), Falona (tin), Meatose*, Nutmeatse* (tin), Vejola (tin), Nutvejo (tin), Malted Nut Caramels (tin), Nut Butter* (tin), Carnos, Golden Grain Meal (packet).

Cookery appliances include several Nut Mills, and "The Pitman Spoon."

Note: There are apparently no foods made by Pitman sold at this vegetarian store.

1564. *San Francisco Chronicle*.1902. Rough weather fatal to cargo: Liquids in the hold of the *Thyra* break and much damage results. Feb. 9. p. 9.
• ***Summary:*** "San Diego, February 8.–The steamer *Thyra* of the California and Oriental line, which has been discharging cargo here since Thursday, sailed at noon to-day for San Francisco. Captain Halvorsen reported" that he had run into some severe weather on the trip from the Orient and that when that portion of the hold containing the Chinese goods was opened, it was found that "large amounts of 'soy' [sauce] and Chinese wine had been broken by the tossing of the ship, and quite a large amount of tapioca flour and other products of the Orient had been destroyed by the spilled liquids. The steamer has about 3,500 tons [of goods] for San Francisco, and some of it will doubtless have met the same fate as the Chinese cargo intender for here.

"The damaged and destroyed freight is piled up in the warehouse here and will have to await the decision of the port warden or insurance adjuster as to its value."

1565. Ono, Ryozo. 1902. Shôyu-chû yori sekisetsu kesshôtai ni tsukite no jikken [Investigation of the crystallized substance separated from shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 245. p. 649-54. July. [Jap; eng]
• ***Summary:*** The author examined the crystals that separate from shoyu during the winter; he reports on the cause and prevention of such separation.

1566. *GVT Grand Valley Times* (*Utah*).1902. How chop suey is made: Famous Chinese delicacy that is becoming popular dish in the United States. Oct. 10. p. 3.
• ***Summary:*** "Chop suey, the national dish of China for at least 25 centuries, bids fair to become a standard food in this country. There are some 60 Chinese restaurants scattered over the different boroughs of New York whose chief attraction is this popular composition, and several American restaurants have endeavored to take advantage of its popularity by adding it to their daily bill of fare. There is a ridiculous amount of mystery concerning this dish. It is simple, economical and easily made, according to the *New York Post*. The general formula (a long recipe in sentence-style format) is as follows: One pound of moderately lean pork..."

"Some Chinese cooks use the Indian soy, which is sweeter. The effect can be imitated by adding a teaspoonful of Worcestershire sauce and another of brown sugar or a teaspoonful of molasses. An agreeable modification results."

"In Chinese restaurants the cost varies from 10 to 25 cents a plate.

Note: This "Indian soy" is clearly sweet soy sauce, which means it is different from the soy sauce made in Japan. Perhaps "Indian soy" here refers to the sweet soy sauce (*ketjap manis*) made in the Dutch East Indies, today's Indonesia. However *ketjap manis* seems to be a recently-developed seasoning and recently-coined term; it is first mentioned in a document in 1960 (as far as we know, as of April 2012).

1567. Hills & Co. 1902. About–Turkeys (Ad). *Hartford Daily Courant* (*Connecticut*). Nov. 21. p. 18.
• ***Summary:*** Their long list of "Imported and domestic sauces" begins: "John Bull, Mushroom, Beef Steak, China Soy, Essence of Anchovies, Worcestershire Sauce,..."

1568. *Washington Post*.1902. Like oriental cuisine: Many Americans eat at Chinese restaurants. Nov. 30. p. 28.
• ***Summary:*** The ordinary bill of fare at Chinese restaurants in this city is bird's nest soup, or birds' nests a la Chinois; chop suey, chow fou, yet quo mien, chow mein, fou young dong and kee heong chan."

"Yet quo mien is perhaps the most popular item on the menu." "Chop suey stands next in order of popularity." The ingredients, which are listed, are hashed fine and fried in peanut oil. For cooking, the Chinese, being good Buddhists,

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never use lard or any other animal fat, employing in their place all manner of vegetable oils. With each dish of chop suey the waiter brings a small dish, such as is used for butter in American restaurants, filled with a peculiar brown sauce. This [soy sauce] is made in China of fermented beans, rice, and cabbage [sic], and is a great appetizer.

"Many years ago a shrewd Englishman who had been in the East India service took this sauce, and by adding certain other ingredients, evolved the famous Worcestershire sauce, which to-day is found on the tables of every hotel in the civilized world.

"It is surprising what the Chinese are able to make of beans. In the Heavenly Kingdom 'bean curd' is as staple an article of diet among the masses as bacon in this country. It is made by grinding beans moistened with water between two heavy stones, the product resembling cream. It is then taken, strained, flavored, and subjected to several processes known only to the makers, and finally pressed into long cakes like castile soap, in which shape it is cut up in slices and sold."

"There the ordinary bill of fare is bird's nest soup, or bird's nest a la Chinois; chop suey, chow fou, yet quo mein, chow mein, fou young dong and kee heong chan."

1569. Law, James Thomas, comp. 1902. Law's grocer's manual: A practical guide for tea and provision dealers, Italian warehousemen, chandlers, drysalters, bakers, confectioners, fruiterers, and general store-keepers. 2nd ed. London: Gilbert & Rivington, Ltd. 1185 p. See p. 872-73 (soy), 957 (torfu [sic, tofu] or bean curd). Illust.

• ***Summary:*** "Soy.–This thick, brown liquid sauce, or ketchup, is not made from black beetles, as some humorous connoisseurs persist in suggesting, but from Soja beans, a kind of black beans, variously known as *Glycine*, or *Dolichos soja*, *Soja hispida*, etc., or Soy-beans, or peas...

"Soy is generally made by boiling the beans till soft, and then mixing them with an equal weight of crushed wheat or barley and salt. After covering and leaving this mixture about 24 hours to ferment, other ingredients are added, and the whole is then stirred daily for about two months. Finally, it is squeezed, and the liquid is filtered, and preserved in wooden vessels, in which it gradually brightens and clears by long keeping. It should be thick, but of a clear brown colour, not too salt or sweet, and of agreeable flavour. When shaken in a glass bottle, it should leave a coat on the surface of a bright yellowish-brown colour.

"The manufacture of China soy and 'bean-curd,' or 'cheese' (see *Torfu* [*tofu*]), is said to be one of the most flourishing in the prefecture of Wenchow, where there are five large factories making them from the Chin-Kiang *white* beans, sea-salt, flour, and water.

"The ordinary batch there is 123 1/3 lbs. of beans, which are first washed and boiled for six hours in a large cauldron, after which the fire is withdrawn, and the beans are allowed to simmer and cool for about 18 hours, after which they are ground to a thin paste with the water in a mill. The 'broth' is then drawn off and kept for use later on in the process. To the mash is added 213 1/3 lbs. of flour. After being well mixed it is filled into large shallow baskets of bamboo, each of which is then fitted on a wooden frame. These frames are piled one on top of another to a great height, and are exposed in the sun for five or six days, or in cold weather for seven or eight days, until the mash gives out the proper effluvium and turns yellow. The mass is next emptied into a large vat, and on it is poured a quantity of clarified brine, which has already been mixed with the bean 'broth' above mentioned. It is all then beaten up together and left to ferment. After three months or so, a yellow oil appears, and to this oil more brine is added (to each 667 lbs. of oil, 2,400 lbs. of brine), and about 10 per cent. of salt to thicken it. The result is 'China Soy,' of which there are about six different qualities, the best being about five times the value of the lowest.

"English soy.–An inferior article sometimes made in this country by simply saturating molasses, or treacle, with common salt. The better sort is made as follows:–Take 1 gallon of malt syrup, 5 lbs treacle, 4¼ lbs. of salt, 1 qt. [quart] mushroom juice; mix with a gentle heat, and stir until thoroughly blended, and in a fortnight [14 days] the clear portion may be drawn off as a very fair imitation soy.

"Soy forms the chief base of nearly all the bottled sauces and relishes in the market.

"Apply to C. Windschuegl & Co., 1 Leadenhall Street, E.C.

Note: The entry for tofu is listed separately in this bibliography (Law 1902) as a "document part."

The first edition was published in 1896. A third edition was published in 1931 in London by W. Clowes & Sons (xiii + 774 p.; edited and revised by C.L.T. Beeching). A fourth edition was published in 1950 in London by William Clowes & Son (xv + 814 p.; edited and revised by W.G. Copsey).

1570. Law, James Thomas, comp. 1902. Law's grocer's manual: A practical guide for tea and provision dealers, Italian warehousemen, chandlers, drysalters, bakers, confectioners, fruiterers, and general store-keepers. 2nd ed.: Tofu (Document part). London: Gilbert & Rivington, Ltd. 1185 p. See p. 957. Illust.

• ***Summary:*** "Torfu [sic, tofu] or Bean Curd.–(See also *Soy.*) A Japanese food product which is said to approach more nearly to animal food than any other vegetable. It is made by powdering the yellowish-white beans grown chiefly in the North of China and the Himalayas. The powder, or meal, is impregnated with brine, and undergoes elaborate treatment until coagulated, and preserved in a mass. It contains about 1-5 [one-fifth] its weight of fat and 2-5 [two-fifths] of nitrogenous matter, and when wanted for use is cut up into slabs which may be fried or toasted, and saturated with soy [sauce], so as to taste like a sweet bread, or it may be divided into small squares for soups, sauces, etc."

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1571. Neuville, Henri. 1902. Les ferments industriels d'Extrême-Orient (Biologie, emploi et produits) [Industrial fermentations of East Asia (biology, utilization, and products)]. Paris: Masson et Cie. 192 p. 19 cm. Encyclopédie Scientifique des aide-memoire publiée sous la direction de M. Léauté. [60+ ref. Fre]

• ***Summary:*** Chapter 4, titled "Food products obtained by fermentation of amylaceous [starch-like] substances," discusses the following fermented soyfoods and related products: Shoyu and miso, koji, brem, and ontjom. Contains a good bibliography. Neuville lived 1872-. Address: Préparateur au Muséum d'Histoire Naturelle.

1572. Rorer, Sarah Tyson. 1902. Mrs. Rorer's new cook book: A manual of housekeeping. Philadelphia, Pennsylvania: Arnold and Company. 730 p. Illust. Index. 21 cm.

• ***Summary:*** The soy bean is mentioned in two special sections: Botanical classification of our common vegetables (p. 281): "Leguminosae: Pulse family. Soy bean, peanut, kidney bean, string bean, lima bean, black bean, pea, chick pea, lentil, St. John's bread."

Soy bean (*Glycine hispida*, Maxim.) (p. 334-35): "Soy beans are grown principally in China where they form an important article of food; in fact, they are the richest of all in food constituents. It is also grown to a considerable extent in India [sic], where it is mixed with rice. This bean ranks high in fat and albuminoids and is their only muscle-making food. It has more than meat value. By the Chinese it is made into cheese [tofu], pastes [jiang], and sauces [Soy]. Soy sauce is used by them on all meat and fish dishes. For the English and Americans it forms the foundation for such sauces as club-house and Worcestershire."

Note 1. This is the earliest document seen (Feb. 2012) stating clearly that soy sauce is used as an ingredient in making Worcestershire sauce.

"Soy is an agreeable seasoning to creamed meat dishes and a very pleasant addition to French salad dressing. It can be purchased in jugs at any Chinese shop, or at the American wholesale druggists by measure." A table (based on Church) gives the composition of the soy bean: Albuminoids, etc. 35.3%. Fat 18.9. Starch and dextrin 12.5. Sugar 12.0. Cellulose 4.2. Water 12.5. Mineral matter 4.6.

"Soy" [sauce] is used as an ingredient in 12 recipes: Japanese fish sauce (p. 228). Japanese eggs (p. 253). Sautéd [sic Sautéed] celery ("When ready to serve sprinkle over two tablespoonfuls of soy or mushroom catsup, and send at once to the table," p. 389-90). Ginger chutney (p. 435). Japanese dressing (p. 442). Celery salad ("This is greatly improved by adding a few drops of Worcestershire sauce, soy or mushroom catsup," p. 451). Bobotee salad (p. 457). Philadelphia cream salad (p. 459-60). Shad roe salad ("one tablespoonful of Worcestershire sauce or soy," p. 469). Salad seasoning ("Agreeable seasonings to be kept on hand for salad making: Garlic, mushroom catsup, tomato catsup, Worcestershire sauce, soy, tobasco oil [sic, Tabasco], tarragon vinegar, mint sauce, capers and celery seed," p. 472). "A group of Hawaiian recipes"–To cook beef ("bake until brown. Then pour over it a half pint of sweet cream, to which you have added a tablespoonful of soy. Cook slowly for one hour, basting frequently with the cream," p. 691-92). Cream lettuce sauce to serve with fish ("a half saltspoonful of pepper and a teaspoonful of soy," p. 695).

Worcestershire sauce is used as an ingredient in at least 25 recipes. The first four are: Ox tail soup (p. 62). Cream of cheese soup (p. 74). Mock turtle soup (p. 80). Baked carp (p. 104).

Peanut butter is used as an ingredient in 5 recipes: Cream of peanut soup (p. 75). Lentil pie (p. 337-38). Peanut wafers (p. 535). Nut and fruit crackers (with almond butter or peanut butter, p. 537-38). Marguerites (p. 556).

The earliest recipe seen for homemade peanut butter states (p. 535): "Peanut Butter: Roast the nuts, shell and blow off the brown skins. When making it in large quantities, it will pay to have a bellows for this purpose, or put the peanuts on a coarse towel, cover them with another towel, rub them gently, then blow off the skins. If you use salt dust them lightly with it and grind at once. Pack the butter into glass jars or tumblers, cover them and keep in a cool place. This may be used plain or diluted with water."

Two recipes use almond butter as an ingredient: Almond wafers (p. 525). Nut and fruit crackers (p. 537-38). A recipe for homemade almond butter is given (p. 525).

The word "vegetarian" is mentioned in connection with 7 sections of recipes: Meats (p. 135-36). Vegetables (p. 277-78). Salsify (p. 317-18). Tomatoes and okra with curry (p. 417-18). Nuts (p. 522-23). Nut croquettes (p. 538). Sample menus–Vegetarian (p. 666). The author speaks very favorably of a balanced vegetarian diet. Scientists in general agree, she says, that animal proteids are easier to digest than vegetable proteids. "I must contend, however, that a well selected vegetable diet will give health, bodily vigor and mental strength to those who live rationally." In other countries and cultures, vegetarians are quite equal in strength to those of the same economic class who live largely on meat or on a mixed diet of proper proportions–and are most likely freer from disease. The out-door laborer would probably do better on a vegetarian diet whereas the sluggish digestive apparatus of an indoor is probably better suited to beef (p. 135-36).

"The American people, as a class, in their rushing and bustling life, prefer to take their nitrogen from animal

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products, which are more easily digested and assimilated than vegetables." "The Japanese, who do in their country the work performed by horses here, are practically vegetarians." The "vegetarian requires but two meals per day," yet they are more nourishing than three meals of meat. They take less time to eat, cost less, and offer more variety. "The amount of cellulose or waste in vegetable foods keeps up the peristaltic motion of the intestines and lower bowels; hence, vegetable eaters are rarely troubled with constipation and torpid livers." America has "grown into a meat-eating nation" in large part because the scullery maids who preside over the kitchen are largely uneducated, do not understand nutrition, and have never learned the subtleties of preparing vegetables (p. 277-78).

"To the vegetarian, they [nuts] are indispensable; they furnish his meat, milk and butter. They are palatable, nutritious, and, if well prepared, easy of digestion. Being of vegetable origin, they are free from the danger of disease germs. Their food value is generally overlooked by Americans as they are generally served as dessert"–on top of a heavy meal. "From the general awakening in regard to healthful diet, societies have sprung up all over the world, recommending the use of vegetable foods, especially fruits and nuts. We have well established, both in New York and London, large vegetarian societies, many with separate branches of 'fruit and nut eaters.' Personally I have tried the experiment, and find it most satisfactory" (p. 522).

The Preface notes that this "new book on Domestic Science... represents on paper The School at its highest period of development..." "A great change in the methods of living has taken place in America during the last few years." Not long ago, schools of cookery taught "fancy cookery"–"to succeed with these elaborate, dyspeptic-producing concoctions as the highest ambition. All this has now changed: the teacher or cook book (an ever present teacher) that does not teach health, body building, and economy in time and money, is short lived. There are still a few women who do elaborate cooking to please the palate and appetite.... They are still at the palate stage of existence. Strive to reach a higher plane of thought–eat to live. Why should any woman be asked to stand for hours over a hot fire mixing compounds to make people ill? Is this cookery? Is the headache that follows a food debauchery more pleasant or pardonable or less injurious than that which follows drink? Results of intemperance are identical. Simple living and high thinking have the approval of learned men and women...."

Sarah Tyson Heston Rorer (1849-1937) "is one of the great ladies of American culinary history. She was a nationally recognized cookery expert, founded and ran a cooking school in Philadelphia for 18 years, authored over 75 books and pamphlets, edited her own magazine *Table Talk*,... and was domestic editor of the *Ladies Home Journal* for 14 years." With over 1,500 recipes, tips and advice, and more than 125 recipes, this "is one of America's great cookbooks. The *Ladies Home Journal* reprinted it in 1970. It offers an excellent view of American cookery at the turn of the 19th to 20th centuries" (MSU introduction).

Note 2. This is the earliest document seen (Jan. 2001) which states that "body building" is widely considered part of a healthy way of life. Address: Philadelphia.

1573. Yendo, K. 1902. Uses of marine algæ in Japan. *Postelsia: The Year Book of the Minnesota Seaside Station* p. 1-18. For the year 1901.

• ***Summary:*** Page 1: "I propose to mention briefly the more important algae which are generally used by the inhabitants of Japan."

Page 5: "*Phyllitis fascia* (*Haba-nori*). Young plants of this species are collected and laid out in sheets after a method which will be explained more in detail in connection with the uses of Porphyra. The sheets are dried in the sun and afterwards baked, powdered and eaten with soy [sauce]. Haba-nori is used principally by the peasantry of the Province of Awa and Sagami.

"*Chordaria abietina* (*Matsumo*)." This is particularly abundant in northern Japan, where it is collected and packed in salt. It is cooked with soy and is a common food of the poorer classes in the north."

Page 6: "*Undaria pinnatifida* (*Wakame*). This species is used in several ways. Dried bales are common articles of merchandise. After washing with fresh water it is used as an ingredient of soup, cooked with soy, or eaten as a salad with vinegar."

Pages 7-9: *Laminaria* (*Kombu*). One form in which *Laminaria* is very much relished by the common people is the so-called Kombu- mati [Kombu-maki] or Laminaria roll. To make this, the dried weed is boiled in fresh water for a while and cut up into pieces of the desired length and width. Portions of dried herring, cod or other fish are wrapped up in the boiled alga and then recooked in dilute soy, soup or milk. *Laminaria* is also used upon New Year's day as a festoon, and for this purpose *L. radicosa* (*Antokume*) is utilized, but not as a food."

Pages 8-9: "*Cystophyllum fusiforme* (*Kijiki* [*Hijiki*]). The young fronds are collected and dried in the sun, in which condition they are a well-known article of merchandise. Cooked in soy it is eaten by the peasantry, but not by the better classes."

Pages 9-12: "*Porphyra* (*Asakusa-nori, amanori* or *nori*). This is one of the most important food plants of Japan. It is used by every class of people in a variety of ways and is cultivated in many districts. The plant is collected, made into sheets, and baked." The method of cultivation is described briefly. The sheets "are washed for a time to remove the mud and sand and are then laid out upon reed mats which are placed in the sun. The layer is made as thin as possible, the plants adhering to each other by their own gelatine. When such a sheet is quite dry it is peeled off from the surface of

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the mat, folded and ready for market. When baked before a gentle fire, Porphyra acquires a remarkably agreeable flavor; the rule of the cooks is to bake until the purple color changes to green. After cooking, *Porphyra* is eaten with soy, powdered and employed as a condiment or made up into sushi. This occupies somewhat the same place in the Japanese menu as the sandwich does in Europe and America. A sheet of Porphyra is laid out, boiled rice spread upon it, strips of meat or fish laid upon this, and the whole then rolled up, after which it is cut in slices. Everyone eats sushi."

"*Nemalion lubricum* (*Umi-zomen*). In some parts of Japan this plant is dried and bleached. It is then eaten with soy or vinegar, but its use is not common."

Page 14: "*Campylaphora hypnoides* (*Ego*). This is prepared similarly to Gelideum corneum. It makes a stiff jelly, which is used for food with sugar or soy, much as is cornstarch by the Americans."

Page 15: "*Grateloupia affinis* (*Comenori*) and *G. filicina* (*Mukade-nori*). These plants are dried, and after dipping in fresh water are eaten with vinegar or soy. Their use is not very general."

Statistics for exports (chiefly to China; weight in lbs and value in yen) for the years 1890-1894 are given for leaf laminaria, cut laminaria, and agar-agar. Address: [Minnesota and Japan].

1574. Pozzi-Escot, Emm. 1903. Chimie de l'industrie du soja [Chemistry of the soy sauce industry]. *Revue Generale de Chimie Pure et Appliquee* 6(3):64-69. Feb. German-language summary in Chemisches Central-Blatt 1903(1):849-50. [3 ref. Fre]

• ***Summary:*** "The manufacture of soja [soy sauce] (which is also called shojou or miso) forms one of the most important industries of Japan. It is obtained by fermentation of the soybean (*du haricot-soja*), wheat and koji, with the aid of certain molds." Soja is widely consumed in Japan and also widely exported. "It is a condiment more than a food, and it serves in place of salt in most culinary preparations. The average Japanese consumes 50-80 cc/day.

The production reached 2,307,844 hectoliters in 1893, and today it surpasses 2.5 million hectoliters, bringing in more than 6 million marks to the government [in taxes]. Today the number of brewers surpasses 11,000; it was nearly 10,000 in 1897 and 10,600 in 1900. One of the factories in Tokyo employs 250 workers and produces 50,000 hectoliters each year. The author has become friends and communicated with two professors in Tokyo, Dr. Oscar Loew (Prof. of Agricultural Chemistry at Tokyo University) and K. Aso.

Three tables (by Murai 1897, by Nagai and Murai, and by Prinsen-Geerligs 1895) give the composition of shoyu (the first two tables are each based on two analyses).

Noting that many erroneous works have been published on the manufacture of soja [soy sauce], the writer proceeds to describe the process as he understands it, based largely on Japanese publications–but also with many mistakes. The process has four main steps: 1. Preparation of the wheat or soybeans. 2. Preparation of the soja koji. 3. The fermentation process. 4. Extraction and sterilization. The total process takes 1-2 years. He concludes with some ideas for improving the process by reducing the fermentation time. He would heat the soy sauce during fermentation and add alcohol. Address: In charge of pure chemical research at the labs., Malzeville, France.

1575. *Nelson Evening Mail* (*New Zealand*).1903. Curiosities of smuggling. Sept. 18. p. 2.

• ***Summary:*** "England taxes... chutney because it contains sugar, soy sauce...."

1576. *Chicago Daily Tribune*.1903. Roosevelt order worries labor. Sept. 21. p. 2.

• ***Summary:*** "The new Japanese salad, 'udo,' and a condiment, 'wasabi,' similar to horseradish, will soon be introduced to the American people. They were found in Japan by Barbour Lathrop of Chicago [Illinois] and Prof. D.G. Fairchild, agricultural explorer for the government [USDA], who brought to this country cuttings of these plants, which are now growing in American soil."

"Prof. Fairchild says that in the tea houses of Japan the crisp blanched stems of udo are eaten with salt, as our native celery is served, or it is boiled and served with soy sauce."

1577. **Product Name:** Garton's H.P. Sauce.
Manufacturer's Name: Midland Vinegar Co.
Manufacturer's Address: Tower Road, Aston Manor, near Birmingham, England.
Date of Introduction: 1903.
New Product–Documentation: Louise Wright. 1975. The road from Aston Cross: An industrial history, 1875-1975. H.P. Sauce is mentioned on pages 10-12. Photos (facing p. 17) show the original labels, proving that Garton's was the original brand.

1578. Hopkins, Albert Allis, ed. 1903. Scientific American cyclopedia receipts, notes and queries. 22nd ed. New York, NY: Munn & Co. 629 + 105 p. See p. 768. Illust. Index.

• ***Summary:*** On page 1 is a helpful list of abbreviations.

The entry for "Sauces" (p. 496-97) includes the following which call for soy [sauce]: "4. Quin's.–a. Walnut pickle and port wine, of each, 1 pt.; mushroom ketchup, 1 qt.; anchovies and shallots, chopped, of each, 2 doz.; soy, ½ pt.; cayenne, ¼ oz.; simmer for 10 minutes, strain and bottle.

4b. Walnut pickle, ketchup and soy, of each 1 pt.; chopped cloves of garlic and anchovies, of each 1 doz.; cayenne and bruised cloves, of each 1 drm. [drachm]. As last [i.e., same as previous formula]."

"8. Sauce au Roi.–Brown vinegar (good), 3 qt.; soy and walnut ketchup, of each ¼ pt.; cloves and shallots, of each

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½ doz.; Cayenne pepper, 1 oz.; mix and let them stand for fourteen days.

"Sauce piquante.–Soy, 1 part; port wine and Cayenne, of each 2 parts; brown vinegar 16 parts; mix and let them stand for three or four days before bottling.

"10. Soy.–Boil until soft 2 qt. of seeds of Dolichos soja (if this cannot be obtained use haricot or kidney beans). Add 2 qt. bruised wheat; keep in a warm place for one day; add 2 qt. salt and 1 gal. of water; keep for two or three months on a tightly covered stone jar. Then press out the liquor. The genuine soy is imported from China, but this is a good substitute.

"To make Quin sauce.–Walnut catsup, 2½ gal.; mushroom catsup, 2½ gal.; soy, 1¼ gal.; garlic, 1¼ lb.; sprats 7½ lb. Boil 15 minutes, strain and bottle.

"Harvey's sauce.–Quin sauce, 24 parts; soy, 8 parts; cayenne, ½ part.

"Epicurean sauce.–Indian soy, 3 oz.; walnut catsup, 12 oz.; mushroom catsup, 12 oz.;" etc.

"Worcestershire sauce.–This is quite a complex condiment. It is made of wine vinegar, 1½ gallon; walnut catsup, 1 gallon; mushroom catsup, 1 gallon; Madeira wine, ½ gallon; Canton soy [China], ½ gallon; moist sugar, 2½ pounds; salt, 19 ounces; powdered capsicum, 3 ounces; pimento, 1½ ounces, coriander, 1½ oz.; chutney, 1½ oz.; cloves, 3/4 oz.; mace, 3/4 oz.; cinnamon, 2/3 ounce; asafoetida [asafetida], 6½ drachams dissolved in 1 pint brandy 20° above proof. Boil 2 pounds hog's liver for 12 hours in 1 gallon of water, add water continually so as to keep up the quantity of one gallon; mix the boiled liver thoroughly with the water, strain through a coarse sieve, and add this to the above mixture. It is self-evident that no chemical examination could ever detect the presence of half the above organic products."

The entry for "Soy" states (p. 530): "Genuine soy sauce is a species of thick black sauce, imported from China, prepared with white haricots, wheat flour, salt and water; but a spurious kind is made in England as follows: Seeds of dolichos soja (peas or kidney beans may be used for them), 1 gal.; boil till soft; add bruised wheat, 1 gal.; keep in a warm place 24 hours; then add common salt, 1 gal.; water, 2 gal.; put the whole thing into a stone jar, bung it up for 2 or three months, shaking it very frequently; then press out the liquor; the residuum may be treated afresh with water and salt for soy of an inferior quality."

The entry for "Vinegar and vinegars" (p. 582+) contains two formulas for "Camp vinegar" (p. 584). The first calls for 3 tablespoonfuls of soy [sauce] (plus 1½ pints walnut catsup); the second calls for 4 oz. of soy [sauce].

The first appendix, titled "Additional receipts" contains numerous formulas that call for "soy" [sauce]. In the section on "Pickles, sauces and catsups" (p. A-55+) we find the following:

"An excellent pickle (p. A-55) includes "1 wineglassful of soy."

"Soy" (p. A-55). This is a sauce frequently made use of for fish, and comes from Japan, where it is prepared from the seeds of a plant called Dolichos soja. The Chinese also manufacture it; but that made by the Japanese is said to be the best. All sorts of statements have been made respecting the very general adulteration of this article in England, and we fear that many of them are true. When genuine, it is of an agreeable flavor, thick and of a clear brown color."

Under "Sauces" (p. A-57). "Sauce aristocratique" includes "2 tablespoonfuls of soy... To every pint of the boiled liquid add vinegar, wine and soy, in the above quantities, and bottle off for use. Cork well and seal the corks. Make this sauce from the beginning to the middle of July, when walnuts are in perfection for sauces and pickling.

"Carrack sauce (for cold meat)." Includes "5 dessertspoonfuls of soy,..."

"Store sauce or Cherokee.–One-half oz. of cayenne pepper, 5 cloves of garlic, 2 tablespoonfuls of soy, 1 tablespoonful of walnut catsup, 1 pint of vinegar. Boil all the ingredients gently for about half an hour;..."

"Harvey sauce.–One dozen of anchovies, 6 dessert-spoonfuls of soy, ditto of good walnut pickle...."

"Leamington sauce" (p. A-58). "Walnuts. To each quart of walnut juice allow 3 qt. of vinegar, 1 pt. of Indian soy, 1 oz. of cayenne, 2 oz. of shalots [shallots] 3/4 oz. of garlic, ½ pint of port..."

"Reading sauce.–2½ pt. of walnut pickle, 1½ oz. of shalots, 1 qt. of spring water, 3/4 pt. of Indian soy, ½ oz. of bruised ginger,..."

Under "Catsups" (p. 59-60) are formulas for: Grape catsup. Mustapha or liver catsup. Mushroom catsup. Oyster catsup. Pontac catsup or sauce. Tomato catsup. Walnut catsup. Note: None of these catsup formulas call for soy [sauce].

"Vinegar" (p. A-60). "Camp vinegar–1 head of garlic, ½ oz. of cayenne, 2 teaspoonfuls of soy, 2 teaspoonfuls of walnut catsup, 1 pt. of vinegar, cochineal to color..."

Note: The publication date printed on the title page is 1903, however the copyright for this edition is 1900. Address: New York [Query Editor of the "Scientific American"].

1579. Koenig, Franz Joseph, ed. 1903. Chemie der menschlichen Nahrungs- und Genussmittel. Vol 1. Chemische Zusammensetzung... Ed. 4 [The chemistry of human foods and food adjuncts (stimulants / enjoyables). Vol. 1. Chemical composition... 4th ed.]. Berlin: Verlag von Julius Springer. 1535 p. See vol. 1, p. 97-98, 595-600, 638, 651-53, 1463, 1483-84, 1509. [31 ref. Ger]

• ***Summary:*** Summaries of early studies on the chemical composition of soybeans and various soyfoods, plus some original studies. Commercial sauces and Japanese shoyu (p. 97-98). Cites: Wein, Kinch, Anderson, Senff,

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Schwackhöfer & Stua, Zulkowski, Mach, Ulbricht, Wildt, Schröder, Blaskovics, Caplan, Pellet, Carriere, Kellner, Jenkins, Becke & Cosack, Kornauth. Soybeans in Russia: Nikitin, Giljaranski, Lipski [Lipskii] (p. 1483-84). Address: Geh. Reg.-Rath, o. Professor an der Kgl. Universitaet und Vorsteher der Agric.-Chem. Versuchsstation Muenster in Westphalia, Germany.

1580. Lange, Rudolf; Noss, Christopher. 1903. A textbook of colloquial Japanese. Based on the *Lehrbuch der japanischen Umgangssprache*. Translated and revised by Christopher Noss. Tokyo: Methodist Publishing House. xxxii + 573 p. 23 cm.

• ***Summary:*** Page 32: The prefix *mi* expresses respect, as in *mikado* (Emperor), or *miya* (shrine). A woman's expression, *o mi o tsuke*, in which we find two honorifics, means a soup made of miso.

Page 66: Shô-yu or soy is a kind of sauce.

Page 71-72. Tôfu means "bean curd." A tôfuya is a tofu shop. "Tofu is one of the most important articles of food among the Japanese."

Page 108: *Shirouri wa misosuke ni suru to, taisô umô gozaimas'*. If you pickle white cucumbers in miso, they are quite delicious.

Page 353: *"Shoyu wo (o) shitaji to mo iimasu.* Shoyu is also called *shitaji."*

Page 395: A mixture of soy, *mirin*, and vinegar is called *sambaizu*.

In the Japanese-English dictionary are definitions of: *miso*, a kind of sauce (p. 510), *shô-yu*, a kind of sauce (p. 533), *tô-fu*, bean curd (p. 541). Address: 1. PhD, Prof. of Japanese at the School of Oriental Languages, Univ. of Berlin [Germany]; 2. Formerly missionary of the Reformed Church, Sendai.

1581. Whitehead, Jessup. 1903. The steward's handbook and guide to party catering. 6th ed. Chicago, Illinois: Jessup Whitehead & Co., Pubs. v + 464 + 29 p. Illust. No index.

• ***Summary:*** Page 60: "Those everlasting relishes" mentions catsups, soys, Worcestershire sauce, mushroom and walnut catsups, Harvey's sauce, India soy.

Page 87: Relishes: Tomato catsup, Worcestershire sauce. Page 214: Worcester sauce.

Alphabetical: Carp (p. 267): Baked carp; gravy made with Worcestershire sauce. Chinese cookery (p. 278-80): Chinese chop soly [chop suey], a savory ragout, is the national dish of China. Incidental ingredients include "salted black beans." Chop sticks.

Cucumber (p. 299) and eggs, with vinegar and Worcestershire sauce. Devil sauce (p. 303), with Worcestershire. Drinks (p. 305): Prairie oyster, with dash of Worcestershire sauce. Garum (p. 324): "One of the two principal sauces used by the ancient Romans...; a kind of soy,..." Horseradish (p. 343): Napolitaine sauce, with Worcestershire sauce.

Japanese cookery (p. 350-51): Mentions "Japanese misoshiru [miso soup]... This is made from miso, a fermented mixture of soy, beans [sic, soy beans], wheat and salt. It has a gamey flavor all its own." "Hachimono,... a piece of sole stewed in soy." "... the brown soy-colored beans and strips of Kukirage, or ear-shaped mushrooms." "Fu, a kind of biscuit made from the glutinous part of wheat flour." A gravy "thickened with a transparent, starchy substance, obtained from the root of a climbing plant (*Pueraria Thunbergiana*), called by the Japanese Kuzu."

Sauces (p. 430-34): "Harvey's sauce–'A fair imitation of Harvey's sauce may be produced by working the following recipe. Mince a clove of garlic very finely, add 6 chopped anchovies, ¼ oz. cayenne, 3 tablespoonfuls of Indian soy, 3 tablespoonfuls of mushroom or walnut ketchup..." "Soy–An East Indian bottled sauce: it is made of purple wrinkled morels, galangal root and spices." "Bottled table sauce–The recipe for making the genuine Yorkshire relish is probably known only to manufacturers. However, the following is said to yield a good imitation of that popular sauce: 1 oz. garlic, 1 teaspoonful cayenne, 2 tablespoonfuls Indian soy, 2 tablespoonfuls mushroom ketchup, and 1 pint vinegar."

Scottish cookery (p. 438): Mince collops–incl. a "dessertspoonful Worcester sauce..."

"Soy–A bottle sauce imported from China and India: composition uncertain."

Tripe (p. 461): Tripe a la Creole, with Worcestershire sauce. Address: Chicago, Illinois.

1582. Yule, Henry; Burnell, Arthur Coke. 1903. Hobson-Jobson: A glossary of Anglo-Indian colloquial words and phrases, and of kindred terms, etymological, historical, geographical, and discursive. A new edition edited by William Crooke, B.A. London: J. Murray. New York: Humanities Press. New Delhi: Munshiram Manoharlal. 1021 p. See p. 858-59 ("soy"). Index. 22 cm. [6 ref]

• ***Summary:*** "Soy, s. A kind of condiment once popular. The word is Japanese *si-yau* (A young Japanese fellow-passenger gave the pronunciation clearly as shô-yu), Chinese *shi-yu*. [Mr. Platts (9 ser. N. & Q. iv. 475) points out that in Japanese as written with the native character, *soy* would not be *siyau*, but *siyau-yu;* in the Romanised Japanese this is simplified to *shoyu* (colloquially this is still further reduced by dropping the final vowel, to *shoy* or *soy*) Of this monosyllable only the *so* represents the classical *siyau;* the final consonant (y) is a relic of the termination *yu*. The Japanese word is itself derived from the Chinese, which at Shanghai is *sze-yu*, at Amoy, *si-iu*, at Canton, *shi-yau* [fermented black soybean sauce], of which the first element means 'salted beans,' or other fruits, dried and used as condiments; the second element merely means 'oil.'] It is made from the beans of a plant common in the Himalaya and E. Asia, and much cultivated, viz. *Glycine Soja*, Sieb. and Zucc. (*Soya hispida*,

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Moench.) boiled down and fermented. [In India the bean is eaten in places where it is cultivated, as in Chutia Nagpur (Watt, Econ. Dict. iii. 510 Seq.)]"

The authors then quote passages relating to soy from Lord King's *Life of John Locke* (1679), Dampier (1688), Ovington (1690), Kaempfer (1712), Thunberg's Travels (1776), and Mrs. Frazer, a Diplomat's Wife in Japan (1900).

Yule lived 1820-1889. Burnell lived 1840-1882. Address: 1. Living in Palermo; 2. Madras Civil Service, one of the most eminent modern Indian scholars. Died 1882.

1583. Moore (H.). 1904. Business notice: English and French goods (Ad). *Mercury (The)* (*Hobart, Tasmania, Australia*). Jan. 12. p. 5.
• ***Summary:*** "Just landed from the celebrated Crosse and Blackwell [of England]: Gruyere and Parmasan [Parmesan] Cheese.... Catsup, India Soy, Mushrooms.

Note: This is the most recent of 230 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "India Soy." Address: Grocer, 91 Liverpool-street [Hobart].

1584. Ansai [or Anzai], -. 1904. Bakteriologische Untersuchung ueber Shoyu [Bacteriological investigation on shoyu]. *Zentralblatt fuer Bakteriologie. Series 2.* 11(19):563-64. Feb. 27. Summary of Japanese article in Mitteilungen der medizinische Gesellschaft zu Tokyo 17(6):1. [1 ref. Ger]
• ***Summary:*** Bacteriological tests showed that 1 cubic centimeter of shoyu contains 9,280 to 19,700 bacteria. Address: Japan.

1585. Farmer, Fannie Merritt. 1904. Food and cookery for the sick and convalescent. Boston, Massachusetts: Little, Brown and Company. xiii + 289 p. Illust. Index. 20 cm.
• ***Summary:*** Chapter 1, titled "Food and its relation to the body," provides basic information about food and the human body. It begins: "Food is that which builds and repairs the body, and furnishes heat and energy for its activities. Metabolism includes the processes by which food is assimilated and become part of the tissues, and the excretion of broken-down tissues as waste products." The body is found to contain 15-20 chemical elements. The main ones are oxygen (62.5%), carbon (21.5%), hydrogen (10%), and nitrogen (3%), plus many minerals.

"Food adjuncts are such substances as stimulate the appetite without fulfilling the requirements of food. Examples: tea, coffee, spices, flavoring extracts, condiments, etc., etc.

"While air is not classified as a food, it is essential to life. Combustion cannot take place without it, and all food must be oxidized (which is a slow process of combustion) before it can be utilized by the body."

A diagram titled "Classification of foods" (p. 2, according to Prof. Atwater), shows that all are divided into organic and inorganic (mineral matter and water). The organic are divided into protein, fats, and carbohydrates (starches, sugars, and cellulose). The protein is divided into proteids, extractives of meat, and extractives of vegetables (amides). The proteids are divided into albuminoids and gelatinoids (collagen of skin and tendons, and ossein of bones). Examples of albuminoids are albumen (white of egg), myosin (lean of meat), casein (of milk), gluten (of wheat), and legumen (or peas).

The text continues: "The chief office of proteids is to build and repair tissues, and they only can do this work... The principal animal proteids are meat, fish, eggs, and cheese; the principal vegetable proteids are cereals, peas, beans, and lentils. The proteids obtained from animal foods are more easily digested and more completely absorbed than those obtained from vegetable foods. This is due in part to the presence of the large quantity of cellulose in vegetables."

Soy is mentioned only once in this book. A table of the "Composition of diabetic flours" (p. 221) shows that "Soya bean meal" contains by far the lowest percentage of starch (26.67) according to Dr. Charles Harrington. Two diabetic flours and a wafer have "Gluten" in their name. Worcestershire sauce is used as an ingredient in Sauce fineste (p. 234).

Gluten is also mentioned in various other places: Bread and bread making (p. 90-91). "Gluten is the chief proteid of wheat... The strength of a flour is determined largely by the quantity of gluten it contains." The gluten in rye flour is less elastic and tenacious, while that in oat and barley flour are even less so. Also: Gluten nut cakes (p. 226). Almonds are also mentioned frequently.

"Although history best remembers Fannie Farmer for her *Boston Cooking-School Cook Book* (1896)," Fannie herself thought this book would be her greatest contribution. During her high school years in Massachusetts, Fannie (who never married) suffered a stroke with paralysis, and had to discontinue her education. She "remained an invalid for years thereafter, recovered enough to walk with a limp for the rest of her life and spent her last several years teaching and lecturing from a wheelchair. Perhaps because of her own illness, she had always had an interest in cooking for invalids.

"She supplied lectures on that subject to training schools for nurses nationwide and lectured on nutrition at Harvard Medical School. Her work there brought her in contact with Dr. Elliott Joslin, the pioneer diabetes researchers, who credited Fannie as 'the stimulus which started me writing about diabetes.'"

"In 1902, she left the Boston Cooking School to open Miss Farmer's School of Cookery, aimed not at professional cooks but at training housewives... The school continued until 1944" (MSU introduction and biography). Address: Principal of Miss Farmer's School of Cookery.

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1586. Societe Nationale d'Agriculture de France. 1904. Séance du 2 Mars 1904 [Meeting of 2 March 1904]. *Bulletins des Seances de la Societe d'Agriculture de France* 64:12, 172. Mr. Tisserand, presiding. [1 ref. Fre]
• ***Summary:*** The perpetual secretary notes: At the conclusion of various communications made on the subject of the soybean (*du Soja hispida*), I have detached an important note from our correspondent, Mr. Paul Serre, vice-consul of France in Batavia–as follows:

I have read in the Bulletin of our society for the month Nov. 1903 and extract of a note from Mr. Foëx, correspondent, on the subject of the soybean. Even I am occupied, here in Java, with this legume, with which the indigenous people prepare a cake [probably tempeh], hairy like bonnet de sapper, of which they are very fond. This food, covered with mold, is repugnant even to Europeans who enjoy Roquefort cheese.

Likewise, they prepare from the soybean a sauce named *ketjap*. I have sent to the museum some soybean seeds from Java and a sample of the aforementioned sauce which looks like caramel, and whose taste is far from disagreeable. Address: France.

1587. Anzai, Shigetaro. 1904. Shôyu no saikingaku-teki kensa [Bacteriological investigations on shoyu]. *Tokyo Igakkai Zasshi* (*J. of the Tokyo Medical Society*) 17(6):209-15. March 20. German-language summary in Zentralblatt fuer Bakteriologie, Series II. 11:563-64. [Jap; ger]
• ***Summary:*** The short German-language summary at the end of the issue is titled *Bakteriologische Untersuchung uber Syoyu*.

1588. *New-York Tribune*.1904. Chinese food products: Beans a leading article of diet in China. April 10. p. A9.
• ***Summary:*** From What to Eat: "Dr. Yamei Kin, a Chinese woman doctor now studying in America, gives some interesting facts about Chinese food products. One surprising thing Dr Yamei Kin tells is that Chinese soy is made from a sort of red bean ground up and fermented. While fermenting it smells like sauerkraut, only worse. The fermented product is shipped in cases to England, where it is mixed with vinegar and other products and sold as Worcestershire sauce.

Note: This is the earliest document seen (April 2012) that mentions Dr. Yamei Kin in connection with soy.

"The Chinese laborer lives on beans as much as does the Boston typewriter girl. The bean in China is more like our small round cow-pea. This is ground fine, mixed with water and a little salt. Then the water is pressed out and the bean cake [tofu] is sold to the poor. This bean cake may be cooked and mixed with other things, fish, chickens, etc. It is highly nutritious and explains why the Chinese laborer can endure so much on so little food. Vegetables are eaten in quantities... Fish is popular but very little meat is eaten. An animal is never killed to be eaten until it is too old to work; hence the Chinese do not like beef, considering it too tough. Pork is popular and every family keeps one or two pigs.

"The Chinese are great cooks, and love to give elaborate dinners. This is the chief means of entertaining in China. However, the dinner consists of sixty courses, and it takes several hours."

Also appeared in the *Detroit Free Press*. 1904. May 1 (p. 2).

1589. Humphreys, Mary Gay. 1904. The aesthetic housekeepers of Japan. *Ogden Standard Examiner* (*Utah*). April 29. p. 23.
• ***Summary:*** The author, an American, writing from her experience of living in Tokio, notes that Japanese housekeepers bring a strong sense of beauty or aesthetics to every part of their daily life. Concerning foods: "One of these is bean curd, 'tofu,' a white substance that is sliced and fried like mush, with soy [sauce] for a flavor. This curd is so nutritious and so cheap that an American who lives in Japan suggested its being introduced into this country as a food. Soy is a liquid made from the black bean and is said to be the foundation of Worcestershire sauce. It enters into almost all cooking, and most agreeably."

A Tokio restaurant meal: "It was charming, a meal to be remembered, and meat thus cooked in soy [sauce] something 'Japanesy' that we might well import."

Nuta salad: "This is made of clams, rape tops and onion with a sauce of bean paste, rice, mustard and soy [sauce], rubbed into a brown liquid." One large illustration shows a Japanese woman with elaborate dress and hairdo; three others show her working at home.

1590. *Boston Daily Globe*.1904. Typical dishes. Japanese service is dainty in the extreme. May 22. p. 35.
• ***Summary:*** "Meat plays a small part in the Japanese menu,... Fish and rice are the staples... The following is a typical menu for a dinner of ceremony:" Soy-related dishes include: "Suimono–A kind of bean-curd [tofu] soup." "Hachi-zakana–A fine, large fish, either boiled with salt or boiled [broiled?] with shoyu." "Umani–Bits of fish or sometime fowl, boiled with lotus root or potatoes in shoyu and with 'mirin,' a sort of sweet liqueur." "Tsubo–Seaweed..." "Ayemono [Aemono]–A sort of salad made with bean sauce [miso?] or pounded sesamum [sesame] seeds." Raw fish–The favorite for festive occasions is the *tai* [sea bream], "on account of its name, which is the last syllable of the word *me-de-tai*, meaning 'congratulatory.'... Before eating, the slices are dipped lightly in soy [sauce], seasoned with grated horseradish or ginger."

1591. Brunson, John A. 1904. A glimpse of Japanese life. *Good Health* (*Battle Creek, Michigan*) 39(5):237-42. May.
• ***Summary:*** A good photo (p. 239) shows a Japanese vegetable vendor carrying his goods in baskets on a shoulder

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pole. Page 240 notes: "*Tofu*, or 'bean curd,' as the foreigners call it, is a favorite dish. The beans are first ground fine in hand mills. These mills consist of two stone discs about eighteen inches in diameter, and perhaps six or eight in thickness, one being placed above the other. To the upper stone is attached a handle by which it is turned, and the motor power is supplied by two women. It is a familiar sight in Japan to see 'two women grinding at the mill.' The husks and coarser parts of the bean flour are then carefully removed, and the fine white residuum is mixed with water and pressed into squares which somewhat resemble cottage cheese in appearance. The *tofu* is then boiled, and is both palatable and nutritious, but rather concentrated."

In Japan, fish are served raw, while yet fresh, "with *shoyu*, a kind of Japanese Worcester sauce."

Note 1. This is the earliest article seen (Aug. 1996) with detailed information on soyfoods in Dr. John Harvey Kellogg's periodical *Good Health*.

Note 2. This is also the earliest document seen (Aug. 1996) that compares tofu with cottage cheese.

1592. *Toronto Daily Star* (*Canada*).1904. Madge Merton's page for women. July 16. p. 16.
• ***Summary:*** "Aunt. B.: The following recipe for homemade Worcestershire sauce sounds well. Pound once ounce of garlic, two ounces of small onions, and half an ounce of cayenne pepper. Put them in an earthen jug with half a pint of vinegar, stand in water, and simmer for three hours. Strain, add a pint of hot vinegar, and half a pint of Indian soy. Perhaps you can't get Indian soy, but at the shops where Chinese food is sold, you may get the Chinese article of the same name. Bottle your sauce and seal tightly, using a mixture of equal parts beeswax and resin."

1593. Bolce, Harold. 1904. First taste of raw fish: Approached with fear and trembling, but followed with ecstasy. *Washington Post*. July 22. p. 11.
• ***Summary:*** From Booklovers Magazine: The writer visited Japan ("this Sunrise Land"), where he met novelist and diplomat Tumio [sic, Tomio] Yano, who invited him to dinner at the Nippon club. "Not so well known among the Occidentals as soy sauce, but of equal merit as an appetizer, is wasabi. Its use is universal in Japan. It serves the same purpose as horseradish does on Occidental tables, but is less acrid." It is almost always eaten with raw fish.

Bolce closes with a song of praise to *Eutrema wasabi*. "All honor to triumphant agricultural Japan, and may this far Eastern member of the mustard family take deep root and spread and flourish in my native land." Address: [Washington, DC].

1594. Smith, Hugh M. 1904. Japan, the paramount fishing nation. *Transactions of the American Fisheries Society* 33:111-38. See p. 116. 33rd annual meeting held 26-28 July 1904 at Atlantic City, New Jersey.
• ***Summary:*** "Raw fish is one of the national foods. I acknowledge that my repugnance to it was great, but it was overcome with the first dish, for as prepared and served by the Japanese the thin, cold, boneless slices of perfectly fresh tai or mackerel, taken with chop sticks and dipped in soy-bean sauce, are delicious."

Note: This is the earliest English-language document seen (April 2012) that uses the term "soy-bean sauce" to refer to soy sauce.

The author traveled to Japan on assignment from U.S. Fish Commissioner Bowers to study the fisheries and related industries; he was the first American to ever do this. He traveled 5,000 miles within the country, always accompanied by helpful government officials, who were well familiar with the different regions and their fisheries, and to act as guides, companions, and interpreters.

"The artificial propagation of food fishes is not as yet important and is practically to salmon on the island of Hokkaido and to carp in all sections."

"A branch of fisheries in which Japan far surpasses all other countries as regards both extent and methods is the sea-weed industry. In the United States, not withstanding our long coast line and sea-weed resources not inferior to Japan's, the annual crop of marine vegetables is worth only $40,000, whereas in Japan these products are worth not less than $2,000,000, and are exceeded in value by only four animal products of the fisheries [herring, sardines, bonito, and tai / red snapper]. Gives detailed information about four of Japan's main "sea-weed resources" (p. 121-27) including *kombu* (*Laminaria*, kelp; and shredded kombu), *kanten* (vegetable isinglass, agar-agar), *nori* (*Porphyra*, laver; "the supply comes almost entirely from planted grounds, and in the cultivation of marine vegetables the Japanese stand alone).

This article contains many photos, including one of "bars of vegetable isinglass" (p. 123). Illustrations (from Japan) show (p. 122-25): (1): Gathering kelp in Hokkaido, showing both above and below water. (2) Planting dry brush on which laver is to grow in shallow water in Tokyo Bay. (3) Spreading and drying laver on mats.

1595. *New York Times*.1904. In the business world: Invoice values advanced. Aug. 26. p. 9.
• ***Summary:*** "Several heavy advances in invoice values were announced yesterday by the Board of United States General Appraisers... and from Many Fook & Co., Yokohama, 160 buckets Japanese shoyu sauce, entered at .80 and advanced to 1.40 yen a bucket. All good will be seized."

1596. *State* (*The*) (*Columbia, South Carolina*).1904. Wants to handle soja beans. Oct. 21. p. 8.
• ***Summary:*** "The department of agriculture, commerce and immigration has received a request from a man who

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wishes to secure and handle on the market large quantities of soy [sauce] and soja beans. Commissioner Watson is very anxious to obtain the names and addresses of any in this State who are growing these beans and hopes that if there are any they will write him at once informing him of what quantities they can furnish and at what prices."

1597. Hosie, Alexander. 1904. Report by Consul-general Hosie on the province of Ssuch'uan. Presented to both houses of parliament by command of His Majesty. Oct. 1904. London: Printed for H.M. Stationery office, by Harrison and Sons. 101 p. See p. 10-11. 34 cm. China No. 5.

• ***Summary:*** Sir Alexander Hosie (lived 1853-1925) traveled to Ssuch'uan in June and July, 1884.

In Part A, titled "Agricultural and horticultural products," section II on "Pulse" (p. 10-11) states: "1. Soy Bean (*Glycine hispida*, Max.).–The soy bean does not play the same part in Ssuch'uan [Szechwan] as it does in Northern China, and especially Manchuria, where it is cultivated almost entirely for its oil and for the refuse cakes, which find a ready market not only in China and adjacent countries, but are winning their way as fertilisers into remoter regions. The great oil-yielding plant of Ssuch'uan is rape, and although oil is extracted from the soy bean, it is as an article of food, whether cooked whole or in the form of resultant products, that the latter is appreciated in Western China. Three well-marked varieties, each with two or more sub-species, are cultivated." A bushel of each weighs 40 pounds.

(I.) Yellow Soy Bean (all are ovoid in shape; oil is extracted from the first two): (a) "Pai Huang Tou" or White Yellow Bean. This is the lightest in color of the three sub-species of the yellow bean. A bushel of 40 lbs. costs T. [Taels] 0.8.8, or about 2*s.* 1*d.* There are about 150 beans per ounce. "As a rule they are cooked whole and served as a vegetable condiment." (b) "Ta Huang Tou" or Large Yellow Bean. Has a light tinge of green. Eaten in the same way as the white-yellow bean. (c) "Hsiao Huang Tou" or Small Yellow Bean. This bean is much smaller and less expensive than the other two sub-species. "For this reason it is in demand for the manufacture of beancurd in its various forms. It is also used as a vegetable. "Oil is extracted from (a) and (b), and to a much less extent from (c); but this subject will be dealt with under the head of oil-yielding plants.

(II.) "Ch'ing Tou"–Green Soy Bean. "There are two sub-species of this bean, (a) where epidermis and inside are both green, and (b) where epidermis is green and inside yellow. The former is more commonly cultivated in Ssuch'uan, and both are eaten and cooked as a vegetable. They are also salted and put away in jars for winter use. The bean is of the same size, shape, and weight as the white-yellow bean. The above yellow and green varieties of the soy bean occupy the ground from April to August, whereas the next variety (black) takes a month longer to mature.

Note 1. This is the earliest English-language document seen (May 2009) that contains the word "Green Soy Bean." It refers to mature dry soybeans with a green seed coat–not to green vegetable soybeans.

(III.) "Hei Tou"–Black Soy Bean. "There are two sub-species of this bean: (a.) The first is much larger, rounder, and heavier than the yellow and green variety. Only 88 are required to make up an ounce and the cost is T. 0.6.5 per bushel of 40 lbs. Like the green bean, it is used cooked in its fresh state as well as pickled. (b) The second is a small flattish bean, about 450 going to the ounce. It is used in medicine and for food, principally the former. The cost is T. [Taels] 0.8.0 for 40 lbs. Both these sub-species are black outside and yellow inside, the epidermis of the former being readily detachable when crushed."

In section VI, "Products of cereals, pulse, and starch-yielding plants," the first entry (p. 19) is for "1. Beancurd and Jellies.–In my book on Manchuria I have fully described the manufacture of beancurd from the yellow soy bean, and it is therefore unnecessary to go into details in this place; but in Ch'êngtu it is preserved and exported in jars like wine. The beancurd is cut into small pieces, drained of its water, and packed in jars with layers of salt. There they remain for forty days, when they are taken out, drained of the brine, packed in other jars with ground up bread, red rice (dyed), star-aniseed, and red wine. The jars are then closely stoppered and the preserved beancurd is ready for export. It is also preserved without the wine, which is replaced by the cold water which had previously drained from it, but with a seasoning of ground-up chillies, star-aniseed, &c." Related products are "pea jelly," "sweet potato jelly," "rice jelly," and "buckwheat jelly." Note 2. This is the earliest English-language document seen (Oct. 2011) that uses the term "preserved beancurd" to refer to fermented tofu.

Note 3. This is the earliest English-language document seen (Oct. 2011) that uses the word "wine" (including rice wine or "sake" / "saké") in connection with fermented tofu, and explains how that wine is used in the two-step fermentation process.

We also read (p. 19): "3. Soy or bean sauce. Two kinds of soy are manufactured in Ssuch'uan–white or red–or, as the latter is frequently called, black:–(a) Red soy.–In describing the manufacture of soy, I propose to give the exact quantities employed, so that a better idea of the amount of soy yielded by them may be obtained.

"Twenty-eight catties of yellow soy beans are steeped overnight in cold water. In the morning they are removed in their swollen state and steamed for five hours. They are then taken from the steamer, spread out on mats, and allowed to cool, after which they are thoroughly mixed with 20 catties of wheat flour and placed in a basket made of split bamboo. [Note: The ratio by volume of soy beans to wheat flour is 1.4 to 1]. In six or seven days, as soon as yellow mould begins to appear, they are placed in an earthenware jar with 30 catties of cold water (well-water preferred) and 30 catties of

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granular salt and the whole is thoroughly mixed and the jar covered. In three or four days the jar, which has been placed in the sun, is uncovered and the contents stirred by hand, and the same takes place daily for three months. At the end of this time the liquid has all evaporated. During the following months the cover is removed during the day and replaced at night. The contents are now a black pickle, and may be eaten as such; but to obtain the soy they are divided up into equal parts and placed in two earthenware jars, to each of which is added 40 catties of boiling well-water. The contents of each jar are now thoroughly mixed and stirred up and a fine bamboo sieve in the shape of a basket is placed in the jar. The liquid escapes into the basket while the dregs are kept back by the sieve. In two or three days the liquid has all drained into the basket, when it is baled out and boiled with two catties of white sugar or glucose manufactured from glutinous rice, already described, with the addition of two or three ounces of mixed whole chillies and star-aniseed. Each jar will yield 35 catties of red soy, valued at 96 cash a catty, so that the 28 catties of yellow beans, with the other ingredients, yield 70 catties of soy. A whole year is required from the steeping of the beans to the production of this soy.

"(b) White soy.–In the case of white soy the beans are first roasted in sand which has been previously heated in an iron pan with a mixture of rape oil. This roasting is complete when the beans open or split, and the sand is removed by sieve. They are then placed in an earthenware jar and steeped in cold water for twelve hours. They are afterwards steamed as in the manufacture of red soy, and mixed with flour and salt; but, instead of 30, some 60 catties of water are added to prevent the blackening of the beans and the discoloration of the soy. The daily uncovering, stirring, and recovering take place as in red soy, but at the end of 120 days the solid matter is removed and the liquid alone is exposed in the jar to the sun. This soy is ready for use at the end of the 120 days, but improves by keeping and exposure to the sun. No sugar or glucose is used, and the seasoning is placed in the jar with the 60 catties of water. Nor is there any boiling before use. The cost of white soy, which is more yellow than white, is from 80 to 96 cash a catty, according to quality."

In the section on oil-yielding plants, p. 34 states: "(e.) *'Glycine hispida, Max.'*–In Ssuch'uan the soy bean of Northern China and Manchuria is replaced by rape seed, and it is cultivated more as a vegetable than for its oil. The production of the latter is insignificant from a commercial point of view."

In 1922 a derivative work titled "Szechwan, its Products, Industries, and Resources," was published in Shanghai by Kelly & Walsh, Ltd. (185 p.).

1598. *Kogyo Kagaku Zasshi (J. of the Society of Chemical Industry, Japan)*.1904. Shodoshima no shôyu jôzô no jikkyô oyobi kairyôhô [Brewing of shoyu in Shodoshima and improvement]. 7(80):1127-34. Oct. [Jap]

Address: Shodo Island, Japan.

1599. *Monthly Consular and Trade Reports (U.S. Bureau of Manufactures, Department of Commerce and Labor)*.1904. Japan's fiscal resources. No. 289. Oct. p. 147-48.
• ***Summary:*** "The Commercial Intelligence, of London, England, September 14, 1904, contains an article on the 'Economic War Resources of Japan,' from which the following fiscal data is taken." In normal times, Japan derives her revenue from various taxes and duties, including a "land tax, income tax, business tax, tax on liquors, tax on soy, sugar excise" etc. These together are estimate to produce $69.5 million for the fiscal year 1904-05. Total revenue from all sources is estimated to be $111.8 million. But now the Japanese government needs more money for prosecuting its war with Russia.

A table (p. 148) shows revenues from the "Supplementary budget of Japan, 1904-05." The four biggest sources of revenue (in million dollars) are: Land tax $11.9. Sugar excise tax $4.1. Income tax $2.6. Business tax $2.5. The soy tax [on soy sauce] brings in only $567,208.

Note: Pages 146-47 discuss "Japan's tobacco monopoly. The law relating to the monopoly of leaf tobacco was promulgated in March, 1896. This law provided that all leaf tobacco grown was to be bought by the government and in turn sold to the manufacturers by the Government at a fixed rate of profit." Address: Washington, DC.

1600. Douglas (J.M.) & Co. 1904. Just a dash of the genuine: Lea & Perrins' Worcestershire Sauce (Ad)... *Toronto Daily Star (Canada)*. Nov. 8. p. 9.
• ***Summary:*** "... is as necessary as salt to bring put the true flavor of Consomme, Bouillon, Sauce, Meats, Game, Fowl, etc. Without an equal for 60 years [i.e., since about 1844]. Ask any good cook." Address: Montreal [Quebec, Canada].

1601. Abel, Mary Hinman. 1904. Beans, peas, and other legumes as food. *Farmers' Bulletin (USDA)* No. 121. 39 p. See p. 11-13, 18-20. Revised. Illust. [1 ref]*
• ***Summary:*** A revised edition, 3 pages longer than the 1900 original. The information about soy is unchanged, however it is on different pages (see above). The section titled "Nutritive value of the legumes" (p. 18-20) includes a table titled "Composition of fresh and dried legumes compared with that of other foods." Under "Dried legumes," the composition of "Soy beans" (dry, containing 10.8% water) is given.

1602. *Agricultural Bulletin of the Straits and Federated Malay States*.1904. Soy and bean cheese. 3(12):494-96. Dec.
• ***Summary:*** "Among the number of small manufactures by natives in Singapore, many of which are quite unknown to the ordinary residents, the manufacture of the Chinese sauce known as Soy, is one of some interest and importance, and

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having had occasion lately to visit three of these factories, I put together such notes on the manufacture as I was able to make. Soy is made from the seeds of the bean *Glycine hispida*, which is cultivated in China and also in India, and the beans are imported from China to Singapore for making Soy and Bean-cheese.

"The present price of the beans is high, six dollars a picul, probably owing to the Russo-Japanese war.

"The Soy beans are first boiled, which causes them to swell up considerably, and then put into stone jars about three feet tall and two feet across, with a quantity of brine made of coarse salt, which I was told was made of equal parts of salt and water. The brine is first made in jars, and occasionally skimmed as the extraneous matter floats to the top. The jars when full of beans and brine are covered on wet or dull days with a conical tin cover which is taken off in sunshine. At one factory I was told that wheat flour was put into the jars with the beans, and a note in 'Spon's Encyclopedia' states that an equal quantity of roughly ground barley or wheat is boiled with the beans, but this does not appear to be done here.

"The beans are left to soak for from sixteen days, when there is a big demand for the product, to a year, and the longer it is kept the better the Soy is considered. Six to eight months, however, seems the usual length of time.

"The beans are then strained out, squeezed in a cloth, and the deep brown liquor filtered through a cloth laid in a rattan basket, and then boiled. It is afterwards poured into stone jars such as the Chinese use for their pickled cabbages, and sold to various places in the East.

"I could not find that any ferment was added to produce fermentation of the beans, and the Chinese said there was none. There is, however, a general idea of there being some secrets, known only to the head man and religiously preserved by him, as to the manufacture. This is, however, commonly stated by any Chinese manufacturer, however simple and well known his manufacture may be.

"There are two kinds of beans of the *Glycine*, black and white, which are used separately.

"Soy is extensively used as a condiment both by Chinese and Europeans in the East, and forms the basis of most of the sauces used throughout the world.

"Bean cheese: Bean cheese or bean-cake [tofu], is also made from the Soy beans, but the white ones only are used. The beans are first cracked in a stone quern or mill, worked by hand, the beans being poured through a hole in the upper millstone. They are then immersed in water for a day, which causes them to swell. Then they are transferred to another quern and ground to the consistency of a cream. This is boiled and when cool poured into a cloth and squeezed and pounded on a small table with a square hole in the centre till much of the water is squeezed out, when the cheese is made into square flat cakes four or five inches across and about ½ or 3/4 inch thick, then wrapped in cloth and put each in a little rattan tray or dish, they are put over a low fire, till they are firm enough. Some are coloured yellow by a decoction of the seeds of a capsular plant brought from China, the seeds being steeped in water and the liquid brushed over the top of the cheese. A little alum and a quantity of powdered gypsum is sometimes at least added to the bean cake during its manufacture. The former probably to make it whiter, the latter probably to increase the weight. The Chinese seem to be very fond of adding gypsum to such manufactured articles. It has been mentioned in an earlier *Bulletin* that it is mixed with Jelutong rubber.

"Bean cheese is a very popular article of food with all kinds of natives, and costs about one cent a cake, and about 6 or 8 cents a pound.–Ed."

Note: This article also appeared in *The Gardens' Bulletin, Singapore* (1904, p. 496).

1603. Fesca, Max. 1904. Der Pflanzenbau in den Tropen und Subtropen [Plant cultivation in the tropics and subtropics. 2 vols.]. Berlin: Wilhelm Suesserott Verlagsbuchhandlung. Vol. 1: viii + 278 p. See vol. 1 (Erster Band), p. 159-65. 21 cm. Suesserotts Kolonialbibliothek. [2 ref. Ger]

• ***Summary:*** In Volume 1, in the chapter on legumes (*Huelsenfruechte, Leguminosen*), is a long section the soybean (*Die Sojabohne*) (p. 159-63), which focuses on soybean production. Contents: Introduction. Climate. Soil and cultivation of the soil. Fertilizers. Planting / sowing. Harvest. Yields. Composition of the seeds and straw. Soybean oil and cake in China. Food uses of soybeans in China and Japan, especially "Shoyusauce" (shoyu) from which the soybean derives its name. It is used in the preparation of Anglo-American sauces such as Worcestershire sauce, etc. A description of the preparation of shoyu is given, along with its composition based on analyses by O. Kellner and E. Kinch. "The fermentation lasts from at least 20 months up to 5 years; the longer the fermentation the better the sauce. The finest quality is a mixture of 3 and 5 year sauces." An analysis of shoyu presscake (*Shoyurueckstande*) is also given.

Note: This 3-volume work is volumes 1-2 in *Suesserotts Kolonialbibliothek*, vol. 708. Address: Germany.

1604. Gautier, Armand. 1904. L'alimentation et les régimes: Chez l'homme sain et chez les malades. 2 éd. rev. et augm. [Diet and dietetics: For healthy and for sick people. 2nd ed.]. Paris: Masson & Co. xvi + 528 p. 3d ed., 1908. [1 ref. Fre]

• ***Summary:*** Chapter 19, on vegetables, grains, etc., contains a section titled *"Pois ou fèves de Soja"* (Soja peas or beans), which notes that these are the "oil peas" (*pois oléagineux*) of China and Japan, where they have been cultivated since ancient times. The small quantity of starch and the large amount of proteins (*albuminoïdes*) [in the seed] has led them to be recommended for use in a bread for diabetics.

A table gives the nutritional composition of yellow

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soybean seeds according to two studies cited by Mr. A. Balland (1903). Gautier adds that the ash is composed mainly of the phosphates of potassium and magnesium, plus a little calcium sulfate.

This food is exceptionally rich in oils and proteins. Unfortunately its taste is not very agreeable. In Japan, soy flour (*la farine de Soja*) is mixed with cooked rice and allowed to ferment until one obtains a sort of pap or sauce which takes the place of meat extract.

Note: Neither soy flour nor rice are used in Japan as raw materials for making soy sauce. Apparently the author is not aware of koji, the key to the soy sauce fermentation.

In chapter 35, on special diets, the first long section (p. 390-97) is about the vegetarian diet (*Régime végétarien*), which concludes that this diet should be practiced "by all who pursue the idea of building up and educating races that are intelligent and artistic, and at the same time prolific, vigorous and active."

The section on diabetic diets (p. 430-31) recommends foods with a low starch content, including gluten, gluten bread, and almonds; soy is not mentioned. Address: Professeur a la Faculte de Médecine de Paris.

1605. Kiliaan, H.N. 1904. Madoereesch-Nederlandsch woordenboek [Madurese-Dutch dictionary]. Leiden, Netherlands: Boekhandel en Drukkerij voorheen E.J. Brill. vii + 384 p. [Dut]

• ***Summary:*** Dutch-language definitions are given for each of the following words: (1) ketjap (p. 193) = soy sauce. Made from soja.

(2) "kadhelli" (p. 260) = soybean. Jav. kedele. Glycine soja. De soja boon.

(3) kotok (p. 281) = "koffie, amfioen of soja voor de tweede maal koken; koto kotoghan." (4) "tahu" (p. 302) = tofu. includes the words "kadhelli" [kadele / kedele] and "soya." Address: East-Indian civil servant with permission [Oost-Indisch Ambtenaar met verlof.

1606. Koenig, Franz Joseph. ed. 1904. Chemie der menschlichen Nahrungs- und Genussmittel. Vol 2. Ihre Herstellung, Zusammensetzung und Beschafftenheit... Ed. 4 [The chemistry of human foods and food adjuncts (stimulants / enjoyables). Vol. 2. Their production, composition and properties... 4th ed.]. Berlin: Verlag von Julius Springer. xxv + 1557 p. See p. 243, 788-91, 839-41, 1090-94. [12 ref. Ger]

• ***Summary:*** Summaries of early studies on the chemical composition of soybeans and various soyfoods, including some original studies. The section on meals (p. 839-40) gives the composition of various legume meals (*Hülsenfruchtmehle, Leguminosesmehle*), including [whole] soybean flour (*Sojabohnenmehl*) and defatted soybean meal (*Desgl., entfettet*, which may have been defatted in the laboratory). "The various preparations made from leguminous meals by Jul. Maggi & Co. in Kempthal (Kemptal) (Switzerland) (see Vol. 1, p. 467) are made by mixing leguminous meals with gluten-rich varieties of cereal grains, and sold under names such as Leguminose-Maggi A (2% fat), B, C, AA (6.54% fat), AAA (14.60% fat), etc. The composition of these products on an as-is and on a dry-weight basis is given on page 841. These can be categorized into those which are low in fat and those which are rich in fat. The fat from the latter is derived from the process of making soybean meal."

In the section on coffee substitutes, the subsection on "coffee from legumes" (p. 1093-94) mentions briefly that a coffee substitute can be made from soybeans (see also p. 788). The composition of this soybean coffee ("Sojabohnen-Kaffee") is given. Address: Geh. Reg.-Rath, o. Professor an der Kgl. Universitaet und Vorsteher der Agric.-Chem. Versuchsstation Muenster in Westphalia, Germany.

1607. Smith, Hugh McCormick. 1904. The seaweed industries of Japan. *Bulletin of the Bureau of Fisheries (USA)* 24:133-81.

• ***Summary:*** A remarkable article, with reproductions of many old Japanese illustrations, plus many current photos. Contents: Introduction (with 7 early references, 3 in English). Kanten, or seaweed isinglass. Funori, or seaweed glue. Kombu. Amanori or laver. Seaweed iodine. Other Japanese algæ and their uses.

The article begins: "Seaweeds are among the most valuable of the aquatic resources of the Japanese Empire, and conduce largely to the prominent rank attained by the fisheries of that country. While marine plants are extensively utilized in France, Ireland, Scotland, and other European countries, in the East Indies, in China, and elsewhere, in no other country are such products relatively and actually so important or utilized in such a large variety of ways as in Japan." Only one species, laver (*nori; Porphyra lacinda*), is extensively cultivated. "The seaweed preparations to which special attention is given are kombu, amanori [nori], funori, kanten, and iodine."

Under "Food qualities of kombu" (p. 153): "Fronds after being scraped once are cut in 3/4-inch squares and boiled in soy-bean sauce, which treatment preserves them for a long time, and these pieces make an excellent relish, tasting like caviare [caviar] or anchovy sauce. The Japanese name, *tsukudani*, means 'boiled with soy-bean sauce.'" The average wholesale price of "kombu chips in soy sauce, 1.10 yen per kamme" (1 kamme [kan] = 8.28 pounds) (p. 154).

Under "Preparation and utilization of porphyra" [nori] (p. 159): "Recently it has been boiled with Japanese (soy bean) sauce and put up in tins."

The section titled "Other Japanese algæ and their uses" notes (p. 163-65) that many species are seasoned in soy-bean sauce: *Arame* (*Ecklonia bicyclis*) "is chiefly eaten as an ingredient of soups, as a salad, or mixed with soy-bean

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sauce."

Hijiki (*Cystophyllum fusiforme*) "is sun dried and is ready for use after boiling in fresh water or cooking with soy-bean sauce."

Wakame (*Undaria pinnatifida*): "Before being used it is washed with fresh water, and then eaten as a salad, cooked with soy-bean sauce or put in soups... The thick root of wakame, called *mehibi*, is often dried, shaved, cut into slices, or eaten with sauce (miso)."

Suizenji nori (*Phylloderma sacrum*): "This product is ordinarily eaten with raw fish (*sashimi*); the dry weed is soaked in fresh water, and after it has swelled, boiling water is sprinkled over it and then soy-bean sauce is added. In the time of the feudal system this preparation was regularly presented to the local daimyo."

Miru (*Codium tomentosum, C. mucronatum, C. lindenbergii*): "After drying they are preserved in ask or salt. They are prepared for food by boiling or baking in water, and are put in soups; or, after washing, by mixing with soy-bean sauce and vinegar."

Haba-nori (*Phyllitis fascia*): "This plant is prepared for use after the manner of 'awa-nori' (*Porphyra*), principally by peasants of the provinces of Awa and Sagami. The young fronds are dried in the sun in sheet form and subsequently parched, powdered, and mixed with soy-bean sauce."

Matsuma (*Chordaria abietina*) "abounds in northern Japan and is consumed by the peasantry. It is preserved by packing in salt, and is cooked with soy-bean sauce."

Mozuku (*Mesogloia decipiens*) "is preserved by salting, and is eaten after washing out the salt and immersing in soy-bean sauce or vinegar."

Hondawara (*Sargassum enerve*) "When the plant is young it is eaten in soup or with soy-bean sauce."

Somen-nori (*Nemalion vermiculare*) "is eaten in soup or after mixing with vinegar and soy-bean sauce."

Tosaka nori (*Kallimenia dentata*) "is preserved by drying, and is eaten as a condiment or mixed with soy-bean sauce."

Other Japanese algæ which are eaten are: *Awo-nori* (*Enteromorpha compressa, E. intestinales, E. linza*). *Aosa* (*Ulva lactuca*), "the well-known sea lettuce of the United States." *Tsuno-mata, hosokeno-mimi* (*Chondrus crispus, C. ocellatus, etc.*). "The well-known Irish moss. *Oga-nori* (*Gracilaria confervoides*).

"Other Japanese algæ which are dried and eaten or utilized in various other ways are: *Cata-nori* (*Gigartina teedii*), *comen-nori* (*Grateloupia affinis*), *mukade-nori* (*Grateloupia filicina*), *makuri* (*Digenea simpler*), *ego* (*Carnpylaephora hypneoides*), *okitsu-nori* (*Gymnogondrus flabelliformis*), *and tosaka* (*Sarcodia species*)." Address: Deputy U.S. Fish Commissioner.

1608. Lea and Perrins. 1905. Lea & Perrins' Sauce (Ad). *Japan Weekly Mail* (*Yokohama*) 43(11):24. Jan. 7.

• ***Summary:*** This black-and-white ad (5 by 4 inches) states: "The original and genuine Worcestershire. By Royal warrant to His Majesty the King."

Note: This is the earliest document seen (Feb. 2012) that contains the phrase "By Royal warrant to His Majesty the King" in connection with Lea & Perrins' Worcestershire sauce. The phrase was used frequently in ads until about 1916. Address: England.

1609. *Chemist and Druggist* (*London*). 1905. Trade report. 66(2):65-68. Jan. 14. See p. 68.

• ***Summary:*** On page 68 we read: "Soy [sauce] of the finest quality is offered at 1*s.* 7*d.* per gallon. duty paid."

1610. Saito, Kendo. 1905. Microbiological studies on the brewing of Japanese Soja-Sauce. *Botanical Magazine* (*Tokyo*) 19(216):75-77. Jan. 20. Bound after p. 119 of Japanese text. [1 ref. Eng]

• ***Summary:*** The author has been able to isolate the following microorganisms from koji and moromi: 1. Moulds: *Aspergillus Oryzae, Rhizopus sp., Tieghmella sp.* Others incl. *Penicillium glaucum, Cladosporium herbarum*, etc. 2. Bacteria: *Sarcina Hamaguchiae* and *Bacterium Soja* (both new species). 3. Yeasts: *Saccharomyces Soja* (new species) grows copiously in moromi [the mash]. Film yeasts incl. *Saccharomyces farinosus* Lindner [Pichia farinosa (Lindner)], *Mycoderma sp.*, etc.

Note 1. This is the earliest document seen (Jan. 2009) describing Japanese investigation on the yeasts in shoyu mash (*moromi*).

Note 2. This is the earliest document seen (Jan. 2009) which mentions that *Saccharomyces* yeasts are involved in the shoyu fermentation. Address: Botanical Inst., Imperial Univ., Tokyo, Japan.

1611. Akizuki, Yoshizo; Nakanishi, Yoshitaka. 1905. Shôyu shiken seiseki hôkoku [Analysis of shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 275. p. 49-51. Jan. [Jap]

Address: Zeimusho-kannai, Matsuyama-shi, Ehime-ken, Japan.

1612. Tokyo Plant, Seed & Implement Co. (Tokyo Konoen). 1905. *Agriculturist* (*The*) No. 125. Jan. 56 p. [Jap]

• ***Summary:*** This illustrated monthly Japanese-language periodical, which began publication in 1894, has two main parts and functions: (1) Articles that promote agricultural theories and techniques to the public in easy-to-understand language. (2) A catalog of the publisher's seeds, plants, bulbs, and implements.

The catalog section titled "Beans" (p. 8+) includes two entries (p. 9) for soybeans (*daizu*): (1) Juninko ("ten people like") variety. 5 sen per *gô* (100 sen = 1 yen; 1 *gô* = 180 cc = 0.763 cups {U.S.}). 40 sen per *shô* (1 *shô* = 1.8 liters = 1.903

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quarts {U.S.}). A recently improved variety with medium sized, shiny seeds. They are good for making shoyu, miso, or other foods. (2) Kimusume ("fresh daughter") variety. 5 sen per *gô*. 40 sen per *shô*. Mid-season / medium-maturing, summer varieties that yield a big harvest. Address: Tokyo, Japan. Phone: 2421.

1613. Kadono, C. 1905. The diet of the Japanese. *Times* (*London*). Feb. 11. p. 6, cols. 3-4.
• ***Summary:*** This article is actually mostly about soya beans and their products. "It is well known that the Japanese diet consists chiefly of rice, vegetables, and fish, with very small and occasional additions of butchers' meat. The relative quantities of these, and vegetables and products thereof used, would be interesting and in some respects instructive.

"The following bill of fare, which attempts to give the three meals of a day for a family of moderate circumstances, will show how they live. It may also be said that all Japanese live rather simply whether high or low in their station of life, and the menu can be taken as typical of all classes.

"Breakfast (about 7 to 7:30 a.m.).–Miso soup (with vegetables, tofu, &c.), pickles, boiled rice, tea (sometimes raw egg or boiled sweet soya beans, or natto, &c.).

"Lunch (12 noon).–Fish boiled in soya, vegetables stewed in soya, pickles, boiled rice, tea.

"Supper (6 to 6:30 p.m.).–Soya soup (with vegetables, fishes, &c.), raw fish sliced and eaten with soya sauce, broiled fish (or boiled) with vegetables (or butchers' meat or fowl and vegetables stewed), rice, tea...

"From the foregoing it can be seen how cereals and vegetables predominate in Japanese diet. Rice and miso and soya, as will be seen from the menu, form the predominant feature of the food, and it may not be an exaggeration to say that the Japanese physique is mainly built up on the products of soya beans, such as miso, soya sauce, tofu, &c."

There follows a detailed table titled "Analysis of Soya Beans and Their Products. (Extract from a table by Mr. C. Omura.)" Nutritional analyses are given for the following, written exactly as they appear: Soya beans (5 varieties), miso (white, red Osaka, red Tokio, red Sendai), soya sauce (regular or Noda), tofu, dried frozen tofu, fried tofu, mash residue from tofu (Okara), yuba (Dried skim off tofu-mash), natto (Steamed beans with surface fermentation).

Note 1. This is the earliest English-language document seen (May 2012) that contains the term "fried tofu."

"Soya beans are grown all over Japan and in Manchuria, and so far as I know cannot be had here [in England]. They are eaten boiled, either young or ripe." They are manufactured into those articles shown above, of which miso, soya, and tofu are the most important..." The author then gives a 5-10 line description for each of how miso, soya sauce, and tofu are made. Tofu is coagulated with a "strong brine. "The remnant (okara), being a white pulverized mass, called fancifully 'snow balls' by Japanese, is eaten boiled and seasoned with soya sauce.

"I have given Japanese meals to some English friends and most have pronounced the food excellent, and some have even braved the sliced raw fish with soya sauce."

Note 2. Concerning the idea that okara is sometimes fancifully called "snow balls," the term *kirazu* is written with three characters: yuki = snow, hana = flower(s), and sai = vegetable(s). Or the author may be referring to a local term from some part of Japan.

Note 3. This is the earliest English-language document seen (Oct. 2001) that uses the Japanese word *okara* or the term "mash residue from tofu" to refer to okara.

Note 4. This is the earliest English-language document seen (Nov. 2011) that contains the word "dried frozen tofu" (or "dried-frozen tofu"). Address: England.

1614. *Manchester Guardian*. 1905. What the Japanese eat. Feb. 13. p. 12.
• ***Summary:*** This is a summary of: Kadono, C. 1905. "The diet of the Japanese." *Times* (London). Feb. 11. p. 6, cols. 3-4. Mentions soya beans, miso soup, tofu, natto, soya sauce, etc.

1615. *Star* (*Canterbury, New Zealand*). 1905. Fish as war food: The fish eater versus the beef eater. Tabloids of brain and nerve food furnished as emergency rations. Feb. 25. p. 2.
• ***Summary:*** "(By Frank G. Carpenter, in the New Orleans 'Times-Democrat'). Washington [DC], December 29, 1904. I saw this morning a specimen of the emergency rations furnished the Japanese Army. It [katsuobushi] looked like a petrified banana of the largest size,...

There follows a conversation with Dr. Hugh M. Smith about fish in Japan.

"Raw fish. 'How about eating fish raw, doctor, I understand that is common in Japan?'

"'It is, and I assure you that raw fish are not so bad when properly served. Take a fresh tai [sea bream] and slice it thin. Bring it cold to the table and eat it with chop-sticks, dipping each bite in soy or bean sauce, and you will find it delicious. The Japanese, however, usually eat their fish cooked.'"

1616. *Chemist and Druggist* (*London*). 1905. Trade report. 66(1310):364. March 4.
• ***Summary:*** On page 364 we read: "Soy [sauce].–Good thick (Mandarin No. 1) sold without reserve at 1*s.* 3*d.* per gallon, and fair thick (Buffalo No. 2) at 1*s.* 2*d.* duty paid. Privately fair to good thick is quoted 1*s.* 3*d.* to 1*s.* 5*d.* per gallon duty paid."

1617. *Chambers's Journal* (*London*). 1905. Japanese diet. Vol. 8. March 25. p. 270. Sixth series. [1 ref]
• ***Summary:*** "The nations of the world have now had the opportunity of learning many a valuable lesson from the general management of the Japanese army... It is interesting

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to note that the hard work done by the Japanese Tommy is performed on a dietary table which would hardly satisfy the soldiers of any other country. A large quantity of the Japanese soldiers' rations is made up of compressed fish-meal... Another form of food which seems peculiar to the Japanese army is obtained from kelp and other seaweeds, many of which afford very nourishing sustenance...

"At home this is the bill of fare of a Japanese family in moderate circumstances, according to C. Kadono in the *Times*. Breakfast (about 7 to 7.30 A.M.)–miso soup (with vegetables, tofu, &c.), pickles, boiled rice, tea (sometimes raw egg or boiled sweet soya beans, or natto). Lunch (12 noon)–fish boiled in soya, vegetables stewed in soya, pickles, boiled rice, tea. Supper (6 to 6.30 P.M.)–soya soup (with vegetables, fish, &c.), raw fish sliced and eaten with soya sauce, broiled fish (or boiled) with vegetables (or butcher meat or fowl and vegetables stewed), rice, tea. The Japanese physique is thus largely built up on the product of soya beans, which are grown all over Japan and in Manchuria, and from which miso, soya, and tofu are made. Soya beans, which, we believe, are not to be had in this country, are much richer in albumen than either beef or mutton. The Japanese diet, therefore, mainly consists or rice, vegetables, and fish, with very small and occasional additions of butcher meat."

1618. *Chemist and Druggist* (*London*). 1905. Trade report. 66(1313):486. March 25.
• ***Summary:*** On page 364 we read: "Arrivals: The following drugs, chemicals, etc. have arrived at the principal ports of the United Kingdom from March 9 to 15, inclusive..." "; soy (@ Hong Kong), 400."

Note: The soy sauce was probably shipped from Hong Kong; the meaning of the number "400" is unknown.

1619. Suzuki, Tozaburo. 1905. Apparatus for making soy extracts. *U.S. Patent* 0,785,776. March 28. 6 p. Application filed 28 July 1904. 6 drawings.
• ***Summary:*** Concerns soy sauce production. Six illustrations (line drawings) show the apparatus consisting of 3 vacuum evaporating pans, in series, working on the multiple effect system. The pans consist of a cylindrical drum containing the extract to be evaporated, surrounded by a steam jacket; a rotary stirring device is provided in each drum for keeping the liquid in motion, and the extremities of the stirring arms are fitted with brushes. The concentrated extract from the last evaporator is discharged into a vacuum finishing receptacle heated by hot water. This receptacle is divided into 2 sections, containing shelves composed of hot-water tubes, upon which trays containing the concentrated extract are placed for final drying; the air can be exhausted from either section independently.

Note: This is the earliest U.S. patent seen related to soy. The five earliest soy-related patents in the United States were all issued to Tozaburo Suzuki. This is the second earliest soy sauce patent seen worldwide, after the British patent of Samuel Bowen of 1767. Address: No. 401 Jibeishinden, Sunamura, Minami Katsushika, Japan.

1620. Lust (Benedict). 1905. Mother's milk (Ad). *Naturopath and Herald of Health (The)* (*New York City*) 6(3):Unnumbered page at front. March.
• ***Summary:*** "... is undoubtedly the best food for infants. When this, however, is not procurable the best substitute for it only should be used... Dr. Lahmann's Vegetable Milk (*Pflanzen-Milch*). Dr. Lahmann's Nutritive Salt Health Cocoa (*Närsalz-Cacao*). Dr. Lahmann's (sweetened) Chocolate. Dr. Lahmann's Nutritive Extract (*Närsalz-Extract*). Dr. Lahmann's Oatmeal and Närsalz Biscuits. Dr. Lahmann's Japan Soya Sause [sic, Sauce] $1.00.

"Descriptive pamphlet on receipt of 2 Cents stamp. For sale by all naturopathic sanitaria and N.D's."

Note: This is the earliest document seen (Aug. 2007) in this periodical that mentions soy. Address: Sole importer and agent for the U.S., 124 E. 59th St., New York City.

1621. *Chemist and Druggist* (*London*). 1905. Trade report. 66(1316):596-97. April 15.
• ***Summary:*** A table shows (p. 597) goods offered and sold: Soy [sauce]–Offered 57. Sold 0.

Note: The meaning of these two numbers is unclear.

1622. *Chemist and Druggist* (*London*). 1905. Trade report. 66(1317):648-49. April 22.
• ***Summary:*** On page 648 we read: "Arrivals: The following drugs, chemicals, etc. have arrived at the principal ports of the United Kingdom from April 6 to 12, inclusive..."

Page 649: "; soy (@ Hong Kong), 155."

Note: The soy sauce was probably shipped from Hong Kong; the meaning of the number "155" is unknown.

1623. *Chemist and Druggist* (*London*). 1905. Trade report. 66(1318):681. April 29.
• ***Summary:*** Page 681 states: "Soy is very quiet at from 1*s.* 2*d.* to 1*s.* 7*d.* per gallon, according to quality."

1624. Ishizaka, S. 1905. Shôyu jôzô fukusan yubun ni tsuite [On the oil by-product of shoyu]. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*) 8(86):381-91. April. [Jap]

1625. Smith, Hugh M. 1905. Japan, the paramount fishing nation. *American Fish Culturist* 2(4):101-10. April. See p. 108.
• ***Summary:*** From *Transactions of the American Fisheries Society*, 1904: "Raw fish is one of the national foods. I acknowledge that my repugnance to it was great, but it was overcome by the first dish, for as prepared and served by the Japanese the thin, cold, boneless slices of perfectly fresh tai

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or mackerel, taken with chop sticks and dipped in soy-bean sauce, are delicious."

1626. Suzuki, Tozaburo. 1905. Apparatus for brewing soy. *U.S. Patent* 0,789,299. May 9. 4 p. Application filed 5 July 1904. 3 drawings.
• ***Summary:*** Three illustrations (line drawings) show the apparatus consisting of a closed heating chamber, the temperature of which can be regulated, one or more brewing tanks sunk in the chamber, and stirring shafts passing centrally through the brewing tanks. These stirring shafts carry several pairs of radial stirring arms, the arms of adjacent pairs being of different radial lengths; the pairs of radial arms are connected by transverse stirring slats, the whole being so arranged as to bring the arms and slats of adjacent stirrers out of alignment and alternately to thrust the soy from the path of one stirrer laterally into the paths of adjacent stirrers. Address: Sunamura, prefecture of Tokio, Japan.

1627. *Chemist and Druggist* (*London*). 1905. Trade report. 66(1320):748-49. May 13.
• ***Summary:*** A table shows (p. 749) goods offered and sold: Soy [sauce]–Offered 53. Sold 0.

Note: The meaning of these two numbers is unclear.

1628. Scanland, J.M. 1905. Some tidbits of the dinner elegant in the Chinese quarter. *San Francisco Chronicle*. May 21. p. 2.
• ***Summary:*** In San Francisco there are hundreds of restaurants. "They are as cosmopolitan as the city's population and as unique." In the "Chinese quarter" there are "restaurants of barbaric glow and splendor, where soft-footed noiseless attendants serve you with strange Eastern dishes of unknown and unpronounceable names; where one is an alien among aliens, and where one awakes from a dream of sumptuous Oriental magnificence."

"Other favorite dishes are stewed shell fish, sliced sea-slugs in chicken broth, stewed bamboo shoots, boiled fish with soy sauce, strips of boned chicken fried in oil,..."

1629. *Chemist and Druggist* (*London*). 1905. Trade report. 66(1322):833. May 27.
• ***Summary:*** A table (p. 833) shows recent price trends for various goods. The four trends are: Higher. Firmer. Easier. Lower. "Soy" sauce is listed under "Easier."

1630. *Chemist and Druggist* (*London*). 1905. Trade report. 66(1322):835. May 27.
• ***Summary:*** Under "London drug-auctions" is a table which shows the amounts of various goods offered and sold, "Soy [sauce]–Offered 30. Sold 30."

On page 836: "Soy.–Easier. Thirty casks of fair thick sold without reserve from 1*s.* to 1*s.* 1*d.* per gallon duty paid."

1631. Kitao, Motohide; Akiyama, Takuji. 1905. Miso shôyu chû ka kurooru tetsu ni yotte sarichiru-san to kokuji no nannô o teisuru ni tsuki. I. [On the substance which appears to resemble the reaction of salicylic acid with ferroperchloride in miso and shoyu. I.]. *Eisei Shikenjo Iho* (*Bulletin of the Imperial Hygienic Laboratories*) 10:79-87. May. [Jap]
Address: 1. Gishi; 2. Gishu. Both: Eisei Shikenjo.

1632. *Chemist and Druggist* (*London*). 1905. Trade report. 66(1324):908. June 10.
• ***Summary:*** A table (p. 908) shows the amounts of various goods offered and sold, "Soy [sauce]–Offered 59. Sold 29."

On the same page: "Soy.–A parcel of 24 casks Chinese sold without reserve at 11*d.* [11 pence] per gallon duty paid for ordinary."

1633. Douglas (J.M.) & Co. 1905. Lea & Perrins': The genuine Worcestershire Sauce (Ad). *Toronto Daily Star* (*Canada*). June 24. p. 65.
• ***Summary:*** A large illustration shows a dignified man wearing glasses seated at a dining table with a steaming bowl of something in front of him. Behind him stands an attentive waiter.

"'James, haven't you forgotten something.'

"'Forgotten–me! Sir.'\ "'What about my cold roast beef?'

"'Beg pardon, Sir. Of course, Sir. Lea & Perrin' Sauce, Sir.

"'Ad it for you hevery day, these thirty years, Sir.

"Couldn't heat cold meats without Lea & Perrins' Sauce, could you, Sir?'" Address: Canadian agents, Montreal [Quebec, Canada].

1634. Ishisaka, S. 1905. Shôyu-jôzô [Analysis of the oil obtained as a by-product of shoyu fermentation]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 281. p. 589-99. June. [Jap]

1635. Kitao, G.; Akiyama, T. 1905. Miso, shôyu-chû ka kuroru tetsu ni yotte sarichiru-san to kokuji no hanno o tei suru seibun ni tsuki, dai ikkai hôkoku [A constituent of miso and shoyu which gives, with ferric chloride, a reaction similar to that of salicylic acid]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 280. p. 483-88. June. [Jap; eng]
• ***Summary:*** This constituent is thought to be tyrosine, which is a decomposition product of albuminous matter contained in the raw material. Authors also give the results of experiments on that constituent and the distinction between it and salicylic acid.

1636. Douglas (J.M.) & Co. 1905. Lea & Perrins': The

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genuine Worcestershire Sauce (Ad). *Toronto Daily Star* (*Canada*). July 15. p. 19.

• ***Summary:*** A large illustration shows a waiter carrying to steaming bowl of soup to the table.

"'Beg pardon, Sir.

"Alphonse says as 'ow the grocer didn't send 'im Lea & Perrins' Sauce, Sir.

"The bottle looked the same, Sir–hand 'e didn't notice the label, Sir.

"Sorry, Sir, that the soup hisn't seasoned just right, Sir.

"'Alphonese, Sir, says has 'ow hit wont 'appen hagain, Sir.'" Address: Canadian agents, Montreal [Quebec, Canada].

1637. *France Militaire* (*La*) (*Paris*).1905. La Guerre Russo-Japonaise: La cuisson des aliments dans l'armée japonaise [The Russo-Japanese War: The cooking of foods in the Japanese army]. 6(6464):1. July 27. [1 ref. Fre]

• ***Summary:*** We borrow the following interesting details from the *Streffleurs Oesterreichische Militaerische Zeitschrift*. The Japanese soldier does not eat bread, which greatly simplifies supply operations, making it unnecessary to construct of bakeries or to carry fresh bread–which is very cumbersome. Moreover, meat is not as important to the Japanese as it is to European armies. Japanese soldiers can easily do without meat, for they are not accustomed to eat it regularly; they are content with rice and dried fish, provisions which are easily transported and distributed. When they are given meat, it is cut into small morsels and stewed with vegetables. They eat it with a sort of piquant sauce (*sauce piquante*) [i.e., soy sauce].

The Japanese eat their meals cold voluntarily–even canned meat.

1638. Eaton (T.) Co., Ltd. 1905. Eaton's July sale news (Ad). *Toronto Daily Star* (*Canada*). July 28. p. 12.

• ***Summary:*** The section titled "You're the doctor" states: "Pure, fresh, clean foods go a long way toward keeping you right, and that's the kind of food we offer every day."

"Lee and Langley's imported Worcestershire Sauce, special per bottle 10¢." Address: 190 Yonge St., Toronto.

1639. Kurihara, T. 1905. Shôyu-chû shibashiba ganyu suru biryo no sanri yaji-san ni tsuite [On a minute quantity of salicylic acid often contained in shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 281. p. 599-600. July. [Jap; eng]

• ***Summary:*** The salicylic acid comes from the cask used in holding the shoyu. Address: Eisei Shikensho, Kurihara, Hyogo-ken, Japan.

1640. Macmillan, H.F. 1905. The "Soya (or Soy) Bean." (Glycine hispida). A new vegetable, fodder, and green-manure product for Ceylon. *Tropical Agriculturist* (*Ceylon*) 25(5):682-83. Nov. 15.

• ***Summary:*** "It is strange that a product so important, so simple of cultivation and so quick in yielding returns as this has not hitherto attracted attention in Ceylon. Notwithstanding the fact that it has been introduced several years ago by the Royal Botanic Gardens, and successfully grown at Peradeniya year in and year out, both for the instruction of visitors to the Gardens and for distributing seeds; I question whether there are at present half-a-dozen gardens or estates in Ceylon which count this amongst their crops."

"The Soya Bean thrives at Peradeniya, and appears to be well-suited to the climate and soil; whilst it also flourishes in the Mediterranean region and Southern Europe. It would therefore seem reasonable to expect it to thrive at a comparatively wide range of elevations in Ceylon, provided the conditions of soil and rainfall were at all favourable. In China and Japan the Soya Bean forms a standard article of food with all classes of the community, being prepared for use chiefly in the form of a sauce, paste or cheese, the latter two preparations being made by crushing and pressing the seeds. In India the seeds are said to be cooked and used in various ways, often 'roasted and ground as *satu*, or simply eaten in the form of *dal*.' Soy sauce is said to form the basis of many popular sauces made in Europe." A few years ago soy sauce in London was worth 2 shillings and 6 pence per gallon. "Personally I think Soya Bean as a vegetable is very agreeable and forms a good substitute for the Lentils and Broadbeans of Europe if cooked and served similarly. Its chemical composition, according to Professor Church, places it above all other pulses as an albuminous food."

The soya bean is also considered valuable as a fodder plant and for green manuring. A brief description of its cultivation is also given. "Regarding cultivation, probably few crops are less exacting in their requirements than this. Its most striking characteristic, judging by results recorded at Peradeniya, is the remarkably short space of time in which the plants grow and produce a crop. Here the seeds germinate in 3 to 5 days, the plants flower when a month old; a fortnight later the pods are fit for picking [for use as a green vegetable], and the harvesting is complete in about two months from the time of sowing. Thus, granted the seasons were favourable, it should be possible to obtain four crops a year. In making these statements, which may seem unduly optimistic, it is not by any means intended to convey the impression that practically no expenditure of labour is involved in the production of this crop. On the contrary it is pretty certain that to make it a profitable product for whatever purpose, even under the most favourable conditions for its growth, a reasonable amount of cultivation will be required. It has yet to be proved how far it would repay cultivation in Ceylon for fodder and green-manuring, but that it should prove a welcome adjunct to the food products of the natives, if not as a general vegetable, there seems no question."

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A footnote states: "* Since writing this Mr. Kelway Bamber has presented a small quantity of Soya Bean seed to the Botanic Gardens, remarking that he intended to recommend it as a green-manure crop." Address: Curator of the Royal Botanic Gardens at Peradeniya.

1641. Holbrook's Sauce. 1905. The soup recipe which won the Holbrook's prize (Ad). *Toronto Daily Star* (*Canada*). Dec. 23. p. 16.
• ***Summary:*** A large illustration shows a bottle of "Holbrook's Worcestershire Sauce" which savour's soup. "It helps make poor soups palatable and makes good soups better than they could be without it.

"Many recipe for soups using Holbrook's Sauce were submitted in competition for 18 prizes offered by the manufacturer. The awards were made after careful test by Miss Ida M. Hunter, the Superintendent of Domestic Science Department of the Public School of Toronto."

The first prize recipe, titled "Curl vegetable soup," is given. Address: 23 Scott St., Toronto.

1642. **Product Name:** Kikko-Ki Soy Sauce.
Manufacturer's Name: Terada (T.) Shoten. By 1915 renamed Terada Shoyu Jozo-sho.
Manufacturer's Address: 1346 N. King, Honolulu, Oahu, Hawaii.
Date of Introduction: 1905-1906.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1905-06. p. 357. Terada T. Shoten, soymkr [soy-maker], 1346 N. King. 1907 Directory. p. 567. Terada, Tagero, soy, 1346 N. King. Residence, same. 1908 Directory, same. 1909 Directory. p. 559. Terada, F., soy. 1346 N. King. Residence, same; Hawaii Hojin Katsuyaku-shi, Meiji 41-42 (Japanese who play an active role in Hawaii, 1908-09). 1915. Oct. Lists Terada Shoyu Jozosho, founded by Tajiro Terada, as a brewer of Kikko-ki brand soy sauce, located on King St., Palawa, Honolulu. The company also has an ad on page 22.

1916 Directory. T. Terada, 1222 N. King. Directory of the City and County of Hawaii, 1947-48. p. 989. Terada T. Shoten (Kyuzo and Robert H. Terada, and Mrs. Hatsuko Umeno). General Merchandise and Soy Manufacturers. 1224 N. King. Tel. 8033. Note this company's rebirth on the same street with the same name after almost 40 years. They are not listed in the 1941-42 Directory.

Note: This is the earliest known commercial soy product made in Hawaii after the Hawaiian Islands were a territory of the United States.

1643. *Japan Year Book*.1905-1952. Serial/periodical. Published by The Japan Year Book Office, Tsukiji, Tokyo; and by Foreign Affairs Assoc. of Japan. Annual. [Eng]
• ***Summary:*** In the *Year Book* for 1906, in the chapter on agriculture, page 104 gives statistics from 1895 to 1903 for the production of the following: Miscellaneous grains (millet, buck wheat [buckwheat], Italian millet, Sarva millet), beans (soja beans, red beans [azuki]), sweet potatoes and potatoes.

Production of soja beans increased from 2,943,478 koku in 1895 to 3,647,830 koku in 1903–an increase of 23% in 8 years. The frontispiece, facing the title page, lists "Weights, measures, and moneys." 1 koku (dry) = 4.962 bushels.

1644. **Product Name:** Sugita Shoyu [Soy Sauce].
Manufacturer's Name: Sugita Jozo-sho (Sugita Brewery).
Manufacturer's Address: 569 Tyler (Taylor?) St., San Jose, California.
Date of Introduction: 1905.
New Product–Documentation: *Zaibei Nippon-jin Nenkan* (*The Japanese-American Yearbook*). 1905. No. 1. Published by Mr. Kyutaro Abiko, of Nichibei [Shinbun], Japanese-American News. 1905. Page 24, under the category heading "Jozosho" (Breweries), lists Sugita Jozo-sho, 569 Tyler Street, San Jose, California. An unnumbered page in the same 1905 edition states that there are currently two shoyu breweries in San Jose. This must mean Yamamori and Sugita.

1645. **Product Name:** Soy Sauce.
Manufacturer's Name: Yamajo Soy Co. [Yamajo Shoyu Seizojo].
Manufacturer's Address: Pua Lane, Honolulu, Oahu, Hawaii.
Date of Introduction: 1905.
How Stored: Shelf stable.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1907. p. 609. Yamajo Soy Co., Nobuyuki Yamakami, mngr. Pua Lane, [Honolulu]. Two entries following: Yamakami, N., mgr, Yamajo Soy Co., residence King, near Palama Chapel. Note: No listing in 1905-06 Directory, which is the earliest at Sutro library. 1908 Directory. Yamajo Soy & Sauce Co. Ltd. The, Pua Lane. 1909 Directory. p. 602. Company name has changed to Yamajo Soy and Sauce Manufacturing Co. Ltd., N. Yamakami, mngr, Pua Lane near Kukui. Krauss. 1909. Hawaii Agric. Exp. Station, Annual Report. p. 16, 83-85. For the year 1908. States that "Seed of two other [soybean] varieties were [sic] donated by the Hawaiian Yamajo Soy Company of Honolulu."

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." States that the company was founded in 1905 by Mr. Nobuyuki Yamakami.

F. Odo and K. Sinoto. 1985. A Pictorial History of the Japanese in Hawaii, 1885-1924. A photo (p. 166) shows the inside of the Hawaii Shoyu Co. (Hawaii Shoyu Kaisha) on King Street in Palama, Honolulu, taken in about 1914. The caption reads: "The Japanese in Hawaii depended upon

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shoyu imported from Japan until Nobuyuki Yamashiro [sic. Yamakami] started making shoyu in 1904." His company was established as Hawaii Shoyu Co. in 1906. American Shoyu Co. was established in Honolulu in 1912. Shurtleff & Aoyagi. 1983. The Book of Miso, 2nd ed. p. 234. Letter from Takao Nihei. 1988. July 19. "There was a record showing that Mr. Shimada was the first to make shoyu in Hawaii. But he closed soon after he started. Therefore I think that the first person who succeeded was Mr. Nobuyuki Yamakami."

1646. **Product Name:** Kenfu Shoyu.
Manufacturer's Name: Yamakami Shoyu Jozo-sho. Renamed Hawaiian Soy Co. Ltd. (Hawaii Shoyu K.K.) by 1909.
Manufacturer's Address: N. King St., Honolulu, Oahu, Hawaii.
Date of Introduction: 1905.
New Product–Documentation: Hawaii Hojin Katsuyaku-shi, Meiji 41-42 [Japanese who play an active role in Hawaii, 1908-09]. 1915. Oct. Lists Hawaii Shoyu K.K. as a soy sauce brewer on King St., Palawa, Honolulu. The ad on page 39 notes that in Taihso 4 (1915) the company produced 3,500 koku (1 koku = 180 liters or 47.6 gallons), so 630,000 liters or 166,600 gallons of shoyu.

Shogoro Fujin. 1937. Dainihon Kaigai Iminshi (Great History of Japanese Immigration Overseas). Published by Kaigai Chosakai. Vol. 2. p. 95. Gives a brief life history of Nobuyuki Yamakami and states that in 1905 in Honolulu he founded Yamakami Shoyu Jozo-sho, which succeeded. He later changed the company's name to *Hawaii Shoyu Kaisha*. He called the shoyu "kenfu," which means "wise wife/women."

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." States that the company was founded in 1906 by Mr. Yamagami/Yamakami Nobuyuki and Tashiro Kumataro.

F. Odo and K. Sinoto. 1985. A Pictorial History of the Japanese in Hawaii, 1885-1924. A photo (p. 166) shows the inside of the Hawaii Shoyu Co. (*Hawaii Shoyu Kaisha*) on King Street in Palama, Honolulu, taken in about 1914. The caption reads: "The Japanese is Hawaii depended upon shoyu imported from Japan until Nobuyuki Yamashiro [sic. Yamakami] started making shoyu in 1904. His company was established as Hawaii Shoyu Co. in 1906. American Shoyu Co. was established in Honolulu in 1912."

1647. Alviso Co. (The) 1905. Dealer in Japanese American provisions, dry goods and merchandise (Ad). In: Nichibei Shinbun-sha. 1905. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Unnumbered page near the end. [Jap; eng]
• ***Summary:*** Ad (full page). The central 1/8 of this ad is in English. This company sells various goods including miso and shoyu. The Japanese title across the top: "Great bargain prices. You'll be surprised!" An illustration shows two flags, Japanese and American, crossed. Address: P.O. Box 15, Alviso, Santa Clara Co., California.

1648. Aoki (George) & Co. 1905. Direct importers of rice and tea: Gents. furnishing goods (Ad). In: Nichibei Shinbun-sha. 1905. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Unnumbered page. [Jap]
• ***Summary:*** Ad (full page). The top 1/3 of this ad is in English and includes a photo showing a man with a sash and many medals, probably George Aoki. This company imports various goods including (exclusively) shoyu made by Nakayama Kankichi (spell?) and Oota Kyusuke. They are wholesale and retail dealers. Address: 437-439 DuPont St., San Francisco, California. Phone: Bush 865. Cable address: Aoki.

1649. Bui, Quang Chieu. 1905. Des cultures vivrières au Tonkin [On the food crops of Tonkin, Indochina]. *Bulletin Economique de l'Indo-Chine* 48:1152-90. New Series 2. Many illust. and photos. [4 ref. Fre]
• ***Summary:*** This article begins with a foreword by H. Brenier, Director of Agriculture, Forestry and Commerce for Indochina. He notes the importance of soybeans, soy products (including soy sauce and tofu) and adzuki beans (*Phaseolus radiatus*), among the people of Asia. In Annamite (south Vietnamese), tofu is called *dau phu* and the soybean is called *dau nanh* or *dau tuong*.

Adzuki beans are discussed (p. 1153-55, 1157) and a nutritional analysis of the azuki bean, which has been cultivated in France, is given. The section on the soybean (p. 1153, 1157-68) discusses: The local names and varieties of the soybean, botanical characteristics, cultivation, utilization (to make soy sauce, *tuong*, tofu, etc.), commerce and trade (in the province of Hungyen, the stalks of the soybean plant are used to make a sort of incense). An illustration (line drawing, p. 1159) shows a Soja plant with pods.

A detailed description is given of the manufacture of *tuong* (a sort of soft miso) in Tonkin. First *moc*, or molded glutinous rice is prepared. After glutinous rice is cooked, it is covered with banana leaves and allowed to mold for 2-3 days. Then the soybeans are prepared. They are grilled, ground to a powder, boiled with water, and put into a jar for 7 days until sweet. Six parts of rice koji are then mixed with 5 parts soy. The mixture will be ready to eat after it has fermented for 15-30 days. If it is too thick, add salt. Good tuong is soft and mildly sweet. It is sweeter and smoother than nuoc mam. Annamites say that only the prosperous households succeed in making tuong. If the tuong starts well, then becomes sour, that is a bad omen.

Tuong can also be made from corn (*maïs*), which is grilled, ground, sifted, covered with taro leaves, and allowed to mold. Put it in salt water, then after 5-6 days add roasted soy flour as above. Stir it before sunrise and let it stand open

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in the sun for 15 days, putting on the cover as soon as the sun disappears. If this is done, it will last a long time.

Note 1. This is the earliest document seen (Jan. 2009) that mentions *tuong*. The importance of this fermented seasoning, a close relative of Chinese *jiang*, is indicated by the local name for the soybean (*dau tuong*), or "the bean used to make tuong."

Production of tofu (*dau-phu*): Lots of dau-phu is made in Tonkin, especially in Hanoi, where it constitutes the basis of the poor people's food. It is never made in large factories, only small shops. Soak the soybeans, wash them and remove their hulls, cook to soften them, then grind them with a hand-turned mill over a wooden bucket. The soymilk is extracted with cold water then boiled for 30 minutes. There remains in the sack a white residue (*un résidu blanc*) [okara] which is fed to the pigs. The next day, add some fermented whey from a previous batch to coagulate the soymilk. Then press the curds. The finished tofu cakes are each 15 by 8 by 1 cm thick. Tofu is widely used in soups. A table (p. 1165) shows the costs of equipment to start a tofu shop, and a profitability analysis. Early analyses of the composition of the soybean, conducted by Fremy, Muentz and Pellet (in France) and Wechler (in Austria), are reproduced. Photos show key steps in the process: (1) A person is washing soybeans in a bamboo colander while standing in a stream near Hanoi. (2) The soybeans are ground in a small, traditional, hand-turned stone mill by a person sitting on the same wooden bench as the mill, in a bamboo hut, surrounded by various wooden tubs and colanders. (3) Using a sack to filter the ground puree from the stone mill. (4) Cooking the filtered liquid over a small wood fire in an earthenware pot. (5) Pressing the curds (outdoors) after precipitation of the protein. (6) More forceful pressing. (7) A merchant walking the streets selling tofu on two trays, each suspended by 3 ropes from the ends of a shoulder pole.

Note 2. This is the earliest French-language document seen that mentions okara (Oct. 2001), which it calls *un résidu blanc*.

Note 3. This is the earliest document seen stating that okara is fed to "pigs." Address: Indo China.

1650. Clubb, Henry Stephen. 1905. Unpolished rice, the staple food of the Orient: A lecture to the Vegetarian Society of America; to which is added over one hundred receipts [recipes] for cooking unpolished rice, rice flour, rice polish; and testimonials of eminent food reformers. Philadelphia, Pennsylvania: The Vegetarian Society of America. 32 p. 18 x 14 cm. Pages unnumbered.

• ***Summary:*** Rev. Henry Clubb (born 1827) was an early advocate of the use of brown rice in America. He notes that this is the food on which the Japanese Army won its great victories (in the recent Russo-Japanese War), performed its rapid marches, remained comparatively free from camp diseases, and recovered rapidly from battle wounds.

On page 5 he notes: "In China, Japan and Java soy sauce, soy bean cheese [tofu], or a similar product is eaten with rice in considerable amounts, and furnishes a large part of the protein necessary for the daily diet of the laborious people."

On the inside rear cover of the booklet is a list of publications and products sold by the Vegetarian Society, which is located at 1023 Foulkrod St., Philadelphia.

Note 1. This is the earliest document seen (April 2011) concerning unpolished rice (brown rice).

Note 2. This is the earliest English-language document seen (April 2011) that contains the term "unpolished rice." Address: Rev., Philadelphia.

1651. Duthie, John Firminger. 1905. Flora of the upper Gangetic plain and of the adjacent Siwalik and sub-Himalayan tracts. Vol. I, part 1. Ranunculaceae to Campanulaceae. Dehra Dun, India: M/s. Bishen Singh Mahendra Pal Singh; Delhi, India: M/s. Periodical Experts. 500 p. + v. See p. 231-32. 19 cm. [6 ref]

• ***Summary:*** In the section on "Leguminosæ" we read (p. 230-31): "20. Glycine, Linn.; Fl. Brit. Ind. ii, 183 [Hooker, Joseph D. 1879. *The Flora of British India*. Vol. 2, p. 183].

"Twining or subercct herbs... Species about 15, spread through the tropics of the old world, also in Australia.

"*G. Soja*, Benth. in *Journ. Linn. Soc.* viii, 266; F.B.I. ii, 184 (not of Sieb. & Zucc.) G. hispida, Maxim.; Watt E.D.; *Field & Gard. Crops* iii, 3, t. 85; Prain in *Journ. As. Soc. Beng.* LXVI (1897), 403. Soja hispida, Moench.; W.&A. *Prod* 247. Dolichos Soja, Linn.; *Roxb. Fl. Ind.* [Roxburgh's Flora Indica] iii, 314; DC. *L'Orig. Pl. Cult* 264. Vern. [Vernacuar] *Bhat.* (Soy bean, Japan pea).

"An annual, with stout suberect or climbing stems, densely clothed with fine rusty-coloured hairs. *Leaves* 3-foliolate, long-petioled; *leaflets* 2-4 in. long, ovate, usually acute. *Racemes* sessile, few-flowered. *Calyx* ¼ in., densely hairy; teeth long, setaceous. *Corolla* reddish-purple, not much exserted [sic]. *Pods* 2-3 in the axils of the leaves, 1½-2 in. long, linear-oblong, recurved, densely pubescent, subtorulose, 3-4 seeded.

"Sparingly cultivated within the area, and confined to a few of the Sub-Himalayan districts. It is grown more extensively on the lower slopes of the Himalaya up to 6,000 feet, from the Punjab eastwards; also in Bengal, on the Khasia, Manipur and Naga Hills, and in Burma, but nowhere in India has it been found truly wild. De Candolle considered the plant to be a native of Cochin China, Japan and Java at the time when the ancient inhabitants of that region began to cultivate it, and to use it as food. As grown within the area of this flora, and in other parts of India, it represents a very inferior form of soy bean. It is a rainy-season crop, and is usually sown in very poor land. Under proper cultivation the chemical composition of the bean shows it to be the richest of all the pulses in albuminoids and oil. In China and

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Japan various preparations are made from it, including soy-sauce, which is largely exported from those countries. The plant affords very excellent fodder for all kinds of stock, if harvested before it is fully matured." Address: B.A., F.L.S., Formerly Director of the Botanical Dep. of Northern India.

1652. Fernie, William Thomas. 1905. Meals medicinal: With "herbal simples," (of edible parts). Curative foods from the cook; in place of drugs from the chemist. Bristol, England: John Wright & Co.; London: Simkin, Marshall, Hamilton, Kent & Co., Ltd. xxii + 781 p. See p. 84. Illust. Index. 22 cm.

• ***Summary:*** In this collection of unusual facts about the healing power of foods, the various foods are listed alphabetically. The section titled "Bean" states (p. 84): "The Soy Bean (*Glycina soja*) [sic, *Glycine soja*] is of three varieties, black, green, and white. These Beans are boiled, then mixed with barley, or wheat, until, through fermentation, they become covered with fungi; then brine is added, and further fermentation goes on for a couple of years. The sauce thus concocted is afterward boiled afresh, and put, when cool, into bottles, or casks. From a nutritive point of view it is superior to any other sauce in our markets." Soy is made throughout Japan, and most Japanese partake of it with every meal. "In China, Soy Cheese [tofu] is extensively eaten, whilst various sauces, and pastes [jiang] are prepared from the Beans... An old fable said that Soy was made from certain beetles, and Londoners have improved this to 'black beetles.'" Note: This is also the earliest English-language document seen (Feb. 2004) that clearly uses the term "Soy Cheese" (or "soy cheese") to refer to tofu.

The author then quotes a four-line poem by Edward Lear from his *Book of Nonsense* (1862) which begins: "There was an old person of Troy / Whose drink was warm brandy and soy,..."

Also discusses: Seaweeds (p. 495-96, 627-33; Incl. Irish moss or carrageen, dulse, laver, sloke, samphire, sea holly, bladderwrack, and *Laminaria digitata* or sea-tang, sea spinach, agar-agar or Japanese isinglass). The Pea-nut (Arachis hypogæa, p. 504-05; Incl. pea-nut candy and nut cream). Vegetarianism (p. 711-17). The book contains no recipes. Address: M.D [England].

1653. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1905. Zaibei Nihonjin nenkan [Japanese-American yearbook. No. 1]. 234 Turk St., San Francisco, California. 345 p., many unnumbered. Reprinted in 25 Oct. 2001 in Tokyo by Nihon Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 1-kai [Collected Documents on Japanese Emigration. No. 1]. [Jap; eng]

• ***Summary:*** This book is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. There is no English-language title page. The company that publishes this yearbook also publishes (at the same address) a daily newspaper titled *The Japanese American*.

The book is composed of: 16 unnumbered pages of ads and basic information; page 14 is "About this publication, and pages 15-16 are the table of contents, 12 unnumbered leaves of black and white photos (including two maps, in Japanese, of northern and southern California, on glossy paper), 192 pages which are the body of the book, a directory interspersed with 80 pages of ads in groups of either 16 or 32 pages.

The table of contents reads: 1. Census of Japan and USA (both population and agriculture). 2. U.S. law. 3. U.S. agriculture as it relates to Japanese. 4. Commerce. 5. Education and religion. 6. Cities in which a significant number of Japanese live. 7. Statistics. 8. Japanese farmers in U.S. agriculture. Appendix: Directory and index to the directory.

Sources are cited: U.S. Agricultural Census for 1900. Trade information from Japan's Dept. of the Treasury (*Ökurasho*) and the U.S. Dept. of Commerce. Then there is a 2nd table of contents for the directory, listing different city place names, by state. This directory was compiled by this newspaper using every means at their disposal.

Imports of Japanese shoyu (soy sauce) to the USA were 429,135 *sho* worth $86,681. Note: 1 *sho* = 10 *go* = 1.8000 liters. So this amount is 772,443 liters or 203,925 gallons (p. 136). A significant amount of Japanese miso was also imported but this yearbook was unable to get the exact statistics (p. 136).

The top half of p. 137 is about shoyu; the bottom half is about sake. Concerning shoyu: Shoyu is one of the daily necessities for Japanese. It is the 3rd largest item imported [probably after white rice and sake]. In Meiji 36 (1903) the amount imported was 4,291 *koku*, 3 *to* and 5 *sho* worth $86,681 (see above). It is the No. 1 "direct import" because it is relatively easy to import due to its packaging, documentation, basic liquid nature, and way of invoicing (it does not require double invoicing). It is easy to sell; not much capital is needed to stock it and it is a very popular item. Like bread or flour in U.S. groceries, it has a small profit margin and the stock turns over rapidly. Many varieties of shoyu are imported from many parts of Japan: Choshi in Chiba prefecture, Hamaguchi Yoshibe, Sa-jirushi, Mogi Saheji's Yama Kikkoman in Noda (Chiba prefecture), Ka-jirushi, Yamagata-hi, Sendai jirushi, and Bunmei jirushi. The best selling brands are those which are of medium price. Recently, in San Jose, Mr. Yamamori, started a shoyu making plant and is working hard to make it successful. We look forward to receiving his product.

In San Jose, California, there are two shoyu makers (p. 156, bottom right).

The Directory shows Japanese companies making soyfoods only in California.

Note: This is the earliest document seen (July 2011)

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that is a directory of Japanese living in the United States. Address: San Francisco, California.

1654. Oshima, Kintaro. 1905. A digest of Japanese investigations on the nutrition of man. *USDA Office of Experiment Stations, Bulletin* No. 159. 224 p. See p. 20-33, 40-43, 46-47, 145-53, 168-73. [26 ref. Eng]

• ***Summary:*** One section titled "The Soy bean and its preparations" (p. 23-33) gives detailed discussions of tofu (including yuba, frozen tofu, kara [okara], and fried tofu), miso (incl. white miso, red or Sendai miso), shoyu, and natto. The nutritional composition of each is given, and many early studies by Western and Japanese scientists are cited.

"Next to rice in importance in the Japanese diet are legumes, which are universally used... Of the different legumes used as food in Japan, the soy bean (*Glycine hispida*) is by far the most important. According to agricultural statistics for the years 1879 to 1887, nearly 10 per cent of the cultivated land in Japan was devoted to the growth of this legume, an area somewhat larger than that devoted to wheat growing. In the northern Island [Hokkaido] in 1887 nearly 17 per cent of the total cultivated area was devoted to the soy bean. The average yearly production of soy beans amounts to about 360,000,000 kilograms... A part of the product is of course used for seed, and a not inconsiderable part is used as fertilizer.*" (Footnote: * "In northern China soy beans are used to some extent in the production of oil, which is used for cooking and illumination [in oil lamps]. The residue from this process [the presscake] is imported largely into Japan, where it is used as a fertilizer"). Other legumes widely used in Japan include the mungo bean (*Phaseolus mungo radiatus*) and the adzuki bean (*Phaseolus mungo subtrilobata*) (p. 23-24).

"Many varieties of soy beans are known, being designated according to the color, size or shape of the seed, and the time required for maturity. For example, there are black, green, yellow, and white varieties, and these are again designated as early, medium, or late, according to the season of maturity, and small, medium, and large, according to the size of the seed. The black soy beans are used chiefly for cooking, with sugar and shoyu; the green variety is also used in this way, either in the fresh state or after being dried" (p. 24). There follows a long section on tofu (detailed in a separate record).

The "larger part of the leguminous food in the Japanese diet consists of the preparations of soy beans, such as miso, shoyu and tofu,..." (p. 46).

In Japan, legumes about 8% of the protein and 11% of the fat in the diet (p. 137). Many digestion experiments are described (p. 144-87), including those with tofu, shoyu, "tofu cake or kara, the soy-bean residue remaining from the preparation of tofu (see p. 26)," and yuba conducted in Japan by Osawa and Ueda (1887), T. Suchi (1887), Kano and Iishima (1899). Table 91 (p. 191) is a "Summary of results of digestion experiments with legumes and legume preparations." The percentages given are "coefficients of digestibility." Experiments No. 6 and 7–soybeans (average): Protein 65.5%, fat (uncertain), carbohydrates (incl. crude fiber) 85.7%. Experiments No. 8 and 92–tofu (average): Protein 92.7%, fat 96.4%, carbohydrates (incl. crude fiber) 93.3%. Experiment No. 94–"yuba (soy legumin coagulated):" Protein 92.6%, fat 95.7%, carbohydrates (incl. crude fiber) 86.6%, crude fiber 35.5%. Experiment No. 93–"tofu cake (soy-bean residue [okara]):" Protein 78.7%, fat 84.3%, carbohydrates (incl. crude fiber) 82.8%, crude fiber 89.6%.

Note: This is the earliest English-language document seen (Oct. 2001) that uses the Japanese word *kara* to refer to okara.

Other Japanese foods discussed include adzuki or adzuke beans (*Phaseolus mungo subtrilobata*) (p. 24, 170), dried algae (sea vegetables, p. 34), and kuzu (p. 170). Address: Director, Hokkaido Agric. Exp. Station, Sapporo, Japan.

1655. Oshima, Kintaro. 1905. A digest of Japanese investigations on the nutrition of man: Preparations of cereals (Document part). *USDA Office of Experiment Stations, Bulletin* No. 159. 224 p. See p. 20-23. [10 ref. Eng]

• ***Summary:*** The section titled "Preparations from cereals" which gives detailed discussions of bread, *fu* (baked wheat gluten cakes), macaroni and vermicelli, sobakiri or soba (buckwheat noodles), mochi, ame [rice syrup].

"Fu: This is a gluten preparation obtained from wheat flour. The whole is mixed with water and made into a dough which is kneaded, the kneading and addition of water continuing until a large part of the starch is removed. What remains is known as "fu," and us used wither in the fresh state as an ingredient of soup, or is roasted to preserve it for future use."

While mochi is usually made from glutinous rice (*Oryza* [*Oryzae*] *sativa glutinosa*), "it may also be made from glutinous grains like millets. In the latter case some special prefix denoting the kind of grain used is also employed, as, for instance, Kibi-mochi, or Awa-mochi (Kibi is *Panicum miliaceum;* Awa is *Setaria germanica*). The use of mochi made from glutinous millets is usually confined to the rural and laboring classes... Mochi is considered one of the essential articles of food for New Year's feasts. It is generally eaten either roasted or cooked with shoyu sauce."

"Ame: This material is prepared most commonly from glutinous rice or glutinous millet, sometimes from common rice, and rarely from Indian corn or sweet potatoes. The essential feature of the process of ame preparation is the conversion of starch into maltose by diastase. Malt or sprouted barley is generally use to furnish the diastatic ferment. The cleaned rice or millet is soaked in water and then steamed, by which process the starch grains are broken

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open and made easily accessible to the ferment. The steamed grain is then transferred to a suitable vessel, mixed with certain proportions of powdered malt (added fractionally) and of water at about 60° C., and well stirred. The mixture is kept at a temperature of 50° to 60° C. In the course of 6 to 8 hours the diastatic ferment has acted upon the starch and converted it largely into dextrin and maltose. The liquid mass is then filtered by pressing through a fine linen bag, and the filtrate is condensed in a double boiler to the proper consistency, which varies slightly according to the season."

"The material thus prepared is called midzu-ame, which means liquid or soft ame. It is a dense, clear, light amber-colored liquid, not unlike the best commercial glucose in some of its physical properties. It is used in this form, or is further concentrated into kata-ame, or hard ame, a sort of hard, white, sweet candy. Stick ame is also made from midzu-ame by pulling.

"Ame has been manufactured in Japan for at least two thousand years, and long before sugar was known it was used for flavoring articles of food. Even at the present time it is sometimes used in place of sugar in cooking. Ame is also a favorite food adjunct for invalids.

"An interesting discussion of the relations between midzu-ame as made by the Japanese and malt products of European countries before sugar was so generally known is given by Storer and Rolfe (1904, p. 80), in which the process of ame making is described by Takaki, from information obtained from Japan. In the same publication is given also the translation by Takaki (Loc. cit., p. 95) of a 'Note on ame,' published in Japanese by Furukowa [sic, Furukawa] (1885, p. 355). A description of the manufacture of midzu-ame from glutinous rice has been given by Wiley and McElroy (1982, p. 57).

"Whether made from glutinous rice, ordinary rice, millet, or corn, ame consists mainly of maltose and dextrin. Kokashima (1855, p. 233) gives the following as the average of three analyses of samples of ame made from glutinous rice: Water, 15 per cent; protein, 1.1 per cent. These figures are almost identical with those given by Furukowa. The composition of ame from ordinary rice, as given by the latter, is as follows: Water, 17.4 per cent; protein, 0.8 per cent; ether extract, 0.1 per cent; maltose, 58. 1 per cent; dextrin, 23.3 per cent, and ash, 0.3 per cent.

"Furukowa states that 'since the rice ame is rich in maltose and poor in dextrin, it has a sweeter flavor than the glutinous rice ame, the flavor of which is weaker in consonance with a similar quantity of maltose and a larger amount of dextrin in it. Since the proportion of nitrogenous matter in both kinds of ame is minute, this constituent would not readily suffer decomposition even if the ame were to be kept for a long time." Address: Director, Hokkaido Agric. Exp. Station, Sapporo, Japan.

1656. Oshima, Kintaro. 1905. A digest of Japanese investigations on the nutrition of man: Tofu (Document part). *USDA Office of Experiment Stations, Bulletin* No. 159. 224 p. See p. 26-28. [1 ref. Eng]

• ***Summary:*** "Tofu: This term is commonly translated as bean cheese–though sometimes bean curd–in English and *Bohnen-käse* in German. Tofu is not strictly equivalent to cheese, however, as neither bacteria nor ferments are involved in the process of manufacture. It consists chiefly of the albuminoid materials of the soy bean combined with magnesium and calcium salts, as pointed out by Inoue." To make tofu, soaked soybeans are ground between millstones. "The mass is then mixed with about three times its bulk of water and boiled for about an hour, after which it is filtered through a cloth. By this process about 30 per cent of the total protein of the beans is dissolved and contained in the filtrate, ready to be precipitated as tofu. The filtrate is white and opaque, somewhat resembling milk. To this is added, with constant stirring, about 2 per cent of the concentrated mother liquid [nigari] obtained in the manufacture of salt from sea water, whereupon the albuminoid material is precipitated in combination with calcium and magnesium salts." After pressing, the tofu is finally cut into cakes about 10 cm broad, 2 cm thick, and 25 cm long [about 3.9 by 0.79 by 9.8 inches], though the size varies in different localities.

"The residue from the boiled and filtered beans is known as kara [okara], or tofu cake, and contains a large quantity of protein and carbohydrates. It is a good food material, being used considerably by poor people as an ingredient of miso soup.

"If the milky filtrate mentioned above is boiled, a sort of film forms on the surface. This film, which consists mainly of coagulated albuminoids and fat, is sometimes prepared in large quantity, and when dried is used as an article of food, being known as yuba.

"Tofu is generally prepared every day and is eaten in the fresh condition simply with a little shoyu, though it is also frequently cooked in shoyu or in miso soup. Fried tofu, called abura-age, is also a very popular article of food. Rape-seed oil is generally used in frying, though sesame oil is sometimes used.

Note. This is the earliest English-language document seen (May 2012) that uses the word "abura-age" to refer to fried tofu or to deep-fried tofu pouches.

"Tofu may also be prepared for preservation and transportation. For this purpose it is cut into smaller pieces and exposed to severe cold weather, to remove the water by freezing, and then dried in an oven. As thus prepared it can be preserved for several years. When the tofu is frozen the water collects in fine needles of ice distributed throughout the mass. When the ice melts and the water runs out, it leaves the tofu porous and it may be easily dried. If it is not frozen, it is difficult to dry it and the resulting material is dense and horn like."

Table 2 (p. 28) gives the average composition of the

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above-mentioned tofu preparations: "Fresh tofu, frozen tofu, fried tofu, tofu cake [okara], yuba."

The digestibility of the nutrients in tofu has been found to be high, as will be seen from the results of digestion experiments summarized later (p. 191). As much as 95 per cent of the protein is digested and about the same proportion of fat. The carbohydrates were found to be somewhat less digestible when the tofu was eaten alone, but when it was eaten with rice about 99 per cent of the total carbohydrates of the diet was digested.

"Both the composition and the digestibility of tofu, therefore, prove it to be a very nutritious food material. This is extremely significant, because tofu in its various forms is used very extensively by all classes of Japanese. In the interior of the country, where fish can not be easily obtained, it is a most important source of protein. For Buddhist priests, as well as the strict adherents to Buddhism (who eat no animal food), it forms a very popular and almost indispensable dietary article. Though no authentic record has been found regarding the manufacture of tofu in Japan, it is believed on good authority that the method was first introduced from China by Buddhists for their own use." Address: Director, Hokkaido Agric. Exp. Station, Sapporo, Japan.

1657. Oshima, Kintaro. 1905. A digest of Japanese investigations on the nutrition of man: Shoyu (Document part). *USDA Office of Experiment Stations, Bulletin* No. 159. 224 p. See p. 30-33. [1 ref. Eng]

• ***Summary:*** "Shoyu, or 'soy sauce,' is a dark-brown, moderately thick liquid very popular for use in cooking, and as a relish or condiment to increase the flavor and palatability of the diet. In odor and taste it is not unlike a good quality of beef extract. It is prepared from a mixture of soy beans, wheat (or sometimes barley), salt, and water by long-continued fermentation. For the preparation of shoyu a large and late variety of soy bean, that is rich in protein, is usually recommended. The varieties especially adapted to this purpose are called shoyu beans. The western name 'soy bean' for all varieties of *Glycine hispida* very probably owes its origin to his fact.

Note 1. This is the earliest English-language document seen (April 2012) that uses the term "shoyu beans" to refer to soybeans used to make shoyu (Japanese-style soy sauce). / "As shown by the average for five years (1887-1891), the annual production of shoyu in Japan, so far as statistics could be obtained, amounted to 221,000,000 liters. A small portion of the total product is exported, but this is more than counterbalanced by what is manufactured privately in rural districts and not included in the statistics quoted. It may be inferred from these figures that the yearly consumption per capita amounts to not less than 5 liters. It is generally estimated, however, on good authority, that the annual consumption per adult is 9 to 10 liters. In the average of 28 dietary studies included in the present compilation, 36 grams of shoyu were used per man per day, an amount equivalent to nearly 11 liters per annum, which is in agreement with the higher estimate quoted above.

"The term 'hishiwo' [hishio], which is considered as applying to a crude from of shoyu made without filtering, is found in a Japanese record dating from the early part of the eighth century. The manufacture of shoyu in its present form originated much later, probably in the sixteenth century, and has been gradually brought to the improved form of the present day."

A detailed description is then given of the process for making shoyu and "shoyu-koji." "When the saline solution is cooled to the temperature of the air, the koji is added and the mixture well stirred. This material is kept in casks and allowed to ferment. It is stirred from time to time, the stirring being at more frequent intervals as the process of fermentation advances. The fermentation is allowed to continue usually one to two years, though often as long as five years. It is believed that the longer the period of fermentation the better the quality of the product, other things being equal. When the fermentation is completed, the mass is filtered and pressed and the filtrate is allowed to settle two to three days. The clear supernatant liquid is then removed and heated to 70° to 100°C. in a double boiler 2 to 3 hours, after which it may be kept for a long time. To improve the taste, it is usual to add a certain quantity of sugar or sweet sake during the heating process."

Note 2. This is the earliest English-language document seen (April 2012) that uses the term "shoyu-koji" to refer to koji used to make shoyu (Japanese-style soy sauce).

Also discusses: The chemical composition of 3 samples of shoyu. The effect of fermentation, including "proteolytic ferments," "the diastatic fermentation" (which produces glucose), and the alcoholic fermentation.

"The vegetable diet of the Japanese people at large is more or less monotonous, hence the value of these preparations [miso and shoyu]. Indeed, the variety which they afford as food adjuncts can hardly be overestimated." Address: Director, Hokkaido Agric. Exp. Station, Sapporo, Japan.

1658. Plaut, Hermann. 1905. Japanese conversation-grammar: With numerous reading lessons and dialogues. Heidelberg, Germany: Julius Groos; New York & Washington, DC: Brentano's. viii + 391 p. See p. 111-13. [Eng; Jap]

• ***Summary:*** Words (p. 111): "*misoshiru*–a soup made with miso, a kind of bean-sauce." "*nimame*–boiled [soy] beans." "*teriyaki*–meat or fish baked with shôyu."

Page 113. "15. Reading Lesson. *Nihon no shokuji.*" "teriyaki unagi."

Note: This is the 2nd earliest English-language document seen (Nov. 2009) that contains the word "teriyaki."

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It does not contains the term "teriyaki sauce." The word and the definition are both in English; the book is in English with Japanese lessons and words. Address: Berlin, Germany.

1659. Sakura-fu Co. 1905. Sakura-fu Co. (Ad). In: Nichibei Shinbun-sha. 1905. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Unnumbered page. [Jap: eng]
• ***Summary:*** Ad (½ page). The central ¼ is in English. This trading company sells various goods including shoyu, miso, and shiro / white sake (*shiro-zake*) and sake. They are also a shipping company.

A full-page ad in the 1908 yearbook states: "Sakura-fu Shôkai. Direct importers of all kinds of provisions. KSK. 1014–1016–1018 3rd St., Sacramento, California. Tel. Sunset Vale 1566." They also sell retail. They still sell miso and shoyu, but shiro sake / white sake is not mentioned. Address: 1014 Third St., Sacramento, California. Phone: Vale 1566.

1660. Tuck Wo. Co. (Tokuwago Shoten). 1905. Tuck Wo. Co. (Tokuwago Shoten) (Ad). In: Nichibei Shinbun-sha. 1905. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Unnumbered page in the block of ads after Directory p. 28. [Jap; eng]
• ***Summary:*** Ad (¼-page). This company sell various goods including shoyu and miso. The company name and address are in given in both English and Chinese. This ad (which appears to be for a Chinese-owned company) also appears in the 1906 yearbook, and in the 1907 yearbook (near the end, p. 36). Address: 33 Cleveland Ave., San Jose, California. Phone: James 3821.

1661. Favre, Joseph. 1905? Dictionnaire universel de cuisine pratique: encyclopédie illustrée d'hygiène alimentaire: modification de l'homme par l'alimentation. Edition 2. 4 vols. [Universal dictionary of practical cuisine: Illustrated encyclopedia of food hygiene. Modification of humans by food. 2nd ed. 4 vol.]. Paris, France: Published by the author. Undated. [1 ref. Fre]
• ***Summary:*** The entry for Soja (p. 1811) has the following contents: About the plant: Chemical analysis (by M. Léon Padé), culinary uses. Soy sauce: Formula No. 5,145, basic description. Tofu (*Fromage de Soja*): Formula No. 5,148, basic description, remarks.

Masculine noun. Pronounced "so-ya" (*Soja hispida platycarpa*). A plant of the legume family, also called *pois oléagineux de la Chine* ("oil pea of China").

Pierre Poivre, who visited the Indies in 1750, tells us in his work *Voyage d'un Philosophe* of a species of phaseolus called *pois du Cap*–which is probably not related to the soybean. Nevertheless, an illustration (not original) shows a soybean plant.

A table gives a chemical analysis of soybean seeds by M. Léon Padé.

Culinary uses: Mentions soy flour, dried frozen tofu (kôri tô-fu), tofu, soy sauce.

Recipe for making soy sauce (Sauce soya, Formula 5,147–apparently located elsewhere in the book) using fresh soybeans. Recipe for making tofu (Fromage de Soja, Formula 5,148) also from fresh soybeans.

Joseph Favre lived 1849-1903. Address: 11 rue Guénégaud (near le Pont-Neuf), Paris.

1662. The Times cook book–No. 2: 957 cooking and other recipes by California women... Brought out by the 1905 series of prize recipe contests in the Los Angeles Times. 1905? Los Angeles, California: The Times-Mirror Company. 105 p. Undated. Index. 24 cm.
• ***Summary:*** On the cover: "Los Angeles Times cook book–No. 2: One thousand toothsome cooking and other recipes including seventy-nine old-time California, Spanish and Mexican dishes–Recipes of famous pioneer Spanish settlers."

This book contains two recipes with the word "vegetarian" in the title: Cream celery soup for vegetarians (p. 14). Vegetarian salad (p. 31).

Two recipes call for peanut butter as an ingredient: Peanut soup (p. 18). Washington salad (p. 25). The recipe for Peanut butter sandwiches (from Mary Stone Welch, San Diego, California) states: "Boil peanuts until tender; remove hulls in cold water; mash. Season with butter and salt. When cold spread between slices of bread. Good for school lunch."

Peanuts are used in 20-25 recipes including: Peanut soup. Peanut butter sandwiches. Peanut cookies. Peanut kisses. Peanut brittle (2). Peanut candy (3). Candied peanuts.

Worcestershire sauce is used as an ingredient in 10 recipes. Soy is not mentioned.

Note: Starting in the late 19th century, various media companies–newspapers, magazines, radio, the movies, and TV–all got involved in publishing cookbooks. This book provides an interesting window into Southern California and its rich Mexican and Spanish heritage. The undated book is based on the 1905 recipe contests in the *Los Angeles Times* (MSU introduction). Address: Los Angeles, California.

1663. Hillman's. 1906. Purity in foods is indispensable (Ad). *Chicago Daily Tribune*. Jan. 9. p. 16.
• ***Summary:*** "Genuine imported Japanese shoyu sauce, bottle, 10¢." Address: State & Washington Sts. Phone: Private Exchange 7.

1664. *New York Times*.1906. Latest customs rulings. Chinese soy assessed on higher basis–Other decisions. Feb. 20. p. 6.
• ***Summary:*** "In a decision by Judge Somerville, the Board of General Appraisers yesterday affirmed the action of Collector Stranahan in declining to accept invoice values placed on Chinese soy, exported by Choy Chong Lung of Hongkong. The merchandise was invoiced as possessing a value of 3.06 Mexican dollars per cask, but this price was deemed too low by the Collector, who raised it to 4.56

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Mexican dollars per cask, on which basis the assessment of duty was levied."

1665. Abel, Mary Hinman. 1906. Beans, peas, and other legumes as food. *Farmers' Bulletin (USDA)* No. 121. 38 p. March 25. See p. 11-13, 18-20. Corrected. [1 ref]
• ***Summary:*** A corrected edition, one page shorter than the 1904 revised edition. On the cover, below the title is written "(Corrected March 25, 1906)," yet at the bottom of the same page the publication date is given as 1904.

The section about soy (p. 11-13) is titled "Soy bean (*Glycine hispida*) and its preparations," but the information in that section appears to be the same as in the original 1900 edition, as is the illustration of the soy bean plant (p. 12) and the table on page 19.

1666. *Otago Witness (New Zealand)*.1906. A Japanese edible plant–Udo. April 11. p. 8.
• ***Summary:*** "Washington [DC], January 9.–'Udo' is the name of a Japanese plant the Department of Agriculture is trying to introduce into the United States to compete with lettuce as a winter salad... It is tabled in all the tea houses in Japan, its crisp, blanched stems being served with salt or boiled with a soy sauce."

1667. Mann & Co. 1906. Now landing: Ex S.S. Tokomaru, from London (Ad). *Bay of Plenty Times (New Zealand)*. April 23. p. 3, col. 5.
• ***Summary:*** "Crosse & Blackwell's Fine sheet gelatine, Walnut catsup, Essence anchovies, China soy [sauce] and Fine Lucca salad oil..." Address: Auckland.

1668. *Hawera & Normanby Star (Taranaki, New Zealand)*.1906. Strange stories from American papers. April 27. p. 2.
• ***Summary:*** The section titled "Seven to die for horrible crime" begins: "A telegram from Hile [sic, Hilo], on the Island of Hawaii, says that seven Coreans [Koreans] were recently convicted of murder in the first degree in the Supreme Court." "One Corean was suspected of having stolen £10 from another, and, instead of reporting the theft to the police, the friends of the man who lost the money adopted Corean methods. The suspected Corean was chased through the cane-fields, and when captured was beaten with sticks and stones until he was exhausted. As he still refused to confess, they rubbed salt in his wounds... When this torture failed to force a confession, they rubbed Japanese soy [sauce] into the wounds, causing excruciating pain..."

1669. Eaton (T.) Co. 1906. Eaton's Friday bargain list (Ad). *Toronto Daily Star (Canada)*. May 31. p. 14.
• ***Summary:*** The section titled "Friday's pure food economy" includes: "Baird's Imported Worcestershire Sauce, 5 bottles, 25¢." Address: Toronto.

1670. Lea and Perrins. 1906. Cheese is much improved by the addition of a little Lea & Perrins' sauce (Ad). *Times (London)*. June 23. p. 11, cols. 5-6.
• ***Summary:*** "Just a small quantity on the side of your plate. Try it." At the top of this display ad is an illustration of a large cylindrical block of cheese on a plate with a pottery cover nearby. At the lower left is a large illustration of a bottle of the sauce, showing the front panel with signature. At the lower right is a royal seal, and below it the words "By Royal Warrant to H.M. The King." Address: [England].

1671. Gautier, Armand. 1906. Diet and dietetics. Edited and translated by A.J. Rice-Oxley. M.A., M.D. London: Constable & Co., Ltd. xii + 552 p. June. Illust. Index. 22 cm. [1 ref. Eng]
• ***Summary:*** This is a translation into English of *L'alimentation et les régimes: Chez l'homme sain et chez les malades*. 2nd ed. (1904).

In a multi-page table titled "Composition of the usual principal aliments with regard to their fundamental nutritive principles," the section on "Seeds of leguminosae" contains an entry (p. 118) for "Soja hispida, yellow." Much of the data comes from König 1889. The average cellulose content is 4.67%.

On page 236 we read: "Peas or beans of Soja.–This is the oily pea of China and Japan where its cultivation dates from the earliest times. Its feeble quantity of starch and its richness in albuminoids has given rise to the proposal to make bread of it for diabetics." A table shows the composition (minimum and maximum for each nutrient) according to H. Pellet (1880) and A. Balland (1903), including: Fatty matter 12.95 to 14.80%. Proteid 34.85 to 38.41. Starch, dextrin, sugar 26.74 to 32.11. Cellulose 3.60 to 6.20. Mineral matters 4.35 to 5.20. The ash is composed mainly of "phosphates of potash and magnesia, with a little calcium sulphate."

"One will notice the exceptional richness of this aliment in nitrogenous principles. Starch rises on an average in this flour to 28 per cent instead of 45 per cent in that of wheat. Unfortunately the taste of this vegetable is not very agreeable.

"In Japan the flour of Soja is mixed with cooked rice and left to ferment, and a sort of broth or sauce is thus obtained [sic] which takes the place of extract of meat."

Also discusses: Albuminoids and proteid matters (p. 8). The cellular mechanism of assimilation and of the production of vital energy (p. 101-12). Ferments [later renamed enzymes], including digestive ferments which hydrolyze and divide, figured ferments (bacteria and yeasts), ferments of hydrolysis and dehydration, oxidizing and reducing ferments, ferments of decomposition and re-composition, coagulating and liquefying ferments (p. 102-11). Lecithins (p. 110). Cholesterins (p. 111). The principal oils and fats furnished by

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vegetables (incl. olive oil, colza oil, cotton oil, oil of sweet almonds; p. 204). Margarin / margarine (p. 206-07). Gluten bread for diabetics (p. 228-29). Almonds (p. 261). Diet in diabetes mellitus (p. 453-55). Address: Professeur at the Faculty of Medicine de Paris; Member of the Institute.

1672. Lea and Perrins. 1906. Classified ad: Dinner–Soup, fish, entrées, joints, savouries, with Lea & Perrins' sauce. *Times* (*London*). July 6. p. 13, col. 6.
• ***Summary:*** To the left is a large illustration of a bottle of the sauce, showing the front panel with signature.

At the bottom right: "The original & genuine Worcestershire." Address: [England].

1673. Suzuki, Tozaburo. 1906. Process of brewing soy. *U.S. Patent* 0,825,500. July 10. 4 p. Application filed 5 July 1904.
• ***Summary:*** "Attempts have been made recently to brew soy [shoyu] in a shorter time and easier way than in the process hitherto in vogue." One approach is to heat the mash. "In my invention I prepare the mass originally with a less amount of salt than heretofore has been the custom and subject it to slow and uninterrupted stirring in tanks or receptacles exposed to moderate external heat." When the fermentation is thoroughly completed, "more salt is added to regulate the quality of the soy."

"The soy-yeast is prepared with about 5.10 bushels of barley and 5.13 bushels of soybeans, to which is added salt water prepared by adding about 2.05 to 3.6 bushels of dissolved salt to about 63.52 imperial gallons of boiling water, the quantity of salt being one-third to one-half less than in mash prepared in the usual way."

Three illustrations (line drawings) show apparatus used in the process of brewing soy sauce. Address: Sunamura, Prefecture of Tokyo, Japan.

1674. Ishizaka, S. 1906. Shôyu jôzô fukusan yubun no shiken [Analysis of the oil obtained as a by-product of shoyu fermentation]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 281. p. 589-99. July. [Jap]

1675. Duncan's (John) Sons. 1906. Lea & Perrins' sauce (Ad). *Outlook* (*The*) (*New York City*) 83(17):Unnumbered page near end of issue. Aug. 26.
• ***Summary:*** Half-page ad. "The original Worcestershire. For steaks, chops, cold meats. Fish, soups, salads, gravies, etc. The peerless seasoning." A photo shows a hand holding a bottle of Lea & Perrins' Sauce, pouring it over a large steak on a plate. Address: New York City.

1676. Yoshida, Kotaro. 1906. Shôyu no seibun ni tsuite [On the constituents of shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 294. p. 848-52. Aug. [Jap; ger]
• ***Summary:*** The author considers the art and practice of the so-called *hiire* (treatment with heat below 100°C) during shoyu production to be the most important problem or challenge as far as shoyu quality is concerned. He proposes a modified method of heat treatment, then analyzes the shoyu before and after this treatment. Address: Kagawa-ken, Japan.

1677. Lea and Perrins. 1906. Fish, hot or cold, is rendered more agreeable and appetizing by the addition of Lea & Perrins' sauce (Ad). *Times* (*London*). Sept. 15. p. 12, cols. 5-6.
• ***Summary:*** "It gives just that 'finishing touch' which makes the dish perfect." At the top of this display ad is an illustration of 3 fish on a plate. At the lower left is a large illustration of a bottle of the sauce, showing the front panel with signature. At the lower right is a royal seal, and below it the words "By Royal Warrant to H.M. The King." Address: [England].

1678. Hillman's. 1906. "A store for everybody" (Ad). *Chicago Daily Tribune*. Oct. 14. p. E12.
• ***Summary:*** Under Groceries–Teas: "Genuine imported Japan Shoyu sauce, per bottle, 5¢." Address: State & Washington Sts. Phone: Private Exchange 7.

1679. Lea and Perrins. 1906. Soups, stews and hashes are rendered tasty and appetizing by the use of Lea & Perrins' sauce (Ad). *Times* (*London*). Oct. 20. p. 7, cols. 5-6.
• ***Summary:*** "The addition of this Sauce gives the finishing touch which makes the meal perfectly enjoyable." At the top of this display ad is an illustration of a large pottery tureen, with a ladle and steam coming out the top; its cover is nearby. At the lower left is a large illustration of a bottle of the sauce, showing the front panel with signature. At the lower right is a royal seal, and below it the words "By Royal Warrant to H.M. The King." Address: [England].

1680. Lea and Perrins. 1906. Classified ad: Hot joints are much improved and rendered more appetizing if a little Lea & Perrins' sauce is added to the gravy. *Times* (*London*). Nov. 17. p. 8, cols. 5-6.
• ***Summary:*** "Lea & Perrins' Sauce is the best 'relish' for all kinds of meat, fish or game, and is a delicacy which should be on every dining table. An excellent digestive." At the top of this display ad is an illustration of a large, thick slice of roasted meat on a plate. At the lower left is a large illustration of a bottle of the sauce, showing the front panel with signature. At the lower right is a royal seal, and below it the words "By Royal Warrant to H.M. The King." Address: [England].

1681. **Product Name:** Soy sauce.
Manufacturer's Name: Hawaiian Soy Co. Ltd. (Hawaii Shoyu K.K.). Formerly named Yamakami Shoyu Jozo-sho.
Manufacturer's Address: Pua Lane near King, Honolulu.

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Oahu, Hawaii.
Date of Introduction: 1906-1909.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1909. p. 255. Hawaiian Soy Co. Ltd., W. Motoshige, president, N. Yamakami, vice president, B. Hayashi, secretary, H. Miyake, treasurer, Y. Takakua, aud. [auditor?]. Note: That year N. [Nobuyuki] Yamakami was also manager of Yamajo Soy and Sauce Manufacturing Co. Ltd., which was also on Pua Lane. 1916 Directory. Hawaiian Soy Co. Ltd., 1136 Pua Lane. Hawaii Hojin Katsuyaku-shi, Meiji 41-42 [Japanese who play an active role in Hawaii, 1908-09]. 1915. Oct. p. 39. Contains an ad for Hawaii Shoyu K.K. at King St., Pua Lane, Hawaii. Gives their production of shoyu in 1915 (Taisho 4) as 3,500 koku. Since 1 koku is 47.6 gallons or 180 liters, this is 166,600 gallons, or 630,000 liters.

F. Odo and K. Sinoto. 1985. A Pictorial History of the Japanese in Hawaii, 1885-1924. A photo (p. 166) shows the inside of the Hawaii Shoyu Co. (*Hawaii Shoyu Kaisha*) on King Street in Palama, Honolulu, taken in about 1914. The caption reads: "The Japanese is Hawaii depended upon shoyu imported from Japan until Nobuyuki Yamashiro [sic, Yamakami] started making shoyu in 1904. His company was established as Hawaii Shoyu Co. in 1906. American Shoyu Co. was established in Honolulu in 1912."

1682. Denver City Directories, Shinzaburo Mogi, and Kikkoman. 1906-1910. Colorado.
• ***Summary:*** There are no relevant listings in Denver City Directories for 1906, 1907, 1909, or 1910 for Mogi (including Shinzaburo), Kikkoman, Oriental, Sauces, Seasonings, Show-You, Shoyu, Soy, or Tatekawa. We were unable to examine the 1908 directory. Address: Denver, Colorado.

1683. *Revue de Service de l'Intendance Militaire (France)*.1906. La cuisson des aliments dans l'armée japonaise [Cooking of foods in the Japanese army (Abstract)]. 19:202-03. [1 ref. Fre]
• ***Summary:*** A French-language summary of a French-language article with the title shown above, published in: *La France militaire*, 27 July 1905.

1684. Aoki (George) & Co. 1906. Geo. Aoki & Co. (Ad). In: Nichibei Shinbun-sha. 1906. *Zaibei Nihonjin Nenkan [Japanese-American Yearbook]*. Unnumbered page near the front. [Jap; eng]
• ***Summary:*** Ad (full page). This company imports various goods including (exclusively) shoyu made by Nakayama Kankichi and Oota Kyusuke. An illustration shows a sack of "Choice Japan Table Rice No. 1, 100 lb, from Japan." Address: 437-439 DuPont St., San Francisco, California. Phone: Bush 865.

1685. Dampier, William. 1906. Dampier's voyages: Consisting of a new voyage round the world, a supplement to the voyage round the world,... Edited by John Masefield. 2 vols. London: E. Grant Richards. Portrait. See vol. I, p. 580.
• ***Summary:*** The following passage appears in the chapter titled "The Voyage to Tonquin from Achin in Sumatra" (p. 557-612). "Year 1688. The Nuke-mum [nuoc-mam, fish sauce] is of a pale brown colour, inclining to grey; and pretty clear. It is also very savory and used as a good Sauce for Fowls, not only by the Natives, but also by many Europeans who esteem it equal with Soy. I have been told that Soy is made partly with a fishy Composition, and it seems most likely by the Taste: tho' a Gentleman of my Acquaintance, who was very intimate with one that sailed often from Tonquin to Japan, from whence the true Soy comes, told me that it was made only with Wheat, and a sort of Beans mixt with Water and Salt."

Captain William Dampier, an Englishman, lived 1652-1715. Address: Capt., London.

1686. Loew, O. 1906. Ueber einige sonderbare japanische Nahrungsmittel [On some special Japanese foods]. *Mitteilungen der Deutschen Gesellschaft fuer Natur- und Voelkerkunde Ostasiens* 11(1):109-11. [Ger]
• ***Summary:*** Prof. O. Loew includes a discussion of tofu, soymilk, yuba, and shoyu (*shôyû-sauce*). On the coasts of Japan there were fresh seafish, and in the inland regions some salted fish were used. People have learned how to prepare wheat gluten (*Jap: fu; German: Weizenkleber*) in various dried forms, which are very porous and easily digested. The protein of the soybean, under the name of tofu (*Tôfu*), comes in the form of soft white cakes and is prepared daily. It is sold from door to door by salespeople.

The cooking of the softened soybeans, before the precipitation of the tofu, has a very milklike consistency. Without doubt, it is similar in nutritional value to milk but it can be recommended only for adults, and not for sensitive infants. "When this soybean milk (*Soyabohnenmilch*) mixed with some gelatine [sic] is simmered down, and while in a concentrated condition the mixture is poured into flat, level containers, there results from the drying of the gelatinous mass thin skins, which are sold under the name of yuba."

Note 1. This is the earliest German-language document seen (Oct. 2003) that uses the term *Soyabohnenmilch* ("soybean milk") to refer to soymilk.

Note 2. The date on the title page is given as 1907-09. The place of publication has now changed to Tokyo. Address: Prof. of Agricultural Chemistry, Imperial University, Tokyo, Japan.

1687. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1906. Zaibei Nihonjin nenkan [Japanese-American yearbook. No. 2]. 234 Turk St., San Francisco, California. 345 p., many unnumbered. Reprinted in 25 Oct. 2001 in Tokyo by Nihon

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Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 1-kai [Collected Documents on Japanese Emigration. No. 1]. [Jap; eng]

• ***Summary:*** This book is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. There is an English-language title page.

The book is composed of: 4 unnumbered pages of front matter, 4 unnumbered leaves of black and white photos (mostly of San Francisco) on glossy paper, 20 unnumbered pages of ads and basic information, of which the 4th to last page is why and how they wrote this book (they got a lot of help from people in various areas to gather data, although no names or places are given), and of which the last two pages are the table of contents, 224 numbered pages which are the body of the book, 44 unnumbered pages of ads, 59 pages of directory interspersed with 50 pages of ads in groups of either 16 or 32 pages.

There is a tofu shop in San Francisco (p. 183, bottom right) and a shoyu (soy sauce) maker in San Jose (p. 189, top right); last year Yamamori Shoyu Jozo-sho made 1,000 koku of shoyu. Note: 1 *koku* = 10 *sho* = 180 liters. Therefore the company made 180,000 liters of shoyu. Since 1 liter = 0.264 gallons, this is 47,520 gallons of shoyu.

There is 1 tofu shop in Florin (p. 203, top right) and two tofu shops in Isleton (p. 204, top right).

The Directory shows Japanese companies making soyfoods in California and Washington state. It is preceded by an index of the Directory. Address: San Francisco, California.

1688. Senft, Emanuel. 1906. Ueber einige in Japan verwendete vegetabilische Nahrungsmittel, mit besonderer Beruecksichtigung der japanischen Militaerkonserven [On some vegetable foods used in Japan, with special attention to Japanese military canned foods]. *Pharmazeutische Praxis* 5(12):481-91. [5 ref. Ger]

• ***Summary:*** Working for the German Food Administration, the author examined a number of preserved foods that had played an important role in helping Japan to win the Russo-Japanese war. He drew heavily on Loew (1895). "Widely distributed in Japan is a unique baked good, which is produced primarily from wheat gluten with only a little of wheat flour; it is called *Fu* (wheat gluten bread).

"A very important role is played by the soybean and the many diverse products made from it: Yuba, the vegetable cheeses tofu, natto, and miso, plus shoyu or soy-sauce (*Shoju oder Soy-Sauce*). Like the soybean, tofu and natto are rich in protein. They supply the protein lacking in rice."

Also discusses fresh konnyaku, dried-frozen konnyaku, dried persimmons, sea vegetables (12 types in great detail, with an illustration of the cells of a kombu plant), and warabi (dried ferns). Address: Official of military medicines, Committee of military hygiene.

1689. Stuerler, F.A. von. 1906. Nederlandsch Oost-Indische cultuurgewassen: Hunne kenmerken, teelt en bereiding [Crops of the Dutch East Indies: Their characteristics, cultivation and preparation]. Tiel: A. van Loon. ii + 373 p. See p. 341-43. Illust. Index. 25 cm. [5 ref. Dut]

• ***Summary:*** The subsection on the hibiscus plant (*De Warre-boom, Hibiscus tiliaceus*, p. 334) states that the leaves are used in making foods from soybeans [tempeh].

In the chapter on crops that yield oils and fats (*Vette oliegewassen*, p. 335-44), the section titled "Soja" (p. 341-43) has the following contents: General botanical characteristics: Introduction, the plant, stem, leaves, flowers, fruit, seeds. Cultivation. Chemical composition of the seeds, preparation, and uses.

The main product made with soybeans is soy sauce (*kètjap*). The Chinese in Java cook the soybeans and inoculate them between hibiscus leaves (*Hibiscus tiliaceceus*) to make tempeh (*tèmpé*). They also make *taotjo*, a sort of bean paste (Indonesian-style miso). And with the black soybeans they make a sort of bean cheese, taodjie (fermented black soybeans). Also discusses peanuts (*aardnooten*, p. 335-37), sesame seeds (*sesam*, p. 337-39), the castor oil plant (*ricinus*, p. 339-41), other crops that yield oils and fats (p. 343-44).

Note: This is the earliest document seen (Sept. 2011) stating that molds grown on Hibiscus leaves are used in Indonesia to inoculate tempeh. Address: Leiden.

1690. Takemoto Shoten. 1906. Takemoto Shoten (Ad). In: Nichibei Shinbun-sha. 1906. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Unnumbered page near the front. [Jap]

• ***Summary:*** Ad (full page). In big Chinese characters the ad says "New Year's Greetings." They sell various goods including miso and shoyu. A small illustration shows some bamboo leaves, with snow on them and a little bird flying. Address: P.O. Box 332, Gilroy, California. Phone: Main 334.

1691. Teikoku Shokai. 1906. Teikoku Shokai (Ad). In: Nichibei Shinbun-sha. 1906. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Unnumbered page near the front. [Jap]

• ***Summary:*** Ad (full page). This company, owned by USHIO Mankichi and KUBO Sakujiro, imports various goods directly including miso and shoyu. An illustration shows two crossed flags; one is the flag of Japan. Address: 802 Stockton St., San Francisco, California. Phone: Main 5556.

1692. Woenne (W.M.). 1906. W.M. Woenne (Ad). In: Nichibei Shinbun-sha. 1906. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Unnumbered page near the front. [Jap; eng]

• ***Summary:*** Ad (half page). In big Chinese characters the ad

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says "Happy New Year." They sell various goods including miso and shoyu. Address: Mt. Eden, Alameda, California.

1693. Meyer, Frank N. 1907. Re: Manchuria, sprouting small green beans. In: Letters of Frank N. Meyer. 4 vols. Compiled by Bureau of Plant Introduction, USDA. 2444 p. Typed.
• ***Summary:*** Meyer wrote this letters from Newchwang, Manchuria, to David Fairchild at USDA in Washington, DC.

Page 310-11 (28 Jan. 1907). He made a hurried trip from Mukden to Liaoyang and from there to Newchwang. "If you find the opportunity, I wish you would take a part of No. 719a, those small green beans [probably mung beans], and make a sprouting test with them. The Chinese way of letting them germinate and sprout is this. They take an earthen jar, pour the beans in it, take luke warm water and pour that over the beans. Then put the jar in a warm place and let the beans germinate, refreshing the water every twenty-four hours. After these beans have made short roots, they pour them out in wickerwork or reed-woven baskets and keep them in a warm, dark place again, taking care not to let them shrivel from want of moisture or of warmth, by sprinkling them several times a day with warm water and keeping moist cloth [sic] over the baskets to prevent cold air from injuring them. After the sprouts are about 1½ inches long they are fit for human consumption and they are hawked out in the streets, being sold by weight.

"Now the most favorite way of eating them seems to be this: lean pork is cut in small pieces, is fried with care, then when it is nearly ready the bean sprouts are thrown into the pan and the pork and sprouts are turned a few times only; then at once it is thrown on the dishes and is ready for the table. When putting a little vinegar or some soy sauce over it, the taste is highly improved and I consider it one of the most palatable dishes.

"Another was of serving which is more patrician is as follows: The sprouts at a length of 1½ to 2 inches are freed from their roots and seed lobes by means of cutting or clipping them off. Then some cold pork or cold veal is cut in long strips, only a few lines broad, the beans are steeped in boiling water for a few minutes only, taken out and mixed with the meat and by putting some salt, pepper, oil and vinegar over it one obtains an excellent salad." Address: USDA Plant Explorer, China.

1694. *Otago Witness* (*New Zealand*).1907. Notes and queries. Feb. 20. p. 47.
• ***Summary:*** "Inquirer.–To make Worcestershire sauce mix together 1½ gallons white wine vinegar, 1 gallon walnut catsup, 1 gallon mushroom catsup, ½ gallon Maderia [Madeira] wine, ½ gallon Canton soy [sauce; from China], 2½ pounds moist sugar, 19 ounces salt, 3 ounces powdered capsicum, 1½ ounces each of pimento and coriander, 1½ ounces chutney, 3/4 ounce each of cloves mace and cinnamon, and 6½ drams of assafoetida [asafoetida] dissolved in 1 pint brandy 20 above proof. Boil 2 pounds hog's liver for 12 hours in 1 gallon of water, adding water as required to keep the quantity; then mix the boiled liver thoroughly with the water; strain it through a coarse sieve. Add this to the sauce."

Note: This recipe for Worcestershire sauce contains soy sauce (Canton soy) as an ingredient.

1695. *New York Times*.1907. Latest customs rulings. Government defeated in Chinese soy case–Other decisions. Feb. 24. p. 15.
• ***Summary:*** "In a decision by Judge Waite the Board of United States General Appraisers suspended yesterday a claim filed by Wo On & Co. of New York regarding the customs classification of Chinese soy, it being held that the article was not a 'sauce' as claimed by the Government but is to be considered as an unenumerated manufactured article within the meaning of the Dingley tariff.

"The soy, which is used by the Chinese and in American restaurants for flavoring purposes, was assessed for duty at the rate of 40 per cent., whereas the importers maintained 20 per cent. as equitable. Some time ago the Government was defeated in an attempt to assess the higher duty on the merchandise, but as large quantities of the soy are brought annually to this country, the Treasury Department concluded to make a new test...."

1696. *Bulletin of the Imperial Institute* (*London*).1907. Utilisation of the soy bean. 5(1):86-87. [2 ref]
• ***Summary:*** "The plant yielding the "soy bean" (*Glycine soja*) has of late received much attention at the hands of agriculturists in tropical countries on account of its value as a green manure. The bean itself has long been employed in the East as a vegetable and food-stuff, and has been imported in large quantities into European countries, principally for use as a feeding-stuff for animals. It is also an important ingredient in Indian soy, which forms the basis of chutney. More recently the introduction of the extraction of cheaper methods for the extraction of fixed oils by the use of solvents has made it possible to utilise such materials as the soy bean, which contains only 10 per cent. of fixed oil, as a source of oil, and considerable quantities are now used in the United Kingdom in this way." Note: This is the earliest English-language document seen (March 2003) that uses the term "solvents" (or "solvent") in connection with the crushing of soybeans to give oil and meal.

Also discusses briefly the preparation of soymilk and tofu in Japan.

1697. Suzuki, Tozaburo. 1907. Apparatus for brewing soy. *British Patent* 9,995. 5 p. Date of application, 30 April 1907. Accepted 3 Oct. 1907. 3 drawings.
• ***Summary:*** "This invention relates to improvements in apparatus for brewing soy... The object of this improvement

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is to provide auxiliary means for quickly changing the temperature of the tanks, said means being also adapted to act as a substitute for the closed chamber for effecting or giving the contents of the tanks a uniform temperature and also acting if desired in conjunction with said chamber for regulating the temperature of said tanks. In the brewing of soy the question of temperature is very important..."

"The novelty of this invention consists in combining with an apparatus, comprising a brewing tank, means for applying a constant temperature thereto, and means for constantly stirring the contents of the tank, an auxiliary means or arrangement whereby the temperature of the contents of the tank may be quickly changed."

Four illustrations depict the apparatus. Address: No. 401 Jibeishinden, Sunamura, Minami-Katsushika, Tokio [Tokyo], Japan.

1698. Suzuki, Tozaburo. 1907. Appareil pour brasser la sauce dite Soy [Apparatus for brewing soy sauce]. *French Patent* 377,294. April 30. 5 p. Application filed 6 July 1907. 4 drawings. [Fre]
Address: Japan.

1699. Inomata, Yoshio. 1907. Shôyu ni hitaseru pesto nezumi shikabane chû pesto kin no unmei ni tsuite [On the fate of pest bacillus and pest bacillus in the corpse of a rat (killed by the bacillus) which was soaked in shoyu]. *Saikingaku Zasshi* (*Bacteriology*) No. 142. p. 576-83. April. [Jap]
Address: Wakayama-ken Dai Yon-bu Saikinshitsu.

1700. Suzuki, Umetaro; Aso, Keijiro; Mitarai, Harukichi. 1907. Shôyu no seibun ni tsuite [On the constituents of soy-sauce]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 28(4):363-407. April. [2 ref. Jap]
• ***Summary:*** An analysis of the chemical composition of Japanese soy sauce. It is very difficult to isolate the various protein decomposition products and to understand the complex chemical changes that occur during shoyu fermentation. Tables show the composition of both soybeans and wheat. Address: 1-2. Nôgaku-shi, Japan.

1701. Saito, K. 1907. Mikrobiologische Studien ueber die Sojabereitung [Microbiological studies on the brewing of Japanese shoyu]. *Wochenschrift fuer Brauerei* 24(24):323-24. June 15. [1 ref. Ger]
• ***Summary:*** This is a summary of an article in *Zentralblatt für Bakteriologie* II. 17. p. 20-27, 101-09, 152-61 (1907). Address: Aus dem pflanzenphysiologischen Laboratorium des Botanischen Instituts der Kaiserlichen Universitaet zu Tokio (Tokyo Univ.).

1702. *Toronto Daily Star* (*Ontario, Canada*).1907. Everywoman's column. July 2. p. 17.
• ***Summary:*** A discussion of making tasty sandwiches. "Peanut butter, dates, and chopped nuts, bananas and crushed strawberries or strawberries are other fillings that meet with favor, and may suggest still others." "Worcester sauce" is also mentioned as a filling ingredient.

Note: This is the earliest document seen (Dec. 2009) in the *Toronto Star* that mentions "peanut butter."

1703. Suzuki, U.; Aso, K.; Mitarai, H. 1907. Ueber die chemische Zusammensetzung der japanischen Soja-Sauce oder "Schoyu." [On the chemical composition of Japanese soy sauce or shoyu]. *Bulletin of the College of Agriculture, Tokyo Imperial University* 7(4):477-94. July. (Exp. Station Record 16:966). [2 ref. Ger]
• ***Summary:*** The koji for shoyu is made with the spores of *Aspergillus oryzae;* it is left in a room at 30-40°C for 3 days. The shoyu is allowed to ferment for 1-3 years.

From 2 liters of shoyu were isolated: alanine 1.6 gm + 5.0 gm impure alanine. Leucine 6.0. Proline 3.0. Lysine 2.6. New base #1 1.0. New base #2 0.2 Ammonia 4.2. Proteins 5.4 (by calculation). Formic acids (*Ameisensaeure*) 0.1. Acetic acid 0.40. Lactic acid 3.20. Also present were: Tyrosine, asparagin acid, polypeptides, phenylalanine (*Phenylalanin*), cystine. Not found were: Glycocoll, histidine, arginine, serine, *Aminoisovaleriansäure ?*, glutamin acid? (*Glutaminsäure ?*) (p. 493-94).

1704. *New York Times*.1907. Here is a Japanese bill of fare: Prof. Chittenden shows value of simple diet used in Japan. Aug. 11. p. SM5.
• ***Summary:*** A typical bill of fare of a Japanese family in moderate circumstances includes: "Breakfast (from 7 to 7:30 A.M.)–Miso soup with vegetables. Boiled rice, pickles, and tea. Sometimes raw egg or boiled sweet soya beans or natto.

"Lunch (12 noon)–Fish boiled in soya. Vegetables stewed in soya. Boiled rice, pickles, tea.

"Supper (from 6 to 6:30)–Soya soup. Vegetables. Raw fish sliced, eaten with soya sauce..."

"The miso, soya sauce, and topi [sic, tofu] are all products of the soya bean, on which, with rice, the Japanese physique may be said to be built up." "Rice is the main foodstuff, with the soya bean a close second."

Prof. Chittenden of Yale University notes that Japan's "exploits in war have recently attracted the attention of the civilized world." Yet the great majority of Japanese have "remained untouched by the prodigality of Western civilization." Their "habits and customs still bear the imprint of simplicity and frugality."

Since Japan defeated Russia in war, many observers have noted that "the people of no other nation... have greater powers of physical endurance, or greater bodily strength and agility..."

1705. Fair (The). 1907. The Fair (Ad). *Chicago Daily Tribune*. Sept. 29. p. D11.

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• ***Summary:*** "Groceries: Catsup–Snider's, per half pint bottle, 12¢... India Soy Sauce–per half pint bottle, 10¢. C. & B. [Crosse & Blackwell's] John Bull's Sauce–½ pint bottle, 15¢.

"Established 1875 by E.J. Lehman." Address: State-Adams and Dearborn Streets. Phone: Private exchange 3.

1706. *Sydney Mail* (*Australia*).1907. Answers to correspondents. Oct. 16. p. 23.
• ***Summary:*** Gwen.–1... A recipe for homemade Worcestershire includes "a gill of Indian soy [sauce]."

1707. Bloch, A. [Armand-Aron]. 1907. Le soja. Sa culture, sa composition, son emploi en médecine et dans l'alimentation [The soybean. Its culture, its composition, its use in medicine and in food]. *Bulletin des Sciences Pharmacologiques* (*Paris*) 14:536-51. Sept.; 14:593-606. Oct. [46 ref. Fre]
• ***Summary:*** A review of the literature drawing heavily on Egasse (1888), Trimble (1896 and 1897), and Williams & Langworthy (1897, revised 1899), and including many others. Contents: Introduction (mainly a long history of the soybean worldwide, with emphasis on Europe). Chemical composition of the soybean. Chemical composition of the soybean plant.

Part II: Preparation of shoyu. Preparation of miso. Natto. Preparation of tao-yu ([Chinese-style soy sauce] a condiment made with black soybeans, hibiscus leaves, and *Aspergillus Wentii* mold) and tuong. Tofu and yuba. Other soyfoods, incl. soy coffee.

"We are presently looking everywhere for ways of giving economic value to our colonies. It seemed interesting to me to draw attention to the soybean, the Chinese bean (*le Soja, Haricot chinois*) which contributes a large part of the food of the people in China, Japan, and the Far East. Already in use in Indochina, tested in Europe with success then abandoned for no apparent reason, the soybean could acclimatize itself in other colonies of ours, particularly in Madagascar, and perhaps in certain of our African possessions, and therefore could contribute to increasing their riches and the well being of their indigenous peoples."

Soy oil "can be extracted partially by pressure or completely by ether or petroleum ether. It is yellowish red with a not particularly disagreeable odor."

Mr. Lailleux, a former intern at the hospital in Algiers, has reported that a certain number of diabetic Arabs under treatment at the hospital of Dey, in Algiers [Algeria], have been helped by a dietary regimen based on soybean pap.

Note: This is the earliest document seen (Aug. 2009) concerning soybeans in connection with (but not yet in) Madagascar. Address: Pharmacist major 2nd class of the colonial troops. Doctor of pharmacy.

1708. *Chicago Daily Tribune*.1907. Recent notes of science. Dec. 12. p. 8.
• ***Summary:*** In China: "Pickled eggs are preserved with a compound of common mud, salt, saltpeter, and soy bean sauce."

Note: This is the English-language document seen (April 2012) that uses the term "soy bean sauce" (regardless of capitalization or hyphenation) to refer to soy sauce.

1709. Suzuki, Tozaburo. 1907. Apparatus for brewing soy. *U.S. Patent* 0,874,041. Dec. 17. 5 p. Application filed 18 July 1907.
• ***Summary:*** In this invention, several tanks were "sunk into a closed chamber wherein means were provided for regulating the temperature. Stirring apparatus was provided for effecting continuous and uniform agitation of he contents of the tanks."

"A further utility of the invention consists in providing means whereby hot water or a like heating medium may be directed through the auxiliary means to facilitate and hasten first maturing by heating the mash and whereby after the first maturing is complete cold water or a like cooling medium may be circulated through the auxiliary means to complete second maturing of the soy."

Four illustrations depict the apparatus. Address: Sunamura, Japan.

1710. Ruata, Guido; Testoni, Giuseppe. 1907. La soia nell'alimentazione italiana [Soy in the Italian diet]. *Ministero d'Agricoltura, Industria e Commercio. Bollettino Ufficiale* 6(6):698-718. Dec. 18. (Chem. Abst. 2:864). [35 ref. Ita]
• ***Summary:*** Contents: Introduction. Description of the soybean. Cultivation and its history in Europe. Harvest and yield. Nutritional value of the soybean: Tables show analyses according to König (10 tables), to Balland (1 table analyzing 3 varieties, from Cambodia [Exposition of 1900], from Cochin China, and from Tonkin), to Gautier (1 table), to Maurel (1 table), and to Lechartier and Joulie (from Grandeau 1903, analyzing 3 varieties, from Etampes, black soybean, and yellow soybean–all grown in France; each either as is or dry). Tables of nutritional analyses by Ruata & Testoni (includes the weight of 1,000 seeds for each variety): I. Black soybean, from Vilmorin-Andrieux of Paris, France; from Dammann & Co. [seedsmen] of Naples (Italy); and from the Inst. of Hygiene of Bologna, Italy. II. Giant Yellow, from Etampes (Pinolini), from Naples (Dammann), from Bohemia (*Boemia*–Ingegnoli); III. Small yellow soybean (from Dammann in Naples). IV. Green soybean (from Dammann). V. Brown soybean (from Dammann). The authors believe the Giant Yellow soybean is best adapted to Italian conditions. The analysis of the variety from Naples is as follows: Weight of 1,000 seeds: 205 gm. Water 9.80%. Albuminoids 37.13% (*albuminoidi*, protein) Carbohydrates 24.40%. Fat 18.36%. Lecithin 1.62%. Crude fiber 4.47%. Ash: 4.30%.

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Preparation of soybeans (detailed descriptions and nutritional analyses): The whole seeds, miso (*Il miso*), tofu (*To-Fu* or *to-fu*), shoyu (fermented; made with koji), soy flour and bread (*farina e pane di soia*, incl. experiments by Brugia, and Rimini), soy polenta. Conclusions.

Three non-original illustrations (line drawings; between p. 700 and 701) show three different full-size views of the Soja plant, including: (1) Plant with roots. (2) Stem, leaves and pods. (3) Stem and pods (Original from Pinolini 1905).

Several bar charts (following p. 712) give nutritional composition comparisons of 12 staple foods, mainly legumes, cereal grains, dairy products, and meat: Fig. 2–Albuminoids (protein content); soya is the highest with 37.13%. Fig. 3–Carbohydrate content. Fig. 4–Fat content; soya is highest with 18.36%. Fig. 5–Salt (*Sali*).

Other tables show: (1–p. 701): For four soybean varieties, weight of 100 liters in kg and number of seeds per kg. Soia d'Etampes yellow 72 / 7,400. Black soybean from Podolia 74.5 / 7,400. Yellow soybean 72.5 / 8,550. Black soybean 73 / 12,200. Note that the black soybean has by far the smallest seeds.

Selected translations of the text: The first part of the article discusses dietary problems in Italy, especially pellagra, a skin disease caused by deficiencies in protein and niacin. One of the causes seems to be the consumption of corn, especially spoiled corn (*maiz guasto*) (p. 699-700). The authors are interested in studying the soybean as a potential new food for Italy, based on the examples from other countries where it has been consumed for a long time and where corn is unknown or almost unknown. They want to take the initiative in getting the best possible advantage from the introduction of soybeans as an Italian food (p. 700). In Italy the varieties which grow well are the early black, the yellow, the brown, the green, and the giant yellow; the latter is similar to the variety Soya Etampes, which has been acclimatized in France (p. 701). History in Italy: According to Pinolini, the soybean made its appearance around 1840, and has been cultivated with success around Verona, along the Lombard coast of Lake Maggiore, and near Mantua and Lucca (Mantova and Lucchese). As far as we know, it either was cultivated or is still cultivated in Liguria, Friuli, the Marches, and Emilia. Around Naples, it is especially cultivated in San Giovanni a Teduccio, under the care of Dammann & Co., a seed company (p. 702).

In the year 1906 in a field annexed to the Institute of Hygiene, we conducted experimental cultivation of soybeans, sowing the black variety from Podolia, sent to us by the Vilmorin-Andrieux, a seed company in Paris. A similar experiment was carried out on a larger expanse of land, at the same time as ours and with the same seeds, by Dr. Ignazio Buldrini at his farm near Bologna. The land at the Institute of Hygiene, being rather rich in humus, was fertilized with phosphate fertilizer at the rate of 500 kg/ha and potassium sulfate at the rate of 100 kg/ha. Dr. Buldrini's land, well supplied with potassium and phosphoric anhydride,... was fertilized with plenty of manure. The seed was planted on both fields in early May. The vegetation developed regularly and in August we obtained a harvest that yielded 1,500 kg/ha of seeds reaching perfect maturation (p. 703).

Brugia (1902) has conducted numerous experiments in baking with soy flour, and here is what he writes about it: "It is necessary to find an inexpensive food with great nutritional value for the poor farmers and rural people. It would be ideal to be able to make bread from soybean flour, thus creating a food that would be physiologically balanced and complete." He first tried mixing soy flour with wheat flour in the proportions 50/50 and 30/60, but the results were unfavorable. Then they tried using brewer's yeast in the process and had very good results, except that the price was a little high. It was then necessary to substitute a mixture of bicarbonate of soda and cream of tartar (½ gm per 3 g of flour) for the brewer's yeast. This worked very well. He then gives a table showing the nutritional analysis of the best bread (p. 716). In the conclusions of his work, Brugia says: "Soy flour cannot be used by itself in baking. But mixed with wheat it gives an optimum bread, soft textured, complete and balanced nutritionally, economical, and convenient. A second table shows an analysis of soy bread published by Rimini (1902) (p. 716).

Soy polenta, a mixture of soy and corn, was named Soyenta by Haberlandt who first prepared it. It could be of nutritional benefit to the people in those parts of Italy who get almost all of their nutrients from polenta. We have conducted numerous tests to find a type of Soyenta (to adopt Haberlandt's name) which, because of taste and ease of preparation, could enter into the diet of our rural population without difficulty. Here are the results of our experiments with various types of Soyenta: (1) With whole yellow soy flour: The resulting product does not have a soft consistency; it is coarse and crumbles rather easily, but the taste is nice. (2) With sifted soy flour: This product is not as good as the previous one, because it is too sticky. The taste reminds us of infant cereal made of wheat flour. (3) Soy flour mixed with wheat flour in varying proportions: Not advisable because it presents in various degrees the difficulties of the former. (4) (p. 717). Soy flour mixed with corn flour: Best results were obtained with a mixture of 1 part soy flour to 4 parts corn meal (coarsely ground, Veronese style). The consistency of this product is not unlike that of regular polenta, and the flavor is also very close. Hot or cold it slices very well, and overall it can be used just like regular polenta, but it has more nutritional value (p. 717).

Note 1. This is the earliest Italian-language document seen (March 2009) that mentions tofu, which it calls *To-fu*.

Note 2. This is the earliest Italian-language document seen (April 2012) that mentions soy sauce, which it calls *Il shoyu* ("shoyu").

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Note 3. This is the earliest Italian-language document seen (March 2009) that uses the word "miso" (*Il miso*) to refer to miso.

Note 3. This is the earliest Italian-language document seen (Aug. 2003) that uses the term *albuminoidi* to refer to protein in connection with soybeans. Address: 1. Direttore dell'Istituto d'Igiene della Regia Universita di Bologna (Director of the Inst. of Hygiene at the Univ. of Bologna); 2. Insegnante nella Regia Scuola Media Commerciale, Direttore del Laboratorio chimico Compartimentale delle Gabelle di Bologna, Italy.

1711. **Product Name:** Shoyu.
Manufacturer's Name: Fukushima Shoyu Brewery [Fukushima Shoyu Jojosho].
Manufacturer's Address: 602 Coral, Honolulu, Oahu, Hawaii.
Date of Introduction: 1907.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1907. p. 275. "Fukushima, Yasuhachi, soy, Coral near govt. stables. Residence: Same. 1908 Directory. Fukushima Soy Factory, Coral near Queen.

1909 Directory. Fukushima, Y., Coral near Queen. Residence: Same. Hawaii Hojin Katsuyaku-shi, Meiji 41-42 (Japanese who play an active role in Hawaii, 1908-09). 1915. Oct. Lists Fukushima Shoyu Jozosho as a soy sauce brewer. 1916 Directory. Fukushima, Y., mauka 614 Coral.

Directory of Honolulu and the Territory of Hawaii. 1954. p. 255. Fukushima Shoyu Brewery. Thomas Y. Kano. 602 Coral. 1955 Directory. Fukushima Soy Brewery.

1712. **Product Name:** Shoyu.
Manufacturer's Name: Hirao, H.
Manufacturer's Address: Kahului, Maui, Hawaii.
Date of Introduction: 1907.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1909. p. 759. "Hirao, H., soy, Kahului" [Maui]. Not listed in 1907.

1713. **Product Name:** [HVP Cubes or Paste? ("A Type of Miso")].
Manufacturer's Name: Jul. Maggi & Co.
Manufacturer's Address: Kempthal, Switzerland.
Date of Introduction: 1907.
New Product–Documentation: Senft. 1907. Pharmazeutische Praxis. 6(3):81-89; 6(4):122-24, 131-32. "Recently the firm of Jul. Maggi in Kempthal [Switzerland] has begun to make and market a type of miso."

Note: This is the earliest known commercial soy product made in Switzerland.

1714. **Product Name:** [Shoyu (Plum Tree Japan, Wisteria Japan, Pinetree Japan, and Water Chestnut Japan)].
Foreign Name: Shôyu.
Manufacturer's Name: Nihon Shoyu Jozo K.K. (Japan Shoyu Brewing Co.).
Manufacturer's Address: Tokyo, and Kyoto-Osaka area, Japan.
Date of Introduction: 1907.
New Product–Documentation: Kenji Kawakoshi, ed. 1972. Shashi-Choshi Shoyu Kabushiki Kaisha. Tokyo: Toppan. p. 72.

Mark Fruin. 1983. Kikkoman: Company, Clan, and Community. p. 69-72. "The Russo-Japanese War... brought on a formidable challenge: the appearance of a maverick entrepreneur named Suzuki who sought to dominate the soy sauce industry in much the same way that he had already prevailed over the world of sugar refining.

"In 1903 the Department of Provisions and Fodder of the Japanese Army had sought to purchase condensed or concentrated shoyu, but discovered that it was generally unavailable and, moreover, that, given the slowly changing technology of the day, it would not quickly become available. Upon learning this, Suzuki Tosaburo, who had already had great success with sugar refining, carefully studied the fermentation process of shoyu and designed a new tank that allowed for the application of heat to fermenting mash to speed fermentation. Thus, Suzuki challenged the traditional world of soy sauce manufacture by introducing high volume, energy- and capital-intensive production methods.

"In April 1904 Suzuki took out a patent on his fermentation tank design, and in 1906 he began sending samples of his new product to Hawaii for field testing. In 1907, after making various adjustments to his process based on the results of the taste sampling in Hawaii, Suzuki formed the Nihon Shoyu Jozo Kabushiki Kaisha (Japan Shoyu Brewing Company) with a capitalization of 10 million yen, and he opened two factories, one in the Tokyo area and one in the Kyoto-Osaka area, to manufacture soy sauce by his new method. Running both factories at full capacity, he produced 300,000 koku (14,280,000 gallons) annually–three times the current capacity of the combined Noda associates! He sold his product under the brand names Plum Tree Japan, Wisteria Japan, Pinetree Japan, and Water Chestnut Japan, at four different prices, thereby blitzing the soy sauce market with his brews."

1715. **Product Name:** Shoyu [soy sauce].
Manufacturer's Name: Sa-shi Shoyu Jozo-sho. Renamed Sanoze (San Jose) Shoyu Jozo-sho by 1908.
Manufacturer's Address: 561 N. 6th St., San Jose, California.
Date of Introduction: 1907.
New Product–Documentation: Nichibei Shinbun-sha. 1907. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Directory entry p. 23. Note: "Sa-shi" is the

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Japanese abbreviation for "San Jose City."

Nichibei Shinbun-sha. 1908. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Directory p. 60 (Japanese numbers). / Note: Japanese Shoyu was first made at this address as early as 1897 by Yamamori Jozo-sho (Yamamori Brewery).

1716. Chalmers, John. 1907. English and Cantonese dictionary. 7th ed. Revised and enlarged by T.K. Dealy. Hongkong: Kelly & Walsh, Ltd. xi + vii + 822 p. 23 cm. [Eng; Chi]

• ***Summary:*** On page 20 are the Cantonese characters and term for bean-curd (tau-foo). On page 437 are the Cantonese characters and terms for soy [sauce], shi-yau, and for soy bean (*Soja hispida*) (taai tau, paak tau) or *Dolichos soja* (wong taai tau, or mo tau [literally "hair beans" = green vegetable soybeans]).

A 5th edition was published in 1878 in Hongkong, and a 7th edition in 1907 in Hongkong.

Note: This is the earliest English-language document seen (Feb. 2004) that uses the word "tau-foo" (or "tau foo") to refer to Chinese-style tofu. Address: Chalmers: LL.D; Dealy: Queen's College, Hongkong.

1717. Griffis, William Elliot. 1907. Corea: The hermit nation. 8th ed. Revised and enlarged. New York, NY: Charles Scribner's Sons. xxvii + 512 p. See p. 270. Illust. Index. 23 cm. 1st ed. 1882. [99* ref]

• ***Summary:*** This enlarged 8th edition is identical to the original 1882 ed. except that 4 pages of front matter (including a "Preface to the eighth edition") have been added, and the recent history of Korea to 1907 and the index have been updated, adding 50 pages to the end. A color fold-out map has been added, facing p. 506; it shows Korea, Tsushima, Shimonoseki, Karatsu, Hirado, Nagasaki, Goto Islands, northwest Kiushiu [Kyushu]. The information on soy remains unchanged, on p. 270. Address: Ithaca, New York. Formerly of the Imperial Univ. of Tokio, Japan.

1718. Hurrier, Paul. 1907. Matière médicale et pharmacopée Sino-Annamites [Chinese and Annamite (Vietnamese) materia medica and pharmacopoeia]. Paris: Vigot Frères. viii + 292 p. Illust. Index. 25 cm. Preface by Prof. Em. Perrot. [25 ref. Fre]

• ***Summary:*** The book begins with a chapter titled "History of medicine in China," which includes many abbreviated bibliographic references in the text. Pages 21-22 discuss acupuncture and a large fold-out illustration (facing p. 20) shows several views of the meridians on the human body. Part two of the book, titled "Special Chinese and Annamite drugs with therapeutic uses," contains four chapters: 1. Mineral kingdom. 2. Animal kingdom. 3. Vegetable kingdom. 4. Five indexes: Latin names, Chinese names, Annamite names, Japanese names, and Cambodian names.

In chapter 3, "Vegetable kingdom," in the section on Legumes (p. 144) is a subsection titled *Dolichos soja* L. (p. 147). It begins with the three Chinese characters for "Yellow soy bean" = *Teou-Ko* (Mérat); *Mau-tau* (Porter Smith); *Houang-teou* (in Chinese), *Dan-dèn* (in Annamite). The laxative seeds of this variety are used to make a special condiment, soy sauce (*le soy; Tsiang-yu*) composed of soybean flour, tea, and salt. From the cooked seeds, the Annamites make a vegetable cheese (*fromage végétal; Teou-fou*), which resembles goat cheese, and of which they consume very large amounts. Mr. Bloch, in a recent study on tofu ("*Quelques mots sur la fabrication et la composition du Teou-Fou,*" published in *Bulletin des Sciences Pharmacologiques* (Paris), March 1906, p. 138-43), described the process of making tofu, which is coagulated with magnesium chloride. The entire plant is used to make a decoction for treating smallpox and rheumatism.

Glycine javanica (*no-mame* in Japanese is also mentioned on p. 148).

Also discusses: Various sea vegetables (*kombu, kanten, funori, amanori;* p. 71-72). *Cannabis sativa* (hemp; p. 102). *Phaseolus radiatus* = small red bean (azuki in Japanese; p. 150). *Sesamum orientale* (sesame seeds; kuro-goma [black sesame] and shiro-goma [white sesame] in Japanese; p. 178). Address: Pharmacien de 1re class, Docteur de l'Université de Paris, France.

1719. Jumelle, Henri L. 1907. Les resources agricoles et forestiéres des colonies Françaises [The agricultural and forestry resources of the French colonies]. Marseille, France: Barlatier, Imprimeur-Éditeur. viii + 442 p. See p. 333. No index. 28 cm. [2 ref. Fre]

• ***Summary:*** In the chapter on Indo-China (p. 267-363) is a section on coconuts (p. 322+) followed by a section on "Other oil-bearing plants" (*Les autres plantes oléagineuses*), which contains paragraphs (p. 326-27) on the sesame seed (*Le sésame*, cultivated in Cambodia) and the peanut (*L'arachide*, long cultivated in Cochin China and central and south Annam). Some confusion exists concerning the oil of *Aleurites cordata* (Chinese wood oil, *l'huile d'abrasin*) (p. 331-32): "Why is this oil, so well known and widely used in Indo-China, not exported, as is its analogous oil from China? It is not ignored by European and American manufacturers; and in the United States, as in Europe, it is in demand * by the factories that make linoleum or that prepare varnish from copal." (Footnote: *"It seems that the oil imported into Europe and the United States is often adulterated with oil from the seeds of *Soja hispida* [soybeans], which is likewise a very drying oil").

The next section, titled "The indigenous food" (*L'alimentation indigène*) (p. 332-35) includes a discussion of various legumes consumed in Indo-China. "Among the leguminous seeds used as food, there is a large consumption of kidney-beans (*de haricots*), of dolichos beans (*de*

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doliques), and, even more, of soybeans (*de sojas*)." "The large consumption of the soybean (*du soja*) is due to the fact that its beans, not only are eaten after a long cooking, but, again, serve as the base for various preparations, as in Japan and China (Footnote: It is with these soybeans, mixed with wheat and *koji*, and coarse salt, that the Japanese make their *shovou* [*shoyu*, soy sauce] and their *miso*, and the Chinese their sauces or analogous dishes, *teou-ju* and *teou-tiung*. In Java, the indigenous people make similar preparations. The fermentations are, in all these cases, caused by various molds.) It is thus that the Annamites [of central Vietnam] make a cheese called *dau-phu*, which is the *teou-fou* of the Chinese, the *tofu* of Japan. They likewise make a sauce named *tuong*, which is almost the same as the *teou-tiung* [*doujiang*] of the Chinese, and two cheeses [tofu], one solid, the other of a softer consistency, called *dau-hu* and *dau-hu-ao* in Cochin China." Address: Prof., Faculte des Sciences de Marseille [Marseilles], France.

1720. Lust, Louise. 1907. The practical naturopathic-vegetarian cook book. New York City, NY: Benedict Lust. 72 p. No index. 20 cm.

• ***Summary:*** This vegetarian cookbook uses milk, butter, and eggs. It also calls for many whole foods, such as unpolished rice [brown rice] (p. 41) and whole-wheat flour. The recipe for "Impromptu soup" (p. 24) states: "If soup is required quickly, not time to make a vegetable stock, it can be made by adding two tablespoons of Japan soya, which may be regarded as 'natural' vegetable salts, extract or any of the other vegetables..." Note 1. "Japan soya," probably a type of soy sauce, is sold by Dr. Heinrich Lahmann of Germany.

A recipe for "Cauliflowers" (p. 24) states: "cleanse the heads carefully from insects." An oval portrait photo facing the title page shows Louise Lust, N.D.

Note 2. This is the earliest document seen (Nov. 2009) that mentions Louisa (or Louise) Stroebel Lust, the wife of Benedict Lust. They were married on 11 June 1901. Address: N.D., Naturopathic Director of Ladies' Dep. of "Yungborn," Butler, New Jersey. Instructor in Naturopathy, The American School of Naturopathy.

1721. Macgowan, John. 1907. Sidelights on Chinese life. London: Kegan Paul, Trench, Trübner & Co., Limited. viii + 367 p. Illust. (12 in color by Montague Smyth and 34 others). 26 cm.

• ***Summary:*** Chapter 1, "The Chinaman," begins (p. 1): "The Chinaman's mind is a profound and inexplicable puzzle that many have vainly endeavoured to solve. He is a mystery not simply to the foreigner, who has been trained to more open methods of thought, but also to his own countrymen, who are frequently heard to express their astonishment at some exhibition of character, that has never occurred to them during the whole of their oblique life."

Page 9: "A coolie, for example, in [sic, is] engaged by you to do general household work. He comes to you from an inland country where poverty is the prevailing characteristic of the whole population. Sweet potatoes are the staple food three times a day, year in, year out, helped down perhaps by salted turnip, bean curds [tofu] and pickled beans [fermented black soybeans]–for it is only on special occasions that they have the rare happiness of indulging in the luxury of rice."

Page 163: "At the same time he placed before him a tiny little platter in which were some nicely browned strips of fried bean curds [deep-fried tofu] to act as appetizer to the rice, and to arouse his flagging appetite."

Note: This is the earliest English-language document seen (May 2012) that contains the term "fried bean curds."

Page 170: "In addition to this precious crop [rice] that needs so much attention, the cultivator has others that claim his thoughts and time. These are the beans that are used in the manufacture of soy [sauce] and in the making of bean curds [tofu] that are considered so important as condiments to be eaten with the rice.

Page 183: "The Chinese, who are connoisseurs in the art of cooking rice, can never tolerate it being boiled to a pulp... There are also bean curds [tofu] and cucumbers pickled crisp and juicy, and celery and lettuce, and salted beans [fermented black soybeans] and plates of various kinds of fish, and different kinds of soy, which are sprinkled with a sparing hand over the bowl of rice to give it a flavour in order to induce an appetite with the first sip that the customer takes of the savoury compound." Address: Rev., London Missionary Society and author.

1722. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1907. Zaibei Nihonjin nenkan [Japanese-American yearbook. No. 3]. 234 Turk St., San Francisco, California. 398 p., many unnumbered. Reprinted in 25 Oct. 2001 in Tokyo by Nihon Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 1-kai [Collected Documents on Japanese Emigration. No. 1]. [Jap; eng]

• ***Summary:*** This book is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. There is an English-language title page.

The book is composed of: 4 unnumbered pages of front matter, 6 unnumbered leaves of black and white photos (mostly taken after the San Francisco earthquake and fire) on glossy paper, 18 pages of ads and basic information, numbered using Japanese numbers (NUJN), of which the last two pages are the table of contents, 176 numbered pages which are the body of the book, 84 unnumbered pages of ads, 75 pages of directory (preceded by an index of the directory) NUJN, 35 pages of ads and back matter NUJN.

There are two tofu shops in San Jose, California, and also two breweries (*jozo-sho*). Note: One may have been for brewing shoyu and the other for sake (p. 153). The San Jose shoyu maker [Sa-shi Shoyu Jozo-sho] helped Komada Shoten [probably not a shoyu maker] in San Francisco last

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year. Although they used wheat and salt made in the U.S., they had to get soybeans and also the bamboo hoops for the wooden kegs (*taru*) from Japan. It cost them over 50 cents to make one wooden keg; that's a problem (p. 154, top right). There is one tofu shop in Watsonville (p. 154, bottom center).

The Directory shows Japanese companies making soyfoods in California and Utah. Address: San Francisco, California.

1723. Royal Botanic Gardens, Kew [England]. 1907. Official Guide to the Museums of Economic Botany. No. 1. Dicotyledons. Third edition, revised and augmented. London, Printed for H.M. Stationery Off. by Darling... 236 p. See p. 65. 19 cm.

• ***Summary:*** Page 65 states: "No 192. Soy beans (*Glycine hispida*, Maxim.). An annual, cultivated largely in China, Japan, and India. In the two former countries a sauce known as Soy is produced in large quantities and in Japan a kind of cheese or curd cake is prepared known as 'Natto.' The chief products of Manchuria are bean oil and bean cake. The seeds yield 17 per cent. of an edible oil obtained by expression, and the residue is made into large circular cakes, weighing about 60 lbs, similar to that exhibited, used in the East for feeding cattle and also as manure. Soy is imported into Europe in barrels and is said to form the basis of most of the popular sauces."

Also discusses "Ground nuts. Pods and seeds of *Arachis hypogaea*, L." (p. 63, No. 188), and Kuzu (*Pueraria thunbergiana*, p. 66-67, No. 195). Address: Kew, England.

1724. Saito, Kendo. 1907. Microbiologische Studien ueber die Soyabereitung [Microbiological studies on the preparation of soy sauce]. *Zentralblatt fuer Bakteriologie. Series 2.* 17(1/2):20-27; 17(3/4):101-09; 17(5/7):152-61. Plus 5 plates on unnumbered pages near end. [55 ref. Ger]

• ***Summary:*** Contents: Part I (p. 20-27): Introduction. (1) Process for making soy sauce (*Soya*, which can be divided into 3 steps): (a) Preparation of the koji (*Koji* or *Soyakoji*). (b) The main process, making the moromi or mash (*Maische*). (3) Pressing, clarifying, and pasteurizing. (2) Method for isolation of the microorganisms: Molds / fungi, yeasts, bacteria. (3) Special remarks: Molds–(a) *Aspergillus Oryzae* (Ahlbg.) F. Cohn.

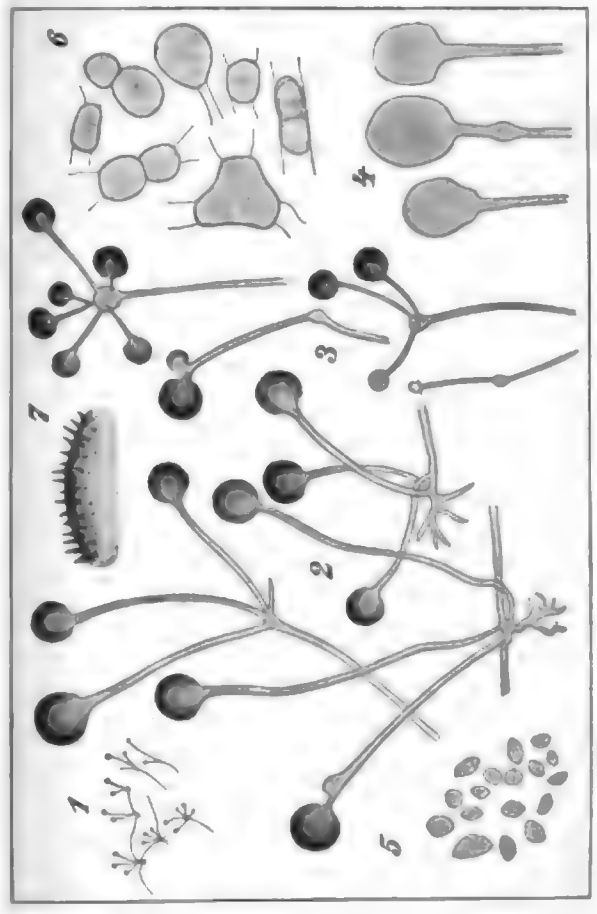
Part II (p. 101-09): (b) *Rhizopus japonicus* Vuillemin nov. var. angulosporus (Fig. 1). (c) *Tieghemella hyalospora* nov. spec. (Fig. 5). (d) Other molds. Yeasts–Soya yeast (a) *Saccharomyces Soya* nov. spec. Diagnostic properties, comparison of soya yeast with other types of yeasts. (b) *Saccharomyces farinosus* Lindner (Fig. 2 and 8c). (c) A soya yeast that grows on the surface of liquids (*Soya-Kahmhefe*) (Fig. 3 and 8b).

Part III (p. 152-61): Conclusion of (c). (d) Mycoderma species (Fig. 6 and 8d). (e) Torula species (Fig. 7). Bacteria–(a) *Bacterium Soya* nov. spec. (b) *Sarcina Hamaguchiae* nov. spec. (Table 5, Fig. 10). Conclusion. Appendix: (1) *Rhizopus Tamari* nov. spec. (2) *Aspergillus glaucus* Link. (3) *Aspergillus Rehmii* Zukai (?). (4) *Circencella mucoroides* nov. spec.

Explanation of five plates of illustrations.

Since ancient times, according to legend, a substance for salting foods has been made by the Japanese. About 300 years ago the process underwent a significant improvement through trade and communication with the Chinese, whose culture then stood on a higher level. For the first time a product named soy sauce (*Soya;* Japanese: *Shôyû*) came to be widely known, and from then on it found extensive use. By the year 1903 nearly 4 million hectoliters [i.e., 400 million liters] of shoyu were being produced in Japan, from which the state took the equivalent of about 7 million German marks in taxes.

Among the yeasts, the author found *Saccharomyces Soya* (a new species of film yeast), *Saccharomyces* (later *Pichia*) *farinosus*, and one species each of *Mycoderma* and *Torula*.



Illustrations show: Plate 1: *Rhizopus japonicus* in seven detailed views.

Plate 2: (2) *Saccharomyces farinosus.* (3)

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Saccharomyces Soya, a soya yeast that grows on the surface of liquids (*Soyakahmhefe*).

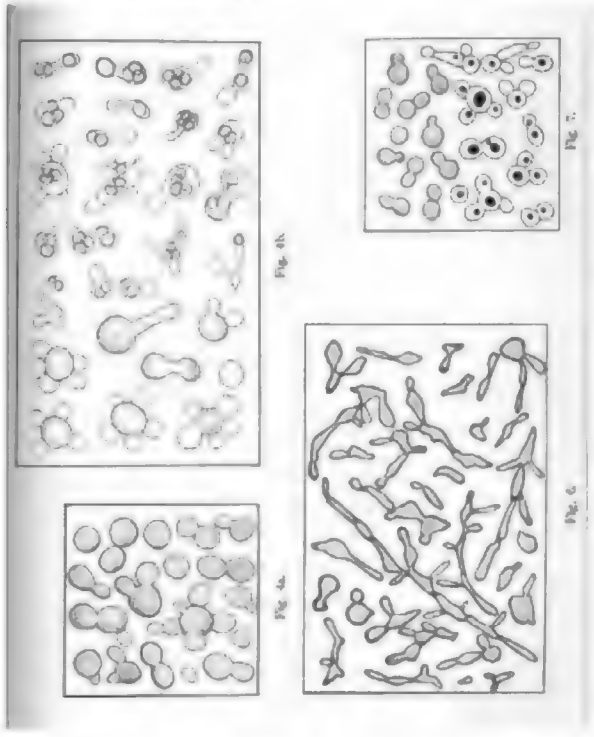


Plate 3: (4a-b) The new yeast *Saccharomyces Soya* from soya koji. (6) Mycoderma sp. x 900. (7) Torula sp. x 900.

Plate 4: (5) *Tieghemella hyalospora* (from rice culture) in seven detailed views.

Plate 5: (8) Large colonies (3 weeks old) of *Saccharomyces Soya*, a soya yeast that grows on the surface of liquids (*Soyakahmhefe*), *Saccharomyces farinosus*, and Mycoderma species. (9) *Bacterium Soya*. (10) *Sarcina Hamaguchiae*.

Note: This is the earliest document seen (July 2010) that mentions the species *Saccharomyces Soya*. Later (in 1909) the author gave this film yeast the name *Zygosaccharomyces japonicus*. In the early 1950s this species was renamed *Saccharomyces rouxii*. Address: Plant Physiology Lab., Botanical Inst., Tokyo Imperial Univ., Japan.

1725. Senft, Emanuel. 1907. Ueber einige in Japan verwendete vegetabilische Nahrungsmittel, mit besonderer Beruecksichtigung der japanischen Militaerkonserven [On some vegetable foods used in Japan, with special attention to Japanese military canned foods]. *Pharmazeutische Praxis* 6(3):81-89; 6(4):122-24, 131-32; 6(6):211-12, 219. [19 ref. Ger]

• ***Summary:*** These three sections contain a good review of the literature (especially the Japanese literature) in German. Issue No. 3 begins with "Phanerogams. Chapter 5. Legumes. Soybeans and soybean preparations" (p. 81-89). Contents: Introduction. Varieties: Group I. Soja platycarpa-Harz (5 forms–olivacea-Harz and punctata-Harz, melanosperma, platysperma, parvula Martens). Soja tumida-Harz (3 forms–pallida Roseb. [sic, Roxb = Roxburgh], castanea-Harz [brown], atrosperma-Harz). Anatomy and cell structure of different parts of the plant and seeds. A non-original illustration (line drawing; p. 83) shows a soy bean, full-size and at cellular levels. Haberlandt and the Vienna World Exposition of 1873. Foods made from soybeans in China and Japan described by Charles Bryant (1785): Miso, soy sauce (*sooju-sauce* or soy), Roos, Koji, Tofu, sake, Shoju or Soja-Sauce, Miso (vegetable cheese; "Recently the firm Jul. Maggi & Comp. in Kempthal makes a type of miso and sells it commercially").

Issue No. 4 begins with "Natto and tofu" (*Bohnenkäese*) (p. 122-24) and includes fresh tofu and frozen tofu (*gefrorener tofu*). Yuba. A separate section on miso pickles (*Misozuke;* p. 131-32) describes the different types, especially those made with daikon (*Rettiche*).

Issue No. 6 discusses shoyu (called *Extrakt-Sauce Japonica*, or Shoju-Sauce) (p. 211). A table (p. 212) lists the main food plants of Japan, including five different "varieties" ("*var.*") of soybeans: *Kuro-mame, Shiro-mame, Ao-mame, Goishi-mame, Gankui-mame*. A photo (p. 219) shows various Japanese preserved foods, including a metal box containing "Fukujinsuke" [*fukujinzuke*] consisting of sliced vegetables (cucumbers, bamboo shoots, onions) preserved in soy sauce. Address: Military medicine official, Germany.

1726. Strakosch, Siegfried. 1907. Das Problem der ungleichen Arbeitsleistung unserer Kulturpflanzen [The problem of the unequal production efficiencies of our crop plants]. Berlin: Verlagsbuchhandlung Paul Parey. 110 p. No index. 23 cm. [Ger]

• ***Summary:*** This book, dedicated to Julius Wiesner, "the master of plant physiology," looks at national food supplies from the viewpoint of plant physiology. In the section on "Calculation of assimilative effects," a table (p. 44-45) compares rye, wheat, corn, rice, soybeans, and potatoes in their production per hectare of starch, digestible protein, value of product in German marks, value of nutritive elements consumed, assimilative effect (defined as the ration of the value of the usable substance produced per unit area to the value of the nutritive elements borrowed from the soil by producing this substance), assimilative effect compared with rye, and difference between the production and consumption in German Marks. Soybean produces much more protein per given area of land than the other crops, has the highest assimilative ratio, 6.68 times larger than that of rye. Thus the culture of soybeans should be the most remunerative.

In the same section, a bar chart (p. 48) shows the value (in marks) of physiologically useful substance resulting from withdrawal of one mark worth of soil nutrients. The soybean gives the greatest returns of the 22 plants listed.

In the section on "Consideration of plant production

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efficiency in crop rotations" (p. 66+), the legumes are praised and soybeans are mentioned on pages 71 (the most productive of all legumes with an enormous number of 668) and 73. In this context, the work of Friedrich Haberlandt with soybeans and his book, *Die Sojabohne* (The Soybean, Vienna, 1878) are described in detail (p. 74-76). Haberlandt died shortly after the publication of this book, and Hecke, his friend, carried on his work.

In the last chapter, "Goals and consequences," a table (p. 102) shows the productivity in the northern U.S. states of nine crops, including wheat, barley, corn, sugar beets, peas, Jerusalem artichokes, and soybeans. In value of crop per hectare, soybeans are third after Jerusalem artichokes (German: Topinambur; French: Topinambour) and sugar beets. Two long footnotes (No. 122 and 123, p. 109-10) discuss the importance in Japan of soybeans and the various foods made from them including shoyu (Shoju, Shoyu), miso, tofu, and yuba. Address: Dr., Wien-Hohenau.

1727. Tokyo Shoyu Tonya-ken Yushutsu Nyugyo. 1907. Tokyo Shoyu Tonya-ken Yushutsu Nyugyo [Tokyo Shoyu {Soy Sauce} Wholesale Export and Import Co. (Ad)]. In: Nichibei Shinbun-sha. 1907. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Page 14 (Japanese numbers) near the front. [Jap]

• ***Summary:*** Ad (half page, vertical). San Francisco branch representative, ICHIDA Risuke, 1905 Bush St., San Francisco, California. Okada Shoten & Co. (*Gomei Gaisha:* an unlimited partnership) represents the Kikkoman brand as well as other shoyu makers from the towns of Noda and Choshi; we sell their products and we also export. Address: Koami-cho 3 chome 19 banchi, Nihonbashi, Tokyo.

1728. **Product Name:** Shoyu [Soy Sauce].
Manufacturer's Name: Hokubei Shoyu Kabushiki-gaisha (Hokubei Soy Sauce, Inc.).
Manufacturer's Address: 1615 Gough St., San Francisco, California.
Date of Introduction: 1908, January.
New Product–Documentation: Rafu Shinposha. 1908. *Rafu Nenkan* [*Rafu Shinpo Japanese-American year book*]. Directory, p. 55. The company name is written in Japanese characters. The address is in English. No phone number is given.

Note: It is surprising that the San Francisco-based directory Nichibei Nenkan never mentioned this first soy sauce maker in San Francisco, whereas the Los Angeles directory did. However Nichibei Nenkan did list a company with this name across the San Francisco Bay in Fruitvale (today a neighborhood in eastern Oakland), California, but at a different street address. Then in Jan. 1919 a company with a very similar name–Hokubei Miso, Shoyu Seizô Oroshi Kouri (North American Mfg. Co.)–started making miso in Los Angeles at 519 East 1st St. Could these three all be one in the same shoyu maker?

1729. *Chemist and Druggist* (*London*). 1908. Soy. 72(3):98. Jan. 18.

• ***Summary:*** In the section titled "Trade report," in the subsection on "London markets" we read: "Soy.–For good thick 'Wochan.' "1*s.* 4½*d.* per gallon is quoted, at which sales have been made."

Note 1. The word "Wochan" refers to a brand name (See this periodical, 17 Oct. 1908 issue, p. 628). It may be a place name, although we can find no such name in gazetteers. "Soy" almost surely refers to soy sauce rather than to soy oil.

Note 2. This is the earliest document seen (Aug. 2011) that contains the word "Wochan" in connection with soy.

1730. *St. Louis Post-Dispatch*. 1908. Notes and queries: Answers to questions from readers of the Post-Dispatch. Feb. 9, p. 2.

• ***Summary:*** "Z.Y.O.D. To make enough Mo Goe chop suey (chop suey with mushrooms) for five persons." The recipe ends: "Drain off superfluous liquor, add teaspoon brown see yu sauce [Mandarin: Shiyou or Shih-yu is fermented black soybean sauce], also obtainable at the Chinese grocers,' and serve with bowls of boiled rice."

1731. *Vegetarian Messenger and Health Review* (*Manchester, England*). 1908. Soy bean sauce. March, p. 75.

• ***Summary:*** "Samples of this sauce are to be had from the Vegetarian Society's Food Stores, Manchester. A number of samples of Japanese Shoyu or Soy Bean Sauce as we should call it, were sent to be exhibited at the 60th Anniversary but arrived too late."

1732. John Duncan's Sons. 1908. Roast meats: Lea & Perrins Sauce (Ad). *Collier's* 41(5):33. April 25.

• ***Summary:*** A 1/8 page ad. Underneath the large bold words "Lea & Perrins Sauce" are written the tiny words "The Original Worcestershire." An illustration shows the bottle. "See that Lea & Perrins signature is on the label and wrappers. Beware of imitations." Address: Agents, New York.

1733. Suzuki, Tozaburo. 1908. Apparatus for brewing soy. *U.S. Patent* 0,888,204. May 19. 4 p. Application filed 5 Dec. 1907.

• ***Summary:*** "This invention relates to improvements in apparatus for brewing soy and has for its object the provision of means for quickly and uniformly controlling the temperature of the soy..."

"It is well known that during the process of making soy it is necessary to artificially change the temperature thereof to obtain fermentation and maturation at the proper time..." Two illustrations depict the apparatus, showing that a coil of pipe surrounds the container in which the soy sauce is

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fermented. A several paddles in the soy sauce, driven by a bevel gear, enable the soy to be stirred.

"In cold weather hot water or other suitable heating medium is passed through the coil until the first fermentation has been completed and in hot weather cold water or other suitable medium is used during maturing..."

"In order to uniformly and quickly change the temperature of the soy, during the process of brewing, it is desirable to agitate the contents of the receptacle..." Address: Sunamura, Japan.

1734. Chalmers, P.A. 1908. Japan: Report for the year 1907 on the trade of North Formosa. *Diplomatic and Consular Reports, Annual Series* (*Foreign Office, Great Britain*). No. 4041. p. 1-19. June.

• ***Summary:*** A map shows the northern three-fourths of the island of Formosa, including railways, projected railways, and the savage frontier. It is in the Tamsui Consular District; the main city is Taihoku. Discusses the total trade of Tamsui and Keelung (both port cities) into North Formosa. Efforts are being made toward "pacification of the 30,000 aborigines of the island" using 5,000 border police.

Annex I shows return of principal articles of import into Tamsui and Keelung during the years 1906-07. One major item is opium from Britain, Persia, Turkey, and China. Small amounts of miso and soy [sauce] were also imported. Trade into Keelung [later named Chilung] comes from Moji and Kobe [Japan]. Trade into Tamsui comes from Foochow, Amoy, and Hongkong. Address: British Consul.

1735. Lea and Perrins. 1908. Lea and Perrins' Sauce (Ad). *Japan Weekly Mail* (*Yokohama*) 50(2):56. July 11.

• ***Summary:*** This black-and-white ad (5 by 6 inches) states: "Assists digestion and gives a delightful piquancy and flavour to all meat dishes, soups, fish, cheese, curries, game, poultry & salads. The original and genuine Worcestershire. By Royal warrant to H.M. the King." A large illustration shows a bottle of Lea & Perrins Worcestershire Sauce. Address: England.

1736. Wileman, A.E. 1908. Japan: Report for the year 1907 on the trade of the consular district of Tainan (South Formosa). *Diplomatic and Consular Reports, Annual Series* (*Foreign Office, Great Britain*). No. 4083. 19 p. July.

• ***Summary:*** A table (p. 14) shows returns of imports from Japan from 1902 to 1907. The value of Soy [sauce] imports, which averaged £3,863 for the 5 years 1902-06, was £3,653 in 1906 and £6,764 in 1907. No quantities are given.

Table II (p. 15) shows returns of exports from the open ports of Anping and Takow from 1902 to 1907. [Soybean] "oil cake" was exported to Amoy, where it was used for manure. The value of oil cake exports, which averaged £2,001 for the 5 years 1902-06, was £1,626 for 16,572 cwts. [1 cwt = hundredweight = 112 pounds] in 1906 and £795 for 6,647 cwts. in 1907. Also exported were hemp, lungan (pulp or dried), and sesamum seed. Address: British Consul.

1737. *Chemist and Druggist* (*London*). 1908. Japanese soy. 73(6):223. Aug. 8.

• ***Summary:*** This small "filler" paragraph in the lower right corner of the page states: "Japanese soy [sauce] is an article the exports of which are increasing from Japan, owing to the number of Japanese residents being scattered in many parts of the globe. A new description, which is said to have many advantages and prepared by a new process, was put on the market last year. The exports of soy from Japan amounted in value to 100,500 *l.* [British pounds sterling] as compared with 97,000 *l.* in 1906."

1738. J.H.C. 1908. Domestic economy: Chop Suey, p. 706 (Letter to the editor). *Country Gentleman*. 73:777, col. 4. Aug. 13.

• ***Summary:*** "Your inquirer for chop suey may find the following satisfactory: Chop suey is made with young, lender pork as a foundation, and is known in Chinese restaurant parlance as fine chop; with chicken it is called guy chop suey, or with chicken and mushrooms mo goe chop suey. With all these is served the Chinese condiment, brown and piquant, known as *see yu* or *gee yow* [soy sauce]. It corresponds to our Worcester sauce [Worcestershire sauce]. It can be purchased of any Chinese dealer, together with the bean sprouts or water chestnuts that go with the dish."

1739. *Otago Witness* (*New Zealand*). 1908. The journey to Kagoshima. Sept. 9. p. 15.

• ***Summary:*** "There was also a great variety of beans, besides the ever-present soya [bean], from which Japan's national soy sauce is made."

Note: Kagoshima is a city at the southwestern tip of Kyushu, Japan's southernmost large island.

1740. Nishimura, Torazô. 1908. Shôyu kôbo Saccharomyces soya Saito ni tsuite. I. [On the shoyu yeasts, Saccharomyces soya Saito. I.]. *Nogakkai Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 83. p. 11-52. Sept. [Jap]

• ***Summary:*** Three varieties of yeast which sporulated were isolated from the shoyu mash: *Torula shoyu, Torula shoyu var. minuta*, and *Torula turbinata*. These three species seem to play an important role in the brewing of shoyu. he also found several kinds of film-forming yeasts, two of which belong to the genus *Pichia* and others to *Mycoderma* and *Torula*. Address: Nôgaku-shi, Japan.

1741. *Chemist and Druggist* (*London*). 1908. Soy. 73(16):628. Oct. 17.

• ***Summary:*** In the section titled "Trade report," in the subsection on "Continental drug and chemical markets" markets" we read: "Soy.–Quiet with sellers at 1*s.* 2*d.* to 1*s.*

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4*d*. per gallon, the higher price being for 'Wochan' brand.

1742. Wilcox, Sarah E. 1908. Domestic economy: The Thanksgiving meats. *Country Gentleman*. 73:1115, col. 2. Nov. 19.
• ***Summary:*** "Chicken pie.–Prepare as for turkey and joint... Serve with currant soy or spiced cherries."

Note: The meaning of "currant soy" is not clear. It is probably akin to "Tomato soy," a recipe, containing no soy sauce or other soy ingredients, that is designed to make a type of tomato ketchup. As of May 2012 this exact phrase occurs nine times in Google Books from 1891 to 1910. In the earliest of these, *Santa Rosa Recipes*, by Presbyterian Church (Santa Rosa, California) (1891, p. 62), in the chapter on "Pickles," recipes for "Currant Soy" and for "Gooseberry Soy" are given; neither calls for the use of a soy-related ingredient in any form. The main ingredients are 5 lb. of currants (or gooseberries), 5 lb. of sugar, one pint of vinegar, and two teaspoons of salt. A recipe for "Currant soy" is given in *The North End Club Cook Book* (1905, p. 125). As above, soy is not among the ingredients in any form.

1743. Harrington, -. 1908. Japan: Report for the year 1907 on the trade of the consular district of Yokohama. *Diplomatic and Consular Reports, Annual Series* (*Foreign Office, Great Britain*). No. 4165. p. 1-47.
• ***Summary:*** Yokohama is Japan's leading port, accounting in 1907 for about 40% of all imports. Germany exported £13,000 in oil and bean cake to Japan (perhaps transshipped from China; p. 13). Japan's main imports from China via Yokohama included raw cotton £362,000, oil and bean cake £296,000, and soja beans £73,000 (p. 14). There was a small increase in the export of soy [sauce] to Canada (p. 16; no amounts are given).

A ten-page table (p. 22-32) titled "Imports into the Port of Yokohama during the Years 1905-07" shows the import of "oil cake" used as manure rose from 61,830 tons worth £281,870 in 1905 to 88,520 tons worth £461,460 in 1907 (p. 32).

A table (p. 34) titled "Exports from the Port of Yokohama during the Years 1905-07" shows the value of the export of "soy" [sauce] (mostly to the United States and Hawaii) rose from £42,007 in 1905 to £59,900 in 1907; no quantities are given. Groundnuts, rice, seaweed, and Bêche-de-mer (sea slug, trepang) were also exported from Yokohama. Address: Acting British Vice Consul, Yokohama.

1744. Ito, Teiji. 1908. Shôyu narabini tamari (kibiki-damari, sobiki-damari, niira tamari) naka no ekisubun gaitei ippô [A method of obtaining approximate measurements of extracts from shoyu and 3 types of tamari (*kibiki*, *sobiki*, and *niira* tamari)]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 321, p. 1200-07. Nov. [Jap]

1745. Takenob, Y.; Takeda, G. 1908-1909. Japanese wine and soy. *Japan Year Book* 4:391. [Eng]
• ***Summary:*** This section on "Japanese wine and soy" is in Chapter 18, titled "Industry." The second part of this section, titled "Soy" (and meaning soy sauce or shoyu) states (p. 391): "For soy the prefecture of Chiba, which is contiguous to Tokyo municipality, heads all other places on the list. Parched wheat mixed with salt and beans is a principal ingredient. The process is still far from scientific, and several patented processes, notably that by Mr. Suzuki, do not seem to have attained ideal perfection. The production in recent years is as below:-"

Note: According to the table of weights and measures at the front of this Year Book, one *koku* (liquid) = 100 *sho* = 39.703 gallons or 150.275 liters:

1902-03–1,767,366 *koku*. 1903-04–1,763,710 *koku*. 1904-05–1,859,165 *koku*. 1905-06–1,765,973 *koku*. 1906-07–1,932,492 *koku*. This latter figure is equal to 76,725,729 gallons.

The part on "*Saké*" above this notes: "For *sake*, the national liquor brewed from rice, the 'Five villages of Nada,' situated about midway between Osaka and Kobe, are the most noted center of production in Japan. What is interesting is that the fame of 'Nada sake' is generally attributed not so much to the long experience of the brewers at Nada as to the peculiar quality of water in certain wells existing in the five villages. The general opinion is that certain bacilli found in the water possess the virtue of imparting peculiar agreeable flavor to the liquor." Address: Japan.

1746. Agricultural Bureau, Department of Agriculture and Commerce. 1908. Agriculture in Japan. Tokyo: Agricultural Bureau, Department of Agriculture and Commerce. x + 455 p. See p. 225-29, 434, 439, 448, 453-54. No index. 23 cm. [Eng]
• ***Summary:*** A table of moneys, weights and measures (p. x) includes British equivalents of the following Japanese units: Money–*yen, sen, rin*. Length: *ri, chô, ken, shaku, sun*. Area: *cho, tan, sé, bu* or *tsubo, kô* (*9.724 tan*). Capacity / volume: *koku, tô, sho, go*. Weights: *kwan or kwamme, kin, momme*.

In Chapter 6 titled "Agricultural products," in section 2 on "staple food stuffs" is a subsection titled "Soja beans" (p. 225-29) which begins: "In point of production and use, soja beans occupy an important position among the various beans, they are extensively cultivated from the Hokkaido in the north to Formosa in the south. They find a congenial soil to prosper, the acreage for 1906 was 460,895 *cho* (1 cho = 2.45 acres) which with the exception of the acreage of barley (503,498 *chô*) is equalled by no other products from the upland fields. Their use is quite extensive. They are eaten boiled, baked and powdered while *soy, miso* and *tofu* (bean curd) made out of beans, are found even in the remotest villages. They are found on the table both of high and low. In making *soy* [*sauce*], a by-product in a shape of soy-cakes

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is obtained and may be used as excellent manure, while in making *tofu*, the remaining ingredients [okara] may be used as a subsidiary diet and as food for cattle. Soja beans may also be pressed, and its oil used for the purpose of diet and for various technical uses, while the residue forms excellent manure. The fresh stalks of soja beans may be used as forage or as effective green manure. In short, soja beans, either as an article of Japanese diet, or as agricultural manure or as food for cattle are indispensable.

"The cultivation of beans under the circumstances was developed from ancient times, and numerous varieties are most extensively cultivated while by its peculiar nature of root, it absolves nitrogen from air so that high priced nitrogenous manure may be dispensed with, and therefore the cultivation of beans like other agricultural products do not exhaust the productive power of the soil, but on the contrary, it operates favourably to improve the soil. As for rotation of crops of wheat, millets, corns and potatoes, beans are indispensable. Seeds are sown early in the beginning of May."

Tables show: (1) Output of soja beans in Japan, 1897-1906." For each year is given the area (in *chô*), the production (in *koku*) and the yield (in *koku* per *tan*) (1 *koku* = 4.962 bushels; 1 *tan* = 0.245 acres). The area increased from 435,605 *chô* in 1897 to a peak of 482,044 *chô* in 1898, then slowly fell to a low of 446,844 *chô* in 1904, then rose to 460,895 *chô* in 1906. Production increased from 3,100,973 *koku* in 1897 to a peak of 4,069,619 *koku* in 1901, then slowly dropped to 3,557,592 in 1906. The yield in 1897 was 0.712 *koku* per *tan*, rising to a peak of 0.830 in 1904. Hokkaido has the largest area (43,924 *chô*) and production (392,140 *koku*). The principal soja bean producing districts are Ibaraki (33,000 *chô*), Saitama (29,000 *chô*), Iwate (26,000 *chô*), Nagasaki (26,000 *chô*), Kumamoto (26,000 *chô*), Niigata (22,000 *chô*). There is no prefecture where the production does not exceed 10,000 *koku*.

(2) "As mentioned above, soja beans are used either boiled, baked or powdered or as material for *tofu* (bean curd), frozen *tofu*, *soy* and *miso* (bean-cheese), and particularly the latter two products besides meeting with domestic demands, are exported abroad in large quantities, as may be seen in the following table." This table shows amount and value (in *yen*) of miso and soy [sauce] exported from Japan each year from 1903 to 1907, inclusive. Miso exports increased from 1,670,092 *kin* (1 *kin* = 1.322 lb) in 1903 to a peak of 5,199,957 *kin* in 1907 (a 3.1 fold increase in 4 years), while soy [sauce] exports increased from 1,974,119 *shô* (1 *shô* = 1.9 quarts) in 1903 to 4,403,851 *shô* in 1907 (a 2.2 fold increase). The total yen value of these two exports rose from 489,213 *yen* in 1903 to 1,354,517 *yen* in 1907 (a 2.8 fold increase). In American units: Miso exports increased from 2.20 million lb (worth $347,647) in 1903 to a peak of 7.50 million lb (worth $132,652) in 1905, dropping to 6.86 million lb (worth $135,833) in 1907.

Shoyu exports increased from 5.92 million lb (worth $204,959) in 1903 to 13.21 million lb (worth $541,425) in 1907. Note that in 1907 shoyu exports are worth about 4 times as much as miso exports.

(3) Because of increasing exports, Japan now needs to import soja beans from abroad. This table (p. 227) shows the amount and value of soybeans imported by Japan for the years 1903-1907, inclusive. They rose from 146,971 tons (worth $3.18 million) in 1903 to a peak of 193,479 tons (worth $4.92 million) in 1905, dropping to 177,365 tons (worth $4.79 million) in 1907. They are mostly imported from Manchuria and Korea. "While a greater portion of these imports is used as material for *soy and miso*, it is also used in making bean-cakes and is sown for obtaining green manure, or used as manure or for feeding cattle."

(4) This table (p. 228) shows the quantity and value of [soy] bean-cakes imported into Japan for the years 1903-1907, inclusive. The cake was used mostly for fertilizer. Cake imports rose from 216,198 tons (worth $3.81 million and representing 57.8% of all fertilizers) in 1903 to 367,210 tons (worth $8.71 million and representing 44.8% of all fertilizers) in 1907. (5) This table (p. 229) shows acreage and production (output) of [soy] beans in Formosa [today's Taiwan]. Acreage doubled in 3 years from 11,226 *kô* in 1901 to a peak of 22,641 *kô* [53,886 acres] in 1904, then decreased slightly to 21,220 *kô* in 1906. Note 1. 1 *kô* = 9.724 *tan*, and 1 *tan* = 0.245 acres. Therefore 1 *kô* = 2.38 acres.

Production in Taiwan increased more than 3-fold from 44,661 *koku* in 1901 to 135,271 *koku* in 1904, then decreased slightly to 100,803 *koku* in 1906. Note 2. Production of soja beans in Formosa in 1904 was only 3.6% as much as production of soja beans in Japan in 1904.

The next section, titled "Red-beans" (p. 229-30) gives similar detailed statistics on acreage, production, and yield for azuki beans in Japan. *Sarashi-an* (the powdered red bean) is made in Osaka, Tokyo, Niigata, and Aomori. A second table gives annual imports of red [azuki] beans to Japan from 1903 to 1907. They are imported mainly from China, Korea, and British India.

In Chapter 9, titled "Agricultural products in commerce," section 2 is on imports to Japan. A table (p. 433-34) gives imports of the following grains and seeds (in quantity / piculs and value / yen) from 1903 to 1907: Italian millet, soja beans, red beans [azuki] (small white), and sesame seeds. Another table (p. 438) titled "Miscellaneous" includes imports of "bean's oil cake" for the same period. An explanation titled "Soja-beans" (p. 439) states: "Not only as foodstuffs, but also as a manure a large quantity of beans are consumed each year, as that from China and Korea a considerable amount is imported. Besides beans, bean-cakes are imported from China in large quantity." Imports of sesame seeds, rice, wheat and rape-seed are also discussed on the same page. In this same chapter, section 3 is on Exports and imports in Formosa. Soy is mentioned on pages 434,

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439, 442, 448, 453-54. "Beans, Soja: The demand for soja beans in Formosa is enormous and as the Formosan product was not sufficient to meet the demand, a large amount is imported from abroad. Soja beans produced in Manchuria, and Chin-kiang [Chinkiang, Zhenjiang] are imported from China and Hongkong." "Oil, Beans [soybean oil]: This is principally produced in Manchuria and is brought here through China and Hongkong. Originally it was used as an illumination, but the demand has greatly increased as it is used in making cut tobacco" [to keep it moist]. Ground-nut oil is used for the same purpose (p. 453-54).

Note 3. This is the earliest document seen (Oct. 2003) concerning miso in international trade–exported from Japan; export statistics are also given. Note 4. The preface, by Chuzi [Chuji] Shimooka, explains that this book was compiled for the International Agricultural Association meeting to be held in Italy in the autumn. The compiler did not have time to explain all the terms [and units] adequately. Address: Tokyo, Japan.

1747. Allen, Horace Newton. 1908. Things Korean: A collection of sketches and anecdotes, missionary and diplomatic. New York, Chicago, Toronto, London, Edinburgh: F.H. Revell Co. 256 p. See p. 74. Illust. (black and white photos). No index. 19 cm.

• ***Summary:*** Page 74: "Products.–The great product of Korea is rice, which is the staple of diet. Next come [soy] beans, which are largely used as a food for man and beast, being mixed with rice in the human dietary or used in the form of curd or cake [tofu], while they are indispensable for making the sauce so highly prized in Asia, and which is shipped abroad in vast quantities for the preparation of a celebrated English sauce as well as others, since it is the foundation for most of our sauces. Any one who patronizes a Chinese restaurant will be familiar with this bean sauce. Millet, rye, barley, oats, wheat and some poor corn, together with cotton and vegetables, form the chief farm crops raised in Korea after rice and beans."

Note 1. By "bean sauce" the author probably means "soy sauce," but he might also mean soybean jang (Korean-style soybean miso).

Note 2. The term "celebrated English sauce" clearly refers to Worcestershire sauce.

Preface: The author lived for 22 years "in China and Korea, including practically the whole period of the latter's diplomatic intercourse with the outside world,..." He spent 3 years in Korea as a medical missionary, 3 years in the Korean service, and 15 years in the diplomatic service of the United States government, "beginning as secretary of legation and ending as minister plenipotentiary." The poor Koreans are in desperate straits but opposition by them to their situation "seems at present to be unavailing if not suicidal." Sadly, the United States "deserted them in their time of need and ignored the solemn agreement we had entered into with them as an inducement for their abandoning the centuries-old position of exclusion and non-intercourse and emerging into the dazzling glare of treaty relations. Our treaty with Korea of May 22, 1882, in its first article, makes the following promise: 'If other Powers deal unjustly or oppressively with either government, the other will exert their good offices on being informed of the case, to bring about an amicable arrangement, thus showing their friendly feeling."

The U.S. disregarded this solemn pledge at the time of the Portsmouth convention: we violated our sacred covenant.

Chapter 16, "Political changes and probabilities."

1884–The "haughty Chinese drove the then inconspicuous Japanese so precipitately from the land that they left their dead in the streets to be devoured by the dogs" (p. 243); the Chinese continued their traditional domination of Korea.

1894-1895–First Sino-Japanese War, over domination of Korea; the Japanese won and in Oct. 1895 the treaty of Shimonoseki was signed. During this war the world got its first intimation of the excellence of Japanese military organization and power. But diplomatic mistakes in Korea by Japan, after her victory, enabled Russia to gain the upper hand. Yet Russia too made diplomatic blunders while for 10 years Japan prepared for another war over Korea.

1904-1905–Russo-Japanese war; Japan won, gained control of Korea, and drove Russia from the entire area except in the vicinity of Vladivostok. During the 20 previous years when Korea could have fortified the country, it "played at all manner of silly pastimes." Now Korea is Japan's to exploit for herself. The U.S. position in the area has been weakened. Japan's next great objective will surely be China; it is only a matter of time. Address: Toledo, Ohio; M.D., Late Envoy Extraordinary and Minister Plenipotentiary of the United States.

1748. Ball, James Dyer. 1908. The Cantonese made easy vocabulary: a small dictionary in English and Cantonese,... 3rd ed. Hongkong: Kelly & Walsh, LD. [viii] + 294 p. See p. 241. [Eng; Chi]

• ***Summary:*** Under "Soy" (noun, p. 241) are the Chinese characters and the Cantonese term for soy sauce, *shi-yau*, with tones shown.

Note: *Shi-yau* is, more precisely, "fermented black soybean sauce." Address: Exmouth, Devon, England.

1749. Bloch, A. 1908. Le soja. Sa culture, sa composition, son emploi en médecine et dans l'alimentation [The soybean. Its culture, its composition, its use in medicine and in food]. *Annales d'Hygiene et de Medecine Coloniales* 11:85-122. [29 ref. Fre]

• ***Summary:*** This article is identical to that published by Bloch in 1907 in *Bulletin des Sciences Pharmacologiques* (Paris). Address: Pharmacist major 2nd class of the colonial troops. Doctor of Pharmacy.

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1750. Colby, Frank Moore, ed. 1908. The new international year book: A compendium of the world's progress for the year 1907. New York, NY: Dodd, Mead and Company. [6] + 860 p.
• ***Summary:*** The section titled "Manchuria" (p. 475-76) states: "By the treaty of Portsmouth (September 1905) Manchuria was practically divided into a northern or Russian sphere of influence, and a southern or Japanese sphere of influence. The Russian section is crossed by the Trans-Siberian Railway, which runs from east to west for a length of 960 miles over Manchurian soil until it reaches Vladivostok; and by the Central Manchurian Railway, which runs southward from Harbin, on the Trans-Siberian, to Changchun, with a branch line of 70 miles from Changchun to Kirin. The Japanese section is crossed by the continuation of the Central Manchurian line from Changchun to Port Arthur and Dalny, now known as the South Manchurian Railway [sic], which was surrendered by Russia to Japan; by the new Japanese line from Antung to Mukden, 187 miles long... Extensions of the Chinese Northern Railways are permitted by Japan only on condition that the capital, if not Chinese, be borrowed from the South Manchuria Railway Company."

"The leading exports are [soya] beans, bean cake, and bean oil, raw wild silk, maize, and millet. Newchwang and Dalny are the principal ports (p. 476).

"History–Reorganization of the Province: On April 20, 1907, an Imperial Chinese edict reconstituted the government of Manchuria. Instead of three provinces governed by three separate Tatar rulers, the whole country was placed under one viceroy, with a governor in each province."

The long and interesting section on Japan (p. 420-30) contains a map of the country. The section on agriculture states: The percentage of land owned by the tillers of the soil is 50.21 in rice field and 60.93 in upland. The rest is rented by tenants. In 1905 the production of soya beans was 3,261,881 koku and of red beans [azuki] was 804,485 koku (1 koku = 4.66 bushels). There is also detailed information on: Population (47 million in 1903) and immigration, fisheries, religion, education, mining, forestry, number of establishments [businesses] and employees, manufactures (incl. vegetable oils; "The Japanese Government is the greatest employer of labor in the country"), foreign commerce, shipping, railways, post and telegraph, banks and money, government (a constitutional monarchy; the Imperial Diet consists of a House of Peers and a House of Representatives; in 1904, 1.67% of the population could vote), finance (in 1907-08 projected internal revenue taxes on alcoholic beverages, soy [sauce] etc. totaled 96,331,881 yen), army, navy. History: Political parties, relations with the United States (incl. persecution of Japanese in San Francisco, California), relations with Great Britain, with France, with Russia, navy and military development, territorial expansion (retention of some troops in Manchuria as "railway guards," gradual absorption of Korea, and conquest of interior portions of Formosa, expansion of lumbering along the Yalu river, opening of 16 cities and towns in Manchuria as 'places of international residence and trade').

1751. Crowe, E.F. 1908. Japan: Report for the year 1907 on the trade of Japan. *Diplomatic and Consular Reports, Annual Series (Foreign Office, Great Britain)*. No. 4026. p. 1-86.
• ***Summary:*** "Export of soy (p. 35): This sauce was again sent in large quantities to those countries where the number of Japanese residents is on the increase. A new kind, said to have many advantages, and prepared by a lately-invented process, was put on the market during the year."

Annex I (p. 64-65) shows imports of "Beans, peas and pulse" to Japan (mainly from China and Corea) from 1902 to 1907.

Annex II (p. 76-77) shows "Return of principle articles of export from Japan during the years 1907 and 1906." Exports of soy [sauce] were worth £97,000 in 1906, increasing to £110,500 in 1907. The average value for the 5 years 1902-06 was £65,300; no quantities are given. Other leading exports were tea, cotton undershirts and drawers, saké, and fish. Address: Commercial Attaché to His Majesty's Embassy, Tokyo.

1752. Freshel, Maud Russell Lorraine (Mrs.). 1908. Six hundred recipes for meatless dishes. Originated, collected, and arranged by M.R.L. Sharpe. Cambridge, Massachusetts: The University Press. viii + 323 p. Recipe index. 22 cm.
• ***Summary:*** On the cover of this important, early vegetarian cookbook is written "The Golden Rule Cook Book." Later editions were published under the title *The Golden Rule Cook Book* in 1910 and 1926. The author's full name was Mrs. Maud Russell (Lorraine) Sharpe; thus her maiden name was Maud R. Lorraine. Born in 1867, she sometimes writes her first name "Emmarel" (i.e. for M.R.L.).

Worcestershire sauce is called for in many recipes in this book; see *The Golden Rule Cook Book* (1910). Address: Providence House, Chestnut Hill, Massachusetts.

1753. Gautier, Armand. 1908. L'alimentation et les régimes: Chez l'homme sain ou malade. 3e édition [Diet and dietetics: For healthy or for sick people. 3rd ed.]. Paris: Masson & Co. xx + 750 p. See p. 317-18, 617. Illust. 25 cm. [1 ref. Fre]
• ***Summary:*** Chapter 19, on vegetables, grains, etc., contains a section titled *"Pois ou fèves de Soja"* (Soja peas or beans, p. 317-18). The first half is almost identical to that in the 1904 edition. It continues: Soy flour contains, on average, only 28% starch, compared with 45% in wheat flour. Unfortunately the taste of this legume is not agreeable.* (* Footnote: This may be because we don't have a good recipe for its preparation. Here is the one Gautier used: Combine

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250 gm of dry soybeans with 1 liter of water at 40°C and 15 gm sea salt; soak for 12 hours. Pour off the water and replace it with the same quantity of newly salted water. Cook on low flame for 3 hours, without skimming off the foam. When it begins to form, add 3-4 gm of sodium bicarbonate, 2 leeks and some spinach leaves. Remove from the fire after sufficiently cooked. Remove the leeks and spinach leaves. Eat in sauce or on a salad).

In Japan, soy flour is mixed with cooked rice and allowed to ferment until one obtains [sic] a sort of pap or sauce which takes the place of meat extract and which is mixed with many foods. In China, the soybean (*le Soja*) is fermented with diced meat, to yield a condiment named *Si-zian*, which is very stimulating for the stomach.

The chapter on vegetarianism is similar to that in the 1904 edition.

Note: Émile Julien Armand lived 1837-1920. Address: Professeur a la Faculte de Médecine de Paris; Membre de l'Institut et de l'Académie de Médecine.

1754. Heppe, Kurt. 1908. Explanations of all terms used in coockery [sic]–cellaring and the preparation of drinks. Pocket dictionary. New York, NY: Published by the author. 335 p. See p. 45-46.

• ***Summary:*** The Preface begins: "This book has been specially adapted to American methods." Pages 45-46. Under the entry for "Cheese" we read: "Tao-foo cheese; Chinese cheese prepared from peas."

Under Sauces, ready-made (p. 274+) we find: Page 274: "Catchup; from the East Indian, kit-jab, (to get the essence). Page 275: Lea and Perrins Worchester [sic] sauce; a very hot dark sauce for meats, rarebits, fish, etc.

Page 286: "- a la Soy or Soya; of Japan beans with butter, brown fish essence, velouté.

Page 313: "Soy–a ketchup of the Soy bean."

1755. **Product Name:** Shoyu [soy sauce].
Manufacturer's Name: Hokubei Shoyu Jozo K.K. Jozo-sho.
Manufacturer's Address: 1217 Temple Ave., Fruitvale, California.
Date of Introduction: 1908. January.
New Product–Documentation: Nichibei Shinbun-sha. 1908. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Directory page 25 (Japanese numbers).

1756. Huang Shirong. 1908. Weituiju suibi [Random notes from the "plain flavor" studio]. China. Passage on soy reprinted in C.N. Li 1958 #349, p. 248-49. [Chi]

• ***Summary:*** Wade-Giles reference: *Wei T'ui Chü Sui Pi*, by Huang Shih-Jung. Qing dynasty. A revised edition of this book, edited by Huang's son, appeared in 1916 during the Republican period. This is a summary by Mr. Huang (in China) of a publication by Li Yu-ying–who was in France at the time.

The section titled "Soybeans efficacy and use" (*gongyong*) states: Mr. Li Yu-Ying recommends that China establish an association / society for soybeans and soybean technology for Chinese manufacturing. Li wrote two articles: One, to promote the establishment of a society for soybeans, and the second to promote manufacture of soybean products in China using modern technology. It is most important to invent new methods of production and manufacture, which would have a great effect on the industry. These two, which contained 5,000 words, were published in a Chinese newspaper [probably in China] the 2nd month on the 6th, 7th, 8th, 9th, 10th, 11th, and 12th days. Note: The name of the newspaper is not given. Mr. Huang summarizes the content as follows:

The nutrients of the soybean benefit health, economics, and commercial production; it is worthy of future development. Its wider propagation will improve the fertility of the soil because the roots contain nodules which fix nitrogen to enrich the soil. Soybeans are a rich source of dairy products (milk content) and oil, so they are very nutritious. They can be used to make good substitutes for meat. They are rich in phosphorus and potassium, so they are healthful and strengthen the brain. Since they are lacking in starch, they are good for diabetic diets. Because they are a rich source of dairy products (milk content) and oil, they would be a good material for industrial exploitation. And its very inexpensive; it sells for only about one-fifth as much as legumes from other countries. When you compare the milk / protein content with that of meat, milk, or eggs, or with other legumes and cereal grains, it is at least 2-10 times higher.

The soybean is rich in phosphorus, which is equal to the efficacy of Western medical phosphorus. Other products: Whole soybeans (*douren*). Soybean noodles (*doumian;* wheat pasta enriched with soy); it is a substitute for wheat gluten (*mianjin*). Soybean oil (*douyou*). Soybean cake–defatted (*doubing*). Okara or residue from making soymilk (*douzha;* [mostly fed to animals]). Soymilk (*doujiang*). Spray-dried soymilk (*doujiangfen*). Canned soymilk (*guandoujiang*). Soured soymilk (*suandoujiang;* by lactic acid fermentation). Soybean extract (*doujing*). Tofu (*doufu*). Pressed tofu–sliced (*doufugan yupian*). Fermented tofu (*faxiao doufu*). Whey–from making tofu (*yujiang*). Soy sauce (*jiangyou*). Sweet wheat-flour jiang (*tiandoujiang*). Soy sprouts (*douyacai*). Soybean coffee (*douren jiafei*). (Translated by H.T. Huang, PhD, April 2003).

1757. Ichida (R.). 1908. R. Ichida (Ad). In: Nichibei Shinbun-sha. 1908. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Page 11 (Japanese numbers) near the front. [Jap]

• ***Summary:*** Ad (full page). Food wholesaler. ICHIDA Risuke. Tokyo Shoyu Tonya-ken Yushutsu Nyugyo [Tokyo Shoyu Wholesale Export and Import Co.] Gomei Kaisha.

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Okada Shoten. Address: Koami-cho 3 chome 19 banchi, Nihonbashi, Tokyo. San Francisco branch representative, ICHIDA Risuke, 1905 Bush St., San Francisco, California. Okada Shoten represents the Kikkoman brand as well as other shoyu makers from the towns of Noda and Choshi; we sell their products and we also export. Address: 1905 Bush St., San Francisco, California.

1758. Lahor, Jean; Lucien-Graux, -. 1908. L'alimentation à bon marché, saine et rationelle [Food that is reasonably priced, healthful and rational]. Paris: Félix Acan, Éditeur. iii + 284 p. No index. 18 cm. [10 ref. Fre]

• ***Summary:*** Chapter 11, titled "Vegetarianism and vegetarian restaurants" (p. 146-66) gives accurate, detailed information for France. The Vegetarian Society of France is located at 13 rue Froisart, Paris. We read on p. 162-63: "The soybean (*Le soja*) of Japan, so rich in nitrogen, should also be favored on our tables, no doubt in the form of soy sauce, just as it is in the Far East."

A table titled "List of vegetarian foods which one can have all year round" (p. 166) includes soybeans and peanuts under "dry legumes."

Appendix IV titled "Fruitarianism" (p. 273-77) notes that fruits includes seeds (such as cereal grains and legumes) as well as nuts.

Note: Jean Lahor is a pseudonym. Address: Dr. Cazalis.

1759. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1908. Zaibei Nihonjin nenkan [Japanese-American yearbook. No. 4]. 234 Turk St., San Francisco, California. 491 p., many unnumbered. Reprinted in 25 Oct. 2001 in Tokyo by Nihon Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 1-kai [Collected Documents on Japanese Emigration. No. 1]. [Jap; eng]

• ***Summary:*** This book is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. There is an English-language title page.

The book is composed of: 4 unnumbered pages of front matter, 3 unnumbered leaves of black and white photos (two show before and after the San Francisco earthquake and fire) on glossy paper, 20 pages of ads and basic information, numbered using Japanese numbers (NUJN), of which the last four pages are the table of contents, 210 numbered pages which are the body of the book, 84 pages of ads NUJN, 6 unnumbered pages of index and ads, 95 pages of directory NUJN, 37 pages of ads and back matter NUJN.

The import tax on shoyu is either 40% or 4% (unclear, p. 48). There is one tofu shop near (but not in) Oakland, California (p. 180, lower right). There are three tofu shops in San Jose, one in Watsonville, one in Salinas, and a brewery [that may make shoyu and sake] in San Jose (p. 182).

The Directory shows Japanese companies making soyfoods in California and Nevada (Reno). Address: San Francisco, California.

1760. **Product Name:** Miso, and Shoyu [soy sauce].
Manufacturer's Name: Sanyo Shokai. Renamed Sanyo Shoyu Jozo Gaisha by 1909.
Manufacturer's Address: 920 Hight St., Melrose (near Alameda), California.
Date of Introduction: 1908. January.
New Product–Documentation: Ad (¼ page) in Nichibei Shinbun-sha. 1908. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. Page 14 (Japanese numbers) middle block of ads. A maker of miso and shoyu [soy sauce] (*Miso shoyu seizô-gyô*).

Nichibei Shinbun-sha. 1909. *Nichi-Bei Nenkan* [*Japanese-American Yearbook*]. Directory entry p. 31. The company name is now given as Sanyo Shoyu Jozo Gaisha. Address: 920 Hight St., Melrose, California. The company no longer makes miso–only shoyu. Note: Melrose is on the mainland, just northeast of Alameda (an island). As of Jan. 2008 Melrose was part of central east Oakland, a city adjacent to Alameda.

1761. Tsuda Shoten. 1908. Tsuda Shoten (Ad). In: Nichibei Shinbun-sha. 1908. *Zaibei Nihonjin Nenkan* [*Japanese-American Yearbook*]. p. 49, middle section of ads. [Jap; eng]

• ***Summary:*** Ad (half page). This company sells various goods including miso and shoyu. Address: 1020 Third St., Sacramento, California. Phone: Oak 1561.

1762. Veitch, Henry Newton. 1908. Sheffield plate: Its history, manufacture and art; with makers names and marks,... London: George Bell and Sons. xiv + 359 p. See p. 176-77. Illust. (74 plates + portrait). Index. 29 cm.



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• ***Summary:*** Chapter 13, titled "Illustrations from the original maker's catalogue of the First Period (with descriptive notes) (p. 153-83) states (p. 154): "Oil and vinegar frames, cruets and 'soy' frames are shown in great variety: teapots, sugar baskets, and cream pails then follow;..."

It continues (p. 176-77): "Plate XLIV, Catalogue Nos. 912-914 No. 912 is a Soy Frame, holding six cut flint-glass bottles with plated tops and name labels; the bottom pierced and flat- chased, on four fluted feet. While this is the only Soy Frame in the whole Catalogue, there are shown no less than twelve Cruets, containing from five to seven bottles, all of the finest type of design;...

The illustrations appear on the page after the description. Address: 4, Bennet St., St. James's, S.W., London.

1763. Watt, George. 1908. Commercial products of India. Being an abridgment of "The Dictionary of the Economic Products of India." London: John Murray. viii + 1189 p. See p. 564-65. [15 soy ref]

• ***Summary:*** Since Watt's *Dictionary of the Economic Products of India* has been out of print for some time, the Government of India asked him to write an updated 1-volume abridgement. He said that soybeans in India were first introduced from Indonesia. "The Soy Bean; in Indian vernaculars, *bhat, ram, gari-kulay, hendedisom horec, pond disom, an-ing-kiyo, tzu-dza, bhatnas, seta, musa, khajuwa,* etc.

"A sub-erect or creeping annual native of China, Cochin-China, Japan and Java, comparatively recently introduced into India, though recorded as acclimatised and even seen as an escape from cultivation. It might, in fact, be described as extensively cultivated, though more as a garden than a field crop; is especially prevalent in Eastern Bengal, Assam (Barpeta Sub-division), the Khasia hills, Manipur, the Naga hills and Burma. It is not infrequent in the plains of India proper, especially in Busti, Gorakhpur, Patna and Purnea, etc. In Bombay and Madras, however, the Soy Bean has apparently hardly passed the experimental stage.

"Cultivation.–Two chief varieties occur, one called white, the other black. On the plains it is generally grown by itself as a *kharif* (autumn) crop. The seeds are sown from June to September, and harvested from November to December... In Assam it is sown with*áhu* (autumn rice) in April and May. The*áhu* crop is removed in July and August, and its stubble acts as a support for the bean plants, which are ready for harvest in December and January."

"It is eaten in India in the localities where it is cultivated, chiefly in the form of *dál* or *satú*. In Japan it is largely used as a sauce, cheese (*natto*) or paste, and in China an edible oil is obtained from the seed. If cut when the pods are fully formed it makes a most nutritious fodder, and the seed-cake, as already stated, is an extremely rich cattle food."

Also discusses: Alfalfa (p. 778). Almonds (*Prunus amygdalus*, p. 905). Broad bean or Windsor bean (*Vicia faba*, p. 1106-07. "There are two distinct forms, the long-podded and the broad-podded, the latter originating the name 'Broad' or 'Windsor bean'"). Chufa (*Cyperus esculentus*, p. 465: also called Rush-nut, earth-almond, or tiger-nut). Coffee (p. 363-68, with an excellent history). Cowpeas (p. 1107-08). Lucerne or alfalfa (*Medicago sativa*, p. 778-79).

Mung bean, *udid*, and *urud / urd* (*Phaseolus mungo* or *P. radiatus*, p. 880-82). "There has been some confusion regarding the nomenclature of *Phaseolus Mungo* and the species which follows–*P. radiatus*,–due chiefly to Roxburgh having transposed the original Linnean names. *P. Mungo, Linn.*, is the present plant, udid or urd; while *P. radiatus*, Linn., is the plant known in the vernacular as mung. There are two varieties of udid, one with large black seeds, the other with smaller greenish seeds, and these correspond very possibly with *P. Mungo* proper and the variety *Roxburghii*.

Sea-weeds (Kelp, p. 50). Address: Kew Gardens, England; Formerly, Prof. of Botany, Calcutta Univ., Superintendent Indian Museum (Industrial Section) and reporter on economic products to the Government of India.

1764. Senn, Charles Herman. 1908? A pocket dictionary of foods & culinary encyclopedia. London: The Food & Cookery Pub. Agency. 158 p. Undated. *

• ***Summary:*** Charles Hermann Senn lived 1862-1934.

1765. *Christian Science Monitor.*1909. Want favorite food duty free. Jan. 1. p. 3.

• ***Summary:*** "Washington–Greeks, Japanese and Chinese now want to take a hand in framing the new tariff bill. The San Francisco Chinese chamber of commerce,... has submitted to the ways and means committee a brief asking that the duties be reduced on Chinese soy [sauce], rice, fish, meat, type and fire crackers.

"The Japanese association of America, with headquarters in San Francisco [California], makes a plea that mizo [sic, miso], a food, shoyu, a sauce, and greenhouse stock be placed on the free list, and that the tariff be reduced on rice, vegetables, and earthenware."

1766. *Chemist and Druggist (London).*1909. Trade report. 74(1511):61-63. Jan. 9. See p. 63.

• ***Summary:*** Page 63: "Soy.–The new method in regard to the calculation of freight on soy has now been established. To arrive 1*s.* 2½*d.* [1 shilling 2 pence] c.i.f. is quoted, or 1*s.* 3½*d.* to 1*s.* 4*d.* per gal. [gallon] spot for good thick."

A subsequent entry [13 Feb. 1909, p. 270-74] reads: "Soy–Small spot sales of good thick have been made at 1*s.* 3½*d.* per gallon, but for shipment higher prices are asked."

Note: Soy sauce now seems to be categorized as thick and not thick (perhaps thin).

1767. *USDA Bureau of Plant Industry, Inventory.*1909. Seeds

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and plants imported during the period from January 1 to March 31, 1908. Nos. 21732 to 22510. No. 14. 64 p. Jan. 9. Also titled USDA Bureau of Plant Industry, Bulletin No. 137. • ***Summary:*** Soy bean introductions: Glycine hispida (Moench) Maxim. [Note the first use of this terminology in this publication.]

21754-21757. "From Paris, France. Purchased from Vilmorin-Andrieux & Co. Received January 3, 1908.

"21754. Yellow seeded.

"21755. *Ogemaw*. Extra early, brown seeded.

"21756. Black seeded.

"21757. Extra early, black seeded."

21818. "From Paris, France. Purchased from Vilmorin-Andrieux & Co. Received January 17, 1908. *Ito San*. Called by the French, *Yellow Etampes*.

21825. "From Hokkaido, Japan. Presented by Mr. K. Hashimoto, Kuchchau Agricultural Society, Abutagun. Received January 14, 1908. *Amherst* (?). 'Used in the manufacture of "soy," "miso," "tifu" [tofu], etc.' (*Hashimoto.*)"

21830/21831. "From Hokkaido, Japan. Presented by the Yokohama Nursery Company, Yokohama, Japan. Received January 24, 1908.

"21830. *Butterball*. Japanese name *Akita*.

"21831. Japanese name *Rumoi*."

21946. "From Buitenzorg, Java. Presented by Dr. M. Treub, director of the Department of Agriculture. Received February 11, 1908. '*Zwarte kadelee*'" [black soybeans].

21999. "Received through Mr. F.N. Meyer, agricultural explorer for this Department at the Plant Introduction Garden, Chico, Cal., February 12, 1908. From Boshan, Shantung, China. '(No. 799a, Sept. 18, 1907.) A rare variety of soy bean, sparsely grown near Boshan. Chinese name *Ta ha tau*. Used by the higher classes as a vegetable in soups.' (*Meyer.*)"

22311/22312. "From Shanghai, Kiangsu, China. Presented by Rev. J.M.W. Farnham, Chinese Tract Society. Received March 11, 1908.

"22311. Black. 'Similar to *Nuttall* but larger.' (*Neilsen.*)

"22312. Yellow."

22317-22322. "From Erfurt, Germany. Purchased from Haage & Schmidt [seedsmen]. Received March 16, 1908.

"22317. Probably *Butterball*.

"22318. '*Giant Yellow*.' Probably *Amherst*.

"22319. Brown.

"22320. *Samarow*. Like No. 17260.

"22321. Probably *Cloud*.

"22322. '*Early Black* from Podolia [Ukraine].' Probably *Buckshot*."

22333-22337. "Grown at Arlington Experimental Farm, Virginia, season of 1907. Received March 19, 1908.

"22333. *Baird*. 'This variety was mixed with *Brownie* when received from Pingyang [Pyongyang / P'yongyang], Korea. This mixture was given S.P.I. No. 6414. The two varieties were grown together under these numbers, 9417, 17256, and Agrost. No. 1542, respectively. The two varieties were separated in the 1907 seed from Arlington Farm, and *Baird* given the above new number, *Brownie* remaining as No. 17256.' (*Nielsen*).

"22334. Flat black. 'Received from Mr. H.B. Derr, Agricultural Experiment Station, Champaign, Illinois. The original source of the seed is not known. It is quite similar in growth to *Nuttall*, but the seed is not the same shape, being flatter and larger.' (*Nielsen.*)

"22335. Yellow. 'Received from Mr. H.B. Derr, Agricultural Experiment Station, Champaign, Illinois, where it was grown as *Illinois Medium Yellow*. It is very similar to *Hollybrook*, and perhaps is the same, but appears different on account of having been grown farther north.' (*Nielsen.*)

"22336. *Guelph*. 'Received from Mr. H.B. Derr, Agricultural Experiment Station, Champaign, Illinois. Original seed was procured from the Agricultural Experiment Station, Wooster, Ohio.' (*Nielsen.*)

"22337. *Guelph*. 'Received from Mr. H.B. Derr, Agricultural Experiment Station, Champaign, Illinois. Original seed was procured from the Agricultural Experiment Station, Fayetteville, Arkansas' (*Nielsen.*)."

22379-22381. "From Canton, Kwangtung [province], China. Presented by Dr. J.M. Swan, Cooks Hospital. Received March 20, 1908.

"22379. Yellow.

"22380. Black.

"22381. Green mixed with yellow and a few brown."

22406/22407. "From Hongkong, China. Presented by Mr. S.T. Dunn, Botanical and Forestry Department. Received March 26, 1908. [Note: It is not clear whether or not they were ever cultivated in Hongkong. These two soybeans (#22406 and #22407, both black seeded) were later given the names "Hongkong" and "Nigra" respectively, and introduced to the USA in about 1910].

"22406. Yellow.

"22407. Black."

22411-22415. "From Naples, Italy. Purchased from Dammann & Co. Received March 25, 1908.

"22411. *Samarow*.

"22412. Black. 'Similar to *Cloud*.' (*Nielsen.*)

"22413. Brown.

"22414. Yellow. 'Similar to *Acme*.' (*Nielsen.*)

"22415. Giant yellow."

"Glycine soja Sieb. & Zucc." [Note the first mention of this species.] 22428. "Grown at Arlington Farm, Virginia, season of 1907, under C.V.P. No. 0474. Received March, 1908. 'Original seed presented by the Botanic Gardens, Tokyo, Japan. A near relative to the soy bean, but a spreading or decumbent plant, abundantly provided with large root nodules. Has considerable promise as a cover or green manure crop.' (*Piper.*)"

22498-22501. "From Hangchow, Chehkiang, China.

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Presented by Dr. D. Duncan Main, through Mr. J.M.W. Farnham, Shanghai, China. Received March 26, 1908.

"22498. Yellow. Similar to No. 18619.

"22499. Yellow.

"22500. Green. Similar to No. 17857.

"22501. Black."

22503-22507. "From Yokohama, Japan. Purchased from L. Boehmer & Co. Received March 31, 1908. The following seeds with Japanese names quoted; varietal descriptions by Mr. H.T. Nielsen:

"22503. '*Teppo Mame.*' Yellow, similar in appearance to *Amherst*, No. 17275.

"22504. '*Kaze Mame.*' Green.

"22505. '*Gogwatsu Mame.*' Yellow, similar to *Haberlandt*, No. 17271.

"22506. '*Maru Mame.*' Yellow.

"22507. '*Vieuri Lei.*' Green, similar to *Yosho*, No. 17262." Address: Washington, DC.

1768. Ford, Sydney (Miss). 1909. Facts, features and fancies for women. *Los Angeles Times*. Jan. 19. p. 117.
• ***Summary:*** The section titled "Table talk" suggests: "Try a Chinese luncheon to entertain your eastern guests... Lay a pair of Chinese chopsticks at each place and serve a dish of soy [sauce], birds' nest soup, chicken with the bones removed, tea, queer candied fruits, chop suey made with fish, nuts and bamboo sprouts,..."

1769. Holland, Edward B. 1909. Soy beans and soy bean oil. *Massachusetts Agricultural Experiment Station, Annual Report* 21(Part II):111-19. Jan. 1909. [30 ref]
• ***Summary:*** Contents: Economic uses. The chemistry of soy bean meal. Table showing composition of Medium Green soy beans. Soy bean oil: Physical tests (tables show specific gravity, specific viscosity, refractive index, mean dispersion), chemical tests (tables show acid number, ether number, Hehner number, insoluble acids, neutralization number, mean molecular weight, iodine number).

The oil was removed from the soy beans by the V.D. Anderson Company of Cleveland, Ohio, using torsional pressure. "An analysis of the resulting cake indicates that from 55 to 60 per cent. of the oil was removed. The oil was passed through a filter press, but was not refined otherwise. The oil was clear and of a dark amber color, with an odor similar to that of other vegetable oils." The author found the oil to have following physical constants: Specific gravity at 15°C 0.9206. Specific viscosity 8.43. Refractive index at 20°C 1.4749. Mean dispersion at 20°C 0.00938.

In chemical tests, the author found the following constants: Saponification (*Koettstorfer*) number 191.95. Acid number 1.27. Ether number 190.68. Iodine number 130.77. "According to the classification of Lewkowitsch, based on iodine number, soy bean oil is a semi-drying oil of the cotton-seed oil group."

Note 1. E.B. Holland is no relation to J.H. Holland of London, who wrote about soy in 1910.

Note 2. This is the earliest English-language document seen (Sept. 2006) with the term "soy bean oil" in the title.

Note 3. This is the 2nd earliest document seen (Sept. 2006) that uses the term "Refractive index" in connection with the soja bean, and the first that gives a value (1.4749 at 20°C).

Note 4. Values for the specific gravity and saponification number of soy bean oil, attributed to Shukoff in "correspondence with Dr. Lindsey," are the same as those published by Shukoff in *Chemische Revue ueber die Fett- und Harz-Industrie* (Hamburg, Germany) (Dec. 1901, p. 250-51). Address: M.Sc., Assoc. Chemist, 28 North Prospect St., Amherst, Massachusetts.

1770. Saito, Kendo. 1909. Preliminary notes on the spore-formation of the so-called "Soya-kahmhefe." *Botanical Magazine (Tokyo)* 23:96. Jan. German summary in Zentralblatt fuer Bakteriologie. II. 26:92-93. [2 ref. Eng; ger]
• ***Summary:*** Discusses the film-forming yeast that makes a film atop Japanese soy sauce. He believes this species is new to science, and proposes the name *Zygosaccharomyces japonicus*. Note: This is the earliest document seen (June 1999) that mentions the genus *Zygosaccharomyces*, or that mentions the species *Zygosaccharomyces japonicus*. In the early 1950s this species was renamed *Saccharomyces rouxii*. Address: Botanical Inst., Tokyo Univ., Japan.

1771. *Chemist and Druggist (London)*.1909. Trade report. 74(1516):272-74. Feb. 13. 9. See p. 272.
• ***Summary:*** Page 272: "Soy–Small spot sales of good thick have been made at 1*s.* 3½*d.* per gallon duty paid, but for shipment higher prices are asked."

1772. Nishimura, Torazô. 1909. Shôyu kôbo Saccharomyces soya Saitô ni tsuite. II. [On the shoyu yeasts, Saccharomyces soya Saito. II.]. *Nogakkai Kaiho (J. of the Scientific Agricultural Society, Japan)* No. 85. p. 3-44. Feb. [Jap] Address: Nôgaku-shi, Japan.

1773. *Scotsman (The) (Edinburgh, Scotland)*.1909. New oilcake industry. March 5. p. 10.
• ***Summary:*** "The following, which appeared in a recent issue of the *Eastern Morning News*, is referred to to-day by our agricultural contributor:–The arrival of the Javorina, s. [steamer], at Hull with the first cargo of Soya beans marks the beginning of what promises to be an important new industry in this country. Considerable interest is manifested in this new development as it will have an important bearing upon the future prosperity of the oilcake industry.

"The Javorina, s., is the first of a fleet of steamers bringing Soya beans to Hull. The beans are in good condition and this is due to the excellent arrangements made for

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ventilation in the holds. It is a long voyage from Vladivostok, the vessel leaving the Russian port on Boxing Day [probably Dec. 26]. The total quantity for Hull is about 4,700 tons, and the remainder will be transshipped to London.

"The Soya bean grown is immense quantities in Manchuria and China. The Japanese have adopted the bean to commercial uses, not for the food of animals, but for that of man. It is not an unpopular article of diet in many parts of the Far East, and during the campaign conducted in Manchuria by the troops of the Rising Sun the men were fed very often on little else. It possesses sustaining qualities, and is the basis of a Japanese sauce [shoyu, or soy sauce]. Its chief value to this country, lies in the fact, however, that it will be an excellent animal food because of its richness in albuminous compounds and nitrogen, which are very good feeding qualities."

"Several forms of cake manufacturers have conducted... tests and these have proved eminently satisfactory. The experimental Soya cakes which have been made in Hull have been tested by a practical and scientific dairyman in the East Riding, who has reported that one cow set aside for this test and fed with half a cake a day, in addition to other food, yielded a considerable extra quantity of milk daily, and was much improved in general condition. The large proportion of oil in the cake makes sparing use of it advisable.

"Up to the present soya beans have been imported to England only in small quantities, but the development of Manchuria promises to revolutionise what is an important industry in Hull."

"What it will mean to Hull alone is that this new source of supply will be available in the seed crushing trade when other classes of seed are scarce and the mills will, therefore, be able to continue running uninterruptedly.

"A combination of circumstances are said to be responsible for the development under such favourable conditions at the present time–the low price of silver, which is what everything is bought with in Japan and China, and low freights. The Javorina, s. [steamer], is the first of a fleet of nineteen vessels which are now on the way from Dalny or Vladivostock with large cargoes of the bean. Several of these vessels are definitely fixed for Hull, two for Liverpool, and the remaining eleven for other ports in the United Kingdom."

1774. *Poverty Bay Herald* (*Gisborne, New Zealand*).1909. New food from China. March 13. p. 2.
• ***Summary:*** "London, Jan. 16–A new food is coming to town–new, that is, in the sense that comparatively few people in the country have partaken of it.

"The soja or soya bean is a product of Manchuria. In appearance it somewhat resembles the ordinary lentil, while in taste (uncooked [sic]) it approaches very nearly to the taste of the common 'split' pea.

"It has only heretofore been brought to this country in very small quantities, and, in spite of the fact that it constitutes almost the staple food [sic] of the Chinese laborer, it has never been seriously considered by Western civilisation as a bean with food properties.

"Travellers who have journeyed through the interior of Manchuria tell marvelous stories of Chinese carriers who will cover thirty miles a day regularly with a load of 120 lb or 130 lb upon their backs, and these laborers keep up their strength for this work by eating the soja bean.

"Some British physicians have recognised its value as a food for diabetes, and it is also prescribed at certain large German hospitals for the same' complaint. The Japanese have for many years past laid it under contribution as the basis of their well-known piquant sauce, and it is from one of the Japanese firms that Europe will shortly receive a consignment of, it is anticipated, well over 100,000 tons.

"As a food the bean is prepared in very similar fashion to the method employed in cooking ground rice" [sic].

1775. Jevne (H.) Co. 1909. The chef's secret (Ad). *Los Angeles Times*. April 17. p. II7.
• ***Summary:*** "That exquisite something you taste in Soup, Gravies, Sauces and Salads, is the clever addition of Just the proper thing–a dash or two of Worcestershire Sauce, or Tarragon-Vinegar 35¢.... or India Soy 35¢.... or any of the long list of Spices, herbs, etc. you will find in our catalogue, given upon request." Est. 1882. Address: Corner Broadway & Sixth St. and 208-210 S. Spring St. Phone: Home 10651, Sunset B'dwy, 4900.

1776. Mitsuda, Ryuichi. 1909. Shôyu no tansuikabutsu ni tsuite [On the carbohydrates in shoyu]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 30(4):335-48. April. [Jap]
• ***Summary:*** Note: According to Oshima (1922) an English-language translation was made by the office of W.T. Swingle, USDA Bureau of Plant Industry. Address: Nôgaku-shi, Japan.

1777. Douglas (J.M.) & Co. 1909. What the grocers say, about Lea & Perrins' Worcestershire Sauce (Ad). *Toronto Daily Star* (*Canada*). May 4. p. 12.
• ***Summary:*** "Fraser, Viger & Co., Limited, of Montreal, have the reputation throughout Canada of catering to the highest class of the trade. This well known house also believes in telling their patrons about their best goods.

"In an advertisement which appeared in 'The Montreal Daily Star' of February 13th, Fraser" etc. said: "Among the various sauces that flood the market, Lea & Perrins', the 'Genuine Worcestershire,' is still in the lead by a big margin Its flavor is unique and most appetizing, different from all others."

Illustrations show: (1) A grocer, wearing muttonchops [sideburns] and a white apron, holding a bottle of Worcestershire sauce. (2) A large upright bottle of Lea & Perrins' Worcestershire Sauce. Address: Agents for Canada,

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Established 1857. Montreal [Quebec, Canada].

1778. Okazaki, Keiichiro. 1909. Process of manufacturing soy or sauce substitute. *U.S. Patent* 0,923,070. May 25. 4 p. Application filed 2 May 1907.

• ***Summary:*** Okazaki and diastarin fungi are cultivated upon a mixture of bean-cake and wheat bran, water added to the mass and the resultant liquid separated and mixed with a liquid containing brewers' yeast. Illustrations (line drawings) show: (1) "A perspective view of a box containing sawdust and bran used in the cultivation of the okazaki and diastarin fungi; (2) A perspective view of the okazaki fungus [a whitish mold of the genus *Aspergillus*] and conidia thereof; (3) A perspective view of the diastarin fungus and conidia thereof." Address: Tokyo, Japan.

1779. Duncan's (John) Sons. 1909. Lea & Perrins Sauce: The original Worcestershire (Ad). *Pearson's Magazine* (*New York*) 21(5):Unnumbered page at end. May.

• ***Summary:*** "Try it on Lobster. All varieties of Fish, are deliciously seasoned and made more appetizing with..."

"Soups, fish, steaks, roast meats, chops, gravies, game, chafing dish cooking and salad dressings are greatly improved by its use. For four generations it has stood unrivaled as a seasoning. Return substitutes."

Photos show: (1) A cooked lobster on a dish; (2) A bottle of Lea & Perrins Sauce. Address: Agents, New York.

1780. *Monthly Consular and Trade Reports* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*).1909. Oleaginous products: Oil cake and seed. No. 344. p. 153-55. May.

• ***Summary:*** Exports of [soy] beans and [soy] bean-cake from Newchwang, China, are increasing rapidly. The United States Consul at Newchwang, "Thomas E. Heenan, calls attention to the exports of Chinese beans to the United Kingdom as the beginning of what is expected to develop into considerable proportions.

"Since the closing of the river to navigation, large numbers of carts have been entering the town with inland produce, and great quantities of beans have been stored for export in the spring. It is difficult to obtain reliable figures concerning the quantity brought by rail, but up to date 64,000 tons have been brought by carts, and it is estimated that the total quantity brought in by rail and carts during the four Months December-March will reach 88,000 tons, against 30,000 tons for the same period last winter. This quantity, however, is small compared with the stocks shipped to Dalny by rail from the north, and when the thaw sets in, putting a stop to cart traffic, unless there are early spring rains, there is very little prospect of large supplies coming down by river boats, as the snow thus far has been insufficient to give the requisite draft of water in the up-river reaches.

"Countries to which shipments are made: Beans, bean cake, and bean oil are the principal products of Manchuria. The prices of these during the past season have been higher than ever before, but how much of this is due to the ability of Japan, a gold-standard country, to pay more in silver, because silver has been cheap, can not be positively stated. The bean cake and bean oil go chiefly to Japan, but shipments have gone to England, France, and the United States during the past year. The American shipment was a small quantity sent from Newchwang merely as a sample... During the year the exports to England amounted to about 70,000 bags. This is a new development, said to have been brought about by English experts who have made a study of the beans. They have discovered, it is said, a means of extracting an oil therefrom, for culinary use as well as for lubricating purposes., the residue being converted into cattle feed. The exports of bean cake from Newchwang to foreign countries in 1908 amounted to 246,608 tons, valued at $5,518,508.

"The exports of beans from Newchwang to foreign countries and other Chinese ports during 1908 were as follows, in tons:" Yellow [soy] beans 75,996. Green beans 31,873. Black [soy] beans 16,489. White beans 4,315. Red [azuki] and small green [mung] beans 3,634.

"United Kingdom: An experiment with the soya bean in Manchuria." U.S. Consul Walter C. Hamm of Hull [England] writes, under date of January 20,..." The soya bean "has been exported to some extent to the United States, and a few samples have been brought to England, but the present shipments to Hull are the first on a large scale. Three steamers, the Maroa, the Javorina, and the Matoppo, are now on their way from Dalny or Vladivostok with about 10,000 tons each, and the Claverdon and the Bannockburn are loading similar quantities at Dalny, making 50,000 tons in all."

A long quotation from an article in the *Eastern Morning News* describes the arrival at Hull, England, from China, of the first cargo of soya beans on board the Javorina. "The beans arrived in good condition, and this is due to the excellent arrangements made for ventilation in the hold." Experimental "soya cakes have been made in Hull and have been tested by a practical and scientific dairyman in the East Riding, who has reported that one cow set aside for this test and fed with half a cake a day, in addition to other food, yielded a considerable extra quantity of milk daily and was much improved in general condition. The large proportion of oil in the cake makes sparing use of it advisable... The Japanese have adapted the bean to commercial uses, not for the food of animals, but for that of man. It is not an unpopular article of diet in many parts of the Far East. It possesses sustaining qualities, and is the basis of a Japanese sauce [shoyu].

"Chinese beans in Scotland: Tests in crushing mills for oil and stock meal." U.S. Consul Rufus Fleming reports on Feb. 12 from Edinburgh: "In the production of oil cake and seed oil the crushing mills in this district have long used

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only Bombay and Egyptian cotton seed. Recently some of the mills have experimented with small quantities of 'soya beans' from Manchuria. The Chinese bean, which is about the size of a pea, has been found to contain from 15 to 16 per cent of oil suitable for soap making. The usefulness of the oil for other industrial purposes has not yet been demonstrated. The cake produced, containing about 6 per cent of oil, is said to be good feed for stock... The mills in this part of Scotland have undertaken to carry out thorough tests, and a shipment of 1,700 tons is expected to soon arrive at Leith for this purpose."

Note 1. This is the earliest document seen (Feb. 2003) concerning soybeans in Scotland. They were imported from Manchuria. Rufus Fleming filed his report on 12 Feb. 1909.

Note 2. This is the earliest English-language document seen (Feb. 2000) that uses the term "soya cake" or "soya cakes" to refer to ground, defatted soybeans.

Note 3. This is the earliest English-language document seen (Sept. 2006) that uses the term "Chinese beans" (or "Chinese-beans") to refer to soybeans.

Note 4. This is the earliest document seen (Oct. 2005) concerning soya beans imported to or processed in Hull, England. Address: Washington, DC.

1781. *Mark Lane Express Agricultural Journal and Live Stock Record* (*Farmer's Express, London*).1909. Soya beans and soya cakes. 100(4054):667. June 7. See also Experiment Station Record 21:474 (1909). [1 ref]

• ***Summary:*** This is a detailed summary of a "communication which Professor Gilchrist, of Armstrong College, has sent to the press." "Trials to test the comparative feeding value of soya and decorticated cotton cakes have been carried out at Newton Rigg, the Cumberland, and Westmorland Farm School, under the supervision of the manager, Mr. W.T. Lawrence.

"Soya cake is produced from soy or soya (soja) beans (from which some of the oil is extracted), which are now being extensively imported from Manchuria to this country." "Soya cake" was found to be slightly superior to "decorticated cotton cake" for milk production. Six cows were fed for 6 weeks on each protein supplement. The basal ration consisted of hay, oatstraw, crushed oats, and roots. Concerning milk production, there was a slight advantage in favor of the soya cake but it was too small to be considered significant. Both feeds also gave similar results in terms of the fat content of the milk. The cows, however, gained somewhat more weight while they were being fed the soya cake than they did on the decorticated cotton cake.

"Soy, soja, or soya beans have been known in China and Japan for a considerable time. Soy (shoyu), the universal condiment in Japan, is prepared from soy beans, mixed in equal quantities with either wheat or barley. The British Oil and Cake Mills, Ltd., Hull, inform me that about 400,000 tons of these have been sold to this country within the past few months for delivery till the end of the year, of which 50,000 tons have now arrived, and a steady supply is anticipated in the future. Three qualities of these are now imported:–The Sakura, which are said to be the best, being shipped from Dalny [Manchuria], the Harbin from Vladivostock [Vladivostok], and the Hankow from Shanghai."

"Soya or soja meal is being sold in this country, which is soya beans from which the greater part of the oil has been extracted. This may contain as little as 1.5 per cent of oil, while the albuminoids and other constituents are consequently increased.

"Soya cake is now sold in the Newcastle district at about £6 15*s.* to £7 a ton."

Note 1. This is the earliest English-language document seen (Dec. 2005) that uses the term "soja meal" to refer to ground, defatted soybeans.

Note 2. This is the earliest document seen about feeding "soya cake" to dairy animals.

Note 3. This is the earliest document seen (Sept. 2004) that mentions "Sakura," which appears to a grade or quality of soybeans, rather than a soybean variety name. "Sakura" is not used as either a grade or soybean variety name in the USA. Address: Armstrong College, England.

1782. Mitsuda, Ryuichi. 1909. On the carbohydrates of shoyu. *J. of the College of Agriculture, Tokyo Imperial University* 1(1):97-101. June 16. [Eng]

• ***Summary:*** Contents: Isolation of sugars from shoyu. About furfurol [an aldehyde of furfuran; also called furfural]. About total pentosane. "Although the existence of sugars in shôyu is easily shown by the reduction of Fehling solution, it is comparatively difficult to isolate them in a pure state. At first I have tried to isolate them as the lead compounds... Afterwards I found that such a long operation is unnecessary." He used recrystallization of crude osazones.

He gives technical details of how each carbohydrate was isolated from shoyu or tamari. Furfurol, which is formed from pentose or pentosane, was found to increase with the age of the moromi. Address: Japan.

1783. Yoshimura, Kiyohisa. 1909. Ueber die chemische Zusammensetzung der Tamari-Schoyu [On the chemical composition of tamari shoyu]. *J. of the College of Agriculture, Tokyo Imperial University* 1(1):89-96. June 16. [3 ref. Ger]

• ***Summary:*** So-called Tamari-shoyu (*Tamari-Schoyu*) is a variety of shoyu (liquid soy sauce) which is mainly used and made in the middle and western part of Japan. The chief difference between this variety and the most common soy is the absence of wheat in the raw materials used in its preparation. The author isolated from 1 liter of "tamari-shoyu" 0.3 gm of putrescine, 0.7 gm of ornithine, 0.7 gm of a base $C_xH_yN_z$, and 4.5 gm of ammonium. Address: Japan.

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1784. *Chamber of Commerce Journal (London)*. 1909. Soya bean oil and oil cake. 32:199-200. July.

• ***Summary:*** "With reference to the paragraph in our previous issue as to Chinese Soya beans..." During the last few months, large quantities of these beans have been imported into the United Kingdom. "The Soya bean grows in great abundance in China and especially in Manchuria, where it is used for human consumption, and its nutritive qualities are highly appreciated. It forms the basis of a Japanese sauce [soy sauce] of great repute."

Because this leguminous plant absorbs nitrogen from the air, it exhausts the soil much less than other oleaginous plants. "In Europe the bean is only of value for the oil which it contains and the cake left after the oil has been expressed." The oil-pressing mills at Hull, England, have already imported large amounts and find the oil a valuable product, with a good color. The residual cake makes an excellent cattle food.

This year more than 150,000 tons have been exported, and there are now many cargoes of 4,500 to 6,000 tons on their way from Vladivostock [Vladivostok] and Dalny to Europe, consigned to Hull, Liverpool, and Hamburg [Germany]. The condition of the beans upon arrival is said to be perfect, despite the long voyage. "The product is sold with a guaranteed maximum of 2 per cent. of non-oleaginous foreign matter; it is packed in the original sacks.

"The qualities are classified in three grades: No. 1, shipped at Dalny; No. 2 at Vladivostock; and No. 3 at Hankow. The value of No. 1 is about 12*s.* 7*d.* per 100 kilos gross, c.i.f. European port direct. Nos. 2 and 3 are of equal value about 12*s.* 5*d.* per 100 kilos gross." The nutritional composition of the cake is given.

Note: This is the earliest English-language document seen (Sept. 2006) with the term "soya bean oil" in the title.

1785. Ruhräh, John. 1909. The soy bean in infant feeding; Preliminary report. *Archives of Pediatrics* 26:496-501. July.

• ***Summary:*** This pioneering paper was read before the Twenty-first Annual Meeting of the American Pediatric Society, Lenox, Massachusetts, May 28, 1909. "The soy bean (glycine hispida), sometimes incorrectly called the soja bean, is an annual leguminous plant which originally grew in a wild state from Cochin China to the south of Japan and Java."

There follows a brief but accurate history of the soy bean. "In 1875 Professor Haberlandt began a series of investigations with this plant in Austro-Hungary, and in his work published in 1878 he urges the importance of the soy bean as a food both for man and animals. After his death, which occurred in 1878, very little notice was taken of the soy bean in Hungary and the prophecy that he made for its future failed."

"As early as 1829 Thomas Nuttall wrote an article in the *New England Farmer* concerning the bean as a valuable crop for this country. The Perry expedition to Japan also brought back soy beans, but until the last fifteen or twenty years the plant was known only as a curiosity."

"The plant is grown in America, but is used chiefly for the purpose of a forage crop and comparatively little reference has been made to its use as food for man." The plants "bear a remarkable number of beans and the flowers are self-pollinated, making the yield independent of insects. The bean may be easily grown in Maryland. I am indebted to three friends for experimenting with this plant in their gardens and obtaining good crops..."

Note 1. This is the earliest document seen (May 2009) that mentions soybean pollination–quite remarkable since it is by a pediatrician writing about a completely different subject. It is also the earliest document seen (May 2009) that uses the term "self-pollinated" (or self-pollinating, etc., with or without the hyphen) in connection with soybeans.

"At the present time there are seven varieties handled by seedsmen, and some twenty-two distinct varieties are known." The varieties Mammoth Yellow, Hollybrook, and Ito San have been used in infant feeding experiments. "The other varieties are the Guelph (green), the Samarow (green), the Ogemaw (brown), and the Buckshot (black). All of these latter may be grown in the north."

"I am indebted to Mr. Frank N. Meyer, agricultural explorer for the Department [U.S. Department of Agriculture], for information concerning the use of the beans in the East... The light-colored beans are eaten in soups and the pods are sometimes picked green, boiled, and served cold with a sprinkling of soy sauce. The green varieties are often pickled in brine and eaten moist or dried with meals as promoters of appetite; the same varieties are often slightly sprouted, scalded and served with meals in winter time as a green vegetable." Also discusses soybean oil, soy bean milk (which "has a composition nearly the same as that of cow's milk" as shown in a table), "natto, tofu, miso, yuba, shoyu,..." (p. 498).

"The soybeans are sometimes roasted and then used as a substitute for coffee" (p. 499)

"The fact that the soy beans contain little or no starch suggested to Dujardin-Beaumetz that they be used as a food for diabetics. The soy bean flour has been placed on the American market, but was withdrawn owing to the fact that according to the manufacturers it contained 8 per cent. carbohydrate. It contains much less carbohydrate, however, than any of the other diabetic foods."

"As regards the use of the beans in infant feeding it seemed to me that soy bean gruel or milk, either alone or with cow's milk, might be of value in feeding several classes of cases, viz., of marasmus and malnutrition, as a substitute for milk in diarrhea, and in intestinal and stomach disorders, and in diabetes mellitus."

Note 2. This is the earliest document seen (July 2008)

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that suggests the use of a soybean preparation as a milk substitute for infants."

Note 3. This is the earliest document seen (Aug. 2003) concerning the actual feeding of soymilk to infants or children, or concerning a soy-based infant formula. The author was the world's first pediatrician to use soybeans in infant feeding, and did the first U.S. studies with soyfoods and human nutrition.

Note 4. This is the earliest English-language document seen (Oct. 2003) that uses the term "substitute for milk" to refer to soymilk. Note 5. This is the earliest English-language document seen (Nov. 2002) that uses the word "malnutrition" in connection with soyfoods.

The writer had hoped to conduct experiments and make a more complete clinical report but several misfortunes attended his efforts to secure the beans. "My first crop was eaten by rats, my second moulded in the pods owing to some unusually damp weather, and insects ate about two-thirds of my last crop. Fortunately, the beans may now be obtained from Messrs. T.W. Wood & Son, Richmond, Virginia.

"So far the gruel has been prepared by soaking the beans over night, stirring to remove the envelope surrounding the bean. Three times the amount of water is added to the beans and they are boiled until a smooth gruel results. This is strained if necessary [to make real soymilk]. This has the odor and taste of malt, but with the addition of a little salt is well taken, especially after the first bottle or two. The gruel is retained unusually well and seems to be easily digested. The stools are not more frequent than with other foods. The stools are light brown in color like those from malted milk. This soy bean gruel has nearly the same food value as milk and for certain children may need further dilution. About the same size feedings should be used as if milk were being given. Five percent sugar may be added to increase the fuel value.

"I have not used the beans in a sufficiently large number of cases nor over sufficient periods of time to justify any further statements at this time, but I do feel that properly used they will be a most valuable addition to the dietary of the sick infant. Grinding them to a bean meal would simplify matters very much, and, if success attends their use, a soy bean meal could easily be prepared.

"I hope to be able to make a second report at the next meeting and have called your attention to the bean in hope that other members may try them and report at the same time."

Note 6. Pediatrician Herman F. Meyer (1960, p. x) published a long poem by Dr. John Ruhräh titled "A Simple Saga of Infant Feeding," which described the history and present status of infant feeding. Meyer described Ruhräh as a "philosopher, teacher, poet, pediatrist [pediatrician] and able historian."

Note 7. This is the earliest English-language document seen (Oct. 2001) that uses the term "soy bean flour."

The following photo of Dr. John Ruhräh (1872-1935) was taken in about 1914. Born in Chillicothe, Ohio, he was a graduate of the College of Physicians and Surgeons (Baltimore, 1894), did post-graduate work at Johns Hopkins, the Pasteur Institute, Paris (1897), and in other European schools (1900-1901), and was quarantine physician of the port of Baltimore (1898-1900), where he became Professor of pediatrics in the University of Maryland Medical School and in the College of Physicians and Surgeons.

His autograph is shown below. Address: M.D., Baltimore, Maryland.

1786. *Milling (Liverpool)*.1909. A new British industry. Soya beans. Their cultivation and manufacture. Their wonderful food value. Great possibilities. 33(9):290, 292. Aug. 28. Also printed in 1910 as *Soya Beans*, a 27-page booklet by Northern Publishing Co. in Liverpool., Liverpool. Extensively quoted by Sawer 1910 (p. 27) and 1911 (p. 212). [1 ref]

• ***Summary:*** "The firms which first entered the export trade in Soya beans in quantity were Messrs. Nathanson (Russia) and Messrs. Mitsui and Co. (Japan). Several English firms have also entered the trade, and among these must be mentioned Messrs. S. Macgregor and Co., and Messrs. Jardine, Mathieson [Matheson] and Co. We believe that Messrs. [John] Bibby, of Liverpool, were one of the first British importers of Soya beans, that firm having received a considerable quantity last year. It was not until last Spring, however, that consignments arrived in this country in large cargoes. Up the present time the imports in 1909 have been estimated at about 300,000 tons. This is a large total for the first year of general crushing, and shows that the trade is certainly to be largely increased, providing that Manchurian exporters can secure the beans, and of this there does not appear to be any doubt."

The yellow Sakura soybean variety shipped from Dalny appears to be the best quality and commands a price of about 2/6 per ton more than small yellow varieties such as the Harbin variety shipped from Vladivostok or the Hankow variety shipped from Shanghai. "The black Soya bean appears to be the richest in oil, while analysis proves it to contain a large percentage of albuminoids and phosphates.

"The analysis of the ordinary yellow Soya bean, made by Mr. Alfred Smetham, F.I.C., F.C.S., of Brunswick Street, Liverpool, shows an average of about the following constituents:–Water 12 per cent., oil 17 per cent., albuminoids (protein) 38 per cent., carbohydrates 22 per cent., fibre 5 per cent., ash 5 per cent., and sand 1 per cent...

"Mr. Smethan, in a pamphlet he has prepared for the *Annual Journal of the Royal Lancashire Agricultural Society* for 1909, gives a number of analyses of Soya beans, besides the products of oil and flour millers generally. Some of our readers will be interested to learn that the Chinese in Liverpool have regularly imported various kinds of Soya

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beans, which are sold in the Chinese shops for human food. We understand that the method of cooking them is very similar to the British plan of steeping and boiling dried peas. In China the beans, after having had the oil extracted from them, are used for feeding pigs and cattle, as well as for manuring the land. The beans have long been known in Japan, where they are made into a favourite condiment known by the name of Shoyu, the meal from the beans being mixed with meal from either wheat or barley."

The oil is of a superior kind and finds a ready sale at high prices for a great variety of purposes, including the manufacture of margarine and other edible goods, the manufacture of fine toilet soaps and paint oils. Note 1. This is the earliest document seen (Oct. 2007) concerning the use of soybean oil in margarine.

"We hear that the Japanese are extracting the caseine [casein] from Soya beans, using it as a substitute for milk. It is said that this vegetable milk is produced by extracting the juice. The preparation, according to the *Java Times*, is a very popular drink among the poorer classes of China and Japan. In making the milk the beans are first softened by being soaked and then boiled in water. The liquor is secured by straining and is similar to cow's milk in appearance, but has a different composition, which renders it highly suitable for use in tropical countries...

"The most interesting use to which the bean can be put, from a corn miller's point of view, is the production of flour for bread-making purposes. This has been done by a Hull firm who recommend that the Soya flour be mixed with wheat flour in the proportion of one of the former and four or five of the latter. We have obtained a sample of Soya flour and blended it with white flour. After baking a loaf it was seen that the top broke but the crumb was all that could be desired. The flavour of the loaf was superior to that of average brown bread. The Soya flour cannot be bleached; therefore, it would not be suitable for white bread making. We think that a proportion of Soya flour might be blended into the millers' brown meal with advantage, because of its great food value and its flavour. Further mention is made of Soya beans and flour in our editorial notes.

"Just as we go to press a gentleman called at this office and showed us a Soya bean pod which had been plucked from plants raised in South-West Lancashire [England]. It was fully ripe and contained four beans... Soya beans, he informs us, have been grown before in this country as an experiment though without much success."

Note 2. This is the earliest document seen (Sept. 1999) that mentions Mitsui & Co. (a major Japanese trading company) in connection with soybeans.

Note 3. This is the earliest English-language document seen (Oct. 2001) that uses the term "soya flour" (one of two documents).

1787. *Tropenpflanzer (Der) (Berlin)*.1909. Die Soja-Bohne [The soybean]. 13(8):388-90. Aug. [2 ref. Ger]

1788. *Toronto Daily Star (Canada)*.1909. Beef-eating in Japan: Is on the increase–abandoning rice which is cause of beri-beri. Sept. 10. p. 7.

• ***Summary:*** London, Sept. 11. "The Japanese peasant does not eat much rice; it is too dear. Barley, vegetables, and fish are his staple foods. The upper and middle classes, however, who have hitherto eaten large quantities of rice, are now slowly beginning to add meat to their dietary. Beef is the favourite dish. It is cut up small, boiled with a native bean sauce [soy sauce] and vegetables, and eaten with the hashi or chopsticks."

1789. United States Land & Irrigation Exposition. 1909. Will the United States export rice to the Orient? (Ad). *Chicago Daily Tribune*. Oct. 4. p. 8.

• ***Summary:*** This organization believes that, using highly-productive mechanized agriculture, the answer to the above question is "yes." "Food value of rice: The nutritive value of rice is greater than that of any other cereal, and it is easily digested, With a little seasoning–dried fish, soy sauce or soy bean cheese [tofu, or fermented tofu] it furnishes for the Oriental a large part of the protein necessary for daily diet."

Note: This is the earliest English-language document seen (Oct. 2011) that uses the term "bean cheese" or the term "soy bean cheese" (regardless of hyphenation) to refer to fermented tofu. Address: 4th Floor (#407) Commercial National Bank Building, 115 Adams Street [Chicago].

1790. *Otago Witness (New Zealand)*.1909. New Zealand products: Markets in the East. Oct. 6. p. 21.

• ***Summary:*** "(From our own correspondent). London, Aug. 20. Another hint has been received this week of the genesis of a large market for New Zealand products in the East"–where 400 million people are gradually beginning to adopt European practices.

"The head of the cattle-breeding department of the Japanese Government (Mr. Hashimoto) is at present visiting this country [Great Britain] to make purchases of stock.

"'Meat-eating,' said Mr. Hashimoto, is on the increase in Japan. Its popularity is increased by the recently advanced theory that an over-consumption of rice is a source of beri-beri. The Japanese peasant does not eat much rice; it is too dear. Barley, vegetables, and fish are his staple foods. The upper and middle classes, however, who have hitherto eaten large quantities of rice, are now slowly beginning to add meat to their dietary. Beef is the favourite dish. It is cut up small, boiled with a native bean sauce [soy sauce] and vegetables, and eaten with the hashi or chopsticks."

About 10-12 years ago Japan began to import European cattle into Japan to improve their native breeds. "'For ploughing purposes, Japanese farmers invariably use cattle. For this purpose the native breeds are good, but for milk and

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beef they are poor.'"

1791. Gordon, E.L.S. 1909. Report for the year 1908 on the trade and navigation of the port of Dairen (Dalny). *Diplomatic and Consular Reports, Annual Series (Foreign Office, Great Britain)*. No. 4372. 18 p. For the year 1908.
• ***Summary:*** The 1st map shows the "Kwantung Leased Territory" (Dairen consular district), a long peninsula including Dairen and Port Arthur, which are connected by the South Manchuria Railway. A 2nd map, "Sketch map of part of Manchuria," shows the four three railways, plus major cities and towns, crops, and rivers: (1) South Manchuria Railway; (2) Chinese Eastern Railway; and (3) Chinese Imperial Railway.

Currency (p. 3): In ports other than Dairen, dealings with the Chinese are based on taels and copper cash, the amount of cash taken for each tael differing at each port. But "at Dairen, there are no taels or cash. The Chinese Imperial Maritime Customs of course make up their statistics in Haikwan taels, but the business here is all done in Yokohama Specie Bank Newchwang notes known as silver yen..." A table shows the value of Haikwan tael, gold yen, and silver yen in shillings and pence for 1907 and 1908.

Pages 3-4 state that "soya beans which come down from the north are made up in bags, each of which weighs from 185 to 200 lbs. avoirdupois. Bean cakes are reckoned by pieces, weighing nearly 60 lbs. apiece." A table defines the following weights and measures: Chinese: *catty, picul, li, mow*. Japanese: *kin, ken (6 shaku), ri, tsubo, koku* (liquid and dry), 1 S.M.R. ton (2,000 lb).

The section titled "Possible industries" contains subsection III on "Bean cake and bean oil" (p. 6). A table gives the chemical composition of 3 samples of bean cake. "By the present method, using hand presses, the amount of oil extracted from the beans is about 8 per cent. At one mill in Dairen, which is fitted with hydraulic presses, nearly 10 per cent. can be obtained. The quantity of oil in the soya bean is from 16 to 17 per cent., and by improved processes it should be possible to extract practically the whole of this, and still make from the fragments as good a quality of bean cake for fertilising purposes as is made now."

The section titled "The South Manchuria Railway" states (p. 6-7): The work of broadening the main line of the South Manchuria Railway and its Fushun and Newchwang branches from the 3 feet 6 inches gauge to the standard gauge of 4 feet 8½ inches was completed by the end of April, 1908. A new and improved system of trains was introduced, and a revision of fares and traffic rates, in most cases involving a reduction, has been effected. As a result the complaints that were so rife during 1907 are no longer heard, and both traders and passengers seem generally satisfied with the treatment accorded to them. In October express trains composed of Pullman dining and sleeping cars commenced to run between Dairen and Changchun, the northern terminus, twice a week, covering the distance of 437½ miles in 21 hours. This time is to be shortened during 1909 to 18 hours, and no doubt further accelerations will follow and the express run oftener.

"With the completion of the reconstruction of the main line, the work of doubling the tracks between Dairen and Suchiatun, a distance of 238 miles, was commenced, and is to be finished in the autumn of 1909."

The section titled "Exports" contains long subsections on [Soya] "Beans" and Bean cake" (p. 10-13). In the first subsection we read: "Towards the end of 1908 was commenced a trade in beans with the United Kingdom and Europe, which promises to have a great effect on this part of China, and, in view of the great possibilities of this trade, the following, taken from a report which appeared in the local newspapers some little time ago, may prove of interest."

There follows the full-text of a 3-page article on production and exports of soya beans in 1907 and 1908.

The subsection on "Bean cake" states: "In 1907 there were at Dairen two large Japanese mills, in one of which steam is used as the motive power while in the other electricity has been adopted, and a few Chinese mills where the old native method has been retained. During 1908 some 17 Chinese factories have been added, and more are in contemplation. This increase is likely to be sustained, though possibly not in the same proportion. A better price can be obtained for bean cakes made here than for those brought down from the interior, as the latter are apt to get damaged in the course of transportation, and the demand for bean cake as manure in other countries is steadily increasing."

Annex 1 (p. 14) gives the value of imports to Dairen during 1907 and 1908. In 1908 the value of soy [sauce] was £27,431 and of miso was £5,422.

Annex 2 (p. 16) gives the value (in British pounds sterling) of exports from Dairen during 1907 and 1908. [Soy] Beans: £658,135 / 1,000,948. Bean cake: £488,997 / 865,480. Bean oil:–/ £27,284. Address: Mr., Acting Vice-Consul [for Great Britain to Japan].

1792. *Tropical Life (England)*.1909. The soy or soya beans (*Glycine hispida*). 5(11):181. Nov. [3 ref]
• ***Summary:*** The soya bean "has long been familiar by name to British cooks, because it furnishes the condiment called 'soy,' which forms an ingredient of several soups and sauces. It is considered the most nutritious of all leguminous vegetables..."

"The beans can be cooked in the green pod, like French beans, or the dried beans may be treated like haricots."

"The Imperial Institute, always on the alert to push the interests of this country, has already brought the matter of soy-bean cultivation to the notice of various Colonial Governments and experiments are now in progress at the Cape of Good Hope, Natal, East Africa, and the Gambia."

A table gives the chemical composition of four different

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soy bean varieties. One of these, a yellow variety, was grown in West Africa.

1793. *Hartford Courant* (*Connecticut*). 1909. Big eats clubs are getting busy: Hungarian Goulash Club meets tomorrow. Dec. 15. p. 16.
• ***Summary:*** "When the Hungarian Goulash Club meets tomorrow night, there will be several gallons of goulash. Each club has its own recipe for its favorite dish and it is a secret. All that is really known is that there are squares of beef, a few vegetables, a sauce that contains some paprika and India soy, and that every one wants two or three plates."

1794. Togano, Meijiro. 1909. Shôyu moromi-chû no saikin ni tsuite [Studies on the microbes in soya (or shoyu) mash (or moromi)]. *Nogakkai Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 90. p. 1-56. Dec. [Jap]
• ***Summary:*** The Japanese word *moromi*, which is often translated as "mash," is the stage in making soy sauce (it has a consistency resembling apple sauce) before the liquid shoyu (soy sauce) is pressed out, leaving behind the shoyu presscake. Address: Nôgaku-shi, Japan.

1795. **Product Name:** Best Shoyu, Ikeda Shoyu, Maru-ichi.
Manufacturer's Name: Ikeda (T.) (Later renamed Ikeda Shoyu Brewery).
Manufacturer's Address: Front St., near King, Hilo, Island of Hawaii.
Date of Introduction: 1909.
Ingredients: Best shoyu: Soya beans, salt, wheat, caramel color, water, and 1/10 of 1% of sodium benzoate.
Wt/Vol., Packaging, Price: Best shoyu is in 1 gallon bottle.
How Stored: Shelf stable.



New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1909. p. 660. T. Ikeda, soy mnfr [manufacturer], Front near King. Residence, same. 1910 Directory. p. 690, same. 1911 Directory. p. 787, same. A photo shows an early square Label (pre. 1950). "Best Shoyu." Logo is Maru-Ichi. "Genuine Brewed Shoyu." Manufactured and Bottled by Ikeda Shoyu Brewery. Hilo, Hawaii. An illustration shows wheat stalks and soybean plants.



A photo shows an oval Label (Used shortly before they closed). Ikeda Shoyu. Maru-Ichi. Hilo, Hawaii. ½ gallon. Same ingredients as before. T.H. Nihei. Hawaii, Maui, Kauai Directory. 1954. p. 78. Shiro Ikeda Shoyu (Shiro Ikeda, proprietor). 195 Liholiho h958, Kaumana Drive, Hilo, Island of Hawaii. 1957 Directory. Becomes the Ikeda S. Shoyu Factory. Address same. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows two labels. Ikeda Shoyu Brewery, Hilo, Hawaii. They make amino acid soy sauce. The company recently closed.

1796. Imperial Hygienic Laboratories. 1909. Inshoku-butsu narabini shikô-hin bunseki-hyô [Analytical tables of food and luxury items]. *Eisei Shikenjo Hokoku* (*Bulletin of the Imperial Hygienic Sciences*) No. 10. p. 1-78. Miso, see p. 27-28. Shoyu, see p. 28-28. Soymilk, see p. 39-45. [Jap]
• ***Summary:*** Gives a detailed analysis of the nutritional composition of these basic foods, including analyses of various well-known brands, which are clearly specified. The number of products analyzed are: Miso 30 products, shoyu 122, fermented black soybean Chiang (Shoyu shisho) 4, shoyu moromi 2, shoyu presscake (kasu) 1, Thick (noko) shoyu 11, shoyu second generation products and imitation products 16, soymilk (containing only soybeans) 6, other soymilk products 89. Address: Eisei Shikensho (National Institute of Hygienic Science), Tamagawayoga-machi, Setagaya-ku, Tokyo, Japan (in 1962).

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1797. Mitsuda, Ryuichi. 1909. Shôyu no tansuikabutsu ni tsuite [On the carbohydrates in shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 4(8):29-40. [Jap]



• ***Summary:*** This influential journal was still being published in 1990. This dynamic illustration, of Japanese men apparently pouring moromi into a vat where it will start fermenting, appeared on the cover. Address: Japan.

1798. **Product Name:** Shoyu (Soy Sauce).
Manufacturer's Name: Sanyo Shoyu Jozo Gaisha. Renamed Sanyo Shoyu Jozo-sho by 1913.
Manufacturer's Address: 69 N. 5th St., Portland, Oregon.
Date of Introduction: 1909.
New Product–Documentation: Nichibei Shinbun-sha. 1909. *Nichi-Bei Nenkan* [*Japanese-American Yearbook*]. Directory entry p. 137. Also in the 1913 Yearbook, however the company name is now Sanyo Shoyu Jozo-sho, the address is 537 Goldsmith, and the phone is C 1397. Also in 1914, p. 215. But the address is 539 Delay St.

1/8 page ad in The Japanese American Directory. 1919. p. 230. Sanyo Shokai, 539 Delay St., Portland, Oregon. Phone: 1397 (written in Japanese characters). They make and sell shoyu, miso, and koji (*issai seizô hanbai*) plus various other non-soyfoods.

Note 1. This is the earliest document seen (Nov. 2005) concerning soybeans in Oregon. This document contains the earliest date seen for soybeans in Oregon (1909). The source of these soybeans is unknown. A shoyu manufacturer must have soybeans in order to make shoyu.

Note 2. This is also the earliest known commercial soy product made in Oregon.

1799. **Product Name:** Shoyu (Soy Sauce).
Manufacturer's Name: Tairiku Shoyu Jozo Gaisha. The Continental Soy Brewing Co.
Manufacturer's Address: 1217 Temple Ave., Fruitvale, California.
Date of Introduction: 1909.
New Product–Documentation: Nichibei Shinbun-sha. 1909. *Nichi-Bei Nenkan* [*Japanese-American Yearbook*]. Directory entry p. 30. Ad (½ page), p. B-34. The top ¼ of this ad is in English: The Continental Soy Brewing Co. 1217 Temple Ave., Fruitvale, California. Tairiku Shoyu Jozo K.K. This is an early maker of soy sauce in the continental United States (not including Hawaii). Two illustrations show what look like its two logos, each including the character *dai / tai*, which means "big." The president (*shachô*) is Hamada Tsunegoro. Vice president (*fuku shachô*) is Isaki Yonetaro. The names and titles of 11 other company officers are listed across the bottom of the ad.

Note: Hokubei Shoyu Jozo K.K. Jozo-sho was at this address in 1908.

1800. **Product Name:** Shoyu.
Manufacturer's Name: Tanaka.
Manufacturer's Address: Waipahu, Oahu, Hawaii.
Date of Introduction: 1909.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1909. p. 554. Tanaka, soy, Waipahu. Not listed in 1907.

1801. **Product Name:** Shoyu (Soy Sauce).
Manufacturer's Name: Un-named Japanese shoyu makers (two).
Manufacturer's Address: Oakland, California.
Date of Introduction: 1909.
New Product–Documentation: Nichibei Shinbun-sha. 1909. *Nichi-Bei Nenkan* [*Japanese-American Yearbook*]. Census entry p. 149. Two male owners and 4 male employees. Also in 1910, p. 172, 174. Male owner and two male employees.

1802. Yoshimura, Kiyohisa. 1909. Tamari shôyu no seibun ni tsuite [On the chemical composition of tamari shoyu]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 30:43-120. [Jap]
• ***Summary:*** Note: This is the earliest document seen (March 2012) that contains the term *tamari shôyu* in Japanese.

1803. Carson, John M. 1909. Soya bean and products. *Special Consular Report* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*) No. 41. Part 5. 35 p. Erroneously numbered Special Consular Reports, Vol. XL.
• ***Summary:*** Contents: Introduction. I. Countries of production. China: Newchang (Varieties of beans and amount produced [in centals [hundredweights; 1 cental = 112 pounds]], methods of cultivating and harvesting,

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prices and exports, shipments to Europe–use by natives). Dalny (Manufacture of bean cake and oil, preparing the cake, expressing the oil and wages paid, freight charges to Dalny, exports, stock on hand, and prices). Chefoo (Beans imported for cake manufacture, quantity and value of output, bean vermicelli made by a peculiar process [from the small green bean lü tou {mung bean}], preparation of beans, drying of product and prices [for vermicelli]). Shanghai (Extent of export trade in beans). Shantung (manufacture of bean oil and cake, harvesting and pressing, shipping and prices). Swatow. Tientsin (Exports of raw beans, shipments of bean cake, extent of trade at Tientsin). Tables (p. 5) show prices and exports of soya beans, bean cake and bean oil at Newchang for the years 1905-1908. Japan: Cost of production and prices (of soya beans, quite detailed), imports of beans and cakes, use of the bean as food (shoyu, miso, tofu, koya-tofu, natto, flour). Kobe (Beans as human food {eaten boiled with a little soy [sauce], "made into bean curd, and a kind of sauce made of wheat, beans, and salt"}–small exports {"The total exports of beans, pease, and pulse [incl. soy] in 1908 were valued at $25,971, of which about $24,000 worth went to Hawaii, the United States, and Canada for use by the Japanese residents in those countries as an article of food"}, manufacture of cake). Nagasaki (Production of beans, imports of beans–market prices). Shipments from Vladivostok * [Russia, of soybeans probably grown in Manchuria] (Fluctuations in prices, shipments during present season, immense shipments planned next season (by Mitsui)).

"It is the intention of Mitsui Bussan Kaisha, the largest exporter from this port, to ship about 200,000 tons of beans via Vladivostok during 1909 and about double that quantity via Dalny. Many large contracts have been made for next season, and from present indications a strong effort will be made against the control of Mitsui Bussan Kaisha as the Chinese are making arrangements to deal direct with the European market without the aid of the Japanese" (p. 18).

Tables show: The quantities and value of soya beans, soya-bean cake, and bean oil imported into Japan during the year 1908 (p. 15). The soya bean harvests (in bushels) reported in various Japanese districts (p. 16).

II. Markets. Denmark: Experimental imports made, views of an importer. France: High duties prevent importation of soya beans, soya-bean flour bread used by diabetics, unknown in Calais district. Germany: Danger of feeding cattle on soya-bean products, oil value–prices at Hamburg, comparative food value of the bean. Italy: Beans imported and cultivated in limited quantities, prices of soya products–American cotton-seed oil, not imported into Catania, home products supply Piedmont district. Netherlands: A great future for the soya-bean trade predicted, prices of the bean and bean cake, soya cake as cattle feed, manufacture of soya-bean products begun, English soya-bean cake defective. Norway: Imports of soya-bean meal and cotton-seed meal. Russia: Beans and products unsatisfactory as feeding stuffs. Spain: Soya bean unknown in Valencia district [They are neither cultivated nor imported in this district]. Straits Settlements [Singapore and Malaya]. Sweden: Soya-bean products introduced through England. Comparative value of cattle feed [work by Nils Hansson of Sweden], comparative prices of feed stuffs. Turkey. England: Liverpool (Conversion of the soya bean into cake and meal). Plymouth (Soya cake and meal extensively consumed). Southampton (The bean appreciated as a fattener and as a dairy ration, the soya bean as human food [for use in diabetic diets]). Ireland: Chinese bean products are favorably received, soya bean introduced in Belfast, small imports at Cork. Scotland: Statistics as to use in Dunfermline not available, test of feeding value of soya cake [by Prof. Douglas A. Gilchrist], Edinburgh mills making experiments (based on 1909 report 1909 of U.S. Consul Rufus Fleming from Edinburgh).

III. Competitive American exports. Tables (p. 35) show exports for 1907, 1908, and 1909 of cotton-seed meal, cotton-seed oil, and cottolene, lardine [not defined: presumably shortening made from cottonseed oil], etc. to major countries, especially in Europe.

The Introduction notes: "In compliance with requests from manufacturers of cotton-seed products in the United States, who desired that an investigation be made of the production and use of the soya bean and its manufacturers in the Far East and of the extent to which they compete with American cotton-seed products in the European markets, the reports following have been submitted by consular officers in the various countries concerned...

"The reports of the consular officers have been placed in two groups, the first having to do with the countries that produce the soya bean and the second with the countries that are sought as markets. Statistics as to the imports of soya-bean products in many European countries were not available at the time the reports were submitted, but inasmuch as the prices quoted were generally lower than for other seed products, emphasis has been laid on the relative merits of the two classes of goods as shown by experiments and analyses in these countries. These manufacturers will have to work in meeting this new competition."

Note 1. This is the earliest document seen (Dec. 2007) concerning soybean products (oil or meal) in Turkey, Denmark, Ireland, the Middle East, or Sweden (one of two documents); soybeans as such have not yet been reported in any of these countries. This document contains the earliest date seen for soybean products in the Middle East or Turkey (1909).

Note 2. This is the earliest English-language document seen (Oct. 2001) that uses the term "soya-bean flour." Address: Chief of Dep.

1804. Carson, John M. 1909. Soya bean and products: Straits

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Settlements (Document part). *Special Consular Report* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*) No. 41. Part 5. p. 26. Erroneously numbered Special Consular Reports, Vol. XL.

• ***Summary:*** "Vice-Consul-General George E. Chamberlin, of Singapore, reports that the soya bean is not cultivated in that district. As to the imports and the uses to which the beans are put, he writes:

"The beans are imported into Singapore and other ports of this district from China, Japan, and India, principally from the former country, in considerable quantities, and are used for making soya [soy sauce] and bean cheese [tofu], or bean cake–popular articles of food among the natives and Chinese. Practically no beans are exported and no bean cake, all being consumed locally.

"Soya beans in this locality are not made into meal, nor are they used for the same purpose as cotton-seed meal and cake. The present market price is about $2 per picul (133 1/3 pounds) for the white soya bean and $1.75 for the black."

Note 1. The Straits Settlements is a former British Colony on the south and west coast of the Malay Peninsula, including adjacent islands, comprising Singapore, Penang, and Malacca settlements.

Note 2. This is the earliest document seen (May 2010) concerning soybeans in Singapore. This document contains the earliest date seen for soybeans in Singapore (1909). Address: Chief of Dep.

1805. Carson, John M. 1909. Soya bean and products: Shanghai: Extent of export trade in beans (Document part). *Special Consular Report* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*) No. 41. Part 5. p. 11. Erroneously numbered Special Consular Reports, Vol. XL.

• ***Summary:*** On page 11, the Vice-Consul-General of Shanghai writes that while the Shanghai district does not produce any beans, there is considerable shipping of beans and bean products from that port. "The soya bean is little known in this district by the name 'soya,' as it is generally stated that the soya bean is any bean from which soy [sauce] is made. The best bean for making soy is the yellow bean [*huang-tou*]. The consular district of Shanghai does not produce any yellow beans of commercial importance... The total reexport of white and yellow beans from Shanghai to foreign countries, Hongkong, and Chinese ports during 1908 was $1,548,572. Bean cake, a product principally of the yellow bean, was reexported to foreign countries, Hongkong, and Chinese ports in 1908 to the value of $791,606.

"The bean curd, or a form of soy, is largely exported to Chinese ports, $17,085 worth being exported in 1908."

"Many of the beans from up the river are shipped into Shanghai and made into soy [sauce] for export."

Note: This is the earliest document seen (April 2001) that contains tofu industry or market statistics by geographical region. Address: Chief of Dep.

1806. Carson, John M. 1909. Soya bean and products: Japan (Document part). *Special Consular Report* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*) No. 41. Part 5. p. 13-16. Erroneously numbered Special Consular Reports, Vol. XL.

• ***Summary:*** Vice-Consul-General E.G. Babbitt of Yokohama writes: "The soya bean, or soja bean, as it is known here (Common Japanese name 'daidzu' [daizu]), is cultivated throughout the Empire of Japan. The total area of cultivation is in the neighborhood of 1,200,000 acres, or about 3.8 per cent of the total area devoted to the cultivation of rice and other cereals and grains. The soya bean is often cultivated, not in fields by itself, but in rows along the edges of rice or wheat fields. These edges are, as a rule, very soft, for they have been previously plowed, and little labor is required in planting... In harvesting the plants are uprooted, and, after being dried in the sun for several days, flails are used to separate the beans from the pods. The flails are of a very primitive type, with bamboo handle and of light weight. Female and child labor is invariably employed in flailing.

"The kinds of fertilizers used differ by districts. In the prefecture of Miyagi, for example, straw ashes and superphosphate of lime are commonly employed, while in the prefecture of Akita wood ashes, superphosphate of lime, and horse dung are used."

The average yield of soybeans in Japan over the past 10 years is 15.30 bushels per acre. For the year 1907 the highest yield is from Ishikawa prefecture, 21.62 bushels/acre, whereas the lowest yield is from Okinawa prefecture (Loochoo Islands, south of Kiushu [Kyushu]), 8.48 bushels/acre. During 1908 huge amounts of soya beans (3.3 million piculs; 1 picul = 132.277 pounds weight) were imported to Japan from China, Kwantung, and Korea, with small amounts coming from Asiatic Russia. Large amounts of soya-bean cake (7.760 million piculs) were imported from China and Kwantung, with small amounts coming from Asiatic Russia and none from Korea. "The total imports of bean oil in 1908 amounted to only 49,993 pounds, valued at $1,325."

"The soya bean is one of the most important articles of food in Japan. The beans are cooked in various ways, while in brewing soy (shoyu), in the manufacture of miso (pea or bean cheese), tofu (bean curd), koya-tofu (frozen bean curd), and natto (steamed beans) they are the chief ingredient. They are also manufactured into flour and make up the principal part of many Japanese sweetmeats. All these foodstuffs are daily used in Japanese homes.

"To a limited extent soya beans are used as horse or cattle food, being sometimes boiled and mixed with straw, barley, bran, etc."

The vice consul of Kobe states that in 1908 Japan produced 18,812,228 bushels of soya beans. Small amounts are exported "to Hawaii, the United States and Canada for

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use by the Japanese resident in those countries as an article of food." Three factories in the Kobe district make bean cake, largely from imported, lower-cost soya beans. "The beans are first crushed flat, then put into a big container and steamed, after which they are put into a steam press to extract the oil and to be made into cakes. The cakes come in circular pieces, a yard in diameter and an inch thick, each weighing about 50 pounds. The oil is used for lubricating machinery. The cake is used only as a fertilizer and is not fed to animals as it causes their hair to fall off."

Note 1. This is the earliest document seen (Feb. 2004) stating that soya bean oil can be used as a lubricant.

Note 2. This is the earliest English-language document seen (Feb. 2004) that uses the term "koya-tofu" (or "koya-dofu" or "kôya-dôfu") to refer to dried-frozen tofu.

Note 3. This is the earliest document seen (Aug. 2011) in *Chemist and Druggist* in which the toxicity of a soy product is discussed or alleged, namely soya cake "is not fed to animals as it causes their hair to fall off." Address: Chief of Dep.

1807. Central Union Church (Honolulu, Hawaii), Ladies' Society, comp. 1909. Hawaiian cook book. 5th ed., revised and enlarged. Honolulu, Hawaii: Hawaiian Gazette Co. 150 p. Recipe index by category. 22 cm. 1st. ed. 1882.

• ***Summary:*** After the title of each recipe is given the name of the person (mostly women) who submitted it. Worcestershire sauce is used to season some recipes (see, for example, soups, p. 9; fish, p. 18; beef, p. 28). For "vegetarian soups" ("for those who are forbidden meat or whose preferences are in favor of a vegetable diet") see p. 12-15.

Note: The recipes in this book are much more American than Hawaiian. The one main exception is the "Hawaiian feast" or luau (p. 130-31). Otherwise, the major Hawaiian influence is the use of tropical fruits (such as cocoanut, papaia [papaya], pineapple, mango, breadfruit, or Alligator pears), in otherwise American recipes. These recipes also show no Japanese or Chinese influence. For example, soy sauce is not used to season even one recipe in the entire book. Address: Honolulu, Hawaii.

1808. Clercq, Frederik S.A. de. 1909. Nieuw plantkundig Woordenboek voor Nederlandsch Indië [New botanical dictionary for the Netherlands Indies]. Amsterdam, Netherlands: J.H. de Bussy. xx + 395 p. See p. 248, no. 1664. [1 ref. Dut]

• ***Summary:*** In the following, we will spell out, then translate, abbreviations in square brackets: "1664 *Glycine Soja* Sieb. et Zucc. * Nat. fam. der Leguminosae. Dekeman, Jav. Kr. D. [Krama-Doesoen of Hoog-Dorps-Javaansch = Mount Dusun high-level village Javanese]; Dele, Jav. [Javaansch = Javanese]; Gadele, Jav. [Javanese]; Kadele, Boeg. [Boegineesch = Buginese, spoken in South Sulawesi], Makas. [Makasaarsch = Makassarese, from Makassar, the provincial capital of South Sulawesi, Indonesia]; Kadale, Jav. [Javanese]; Kadheli, Madoer. [Madoereesch = Madurese, spoken in Madura (Dutch: Madoera), an Indonesian island off the northeastern coast of Java]; Katjang djepoen, Soend. [Soendaasch = Sunda, the language of the Sundanse people of Western Java]; Katjang kedelai, Mal. [Maleisch = Malay, the language of Malaysia and Brunei, lingua franca of the Malay Archipelago]; Katjang kedele, Mal. Batav. [Bataviasch-dialect van Maleisch = the Batavian dialect of Malay; Batavia was the colonial Dutch name (1600s to 1942) for today's Jakarta]; Kedangsoel, Jav. Kr. D. [high-level village Javanese]; Kedelai, Mal. [Malay]; Kedele, Balin. [Balineesch = Balinese, the language of the Indonesian island of Bali], Jav. [Javanese], Mal. Batav. [the Batavian dialect of Malay]; Keudeule, Soend. [Sunda]; Lawoeï, Biman. [Bimaneesch = Bima, language of the Bimanese people, spoken on the Indonesian island of Sumbawa and its city of Bima]; Leboewi bawak, Sas. [Sasaksch = Sasak, spoken by the Sasak people on the Indonesian island of Lombok]; Retak medjong, Lamp. [Lampongsch = Lampung, spoken by the Lampung people in the Indonesian province of Lampung, on the southeastern tip of Sumatra].

"Variëteiten (Varieties) in Soend. [Sunda]: Katjang djepoen beureum; Katjang djepoen bodas; Katjang djepoen hedjo; Katjang djepoen hideung.–Kruid (herb, plant), de sojaboon.

"Uses: Known for the high protein content of its beans, consumed mostly by indigenous people as green vegetable soybeans (unripe). For the preparation of Batavian ketjap or Soy (*Bataviasche ketjap of soja*), black-seeded soybeans are used. In addition, the beans are boiled, beaten into flat cakes, and inoculated with a particular type of mold to obtain tempeh (*tempe*), which is very much liked in Java." Address: in Leven; Oud-Resident van Ternate en van Riouw [former resident of Ternate and of Riouw].

1809. Cornet, Paul. 1909. Le régime alimentataire des malades: Considérations pratiques sur les aliments et les boissons diététiques et sur l'hygiene de l'alimentation [The dietary regimen for the sick: Practical considerations on dietetic foods and drinks and on the hygiene of feeding]. Paris: G. Steinheil, Éditeur. 484 p. No index. 23 cm. [144* ref. Fre]

• ***Summary:*** In Part III, "Foods drawn from the vegetable kingdom," Chapter 20 titled "Starchy vegetables" discusses various fruits, grains, and legumes. The section on "Soya" (p. 269-70) gives the name of the soybean in Japan (*daizu*), Annam (*dau-nauh*), and China (*théou*), and notes that the seeds can be used to make shoyu, miso, and tofu–which are widely appreciated.

"Dietetic uses: Without having recourse to these exotic preparations, the nutritional value of soybeans is not used enough in our country. Soy bread is only used in anti-diabetic diets*, whereas one could prepare a pap and a drink (*boisson,*

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[soymilk]) no less precious, as well as extracts [soy sauce] which could be substituted for meat extracts." Footnote: *Soya is well suited for diabetics, for the seed contains only 3% starch plus 16% oil and 27% protein.

In Part V, "The regimens," Chapter 30 titled "General solid regimens" has two parts: The first, the "Vegetarian regimen" (p. 341-55) has the following contents: Indications for the vegetarian regimen. Application of the vegetarian cure: Absolute [vegan foods plus water], mitigated (lacto-ovo vegetarian), total vegetarian diet (*régime total*) throughout the seasons (incl. dry legumes such as soybeans, peanuts, etc.), culinary preparations. Vegetal calendar (*Calendrier végétal*): soups, main dishes, and desserts for each month of the year. Address: Dr., Professeur at the municipal schools of the infirmaries of the Hospitals of Paris (aux Ecoles municipales d'Infirmières des Hôpitaux de Paris).

1810. *Hawaii Agricultural Experiment Station, Annual Report.*1909. Soy beans. p. 83-85. For the year 1908.
• ***Summary:*** "The soy bean possesses many advantages as a green manuring and rotation crop. Early in the present year, three varieties of soy beans were obtained through the Bureau of Plant Industry. These were designated as Nos. 20797, 20798, and 21080... Seed of two other varieties were donated by the Hawaiian Yamajo Soy Company of Honolulu. One of these, a green seeded type, has been grown in the Kona district of Hawaii for some years; the other, a yellow seeded variety, was imported direct from Japan. The seed of both these varieties is used in the manufacture of the Japanese food product, 'Miso,' and other preparations."

All the varieties were sown on March 12. Variety No. 21080 yielded 600 lb of shelled beans per acre; the yellow seeded variety imported from Japan yielded 800 lb, and the Kona seed yielded 1,060 lb. "The average price in the Honolulu market is $3 per hundred pounds. About 500 tons of the beans are imported from Japan annually, and the demand is said to be on the increase. It would appear that this could be made a profitable crop for the small farmer."

Photos show: A man standing in a plat of soy beans in Hawaii, with palm, banana, and other tropical trees in the background. Three sets of dwarf soy bean plants with roots; their soy beans are used in making miso and other Japanese food products.

Note: In 1898 Hawaii was annexed as a U.S. Territory.

1811. Hokubei Boeki K.K. 1909. North American Mercantile Co. (Ad). In: Nichibei Shinbun-sha. 1909. *Nichi-Bei Nenkan* [*Japanese-American Yearbook.* No. 6]. p. A-1. [Jap]
• ***Summary:*** Ad (full page). This company imports various goods including white rice, sake, shoyu, and miso. Illustrations show: (1) Two sacks of "Japan Rice–100 pounds." (2) Two kegs of sake tied with traditional rice-straw ropes. Address: 318-320 Front St., San Francisco, California.

1812. Ichida Risuke. 1909. R. Ichida (Ad). In: Nichibei Shinbun-sha. 1909. *Nichi-Bei Nenkan* [*Japanese-American Yearbook.* No. 6]. p. A-15. [Jap]
• ***Summary:*** Ad (full page). The top 1/5 of this ad is in English. This company imports various goods including Kikkoman shoyu, and shoyu made by other companies in Noda, Japan. Ichida is the overseas sales representative of Tokyo Shoyu wholesalers and of Okada Shoten. Address: 1968 Bush St., San Francisco, California. Phone: WEST 1688.

1813. Iwakami Gomei-gaisha Shiten. 1909. Iwakami & Co. (Ad). In: Nichibei Shinbun-sha. 1909. *Nichi-Bei Nenkan* [*Japanese-American Yearbook.* No. 6]. Unnumbered page. [Jap]
• ***Summary:*** Ad (full page). The company name is written across the top of this ad in English. This Japanese company has its main office in Yokohama, Japan, with branch offices (*shiten*) in Osaka, Hawaii, and San Francisco, California. It exports shoyu, miso, and other goods from Japan. Address: Yokohama, Japan.

1814. Kita, Gen-itsu. 1909. Shôyu jôzô ni kansuru kenkyû. I and II. [Studies on shoyu brewing. I and II.]. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*) 12:1-24; 12:399-428. II. Application of natto microorganisms. [Jap]
• ***Summary:*** Part I is titled "Shoyu moromi and shoyu presscake" Address: Kôgaku-shi, Japan.

1815. Lewkowitsch, Julius. 1909. Chemical technology and analysis of oils, fats, and waxes. 4th ed. Entirely rewritten and enlarged. 3 vols. London: Macmillan and Co., Ltd. See vol. II, p. 122-24. [7 ref]
• ***Summary:*** The section titled "Soja bean oil (Soy-bean oil, Bean oil, Chinese bean oil)" (Vol. II, p. 122-24) gives details about the soja bean, which is indigenous to China, Manchuria, Korea, Japan, Formosa, and Indo-China. The soja bean industry is one of the most important in Manchuria and Japan. In Manchuria, the expressed meal is made into bean cakes (*Téou-fou-tcha*) which are exported in large numbers. The Japanese make shoyu and miso from soja beans. "Efforts have been made to ship soja beans to Europe, but on account of the deterioration which they undergo on the long voyage, as also on account of the difficulty of disposing of the cakes, attempts in this direction have been abandoned." Two tables give physical and chemical characteristics based on the investigations of: (1) Morawski and Stingl; (2) De Negri and Fabris; (3) Shukoff (from seed grown in an experimental station in South Russia); (4) Lane (who found 80.26% of liquid fatty acids).

Vol. II also discusses many other major and minor oils including: Linseed oil (p. 39-60), hemp seed oil (p. 76-77), sesamé oil (beniseed oil, gingelli oil, teel oil, p. 167-79),

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almond oil (p. 233-40), and arachis oil (peanut oil, earthnut oil, ground nut oil, p. 244).

Julius Lewkowitsch lived 1857-1913. Address: Ph.D., M.A., F.I.C., Consulting and analytical chemist, and chemical engineer, examiner in "soap manufacture" and in "fats and oils" to the City and Guilds of London Inst.

1816. Lloyd, Arthur. 1909. Every-day Japan. London, New York, Toronto and Melbourne: Cassell and Co., Ltd. xvi + 381 p. See p. 121, 124, 188. Introduction by Count Hayashi. Illust. Index. 24 cm. With 8 color plates and 96 reproductions from photographs.

• ***Summary:*** On the title page: "Written after twenty-five years' residence and work in Japan."

Chapter 22, "Life in a tea, silk, saké or shoyu district," states (p. 121): "As a striking contrast to the general poverty of appearance of districts purely agricultural–i.e. devoted to the cultivation of rice and other cereals–we have the general aspect of those districts in which tea is the principal product, where silkworms are cultivated, or saké and soy manufactured. In these districts–known as "Shoyu" districts–there is a far larger amount of wealth, and the general standard of comfort in all classes is much higher."

Continuing on p. 124: "Saké and soy [sauce] (the latter the foundation of our Worcestershire sauce) are old-established industries which have generally been carried on by the same families for generations." Soy is mentioned briefly on p. 128.

Chapter 35, "Sights and cries in Tokyo streets," states (p. 188-89): The first sounds he hears in the morning are those from a Buddhist temple. "Domestic life begins at a somewhat later hour, but in the streets I can already hear the cry of "Natto, na–tto–!" which tells me that the poor are beginning to bestir themselves. Natto is a concoction of beans which have been kept until they are beginning to go bad. It is said to have a rich tasty flavour, and to be very popular with some sections of the community. It is essentially a poor man's dish. By the time the natto sellers have done their business, other itinerant vendors have begun their rounds." Address: M.A., Lecturer in the Imperial Univ., Higher Naval College and Higher Commercial School, Tokyo. Formerly Fellow of Peterhouse [UK].

1817. Maurel, Edouard César Emile. 1909. Traité de l'alimentation et de la nutrition à létat normal et pathologique. Vol. 3 [Treatise on food and nutrition in normal and diseased conditions. Vol. 3]. Paris: O. Doin, Éditeur. xii + 685 p. Index (in vol. 4). 25 cm. [Fre]

• ***Summary:*** The last entry in the section on "Legumes," titled "Soy peas or beans" (*Pois ou fèves de Soja / Soya*), states: In order to be complete, to the preceding dried legumes I add the soybean, used here only as a therapeutic agent, but whose consumption in China and especially in Japan is considerable.

Its use in food is, moreover, completely justified by its great nutritive value. Here are some analyses of its nutritional composition: A table (p. 495) gives 6 analyses by three authors (each of whom cites other researchers) as follows: Balland (Gautier): maximum, minimum, mean. König (Siderski): black or yellow soybeans. König (Siderski): soy flour.

As you see, despite their great nutritive value, all the other legumes remain below that of the soybean. It contains more than 30% protein and 400 calories per 100 gm. It must be added that no other legume is as rich in minerals, for soy always contains at least 4%.

This legume, known in Japan by the name of *daidzou* [*daizu*], can be made into a cheese, tofu (*tôfou,*) and above all the national sauce, shoyu (*shôyou*) and miso. These three substances result from fermentation, but under different conditions.

Japanese miso is a venerable food; it's the *tao-tzung* of the Chinese. It is made of crushed soybeans, boiled and mixed with rice or wheat koji, then submitted to fermentation. Miso consumption in Japan is 30 million kg.

Tofu is also used frequently but less than the preceding [miso], and much less than soy sauce which constitutes the universal seasoning. The consumption of this last would be, in fact, 5.5 liters per inhabitant.

Discussed in this section are: Dry beans (*haricots secs;* [*Phaseolus vulgaris*]), lentils, peas or round peas (*pois ronds* [Pisum sativum]), square peas (*pois carrés;* probably winged beans {*Psophocarpus tetragonolobus*}, or flat pea / Lathyrus pea / chickly vetch {*Lathyrus sativus*}, or *Pisum sativum medullare*), chickpeas (*pois chiches*), and dry [broad] beans (*fèves sèches;* [probably *Vicia faba*], broad beans). Address: M.D., principal physician for the Naval Reserves, Prof. at the Faculty of Medicine, Toulouse (Médecin principal de réserve de la Marine).

1818. Murai Nishikawa Shokai. 1909. Murai & Nishikawa: Importers & com. merchts. [commercial merchants] (Ad). In: Nichibei Shinbun-sha. 1909. *Nichi-Bei Nenkan [Japanese-American Yearbook*. No. 6]. Unnumbered page near center of book. [Jap]

• ***Summary:*** Ad (full page). The top ¼ of this ad is in English. This company imports various goods including white rice, sake, shoyu, and miso. Cable address: "Muranisu" San Francisco. Code used: A. B. C. 5th Ed. Western Union. Address: 2001 Pine St., San Francisco, California. Phone: West 5407.

1819. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1909. Nichi-Bei nenkan [Japanese-American yearbook. No. 5]. 650 Ellis St., San Francisco, California. 605 p. Reprinted in 2001-02 in Tokyo by Nihon Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 5-kai [Collected Documents on Japanese Emigration. No. 5]. [Jap; eng]

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• ***Summary:*** This book is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. The English-language title page reads: *The Japanese American Year Book.*

The book is divided into 17 parts, each numbered separately. Contents: (1) Front matter (5 p.) (2) Table of contents (3 p.). (3) Maps (2 p.): Map of the United States. Map of California (1 p. each, in Japanese). (4) Black and white photos on 6 unnumbered pages (single sided). (5) Advertisements (A-1 to A-32). (6) Front part (p. 1-168), including general information about America, Japanese in America, U.S. and agricultural census data, etc. (7) Ads from San Francisco printers (2 p.). Appendixes: (8) Appendix 1: Table of contents (2 p.) (9) Appendix 1. Japanese agricultural workers in the various states (p. 1-60). (10) Ads (p. B-1 to B-96). (11) Appendix 2 table of contents (2 p.). (12) Ads (3 p.). (13) Appendix 2. Japanese living in America, alphabetically by state, and within each state by city (p. 1-148). (14) Ads (2 p.). (15) Ads on numbered pages (C-1 to C-66). (16) California ads (p. C-1 to C-42). (17) Publication data / Copyright page (1 p.).

Basic information about how this book was compiled and the survey conducted is given on pages 60-66, 140-41, and on the title page of Appendix 1 of this year book. Pages 60-66 show various existing government registration forms that Japanese are required to fill out, such as birth, marriage, death, and divorce certificates, employment / occupation, agricultural details (employer, land use, nature of relationship with employer, etc.), and visa.

The tariff (import duty) on shoyu and miso from Japan is 40% for each (p. 32).

The value of the 1900 soybean crop in the United States is $7,634,262 and the value in California is $1,022,586 (p. 69). Note: This is the earliest document seen (March 2009) that gives soybean production or area statistics for either the USA or California–much earlier than any U.S. Department of Agriculture statistics. Unfortunately, the source of these statistics is not given. During the period 1900 and 1909 many Japanese were farming land in California, and there was a significant number of soyfoods manufacturers in California and, more broadly, west of the Rocky Mountains. Therefore we should not be surprised to learn that these farmers were growing soybeans in California, either for use as edamamé (green vegetable soybeans in the pods) or for sale as whole dry soybeans to soyfoods makers.

Value of selected imports from Japan to the USA in 1906: Miso–Imported to the mainland $55,648. To Hawaii $43,108. Total $98,756. Shoyu [soy sauce]–Imported to the mainland $241,345. To Hawaii $211,265. Total $452,610 (p. 119).

Retail prices of Japanese foods in San Francisco (on 1 Nov. 1908): Amazake [cup] for 15 cents (100 cents apparently = $1.00). Kikkoman shoyu: 1 cho for 300 cents. Yamasa shoyu: 1 cho for 280 cents. Miso: 1 cho for 180 cents. Tai [sea bream] miso: 1 piece (*ko*) for 10 cents. Note: A *cho* is an undefined, vague unit of Japanese measurement. A photo shows the inside of a Japanese retail store (p. 120). Note: The meaning of "1 cho" is unclear.

In 1908 the Japanese population in the United States totaled 103,630, including 93,149 men (89.9%), 6,379 women, and 2,100 male children, and 2,010 female children. Six pages of tables give the Japanese populations of different U.S. states and cities.

The directory (p. 5) gives a listing of sake and shoyu sellers in San Francisco: Hokubei Boeki Kaisha, 318 Front St. Tel. [Phone] Kearny 451. McKendry Shosha, 149 California St. Tel. Kearny 2970. Iwagami Shokai, 441 Commercial St. Tel. 2447. Kagawa Soko Shiten, 41 Commercial St. Tel. 1263. Ichida Shoten, 1968 Bush St. Tel. West 1688. Murai Ishikawa Shokai, 2001 Pine St. Tel. West 5407. Tanaka Kyodai Shokai, 1609 Gough St. Tel. West 6615.

The Directory shows Japanese companies making soyfoods in California, Colorado, Nevada, New York, Oregon, Utah, and Washington.

Note: A big jump in the number (and geographical extent) of Japanese tofu shops occurred in 1909. A translation (from older Japanese) of the pages describing how this book was compiled and the survey conducted (on pages 60-66, 140-41, and on the title page of Appendix 1 of this year) would probably help to explain this jump. William Shurtleff has a theory that it had something to do with contact between the people who conducted the Mackenzie survey of Japanese in America (1910). He spent a large amount of time trying, unsuccessfully, to find out how those surveyors knew where to look. He thinks that they worked with the owners of *Nichibei Shinbun* using its list of subscribers to locate communities of Japanese living in California.

At some point a light when on in the minds of the publishers of the annual directory. (1) If the businesses in those communities started advertising in our annual directory, it could become a major source of income. (2) Each new address of a Japanese person or business we find represents a potential new subscriber to our newspaper. Hence their interest and follow-through. So each helped the other to their mutual satisfaction. A win-win situation. Address: San Francisco, California.

1820. Saito, K. 1909. Shôyu jôzô jô ni okeru biseibutsugaku-teki kenkyû [Microbial investigation of shoyu brewing]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 4(4):99-101. See p. 101. Part of his doctoral dissertation, in German. [Jap]

• ***Summary:*** Two illustrations (line drawings) show the equipment. Address: Japan.

1821. Tanaka Kyodai Shokai (Tanaa Bros.). 1909. Direct

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importers & general mdse. [merchandise] (Ad). In: Nichibei Shinbun-sha. 1909. *Nichi-Bei Nenkan [Japanese-American Yearbook.* No. 6]. p. A-8. [Jap]

• ***Summary:*** Ad (full page). The top 1/20 of this ad is in English. This company imports various goods including sake and Sakae-jirushi shoyu, which is made in Noda, Chiba-ken by Mogi Shichiro Uemon. Tanaka is the exclusive seller of this product. Each year 115,000 *koku* (1 koku = 180 liters; so 20,700,000 liters). An illustration shows a Japanese woman dressed in a kimono holding a keg of sake bound with rice-straw ropes. The word "shoyu" in written in flowing script in the upper right corner of the illustration. Address: 1609 Gough St., San Francisco, California.

1822. Thomson, John Stuart. 1909. The Chinese. Indianapolis, Indiana: The Bobbs-Merrill Company. 441 p. Illust. (photos). Index. 22 cm.

• ***Summary:*** Page 118: "Eggs are preserved in a paste of saltpetre, soy [sauce] and earth for periods so long that they are blackened with their sulphur, and taste like our high school boy's experiment in sulphurated hydrogen. In Chekiang Province hams are pickled in soy sauce."

Page 120: "Cassia, mushrooms,... carambola fruit, almond custard, orange wine, steamed sharks' fins, chicken cooked with rice wine, ginger, soy [sauce], sesamum, peanut oil and herbs,–are all drawn upon by these versatile cooks in preparing their menus, especially when a foreigner is to be invited."

Page 300: "The South Manchurian Railway route, now dominated by the selfish Japanese."

Page 319: In Kowloon, "across the bay from Hong-Kong, is situated a village of soy-makers." "Behind the bamboo fences you will notice the bean poles, and the great earthenware pots, where the bean liquor is fermented, and stirred for two months in the blazing sun until it is black. The beans are skinned and made into a flour, into which gypsum is mixed. Salt and secret things are added to make this appetizing soy, which those who have learned the taste prefer to the flavored Worcestershire, of which it is the base. The soy costs only a trifle, and the workman who earns only ten cents a day will have it at his meal. The wealthy are equally proud of their national 'abettor of appetite.'" Note: Gypsum is used in making tofu, not soy sauce.

Page 408: "On the railway which the war gave her in Southern Manchuria, Japan is seeking a loan of $150,000,000, which will be reloaned to finance these Government-Baronial Development Companies. The railway is to be broad-gaged so as to exchange traffic with the Chinese railways coming from the south and west, rather than to look for trade with the broader gaged Siberian Railway at Kwang Chau Fu. Exclusive of the revenue from military transport the South Manchuria Railway is already earning $3,000,000 gold a year, or nineteen dollars gold a mile per day. The operating expenses are forty-five per cent. China is fighting Japan bitterly to parallel with the Fakumen Railway the Japanese South Manchurian Railway from the Russian railways down past Mukden to tidewater in Liaotung Gulf."

"Another knotty problem for the future in Manchuria is the question of taxation in the railroad zone. The Russians control the largest part of the Chinese Eastern Railway. The Japanese own as a war legacy the South Manchurian Railway. Now, if the Americans, British and French have a right to levy taxes in the settlements of Shanghai, Tientsin, etc., why have not the Russians and Japanese the same right in the railroad zones in Manchuria?"

Page 411: "On exports to Manchuria, the subsidized steamship lines, which so far are in private control, have been compelled by the [Japanese] government to reduce rates fifty per cent. During the first year after the war the government charged on its Manchurian Railway half rates on Japanese goods, which alone came duty and likin free through Tairen (Dalny), on the flimsy pretext that Russia, which is not a manufacturing nation at all, had no custom-houses on the Manchurian border."

Note: A "likin" is a former Chinese provincial tax at inland stations on imports or articles in transit.

1823. Wilcox, E.V. 1909. Summary of investigations: Miscellaneous crops. *Hawaii Agricultural Experiment Station, Annual Report.* p. 9-16. For the year 1908. See p. 16.

• ***Summary:*** "Several varieties of soy beans have been grown for use as fodder, green manuring, and human food, particularly in the Japanese product, Miso. The yields have been very encouraging. About 500 tons of soy beans are annually imported from Japan, and the demand is increasing. The beans are sold in Honolulu for $3 per 100 pounds. The market can easily be supplied by home production.

"Peanuts have yielded gratifying results in various localities. On the trial grounds of the station a number of varieties have been grown, including Spanish, Bunch Jumbo, Running Jumbo, and Virginia Running."

Note: In 1898 Hawaii was annexed as a U.S. Territory. Address: Special agent in charge.

1824. Yukawa, Genyô. 1909. Ueber die absolut vegetarische Ernaehrung japanischer Bonzen [The strict vegetarian (vegan) diet of Japanese Buddhist monks]. *Archiv fuer Verdauungs-Krankheiten* 15:471-524. [5 ref. Ger]

• ***Summary:*** The author studied a group of 12 strict vegetarian [vegan] Buddhist monks in Japan and found them to be in good health. He estimated that their daily diets, if evaluated for a 150-pound male, supplied 3,575 calories and 113 gm of protein. The older men ate somewhat less. The diet consisted chiefly of rice and barley, with soy products, vegetables, and rape seed oil.

A table (p. 478-79) summarizes the author's research on the protein content of vegetarian meals by previous

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Japanese researchers. These meals contained various soy products: Miso (*Soybohnenmus*), soy sauce (*Soy*), and tofu. On pages 489-91 are definitions of miso soup, miso, soy sauce (*Soy*) koji, grilled tofu (*Yakidofu*), cooked soybeans (without the hulls removed), azuki bean paste, and mochi, which are served at Nanshuji temple. A table (p. 497-98) gives the nutritional composition of these and other foods. Amounts served at each meal are shown on p. 501, 514, 522, including daikon pickled in miso. The terms "Makrobiotik" and "Makrobier" are used. Address: Aus der Privatklinik fuer Magen- und Darmkrankheiten von Dr. Yukawa in Osaka, Japan.

1825. Hitier, H. 1910. Société Nationale d'Agriculture de France: Le soja [National Society of Agriculture of France: Soya]. *Journal d'Agriculture Pratique* 74(1):24-25. Jan. 6. [Fre]

• ***Summary:*** "Mr. Sagnier, on behalf of Mr. Liyuying [Li Yu-ying], delegate of the government of China in Europe, gave a very interesting presentation on the soybean (*le soja*), and its alimentary, therapeutic, agricultural, and industrial utilization. (This journal will soon publish an article on the soybean.)

After his presentation, Mr. Sagnier showed the members of the Society various products that can be extracted from soybeans: flour, bread for diabetics, cake, seasoning sauce, confections, raw milk, fresh cheeses, etc.

Mr. Schribaux recalled that the soybean, which is widely grown in East Asia, is also cultivated in Europe, but the varieties introduced up to this time have been very sensitive to the cold. In the USA the crop has expanded rapidly.

Mr. Lindet remarked that the soybean contains 16-17% oil, a rather low percentage. Mr. Ch. Girard has cultivated soya at Joinville as a forage plant, but the forage obtained is mediocre, in part because the plant is covered with hairs.

The prince of Arenberg noted that prior to 1908 not one kilogram of soybeans passed through the Suez Canal, yet in 1908 35 million kilograms passed through. This gives a good idea of the commercial development of this plant. Address: France.

1826. *Los Angeles Times.*1910. Our consuls say. Jan. 16. p. II20.

• ***Summary:*** "For public reference the Bureau of Manufactures [Department of Commerce and Labor], Washington, D.C., has a report on the soya bean (coming greatly into vogue in Europe for Chinese process of manufacturing soy and soyacake), and two specimens of the plant."

Note: The meaning of the last half of this sentence (starting with "for Chinese process") is unclear. In Europe, the soya bean is now crushed to make soya bean oil and cake (or meal). An addition, Li Yu-ying in Paris is using soya beans to make many innovative types of soyfood products, including soy [sauce].

1827. Cornwell (G.G.) & Son. 1910. A list of fancy sauces (Ad). *Washington Post.* Jan. 29. p. 7.

• ***Summary:*** "Here are only a few of the extraordinarily large line of table sauces we carry: Brand A 1, Genuine India Soy, English Anchovy Sauce, Lazenby's Harvey Sauce, Walnut and Mushroom Sauce,..." "Grocers and importers."

Note: This ad also appeared in the June 30 and 31 issues of this newspaper. Address: 1412-18 Pa. [Pennsylvania] Av., Washington, DC].

1828. *Bulletin de l'Association Amicale Franco-Chinoise.*1910. Le soja [Soya]. 2(1):62-64, Jan. [Fre]

• ***Summary:*** This periodical was established to promote understanding and friendship among the people of France and China.

The name *Soja* or *Soya* comes from the name that the Japanese give to the sauce made from soybeans. In Chinese it is called *tsiang-yeou* (Cc = Chinese characters given [soy sauce]) and it is made from *houang-teou* (Cc [yellow soybeans]). This sauce, which is used in the well-known *Worcester sauce*, is widely used in China and Japan. Some Chinese residing in Paris [incl. Li Yu-ying] recently took the initiative to introduce into France this sauce, as well as several other products derived from these same 'yellow peas' (*pois jaunes*).

They have just built a factory near Paris in a town named Les Vallées (rue Denis-Papin), on the train line going to Saint-Germaine-en-Laye. There, perfected machines / equipment and the resources of western science allows them to obtain from the raw materials a much better yield than could be obtained using the rudimentary Chinese process. These things made it possible, at the same time, to develop many new soy products suited to European tastes.

A retail store named the Golden Jar in Paris (La Jarre d'Or, 4, rue du Renard) received the right to sell these products from *Caséo-Sojaïne*. And an exposition [of the soy products] was organized at the Grand Palace, at the time of the opening, last Nov. 20, of the Food Fair / Expo (*Salon de l'Alimentation*). There various products were offered.

A summary of the contents of an interesting brochure from that exposition is reprinted. Contents of the brochure: Introduction to the soybean. Products based on soymilk (*Le lait de soja, Le lait végétal*): Liquid, powdered, or fermented soymilk, soy cheese (*Le fromage de soja, Le fromage végétal* [tofu]) (fresh, hard, and fermented). Soy sauce. Soy oil. Sweet soya preserves (*Confiture de Soja;* this soy cream {*crème de soja*} resembles chestnut cream {*crème de marron*}). Soybeans used as a vegetable (dehulled dry soybeans, and soy sprouts). Other soy products (including soy flour, bread for diabetics, whole-meal bread, and soybean cakes–used as feed for animals).

Note 1. It is unclear whether the Chinese-run factory,

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Caséo-Sojaïne, has started to make and sell commercial soy products, or whether they are just about to. They may have started on Nov. 20 of the previous year, however there is no description of soyfood products now being sold in Paris.

Note 2. This is the earliest document seen (Aug. 2001) that contains the term *Caséo-Sojaïne*, which appears to be the name of a business, not of a product. This term would soon be used to also refer to "tofu." Li Yu-ying's name is not mentioned.

Note 3. This is the earliest document seen (Sept. 2002) that mentions soy cream (*crème de soja*).

Note 4. This is the earliest document seen (Sept. 2002) that mentions powdered soymilk (*Le Lait de Soja, en poudre*).

Note 5. This is the earliest document seen (Sept. 2002) that mentions fermented soymilk (*Le Lait de Soja Fermenté*).

1829. Saito, Kendo. 1910. Notizen ueber einige koreanische Gaerungsorganismen [Notes on some Korean fermentation organisms]. *Zentralblatt fuer Bakteriologie. Series 2.* 26(13/15):369-74. Feb. 23. [4 ref. Ger]

• ***Summary:*** Mentions the molds *Aspergillus oryzae* and *Rhizopus Tamari*. Address: Botanical Institute, Tokyo.

1830. Sagnier, Henry. 1910. Le soja et ses produits [The soybean and its products]. *Journal d'Agriculture Pratique* 74(1):307-10. March 10. [4 ref. Fre]

• ***Summary:*** The soybean was a curiosity in Europe until 2-3 years ago, when large amounts started to be imported. The prince A. d'Arenberg, president of the Suez Canal Society, told the National Society of Agriculture, that prior to 1908 no soybeans had passed through the Suez Canal, yet in that year 35,000 tons passed through it. It seems that the new commerce has been stimulated by the expansion of the crop in Manchuria and Korea, under Japanese influence. Most of the imports have gone to England and northern Europe. In England, the oil is used to make soaps and the cakes are fed to livestock.

Recently it was announced that the Chinese government, preoccupied with the expansion of exports, would have manifested the intention to prohibit these exports in view of preventing a shortage of soybeans in the interior of the country.

"The Chinese are now greatly expanding their efforts to make known in Europe the advantages to be gained from soya and from the products that can be extracted from its seeds. I recently had the occasion to present to the National Agricultural Society of France a study written by Mr. Liyuying [Li Yu-ying], delegate of the government of China for several missions. It was titled *Le soja, utilisation alimentaire, thérapeutique, agricoles et industrielle*. This study was accompanied by samples of yellow and black soybean seeds, and by the principal products which can be extracted from this plant: flour, bread for diabetics, cake (*gâteau*), seasoning sauce (*sauce condimentaire*), confections (*confitures*), raw milk (*lait cru*), cooked and sweetened milk (*lait cuit et sucré*), cake for livestock feed, (*tourteau pour l'alimentation du bétail*), fresh cheese (*fromage frais* [tofu]), and smoked cheese (*fromage fumé* [smoked tofu]).

"These products originated from processing imported soybeans. They have been prepared at a test factory (a photo, p. 309, shows the interior) set up just outside of Paris, at Vallées, near Asnières. Li Yu-ying's study gives complete details on these products" which are made from imported soybeans. This factory, named *Caséo-Sojaine*, "has been established by the agents of a civil society constituted in China under the name of *Société biologique de l'Extrême-Orient* (Far Eastern Biological Society). Made up of physicians, scholars (men of letters), and businesspeople, this society would seem to have as its principal goal/object to make known and have used in Europe the pharmaceutical and agricultural products of the Far East [East Asia]."

Note: This is the earliest document seen (May 2011) that mentions the Far Eastern Biological Society (*Société biologique de l'Extrême-Orient*)

The author concludes by discussing soymilk (*lait de soja ou lait végétal*), soybean cakes (*les tourteaux d'huilerie*), and a brief history of the soybean in France.

Illustrations (p. 308) show: Mature soy bean plant with pods. Close-up of soy bean pods and seeds. Soy milk and soy flour viewed under a microscope (p. 309).

1831. Cowie, W.B. 1910. Soya seeds and oil. *Chemist and Druggist* (*London*) 76(13):66. March 26. [1 ref]

• ***Summary:*** Overview of a paper presented by Cowie on 16 March 1910 in Edinburgh at an evening meeting of the North British Branch of the Pharmaceutical Society of Great Britain.

People have become suspicious of "soya-bean meal" because it has been sold mixed with Java beans which contain a significant amount of cyanogenetic glucoside. A table shows six constants for "soya-bean oil" based on studies by Cowie, E.S.L. & W. and Lewkowitsch. The iodine value was found to be 120, 130.4, and 122 respectively. When soya-bean oil is substituted for olive oil in B.P. liniments of ammonia, lime, camphor, or nitrate of mercury ointment, the ointment is a complete failure.

In Japan there are some 11,000 firms in which 2.5 million hectoliters of soya beans are expressed each year and fermented with "*Aspergillus oryzae* for the preparation of the liquid soy" [sauce].

Also gives an overview of the discussion that followed. Mr. Wilson noted that the use of soya oil in the manufacture of linoleum depends on its relatively high iodine value. He added that for feeding purposes, soya-bean is never used alone; a maximum of 25% is mixed with linseed or other feeding stuffs.

Note: This is the earliest document seen (March 2001)

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that mentions the term "Java beans." Address: Ph.C., F.C.S., Edinburgh.

1832. Cowie, W.B. 1910. Note on soya seeds and oil. *Pharmaceutical J. and Pharmacist (London)* 30:403-04. March 26. [3 ref]

• ***Summary:*** At yesterday's evening meeting of the Pharmaceutical Society of Great Britain, held in Edinburgh, Scotland, three varieties of soya beans and a sample of soya bean oil were exhibited. Seeds received from Mr. J. Rutherford Hill, of the yellow variety, yielded 18% of oil and 38.2% of proteins. They were found to contain no cyanogenetic glucoside. "All the suspicion attached to the soya bean meal seemed to have been caused by admixture with Java beans which contain an appreciable amount of cyanogenetic glucoside."

An analysis of the oil is given; it agrees quite closely with that given by Lewkowitsch and those given in Evans' *Analytical Notes* for 1909. A long passage quoted from the *Scotsman* of 4 March 1910 concerns the present great interest in soya bean trade. If the Manchurian supply should be cut off, the remainder might be supplied by Japan, where each year 11,000 installations transform 2.5 million hectoliters of soybeans, using fermentation and *Aspergillus oryzae*, into "soy [sauce], a liquid condiment used extensively by the population."

There follows a long discussion, with many questions and answers. Dr. Watt asks about the difference in price between soya bean oil, arachis oil, and cotton-seed oil–which are sometimes used as a substitute for olive oil. Mr. Giles asks if soya bean oil is less expensive than arachis oil. Mr. Cowie notes that it could be detected as an adulterant in olive oil, and that it could possibly be substituted for olive oil in the following official preparations: Liniments of ammonia, lime, and camphor, and nitrate of mercury ointment.

Mr. Wilson described the case in which soya bean oil had been supplied to a fried fish restaurant. When used in cooking, it seemed to decompose like crude linseed oil, creating an offensive smell.

Mr. McEwan recalled that about 15 years ago a baker in Edinburgh had tried to use soya bean oil in bread and biscuits, but had found it impossible to work with, and had long since abandoned it.

Mr. Hill recalled that a gentleman who had a garden a few miles from Edinburgh, Scotland, cultivated the soya bean for three years. Although they grew readily and flowered, he was never able to obtain seeds from them.

Note 1. Unfortunately, neither the name of the gentleman who cultivated the soya bean nor the date that he began cultivation are given. However, if he planted the seeds in May, he could have started no later than May 1906. Note 2. This document contains the earliest date seen for soybeans in Scotland, or the cultivation of soybeans in Scotland (by May 1906, near Edinburgh). The source of these soybeans is unknown. Address: Ph.C., F.C.S.

1833. Japan, Bureau of Agriculture (Norinsho, Nomukyoku), Dep. of Agriculture and Commerce. 1910. Outlines of agriculture in Japan. Tokyo: Agricultural Bureau, Department of Agriculture and Commerce. 132 p. March. Illust. No index. 23 cm. [Eng]

• ***Summary:*** This book was compiled to acquaint foreigners with agriculture in Japan. Company name with diacritics is: Nôrinshô, Nômukyoku. A map near the front shows Japan and its empire (incl. Korea, Formosa, Kwantung, Karafuto, and the Kurile Islands, with an inset pie chart showing the value of Japan's agricultural products). Oval photos show Japan's six top agricultural officials. A full-page table shows the moneys, measures and weights of Japan with English equivalents. Contents of the first part of the book: Introduction: Geographical location, area, population, topographical position, climate. 1. General remarks. 2. Condition of farmers. 3. Condition of agricultural land.

The section titled "Upland fields" (p. 18) states: "Upland fields are those portions of land being located in high and dry places which by wanting means of irrigation could not be converted into paddy fields. The utilization of these fields is commonly made by the rotation system and crops are raised twice a year. The commonest instance is that barely, naked barely, and wheat are raised as the first crop in winter whereas soja beans, sweet potatoes and millets are raised during the summer as the second crop." The profits from upland fields are generally smaller than from lowland / paddy fields. The average yield of soja beans over the past 10 years is given in Japanese units (p. 19).

In Japan only cows and horses are kept as work animals. In 1907 Japan had 1,008,922 cows and 2,204,031 horses. But they were used more for their manure than for plowing.

A table (p. 28) shows the value (in yen) of the principal commercial fertilizers in Japan from 1905 to 1907. "Soja bean cakes" (a key source of nitrogen) is by far the largest, averaging 12.9 million yen for these three years, followed by superphosphate of lime, mixed manure, rape-seed oil cakes, herring cakes, bone dust, and cotton-seed oil cakes. Note 1. This is the earliest English-language document seen (Nov. 2005) that uses the term "cotton-seed oil cakes" (plural or singular) to refer to cotton-seed cakes.

A table (p. 37) gives the cultivated area (in 1,000 *cho*) of major Japanese crops in 1887, 1892, 1897, 1902, and 1907. In 1907 rice had by far the largest area (2,906), followed by naked barley (694), barley (658), soja bean (471), wheat (444), mulberry tree (390), sweet potato (288), Indian millet (202), rape seed (143), small red bean ([azuki], 135). Soja bean area remained almost unchanged between 1887 (466) and 1907 (471).

A table (p. 39) gives average yield (in *koku/tan*) of the same major Japanese crops for the same years shown in the previous table. Yield of soja beans rose from 0.698 in 1887

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to 0.777 in 1907. Since 1 *koku* = 4.963 bushels and 1 *tan* = 0.245 acres, the 1907 yield is 15.74 bushels/acre.

A table (p. 40) gives the production (in 10,000 koku) of the same major Japanese crops for the same years shown in the previous table. Production of soja beans rose from 325 in 1887 to 366 in 1907. Since 1 *koku* = 4.963 bushels, and 10,000 *koku* = 49,630 bushels, then 366 *koku* is 18.164 million bushels. The next table (p. 42) shows the value (in yen) of each of these agricultural products in 1905-07, and a table (p. 46) compares the cultivated area of each of these crops with rice; soja beans are 16.2% of rice.

In the section on "Food crops" (p. 47+) is a detailed discussion of each. Concerning "Soja bean" (p. 50-51) we read: "The use of this bean is extremely extensive since they are used for the purpose of supplying to the people low priced starchy food by being made into *miso* (pea cheese), soy, *tofu* (bean curd), and other food-stuffs required by the Japanese. The residue obtained from making these food-stuffs from the bean is used for the purpose of feeding cattle or of pressing oil while as manure it is highly valued. Soja bean is easily cultivated requiring less amount of manure and labour. It is therefore cultivated all over the country and occupies the principal position among summer crops of upland fields. Within recent years the demand for it has considerably increased at home and also the export of various food-stuffs prepared out of bean has shown some increase so that no small amount of bean is imported either from China [Manchuria] or Korea. The amount imported actually reaches 10,000,000 *yen*. Over and above these, the import of bean cakes is approximately figured at 20,000,000 *yen* so that the domestic output has somewhat been affected."

Also discusses: Barley and naked barley. Indian millet. Barnyard millet and sorghum. Small red bean [azuki] ("A large amount of small red bean is used as a material for cakes [confections], Hokkaido being the principal producing district." p. 51). Flax and hemp. Green manure crops, incl. *genge* (*Astragalus sinicus*, *umagoyashi* (*Medicago denticula*)), soja beans, etc.

Note 2. This is the earliest English-language document seen (March 2006) that uses the term "small red bean" to refer to the azuki bean.

Chapter 4, titled "Animal industry and poultry" (p. 69+) contains many statistics which may be of interest to vegetarians. Japanese traditionally ate fish rather than meat. "Even at present, the amount of meat consumed per capita a year does not exceed 1.7 pounds while that consumed in America is 150 pounds and in England 118 pounds per capita." etc.

A table (p. 85) shows imports of principal agricultural products (quantity and value) each year from 1906 to 1908. Imports of soja beans increased from 286 to 352 (x 10,000 piculs) during this period, while imports of [soja] bean cake increased from 433 to 776. Both were imported mainly from China. However "the output of *soy* [sauce] and *miso* made of soja bean is exported to the amount of 1,200,000 yen, while bean cake forms the principal fertilizer in Japan" (p. 86).
Address: Tokyo.

1834. Kita, Gen-itsu. 1910. Shôyu jôzô ni kansuru kenkyû. III. [Studies on brewing shoyu. III.]. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*) 13(145):221-35. March. [1 ref. Jap; ger]
Address: Kôgaku-shi, Japan.

1835. Blin, Henri. 1910. Le soja ou fève de Mandchourie. Production et utilisations [The soybean or bean of Manchuria. Production and utilization]. *Nature* (*La*) (*Paris*) 38(1, Supplement):141-42. April 2. [Fre]
• ***Summary:*** Since 1908 people in France have been very preoccupied with the large imports of soybean seeds which are grown in Manchuria and shipped from Dalny and Vladivostok. Soya beans are known in commerce as *Haricot de Chine* and *Pois oléagineux du Japon*. In England, soybeans have been used as a source of oil which is healthful, very nutritious, and of great value–especially for use by soap manufacturers. In Germany, this bean is used for the preparation of an artificial distillery yeast; it contains an important amount of fermentable materials and of an enzyme (*ferment*) similar to the diastase of malt which transforms fermentable starches and sugars. The investigations of Dr. Calmette of the Pasteur Institute at Lille, have made it possible to extract from soybeans diastatic enzymes (*des diastases*) which have unique effects. [Note: Dr. Calmette was one of the inventors of the "amylo process," which began operation in France in 1891. He also first named *Aspergillus rouxii*.]

Recently Li Yu-ying, a delegate of the government of China in Europe, made a very interesting presentation to the French Society of Agriculture, concerning the food, therapeutic, agricultural, and industrial uses of the soybean: Flour, bread for diabetics, cakes, a seasoning sauce, confections, raw milk, fresh cheeses, etc.

Also discusses: Soybean cakes, cultivation of soybeans in Europe and the USA, soy coffee made by roasting soybeans in the south of France (*le Midi*), and the use of soya in diabetic diets. The author concludes by stating that the soybean has great potential in France, and varieties well adapted to this climate should be cultivated.

1836. *J. of the Royal Society of Arts* (*London*).1910. Soy beans. 58:519. April 8.
• ***Summary:*** "At a recent meeting of the Linnaean Society, Mr. J.H. Holland, on behalf of the director of Kew, showed samples of Soy bean, *Glycine Soja*, Sieb. and Zucc (*G. hispida*, Maxim.), with herbarium specimens of the plant producing this seed... This plant is variously known as 'Soy,' 'Soja,' 'Soya,' 'White Gram,' 'American Coffee Berry,' and 'China Bean.'

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The "Soy [Sauce] of Commerce" is made from the seeds of this bean, plus salt, flour, and fresh water. "Wenchow is an important centre of the manufacture, and here the bean used for the purpose is said to be chiefly the white form from Chinkiang."

"The principal use of the beans in this country is for the extraction of the oil, of which they contain about 18 per cent, suitable for soap-making, and in general as a substitute for cotton-seed oil... The beans can be bought in London at about £5 to £6 per ton; the oil realises about £21 to £22 per ton, and the cake about £6 to £7 per ton.

"Beans and bean-cake exported from China have gone chiefly to Japan, and certain parts of Asia, but recently, beginning about November 1908, an important trade has been developed in them, more especially with the beans, between Manchuria and Europe, Dairen (Dalny) being the chief place of export."

"The amount of the 1908 crop sent to Europe through Vladivostok up to July, 1909, was 180,000 tons, the greater part destined for the English market (Hull and Liverpool), and the remainder going to German (Hamburg) and Scandinavian ports.

"Up to 1907 the export of Soy beans from Manchuria did not exceed 120,000 tons annually. During 1908 the export rose to 330,000 tons (one half shipped from Dairen; 100,000 tons from Newchang, and 65,000 tons by rail *via* Suifenho [Suifenhe] to Vladivostok), the increase it is said being due entirely to the demand from Europe."

Note: This is the earliest document seen that mentions Suifenho [Suifenhe] (spelled Suifenhe in 1999), a border town on the railroad that joins eastern Manchuria with Vladivostok. It is located between the cities of Suiyang (in Manchuria) and Pogranichnyy (in Primorskiy Kray in the Russian Far East). Address: Kew Gardens.

1837. Holland, J.H. 1910. Linnean Society of London: Soy bean. *Pharmaceutical J. and Pharmacist* (*London*) 30:515-16. April 23. Series 4.

• ***Summary:*** Reprinted from the *Proceedings of the Linnean Society of London.* Session of March 17, 1910. Address: F.L.S., London.

1838. Brenier, H. 1910. La question du soja [The soya question]. *Bulletin Economique de l'Indochine* (*Hanoi*) 13(83):105-28. March/April. Series 2. [22 ref. Fre]

• ***Summary:*** This is an in-depth look at the relevance of the soybean to France, both now and in the future. It is prompted by the rapid growth of soybean imports to Europe from Manchuria. The author has a good knowledge of the literature on soybeans and a familiarity with the crop in the field in French Indochina and China.

Contents: 1. Soybean cultivation: Species and varieties, major soybean producing countries (China, Japan, Korea, Indochina), other countries (Java and the Dutch East Indies, France, USA. The Imperial Institute of London is conducting trials in the Cape of Good Hope and Natal [South Africa], in British West Africa, and in Gambia), methods of cultivation and yield. 2. Commerce: Exports of soybeans and soybean cake (beancake, *tourteaux de soja*) from China and especially Manchuria (Newchwang, Dairen/Dalny, Antung, Ta tung kow, Suifenho [Suifenhe] / Sui-fen-ho), importing countries in 1908 in descending order of amount imported (Russian ports on the Pacific [Vladivostok, for re-export to Europe], Great Britain, France, Holland, Italy, Belgium, Germany), prices. 3. Soybean utilization: Chemical composition, use as a forage plant and for improving the soil, use in human foods (tofu, shoyu, Worcestershire sauce, tuong [Annamite soy sauce], miso, natto, soymilk), the soybean as an oilseed (yield of oil from various oilseeds), soybean cakes. Conclusions.

Page 109 discusses soybeans in Indochina, according to information received from M. Crevost, Curator of the Agricultural and Commercial Museum of Hanoi, and from the article by Bui-quang-Chiêu (Dec. 1905). The names of the soybean are different in the various parts of Indochina. In Cochin China (especially in the provinces of Chaudoc and Baria), in Annam (sporadically), and in Tonkin it is called *dau-nanh* or *dau-tuong* (*Tuong* is a sauce made with soybeans, described later under "Uses"). In Cambodia (*Cambodge*) it is called *sandek sieng*. The variety most widely cultivated in Indochina seems to be one with a yellowish-white color, more oblong than round, a little flattened (*soja platycarpa* of Harz [1880, 1885] (?)), different therefore from the fine (*belle*) varieties of Manchuria and Japan that are well rounded and pure yellow.

A table (p. 112) shows soy bean grain exports (in 1,000 metric tons) from different Manchurian ports for the years 1905-1908. The author notes that Indochina could be exporting soybeans to France. One factor that stimulated the large exports of soybeans from Manchuria in 1908 (besides an excellent harvest in 1907) was a program to suppress the cultivation of opium by expansion of soybean acreage (p. 113). The author uses the scientific name *Phaseolus radiatus* to refer to the *petit haricot vert* (probably mung bean). He observed soybeans planted in mixed culture in Szechuan.

Page 116 notes that the rise of soybeans in Manchuria is due in part to the power of the Japanese commercial house Mitsui Bussan Kaisha and the large English oil mills, which joined to develop an industry that had not previously existed. At the end of 1906, Mitsui, which had a dominant commercial role in Southern Manchuria, sent one or two trial shipments of soybeans to England. Mitsui was followed mainly by the British trading houses (Samuel & Samuel, Jardine, Matheson), then by the Germans (Otto Reimers, Arnhold Karberg), and the Russians. Continued suppression of opium growing led to further expansion of soybean cultivation.

A table (p. 117) gives the price of soybeans (per picul

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of 300 catties = 180 kg), soybean cake (per 10 cakes of 53 catties each or 318 kg for the 10), and soybean oil (per picul of 100 catties = 60 kg) in New chwang [Newchwang] taels and in French francs in the average year from 1882-1891, and in the year 1897. Prices were up in 1897.

Page 124 states: "A factory was recently founded near Paris (at Saint Germain en Laye), with Chinese capital, for the preparation of a series of products derived from soya: milk, *"caséo-sojaïne,"* cheese [tofu], sauce, and sweet soya preserves (*confiture (?) de soja*)." A footnote states: "I owe this curious piece of information to the amicability of the secretary of *Ecole française d'Extrême-Orient*, Mr. Ch. Maybon, who pointed it out in the January 1910 issue of the *Bulletin de l'Association amicale franco-chinoise*.

A table (p. 125) shows that the soybean gives the lowest yield of oil of all major oilseeds: copra (from coconut) yields 67-70% oil, sesame seeds 50-56%, poppy seed (*pavot*) 43-50%, castor oil plant 42-50%, rapeseed (colza) 42-45%, linseed 43%, peanuts 35-47%, cottonseed 21-26%, soybeans from Manchuria 16-18%.

Note: This is the earliest document seen (March 2000) that describes *caséo-sojaïne* as a product. Yet this may well be a mistake since its source of information is given as *Bulletin de l'Association Amicale Franco-Chinoise* (Jan. 1910)–which uses the term to refer to a business name. Address: Inspecteur-Conseil des Services Agricoles et Commerciaux de l'Indochine.

1839. Nishimura, Torazô; Inoue, T. 1910. Shôyu ni kansuru kagakuteki kenkyû. I. [Chemical investigation of shoyu. I.]. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*) 13(146):378-85. April. [Jap; ger] Address: Nôgaku-shi, Japan.

1840. Noorden, Carl von; Lampé, Eduard. 1910. Ueber Sarton, ein neues Naehrpraeparat fuer Zuckerkranke [Sarton, a new food for diabetics]. *Therapie der Gegenwart: Medizinische-Chirurgische Rundschau* 51(4):145-46. New Series Vol. 12. [Ger]

• ***Summary:*** This article is mainly about soybeans, their chemical composition, and the various foods that can be made from them. "By coincidence, the soybean (*Soja hispida*), of Japanese origin, fell into our hands. The first experiments on this plant were conducted many years ago, initially in our private clinic in Frankfurt, then later by another one of us in Frankfurt and the other in Vienna.

"Soja hispida, a legume, produces a seed that lies somewhere between peas and beans in appearance. There are numerous varieties of soybeans and each has different qualities. Only certain varieties are useful in the kitchen. In Japan it is used to make the Japanese "bean sauce [*Bohnensauce*], called shoyu; it is also found in fine European kitchens. Moreover, in Japan, a peculiar dish called tofu (*Tofou*) is prepared from soybeans. It is rich in protein; almost all other nutrients of the beans are removed during its preparation. In its simple boiled state, the soybean is used as a vegetable or salad in Japan by the poor. Also in southeast Europe, people have been planting soybeans for three decades, but they don't have the same value here as in Japan.

"The high concentration of protein in soybeans (30-35%), the low concentration of starch and of digestible carbohydrates (ca. 6%) leads us to want to try soybeans in diabetic diets. But the plain, unprocessed bean, regardless of what we add to it, does not suit European palates..."

"Finally a method was found that removes almost all of the carbohydrates from soybean meal (*Sojabohnenmehl*), and also gets rid of the unpleasant tasting materials. Because this process is much too complicated to be carried out in one's household, Bayer & Co., a paint factory in Elberfeld, took over the production on a large scale. The preparation was next produced in the form of a thick puree, put into sterilized tin cans (about 18-19% solids, of which 8-9% was protein). Meanwhile they succeeded in making a dry powder, and the firm even told us that they would probably prefer to sell the preparation in a powdered form.

This soybean puree, given the name Sarton by the factory, contains no starches or red dextrins (*Erytrodextrins*) as indicated by a test with Lugol's solution. If properly prepared, the taste is excellent. All patients, and even healthy workers, accepted it very well. Like pea soup and lentil soup, the Soybean soup invites the use of plenty of butter or other fats, and thereby enables the incorporation of a high level of total nutrients–with little resulting sugar in the urine.

"More detailed communications about the soybean, about the chemistry of this and other preparations, about its digestibility, etc. will soon be published by Dr. E. Jürgensen from the Vienna Medical Clinic (*Wiener I. medizinischen Klinik*).

Note: This product, which originated in Japan, was made in its own factory in Potsdam. Address: 1. Vienna, Austria; 2. Frankfurt am Main, Germany.

1841. Sewaki, Hisao. 1910. Jika kôan shôyu baiyôki ni tsuite [On shoyu culture media developed by the writer]. *Seiikai Geppo* No. 338. p. 1-7. April. [Jap] Address: M.R.C.S., L.R.C.P.

1842. Nishimura, Torazô. 1910. Shôyu kôbo no shurui sesshoku baiyô oyobi shôyu no nama kabi ni taisuru fuyu-hô no kôka. I. Shôyu kôbo no shurui [On the contact culture of shoyu yeast, and the effect of covering shoyu with oil to prevent molds. I. The varieties of shoyu yeast]. *Nogaku Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 94. p. 19-37. May 5. [Jap]

1843. Langworthy, C.F. 1910. Apendice. La soya como alimento para el hombre [Appendix: The soy bean as human food]. *Boletin de la Sociedad Agricola Mexicana*

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34(20):389-92. May 25. [1 ref. Spa]
• ***Summary:*** This is a Spanish-language translation of USDA Farmers' Bulletin No. 58 (1897, Revised 1899). The soybean is referred to throughout as "La haba soya." It describes and gives the nutritional composition of various Japanese soyfoods, including natto, miso (3 types; *miso blanco, colorado, Suiza* [*Swiss*]), tofu (*Tofu o queso de haba; Tofu fresco*), soymilk (*leche de la haba soya*), frozen tofu (*Tofu helado*), yuba, soy sauce (*salsa de la haba soya*).

Note 1. This is the earliest Spanish-language document seen (Oct. 2008) that mentions yuba, which it calls *yuba.*

Under the name of coffee beans (*habas de café*), soybeans (*las habas soya*) are sometimes consumed in Switzerland as legumes (*como legumbres);* when they are dry and toasted, they are used as a substitute for coffee (*sustituir al café*). No mention is made of soybeans or soyfoods in Mexico.

Note 2. This is the earliest Spanish-language document seen (July 2000) that mentions tofu, which it calls *Tofu or queso de haba.*

Note 3. This is the earliest Spanish-language document seen (Jan. 2012) that mentions natto, which it calls *natto.*

Note 4. This is the earliest Spanish-language document seen (March 2009) that mentions miso, which it calls *miso.*

Note 5. This is the earliest Spanish-language document seen (Feb. 2004) that mentions soy as a substitute for coffee, which it calls *sustituir al café.*

Note 6. This is the earliest Spanish-language document seen (Oct. 2003) that uses the term *leche de la haba soya* to refer to soymilk.

Note 7. This is the earliest Spanish-language document seen (Feb. 2004) that mentions frozen tofu, which it calls "Tofu helado."

Note 8. This is the earliest Spanish-language document seen (April 2012) that mentions soy sauce, which it calls "salsa de la haba soya." Address: PhD, Office of Experiment Stations, USDA, USA.

1844. Sewaki, Hisao. 1910. On the preparation of a simple culture medium. *Sei-i-kwai Medical Journal* 39(5):515-16. May 31. Whole No. 339. [Eng]
• ***Summary:*** To replace the ordinary bouillon and agar culture media, most frequently used for the cultivation of bacteria, the writer describes five less expensive alternatives: (1) Shôyu-Bouillon–15 parts shoyu, 18 parts pepton, and 1000 parts water. (2) Simple shoyu culture medium. (3) Shoyu-agar medium. (4) Shoyu medium after Endo's method. (4) Shoyu medium after Conradi-Drigalsky's method.

Characteristics of these shoyu media: 1. The shoyu medium does not contain meat in any form. 2. Shoyu is employed in place of meat. 3. As shoyu contains sodium chloride, the latter is not used. 4. It takes only 2 hours to make an ordinary shoyu culture medium. 5. The above mentioned conditions make the expense very small and economise on time.

Note: This journal, later titled *Seiikai Geppo,* is published by the Society for the Advancement of Medical Science in Japan. Address: M.R.C.S., L.R.C.P.

1845. Nishimura, Torazô; Inoue, T. 1910. Shôyu ni kansuru kagakuteki kenkyû. II. [Chemical investigation of shoyu. II.]. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*) 13(147):484-511. May. [Jap; ger] Address: Nôgaku-shi, Japan.

1846. Nishimura, Torazô. 1910. Shôyu kôbo no shurui sesshoku baiyô oyobi shôyu no nama kabi ni taisuru fuyu-hô no kôka. II. Shôyu kôbo beetaa (1) Kin no keitai oyobi kôzô no tsuzuki [On the contact culture of shoyu yeast, and the effect of covering shoyu with oil to prevent molds. II. The beta shoyu yeast (1) Its form and structure]. *Nogaku Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 95. p. 42-65. June 5. [Jap]

1847. Nakamura, Keisuke. 1910. Ika shôyu-chû no chisso kagô-butsu [On the nitrogenous compounds in ika-shoyu (made from squid or ink-fish)]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 31(6):597-613. June. [Jap] Address: Nôgaku-shi, Japan.

1848. Mitsuda, Ryuichi. 1910. Shôyu moromi-chû no kôbo no sûshu ni tsukite [On the yeasts of shoyu moromi]. *Nogaku Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 96. p. 43-54. July 5. [Jap]
• ***Summary:*** Eight photos (p. 48) show shoyu yeasts at different magnifications. Address: Japan.

1849. Nishimura, Torazô. 1910. Shôyu kôbo no shurui sesshoku baiyô oyobi shôyu no nama kabi ni taisuru fuyû-hô no kôka. II. Yasai-rui [On the contact culture of shoyu yeast, and the effect of covering shoyu with oil to prevent molds. II. Vegetable types]. *Nogaku Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 96. p. 1-17. July 5. [Jap]

1850. *Christian Science Monitor.* 1910. Rapid development of the soy bean trade in China. July 21. p. 2.
• ***Summary:*** London. From the black variety of soy bean "is manufactured soy (so called from the Japanese equivalent So Yu [sic, Shoyu]), a sauce used by the Japanese as well as the Chinese in astonishing quantities with all kinds of cooked food. It is manufactured by boiling the beans and by allowing them to ferment with yeast [sic] after mixing thoroughly with water, flour, and salt, and is sold in glazed earthenware jars.

"The variety of yellow beans is used for making another product of general use, a clear [sic] jelly like substance known as bean curd. It is to be seen on sale in large slabs on every wayside food stall. The cheerful looking coolies in the

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accompanying photograph are pausing a moment in their work of grinding beans for the purpose under a revolving stone mill. The pulp [okara] so produced will be filtered, [the soy milk cooked], the casein coagulated by the addition of gypsum and the jelly-like coagulated mass pressed into shape for market.

"But it is the cultivation of a third variety, the white bean, which has developed during the last few years from a mere local crop, to supply far eastern demands, into an industry of world-wide importance. At a recent meeting of the Linnaean Society of London Mr. Holland, on behalf of the director of the royal botanic gardens, Kew, gave some statistics of the remarkable innovation for which Manchuria is apparently responsible. The output of soybeans from that country prior to 1907 did not exceed 120,000 tons annually, nearly all being taken by neighboring ports in China and Japan; but during 1908, owing to the demands from Europe, the export rose to 330,000 tons, while the 1909 crop has been estimated at 700,000 to 800,000 tons. The principal use of the beans in Europe is for the extraction of oil, of which they contain some 18 per cent, which is suitable for soap making, while the cake left after crushing is said to be a valuable cattle food likely to prove a serious competitor to cotton seed and linseed cake, at present in use for this purpose. The beans fetch $20 to $21 a ton in London, the oil from $84 to $88 per ton, and the cake about $26 per ton.

"The sudden influx upon the markets of the world of this extremely useful product is, strange as it may seem, undoubtedly due to the Russo-Japanese war, for the cultivation of the crop was extended in Manchuria in direct consequence of the large demand for the bean for food for the Russian army. When the troops were withdrawn other markets had to be sought for the products, the supply of which was at once greatly in excess of demand."

The photo caption reads: The grinding process. Soy beans being prepared for market in a Kwangtung [Guangdong] village. Note: Guangdong is a province in southeast China; its capital is Canton (Guangzhou).

1851. Burtt-Davy, Joseph. 1910. The soy-bean (Glycine hispida). *Transvaal Agricultural Journal* 8(32):620-26. July. • ***Summary:*** Contents: Introduction. Description. Climatic requirements. Varieties. Planting and cultivation. Harvesting the seed. Returns of seed. Use of the seed for stock feed. Use of the seed for human food. Commerce in the seed. Soy-bean oil. As green forage. For ensilage. For hay. As a rotation crop for green manuring. Some co-operative experiment reports (from South Africa).

"We have grown soy-beans successfully at Skinners Court and on the Springbok Flats since 1903. We have also tested them successfully in other parts of the country, but as there was no market for the beans, and farmers had not learned to use them for their own stock, they were not taken up as a regular crop. Another reason for this was that some varieties gave a uniformly poor germination, while on some soils, or under some conditions, none of the varieties did well.

"We have continued our experiments and have now established a strain of seed which gives very satisfactory results. But owing to the variations in soil and the apparent necessity for inoculation (natural or artificial) in some cases, I cannot recommend farmers to plant largely until they have given the crop a trial on a small scale...

"A variety brought by me from the United States in 1903, known as the 'Southern,' has given the best results of any tried by us, both at Skinners Court and on the Springbok Flats. The seed harvested in 1904 we distributed extensively in different parts of the Transvaal, and have had favourable reports of it, both from the high veld and the bush-veld. The original stock was obtained through [seedsmen] J.M. Thorburn & Co., New York.

"Writing from London, Messrs. Mitchell, Cotts & Co. state that only two varieties have been imported into England in any quantity, viz., the north Manchurian or 'Harbin' quality, exported from Vladivostok, and the south Manchurian or 'Sakura' quality, shipped from Dalny, both of which are described as very similar in appearance and composition; the 'Sakura' realizes about 2*s.* 6*d.* per ton more than the others. These are the classes which are most acceptable to the English market. Seed has been received through the courtesy of Messrs. Mitchell, Cotts & Co., and will be tried the coming season."

"Of the varieties grown in Europe we have tried Vilmorin's 'Extra-Early,' 'Extra-Early Black,' and 'Yellow Etampes' at Skinners Court, but they did not thrive at all, even though grown alongside the 'Southern' which did excellently" (p. 621).

A list of the names of soybeans grown in Japan, grouped according to seed color, is given. Among the six white seeded beans (*Shiro Mame*), Teppo Mame or 'Gun Bean' is "the sort principally used to make the famous Soy Sauce." Maru Mame or 'Bullet Bean' is recommended as very valuable for horse food. The names of three black seeded soybeans (*Kuro Mame*) and three speckled seeded soybeans (*Fuiri Mame*) are also given. "These have not yet been tested by the Department, but seed is on order for trial next season. In the meantime I recommend farmers to restrict themselves mainly to the 'Southern' variety." Note 1. In calculating yields, 1 muid = 3.33 bushels.

"In China and Japan the soy-bean is an article of human diet. In Japan it constitutes a large proportion of the food of the people, a variety of dishes being prepared from it as well as foodstuffs similar to butter, oil, and cheese. A condiment famous among the Chinese under the name of 'soy', is made from this bean. The beans are of a pleasant taste when boiled, either in a green state or when ripe; in the latter state they need considerable soaking before use...

"The Japanese are reported to extract the casein from

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soy-beans, using it as a substitute for milk. This vegetable drink is said to be a very popular drink among the poorer classes of China and Japan. The beans are first softened by being soaked and then boiled in water.

"Experiments are being made in Europe in the use of soy-bean flour as an admixture with wheat flour for bread. A biscuit is made and sold in Paris, containing soy-bean flour, which has no starch, and is recommended for persons suffering from diabetes.

"Biscuits seem to be the most likely form in which this flour can be used, and two or three large English firms are now making them... A coffee substitute is made in America and on the Continent of Europe, out of soy-beans."

Note 2. This is the earliest English-language document seen (Oct. 2001) that uses the term "soy-bean flour." Address: F.L.S., etc., Governnment botanist and agrostologist.

1852. Crowe, E.F. 1910. Japan. Report for the year 1909 on the trade of Japan. *Diplomatic and Consular Reports. Annual Series (Foreign Office, Great Britain)* No. 4511. 86 p. July.
• ***Summary:*** "Imports of manures.–The question of manures forms one of the most interesting items of 1909. A detailed table showing the quantities and values imported during the past three years will be found in Table 1 (B), page 61. Bean cake, of course, heads the list as regards value. The total amount imported in 1909 was 575,180 tons, worth £2,283,700, or £3 19*s.* 4*d.* a ton, as compared with 461,950 tons, worth £2,220,000 in 1908, or an average of £4 16*s.* 1*d.* a ton.

"Next comes the sulphate of ammonia, but in this item there was a big drop from 66,445 tons, valued at £898,000, to 45,835 tons, worth 604,700, while in the case of both phosphate rock and fish guano there was a decrease of about £100,000. Nitrate of soda made a small gain.

"It is a well-known fact that bean cake has for years occupied the position of the most popular imported fertiliser in Japan. Now, however, that the United Kingdom, and the Continent of Europe and America to a lesser extent, have become purchasers of Manchurian beans the questions arises as to whether Japan will be able to continue to buy bean cake in huge quantities if the price rises appreciably. In studying this question two factors should not be lost sight of; one is that Japan is herself a large grower of soya beans, having, according to the latest available returns (1908) over 1,200,000 acres under cultivation, producing annually some 19,000,000 bushels of beans, while the other is that Japan imports very large quantities of soya beans from China and Corea.

"The greater part of these beans is used for the purposes of human food, *i.e.*, the making of "soy," "miso," and bean curd, but a portion, by no means small, is used also as a fertiliser.

"The Russo-Japanese war had such an effect in curtailing the supplies of beans and cake that to arrive at a just appreciation of the position it is necessary to go back a good many years." A table (p. 18) shows imports of [soy] beans and bean cake (in piculs; 1 picul = 132.27 lb), the value of each, and the average price of silver each year from 1900 to 1909. Imports of [soy] beans increased from 1,575,022 piculs in 1900 to a record 3,623,377 piculs in 1909. Imports of bean cake increased from 2,280,687 piculs in 1900 to a record 9,663,036 piculs in 1909. The average price of silver fell by about 16% during this period. "Should the price in future be forced up very high in consequence of British and other demand, the presumption is that Japan would turn to sulphate of ammonia if the cost per unit of nitrogen therein were to be less than in the bean cake. On the other hand it must be remembered that the removal of duty on sulphate of ammonia in the United States of America means that that country will probably absorb large quantities of the British output and that Japan will have to pay a bigger price if she wants a share of this fertiliser.

"Thus the outlook for nitrate of soda becomes a good deal brighter and now that, owing to the subsidised Japanese line which runs to South America, it is possible to get cheap direct rates of freight, it looks as though the nitrate of soda will be a serious competitor to the other nitrogenous fertilisers, except in the matter of wet rice cultivation."

Page 31 shows the shares of principal countries in the import and export trade of Japan during the years 1908 and 1909. Japan's biggest imports came from the United Kingdom, followed by the USA, then China. The biggest customer of Japan's exports was the United States, followed by China then France (p. 31). Japan's biggest port (in terms of value of imports and exports) was Yokohama, followed by Kobe than Osaka (p. 37). Japan's population at the end of 1909 was estimated at 49,769,704 (not including Formosa or Karafuto [Japanese Sagalien]). Japan's most valuable exports in 1909 were tea, followed by rice then fish. Exports of "Soy" [sauce] rose from £110,500 in 1907 to £111,100 in 1909.

Summarized in *J. of the Board of Agriculture (London)*, Aug. 1910, p. 410.

Note: This is the earliest document seen (Sept. 2001) that gives statistics concerning industrial utilization of soybeans–in this case soybean meal used as a fertilizer in Japan. Address: Attaché, British Embassy, Tokio [Tokyo].

1853. Duncan's (John) Sons. 1910. Try it on salads and obtain that piquancy so often lacking in Salad Dressings. Use Lea & Perrins Sauce, the original Worcestershire (Ad). *Boston Cooking School Magazine* 15(50):xi. June/July.
• ***Summary:*** "Soups, fish, steaks, chops, roasts, and many other dishes are improved by its use. For four generations it has stood unrivaled as a seasoning. Shun substitutes. John Duncan's Sons, Agents, New York." An illustration (line drawing) shows a woman cooking, a man dining, and a plate

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of food with the sauce on the white table cloth. Address: New York.

1854. Paton, G.P. 1910. Japan. Report for the year 1909 on the trade and navigation of the port of Dairen. *Diplomatic and Consular Reports, Annual Series* (*Foreign Office, Great Britain*) No. 4504. 22 p. July.

• ***Summary:*** On pages 3-4 key weights and measures are defined: Chinese: catty = 1.333 lb, picul = 133.33 lb, *li* = 1/3 miles, *mow* = 736½ square yards; Japanese: 1 *koku* [liquid] = 39.703 gallons, 1 *koku* [dry] = 4.963 bushels. The Japanese, Chinese, and total populations are given for Dairen, Shaokangtzu [Shao-kuan, in Kwantung Leased Territory], Port Arthur, Chinchou [Chin-chou] and Pitsewo [Pikou, in Kwantung Leased Territory]. One map (p. 5) shows part of Manchuria, with the main towns, railroads, and where major commodities are produced. Next comes a large fold-out map of the Kwantung Leased Territory [and peninsula] (Dairen Consular District).

Dairen may now be considered the principal outlet for the produce of South Manchuria. The Central Laboratory is doing good work in the manufacture of bean cake and bean oil, and soap from bean oil. "The manufacture of soap from bean oil has been commenced on a very small scale by three different firms in Dairen, but the excessive price of bean oil since the end of 1909 is proving a great handicap." The South Manchuria Railway Company takes a major share in the development of South Manchuria as well as the Kwantung Peninsula. Its work during the past year is discussed. An ice-breaker has been added to facilitate the berthing of ships during the winter months.

"Export trade.–Thanks to the very large increase in the export of beans, the export trade is in a very thriving condition... Beans and bean products.–The most striking feature in the exports is the enormous increase in the shipments of beans and bean products, viz., oil and cake" which accounted for nearly 70% of all exports from Dairen. Export of [soy] beans rose from 206,653 tons in 1908 to 462,423 tons in 1909. In 1909, some 56% of these beans went to Europe, 29% to Japan, 12% to north China, and 21.4% to south China. "Of the amount sent to Japan, probably some was re-shipped to Europe; while of the quantity sent to Europe about 90 per cent. went to the United Kingdom." There follows a long discussion of economic factors causing the prices of soybean and bean cake to be currently high in Manchuria. If, as seems probable, the French, German, and U.S. governments remove the import duty on [soy] beans, then a great impetus will be given to the export... The farmer in Japan has learned the value of bean cake as a fertiliser for the paddy field and the mulberry plantation, and immense quantities are exported to that country. In 1909, indeed, Japan took over 99 per cent. of the bean cake exported from Dairen... A small quantity is exported to South China where it is used both as a fertiliser and as a food for pigs. A shipment was also made last year to Formosa [today's Taiwan] for trial in the sugar plantations and, as the result was successful, the experiment will probably be repeated this year."

"Bean oil.–In Manchuria the primary object of the bean mills is the manufacture of bean cake, and the oil is only of secondary importance. The mills are worked on the press system and only extract 7 or 8 per cent. of the 17 or 18 per cent. of the oil contained in the bean... The largest purchaser of bean oil is South China, which takes about one-half of the output. Of the remainder, the bulk goes to Japan, where it is mostly transhipped [transshipped] to Europe and America." The value of "Soy" (soy sauce) imports to Dairen increased from £22,367 in 1907, to £27,431 in 1908, falling to £21,551 (3,307 tons) in 1909. The value of miso imports to Dairen increased from £2,128 in 1907, to £5,422 in 1908, falling to £2,815 (656 tons) in 1909. Tables (p. 19-21) show returns of: (1) Import trade of Dairen during 1907-09 (2) Export trade of Dairen during 1907-09 (3) Shipping entered at the Port of Dairen during 1908-09. Note: In some parts of this report, the £ sign is written as "*l*.

Summarized in *J. of the Board of Agriculture* (*London*), Sept. 1910, p. 502. Address: Acting British Vice-Consul, Dairen.

1855. Suzuki, Umetarô; Furuya, Yeizô. 1910. Shôyu jôzô no sai ni okoru kagaku henka ni tsuite. I. [Chemical changes occurring during shoyu fermentation. I.]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 31(7):696-712. July. [Jap]

• ***Summary:*** Note: According to Church (1923, p. 26) an English-language translation was made by Dr. S. Komatsu, formerly of the USDA Bureau of Chemistry.

Note: Oshima 1922 (uncitable bibliography) says that Furuya's first name starts with "E" as in Eizô. Address: 1. Nôgaku hakase; 2. Nôgaku-shi.

1856. Hervier, F. 1910. Le pois oléagineux de la Chine (*Soja hispida*) [The "oil peas" of China (*Soja hispida*)]. *Jardin* (*Le*) 24:233-36. Aug. 5. [1 ref. Fre]

• ***Summary:*** The elder readers of this garden magazine will know well this plant, which is so useful and versatile. "But that we will take advantage of the resurgence of interest in the soybean to give our young readers a summary of what various people appreciate this useful plant. It can be used as food, forage, in industrial products, and as a medicine. Those who have written about it include Blavet, D. Bois, A. de Candolle, Chevallier, Cusin, Foëx, Fruewirth, Grandeau, Guichard, Haberlandt, Lachaume, Ladureau, de Lunaret, Michelin, de Mortillet, Paillieux, Trabut, Vavin, Vianne, Vilmorin, and many more. We also want to encourage our young readers to at least try cultivating the soybean, since this is not difficult."

Contains a brief botanical description of the soybean,

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a list of the Asian countries where it is grown and its vernacular names in some of these countries, a long quotation from Kaempfer (1712) describing the soybean, and a history of the soybean in France from about 1740 when it was sent to the *Jardin du Roi* (today called the Museum) by missionaries in China–although the first records date from 1779. In 1821 it was tested by Mr. C. Brun of Beaumes on his land at Champ-Soue, near Etampes (Seine-et-Oise). At the end of 1855 the Society for Acclimatization distributed it to some farmers for trial. "Then in 1880, thanks to the introduction in the catalog of the house of Vilmorin-Andrieux & Co. of a variety cultivated in Austria-Hungary which could be propagated very easily, serious trials were conducted in different parts of France. From these, we can conclude that the early yellow soybean (*Soja jaune hâtif*) or oil-pea of China (*Pois oléagineux de la Chine*) (*Houang-teou* or *Houang-ta-teou*, whether referred to as the dwarf or as the tall variety) could be usefully cultivated" (p. 233).

"Being better advised than we are, the Austro-Hungarians, after the first trial they conducted in 1850, acquired incontestable proof of the value of Soya in the feeding of cattle / livestock (*du bétail*). So they developed this crop more and more; it took off strongly, especially after the Vienna World Exposition of 1873."

"In the climate of Paris, only the yellow Chinese and the Mongolian varieties can be cultivated successfully, since their vegetative cycle is 3-4 months. South of the Loire River, one can add the brownish-red variety of China. Finally, even further south, in Languedoc, Provence [regions in south central France], and Algeria, all the late varieties can be cultivated, especially the ones with black seeds and those from Japan. A large number of these varieties are found in commerce, especially the early ones designed by names such as Early of Podolie and Early of Etampes (see fig. 140).

Gives details on how to sow, cultivate, and harvest the soybean for garden use. Its needs are quite similar to those of the Haricot. "Unlike Haricot beans, which can only be eaten as green beans (pods and all), soybean seeds (*Pois oléagineux de la Chine*) can be consumed either fresh or dry. Moreover, soybeans are easily digested and do not cause the all-too-well-known inconvenience of Haricot beans. To eat them in the fresh green stage, they should be prepared/cooked like small green kidney beans (*flageolets*), which they resemble in taste. For the dry beans, soak them overnight in twice their volume of either rain- or river-water in which you have dissolved (per liter) 3 gm of baking soda or 50 gm of sugar. The next day, drain them then put them like any dry legume in cold water, bring to a boil, and simmer for 2½ hours. Half way through the simmering process, add salt and a walnut-sized piece of butter. After they are cooked, you can serve them either with or without fat [butter or lard] or meatless seasonings (*au gras ou au maigre*). The cooked dry soybeans are also excellent pureed" (p. 234).

A table (p. 234) compiled by Prof. Haberlandt of Vienna compares the composition of seeds of soybeans, haricot, peas, lentils, feves, and yellow lupins. It shows that soybeans are the most nutritive, because they contain the most protein and fat.

A second table (p. 235) shows that this plant, cultivated in the garden solely for its seeds, removes from the soil the following amounts of minerals per 100 kg of seeds: Phosphoric acid 0.729 kg, lime 3.146 kg, magnesia 1.106 kg, and potash 0.811 kg.

A third table shows the amount of these four substances removed when the soybean is grown for forage; the yield is 20,000 to 30,000 kg/ha.

"The Asiatics and particularly the Chinese and Japanese greatly value the seeds of the soybean (*du Soja*), which are both nutritive and rich in fat: they form the basis of their diet, replacing butter, oil, and milk. They are used in culinary preparations greatly appreciated in these regions."

The seeds are the richest of all legumes in the protein legumine, which is actually "solid milk." The Orientals soak, then grind the beans and extract the milk, which they use like dairy milk. "Much of it is coagulated to make a cheese, similar to our *fromage à la pie*, which is called *Teou-fou* in China and *To-fu* in Japan, and which they consume in large quantities, fresh or dry, uncooked or cooked.

"This cheese, when well prepared, is very tasty, and it forms a very exquisite dish when it is deep fried like potatoes.

When the seeds are roasted with an equal quantity of wheat or barley, then mixed with water and allowed to ferment, they become the appetizing condiment sauce of great renown, known as Tsiang-yeou or Shoyu: at this time it is greatly in vogue in England and America under the name of "Indian Soy." This sauce is greatly appreciated with roasted meat or fish; added to beef or beef bouillon, it communicates a color and savor that are very agreeable."

Aside from these food uses, the soybean is also used in Asia for forage and to make oil and meal. "Finally, the soybean can be used as a coffee substitute–as it has long been in the regions of Languedoc and Tyrol [Tirol]." Also discusses soy flour and its high nutritional value.

A non-original illustration (p. 235) shows a soy bean plant with pods and a close-up of the pods on stem (from an original in Carrière 1880).

1857. *Daily Consular and Trade Reports* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*).1910. Industries of Hongkong: Bean sauce and rice milling. 13(36):489-92. Aug. 15. See p. 491.

• ***Summary:*** "Chinese soy or bean sauce is the main constituent of almost all of the well-known sauces used with meats, and it is exported in large quantities both to Europe and to the United States. The value of soy exported from this district [Hongkong] to America in 1909 was $36,523

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United States currency. There are several large factories in Hongkong, all owned and operated by Chinese, engaged in the manufacture of this product." Note: No amounts are given. Address: Washington, DC.

1858. *Daily Consular and Trade Reports (U.S. Bureau of Manufactures, Department of Commerce and Labor).*1910. Japanese trade notes. 13(36):499. Aug. 15.
• ***Summary:*** "Consul-General Thomas Sammons, of Yokohama, furnishes the following notes concerning Japanese trade... Japanese 'soy' [sauce] is exported chiefly to the United States, Hawaii, Port Arthur and Dalny [Manchuria], and Korea, each taking approximately 400,000 gallons annually."

"Of Japan's total exports of peanuts the United States takes two-thirds."

"Korea leads in the consumption of Japan's national beverage, sake, taking 1,400,000 gallons a year; the United States consumes about 250,000 gallons annually." Address: Washington, DC.

1859. Ransford, Robert Bolton. Assignor to Société Francaise des Distilleries de L'Indo-Chine. 1910. The treatment of leguminous matter and of soja (Glycine Hispida) in particular for the manufacture of sauces and condiments. *British Patent* 20,520. 5 p. Date of application, 2 Sept. 1910. Accepted, 2 Nov. 1911.
• ***Summary:*** This patent for making soy sauce using a new process is based on French Patent 415,025 of 1909. This invention was communicated to Mr. Ransford, a "Chartered Patent Agent" in London, "from abroad by Société Francaise des Distilleries de L'Indo-Chine, of 20, rue Lafitte, Paris, France."

"The various processes used in the Far East for the manufacture of sauces, and condiments of which soja is the principal ingredient generally–involve the action of micro-organisms, usually the mucedins, which bring about the transformation of the material."

"The manufacture at present is difficult and sometimes very long; this is the case with shoyu, under which term the most widely-used sauce or condiment based on soja is known; the preparation of shoyu may last form 8 months to five years. The results obtained moreover are irregular and not always those desired and as a rule all the useful constituents of the material employed are not used to the best advantage."

This invention consists in "preparing from the materials used an aseptic medium in which the selected micro-organisms can develop and react." In the "first phase, the primary materials usually employed are soja (glycine hispida) and a cereal, such as wheat, barley, rice, maize, *etc.* or other leguminous matter. For example a product of the shoyu type made be produced" from equal parts soja and rice. Address: 24, Southampton Buildings, London, W.C., Chartered Patent Agent.

1860. Ueno, Senichi. 1910. Nihon shôyu jôkyô torishirabe no ken [The Japanese shoyu market in Honolulu, Hawaii]. Honolulu, Hawaii. 3 p. Sept. 3. Handwritten unpublished manuscript. [Jap; eng]
• ***Summary:*** This is a market report from Mr. Ueno at the Japanese consulate in Honolulu, to Mr. Yoshitaro Komura at the Japanese Ministry of Foreign Affairs.

Shoyu imports to Honolulu were 83,894 kegs (*taru*) in 1909 (about 1.359 million liters), with 90,000 expected in 1910. The 1910 Japanese population was 65,790. Note: The average keg (*taru*) held 9 shô = 16.2 liters = 4.28 gallons (U.S.). One shô is 1.8 liters.

Note: This is the earliest document seen (Aug. 2002) that is a market study concerning soy products (shoyu). One of three documents. Address: Japanese Consulate, Honolulu, Hawaii.

1861. Yada, Naganosuke. 1910. Shôyu jôkyô torishirabe no ken [The Japanese shoyu market in Vancouver, British Columbia, Canada]. Vancouver, BC, Canada. 5 p. Sept. 13. Handwritten unpublished manuscript. [Jap; eng]
• ***Summary:*** This is a market report from Mr. Yada at the Japanese consulate in Vancouver, to Mr. Yoshitaro Komura at the Japanese Ministry of Foreign Affairs.

In 1909 1,390 koku (250,200 liters) of shoyu were imported to Vancouver, where about 8,000 Japanese lived. Address: Japanese Consulate, Vancouver, BC, Canada.

1862. Société Française des Distilleries de l'Indo-Chine. 1910. Nouveau procédé de traitement des légumineuses et particuliérement du Soja (Glycine hispida) pour la fabrication des sauces, condiments ou produits alimentaires [New process for the treatment of legumes and particularly of Soya (Glycine hispida) for the making of sauces, condiments or food products]. *French Patent* 415,026. Sept. 16. 3 p. Application filed 1 July 1909. [Fre]
• ***Summary:*** Soya or other leguminous seeds, with or without addition of cereals, are suitably cooked, and after being cooled aseptically are seeded with pure cultures of the organisms necessary to produce the desired results. They are then aged. The process is very delicate and the aging sometimes very long (as in the preparation of *shoyu*, which can last from 8 months to five years). Other products include *tao-yu, miso tao-tjing, and tuong*. The sauces or condiments produced are sterilized or pasteurized in trade packages. Address: Boulevard Gia-Long 53, Hanoï [Hanoi] Tonkin [French Indochina].

1863. Choles, H.J. 1910. Soy beans: Their cultivation and uses. A new Natal industry. *Natal Agricultural Journal* 15(3):281-307. Sept. [4 ref]
• ***Summary:*** Contents: Introduction. I. Botany and habitat:

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Introduction, varieties. II. Cultivation: Conditions of growth, methods of culture, soy bean mixtures. III. Harvesting: When to harvest, curing, frame for curing soy bean hay, harvesting for seed, yield of seed, yield of forage. IV. Chemistry of the soy bean: Introduction, digestibility, soy bean oil, soy bean bake. V. Value and uses of the soy bean: Introduction, the uses of the soy bean (uses of the oil {7 uses}, uses of the bean as a vegetable in Natal {like marrowfat peas or haricot beans}, in bread or biscuits in Paris [France] for diabetics, in France and Switzerland as a coffee substitute or adulterant, soy bean flour used for making bread and biscuits in England, soya meal for cattle feeding, oil-free residue made into cake for stock-breeding purposes, liquid closely resembling cow's milk made in Japan, vegetable cheese [tofu] made from the milk, a sauce called "Shoyu" made in Japan, soy-bean cake used as a fertilizer in Japan and China), as a soiling crop, as a silage crop, as a hay crop, as a pasture plant, as a soil renewer. VI. Value of the bean for feed: Introduction, soy beans for hogs, soy beans for dairy cows, other experiments with milch cows.

Illustrations (non-original line drawings) show: The soy bean plant with pods and roots (p. 280; from an original in Piper 1909). Flowering branch with close-ups on flower, leaves and pods (p. 285; from an original in Lamson-Scribner 1899). Frame for curing soy bean hay (p. 291; reproduced from Messrs. Lever Bros. pamphlet on Soy Bean Cultivation). Roots of soy bean plant with nodules (p. 301).

Note: This is the earliest document seen (May 2005) concerning Lever Brothers in connection with soybeans.

1864. Higeta Shoyu Jozosho (The "Higeta" brand soy brewery.) Main office: Choshi, Chiba Prefecture (Document part). 1910. In: Japan's Industries: And Who's Who in Japan. 1910. Osaka, Japan: Industrial Japan. vi, iii, 687 p., iv p. See p. 152-53. Undated. Translated from unpublished Japanese manuscripts. 29 cm. [Eng]

• ***Summary:*** History: The 'Higeta' is one of the brands of soy made in Choshi. The concentrated kind of soy from which it is derived was first brewed in the second year of Genna (1616) by a brewer named Gemba Tanaka. After the quality had been greatly improved, a new variety of the brand was made in the second year of Bunsei (1819), known as 'Horai.' When the metropolis was moved from Kyoto to Tokyo in 1868, the firm was honoured by being appointed supplier of soy to the Imperial Household. Since then the business has greatly increased. In 1898 the firm, in conjunction with the Iwasaki and Hamaguchi concerns, started an experimental laboratory, under superintendence of Dr. Ryojun Tawara, and a staff of experts, in which a study was made of soy fermentation. As a result of the investigations, much improvement was effected in the quality of soy generally. In that year, 1898, the Imperial Household ordered a special supply of the 'Higeta' brand, and this fact, coupled with the improved methods of salt refining, greatly extended its sale. When the grand military manoeuvres were held in the vicinity of Kumamoto in 1902, attended by His Majesty the Emperor, an order was placed with the firm to supply the army with bottled soy; to commemorate this honour the brewer has sold bottled soy ever since.

"During the Russo-Japanese war, 'Higeta' soy was used by the Army Department for seasoning canned foods sent to the front. In 1905 a new kind of soy bottle, with a screw stopper, was made for the troops. Soy was afterwards sold to the public in this form. Since then the firm has gone on flourishing, nothing being left undone to maintain the quality of the brand, and improve it if possible.

"The firm possesses two breweries, fitted up with steam engines, and employing altogether 320 workmen. The 'Higeta' brand soy is used all over the country, especially at Tokyo and Yokohama. It goes also to the United States, Canada, Siberia, China, Korea, Hawaii, the Philippine Islands and the Straits Settlements [later Singapore], being much appreciated in all these markets.

"In addition to being suppliers to the Imperial Household, the brewer has been honoured in other ways. At the Milan Exhibition of 1906, the 'Higeta' brand, which was selected by the Japanese Department of Agriculture and Commerce as a typical soy, was awarded the highest order of the Grand Prix; besides this, the soy was presented to Their Italian Majesties by the Japanese Commissioner for the Exhibition, and they are reported to have expressed to him their high appreciation of its flavour. The following are the principal honours conferred upon the firm by various exhibitions:

"A First Prize at each of the five National Exhibitions.

"The Grand Prize at the Chicago [Illinois] Exhibition, 1890.

"A Gold Medal at the Asian Exhibition (Hanoi, French Indo-China), 1903.

"The highest Grand Prize at the St. Louis [Missouri] Exposition, 1904.

"The Grand Prize of Honour at the Seattle Exposition, 1909.

"Mr. Gemba Tanaka, the proprietor, who was born in 1871, studied political economy at Keio University. On succeeding to the business of his ancestors, he entered into his work with enthusiasm, and by his strenuous exertions did much to extend the sale of the 'Higeta' brand. Owing to the esteem in which he is held in the district, Mr. Tanaka has been elected to represent the highest taxpayers of his prefecture in the House of Peers."

A large photo shows "the interior of a Choshi soy brewery."

Note: This is the earliest document seen (April 2001) concerning Higeta Shoyu. Address: Japan.

1865. Japan's industries: And who's who in Japan. 1910. Osaka, Japan: Industrial Japan. vi, iii, 687 p., iv p. 4 p. of

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plates. Undated. Translated from unpublished Japanese manuscripts. Colophon title in Japanese: Sangyô no Nihon. 29 cm. [Eng]

• ***Summary:*** On the title page, below the subtitle, is written: "An Exponent Encyclopedia of the Present Industries of Japan has never been yet Published." Black-and-white photos (unnumbered front pages) show each of the major contributors. A photo shows "Dr. Teizo Takahashi (*Kogakuhakushi*), Professor of the Tokyo Imperial University." He contributed an article titled "The Outline of the Brewing Industry." Photos throughout the book show many companies and their owners. The book was apparently never published in Japanese.

This book was published under the support of Count Okuma, whose photo is shown, and who wrote the excellent first part (p. 1-22) titled "The Industries of Japan." Its contents is: 1. The industrial condition of Japan before the restoration: The great landmark in history (in 1858 Japan was forced to end nearly 300 years of seclusion), industries under the Tokugawa shogunate, industries in the Genroku era (1688-1704). 2. Japanese industries after the opening of the country: The industrial revolution, demand for things European, table of exports and imports (1868-1908; p. 5-6), general dissemination of education, progress of natural resources. 3. Industries before and after the Sino-Japanese War (1894-1895): The growth of foreign commerce, the improvement of the currency system and foreign commerce, entry into the comity of financial nations, manufacturing industries on a large scale (there was a major National Industrial Exhibition as early as 1877). 4. The state of Japanese industries before and after the Russo-Japanese War (1904-1905): The blow dealt by the war, abnormal trade and consequent reaction, the increase of population in Japan and Formosa, progress in the means of transport and communication (especially railways), the money market and industry, free trade and protection, protection in the United States, Japan need not imitate the USA, Great Britain's free trade policy. 5. The future of Japanese industries: Bright future for Japanese industries, silk yarn and silk production, cotton yarn and cotton manufacture, forestry, minerals, the trade in marine products, capital.

The book is composed of lengthy chapters on Japan's major industries, each preceded by a general overview and outline, and containing a detailed description of the largest 10-20 firms. These industries are cotton and silk spinning, Portland cement, sugar, brewing sake and soy [sauce], woollen textiles, hemp, electricity, engineering, mining, transportation, silk textiles, shipbuilding, ceramics, an appendix (p. 485-572) with representative firms from other industries (incl. Mitsui & Co. [p. 493-95], Osaka Gas Co. [p. 520]), and a Who's Who in Japan (p. 573-687; brief biographical sketches with photos of "over 700 names of representative captains of our business world," incl. Keizaburo Mogi [p. 632, soy brewer], Teizo Takahashi [p. 664, microbiologist]).

The chapter titled "The Brewing Industry" starts with a general outline by Dr. Teizo Takahashi on the brewing of sake, "shoyu or soya," beer, shochu, awamori, and mirin (p. 121-27). Representative soy breweries are discussed in detail, with photos, a brief company history, present conditions, awards of merit (in Japan and overseas), and a biographical sketch of the owner, proprietor, and or managing staff.

Part I: The soy industry of Choshi, Chiba prefecture (A photo shows the interior of a Choshi Soy Brewery). The four principal Choshi Soy Brewers are: (1) Higeta Shoyu Jozosho [Brewery] (The concentrated forerunner of this brand was first brewed in 1616. Proprietor: Mr. Gemba Tanaka. A photo shows interior of a Choshi Soy Brewery); (2) Jigamisa Shoyu Jozosho (brand first brewed ca. 1645. Proprietor: Mr. Kichibei Hamaguchi. A photo shows the Jigamisa brand soy brewery with hundreds of shoyu kegs); (3) Yamaju Shoyu Jozosho (brand first brewed ca. 1630. Proprietor: Mr. Jujiro Iwasaki. A photo shows a motor for brewing); (4) Yamasa Shoyu Jozosho (see separate record).

Part II: The soy industry of Noda, Chiba prefecture (p. 158): Joju Shoyu Jozosho (brand first brewed before 1710. Proprietor: Mr. Hyoyemon Takanashi. A photo shows the interior of the Joju brand soy brewery with several kegs of shoyu). Kihaku Shoyu Jozosho (brand first brewed in about 1750. Proprietor: Mr. Hichiroyemon [Shichirouemon] Mogi. A photo shows the Kihaku brand soy brewery and its proprietor). Kikkoman Shoyu Jozosho (see separate record). Kushigata Shoyu Jozosho (See separate record. It was 290 years ago [i.e. in 1620] the founder of the firm, the ancestor of the present proprietor, settled in Noda as a shoyu brewer. Proprietor: Hichizaemon [Shichizaemon] Mogi). Minakami Shoyu Jozosho (Brand first brewed in about 1710. Proprietor: Mr. Fusagoro Mogi. A photo shows machinery for pumping soy [sauce]).

The book begins (p. 1): "The year 1858 forms one of the greatest landmarks in Japanese history, for it was then that, after nearly three hundred years of seclusion, the country was definitely thrown open to foreign trade and intercourse. In that year, also, the Tokugawa Shogunate, (1591-1858) signed the first treaty of commerce and amity with the United States, Great Britain, France and Holland. By this treaty Old Japan ceased to be and the New Japan entered upon her career among the comity of nations."

Page 3 continues: "In 1868 [the first year of Meiji] the feudalism that had lasted for centuries, was abolished at a single stroke, and the reins of government restored to the Imperial Throne. Despotism was done away with, and an Imperial Edict announced that the prefectural system of administrature [administration] then inaugurated was to be the foretaste of constitutional government on Western lines twenty years later. Not only was this a political revolution, but a social and industrial revolution. One remarkable feature

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of this revolution, so complex in its effects, was that the new order of things inaugurated by it became at once stable and permanent, while the nation was infused with a new life and vitality. In this respect, there has never been a revolution in any country to compare with it. It is hardly necessary to say that the industrial side of a revolution is as important and as interesting as its political side, if not more so." Also in 1868 Yedo [Edo], the administrative headquarters of the Tokugawa Government, was renamed Tokyo.

A table of imports and exports (p. 5-6) shows that exports rose from 15.5 million yen in 1868 to 432.4 million yen in 1907, while imaports rose from 10.6 million yen in 1868 to 494.5 million yen in 1907. In a majority of these years, imports exceeded exports.

The improvement of the currency system and foreign commerce (p. 8-10). During the last 10 years of the Tokugawa Shogunate, about 60 varieties of coins were in circulation. In 1871 (Meiji 4) the new Meiji government adopted a gold standard. As foreign Powers were using the Mexican silver dollar as the basis of their exchange in the Far East, the Japanese Government issued silver coin of similar quality and weight (known as silver *yen*) for circulation in Treaty Ports. In 1877, to pay for the Satsuma Rebellion, the government was forced to issue inconvertible paper money. This led to chaos and undermined the gold standard. In 1873 Germany adopted the gold standard; this led to a depreciation of silver. Though Japan remained among the silver standard countries of East Asia, she found it necessary to issue silver trade dollars. In March 1897 the Diet passed an Act that again established a gold standard in Japan. This had a most salutary effect on Japanese finance. "On looking back on the history of foreign commerce in Japan from the time the country was opened in the mid-1800s, we find that it attained its full growth on adoption of the gold standard."

Note: How do we know when this undated document was published? The latest year published in the document is 1909 (see p. 12). But the National Union Catalog record gives the year as 1910. Address: Japan.

1866. Kikkoman Shoyu Jozosho (The "Kikkoman" brand soy brewery.) Main office: Noda, Chiba Prefecture (Document part). 1910. In: Japan's Industries: And Who's Who in Japan. 1910. Osaka, Japan: Industrial Japan. vi, iii, 687 p., iv p. See p. 163-65. Undated. Translated from unpublished Japanese manuscripts. 29 cm. [Eng]

• ***Summary:*** "History: The origin of the brewing of the 'Kikkôman' brand of soy, reputed to be the leader among the best varieties, dates back about 120 years [i.e. to about 1790]. Ever since the honoured founder of the firm inaugurated the brewing of soy, the succeeding proprietors have all been men of great ability, who have succeeded in extending the business generation by generation, as well as improving the quality of the product. In the year 1838, when Mr. Saheiji Mogi, fifth of the line, was the head of the firm, it was appointed by special warrant purveyor to the Household of the Tokugawa Shoguns, having been ordered to supply the Household and the Heir-Apparent every year with a large quantity of soy, a custom which was continued until the overthrow of the Shogunate in 1868. Very few firms or individuals were honoured by being appointed special contractors to the Court of the Shogun, and this fact must be considered as a very high tribute to the excellence of the firm's products, the quantity to be supplied being subsequently doubled.

"The chief point worthy of special mention in regard to the 'Kikkoman' firm is the fact of its having been chiefly instrumental in making Japanese soy known and appreciated in foreign countries, more than half the total amount of soy exported to foreign countries at present being the 'Kikkoman' brand. Mr. Saheiji Mogi, the grandfather of the present proprietor, was a remarkable able business-man. He was most assiduous and energetic in endeavouring to effect improvements in the process of brewing as well the extension of the business. On the occasion of the International Exhibition held in Vienna, Austria, in 1873, when the Japanese Government participated for the first time in such an undertakings, the 'Kikkoman' soy was among the exhibits. Being deemed by the judges far superior both in regard to taste and colour to the sauce usually used as a condiment, the 'Kikkoman' soy was awarded the gold of honour.

"Afterwards, when the name of 'Kikkoman' soy gradually came to be known in Europe and its exportation increased, many spurious articles appeared on the market, bearing the same brand. This proved very detrimental to the reputation of the genuine 'Kikkoman' soy, so that, the firm, in order to protect itself against fraudulent imitations, ordered a very elaborate design for a trade-mark to be made for them in Paris, which they had registered, this being, in fact, the very first instance of a trade-mark being registered for soy and most probably in advance of any other commodity. In January, 1905, the above trade-mark was registered at the United States Patent Office. In June 1909 the United States Government issued a certificate regarding 'Kikkoman' soy, to the effect that it is of very superior quality, containing no admixture of saccharine or any other chemicals and being very suitable as a condiment.

"The services which this firm have rendered in the cause of the soy industry, principally for its exportation to foreign countries, are very remarkable. Whenever there was an exhibition abroad, tiny sample bottles of the soy were distributed, and no opportunity was lost and no difficulty seemed too great to be overcome by the firm in order to popularise Japanese soy in foreign countries.

"On the occasion of the Japan-British Exhibition held in London in 1910, 'Kikkoman' soy as well as the other best varieties of Japanese soy, is being exhibited. Thus, the English public will be given full opportunity to test this best

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quality of Japanese food condiment.

"Present conditions: The 'Kikkoman' firm owns at present six soy breweries, with the total number of 4,200 hands and eight sets of boilers and steam engines. The yearly output is about 11,800,000 gallons, of which 2,880,000 gallons are exported to foreign countries, the principal destinations being Honolulu [Hawaii], Portland [Oregon], San Francisco [California], Seattle [Washington], Los Angeles [California], Tacoma [Washington], Denver [Colorado], Chicago [Illinois], London [England], Paris [France], Berlin [Germany], Vienna [Austria-Hungary], and China ports.

"Honours awarded: The 'Kikkoman' firm has had conferred upon it the honour of being special contractors to the Imperial Household Department, a special brewery being devoted exclusively for the brewing of soy supplied to the Imperial table. An entirely new plant, with the capacity of turning out 20,000 gallons per annum has been newly installed, which is under the strict surveillance of experts specially appointed for the purpose. The utmost cleanliness is carefully observed and the brewing is carried out on up-to-date and hygienic principles.

"The most principal medals and prizes awarded to the firm at the various exhibitions are as follows: International Exhibition at Vienna, 1873. Gold Medal. National Industrial Exhibitions (First to the Fifth inclusive). First Prize. International Exhibition at Amsterdam (Netherlands), 1883. Gold Medal. St. Louis [Missouri] International Exposition, 1904. Grand Prix of Highest Honour. Seattle International Exposition, 1909. Grand Prix of Honour.

"Proprietor: Mr. Saheiji Mogi, the father of the present proprietor and eighth of the line, was a man of very progressive ideas. He studied at Cambridge University, and after a stay in England extending for several years, returned to Japan and devoted himself to the extension of the business of the firm, when he was unfortunately attacked by a sudden illness to which he succumbed. His son succeeded to the head of the business and being ably and faithfully is assisted by the guardian, Mr. Keizaburo Mogi, and the Manager, Mr. Kyujiro Uchida, the business has progressed and is at present in a very prosperous condition.

A photo (p. 164) shows the Kikkoman brand soy brewery next to a river. Smoke is rising from a tall smokestack and boats are docked along the river.

Note: This is the earliest document seen (April 2012) that contains industry or market statistics for soy sauce production by a particular manufacturer. Address: Japan.

1867. Kushigata Shoyu Jozosho (The "Kushigata" brand soy brewery.) Main office: Noda, Chiba Prefecture (Document part). 1910. In: Japan's Industries: And Who's Who in Japan. 1910. Osaka, Japan: Industrial Japan. vi, iii, 687 p., iv p. See p. 165-67. Undated. Translated from unpublished Japanese manuscripts. 29 cm. [Eng]

• ***Summary:*** "History: As will be seen by the accompanying articles, most of the soy brewers of Noda are distinguished by the surname of Mogi, and the family of Mr. Hichizayemon [Shichizaemon, Hichizaemon] Mogi, proprietor of the firm of 'Kushigata' brand soy is, in fact, the head and originator of all these distinguished so brewing firms of the same name. One of the ancestors of the Mogi family was a distinguished Samurai in the service of the celebrated warrior and statesman–Toyotomi Hideyoshi–and his daring and deeds of valour are matters of history. With the overthrow of the Toyotomi family he laid aside his sword and entered the field of business. It was 290 years ago that the founder of the firm, the ancestor of Mr. Hichizayemon Mogi settled in Noda as a soy brewer. His distinguished personality and lineage gained for him the deep respect of the inhabitants and he was appointed the headman of the place, thus being called upon to engage in public business as well as his own. At this period, soy was brought over from Osaka to Tokyo, the capital of the Tokugawa Shoguns. The quality of this sauce, however, was very inferior and in view of this Mr. Mogi instructed a member of this branch of the family–Mr. Saheiji Mogi–to brew the 'Kikkôman' soy as an experiment. The results having proved very satisfactory, that brand was brewed on a large scale, and Mr. Mogi subsequently inaugurated the brewing of the 'Kihaku' brand, the two firms being allowed to engage in the brewing of so-called Noda Soy on an extensive scale. These two brands of soy having proved very well suited to the tastes of the citizens of Yedo, the demand increased to such an extent that the output was hardly sufficient to meet the demand. Such being the case, Mr. Hichizayemon Mogi himself engaged in the brewing of soy also. The ripe experience gained by supervising the work of the branch firms in brewing superior varieties of soy proved very valuable to him, and his business also proved a very great success, the name of the new brand of soy 'Ichiyama' becoming quite celebrated within a comparatively short period of time. However, another new branch of the Mogi family's firm being inaugurated under the proprietor-ship of Mr. Yuyemon Mogi, the brand 'Ichiyama' was transferred to the new firm so as to ensure its prosperity and the brand 'Kushigata,' at present in use, was then adopted. Such proceeding may appear somewhat strange, but it was in compliance with the legacy left by the ancestors of the Mogi family that the various branches should unite for the general sharing of profits in their business undertakings. At the time when the fame of the 'Kushigata' brand was at its height, in 1871, the whole premises of firm were unfortunately destroyed by fire. This proved a great blow to the fortunes of the firm but the present proprietor, by dint of sheer energy and perseverance, succeeded in retrieving the lost fortunes of the firm, the yearly output at present far exceeding the former production. Although the yearly output of the main house of Mogi ('Kushigata' brand soy) is below that of the branches, namely the 'Kihaku' and other brands,

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it has been entirely owing to the good will of the former that the latter firms have been enabled to attain their present prosperous state, the outcome of the traditional legacy of the Mogi family having been carried out by the head of the house

"Present conditions: The firm has at present two factories, the number of hands employed being 600. The factories are provided with two sets of boilers and steam engines for motive power. The firm produced about 5,270,000 gallons of soy per year, of which about 336,000 gallons are exported to foreign countries, the places of destination being Hawaii, Australia, China, Korea, Canada, British Columbia, the United States, the Philippine Islands, and the Straits Settlements [today's Singapore]. The export trade shows a tendency to increase year by year.

"Honours Awarded: The following are some of the principal prizes and medals awarded to the 'Kushigata' brand soy at the various exhibitions where the firm's products have been shown:–The National Industrial Exhibition from the First to the Fifth. First Prize on each occasion. International [Columbian] Exposition held in Chicago [Illinois], 1893. Gold Medal. International Exhibition held in Paris, 1899. Gold Medal. St. Louis International Exposition [Missouri], 1904. Grand Prix. Alaska-Yukon International Exposition at Seattle, 1908. Grand Prix.

"Proprietor: The present proprietor of the famous firm of the 'Kushigata' brand is Mr. Hichizayemon Mogi, who is the eleventh of the line. Although he is yet young, he places business before pleasure, strictly adhering to the precepts of his ancestors and is devoting his entire energy to the development of his business and the improvement of the particular brand for which the firm is responsible. Having selected a most favourable locality he is, at present, constructing a new factory with the producing capacity of 2,000,000 gallons per year, which promises to be the best equipped factory of its kind in Japan. The machinery employed is to be of the latest pattern, and it is intended that electricity be used as the motive power."

A photo (p. 166) shows "The pumping machinery of soy." Around the pump are many brick walls. Address: Japan.

1868. Nagai, Shôzô. Japanese Consulate. 1910. Shôyu ni kansuru hôkoku teishutsu no ken [The Japanese shoyu market in San Francisco, California]. San Francisco, California. 7 p. Sept. Handwritten unpublished manuscript. [Jap; eng]

• ***Summary:*** This is a market report from Mr. Nagai at the Japanese consulate in San Francisco, to Mr. Yoshitaro Komura at the Japanese Ministry of Foreign Affairs.

About 50,000 Japanese live in San Francisco. About 6,000 large and small kegs (*taru*) of shoyu a month are imported, equaling about 97,200 liters. Address: Japanese Consulate, San Francisco, California.

1869. Takahashi, Teizô. 1910. The brewing industry: Chapter II. Shoyu or soya brewing (Document part). In: Japan's Industries: And Who's Who in Japan. 1910. Osaka, Japan: Industrial Japan. vi, iii, 687 p., iv p. See p. 125. Undated. Translated from unpublished Japanese manuscripts. 29 cm. [Eng]

• ***Summary:*** "Development of the industry: *Shoyu*, also called *soya* and more generally known in English as 'soy,' is a food adjunct or condiment especially used in Japan. Its origin is not known, but it is highly probable that the brewing of *shoyu*, like *sakê*, is of Chinese origin. The first description about *shoyu* appears at the beginning of the 16th century during the reign of the Emperor Go-Kashiwabara, and the demand for it appears to have somewhat increased at the end of the century, but the method of its preparation was artless and the product must have been a crude one. Certain improvements in brewing were made at the end of the 17th century, but *shoyu* of the kind at present in use was first prepared at the beginning of the 18th century.

"In 1751 a *shoyu* factory was established in the town of Noda in the Prefecture of Chiba. Other similar factories were opened there and they increased in number annually, and that city now stands in the first rank for this particular commodity. The annual production for the 5 years from 1904 to 1908 may be seen from the following table." Production grew from 74,367,040 gallons in 1904 to 84,952,440 gallons in 1908.

"In olden times *shoyu* brewing was somewhat different from the present method. The steamed *soya* beans were covered with layers of rice straw for 5 or 6 days until the surface of the beans appeared yellow by the growth of the fungus. After that the beans were dried in the sun and steamed again; then, after mixing with moderate quantities of common salt, ginger and orange peel, allowed to ferment in sealed tubs for 1 to 2 months. An improvement was made, probably by the introduction of Chinese methods of preparation, at the end of the 17th century; but the products of those days were very inferior compared with the *shoyu* as a present in use.

"*Shoyu* or Soy sauce is prepared from wheat (sometimes also from barley), the *soya* bean, and a salt solution by a slow fermentation, which requires from one to two years and sometimes longer.

"The process of brewing is divided into four stages: (1) Preparation of the wheat and *soya* bean; (2) Preparation of the soy *koji;* (3) The fermentation, of *moromi* process; and (4) Pressing and boiling." Address: PhD, Prof. at Tokyo Imperial Univ., Japan.

1870. Takahashi, Teizô. 1910. The brewing Industry: Chapter III. Soy breweries. (1) The soy industry of Choshi (Document part). In: Japan's Industries: And Who's Who in Japan. 1910. Osaka, Japan: Industrial Japan. vi, iii, 687 p.,

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iv p. See p. 150-51. Undated. Translated from unpublished Japanese manuscripts. 29 cm. [Eng]

• ***Summary:*** "Outline: Soy is brewed in almost all parts of Japan, but the chief centres for its production are Chôshi and Noda in the Prefecture of Chiba; Sakai and Amagasaki, seaport towns in the vicinity of Osaka; and Tatsuno, Yuasa, and Shôdoshima in the prefectures of Hyogo, Wakayama, and Kagawa respectively. The soy of Chiba Prefecture is generally recognised as the best, and by far the largest quantity is made there. The soy brewers have derived great advantage from the river Tone which flows through the district; indeed the towns of Chôshi and Noda on its banks have flourished from early times in consequence, and have become famous throughout Japan as centres for the brewing of soy.

"Chôshi is right at the mouth of the river, on the Pacific Ocean, and is a few hours' railway journey from Tokyo, which is 73 miles distant. Only a small proportion of the soy, however, is carried by rail, the greater part of it being sent by sea, as the marine service is a good and safe one. Tokyo is the distributing centre for the sauce, both for home consumption and the foreign market. A good telegraph and telephone service facilitates the dispatch of business.

"Soy has been brewed in Chôshi for the past three hundred years. The first to brew the thick concentrated variety of soy was a man named Gemba Tanaka, an ancestor of the present Mr. Gemba Tanaka, who makes the 'Higeta' brand. From that time onward different varieties of soy came to be brewed, such as the 'Yamaju,' 'Yamasa,' and other such brands. In the year 1825, when there was much distress throughout the country owing to a famine, and the Tokugawa Shogunate issued an edict to regulate the prices, and thus allay the suffering as far as possible, four brands of soy made in Chôshi, and three in Noda, were specially exempt from the operation of this law on account of their excellent quality, and were moreover granted the rare privilege of being called the 'Best Soy.' Henceforth Chôshi's four first-class brands became famous throughout Japan, and the industry has grown more and more prosperous.

"The Chôshi brewers are very careful in the selection of their ingredients. The beans and wheat used are the best that Hidachi Province can supply; salt is brought all the way from Hyogo Prefecture, the centre of Japan's salt industry; all the water used is very carefully filtered through layers of sand, and in fact everything possible is done to ensure purity and good quality. Whenever possible, the soy factories are situated in shady, secluded spots, as the sunlight prevents proper fermentation. The machinery and apparatus used is constantly improved.

"It may be mentioned that the relations which subsist between masters and workmen are of a very cordial nature. For the most part, the labour is hereditary, the sons carrying on the vocation of their fathers. The workmen put heart and soul into their labour, rivalling each other in diligence and perseverance, and the employers, on their part, treat their servants with much liberality, and neglect no means to protect and guide them. A complete system of life insurance and old age pensions enables the men to carry on their work without anxiety as to their future. Their children, too, are not left uncared for, and special schools have been erected for their benefit. Indeed, it is to the complete harmony which exists between capital and labour that the great prosperity of Chôshi's soy industry is attributed.

"As already stated, it was the excellent quality of Chôshi soy which won for it such a wide reputation, even at a time when facilities for its transportation were not very good. The climate and the pure water in the vicinity have proved of tremendous advantage in the industry, while the improved means of communication and transport have also done much for its development in later years. And above all, the brewers have paid great attention to their apparatus and methods, so that not only is the industry in a flourishing state, but the prospects for its future development are of the brightest."

"The following articles give some account of the four principal Chôshi Soy Brewers." 1. Higeta Shoyu Jozosho. 2. Jigamisa Shoyu Jozosho. 3. Yamaju Shoyu Jozosho. 4. Yamasa Shoyu Jozosho.

A photo shows "the interior of a Choshi soy brewery." Address: PhD, Prof. at Tokyo Imperial Univ., Japan.

1871. Takahashi, Teizô. 1910. The brewing industry: Chapter III. Soy breweries. (2) The soy industry of Noda (Document part). In: Japan's Industries: And Who's Who in Japan. 1910. Osaka, Japan: Industrial Japan. vi, iii, 687 p., iv p. See p. 158-60. Undated. Translated from unpublished Japanese manuscripts. 29 cm. [Eng]

• ***Summary:*** "History: Noda is a small town of some 12,000 houses situated about 20 miles north-east of Tokyo, and is 8 or 9 miles from the nearest railway station, but the River Yedo, one of the tributaries of the River Tone, affords excellent means of direct communication with the Capital, and light railways traverse the town, these being used for the conveyance of the soy casks from the various factories to the wharves on the river bank, whence they are shipped to Tokyo. Noda is also well provided with an excellent telegraph and telephone service which facilitates business with various parts of the country.

"The major portion of the population is engaged in the industry of soy brewing, for which the place has been famous for very many years. It was back 350 years ago [i.e. 1560] that the first soy factory was established at Noda, the proprietor being a man named Ichirobei Iida. The success of his business proved the suitability of the place for the brewing of *shoyu* or soy, and subsequently Hyoyemon Takanashi, brewer of the 'Jôjû' brand soy, entered into partnership with the idea of doing business on a larger scale than had hitherto been attempted. That partnership was eventually dissolved, each partner starting business on his

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own account, and subsequently many other firms of soy brewers were established, such as Saheiji Mogi ('Kikkoman' brand soy), Fusagoro Mogi ('Minakami' brand soy), Heibei Yamashita ('Kinoyene' brand soy), and Okuyemon Mogi ('Ichiyama' brand soy), and great prosperity has attended the industry as a whole. In 1825 when, as a result of a famine, the price of commodities rose very high and great distress prevailed amongst the masses, the Government of the Tokugawa Shogunate issued an edict ordering that as a means of alleviating the distress lower prices should be charged for commodities. It is noteworthy that the 'Kikkoman', 'Jôjû' and 'Kihaku' brands of soy (together with the four best brands of soy made in Choshi) were granted the special privilege of being permitted to retain their former prices, on account of their superior quality. Moreover, they were allowed to use the distinguishing mark 'Best Soy' which was the highest testimonial to their general excellence.

"Mr. Keizaburo Mogi, a leading authority on matters relating to the soy industry, began experiments in 1879 at Noda with the object of applying scientific and mechanical methods to the fermentation of the sauce. In 1882 his experiments had progressed to such an extent that steam was successfully applied to the brewing of soy, while at the present time further advance is in contemplation by the utilisation of electricity, the necessary plans for this having already been completed. Mr. Mogi also made a close study of the question of the improvement of the *kôji* (yeast), the most important ingredient of soy, and in 1899 he completed a perfect method for its preparation. For this discovery he obtained a patent from the Government, but in order that the industry as a whole might benefit from his investigations, he made the process public and available to all the brewers. He has also made important investigations in regard to a more rapid process of brewing and has thus rendered very valuable services to the soy industry in general, and to that of the Noda district in particular.

"There are many reasons for the unrivalled position which Noda Soy holds, but the chief cause of its success lies in the extreme care bestowed upon the selection of the necessary ingredients in order that only the very best may be used. The wheat, beans, and salt required for the brewing of soy are not produced in the neighborhood of Noda, but are purchased from distant localities specially noted for those products. Salt, for instance, is brought from Nagasaki, about ten hundred miles distant, and this alone is sufficient proof of the care best owed by the Noda soy brewers upon their product. As in other brewing operations, one of the main factors is the water supply, and Noda is exceptionally well provided in this respect, having been noted from ancient times for the abundance and purity of its water supply, which has its source in a natural well 3,000 feet deep."

"There are over 5,000 labourers employed in the various soy breweries and the fact that there has never been a strike or unpleasantness to any extent is very good evidence that the work-people are satisfied with their lot and that employers are treating them fairly and with proper consideration."

Photos show: (1) The soy brewing laboratory, Noda. (2) Mr. Keizaburo Mogi (oval portrait; he is wearing two medals), "a leading soy brewer." Address: PhD, Prof. at Tokyo Imperial Univ., Japan.

1872. Yamasa Shoyu Jozosho (The "Yamasa" brand soy brewery.) Main office: Choshi, Chiba Prefecture (Document part). 1910. In: Japan's Industries: And Who's Who in Japan. 1910. Osaka, Japan: Industrial Japan. vi, iii, 687 p., iv p. See p. 156-58. Undated. Translated from unpublished Japanese manuscripts. 29 cm. [Eng]

• ***Summary:*** "History: The Hamaguchi Soy Company, which was formed in 1906, with a capital of ¥500,000, is the continuation of a very old firm founded 265 years ago [i.e., in about 1641] by the brothers Kichiyemon and Gihei Hamaguchi, ancestors of the present Mr. Kichiyemon Hamaguchi, the proprietor of the firm. These two brothers, natives of what is now Wakayama Prefecture, settled down in Chôshi, and opened a soy brewery, which has gone on progressing from that day to this. In 1825, the Yamasa brand was one of those accorded the privilege of being called 'The Best Soy' by the Tokugawa Shogunate.

Note: This is the earliest document seen (Feb. 2012) which states that a brand of soy sauce named Yamasa existed as early as 1825. The name of the company that makes this brand is not clear. Nor does this article state when the present company, Yamasa Shoyu Jozosho, was founded. We believe this company was founded in 1928.

"Mr. Goryo Hamaguchi, the father of the present proprietor, after a visit to Europe and America, in 1833, introduced some radical changes in the brewing of soy in his brewery, by an application of the most scientific principles. Mr. Kichiyemon Hamaguchi, the present head of the firm, continued the same enterprising policy of his father, and the business began to extend very much in consequence. In 1894 the firm was appointed supplier of soy to the Imperial Household by special warrant. On being transformed into a partnership concern, the business of the firm increased considerably, while experts were engaged to conduct scientific investigations. Dr. Kendo Saito, the well-known scientist, was entrusted with the study of soy fermentation.

"At present the firm owns two breweries, installed with steam plants, and employing over 600 hands. The annual output is approximately 8,000,000 gallons. Tokyo, Yokohama, and other large business centres, consume great quantities of the 'Yamasa' brand, and much of it is exported to Great Britain, the United States, Germany, Australia, China, Korea, Hawaii, and Vladiovstock. The soy which goes abroad is contained in bottles of artistic appearance, well packed in boxes. The Hamaguchi Company was the pioneer in the export trade of soy, this being due to Mr.

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Goryo Hamaguchi's tour in 1883, when he made a special study of the foreign taste for the Japanese sauce.

"As above mentioned, 'Yamasa' brand soy is supplied to the Imperial Household by special warrant. A great honour was done the firm when His Highness Prince Kan-in, the President of the Fifth National Industrial Exhibition, paid a visit of inspection to the brewery. In 1907 their Imperial Highnesses, Princes Kitashirakawa and Higashikuni went over the brewery, and made some observations highly complimentary to the proprietor. In the same year a further honour was done the proprietor, when he was appointed supplier of 'Yamasa' soy to His Imperial Highness the Crown Prince of Korea.

"Space does not permit of a full list of the prizes won by the company at various exhibitions. 'Yamasa' brand soy was awarded a first prize at every one of the five National Exhibitions which have been held in Japan. Abroad, either a gold medal or the Grand Prix was awarded at each of the following Exhibitions: Chicago [Illinois / Columbian] International Exposition, 1893; Paris International Exhibition, 1899; The Asia Exhibition (Hanoi, French Indo-China), 1903; St. Louis [Missouri] International Exposition, 1904; Milan Exhibition [Italy], 1905; and Seattle Exhibition, 1909.

"Mr. Kichiyemon Hamaguchi, the President of the company, was born in Wakayama Prefecture in 1862, and was educated at Keio University. In 1900 he made a tour round the world, and since his return has done much to assist in extending the nation's commerce and industry. In order to enlarge his business he converted it into a company, and owing in great part to his energy and enterprising spirit, the company has proved a conspicuous success. Indeed, the whole soy industry has profited by his labours. A gentleman of excellent character and reputation, he has sat in both Houses of the Legislature. Mr. Hamaguchi has been ably assisted in his work by Mr. Kichibei Hamaguchi, a director, and Mr. Tetsujiro Midzushima, the superintendent of the works, as well as by an industrious and efficient staff."

Photos show: (1) Yamasa soy in casks and bottles. (2) Angled aerial view of "The 'Yamasa' Brand Soy Brewery;" smoke rises from two tall smokestacks. Address: Japan.

1873. Gilbert, A.W. 1910. Soy beans and fertilizer question. *Daily Consular and Trade Reports (U.S. Bureau of Manufactures, Department of Commerce and Labor)* 13(79):55. Oct. 5. [1 ref]

• ***Summary:*** The following is an extract from the *National Review*, of Shanghai, China: "It is well known that soy-bean cake has for years been the most popular fertilizer in Japan. Now, however, that the United Kingdom, and the Continent of Europe and America to a less extent, have become purchasers of Manchurian beans, the question arises whether Japan will to be able to buy bean cake in huge quantities if the price rises appreciably. In studying this question two factors should not be lost sight of: One is that Japan is herself a large grower of soy beans, having according to the latest available returns (1908) over 1,200,000 acres under cultivation, producing annually some 19,000,000 bushels of beans, while the other is that Japan imports very large quantities of soy beans from China and Korea. The greater part of these beans is used for the purpose of human food–i.e., in making of 'soy,' 'miso,' and bean curd–but a portion by no means small is used also as a fertilizer.

"The Russo-Japanese war had such an effect in curtailing the supplies of beans and cake that to arrive at a just appreciation of the position it is necessary to go back a good many years. In making such a review it will be noted that, both in the case of beans and of cake, the amounts imported in 1909 were record importations, but that the average price was the lowest since 1903. Should the price in the future be forced up very high in consequence of British and other demands, the presumption is that Japan would turn to sulphate of ammonia, if the cost per unit of nitrogen therein were less than the cost of bean cake. On the other hand, it must be remembered that the removal of the import duty on sulphate of ammonia in the United States of America means that the United States will probably absorb large quantities of the British output, and that Japan will have to pay a higher price if she wants a share of this fertilizer. Thus the outlook for nitrate of soda becomes a good deal brighter, and now that, owing to the subsidized Japanese line to (South) America, it is possible to get cheap freight rates, it looks as though (Chilean) nitrate of soda will be a serious competitor to the other nitrogenous fertilizers, except in the matter of wet rice cultivation.

"There is a point which, though obvious enough to those intimately connected with the trade, is sometimes overlooked in general discussions on the subject of bean cake, viz, that the British farmer can afford to pay a proportionately higher price for cake than the Japanese farmer, the reason being that in the United Kingdom the cake, after serving for provender, turns into a fertilizer, whereas in Japan it is employed as a fertilizer directly, without any intermediate use.

"As regards rock phosphate, most of the supplies have hitherto come from Ocean and other islands. Owing, however, to the new fertilizer law which prohibits any admixture in Japan of earth and sand with rock, it will probably be found that the phosphate from the above-mentioned islands, being pure and expensive, will be displaced by the cheaper varieties of rock from Tennessee and Algiers, which are naturally mixed with impurities." Address: Vice-Consul, Nanking.

1874. *Los Angeles Times*. 1910. Fertilizers for Japan. A scarcity of soy beans makes a market for Tennessee rock phosphate. Oct. 13. p. 113.

• ***Summary:*** "It is well known that soy-bean cake has for years been the most popular fertilizer in Japan. Now,

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however, that the United Kingdom, and the Continent of Europe and America to a less extent have become purchasers of Manchurian [soy] beans, the question arises whether Japan will continue to be able to buy bean cake in huge quantities if the price rises appreciably.

"In studying the question, two factors should not be lost sight of: One is that Japan is herself a large grower of soy beans, having according to the latest available returns (1908) over 1,200,000 acres under cultivation, producing annually some 19,000,000 bushels of beans, while the other is that Japan imports very large quantities of soy beans from China [Manchuria] and Korea. The greater part of these beans is used for the purpose of human food–i.e., in making of 'soy' [sauce], 'miso,' and bean curd [tofu]–but a portion by no means small is used also as a fertilizer.

"The Russo-Japanese war had such an effect in curtailing the supplies of beans and cake that to arrive at a just appreciation of the position it is necessary to go back a good many years." In 1909 Japan imported record amounts of beans and cake, but "the average price was the lowest since 1903. Should the price in the future be forced up very high in consequence of British and other demands, the presumption is that Japan would turn to sulphate of ammonia, if the cost per unit of nitrogen therein were less than the cost of bean cake."

The "British farmer can afford to pay a proportionally higher price for cake than the Japanese farmer," since in the UK the cake, "after serving for provender [feed], turns into a fertilizer [manure], whereas in Japan it is employed as a fertilizer directly, without any intermediate use. "

1875. *Tropical Agriculturist. Supplement (Ceylon).* 1910. East Asiatic Co. and the soya bean industry. Soya cake factory erected at Copenhagen. 35(4):368. Oct. 15. Also titled Supplement to the Tropical Agriculturist and Magazine of the Ceylon Agricultural Society. [1 ref]

• ***Summary:*** A factory "has been erected there with capital provided by the East Asiatic Company at a cost of about 1,000,000 kr. (£55,500). It is estimated that as at present arranged 100 tons of soya beans can be pressed in 24 hours, and that, if necessary, the output could be increased. The factory appears to be well equipped and fitted with the latest improvements. The East Asiatic Company's own vessels are likely to largely contribute to the activity of the factory by bringing the beans from the East for pressing, though a quantity of soya beans has already been shipped from the United Kingdom [to Copenhagen]. It is anticipated that by establishing this, and in the course of time other oil cake factories, Denmark may be able to obtain a more effectual control over the price of butter than has been the case hitherto, and avoid the enormous fluctuations of price which of late have been so much in evidence."

"A French agency states that Mr. Li Yu Jin [sic, Li Yu-ying], who established the first soya bean industry in Paris, has returned from China after consulting Chinese capital of F. 1,500,000 for developing this enterprise in Europe. The soya will be worked at Paris, Brussels, London, and Berlin, and will be consumed in the form of milk, sauce, soup, vegetable, jam, cheese, flour, and bread.–*L. & C.* [*London and China*] *Express, Aug. 19.*"

Note 1. It is not clear whether soybeans have arrived yet in Denmark for processing by this new oil mill. Note 2. This is the earliest English-language document seen (March 2000) with the term "Soya cake" in the title.

1876. *Oil, Paint and Drug Reporter.* 1910. The soya bean and the fertilizer question. 78(17):41. Oct. 24. [1 ref]

• ***Summary:*** "An extract from the *National Review of Shanghai*, regarding the relation of the soya bean to the fertilizer question, has been sent to the Department of Commerce and Labor by Vice-Consul A.W. Gilbert from Nanking. The discussion of the subject by the Review is as follows:" There follows a long excerpt.

1877. Page, H. Orville (Pat). 1910. Maroon baseball nine at ambassadors reception in Japan... Orientals give Yankees many treats before games. *Chicago Daily Tribune*. Oct. 30. p. C4.

• ***Summary:*** Tokyo, Oct. 2.–"The University of Chicago baseball team has been entertained royally since its arrival in Japan. Wednesday night Waseda university tendered the maroons an elaborate banquet at Seiyoken, Uyema, and welcomed us formally."

"Move number two found them [the Japanese baseball players] squatted around on mats with their individual charcoal stove [sic, stoves] before them... The [Japanese] athletes relished most the item entitled 'niku nabe,' cooked in 'shoyu,' a bean sauce,..."

1878. Mene, Edouard. 1910. La Chine a l'Exposition de Bruxelles [China at the Brussels Exposition]. *Bulletin de l'Association Amicale Franco-Chinoise* 2(4):336-46. Oct. See p. 340-43, 346. [Fre]

• ***Summary:*** 1. The Chinese pavilion: In the beautiful and grandiose Universal Exposition of 1910, that a frightful fire partially destroyed, the Chinese section merits special mention. It is not an official exposition organized through the care of the Chinese administration. Rather, it is an exposition organized by five Chinese merchants The last one, Mr. Tsu represents both soya and the ideal kite (*soja et cerf-volant idéal*).

Note: The meaning of *cerf-volant idéal* is unclear. The Chinese have long been known for their beautiful and well-designed kites, some with long, flowing tails. However, if Mr. Tsu was exhibiting kites, he would have used the plural form of the noun. Is he saying that soy is like a high-flying kite?

These exhibitors have gathered a certain amount of

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indigenous and modern objects, commercial and artistic in a pavilion located in the section reserved to foreign countries (start of p. 339).

In the back of the room, to the right are displayed by Mr. Tsu, the different products extracted from one of most utilized plants in China: *Soja hispida*, Houang-teou, the soybean of the leguminous family.

One can observe plates filled with soybean seeds (*graines*), looking like little round (broad) beans (*fèves*), and some dehulled soya beans; jars filled with white soya cheese, looking like quark [tofu], cheese in round boxes, looking like Camembert [fermented tofu]; a jar with the skin of the soya cheese [yuba]; a vial with soya casein [soy protein].

A display case is filled with jars of different types of yellow, green, and black soybeans, of soya flour, of semolina, of a brownish soya coffee in bean and powder form, of bottles of soymilk, of soy oil, and of Soy [sauce], this condiment so utilized in Chinese cuisine. On a table are displayed soya pastries resembling in their shape, the Commercy madeleines [small sponge cakes shaped like sea shells], some noodles, macaroni and soya bread that is prescribed to diabetics as well as a gruel of soya flour. On the floor are placed several square soybean cakes (*tourteaux*), residue of the soya oil production, of a grey-yellow color, to be used as fertilizer. A brochure on soya-based food products, excerpted from the book *The Soybean* (*Le Soja*) by Mr. Li Yu-ying is being handed out through the care of the exhibitor, Mr. Tsu.

This brochure, titled: 'Soya based Food Products' (*Produits alimentaires à base de Soja*), Caseo-Sojaine, rue Denis-Papin, les Vallées (Seine), describes these products and their preparation: soya milk, liquid or in powder form, derived from the grinding of the beans, after immersion, in water, for several hours. The grain content consisting of legumin or vegetable casein, is placed under a grindstone: one derives an homogenous, nutritive and digestible milk product. Fermented and powdered milk is produced, soya casein, extracted from the soya milk, with uses in food and in industry; soya flour, obtained by the grinding of the dehulled beans, completely deprived of their seed coat to lessen the proportion of cellulose and increase its digestibility. It does not contain any starch; soya bread, well utilized to feed diabetics; by perfecting fermentation, one makes a rather light bread, one that reminds one of rye bread; pasta / noodles; cookies, pastries, white- and pink-tinted pasta prepared with soya flour, soy sauce (Soy) with a bouquet that reminds one of burned onion that is used to enhance fish and vegetables; soya jam (*confiture de Soja*), similar in appearance and taste to chestnut cream (à la crème de marrons), soya oil for food use; green vegetable soybeans (*légumes de Soja*), whose sprouts may be used as a salad. As for the soybean cakes (*tourteaux*), these are used for animal feed and fertilizer.

In China, the *Soja hispida* (the soybean), with hairy pods, with yellow, reddish, black, green, white, variegated beans, whose taste echoes the green bean, the lentil, the pea, and that has a high content of culinary oil, is grown, on a large scale, in Mongolia, in Manchuria, and in the provinces of Henan, Zhejiang, Jiangxi (*Ho-nan, Tchokiang, Chan-si et Chang-tong*). It is one of the most utilized plants from the culinary and industrial point of views.

Soy sauce, called Soy in English and in Chinese *Tsiang-yeou*, is a greatly-appreciated condiment that is prepared with yellow soybeans named *Houang-teou* and that one flavors with star anise, green anise, and grated orange rind. It is a blackish liquid, lightly syrup-like used to enhance the flavor of fish, meat, and vegetables. Another Chinese condiment [fermented black soybeans] is made with soybeans mixed with salt and ginger. In Canton, *Kiu-tsu* [*jiuzi*, Cantonese wine starter, a ferment] is made with soybeans, red rice, and leaves of *Glycosmis citrifolia*. As for soya cheese, it is made as follows (see footnote): Soak the soybeans in water for 24 hours to make them swell; drain off the water, grind while adding fresh water to form a slurry that is run through a filter. Stir it by hand, then pour it into a caldron, where it undergoes a slow cooking. Let it cool in a tub and remove and foam with a big spoon.

A thick film [yuba] is formed on the surface. It is lifted off with a round wooden stick shaped like a long chopstick (*baguette*) and it is allowed to dry on thin ropes. This skin is called skin of soya cheese [yuba]. To the remaining soymilk, add a little water mixed with calcium sulfate (*plâtre*) and several drops of nigari, which is magnesium chloride derived from the salt in salt beds.

Footnote at the end of page 342: See (1) *Bulletin of the Society for Acclimatation*, second series, volume 13, page 562, 1866, "On The production of tofu in China," by Paul Champion.

Stir in the liquid coagulant which will cause the casein in the soymilk to coagulate. Pour the warm mass into in a wooden frame or box lined internally with a fine cloth through which the liquid whey will seep. Atop the frame or box place a board loaded with weights to press the cheese which is of a grayish white color, looks like quark, and has a pea-pod taste (*à goût de pois*); with the addition of salt, this cheese will keep; without this precaution, it spoils. It is used to feed the impoverished portion of the population: often, it is fried in soya oil. Soya cheese [tofu] is manufactured on a large scale near Peking and in most of the sea ports of Southern China. It is mostly the town of Ning-po that is the center of this production. Each year, thousands of junks (*jonques*) loaded exclusively with soya cheeses leave this town harbor to reach other Chinese harbors.

Besides cheese [tofu], the most important soya product is the oil that is extracted from its beans, mostly the yellow beans called *Houang-teou*. This yellow oil, which is siccative / drying, has a special smell and a pea-pod taste. At Kaifeng (K'ai-fong) in Henan (Ho-nan) province, at Tsi-

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nan in the Chan-tong, and at T'ai-yuan in the Chan-si, are located important soya oil manufacturing plants. But it is mostly Ningpo in the Tcho-kiang, that is the center for the production and the centralizing of soya oil. Much is also produced in Newchwang [Nieou-tchouang], and in Chefoo / Tantai (Tche-fou) in Shantung province. The soybean cakes (*tourteaux*), the by-products of soya oil processing, are a major export out of Newchwang and Chefoo; they are shipped to Swatow and Amoy to be used as fertilizer in sugar cane plantations.

These soybean cakes (*tourteaux*) are sought after as much as the beans themselves, and are to feed cattle, as are the pods, the stems and the foliage of the plant. The beans of *Hei-teou*, the black soya bean, mixed with cut up straw, are given as feed to horses and mules in Northern China and in Manchuria.

Note: This periodical was established to promote understanding and friendship among the people of France and China. Soja is mentioned on pages 341, 342, 343, and 346. Address: Dr.

1879. *Proceedings of the Linnean Society of London*.1910. Soy beans. Oct. (122nd Session). p. 53-55. Meeting of March 17, 1910.

• ***Summary:*** "Mr. J.H. Holland, F.L.S., also on behalf of the Director of Kew, showed samples of the Soy Bean, *Glycine Soja*, Sieb. & Zucc. (*G. hispida*, Maxim.), with herbarium specimens of the plant producing this seed.

"He stated that the seeds of 'Soy,' of which there are many varieties, may be black, brown, green or greenish-yellow, yellow, or mottled; sometimes seeds are described as white, but there appears to be no Soy bean true white in color.

"The plant is variously known as 'Soy,' 'Soja,' 'Soya,' 'White Giram,' 'American Coffee Berry,' and 'China Bean.'

"In China and Japan, where the plant has been cultivated for many years–perhaps centuries–the beans are an important food, and they are also said to be used as a substitute for coffee.

"Bean cake and the sauce known commercially as 'Soy' is also made from them. It is stated that in the manufacture of the soy of commerce, in addition to the beans, the requirements are simply a large amount of salt and flour and an unlimited supply of fresh water. Wenchow is an important centre of the manufacture, and here the bean used for the purpose is said to be chiefly the white form from Chinkiang. The cultivation has been extended to India, Africa, and other warm countries...

"The principal use of the beans in this country is for the extraction of the oil, of which they contain about 18 per cent. suitable for soap-making, and in general as a substitute for cotton-seed oil. The residue, after the extraction of oil, is suitable for feeding cattle, and for this purpose appears likely to become a serious competitor of cotton-seed cakes, sunflower-seed cakes, linseed cakes, &c."

"Beans and bean-cake exported from China have gone chiefly to Japan and certain parts of Asia, but recently, beginning about November, 1908, an important trade has been developed in them more especially with the beans, between Manchuria and Europe, Dairen (Dalny) being the chief place of export.

"The cause of this sudden development may, perhaps, be attributed to the facts that a great increase in the cultivation took place in Manchuria during the Russo-Japanese war to meet the demands for food of the Russian Army; then, when the troops were withdrawn, the production being found, profitable, and the home demand reduced, other markets were sought. The trade extended to Japan, and afterwards, assisted perhaps by a period of depression in that country, it extended to Europe, where the industry has created interest in many quarters.

"The amount of the 1908 crop sent to Europe through Vladivostok up to July, 1909, was 180,000 tons, the greater part destined for the English market (Hull and Liverpool), and the remainder going to German (Hamburg) and Scandinavian ports.

"Up to 1907 the export of soy beans from Manchuria did not exceed 120,000 tons annually. During 1908 the export rose to 330,000 tons (one half shipped from Dairen; 100,000 tons from Newchang, and 65,000 tons by rail *via* Suifenho [Suifenhe] to Vladivostok), the increase, it is said, being due entirely to the demand from Europe."

Summarized in *Tropical Agriculture*. 1910. July 15. p. 28. Address: England.

1880. Lewkowitsch, Julius. 1910. Die Industrie des Soyabohnenoeles [The soya-bean oil industry]. *Chemische Industrie (Berlin)* 33(22):705-08. Nov. 15. Whole number 670. (Chem. Abst. 5:597). [3 ref. Ger]

• ***Summary:*** This is a major report on the world soybean oil industry. "In an astonishingly short period of time, the almost unknown soybean has become a major oilseed in Europe." The method of separating the oil from the soya bean in Manchuria is to soak the seeds in water overnight, to crush them, and, after boiling the mass with a little water, to express the oil in a primitive form of press. Owing to the length of time during which the pressure is continued, the yield of oil is as high, if not higher, than is given by the modern hydraulic presses [used in Europe]. The expressed oil is mainly used for food, while any that is unfit for that purpose is burned in lamps. The residual cakes in the press, which are about 3 inches thick and 2 to 3 feet in diameter, form a staple food product. The bean cakes in China are called *teou-fou-tcha* [sic, actually this term refers to okara].

Some idea of the trade done in these soya bean cakes may be formed from the fact that during the year 1904 no less than 160,000 tons of soya bean cake (not including the beans themselves or the oil) were exported to Japan alone,

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although that country itself produced about 2,500,000 hl. (1 hectoliter = 100 liters, so 6,875,000 bushels) of beans, which were utilised in 11,000 factories that manufacture soy sauce. In the year 1909 the quantity of beans exported from Manchuria to Japan reached 600,000 tons.

Until two years ago considerable difficulties stood in the way of the trade with Europe, for the long sea-voyage through the tropics and especially through the Red Sea, had such a deteriorating effect upon the beans, that, after removal of about 10 per cent of oil, the residual oil cake was quite unsuitable as a feeding stuff. Only a small amount arrived in Liverpool, where the resident Chinese created an insignificant demand for their favorite dishes. Nevertheless, small amounts of soybean cake (*Soyakuchen*) were imported to England for use in mixed feeds, although this branch of trade had but a paltry existence. Therefore the confluence of a number of particularly favourable conditions were required to introduce the beans into the world and European markets. During the Russo-Japanese War, soybeans served as a staple food for the Japanese, and later the Russian soldiers. After the war, Manchuria was thrown open to the commerce of the world. Thanks to the industrial activity of the Japanese and the decline in the shipping rates, a favorable opportunity arose, after the soldiers left, for exporting large quantities of the beans to England.

The first large consignment reached Liverpool towards the end of 1908, and its arrival coincided with a period of great scarcity of other oils and fats, due to various causes, and, in particular, to the increased consumption of edible fats, and the growing demand for dynamite glycerin for the Transvaal mines and the construction of the Panama canal. In addition to this, the cotton-seed harvest in the United States had been poor, and this had caused a considerable increase in the price of Egyptian cotton-seed, so that many oil-mills in England had been forced temporarily to suspend work. Hence attention was at once directed to the new raw material, large quantities of which were available at favourable prices.

The imported beans had the following average composition: Water 10%, oil 18%, proteins 40%, carbohydrates 22%, fibre 5%, and ash, 5%. It was not possible to reckon upon a higher yield of oil than 10 per cent. from the beans, but feeding experiments with the oil-cake showed that while it produced as much flesh as cotton-seed oil-cake, it caused the cows to yield a milk richer in cream. Thus for some time past soya cake has fetched higher prices in the market than cotton-seed cake.

Had it not been for the timely appearance of soy-bean oil the already high price of cotton-seed oil would have been at least 25 per cent. higher, and there would have been a corresponding increase in price of all the fats used in the soap industry. Immense quantities of the new oil were employed in the manufacture of soap, and during the year 1909 more than 400,000 tons of the beans were imported into England. Only small quantities were sent to America, and, relatively, very little to the continent of Europe.

The high tariff on raw materials in Germany and in France prevented the importation of the seed, and at first the English oil manufacturers took advantage of this, and exported large quantities of soya oil and soya cake both to America and the Continent. Only within the last few months have the German oil manufacturers succeeded in obtaining the concession that soya beans may be imported into Germany free of duty, but in the near future the production of soya oil and soya cake may become an important branch of the German oil industry.

The chief use of the new material in the manufacture of soap is as a partial substitute for cotton-seed oil in the production of hard soaps, while for soft soaps it can completely replace cotton-seed oil and partly replace linseed oil. Soya-bean oil has also been extensively used as an edible oil, and in admixture with cotton-seed oil large quantities of it have been consumed in England. It has also been employed as an oil for the preservation of sardines. Attempts were made to use it as a substitute for linseed oil in the color and varnish industries, but it can never replace the latter oil completely.

The composition of soya-bean oil renders it particularly suitable for the adulteration of both linseed and cotton-seed oils, while it is also frequently employed as an adulterant of Japanese rape oil.

The chief ports for the export of soya beans are Newchang, Dalny, Vladivostok, and Hankow, while the principal European ports for their importation are Hull, London, and Liverpool, and, more recently, Hamburg. The supply of the beans is assured for several years, for, in addition to that produced in Manchuria and South China, attempts, which appear likely to be successful, are being made to cultivate the plant in West Africa and in the East Indies.

In the Southern States of North America the soya plants are already grown for fodder, and experiments are now being made to cultivate them for the production of oil seed. It has already been proved that the beans grown in West Africa from Asiatic seed do not yield less oil than the original seed. The author lived 1857-1913.

Note 1. This is the earliest document seen (March 2001) concerning soybeans in connection with (but not yet in) Panama or the Canal Zone. Address: London.

1881. *Times* (*London*).1910. Soy bean as a fertilizer. Nov. 21. p. 14, col. 6.

• ***Summary:*** "Several subjects of importance to this country are discussed in the *Daily Consular and Trade Reports* published by the Bureau of Manufacturers, Department of Commerce and Labour, Washington [DC]. A note upon soy beans as a land fertilizer is particularly noteworthy in view of the doubt expressed in this country last year as to their manurial value."

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There follows a summary of: Gilbert, A.W. 1910. "Soy beans and fertilizer question." *Daily Consular and Trade Reports* (U.S. Bureau of Manufactures, Department of Commerce and Labor). Oct. 5. p. 55.

1882. *Agriculture Pratique des Pays Chauds* (*Bulletin du Jardin Colonial*).1910. Analyses de soja [Analyses of soybeans]. 10(92):427-28. Nov. [Fre]

• ***Summary:*** "The Colonial Garden [*Jardin Colonial*, probably located in Paris, France] has recently had the opportunity to conduct a number of analyses of samples of the soybean [Soja] and of products made from these seeds. A compositional analysis is then given for white soybeans and black soybeans from northern China, white soybeans imported from Denmark, dehulled white soybeans, flour of white soybeans, soybean cake (from white soybeans), and bread made from white soybeans. The bread contains 15.53% moisture, 3.74% minerals, 30.25% nitrogenous (protein) materials, 7.36% fat, and 17.88% saccharifiable materials.

Page 428 contains an analysis of soy sauce (*la Sauce de Soya*), which is said to be known, in China and Japan, under the name of "Schoyu." Solids comprise 39.59% of the product on a dry-weight basis. These solids are composed of ash 41.70%, nitrogenous materials [proteins] 18.00%, and oil 4.2%. The mineral portion is very rich in chlorine, potash, and soda or kali (*soude* [*sodium*]), and rather rich in sulfuric acid; it contains traces of phosphate.

Note: This is the earliest French-language document seen (April 2012) that uses the word *Schoyu* to refer to soy sauce.

Note: This is the earliest document seen (Feb. 2001) concerning soybeans in Denmark. This document contains the second earliest date seen for soybeans in Denmark (Nov. 1910). According to Thompson (1914. p. 15) Denmark first started importing commercial quantities of soybeans in 1911; that year they imported 20,000 metric tons. Address: Le Jardin Colonial, Paris, France.

1883. *Oil, Paint and Drug Reporter*.1910. Prospects of lower soya bean values. Difference of opinion abroad–Crop large and quality better. 78(23):23. Dec. 5.

• ***Summary:*** The new Manchurian soya bean crop is expected to be 25-30% larger than last year's crop. One firm predicts that about 1,550,000 tons of soya beans will be available for export from the 1910-1911 crop; Japan will take 600,000 tons and South China 200,000 tons leaving 750,000 tons available for Europe. "The beans are required in Japan for making Japanese sauce–a national food in demand during the winter."

A table shows shipments of soya beans from Manchuria, from Oct. 1 to Sept. 30, 1908-09, and 1909-10, from three ports: Dalny (the leading port both years), Newchwang, and Vladivostok (having the smallest exports of the three).

1884. *Hartford Courant* (*Connecticut*).1910. Note and comment. Dec. 19. p. 8.

• ***Summary:*** "Japanese living in our Pacific states are importing canned beef from their native land." It "is known to the trade as 'Yamatoni' beef–'Yamato' being the poetical name for Japan and 'ni' meaning stewed or cooked. Before being cooked, the beef is sliced so as to permit of its being picked up with chopsticks. It is then thoroughly cooked with shoyu and sugar. Sometimes a little thin-sliced fresh ginger is added as a flavor" before it is canned.

1885. Li, Yu-ying. 1910. Produits alimentaires et condimentaires à base de graine de soja [Food products and condiments made from the soybean]. *French Patent* 424,125. 2 p. Application filed 27 Dec. 1910. Issued 5 May 1911. [Fre]

• ***Summary:*** "This invention has for its object the manufacture of products based on cooked soybeans (*graines de soja cuites* (*pois chinois* = Chinese peas)), which can be divided into two large categories: 1. Products fermented with salt, including soy sauce (*la sauce de soja*) and soybean paste (*la pâté de soja*). 2. Non-fermented, sweetened products, including sweet soya preserves (*la confiture de soja*) and soy powder (*la poudre de soja*), which can be utilized in pastry (*la pâtisserie*) and confectionery (*la confiserie*).

The process for making each type is described in general terms. To the fermented sauces "can also be added spices such as pepper, cloves, ginger, nutmeg, pimento / allspice, etc. Or sugar can be used in place of the spices. The soy sauce or paste obtained, as has just been said, can be concentrated or dried by heat or evaporation.

"For the non-fermented, sweetened products, including soy confectionery and soy powder, one proceeds as follows: For the confectionery, the soybean seeds are dehulled, cooked, and crushed. Then this pulp is mixed with about one-third part sugar. Or, one can add dry fruits, chestnuts, almonds, hazelnuts, cocoa*, etc. The product can be dried to obtain a soy-based powder, which can be employed in various ways in pastry and confectionery. This powder is different from flour, not only because it comes from cooked soybeans, but also because it contains none of the cellulose in the soybean hulls."

Note: This is the earliest document seen stating that soy can be used with cocoa. *Webster's Dictionary* defines cocoa (pronounced CO-co, a modification of the Spanish term cacao), a term first used in 1577, as "1: Cacao. 2a: Powdered ground roasted cacao beans from which a portion of the fat has been removed." *Webster's Dictionary* defines cacao (pronounced kuh-KAO, derived from the Spanish from Nahuatl *cacahuatl* cacao beans, and first used in 1555) as the dried partly fermented fatty seeds of the cacao (a South American tree, *Theobroma cacao*), used in making cocoa, chocolate, and cocoa butter–also called cacao bean, or cocoa

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bean. Address: Resident in France (Seine).

1886. Li, Yu-ying. 1910. Sauce consisting chiefly of soja grains. *British Patent* 30,351. 2 p. Date of application, 31 Dec. 1910. Accepted 29 Feb. 1912.

• ***Summary:*** Sauces. Cooked soy beans, to which flour may be added, are fermented with ferments such as "sojaobacille" (*vide* 30,275, 1910, *supra*), and the fermented mass is placed in saltwater. When matured, it is pounded to a paste or is diluted with saltwater and filtered. Alternatively, "soy milk," obtained as described in 30,275, 1910, is fermented with sojaobacille, sodium chloride being added, and filtered. Spices or sugar may be added, and the products may be concentrated or dried.

Note: This is the world's earliest patent seen for soymilk.

1887. Friedenwald, Julius; Ruhräh, John. 1910. The use of the soy bean as a food in diabetes. *American J. of the Medical Sciences* 140:793-803. Dec. [9 ref. Eng]

• ***Summary:*** The article begins: "The soy bean (Glycine hispida), sometimes incorrectly called the soja bean, is an annual leguminous plant..." It continues with a brief but accurate history of the soy bean in Europe and the USA, a botanical description of the plant, examples of food uses such as boiled whole dry soybeans, green vegetable soybeans ("The beans are eaten as a vegetable, in soups, sometimes picked green, boiled and served cold with a sprinkling of soy sauce and sometimes served as a salad... If the beans are green, the preliminary soaking may be omitted."), soy sauce or shoyu, natto, tofu, miso, yuba, a coffee substitute, and whole dry soybeans. A brief description of the process for making tofu is given, together with nutritional analyses of tofu, and 4 varieties of soybeans. "The most striking point about the bean is that it contains no starch, or, at least a very small quantity, which is strange when one considers it resembles the various beans very closely and all other varieties of beans are extremely rich in starchy materials." An analysis of the "gruel flour from the soy bean" made by the Cereo Co., Tappan, New York, shows it to contain 14.64% protein, 19.43% fat, no starch, and no reducing sugars. "Our own experience with the soy bean in diabetes extends over a series of eight cases." The 8 cases are then described individually. Cooking directions and recipes are given for making gruels, broths, and muffins using "soy gruel flour" or "soy flour."

The authors conclude: "(1) The soy bean is a valuable addition to the dietary of the diabetic on account of its palatability, and the numerous ways in which it can be prepared. (2) The soy bean in some way causes a reduction in the percentage and total quantity of sugar passed in diabetic subjects on the usual dietary restrictions." Address: 1. M.D., Prof. of Diseases of the Stomach, College of Physicians and Surgeons, Baltimore, Maryland; 2. M.D., Prof. of Diseases of Children and Therapeutics same college.

1888. Honcamp, F. 1910. Die Sojabohne und ihre Verwertung [The soybean and its utilization]. *Tropenpflanzer (Der) (Berlin)* 14(12):613-34. Dec. (Chem. Abst. 30:45). [9 ref. Ger]

• ***Summary:*** Contents: Introduction. Utilization as food and food adjuncts (stimulants / enjoyables) (*als Nahrungs- und Genussmittel*). Use for technical purposes. Use for fodder.

According to English consular reports the total production of soya beans in China amounted in 1907 to 580,000 tons, rising in the following year to 850,000 tons. During the year 1909 no less than 35 million kg of the beans passed through the Suez Canal.

Harz classified the varieties of Soja hispida into 2 main groups, one containing those of strongly compressed form and of olive green to brownish-black color, and the other swollen varieties more or less sickle-shaped, and of yellowish-brown to deep brown color.

Dietrich and König [1891] conducted 20 analyses of the soybean and found the following average composition: Water 11.34%, crude protein 35.11%, crude fat 16.98%, nitrogen-free extract 26.18%, crude fiber 5.88%, and ash 4.51%.

An analysis of the inorganic constituents of the beans by Schwackhöfer gave the following results: Potassium oxide, 44.56%; sodium oxide, 0.98%; lime, 5.32%; magnesia, 8.92%; iron oxide, trace; silica, trace; phosphoric acid, 36.89%; sulphuric acid, 2.70%; and chlorine, 0.27%.

Both in China and Japan the black varieties are boiled and roasted and eaten with rice, while the green and white varieties are ground to meal and baked into cakes, etc. The soy sauce, which is now largely exported to England and America, and used in the manufacture of other sauces, is prepared from wheat and a small light yellow variety of the bean, with the addition of salt and water, the prepared mass being fermented in open vessels at as low a temperature as possible for a period of 8 months to 5 years, and the sauce then separated from the residue. Another product made from the beans in Japan, and used in the preparation of soups and flavors for cooking, is know as miso. In addition to these, a so-called bean cheese (tofu), and a similar product from which the bulk of the water has been removed (kori-tofu), are prepared from soya beans in Japan.

Attempts to acclimatize the plant in Germany have not yet proved successful, although it may be possible to introduce an early-ripening variety with a short vegetation period.

Note: This is the earliest document seen (Aug. 2007) that gives soybean production or area statistics for China. It is not clear whether or not this includes Manchuria, or refers only to Manchuria. Address: Prof., Germany.

1889. Honcamp, Fr. 1910. Die Sojabohne und ihre Abfallprodukte [The soybean and its by-products].

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Landwirtschaftlichen Versuchs-Stationen 73:241-84. Dec. (Chem. Abst. 4:3099). [18 ref. Ger]
• ***Summary:*** Largely a good review of the literature. Contents: Introduction and history. Botanical and microscopic characteristics. The best varieties for production of seeds / beans (incl. Soja platycarpa, Soja tumida, etc.). Soybean cultivation (incl. Fesca, Haberlandt). Chemical composition. Utilization of the soybean and its products: Use as food and food adjuncts (stimulants / enjoyables) (*Genussmittel*) (incl. boiled or roasted soybeans, shoyu or soy sauce {*Shoyu oder Bohnensauce*} made with rice- or wheat koji {*Reis- oder Gerstenkoji*}, miso, tofu {*Bohnenkäse*}, dried-frozen tofu {*Kori-Tofu oder Eisbohnenkäse*}, soybean meal {*Sojabohnenmehl*}, soybean oil {*Sojabohnenöl*}), industrial and technical uses of soybean oil (illuminant, soaps, table of constants), use as a livestock feed (Sheep were fed soybean oil meal and meal {*Sojakuchen, Sojamehl*}, pressed residue {*Pressrückstand*}, or solvent processed {*Extractionsrückständen, Sojamehle, Sojakuchenmehl*}; soybean hay {*Sojabohnenheu*} and straw also make good feeds).

Illustrations show: (1) A soy bean plant with pods (non-original, p. 245; from an original in Fesca 1898). (2) Soy bean pods, seeds, and cells (non-original, p. 246; from an original in C.O. Harz 1885).

Note: This is the earliest German-language document seen (Feb. 2004) that uses the term "Eisbohnenkäse" to refer to dried-frozen tofu. Address: Rostok, Germany.

1890. **Product Name:** Shoyu.
Manufacturer's Name: Ekeda.
Manufacturer's Address: Waiakea, Hilo, Island of Hawaii.
Date of Introduction: 1910.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1910. p. 669. "Ekeda, soy, Waiakea, Hilo. Not listed in 1909.

1911 Directory. p. 766, same.

1891. Kinoshita, Asakichi. 1910. Tanshoku shôyu seizô-hô [Method of brewing usukuchi (light-colored) shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 5(3):23-29. [Jap]
Address: Kumamoto Zeimu-kan Tokukyoku Gishu, Kumamoto-ken Gishi.

1892. Takahashi, Teiz; Yamamoto, Takeji. 1910. Seishu tane kôji-kin to shôyu mata wa tamari kôji-chû no kôji-kin to no hikaku kenkyû [Comparison of the koji starter microorganisms used in sake with those in shoyu and tamari koji]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 32:454-76. [Jap]
Address: 1. Prof., Tokyo Imperial Univ.

1893. Togano, Meijiro. 1910. Shôyu moromi-chû no saikin ni tsuite [On the microbes in shoyu moromi. I-IV.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 5(3):1-22; 5(4):13-.; 5(5):1-15; 5(7):1-14. [Jap]
Address: Nihon Shoyu Jozo Kabushiki Kaisha Gishi, Nôgaku-shi.

1894. Togano, Meijiro. 1910. Shôyu moromi-chû no saikin ni tsuite [On the microorganisms (bacteria) in shoyu moromi]. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*) 13:551-52. [Jap]

1895. **Product Name:** Soy sauce.
Manufacturer's Name: Tsuji.
Manufacturer's Address: Hanapepe, Kauai, Hawaii.
Date of Introduction: 1910.
New Product–Documentation: Polk-Husted's Directory of Honolulu and the Territory of Hawaii. 1910. p. 902. Tsuji, soyo mnfr, Hanapepe, Kauai, Hawaii. 1911 Directory. p. 1011, same.

1896. Encyclopædia Britannica (11th ed): Bean. 1910. New York, NY: Encyclopædia Britannica, Inc. See vol. 3, p. 572, 573c.
• ***Summary:*** "The Soy bean, *Glycine hispida*, was included by Linnaeus in the genus *Dolichos*. It is extensively cultivated in China and Japan, chiefly for the pleasant-flavoured seed from which is prepared a piquant sauce. It is also widely grown in India, where the bean is eaten, while the plant forms a valuable fodder; it is cultivated for the latter purpose in the United States."

Note: The 11th edition of the Encyclopædia Britannica is considered by many to be a classic, perhaps the best edition of this famous work ever published. The key to its use lies in the index.

1897. Freshel, Maud Russell Lorraine (Mrs.). 1910. The golden rule cookbook: Six hundred recipes for meatless dishes. Originated, collected and arranged by M.R.L. Sharpe. New edition. Boston, Massachusetts: Little, Brown and Company. viii + 323 p. Illust. Recipe index. 21 cm.
• ***Summary:*** This important, early vegetarian cookbook was first published in 1908 (copyright 1907) under the title *Six hundred recipes for meatless dishes*. The author's full name was Mrs. Maud Russell (Lorraine) Sharpe; thus her maiden name was Maud R. Lorraine. Born in 1867, she sometimes writes her first name "Emmarel."

Worcestershire sauce is called for in many recipes: Black bean soup (p. 48-49). Savoury rice (p. 189). Macaroni bianca (p. 190-91). Fried eggs (p. 231; "A little Worcestershire sauce or walnut catsup heated in the pan and poured over fried eggs adds variety"). Egg savoury (p. 275; "sprinkle with Worcestershire sauce, or any good sauce,..."). Egg sandwiches (p. 283; "sprinkle with Worcestershire sauce").

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A "fourth printing" (Feb. 1926 edition) was issued by Dodd, Mead and Co. in New York. Part of the title was changed slightly to read: Originated, collected, and arranged by M.R.L. Freshel. Apparently between 1910 and 1926 she had divorced Mr. Sharpe and married Mr. Freshel. Address: Providence House, Chestnut Hill, Massachusetts.

1898. Hirtzler, Victor. 1910. Hotel St. Francis: Book of recipes and model menus. L'art culinaire. San Francisco, California: Putney Haight. Subscription edition. [31] + 67-307 p., Illust. No index. 24 cm.

• ***Summary:*** The legendary Victor Hirtzler, a native of France, was one of America's first "celebrity chefs." He was chef of the Hotel St. Francis in San Francisco from 1904 (the year the hotel was built) until 1926. The lavish hotel was a success right from the start. It "was the best known hotel in San Francisco and probably the best known west of Chicago" [Illinois]. "If the hotel was a grand theater, Victor was its greatest actor; with his extravagant French accent, neatly pointed mustache and beard, and bizarre costumes, he exceeded even the Hollywood portrait of a master chef" (Source: MSU Feeding American–biography of Hirtzler, 1919).

On unnumbered pages at the front of the book are: Illustration of Hotel St. Francis, San Francisco, with trolley car and 3 flags flying. About the Hotel St. Francis. To epicurean San Francisco. Victor Hirtzler, Chef de Cuisine, Hotel St. Francis (with full-page portrait photo). Patrons of this first, or subscription edition (8 pages of names, 2 columns per page). Recipes published in *The Evening Post* (SF). Foreword: Scraps of culinary information. Preface: One minute home talk by Victor.

Table of Contents. Part I: Victor's two hundred model menus, selected to provide for all ordinary and special meals. Special breakfasts. Special Luncheons. Special dinners. Special suppers and midnight bites. Part II: General advice on selections and points involving success in cooking, by Victor. Victor's own recipes: Bread, rolls, muffins, buns, etc. Soups, purees, consummes, etc. Preserves, confections, nuts, dainties, etc. Ices, coupes, fancy drinks, etc. Miscellaneous special dishes. Hors d'oeuvres, tidy bites, etc. Salads, green dishes, heavy and light preparations. Meats, entrees, dinner dishes, etc. Cocoa, coffee, beverages. Eggs–Omelettes and other forms. Sauces, dressings, gravies, etc. Vegetables, special preparations, etc. Pastries, puddings, cakes, desserts, etc. Fish, oysters, sea food, etc.

Worcestershire sauce (called simply "Worcestershire," as in "a dash of Worcestershire," in 8 recipes) is used as an ingredient in a surprising 20 recipes in this cookbook–thus clearly showing its standing as a highly respected sauce and ingredient in the USA. Most of these recipes were served at dinner and are based on animal products (fish or shellfish, meat, poultry, eggs, cheese, or milk); some are salad dressings or sauces. The recipes using Worcestershire sauce are: Manhattan clam chowder (with "a wine-glass of tomato catsup," p. 155-56). Sardine paste sandwich (p. 185). Welsh rarebit (p. 185). Venetian egg, in chafing dish (p. 186). Baked steak en casserole (p. 203). Brains with black sauce (p. 204). Curried lamb, East Indian style (p. 222). Pigeon pot pie, English style (p. 223). Baked porterhouse (p. 228). Miroton [stew containing beef with onions devilled] or beef or meat (p. 29). French dressing (p. 251). English Colbert sauce (p. 253). Devil sauce (p. 255). Parisian tomato sauce (p. 258). Curry sauce (p. 261). Bengal oysters (p. 291). Deviled crab in shells (p. 294-95). Deviled lobster (p. 301). Coquille of fish (p. 304). Crab cocktail Victor (p. 306).

Catsup / ketchup is used in many recipes, such as: Raisin cocktail ("half a pint of catsup," p. 187). English Colbert sauce ("two teaspoons of mushroom catsup," p. 253). Sauce with spaghetti ("three or four spoonsful of catsup," p. 256). Oysters a la ancienna ("putting on each bivalve a teaspoonful of catsup," p. 292). Crab cocktail Victor ("make a sauce of three-quarters cup of tomato ketchup, one teaspoonful of Worcestershire...." p. 306). Almonds are also used in many recipes. The cruelest recipe: "How to boil a terrapin. Take two live terrapin and put into boiling water for two minutes..."

Note: Many advertisements for food and drink are scattered throughout this book. Address: Chef of Hotel St. Francis, San Francisco [California].

1899. Inouye, Jukichi. 1910. Home life in Tôkyô. Tokyo, Japan: Printed by the Tokyo Printing Co. vii + 323 p. No index. Illust. (some color). 23 cm. Facsimile edition reprinted in 1985 by KPI (London & Boston). [Eng]

• ***Summary:*** Chapter 5, "Meals," states (in a description of making breakfast): "But in point of utility the soy bean comes next to rice, for our soy sauce which enters into almost all dishes is made from the bean, wheat, and salt. So extensively is this sauce employed that table salt is comparatively little needed. The bean is also the principal ingredient in *miso*, which is a mixture of the soy bean, steamed and pounded, with rice-yeast [koji] and salt. This *miso* is largely used in making soup; and the soups into which it does not enter are usually flavoured by boiling shavings of sun-dried bonito and straining them off" (p. 58).

"After the rice-pot is removed, another pot is put over the hearth for making *miso*-soup... *Miso*-soup contains strips of garden radish [daikon], edible seaweed (*alopteryx pinnatifida*) [wakame], bean-curd [tofu], egg-plant, or other vegetables according to season. These two, the rice and the soup, are all the cookery required in the morning. There must, of course, be hot water for tea." Pickled vegetables (called *kôkô* or *kô-no-mono*) especially garden radish, invariably accompany Japanese meals (p. 58-59).

"The breakfast, then, is very simple. Sometimes the family take their meals at a large low table which is set before them [as they sit on their heels in the *seiza* position

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on tatami mats] at each repast; but often a small tray, about a foot square and standing six inches or more high, is placed before each member. In the left corner of the tray near the person before whom it is set, is a small china bowl of rice, while on the right is a wooden bowl of *miso*-soup. A tiny plate of pickled vegetables occupies the middle or the farther left corner, while any extra plate would fill the remaining corner. This plate also holds something very simple, such as [*umeboshi*] plums preserved in red perilla leaves, boiled kidney beans, pickled scallions, minute fish or shrimps boiled down dry in soy sauce, a pat of baked miso, shavings if dry bonito boiled in a mixture of soy and *mirin*." An illustration (line drawing) shows such an individual meal tray, with chopsticks resting on the rim of the tray (p. 59-60).

"Soy [sauce] is usually sold in wooden kegs as it does not change [spoil] with time; but the poor buy it in half-pint bottles" (p. 68).

The midday meal is very simple. But the "evening repast is the principal meal of the day... fresh fish is more frequently served than at noon. The fish may be boiled in a mixture of *mirin* and soy, be put into a soup made with an infusion of dried bonito shavings, be roasted on the iron netting with a sprinkling of salt or repeated coatings of soy, or be taken raw in thin slices [*as sashimi*]. This raw fish is a peculiarly Japanese dish" (p. 70).

Note 1. In Japan, almost everything is done in an orderly way, followed by nearly everyone. There are rules (often unwritten) for how to do almost everything.

Chapter 6, "Food," states: "Sea-weeds are also in great demand. Of these the principal are the *konbu* (*Laminaria japonica*), which is largely exported into China, and the laver [*Porphyra tenera*], which is obtained in this sheets [*nori*] and taken with soy alone or with rice rolled into it." Yellow chrysanthemum flowers are also used as food, "either fried with a coating of *kuzu* (*pueraria Thunbergiana*) or boiled in brine and pressed" (p. 72).

Eels are eaten, with bamboo skewers passed through them; "they are roasted over a fire, being from time to time dipped in a gravy [sauce] of *mirin* and soy. Tokyo is especially noted for eels served this way." Sun-dried cuttlefish, which are flat and hard, "are cut into slices which are roasted and dipped in soy" (p. 73).

"As we do not use a knife and fork at table, all fowls have to be cut up before they are served... The commonest method with the domestic fowl and duck is to boil them in small slices in a shallow pan with bits of onion in a gravy [sauce] of soy, *mirin*, and sugar." "It is only of recent years that we have begun to eat beef and pork; but we have in Tokyo a large number of shops where they are sold." One kind of shop is "a sort of restaurant where beef is served in the same manner as the domestic fowl and duck above mentioned" (p. 74).

"Though cooking is mostly done at home, no small quantity of small quantity of prepared food is bought for the meals. The most important of such food is the bean-curd [tofu]. For this the soy bean is soaked in water, ground, steamed, and strained; and the liquid is allowed to coagulate by the addition of brine [nigari] and then pressed in a square box with a cotton-cloth bottom until the water has been drawn off, leaving behind a soft white curd. This curd is cut into small slices and put into soup in the morning; it is sometimes thrown into hot water, and as soon as it is warmed [as *yudofu*], dipped into a mixture of soy and *mirin* and eaten. It is also fried. Indeed, the bean-curd shares with the *tai* [sea-bream] the distinction of having a special treatise dealing with a hundred ways of dressing [cooking / serving] it" (p. 74).

"As there is no dessert at a Japanese meal, fruits are commonly eaten at odd hours, especially by children." Apples are grown mostly in Yezo [Hokkaido], "the most northerly of the larger islands" (p. 75).

A common dish for the bever [a light lunch eaten between meals] is the (*soba*) or buckwheat noodles. Soba "is dipped before eating, into an infusion of bonito shavings flavoured with a little soy and *mirin*, to which small bits of onion [*negi*] and Cayenne pepper have been added" (p. 77).

Another inexpensive food "is a kind of cracknel [*senbei*] made by baking and dipping small disks of rice or wheaten flour in soy" (p. 78).

"The bulk of confectionery is made of rice, red beans [*azuki*], millet or sugar. Glutinous rice is steamed, pounded in a wooden mortar into a pasty consistency, and left to cool" [to become mochi]. "The red bean is boiled, pounded, and strained through a coarse cotton bag to get rid of the skin, though the latter is sometimes retained, in which case the straining is unnecessary, and finally mixed with sugar" to make "red bean jam" [*an*], which "is the most important ingredient of Japanese sweetmeats as there is in our confectionery no other equivalent... The red bean jam is also used in making soup into which small rice dumplings are thrown; this soup is much in demand, especially in winter, to while away the tedium of long evenings. The red bean is also boiled with rice to give it a colour; the red-bean is eaten in old-fashioned families three times a month, on the first, fifteenth, and twenty-eighth" (p. 80).

Note 2. This is the earliest document seen (May 2011) that uses the term "red bean jam" to refer to Japanese *an* [sweet azuki bean paste].

"Starch extracted from the root of the *kuzu* (*pueraria Thunbergiana*) is also much employed in confectionery." "By steaming a mixture of red beans, sugar, wheat, and *kuzu*, we get a sweet dark-red cake, which is almost as popular as the sponge-cake" (p. 80).

Inouye, who lived 1862-1929, lived to witness the Meiji period end and westernization begin. A scholar, journalist, translator and Japanese diplomat, he served at Japanese embassies in Belgium and the United States. Returning to Japan in 1918, he devoted the remaining years of his

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life to compiling English-Japanese and Japanese-English dictionaries.

Note 3. This book comes in an elegant, traditional "folding case" (*chitsu*), consisting of five stiff pieces of paperboard, covered with cloth, and held in place by two ivory-looking pegs (each 3 cm long), each of which slips into a cloth sleeve. This folding case performs much the same function as a Western slipcase. Address: Tokyo, Japan.

1900. Lafar, Franz. 1910. Technical mycology: The utilization of micro-organisms in the arts and manufactures. Vol. I. Schizomycetic fermentation. Translated from the German by Charles T.C. Salter. London: Charles Griffin & Co. xvi + 312 p. Introduction by Dr. Emil Chr. Hansen (Principal of the Carlsberg Laboratory, Copenhagen). Illust. (90 figs). Index is in Vol. II. 23 cm. [Eng]

• ***Summary:*** This first volume discusses bacterial ("schizomycetic") fermentations. Richly illustrated, it also includes accurate historical background on many subjects. An extensive bibliography for both this volume and volume II appears at the back of volume II (p. 417-518).

The Preface, by Emil Chr. Hansen of Copenhagen, states (p. vi): "Within the last two decades the study of Microbiology has made gigantic strides, both in the pathological and technical branches of the subject; and just as investigations into the Physiology of the higher plants gave the first impetus to the establishment of Agricultural Experiment Stations in all countries, so, in like manner, have the Physiology of Fermentation and Technical Bacteriology called into existence, within the last few years, a number of Stations and Laboratories for the development of those branches of industry where micro-organisms play an important part." The first three chapters, comprising the introduction, give an interesting early history of the discovery of fermentation. Their contents: 1. The theory of spontaneous generation: Definition, discovery of fermentative organisms, Needham's demonstration in favour of 'Generatio Æquivoca', Spallanzani's experiments, Franz Schultze's experiment, foundation of the science of antiseptics by Schwann, labours of Schröder and Dusch, Pasteur's examination of the theory, Béchamp's microzyme theory, spontaneous generation only unproven, not impossible. 2. Theories of fermentation: The alchemists–Stahl's theory of fermentation, Gay-Lussac's opinion, Cagniard-Latour's vitalistic theory, Th. Schwann's researches, Fr. Kützing's general theory, Liebig's decomposition theory, Pasteur's theory, Nägeli's physico-molecular theory, the enzymes and M. Traube's ferment theory, general definition of fermentation, so-called spontaneous fermentation of sweet fruits, decompositions effected by light and air.

In Chapter 31, titled "The fermentation of cheese and allied decompositions" (p. 243-52) are sections on "Pure culture ferments" (p. 246-47) and "Natto and miso" (p. 247-48; each a kind of "vegetable cheese"). The latter section also discusses the Soja bean, Fr. Haberlandt, koji, shoyu (called shojou, soy or shoyn), tofu and nukamiso. Reports by H.C. Prinsen-Geerligs "on the preparation (by the aid of fungoid ferments) of other dishes from soja beans in Chinese cookery, such as Taohu or bean-cheese [tofu], the sauce Tao-yu, &c."

In Chapter 33, titled "The fixation of free nitrogen by bacteria" (p. 259-71) are sections on "The discovery of leguminous nodules" (p. 261-62; Malpighi, Boussingault, Hellriegel), "Formation and functions of the nodules" (p. 262-64; Lachmann, Frank, Woronin, Hellriegel, Wilfarth), "The nodule bacteria" (p. 264-66; organized albuminoids, *Bacillus radicicola*), and "The bacteroids" (p. 266-69). Concerning bacteroids: "The first successful, artificial production of nodules by the aid of pure cultures was made by A. Prazmowski. This worker, in view of the absence of the sporogenic faculty in these organisms, changed the name of *Bacillus radicicola*, bestowed on them by Beyerinck, into *Bacterium radicicola*."

Note 3. This is the earliest English-language document seen (March 2003) that uses the word "bacteroids" (or "bacteroid") in connection with root nodules on plants.

Note 4. This is the earliest English-language document seen (Feb. 2004) that uses the word "Taohu" to refer to Chinese-style tofu. Address: Prof. of Fermentation-Physiology and Bacteriology, Imperial Technical High School, Vienna.

1901. Lafar, Franz. 1910. Technical mycology: The utilization of microorganisms in the arts and manufactures. Vol. II. Eumycetic fermentation. Part II. Translated from the German by Charles T.C. Salter. London: Charles Griffin & Co. ix + p. 191-748. Illust. Index. 23 cm. [3240* ref. Eng]

• ***Summary:*** An extensive bibliography on mycology and fermentation (3,240 references) for both this volume and volume I appears at the back of this volume (p. 561-695). The first chapter in this volume is Chapter 49, titled Mineral Foodstuffs (p. 191-202).

Chapter 55, titled "Classification of the families Saccharomycetaceæ and Schizosaccharomycetaceæ" is on p. 270-295. Section XVII (starting p. 456) is titled "The enzymes and the enzyme actions of yeast." It begins with Chapter 53, on "Alcoholase," by Dr. Rudolf Rapp, which starts with an historical introduction. Page 506 mentions the "Amylo process."

Chapter 56, by Prof. Dr. Carl Wehmer, titled "Morphology and subdivision of the family Aspergillaceæ" discusses (p. 296-346): Eighteen illustrations of Aspergillus conidiospores (p. 300-19).

"*Aspergillus Oryzae* (Ahlburg) Cohn (=*Eurotium Oryzae* Ahlburg). This species is of practical importance as a saccharification fungus, and has been cultivated for centuries in Japan for the preparation of the rice mash for Saké, as

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well as for the production of Soja sauce and miso." It was first identified (as *Eurotium oryzae*) by Ahlburg in 1876, and was renamed *Aspergillus oryzae* by Cohn in 1883, though a full morphological description was not given until 1895 (by Wehmer) (p. 308).

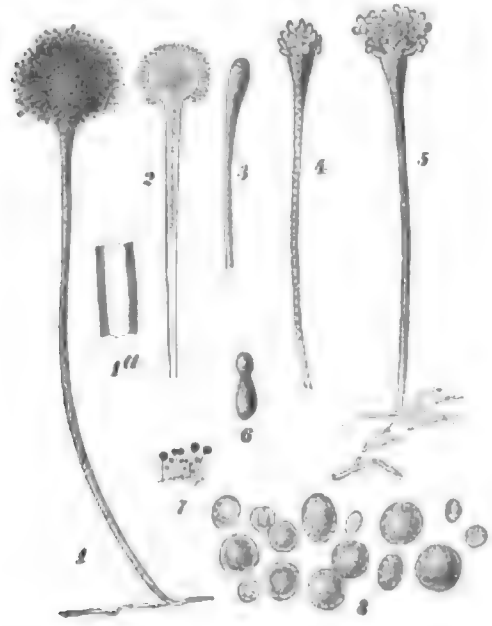


Fig. 166 shows *Aspergillus oryzae*. "1-2. Conidiophores with clavate and almost spherical glubule. 2. In optical section. 3-5. Development of a small conidiophore, distension of the hypha, protrusion of the sterigmata and incipient formation of conidia. 1a. Optical section of tough stem. 6. Sterigmata. 7. Conidial herbage, slightly magnified. 8. Conidia. Approximate magnification of 1-5 = 75 times. Of 6 = 400 times. Of 8–900 times. (After Wehmer).

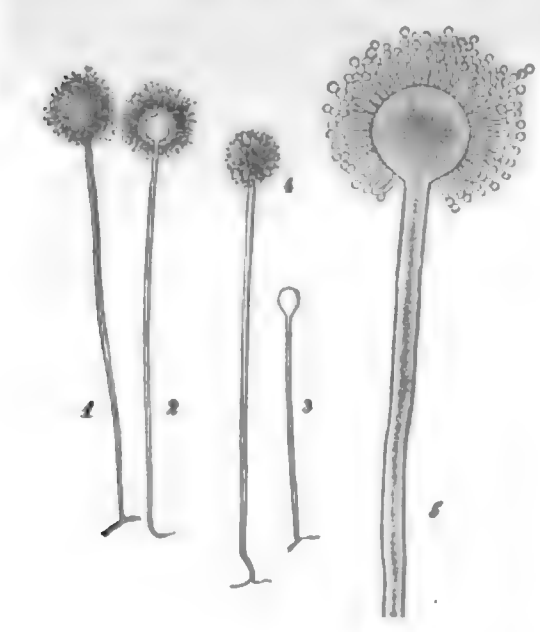


Fig. 167. Conidiophores 1-5, 2 and 5 in optical section. Figs. 3-5, development of the globule (3) and sterigmata (4). The separation of the conidia is beginning in 5. Approximate magnification of 1-4 = 20 times. Of 5 = 120. *Aspergillus Wentii* (Wehmer), which is used in Java to make Tao-Yu (Chinese-style soy sauce). It appears spontaneously on the boiled Soja beans that have been covered with *Hibiscus* leaves, as described by Wehmer in 1896 (p. 311).

Chapter 57, also by Prof. C. Wehmer, titled "Chemical activity of the Aspergillaceæ," discusses (p. 350-74): Saccharification of starch, Takamine's research using Aspergillus to make diastase (Taka-diastase) and its efficiency compared with similar enzymes of different origins, koji extract which contains amylase and other enzymes, use of *A. oryzae* in the preparation of rice-wine, Soya [shoyu], and Miso (p. 352).

This volume also discusses: The degradation of proteids and their derivatives, protease (p. 369-70). Film-forming surface yeasts and their accompanying phenomena, *Mycoderma* (p. 411-15). Invertase (p. 516). Other enzymes discussed in this chapter include maltase, melibiase, lactase, trehalase, raffinase, and amylase. Address: Prof. of Fermentation-Physiology and Bacteriology, Imperial Technical High School, Vienna.

1902. Macmillan, Hugh Fraser. 1910. Handbook of tropical gardening and planting, with special reference to Ceylon. Colombo, Ceylon: H.W. Cave. xii + 524 + xvi p. See p. 188. Illust. 22 cm. [15 ref]

• ***Summary:*** In chapter 4, titled "Green manuring and mulching," is a list of suitable plants including (p. 35) "*Glycine hispida*. Soya Bean. Small herb, 12-15 inches. [Grows at altitudes] Up to 2,500 ft." Note: No Sinhalese or Tamil names are given.

In chapter 12, on "Tropical vegetables and food products," section 1, "Leguminosæ, including beans, grams and pulses," contains the following (with Sinhalese and Tamil names given for most): *Cajanus indicus*. Pigeon pea; Congo bean *Canavalia gladiata*. Sword bean. *Cicer arietinum*. Chick pea; Bengal gram. *Cyamopsis psoraliodes*. Guar, or cluster bean. *Dolichos bracheata*. *Dolichos lablab, var.* Four varieties. *Lens esculenta* (= *Ervum lens*). Lentil. *Mucuna nivea*. Velvet bean is one variety. *Glycine hispida*. Soya bean. *Pachyrrhizus tuberosus*. Yam bean. *Phasaeolus lunatus*. Lima bean; Tonga bean. *Phaseolus vulgaris, var.* Climbing, or Runner beans. *Phaseolus vulgaris, var.* Dwarf French or Kidney bean. *Psophocarpus tetragonolobus*. Winged bean; Goa bean; Manilla bean [Manila bean]. *Vigna sinensis*. Cow pea; Yard-long bean.

The section on the Soya bean (p. 188) begins with a botanical description. "In India they are sometimes eaten in the form of 'dhal.' The famous Soya-sauce, said to be the basis of many popular sauces made in Europe, is made from these seeds. A useful domestic oil is also obtained from

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them, and the residual cake resulting from the expression of the oil forms a nutritious cattle-food. According to Sir George Watt, 'Soya Bean is extensively cultivated in Eastern Bengal, Khasia Hills [Khasi Hills, in today's Indian state of Meghalaya], Burma, &c.' Yet I can find no mention of it in either Firminger's or Woodrow's works on gardening in India. Cultivation is very simple. A loose rich soil is preferable."

Chapter 26, "Pasture, grazing, and fodder plants," has a section titled "Other forage plants (leguminous)," which includes (p. 463) "*Glycine hispida.* Soya bean–A quick-growing annual, 15 inches high, producing a heavy crop of herbage, much relished by stock. See *Tropical Vegetables.*" Address: F.L.S., Curator, Royal Botanic Gardens, Peradeniya, Ceylon.

1903. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1910. Nichi-Bei nenkan [Japanese-American yearbook, No. 6]. 650 Ellis St., San Francisco, California. 278 p. Reprinted in 2001-02 in Tokyo by Nihon Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 5-kai [Collected Documents on Japanese Emigration. No. 5]. [Jap; eng]

• ***Summary:*** This book is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. The English-language title page reads: *The Japanese American Year Book.*

The book is divided into 10 parts, each numbered separately. Contents: (1) Front matter, incl. 1 ad (5 p.) (2) Table of contents (3 p.). (3) Map of California agriculture (fold out, in Japanese, 1 p.). (4) Black and white photos on unnumbered pages (6 p., single sided). (5) Front part of Nichibei Nenkan No. 6 (p. 1-237), including general information about America, Japanese in America, U.S. and agricultural census data, etc. (6) Ads (9 p.). (7) Nichibei Nenkan continued (p. 238-50). (8) Original printing and publication dates and data (1 p.) (9) Ads (2 p.). (10) New printing and publication dates (2001), data, and ISBN (1 p.).

A table (p. 39) shows Japanese population by states. For each state the population is subdivided by men, women, and children. For Japanese, the 8 most populous states are: California 55,901, Washington 16,930, Colorado 4,557, Oregon 3,873, Utah 2,529, Idaho 2,399, New York 2,260, and Wyoming 1,409. The totals are: Adult men 87,170, Women 7,323, Children 4,222, Total 98,715.

A table (p. 42) compiled from census data, shows that there were 2 shoyu makers in the USA, with 2 male owners and 4 male employees. There were 42 tofu makers with 47 male owners, 10 male employees, and 1 female employee.

Note: Unlike other volumes, this relatively slender 1910 volume has no directory to give us the names the names and addresses of these Japanese tofu and shoyu makers in the USA.

A table (p. 54-55) shows the general population (not only Japanese) each decade in California from 1850 to 1910: It grew from 92,597 in 1850, to 379,994 in 1860, to 1,208,130 in 1890, to 1,484,053 in 1900, to 2,564,363 in 1910.

A table (p. 56) shows the Japanese population of California: 120 in 1878, 270 in 1880, 420 in 1884, 500 in 1885, 1,000 in 1887, 2,300 in 1890, 4,500 in 1892, 6,000 in 1895, 13,000 in 1897, 25,000 in 1900, 30,000 in 1902, 35,000 in 1903.

A table (p. 56-60) shows the 1910 Japanese population in various counties and cities in California. For each it subdivided into men, women, boys, and girls. In 1910 the Japanese population of California was 55,901, which was about 2.2% of California's total population.

A table (p. 62) shows the total value in 1900 of various crops in the USA and California. The soybean crop was worth $7,634,262 in the USA and $1,022,586 in California.

A table (p. 172) gives the population of Japanese in California by occupation; there is 1 shoyu maker (in Oakland) and 32 tofu makers.

The Directory shows Japanese companies making soyfoods in California, Oregon, Washington, Utah, Colorado, New York City, and Vancouver, British Columbia, Canada. Address: San Francisco, California.

1904. Sawer, E.R. 1910. Studies in agriculture. Series 2. The soya bean. Div. of Agriculture and Forestry, Natal, South Africa. 33 p. Reprinted from the Natal Mercury. [10 ref]

• ***Summary:*** Contents: 1. The agricultural romance. 2. The commercial aspect. 3. The adaptability of the bean. 4. The cultivation of the crop. 5. Soya bean oil. 6. A food for man. 7. A stock food and fertiliser (the cake is widely used as an agricultural fertiliser in the Far East). A photo (opposite contents page) shows two men standing in a crop of soy beans at the Central Experiment Farm, Cedara, 1908-09.

Concerning "Soya bean oil": "In the Far East it is largely employed for edible purposes; it is suitable for cooking, for a salad oil, and as a component in such butter substitutes as margarine. In the 'Mark Lane Gazette' for Jan. 20, 1910, it is stated that one third of the frying oil used in London kitchens now comes from the soya bean, instead of from cotton seed as heretofore" (p. 21).

Illustrations on unnumbered pages show: (1) A typical soya bean plant. (2) Botanical characters of soya bean, with close-ups of vegetative parts, floral parts, and fruit. (3) Seeds and pods of 7 varieties of soya beans. (4) Soya bean seedlings, with roots. (5) Roots of soya bean plant, with nodules (by Blanchard). (6) Curing frame for harvesting soya beans. Address: Director, Div. of Agriculture, Natal, Durban, South Africa.

1905. The provinces of China, together with a history of the first year of H.I.M. Hsuan Tung and an account of the government of China. 1910. Shanghai, China: The National Review office. 187 p. See p. 158. Undated. Illust. 23 x 19

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cm.

• ***Summary:*** Until a year or two ago, millions of otherwise well informed people in Europe and the USA were largely ignorant of China and "all matters Chinese." This book has one a chapter on each of China's 22 provinces.

The chapter on Shantung states (p. 38): Salt is largely obtained from the evaporation of sea-water and is used very extensively for the purpose of salting fish and vegetables, the making of soys [soy sauces] and bean sauces, and the like.

In Chapter 22, titled "Manchuria," the section on "Products" states (p. 158): "Manchuria is but sparsely populated. The settled inhabitants are re-inforced every spring by willing labourers from Shantung and Chihli coming to till, to sow, and to reap. Twenty thousand pass over to Newchwang and ports in south Manchuria from Chefoo alone; and these nearly all return in the autumn, when the harvesting is done. So that shortage of labour is a serious drawback in Manchuria. Next comes the climatic disadvantage. Agricultural and indeed all outdoor pursuits are confined to seven months of the year–from Mid-March to the middle or end of October."

The most important crop for Manchuria's external trade is pulse. "A large variety of beans is grown in Manchuria and, together with their products, bean-cake and bean oil, they constitute by far the most important item in the export trade of the Three Eastern Provinces. The beans are of many kinds, yellow, green, black, white, red, and small green. The yellow, green and black are varieties of the soy bean, and each variety has sub-varieties. Besides these beans of commerce there are several kinds of garden bean, cultivated for food." Two varieties of hemp, opium, tobacco, and ginseng are also grown in large quantities.

The section titled "Mammon" notes (p. 169): On all sides new enterprises have been springing up and new industries started. From Manchuria the export of beans has very rapidly, and largely during the past year, become a most important trade, so much so that the Indian exporters of oil seeds of one kind or another are beginning to feel the effect and to consider the possibility 'of producing the soy bean on Indian soil."

China's chief foreign complications have been with Russia and Japan, but "it is emphatically with Japan that the most serious trouble has taken place" (p. 172). The Japanese were found to be stealing supplies of nitrates from China's Pratas Islands–an incident which came to be known as the "Tatsu Maru case." This unwarranted intervention led to the "Manchurian Convention" which "is so obviously unfair to China." The publication of its terms "aroused great indignation in China and a boycott of Japan was immediately set in motion" (p. 173).

"It is possible that the terms of the Convention would have been vastly different had not Japan previously set all the canons of international morality at defiance by the seizure on the flimsiest of pretexts of the Antung-Mukden Railway. By the terms of an arrangement made in 1905 it had been arranged that Japan might within two years convert the Antung-Mukden Railway from a narrow gauge military railway to a standard gauge line suitable for all purposes. This privilege had lapsed with the flux of time and China was therefore exercising more than the necessary patience in acceding early in the year now under review to the survey of the line by a joint commission. The reason of Japan's delay had been obvious. If she delayed to begin the reconstruction of the line her term of tenure night be made to overreach that of the South Manchuria Railway, and would or could be pressed to imply an extension of the lease of the South Manchuria itself. When it was found that China was not so complaisant as she was expected to be the only alternative was to steal the line; this Japan promptly proceeded to do. This theft precipitated the Manchuria Convention for which Japan is never likely to be forgiven."

"Beans" (meaning soybeans) are also mentioned in passing, usually in section on "Productions" under Shensi (p. 9), Chihli (p. 28), Shantung (p. 36. "The beans are used for the manufacture of bean-oil and bean-cake, the oil being extracted [expressed] during the process of pressing the beans into cakes; the latter are exported for use as manure."), Szechwan (p. 49, in the Chengtu plain), Hupeh (p. 54. A table shows exports of beans and beancake each year from 1905 to 1908), Anhwei (p. 71, beans are exported), Kiangsu (p. 86, beans and beancake are exported from Shanghai), Yunnan (p. 92), Kweichow (p. 99).

Page 164 discusses the South Manchuria Railway and Newchwang (literally "Cattle Mart"), which was the leading port of entrance to Manchuria before the railway. Newchwang was formerly at the mouth of the Liao, but silting has left it 10 miles inland and the new port of Yinkow has been developed at its former place.

1906. Wheldon, Rupert H. 1910. No animal food: And nutrition and diet with vegetable recipes. New York, NY; Passaic, New Jersey: Health Culture Co. 125 p. Plus 18 unnumbered pages of advertisements at end. Undated. No index. 19 cm.

• ***Summary:*** A comprehensive appeal to vegetarianism, advocating exclusion of all foods of animal origin [i.e., a vegan diet]. Contents: I. No animal food: 1. The urgency of the subject. 2. Physical considerations. 3. Ethical considerations. 4. The aesthetic point of view. 5. Economical considerations. 6. The exclusion of dairy produce. 7. Conclusion. II. Nutrition and diet: 1. Science of nutrition. 2. What to eat. 3. When to eat. 4. What to eat. Food table. Recipes (100 "strictly vegetarian" [vegan] recipes as they appear in the English edition).

The Preface states that "the following pages are in vindication of a dietary consisting wholly of the products of the vegetable kingdom, and which therefore excludes not only flesh, fish, and fowl, but milk and eggs and products

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manufactured therefrom." "This work is reprinted from the English edition with changes better adapting it to the American reader."

Pages 30-31: "As to the testimony of individuals it is interesting to note that some of the greatest philosophers, scientists, poets, moralists, and many men of note, in different walks of life, in past and modern times have, for various reasons, been vegetarians, among whom have been named the following:–Manu, Zoroaster, Pythagoras, Zeno, Buddha, Isaiah, Daniel, Empedocles, Socrates, Plato, Aristotle, Porphyry, John Wesley, Franklin, Goldsmith, Ray, Paley, Isaac Newton, Jean Paul Richter, Schopenhauer, Byron, Gleizes, Hartley, Rousseau, Iamblichus, Hypatia, Diogenes, Quintus Sextus, Ovid, Plutarch, Seneca, Apollonius, The Apostles (Matthew, James, James the Less, Peter), The Christian Fathers (Clement, Tertullian, Origen, Chrysostom, St. Francis d'Assisi), Cornaro, Leonardo da Vinci, Milton, Locke, Spinoza, Voltaire, Pope, Gassendi, Swedenborg, Thackeray, Linnaeus, Shelley, Lamartine, Michelet, William Lambe, Sir Isaac Pitman, Thoreau, Fitzgerald, Herbert Burrows, Garibaldi, Wagner, Edison, Tesla, Marconi, Tolstoy, George Frederick Watts, Maeterlinck, Vivekananda, General [Bramwell] Booth, Mrs. [Annie] Besant, Bernard Shaw, Rev. Prof. John E. B. Mayor, Hon. E. Lyttelton, Rev. R. J. Campbell, Lord Charles Beresford, Gen. Sir Ed. Bulwer, etc., etc., etc."

The chapter title "What to eat" states (p. 83): "The Mongol procures his supply of protein chiefly from the Soya bean from which he makes different preparations of bean cheese [tofu] and sauce." "Among the foods rich in protein are the legumes, the cereals, and nuts... Fat is chiefly found in nuts, olives, and certain pulses, particularly the pea-nut."

Several recipes (p. 116-17) call for: Nut-milk, Vegeton, Nutter or nut butter, Marmite, Carnos, Pitman's Vigar Gravy Essence. These can be ordered from stores in England (see p. 111). The last 16 pages contain advertisements for *Health-Culture* magazine (monthly), "health appliances" (such as Dr. Forest's massage rollers and colon syringes), and many books published by The Health Culture Co., Turner Building, 45 Escension St., Passaic, New Jersey.

1907. Labbé, Henri. 1911. Le soja et ses usages [The soybean and its uses]. *Revue Scientifique* 49(1):171-76. Jan. 7. [6 ref. Fre]

• ***Summary:*** A summary of earlier publications (mostly in French) on soybeans and soyfoods. Discusses: Soy flour (*farine de soja*) for diabetics. Soy bread (*pain de soja*). Soy flour used to make various foods for diabetics as well as for vegetarians. Soymilk (*lait végétal à base de soja*, p. 174). Soy kefir and soy yogurt (Kephir, Yohourt). Soy sauce (*sauce de Soja, soyou, choyou*). Tofu (*Le fromage de Soja ou Tou-Fou*), which was invented by the ancient Chinese philosopher Whai Nain Tzu. Fresh tofu and dry tofu [dried frozen tofu, containing 53.6% protein]. How shoyu is made.

Note: This is the earliest French-language document seen (April 2012) that uses the word *soyou* to refer to soy sauce.

The section on the nutritional value of soy and soy protein (p. 173) ends with this interesting thought: For a long time the Chinese and Japanese, who cared little about the future justification of their habits and customs, have adopted the consumption of soy on a large scale, without realizing that science would perhaps one day come to bestow / confer on them a certificate or testimonial of complete approbation.

The section on soymilk ends as follows: Soya milk, according to trustworthy Chinese persons, is not just a mere curiosity. It is used, in China, for breakfast, being mixed with cow's milk. It is also used for infant formula [literally "artificial breast feeding"] or therapeutically. For this latter purpose, it is the fermented foods, such as Kefir, Yogurt, etc. that appear to be of interest. (*"Le lait de Soja, au dire de Chinois dignes de foi ne serait pas une simple curiosité. On s'en sert, en Chine, pour le dèjeuner du matin, et en mélange avec le lait de vache. On l'utilise aussi pour l'allaitement artificiel, ou dans un but thérapeutique. Dans ce denier but, ce sont plutôt les laits de soja fermentés, genre Kephir, Yohourt, etc. qui paraissent intéressants"*).

The author notes (p. 175, footnote) that a Chinese proverb says: *Le To-Fou est la viande des os* ("Tofu is the meat of the bones"). Note: This makes no sense and appears to be a mistake. Tofu has long been known as "the meat without bones" (Horvath 1927, 1931, 1938, etc.) or "the meat without a bone" (Lager 1945, etc.).

The writer also notes that France is not taking any part in the development of an industry to produce soy oil (p. 176, footnote). Illustrations (p. 72) show: Soy bean plant, with roots and pods. Close-up of soy bean pod and seed. Address: Doctor of Sciences (*Docteur ès-sciences*), France.

1908. Rousset, H. 1911. Chronique et correspondance: Chimie industrielle. Laits et beurres végétaux [Chronical and correspondence: industrial chemistry. Vegetable milks and butters]. *Revue Generale des Sciences* (*Pures et Appliquees*) 22(1):182-83. Jan. 15. [2 ref. Fre]

• ***Summary:*** Vegetable butters are made from coconut oil. Soymilk is made from the soybean, a unique type of bean which is grown in China. Huge quantities have recently been exported. This paradoxical plant can be used in many different ways–as to make oil and soap, special breads for diabetics, forage and fodder for animals, and confections. The Japanese transform the soybean into a cheese [tofu], the Chinese make it into milk, and the English use it to make sauces [such as Worcestershire sauce].

According to Mr. Li Yu-Ying, who, as a former student at a French school of agronomy, is well qualified by his origins and knowledge to know the soybean, as well and the milk and sprouts made from it. A table shows the composition of soymilk. A long discussion of soymilk and its

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uses follows.

1909. *Christian Science Monitor.*1911. Paris and the soy bean. Jan. 24. p. 16.

• ***Summary:*** "Western palates may not be easily reconciled to the culinary art of the eastern nations. Oriental cooking has not so far inspired the celebrated chefs of the world centers. For famous recipes, the epicures would hardly look to China. As many bills of fare still make their appeal in the French language, so the kitchens of France retain reputations earned long ago... But Paris, no doubt, is as proud of Alexis Soyer's 'Culinary Relaxations,' which the famous cook wrote in 1845, as of some other literary achievements of the period, more popular today, perhaps, but scarcely as interesting to the epicure.

"What, then, shall be said of Li Yu Ying, home address Peking, who has established himself in Paris and believes he has something of value in the cooking line for even the surfeited Parisians. This, assuredly, is blazing a new trail where it must have required considerable courage to venture. China teaching France how to cook! Here, to say the least, is a gastronomical novelty.

"Son of a former minister of state at Peking, Yi Ying [sic], after studying scientific agriculture in France returned to his native land two years ago. Apparently impressed with what the French had taught him, he nevertheless considered it possible to produce something different from anything they had to show. For this purpose progressive China assisted Li Ying [sic, Li or Li Yu-Ying] in forming a company with a capital of $400,000. The factory built at Les Vallees, near Paris, is the result.

"This Chinese invasion of French territory, however, need not cause alarm to Parisian restaurateurs. Li Ying and his associates, for the present at least, propose to devote their efforts to concentration of foodstuffs. The French Agricultural Institute at Chesnoy, where Li obtained his training, has done vegetarianism more than one service, and it appears as if China is now the debtor through that which the institute taught one of her sons."

In the food area, Li is "proceeding along original lines. For instance, since all the machinery came from China, it is an interesting commentary on oriental progress that the far east is so advanced in mechanics that it can supply the equipment for a factory located in the center of European industrial activity. All the raw materials from which the foods are prepared are also imported from the eastern empire. Further than this, one of the most plebian staples in China, the soy bean, is the leading agricultural product from which Li Ying is manufacturing his delicacies.

"Tabloid foodstuffs may not revolutionize ordinary cooking methods, but if the soy bean is capable of tasty preparation, then it is evident from the magnitude of this Chinese enterprise there is a lesson wrapt in the incident. The Occident is no stranger to the value of the soy bean as basis for a piquant sauce. Here, now, is the Orient teaching many novel values for the same insignificant product.

"The western world has hardly had a chance to say what it thinks of this Chinese product. But if the Parisian institution is a success, there is no reason why other countries should not prove responsive to the idea. The civilization of the west owes many things to Asia. And the utilization of the bean is everywhere easy since there is practically no deterioration, no matter how far it is shipped."

1910. *Matieres Grasses (Les) (Paris).*1911. Analyses de soja [Analyses of soya]. 4(33):2083. Jan. 25. [Fre]

• ***Summary:*** "Le Jardin Colonial recently conducted a number of nutritional analyses of soybeans and soybean products," including white (yellow) and black soybeans from northern China, yellow soybeans imported to Denmark from China, dehulled yellow soybeans, soy flour, soybean cake, soybean bread, shoyu.

1911. Cornwell (G.G.) & Son. 1911. Unusual flavorings (Ad). *Washington Post.* Jan. 31. p. 7.

• ***Summary:*** "The art of good cooking consists chiefly of a judicious use of flavorings and relishes. In no other store will you find such a large and unusual assortment.

"Tippo Saibs. Curry Powder. Surfines Capers. India Soy Sauce. Escoffier Sauce..." "Importing grocers." [Est.] 1865. Address: 1412-18 Penna. {Pennsylvania} Av., Washington, DC].

1912. Shaw, Norman. 1911. The soya bean of Manchuria. *Shanghai, Statistical Department, Inspectorate General of Customs. China Imperial Maritime Customs. II. Special Series* No. 31. 32 p. Also published by P.S. King & Son, 2 Great Smith St., Westminster, London SW, England. [6 ref. Eng]

• ***Summary:*** Contents: Introductory. Varieties. The plant. Soil and climate. Cultivation. Soil infestation. Yield. Uses of the soya bean: In the Far East: Bean sauce or soy (called shoyu in Japan [whence the name "soya"] and *chiang-yu* in China), the Chinese paste *chiang* (incl. *ta chiang* {great, made with yellow soybeans} and *hsiao chiang* {small, made with soybeans and maize}), tofu (incl. firm tofu {*tou-fu kan-tzu*}, tofu curds {*tou-fu nao*, curded with calcium sulphate instead of brine}, curd skin or yuba {*tou-fu p'i*}, layers of tofu pressed in cloth [pressed tofu sheets] {*ch'ien-chang tou-fu*}, and "frozen curd" {*tung tou-fu*, tofu that is frozen then dried}), bean flour, bean refuse {okara}, bean oil for food or industrial uses. Beancake and its uses. Uses in the Western world (beancake in Europe, and bean oil in Europe). The bean oil and cake industry in Manchuria. Trade development (statistics on exports from Newchwang have been kept since 1864). Beginnings of the European trade. Bean oil and cake production in South Manchuria. Chief sources of supply. Map references. Supplementary note.

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Appendixes: 1. Table showing values (in Haikwan taels) per picul of [soya] beans, beancake, and bean oil at Newchwang, 1864-1909. 2. Graph showing monthly values (in silver yen) at Dairen of beans, bean oil, and beancake, 1907-10. 3. Table showing estimated [soya] bean production of Manchuria in normal years, compiled by the South Manchuria Railway Co. in 1909. 4. Estimates of [soya] bean production of Manchuria for the last 5 years by province and territory, compiled by the South Manchuria Railway Company in 1909: Fengtien province 1,092,350 tons. Kirin province 626,500 tons. Heilungkiang province 280,250 tons. Grand total for all Manchuria: 1,999,100 tons. Estimated soya bean production in Manchuria has increased from 600,000 tons in 1906 to a peak of 1,500,000 tons in 1908, to 1,400,000 tons in 1910. Percentage contributed by various colors of soya bean in 1910: Yellow 80.1%, green 9.4%, white-eye 3.8%, black-eye 3.2%, and black 3.4%. 5. Table showing total export of [soya] beans and bean products from Manchuria, 1909. For export of soya beans: Dairen 51% of total, Suifenho [Suifenhe] 25%, Newchwang 23%. For export of bean cake: Newchwang 50%, Dairen 44%, Antung 2%. For export of oil: Newchwang 75%, Dairen 21%, Harbin 1%. The writer frequently refers to Sir Alexander Hosie's book on Manchuria (1901, 1904).

The introduction begins: "It is only in the last three years that soya beans have become important in intercontinental commerce, and their rapid emergence from obscurity has, indeed, been one of the most remarkable commercial events of recent times. The circumstance that 'the rise of a great export trade in beans is that fact that overshadows all others,... the soya bean thus taking at a bound a position equal to that of tea in the list of exports and, with the addition of beancake, even challenging the position of silk at the top of the list'"* (Footnote: * = "Statistical Secretary's Report on the Foreign Trade of China in 1909").

The "bean district *par excellence* is the upland country beyond Moukden [Mukden] where the hills... are overlaid with wind-deposited soil..."

"Cultivation: In Manchuria the beans are produced almost entirely by hand methods. The plough, which is drawn by quaintly mixed teams of oxen, mules, and donkeys, has only one handle and a rough steel-tipped cutter. The seed is sown by hand, on top of the drills, in April, and is covered by hand. A heavy hoe is used for a good deal of the turning and breaking. When the plant appears the earth is heaped up round it, so that the roots may derive the maximum of nourishment from the soil."

"The harvest takes place in September, and the pods are usually harvested before they are quite ripe, as otherwise they are liable to burst on drying, a loss of seed being thus occasioned. The plants are pulled up by hand or cut with a straight-bladed sickle in Manchuria, and collected into small heaps in order to facilitate drying, and, when dry, the seed is separated by means of a cylindrical stone roller having longitudinal cuts on its surface, which is dragged over the plants by a mule as they lie on the threshing-floor. After this primitive threshing operation has been completed, the beans are winnowed in the usual Chinese method–that is, by throwing them against the wind. The only manure used is a compost of stable manure and earth, which is often taken from the miry pools formed in the roads–the despair of the carter but a boon to the farmer. In countries where chemical manures are used, it is only necessary to apply potash and phosphoric acid where they are lacking, for nitrogenous manure is unnecessary, owing to the property which the soya bean possesses, in common with other leguminous plants, of obtaining nitrogen from the air by means of colonies of bacteria."

Yield: In 1867 the Rev. A. Williamson, who travelled in the upper Sungari district at the time and who appears to have been a very close observer, estimated a maximum yield of 2,000 lb., or 15 piculs, to the acre.

The Chinese paste *chiang* is not the same as the Japanese paste miso. Chiang "is made by farmers and eaten with fish, meat, and vegetables, while the more expensive Chinese soy [sauce] is only made by wealthy families and restaurant keepers and is not consumed by the very poor. There are two kinds of *chiang: ta* (great) and *hsiao* (small)." Describes in detail how each is made. Great chiang is made from yellow soybeans, salt, and water. Small chiang contains a small amount of maize (p. 7).

Industrial uses of bean oil: (1) As an illuminant, where it has not been superseded by kerosene oil. One advantage is that "no lamp is needed to hold it, the wick being inserted into the basin or plate containing the oil." (2) As a lubricant, bean oil is used to a very considerable extent in north China and Manchuria "for greasing axles and parts of native machinery" (p. 8-9).

In China, bean oil "is used as a substitute for lard, in cooking. Although it is inferior to rapeseed and sesamum oils for this purpose, these oils cannot compete with it in point of price... In spite of its unpleasant characteristic odour and unpalatability, the poorer classes in China consume it in its crude state, but among the rich it is boiled and allowed to stand until it as become clarified" (p. 8). In Europe "Refined bean oil may be used as a salad dressing in place of other oils (but, owing to its unpleasant odour, is usually mixed with an oil of animal origin or with rapeseed oil), or in the manufacture of margarine, when a greater percentage of soya oil than of copra oil is allowed" (p. 10).

Traditional methods of pressing out the oil yield only about half of that present in the seed (9% of the weight of the beans); the rest is left in the cake, and this distracts very much from its fertilizing value. "By gasoline extraction the beans give up practically all their oil, which, as refined by this process, is a clear, pure liquid, hardly resembling the muddy, dark oil produced in the old way" (p. 14).

Photos on unnumbered pages show: (1) Seven varieties

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of soya beans: Large black, small black, large flat black, small flat black, two green, and two yellow. (2) Soybean root nodules. (3) A massive granite roller for crushing beans. (4) "Steaming vat with grating on which [soya] beans are placed in gunny bags during the steaming process." (5) Native bean press, showing cakes in receptacle and log wedges driven in to press out the oil. (6) Modern bean press [hand turned screw?] set up in bean mill. (7) Oil-motor and crusher. (8) Modern crushing machinery. (9) Piles of beans in sacks awaiting loading onto trains at Changchun. (10) Color fold-out map titled [soya] "Bean districts of Manchuria." A schematic diagram (in the form of a rhombus / diamond) shows the probable relationships of the different groups of soya beans based on their color. A beautiful map, approximately 17 by 22 inches, is attached between page 26 and page 27. "Wuchang" [not Wochan] is in the area labeled "Yellow Beans" in the map. Other labeled growing areas on the map include "Grasslands," "White eye," "Black beans" [soy], "Maize" and "Green beans." The major railways, rivers, roads, and towns / cities (with their Chinese characters) are shown. The major soybean markets (underlined) are Fenghwa / Maimaikai, Kungchuling, Changtufu, Tungkiangtze, Sinminfu, Tienchwangtai, Newchwang, Kaiyüan, Tiehling, Mafengkow, Moukden, Takushan, Antung, Harbin, and Shwangcheng.

Shaw finished writing this yellow book on 31 December 1910.

Note 1. This is the earliest document seen (July 2000) that mentions the South Manchuria Railway Company in connection with soybeans. This company was run by Japan. According to the *Encyclopedia Nipponica* (vol. 22, at "Minami"), the South Manchuria Railway Company (*Minami Manshu Tetsudo K.K.*) was established in 1905 based on the Portsmouth Treaty ending the Russo-Japanese War; Japan took over the rights to the railway from Russia. The company started to actually run the railway in 1907.

Note 2. This is the earliest English-language document seen (Feb. 2004) that uses the term "frozen curd" to refer to dried-frozen tofu.

Note 3. This is one of the earliest English-language documents seen (Sept. 2006) that repeatedly uses the word "bean" (not preceded by the word "soya") to refer to the soya bean.

Note 4. This is the earliest English-language document seen (Oct. 2008) that uses the term "tou-fu p'i" to refer to yuba.

Note 5. This is the earliest English-language document seen (April 2012) that uses the term *chiang-yu* to refer to Chinese soy sauce. Address: 4th Asst., Custom House, Dairen.

1913. Clerget, Pierre. 1911. La question du Soja [The question of the soy bean]. *Revue Generale des Sciences (Pures et Appliquees)* 22(3):100-01. Feb. 15. (Chem. Abst. 5:1637). [2 ref. Fre]

• ***Summary:*** Contains a brief description of the soybean and discusses its commercial importance, distribution, soil requirements, the value of the oil and its uses, and the composition and commercial value of the cake. During the past 2 years, the large amounts of soybeans exported from Manchuria to Europe have called attention to this plant. It is cultivated all over China, but especially in Manchuria (in the Liao Valley, where it is the second most important crop after sorghum), Japan, Korea, and Indo-China. In China it is often cultivated with maize; it demands a great of work, care, and good soil. The main exports come from the Manchurian ports of Newchwang and Dairen, and from Vladivostok. In 1908 some 859,200 tonnes of soybean and cake were exported from Manchurian ports, up from only 88,900 tonnes in 1905. Until 1908, Japan was the principal outlet for Manchurian soybeans (615,900 tonnes), but at the start of that year, exports to Europe began: 69,200 tonnes to Great Britain, 21,390 tonnes to France, 7,290 tonnes to Holland, etc.–for a total of 204,440 tonnes.

According to chemical analyses made at the Colonial garden of Nogent-sur-Marne, Manchurian soybean seeds contain 17.64% oil and 33.5% protein; yellow varieties contain more oil than black varieties. The soybean is used as a forage plant and for soil improvement, but its most important role in China and Japan is as a human food among people who consume little meat. According to Bloch (1908), it is most widely used in making a sauce [soy sauce] and a cheese [tofu]. It is also used to make numerous pastes and a sort of soymilk (*lait de soja*).

It also has industrial uses, thanks to its oil content of 16-18%. Indigenous mills can obtain only 8-10% oil, but modern hydraulic presses can obtain 12-14%. The oil and cake have made the soybean rise so rapidly on European markets. The oil, which has an agreeable smell and taste, is widely employed for culinary purposes in Manchuria. In England, as in France, it is used in making soap and margarine. It is more drying that cottonseed oil and can likewise be used in making paints. Soybean cakes (*Les torteaux de soja*) would give the same results as cottonseed cakes in terms of milk yield from dairy cows. As a fertilizer, they are used throughout Japan and on the sugarcane plantations of southern China.

The soybean could be introduced to Indo-China where, even if it has to compete against Manchurian soybeans, it could be service locally for soil improvement in the rice fields and as a food in the densely populated districts where there is hardly any room for animals, or where the animals have been decimated by disease. Address: Professeur à l'Ecole supérieure de Commerce (Graduate School of Commerce) de Lyon [France].

1914. Lea and Perrins. 1911. Fish. It is essential, with such delicate fare, that a *good* sauce be used, otherwise the flavour

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may be spoiled instead of being enhanced (Ad). *Times (London)*. March 3. p. 4, cols. 6-7.
• ***Summary:*** "The right sauce is Lea & Perrins' sauce. The original and genuine 'Worcestershire.'" At the top of this display ad is an illustration of a fish is the water with a hook and fishing line in its mouth; nearby is a fishing net. At the lower left is a royal seal, and below it the words "By Royal Warrant to H.M. The King." Address: [England].

1915. Nishimura, Torazô. 1911. Shôyu kôbo aruhaa no seijô (zoku) [On the character and form of the shoyu yeasts "alpha"]. *Nogaku Kaiho (J. of the Scientific Agricultural Society, Japan)* No. 104. p. 23-62. March 5; No. 105. p. 14-55. April 5. [Jap]
• ***Summary:*** In the English-language table of contents, shoyu is called "Soya." Address: Nôgaku-shi, Japan.

1916. Le Goff, Jean. 1911. Le soja dans l'alimentation des diabétiques [Soybeans in diabetic diets]. *Gazette des Hopitaux* 84(27):399-402. March 7. [8 ref. Fre]
• ***Summary:*** The author, a woman who has written more than 15 articles on diabetes mellitus (*diabète sucré*), reviews the literature on that subject as it relates to soybeans. Diet plays an important role in the treatment of diabetes mellitus. Takeuchi, in Tokyo, Japan, was the first to point out the presence of a very active urease in soybeans. Soyfoods are now available in France for there is a factory, located not far from Paris, that makes them under the direction of Chinese [Li Yu-ying]. Armand Gautier, in *L'Alimentation et les Régimes* recommended adding 12-15 gm of sodium bicarbonate per kg of soybeans that one is going to cook. The author feels that "except for shoyu, all soyfoods have a peculiar flavor and I believe that one will meet with many difficulties in trying to make them acceptable to the European palate."

She gives five recipes for the use of soybeans in diabetic diets: 1. Roasted: "The soybean can be eaten roasted or grilled like our chestnuts (*grillé comme nos châtaignes*). It is sufficient to run them through a chestnut- or coffee roaster. If the soybeans are imported, they must be soaked previously in lukewarm or soft water." 2. Whole soybeans with butter. 3. Soybeans sauteed with vegetables. 4. Cooked soybean puree. and 5. Bread or cake with soybeans (boiled until soft with sodium bicarbonate).

She encourages the French to grow their own soybeans for use in diabetic diets. In 1911 the most widely grown varieties were le Soja d'Etampes and le Soja de Podolie [Podolia]. "In conclusion, the introduction of the soybean to our country for use as food is justified by the important role its oils can play in the feeding of diabetics. I would add that the leaves of this plant, which are equally nutritious, can constitute a precious resource for agriculture, and that its culture, after being practiced for a number of years, can improve the soil considerably. Under these conditions, I would consider that serious and ongoing trials should be undertaken, and I call this subject to the attention of those in public power who are interested in the question, and would be able to render an important service to the numerous diabetics and to agriculture."

Photos show: (1) A small soy bean plant in the ground. (2) A field of soy bean plants growing in the suburbs west of Paris.

Note: This is the earliest French-language document seen that refers to soynuts, which may be made by roasting soybeans like chestnuts. Address: Laureat de la Faculté de Médecine de Paris.

1917. *Times (London)*. 1911. Wills and bequests. March 31. p. 11, col. 2.
• ***Summary:*** "Mr. Francis Barnitt, of Woodside, Larkhill, Worcester, a member of the firm of Lea and Perrins, sauce manufacturers, who died on February 27, aged 77, left estate valued at £118,401 gross, and net personalty [personal property], £114,497. He bequeathed £250 to the Worcester Infirmary, unless he had given such a sum in his lifetime." Address: [England].

1918. Mitsuda, Ryuichi. 1911. Notes on yeasts of "shoyu"-mash [moromi]. *J. of the College of Agriculture, Tokyo Imperial University* 1(3):345-56. March. German summary in Zentralblatt fuer Bakteriologie, Series II. 37:289 (1913). [2 ref. Eng]
• ***Summary:*** This is the third Japanese investigation on the yeasts in shoyu mash (*moromi*). "Three samples were used for the purposes of isolation, one from Noda, one from Tatsuno, and the other from Handa. Eight different varieties of yeast, 3 bacilli and 3 mould fungi were obtained from them." Among these was a red yeast and two film-forming yeasts. The first yeast variety discovered by the author "ferments sucrose, raffinose, dextrose, etc. but not lactose etc. (Cf. Table 2)."

The author believes that the five varieties of yeast he describes are different from the *Saccharomyces Soja* discovered by Saito, since they ferment "Sucrose and raffinose, while his does not ferment either" (p. 351).

Note: This is this is the earliest English-language document seen (March 2002) that contains the word "raffinose" (See p. 347, 351, 353). Address: Japan.

1919. Quintus Bosz, J.E. 1911. De samenstelling van Indische voedingsmiddelen [The composition of Indonesian foods]. *Bulletin van het Kolonial Museum te Haarlem* No. 46. 261 p. March. Also published in Amsterdam by J.H. de Bussy as a book. [8 ref. Dut]
• ***Summary:*** The nutritional composition and the source of information is given in a table for the following: Soybean seeds (p. 74-77). Soybean oil (*sojaboonen-olie*) (p. 76-77). Soybean flour or meal (p. 154-55). Soybean biscuit

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(*Beschuit*, 170-71). Japanese soy sauce and soybean tempeh (*Japansche soja, Tempé kedeleh* p. 242-43). Indonesian soy sauce (*Ketjap, Bataviasche soja* p. 244-45). Firm tofu (*Tao-koan*, 79.8% water, p. 244-45). Address: Dr., naar onderzoekingen in het Laboratorium van het Koloniaal Museum verricht onder leiding van Dr. M. Greshoff.

1920. Takahashi, Teizô; Yamamoto, T. 1911. Seishu tane kôji-chû no kôji-kin to shôyu mata wa tamari kôji-chû no kôji-kin to no hikaku kenkyû [Comparison of *Aspergillus oryzae* in various koji of sake, shoyu, and tamari]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 37, p. 369-90. March. [Jap]
Address: 1. Jozo Shikensho, Shokutaku Nôgaku Hakase; 2. Ditto, Gisho.

1921. *Daily Colonist* (*Victoria, BC, Canada*). 1911. On the waterfront: Panama Maru from Far East. Osaka Shosen Kaisha liner reached the outer wharf yesterday from Yokohama and other Oriental ports. 103(412):14. April 6.
• ***Summary:*** "The steamer Panama Maru of the O.S.K. line reached the outer wharf yesterday after a fair passage from Yokohama with 31 passengers and a good cargo including 444 bales of silk worth a quarter of a million dollars. In the cargo for Victoria was a shipment of 500 tubs of soya bean oil, the product of the soya bean grown in Manchuria in which a profitable trade has been worked up during the past few years, 450 bags of peanuts, 251 cases of rattan furniture, 150 mats of rice, 140 tubs of sake.... 100 tubs of soy [sauce] and some general merchandise."

There is a famine in the interior of China. A new Japanese tariff, which goes into effect July 1st, has caused a rush of shipments to ports in that country.

1922. Li, Yu-ying. 1911. Charcuterie de soja [Cold cuts and meatlike products from soya]. *French Patent* 428,718. 2 p. Application filed 20 April 1911. Granted 6 Sept. 1911. [Fre]
• ***Summary:*** "This invention concerns the products of the pork-butcher's shop (*charcuterie*) such as fresh sausages (*saucesses*), pâtés, etc. to which are added a soy-based product (*un produit à base de soja*) (*pois chinois*). The preparation of these products of the pork-butcher's shop involves the use of tofu (obtained by the coagulation of soymilk) *fromage de soja* (*obtenu par la coagulation du lait de soja*) to replace ordinary meats in part or in totality, tofu being a sort of vegetable meat (*le fromage de soja constituant une sorte de viande végétale*).

The author then discusses how to cook tofu and use it in to make fresh sausages (*les saucisses*), large dry sausages or salami, (*saucissons*), pâtés, etc. Aromatics (*aromates*) which can be used for seasoning are soy sauce, salt, pepper, and the oil and juice of onions.

Likewise, tofu can be mixed with ordinary meat to obtain charcuterie products. Note:

Note: This is the earliest document seen (Aug. 2002) in the Western world concerning soy-based meat alternatives or a soy-based meatless sausage, or soy-based pork alternatives. Address: Resident of France (Seine).

1923. Bontoux, Emile. 1911. Le Soja et ses dérivés [The soybean and its products]. *Matieres Grasses* (*Les*) (*Paris*) 4(36):2195-99. April 25; 4(37):2239-43. May 25; 4(39):2326-29. July 25; 4(40):2364-66. Aug. 25; 4(41):2405-07. Sept. 25. [48 ref. Fre]
• ***Summary:*** Contents. Introduction. The plant: origin and history, species and varieties, culture, and production: USA, Japan, Manchuria, France, England, China, Korea, Indochina (it is cultivated for the needs of the population in Cochin China [especially in the provinces of Chaudoc and Baria], Annam, Tonkin, Cambodia), Formosa, Java, India, Africa. The soybean–a food plant: The plant, the seed, large table showing many analyses from many countries of the chemical composition of many soybean seed varieties.

Introduction to food products made from soybeans in East Asia. Shoyu [soy sauce] (and koji). Miso. Natto (from Japan). Le Tao-yu (a Chinese condiment also widely used in Japan. It is a thick, clear liquid made from black-seeded soybeans) Tao-tjiung (doujiang, from China). Tuong (from Annam). Tofu. Li Yu-ying. Table showing composition of powdered soymilk, fresh tofu, and soy flour.

The soybean–an oilseed plant. The soybean as an oilseed in the Far East. Table showing exports of soybean cake and oil from various Manchurian and Chinese ports in 1908 and 1909. The soybean as an oilseed in Europe and the United States. Table showing imports of soybeans to various British ports in 1909 and 1910 (the leading port by far is Hull, followed in 1909 by Liverpool, London, Bristol Channel, Scotland, and Other ports [Rochester, etc.]). Table showing exports of soy oil from Great Britain in 1910: To Germany, Austria, Australia, USA, Belgium, Denmark, Egypt, France, Holland, Italy, the Indies (*Indes*), Norway, Russia, Sweden, other, total (115,372 barrels, each weighing 175 kg). Discussion of soy oil and cake in most of the above countries.

Trade in soybean seeds: Mitsui Bussan, Manchuria, England, China, Japan. Soybean cake.

Soy oil: Physical and chemical properties. Applications and uses as food and in industry: Margarine, for illumination, soaps, as a drying oil, paints and varnishes, linoleum, artificial rubber. An extensive bibliography is at the end of the last article in the series.

Note: This is the earliest document seen (May 2010) concerning the cultivation of soybeans in Cambodia. This document contains the earliest date seen for the cultivation of soybeans in Cambodia (April 1911). Earlier documents imply that soybeans were being cultivated in Cambodia by 1900, and it is highly likely that they were being cultivated for at least a century before that time. Address: Ingénieur-

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chimiste E.C.I.L., France.

1924. Hattori, H. 1911. Ueber die Brauchbarkeit japanische Soja als Kulturmedium fuer die bakteriologischen Untersuchungen [On the usefulness of Japanese shoyu as a culture medium for bacteria]. *Botanical Magazine (Tokyo)* 25(291):97-103. [8 ref. Ger]

• ***Summary:*** The author refers to shoyu in German as "Soja" and discusses one brand named Yamadju [Yamaju]. "Japanese shoyu was first used by Prof. Miyoshi of this Institute as a liquid cultural medium for various molds. He recommended a mixture of 20 parts shoyu, 25 parts concentrated cooked onion juice, 5 parts raw sugar, and 5 parts distilled water." Address: Botanisches Institut der Kaiserl. Universitaet in Tokyo.

1925. Nishimura, Torazô. 1911. Tamari miso sonota miso no kôbo kinrui ni kansuru kenkyû [Studies on the yeasts of tamari miso and other misos]. *Nogaku Kaiho (J. of the Scientific Agricultural Society, Japan)* No. 106, p. 21-50. May 5; No. 107, p. 8-48. June 6; No. 108, p. 20-40. July 5. [Jap]

1926. Teichmann, William C. 1911. Soya-bean industry in Germany. *Daily Consular and Trade Reports (U.S. Bureau of Manufactures, Department of Commerce and Labor)* 14(112):680-81. May 13.

• ***Summary:*** "The recent arrival at the port of Stettin, by direct shipment from Vladivostok, of 4,823 tons of soya beans, valued, according to the local press, at $166,600, marks the entry into this market of a new raw material for industrial exploitation.

"Following the example of Hamburg manufacturers, Stettin capitalists have organised a company with a capital of 1,500,000 marks ($357,000) for the utilisation of the soya bean for industrial purposes. The removal of the German duty on these beans in March, 1910, will develop an industry of importance for several reasons: First, as a competitor of linseed oil, soya-bean oil can be sold at a price one-third lower than the former; second, as a valuable oil for soap manufacture, where such oils can be substituted; third, for cattle-feed purposes the residue remaining in the process of oil extraction can compete with the American cottonseed-oil cake. Meal can also be produced therefrom which, when mixed in correct proportion with wheat flour, makes an edible bread or biscuit, provided the meal has been manufactured by the extraction process, which removes the 8 per cent of oil present in the ordinary meal.

"Some analyses have shown the bean to yield as high as 23 per cent of oil, but this is exceptional, and the average percentage is figured to amount to about 17 per cent; loss in manufacturing reduces this to 8 or 9 per cent. The ordinary meal contains about 8 per cent of oil and 41 per cent of protein, but by a refining process 90 per cent of this oil can be extracted, only 1 per cent of fat remaining in the meal, which has about 45 per cent of protein and 28 per cent of carbohydrates."

"Uses of the bean–Its culture outside of China: In Japan soya-bean oil [sic, soy sauce] is still used as a favored aromatic constituent of sauces, and enormous quantities are said to be absorbed there for this purpose. The bean is much used as a spice [sic]. A cheese called tofu is also prepared therefrom. The cakes are useful to a certain extent as fertilizers and as fodder, although definite conclusions as to the value of this feed have not yet been reached thus far... Scandinavia has become the largest consumer of the cakes made in England, Denmark alone having imported about 150,000 tons during the 1909 season.

"Efforts to cultivate the soya bean on European soil have been made as far back as 40 years ago, especially in Germany and Hungary, but as yet without success. Some investigations resulted in the alleged discovery that all these failures were to be ascribed to the absence of a specific bacterium, present in the plants in Manchuria but absent in those grown in Europe; in fact, not until this so-called *Knoellchenbakterium* [root nodule bacterium] had been cultivated in Japan and the seed inoculated therewith was the plant brought to growth in Europe. In Italy and southern France the cultivation of the bean is said to have shown better results than in Germany.

"The demands made upon the yield in Manchuria, the hinterland of Kiaochow, and Shantung have created the necessity for the cultivation of this bean in other countries, and the Tropics and subtropics, as best adapted, will probably take up its production."

Note 1. This is the earliest English-language document seen (Nov. 2005) that uses the term "cottonseed-oil cake" (plural or singular) to refer cotton-seed cake.

Note 2. Stettin [Szczecin] is the largest seaport in Poland (as of Feb. 2008); it is located on the Baltic Sea and the Oder River. Address: Consul, Stettin.

1927. Lea and Perrins. 1911. Lea & Perrins' sauce for travelers and sportsmen (Ad). *Times (London)*. May 26. p. 6, col. 6.

• ***Summary:*** "A most delicious and appetizing relish for meat dishes, fish, cheese, salads, preserved meats and fish, sandwiches, &c. The only original and genuine 'Worcestershire.'"

Near the upper left this display ad is an illustration of huge ocean liner steaming away at sea. At the center of the ad is a circular illustration of well-dressed men and women seated at a table on board ship; a bottle of what appears to be Worcestershire sauce is at the front right corner of the table. At the lower right is a large royal seal, and above it the words "By Royal Warrant to H.M. The King." Address: [England].

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1928. Dahle, Alfred. 1911. Ueber das fette Oel der Sojabohne [On the oil of the soybean]. Dissertation from University of Jena. Published in Neustadt by J.K.G. Wagner (Wagnerschen Buchdruckerei). 43 p. 22 cm. See Jena Dissertations 1910-11. v.1, no. 7. [28 footnotes. Ger]

• ***Summary:*** The author's advisors were Prof. Dr. H. Matthes, and Prof. Dr. Haussner. Contents: Introduction: Nomenclature, history in Asia and Europe (Kaempfer, Haberlandt), taxonomy, chemical composition, Maggi and shoyu, miso, tofu, soy bread for diabetics, coffee substitute, soy oil in China and Japan, in England and Germany, use in soaps and as a substitute for linseed oil, constants (such as iodine number), fatty acids, the work of Prof. Matthes. Experimental part.

In Japan and China, two fermented products are made from soybeans: Shoyu or bean sauce (*Bohnensauce*) and miso. Shoyu is enjoyed with almost all foods as a seasoning, and for quite some time has been exported in abundance to England and America, where it is used in the manufacture of English and American sauces. Shoyu is even used in the well-known Maggi seasoning. With respect to its nutritional value and stimulating effect (on the appetite), shoyu sauce (*Shoyu-Sauce*) is somewhat comparable to meat extract. For the preparation of shoyu sauce, milled wheat, soybeans broken into large pieces then cooked until half soft, water, and table salt are combined in specific proportions and allowed to ferment in large vats. The fermentation lasts anywhere from 8 months up to 5 years.

The preparation of miso seems similar to that of shoyu except that barley or rice are used [instead of wheat]

Moreover, in Japan, a type of raw cheese, so-called "bean cheese" (*Bohnenkäse*), is made from soybeans (*Soja*); in Japan it is called tofu (p. 8). (p. 8).

Biography: The author was born on 20 March 1884, in Halberstadt, the son of a chemist, who was later the director of a sugar factory. Address: Halberstadt, Germany.

1929. Takahashi, Teizô; Yamamoto, T. 1911. Seishu tanekôji-chû no kôjikin to shôyu mata wa tamari kôji-chû no kôjikin to no hikaku kenkyû [Comparison of *Aspergillus oryzae* in koji of sake, shoyu, and tamari]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 32(5):454-76. May. [Jap]

1930. Beltzer, Francis J.-G. 1911. Études sur la caséine végétale du "soja" et ses applications [Studies on the vegetable casein of soybeans and its applications]. *Revue Scientifique* 49(23):716-20. June 10. [4 ref. Fre]

• ***Summary:*** The author did his research in Cochin China [today's Vietnam], then a French colony. This is a very original and important article.

Contents: Introduction. Vegetable milk [soymilk]. Vegetable cheese [tofu and fermented tofu]. Industrial vegetable casein (*La caséine végétale industrielle;* i.e. soy protein). Production of vegetable casein: Cleaning and washing the soybean seeds, extraction of the oil (which can be used in soap), extraction of the casein. Industrial [non-food] applications of vegetable casein: Paint, paper coating, Galalith, etc. Conclusion.

The preparation of vegetable milk and vegetable cheese are widely practiced today in Cochin China and in Annam [today's North Vietnam], as recently discussed by Mr. Henri Labbé in *Revue Scientifique* (11 Feb. 1911).

Soymilk (*lait végétal*). After describing the process for preparing soymilk, the author notes: This soymilk serves for the feeding of infants and for general nutrition (*Le lait sert à l'allaitement des enfants et à l'alimentation générale*); it can also be used for the production of a vegetable cheese (*fromage végétal*).

Tofu (*fromage végétale*): When vegetable milk is treated with a mineral salt or an acid, playing a role analogous to that of rennet, it produces curds through coagulation, resembling those of ordinary casein. By draining and washing, one obtains a sort of white cheese (*fromage blanc*) which plays a major role in the nutrition of the peoples of the Far East. In Indochina the milk is coagulated by the addition of a very small quantity of a powder called Tchach-Kao or plaster [calcium sulfate], which comes from a selenite pulverised by the action of fire.

Tofu is generally eaten fresh, the same day it is made, but it can also be preserved by salting or smoking. In Annam, three main varieties of tofu are found: 1. Fermented tofu, gray or yellow in color, with a flavor resembling Roquefort cheese; 2. White or salted tofu resembling goat's cheese; 3. Baked or smoked tofu, resembling Gruyere cheese. At the market in Saigon, Chinese sell regular tofu to the natives for one-tenth the price of Gruyere cheese.

Industrial vegetable casein: Defatted soybean meal from oil presses is ground between millstones with cold water to give a slurry that is filtered to obtain soymilk. The soymilk is heated to boiling, then calcium sulfate is added to precipitate the protein, which is collected (just like tofu curds) on filter cloths. The presscake is mixed with forage and molasses, then fed to livestock. The curds are then dissolved in diluted soda lye (sodium hydroxide), filtered, precipitated with acetic acid. The finely divided precipitate is filtered out, washed on the filter, left to evaporate in the open air, then dried to a yellowish powder at a low temperature. The casein thus obtained is white, and, from an industrial viewpoint, very pure. It is insoluble in water, but soluble in dilute caustic alkalies and in ammonia. It exhibits almost precisely the same properties as the casein obtained from ordinary milk. It is found on experiment to be susceptible of the same industrial applications as animal casein, and may come to largely supersede this because of lower cost. 100 gm of soybeans yields about 25 gm of this "vegetable protein," which has both food and industrial uses.

Note 1. This is the earliest document seen (June 2011) concerning isolated soy protein. The author says that his

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"vegetable protein" has both food and industrial uses.

Note 2. This is the earliest French-language document seen (Aug. 2003) that uses the term *caséine végétale du "soja"* or *caséine végétale industrielle* to refer to isolated soy protein.

Industrial applications of vegetable casein: "Like animal casein, industrial vegetable casein, free of fat or buttermilk, can be used in a host of applications. It can be used in making paints, and for the preparation of moisture-resistant products. Note 3. This is the earliest document seen (Oct. 2001) that mentions the use of soy protein in paints.

"It may be used also for the sizing (coating used to fill the pores) of paper, which consumes such large quantities of ordinary casein. Being soluble in ammonia and caustic solutions it is capable of forming a smooth and solid size.

Note 4. This is the earliest document seen (Oct. 2001) concerning the use of soy protein as a sizing for paper.

"Other uses are in certain manufacturing processes in the preparation of silks and artificial textiles, as well as of rubber, leathers, plastic materials, films, photographic emulsions, etc.

Note 5. This is the earliest document seen (Sept. 2001) concerning the use of soy protein to make silks, artificial textiles, or other industrial (non-food) fibers.

Note 6. This is the 2nd earliest document seen (Dec. 2001) concerning the use of soy protein as a raw material for making plastics.

Large amounts of animal casein are at present employed in the manufacture of 'Galalith,' from which are made numerous objects which imitate articles made from ivory, tortoise-shell, bone, horn, etc. The Soya casein, when free from fats, is equally well adapted for these purposes.

"Formol acts upon this casein in the same way as on ordinary casein, rendering it insoluble. Hence it may be used for the water-proofing of fabrics, straw hats, etc., as well as for the preparation of sizes and dressings... A solution of vegetable casein and borax can be successfully utilized in the process of calico printing."

"It will be seen from the foregoing rèsumè, that the fabrication of vegetable casein for industrial purposes has immense possibilities, only exceeded in importance by the alimentary value of its food products for man and for beast.

Note 7. *Webster's Third New International Dictionary* (1963) defines Galalith (a registered trademark)–as "used for a hornlike plastic [also resembling ivory or bone] made from casein [milk protein] and formaldehyde and used especially in making small molded objects (as buttons, beads, or combs)." This is the earliest document seen (Nov. 2003) that mentions Galalith in connection with soy protein. Galalith, "a new horn-like product from cow's milk," was sold commercially by Nov. 1905 and the process was protected by patents "in all civilized countries" (*Monthly Consular and Trade Reports*, USA. 1905. No. 302. Nov. p. 243.)

Conclusion: "A Chinese factory has already been established on the outskirts of Paris (at Vallées near Colombes) to make food products based on soya (*produits alimentaires à base de Soja*). This factory now produces tofu (*Caséo-Sojaïne*) and the following food products: Soy flour, soy bread, soy sauce, sweet soya preserves (*confiture de Soja*), soymilk (*lait de soja*), fermented soymilk (*lait de Soja fermenté*), tofu (*fromage de Soja*), etc.

Note 8. We wonder: Was Beltzer influence more by Li Yu-ying, or was Li influenced more by Beltzer? Both did independent and original research, however by Dec. 1910, some 6-7 months before this article was published, Li had applied for two French patents and three British patents which describe how to make various soy products in detail–including many of those products described by Beltzer. Therefore, we believe that Li influenced Beltzer more than Beltzer influenced Li.

"The Indochinese prepare, in addition, a fermented liquor, a concentrated milk, an alimentary flour, and a casein which forms the essential food of the people... Many Europeans are preoccupied with extracting part of the nutritive principles that exist so abundantly in the seeds, for the feeding of armies at war and of colonial troops... Hopefully the question of food uses of soy will be taken up at the same time as the manufacture of industrial casein, and that this will permit the utilization of the immense resources that our Indochinese colonies offer as raw materials."

Note 9. Later in 1911 this article was summarized in *Scientific American* Supplement and printed as a special booklet.

Note 10. This is the earliest document seen (May 2000) that uses the term *la Caséo-Sojaïne* to refer to a food–clearly to tofu. Li Yu-ying coined this term, apparently after considerable thought and research. However the author also uses the term *fromage végétale* to refer to tofu–perhaps more generically. Martine Liguori, a native French speaker who is interested in tofu, noted in an interview (May 2000): "This term for tofu doesn't sound foreign. Rather it sounds somewhat scientific, learned, and upper-class, as from the techno-elite. If you don't know what it means, that's because you are not well enough educated. In France, people will adopt something that is upper class, but they resist foreign things–even foreign words. This whole idea originated in France when Napoleon created the *Grandes Ecoles* (French graduate schools) to develop an intellectual elite to replace the royal elite."

Note 11. This is the earliest document seen (April 2001) that mentions dried tofu. Address: Ingénieur-chimiste.

1931. *Farben-Zeitung*.1911. Die Sojabohnen-Industrie in Deutschland [The soybean industry in Germany]. 16(37):2067. June 10. [Ger]

1932. Figart, D. Milton. 1911. Notes from Malaysia. *Daily Consular and Trade Reports* (*U.S. Bureau of Manufactures*,

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Department of Commerce and Labor) 14(135):1114-16. June 10. See p. 1116.

• ***Summary:*** "The valuable soya bean: The soya bean has lately come into some prominence by reason of its extensive uses in the manufacture of oil and soap, and also because it forms return cargoes for tramp steamers bringing coal to the East. Dr. Gilbert Brooke, port health officer of Singapore, describes some new uses for the article:

"'The object of this paper is to show that we have at hand an article of diet which is cheap, which can be grown over large areas of the globe, which is palatable, which is not attacked by any known insect or fungus, which forms valuable by-products, and–most important of all–which contains, more nearly than any other known animal or vegetable substance, all the essential and properly proportionate constituents of a perfect diet.

"'Rice is a very badly balanced food, consisting mainly of starch, having next to no nitrogen, and hardly any fat or salts. In this rice stands, in the scale of food values, almost at the bottom, whereas the soya bean stands at the top. But it is remarkable that nature and experience seem to have taught rice-eating races that one of the best accompaniments to rice is some form of leguminous food, such, for instance, as dhal, the small yellow pea so much used by natives of India. Following out this analogy it would seem to be most desirable to foster among Asiatic races that depend mainly upon rice as a staple the simultaneous consumption of the soya bean as supplying in abundance those essential food elements that can not in the least be derived from rice.'

"Among the economic products derived from the soya Dr. Brooke enumerates these:

"'(1) Bean curd. A most nutritious jelly can be made from the soya bean. This has been known and widely used by all classes in north China for the last 2,000 years.

"'(2) Bean milk. The beans are dried, very finely ground, and made into an emulsion with water. This forms a valuable milk, which resembles cow's milk in that it coagulates when heated and acidified. The possibility of this is due to the fact that the proteid is composed of casein, as in the case of animal milk.

"'(3) Bean cheese. A nutritious cheese [tofu] is frequently made in Japan from bean milk.

"'(4) Bean flour. The dried and pulverized bean is most valuable as a soup basis. It is also useful for making biscuits and infant foods. Soya biscuits, produced by a Scotch firm, are supplied on several P. & O. mail boats.

"'(5) Bean oil. There is a very high percentage of fat in the soya bean. This is of commercial value. It is edible, and also forms an excellent basis for candle and soap manufacture.

"'(6) Bean cake. The seed cake left after expression of the oil from the soya bean forms one of the most valuable and rich cattle foods known.

"'(7) Bean sauce. The soya bean ground up and steeped in vinegar or brine forms a basis for Worcestershire and other sauces.

"'(8) Bean coffee. A substitute for coffee may be made from the soya bean, by dry toasting and grinding it, then adding boiling cow's milk or hot soya milk.

"'(9) The straw surpasses in nitrogenous value that of wheat or even hay. It is quite possible that the leaves or root may have medicinal properties, but this has not yet been worked out.'" Address: Vice Consul General, Singapore.

1933. **Product Name:** [Soy Sauce or Shoyu].
Foreign Name: Sauce de Soja ou Schoyou.
Manufacturer's Name: Usine de la Caseo-Sojaine.
Manufacturer's Address: Valles, Colombes (near Asnieres, Seine), northwest of Paris, France.
Date of Introduction: 1911. June.
New Product–Documentation: Beltzer, Francis J.-G. 1911. *"Études sur la caséine végétale du "soja" et ses applications* [Studies on the vegetable casein of soybeans and its applications"]. *Revue Scientifique* 49(23):716-20. June 10. See p. 720. Conclusion: "A Chinese factory has already been established on the outskirts of Paris (at Vallées near Colombes) to make food products based on soya (*produits alimentaires à base de Soja*)." This factory now produces various food products, including soy sauce (*sauce de Soja*).

Scientific American Supplement. 1911. "Extended utilization of soya bean products: Milk, cheese, and a variety of other products from a vegetable seed." Aug. 19. p. 115. "A Chinese factory has been established [by Li Yu-ying] not far from Paris for the purpose of manufacturing alimentary products from Soya, and it has already put on the market... Soya sauce...."

Li, Yu-ying; Grandvoinnet, L. 1912. "*Le soja* [The soybean"]. *Agriculture Pratique des Pays Chauds* (Bulletin du Jardin Colonial) 12(108):213-23. March. See p. 216-22. The section titled "Sauces" begins: "1. *Schoyou* (*Soyou, Schoyu*). *Shoyou* (*Phek-sze-You* in Chinese) is a liquid, soy-based condiment..." Details are given on the preparation, raw materials used and their proportions, formation of molds and koji, fermentation, perfection of the fermentation process in an aseptic environment using soymilk or soy bouillon inoculated with pure cultures, properties of shoyu, chemical composition of shoyu.

1934. Porter, Albert J. 1911. Heard between the watches. *San Francisco Chronicle*. July 9. p. 29.

• ***Summary:*** This Veteran Customs Officer had been watching the sterns of China boats for many years, "and he could tell at a glance whether the rice mat or shoyu tub tossed over the rail high above contained that which has been keeping the Federal authorities on the run for a long time–the little five-tael tins of the subtle poppy drug, at present worth nearly its weight in gold."

Note: This article is about opium smuggling.

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1935. *Los Angeles Times.*1911. Wonderful soya bean: Has great food possibilities and is grown in great quantities in China and Japan. July 16. p. II-11.

• ***Summary:*** From *The Pathfinder.* "The Western world is only just beginning to appreciate the possibilities of the soy, soja, or soya bean, which is produced in such vast quantities in China, Japan and other parts of the East and which is adapted to so many different purposes. Large quantities of these beans are now being brought to Europe and this country, as they form a good return cargo for vessels that carry manufactured goods to the oriental markets."

"Dr. Gilbert Brooke, British health officer at Singapore, has issued a paper emphasizing the merits of the soya bean. He recommends it as a very desirable food... and–most important of all–which contains more nearly than any other known animal or vegetable substance, all the essential and properly proportioned constituents of a perfect diet. Among the economic products derived from the soya Dr. Brooks enumerates these:" Bean curd, bean milk, bean cheese [probably tofu–not fermented], bean flour, bean oil, bean cake, bean sauce ("the well-known 'soy' sauce"), and bean coffee.

"The straw surpasses in nitrogenous value that of wheat or even hay. Like other leguminous plants it enriches the land on which it grows, instead of impoverishing it."

1936. Lea and Perrins. 1911. Lea & Perrins' sauce for travelers and sportsmen (Ad). *Times (London).* July 23. p. 16, col. 1.

• ***Summary:*** "Adds much to the enjoyment of hot or cold luncheon, dinner or supper. The only original and genuine 'Worcestershire.'"

Near the upper left of this display ad is an illustration of large, fancy hotel. At the center of the ad is a circular illustration of a well-dressed man and woman seated at a table in the hotel. Behind them is a waiter with what appears to be a bottle of Worcestershire sauce on his upheld tray. At the right center are some people in a motor car. At the lower right is a large royal seal, and above it the words "By Royal Warrant to H.M. The King." Address: [England].

1937. Beltzer, Francis J.-G. 1911. Le lait végétal, la caséine végétale et les produits industriels retirés des graines de "soja" [Vegetable milk, vegetable casein, and industrial products extracted from soybeans]. *Revue de Chimie Industrielle et le Moniteur Scientifique, Quesneville* 22(259):209-15. July; 22(260):241-51. Aug. (Chem. Abst. 5:3597). Also published in Paris by Librairie Bernard Tignol (1911). Bibliotheque des Actualites Industrielles, No. 144. [13 ref. Fre]

• ***Summary:*** Contents: Introduction: Chemical composition of the soybean and of soy oil. Fermented soyfoods and koji: Li Yu-ying and his soyfoods plant established near Paris (at Vallées, near Colombes), the products it makes (tofu or soy casein {*Caséo-Sojaïne*}, soy flour, bread, sauce, confections, milk, fermented milk, tofu, etc.), soyfoods made in French Indochina. Soymilk (*lait végétal*). Tofu (*fromage végétal* or *to-fou*): fresh tofu, fermented tofu (*La variété fermentée*, which is gray or yellow and has a piquant taste resembling that of Roquefort cheese), white and salted tofu (which resembles a goat's cheese), smoked tofu (which resembles a gruyère cheese)...

Industrial production of vegetable casein from soybeans (cleaning the seeds, extraction of the oil), cost of a plant to make vegetable casein, industrial applications of vegetable casein: in paints, glues, paper coatings, plastics resembling Galalith, conclusion.

An illustration (schematic drawing; p. 248) shows two views (a cross-sectional side view and an overhead floor plan) of a factory for producing vegetable casein, with a capacity to process 10 tons of soybeans per day.

Note: This is the earliest document seen (Sept. 2001) concerning the use of soy protein in glues or adhesives. Address: Ingénieur-chimiste, Expert, Professeur de Chimie Industrielle, France.

1938. Togano, Meijiro. 1911. Shôyu no kôki ni tsuite [On the odor of shoyu]. *Nogaku Kaiho (J. of the Scientific Agricultural Society, Japan)* No. 109. p. 1-38. Aug. 5. [Jap]

• ***Summary:*** In the English-language table of contents, shoyu is called "Soya." Address: Nôgaku-shi, Japan.

1939. Oyama, Jiro. 1911. Pootorando ni okeru yunyû Nihon shôyu ni kansuru ken [The market for imported Japanese shoyu in Portland, Oregon]. Portland, Oregon. 15 p. Aug. 8. Handwritten unpublished manuscript. [Jap; eng]

• ***Summary:*** This is a market report from Mr. Oyama at the Japanese consulate in Portland to Mr. Yoshitaro Komura at the Japanese Ministry of Foreign Affairs.

During the past 18 months 10,509 taru (170,460 liters, or 947 koku) of shoyu has been imported to Portland. A Japanese run shoyu company in Portland [probably *Sanyo Shoyu Jozo Gaisha;* see 1909 entry] made or makes about 300 koku (54,000 liters) a year. Address: Japanese Consulate, Portland, Oregon.

1940. *Scientific American Supplement.*1911. Extended utilization of soya bean products: Milk, cheese, and a variety of other products from a vegetable seed. 72(1859):115. Aug. 19. Summary of Beltzer 1911, in Revue Scientifique. [Eng]

• ***Summary:*** "A Chinese factory has been established [by Li Yu-ying] not far from Paris for the purpose of manufacturing alimentary products from Soya, and it has already put on the market Soya flour, Soya bread, Soya sauce, Soya Milk, Soya cheese, preserves, fermented milk, etc."

The well-known chemical engineer, F.J.G. Beltzer, "who has made a careful study of the whole subject, publishes

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in the *Revue Scientifique* a report of whose most important features we present an abstract."

"For purely industrial applications it is necessary, as we have said, that the vegetable casein be entirely free from fatty matters.

"In the industrial treatment of Soya, therefore, the process is somewhat different. The 3 objects sought are: the pure oil, the casein entirely free from oil, and the residuary cake.

"The oil is extracted by pressing, and 2 grades are obtained. The first or purest is sold for edible purposes, while the second is useful for soap-making and other manufactures where oils and fats are employed...

"The pure casein is prepared from the pulp which remains after the extraction of the oil. The milky liquid obtained by triturating the pulp with cold water, is filtered and treated with powdered gypsum. About 1 kilo of gypsum per 1,000 liters of the liquid is used. The mixture is brought to a boil and the resulting coagulate is drained and washed in cloth filters. The casein thus obtained is dissolved in a quantity of very dilute soda solution, so weak that the reaction is either neutral or very slightly alkaline. The solution is filtered and then precipitated by acetic acid. The finely divided precipitate obtained is filtered out, washed on the filter and finally dried at a low temperature.

"The casein thus obtained is white, and, from an industrial point of view, very pure. It is insoluble in water, but soluble in dilute caustic alkalies and in ammonia. It exhibits almost precisely the same properties as the casein obtained from ordinary milk. It is found on experiment to be susceptible of the same industrial applications as animal casein, and may come to largely supersede this because of lower cost.

"Among the various uses to which it may be applied we may mention its employment in painting, and for the preparation of products having a resistance to moisture.

"It may be used also for the sizing of paper, which consumes such large quantities of ordinary casein. Being soluble in ammonia and caustic solutions it is capable of forming a smooth and solid size.

"Other uses are in certain manufacturing processes in the preparation of silks and artificial textiles, as well as of rubber, leathers, plastic materials, films, photographic emulsions, etc. Large amounts of animal casein are at present employed in the manufacture of 'Galalith,' from which are made numerous objects which imitate articles made from ivory, tortoise-shell, bone, horn, etc. The Soya casein, when free from fats, is equally well adapted for these purposes...

"It will be seen from the foregoing rèsumè, that the fabrication of vegetable casein for industrial purposes has immense possibilities, only exceeded in importance by the alimentary value of its food products for man and for beast.

"The residuary cake left after the extraction of both oil and casein still retains sufficient nutritive qualities to be useful as an addition to the feed of animals."

Note 1. This is the earliest English-language document seen (Oct. 2011) that uses the term "soya cheese" to refer to fermented tofu.

Note 2. This is the earliest English-language document seen (Oct. 2011) that uses the term "soya cheese" to refer to either (or both) regular tofu or fermented tofu. By 1905 Li presented a paper (in French) describing how he had tofu to make "Fermented cheese (*Le fromage fermenté*). Its color is white, yellow, or gray, and it flavor is very strong, like that of Roquefort." In Dec. 1910 he applied for British Patent 30,275, titled "Vegetable milk and its derivatives." It was accepted / issued on 29 Feb. 1912. It stated: "For obtaining fermented cheese such as roquefort [Roquefort], parmezan [Parmesan], romatour [Rahmatour], camambert [Camembert], and gruyere, suitable ferments are employed."

Note 3. This is the earliest document seen (Oct. 2008) that uses the term "Soya casein" to refer to an isolated soy protein product; it is used for industrial purposes.

Note 4. This is the earliest English-language document seen (Dec. 2004) that uses the term "silks" (or "silk") to refer to spun soy protein fiber used like a textile fiber.

1941. Nishimura, Torazô. 1911. Shôyu kôbo aruhaa, beetaa, oyobi ganmaa ni kansuru kenkyû [Studies on the shoyu yeasts "alpha," "beta," and "gamma"]. *Nogaku Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 110, p. 44-56. Sept. 5; No. 111, p. 16-41. [Jap]

• ***Summary:*** In the English-language table of contents, shoyu is called "Soya." Address: Nôgaku-shi, Japan.

1942. Li, Yu-ying. 1911. Procédés et dispositifs pour la transformation intégrale du soja [Processes and apparatus for the complete transformation of soybeans]. *French Patent* 433,986. Application filed 6 Sept. 1911. Granted 20 Jan. 1912. [Fre]

• ***Summary:*** The beans, freed from stones and decorticated, are passed into a pipe from which they are withdrawn, through a number of branch-pipes, to be converted into flour (by dry grinding and bolting) suitable for bread-making, etc. They are also converted into oil and press-cake, or into "milk" (by wet grinding and pressing) and press-cake [okara], or into sauce, or after roasting into "coffee" or "chocolate." The "milk" may be concentrated or reduced to powder, or converted into "cheese," or into sauce, or it may be used for the preparation of casein (*sojalithe*, for various industrial uses). The cake obtained on expressing the "milk" may also be used for the preparation of casein, and the cake obtained on expressing the oil from the bean serves for the preparation of "milk" or meal.

Soybeans can be used in seven different food industries: (1) Milling. (2) Dairy and cheese. (3) Baking, pastry, and pâtes. (4) Confectionery. (5) Chocolate. (6) Charcuterie–Pork butcher deli business. (7) Preserves and canned foods.

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They can also be used for industrial (non-food) uses in: (1) The casein industry (*Caséinerie*, incl. sojalithe for various industrial uses). (2) The oil industry (*Huilerie*, incl. soap, paint, candles {*bougies*}, and artificial rubber).

Note: This is the earliest document seen (Dec. 2005) that mentions the use of soy oil to make candles (one of two documents). However no description or details are given as to how the candles are actually made. Were they made from hydrogenated soybean oil? Address: Resident in France (Seine).

1943. Krauss, F.G. 1911. Leguminous crops for Hawaii. *Hawaii Agricultural Experiment Station, Bulletin* No. 23. 31 p. Sept. 20. See p. 23-27, 30.

• ***Summary:*** "Soy bean (Glycine hispida): While possessing most of the good qualities common to other leguminous forage plants, the great diversity of type to be found in the soy bean adapts it to many uses and conditions unsuited to other legumes."

"Among its most important uses is that for culinary purposes especially in the manufacture of the Japanese products (soy and miso). These products are imported into Hawaii from Japan in large quantities, but their manufacture is being rapidly extended in Hawaii. This has created quite a demand for the bean locally. At present two and one-half million pounds of the bean are being imported into Hawaii annually. The average cost is about $3 per hundred pounds landed in Honolulu and the beans sell for $3.25 to $3.40 per hundred pounds. The Japanese coffee growers in the Kona district in Hawaii have been growing the bean as an intercrop for years. The total production is said to be about 200,000 pounds per annum. It will thus been seen that the immediate local demand is very far from being supplied at present."

Note 1. This is the earliest document seen (Jan. 2005) that gives soybean production or area statistics for part or all of the United States (Hawaii).

"The yield of seed obtained by the station from small experimental plantings ranges from 600 to 1,000 pounds per acre for the dwarf early maturing varieties, and about twice that amount from the medium late and medium tall sorts."

"The following list has been selected from about 100 varieties tested by the station. It is believed to include the best sorts for each of the several purposes for which the soy bean is especially recommended. In the case of culinary varieties, both quality and yield of seed have been considered. The soy and miso manufacturers demand a large, hard, light colored seed, with a thin skin, and the writer is indebted to Mr. N. Yamakami, manager of the Hawaiian Soy Co., for his assistance in selecting varieties according to these qualities.

"Under Group I has been collected the best culinary varieties. These are usually found among the dwarf, early maturing sorts, qualities which make them well suited for intercultures, short rotations, and catch crops. Group II contains the heaviest seeding sorts irrespective of their culinary qualities. These varieties are especially well suited for growing as grain for cattle feeding. Group III contains the rankest growing sorts. These supply the maximum yields of both forage and grain, which makes them especially valuable for fodder and green manuring." Two photos show two types of soy bean plants: (Fig. 1) Three dwarf types (culinary varieties). (Fig. 2) Three intermediate types (general purpose varieties). These are accompanied by a list of the soybean names in the 3 groups with SPI numbers and basic characteristics. The six culinary varieties in Group I include Hollybrook, Manhattan, Swan, Elton, and Acme. The four culinary and grain varieties in Group II include Acme, Edward ("Mr. Yamakami, of the Hawaiian Soy Co., pronounces this the largest seeded yellow soybean he has ever seen and considers it a very desirable variety for the production of miso and other Japanese food products"), Ito San, and Ruralnook. The two forage varieties in Group III (tall, rank-growing, and best suited for green manuring) are Riceland and Barchet.

Another photo (Plate VIII) shows "Seeds of leguminous plants described in this bulletin, natural size–including three colors and sizes of soy beans.

Note 2. This is the earliest English-language document seen (June 2005) that uses the word "intercrop" (or "intercropped" or "intercropping") in connection with soybeans.

1944. Abel, Mary Hinman. 1911. Beans, peas, and other legumes as food. *Farmers' Bulletin* (*USDA*) No. 121. 38 p. See p. 11-13, 17-20, 35-36. Revised Nov. 15, 1906. Reprint, Sept. 30, 1911. [1 ref]

• ***Summary:*** This is a reprint of the 1906 revised edition. The information about soy is unchanged. On pages 17-18 is a section titled "The peanut" (*Arachis hypogæa*). On pages 35-36 is a section titled "Peanuts and peanut preparations" which includes a subsection titled "Peanut butter.–The roasted peanut ground to an oily meal has somewhat the consistency of butter and is now marketed under the name of peanut butter. Salt is perhaps quite generally added during the process of manufacture. Water is also sometimes added–usually before serving. Peanut butter is used like other butter to spread on bread, for the making of sandwiches, and in the preparation of a number of made dishes. Many persons like its flavor when it is fresh and of good quality, and it seems fair to say that the use of this and other sorts of nut butter is growing. As regards composition, peanut butter, which is essentially the ground roasted peanut, contains more protein and less fat than ordinary butter. Little is known regarding the digestibility of peanut butter, but the fine grinding would naturally seem to be of an advantage. Judged by Jaffa's experiments with a ration containing peanuts, it would be well digested. (See p. 26)

"Peanut oil.- At present the American peanut crop is

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not large enough to more than supply the roaster and the confectioner, hence the expressing of oil from the peanut has never become established here, but in Europe large quantities of the African-raised nuts are used for this purpose. The shelled nuts contain from 30 to 50 per cent. of oil. The oil is said to be of fairly good flavor, but inferior to olive oil. In 1899 some 80,000 tons of the nuts were used in Marseille alone for oil making. The unhusked nuts are passed between a pair of rapidly revolving grooved rollers and the shells and red inner skins are then removed by a winnowing process with the use of air currents and oscillating sieves. The cleaned kernels are ground and enveloped in fibrous mats and pressed to extract the oil.

"According to Brannt, "the first cold pressure yields 16 to 18 per cent of very fine table oil. The residue is then broken up, moistened with water, and again cold pressed, yielding 7 to 8 per cent of more or less valuable oil, used for table purposes and burning. The residue from this is heated and then pressed, giving 7 to 8 per cent more oil, unfit for table use, but used for soap and lubricating." The grades of oil are sold as salad oil alone or mixed with olive oil.

"Peanut cake.- When the oil has been pressed from the ground nut, the mass remaining, called oil cake, is used for fattening. Some experiments have also been made as to its food value for human beings. Containing, as it does, 47 per cent of protein and 9 per cent of fat and starch, and costing about 5 cents a pound, this attracted the attention of German scientists. The oil cake broken up and cooked a long time in water and eaten as a soup or porridge in a hospital. Most of those who tried it ate it with apparent relish, not once only, but again and again. No effort have been made to ascertain to what extent it was digested, and the use of the cake does not seem to have passed the experimental stage."

1945. Nishimura, Torazô. 1911. Shôyu moromi oyobi shôyu ni shôzuru sanmakusei kôbo kinrui (zoku ni shôyu no kabi to shôsu) ni kansuru kenkyû [Species of film-building yeasts on shoyu]. *Nogaku Kaiho (J. of the Scientific Agricultural Society, Japan)* No. 111, p. 42-63. Oct. 5. [Jap]
• ***Summary:*** In the English-language table of contents, shoyu is called "Soya." Address: Nôgaku-shi, Japan.

1946. Dorsey, George. 1911. Skill of the Chinese shown on farms: Few people have grown more food on rocks or developed more plants. Their cookery an art. *Chicago Daily Tribune*. Oct. 29. p. A2.
• ***Summary:*** "No other dense population has so thoroughly adjusted itself to its physical surroundings, depending throughout the course of its history on its own natural resources and the ingenuity of its brain. We speak of the application of science to agriculture as if science were something quite new... Few countries can show such a record of great inventions as the Chinese."

"China is just enough saturated with Buddhism to make people afraid of eating meat at times... There are societies in China, like our temperance societies, the members of which vow never to eat beef. There is in Chinese a formula to the effect that the ox, as man's most useful helper in plowing and winning his daily bread, shall be inviolable [not available for slaughter to eat].

"In parts of China where Mohammedans are numerous, beef and mutton are largely consumed. The butchers of Peking are all Mohammedans. The Chinese abhor milk. Nor do they prepare cheese. Pork is the favorite meat throughout China."

"Variety of grains:... Chinese grow all kinds of pulse–white, yellow, red, green, and black. Bean curd, prepared from the yellow and black bean, is the principal food article in China and Japan. The beans are macerated in water and milled. The liquid filtered [and boiled], and gypsum added to coagulate the casein. Vermicelli and a kind of jelly are made from [mung] bean flour. From the starch extracted from green beans a meat sauce is made; from fermented beans a condiment known as soya [soy sauce]... Turnips and cucumbers are seasoned with soya." Address: PhD, LLD, Hankow, Hupeh Province, China.

1947. Eddington, Jane. 1911. Economical housekeeping: Chop sooy. *Chicago Daily Tribune*. Nov. 9. p. 8.
• ***Summary:*** The typical American has all the ingredients needed to make "chop suey or sooy" "except the soy sauce, which he buys."

"The following remarks and recipe is from the *Hotel Monthly:* 'To make chop sooy the following Chinese goods are necessary: Soy or Chinese sauce, per jug, 35 cents...'" "Serve with a bowl of hot boiled rice, black tea, wafers, and a bottle of soy."

Note 1. This is the earliest document seen (Oct. 2006) which states that soy sauce is a basic ingredient in chop suey.

Note 2. This is the earliest English-language document seen (April 2012) that uses the term "Chinese sauce" as a synonym for "Soy."

1948. Harland, Marion. 1911. Marion Harland's helping hand. *Chicago Daily Tribune*. Nov. 16. p. 9.
• ***Summary:*** "At least a dozen women have asked... for the recipe which follows... I am asking you to print what I know to be the best thing of its kind ever published for the housewife's use: Worcestershire Sauce–Vinegar, one gallon; garlic, one ounce; black pepper, one-half ounce; nutmegs, grated, two; lemons, twenty; salt, one ounce; cayenne, one-quarter ounce; mace, one ounce; mustard, two ounces. One pint of Chinese soybean sauce greatly improves this sauce."

Note: This is the earliest English-language document seen (April 2012) that uses the term "soybean sauce" to refer to soy sauce.

"Cut each lemon half-way through; peel garlic and put in lemons whole. Mix other ingredients together; divide

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equally between lemons and place in lemons. Put lemons in an earthen dish and cover with plate; bake until quite brown, then turn into vinegar in a covered earthen jar. Stir several times a day. It is ready to bottle in ten days. I have tried it and I know it is good! I don't know where I got it, but copied it from somewhere. R.M.C."

1949. Cornwell (G.G.) & Son. 1911. The chef says today:... (Ad). *Washington Post*. Nov. 17. p. 7.

• ***Summary:*** "The charm of French cooking lies in the unusual flavors imparted by the use of various seasonings and sauces. Here are a few that every housewife should have in her pantry: Rose Water, India Soy, Escoffier Derby Sauce,... Harvey's Sauce, Walnut Catsup."

An illustration shows a smiling French chef with a white top hat, a goatee, and a waxed handlebar mustache. Address: New store: 1415-17 H St., N.W. [Washington, DC].

1950. Kent, William P. 1911. Manchurian trade and commerce: Newchwang. *Daily Consular and Trade Reports (U.S. Bureau of Manufactures, Department of Commerce and Labor)* 14(271):888-93. Nov. 18.

• ***Summary:*** Table 2 (p. 891) shows that significant "decreases occurred in the 1910 [soy] bean, [soy] bean-oil, and [soy] bean-cake shipments through the Newchwang customs. Beans were exported to Japan, Hongkong, and Samarang [Semarang, a port city on the north coast of the island of Java]; bean oil to Japan, the United Kingdom, Samarang, and Belgium; while Japan imported all the bean cake not consumed locally. All units for these three commodities are in piculs; A picul is equivalent to 133.33 pounds.

"The soya bean and its products... continue to grow in importance throughout Manchuria and to furnish the principal articles of commercial activity at Newchwang. When it is recalled how recently the soya bean and its extensive uses have come to the knowledge of the commercial world and how rapidly it has taken its place as an article of commerce, it must be regarded as a marvel of agricultural transformation, comparable alone in modern times to the discovery of Indian corn, tobacco, and the potato. The average price for 1910 of beans, bean cake, and bean oil, laid down at Newchwang, was: Beans, $4.90 per 400 pounds; bean cake, $5.55 per 687 pounds; and bean oil, $5.75 per 133.33 pounds.

"One of the by-products of the soya bean whose manufacture is increasing is soy sauce, a condiment much used in Japan and other parts of the East. The Japanese established a factory at Newchwang in 1903 for the manufacture of soy [sauce], starting with a small capital. It has been so successfully conducted that from the profits the plant is being englarged by an expenditure of $30,000. Some prominent Chinese capitalists from the south of China propose erecting two additional factories at Newchwang during the coming season.

"The most important and profitable adjustment of the bean trade is bean milling, and during the 1909-10 season great progress was made in the substitution of modern machinery for the old type of press, in which a system of wooden wedges was used. Up to December, 1910, the number of bean mills in operation at Newchwang was as follows: Seven steam mills with an average capacity of 5,000,000 pieces of bean cake and 21,000,000 catties (catty=1.33 pounds) of oil per annum; 7 smaller ones with an average annual capacity of 1,800,000 pieces of cake and 7,900,000 catties of oil; and 3 others with an average annual output of 300,000 pieces of cake and 1,300,000 catties of oil. One of steam mills employs hydraulic power on the mold presses; all the others utilize steam and oil engines simply to crush the beans preparatory to their being placed in the molds, which are worked by hand on a cog and screw system.

"What is desired is a machine similar to a cottonseed press, meeting certain requirements peculiar to the bean. This suggestion implies a matter of great importance to the first devisers of a machine meeting the approval of local bean-mill owners. To accomplish this end will require a personal investigation to acquire a close knowledge of the minor details of the industry. Descriptions and details are of no avail, owing to the probable omission of some item overlooked by an inexpert investigator.

"Declared exports–shipping: Beans have not as yet been shipped direct from Newchwang to the United States. A small shipment of bean oil was sent on trial to a New York firm, and should this prove satisfactory larger returns may confidently be expected." Address: Consul, Newchwang.

1951. Barrett, O.W. 1911. Rice ally crops. *Philippine Agricultural Review* 4(11):592-98. Nov. See p. 594-96. [1 ref]

• ***Summary:*** The section titled "Soybeans" (p. 594-96) begins: "Probably every tourist who has visited any of the cities of Japan or China has noticed in the markets these peculiar blocks of a grayish white, jelly-like substance and wondered whether they were really good to eat, but comparatively few have ever tried there the three or four varieties of vegetable 'cheese' prepared from the soybean*."

*Footnote: A 3/4 page footnote, extracted from USDA Farmers' Bulletin No. 58 by Langworthy, discusses five preparations commonly made in Japan from the soybean: natto, tofu or bean cheese (eaten in the fresh state or frozen), miso, yuba, and shoyu.

"Experts in threpsology, the new science of nutrition, seem to be in accord on the fact that in dietary matters two kinds of food are at least four times as good as one... Recently the European food experts have realized the high nutritious value of the soybean and a factory has been established near Paris [by Li Yu-ying] for the manufacture of

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various food products from this wonderful seed."

"Now is the time for the Philippine Agriculturist to take up soybean culture in earnest, and to develop it in the same way, even if not to the same degree, as our neighbors across the way have been doing for centuries. The fact that there are practically no seeds of this valuable crop at the present in the Philippines is a sad commentary on the progressiveness of the Philippine farmer; but it is never too late to learn" (p. 596). Address: Chief of the Div. of Experiment Stations, Philippines.

1952. Ishikawa, S. 1911. Seishu oyobi shôyu-chû no horumuarudehiido kenshitsu ni tsuite [On the determination of formaldehyde in sake and shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 357. p. 787-803. Nov. [Jap; ger]
• ***Summary:*** The German title is "Ueber die Ermittelung von Formaldehyd in 'Sake' und 'Shoyu' (So-ya)." Address: Tokyo Eisei Shikensho, Japan.

1953. Takahashi, Teizô; Yukawa, Matao. 1911. Shôyu kôji oyobi shôyu moromi-chû no gaseikin ni tsuite (1) [Studies on the budding fungi of shoyu koji and shoyu moromi (mash) (1)]. *Nogaku Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 112. p. 1-26. Dec. 5. [Jap]
Address: 1. Nôgaku-Hakushi (Doctor of Agriculture), Japan; 2. Nôgaku-shi, Japan.

1954. Nishiwaki, Yasukichi. 1911. Kaki-iro kabi, kôji kabi oyobi kumonosu kabi o motte, shôyu jôzô hikaku kenkyû [Shoyu manufacturing experiment using orange-colored mold, koji mold, and *Rhizopus* mold]. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*) 14(166):1161-65. Dec. [Jap; eng]
• ***Summary:*** The orange colored mold is actually called "persimmon colored" and refers to *Oidium lupli* or *Monilia sitophila* (used to make onchom or ontjom). The koji mold is *Aspergillus oryzae*. *Rhizopus japonicus* is called "spider-web mold." It is clear that shoyu can be made with molds other than just the koji mold. Good shoyu koji was made easily with the orange mold, which is little attacked by other molds. The *Rhizopus* mold gave unfavorable results. Address: Nôgaku-shi, Japan.

1955. **Product Name:** Soy sauce?
Manufacturer's Name: Honolulu Soy Manufactory.
Manufacturer's Address: 1100f N. King, Honolulu, Oahu, Hawaii.
Date of Introduction: 1911.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1911. p. 304. Honolulu Soy Manufactory. K. Daimaru, mngr. 1100f N. King.

1956. **Product Name:** Soy sauce.
Manufacturer's Name: Ishizu (J.).
Manufacturer's Address: Front St., Hilo, Island of Hawaii, Hawaii.
Date of Introduction: 1911.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1911. p. 788. Ishigu, J. [But Ishizu is correct], soy mnfr, Front St., Hilo, Hawaii. Note: 1912 Directory (p. 813) lists J. Ishizu, soy, Front, Hilo. Ishizu is also listed in 1913, 1914, and 1915 directories.

1957. Kinoshita, K.; Taido, J. 1911. Seishu-chû "forumuarudehiido" kenshutsu-hô ni tsuite [Detection of formaldehyde in sake. I-IV.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 6(10):15-28; 6(12):5-15; 7(6):10-16; 7(2):12-25. [Jap]

1958. Kita, Gen-itsu. 1911. Shôyu seizô ni kansuru kenkyû hôkoku. IV. [Research report on shoyu production. IV.]. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*) 14(156):109-28. [Jap]
• ***Summary:*** "Traditional shoyu production depends on alcohol fermentation as well as on protein degradation and acid fermentation. Therefore starch or the majority of the sugar is converted into alcohol, then into esters, which the flavor of shoyu. In 1907 Dr. Saito Kendo published a report titled "Microbiological studies on the preparation of soy sauce" (*Zentralblatt für Bakteriologie*. Series 2. 17(1/2):104-09, 152-53) in which he discussed shoyu yeasts. The major yeast is the new variety *Saccharomyces soya*, and there are others such as *Sacc. farinosus*.

"I tried to isolate the yeast in order to study the process of fermentation, the growth of yeast, the side effects the yeast, etc. After plating the yeast many times on a medium containing koji solution plus salt, the yeast can be purified by Lintner's method. Samples were obtained from Noda, Choshi, Shizuoka, Handa, Sakai, Shodoshima (island) and Tatsuno.

"I observed four types of yeast: Type 1 was isolated from the samples from Noda, Shizuoka, Sakai, Shodoshima, Tatsuno, Choshi, and Handa. It is the most common type which has the medium fermentation ability. Type 2 was isolated from the Shizuoka sample. Its characteristics are about the same as Type 1. Types 3 and 4 were isolated from the Noda sample; they do not ferment during cold weather.

The author then discusses: Microscopic observation. Plate culture. Large colonies. Agar culture. Liquid culture. Small droplet culture. Fermentation characteristics using various kinds of sugar. Apparent optimal temperature and the actual optimal temperature. Test for spore formation. Fermenting ability of the shoyu yeast (p. 115): 1. The growth condition when the medium contains salt and sugar. 2. The fermenting ability of various yeasts grown in boring (?) 10° or boring 20° sugar medium without salt (boring is a unit of

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concentration). 3. The fermenting ability of various yeasts grown in boring 10° sugar medium containing 10% salt. 4. The effect of alcohol on shoyu yeast. 5. The reaction of yeast to salt. 6. The fluctuation of nitrogen compounds in the culture medium due to the presence of yeast.

"The importance of alcohol fermentation in shoyu making (p. 125): Alcohol fermentation is one of the most important changes that takes place during the process of making shoyu. Although the flavor of shoyu depends a lot on alcohol fermentation, we don't know exactly how important its role can be. When the flavor and color of shoyu was evaluated, we did not find a significant difference, so that it seems unnecessary to add a large amount of wheat when making shoyu. Currently equal volumes of wheat and soybeans are mixed in order to make the best quality shoyu. However considering that regular quality shoyu doesn't require wheat at all makes us think that addition of wheat is arbitrary and irrational. I conducted the following tests (p. 116): 1. The effect of decreasing the amount of wheat on the taste and flavor of shoyu and the relationship between profit and cost. 2. The characteristics of koji (?) when cheaper soybeans are used instead of wheat. 3. characteristics of koji (?) when other cheaper starchy grains are used instead of wheat. These tests should be conducted with great caution, using a large quantity, and we should avoid drawing conclusions obtained from only a few experiments. I hope the shoyu makers will volunteer to conduct them. Here are some results which I obtained: The possibility of storing koji enzyme in salty water." Three photos (p. 111) show microorganisms growing in petri dishes. Address: Kôgaku-shi, Japan.

1959. Alviso Co. (The) (Arubiso Shokai). 1911. The Alviso Co. (Ad). In: Nichibei Shinbun-sha. 1911. *Nichi-Bei Nenkan [Japanese-American Yearbook*. No. 7]. p. C-36. [Eng; jap]
• ***Summary:*** Ad (½ page). The top 1/3 of this ad is in English. This company sells various goods including (in Japanese) shoyu [soy sauce]. This ad also appears in the 1912 Year Book (p. C-16), and in 1913 (p. 35). Also in 1914, p. 15 (near end). They sell Japanese foods including shoyu, and Western foods. Address: P.O. Box 15, San Jose, California. Phone: San Jose 5417 R 1.

1960. Bowie, Henry P. 1911. On the laws of Japanese painting: An introduction to the study of the art of Japan. San Francisco, California: Paul Elder and Company. xv + 117 p. See p. 90. With prefatory remarks by Iwaya Sazanami and Hirai Kinza. Illust. Index. [14 ref]
• ***Summary:*** In Chapter 6, in the section on "Month and holiday subjects," under the month of "May" (p. 90) we read: "The fifth of May is the boys' festival, and the carp (*koi*) is the favorite subject for painting... When this fish is caught and about to be cut up alive for *sasshimi* [*sashimi*], a Japanese delicacy, once the carver has passed the flat side of the knife blade over the body of the fish the *koi* becomes motionless, and with heroic fortitude submits to being sliced to the backbone. Served in a dish, a few drops of soy being placed in its eye it leaps upward in a last struggle, to fall apart in many pieces."

References (Japanese title in Roman letters, English translation of that title, and author) to 14 of the best Japanese-language books about Japanese painting appear on p. 28; none have yet been translated. Address: Japan.

1961. Farmer, Fannie Merritt. 1911. The Boston Cooking-School cook book. Revised. Boston, Massachusetts: Little, Brown and Company. xv + 648 p. + [30] p. of advertisements. Illust. Index. 19 cm. See also the 1918 ed.
• ***Summary:*** Contains 125 new recipes. As in the original 1896 edition, Worcestershire sauce is called for in many recipes in this book (p. 117, 180, 182, 188, 189, 197, 207, 212-13, 223, 227, 231, 273, 333-34, 344, 371, 372, 554, 565).

Catsup is called for much more and in many new forms compared with the 1896 edition: Oyster cocktail (p. 180; "1 tablespoon tomato catsup"). Lobster cocktail (p. 186; "two tablespoons, each, tomato catsup and Sherry wine"). Blanquette of lamb (p. 223-24; one tablespoon Mushroom Catsup, or any other suitable table sauce"). Asparagus salad (p. 329; "serve with French Dressing, to which has been added one-half tablespoon tomato catsup"). Oyster and grape fruit salad (p. 344; "season with six tablespoons tomato catsup,..."). Breast of quail Lucullus (p. 376; "Serve with one and one-half cups rich brown sauce seasoned with tomato catsup..."). Devilled bones (p. 565; "1 tablespoon Walnut Catsup").

Concerning vegetarian diets: In Chapter 1, titled "Food," he section on "Correct proportions of food" states (p. 3): "To keep in health and do the best mental and physical work, authorities agree that a mixed diet [from animal & vegetable sources] is suited for temperate climates, although sound arguments appear from the vegetarian... Brain workers should take their proteid in a form easily digested. In consideration of this fact, fish and eggs form desirable substitutes for meat."

Near the end of the book is an ad (on an unnumbered page) for "Works on cookery." The first of these is *The Golden Rule Cook Book: Six hundred recipes for meatless dishes*, by M.R.L. Sharpe. "A new edition of the best of all books on vegetarian food and cookery." Address: Of Miss Farmer's School of Cookery.

1962. Hooper, David. 1911. Soy bean in India: Glycine hispida. *Agricultural Ledger* (*Calcutta*) No. 3. p. 17-33. (Vegetable Product Series No. 114). Also reprinted in Tropical Agriculturalist, 1912. 38:11-15, 99-103.
• ***Summary:*** Contents: Introduction. Experimental cultivation in India. Vernacular names of the soybean. Method of

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cultivation: Green manure, harvesting. Races and varieties. Races in India: Yellow [grown in Poona Experimental Farm, Burma, Darjeeling, Dehra Dun, Simla, Punjab], green [Poona], black [Poona, Kashmir to Darjeeling, Simla], brown [Kashmir, Kalimpong to Darjeeling], mottled [Shillong, Assam]. Composition of the seed: From Church, from König, from Dr. J.W. Leather (1903), tables showing analyses made in India of Indian-grown Soy beans from various provinces (Burma, Hill Tracts, United Provinces [black seeds], and Poona). Soy bean oil. Soy bean oil-cake. Composition of hay. Use as food: Soy-bean milk, bean cheese (topo, sic tofu, or "Soy-bean cheese"), shoyu ("Under the name of 'Soy sauce' and other fanciful names it has formed the basis of most of the important sauces of Europe for many years."), roasted soy beans as a coffee substitute, soy beans in diabetic diets. Trade (exports of Soy bean from Manchuria to England). Price.

"The plant was introduced into the United States of America in 1854 and was grown to a small extent in the Southern States, but from the year 1885 its cultivation as a forage crop has gained in importance in all the agricultural centres. Within the last two or three years a great deal of interest has been taken in the cultivation of Soy, and experiments are in progress in Government Farms in Cape Colony, Natal [South Africa], East Africa, Gambia, Mauritius and Australia.

Contains a good early history of the soybean in India: "It is difficult to ascertain the date of the introduction of Soy beans into India. There is no doubt that certain hill tribes, mostly of Mongolian origin, have cultivated the bean for a long time. At the Punjab Exhibition held at Lahore [later divided between India and Pakistan] in 1864 Soy beans identified by Dr. Cleghorn, were sent from the Hill States. This is the first record of the beans being exhibited in this country, and shows that the cultivation was on a insignificant scale.

"Experiments in India. In 1882 Messrs. Jardine, Matheson & Co. of Hong-Kong sent a sample of Soy beans for experimental cultivation in the Saidapet Experimental Farm, Madras. The plants raised from these seeds were healthy but the yield of the crop was small.

"In 1897 Surgeon-Colonel W.G. King, Sanitary Commissioner, Madras, strongly advocated the cultivation of Soy bean as a valuable food worthy of the attention of the people. In two experiments carried on at Saidapet during 1897-98, the yield of seed per acre was 468 to 495 lbs., respectively. Recent enquiries in Madras resulted in the opinion that the cultivation in the Presidency is still in an experimental stage.

"In 1882 some Japanese Soy beans were sent by the Government of India for trial to Saharanpur. In 1885 very good results were obtained, the black seeded variety giving a yield of 1,124 lbs. per acre, and the white seeded variety giving a yield of 561 lbs. per acre. In 1886 the acclimatised seed was widely distributed: in some cases the crop failed and in others it was fairly successful, but as a rule where seed was harvested it was said that the pulse was not popular in any form. The Botanical Gardens grew the crop for a few years longer but as there was no demand for the seeds the cultivation was abandoned. An interest in Soy bean, however, seems to have revived for the Agricultural Department has this year sent to the Reporter on Economic Products samples of the black variety of Soy beans from forty villages of the United Provinces.

"At the Experimental Farm at Nagpur, Central Provinces, the bean was grown experimentally from Japanese seed first planted in 1885. The yield at the end of the first year was at the rate of 180 lbs. per acre, but taking the average of five years the result was 88 lbs. per acre. In the Report for 1908-09 it is stated that Soy beans were grown on a small area under field conditions and the yield was fair, but there was little local demand for the seed. It was, however, ground and formed an excellent addition to the diet of the farm cattle. Last year only 43 lbs. were obtained on light soil on the Nagpur Farm, the crop being practically a complete failure; on heavier soil 380 lbs. of seed were raised.

"Soy beans have been grown at Poona for nine or ten years with varying results, and they have also been tried at Nadiad in Gujrat [Gujarat] and elsewhere in the Bombay Presidency. In the Experimental Farm Report for 1901 a large yield was chronicled, but next year the crops at Poona and Surat failed. In 1904 a yield of 300 lbs. per acre was obtained in light land. One year later nineteen plots were under trial but with unpromising results, for only five yielded seed enough to repay the cost of cultivation. The yield varied from 50 to 293 lbs. per acre, and it was found that only when the yield exceeded 200 lbs. was the crop profitable. In 1905-06 the Manjri Farm, Poona, grew nineteen plots with better results, probably due to better soil. The yield of some of the plots was on an average of 680 lbs. per acre—a highly remunerative return. A year later it was reported by Mr. Fletcher, Deputy Director of Agriculture, that an experiment made on the edge of black cotton soil gave a yield of 1,166 lbs. per acre, while adjacent plots gave from 395 to 650 lbs. per acre.

"In the Agri.-Horticultural Gardens at Lahore Soy bean planted on a small area in 1894 yielded an estimated crop of 349 lbs. of seed per acre and 349 lbs. of fodder. Evidently it varies greatly in suitability to different soils and climates and does not seem to be adapted to the sea level plains of India.

"Gollan observed that the Japanese plant is erect, attaining a height of 12 to 15 inches, while the Himalayan form is a trailing plant. So far this vigorous growing plant does not appear in India to have been attacked by any insect or parasitic fungus.

"With regard to Burma, Mr. Burkill remarks: 'The Burmese grow it under the names of Pe-nga-pi and Pe-kyat-pyin, sowing it never in great quantities along with

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other beans on the mud banks as the falling rivers leave them bare in October, or more sparingly still away from the rivers. The Kachins and other hill tribes grow a little of it on their hill clearings, the Kachins call it Lasi. The Khasis, the Nagas and other tribes between the Brahmaputra and Upper Assam cultivate it similarly... In the Brahmaputra Valley it is grown as far as known only towards Barpeta in the Kamrup District.'

"Soy beans are called 'Bhut' in the Punjab, 'Bhat', 'Bhatwas' or 'Bhatmas' in the United Provinces and in the hills as far as Darjeeling, and 'Rymbai ktung' in Shillong and the Khasi Hills. Mr. B.C. Basu gives the Assamese name for *Glycine* as 'Patani jokra' and the corresponding Bengali name as 'Chhai.' In the Naga Hills it is called 'Tsudza' or 'Sudza.' It is grown by the Lepchas in Sikkim and is called by them 'Salyang' or 'Silliangdun.' 'Pe-nga-pi' is the usual name for Soy bean in Burma, but it has been received under the name of 'Lasi shapre tum' from Bhamo, and as 'Lasi N'Loi' and 'Lasi N'Hti' from Myitkyina. The Santali name appears to be 'Disom Horee.'"

"Dr. J.W. Leather in 1903 analysed the seeds of seven samples of Soy bean from Japanese seeds cultivated at Manjri, near Poona. The amount of oil in them varied from 14.92 to 23.05 per cent, being on the dry weight 15.97 to 24.41 per cent, with an average of 19.99. In 1902 Dr. Leather examined five samples grown on the Dumraon Farm. They yielded from 14.27 to 19.72 per cent of oil on the air-dried seeds.

"Fourteen samples of the seeds grown from Japanese seeds at the Manjri Experimental Farm were again analysed last year by a leading European firm. The percentage of moisture varied from 9.90 to 12.06, and the percentage of oil from 16.80 to 22.48...

"The following analyses of Indian-grown Soy beans were made in the laboratory of the Indian Museum in 1909 and 1910." Gives names and composition (oil [as is and on a dry basis], water, and ash) for 17 varieties from Burma, 21 from the Hill Tracts, 11 from the United Provinces [black seeds], and 15 varieties from Poona. "An attempt in 1903 to extract oil from these beans with the country *ghani* or indigenous oil-mill was a failure in Bombay."

Note: This is the earliest English-language document seen (Feb. 2004) that uses the term "soy-bean cheese" to refer to tofu.

1963. Hutchison, Robert. 1911. Food and the principles of dietetics. 3rd ed. New York, NY: William Wood and Co. viii-xx + 615 p. See p. 234-36, 496. Illust. Index. 22 cm. [100+* ref]

• ***Summary:*** Contains exactly the same information about soy and related products as the 1906 edition, in the same chapters, except it is on slightly different pages: See p. 234-37, and the section on diabetes, which has a subsection on "Diabetic breads" (p. 496-97). Robert Hutchison was born in 1871. Address: M.D. Edinburgh, F.R.C.P., Physician to the London Hospital [London].

1964. Jackson, Charles James. 1911. An illustrated history of English plate, ecclesiastical and secular: In which the development of form and decoration in the silver and gold work of the British Isles from the earliest known examples to the latest of the Georgian period is delineated and described. London: Country Life. xxxviii + 466 p. *

1965. Jingu Shicho. 1911. Koji ruien [Encyclopedia of early references to things Japanese]. Tokyo: Koten Kokyusho. Revised editions publ. in 1931 and 1971 by Yoshiko Bunkan; 51 volumes. Key volumes are Inshoku (#39) and Shokubutsu (#50). [50+ ref. Jap]

• ***Summary:*** Koji means "ancient things" or "origins." Rui means "varieties" or "description." En means "dictionary." This is one of the best books for doing historical research on Japanese culture, including foods. The book is divided into 30 major subject areas, such as Food and Drink. Within that section all basic Japanese foods and beverages are listed. After each one is listed many of the important early works in which that food is mentioned, with a quote of what is said. Furigana are used liberally to assist with pronunciations of hard-to-pronounce early document names and terms. Compiled from 1896 to 1914, volume 1 of the original edition is dated 1908. The works cited are from ancient times to 1867. The final volume is an index to the whole.

The volume on Food and Drink is titled *Inshoku-bu* (Vol. 51). Whole soybeans, p. 229-35. Black soybeans, p. 235-36. Green soybeans (*ao-daizu*), p. 236-37. Green vegetable soybeans (*edamame*), p. 239-40. Soybean cultivation, p. 240-42. Soybean utilization, p. 243-47. Daizu-ko Mochi, p. 555. Amazake, p. 695-97. Shirozake, p. 697-98. Hishio (Chiang), p. 836-40. Shoyu, p. 840-49. Miso, p. 851-68. Kuki (fermented black soybeans), p. 868-71. Natto, p. 871-74. Tofu (incl. Dengaku), p. 984-1005. Yuba, p. 995-96.

1966. Kagawa (T.) Company 1911. Importers and distributors (Ad). In: Nichibei Shinbun-sha. 1911. *Nichi-Bei Nenkan* [*Japanese-American Yearbook*. No. 7]. p. C-64. [Eng; Jap]

• ***Summary:*** Ad (full page). About ¼ of this ad is given in English. This company imports and sells various goods. These include (in Japanese) shoyu [soy sauce], shiro miso [sweet white miso], and aka miso [red miso]. And (in English) "Japanese refined sake (Aramakiya-Masamune), rice, miso, sauce, canned goods, dried fish, vegetables & pickles." Address: 442 Merchant St., San Francisco, California. Phone: Kearny 1263.

1967. Lafar, Franz. 1911. Technical mycology: The utilization of microorganisms in the arts and manufactures. Vol. II. Eumycetic fermentation. Translated from the German

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by Charles T.C. Salter. London: Charles Griffin & Co. ix + 558 p. Illust. Index. 23 cm. [3240* ref. Eng]

• ***Summary:*** An extensive bibliography (3,240 references) for both this volume and volume I appears at the back of this volume (p. 417-518). The opening chapter begins: "Already in the first volume (sect. 22) the algae and the fungi were arranged in a single group, that of the Thallophytes, in contradistinction to all other plants, the latter being classed in the group Cormophytes." The latter group has "an articulation of the body of the individual organism into leaf and stem."

Chapter 43, titled "Morphology and systematology of the Mucors (p. 48+) contains sections on "Subdivision of the Mucor family" (p. 49-51), "The genus Mucor" (p. 51-53; The genus was established by Micheli as far back as 1729. It contains *Mucor Rouxii* and *Mucor mucedo*), and "Rizopeæ" (p. 53-56). An illustration (p. 55) shows *Rhizopus nigricans* (After Brefeld). *Rhizopus nigricans* is the best and longest known member of this family. In 1818 it was described by Ehrenberg under the name *Mucor stolonifer,* which is still used by several workers." "The name *Rhizopus oryzae* has been given by Went and Prinsen Geerligs (I.) to a fungus discovered by them in Ragi (sect. 241), the sporangia and spore of which organism are considerably smaller than those of *R. nigricans.*

Chapter 44, is titled "Fermentation by Mucors" (p. 57-62). Chapter 45, titled "The use of Mucoreæ in the spirit industry" (p. 63-71) has three sections: Sect. 240. "Mucor rouxii and other species of Amylomycetes" (p. 63-67) states: "For the preparation of rice spirit there is produced in China, Cochin China, and neighboring countries, an article known as Chinese Yeast, and put on the market in the form of flat mealy balls, about the size of a half-crown. Its preparation, composition, and application were first described in 1892 by E. Calmette (I.), whose reports were extended and supplemented by C. Eijkman (II.) in 1894." The method of preparation is given. More important than its bacteria are "the yeast cells, which must be regarded as the exciting agents of the alcoholic fermentation; and certain Mucors, which affect the saccharification of the starch. Of the last-named organisms, which concern us here,. Calmette isolated a species which, in honour of his teacher and colleague, E. Roux, he named *Amylomyces Rouxii.*" Two illustrations show this organism, which produces a "diastatic enzyme" (p. 65). The so-called amylo process and the work of Colette and Boidin with *Beta-Amylomyces* and *α-Amylomyces* in this process are discussed (p. 65-66).

Sect. 241 titled "Ragi and tapej" [tapé or tapeh] (p. 67-69) states that "Tapej... is prepared from rice by the aid of a secondary auxiliary material, which the Malay natives of Java term Ragi or Raggi, and the Chinese settlers call Peh-Khah." A.G. Vorderman (1893) describes the preparation of Ragi. According to Eijkman (1894) Tapej, which is also called Tsao, is prepared with the aid of Ragi, by boiling husked Mochigome rice (*Oryza glutinosa* [*Oryzae sativa glutinosa*], known as "Ketan" in Java) in water until soft. The flora of Ragi and Tapej comprises three groups of microorganisms: bacteria, budding fungi, and fungi belonging to the family *Mucoraceæ.*

Sect. 242, titled "The so-called Amylomyces process," (p. 69-71), or Amylo process for short, states that "this is the name given to the process for the industrial utilisation of the diastatic activity of *Mucor Rouxii* and several allied fungi. A company, the *'Société d'Amylo,* was founded by A. Collette and A. Bodin (I, 1897), who also, in 1897, took out in the name of this company a German patent for a 'process for producing alcohol from starchy materials, by means of aseptic saccharification and fermentation with *Mucedineæ,...*'"

Fernbach (II, 1899) has given a lucid description of the practical performance of this process in the patentees' works, the maize distillery at Seclin near Lille, France. This description is summarized. "An English patent for the mechanico-technological modification of the process was also taken out by Collette and Boidin (III.) in 1898." See also two other 1897 English patents by Collette and Boidin No. 19858 and No. 1155. "The reader interested in this matter will find more precise data in the review published by M. Delbrück (III, 1899). The chief advantage of the Amylomyces process is the abolition of the expensive additions of malt requisite in the older method of saccharification, the amount formerly needed being up to 15 per cent. in the case of maize, and 2 to 3 per cent. in the case of potatoes. With regard to the yield furnished by the Amylomyces process, it is stated that in the Seclin works, 37.8 litres of absolute alcohol are obtained per 100 kilos. of maize containing 57.5 p. a yield corresponding to 66.2 litres per 100 kilos of starch. Owing to the large amount of mycelial hyphae, the residue filters easily." "Finally it should be said that, since 1898, the aforesaid patentees have replaced *Mucor* (*Amylomyces*) *Rouxii* by another species, namely, so-called *Beta-Amylomyces,* or *Mucor Beta.* This organism is capable of dealing with more highly concentrated mashes than the other, and enables a charge of 25,000 kilos. of maize to be mashed to 1000 hl (22,000 gallons) of goods, per cent. of starch

Page 213 states that *Pichia farinosa* (Synonym: *Saccharomyces farinosus* Lindner, a film yeast) has been found by K. Saito (II, 1905, *Botanical Magazine,* Tokyo) in Japanese Soja sauce.

Chapter 51 discusses the genus *Aspergillus* (p. 228-31) with many fine illustrations, including conidiophores, conidia, ascospores, different stages of *A. oryzae* and *A. glaucus.* Page 228-29 state: *"Aspergillus Wentii,* Wehmer, was observed by Went in the preparation of Tao Yu (*see* vol. 1, p. 248) according to the method practised in Java, and was described by Wehmer (XIX.) in 1896. It appears spontaneously on the boiled Soja beans that have been

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covered with *Hibiscus* leaves, and affects a loosening and disintegration of the firm tissue of the bean. The species forms a pale coffee-coloured, dense mold vegetation (Fig. 167)."

In Chapter 57 titled "Chemical activity of the Aspergillaceæ," by Prof. Dr. C. Wehmer, page 270 states: "Two species, *Asp. oryzæ* and *Asp. Wentii* are reported as able to grow through the substance of soft-boiled rice and Soja beans..." The "enzyme mixture from *Asp. oryzae* (the so-called 'Takadiastase')" is also mentioned.

Chapter 62 titled "The Monillæ and Oidia," by Dr. H. Wichmann mentions *Monilia javanica* (occurring in association with others in Ragi, p. 333)., "*Monilia sitophila* (Mont.), Saccardo, is said by Went (IV.; reference missing) to be used by the natives in West Java in the preparation of a sweetmeat known as 'ontjom' composed of the seeds of the ground-nut or earth-nut (*Arachis hypogæa*). The ground-nuts, which are thoroughly permeated by the fungus, are made up in the form of small, orange-colored cakes, the surface of which is covered with the conidia, whilst the interior is both chemically altered and loosened in structure by the mycelium." Sect. 315 (p. 336-39) is titled "Oidium lactis and allied species." Also discusses *Oidium lupuli*. Matthews and Lott (p. 338). Address: Prof. of Fermentation-Physiology and Bacteriology, Imperial Technical High School, Vienna.

1968. Langworthy, C.F. 1911. Cheese and other substitutes for meat in the diet. *Yearbook of the U.S. Department of Agriculture* p. 359-70. For the year 1910. See p. 363-64.
• ***Summary:*** Physiologists "admit that meat is not essential to a well-balanced diet, and there are many who, for one reason or another, are interested to know the rational ways of lessening the amount of meat which they consume or of replacing it with other foods." "Meat apparently supplies "a greater abundance than other foods of the substances which stimulate the normal or natural flow of the digestive juices" (p. 359).

The section titled "Dried beans and other legumes" (p. 363-64) states: "In Eastern countries, where conditions differ from those in Europe and America, the lack of abundant supply of food animals has been responsible for the production of a series of food products made from legumes, chiefly the soy bean. By ingenious processes, the nitrogenous material and more or less of the fat which the beans contain are separated and made into a number of special articles of diet, for instance, bean cheese or bean curd, a white material not unlike cottage cheese in appearance, and soy, a thick brown sauce which is the common flavoring material as well as a condiment of millions of people who thus supply nitrogenous material and flavor to a diet of vegetables, rice, and other similar foods."

The section titled "Commercial meat substitutes" notes: "There are on the market numbers of proprietary or patent foods recommended by their makers as meat substitutes. For some it is claimed that they are made from nuts, and judging from their flavor and other characteristics they may be prepared from the peanut or other nuts, in part at least. It has been suggested that some of these special foods contain wheat gluten. Undoubtedly considerable quantities of these foods are used by those who follow some one of the vegetarian systems of diet, but they are not used in any general way as substitutes for meat in the average home." Address: Expert in Charge of Nutriton Investigations, Office of Experiment Stations [USDA].

1969. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1911. Nichi-Bei nenkan [Japanese-American yearbook. No. 7]. 650 Ellis St., San Francisco, California. 647 p. Reprinted in 2001-02 in Tokyo by Nihon Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 5-kai [Collected Documents on Japanese Emigration. No. 5]. [Jap; eng]
• ***Summary:*** This book is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. The English-language title page reads: *The Japanese American Year Book.*

The book is divided into 12 parts, each numbered separately. Contents: (1) Front matter, incl. 1 ad (5 p.) (2) Table of contents (6 p.). (3) Map of California agriculture (fold out, in Japanese, 1 p.). (4) Black and white photos on unnumbered pages (12 p., front and back). (5) Ads (p. A-1 to A-18). (6) Front part of Nichibei Nenkan No. 7 (p. 1-200), including general information about America, Japanese in America, U.S. and agricultural census data, etc. (7) Ads (12 p.). (8) Nichibei Nenkan continued (p. 108 p., incl. original printing and publication dates and data on last page). (9) Ads (B-1 to B-66). (10) Directory of Japanese businesses and other organizations in the USA (p. 1-152, as of 1910 Oct. 1) (11) Ads (C-1 to C66). (12) New printing and publication dates (2002 Feb. 25), data, and ISBN (1 p.).

This year book focuses on Japanese in California. In early 1909, the California legislature "approved an appropriation of $10,000 to be utilized for investigating the conditions of the Japanese in that state. The duty of directing the investigation naturally devolved upon the State Commissioner of Labor Statistics (*Rôdôkyoku-cho*), Mr. John D. Mackenzie. The work was begun on April 15, 1909, with the appointment of 9 special agents," 8 men and one women, all white Americans. "There were no Japanese or other aliens employed in any capacity. To this force were added for the office work two expert statisticians and two stenographers." In early 1910, Mr. Mackenzie submitted to the governor of California (Gov. Gilette) a 78-page report (K. Kawakami 1912, p. 343-44).

Basic information about how the survey was conducted, its scope, and reaction to it is given on pages 27-28, 36-45, 47, 61-62, 150-51 of this year book. The text is written in the Japanese of the day, which included old-fashioned characters, sentence structure, and grammar–and is thus

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difficult for modern Japanese to read or translate. The surveyors went to every part of California where Japanese were believed to live, and eventually surveyed an estimated 95% of the Japanese in California.

Most Japanese welcomed the surveyors and responded accurately and in detail on forms which were printed in both Japanese and English. A very high percentage of the forms were returned by mail to the survey headquarters. The Japanese were also asked to fill out more specialized forms such as business license, payment of taxes, no. of children in school (incl. where and in what grades), occupation, employment, land use, etc. This newspaper (*Nichibei Nenkan*) obtained much information from this survey, and (apparently) from another census begun on 15 April 1910 (or is it 1909?); this one took one year and 5 days–finishing the research in April 1911, at which point compilation began. A key reason for the census was the strong anti-Japanese feeling in California, stirred up by leaders of the labor movement. The survey praised Japanese in California.

A table of U.S. farm crops (p. 54, near the front of this book) shows that in 1911 some 2,785,516 bushels of soybeans were produced in the entire USA worth $7,767,702. Note: What is the source of these statistics? These are very early statistics on soybean production in the United States–earlier than any known USDA statistics.

A table of U.S. imports and exports from Japan (p. 74) shows that $109,316 worth of miso and shoyu were imported; they were considered dutiable items, with a 40% duty levied on each (part 2, p. 23).

The Directory shows Japanese companies making soyfoods in California, Utah, Colorado, New York City, Washington state, and Oregon. Address: San Francisco, California.

1970. Nolton, Jessie Louise, ed. 1911. Chinese cookery in the home kitchen: Being recipes for the preparation of the most popular Chinese dishes at home. Detroit, Michigan: Chino-American Publishing Co. 71 leaves, unnumbered. 24 x 13 cm.

• ***Summary:*** The preferred oils are sesamum [sesame] oil and peanut oil. On one unnumbered page are descriptions of two Chinese sauces; both probably contain soy sauce: "Chinese Seasoning Sauce. A rather salty sauce with a sort of meaty flavor. It is a necessity in preparing Chinese dishes to obtain the peculiar flavor which makes the chief charm of the dish.

"Chinese Flavoring Sauce. A sauce which is somewhat like molasses in appearance and is used in most Chop Sooy [Suey] dishes. These sauces are imported from China in jugs of a distinctive Chinese pattern."

The section titled "Luncheon menu" states: "A small pot of soy, see yu, or see gow, as the Seasoning Sauce is variously called should be at each place for use if furthering seasoning of the food is desired."

Contains 36 recipes. Address: The Chicago Inter-Ocean.

1971. Okurasho Shuzeikyoku. 1911. Naikokuzei isan 53 [Domestic tax; treasure from the past 53]. Tokyo: Tokyozeimu Kantoku-kyoku. 1 vol. 23 cm. [Jap]*

• ***Summary:*** This is a Japanese government publication. Note: This is the 3rd earliest book in WorldCat / OCLC that has miso as a subject or title word. Address: Japan.

1972. Sawer, E.R. 1911. Cedara memoirs on South African Agriculture. Vol. II. Containing reports on feeding crops and livestock experiments in South Africa. Natal/Pietermartizburg, South Africa. 371 p. See p. 131, 177, 183-218. Report X. The Legumes as Grain and Oil Crops: Soya Beans. [15 ref]

• ***Summary:*** A superb, early overview of soybeans and their uses in South Africa and England. Contents: An agricultural romance. Early experiments with the soya bean [in Europe and South Africa]. Export trade from Manchuria. The course of prices. Consumption in Great Britain. Botanical character. The commercial aspect. History of the oil market during 1910. The adaptability of the bean. Germination of seed. Climatic requirements. Classification of varieties. Variety tests at Cedara: Black seeded (Buckshot and Nuttall tested in 1906), brown seeded, green seeded (Samarow and Guelph), yellow seeded (Mammoth and Hollybrook, planted Nov. 1908). The cultivation of the crop. Times of planting. Distances of planting. Manure experiments at Cedara. Nodule formation and composition of the plant. Harvesting soya beans. Storage of seed. Comparative yields of grain. Soya bean oil. Uses of the oil [for cooking, paint, soap, etc.]. Soya beans as human food (incl. natto, tofu, miso, yuba, shoyu [p. 209-11]). Digestion experiments [on humans in Japan]. Milling experiments. Soya beans as stock food and fertiliser. Live-stock experiments. Soya cake as fertiliser. Soya bean as green forage.

Concerning industrial utilization: The Vice-Consul-General at Yokohama writes that "the annual value of fertilisers employed in this country (Japan) amounts on an average to about £8,000,000 represented in equal proportions by artificial fertilisers and soya bean cake." The year 1908 was exceptional, however, in that the value of the bean cake was 3.5 times that of the artificial fertilizers.

During 1910 the linseed oil reached its highest price in 50 years. Soya oil, now produced in large amounts in Manchuria after the Russo-Japanese war took its place. It was used in making paints, candles, and soaps. "Soya bean oil has been found eminently suitable for the soap-makers' purpose on account of its low content of free fatty acids and of unsaponifiable matter or impurities. In the latter respect it has been shown superior to any of the other oils or fats of commerce, whether of vegetable or animal origin. The glycerine, which is secured as a by-product of soap and candle manufacture, is subsequently distilled for explosives, such as dynamite, blasting gelatine, cordite, etc., and for

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various purposes in the arts, for filling gas-metres, for the manufacture of inks, printers' rollers, etc. The residue from the distillation of glycerine is used in the manufacture of boot blacking."

Concerning germination (p. 191): At Cedara: "The first crop was planted in 1903, and a maximum yield of 920 lb. of grain obtained per acre. In the following season, characterized by unfavourable weather conditions, the heaviest yield on a new series of plots was 780 lb. per acre. A third season's trial on the same ground, however, witnessed a marked increase with local seed, the heaviest crop totalling 1,252 lb. of grain."

Concerning soybean cultivation in British colonies in Africa (p. 192): "Early last summer the late Sir Alfred Jones shipped to West Africa soya beans for experimental purposes, and it was subsequently reported by Mr. A.G. Turner, who was entrusted with a special mission to encourage this culture on the west coast, that the soya bean could be successfully cultivated throughout the Gambia, Sierra Leone, Nigeria, and the Gold Coast Colony, but that the yield to the first experiment had only been from six to eight bushels per acre, there having been a considerable loss owing to faulty germination. Later results, however, were phenomenally successful."

Concerning soybean trials in South Africa (p. 192-93): "During the past year favourable results have been received from Umzinto [from Messrs. Archibald and Co., 52 miles south of Durban; elevation 300 feet], Nel's Rust Estate [64 miles north of Durban; elevation 2,710 feet], Nottingham Road [elevation 4,807 feet], and Naval Hill [Mr. J.R.T. Clouston of Garrow planted a few acres in 1908], Colenso [elevation 3,200 feet], and Cedara [82 miles by rail from Durban; elevation 3,540 feet; a number of varieties were tested in 1906] in Natal; and from Barberton and Pretoria in the Transvaal."

Concerning comparative yields (p. 203): "As a grain producer, the soya bean compares very favourably with other leguminous crops, such as field beans, peas, etc. At Cedara no other legume has produced, with chemical manures only, so heavy a yield of seed; and no other legume, except the lupine, has showed itself so much to be depended upon as a grain producer." "Land that will produce 10 muids of maize per acre should yield at least six muids of beans after the second year's cultivation,..."

Concerning human digestion experiments (p. 212): "The general opinion of Japanese investigators, and others familiar with Oriental dietetics, is that the protein in articles of food prepared from soya beans is in a very available form, and that these preparations are most valuable foods."

Five photos show various men standing in a crop of soya beans and in some of the variety plots at Cedara (1909-11). An illustration (line drawing) shows a curing frame for soya beans.

Tables show: (1) Yields in lb. per acre of soya beans sown at different times, during 3 years (19-3-04 to 1905-06). For each year is given: Date of sowing, date of harvest, yield of grain and straw, and manures used (superphosphate, gypsum, and potash). The variety tested was Henderson's Early Green (Guelph) (p. 198). (2) Results of manure experiments with soya bean (Early Green) in lb. per acre. Sown 4 Nov. 1904. Harvested 13 March 1905. Increasing yields "may be attributed to the association of nitro-bacteria, the benefits of constant cultivation, and the accumulation of humus and residues of fertilizers" (p. 200). (3) Feeding value of soya bean cakes for manure, based on experiments by Messrs. Lever Bros., Port Sunlight, Liverpool (p. 215).

Note 1. This is the earliest document seen (June 2004) that mentions the use of a soy oil derivative (glycerine) in printing inks.

Note 2. This is the earliest document seen (May 2004) that mentions the use of soy oil to make candles (one of two documents).

Note 3. This is the earliest document seen (June 2004) concerning the use of soy oil (or the glycerine derived from it) to make explosives.

Note 4. The next section of this report (p. 218+) is about ground nuts (*Arachis hypogoea*). Address: Director, Div. of Agriculture and Forestry, Natal; Principal, Cedara School of Agriculture; Formerly Asst. Secretary of Agriculture, Southern Rhodesia.

1973. Stuart, George A. 1911. Chinese materia medica: Vegetable kingdom. Shanghai, China: American Presbyterian Mission Press. 558 p. See p. 189-96, 411. 23 cm. Reprinted in 1928 in Shanghai at the Presbyterian Mission Press. [6 ref]

• ***Summary:*** Below the title is written: "Extensively revised from Dr. F. Porter Smith's work." This excellent book contains good summaries of the information on soyfoods found in the famous *Pen-ts'ao kang-mu* (1578-1597) by Li Shih-chen. Rev. Stuart, a physician (M.D.), minister, and missionary in China, adds a number of observations on medicinal properties ascribed to these foods by the Chinese. He began to write this revision of Dr. Smith's 1871 work in 1900 when the Boxer trouble (movement) drove him to Shanghai. He died shortly before the work was published and before he was able to finish the Preface. The section on the soy bean (p. 189-96) begins: "Glycine hispidia [sic, hispida].–(Ta-tou), (Shu), (Jên-shu), (Jung-shu), (Shih-tou), (Hei-tou), (Huang tou) (Chinese characters given before each term). This is the same as *Soja hispidia* [sic, *hispida*] and *Dolichos soia* [sic, *soja*], and is the Chinese and Japanese *soy bean*. It has been known in China from ancient times, and has always been considered by the Chinese as the most important of the cultivated leguminous plants. A very large number of varieties is found throughout the Empire, especially in the north. The name 'great bean' applies to the plant, not to the seeds, as these are quite small. It is employed in China and Japan in the preparation of three

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products which are of almost universal use in oriental cookery. These are 'bean oil,' 'bean-curd,' and 'soy.' There are many varieties of this bean, which the Chinese distinguish by the color of the seeds; these being black, white, yellow, gray, azure, and spotted."

"The black sort [of soybean] is used in medicine, and the yellow is especially valued in the preparation of bean-curd [tofu] and soy [sauce]. The black kind is not used much as food as it is thought to render the body heavy. The Chinese regard those things which give lightness to the body with more favor than those which promote flesh and sluggishness. The characters (Shu) (three separate Chinese characters are given) are the classical name, while (Jên-shu) and (Jung-shu) (Chinese characters given before each) are equally ancient compound names for this plant. (Chinese characters given) (Shih-tou), 'bean-relish bean,' indicates its use in making the bean relish and soy [fermented black soybeans and soy sauce].

"Medicinally, the black beans are considered to have much value. Their frequent use is thought to have a most beneficial effect upon the body, giving strength and vigor, albeit with heaviness. This latter fact is the only objection offered to the use of these beans. They are regarded as an admirable counter-poison against most of the vegetable poisons, such as *Aconite* and *Croton tiglii*. Carminative and quieting properties are also ascribed to them. They are prescribed in a large number of difficulties, notably post-partum and sexual disorders; but as they are always in combination with other active drugs, it may be readily supposed that the beans play no very important part in these prescriptions. The green bean hulls, 1317, chewed into a pulp, are applied to small pox ulcers, corneal ulcer, and the excoriation produced in children by urine. The bruised leaves of the plant are used as a local application in snake bite. The flowers, 1310, are used in blindness and opacity of the cornea."

"The *bean sprouts*, called (Ta-tou huang-chüan) and (Tou-nieh) (Chinese characters are given before each term) are also mentioned in the *Pentsao*. Bean-sprouts (Chinese characters are given, Tou-ya) are a common article of diet with the Chinese, but these former are made with the black bean and are especially used in medicine. Li Shih-chen gives the following method of preparation: "On a water day (Three Chinese characters) soak black beans in clear water, and after the sprouts have grown, take off the hulls and dry the sprouts in the shade." Their medical properties are considered to be laxative, resolvent, and constructive. They are reputed to have special influence upon the growth of the hair, and to be curative in ascites and rheumatism.

Note 1. *Webster's Dictionary* defines ascites (pronounced uh-SAIT-ez, and first used in the 14th century) as "accumulation of serous fluid in the spaces between tissues and organs in the cavity of the abdomen."

"The yellow variety of beans is also given a separate discussion in the *Pêntsao*. As was before said, these are used for the most part in the preparation of bean oil, bean-curd, and soy [sauce]. The beans and pods of this variety are larger than those of the black kind, and in the green state they are highly esteemed by the Chinese as an article of food [green vegetable soybeans]. But they are also considered 'heavy,' and if partaken of too freely they are thought to produce jaundice. They are considered to be carminative and deobstruent, and are recommended in ascites. Locally they are applied to smallpox ulcers. The ashes of bean stalks are specially recommended as an application to unhealthy granulations in hemorrhoids (possibly fungous growths of the anus).

"The [soy] oil, (Chinese characters for bean + oil) (Tou-yu), is considered to be very slightly deleterious, and is used as a local application to ulcers and skin diseases, and for removing bandoline (defined by the *Oxford English Dictionary* as "a gummy preparation for fixing the hair or a moustache" and in use by 1846) from the hair. This oil is manufactured in large quantities, especially in Manchuria, and is shipped to every part of China. It is used as food, chiefly by the poorer people, and was formerly used as a burning oil; but kerosene has now almost superseded it for this latter purpose. It is usually dark colored, and has a not very pleasant odor."

On page 411 we read: "Soja hispida–(Chinese characters for white + bean) (Pai-tou). Also called (Chinese characters are given) Fan-tou. This is a small bean, a variety of *Glycine hispidia* [sic, hispida], the stalks of which, when young, are eaten as a pot-herb. The bean is sometimes used to make soy [sauce] and bean-curd, and is eaten boiled and as a congee. It is considered to belong to the kidneys, therefore those suffering from diseases of this organ should use it. The bean is regarded as very nutritious, and both it and the leaves benefit the viscera."

Note 2. Congee is rice cooked with excess water to make a porridge. In China, there are many types of medicinal congee (*jook*) containing grains, vegetables or herbs, eggs, meat, etc. See: Flaws, Bob. 1995. *The Book of Jook: Chinese medicinal porridges*. Boulder, Colorado: Blue Poppy Press. $16.95. Address: Rev., M.D., Shanghai, China.

1974. Stuart, George A. 1911. Chinese materia medica: Vegetable kingdom. Bean ferment (Document part). Shanghai, China: American Presbyterian Mission Press. 558 p. See p. 193-94. 23 cm.

• ***Summary:*** "Bean Ferment.–(Chinese characters given) (Tou-huang). This is the fermentation pellicle (*Mycoderma*) which forms on the top of fermenting beans, as the mother-of-vinegar forms on the top of vinegar in its process of preparation. The pellicle contains, in addition to the *mycetes* of fermentation, various kinds of moulds and mildews." To make the product, "Take a peck of black beans and thoroughly steam them. Spread upon matting and cover with

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artemisia stalks, as in the process of preparing soy [sauce]. When the pellicle is formed on top, take it off, dry in the sun and powder, when it is ready for use. The taste is sweet and cooling, and the substance is non-poisonous. It is specially recommended in the treatment of rheumatism, especially that of the knees, for the insufficient action of the five viscera, spleen, and stomach, giving strength to the body, lubricating the muscles and skin, improving the complexion, invigorating the marrow, and toning up the system generally, enabling one to eat fats. It is sometimes combined with pork fat and made into pills for producing flesh. A hundred pills should be take at one time. Fat people should not use this substance. Chewed into a paste and applied to eczema, it proves very efficacious."

Note: Eczema, a skin disorder, was later recognized to be, in many cases, an allergic reaction. Address: Rev., M.D., Shanghai, China.

1975. Stuart, George A. 1911. Chinese materia medica: Vegetable kingdom. Soy [Chinese miso and soy sauce] (Document part). Shanghai, China: American Presbyterian Mission Press. 558 p. See p. 195-96. 23 cm.
• ***Summary:*** "Soy.–(Chinese character given) (Chiang). Common names are (Chinese characters given) (Chiang-yu [soy sauce]) and (Chinese characters given) (Shih-yu [fermented black soybean sauce]). Li Shih-chen says that the Chinese name indicates the power of this substance to counteract the poison which may exist in food. Several forms of soy exist, such as flour soy, made of wheat or barley flour; sweet soy, of similar composition, but varying slightly in the method of manufacture; and bean soy, made of various kinds of beans, but more particularly of the Hispidia [sic, Hispida] bean. One method of manufacture is as follows: 'Take of Hispidia beans three quarts, and boil in water. Mix with twenty-four catties of flour and allow to ferment. To every ten catties of the mixture take of salt eight catties, of well water forty catties; mix and allow to stand until it is ripe.'

"Several other methods of manufacture are given in the *Pêntsao*, differing in various respects from this, but the method here given will suffice to illustrate the mode of manufacture. Soy is a black, thin liquid, having an agreeable saltish flavor, and frothing up of a yellow color when even slightly shaken. It is the universal sauce of the Chinese and Japanese, and is largely exported to India and Europe as a convenient menstruum for other flavoring substances used as condiments. In China it is both made in large quantities by shops and in smaller quantities by domestic manufacture. It is considered to provoke the appetite and to correct any injurious qualities of food. It is laxative, cooling, and antidotal to various poisons, according to Chinese estimation. It is often applied to burns, scalds, eczema, and leprous sores. Its use is considered beneficial in threatened abortion and the hematuria of pregnancy.

"Two other kinds of soy are mentioned in the *Pêntsao*, each made from the seeds of different species of elm tree. One is called (Yü-jên-chiang) and the other (Wu-i-chiang) (Chinese characters given before each term). In regard to these two terms for elm, see the article on *Ulmus*. Both these kinds of soy are considered to be laxative, diuretic, and anthelmintic [expelling or destroying parasitic worms esp. of the intestine]. They should not be used to excess, as they are considered to have some deleterious properties." Address: Rev., M.D., Shanghai, China.

1976. Ward, Artemas. 1911. The grocer's encyclopedia–Encyclopedia of foods and beverages. New York, NY: Published by the author. 748 p. Illust. (color). 29 cm.
• ***Summary:*** Soy-related entries: Bean (p. 49-54): "The bean of European history is the Broad or Windsor variety,..." "The principal beans of United States cultivation are the Kidney and Lima, both of them believed to be native to South America.

"The Kidney Bean is the Haricot of the French and in Great Britain is sometimes called the French bean." The many varieties can be classified into "tough podded" and edible podded." "The 'tough podded' class produces the bulk of the dried beans of commerce, variously known as 'Kidney Beans,' 'Navy Beans,' 'Marrow Beans,' 'Black Beans,' 'Turtle Beans,' etc., in many colors, shapes and sizes." "'Flageolets' are cultivated with special regard to the consumption of the fresh seeds or beans." To the "edible podded" class of kidney beans belong Wax or Butter Beans, the Cranberry Bean or Red Speckled Bean, String Beans, Snap Beans, French Beans. "Pea Beans are the Cowpeas of the agriculturist." "Among numerous other 'special' varieties are the Soy Bean (which see), Asparagus Bean, Frijole, Lab-lab (or Egyptian Kidney), Red Bean, and Scarlet Runner." Asparagus Beans are known as *Tou Kok* by Chinese gardeners in California.

"Catsup, Catchup, Ketchup: a word derived from the name of an East Indian pickle, which was formerly applied specifically to the boiled spiced juice from salted mushrooms, but is now freely attached to various sauces (sold both bottled and in bulk) which consists of the pulp–bottled, strained and seasoned–of various fruits, as tomatoes, green walnuts, etc." Note: At "Catchup" and "Ketchup" we are told to see "Catsup."

Locksoy ([Lock Soy], p. 346): "Rice boiled into a paste and drawn into threads, imported from China. It is used to thicken soups."

Nuts (p. 412-13): A table shows the nutritional composition of all major American nuts, including almonds, chincapin [chinquapin] or water chestnut, chufa (earth almond), cocoanut, peanut, and peanut butter. "Many special nut foods, such as malted nuts, meat substitutes, etc., have been devised and extensively advertised by manufacturers for general dietetic use and for the special needs of vegetarians and fruitarians. It is said that some of these

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products contain soy beans, but apparently the peanut is very important in their composition.

Sauces (p. 552-53): In bottled sauces, vinegar is the most common liquid ingredient. "Commercial sauces of the Worcestershire kind, if of good quality, generally have Soy (which see) as their chief character ingredient. A typical formula of Worcestershire-style includes, in addition to Vinegar and Soy, a considerable percentage of lime juice, onions and tamarinds and small quantities of garlic, fish (as anchovies or pickled herrings), red chilies and spices. The product, after cooking, is strained through fine hair sieves. Leicester Sauce resembles Worcestershire in general characteristics but is less pungent."

Soy (p. 576): "A brown sauce, valuable to the commercial sauce market, made from the Soy Bean, a native of Southeastern Asia [sic] and widely grown in China and Japan. The beans are boiled, mixed with ground wheat or other grain, salt, etc., and allowed to ferment for a month or 6 months. The liquid is then strained off and clarified. Molasses is frequently added. In appearance it resembles Worcestershire Sauce, of which it is an important ingredient. It should not be too salt [salty] or too sweet, and although thick and syrupy, should be clear. When shaken in a bottle or glass it should, if it is genuine, leave a bright yellow film on the glass. Being a very desirable article, it is often counterfeited."

Soy bean (p. 577): "Commercial and government circles, both in Europe and this country are devoting increased attention to the cultivation of the Soy Bean as a food product, as it contains a large percentage of protein and a fair amount of fat, thus resembling meat in general nutritive value. The cell-walls of the raw bean are very tough, but thorough cooking makes it readily digestible. Boiled with bacon and other fatty broths until soft and then seasoned, the result is a vegetable dish very pleasing to the average palate. If the beans are dry, a preliminary soaking to remove the skins is necessary.

"The Soy Bean is largely consumed in Japan, China and other parts of Asia as an adjunct to rice and other foods, taking the place of meat in the popular dietary. It is most popular in these countries in fermented form, the best known types being *Shoyu* or Soy Sauce; *Tofu*, a kind of cheese; *Miso*, Soy Bean 'Milk' [sic]; *Yuba*, the evaporated product of 'Miso" [sic], and *Matto* [sic, *Natto*], a product obtained by simple fermentation of the boiled beans. The various degrees and styles of fermentation serve the double purpose of rendering the beans more easily digestible and producing new flavors, just as by the fermentation of milk and cream we produce the different flavors of cheese.

"The plant is an annual, growing chiefly in bush form..." The different varieties are classified principally by the color of the beans: "Black, Yellow, White and Brown.... Types of all these four classes are grown to some extent in Germany, Austria, and Switzerland, and the first three also in this country, in North Carolina and other Southern States. Under favorable conditions a single plant may bear a hundred or more pods.

"Because of the fact that the beans contain little if any starch, they have been recommended as a desirable food for diabetics, and Soy Bean Bread and Soy Bean Meal are prepared for that purpose in Paris. The dried beans are also used in Switzerland and elsewhere as a coffee substitute." An illustration shows the top of a soy bean plant, with leaves, pods, and flowers.

Note 1. This book is full of fascinating information about the food system in the USA in 1911, with entries such as cold storage (first attempted in 1860, it has grown to extraordinary proportions), coloring matter (great improvements, no longer harmful), ice and refrigeration (ice manufacture dates from about 1870; today nearly 200 companies produce ice for general sale, mostly using the compressor and anhydrous ammonia). Dictionary of food names in five languages (English, French, German, Italian, and Swedish, p. 710-724) and a dictionary in English of "Culinary and bill-of-fare terms" (p. 741-45).

Note 2. The author, Artemas Ward, lived 1848-1925. His father was Henry Dana Ward (1797-1884), his grandfather was Thomas Walter Ward (1758-1835), and his great-grandfather was Artemas Ward (1727-1800), the first Commander-in-Chief of the colonial troops before the arrival of George Washington (a little-known Virginia planter) on 3 July 1775. Thereafter he served as second in command after Gen. Washington and was a Major General in the American Revolutionary War. Address: Formerly (from 1874) founder and editor of *The National Grocer*, 30 Union Square, New York.

1977. Yabuno Bros. 1911. Yabuno Bros. (Ad). In: Nichibei Shinbun-sha. 1911. *Nichi-Bei Nenkan [Japanese-American Yearbook*. No. 7]. p. B-3. [Eng; jap]

• ***Summary:*** Ad (¼ page). The top half of this ad is in English. This company imports and sells Kishu Yuasa shoyu [soy sauce]. A photo shows a wooden keg of soy sauce. This ad also appears in the 1912 Year Book (p. A-11), and in 1913 (p. 26). Address: 1525 Geary St., San Francisco, California. Phone: West 2324. Home S. 3651.

1978. Yamato Shokai (Yamato Co.). 1911. Dealers in Japanese and American groceries and provisions and general merchandise (Ad). In: Nichibei Shinbun-sha. 1911. *Nichi-Bei Nenkan [Japanese-American Yearbook*. No. 7]. p. C-33. [Eng; Jap]

• ***Summary:*** Ad (¼ page). The top 1/3 of this ad is in English. This company sells various goods including (in Japanese) shoyu [soy sauce] and miso. This ad also appears in the 1913 yearbook (p. 35). Address: 630 N. 6th St., San Jose, California. Phone: San Jose 3379.

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1979. Estes, Rufus. 1911? Good things to eat... Chicago, Illinois: Published by the author. 142 p. Undated. Frontispiece (portrait). Illust. Index. 24 cm.
• ***Summary:*** "Soy" [sauce] is mentioned as an ingredient in the recipe for Royal sauce ("... stir in by degrees two tablespoons of tarragon vinegar, two tablespoons of Indian soy, one finely chopped green gherkin... When cold serve with fish." p. 76).

Peanut butter is used as an ingredient in Peanut Meatose (a meat alternative, p. 49). Peanuts are also used in recipes for Peanut soup and Margarettes (as part of the filling between crackers).

Note: The author, Estes Rufus (born 1857) is African American. The frontispiece shows his portrait photo. The "Sketch of my life" tells how he was born a slave in 1857 in Tennessee then rose to become a chef in the Pullman Company Private Car Service. He is presently chef of the subsidiary companies of the United States Steel Corporations in Chicago. Address: Chicago, Illinois.

1980. Nishimura, Torazô. 1912. Shôyu moromi oyobi shôyu ni shôzuru sanmakusei kôbo kinrui (zoku ni shôyu no kabi to shôsu) ni kansuru kenkyû [Species of film-building yeasts on shoyu]. *Nogaku Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 113. p. 1-45. Jan. 5. [Jap]
• ***Summary:*** In the English-language table of contents, shoyu is called "Soya." Address: Nôgaku-shi, Japan.

1981. Hooper, David. 1912. Soy bean in India: Glycine hispida. *Tropical Agriculturist* (*Ceylon*) 38(1):11-15. Jan. 15; 38(2):99-103. Feb. 15. [1 ref]
• ***Summary:*** This is a reprint of an article by the same author with the same title published in 1911 in *Agricultural Ledger* (Calcutta) No. 3. p. 17-33. Address: Australia.

1982. Li, Yu-ying; Grandvoinnet, L. 1912. Le soja [The soybean]. *Agriculture Pratique des Pays Chauds* (*Bulletin du Jardin Colonial*) 12(106):28-38. Jan. [16 ref. Fre]
• ***Summary:*** Contents (continued): Soymilk (continued): Chemical properties, composition (comparison with 8 animal milks–in bar chart form showing protein, lipids, carbohydrates, and ash), action of ferments [enzymes] and diastases [diastatic enzymes] on soymilk (*Action des ferments et des diastases sur le lait de soja*) (1. The lactic ferments {kefir, yogurt, etc.} act in the same way on vegetable milk and on animal milks. 2. The ferments of certain European cheeses make analogous vegetable cheeses {*fromage végétal d'une façon analogue*}. 3. Rennet coagulates soymilk, but the optimum temperature is a little higher than for cow's milk. 4. The ferments that we have extracted from shoyu [Japanese soy sauce] coagulate animal milks in the same way as vegetable milk).

Uses of soymilk (p. 30): They are the same as those of the animal milks. We will note, mostly, its use in China as a substitute for mother's milk. (Footnote 1. One of our parents was nourished, from the first phase of life, with soymilk. He/she is now 37 years old and has always been in excellent health).

Residues of the [soy] dairy (*residus de laiterie;* okara).

Condensed soymilk (*lait de soja concentré*). Powdered soymilk (*lait de soja en poudre*). Fermented soymilk (Kefir, yogurt, etc. are increasingly used therapeutically. One can compensate for the lack of carbohydrates in vegetable milk by the addition of lactose {or levulose for diabetics}). Tofu–which Li calls *Caséo-Sojaïne* (*fromage de soja*)–meaning "tofu or soy cheese": Method of production, coagulants used, perfected modern production methods at Li's factory (In this factory, tofu can be made into either non-fermented or fermented cheeses. The non-fermented cheeses {*Fromages non fermentés*} are of two types: Fresh and hard/firm. The fresh are white in color and the consistency of hard-boiled eggs. The hard/firm are of two types: In diced sheets {salted or unsalted}, and in salted, semi-dry pieces/morsels. The fermented cheeses {*Fromages fermentés*} may be of the Gruyere, Roquefort, or Camembert types), tofu yields, preservation and storage, composition of tofu (compared with 4 meats on a moisture-free basic, in bar chart form showing protein, lipids, carbohydrates, and ash), digestibility of tofu, culinary preparations based on tofu (tofu omelette with egg, smoked tofu with shoyu, tofu pâté, soy sausage–made like regular sausage except that meat and fat are replaced by fresh, hard tofu plus butter or cocoa butter). Soy casein (*Caséine de soja;* for food or industrial uses). Contains various tables and charts from other sources.

Residues of the [soy] dairy (*residus de laiterie;* okara, p. 30-31): After filtering the [soy] milk, a slightly firm, aqueous oilcake remains in the filter cloth that is still very rich in nutrients (*substances alimentaires*). According to Dr. Bloch, it does not contain any trace of starch (our tests agree with this conclusion). Consisting of torn cells emptied of the largest part of their content, it would have the following percentage composition (see Bloch 1907):

Protein 0.248, water 88.75, ash 0.36, fat .04, other 10.85.

"The oilcake (*torteau*) obtained at the factory of 'Soy-Casein' (*Caséo-Sojaine*) and analyzed at the municipal laboratory of Paris yielded:

Water 80.04, protein 33, fat 8.44, carbohydrates 22.63, mineral salts 4.24.

"This oilcake was very easily dried to 10% water. The milk can only be filtered after boiling, thus according to Prinsen [Geerligs]:

Proteins 29.38, oil 12.81, ash 4.66, carbohydrates that are convertible to sugar 26.80, fiber 11.10, cellulose 10.2.

"The oilcake can be diluted in water. The liquid thus obtained is used in grinding to make the second extraction of [soy] milk."

Soy casein (p. 38): The casein or legumine of soymilk can be prepared by precipitation, purifying it by several

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dissolutions and precipitations, and finally drying it. One obtains a yellowish powder resembling animal casein obtained by the same processes.

It is generally admitted that vegetable albumins have a coefficient of assimilation greatly inferior to those of animal albumins. But confirmation of this is far from being definitive. The experiments of Messrs. H. [Henri] Labbé and Marchoisne have showed, in effect, that vegetable albumin is as well assimilated as animal albumin.

Legumine is different from animal casein, but the differences are of the same order as those which exist between the various animal caseins. The differences existing between the caseins of the various animal milks have been noted by many chemists.

The casein extracted from soymilk can be used in the same applications as casein from cow's milk. These are of two types: food and industrial. For food uses, one can point out the manufacture of powders, of lacteal flours (*farines lactées*, perhaps wheat flour enriched with soy casein), of whole-grain bread, etc.

Note 1. This is the earliest document seen (April 2001), worldwide, that mentions a Western-style soy cheese (Gruyere, Roquefort, or Camembert types), or a tofu sausage. This is also the earliest French-language document seen that mentions soy cheese, which it calls *fromage de soja*.

Note 2.

Note: This is the earliest document seen (Jan. 2003) concerning the use of tofu in a second generation product.

Note 3. This is the earliest document seen, worldwide, that mentions powdered soymilk or dried soymilk.

Note 4. This is the earliest document seen, worldwide, that mentions soy kefir. Address: 1. Counseiller de 1ere classe au Ministère de l'Agriculture de la Chine; 2. Ingénieur agricole (G.).

1983. Cornwell (G.G.) & Son. 1912. The chef says today: A good meal... (Ad). *Washington Post*. Feb. 27. p. 7.
• ***Summary:*** "... is a better meal when accompanied by the proper condiments. Cornwell's is the one store in Washington that satisfies every demand for unusual table wants of this kind.

"Chutneys: C & B [Crosse & Blackwell] Bengal Club. Cashmere. Sweet Mangoes. Major Greys. Heinz Tomato. Shrewsbury.

"Sauces: Mushroom Catsup. Escoffier English Derby... India Soy. Reading Sauce. Essence of Anchovies."

An illustration shows a smiling French chef. Address: 1415-17 H St., N.W. [Washington, DC].

1984. Nishimura, Torazô. 1912. Shôyu oyobi miso ni kansuru kenkyû seiseki hôkoku [Results of studies on shoyu and miso]. *Nogaku Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 115. p. 1-10. March 5; No. 116. p. 1-31. April 5. [Jap]

Address: Nôgaku-shi, Japan.

1985. Li, Yu-ying; Grandvoinnet, L. 1912. Le soja [The soybean]. *Agriculture Pratique des Pays Chauds* (*Bulletin du Jardin Colonial*) 12(108):213-23. March. [7 ref. Fre]
• ***Summary:*** Contents (continued): Products and condiments based on fermented soybeans. 5. Condiments in paste form (*Condiments pâteux*): Miso (preparation, different varieties including white miso, Yeddo miso, Sandai [Sendai] miso or red miso, composition of miso {a table based on studies by Kellner and König}), Tao-Tjiung (Tou-chiang, doujiang) or Chinese-style miso (preparation, properties, composition {a table based on analyses by Prinsen-Geerligs}). Sauces: Shoyu (Schoyou, soyou, schoyu, or Phek-sze-You in Chinese; preparation, raw materials used and their proportions, formation of molds and koji, fermentation, perfection of the fermentation process in an aseptic environment using soymilk or soy bouillon inoculated with pure cultures), properties of shoyu, chemical composition of shoyu (tables show: (1) Composition based on analyses by Kellner, Stift, Belohoubeck, Tahara & Kitao, (2) Composition and forms of nitrogen according to Suzuki, Azo [sic, Aso], and Mitarai (3 tables)), aroma of shoyu (2 tables based on analyses by Tahara and Kitao; Belohoubeck found two types of microbes in shoyu; the Saccharomyces and the bacteria). *Chiang-yu* (*Tsiang-yeou;* Chinese soy sauce). Ketjap (soy sauce from Java).

Note: This is the earliest French-language document seen (April 2012) that uses the word *Schoyou* or the term *Phek-sze-You* to refer to soy sauce. Address: 1. Counseiller de 1ere classe au Ministère de l'Agriculture de la Chine; 2. Ingénieur agricole (G.).

1986. *Pure Products* (*New York*).1912. Products of the soy bean. 8(3):157-60. March.
• ***Summary:*** "Three very interesting food products are manufactured from the soy bean, one known as vegetable milk, another known as vegetable cheese or vegetable casein, and soy sauce." "Vegetable milk, like animal milk, may be may be homogenized; that is to say, it may be passed through an apparatus known as a 'homogenizer'..." Concentrated or "condensed vegetable milk has a characteristic odor, but this can be improved by adding a little coumarin or vanillin, which corrects the taste so as to make it more nearly resemble that of cow's milk."

Vegetable cheese is coagulated "by the addition of a white mineral powder known as tchach-kao, which consists largely of plaster of paris."

"Soy sauce, or fermented soy,... may well serve as the basis of sauces of the Worcestershire type." Address: USA.

1987. Yoshida, T. 1912. Seisei shôyu no kôbo ni tsuite oyobi sono seibun ni oyobosu sayô [On the yeast of shoyu and its influence on constituents]. *Sapporo Norin Gakkaiho* (*J. of*

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the Society of Agriculture and Forestry, Sapporo) No. 13. p. 1-27. March. [Jap]
Address: Nôgaku-shi.

1988. Kuriyama, Masao. 1912. Shôyu oyobi mirin-chû ni ganyû suru tôbun no kenshutsu-hô [A method for the detection of sugars in shoyu and mirin]. *Nogaku Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 116. p. 25-31. April 5. [Jap]
Address: Japan.

1989. Li, Yu-ying; Grandvoinnet, L. 1912. Le soja [The soybean]. *Agriculture Pratique des Pays Chauds* (*Bulletin du Jardin Colonial*) 12(109):302-08. April. [2 ref. Fre]
• ***Summary:*** Contents (continued): Products and condiments based on fermented soybeans (continued): Tuong (an Annamese condiment that can replace nuoc mam or fish sauce; preparation with rice or corn/maize as described by Bui), Tao-yu (a condiment widely used in China and Japan, as described by Prinsen Geerligs; preparation, properties, chemical composition).

6. Confectionery products (*Produits de confiserie*): Sweet soya preserves made from whole soybeans (*Confiture de soja*, such as soy-based *crème de marron*, a chestnut cream), soya powder (two types are made at Li's plant: one by drying soy pâté and one from roasted soybeans), soy chocolate. At Li's tofu factory (*l'usine de la Caséo Sojaine*) near Paris, soy chocolate (*Chocolat de soja*) is prepared using roasted soybeans, sugar, and cocoa butter [a pale-yellow, pure edible vegetable fat extracted from the cocoa bean]. From these one is able to obtain almost the same composition, appearance, and flavor as chocolate. But this product has the advantage of containing considerably less toxic theobromine.

7. Soya used as coffee (*Le soja employé comme café*). For a very long time, soybean seeds, dried and roasted, have been used in certain parts of Europe (Switzerland) to replace coffee. By an infusion of these roasted seeds, a liquid is obtained which resembles coffee in color and flavor. Moreover, under a different name [Cole's Domestic Coffee Berry, 1892], soybeans have been launched in the United States for this usage. This very special use of the soybean will be of interest to those who are forbidden to drink coffee, for they will now be able to enjoy it in a different way. A table shows the composition of Swiss soya coffee according to Kornauth.

8. Ferments or starter cultures for fermentation: Kiu-tsee (a special ferment from Canton described by M. Daby de Thiersant), lactic ferments (fermented soymilks).

Industrial uses of soybeans: Uses of the oil to make soap, wax candles (*bougie*), paint, or artificial rubber. Uses of the protein (*caséine de soja*) to give products resembling those made from milk proteins: sojalithe or soy stone resembling lactite, insulators for electrical apparatus, soy glues, etc. Illustrations (line drawings, p. 305) show cellular elements of different soya confections. Address: 1. Counseiller de 1ere classe au Ministère de l'Agriculture de la Chine; 2. Ingénieur agricole (G.).

1990. Hanzawa, Jun. 1912. Ueber Pilze und Zusammensetzung des japanischen Tamari-koji [On the mold and composition of Japanese tamari-koji]. *Mycologisches Centralblatt* 1(6):163-66. June 8. [9 ref. Ger]
• ***Summary:*** There are three types of Tamari-Shoyu: Kibiki- (the best, made by short cooking of the soybeans), Niira- (made by long cooking of the soybeans), and Ban-Tamari-Soja (made by cooking the residue from one of the first two types in salt water).

Note: The author was in Hannover, Germany, when he finished this paper in May 1912. Address: Lab. for Applied Mycology, Agricultural Institute of the Tohoku Imperial Univ., Sapporo, Japan.

1991. *New York Times*.1912. This is not in China, but in New York City: Farms in Steinway, near Long Island City, where natives of the Far East raise supplies for the chop suey restaurants of New York. Aug. 25. p. SM11.
• ***Summary:*** "Chow chop-suey is, next to rice, the Chinese national dish. Rice is, of course, on every table. The Chinese eat it instead of bread, and no one can cook rice like a Chinaman. Every grain is distinct, yet perfectly soft, and it is piled up in the bowls like mounds of snow. It is boiled, or rather steamed, without seasoning, and the condiments are supplied by the seow [Cantonese: *shi-yau* or *si-yau*, meaning "fermented black soybean sauce"], the immediate progenitor of the soy of the English East Indies and the Gastronomic father of Worcestershire sauce."

Six photos show Chinese at work on their farms on Long Island.

Note that the term "chop suey restaurants" in the title is apparently synonymous with "Chinese restaurants."

1992. **Product Name:** Shoyu.
Manufacturer's Name: America Soy Brewing Co. Ltd. (American Shoyu Jozo K.K.).
Manufacturer's Address: End of Banyan St., Honolulu, Oahu, Hawaii.
Date of Introduction: 1912. August.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1912. p. 123. American Soy Brewing Co. Ltd., D. Yonekura, president; M. Kawahara, vice president; K. Iida, secretary; R. Niki, treas; George I. Enomoto, mngr; end of Banyan.

Also in 1916 Directory. American Soy Brewing Co. Ltd., Banyan. 1928-29 Directory. American Hawaiian Soy Co. Ltd. mauka end Banyan. Is this the same or a different company? Both are on Banyan St.

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-

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49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." States that the company was founded in August 1912 by Mr. Danzaburo Yonekura.

F. Odo and K. Sinoto. 1985. A Pictorial History of the Japanese in Hawaii, 1885-1924. Page 166. American Shoyu Co. was established in Honolulu in 1912.

1993. Maynard, Lester. 1912. Manchurian trade and commerce: Harbin. *Daily Consular and Trade Reports* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*) 15(214):1281-91. Sept. 11.

• ***Summary:*** This report is filed by four different U.S. consuls from Harbin, Antung, Dairen, and Newchwang–starting with Harbin. "The Harbin consular district includes all of North Manchuria north of Changchun and Kirin, and is bounded on the west by Mongolia and Siberia, on the north by the Amur River, and on the east by the Maritime Provinces of eastern Siberia. Harbin, the chief commercial center, is on the banks of the Sungari River and at the junction of the main line of the Chinese Eastern Railway with the branch running south to Changchun, which connects with the South Manchuria Railway. This location, in the center of the soya-bean area of Manchuria, accounts for its rapid growth and prosperity."

"As the customs statistics of the five customhouses of North Manchuria do not cover the entire foreign trade of this [consular] district, a careful estimate has been made of the value of the imports and exports through Changchun and Kuangchengtzu, which are the junction points of the South Manchuria and Chinese Eastern Railways." A large table (p. 1284) shows northbound and southbound movement of goods. For example, 90 tons of "Soy" [sauce] worth $5,450 was northbound. Beancake (1,366 tons), [soya] beans (289 tons), small red beans ([azuki], 16,628 tons) were all southbound.

"By far the most important increase in the exports of this district was that of $5,014,495 in soya beans, which was due to increased shipments as well as to a substantial increase in market value."

A table (p. 1286) shows the value in 1910 and 1911 of the principal exports of native goods to foreign countries through the customhouses of Aigun, Harbib, Manchouli, Sansing, and Suifenho. During these two years: Beancake decreased from $146,371 to 124,674. [Soya] Beans increased from $3,591,197 to $8,965,692. Oil, [soya] bean and hempseed decreased from $539,524 to 351,154.

The section title "Soya beans" states (p. 1286-87): "Practically the entire soya-bean crop of North Manchuria is shipped over the Chinese Eastern Railway through Suifenho, for exportation from Vladivostok. All the beans shipped from that port come from North Manchuria, so that the exports from Vladivostok give the most accurate figures obtainable of the foreign shipments of North Manchurian beans." "The southern movement of soya beans through Kuangchengtzu and destined for the oil mills of South Manchuria or for exportation from Dairen or Newchwang is relatively small... To take advantage of the lower freight rates of the South Manchuria Railway, which are designed to encourage the exportation of beans through Dairen, farmers in the southern part of this consular district cart their beans to Changchun rather than ship them north to Vladivostok via Harbin."

"Scattered throughout this district are a number of small oil mills, but the methods used are very crude and the production is only sufficient for local consumption."

"The Sungari River, the largest watercourse in North Manchuria, is navigable from the southern to the northern end of this district and as a trade route ranks second to the Chinese Eastern Railway. In 1911 the total number of vessels entered and cleared at the river customhouses of Harbin, Aigun, and Sansing was 8,600 or 965,053 tons. Of these, 2,142 of 837,749 tons were Russian steamers, 46 of 11,081 tons were Chinese steamers, and 6,412 of 116,173 tons were Chinese junks." "The United States purchases a very small amount of Manchuria's exports." Address: Consul.

1994. Williamson, A.A. 1912. Manchurian trade and commerce: Antung. *Daily Consular and Trade Reports* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*) 15(214):1291-95. Sept. 11.

• ***Summary:*** "The founding of the Chinese Republic [on 1 Jan. 1912 by Sun Yat-sen, the 1st provisional president, in Nanjing. But Yuan Shikai was head of the army, in Peking] had little direct influence upon [the port of] Antung and the Yalu River region, but a visitation of plague in the early part of 1911, the most severe in recent years, threatened the very life of the district for a time." The value (given by the United States Treasury) of the local currency, the haikwan tael, was $0.652 in 1911 and $0.6525 in 1910.

"Simultaneously with the opening of the bridge over the Yalu River, the South Manchuria Railway inaugurated broad gauge traffic with Mukden."

A table (p. 1292) shows the principal exports in piculs (1 picul = 133.33 lb) from Antung in 1910 and 1911. Exports of [soy] bean cake increased from 180,812 in 1910 to 497,497 in 1911. Exports of [soy] beans rose from 2,041 in 1910 to 68,872 in 1911.

The port of Antung was opened in 1906 on the Yalu River, which divides Manchuria and Korea. Since that time the river has flooded at regular two-year intervals.

A table (p. 1294) shows the principal imports in piculs into Antung during 1910 and 1911. Imports of soy [sauce] were 4,406 piculs in 1910 and 3,069 piculs in 1911.

The chief exports of Tatungkow [pinyin Dandong, W.-G. Tan-tung; also Antung, in Liaoning province, at the mouth of the Yalu River] were: Bean cake 116,494 piculs, valued at $167,999. [Soya] beans 15,414 piculs worth $25,125. And bean oil 1,100 piculs worth $6,885. Address: Consul.

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1995. Ito, Teiji. 1912. Shôyu jôzô oyobi seihin ni kansuru shoseibun ichiran [On the constituents of the raw materials and products of shoyu brewing]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 367. p. 934-56. Sept. [Jap]

1996. Kita, Genitsu. 1912. Haupthefe der Sojamaische [Major yeasts in soy sauce moromi (mash)]. *Eighth International Congress of Applied Chemistry, Original Communications* 14:99-106. Section VIb: Fermentation. Held 4-13 Sept. 1912 in Washington and New York, USA. [1 ref. Ger]

• ***Summary:*** Includes a discussion of *Saccharomyces Soja*, a yeast that forms a film on the surface of shoyu. Address: Technological Faculty, Imperial University, Tokyo [Japan].

1997. Li, Yu-ying; Grandvoinnet, L. 1912. Le soja: Sa culture. Ses usages alimentaires, thérapeutiques, agricoles et industriels [The soybean: Its culture. Its food, therapeutic, agricultural, and industrial uses]. Paris: Augustin Challamel (Rue Jacob 17). 150 p. Illust. Index. 25 cm. Translated into French and expanded from the Chinese edition, published by la Societé Biologique d'Extréme-Orient (1910). [151 ref. Fre]

• ***Summary:*** One of the earliest, most important, influential, creative, interesting, and carefully researched books ever written about soybeans and soyfoods. Its bibliography on soy was larger than any published prior to that time. It was first published as a series of eight articles in *Agriculture Pratique des Pays Chauds* (*Bulletin du Jardin Colonial*) from September 1911 to April 1912. Before being published as a book, it was revised slightly by adding a table of contents at the back, dividing the material into 5 parts with 19 chapters, and adding several photos (p. 16-17), a world map showing the distribution of soybean cultivation (p. 21), and an interesting 2-page table (p. 66-67).

Contents: The soybean: Origin and history. Part I: Soybean culture. 1. Species and varieties of soybeans: Botanical characteristics, species, varieties (Chinese, Japanese, Indian, Indochinese, Hawaiian, USA, European). 2. Needs of the soybean: Climatic, geographical area of the soybean by region worldwide, agrological/soil needs, fertilizers, soil preparation, the place of the soybean in crop rotations. 3. Soybean seeds: Study of seeds (by weight, by germination rate, selection of seeds), time of planting, plant spacing, depth of seeding, rate of seeding per hectare, method of seeding (broadcasting, in rows, in mounds). 4. The soybean during its vegetative stage: Germination, transplanting, types of care (e.g., second dressings), irrigation, flowering and fruiting, enemies of the soybean (e.g., insects). 5. Harvest of soybeans: Time for harvest (forage or grain), methods of harvesting (forage or grain; mechanical mower), threshing (use of machine), yields of soybeans (forage and grain in various countries, ratio of seeds harvested to straw is about 1 to 2, yield of nutrients). 6. Fixation of atmospheric nitrogen by soybeans, and improvement of the soil. 7. The soybean in mixed cultures and alternate rows: With corn, cowpeas, rice, sweet sorghum, or millet.

Part II: Chemical composition of the soybean. 1. Composition of the plant: Minerals in the leaves and total plant. 2. Study of the seed: Composition, chemical composition, microscopic comparisons, table of analyses by 28 previous researchers, albumins, sugars, starch, dextrin or dextrine, diastase, lipids, ash/minerals.

Part III: The soybean as human food and animal feed. 1. The soybean as feed for animals: Green forage and hay. 2. The soybean in human feeding: From the viewpoints of physiology, economy, and gastronomy. The role of soya in special diets: Vegetarianism, remineralization, diabetic, and lactose intolerant.

Part IV: Food products based on soya. 1. Soymilk and its derivatives: Soymilk (Methods of manufacture, Chinese and modern at l'Usine de la Caséo-Sojaïne, nature and properties [physical and chemical] and composition of the milk, action of ferments and diastases (enzymes) on the milk, uses of the milk, the residue from the soy dairy [okara], condensed soymilk, powdered soymilk, fermented soymilk (kefir, yogurt, etc.)), tofu (called Caséo-Sojaïne, or fromage de soya; methods of production, coagulants, yield of tofu, storing tofu, composition and comparison with various meats, digestibility, culinary preparations made from tofu (smoked tofu, tofu pâté, tofu sausages)), Soy casein (food and industrial uses). 2. Soy flour and its derivatives: Soy flour, soy bread, wholemeal bread, other products based on soy flour (as biscuits and cakes for diabetic diets). 3. Soy oil and its by-products: Soy oil, physical and chemical properties, usage, residue of the oil mill: the cake, price, uses. 4. Use of the soybean as a legume: Whole soybeans (composition and digestibility), soy sprouts (*germes de soja*), green vegetable soybeans (*le soja frais*). 5. Fermented soy condiments: Solid condiments from Japan: Tokyo natto (*Le Tokio-Natto*) and Ping-Ming natto or tao-tche (*Le Ping-ming-Natto;* fermented black soybeans with salt, ginger, orange rind, etc. A similar product is made in China and called tao-tche). Paste condiments: Miso (four types and composition), tao-tjung (Chinese miso). Sauces: Shoyu (its production, varieties, properties, composition), chiang-yu (*tsiang-yeou*), ketjap [kechap, from Java], tuong (from Annam, with rice or corn), tao-yu (widely used in China and Japan, described by Prinsen Geerligs). 6. Confectionery products: Comparison with chestnuts, roasted soy flour to replace chocolate. 7. Soy coffee (with analysis by Kornauth). 8. Special fermented products: Kiu-tsee (a special commercial ferment from Canton described by Thiersant), fermented soymilks.

Part V: Industrial uses of soybeans. Oil based: soap, wax candles (*bougie*), and paint oils. Protein based: sojalithe or soy stone which corresponds to lactite, insulators for

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electrical apparatus, glue, etc. Conclusion. Addendum (*Complément*) to Part III, Chapter 1: Soybean straw and stems. Composition of various seeds, including soybeans. Soy flour. The cakes from oil mills. Soymilk and the cake from soy dairies (*tourteau de laiterie*, okara).

A very interesting table (p. 66-67, which does not appear in the original 8 articles) shows earlier nutritional analyses of the composition of soybeans by Steuf (from Hungary, Mongolia and China), Schroeder, Caplan, Pellet (from China, Hungary, Etampes), Muntz, Nikitin (black soybeans from Russia, 2 samples), Lipski [Lipskii] (yellow, from Russia), Giljaranski (yellow from Russia, China and Japan; black from China and Japan; green), König (*Hispida platycarpa* black, Tumida yellow, brown and black), Prinsen (white from Java and China), Goessmann, Kellner, USDA, Chemiker Zeitung (white from Java and China, 29 Jan. 1896), Scuff (misomame; miso soybeans), Zulkovski (yellow from China, reddish brown from Mongolia), Institut Agr. de Vienne (Austria; yellow from Vienna, reddish brown from Tirol), Ecole Imp. et Roy d'Ag. Hong (yellow from Mongolia and China, reddish brown from China), Chez M. Olivier Lecq (from Moravia), Lechartier (Etampes and black), Joulie (yellow), Stingl and Morawski, Bloch (yellow, green, and black), Balland, Cavendish Evelyn Liardet (yellow, brown, green, black, and white), Jardin Colonial (Laos, Tonkin, China), Aufray (Tonkin, Yun-nan), Homes Laboratory (black from China, or white). Photos and illustrations are the same as those referenced in individual sections of the book, except for the following: A field of soybeans (p. 16). A soybean plant growing in Europe (p. 17). Color illustrations appear facing pages 12, 22, and 64. Address: Li is from Societe Biologique d'Extreme-Orient (Chine). Grandvoinnet is from Ingenieur Agricole (G.).

1998. Takahashi, Teizô; Yukawa, Matao. 1912. On the budding fungi of "shoju-moromi." *Eighth International Congress of Applied Chemistry, Original Communications* 14:155-71. Section VIb: Fermentation. Held 4-13 Sept. 1912 in Washington and New York, USA. [22 ref. Eng]

• ***Summary:*** In the title, and throughout this paper, the word "shoju" should be spelled "shoyu," meaning soy sauce. The following budding fungi were isolated from 52 samples of shoyu-moromi of different ages (2-24 months) collected from 11 different factories: 1. *Zygosaccharomyces major*, nov. spec. 2. *Zygosaccharomyces Soja*, nov. spec. 3. *Zygosaccharomyces japonicus*, Saito. 4. *Zygosaccharomyces Salsus*, nov. spec. 5. An asporogenic species of *Zygosaccharomyces* (?). 6. A species of *Mycoderma*. 7. A species of *Pichia*. 8. Several species of *Torula*. 9. A species of *Monilia*.

The following shoyu breweries granted samples to the author: Those owned by Sh. Magi [Mogi] and S. Mogi in Noda, province of Shimôsa. Those owned by Mr. Hamaguchi, G. Tanaka, and J. Iwasaki in Choshi, Shimosa province. One owned by K. Nakamura at Gaju, Owari province. The Asahi, Maruo, and Kikuchi breweries, and that owned by Mr. Takano, all at Tatsuno, Harima province. Kagawa shoyu brewery experimental station at Shôtoshima [Shodoshima], Sanuki province.

Zygosaccharomyces species Nos. 1, 2, and 5 did not form films on shoyu, whereas Nos. 3 and 4 did form films. *Zygosaccharomyces major* was the main yeast isolated from mature samples of moromi, whereas *Zygosaccharomyces soja* was the main species isolated from young samples. There is no doubt that these two species play an important role in the ripening of shoyu. *Zygosaccharomyces japonicus* and *Zygosaccharomyces salsus* easily produce greyish-white films resembling crepe-paper on top of even concentrated shoyu. Moreover these two species easily form a large number of sporulated cells. Thus they are harmful when storing shoyu.

Note: This is the earliest English-language document seen (June 2011) with the word "moromi" in the title. Address: College of Agriculture, Imperial Univ., Tokyo [Japan].

1999. *Chemist and Druggist* (*London*). 1912. Trade report. 81(17):663-65. Oct. 26. Series No. 1709.

• ***Summary:*** In the section on "London markets" under "Oils (fixed)" we are informed (p. 664) Soya oil is 6*d.* cheaper at 30*s.* on spot (p. 664).

On page 665 we read: "Soy.–With a scarcity of Wochan, 1*s.* 6*d.* per gallon is wanted; outside brands are quoted 1*s.* 4*d.* to 1*s.* 4½*d.*"

2000. Hawthorne, H.L. 1912. An official visit to the Japanese army. *J. of the Military Service Institution of the United States* 51(179):156-72. Sept/Oct.

• ***Summary:*** The first Appendix, titled "Schedule for carrying out theoretical and practical studies of the recruits in the first term, 1911-1912. By the 2d [2nd] Company, the 3d [3rd] Battalion, Engineers" states (p. 172) under "Bills of fare. Prepared by the 1st Battalion, the 68th Regiment, Infantry. (Extract)."

Sunday (March 10, 1912). Breakfast includes: *Moritsuki*, with Soy, 2 shaku. Tiffin includes: *Furofuki* radish [daikon] with Miso (bean paste), 13 momme. Supper includes: *Shitashi*, with Soy, 15 sai. Cost of fish and vegetables per man, Yen 0.11 7/10.

Monday (March 11, 1912). Breakfast includes: Miso soup with Fried bean-curd 1/3 piece. Bean curd 1/4 piece. Miso, 18 momme. Tiffin includes: *Nimame* with Black [soy] bean, 4 shaku. Soy, 1 shaku. Supper includes: Fresh beef, 10 momme.

"Note: Momme–about 3.8 gram. Shaku–0.004 gallon. Sai–1/10 shaku." Address: Lieut-Col., U.S. Army, Military Attache, Tokyo, Japan.

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2001. Takahashi, Teizô; Yukawa, Matao. 1912. Die Pilze von "Shoju-Moromi" [The molds of "shoyu moromi"]. *Chemiker-Zeitung* 36(134):1307. Nov. 7. Summarized in Zentralblatt fuer Bakteriologie, Series II. 41:257 (1914). [Ger]

• ***Summary:*** Japanese understand the term "shoyu-moromi" to refer to a semi-solid liquid that is made from shoyu-koji, salt, and water. Shoyu koji is made from steamed soybeans and roasted wheat in much the same way that saké koji is made from rice. In the brewing (*Brauen*) of shoyu, three species of Torula yeasts seem to play a significant role: *Torula shujo, T. Shujo var. minuta,* and *T. Turbinata.* The authors have made a plate culture using shoyu-koji-agar as a culture medium after purifying the resulting colonies through the Lindner Drip Culture Method (*Tröpfchenkulturmethode*) and obtained 9 different molds, from which they isolated five *Zygosaccharomyces* (yeast) species. Address: Tokyo.

2002. *Chemist and Druggist* (*London*).1912. Trade report. 81(19):728-30. Nov. 9. Series No. 1711.

• ***Summary:*** In the section titled "London markets" we read (p. 730): "Soy.–For Wochan 1*s.* 6*d.* per gallon has been paid on spot, being scarce, and less esteemed brands are quoted 1*s.* 5*d.*"

2003. Skinner, Robert P. 1912. Soya beans and their products in Germany. *Daily Consular and Trade Reports* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*) 15(269):827. Nov. 14.

• ***Summary:*** "A growing business is being carried on in Hamburg in soya beans and their manufactured products, although official trade statistics are not yet available. The trade to a large extent has been built up in foreign tributary markets, because in Germany cattle are usually kept in stalls and, having little exercise, are apt to have digestive disorders when overfed with soya bean cake. In Denmark, on the other hand, where grazing is more usual, the demand for this feed has progressed steadily." Crushers use naphtha as a solvent. Prices of soya beans and products are given.

"Last year one Hamburg concern sent a shipment of beans to Houston, Texas, for planting, the results being excellent, according to reports from the importers. In England sauces [e.g., Worcestershire] are manufactured from soya beans, and in Hamburg one concern has produced a coffee substitute, or material to be added to cocoa, by roasting and grinding the beans. It is stated that this article has not met with much commercial success.

"All contracts in this country are made according to the terms of the Incorporated Oil Seed Association of London. These contracts consist of 13 lengthy articles, and provide, among other things, that all disputes arising out of contracts shall be referred to arbitration in London." Address: Consul, Hamburg.

2004. Yada, Naganosuke. 1912. Honpô shôyu shôkyô hôkoku no ken [The Japanese shoyu market in Vancouver, British Columbia, Canada]. Vancouver, BC, Canada. 10 p. Nov. 22. Handwritten unpublished manuscript. Requested by Mogi Shichirouemon of Noda, Chiba-ken. [Jap; eng]

• ***Summary:*** This is a market report from Mr. Yada at the Japanese consulate in Vancouver, BC, Canada, to Mr. Yasunari Uchida at the Japanese Ministry of Foreign Affairs.

There are about 9,000 Japanese living in Canada. Japanese shoyu imports were about 15,400 taru (249,500 liters) a year, and it was used almost entirely by Japanese. The best selling brand is Kikkoman. Address: Japanese Consulate, Vancouver, BC, Canada.

2005. Takahashi, Seiichi. 1912. Mogi Shichirôuemon yori Kihaku Shôyu yushutsu ni tsuki tôchi shijô toiawase no ken [Inquiry from Mr. Shichirôuemon Mogi about exporting Kihaku Shoyu to Seattle, Washington]. Seattle, Washington. 4 p. Nov. 27? Handwritten unpublished manuscript. Requested by Mogi Shichirouemon of Noda, Chiba-ken. [Jap; eng]

• ***Summary:*** This is a market report from Mr. Takahashi at the Japanese consulate in Seattle, to Mr. Yasunari Uchida at the Japanese Ministry of Foreign Affairs.

About 5,000 Japanese live in Seattle, 5,000 outside, and 2,000 elsewhere. Address: Japanese Consulate, Seattle, Washington.

2006. *Chemist and Druggist* (*London*).1912. Trade report. 81(22):831-33. Nov. 30. Series No. 1714.

• ***Summary:*** In the section titled "London markets" we read (p. 833): "Soy. A report is current that owing to the death of the proprietor of the Wochan brand there will be no more of this mark available."

2007. Kuijper, J. 1912. Soja [Soya]. *Departement van den Landbouw, Suriname, Bulletin* No. 29. p. 24-29. Nov. [Dut]

• ***Summary:*** In recent years, since 1908, soya has become a product of great importance on the world market. There are few products whose exports have risen so dramatically in just a few years. The reason for the great expansion of trade in soya can be found in the great demand by industry for oilseeds. For more than 30 years, experiments have been conducted on growing soybeans in Europe, but the results have not been very promising. Some people have suggested that soya might be able to be grown in Suriname. It is grown in many tropical countries, including Siam, British India, and Java. Requirements for cultivation and yields are discussed. Japan reports the highest yields, 2,500 kg/ha, compared with 1,000 to 1,400 kg/ha from the USA. Soybeans produce more protein and oil per unit area of land than any other farm crop. The seed is used mainly for human consumption but the plant also yields, fresh or dried, an excellent livestock feed, which is why so much research on it is now being conducted

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in Australia and America. It is important for Suriname that soya can be used as a green fodder, for example interplanted and fed with corn.

From soya one can make numerous products such as soymilk (*soyamelk*), soy cheese (*soyakaas*, whose food value is higher than that of meat), soy flour, soy bread (*soyabrood*), oil (*olie*), various sauces (soya sauce, Worcester sauce, etc.), and various substitutes for coffee and chocolate, etc. (*surrogaten voor koffie en chocolade enz.*).

In Suriname soya is cultivated on a small scale by the Javanese, for example in Lelydorp and in the settlements of Johan and Margaretha. Many experiments with Soya have already been conducted in the experimental garden (*Cultuurtuin*). Seeds imported from America did not give good results; the plants remained small, yielded few fruits, and died quickly thereafter. It is a common occurrence that plants from temperate or subtropical regions do not grow well in the warm tropics in the rainy season. Of the seeds cultivated in Suriname, two varieties give good results. Those cultivated by the Javanese give hardy plants and a lot of seed though exact yield figures are not available; the planted area is still quite small. But the yield is about 1,000 kg/ha. Apparently the necessary bacteria are present in the soil, for the roots show nodulation.

In the experimental garden two beds of soya were planted on May 24. The first seeds ripened after 3 months and within 4 months all was harvested. Thus the plants developed during the rainy season, and they probably got too much water. The results would probably be better if this season could be avoided. Soya is sold in Suriname for hfl 30 per bag, a considerably higher price than that paid in Europe. On the plantations Peperpot and Jaglust experiments with soya have also been conducted. The European seed that was used gave very limited results. The experiments will be conducted again using Suriname seeds.

With the market price at hfl 10 per bag, it seems very unlikely that the cultivation of soya in Suriname will ever be profitable, unless high yields can be obtained. As mentioned above, this seems unlikely. Small scale cultivation for sale in Suriname, however, seems advantageous at present, while in areas where cattle are raised the use of soya as a green feed to replace more expensive secondary feeds will likely give good results.

Note 1 This is the earliest document seen (May 2009) concerning soybeans in Suriname, or the cultivation of soybeans in Suriname.

Note 2. This is the earliest Dutch-language document seen (March 2001) that uses the term *surrogaten voor koffie* to refer to soy coffee.

Note 3. This is the earliest Dutch-language document seen (Oct. 2003) that uses the term *soyamelk* to refer to soymilk. Address: Surinam.

2008. Tonnelier, Adolfo C. 1912. Soja hispida, Moench: Metodos industriales de elaboracion de sus diversos derivados [The soybean: Industrial methods of manufacturing its various derivatives]. *Revista Industrial y Agricola de Tucuman (Argentina)* 3(6):236-39. Nov. See also p. 396. With 5 photos of soybean plants and soybeans. [Spa]
• ***Summary:*** Contents: Introduction. Vegetable milk (*leche vegetal*, soymilk). Vegetable cheese (*queso vegetal*) [tofu]. Oil and casein (*aceite y caseina*, including preliminary operations of washing the seeds, extraction of the oil (*El aceite de Soja*), extraction of the vegetable casein {*caseina vegetal*} which has numerous industrial applications, as in the preparation of water-resistant paints, in the textile, paper, silk, and artificial textile industries, rubber, leather, plastic materials, films, photographic emulsions, etc.). Soy flour. Artificial rubber (*caucho artificial*). Shoyu or soy sauce (*choyou ó salsa de soja*).

"In the vicinity of Paris a factory for the production of soy-based food products has been founded. In England important manufacturers of soy flour, soybean cakes, and the extraction of the oil are in operation. Mr. Karajama [sic, Katayama (1906)], a Japanese chemist, uses soybean seeds to prepare a concentrated milk, a flour of the type that Nestlé makes, and biscuits (*biscochos;* not cookies), obtaining in this way a maximum of food and nutrition at very reduced volume.

"The experiments carried out since one year ago at this part of the Experiment Station, attached to the National School of Agriculture at Córdoba, have verified the easy acclimatization of this plant, the abundance and goodness of its products.

"It is to be hoped that its cultivation with be extensively propagated in the zones that are favorable for it. This leguminous oilseed is not only of interest to the farmer, agriculturist, and landowner, but also to the industrialist, and on no smaller scale.

"It is a new fountain / source of riches for the nation, that we must not neglect."

Note 1. This is the earliest Spanish-language document seen (Aug. 2003) that uses the term *caseina vegetal* to refer to isolated soy protein.

Note 2. This is the earliest Spanish-language document seen (Sept. 2006) that uses the term *El aceite de Soja* to refer to soy oil.

Note 3. This is the earliest Spanish-language document seen (April 2012) that uses the word *choyou* or the term *salsa de soja* to refer to soy sauce. Address: Chief of the Experiment Station, attached to the School of Agriculture, Argentina.

2009. *Christian Science Monitor.* 1912. Tried recipes. Nov. 5. p. 6.
• ***Summary:*** Note: These two recipes are interesting in that soy is not used as an ingredient and the word "soy" is not mentioned in the body of the recipe.

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"Tomato soy: Pare four quarts of ripe tomatoes, cut up, boil four hours with eight cups of vinegar, one cup of salt, one tablespoon each of ground cloves, mustard, ginger, allspice, one teaspoon of cayenne. Add one pound of sugar, one quarter pound of mustard seed. Have as thick as catchup. Bottle.

"Indian soy: Allow to four pounds of green tomatoes one pound of onions, two pounds of cucumbers, one half pound of salt, one ounce peppercorns, two ounces of chillies, a blade or two of mace, one ounce whole cloves, two bruised ginger, two ounces of mustard seed and vinegar to cover.

"Chop the vegetables, put in a colander, sprinkle with salt and stand aside to drain over night. In the morning add the spices and vinegar. Boil slowly to a pulp, taking care not to let it scorch, then press through a sieve. Have ready small bottles, put a couple of cloves and a chilli in the bottom of each, pour in the soy [what soy?] and seal tightly. This pickle is particularly good with fish."

2010. Gibbs, H.D.; Agcaoili, F. 1912. Some Filipino foods. *Philippine J. of Science* 7A(6):383-401. Dec. Section A. Plus 6 unnumbered pages of plates at end. See p. 398-99 + plates III, IV. [2 ref]

• ***Summary:*** "Toyo sauce–This condiment is made principally by Chinese from soja beans, *Glycine hispida* Maxim., imported from China. It is a Chinese sauce of the Worcestershire type." Boiled beans and salt are placed in earthenware jars and spontaneous fermentation is allowed to go on in the sun for 2-4 months (see plate V). "The fermented mass is again boiled for another 12 hours, and the clear liquid is bottled and sold under the name of the toyo sauce. Sometimes it is boiled two or three times producing different grades of strengths of sauce. Molasses or sugar are sometimes added, and this variety is called *si yao* (Chinese).



Photos show: (1) A man in a bihon (thick rice vermicelli) factory using a push-pull apparatus, suspended by ropes from the ceiling, to rotate a traditional stone mill.

Note 1. This same kind of apparatus and mill are used in traditional shops making tofu throughout East Asia.



(2) Soja beans fermenting in earthenware jars, covered with conical woven bamboo lids, in a courtyard, in the manufacture of toyo sauce.

"The Macao Chinese add a quantity of wheat flour to the boiled beans and dry the mixture in thin layers on trays several days before placing in jars for fermentation. This process hastens the fermentation." Note 2. Macao [Macau] is a Portuguese overseas territory, located about 40 miles west of Hong Kong.

Table XVIII gives "Analyses of toyo sauce," including regular toyo, toyo made with sugar, and crude molasses.

Note 3. This is the earliest document seen (April 2012) that uses the word "toyo" or the word "toyo sauce" to refer to Filipino-style soy sauce. Address: 1. Assoc. Prof. of Chemistry, Univ. of the Philippines; 2. Food and Drug Inspector, Bureau of Health. Both: From the Lab. of Organic Chemistry, Bureau of Science, Manila.

2011. Ito, T. 1912. Yo no kôan ni kakaru nyûsan ôyô shôyu oyobi tamari jôzô ippô [On the application of lactic acid to shoyu and tamari brewing]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 7(10):21-24. [Jap]
Address: Hiroshima Zeimu Kantoku Kyoku Gishi.

2012. Ito, Teiji. 1912. Shôyu jôzô-yô genryô ni tsuite (2) [On the raw materials used in brewing shoyu. II.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 7(1):6-10. [Jap]
Address: Hiroshima Zeimu Kantoku Gishu.

2013. **Product Name:** Shoyu.
Manufacturer's Name: Kawazui.
Manufacturer's Address: Waipahu, Oahu, Hawaii.
Date of Introduction: 1912.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1912. p. 392. "Kawazui, soy, Waipahu." Not listed in 1911.

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2014. Kinoshita, Asakichi. 1912. Shôyu jôzô-yô iri-mugi no funsai [On the shattering or pulverizing of roasted wheat for making shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 7(3):20-24. [Jap]
Address: Japan.

2015. Kinoshita, Asakichi. 1912. Shôyu hiire ni tsuite [On the pasteurization of shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 7(6):36-43. [Jap]

2016. Kinoshita, Asakichi. 1912. Shôyu "kabi" dome sôchi [An apparatus for preventing mold growth on shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 7(12):12-17. [Jap]

2017. Kochi, Genichiro. 1912. Shôyu jôzô ni kansuru danpen-teki kenkyû (I) [Fragmentary studies on shoyu brewing. I.]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 7(7):31-37. [Jap]

2018. **Product Name:** Shoyu.
Manufacturer's Name: Nakamura.
Manufacturer's Address: Haleiwa, P.O. Waialua, Oahu, Hawaii.
Date of Introduction: 1912.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1912. p. 528. "Nakamura, soy, Waialua, P.O. Haleiwa" [Oahu, Hawaiian Islands]. Not listed in 1911.

Note: Is this Nakamura related to Nakamori in Waialua, P.O. Haleiwa, in the 1913 directory.

2019. Nishimura, Torazô. 1912. Shôyu oyobi miso ni kansuru kenkyû seiseki hôkoku [Results of studies on shoyu and miso]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 7(4):1-8; 7(5):5-14; 7(6):16-24. [Jap]

2020. **Product Name:** Shoyu.
Manufacturer's Name: Pack (Y.O.).
Manufacturer's Address: Honolulu, Oahu, Hawaii.
Date of Introduction: 1912.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1912. p. 566. "Pack, Y.O., soy, rear 541 S. Beretania [Honolulu, Oahu, Hawaiian Islands]. Residence: Same." Not listed in 1911.

2021. Aki Shokai (Aki Co., Inc. (The)). 1912. The Aki Co. (Ad). In: Nichibei Shinbun-sha. 1912. *Nichi-Bei Nenkan [Japanese-American Yearbook.* No. 8]. p. [C-41]. [Eng; jap]
• ***Summary:*** Ad (full page). The top ¼ of this ad is given in English. This company sells various goods including (in Japanese) miso and shoyu [soy sauce]. The company also has a Fresno branch at 1505 Kern St., Fresno, California. An illustration shows the face of a Tengu, a long-nosed mythological creature or goblin. Mock Joya (1960, p. 523) states: "The Tengu is the most widely feared of traditional superhuman monsters. It is known to abduct young women, kidnap little children, and do other mischief but at the same time, much superhuman power of punishing the bad and helping the good is attributed to it." It is part bird and part human, and is able to fly at terrific speeds. "It is dressed in a costume similar to that worn by *yamabushi* or mountain Buddhist priests... All Tengu live in high wooded mountains, far from villages."

This ad also appears in the 1913 yearbook. Address: 1122-1130 4th St., Sacramento, California (P.O. Box 258).

2022. Beltzer, Francis J.-G. 1912. Industries du lactose et de la caséine végétale du soja [Industries producing lactose and soy vegetable casein]. Paris: Librairie Bernard Tignol. 144 p. Undated. (Bibliotheque des Actualites Industrielles, No. 144). [17 ref. Fre]
• ***Summary:*** Contents: Preface. Part I: The lactose industry (p. 9-95; 4 chapters). Part II: Vegetable milk, vegetable casein, and products from soybean seeds. Introduction. 1. Vegetable milk (*Le lait végétal;* soymilk), microscopic examination of vegetable milk. 2. Vegetable cheese (*Le fromage végétal;* tofu). 3. Industrial uses of vegetable casein, proximate analysis of soybean seeds, quantity and dosage determination, the price of soybeans, price of recovery of vegetable casein, industrial production of vegetable casein, cleaning the soybeans, extraction of soy oil, extraction of soy casein. 4. Plan and installation of a factory for processing (10 tons/day of) whole soybeans [to make industrial vegetable casein], estimate and specifications for special materials, general materials, the buildings, price of recovery of vegetable casein, industrial uses of vegetable casein. Illustrations (line drawings) show: (1) Microscopic view of soymilk globules. (2) Microscopic view of soya bean tegument (exterior). (3) Schematic drawings (cross section and overview) of a factory for making vegetable casein.

The Preface notes that in Indo-China, vegetable milk and vegetable cheese made from the soybean form the base of the people's nutrition. Cow's milk is largely unknown, and the people raise and nourish their children largely with soymilk. Tofu serves equally for the current nourishment of the poor (p. 6).

The Introduction (p. 101-07) notes that soy protein is a globulin, called *glycinine* or vegetable casein (*caséine végétale*). Osborne & Clapp submitted this substance to acid hydrolysis and found its composition, which is very rich in glutamic acid (p. 102). Soy flour (*farine de Soja*) contains little starch but a large amount of nitrogenous materials, similar to gluten; it is widely used in making bread for diabetics. It can also be used as the basis of foods that are rich in protein and very nutritious, as for colonial or European troops (p. 103).

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Soy sauce (*Soja fermenté*) is made in Japan from a mixture of soy and wheat (*koji*). The number of brewers (*brasseurs*) of soy sauce exceeds 12,000 in the entire Japanese Empire, furnishing more than 2,500,000 hectoliters of this condiment (p. 103).

A Chinese factory has been founded on the outskirts of Paris (at Vallées, near Colombes) for the production soy-based food products (*produits alimentaires à base de soja*). This factory currently makes *Caséo-sojaïne* [tofu] and the following food products: Soy flour (*Farine de soja*), soy bread (*Pain de soja*), soy sauce (*Sauce de soja*), soymilk (*Lait de soja*), fermented soymilk (*Lait de soja fermenté*), soy cheese [tofu] (*Fromage de soja*), soy confections (*Confitures de soja*), etc. The Journal, in its issue of 9 Jan. 1911, under the title *"Une usine chinoise fonctionee dans la banlieue parisienne* [A Chinese factory is operating on the outskirts of Paris]" gives some details (p. 106).

In our colonies in Indo-China, the indigenous people have long prepared soymilk, tofu, and several other foods. Soymilk is used like regular milk for feeding babies. Soy cheese, when cooked, is analogous to gruyere cheese; fresh soy cheese resembles our goat cheese. Many Europeans are now preoccupied with making the best of the abundant nutritive principles found in the soybean. One can eat green vegetable soybeans (*Les fruits verts*) like green peas (*pois verts*). In Annam and Japan a sauce is also made from soybeans; its use has spread from East Asia just like that of tofu (*fromage végétal*) (p. 107).

The introduction into Europe and France of soyfoods (*aliments retirés du Soja*), especially soymilk and tofu, will enable us to combat periods of scarcity of animal milk and periods when the prices of certain foods are high. Will the substitution of vegetable casein for milk casein enable us to likewise conserve milk for food use instead of delivering it to industry? (p. 107).

Chapter one, "Soymilk" (p. 108-13), discusses the work of the Japanese chemist T. Katayama (1906) with soymilk and notes that it can be homogenized and condensed. Illustrations show a microscopic view of the globules of soymilk and of okara. The absence of starch in soybeans is a very positive characteristic.

Chapter two, "Tofu" (p. 114-18), notes that in Cochin-China, calcium sulfate is called *Tchack-kao*, and there are three main varieties of tofu: (1) The fermented variety, which is gray or yellow in color, has a piquant taste and resembles Roquefort cheese. (2) The white salted variety resembles goat's cheese. (3) The baked (*cuite*) or smoked variety resembles gruyere cheese and keeps as well as the salted variety.

Chapter three, "Industrial uses of vegetable casein" (p. 119-32), observes that the oil in soybeans must first be removed by pressing or extraction. A table (p. 120) gives the chemical composition of soybeans from Laos and Cochin China, Tonkin, and China and Manchuria. They contain 17.64 to 18.28% oil. In Indochina a food which Beltzer calls *La caséine végétale en lames* ("vegetable casein in sheets" = yuba) has a rather high oil content–about 25-28%. There follows a section (p. 126-32) which contains details on industrial production of soy casein. Chapter four, "Design and installation of a factory for processing soybeans into industrial vegetable casein," describes each piece of equipment and its cost, itemizes the costs of general and special materials plus, buildings and working capital. Also includes a detailed schematic diagram (p. 136-37) with three production lines, and both top and side views. Finally, it lists expenses, income, and profit (p. 139). The last section, applications of industrial vegetable casein, includes paints, paper coatings, silk and artificial textiles, Galalith, and waterproofing of textiles and straw hats. The book contains no bibliography, few footnotes, and no mention of the work of Li Yu-ying–from whom the author appears to have borrowed much.

Note: Although this book is undated, all major sources (except a Seattle Public Library bibliography) give its date as 1912. Address: Ingenieur-Chemiste-Expert, Professeur de Chimie Industrielle.

2023. Bradbury, Frederick. 1912. History of Old Sheffield Plate: Being an account of the origin, growth, and decay of the industry... London: Macmillan and Co., Ltd. xiii + 539 p. See ix, p. 197, 271. Illust. General index. Index to marks. 30 cm. [25* ref]

• ***Summary:*** This is a very interesting and original book, with much new information about and photos of early soy cruets and soy frames. In the 1740s craftsmen in Sheffield, England (long known for its cutlery and metalwork), invented the process for making articles from silver plated on copper by fusion; this process is much older than electro-plating. Before that all such articles were made from pure silver. Two early products were metal "soy frames" and cruet frames," used for holding cruets–which are cut glass bottles that usually hold oil, vinegar, soy [sauce], liquor, etc. for use at the dining table.

The section titled "Sale room values of Old Sheffield Plate" states (p. 184) that as of 1912: "Cruet and liquor frames are not in request, but small soy frames from the Adam period [ca. 1770-1790] are much sought after."

A complete list of Old Sheffield plated wares manufactured by the firm of Watson & Bradbury between the years 1788 and 1815, with original descriptions taken from the company's pattern book, includes (p. 196-97): "Cruet frames"–485 different patterns. Note: this is the single most popular type of pattern / item. "Soy frames"–84 different patterns." This one firm made a total of 570 different patterns of soy frames and glass cruets."

The section titled "Cruet frames and soy frames" (p. 271-73), which contains various superb illustrations, states: "The soy frames and cruet frames–with their many

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combinations and varieties of patterns, are sufficiently illustrated here to give a very fair general idea of the different fashions and requirements of this branch of the industry. The name soy is borrowed from the French [sic, the Japanese], and signifies sauce." (p. 271).

Black-and-white illustrations show: (1) A punching and piercing machine, with a "soy frame base" after piercing (p. 119; various spaces were pierced on its edge).



Small 2-bottle Soy Frame, by
D. Holy, Wilkinson & Co.
Date 1787. Mr. F. Hawley, London.

(2) "Small 2-bottle Soy Frame, by D. Holy, Wilkinson & Co. Date 1787."

(3) "Small 3-bottle Soy Frame, with green bottles ornamented with gold, by N. Smith & Co. Date 1803." See next page.

(4) "Round 6-bottle Soy Frame, by Richard Morton. Date 1776." Note: This is the earliest date seen (Sept. 2003) for a soy frame or soy cruets.

(5) "7-bottle Oval Soy or Cruet Frame, by T. Law & Co. Date 1792."

(6) "3-bottle Cruet or Soy Frame Combination, with plated Mustard Pot, by N. Smith & Co. Date 1789." (p. 271-73).

(7) "Illustrated designs [two] from catalogues, about 1778. The Soy Frames. The property of T. Bradbury & Sons" (p. 404). Address: Sheffield, England.

2024. Capus, G.; Boise, D. 1912. Les produits coloniaux: Origine, production, commerce [Colonial products: Origin, production, and commerce]. Paris: Librairie Armand Colin. xvi + 687 p. See p. 113-15, 340. Illust. Index. 19 cm. [193* ref. Fre]

• ***Summary:*** In the chapter on "Vegetables" is a section titled "Soybeans" (*Le Soya ou Soja*) (p. 113-15), which gives basic information and contains a large (non-original) illustration of a soybean plant by Thiebault. In Japan, soybean are used to make a sauce or condiment called shoyu (*Sho-yu*).

In the chapter on "Forage plants" is a short paragraph (p. 340) on the "Soybean" (*Le Soya*) which states that it is a precious legume for subtropical regions. Its stems and leaves are very rich in nitrogenous materials, and therefore very nourishing.

Also discusses: Peanuts (*L'Arachide*, p. 115-16, 289-94, 337). Bambara groundnuts (*Le Voandzou*, p. 116). Sesame seeds (*Le Sésame*, p. 298-301). Address: 1. Doctor of Science, former Director General of Agriculture in Indochnia; 2. Asst. at the Museum of Natural History, professor at the l'École coloniale. Both: Paris, France.

2025. Giles, Herbert Allen. 1912. A Chinese-English dictionary. 2nd ed., revised & enlarged. 2 vols. Shanghai, China: Kelly & Walsh, Ltd.; London: Bernard Quaritch. 33 x 26 cm. Reprinted in 1964, 1978. [4 ref. Eng; chi]

• ***Summary:*** These two massive volumes, each weighing about 9½ lb, contain more than 1,800 pages and 13,848 Chinese characters. Contents of Vol. I: Part I. By the same author (25 books). Dedication. Preface. Extracts from preface to first edition. Dialects (The romanized pronunciation of each character is given in Cantonese, Hakka, Foochow, Wênchow, Ningpo, Peking, Mid-China, Yangchow, and Ssuch'uan {Szechwan} dialects, as well as in Korean, Japanese, and Annamese, each being distinguished by its initial letter). Tables: Insignia of official rank, the family names, the Chinese dynasties, topographical, the calendar, miscellaneous (the Chinese digits, the Chinese decimal system). The 214 radicals. Radical index. Part II. A Chinese-English dictionary (p. 1-1711, in two volumes). Examples of soy-related characters:

Chiang (p. 149, No. 1220). "A soy made by mixing salt with bean flour. Sauce." Fourteen compounds using this character are given, including: Bean sauce, soy. Pickled bean curd. Bean sauce. Soy is of two kinds, the clear and the thick. Dry relishes. Soy [sauce] colour–a dark reddish drab. He won't use money for vinegar to buy soy.

Ch'ih (p. 249, No. 1996). "Salted fruits, etc., dried and used as relishes." Four compounds incl.: Salted beans. Soy, sauce.

Fu (p. 458, No. 3686). "Rotten; putrid; worthless." Eleven compounds and sayings include: Bean curd, see No. 11,417. Bean curd officials–a term of contempt applied to certain of the poorer classes of official servants who are compelled to feed largely on this cheap food. Also explained as flabby or unenergetic officials. A Mongol name for cheese. A kind of milk made from beans (milk + fu) [Note: Probably fermented tofu].

Huang (p. 635, No. 5124). Yellow. Compounds: Yellow beans.

Mao (p. 955, No. 7,679). "Hair, down, feather." But the

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Round 6-bottle S.y frame by Richard Morson
Date 1776. Basket Condition







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word *Maodou* ("Hairy beans") = edamame does not appear here.

Ta (p. 1,294-96, No. 10,470). "Great." But the word "Great bean" = soybean does not appear here.

Tou (p. 1,412, No. 11,417). "Beans; pulse." See also No. 11,412. Thirty compounds, incl.: Bean-sprouts. Bean-curd. A cheap restaurant (a bean-curd restaurant). Like making bean curd–very tedious. A tongue like a knife, but a bean-curd heart (soft). Bean-cake. Bean oil. Big bean, black bean, or yellow bean = the soja or soya bean (*Glycine hispida*, Max.), used for making bean-curd, soy, oil, etc. Ground-nuts.

Yu (p. 1,661, No. 13,409). "Oil, fat, grease." 45 compounds incl. Oil, salt, soy, and vinegar = condiments generally. Sesamum-seed oil. Linseed. Wood oil. An oil factory. Oil dregs. But "bean-oil" = soybean oil does not appear here.

Note 1 (see p. vii): Other earlier important Chinese dictionaries are: Morrison (1819, English), Medhurst (1843, English), Williams (1874, American), Giles (1892, English). Giles lived 1845-1935.

Note 2. Unfortunately, the pronunciation of the compounds is not given (as in Mandarin). Address: Prof. of Chinese, Univ. of Cambridge, Cambridge, England; and sometimes H.B.M. Consul at Ningpo.

2026. *Giornale di Farmacia, di Chimica e di Scienze Affini (J. of Pharmacy, Chemistry and Related Sciences) (Torino, Italy)*.1912. Sopra una reazione chromatica dell'olio di soja [On a chromatic reaction of soya oil (Abstract)]. 61:495-96. [1 ref. Ita]

• ***Summary:*** A summary of: Settimj, L. 1912. *"Sopra una reazione cromatica caratteristica dell'olio di soja* [On a chromatic or color reaction characteristic of soy oil"]. *Annali del Laboratorio Chimico Centrale delle Gabelle* (Rome) 6:461-65. Note: This summary says that the author of the original article was "L. Settimi."

2027. Goodrich, Walter Francis. 1912. Modern destructor practice. London: Charles Griffin and Co., Ltd.; Philadelphia: J.B. Lippincott Co. xvi + 278 p. See p. 180. Illust. (With 116 illust. and 46 tables). 23 cm. [10+* ref]

• ***Summary:*** A destructor is a large incinerator or battery of incinerators designed for sanitary refuse / waste disposal and to produce low-cost power as a by-product using steam.

In the section on "The Far East" (Oriental countries), table 24 titled "Report of the Shanghai Municipal Council for year ending December 31, 1899..." (p. 180) shows the percentage composition of Shanghai garbage among 15 categories each month for a year. A footnote concerning organic matter states: "Includes cabbage leaves... putrid meat, old shoes, fish and fowl entrails, fish heads and bones, refuse from the manufacture of bean cakes [probably okara] and Chinese sauce (soy), etc." Address: Monmouth Lodge, Watford. Associate of the Institution of Mechanical Engineers; Fellow of the Inst. of Sanitary Engineers, and author of various books incl. *Refuse Disposal and Power Production*.

2028. Hokubei Shokai. 1912. Hokubei Shokai (Ad). In: Nichibei Shinbun-sha. 1912. *Nichi-Bei Nenkan [Japanese-American Yearbook*. No. 8]. p. C-11. [Jap]

• ***Summary:*** Ad (½ page). This company (an original manufacturer and importer, under special contracts) imports various goods including miso and shoyu. Only the address in California (1 line) is given in English. Address: 246 Jackson St., San Jose, California.

2029. Kinokuniya Co. (The). 1912. The Kinokuniya Co. (Ad). In: Nichibei Shinbun-sha. 1912. *Nichi-Bei Nenkan [Japanese-American Yearbook*. No. 8]. p. C-16. [Eng; jap]

• ***Summary:*** Ad (¼ page). The top ¼ of this ad is given in English. This company sells various goods including (in Japanese) miso and shoyu [soy sauce]. Address: 224 Jackson St., San Jose, California. Phone: San Jose 1276.

2030. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1912. Nichi-Bei nenkan [Japanese-American yearbook. No. 8]. 650 Ellis St., San Francisco, California. 652 p. Reprinted in 2001-02 in Tokyo by Nihon Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 5-kai [Collected Documents on Japanese Emigration. No. 5]. [Jap; eng]

• ***Summary:*** This book is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. The English-language title page reads: *The Japanese American Year Book.*

The book is divided into 14 parts, each numbered separately. Contents: (1) Table of contents (4 p.). (2) Ads (4 p.). (3) Maps (2 p.): Map of the United States. Map of California (1 p. each, in Japanese). (4) Graphs and charts on 4 unnumbered pages: (A) Bar chart: Population of Japanese living in the USA from 1869 to 1911 (some years missing before 1904). Three pie charts: (B) In which U.S. states do Japanese live. (C) Occupations of Japanese in USA. (D) Japanese in USA by gender. (E) Bar chart: Agricultural land use by Japanese by state. (F) Bar charts of four things for 7 years. (5) Black and white photos on 16 unnumbered pages. (6) Advertisements (A-1 to A-18). (7) Front part (p. 1-150), including general information about America, Japanese in America, U.S. and agricultural census data, etc. (8) Ads from San Francisco. (9) Back part (p. 1-136). (10) Assorted ads (B-1 to B-66). Appendixes: (12) Table of contents of Directory of Japanese living in America (2 p.). Appendix 1. Japanese living in America, alphabetically by state, and within each state by city (p. 1-194). Appendix 2. Assorted California ads (p. C-1 to C-42).

(4A) Population of Japanese living in the USA from 1869 to 1911 (read from right to left). 40 people in 1869, 55 in 1871, 95 in 1874, 270 in 1878, 420 in 1884, 500 in 1885,

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1,200 in 1887, 2,300 in 1890, 6,000 in 1895, 35,000 in 1899, 53,761 in 1904, 61,034 in 1905, 75,534 in 1906, 89,575 in 1907, peak of 103,683 in 1908, 98,718 in 1909, 93,644 in 1911.

(4B, top pie chart) In which U.S. states do Japanese live: Total Japanese population in USA: 93,359. California 56,760. Washington 16,817. Colorado, Arizona, and New Mexico combined 5,083. Rocky Mountain region (Nevada, Utah, Idaho, Wyoming, Montana?) (*Sanchubu-gun*) 4,896. Oregon 3,795. Colorado 3,731. New York 2,178. Idaho 1,168. Utah 1,472 (see also p. 79).

(4C, lower left pie chart) Occupations of Japanese in USA: Total 76,000. Farm laborers 36,000. Domestics 8,000. Merchants and hotel workers 7,500. Farm owners (*Nogyo keiei-sha*) 5,000.

(4D, lower right pie chart) Japanese in USA by gender: Total 93,359. Adult men 76,378. Adult women 9,673 (so 7.9 men for each woman). Boys–American born 3,237. Girls–American born 3,195.

(5) How Japanese worked agricultural land in the USA (3 bar charts) (5A) Far left graph: Too hard to read bottom of graph. (5B) Right graph: California. Colorado. Idaho. Texas. Washington. Utah. Oregon. Nebraska. New York. Florida. Other. (5C) 3rd graph (full page): Gives data from 1905 to 1911 for the following states: California, Colorado, Idaho, Texas, Washington, Utah, Oregon, Nebraska, New York, Florida, and Other. For each state gives the following: black bar = *genkin shakuchi* = rent the land; pay cash (most prevalent). White bar with wavy line = *buai kôsaku* = pay a percentage of the crop (#2 most prevalent). Dark diagonal lines = *ukeoi kôsaku* = a person asks you to cultivate and manage the land (#3 most prevalent). Light diagonal lines = *shoyû* = Cultivators owns the land (least prevalent).

In 1910, the value of miso and shoyu imported from Japan to San Francisco topped $100,000. Also imports of soybean cakes (*daizu kasu*) from Manchuria increased rapidly (p. 75).

In 1910, the value of shoyu and pickles imported from Japan to Portland, Oregon, was $11,094 (p. 77).

Basic information about how the survey was conducted, its scope, and reaction to it is given on pages 67, 73, 79-80, 90, 98-100, and 114 of this year book. The date on page 1 of the directory is Meiji 44 (1911), Oct. 1. On page 67 is a comparison of Japanese and American import and export data–this data compiled by both countries; soy is not mentioned. Pages 73 on show existing government forms that Japanese had filled out: Marriage certificate, birth certificate, divorce, military draft, type of business and business license, agricultural work details, visa, etc. These provided important basic information for the surveys of Japanese in California.

Pages 79, 80, and 90 contain data compiled by the *Nichibei* newspaper, perhaps a survey conducted by sending out forms, with follow-up by phone calls. The first Japanese laborers came into California in Meiji 2 (1869); A Dutchman named Snail brought a group of 40 Japanese workers. In Meiji 11 (1878) a census of Japanese in California was conducted. In Meiji 37 (1904) the first detailed research on Japanese in California was conducted.

The Directory shows Japanese companies making soyfoods in California, Utah, Oregon, and Washington. Address: San Francisco, California.

2031. Okurasho Shuzeikyoku. 1912. Naikokuzei isan 55 [Domestic tax; treasure from the past 55]. Tokyo: Tokyozeimu Kantoku-kyoku. 161 p. 23 cm. [Jap]*
• ***Summary:*** This is a Japanese government publication. Note: This is the 4th earliest book in WorldCat / OCLC that has miso as a subject or title word. Address: Japan.

2032. Okurasho Shuzeikyoku. 1912. Naikokuzei isan 56 [Domestic tax; treasure from the past 56]. Tokyo: Tokyozeimu Kantoku-kyoku. 133 p. 23 cm. [Jap]*
• ***Summary:*** This is a Japanese government publication. Address: Japan.

2033. Ozaki Shoten (Okaki & Co.). 1912. Ozaki Shoten (Ad). In: Nichibei Shinbun-sha. 1912. *Nichi-Bei Nenkan* [*Japanese-American Yearbook*. No. 8]. p. C-24. [Eng; jap]
• ***Summary:*** Ad (¼ page). The top 1/5 of this ad is given in English. This company sells various goods including (in Japanese) shoyu [soy sauce]. A similar ad also appears in the 1913 Yearbook (last block of ads, p. 23). Says it is a branch of Ozaki Shoten, a shoyu maker in Wakayama, Japan. Address: 404–406 E. First St., Los Angeles, California.

2034. Pacific Trading Co., Inc. 1912. General importers and exporters (Ad). In: Nichibei Shinbun-sha. 1912. *Nichi-Bei Nenkan* [*Japanese-American Yearbook*. No. 8]. Unnumbered page near front. [Jap; Eng]
• ***Summary:*** Ad (full page). The top one-fifth of this ad is in English. This company imports various goods including (in Japanese) shoyu and miso. In English: "Rice, soy, canned goods, vegetable wax, dried vegetable, crockery, chilli pepper, dried ginger, etc." "Cable address 'PacTrad.'"

The company's full-page ad near the front of the 1914 Yearbook (p. 1) shows company trademarks / logos for Kikkoman Shoyu and Higeta Shoyu. Address: 441-443 Clay St., San Francisco, California. Phone: Kearny 1263. Douglas 170. Home C 5456.

2035. Settimj, L. 1912. Sopra una reazione cromatica caratteristica dell'olio di soja [On a chromatic reaction characteristic of soy oil]. *Annali del Laboratorio Chimico Centrale delle Gabelle (Rome)* 6:461-65. (Chem. Abst. 7:908). [Ita]
• ***Summary:*** The soybean seed (*semi di soja*) is furnished by the plant *Soja hispida*, which is a member of the

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legume family. In Japan, since ancient times, the seeds of the soybean have been used to make a fermented paste called Miso and an oil called Shoyu (*un olio per con lire detto Shoyu*). In the United States, England, and Germany the soybean is used mostly as a source of oil, of which it contains 13-19%. During the past year, soy oil in Italy (*dell'olio di soja in Italia*) has assumed a new importance; it is coming to be used mainly for the manufacture of soaps but also for edible use, mixed with the oil of other seeds and olive oil. The Settimi Test is a color test which has been proposed for use with vegetable oils, including soy oil. On shaking together a mixture of 5 c.c. of soya bean oil, 2 c.c. of $CHCL_3$, and 3 c.c. of a 1:50 aqueous solution of uranium nitrate, a distinctly yellow emulsion is obtained. This yellow color is permanent. With sesame (*sesamo*), cottonseed (*cotone*), peanut (*arachide*), rapeseed (*colza*) and maize (*maiz*) oil, a white emulsion results. Olive oil gives a greenish tint, sometimes also a yellowish tint like that of an oil mixed with a little soya oil.

Note 1. This article was summarized in *Chemische Umschau auf dem Gebiete der Fette, Oele, Wachse und Harze* (1913, p. 61), *Pharmazeutische Zentralhalle für Deutschland* (1913, vol. 54, p. 522), and *Year-Book of Pharmacy* (1913, p. 107).

Note 2. This is the earliest Italian-language document seen (Sept. 2006) that mentions soy oil, which it calls *olio di soja*.

Also discusses: Sesame oil, peanut oil, olive oil, corn oil, and colza oil. Address: Rome, Italy.

2036. Tibbles, William. 1912. Foods, their origin, composition and manufacture. London: Baillière, Tindall and Cox. viii + 950 p. See p. 532. 23 cm. *

• ***Summary:*** "Soy Sauce, or Shoyu, is prepared from a mixture of cooked beans, roasted wheaten flour, and salt, which are put into a cask and allowed to undergo a prolonged fermentation. The result is a thick brown liquid, of pungent and agreeable..." (p. 532).

2037. Tonnelier, Adolfo C. 1912. La Soja hispida y sus aplicaciones [The soybean and its applications]. Buenos Aires, Argentina: J. Carbone. 16 p. [Spa]

• ***Summary:*** Various tables give the chemical composition of soybeans based on different previous analyses (incl. moisture, ash, oils, nitrogenous substances / proteins {*materias azoadas, materias proteicas*}, cellulose, and carbohydrates).

"The results obtained during these last two periods in this Experimental Station permit us to predict a bright future for these industries. The soybean is adequate to use as green manure, green fodder and hay; it produces a grain with which flour is made for the maintenance of people and animals; it also produces oil which leaves a residue cake that can be fed to livestock. Besides these products, soybeans can be a source for artificial milk (*leche artificial;* soymilk), cheese (*queso*) [tofu], and a certain sauce (*cierta salsa;* soy sauce), all of which, even if their use has not yet become part of our custom, are at least widespread in the Chinese Empire" (p. 1).

"The main center for the utilization of the soybean and for the production of flour, oil and cakes is found in Hull, England." Tables show the composition of soy flour and the soybean cake, based on analyses by Maret and Delattre (p. 8).

On page 10 is a discussion of vegetable milk or soy milk. Page 12 discusses *"queso de Soja, ó To Fou"* ("soy cheese, or tofu") and *"la famosa salsa de Soja, llamada Soyou ó Choyou"* ("the famous soy sauce, called Soyou or Choyou" [actually shoyu]). A table gives the chemical composition of fresh and dry tofu.

A full-page table (p. 13) compares the chemical composition of soybeans and soyfoods with similar foods from other sources in six categories: Seeds or grains, cakes (for feed), flour, green forage, milk (incl. soymilk), and cheese (incl. fresh and dry tofu; *Queso de To Fou, fresco; Queso de To Fou, seco*). The dry tofu cheese may be dry-frozen tofu.

"Experiments carried out at this Experimental Station in Cordoba during the last three years plainly confirm the favorable effects that legumes produce as green/unripe manure over other crops such as corn, flax, wheat, barley, rye and potatoes. In the period 1910-1911, as is well known, was not a very favorable one for forage production. A yield corresponding to 36,000 kg/ha of green forage was obtained [from soybeans] at this Experimental Station" (p. 15). "The experimental cultivation of the hispid/hairy soybean in the period of 1910-1911 was carried out on soil of mediocre composition, inferior to that of the average crops in the region. As I stated earlier, that year was extremely unfavorable for all vegetation. Half of the crop either failed to bloom or did not ripen. As a result, by January 19, 1911, the harvest of green forage was 36,800 kg/ha, leaving the other half for seed" (p. 16).

Photos show: (1) A field of soy bean plants (Soja hispida). (2) Close-up view of a man standing with a measuring stick in a field of soy bean plants. (3) Close-up view of leaves of a soy bean plant. (4). Close-up of soybean pods on stem. (5). Soybean pods placed next to a ruler.

Note 1. This is the earliest document seen (May 2009) concerning the cultivation of soybeans in Argentina (one of three documents).

Note 2. The last two lines of the article read: "Cordoba, July 1911. A.C. Tonnelier." Therefore this document contains the earliest clear date seen for soybeans in Argentina, or the cultivation of soybeans in Argentina (1908). The source of these soybeans is unknown.

Note 3. This is the earliest Spanish-language document seen (Aug. 2003) that uses the term *materias azoadas* or

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materias proteicas to refer to nitrogenous substances or protein in connection with soybeans. Address: Jefe de la Estación Experimental, anexa á la Escuela Nacional de Agricultura y Ganaderia de Córdoba (Chief of the Experiment Station, attached to the School of Agriculture and Cattle Raising of Cordoba, Argentina).

2038. Tozai Boeki Shokai (Oriental & Occidental Trading Co.). (The). 1912. General importers and exporters (Ad). In: Nichibei Shinbun-sha. 1912. *Nichi-Bei Nenkan* [*Japanese-American Yearbook*. No. 8]. p. C-36. [Eng; jap]
• ***Summary:*** Ad (full page). The top ¼ of this ad is given in English. This company sells various goods including (in Japanese) shoyu [soy sauce]. Address: 461 Pacific Building, Market St. at 4th, San Francisco, California. Phone: Douglas 3284.

2039. Winkler, Hubert. 1912. Botanisches Hilfsbuch fuer Pflanzer, Kolonialbeamte, Tropenkaufleute und Forschungsreisende [Botanical guidebook for colonial settlers and officials, buyers of tropical goods, and explorers]. Wismar: Hinstorffsche Verlagsbuchhandlung. 322 p. See p. 240-41. [1 ref. Ger]
Address: Privatdozent an der Universitaet Breslau [Germany].

2040. *Chemist and Druggist* (*London*). 1913. Trade report. 82(5):205-07. Feb. 1. Series No. 1723.
• ***Summary:*** London markets–Soy. "Seuloong brand is obtainable at 1*s.* 8*d.* per gallon, no Wochan being available" (p. 207).

2041. Cornwell (G.G.) & Son. 1913. Appetizing sauces (Ad). *Washington Post*. Feb. 27. p. 7.
• ***Summary:*** "Add zest to your meals and help your digestion with some of these delicious sauces which we import direct from Crosse & Blackwell, in England.

"Essence of Anchovies, ½ pts. Harvey's Sauce, ½ pts. Walnut Catsup, ½ pts. India Soy, ½ pts. Reading Sauce, ½ pts. Importers of fine groceries."

Note 1. This ad also appeared in the Feb. 28, March 11, and March 22 issues of this newspaper.

Note 2. The March 22 issue is the most recent English-language document seen (Oct. 2006) that uses the term "India Soy" to refer to soy sauce. Address: 1415-17 H St., N.W. [Washington, DC].

2042. Granato, L. 1913. A soja [The soybean]. *Sao Paulo Secretaria de Agricultura, Comercio e Obras Pulicas. Boletim de Agricultura, Series 14*. No. 3. p. 159-67. March. Series XIV. [Por]
• ***Summary:*** Contents: Names of the soybean: Scientific and in various foreign countries. Botanical characteristics. Soybean cultivation: In Russia, France, Italy, Austria. Harvest and yield: In Italy, Hungary, France, in Brazil at the Agronomic Institute of Campinas (*instituto Agronomico de Campinas*) where Dutra reported yields of 2,200 to 2,300 liters/hectare. The soybean as a food: Nutritional composition and food value of the seeds of varieties analyzed by König, of varieties cultivated in 1899 at the Agronomic Institute of Campinas and analyzed by Mr. R. Bolliger. Soja as a forage crop. Uses of the soy bean (esp. in Japan and China): Miso, tofu (a type of cheese {*queijo*} called *To-fu*), shoyu, koji, soy flour.

Three bar charts (p. 165-66) compare the protein (*albuminoides*), oil and fat, and carbohydrate content of the soybean with those of other major foodstuffs (of both animal and vegetable origin, such as common beans {*feijao*}, beef, eggs, wheat, etc.). Soybeans have the highest content of protein, and of oil or fat, of all foods with which they are compared.

2043. Kita, Genitsu. 1913. Some properties of koji-diastase. *J. of Industrial and Engineering Chemistry* 5(3):220-22. March. [3 ref. Eng]
• ***Summary:*** "I have lately been occupied in a series of investigations relative to Soya or Shoyu (Japanese [soy] sauce fermented from beans, wheat and salt) making, and incidentally cleared up certain" points about the saccharifying enzyms [enzymes] of koji."

"Summary: I. Though koji may contain two different saccharifying enzyms, *viz.*, amylase and glucase, the total quantity of glucose saccharified solution could not be produced from maltose by the action of glucase alone; hence, koji must contain some other kind of diastase which produces glucose directly from starch without the aid of glucase.

"II. Common salt has a protecting action on koji-diastase under heating but not on malt-diastase, while sodium hydrogen phosphate (Na_2HPO_4), asparagine and sulfuric acid impair its activity more quickly.

"III. The inhibitory action of salt on koji-diastase has a certain relation to the concentration of diastase. In a dilute enzymic solution it is very strong but not in a concentrated enzymic solution. It is therefore necessary in every case to note concentration of diastase when we consider the influence of some salt upon it.

"IV. The activity of koji-diastase is conserved in brine for a long time." Address: Dep. of Applied Chemistry, Tokyo Imperial Univ.

2044. Takahashi, Teizô; Yamamoto, Takeharu. 1913. On the physiological difference of the varieties of *Aspergillus oryzae* employed in the three main industries in Japan, namely saké-, shôyu-, and tamari-manufacture. *J. of the College of Agriculture, Tokyo Imperial University* 5(2):153-61. March. Previously published in *Jozo Shiken-jo Hokoku* (Report of the Brewing Inst., Tokyo), March 1911. [6 ref. Eng]

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• ***Summary:*** "The physiological differences between the fungus of saké koji, shôyu koji and tamari koji are remarkable, especially in the formation of amino-acids, sugars, esters, ammonia and the liquefaction of gelatine... The formation of sugars is more conspicuous in the varieties of the fungus customarily used in the brewing of saké than in that of the varieties of shôyu or tamari, and vice versa in regard to the peptonification on the formation of amino-acids or ammonification.

"Still further, the formation of large quantities of amino acids at the stage of the spore formation of the fungus, in spite of their being less of them at the mycelium stage, explains why we use koji at spore stage in shôyu or tamari industry, and at the mycelium stage in saké brewing."

Contents: Introduction. Varieties [of Aspergillus oryzae] used in the experiments. The preparation of koji and the method of analysis. The content of sugar in the whole mass of the prepared koji, namely the growth on 100 g. of rice. The amounts of organic acids. The esters. The amino-acids and ammonia. The liquefaction of gelatine in the culture of the fungus in koji gelatine. Summary. Address: Tokyo Imperial Univ., Japan.

2045. Woodhouse, E.J.; Taylor, C. Somers. 1913. The varieties of soy beans found in Bengal, Bihar, and Orissa and their commercial possibilities. *India Department of Agriculture, Memoirs. Botanical Series* 5(3):103-76. March. Plus 4 plates on unnumbered pages Also published as a book in Calcutta by Thacker, Spink & Co. and in London by W. Thacker & Co. 28 cm. [15 ref]

• ***Summary:*** Contents: 1. Introductory. 2. Nomenclature. 3. Varietal characters of soy beans: Habit, foliage, pubescence, flower (morphology, pollination, extent of natural crossing), pods, seeds (morphology), seeds (composition; black, yellow, and chocolate seeded varieties grown by the authors from seed obtained in 1909; the back varieties contained significantly more nitrogen/protein and less oil), maturity, diseases. 4. Description of types: *Kala Bhetmas, Safed Bhetmas, Lal Bhetmas, Barmeli Bhetmas, Nepali Bhetmas* (obtained from Kalimpong and tested at Sabour in 1911). 5. Distribution. 6. Cultivation. 7. Yield. 8. Price. 9. Uses: Food-stuff, bean sauce (soy, or shoyu), chiang or miso, tou-fu (tofu), soy beans as a green vegetable, oil (for use in England in soap-making, or in China "as an illuminant, as a substitute for lard in cooking, though it is inferior to rapeseed and sesamum oil for this purpose, as a lubricant for greasing cart axles, or for waterproofing cloth"), cake and flour. 10. General conclusions.

"In 1909 the survey work on the crops of Bengal was commenced, and in July of that year a number of trial plots of the chief pulse crops of the Province were sown for identification and field study. Among these were three samples of *Bhetmas*, of which one sample of black-seeded *Bhetmas*, received from the Settlement Officer, Bhagalpur, was found to be pure for seed characters... All the plots did well and were identified as varieties of the Soy Bean, but in October it became apparent that the black-seeded type differed from the other two in having darker bullate leaves and a more prostrate habit...

"In 1910 the seed of the single plants which had been analysed was sown together with some samples obtained by Mr. A.C. Ghosh from the Kurseong bazar [bazaar]... a distinctly earlier black seeded form was obtained from a plot (E256 of 1910) grown from seed collected at the Bankipur Exhibition. The trial plots of the seed from Kurseong failed."

"In 1911... the success of the plots of the acclimatized American varieties induced us to exchange seeds of the Bengal types with Mr. Piper, of the United States Plant Industry Bureau, who kindly supplied us with seed of the varieties, Barchet, Duggar, Haberlandt, Hollybrook, Mammoth, Pekin [Peking], Pingshu. Another attempt was made to cultivate at Sabour the varieties grown in the Sikkim Himalayas, and plots of the Nepali, Barmeli, black seed, greenish yellow seed and chocolate seed varieties were obtained from Mr. Goodwin, Superintendent of the Kalimpong Homes Farm, and grown successfully at Sabour" (p. 104-05). Note 1. This is the earliest document seen (Sept. 2004) that spells the soybean variety named "Peking" as "Pekin." This spelling also appeared in Cuba in 1920 (3 documents), in Argentina in 1922, and in the United States in 1925 (in Alaska, see Georgeson 1925).

Concerning seed morphology (p. 114-15): The weight of 100 seeds in some of the American varieties such as Barchet, Pekin and Pingshu have remained approximately constant, whereas others, such as Duggar, Hollybrook and Mammoth have decreased in weight more or less considerably during the past season. The Nepali type has decreased in weight from 24.4 grams to 12.8 grams per 100 seeds. The variation in weight per 100 seeds in the case of varieties cultivated in new localities would appear to give a good indication of the adaptability of a variety to its new environment."

The authors record the results of a large number of selection experiments which they have carried out with a view to obtaining early-maturing types rich in oil, and also deal briefly with the cultivation and uses of soy beans.

Concerning uses (p. 138): "In Bengal, soy beans are used very little for food as they are said to be too heat producing. It is usually taken after frying over a heated sand bath as *bhunja*, but it is also heated, crushed, and then used as *dal*, and also as *larua* mixed with *gur*." In the "Soya Bean of Manchuria" (1911), Shaw states that soy beans can also be used to make bean sauce or shoyu, chiang or miso, and tou-fu (tofu). They can also be used to make oil, cake, and flour.

"General conclusions (p. 140): At the present time, Soy Beans are grown to a slight extent only in the Darjeeling hills and to no appreciable extent elsewhere although satisfactory yields have been obtained in the experiments conducted by the Agricultural Department in both these areas. We may

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ascribe the present unpopularity of the crop to the following reasons. For export the price offered in Calcutta is not yet sufficiently attractive; as a food-stuff it is more potent than the ordinary pulses to which the people are accustomed; as a crop for growth in the plains it has the disadvantage of occupying the land during two seasons, it may suffer from waterlogging during the rains, and requires plenty of moisture in October, and it harbours rats during the last two months of its growth. These objections do not appear to us by any means unsurmountable [insurmountable]... The use of Soy Beans for food could be extended if the educated classes once appreciate its value as an addition to a rice diet, and experiment with its preparation for food on the lines suggested."

"Its cultivation in the hills would probably be largely extended on the present lines as soon as the price reached a satisfactory figure. It only remains to say that our work is being continued on the lines indicated in this paper with a view to isolating early maturing types possessing a high yield of oil."

Contains many tables, mostly showing the composition of various black, yellow, and chocolate soy beans and the history of descendants of various singly selected plants. Black soy beans contain on average 6.72% nitrogen and 13.52% oil. Yellow soy beans contain 5.61% nitrogen and 16.99% oil. Note 2. Therefore black soy beans contain 19.8% more nitrogen [protein] and only 79.6% as much oil as yellow soy beans. Chocolate-colored soy beans contain 5.57% nitrogen (the least of all three types) and 17.13% oil (the most of all three types).

A table titled "Life periods of American varieties of Soy Beans grown at Sabour, 1911" (p. 124) gives information on eight varieties: Barchet, Duggar, Haberlandt, Hollybrook, Mammoth, Pekin, Pingshu, and Riceland. For example, Duggar: Origin: S.P.I. No. 17268C. Date of planting: July 12, 1911. Date of harvesting: Oct. 11. Life period at Sabour: 91 days. Life period in the U.S.A.: 110-120 days.

Another table titled "Yield of the types of soy beans found in Bengal, Bihar, and Orissa lists 8 varieties, and for each: Where grown, dates of sowing, area sown, approximate yield in lbs/acre, corresponding yield (on unmanured land) in mds., srs., and chtks. [mds. = maunds; 1 maund = 82.28 pounds or 37.32 kg; srs. = seers; 1 seer = 2.05 pounds; chtks. = chittaks or chittacks or chattaks or chattacks; 1 chittak [also chattak or chattack] = 1/16 seer = 900 grains = about 2 ounces], and remarks. Two trials gave yields of more than 2000 lb/acre (2,189 lb from the variety Nepali in Kalimpong, and 2,164 lb for a Chocolate variety at Bankipur Farm). Seven additional trials gave yields of 1,000 to 1,400 lb/acre.

Photos on unnumbered pages near the end show: 1. Type I–"Late Black-seeded" soybean variety, photographed 28 Oct. 1911. 2. Type V–Barmeli variety. 3. Type VI–Nepali variety on left, and Type IIIa–"Upright long branched greeny yellow seeded variety on right." 4. Barchet variety, photographed 30 Oct. 1911.

Four graphs on the last page show the distribution of chocolate, black, and yellow soybeans according to both their nitrogen and oil contents.

Note 3. This is the earliest document seen (May 2004) that clearly refers to the cultivation of soybeans in Bengal (probably later Bangladesh). Address: Economic Botanist to the Government of Bihar and Orissa, India.

2046. Kita, Gen-itsu. 1913. Einige japanische Schimmelpilze [Some Japanese molds]. *Zentralblatt fuer Bakteriologie, Series 2*, 37(17/21):433-52. April 30. [7 ref. Ger]

• ***Summary:*** Contents: Introduction. *Aspergillus tamarii*, new species. Morphological. Physiological. Affinity. Diagnosis. Incidence of mold parts isolated from soybean koji used to make tamari soy sauce. *Aspergillus glaucus*, varieties α, Beta, gamma. For each of the three varieties the same categories of information are given as for *Aspergillus tamarii*. A new white *Aspergillus* species. Comparison with *A. Okazaki*, *A. candidus*, and *A. albus*.

Kita named the species *Aspergillus tamarii*. Twenty-one photos and illustrations show: Spores of the mold magnified x 370. Sterigmata and spores. Conidio bearers and spores. Hyphae. *Aspergillus glaucus*. "The moist wind and warm climate of Japan enable the flora, and especially the microorganisms, to grow very luxuriantly." See next page.

(1-3) *Aspergillus tamarii* x 370. (5) Spores. Address: Aus dem Techn. Institut d. Kaiserl. Universitaet zu Tokio, Japan.

2047. Winkler, Gustav. 1913. Die Sojabohne: Vortrag gehalten in der Monatsversammlung des Gartenbau- und Verschoenerungsvereins Fechenheim [Mainkur] am 17. April 1913 [The soybean: Lecture presented at the monthly meeting of the Gardening and Beautification Society of Fechenheim [Mainkur] on 17 April 1913]. Frankfurt am Main, Germany: Published by the author. 14 p. [Ger] Address: Mainkur bei Frankfurt am Main, Kreis Hanau, Waldstrasse 55.

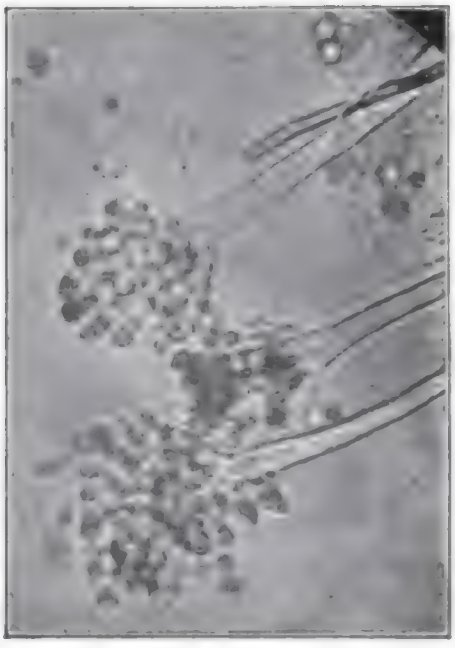
2048. Houyet, A. 1913. La fève de soya [The soybean]. *Bulletin de la Societe Belge d'Etudes Coloniales* 20(5):367-90. May. [Fre]

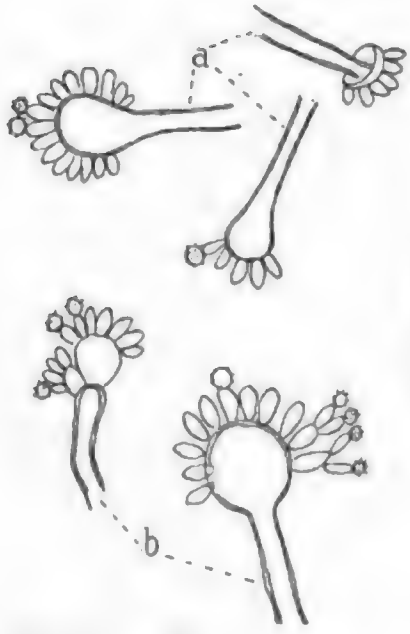
• ***Summary:*** "The notes which follow have as their object the study of a commercial plant of East Asia which produces soybeans; it is interesting from the local point of view as a food plant and more specifically from the world viewpoint as an industrial plant.

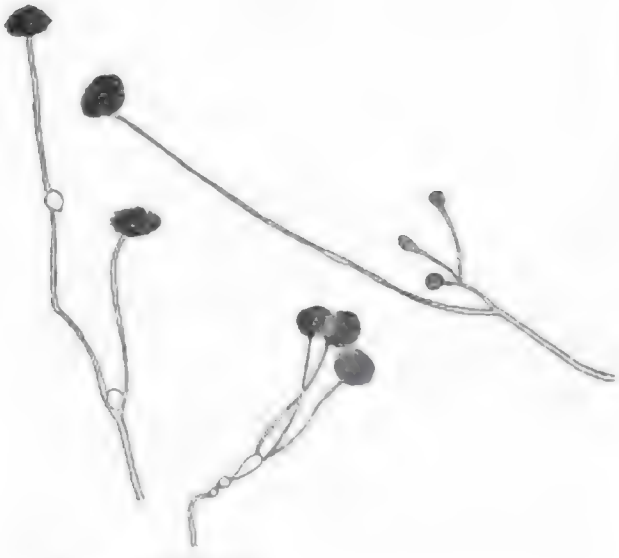
"It appears useful to us to precede them with a geographic survey of the place of production of the plant, as well as some data on the population living there. After having studied the plant itself and the conditions of its agriculture, we will examine its uses, its commerce, and the possibilities for its development."

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A. tamarii. Fig. 5. Keimung.

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This is largely a discussion of soybean production and trade in Manchuria. But pages 378-80 contain a brief discussion of the many ways of using soybeans including in soy sauce, margarine, soap, as meal for livestock feed, as flour for fortifying biscuits, as soymilk, and (in Germany) as artificial rubber. "A Chinese manufacturer [Li Yu-ying] has established a factory near Paris that makes food products from the soybean" (*produits alimentaires à base de fève de soya*).

Concerning margarine: "Refined [soybean] oil can be used for the manufacture of margarine and as a salad oil" (*L'huile raffinée peut être employée à la fabrication de la margarine et comme huile de salade*). Note: This is the earliest French-language document seen that uses the term *margarine* to refer to margarine.

2049. Holbrooks Limited. 1913. Holbrooks Worcestershire Sauce (Ad). *Toronto Daily Star* (*Canada*). June 9. p. 8.
• ***Summary:*** "It's made in the largest Worcestershire Sauce factory. Imported–Absolutely!! Business founded 1798." Address: Birmingham and Stourport, Worcestershire, England.

2050. Pontius, Alfred W. 1913. Manchurian soya bean trade and industry. *Daily Consular and Trade Reports* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*) 16(147):1560-61. June 25.
• ***Summary:*** "The export season of beans commences usually in October and ceases early in the May following. The present season closed rather early. A table shows exports of [soya] beans, bean cake, and bean oil in 1911-12, and 1912-13 to Japan, China, Europe, and total.

"New model bean mill–Its effect on other mills: The local bean mills, which formed a union to adjust their output to the demand in order to prevent prices from falling abnormally low, face a new danger in the chemical extraction process, whose merits will be tested thoroughly by the South Manchuria Railway, which will erect an experimental bean mill. This modern scientific process is used in the bean mill established, during the past year near Osaka, Japan, by Lever Bros., English soap manufacturers. The bean consumption of this factory is estimated to be 100 tons per day, while the new Dairen mill is designed upon a scale half as large. As previously noted the two chief advantages of this new process is that 12 to 14 per cent of oil may be extracted against only 8 to 9 per cent now obtainable. The residue suits better for fertilizing purposes and for feeding stock, as it is in meal form, thus avoiding the expense of grinding the cake.

"Local millowners have another worry. One cause of the recent depression in the South Manchurian bean-mill industry was the establishment of rival mills in Japan, which is said to be more advantageously situated."

"Soy [sauce] breweries in South Manchuria: While reliable statistics are lacking regarding the manufacture of soy from Manchurian beans, it is claimed locally that the total output in South Manchuria has been increasing steadily year after year while imports from Japan have deceased. Annual imports from Japan and outputs in South Manchuria are estimated as follows:"

A table shows that in 1910 imports of soy sauce were 2,264 tons and total output in South Manchuria was 875 tons. Total: 3,139 tons. In 1911 imports were 1,871 tons and local output was 1,125 tons. Total: 2,996 tons. In 1912 imports were 1,683 tons and local output was 1,625 tons. Total: 3,308 tons.

"The demand for soy [sauce] has increased as the Chinese have gradually learned to like it. Of the total consumption of soy of superior and medium quality each takes up about 20 per cent, the remaining 60 per cent being of inferior quality. The steady increase of the South Manchuria output in recent years signifies that the imported product will be entirely supplanted by the local manufactured article. Japanese have $65,000 invested in these local soy breweries, apportioned as follows: Dairen, $30,000; Port Arthur, $18,000; Newchwang, $10,000; and five smaller places $7,000. Present prices for the product are $1.40 to $1.80 per 50 pounds wholesale, and $1.60 to $2 per 50 pounds retail." Address: Consul, Dalny (Dairen), Japanese Leased Territory.

2051. *Chamber of Commerce Journal* (*London*). 1913. Trade products of the British Empire. Special Supplement. Vol. 32. July. p. 1-44.
• ***Summary:*** The Special Supplement to the London *Chamber of Commerce Journal*, deals with the "Trade Products of the Empire: A statistical account of the resources of the British Empire as a supplier of food stuffs and of raw materials for British industries, with statistics and notes as to foreign sources of supply. It is full of useful information and statistics on British agricultural imports. The section titled "Preserved ginger, soy, tamarinds, chutney" (p. 11) states: "The value of imports of soy in 1912 was £11,729, of which £10,645 was the value of the imports from Hong Kong."

The section on "Vegetable oils and oilseeds" (p. 23-27) begins: During the last few years there has been a remarkable rise in the prices of almost all oilseeds, oils and fats. This has been due partly to a large increase in the demand for oils and fats for soap-making lubricants, etc., and partly to extending the use and manufacture of butter substitutes, cooking fats, etc., into the composition of which vegetable oils largely enter."

The section titled "Vegetable oils and oilseeds (p. 23-27) includes import statistics for and discussions of: Castor oil and castor seed, coconut oil, cotton seed and cotton seed oil (in 1912 the UK imported 630,117 tons), ground nut oil and ground nuts, linseed oil and linseed, niger seed, olive oil, palm oil, poppy seed and oil, rapeseed and rape oil (colza oil), sesamum seed and oil, shea nuts and shea butter, soya

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beans, bassia fats, t'ung oil, tea seed oil, and senat seed.

The section titled "Soya beans" (p. 27) contains a table that shows the tonnage and value of soya bean imports to the United Kingdom in 1911 and 1912. The main source both years was Russia (perhaps via Vladivostok), followed by China [Manchuria], with small amounts from Japan and other countries. Total tonnage decreased from 222,157 in 1911 to 188,760 in 1912.

The section continues: "The soya bean of Manchuria has grown in "The soya bean of Manchuria has grown in commercial importance during the last few years in a remarkable manner. In the East it has long been an important article of food. In Europe the oil pressed from the bean is used by manufacturers of margarine, soap and candles, in the manufacture of varnish and printing ink, and for waterproofing umbrellas. Soya bean meal is also stated to be used in making bread on the Continent. Beancake has long been used as a fertilizer and for feeding stock.

"Experiments in growing soya beans have been made in practically every British colony, but it seems doubtful whether the product could be profitably grown for export in competition with the Manchurian beans, which are raised under ideal climactic conditions, and by the cheapest possible labour."

2052. Takahashi, Teizô; Yukawa, Matao. 1913. Shôyu kôji oyobi shôyu moromi-chû no gaseikin ni tsuite (2) [Studies on the budding fungi of shoyu koji and shoyu moromi (mash) (2)]. *Nogaku Kaiho (J. of the Scientific Agricultural Society, Japan)* No. 133, p. 1-25, Sept. 5. [Jap]
Address: 1. Nôgaku-Hakushi (Doctor of Agriculture), Japan; 2. Nôgaku-shi, Japan.

2053. Lust's (B.) Pure Food Store. 1913. The Dr. Lahmann food system (Ad). *Naturopath and Herald of Health (The) (New York City)* 18(9):Unnumbered page. Sept.
• ***Summary:*** Among the most popular items are: "Dr. Lamann's Japan-Soja–Per bottle $1.50. A piquant, agreeable and wholesome table sauce." Address: Butler, New Jersey, or New York City.

2054. Winkler, Gustav. 1913. Die Sojabohne: Vortrag gehalten in der Monatsversammlung des Gartenbau- und Verschoenerungsvereins Fechenheim-Mainkur am 17. April 1913. 2 Auflage [The soybean: Lecture presented at the monthly meeting of the Gardening and Beautification Society of Fechenheim-Mainkur on 17 April 1913. 2nd ed.]. Fechenheim bei Frankfurt am Main, Germany: Published by the author. 16 p. 22 cm. [Ger]*
Address: Mainkur bei Frankfurt am Main (Germany).

2055. Kita, Gen-itsu. 1913. Japanische Sojaindustrie [Japanese shoyu industries]. *Wochenschrift fuer Brauerei* 30(42):549-52. Oct. 18; 30(43):559-61. Oct. 25. (Chem. Abst. 8:984). Summarized in Zentralblatt fuer Bakteriologie, Series II, 41:257 (1914). [8 ref. Ger]
• ***Summary:*** An excellent and very detailed description of how shoyu is made in Japan, with many photos. Contents: Introduction. Overview of the process. The raw materials. Preparing the koji: Pre-preparation, mixing the beans with the wheat, the koji room (*muro*), handling the mass of koji, characteristics of koji. Part II: The fermentation process. Pressing. Scientific investigations of soy sauce brewing. Summary.

The author calls soy sauce *Soja* and *Sojasauce*. The two basic types of shoyu are made with soybeans and wheat, or just with soybeans. But some special sauce is also made with fish meat, such as Lintenfish. The addition of sugar and other sweeteners, and of colorings such as molasses to low-grade shoyu is not rare.

Preparation of soy sauce: The fermentation usually takes 6 to 12 months or more. Some years ago the "quick method" was widely introduced but after several years it unfortunately fell into ruin. The shoyu process has never been developed with modern processes like the sake processes, because sake must be a certain way when finished but shoyu is acceptable in many ways. The aroma from the roasted wheat adds a special component to Japanese shoyu, not found in Chinese soy sauce. The roasted wheat is coarsely ground (using a roller miller or, earlier, a granite mill), and the meal produced thereby serves to enrobe the steamed soybeans, while the larger particles hold the beans, thus aiding aeration. So the wheat must not be ground too fine. The beans are steamed, usually at a pressure less than 2 times atmospheric pressure; higher pressure creates a bad aroma. If the beans are cooked in an open kettle, a bamboo mat is placed in the bottom to prevent the beans from browning. The liquor left after cooking is called *amé*. The beans and wheat koji are then mixed. The beans, after being removed from the kettle, are spread out on the koji floor in front of the koji room (*koji-muro*) to a depth of about 3 cm. They are stirred from time to time until cooled to about 30-35°C. The spores (*keim*) of *Aspergillus oryzae*, when they are used, are then sprinkled on. The mixture is put into wooden koji trays (*kojibuta*) each about 60 by 30 by 10 cm deep (24 by 12 by 4 inches), and holding 18 liters of raw material. In some places (such as Shozushima) a wide straw mat (80 by 180 cm) is used in place of these koji trays. The koji room is typically 10 by 3.5 by 2.2 meters high. The walls are thick. A modern room is of tiles in order to prevent changes of temperature from the outside. For cleanliness, the walls should be made of cement, with a door at one end and a window at the other. The room contains many vents to remove moisture and carbon dioxide. Steam pipes are laid in the floor, or a fire-pot is used instead. As noted above, the koji mold spores are either mixed in, or they settle from the air in the koji room, or come from the koji trays. The koji trays are stacked in a zigzag fashion to allow ventilation, which is necessary for shoyu koji but not

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for sake koji. Dampness and lack of oxygen favor the growth of Mucor molds and undesirable bacteria. After 20 hours, the koji is mixed well in the trays, and the upper trays are placed on the bottom–and vice versa. Stir again after 7-10 hours: the temperature is now 38-40°C. After 10-15 hours conidia formation begins. The koji is usually ready in 3 days. Good koji has yellow-green conidia, very numerous on the inside. The surface is white and the mass dry. Contaminants: *Mucor, Rhizopus* and bacteria due to too much moisture, especially with heat. Black koji has a bad aroma from the disease *kurotoko*, which is caused mostly by excessive moisture. During fermentation about 20% of the original mass is lost; starches are changed to sugars, which are used up by the koji mold. The goal is to obtain koji which is rich in enzymes.

The brewing process: The ingredients are mixed in a vat to make the mash (moromi), which contains enzymes. The vats are made of sugi wood (*Cryptomeria japonica* Don.) with bamboo hoops. In the large shoyu factories they usually have a capacity of 4,000 to 4,500 liters (1,057–1189 gallons). The proportions of raw materials are as follows: Soybeans (2,700 liters = 1,875 kg), wheat (2,700 liters = 2,025 kg), salt (NaCl, 2,700 liters = 1,690 kg), and water (5,400 liters = 5,400 kg). The salt may be dissolved in hot or cold water, usually to 20° baume. Less salt gives better quality. The mash is mixed with a pole or with compressed air. The mash must usually ferment for a year before it can be pressed. A longer fermentation improves the color and aroma, but the flavor becomes weaker. Where a 2 or 3 year mash is used, it is mixed with 1-year mash to improve the quality. In order to shorten the fermentation time, the mash is sometimes warmed; this and other suggestions for improving the process will be discussed later. The mash contains microbes, especially yeasts and bacteria.

Pressing: The mash, after it finishes aging, is pressed in cotton bags that have been dipped in tannin from astringent persimmons (*kaki-shibu*). Each bag holds about 2 liters. More than 2 liters may causes the bag to tear in the *fune* (literally "boat"), which is about 230 by 73 by 91 cm and which holds about 800 such bags. Formerly a log was used in the form of a lever press, but now screws and hydraulic presses are widely used. The yield of shoyu is about 70-80% of the volume of the moromi. The remaining presscake still contains soluble constituents, which are extracted by mixing the presscake (*Der Presskuchen*) with water. The remaining cake is sold as fodder.

Treatment of the pressed liquid: This liquid is heated in an iron kettle in order to partially pasteurize it, separate the coagulable constituents, and darken the color. Better grades are heated at a lower temperature (never above 70-80°C), and poorer grades at a higher temperature, mainly to concentrate and darken the color. For good grades, darkening of the color is seen as a disadvantage, as is the resulting change of aroma. Kita then gives a detailed analysis of both shoyu and the second-pressed liquid. Shoyu contains 30-32% solids, has a specific weight of 1.189 to 1.234, and contains 16.15 to 18.61% minerals.

Scientific investigations and various proposals for the shoyu brewery: Kita experimented with the use of defatted soybean meal. He notes that koji contains a powerful proteolytic enzyme. Cooking under pressure and defatting promote decomposition. Pressure cooking is more and more widely used. Defatting of the beans proved to be disadvantageous since it lowered the quality of the final shoyu, but he thinks the problem lay in the improper treatment of the beans during defatting. He proved this hypothesis with coarse beans defatted with benzine (*Benzin*) to make flawless shoyu. Sake koji has stronger diastatic and weaker proteolytic enzymes than shoyu koji. The proteolytic and diastatic power of mold enzymes are inversely related. There are different varieties of *A. oryzae* with different morphologies. Photos (p. 550-51) show equipment used in making shoyu in a factory: (1) Presses for pressing the sauce from the aged moromi. (2) Brick roaster for the wheat, with a belt-driven mechanical stirrer. (3) Wooden fermentation vat. (4) Many wooden moromi fermentation vats, held together by braided bamboo hoops, with a wooden plank across the top of each. (5) A man in a white coat, with a moromi stirrer in one hand, standing among many tall fermentation vats. Address: Technical Inst., Tokyo Imperial University.

2056. W. 1913. Die Sojabohne und ihre Verwendung in der Naehrmittelbranche [The soybean and its use in food-service departments]. *Konserven-Zeitung* 14(48):377-78. Nov. 28. [4 ref. Ger]

• ***Summary:*** A brief account of the history, nutritive value, and utilization of the soy bean. One of the earliest food uses of soybeans in the West was in the use of Japanese soy sauce in Worcestershire sauce, in England. The soybean was also used secretively, unbeknownst to food chemists and experts, as a popular coffee substitute until it was exposed in 1912 in Weller-Darmstadt (see *Chemiker-Zeitung*). This substitute, made from roasted soybeans, was used to extend coffee at levels of up to 33%. It was shown that this soy-extended coffee was much richer in nutrients than real coffee.

In Paris, France, Bergey roasted soybeans and added molasses or grape sugar to make a coffee substitute, or he added vanilla, sugar, and cocoa-butter (the fat in butter) to make a chocolate substitute.

"As far as we know from the literature, the soybean has been used heretofore, with the exception of Worcestershire sauce and other sauces and soup seasonings, only as coffee or chocolate substitutes. However the real superiority of this plant lies in its high nutritional value and therefore it should be used directly as a food, as it is in the countries of its origin." Address: Germany.

2057. *San Francisco Chronicle*.1913. Harbor news. Nov. 29. p. 16.

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• ***Summary:*** The British steamer Nile, Captain George S. Lapraik, of the Pacific Mail Company's intermediate services, arrived in the port of San Francisco yesterday.

"Principal items in the Nile's manifest were 6,148 mats of rice, 1,802 bales of raw silk, 1,476 rolls of matting, 124 bales of jute, 3,000 tubs of shoyu, 200 bags of sugar, 361 chests of tea, 400 bales of hemp." And there were 239 bags of mail.

2058. Ito, Teiji. 1913. Sho-kôji seizô-chû kôso no kenkyû [Enzyme production during koji-making for shoyu]. *Yakugaku Zasshi (J. of the Pharmaceutical Society of Japan)* No. 382. p. 1237-47. Dec. 26. [Jap]
Address: Hiroshima, Japan.

2059. Heyne, K. 1913-1917. De nuttige planten van Nederlandsch-Indië, tevens synthetische catalogus der verzamelingen van het Museum voor Technische- en Handelsbotanie te Buitenzorg [The useful plants of the Netherlands Indies, 4 vols.]. Batavia [Jakarta]: Printed by Ruygrok & Co. Vol. 1, 250 + xxvii p. Vol. 2, 349 + xxxix p. Vol. 3, 402 + xlviii p. See vol. 2, p. 242-43, 316-22. See also 2nd ed. 1927 and 3rd ed. 1950. 24 cm. [12+ ref. Dut]
• ***Summary:*** Contains detailed information on soybeans in Indonesia, including various local names, soybean production in Indonesia by province from 1918-1925 (the top producers in 1925 were Madoera and Madioen; total production grew from 222,426 to 260,125), soybean culture, imports, exports, tempeh, tofu (tao hoe), tao koan, tao tjo (Indonesian miso), and soy sauce (ketjap). Also discusses ontjom and dagé made from peanuts.

Note 1. This is the earliest document seen (May 2010) that gives soybean production or area statistics for the Dutch East Indies (later Indonesia).

Note. This is the earliest document seen (April 2001) that contains the term *tao koan*. Address: Chef van het Museum voor economische botanie te Buitenzorg (Bogor).

2060. **Product Name:** [HVP made from hydrolyzed soybean meal. Used in Germany like Maggi seasoning cubes].
Foreign Name: Sojawurze.
Manufacturer's Name: Agumawerke, Thoerl & Co. (Thoerlschen Oelfabriken).
Manufacturer's Address: Harburg (near Hamburg), Germany.
Date of Introduction: 1913.
New Product–Documentation: Horvath, 1927. The Soybean as Human Food, p. 42-53. Extracts similar to beef extracts are use to season soups. "They are used extensively in Germany, e.g., the well-known 'Maggi' cubes, and were manufactured in large quantities in pre-War and War time from soybean flour at the Aguma factory under Ehrhorn's supervision. Ehrhorn claims that his new patent soybean flour is very suitable for the manufacture of such 'Suppenwurze.' He calls the new product 'Sojawurze.' In appearance and taste it is very similar to a fluid meat-bouillon extract, but may also be easily obtained in a dry state. The manufacturing process takes only 10 hours. The bean flour is hydrolized in a chemical way. A hundred kilo [100 kg] of Ehrhorn's flour gives 200 kilo of such 'Wurze,' specific gravity 1.25. According to Ehrhorn, the market price for such 'Suppenwurze' in Europe is very high in comparison with the cost of its production of soybean flour."

2061. Ishiwara, G. 1913. Shôyu sokujô-hô ni tsuite [Rapid brewing of shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 8(2):31-36. [Jap]
Address: Sanjo Kaiin, Hiroshima Zeimu Kantoku Kyoku Gishu.

2062. Kinoshita, Asakichi. 1913. Shôyu no aji ni tsuite [On the taste of shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 8(3):37-39. [Jap]

2063. Kinoshita, Asakichi. 1913. Shôyu jôzô ni kansuru daizu no kenkyû [Studies on soybeans used for shoyu brewing]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 8(8):45-50. [Jap]
Address: Jozo Shikensho Gishi.

2064. Matsuo, Rikitarô; Tanaka, Y. 1913. Ni, san no kinrui to shôyu [Several microorganisms and shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 8(3):62-69. [Jap]
Address: Kumamoto Zeimu Kantoku Kyoku.

2065. Nagaki, G. 1913. Shôyu no kômi [Flavor and taste of shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 8(8):63-66. [Jap]

2066. Nagaki, G. 1913. Shôyu no chômiryô ni tsuite [Seasoning ingredients that can be added to shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 8(9):71-78; 8(10):68-78. [Jap]

2067. **Product Name:** Shoyu.
Manufacturer's Name: Nakamori.
Manufacturer's Address: Haleiwa, P.O. Waialua, Oahu, Hawaii.
Date of Introduction: 1913.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii, 1913, p. 557. "Nakamori, soy, Waialua, P.O. Haleiwa" [Oahu, Hawaiian Islands]. Not listed in 1912.

Note: Is this Nakamori related to Nakamura in Waialua, P.O. Haleiwa, in the 1912 directory.

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2068. Nishimura, Torazô; Inoue, K. 1913. Shôyu jôzô keika-chû (ichi nenkan) ni okoru kagaku-teki henka no gaiyô [Summary of the chemical changes in moromi during fermentation of shoyu for 12 months]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 8(8):28-44. [Jap]

2069. Takahashi, Teizô. 1913. Sprosspilze von syoyu koji und syoyu moromi [Sprouting fungi or blastomyces in shoyu koji and shoyu moromi]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 8(11):18-. [Ger]*

2070. Togano, Meijiro. 1913. Saikin junyô shôyu sokujô-hô [Rapid brewing of shoyu using trained or domesticated microorganisms]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 8(2):28-31. [Jap]

2071. Asahi Shokai K.K. 1913. Asahi Co., Inc. (Ad). In: Nichibei Shinbun-sha. 1913. *Nichi-Bei Nenkan [Japanese-American Yearbook.* No. 9]. p. 31 (near end). [Eng; jap]
• ***Summary:*** Ad (¼ page). The top ¼ of this ad is given in English. This Japanese company imports many items, including miso and shoyu. Ad also in the 1914 Yearbook, p. 40 in last block of ads near end of book. Address: P.O. Box 1057, Oxnard, California. Phone: Home 116. Red 322.

2072. Clark, George Harold; Malte, M. Oscar. 1913. Fodder and pasture plants. Ottawa, Canada: Minister of Agriculture. 143 p. + 27 unpaginated color plates. See p. 134-35. Illust. Index. 26 cm.
• ***Summary:*** The section titled "Soy or soja bean (*Glycine hispida* Maxim.)" (p. 134-35) has the following contents: Botanical description. Geographical description. Agricultural value. Cultural conditions. Varieties. Fodder Seed growing. Quality of seed.

The soy bean variety Medium Green, which gives a high yield of both hay and seeds, is best suited to Canada. "The plant got its name from Soy, a product obtained by a long and complicated fermentation of a mixture of cooked Soy Beans, ground wheat and steamed rice or barley, to which later is added water and salt. Soy is the principal constituent of Worcester and other sharp sauces." Concerning fodder: "The hay is of high nutritional value if the crop is cut at the proper stage. This is when the pods begin to develop. If they are advanced, the hay will be woody and unpalatable and the leaves, which constitute the most nutritious part, will be shattered. From one and a half to two bushels of seed to the acre are required when intended for hay."

The Preface notes that the authors are greatly indebted to Leonard S. Klinck, B.S.A., Professor of Field Husbandry at Macdonald College, Quebec, who gave valuable comments, and to C.A. Zavitz, B.S.A., Professor of Field Husbandry at the Ontario Agricultural College at Guelph, who has given the authors much valuable information on fodder and pasture plants that are of interest in Ontario province.

George Clark was born in 1872. Malte Oscar Malte lived 1880-1933. Address: 1. B.S.A.; 2. Ph.D. Both: Canada.

2073. Cooper, Lenna Frances. 1913. The new cookery: A book of recipes, most of which are in use at the Battle Creek Sanitarium. Battle Creek, Michigan: The Good Health Publishing Co. [v] + 298 p. Illust. (10 photos). Index. 20 cm.
• ***Summary:*** This Seventh-day Adventist vegetarian cookbook, the first by Lenna F. Cooper, advocates a "low-protein" diet based on the research of Prof. R.H. Chittenden, dean of physiology, Yale University [New Haven, Connecticut]. It uses dairy products and eggs, but no meat, poultry, fish, shellfish or stimulants (such as coffee or tea).

The Foreword states: "Many 'food reformers' and faddists have attempted to prepare wholesome foods but have neglected the almost equally important requirement–palatability. This combination of wholesomely prepared and palatable foods constitutes in a sense a New Cookery... which has for its object, efficiency of body and mind." She thanks "Dr. and Mrs. J.H. Kellogg, who first inspired her with a love for the study of foods and their scientific preparation and who have since been constant sources of help and encouragement." She also thanks Miss Clara B. Lambert and Mrs. Estella F. Ritter.

Recipes call for the use of Minute Brew (p. 10), cereal coffee (p. 10), Kaffir tea (p. 11), Sanitas / Health Koko (p. 11), yogurt buttermilk (p. 11-13), bran (p. 18), Graham flour (p. 20), Good Health Breakfast Food (Brose, p. 20), gluten (p. 20), granola (p. 22), fermented breads (p. 23+), Graham bread (p. 26-28), unfermented breads (p. 33+), bran and Graham biscuit (p. 41), bran gems (p. 43-44), peanut butter sandwiches (p. 49), Protose (p. 49, 71, 77, 79), cream soups made with almonds, lentils, white beans, lima beans, or split peas (p. 63-66), Savora (p. 73-74, 78-79).

Chapter 10, titled "Meat substitutes and entrees," begins (p. 81): "In many homes, meat forms the chief part of the meals,..." but this book calls for a "meatless dietary," which requires a "knowledge of the chemistry of foods." Recipes (p. 81-103): Roast Protose [canned] with dressing. Boiled Protose. Protose fillet. Nut fillet (with Protose and Nuttolene). Fillet of nut meat. Panned Protose. Nut or Protose cutlets. Braised Protose. Nut and apple pie. Normandy or mock veal loaf. Chipped Protose in cream. Nut and rice croquettes. Protose hash with rice and peas. Nut sausage (p. 87; with ¼ lb Protose, seasoned with "2 tablespoons Japanese soy or 4 teaspoons Savora"). Nut and vegetable stew (with Protose). Protose steak with onions. Broiled Nuttolene. Nuttolene with mint sauce. Nuttolene cutlets. Nuttolene a la cream. Baked Nuttolene. Nuttolene fricassee. Nuttolene croquettes. Nut meat pie (with Protose). Pressed vegetable meat (with Protose). Rice a la Carolina (with Protose). Nut meat loaf (with Protose and Nuttolene). Vegetarian ham (with Nuttolene and Savora). Nut patties. Nut chops (with peanut butter). Pine nut roast. Peanut

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roast (with peanut butter). Walnut roast. Cereal roast (with granola). Chestnut roast. Creamed chestnuts. Chestnuts with tomato sauce. Baked beans (with white beans). Baked lima beans. Lima bean loaf. Bean croquettes. Bean souffle. Savory roast or mock turkey (with lentils and granola). Peas patties. Baked lentils. Lentil and potato loaf. Hominy croquettes. Corn roast. Apple fritters. Prune fritters. Banana fritters. Rice patties.

Chapter titles: 12 Eggs. 15. Salads and relishes (incl. Neufchatel or yogurt cheese, p. 168, 176. Salad dressings, p. 172+). 17. Fruits and fruit desserts (incl. Baked apples with Meltose dressing, p. 186. Vegetable gelatine desserts, p. 195+). 19. Frozen desserts (incl. Yogurt buttermilk ice cream, p. 215). 20. Pastry and pies (most desserts call for lots of white or granulated sugar). 21. Cakes. 22. Cake fillings and icings. 23. Hot puddings. 24. Sauces for puddings. 25. Canning and preserving. 26. Invalid dishes. 27. Balanced menus (breakfast, dinner, supper). Lenna F. Cooper was born in 1884.

After the Index (p. 288-98) are advertisements: Perfection Biscuit Co. The Welch Grape Juice Co. Horlick's Malted Milk Co. Winorr Canning Co. (Winorr Kerneled Corn). Acme Preserve Co. (White A Condensed Tomatoes). Garis-Cochrane Household Dish-Washing Machine (motorized). Sprague, Warner & Co. (Richlieu Food Products). A.-B. Stove Co. (gas range). Wagner Manufacturing Co. (cast aluminum ware). The Kellogg Food Co. ("Protose: A vegetable meat." Minute Brew. Colax {relief from constipation}). McGraw Mfg. Co. (Servette [Lazy Susan]). Battle Creek Sanitarium School of Home Economics. National Onion Salt Co. American Thermos Bottle Co. Seely Fasco Fireless Cooker. Address: Director of the Battle Creek Sanitarium School of Home Economics, Head Dietitian of the Battle Creek Sanitarium.

2074. Friedenwald, Julius; Ruhräh, John. 1913. Diet in health and disease. 4th ed. Thoroughly revised and enlarged. Philadelphia, Pennsylvania: W.B. Saunders Co. 857 p. Illust. 24 cm. [4 soy ref]

• ***Summary:*** The section titled "The soy bean" (p. 124-26) states: "This bean (glycine hispida), sometimes called the soja bean, is an annual leguminous plant extensively used as a food in China and Japan. Until recently it has been regarded as a botanical curiosity in the Occident. It has recently been extensively used in America as a forage crop and to improve the soil if plowed under... There are a large number of different varieties, which vary in size, shape, color, and length of time they take to mature. Some are grown exclusively for the oil they contain, and it is used for culinary, illuminating, and lubricating purposes. The light-colored beans are eaten in soups, and the pods are sometimes picked green, boiled, and served cold with a sprinkling of soy sauce. The green varieties are often pickled in brine and eaten moist or dried with meals as appetizers; the same varieties are often sprouted, scalded, and served with meals in winter as a green vegetable. The bean forms the basis of the so-called soy sauces, used as a condiment all over the world. The Oriental races most frequently eat the bean, in more or less cheesy-like foods, which are prepared from it. The most common of these are natto, tofu, miso, yuba, and shoyu. Natto is a sort of bean cheese made by boiling the beans until they become soft and then placing the resulting mass in a warm cellar where it ferments. Tofu is made by soaking the beans in water, crushing between millstones, and boiling in about three times their bulk of water. The protein is precipitated and the resulting cheese eaten. The white milky liquid of the above has nearly the composition of cows' milk, and tastes something like malt. It may be used in infant feeding to advantage (see same).

"Americans may eat the beans in numerous ways described under the head of soy bean cookery in the recipes at the end of this book. The bean is of particular value in diabetic diets (see same). It may be used to increase the protein of the diet.

There are variations in the composition of the different varieties." A table shows the chemical composition of yellow soy beans grown in the USA, both as is and calculated on a water-free basis. "The Cereo Company of Tappan, New York, have made a soy bean flour which is useful." Its composition is given. "The percentage of protein in this flour is almost one-third greater than the percentage of protein in the whole beans. This is caused by removing the coarse fibrous hulls which contain little protein.

"Vegetable food of such composition certainly is remarkable when compared with round beef, medium"– whose composition is given.

Soy flour can be used as a gruel, in broths, and in making biscuits. A table (p. 126) shows the "Composition of fresh and dried legumes (incl. soy beans, cow peas, chick-peas, peanuts) with that of other foods" (Based on Abel, Farmers' Bulletin No. 121 [1900, p. 17]).

The section on "vegetarianism" (p. 130-31) is the same as that in the 1909 edition (p. 113-14).

In the chapter on "Infant feeding," the section on "Other food for infants" has a subsection on "The soy bean" (p. 297-98) which begins: "In certain conditions the soy bean... is of great value. In cases when milk is badly borne, in certain forms of intestinal disorders, in diarrhea, and especially in the convalescence after diarrhea, in certain cases of marasmus and in malnutrition, the soy bean flour, properly used, is of great value. Each ounce contains 13 grams protein and 120 calories." A table shows the composition when mixed with various amounts of water. Recipes for making gruels are given.

In the chapter on "Diet in disease," in the section titled "Diseases in which diet is a primary factor," is a subsection on "The soy bean" (p. 592) states: "The bean contains about 8 per cent. of sugar and no starch, and furnishes a large

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amount of available protein and fat." "A patient on a strict diabetic diet, who is excreting a certain amount of sugar, will excrete less sugar when the soy bean is added to the diet. It seems to be of particular value in severe cases. In addition to this action, it is a very valuable food, both on account of its nutritious properties and owing to the fact that it may be prepared in a number of different ways, and so serves to vary the diet."

In the section on "Diabetic Foods" (p. 601-02) is based on Winton (1906) and contains the same information, including that about The Health Food Company of New York.

In the chapter on "Recipes" is a section on "Bread" (p. 740-41) which includes whole-wheat bread, zwieback, and bran muffins for constipation. The same chapter has a section on "Soy bean cookery" (p. 766-69) with the following recipes: Introduction, gruels, broths, muffins, nut-cakes, soy bean cakes, breakfast food (like oatmeal), pancakes, soy bean cheese ("In Seattle, Washington, and other places in the West we are informed that tofu is made by the Japanese and sold to the Oriental residents"). Goff (1911) offers the following: Grilled soy bean [dry roasted soynuts], [whole] soy beans with butter, soy beans au gras (fried with onions and fat), bread or cakes of soy beans.

Note: Julius Friedenwald lived 1866-1941. John Ruräh lived 1872-1925. Address: 1. Prof. of Gastro-Enterology; 2. Prof. of Diseases of Children. Both: College of Physicians and Surgeons, Baltimore, Maryland.

2075. Griffis, William Elliot. 1913. The Mikado's empire. 2 vols. New York, NY: Harper & Brothers, Publishers. 754 p. Illust. Index. Map. 23 cm.
• ***Summary:*** The material in this book up to page 578 is identical (page for page) to that in the 1876 edition. Thereafter begins "Book III: Supplementary chapters, including history to the beginning of 1912"–about 129 pages of new information in the following chapters:

1. Japan in 1883. 2. Japan in 1886. 3. Japan in 1890. 4. Japan in 1894. 5. War with China (Sino-Japanese War, 1894-1895). 6. Facing the twentieth century. 7. Japan a world power (including a detailed description of the Russo-Japanese War, 1904-1905). 8. Japan on the Asian continent. A separate index covers this supplementary material; soy is not mentioned.

The author reveals his basic viewpoint on the last page of this book (p. 734) by expressing his fervent hope that all of Japan's traditional religions will be "transformed by the spirit of Christ." Address: D.D., L.H.D., Late of the Imperial Univ. of Tokio; presently in New York.

2076. Iwakami & Co. 1913. Importers and wholesale dealers in Japanese merchandise (Ad). In: Nichibei Shinbun-sha. 1913. *Nichi-Bei Nenkan [Japanese-American Yearbook*. No. 9]. p. 1. [Eng; jap]
• ***Summary:*** Ad (full page). The top and bottom 1/5 of this ad are given in English. This company imports shoyu and miso from Japan. Address: 427-435 Commercial Street, San Francisco, California. Phone: Kearny 2447. Home C 2447.

2077. Japan year book. 1913. Tokyo, Japan: Y. Takenoh and G. Takeda (The Japan Year Book Office). 702 p. See p. 163-64, 230, 351, 356, 358, 438, 654, 659, 672, 690. [Eng]*
• ***Summary:*** In chapter 11, "Agriculture" (p. 155-77) is a table titled "Beans, sweet potato and potato (p. 163) which gives "Soy bean" production in Japan for 1906-1910 (in *koku*).

On page 164 we read: "The three daily articles of diet for all classes, viz. soy [sauce], *miso*, and *tofu* are manufactured from this bean..."

In chapter 15, "Industry," is a paragraph (p. 230) on the patented Suzuki process for brewing soy [sauce].

In Chapter 25, "Home trade" is a table (p. 351) titled "Prices of principal commodities in Japan," which includes prices for 1905-1911 in yen for soy beans (per *koku*), soy [sauce] (per *koku*), and miso (per *kwan*).

In Chapter 26, "Foreign trade" is a table (p. 356-58) titled "Imports" (in 1,000 yen). Under the heading "Staples articles of over yen 1,000,000" (p. 356) is given the value of soja bean imports for 1908-1912. Under the heading "Trade with China (p. 359) is given the value of imports of "beans" and of "oil-cakes" for 1906-1911.

In chapter 30, "Finance," is a paragraph (p. 438) titled "Tax on Japanese soy" [sauce].

In chapter 34, "Chosen (Korea)," a table (p. 654) on "Exports (in 1,000 yen), under the heading "Foreign trade" has data on beans and peas for 1906-1912. Under the heading "Agriculture" is a paragraph (p. 659) titled "Barley and soya bean," giving acreage and yield for soya bean (no year is specified) with the value (in yen) of exports to Japan in 1909.

In Chapter 35, "Taiwan (Formosa)," under the heading "Agriculture," a table (p. 672) titled "Agricultural products" has production data on "Beans and peas" (in 1,000 *koku*) for 1905-1909.

In Chapter 37, "South Manchuria," is a paragraph (p. 690) titled "The soya bean" which has information on South Manchuria's soya bean yield, [soya] bean-cake output, and amount exported. Address: Japan.

2078. Jumelle, Henri L. 1913. Les cultures coloniales: Légumes et fruits. Deuxième édition [Crops of the colonies: Vegetables and fruits. 2nd ed]. Paris: Librairie J.-B. Baillière et Fils. 122 p. See p. 47-51. Illust. No index. 18 cm. [Fre]
• ***Summary:*** This is the 2nd volume of an 8-volume work. In Chapter V, "Vegetables," the section titled *Glycine hispida* Max. discusses soybeans and soyfoods.

Henri Jumelle lived 1866-1935. Address: Prof., Faculte des Sciences de Marseille [Marseilles], France.

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2079. Kin, Choshi. 1913. Shôyu enkaku-shi. ed. 3 [History of shoyu production. ed. 3]. Choshi, Japan. 186 p. First edition was 1909. 28 cm. [Jap]

• ***Summary:*** Contents: 1. Overview (p. 1): Shoyu as a special East Asian product, shoyu as superlative seasoning, relationship between shoyu and sauce, shoyu as an influence in life. 2. Origins of Japanese shoyu (p. 7): About Chinese jiang, Japanese shoyu in history, origin of the shoyu industry in Japan, trends and growth of shoyu production (output), the shoyu industry and taxation, household makers of shoyu and changes in home usage, the Japanese government's attitude toward shoyu, overseas demand for shoyu, the development of shoyu in the Kantô (Tokyo/eastern Japan) region.

3. Choshi shoyu (p. 117): Shoyu in the Kantô region, the shoyu makers guild in Choshi, the development of the shoyu-makers' union (or cartel) in Choshi and Noda, names and identification of the best quality shoyu brands, current varieties of shoyu, Choshi shoyu and raw materials (ingredients), Choshi shoyu and the local topography, Choshi shoyu and transportation, Choshi shoyu and micro-climate, Choshi shoyu's trademarks and brands. 4. Higeta shoyu (p. 151): The origins of Higeta shoyu, how to judge good-quality shoyu, the raw materials for Higeta shoyu, a chemical analysis of Higeta shoyu, the handling of Higeta shoyu, shelf life (period of freshness) of Higeta shoyu, awards received by Higeta shoyu. 5. Conclusions (p. 174). A table (p. 35-36) shows national production statistics for shoyu for the years 1885-1910, including the amount and number of makers. Appendixes: 1. The reputation and names of Japanese shoyu in Europe (in English, French, and German) according to various early documents (p. 175). Historical documents in Asian languages about raw materials (soybeans and wheat) used for shoyu (p. 182).

Notes and observations by Mark Fruin: Kin Choshi was the pen name of Genba Tanaka XIII, the head of an important shoyu brewing family in Choshi during the Tokugawa and Meiji periods. Forty percent of the book is early shoyu history and 60% is the history of Choshi Shoyu–Higeta.

Yuasa shoyu appears to be the first true shoyu in Japan; it gradually separated from miso production. Yuasa shoyu was sold throughout Japan by Osaka merchants and it benefited as well from the political protection of the Daimyo of Wakayama. The Osaka shoyu trade developed gradually and it was not important until the 17th century. Yet shoyu developed somewhat independently in Western Japan (Yuasa) and Eastern (Noda and Choshi).

The earliest record of an Osaka merchant (one Komatsuya Ibei) handling Yuasa shoyu dates from 1535; some 50 years later some Osaka merchants had certain ships earmarked for the exclusive task of carrying Yuasa shoyu to and from market, which by this time had spread from Osaka to the Inland Sea trade area.

In 1908 shoyu was the fifth most important export from Wakayama prefecture [to other parts of Japan]: there were 59 makers in a locally organized cartel producing 52,700 koku with a value of 850,000 yen.

Tatsuno shoyu began its history some 319 years ago (from the year 1913) when in 1594 a local farmer in the Tatsuno area, Yokoyama Gorobei, began to make sake as a sideline to his farming. Later he added shoyu to his household industries. In 1596 Yokoyama turned over his sake making activities to a branch household established for that purpose and concentrated his own efforts on farming and shoyu manufacture. By the late Tokugawa Period (1600-1868) the Yokoyama family sold its shoyu business to the Kataoka family and the latter merged with the Nakahara family in 1893 to form Kikuichi Shoyu.

Shodoshima shoyu began being made in the middle of the Tokugawa period. In 1882 production stood at 34,000 koku and in 1908 at 98,832 koku. In 1901 many of the various shoyu makers in numerous villages on the island amalgamated into a cartel and in 1908, the first corporation for making shoyu in Japan was formed. Later, three other forms merged to establish Marukin Shoyu. p. 35-36 gives Japanese national statistics for total shoyu production and the number of manufacturers each year from 1885 to 1910. In 1,176,535 units? were produced by 10,971 companies. In 1910 some 2,205,574 units were produced by 14,364 companies.

2080. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1913. Nichi-Bei nenkan [Japanese-American yearbook. No. 9]. 650 Ellis St., San Francisco, California. 716 p. Reprinted in 2001-02 in Tokyo by Nihon Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 5-kai [Collected Documents on Japanese Emigration. No. 5]. [Jap; eng]

• ***Summary:*** This book is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. The English-language title page reads: *The Japanese American Year Book.*

The book is divided into 13 parts, each numbered separately. Contents: (1) Front matter (incl. how this book was created) (5 p.). (2) Table of contents, general (4 p.). (3) Table of contents, ads (4 p.). (4) Photos (black and white on 12 unnumbered pages). (5) Graphs and charts on 4 unnumbered pages: Three pie charts for 1912: (A) In which U.S. states do Japanese live. (B) Occupations of Japanese in USA. (C) Japanese in USA by gender. Two pie charts (D-E). Increase and decrease of Japanese population by gender. (F) Bar chart: Agricultural land use by Japanese by state. (G) Agricultural crops grown by Japanese. (6) Photo of the site to be of the Panama-Pacific International Exposition (1915) in San Francisco. (7) Two maps: Map of the United States. Map of California (2 p.). (8) Advertisements (A-1 to A-18). (9) Front part (p. 1-152), including general information about America, Japanese in America, U.S. and agricultural census data, etc. (10) Ads (p. 1-16). (11) Back part (p. 1-142). (12) Ads (B-1 to B-64). Appendixes: (13) Table of contents for

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directory of places where Japanese live in America, by state, and within each state by city: In Japanese (2 p.). In English (2 p.). (14) Directory of Japanese living in America, interspersed with ads (p. 1-228). (15) Ads (p. 1-50). (16) Copyright page.

In a table (p. 57), one vertical line gives soybean production statistics in Japan from 1905-1909 (five year average): Area: 464,021 *cho* (*1 cho* = 2.45 acres; so 1,136,851 acres). Production: 3,766,962 *koku* (*1 koku* = 180 liters = 47.6 gallons = 308 lb = 5.13 bushels; so 1,932,452 bushels). Average yield 0.87 *koku/tan or tanpo*. Note: Something seems to be wrong with these soybean statistics. The yield of Japanese soybeans seems too low; only about 1-2 bushels per acre.

A table (p. 92) shows Japanese population in the top 8 U.S. states in 1912. There are 7 columns: Male adults, female adults, male children born in USA, male children born in Japan, female children born in USA, female children born in Japan, and total. The totals are: California: 58,555. Washington: 16,037. Colorado 3,556. Oregon 3,518. New York 2,002. Idaho 1,392. Utah 1,390. Montana 972.

Individual lines in various tables (p. 115-150) show tofu, miso and shoyu makers in the United States by state, and within California by city. There are 7 columns: Location, total no. of shops, no. of owners, investment ($), sales ($/year), workers, salary ($/year). The number of tofu makers by state is: California 28, Utah (Ogden) 1, Idaho 2, Colorado (Denver) 2, Oregon 1, Washington 9. There are also 2 miso makers in Los Angeles and 1 shoyu maker in Oregon. Columns 1-2 are filled out for all entries, columns 3-4 for all California entries, and columns 5-6 for about half the California entries.

A table (p. 26-27) shows import tariffs on goods from Japan. These include: Soybeans $0.45/bushel, Shoyu, miso, deep fried tofu pouches (*aburage*), dried frozen tofu (*Koyadofu*) and yuba 40% of their value, but a request is being made to change the shoyu, the two tofu products and the yuba to 20%.

The Directory shows Japanese companies making soyfoods in California, Utah, Idaho, Colorado, New York, Washington state, and Oregon. Address: San Francisco, California.

2081. Paerels, J.J. 1913. Tweede Gewassen [Second crops]. *Oost-Indische Cultures* (*Dr. K.W. van Gorkom's*) 3:276-88. [11 ref. Dut]

• ***Summary:*** See Prinsen Geerligs (1913, vol. 3, p. 276-88). Address: Indonesia or Netherlands.

2082. Prinsen Geerligs, H.C. ed. 1913. Dr. K.W. van Gorkom's Oost-Indische Cultures, opnieuw uitgegeven onder redactie van H.C. Prinsen Geerligs. Compleet in drie deelen [Dr. K.W. van Gorkom's East-Indian crops. New edition. 3 vols.]. Amsterdam, Netherlands: J.H. de Bussy. See vol. 3, p. 276-88. Illust. Index. 27 cm. [7 ref. Dut]

• ***Summary:*** In vol. 3 is a section on "Second crops (*Tweede Gewassen*)" (p. 243-91). Chapter 4 (*Hoofdstuk IV*) of that section is titled "Soybeans (*Soja*)" (p. 276-88). Contents: Origin and native land. The soybean plant: Botanical description (flowers, seeds, fertilization, germination), types and varieties, geographical distribution. Cultivation of soybeans: General instructions for growing, planting, manuring, diseases and pests. Production, trade, and use of soybeans: Tofu (*Tao-Hoe*), Chinese soy sauce (*Tao-Yoe*), soybean paste (*Tao-Tjiong*), Tempeh, composition and value as a food (*samenstelling en voedingswaarde*).

Note: This is the earliest document seen (Feb. 2009) that contains the term Tao-Tjiong, a term, and perhaps a product, that appears to be between *doujiang* (Chinese-style miso) and *tao-tjo* (Indonesian-style miso).

Photos show: (1) A soybean plant that bears black-seeded varieties (p. 277). A soybean plant that bears white-seeded varieties (p. 278).

Also discusses (in vol. 2): Peanuts (p. 227-41). Sesame seeds (p. 247-51).

Reprinted in Van Gorkom 1918, p. 839-51. Karel Wessel van Gorkom lived 1835-1919. Address: Amsterdam, Netherlands.

2083. Singleton, Esther; Sturgis, Russell. 1913. The furniture of our forefathers, with critical descriptions of plates... complete in one volume. Garden City, New York: Doubleday, Page & Company. xii + 664 p. See p. 299. Illust. Index.

• ***Summary:*** Part IV, "Dutch and English periods: New York from 1615 to 1776" notes (p. 299) that in 1762, cut glass and silver ornamental cruet stands cost from 10 shillings to £1 5 each. In 1772, "ebony cruet stands, jelly glasses, soy cruets, carroffs [carafes], wine and water glasses and bottle stands" are for sale by John J. Roosevelt in Maiden Lane.

2084. Sornay, Pierre de. 1913. Les plantes tropicales alimentaires et industrielles de la famille des légumineuses [Edible and industrial tropical plants of the legume family]. Paris: Augustin Challamel. xii + 489 p. Illust. Index. 26 cm. [77* ref. Fre]

• ***Summary:*** This book is dedicated to "Mr. P. Boname, my excellent master and friend." Boname, who wrote the Preface and is now director of the agronomic station on Maurice, was the soybean pioneer in Maurice.

The section on the soybean (*Le Soja*, p. 195-205, 272, 276, 469, 471, 473, 475) is largely summarized from earlier writers, including Aiton, Bonâme, Bloch, Church, Grandeau, Joulie, Kaempfer, König, Korentschewski and Zimmermann, Lechartier, Li and Grandvoinnet, Paillieux, Paillieux and Bois, Pellet, Trimble, and Watt. Most of the section is about soybean production, but there are also subsections on soymilk, tofu (*Fromage de soja*), and shoyu (p. 204-05), plus

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soy coffee, soy bread and biscuits for diabetics, and trade in soybeans and soybean products (p. 205).

Also discusses: Alfalfa or Lucerne (*Medicago sativa*, p. 309, 453-54, 471, 474). Bambarra groundnuts (*Voandzeia subterranea, pistache voandzou*, 72-75, 277-78, 469, 473, 476). Kudzu (*Pueraria Thunbergiana*, p. 429-30). Lupins (*Lupinus albus*, p. 264, 309, 453-54, 468). Peanuts (*Arachis hypogæa, arachide* p. 47-72, 270, 273, 453-54, 467, 471, 472, 474-76). Winged bean (*Psophocarpus tetragonolobus, pois carré*, p. 183-94, 273, 276, 468, 471, 473-76). Address: Asst. Director, Agronomic Station, Mauritius (Station agronomique de l'Ile Maurice).

2085. Tanaka Shoten. 1913. K. Tanaka Co. (Ad). In: Nichibei Shinbun-sha. 1913. *Nichi-Bei Nenkan* [*Japanese-American Yearbook*. No. 9]. p. 43 (near end). [Eng; jap]



• ***Summary:*** Ad (¼ page). The top ¼ of this ad is given in English. This Japanese company imports many items, including sake, white rice, miso and shoyu. Address: 1531 Geary St., San Francisco, California. Phone: Filmore 2179. S 2947.

2086. Togano, Meijiro. 1913. Saishin shôyu jôzô-ron [Principles of modern shoyu brewing]. Tokyo: Nippon Takujo Co. Ltd. 1040 p. Two supplements to the first edition were published. The 7th edition, published in 1919 was 1088 pages long; the 8th edition, 1921, was 1181 pages. Illust. 23 cm. [Jap; eng+]

• ***Summary:*** Contents: 1. Outline (p. 1): Preface, microbiology outline, outline for how to treat and examine microorganisms, general theory of shoyu fermentation. 2. Raw material outline (p. 85): Raw materials for shoyu, soybeans, wheat, salt, water, storing raw materials, coal. 3. Preparation of raw materials (p. 175): Making salt water, preparing raw soybeans, preparing wheat, mixing cracked wheat and cooked soybeans, koji starter (*tane koji*).

4. Making koji (p. 293): The purpose and need for making koji, how to make koji, the koji room (*koji mura*), improving the koji room, koji for shoyu. 5. Shoyu moromi or mash (p. 383): The fermentation room (*shikomi-gura*) and fermentation vats (*shikomi oke*), fermentation, shoyu moromi, chemical and physical changes in shoyu moromi, microorganisms in moromi, ripening (*jukusei*) of moromi, warm temperature-controlled fermentation (*on-jôzo*), quick fermentation (*sokujôzo*). 6. Shoyu (p. 489): Pressing the liquid sauce from moromi, heating the shoyu (*shoyu no hiire*), clarification (*seichô*), history of one generation of shoyu, components of shoyu, the flavor and fragrance of shoyu, relationship between the quality of shoyu and its components, methods of testing the quality of shoyu, the value of shoyu as a raw material for sauces, (*bansui*) and (*bankasu*), mold on shoyu, containers for shoyu.

7. The theory of marketing shoyu (p. 639): History of marketing / selling shoyu, selling shoyu, outlook for selling shoyu, precautions in selling shoyu. 8. Constructing and running a shoyu factory (p. 653): Building the plant, equipment and labor, the economics of building and running the factory. 9. The method of testing the microorganisms (p. 693): The need for testing microorganisms, the method of testing the microorganisms found in water, method of testing the microorganisms found in the air, method of testing the microorganisms found in koji starter and koji, method of testing the microorganisms found in moromi.

10. The method of analysis (p. 725): The need for analysis, general method of analysis, method of analyzing raw materials, method of analyzing koji, method of analyzing moromi, method of analyzing shoyu, method of analyzing shoyu presscake (*shoyu kasu*), method of detecting saccharin, qualitative analysis of formalin, method of qualitative analysis and measurement of salicylic acid (*sarichiru-san, saruchiru-san*), method of analyzing coal. 11. Conclusion (p. 809): Brewing and exporting, improvement of quality, quick fermentation of shoyu, application of machinery, the necessity of having a shoyu fermentation laboratory. Appendix (p. 825): The Togano method and equipment for moromi stirring. 12. Fifteen charts and tables concerning shoyu fermentation (mostly scientific information on physical and chemical properties). A portrait photo (located just after the title page) shows Meijiro Togano, formally dressed.

Note: This book was also published in 1914 by Otani Shoten in Tokyo. The same publisher republished the book in Jan. 1999 as a three-volume set. In the USA, this 1999

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reprint is owned by the East Asian Library at Yale University in Connecticut.

2087. Williams, Martha McCulloch. 1913. Dishes & beverages of the Old South. New York, NY: McBride Nast & Company. 318 p. Illust. Index. 19 cm.

• ***Summary:*** This cookbook, a nostalgic look (after the Civil War) at the "good old days," contains a recipe titled "Tomato soy" (p. 193), however no soy is used as an ingredient and soy is not even mentioned in the body of the recipe. "Take one gallon solid, ripe tomatoes, peeled and sliced, or four canfuls put up in glass, put in a preserving kettle with a quart of sliced onions, two tablespoonfuls of salt, as much moist sugar, teaspoonful black pepper, saltspoon paprika, four hearts of celery cut fine, a tablespoonful of pounded cloves, alspice [allspice], mace, grated nutmeg, and cinnamon mixed. Stir well together and cook slowly, taking care not to burn, until reduced one half. Dry mustard or mustard seed can be added, but many palates do not relish them. After boiling down add a quart of very sharp vinegar, stir well through, skim if froth rises, bottle hot, and seal. This keeps a long time in a dark cool place."

Also contains 3 recipes in which Worcestershire sauce is used as an ingredient–surprising for a book of recipes from the "Old South": Hams and other hams (p. 59-62, see p. 62). Leg of mutton in blanket (add "a spoonful of tart jelly, along with tabasco or Worcestershire sauce... Tomato or walnut catsup may be used for flavoring," p. 164-65). Egg fours ("tabasco, Cayenne vinegar, walnut catsup, or Worcester can be added," p. 182-83).

The author, christened Susan Martha Ann Collins, was the fourth daughter of Fannie Williams and William Collins. She was born and grew up near Clarksville, in Montgomery County, northwest Tennessee. She grew up in a privileged world of leisure and abundance, but after the Civil War the family fell into genteel poverty. After her parents' death, she and a distant cousin, Thomas McCulloch Williams, left together for New York city where she created a new name (Martha McCulloch-Williams) and a new career for herself. It is unclear whether she and Thomas ever married (MSU biography). Address: [New York City].

2088. Wilson, Ernest H. 1913. A naturalist in Western China, with vasculum, camera, and gun: Being some account of eleven years of travel, exploration, and observation in the more remote parts of the flowery kingdom. 2 vols. London: Methuen & Co. Ltd. See vol. 2, p. 49, 54-56, 61, 87-88. Introduction by Charles Sprague Sargent, LL.D. Illust. Index. 23 cm.

• ***Summary:*** In volume 2, chapter VI (p. 48-63) is titled "Agriculture: The principal food-stuff crops." "The Chinese nation is to a very large extent vegetarian, flesh being eaten only in small quantities except on festival occasions... The Chinese fry most of their vegetables, and for this purpose a vegetable oil is nearly always used. The oils expressed from members of the Cabbage (*Brassica*) family [such as rapeseed], the Soy Bean (*Glycine hispida*), and Sesamé (*Sesamum indicum* [sesame]) being most in request" (p. 49). The seeds of ground-nut (*Arachis hypogæa*, called "Lao-hua-tsen), opium poppy, sunflower, and cotton seed are also used as oilseeds (p. 61).

Beans are discussed on pages 55-56. "Since the Chinese are to such a large extent a vegetarian people, the various members of the pea and bean family are necessarily most important crops... The soy bean is everywhere a summer crop." The country's most important legume, it is "planted everywhere–in fields by itself, around rice and other fields, and as an undercrop to maize and sorghum. It yields seeds in three colours, namely yellow, green, and black. The Chinese distinguish three kinds of the yellow and two kinds each of the green and black. These varieties yield a succession of beans, the black being fully a month later than the others. The 'Huang-tou' [yellow soybean] is cooked and eaten as a vegetable, or ground into flour and made into vermicelli; preserved in salt it makes an excellent pickle. It is also extensively used in the manufacture of soy sauce and soy vinegar. A variety with small yellow seeds is largely employed in making bean-curd [tofu]. While in Central and Western China the soy bean is cultivated exclusively as a food-stuff, in Manchuria it is grown almost solely for the oil which is obtained from the seeds by pressure, and for the residual-cakes that remain after the oil has been expressed. From Newchwang, the port of Manchuria, there is an enormous export trade done in 'Bean-cake,' which is in great demand as an agricultural fertilizer in all parts of China. The soy bean has recently been exported to Europe in large quantities and the soy-bean oil is employed in soap making and for culinary purposes.

"Two kinds of Gram, *Phaseolus mungo*, 'Lu-tou' and *P. mungo*, var. *radiatus*, 'Hung-tou,' are grown as summer crops. The seeds of the 'Lu-tou' (green bean [= mung bean]) are especially valued for their sprouts... Of the 'Hung-tou' (red bean [azuki bean]) there are two or three varieties. The seeds of these are used as a vegetable or ground into flour and employed for stuffing cakes and sweetmeats."

"Both sesamum and soy bean are cultivated extensively in Western China, but for local consumption only. The large exports of these products that pass through Hankow [located on the Yangtze River near Wuhan and Wu-ch'ang] are brought down by the Peking-Hankow railway. Szechuan is capable of growing enormous quantities of these valuable plants, but cheaper and better facilities for transport are necessary before the products can become articles of external trade. When the much-discussed Hankow-Szechuan railway is *fait accompli* the raw products of the west will be available as articles of export, and a much-needed stimulus given to the agricultural industries of the regions concerned" (p. 87-88).

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Note: *Webster's Dictionary* defines vasculum (derived from the Latin meaning "small vessel"; the term was first used in 1844) as "a usually metal and commonly cylindrical or flattened covered box used in collecting plants." Address: V.M.H., England.

2089. Grimme, Clemens. 1914. Die Sojabohne und ihre Verarbeitung zu Nahrungs- und Genussmitteln [The soybean and its processing for food and stimulants]. *Konserven-Zeitung* 15(1):1-3, 10-11. Jan. 2. [1 ref. Ger]

• ***Summary:*** The author discusses the many food uses of soybeans and how they are made and used, drawing heavily on *Le Soja* by Li & Grandvoinnet (1912). He notes that there is a steadily rising interest in soyfoods in almost all branches of the German food industry [perhaps in anticipation of World War I].

Foods made from natural [unfermented] soybeans include: Soymilk (*Sojamilch*), tofu (*Sojakäse*), frozen tofu (*Kori-Tofu*), soy flour (*Sojamehl*), soy bread (*Sojabrot*), soya confections (*Sojakonfekt*), soy chocolate (*Sojaschokolade*), soy coffee (*Sojakaffee*), and green vegetable soybeans (*Soja als Gemüse*). Foods and seasonings made from fermented soybeans include: (1) Solid seasonings: Natto (Japan: Tokio Natto, Ping-Ming Natto). Tao-tche (China [fermented black soybeans]. The process for making this Chinese food is exactly the same as that used to make natto in Japan [sic, almost completely different]); (2) Seasonings in paste form: Miso (4 types), and Tao-tjiung (Doujiang, Chinese miso); (3) Liquid seasonings: Shoyu (Schoyou), Tsiang-Yeou (Chinese soy sauce), Ketjap (Javanese soy sauce), Tuong (Annamite soy sauce, made with rice or corn), Tao-Yu (soy sauce made with black soybeans in China and Japan).

Note 1. This is the earliest German-language document seen (June 2009) that mentions green vegetable soybeans, which it calls *Soja als Gemüse*.

Note 2. This is the earliest German-language document seen (Oct. 2003) that uses the term *Sojamilch* to refer to soymilk. As of Jan. 2009 *Sojamilch* is the modern German word for soymilk.

Note 3. This is the earliest German-language document seen (Jan. 2009) that uses the word *Sojaschokolade* to refer to soy chocolate. The German word for "chocolate" is *Schokolade*.

Note 3. This is the earliest German-language document seen (Dec. 2011) that mentions fermented black soybeans, which it calls *Tao-tche*. Address: Dr.

2090. Xrayser II. 1914. Observations and reflections. *Chemist and Druggist* (*London*) 84(2):49. Jan. 10. Series No. 1772.

• ***Summary:*** Under the sub-heading "Words relating to pharmacy" we read: "Soya, the name of the well-known bean is Japanese in origin, the plant yielding the bean being *Soja hispida*. Soy is the colloquial form of Japanese *sho-yu* or *siyau-yu* [sic] the first element of which indicates salted beans [sic] (properly of the plant just named), and the second oil" (p. 49).

2091. Anderson, George E. 1914. Soya bean as food in China. *Daily Consular and Trade Reports* (*U.S. Bureau of Manufactures, Department of Commerce and Labor*) 17(23):362-63. Jan. 28.

• ***Summary:*** "The soya bean is not generally used for food by the Chinese, though at times it is so used, and its use seems to depend largely upon whether or not supplies of the more usual food products of the people can be had at prices within their reach rather than upon any element of preference. Various other beans, notably a large flat white bean, are used extensively both in the manufacture of flour and as bean 'curd.'" Note 1. Virtually all beans used to make 'bean curd' in China and worldwide are soya beans.

"Soya bean has been raised by the Chinese chiefly for its oil and for the residue, known as 'bean cake,' for fertilizer. Its cultivation on so large a scale as that witnessed in Manchuria in recent years is a matter of development in the past five years or so and represents the response of Chinese farmers to the demand of Europe and the United States for cheap vegetable oil rather than any great Chinese production in the first place."

"The varieties of beans and their uses: There are six varieties of beans commonly grown in North China and shipped more or less extensively to this part of the country and also grown to some extent in South China as well. These varieties are distinguished among the Chinese by their colors and are known as the yellow, the green, the black, the red, the white, and the small green. Of these, the yellow, green, and black are soya beans and are distinguished from the others by their size and ovoid shape. The red bean [xiaodou, azuki] is used by the people as food in much the same shape it is used in other parts of the world, being used largely while green, the pods and all being cooked and served, chopped, with oil or other dressing.

"The white bean is used for the manufacture of a cheap meal or flour like other beans, but is used chiefly in manufacture of what is known as 'bean curd,' one of the most common food products used by the people of central and northern China and used to some extent in South China. The beans are partially cooked and are then ground in a stone mill which often is one of the picturesque features of a Chinese village picture, the mill consisting of a large millstone set in a stone cup, operated by a buffalo or donkey passing around and around the mill, turning the heavy stone directly by a beam it draws. With these beans as they are ground a considerable quantity of water is mixed and the ground product is gathered on a tray and is drained of most of the water. It partially solidifies or rather 'jellies' or 'curds.' When drained it is cut in slices and is eaten with soy sauce, which in itself is the fermented liquor of ground soya beans,

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ripened for several months. This curd also is dried to a fair degree and is made into cakes, which are fancifully stamped with red or yellow designs or characters, and are sold in shops as cakes. The curd, as it is freshly made, sours in a comparatively short time, while the dried cakes keep longer.

"A substitute for flour–soy sauce: The use of the soya beans, properly so called, as human food among the Chinese is comparatively small, and is, as above indicated, more in the way of substitution. Whenever wheat flour from abroad or from north or central China itself rises in prices beyond the convenient reach of the average Chinese consumer, beans of various sorts, including the soya bean, are brought into use in the manufacture of a substitute. For such purposes the small green variety of soya beans are usually employed in South China, though apparently other varieties are also used in the north, and the small black variety is sometimes used in Canton. Considerable quantities of such flour are imported into Hongkong at times, but the Chinese of South China regard such flour as a substitution, however, and it is not popular.

"Bean oil, of course, which constitutes on an average substantially 20 per cent of the soya bean, is used for all purposes by the Chinese, both as food and as illuminant, and at times in paints. As a food it is used in substantially the same way, and with more or less interchanging with peanut oil, though the bean oil is less readily absorbed by articles cooked in it.

"Soy, the Chinese sauce which is the basis for most modern table sauces, is manufactured extensively in Hongkong from the soya bean, the process simply being that of grinding the beans and mixing the meal with water and a Chinese yeast. The mixture is then allowed to stand for from three to four months, the resulting liquor being the sauce. The United States imports about $50,000 worth of soy [sauce] annually from Hongkong in addition to quantities imported from Japan." Address: Consul General, Hongkong.

2092. *Queensland Agricultural Journal*. 1914. The soya bean. 1(1):7-9, Jan. [3 ref]

• ***Summary:*** "Much has been written in the Australian Press during late years of the Soya bean as a profitable crop for farmers, and experiments have been made with it at the State Nursery at Kamerunga, but nothing has resulted from the experiments beyond proving that the soils and climate of some parts of Queensland are well adapted for the cultivation of this crop."

This article summarizes three articles received by the Department of Agriculture and Stock: (1) A communication from "Messrs. Thompson and Co., Dalny, South Manchuria, giving interesting information concerning the commercial possibilities of the [soy] bean, and suggesting that the Department experiment with the seed at the State Farms and in Western districts like the Marona, where the rainfall is comparatively small and uncertain, offering at the same time to supply the necessary seed, and, if the experiments proved successful, the firm would consider the taking up of a large tract of land in Queensland and growing the bean in quantity, as there would be no difficulty in disposing of the product. The present price of the beans in Europe is £9 per ton."

(2) "Messrs. Thompson and Co. furthermore enclosed an extract from the report (for 1912) of the Trades Commissioner for the Government of the Union of South Africa on the subject, which we summarise as follows,..." (see Turner 1914). The Queensland Journal then reflects: Profitability: "But the question to our mind is, whether, under our labor conditions, it would pay as well as it does in cheap-labor countries. A 1,000-lb. crop, at the highest prices for the beans, would sell for £4 10*s.* in Europe, and, deducting labour for production, freights, commission, &c., there would appear to be little in it to attract the attention of farmers, who can make far more [profit] out of dairying, sugar-planting, potato, onion, and maize growing. As a catch-crop amongst coconut and rubber trees, the Soya bean would doubtless prove of great value.

"As far as the feeding value of the [soy] bean is concerned, it is said to be at least twice as valuable for food as maize, as it is very rich in protein, but it is best fed in conjunction with maize. As a green manure, it is undoubtedly valuable in restoring the soil, being a leguminous plant.

"The expenses per ton for bags, railage, and freight to Harbin to Vladivostock [Vladivostok] are set down at £1 13*s.*; add ocean freight to England, £1 10*s.*–£3 3*s.*

"The expense of transport from South Africa to England is set down in the report we quote from at £1 9*s.*

"But Queensland is further from England than South Africa; and while it might pay to grow and export Soya beans thence to Europe, we cannot see that the crop could be profitably produced in this country."

(3) "The following summary of the uses of the Soya bean and its products given by *Tropical Life* [published in England], April, 1913 [p. 71-72], is interesting:–For dynamite and high explosives, soap, linoleum, India-rubber substitute, margarine, paints and varnishes, in place of linseed oil, various edible foods, toilet powder, salad oil, vegetable cooking oil in place of lard, oil, &c., preserving sardines, lamp oil, lubricating, as food in place of peas, flour for soups, biscuits, brown bread, artificial milk and cheese [soymilk and tofu], substitute for coffee, for sauces; cake for feeding cattle, and for manure."

Note: In this same Jan. 1914 issue (p. 3) of this journal, an article titled "Queensland Agricultural Journal," states: "With this number of the Journal we commence a New Series of issue, dating practically from the 1st July 1913, on which date the Journal completed its sixteenth year of publication." It first appeared in July 1897, and today some 60,000 copies a year [5,000 copies a month] are mailed to subscribers worldwide. From now on the Journal will accept "advertisments having reference solely to productions of the

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land or to manufactured articles needed by rural occupiers, thus not interfering in any way with the general run of advertisements in the public Press." Address: Australia.

2093. Togano, Meijiro. 1914. Shôyu no hiire ni kansuru kenkyû [On the pasteurization of shoyu]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 52. p. 503-27. Jan. [Jap]
Address: Jozo Shikensho, Gishi.

2094. Eddington, Jane. 1914. Economical housekeeping: More about soy beans. *Chicago Daily Tribune.* Feb. 4. p. 16.
• ***Summary:*** Because of its high protein content, the [whole dry] soy bean must be soaked for a long time then cooked gently for "several hours to reduce it to the required softness.

"It does not make as smooth a purée as the pea or peanut–in fact a rather granular one is obtained–but that nevertheless is palatable when dried over a hot fire, with a seasoning or butter, pepper, and salt if needed." We should manufacture "soy sauce from this bean–that sauce without which chop suey and many other Chinese dishes would not be what they are. In a government bulletin on the legumes we have a general description of how this is made." There follows a summary, with long quoted excerpts, of the section titled "The soy bean and its preparations" in: Oshima, Kintaro. 1905. "A digest of Japanese investigations on the nutrition of man." *USDA Office of Experiment Stations, Bulletin* No. 159. 224 p. See p. 23 on. Shoyu, tofu, miso and natto are discussed briefly.

2095. Eddington, Jane. 1914. Economical housekeeping: Soy beans. *Chicago Daily Tribune.* Feb. 11. p. 11.
• ***Summary:*** It is called "the soy or soja bean." "In an English food magazine of two years back there is an interesting and very suggestive article, 'About the Soy Bean.' In the first paragraph it is said that medical men have been experimenting with it and writing about it for a year or so. Then it says:

"'The soja (or soy) hispida is the only representative of a genus of leguminosae or the tribe papilionaceæ, and it has been cultivated from time immemorial in Japan and China. It grows freely in tropical countries, and since 1878 it has been grown successfully in the warmer parts of Europe. There are a number of varieties of the soy bean, the difference lying in the size, shape, and color of the seeds. The Japanese is the most highly esteemed and in appearance it is a good deal like the common dwarf kidney or French bean...

"'The bean, which has a most agreeable flavor, is used by the orientals in many ways. The oil is expressed, used as a food, and the residual cake, which contains 40 per cent of flesh forming material, is eaten by the poorer classes [sic]. A paste [miso] and a kind of cheese [probably tofu] are also obtained from the bean, but one of its principal uses–perhaps the best known to us–is for the manufacture of the celebrated soy sauce, the making of which has always been surrounded by a certain amount of mystery.

"'It is the chemical composition of the soy bean which has attracted so much attention of late, and it has been found to be worthy of the highest place among pulses. It is rich in albuminoid, or flesh forming constituents, also in fat or oil, and contains but a very small proportion of starch or sugar.

"'The bean has been said to favor digestion, and it is a fact that the protein it contains is particularly easy of assimilation. A delicate infant, unable to digest cow's milk, often will thrive on a gruel made of the soy bean flour and water, and during the little intestinal disturbances of summer, to which children are so liable, it is much to be recommended. Diabetic patients find it an invaluable article of diet on account of the small amount of starch and sugar which it contains.

"'One might well expect that so valuable a food necessarily would be expensive, but when one learns that both bean and flour are sold for about 3*d* (6 cents) a pound, one feels that it is high time to give it a trial.

"'It is in the form of flour that the soy bean is likely to be most popular on this side of the globe, although the beans themselves, when properly cooked, make good soups and form the basis of many of those little dishes beloved of those who prefer a meatless fare [vegetarians]...

"'The soy bean thus is a cheap substitute for meat. In the dried state it looks more like a pea than a bean, but when soaked in warm water it expands and assumes its beanlike appearance...'"

"The article says that these beans soaked and cooked are excellent mixed with a well flavored tomato or other sauce and made up into cutlets, croquettes, etc., to be used with cheese, etc., because its flavor is not pronounced, for which reason it is more valuable in the kitchen.

"These beans can be obtained at a seed store at just the price one pays for other sorts of beans at a grocery."

2096. Eddington, Jane. 1914. Economical housekeeping: Chop suey. *Chicago Daily Tribune.* March 16. p. D16.
• ***Summary:*** Discusses the origin of Chop Suey: It "is not a recipe; it is a mixture... Here is the trick: The Chinese have taken two dishes of which the Americans have been inordinately fond for a century or so, mixed them, dressed them up a little, and made a mint of money by them, or at least enough to set up scores of restaurants over the country to sell us our fried pork and fried onion, plus some chopped celery,... and some sauce which the uninitiated could never tell from the Worcestershire sauce which is on thousands of restaurant tables of our land the whole year around.

"This sauce is flavored with Indian soy, and Indian soy and Japanese soy and Chinese or soy sauce are as nearly the same sort of thing as such things ever are when made by different manufacturers."

There follows a recipe for "Every day chop suey." "...

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if you chose, add a tablespoon or two of soy sauce to the meat and let it simmer a few minutes in it. Combine the two mixtures,... and serve with rice and the soy sauce. The Chinese do not add the sauce in cooking always."

Note: This is the most recent English-language document seen (Oct. 2006) that uses the term "Indian soy" to refer to soy sauce.

2097. Sahr, C.A. 1914. Report of the Assistant Agronomist. *Hawaii Agricultural Experiment Station, Annual Report.* p. 43-49. For the year 1913. March 16. [1 ref]

• ***Summary:*** In this report's only section, titled "Experiments with leguminous plants," all crops are grouped into three types based on the length of their growth period. The soy bean appears in both the first group (quick rotation, short season, 3 to 4 months) and the second group (medium time, 4½ to 6½ months). The importance of inoculation is emphasized.

The subsection on "Soy bean" (p. 46-49) states: "Soy beans were grown more or less extensively by Japanese farmers in Kona to defray expenses while their coffee trees came into bearing, finding a ready market for culinary purposes and also among local soy sauce brewers. Since the coffee orchards now demand the entire attention of the growers, the soy brewers depend upon soy beans imported from Japan for their supply.

"The brewing of Japanese soy sauce having become a well-established industry in Hawaii, a visit of inspection to several of the largest factories was made to ascertain the method of manufacture, which is given here briefly..." Equal parts of boiled soybeans and roasted California wheat are mixed, "poured into molds, and left to stand for 3 or more days, or until slightly covered by mold fungi. The molds are then emptied into large cedar vats of 500 to 800 gallons capacity. A starter made from cass [soybean presscake] and brine is then added, and the mass is left to ferment for a period ranging from 6 months to a year or 18 months, the mass being thoroughly stirred twice each day. The fermented mass is then transferred into a large press and the liquid sauce is pressed out, boiled 2 or 3 hours, and put in cedar tubs of 4½ to 6 gallons capacity... The ferment starter is made of a small quantity of soy-bean cake, or cass, sprinkled over a few handfuls of parboiled soy beans and left in a warm place for several days. The cass is sold for 20 cents per 100 pounds to rice planters as a fertilizer, and contains about 20 per cent salt. It is also fed to hogs, after soaking in water to draw out the salt. The brewers buy imported soy beans at $72 per ton in Honolulu, wheat at $40, and salt at $10. The tubs in which the soy sauce is put up are made of Japanese cedar, shipped knocked down from Japan, and put together as wanted. The cost per tub is from 40 to 70 cents, according to their capacity, which ranges from 4½ to 6 gallons. Soy sauce is eaten by all classes of Japanese as a table sauce, with their rice, fish, and meats. It has the color of strong black coffee.

"Miso, another Japanese table sauce, is brewed from soy beans and rice. The brewed liquid is clear white. The climate of Hawaii is too warm for its manufacture."

A table (p. 48) shows five soybean varieties (each with an "Agronomy accession number, three also with an S.P.I. number–20798, 19183, and 14953) and their yields as hay, fodder and/or seed, and stages of growth in Hawaii. The only named variety, Otootan [black seeded], was "grown from seed received from the College of Hawaii in May 1911. This variety is undoubtedly the coarsest, rankest soy bean ever grown by this station. It is also most tolerant of both dry and wet conditions, but only makes a rank growth during a cool and moist growing period." Trials of this variety were made at the Hilo and Glenwood substations.

No. 698, a Russian soy bean, was received from S.R. Cope of London, England. Seven varieties were received from the College of Hawaii. Eight varieties were received from the Bureau of Plant Industry (USDA) under the [S.P.I.] numbers 19183, 22379, 32906, 32907, 34857, 34934, 34924, 34987, and 34123; they were planted in May. "Four varieties, said to be rich in oil content, were received from an eastern paint and oil company for trial by this station. Samples of these will be analyzed and the oil content determined."

A photo shows two Otootan variety soy bean plants, valuable for forage and green manuring; one is bigger than the other and both are hanging up-side down.

Other leguminous plants tested: Kulthi or horse gram, cowpeas, sunn hemp (*Crotolaria juncea*), a variety of Cuban peanut, asparagus bean (*sasagi;* probably yardlong cowpea) and sesbania.

Note 1. This is the earliest document seen (June 2009) that mentions the soybean variety Otootan.

Note 2. This is the earliest document seen (March 2004) that mentions the asparagus bean (*Vigna sesquipedalis*). Address: Asst. in Agronomy.

2098. Nishimura, Torazô. 1914. Shôyu moromi no kaiire ni kansuru chôsa [Examination of the stirring of shoyu moromi (mash)]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 53. p. 561-71. March. [Jap] Address: Jozo Shikensho, Gishi.

2099. Nagel, Oskar. 1914. Vorschlaege zur Herstellung neuer und billiger Futter- und Naehrstoffe [Proposals for the production of new and inexpensive feeds and foods]. *Zeitschrift fuer Angewandte Chemie* 27(1):208. April 7. (Chem. Abst. 8:2583). [Ger]

• ***Summary:*** Similar to the plant albumins are the plant caseins, above all the casein of the one plant which is richest in this casein, the soybean (*Sojabohne*), which has been used for centuries in the form of soy cheese (*Sojakäse* or tofu), soy sauce (*Sojasauce*), etc. and is an important Japanese foodstuff. Now in recent years, the soy oil factories

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of Europe have grown to large dimensions, and presently large amounts of soybean oil cake (*Sojaölkuchen*) and sold inexpensively. So it is time to recognize the value of this raw material for nutritional purposes. The extraction of casein from defatted soybean cake is simple. It dissolves in a dilute alkali solution, is filtered, washed with alkali and dried–for use as food. When we realize that 100 kg of protein contained in soybean oil cake costs less than 50 Marks and that it can be produced less expensively than milk protein, it is clear that large amounts should be used as a raw material.

2100. Eddington, Jane. 1914. The Tribune Cook Book: Lettuce. *Chicago Daily Tribune*. April 26. p. E8.
• ***Summary:*** Under "Lettuce a la vinaigrette" is a recipe of the old prose format. "The famous 'salad seasoners' have been those who have added to a French dressing the greatest variety of unique flavors, perhaps a bit of soy sauce, some anchovy, vinegars of different flavors–half a dozen to a dressing–oils flavored with fruit juice, catsup, mustard, curry, meat juice."

2101. Douglas (J.M.) & Co. 1914. Even if you had never tasted it, you could know that Lea & Perrins' is the best Worcestershire sauce in the world (Ad). *Toronto Daily Star (Canada)*. May 2. p. 4.
• ***Summary:*** The upper illustration shows a black maid looking in on a group of diners seated around a table. The lower illustration shows a bottle of Lea & Perrins' Worcestershire Sauce. To the right of the bottle, the following is written in a rectangle: The white writing on the red label indicates the Original and Genuine Worcestershire Sauce. In the middle of the rectangle is the "Lea & Perrins" signature. Address: Canadian agents, Montreal [Quebec, Canada].

2102. Kita, Gen-itsu. 1914. Einige japanische Schimmelpilze. II. Ueber die Aspergullusarten aus "Katsuobushi" und Vergleichung von vier A. ochraceusartigen Pilzen [Some Japanese molds. II. On the *Aspergillus* varieties in katsuobushi and comparison with four *A. ochraeus* types of molds]. *Zentralblatt fuer Bakteriologie. Series 2*. 41(11/17):351-63. June 6. [2 ref. Ger]
• ***Summary:*** Katsuobushi is the dried flesh of the bonito fish. It is widely used in Japan in the preparation of soups, sauces, and in cooking together with soy sauce (*Soja*). The amount produced in Japan is enormous. The author isolated numerous Aspergillus molds from katsuobushi, including the following: *A. glaucus*, a white Aspergillus variety, *A. candidus*, *A. Wentii*, *A. sulfureus var. A. oryzae*, *A. tamarii*, *A. ochraceus* plus Rhizopus Delemar. He grew these out on various substrates (including rice and defatted soybean meal), then measured their diastatic power. Address: Technical Inst., Tokyo Imperial Univ.

2103. Kita, Gen-itsu. 1914. Ueber die Asporogenitaet der Sojahefen [On the asporogenity (non-spore-bearing development) of soy sauce yeasts]. *Zentralblatt fuer Bakteriologie. Series 2*. 41(11/17):364-65. June 6. [6 ref. Ger]
Address: Technical Inst., Tokyo Imperial Univ.

2104. *Times (London)*.1914. Condiments. Pickles and sauces. Various aids to appetite and digestion. June 8. p. 27, cols. 4-5.
• ***Summary:*** The wise old proverb that "Hunger is the best sauce" still retains its ancient force. Yet inventors have flooded the world's markets with a multitude of "ingenious appetizers and stimulants for the jaded palate." The reproach of the insightful Frenchman [Voltaire, in 1729, after a two-year stay in London] that "England was a nation with a hundred [sic, sixty] religions but only one sauce has long since become wholly unmerited."

"The indispensable companion of all meat meals is the homely cruet-frame, with its store of mustard, pepper, vinegar, and oil." The most common ingredient in table sauces is some form of vinegar. High-class sauces use only the finest malt vinegar, while their low-brow relatives substitute the cheaper forms of acetic acid.

The famous Harvey Sauce [Harvey's Sauce] is "composed of a mixture of malt vinegar, Indian soy, and mushroom or walnut vinegar [ketchup?]. To this must be added finely chopped anchovies, a clove of garlic bruised, and a seasoning of cayenne pepper." Keep these ingredients in an earthenware jar for a month or more, stirring regularly, then strain carefully for use.

To make Worcestershire sauce, mix "Bordeaux vinegar, walnut ketchup, essence of anchovy, Indian soy, cayenne, and garlic." Place in a large bottle, cork, and shake many times daily for several weeks, then strain and bottle for use. These two "may be regarded as typical of the thin or black sauces."

The thick or creamy sauces include O.K. Sauce and A1 Sauce.

2105. *Times (London)*.1914. Worcester: The making of a famous sauce. June 8. p. 22, col. 6.
• ***Summary:*** Located on the River Severn, Worcester is blessed with a magnificent old cathedral. "A great sauce factory: The makers of the well-known sauce, Worcestershire Sauce, are Messrs. Lea and Perrins," one of the oldest and most progressive firms in the city. "Their factory is perhaps the largest establishment in the world wholly devoted to the manufacture of sauce: certainly there is nothing equal to it in the United Kingdom." The company still uses the original recipe, which "remains a closely-guarded secret, and the firm exercises a strict privacy over the whole process of manufacture."

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"Before being bottled, the sauce is allowed to mature in barrels in the cellars of the factory."

"Seventy years ago [i.e., 1844] the output of sauce was very limited and was practically all consumed locally. At that time, and for twenty years afterwards, the bottles were filled from a jug carried in the hand." Today, bottling machines fill thousands of bottles a day."

Another Worcester firm, Hill, Evans, and Company, has been making malt vinegar for more than 80 years, and today its works are the largest of their kind in the UK.

Note 1. This is the earliest document seen (Feb. 2012) that contains the phrase "mature in barrels in the cellars" in connection with Worcestershire sauce

Note: Vinegar is an important ingredient in Worcestershire sauce.

2106. Hanson, George C. 1914. Commerce and industries of Kwantung. *Daily Consular and Trade Reports (U.S. Bureau of Foreign and Domestic Commerce. Department of Commerce)* 17(153):7-17. July 1. See p. 11-12, 15-16.
• ***Summary:*** "The Dairen (Dalny) consular district embraces the Kwantung Leased Territory (Japanese), comprising the tip of the Liaotung Peninsula and the islands adjacent thereto... Its area is 1,221 square miles and its population in 1913 was 517,147, of whom 469,651 were Chinese [90.82%], 47,381 Japanese [9.16%], and 115 foreigners."

A table (p. 8) of "Foreign trade by countries" shows that the lion's share of its imports (71.5% of gross value) come from Japan, followed by Germany, UK, Belgium, and USA.

A table (p. 11) shows "Shipments from Manchuria into Kwantung during 1912 and 1913, including: Bean cake 103,787 / 127,690 tons. [Soy] beans 553,438 / 622,205 tons. Beans (small=azuki) 16,794 / 16,297. Sauce, bean and soy 50 / 78 pounds.

The export trade in soybeans and products expanded. A table (p. 12) shows the "native exports" (to within China: quantity and value), including bean cake, [soy] beans, and bean oil.

The section titled "Last year's improvement in bean trade–unfavourable outlook" includes a table which shows exports (incl. reexports) of [soy] beans and bean oil "in 1913, by countries of destination. Exports of bean cake to foreign countries increased in 1913 to 527,507 short tons, of which 520,947 tons went to Japan and the remainder to Chosen [Korea]. The amount shipped to Chinese ports was 38,629 tons in 1913, as against 76,172 in 1912." "A large proportion of the bean oil shipped to Japan is transshipped to the United States." Address: Vice Consul, Dalny (Dairen), Japanese Leased Territory.

2107. *San Francisco Chronicle.*1914. Harbor news. July 22. p. 16.
• ***Summary:*** The *Nippon* arrived in San Francisco harbor only one day behind schedule. "Principal items in the liner's cargo of 2613 tons measurement were:... 371 cases of cigars, 6,665 sacks of rice, 885 tubs of shoyu [soy sauce], 700 bags of shelled peanuts,..."

Note the large amount of shoyu being imported into the United States in 1914.

2108. Loomis, Henry M. 1914. Food products from the soy bean. *American Food Journal* 9(8):472-74. Aug.
• ***Summary:*** Loomis collected information on soybean products while stationed on the Pacific Coast. "Probably the most interesting and important of these food products is soy sauce, or shoyu, as the Japanese call it. It is the only one which is used to any extent among Occidental nations, with whom it forms the principal ingredient of Worcestershire and similar table sauces. It is also used to some extent as an ingredient of bouillon cubes. König estimates that the consumption of this product in Japan amounts to two or three fluid ounces per day for each person, which would make a total consumption for that country alone of three to four hundred million gallons. No figures are available as to the amount of this sauce which is used in China, but all except the poorest class eat it habitually on rice and fish, which form their principal articles of diet."

Japanese soy sauce "is prepared on more scientific principles and it is considered much superior to Chinese soy. Each manufacturer of Japanese soy has special brands or trade marks under which his products are sold. Japanese soy is usually imported into this country in wooden tubs holding about three gallons each and sells at wholesale price of from 75 cents to $1.50 per tub" [i.e. 25 to 50 cents per gallon]. A brief description of the Japanese process for making soy sauce follows; it mentions Koji.

Brief descriptions are also given of the following foods and their method of preparation: (1) "Soy bean curd, or, in Japanese, Tofu, is as its name implies prepared by coagulating or precipitating the legumin or vegetable proteid, of the soy bean by mineral salts. (2) "The frozen bean curd, or 'Koritofu,'..." (3) [Yuba]. "The liquor or bean milk is the milky fluid produced in the manufacture of bean curd after straining and before coagulating. Chinese bean curd [sic], or Toufu-pi, is prepared by drying the scum produced on boiling the bean milk. It is imported in the form of vitreous, brittle, yellowish sticks in appearance like dried casein. (4) Soy bean oil. (5) "Kinako is prepared by roasting and grinding soy beans. It has a very agreeable flavor and is much used in the preparation of confections, particularly as a sort of coating powder. (6) Miso, which is made from "Koji, the same ferment as is used in the making of soy. There are two principal kinds imported into this country, the white and red Miso. They differ principally in the rapidity of fermentation and in the amount of salt used."

"Winton and others have suggested the use of soy bean products as foods for diabetics and it appears that there are many of the foods mentioned above which would serve a

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useful purpose in this regard. There are a number of firms now putting out soy bean meal or flour on a commercial scale and notices have appeared recently that soy bean curd and milk are to be manufactured on a large scale in Europe.

A large table contains nutritional analyses of four types of soy [sauce] (incl. Kikkoman, Kikkoraku, typical Japanese shoyu and Chinese soy) plus each of the foods mentioned above, including tofu (8.6% protein) made in Seattle, Washington, and "Bean milk (strained bean liquor before coagulating; 2.09% protein).

Mr. J.T. Willard notes: "I remember twenty years ago [i.e., 1894] that Prof. Georgeson of the Kansas Agricultural College had half a dozen varieties [of soy beans]. He was a teacher of agriculture in Japan and I suppose he learned as much there as he taught, and he became very enthusiastic over the soy bean. I remember there was a great difference in the different varieties of the soy bean." A portrait photo shows Mr. H.M. Loomis.

Note: This is the earliest English-language document seen (Feb. 2004) that uses the term "soy bean curd" to refer to tofu. Address: Bureau of Chemistry, USDA.

2109. Takamine, Jokichi. 1914. Enzymes of *Aspergillus oryzae* and the application of its amyloclastic enzyme to the fermentation industry. *Chemical News* 110:215-18. Oct. 30. [11 ref]

• ***Summary:*** Originally published in *Journal of Industrial and Engineering Chemistry* 6:824-28 (Oct., 1914).

2110. Takamine, Jokichi. 1914. Enzymes of *Aspergillus oryzae* and the application of its amyloclastic enzyme to the fermentation industry. *J. of Industrial and Engineering Chemistry* 6(10):824-28. Oct. [11 ref]

• ***Summary:*** This is the first review of the early history of the application of East Asian fungal fermentations to modern industrial processing, which began in the 1880s. A principal impetus for the development of the fungal enzyme industry was the discovery that *Aspergillus oryzae*, the fungus involved in the shoyu, miso, and saké industries, produced amylases that could be used to saccharify starch in place of barley malt in the production of distilled spirits. The first commercial enzyme was Takadiastase (a white to yellowish powder rich in amylases) produced by precipitating an aqueous extract of *Aspergillus oryzae* koji with 70% v/v ethanol. The precipitate was then dehydrated with strong alcohol and pulverized.

Though *Aspergillus oryzae* plays an important role in the national economy of Japan, "its utilization in Occidental countries is singularly lacking. Calmette and Bodin's investigation on amylomyces with a view of utilizing it in the spirit industry is an isolated instance in Europe, and their process, known as the amylo-process, has been in operation in France since 1891.

"In 1891, I made an arrangement with the Distilling and Cattle Feeding Co. [popularly known as the "Whiskey Trust"], of Peoria, Illinois, and carried out on a practical scale the application of the *Aspergillus oryzae* to the American Distillery. My experiments, which ran for a couple of months on a 2,000 bushel scale at the Manhattan Distillery, were partially successful, but unfortunately the process did not attain general recognition of its merit..."

Aspergillus oryzae has been used in Japan for many centuries to make products such as Sake or rice beer, Soy [sauce], and Miso. In 1912 the tax on fermented sake in Japan contributed the $41,974,630 to the national treasury. "The tax on the production of Soy (Bean sauce) amounted to $2,048,141" [only about 5% as much as sake]. The total cost of all articles produced with the aid of the *Aspergillus oryzae* fungus is put at roughly $200 million.

"To the growth of *Aspergillus oryzae* on wheat bran as a culture medium I gave the convenient name of Taka-Koji and have employed it for a number of years to distinguish it from that known in Japan as Koji which is a culture on steamed rice.

"Taka-Koji is designed for a substitute for malt as an amyloclastic agent in varied fermentation and other allied industries. Its proposed use is encouraged by the fact that the cost of malt is subject to fluctuations according to the crop conditions of barley while bran is exempt from similar market conditions. Besides, the transformation of bran into Taka-Koji can be accomplished in 48 hours, while malting needs three or four times as long for completion of the process."

The author made his Taka-Koji in a revolving drum with up to 70 kg capacity. Then he ordered a drum of about 4,800 pounds capacity–the size of an 8-ton malt drum. The cylinder turned at 1 revolution per minute. This resulted in an 83% saving in labor costs as well as a considerable saving in space. The "process promises well for furnishing a substitute for malt in alcoholic fermentation and other industries where amyloclastic enzyme is required." The process was tested by Dr. Niels Ortved, Chief Chemist of Hiram Walker & Sons of Walkerville, Ontario, Canada. In his results, which were presented in a paper at the last Congress of Applied Chemistry (held in New York), and published, he noted: "Takamine was the first to introduce the Koji process to America. As far back as 1899 he advocated the use of Koji in the distilling industry... Lately, I understand, he has succeeded in adapting a modification of the Galland-Henning malt drum system to his process. This should be a great improvement over the old floor system..."

"Taka-Diastase: An aqueous extract from the Taka-Koji can be easily made by percolation and an enzyme can be precipitated by adding alcohol to such an extent as to contain 70 per cent by volume of same in the mixture. The precipitate is dehydrated by means of strong alcohol, dried and powdered. It is a white or yellowish white powder or hygroscopic nature. It is marketed in this form for

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medical use under the name Taka-Diastase. Though known as an amyloclastic agent, it contains various enzymes; nevertheless, amyloclastic and proteolytic enzymes predominate." Taka-Diastase is a Koji extract whose function is to transform starch directly into glucose.

The paper closes: "The author extends his thanks to Mr. Wooyenaka for his untiring and valuable assistance and to Parke, Davis & Co. for affording every facility for carrying out the 'Drum Experiments." Address: 552 West 173rd St., New York.

2111. Eddington, Jane. 1914. Economical housekeeping: Soy beans. *Chicago Daily Tribune*. Nov. 13. p. 14.
• ***Summary:*** "The soy bean is one of the staples with which we are not very well acquainted, but it is inexpensive and richer in protein than any of the other legumes."

"This bean is considered of particular value in diabetes, but it is the flour that is chiefly used in dishes for the sick, a considerable number of recipes for which will be found in [the book] *Diet in Health and Disease*, by Friedenwald and Ruhräh. A long quoted excerpt is given.

"There is an American company in America [perhaps Waukesha Health Products Co., in Waukesha, Wisconsin] which makes the soy bean flour, the address of which will be sent on request (stamped and addressed envelope) to any one interested. There are about three pages of recipes in the book quoted from. In recommending them for diabetics it says:

"'The simplest way to use the beans is to cook them like the ordinary navy bean, preparing either bean soup, boiled beans, or baked beans, the flavor being rather improved by the addition of a piece of fat salt meat.'"

2112. Lea and Perrins. 1914. Variety of uses. The uses to which Lea & Perrins' Sauce can be put are innumerable (Ad). *Times* (*London*). Nov. 13. p. 13. cols. 5-6
• ***Summary:*** "At luncheon, dinner or supper, it is the ideal sauce for roast meats, fish, game, cheese, salad, etc. In the kitchen, it is indispensable to the cook for flavouring soups, stews, gravies, minced meat, etc. In India, a favourite 'Pick-me-up' is Lea & Perrins' Sauce with soda-water. The original and genuine Worcestershire."

Near the upper right of this display ad is an illustration of a large slice of cheese on a plate. In the lower right is the large "Lea & Perrins" signature. On each of the four sides of the ad, the words "Lea & Perrins' Sauce" are printed inside a white oval within the decorative border. Address: [England].

2113. Kinoshita, Asakichi. 1914. Nidan shikomi shôyu jôzô-hô anshutsu no yurai [The origin of the idea of the two-step method for brewing shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 9(11):39-42. [Jap]
Address: Jozo Shikensho Gishi.

2114. Nishimura, Torazô; Inoue, T.; Kimura, K. 1914. Shôyu jôzô yô en. Enshitsu hikaku shiken seisei [Comparative examination of the quality of salt used for making shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 9(3):24-60. [Jap]
Address: 1. Jozo Shikensho Gishi; 2-3. Senbaikyoku Gishi.

2115. **Product Name:** Shoyu.
Manufacturer's Name: Noto (G.).
Manufacturer's Address: Honolulu, Oahu, Hawaii.
Date of Introduction: 1914.
New Product–Documentation: Directory of Honolulu and the Territory of Hawaii. 1914. p. 534. "Noto, G., soy, 1339 Liliha [Honolulu, Oahu, Hawaiian Islands]. Residence: Same." Not listed in 1913.

2116. Togano, Meijiro. 1914. Togano-shiki jidosei kôji sochi no kansei [Togano's perfected automatic koji making machine]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 9(6):3-9. [Jap]
Address: Jozo Shikensho Gishi.

2117. Bosse, Sara; Watanna, Onoto. 1914. Chinese-Japanese cook book. Chicago and New York: Rand, McNally & Co. 120 p. Index. 17 cm.
• ***Summary:*** A remarkable and pioneering East-Asian cookbook. It may well be the earliest Japanese cookbook seen published in America. It is one of the earliest Chinese cookbooks published in America. The cover illustration shows a well dressed Japanese woman in a Japanese room kneeling and cooking over a brazier. Contents: Preface. Part I: Chinese recipes (12 sections, p. 9-64). Part II: Japanese recipes (7 sections, p. 74-110). List of Chinese and Japanese groceries.

The Preface begins (p. 1): "Chinese cooking in recent years has become very popular in America, and certain Japanese dishes are also in high favor. The restaurants are no longer the resort of curious idlers, intent upon studying types peculiar to Chinatown, for the Chinese restaurants have pushed their way out of Chinatown and are now found in all parts of the large cities of America." "There is no reason why these same dishes should not be cooked and served in any American home."

Concerning shoyu, or Japanese-style soy sauce (p. 2-3): "Syou, sometimes called Soye, is similar to Worcestershire and similar European sauces. In fact, the latter are all said to be adaptations of the original Chinese syou, and most of the European sauces contain syou in their makeup. It lends a flavor to any meat dish, and is greatly esteemed by the Oriental peoples."

Note 1. This is the earliest English-language document seen (April 2012) that uses the word "syou" to refer to shoyu or soy sauce.

Syou (soy sauce) is an ingredient in at least 55 recipes in this book, both Chinese and Japanese–starting with Chinese

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soups (p. 12-17). When first mentioned here it is called "syou (Chinese sauce)," but thereafter simply "syou."

"Miso paste" appears in 5 Japanese recipes: Satsuma soup ("one quarter pound of aburage {oil-fried Tofu}; one quarter pound of miso paste {soy bean and rice cheese}," p. 71-72). Uwo shiru (Fish soup) ("one pound of miso paste {bean and rice paste}; one half cupful of syou sauce," p. 73-74). Shika shiro (Pot-roasted venison) ("one cupful of syou sauce;... one quarter pound of miso paste," p. 80). Tamago bolan (Peony eggs) ("finely mashed miso," p. 91-92). Shiro uri (Stewed squash) ("syou sauce... two tablespoons of miso," p. 95).

"Aburage (oil-fried Tofu)" and regular tofu appears in Satsuma soup (p. 71, see above). Yaki zakana (Fried fish) (with "oil-fried Tofu... Note: Tofu is made from a mixture of syou bean [soy bean] and rice. It is mashed and rolled into a thin cake, and fried in oil, very much like pancakes," p. 77-78). Note 2. A poorer definition of tofu would be hard to find. Yaki udzura (Broiled quail or pigeons) ("aburage {bean cheese paste}" and "Tofu cakes," p. 79). Fried squab (with "fried Tofu," p. 81). Tamago tofu (a tofu-like custard made with eggs and syoyu sauce, but no real tofu, p. 89-90).

Bean sprouts are used in many recipes, but we are never told what type of beans are sprouted [probably mung beans]; a recipe for homemade bean sprouts (p. 109) calls for "ordinary white beans, or dried lima beans." Other interesting ingredients include: "Adzuki (purple beans)" (mentioned once in Yohan candy). Goma seeds [sesame] or goma-seed oil (mentioned 15 times). Kudzu starch (6 times, misspelled once as "kudze"). Peanut oil (at least 10 times). Seaweed (1 can of seaweed; small piece of seaweed), seaweed jelly or gelatine, or Kanton [kanten, agar] (15 times). Sweet rice [mochigome].

The authors, "Winnifred and Sara Eaton were sisters, daughters of a Chinese-born mother and an English-born father, and grew up in a large family in Montreal, Canada. Winnifred Eaton was a very successful fiction writer who, by taking on a Japanese identity, both exploited the public's craze for 'Japonica' at the time, and obscured her Chinese heritage during an age of anti-Chinese sentiment and policies. This cook book was her first collaboration with Sarah, who may have done very little of the writing. A painter, Sarah (1868-1940) lived out her life with her German artist husband, Karl Bosse, in New York. Winnifred (whose Japanese pseudonym was Onoto Watanna) lived 1879-1954, knew almost nothing about Japanese cooking. Winifred's biographer and granddaughter, Diane Birchall, says that the authors' claim in the Preface that the Chinese recipes are "... secret recipes handed down from Vo Ling, worthy descendant of a long line of noted Chinese cooks...' is just a hoax. "According to Birchall, Eaton was awful at cooking Chinese dishes" (MSU introduction and biography).

Note 3. This is the earliest document seen (Jan. 2009) concerning soy ingredients used in Japanese-style recipes, food products, or dishes outside Japan.

2118. Chiappini, C. du P. 1914. The trade of the Union: Soya beans. In: W.H. Hosking, ed. 1914. South African Year-Book 1914. London: George Routledge and Sons, Ltd. New York: E.P. Dutton & Co. See p. 192-261, especially p. 247-56.
• ***Summary:*** "The Annual Report of the Trades Commissioner in London for the Union Government of South Africa for the year ending 31st December, 1912, and dated 16th April, 1913, was presented to both houses of Parliament by command of His Excellency the Governor-General."

Soya Beans: Trials in connection with these beans have been, and are being, made by farmers in the Union--principally in Natal. During the past nine years many useful experiments have been made by the Agricultural Department, mainly at the Cedara, Winkle Spruit, and Weenen Government Farms (Natal), and also at Skinner's Court, Pretoria. A great deal of knowledge has thus been gained and made known to farmers by means of bulletins, etc., issued by the Government. I am, however, informed that there has been a check in the progress of this industry, and that in some parts farmers have been disheartened by their first trials, and have dropped the matter... I submit the [following] details in the hope that they will stimulate farmers through the Union to continue their experiments and carry them to a successful issue, my object being to support Mr. Burtt Davy and other officers of the Agricultural Department who are doing such good work in this direction.

"I have been fortunate in securing the valuable assistance of Mr. A. Grenville Turner, Grain and Oilseed Broker, and Assistant Secretary to the Seed, Oil, and Cake Trade Association, C 20, Exchange Buildings, Liverpool, and of Mr. Harold Beckwith, of Peter's Buildings, II, Romford Street, Liverpool, who is a specialist on the production of vegetable oil and on oil milling plant generally...

"During the year 1909 experiments were conducted in the Argentine Republic, Mr. A. Grenville Turner reporting that a crop of beans may be secured there in about thirteen weeks, as against six months in Manchuria, and ten weeks to five months in South Africa, according to zone and climatic conditions. Worldwide interest is now evinced in the culture of the Soya bean, and experiments are being conducted in practically every British Colony. The late Sir Alfred Jones, K.C.M.G., entrusted Mr. Turner with a mission to introduce the cultivation of the bean throughout West Africa, the result of the experiments being successful. On his return from the coast, Mr. Turner was entrusted with a mission by Messrs. Lever Brothers, Limited, to encourage the cultivation of the Soya bean throughout the Union of South Africa. The scheme was enthusiastically taken up by the farmers. Large quantities of seed (with descriptive pamphlets) were distributed by Messrs. Lever Brothers, the result of the experiments proving that South Africa can raise a crop of

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Soya beans equal, if not superior, to those from Manchuria...

"At the Government Experimental Farms in South Africa, over 80 varieties have been tested, and as high as 2,000 lb. per acre was recorded, while in many instances the yield was well over 1,000 lb. per acre. In Manchuria the yield per acre is from 1,100 to 1,600 lb. per acre...

"The subject has received the hearty support of the Union Government Agricultural Department, the Agricultural Unions, and Messrs. Lever Brothers, Limited, by whose assistance, through Mr. Turner, seed for the planting of three to five acre plots was distributed to over 300 farmers in all parts of the Union, together with printed report forms and descriptive bulletins. One factor was proved–viz., the capability of the plant to resist a long sustained drought, and to grow under conditions that would probably in many instances be too severe even for maize.

A list is given of 18 products which can be obtained from the Soya bean, including "Human consumption, as a vegetable, like marrowfat peas, and in preparation of soups. As a substitute for meat, specially manufactured. Manufacture of a substitute for chocolate. Preparation of macaroni. As flour for biscuits and brown bread. As artificial cream and milk. Manufacture of cheese. As a substitute for coffee. Preparation of plastic substances and artificial horn." Diabetic foods, soy sauce, meal for feeding cattle, stallions or dairy cows, seasonings, beverages, industrial products, and livestock feeds.

The oil can be used for the manufacture of "Dynamite and high explosives. Soaps. Linoleum. India-rubber substitute. Margarine. Paints and varnishes in place of linseed oil. Edible goods and toilet powder. Waterproof cloth, paper umbrellas, and lanterns. Salad oil. Lubricating oil, in China, for greasing axles and native machinery. Lamp oil instead of kerosene oil. It is used on English railways for burning. The Soya oil is also used for preserving sardines, and in place of lard, and cotton-seed oil for cooking.

"Chemical analyses of the beans made in Europe show considerable variation in the percentages of the different constituents... of oil from 15.62 to 23.20 per cent., the latter oil content being the highest recorded, the beans being grown by Mr. Turner, at Sierra Leone (West Africa).

"At the latter end of the year 1908 the Soya beans started to be exported from Manchuria to Great Britain and Europe; the price on the London market being £4 15*s.* per ton, which recently rose to £9 2*s.* 6*d.* per ton in England; the value on the spot at Hull being now given as £8 7*s.* 6*d.* per ton; the value of soya oil on the spot, crushed, is £24 10*s.*, and extracted, £23 15*s.* per ton, and of Soya oilcake, £6 15*s.* per ton."

Note: This is the earliest English-language document seen that uses the term "oilcake" or "Soya oilcake" to refer to ground, defatted soybeans. Address: Trades Commissioner, South Africa.

2119. Cooper, Lenna Frances. 1914. The new cookery: A book of recipes, most of which are in use at the Battle Creek Sanitarium. 2nd ed., revised. Battle Creek, Michigan: The Good Health Publishing Co. [10] + 301 p. Illust. (10 photos). 20 cm.

• ***Summary:*** Soy is mentioned only once in this book, in the recipe titled "Nut sausage" (p. 89); this exact same recipe was on page 87 of the 1913 1st ed.

Note: This book contains a few more pages than the 1913 edition: 5 more pages of unnumbered front matter and 3 more pages of text. The title page is identical except that the words "Second edition–Revised" have been added. The index starts on p. 291, is more than 1 page longer, and ends near the bottom of p. 301. The ads at the rear are generally on different pages; some have been added and others deleted. Lenna F. Cooper was born in 1884. Address: Director of the Battle Creek Sanitarium School of Home Economics, Head Dietitian of the Battle Creek Sanitarium.

2120. Council of Jewish Women. 1914. The neighborhood cook book: Compiled under the auspices of the Portland section in 1912. 2nd ed. Portland, Oregon: Council of Jewish Women. 329 p. Index. 20 cm.

• ***Summary:*** This book contains 35 recipes in which Worcestershire sauce is used as an ingredient: The first 10 are: Chicken or goose livers (p. 12). Crab cocktail (p. 13). Okra gumbo soup (p. 49). Artichoke poulette (p. 56). Artichokes with veal (p. 56). Chicken a la King (p. 61). Tomato sauce (p. 63). Saddle bags a la Rothchild / Rothschild ("Slit a pocket in a large tenderloin steak, fill it with oysters (small ones) which have been seasoned with salt, pepper and catsup or a little Worcestershire sauce; boil or bake...." p. 67). Sweetbreads a la Newburg (p. 68). Crab a la San Francisco (p. 78). On p. 33 is a recipe for Gluten bread.

The recipe for Tomato Soy (p. 293) is interesting because soy is not used as an ingredient and the word "soy" is not mentioned in the body of the recipe. It states: "One dozen large ripe tomatoes, two large onions, four green or red peppers, one tablespoon salt, ground spices to taste, two cups vinegar, one teacup sugar. Chop vegetables fine, cook slowly until rather thick, bottle air tight."

On page 42 of this book is a half-page ad for "Albers Bros. Milling Co." They make "Albers Rolled Oats" and "Albers Flapjack Flour" for breakfast and desserts. No address is given. Note: Albers was a pioneer U.S. soybean processor.

"The Council of Jewish Women, now called the National Council of Jewish Women, was founded in 1893 by Hannah G. Solomon of Chicago [Illinois]. Solomon had been asked to encourage and organize the participation of Jewish Women in the Chicago World Parliament of Religions, but when she discovered that the women would be serving only as hostesses and pouring coffee she and other women

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quickly withdrew from the fair. She then organized a Jewish Women's Congress which met at the time of the Parliament. During the Congress meeting, the Council of Jewish Women was established. Solomon served as the president of the council from 1893 until 1905. The Council of Jewish Women has a long history of community service. In the early years of the organization, the group was involved in the settlement house movement and worked with Jane Addams' Hull House" (MSU biography). Address: Portland, Oregon.

2121. Fujimoto, Taizo. 1914. The nightside of Japan. London: T. Werner Laurie, Ltd.; Philadelphia: Lippincott. xii + 233 p. Plus 40 p. plates on unnumbered pages. Illust. No index. 21 cm.

• ***Summary:*** "Howling of a 'oinarisan' pedlar [peddler] (oinarisan is a kind of sushi, and its pickled rice is wrapped with a piece of fried bean-curd flavoured with sugar and soy [sauce]) and flute of a Chinese buckwheat seller are faintly heard in a distant street" (p. 39).

"To classify the labourers who are staying in these lowest lodging-houses, according to the kinds of their work or business, one half of them are stall- keepers who sell... amé (wheat gluten),... *shiruko* (a dish made of rice cake [mochi] and sugared beans), *inarisushi* (another name of *oinarisan*, which is a mass of pickled rice wrapped up with a piece of fried bean curd),..." (p. 44-45).

Note: This is the earliest English-language document seen (May 2012) that contains the word *inarisushi* (one word without hyphenation).

"Consequently, every night till midnight the streets in the vicinity of these lowest inns are full of small shops and stalls of cheap food and drinks, awaiting the customers from those *kichinyado*. Stalls of hot wine and *oden*, *inarisushi*, *shiruko*, *mochi* (rice-cake), *tsukeyaki pan* (pieces of bread toasted and flavoured with soy [sauce]),..." (p. 47). Note: Mochi is also mentioned on pages 172, 173, and 202.

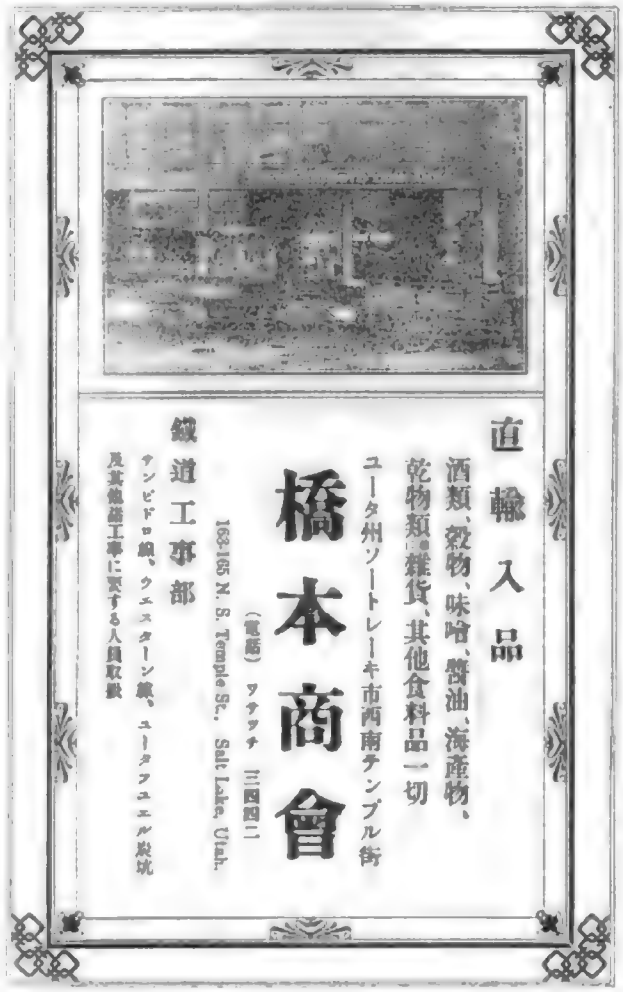
"In this book you read often of stalls of *odenya*, but the Marugin is a large house situated at the cross-roads of Sudachô, and though it belongs to the eating-houses of the lowest class, it may probably be the first and largest *odenya* in Tokyo. The room, lighted with electric lights, is furnished with tables and chairs, in place of mats and futon, very common in the shops of the lower rank. Oden is, as previously explained, a special kind of food boiled down with soy, its chief materials consisting of fish, bean-curd, konnyaku, and taro" (p. 63-64).

"You often find little boys of nine or ten years at the temple, and their true object of the visit seems not to be prayer to the temple, but they are ambitious to taste the sweet *amazake* (hot beverage made of fermented yeast [sic]), which the temple entertains to the visitors" (p. 153).

2122. Garner, W. E. 1914. Reliable recipes for many Chinese dishes. Long Branch, New Jersey: F.M. Taylor. 10 p. 22 x 15 cm.

• ***Summary:*** This booklet has ten recipes written in narrative form. The recipe for Plain Chop Suey calls for "a dessert spoonful Queow (thick black sweet sauce similar to New Orleans molasses), a dessert spoonful Seow (thin black salty sauce similar to Worcestershire sauce), a few drops of Miow (an oil something like peanut oil), all of which can be purchased at a Chinese grocery store, and without which you cannot make any Chinese dish." Address: USA.

2123. Hashimoto (E.D.) Co. 1914. Hashimoto Shokai (Ad). In: Nichibei Shinbun-sha. 1914. *Nichi-Bei Nenkan* [*Japanese-American Yearbook*. No. 10]. Unnumbered page before last block of ads. [Eng; jap]



• ***Summary:*** Ad (full page). Only two lines in the text of this ad are in English: The company name and address. This Japanese company imports many food items, including miso and shoyu. A large photo shows the front of the company, with two delivery wagons parked in front. The company name is also written in English (Roman letters) on one sign above the shop and on another on the side of one wagon.

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Address: 163-165 N.S. Temple St., Salt Lake City, Utah. Phone: Was. 3442.

2124. Koenig, Franz Joseph. ed. 1914. Chemie der menschlichen Nahrungs- und Genussmittel. Vol 3. Untersuchung von Nahrungs-, Genussmitteln und Gebrauchsgegenstaenden. II. Teil. Die tierischen und pflanzlichen Nahrungsmittel... Ed. 4 [The chemistry of human foods and food adjuncts (stimulants / enjoyables). Vol. 3. Investigation of foods, food adjuncts (stimulants / enjoyables), and kitchen utensils. Part II. Animal and plant foods... 4th ed.]. Berlin: Verlag von Julius Springer. xxxv + 972 p. See p. 488-89, 610. Illust. Index. 25 cm. [Ger]

• ***Summary:*** The section on commercial sauces (p. 149) mentions Japanese and Chinese soy sauce (*Soya oder Shoja oder Soja oder Soja [auch das japanische Shoyuugt [Shoyu]]*). The section on plant cheeses (*Pflanzenkäse*, p. 331) mentions those made from soybeans, including natto, tofu (Japan), and tao-hu (China). In Africa the seeds of *Parkia africana* are used to make products such as "Daua-Daua" of "Afiti" whose composition is similar to those made from soybeans. A table gives the composition of Dawa-Dawa cheese (*Daua-Daua Käse*) and Parkia seeds as reported by H. Fincke (1907).

The section on legumes (p. 488-89) discusses soybeans, which are best known in the form of products such as "Indian soy sauce" (*India Soja*, p. 149) or Tofu (p. 331). Recently, defatted soybean press-cake has been introduced as a feed for cattle.

The section on "Microscopic investigations of flours and starches" (p. 609-10) gives details and five cross-sectional illustrations of soybean tissue and cells. The first two, based on A.L. Winton, show: (1) A general cross section (source: Winton 1906, p. 248). 2. Surface of the cotyledons (epidermis), with palisade cells and aleurone cells. The last three, based on A. Scholl, show: (1) A tangential section. (2). Palisade cells. 3. Parenchyma under *Traegerzellen*. Address: Geh. Reg.-Rat, o. Prof. an der Kgl. Westfaelischen Wilhelms Universitaet und Vorsteher der Landw. Versuchsstation Muenster in Westphalia, Germany.

2125. Maddocks, Mildred; Wiley, Harvey Washington. 1914. The pure food cook book: The Good Housekeeping recipes. Just how to buy–Just how to cook. New York, NY: Hearst's International Library Co. vii + [2] + 417 p. Illust. 20 cm. Reprinted in 1915.

• ***Summary:*** Edited by Mildred Maddocks, with an introduction and notes on food and food values by Harvey W. Wiley, M.D. Contains over 70 black and white photos. In his introduction, Wiley praises the cooking of French peasants, bemoans the fact the young American women spend years learning how to play the piano instead of the principles of nutrition and how to cook simple, nutritious dishes. He advocates Graham flour or "entire wheat flour."

Worcestershire sauce is called for as an ingredient in the following recipes: Crab rabbit (p. 162). English cottage pie (p. 218). Liver with bechamel sauce (p. 228-29). Jellied chicken and egg salad (p. 267). Mock beef a la mode (p. 331; made mostly with squash, onions, and carrots).

Concerning vegetarianism: A recipe for "Vegetarian rice" is given (p. 101-02).

In the chapter titled "Meat," by Harvey W. Wiley, M.D., we read (p. 185): The number of animals in the U.S. is not keeping pace with population growth. "The natural result of this, aside from manipulation on the markets, is an increasing demand and a decreasing supply. This has worked out at the present time into a condition in which the price of meats is higher to the consumer than ever before. This, however, does not affect in any way the value of meat as a food. With all due deference to our vegetarian friends, whose opinions I respect, I am fully convinced that man is an omnivorous animal. He makes a mistake when he confines his diet to any one particular form of food. Man can thrive quite well, however, on a vegetable diet. Perhaps this should be modified by saying on what is generally called 'a vegetable diet' because the vegetarian as a rule eats eggs, drinks milk, and uses butter, all of which are animal products. The lean or muscular part of meat is essentially a tissue builder, while the fat is a heat and energy former."

Surprisingly the recipes for dried beans are in the chapter titled "How to cook vegetables," which is mostly about fresh vegetables but includes recipes for Baked lentils, Lentil and mushroom cutlets, Baked lentils and cheese, Red kidney beans with cheese in chafing dish, Roast nut and barley loaf (p. 316-23), Black bean soup, Mock beef a la mode (featuring Hubbard squash), and Mock pork (featuring white summer squash) (p. 330-33). Soy is not mentioned. "In general, vegetables need long, slow cooking" (p. 317). Address: 1. Assoc. Editor of *Good Housekeeping Magazine*. Editor of the *Family Cook Book, Every Day Dishes, Brosia Meal Cook Book;* (2) M.D.

2126. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1914. Nichi-Bei nenkan [Japanese-American yearbook. No. 10]. 650 Ellis St., San Francisco, California. 693 p. Reprinted in Feb. 2002 in Tokyo by Nihon Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 5-kai [Collected Documents on Japanese Emigration. No. 5]. [Jap; eng]

• ***Summary:*** This book is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. The English-language title page reads: *The Japanese American Year Book.*

The book is divided into 14 parts, each numbered separately. Contents: (1) Front matter (incl. how this book was created) (5 p.). (2) Table of contents, general (4 p.). (3) Table of contents, ads (4 p.). (4) Photos (black and white on 15 unnumbered pages). (5) Maps and charts on 3 unnumbered pages. (6) Advertisements (A-1 to A-16). (7)

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Front part (p. 1-165), including general information about America, Japanese in America, U.S. and agricultural census data, etc. (8) Ads (p. 1-13). (9) Back part (p. 1-136). (10) Ads (p. 1-66). Appendixes: (11) Table of contents for directory of places where Japanese live in America, by state, and within each state by city: In Japanese (2 p.). In English (2 p.). (12) Directory of Japanese living in America, interspersed with ads (p. 1-228). (13) Ads (2 p. + p. 1-50). (14) Copyright page.

In the front part: There is no import duty / tax on soybean oil. The value of the total amount imported was $733,937 (p. 87). There is also no import tax on soybeans (written "sooyabinzu" in katakana for the first time in these Yearbooks) (p. 87). The total value of soybeans imported to San Francisco was $27,867 (p. 91). There is (again) no tax on soy oil (written Soyamame Abura, in kanji). The total value of soy oil imported to Portland, Oregon was $13,692. No tax on soy sauce pickled imported to Portland, Oregon, worth $10,353 (p. 94).

A table (p. 97) shows the Japanese population in the USA for most years from 1860 (6 people) to 1913. For recent years: 1907–89,573. 1908–103,683 (peak). 1909–98,715. 1910–91,958. 1911–93,359. 1912–93,751. 1913–95,843.

A table (p. 98) shows Japanese population in the USA in the 8 states with the highest populations: California, Washington state, Oregon, Colorado, New York, Utah, Montana, Wyoming.

A table (p. 102) shows the number of tofu shops in the USA: Total 48. Owners 48. Workers 7. This research was conducted by Nihonsha ("Japanese Company").

A table (p. 103) shows the total population of California from 1850 to 1919 (projected) and percentage increase during each decade: 1850–92,957 (-). 1860–379,994 (310% increase). 1870–560,247 (47%). 1880–864,694 (54%). 1890–1,213,398 (40%). 1900–1,485,053 (22%). 1919–2,377,540 (60%--projected).

Individual lines in various tables (p. 127-163) show tofu, miso and shoyu makers in the United States by state, and within California by city. There are 7 columns: Location, total no. of shops, no. of owners, investment ($), sales ($/year), workers, salary ($/year). The number of tofu makers by state is: California 34. Utah (Ogden) 1. Colorado (Denver) 2. New York City 1. Oregon 1. Washington 9. There is also 1 miso maker in Los Angeles and 1 shoyu maker in Oregon. Columns 1-2 are filled out for all entries, columns 3-4 for all California entries, and columns 5-6 for about half the California entries. Note: The information on this page is not identical to that in the directory. For example, for Utah, the directory shows 3 tofu shops in Salt Lake City and one in Ogden.

A table (p. 155) shows Japanese population in the top 8 East Coast states in 1913. There are 4 columns: State, males, females, and total. The totals are (in descending order of population): New York: 2,209. New Jersey 277. Massachusetts 230. Pennsylvania 223. Florida 89. Washington, DC 54. Rhode Island 41. Maryland 29. Five other states except Vermont 89. Grand total 3,275 Japanese, including 3,108 males (95% of total) and 167 females.

Tariff (import duty) reduction on soybeans, from the old rate of $0.45 per bushel to $0.13 per bushel in 1913 (p. 27). Tariff reduction on Manchurian soybeans, from the old rate of $0.45 per bushel to no tax in 1913 (p. 28).

The Directory shows Japanese companies making soyfoods in California, Utah, Colorado, Oregon. Address: San Francisco, California.

2127. Takenob, Y. 1914. Japan year book. Tokyo, Japan: Y. Takenob and G. Takeda (The Japan Year Book Office). 740 p. See p. 334, 400, 433-34, 439-40, 442, 689, 692, 705, 718. [Eng]

• ***Summary:*** This annual book was first published in 1905. Facing the Preface is a table of Japanese weights, measures and moneys. In chapter 16, "Agriculture" (p. 337-57) is a table titled "Beans, sweet potato and potato (p. 345) which gives "Soy bean" production data in Japan for 1908-1912 (in *koku*). The next paragraph contains information on soy [sauce], *miso*, and *tofu* similar to that in the 1913 year book.

In chapter 20, "Industry," is a table on soy [sauce] production in Japan from 1908-1911, and a paragraph (p. 400) on the patented Suzuki process for brewing soy [sauce].

In Chapter 22, "Trade" is a table (p. 433-34) titled "Prices of principal commodities in Japan," which includes prices for 1907-1912 in yen for soy beans (per *koku*), soy [sauce] (per *koku*), and miso (per *kwan*).

In Chapter 23, "Foreign trade" is a table (p. 439) titled "Imports" (in 1,000 yen). Under the heading "Staples articles of over yen 1,000,000" (p. 438) is given the value of soja bean imports for 1911-1913. In a table titled "Soja bean" (p. 442), under the heading "Staple exports and destinations (in 1,000 yen)" (p. 440) is given the value of soja bean exports to China, Kwantung, India, and other places for 1911-1913.

In chapter 35, "Chosen (Korea)," under the heading "Agriculture" (p. 691) is a paragraph (p. 692) titled "Barley and soja bean," which gives acreage and yield for soja (year not specified) with the value (in yen) of exports to Japan in 1912.

In Chapter 36, "Taiwan (Formosa)," under the heading "Agriculture," a table (p. 705) titled "Agricultural products" has production data on "Beans and peas" (in 1,000 *koku*) for 1911-1912.

In Chapter 38, "South Manchuria," is a paragraph (p. 718) titled "The soya bean" which has information on South Manchuria's soya bean yield, [soya] bean-cake output, amount exported for specific years, and production of various milling centres.

In the advertisements at the rear (p. xiii) is a full page ad for Higeta Shoyu, showing many medals: "Patronized by the Imperial Household. Trade mark. The celebrated Japanese

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sauce. Established in 1616. Manufactured by G. Tanaka, Chioshi [Choshi], Chiba-ken, Japan." Address: Prof. at Waseda Univ. and Late of the *Japan Times*, Japan.

2128. Terry, Thomas Philip. 1914. Terry's Japanese empire: Including Korea and Formosa, with chapters on Manchuria... A guidebook for travelers. Boston and New York: Houghton Mifflin Co.; London: Constable & Co., Ltd.; Tokyo: Kyo-Bun-Kwan, Ginza, Shichome. cclxxxiii + 799 p. See p. 515. Maps. Index. 16 cm. [75 ref]

• ***Summary:*** This guidebook, after its 283-page introduction, is organized geographically into: 1. Central Japan. 2. Northern Japan. 3. Yezo, the Kuriles, and Saghalien. 4. Western Japan. 5. Kyushu and the Loochoo and Goto islands. 6. Korea, Manchuria, ad the Trans-Siberian Railway. 7. Formosa (Taiwan) and the Pescadores. Abbreviations (p. ix). List of maps (13).

In the Introduction: Japanese inns (p. xxxvi, xxxix-xl): The best food is not always to be had in the most pretentious places. In certain modest inns, where the rooms are as bare as a monk's cell, and the general appearance of austerity might argue a strict economy, there will often come, as an agreeable surprise, dainty food served in dishes that delight the lover of beautiful porcelain or lacquer. Later the traveler may learn that the place enjoys fame for some savory specialty–eels boiled in soy, broiled crayfish, stewed octopus, buckwheat-macaroni, or the like."

"Food is served in the guest's room on a lacquered tray... One of the soups may be made of... lobster, or seaweed, in which case it is amazingly thin and unpalatable; the other of beans [miso], bean curd or something of that nature. Salt is not provided unless asked for. Many of the dishes are cooked in soy; a tiny dish of which is supplied for dipping bits into before eating them."

Japanese food (p. xliii-xlvii): "Rice is a luxury with thousands of the peasants; it takes the place of bread with the well-conditioned; and wherever it is eaten to the exclusion of other foods it produces (because the thin phosphorous skin is polished off it) the prevalent beriberi. The proportion of animal food is small. Beans eaten in a variety of ways occupy a conspicuous place in the food of all classes and they supply the nitrogenous matter essential to those who rarely eat meat and who do not get the casein obtained by cheese-eating peoples. The soy-bean (*daizu; omame*) ranks first in extent, variety of use, and value among the pulse of Japan, and in point of nutriment is quite near to meat. It contains nearly two fifths of its weight in legumin, nearly one sixth in fat, and is rich in nitrogen. It is to the Nipponese what frijoles are to Mexicans and garbanzos (chick-peas) to Spaniards. Of the numerous varieties some are made into curd [tofu], and into the widely celebrated bean-sauce (the Worcestershire of Asia) called shoyu (sho, soy; yu, oil), and which is almost as indispensable as rice. It forms the daily relish of the rich man and the beggar, and is in as general use as tea and tobacco."

Fish (sakana)... Teriyaki: Fish in a sauce of soy, mirin, and sugar... Sashimi: raw fish cut in thin slices and eaten after being dipped in shoyu.–Kabayaki: fish which is first steamed then dipped into soy and roasted (or eels cut open on the dorsal line, covered with soy mixed with sugar, and roasted). The latter dish, usually called Unagi-no-kabayaki, is a favorite with the Japanese...."

"Rice:... Azuki-meshi: rice and red pea-beans mixed (boiled).–Mochi: small dough-cakes made of rice and sold throughout Japan.–Sushi: a general name for food of boiled rice and fish, eggs, vegetables, etc., seasoned with vinegar and soy...–Inari-zushi: fried tofu stuffed with chirashi-zushi.

Note: This is the earliest English-language document seen (May 2012) that contains the word *Inari-zushi*.

- Maki-zushi: boiled rice and other vegetables rolled and wrapped in a sheet of the sea weed called Asakusa-nori...–Kombu-zushi: fish seasoned with vinegar and wrapped in a piece of the edible seaweed known as Laminaria japonica. A differentiation of this popular food is the Kombumaki: baked or roasted fish wrapped in kombu, then tied, and boiled in sugar and soy.

Various:... Tsukudani: small fish boiled in soy and used as a relish or condiment (named for Tsukudajima, a place in Tokyo famous for its preparation).–Oden: a stew (greatly enjoyed by the proletariat) of fried bean-curd, lotus-roots, potatoes, etc." Ame and midzu ame.

"Soup (shiru): Tôfu-jiru: bean-curd soup.–Miso-shiru: bean-soup with vegetables."

Railways–Dining cars (p. lxxxiv): Discusses "The unique and not unpalatable bento,–a sort of national sandwich,–put up (usually cold) in thin, flat, twin boxes (bento-bako) of dainty white wood (1 in. high, 5-7 in. long), along with a paper napkin (kuchifuki) and a pair of chop-sticks (hashi), and sold at many stations, is distinctively Japanese and widely popular... Besides the full box of plain boiled rice, the ordinary (15 sen) bento contains usually... a few boiled black beans (nimame)... seaweed (kobu)..." Rice cakes (mochi) with the kernel of yokan, or sweet [azuki] bean paste, which usually forms their center.

Buddhism (cxc): Again the rice-flour cake [mochi] is offered at the domestic altar. It now takes the form of a lotus-petal with capsule of [azuki] bean-paste." (an).

Yokohama (p. 13): "The return gifts from the emperor and princes included...jars of soy [sauce]; coral and silver ornaments;..."

Tokyo (p. 199): "The hill beyond the intersecting roadway is called Suribachi-yama because of the similarity in shape to a suribachi–an earthenware vessel in which bean-soup [miso soup] is prepared."

Nikko–Shops: "... the kuri-yokan (so-called from the chestnuts mixed with the sweetened bean-paste [azuki]) is good and cheap (10 sen)."

Kyoto–The Shinto Shrine of Inari. There are many local

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festivals, the most important of which is the Inari-matsuri which usually falls on June 5. There are trick riders on horseback and decorated sacred cars [carts] are "placed in the procession, and the day is devoted to general jollity–and pocket- picking. On this occasion the people eat Inari-zushi, or fried tofu stuffed with boiled rice, since tofu [fried, as aburage] is the favorite food of the fox popularly believed to be the messenger of Inari (and by extension, the God of Rice)."

Kyoto–Miidera (p. 504-05): Travelers visit Benkei's Iron Pot (*Benkei-no-shiru nabe*), a very old, rusted, and broken contraption (about 5 ft. wide and 3 deep) resembling a soap-boiler, and from which Yoshitsune's devoted servitor (and popular hero) is supposed to have eaten his bean-soup [miso soup]–which may well be doubted."

Kyoto to Koya-San (p. 515): For the Western traveler there is "a tiny kitchen a blessed refuge wherein, if he is making a prolonged stay, he may cook his un-Christian food without the vegetarian priests knowing (or caring) that such a sacrilege is being committed! Meals are served in one's apartment; the food is purely vegetable, and after the second day distressfully unpalatable. Fish, flesh, fowl, butter, cheese, eggs, milk, bread, coffee, and other necessaries of life are absent, and are replaced by seaweed, greens, bamboo-shoots, cabbage, daikon in various unappetizing forms, and other garden-truck which one eats as a novelty the first meal and rejects with an involuntary tightening of the throat when it is offered at the second and third. In addition there are flabby mushrooms boiled in very thin water without seasoning; the omnipresent boiled rice without sugar, milk, or salt; a bean-curd (tofu) for which one acquires a liking only after much patient effort; a yellow substance (known as yuba) made of the skin of bean-curd, and looking and tasting like thin sheet rubber;..."

Kobe excursion–The Tansan Hotel (p. 630): The strawberries and other ground fruits and vegetables, which grow nearly all the time in this favored spot, are enriched with [soy] bean-cake only [no human excrement is used] (as a precaution against typhoid)."

Korea (p. 725): "Among the dishes dear to the native heart are pounded capsicum, bean curd [tofu], various sauces of abominable odors, a species of sour kraut (kimshi [kimchi]), seaweed, salt fish, and salted seaweed fried in batter."

Manchuria and the Trans-Siberian Railway (p. 756): "Considerable [soy] bean-cake and furs, and vast quantities of lumber, etc., come down the river from upper Manchuria and Siberia."

Also discusses edible seaweed (p. xliv, 330): Japanese food: "Seaweed in almost endless variety enters largely into foodstuffs. Not only are the giants of the marine flora taken up and utilized in various ways, but also the more delicate red and green sorts–the use of which has been adopted by other nations. Most of the edible green and red algae bear the generic term nori, while the words *umi-kusa*, or *kai-so* (which also means *bêche-de-mer*), are used for algae in general. Many of the weeds are eaten fresh, others in soup. Some are dried or pickled and eaten in vinegar. They usually appear in commerce in the form of little packages, to the sale of which special stores are dedicated. Certain varieties are converted into jelly."

Yezo–fisheries: "Certain of the many varieties of edible seaweed which flourish along the Japanese coast are found in Yezo, particularly the circumpolar tangle (*Laminaria*) and seawracks (*Fucus* species), which prefer cold water and a heavy surf. For this reason sea-algae add considerably to the value of the Yezo exports."

Note: The author resided for almost 12 years in Japan and made repeated journeys on foot (and otherwise) from one end of the country to the other. Address: F.R.G.S. [Fellow of the Royal Geographical Society, England].

2129. Thompstone, E.; Sawyer, A.M. 1914. The peas and beans of Burma. *Burma Department of Agriculture, Bulletin* No. 12. 107 p. See p. 22-26. [Eng]

• ***Summary:*** Contents: Names and description of the plant: Leaves, pods, seeds (yellow or black). Varieties (based on seed color, size, and shape): Yellow (3 races), greenish-yellow to yellow, dull brownish gray to olive brown shading to black around the hilum. Notes.

Tables shows that each of the soybean varieties and races has one or more local names in different parts of Burma: Local names of the yellow soybean are: Hto-khyan-pè, pè-ngapi, san-to-tep, be-hrum, pe-hlum, beir-kan, pè-bôk-san, hsan-to-nouk, to-nouk, pè-bi-zat (probably a misnomer generally applied to Dolichos biflorus), lazi-shaprè-tum, lasi n'loi, lasi n'hti, hto-laung, pè-ngapi. Local names of the greenish yellow variety are pè-ngapi, pè-kyât-pin, pè-bouk-si, and pè-bouk. The local name of the dull brownish gray to olive variety (which grows only in Maungoli/Kachin Hills) is ngasee.

"The Soy Bean is not extensively grown in Burma though its distribution is wide. It is more frequently sown as a subordinate crop than alone. A little is often scattered along with other peas and beans, chiefly along the banks of rivers and streams or on islands after the floods subside. In Sagaing District it is frequently grown on paddy nurseries after the young plants have been removed. In Myingyan, Minbu, Pakôkku, Lower Chindwin and Bhamo districts, it is also sown away from the rivers on high sandy soils. Sowing generally takes place about October and the crop is ripe by about February. In Kônmahut (Bhamo District) two crops are sometimes grown–a rainy season crop sown about August and reaped about November and a cold weather crop sown in November and reaped in February... Very little care is bestowed upon its cultivation; the seed is scattered at the rate of 1/8 to ¼ basket per acre after which very little attention is given to the crop. The yield is poor and varies from 4 to 12

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baskets per acre.

"Pè-ngapi is issued for a variety of purposes. After being steeped in water, fermented and cured it is used under the name of 'Kyányo,' 'pè-bouk-yè,' or 'pè-ngan-byá-yè' as a sauce for flavouring food and takes the place of 'ngapi' (Burmese rotted fish) where the latter cannot be easily obtained. For this purpose, considerable quantities of the bean are utilized in the plains and the product carried to other parts, particularly to the Northern Shan States. A similar product is made by Chinamen in parts of Mandalay, but for this purpose the Manchurian Bean is frequently imported."

A detailed description is given of the process used by Chinese for making soy sauce in Burma. Wheat flour is mixed with the beans before the mixture is spread on bamboo matting to dry and become koji. The fermentation takes place in earthenware vessels outdoors, often for as long as one year. "When fermentation has proceeded far enough, which is ascertained by tasting, the dark reddish-brown liquid is decanted off, bottled and sold. The residue is made into small flat cakes called 'pé-bôk' which are used for flavouring curries and soups. The whole beans are also said to be made into similar cakes, also called 'péhôk,' by the Shans of the Northern Shan States for sale to caravans, and it is further stated that one small cake is sufficient for a meal.

"Attempts have been made to introduce foreign Soy beans into Burma but with no success. Although they will grow, a profitable yield cannot be obtained and the oil-content rapidly decreases. The Chinese who import the bean from China state that the climate of Burma is not suitable for the production of Soy beans of good quality; hence they are forced to import them at a cost of somewhere about Rs. 20 per bag of three baskets (Burmese)." Address: 1. B.Sc., Deputy Director of Agriculture, Burma; 2. Asst. Agricultural Botanist, Burma.

2130. Togano, Meijiro. 1914. Saishin shôyu jôzô-ron [Principles of modern shoyu brewing]. Tokyo: Otani Shoten. 1040 p. Illust. 23 cm. [Jap; eng+]*

• ***Summary:*** This book is the same as the 1913 edition, except that the publisher is now Otani Shoten.

2131. Winkler, Gustav. 1914. Die Sojabohne: Aus einem Vortrage... gehalten in der Hauptversammlung der Gartenbau-Gesellschaft Frankfurt a.M. am 17. April 1914 [The soybean: From a lecture... presented at the main meeting of the Gardening Society of Frankfurt am Main, on 17 April 1914]. Frankfurt am Main: Fr. Honsack & Co. 30 p. 22 cm. On title page: Als Manuskript gedruckt (Printed as a manuscript). [3 ref. Ger]

• ***Summary:*** On the gray cover: *Die Sojabohne der Mandschurei* [The soybean of Manchuria]. Contents: Introduction. Sir Alexander Hosie, in his books about Manchuria, counts eight types of soybeans: Yellow soybeans (3 varieties), green soybeans (2 varieties), and black soybeans (3 varieties). The soybean plant. Condition / nature of the soil and the climate. Cultivation of soybeans. Soybeans can enrich the soil with nitrogen. Yield.

Utilization of the soybean: 1. In East-Asia. A. As foods: 1. Soy sauce. 2. The Chinese paste *Chiang* and its near relative Japanese miso. 3. Tou-fu or tofu (incl. firm tofu, tofu curds, tou-fu p'i or yuba, ch'ien-chang or pressed tofu, tung tou-fu or frozen tofu). B. Soybean meal or flour. C. Soybean meal for use as fertilizer or animal feed. D. Soybean oil. E. Lard substitute and margarine. F. Industrial uses such as lubricant and waterproofing agent. Soybean meal. 2. In Europe and the USA. Refined soybean oil used for salad oil, margarine. Utilization of soybean cake in Europe. Utilization of soybean oil in Europe (for making soap, above all). The soybean oil and cake industry in Manchuria.

This booklet begins: A year ago today I had the opportunity to speak about the soybean for the first time. What we knew and understood about it then was still very little. Except within botanical circles, even its name was completely unknown, even though in East Asia (China, Japan, India), for more than 1,000 years, the soybean has been cultivated and is near rice as the main food for more than 500 million people.

Note: Part of this lecture was based the following English-language article, translated into German by Werner Winkler (Gustav's son) in 1913: Shaw, Norman. 1911. "The soya bean of Manchuria." *Shanghai, Statistical Department, Inspectorate General of Customs. China Imperial Maritime Customs. II. Special Series* No. 31. 32 p. Address: Mainkur-Fechenheim [Frankfurt am Main, Germany].

2132. Eddington, Jane. 1915. The Tribune Cook Book: Chop suey. *Chicago Daily Tribune.* Jan. 11, p. 10.

• ***Summary:*** "English Worcestershire sauce has probably been made for a century at least. Its basis is the shoyu sauce, a very dark, sweetish sauce made in China and Japan of the soya bean. This bean is not well known and is only imported to serve with chop suey." There follows a recipe for Pork chop suey, which includes "two or three tablespoons of shoyu sauce."

2133. *New York Times.*1915. Latest customs rulings. Jan. 12. p. 14.

• ***Summary:*** "C.S. Bush & Co., Los Angeles [California] and other Pacific ports, were sustained in a claim that Japanese shoyu is an unenumerated article within the meaning of that term as used in the Tariff acts of 1909 and 1913... The action of Collector in assessing the shoyu at higher rates was reversed."

2134. *USDA Bureau of Plant Industry, Inventory.*1915. Seeds and plants imported by the Office of Foreign Seed and Plant Introduction during the period from October 1 to December 31, 1912. Nos. 54426 to 54676. No. 33. 60 p. Jan. 23.

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• ***Summary:*** Soy bean introductions: *Soja max* (L.) Piper. (*Glycine hispida* Moench.)

Note: This is the earliest document seen (Aug. 2011) in which the scientific name of the soybean is given as "*Soja max* (L.) Piper." This indicates that the name "*Soja max* (L.)" was first given by Dr. Charles V. Piper of the USDA. This name continued to be used in this publication and by the USDA Bureau of Plant Introduction until at least June 1940 (Inventory No. 126, p. 18).

"34643-34654. From Kioto [Kyoto], Japan. Presented by Miss E.R. Scidmore, Seoul, Chosen (Korea). Received November 29, 1912. Quoted notes by Miss Scidmore:

"34645. The soy bean has been listed in previous inventories as *Glycine hispida* Moench. Mr. C.V. Piper has recently shown (Journ. Amer. Soc. Agron., vol. 6, p. 75-84, 1914) that the earliest name given by Linnæus to this plant was *Phaseolus max*, that the generic name should be Soja, and that the correct name is therefore *Soja max* (L.) Piper.

"'*Kuro* [meaning "black" in Japanese]. Used for making sweet paste, but more usually boiled with a pinch of salt and a pinch of sugar added when the water is poured off or shoyu poured on and kept hot until saturated. Served as a relish or accompaniment to each meal and always found in lunch boxes sold at railway stations.'

"34654. '*Shiroi daiozu* [*daizu*] [meaning "white soybean" in Japanese]. Used for making tofu or bean curd.'

"34700/34702. From Shantung Province, China. Grown by Dr. William R. Faries, Coachella, Cal. [California]. Received December 17, 1912. Quoted notes by Dr. Faries:

"34702. 'The yellow bean with the hairy pods (soya) I sent to the department in December, 1894, I think, from Pacific Grove, California, as 'Manchuria beans,' and they were sent to Maine station. This would result in failure, I think. They did not do well in Orange County, California, but grow well here. They are fine for green shelled beans.'"

Note 2. This is the earliest English-language document seen (June 2009) that uses the term "green shelled beans" to refer to shelled green vegetable soybeans. Address: Washington, DC.

2135. Kinoshita, Asakichi. 1915. Nidan shikomi shôyu jôzô-hô yobi shiken no seiseki hôkoku [The double brewing of shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 55. p. 165-76. Jan. [Jap]
Address: Jozo Shikensho, Gishi.

2136. Togano, Meijiro. 1915. Shôyu, miso, tamari sokujô-hô [The quick process for brewing shoyu, miso or tamari]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 55. p. 121-51. Jan. [Jap]
Address: Jozo Shikensho, Gishi.

2137. Fruwirth, C. 1915. Die Sojabohne [Soybeans]. *Fuehlings Landwirtschaftliche Zeitung* 64(3/4):65-96. Feb. 1 and 15. [65 ref. Ger]

• ***Summary:*** Contents: Introduction (work in East Asia and Europe from 1905-10). History. Botanical aspects. Varieties. Breeding. Needs of the plant (incl. "heat units," *Wärmesumme*). Utilization (incl. in German *Tofu, Miso, Chiang, Schoyu* or *Sojatunke* (shoyu, p. 83), *Natto, vegetabilische Milch* (soymilk), soy sprouts). Measures and precautions in cultivating soybeans (incl. yields). The soybean as a crop in central Europe. Conclusion.

Note 1. On p. 83 the term "Sojas" is used to refer to soybeans

Note 2. This is the earliest German-language document seen (April 2012) that uses the term *Sojatunke* to refer to soy sauce.

In 1905 the Japanese made the first attempt to import soybeans from Manchuria to Europe, but it failed because they did not arrive in good condition. The repetition of the attempt in 1908, however, gave good results. Then imports of soybeans grew, followed by imports of soybean cake (*Sojabohnenkuchen*). Major importers today are England, France, Germany, Denmark, Italy, Belgium, Netherlands, Sweden. The high import duty hinders imports to Austria-Hungary.

Toward the end of the 1800s in Russia, Owinsky took early-ripening soybean varieties from China and Japan and requested the expansion of soybean cultivation. In 1899 in Kiev, Owinsky wrote the name of the soybean as Soja hispida praecox (p. 67). Owinsky in Derajne [Derazhne?] grew Podolie soybeans (p. 77). Sempolowsky in Derebzin, Russian Poland, also grew soybeans. European Russia gets soybeans overland (probably from Manchuria). Russia was one of the first countries to take an interest in growing soybeans after 1908. Russia now grows large amounts of soybeans in Podolia. In Germany, Prof. Kallo in Wiesbaden was a pioneer who recommended soybeans as an inexpensive food for the people. North America first started to import lots of soybeans as a source of oil because of a bad cottonseed harvest.

"Since the start of my teaching activities, I have had an interest in the soybean plant and have carried on my own investigations." In 1900 the author received 7 soybean varieties from L.V. Jurdiewicz from Deraznia in Podolia; these had been imported by Owinsky. In 1901 at Hohenheim he began to study the time needed for soybeans to mature; He found it ranged from 141 to 163 days. He continued this research at Hohenheim from 1901 to 1903, getting soybean seed yields of up to 1,560 kg/ha. From 1910 to 1914 he continued at Waldhof-Amstetten, with 5 varieties. The maturity range there was 112-166 days and the yields were up to 1,500 kg/ha (about 23 bushels/acre), but the yields of many varieties were low, about 300 to 500 kg/ha (4.5 to 7.5 bu/acre). Yields of soybean straw, however, were up to 3,600 kg/ha. Fruwirth uses three terms to refer to soybeans: (1) Die Sojabohne; (2) Die Soja; and (3) Sojas, as "Zuechtung von

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Sojas" or "Sojas, meist gemahlte." There are now a proposal to establish a joint stock company for growing soybeans in central Europe (probably in Germany), using big money. But it may not succeed because soybean yields in Germany and Austria are low. Seedsmen who sell soybeans commercially in 1915 include: Haage and Schmidt (Erfurt, Germany), Vilmorin Andrieux (Paris, France), Dammann & Co. (St. Giovanni at Tedaccio, near Naples, Italy), and Wood and Son (Richmond, Virginia, USA). The main soybean varieties sold by each of these companies are described in detail (p. 73-74).

Utilization (p. 82): Since soybeans are rich in protein and fat, they can be used as a good meat substitute. In Europe the use of soybeans for food is still very small. "In Europe, the first foods from soybeans were made in France, at Vallées near Asnieres: Flour, bread, and cakes for diabetics, and cheese. In Germany not long ago the Soyama-Works at Frankfurt am Main likewise began the production of such foods. Similar foods were also made in Romania. Soybeans sprouted in the dark yield a bitter-tasting salad. Production of vegetable milk started in France at 'Caséo Sojaine' at Vallées (Seine); and is now being studied by the Synthetic Milk Syndicate in England. Using the process developed by Fritz Goessel, this Syndicate made 100 liters of soymilk from 10 kg of ground soybeans at a factory at Liverpool." "It is in no way certain that soybeans will ever be widely used in human foods."

A fairly large amount of soybeans are ground for use as fodder. The main use is for oil extraction. Yet Haberlandt considered that since the soybean contained only about 18% fat (range: 13-22%), its use as a source of oil would not be economical. The main use of soy oil is in soaps, for which it is highly prized. It is also used in making paints as a partial substitute for linseed oil. The best quality may be used as food. In England soy oil is used for margarine production.

Conclusion: The soybean originated in central Asia and is now widely cultivated in China, Japan, Manchuria, and India. Its seeds are rich in protein and, unlike most other legumes, also rich in fat. The plant is used in its homeland mostly as a source of human foods and seasonings, made by fermentation; the oil is used mostly for industrial non-food purposes. In recent years soybean production has expanded significantly in the southern part of the United States. There it is used mainly as green fodder, hay, silage, and soil building. The main expansion of soybean cultivation in Europe has been in Italy, southern France, Hungary, and southern Russia. Good early varieties give yields of 1,100 to 1,300 kg/ha. A large expansion of soybean production in central Europe is possible only in southern Austria and Hungary, and maybe in a few other places where it is warm. But late-maturing soybeans may be grown for forage and silage in the cooler parts of Germany and Austria. Address: Prof., Dr., Wien (Vienna).

2138. *Times* (*London*). 1915. High Court of Justice. Chancery Division. The recipe for Worcestershire sauce. Lea and Perrins v. Barnitt. (Before Mr. Justice Eve). March 6. p. 3, col. 2.

• ***Summary:*** "The plaintiffs here were Messrs. Lea and Perrins, of Worcester, the manufacturers of Worcestershire sauce, and they claimed an injunction to restrain the defendant from using any recipe from which their sauce was manufactured."

Mr. Clayton, representing the plaintiff, "said that the defendant, Mr. W.D. Barnitt was the son of an executor of a late partner in the plaintiffs' firm. From correspondence with the defendant, the plaintiffs were led to believe that he had in his possession, and proposed to make use of, the recipe for the plaintiff's sauce. This recipe was a valuable trade secret. A writ was issued, and subsequently the defendant denied on affidavit that he had the recipe. The plaintiffs, however, were not satisfied..."

His Lordship, the judge, dismissed the action (case) with costs from the date of the receipt of the affidavit."

Note 1. The defendant was found not guilty. See also the court case of 26 July 1876 in which another defendant was also found not guilty.

Note 2. The late partner was Mr. Francis Barnitt, who died on 27 Feb. 1911. Address: [England].

2139. Kinoshita, Asakichi. 1915. Shôyu no kaon jôzô ni okeru moromi dennetsu no jôtai [On the heat conductivity in moromi (mash) during "heated brewing" of shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 58. p. 447-69. March. [Jap]
Address: Jozo Shikensho, Gishi.

2140. Nishimura, Torazô. 1915. Shôyu jôzô-yô en enshitsu hikaku shiken. II. [On common salt and its quality as a raw material for shoyu production. II.]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 57. p. 331-62. March. [Jap]
Address: Jozo Shikensho, Gishi.

2141. Nishimura, Torazô. 1915. Komugi, daizu ni kansuru 2, 3 no kenkyû [Several studies on wheat and soybeans for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 58. p. 425-45. March. [Jap]
Address: Jozo Shikensho, Gishi.

2142. Takahashi, Teizô; Yukawa, Matao. 1915. On the budding fungi of "shôyu-moromi" and "shôyu-koji." *J. of the College of Agriculture, Tokyo Imperial University* 5(3):227-61. March. [10 ref. Eng]

• ***Summary:*** "Up to now several studies on the budding fungi of 'shôyu-moromi' and 'shôyu-koji' have been published, but with regard to the botanical classification all these studies have very little merit, as we cannot derive any systematic classification from them."

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The author gathered 52 samples of moromi, aged for 2 to 24 months, from 11 shoyu factories in various parts of Japan. The factories were: 1. Shichirouemon Mogi's shoyu brewery at Noda, Shimousa province. 2. Saheiji Mogi's shoyu brewery at Noda, Shimousa prov. 3. Hamaguchi's shoyu brewery at Choshi, Shimousa prov. 4. G. Tanaka's shoyu brewery at Choshi, Shimousa prov. 5. J. Iwasaki's shoyu brewery at Choshi, Shimousa prov. 6. K. Nakamura's shoyu brewery at Goyu, Owari prov. 7. Asai shoyu brewery at Tatsuno, Harima prov. 8. Maruo shoyu brewery company at Tatsuno, Harima prov. 9. Kikuichi shoyu brewery company at Tatsuno, Harima prov. 10. Tatsuno shoyu brewery company at Tatsuno, Harima prov. 11. Kagawa shoyu brewery experimental station at Shôtoshima, Sanuki prov.

The following budding fungi were isolated from the samples: 1. *Zygosaccharomyces major* [a yeast] nov. spec. 2. *Zygosaccharomyces soja,* nov. spec. 3. *Zygosaccharomyces japonicus,* Saito. 4. *Zygosaccharomyces salsus,* nov. spec. 5. An asporogenic species of *Zygosaccharomyces* (?). 6. Two species of *Mycoderma.* 7. *Pichia alcoholophila,* Kloecker var. 8. Several species of *Torula.* 9. A species of *Monilia* [Note 1. The mold *Monilia sitophila* is used to make onchom in Indonesia].

"General conclusions: The occurrence of *Zygosaccharomyces* in 'shôyu'-mash furnishes us with a very interesting field for future researches in microbiology. The application of pure cultures of *Zygo. major* and *Zygo. soja* must naturally result in the future improvement of our 'shôyu.' The two species of *Zygosaccharomyces* i.e. *japonicus* and *salsus,* and the species of *Torula* and *Monilia* must be regarded as harmful or damaging fungi for 'shôyu', but their common property of decolorizing 'shôyu' may sometimes be utilized for the preparation of the colorless or 'shiro-shôyu', by taking the precaution of lessening the deteriorating effect of the fungus. The *Mycoderma* species in 'shôyu-koji' will be more appreciated in future on account of its energetic generation of a pleasant aroma."

Note 2. This is the earliest document seen (June 1999) that mentions the shoyu yeasts *Zygosaccharomyces major Zygosaccharomyces salsus.*

Note 3. This is the earliest English-language document seen (April 2012) that uses the term "shiro-shôyu" [regardless of hyphenation or diacritics] to refer to clear shoyu, which has the lightest color of the five basic types of Japanese shoyu. Actually, the color of shiro-shoyu resembles that of honey. Address: Tokyo, Japan.

2143. Yukawa, Matao. 1915. The fate of tyrosine in "shôyu-moromi". *J. of the College of Agriculture, Tokyo Imperial University* 5(3):291-99. March. [8 ref. Eng]

• ***Summary:*** When the proteins from soy beans and wheat are hydrolyzed by enzymes during the ripening process of shoyu moromi, a significant amount of tyrosine and a number of amino acids are always obtained. "Both tyrosol and tyrosamine were isolated from 'shôyu' and 'Tamari-shôyu' [Tamari shoyu], whilst p-hydroxyphenyllactic acid was never found in them. 'Shôyu' contains more tyrosol and less tyrosamine compared with 'Tamari-shôyu.' The occurrence of tyrosol in 'shôyu' or 'Tamari-shôyu' is partly or entirely due to the decomposition of tyrosine by the budding fungi dwelling in 'moromi.' The experimental results, according to which the cultured budding fungi have never produced tyrosamine from tyrosine, led me to presume that tyrosamine in 'shôyu' or 'Tamari' is certainly produced from tyrosine or its decomposed products formed by *Aspergillus Oryzae* or directly from protein matters by the actions of the same bacteria in 'moromi.'...

"In our country 'shôyu' or 'Tamari-shôyu' are used in cookery as a necessary seasoning on account of their content of amino-acids, carbohydrates, sodium chloride, etc. Moreover, they seem to act as stimulants. The occurrence of tyrosamine in 'shôyu' or 'Tamari-shôyu' makes me easily recognize this. According to the descriptions of Barger, Dale and Dixon, and Bickel and Pawlow p-hydroxyphenylethylamine (tyrosamine) causes a contraction of the blood vessels and a rising of blood pressure. Judging from the pharmacological significance of this compound, the consumer of 'shôyu' or 'Tamari-shôyu' receives a moderate stimulation on his blood circulation."

Note: This is the earliest English-language document seen (April 2012) that contains the term "tamari shôyu" (or "tamari shoyu"). Address: Tokyo Imperial Univ.

2144. Schieber, W. 1915. Die Sojabohne und deren volkswirtschaftliche Bedeutung als Nahrungsmittel [The soybean and its economic significance as a food]. *Oesterreichische Chemiker-Zeitung (Vienna)* 18(10):85-86. May 15. Excerpts from a lecture to the Austrian Chemical Society, 24 April 1915. [1 ref. Ger]

• ***Summary:*** Includes a summary of information from Li Yu-ying (1912) about foods and food adjuncts made from the soybean: Soymilk, tofu (*Sojakäse*), soy flour (*Sojamehl*), soya bread (*Sojabrot*), soya confections (*Sojakonfekt*), soy chocolate (*Sojaschokolade*), soy coffee (*Sojaskaffee*).

Japanese foods from fermented soybeans: Natto (*Feste Würzen*), miso (*Pasten*), soy sauce (*Saucen*). Plus original nutritional analyses. Address: Austria.

2145. Brewer, Lucile; Canon, Helen. 1915. Beans and similar vegetables as food. *Cornell Reading Courses (New York State College of Agriculture) Food Series* 4(89):181-200. Food Series No. 16. June 1. [20 ref]

• ***Summary:*** The section titled "Long and extensive use of legumes as food" states (p. 182): "The cowpea and the soy bean have only within recent years come into common use in this country." "The first reference to the soy bean in American literature was in 1829; it had been grown in the

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botanical garden at Cambridge, Massachusetts and was referred to as 'a luxury, affording the well-known sauce, soy, which at this time is only prepared in China and Japan.' About twenty-five years later [1854], seed of the soy bean, or Japan pea as it then was called, was brought from Japan to California, and thence to Illinois and Ohio. Within the last twenty-five years, it has come to be a crop of great economic importance in the United States."

"The peanut, properly classed with the nuts, is thought to be a native of tropical America. It has long been grown in Africa, the East Indies, China, and Japan. It is said that in the seventeenth century it had become so important an article of food in Africa that the slave dealers loaded their vessels with it as food for their captives. Since the Civil War, the peanut has become important in the Southern States as a human food, a forage crop, and a fertilizer."

The section titled "Digestibility" (p. 184) states: "In Japan the soy bean is grown almost entirely for human food. According to Mr. Oshima, next to rice in the Japanese diet are the legumes, which are universally used.

In the section on "The cooking of legumes" we read (p. 188) that the use of a small amount of baking soda (sodium bicarbonate; ¼ teaspoon to 1 quart of water) serves to loosen the skins of legumes, "to render their protein more digestible, and to soften water of average hardness..." "Soft water, either distilled or rain water, is the best in which to soak and cook the legumes. Hard water interferes with their becoming soft and also with their digestibility. Hardness of water caused by the carbonate of lime or magnesium, may be remedied for use in the cooking of legumes by boiling the water, pouring it from the sediment, and adding a small amount of soda; when the hardness is caused by the sulfate of lime of magnesium, boiling has no effect, but soda may improve it for this purpose.

This publication contains many recipes for "beans" but without any specific reference to soy beans in a recipe.

2146. Schieber, W. 1915. Die Sojabohne und deren volkswirtschaftliche Bedeutung als Nahrunsmittel [The soybean and its economic significance as a food]. *Seifensieder-Zeitung* 42(22):471-72. June 2. (Chem. Abst. 10:1558). [Ger]

• ***Summary:*** Descriptions and nutritional analyses are given of a number of different food products prepared from the unfermented and the fermented soy bean. Unfermented: soya milk, tofu (*Sojakäse*), soy flour ("because of its composition it can be recommended as a first class food for diabetics and vegetarians"), soya bread, soya confections (resembling marzipan), soya chocolate, soya coffee, soy grits, whole dry soybeans, and soy sprouts. Fermented: Solid seasonings such as Japanese natto, pastes such as Japanese miso, sauces (in Japan each year 10,000 factories make 700 million liters of soy sauce), a new German fermented soyfood product is made by a secret process; its contains 45% protein, 6% nutritional salts, and about 2% lecithin. Address: Dr.

2147. Nishimura, Torazô. 1915. Shôyu kôji oyobi kôji-kin ni kansuru bubun-teki kenkyû [Limited research on shoyu koji and the koji mold *Aspergillus oryzae*]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 60. p. 1-9. June. [Jap]
Address: Jozo Shikensho, Gishi.

2148. *New York Times*.1915. Latest customs rulings. July 15. p. 14.

• ***Summary:*** "Importers of Japanese shoyu and nigari [a traditional Japanese tofu coagulant] were sustained yesterday by the Board of General Appraisers in the claim for lower duty on these products." A list of the many protesting importers is given.

Paragraph 606 specifies the duty on "soya beans."

2149. *Chamber of Commerce Journal* (*London*).1915. Trade products of the British Empire. Special Supplement. July. p. 1-54.

• ***Summary:*** "The Special Supplement to the London *Chamber of Commerce Journal*, dealing with the 'Trade Products of the Empire,' is full of useful information and statistics: The section on "Oilseed cakes" (p. 7) shows the tonnage and value of imports to the United Kingdom of cotton-seed cake (mainly from the USA), linseed cake (mainly from India and Russia), and rape-seed (mainly from Russia) from various countries in 1913 and 1914. Soybean cake is not mentioned.

The section titled "Preserved ginger, soy, tamarinds, chutney" (p. 14) states: "The value of imports of soy in 1914 was £9,416, of which £8,629 was the value of the imports from Hong Kong."

The section on "Vegetable oils and oilseeds" (p. 17-22) begins: "The fact that liquid oils can now be converted, by the process known as hydrogenation, into solid fats, and used for the manufacture of butter substitute, is of great importance to the trade in vegetable oils and oil-seeds. The sales of butter substitutes, which for several years past has been very large in continental countries, has increased enormously in this country within the last year or two...." [i.e., during Word War I].

Many oils can be used to make butter substitute including "coconut oil, cottonseed oil, palm oil, palm kernel oil, ground nut oil, sesamum seed oil, mowrah-seed fat, &c." Import statistics are also given on these and other oilseeds and oils (such as olive oil, poppy seed and oil, rapeseed and rape oil {colza oil}, shea nuts and shea butter, sunflower seed, tea seed oil {obtained from the seed of *Camellia Sasanqua*, a near relative of the tea plant}).

Ground-nut oil is largely used, especially on the Continent. Efforts are being made to establish the crushing of ground-nuts on a much larger scale, but this is being

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hindered by the War.

The section titled "Soya beans" (p. 22) contains a table that shows the tonnage and value of soya bean imports to the United Kingdom in 1913 and 1914. The main source both years was Russia (perhaps ia Vladivostok), followed by China, with small amounts from Japan and other countries. Total tonnage decreased from 76,452 in 1913 to 71,161 in 1914 [in part because of the war].

The section continues: "The soya bean of Manchuria has grown in commercial importance during the last few years in a remarkable manner. In the East it has long been an important article of food. In Europe the oil pressed from the bean is used by manufacturers of margarine, soap and candles, in the manufacture of varnish and printing ink, and for waterproofing umbrellas. Soya bean meal is also stated to be used in making bread on the Continent. Beancake has long been used as a fertilizer and for feeding stock.

"Experiments in growing soya beans have been made in practically every British colony, but it seems doubtful whether the product could be profitably grown for export in competition with the Manchurian beans, which are raised under ideal climactic conditions, and by the cheapest possible labour."

2150. *Washington Post.* 1915. 'Soy' bean as war food: German dieticians experiment with it in many prison camps. Product used in Worcestershire sauce is declared by many to be highly nourishing. Aug. 1. p. M8.
• ***Summary:*** "Berlin, July 31.–Protracted experiments with the Japanese 'soy' or 'soja' bean, out of which, among other things, Worcestershire sauce is made, are being conducted with a view to determine whether this vegetable, which can be and is raised in Germany, cannot be used in the many prison camps."

"In the Far East the soja bean is in great demand, both for human and animal food products, and also for the oil it contains. Next to rice it forms one of the principal articles of the food supply in some Eastern countries, especially when combined with cereals and salt. It also plays an important part in sauces and spices. The milk from this bean approximates ordinary milk in nutritive value, and cheese can be made from it.

"When combined with 30 or 40 per cent white flour, the meal of the soja bean lends itself to a tasty and nourishing bread which has been found to be especially good for diabetics because of the high percentage of albumen and fat contained. The roasted soja beans also make a good substitute for coffee. The soja plant forms a good fodder for cattle."

2151. *Los Angeles Times.* 1915. Alliance–Japanese beans for Germans: The soy and soja said to be valuable foods. Experiments are to be made to determine if they can be used in the prison camps–together they yield flour, meal, milk, cheese, coffee and fodder. Aug. 8. p. III25.
• ***Summary:*** This article, via A.P. [Associated Press] foreign correspondence, is very similar to one published a week earlier (Aug. 1) in the *Washington Post* titled "'Soy' bean as war food: German dieticians experiment with it in many prison camps." (p. M8).

The last sentence in the article, however, is new: "Exhaustive experiments with the soja bean have already been made at the agricultural station of the University of Wisconsin, all tending to bear out, it is said, the contention of German dieticians in favor of the bean."

2152. Arita, Hachirô. 1915. Honoruru ni okeru shôyu juyô jôkyô ni kansuru ken [The demand for Japanese shoyu in Honolulu]. Honolulu. 11 p. Aug. 12. Handwritten unpublished manuscript. [Jap; eng]
• ***Summary:*** This is a market report from Mr. Arita at the Japanese consulate in Honolulu, to Mr. Shigenobu Okuma at the Japanese Ministry of Foreign Affairs.

Shoyu imports from Japan are 80,807 taru (1,309 million liters). Production by 4 Japanese companies in Hawaii is about 4,200 koku (756,000 liters). Domestic production is up by 20% over last year. Address: Japanese Consulate, Honolulu, Hawaii.

2153. Eddington, Jane. 1915. The Tribune Cook Book: Perennial chop suey. *Chicago Daily Tribune.* Oct. 29. p. 14.
• ***Summary:*** "A chop suey is a Chinese hash which may be one of many combinations of meat and vegetables. The only certain ingredient in all of these is the soy sauce–also spelled shoyu–and rice. Expensive chop sueys are made with chicken and imported Chinese vegetables. Inexpensive chop sueys almost always have pork as a basis."

A recipe for "Pork suey" is given. "If cooked right soy sauce not needed to color, if the flavor is not liked."

2154. Hawaii hôjin katsuyaku-shi, Meiji 41-42 [Japanese who play an active role in Hawaii, 1908-09]. 1915. [Jap]*
• ***Summary:*** In the section on soy sauce brewers, it lists: 1. Fukushima Shoyu Jozo-sho. 2. Terada Shoyu Jozo-sho, founded by Tajiro Terada, as a brewer of Kikko-ki brand soy sauce, located on King St., Palawa, Honolulu. 3. Hawaii Shoyu K.K. as a soy sauce brewer on King St., Palawa, Honolulu. The ad on page 39 states that in 1915 this company produced 166,600 gallons of shoyu.

2155. Tsujimoto, Mitsumaru; Ueno, Takeo. 1915. Shôyu no abura oyobi seishû no abura ni tsuite [On "soy" and "saké" oils]. *Kogyo Kagaku Zasshi (J. of Chemical Industry, Japan)* 18(212):1072-76. Oct. [Jap]
• ***Summary:*** "Soy" oil is a mixture of soy bean and wheat oils obtained as a by-product in the brewing of soy (i.e. soy sauce, yield 0.25-0.3% by volume). It is a dark red to brown liquid or semi-solid mass with an aromatic odor of soy.

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"Saké" oil consists chiefly of rice oil and is found floating on the surface after the fermentation of saké (yield 0.01-0.02% by volume). It is an orange-yellow liquid with an odor of saké. Samples of soy oil (2 samples) and saké oil (values in parentheses) had the following characteristics: Specific gravity at 15°C, 0.9000, 0.9835, and (0.9031); solidification point, -5°C, -13°C, and (turbid at 0°C); acid value, 59.24, 55.03, and (22.56); saponification value, 184.12, 182.81, and (179.11); iodine value (Wijs), 127.79, 133.22, and (101.56); refractive index at 20°C, 1.4650, 1.4633, and (1.4660); % unsaponifiable matter, 2.88, 2.72, and (-).

Soy oil, which is best refined by reduction with zinc dust and sulfuric acid, followed by treatment with Kambara earth, is a commercial product used in the manufacture of low-grade soaps. Saké oil is not yet a commercial article. Address: Kôgaku hakase, Japan.

2156. *USDA Bureau of Plant Industry, Inventory.*1915. Seeds and plants imported by the Office of Foreign Seed and Plant Introduction during the period from April 1 to June 30, 1913. Nos. 35136 to 35666. No. 35. 69 p. Nov. 9.

• ***Summary:*** Soy bean introductions: *Soja max* (L.) Piper. (*Glycine hispida* Maxim.)

"35600. Grown at the Plant Introduction Field Station, Rockville, Maryland, under Yarrow No. 288. Original seed received from Pomona College, Claremont, California, in 1911.

'It makes a remarkable growth of vines and has extremely large root nodules. Two bushels of seed were secured last year, and this has all been planted this spring.' (J.M. Rankin.)."

"35601/35657. Collected by Mr. Frank N. Meyer, agricultural explorer. Received June 14, 1913. Seeds of the following; quoted notes by Mr. Meyer:

"35622-28.

"35622. '(Tsinan, Shantung, China, No. 1822a. April 10, 1913.) A small black soy bean locally used to produce soy bean sprouts. Chinese name *Hsiao ghae doh.*' Note: This is the earliest English-language document seen (Feb. 2000) that uses the term "soy bean sprouts" to refer to these sprouts.

"35623. '(Tsinan, Shantung, China, No. 1823a. April 10, 1913.) A soy bean which is black outside and green inside. Used boiled when half sprouted as a human food. Chinese name *Lu li ghae doh.*'

"35624. '(Tsinan, Shantung, China, No. 1824a. April 10, 1913.) A soy bean which is black outside and yellow inside. Used boiled when sprouted, also employed in soy-bean sauce production. Chinese name *Tau hsing ghae doh.*'

"35625. '(Tsinan, Shantung, China, No. 1825a. April 10, 1913.) A good variety of yellow soy bean used in the manufacture of sauce, bean curd, bean oil, for sprouts, etc. Chinese name *Huang doh.*'

"35626. '(Tsinan, Shantung, China, No. 1826a. April 10, 1913.) A large green soy bean, considered locally a fine variety. Used like the preceding one (S.P.I. No. 35625), and besides that it is also eaten roasted and salted as an appetizer before meals. Chinese name *Tsing doh.*'

"35627. '(Tientsin, China, No. 1827a. April 16, 1913.) A large green variety of soybean used like the preceding number (S.P.I. No. 35626). Chinese name *Ta tsing doh.*'

"35628. '(Tientsin, China, No. 1828a. April 16, 1913.) A rare variety of soy bean, being of brown color. Used boiled in soups. Chinese name *Ta tze doh.*'" Address: Washington, DC.

2157. *Christian Science Monitor.*1915. The markets of Chinatown. Dec. 22, p. 6.

• ***Summary:*** "Against the wall [of Chinese food shops] there is usually an array of kegs of odd workmanship; these are to hold the Soy sauce that is used in chop suey, preserved ginger, sugared fish and other dainties."

2158. *USDA Bureau of Plant Industry, Inventory.*1915. Seeds and plants imported during the period from July 1 to September 30, 1913. Nos. 35667 to 36258. No. 36. 74 p. Dec. 23.

• ***Summary:*** Soy bean introductions: *Soja max* (L.) Piper. (*Glycine hispida* Maxim.)

"36073-36086. From China. Collected by Mr. Frank N. Meyer, Agricultural Explorer for the Department of Agriculture. Received at the Plant Introduction Field Station, Chico, Cal., August 13, 1913. Quoted notes by Mr. Meyer, except as indicated.

"36079. '(No. 1864a. San Tun Ying, Chihli Province, China, May 30, 1913.) A local variety of soy bean of a dull-yellow color, used in the making of bean curd and bean sauce. Requires only a short season to mature. Chinese name *Huang tou.*'

"36107/36121. From China. Collected by Mr. Frank N. Meyer, Agricultural Explorer for the Department of Agriculture. Received September 9, 1913. Quoted notes by Mr. Meyer, except as indicated.

"36116. '(No. 1882. San Tung Ying, Chihli Province, China, May 31, 1913.) A rare variety of soy bean, of an olive color, found among seeds of the ordinary yellow variety. Chinese name *Ma chan tou.*'" Address: Washington, DC.

2159. Tsujimoto, M.; Ueno, T. 1915. "Soy" and "saké" oils (Abstract). *J. of the Society of Chemical Industry (London)* 34(24):1259. Dec. 31 [1 ref]

• ***Summary:*** An English-language summary of the following Japanese-language article: Tsujimoto, Mitsumaru; Ueno, Takeo. 1915. "Shôyu no abura oyobi seishû no abura ni tsuite [On 'soy' and 'saké' oils]." *Kogyo Kagaku Zasshi (J. of Chemical Industry, Japan)* 18(212):1072-76. Oct. Address: [Japan].

2160. Ito, Teiji. 1915. Ban shôyu seizô-hô no kenkyû

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[Studies on making No. 2 shoyu (ban-shoyu) using shoyu presscakes]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 10(8):23-36; 10(9):15-24. [Jap]
• ***Summary:*** Ban-shoyu is that made by refermenting the shoyu press cakes after it they have been pressed once. It is a term like "ban-cha" or No. 2 tea. Ban is an abbreviation for "ni-ban" or "number 2."

2161. Kinoshita, Asakichi. 1915. Nidan shikomi shôyu jôzô-hô no gainen [The concept of the two-step method of brewing shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 10(1):24-29. [Jap]

2162. Kinoshita, Asakichi; Kishimoto, M. 1915. Shôyu no kaon jôzô ni okeru moromi dennetsu no jôtai [On the heat conductivity in moromi during "heated brewing" of shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 10(3):25-36. [Jap]

2163. Kinoshita, Asakichi. 1915. Kenkyû-chû no shôyu jôzô-hô [Research on shoyu brewing]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 10(8):37-39. [Jap]

2164. Nishimura, Torazô. 1915. Shina shôyu moromi oyobi shôyu no futsû seibun bunseki kekka [Analysis of the typical composition of Chinese moromi and shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 10(5):1-9. [Jap]

2165. Nishimura, Torazô. 1915. Kôji-kin no chisso yôgen to shite "amino" san o kyôkyû suru baai to "peputon" a kyokyû suru baai to ni okeru "anmonia" seisei jôtai [Formation of ammonia when amino acid or peptone is used as a nitrogen source for koji molds]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 10(7):33-37. [Jap]

2166. Togano, Meijiro. 1915. Tamari kôji no kairyô shiken [A test for improving tamari koji]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 10(9):1-8. [Jap]

2167. Hakurankwai Kyokwai (Societe des Expositions). 1915. Japan and her exhibits: At the Panama-Pacific International Exhibition, 1915. Tokyo: Hakurankwai Kyokwai. Printed by the Japan Magazine Co. 373 p. See p. 102, 103, 115, 241-45, 248-55. Illust. No index. 19 cm. [Eng]
• ***Summary:*** This exhibition was held in San Francisco, in the Marina district, to celebrate the city's recovery from the 1906 earthquake. The grounds were built on landfill consisting of rubble from the quake. As of 1989, the only remaining building is the Palace of Fine Arts.

The section in this book titled "Vegetable food products and agricultural seeds" (p. 241) lists the name, address, and products of companies that process soybeans. Eight companies that make "Soy bean oil" or "Bean oil" as their main product are listed. The Japanese word *daizu / daidzu* means "soybean(s)": Daidzu Hyohaku K.K. (The Soybean bleaching Co., Nagoya), Hirano Daizu Kogyo K.K. (Hyogo-ken), Torajiro Inoue (Kobe), Kwanto Totoku-fu (Kwantung Government; South Manchurian Railway Co., Dairen and Port Arthur; Soy beans and soy-bean oil), Saburo Oguri (Aichi-ken), Okuda Shoten Sei-hi-jo (Fertilizer Manufactory, Aichi-ken; Soy bean oil), Suginuma Shokwai (Chita-gun, Sichi-ken), Sadajiro Yoshiwara (Okawa-machi, Higashi-ku, Osaka; Rape seed oil and bean oil). Note 1. The only other oil widely made in Japan seems to be rape seed oil.

One association involved with soybeans is the Hokkaido Nokwai (Hokkaido Agricultural Assoc.). It was established in 1900. Production of "beans" is as follows: Daifuku 11,880,000 kin, Nagauzura 9,700,000 kin, Maru-uzura 5,790,000, Kintoki [azuki] 2,050,000 kin, Otenashi-Kotenashi 4,000,000 kin (p. 241).

Note 2. This is the earliest English-language document seen (March 2006) that uses the word "Kintoki" to refer to a type of azuki bean.

Page 245 lists the Jozo Shiken (Brewed Products Experiment Station), Tokyo.

The section titled "Sugar and Confectionery, Condiments and Relishes; Nuts and Fruit Foods" (p. 248-54) lists 103 manufacturers of "Soy" and/or "Tamari." These two products comprise most of the listings.

The ad section at the back has a full-page ad (p. 9) titled: "The standard of Japan shoyu: Soy sauce (see next page). Representing eight largest breweries at Choshi and Noda, Chiba-ken, the centre of the industry in the empire. The annual output is estimated at 40,000,000 gallons." Brands with logos [name of owners in parentheses]: Yamaju (Jujiro Iwazaki), Kikkoman (Saheiji Mogi), Minakami (Fusagoro Mogi), Kushigata (Shichizaemon Mogi), Jojyu (Hyozaemon Takanashi), Yamasa (Gihei Hamaguchi), Higeta (Choshi Shoyu Goshi Kaisha), and Kihaku (Shichiroemon Mogi). These eight brands are a guarantee of quality. They dominate the Shoyu Market. Do not miss seeing the exhibits (Palace of Food Products).

On the next page (p. 10) is an ad titled "Okayama-ken Shoyu (Soy Sauce)!!! The climate of Okayama-ken is best suited for the brewing of Soy of an excellent quality. The quantity produced amounts to 250,000 koku [11,900,000 gallons; there are 47.6 gallons/koku] a year. Soy is rich in nitrogenous nutriments and consequently is a table sauce par excellence. The exhibitors of the Soy produced in Okayama-Ken are as follows: Keijiro Kondo (output 16,614 koku), Entaro Oka (3,399), Kurajiro Koyama (4,938), Kanaichi Shoyu Gomei Co. (4,500), Jotaro Takimoto (8,049), Motomasu Ono (3,804), and Ihachiro Kuyama (2,859)." Address: Tokyo, Japan.

2168. Hopkins, Albert Allis, ed. 1915. Scientific American cyclopedia of formulas: partly based upon the twenty-eighth

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THE STANDARD

OF

JAPAN SHOYU

SOY SAUCE

Representing EIGHT LARGEST BREWERIES at Choshi and Noda, Chibaken, the centre of the industry in the empire.

The annual output is estimated 40,000,000 gallons.

BRANDS

YAMAJU



Jujiro Iwazaki

KIKKOMAN



Saheiji Mogi

MINAKAMI



Fusagoro Mogi

KUSHIGATA



Shichizaemon Mogi

JOJYU



Hyozaemon Takanashi

YAMASA



Gihei Hamaguchi

HIGETA



Choshi Shoyu Goshi Kaisha

KIHAKU



Shichiroemon Mogi

These eight brands are a guarantee of quality.
They denominate the Shoyu Market.

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edition of *Scientific American Cyclopedia of Receipts, Notes and Queries*. 15,000 formulas. New York, NY: Munn & Co. vii + 1077 p. See p. 752, 772, 768. Illust. Index.
• ***Summary:*** In Chapter 21, titled "Preserving, and canning, condiments, etc. (p. 735+) is a section on "Catsups" (p. 752) which includes: Anchovy catsup. Cucumber catsup. Horseradish catsup. Mushroom catsup. Soy, Indian. Soy, Japanese. Tomato catsup. Walnut catsup.

"Soy, Indian.–This sauce is usually bought ready prepared. It is imported from China and Japan, where it is made from a small bean, the produce of Dolichos Soja. Japanese soy is usually preferred to that of China, because it is free from the sweet treacly flavor which distinguishes the latter. When well made it has a good brown color, thick consistency, and is clear.

"Soy, Japanese.–An equal weight of beans, coarse barley meal and salt. Wash the beans well, boil them in water until tender, and pound them in a mortar, adding the barley meal gradually. Put the mass into an earthenware bowl, cover with a cloth, and let it stand in a warm place for several days, until it is sufficiently fermented, but not moldy. To each pound of salt add 4 pt. of water, stir until the salt is dissolved, then stir into the fermented mass. Keep the bowl or pan closely covered for 3 months, during which time it must be daily stirred for at least 1 hour. At the end of this time strain through fine cloths, pressing the insoluble portion well, in order to extract as much of the moisture as possible. Let it stand again until quite clear, then drain off and bottle for use. In making Chinese soy, the liquid extracted is boiled and reboiled with a varying amount of sugar, mace, ginger and pepper until it acquires the desired consistency."

On pages 771-72 is a section on "Vinegars" are two formulas for "Camp vinegar." The first calls for 3 tablespoonfuls of soy [sauce] (plus 1½ pints walnut catsup); the second calls for 4 oz. soy sauce.

On pages 767-68 is a section on "Sauces and salad dressings," which begins with home-scale recipes for various sauces including: Anchovy butter. Anchovy essence. Anchovy paste. Anchovy sauce. Fish [sauce]. Gravies. Harvey sauce. Herb sauce. Soy [sauce]. Tomato sauce. Vegetable butters. Worcestershire sauce.

The formula for Harvey sauce begins: "Good vinegar, 1 qt.; anchovies, 3; soy, 1 tablespoonful; walnut catsup, 1 tablespoonful; finely chopped shallot,..."

The formula for "Soy" states: "Genuine soy sauce is a species of thick black sauce, imported from China, prepared with white haricots, wheat flour, salt and water; but a spurious kind is made in England as follows: Seeds of dolichos soja (peas or kidney beans may be used for them), 1 gal.; boil till soft; add bruised wheat, 1 gal.; keep in a warm place 24 hours; then add common salt, 1 gal.; water, 2 gal.; put the whole thing into a stone jar, bung it up for 2 or three months, shaking it very frequently; then press out the liquor; the residuum may be treated afresh with water and salt for soy of an inferior quality."

Likewise: "Worcestershire Sauce.–There are many concerns, we believe, who make a sauce which they call Worcestershire. That made in England by Lea & Perrin is considered the best and many have tried to imitate it, but with indifferent success. Of the many formulas appearing in print, the following will serve as an example: Vinegar, 1 qt.; powdered pimento, 2 dr.; powdered cloves, 1 dr.; powdered black pepper, 1 dr.; powdered mustard, 2 oz.; powdered Jamaica ginger, 1 dr.; common salt, 2 oz.; shallots, 2 oz.; tamarinds, 4 oz.; sherry wine, 1 pt.; curry powder, 1 oz.; capsicum, 1 dr. Mix all together, simmer for 1 hour, and strain. Let the whole stand for a week, strain it, and fill in bottles. Worcestershire sauce is never quite clear; straining to remove the coarser particles is all that is necessary."

Note: The publication date printed on the title page is 1915, however the copyright for this edition is 1910. Address: New York, Query Editor of the "Scientific American".

2169. *Japan Year Book*.1915. Soy. p. 402. [Eng]
• ***Summary:*** "The collapse of the short-lived Nippon Soy Co., started in 1907 near Osaka with 2,500,000 yen paid up, has dampened the cause of scientific process of soy brewing." Address: Japan.

2170. Japan year book. 1915. Tokyo, Japan: Y. Takenob and G. Takeda (The Japan Year Book Office). See p. 717. [Eng]
• ***Summary:*** In the chapter on "Chosen (Korea): Agriculture," under "Barley and Soja Bean" (p. 717) it is stated that "Soja and other beans are exported chiefly to Japan for manufacturing soy [sauce]. Acreage of soja beans in Korea is 553,077 *cho* and the yield 3,345,472 *koku*." Note: 1 *cho* = 2.45 acres and 1 *koku* = 47.6 gallons or about 6 gallons. Thus, in English units, in Korea 1,355,039 acres produce 20,072,832 bushels, for a yield of 14.8 bu/acre.

Note: This is the earliest document seen (Jan. 2005) that gives soybean production or area statistics for Korea (which has been a "province" of Japan since 1910). Address: Japan.

2171. Japan year book. 1915. Tokyo, Japan: Y. Takenob and G. Takeda (The Japan Year Book Office). 789 p. See p. 349, 401-02, 436, 714, 716-17, 730, 743. [Eng]
• ***Summary:*** In chapter 16, "Agriculture" (p. 340-60) is a table titled "Beans, sweet potato and potato (p. 349) which gives "Soy bean" production data in Japan for 1911-1913 (in *koku*). The next paragraph contains information on soy [sauce], *miso*, and *tofu* similar to that in the 1913 and 1914 year books.

In chapter 20, "Industry," is a paragraph (p. 402) on the patented Suzuki process for brewing soy [sauce] similar to that in the 1913 year book. Following that is a small table with production data for Soy [sauce] (in koku) for 1912-13, 1913-14 and 1914-15–"Year (March to Feb.).

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In Chapter 22, "Trade" is a table (p. 436) titled "Prices of principal commodities in Japan," which includes prices for 1911-1913 in yen for soy beans (per *koku*), soy [sauce] (per *koku*), and miso (per *kwan*).

In chapter 35, "Chosen (Korea)," under the heading Foreign Trade," is a table (p. 714) on "Staple exports" (in 1,000 yen) which has data on "Beans and peas" for 1910-1914. Under the heading "Agriculture" (p. 716) is a paragraph (p. 717) titled "Barley and soja bean," which gives acreage and yield for soja (year not specified) with the value (in yen) of exports to Japan in 1912.

In Chapter 36, "Taiwan (Formosa)," under the heading "Agriculture," a table (p. 730) titled "Agricultural products" has production data on "Beans and peas" (in 1,000 *koku*) for 1912-1913.

In Chapter 38, "South Manchuria," is a paragraph (p. 743) titled "The soya bean" which has information on South Manchuria's soya bean yield, [soya] bean-cake output, amount exported for specific years, and production at various milling centres (almost same wording as 1914 Year Book). Address: Japan.

2172. Lindlahr, Anna; Lindlahr, Henry. 1915. The nature cure cook book and A B C of natural dietetics. 1st ed. Chicago, Illinois: The Nature Cure Publishing Co. xii + 469 p. No index. 21 cm. On cover: Nature Cure Series. Vol. II.
• ***Summary:*** This book is divided into two parts. Part I "Nature Cure Cook Book," is a vegetarian cookbook. Part II is "A B C of natural dietetics." Contents: Part I. Key to our system of recipe marking. Examples of Combination salad, Our health bread, Milk. What constitutes a natural diet. Diet prescriptions made easy for the doctor. A timely warning. Uncooked food vs. cooked food. Cause and cure of beri-beri. Vitamines. Dangers of extreme raw food diet. Raw foods and their medicinal properties. Medicinal vegetables. Simple vegetable salads and dressings. Soups. Salads. Croquettes (baking or roasting is better than frying). Vegetables (the recipe for "Chop Suey (2)," p. 209, calls for 1 can protose. "Add Chinese sauce (Soy) if desired"). Desserts (many recipes use 1 cup sugar). Cereal foods (incl. Graham flour, whole wheat flour, Protose). Dr. Lindlahr's health bread (p. 277-78). Leguminous foods (dangerous because they contain an abundance of "the negative, acid-forming proteid and starchy elements," p. 284). Rice, macaroni, spaghetti. Dairy products ("There is something in animal food which, we cannot secure from purely vegetable food,–and that is the animal (magnetic) life element, or, as we usually call it, the animal magnetism." Dairy products are good, but meat is bad). Eggs (use in moderation; best eaten raw, soft boiled, or poached. "Prolonged boiling or frying coagulates the albumin, making it hard and tough and therefore less digestible"). Sandwiches (incl. "Peanut butter sandwiches"). Beverages. Sample menus.

Part II, titled "A B C of Natural Dietetics," with 13 chapters, is about the benefits of a vegetarian diet and lifestyle. Chapters include: 1. Two sides to every question: Why we favor a vegetarian diet. Why we sometimes deviate from a strictly vegetarian diet. What are the indications of meat requirement? Why vegetarianism will triumph in the future. 2. Is it worth while to pay attention to diet? What is natural food? 3. For what do we eat and drink? Is vital force derived from food, medicines and tonics? "Vital force" active after death in spiritual body. 9. The magnetic properties of foods. 10. Polarity of foods and medicines. 11. Classification of foods according to the electro-magnetic qualities (animal foods are positive, legumes are very negative).

"This cookbook is based on the system of dietetics originated by the German School of Nature Cure. Drs. Lahmann, Hensel and others found a solution to the problem of scientific food selection which stands every test of theoretical inquiry and of practical application." "We have divided all food materials into the following five groups: Group I (St.) Starches. Group II (S.) Sugars, dextrine. Group III (F.) Fats, oils. Group IV (P.) Proteins, albumin, gluten, myosin, hemoglobin, etc. Group V (M.) Positive mineral elements: Potassium, sodium, iron, lime, magnesium, manganese, lithium, etc." (p. 5)

"Every recipe in this cook book, underneath its title, will be marked in such a way as to show the various food elements which it contains, in the order of their amount and importance."

A natural diet "must conform in its component elements to the chemical composition of milk or red (arterial) blood." Thus half of the food materials must be of Group V (Mineral Elements) and half from groups I through IV (p. 6).

"A timely warning:... Do not become finical or hypochondriacal over this matter of food selection and combination" (p. 9). The authors generally recommend uncooked or raw food–but not exclusively. "Nature did not create man with a cookstove by his side. Man existed on this planet for ages before he knew how to start a fire..." (p. 11).

"A mixed cooked and raw food diet, with liberal allowances of the dairy products, seems to agree best with the majority of our friends" [patients]. "We recommend, and serve in our Sanitarium regimen, one meal daily consisting of raw foods only. All the juicy fruits and vegetables that can be relished and digested in the natural state are not only excellent foods, but the best medicines for the human body" (p. 16-17).

Gluten flour and Protose are discussed on p. 272-733.

The red blood [in the arteries] carries into the body the various nutrients, and comes back laden with poisonous gases, broken down cell material, and devitalized food products (wastes). This debris is carried in the venous blood to the various organs of depuration and excreted in the form of feces, urine, mucus, perspiration, etc... The meat-eater, therefore, has to eliminate, in addition to his own morbid waste products those of the animal carcass" (p. 339). "The

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American suffers from uric acid and phosphoric acid poisoning..." (p. 347).

"What is natural food? We have endeavored to define this term as follows: '"Natural" for animal and man is that food which appeals to the senses of sight, taste and smell in the natural condition, as it comes from Nature's hands.' Any food which needs disguising by cooking, spicing, pickling, etc. is not 'natural'" (p. 359).

On the last pages of this book are five ads: (1) Nature cure by mail, from The Lindlahr Nature Cure Institutes, Inc., Chicago. (2) Lindlahr College of Nature Cure and Osteopathy (3 year course; also Nurses' training course, six months' condensed course, and quiz courses for State Board Health Exams), same address. (3) The Lindlahr Nature Cure Institutes, Inc.–one in Chicago and one in the country–the beautiful Elmhurst Health Resort, a 40-minute ride by Electric car from Chicago's center. Two full page photos (on unnumbered pages near rear of book) show the sanitarium in Chicago and the resort at Elmhurst. "Some of our healing factors: Pure food diet, water cure treatment, open-air, light and air baths, massage, osteopathic and magnetic treatments, mud baths for rheumatism, corrective gymnastics and breathing exercises, mental therapeutics and normal suggestion (on a common-sense, scientific basis), scientific relaxation, homeopathic and simple non-poisonous herb remedies, diagnosis from the eye [iridology]. (4) Carqué Pure Food Co., Inc., 1603 So. Magnolia Ave., Los Angeles, California. "From California's sunkissed orchards direct to your table... Black mission figs, Unsulphured white figs, Unsulphured calimyrna figs, Large prunes, Muscatel cluster raisins, Unsulphured apricots, Assorted dried fruits." 10 pounds for $1.50 to $2.00 postpaid. Also nuts, olive oils, honey, unfermented grape juice, and books on hygiene and dietetics. (5) *Iridology: The diagnosis from the [iris of the] eye*, a book by Henry Lindlahr. 156 pages, 70 illustrations.

Henry Lindlahr was a physician (M.D.) who lived 1862-1924. The eleventh edition of this book was published in 1918 in Chicago by the same publisher. The 15th edition, published in 1922 in Chicago by the Lindlahr Publishing Co., was titled *The Lindlahr Vegetarian Cook Book and A B C of Natural Dietetics*. The 18th edition (535 pages) was published in 1926 with the same title and publisher. Address: 1. Mrs.; 2. M.D. Both: The Lindlahr Nature Cure Institutes, Inc., 525-29 Ashland Blvd., Chicago, Illinois.

2173. Martindale, William Harrison; Westcott, W. Wynn. 1915. The extra pharmacopoeia of Martindale and Westcott. 16th ed. 2 vols. London: H.K. Lewis & Co., Ltd. See vol. I, p. 563, 849. Index. 17 cm. [14 ref]

• ***Summary:*** In Vol. I, the section titled "Oleum papaveris" (p. 562-63) is about "Suggested use of other oils to replace cod liver oil in malnutrition, phthisis and other forms of wasting disease." "Several nutritive oils... which rank almost as high as Cod Liver Oil in Iodine values, suggest themselves as suitable for therapeutic use. These oils are used both medicinally and as foods..." A table shows each oil with its iodine value. Cod liver oil 126-66. Poppy seed oil 138.1. Maize oil 111. Sunflower seed oil 136.1. Soya bean oil 122. Of these, poppy seed oil seems to be suited for use as an alternative to cod liver oil. Arachis oil, sesame oil, and henbane oil are also discussed briefly.

In the chapter titled "Supplementary list of drugs" is a long section (p. 805) on "Soya Bean.–*Glycine Hispida* (*Leguminosae*). This bean is extensively cultivated in China and Japan for human consumption and laterally in America and Europe, chiefly as a forage crop, is eaten as a vegetable, in soups, sometimes picked green, boiled and served cold with a sprinkling of Soy Sauce, and sometimes as a salad. A favourite method of preparing in the East is to boil until soft and place the resulting mass in a warm cellar until it ferments,–the resulting 'cheese' being known as 'Natto.'

"Analysis of the bean calculated on water free basis, indicated 38.5% Protein and 20% fat. It is probably due to this large amount of easily assimilable Nitrogenous matter that the Chinese and other rice eating people require so little meat. It contains practically no Starch–the latter fact is said to be due to presence of a diastase in the bean capable of converting Starch formed, two-thirds into Sugar, one-third into Dextrin. Has been used as an addition to ordinary diabetic dietary,–the beans may easily replace the Gluten of bread,–causes reduction in percentage of sugar (*Lancet* 1910, p. 1844). Soy Flour is even more serviceable, containing almost 1/3 more Protein than the bean, this being due to the removal of the fibrous hulls, which contain but little Protein (*British Medical Journal Epitome* 1911, p. 80).

"The protein of the Bean is being extensively used in connection with the treatment of diabetes and malnutrition. Soya Bean Meal from which it is made must be carefully examined for the toxic *Java Bean*.–F.W. Crossley Holland (*Pharmaceutical Journal and Pharmacist* (London) 1912, p. 154). Soya Beans average 8 m.m. in length and 7 m.m. in breadth and 6 m.m. in thickness. They are roundly ovoid in shape and about 99% are pale yellow in colour–there being a few darker coloured, smaller and more elongated. Structure of the bean. Soya Bean Cake and Meal is enormously adulterated.–T.E. Wallis (*Chemist and Druggist* (London) 1913, p. 278; *Pharmaceutical Journal and Pharmacist 1913*, p. 120).

"E.S. Peck states *Glycine Hispida* has been used in clinical experiments for the splitting up of Urea into Ammonium Carbonate.

"* Sarton is a preparation of the bean for use as a diabetic food.

"Soya Oil has Iodine value 121 to 123. Cowie found 131 (Chemist and Druggist 1910, p. 66). For further characters see (*Pharmaceutical Journal and Pharmacist* (London) 1911, p. 407)." See also p. 563.

In Vol. II, the section titled "Lecithin" (p. 76) states

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that it is a "Mono-amino Phosphatide" and contains a table listing the percentage of lecithin contained in 17 substances, including: Brain 160. Spinal cord 11.0. Nerve tissue (dry) 17.0. Kidneys 8.5. Egg yolk 12.0. Lupin seeds 2.0. Yeast (dry) 2.0. The soybean is not mentioned. A test of purity of lecithin made from fresh egg yolk, and the determination of lecithin in preparations are described.

William Martindale lived 1840-1902. Volume I also discusses Gluten (p. 546–Synonym: Vegetable Albumin), Diabetic foods (p. 546-47, incl. starchless bread; soy is not mentioned), *Oleum sesami* Sesame Oil (p. 571; also called Benné oil, gingelli oil, teel oil), *Arachis Hypogæa* (p. 805; also called Pea Nut, Ground Nut, Goober Nut, Manilla grain [Manila grain], Chinese Almond).

Volume II also discusses "glutin" (p. 86-89), proprietary medicines (incl. Ovaltine, and Pinkham's (Mrs. Lydia E.) Vegetable Compound, p. 162-63). Address: 1. Ph.D., F.C.S.; 2. M.B.Lond., D.P.H.

2174. Morita, Sakae. 1915. Hawai Nihonjin hatten-shi [History of progress of Japanese in Hawaii]. Hawaii: Waipahu Shin Eikan. 866 p. See p. 260-65. Jozo-gyo (Brewing/fermentation industry) section. 23 cm. A second edition was published in 1919 under the title Hawai gojûnen-shi. [Jap]

• ***Summary:*** "The first Japanese who lived in Hawaii and brewed shoyu there was Haruhachi Shimada, who originally came from Yamaguchi-ken, Japan. He started in June 1891 and tried to make shoyu on a large scale. But bad transportation made it difficult for him to expand his market. This plus lack of capital forced him to quit."

Note: It is not clear where the soybeans used to make this shoyu were grown. They were probably either grown in Hawaii (probably on Oahu) or imported from Japan. If they were grown in Hawaii, this document would contain the earliest date seen for soybeans in Hawaii, or the cultivation of soybeans in Hawaii (June 1891). Address: He had a photo shop in Hawaii.

2175. Neil, Marion H. comp. 1915. "Kitchen Hanger" of recipes for the numerous uses of Lea & Perrins' Sauce. New York, NY: John Duncan's Sons.

• ***Summary:*** This is a booklet of recipes that hangs on the wall like a calendar. The letter from Marion H. Neil to Lea & Perrins (New York) is dated November 11, 1914. Address: School of Cookery, 3602 Spring Garden St., West Philadelphia, Pennsylvania.

2176. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1915. Nichi-Bei nenkan [Japanese-American yearbook. No. 11]. 650 Ellis St., San Francisco, California. 295 p. Reprinted in Feb. 2002 in Tokyo by Nihon Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 5-kai [Collected Documents on Japanese Emigration. No. 5]. [Jap; eng]

• ***Summary:*** This book is very different from previous yearbooks in this series in that it has no directory (giving business names, address, and sometimes phone numbers) and almost no advertising. It also contains many fewer pages. It is not clear what caused these major changes.

Like its predecessors, is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. The English-language title page reads: *The Japanese American Year Book.*

The book is divided into seven parts, each numbered separately. Contents: (1) Front matter (5 p.). (2) Table of contents (5 p.). (3) Ads (3 p.). (4) Photos (black and white on 14 unnumbered pages). (5) Maps and charts on 2 unnumbered pages. (6) Front part (p. 1-176), including names of Japanese people in agricultural enterprises in California, Utah, Idaho, Colorado, Nevada, Wyoming, New Mexico, Texas, Nevada, and Oregon–based on research conducted in Dec. 1914 (p. B1 to B-88). Note: Two ads appear on the bottom half of the last page of the previous section. (7) Copyright and publishing information page.

By a careful reading of part 6, we can extract the following information about business that make soyfoods. There are 45 tofu makers in California (p. 130), 1 in Ogden, Utah (p. 153), 1 in other cities in Utah, 1 in Pocatello, Idaho (in Bannock County, the southeast corner of the state), and 1 in other cities in Idaho (p. 154), 1 in New York City (p. 161), 1 in Oregon (p. 165), and 6 in Washington state (p. 169). There is also 1 shoyu maker in Oregon (probably in Portland) (p. 165). Concerning the tofu makers in California, there are 2 in Oakland and 2 in Alameda (p. 132), 1 in Berkeley, 1 in San Mateo (p. 133), 2 in Santa Clara and 1 in Kason? (p. 134), 2 in Salinas, 1 in San Benito County, 2 in Guadalupe and 1 in Lompoc (both in Santa Barbara County, in southern California) (p. 135), 1 in Sonoma County and 3 in Vacaville (p. 136), 3 in Sacramento and 3 in the Courtland, Walnut Grove, Isleton area (p. 137), 3 in the Loomis, Penryn, Newcastle, Auburn area (northeast of Sacramento), 1 in the Marysville, Colusa, Oroville, Chico, Red Bluff area, and 1 in the Florin, Woodland area (p. 138), 2 in Stockton and 1 in Lodi (p. 139), 1 in Fresno, 1 elsewhere in Fresno County (p. 140), 2 in Tulare County (p. 141), 4 in Los Angeles (p. 142), 1 in Riverside (p. 143), 2 in Ventura County, and 1 in Imperial County (in the far southeastern corner of California) (p. 144). For all of these California tofu shops is given their capital, annual sales in dollars, and number of workers. For all of the California tofu shops (total): Capital: $23,050. Sales in 1914: $74,400. No. of workers: 65. Salaries in 1914: $8,260. Note that no miso makers are listed.

The total value of imports of shoyu [soy sauce] and pickles from Japan to the U.S. for the past 5 years is given (p. 86). The value of shoyu imported to San Francisco in 1914: $133,870 (p. 102). The value of shoyu and pickles imported to Portland, Oregon in 1913: $8,663. The value of soybeans imported to Portland, Oregon in 1913: $2,593 (both

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p. 105). The total Japanese population in the USA in 1914: 99,321 (p. 171).

The Census shows Japanese companies making soyfoods in California, Utah, Idaho, New York City, Oregon, and Washington state. Address: San Francisco, California.

2177. Porter, Robert Percival. 1915. Japan, the new world-power: Being a detailed account of the progress and rise of the Japanese empire. London, New York, Toronto, Melbourne and Bombay: Humphrey Milford, Oxford University Press. xxiv + 789 p. Illust. Seven colored maps. Index. 23 cm. [soy ref]

• ***Summary:*** Japan (regardless of race and colour) intervened in the Great War on the side of her ally Great Britain. They worked together successfully against Germany in the siege of Tsing-Tau in 1914 from Oct. 31 to Nov. 7.

Near the front of the book is a table of "Weights, measures and moneys, for Japan, Great Britain, and the USA."

Page 149-50: "The annual average number of immigrants from Japan is about 20,000. Roughly, half go to China and the United States of America... Since 1907 two batches of Japanese emigrants, under 2,000 in all, have gone to Brazil, the majority of which have been under contract with the Sao Paulo Government to work in the coffee plantations." There are now about 155,000 Japanese in the United States. Since a 1907 agreement between Japan and the USA, immigration of Japanese labour to the USA has been restricted. Some Japanese have tried to enter the USA by going first to Mexico. There are not more than 2,000 Japanese in Canada at present.

Page 232: In Japan: "The necessity for increased military and naval expenditure, which rose in connection with Korea in 1881, called for considerable additional revenue. Fresh military taxes were therefore levied: income-tax was introduced along with indirect imposts [taxes] on soy [sauce], tobacco, confectionery, and stamps, and the tax on *sake* was raised, augmenting the receipts to such an extent that the Government was able in 1886 to reduce the land-tax again. But following the war with China [1894-95] it became necessary to establish occupation and registration taxes, to raise again the *sake* tax, and to create a Government monopoly of leaf tobacco."

A table (p. 233) shows how the ordinary State revenue of Japan was derived in the financial years 1898-99 and 1909-10. The two main sources of revenue were: Land tax (38.4 and 85.7 million yen respectively) and liquor tax (33.0 and 91.5 million yen). By comparison, the soy tax was relatively small: 1.54 and 4.73 million yen.

Page 235-36: "The tax on liquors is levied upon (a) brewers of *shurui* (alcoholic liquor), which is divided into five classes, viz. *seishu*, or refined *sake*, *dakushu*, or unrefined *sake*, *shirozake*, or white *sake*, *mirin*, or sweet sake, and *shochu*, or distilled sake; (b) brewers of beer; and (c) wine and alcohol and alcoholic liquors other than sake or beer."

"Soy tax: The soy tax is levied upon manufacturers of this sauce at the rate of about 1 3/4 yen per *koku*. A tax on soy for household use was introduced in 1900, and ranges from 50 sen to 4 yen per *koku*, according to the amount manufactured. No more than 5 *koku* of soy per annum may be made for household use."

Page 240: A full-page table shows the "Budget for financial year 1911-12." The main sources of "Ordinary revenue" are liquors tax (88.7 million yen), land tax (75.1 million), customs duties (50.5 million), and tobacco monopoly (50.5 million yen). Revenue from the soy [sauce] tax is 4.6 million yen. The sugar excise is 14.7 million yen.

Page 261-62: "The upland fields, being for all intents and purposes unirrigable, are only to a very limited extent utilized for the cultivation of rice. Rotation crops are, however, raised twice a year, usually barley, 'naked barley,' and wheat as winter crops, and soya (more properly soja), sweet potatoes, and millets as summer crops." A key unit of area in agriculture is one *tan* = 0.245 acre. On [lowland] paddy fields, nationwide over the past 10 years, the average yield per *tan* is 7.913 bushels of rice and 6.668 bushels of barley, which may be considered a representative winter crop. "Upland fields, upon the same basis, produce 6.638 bushels of barley as a summer crop and 3.756 bushels of soya bean."

Another key (larger) unit of area in agriculture is one *cho* = 2.45 acre.

A table (p. 263) shows the total area, production, and yield of 17 major crops in Japan in 1897 and in 1910. Both years, the leading crop (by far) in area was rice, followed (in 1897) by barley, naked barley, wheat, and soya bean. For 1897 the three figures for soya beans were: 1,067,000 acres under cultivation, 15,381,000 bushels total production, and 14.41 bushels per acre yield. For 1910 the three figures for soya beans were: 1,137,000 acres, 18,834,000 bushels total production, and 16.56 bushels per acre yield.

Statistics for "small red bean" [azuki] are also given: For 1897 268,000 acres under cultivation, 3,069,000 bushels total production, and 11.45 bushels per acre yield. Thus, in 1897 and 1910 the production of soybeans was roughly 5 times the production of azuki beans.

Chapter 15, "Agriculture," contains a section titled "Soya bean" (p. 264-65): The soya, or soja, bean is well enough known in England as a cattle-food, but in Japan its application is by no means limited to this use. It is the basis of the Japanese sauce, soy, of which enormous quantities are brewed; of *miso*, or bean cheese [sic], used extensively for soup and in cookery in general; and of *topu* [sic, tofu], or bean curd, a cheap, highly nutritious and very popular article of diet. The residue from these manufactures is used both as fertilizer and as cattle food, or, alternatively, an oil of some value may be obtained from it. It is the principal summer

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crop of the upland fields, and its cultivation, which requires less fertilizer and less labour than other products, is general throughout Japan and particularly in Hokkaido. But the supply is far from equal to the demand, and a large quantity of beans and bean cake is imported from Chosen and Manchuria, the value of the present importation amounting to £3,000,000 annually.

"Among other beans the small red bean is largely cultivated, especially in Hokkaido, and is used for cakes and confectionery, and boiled with rice on occasions of ceremony. The Japanese are very fond of peas, horse-beans, and kidney-beans, which are grown as a stolen crop after rice in the paddies and just before it in the upland fields."

Page 269: "A comparison of the relative positions of human and animal labour in paddy fields and upland farms for the years 1903 and 1908 (the latest year for which figures are available) shows that the area tilled exclusively by human labour still forms a very large proportion of the total, though it tends steadily to decrease." "Manual labour is plentiful and it is chiefly by reason of its abundance that the intensive system can be carried on. Rice-growing requires, for instance, the labour of 17 men and 9 women per *cho* (2.45 acres), barley and wheat 11 men and 6 women, tobacco 25 men and 23 women, soya bean 7 men and 5 women, and so on. Farmers, in the vast majority of cases, are their own labourers, and those who may be distinguished as 'professional labourers' are a very small class."

Page 292: Sea-weeds: "Chief among the sea-weeds used as food is that known as 'Kombu' (*Laminaria*). It grows mostly on the shores of Hokkaido and the south-east of Honshiu [Honshu], and is eaten sliced into very thin shreds. 'Kanten' is made by dissolving the weed Tengusa in water and exposing the resulting gelatinous infusion to the action of cold by night and the sun by day. Only the Chinese use it as food, however; in the West it is a substitute for gelatine, isinglass, starch, and the like. Other sea-weeds are used as paste." Address: Queen Anne's Mansions, London, England.

2178. Associated Press (AP). 1916. Nutrition–Find soja bean valuable food. Blockade against Germany shows its merits. Chinese have used it extensively for the last 2000 years and it possesses more universal usefulness than almost any other common article of diet. *Los Angeles Times*, Jan. 13, p. 13.
• ***Summary:*** London, Dec. 15.–Discussion of the food blockade against Germany has served to bring attention to the merits of the soja bean, to which is given up more than twenty-five per cent. of the cultivated area in Manchuria. Although the soja is well known and highly regarded in Germany and the Scandinavian countries and is now second on the list of China's exports, it has hitherto achieved small general reputation in the English-speaking countries, and even the latest dictionaries dismiss it with the brief description: An Asiatic leguminous herb, Glycine Soja, the seeds of which are used to prepare sauce called soy."

The "first important shipment to Europe was made in 1908 by a British firm. The Germans almost immediately began to experiment with it and five years later were using the major part of an importation estimated at over $200,000,000 a year.

"The secret of the soja bean is its universal usefulness. A British government report gives the following list of soja products: 'Vegetable food (like marrowfat peas); soups; meat substitutes; chocolate substitute; macaroni preparation; flour; artificial milk; cheese [tofu]; coffee substitute; artificial horn; biscuit and food for diabetic patients; sauce; meal for cattle; oils, oil cake for fodder; fertilizer; beancake.'

"The same report points out that the oil from the bean is used in the manufacture of the following articles: 'dynamite and high explosives, soaps, linoleum, rubber substitute, margarine, paints, varnishes, toilet powder waterproof cloth, paper umbrellas and lanterns, salad oil, lubricants, lamp oil, preservative for sardines, substitute for lard.'"

"There are three principal varieties of the bean–yellow or huangtou [huangdou], green or chingtou [qingdou], and black or wutou [wudou]. The yellow contains more nutritive ingredients than the others, and this is the variety almost exclusively used for export. The quantity of oil extracted from the beans runs as high as 10 per cent. of the total weight.

"Sweden uses large quantities of the bean cake as food for milch cows; Denmark has a large pressing factory at Copenhagen; France has a factory built in Paris by a Chinese firm [Li Yu-ying]; and South Africa has recently begun to grow the bean in competition with the Manchurian Farmers. Germany in 1912 rescinded her former import duty and installed reduction plants for the far-eastern vegetable products in all her oil mills, importing the beans directly from Vladivostok by the shipload."

2179. *Times* (*London*). 1916. The grain trade: A strong opening in wheat. Government intervention. Jan. 21, p. 15.
• ***Summary:*** The section titled "Minor crops" notes that beans and peas are now [during World War I] quite expensive, and the imported kinds even more so. The price per qr. [quarter of a hundredweight, or 28 lb] is: "53*s.* for Indian chick peas, 48*s.* for Chinese and Manchurian [soy] beans, 105*s.* for Rangoon [Burma] haricot beans, and 47*s.* for Japanese soya beans. The last named are a good bargain, but the trade is a very wholesale one, and sellers expect the buyer as a rule to take not less than a ton, for which 10 guineas is the price, ex London warehouse." Address: [London].

2180. Puig y Nattino, Juan. 1916. El cultivo de la soya [The cultivation of soybeans]. *Revista del Ministerio de Industrias* (*Montevideo, Uruguay*) 4(19):78-91, Jan. [7 ref. Spa]
• ***Summary:*** Describes variety trials conducted in Uruguay using seeds supplied by the USDA. The varieties harvested

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in March 1915 included Peking, Arlington, Pinsu [Pingsu], Jaba, and Mammoth. A table (p. 79) shows that the yields of seed were very small, but that Mammoth gave by far the largest seed yield, 320 kg/ha. Discusses the many ways that soybeans (*las habas de soya*) are used as food in Japan, including soy sauce (*Shoryu* [*sic*, *shoyu*]), cooked whole soybeans, tofu or soybean cheese (*Tofú ó Queso de habas de Soya*), and soymilk. They used Mammoth variety soybeans, grown in Uruguay, to make soymilk. Seven tables (p. 84-90) give the nutritional composition of five different soybean varieties tested in Uruguay, planted in 1914 or 1915. An 8th table (p. 91) gives the nutritional composition of soymilk.

Note 1. This is the earliest document seen (May 2009) concerning soybeans in Uruguay, or the cultivation of soybeans in Uruguay.

Note 2. This journal is published in Uruguay by the *Ministerio de Industrias y Trabajo*. Address: Ing. Agrón., Director del Laboratorio Agronómico en la Inspección Nacional de Ganaderia y Agricultura.

2181. *New York Times*.1916. Latest customs rulings. Feb. 11. p. 16.

• ***Summary:*** "New York jobbers were sustained by Judge Brown in the entered prices put on soy sauce from Cheang Yan Chick of Canton. At the trial Assistant Attorney General Hanson argued that, following an earlier reappraisement, the advances made by the local officials should be sustained. The General Appraiser held, however, that the soy sauce involved in the present case was a different article from the commodity figuring in the case cited." So the Custom House authorities were reversed.

2182. Suzuki, Tozaburo. 1916. Process of making foods. *U.S. Patent* 1,175,839. March 14. 1 p. Application filed 2 Sept. 1913.

• ***Summary:*** In the process of making soymilk, after boiling, a centrifugal machine is used to removed the lees [okara, or pulp]. Then the milky liquid [soymilk] is condensed by evaporation into a dough-like mass, which is placed on flat trays, fully dried, then powdered or molded into any desired forms.

Note: The author, a citizen of Japan, was also an inventor and innovator in the manufacture of soy sauce. Address: No. 401, Jineishinden, Sunamura, Minami-Katsushika, Japan.

2183. Lea and Perrins. 1916. Quality (Ad). *Times* (*London*). March 17. p. 10, cols. 4-6.

• ***Summary:*** "With Lea & Perrins' Sauce–the original and genuine Worcestershire–*a few drops* sprinkled over the meat, fish or cheese, &c., are all that is required to impart the most pleasing and appetizing flavour." At the left of this display ad is a royal seal, and below it the words "By Royal Warrant to H.M. The King." In the lower right is the large "Lea & Perrins" signature. Address: [England].

2184. Togano, Meijiro. 1916. Shôyu kôji no hinpyô-hô [A method for evaluating the quality of shoyu koji]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 63. p. 231-41. March. [Jap]
Address: Jozo Shikensho, Gishi.

2185. Togano, Meijiro. 1916. Ryûsan "mangan" no shôyu moromi ni oyobosu kôka ni tsuite [The effect of manganese sulfate on shoyu moromi (mash)]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 62. p. 190-203. March. [Jap]
Address: Jozo Shikensho, Gishi.

2186. *Washington Post*.1916. Uses of soya bean: Merits not sufficiently appreciated, food experts point out. April 3. p. 10.

• ***Summary:*** "The general value of the soya bean has not attracted the general attention it deserves, according to experts who are bringing it to the attention of the American people. The Japan Society Trade Bulletin points out that the secret of the soya bean is its universal usefulness. Almost more remarkable than the rise of the bean trade itself is the number of discoveries of the uses to which it can be put. The trades commissioner for the government of South Africa gave the following list of soya bean products: Vegetable (like marrowfat peas) soups, meat substitute, chocolate substitute, macaroni preparation, flour, artificial milk, coffee substitute, cheese [tofu], biscuits, [soy] sauce, meal for cattle, oil, oilcake, fertilizer, beancake.

"The oil extracted from the soya bean, he pointed out, was used in the manufacture of the following articles: Dynamite and high explosives, soaps, linoleum, rubber substitute, margarine, paints and varnishes, toilet powder, waterproof cloth, paper umbrellas and lanterns, salad oil, lubricating oil, lamp oil, preserving sardines, lard substitute."

2187. Beille, L. 1916. Le Soja [Soya]. *Gazette Hebdomadaire des Sciences Medicales de Bordeaux* 37(9):67-70. May 7; 37(10):73-76. May 21. [4 ref. Fre]

• ***Summary:*** "The question of the soybean (*haricot Soya or Soja*) reappears in our scientific and medical journals from time to time; the importance that this grain has acquired in the diet of the essentially vegetarian peoples of the Far East, and its richness in oil, albuminous materials, and minerals, have long called it to the attention of hygienists. Some authors have wanted to portray the soybean as an ideal food, a little jewel with a nutritive power comparable to that of eggs and meat; others have extolled the milk-like emulsion, obtained by grinding soybeans with water, as an advantageous substitute for cow's milk.

A factory, established on the outskirts of Paris, at Vallées (Seine), was able to supply French consumers with

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flour, cheeses [tofu], sauces, and many other soy-based preparations used in China and Japan.

"Leaving aside the inevitable exaggerations that accompany a product which is new to us, but which already has an established reputation elsewhere, it is necessary to recognize that the chemical composition of the soybean is of real interest. The Parisian clientele promptly abandoned the sauces, cheeses, and milk made from soya, but they appreciated the sprouts, which are still selling well as vegetables in the markets of Paris and its suburbs; soy-based flour and biscuits are very well adapted for use in diabetic diets."

The author then gives an overview of the soybeans from a medical viewpoint, including a brief history and review of worldwide production and nutritional studies. "In 1779 this plant was introduced to France and cultivated in Paris at the Jardin du Roi. Since that period, despite the laudable efforts of the National Society for Acclimatization, the cultivation of the soybean has not gone beyond botanical gardens and some experimental fields. Nor has it had any more success in England or Italy. However in North America it is cultivated in all the southern parts of the United States, but as a forage plant."

Through the merchant and importer Mr. A. Denis of Bordeaux, the author obtained two varieties of soybeans, one from Manchuria and one from Japan. He conducted a nutritional and microscopic analysis of these.

The author concludes that the soybean has great potential as both a food and an in industrial uses, where the precipitated protein for example, can be used in place of milk casein to make Galalith, artificial ivory, glue, and paper coating.

Part II of this article discusses more about the general nutritional value of soybeans. He then discusses soy flour (*farine de soja;* he has a sample produced by the factory at Valées), soy milk (*lait de soja*), tofu (*fromage de soja*), shoyu and various soy-based sauces (such as *Tao-Tjung* of China, or *Touong* of Indo China).

"In summary the soybean is of great interest from the industrial point of view. The place that it occupies in the oil mills of Europe is already important... Its oil, for food or industrial uses, and its by-product, soy casein, are likely to receive a host of diverse applications. On the other hand, the future of the soybean as a food substance in Europe would seem to be more modest; its disagreeable taste removes it from daily consumption and enables it to be used only as an ingredient in mixtures."

"If, in Europe, with a few reservations, we can include soya in the diet of healthy people, then there will be even stronger reasons to give it to sick people. At first glance soya, which is rich in fats and protein, with little or no carbohydrates, appears to be a food of choice for diabetics. And we must recognize that it has attained the greatest success among these sick people. But, here again, it would be appropriate to give soya in the form of rusks/zwieback (*biscottes*), or mixed with vegetables or fruits; if it is not tolerated by sick people in these forms, then we should not hesitate to stop using it." Note: In Europe, rusks are widely given to sick people, like chicken soup in the USA. Both are considered to be good medicinal foods that are easy to digest. Address: Professeur â la Faculté de médecine et de pharmacie de Bordeaux.

2188. *Washington Post.*1916. Admiral Togo, 'Nelson of Nippon,' 'simple life' model, servants say. May 21, p. ES14. • ***Summary:*** Admiral Togo, the victor of Tsu Shima, has never been interviewed and he never speaks about himself. Note: Tsushima Strait was the site of a naval battle in May 1905 in the Russo-Japanese War in which the Russian fleet was destroyed or captured by the Japanese fleet under Admiral Togô Heihachiro.

So the *Katei Zasshi*, a popular monthly magazine, sent reporters to "interview the count's butcher and baker and candlestick maker, his barber and fishmonger and man at the corner." By paying attention to his monthly housekeeping bills, they were able to conclude that the hero led a simple, frugal life–which all the tradespeople sincerely admired.

The man at the sake (spirits) shop said: "I get no orders for sacke [saké] nowadays and only send in some soy (sauce) and miso (a curd [sic] made from beans and eaten for breakfast) of the commonest quality, occasionally."

2189. Nemzek, L.P. 1916. The soya bean and soya oil. *Paint Manufacturers' Association of the U.S., Educational Bureau, Scientific Section, Circular* No. 37. 8 p. June 10. [1 ref] • ***Summary:*** This address was presented on May 18, 1916 (during World War I) at the meeting of the Mississippi Cotton Seed Crushers' Association, New Orleans, Louisiana. Accompanied by three exhibits, it states: "As early as 1907 the Bureau interested itself in a campaign to promote the increased production of flaxseed in the United States. The rapidly increasing demand for linseed oil, by the industries in this country, indicated that we should soon face a shortage of his commodity. It remained for the 1910 flaxseed crop failure to demonstrate what a menace to the pain trade such a shortage meant. Due almost entirely to the resultant scarcity of linseed oil, the price commenced to soar during the latter part of 1910. Linseed oil reached the high price of $1.00 per gallon during 1911 and high prices prevailed throughout most of the year 1912. This condition forcibly showed the necessity for a more profound investigation of oils which might find application as substitutes for linseed in the different industries which use the oil in large quantities. In view of the fact that the work which was done toward promoting an increased production of flaxseed had been so marvelously effective, it was decided to do work of similar magnitude with miscellaneous oils."

"A series of practical paint exposure tests were begun on

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test fences located at Washington, D.C., in connection with the Institute of Industrial Research. The paints were exposed in May, 1911. The repainting tests were made during the latter part of 1914. This series of tests is referred to in Circular No. 30, 'Repainting Tests on Paint Oils,' issued by the Educational Bureau during December, 1914.

"Soya oil was one of the oils decided upon for the experiments largely because it was already available in quantities and could readily be imported. After looking into the matter it was found that the production of it might be developed on a satisfactory basis in this country. Soya beans were already being grown in considerable quantities, but up to that time domestic oil on a commercial scale had not been produced.

"Soya oil is crushed from the bean bearing that name. The bean is commonly referred to by the agriculturists in this country as 'Soy,' but the oil, ever since it was first imported, has been known as 'Soya Bean Oil' or 'Soya Oil.' Largely for the sake of convenience the title 'Soya Oil' has been adopted and is coming into general use. The title 'Soya' was, very likely, introduced from Manchuria, where the bean is grown in enormous quantities, and is a derivation from the Japanese 'Shoyu' or 'Soja.' 'Soya' is replacing 'Soy' when used in reference to the bean as such, even in the language of the agriculturist, and it is only a question of time when the word 'Soya' will be adopted generally."

"The first step in connection with the Bureau's endeavor consisted of the importation of soya beans from Manchuria for oil-extraction tests and the distribution of this seed, together with seed from a number of varieties already grown in this country, and the soliciting of the assistance of the State Agricultural Experiment Stations and other interested persons to urge the farmer to grow more soya beans for seed. While soya beans had been grown in this country for a good many years, this was done as a forage crop and for fertilization purposes. Only enough seed was being harvested to take care of the succeeding year's planting. The far-reaching propaganda, through the active co-operation of the State Agricultural Experiment Stations and the different Bureaus of the U.S. Department of Agriculture, was solely for the purpose of inducing the farmer to increase his population."

The Bureau reached farmers through the State Agricultural Experiment Stations. "While growing tests during 1911 and 1912 were limited to North Dakota, Minnesota, Missouri, New Jersey and Kentucky, they were extended in 1913 to every State, with the exception of a few where conditions are unfavorable from an agricultural standpoint.

"The tests were also extended to the Philippine Islands and to several places in Canada. It is noteworthy in this connection that there are at least two varieties which can be successfully matured as far north as the southern portions of Quebec.

"During 1912, forty-eight varieties were experimented with, including four imported from Manchuria. This number was greatly increased in 1913, so that all available types would be included."

By 1916 the number of varieties had been reduced to about fifteen (see Exhibit No. 1), which were already popular: "Mammoth, Medium Yellow, Ito San, Holly Brooks [Hollybrook], Haberlandt, Peking, Wilson, Auburn, Black Eye Brow [Black Eyebrow], Arlington, Tokio, Mikado, Virginia, Chiquita, Sable and the Yellow Manchurian bean...

"No sooner were the farmers interested in the larger growth of soya beans than they began to ask for information as to how and where the beans could be disposed of to be converted into oil.

"It was soon evident that the cotton seed mills in the South were best situated for crushing the beans. The location of the hundreds of these mills is fortunate, inasmuch as the South is naturally adapted to become the great soya bean-producing section of the country. Definite plans have not been evolved in sections where the cotton seed mills are not located, but in the northern section of the country the linseed oil mills will, very likely, crush the beans as soon as the production is large enough to warrant their going into the matter. In some sections, notably Tennessee, it was suggested that the farmers in a certain locality club together and conduct their own mill, disposing of the oil in the regular manner, and each farmer to use the cake from his crop for feeding purposes. In this way there would be returned to the land the full fertilizing values of the crop. The promoters of successful agriculture see in this a means to increase the production of soya beans, mainly because of the value which the farmer obtains by the improvement of his soil.

"During August and September, 1913, I made a trip of nearly twenty-four thousand miles, visiting most of the Agricultural Experiment Stations, to discuss matters relating to the increased production of beans for oil-crushing purposes and to determine whether or not the cotton seed mills were in a position to handle the crop without materially altering the machinery they use for the crushing of cotton seed or going to the expense of installing new equipment. Most of my time was spent in the States growing cotton and where cotton seed mills were already established."

Also discusses the oil-bearing properties of different varieties of soya beans (the oil content averages 19% and ranges from 16 to 25%), and the drying properties (see Exhibit No. 2). "During the past six or seven months there has been produced in this country in the neighborhood of one hundred thousand gallons of soya oil. The largest part of this quantity has been produced by the Elizabeth City Oil & Fertilizer Co., Winterville Cotton Oil Co. and the New Bern Cotton Oil & Fertilizer Mills."

Discusses prices at which soybeans should be purchased for profit in the oil industry, and opportunities for disposing of the oil and meal. The author points out the limited uses

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of soy bean oil in paints: in 1916 some 98,171,275 lb of soy bean oil were imported into the United States. The five samples of soybeans analyzed had an average iodine number of 125.8. But iodine value and drying power do not necessarily go hand in hand, although such is often the case.

"In those sections of the South where the cotton fields are infested by the boil weevil, the growers may find it to their advantage to produce soya beans on a large scale. The Alabama Cotton Seed Crushers' Association has the matter under careful consideration at the present time. The cotton crop of certain sections of that State has been seriously affected by the disastrous results which accompany the boil weevil.

"It is at once apparent that it is to the advantage of the cotton seed mills to take up the crushing of soya beans. In the first place it will help to give the mills a longer season and thereby shorten the period of idleness. This period generally varies from four to six months every year with different mills.

"The crushing of soya oil has advantages over cotton seed; it is a cleaner and easier material to handle preparatory to crushing, and the bean releases its oil as freely, at least, as cotton seed.

"Soya oil can be disposed of just as readily, at least, as cotton seed. The A.M. Parks Company, Philadelphia, commencing with the May issue of 'The Oil Miller,' advertise for domestic soya oil. This is the first ad to appear, and opens up what is likely to prove the most satisfactory outlet for the product of so many mills... In some cases the consumers who could handle it in tank cars would be able to deal direct with the crushers. The A.M. Parks Company was one of the first to import soya oil, and still imports it in large quantities. Two or three years ago the Company distributed an interesting pamphlet entitled 'Soya,' in which the commercial possibilities of the oil are referred to in some detail."

"While practical tests started in 1911 have not yet been completed, and the Bureau, in line with its adopted policy, does not intend to make a definite report until the investigation has been finished, the writer feels safe in stating that large quantities of soya oil will eventually be consumed in the manufacture of paint and varnish. Because of the inferior drying properties of soya oil as compared with linseed oil it cannot entirely displace linseed, and its use in connection with linseed oil will be limited to from 25 to 50 per cent., depending on the product in which it is used."

Note 1. This is the earliest English-language document seen (Nov. 1999) with the term "soya oil" in the title.

Note 2. This is the earliest document seen (Aug. 2004) that mentions the soybean variety Chiquita. Address: Special Technical Representative, Educational Bureau, Paint Manufacturers' Assoc. of the United States, Philadelphia, Pennsylvania.

2190. *Miami Daily Metropolis (Miami News)*.1916. Some typical dishes of the Allies. July 6. p. 10.

• ***Summary:*** A recipe for Salmon teriyaki (Japanese) is given: "Mix well together 1-2 cupful [sic, ½ cupful] of Japanese Shoyu and 1 tablespoonful of Mirin [sweet sake]: put a salmon on the grill and when nearly done spread the sauce on the salmon with a brush freely. Then put back on the grill and cook until it browns. When that side is done, cook the other side the same way.

"Note:–Japanese Shoyu is made of wheat and beans."

Note: This is the earliest English-language document seen (April 2012) that contains a recipe for teriyaki sauce [very crude] or fish teriyaki.

2191. Johnson, Nelson Trusler. 1916. Manufacture of bean milk at Changsha. *Commerce Reports [USA] (Daily Consular and Trade Reports, Bureau of Foreign and Domestic Commerce, Department of Commerce)* 19(183):468-69. Aug. 5.

• ***Summary:*** "A firm composed of Chinese from the Province of Chekiang has recently opened a small factory at Changsha for the manufacture of milk from beans. This milk has long been known to the Chinese under the name of *to fu chiang* [soy milk] or bean-curd sauce. This is not to be confused with the product known as *chiang yu*, a fermented sauce made from beans which is well known as the soy of the Japanese and as one of the constituents of the famous sauces of Europe [such as Worcestershire sauce].

"Bean milk is made from small yellow beans, the same variety from which the Chinese bean curd [tofu] and *chiang yu* or soy [sauce] are made. The process appears to be a very simple one. The beans are soaked and then crushed between two stones. The crushed mass is allowed to run off into a tub and is then strained through cheesecloth and diluted with water and boiled. After boiling, it is again strained and the white milk run off into bottles and sold to the factory's customers." Note 1. The milk is first filtered when cold, before it is heated or boiled.

"An analysis of the bean-curd milk [soy milk] shows that it has a specific gravity of 1.020 and a fat content of 3.125 [percent], contrasted with a specific gravity of 1.029 and a fat content of 3.9 [percent] for good average cow's milk in America.

"No complicated machinery: The factory is a very small one. The proprietors informed me that they did all their work at night, in order to have fresh milk for delivery the following morning. They begin their work at about 10 o'clock. The milk is ready and bottled by daylight, when it is sent out by coolie to the various customers." Note 2. See photo in Piper & Morse 1923, p. 231.

"The room where the milk is made shows that no complicated machinery is necessary in the manufacture of the milk. At one end of the room are found two of the small stone mills in which the beans were ground. Large

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numbers of bottles were arranged on a rack near the wall, clean and ready to receive the morning's supply of milk. At the opposite end of the room there were three wooden [sic, metal] vats built into a concrete foundation, which proved to be a furnace. The prepared product is poured into these vats and boiled, the furnace being supplied with fuel from a hole in the outside wall. On either side were two earthenware jars into which the boiled product is poured and through which it is allowed to run through stop cocks into the bottles.

"The manufacturers of this milk seem to be endeavoring to conduct their factory along hygienic lines. They invited inspection of their factory and expressed a desire to carry out the suggestions made by the inspecting physician. These suggestions related principally to the sterilization of the bottles before allowing the milk to run into them. The whole room was very clean.

"Possible opening for milk bottle manufacturers: The manufacture and sale of this milk appears to be a new enterprise in Changsha, although I am informed by the natives of Shanghai and its neighborhood that it is an old and well-known product in that part of the country. To the eye the product looks exactly like unskimmed cow's milk. It has an odor of raw beans and is said to be not unpleasant to the taste. I am informed that a member of the family of Li Hung Chang is now engaged in manufacturing the various products of beans in Paris, his factory turning out, among other things, this bean milk.

"The product is very cheap compared with cow's milk. The factory undertakes to supply one pint each morning for approximately 50 cents gold a month. If this industry proves a success, manufacturers of milk bottles and patent milk-bottle tops should find a market for their wares here at Changsha, if they could be brought in cheaply... The milk bottle manufacturer will, of course, have to compete with the enormous numbers of empty bottles discarded by families who use aerated waters and wines. These bottles are sold by the servants, and are purchased for use in just such factories."

Note 3. This is the earliest document seen (Dec. 2006) describing the selling of soymilk in bottles in China. Changsha is in southeastern China, far to the southwest of Shanghai. Note 4. Consul Johnson seems to be a careful and well informed observer and reporter. Address: Consulate, Changsha, China.

2192. Tanaka, Katsuhirô; Katashima, Hideo. 1916. Kabi o shôsezaru shôyu no shisei [Test production of mold-free shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 414. p. 757-58. Aug. [Jap]
Address: 1. Zeimu Kantoku Kyoku Gishi; 2. Zeimu Kantoku Kyoku Gishu.

2193. Cunningham, Edwin S. 1916. China's production of beans, bean oil, and bean cake. *Commerce Reports* [*USA*] (*Daily Consular and Trade Reports, Bureau of Foreign and Domestic Commerce, Department of Commerce*) 19(209):886-87. Sept. 6.

• ***Summary:*** "The soya or soy bean in recent years has become an important article of trade. It grows on a plant from 2 to 3 feet in height and is contained in pods about 2 inches long. The plant is cultivated everywhere, in fields by itself, around rice and similar crops, and as an undercrop to maize and sorghum. There are 25 to 50 varieties of the soya bean, but in commerce only 3 are ordinarily recognized–yellow, green, and black.

"The yellow bean, which is of greatest importance, is found generally throughout Manchuria, and it is reported that the finest crops come from the highlands to the north of Mukden. The green variety comes from the Liaotung district and the Yalu basin, and the black bean from Liaoyang and the south of Mukden. There are two other varieties, the brown bean and the mottled bean, which are grown to some extent in the Yangtze Valley, but these varieties are of little importance.

"Grown largely for its oil in Manchuria: The Soya bean is put to many uses in the Far East. It is cooked and eaten as a vegetable, made into a sauce or soy, preserved as a pickle, ground into a flour and made into vermicelli, and employed extensively in the manufacture of vinegar. One particular variety, having small yellow seeds, is used in making bean curd. In Manchuria, however, the soya bean is grown almost exclusively for its oil properties and for the residual material called bean cake.

"The soya bean contains about 18 per cent oil. When the hydraulic-press method is employed only 11 to 12 per cent of the oil can be extracted, but with the use of benzene in the chemical process 17 per cent is obtainable. This oil is used as an illuminant, a lubricant, for culinary purposes, and in the manufacture of soap. In southern China it is also used in the making of waterproof cloth, paper umbrellas and lanterns, and when mixed with lacquer is employed in the manufacture of varnish and printing ink.

"Dairen is the center for the bean-oil industry, exporting more than eight times as much as Hankow, its nearest competitor. The oil mills, which are to be found in every town throughout the bean district, are growing in numbers and becoming more modern all the time. The old crush-stone mills worked by animals are rapidly giving way to up-to-date hydraulic, steam, and oil-motor plants. Hankow has about 10 such mills. During 1914 the local exportation of bean oil was 4,714 tons, valued at $393,759 gold, and during 1915 there were 6,882 tons, valued at $482,694.

"Japan takes practically all bean cake exported: After the oil has been pressed from the bean, the residue is pressed into the round, flat cakes known as bean cake. The product is very valuable as a fodder for animals, and as a fertilizer... Japan takes practically all the bean cake exported, and the United States none.

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"The greatest original exporting center for bean cake is Dairen; Newchwang is second, and Hankow a poor third..." Address: Consul General, Hankow.

2194. Eddington, Jane. 1916. The Tribune Cook Book: Cheap chop suey. *Chicago Daily Tribune*. Sept. 8. p. 12.
• ***Summary:*** A recipe for "Chop suey with pork" says that Chinese generally use a little peanut oil to fry the pieces of pork and vegetables. "Put the two parts together in the oil in which they have cooked, add two or three tablespoons of soy sauce, and let them stand covered for a few minutes over a small amount of fire."

2195. Saito, Kendo. 1916. Ueber die chemischen Bedingungen der Askenbildung bei *Zygosaccharomyces major* Takahashi et Yukawa (Vorlaeufige Mitteilung) [On the chemical conditions of spore formation of *Zygosaccharomyces major*, the shoyu yeast]. *Botanical Magazine* (*Tokyo*) 30:249-56. In back half of journal. [Jap]
• ***Summary:*** This article, written in Japanese, has both a Japanese title (*Shôyu jôbokin no shinô keisei ni yôsuru kagaku-teki jôken ni tsuite* (*yohô*)) and a German title (shown above). This is the first of a 3-part series published in this journal. Parts 2 and 3, written in German, were published in 1918–32(373):1-13, and 32(374):15-25.

2196. Piper, C.V.; Morse, W.J. 1916. The soy bean, with special reference to its utilization for oil, cake, and other products: Soy beans in Japan, in Europe, and in the United States (Document part). *USDA Bulletin* No. 439. 20 p. Dec. 22. [2 ref]
• ***Summary:*** "Soy beans in Japan (p. 4):... In many districts it is cultivated not in fields by itself, but in rows along the edges of rice and wheat fields. Although not grown to any considerable extent as a main crop by the Japanese farmer, the average annual production is about 18,000,000 bushels. In quality the beans raised in Japan are said to be superior to those of Manchuria and Chosen [Korea] and are used exclusively in the manufacture of food products. The imported beans, of which very large quantities are obtained from Manchuria and other Asiatic countries, are used principally in the manufacture of bean cake and oil."

"The soy bean forms one of the most important articles of food in Japan. It is one of the principal ingredients in the manufacture of shoyu (soy sauce), miso (bean cheese), tofu (bean curd), and natto (steamed beans). The beans are also eaten as a vegetable and in soups; sometimes they are picked green, boiled, and served cold with soy sauce, and sometimes as a salad. A 'vegetable milk' is also produced from the soy bean, forming the basis for the manufacture of the different kinds of vegetable cheese. This milk is used fresh and a form of condensed milk is manufactured from it. All of these foodstuffs are used daily in Japanese homes and for the poorer classes are the principal source of protein. To a limited extent, soy beans are used as a horse or cattle feed, being sometimes boiled and mixed with straw, barley, and bran."

"Soy beans in Europe (p. 6): The soy bean was first introduced into Europe about 1790 and was grown for a great number of years without attracting any attention as a plant of much economic importance. In 1875 Professor Haberlandt, of Vienna, begun an extensive series of experiments with this crop and strongly urged its use as a food plant for man and animals. Although interest was increased in its cultivation during the experiments, the soy bean failed to become of any great importance in Europe. At the present time it is cultivated only to a limited extent in Germany, southern Russia, France, and Italy."

"Soy beans in the United States (p. 7): Although the soy bean was mentioned as early as 1804 (Footnote: Willich, A.F.M. American Encyclopedia. 1st Amer ed., v. 5, p. 13. Philadelphia, 1804), it is only within recent years that it has become a crop of importance in the U.S. At the present time the soy bean is most largely grown for forage. In a few sections, such as eastern North Carolina, however, a very profitable industry has developed from the growing of seed... The yields of seed to the acre in various sections of the United States range from about 15 bushels in the Northern States to about 40 bushels in the northern half of the cotton belt. The average yield in eastern North Carolina is about 25 bushels, although many fields produce 35 bushels or more to the acre..." Note: This is the earliest U.S. document seen (June 2003) that cites the 1804 publication by Willich [and James Mease] concerning the soybean in Philadelphia. Note that this article appeared 112 years after 1804.

"The first extensive work in the U.S. with the soy bean as an oil seed was entered upon about 1910 by an oil mill on the Pacific coast. The beans, containing from 15-19% of oil, were imported from Manchuria, and the importations, most of which are used in the manufacture of oil and cake, have gradually increased, as shown in Table V. The oil was extracted with hydraulic presses, using the same methods employed with cottonseed and linseed. It found a ready market, as a good demand had been created for this product by soap and paint manufacturers, which up to this time had been supplied by importation from Asiatic countries and England. The soy cake, ground into meal, was placed on the market under a trade name and was soon recognized as a valuable feed by dairymen and poultrymen. The use of the cake has been confined almost wholly to the Western States, owing principally to the high cost of transportation."

"An industry which promises to be of importance in a further utilization of the soy bean is the manufacture of 'vegetable milk.' At the present time a factory in New York State is being equipped for this purpose." Address: 1. Agrostologist in Charge; 2. Scientific Asst. Forage-Crop Investigations, USDA, Washington, DC.

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2197. *New York Times.*1916. Versatile red bean here. All kinds of dishes can be made from it, curbing cost of living. Dec. 27. p. 18.

• ***Summary:*** "Forty-nine varieties of a Titian-haired bean were exhibited yesterday at the School of Modern Cookery, 6 East Thirty-ninth Street, as an offering of the United States Department of Agriculture in reducing the high cost of living. The beans, which have as a distinguishing feature a thick red hirsute adornment, are the Soy or Soja Bean, natives of China and a prime article of the diet there a few thousand years before Boston [Massachusetts], the bean centre of the United States, was known.

"The soy bean is much used in Chinese chop-suey restaurants and forms the basis of the brown sauce [soy sauce] served on Chinese restaurant tables. Yet a whole course dinner, or the equivalent for it, can be served from the Soy bean in different forms, or the various courses can be lumped together and served with equally satisfying hygienic results in a single dish."

2198. Norton, Jeanette Young. 1916. Chinese delicacies and how to prepare them: Recipes given by Chinese chefs will enable American housewives to duplicate at home some of the famous restaurant dishes. *New-York Tribune.* Dec. 31. p. 3.

• ***Summary:*** "Soye (dragon's blood) is the Chinese Worcestershire sauce; it is imported by the barrel, and a little is used to flavor nearly all of the made dishes" (col. 3).

"Noodles are always fried in peanut oil."

Pao ping (Thin cakes): "Chop fine vegetables and cold pork; add seasoning and a little soye" (col. 5).

Pork chop suey: Ingredients include a "tablespoon of soye" (col. 6).

Note: "Soye" refers to "soy sauce," which does not mean "dragon's blood" in Chinese.

2199. Williams, C.B. 1916. Soy-bean products and their uses. *North Carolina Agricultural Experiment Station, Circular* No. 34. p. 1-7. Dec.

• ***Summary:*** Contents: Introduction. First commercial crushing from domestic beans (started on 13 Dec. 1915 by the Elizabeth City Oil and Fertilizer Company of Elizabeth City, North Carolina). Soy-bean oil. Uses for the oil. Soy-bean meal. Composition and exchange value of the meal. Prices paid for beans by the oil mills. Soy-bean oil industry in England, Manchuria, and Japan. Importation of oil. Soy-bean meal as feed. Soy beans and products for human food.

The article begins: "In order that any people may maintain their soils in the highest state of productivity in an economical way it will be necessary that proper systems of crop rotation are used, and in these rotations it will be necessary to bring in leguminous crops at as frequent intervals as practicable. For North Carolina conditions one of the crops of this nature that may be used to good advantage in all parts of the State is the soy bean. If properly handled, this crop may be used as the means of adding to the productivity of the soils as well as to increase the net returns from the farm. Recently there has been a marked interest throughout this State and the South in the growing of soy beans." A "new outlet for the beans has developed from the crushing of the seed by a number of oil mills of the State..." The spread of the boll weevil should lead to increased interest in the soy bean.

"This crop was introduced into the State something like thirty-five years ago, yet very little was heard of it, outside of very limited areas, until quite recently, when a campaign was begun to induce the cotton oil mills of the State to use beans for crushing purposes in the same general way that cotton seed had been used for many years before. This campaign not only opened the eyes of the oil crushers to the possibilities of the soy bean in a commercial way, but of the farmers, also, to the great opportunities of this crop.

"During the spring of 1915 farmers, particularly in the Eastern part of the State, were casting about to find a crop or crops that might be substituted, satisfactorily, for cotton, as the price of this latter crop during the previous fall had been, in many cases, below the cost of production. Many farmers increased their acreage of soy beans, and as a result of this increase at least a million bushels or more of beans were produced last year." Something like 80,000 to 100,000 bushels of soy beans were used by the cotton oil mills of the State during the past fall, winter, and spring.

"The first commercial manufacture of soy-bean oil and meal from domestic soy beans in the United States was started on December 13, 1915, by the Elizabeth City Oil and Fertilizer Company of Elizabeth City, North Carolina.

"From the start this mill operated night and day solely on soy beans until it had crushed it supply of about 20,000 bushels. This mill was able to crush about twenty tons during each twenty-four hours...

"It is understood that before the mill had ground a single bean they had contracted their entire output of oil to one of the leading manufacturers of the country at fairly reasonable prices. It, too, had no difficulty in selling its entire output of soy-bean meal, most of it going to a fertilizer manufacturer. From a ton of the beans this mill was able to secure something like 32 to 35 gallons of oil and about 1,650 pounds of meal... Other oil mills in North Carolina that crushed more or less soy beans during the past season were those located at New Bern, Hertford, Winterville, Washington, Wilson, Farmville, Lattimore, and at a few other places."

"Uses for the oil: At the present time the oil is used in this country chiefly in the manufacture of soaps, varnishes, paints, enamels, linoleums, and water-proofing materials. It has entered, also, to some extent in the manufacture of edible salad oil and butter substitutes" (p. 3). "Soy-bean meal: The meal secured from crushing the beans is the most valuable

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product and will have the widest usefulness. That secured from the crushing of yellow-colored beans is of a bright yellow color... Meal, too, that has been treated with ordinary solvents, employed for this purpose to remove the oil, is of a brighter color than are those meals from which the oil has been removed by heating and pressure. The oil, however, secured by a solvent process would be of a darker color... The soy-bean cake secured by expression methods, has a pleasant taste, not unlike malted milk, and when ground into meal may be used, at the present time, chiefly for feeding to livestock or for fertilizing purposes. The meal as a feed is highly concentrated and nutritious, and all kinds of stock seem to relish it when fed to them properly. It should not be fed in large quantities for any great length of time, because of its highly concentrated nature. As a fertilizer it acts satisfactorily. Much of the meal produced by the oil mills of the State during the past year seems to have been sold, without any difficulty, to manufacturers for the making of mixed fertilizers."

"... during 1913 and 1914 the British Oil Mills, located mainly at Hull, England, paid from $1.00 to $1.17 per bushel for Asiatic beans. During 1915 the price paid at the mills at Hull varied from $1.04 per bushel in January to $1.82 per bushel at the end of the year.

"In England, the oil from the soy bean is extracted largely by a secret process owned by an oil extracting company of Hull. By this process the seed are ground finely and are then treated directly by means of a solvent, which is thought to be benzine. Afterwards the oil is removed from the solvent by distilling off the latter, the solvent being used over and over again in the extractive process."

"By use of gasoline extraction the whole of the oil may be secured, the oil being of a clear, pure color, and hardly bearing any resemblance at all to the dark, muddy oil secured by the old hand-press method.

"The machinery used by the larger operators of England, Continental Europe, as well as of Japan, Korea, Manchuria, and China, is of Anglo-American manufacture, which is the kind ordinarily used in the expression of oil from cotton seed. In 1910 Stewart and Chard secured patents in England for a special machine which was particularly adapted for breaking up the beans. This machine has been very useful in solving some of the difficulties experienced in the soy-bean crushing industry in England.

"In England soy-bean oil for general purposes is not refined, as is cotton-seed oil in America, by the use of caustic soda, but by means of sulphuric acid and fuller's earth.

"Processes of refining soy-bean oil for edible purposes have been devised, but these, like those used for extracting the oil from the seed, have been kept secret; but they are thought in most cases to be by means of superheated steam."

"Importation of oil: In this connection it may be of interest to know that for the five years ending with 1916 there were imported into this country more than 174,000,000 pounds of soy-bean oil, which represented crushings amounting to more than 12,000,000 bushels. Of these, 47.6 per cent came through the port of New York; 36.1 per cent through Seattle [Washington]; 9.6 per cent through San Francisco [California]; 2.2 per cent through Philadelphia [Pennsylvania]; 1.6 per cent through Boston [Massachusetts]; 1.1 per cent through Chicago [Illinois]; and 1.3 per cent through all other ports of the United States. In 1916, 75 per cent of the importations came through the ports of Seattle and of San Francisco, the chief port of entry being Seattle, with 62.9 per cent of the total importation. During 1916 more than 98,000,000 pounds of soy-bean oil came in from other countries, 99.9 per cent of the total coming from Asia. Of the total amount imported from Asia, almost 72 per cent were shipped from Japanese ports. The total importations during 1916 wore valued at little more than $5,000,000."

"Soy beans, before crushing, and the meal secured by crushing, seem to have great possibilities in the way of different human foods. They are not only rich in food nutrients, but when properly prepared make very appetizing products...

"In this country some enterprising manufacturers are putting out prepared pork and beans, part of all of the beans being soy beans. A regular preparation of these which the writer has tried proved to be of as high grade as could be desired...

"Muffins made from soy-bean flour have been found to be very palatable [a recipe is included]...

"The chief value of the flour lies in its high content of protein (muscle-forming material) and mineral matter, one pound of it containing as much protein as two pounds of meat. Bread made from the soy-bean flour in Germany, where it is being largely used at the present time, secures about the same amount of food value as six dollars spent for meat. The flour seems to have especial value in the preparation of foods for delicate infants which have difficulty with digesting cows' milk, and for persons suffering with diabetic troubles." A diagram (p. 7) shows "Products secured from the crushing of a ton of soy beans by the oil mill, and the material made from these products." One ton yields 1,650 lb of meal, 32 gallons of oil, and 120 lb of trash and moisture. From the meal one can make food (human and animal), fertilizer, and celluloid. The human food can be macaroni, flour, sauce, milk, cheese, coffee, and lard. From the oil one can make food (cooking oils, butter [margarine?]), paints, enamels, blown oil (linoleum, India rubber substitutes, varnishes), and soap stock (soaps, glycerine). Note: This is the earliest English-language document seen (August 1996) that contains a diagram of this type. Address: Chief, Div. of Agronomy, North Carolina Agric. Exp. Station.

2200. Ito, T. 1916. Shôyu no seisei oyobi seihin-hô no kenkyû [Studies on the manufacture of shoyu and its

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products. I-VI.]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 11(7):33-43; 11(8):28-36; 11(9):19-29; 11(10):14-30; 11(11):14-25; 11(12):24-35. [Jap]

2201. Tanaka, Katsuhirô; Katashima, Hideo. 1916. Kabi o shôzezaru shôyu no shisei [Studies on mold-free shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 11(6):27-28. [Jap]
Address: Hiroshima Zeimu Kantoku Kyoku Gishi.

2202. Togano, Meijiro. 1916. Shôyu jôzô ni okeru san dai yôten [Three main principles of shoyu brewing]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 11(7):11-33. [Jap]
Address: Jozo Shikensho Gishi, Nôgaku-shi, Japan.

2203. Sornay, Pierre de. 1916. Green manures and manuring in the tropics, including an account of the economic value of leguminosæ as sources of foodstuffs, vegetable oils, drugs, etc. Translated from the French by F.W. Flattely. London: John Bole, Sons and Danielson, Ltd. xvi + 466 p. Illust. 26 cm. [12 soy ref]
• ***Summary:*** This book is dedicated "To my esteemed Master and Friend M.P. Bonâme. A token of deep gratitude and sincere admiration." It "was awarded a gold medal by the *Société Nationale d'Agricole de France.*" The translator is from the International Institute of Agriculture, Rome, and the Dep. of Zoology, University College of Wales, Aberystwth. In the introduction H. Pellet states (p. viii) "M. de Sornay, who for a number of years has been a member of the Agronomic Station of Mauritius, had already published, some time ago, in the *Bulletin* of the Station, a short treatise on the Leguminosæ." This volume is a major expansion of that work. The author was one of the first to study intercropping of sugar cane with legumes. Working in Mauritius, he found that legumes used in mixed cultivation with sugar prevented the growth of weeds and retained the soluble salts which would have been washed away by rain. A trailing variety of peanut was used. He also suggested soybean as an intercrop because "it does not interfere in any way with the small canes; the soybean may be used on a mixed cultivation and may even be sown in two rows in interspaces of canes" (p. 184). Also includes concise information about the cultivation and yield of soybeans.

Chapter 1, "General remarks" (p. 1-9) begins: "The family of the Leguminosæ, which numbers not less than 7,000 species distributed over every portion of the globe, contains, according to Van Tieghem, 430 genera." "The Leguminosæ are generally divided into three great sub-families: Cæsalpineæ, Mimoseæ, and Papilionaceæ." The first two sub-families prefer tropical climates, whereas the Papilionaceæ "adapt themselves to every climate and are found distributed from the Equator [Ecuador] to the Poles." The Papilionaceæ are divided into eleven tribes; a table shows these and the subtribes or genera they contain. The genus Glycine is in the tribe Phaseoleæ, subtribe Glycina.

Chapter 2 is an "Account [history] of the theories on the absorption of nitrogen from the air by the leguminosæ." Chapter 3 (p. 9-46) is a "Description of the various leguminous plants of agricultural value." The 37 species discussed include the peanut (p. 47-70), Bambarra groundnut or Voandzou (p. 70-72, native of Madagascar), *pois carré* [winged bean] (*Psophocarpus tetragonolobus*), and Soja, or Soy bean (p. 182-92).

The rambling treatment of the soy bean discusses bits and pieces of its history, botany, and yields in India, South Africa, and Mauritius. Nineteen tables show its composition. Concerning uses: "The seed of the soy bean is eaten as a vegetable by the majority of Chinese and Japanese, and they make numerous other uses of it." The chief ones are: Soy milk, soy cheese [tofu], and shoyu. "The roasted seeds of the soy bean are used in the United States and Switzerland as a substitute for coffee. Not containing any starch, these breads are used in the manufacture of breads and biscuits for people suffering from diabetes. They are found on the European market... The seeds are pressed in order to extract the oil, the oil resulting from the first expression being used in the manufacture of soap, whilst that from the second is used as machine oil. The cake is given to cattle mixed with other nutriments of lower nitrogen content. The trade in soy has increased considerably during the last five years." Trade statistics (exports of soy beans from Manchuria and imports to Europe) and prices on the London market (of soy beans, oil, and cake) are given.

Chapter 7, "Starch in the leguminosæ" (p. 246+) discusses the "Characters of the principal starches in the Leguminosæ." It contains an illustration (line drawing) of the starch in Soja hispida (Fig. 42, p. 251), and a description (p. 255) as follows: "Soja hispida.–Soy contains very little starch. The shape of the grains is fairly uniform, whilst their size is very variable. All the grains polarize clearly. The hilum is linear, occasionally stellate, but of rather rare occurrence. The striations are only visible at the edges and are very close together. Starch only very slightly homogeneous." Address: Chemist, Ex-Asst. Director of the Station Agronomique of Mauritius, Laureate of the Association des Chimistes de Sucrerie et de Distillerie de France et des Colonies, Laureate of the Société Nationale d'Agriculture de France.

2204. *San Francisco Chronicle*,1917. Gotham now has the soja bean. Jan. 12. p. 15.
• ***Summary:*** New York, January 11–When it comes to the matter of beans, Boston would do well to look to its laurels, because New York has welcomed into its capacious midst a rival to the famous New England Saturday night and Sunday morning food staple. And if you don't believe it go to 6 East Thirty-ninth street, make your way into the soja bean room

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of the School of Modern Cookery and gaze reverently on the soy, or soja bean, there on exhibition.

"The soy in its native haunts is said to have red hair, and somewhat of the temperament generally associated with that style of adornment.

"Forty-nine soybean specimens are on display, shorn of their hirsute appendages, the pods, leaves, and stems.

"In its original condition the bean, which is about the size and form of a green pea, is served in soup and is used in the preparation of meat sauces [such as Worcestershire sauce]. It can be found in the mysterious concoctions [soy sauce] which the adventurous eater absorbs in chop suey establishments, it is said.

"The soja bean, according to its sponsors in the bean room, forms the principal article of diet of Chinese and Japanese soldiers, and it is also popular in Germany, where it forms an auxiliary to the cow and goat in furnishing substitutes for milk. Information as to how a soja bean was milked was refused, by the way.

"It was predicted that the soja bean as a great future in this country."

2205. *Weekly News Letter* (*USDA*).1917. Soy bean useful crop. May be utilized in greater number of ways than almost any other agricultural product. 4(27):3. Feb. 7. [1 ref]
• ***Summary:*** "The soy bean... may be utilized in a greater number and a greater variety of ways than almost any other agricultural product...

"In Japan the soybean forms one of the most important articles of food in use. It is one of the principal ingredients in the manufacture of shoyu (soy sauce), miso (bean cheese), tofu (bean curd), and natto (steamed beans). The beans are eaten also as a vegetable and in soups; sometimes they are picked green, boiled, and served cold with soy sauce, and sometimes as a salad. A 'vegetable milk' is also produced from the soy bean, forming the basis for the manufacture of the different kinds of vegetable cheese. This milk is used fresh, and a form of condensed milk is manufactured from it."

In several European countries and to some extent in America, soy-bean "flour enters largely as a constituent in many of the so-called diabetic breads, biscuits, and crackers manufactured as food specialties.

"Soy-bean milk... has been produced in small quantities in the United States, and recently a factory has been equipped to make this product." In Europe and America soybeans are roasted to make "an excellent substitute for coffee. In Asia the dried beans, especially the green-seeded varieties, are soaked in salt water and then roasted, this product being eaten after the manner of roasted peanuts."

Soy-bean meal (for use as a stock feed) and soy-bean oil are also discussed. "In addition to its availability as a food, soy-bean oil has found important uses in the markets of the world for making paints, varnishes, soaps, rubber substitutes, linoleum, waterproof goods, and lubricants. It is also used in the Orient for lighting and in the manufacture of printing ink."

Reprinted in *Jersey Bulletin and Dairy World* 36:323. Feb. 28; *Ohio Farmer* 139:377. March 10; and *Journal of Home Economics* 9:183-4. April. Address: Washington, DC.

2206. *Jersey Bulletin and Dairy World*.1917. Soy bean a useful crop: May be utilized in a greater number of ways than almost any other agricultural product. 36:323. Feb. 28. [1 ref]
• ***Summary:*** Reprinted from the *USDA Weekly News Letter* 4:3 (7 Feb. 1917). Also reprinted in *Ohio Farmer*, 139:377. March 10; and *Journal of Home Economics*, 9:183-4. April. Address: Washington, DC.

2207. *Ohio Farmer*.1917. Soybeans for human food. 139(10):377. March 10.
• ***Summary:*** Reprinted from the *USDA Weekly News Letter* 4(27):3 (7 Feb. 1917). Address: Cleveland, Ohio.

2208. McClelland, C.K. 1917. Farms and farmers: Soy beans (Continued). *Atlanta Constitution* (*Georgia*). March 18. p. A10.
• ***Summary:*** Discusses soy bean harvesting machinery and uses for human food (shoyu, miso, natto, tofu, and soy bean meal [flour]). Address: Editor & Prof., Experiment, Georgia.

2209. Williams, C.G.; Park, J.B. 1917. Soybeans: Their culture and use. *Ohio Agricultural Experiment Station, Bulletin* No. 312. p. 577-600. March. [3 ref]
• ***Summary:*** This bulletin consists of two articles: "Soybean Culture" by Williams, and "Uses of Soybeans" by Park. The latter, which contains extensive information on soyfoods, is an extract of Park's paper titled "Soybeans as Human Food. Palatable Dishes Made from a Comparatively New Legume"; it was printed in Ohio Agricultural Experiment Station Monthly Bulletin 2(9, whole no. 21):299-303. Sept. 1917.

Contents: I. Soybean culture. Introduction: Production in Ohio, place. Climate and soil requirements: Climate, soil, fertilizers, inoculation. Seeding and cultivation: Seed bed, time of seeding, manner of seeding, depth seeding, rate of seeding, cultivation. Harvesting: For hay, for silage, for seed ("The best implements for cutting soybeans for seed are the mowing machine with side-delivery attachment, the self-rake reaper and the grain binder."), threshing. Varieties: For seed production, for hay. The effect of soybeans in crop rotations.

Tables show: (0) Acreage planted to five legumes in Ohio. Red and alsike clover: 880,676 acres (No. 1). Soybeans: 4,921 acres (No. 4). (1) Rate of seeding and yields of soybeans in Ohio from 1909 to 1916. Best rate–3 pecks/acre–gave 6-year average yield of 3,540 lb/acre of beans. (2) Description of 25 varieties: Amherst, Auburn, Cloud, Ebony,

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Elton (Chestnut)* (* = The Elton was first sent out by the U.S. Department of Agriculture under the name of Chestnut), Habaro, Hollybrook, Ito San, Ito San 17268, Manchuria, Medium Green, Mongol, Mikado, Ohio 7491, Ohio 7496, Ohio 9001, Ohio 9016, Ohio 9035, Ohio 9100, Ohio 9110, Sable, Shingto, Taha, Wing's No. 1, Yosho. The five highest yielders of grain are: Ohio 9016 (29.22 bu/acre, 5 year average), Ohio 7496, Elton, Ito San 17268, and Shingto.

(3) Yields of grain and straw of these 25 varieties. (4) Variety tests at the county experiment farms (yields of 8 varieties). (5) Soybean hay test (yields of 10 varieties, 1912-1916). (6) Wheat yields following crops of corn, soybeans (the highest), potatoes, or oats.

Part II. Uses of soybeans. Introduction. Use for animal food: Hay, grain, soiling crop. Special uses and products: Soybean meal, soybean oil. Use for human food: Soy sauce, soybean milk, use of the whole beans.

Concerning soymilk and tofu (p. 300): "If a small amount either of acid or of magnesium or calcium salts is added to the liquid [soybean milk], or if it is allowed to stand until sour, a curd is formed which settles out, leaving a clear, yellowish, watery liquid. The grayish white curd can be drained, pressed and eaten like cottage cheese. When salted and fried it is palatable, and can be used as a salad. This bean curd is the tofu which is so extensively eaten in the Orient. It is made fresh every day, and is as staple an article of diet of Oriental peoples as bread is of ours. As used by the Japanese these cakes contain 83 to 88 percent of water, 7 to 11 percent of protein and 4 to 5 percent of fat."

Concerning use of whole soybeans: "When properly roasted and prepared, the ripe soybean makes a good substitute for coffee, equal to many of the cereal preparations on the market" (p. 302).

Photos show: (1) A soybean plant with its leaves removed to show pods (front cover). (2) A field of soybeans, with about half the leaves fallen, ready to be cut for seed (opposite p. 581). (3) Root system of a soybean plant with "numerous nodules in which nitrogen-fixing bacteria live" (p. 583).

Tables show: (7) Percentage composition and digestibility of soybean meal (pressed, or extracted) and other foodstuffs [oil meals and feed grains] for comparison. (8) Quantity and value of imports of soybeans, soybean cake, and soybean oil into the United States, 1910-1915.

Bar charts show (p. 600): (1) Pounds of digestible protein in 100 pounds of 14 food materials; soy beans are highest at 28.3 lb. (2) Pounds of digestible protein and digestible carbohydrate that one dollar will buy in the form of the same 14 food materials; in the form of soy beans, it will buy the most digestible protein (9.43 lbs at 3 cents/pound) and the 4th most digestible carbohydrate (after corn meal, rice, and wheat flour). Address: Wooster, Ohio.

2210. Li, Yu-ying. 1917. Procédés et dispositifs pour la transformation intégrale du soya [Processes and technology for the transformation of whole soybeans]. *Chemisch Weekblad* 14(15):348-51, April 14. Included within a longer paper in this journal by de Waal, p. 344-56. [Fre; dut]

• ***Summary:*** This lecture, delivered in French on 11 Nov. 1911, includes a description of and an interesting, complex diagram showing the basic processes by which the many food and industrial uses of the soybean are created. "In the soybean industry, it is not only the whole seed / bean which constitutes the usable raw material, but also its derivatives such as soy flour, milk, etc., and even the by-products (cakes), which can, themselves, serve as the basis for a large number of products." A table (p. 349) shows these raw materials in five degrees: 1st. Whole soybeans. 2nd. Dehulled soybeans, cellulose/fiber, cakes, oil-rubber, milk, cakes. 3rd. Flour, cakes, oil, milk, cakes. 4th. Flour, milk, cakes, casein (*caséine*), flour. 5th. Casein, flour. "These five groups are composed of 19 products which can be considered as the raw materials which derive from a series of transformations leading up to the complete utilization of the bean.

"The course of operations to obtain the announced products comprises the following phases which are represented in figure 1.

"Dehulling of the beans. Grinding of the dehulled product, of oilcakes (*tourteau d'huilerie*), cakes for [soy] dairy production (*tourteaux de laiterie*), of casein.

"Pressing to obtain oil, or to obtain *sojalithe* (an industrial soy casein resembling ivory or horn).

"Drying of the casein, of the soymilk cake [okara] (*tourteaux de lait*), of the powder for preserves (*confiture*) [such as chestnut cream (*crème de marron*)].

"Cooking for the production of preserves, or for making sauce.

"Roasting / grilling for the manufacture of [soy] chocolate or [soy] coffee.

"Wet-grinding to obtain milk [from soybeans], or to obtain milk from okara (*lait provenant de tourteaux*).

"Fermentation for the manufacture of sauce [jiang or soy sauce], cooked soybeans, or milk.

"Concentration for the manufacture of milk, [okara] (*torteaux de lait*), or sauce.

"Desiccation / drying to obtain powdered [soy] milk, powdered [soy] milk cake [okara] (*poudre de lait de tourteaux*), powdered soy sauce.

A chart (fig. 2, p. 350) describes the progress and combination of different necessary operations to obtain these products.

"You can see that the soybean is first dehulled so that it can be cooked or ground either dry or with the addition of water. The dry-ground products, made into flour, are used for baking, pastry-making, and the fabrication of pasta (*pâtes alimentaires*).

"Dehulled soybeans treated by wet-grinding yield

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soymilk, which can itself be transformed into fermented milk, concentrated milk, powdered milk, or it can serve for the production of fresh or fermented cheeses, of [soy] sauce (by fermentation), as well as to obtain casein that can be dried or powdered; by pressing casein one obtains 'sojalithe.' The oilcakes [okara] resulting from the fabrication of milk are pressed and ground and can be used to make casein.

"Soybeans are pressed to obtain oil which can itself serve as a base to make candles, soaps, paint, artificial rubber, etc. Oilcakes remaining as by-products can be ground to make milk or pulverized to obtain flour.

"Cooked soybeans are also used to make condiments, fermented [soy] sauce, liquid sauce, solid [sauce], [sauce] concentrated into a paste or in dry powder. Cooked soybeans are also used to make pasty preserves (*confitures pâteuses*) or in powder.

"Cooked and grilled soybeans again serve to make [soy] coffee and chocolate." Address: Seine, France.

2211. Waal, A.J.C. de. 1917. Over soja-producten [On soy products]. *Chemisch Weekblad* 14(15):344-56. April 14. (Chem. Abst. 11:2001). [22 ref. Dut]

• ***Summary:*** Describes the work done by men in different countries on various soybean preparations and includes a paper by Li Yu Ying (cited separately) titled "Procédés et Dispositifs pour la Transformation Intégrale du Soya," including food and industrial uses of soybeans. A complex, full-page French-language diagram (p. 350) shows the basic processes by which the many food and industrial products that can be derived from the soy bean, and summarizes patents related to many of these. By milling and baking: soya meal (*soja-meel*) and soy bread (*soja brood*). Soya milk (*soja-melk*) and Western-style cheeses. Coffee and chocolate substitutes: Soy coffee (*soja-koffie*) and soy chocolate (*soja-chocolade*). Pork-butcher products, incl. soy sausages (*soja-worst*) in which one can use soy cheese (*soja-kaas*). Soy protein (*soja-eiwit*). Worcestershire sauce (*Worcestershire-saus*). Li is a resident of Seine France. This paper was presented on 11 Nov. 1911, and published on 20 Jan. 1912.

Note 1. This is the earliest Dutch-language document seen (March 2001) that used the term *soja-koffie* to refer to soy coffee.

Note 2. This is the earliest Dutch-language document seen (Oct. 2003) that uses the term *soja-melk* to refer to soymilk. Address: s' Gravenhage (The Hague), Netherlands.

2212. Eddington, Jane. 1917. The Tribune Cook Book: Chinese foods. *Chicago Daily Tribune*. April 15. p. B8.

• ***Summary:*** "In some recent stories with a Chinese background a poor student is described as 'the son of a man who dines on no richer dish than rice and soy gravy.' This soy or shoyu or syou sauce is procurable at almost any grocery store. It is one of the ingredients of Worcestershire sauce, which is one of the proofs that is has been used in England for nearly a century. When the soy is not procurable a little Worcestershire may be used."

Note 1. This is the earliest English-language document seen (April 2012) that uses the term "syou sauce" to refer to shoyu or soy sauce.

"At this [Chinese food] store I might have purchased fresh pig stomachs or soy bean cheese [probably tofu, but possibly fermented tofu], both cooked and uncooked, and I did get [mung] bean sprouts (15 cents a pound), and the tiny beans from which these are grown. These beans are green of color and not half as large as the smallest peas I have seen.

A boy in a story "says that he likes iced seaweed jelly, referring probably to jelly of the agar, or what we call vegetable gelatin,..." A recipe for "Seaweed jelly" states: "One ounce of agar-agar will make a gallon of jelly, or even more."

2213. *J. of Home Economics*.1917. The soy bean. 9:183-84. April.

• ***Summary:*** "The soy bean, already one of the most important crops of Asia, promises to take an important place in the agricultural industry of the United States. It is said that it may be utilized in a greater number and a greater variety of ways than almost any other agricultural product. Not only are the beans, and the oil expressed from them, available as food, but soy bean oil is used for making paints, varnishes, soaps, rubber substitutes, linoleum, waterproof goods, and lubricants, besides its use in the Orient for lighting and other purposes.

"In Japan the soy bean is one of the principal ingredients in the manufacture of shoyu (soy sauce), miso (bean cheese), tofu (bean curd), and natto (steamed beans). The beans are eaten also as a vegetable and in soups; sometimes they are picked green, boiled, and served cold with soy sauce, and sometimes as a salad. A 'vegetable milk' is also produced from the soy bean, not only forming the basis for the manufacture of the different kinds of vegetable cheese, but used fresh, while a form of condensed milk is also made from it. All of these food stuffs are used daily in Japanese homes, and for the poorer classes are the principal source of protein.

"Soy bean oil resembles that of cotton seed in many ways. The meal remaining after the oil is extracted from the beans has become important during the last few years as a food of low starch content, and so adapted to the use of diabetic patients.

"Soy bean flour enters as a constituent into many of the so-called diabetic breads, biscuits, and crackers manufactured as food specialties. The flour or meal may be used successfully in the household as a constituent of muffins, bread, and biscuits in much the way in which corn meal is used.

"An artificial milk like that manufactured in the Orient has been produced in small quantities in the United

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States, and recently a factory has been equipped to make this product. Such milk may be used for cooking in the household, and by bakers, confectioners, and chocolate manufacturers. Such products must, of course, be properly labeled.

"The soy bean has also been utilized as a substitute for the coffee bean. When roasted and prepared, it makes an excellent substitute for coffee."

2214. Yukawa, Matao. 1917. Daizu no tansuikabutsu oyobi sono shôyu jôzô to no kankei ni tsuite [Soybean carbohydrates and their relation to shoyu fermentation]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 38(4):318-58. April. [12 ref. Jap]

• ***Summary:*** The author found the following carbohydrates in matured soy-bean seeds: Total carbohydrates (in anhydride form): 21.69%. Cane sugar [sucrose]: 5.90%. Stachyose: 3.52%. Araban: 3.80%. Galactan: 4.64%. Fiber (crude): 3.85%.

Note: According to Oshima (1922) an English-language translation was made by Dr. W.T. Swingle, USDA Bureau of Plant Industry.

2215. Yukawa, Matao. 1917. Shôyu moromi no jukusei ni okeru chiroshin no hen'i [Changes in tyrosine during aging of shoyu moromi]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 38(4):358-73. April. [Jap]

2216. Prinsen Geerligs, H.C. 1917. Ueber die Anwendung von Enzymwirkungen in der Ostasiatischen Hausindustrie [On the application of enzymes in East Asian cottage industries]. *Zeitschrift fuer Angewandte Chemie, Wirtschaftlicher Teil* 30(3):256-57. May 8. [Ger]

• ***Summary:*** Paper read before the *Niederlaendische Chemische Vereinigung* (Dutch Chemical Union), General session in Hague, December 28, 1916.

This paper is on the domestic application of enzyme actions in Eastern countries, and describes, among other things, the making of fermented and non-fermented soybean food products. "To make soymilk (*Milchersatz*), only white soybeans are used, softened in water for 3 hours until they have swollen to 3 times their original size. Then, while water is added continuously, they are milled between two hard stones and fall through a hole in the bottom stone into a pail. A very small amount of the thin soybean slurry is set aside; through the proliferation of lactic acid bacteria it quickly becomes so sour that after several hours that lactic acid content has risen to 1.5%. The above mass is cooked in a large pan. The now pasteurized liquid is filtered through a large sieve to remove the hulls and hard pieces. The filtered milk-white liquid has, in appearance and chemical composition, the greatest similarity with animal milk. A sample contains 6.9% solids, 3.13% protein, and 1.89% fat. It gives an alkaline reaction and contains a solution of legumin bound to potassium phosphate, while the fat is emulsified in the thick protein solution. Unfortunately this soymilk (*Bohnenmilch*) tastes very much like raw French-beans (*Schneidebohnen*), so that people who are accustomed to cow's milk do not enjoy it much. But infants should be very content with it.

"If cheese is to be made from this milk, a small amount of the slurry soured with lactic acid is added to it. Thereby, the legumin (protein) is dissolved from the potassium phosphate and coagulated, then settles out with the fat with which it is emulsified. When the milk, through several hours mixing with the coagulation liquid, has become fully firm, it is packed in cloths and pressed between boards, in order to remove any excess water. Then the cakes are cut into square pieces; if they are to be eaten raw, it must be done quickly, lest they continuing souring and spoil. In order to impart a pleasant color to the cakes, they may be placed for several moments in a Curcuma [turmeric] decoction. Mostly the cakes of cheese (*Kaesekuchen*) are dried in the sun or fried (*gebraten*). They then keep better and acquire a pleasant flavor."

"Of much greater significance is the preparation of the most popular and prevalent soybean preparation, soy sauce (*der Soja*), which in East Asia is an indispensable seasoning for a variety of dishes, and is produced and used in unbelievably large quantities. There are various types, some of which contain wheat flour. But here we will consider only the type that is made [in the Dutch East Indies] with soybeans plus some added ingredients to improve the flavor.

Note: This is the earliest German-language document seen (April 2012) that uses the term *der Soja* to refer to soy sauce.

For the preparation of soy sauce, brown or black soybeans are cooked for several hours. After pouring off the cooking water, the beans are placed in flat pens / trays (*Hürden*) of woven bamboo and dried for half a day in the sun, then cooled in the shade. When they are cooled, the beans are covered with leaves of *Hibiscus tiliaceus*, a species of mallow, and they are soon covered with a layer of Aspergillus mold, which is usually found on the tiny hairs or cilia on the underside of the hibiscus leaves and so is transferred to the beans. The mold filaments or hyphae penetrate between the tough and thick cell walls, dissolve these through hydrolysis, and thus make the cell contents accessible to the influence of the molds. The mold is allowed to work until it forms spores (*Fruchtstaende*). The beans then appear to be covered with a brownish green felt. The beans are then dried in the sun and placed in a strong, cold salt solution. The mixture is placed in the sun for several days and then cooked. The brine solution, which contains the soybean extract, is poured off and the beans are cooked several more times until they have lost their salty taste. The various cooking extracts are mixed, filtered through a fine sieve, then mixed with palm sugar, aniseed

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[*Pimpinella anisum*], and an herb extract, which one can buy at a druggist's shop, and finally cooked until salt crystals appear. The soy sauce (*Soja*), which is now ready to use, is a dark brown, thick, very salty liquid, in which a viscous sediment forms. By thinning with water, it becomes turbid. But the solution again becomes clear with the addition of salt. This thorough investigation has shown that the mold hyphae branch out into the cell walls, hydrolyze and dissolve the pectin substances, and likewise break down the protein content of the cells to leucine, tyrosine, asparagine, and other decomposition products of legumes.

"But this action and result is of secondary importance. The main point is the dissolution of the cell walls, whereby the protein becomes free and can be dissolved in the concentrated salt solution. The composition of soy sauce, except for the salt content, is very similar to that of meat extract, so that it can completely replace meat in the largely vegetarian diets of the people of the East.

"In a similar way, various other foods are obtained, whereby a mold dissolves the cell wall and so fulfills the function otherwise accomplished by cooking. We mention here only the bean paste (*Bohnenbrei*) [*tao-tjo*], for the preparation of which, dehulled white soybeans are cooked and then mixed with rice flour and glutinous rice flour (*Kleereismehl*). The mixture is placed in a small basket that is lined with the same hibiscus leaves mentioned above, and the Aspergillus molds growing on the leaves are allowed to develop. This saccharifies the rice starch flour and dissolves the bean cell walls. Thereby, the mixture becomes sticky and glutinous, and tastes sweet. It is dried and placed in a pot with saltwater. There it remains until each bean is permeated with salt and a sample tastes salty. Palm sugar is added to taste and it is ready for use without further cooking. Microscopic analysis showed that the cell walls were completely dissolved and the contents lay free, so that the mold growth had greatly improved the digestibility of the beans.

"In Java, soybeans are also cooked and made into flat cakes on a flat bamboo lattice. A small piece of an old cake is added and the mass is covered with banana leaves. One soon observes a rise in temperature and the development of moisture. The mass is penetrated by hyphae of *Rhizopus Oryzae*, which again dissolves the cell walls and frees their contents. The cake [tempeh, though the term is not mentioned] with its covering of mold, is consumed without further processing, raw or fried (*gebraten*).

Also discusses the preparation of onchom from peanut press-cake. Address: PhD, Netherlands.

2217. *New York Times Magazine*. 1917. Woman off to China as government agent to study soy bean. Dr. Kin will make report for United States on the most useful food of her native land. June 10. p. 9. (New York Times section 6).

• ***Summary:*** The *New York Times Magazine* is part of the Sunday *New York Times* and may be simply cited as such. Dr. Yamei Kin is "the only Chinese woman with a physician's diploma from an American college," the Woman's Medical College of New York. "She left New York a few days ago for the orient to gather data on that humble but nutritious food [the soy bean] for the Department of Agriculture at Washington." During World War I, new demands are being placed on America to feed its citizens and allies. "The appointment of Dr. Kin marks the first time the United States Government has given so much authority to a Chinese. That it is a woman in whom such extraordinary confidence is now reposed detracts nothing from the interest of the story."

China was the first country to invent paper, printing, gunpowder, porcelain, chess, playing cards, and silk. "And now Dr. Kin is going to see if her native land can teach the United States how to develop a taste for the soy bean in its numerous disguises...

"'The world is in need of tissue-building foods,' said Dr. Kin, 'and cannot very well afford to wait to grow animals in order to obtain the necessary percentage of protein. Waiting for an animal to become big enough to eat is a long proposition. First you feed grain to a cow, and, finally, you get a return in protein from milk and meat. A terribly high percentage of the energy is lost in transit from grain to cow to a human being."

"'The statement is frequently made that the Orientals live almost exclusively upon rice, eating little meat. It is not generally known, perhaps, that deficiency in protein is made up by the consumption of large quantities of products of the soy bean, which take the place in our dietary of meat and other costly nitrogenous foods. They are eaten in some form by rich and poor at almost every meal. Instead of taking the long and expensive method of feeding grain to an animal until the animal is ready to be killed and eaten, in China we take a short cut by eating the soy bean, which is protein, meat, and milk in itself. We do not eat the plain bean in China at all. It is never eaten there as a vegetable, but in the complex food products–natto, tofu, miso, yuba, shoyu, and similar dishes.

"'The chief reason why people can live so cheaply in China and yet produce for that nation a man power so tremendous that this country must pass an Exclusion act against them is that they eat beans instead of meat.'"

She then describes how to make tofu. "'Soup noodles are made out of bean curd. Entrées made of bean curd are served with cream mushroom sauce or a hot Spanish tomato sauce. A salad of bean sprouts, accompanied by cheese–the cheese [fermented tofu] a cross between Camembert and Roquefort, and made from the soy bean–is very nutritious and palatable. Americans do not know how to use the soy bean. It must be made attractive or they will not take to it. It must taste good. That can be done. We make from it a delightful chocolate pudding. A black soy bean sauce we use as a foundation for sweetmeats in China." Note:

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None of the various Chinese food experts whom we have asked can understand what Dr. Kin means by the previous sentence. None has ever heard of a "black soy bean sauce" that is used as a foundation for confections or sweets in China. The two black soy bean sauces made in China, from either soy nuggets or jiang, are both salty. (WRS Jan. 2009). Nevertheless: This is the earliest English-language document seen (Oct. 2008) that uses the term "black soy bean sauce" to refer to a kind of sauce made from soybeans.

"The soy bean contains practically no starch, which means that it is a most desirable food for diabetics, and also, of course, for vegetarians. Buddhists kill no animals–they thrive by making a specialty of the soy bean, which, by the way, is already being used in the French Army. They find there that soy bean mixed with flour makes a good cracker, more nourishing than any other cracker.'"

"The Chinese do not know what worn-out soil is. Some places are so fertile and are cultivated with so much care and skill that three or four crops a year are regularly gathered... it is very common to see two crops in the same field at the same time... The Chinese have a passion for fertilizing the soil..."

"Dr. Kin is a graduate of the Woman's Medical College of New York, and her great interests have always been domestic sanitation, civic hygiene, the conservation of life, and questions of nutrition. She is the head of the Imperial Peiyang Woman's Medical School and Hospital, near Peking... the Imperial Infant Asylum in Tien-tsin, the Widows' Home, and the Girls' Refuge all come under her supervision as head of the woman's hospital work of Northern China. She will return to this country in October, bringing to our Government the detailed results of her study of the uses of the soy bean as a foodstuff needed by this country and by the world in the campaign of food raising and conservation." An illustration (line drawing) shows a portrait of Dr. Yamei Kin.

Note 2. This is the earliest published document seen (July 2000) that mentions Dr. Yamei Kin. Frank N. Meyer wrote letters about her in 1911 and 1916.

Note 3. This is the earliest document seen (Oct. 2001) that mentions a soy pudding (a "delightful chocolate pudding" made from bean curd).

2218. Rittenhouse, Anne, ed. 1917. The household: Soy beans, a vegetable from East. *Hartford Courant (Connecticut)*. June 12. p. 8.

• ***Summary:*** "What do you know about soy beans? Not much, probably. The most that anybody, excepting the food experts, seems to know is that they are usually served in the way of sauce with a Chinatown table d'hote dinner." Some also know them as a crop that is grown for cattle feeding. "But it seems to be time that we learned more of these beans." "The oil is not only useful for food, but it can also be used in making soap, linoleum, paints and varnishes.

"The beans are used both fresh and dried. Dried they may be used much as our army beans are used–soaked overnight, then cooked with pork for a long time in a slow oven. Green soy beans may be used in any way in which lima beans are used."

"These beans look more like dried green or yellow peas... They need long cooking, when dried, before they can be made into soup or baked. They cost about nine cents a pound."

2219. Prinsen Geerligs, H.C. 1917. Domestic application of enzyme actions in Eastern countries (Abstract). *J. of the Society of Chemical Industry (London)* 36(12):662-63. June 30. [1 ref]

• ***Summary:*** A summary of a paper read before the *Niederlaendische Chemische Vereinigung* (Dec. 28, 1916) and published in the *Zeitschrift für Angewandte Chemie, Wirtschaftlicher Teil* 30(3):256-57 (1917, May 8).

"A milk-like product produced by grinding soya beans with water contains 6.9% of total solids, 3.13% of proteins, and 1.89% of fat; this product, unless boiled, rapidly undergoes lactic acid fermentation, and a cheese may be obtained by the addition of a quantity of the fermented liquid to a larger volume of the normal liquid. To prepare an extract [soy sauce] resembling meat extract, the cooked beans are subjected to the action of fungi which are found on the leaves of a species of mallow (*Hibiscus tiliaceus*), the mass is then extracted with salt solution, spices are added to the extract, and this is then concentrated to a thick syrup. A similar product is prepared from a mixture of soya beans and rice by the action of fungi. Another food [tempeh] is obtained by submitting soya bean cakes to the action of fungi found on banana leaves, etc. The fungi found in rice meal and rice straw are utilised for converting rice meal into alcohol; rice meal may be saccharified by treatment with the fungi occurring on banana leaves and the liquid obtained is subsequently converted into rice wine. One of the most important results of enzyme action is the production of sugar in the palm; the stem of the latter is free from sugar but contains large quantities of starch; the conversion of the starch into sucrose proceeds in the tree, but laboratory experiments with the separated enzyme resulted in the formation of dextrose alone."

Note: This early English-language document describes tempeh, although the term is not actually mentioned.

2220. *Literary Digest.* 1917. To study the soy-bean for Uncle Sam. 55(2):52-53, 55. July 14. Whole No. 1421.

• ***Summary:*** This is a lengthy summary of an interview with Dr. Yamei Kin, published in *The New York Times Magazine* on 10 June 1917. It includes several lengthy excerpts. "So interested has the United States become in this discovery [China's knowledge of the soy-bean] that Dr. Yamei Kin, a Chinese woman graduate of an American college, has been

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sent back home to gather for the Agricultural Department at Washington [DC] all the facts that are known in China about the soy-bean."

"'Instead of taking the long and expensive method of feeding grain to an animal until the animal is ready to be killed and eaten, in China we take a short cut by eating the soy-bean, which is protein, milk, and meat in itself,' says Dr. Kin.

"The plain bean, however, is never eaten, but it furnishes such products as natto, tofu, miso, yuba, shoya [sic, shoyu], and other dishes with queer-sounding names..."

A letter dated 26 March 1917 from Frank N. Meyer in China gives the address of Dr. Mrs. Yamei Kin as 500 W. 111th St., New York City.

2221. *Hartford Courant (Connecticut)*.1917. The case of the soy bean. July 21. p. 10.
• ***Summary:*** That the soy bean "will become forthwith an article of food for New England folk is very unlikely even though the National Emergency Food Garden Commission is now urging the public to can the beans.

"The strange campaign for the introduction of this new article of diet has moved W.P. Brooks of the Massachusetts Agricultural Experiment Station to publish a fairly conclusive statement upon the matter. He says the advocates of the soy bean say something like this about it: -

"'The soy bean is a very rich food; it can be successfully grown in Massachusetts and will give a large yield; it is palatable prepared and served in similar ways to those employed in the cooking of ordinary field and garden beans. The last statement is, I believe, absolutely incorrect, and the others require qualification. The fact that I have had unusual opportunities of observation and experience with this crop leads me to ask space for this article since I hope it may be the means of preventing discouragement and disappointment. I lived for twelve years in Japan. In that country the soy bean has for many hundreds of years been an important crop. The Japanese made practically no use of it as a vegetable prepared by ordinary methods of cooking. They are very largely vegetarians, and if it were adapted to such use there can be no doubt they would so employ it.'

"Then Mr. Brooks goes on to say that since coming to this country he has tried baking the soy bean and the members of his family were a unit in agreeing that it was nowhere near as desirable as the native varieties. He had roasted and ground the bean and used it as a substitute for coffee and found it a trifle less worse than when baked.

"He says that the bean is rich in protein and fat but he adds that it is much too rich to be palatable. While the Japanese do not use it as a cooked food they contrive to make a cheese [tofu] of it, but this they do not prepare in the family but buy it of manufacturers. They also use the bean in preparing a sauce [soy sauce] and make extensive use of it as a food for cattle. Finally he says that while he does not wish to discourage experiments he does not think it will be regarded as useful as an article of food.

"The most productive varieties, he says, are not likely to mature in Massachusetts but several varieties will generally produce a crop. They need, he says, a season a little longer than the larger sorts of field corn and they will produce from twenty to twenty-five bushels to the acre. Do Connecticut people care to raise soy beans with this outlook, especially when it is considered desirable to inoculate the soil with a certain bacteria before attempting to get a crop?"

2222. *New York Produce Review and American Creamery*.1917. Navy bean has rival: Soybean has higher food value--Bean milk preparation. 44(14):565. Aug. 1. [1 ref]
• ***Summary:*** Discusses the advantages of soybeans over navy beans, based in part on *Ohio Agric. Exp. Station Bulletin* 312. "Soybeans are rapidly finding a place as human food, used as common white beans and in new preparations, but more nutritious and economical. Less risk and labor are involved in growing and harvesting soybeans as compared with navy beans.

"Boiled or baked alone, or in combination with pork, potatoes or rice, soybeans take the place of navybeans. Soaking over night in considerable water is necessary to remove the strong flavor of the beans. A little soda in the water during cooking makes them softer.

"Green soybeans cooked in the pod shell easily, and make a palatable dish when served with butter or milk. The pods are tough and seldom eaten.

"A little soybean flour added to cornmeal makes mush made from the mixture brown and quicker and increases its food value."

"Soy sauce, bean milk, bean curd and a ripened vegetable cheese called 'miso' are common foods made of soybeans in Japan and China."

Note: This is the earliest English-language document seen (Oct. 2001) that uses the term "soybean flour." Address: New York.

2223. *USDA Bureau of Plant Industry, Inventory*.1917. Seeds and plants imported by the Office of Foreign Seed and Plant Introduction during the period from January 1 to March 31, 1914. Nos. 36937 to 37646. No. 38. 105 p. Aug. 17.
• ***Summary:*** Soy bean introductions: *Soja max* (L.) Piper. (*Glycine hispida* Maxim.)

"37036-37058. From Chusan, Chosen (Korea). Presented by Rev. George H. Winn, Presbyterian Mission. Received Jan. 28, 1914.

"37036 and 37037. Soja max (L.) Piper. (*Glycine hispida* Maxim.)

"37036. 'No. 1. *Yulgochi* bean. Very hardy, will grow and produce where the ordinary beans will not amount to much.'

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"37037. 'No. 2. *Kambool.* Very commonly found in the markets.'

"37038 and 37039. Phaseolus angularis (Willd.) W.F. Wight. Adzuki bean."

"37040 to 37055. Soy bean.

"37040. 'No. 5. Brown mottled bean; carefully cultivated and given sufficient fertilizer.'

"37041. 'No. 6. Brown. Planted around the edges of the rice fields or where there is a small corner that can be utilized, they are very hardy and will grow and produce where the ordinary beans will not amount to much.'

"37042. 'No. 7. Large white-eyed bean; carefully cultivated and given sufficient fertilizer.'

"37043. 'No. 8. Large green bean. The larger beans are all carefully cultivated and given sufficient fertilizer.'

"37044. 'No. 9. Black mottled brown bean. As a rule, the smaller beans are planted around the edges of the rice fields or where there is a small corner that can be utilized. They are very hardy and will grow and produce where the ordinary beans will not amount to much.'

"37045. 'No. 10. White mottled black bean; carefully cultivated and given sufficient fertilizer.'

"37046. 'No. 11. Ordinary green bean. As a rule, these beans are planted around the edges of the rice fields or where there is a small corner that can be utilized. They are, however, often planted in fields. They are very hardy and will grow and produce where the ordinary beans will not amount to much.'

"37047. 'No. 12. Brown mottled bean; often planted around the edges of rice fields and where there is a small corner that can be utilized; very hardy and will grow and produce where ordinary beans will not amount to much.'

"37048. 'No. 13. Large blue bean; carefully cultivated and given sufficient fertilizer.'

"37049. 'No. 14. Large black bean; carefully cultivated and given sufficient fertilizer.'

"37050. 'No. 15. Small black bean; grown around the paddy fields. It is cultivated in larger areas because it is supposed to be extra nourishing, and some seem even to suppose it has medicinal properties, but I fear there is not much to it.'

"37051., 'No. 16. The larger beans are all carefully cultivated and given sufficient fertilizer.'

"37052. 'No. 17. The red bean; carefully cultivated and given sufficient fertilizer.'

"37053. 'No. 18. Black mottled yellow. Small beans which are planted around the edges of the rice fields or where there is a small corner that can be utilized; very hardy and will grow and produce where the ordinary beans will not amount to much.'

"37054. 'No. 19. Maroon bean. One of the larger beans, all of which are carefully cultivated and given sufficient fertilizer; but this is not very commonly found.'

"37055. 'No. 20. Ordinary white bean. One of the larger beans; carefully cultivated and given sufficient fertilizer.'"

"37062 and 37063. Soy bean. From Harbin, China. Presented by Mr. Southard Warner, American consul, at the request of the American consul at Newchwang. Received Feb. 5, 1914.

"See report on the 'Soya Bean of Manchuria,' 1911 [by Norman Shaw, Dairen].

"37062. Grown south of Harbin.

"37063. Grown north of Harbin."

"37069 to 37083. From Tientsin, China. Presented by Dr. Yamei Kin, Peiyang Woman's Medical School and Hospital. Received Feb. 6, 1914.

"37074 and 37075. Soy bean.

"37074. '*Yüeh ya tou*, literally 'moon-tooth' bean, so called from the edge of the green peeping outside of the black thick skin like the crescent moon in the sky. Is largely used for making bean sprouts, which they say requires a bean that is not mealy or farinaceous, as that kind becomes mushy in the process of germination and has no taste left. Also is good for feeding animals, requiring to be lightly steamed before feeding, not boiled, for then the oil escapes and the flavor is lost. This kind is valued for its oil, which it contains in a great amount, and for making bean curd. This must be grown in a well-drained clay soil; black or moist earth will not do.'

"37075. '*Cha tou.* Specially used for making bean curd and bean sprouts.'"

"37077. Soy bean. '*Huang tou.* Used for making bean curd as well as starch and vermicelli.' Note: #37078 is Mung bean (*Phaseolus aureus* Roxb. [Roxburgh], *Lü tou*).

"37080. Soy bean. '*Ching tou.* Used only for the oil expressed and fodder purposes.'"

"37228 to 37325. Soy bean. From Seoul, Chosen (Korea). Presented by Mr. George H. Scidmore, American consul general. Received Feb. 17, 1914.

"'I submit the following information, which has been obtained, for the most part, from the Director of the Department of Agriculture, Commerce, and Industry, of the General Government of the Chosen. The same officer has very kindly supplied samples of 98 varieties of soy beans.

"'The usual period during which the seed is sown extends from the middle of May to about July 10. In case the sowing is postponed till the latter part of that period, the fields from which wheat has already been harvested are used. The soil is first prepared by plowing and is then shaped into small hemispherical hillocks about 4 ft in diameter. The seed is then planted in drill holes on the top of these hillocks, 6 or 7 inches being left between drill holes and 5 or 6 seeds being sown together in a hole. As a general rule, no manure or other fertilizer is used, but when it is desired to enrich the soil ashes are most commonly employed. After the plants have sprouted sufficiently, the shoots are thinned out so as to leave two or three only to each drill hole. This process takes place at the time of the first weeding. The ground

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surrounding the plants is gone over with a hoe or other implement two or three times to turn over the soil and to weed the field. The process outlined above gives briefly the method of cultivation generally in use throughout Chosen, and is applicable whether the beans are planted in separate fields by themselves or in the same fields with other crops.

"'It is used mainly for its food value, the oil, and the residue as a fertilizer after the oil has been expressed. It is valuable as a food product for both men and cattle, the latter finding it a very excellent fodder when the whole plant is used. The principal food products for human consumption derived from the soy bean are bean paste [jang, Korean miso], soy [sauce, kan jang], bean curd, meal, etc.'" There follows a long list of 98 new soybean introductions from Korea, grouped by seed color; the first four are representative of the rest:

"37228. 'A1. *Six Months*. Yellow. From South Chusei Province, Koshu district.'

"37229. 'A2. *Widower*. Yellow. From North Heian Province, Seisen district.'

"37230. 'A3. *Broad River*. From South Heian Province, Junan district.'

"37231. 'A4. *White*. Yellow. From North Zenra Province, Chinan district.'

"37232. 'A1. *Early Yellow*. Yellow. From North Heian Province, Kokai district.'

Note: This is the earliest document seen (March 2009) that mentions Korean-style soy bean paste; it is also the earliest English-language document seen (March 2009) that uses the term "bean paste" to refer to Korean soybean paste (*jang*).

Other interesting names among these 98 introductions from Korea are: *Rengyo Egg, Large-Grained White, White Rat's Eye, Rich and Virtuous, Large Date, Indigo, Bluish, Barbarian Blue, Clasped Hands, Clear Blue, Black Rat's Eye*, and *Thousand Tied*. A tally of the seeds by color shows: Yellow 35, Green 22, Gray 17, Black 16, Striped 8. Note that Yellow seeds comprise only 35.7% of the total by color. Address: Washington, DC.

2224. Park, J.B. 1917. Soybeans as human food: Palatable dishes made from a comparatively new legume. *Ohio Agricultural Experiment Station, Monthly Bulletin* 2(9):299-303. Sept. Extract from Ohio Agric. Exp. Station, Bulletin No. 312, "Soybeans: Their Culture and Use." [2 ref]
• ***Summary:*** For details, see Williams and Park, 1917. "Soybeans: Their Culture and Use." Address: Ohio.

2225. Saito, T.; Matsuyama, M. 1917. Shôyu moromi no kôso ni tsuite [The enzymes of shoyu moromi]. *Sapporo Norin Gakkaiho (J. of the Society of Agriculture and Forestry, Sapporo)* 9(42):291-316. Sept. [Jap]
Address: 1-2. Nôgaku-shi, Japan.

2226. Stoddard, William Leavitt. 1917. Soy: The coming bean. *Good Housekeeping* 65:77, 126-28, Sept. [4 ref]
• ***Summary:*** "*Good Housekeeping* asked the Department of Agriculture to tell its readers the truth about the soy bean. This article is the department's answer. In the [Good Housekeeping] Institute Kitchen new recipes and methods of using the soy bean were evolved and tested. These recipes will be found at the end of this article. A list of dealers in various sections of the country who carry a supply of soy beans will be mailed upon request accompanied by a stamped addressed envelope.

"'The soy bean, also called the soja bean, is a native of southeastern Asia, and has been extensively cultivated in Japan, China, and India since ancient times... The beans are there grown almost entirely for human food, being prepared for consumption in many different ways. Their flavor, however, does not commend them to Caucasian appetites and thus far they have found but small favor as human food in either Europe or America.' Thus declared a bulletin of the Department of Agriculture [Piper and Nielsen, 1909, Farmers' Bulletin 372] before the war. Less than three months after our entrance into the war–and the entrance of the United States as a nation for the first time into a food moderation and conservation campaign–this same authority stated that 'the soy bean has already reached a place of high economic importance in America and Europe as a foodstuff... During the past season the demand for seed by food manufacturers has resulted in greatly increased prices.' The soy is a coming bean if not *the* coming bean."

Sold in some American markets under the name Togo bean, the soy bean "now flourishes in an increasingly large acreage in Tennessee, North Carolina, Virginia, Maryland, Kentucky, and the southern parts of Illinois and Indiana. The earlier varieties even mature in Ontario [Canada] and our Northern states."

The American housewife probably does not care "that there is a factory in New York is making a 'vegetable milk' of soy beans; the "flour or meal [okara] which remains after the milk is manufactured is valuable both as a stock for feed and for human consumption; that soap manufacturers and paint manufacturers are using the oil of soy beans to replace more expensive oils; and that the substitute butter makers are using the fat of the soy bean in products which thousands of consumers are using all unwitting of its true nature.

"The thing that the American housewife wants to know today is where soy beans can be bought and what are the simplest uses of them... Probably the easiest and commonest method of cooking soy beans is to use them either for soup or to bake them."

Eight recipes are given; all but two call for "soy beans." Soy-bean bread (containing 20% of the flour in the form of "soy-bean meal" [a full-fat soy flour]), Soy beans and rice (with "1 tablespoonful Worcestershire sauce"), Soy-bean loaf with tomato sauce, Vegetable roast (baked), Savory baked

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soy beans, Soy-bean soup, Soy-bean muffins (with "1 cupful cold baked soy-bean pulp"), and Salted soy beans (deep fried).

Photos show: (1) Muffins made with soy-bean meal. (2) Soy-bean meal ground at the Good Housekeeping Institute; the hand-turned mill and two small piles of soy beans are shown. (3) A dish of soy beans and rice. (4) A soy bean plant. (5) A vegetable roast with soy beans as an ingredient.

Note 1. Theodore Hymowitz writes (12 Feb. 1990): "I have no idea if William Leavitt Stoddard was related to Illinois soybean pioneer William Hoyt Stoddard. William Hoyt had one brother named Charles Lumas Stoddard."

Note 2. This is the 2nd earliest document seen concerning soybeans in connection with (but not yet in) Togo.

Note 3. This is the earliest English-language document seen that uses the term "Salted soy beans" to refer to soynuts. It is also the earliest document seen in any language describing the frying or deep-frying of whole soybeans to make soynuts. Previously soynuts had always been dry roasted.

Note 4. This is the earliest article on soy seen (Aug. 2002) in *Good Housekeeping* magazine.

2227. Furukawa, Seiji; Tomizawa, Zenjirô. 1917. Kôryô no shôyu bôfu sayô ni tsuite [On the action of spices/perfumes as preservatives for shoyu. I & II.]. *Nogaku Kaiho (J. of the Scientific Agricultural Society, Japan)* No. 182. p. 708-720. Oct. 5; No. 183. p. 781-83. Nov. 5. [Jap]
• ***Summary:*** Some 35 different *"koryo"* (spices) were tested. Most of these are not commonly known substances. They include menthol, folmarin, etc. Address: Itô Kochôen Kenkyû-bu.

2228. *Hartford Courant (Connecticut)*.1917. Every household must help in war. Oct. 12. p. 11.
• ***Summary:*** Under "Today's recipes," the first has no name but resembles chop suey. It is seasoned with ½ cupful "soy sauce."

2229. Eddington, Jane. 1917. The Tribune Cook Book: Beans, soy special. *Chicago Daily Tribune*. Oct. 14. p. E8 (Part 6, p. 8).
• ***Summary:*** "We do not know enough about that most charming family of plants which furnish us the meat stuff of the vegetable kingdom, or vegetable protein."

"'Don't forget the soy bean,' was one of the commands urged on growers this year, 'for there is sure to be a larger demand for the beans for human food.' Last year these beans cost no more than a third as much as navy beans and only a fourth as much as limas, and more people were trying them and failing in their cooking than ever before. They really ought never to be subject to a boiling temperature. Protein of any sort is easily hardened by much heat, and these beans have a high per cent of this food principle. With this in mind they may be baked, etc., like navy beans.

"The soy bean, though so long used in China and Japan, whence we have such products as soy sauce, was introduced many years ago into the United States as a soil renewer and fodder crop."

Years ago, experiment station bulletins were discussing "the total digestible nutrients" of fodder crops. Yet more than 25 years were to pass "before even a few people would listen to the word 'nutrient' in reference to their own diet. 'Roughage' was a term much used that far back, as contrasted with such condensed foods as grains, while now we use the term in talking about human diets."

"Perhaps we shall some time learn to make the bean curd of soy beans which the Chinese use so much. I am hoping to get a precise recipe. The soy bean flour came into use some time ago."

"The medical writers, who for a considerable number of years have used this bean extensively and written much about it with recipes," say that the "yellow soy bean" contains 35 per cent protein.

The section titled "Soy bean cheeses" contains a long excerpt from Friedenwald and Ruhrah (1913, p. 124-26), which states that the most common of these "cheeses" are natto, tofu, miso, juba [sic, yuba], and shoyu. A brief description of each is given.

The last section, titled "Home made soy bean flour," again discusses Friedenwald and Ruhrah, "patent soy bean flour, mostly known to doctors only," grilled soy beans, diabetics, and a recipe for home made soy flour.

2230. Frazer, Robert, Jr. 1917. Japan. Kobe. *Supplement to Commerce Reports [USA] (Daily Consular and Trade Reports, Bureau of Foreign and Domestic Commerce, Department of Commerce)* No. 55c. Dec. 31. p. 15-40.
• ***Summary:*** Goods shipped from Osaka to all countries: Pea cheese (miso): In 1915 612,517 lb worth $16,379 was exported; in 1916 this rose to 886,245 lb worth $23,268. Soy sauce: In 1915 80,977 gallons worth $32,157 were exported; in 1916 this decreased to 73,261 gallons worth $29,881.

Imports at Kobe from other countries included soya beans and oil cake. Tables summarize imports to and exports from Osaka for the years 1915 and 1916. Address: Consul, Kobe, Japan.

2231. Scidmore, Geo. H. 1917. Japan. *Supplement to Commerce Reports [USA] (Daily Consular and Trade Reports, Bureau of Foreign and Domestic Commerce, Department of Commerce)* No. 55c. 40 p. Dec. 31.
• ***Summary:*** One "important item of import is bean-oil cake, which comes practically all from Kwangtung Province and China. These imports were valued at $17, 234,382 for 1916 and the quantity amounted to 1,727,079,733 pounds." In the table of articles imported, bean-oil cake is listed under

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fertilizers, and is by far the largest value. Cottonseed and rapeseed oil-cake were also imported for use as fertilizer in 1916, but the value of each was only about 4% that of bean-oil cake. Small amounts of manures and bone dust were also imported as fertilizers. Of the $2,263,504 worth of soya bean imported, 74% came from China [including Manchuria], 19% came from Kwangtung Province [controlled by Japan], and 7% came from Asiatic Russia. But of the $17,234,382 worth of bean-oil cake, 57% came from Kwangtung Province, 25% came from China, and 2% came from Asiatic Russia.

Exports of "soy" (soy sauce) from Japan were worth $491,596 in 1915 and $533,545 in 1916. Of the 1916 amount, 34% went to the United States, 26% went to Hawaii, and 13% went to Kwangtung Province. A small amount was exported to the Philippine Islands. The volume exported is not given; "soy and vinegar" are grouped together.

Within the report from Japan is a report from Kobe by Consul Robert Frazer Jr.

Note: This is the earliest document seen (Feb. 2001) concerning soybeans in the former USSR after it was established in Nov. 1917. This document contains the earliest date seen for soybeans in the USSR (1917). Address: Consul General, Yokohama.

2232. Tadokoro, Tetsutarô. 1917. Shôyu moromi no kôso sayô ni taisuru en-rui no sokushin genshô ni tsuite [The stimulating action of salts on the enzyme action of shoyu moromi]. *Sapporo Norin Gakkaiho* (*J. of the Society of Agriculture and Forestry, Sapporo*) 9(43):416-30. Dec. (Chem. Abst. 23:1932). [Jap]
Address: Tohoku Teikoku Daigaku Noka Daigaku, Nogei Kagaku Jikken-shitsu, Nôgaku-shi.

2233. **Product Name:** Shoyu.
Manufacturer's Name: Kawasoyi (M.).
Manufacturer's Address: Waipahu, Oahu, Hawaii.
Date of Introduction: 1917.
New Product–Documentation: Directory of Honolulu and the Territory of Hawaii. 1917. p. 447. "Kawasoyi, M., soy, Waipahu." Not listed in 1915.

2234. Kinoshita, Asakichi. 1917. Shôyu no hiire ni tsuite [Pasteurization of shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 12(2):21-25. [Jap]
Address: Jozo Shikensho Gishi, Japan.

2235. Kinoshita, Asakichi. 1917. Daizu yori yubun o chûshutsu shitaru mame kasu shôyu jôzô ni tsuite [Shoyu brewing with defatted soybean cakes]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 12(5):1-9. [Jap]
Address: Jozo Shikensho Gishi, Japan.

2236. Tadokoro, Tetsutarô. 1917. Shôyu moromi no kôso sayô ni taisuru en-rui no sokushin genshô ni tsuite [Stimulating action of salts on the enzyme action of shoyu moromi. II.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 12(11):23-28; 12(12):21-28. [Jap]

2237. **Product Name:** Shoyu.
Manufacturer's Name: Takahashi (G.).
Manufacturer's Address: Waialua, Oahu, Hawaii.
Date of Introduction: 1917.
New Product–Documentation: Directory of Honolulu and the Territory of Hawaii. 1917. p. 770. "Takahashi, G., soy, Waialua" [Oahu, Hawaiian Islands]. Not listed in 1915.

2238. Yukawa, Matao. 1917. Shôyu moromi no jukusei ni okeru "chiroshin" no heni [Transformation of tyrosine in the ripening of shoyu moromi]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 12(6):15-30. [Jap]

2239. Yukawa, Matao. 1917. Daizu no tansuikabutsu oyobi sono shôyu jôzô to no kankei ni tsuite [The relation between the carbohydrates in soybeans and shoyu brewing]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 12(7):23-34. [Jap]

2240. Couling, Samuel. 1917. Encyclopaedia Sinica: Bean, Soya. London: Oxford University Press, Humphrey Milford; Shanghai: Kelly and Walsh. See p. 46. 28 cm. [2 ref]
• ***Summary:*** *"Glycine hispida*, Monch. or *Dolichos soja*, L. This bean, so valuable for the oil which is expressed from it, has come into great prominence of recent years, owing to the enormous dimensions of the export trade in it since the Russo-Japanese War... The oil-yielding variety par excellence is the yellow bean, of which nearly 15 million piculs, or not far short of one million tons, were exported in 1915, 90% of this being from Manchuria, and the balance from Chihli, Hupei and Kiangsi... For several generations beans, but more especially beancake, had been sent to South China as manure for the sugar plantations; exportation abroad was prohibited until 1869, when shipments were made to Japan, which soon became a large customer both for beans and bean oil... In the Far East soya beans are used, as human foodstuffs, for making soy [sauce], bean paste, or *chiang*, as *tou fu* or beancurd, in soups, etc.; in cooking instead of rapeseed and sesamum oil; and the cake is employed as a fertilizer and for fattening hogs... Besides the Soya Bean there are many other kinds of bean cultivated in China, and entering largely into the diet of the people. The chief of these is *Phaseolus mungo* L, the green bean Lü Tou [mung bean], which contains little oil but is used in the manufacture of vermicelli.

"The annual export of vermicelli, principally from Chefoo, is considerable–amounting in both 1913 and 1915 to nearly Hk. Tls. [Haikwan Taels] 3,000,000; it goes to Chinese emigrants abroad." Address: M.A. (Edin.), Lately honorary secretary and editor, North China Branch, Royal

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Asiatic Society.

2241. Crevost, Charles; Lemarié, Charles. 1917. Catalogue des produits de l'Indochine. 5 vols [Catalog of the products of Indochina. 5 vols.]. Hanoi: Imprimerie d'Extrême-Orient. 29 cm. Formerly published in Bulletin Economique de l'Indochine, Vols. 25 and 26. [Fre]

• ***Summary:*** Volume 1 (published in 1917; 175 p.), titled *Produits Alimentaires et Plantes Fourragères* (*Nutritious Products and Forage Plants*), describes plants grown in Indochina and the nutritive value of each. Pages 106-09 describe "Soja–Glycine Soja," the soybean. Local names are given in Annam and Tonkin, Cambodia, China, and Japan. "The plant is widely cultivated in Indochina for its seeds, which are consumed in various forms. Soybean seeds in Indochina are typically yellowish white... It is well known that the Japanese use the soybean to prepare a sauce named *shoyu* (*teou yeou* in China), as well as a *fromage de pâte* or vegetable cheese named *to fu* [tofu], or *teou fou* in Chinese. The Annamites also prepare an analogous sauce named *tuong* and a *fromage de pâte* named *dau phu* and *dau phu-ao*. Cambodia and the Indochinese province of Châu-dôc produce significant quantities of soybeans, of which a part is sent down to Saigon to be consumed or exported. There are good varieties on the high plateaus of Tonkin, especially in the province of Lang-son, whence large amounts can be obtained for export.

"The dead leaves are ordinarily burned. However some indigenous people partially burn the stems of the soybean plants, stripped of their leaves, to obtain a very fine charcoal dust or ash, which they mix with the resinous balm of *Canarium commune*, to use in making joss sticks. These are slender incense sticks burned as offerings in the pagodas and at the altars of their ancestors in their family homes." [Note: A joss house is a Chinese temple or shrine.] A large, excellent, and very detailed illustration (p. 108) shows a soybean plant, with leaves, pods, seeds, and flowers. Nutritional analyses of soybeans from Laos, Tonkin, and Manchuria are given (from other sources).

Volume 3, titled *Matières Grasses Végétales* (*Fats and Vegetable Matter*), includes analyses of Indochinese plants and their fat and oil contents. The contents of Vol. 3, was first published in the *Bulletin Économique de l'Indochine* 1922-1924. Pages 75-78 discuss "Soja–Soja Max (Lin.) Piper," the soybean. "Mr. Li Yu-ying, a member of the Biological Society of the Far East, has greatly contributed, following several attempts made for more than a century by naturalists and those who acclimatize plants, to popularize in France this plant of many uses. He introduced cultivation of the plant in the area around Paris and, in Paris itself, in 1908 he established a laboratory for the study of the soybean, since completed by a soyfoods factory (*l'usine de la caséo-sojaïne*), where all the products derived from this plant are manufactured: Soymilk (regular, concentrated, powdered, or fermented), tofu (*fromage de soja*), soya patés (*pâtes de soja*), soya casein (*caséïne de soja*), soy flour and bread, etc." The rest of the article is concerned mostly with characteristics, uses, and trade of soybean oil.

Crevost was born in 1858. Note: The meaning of soya casein is not clear. Address: 1. Inspecteur des Services agricoles et commerciaux; Conservateur du Musée [Maurice Long] agricole et commercial de Hanoi; 2. Ingénieur-Agronome, Directeur des Services agricoles et commerciaux du Tonkin, Lauréat de la Société nationale d'acclimatation.

2242. Fuerstenberg, Maurice. 1917. Die Soja, eine Kulturpflanze der Zukunft und ihre Verwertungsmoeglichkeiten [The soybean, a cultivated plant of the future, and possibilities for its utilization]. Berlin: Paul Parey. 40 p. [59 ref. Ger]

• ***Summary:*** Dedicated to the Prof. Friedrich Haberlandt, who introduced the soybean to Central Europe. Contents: Foreword. Introduction: The soybean. Ways of using the soybean in its homeland (East Asia, especially Japan and China). Shoyu or soy-sauce. Miso (vegetable cheese). Natto. Tofu of the Japanese or Tao-hu of the Chinese (bean cheese). The soybean as an oilseed. Soybean meal (and flour). Soy as a coffee substitute or extender. Soybean milk. Soy meat substitutes. Soybeans as a chocolate substitute. Soy rubber substitute. The utilization of the soybean in agriculture: As cow fodder. Summary. Bibliography.

Photos show: (1) A field of soybeans (p. 6). (2) A soybean plant with the leaves removed to show the pods (p. 12). (3) Soy beans and pods (p. 13).

Contains numerous tables, mostly from other sources: pages 11, 16-17, 19, 25, 27, 30, 35-37. Contains one of the best early European bibliographies on the soybean.

The author wrote this book during World War I. In his first book, published one year earlier in 1916 and titled "The Introduction of Soya, a Revolution in the Food of the People," he discussed what he believed to be the great agricultural and nutritional value of the soybean. He uses two terms, *Die Soja* and *Die Sojabohnen* to refer to soybeans.

Chapter 1 (p. 5-7): In 1908 England started to import large quantities of soybeans; in 1909 these increased to 400,000 tonnes and in 1910 to 800,000 tons. Also in Germany, in the years just before World War I, imports of soybeans climbed in an unexpected way, reaching 43,500 tonnes in 1910, 90,600 tonnes in 1911 and 125,200 tonnes in 1912. Note: These units are given in dz. One dz (*doppelzentner*) = 100 kg.

The first manufacture of soyfoods in Europe took place in France, at Valees near Asnieres, where they made flour, bread, cakes, cheese [tofu], and soymilk (*Mehl, Brot, Kuchen und Käse, vegetabilischer Milch*)–though only in small quantities and, above all, for diabetics. In England, soy flour has been used for a long time in the preparation of cakes (p. 5-6).

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However it was in Germany that the utilization of soybeans for food took place on a large scale; this began shortly before the war. The supply of foods to Germany was almost completely cut off during the war, so general attention soon turned to the new foods prepared from soybeans and people quickly became aware of their great nutritional value. Thus, in the middle of the war, a soybean industry was built in Germany. Unfortunately this youngest twig of the food industry was left crippled due to lack of raw materials. However one can predict that this industry has a bright future because of the great encouragement given to these products in so short a time. For example, in October 1914 the *Agumawerke* (Aguma Works) located in Harburg (near Hamburg) on the Elbe, first began mass production of a soy flour according to its own process. During the next few years it made many thousands of tonnes of this meal, until the production had to be stopped for lack of raw materials (p. 6).

Equally gigantic sales of soy products were made by the *Soyamawerke* (Soyama Works) in Frankfurt am Main; this company made only soy food products. In addition to a meal (flour), it also produced a meat substitute (*Fleischersatz*), and, largely from soybeans, fresh and dried milk (*Frisch- und Trockenmilch*) as well as a fresh and dried cream preparation (*ein Frisch- und Trockenrahm-Präparat*). Likewise, this firm had to cease production of most of its soy products because of difficulties in soybean procurement, and concentrate only on the production of meat substitutes (*Fleischersatz*). These articles likewise entered all classes of the population splendidly as is seen from the large demand for them. Within 3-4 weeks this firm had orders for more than 1½ million pound cans, of which unfortunately it was able to satisfy only a small part. In addition to these two well-known firms, there are in Germany still a number others that are occupied with the production of foods from the soybean.

In Austria [the Austro-Hungarian empire], there exists a unique firm, the food factory Santosa in Prague [in the Czech Republic as of Sept. 2002], which is still processing soybeans. They introduced soy coffee into commerce. I understand that in Austria a large-scale soy processing venture is now being planned.

Certainly the soy processing industry finds itself in a beginning state and, like all young industries, in need of improvement. Remember the sugar-beet industry was also once young but it made improvements and went on to great success, as will be expected of this new twig on the food industry. In any case, the beginning of utilization of the soybean as food for the people has been made, and in the foreseeable future the soybean may, as in China and Japan, become an indispensable part of our people's food.

It is different with the introduction of the soybean as a cultivated plant in Central Europe. Forty years ago Friedrich Haberlandt showed (and after him countless others have shown) that the soybean grows well in Central Europe. Although additional new tests verify this, there are still those who object to soybean culture. One objection is the long time required by the soybean to come to maturity; the answer is the development of new varieties. Another is the relatively low yield compared with other beans; the answer lies in the use of inoculation. The author then discusses nutrient yield per acre and per unit of money, showing both to be high for soybeans.

Pages 10-11: It is well know that legumes possess the ability to transform and fix free nitrogen from the air. In 1886 Prof. Hellriegel discovered that this capability is due to certain bacteria that live in the soil and move through the root hairs into the root, where they cause nodule formation. The nitrogen-fixing bacteria living in the nodules nourish the plant. The author then talks about inoculation using either soil from a previous planting or "Nitragin," a pure culture of root bacteria, which is well known and has recently been improved. Dr. Kuehn of Berlin-Grunewald showed that soil inoculated with Nitragin gave a 3- to 4-fold increase in yield, plus an increase in protein in the roots and leaves. He then discusses improved cultural practices. Winkler says that transplanting improves yields. Continued. Address: Frohnleiten, Steiermark [Austria].

2243. Fuerstenberg, Maurice. 1917. Die Soja, eine Kulturpflanze der Zukunft und ihre Verwertungsmoeglichkeiten [The soybean, a cultivated plant of the future, and possibilities for its utilization. Part II (Document part)]. Berlin: Paul Parey. 40 p. 28 cm. [59 ref. Ger]

• ***Summary:*** Continued on p. 14. Ways of using the soybean in its homeland (East Asia, especially Japan and China): Note: In this section, starting on p. 15, the author repeatedly uses the word *Sojaspeisen* meaning "soyfoods." The soybean probably originated in India. The Chinese and Japanese used it to fortify their rice-based, protein-poor diet. The practice came before the theory. The author says (incorrectly, p. 15) that all the basic soyfoods are fermented. He then gives a long description of koji and how it is made.

Shoyu or soy sauce (*Shoju oder Soja-Sauce*) (p. 15-17): In Japan, 540-720 million liters are manufactured each year so each Japanese uses 60-100 ml/year. The fermentation time is 8 months to 5 years. The best soy sauce is fermented for 3 to 5 years. He explains how, as soy sauce is fermented, the protein is broken down into amino acids such as leucine, tyrosine, and members of the "Xanthin" group.

Miso (vegetable cheese, p. 17-18): Miso is widely used in soups. More than half of the yearly Japanese soybean harvest is used for making miso. This is 30 million kg per year. Types of miso include *shiro miso* and Sendai miso. Winkler, in his small work titled "The Soybean of Manchuria," mentions two other types of miso: Aka or red miso and nuka miso. Kellner investigated five types of miso; a table shows their composition. Loew reports that this

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vegetable cheese (miso) is consumed either raw or in soups. Kellner, Nagasaka and Kurashima report that, based on their investigations, the amount of amino-nitrogen increases 3-fold and the quantity of carbohydrates is significantly diminished through lactic acid and alcoholic fermentation. The carbonic acid created thereby rises significantly during fermentation (Loew).

Natto (p. 18): Discusses the findings of Yabe.

Japanese tofu or Chinese Tao-hu (p. 18-20): This is the so-called "bean cheese" (*Bohnenkäese*). A table (p. 19, from König) shows the nutritional value of fresh tofu (84.8% moisture) and frozen tofu (17.0% moisture). E. Senft studied frozen tofu, a Japanese military preserved food (*Militärkonserve*) that is not canned; he found it had a beige color and a unique, slightly sour aroma which was at times reminiscent of dextrin. It has a uniform texture throughout, with many tiny pores. Winkler refers to five other types of soy cheese. Concerning the military preserved foods, they were highly regarded during the Russo-Japanese War and (according to Senft) played a key role in the war. (Footnote: The descriptions of the various preparations made from soya make E. Senft's treatises (1906 and 1907) valuable; in them he published his investigations of a number of Japanese vegetable foods and military preserved foods or conserves). The well-known food manufacturer Maggi in Kempttal, Switzerland, has tried for many years to introduce a commercial miso-like product, but was not successful.

The soybean as an oil plant (p. 20-26): Winkler, in his brochure, discusses the uses of soybeans in Manchuria. After 1908, soybeans were sold in Europe at incredibly low prices which resulted in the expansion of imports and production. Then tariffs were levied on soybeans. There were some major problems in the Austrian oil industry.

Soybean flour (*Sojabohnenmehl;* p. 26-28): In recent years, various processes have been patented. One manufacturer is Soyamewerke in Frankfurt am Main, which makes *Soyama Kraftmehl*. Yellow soybeans are mechanically cleaned, washed, dried, and dehulled according to the process of Dr. Fritz Goessel. Agumawerke in Harburg also makes soy flour.

The soybean as a coffee substitute and extender (p. 28-31): Coffee is known to be detrimental to good health and void of nutrients. Rye, for example, has been used since the 17th century as a coffee substitute. Barley also plays a major role, especially as malt. A table (p. 30) shows the nutritional composition of ten coffee substitutes, including chicory, figs, lupin, and carob. Soy coffee tastes remarkably similar to real coffee. In Istria (*Istrien*), in the Austrian alps, in Switzerland as well as in Alsace (*Elsass*), the soybean has been used since its introduction as a coffee substitute. Haberlandt reported in his work that a teacher from Capo d'Istria told him that the soybean was used as a coffee substitute in Istria, and a friend told him that there was no difference between the flavor of the two. The Thunschen is used to make good soy coffee. The soybeans are mechanically cleaned, put into a trommel, agitated with water at 65-70°C, brushed and thereby freed of a large number of impurities which can leave a burned smell. The aroma of soy coffee can be improved by impregnation with an extract of largely decaffeinated coffee. It has roughly twice the nutrients of regular coffee and no harmful constituents.

Soybean milk (*Sojabohnen-Milch,* p. 32-33): The most popular vegetable milk is Dr. Lahmann's Vegetable Milk (*Lahmannsche Vegetabile Milch*), an emulsion made from almonds and nuts. In Japan, they make milk from soybeans; he describes the process, inaccurately, based on information from Winkler. This milk is also used to make cheese [tofu]. Also in Europe there have been successful attempts to make a soymilk adapted to European tastes, as in France by the Caseo-Sojaine at Vallées near Asnieres, and in England by the Synthetic Milk Syndicate. Using the process of Dr. Fritz Goessel, the latter company has a factory in Liverpool; it makes 100 liters of soymilk from: 10 kg ground soybeans plus 5 gm sodium phosphate, 2.4 kg lactose, 2 kg sesame oil, 6 gm common salt, and 60 gm sodium carbonate. Also the Soyamawerke in Frankfurt makes a soybean milk, named Soyama, as mentioned above (fresh and dried milk and cream). Recently Prof. Melhuish developed a new method using soybean, peanuts, and added coconut milk fat.

Soy meat substitutes (*Soja-Fleischersatz:* p. 33): Soyamawerke makes a product named *Soyama-Fleisch-Ersatz*.

Soybean as a chocolate substitute (p. 34): Haberlandt reports such a product.

Soya rubber substitute (p. 34): Goessel and Sauer have developed a rubber substitute made from soybean oil.

The utilization of soya in agriculture (p. 34-38): Use as fodder for cows. In 1880 Blascowicz [Blaskovics], Assistant at the Royal Hungarian Academy in Hungarian Altenburg, conducted fodder tests, whose results are given in various tables.

Conclusions (p. 38).

Note: This is the earliest document seen that uses the word *Ersatz* or the word *Fleischersatz*. They mean "artificial or inferior substitute" and "meat substitute" respectively. Though often associated with World War I, the word "ersatz" (which means simply "substitute" in German) was actually adopted into English as early as 1875, in reference to the German army's "Ersatz reserve," or second-string force, made up of men unqualified for the regular army and drawn upon only as needed to replace missing soldiers. Hence the meaning "inferior substitute." Address: Frohnleiten, Steiermark [Austria].

2244. Galster, Vernon. 1917. Chinese cook book in plain English. Morris, Illinois: Published by the author. 8 p. 22 x 14 cm.

• ***Summary:*** Contains 27 recipes written in various styles.

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In the recipe for Chinese Chop Suey (for two portions) are included "1 tablespoonful Chinese salty sauce; 1 tablespoonful Chinese sweet sauce." No other soyfoods are mentioned. Address: Morris, Illinois.

2245. Kinoshita, Asakichi. 1917. Shôyu seizô ni kansuru kôjô keisû [On the yield of products in the production of shoyu]. *Kogyo Kagaku Zasshi (J. of Chemical Industry, Japan)* 20(236):1124-43. [Jap]
• ***Summary:*** Gives figures on the amount of ingredients used in "shoyu" and the amount of finished product resulting.

The proportion of ingredients employed are as follows: Soy beans, 0.5 koku (1 koku = 180.39 liters); wheat, 0.5 koku; common salt, 0.5 koku; and water, 1.0 koku. The beans when washed, steeped, and steamed, gain about an equal amount in weight and volume compared with the original. The wheat, when parched/roasted and crushed, increases to about 1.8 times its original volume and loses about 0.16 of its original weight. The mixture of beans and wheat is transformed into "koji," the yield of koji being about 1.6 by volume and 0.9 by weight. The koji is mixed with a salt solution (specific gravity 1.143-1.152) and stirred occasionally. When the summer comes, active fermentation sets in and after one year, finished "moromi" is obtained, its weight being 85 kwan (1 kwan = 3.75 kg). This moromi is pressed, and the liquor is pasteurized, yielding about 1 koku of Japanese soy.

2246. Lyman, Benjamin Smith. 1917. Vegetarian diet and dishes. Philadelphia, Pennsylvania: Ferris & Leach. 416 p. See p. 155-58. Index. Portrait. 21 cm. [3 ref]
• ***Summary:*** Discusses the physiological, economical, and ethical advantages of a vegetarian diet, with recipes and principles of preparation. The author, who wrote mostly about geology, lived 1835-1920.

A large table titled "Composition of foods" (p. 44-47) gives the percentage of protein, fat, carbohydrates, and ash (on a dry basis) for many foods, including natto, fresh tofu, soy bean–dried, Swiss miso, soy [shoyu] No. 1 and 2, and white miso (all figures from Abel 1900), plus peanuts–dried.

In the chapter titled "Foods of vegetable origin" (p. 141-267), the section on "Pulse" (p. 152-78) contains a subsection titled "Soy bean" (p. 155-58), which begins: "The soy bean of China and Japan is perhaps the most important food plant there, next to rice. The bean is eaten to a small extent boiled like other beans; but is generally elaborated into a variety of products remarkably rich in protein and fat and therefore going well with rice so deficient in those constituents." The following soy-related subjects are discussed, based largely on the writings of others: Soy sauce (Abel), natto (Abel), miso (R. Takahashi), tofu (Abel), *aburage*, *koritofu*, substitutes for milk and cheese, and nutritional comparison with eggs, milk and cheese (Abel, Atwater).

The section titled "Substitutes for milk and cheese" states: "The Chinese in Paris [probably Li Yu-ying] have been urging the culture of the soy bean. The seeds, when boiled, mashed, and pressed, yield both milk and cheese; if thinned with water, a very good substitute for animal milk; and if coagulated with mineral salt, a cheese that is usually eaten fresh, though it may be preserved by salting or smoking, after being cooked. Three varieties of the cheese are common in the oriental markets; a fermented kind [fermented tofu], white, yellow, or gray in color, with a piquant taste, like roquefort; a salty and white kind, like goats' milk cheese; and a third kind, smoky and resembling Gruyére. The soy cheese costs about a fiftieth as much as animal cheese; and in nutritive value, like the vegetable milk, compares very favorably with the ordinary products of the cow. ('Phila. Ledger,' Sept. 27, 1906)."

Note 1. No such article in the *Philadelphia Ledger* or the *Public Ledger* (Philadelphia, Pennsylvania), of this date, can be found.

Note 2. This is the earliest U.S. document seen (Dec. 2008) that mentions smoked tofu.

The section on peanuts (p. 158-62) includes roasted peanuts, peanut butter, peanut taffy, and "Terralac or peanut-milk (here first published)." Details on how to make peanut-milk at home are given, followed by many recipes for its use–each preceded by the word "Terralac." Thus: Terralac custards, Terralac punch, Terralac cream, salad dressing, sauce, cream sauce, creams, blanc-mange [blancmange], cream pie, Bavarian cheese, Terralac in soup, "Ice-Terralac, or peanut ice-cream," peanut soup, salted peanuts.

There are also sections on the cowpea (p. 163+), almonds (p. 263-65; incl. salted almonds, marchpane, macaroons, nougat or almond cake, almond milk, orgeat syrup, burnt almonds, replacing almonds), vegetable-gelatine (p. 384-87, incl. carrageen or carragheen [carrageenan], Irish moss, and kanten), sesame oil or gingelly oil (p. 388), peanut oil or groundnut oil (p. 388), almond oil (p. 389), and sago and sago recipes (p. 390-91, incl. three sago puddings).

Note: *Merriam-Webster's Collegiate Dictionary* (1998) defines orgeat (a word first used in 1754) as "a sweet almond-flavored nonalcoholic syrup used as a cocktail ingredient or food flavoring."

2247. Morse, Edward S. 1917. Japan day by day, 1877, 1878-79, 1882-83. 2 vols. Boston & New York: Houghton Mifflin Co. Vol 1, xiv + 441 p.; Vol. 2, 453 p. Illust. (Color frontispieces + sketches). Index. 22 cm. [20+* ref]
• ***Summary:*** These charming books, illustrated with 777 illustrations from sketches in the author's journal, is a diary (to avoid the duplication of home letters; subjects are treated chronologically rather than topically), filled with detailed observations about most aspects of Japanese life and the author's pioneering work there as a professor. It gives a vivid picture of daily life in Japan in the late 1870s. Morse quickly

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grew to admire and love the Japanese people; his greatest problem was learning to enjoy Japanese food.

Volume 1: "Almost everything in the sea furnishes food for the masses... Seaweed, a thin green leaf, is also eaten; it is dried and put up in tin boxes," apparently a species of ulva. "I have mustered courage enough to taste a few of the dishes, and have succeeded in swallowing but one of them, and that was a kind of soup... Water was boiled in a tin vessel with a sauce [shoyu or miso] made from fermented bean [sic, beans], dark in color like Worcestershire sauce; into this were put slices of what looked like a cucumber, and then followed large blocks of a substance which resembled new white cheese [tofu], fresh from the press; this was cut into triangular slices. This last substance was made from [soy] beans, strained to remove the skins, and then made into a paste-like block. This soup was certainly nourishing and with a little practice one might come to like it. Another common article of food is made from seaweed an is known as *tokoroten*" (p. 87-88).

"It was delightful... to sit down again to a dinner of rare roast beef, real butter, and good bread. It is difficult to understand a country in which there is no milk, butter, cheese, bread, or coffee, and never has been. Butter is so distasteful to the Japanese that they cannot eat cake or other article of food in which composition butter is used" (p. 120).

A famous preparation is "cold raw fish, cut in thin slices from the fish while fresh and alive. The idea of eating raw fish is particularly repulsive to our taste, though we eat raw oysters; nevertheless, foreigners soon get accustomed to it. The sauce [soy sauce] made of fermented [soy] bean, barley, and some other grain seems to have been specially created for this kind of food. I ate a great deal of it and must confess that my first experience was fairly good.... (p. 143-44).

"The tail of the fish was cut off and flung overboard... the [raw] fish was chopped into small pieces, head, eyes, bones, and all, and this hash was put into a wooden bowl... From a box was added a substance [miso] that had a very sour odor, something made of beans and allowed to ferment, a little water was added, and it was all stirred up together, and such an unsavory-looking mess I never saw before. The gusto, however, with which the man ate it to the last grain, showed that it was palatable to him at least" (p. 185).

"I have lived on rice, sweet potatoes, egg plant, and fish for two weeks. I would give all my old shoes, and new ones too, for a good slice of bread-and-butter, a bowl of bread-and-milk, or any other thing you are enjoying at home" (p. 227).

"The cakes had a stamp of the chrysanthemum on top; these were red and white and were made of [azuki] bean paste and sugar. The Japanese are very fond of them, but they are rather insipid in taste" (p. 395).

"I have finally resigned myself to the Japanese food of this region [Yezo {Hokkaido} near Hakodate]... And of all places to start such an experiment in this village! It required some courage and a good stomach to eat for dinner the following: fish soup, very poor; bean paste [miso?], which was not so bad;... and holothurian, or sea cucumber,... by no means agreeable. It was eaten with Japanese sauce, *shoyu*, which renders everything more or less palatable... On the whole, I am keeping body and its animating principle together, but long for a cup of coffee and a slice of bread-and-butter. I am the only outside barbarian in town" (p. 440-41).

Volume 2: The New Year's food included "a bean pickle in sugar syrup and Japanese sauce" [probably black soybeans (*kuromame*)] (p. 93). A detailed description of mochi and its pounding are given, with two illustrations (p. 95).

As they left Izumi and entered the Province of Kii [today's Wakayama], "I saw the process of manufacture of a curious kind of food one often sees in certain soups. It has a bright-yellowish color, as thin as paper, and has no definite flavor. The substance is made from soya beans by a curious and simple process. The beans are boiled in a large boiler till they are very soft; they are then ground in a mill to a fine paste, and mixed with water and colored by some stuff that is imported from abroad (fig. 675). This material is then put into a shallow trough divided by square partitions, beneath which is a charcoal fire which keeps the stuff gently boiling. The surface coagulates as it does on boiled milk, or on a cup of cocoa, and the film that forms is taken off very skillfully with slender bamboo sticks and hung up to dry (fig. 676). Other films form and are promptly removed by a girl who is kept busily at work" (p. 286-88).

In Kawagoe [a city in today's Saitama prefecture, about 20 miles northwest of Tokyo]: "It is a common custom... to eat grasshoppers as a relish... The Japanese prepare them by boiling them in shoyu, sugar, and a little water, till the water has nearly all boiled away" (p. 324-25).

At New Year's "our old cook brought me a box of *yokan* (made of sugar and [azuki] beans)... (p. 393).

Edward Sylvester Morse, a marine biologist specializing in Brachiopods, lived 1838-1925. Address: Salem, Massachusetts; Former Prof. of Zoology, Imperial Univ., Tokyo.

2248. Tadokoro, Tetsutarô. 1917. Shôyu moromi no kôso sayô ni taisuru en-rui no sokushin genshô ni tsuite [Stimulating effect of salts on the enzyme action of shoyu moromi]. *Kogyo Kagaku Zasshi* (*J. of Industrial Chemistry*) 20(236):1114-24. [Jap]

• ***Summary:*** The enzymic activities of Japanese soy have a very important effect on the formation of its proper odor and taste during fermentation. These activities are very much checked by the presence of a large quantity of common salt, such as is usually added in the preparation of the "shoyu." They may, however, be stimulated either by decreasing the quantity of salt or by increasing the temperature during fermentation. The author has found yet another method

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whereby the inhibitive effect of the salt may be controlled, by the antagonistic action of other neutral salts. Potassium chloride, aluminum chloride, calcium chloride and magnesium chloride are good antagonistic agents: aluminum chloride and calcium chloride show a powerful stimulating effect on amylase and pepsin in "shoyu-moromi." Better results are obtained by using a mixture of 2 or more salts together than with a single salt. When the concentration of common salt is 3 normal, a beneficial result is obtained by adding 0.0001-0.002% of a mixture of antagonistic salts to the common salt, whereby the enzymic activities of the shoyu-moromi are increased by 20%. Address: Nôgaku-shi, Tohoku Teikoku Daigaku, Noga Daigaku, Nogei Kagaku Jikkenshitsu.

2249. Yukawa, Matao. 1917. Shôyu moromi no jukusei ni okeru chiroshin no hen'i [Transformation of tyrosine during the ripening of shoyu moromi]. *Tokyo Kagaku Kaishi* (*J. of the Tokyo Chemical Society*) 38:358-73. [3 ref. Jap] Address: Nôgakushi.

2250. *Northern Territory Times and Gazette* (*Darwin, NT, Australia*).1918. Cookery: A good Worcester sauce. Jan. 5. p. 14.
• ***Summary:*** "Pound and mix together ½ oz. of cayenne pepper and 1-8oz. [1/8 oz.] of garlic in a mortar, and add to them gradually one quart of white vinegar. When thoroughly mixed pass all through a hair sieve. Add a gill of Indian soy, then bottle and cork securely for use."

2251. Eddington, Jane. 1918. The Tribune Cook Book. *Chicago Daily Tribune*. Jan. 13. p. B2.
• ***Summary:*** "Bean sprouts for chop suey: At the Chinese stores we can get a tiny round bean [mung bean], green in color, not half as large as the smallest pea, which will grow as quickly as one can grow the mustard and cress, and so raise our own beans sprouts."

"With soy sauce, rice, and chicken, these cooked sprouts are suggestive enough of fine chop suey to satisfy."

Chop sueys are made by frying separately the meat and vegetables, "then putting the two together with soy sauce and serving them with rice."

2252. Lynch, R. Irwin. 1918. On increased food production: The soy bean. *Gardeners' Chronicle* (*London*) 63(1622):38. Jan. 26. Third Series. [3 ref]
• ***Summary:*** The various food and industrial products made from soybeans are briefly mentioned. Writing in his book on Japan, after a visit to the bean centers of Manchuria, Mr. Robert P. Porter says: "Only after one has travelled through the region where the Soy Bean reigns supreme, and has seen the wharves and the warehouses, the stations and the platforms, laden with bags of Beans, and noted the thousands of queer-looking stacks with pagoda-like roofs with which the country is dotted, and which serve as temporary storehouses for the produce while awaiting shipment, does one realise that it (the growth of the Bean trade) is not a fable, but a veritable fact in the history of international commerce... And the manifold uses, agricultural and industrial, as well as dietary, to which the Bean can be put, invest this generous vegetable with increasing importance, and the future of the Bean crop with romantic mystery.

"A peculiar point, I note, is the changing shape of these Beans. Before they were quite ripe they were kidney-shaped. When dry, black, and ripe, they became round as a Pea, and on being soaked and cooked, they again showed the kidney-like form." A photo shows a soy bean plant with pods and roots exposed. Address: Botanic Garden, Cambridge, England.

2253. *Davis County Clipper* (*Utah*).1918. Makes new kind of meat. Feb. 26. p. 7.
• ***Summary:*** "On the top floor of 641 Washington street, New York city, is one of the most interesting kitchens in the world, presided over by a Chinese woman doctor." Dr. Yamei Kin, who recently traveled to China for six months to study the soy bean, says that its protein is equal to that of meat. A "sort of vegetable cheese [tofu]," it is a replacer of meat and forms no acid; it is an alkaline form of protein. The salty black sauce [soy sauce] served on top of "chop suey," "chow mein" and other dishes in Chinese restaurants, is made from soy beans. Dr. Kin can make from soybeans a roquefort cheese [fermented tofu] that looks and smells like the real thing. "In all the world there is not a more misunderstood vegetable than the soy bean, says Doctor Kin." An illustration shows Dr. Yamei Kin standing, holding a plate in her left hand.

2254. Howell, E.V. 1918. Soy beans and soy bean oil. *J. of the American Pharmaceutical Association* 7(2):159-63. Feb. [14 ref]
• ***Summary:*** "This bean is a native of southeastern Asia. It is at present the most important legume grown in China and Japan, where it is grown almost exclusively for human food. It has been cultivated from a remote period, each district having its own distinct variety, some two hundred kinds in all... The bean was introduced into England in 1790. Apparently the first mention of soy beans in American literature was in the *New England Farmer*, October 23, 1829, in an article by Thomas Nuttall." There follows a summary of this article and several other early U.S. documents that mention the soy bean.

"Importance: I think the soy bean is the most important plant introduced into the South within a hundred years. This opinion is based on the range of the plant, the value as a soil improver, and the numerous uses of the seed and oil, together with the fact that the present cottonseed oil mills can produce the oil with practically no change in machinery and thus double their mill season. The beans can be stored,

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as they are practically immune to insects. Especial emphasis is placed on this statement in the present demand for food on account of the war. In Japan the bean forms one of the most important articles of food, by nature a meat, to go with the starch of rice. The Chinese make from the beans a cheese resembling our own cheese, while the Japanese make the well-known sauce for rice or fish, soy or suey sauce. It is one of the principal ingredients in 'Tofu' (bean curd), natto (steamed beans), and white and brown miso, which is like our molasses brown bread."

"A factory for the production of this [soy] milk has recently been established in America. This can be used in cooking, by bakers, confectioners, and chocolate manufacturers. I have before me the following food articles in which soy bean meal is the principal ingredient: Egg substitute No. 1, egg substitute No. 2, colored cocoanuts, coffee substitute, cocoa substitute, roasted malted nuts, coloring curry powder, cutlet powder, soy and navy beans with pork, the equal of any pork and beans.

"The use of the soy meal for soups, for proportional use in muffins, cookies, fritters, croquettes, biscuit, and loaf bread is unlimited. Its use is checked only by our prejudice for certain customary flavors, just as northern people and Europeans do not use corn meal. In other words, North Carolina, if forced to by war conditions, could largely exist on the soy beans crushed in the State this year, including the imported and native beans crushed, the oil from which I estimate to yield this year 400,000 gallons. This oil can be used for frying, and for a salad oil in French dressing or in mayonnaise. I fried a partridge in the crude unrefined oil, and found it delicious.

"While the chief use, so far, of the oil has been for soaps and paints, the particular object of this paper has been to call attention to the use of soy oil in pharmaceutical preparations."

Tables show: (1) The specific gravity, saponification value, and iodine for three samples of Manchurian soy oil purchased in New York. (2) The chemical composition of soy bean meal (8.77% fat), compared with the meal of five other seeds (including cottonseed, linseed {old and new process}, decorticated peanut, and sunflower seed). (3) Four chemical constants of seven samples of domestic and imported soy oils (from L.P. Nemzek). (4) The food values (nutritional composition) of soy beans and six other foods, including lean beef, milk, and eggs.

Because of World War I: "During the past six or seven months there has been produced in this country in the neighborhood of one hundred thousand gallons of soy oil. The largest part of this quantity has been produced in North Carolina by the Elizabeth City Oil & Fertilizer Co., Winterville Cotton Oil Co., and the New Bern Cotton Oil & Fertilizer Mills. Samples from the different crushings have been examined in comparison with the imported oil."

"Medicinal use: In England a diabetic biscuit is manufactured. In this country an infant's food from the soy bean is on the market. The enzyme in the bean is also attracting attention and opening a field for investigation."

Note 1. This paper was presented at the Scientific Section, American Pharmaceutical Assoc., Indianapolis meeting, 1917.

Note 2. This is the earliest English-language document seen (Oct. 2008) that contains the word "crushings."

2255. Johnson, Nelson Trusler. 1918. Process used by Chinese in making bean curd. *Commerce Reports [USA]* (*Daily Consular and Trade Reports, Bureau of Foreign and Domestic Commerce, Department of Commerce*) 21(58):926-28. March 11.

• ***Summary:*** This report begins: "Probably the first article of diet that attracts the attention of the foreigner coming to China is the bean curd which is served to him at the Chinese restaurant or hotel, or in the Chinese family in many ways. Bean curd is only one of a number of products derived from soya beans. Among these are bean meal, a kind of spaghetti, bean cheese, bean sauce (known as shoyu to the Japanese, chiang yu to the Chinese, and soy in commerce), bean milk, and bean oil. All of these products are used by the Chinese as foods. The shoyu is used as a foundation for a certain well-known brand of sauce." Note: Probably Lea & Perrin's Worcestershire Sauce.

The next section, titled "Product called an ideal food," is largely a summary of a 1917 article by John E.S. Han titled *The Yale-in-China Student* (Changsha, China) 1(2):8-14. Nov. Contents: Introduction. Product called an ideal food. Uniform quantities of beans used. Specific gravity near that of milk. Method of coagulating emulsion. Suggested improvements in process.

On the last point, Mr. Johnson notes that the changes Mr. Han recommends "are largely the same as those proposed by Li Yu-ying." Address: Consul, Changsha [China].

2256. Itano, Arao. 1918. Soy beans (Glycine hispida) as human food. *Massachusetts Agricultural Experiment Station, Bulletin* No. 182. 10 p. March. [16 ref]

• ***Summary:*** Contents: Introduction. Chemical composition and digestibility. Human food prepared from soy beans (practical recipes for making Japanese foods at home; names in parentheses indicate the Japanese name). Soy bean milk (*Toniu*): The ordinary method employed in Japan, toniu from soy bean meal (made by grinding soybeans in a wheat flour mill or fine coffee mill), author's method [from soy bean meal, plus inoculation with *Bacillus coli* and *B. lactis aerogenes*], synthetic toniu, condensed soy bean milk (condensed toniu). Evaporated soy bean milk (yuba). Soy bean curd (tofu): Fresh curd (tofu), frozen tofu (*kori tofu*), fried tofu (*abura-age*). Baked beans. Boiled beans. Roasted beans. Powdered beans: Roasted, or raw (soy bean meal). Green beans. Soy bean pulp (*kara*). Fermented boiled beans

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(natto). Ripened vegetable cheese (miso; discusses koji). Soy bean sauce (shoyu). Vegetable butter, ice cream, oil (table use) and lard (cooking): "The manufacture of these articles from soy beans needs further investigation."

Concerning "Baked beans" (p. 7). "1. Soak the beans, suspended in a cloth bag, in a large quantity of hot water over night. (Soaking for twenty-four hours in ice-cold water which is changed occasionally will give the same result.) 2. Change the water, when hot water is applied, in the morning and an hour or two before cooking. 3. Add 1 teaspoonful of soda [sodium bicarbonate] per quart of beans and boil until the beans become soft. 4. Bake like other beans. Note.–The characteristic strong flavor of the beans is removed by soaking before cooking; the addition of soda [sodium bicarbonate] makes the beans soft. Cooking with salt pork, potatoes, onions, molasses and other substances makes the beans more palatable to some tastes."

Concerning the "Roasted beans" (p. 7). "1. Roasting can be done either in an oven or in an ordinary corn popper. 2. Roast until the skin of the bean is burst by popping. Note.–The beans can be kept soft by immersing them in a syrup while they are hot. Thus very wholesome candy is prepared."

Concerning the "Powdered beans: Roasted" (p. 7). "1. Roast as in the roasted beans. 2. Let them stand until they cool to harden them. Grind them in a coffee mill or other suitable grinder. Note.–The powder can be used as a salad dressing or cooked [baked] with cookies like peanuts and other nuts, or employed as a substitute for coffee." Note 1. This is the earliest English-language document seen (Dec. 2005) that uses the term "Powdered beans: Roasted" to refer to roasted soy flour.

Concerning "Green beans: 1. Pick them when the beans are three-fourths to full grown. Boil them in salt water. 3. Discard the pods. 4. Serve the beans with butter or milk. Note–The pods are tough and they can be removed easily on boiling."

Concerning "Soy bean pulp (kara): 1. This is the residue after the milk is extracted in the process of preparation of soy bean milk. 2. Cooked like any other vegetable with proper seasoning. Note.–Makes a very rich dish; an addition of green onions, cabbage or parsnip may improve it."

Tables contain chemical composition analyses.

Note 2. This is the earliest English-language document seen (March 2007) concerning soy ice cream, which it calls simply "ice cream." This is also the earliest document seen (March 2007) concerning the etymology of soy ice cream.

Note 3. This is the earliest English-language document seen (Oct. 2001) that uses the term "soy bean pulp" to refer to okara.

Note 4. This is the earliest English-language document seen (Feb. 2004) that uses the word "kori tofu" to refer to dried-frozen tofu. Address: Amherst, Massachusetts.

2257. *USDA Bureau of Plant Industry, Inventory.*1918. Seeds and plants imported by the Office of Foreign Seed and Plant Introduction during the period from January 1 to March 31, 1915. Nos. 39682 to 40388. No. 42. 123 p. April 17.

• ***Summary:*** Soy bean introductions: *Soja max* (L.) Piper. Fabaceæ. (*Glycine hispida* Maxim.)

"39967-39982. From Soochow, China. Presented by Mr. N. Gist Gee, Soochow University. Received February 11, 1915. Quoted notes by Mr. Gee, except as otherwise indicated. "39967-39972.

"39967. '(No. 1. *Kua shu tou* (*Kwa zoh*). Melon-ripe bean.) This is so named because of its time of ripening. Seeds are sown about the first of May and cropped late in June when melons are ripe. Used only as a vegetable.'

"39968. '(No. 2. *Chia chia san tou* (*Kah kah sen*). Pod pod three bean.) Planted in the middle of May and reaped during September. Used as a vegetable and for manufacturing of oil.'

"39969. '(No. 3. *Hung hsiang chih tou* (*Ong sing sze*). Red familiar bean.) These are "Loving beans," as the characters suggest. Planted in the middle of May and harvested about September. Used both as vegetables and in the manufacture of oil.'

"39970. '(No. 4. *Hei tou* (*Huk*). Black bean.) Owing to their color, these are called "Black beans." Planted in the first part of June and reaped in the middle of October. Used as a vegetable and in the manufacture of oil.'

"39971. '(No. 5. *Ku li ch'ing* (*Kwa lea ching*). Bone inside green.) Planted early in June and harvested in late October. Used only in making oil.'

"39972. '(No. 6 *Shih tzû ho tou* (*Zee tee 'ah*). Persimmon-seed bean.) Planted in the first part of June and cropped in the middle of September. They are largely used as vegetables.'

"39974-39977.

"39974 '(No. 8 *Pa yüeh pai tou* (*Gee buh*). Eight-month white bean.) The combined meaning of its color and its time of ripening indicates the name. Planted in May and harvested in September, which is the eighth month of the Chinese calendar. Used to make oil. This and No. 9 [S.P.I. No. 39975] are the best two for oil manufacture.'

"39975. '(No. 9. *Shui pai tou* (*Gee buh*). Water white bean.) Planted in late May and reaped in September. Used to manufacture oil; one of the best two for oil manufacture.'

"39976. '(No. 10. *Niu t'a pien* (*Nue duh pea*). Cow crush flat.) Its use and time of harvesting are the same as those of the *Gee buh* [S.P.I. No. 39975]. The beans are trodden out by cows; hence the name.'

"39977. '(No. 11. *Wu ch'iao tou* (*Oh tsah*). Sparrow's cackling (or magpie) bean.) Planted about the last part of June and cropped in mid-October. Used largely to make oil.'"

"39982. '(No. 16. *Lü tou* (*Loh*). Green bean [mung].) Planted in the early part of June and cropped early in September. Used the same as the *Ch'ih tou* [S.P.I. No.

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39980]. Called "green bean" because of its color, probably.'"

"40106/40138. From Wakamatsu, Iwashiro, Japan. Presented by Rev. Christopher Noss. Received March 8, 1915. Quoted notes by Mr. Noss. 'From an exhibition in Kawamata, near Fukushima City.'

"40106-40127.

"40106. '*Mochidaizu* (*dai*, large; *zu*, bean [daizu = soybean]), used in *mochi* (glutinous rice boiled and pounded in a mortar).'

"40107. 'No. 2. *Nakatedaizu* (second early), used in *miso* (beans, etc., pickled in salt and made into soup), *tofu* (bean curd).'

"40108. 'No. 3. *Shichi-ri-korobi-daizu* (20-mile rolling), used for *tofu, soy, and miso.*'

"40109. 'No. 4. *Yuki-no-shita-daizu* (under the snow), used for *tofu, soy, and miso.*'

"40110. 'No. 5. *Wasedaizu* (early), used for *tofu, soy, and miso.*'

"40111. 'No. 6. *Misodaizu.*'

"40112. No. 7. *Ko-tsubu-daizu* (small grain), used for *miso* and *natto* (buried, fermented, and eaten as a relish).'

"40113. 'No. 8. *Kinako-daizu*, made into *kinako* (a flour used in cooking) and also *natto*. Said to have been brought by soldiers from Manchuria.'

"40114. 'No. 9. *Tamazukuridaizu* (name of a country near Sendai), used boiled.'

"40115. 'No. 10. *Asahidaizu* (morning sun), used for *natto.*'

"40116. 'No. 11. *Darumadaizu* (Dharuma [Bodhidharma], whose image was a roly-poly, can not be upset), used boiled and for *tofu.*'

"40117. 'No. 12. *Taiwandaizu* (Formosa), used boiled.'

"40118. 'No. 13. *Hato-koroshi-daizu* (dove killer), used boiled.'

"40119. 'No. 14. *Usu-ao-daizu* (light green), used for *kinako* and boiled.' Note: This soybean might give naturally greenish kinako.

"40120. 'No. 15. *Ao-daizu* (green), used for *kinako* and boiled.'

"40121. 'No. 16. *Aka-kuki-daizu* (red stalk), used for *natto* and *miso.*'

"40122. 'No. 17. *Fuku-shiro-daizu* (clothing white), used for *tofu.*'

"40123. 'No. 18. *Hachi-ri-han-daizu* (21 miles), used boiled. The name *Hachi-ri-han-daizu* involves a curious play on words. *Hachi-ri-han-daizu* means "eight ri (a ri is 2.5 miles) and a half," which is just a little short of *ku-ri*. Now *ku-ri* means nine ri, and *ku-ri* also means chestnut, so the expression in question means that the beans so named are almost equal to chestnuts.'

"40124-40127. 'Beans are used boiled.'

"40124. 'No. 19. *Yoshiwaradaizu* (harlot quarters in Tokyo).'

"40125. 'No. 20. *Chadaizu* (tea, alluding to the color [brown]).'

"40126. 'No. 21. *Kichidaizu* (lucky).'

"40127. 'No. 22. *Kurodaizu* (black).'"

"40370-76. From Wakamatsu, Iwashiro, Japan. Presented by Rev. Christopher Noss. Received March 27, 1915. Quoted notes by Mr. Noss.

"40370. 'No. 33. *Hikagedaizu* (shade), produces in shady places; used for *miso.*'

"40371. 'No. 34. *Dekisugidaizu* (excessive yield); used for *miso.*'

"40372. 'No. 35. *Kurodaizu* (black); eaten boiled and sugared.'

"40373. 'No. 36. *Nakatedaizu* (medium early); used for *miso.*'

"40374. 'No. 37. *Hishidaizu* (water caltrop, alluding to the flattened shape); eaten parboiled and seasoned with shoyu and salt.'

"40375. 'No. 38. Name unknown, cultivated from ancient times in Soma County, Fukushima Ken; used for *miso.*'

"40376. 'No. 39. *Hakodate-nishiki-daizu* (Hakodate brocade); used for *miso.*'" Address: Washington, DC.

2258. Dorsey, Henry. 1918. Growing soybeans. *West Virginia Univ., College of Agriculture, Extension Dept., Circular* No. 204. p. 1-8. April. [1 ref]

• ***Summary:*** "Within the last five years soybeans have assumed, due to their many desirable qualities, an important place in West Virginia agriculture and their importance is quite likely to increase. Less than a decade ago the crop was practically unknown. A conservative estimate derived from county agents' annual reports indicates an acreage of more than 6,000 in 1917. This acreage is almost equal to that of clover alone according to the census figures of 1910."

Contains sections on the importance of the crop, harvesting, yields, suitable varieties, special uses, human food, and in crop rotations.

The section on human food uses states: "The scarcity of meats will doubtless lead to a wider use of soybeans in the human dietary. For centuries they have supplied a large proportion of the nitrogenous part of the food of the Chinese and Japanese. In the Orient the whole beans are not eaten directly but soy sauce, bean milk, bean curd, and vegetable cheese are made from them. Americans would doubtless object to many of these products. The whole beans have often been used like other beans–boiled, baked, or with pork. They need to be soaked several hours to remove the strong flavor. Soybean flour has great possibilities as a substitute for part of the constituents of various breads. When Americans learn to use the products of the seed, then there will be a ready market for the crop and it will take a regular place in our cropping scheme." Address: Asst. Prof. of Agronomy, West Virginia Univ., Morgantown.

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2259. Takahashi, Teizô. 1918. Re: Design of koji trays. Letter to Dr. Charles Thom, Washington, DC, May 17. 2 p. Handwritten. [Eng]
• ***Summary:*** Takahashi has Dr. Thom's letter of May 18th and he is very pleased to see Miss Church working on this problem [of how to make shoyu using koji]. If Miss Church comes to visit him, she should come to Rutland, Massachusetts (c/o Mrs. Brown); he moved there from Boston a little while ago.

"I imagine that the apparatus needed for this problem is a wooden tray." He sketches a three-dimensional wooden koji tray, 1.5 feet long, by 8-9 inches wide, by 2-3 inches deep, with short legs on the bottom. "This tray is used for the preparation of 'kôji,' which is mentioned in my former letter. Other apparatus, such as steaming, roasting and crushing, I suppose are easily obtained in your Bureau." Address: 82 St. James Ave., Boston, Massachusetts.

2260. *Weekly News Letter (USDA).*1918. Soy beans, used like navy kind, make valuable food: Ancient China's product can be served in numerous desirable ways. 5(42):3. May 22.
• ***Summary:*** "While the soy bean has been grown in the United States primarily as a forage crop, its availability as a valuable food for human beings is being given increasing attention. Many schools of cookery and domestic science in this country, as well as home economics experts and home-demonstration agents of the United States Department of Agriculture, have shown that dried beans can be used successfully in the same manner as navy beans." After the beans are soaked, then boiled slowly, they "may be seasoned and used as the principal part of a meal, as they are or may be made into bean loaf, bean croquettes, or other dishes.

"When soy beans are three-fourths or more grown, the seed make a palatable and nutritious green vegetable."

Also discusses "soy-bean milk" ("a milky emulsion is obtained which is similar in appearance and properties to cow's milk"), "tofu or bean curd" (the addition of either magnesium chlorid [chloride] or calcium sulphate to soy-bean milk precipitates some of the proteid substances, forming a grayish-white curd).

"Soy or shoyu sauce is a dark-brown liquid prepared from a mixture of cooked and ground soy beans, roasted and pulverized wheat or barley, salt, and water, inoculated with a culture known as rice ferment and left in casks to ferment for six months to a year or longer. The liquid obtained is used in many countries, including the United States, as a sauce for meat or vegetables." Address: Washington, DC.

2261. Layosa y Makalindong, Pedro. 1918. Field tests of soy beans. *Philippine Agriculturist* 6(10):276-91. June. Based on his thesis, College of Agriculture, No. 92. [8 ref]
• ***Summary:*** "Of the leguminous crops in the Philippines the soy bean is the only one of which the finished products are used. These finished products, the most important of which are the [salt pickled] soy bean curd (*tahuri*) and soy bean sauce (*toyo*) have been long known all over the islands. In spite of this evidence of its economic importance, the crop has been given but very little attention by Filipino farmers."

The field tests were carried out in the Philippines. The author mentions that soy beans are used in China, Japan, and other countries as a substitute for meat.

The author has carried on the breeding work with soybeans begun by Maceda in the Philippines to determine their commercial value and to find the varieties best suited for the rainy and the dry seasons, respectively. It was found that the selections from the variety Kedilcie Wit grown during the rainy season and strains from Ami's bean grown during the dry season produced the highest yields. Address: Philippines.

2262. *Gardens' Bulletin, Straits Settlements (The) [Singapore].*1918. Soy bean. 2(1):12. July 4.
• ***Summary:*** "The Soy bean is of enormous importance in Japan, Manchuria and China; and thence a great feature in world commerce. It is now being extensively planted in the United States. It has been said that it could not be grown in the Tropics, and some first trials of it in the Philippines a few years ago led to statements that it could not be successfully grown there. However this was merely a case of the wrong variety for the season in which the planting was done; for there are many distinct varieties of Soy of quite different possibilities; and more comprehensive trials in the Philippine islands developed the fact that certain varieties were suited only to the wet season, others only to a drier period, and some were heavier yielders of hay, others of grain, and so on, it now being recognized that soy is a practicable crop for the country.

"Three varieties were brought to Singapore from the Philippines. Two did not germinate. The third gave but few plants, but these grew well and are now setting pods. Great care should be taken to continue and develop this culture* since out of it may arise a real asset to the country. Comprehensive trials of all the plant in furnishing direct food for man and beast is but a part of its value, since its secondary products are used the world over. Vast quantities of the famous soy sauce** are consumed yearly in all parts of the world, while bean curds [probably tofu] and oil from this source are well known.

Footnotes: "* The second crop of Soy bean was for some unknown reason a complete failure. E.H.M. ** Basis also for one of the best known English [British] table sauces" [Worcestershire sauce].

Note 1. This is the earliest document seen (May 2010) concerning cultivation of soybeans in Singapore. This document contains the earliest date seen for the cultivation of soybeans in Singapore (1918). Address: Singapore.

2263. *Scientific American Supplement.*1918. Soy beans make

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valuable food (Abstract). 86(2218):8. July 6.
• ***Summary:*** A near reprint of: *USDA Weekly News Letter.* 1918. "Soy beans, used like navy kind, make valuable food." May 22. p. 3.

2264. Norton, Jeanette Young. 1918. National dishes the world over: Favorite foods in all the principal kitchens of the Earth,... *San Francisco Chronicle.* July 7. p. SM5.
• ***Summary:*** "A well known Japanese dish is gyunabe ["beef + pot"]. The dish is made with vegetables stewed in shoyu sauce and mirin, a cooking wine. Chicken or meat cut in small thin slices is cooked on top of the stew.

"Chinese chop suey served in China has soy beans and pork in it that are used in place of the more expensive chicken and mushrooms that appear in the American version."

Note: We know of no other source stating that soy beans are used in chop suey in China. Soy sauce is used, although chop suey is much better known in the USA than in China.

2265. Morse, W.J. 1918. The soy bean: Its culture and uses. *Farmers' Bulletin* (*USDA*) No. 973. 32 p. July. Superseded by Farmers' Bulletin 1520. [27 ref]
• ***Summary:*** Contents: Summary. Commercial importance. Climatic adaptations. Soil requirements. Preparation of the seed bed. Fertilizers. Inoculation. Time of planting. Depth of planting. Rate of seeding. Method of seeding. Cultivation. Varieties: Barchet, Biloxi, Black Eyebrow, Chiquita, Early Brown, Elton, Guelph ("also known as Medium Green, Early Green, Medium Early Green, and Large Medium"), Haberlandt, Hahto, Hollybrook, Ito San ("has been known under the names of Japan Pea, Yellow, Medium Yellow, Dwarf Yellow, Early Yellow, Early White, and Coffee Berry"), Lexington, Mammoth, Manchu, Medium Yellow ("has been grown under the names Early Yellow, Mongol, Banner, and Roosevelt"), Mikado, Peking ("In variety tests the Peking, Sable, and Royal varieties appear to be identical, and it is quite evident that the latter two are selections from the Peking."), Shanghai ("has been grown in North Carolina under the name of Tarheel Black"), Tokyo, Virginia, Wilson-Five [black seeded], Yokotenn [Yokoten].

Soy beans in rotations. Soy beans in mixtures: With cowpeas, corn, sorghums, or Sudan grass. Soy beans for seed: Yields of seed, feeding value, for human food, for oil and meal, viability of soy-bean seed, cost of production, soy-bean straw. Soy beans for hay: Time of cutting, curing soy-bean hay, feeding value of soy-bean hay, yields of soy-bean hay. Soy beans for soiling. Soy beans for pasture. Soy beans for ensilage. Soy beans for soil improvement. Enemies of the soy bean: Rabbits, root-knot caused by a nematode, cowpea wilt due to a Fusarium, caterpillars, and black blister beetles.

"Commercial importance: The soy bean, also called the soya bean, the soja bean, and in North Carolina the stock pea, is an annual leguminous plant, a native of southeastern Asia. It has been cultivated in China, India, and Japan for more than 5,000 years and in extent of use and value is the most important legume now grown in these countries."

"The soy bean was introduced into the United States as early as 1804, but it is only during the last decade that it has become a crop of much importance. At the present time it is most largely grown for forage. In many sections, especially southward and in some parts of the corn belt, a very profitable industry has developed from that growing of seed. During the past few years the acreage has increased to a very considerable extent. The large yield of seed, the excellent quality of forage, the ease of growing and harvesting the crop, its freedom from insect enemies and plant diseases, and the possibilities of the seed for the production of oil and meal and as a food all tend to give this crop a high potential importance and assure its greater agricultural development in America" (p. 3).

Concerning the variety Hahto (p. 14): "This variety recently introduced from Japan is a large producer of seed and forage, and the seeds when from three-fourths to full grown make an excellent green vegetable, similar to the Lima or butter bean. Plants stout, erect, maturing in about 135 days; pubescence tawny; flowers purple; seeds olive yellow, with a black seed scar, much flattened, very large, about 75,000 to the bushel; oil, 14.8%; protein, 40.6%." Note 1. This is the earliest English-language document seen (May 2003) that uses the term "butter bean" to refer to the lima bean.

Uses for human food (p. 22-23): "Until 1916 the soy bean had been used but little in the United States for food and only as a special diet for persons [diabetics] requiring foods of a low starch content. Much interest has been shown during the last two years in the possibilities of the soy bean for food. The United States Department of Agriculture and many schools of cookery and domestic science have conducted successful experiments in utilizing the dried beans in the manner of the navy bean and the green beans when three-fourths grown to full grown as a green-vegetable bean. The variety and palatability of the forms in which the bean can be served make it a very desirable article of food, and undoubtedly it will grow in favor as it becomes better known. Soy-bean meal or flour may be used as a constituent of bread and muffins and in pastry."

Photos show: (1) A man standing in a field of soy beans (front cover). (2) A typical mature soy-bean plant (p. 4).

(3) Roots of a soy-bean plant with abundant development of nodules (p. 7).

(4) Cultivating soy beans. Cultivation should begin as soon as the seedling plants appear. Two horses pull a man on a harrow or weeder. (5) A field of the Biloxi variety of soy beans in Mississippi (p. 13). (6) A field of the Black Eyebrow variety of soy beans in South Dakota. (7) Plats of the Mammoth and Virginia varieties of soy beans at Arlington Farm, Virginia (p. 15). (8) A man standing in a field of the

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Peking variety of soy beans grown in 24-inch rows. (9) A field of soy beans and corn grown for ensilage (p. 17). (10) A field of soy bean and Sudan grass grown in mixture for hay (p. 22).

(11) Opened pods of Hahto variety soy beans on a plate, showing the large seeds (p. 23). (12) Soy-bean hay on frames (p. 25).

A diagram (p. 5) shows 67 different ways in which soy bean plants and seeds are utilized. The plants are used for green manure, forage (hay, ensilage, soiling), and pasture. The seeds are used to make oil, meal, and food products. The oil is used to make various non-food industrial products (glycerin, explosives, enamels, varnish, waterproof goods, linoleum, paints, soap stock {for hard or soft soaps}, celluloid, rubber substitute, printing inks, lighting oil {illuminants}, and lubricating oil), and four food products (butter substitute, lard substitutes, edible oils, and salad oils). Food products include dried beans and green beans. From dried beans are made soy sauce, boiled beans, baked beans, soups, coffee substitute, roasted beans, breakfast foods, and vegetable milk (from which is made soy cheese {fresh, dried, smoked, or fermented}, condensed milk, fresh milk, confections, and casein). The green beans are used as green vegetables, canned, or in salads.

An outline map of the United States (p. 6) shows the areas to which the soy bean is especially adapted, as to varieties and purpose. The eastern half of the country is divided horizontally into 3 zones: Southern, for later and larger varieties for seed production; Central, for medium and medium-late varieties for seed and the same varieties and later varieties for forage; Northern (the line runs through central Ohio, Indiana, and Illinois, and southern Iowa) for very early varieties for grain production and the medium and medium-late varieties for forage and ensilage.

Note 2. This is the earliest document seen (Aug. 2004) that mentions the soybean varieties Hahto, Yokoten, or Wilson-Five.

Note 3. This is the earliest document seen (June 2009) that describes a vegetable-type soybean variety (Hahto), or says that a specific variety makes an excellent "green vegetable."

Note 4. This is the earliest English-language document seen (June 2009) that contains the term "green-vegetable bean." Address: Scientific Asst., Forage-Crop Investigations, USDA Bureau of Plant Industry, Washington, DC.

2266. Evans, W.A. 1918. How to keep well. *Chicago Daily Tribune*. Aug. 28. p. 6.

• ***Summary:*** "Soy beans offer large possibilities as a food. They contain 17 per cent fat, 36 per cent proteid, and 14 per cent starch. Soy bean milk has been used for feeding children for a long time. Le Wall says that soy bean cheese and soy bean croquettes resembling meat croquettes are in use. According to the same author, soy bean is the basis of Worcestershire and other sauces. Among orientals soy bean foods are: Tashir, a bean natto and miso, also soy bean cheeses. Ordinary soy milk and Yuba or soy cream are in use. Shoyer [sic, shoyu] is an oriental sauce in making which soy beans are used." Address: Dr.

2267. *Bean-Bag (The)* (*St. Louis, Missouri*).1918. Chinese woman doctor favors soy beans. 1(3):28. Aug.

• ***Summary:*** "Dr. Yamei Kin, a Chinese woman doctor of New York City, recently spent six months in China, studying and analyzing the soy bean. Dr. Kin says that the protein contained in the soy bean is equal to that of meat, and is of great value to persons who cannot safely eat meat. It is a replacer of meat, a sort of vegetable cheese. It forms no acid. It is an alkaline form of protein.

"There are several varieties of soy beans, says Dr. Kin. They look like dried peas, and taste like pebbles. Combined with hash or any form of meat leavings, it forms a wonderful food for diabetics, as the curd contains no starch. When you eat 'chop suey,' 'chow mein' and other dishes in Chinese restaurants, the salty black sauce [soy sauce] served with the food is made of soy beans.

"Excellent cheese [tofu] can be made from soy beans, according to Dr. Kin. She says she can make roquefort cheese [fermented tofu] that smells and looks like the real thing. She also says that when the public becomes educated to the soy bean it will take its place at the head of the procession of American products. In all the world there is not a more misunderstood vegetable than the soy bean, says Dr. Kin."

2268. *J. of Agriculture and Horticulture* (*Quebec*).1918. Soy beans as food. 22:48. Sept. 1.

• ***Summary:*** "The housewife of to-day who desires to patriotically conserve needed foods for overseas and at the same time provide adequately for her own household is naturally on the lookout for new articles to add to her dietary list. Such a one which has much to recommend it is soy beans...

"Most varieties require a longer season for maturity than our northern climate provides but there are one or two that appear to thrive in Quebec and a number of people are trying them this year. They are said to produce abundantly so it is probable that many housewives will be giving them a trial this season for the first time, and a few suggestions as to their treatment may be welcome.

"In Japan and China soy bean milk is prepared and used extensively. This milk is also sold in a condensed form and as curd [tofu]. Other preparations are vegetable butter and cheese, and the extracted oil is sold for table use and for cookery.

"The Food Preservation Demonstrations of the Canada Food Board form an interesting feature of the fall fairs this year."

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Describes the preparation of: (1) Green soybeans. "If cooked when about three-fourths grown as green beans the water should be changed once during cooking". (2) Dry soybeans. Long soaking in a large quantity of water improves the flavor by assisting "in the removal of any disagreeable principle." To serve as baked beans, in a crock, add to 2 cups cooked beans, ¼ teaspoon mustard, salt, a few grains of cayenne pepper, ½ cup tomato catsup, or if desired a few drops of onion juice, or 2-3 tablespoons molasses, or a teaspoonful of Worcestershire sauce. (3) Soy flour. "The raw soy beans may be ground into meal and combined with flour for bread, biscuits, or muffins. In the bread 1/3 soy bean meal may be used, in the biscuits and muffins a larger proportion." The meal tastes best if slightly browned.

Note: This is the 2nd earliest document seen (Jan. 2010) concerning soybeans in Quebec province, Canada, or the cultivation of soybeans in Quebec province (one of two documents). Address: Canada.

2269. *Christian Science Monitor.* 1918. Welcoming the soy bean. Sept. 13. p. 10.

• ***Summary:*** In the section titled "Fashions and the household" we read: "The soy bean is a native of Asia: it is found in Japan, China, the Molucca Islands, and in India. It is said that the products of the bean, rather than the bean itself, are generally eaten in these countries. In China, a popular sauce [soy sauce], usually served with rice, is made from it. Here are some recipes for the use of this bean, given out by the Food Administration of the United States, with the suggestion that it may be used largely in the place of meat:" Recipes are given for: Black soy bean soup (with "1 pint black soy beans"). Cream soy bean soup (with "1 cup of green or yellow soy beans... Soak the beans 12 hours, cook in water 4 hours or until tender, then rub through sieve"). Yellow soy bean soufflé (with "1 cup of yellow soy beans"). Baked soy beans. Soy bean cup cakes (with "3/4 cup of soy bean meal").

2270. Jordan, Sam. 1918. Soy beans from soup to nuts: A new crop with many uses both on farms and in factories. *Country Gentleman* 83(39):7, 34. Sept. 28.

• ***Summary:*** Begins by discussing: The possibilities of soy beans "as a substitute for meat." The rising demand for "soy oil" which started a few years ago when the flax crop was little better than a total failure. "Industrial uses" of soy oil in soap, paint, and varnish. "Several packing houses were experimenting with the oil as a possibility in oleomargarine manufacture." "Soys fix soils for cotton." "Varieties of soy beans have been matured as far north as Quebec" [Canada]. The "development of the soy in the cotton sections will no doubt be swifter from an industrial standpoint because of the already existing facilities for oil extraction."

Concerning food uses, the author believes that "the soy bean as human food is destined to play a leading part in the way of a substitute for meat. From studies made of soy beans as food, the use of flour seems to be one form in which their use will suit the American taste and palate best."

"I have heard that the soy-bean milkman comes around before breakfast each morning in the Orient and leaves soy-bean milk." A Chinese student recently verified this story and said that in his family's household "it was customary to drink a glass of the milk upon arising." The student added that fried bean curd was often served for breakfast, and with soy sauce for dinner. "This soy sauce is something more or less familiar to Americans, the acquaintance being contingent upon the frequency with which our Chinese restaurants are patronized. It is the dark-brown liquid usually on the tables in the vinegar bottles. It is also the base of our Worcestershire sauces.

"For supper a favorite dish is sprouted beans in salad form, mixed with small pieces of meat or egg. They usually have also some form of bean cheese or fermented boiled beans. Next to baked and boiled beans, the preparation of soy-bean milk is a thing which should be more widely known."

"The author gives a brief description of how this milk is made, noting that it can be used in "cream sauces, puddings, custards, and even ice cream when some high flavoring is added to kill the beany taste. Much of the strong taste can be eliminated by boiling the milk slowly and stirring to prevent scalding.

"The residue [okara] obtained by straining the milk makes an excellent base for muffins and even bread, when it is used in the proportion of one part to three or four parts of wheat flour."

"In regard to fresh bean curd or 'tofu,' as the Chinese call it, it is hardly probable that we shall use it generally at an early date. The process of making it will no doubt come through the activities of our increasing number of women home-demonstration agents and, also, it is being made commercially by several Chinese firms in this country. When it does become more widely known, however, it is destined to be used extensively. It has very little taste of its own, and takes the flavor of everything with which it is used, generally as a base. It is also highly nutritious.

"Soy sauce is likewise destined for greater use, but the process of its manufacture is too complicated for domestic preparation. It can be purchased at Chinese groceries in this country, and probably from the majority of Chinese restaurants.

"Another dish which tastes as good as it looks or sounds is soy-bean sprouts. The smaller beans, of some yellow or green variety, are usually used." They are excellent because of "their use in the winter, acting as a green vegetable, and the fact that the vegetable can be had whenever wanted."

"And here is one for vegetarians–a 'vegetarian roast.' This is made by using equal parts of soy beans and peanuts, with the peanuts roasted and the beans boiled until soft

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before both are mixed and treated as an ordinary meat loaf. Such a roast as this is now being prepared by several food-manufacturing firms in the South, where both peanuts and soy beans are plentiful. It is being placed on the market in one and two pound containers."

"The beans served as a green vegetable are treated after hulling in much the same manner as Lima beans or peas. To hull, however, they should be boiled in the pods for about five minutes, then dipped into cold water, after which they shell easily. They can also be canned in this way, treating them after hulling the same as Lima beans. It is often desirable to serve them with rice or potatoes."

"So here we have a small glimpse of what their [soy beans'] future really is. A crop with a great industrial importance, a crop with known forage and manurial possibilities, and a crop holding forth a beneficent promise as an essential food, soy beans will soon be giving corn and wheat a close race for the more prominent places on our agricultural map."

Photos show: (1) Soy beans after being soaked but before boiling. (2) Piles of hay, used for forage. (3) Side view of a soy-bean harvester (with a man on top, pulled by two horses) used in the South, showing the bags filled. (4) A rear view of the same separating and bagging soy-bean harvester.

Note 1. This is the earliest document seen (March 2012) that uses the term "from soup to nuts" in connection with soybeans. Note 2. This is the earliest English-language document seen (Feb. 2000) that uses the term "soy-bean sprouts" to refer to these sprouts. Address: Columbia, Missouri.

2271. *J. of Agriculture and Horticulture* (*Quebec, Canada*).1918. Soy beans, used like navy kind, make valuable food: Ancient China's product can be serve in numerous ways. Oct. 1. p. 67.

• ***Summary:*** From Weekly News Letter, U.S. Dept. of Agriculture [22 May 1918, p. 3]: "When prepared like the ordinary field or navy beans, soy beans should be soaked for 10 or 12 hours or more, if necessary, and boiled slowly. The boiled soy beans,... may be seasoned and used as a principal part of a meal as they are or may be made into bean loaf, bean croquettes, or other dishes.

When soy beans are three-fourths or more grown, the seed make a palatable and nutritious green vegetable.

Also discusses "soy-bean milk" ("a milky emulsion is obtained which is similar in appearance and properties to cow's milk"), "tofu or bean curd" (the addition of either magnesium chlorid [chloride] or calcium sulphate to soy-bean milk precipitates some of the proteid substances, forming a grayish-white curd).

"Soy or shoyu sauce is a dark-brown liquid prepared from a mixture of cooked and ground soy beans, roasted and pulverized wheat or barley, salt, and water, inoculated with a culture known as rice ferment and left in casks to ferment for six months to a year or longer. The liquid obtained is used in many countries, including the United States, as a sauce for meat or vegetables."

2272. *Bean-Bag* (*The*) (*St. Louis, Missouri*).1918. Products secured from a ton of soybeans (Diagram). 1(5):37. Oct.

• ***Summary:*** This diagram shows all the things that can be made from 2,000 pounds of soybeans: Meal 1,650 lb. Oil 32 gallons. Trash and moisture: 120 pounds.

From the meal: Food (animal or human), fertilizer, and cellulose. Human foods include macaroni, flour, soy sauce, milk [soymilk], cheese [tofu], coffee, lard [sic].

From the oil: Food (cooking oils, butter [substitute, lard substitute]), paints, enamels, blown oil (linoleum, varnishes, India rubber substitutes), soap stock (soaps, glycerine).

2273. Heinze, B. 1918. Einiges ueber die Oelbohne, ihren Anbau, den volkswirtschaftlichen Wert und ihre besondere Bedeutung als Heil- und Gewuerzpflanze [The soybean, its cultivation, its economic value, and special importance as a medicinal- and culinary spice plant]. *Heil- und Gewuerzpflanzen* 2(4):82-91. Oct.; 2(6):129-34. Dec. (Chem. Abst. 14:786). [22 ref. Ger]

• ***Summary:*** A discussion of the economic value of the "Chinese oilbean or soya bean" (*chinesische Oelbohne oder Sojabohne*), its culture, and special uses as a medicinal and aromatic plant. In the preparation of soy sauce, wheat and soy beans, after the addition of sodium chloride, are fermented by koji (rice impregnated with a culture of *Aspergillus oryzae*) for a period of 8 months to 5 years. The solid material is separated from the liquid. Vegetable cheese is prepared in a similar manner. Address: PhD, Bakteriologische Abteilung der agrikultur-chemischen Versuchstation Halle a. d. Saale [Germany].

2274. Winkler, Gustav. 1918. Die Sojabohne: Aus einem Vortrage... gehalten in der Hauptversammlung der Gartenbau-Gesellschaft Frankfurt a.M. am 17. April 1914. Zweite Auflage [The soybean: From a lecture... presented at the main meeting of the Gardening Society of Frankfurt am Main, on 17 April 1914. 2nd ed.]. Mainkur bei Frankfurt am Main, Germany: Published by the author. ii + 28 p. Illust. 22 cm. [4 ref. Ger]

• ***Summary:*** On the cover: "Die Sojabohne der Mandschurei [The soybean of Manchuria]. Much of this lecture (as stated on the title page) was based the following English-language article, translated into German by Werner Winkler (Gustav's son) in 1913: Shaw, Norman. 1911. "The soya bean of Manchuria." *Shanghai, Statistical Department, Inspectorate General of Customs. China Imperial Maritime Customs. II. Special Series* No. 31. 32 p.

Contents: A 2-page insert at the front. Photos show: (1) The author (with a large white beard and moustache)

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with a many-branched soybean plant, stripped of its leaves, mounted on a 2 x 3 foot wooden board, from his beanfield (*Winklers Bohnenfeld*) at Mainkur. This one plant grew from May 10 to Oct. 15, 6 months, producing 242 pods containing 503 completely mature soybeans. This line was acclimatized for 6 years and cultivated in the soil for 5 years. (2) The author standing and holding (with the roots facing upward) one soybean plant in each hand. In his right hand is an acclimatized soybean which produced 58 beans in 100 days. In his left hand is a plant grown from Chinese seeds of 1912-13 which produced 224 flowers and no seeds in 100 days. (3) A many-branched soybean plant, stripped of its leaves, from Winkler's beanfield, affixed to a board. Grown from Chinese seeds harvested in 1911/12. It grew from 15 May 1917 until Oct. 1, five months. 105 pods produced about 250 completely mature soybeans. From seeds that were not yet acclimatized grown on cultivated soil. (4) A similar looking plant from Winkler's beanfield. Grown from Chinese seeds harvested in 1911/12. It grew from 15 May 1918 until Oct. 15, five months. 160 pods produced about 350 soybeans. The seeds were not yet completely ripe because of bad, raw weather in 1918.

Foreword to the 2nd edition. Introduction. Diagram in the shape of a rhombus / diamond, showing how the various colored soybeans change from one color into another (adapted from Shaw 1911, p. 2). Description of the diagram: Discusses: (1) Ball, Carleton R. 1907. "Soy bean varieties." *USDA Bureau of Plant Industry, Bulletin* No. 98. 30 p. + 5 plates. May 27. (2) Hosie, Alexander. 1910. *Manchuria: Its People, Resources, and Recent History.* London: Methuen & Co. xii + 293 p. Hosie describes 3 types of soybeans: Yellow, with 3 subvarieites. Green, with 2 subvarieites. Black, with 3 subvarieites.

The rest of the contents is fairly similar to that of the 1st edition (1914), but the details within many sections are greatly expanded. On the rear cover is a photo of two soybean plants attached to a board, one month after planting the seed, Summer 1917; 15 May to 15 June. In the Supplement (p. 26-28), the author summarizes the results of his 8 years of soybean cultivation in Frankfurt; he concludes that it can be grown with good results in southern Germany. Frankfurt am Main is about midway between the northern and southern tips of Germany. Address: Mainkur bei Frankfurt am Main, Germany.

2275. Vantine (A.A.) & Co., Inc. 1918. Oriental delicacies: Vantine's–The Oriental store (Ad). *New York Times.* Nov. 24. p. 38.

• ***Summary:*** "Toothsome tidbits from Oriental lands, for your Thanksgiving Dinner, or to send to the boys in the Service, including an almost unlimited selection of specially packed 'goodies' for Christmas gifts."

"Imported Japanese shoyu or soy sauce. A delicious sauce for flavoring gravies, meats, fish, etc.–Prices 55¢, 85¢, $1.35."

"Japanese 'Midzuame' or rice candy. Made from rice, barley, malt, sugar and gelatine." 4 flavors–Price 35¢.

2276. *New York Times.*1918. Opens way for exports. War Trade Board modifying restrictions on foreign commerce. Dec. 9. p. 17.

• ***Summary:*** "Washington [DC], Dec. 8. Plans for a general loosening up in restrictions on both export and import trade.... especially in South America and the Orient, are being carried out by the War Trade Board." Restrictions on the importation of various items from China have been rescinded. These include "soy bean sauce."

2277. Arnold, Julean. 1918. Chinese products of interest to Americans. *Commerce Reports [USA] (Daily Consular and Trade Reports, Bureau of Foreign and Domestic Commerce, Department of Commerce)* 21(299):1110-19. Dec. 21.

• ***Summary:*** About Chinese vegetable products. Two long sections ("Chinese production of beans" and "Extensive use of bean products–Exports during 1917") contain detailed discussions of soybeans and soyfoods in China. However, the author states (p. 1112) that the "greater part of the descriptive information above is taken from:" Shaw, Norman. 1911. "The soya bean of Manchuria." *Shanghai, Statistical Department, Inspectorate General of Customs. China Imperial Maritime Customs. II. Special Series.* No. 31. 32 p.

The first of these sections states: "It is only within the past 10 years that the outside world has become acquainted with the soya bean of China. It is probably safe to say that the sudden rise of the soya bean from a position of comparative obscurity to a position of prominence in the world of trade, during a period of little more than a decade, constitutes one of the commercial wonders of the world.

"In the Far East soya beans are used for the following purposes: (1) For bean sauce or soy ('soya' is a corruption of the Japanese 'shoyu'), known to the Chinese as 'chiang-yu' and made... The sauce is clear, resembles Worcestershire sauce, and is used in a somewhat similar way. (2) For 'chiang' or bean paste, eaten with fish, meat, and vegetables, and made by... (3) For 'tou-fu' or bean curd [tofu], made from green or yellow beans by... (4) For a form of flour, extensively used for bean vermicelli, which is tasty and nutritious. (5) As a table vegetable [green vegetable soybeans]. (6) For soups. (7) For making confectionery (in Japan). (8) For oil, as a substitute for lard, as a lubricant, as an illuminant, and to make waterproof cloth, paper umbrellas, and lanterns."

Also discusses "Exports of peanuts" (p. 1118-19): Just before the outbreak of World War I, the peanut export industry in China reached a peak. "The annual exports then were about 70,000 tons of shelled peanuts and about 50,000 tons of oil. More than 40% of these exports went from the

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port of Tsingtau [Tsingtao] as Shantung has developed into the largest peanut producing Province in China." Address: Commercial Attaché, Peking.

2278. Bell, Archie. 1918. Sunset Canada: British Columbia and beyond. Boston, Massachusetts: The Page Company. xii + 320 p. Illust. Index. Series: See America First.
• ***Summary:*** Chapter 10, titled "The Royal City," is about New Westminster in British Columbia, Canada. In 1859, New Westminster was selected as the first capital of the new Colony of British Columbia by Queen Victoria, who named the city after part of London. It soon became known as "The Royal City." Located on the north bank of the Fraser River, 12 miles southeast of Vancouver City, it was the only freshwater harbor of any consequence in Western Canada.

Yet the Canadian Pacific Railroad bypassed New Westminster (a crushing disappointment to the city's people) and went instead to Vancouver. Still its location "is strikingly similar to that of New Orleans on the Mississippi river or Shanghai above the mouth of the Yangtzu-Kiang. Both of the latter compelled the commerce of the world to come up the river to them.

Across the Fraser river one soon arrives at Steveston, which is almost an Oriental City; most of the inhabitants are Japanese fisherman, and they live much as if they were still in Japan. On Lulu Island at Steveston, "the native instinct for beauty and love for the picturesque has prompted the planting of shrubs and flowering plants. Sometimes they are in painted tin cans, in [wooden] soy kegs or in China urns; the idea is the same, the beautification of the dooryard, which is as noticeable among Nippon's very poor, where the dooryard may not be more than two square yards in area, as among the rich and noble who can build extensive parks and landscape gardens." Address: Author, Cleveland, Ohio.

2279. Crevost, Charles. 1918. Plantes oléifères de l'Indochine [Oil-bearing plants of Indochina]. In: Congrès d'Agriculture Coloniale, Gouvernement Générale de l'Indochine. 1918. Hanoi-Haiphong: Impr. d'Extrême-Orient. 57 p. Series: Hanoi No. 6. See p. 26-27. [100* ref. Fre]
• ***Summary:*** Following an overview, the various oil-bearing plants are described in detail, organized by family. The section on Soja (p. 26-27) states: Indigenous names in Cochin China, Annam and Tonkin: Dau nanh, Dau tuong. Cambodia: Sandek sieng. China: Teou [dou]. Japan: Daizu mame. The plant is widely cultivated in Indochina for its seeds which, although not consumed directly as food, are used nevertheless to make various other foods: cheeses (dau phu and dau oc [tofu]), and a condiment sauce [soy sauce] (tuong).

In Indochina there is only one variety of soybean, which has oblong yellowish-white seeds, slightly flattened, more or less large according to its place of origin, whereas in China and Japan soybeans come in various colors and colorations.

The best seed in the colony come from Cambodia and the province of Lang-son in Tonkin.

It is well known that soy protein (*graine de soja à base de caséo-sojaïne*) serves as the basis for numerous food preparations; but the seeds are now most widely used in the manufacture of an oil, used for illumination [in lamps] or food; it tends to replace cotton oil in the soap industry, whereas soybean cakes (*les tourteaux de soja*) are considered excellent for use as a fertilizer or for fattening cattle.

A table shows nutritional analyses of soybeans from three locations, conducted at the colonial garden of Nogent-sur-Marne: Laos, Tonkin, and Manchuria. For each the moisture, protein, oil, carbohydrate, and mineral content are given.

Also discusses: Peanuts (p. 25-26, with illustration facing p. 25, and 9 references), sesame (p. 29-30, with illustration facing p. 29), perilla (p. 30).

Note the interesting phrase *graine de soja à base de caséo-sojaïne*, based on the work of Li Yu-ying near Paris, France. Address: Inspecteur des Services agricoles et commerciaux; Conservateur du Musée [Maurice Long] agricole et commercial de Hanoi.

2280. Michigan Dept. of Labor, Michigan Bureau of Labor and Industrial Statistics. 1918. Thirty-fifth annual report of the Department of Labor of the State of Michigan. Lansing, Michigan: Wynkoop Hallenbeck Crawford Co., state printers. 686 p. See p. 332. Index.
• ***Summary:*** A multi-page table titled "Factory inspection.–Continued" (p. 332) has eight columns, for Wayne County: Date inspected: April 11. Names of establishments: Oriental Show-You Company. Where located: Detroit. Goods manufactured or handled: Japanese sauce [probably soy sauce imported from Japan]. Number males employed: 2. Number females employed: 3. Whole number employed: 5. Number who were under 10 years of age: -.

Note: This is the earliest document seen (April 2012) that mentions Oriental Show-You Company.

2281. Montagné, Prosper. 1918. La bonne chère pas chère sans viande [Good food is not expensive without meat]. Paris: Editions Pierre Lafitte. 2 + iii + 126 p. 19 cm. [Fre]
• ***Summary:*** This is a French vegetarian cookbook published during the period of food shortages at the end of and shortly after World War I. The author (lived 1865-1948) may also be the author of the famed French food encyclopedia *Larousse Gastronomique*.

In Chapter 6, "Complementary Recipes," page 104 discusses soy sauce: "Formula 324.–Soya extract (*Extrait de Soja*). This extract, which is found read-made in commerce, considerably enhances the taste of dishes prepared without meat. It is made from the soybean (*le soja; soja hispida*)..." The composition of soy sauce is given. "Soya extract is used in very small quantities. A few drops will be enough to give

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a good taste to a large bowl of water-based soup (*potage à l'eau*). You can also add it at the end of the cooking process to most recipes that call for either broth or gravy.

Formula 366 (p. 116-17) is titled "Soya or Essence of Mushrooms," but soy does not seem to be mentioned in the formula for this condiment. The recipe enables you use locally grown mushrooms to make a product resembling soy sauce during wartime scarcity when real soy sauce is not available. Address: France.

2282. Morse, W.J. 1918. The soy-bean industry in the United States. *Yearbook of the U.S. Department of Agriculture* p. 101-11. For the year 1917. See p. 101-06. Contains many photographs by Frank N. Meyer.

• ***Summary:*** Contents: Early history of the soy-bean industry. Soy beans in the United States. Cultural requirements. Varieties. Soy beans as forage. Soy beans for oil. Soy-bean meal. Soy beans for human food: Dried beans, green beans, soy-bean milk, soy-bean cheese, soy sauce, soy-bean sprouts. Possibilities of the soy-bean industry in the United States.

"The annals of Old China set forth the fact that the soy bean was an important food fully 5,000 years ago. When the ports of China were first opened to foreign commerce, the trade in [soy] beans and bean products was found to have been a long-established and flourishing institution. In value and in extent and in variety of uses the soy bean is the most important legume grown in Asiatic countries." Note: This is the earliest document seen (May 2003) which gives the age of the soybean as "5,000 years."

"Near the close of the eighteenth century the soy bean found its way its way to Europe, its cultivation being recorded in England in 1790. It is mentioned in the United States as early as 1804. For several decades, however, it was regarded more as a botanical curiosity than as a plant of much economic importance. In 1875, Prof. Haberlandt began an extensive series of experiments in Austria with the soy bean and strongly urged its use as a food for both man and beast. Although considerable interest was aroused during the experiments, the soy bean failed to attend the success hoped for by the experimenter.

"Previous to the Russian-Japanese war [1904-05] China and Japan were not only the greatest producers but also the greatest consumers of the soy bean and its products. During the war the production of the crop was greatly increased throughout Manchuria. After the war, however, it became necessary to find new markets for the surplus beans, and trial shipments were made to Europe. The first attempts to introduce the soy bean and its products into European markets were generally unsuccessful because of the unsatisfactory condition in which the beans and cake were received, owing to poor shipping facilities. About 1908 a large trial shipment made to the English oil mills was received in much better condition than previous shipments, and the results obtained were so satisfactory that larger imports were made."

"Soy beans in the United States. As previously stated, the soy bean was introduced as early as 1804, but it is only within recent years that it has become a crop of much importance in the United States. Until the present season it has been grown primarily as a forage crop, though a constantly increasing demand for seed for food and planting has led to the development of a very profitable soy-bean seed industry in many sections of the South and the corn belt. The large yield of seed, the ease of growing and handling the crop, the value of the beans for both human and animal food, and the value of the oil and meal all tend to make this crop one of great potential importance and to assure its greater agricultural development in America."

"Varieties:... At the present time about 20 varieties are handled commercially by growers and seedsmen, although more than 500 distinct varieties are known and have been grown by the Department of Agriculture on its testing grounds. The yellow-seeded sorts are preferred for food and the production of oil and metal and include the following: Mammoth (late), Tokyo (late), Hollybrook (medium late), Haberlandt (medium late), Medium Yellow (medium), Mikado (medium), Ito San (early), Manchu (early), and Elton (early). For forage, the black and brown seeded varieties are most suitable and include Barchet (late), Biloxi (late), Peking (medium), Wilson-Five (medium [black seeded]), Virginia (medium late), Early Brown (early), and Black Eyebrow (early).

"Soy beans for oil: The soy bean was first utilized for the production of oil and meal in the United States about 1910 by an oil mill on the Pacific coast. The beans were imported from Manchuria, and the success of the industry is indicated by the continued production of the oil and meal and the increasing imports of soy-bean seed from Manchuria.

"American-grown seed was first crushed for oil the latter part of 1915 by a few cottonseed-oil mills in North Carolina. A shortage of cottonseed and a surplus of soy-bean seed led to a rather extensive use of domestic-grown seed for this purpose. However, during the season of 1916-17 no domestic-grown beans were utilized for oil, owing to the extremely high price of seed. The cottonseed-oil mills of the South saw the possibilities of the soy bean as an oil seed, and many mills throughout the cotton belt contracted with planters for seed of the 1917 crop. This led to a considerable increase of acreage. Large quantities of Manchurian beans have been imported during the past few months and utilized by southern mills in the production of oil and meal.

"The utilization of the soy bean as an oil seed has not required any extensive changes in the equipment of the modern oil mills. The methods are similar to those employed with other oil seeds, such as cottonseed and linseed. According to data obtained from different mills, 1 ton of soy-bean seed yields from 28 to 31 gallons of oil and about 1,600 pounds of meal.

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"The oil extracted from the soy bean in many respects resembles cottonseed oil, though it dries more rapidly. This oil has a good color, has but a faint odor, and is rather palatable. New trade uses are being constantly found for soy-bean oil, and it has become an important competitor of other vegetable oils. It was first used in the United States in its crude state, principally in the manufacture of soft soaps. In the search for new oils to replace linseed oil for paint purposes, partly or wholly, soy-bean oil was found most suitable. Paint grinders are using successfully large quantities of this oil in the manufacture of certain types of paint. Manufacturers of butter and lard substitutes are using considerable amounts of soy-bean oil in their products. Other uses for which this oil is employed are in the manufacture of explosives, linoleum, varnish, and foodstuffs.

"Soy-bean oil has been studied with other oils by the Office of Home Economics and found to compare favorably with the more common table oils with respect to digestibility. In view of the rapid improvement in the process of refining this oil, there seems to be scarcely any use to which oil is put in the manufacture of foodstuffs in which soy-bean oil may not eventually be found to have an important place" (p. 104).

"Soy-bean meal:... The meal or flour produced from American-grown yellow varieties is bright yellow in color when fresh and has a sweet, nutty flavor. Samples of meal from different sources range from 46 to 52 per cent protein and from 5 to 8 per cent oil. As a human food, soy-bean flour has been used in the United States principally as a special article of diet and sold by companies manufacturing special foods of low starch content. The flour or meal can be successfully used as a constituent of bread, muffins, biscuits, or pastry. Extensive tests have been conducted by the United States Department of Agriculture with soy-bean flour in the making of bread and pastry. In these various food products about one-fourth soy flour and three-fourths wheat flour has been found to be the proper proportion. In some of the pastry products, however, as much as one-half soy flour can be used. During the past year the use of soy-bean meal has gained in popularity on account of the many palatable products that may be made from it" (p. 105). Photos are described in Part II. Continued. Address: Scientific Asst. in Forage-Crop Investigations, Bureau of Plant Industry, USDA, Washington, DC.

2283. Morse, W.J. 1918. The soy-bean industry in the United States (Continued–Document part II). *Yearbook of the U.S. Department of Agriculture* p. 101-11. For the year 1917. See p. 106-10. Contains many photographs by Frank N. Meyer. • ***Summary:*** Continued from p. 106. "Soy beans for human food: In Asiatic countries, especially China and Japan, the soy bean and the various food products made from it are so largely consumed that it is second only to rice in importance as a food crop. The soy bean is eaten only to a very small extent like other beans, but in China and Japan it is elaborated into a great variety of products, all having a high percentage of protein and making a well-balanced diet when eaten in connection with the staple food, rice. Some of these products are said to be eaten at every meal and by rich and poor alike. Of these numerous preparations, only one, 'shoyu,' or 'soy sauce,' has been introduced to any extent in other countries. It is quite possible that some of these products would appeal to the American taste and with proper exploitation become established on the American market.

"Although the soy beans as an article of food has attracted attention from time to time in the United States, thus far it has been used but little except as a special food for invalids. The beans contain only a trace of starch and are highly recommended as a food for persons requiring a diet of low starch content. During the past year, however, much interest has been manifested in the possibilities of the soy bean as a staple food.

"Many schools of cookery and domestic science throughout the country have conducted experiments rather successfully, utilizing the dried beans in the manner of the navy bean. As a result, the dried beans can now be purchased in the markets in nearly all of the large cities. The variety and palatability of the forms in which the bean can be served make it a very desirable article of food, and it may be expected to grow in favor as it becomes better known (p. 107)."

"Dried beans:... During the season of 1916 about 100,000 bushels of American-grown [dried] soy beans were packed as baked beans by several canning companies in the Central and Eastern States." Properly roasted, the dried beans "make a good coffee substitute. Those fond of cereal beverages pronounce it equal to many of the preparations on the market. In China, the beans are soaked in water and roasted, the product being eaten after the manner of roasted peanuts. This method of preparing the beans is improved by soaking the beans for about twelve hours in a 10 per cent salt solution, boiling slowly for about 30 minutes, and then roasting to a light-brown color. The yellow-seeded and green-seeded varieties are preferable, as they make a product of better appearance.

"Green beans: When soy beans are three-fourths or more grown, the seed makes a most palatable and nutritious green vegetable. As such it may be used much as is the green pea or the Lima bean. The pods are somewhat tough and not desirable to eat. The green beans are rather difficult to shell, but after cooking in the pods for about five minutes, they shell out very easily."

"Soy-bean milk:" If dried soy beans are soaked, crushed, and boiled "a milky emulsion is obtained which is very similar in appearance and properties to cow's milk. This liquid, separated out by means of a very fine sieve or through a cloth filter, is the soy-bean or 'vegetable' milk used so extensively in China." "Soy-bean milk has a rather strong characteristic taste and odor which may be masked

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by the addition of a small quantity of coumarin or vanillin. This 'vegetable milk' can be used in numerous preparations, such as breads and cakes, in creaming vegetables, in milk chocolate, and in custards. If allowed to remain in a warm place the milk becomes sour, like animal milk, and in that form may be employed just like sour milk or buttermilk...

"After separating the milk from the solid material, the residue [okara] is still very rich in nutritive substances. It can be dried and used for cattle feed or possibly made into a meal or flour for human consumption."

"Soy-bean cheese: "The addition of magnesium or calcium salts (about a 1 per cent solution) to soy-bean milk when hot precipitates some of the proteid substances, forming a grayish white curd which settles out, leaving a yellowish watery liquid. This curd, after being drained and pressed, represents the tofu, or bean curd, which is so extensively eaten and forms the basis of numerous fermented, smoked, and dried cheeses in China and Japan (Plates III and IV). Tofu is made fresh daily and is a staple article of diet of oriental peoples. In many cities of the United States having a large Asiatic population, fresh bean curd generally may be found in the Chinese markets. Although the fresh curd, or tofu, is tasteless, it is a highly nutritious food and no doubt could be elaborated by the American housewife into a variety of palatable dishes.

"Soy sauce: Soy or shoyu sauce is a dark brown liquid prepared from a mixture of cooked and ground soy beans, roasted and pulverized wheat (barley is sometimes used), salt and water. This mass is inoculated with a culture known as rice ferment (*Aspergillus oryzae*) and left in casks to ferment from six months to a year and sometimes longer (Plate V)... This product may well serve as the basis of sauces of the Worcestershire type... The manufacture of soy sauce is conducted on a large scale in China and Japan, and to some extent in India. The yearly production of Japan is said to amount to nearly 2,000,000 barrels. The brewing of this sauce has also become a well established industry in Hawaii. Although there are no factories in the United States, considerable quantities of the sauce are imported annually, and it can be obtained at Chinese stores in most of our cities."

"Soy-Bean sprouts: Several species of beans are sprouted and used as a green vegetable by the Chinese (Plate VI). Soy beans are used to a very considerable extent for this purpose, as these sprouts are larger and firmer than those of most other legumes. Bean sprouts can be used as a home winter vegetable, for the dried beans are sprouted easily in a short time under proper conditions of heat and moisture. It is quite possible that sprouted soy beans utilized in various vegetable dishes would appeal to the American taste."

A table (p. 111) shows the "Quantity and value of soy beans, soy-bean cake, and soy-bean oil imported into the United States, 1910-1917, inclusive.

Photos on unnumbered pages show: (1) A typical soy bean plant. (2) A field of the Biloxi soy bean grown at Biloxi, Mississippi. (3) Pods and seeds of 7 common varieties of soy beans.

(4) "Large blocks of freshly made bean curd, 'tofu' [on a round wooden table], ready to be cut up into squares and sold to the housewife."*

(5) "Large bamboo tray of various kinds of soy-bean cheese of the drier type" [pressed tofu sheets].*

(6) "A dark room of even temperature where wooden trays, full of bean curd [tofu] are piled. This is another method of preparing soy-bean cheese" [fermented tofu].*

(7) "Large earthen jars full of squares of bean curd, which are covered with spiced brine and soy sauce. After several months' curing a bean cheese [fermented tofu] is formed, which can be kept for many years."*



(8) A "courtyard full of covered pots of fermented soy beans and brine from which soy sauce is made."*

(9) The basket on the left contains "sprouted soy beans, which are sold and used as a green vegetable" [in China]* * = Photographed by Frank N. Meyer, Agricultural Explorer, USDA.

Note 1. This is the earliest published document seen (Jan. 2001) that contains photos of soyfoods by Frank. N. Meyer. Most of the photos appear to have been taken in China.

Note 2. This is the earliest document seen (Jan. 2001) in which William Morse describes "soy-bean sprouts" or "soy-bean cheese" (tofu).

Note 3. This is the earliest English-language document seen (Oct. 2011) that uses the term "soy-bean cheese" to refer to fermented tofu.

Note 4. This is the earliest English-language document seen (Oct. 2003) that uses the term "milky emulsion" to refer to soymilk.

Note 5. This is the earliest English-language document seen (May 2005) that uses the term "masked" (or any other form of that verb) in connection with the undesirable taste or odor of soyfoods (soy-bean milk) or soy beans. Address: Scientific Asst. in Forage-Crop Investigations, Bureau of

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Plant Industry, USDA, Washington, DC.

2284. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1918. Nichi-Bei nenkan [Japanese-American yearbook. No. 12]. 650 Ellis St., San Francisco, California. [20] + 432 p. Reprinted in Feb. 2002 in Tokyo by Nihon Tosho Senta. Series: Nikkei Imin Shiryôshû. Dai 5-kai [Collected Documents on Japanese Emigration. No. 5]. [Jap; eng]
• ***Summary:*** This book is somewhat similar to the 1915 yearbook but very different from previous yearbooks in this series in that it has no directory (giving business names, address, and sometimes phone numbers). It has more pages of advertisements than the 1915 edition but fewer than previous editions. Moreover the structure and contents are very different. For the first time, the pages are numbered sequentially throughout the book–except for the first 20 pages which are unnumbered. Again, it is not clear what caused these major changes. But the main message seems to be: Japanese are hard-working people adding significantly to the production and value of the United States.

Like its predecessors, it is read and numbered from "back to front" compared with typical English books; it is mostly (99%) in Japanese. The English-language title page reads: *The Japanese American Year Book.*

Contents: Front matter (6 p.). Preface, correction notice, and full-page ad for Pacific Trading Co. (soy is not mentioned) (2 p.). Photos (black and white on 6 unnumbered pages). Maps and charts on 2 unnumbered pages: Total value of agricultural products by Japanese farmers in the USA in 1917: (1) Pie chart of value ($) of principal crops produced. The top 5 are vegetables, beans, grapes, sugar beets, and potatoes. (2) Bar chart of percentage of principal crops produced by Japanese, showing their adaptability for intensive cultivation (average 1915-1917). Japanese produce 90% of all celery, 88% of berries, 86% of asparagus, 85% of cantaloupes, 83% of onions, 80% of tomatoes, 72% of florists' products, 53% of seeds, etc. Bar chart showing the increase in land value under the cultivation of Japanese in 12 places of California. For each place, a white bar shows land value per acre before 1913 and a black bar shows land value per acre in 1918. These places include: Imperial Valley (melon ranch), Colusa (rice field), Sonoma (vineyard & orchard), etc. On average, the land has increased in value from 4.5-fold to 6.7 fold.

Table of contents (2 p.). Map showing yearly amount of rainfall in California (1 p.).

Nichibei Nenkan No. 12–Industrial edition (p. 1-). Japanese agricultural conditions (p. 1-20, with ads on p. 16-17). Various other Japanese industries (p. 21-28). Ads (p. 29-36). Education (p. 37-64). Ads (p. 65-80). Agriculture (part 1 of 3; p. 81-209, with ads p. 204-209). How to run an agricultural business (part 2 of 3, p. 210-340, with ads p. 297-300, 341-348). Agricultural production industry (part 3 of 3, p. 349-389). Industries: Fishery (p. 389-419). Forestry (p. 420-24). Mining (p. 425-28). Manufacturing (p. 429-31). Ad (Hinoe / The Hinoy, p. 432). Copyright and publishing information page.

Summary: Tofu makers (*tofu-ya*): In 1908 there were 20 tofu makers. This number increased to 50 in 45 locations in 1917 (p. 25). Miso makers (*miso seizô-sho*): Since 1908 there have been 12 miso makers that opened: some have closed. In 1917 the number increased to 6 due to the ban on importing Japanese miso. Among the oldest and most established in Los Angeles: Miso Seizô-sho. Their capital investment is $12,000. They use 180,000 *kin* of soybeans (1 kin = 1.323 lb = 600 gm) and 240,000 *kin* of rice. Sales are $36,000/year. Number of workers: 4 (p. 28). The only soy-related ad in this volume is for "L.A. Miso Mfg. Co., 605-7-9-N. Alameda St., Los Angeles, California." Trade mark: Shows 3 horizontal lines in a circle, probably pronounced "marumi"–which means "flavor" in Japanese. In Japanese is written (in big, bold characters), *Rafu Shiromiso Seizô-sho.*

The Directory shows Japanese companies making soyfoods in California and other states. Address: San Francisco, California.

2285. Paerels, J.J. 1918. Soja [Soya]. In: Dr. K.W. Van Gorkom's Oost-Indische Cultures. 1918. Amsterdam: J.H. de Bussy. 2nd ed. Vol. 2. Edited by Dr. H.C. Prinsen Geerligs. See p. 839-51. Figs. 285-86. [8 ref. Dut]
• ***Summary:*** This is a reprint of Paerels 1913. Contents: Origin and native land. The soybean plant: Botanical description (flowers, seeds, fertilization, germination), types and varieties, geographical distribution. Cultivation of soybeans: General instructions for growing, planting, manuring, diseases and pests. Production, trade, and use: Tofu (*Tao-Hoe*), Chinese soy sauce (*Tao-Yoe*), soybean paste (*Tao-Tjiong* [a term, and perhaps a product, between *doujiang* and *tao-tjo*, Indonesian-style miso]), composition of the seeds and value as a food (*samenstelling en voedingswaarde*). Photos show: Plants of a black variety (p. 840), and a white variety of soybeans (p. 841). Address: Netherlands.

2286. Saito, Kendo. 1918. Ueber die chemischen Bedingungen der Askenbildung bei *Zygosaccharomyces major* Takahashi et Yukawa [On the chemical conditions of asci formation in *Zygosaccharomyces major* Takahashi et Yukawa]. *Botanical Magazine (Tokyo)* 32(373):1-13. Jan.; 32(374):15-25. Feb. [Ger]
• ***Summary:*** *Zygosaccharomyces major* (later renamed *Saccharomyces rouxii*) is an important yeast that grows in soy sauce and was later found to contribute to its flavor. Asci are small sacs which some yeasts, under certain conditions, produce to contain their sexual spores.

Contents: Introduction. Preliminary remarks concerning materials and methods (soy sauce is mentioned on p. 4). The need for a definite salt solution for ascospore formation.

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Theory concerning the effect of salt. The need for a carbon source for the development of the ascospores.

Note 1. Yeasts have been defined as fungi in which the usual dominant, or conspicuous form in unicellular (single-celled). This unicellular form gives yeasts two advantages over the mycelial (multi-cellular) form of molds: (1) There is greater surface to volume ratio which allows greater metabolic activity; (2) The unicellular form is more readily distributed than the mycelial form. On the basis of their method of reproduction, the yeasts can be divided into four groups. Only two of these groups contain yeasts involved with foods. One group produces sexual ascospores in asci (small sacs) and is in the class Ascomycetes. These are the so-called true yeasts. For most yeasts, the maximum number of spores per ascus is four, but a few yeasts can produce eight. The usual form of vegetative (asexual) reproduction is by budding; all yeasts can reproduce asexually. The yeasts in the other group form no sexual spores and have no sexual life cycle; they are the false yeasts, Fungi Imperfecti, or Deuteromycetes (See Banwart, G.J. 1979. *Basic Food Microbiology*, p. 97-98).

Note 2. This yeast *Zygosaccharomyces major* was renamed *Saccharomyces rouxii* by the late 1950s (see Sakaguchi 1959). It is halotolerant (can tolerate high salt concentrations), and contributes to the flavor and aroma of soy sauce, in part by producing ethyl alcohol.

Note 3. Part 1 of this 3-part series was written in Japanese and published in this journal in 1916.

2287. Shih, Chi Yien. 1918. Beans and bean products. Shanghai, China: Soochow University Biology Dept. 13 p. 24 cm. [Eng]

• ***Summary:*** The author's name in pinyin is probably Shi Jiyan. At the head of each section, the name of each product or type of bean is written in Chinese characters. Contents: Introduction by N. Gist Gee of the Dept. of Biology, Soochow Univ., China.

Note 1. Soochow, also called Su-chou (formerly Wuhsien) is a city in southern Kiangsu (pinyin: Jiangsu) province, in eastern China, on the Grand Canal. Introduction and names of soy beans: Classical Chinese names, colloquial Chinese names, Latin names, and English name (Soja bean). Soy beans. The food products of soy beans. Bean curd (Cc). Tou fu koen. Po yeh. Yu tou fu [fried tofu]. Ju fu [fermented tofu]. Tsao ju fu [fried fermented tofu]. Ch'ing hsien ju fu. Tou chiang or bean sauce. Chiang yu. Bean ferment or tou huang. Bean Sprouts. Bean relish or tou shih [fermented black soybeans]. Bean oil.

Beans (Four varieties of *Phaseolus mungo* var. *radiatus:* chidou = dark-red [azuki] bean, baichidou = white dark-red bean, lüchidou = green red bean, and lüdou = green [mung] bean): The food products from the green [mung] beans (lüdou): Bean sprouts, green bean congee or lu tou chou, green bean soup or lu tou tang, green bean pudding or lu tou kao and lu tou sha. The food products from the red [azuki] bean (quite similar to those made from the green [mung] bean): Congee, rice, pudding, tou sha.

Hyacinth beans (*Dolichos lablab:* five Chinese varieties / names: biandou, baibiandou, qingbiandou, zibiandou, longzhao biandou). Asparagus beans [cowpeas] (*Vigna catiang:* four Chinese varieties / names: jiangdou, panxiang jiangdou, manli jiangdou, baimi jiangdou). The food products from Pien Tou and Chiang Tou. Medicine. Flowers and seeds of the Pai Pien Tou, the broad bean, windsor bean, or horse bean (*Vicia faba):* In China it has two names: (1) Ts'an Tou or silkworm bean, because it is harvested at the time the silkworm is making its cocoon; (2) Han Tou or cold bean, because it grows through the winter. The food products from Ts'an tou (broad bean): Bean shoot (tou miao), Ch'ing tou (as a vegetable), Ja tou (broad bean sprouts), Shien fan and fan bee (made from broad beans and mung beans), Tou sha. The section on the names of beans (p. 1) we will give the English name, Latin name, the classical Chinese names / colloquial Chinese names, and an English translation in parentheses, as follows: (1) Soja bean, *Glycine hispida:* heidou / heidou (black [soy] bean), huangdou / huangdou (yellow bean), yangyandou / yangyandou (sheep eye bean), maliaodou / maliaodou (horse material / feed bean),–/ guguo qingdou (bone wrap green bean),–/ jiajia sandou (pod pod three bean), xiangsidou (mutually think bean) / xiaqngzhidou (fragrant branch bean),–/ bayue baidou (8th month white bean). Soja bean: *Dolichos cultratus* quedou (magpie bean) / equedou (chirp magpie bean). Soja bean: *Phaseolus vulgaris* baidou (white bean) / shui bai dou (water white bean),–/ shidou (fennel bean) (Note 3, shiluo means "fennel"),–/ guashudou (melon ripe bean),–/ maquedou (sparrow bean),–/ niuta biandou (cow tread flat bean),–/ yadou (sprout bean),–/ shijia xiangdou (ten family fragrant bean),–/ xifeng qingdou (west wind green bean),–/ shizi hedou (persimmon pit bean),–/ denglongdou (lantern bean).

Note 4. The large title "Soy Beans" at the top of this table, the right column which says that the English name of each variety is "Soja bean," and the next 8 pages which are only about soy beans, strongly indicate that all the colloquial names in this table refer to different varieties of soy beans. Moreover, all these colloquial names appear again on page 3 in a table on planting and harvest times of different varieties of [soy] beans. The bottom half of the colloquial names are probably from different parts of China, since Dr. H.T. Huang (a soybean expert) has never heard many of these colloquial names before. The most puzzling question is: What are *Dolichos cultratus* and *Phaseolus vulgaris* doing at the bottom of the "Latin name" column? *Dolichos cultratus* is not listed on either of the two comprehensive taxonomy databases (GRIN and ILDIS, which include all past Latin / scientific names). *Phaseolus vulgaris* refers to the common bean, such as the kidney bean, pinto bean, navy bean, frijole, etc.

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2. Soy beans. "They were introduced into France during the reign of Ch'ien Lung about 1740 A.D. by a French Consul; into England in 1790, into Australia in 1875, into Germany 1881, and 1888 into America. They were known here from ancient times and were mentioned in the oldest books Pên Ts'ao Kong Mu, which were written by the Emperor Shen-nung in the year 2838 B.C., and the later Chinese Classics."

Note 5. This is the earliest English-language document seen (Aug. 2002) that treats Shen Nung as a real, historical figure, or that says the first written record of the soybean appears in a book written by him. The information about that book is wildly inaccurate. The *Bencao gangmu* (The great pharmacopoeia), perhaps China's most famous materia medica, was written by Li Shizhen (+1596). The above information, which is all wrong, has been cited again and again, down to the present day (2002), in connection with the supposed origin of the soybean.

"Even during the ancient times they were considered by the people to be the most important of the cultivated leguminous plants." Note 6. This is the earliest document seen (Aug. 2002) which states, incorrectly, that the date of Emperor Shen-nung's book is 2838 B.C.

"The methods of cultivation are as follows: In general all of the soja beans are planted in rows along the banks of canals and the boundaries of the fields, which separate the fields of one family from those of another, except those which are called oil beans or Eighth month white bean and Water white bean. These last are planted in large fields. The oil beans are planted early in June." The method of cultivation, harvest, and threshing is then described in detail. A table gives the time of planting and harvest for 18 varieties of Chinese soybeans, grouped into 6 types by planting and harvest dates: (1) Plant in latter part of April, harvest in latter part of Sept.: *Heidou* (black [soy] bean), huangdou (yellow bean), *maliaodou* (horse material / feed bean), *guguo qingdou* (bone wrap green bean), *jiajia sandou* (pod pod three bean), *xiangzhidou* (fragrant branch bean). (2) Plant in early part of June, harvest in middle part of Sept.: *bayue baidou* (8th month white bean), *shuibaidou* (water white bean), *maquedou* (sparrow bean). (3) Plant in early part of July, harvest in early part of Oct.: *equedou* (chirp magpie bean), *niuta biandou* (cow tread flat bean), *shijia xiandou* (ten family fragrant bean), *xifeng qingdou* (west wind green bean), *shizi hedou* (persimmon pit bean), *denglongdou* (lantern bean). (4) Plant in early part of April, harvest in early part of July: *guashudou* (melon ripe bean). (5) Plant in early part of April, harvest in latter part of July: *shidou* (fennel bean). (6) Plant in early part of April, harvest in latter part of June: *yadou* (sprout bean).

The rest of the work concerns the food products of the beans, including a detailed description of how each is made.

Note 7. This document contains the earliest date seen for soybeans in Australia or Oceania (1875). It is not clear whether or not these soybeans were cultivated in Australia; they may well have been. The source of these soybeans is unknown, as is the author's source of information concerning that early introduction, 43 years before Shih wrote this booklet. He is the first to give such an early date for the introduction of soybeans to Australia. Yet the date does not seem unreasonably early since there were 17,000 Chinese in Australia by 1855 (see Australian Department of Immigration and Ethnic Affairs. 1985. "A Land of Immigrants"). Address: Biology Dep., Soochow Univ., China.

2288. Shih, Chi Yien. 1918. Beans and bean products: Bean curd [tofu], to fu koen [pressed tofu], po yeh [pressed tofu sheets], and yu tou fu [deep-fried tofu] (Document part). Shanghai, China: Soochow University Biology Dept. 13 p. See p. 3-5. [Eng]

• ***Summary:*** (Cc) = Chinese characters inserted in text. Bean curd (Cc): "The making of bean curd had its origin in the Han dynasty (Cc), during the reign of Huai Nan Wang (Cc) (A.D. 22) at Liuan. All sorts of black beans, yellow beans, green beans, etc. can be used in its preparation; but largely we use the beans which are called Cc (Eighth Month White Bean) Glycine Hispida and Cc (Water White Bean or Tenth Month White Bean) Phaseolus Vulgaris. The other beans are not so much planted by the farmers for this purpose; they only eat them when the beans are young.

"The processes necessary to prepare Bean Curd are as follows:–(1) Soaking the beans in cold water for six or seven hours in summer time, and twenty-four hours in winter time. (2) Washing the beans thoroughly after soaking. (3) Grinding with cold water [then filtering] to form Bean Milk (Cc = doufujiang). (4) Pouring this into a big kettle and cooking it.

"(5) After about a quarter of an hour, there is a film or skin which floats on the surface of the bean milk. A stick is used to take this up and it is then put aside and left to dry. This film or skin is called Tou Fu Yi (Cc = doufuyi = bean + curd + clothes). From one kettle of bean milk, twenty or thirty films can be obtained. If more than this are taken off, the bean milk will become thin and will not be fit to make bean curd.

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "Tou Fu Yi" to refer to yuba.

"(6) After boiling the bean milk about half an hour, it is poured into a big earthenware jar and a gypsum or salt solution is added to curdle it. If 133 pounds of beans are used, 6 ounces of gypsum or salt will be required. Then it is left in the jar for about 15 minutes. The curdled material is called Tou Fu Ho (Cc = doufuhua = bean + curd + flowers)."

"(7) A piece of board, about two feet five inches long and one foot five inches wide, is used to make a bottom for a frame slightly smaller than the board and about two inches high. Then a piece of coarse cloth, twice as big as the large

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piece of board, is used to fold in the frame. The curdled material is poured on the cloth and wrapped up in it. Then another piece of board, as large as the bottom one, is placed on top of the cloth and it is pressed by a heavy block of wood for about fifteen minutes. Then the top board and the frame are removed and a knife is used to divide it into small pieces which are called Bean Curd or Tou Fu.

The price is about five cash for one small piece, about three inches square and one inch thick.

"Tou Fu Koen (Cc = doufugan = tofu + dry): Tou Fu Koen is made from bean curd or Tou Fu. A small piece of coarse cloth, above five inches square, is used to wrap the small pieces of bean curd and they are pressed between two boards, which are used to press the bean curd, for about six hours, then the cloth is removed and the small pieces are cooked in [soy] sauce, or Chiang Yu (Cc = jiangyou). After cooking they are called To Fu Koen.

"Po Yeh (Cc = baiye = 100 sheets / leaves): Po Yeh is prepared from Tou Fu Ho (Cc = doufuhua). The apparatus which is used to prepare the Po Yeh is the same as that used to prepare the bean curd; but is smaller, its dimensions being only about one foot square and eight inches high. A piece of coarse cloth about twenty feet long and one foot wide is used to fold in the frame. At first, one end of the cloth is spread on the bottom of the frame and then a thin layer of Tou Fu Ho is poured on the cloth, and then the cloth is turned back on the Tou Fu Ho and another layer is added, etc., until the frame is filled with the material and it is then pressed with a heavy block of wood about six hours. Then it is brought to the market for sale. The price is about four coppers for one catty.

"When eaten, it is usually first boiled with pork or cabbage, bean curd, turnip, etc.

"Yu Tou Fu (Cc = youdoufu = oil + tofu): Yu Tou Fu is the small piece of Tou Fu which is boiled in the bean oil or rape seed oil. The oil is boiled first and then the small pieces of Tou Fu are poured into the boiling oil. After four or five minutes the small pieces usually float on the surface of the oil and they are then taken out. These are called Yu Tou Fu.

"They are used to boil with cabbage or with meat. Sometimes an opening is made on one side of the Yu Tou Fu and pork cut into very fine pieces is put into it and then it is boiled. It is sold for about twenty cents for one catty."

Note: This is the earliest English-language document seen (May 2012) that contains the term *Yu tou fu*. Address: Biology Dep., Soochow Univ., China.

2289. Shih, Chi Yien. 1918. Beans and bean products: Ju fu [fermented tofu], tsao ju fu [redolent tofu], chiang ju fu, ham ju fu, ch'ing hsien ju fu (Document part). Shanghai, China: Soochow University Biology Dept. 13 p. See p. 5-6. [Eng]
• ***Summary:*** (Cc) = Chinese characters inserted in text; pinyin romanization has been added. "Ju Fu (Cc = rufu = fermented + tofu): Ju Fu is made from raw Tou Fu Koen (Cc = sheng doufugan = raw + tofu + dry), but it is less compressed than Tou Fu Koen. The different kinds of Ju Fu are prepared by different methods.

Chiang Ju Fu is taken as our first example. A kind of whitish mold, which is called Chiang Hsi, is required to prepare Chiang Ju Fu. This mold is obtained during the middle of the summer in the following way:–(1) Wheat flour is mixed with cold water to make slipper-shaped cakes. (2) Then these are put into boiling water and cooked thoroughly. (3) After boiling, the cakes are broken into small pieces and put aside in some exposed place to allow them to mold. (4) After about one week, the small pieces are all covered with mold and then they are placed in the sunshine for two days in order to dry them. (5) Next they are ground into powder which is called Chiang Hsi (Cc = jiangxi).

"To prepare three catties of raw Tou Fu Koen requires six ounces of salt, four ounces of Chiang Hsi. These are thoroughly mixed with the Tou Fu Koen and put into an earthenware jar and one catty of rice wine, one catty of Chiang Yu [soy sauce], one catty and four ounces of sugar solution, (which contains one catty of water and four ounces of sugar), are added into the jar and it is then thoroughly sealed.

"The method of sealing the jar is interesting. First a cloth is laid across the mouth of the jar, then large bamboo leaves are placed on top of this and they are bound together around the neck of the jar with a cord. Then mouth and neck of the jar are entirely covered with a sticky clay mixed with the flowers of the reed to hold it together. The jar must be kept sealed for at least four months before its contents can be used for food, and if the vessel of opened before the end of this time the Ju Fu will spoil.

"It is used as food throughout the year and is eaten without further cooking as a vegetable with soft rice.

"It is red in color which is due to the presence of a kind of red rice. Three catties of Tou Fu Koen requires two ounces of red rice (Cc = hongqu). The price is about ten cash for a piece about two inches square and half an inch thick.

"There is another way of making Chiang Ju Fu. The Tou Fu Koen is first put on a board and allowed to mold, and then it is salted thoroughly and packed in an earthenware jar for about four or five days. The Chiang Yu [soy sauce], sugar solution, and red rice (Cc) are added. The proportions of ingredients are as follows: One catty of Tou Fu Koen, two ounces of salt, six ounces of red wine, six ounces of Chiang Yu [soy sauce] and four ounces of sugar in six ounces of water.

"After this, the jar is sealed and not opened for about four or five months. It is eaten in the same way as the other Chiang Ju Fu, and the price is approximately the same.

"Ham Ju Fu (Cc = nantui furu) is the Chiang Ju Fu which has ham mixed with it.

"Tsao Ju Fu (Cc = zaofuru): Tsao Ju Fu us made from Tou Fu Koen which is first allowed to mold, just as in the process of preparing Chiang Ju Fu in the second way. After

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molding, the cakes are thoroughly salted, using about three ounces of salt to one catty of Tou Fu Koen. Then they are put in an earthenware jar for about four days and Chiu Niang (Cc = jiuniang) is added to cover all of the Tou Fu Koen.

"Chiu Niang is made from rice which is first steamed and then poured into a big earthenware jar where it is allowed to cool. After this, a kind of yeast powder is added to the rice. Sixty seven pounds of rice requires six ounces of yeast powder. The two are mixed together and cold water is added to moisten the rice. Then a hole is made in the rice at the center of the jar and the rice is pressed back against the side of the jar. A straw cover is used to cover the mouth of the jar and a straw matting is wrapped around it. This is to keep its temperature high enough to hasten fermentation of the mixture. During cold weather the jar must be kept in a warm place. After about three days the wine collects in the central cavity. The fermented rice is called Chiu Niang.

"After Chiu Niang is poured into the Tou Fu Koen, the jar is sealed in the same way as in the making of the Chiang Ju Fu. The cakes of Tsao Ju Fu can be eaten after about two months.

"The price is about ten cash for one piece which is about the same size as that of Chiang Ju Fu.

"Ch'ing Hsien Ju Fu (Cc = qingxian furu): This is made from Tou Fu which is first divided into small square cakes. These are exposed upon matting or boards to allow them to mold. After about eight or nine days a whitish mold, about half an inch long thoroughly covers the Tou Fu cakes. The cakes are first salted, using about three ounces of salt to one catty of Tou Fu. Then they are put into a big earthenware jar and covered with cold water to the depth of an inch. It is not necessary to seal the mouth of the jar, so it is only kept free from the dust by being covered with a piece of cloth. After ten or twelve the Ch'ing Hsien Ju Fu is used in the same way as the Chiang Ju Fu.

"Its price is about sixty cash for one catty."

Note: This is the earliest English-language document seen (Oct. 2011) that uses the terms "Ju Fu" or "Tsao Ju Fu" or "Chiang Ju Fu" or "Ham Ju Fu" or "Ch'ing Hsien Ju Fu" to refer to fermented tofu. Address: Biology Dep., Soochow Univ., China.

2290. Shih, Chi Yien. 1918. Beans and bean products: Chiang yu [Chinese-style soy sauce] (Document part). Shanghai, China: Soochow University Biology Dept. 13 p. See p. 7. [Eng]

• ***Summary:*** (Cc) = Chinese characters inserted in text; pinyin romanization has been added. "Chiang Yu (Cc = jiangyou = soy sauce) may be obtained from Tou Chiang or Tou Pan (Cc = douban). Tou Pan is the molded bean which is mixed with salt and water. The proportion of the materials is the same as in the Tou Chiang. After it is placed in the sunshine about 2 weeks, then the Chiang Yu can be obtained.

"A small basket, the outside of which is wrapped with coarse linen cloth is used to press down into the Tou Chiang or Chiang Pan. A stone or an iron ball, about 3 catties in weight, is used to put into the basket to force it down into the material which is contained in the jar. Then the juice seeps through the linen cloth into the basket. Next a big spoon is used to collect the Chiang Yu out of the basket and it is poured into small earthenware jars. A piece of cloth and the big leaves of bamboo are laid across the mouth of the jar and they are bound together around the neck of the jar with a cord and then the jar is placed in sunshine about 2 weeks. After this a straw cover is added on the top of the jar and it is thus kept for the future use. This method is the one largely used to prepare it for sale. Usually if it is prepared in the home it will be boiled four hours after it is collected from the basket. After boiling it is poured into small jars, kept open until it is cold and then sealed as above.

"Chiang Yu is sometimes used to boil with meats or cabbages in the same way as Tou Chiang; but it is more generally used to eat as sauce with these things after they are already cooked." Address: Biology Dep., Soochow Univ., China.

2291. *Virginia Department of Agriculture and Immigration, Bulletin.* 1918. Soy bean useful crop. May be utilized in greater number of ways than almost any other agricultural product. No. 126. p. 174-76.

• ***Summary:*** "In addition to its availability as a food, soy-bean oil has found important uses in the markets of the world for making paints, varnishes, soaps, rubber substitutes, linoleum, waterproof goods, and lubricants. It is also used in the Orient for lighting and in the manufacture of printing ink. In Japan the soy bean forms one of the most important articles of food in use. It is one of the principle ingredients in the manufacture shoyu (soy sauce), miso (bean cheese), tofu (bean curd), and natto (steamed beans). The beans are eaten also as a vegetable and in soups; sometimes they are picked green, boiled, and served cold with soy sauce, and sometimes as a salad. A 'vegetable milk' is also produced from the soy bean, forming the basis for the manufacture of the different kinds of vegetable cheese. This milk is used fresh, and a form of condensed milk is manufactured from it. All of these foodstuffs are used daily in Japanese homes, and for the poorer classes are the principle source of protein."

"An artificial milk like that manufactured in the Orient has been produced in small quantities in the United States, and recently a factory has been equipped to make this product." Photos show: (1) Soy beans as a forage crop, arranged in stacks. (2) Lime spreader at work. Address: Virginia.

2292. Daizu Seisan Gaisha (Soybean Food Products Co.). 1919. Save food. Dealers in soybeans and soybean products (Ad). In: Nichibei Shinbun-sha. 1919. *Japanese-American Directory (Nichibei Jushoroku).* Page 40 near front. [Jap;

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• ***Summary:*** Ad (full-page). The top half of this ad is in English, with large, bold letters. The company, which has a factory in Petaluma, lists the following products in Japanese characters (*kanji*): *Daizu shushi* [Soybean seeds]. *Shoyu-yo daizu* [Soybeans for use in making shoyu / soy sauce]. *Jozo-yo daizu* [Soybeans for use in making fermented products: miso and perhaps natto seem to be implied]. *Tofu-yo daizu* [Soybeans for use in making tofu]. *Tofu-ko* [Tofu powder]. Note: It is not clear what "*Tofu-ko*" is / means. *Seisei nigari* [Refined nigari (probably magnesium chloride)]. *Mamekasu* [Soybean presscake, probably left over from making soybean oil].

The following product names are written in Japanese katakana characters: Soybean oil, soybean flour, soybean table sauce, soybean butter, soybean cheese, soybean candy, soybean feed.

In the center of the ad is the company's smaller logo, with all the text in English: Sun Brand Soy. Registered U.S. Patent Office. Above the huge "Save Food" logo near the top of the is an American flag in a circle surrounded by ears of wheat. Just above that, across the very top of the ad we read: "With patronization of U.S. Food Administration."

Note 1. Letter (e-mail) from John Benanti, Researcher, Petaluma Museum research library collection. 2009. April 16. "The 1917 Petaluma City Directory does not mention the Soybean Production Co. The next city directory we have is 1939 and it is not mentioned there either.

"However, we have a number of Sonoma County Telephone Directories where the company is mentioned. A listing for "Soy Bean Company, Wilson" is first found in the April, 1923 directory. The same listing then appears in the April, 1924, May, 1926, May, 1927, November, 1927, and May, 1928 directories. There is no listing in any directory after that date.

"I also looked in three Sonoma County histories, 1911, 1926, and 1937. There is no mention of the company or soybean production in any of them.

"The 1919 Sanborn fire insurance map for Petaluma (p. 22) shows the Soy Bean Co. mill at a time it was located on Weller St., a few blocks from Wilson. I have gone over the 1923 Sanborn map and do not find the mill anywhere on it. I can not explain why it is not there when the directory says it was on Wilson Street in 1923."

Note 2: This company, which existed from at least 1919 to 1928, is the earliest known company with a name and address that cultivated soybeans in California. Its only other entry in the Japanese American Directory is 1925, p. N-142.

Note 3. No address in San Francisco is given in the ad.

Note 4. World War I ended not long ago. Address: San Francisco, California.

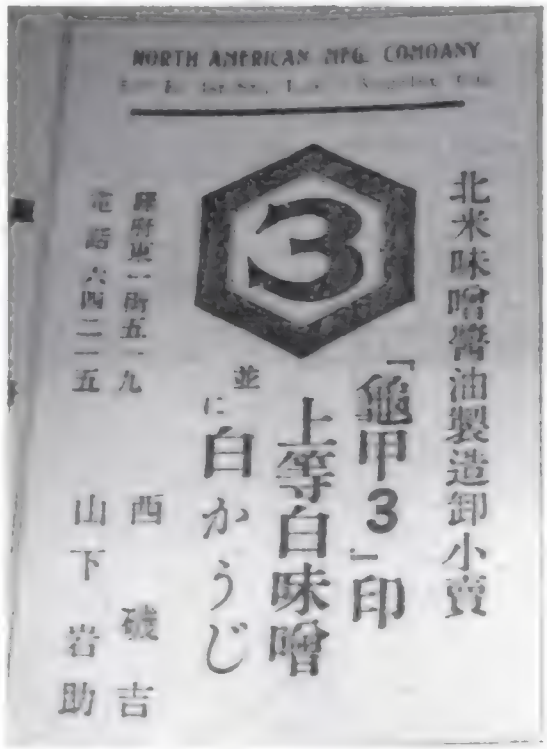
2293. **Product Name:** Kikko San-jirushi Sweet White Miso, Shoyu, and White Koji.

Manufacturer's Name: Hokubei Miso, Shoyu Seizo Oroshi Kouri (North American Mfg. Co.).

Manufacturer's Address: 519 East 1st St., Los Angeles, California. Phone: 64215.

Date of Introduction: 1919. January.

New Product–Documentation: The Japanese American Directory. 1919. p. 368. Ad (¼ page). At the top of the ad in English: "North American Mfg. Company, 519 E. 1st St., Los Angeles, Cal." Most of the ad is in Japanese. The three words at the end of the company's Japanese name mean "Manufacturing, Wholesale, and Retail." The large, central logo, a hexagon with three horizontal lines inside, is probably pronounced "Kikko San-jirushi." The company makes high-class sweet white miso (*joto shiro miso*) and white koji (*shiro koji*) [as well as shoyu]. The owners are NISHI Isokichi and YAMASHITA Iwasuke.



The Japanese American Directory. 1920. p. 277. Ad (¼ page). This is as basically the same as the one which appeared in 1919, except it looks very different because the large logo has changed. The outside is still a hexagon (although smaller and bolder) but inside it is the number "3" but having an unusual form that makes it look like a cross between the usual Arabic numeral "3" and a Tibetan character. Apparently the previous logo either belonged to another company or looked too Japanese.

The Japanese American Directory. 1920. p. 296. Hokubei Miso, Shoyu Seizô-sho, 519 East 1st St., Los Angeles. Phone: 64215. Also in 1921, p. 288 (ad) and p. 314 (directory). The directory gives the company name as

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Hokubei Miso Seizô-sho. Also in 1922, p. 315 (directory) and ad (¼-page, p. 321). At the top of the ad is written in English: "N.A. Miso Mfg. Co., 519 E. First St., Los Angeles, California." In Japanese, the company's name has changed to Hokubei Miso, Koji Seizô Moto Oroshiuri [Manufacturing and wholesale]. The word "Shoyu" no longer appears in the company name or in the ad, as it did in 1919-21. Also in 1923, p. 347 (ad; In Japanese, the company's name has changed to Hokubei Miso, Koji Seizô, Tsukemono Seizô Oroshiuri. Tsukemono are Japanese-style pickles) and p. 355 (directory: Hokubei Miso Seizô-sho). Also in 1924, p. 371 (¼-page ad) and p. 394 (directory). Also in 1925, p. S-17 (½-page horizontal ad. New name in English: "North American Miso M'f'g. Co." New phone number: TUcker 4215) and p. S-44 (directory). Also in 1926, p. S-15 (Full-page ad. Name in English is now "North American Miso Mfg. Co." An illustration shows a large box of dried koji (*hoshi koji*) near top center of ad) and p. S-33 (directory; Hokubei Miso Seizô-sho).

The Japanese American Directory. 1930. p. S-53. The company (Hokubei Miso Seizô-sho) now makes only miso. Phone: TUcker 4215. Also in 1932, p. 346 (directory; this old company has a new name: Kikko San Miso Seizô-sho. The address, although unchanged, is now written in English: "519 E. First St." New phone: VAndike 5702). Also in 1934, p. 305 (directory; same company name, address and phone number).

2294. **Product Name:** Marufuku Shoyu [Soy Sauce].
Manufacturer's Name: Sacramento Shoyu Jozo Gaisha (Sacramento Sauce Brewing Co.).
Manufacturer's Address: 2116-20 Fourth St., Sacramento, California. Phone: Main 2867J.
Date of Introduction: 1919, January.



New Product–Documentation: The Japanese American Directory. 1919. p. 377. Ad (½ page). At the top is written in English: "Sacramento Sauce Brewing Co., 2116-20 4th St., Sacramento, Cal." But most of the ad is in Japanese, with a huge, bold, circular Marufuku logo in the center. Saijo Marufuku shoyu (Highest- quality Marufuku shoyu). Name of company with diacritics is: Sacramento Shoyu Jôzô Gaisha.

The Japanese American Directory. 1920. p. 154. Company name: Sacramento [in Chinese characters–*kanji*] Shoyu Seizô-sho [Sacramento Soy Sauce Manufacturing Co.]. Address is now: 2116 Fourth St., Sacramento.

2295. Eddington, Jane. 1919. The Tribune Cook Book: Soy beans as human food. *Chicago Daily Tribune*. Jan. 12. p. B4.
• ***Summary:*** Miss Eddington first got interested in the use of "soy bean flour" in the human diet about 5 years ago when she "first received samples of this flour for a medical manufactory." During these five years "soy bean flour has come into wide use in hospitals and homes. From being used in the United states to renew worn out soil and then for hog feed, the soy bean has come to be used largely as a food for those who have worn out kidneys, the diabetics."

"Soy bean cookery, especially the whole bean cookery, must be good, of the variety [of] vegetable meat contained in it is ruined, becoming as indigestible as white of egg cooked to a crisp." The key is to cook the whole bean at a low temperature for a long time. "Baked soy beans must be cooked at least eight hours."

"In Washington [DC], the government experts used 30 per cent soy bean flour with 70 per cent of wheat flour and called their product 'a high powered bread.'" She then gives four wartime recipes for "Soy bean muffins." Some call for "soy bean meal." Note: This "meal" is probably soy bean flour.

"Used as a meat substitute:... The tofu, a sort of cheese which is fried in deep fat and used as a meat substitute, was exploited by the United States department of agriculture last year, along with other of the soy bean products..." She then cites (incorrectly): Morse, W.J. 1918. "The soy-bean industry in the United States." *Yearbook of the U.S. Department of Agriculture* p. 101-11. For the year 1917. Then, from the section titled "Soy beans for human food," she includes the recipes for "Soy-bean milk" and "Soy-bean cheese," and the description of soy sauce. "Soy or shoyu sauce Is a dark brown liquid prepared from a mixture of cooked and ground soy beans, roasted and pulverized wheat or barley, salt, and water..."

2296. Takahashi, Teizô. 1919. Re: Sample of shoyu sent by his brother to Margaret Church. Letter to Margaret B. Church, Bureau of Chemistry, USDA, Washington, DC, Jan. 18. 2 p. Typed, with signature. [Eng]
• ***Summary:*** "Yours to hand and very much pleased to know that you received 'shoyu' from my brother [of Pacific Trading Co., in San Francisco, California]. I hope that you

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will order the same to my brother at any time. An interesting news is that you have an organic chemist working on the chemistry of 'shoyu.'

"If press cake of peanut may be utilized for 'shoyu' manufacture, it is a great progress in this business. A further culture material from Dr. Thom's mycological collection is deeply appreciated. Respectfully yours...."

On the back of the letter are 3 illustrations (his sketches) of small wooden implements, apparently related to making shoyu. One appears to be a stirrer. Address: Agricultural College, Tokyo Imperial Univ., Tokyo, Japan.

2297. Lea and Perrins. 1919. Simple fare (Ad). *Times (London)*. Jan. 20. p. 4, cols. 6-7.

• ***Summary:*** "... does not seem insipid if you use Lea & Perrins' Sauce. A few drops of this famous sauce makes the plainest dish appetizing and enjoyable. Lea & Perrins' Sauce. The original and genuine Worcestershire." At the left of this display ad is a royal seal, and below it the words "By Appointment to H.M. The King." Address: [England].

2298. U.S. Department of Commerce, Far Eastern Div. 1919. Oil and oilseeds of the Orient. *Commerce Reports [USA] (Daily Consular and Trade Reports, Bureau of Foreign and Domestic Commerce, Department of Commerce)* 22(33):611-16. Feb. 8.

• ***Summary:*** Contents: Introduction. Method of cultivation [and harvesting] in China. Bean curd a Chinese delicacy. Domestic methods of marketing oil in China. Japanese production of vegetable oils [and exports to the United States]. China's production of oil steadily growing.

Tables show: (1) Total quantity and value of Chinese vegetable-oil exports, and the value of exports to the United States, including transshipments [from Manchuria], in 1917. Of total oil exports, coconut oil is by far the leader in quantity and value, followed by soya bean oil. But of oil exports to the USA, soya bean oil is by far the leader. Dairen exported 90% of the soya bean oil in 1917.

(2) Exports of vegetable oil from China in 1915, 1916, and 1917 (the quantities are expressed in piculs of 133.33 pounds and the values in Haikwan taels worth $0.62 in 1915, $0.79 in 1916, and $1.3 in 1917). Soya bean oil was by far the largest oil export in both quantity and value all three years. The quantity increased from 1.017 million in 1915 to 1.566 million in 1916 to 1.891 million in 1917.

(3) Exports of oil-bearing seeds and beans from China in 1915, 1916, and 1917. Soya beans were by far the largest bean or seed export in both quantity and value all three years. The quantity was 10.235 million in 1915, then 6.732 million in 1916, rising to 7.927 million in 1917.

"No single vegetable product has developed such importance in the Far East as the soya bean... As a food it is the principal ingredient of soy sauce, bean curd, and steamed beans. The bean cake, containing a high percentage of nitrogen, is a valuable fertilizer and is used extensively in Japan, and recently bean oil temporarily replaced petroleum for lighting in China when lack of shipping facilities kept that product off the market. The center of soya-bean production is Manchuria, and Japan is the chief crusher and producer of oil and cake, though the manufacture of bean oil and cake is also a very important industry of Dairen, Kwantung Leased Territory. Mukden is the center of the bean trade and the beans are there bought for cash from the farmers."

"Bean curd a Chinese delicacy: Bean curd is made mostly from the two kinds of oil beans described [Eighth Month White Bean and Water White Bean], although all varieties may be used in its preparation. As a rule, however, the other varieties of beans are not planted for oil or curd, but are eaten steamed when the bean is young and tender.

"Bean curd is prepared by first steeping the beans in cold water for 6 or 7 hours in summer or 24 hours in winter, and, after washing, grinding with cold water to form a bean milk. This milk is cooked in a large kettle and the film removed from the surface after a quarter of an hour and dried. This film or skin is known as Tou Fu Yi [doufu pi, usually called "bean curd skin" in English; yuba in Japanese] and 20 or 30 films can be obtained from a kettle without thinning the milk too much. After boiling half an hour the remaining milk is poured into a jar and a gypsum or salt solution added to curdle it. The proportion is 6 ounces of salt to 1 picul (133.33 pounds) of beans.

Note: Yuba is made as an early step in the tofu-making process. Viewed in this way, the word "bean curd skin" makes more sense.

"After standing 15 minutes a curdled substance called Tou Fun No [bean curd brain] is the result. This product is molded in wooden frames by a heavy block of wood for 15 minutes and is then cut into small pieces with a dull brass knife. A piece 2 inches square and half an inch thick retails for 5 cash (0.5 cent). This curd forms the basis for numerous Chinese articles of food and is prepared in various ways. Perhaps the most usual form of serving is to press the curd, wrapped in cloth, for six hours in a box 1 foot square and 8 inches high and then cook in oil. It is also boiled, after such preparation, with pork or cabbage."

"Japanese production of vegetable oils: The present estimated production of Japanese oil mills is 90,600 long tons of vegetable oils annually and is made up as follows: Soya-bean oil, 37,509 tons; coconut oil, 27,542 tons; rapeseed oil, 17,848 tons; cottonseed oil, 6,433 tons; and peanut oil, 1,268 tons. Seventy-five per cent of this crush is made in the Kobe district and is handled by 25 oil mills, modernly equipped." In 1917 Japan exported (including transshipments) 34,916,260 lb of coconut oil, 22,643,623 lb of soya bean oil, and 19,677,825 of rapeseed oil. He concludes that "American importers of Far Eastern products may well investigate the domestic market for Far Eastern

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oilseeds with a view to supplying oil mills in the U.S. with raw material." A table shows import and export data. Address: Asia.

2299. Eddington, Jane. 1919. Tribune Cook Book: The neck of the pig. *Chicago Daily Tribune*. Feb. 19. p. 18.
• ***Summary:*** "To this fried pork add the vegetables in their liquid and cook the two together for five minutes, then add a tablespoon of soy sauce. If this sauce is not somewhat sweet add about a tablespoon of molasses to your mixture."

2300. Lea and Perrins. 1919. Vegetable dishes (Ad). *Times (London)*. March 17. p. 6, cols. 6-7.
• ***Summary:*** "... need never be unpalatable. A little Lea & Perrins' Sauce makes a world of difference in the flavour– try it! Lea & Perrins' Sauce. The original and genuine Worcestershire." At the left of this display ad is a royal seal, and below it the words "By Appointment to H.M. The King." Address: [England].

2301. Kita, Genitsu. 1919. Re: Okazaki fungus not suited for soy sauce production. Letter to Miss Margaret B. Church at Bureau of Chemistry, Washington, DC, March 20. 1 p. Handwritten. [2 ref. Eng]
• ***Summary:*** "'Okazaki fungus' is described under the name of *Asp.* [*Aspergillus*] *Okazaki* in the *Zentralblatt für Bakteriologie* [Series] II, Vol. 19, p. 481-85 (1907) & I have once studied it (Ibid, Vol. 37, p. 441, 1913). But now I have no culture and it is not sold as usual 'Tanekōji.' I think you can get [it] from Dr. K. Saito.

"I can however inform you that I have never heard of it applied in soy sauce making. According to my experience it is impossible to use for that purpose. Besides others it is difficult to get sound koji at first. Respectfully..." Address: 113 Gainsboro St., Boston, Massachusetts.

2302. Holland, J.H. 1919. Food and fodder plants. *Kew Bulletin of Miscellaneous Information* Nos. 1&2. p. 1-84. April 16. See p. 11-12. [5 ref]
• ***Summary:*** Great Britain imported large quantities of soy oil before World War I to make up for the shortage of cottonseed oil needed to manufacture soaps: 875,526 hundredweight from Manchuria, 816,032 hundredweight from China, and 43,209 hundredweight from Manchuria. Note: A hundredweight is 112 pounds weight.

"Considerable interest has been taken in the cultivation in England, but results of experiments made at Cambridge, Midland Agricultural College, South Eastern Agric. College, Wye, &c., go to show that no variety so far has been found that can be relied on to produce seed here.

"In Japan and China they [soy beans] are largely known in the preparation of the sauce known commercially as 'Soy,' and they make there a preparation used as a substitute for milk, and from this a food product call 'Tofu,' which in turn forms the basis of the bean cheeses of Japan. The meal [flour] in this country is used in the manufacture of biscuits and in making a bread for special use in diabetes; but the principal use here is for the extraction of the oil of which the beans contain about 18 per cent., suitable for soap-making and in general as a substitute for cotton seed oil, the residue being a valuable cattle feed.

Also discusses the adzuki bean (*Phaseolus angularis*, Wight). "This bean appears to have been coming into the market recently in quantity. Trade samples have been submitted to Kew for name as 'Dainagon Azuki Beans.'" They are important human food in Japan, Korea, China, and Manchuria, cultivated for the purpose.

2303. Rose, Edmond. 1919. Le nuoc-mam, condiment national indochinois [Nuoc-mam, the national condiment of Indochina]. *Annales de l'Institut Pasteur (Paris)* 33:275-81. April. [1 ref. Fre]
• ***Summary:*** Contents: Introduction. Preparation. Chemical composition. Differentiating between real and false nuoc-mam. Definition of nuoc-mam.

Pure nuoc-mam (Annamite for "water of salted fish") is a "fish peptone" resulting from the auto-digestion or autolysis of the meat of certain fish. Nuoc-mam results from the maceration of fish in a concentrated solution of sea salt. It is essentially a NaCl solution of albuminous matter at a certain degree of disintegration, which should remain distinctly stationary for a certain time, at least 1 year, allowing it to be conserved. Its total content of nitrogen (amino acids) is a measure of its quality. Generally commercial samples contain 15-25 gm total nitrogen and 10-20 gm organic nitrogen per liter. Top quality nuoc-mam should contain at least 200 gm of sodium chloride per liter. But the lower quality products, which have less than 15 gm total nitrogen per liter, should contain not less than 240 gm sodium chloride per liter. Soy is not mentioned. Address: Doctor of Sciences (*Docteur ès-sciences*), Chef de laboratoire à l'Instut Pasteur, Directeur du Laboratoire officiel pour la répression des fraudes en Cochinchine, Saigon.

2304. *Times of India (The) (Bombay)*. 1919. Import manifests [at Bombay harbour]. May 24. p. 10.
• ***Summary:*** "S.S. Tokyo Maru, from Kobe [Japan]. Agents N.Y. Kaisha.–250 cases safety match.... 10 cases Japanese miso; 23 cases Japanese soy; 71 cases window glass plain;..."

Note 1. These imports of Japanese seasonings are probably for one or more Japanese communities or stores in Bombay or western British India.

Note 2. World War II recently ended in Europe; Japan and India are at peace.

2305. *Los Angeles Times*. 1919. Questions answered. June 4. p. II2.

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• ***Summary:*** "What is the origin of the word 'catchup?' B.T.U.

"A: This word which is spelled 'catsup,' 'catchup,' 'ketchup,' is a corruption of the Chinese word 'kitjap,' the name given to an inferior kind of soy [sauce] made in China."

2306. Nakajima, Iwao. 1919. Shina shôyu no futsû seibun ni tsuite [Typical components of shina shoyu]. *Minami Manshu Tetsudo K.K., Chuo Shikenjo Hokoku* (*South Manchuria Railway Co., Central Experiment Station, Report*) 5:179-86. June. [Jap]

2307. *Times of India* (*The*) (*Bombay*). 1919. Import manifests [at Bombay harbour]. July 3. p. 10.
• ***Summary:*** "S.S. Kifunezan Maru No. 2, from Japan ports. Agents: N.Y. Kaisha.–5 cases cotton hosiery goods,... 5 packages Japanese wine, 5 cases Japanese soy [sauce], 9 cases lead pencils,..."

2308. Oka, Takeo. 1919. Nippon in New York. *New York Times*. July 6. p. 34.
• ***Summary:*** An estimated 5,000 to 7,000 Japanese now live in New York City, including about 300 Japanese women. "Dr. Jokichi Takamine of the Takamine Industrial Company has broken into the company of 'Who's Who.'"

"The metropolis boasts no less than a dozen Japanese restaurants. Your casual visit will introduce you to fresh sliced fish taken raw [sashimi], seasoned bamboo shoots, and lotus root and pickled radish served on the same table with 'sukiyaki,' palatable at least to the Japanese. 'Sukiyaki,' a compound word still unauthorized in any standard English dictionary, is the Japanese 'quick lunch,' eaten while being cooked on a small charcoal table stove.

"Beef, onions, cabbage, beancurd [tofu], and other vegetable additions, not forgetting Japanese soy [sauce], sugar, and a little sake, are ready to be prepared in a shallow pan à la japonaise on the fire. The rest devolves upon you and your company, ladies not honorably excluded! A great time saving it is for the proprietor, this having his guests prepare their own meals!"

Note: This is the earliest document seen (Aug. 2010) stating correctly that the basic ingredients in sukiyaki include tofu and soy sauce.

2309. *Times of India* (*The*) (*Bombay*). 1919. Import manifests [at Bombay harbour]. July 24. p. 14.
• ***Summary:*** "S.S. Kosoku Maru, from Yokohama [Japan]. Agents N.Y. Kaisha.–312 cases silk goods,... 22 cases Japanese provision, 15 cks [casks] Japanese miso, 15 cks Japanese soy [sauce], 9 cases nails,..."

2310. Fairchild, David. 1919. A hunter of plants. *National Geographic Magazine* 36(1):57-77. July.

• ***Summary:*** The story of the life and work of Frank N. Meyer, USDA agricultural explorer, including descriptions of his four expeditions. He drowned on 2 June 1918 in the muddy waters of the Yangtze River. "His first expedition in the years 1905-1908 was into North China, Manchuria, and northern Korea; his second, in 1909-1911, through the Caucasus, Russian Turkestan, Chinese Turkestan, and Siberia; his third, in 1912-15, through northwestern China into the Kansu Province to the borders of Tibet, and his last expedition in search of plants began in 1916..."

Photos show: (1) A "courtyard filled with jars in which a mixture of soy-beans, wheat, and salt is fermenting to make soy sauce. The mixture is protected from the sun and rain by cleverly woven hoods of split bamboo. Mr. Meyer made a careful study of this great soy-bean sauce industry and introduced a large number of varieties of the bean" (p. 66). (2) Frank N. Meyer with a branch of jujube in his hand. He first saw orchards of this new fruit in China in 1906 (p. 76). Address: Agricultural Explorer, in Charge of Office of Foreign Seed and Plant Introduction, USDA.

2311. Palen, L.S. 1919. The romance of the soya bean. *Asia and the Americas* 19(1):68-74. July. Illust.
• ***Summary:*** The author, who begins by acknowledging his indebtedness to Dr. Yamei Kin, Dr. John Harvey Kellogg, and Mr. W.J. Morse for much of the material in this article, gives an overview of the soya bean worldwide. The article contains excellent photos (many by Adachi): (1) Stacks of soya bean cake in open storage on Dairen wharves, South Manchuria. (2) Horses plowing soybean fields in North Manchuria. (3) Modern machinery [a huge steam-powered tractor] used in bean cultivation in remote parts of Manchuria where foreign interests are involved. A Western man and woman ride horses nearby. Caption: "To the Manchurian farmer, with his laborious methods of hand cutting and hand winnowing, the introduction of modern Western farming methods would spell many-fold prosperity." Note: This is the earliest document seen (Feb. 2003) that shows a photo of a tractor in connection with soybeans. (4) Stacks of soybeans piled high in sacks in Manchuria as far as the eye can see. (5) Soybeans stored in huge cylindrical, 20-foot-high osier bins, each covered with a conical top.

Soy oil is purified and flavored with an admixture of olive oil for use as a salad oil. It also forms the basis of some of our butter and lard substitutes. "What Mr. Li Yu-ying accomplished in Paris in the establishment of a Laboratory of Research and of a factory for the production of all the products derived from the soya has been the forerunner of activity on the part of certain independent Chinese companies in America and of government and private investigations."

"In general the use of whole soya beans has not been attended with much success because of the ever present flavor of the oil content and because, with the ordinary

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method of cooking, they remain hard and unpalatable; but it has been found that cooking at a temperature somewhat above the boiling point, say from 220 to 230 degrees, breaks up the cellulose structure and develops a richness of flavor that is not obtainable with the lower temperature."

"By far the most extensive use of the soya is in the products manufactured from it. And it is here that Dr. Yamei Kin, the talented Chinese physician, is making her chief studies under the direction of the Pure Foods Division of the Department of Agriculture, with the purpose of spreading a knowledge of the soya among Americans. For convenience of consideration the products studied may be divided into sauces, curds, cheeses and milk.

"Of the sauces the liquid form is already familiar, although unrecognized, perhaps, by a large percentage of Occidentals through the work of early English traders in bringing back the base of the now famous Lea and Perrins Worcestershire Sauce. This original Chinese *shi-yu* was highly spiced and became a well recognized adjunct to many an English meal. Following the example of Lea and Perrins, others have put out sauces with the same base without, however, attaining the same success, because the makers did not understand that there are many kinds of soya sauce. While they are all made by the same ferments and in the same general way, they differ very greatly in quality according to the locality and to the manufacturer, just as wine, though made from the identical kind of grape and by the same process of fermentation, may be a very different article from different hands. It takes several months to make this liquid form of sauce, while the best kind requires a year or more to attain the finest flavor and mellowness. The hot condiment added by Lea and Perrins is not favored by the Chinese, since according to their taste it detracts from a wide use of the soya sauce."

Tofu (spelled to-fu) is discussed in detail. "There are records to show that it has been used since at least nine hundred years B.C. *To-fu* making is a staple industry in every little community. Usually it is done at night so that the fresh curd will be ready for the morning demand in the market, or for peddling around the streets. It provides, for the fraction of a cent, the indispensable equivalent of meat and affords very often the explanation of how the Chinese laborer does so much work on what is purely vegetable diet, popularly supposed not to contain much protein. *To-fu* is made in many different forms and the bean stalls occupy quite as large and prominent places in the city market as the fish and meat stalls...

"Cheeses are also made from the growth of cheese-making moulds on *tofu*. The Chinese resident in America regularly import a certain highly flavored red bean cheese for their own use...

"Perhaps the greatest contribution of the soya to the life of the Occident will be in its form of milk. Back in the golden era of peace there had been established in London a soya bean milk factory which was prepared to place its product regularly on the market, and there were said to be plans consummated for the erection of two others at Manchester and Liverpool; but of what the development has been we have no definite information. In Shanghai, Peking and Dalny Chinese companies are supplying hospitals and individuals with an 8 or 10 ounce bottle of concentrated milk per day at a cost of $1.00 Mex per month.

"In its competition with the cow the legume has in its favor the following facts: Soya milk can be produced with less contamination; it is tuberculosis-free; its caseins break down much more readily than the caseins of cows' milk and do not form curds in the stomach in the same degree...

"By those who advocate and urge a vegetarian diet, a very strong bill can be drawn in favor of this oriental substitute. In these days when war has thrown new light on many of our life problems, it will be easier to secure acceptance for their contention that the world must for both economic and physiological reasons adopt the biological diet. It has been calculated that, roughly speaking, it takes 100 pounds of foodstuffs to produce 3 pounds of beef and that a given acreage of land can support five times the population if the necessary protein can be derived directly from vegetable sources rather than going through the roundabout way of an animal form, imposing upon the body the burdens incident to taking in the toxines [toxins] resultant from the catabolism of the cells of the animal, and from possible putrefaction. In China the Buddhist priests and people who enter the various temperance societies all depend on varieties of *to-fu*."

2312. Takahashi, A. 1919. Re: Response to request for sample of miso. Letter to Miss Margaret B. Church at Bureau of Chemistry, Washington, DC, Aug. 12. 1 p. Typed, with signature on letterhead. [Eng]

• ***Summary:*** In her letter of May 27, Miss Church asked him to please send a sample of miso. She received his sample of shoyu. "There are two or three kinds of Miso manufactured in Japan, but we usually import only one kind–*shiro miso*. *Shiro* means 'white' in English. I am sending sample bottle under separate cover, and this is the best quality of shiro miso manufactured in Japan: this is a fresh sample, only having been made four or five months, as it is a commodity that is easily manufactured."

He is also trying to find her a sample of *aka miso* or Red Miso, "which requires a considerable time to manufacture."

Note: The writer is the younger brother of Teizo Takahashi, who is a lecturer at the "Imperial University of Tokyo." Address: Pacific Trading Co., 331-343 Battery St., San Francisco, California. Phone: Sutter 270.

2313. Eddington, Jane. 1919. Tribune Cook Book: Vegetarian chop suey. *Chicago Daily Tribune*. Aug. 15. p. 20.

• ***Summary:*** "When served over a nice mound of boiled

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rice a vegetarian chop suey... makes a satisfactory one piece meal, served with soy sauce or without it." A recipe is given.

2314. *Christian Science Monitor.* 1919. Japanese children. Aug. 28. p. 14.
• ***Summary:*** "The Japanese also have... wafers [rice crackers] which are made of rice paste, dipped into 'shoyu' and dried in the sun. 'Shoyu' is a sauce with a salty taste, which is the Japanese equivalent of Worcester sauce."

Also discusses a sweet called "ame," which is made from malt, and "'yokan' consisting of mashed [azuki] beans and sugar, which is made in the mountain districts of Japan. It is much nicer than it sounds and looks so attractive packed in its long, narrow, white, wooden boxes and wrapped in a single big bamboo leaf."

2315. Arnold, Julean. 1919. Commercial handbook of China. 2 vols. Washington, DC: Government Printing Office. 629 p. + 472 p. Dep. of Commerce, Bureau of Foreign and Domestic Commerce. Miscellaneous Series No. 84.
• ***Summary:*** In Vol. 1: The "Letter of submittal" from the Department of Commerce, Bureau of Foreign and Domestic Commerce, states that the Bureau "realizes keenly the desirability of an immediate, vigorous, and systematic effort to promote American trade with this great friendly nation in the east of Asia. Such an effort... must be based on the most recent and dependable economic information. To supply that information is the purpose of this handbook.

"This handbook, the most detailed publication of its kind ever issued by the Department of Commerce, will appear in two volumes." The basic organization will be by each of the 17 American consular districts.

Digital searches for "soy" or "soya" or "beans" or "bean curd" or "bean sprouts" or "bean cake" or "bean oil" will result in many hits and a vast amount of information. For example:

Pages 42, 45: A table titled "Commercial statistics for China as a whole," under "Exports, sundries" includes:

"Bean cake" (pounds). For 1913. Quantity: 1,575,792,400 pounds. Value: $18,197,871.

"Bean cake" (pounds). For 1918. Quantity: 2,182,241,744 pounds. Value: $35,650,215.

"Bean curd" (pounds). For 1913. Quantity: 4,846,543 pounds. Value: $144,849.

"Bean curd" (pounds). For 1918. Quantity: 3,765,591 pounds. Value: $265,141.

"Beans" (black, green white, yellow, other kinds) (pounds). For 1913. Quantity: 1,376,795,200 pounds. Value: $16,983,422.

"Beans" (black, green white, yellow, other kinds) (pounds). For 1918. Quantity: Yellow (#1): 849,479,313 pounds. Value: $17,106,454. Values are also given for Other kinds (#2), White (#3), Green (#4), and Black (#5): 13,481,033 pounds. Value: $295,796.

"Oil, Bean" (pounds). For 1913. Quantity: 65,575,600 pounds. Value: $2,720,637.

"Oil, Bean" (pounds). For 1918. Quantity: 393,621,508 pounds. Value: $29,802,630.

"Soy" (pounds). For 1918. Quantity: 820,531 pounds. Value: $45,871.

Page 115: "Canton Consular District." "Other native industries of Canton that give employment to large numbers of people in the aggregate are:... The making of a Chinese sauce called 'soy,' which is made from a certain bean which as been boiled slowly and to which wheat or barley flour is added (soy is exported for the use of Chinese living abroad and also for the making of certain foreign sauces and condiments);" [such as Worcestershire sauce?].

Page 200: "Export trade:... The leading products shippd from Hongkong to all parts of the world are:... beans....soy, tapioca flour, tea..." Pages 202-03: Trade between Hongkong and the United States during 1918. Hongkong Consular District. Value in 1913: Soy. Shipped to the United States: $51,595. Shipped to the Philippine Islands: $1,430. Shipped to Hawaiian Islands: $1,140.

Page 365-66: "Amoy Consular District." Manufacturing and other industries. The Amoy Tinning Co. (Ltd.) and The China Canning Co. (Ltd.): The output of these two factories includes "soy and soy sauce."

Page 397. Antung Consular District. Exports include soy.

Page 478: "Shantung Province is the original home of the soya bean and the bean-crushing industry in this part of the world, and until the possibilities of Manchuria were discovered and developed this Province led the industry." "Manufacture of vermicelli: The principal crude native industry is the manufacture of Chinese vermicelli from a small green bean known as the 'lu tou' [mung bean]. This vermicelli is manufactured not only in large factories but also by individual farmers and in the homes of the natives in all parts of the Province."

Page 517-18: Dairen Consular District, Agriculture. The principal crops and their yeild per acre: soya bean, 4.5 bushels. "The principal fertilizers are manures and bean cake (the residue after the oil has been pressed from soya beans)." "Soya beans, and the bean oil and bean cakes manufactured thereform are the principal agricultural products exported from this district." Address: Commercial Attaché, Peking, and various American Consular Officers, China.

2316. Arnold, Julean. 1919. Commercial handbook of China. 2 vols. (Continued–Document Part II). Washington, DC: Government Printing Office. 629 p. + 470 p. Dep. of Commerce, Bureau of Foreign and Domestic Commerce, Miscellaneous Series No. 84.
• ***Summary:*** Continued: Volume 2 of an outstanding, comprehensive book. The basic structure and content of Vol. 2 is completely different from that of Vol. 1. In Vol. 2: The

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"Letter of submittal" from the Department of Commerce, Bureau of Foreign and Domestic Commerce (p. 13-14) is date Aug. 15, 1919.

Contents: Outline of Chinese system of government (p. 24+). Commercial treaty between China and United States (p. 34+). Judicial procedure in China (p. 42+). American courts in China (p. 46+). The American consulate and its relation to the public (p. 55+). Trade-marks, patents and copyrights in China (p. 61+). United States Customs requirements (p. 65+). China's tariffs and internal taxes (p. 83+). Postal facilities in China (p. 106+). Railways in China (p. 115+). Chinese ports and shipping facilities (p. 130+). Currency, exchange, and banking (p. 158+). Chinese government finance (p. 201+). Concessions and titles in China (p. 222+). Chinese guilds and chambers of commerce (p. 245+). Position and function of the Chinese comprador (p. 254+). Chinese products of interest to Americans (p. 261+, includes [Soy] Beans [p. 282-83 with photos facing pages 282 and 283]). Animal industries in China (p. 306+). Progress of forestry in China (p. 316+). China's commercial and industrial progress and prospects (p. 319+). Miscellaneous economic activities. Cotton goods in China (p. 329+). Suggestions to American manufacturers and merchants (p. 356+). Pertinent points for Americans seeking trade with China (p. 367+). Essentials of business practice in China (p. 370+). Advertising American goods in China (p. 387+). Training Americans to know Asia (p. 396+). Teaching the Chinese language to foreigners (p. 402+). Present conditions of government education in China (p. 406+). Chinese students in the United States (p. 420+). American missionary work in China (p. 423+). Labor and living conditions in China (p. 432+). Methods of keeping well in China (p. 439). Land values in China (p. 443+). Words and expressions in common use in foreign communications in China (p. 444+). Notes on Chinese social customs and etiquette (p. 450+). Important days in Chinese calendar (p. 454+). Chinese weights and measures (p. 455+). Lists of officials, organizations and institutions (p. 457+). Useful literature on China [Bibliography] (p. 460). Shipping Board freight rates from United States to China (p. 467+, by commodity per 100 pounds).

Words and Expressions (p. 444+). "Bean cake.–The refuse after the oil has been expressed from the beans. It is pressed into huge cakes and used very extensively as a fertilizer."

"Bean curd.–A thick, white, cheesy substance made of beans, which may be called bean cheese. It is very nutritious and is eaten extensively throughout China."

"Chop-suey.–In Cantonese 'Tsap-suey,' literally miscellaneous pieces or odds and ends,..."

"Comprador.–The Chinese agent in a foreign firm, through whom the foreign firm transacts much of its business with Chinese and who often guarantees the credit of the firm's Chinese customers."

"Congee.–A thick rice or millet soup or gruel."

"Coolie.–An appellation for the unskilled laborer of China."

"Godown.–This word is always used in China in place of the word warehouse. It is a pidgin English word."

"Haikwan,–The Maritime Customs of China..."

"Hong–A mercantile house... or a merchandising establishment."

"Kang.–A Chinese word meaning a brick or clay bed with an opening beneath for a fire, used all over the north of China."

"Kin.–A catty, or 1 1/3 pounds avoirdupois."

"Kong or kang.–A large earthenware jar used for holding water, or Chinese pickles, etc."

"Li.–A Chinese mile, equivalent to about 3/10 of an English mile but varying in different parts of the country."

"Liang.–A Chinese ounce, known to foreigners as a tael, or 1 1/3 ounces avoirdupois."

"Mandarin.–A Chinese official."

"Mandarin dialect.–The official language of China, spoken by about three-fifths of the people of the country."

"Picul–A measurement of weight in China, equivalent to 133 1/3 pounds avoirdupois."

"Soy.–Bean sauce." Address: Commercial Attaché, Peking, and various American Consular Officers, China.

2317. *Times of India (The)* (*Bombay*). 1919. Import manifests [at Bombay harbour]. Sept. 2. p. 11.

• ***Summary:*** "S.S. Tenshin Maru, from Japan, Agents, N.Y. Kaisha.–727 bales cotton shirting,... 10 cases penholder, 40 cks [casks] Japanese soy [sauce], 20 cks Japanese miso, 5 cases watch glass,..."

2318. Groff, Elizabeth H. 1919. Soy-sauce manufacturing in Kwangtung, China. *Philippine J. of Science* 15(3):307-16. Sept. [1 ref]

• ***Summary:*** Contents: Introduction. The equipment of a soy sauce manufacturing plant: Grounds and buildings, boiling shed, jars, racks, trays, baskets, covers, raw materials, method of mixing, boiling of beans, mixing of beans and [wheat] flour, mold, method of sunning beans and flour, first drawing, second drawing, third drawing, fourth drawing, boiling method, mixing of soy, prices of raw materials, Sainam soy, making soy from rice, soy samples and prices gathered on the Canton market (8 grades are described). 8 plates with 13 photos.

"Soy sauce, known among the Chinese as *Ch'au yau* "drawing oil," or *pak yau*, "white oil," is without question the best liked and most widely used [of the many sauces in China]. Kwangtung Province [in southeast China; Guangdong in pinyin] is famous all over China for the soy sauce which it produces. Canton as its capital is the naturally the center of all this trade... Each neighborhood has its peddler who goes from door to door selling soy and other

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sauces. In Canton, jars of soy can always been seen in the making, as much of it is placed on the roofs to sun.

Note 1. This is the earliest English-language document seen (April 2012) with the term "soy-sauce" (regardless of hyphenation) in the title.

Note 2. This is the earliest English-language document seen (April 2012) that uses the term "Ch'au yau" or the term "pak yau" to refer to Cantonese soy sauce."

"Sainam, a city of about 30,000 inhabitants, 50 miles southwest of Canton on the Samshui ("Three Waters") Railway, is famous for the excellent quality of soy that it produces. The first-class shops in Canton all have signs advertising Sainam *Ch'au yau.*" The establishments is Sainam are much larger than those in Canton and they have more space for sunning jars. There are 8 factories, all of about the same capacity, doing a business of over 100,000 dollars a year.

The manager of a large sauce-manufacturing plant named On Shing Lung showed the author in detail how his soy sauce was made. The buildings surrounded the 4 sides of the plot with a large court in the center for sunning the soy sauce. A "mold room" was usually placed to the north so that the doors which control the light and ventilation, very essential to good mold growth, can be opened to the south and plenty of sunlight allowed to enter. The koji is placed in trays (typically circular bamboo trays 3 feet in diameter and 1.5 inches deep) on racks in the mold room. The brown earthenware cylindrical jars in which the soy sauce is fermented are about 18.5 inches deep, 19.5 inches in diameter, and have a capacity of 180 catties (240 lb). About 1,000 of these jars are kept in the sunning yard at one time, although at times only about two-thirds of them are in use. "The Chinese believe that the [soy sauce in the] jars are greatly improved by long sunning, and when space permits the jars are allowed to sun in the court yard for months at a time." For the jars, "Nothing is more important than a good cover with which to protect the sauce at night and when it rains. A standard conical bamboo cover, 21 inches in diameter and 12 inches high, is used.

The raw materials used in making soy sauce are yellow soy beans (grown in Ngau Chong, Manchuria), local wheat flour, raw salt (from Tientsin), and water. Beans are measured in catties (1 catty = 1 and one-third pounds). The best soy beans have a thick and tough seed coat that does not break apart easily after the beans are boiled. "The Chinese consider this characteristic to be very important, for they wish to keep the bean as much intact as possible for the molding process." After mid-November the soy sauce plants stop boiling soybeans and do not begin again until February.

After the beans are boiled for 3-4 hours, they are drained in bamboo baskets until they are almost cold. Then 2 baskets at a time are poured onto a mixing board and two men mix the beans and flour with their hands until each bean is covered with flour. The mixture is then placed on the circular bamboo trays to a thickness of about 1½ inches and the hand is used to furrow them so they get proper ventilation. They trays are placed in the mold room for 1-2 weeks. Inoculation takes place naturally, probably by a yellow mold of the species *Aspergillus*. The undesirable black mold is *Mucor.* "The mold [koji] from 1,400 catties of beans and 1,200 catties of [wheat] flour is divided into 36 jars. [Note: The ratio of soybeans to wheat flour by weight is 1.17 to 1]. A salt solution, 150 catties of water to 40 catties of salt, is then poured into the jars until they are full." The jars are then sunned for 2 to 6 months–the longer the better. Most of the shops, however, make the first drawing after 3-4 months. The sunning process results in evaporation "and three days before the drawing of the soy, salt solution is used again to fill the jars. The first drawing is made by siphon. About 60 catties of the liquid are drawn off. This liquid is allowed to settle and is again drawn off, reducing the quantity to about 50 catties. It is then placed again in clean jars and allowed to sun again for from one to six months. Some of this soy is at times allowed to sun for three years, but this is too expensive and is rarely done commercially." The soy from the first drawing is called *teng ch'au* ("first drawing"). The material that remains in the jar is called *teng shi* ("original soy nuggets") and is sold as a separate sauce, used as the base of a number of different sauces or as the base for a "second drawing" *i ch'au.* For the second drawing, a salt solution of 150 catties of water and 30 catties of salt in now poured on the *teng shi*, or the beans which remain in the jar from the first drawing. The jars are again placed in the sun for 1-2 months, etc. Third and fourth drawings can also be made. "The sunning methods takes so much time that many of the manufacturers boil the second, third, and fourth drawings instead of sunning them. This makes a decidedly inferior quality of soy, but it can be sold very cheaply.

"After the soy is drawn from the beans, it is placed in an iron pan and boiled from two to four hours. The longer the better, but it must be boiled at the least two hours or it will not keep... The manufacturers never boil the first drawing. They always sun this and sell it for their finest grade.

"Mixing of soy. It is interesting to note that of the four drawings of soy, the only drawing that is sold as it is drawn is the 'first drawing.' The others are all mixed together and sold under the names of the price they cost per catty. Candied molasses (*kat shui*) is added to the very cheapest soy as a coloring and to sweeten it.

"Many of the village people make their own soy from the rice that has stuck to the bottom of the vessel in which it is boiled." No soybeans are used and the result is an inferior grade of sauce.

The best quality soy [sauce], called *T'in teng ch'au yau* ("best selected drawn oil"), made of the first drawing and sunned for 4 months after drawing off, retails on the Canton market for "40 cents local silver per catty." The same soy, sunned for only 2 months after drawing off, retails for 14

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cents per catty. Soy made of equal parts "first drawing" and "second drawing" retails for 11 cents. Soy made of equal parts "first drawing" and "second drawing," but after it has been drawn off the beans it is not boiled or sunned, retails for 8 cents. This "raw drawing" is used for soups and does not keep longer than about a week. Soy made of a mixture of 25% each of "first drawing," "second drawing," "third drawing," and "fourth drawing" retails for 8 cents per catty. Soy made of 50% salt solution, and 50% "third drawing" and "fourth drawing," and colored with candied molasses retails for 6 cents per catty. Soy made of 50% salt solution, and 50% "fourth drawing," and colored with candied molasses retails for 4 cents per catty.



Photos on unnumbered pages show: (1) The soybeans being boiled in an iron pan above a brick oven; a man is holding a strainer over the pan. (2-3) The dark mold fermentation room with its racks and trays. (4) Soy [sauce] being drawn by means of a siphon. (5) A man standing in a courtyard filled with earthenware jars, about to begin "the first drawing of soy." (6) A light frame used to hold the koji trays. (7) Bamboo baskets in which the boiled beans are cooled and drained. (8) A courtyard filled with earthenware jars topped with conical woven bamboo covers. (9) A court yard full of uncovered soy sauce jars. (10) Whole, dry soy beans (natural size). (11) Soy beans and flour after 5 days in the mold room. (12) Circular bamboo trays. (13) Soy



sauce ready for shipment to northern China. It is placed in many sealed earthenware jars, which are incased in bamboo holders. Address: Canton, China.

2319. Nishimura, Torazô; Kawakami, T. 1919. Daizu oyobi shôyu ni kansuru 2, 3 kenkyû hôkoku [Several studies on soybeans and shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 78. p. 209-305. Sept. [Jap] Address: 1. Jozo Shikensho, Gishi; 2. Ditto, Gishu.

2320. *Christian Science Monitor.* 1919. The window of the world. Oct. 13. p. 3.

• ***Summary:*** The section titled "Climbing prices in Japan" states that "Japan finds herself in the same economic fix as other nations," with prices that continue to climb; "'the high cost of living threatens the livelihood of the majority of the Nation.'" Figures show that "compared with August, 1918, the cost of rice just before the rice riots last spring had risen by 9.1 per cent, sugar by 34.5 per cent, miso by 21.1 per cent, soy [sauce] by 11.7 per cent,..." Citizens of all nations of "the world sympathize with each other because they are all in the same boat."

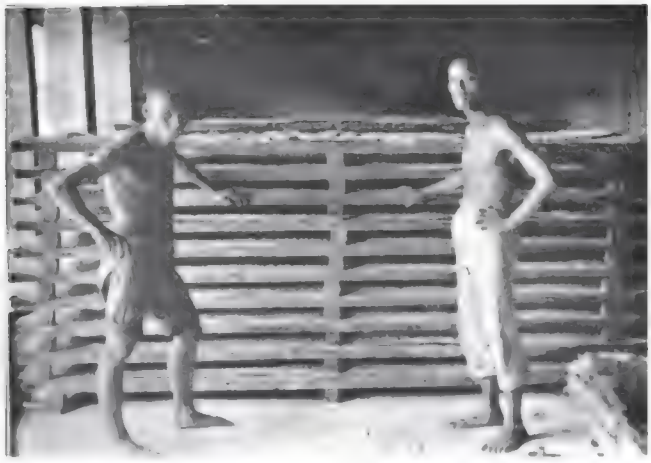
About 30 newspapers have been suppressed by the government for "expressing incendiary thoughts on the subject of rice."

2321. *Boston Daily Globe.* 1919. Household department. Nov. 12. p. 16.

• ***Summary:*** "Chinese Yockomay:" Use beef or chicken broth. "Add to it enough either home-made or store noodles to make it quite thick, and boil until the noodles are cooked. Season with soy sauce (Chinese sauce) to taste, also pepper and sauce, and just before serving the yockomay drop in 3 eggs and let them set for about 5 minutes... Little Sunshine."

2322. Cromwell, Richard O. 1919. Fusarium blight of the soy bean and the relation of various factors to infection. *Nebraska Agricultural Experiment Station, Research*

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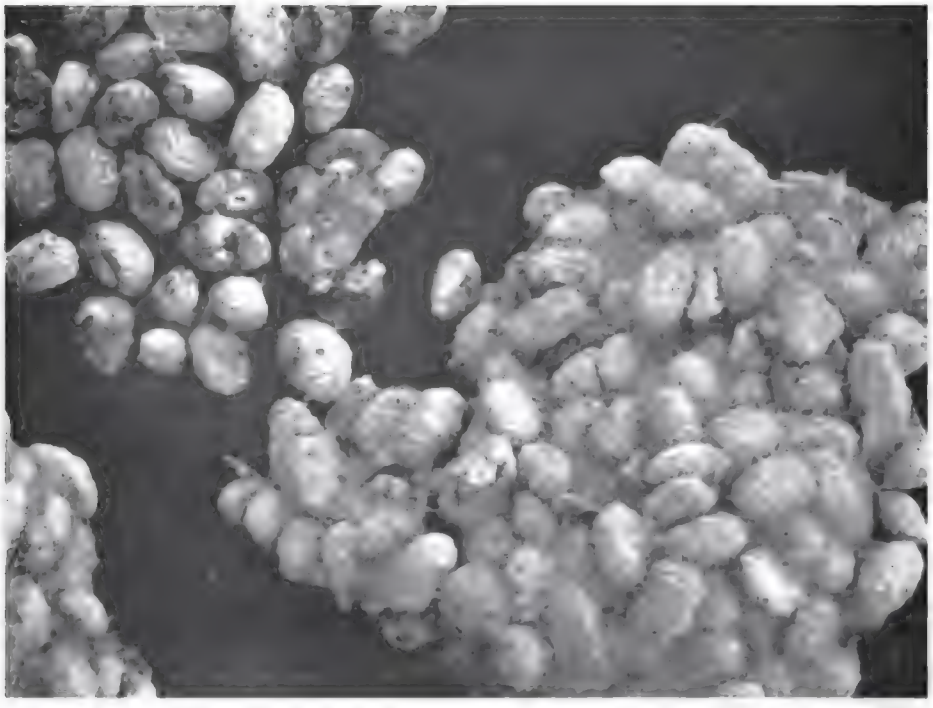








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Bulletin No. 14. 43 p. Nov. Based on his PhD thesis, Univ. of Nebraska. [32 ref]

• ***Summary:*** The blight of soy beans is due to *Fusarium tracheiphilum*. The first report of this soy bean disease appeared in a publication by the author in 1917. "The disease is characterized by a chlorosis and shedding of the leaves or leaflets, followed by the death of the plants, and is herein called 'blight.' Soy bean blight has been observed in several localities within North Carolina on soils infested with cowpea wilt..." The physical structure of soils under natural conditions is not the limiting factor in the infection of the disease, but acidity under certain conditions has some influence. The nematode (*Heterodera radicicola*) also has some influence.

The section titled "Economic importance of the soy bean" (p. 6-7) states: "Its culture in England was begun in 1790. The plant was introduced into the United States from Japan in 1860. Since that time its cultivation as a soil-improving and a forage crop has been confined for the most part to the Southern States. North Carolina is probably foremost among these States in the production of soy beans. The yield in 1909 was only 13,313 bushels (29, p. 632), and in 1915 was estimated as approximately 1,000,000 bushels. Within the last three or four years, and especially since the war began, this crop has become increasingly important because of the large variety of products manufactured from the oil and meal and because of its introduction in the United States as a human food.

"The following is a list of the most important products obtained from soy beans or in which soy beans enter: Soy bean milk, vegetable cheese, meal or flour, macaroni preparation, soups, pork and beans, meat substitutes, toilet powder, fertilizer, and cattle feed from the meal, and high explosives, soaps, linoleum, rubber substitutes, margarine, Japanese sauce, paints, varnishes, water-proof cloth, salad oil, lubricants, and lard substitutes from the oil."

The section titled "Other soy bean diseases" (p. 7) mentions nine, including Heterodera, and "Chlorosis and crinkling (cause?)."

The section titled "History, occurrence and importance of the disease" (p. 8) states that in 1900 Orton conducted tests for disease caused by *Fusarium* on soy beans at Edisto Island and at Monetta, South Carolina (see Orton 1902, p. 16-19). Eight varieties of soy beans [planted on 29 May 1901 in Monetta] were tried on ten plats. "The varieties tested were Tokio, Buckshot, Yosho, Ito San, Manhattan, Guelph, and Amherst [Footnote: The names in use for these varieties in 1890 were respectively as follows: Best Green, Early Black, Yoshoka [sic, Yoshioka], Rokugatsu, Gosha, Black Round, Green Medium, and Bakaziro]. Orton reported that at Edisto Island the soy bean made a heavy growth, 3 or 4 feet high, and was free from the wilt disease. It may be said that a very considerable proportion of the several varieties of cowpeas grown in adjacent plots succumbed to wilt. The results of these tests accord with the observations of others who have had opportunity to observe these crops when they were grown on soil known to be infested with cowpeas wilt."

The section titled "Field experiments to determine the susceptibility of varieties" (p. 38-40) states that the following soybean varieties were planted in May 1916 in Red Springs, North Carolina: Black Eyebrow, Brown, Haberlandt, Mammoth Yellow (which suffers greatly from *Fusarium* blight), Medium Yellow, Pekin, Tar Heel Black, and Virginia. Black Eyebrow seems to show some evidence of resistance.

A larger number of varieties were tested in this field in 1917, including the following not tested in 1916: Arlington, Auburn, Austin, Barchet, Chiquita, Early Dwarf Green, Guelph, Jet, Manchu, Peking (spelled differently this time), Tokio, and Wilson Black. Again, Black Eyebrow showed resistance. "The Brown variety, altho as badly infected by the nematode and *Fusarium* as any of the other varieties, deserves special mention because of its tolerance to these parasites." Address: Extension Plant Pathologist, Iowa State College. Formerly Asst. Plant Pathologist, North Carolina Agric. Exp. Station.

2323. *Hartford Courant* (*Connecticut*). 1919. The soy bean again. Dec. 4. p. 16.

• ***Summary:*** "Two or three years ago the department of agriculture [USDA] used tons of paper in an effort to bring the soy bean into favor and spread its propaganda across the country indifferent alike to the customs of the inhabitants and to the climate. The attempt was not successful but now we find the department using one of its publications as a vehicle for telling more of the possibilities of the legume."

Contains a somewhat sarcastic summary of: *American Food Journal*. 1919. "Eastern soy sauce mystery penetrated." 14(12):41. Dec. The *Courant's* article concludes: "The imagination is stimulated by this glorious discovery of the fermentation experts of the bureau of chemistry."

2324. *Times of India* (*The*) (*Bombay*). 1919. Import manifests [at Bombay harbour]. Dec. 20. p. 16.

• ***Summary:*** "S.S. Shingo Maru, from Osaka [Japan], Agents, N.Y. Kaisha.–350 bundles, 100 bales, 25 packages and 5 cases stram board....–12 bundles, 19 cases, 8 casks and 27 packages Japanese provision; 25 casks and 1 tub Japanese soys, 20 casks Japanese miso; 10 cases wine;..."

Note: This is the earliest document seen (Aug. 2010) that uses the word "soys" in this way–perhaps to refer to Japanese fermented soy products.

2325. *American Food Journal*. 1919. Eastern soy sauce mystery penetrated. 14(12):41. Dec.

• ***Summary:*** "There are mysteries of the far and ancient East that, now and then, may be penetrated by the occidental mind. Some of them have been–and one of them is soy sauce. That substance, they say, has gone into all the meat

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sauces–all the good ones at least [such as Worcestershire sauce]–that the Western world has consumed through all the years. But is has been made only in the Far East–in Japan and China.

"Now, it has now been made in the United States–by the government of the United States, through its fermentation experts at the Bureau of Chemistry of the Department of Agriculture.

"The work has been going on only for about a year, and it is said to take five years to make some qualities of sauce... The work was begun with the aid of a professor from the University of Tokio, and has been carried forward by workers in the Bureau of Chemistry who worked with him."

The process is described. Boiled soy beans and roasted wheat are inoculated with a small quantity of yellow-green aspergillus mold. The brine fermentation takes from 6 weeks to 5 years, depending on the quality of sauce desired.

"The Japanese use this sauce in cooking meats, soups, rice and other dishes. Its principal use in occidental countries has been for mixing with the other ingredients of meat sauces. Its manufacture in the United States will afford an additional means of utilizing the soy bean, which recently has taken its place as one of the important leguminous crops of this country."

Note: This is the 2nd earliest English-language document seen (April 2012) with the term "soy sauce" (regardless of hyphenation) in the title.

2326. Thom, Charles. 1919. [The Aspergilli]. Paper presented before the American Bacteriological Society, Dec. 1919. 9 p. Handwritten. Unpublished manuscript.
• ***Summary:*** The paper begins: "The specific name *Aspergillus oryzae* is generally recognized in Japan as belonging to such molds of the genus *Aspergillus* as are used for their enzymatic activity in the preparation of sake, shoyu or soy sauce, etc." "The rice overgrown with mold and therefore fermented thru the agency of the mold activity is called a koji or more specifically sake-koji." "The Takamine patents have incorporated in them this specific name, *A. oryzae*. Because of such current usage we wish to state emphatically before this group of scientific workers that *A. oryzae* Ahlburg having narrow and easily delineated boundaries can not be used to identify the entire group of yellow-green Aspergilli.

"Our studies have proved to us that the species name, *Aspergillus oryzae* as used in Japan applies (1) to such yellow-green Aspergilli as come with the description *A. oryzae* Ahlburg, (2) to such green, shorter-stalked forms as we are sure justly come under the name of *A. flavus* Link in the sense of Brefeld, (3) to innumerable yellow-green forms morphologically between these two descriptions, (4) to brown Aspergilli as *A. tamari* Kita having spores similar to *A. niger*, and spore-bearing structures similar to the yellow-green forms and even (5) to a certain brown Aspergillus (*A. oryzae* var. fulvus) which does not at present seem to us as belonging to the group at all." Address: USDA.

2327. **Product Name:** Shoyu.
Manufacturer's Name: Hilo Bussan Shokai.
Manufacturer's Address: Hilo, Island of Hawaii.
Date of Introduction: 1919.
New Product–Documentation: Directory of Honolulu and the Territory of Hawaii. 1919. p. 924. "Hilo Bussai Shokai, M. Ohara, manager, manufacturer and wholesale dealer in soy, app. 706, Kilauea ave., Hilo. Tel. 143, P.O. Box 174." Not listed in 1918.

Note: On p. 1001 of the 1919 directory, M. Oara is listed as residing in Wailuku [Drive], Hilo.

2328. **Product Name:** [Josen Shoyu].
Foreign Name: Jôsen Shôyu.
Manufacturer's Name: Sendai Miso Shoyu K.K.
Manufacturer's Address: Furujiro 1-5-1, Sendai-shi 982, Japan.
Date of Introduction: 1919.
Ingredients: Water, wheat, soybeans, salt.
New Product–Documentation: The present owner is the ninth generation. Letter from Mitsuo Miyazawa, 1988, Jan. This company, Sendai Miso Shoyu K.K. was founded in 1919, as an amalgamation of many smaller miso and shoyu companies in the area. The first miso made was called Sendai Miso, and the first Shoyu was called Josen Shoyu. The Josen brand originated in 1919.

2329. Greenbaum, Florence Kreisler. 1919. The international Jewish cookbook: 1600 recipes according to the Jewish dietary laws with the rules for kashering... 2nd ed. New York, NY: Bloch Publishing Co. [xiv] + 438 p. Index. 21 cm.
• ***Summary:*** Three recipes call for the use of Worcestershire sauce as an ingredient: Sardine canapés (p. 1). Mustard sardine paste for sandwiches (p. 9). Enchiladas (p. 85).

One cup of peanut butter is used as an ingredient in Peanut and rice croquettes (p. 66). There is also a recipe for Salted peanuts. Address: New York.

2330. Hedrick, U.P. ed. 1919. Sturtevant's notes on edible plants. Albany, New York: J.B. Lyon Co., state printers. vii + 696 p. Index. 30 cm. Series: New York, (State) Dept. of Agriculture, 27th Annual Report, 1918/19, vol. 2, part II. [9 soy ref]
• ***Summary:*** The 2,897 plants are arranged alphabetically by genus and species. Common names and synonyms are listed alphabetically. Contains many footnotes and a huge bibliography.

The entry for "*Glycine soja* Sieb. & Zucc." (p. 291-92) states: Family: Leguminosae. Synonyms: Coffee bean, soja bean, soy bean. Origin: Tropical Asia. Contains a summary of information from other sources, and mentions "the sauce

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known as soy," miso, and oil.

Also discusses: *Amaranthus paniculatus* (prince's feather, red amaranth). *Apios tuberosa* (groundnut). *Arachis hypogaea* (earth nut, earth almond, goober, grass nut, ground nut, peanut, pindar). *Cannabis sativa* (fimble, gallow grass, hemp). *Chenopodium quinoa* (petty rice, quinoa). *Coix lachryma-jobi* (Job's tears). *Cyperus esculentus* (chufa, earth almond, zulu nuts). *Gracilaria lichenoides* (agar-agar). *Laminaria digitata* (red-ware, sea-girdles, sea-wand, sea-ware, tangle). *Laminaria esculenta* (badderlock). *Linum usitatissimum* (flax). *Lupinus albus* (field lupine, wolf-bean). *Lupinus hirsitus* (blue lupine). *Lupinus luteus* (yellow lupine). *Medicago sativa* (alfalfa, lucerne). *Porphyra laciniata* (laver, slokam, sloke). *Porphyra vulgaris* (laver). *Prunus amygdalus* (almond). *Psophocarpus tetragonolobus* (goa bean, pois carrés). *Sesamum indicum* (sesame). *Vigna catjang* (cowpea, Jerusalem pea, marble pea). *Voandzeia subterranea* (groundnut). Edward Lewis Sturtevant lived 1842-1898. A large oval portrait photo (frontispiece) shows E.L. Sturtevant. Address: Horticulturist, New York State Agric. Exp. Station.

2331. Hirtzler, Victor. 1919. The Hotel St. Francis cook book. Chicago, Illinois: The Hotel Monthly Press. 430 p. Frontispiece (portrait). Index. 27 cm.

• ***Summary:*** This book, which is completely different from Hirtzler's 1910 *Hotel St. Francis* cookbook, is "organized as a year's worth of Breakfast, Luncheon, and Dinner menus with recipes displayed next to each menu." Thus, page 1 contains the menu, and accompanying recipes, for January 1 (MSU biography and introduction).

Worcestershire sauce is used as an ingredient in a remarkable 37 recipes in this cookbook–thus clearly showing its standing as a highly respected ingredient. Most of these recipes were served at dinner and are based on animal products (fish or shellfish, meat, poultry, eggs, cheese, or milk); some are salad dressings or sauces. The recipes using Worcestershire sauce are:

Squab pie, à l'Anglaise (p. 1, Jan. 1). Roquefort dressing, for salads (p. 19). Cocktail sauce, for oysters (1 and 2) (p. 23). Deviled crabs, p. 30. Oysters Kirkpatrick, p. 31. Ox tail, English style (p. 32). Haricot of mutton (stew) (p. 44). Aiguillettes of bass, Massena (p. 74). Crab cocktail, Victor (p. 84). Venetian eggs in chafing dish (p. 92, April 1). Curried oysters (p. 99). Deviled crab in shells (p. 108). Roast shad and roe, à la Americaine (p. 115). Angels on horseback (oysters) (p. 117). Deviled chickens' legs (p. 121). Devil sauce (p. 121). Suprême of oysters, St. Francis (p. 124).

Lamb broth, à la Grecque (p. 127). Crab salad, Louis (p. 128). Alligator pear cocktail [avocado] (p. 136). Fillet of sole, Doria (p. 137). Lamb hash with [green] peppers (p. 139). Crab leg stock (p. 156). Broiled sirloin steak, Cliff House (p. 164). Broiled veal kidneys, English style (p. 168). Russian dressing, for salads (p. 179). Baked lobster, Lincoln (p. 185). Crab gumbo (p. 213). Baked porterhouse [steak] (p. 301). French dressing, for salad (p. 320). Giblet soup, à l'Anglaise (English style) (p. 323). Mayonnaise sauce (p. 325). Spring lamb Irish stew (p. 328). Cold horseradish sauce, English style (p. 329). Sauce special (p. 352). Welsh rabbit (melted cheese with sauce over toast, p. 356). Chicken okra soup (p. 367).

Neither Harvey's Sauce nor Leicester Sauce are mentioned. Almonds are used in a surprising 162 recipes, while neither peanuts, nor peanut butter, nor almond butter, nor cashews are mentioned. Address: Chef of Hotel St. Francis, San Francisco [California].

2332. Mattei, G.E. 1919. La soja ed i suoi prodotti [The soybean and its products]. *Bollettino di Studi ed Informazioni del Regio Giardino Coloniale di Palermo* 5(1/2):1-34. [40 ref. Ita]

• ***Summary:*** This article contains one of the best histories seen to date of the soybean in Italy, from 1760 to 1813. Contents: Brief history of the soybean. History of its taxonomic classification. Botanical description of the wild and domestic soybean. Varieties. Introduction of the soybean to Europe (especially France and Italy). The question of the root nodule bacteria. Cultural requirements. Importance / value of the production. Utilization of the seeds. Soy flour (*farina di soja*). Soymilk (*latte di soja*). Soy cheese [tofu] (*formaggio di soja*). Soy oil (*olio di soja*). Soy cakes (*panelli di soja*). Other Japanese preparations: Miso, shoyu, koji. Opportunities for soybean cultivation in Italy. Results of cultural trials at the Colonial Garden (*Giardino Coloniale*) in Italy.

"Introduction of the soybean into Europe: The soybean (*La Soja*) was long confined to East Asia, and it is only towards the 17th century that it appears in the Indian Archipelago; in fact, if it had existed in the Pacific islands at the time of Cook's voyage, Forster surely would have reported it. Its introduction to the East Indies is even more recent. Roxburgh mentions its cultivation in the Botanical Gardens of Calcutta from seeds acquired from the Moluccas, in 1798. On the other hand, as Alphonse de Candolle observes, if its cultivation were ages-old, it would have spread long ago toward the West to Syria and Egypt, which did not occur.

"Its introduction to France is said to date back to 1739, when certain missionaries sent soybean seeds, from China, to the *Jardin des Plantes* in Paris; the uncertainty however arises as to whether, even before this time, it was cultivated in Europe, since, as Saccardo points out, it appears that essays (*saggi*) on the plant exist in the *Herbarium* of Bartolomeo Martini of Verona, Italy, written (*composto*) in 1701.

"In any event, concerning France, the soybean is reported as being grown extensively in about 1821 at Champ-Rond near Etampes; it seems, however, that

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subsequently its cultivation was nearly lost; in fact, Lachaume, in the *Revue Horticole* of 1857 [pages 568-70, Nov. 16], reports it as a new introduction, thanks to the French Consul in Shanghai, and he describes and illustrates it.

"As for Italy, Pinolini [1905] dates the soybean to 1848 [sic, 1840]. It is possible that its cultivation as an agricultural plant began to spread from that date, but the existence of the soybean in Italy antedates this date by at least a century. Saccardo says in fact: 'cultivated since the mid-18th century, and at times extensively, as in the Treviso region.'

"With the existence, as I have stated, of essays on the soybean in the *Herbarium* of Bartolomeo Martini of Verona, an herbarium written in 1701, one might suspect that from that time the soybean was being cultivated in the Verona region; but who could have brought the seeds? And if this were the case, why do we not find any reports of it in somewhat later authors? Or was the above-mentioned essay brought directly from the Orient. It should be noted that Kaempfer's voyage to Japan dates to 1690, and we have the first accurate reports on the soybean in 1712 with Kaempfer's own publication. Should we perhaps believe that some study, brought back by Kaempfer, was given to Martini? He might have obtained it from Zannichelli who, as Targioni-Tozzetti relates, in the life of Micheli, carried on a correspondence with Martini himself? Assuredly Kaempfer had to regard a plant which is used for so many purposes in Japan as important and it is possible he brought back essays about it, and perhaps even seeds.

"In any event, the Jardin des Plantes in Paris, after 1739, must have distributed seeds to various botanical institutions, including Italian. In fact, from the old *Catalogs* (*Cataloghi*) of the first Italian botanical gardens and from the pertinent *Index seminum*, we see that in the second half of the 18th century, the soybean is being cultivated almost everywhere: in 1760 Allioni mentions its cultivation in the Botanical Gardens of Turin; in 1780 Abbot (*l'Abate*) Farsetti introduced it to his Santa Maria di Sala garden near Venice; in 1785 Scopoli mentions it in Pavia; in 1787 Guatteri records it in Parma; in 1790, with the Botanical Gardens barely established, Tineo was cultivating it in Palermo, as results [show] from the Catalogue published in precisely that year; in 1793 Zuccagni refers to it in Florence; in 1798 Durazzo had introduced it into his garden Dello Zerbino near Genoa; in 1801 Tilli mentions it in Pisa; in 1805 Graefer refers to it in Caserta; in 1807 Arduino introduced it to the Agricultural Gardens (*Orto Agrario*) of Padua; in 1811 Fabriani refers to it in Modena; in 1813 Tenora points it out in Naples, and the same may be said for other more recent reports. From this we see that, at the end of the 18th century, the soybean was already cultivated throughout Italy, not for agricultural but for scientific purposes, that is, in Botanical Gardens.

"Perhaps this information escaped those, like Pinolini, who did research on the soybean as an agricultural plant because, in all works dealing with plants cultivated at that time, the soybean is found under the name of *Dolichos soja*, the generic name *Soja*, of Moench or Savi, not yet having been adopted."

In 1918 a soybean cultural trial was conducted at the Colonial Garden, Palermo, on a plot of 350 square meters; smaller experiments had been conducted in previous years. A variety was chosen which had almost spherical seed and was greenish yellow in color. The seeds were planted on March 29, in furrows at a spacing of 30 x 40 cm.; they germinated regularly about 10 days later. The plants were hoed twice to reduce weeds and irrigated eight times from the end of May until the end of August. Flowering began in early July and the seed was harvested on Nov. 15. The entire vegetative period was, therefore, 7½ months. The plants reached an average height of 90 cm. Their growth was luxuriant and there was a normal development of nodules on the roots. From this plot of 350 square meters, 51 kg of clean seed was harvested; this corresponds to a yield of about 1,450 kg/ha, which is considered quite satisfactory and could be increased by manuring. The beans, when cooked in different ways, were found to have an agreeable taste.

Talk with Ted Hymowitz, soybean geneticist, Univ. of Illinois, 2003, Aug. 18. Caution! It is not clear whether the early dates for soybean in Italy this article are based on herbarium specimens or living plants. With herbarium specimens, it is easy to make errors.

Note 1. This document contains the earliest solid dates and the second earliest overall dates seen (Aug. 2003) for soybeans in Italy, or the cultivation of soybeans in Italy (1760). The source of these soybeans is unknown. Yet note that the earliest possible date that the soybean was cultivated in France was about 1740. Perhaps there was some connection between the earliest possible soybean cultivation in France and in Italy.

Note 2. This article was reprinted in the Nov. 1991 issue of *Il Giornale della Soia* (p. 11-16). Address: Royal Botanical Garden (R. [Regio] Orto Botanico), Palermo, Italy.

2333. Mitchell, Wesley C.; Goldsmith, Margaret I.; Middaugh, Florence K. 1919. History of prices during the war: International price comparisons. *War Industries Board, W.I.B. Price Bulletin (USA)* No. 2. xii + 395 p. See p. xii, 108, 379-81.

• ***Summary:*** This bulletin, "prepared in cooperation by the Department of Commerce and the War Industries Board, forms part of the History of Prices During the War [World War I, 1914-1918], planned by the latter agency" (p. 1).

A table titled "Commodities quoted for which no United States equivalents were found" (p. xii) includes the following from Japan: (1) Beans, Soja, Hokkaido, medium (p. 376). (2) Miso (sauce (soy bean, rice, water)), red, common (p. 378). (3) Soy (condiment, bean juice), Noda (p. 380).

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A table titled "Wholesale prices in Japan, by months, quarters, and years, 1913-1918" in Yokohama, includes: (1) Beans, soja, Hokkaido, medium (p. 376-77, in yen per koku): Base price: 10.85. Increased from 10.5 in Jan. 1913 to 18.70 in Oct. 1918.

(2) Miso, red, common (sauce) (p. 378-79, in yen per kwan): Base price: 01.34. Increased from 0.38 in Jan. 1913 to 0.60 in Nov. 1918.

(3) Soy (condiment, bean juice), Noda (p. 380-81, in yen per koku): Base price: 18.25. Increased from 17.00 in Jan. 1913 to 44.00 in Oct. 1918.

The source of all these statistics from Japan was *Chamber of Commerce Journal, Yokohama* (p. 385, 390, 393). Address: War Industries Board.

2334. Murray, James A.H. comp. 1919. The Oxford English dictionary: Soy and Soya. Oxford, England: At the Clarendon Press. [30 ref]

• ***Summary:*** This magnificent work contains many early references concerning soy and soya in Vol. IX, Part 1, p. 494-95.

The 1,300 members of the English Philological Society were asked to read all the major English works before that time, to illustrate sources and changing definitions of words. Unpaid, they wrote citations on pieces of paper. In 1879 James Murray, an extraordinary philologist, was hired to edit these. He estimated they would fill 4 volumes, 6,400 pages, and take 10 years to compile. The 10 years actually became 49 years, and the 6,400 pages took 15,487, and the 4 volumes took 15 + 1 = 16. Murray died in 1915. The formal title of the book is *New English dictionary on historical principles: Founded mainly on the materials collected by the Philological Society.* 10 vols. plus 2 vols. of supplements and bibliography. These 13 volumes were published between 1888 and 1933. In 1884 the first fascicle of the letter A was published. In 1928 the final section the dictionary (to the letter Z) appeared. The title "Oxford English Dictionary" first appeared in 1895 on the cover of the section containing *Deceit* to *Deject*–but not on the title page.

Sheehy in his fine *Guide to Reference Books* (1986) states: "The great dictionary of the language, compiled on a different plan from any of the other standard English dictionaries and serving a different purpose. It is based upon the application of the historical method to the life and use of words, and its purpose is to show the history of every word included from the date of its introduction into the language, giving differences in meaning, spelling, pronunciation, usage, etc. at different periods of the last 800 years, and supporting such information by numerous quotations from the works of more than 5,000 authors of all periods, including all writers before the 16th century and as many as possible of the important writers since then. The vocabulary is very full, and is intended to include all words now in use or known to have been in use since 1150, excluding only words which had become obsolete by 1150... The complete work has a total vocabulary of 414,825 words and includes 1,827,306 quotations. The most important use of this dictionary is for historical information about a word..."

In 1957 Robert Birchfield was hired to add 4 new supplements, which were published in 1972-86, superlatively. Now the entire work will be put into compact disks and published electronically, being updated daily.

The fascinating story of the creation of this dictionary is told in the book "Caught in the Web of Words: James A.H. Murray and the *Oxford English Dictionary*" by Katharine Maud Elizabeth Murray (Yale Univ. Press, 1977, 386 p.). Address: England.

2335. Newland, H. Osman. 1919. The planting, cultivation and expression of coconuts, kernels, cacao, and edible vegetable oils and seeds of commerce: A practical handbook for planters, financiers, scientists, and others. London: Charles Griffin & Company, Ltd. 4 + 111 p. See p. 85-89. Illust. Index. 22 cm. Series: Griffin's Technical Hand-Books.

• ***Summary:*** Chapter 6, titled "The soya bean, cotton seed, and sesame" contains basic information on soya beans (p. 85-89). The more than 200 varieties of Soya beans are distinguished by the color, size and shape of the seed, and by the number of days required for the plants to reach maturity. These varieties can be grouped by color into six groups: yellow, greenish-yellow, black, brown, green, and white. One of the yellow varieties, the Southern [also called Mammoth, or Mammoth Yellow], has given very good results in South Africa (in Natal and in the Northern Transvaal). The white variety grows abundantly in Darjeeling, the Himalaya mountains, and in India, where it is known as Glycine Soja-Bhat. The black variety is used by the Chinese and Japanese to make the popular condiment called *Shoja* [sic, shoyu] or soy sauce, which is darkish brown in color and is imported in large amounts to Europe for use in making various sauces.

Note: This is the earliest (and only) English-language document seen (April 2012) that uses the term "Shoja" (incorrectly) to refer to shoyu or soy sauce.

Tables show: (1) The average composition of the seed of the six varieties of soya beans. (2) The composition of soybean cake and soybean meal.

An appendix (p. 107) lists "Companies and associations interested in edible oils and cacao." Most are located in England, and all in Europe. The city, and sometimes the full address, is given for each organization. For example: African Association, Liverpool. African Oil Mills, Liverpool. British West African Association, 68 Coleman St., London, E.C. Cadbury Bros., Bourneville, Birmingham. Lever Bros., Port-Sunlight. Note: The ground nut is also mentioned. Address: Captain, London.

2336. Rouest, Leon. 1919. Étude sur le soja [Studies on the soybean]. *Genie Rural (Le)* 11(99-100):23-26. (New Series

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Nos. 39-40). Continued: See Rouest 1920. [Fre]

• ***Summary:*** Gives a brief overview of the history of soya in Europe and France, including Li Yu-ying, Dr. Bloch, the Soyanna [sic, Soyama] Werke near Bockenheim, Messrs. Paillieux, Sagot, Raoul, and Jumelle, and the various soyfoods from China and Japan that they describe (Miso, shoyu {*Shoyua*}, tofu {*Tofou*}, dried frozen tofu {*Kouri Tofou*}, yuba {*Uba*}), and the potential threat of soya to the French cheese industry. "Finally in 1910-11 numerous soy products were presented at the expositions in Brussels [Belgium], Turin [France], and Dresden [Germany]."

Describes work on the *Ferme Expérimentale de Néoculture du Sud-Est*, at Villardonnel, Aude. Mr. Semichon, Director of the wine station at Aude, sent this experimental farm some soybean seeds which he received from the USDA accompanied by a bulletin written by William Morse (probably "The soy bean: Its culture and uses," 1918). Rouest translates the Bulletin into French. The most important varieties mentioned are: Mammoth, Hollybrook, Ito San, Guelph, Haberlandt, Medium Yellow, Wilson, Peking, Tokio, Manchu, Black Eyebrow, Barchet.

Rouest was born on 11 Nov. 1872 in Paris; he died on 27 Feb. 1938 in Chartres, France. Illustrations (line drawings, both non-original) show: (1) Soja hispida plant, with close-up of a cluster of pods. (2) Soja Hato soybean plant. Address: Director, *Ferme Expérimentale de Néoculture du Sud-Est*, at Villardonnel (Aude), France.

2337. Smith, Joseph Russell. 1919. The world's food resources. New York, NY: Henry Holt and Company. 634 p. See pages 326-27, 360-65. [1 ref]

• ***Summary:*** Contains a brief overview of the soybean, soybean production, and soybeans as a food product, with several long excerpts from Dr. J.H. Kellogg, and the *USDA Year Book of Agriculture* (about food uses, including shoyu or soy sauce).

A photo shows "Soy bean curds and cheeses in a Japanese factory," in large earthenware containers (p. 362). Note: This photo of "curds and cheeses," taken by Frank N. Meyer, shows the production of fermented tofu, probably in a Chinese factory (See: {1} Morse 1918. "The Soy-bean Industry in the United States." Plate IV, fig. 2; {2} Piper & Morse, 1923. *The Soybean*, p. 242).

Concerning use of food resources, in the USA and Canada, the chief goal of agriculture is not to feed humans but to feed animals. This was true even in the food crisis of 1918 [at the end of World War I]. About 5,191 million bushels of grain are now grown in the USA; in descending order of importance (in million bushels) they are corn (2,863), oats (1,422), wheat (643), barley (195), rye (54), and buckwheat (14). Of this total of 5,191 million, the American people eat less than 550 million (14.1%). Adding the 340 million bu exported, the total amount used for human food was 900 million bu (17.3%). "The rest, 4,300 million, went to our four-footed brethren, who outnumber us and whose food requirements, because of their greater size, are several times our own.

"In addition to the grain, they get all of the 85,360,000 tons of hay grown on 54,618,500 acres. (More than ten per cent of the half billion acres under cultivation in the United States). They also roam over millions of acres eating all the grass. It is therefore plain that more than four-fifths [80%] of the produce of American agriculture, even in 1918 [a war year], went to feed beasts." Address: Prof. of Geography, Columbia Univ., New York.

2338. Young, W.A. 1919. The silver and Sheffield plate collector: A guide to English domestic metal work in old silver and old Sheffield plate. London: Herbert Jenkins Ltd. 320 p. Illust. (32 plates). Index. 20 cm. The collectors' series. Reprinted in 2006. [11 ref]

• ***Summary:*** A photo (plate No. 12, p. 160) shows: "An Old Sheffield Plate Soy Frame; four crystal cut bottles and stoppers in silver mounts and with handles on a long octagonal base, gadroon mounts; fine thread rings for bottles. Makers, Nathaniel Smith & Co., of Sheffield [England]. Date, *circa* 1790. Mr. F. Bradbury."

The section titled "Cruets (Silver and Old Sheffield Plate)" (p. 161-64) notes that the earliest known existing silver cruet frame dates from 1713 (the time of Queen Anne) and the earliest known cruet from 1736. "There are two distinct types–the canoe or boat shape with end handles, and the frame with its central lifting handle and the cut-out plate fastened thereto for the purpose of separating and supporting the bottles."

"The number of bottles was often eight and occasionally ten, the condiments including white and black pepper, oil, vinegar, cayenne, soy–a sauce–and one or more special flavourings." Small frames with three or four bottles are also met with. "Small soy frames (*q.v.*) really form part of this [three bottle] group.

The section titled "Soy frames (Silver and Old Sheffield Plate)" (p. 236-37) begins: "Soy was a sauce introduced into Europe from China at the end of the sixteenth century. It was prepared from a small bean, and is first mentioned in English literature of the culinary arts in Mrs. Glass's [sic. Glasse's] 'Book of Cookery,' published in several editions between the years 1747 and 1796. The sauce came to be placed on the table in glass cruets, the necks of which were mounted with lipped collars of silver. Usually two were set in a frame which was quite commonly boat-shaped with end handles. In process of years cruet frames for four or more sauce bottles became known by the term soy frames, and that was particularly the case with Old Sheffield Plate, in which metal are some exceedingly dainty examples with miniature bottles, each in its own ring mounted on footed tray.

"Soy Frames (Silver).

"1784. A boat-shaped soy frame, beaded edge, four

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divisions, cut glass bottles and stoppers. Maker, Thomas Daniell; weight 7 oz. 9 dwt., [pennyweight] at per ounce 40*s*.

1789. A similar one but with eight bottles, including a mustard with its ladle; weight 27 oz. 13 dwt., at per ounce 13*s*. 6*d*.

Late 18th century. A soy cruet, boat shaped, bead edge with centre pedestal, for an engraved pierced muffineer; on each side a cut glass cruet with a handle and lip mount of silver. Sold 'at all' for £8.

"Soy Frames (Old Sheffield Plate).

"B.S. A soy frame with two bottles; four fluted feet, the bottles mounted with handles and lids. Sold at 50*s*.

Note 1. We know of no evidence that soy sauce was introduced to Europe as early as the end of the 16th century = late 1500s. The earliest dates we have seen are in the late 1600s.

Note 2. A "muffineer" can be either (1) a shaker for sifting sugar on muffins, or (2) a covered dish for keeping muffins hot.

2339. Noda Shoyu. K.K. 1919? Noda Shôyu Jôzô Kumiai-shi [History of the Noda Shoyu Brewers Association]. Noda, Japan. 350 p. Undated. Handwritten unpublished manuscript. A translation of pages 5-15, Rules and Regulations of the Noda Shoyu Brewers' Association is given in W.M. Fruin, 1983, p. 309-312. [Jap]*

• ***Summary:*** In the 1870s a group of soy sauce manufacturers in Noda formed a cartel named Noda Shoyu Brewers' Association. In 1917 some of them formed a new company Noda Shoyu K.K., which later became Kikkoman. In about 1919 it was decided to write a history of the former association. This key early document is widely cited by Mark Fruin in his 1983 history of Kikkoman, as follows: Anonymous, Noda Shoyu Kumiaishi (n.p., 1919?).

Talk with Mark Fruin. 1991. Oct. 22. The chapters on the clan and carter business in his book on Kikkoman are largely from this rare, old, valuable manuscript. Copies of this manuscript exist at the Kikkoman archives at Noda, and with Mark Fruin in Palo Alto, California. Address: Noda, Japan.

2340. Okazaki Co. (Okazaki Shokai). 1920. General importer and exporter (Ad). In: Nichibei Shinbun-sha. 1920. *Japanese-American Directory* (*Nichibei Jushoroku*). Page 57. [Jap; eng]

• ***Summary:*** Ad (¼ page). The top 1/5 of this ad is in English. The company specializes in selling rice, miso, shoyu, tea, canned goods, etc. Address: 545 Grant St., San Francisco, California. Phone: Douglas 1656.

2341. Sato, H. 1920. Jôzô enkaku-shi [Chronology of brewing in Japan]. *Nogaku Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 209. p. 61-107. Jan. 5; No. 210. p. 119-42. Feb. 2; No. 211. p. 189-208. March 5; No. 214. p. 469-82. June 5. [Jap]
Address: Nôgaku-shi, Japan.

2342. Itano, Arao. 1920. Re: Comments on the first batch of shoyu made by Margaret Church. Letters to Miss M.B. Church at Bureau of Chemistry, Washington, DC, Jan. 24 and Feb. 4. 1 p. Typed, with signature. [Eng]

• ***Summary:*** "I received your letter of Jan. 16th and also a bottle of 'Shoyu.'" He and his wife "both agree in stating that your Shoyu is very good for the first attempt... (1) It tastes like the Shoyu which is often found in the country [countryside] in Japan. (2) It lacks the ester which gives the fine flavor. (3) The flavor of Moromi is prominent. This and (2) may be due to the young age... I should be very much obliged to you if you would kindly send me your culture of *Aspergillus oryzae* at your convenience."

Miss Church sends him the desired culture and asks several questions concerning his opinions of her shoyu. He answers (Feb. 4) that she has generally interpreted his comments in his first letter correctly. Her Moromi had an immature flavor. "The common rule that the quality of fermented products improves with age, holds true with Shoyu." Address: Dep. of Microbiology, Massachusetts Agricultural College, Amherst, MA.

2343. Parry, Charles A. 1920. Travel sketches. LXXXIII–Bean that made Manchuria famous: A factory at Shimizu–The bean of many qualities. *Japan Advertiser* (*Tokyo*). Jan. 25. p. 7. [Eng]

• ***Summary:*** Contents: Introduction. Sweet and nasty. "Not now." The tea port. History of a bean. Substitutes. Big business. Japanese place names. On 26 Nov. 1919 the author traveled by train from Tokyo to the port city of Shimizu, on Suruga Bay, in Shizuoka prefecture (about 90 miles southwest of Tokyo). "Shimizu is one of the 36 treaty ports, and it was opened along with now fewer than 26 others, in 1899. The name means 'clear water'... My chief object in coming to Shimizu is to visit the Suzuki Company's Bean Oil Factory, for which I have obtained permission by courtesy of the Japan Tourist Bureau. This consists of several large buildings, erected three years ago, including a central office and two mills which being built in a castellated Gothic style, make a picturesque adjunct to the scenery as they rise by the calm waters of Shimizu Bay. The mills deal at present with two only of the many products of the wonderful manchurian [sic] or soy bean, called in Japanese daizu (glycerine [sic, Glycine] hispida) the crushed bean and the oil." The two mills are capable of treating 300 tons of beans per day. The process is secret. "I am informed that factories for the extraction of this oil exist only in Japan and Manchuria; but the Suzuki Co. has a branch office in New York, and the business is rapidly extending."

"The oil is used for frying, for lubricating, for water-proofing clothes, for medicine, as a butter substitute, and in

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the manufacture of soap, candles, guncotton, and artificial rubber; though it can hardly yet be said to be on the market." For culinary purposes it is not as good as the ordinarily used goma (sesame) oil, being much lighter and requiring the use of a deep saucepan. Yet it costs only about 62% as much as sesame oil; the latter costs ¥1.60 per sho (1.58 quarts).

"At present its chief use is for making soap, for which it is taken at a less refined stage, of a dark brown color while the finished product is light yellow. The oil is at present little used in Japan because little known: its retail sale seems to be limited to the neighborhood of the factories. Of these there are three, the two others being at Yokohama and Kobe, both established only last year.

"One large shed is devoted to storing the crushed beans (*kasu*) after the oil has been extracted, large piles of which lie about... The chief use of this at present is for cattle-food; but it is now to be manufactured into flour, useful for mixing in various proportions with wheat flour."

"The daizu [soy] bean has long been known in Japanese cookery in the form of 'kiriako' [sic, kinako] ('yellow powder') to make which the entire bean is slightly roasted and pulverized; then used for mixing with flour to make light cakes, for giving savor to boiled rice, etc. The prices are not yet determined, the cost of manufacture not being known; but it will be cheaper than flour, as well as more nutritious, and will help to relieve the scarcity of rice.

"Substitutes: Other products of the bean are: tofu, the white bean-curd, used universally in Japan and, until recently, almost absurdly cheap; also used in the forms of age-dofu (fried in cottonseed oil), yake-dofu (baked) [yaki-dofu (grilled)], and the curious gori-dofu [kori-dofu], 'frozen tofu,' also called koya-dofu (from koya-san) tofu sprinkled with hot water, frozen, dried, and cut into small cakes; miso, the cheap condiment made of daizu beans fermented with yeast and barley; and soy, Japan's only sauce. A later addition to the list has been to-nyu, or tofu-milk [sic, "bean milk], a very passable substitute for cow's milk at half the price; and still more recently tofu-butter. The whole bean, parched and boiled, is an excellent coffee-substitute, yielding when parched just to the right degree, much of the aroma of that fascinating drink without any of its deleterious effects."

"The present demand for been cake in Japan is met by the three factories of the Suzuki Co. that at Shimizu supplying central Japan, Yokohama Northern and Kobe Southern.

"There are several varieties of the bean known as white, yellow green and black, the first two being the most used. The plant is as yet little grown in Korea and Japan.

"Big Business: The Shimizu factory, which is the largest of the three, employs about 300 workpeople on day and night shifts. This new bean-industry is, however, only the latest among many activities of the Suzuki Co. which ranks among the great industrial concerns of the world, the third largest in Japan, standing next to the Mitsui and the Mitsubishi, and employing a total of over 3,000 clerks and 100,000 workpeople. It deals also in rice, wheat flour, sugar, sake-brewing, coal, timber, metals, camphor, wool, cloth and manure besides numerous small lines. It has three dockyards, at Harima, Toba and another; a coal-mine in Kyushu; copper mines at Hibi (Okayamaken) Hiroshima (Yamaguchiken) and Dairi (Fukuoka ken) also mines of zinc and iron; while its steel works (*seikojo*) at Kobe are the largest in Japan."

"Shimizu is well situated for growth being midway between the ports of Yokohama and Yokkaichi and serving a prosperous hinterland. Its chief exports are tea and oranges and its imports coal and timber." Address: Japan.

2344. *Times of India (The) (Bombay)*. 1920. Import manifests [at Bombay harbour]. Jan. 26. p. 7.
• ***Summary:*** "S.S. Totomi Maru, from Yokkaichi [in today's Mie Prefecture, central Japan], via Colombo [Ceylon]. Agents: N.Y. Kaisha,–2,524 cases safety matches,... 7 cases pencil, 10 casks and 1 case Japanese soy [sauce], 21 cases perfumery,..."

2345. *Boston Daily Globe*. 1920. Household department. Jan. 31. p. 8.
• ***Summary:*** "Pepper steak: Dear Nellie–Am glad you enjoyed the Yockomay chicken chop suey I sent in some time ago... Am sending you another Chinese dish called pepper steak." The recipe is given. "... add 1 tablespoon of soy sauce and let stand covered a couple of minutes on back of stove; then serve with Chinese cooked rice... Little Sunshine."

2346. Oriental Show-You Co. 1920. Display ad: Have you tried it? *Chicago Daily Tribune*. Feb. 8. p. F3.
• ***Summary:*** This large vertical ad (see next page) shows a Japanese Geisha-like woman, with elaborate kimono and hairdo, holding a tray on which are a bowl of steaming soup or rice and a bottle of Oriental Show-You [soy sauce]. Over her head is a Japanese lantern and dark foliage.

"Oriental Show-You, now gaining wide American popularity, is an Oriental spicely relishing condiment. It imparts a very pleasing flavor to meats–hot or cold–fish, gravy and salads, enriching home cooking with a refreshing appetite appeal."

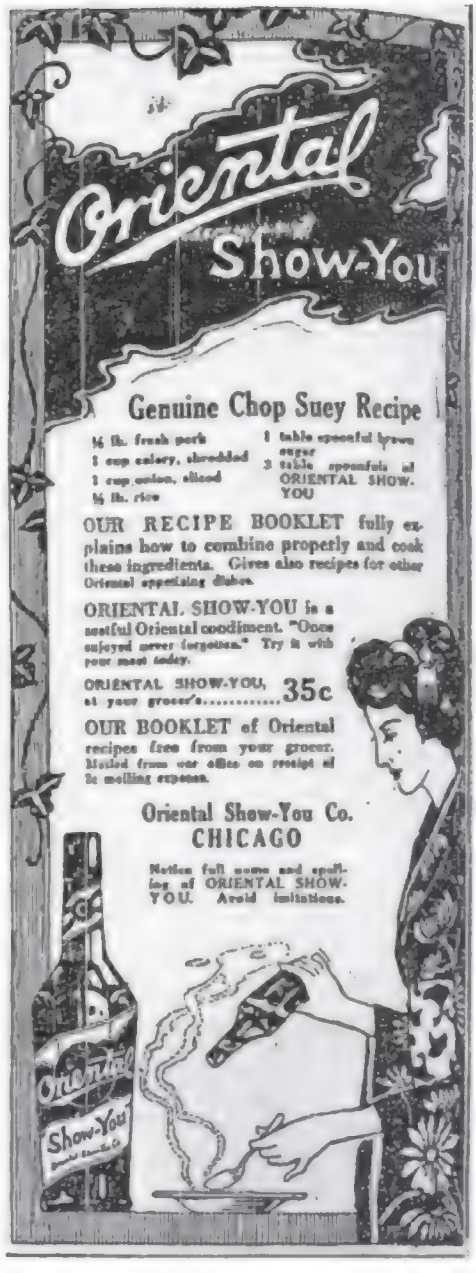
"Recipe booklet free: Oriental delicacies–14-page booklet of useful recipes..." One bottle of Oriental Show-You at your grocer's costs 35¢.

2347. Oriental Show-You Co. 1920. Display ad: Genuine Chop suey recipe. *Chicago Daily Tribune*. Feb. 10. p. 14.
• ***Summary:*** This large vertical ad shows a Japanese Geisha-like woman, with elaborate kimono and hairdo, pouring soy sauce from a bottle into a steaming dish on a table. To her left, an illustration shows a large bottle of Oriental Show-You. The recipe contains only the ingredients, not the process! "Our recipe booklet fully explains how to combine

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properly and cook these ingredients. Gives also recipes for other Oriental appetising recipes."

One bottle costs 35¢.

2348. *Good Health (Battle Creek, Michigan)*.1920. The soy bean. 55(2):71-73. Feb.
• ***Summary:*** Contents: Introduction. Soy-bean milk. Soy-bean cheese. Soy sauce. Soy-bean sprouts." Photos show: (1) A typical soy bean plant with leaves and pods. (2) A large basket full of "sprouted soy beans, which are sold and used as a green vegetable" [in China].* (3) "Large blocks of freshly made bean curd, 'Tofu' [on a round wooden table], ready to be cut up into squares and sold to the housewife."*

Note 1. This article consists mainly of long quotations from the following article: Morse, W.J. 1918. "The soy-bean industry in the United States." *Yearbook of the U.S. Department of Agriculture* p. 101-11. For the year 1917. * = Photographed by Frank N. Meyer, USDA Plant Explorer.

Note 2. The cover of this issue reads: "Edited by John Harvey Kellogg, MD, LLD. Devoted to race betterment and biologic living."

2349. Kirk, Alice Gitchell. 1920. Household quiz. *Atlanta Constitution*. March 1. p. 8.
• ***Summary:*** "Answers to Saturday's questions:... 6. The name of the piquant sauce used by the Chinese on chow mein or chop suey is 'soy,' which adds an agreeable flavor."

2350. Satow, Sadakichi. 1920. Sauce and process of making the same [from soya bean]. *U.S. Patent* 1,332,448. March 2. 2 p. Application filed 5 May 1917.
• ***Summary:*** A mixture of soya bean, roasted grain, water, and koji is "fermented," alcoholic or other harmful fermentations being prevented, e.g. by addition of common salt, and the filtered liquid is evaporated to dryness *in vacuo*. Address: Sendai, Japan.

2351. Oriental Show-You Co. 1920. Display ad: Learn to cook Chop suey. *Chicago Daily Tribune*. March 28. p. C13.
• ***Summary:*** This large square ad shows the company name written in front of a full moon and dark sky, with pine branches to the right. At the lower right is an illustration of a large bottle of Oriental Show-You. Across the bottom of the ad: "Note–Oriental Show-You is the genuine imported Japanese sauce. Observe the full name and spelling to avoid imitations."

2352. Adolph, W.H.; Kiang, P.C. 1920. The nutritive value of soy bean products. *National Medical J. of China (Shanghai)* 6(1):40-49. March. [15 ref. Eng]
• ***Summary:*** "One of the problems of science has been the search for a perfect food. Though eggs and milk are presently considered to be "perfect foods," the authors believe that the soy bean should also be considered. "The recent world shortage of food, and the demand for foods which are high in nutritive value has turned the attention of dietitians to the possibilities of the soy bean." It is a distinctly well-balanced food.

"During the last few years, the soy bean has found application in the West in the infant dietary, frequently with an admixture of some cereal for additional carbohydrate (Ruhräh 1915), and in summer diarrhea (Sinclair 1916). It is one of the recognized diabetic foods. One of the most satisfactory forms of artificial milk is made from soy beans. The bread used by the French army in the recent war was made essentially from soy bean flour."

"Soy bean products in China: History–The use of the soy bean in China dates back to the beginning of China's agricultural age under the emperor Shen Nung. It is mentioned in the *Ben Tsao Gang Mu* [*Bencao gangmu*] written by Shen Nung in the year 2838 B.C."

Note 1. This is the second earliest English-language seen (Aug. 2002) that treats Shen Nung as a real, historical figure, or that says the first written record of the soybean appears in a book written by him. The *Bencao Gangmu* (The great pharmacopoeia) was actually written by Li Shizhen in +1596.

"Tradition says that the manufacture of soy bean curd [tofu] originated in China in 164 B.C. during the reign of Han Wen Di, by a man named Liu An, the duke of Hwai Nan [Huai Nan]. The colloquial name for soy bean curd is *Do Fu*, and the classical name, *Li Chi*, probably meaning 'the morning prayer.' Its exact derivation, however, could not be traced. It is interesting to note that in China, at the present day the bean curd is made in the early hours of morning, and sold at daybreak."

"Liu An was a great friend of the Buddhist monks, and it is quite probable that he invented this bean curd in order to provide a change or a delicacy to break the monotony of the monastic ration. As a matter of fact, the bean curd is a real delicacy if carefully made and well cooked. Chinese who are connoisseurs on the subject assert that when so prepared it has the taste of pig's brain. The foreigners eating Chinese food often eat carefully prepared bean curd thinking it pork. With sugar it produces a dish like custard. Prepared with salt it resembles scrambled eggs."

"Application–The Chinese people make practically no use of dairy products, and the bulk of the people consume only very meager amounts of meat. Yet in spite of this they have lived for centuries on what appears to be a remarkably well-balanced diet by use of the soy bean."

"A number of interesting examples are found in China of the use of bean products as an agent for growth. One of us has observed in Anking that dealers in birds employ bean curd as the sole food for infant birds. The birds are robbed away from their nests immediately after they are hatched, and are then fed bean curd to tide over the infantile period till

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able to feed themselves. Possibly more interesting is the case of the true Buddhist monk who from birth is consecrated to the priesthood, and is carried through the period of childhood growth on a rather heavy diet of bean curd. The apparently normal growth of these monks would seem to be paralleled by the experiments of Osborne and Mendel (1917) on the promotion of growth in rats by both the water-soluble and fat-soluble vitamines contained in the soy bean. The country monastic diet is noted for its high content of soy bean products."

"The Chinese coolie... in spite of the scanty intake of meat and the constant exposure to overwhelming sources of infection, still does possess a wonderful resistance. The diet of the average coolie contains a surprisingly large amount of beans and bean products."

"A common saying in some parts of China terms *bean milk the poor man's milk*, and *bean curd the poor man's meat*... It is commonly stated that a meat diet is characteristic of the most aggressive peoples of the world. Has the protein of the soy bean replaced meat in the Orient?

"Bean milk is another bean product which is in composition not far different from cow's milk. In many places in China bean milk is a food drink. It is usually drunk sweetened with sugar. Western countries employ a number of patented methods for removing the 'beany taste' objectionable from the point of view of the Western consumer."

"It would be almost impossible to make a complete list of all the products manufactured from the soy bean in China. The best known and most important are the bean milk, bean curd, bean sauce (soy), and bean oil. In addition to this are the different forms of bean curd preparations, bean sprouts, and a large variety of sauces and condiments into which the soy bean enters as one of the constituents."

Details are then given on bean milk and bean curd. In making bean milk, the "bean residue [okara] which does not pass through the sieve is used as feed for hogs. On coagulation of this solution the soy bean curd (tofu), often called Chinese cheese, separates. As far as is known to the authors there are at present four agents employed in China to effect this coagulation. These are: (1) *lu*, the residue from the crystallization of salt, (2) gypsum; (3) *swan giang*, the soured bean milk whey remaining from the previous coagulation of bean curd; and (4) vinegar."

Table 1 gives the average chemical composition of the yellow soybean [*huangdou*] common throughout Shantung. Table 2 gives the chemical composition of two samples of soy bean curd purchased on the streets of Tsinan and made with *lu* [nigari] as a coagulating agent: The composition of the first sample is: protein 10.22%, fat 3.66%, water 80.90%, ash 1.09%, nitrogen-free extract 4.13%. This composition is compared with that of cottage cheese. Table 3 compares analyses of the ash of soy bean curd with that of soy bean. When it is made by coagulating soybean milk with bittern (from sea salt) the curd is rich in all the inorganic essentials (especially calcium, sodium, and chlorine) missing from the soy bean itself. The authors suggest that some of the racial characteristics of the Japanese people can be traced to their dependence largely on vegetable protein.

Table 4 gives analyses of 2 samples each of [soy] bean milk, cow's milk, bean milk whey, and bean residue [okara]. The chemical composition of the first sample of bean milk is: protein 4.22%, fat 1.87%, ash 0.40%.

Note 2. This is the second earliest document seen that mentions Liu An of Huai Nan in connection with tofu.

Note 3. This is the earliest English-language document seen which states that *Li Chi* was an early or classical name of tofu.

Note 4. This is also the earliest English-language document seen (Feb. 2004) that uses the term "Chinese cheese" or the term "poor man's meat" to refer to tofu. Address: Lab. of Chemistry, Shantung Christian Univ., Tsinan, China.

2353. Kinoshita, Asakichi. 1920. Shôyu kabi-dome ni kansuru shiken [Studies on the prevention of mold in shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 81. p 797-827. March. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Kenshuin.

2354. Fellers, Carl R. 1920. Re: Mr. Jun, a Chinese living in America, has stopped making soy sauce. Letter to Dr. Charles Thom. Bureau of Chemistry, USDA, Washington, DC. April 5. 1 p. Typed, without signature.
• ***Summary:*** "Mr. Jun, a Chinese, had discontinued the manufacture of soy sauce for some months, although he operated his factory for nearly two years previous to this date. The reason he discontinued his business was the high cost of labor in this country as compared to the cheapness of same in China and Japan where most of the soy sauce is made. He told me that it could be imported to this country much cheaper than he could make it. Mr. Jun told me that in two years during which he manufactured soy sauce he made about 50 to 80 thousand pounds of the sauce, and made from this a clear profit of between five and six thousand dollars. He sold the sauce at the rate of fifteen dollars per hundred pounds."

Note: It is not clear where Mr. Jun's soy sauce factory was located. It may have been in San Francisco, since that is the city from which Fellers is writing. Address: Bacteriologist, Bureau of Chemistry, USDA, San Francisco, California.

2355. Church, Margaret B. 1920. Re: Request for information on and samples of fermented foods in China. Summary of research on these foods in the USA. Letter to Dr. Y.S. Djang, Chichi Industrial Inst., Tientsin, China, April 6. 2 p. Typed, without signature (carbon copy).

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• ***Summary:*** Church was given Dr. Djang's name by Carl Fellers, who is presently a member of her Bureau and stationed in San Francisco, California. "We are studying in this office food products produced from soy beans by controlled fermentation processes, and also red rice (ang-kak). As it happens we have studied the Japanese process of making soy sauce most specifically." Church requests samples of Chinese soy sauce not found on the U.S. market, "or sauce flavored with decoctions of such things as Perilla or Ceirela... We are interested in knowing to what extent sweetening such as molasses, caramel or sugar is used in Chinese soy sauce. Is the practice of sweetening soy sauce local, or confined to broad areas as southern China and not Central China?"

Note: This is the earliest document seen (April 2012) that contains the term "Chinese soy sauce."

"At times we have attempted to make fermented bean cheese. It would be of value to us if you could send us one or more of those little to-fu cheeses as they might be secured in the middle of the process, when they are covered with an inch or so of white mold..." Address: Microanalyst [Biological Laboratory, Bureau of Chemistry, USDA, Washington, DC].

2356. Chung, H.H. 1920. Re: Offer to gather information about fermented soy products in China for Margaret Church. Letter to Miss Margaret B. Church, Biological Laboratory, Bureau of Chemistry, USDA, Washington, DC, April 27. 1 p. Handwritten. [Eng]

• ***Summary:*** Chung plans to return home this coming July; his address will be Nan Kai College, Tientsin, Chihli province, China. "I shall be very glad to do my best for you in gathering information about the fermented food products of my country and securing samples of the same, whenever possible, after I have arrived at home. At present I have nothing to add to what I already told you about the making of soy sauce. The people in my province (Kiangsi) also make cheese out of tofu as you described, and we usually dye it with the powder of a kind of seeds which I think are those of *Bixa Orellana* L. [annatto]. I have never examined the mold with a microscope, so I cannot say what mold is used here. Yours truly..."

Note: At the top of the letter Miss Church has written "Chinese cheese." Address: 120A Conant Hall, Cambridge 38, Massachusetts.

2357. *Bulletin Mensuel des Renseignements Agricoles et des Maladies des Plantes* (*Rome*). 1920. Fabrication de la sauce de soya dans le Kwantung, Chine [Manufacture of soy sauce in Kwangtung, China (Abstract)]. 11(5):749-50. May. [1 ref. Fre]

• ***Summary:*** A French-language summary of the following English-language article: Groff, Elizabeth H. 1919. "Soy-sauce manufacturing in Kwangtung, China." *Philippine J. of Science* 15(3):307-16. Sept.

2358. Nishimura, Torazô; Kinoshita, A.; Kawakami, T.; Oikata, R. 1920. Mamekasu oyobi Sakuramame shiyô shiken seiseki hôkoku. I. Sakuramame oyobi mamekasu shiyô shiken [Shoyu brewing with soybean cake and Sakuramame]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 80. p. 739-95. May. [Jap]

• ***Summary:*** Sakuramame is a type of defatted soybean meal specially developed for use in making shoyu. Address: Jozo Shikensho. 1. Gishi; 2. Gishi; 3. Gishu; 4. Ko (Yatotta = Hired).

2359. *Japan Advertiser*. 1920. Tokyo a city of many kinds of specialty restaurants: All sorts of food can be found at all sorts of prices if one knows where to go. No. 9,307. Aug. 22. p. 5, cols. 1-3. Sunday. [Eng]

• ***Summary:*** This introduction to the many types of restaurants in Tokyo mentions various soyfoods. Better class houses serve beef. The centerpiece is the "nabe"–"the iron skillet in which the food is cooked. The cooking is done by the customer, no skill being required as the secret of good 'nabe' is in the tenderness of the meat and in the sauce which is prepared by the house. Onions, either Bermuda or the long leek variety, tofu, konnyaku (a stringy preparation made out of a root), and sometimes cabbage leaf are the usual ingredients which are put in the nabe along with the thin slices of meat. Sake can be had if ordered. A reasonable meal at a beef house now costs about ¥1.50, although the nabe alone is probably listed at only 60 or 70 sen.

"Another name by which this dish is usually known outside of Tokyo, is sukiyaki. This is derived from *suki*, which means a spade, and *yaki*, to cook. The reason for this unusual derivation is that when meat we first introduced into Japan as food for humans, there was a very great prejudice against it. Those who wished to indulge in this 'unclean' food were forced to go into the mountains, far from any habitation and conveniences, and they made use of the farmer's broad spade on which to cook the meat. Another reason, aside from the fact that Buddhism preached abstinence from the flesh of animals, that the Japanese did not look with favor upon meat as a food was the flesh has always been eaten by the Eta, or the outcast class of the country."

"In contradistinction to meat, eels have always been looked upon as a delicacy. Eel restaurants are numerous in Tokyo, but they are not cheap... The customer is served in private rooms at these eel houses... Eels are considered very nutritious and are eaten by all classes. It is a favorite dish with coolies when they have the price... The first 'ox' day of the summer doyo, or period of greatest heat, is set aside as a special day to eat eels.

"There is not much choice in the way in which eels are prepared. Kaba-yaki is the name of one style. The bones are all removed, the eel is laid out flat and broiled over a

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charcoal fire with a special shoyu sauce and served on a big flat plate. Rice is also served..." One serving typically costs 1-3 yen.

"A very cheap kind of food, yet one whose 'social standing' is as good as any, is soba or udon... Cold soba is known as mori, and is eaten by being dipped into shoyu sauce and is flavored with sea-weed." "Tempura soba is served in a bowl with a piece of tempura placed on top. This is a very nutritious dish. Soba is served is served in the same way with onions or a piece of abura-age or fried tofu and is known as okame soba."

"A typical Japanese restaurant where a table d'hote is served is known as a kaiseki restaurant." One popular dish is "onuko, or fish mixed with miso and flavored with vinegar."

In Tokyo, pork "is eaten more than any other kind of meat, but as it is the cheapest it is found only in the poorest restaurants." Surprisingly large quantities of horse-meat are consumed at cheap restaurants. Tempura, which is very popular, "means a certain way of cooking–namely, dipping in this wheat-flour batter and frying in deep oil, usually goma-abura, or sesame oil, although almost any vegetable oil can be used." Also discusses sushi. Rice comes at the end of the meal. Sake is not supposed to be drunk after rice is consumed, as it produces indigestion. Address: Tokyo.

2360. Rindl, M. 1920. Vegetable fats and oils. IV-V. Semi-drying oils. Soy bean. *South African J. of Industry* 3(6):518-31, June; 3(8):742-49, Aug. [29 ref]

• ***Summary:*** These are 2 installments of a series of articles on vegetable fats and oils, forming a Report to the Advisory Board of Industry and Science on Vegetable Oils, Fats, and Waxes. Soybeans are considered among the semi-drying oils. Contents of Part I: Introduction. Early [soybean] experiments in South Africa. Botanical characters. Varieties. Germination. Inoculation. Technique of inoculation. Soy beans as a rotation crop for maize. Comparison of soy beans and cowpeas. Storage of seed. The soy bean as human food. Vitamines. Soy-bean [food] preparations: Soy-bean milk, soy-bean curd [tofu], the soy bean as a vegetable (baked, boiled, roasted, green beans [green vegetable soybeans], soy-bean pulp (kara)). Soy-bean meal [soy flour and its uses]. Fermented soy-bean products: Fermented boiled beans (natto), ripened vegetable cheese (miso), the Chinese paste chiang, soy-bean sauce (shoyu).

Contents of Part II: Oil content of seed produced in South Africa. Quality of oil from South African beans. Extraction of oils. Nature and composition of soy-bean oil, and methods of treatment. Uses of the oil. Soy beans as forage. Enemies of the soy bean. Method of shipment from the East.

"The first systematic trials [with soy beans] were initiated about 1903 at Skinner's Court, on the Springbok Flats, and at the Natal Experiment Farms, Cedara, Weenen, and Winkle Spruit. These latter were continued until the season 1910-1911 when the field trials referred to above [by the Transvaal and Natal Departments of Agriculture] were carried out by the Department of Agriculture in conjunction with Messrs. Lever Bros. and a large number of farmers" (p. 519).

The best yields during the 1910-11 season at the three Natal Experiment Farms were: At Cedara: Haberlandt 2,000 lb/acre. Winkle Spruit: Mammoth Yellow 1,191 lb/acre. Weenen: Mammoth Yellow 1,400 lb/acre.

"Method of shipment from the East. The beans are shipped in bags, vessels are well dunnaged, and a large number of wooden pipe ventilators are placed in the ships' holds to keep the cargo from getting heated. The beans, on a long voyage from Eastern Asia to Europe, being liable to sweat, are sometimes dried before shipment."

Tables show experimental yields and chemical compositions of soy beans from different countries and soy-related products. A diagram (outline-form) shows the various ways in which plants and seeds of soy beans are utilized. Note: This is the earliest English-language document seen (Feb. 24) that uses the term "soy-bean curd" to refer to tofu. Address: Ing. D., Prof. of Chemistry, Grey University College, Bloemfontein [Orange Free State, South Africa].

2361. *Boston Daily Globe*.1920. Flesh of snapping turtle makes very delicious soup. Sept. 26. p. 61.

• ***Summary:*** Snapping turtles are found in almost every lake and pond in New England. Yet most New England housewives have yet to learn of their food value and delicate flavor. To steamed turtle, "add black sauce (the soy-bean sauce to be found in Chinese restaurants) or Worcestershire sauce."

2362. Segawa, Rinjiro. 1920. [Estimation of total solid substance in soy-sauce by means of specific gravity]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 465. p. 940-73. Nov. (Chem. Abst. 15:1360). [Jap]

2363. **Product Name:** Soy sauce.
Manufacturer's Name: Hawn Soy Co. (A. Kanayama).
Manufacturer's Address: 1136 Pua Lane, Honolulu, Oahu, Hawaii.
Date of Introduction: 1920.
New Product–Documentation: Directory of Honolulu and the Territory of Hawaii. 1920. p. 448. Kanayama, A. soymkr [soy maker], Hawn Soy Co. Residence, 1136 Pua Lane. Note: This entry was found completely by chance. There is no Hawn listed in the 1920 directory, and the names Kanayama or Hawn do not appear in the 1919 directory. They are also not in either year's business index under "Soy."

2364. Nagaki, G. 1920. Shôyu moromi shikomi ni nyûsan no ôyô ni tsuite [Application of lactic acid with moromi

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fermentation in making shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 15(8):26-29. [Jap]

2365. Oikata, R.; Kitaura, T. 1920. Shôyu no hinshitsu to gantoryô to no kankei ni tsuite [The relation between the quality of shoyu and its sugar content]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 15(3):12-14. [Jap]

2366. Lea and Perrins. 1920. Seasoning suggestions: Revealing the chef's seasoning secrets for improving over one hundred and fifty dishes with Lea & Perrins' sauce. New York, NY: Lea & Perrins. 32 p. Index to recipes. 21 cm.
• ***Summary:*** A booklet of recipes advertising Lea & Perrins' Worcestershire Sauce. Copyright 1920 by John Duncan & Sons, Ltd., New York, NY. Contents: 1. The new dinner appetizer. Dishes improved with Lea & Perrins' Sauce on the table. Dressings and gravies. 2. How to improve dressings and gravies with Lea & Perrins' Sauce. Different kinds of dressings. How and when to season dressings with Lea & Perrins' Sauce. Brown dressings. White dressings. Drawn butter dressings. Miscellaneous dressings. 3. Chowders and soups. Garnishings for soup. 4. Croquettes, timbales, casseroles, stews and other meat dishes. Timbales. Stews and casserole dishes. 5. Eggs, omelets, souffles, Creole and rice dishes. Omelets and souffles. Creole and rice dishes. 6. Chafing dish suppers. 7. Sandwich fillings. Cheese sandwich fillings. Egg sandwich fillings. Meat sandwich fillings. Fish sandwich fillings. 8. Salad dressings. 9. Catsups, chutneys, pickles and home-made relishes.

On the cover a large color photo shows a bottle of Lea & Perrins' Worcestershire Sauce. Address: 241 West St., New York, NY.

2367. Noorden, Carl von; Salomon, Hugo. 1920. Handbuch der Ernaehrungslehre. Erster Band. Allgemeine Diaetetik [Handbook of nutritional education. Vol. I. General dietetics]. Berlin: Verlag von Julius Springer. xxxiii+ 1237 p. [100+* ref. Ger]
• ***Summary:*** The section titled "Vegetable Milk and Cream" (p. 311-14) notes that the authors have had extended experience with soybean milk and soy flour made by Frankfurter Soyama-Werken in various forms. For each product the percentage protein, fat, carbohydrates, ash, and calories per 100 gm is given, based on analyses of Dr. G. Popp in Frankfurt: Soyama Flour (*Soyamamehl;* 42% protein, 18% fat), Soyama Milk (*Trink-Soyamamilch* [normal], 3.77%, 3.36%), Soyama Milk for Diabetics [low in carbohydrates] (*Trink-Soyamamilch [fuer Diabetiker]*, 3.77%, 3.40%), Soyama Milk for Baking (3.29%, 4.40%), Soyama Cream (Soyamarahm [normal], 2.93%, 11.50%), Soyama Cream for Diabetic (*Soyamarahm [fuer Diabetiker]*, 2.95%, 11.50%), Soyama Cream [extra rich in fat, especially for diabetics] (*Soyamarahm*, 2.50%, 30.0%). The soybean is of special importance in diabetic diets because of its low carbohydrate content, which can be reduced even more by a special process.

When Soyama Cream is mixed with coffee, tea, or chocolate, once can scarcely tell whether or not one is using cow's milk. Pages 312-13 summarize the findings of Fischer on the ease with which plant- or vegetable milks are digested.

The section on variety breads (p. 427) notes that soybean flour is now warmly recommended in such recipes.

A section titled "Soybeans" (p. 542-43) notes that edible soy products are made by Aguma-Werken F. Thoerl in Harburg, Vaterland brand soy flour is made by E. Friedrichsen in Berlin, and an excellent soy flour is made by Soyama-Werken in Frankfurt am Main. In Japan and China countless preparations made from soybeans are on the market. Especially prized is the cheese named tofu (To-fu). Soy sauce is also known worldwide. Soy coffee (p. 694) is of much less economic importance than imitation coffees made from cereal grains or malt. Page 714 mentions tests using soybean flour to make cocoa or chocolate. Page 800 discusses soya seasonings such as shoyu fermented with koji, and miso.

Pages 887-903 discuss vegetarian cures for diseases, and ten specific diseases for which they are well suited. Some groups of German vegetarians are endeavoring to return to a more "natural way of life," and some of these eat a raw-food diet. Pages 898-99 give the protein content and calories per 100 gm of soy flour and soymilk, plus a discussion of soymilk. Page 979 gives the composition of two brands of soymilk and one of soy cream. Also contains early information on using baking soda for cooking whole soybeans. Noorden lived 1858-1944. Address: 1. Geheimer Medizinalrat und Prof., Frankfurt-am-Main, Germany; 2. Prof., Vienna, Austria.

2368. Oriental Show-You Co. 1920. Oriental "Show-You" recipes. Columbia City, Indiana: Oriental Show-You Co. 24 p. Illust. Index. 18 cm.
• ***Summary:*** Place of publication and publisher at foot of page 1. Page 1, titled "New dishes for American homes, states: "In addition to Show-You sauce we are marketing canned Chop-Suey, Bean Sprouts (mung beans), Chow-Mein Noodles (fried), and Mixed Vegetables." "Hints for cooking Chop-Suey: Meats, celery and onions." "Chop-suey sauce... It is absolutely necessary to use the best chop-suey sauce (soy) to get the tang of the orient. 'There are two or three qualities of soy, but the Japanese soy is reckoned as the best'–*The Century Dictionary and Cyclopedia.* Oriental Show-You Sauce, being the purest soy brewed according to the secret Japanese formula, is considered the best by thousands of people who have used it."

Most of this publication is Oriental-style recipes, with helpful information scattered throughout. Each recipe calls

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for at least one of the company's products.

Several illustrations show these products, such as a bottle of Oriental Show-You Sauce, a can of Oriental Show-You Bean Sprouts, etc. Address: Columbia City, Indiana.

2369. Ubbelohde, Leo. 1920. I. Oele und Fette aus Pflanzen. B. Schwachtrocknende Oele [I. Oils and fats from plants. B. Semi-drying oils]. In: Leo Ubbelohde & F. Goldschmidt, eds. 1920. Handbuch der Chemie und Technologie der Oele und Fette: Chemie, Analyse, Gewinnung und Verarbeitung der Oele, Wachse und Harze. II. Band [Handbook of the Chemistry and Technology of Oils and Fats: Chemistry, Analysis, Extraction, and Processing of Oils, Fats, Waxes, and Resins. Vol. 2]. Leipzig, Germany: Verlag von S. Hirzel. p. 137-322. See p. 282-93. Illust. Index. 25 cm. [Ger]

• ***Summary:*** No. 182, "Soybean oil (*Sojabohnenöl*)," has the following contents: Names: *Huile de Soja, Soja bean oil, Chinese bean oil, Olio di Soia*. Introduction: Botanical, varieties, culture, composition of the beans (2 tables), lecithin content, urease. Various preparations from soybeans: European (Sarton powder / Sartonpulver made by Bayer & Co.; Soyap made by Firma Zinnert), Asian (flour, bread, milk, cheese, canned / tinned foods, soya sauce {*Sojasauce*} and the so-called soya-quark {*Sojaquark*} [tofu, containing 72.1 to 73.0% water], natto), diabetic bread, soy sauce. Production of soybean oil. Properties of soybean oil. Use of soybean oil. Soybean cake (*Sojabohnenkuchen, Sojakuchen*). Commerce and trade.

Also discusses: Sesame oil (p. 196-206). Address: 1. Prof. Dr., Karlsruhe [Germany].

2370. U.S. Tariff Commission. 1920. Summary of tariff information, 1920: prepared for the use of the Committee on Ways and Means, House of Representatives. Washington, DC: Government Printing Office. 1004 p. See p. 320-22, 779-80, 990. [7 ref]

• ***Summary:*** Contains a description of the soybean, its uses, production, and quantities imported, and the tariff regulations applicable to the various soy products.

Paragraph 200, page 321: "The provision in this paragraph for 'bean stick [dried yuba sticks] or bean cake, miso, and similar products,' covers a Japanese food product made from ground soja (soya) beans and water, known as frozen tofu or koya-dofu, and fried tofu or hoshi aburage, the frozen tofu or koya-dofu being in the shape of small, porous, yellow cakes about one-half inch thick, from 1½ to 2 inches square, and the fried tofu or hoshi aburage being in thin cakes one-quarter inch thick and 2½ to 5 inches in diameter, which have been fried in some kind of oil or grease. Even if not bean cake it is dutiable as a product similar to bean cake, bean stick, and miso. (G.A. 8045, T.D. 37079, of 1917, following Abstract 29577, T.D. 32780, of 1912.) '*Amasake*,' made from rice yeast (30 per cent) and boiled rice (70 per cent), used as a drink among the Japanese, was likewise classified as a 'similar product,' apparently as similar to miso. (Abstract 31147, of 1913).

Oil cake produced from the soya bean is free of duty as oil cake provided for in paragraph 560. (Abstract 23794, T.D. 30828, of 1910)."

Paragraph 201, p. 321-22: In the Act of 1909, sauces of all kinds were subject to a 40% ad valorem duty; this decreased to 25% in the Act of 1913. Thick sauces include dressings and condiments such as chutney. "Thin *Chinese soy* made by mixing cooked soy beans with wheat flour, salt, and water and exposing to the sun for about three months, used to flavor and color soups, fish, and meats, about 80 per cent being used in the kitchen and about 20 per cent on the table, is dutiable as a sauce hereunder and not as a nonenumerated manufactured article under paragraph 385. (9 Ct. Cust. Appls., -; T.D. 37976, of 1919.) *Japanese shoyu* is also classified as a sauce under this paragraph. (T.D. 37574, of 1916; Abstract 43496, of 1919.)"

Paragraph 606, p. 779-80. A duty is first levied on soya beans in the Act of 1913.

"Description and uses.–*Soya beans* used in oil mills, the important consumers, are chiefly imported. Soya-bean cake, or meal, a by-product of oil manufacture, is a valuable cattle feed and enters extensively into international trade. (See pars. 560 and 561.) In China and Japan the beans, cake, and oil are elaborated into a large number of food products, such as milk, cheese, flour, bean cake, and soya sauce... Except by resident Asiatics there is only a limited use of soya beans for food purposes.

"Production.–Soya-bean culture has recently developed rapidly... Imports of *soya beans*, too small to be listed separately prior to 1914, rose from about 2,000,000 pounds in 1914 to about 32,000,000 pounds in 1918; during the same period imports of soya bean *oil* rose from 16,000,000 to nearly 337,000,000 pounds.

"*Soya beans cooked and salted*, but not enough to so change them as to prevent their identification as soya beans, and packed in tins, jars, bottles, or similar packages, do not thereby lose their status as soya beans and are free of duty under this paragraph rather than dutiable under paragraph 199. (6 Ct. Cust. Appls., 415, of 1915.) *Soya beans* in stone jars and hermetically sealed tins, invoiced as *bean sauce*, were likewise classified, and not dutiable as prepared beans under paragraph 199, nor as sauce under paragraph 201. (G.A. 8217, T.D. 37860, of 1918.) *Beans* and *bean sauce* prepared or preserved in tins, jars, bottles, or similar packages, were also held free of duty under this paragraph, analysis of the samples showing them to be soya beans, either natural or prepared. (Abstract 41021, of 1917.)... A *black bean* known to the Japanese as *Kuromame*, was held not to be free of duty under this paragraph, the evidence being insufficient to prove that the merchandise was soya beans. (Abstract 42852 of 1919)." Address: Washington, DC.

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2371. Thom, C. 1920? Utilization of molds in certain foods. 9 p. Undated. Unpublished typescript.
• ***Summary:*** "Here is some soy sauce in a bottle–this was made between January and October 1920 in Washington, DC, by the Department of Agriculture." Describes how soy sauce is made and its microbiology. Also discusses miso (red and white), grey-white or red Chinese cheeses based on soybean curd (made by ripening with a mold and then brining; in Foo-chow is made a red vegetable dye–made from ang-quac or red rice made with the red mold *Monascus purpureus*), katsuobushi. Address: USDA Bureau of Chemistry, Washington, DC.

2372. **Product Name:** Shoyu (Soy Sauce).
Manufacturer's Name: Hasegawa Shoyu Hanbai-sho (Hasegawa Soy Sauce Seller).
Manufacturer's Address: 81 N. 9th Street, Portland, Oregon. Phone: 5-2046.
Date of Introduction: 1921, January.
New Product–Documentation: The Japanese American Directory. 1921. p. 471 (directory). Note: This company is not a manufacturer. Whether they sell imported or American-made shoyu is not known. Also in 1922, p. 497.

2373. Johnson, Wynonah B. 1921. Dining 'round the world in Los Angeles. *Los Angeles Times*. Jan. 1. p. VI9.
• ***Summary:*** The section titled "In Chinatown's alleys" describes it as appealing to the tourist, inscrutable, and intriguing. "Of course the main standby of the oriental cafe is chop suey, in one of its fifty-seven disguises. Don't ask me. I don't know what it's made of... I leave it to luck and the almond-eyed chef, and proceed to mix it with the mound of snowy rice in its companion dish, and drench the whole with soy-sauce, and get a firm hold on the chop-sticks–and we're off." "The long slender black ones [chopsticks] give a final flavor of the celestial kingdom to these mysterious dishes..."

The section titled "In Little Tokyo" begins: "... there is something very different about Chinese and Japanese eating places. Heavy carvings and somber hangings give place to lighter and more artistic furnishings, and the inscrutable waiter is replaced by a smiling boy or glossy-haired maiden who will serve you just as deftly, but somehow with a subtle difference." Some of the delicate little confections "are made right here in the Japanese district, where they are in big demand. These centers look and taste like chocolate, but they are made, the polite clerk assures us, of [azuki] bean-paste, which also forms the foundation of many others." Seaweed is on the menu and "each plate is a delight to the eye, at least. The surroundings are immaculate;..."

2374. **Product Name:** Shoyu.
Manufacturer's Name: Yasuhara Shoyu Seizo-sho (Yasuhara Soy Sauce Mfg. Co.).
Manufacturer's Address: 219 Jackson St., Los Angeles, California. Phone: 11938.
Date of Introduction: 1921, January.
New Product–Documentation: The Japanese American Directory. 1921. p. 314. Also in 1922 directory, p. 315. Also in 1923, p. 355 (directory; new phone number: Main 5670). Also in 1924, p. 383 (1/8-page ad all in Japanese. Name is given here as Yasuhara Shoyu Jozo-sho [Brewery]. Phone: 820658. Owner: Mr. YASUHARA Kei) and p. 394 (directory; Yasuhara Shoyu Seizô-sho. Phone: 820658 and Main 5670). Also in 1925, p. S-44 (directory; new phone number: TUcker 1458). Also in 1926, p. S-35 (directory) and p. S-71 (1/8-page ad).

Ad (1/8 page) in The Japanese American Directory. 1925. p. S-49. All in Japanese. Yasuhara Shoyu Seizôsho, 219-21 Jackson St., Los Angeles, California. Phone: TUcker 1458. Owner: Kei Yasuhara. In addition to soy sauce (shoyu), also makes miso and koji.

Same ad in 1930, p. S-40. The directory entry (p. S-53) contains the same name, address, and phone number. Also in 1932, p. 346 (directory) and p. 347 (1/8-page ad). Also in 1934, p. 305 (directory). Also in 1936, p. 374 (directory).

The Japanese American Directory. 1940. p. 326-27. Listed in the category "Foodstuff Factory." In characters: Yasuhara Shoyu Seizô-sho. In English: Yasuhara Shoyu Mfg. Co., 219 Jackson St., Los Angeles. Note: They were not listed in this directory in 1937, 1938, or 1939. They apparently no longer make miso or koji. Also in 1941, p. 328.

2375. Adkins, Dorothy Margaret. 1921. The soya-bean problem. *Science Progress (London)* 15(59):445-51. Jan. [9 ref]
• ***Summary:*** This is a popular article. Contents: Introduction. Practical applications of the bean: Food uses include Tofu, or bean cheese (Japanese), Miso similar to chiang (Chinese), Shoyu (Japanese) and chiang-yu (Chinese), Natto (Japanese), whole dry soybeans, soybeans canned as a green vegetable (see description below), vegetable milk, soya-beans roasted, ground and used as a coffee substitute in Switzerland and the USA, soya flour, soya in diabetic diets and macaroni. Utilisation of soya-bean oil: In Italy, China, Manchuria. Utilisation of soya-bean cake and meal: As fertilizer in China and Japan, for feeding stock. Food value of the bean. The cultivation of the soya bean: China, Japan, United States, Australia (New South Wales), South Africa, West Indies, British East Africa, West Africa, Burmah [Burma], England.

"In Japan beans are germinated until the sprouts are about five inches long, and eaten with vinegar; beans, germinated and treated with brine, have also been noted in Spain." Note: It is not stated clearly that these beans in Japan or Spain are soya beans.

"Soya-beans may be cooked and used in the same way as haricot-beans, and may also be picked when young and treated like green peas, in which condition they may be

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canned."

"In South Africa success has been achieved in growing the plant; in 1910 the outlook was so hopeful that a project for constructing oil mills was suggested. Unfortunately the bean was not taken up by farmers, who preferred to cultivate maize, as it was an easier crop to produce. Thus no extensive culture of the bean was attempted, and the subject was dropped.

"In other parts of the Empire, for example the West Indies, British East Africa and West Africa, trials of soya-beans have proved successful, but in no district have promising early experiments been followed by tests on a larger scale."

"In certain parts of India, for example Burmah, soya-beans are grown on a large scale and are consumed by the natives."

Note: "Lower Burma is a historical region, referring to the part of Burma annexed by the British Empire after the Second Anglo-Burmese War, which took place in 1852... Lower Burma was centered at Rangoon, and composed of all of the coast of modern Burma, and also the lower basin of the Irrawaddy River, including Prome. The area was also known as British Burma" (Source: Wikipedia, Oct. 2010). Address: Royal Holloway College, London.

2376. Oshima, Kokichi. 1921. Re: Description of Japanese foods pickled in miso or shoyu, imported to New York. Letter, probably to Margaret B. Church, Bureau of Chemistry, USDA, Washington, DC, Feb. 12. 2 p. Handwritten. [Eng]

• ***Summary:*** Mentions daikon misozuke (white radish), taimiso (sea bream), youkizuke (Miscellaneous vegetables in shoyu).

Note: According to Dr. Charles Thom's personal papers from about 1922-23, Kokichi Oshima spent 7-8 months at the Microbiological Laboratory of the USDA Bureau of Chemistry doing research related to food fermentation, such as quantitative determination of industrial mold enzymes. Oshima was a graduate of Hokkaido Imperial University (Sapporo, Japan). In Dec. 1922 and Feb. 1923 Oshima was back in Sapporo. Address: Apt. 42, 604 W. 139th St., New York City, NY.

2377. Carver, G.W. 1921. Prof. G.W. Carver's lecture–Farmer's Conference. 19+ p. See p. 18. Feb. 16.

• ***Summary:*** "Here is a bottle of worcestershire sauce and it is made of Peanuts. The original worcestershire is made from the soy bean but I find this is just as nice as the soy bean and therefore will be attractive in that particular. Here is a bottle of Peanut coffee...

"Here is a bottle of tofue [tofu]. It is a Chinese preparation made from the soy bean and I find that the peanut makes it just as nice as the soy bean. The Peanut milks have just about the same quality of curds as cow's milk. Here is a bottle of Curds and all that is necessary is to freshen them up and you can make any of the various cheeses, or koumiss."

Note 1. The above lends support to the theory that Carver may have been influenced in his peanut research by his knowledge of existing processes for making products from soybeans. Note 2. This lecture was presented at the Voorhees Normal and Industrial School, Denmark, South Carolina. Address: [Tuskegee, Alabama].

2378. Meekins, Lynn W. 1921. Favorable outlook for American trade in Manchuria. *Commerce Reports [USA] (Daily Consular and Trade Reports, Bureau of Foreign and Domestic Commerce, Department of Commerce)* 24(41):983-93, Feb. 18. See p. 989-91.

• ***Summary:*** "The South Manchuria Railway Co., the largest purchaser of American products, proposes to spend more than $200,000,000 gold upon improvements and extensions of its enterprises within the next five years... In spite of Japan's special advantages in Manchuria there is an excellent opportunity for the marketing of many lines of American goods,..." Manchuria is made up of three provinces having an area of some 365,000 square miles.

"American trade with Dairen–Dairen versus Vladivostok: The share of the United States in the trade of Dairen is much larger than that shown by the Maritime Customs statistics, owing to the extensive shipments of goods to and from the United States credited to Japan as the country of immediate destination and origin. The direct trade between Dairen and the United States exceeded $38,000,000 in 1919, of which imports [to Dairen] comprised two thirds and exports one third."

"As between Dairen and Vladivostok, at present a greater risk is involved in using the Vladivostok route. Costs of handling cargo at that port are higher than at Dairen; there is no market at Vladivostok itself for produce shipped there, wharves and warehouses are inadequate, and shipping services are irregular. Until these conditions are improved Dairen will probably continue to handle most of the exports of Manchurian products, as well as the imports of American goods for sale in Manchuria.

"If Vladivostok were made a free port and provided with facilities which Dairen now enjoys, full advantage could be taken of it as a real open door to Manchuria. Vladivostok, rather that Dairen, offers the more promising outlook to American firms seeking non-Japanese business in Manchuria and eastern Siberia."

"It is estimated that 2,500,000 tons of soya beans are produced annually in the three Provinces of Manchuria. The wheat and millet crops generally approximate 1,000,000 tons each. The Japanese firm of Suzuki & Co. has sold 100,000 tons of Manchurian wheat to the United Kingdom and 50,000 tons to Italy during the last few months."

"The products of the soya bean include bean curd [tofu], flour, milk, cheese, soy sauce, oil, and cake. The Chinese are

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concerned chiefly with the food products mentioned and the Japanese use large quantities of the cake for stock feed and fertilizer. The United States is the principal purchaser of the oil, a substitute for cottonseed and linseed oil employed in the manufacture of soap and paint and also as a lubricant."

"How bean trade is conducted: In Tiehling and Sunkiatai (Fengtien) and Kwanchengtze (Kirin) there are about 300 Chinese wholesale bean companies whose capital averages from $100,000 to $200,000 Mukden currency. Four Chinese banks–the Bank of China, the Bank of Communications, the Government Bank of the Three Eastern Provinces, and the Hsing Yeh Bank of Mukden–negotiate loans upon the joint guarantee of two of these companies without security; other Chinese banks require in some cases that the beans be pledged. Such loans are for three months or six months, sometimes one year, and the rate of interest has been less that 10 per cent. The Japanese banks lending money to bean dealers are the Yokohama Specie Bank and the Bank of Chosen [Korea], the former issuing Newchwang notes and the latter gold notes. It is estimated that between 60 and 70 per cent of the loans made by the Japanese banks is to Chinese and between 30 and 40 per cent to Japanese companies.

"The bean business may be said to commence in September, when buyers visit the producing districts and pay from 10 to 20 per cent of the stipulated price in advance. To the towns mentioned above, from 1,000 to 2,000 cartloads of beans are brought daily from November to January. The average price during the past two years has been $2 Mukden currency per 27 catties (36 pounds), exclusive of the production tax and the cost of transportation to Dairen and Newchwang. Mukden currency–that is, small coin dollars–exchanges for Mexican dollars at an average value of $1.40 to $1. At the present rate they are equivalent to about 40 cents in United States currency.

"Owing to the lack of good roads in Manchuria the beans must be carried to the market centers during the winter months, when the fields and streams are frozen. By March the crop has been collected and stored and exports become most active.

"Through the system of mixed storage, the South Manchuria Railway Co. has effected a great improvement in the handling of beans. When brought to the railway stations the beans are examined and graded according to quality and size. A certificate issued to the depositor entitles him to draw from the mixed-storage depot at Dairen or Newchwang an equivalent amount of beans of the same quality and size. The bags used in packing are also examined, and when the grade of bags deposited and that of the bags delivered is different the loss or gain thereon is adjusted by paying to or collecting from the depositor the difference in value. The new system saves the railway the trouble of transporting and storing each consignor's cargo separately. It also saves the shipper from the risks attending delay in transportation and from searching for his goods after they have arrived at their destination.

"Production of oil: The 60 bean mills at Dairen produce daily nearly 400 tons of oil and 3,700 tons of cake. Newchwang and Harbin are next in importance as oil-mill centers. The most widely used method of production is the expression system, by which one picul (133.33 pounds) of beans yields about 12 pounds of oil and 122 pounds of cake (in two equal pieces of 61 pounds each). By the chemical extraction system one picul of beans yields an average of 17 pounds of oil and 116 pounds of meal. The specific gravity of the oil is from .922 to .930.

"Sapan-wood, hemp seed, sesamum, and bean oil are being used by the Manchuria Paint Factory in Dairen, organized in February, 1920, with a capital of 1,000,000 yen, to manufacture paints for the South Manchuria Railway Co. and for various markets. The daily output is about 7,000 pounds, or 250 tins containing 28 pounds each. The colors produced include white, 'iron rust' red, and brown.

"The Japanese initiated the export trade in soya beans from Manchuria and developed the business to its present proportions. These middlemen, conversant with oriental ways, studied occidental needs and learned enough about western business methods to deal successfully with American and European firms. their strong position is due to their control of railways, their banking connections, their oil mills, and, in general, their special organization in South Manchuria for handling the business. Eventually it may be possible by exporting beans and oil through Vladivostok for Chinese sellers and American buyers to deal directly with each other. Meanwhile the most effective methods to be employed involve the development of selling and buying organizations able to cope with the situation now existing."

"About two thirds of the population of Manchuria is in the Province of Fengtien, which composes, in general, South Manchuria." Address: Trade Commissioner, Peking.

2379. Thom, Charles; Church, Margaret B. 1921. *Aspergillus flavus, A. oryzae*, and associated species. *American J. of Botany* 8(2):103-26. Feb. [54 ref]

• ***Summary:*** Introduction. "The numerous strains align themselves into groups of closely related forms which may for convenience be considered here under three series names."

Aspergillus flavus-oryzae series. The saké industry of Japan is based upon the diastatic power of *A. oryzae* (Ahlb.) Cohn. When "numerous cultures from the soy or shoyu industry of Japan and China are brought together, a whole series of forms are found which bridge the gap morphologically between *A. oryzae* as the saké organism and *A. flavus* as described and distributed also by Wehmer. Material taken directly from fermenting vats in China by Dr. Yamei Kin, formerly of the Bureau of Chemistry, shows strains of this character. Inoculating material furnished by Dr. Teizo Takahashi for experimental work on the fermentation

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of soy sauce or shoyu proved to be a member of this series. Dr. Takahashi had selected his strain for this type of fermentation from among several recognized and studied by him in Tokyo... All of these strains are regarded by him as varieties of *Aspergillus oryzae*, not *A. flavus*."

Aspergillus oryzae series. "In the Oriental industries in which it has been long used, the separateness of this form is largely lost. It becomes, therefore, a gigantic race in a group in which other members possess the same habits, the same essentials of structure, but differ slightly in color and greatly in size... *Aspergillus flavus* was first described by Link (1809) in terms vague enough to baffle any attempt at certain identification."

Aspergillus Wentii and related forms. "The Java culture originally sent by Went to Wehmer was used in rice and soy fermentation on that island by Chinese workmen."

Aspergillus tamari and allies. "A second brown series of forms is more closely associated in occurrence and in habit with *A. flavus* and its allies than is *A. Wentii*. Many cultures in this series have been obtained in forage and feeding stuffs, from the Oriental soy fermentations... In size of colony, habit, and appearance aside from color, these forms resemble *A. flavus*. In the markings of conidia they suggest *A. niger*... Kita (1913) described as *A. tamari* a culture discovered as a contamination in a Japanese fermented product, tamari-koji."

A photo (photomicrograph) shows the wide variety of heads in a species and in a strain of *Aspergillus tamari*. Includes a calyptrate head. Note: This is the second earliest study seen of a fermented food published by USDA researchers. Address: USDA Bureau of Chemistry, Washington, DC.

2380. Matsumoto, K. 1921. Shôyu seibun-chû yûki-san-rui no kenkyû. I. [On the organic acids in shoyu. I.]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 85. p. 381-412. March. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Gishi; 3. Gishu; 4. Ko (Yatotta = Hired).

2381. Morse, W.J. 1921. La industria del "soy bean" en los Estados Unidos [The soybean industry in the United States]. *Revista de Agricultura, Comercio y Trabajo* (*Cuba*) 4(3):521-24. March. [1 ref, Spa]
• ***Summary:*** This is a translation of Morse 1918, from the USDA *Yearbook of Agriculture* (1917). Contents: Early history of the soy-bean industry. The soy bean in the United States. Cultural requirements. Varieties. Soya as forage. Soya for oil. Soy-bean meal (*Harina de "Soya"*). Soy beans for human food: Dried beans (*frijoles de soya secos*), green vegetable soybeans (*frijoles de soya verde*), soy-bean milk (*leche de frijol de soya*), soy-bean cheese (*queso de frijol de soya*), soy sauce (*salsa de soya*), soy-bean sprouts (*brotes de frijol de soya*). Possibilities of the soy-bean industry in the United States.

A table shows the quantity and value of soybeans (*Frijoles de soya*), soybean cakes (*Tortas de soya*), and soybean oil (*Aceite de soya*) imported by the United States from 1910 to 1917, inclusive.

Note 1. This is the earliest Spanish-language document seen (June 2009) that uses the term *frijoles de soya verde* to refer to green vegetable soybeans.

Note 2. This is the earliest Spanish-language document seen (April 2012) that uses the term *salsa de soya* to refer to soy sauce. Address: USDA, Washington, DC.

2382. Muhse, Effie Funk. 1921. The soy bean in Chinese cookery. *Good Health* (*Battle Creek, Michigan*) 56(3):108-114. March.
• ***Summary:*** Contents: Introduction. Sprouted seeds. Bean oil. Soy sauce. Bean curd.

Photos show: (1) Many large containers storing soy sauce, oil and wine in Shanghai; each is "made up of an outside covering of wicker, a thick body of clay, and a lining of oiled paper." (2) About 300 sixty-gallon earthenware vats with cone-shaped wicker tops containing yellow soybeans, salt, and water in the process of becoming soy sauce in the immense court of a soy sauce factory in Shanghai. (3) A man in the street end of a bean curd factory. (4) Scene from a bean curd factory, including many people. Caption: "All the products of the factory are to be seen,–fresh curd masses, a pile of wafers, and a tray of cooked bean curd. Beneath the table is a basket of the powder used to coagulate the boiled, crushed beans."

2383. Nishimura, Torazô; Kinoshita, A.; Inoue, T. 1921. Shôyu jôzô yô enshitsu hikaku shiken [Comparative examination of salts for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 84. p. 325-42. March. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Gishi; 3. Gishu.

2384. *St. Louis Globe-Democrat* (*Missouri*).1921. Amazing food uses for the lowly peanut. April 3. p. 3. Sunday magazine section.
• ***Summary:*** The subtitle reads: "At a recent session of the Ways and Means Committee of the House of Representatives, Geo. W. Carver, a professor of the Tuskegee Institute, astounded both the members and spectators with visible proof that he can manufacture one hundred and forty-five different foods and useful articles, including milk and cream, from peanuts. This milk not only looks like cow's milk, but even tastes better and purer."

"'My very latest work in investigation is in reference to the production of peanut milk. Like Mr. Ford I believe that the cow is the crudest milk machine in the world and may easily be abolished for the synthetic cow, which gives clean, sweet and wholesome peanut milk.

"'In the milk, the cream rises exactly the same way

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as in cow's milk. In many ways peanut milk is even better than cow's milk, for no chemicals are used-nothing but pure water. The milk produced from the peanut is a vegetable milk, uncontaminated with harmful bacteria.

"'The peanut milk I have developed looks like cow's milk and is, if anything, more nourishing and more pleasant to the palate. It consists of a perfect emulsion of oils, fats, proteids, and carbohydrates. If you did not know one was cow's milk and the other peanut milk, the eye would never detect the difference. Peanut milk can be used for cooking just the same as cow's milk, while the rich cream may be used on fruit, in coffee, and for breakfast cereals.

"'of course, you want to know how many peanuts it will take to make a pint of milk. Here is a 3½ ounce glass. When filled with shelled peanuts it will make a pint of very, very rich milk, that is, milk that is many times richer than cow's milk, about what they call cream in most city dairies.

"'Here is a bottle of synthetic buttermilk made from peanuts. In this buttermilk, the whey rises exactly as it does in the cow's milk, and tastes very much like real fresh buttermilk. What's more, it is very nutritious, having a mild, pleasing acid taste.

"'Here is a bottle of full peanut cream. It can be used in coffee, chocolate, cereals, fruit, and in other ways, the same as cow's product.

"'Here is some peanut milk made especially for ice cream. Not long since I made a quart, gave it to a neighbor, and invited myself over to help eat it. It is not modest to say so, but I am honest when I say it was the finest I had ever tasted.

"'Here is an evaporated synthetic milk, much on the order of the regular commercial evaporated cow's milk, and acting when used in the same way. An interesting thing about this and the other peanut milks is that you can use nay acid with them, and they don't curdle as cow's milk does.

"'The cow is a portable milk manufacturer who grinds her food, moistens it, heats it to a proper temperature and then filters it, and the result is milk,' continued the chemist. 'A machine or the simple utensils used here, under the direction of a man, can do the same thing that the cow does. It is the same food or the elements of the same food as cow's milk and contains all the vitamines and nutritive quantities now that it has been proved that most excellent milk can be made from peanuts. The skill and ability of the human being can perfect a machine far more economical and infinitely more convenient for milk making than the cow. Man can do more than the cow. He can produce a synthetic milk at his own convenience and protect its quality and purity. He can make milk which lacks the animal taint and the danger of disease germs.

"'It takes the cow twenty-four hours to make milk. I can make from peanuts better, cleaner and more healthful milk in five minutes. The cow simply takes out of the food she eats what is soluble. Which is the cleaner process, that of grinding, moistening, heating and filtering in a machine or pan, or passing cereals, vegetables or the vegetable matter a cow eats through her stomach?'"

Dr. Carver then demonstrated how to make peanut coffee. For the best flavor, the peanuts must be roasted, allowed to cool, then roasted again; only then does it develop the coffee flavor. An illustrations shows Carver turning the crank on a hand mill whose hopper is filled with peanuts. Out of it come boxes and bottles of many common products, such as dyes, sauce, coffee, breakfast food, cheese, cream, milk, oil, face cream, and flavorings.

2385. Norton, Jeanette. 1921. The home kitchen. *Washington Post*. May 24. p. 8.
• ***Summary:*** Yue Tong–Fish soup:... "The gravy is made of one cupful of stock, a teaspoonful of soy sauce, salt, sugar, a tablespoonful of cornstarch dissolved in cold water, and a few drops of sesamum [sesame] seed oil." Address: Author of "Mrs. Norton's Cook Book".

2386. Lea and Perrins. 1921. At the horse show (Ad). *Times (London)*. June 10. p. 9, cols. 1-2.
• ***Summary:*** "... you will find the best people and the best horses. See that you get the best sauce when you go to lunch." Below that is a large, bold signature: "Lea & Perrins' Sauce." Below that: "The original Worcestershire sauce." At the left of this display ad is an illustration of the head of a horse with a bridle. Address: [England].

2387. Rodyenko, S.P.R. de. 1921. Some popular misconceptions about our resident Chinese. *New York Times*. July 31. p. 41.
• ***Summary:*** In the late 1800s, Chinese communities formed in New York, Baltimore [Maryland], Chicago [Illinois], and San Francisco [California]. These became known as "Chinatowns." Discusses the purpose of tongs and the ways they help Chinese in the USA.

One "of the most popular Chinese dishes in this country, tsar-suey, the Cantonese pronunciation of which is 'chop-suey,'" means "mixed fry" in English. A "dash of Chinese cane syrup and of soy bean sauce" are added for extra flavoring. Address: Major, Chinese Military Forces, retired.

2388. Kamper's. 1921. The choicest products of the world's harvests and some food manufacturing plants come to our store (Ad). *Atlanta Constitution (Georgia)*. Sept. 28. p. 2.
• ***Summary:*** Their long list of products includes: "Crosse & Blackwell China Soy Sauce–Bottle 50c."

Note 1. This is the most recent English-language document seen (April 2012) that uses the term "China soy" to refer to a type of soy sauce.

Note 2. This is the earliest document seen (April 2012) that contains the term "China Soy Sauce" (regardless of capitalization or hyphenation).

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2389. *Light of Manchuria.*1921. Present Manchuria and Mongolia, Series II. Oct. 1. p. 12-14, 30-31, 46-47.
• ***Summary:*** This article, continued from the September number, notes that one of the principal agricultural products of Manchuria and Mongolia [probably Inner Mongolia] are soya beans. "Yellow (Soya) Beans belong to the most common species. They contain a good percentage of oil and are also good as an article of food and also for the expression of oil. The Manchurian (Soya) Beans have become widely known all over the world. Hitherto they used to be used by Manchurian inhabitants as a food-stuff and for the expression of oil as a source of light. The residue left after oil was obtained served as cattle feed. Since the residue popularly known as Bean Cake came to awake demand in Japan as fertilizer, and Bean Oil began to be exported to the Western countries as industrial material, a marvellous development has been noted in the cultivation of Soya Bean. This belongs to only a recent date...

"The Chinese not only use Beans and Bean Oil in their daily cooking, but also *tofu* (bean curd palatable also to the Western palate and pronounced by the qualified chemist as similar in its composition to cow's milk), *miso* (an article of the staple food to both Japanese and Chinese), and *soy* are also made from Beans...

"Beans put out in Manchuria and Mongolia are put at about 20,000,000 *koku* (1 *koku* being equivalent to 4.96 bushels), but the outputs are increasing rapidly year by year, and there is a vast area of territory awaiting cultivation."

Page 30, under "Manufacturing Industry," notes that "Bean milling ranks foremost in manufacturing industry... Bean milling is best developed at Dairen, which is now possessed of sixty mills. In the interior of the country, the old primitive system by which a few head of mules or donkeys and a few hands do the work of expressing oil from Beans is still found in vogue. Such is only a domestic bye-industry. However, such extensive mills as use steam engines and express oil by hydraulic pressure are mostly found at Dairen. The Suzuki Bean Mill at Dairen is operated on the chemical extraction system which is the latest scientific method. The round-shaped cake left after the expression of oil weighs 46 *kin* a piece, which is the standard weight for export cake. In the fiscal year 1919, 19,693,000 piculs valued at 43,029,000 *Hk. taels* [Haikwan taels] were exported to Japan. Bean Meal, which is put out at the Suzuki Mill, is good for use as it is. Bean Cake is used by the Chinese for cattle-feed, and by the Japanese as fertilizer."

On pages 46-47 are tables giving exports and imports at Dairen. The three exports with the greatest value (in Haikwan Taels) were Bean Cake (36,851,244), Beans (Soya) (24,750,377), and Bean Oil (17,369,655). Imports included Miso and soy [sauce] (97,305).

2390. North, J.L. 1921. To solve the cost-of-living problem? A magic bean. *Illustrated London News (The)*. Oct. 8. p. 476-77. [1 ref]
• ***Summary:*** "The leading article and letter in the *Times* of Sept. 28 from its Vienna correspondent about Manna flour, manna bread, and milk substances made from the Soya bean, are likely to do good if they help us to realise how much we are losing by our neglect of this, the most valuable–for the uses to which it can be put–of all legumes.

"In the letter giving the details of the researches of Dr. László Berczeller of Vienna, there is no reference to the fact that these 'Manna' or Soya bean products were first made in England before the war. Samples of the flour and biscuits are to be seen in the cases of the London Institute of Hygiene, and Manna milk has been for years–and, no doubt, still is–sold here under the name of 'Solac' at a price considerably lower than that charged for milk by dairymen. The appearance and rapid rise into importance of the Soya bean is one of the most remarkable commercial events of modern times."

"In 1790 the [soy] bean was brought to Europe when its cultivation was first attempted by Young [Arthur Young, lived 1741-1820 in England], the father of British Agriculture, though without success. In 1878 an Austrian professor, Haberlandt, tried it, but failed [Note 1. Haberlandt did not fail; he successfully cultivated soybeans in Austria as early as 1875, and many times thereafter.] When the bean came here in 1908 there was an immediate rush to grow it both in Europe and America. Experiments were started by our Board of Agriculture, the Royal Agricultural Society, and many semi-public bodies. The early experiments failed completely, for the reason that they were made with seed whose climatic origin was unknown, as well as the orthodox Chinese methods of growing it. Later, this was remedied..."

By 1918 Europeans were aware of 500 different soybean varieties that were growing experimentally at Arlington, Virginia.

"My interest in the Soya bean began in 1913 with a visit from an agent of a German cultivator at the office of the Royal Botanical Society at Regent's Park. He was, he said, trying to form a syndicate to grow what he called an acclimatised Soya bean, brought from China in 1910, and already in cultivation in Germany. He refused seeds for testing, but sent from Hamburg a plant which had been carefully cleared of the seed, though the *empty* pods, nearly sixty in number, were left. The syndicate never materialised, and I thought no more of the matter, until later on, whilst examining the dried plant, I noticed a tiny pod, scarcely half an inch long, which contained a seed no bigger than a pin's head. Going over the plant I found other pods which evidently had been thought too insignificant to be of use, and from these I obtained thirteen seeds. These were sown in 1914 and resulted in thirteen plants, which produced four hundred and forty seeds. From thirty-three plants in 1915 one thousand seeds resulted, and in 1916 no less than twelve

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thousand. Many experiments as to the value of different methods of growing them were made in several countries, and with no less than twenty-one different foreign varieties. One thing came clear throughout the tests, and that was that the original variety started with was by far the best. It says a good deal for German astuteness that they should have gone to Manchuria and, from hundreds of varieties, chosen the one best for them and for us."

The future of the Soya bean in England is uncertain. "Natural selection helps the plants that mature earliest produce most seed; those that mature late die out. It is noticeable that the plants experimented with in England fruit earlier now than they did at first, and this is a very hopeful sign. Another satisfactory fact is that there is no lessening in the number of pods produced, but rather a gain. This year there are plants with three times the number of pods shown in a photograph of the best German-grown specimen of 1912."

In China and Japan the Soya bean "enters into the composition of most dishes, and in one form or another, as Soy sauce, bean paste, bean cheese, bean curd, bean milk, bean wafers, bean cakes and confectionery, is used everywhere. For a hundred years Soy sauce has been imported–the principal ingredient in the well-known Worcester [Worcestershire] sauce."

Apart from its value as a food, it is used in the manufacture of glycerine, explosives, enamels, varnish, varnish, waterproofs, linoleum, paints, soaps, celluloid, printing inks, and as a lubricant."

Photos (all but #1 by Frank N. Meyer of the USDA) show: (1) A typical pod from a soya bean plant grown by Mr. J.L. North at Chiswick, England, in 1921. (2) Two large, thin "blocks of tofu (bean curd)" on a round, wooden table. "Soya bean cheese for human food... Ready to be cut up into squares for sale to the public. Tofu, or Soya bean curd, is made by adding magnesium or calcium salts (about a 1 per cent. solution) to hot Soya bean milk; the product is drained and pressed. (3) "Varieties of soya bean cheese on a bamboo tray. Tofu, or Soya bean curd, forms the basis of many fermented, smoked, and dried cheeses in China and Japan." (4) "Soya bean cheese [fermented tofu] in preparation: A pile of wooden trays full of bean curd in a dark room of even temperature." (5) "Used by the Chinese as a green vegetable: A basketful of sprouted soya beans." (6) Soy bean plant with leaves, many pods and roots, grown at Chiswick.

Note 2. This is the earliest document seen (March 2002) written by Mr. J.L. North, the pioneer in cultivating soybeans in England.

Note 3. This is the earliest English-language document seen (March 2010) that uses the term "soya bean cheese" (or "soya-bean cheese") or the term "soya bean curd" to refer to tofu.

Note 4. This is the earliest English-language document seen (July 2007) that uses the term "magic bean" or that uses the word "magic" as an adjective to refer to the soybean.

Note 5. Concerning Arthur Young. He was the author of many books on agriculture, which were very influential in their day. He was an important advocate for the progressive agricultural practices of his time, advocating such innovations as the seed drill, improved crop rotations, the use of marl as fertilizer, and the enclosure of open fields. In 1767 he undertook the management of a farm in Essex. He conducted various experiments and published the results in *A Course of Experimental Agriculture* (1770). In 1784 he began the publication of the *Annals of Agriculture*, a periodical which was continued for 45 volumes and had many contributors. Young traveled to France during 1787-89 and in 1792 published an important book about his travels and observations there. The soybean was first grown in Paris, France, perhaps as early as 1740, definitely by 1779. So he may have learned about soybean from fellow agriculturalists in Paris while on this trip. Address: Curator of the Royal Botanic Society of London.

2391. Togano, Meijiro. 1921. Quick method for brewing soy. *U.S. Patent* 1,394,236. Oct. 18. 2 p. Application filed 19 Feb. 1920.

• ***Summary:*** Soy-bean or its cake is first soaked in water for about 8 hours and then boiled for about the same length of time. It is cooled to 30°C, then the spores of *Aspergillus oryzae* are mixed with it. If desired, about 20% of wheat or other grain may be added to this mixture. The mixture is kept for 3 days at 30°C in a warm, damp chamber. During the latter period the soy-bean becomes covered with a soft, greenish-yellow mycelium, produced by germination and development of the *Aspergillus oryzae*. The result is "soy-bean koji." To this soy-bean koji is added an equal volume of salt water having a temperature of about 60°C and a specific gravity of 20 degrees Baumé (SG = 1.16). This mixture is then kept at a temperature of from 30 to 70°C and stirred 1-3 times a day. By this treatment, the albumin of the soy-bean "is properly decomposed in a period of less than 10 days from the time the salt water was added to the soy-bean koji, and the soy-mash will produce the particular flavor of soy. Therefore, after the albumin is decomposed, soy is squeezed out or extracted from the soy-mash and the product thus produced is heated by means employed in the ordinary process, for the purpose of preparing the soy for use and sale." Address: No. 1686 Sugamomachi, Tokyo, Japan.

2392. Kubota, Seikou; Ikeuchi, Kôki. 1921. Nihon shôyu no kenkyû: Nihon (Kikkôman) chû ni beta-iminazoriiru, echiramin no kagakuteki oyobi seiriteki shômei ni tsuite [Studies on Japanese shoyu. 1. Biological and chemical detection of beta-imidasol and ethylamine in "Kikkoman"]. *Nanman Igakkai Zasshi* (*J. of South Manchurian Medicine*) 9:142-51. Oct. [6 ref. Jap]
Address: 1. Igaku Hakase. Both: Nanman Igakudô

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Yakubutsugaku Kyôshitsu.

2393. Satow, Sadakichi. 1921. Researches on oil and proteids extraction from soy-bean. *Tohoku Imperial University, Technology Reports (Sendai, Japan)* 2(2):1-124 (41-164). Oct. 28 cm. [Eng]

• ***Summary:*** Contents: 1. General description of the soy-bean: The use of the soy-bean (as a food-stuff [shoyu, miso, tofu, natto], soy bean oil [for the manufacture of soap, hydrogenated oils, paints, varnishes, oil-cloth, and rubber substitutes], and bean cake or waste residue from the manufacture of soy-bean oil [nitrogenous fertilizer, as a cattle food, Solite–a water-based paint]). 2. Classification and analysis of soy beans and their standardization: By color, by protein / proteid content, conclusion of analysis (the best soy-beans are Tsurunoko and Kauro grown in Hokkaido): Standardization of the raw material, content of proteids, color of the raw material, moisture, regularity of the grain, specific gravity of the soy-bean, impurities. 3. Microscopical observations of soy-beans: Colour reactions of cellular substances, distribution of proteids and fatty acids, distribution of fatty oils. 4. Oil extraction (p. 17): Influence of hulls, influence of moisture, influence of oxidation, comparison of the dissolving power of various solvents, to find the best conditions for the extraction of oil by means of benzine, how to extract the oil technically without denaturing the proteids and how to remove the retained solvent, on the apparatus employed in oil extraction, working of the extracting apparatus, recovery of solvent by application of the vacuum system, separation of oil from the solvent and oil refining, reserving the oil-freed soy-bean meal.

5. Isolation of proteids out of oil-freed soy-bean (p. 35): General discussion, necessary and sufficient conditions for the extraction of proteids (on the quality of isolated proteids [plasticity, solubility, coloration], on the purity of isolated proteids, to obtain a maximum yield). 6. The extraction of proteids by means of water (p. 41): General properties of bean meal, on gummy substances and their properties (saccharo-colloids, incl. stachiose [stachyose], araban, galactan; p. 43), quantitative estimation of water-soluble proteids and carbohydrates, determination of the volume of water necessary for the extraction of soluble carbohydrates, relation of the duration of extraction to the quantity of extractable proteid and carbohydrates, effect of the process of water-extraction. 7. On the extraction of proteids by means of alkaline reagents: General properties of glycinin against alkaline reagents, classification of alkaline reagents, comparisons of dissolving power of alkaline reacting compounds, relations of the plasticity and coloration of the proteid to various kinds of extracting agents, standardization of plasticity of isolated proteid, on the relations between plasticity and chemical reagents, comparative experiments relating to the extracting process by means of sodium sulfite and sodium hydroxide.

8. The determination of the concentration, quantity, and other factors of Na_2SO_3 [sodium sulfite] in the process of extraction (p. 69): Determination of the concentration of sodium sulfite, the determination of the relation between the plasticity of the protein and the concentration of sodium sulphite, to determine the relation between the yield and the time of extraction, to find out the actual yield of proteid, as well as the volume of sodium sulfite solution provided the bean meal is previously extracted by water, then extracted with sodium sulphite, conclusion of this chapter. 9. Extraction of proteids by means of caustic alkalies [alkalis] (p. 80): To determine the concentration of the caustic soda [sodium hydroxide] solution, determination of the relation between the time of extraction and the yield of proteid, to determine the volume of caustic soda, the systematic extraction of proteids (using water, sodium sulphite, or alkali). 10. Clarification of extracted proteid solution and precipitation thereof (p. 86): Precipitation of proteids, precipitation by means of alkaline earth metals (such as magnesium sulphate), by means of colour base (such as malachite green, methyl violet, brilliant green, auramine, or new fuchin), by means of alcohol, by means of heating, by means of formaldehydes, by means of fermentation, by means of acids (choice of acid, yield of precipitated proteid, quality of proteid). 11. Quantitative investigations on the precipitation of proteids (p. 101, 11 experiments with summary of conclusions). 12. Effect of heating on the yield of proteid (p. 115). 13. Separation of excess water from the proteidal precipitate (p. 118). 13A. Process for drying the proteidal mass and for drying the residue (p. 121). 14. Pulverizing the dried proteid (p. 122). 15. Recovery of carbohydrates from waste liquid (p. 123).

World soybean production (in short tons): Manchuria 1,850,000 (25% is used in Manchuria as food; 75% is exported to all parts of the world in the form of "bean cakes or bean meal"). Japan 450,000. Korea 322,500. Kantoshu 15,400. Total of the above: 2,640,000 tons valued at more than 200 million Japanese yen (p. 2).

The author investigated the use of soy-bean proteins in plastics. There are upwards of 30 varieties of soybeans which may be classified into yellow, blue, and black. The first contain the most protein and oil, the last the least. The protein content varies from 35-40.5% and the oil content from 15.4 to 20.9%. The mean analysis of 16 different varieties was: Water 10.2%, proteins 37.8%, oil 18.9%, carbohydrates 23.5%, fiber 5.2%, and ash 4.4%. The carbohydrates consist mainly of non-reducing sugars with little or no starch. The cell membrane consists of galactan or hemicellulose, with a little free cellulose. The presence of the hulls in the crushed bean reduces the speed of extraction of the oil and the yield, and gives the oil and protein a brown color. Note: This is the earliest document seen (May 2004) containing the word "hemicellulose." *Webster's Dictionary* defines hemicellulose, a word first used in 1891, as "any of

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various plant polysaccharides less complex than cellulose and easily hydrolyzable to simple sugars and other products." The sugar molecules in this polymer each contain 5 carbon atoms.

Oil extraction: Benzene is the most suitable commercial solvent; the solvent must not be recovered by direct steaming of the meal, but by the use of a vacuum.

Protein extraction: The soluble carbohydrates are removed from the meal by washing with very dilute acetic acid. The protein is then extracted in 3 stages, i.e. with water, with 0.2-0.4% sodium sulphite solution, and with 0.2% sodium hydroxide solution. 20-30% of the total available protein is extracted in the first stage, a further 50% in the second, and the total yield is about 95%. The protein is finally dried at the lowest temperature and highest vacuum and in as short a time as possible. The dry protein is very tenacious and can only be ground in high-speed disintegrators; it is then suitable for the manufacture of plastic materials, lacquer, enamel, or imitation leather. The soluble carbohydrates, which amount to 10-12% of the meal treated, can be worked up into syrup or converted into alcohol or lactic acid by fermentation. The bean residue consists of fiber, galactan, and protein and can be used for cattle feed or as an ingredient of linoleum-like products.

Note: This is the earliest document seen (Sept. 2010) concerning isolated soy proteins (other than simply isolation as part of nutritional research).

Continued. Address: Kôgakuhakushi.

2394. Satow, Sadakichi. 1921. Researches on oil and proteids extraction from soy-bean: Illustrations and tables (Continued). *Tohoku Imperial University, Technology Reports (Sendai, Japan)* 2(2):1-124 (41-164). Oct. 28 cm. [Eng]

• ***Summary:*** Continued: Illustrations show: (1) The cells of the soy-bean (after Winton, p. 55). (2) The effect of various chemicals on soy-bean cells (8 figures, after p. 16). (3) A rotary drum extractor used with solvent and a vacuum system (p. 68). (4) An endless belt system for drying proteid precipitate.

Tables show: (1) Percentage of proteids and fat found in 23 samples of beans. The varieties are: Akakiji bean, Nagaaneko bean, Kintoki bean, Shônembo bean, Biruma ingen bean, Chûnembo bean, Maru uzura bean [speckled], Naga uzura bean, Kumamoto ingen bean, Azuki, Chûnaga uzura bean, Aneko bean, Shiromarufuku bean, Green pea, Dainenbô bean, Daifuku bean, Chûfuku bean, Red pea, Black soy-bean (38.61%), Yellow soy-bean from Manchuria {2 samples, 38.65% and 39.12%}, Yellow soy-bean from Korea (41.00%, and 22.826 fat–the highest fat of any bean tested), Yellow soy-bean from Hokkaido, Japan (41.92%–the highest proteid of any bean tested) (p. 6-7). (2) Previous analyses of the chemical composition of 16 soybean samples from Manchuria, Korea, and Japan. For each, gives the district, variety (mostly yellow but one "Blue variety"), water, proteids, fat, carbohydrate, fiber, ash, name of analyst (an organization) (p. 8). (3) Analyses by Sato of the chemical composition of 14 soybean varieties from Manchuria, Korea, and Hokkaido (Japan). For each, gives the varietal name, growing region, "moisture, total protein, soluble proteose, available protein, non-proteidal nitrogenous matter, fat, nitrogen-free extract, fiber, ash, color and shape (all yellow), producing organization (Korean Central Experimental Station or Sapporo), date of production. Named varieties include: Harupin, Shoshu bean, Utsuzan bean, Ampen bean, Chogei bean, Ryusan bean, Turunoko [Tsurunoko], Kanro, Yoshioka, Otanizi [Otaniji] (41.92% total protein and 37.53% available protein, both the highest of any bean tested) (p. 11). (4) Effect of hulls on solvent extraction of soy-bean oil with 3 varieties: Kanro, Otaniji, Yoshioka (p. 18). (5) Influence of moisture on solvent extraction (ether) of soy-beans (p. 19). (6) Effect of using benzine in place of ether in solvent extraction of soy-bean oil. The best moisture content is 7.5% to 12.5% (p. 20). (7) Substitution of vacuum drying for open air drying in removing moisture. Shows that the smaller the quantity of moisture contained in the bean, the greater the yield of oil, provided that the oil is protected from oxidation (p. 22). (8) Effect of different solvents on oil extraction: Carbon bisulphide (flammable and expensive), ether (flammable and expensive), benzine (boiling point 75°C), carbon tetra chloride [tetrachloride]. (9) Separation / distillation of benzine from oil solution (p. 34).

(10) Chemical composition of "soy bean meal" from which the hull and oil have been removed (p. 42). (11) Composition of carbohydrates or saccharo-colloids, based on S. Yukawa (p. 43). (12) Composition of para-galacto-araban / gummy substances in 9 varieties (p. 44-45). (13) Percentage of water-extractable substances and reducing sugars in flattened and powdered soy-beans (p. 46-47). (14) Sugars in soy-beans (p. 48). (15) Proteids and soluble carbohydrates in soy-beans (p. 49). (16) Effect of acetic acid in retarding dissolution of the globulins (p. 50). (17-18) Dissolving power of alkaline reagents on proteids in bean meal (p. 54-56). (19) Effect of reagent on plasticity and coloration of proteids (p. 56).

(20-22) Amount of proteid extracted in 3 consecutive extractions, or with pressure (p. 63-65). (23) Effect of 4 consecutive washings in removal of ash (p. 66, 68). (24-26) Percentage of proteid extracted with sodium sulfite after 1 or 2 hours (p. 70-71). (27) Concentration of sodium sulfite, mark of plasticity [rating], and color of precipitate (p. 73). (28) Relation between time of extraction and yield of nitrogen and proteid (p. 74). (29-30). Yield of proteid with water or sodium sulfite and 5 or 6 consecutive extractions (p. 76).

(31) Test to maximize yield of proteid using sodium sulphite solvent; the weight of the solution must be 16 times that of the meal, and the yield will be 52.20 (p. 78).

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(32) Effect of adding acetic acid on yield (p. 79). (32-33). Effect of caustic soda (sodium hydroxide) on percentage of proteid extracted (p. 81) (34-37) Relation between time of extraction and yield of proteid using caustic soda (p. 82-83). (38) Volume of caustic soda consumed by different volumes of bean meal solution (p. 83). (39) Volume of caustic soda solution needed in three extraction processes: water, sodium sulphite, or alkali (p. 85).

(40) Extraction with magnesium sulphate for 1, 2, or 3 hours (p. 90). (41) Percentage of proteids precipitated by different precipitants: "isolated proteid," "glutinizing chemicals" (p. 95) (42). Effects of sulphurous acid, formaldehyde, and formalin (p. 96). (43) Effect of different precipitants on quality of precipitate; "sulphurous acid gives proteid of the whitest and best quality, and most suitable for the manufacture of plastic products" (p. 100). (44) Yields of proteid with different volumes of sulphurous acid; all yields are very unsatisfactory (p. 103). (45-47) Effect of adding sulfur dioxide to sulphurous acid at various concentrations: remarkable increase in yield (p. 104-06). (48-51) Precipitation of water extracted protein using acetic acid (p. 107-10). (52-55) Effect sulphuric acid for precipitation of proteids (p. 111-14). (56-57) Effect heating on yield of proteids (p. 116-17).

Note: Horvath (1937) states: "The extraction of protein from soybean meal, its subsequent precipitation and properties, as well as its industrial applications have been extensively studied by S. Satow, and the results published (in English) in 1921-23 in two voluminous reports [*Technology Reports, Tohoku Imperial University* (Japan): 2(2) and 3(4)]. These reports continue to serve as an unsurpassed source of information on this subject, and a number of discoveries during the last 15 years can be traced to the researches of Satow." Horvath then summarizes many of Satow's key findings. Address: Kôgakuhakushi.

2395. Waksman, Selman A. 1921. On the preparation of a soluble protein extract from soy beans. *Proceedings of the Society for Experimental Biology and Medicine* 18(1):219-20. Oct. (Chem. Abst. 15:3692).

• ***Summary:*** "This extract can be very cheaply prepared and it may take the place, when properly modified by the addition of necessary salts, of meat extract and other digested meats in infant feeding and, since the soy bean contains very little carbohydrate and even the small amounts present are used up by the fungus, in the process of development, for energy purposes, the extract is practically free from sugars and can be introduced into diabetic cookery." Address: New Jersey Agric. Exp. Station, New Brunswick, New Jersey.

2396. *San Francisco Chronicle.* 1921. Chronicle shipping news. Nov. 23. p. 20

• ***Summary:*** The section titled "Persia Maru here" begins: "After an uneventful voyage of thirty days from Hongkong via Dairen, Kobe, Yokohama [Japan] and Honolulu [Hawaii], the T.K.K. liner Persia Maru, Captain K. Shinji, arrived here yesterday with 162 passengers and 1,924 tons of cargo."

"Cargo on the Persia included shipments of gunnies [gunny sacks?], matting, oil, raw silk, rice, silk goods, shoyu, tea, tin and general merchandise."

Note: The T.K.K., *Toyo Kisen Kaisha*, of Yokohama, Japan (also known as the Oriental Steamship Company and as the *Toyo Kisen Kabushiki Kaisha*) was founded in about 1896 or 1897 with the goal of entering the transpacific steamship trade. Other steamships owned at this time were the *Shinyo Maru* and *Taiyo Maru*. They carried both passenger and freight.

2397. Oniki, M. 1921. Rice for manufacturing soy. *U.S. Patent* 1,400,374. Dec. 13. 5 p. Application filed 18 April 1918.

• ***Summary:*** A culture of *Aspergillus Onikii* on a cereal medium is treated with a mixture of steamed beans and roasted wheat, and formed into soy, the liquid being subsequently separated from the solid residue and sterilized and clarified.

Illustrations (line drawings) show: (1) Microscopical view of the conidiakeria. (2) Like view of sterigmas growing upon the head of the conidiakeria. (3) Like view of conidiophore fully ripened. (4) Side elevation of an approximately natural sized grains of rice planted with the *Aspergillus-onikii*. (5) Different germinating stages of the conidiophore. (6) Longitudinal sectional elevation of the conidiophore, already ripened. (7) Side elevation of the conidiophore, shown on a smaller scale. (8) Over-ripened conidiophore. (9) Detailed view of the primary sterigma bearing 4 secondary sterigmas thereon. (10) Detailed view of the conidia. (11) Young, enlarged and partly deformed mycelium. Address: Fukuoka-ken, Japan.

2398. Hotta, I. 1921. Shôyu jôzô-jô ni okeru jikken kenkyû [Some experiments in shoyu brewing. I-XI.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 16(11):21-23; 16(12):18-22; 17(2):20-22; 17(4):20-24; 17(5):35-38; 17(7):20-27; 17(8):16-23; 17(9):35-41; 17(10):16-17; 17(11):31-35; 17(12):22-25. [Jap]

2399. Kinoshita, Asakichi. 1921. Shôyu no kabi-dome- zai ni tsuite [Preservatives used to stop mold growth on shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 16(7):23-24. [Jap]
Address: Jozo Shikensho Gishi, Japan.

2400. Kellogg, John Harvey. 1921. The new dietetics: What to eat and how. A guide to scientific feeding in health and disease. Battle Creek, Michigan: The Modern Medicine Publishing Co. 933 p. Illust. Index. 24 cm.

• ***Summary:*** This is the first edition of this important

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book; subsequent editions were published in 1923 and 1927. Contents: Foods: Food Principles. The digestive process: The liver, mastication, hunger. Metabolism: The energy of food–the calory [calorie]. The physiology of eating: The protein ration, fats, carbohydrates–starches and sugars, food salts, vitamins, cellulose, the acids of foods. Wholesome foods: Cereals (incl. wheat bran), vegetables, green vegetables, root vegetables, vegetable or garden fruits (incl. tomato, cucumber, eggplant, watermelon, muskmelon, squash, vegetable marrow, pumpkin, chayote), legumes (incl. the adsuki [azuki] bean, the Hahto bean, the soy bean, composition of the soy bean, soy bean milk, to fu [tofu], soy sauce, soy bean sprouts), fruits, nuts (incl. the ground nut, the peanut, peanut butter, flour from the peanut, peanut milk, malted nuts). Animal foods. Condiments. Tea and coffee (They are poisonous drugs, in 1921 the U.S. per capita consumption increased to 12 lb/year, chronic caffein [caffeine] poisoning, coffee raises blood pressure, tea, coffee and uric acid, coffee cripples the liver, other coffee poisons, some poisonous effects of tea and coffee, soda fountain drinks containing caffein, coffee substitutes {most consist of cereals plus molasses, roasted until part of the starch and sugar are caramelized; the roasting process makes them unwholesome}), tobacco. Ptomains–Poisoned foods. Water drinking. Medical dietetics: Introduction, scientific tests of the nutritive functions, regimens and dietaries, diet in disorders of the digestive organs, diet in disorders of nutrition, diet in joint diseases (rheumatism, arthritis, gout), diet in disease of the heart and blood vessels–Cardio-vascular-renal diseases, diet in disorders of the nervous system, diet in disorders of the urinary organs, diet in diseases of women, diet in management of fevers, diet in chronic infectious diseases, diet in diseases of the skin, diet in surgical cases, diet in diseases of the eye, ear, nose, and throat, infant feeding, the rice regimen. The world's foods: Making the bill of fare.

A table (p. 138) titled "Vegetable fats" lists "The principal sources of edible vegetable fats..." including: Cocoanut meats 36%, corn 5%, hemp seed 32%, palm nut 72%, peanut 52%, sesame seed 51%, soy bean 20%

A table (p. 166-67) lists the 7 main food salts [minerals] found in various foods, including soy beans, gluten (pure, 40%, or 20%), and peanuts.

Table XII (p. 170-71) lists foods rich in iron. Columns (a) shows the grains of iron in one ounce, and column (b) shows the number of ounces required to supply one day's ration of iron. Includes (in descending order of iron content): Savora (yeast extract), Gluten–pure, gluten–40%, egg yolk, dried lentils, wheat bran, soy beans, Protose, Brose (oatmeal, corn meal, bran), Nuttolene, Graham Flour, tenderloin meat, Graham bread, Zante currants.

Table XIV (p. 182) lists foods rich in lime [calcium] in descending order of lime content, with the same two columns as table XII. Includes: Cheese, yogurt cheese, mustard greens, linseed meal, turnip tops, soy beans.

Page 183 discusses "The acids and bases of foods–The reaction balance. As pointed out by Bunge many years ago, and as further shown by an extensive research conducted by Sherman of Columbia University, foodstuffs differ in relation to their acid and basic contents... The waste products of the body are predominantly acid, consequently it is desirable that the foodstuffs should be predominantly basic... The predominance of acids gives rise to a condition known as acidosis (p. 719), and care must be taken to protect the body from injuries which result from this condition... Meats of all sorts, especially the lean meats, tend to acidify the tissue fluids to a marked degree. Eggs tend in the same direction, though less strongly than do meats."

In the chapter titled "Diet in disorders of the digestive organs," pages 654-55 discuss soy flour, yeast extract (Savita, Marmite–which is a very useful source of iron and vitamins), Malted Nuts, 20% gluten meal, and the "Gluten-feeding method."

In the section on diabetes, page 703 gives a recipe for gluten bread. Gluten is also mentioned on p. 718. The section titled "Diet for acidosis" (p. 719) begins: "The blood and tissue fluids are slightly alkaline in reaction. This slight degree of alkalinity is essential to the maintenance of health. When, through disordered metabolism, the body becomes charged with an excess of acids, so that the alkalinity of the blood and tissues is diminished, the result is a condition known as acidosis. Among the symptoms due to acidosis may be mentioned nervousness, mental depression, mental confusion, drowsiness, convulsions, and coma. Air hunger with shortness of breath is one of the early symptoms of acidosis. This condition is most pronounced in advanced cases of diabetes and is encouraged by a meat diet, particularly by the use of an excess of fats. Fasting persons always show a condition of acidosis after fasting for a day or two. Professor Fischer believes that this preponderance of acids, or chronic acidosis, is the exciting cause of Bright's disease."

The section on diet and heart disease notes (p. 738-39): The "great frequency with which arteriosclerosis is encountered in modern times is the result of the increase in flesh eating which in recent years has been very marked in all civilized countries." It "has become the universal custom among practical physicians to exclude meats, meat extracts, and broths of all sorts from the diet of patients suffering from arteriosclerosis, as the most efficient means of checking the degeneration of the arteries..." Foods containing uric acid, plus coffee and tea, should be discarded. Bran, agar, paraffin oil, and an enema should be used freely. Address: M.D., LL.D., F.A.C.S., Superintendent of the Battle Creek Sanitarium, Battle Creek, Michigan.

2401. Kellogg, John Harvey. 1921. The soy bean. Composition of the soy bean (Document part). In: J.H.

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Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 299-302. 24 cm.

• ***Summary:*** In the chapter on "Legumes," the section titled "The Soy Bean" (p. 315-21) has the following contents: Introduction and history (incl. a long extract from a publication by W.J. Morse (1918), and discussion of soy beans and diabetic diets). Composition of the soy bean (according to Bailey and Street 1915). Soy bean milk. To fu (tofu). Soy sauce. Soy bean sprouts. Composition of soy bean sprouts compared with mung bean sprouts.

The section begins: "The soy bean has been used in China since 2838 B.C. It was introduced into France in 1740, England 1790, and this country not until a century later. This bean requires a long season and does best in the Southern states on this account. It is quite hardy, however, and some varieties have been found which mature as far north as Canada.

"The soy is the best of all beans. It differs decidedly from other beans in its composition. It contains 40% protein, practically no starch, and nearly 20 per cent fat, giving it characteristics approaching those of the peanut more closely than those of ordinary beans.

"More than one thousand varieties have now been tested by the U.S. Department of Agriculture. Twenty varieties are at the present time being handled by growers and seedsmen in this country. The green and yellow varieties are best adapted for food. The black and brown are chiefly for forage.

"In China, the soy bean is very little used in the manner in which beans are used in this country. Instead, according to W.J. Morse [1918], of the U.S. Department of Agriculture, 'the beans are soaked in water and roasted, the product being eaten after the manner of roasted peanuts.'" Dr. Kellogg then quotes two passages from Morse; one about roasted soybeans, and the other about soy beans which, when three-fourths or more grown, can be used as "a most palatable and nutritious green vegetable."

"This bean not only contains a large amount of protein, more than is found in the same weight of beef, but its protein is of a particularly fine quality. Heretofore, the casein of milk has enjoyed a unique reputation as a protein of finest quality, but now 'the protein of the soy bean appears to be as valuable as the casein of milk.' In view of the shortage of milk, which is likely to increase, it is gratifying to know that a protein has been discovered equally valuable as casein, and one which may be produced in unlimited quantities.

"For promotion of growth, it is not only necessary for the food to contain 'complete' protein in proper amount, but it must also contain a sufficiency of the two vitamins, designated as fat-soluble A and water-soluble B. Osborne and Mendel demonstrated that the soy bean contains an adequate supply of both fat-soluble and of 'water-soluble vitamins,' in which respect it is superior to all seeds heretofore examined, with the possible exception of flaxseed and millet.

"The soy bean is destined to become one of the great food staples, not only of this country but of the world. It is capable not only of supplying the essentials for growth and maintenance, but may also act as a complement to other imperfect foods, such as corn for example, in combination with which it has shown most excellent experimental results.

Composition of the soybean: A table shows the composition of the soy bean, compiled from various sources. "The above analysis clearly shows the soy bean to be a most remarkable food product. Its composition is in some respects more like that of a nut than that of other legumes. In this respect it very much resembles the peanut. Its protein content, nearly 40 per cent, is higher than that of any other foodstuff. Even lean meat affords but half as much. Its high percentage of fat gives it a very high food value and makes it a rich source of oil for various industrial purposes as well as for food.

"The soy fills the place of meat as well as milk in the dietary of many millions of sturdy Orientals. Since the composition of the soy has been understood, it has been much used as a food for diabetics. It is evident from the above [table] that it contains little which can be objectionable in diabetes. The small amount of dextrin and sugar may be easily removed, when necessary, by parboiling.

"Experiments by Holmes [1920], of the office of Home Economics, U.S. Department of Agriculture, have shown that the well cooked soy bean (cooked for two hours under steam pressure) is very easily digestible, and is an exceptionally wholesome article of food, superior to most other legumes.

"The soy bean may not become really popular until the pressure cooker comes into general use, which may be some time. In the meantime, while the patent pressure cooker is coming, any resourceful housewife may improvise a perfectly good and satisfactory pressure cooker from inexpensive materials close at hand. Get a stone jug or jar that can be hermetically sealed. The little stone jars in which apple butter is sometimes sold are well adapted to the purpose. After soaking the beans over night put [them] in the jug with a little salt and enough water to cover, seal up tight and secure the cover well, remembering that the pressure will be from within. Set the jug in a saturated solution of common salt, place over a smart fire and boil for one to two hours. The salt solution boils at a temperature of 220°F. and so the beans are exposed to a higher temperature than in ordinary boiling... Cooking at the higher temperature not only softens the cellulose and so renders the foodstuffs tender, but greatly improves the flavor.

Note: This is the earliest document seen (Sept. 1996) that uses the term "pressure cooker" in connection with soy beans. Address: Battle Creek, Michigan.

2402. Kellogg, John Harvey. 1921. Soy sauce (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine

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Publishing Co. 950 p. See p. 304. 24 cm.
• ***Summary:*** "'Soy or shoyu sauce is a dark brown liquid prepared from a mixture of cooked and ground soy beans, roasted and pulverized wheat (Barley is sometimes used), salt, and water. This mass is inoculated with a culture known as rice ferment (*Aspergillus oryzae*) and left in cakes to ferment from six months to a year, or sometimes longer.

"In odor and taste this sauce suggests a good quality of meat extract, though perhaps more salty and a trifle more pungent." Address: Battle Creek, Michigan.

2403. Rouest, Leon. 1921. Le soja et son lait végétal: Applications agricoles et industrielles [The soybean and its vegetable milk. Agricultural and industrial applications]. Carcassone (Aude), France: Lucie-Grazaille. 157 p. Illust. No index. 25 cm. [42 ref. Fre]
• ***Summary:*** Contents: Preface, by Louis Forest. Introduction–What is soya? 1. History of the dissemination of soya: In 1712 the naturalist Kaempfer introduced soya, introduction of soya to France and Europe, soya is cultivated in Austria in 1875 by Prof. Haberlandt, soya is the object of many trials in France from 1876 to 1881, the study and acclimatization of soya becomes widespread, the causes of setbacks in the cultivation of soya.

2. Cultivation of soya: Botanical characteristics of soya, the varieties of soya, Chinese varieties and soya in China, Japanese varieties and soya in Japan, American varieties and soya in America (varieties: Mammoth, Hollybrook, Ito San, Guelph, Haberlandt, Medium Yellow, Wilson, Peking, Tokio, Mandchu [Manchu], Black Eyebrow, Barchet), soya in Europe–France and Italy, seven varieties of soya tested in France, soya in the experimental farms for new crops (*les Fermes Expérimentales de Néoculture;* Many varieties from the USA were tested, including Manchu, Wilson Five, Haberlandt, Tokio, Virginia, Hato [Hahto], Early Medium Green), the cultural and geographical appearance of soya, its production worldwide, planting soybeans, heat units (*degré thermique*) and the germination of soya, the importance of spacing between plants, number of seeds per hectare, soya during its vegetative stage, the vegetation of soya compared with that of the haricot at high altitudes, rolling the seeds and types of crop maintenance, growth of the plant, acclimatization, the enemies of soya.

3. Composition of the soybean plant. 4. Soya forage: Green soya forage, soya hay, soya as a plant for soil improvement. 5. Harvesting soybean seeds: Maturity of the seed, harvesting soya, the food value and composition of soya seeds. 6. Soya as an oil plant: Richness in oil, defatted soybean cake, imports and exports of soya cake from 1915 to 1919 (Imports to: Sweden, Canada, Korea, Japan, Formosa. Exports from: England, China, Korea), production of soya cake from 1915 to 1919 (Denmark, Great Britain and Ireland, Netherlands, Sweden, USA, Japan, Formosa, Korea, Java and Madura).

7. Soymilk: Its manufacture (in 1910-1913 Li Yu-ying installed a factory named "La Caséo-Sojaïne" at Vallées [Asnière-Seine] near Paris. Rouest visited this factory and saw them make soymilk, which was filtered using a filter-press resembling those used in sugar refineries), its properties and composition, composition compared to other types of milk, powdered soymilk, soymilk in the nursing and feeding of animals, soymilk related to tuberculosis in animals and in humans, soymilk would allow the milk and butter from animals to be reserved exclusively for human foods and could be used for raising many piglets, manufacture of non-dairy milk in Canada (a factory is now under construction). 8. Soya in Industry: Soymilk and soy casein, Sojalithe (like Galalithe).

9. Soya in human nutrition: Soy flour and its applications (incl. Li Yu-ying's usine de la Caséo-Sojaïne, and bread made of soya and wheat), soya compared to dry legumes (such as lentils, haricots, peas, beans), soya used as a legume (whole soybeans), the food value of soy sprouts, preserves and confections made from soya, soya chocolate and coffee, the amount of nutrients produced by soya and other crops from a unit of land, a meal of soya served in France (prepared and served some years ago by Li Yu-ying's soyfoods plant La Caséo-Sojaïne for the major print media, the medical press, the National Society for Acclimatization, etc.; it consisted of 2 soups [one with 'soya meat' and one with soymilk], 2 entrees [an omelet with smoked soya ham, and fritters stuffed with soy meat], soy [actually mung bean, *lüdou*] sprouts in a salad and sauteed, 3 desserts [soya cake, biscuits, and confection], and soy coffee; a recipe for each is given; soya meat is smoked tofu).

10. Use of soya in East Asia: Tofu (*fromage végétal*), soy-based condiments (such as natto [Ping ming Natto and Tokio-Natto], miso, Chinese miso or tao-tjiung [doujiang], and shoyu [Soyou or Schozou]), making soy sauce in Kwantung, China (from Groff).

11. The opinions of several authors concerning soya (from the French medical and hygienic press): Introduction–E. Maurel. Soya and soy bread in diabetic diets–Dr. Dujardin-Beaumetz, Dr. Bloch, Dr. J. Le Goff, L. Beille, M. Gautier. Soya used as a bean–M. Gautier. Soy sauce used in place of meat extracts. The state of cheese. The popularization of soya in Europe–A. Paillieux.

Conclusions: The influence of cultural technology on variation. Appendix: Advice to experimenters on the acclimatization of soya in France. Other methods of obtaining early-maturing soybeans.

The author concludes (p. 140): We must make every effort to acclimatize soya in France. We must develop the will and learn from past mistakes. Most soybean varieties now available in France are too late. We must get varieties from Manchuria, whose climate is similar to that of southeastern France, and from the northeastern USA. It is urgent that, in the near future, we start a Soybean Experiment

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Station to take responsibility for this work. The setbacks since 1830 can be overcome by present science and genetics. The first step is to introduce better varieties.

On the last page is a full-page advertisement for various seeds sold by Mr. Rouest, including 30 varieties of soybeans (*Soja hispida*); the names of the individual varieties are not given.

Illustrations show: (1) A soy bean plant with many pods (title page). (2) Flowers and pods of the soy bean plant (p. 29). (3) Soy pods and beans (p. 30). (4) A soy bean plant drawn by a Chinese artist (p. 32, from Li Yu-ying). (5) Pods of the Hato [Hahto] variety of soy bean (p. 51). (6) Germinating soy bean seeds (p. 54, from Li Yu-ying). (7) Soy bean roots with nodules (from a photo by Dr. Le Goff; p. 73). (8) Soy bean pods, opened to show 3 beans in each (p. 82).

Tables show: (1) Production of soybeans by color in China in 1916 and 1917 (p. 35, in quintals, from the International Yearbook of Rome, Vol. 1, 1919): In 1917: Yellow 4,069,822. Other 953,012. Green 181,190. White 71,234. Black 40,066. Total: 5,315,324.

(2) Percentage composition of various oilseed cakes (p. 95, from Kellner). (3) Imports and exports of soybean cake, by country, from 1915 to 1919 (in quintals, p. 96). Imports are given for Sweden, Canada, Korea (from 1916), Japan, and Formosa [Taiwan]. Exports are given for England (6 quintals in 1915), China (including Manchuria, by far the biggest exporter, from 1916), and Korea (from 1916).

(4) Production of soybean cakes, by country, from 1915 to 1919 (p. 97, in quintals, based on statistics from the International Bureau of Agriculture, Rome, 1919). In descending order of production in 1915 (in quintals): Japan 5,439,337. Korea 3,209,238. Great Britain and Ireland: 1,513,059. Denmark 921,782. Java and Madura 503,025. Note that China is not listed. Netherlands 144,523. Formosa [Taiwan] 62,131. Sweden 1,733. USA 0, but 501,822 in 1916.

Note: When Alsace was occupied by the Germans during World War I, the Rouest family moved from Alsace to Paris. Mr. Rouest brought soybeans from Africa and adapted them to France. He paid for the publication of this book. Address: Directeur des Fermes Expérimentales de Néoculture, Carcassonne (Aude), France.

2404. **Product Name:** Shoyu.
Manufacturer's Name: Kinka Shoyu Jozo Moto (Kinka Soy Sauce Brewery).
Manufacturer's Address: 219 Jackson St., Los Angeles, California. Phone: Main 5650.
Date of Introduction: 1922, January.
New Product–Documentation: The Japanese American Directory. 1922. p. 335. Ad (¼ page). This business is at the same address as Yasuhara Shoyu and is apparently owned by the same man, Yasuhara Kinzo (or Kanezo or Kei). Phone: Main 5650. Home 11938 (the same phone number as Yasuhara Shoyu). Note: In this same boxed ad, Mr. Yasuhara advertises his other enterprises. He is a wholesaler and retailer of Japanese and western foods, and also runs the Yasuhara Hotel at 235 Jackson St.

2405. Noda Shoyu K.K. 1922. Tenka ippin. Saijô shôyu [The best under heaven. The No. 1 shoyu (Ad)]. In: Nichibei Shinbun-sha. 1922. *Japanese-American Directory* (*Nichibei Jushoroku*). Page 19 near front. [Jap]
• ***Summary:*** Ad (half page). All in Japanese. Near the center is a photo of a large (18 liter = 1 to) keg of Kikkoman shoyu, with bamboo hoops, tied with rice-straw rope. Address: Chiba-ken (prefecture), Noda-chô (machi=town) [Japan].

2406. *USDA Bureau of Plant Industry, Inventory*.1922. Seeds and plants imported by the Office of Foreign Seed and Plant Introduction during the period from January 1 to March 31, 1917. Nos. 43890 to 44445. No. 50. 83 p. Jan. 30.
• ***Summary:*** Soy bean introductions: *Soja max* (L.) Piper. Fabaceæ. (*Glycine hispida* Maxim.)

"44203-44238. From China. Collected by Mr. Frank N. Meyer, Agricultural Explorer for the Department of Agriculture. Received February 9, 1917.

"44209-44214. 'From Malanyu, Chihli Province, China, November 25, 1916.'

"44209. '(No. 2337a.) *Huang tou*, meaning "yellow bean." An early-maturing medium-sized yellow variety of soy bean, primarily used to make bean curd.' (*Meyer.*)

"44210. '(No. 2338a.) *Huang tou*, meaning "yellow bean." A late-maturing medium-sized yellow variety used for oil production and in making bean curd and sauce.' (*Meyer.*)

"44211. '(No. 2339a.) *Ta ch'ing tou*, meaning "large green bean." A pale-green variety, used in bean curd and sauce manufacture.' (*Meyer.*)

"44212. '(No. 2340a.) *Ch'ing tou*, meaning "green bean." A green variety, often used as an appetizer with meals when slightly sprouted and salted or when fried and salted.' (*Meyer.*)

"44213. '(No. 2341a.) *Ch'ing tou*, meaning "green bean." A green variety, slightly different from No. 2340a [S.P.I. No. 44212]. Used as an appetizer with meals when slightly sprouted and salted or when fried and salted.' (*Meyer.*)

"44214. '(No. 2342a.) *Hei tou*, meaning "green bean." A small, shining, black soy bean, generally used, when boiled, as a food for hard-working horses, mules, donkeys, and oxen, mixed with chopped straw and kaoliang grains.' (*Meyer.*)" Address: Washington, DC.

2407. Oshima, Kokichi. 1922. Promising development of soya bean sauce: Studies on the protease of the *Aspergillus oryzae-flavus* group and its role in shoyu brewing. *American Food Journal* 17(1):30-31. Jan. [10 ref]

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• ***Summary:*** "Editor's note.–The author of this article has been engaged for some time in experimental work in the laboratories of the Pathological Division of the Bureau of Animal Industry and the Microbiological Laboratory of the Bureau of Chemistry, U.S. Department of Agriculture. He is studying in Europe at the present."

The article begins: "Shoyu (soya bean sauce) is a most important seasoning in Japan and China, where it is widely used instead of vegetable or meat extract and salt. It is a fermented product made from soya beans, wheat and salt which are acted upon by *Aspergillus flavus* and related forms. The finished product contains about 20 per cent sodium chloride, 5 per cent glucose and 3 per cent protein cleavage products. Being highly palatable, nutritious and cheap, it will probably be used more and more extensively in many countries."

Note. This is the earliest English-language document seen (April 2012) that uses the term "soya bean sauce" to refer to soy sauce.

From "analysis of 'moromi' at different ages and from the fact that *Aspergillus flavus* and related forms which are used in 'shoyu-koji' preparation, produce a very strong proteolytic enzyme, it may be assumed that the protease from such *Aspergilli* is the most important one."

A table (p. 30) shows three different species of *Aspergillus* and their characteristics: *Aspergillus oryzae*. Amylase production: strong. Growth: quick. *Aspergillus effusus*. Amylase production: very weak. Growth: slow. *Aspergillus parasiticus*. Amylase production: very weak. Growth: quickest.

"Influence of cooking on glycinin digestibility [by protease enzymes]: In 'shoyu' brewing soya beans are generally cooked 2 to 3 hours in open kettles. Cooking in the autoclave [pressure cooker] at 15 pounds pressure for 1½ to 2 hours is coming into vogue."

"Summary: 1. Proteolytic enzymes prepared from *Aspergillus oryzaeflavus* group can digest native proteins such as beef muscle, egg white, glycinin, edestin and casein as well as paoepton [peptone ?] with the production of amino acids... The glycinin is favored by the presence of sodium of sodium chloride because the salt keeps the protein in solution..."

Acknowledgment: "The author is greatly indebted... to Drs. William N. Berg, Margaret B. Church and Charles Thom.

"Many thanks are due to Dr. Jokichi Takamine, in whose laboratory many practical experiments were made on Taka-diastase." Address: Was at USDA Bureau of Chemistry Microbiological Lab. Now studying in Europe. By 23 Feb. 1923 he is in Sapporo, Japan.

2408. Adolph, William Henry. 1922. How China uses the soy bean as food. *J. of Home Economics* 14(2):63-69. Feb. [11 ref. Eng]

• ***Summary:*** This article is quite similar to a 1920 article by Adolph and Kiang titled "The nutritive value of soy bean products," published in *The National Medical Journal of China* (6:40-49). It combines a review of the literature with the author's personal experience in China and a summary of some studies conducted in the Shantung Christian University laboratory on soy bean products. "The soy bean is probably the most universal article in the Chinese dietary. When the Chinese finds it necessary to distinguish between the soy bean and other varieties of bean, he refers to the soy bean as the *yellow* bean (*hwang dou*), and this is the name most common throughout the orient... The use of the soybean in China dates back to the beginning of China's agricultural age under the Emperor Shen Nung. It is mentioned in the *Ben Tsao Gang Mu*, the ancient materia medica, written by Shen Nung himself in the year 2838 B.C."

"The soy bean as such is not very largely used as food in China, but it is the source of a number of products. It would be impossible to make a complete list of all these. The best known and the most important are the bean milk, bean curd, bean sauce (soy), bean sprouts, bean oil, and bean cake. The student of nutrition is particularly interested in the bean curd or 'bean cheese.'" There are four agents employed in China to make soy bean curd, often called Chinese cheese. "These are: (1) *lu*, the solid residue prepared by the evaporation of salt bittern; (2) gypsum; (3) *swan giang*, the soured bean milk whey remaining from the previous coagulation of bean curd; and (4) vinegar.

"In spite of the tremendous consumption of bean curd in China, the industry does not center in large factories, but myriads of small shops, as numerous as our own candy stores and fruit stands, make and supply the daily needs in bean curd for the millions throughout the Chinese republic. Every small town has at least one bean curd shop. Good bean curd must be manufactured fresh every day. The coagulated curd is white in color and resembles our cottage cheese. After coagulation it is pressed between cloths, cut up into squares or moulded into cakes about five inches in diameter and an inch thick, and sold to the Chinese housewife. A cake of the size indicated costs approximately $0.01 in U.S. currency. The cakes of bean curd may also be salted and dried, yielding a product which resembles our cream cheese.

"Tradition says that the manufacture of soy bean curd was originated in China in 164 B.C. during the reign of the Emperor Han Wen, by a man named Liu An, the duke of Hwai Nan. The common Chinese name for soy bean curd is *dou fu*, often romanized *tofu;* and the classical name is *li chi*, probably meaning 'the morning prayer.' It is interesting to note that in China at the present day the bean curd is made in the early hours of the morning, and sold at daybreak.

"Liu An was a great friend of the Buddhist monks, and it seems quite probable that he invented this bean curd in order to provide a change or delicacy to break the monotony of the monastic ration. As a matter of fact, bean curd is a real

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delicacy if carefully made and well cooked. Chinese who are connoisseurs on the subject assert that when so prepared it has the taste of pig's brain. Americans and Europeans eating Chinese food often eat carefully prepared bean curd thinking it is pork. With sugar it produces a dish like custard. Prepared with salt it resembles scrambled eggs.

"The Tsinan variety of bean curd is made exclusively with the use of *lu* as a coagulating agent. In the following table the analyses of bean curd are compared with that of common cottage cheese."

Table II gives an analysis of both fresh and dried soy bean curd, and compares them with cottage cheese. Table III gives an analysis of the ash of soy bean curd and soybeans.

Soy bean milk is discussed and Table IV gives its composition (4.22% protein, 1.87% fat), plus that of cow's milk (3.3% protein, 4.0% fat) and bean milk whey.

"Soy bean sprouts. Soy beans soaked in water and allowed to sprout are much relished as a vegetable by the Chinese. Very considerable quantities of soy bean are used in this way. The sprouts are usually cooked in oil, and produce a dish which appeals very strongly to the taste of Americans in China. It is strongly recommended for use as a vegetable on the American table." Table V shows that soy sprouts contain 5.7% protein and 0.8% fat.

"The soy bean cake is the press-cake which remains behind after the removal of the soy bean oil in the press mill. The orient has used soy bean cake for cattle feed and for fertilizer. It is of note that it contains a high percentage of nitrogen, but, economical though the Chinese have been, they do not seem to have attempted to convert it into a human food. Only recently has it been very seriously suggested that both in the occident and in the orient this rich nitrogenous material should be converted into some form of food for human consumption. During the north China famine of 1920-1921, the soy bean cake was actually used in the starvation diets to bolster up a failing food supply."

"Discussion: The Chinese people make practically no use of dairy products, and the bulk of the people consume very meagre amounts of meat. Yet in spite of this they have lived for centuries on what appears to be a remarkable well-balanced diet by the use of the soy bean...

"A number of interesting examples are found in China of the use of bean curd as an agent for growth. One of the writer's Chinese colleagues, whose home is in Anking, has observed that dealers in birds employ bean curd as the sole food for infant birds. The birds are robbed away from their nests immediately after they are hatched, and are then fed bean curd to tide over the infantile period till able to feed themselves. Still more interesting is the case of the true Buddhist monk who from birth is consecrated to the priesthood, and is carried through the period of childhood growth on a rather heavy diet of bean curd... The country monastic diet is noted for its high content of soy bean products...

"The Chinese coolie... in spite of the scanty intake of meat and the constant exposure to overwhelming sources of infection, still does possess a wonderful resistance. The diet of the average coolie contains a surprisingly large amount of beans and bean products...

"A common saying in some parts of China terms 'bean milk the poor man's milk, the bean curd the poor man's meat.' This simply indicates the extent to which bean curd has been incorporated into the diet of the Chinese...

"Soy bean propagandists have been especially enthusiastic over the introduction of soy bean curd into America. Dr. Yamei Kin, a Chinese dietitian, has become particularly well-known as an exponent of bean curd on her visits to the United States."

Note 1. This is the earliest document seen (Feb. 2004) that uses the terms "poor man's meat," or *li chi*, or *dou fu*, or "bean cheese" or "Chinese cheese" to refer to tofu. Use of the word "bean cheese" is confusing, since it could also refer to fermented tofu (also called "Chinese cheese" or "bean cake").

Note 2. This is the earliest document seen (Aug. 2003) that uses the term "poor man's milk" to refer to soymilk. Address: Assoc. Prof. of Chemistry, Shantung Christian Univ., China.

2409. *San Francisco Chronicle*.1922. Chronicle shipping news. March 11. p. 19.

• ***Summary:*** The section titled "Shipping notes" states: "The peanut market was flooded yesterday with the arrival of 2,600 bags of peanuts from the Orient on the steamer Melville Dollar. Other items of the cargo were 1,130 bags of linseed cake, 2,900 bundles of rattan, and camphor, soya beans and dried fish.

"The Japanese steamer Hague Maru, arriving here from the Orient, brought 1,000 cases of tea and a miscellaneous cargo of oil, gum damar, soy [sauce], dried fish, bamboo ware and porcelain."

2410. Nishimura, Torazô; Kawakami, Tojiro. 1922. Shôyu jôzô-jô shiyo serareruru kôji-kin tane no hatsuiku ni yorite daizu oyobi komugi-chû ni ganyu serareruru kaku shu tanpakushitsu no ukeru henka [On the decomposition of protein in soybeans and wheat by the koji mold, *Aspergillus oryzae*, during shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 87. p. 527-46. March. [6 ref. Jap]

Address: Jozo Shikensho. 1. Gishi; 2. Gishu.

2411. Kirkman, Laura A. 1922. Efficient housekeeping: Chinese chop suey in the guest luncheon menu. *Los Angeles Times*. April 15. p. II8.

• ***Summary:*** One of the ingredients is "'Soye' (the Chinese Worcester sauce)." Recipes are given for both Chicken chop suey and Pork chop suey. The ingredients for each include "1

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tablespoon of soye."

"To adapt these recipes for our table without any of the real Chinese ingredients, simply drop the Chinese ingredients, use a few drops of Worcester sauce instead of soye:..."

2412. *USDA Bureau of Plant Industry, Inventory.*1922. Seeds and plants imported by the Office of Foreign Seed and Plant Introduction during the period from October 1 to December 31, 1917. Nos. 45221 to 45704. No. 53. 86 p. April 17.
• ***Summary:*** Soy bean introductions: *Soja max* (L.) Piper. Fabaceæ. (*Glycine hispida* Maxim.)

"45263-45320. From China. Seeds collected by Mr. Frank N. Meyer, Agricultural Explorer for the Department of Agriculture. Received October 6, 1917. Quoted notes by Mr. Meyer.

"45269-45295. [Note: these numbers are nearly all said to be late-ripening varieties of soy beans; they come from a region greatly resembling in climate the Gulf States (southern parts). They should therefore be tested in districts where cotton and rice are grown.]

"45269. '(No. 2401a. Hankow, Hupeh Province. March 7, 1917.) *Huang tou* (yellow bean). A small to medium-sized, yellow soy bean, used mostly as a human food in the form of bean curd.'

"45270. '(No. 2403a. Changsha, Hunan Province. May 16, 1917.) *Huang tou.* A small to medium sized, yellow soy bean.'

"45271. '(No. 2403a. Changsha, Hunan Province. May 16, 1917.) *Huang tou.* A small, yellow soy bean, used almost exclusively for bean-curd production.'

"45272. '(No. 2404a. Ichang, Hupeh Province. March 24, 1917.) *Huang tou.* A small, yellow soy bean, said to ripen in early August. Used like the preceding number.'

"45273. '(No. 2405a. Changsha, Hunan Province. May 16, 1917.) *Huang tou.* A small to medium-sized, yellow soy bean. Used like the preceding numbers.'

"45274. '(No. 2406a. Ichang, Hupeh Province. May 24, 1917.) *Huang tou.* A medium-sized, yellow soy bean with a dark hilum. Said to be a medium late ripener.'

"45275. '(No. 2407a. Ichang, Hupeh Province. March 24, 1917.) *Huang tou.* A large yellow soy bean.'

"45276. '(No. 2408a. Changsha, Hunan Province. May 16, 1917.) *Huang tou.* A medium-sized, yellow soy bean.'

"45277. '(No. 2409a. Ichang, Hupeh Province. March 24, 1917.) *Huang tou.* A very small variety of yellow soy bean.'

"45277. '(No. 2409a. Ichang, Hupeh Province. March 24, 1917.) *Huang tou.* A very small variety of yellow soy bean.'

"45278. '(2410a. Wuchang, Hupeh Province. March 9, 1917.) *Hsia huang tou* (small yellow bean). A very small variety of yellow soy bean.'

"45279. '(No. 2411a. Ichang, Hupeh Province. March 24, 1917.) *Huang tou.* A small, greenish yellow soy bean.'

"45280. '(No. 2412a. Ichang, Hupeh Province. March 24, 1917.) *Huang tou* A small, greenish yellow variety of soy bean, used almost entirely in bean-curd production.'

"45281. '(No. 2413a. Shuichaipang, Hupeh Province. April 2, 1917.) *Hsiao huang tou* (small yellow bean). An exceedingly small variety of yellowish soy bean, used in making bean curd.'

"45282. '(No. 2414a. Changsha, Hunan Province, May 12, 1917.) *T'ien ch'ing tou* (field green bean). A medium-large, pale-green variety of soy bean; rare. Eaten as a sweetmeat when roasted with sugar; it is then a very tasteful, wholesome and nourishing product.'

"45283. '(No. 2415a. Changsha, Hunan Province. May 16, 1917.) *Ch'ing tou.* (green bean). A dull pale-green variety of soy bean.'

"45284. '(No. 2416a. Changsha, Hunan Province. May 16, 1917.) *Ch'ing tou.* A small, green soy bean, often used as an appetizer with meals, when slightly sprouted, scalded, and salted. Also eaten as a fresh vegetable when having firm sprouts 3 inches long.'

"45285. '(No. 2417a. Ichang, Hupeh Province. March 24, 1917.) *Ch'ing pi tou* (green skin bean). A dark-green soy bean of medium size, used like the preceding number. The beans are also eaten fried in sweet oil with salt sprinkled over them as an appetizer before and with meals.'

"45286. '(No. 2418a. Hankow, Hupeh Province. March 7, 1917.) *Ch'ing tou.* A medium-sized, dull-green variety of soy bean, used in the same way as the preceding number.'

"45287. '(No. 2419a. Ichang, Hupeh Province. March 24, 1917.) *Ch'ing p'i tou.* A medium-sized variety of green soy bean, often speckled with black. Eaten like No. 2416a. [S.P.I. No. 45284].'

"45288. '(No. 2420a. Changsha, Hunan Province. May 16, 1917.) A rare variety of soy bean of pale-green color, with brown splashes.'

"45289. '(No. 2421a. Changsha, Hunan Province. May 12, 1917.) *Ch'a hua tou* (tea-flower bean). A peculiar variety of soy bean, of dull brown color, said to ripen very late. Locally much eaten when roasted with salt sprinkled over, like salted peanuts. Very nourishing and appetizing. Well worth introducing to the American public as a new, wholesome, and nourishing sweetmeat.'

"45290. '(No. 2422a. Ichang, Hupeh Province, March 24, 1917.) *Hei tou* (black bean). A medium-large, black soy bean, used when boiled, as a food for hard-working field animals and for oil production; it is also eaten by the poor.'

"45291. '(No. 2423a. Hankow, Hupeh Province. March 7, 1917.) *Hei tou.* A medium-sized, black soy bean, used like the preceding number.'

"45292. '(No. 2424a. Wuchang, Hupeh Province, March 9, 1917.) *Hei tou.* A medium-sized variety of black soy bean; said to be an early ripener. Used like No. 2422a. [S.P.I. No. 45290].

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"45293. '(No. 2425a. Wuchang, Hupeh Province. March 9, 1917.) *Hsiao hei tou* (small black bean). A small, flat, black soy bean, used when boiled, salted, and fermented as the main ingredient in a sauce; also fed, when boiled, to water buffaloes.'

"45294. '(No. 2426a. Changsha, Hunan Province. May 16, 1917.) *Hei tou.* A small, flat soy bean of shining black color, used like the preceding number.'

"45295. '(No. 2427a. Changsha, Hunan Province. May 16, 1917.) *Hei tou.* A small, round variety of soy bean of dull black color; used like No. 2425a [S.P.I. No 45293].'

"45449/45476. From Soochow, China. Seeds presented by Prof. H. Gist Gee, of the Soochow University, through Dr. Yamei Kin. Received October 27, 1917. Quoted notes by Prof. Gee.

"45470. '*Ya tou* (*soy beans for sprouts*).'"

Other non-soy species of Chinese seeds presented by Dr. Yamei Kin (Peking, China) are listed and described on p. 18-19; they are pai ts'ai, chestnut, muskmelon, cucumber, squash, radish (*Raphanus sativus*), and spinach. Address: Washington, DC.

2413. *Washington Post.*1922. Bean that is a cow. April 28. p. 23.

• ***Summary:*** "The world's demand for soy beans is steadily increasing, and China's export of them bids fair soon to surpass in value that of its silk output. There are more than 1,000 varieties of soy beans, from which an experiment station at Kung-chu-ling, in southern Manchuria, has chosen one as the best of all. It is nearly spherical, yellow in color," and the size of a small pea. It yields 22% of its weight in oil when crushed. "The soy bean yields milk and butter (or products equivalent for table use), as well as a great variety of other edibles, including a famous sauce [soy sauce]. Taken all in all, the soy bean is one our most versatile vegetables."

2414. *San Francisco Chronicle.*1922. Shipping notes. May 1. p. 19.

• ***Summary:*** "The principal items of cargo arriving here on the Japanese steamer Persia Maru from the Orient were 750 gunnies, 1,745 rolls of matting, 150 barrels of oil, 215 bales of raw silk, 13,029 mats of rice, 63 packages of silk goods, 968 packages of shoyu, 651 cases of canned crab, 306 cases of firecrackers, 133 cases of tea and 108 packages of tin."

2415. Eddington, Jane. 1922. Tribune Cook Book: Vegetarian chop suey. *Chicago Daily Tribune.* May 2. p. 24.

• ***Summary:*** A new recipe. "To make it most like the chop suey use one tablespoon of soy sauce or any of the heavy and syrupy commercial sauces."

2416. *Christian Science Monitor.*1922. Coolie trackers of the Yangtze River, philosophers of great brawn and courage. July 1. p. 9.

• ***Summary:*** These men use long tow ropes to pull boats or junks upstream along a 100-mile stretch of gorges on the Yangtze west of Ichang. It takes about 25 trackers to pull a houseboat 15-20 miles a day against the current. The happiest time of day for these "half starved" men is "chow time" at noon. They gulp down rice and return to work within 15 minutes. A vegetable soup is often included. "The basis of the soup is boiled beans, peas, or bean curd. Bean curd is a high protein food made by grinding soya beans under water, adding a little gypsum water and allowing the material to stand all night. A thick white curd settles out. It is sold wet or dried and smoked. The smoked product in three-inch squares and inch thick keeps very well; these are the kind used aboard the boats."

"The captain's contract with the men calls for a catty (1 1/3 lbs.) of pork a month. No other meat is served on the trip... The poorer Chinese families buy meat in two-ounce lots at long intervals. It is a luxury and not a necessity. The wealthy Chinese are heavy meat eaters, but the real workers live on a practically vegetable diet. The only condiment of the trackers is dried capsicum peppers ground in soya bean sauce." Note: It is not clear whether this sauce is *jiang* or soy sauce (*jaingyou*). Five photos show the boats and trackers.

2417. *San Francisco Chronicle.*1922. Chronicle shipping news. July 20. p. 20.

• ***Summary:*** The section titled "Shipping notes" states: "The cargo of the Japanese steamer Mandasan Maru, arriving from Yokohama, consisted in pat of 6,586 chests of tea, 1,041 packages of groceries, 2,560 tubs of shoyu, 1,478 cases of canned crab, 2,420 sacks of beans [probably soy beans], 1,875 sacks of linseed cake, 3,808 bags of bean cake."

2418. Willaman, J.J. 1922. Soy bean, the most perfect crop plant: Used in the United States only in recent years–Many products can be made from it. *American Food Journal* 17(7):11-12. July.

• ***Summary:*** Contents: Introduction. Exceptionally high in protein. Soy bean one of the newest foods in the U.S. Soy bean cheese [tofu] (This long section is based on an article by Prof. Adolph in the February issue of the *Journal of Home Economics*). Experiments have shown high vitamin content. Shoyu one of the best known products (largely based on an article by K. Oshima in *American Food Journal*, Jan. 1922, p. 30-31).

Tables: (1) "Analysis of soy bean curd compared with cottage cheese." Values are given for "Soy bean curd, Cottage cheese, and Dried soy bean curd." (2) "Analysis of ash of soy bean curd (in percentage of water-free portion). (3) Composition of soy sauce.

(4) Yields per acre, lbs. protein per acre (digestible), and calories per acre from various crops. The soy bean produces twice as much protein per acre as any other crop. On the latter point, soy beans, yielding 16 bushels per acre, produce

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294.7 lb of digestible protein per acre. Beans (yielding 14 bu/acre) produce 157.9 lb of protein. Corn (yielding 25 bu/acre) produces 147.0 lb of protein. Peanuts (yielding 34 bu/acre) produce 126.2 lb of digestible protein per acre. A photo shows the soy bean plant with roots. Address: Minnesota Agric. Exp. Station.

2419. Norton, Jeanette. 1922. The home kitchen. *Washington Post*. Aug. 18. p. 8.
• ***Summary:*** "Japanese raw fish: Filet one of the pink or white meated fishes and lay the filets into a marinade made of spiced vinegar, a chopped onion, a chopped seeded pepper, a little fresh green ginger root, a little sugar and a little soy sauce. When ready drain and serve as a relish."

"Chinese pineapple pike:" "... a little soy, the Chinese sauce," is used to season the fish sauce. Address: "The authority on home cooking".

2420. Arnolds. 1922. The markets that set the pace (Ad). *Toronto Daily Star (Canada)*. Aug. 24. p. 16.
• ***Summary:*** "Holbrook's Worcestershire Sauce. Imported bottle 25¢."

2421. Vesta. 1922. Women to women: Welfare of the young. *Argus (The) (Melbourne, Victoria, Australia)*. Aug. 30. p. 4-5.
• ***Summary:*** The recipe for Worcestershire sauce (p. 5) calls for "1 pint of Indian soy sauce."

2422. Kinugasa, Yutaka; Tatsuno, Shojiro. 1922. Shôyu, seishu sono-ta no inshokuhutsu chû betanafutooru no kenshutsu-hô ni tsuite [Detection of beta-naphthol in shoyu, sake and other foods and drinks]. *Eisei Shikenjo Iho (Bulletin of the Imperial Hygienic Laboratories)* 18:181-87. Aug. [1 ref. Jap]
Address: 1. Gishi; 2. Gishu. Both: Tokyo Eisei Shikenjo.

2423. Onuki, Motoi. 1922. Daizu tanpaku-chu ni beta-okishigurutamin-san no sonzai ni tsuite [On the presence of beta-hydroxy glutamic acid in the proteins of soybeans]. *Nippon Kagaku Kaishi (J. of the Chemical Society of Japan)* 43(9):737-43. Sept. 28. (Chem. Abst. 17:1983). [1 ref. Jap]
• ***Summary:*** Following Dakin's butyric acid method, Onuki isolated from 100 gm of dry protein matter, 5.47 gm of Beta-hydroxyglutamic acid, but was unable to determine from which individual protein it was derived and the full amount present. Address: Nôgakushi, Shoyu Kenkyusho-in.

2424. Nemzek, L.P. 1922. The production and use of soya bean oil in the United States with a brief history of their development. *Paint Manufacturers' Association of the U.S., Educational Bureau, Scientific Section, Circular* No. 155. 14 p. Sept. Also in Oil, Paint and Drug Reporter 102(20):33, 50. Nov. 6, 1922.
• ***Summary:*** "An address to the Corn Belt Seed Growers' Association, Columbia, Missouri, September 1, 1922." An excellent overview. Contents: Introduction: Importance and value of soybean oil, imports of the oil into the United States (table from 1913-1921 showing pounds and dollar value), its promotion by the Educational Bureau. Linseed failure demonstrates need. Exposure tests show value of soya oil: Paint exposure tests begun in May 1911 in connection with the Institute of Industrial Research were conducted to establish its suitability for making paint, enamel, and varnish. Experiment stations spread propaganda. Beans can be grown throughout the country: Two types of soya bean oil manufacture, by hydraulic press or expeller. Cotton and linseed mills well situated to crushing. Average oil content 19 per cent. Suggested specifications. Chemical constants: Physical properties of the oil. Drying properties. Price fluctuation (incl. table, monthly, Jan. 1920 to Dec. 1921). Yield per acre. Food value of soya bean: Various uses in China and Japan. Importation of beans. Diversified market (incl. table of soya bean prices, 1913-1921). Wholesale prices of soya beans. Market for cake and meal (incl. table comparing composition of soya bean meal, cottonseed meal, and linseed meal).

"American agriculture is gradually adopting the growing of the 'Soy Bean,' as it is still quite generally known. Each year witnesses an increased interest its development. This year there has been a remarkable increase in production and a similar increase in the number of inquiries concerning different points relative to the possibilities of the Bean and the utilization of the products derived from it, namely: the oil and the cake or meal. The progress in production is fairly well illustrated by the recent announcement that oil will be crushed from beans grown in Central Illinois. A weekly output at the start of from twenty-five to thirty cars is expected."

"In view of the fact that there are hundreds of varieties, many of which differ in only a few minor respects from others, it was necessary after making preliminary tests, to eliminate many of them in order to bring the number down to a practical working basis. There is really nothing to be gained by growing so many different varieties. The number was reduced to about fifteen already popular varieties, namely:–Mammoth, Medium Yellow, Ito San, Holly Brooks [Hollybrook], Haberlandt, Peking, Wilson, Auburn, Black Eyebrow, Arlington, Tokio, Mikado, Virginia, Sable, and the Yellow Manchurian bean, which growing tests showed were very satisfactory" (p. 4).

"In 1916 there were produced in this country in the neighborhood of one hundred thousand gallons of Soya Oil. The largest part of this quantity was produced by the Elizabeth City Oil [& Fertilizer] Company, and the New Bern Cotton Oil and Fertilizer Mills." (p. 7).

"In China and Japan, millions of tons of soya beans are consumed as food." "Soya meal... finds application in human

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food in connection with wheat flour and other substances like Corn and Rye meal.

"In China soya beans are used for human consumption as vegetables like marrow-fat beans and in the preparation of soups. They are prepared especially as substitutes for meat and as substitutes for chocolate and coffee. They also enter into the manufacture of cheese and in the macaroni preparations.

"One of the best known uses for them is in Soy, the Chinese sauce, manufactured extensively in Hong Kong. The process is simple. It consists merely of grinding the bean and mixing the bean with water and Chinese yeast. The mixture is then allowed to stand for three to four months, the resultant liquor being the sauce.

"Soya beans are also the basis for many modern table sauces.

"Large quantities of the beans are consumed in the form of oil used for lubricating purposes for the greasing of axles and in connection with much of the Chinese machinery. It is also used as a lamp oil instead of kerosene oil. The refined oil is frequently used for preserving sardines, and in place of lard and Cotton Seed oil for cooking.

"During the last five years a considerable tonnage of Soya Beans has been imported for crushing in this country. Some of the beans have been crushed in the Cotton Seed oil mills in the South..." (p. 10). Address: [Paint Manufacturers' Assoc. of the U.S., Philadelphia, Pennsylvania].

2425. Takahashi, Teizô; Sano, Yonesaburo. 1922. On the budding fungi of "shoyu-moromi." *J. of the College of Agriculture, Tokyo Imperial University* 7(2):119-55. Oct. 15. [45 ref. Eng]

• ***Summary:*** Contents: Introduction. The film-forming Zygosaccharomyces. Non-film forming Zygosaccharomyces. Asporogenic Zygosaccharomyces (?): Fermenting faculty. Torula: Film-forming variety, non-film forming varieties (7 varieties). Red yeast. Willia. Mycoderma. Saccharomyces. Oidium and Sachsia. Summary.

The author claims to have found two new varieties of film forming zygosaccharomyces and one new variety of non-film forming zygosaccharomyces. He proposes to call the latter *Zygosaccharomyces soja var. saccharoraffinosum.* He has also isolated four new varieties of asporogenic zygosaccharomyces. Of the various organisms studied, zygosaccharomyces produce the most alcohol. This paper was submitted in Jan. 1915. Ten photos (plate VII; last page) show the budding fungi of *Shoyu-Moromi*, including asporogenic *Zygoasaccharomyces, Mycoderma,* and *Torula.* Address: Japan.

2426. Kinoshita, Asakichi; Katsuyama, M. 1922. Dasshi daizu no mushini no hôhô oyobi teidô hikaku shiken [Comparative tests on steaming methods and amount used for defatted soybeans]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 89. p. 1-28. Oct. [Jap] Address: Jozo Shikensho. 1. Gishi; 2. Ko (Hired).

2427. Kinoshita, Asakichi; Ohno, T.; Fukui, S.; Kumo, A. 1922. Shôyu no bôbaizai toshite jinkô kihatsu karashi-yu no shiyô shiken [Experiment with artificial mustard oil as an anti-mold substance for shoyu]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 87. p. 561-78. Dec. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2-4. Moto Kenshuin.

2428. **Product Name:** Soy Sauce.
Manufacturer's Name: La Choy Food Products (Importer). Made in China.
Manufacturer's Address: Detroit, Michigan.
Date of Introduction: 1922.
Wt/Vol., Packaging, Price: Bottle.
New Product–Documentation: Ad in *Soybean Digest.* 1944. Sept. p. 12. "Genuine soy sauce." Soybean Blue Book. 1947. p. 72-73. The 2¼ by 3½ inch display ad is titled: "Genuine Soy Sauce" from "LaChoy Food Products, Archbold, Ohio. Division of Beatrice Foods Company."

Shurtleff & Aoyagi. 1982. History of Soy Sauce. p. 105. "One of the earliest importers and marketers of soy sauce in America was La Choy Food Products. The company was founded to produce mung bean sprouts in Detroit, Michigan, by Mr. Ilhan New (a Korean) and Wally Smith. Soon they were doing a booming business and by 1922 they were importing fermented soy sauce from China in wooden barrels to use as a seasoning in their Asian food products. In the early 1930s they began buying HVP soy sauce from Huron Milling Co. (now Hercules) and A.E. Staley, and selling it in small bottles as La Choy Soy Sauce."

Note 1. See also the history of Oriental Show-You Company, which was started in 1918 in Detroit, Michigan, by Shinzo Ohki, a Japanese man, who began by importing shoyu and tea from Japan. In late 1922 he moved his business to Columbia City, Indiana, and began making his own shoyu there in 1924.

Joe Staudt. 1985. Horizons (Beatrice Grocery Group). Summer. p. 1-7. In 1920 Wally Smith and Ilhan New, two friends from the University of Michigan, founded La Choy Foods in Detroit. Their first product was bean sprouts. In 1922 the business was incorporated as La Choy Food Products. The first La Choy-owned plant was built in Detroit in 1937. The Archbold, Ohio plant was built on its present site in 1942. The Company's long association with Beatrice started in 1943, when La Choy was bought by the Chicago-based company and became Beatrice's first non-dairy operation.

Note 2. This is the earliest record seen (April 2012) concerning La Choy.

Note 3. This is the earliest record seen (Sept. 2005) concerning the work of Koreans overseas with soy.

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2429. **Product Name:** [Nishii Super Shoyu, and Miso].
Foreign Name: Nishii Super Shoyu, and Miso.
Manufacturer's Name: Nishii Super Shoyu.
Manufacturer's Address: Renovacion 101-A, La Victoria, Lima 13, Peru.
Date of Introduction: 1922.
Ingredients: Water, soybeans, wheat, salt.
Wt/Vol., Packaging, Price: 750 ml bottle.
How Stored: Shelf stable.
New Product–Documentation: Nishii Shoyu, located in the Victoria district of Lima, Peru, is owned by Mr. Shinji Kawakami, age 75, the second-generation Japanese owner. The outside and inside of his shop, and the process by which he makes 5 tonnes/week of shoyu in the traditional hand-made way, are shown. He also makes miso. A close-up shows the 750 ml bottle and its colorful label, orange, blue, and green on yellow. One bottle costs the equivalent of about 300 yen.

Talk with Mr. Kawakami by phone. 1991. March 21. His uncle founded this company at this location in 1922. He is the second generation owner. He runs it as an "individual business" so there is no real company name. His address is shown above. His phone is 14-31-81-05.

Letter from Marco Kamego of Kikko Corporation S.A. in Peru. 1998. Feb. 13. The present manager of this company is Mr. Cesar Kawakami.

Note 1. This is the earliest known commercial soy product made in Peru, or in South America, or in all of Latin America.

Note 2. This is the earliest document seen (May 2009) concerning soybean products (shoyu and miso) in Peru. This document contains the earliest date seen for soybean products (shoyu and miso) in Peru (1922); soybeans as such had not yet been reported by that date.

2430. Noda Shoyu K.K. 1922. [Report on activities, 1921-1922]. Mimeographed. 6 p. Unpublished manuscript in Kikkoman Corporation Archives. [Jap]*
• ***Summary:*** For a list of many other early documents in the Kikkoman Company Archives, see Fruin (1983), Notes. For 1918-1929, see especially p. 333. Address: Noda, Japan.

2431. Ri-Koheki. 1922. Chôsen shôyu miso oyobi tôfu no seihô ni tsuite [The processes for manufacturing shoyu, miso, and tofu in Korea]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 17(11):45-46. [Jap]
Address: Chosen Sotokufu Iin Yakuzai-shi.

2432. **Product Name:** Loma Linda Smokene (Seasoning).
Manufacturer's Name: Sanitarium Food Co. (Changed name to Loma Linda Food Co. on 6 Feb. 1933).
Manufacturer's Address: Anderson Street, Loma Linda, California.
Date of Introduction: 1922.
Ingredients: In 1973: Toasted soy powder, dried yeast, soy sauce, condensed wood smoke.
Wt/Vol., Packaging, Price: By 1969: 2.5 oz shaker bottles.
New Product–Documentation: Ad in *Health* (Mountain View, CA). 1934. April. p. 33. The product is now named Smoteen.

Today's Food. 1961. Summer. p. 6. "Smokene."

Loma Linda Food Co. 1969. "Wholesale Price List." Smokene is now sold in 2.5 oz shaker bottles, which retail for $0.30 each.

Interview with Charlotte Van Gundy Holmes. 1981. She says that this was produced as an imitation of the soy-based Smoein developed several years earlier by her father, T.A. Van Gundy, at La Sierra Industries in nearby La Sierra, California.

Karen Misko. 1973. *SeVa Longevity Cookery Cookbook*. p. 101. "Smokene: smoked seasoning spice made from toasted soy powder, dried yeast, soy sauce and condensed wood smoke. It is used for flavoring soups and sauces (Loma Linda Foods)."

Talk with Ty Myers of Washington state. 2004. Jan. 30. His aunt, who also lives in Washington, has a bottle of Smokene with some of the product still in it. She had it when he was a boy, and he is now age 40. He tried some not long ago. A powder, it adds a delicious smoky flavor when sprinkled on almost anything. Ingredients include soybeans and yeast. It comes in a glass bottle, 3 inches tall, with a shaker top and a metal cap. The design looks like it was made in the 1940s. He will send color photos to Soyfoods Center.

Note 1. This is the earliest known commercial soy product made by Loma Linda Foods or its predecessors.

Note 2. This is the 2nd earliest known commercial roasted soy flour in the Western world (after Smoein).

2433. Togano, Meijiro. 1922. Shôyu miso no sokujô ni tsuite [Rapid manufacture of shoyu and miso. I-III.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 17(3):7-9; 17(4):4-8; 17(5):14-16. [Jap]
Address: Nihon Jozo Kogyo K.K., Senmu Torishimari Yaku, Nôgaku-shi, Japan.

2434. **Product Name:** Miso, and Shoyu.
Manufacturer's Name: Tsuruda Miso Shoyu Seizo-sho (Tsuruda Miso & Shoyu Mfg. Co.).
Manufacturer's Address: 472 Jackson St., San Jose, California. Phone: 5539.
Date of Introduction: 1922.
New Product–Documentation: Shin Sekai-sha. 1922. *Zaibei Nippon-jin Kan* (*Directory of Japanese in the USA*). p. 208.

San Jose City Directories. 1927-1936. The first listing, in 1927, says: Tsuruda Co., Nabutaro Tsuruda, mgr. Food

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products. 472 Josefa, San Jose. In 1929 the company name had changed to Tsuruda Bros. (Nabutaro and Tsuneo). Yasua and Yoshio were factory heads. In 1932 the occupation first changed to condiment manufacturers from food products. In 1936 the listing was: Tsuruda Bros. Mitsuo Tsuruda, mgr. Condiment mfrs, 472 Josefa.

Shurtleff & Aoyagi. 1983. The Book of Miso. 2nd ed. p. 234. Started by Mr. and Mrs. Tsuruda, this company was shut down during World War II and never resumed.

2435. Fritsch, Jean. 1922. Fabrication et raffinage des huiles végétales: Manuel à l'usage des fabricants, raffineurs, courtiers et négociants en huiles. Troisième édition entièrement refondue [Manufacture and refining of vegetable oils: A manual for the use of manufacturers, refiners, brokers, and wholesale merchants. 3rd ed., completely reset]. Paris: Desforges–Librairie Générale Scientifique et Industrielle. xiv + 723 p. Illust. Index. 25 cm. [16 ref. Fre]
• ***Summary:*** Chapter 2, "Drying oils (*Huiles siccatives*)" contains a section on "Soybean oil (*Huile de Soja hispida; Huile de pois*")" (p. 368-76). Its contents: Origin (Incl. miso, shoyu, tofu). Manufacture (China, Japan, above all Formosa). Physical and chemical properties. Table showing such properties, with 16 references. Applications and uses. Residues (soybean cake remaining after the oil is pressed from soybeans; *le tourteau de soja*).

Also discusses: Margarine (p. 232-33). Peanut oil (*Huile d'arachide*, p. 238-48, 699-701). Colza oil (Coleseed oil, *Huile de colza*), rapeseed oil (*Huile de navette*), and rubsen oil (*Huile de rabette*) (p. 265-72, 652). Sesame oil (*Huile de sésame*, p. 273-81, 705-06).

Note 1. The first edition of this work was published in 1905, and the second edition in 1914.

Note 2. This is the earliest document seen (March 2005) that uses the English word "coleseed" or the term "coleseed oil" to refer to rapeseed or to rapeseed oil, respectively.
Address: Ingénieur-Chemiste.

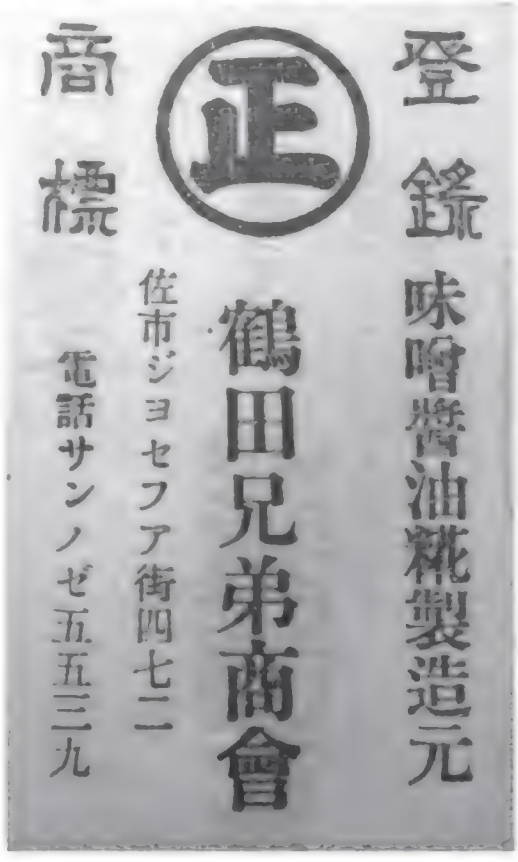
2436. Kodama, Shintaro. 1922. Arudehido no kagaku. IV. Shôyu-chû ni sonzai suru 1, 2 no shin arudehido ni tsuite [The chemistry of aldehydes. IV. On 1 or 2 new aldehydes in shoyu]. *Nippon Kagaku Kaishi* (*J. of the Chemical Society of Japan*) 43:956-81. (Chem. Abst. 17:2881). [Jap]
Address: Rigakushi, Tokyo Teikoku Daigaku, Rigaku-bu, Kagaku Kyoshitsu.

2437. Kodama, Shintaro. 1922. Iwayuru seishu oyobi shôyu no furoforu hannô ni tsuite [On the so-called furfurol reaction in sake and shoyu]. *Nippon Kagaku Kaishi* (*J. of the Chemical Society of Japan*) 43:948-56. (Chem. Abst. 17:2881). [Jap]
Address: Rigakushi, Tokyo Teikoku Daigaku, Rigaku-bu, Kagaku Kyoshitsu.

2438. Nichibei Shinbun-sha (Nichi-Bei Shinbunsha). 1922. Zaibei Nihonjin Jinmei Jiten [Brief biographies of Japanese living in America: Mr. Shinzo Ohki]. 650 Ellis St., San Francisco, California. 733 p. 24 cm. [Jap]
• ***Summary:*** Japan: Kanagawa-ken, Kamakura-gun, Kamakura-cho. USA: 208 N. Wabash Ave., Chicago, Illinois. He came to the USA in 1901. In 1911 he graduated from the commercial department of an American college or university. He worked as a tea maker and marketer and is presently president of Toyo Shoyu K.K. Address: San Francisco, California.

2439. Shin Sekai-sha. 1922. Zaibei Nippon-jin kan [Directory of Japanese in the USA]. San Francisco, California: Shin Sekai-sha. See p. 19, 41, 50-51, 207-08, 234, 238, 346, 357, 409. [Jap]
Address: San Francisco, California.

2440. **Product Name:** Maru-sho brand Miso, Shoyu [Soy Sauce].
Manufacturer's Name: Tsuruda Goshi-gaisha (Tsuruda Limited Partnership). Miso, Shoyu Seizo-sho. Renamed Tsuruda Kyodai Goshi-gaisha in 1930 (Tsuruda Brothers Limited Partnership).
Manufacturer's Address: 472 Josefa St., San Jose, California. Phone: San Jose 5539.
Date of Introduction: 1923. January.



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New Product–Documentation: The Japanese American Directory. 1923. p. 138. Ad (¼-page) at bottom middle of same page (all in Japanese) says the company makes Marusho (or possibly Marumasa) brand miso and shoyu. Marusho is their registered trademark (*toroku shohyo*). Also in 1925. p. 4. Full-page ad (all in Japanese). The company now makes and sells koji. Tsuruda (probably not Tsuruta) Goshi-gaisha makes Maru-sho brand miso, shoyu, and koji. 473 Josefa St. (probably is 472 Josefa), San Jose. No phone number listed. A large illustration shows Maru-sho brand shoyu in a 30 oz. glass bottle, and a keg, Maru-sho brand miso in the same size keg, and Maru-sho koji in a wooden box. Also in 1924 directory, p. 143. Address is now 472 Josefa St. Also in 1924, p. 143. Also in 1925, p. N-114. Also in 1926, p. N-111. Still 472 Josefa. Full-page ad (identical to that of 1923) also in 1926, p. N-113. Also in 1930 directory, p. 116. New company name: Tsuruda Kyodai Shokai. Miso, shoyu. 472 Josefa St., San Jose, California. Phone: BAllard 5539. Also in 1932 directory, p. 112, plus ad (¼ page) on same page, bottom right. Makes Maru-sho brand miso, shoyu, and koji. Also in 1934 directory, p. 116. Also in 1936 directory, p. 140.

2441. *Christian Science Monitor.* 1923. Recipes from many places. Jan. 5. p. 18.
• ***Summary:*** "American chop suey:" Add "salt, pepper, and soy sauce to season."

2442. *Atlanta Constitution* (*Georgia*). 1923. Dairen rivals Boston as great bean city: Japan's ice-free port in Manchuria, all-year-round shipping point for soy product of vast fields has grown from mud village. Jan. 21. p. 54.
• ***Summary:*** "Dairen and Boston–the world's premier bean towns." Dairen lives not on but by beans; it is the port of the greatest bean country in the world."

"Steamers come in an endless procession to Dairen wharves to carry away countless tons of [soy] beans, thousands of gallons of [soy bean] oil and the sauce you eat on your chop suey when you visit 'Chinatown,' and shiploads of great cartwheel-like disks of bean cake from the oil mills. The thousands of gallons of soy bean oil which leave Dairen annually, compete actively in world markets with American cottonseed oil as an olive oil substitute."

"To the Chinese it is Talien-wan; the Russians, who thought in 1899 they had established there their long-sought ice-free Pacific port, called it Dalny." The Chinese (and Japanese) characters mean "great connections," and "it is truly a connecting link between the China that was and the Japan that is."

"Russia, great power of the West, left Dalny at the end of the Russo-Japanese War an unhealthy, overgrown village with streets of mud. Japan, apt pupil of a more western West than Russia, gave the newly christened town paved streets, 20th century sanitation, forest-clad hills, electric lights and street cars, and an efficient municipal government.

"Politically, Dairen is the seat of administration of Japan's 99-year lease over the Kwang-tung or Liaotung peninsula [1,220 square miles], which forms the southern extremity of Manchuria.... It would be difficult to conceive of a port in a relatively undeveloped region of the world more strategically situated."

Japan "also has a 99-year concession for the South Manchurian Railway, which extends several hundred miles to the north through the center of Manchuria's almost matchlessly fertile plains. 'Railway' must be taken in something of a Pickwickian sense... In addition to its road it operates a line of ocean steamers and great warehouses, develops power, runs mines and manages lands." The railroad has all the conveniences of U.S. trains; it even has all-Pullman trains.

2443. *Quebec Daily Telegraph* (*Canada*). 1923. Chop suey. Jan. 29. p. 4.
• ***Summary:*** This recipe, by Bertha E. Shapleigh, of Columbia University, calls for "2 tablespoons Soyu Sauce."

In the instructions is a section which reads: "Soy bean sauce: The Shoyu or Soyu Sauce is the Worcestershire of China. It is made from the soy bean and gives the characteristic flavor found in Chinese food. If it cannot be purchased, use Worcestershire, one tablespoon, and a little

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salt. The Soyu sauce is salty and where used, no other salt is required."

Note: This is the earliest document seen (March 2012) that refers to soy sauce as "the Worcestershire of China."

2444. Nakai, T. 1923. Inshokuhin toku ni shôyu-chû no beeta nafutooru no shin kenshutsu-hô [A new method for detection of beta-naphthol in foods and especially in shoyu]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) No. 491. p. 17-26. Jan. (Chem. Abst. 17:3059). [Jap]

• ***Summary:*** About 1 part of Beta-naphthol in 500,000 can be detected with a reagent prepared by dissolving molybdic acid (5 gm) in concentrated sulfuric acid (100 cc). The naphthol is extracted from soy sauce by shaking the sauce (100 cc) with 200 cc of a mixture of ether and petroleum spirits (1:1) for 30 minutes, evaporating the solution to dryness, and dissolving the residue in warm water (7 cc); or better by distilling the sauce (100 cc) and collecting the distillate in fractions of 7 cc, the third and fourth fractions being used for the test. On adding the molybdic acid reagent to the solution along the wall of the vessel in a thin stream, a violet-red zone is developed between the two solutions when Beta-naphthol is present. α-naphthol gives no coloration with this reagent.

2445. Oshima, Kokichi; Church, Margaret B. 1923. Industrial mold enzymes. *Industrial and Engineering Chemistry* 15(1):67-70. Jan. [13 ref]

• ***Summary:*** "A new method for quantitative estimation of protease is described in this paper. Many strains of the *Aspergillus flavus-oryzae* group, which were separated from tane-koji used in shoyu manufacture and related industries, showed individually the production of amylase and protease of widely different strengths... Even on soy-bean flour, which contains no starch, strong amylase is produced."

The molds were cultivated on various media, including "soy-bean milk agar." "Experiments here show that extracellular and intracellular enzymes are the same, and after a certain period of growth all enzymes are excreted."

On page 68 is a reproduction of an interesting label, written in both Japanese and English, on an envelope containing "commercial mold ferment." The English-language portion reads: "Pure Cultured Aspergillus Soja. Registered Trade Mark." Illustrations show conidiophores of Aspergillus.

Photos show: (1) A worker in or near a koji room with koji trays inoculating the ingredients for making soy sauce with the mold ferment, *Aspergillus flavus*. (2) A series of modern, brick-walled koji rooms with wooden doors. Address: 1. Hokkaido Imperial Univ., Sapporo, Japan; 2. Bureau of Chemistry, USDA, Washington, DC.

2446. *Miami Daily Metropolis* (*Miami News*). 1923. Chop suey. Feb. 9, p. 5.

• ***Summary:*** Note: This recipe first appeared in the *Quebec Daily Telegraph* (Canada) on 23 Jan. 1929, p. 4. It calls for "2 tablespoons Soyu Sauce" and has a section in the instructions titled "Soy bean sauce," which begins: "The Shoyu or Soyu Sauce is the Worcestershire of China."

2447. Piper, Charles V.; Morse, William J. 1923. The soybean. New York, NY: McGraw-Hill Book Company, Inc. xv + 329 p. Feb. Illust. Index. 24 cm. Reprinted unrevised in 1943 by Peter Smith Publishers, New York. [563 ref]

• ***Summary:*** This is the first comprehensive book about the soybean written in English, and the most important book on soybeans and soyfoods written in its time. Contains an excellent review of the world literature on soybeans and soyfoods with a bibliography on soy that is larger than any published prior to that time (563 references), a good description of the present status of the soybean worldwide based on the authors' extensive contacts, and a great deal of original information. It quickly became a key source for people and organizations working with soybeans and soyfoods in all countries, and a major factor in the expansion of the soybean in the western world. Because of its scope and influence, Soyfoods Center considers the year of its publication to mark the end of the "Early Years" of the soybean worldwide. It remained in print until about 1986.

Contents: Preface. 1. Introduction: Name of the plant, origin, literature, use by the Chinese and Japanese, present importance, future prospects in the U.S., recognition of the possibilities. 2. The commercial status of the soybean: Manchuria and China, Japan, Europe, U.S., other countries, summary of imports and exports of soybeans and soybean oil. 3. Botanical history of the soybean: History prior to Linnaeus' "Species Plantarum" 1753, Linnaeus' misunderstandings of the soybean, Prain's elucidation, other and the correct botanical name.

4. Agricultural history of the soybean: Vernacular names of the soybean, China, Korea, and Japan, India and neighboring regions, Cochin China, Malayan region, early introduction into the United States, later U.S. introductions, the early introduced varieties (grown in the USA by 1898–Ito San, Mammoth, Buckshot, Guelph or Medium Green, Butterball, Kingston, Samarow, Eda, Ogemaw or Ogema), soybean in Europe, varieties grown in Europe and identification, Hawaiian Islands, Australia, Africa, Argentina (p. 50), Canada ("Soybeans are grown in very small quantities in Canada and then usually as a forage crop"), Philippines, Egypt, Cuba (p. 52), British Guiana, Mauritius (p. 53), present culture distribution. 5. Culture of the soybean: Climatic adaptations, soil preferences, water requirement, preparation of seed bed, time of planting, methods and rate of seeding, seeding for pasturage, depth of seeding, inoculation, fertilizer reactions, cultivation, soybeans in mixtures (with cowpeas, sorghums, Sudan grass, Johnson grass, millet, corn, or sunflowers and corn).

6. Harvesting and storage of soybeans: harvesting

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soybeans for hay, silage, for the seed, seed yields, proportion of straw to seed, storing seed, separation of cracked from whole soybean seed, viability of soybean seed, pedigreed, inspected, registered, and certified seed. 7. Composition of the soybean: Proportions of stems, leaves and pods, composition of plant and seed, nutritive and mineral constituents, forms of nitrogen in soybean nodules, factors affecting oil content of seed. 8. Utilization of the soybean: Diversity of uses (a chart, p. 129, shows 59 products that can be made from soybean seeds, and 6 more that can be made from soybean plants), soybeans for green manure, pasturage, soiling, ensilage, hay, straw.

9. Varieties: Japanese, Manchurian, botanical classifications, vital characteristics, descriptions of important varieties, key for identification, breeding and improvement, genetic behavior, oil content.

10. Structure of soybean seeds. 11. Soybean oil: Methods of extraction [Manchurian, and solvent], American oil mills, methods of shipping and marketing, prices, utilization in soap manufacture, food, paint manufacture, miscellaneous. 12. Soybean cake or meal: Feeding value, composition, use for feeding for dairy cows, cattle, swine, sheep, poultry, digestibility, injurious effects, fertilizer.

13. Soybean products for human food: Food value of the soybean, digestibility of the soybean and its products, mature or dry soybeans, immature or green soybeans (a "nutritious green vegetable"), soybean flour, digestibility of soybean flour, soybean bran (p. 225-26), soybean sprouts, soybean coffee, soybean or vegetable milk [soymilk] (preparation, composition, residue from the manufacture of vegetable milk [okara], utilization of soybean milk, condensed vegetable milk, vegetable milk powder, fermented vegetable milk), vegetable casein, tofu or soybean curd (names and brief history, method of manufacture, coagulating agents, manufacturing yields, digestibility, utilization of bean curd and manufactured products, bean curd brains or *tofu nao*, dry bean curd or *tofu khan*, thousand folds {*chien chang tofu*}, fried bean curd {*tza tofu*}, Fragrant dry bean curd {*hsiang khan*}, frozen tofu {*kori tofu*}, Chinese preparation, various dishes), natto, hamananatto [hamanatto], yuba, miso, shoyu [soy sauce], confections. 14. Table dishes of soybeans and soybean products: mature or dry beans, flour, tofu, sprouts (86 recipes). 15. Enemies of the soybean: bacterial, mosaic, fungous [fungus], and nematode diseases, insects, rodents. This last chapter is a comprehensive review of the literature on soybean diseases and insects published before 1922.

The Preface begins: "The soybean, also known as soya or soja bean, has assumed great importance in recent years and offers far-reaching possibilities of the future, particularly in the United States. It is, therefore, desirable to bring together in a single volume the accumulated information concerning this crop...

"The aim has been to present the information so as to make it useful from both agricultural and commercial standpoints, not omitting, however, much that is mainly of historical or botanical interest..."

The introduction begins: "There is a wide and growing belief that the soybean is destined to become one of the leading farm crops in the United States."

Note 1. C.V. Piper lived 1867-1926. Note 2. This is the earliest English-language document seen (July 2003) that uses the term "soybean bran" to refer to soy bran.

Note 3. This is the earliest document seen (July 2003) in which Piper or Morse describe natto, Hamananatto [Hamanatto], yuba, or miso.

Note 4. This book was published by March 1923 (See *Ohio Farmer*, 10 March 1923, p. 313). Address: 1. Agrostologist; 2. Agronomist. Both: United States Dep. of Agriculture, Washington, DC.

2448. Read, Bernard E. comp. 1923. Botanical, chemical, and pharmacological reference list to Chinese materia medica. Peking, China: Printed by the Bureau of Engraving and Printing. v + 38 p. Feb. 28 cm.

• ***Summary:*** Contents: Chemical and pharmaceutical references (45 entries; p. i-ii). Botanical literature (17 entries; p. iii). Bibliography of materia medica and medical botany other than cited in this reference list (47 entries; p. iv-v). Note: For these first three parts, column 1 is the abbreviation; column 2 is the full title.

The rest of this book consists one long table (p. 1-38) composed of four columns. (1) Chinese names (The name of each materia medica substance written in Chinese characters). (2) Romanized Wade (The Wade-Giles romanization of the Chinese name; the table is sorted alphabetically by this column). (3) Botanical references (such as the scientific name of a plant, or terms like "soy oil," "rice congee," or "rice gruel"). (4) Chemical & pharm. references (Abbreviations of references to documents containing information about this plant or other substance).

Chiang Yu–Soy oil appears on p. 3. References: (1) USDA Office of Experiment Stations, Bulletin No. 68, p. 36 (1899). (2) Stuart, G.A. 1911. Chinese materia medica, Shanghai. (3) J. of the College of Agriculture, Tokyo Imperial University 1:97 (16 June 1909). (4) J. of the College of Agriculture, Tokyo Imperial University 1:89 (16 June 1909).

Huang Ta Tou–Glycine hispida [The yellow soybean] appears on p. 11. References: (1) Matsumura, J. Shokubutsu-mei-i, Tokyo, 1915. (2) China Medical Journal 35:247 (1921). (3) Martindale and Wescott, Extra Pharmacopoeia, London, 1921, p. 824, 1913. (4) Pharmaceutical Journal (London), II, p. 120, 1913. (5) Loureiro, J. Flora cochinensis, 1790, vol. II, 1844, 1912. (6) Pharmaceutical Journal (London), II, p. 154 (1912). (7) USDA Office of Experiment Stations, Bulletin No. 68, p. 33 (1899). (8) Wehmer, C. Die Pflanzenstoffe, Jena, 1911, p. 362.

Pai Tou–Soja hispida [The white soybean] appears on

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p. 11. References: (1) Stuart, G.A. 1911. Chinese materia medica, Shanghai. (2) Wehmer, C. Die Pflanzenstoffe, Jena, 1911, p. 362. (3) American J. of Physiology 19:468 (1907). (4) J. of the American Chemical Society 20:419 (1898).

Ta Tou–Glycine hispida M. [The soybean] appears on p. 11. (3) Bretschneider, E. Botanicon sinicum, 1881, 1892, 1895. (4) Giles, H.A. A Chinese-English dictionary, 1892

Ta Tou Ch'in–Bean relish appears on p. 30. No references.

Ta Tou Huang Chüan–Bean sprouts appears on p. 30– References: (1) Stuart, G.A. 1911. Chinese materia medica, Shanghai. (2) USDA Bureau of Plant Industry, Bulletin No. 107 (?), p. 28. (3) China Medical Journal 35:247 (1921).

Note 1. The references in this book are very cryptic and hard to understand, even after careful analysis. The book also contains quite a few typographical errors, inconsistencies, and mistakes.

Note 2. Other interesting substances mentioned in this book are: Mung beans (p. 4; *Phaseolus mungo*). Laminaria and Sargassum (p. 7, 15: types of sea vegetables, like kombu). Amarantus (p. 9). Sesame seeds (p. 10; *Sesamum indicum*). Fermented nonglutinous rice (p. 12). Job's tears (p. 12; *Coix lachryma*). Kudzu (p. 13; *Pueraria hirsuta*). Daikon (*Raphanus sativus*). Umeboshi plum (p. 19; *Prunus mume*). Address: Dep. of Pharmacology and Physiological Chemistry, Peking Union Medical College.

2449. Lea and Perrins. 1923. Lea and Perrins' Sauce (Ad). *Times (London)*. March 20. p. 16, cols. 6-7.
• ***Summary:*** At the top of this display ad is an illustration of Worcestershire sauce being poured from a Lea and Perrins' bottle onto slices of bacon on a plate of bacon and eggs. Below that: "The eggs addressed the bacon thus:–'People hail the man who discovered that jelly went with a saddle of mutton, but some have not yet learned the joy of eating us with just a drop of Lea & Perrins' Sauce.'"

At the left in a sidebar: "Free. A cookery book that contains 150 delightful dishes. New ideas for soups, salads, curries and ragouts–new fish, egg and casserole dishes... Sent free on receipt of a penny stamp to cover postage. Lea & Perrins, 2 Midland Rd., Worcester." An illustration shows the cover of the booklet titled "Kitchen Recipes for Lea & Perrins' Sauce." Across the bottom of the ad: "The original Worcestershire. 'The first thing to reach for." Address: [England].

2450. Bidwell, Emelia. 1923. Kitchen recipes: The chef's suggestions for seasoning over one hundred and fifty dishes with Lea & Perrins' sauce. Worcester, England: Lea and Perrins. 46 p. 18 cm. *
• ***Summary:*** A booklet of recipes advertising Lea & Perrins' Worcestershire Sauce. Address: [England].

2451. Kamiha, Toyosaburo. 1923. Nihon shoyu ni taisuru ni san no bôbi shochi ni tsuite [Some antibiotics in Japanese shoyu]. *Nihon Biseibutsu Gakkai Zasshi (J. of the Japanese Microbiological Society)* 17(3):467-84. March. [12 ref. Jap] Address: Kyoto Imperial Univ. (Kyoto Teikoku Daigaku, Igakubu, Eiseigaku Kyôshitsu, Toda Kyôju shidô.

2452. Kinoshita, Asakichi; Kishimoto, M.; Oikata, R.; Katsuyama, M. 1923. Moromi kakuhan no hôhô oyobi teido hikaku shiken [On the methods and amount of stirring for shoyu moromi (mash)]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 91. p. 199-231. March. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Shokutaku; 3-4. Hired.

2453. Kinoshita, Asakichi; Katsuyama, M.; Oikata, R. 1923. Komugi daiyôhin shiyô shiken [The use of substitutes for wheat in shoyu]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 90. p. 93-134. March. [Jap] Address: Jozo Shikensho. 1. Gishi; 2-3. Hired.

2454. Kinoshita, Asakichi; Katsuyama, M. 1923. Dasshi daizu to komugi no daiyô genryô shiyô shiken [The use of defatted soybeans and substitutes for wheat in shoyu brewing]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 90. p. 73-92. March. [Jap] Address: Jozo Shikensho. 1. Gishi; 2. Hired.

2455. Nishimura, Torazô; Kawakami, T. 1923. Shôyu no hinshitsu kanhyô ni tsuite [On the discrimination of quality in shoyu]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 91. p. 143-98. March. [Jap] Address: Jozo Shikensho. 1. Gishi; 2. Gishu.

2456. Piper, Charles V.; Morse, William J. 1923. Photographs and illustrations (Document part). In: Piper and Morse. 1923. The Soybean. New York: McGraw-Hill. xv + 329 p.
• ***Summary:*** Photos show: (Fig. 1) Typical soybean plant (p. 1). (2) Plant of wild soybean (p. 2). (3) A fleet of junks engaged in carrying soybeans to Newchwang, Manchuria, from different points in the interior, taking away bean oil and bean cake to other places * (p. 6). (4) Soybeans in sacks brought to a bean center by horses in winter in Manchuria (p. 8). (5) Chinese bean cart loaded with beans in wicker containers in Manchuria (p. 8).

(6) Type of cart and method of hauling soybeans with a horse in Manchuria (p. 10). (7) Manchurian farmers hauling the bean crop to market in winter on sleds (p. 10). (8) Plants of a soybean variety from India (p. 38). (9) Plants of the wild soybean from Soochow, China, grown at the Arlington Experimental Farm, 1908 (p. 38). (Fig. 15) Soybeans grown on the edges of a rice field in southern China * (p. 58).

(16) A man in a field of the Peking variety of soybean grown in rows and cultivated (p. 61). (17) A broadcast field

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of soybeans showing how weeds have overrun the field (p. 61). (18) The ordinary grain drill furnishes a most convenient method of seeding in rows or broadcast (p. 63). (19) Soybeans and corn grown in alternate rows for pasturage: a man in a hat stands between the rows (p. 65). (20) The roots of a soybean plant, showing abundant development of nodules (p. 66).

(21) A man standing in a plat of soybeans without inoculation (in the foreground) and an adjacent plat which had been inoculated, in the background (p. 67). (22) A man seated on a cultivator pulled by two horses doing the last cultivation on a field of soybeans (p. 79). (23) Soybeans and sorghums grown in mixture for forage purposes (p. 80). (24) A field of soybean and Sudan grass grown in mixture for hay (p. 81). (25) A field of soybeans and corn grown in the same row for ensilage (p. 82).

(26) Soybean hay on frames. Under favorable weather conditions, hay can be successfully cured in this manner (p. 86). (27) A field of mature soybeans ready to cut for seed (p. 90). (28) Harvesting soybeans for seed with a bunching attachment on the mower (p. 90). (29) Self-rake reaper used in cutting soybeans for seed (p. 91). (30) Soybeans cut for seed with binder and soybeans placed in shocks for curing (p. 92).

(31) The ordinary gasoline threshing outfit which may be used in threshing soybeans (p. 92). (32) A special bean harvester used in gathering the soybean seed from the standing mature plants and also cleaning it (p. 94). (33) A special bean harvester by which the plants are cut, thrashed, and cleaned (p. 94). (34) A special soybean harvester used to gather soybean seeds from the standing mature plants, and which can be adjusted to level or ridged cultivation. On one side is written "The Little Giant Bean Harvester." manufactured by Hardy & Newsom, La Grange, North Carolina (p. 95). (35) Method of storing soybean seed awaiting shipment in Manchuria. The beans is sacks are stacked under Chinese mats (p. 98).

(37) Pasturing a corn and soybean mixture with sheep (p. 133). (38) Thrashing soybeans from the field and baling the straw (p. 141). (39) The larger plant is the Guelph or Medium Green which is very pubescent, while the smaller plant is a nearly smooth variety from Japan (p. 149). (40) Pods of soybeans showing the range in size and shape (natural size; p. 151).

(41) Seeds of the most important varieties of soybeans now grown in the United States showing the wide range in size and shape of seed. The name of each of the 20 varieties is given. A side view and a ventral view of each pair of seeds is given (p. 152). (42) Seeds of a black and white variety (Widower) from Korea. The white is due to the splitting of the outer later of the testa. A side view of six varieties is shown (p. 155). (43) A field of the Biloxi soybean, which requires a long season to mature (p. 163). (44) A man standing in a field of the Virginia variety of soybeans (p. 170). (45) Seeds of a natural soybean hybrid showing peculiar types of coloration (p. 175). (46) Pods of soybeans, hairy and smooth (p. 176). (47) A sterile soybean plant obtained from a natural hybrid (p. 176). (49) Seeds of an artificial soybean hybrid, showing peculiar types of coloration (p. 181). (56) An old style Chinese oil bean press, Manchuria (p. 195). (57) Coolies at Newchwang, Manchuria, carrying loads of soybeans from the junks to big stacks, where they are kept until the factory needs them for oil manufacture * (p. 196). (58) "Seeds and pods of the Hahto variety of soybeans, the seeds being especially valuable as a green vegetable" (p. 222). (59) Baskets of sprouted, small yellow soybeans and sprouted mung beans * (p. 226). (60) Men making soymilk, working with machinery with which the soybeans are ground and the milk strained. Note the 2 grinding stones and the cloth strainers suspended from the ceiling over the tub. The cabinet with rack for bottles is noted in the background (p. 228). (61) Motor stone mill for grinding soybeans in preparing tofu with brass water tank, funnel reservoir, stones, and brass guard (p. 229). (62) Delivery coolies holding baskets full of bottles showing the way soybean milk is delivered by the factory in Changsha, China (p. 231). (76) A courtyard filled with large earthenware containers with cone-shaped wicker tops for ripening soy sauce mash [in Ichang (I-ch'ang or Yichang), Hupe / Hupeh / Hubei province, China]: a small, strong basket is placed into each, with its rim just above the surface of the mash. The soy sauce collects or accumulates in each basket and is then dipped out, ready for consumption * (p. 251). (77) A man standing next to an iron cauldron in which soybeans are boiled for the manufacture of soy sauce (p. 252). (79) Fermenting room for yeast and soybeans in preparation of soy sauce (p. 253). (80) Rows of pots with cone-shaped wicker lids filled with soybean and wheat mixture for soy sauce * (p. 254). (81) A box press in which sacks of fermented soybeans are placed for pressing out the liquid forming soy sauce * (p. 254). (82) A man next to a kettle for boiling the soy sauce. After it is boiled, the sauce is ready to be placed in kegs at left side (p. 255). (83) Rows of soybean sauce in jars ready for shipment (p. 255). (84) Root of a soybean plant showing rootknot caused by the nematode (*Heterodera radicicola*) (p. 285).

Note: * means photo by Frank N. Meyer in China or Manchuria.

Illustrations (line drawings) show: (Fig. 48) Flower of the soybean enlarged. Front view. Side view. Parts of the corolla, standard, wing, one of the keel petals. Stamens. Pistil (p. 177). Figures 50-55, from Kondo (1913) are described at Kondo.

Maps show where the soybean is extensively and successfully grown in: (Fig. 10) The Orient (p. 51). (11) North and South America (p. 52). (12) Europe and Africa (p. 53). (13) A map of Manchuria shows the soybean districts and seed production of different localities (p. 56). (14)

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An outline map of the United States shows the areas with shading to which the soybean is especially adapted as to varieties and purposes (p. 57).

A diagram (Fig. 36, p. 129) shows the various ways in which the plants and seeds of soybeans are utilized. Level 2: The first two categories are seeds and plants.

Level 3: Under seeds: Food products, oil, and meal. Under plants: Hay, ensilage, soiling.

Level 4: Under food products: green beans and dry beans. Under oil: Glycerin, explosives, enamels, varnish, food products, waterproof goods, linoleum, paints, soap stock, celluloid, rubber substitute, printing inks, lighting [illumination], lubricating. Under meal: Human food, stock feed, fertilizer. Under forage: Hay, ensilage, soiling.

Level 5: Under green beans: Green vegetables, canned, salads. Under dried beans: Soy sauce, boiled beans [from whole dry soybeans], baked beans [whole], soups, coffee substitute, roasted beans, vegetable milk, breakfast foods. Under soap stock: Soft soaps, hard soaps. Under oil–food products: Butter substitute, lard substitutes, edible oils, salad oils. Under meal–human food: Breakfast foods, diabetic foods, flour, infant foods, macaroni, crackers, [soy] milk.

Level 6: Under dried beans–vegetable milk: Cheese, condensed milk, fresh milk, confections, casein. Under meal–human food–flour: Bread, cakes, muffins, biscuit.

Level 7: Under cheese: Fresh, dried, smoked, fermented.

2457. Piper, Charles V.; Morse, William J. 1923. Early introduction of the soybean into the United States (Document part). In: Piper and Morse. 1923. The Soybean. New York: McGraw-Hill. xv + 329 p. See p. 39-41.

• ***Summary:*** "There are fortunately fairly complete records for the early history of the soybean in the United States. The facts emphasize the difficulties with which a new crop wins its way to recognition.

"The earliest records.–The first mention of the soybean in American literature is by Mease (1804), who writes 'The soybean bears the climate of Pennsylvania very well. The bean ought therefore to be cultivated.'

"Thomas Nuttall (1829) grew a variety with red flowers and chocolate brown seeds in the botanic garden at Cambridge, Massachusetts, and from his observations wrote a brief account concerning it. He writes:

"'Its principal recommendation at present is only as a luxury, affording the well-known sauce, soy, which at this time is only prepared in China and Japan.'

"In the same journal two years later, November 23, 1831, is an account of the successful culture of the plant at Milton, Massachusetts, the seed having been obtained from Nuttall.

"No further mention of the plant in America literature appears until 1853, when a brief account appeared under the name 'Japan pea' by Ernst [of Ohio] (1853), as follows:

"'The Japan pea, in which so much interest has been manifested in this country for a year or two past, from its hardihood to resist drought and frost, together with its enormous yield, appears to be highly worthy of the attention of agriculturists.'"

"The Perry Expedition to Japan.–The Perry expedition in the year 1854 brought back two varieties of 'soja bean' from Japan, one 'white' seeded, the other 'red' seeded. These, together with the Japan pea, were distributed by the Commissioner of Patents in 1854, (Browne 1854) and, thereafter frequent references to the plant occur in agricultural literature under such names as Japan pea, Japan bean, and Japanese fodder plant. Most of these articles speak of the plant as the Japan pea, none of them as the soy or soja bean. It is apparent from the early accounts that there were at least two Japan peas, one early enough to mature in Connecticut (Patent Office Report, 1854, p. 194), the other very late (American Agriculturist, 1857, vol. 16, p. 10). Judging from all the accounts, we suspect that the early Japan pea may be the Ito San variety, which, however, has red flowers, while the late variety may be the Mammoth. The Ito San is still occasionally called the Japan pea, while the introduction and source of the Mammoth has never been definitely determined. From these early accounts the Mammoth may well be the 'white-seeded' soja bean obtained by the Perry expedition. The 'red-seeded soja bean' was, probably, the adsuki bean (*Phaseolus angularis*), as no red-seeded soybean is known.

Later Introductions.–Prof. G. H. Cook, of New Brunswick, New Jersey, obtained seed of the soybean at the Bavarian Agricultural Station [in Germany] in 1878. In the same year Mr. James Neilson obtained seeds of several varieties at Vienna, Austria. Both of these gentlemen planted the seeds and gathered crops of the different varieties in 1879. These varieties were without doubt some of those grown and distributed through Europe by Professor Haberlandt of Vienna.

"A yellow-seeded soybean was grown at the North Carolina Agricultural Experiment Station in 1882 and reported on in some detail. The source of the variety is not given, but by implication it is the same as the variety stated to be grown by a number of persons in the State, and is probably the Mammoth.

"Two varieties, one black seeded, the other with white seeds, were grown at the Massachusetts Agricultural Experiment Station in 1888.

"In 1890 Prof. C. C. Georgeson (1890) secured three lots of soybeans from Japan which were grown at the Kansas Agricultural Experiment Station in 1890 and subsequently.

"Prof. W. P. Brooks, (1890) of Amherst, Massachusetts, brought with him from Japan in 1889 a number of soybean varieties, including the Medium Green or Guelph, and the Ito San. It is quite certain that other importations of soybeans from Asia were made by others, but no definite records have been found.

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"Since 1890 most of the agricultural experiment stations have experimented with soybeans and many bulletins have been published dealing wholly or partly with the crop."

2458. Piper, Charles V.; Morse, William J. 1923. Tables (Document part). In: Piper and Morse. 1923. The Soybean. New York: McGraw-Hill. xv + 329 p.

• ***Summary:*** Tables: (1) Acreage, production and yield of soybean seeds in the United States. Gives statistics for each for 1918, 1919, and 1920 for 14 states, other, and total. The states are listed in descending order of soybean acreage in 1921, as follows: North Carolina, Virginia, Alabama, Illinois, Ohio, Kentucky, Missouri, Tennessee, Wisconsin, Indiana, Georgia, Pennsylvania, S. Carolina, Mississippi.

(2) Estimates of soybean production of Manchuria for various years (in million tons): 1906 = 0.6. 1907 = 0.6 to 0.9. 1908 = 1.150. 1909 = 1.150. 1910 = 1.4. 1913 = 1.2 1921 = 4.52.

(3) Cost of production of soybeans per acre in Manchuria, 1910. (4) Monthly capacity of steam oil mills at Newchwang, Manchuria, 1917. (5) Export of soybeans, bean cake, and bean oil from the principal ports of South Manchuria, 1909 to 1913, inclusive. (6) Five-year averages of acreage, production, and yield per acre of soybeans in Japan. (7) Amount and value of soybeans imported by Japan. (8) Importations of soybean cake and bean oil into Japan. (9) Quantity and value of exports of soybeans and soybean oil from Japan to foreign countries, 1913 and 1914. (10) Quantity and value of exports of miso (bean cheese) and shoyu sauce, 1903 to 1907, inclusive. (11) Quantity and value of imports of soybeans, bean cake, and bean oil by European countries, 1912 to 1914, inclusive. (12) Comparative prices per ton of cottonseed and soybeans in European markets, 1911 to 1914, inclusive. (13) Quantity and value of soybeans, soybean cake, and soybean oil imported into the United States, 1910 to 1920, inclusive. (14) Quantity of imports of soybeans in the world's trade, 1920-1919 inclusive. (15) Quantity of imports of soybean oil in the world's trade, 1910-1919 inclusive. (16) Quantity of exports of soybean oil in the world's trade, 1910-1919 inclusive. (17) Quantity of exports of soybeans in the world's trade 1910-1919 inclusive. (18) Acre yields of seed and hay of soybeans at different dates of planting at Arlington Farm, Virginia. (19) Yields of soybeans variously spaced. (20) Acre yields of soybean hay and seed when planted at different rates. (21) Germination of soybeans at different depths of planting at Arlington Farm, Virginia. (22) Influence of nodules on the composition of seed. Michigan Experiment Station. (23) Effect of various nitrogenous fertilizers on the yield of soybeans. Massachusetts Experiment Station. (24) Effects of different phosphatic fertilizers with and without lime. Rhode Island Experiment Station. (25) The influence of different potash salts on yields of soybeans. Massachusetts Experiment Station. (26) Effects of different kinds of lime on the yield of soybeans. Massachusetts Experiment Station. (27) Effect of fertilizers on soybeans. Delaware Experiment Station. (28) Composition of hay of Mammoth soybean at different stages of development. Arlington Farm, Virginia. (29) Comparison of the loss in moisture in 10-lb. samples of green forage of ten varieties of soybeans when air dried. Arlington Farm, Virginia. (30) Tons of soybean hay to the acre at different experiment stations in the United States. (31) Bushels of soybean seed to the acre at different experiment stations in the United States. (32) Relative yields of straw to seed in different varieties of soybeans. Ohio Experiment Station. (33) Viability of soybean seed. (34) Proportions of stems, leaves, and pods. (35) Nutritive constituents contained in each part of the soybean plant. After Lechartier. (36) Composition of the different parts of the soybean plant at different stages of growth, at Arlington Farm, Virginia. (37) Total weights of mineral materials in 1,000 kilos of dry forage. After Lechartier. (38) Mineral Materials in 1,000 kilos of dry forage. After Joulie. (39) Percentages of nitrogen, phosphoric acid and potash contained in different parts of the soybean plant at different stages of growth, at Arlington Farm, Virginia. (40) Composition of soybean seed compared with that of other legumes. (41) Composition of common American varieties of soybeans. (42) Percentage composition of the different parts of soybean seed. After Lechartier. (43) Percentage composition and comparison of the amino acids of the protein of the soybean and of cow's milk. (44) Percentage composition of the nitrogen-free extracts of the soybean. (45) Starch content of commercial varieties of soybeans in the United States. (46) Maximum, minimum, and average of the more important constants of soybean oil from 48 varieties, compared with those of other well-known oils. (47) Comparison of the more important constants of soybean oil by different observers. (48) Constants for soybean oil. (49) Composition of the ash of the soybean seed. After Pellet. (50) Mineral content of the soybean seed compared with those of cowpea, navy bean, and peanut. (51) Oil content of soybeans gathered at various stages of maturity. (52) Oil content of soybeans as affected by partial defoliation. (53) Oil content of soybeans as affected by partial removal of very young seed pods. (54) Oil content of soybeans of large and small size seed from the same plant. (55) Oil content of soybeans planted at intervals of two weeks in 1911, at Arlington Farm, Virginia. (56) Varietal differences in the oil content of soybeans grown at Arlington Experiment Farm, Virginia, in 1907, 1908 and 1910. (57) Oil content of soybeans grown under different environmental conditions. (58) Oil and protein content of soybean varieties grown under different environmental conditions. (59) Fertilizing constituents of soybeans contained in crop and roots on one acre. Connecticut (Storrs) Experiment Station. (60) Yields of hay of different legumes and content of fertilizing ingredients. Michigan Experiment Station. (61) Fertilizing

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constituents of soybeans cut at different stages of growth. Arlington Farm, Virginia. (62) Data and results of soiling experiments with milch cows. Iowa Experiment Station. (63) Soybean soiling experiment with milch cows. Pennsylvania Experiment Station. (64) Analyses of soybean, soybean and corn, and corn silages. (65) Digestibilities of soybean and other silages. (66) Digestible nutrients in 100 lb. of air-dry substance. (67) Digestible nutrients in 100 lb. of soybean straw and in other roughages. (68) Fertilizing constituents of soybean straw compared with those of wheat, oats, barley, and rye. (69) Number of seeds per bushel and weight in grams of 100 seeds of the most important varieties. (70) Results of planting a single variety of soybean at different dates. Vienna, Austria, 1877. (71) Results of planting different varieties of soybeans at different dates at Knoxville, Tennessee. (72) Life period of soybean varieties grown at the Arlington Experimental Farm, Virginia, for eight seasons. (73) Life periods of American varieties of soybeans grown at Sabour, India, 1911 (from Woodhouse and Taylor, 1913). (74) Life period of soybean varieties planted at intervals of two weeks in 1911 at the Arlington Experimental Farm, Virginia. (75) Behavior of flower color in natural hybrids. (76) Behavior of pubescence colors in natural hybrids. (77) Behavior of amount and colors of pubescence in an artificial hybrid. (78) Behavior of the color of pods in natural hybrids. (79) Behavior of seed colors in natural hybrids. (80) Soybean crosses in the study of seed color. (81) Behavior of cotyledons in natural hybrid selections. (82) Behavior of cotyledons in soybean crosses. (83) Variations in the cooking qualities of seed of different varieties of soybeans. (84) Consumption of vegetable oils by the soap industry in the United States. (85) Consumption of vegetable oils in the production of lard substitutes and oleomargarine in the United States. (86) Composition of soybean cake, meal, and other important oil feeds. (87) Two 17-week comparisons of soybean meal with other supplements for fattening pigs. (88) Growth and nitrogen elimination of chicks fed varying amounts of meat scrap or soybean meal or both, in addition to a corn ration. (Indiana Experiment Station). (89) Comparison of the digestibility of soybean meal and other oil meals. (90) Digestion coefficients of soybean meal obtained with sheep. Massachusetts Experiment Station. (91) Fertilizing constituents of soybeans, soybean meal, and cottonseed meal. (92) Analyses and calories of soybeans compared with those of other legumes and foods. (93) Composition of soybean flour in comparison with wheat flour, corn meal, rye flour, graham flour, and whole wheat flour. (94) Composition of the sprouts from the soybean and mung bean. (95) Composition of soybean milk compared with cow's milk. (96) Yields of bean curd obtained from different varieties of soybeans. (97) Compositions of tofu and tofu products. (98) Nitrogenous substances in natto. (99) Composition of hamananatto. After Sawa. (100) Composition of yuba. (101) Composition of red and white miso. (102) Composition of shoyu or soy sauce. (103) Composition of soybeans of the same variety dried, soaked, and roasted.

2459. *USDA Bureau of Plant Industry, Inventory.*1923. Seeds and plants imported by the Office of Foreign Seed and Plant Introduction during the period from April 1 to May 31, 1920. Nos. 49797 to 50647. No. 63. 99 p. March.

• ***Summary:*** Soy bean introductions: *Soja max* (L.) Piper. Fabaceæ. (*Glycine hispida* Maxim.)

49828-49833. "From Yokohama, Japan. Beans presented by Robert Fulton & Co. Received April 2, 1920. Quoted notes by Mr. Fulton:

"49828. '*Kuro mame* (black soy bean).'

"49829. '*Kuro Teppo mame* (round, middle-late, black soy bean).'

"49830. '*Nakate mame* (middle-late, white soy bean), seed larger than *Wase mame.*'

"49831. '*Okute mame* (late white soy bean).'

"49832. '*Shiro daizu* (white soy bean).'

"49833. '*Wase mame* (summer bean), small seeded early white.'

"49834. From Aizu Wakamatsu, Japan. Beans presented by Rev. Christopher Noss. Received April 2, 1920. '*Ogon daizu* (golden soy bean).' (*Noss.*)

"The oil of the bean is used for frying, as a butter substitute, for lubricating, for water-proofing clothes, for medicine, and in the manufacture of soap, candles, guncotton, and artificial rubber. The residue after the oil has been extracted has been used for cattle feed, but is now mixed with wheat flour for food purposes. The entire bean is slightly roasted, pulverized [to make kinako], and mixed with flour to make light cakes and to give flavor to boiled rice; it is cheaper and more nutritious than flour. (Adapted from *Parry, Travel Sketches, Japan Advertiser, January 25, 1920.*)'

"49911/49921. From Techow, Shantung, China. Seeds presented by Miss Alice Reed through Prof. Henry Conrad, Grinnel College, Grinnel, Iowa. Received April 21, 1920. Quoted notes by Miss Reed.

"49918-49920.

"49918. 'Black bean.'

"49919. 'Yellow bean.'

"49920. 'Large green bean.'

"50382/50387. From Foochow, Fukien [Fujian], China. Seeds collected by C.R. Kellogg. Received May 27, 1920. Quoted notes by Mr. Kellogg.

"50385. 'Yellow bean from Hokchiang (Futsing).'

"50440-50441.

"50440. '*Deu tz* (bean). The only yellow soy bean known here and the one referred to when beans are spoken of unless some other variety is definitely mentioned. A field crop; clay preferred. Usually planted right after rice is reaped, making a rotation of rice in the spring and beans in

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the fall.'

"50441. '*U deu* (black bean). The only other type of soy bean grown here. Rather heavier yielder and more vine than the yellow, but not grown very much. A field crop preferring medium-heavy clay soil. Collected at the farm of Lee U. Ken.'

"50522-50524. From Mukden, China. Seeds presented by Albert W. Pontius, American consul general. Received June 7, 1920. Market beans requested for the Office of Forage-Crop Investigations.

"50522. '*Hei tou* (black).' 'A small flat shining black bean used when boiled, salted, and fermented as the main ingredient in a sauce; also fed, when boiled, to water buffaloes.' (*Frank N. Meyer.*) For previous introduction, see S.P.I. No. 45294.

"50523. '*Hsiao chin huang tou* (small golden yellow bean).'

"50524. '*Pai mei tou* (white-crested bean).' A late maturing bean, yellow with a 'white eyebrow.' For previous introductions, see S.P.I. No. 30745.

"50531/50539. From Keijo, Chosen (Korea). Seed presented by Miss Katherine Wambold. Received June 21, 1920.

"50535-50536.

"50535. '*Kong* Bean.' For previous introductions, see S.P.I. No. 42059.

"50536. '*Kong* bean; this is used for making sauce.'" Address: Washington, DC.

2460. Church, Margaret B. 1923. Soy and related fermentations. *USDA Department Bulletin* No. 1152. 26 p. May 12. [27 ref]

• ***Summary:*** This long and very informative paper, with its excellent bibliography and review of the literature, is the third earliest study seen of a fermented food published by a USDA researcher. The focus is on Japanese fermentations because of the laboratory's contact with Japanese researchers, such as Dr. T. Takahashi and Dr. G. Kita. "The experimental work reported here was conducted under the direction of Charles Thom, mycologist in charge, Microbiological Laboratory, Bureau of Chemistry."

Contents: Introduction. Work of previous investigators. Experimental work: Apparatus, material, preparation of ingredients, shoyu-koji, peanut press cake koji, shoyu-moromi. Proportions of ingredients. Yields. Chinese soy sauce. Peanut sauce. Relation of enzymic activity to soy processes. Manufacture in the United States. Related fermentations (Miso, soy cheese [fermented tofu], natto). Summary. Bibliography. "Soy sauce is a dark-brown salty liquid made by the fermentation of soy beans with, as a rule, some additional starchy component. It is widely used as a seasoning throughout Japan, China, and Java [Indonesia], and has been introduced into the Philippines and Hawaii* (* = See letter from C.W. Carpenter, Sept. 23, 1918). Where the occidental would use a vegetable or meat extract and salt, the oriental daily uses soy sauce. Americans are familiar with soy sauce as it is used in the Chinese-American restaurants and as an ingredient which produces the characteristic flavor of the Worcestershire type of sauce." In Japan, the process of preparing "shoyu-koji," a mold-fermented product made from "tane-koji," takes 3 to 4 days. "The mold-fermented material is emptied into a strong brine, thus producing a mash. Constant daily attention is given to aeration, even distribution, and stirring of the solid ingredients. Progressive changes take place over a period of from six months to several years, until at last the mature 'moromi,' as the mash is designated by the Japanese, is produced. These changes are due partially to the activity of bacteria and yeasts, but chiefly to the enzymes of the mold introduced into the mash with the koji."

"Experimental work: The Department of Agriculture had certain strains of the *Aspergillus flavus-oryzae* group of molds known to be used in making soy sauce. Through the courtesy of W.T. Swingle, of the Bureau of Plant Industry, a can of commercial Japanese rice *tane-koji* designed for shoyu manufacture was also received. Dr. Gen-itsu Kita brought additional samples of shoyu *tane-koji* under sterile conditions directly from Japan. Provided thus with soy beans, wheat, and the mold ferment, experiments with soy sauce were undertaken by the Bureau of Chemistry in 1918.

(1) "Apparatus: The apparatus was made according to specifications drawn by Doctor [T.] Takahashi, of the Imperial University of Tokyo, who worked in the bureau for a month." "The usual Japanese koji room (fig. 2) is 32½ feet long, 11 feet wide, and 7 feet high. The walls are thick, and in the more modern factories are built of brick, which does away with fluctuations in the temperature from without. At one end of the room is an entrance and at the opposite end a window. In the ceiling several openings provide means of escape for the carbon dioxid [dioxide] and the damp air. Steam pipes along the floor make it possible to warm the room in cold weather. The ceiling is built with many layers of straw in order that the condensing moisture may be absorbed. One disadvantage of such a ceiling is that infection always occurs in the wet straw. A large area of infection directly over the piles of koji trays is detrimental to the production of sweet koji. In modern buildings, therefore, the surface of the ceiling is coated with cement. When a cement ceiling is used the condensed water drops on the trays of koji, which also is harmful... The burning of sulphur is useful in combatting any infection of a koji room."

Material: "The mold ferment employed in shoyu-koji manufacture is *Aspergillus flavus* Link, occasionally *A. oryzae* (Ahlb.) Cohn, or strains intermediate between the two species." "Certain Japanese manufacturers add cultures of pure yeast belonging to the genus *Zygosaccharomyces* at the time of placing the first mold-fermented material in the brine."

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Preparation of ingredients: While soaking the soy beans, the water should be changed at intervals of several hours to prevent the formation of spore-forming rods, which cause heating and souring. The spores of these bacilli are on the beans as they come from the field. "After being soaked for 20 to 24 hours the swollen beans are cooked in an open kettle or under pressure until they are soft enough to be easily pressed flat between the thumb and finger. This desired softness can be obtained by autoclaving at 15 pounds pressure for 50 minutes and also by much longer cooking in an open kettle. Autoclaving under pressure has the advantage of sterilizing the material." After roasting, the wheat is crushed or cracked. It is important to "reduce some portions of the kernel to a fine powder or dust." The cooked beans and cracked wheat are "mixed in large trays or on mixing tables." Hot beans "may be cooled with a draft of air directed over a thinly spread layer." These "two ingredients need to be thoroughly mixed, so that the wheat dust may form a coat over each bean. The lower water content thus induced on the exterior of the beans makes them better adapted to mold growth than to bacterial growth."

"Shoyu-koji–Ripening: After the beans and wheat are thoroughly mixed, a very small quantity of previously molded material, such as mature rice koji (tane-koji), some shoyu-koji, or a pure mold culture, is thoroughly mixed into the ingredients. The whole mass is then distributed into the small flat koji trays (Plate II, inserted between pages 4 and 5) which are immediately placed into the koji fermentation room before they cool further. Each tray holds about 1.8 liters, or about 2 quarts of raw material. The koji trays are placed in tiers along the wall of the room (Fig. 3)." They are usually stacked in a zigzag fashion to ensure adequate aeration. This is extremely important "because moisture and the lack of oxygen induce the development of mucors and bacteria, and are said to cause the diastatic enzyme to develop at the expense of the proteolytic enzyme. In some localities in Japan no such trays are used, but a broad straw mat with which very good koji can be secured." "The koji room or compartment is kept at a temperature of 24° to 25° C., with a definite humidity." Continued. Address: Microanalyst, Microbiological Lab., Bureau of Chemistry [USDA].

2461. Church, Margaret B. 1923. Soy and related fermentations (Continued–Document part II). *USDA Department Bulletin* No. 1152, 26 p. May 12. [27 ref]

• ***Summary:*** Continued from p. 9. Shoyu-koji: Ripening. The temperature of the koji starts at 24-28°C. Eighteen hours after the trays have been stacked in the koji room, they should be examined; the temperature inside the koji should be 27 to 29°C. "Any higher temperature is due to serious bacterial contamination, or to unsatisfactory conditions of temperature and humidity in the koji room. At the end of 18 hours the koji is stirred, the bottom being brought to the top and the beans are broken apart. Thorough stirring is necessary, for the beans and wheat are now bound by the mycelium or white threads produced by the shoyu-mold." Sporulation must not have begun. "This immature koji should be spread out and exposed by stirring until it has cooled down to 24° or 25° C. (70-72°F) or lower." The koji should now be heaped in two piles extending the length of the tray (Plate II, B). "The material should come in contact with the sides of the tray as little as possible, since condensed water on the surface of the saturated wood induces bacterial growth when absorbed by the tray or retained by the beans and wheat."

The trays are left undisturbed in the koji room for 6-7 hours. The temperature of the room should be just under 30°C while that of the koji should be 27-29°C. "The mycelial growth is now heavier but no sporulation should be evident. At the end of this second incubation period, the koji is stirred thoroughly a second time, the beans and what being broken apart. The mass is cooled below 24°C. After this stirring, four furrows, running the short way of the tray and forming three heaps, are made (Plate II, C). The trays of koji are again placed in the koji room."

"When examined at the end of 40 hours, 12 to 14 hours after the second stirring, the surface of the koji should be a clear 'flavus' or yellow color from the fruiting heads of Aspergillus... The temperature of the best koji should now be not much above 35°C, although 35° to 36°C is permissible... Mature koji has a clear yellow to yellow-green color on the surface and throughout the whole mass. If well ripened, it may be lifted from the tray as one entire block.

"The koji may become infected with *Rhizopus nigricans* if the atmosphere of the koji chamber is moist to the point of condensation as drops. A little Mucor or Rhizopus is disregarded in the material, unless a bad flavor or odor is also present. It is poor practice, however, to allow the Rhizopus to enter..."

Proportion of wheat: Japanese shoyu requires "at least one part of prepared wheat to three parts of prepared beans. This proportion of wheat is somewhat less than equal parts of the unprepared ingredients by volume."

"Color: Mold-ripened soybeans and wheat are usually clear yellow when prepared by the Japanese method for shoyu-koji. This coloration is due to pigments of the spores or seedlike bodies of the mold. Occasionally the color of the mass of beans and wheat is yellowish green. The reason for this variation is not easily defined."

"Bacterial count: Condemnation of batches of koji may be readily based on the presence or absence of an ammoniacal odor or evidence of putrefaction. Any odor of ammonia or of putrefaction, any sticky condition, or any appearance of rottenness in koji is due to bacterial and not mold activity. The bacteria involved in the ripening of shoyu-koji in these experiments belong to the *Bacillus mesentericus* and *B. vulgatus* groups." These are aerobic spore formers. The spores of these bacteria, which grow if the bean soaking

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water is not changed, can survive pressurized cooking at 15 pounds for 30 minutes."

The author successfully made koji from "commercial peanut press cake."

"Shoyu-moromi: The shoyu koji when mature is emptied into a tub of brine. In the experimental work conducted in cooperation with Dr. T. Takahashi one-half of a 65-gallon wooden cask was used for the tub or vat. The brine was a solution of commercial salt at a strength of 20° to 22° B [Baumé, a measure of specific gravity]... Each tub of moromi was inoculated on the first day with four flasks (450 cubic centimeters of wort extract broth and 5 per cent sodium chlorid in each) of a yeast culture of Zygosaccharomyces sp... In Japan sea salt is used. It is said that one part of the sea salt to two parts of water by volume gives a brine from 20° to 22° B., presumably because of the coarseness of the native Japanese sea salt."

Three different batches of experimental shoyu-moromi were made. Two were kept at the ambient temperature of the laboratories (20-24°C). Mash C was made with a weaker brine and kept at a higher temperature. These mashes were stirred daily for 1 hour. "Also a blast of air was bubbled into the material in order to supply oxygen for the microorganisms present." The ripening lasted 10 months. Mash C was of inferior quality. "Doctor Takahashi stated that shoyu A compared favorably with the best commercial shoyu of Japan, while others thought that it resembled the heavy soy made by Japanese housewives in the country districts... The highest quality of shoyu in Japan is said to go under the label 'Mogi' or 'Kikkoman,' but chemical analyses in König (1904) and in the Bureau of Chemistry records indicate no consistent chemical composition."

Bacteriological examination: The main bacteria in this shoyu-moromi seemed to be *Bacillus mesentericus*. "In January 1920 two lots of sauce were started. One was composed of soy beans and wheat and the second of peanut press cake and, for the most part, wheat as a starchy substance." Dr. Edwin LeFevre of the Bureau of Chemistry helped with the bacteriological analyses.

Proportions of ingredients: Table 3, prepared by Dr. Takahashi, shows the proportion of ingredients by volume used in Japan to make 3 grades of shoyu: Best, good, and common. For the best grade use 100 parts (by volume) each of soy beans and wheat, 90 parts of Japanese sea salt, and 180 parts of water.

Yields: When pressed in sacks with a hydraulic press under 1,250 pounds per square inch for 23 hours, 100 liters of moromi yields, on average, 78.7% shoyu and 21.3% residue.

Note: This is the earliest document seen (April 2012) that describes how to make fermented soy sauce on a commercial scale–that will actually work. All known previous descriptions omitted the "mold culture" or koji stage. Address: Microanalyst, Microbiological Laboratory. Bureau of Chemistry [USDA].

2462. Church, Margaret B. 1923. Soy and related fermentations (Continued–Document part III). *USDA Department Bulletin* No. 1152. 26 p. May 12. [27 ref]

• ***Summary:*** Continued (p. 20): Relation of enzymic activity to soy processes: During the ripening of the moromi, the essential factors are diastatic and proteolytic enzymes produced by the mold. But what part do the enzymes of the bacteria play? "Increasingly great numbers of bacteria in the koji cause an undesirable flavor in the final soy sauce."

Manufacture [of soy sauce] in the United States: Making soy sauce is a complex, subtle, and difficult process. "If this were not true the process would not be regarded as secret, as it so generally is in the Orient." Church was interested in helping a soy sauce industry to develop in the USA. "The majority of soy sauce makers and manufacturers in the Orient employ purely rule-of-thumb methods which have been handed down and individually perfected by more or less successful experience. Accurate knowledge of the reasons for the steps involved in the process as practiced is not common."

"Of the almost innumerable ways in which soybeans are used in the Orient as more or less elaborately prepared foods, soy sauce seems to offer prospects of more immediate adoption in the United States than any other product..."

"Soy sauce has already gained a strong foothold with frequenters of Chinese-American restaurants.

"Table sauces containing soy sauce as an ingredient are to be had in a great variety of grades and flavors. They also present an unlimited field for further variation. Concentrated forms of seasoning, such as yeast and vegetable extracts suitable as meat substitutes in flavoring soups and other prepared dishes, are receiving consideration by manufacturers."

"The manufacturers of table sauces and condiments interested in soy sauce are among the largest and best known firms of the United States... One company at least in the United States manufacturers a wholly domestic product."

Related fermentations (Miso, soy cheese [fermented tofu], natto). Summary. Bibliography. Address: Microanalyst, Microbiological Lab., Bureau of Chemistry [USDA].

2463. Church, Margaret B. 1923. Soy and related fermentations: Chinese soy sauce (Document part). *USDA Department Bulletin* No. 1152. 26 p. May 12. See p. 18-19. [27 ref]

• ***Summary:*** "The primary difference between the soy sauce of Japan and that of China, judging from the department's contact with Japanese and Chinese scientists and travelers, is that Japan has a generally standardized commercial product, while the soy of China is made on a smaller scale, varying with the locality and the producer to a much greater extent. Small-scale production, however, gives a choice product

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of uniform quality from certain factories or localities. The underlying principles of the Japanese and Chinese soy industries are the same. The Chinese soy-sauce manufacture has been discussed by Prinsen Geerligs" (1896) and Groff (1919). A long summary of Groff's article is given. Address: Microanalyst, Microbiological Lab., Bureau of Chemistry [USDA].

2464. Church, Margaret B. 1923. Soy and related fermentations: Peanut sauce (Document part). *USDA Department Bulletin* No. 1152. 26 p. May 12. See p. 19-20.
• ***Summary:*** The writer tried making a product resembling soy sauce, but made using peanut press cake instead of soy beans. "The possibility of substituting peanut press cake for soy beans in sauce was investigated. The koji fermentation was carried out as with soy beans and wheat." "After having been brought to a suitable water content and practically sterilized, the cake was ground into strings about one-half inch in diameter in an electrically driven food chopper. The roasted and ground wheat was quickly mixed with the strings of peanut press cake, the mixture was inoculated with the mold ferment desired, and the koji process was carried out as usual. The ripening of the peanut press cake koji was completed in a shorter period than when whole soy beans and wheat were used."

"The peanut press cake koji was made into a moromi having an initial salt content of 11 to 12 per cent sodium chlorid. Evaporation through January to September, 1920, increased the salt content gradually." The final sauce contained about 19% sodium chlorid.

"The quality of the peanut sauce was very satisfactory." It "combined the natural taste of the peanut with a mild meaty flavor."

This is the earliest document seen (April 2001) that mentions a non-soy sauce resembling soy sauce but made from another legume–in this case peanut press cake. Address: Microanalyst, Microbiological Lab., Bureau of Chemistry [USDA].

2465. Church, Margaret B. 1923. Soy and related fermentations: Photos (Document part). *USDA Department Bulletin* No. 1152. 26 p. May 12. [27 ref]
• ***Summary:*** Photos show: (1) Experimental koji room (wooden cabinet type) used in Bureau of Chemistry with doors, trays on racks, electric plate, thermometers, and tube for blast of cool air (p. 3).

(2) Exterior of Japanese koji room (brick-walled with large doors) (p. 4).

(3) Large wooden tubs of shoyu-moromi in Japan, with beans floating on the surface of the mash (inserted between pages 4 and 5).

(4) A courtyard filled with large earthenware containers with cone-shaped wicker tops for ripening soy sauce mash in Ichang (I-ch'ang or Yichang), Hupe [Hupeh / Hubei],



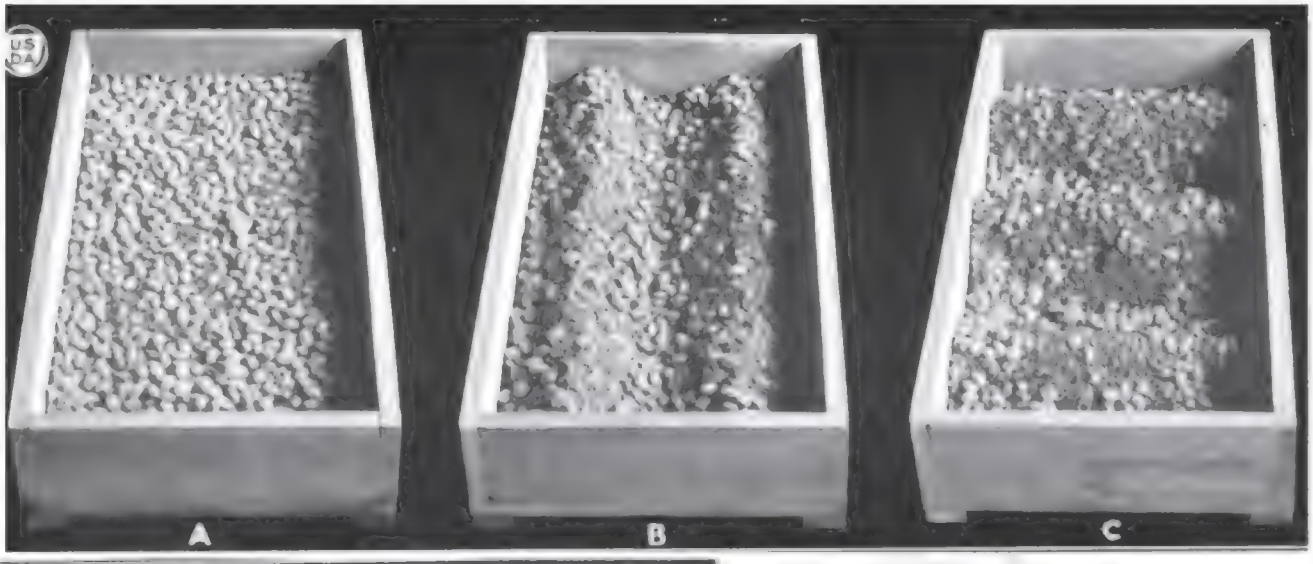


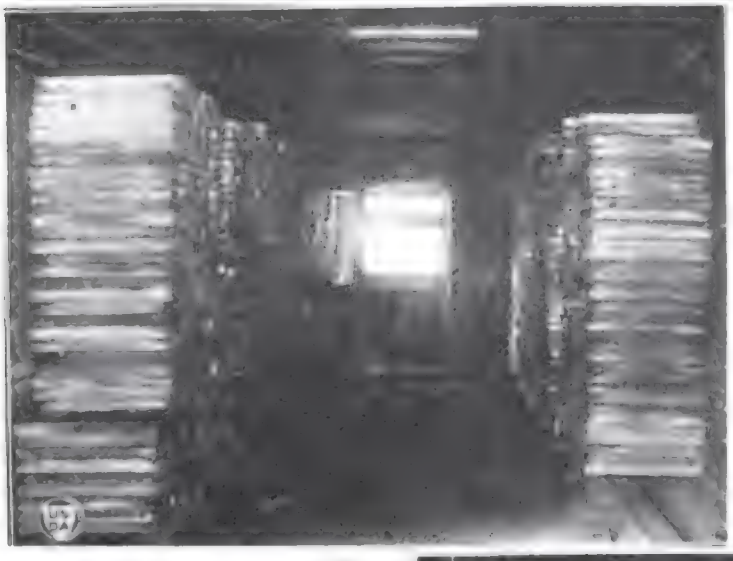


China; a small, strong basket is placed into each, with its rim just above the surface of the mash. The soy sauce collects or accumulates in each basket and is then dipped out, ready for consumption.

(5) Three different stages of shoyu-koji in wooden trays, each 17 by 8 by 2½ inches deep. This koji, "overgrown with a white mycelium of mold ferment," must be stirred and heaped at regular intervals (plate 2).

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(6) Interior of a Japanese koji room, with many wooden trays stacked one upon the other (p. 5).

(7) Comparison in volume of two piles of beans, before and after soaking (p. 7).

(8) A man inoculating soy beans and wheat with mold ferment for shoyu-koji in a large wooden mixing table in a traditional koji room in Japan (p. 8; photo courtesy of G. Kita). Address: Microanalyst, Microbiological Lab., Bureau of Chemistry [USDA].

2466. Nishii, Y. 1923. Henmi shôyu to seisei ni tsuite [On the putrefaction of shoyu]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 1(10):820-23. May. [Jap]
Address: Gishi-cho (Head technician), Izumi Shoyu K.K.

2467. Hamburger's 1923. To tempt the summer appetite (Ad). *Los Angeles Times*. June 15. p. I8.
• ***Summary:*** This large ad is an abbreviated menu without prices. "Fish and meat sauces: "Crosse & Blackwell's Harvey Sauce, mushroom and walnut catsup, A.I. and H.P. English Sauce, Crosse & Blackwell's Bengal Club Chutney.

"Shoyu Sauce, prepared at Choshi, Japan–delicious with chop suey, meat and fish or for soup flavoring."

Note: It is unclear which brand of "Shoyu Sauce" this is, made in Choshi, Japan. It could have been either Higeta or Yamasa.

"Hamburger's. Established 1881. Imported and domestic delicacies. Phone your order. Have it charged." An large illustration shows a man and wife dining in luxury, with a servant carrying in a platter of food. Yet Hamburger's is apparently not a restaurant. Address: Broadway, Eighth and Hill [Los Angeles]. Phone: Broadway 3940.

2468. *Los Angeles Times*.1923. Japanese "Bean Town." June 17. p. XI38.
• ***Summary:*** "Dairen, a Japanese city in Manchuria, according to reports, is the port of what is becoming the greatest bean-raising country of today. The product, also used in making soy-bean sauce and soy-bean oil, is exported to various markets. The soy-bean sauce is familiar to patrons of 'Chinatown' restaurants."

2469. *Boston Daily Globe*.1923. Foods from all the world in Boston shops. June 24. p. A8.
• ***Summary:*** "Strange Chinese dishes:... Their soy sauce for meats and vegetables is quite well known,..."

2470. Brook, Harry Ellington. 1923. Care of the body. *Los Angeles Times*. July 8. p. XI30-35. Sunday magazine.
• ***Summary:*** The section titled "What workers eat" begins (p. 32): "Dr. Josiah Oldfield, an eminent English physician, has been investigating the diet of the world's workers. He obtained the following information from foreign legations in London:"

"From the Consulate General of Japan: Rice, barley, wheat, vegetables, miso soup (miso is prepared from the soya bean), sou [soy; soy sauce or shoyu] (Japanese sauce which is indispensable for cooking purposes), fish (fresh or salt, wet or dried), vegetables are chiefly cooked with soy, salt, sugar, etc. Rice is taken in the place of bread. Flesh-meat does not form an important part of the Japanese dietary."

After discussing food consumption information from 13 countries, Brook concludes: "These people are better nourished than the Americans, who subsist mainly on lean meat, bread made from refined white flour and refined white sugar, with tea and coffee and little vegetables"

2471. *Manchester Guardian* (*England*).1923. The winter hoard: Sauces and pickles. Aug. 27. p. 4.
• ***Summary:*** "At this time of year the wise housewife will see to the replenishing of the shelves in her store cupboard. Not only should jams and jellies be made, but various kinds of sauces, pickles, and chutneys..."

After the recipe for "Tomato ketchup" is a recipe for "Worcester sauce" as follows: "1 pint Indian soy [sauce], 1 oz. ground black pepper, ½ oz. powdered mace, ½ oz. bruised cloves, ½ oz. cayenne, ½ oz. peeled garlics, 8 oz. shallots, 2 quarts vinegar.

"Put the mixture into a large brown jar and let it stand for a fortnight, closely covered. At the end of the time turn the mixture into a large pan and simmer for three-quarters of an hour. Then strain and bottle for use."

Note: Soy sauce is the main ingredient in homemade Worcestershire sauce in a British newspaper.

2472. Church, Margaret B. 1923. Re: USDA research on mold cultures. Letter to Kokichi Oshima [Hokkaido Imperial Univ., Sapporo, Japan], Aug. 28. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** "We received the cultures that you spoke of sending in your letter of May 23... we have every intention of continuing careful studies of Aspergilli, Penicillia, and other common saprophytic molds. Above all we were pleased to receive the cultures as they assured us that you still had within you the same spirit of open generous cooperation as we had learned to appreciate in you in the States."

"You spoke of Mr. Konno telling you of a fever-like sickness occurring among workers where *Aspergillus flavus* and *A. ochraceous* were prevalent. Would you keep your ears open for such reports and when possible run down the truth of such instances? Molds are being used in this country more than previously in their limited way and fields, and they are used more extensively in your country than mine because of shoyu and katsuo-bushi." Address: Microanalyst [Biological Lab., Bureau of Chemistry, USDA, Washington, DC].

2473. Ishio, M.; Endo, Y. 1923. Shôyu to forumuarudehiido to no kankei ni tsuite [On the relation between shoyu and

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formaldehyde]. *Yakugaku Zasshi (J. of the Pharmaceutical Society of Japan)* No. 498. p. 628-37. Aug. (Chem. Abst. 18:298). [Jap]
• ***Summary:*** The small amount of formaldehyde present in soy sauce, either intentionally added or derived from the caramel used for coloring the sauce, gradually decreases on keeping, and at last entirely disappears. This is attributed to combination of the aldehyde with amino acids present in the sauce. The decrease is proportional to the amount of amino acids in the sauce. Address: 1. Igakushi, Japan.

2474. *Tropical Life (England).*1923. Billiard balls at present being grown at the Royal Botanic Gardens, Regent's Park, N.W. [Soya bean cultivation in London]. 19(8):119. Aug.
• ***Summary:*** This summary of an article in the *Daily Mail* (London) notes that the soya beans, which are growing nicely, could be made into billiard balls, knife- and umbrella handles, buckles and beads, cheese [tofu], flour, table-oil, cake, sauce, soap, lubricating and illuminating oil, glycerine, paint, varnish, celluloid, printing ink, waterproofs [waterproof gear and cloth], explosives, and linoleum.

The soya beans are being grown by Mr. J.L. North, curator of the Royal Botanic Gardens (See "Our Friend" in the Jan. 1923 issue). North, who is known as London's soy wizard, has been growing soya beans for 9 years [i.e., since 1914]. Since there is so little room for them in the Gardens, he is experimenting at Chiswick [in the Greater London borough of Hounslow] with 17 species from Europe and America. He believes they are of great importance to England–a country that grows no oil plants.

2475. Osaki, Masao. 1923. Shôyu genryô daizu kasu no shiyo-hô ni tsuite [On the application of defatted soybean cake for shoyu brewing]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 1(2):91-95. Sept. 15. [Jap]
Address: Osaka Koto Kogyo Gakko, Kyoju, Japan.

2476. Hotta, Imakazu. 1923. Kôji-kin no baiyô kyôgû ni yoru jidai naiteki henka ni tsuite [The inner change of next generation of koji mold by cultural condition]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 1(2):96-99. Sept. [Jap]
Address: Marukin Shoyu K.K., Moto Gishi-cho, Japan.

2477. Slosson, Edwin E. 1923. Catching up with China. *Scientific Monthly* 17:283-85. Sept.
• ***Summary:*** The soy bean "was first introduced to America in 1804, but it was a hundred years before we could be induced to take it seriously... But in the last ten years it has rapidly come to the front as one of our major crops and is likely in the next ten years to go ahead of oats in acreage in some of our states... The latest bulletin of the Department of Agriculture lists fifty different uses for soy products, and doubtless Yankee ingenuity can and will add more when we get our minds to working on it.

"Even the Japanese have not exhausted their ingenuity in this field, long as they have been at it. A Japanese scientist named Sato has invented a new plastic which he has called, according to American precedent, 'Satolite.' It is made by precipitating the protein with sulphite, hardening it with formaldehyde, and molding it under heat and pressure into combs, buttons and whatever we make from hard rubber or celluloid or the casein of milk.

"The soy bean is rich in protein and fat, and lacking in starch; in that more like animal than like vegetable food. You can make a milk out of it by simply soaking the dried beans till soft, then crushing fine in a meat grinder, boiling in three times the volume of water for half an hour and straining through cloth. If you do not like the flavor you can add vanillin or something else. This vegetable milk sometimes agrees with children when cow's milk does not. It can also be used for cakes and custards.

"The soy milk may be made into curds and cheeses of various sorts which form a large part of the diet of orientals, but for which we have not yet acquired a taste. Soy meal has come into common use in America, not only as a cattle food, but also for bread and pastry mixed with three parts wheat flour.

"Soy sauce has long been familiar but quite unknown to us. We did not recognize it under its aristocratic English name and its added flavors. But when the high cost of living drove us to the chop sueys, we became acquainted with the cruet of brown salty sauce called 'shoyu,' and we found, as the Chinese had found thousands of years before, that a sprinkling of it would make tasty a large lot of rice and serve as substitute for meat, both in taste and nutriment. Soy sauce is of several sorts. If you want it strong take the Korean. If you want it sweet take the Japanese. It is made by fermentation and the flavor depends upon the way it is brewed and the length of time it is left to ripen. To suit the palate of a Korean connoisseur the jars must be exposed to the sunshine by day and covered by night for a period of thirty years. We Americans, when we get to making it, will undoubtedly speed up the process.

"So far the oil is the most in demand of the soy products. The beans contain from 18 to 20 percent. of a fine palatable oil, which we have imported at the rate of a hundred thousand tons in a year, but which we are now growing for ourselves. It can take the place of cottonseed oil in vegetable substitutes for lard and butter, and of linseed oil in paints. Formerly the oil went mostly to Germany and England, but the war made a shift in the currents of Pacific trade, and we learned to appreciate its value. But we have a lot to learn yet before we catch up with the orientals in the utilization of this multifarious bean."

2478. Loblaw Groceterias Co., Limited. 1923. Proof: That our modern system pleases the careful buyer is the large crowds that throng our 17 busy groceterias each week (Ad).

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Toronto Daily Star (*Canada*). Oct. 11. p. 6.
• ***Summary:*** "Harvey's Worcestershire Sauce bottle 11¢."

"We sell for less." The address of each of the 17 groceterias is given.

2479. Carqué, Otto. 1923. Rational diet: An advanced treatise on the food question. Los Angeles, California: Times-Mirror Press. xvi + 540 p. Illust. 24 cm. [104* ref]
• ***Summary:*** The preface of this book begins: "The aim of this book is to disseminate a better knowledge of diet and its relation to health and disease, in plain non-technical language, understandable to all who seek more scientific information on this vitally important subject." The author advocates a vegetarian diet, with dairy products and eggs consumed in small amounts–if at all; their pros and cons are discussed on pages 324-340.

In the chapter on "Flesh Foods," pages 353-54 state: "Writing to his friend Firmus, who had abandoned the Pythagorean doctrine in order to eat meat, the philosopher Porphyry, living in the third century, said: 'I cannot believe that your change of diet is due to reasons of health, for you yourself have constantly affirmed that a vegetable diet is much more suitable than any other, not only to give perfect health, but even a philosophic and balanced judgment, as a long experience had taught you.'

"And Seneca, who, after studying the problem of nutrition for many years, had adopted vegetarianism, wrote: 'Struck by such arguments, I also have given up the use of flesh of animals, and at the end of a year my new habits have become not only easy to me, but most agreeable; and it even seems to me that my intellectual aptitudes have become more and more developed.'

"Isaac Newton adhered strictly to a vegetarian regimen while performing the prodigious intellectual work which made his name immortal. Among the modern philosophers and artists who have followed or advocated a rational vegetarian regimen may be mentioned: Shelley, Byron, Thoreau, Tolstoi [Tolstoy], Richard Wagner, Tagore, Maeterlinck, Alexander Pope, and George Bernard Shaw."

Chapter V, "Cereals, Legumes, and Miscellaneous Food Products," contains a section titled "Beans," which is largely devoted to soy beans (*Dolichos soya*) (p. 316-318). It discusses green vegetable soybeans ("Soy beans, when about three-fourths grown, make a most palatable and nutritious green vegetable, like the green pea or the lima bean."), soy flour, soy bean milk, bean cheese (tofu), and soy sauce.

Note: This is the earliest document seen (Nov. 2010) in which Otto Carqué mentions or discusses soybeans or soyfoods.

Concerning the wastefulness of the animal as a converter of feed to food, page 361 contains a long quotation from an article in the prestigious journal *Science* titled "The cost of roast pig," by Prof. Henry P. Armsby (1917).

In extensive tables of food composition, the composition of soy beans is given on page 504. The author lived 1867-1935. Address: Los Angeles, California.

2480. Yoshida, Hisao. 1923. Shôyu no nôdo ni tsuite [On the concentration of shoyu]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 1(4):313-16. [Jap]
Address: Osaka Koto Kogyo Gakko, Koshi, Japan.

2481. Kikkoman. 1923-1954. [Monthly and annual soy sauce exports from Japan (1923-54)]. Noda: Kikkoman. Statistical tables. 22 p. [Jap; eng+]
• ***Summary:*** In 1923, some 11,720 *koku* of shoyu [soy sauce], worth 799,022 yen, were exported from Japan. (Note: 1 koku = 180 liters or 47.6 gallons). Of this, 5,307 koku went to the USA and Hawaii (3,330 koku to the USA), 709 koku to Canada, 5,108 koku to Asia (incl. 2,311 koku to Canton and 1,447 koku to China), and 201 koku to Europe. In 1924 total exports increased to 13,149 koku.

A table shows Kikkoman's exports of shoyu by country from 1938 to 1944. In 1938 Kikkoman exported 80 tonnes (metric tons) of shoyu to Peru and Argentina. In 1939, the peak year, 10,658 tonnes were exported; of this 4,444 tonnes (41.7% of the total) went to the USA and Hawaii, 2,680 tonnes went to Manchuria, and 2,098 tonnes to China.

Another table shows total Japanese exports of shoyu by country from 1938 to 1944. In 1939, the peak year, 34,838 tonnes (metric tons) were exported; of this 4,351 tonnes (12% of the total) went to the USA and Hawaii, 293 tonnes went to Canada, 50 tonnes to South America (Peru and Argentina), 63 tonnes to Europe (Holland), and 30,081 tonnes to Asia (incl. 9,550 tonnes to Karafuto, 5,803 tonnes to Taiwan, 4,620 tonnes to Manchuria, 4,295 tonnes to China, and 1,336 tonnes to the Philippines).

Another table shows exports of shoyu from Japan after World War II (1949-1954) to various countries and regions by Kikkoman and by all Japanese shoyu makers. Roughly 85% of Japan's exports were by Kikkoman. The total increased from 6,066 koku in 1949 to 9,316 koku in 1954; of the 1954 figure, 7,009 koku went to the USA and 1,476 koku to Asia. Another table shows exports of shoyu from Japan to major cities from 1949 to 1954 by Kikkoman and by all of Japan. In 1954, worldwide, the cities receiving the most shoyu were: San Francisco 2,033 koku, Honolulu 1,926 koku, Los Angeles 1,504 koku, Okinawa 1,376 koku, Guam 647 koku, Vancouver (BC, Canada) 414 koku, New York 381 koku, Seattle (Washington state) 290 koku. Address: Noda, Japan.

2482. **Product Name:** Soy sauce.
Manufacturer's Name: Chinese & Korean Soy Co. (C.K. Soy Co.).
Manufacturer's Address: 2406 Notley, Honolulu, Oahu, Hawaii. Phone: 89550.
Date of Introduction: 1923.

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New Product–Documentation: Directory of Honolulu and the Territory of Hawaii. 1923. p. 224. Chinese & Korean Soy Co. (C.K. Soy Co.), W.K. Ahn, mngr, groceries, canned goods, general merchandise and soy. 346 N. Beretania. Tel 2541. Soy Factory, 2406 Notley, Tel. 89550. P.O. Box 1454.

2483. Kinoshita, Asakichi. 1923. Nidan shikomi shôyu sokujô shiken hôkoku [The quick double brewing of shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 91. p. 232-48. [Jap]
Address: Jozo Shikensho, Gishi.

2484. Kinoshita, Asakichi. 1923. Nidan shikomi shôyu sokujô no seiseki [Results of quick two-step brewing of shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 18(2):4-8. [Jap]
Address: Jozo Shikensho Gishi, Japan.

2485. Kinoshita, Asakichi. 1923. Shôyu genryô to shite dasshi daizu (sakura mame) no shiyo-hô [Use of defatted soybean and wheat substitutes as ingredients for brewing shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 18(3):13-16. [Jap]
Address: Jozo Shikensho Gishi, Japan.

2486. Ackermann, Alfred Seabold Eli. 1923. Popular fallacies explained and corrected (With copious references to authorities). 3rd ed. London: Old Westminster Press; Philadelphia, Pennsylvania: Lippincott. xvi + 984 p. See p. 287-88. Introduction by Richard Gregory. Index. 21 cm. [1 ref]
• ***Summary:*** In the section titled "Fallacies connected with the animal kingdom. (c) Insects" is a subsection (p. 287-88) titled "That Soy is made from 'Black-beetles,'" which states:

"Sailors have a notion that soy [a kind of sauce prepared in the East from the soy-bean (*Soja hispida*)] is made from cockroaches; and, however absurd the belief may appear, the reason for it is worthy of investigation.

"The Chinese at Canton have a large soy manufactory and they are particularly solicitous to obtain cockroaches from ships, from which circumstances sailors immediately conclude that it is for the purpose of making soy from them. But it is better established that cockroaches are used by the Chinese as a bait in fishing. The infusion of cockroaches is also used in medicine, and Mr. Webster, surgeon of H.M.S. *Chanticleer,* states that common salt and water, saturated with the juices of the cockroach, has all the odour, and some of the flavour and qualities, of soy; so that the sailors' notion, after all, may not be far from the truth."–J. Timbs, F.S.A., *Popular Errors.*

"Sir,–Will you allow me to say a word upon the extraordinarily interesting article in your issue of to-day upon the wonder-working soya bean?

"In these days, when each of one of us is concerned to get the greatest possible return in nourishment from the least possible outlay of cash upon food-stuffs, I think it ought to be far more widely known than it is that soya flour–a staple food in the Far East these 2,000 years and more–is among the most highly nutrient products that the earth brings forth. Soya flour is actually higher in protein value than the germ of wheat. Without suggesting any revolutionary changes in our national dietary–when even the hardened cynic will allow might be improved upon–I think all those in general who have the national welfare at heart, and in particular all thrifty housewives, might well ponder upon the following merits, all fully proven, of soya.

"An admixture of 5 to 10 per cent. of soya flour to our ordinary wheaten flour, baked in the customary manner, raises the nutritive value of the loaf from 10 to 25 per cent. above that of any bread–including wholemeal–ordinarily consumed by our British public. The soya bread is also delicious, most digestible, and retains its moisture far longer than our normal breads. I speak from first-hand experience."

"H.C.M."

Note: Ackermann was born in 1867. Address: 17, Victoria St., Westminster, S.W. 1 [England].

2487. Beeton, Isabella Mary (Mayson). 1923. Mrs. Beeton's cookery: Practical and economical recipes for every-day dishes, and general cooking instructions in marketing, trussing, cookery, etc., invalid cookery, labour-saving, carving, etc. New edition. London and Melbourne: Ward, Lock & Co., Ltd. 256 p. See p. 136. With 100 illust.
• ***Summary:*** Contains a recipe for Worcestershire Sauce (p. 136), which reads: "Worcester Sauce. Ingredients–1 quart of best brown vinegar, 6 tablespoonfuls of walnut ketchup, 5 tablespoonfuls of essence of anchovy, 4 tablespoonfuls of soy, ½ a teaspoonful of cayenne, 4 finely-chopped shallots, salt. Method–Put all these ingredients into a large bottle, and cork it closely. Shake it well 3 or 4 times daily for about 14 days, then strain the sauce into small bottles, cork them tightly, and store in a cool, dry place. Time–2 weeks."

Note: This is the earliest document seen (April 2012) that contains a recipe for Worcestershire sauce with soy sauce as an ingredient. Note also that vinegar is by far the most abundant ingredient.

The author lived 1836-1865. Address: England.

2488. Bottari, Fulvio. 1923. La soja nella storia, nell'agricoltura e nelle applicazioni alimentari ed industriali [The soybean in history, in agriculture, and in food and industrial applications]. Torino & Genova, Italy: S. Lattes & Co. 243 p. Preface by Prof. Oreste Mattriolo (R. Università di Torino). With 34 illust. 22 cm. [25 ref. Ita]
• ***Summary:*** Contents: Preface. Reason for the work; its scope and limits. Part I: The origin and history of the soybean. Reason for this history, the origin of the soybean and its early dissemination, soya (including production

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statistics) in Oriental countries (China, Manchuria, Japan, Formosa, Korea, French Indochina), how the soybean was introduced to Europe, the cultivation of soya in France, Soya in England, Austria, Germany, Denmark, Holland, Russia, Sweden, Alsace-Lorraine (now in northeast France), Spain, Italy, America, Conclusion.

Part II: Cultivation of soya. Part III: Soya in the feeding and nutrition of humans and animals. 1. The analysis and physiology of metabolism as an element in the study of nutrition. 2. Soybean forage in the feeding of animals. 3. Soybeans (*il grano di soja*) and soy products in the feeding of humans and animals: Commercial and nutritional value and digestibility of the soybean, how to prepare and cook whole soybeans, soy broth, thick soups, salads, and meat dishes, soy purée, soybean cakes, soybean sprouts, roasted soybeans (soynuts), soy coffee, soy chocolate, soy confections, special foods for diabetics and tuberculosis patients, the soybean as a feed for animals.

4. Flour, pasta, and bread in feeding. 5. Soymilk (*il latte di soja*) and its use in the feeding of animals and humans. 6. Tofu (*il formaggio di soja*). 7. Soy oil and oil-cakes (*panelli*). 8. Condiments and sauces: Natto, miso, soy sauce (*le salse*, called *Schogon* [sic] in Japan, *Tsinag-Yeou* [sic] or *Tao-yu* in China, *Ketjap* in Java, and *Tuong* in Annam). 9. Enzymes (I fermenti, incl. urease). 10. Conclusions.

Part IV: Industrial applications of soya.

Part V: General conclusions.

The first test of the lactation of calves with soymilk was conducted in the winter of 1916-17 by the Bonafous Institute in Turin. The results were splendid, and have encouraged eminent pediatricians such as Dr. Casalini, Prof. Dr. Alberto Muggia (teacher of clinical pediatrics at the University of Turin), and Dr. Enrico Gasca (vice director general of infants at Turin) to extend their experiments (p. 6).

In Italy vegetable oil production has decreased steadily from 1870 to 1920. Attempts were made to grow sesame, peanuts, and rapeseed, and to import oils from abroad. During World War I, unrefined soy oil was introduced to the market in large quantities, but its unappealing taste disgusted consumers and for a while nothing more was heard of it. Then in 1921 it began to be introduced again, but this time it was refined at Italy's national oil works. The good results obtained encouraged the Italian oil milling company, Sairo, and other oil works to make great progress in soy oil production. Several thousand quintals (i.e., several hundred metric tons) of the best soy oil, sold under the name "refined oil from seeds," were introduced in the first half of 1922 by the national oil works of Genoa.

Returning to the early history of soya in Italy, we find that in 1848 some missionaries brought soybean seeds and a little soil to Italy from Japan. They waited for the cultivation for several years, then nothing else was said. In 1880 the Italian Ministry of Agriculture recommended the cultivation of soybeans as a fodder crop for the future, as was being done in the USA, but their suggestion received no attention. In 1918, according to Mattei, a test of soybean culture was done at the Colonial Garden of Palermo on a parcel of 300 square meters.

Since 1912, after seeds had been brought by foreign delegates to the International Exhibition at Turin in 1911, repeated experiments with soybean cultivation have been conducted at the Bonafous Agricultural Institute in Turin, with the goal of developing two well adapted varieties, one for fodder and one for seed. Their green variety is for fodder and their yellow one for seed.

From 1920 the directorship of the cultural work was given to the head professor at the Institute, Venanzio Manvilli, also professor of the Germano Sommeiller Technical Institute, professor the faculty of agriculture, University of Turin. They worked with seeds already selected from the institute and with those obtained from Prof. Don Ricaldone, and from Tientsin, China, directly. Others who have done important work with soya in Italy are Paolo Bottari (with soymilk at the Bonafous Institute), Tamanini Guido, Mossello and Bellia, Prof. Cav. Giov. Batt. Allaria, Dr. Mose Miccinelli

A table (p. 31) shows soybean and cotton hectarage and production in Korea from 1909 to 1917. Soybean hectarage increased from 277,776 ha to a record 487,134 ha. Soybean production grew from 1,991,126 quintals (1 quintal = 100 kg or 0.1 metric tons) to a record 3,816,498 quintals.

Page 35: "Prof. Rouest of Luxey (Landes) in France wrote us on 30 Nov. 1921. 'I have finished only the period of acclimatization of the soybean. It remains for me to propagate it a little everywhere. The experiments of 1921 were extended in all the Departments, being viewed from an industrial and commercial point of view. I must now study which variety adapts among those I am cultivating. Soy flour will not be able to be made until we have many thousands of hectares under cultivation, and then we will be able to think of other applications as well... Actually the firm Hendebert de Lion sells its flour, originating in China, at 10 French francs per kg, a prohibitive price.'"

Page 206: At the pediatric congress held in Milan in Sept. 1922, the question of lactation (feeding children) with vegetable milk was discussed in a favorable way, proposed by Prof. Muggia and sustained by the illustrious Prof. Berghius, Director of the Pediatric Clinic of the University of Padua, and by Prof. Francioni of Bologna. We can also add that experiments on lactation are proceeding in Italy at the pediatric clinics of Turin, Bologna, Padua, Genoa, and Florence, and also at the Infant's Dispensary in Turin.

Photos show: (0) An infant fed soymilk in Turin in 1921, together with a table showing its weight gain from 18 July 1921 until 14 Jan. 1922 (p. 7). (1) Three different varieties of soybean plants (p. 70). (2) 2 soybean plants up close (p. 71). (3) The leaves of 3 different varieties of soybean plants (p. 72). (4) Close-up of the stem and pods of a soybean plant (p.

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73). (5) Beans and pods of soybeans (p. 74).

(6) Different stages of germinating soybean seeds (p. 75). (7) Close-up of soybean roots (p. 76). (8) Field of soybeans at the "Istituto Bonafous" (p. 106, 108, 113). (9) Field of soybeans grown with corn (p. 122, 123). (10) Cellular transverse section through a soybean (facing p. 152). (11) Pasta made from soy (p. 181). (12) Bread made from soy (p. 183-89).

Note 1. Quite a bit of the historical and non-Italian information in this book comes from Léon Rouest's 1921 book *Le soja et son lait végétal: Applications agricoles et industrielles*.

Note 2. This is the earliest Italian-language document seen (Jan. 2012) that mentions natto, which it calls "il *Natto* in Giappone che corrisponde al *Tao-Teche* della Cina." Address: Dr. of Economic and Commercial Science, Turin [Torino], Italy.

2489. Kellogg, John Harvey. 1923. The natural diet of man. Battle Creek, Michigan: The Modern Medicine Publishing Co. 386 p. Illust. Index. 20 cm. [50+* ref]

• ***Summary:*** This classic of vegetarian literature contends that a vegetarian diet is the natural diet of man. Contents: 1. Man not naturally a flesh-eater: Modern civilized life unnatural and unbiologic, animal dietaries, lessons from the monkey, porcine wisdom in diet, animals classified by diet, the ancient family of primates, all mammals originally vegetable feeders, when germ diseases were unknown, kinship of higher apes and men, flesh-eating never a universal human custom.

2. Twenty popular delusions about flesh foods: D-1. That meat is superior as a blood-making food, and, hence, is needed in anemia. D-2. That meat is essential as a flesh-building food. D-3. That a flesh diet is essential to support severe or prolonged activity; that is, promotes endurance. D-4. That flesh-eating is necessary to produce physical courage. D-5. That vegetarian races are inferior physically and mentally to races using a mixed diet. D-6. That flesh foods are more refined and more easily digested and, hence, more nutritious than are foods of vegetable origin. D-7. That man is naturally omnivorous. D-8. That flesh foods are stimulating and thus supply an element needed especially by brain workers. D-9. That beef tea is a useful nutrient. D-10. That a meat diet is required to prevent or cure gastric acidity. D-11. That a meat diet is desirable in tuberculosis. D-12. That a meat diet is necessary in diabetes. D-13. That a flesh diet is essential in the treatment of obesity. D-14. That meat is required in beri-beri. D-15. That meat is essential as a "building-up" or restorative food. D-16. That meat is needed by growing children. D-17. That meats are needed as a stimulus to appetite. D-18. That the beef industry is a necessary part of our national economic system. D-19. That a meat diet is necessary to insure reproductive activity. The law of diminishing returns versus flesh-eating. D-20. That meat is a harmless luxury.

3. Scientific objections to the use of meat: Human liver not adapted to meat diet; important differences between meat and milk; meat deficient in vitamins and food lime; Eskimos eagerly seek vegetable food; ill effects of meat diet on Arctic explorers; meat saturated with tissue poisons; meat readily putrefies, natural foods do not; the poisons of meat; meat extracts; why viscera are especially objectionable; bacteriology condemns meat as food; vast numbers of bacteria in meat; putrefactive products of meat; why physicians forbid meat in cases of kidney disease and high blood pressure; how flesh-eating causes constipation.

4. Diseases due to flesh eating: Tuberculosis in animals, cancer from meat eating, cancer rare and appendicitis unknown among flesh abstainers, meat-eating causes disorders of nutrition, acidosis from a flesh diet, a meat diet and scurvy, meat eating and arteriosclerosis, pernicious effects of a meat diet experimentally proven, recognized meat contraindications, the peregrinations of a deadly parasite, typhoid germs in meat products, flesh poisoning, no protection for meat-eaters, oyster poisoning, converting sewage into food.

5. Experimental evidence against flesh eating: McCollum's experiments, Dr. S. Weir Mitchell endorses the meatless regimen, an eminent scientist on meat diet, Fauvel's observations, greater endurance of flesh-abstainers, the death rate reduced by meatless diet, flesh-eating does not develop intelligence, meat-eating and race degeneracy, meat-eating a city habit, non-meat diet best even for carnivorous animals, the Scotchman's dog, the effects of a meat diet on rats, the effects of a flesh diet on rabbits, flesh-eating animals short lived. 6. The ethical argument.

7. Historical facts and authoritative opinions: Biblical teaching about flesh eating, apostles who were flesh abstainers, the Essenes were flesh-abstainers, the diet of the ancient Greeks, King Cyrus a flesh-abstainer, Julius Caesar's army ration, diet of Peruvian soldiers, diet of athletes of ancient Greece, ancient philosophers were flesh-abstainers, Plutarch's essay on flesh-eating, fleshless diet of a Roman emperor, meatless diet endorsed by Gautier, views of Seneca, diet of the ancient Sumerians [today's Iraq], eminent modern flesh abstainers, vegetarian monks, Thoreau on the fleshless diet, a Chinese statesman's experience, the views of two great naturalists, the poet Shelley a food reformer, a child's natural repugnance to meat, Liebig on the advantages of a non-flesh diet, Sylvester Graham's diet reform movement.

8. Interesting facts concerning the dietary habits of various peoples. 9. The marvelous adaptation of the natural diet to human needs. 10. How to discard meats comfortably and safely.

11. Is the disuse of meat advisable from a practical standpoint? The U.S. Department of Agriculture shows the use of less meat to be safe and economic, the importance of planting nut trees, avoidance of meat is necessary to change

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the intestinal flora, vegetable substitutes for meat, the recent low protein movement in the United States, the half century experience of the Battle Creek Sanitarium with a fleshless diet.

12. Newspaper and magazine misinformation: An "eat-more-meat" campaign, Professor Fisher of Yale University [Connecticut] refuses to support the "eat-more-meat" campaign of the [Chicago, meat] packers, pernicious piffle.

Soy is mentioned in many places. The section titled "Flesh-eating never a universal custom" states (p. 33-34): "According to Mori, the Japanese peasant of the interior is almost an exclusive vegetarian. He eats fish once or twice a month and meat once or twice a year... The soy bean is held in high esteem and used largely in the form of *miso*, a purée prepared from the bean and fermented; also *to-fu*, a sort of cheese; and *cho-yu* [shoyu, soy sauce], which is prepared by mixing the pulverized beans with wheat flour, salt, and water and fermenting from one and a half to five years. The Chinese peasant lives on essentially the same diet, as do also the Siamese, the Koreans, and most other Oriental peoples. Three-fourths of the world's population eat so little meat that it cannot be regarded as anything more than an incidental factor in their bill of fare."

Page 45: Complete "proteins are found in milk and eggs as well as in most nuts, peanuts, and the soy bean..."

Page 73: "The protein of milk, of the soy bean, and of nuts is known to be superior to meat as a source of body nitrogen." Address: Superintendent of the Battle Creek Sanitarium, Battle Creek, Michigan.

2490. Kellogg, John Harvey. 1923. The soy bean (Document part). In: J.H. Kellogg. 1923. The New Dietetics: A Guide to Scientific Feeding in Health and Disease. Revised ed. Battle Creek, Michigan: The Modern Medicine Publishing Co. 1021 p. See p. 315-21. 24 cm.

• ***Summary:*** This section is quite similar to that in the 1921 first edition of this book, but on different pages. Changes appear on the following pages: 316 (addition of a paragraph stating that the soy bean is a highly valuable food for persons suffering from diabetes), 318 (deletion of the statement that the writer "has for twenty-five years made use of milk prepared from the almond and other nuts."), 320-21 (addition of a table, supplied by William Morse of the USDA, giving the composition of soy beans sprouts and mung bean sprouts). Address: Battle Creek, Michigan.

2491. Kellogg, John Harvey. 1923. The natural diet of man (Continued). Battle Creek, Michigan: The Modern Medicine Publishing Co. 386 p. Illust. Index. 20 cm. [50+* ref]

• ***Summary:*** Continued: Page 74: "Vegetable extracts (yeast extracts and soy sauce) are now prepared which are finer in flavor than the best meat extracts..."

Page 191: "Complete proteins are found in the almond and also in the soy bean and the peanut, a fact which accounts for the large use of the soy bean and the peanut in China and other Oriental countries as a supplement to a diet of rice and green vegetables."

Page 198: "The soy bean contains more protein than does beef, and 20 per cent of oil."

Page 282: G. Yukawa reports that the diet of Japanese monks "consists exclusively of vegetable products, rice being the staple, supplemented with soy beans and vegetables. The diet contained an average of 70 grams of protein, 15 grams of fat, 514 grams of carbohydrates, an average energy intake of 2,500 calories. The experimenter concluded that the absolute vegetarian diet of the Buddhist monks of Japan is entirely adequate to maintain perfect health."

Page 285: "Some years ago (1899) the Emperor of Japan appointed a commission to determine by investigation whether it was necessary to add meat to the national dietary to improve the physique of the race, especially to increase their stature. As regards the use of meat, the commission reported 'that the Japanese had always managed to do without it, and that their powers of endurance and their athletic prowess exceeded that of any of the Caucasian races. Japan's diet stands on a foundation of rice.' The rice diet of the Japanese is supplemented by the free use of peanuts, soy beans, and greens, which supply all that rice lacks to constitute a wholly sufficient bill of fare."

Page 306: "The experiments of McCollum and numerous others have in recent years demonstrated the entire feasibility of living exclusively upon a diet of purely vegetable origin. It is only necessary to make such a selection of foodstuffs as will supply the body with all the elements necessary for complete nutrition; and this may be easily done, as has already been indicated. It has also been shown that two widely used legumes, the soy bean and the peanut, as well as nuts, supply complete proteins and may be used in supplementing the incomplete proteins of cereals and vegetables. This fact explains the great rôle played by the soy bean in the bills of fare of the Orientals."

Pages 313-14: "Certain proteins known as complete proteins, when taken into the body in proper quantities may be wholly utilized in tissue building, because they contain exactly the elements needed, no more and no less, for the building of muscles, nerves, glands, and other nitrogenous tissues." "The protein of the soy bean, the peanut, the almond, and various other nuts has, however, been shown to be of high quality, practically equal to the protein of flesh... When meat is discarded, it is evidently necessary that care be taken to supply in its place an adequate amount of protein derived from the soy bean, the peanut, the almond, or other nuts, or from milk or eggs. Four or five ounces of soy beans, peanuts, or almonds afford an abundance of protein for a day's ration. See also p. 320.

Page 322: "But even in the absence of milk and eggs, an abundant supply of protein could be readily secured by

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the planting of peanuts and the soy bean, two remarkable legumes which, pound for pound, supply more nourishment than beef or pork and of finer quality." "Nuts, together with the peanut and the soy bean, afford a protein which is equivalent to that of meat at a cost far below the cost of meat proteins. For example, an acre of very ordinary ground will produce twenty bushels, or twelve hundred pounds of soy beans, which contain 40 per cent, or four hundred and eighty pounds of excellent protein. It takes an acre of ground and two years to produce seventy-five pounds of dried protein in the form of beef. The same land will produce in the same length of time nearly one thousand pounds of soy bean protein. In other words, an acre of ground devoted to soy beans will produce more than thirteen times as much protein as the same ground used as a pasture for fattening steers..."

Page 338: The section titled "The recent low protein movement in the United States," notes that the daily protein requirement for a person weighing 120 pounds could be "provided by 2½ pints of milk or by 6 ounces of almonds, 5 ounces of peanuts, 6 ounces porterhouse steak, 6 ounces navy beans, 4 ounces soy beans, 5 ounces lentils, 5 ounces black walnuts."

Page 359: "Animals furnish us a good object lesson on this subject. Compare the agility, alertness, curiosity and intelligence of the fruit-eating chimpanzee with the dull stupidity of the lion and the tiger; or the vivacity and progressiveness of the rice- and soy-eating Japanese, with the dull-witted, decaying Eskimo."

Nuts are discussed favorably on pages 56, 297, 327-31 but neither peanuts nor peanut butter are mentioned specifically.

Dr. Kellogg was a pioneer in promoting the importance of dietary fiber. The following terms appear: Bran or wheat bran (p. 40, 155, 157, 201, 301). Bulk, bulky, or bulky diet (referring to "roughage") (p. 70, 135). Cellulose (p. 57, 70, 297, 303). Constipation (p. 10, 66, 135-138, 148, 157, 161, 332, 382). Roughage (p. 57, 135, 297, 301). But none of the following terms appears in the index: Laxative, laxatives.

The author lived 1852-1943.

Note: This is the earliest English-language document seen (June 2004) that contains the term "natural foods" and that also discusses soy. Address: Superintendent of the Battle Creek Sanitarium, Battle Creek, Michigan.

2492. Kempski, Karl E. 1923. Die Sojabohne: Geschichte, Kultur und Verwendung unter besonderer Berucksichtigung der Verhaeltnisse in Niederlaendisch-Indien [The soybean: History, culture and use, with special attention to the situation in the Netherlands-Indies]. Berlin: Paul Parey. 88 p. Illust. Index. 22 cm. [101 ref. Ger]

• ***Summary:*** Contents: Introduction. Some remarks on the soybean's early history. Overproduction of soybeans in Manchuria after the Russo-Japanese War–English oil mills make their first trials. Soybean production in Manchuria. Soybean production in Korea. Soybean production in Japan. Soybean production in America–Soybean meal and soybean milk are introduced. Soybean production has also expanded in Africa, British India, and the Philippines. The introduction of soybean cultivation to Europe. The many uses of the soybean in Europe. Uses of soy oil. Old and new methods of obtaining soy oil. Soybean production and use of soybeans in the Netherlands-Indies. Appendix: Descriptions of how the most important soybean products are manufactured: In Java (tao-hoe [tofu]), tempeh, ketjap [soy sauce], tao-tjiong [or tao-jiung, a term, and perhaps a product, between *doujiang* and *tao-tjo*, Indonesian-style miso], in China and Japan (soy sauce, miso, tofu, frozen tofu, natto, soymilk) (p. 62-68). Supplements: I: Soybeans in Manchuria. II: Hansamuehle [Hansa Muehle] in Hamburg, Germany. III: *The Soybean* by Piper and Morse.

Note the extensive, early bibliography. Unfortunately, it contains many errors.

This book is largely a review of the literature, but with some original information, especially on Indonesia and Germany. In 1923 Java imported 150,000 to 200,000 tons of soybeans and had a population of 35 million. The area of soybeans planted in Java (including Madura) increased from 157,600 ha in 1918 to 164,700 ha in 1922 (p. 32). In 1921, 67.3% of Java's soybean acreage was in Central Java, 20.7% was in East Java, and only 5.7% was in West Java. (p. 35). Large quantities of soybeans are imported to the Netherlands-Indies from Manchuria: 35,105 metric tons (tonnes) in 1920, rising to 95,742 tonnes in 1922. From these and local soybeans are made tempeh [spelled like this!], tofu (*tahoe; Bohnenkäese*), soy sauce (*Ketjap, Sojasauce*), etc. In Java, mostly black soybeans are grown. To make tofu yellow, it is cooked in an extract of the *Curcuma* root / rhizome. Sometimes it is also sun-dried or fried/roasted (*gebraten*). Tempeh is inoculated with a piece of tempeh from a previous fermentation, and often fried in coconut oil. Detailed descriptions are given of the production of soy sauce (*ketjap;* which is made from black soybeans) and Indonesian miso (*taucho; tao-tjiong*). The author (p. 64) states that ketjap and tao-tjiung are both inoculated using *Hibiscus tiliaceus* (hibiscus) leaves, called *wanoe* in Java. Today Germany, like America, produces fresh and dried soymilk, fresh and dried soya cream, meat analogs, and soy sauce (p. 25).

This book contains 17 interesting, old photos. Descriptions of those reproduced from other periodicals are omitted. (1) A soybean field on the farm Kikai Nojo near Sempo-Station, Korea, owned and run by Mr. Moegling (p. 12). (2) A combine used for harvesting regular beans in California in 1918 (p. 19). (3) Many hydraulic presses in a modern American oil factory (p. 29). (4) The equipment used in steaming the soybeans before they are crushed in an American "steam mill" type oil mill (p. 31). (5) The interior of a British oilmill (p. 33). (6) The electrical generators in a modern oilmill (p. 34). (7) Soybeans being harvested

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manually at Madioen [Madiun, in East Java], Java (p. 48). (8) Harvested soybeans being dried on racks in a field in Java, and carried away by one worker (p. 48). (9) Workers dividing up the harvest in Java (p. 50). (10) Threshing soybeans with bamboo flails in the courtyard of a small farmer in Java (p. 51). (11) Selling soybeans in a small market in Central Java (p. 51).

Tables show: (1) Imports of soybeans to Germany from 1910 (43,500 tonnes) to 1912 (more than 125,200 tonnes) (p. 24). (2) Soybean acreage in Java (including Madoera) from 1918 (157,600 ha) to 1922 (164,700 ha) (p. 32). (3) A breakdown of soybean area in Java in 1921 (of 226,186 bouws) into West Java (12,980 bouws), Central Java (152,154 bouws), and East Java (61,082 bouws) (p. 35). Note: 1 bouw = 1.754 acres (Johnstone 1975). (4) Imports of Manchurian soybeans to Java (including Madoera) and other parts of the Dutch East Indies (mainly Sumatra) from 1920 to 1922 (p. 36). (5) Yields (average or range) of soybeans in various countries: Germany, Italy, British Indies, Manchuria (incl. China and Korea), Japan, America (up to 2,700 kg/ha), Java (p. 52). (6) Comparison of the nutritional composition of soybeans, peas, and regular beans (Phaseolus varieties) (p. 53). (7) Comparison of the nutritional composition of soya cheese (*Sojakäse*, tofu), beef, and lean pork (p. 53). (8) The prices of white and of black soybeans in Java during January and December 1922 and the same two months of 1923 (in Gulden) (p. 56). (9) Comparison of yields, price, costs, and profit for peanuts (*Katjang tanah*) and soybeans in Java (p. 57-58). (10) Nutritional composition of canned frozen tofu (based on E. Senft) (p. 68). (11) Exports of soybeans from five Manchurian ports (Dairen, Antung, Newchwang, Suifenho [Suifenhe], and Sansing) in 1919, 1920, and 1921 (p. 70). (12) Exports and value of soybeans from all of China to four countries (Netherlands, Russia, Japan, Dutch East Indies) in 1919, 1920, and 1921 (p. 72). (13) Exports of soybean oil from five Manchurian ports (Dairen, Antung, Newchwang, Suifenho [Suifenhe], and Harbin) in 1919, 1920, and 1921 (p. 72). (14) Exports and value of soybean oil from all of China to five countries (England, Netherlands, Belgium, Japan, USA) in 1919, 1920, and 1921 (p. 72). (15) Exports of soybean meal from four Manchurian ports (Dairen, Antung, Newchwang, Suifenho [Suifenhe]) in 1919, 1920, and 1921 (p. 73). (16) Exports and value of soybean meal from all of China to three countries (Japan, Russia, USA) in 1919, 1920, and 1921 (p. 73). (17) Names of the five major railway lines in Manchuria (South Manchuria Railway, Chinese Eastern Railway, Peking Mukden Line, Kirin-Changchun Line, Saupingkai-Taonan Line) (p. 74). (18) Amounts (in tons) of soybeans, soybean cake, and soy oil (*Sojaöl*) shipped over the South Manchuria Railway, and the Chinese Eastern Railway in one year (p. 74). (19) Railway transport and production amounts of the mills (in tons) in Dairen and Newchwang of soybeans, soybean cake, and soy oil (*Sojaöl*) during the year 1921 (p. 74). Address: Agricultural Expert in Poerbasari te Pengalengan, Java.

2493. Lewis, William S.; Murakami, Naojiro, eds. 1923. Ranald MacDonald: The narrative of his early life on the Columbia under the Hudson's Bay Company's regime; of his experiences in the Pacific Whale Fishery; and of his great adventure to Japan; with a sketch of his later life on the western frontier, 1824-1894. Spokane, Washington: Published for The Eastern Washington State Historical Society by The Inland-American Printing Co. 336 p. 25 cm. [127* ref]

• ***Summary:*** Ranald MacDonald was born on 3 Feb. 1824 at Fort George, a great trading post located at the mouth of the Columbia River, owned by the Hudson's Bay Company, and formerly called Astoria; this area is now in Oregon. His mother was an Indian (he believed that she was a daughter of the great Chinook Chief Com-comly) and his father, Archibald, was a Scotch highlander; he was born a British subject. His mother died a few months after his birth and he was raised by his mother's sister. In Sept. 1825 his father remarried and he was raised by a stepmother, Jane Klyne. He worked with the Hudson's Bay Company, of which his father was chief trader and chief factor. The Oregon Treaty of 1845 made him a citizen of the United States.

"In March 1833 a Japanese junk laden with crockery..., blown across the Pacific, was wrecked about 15 miles south of Cape Flattery [on the northwest coast of Washington] and all of the seventeen men on board lost except three who were seized and held as slaves by the local Indians... These Japanese were subsequently rescued from the Indians in May, 1834, by Captain William McNeil–the Boston skipper–on board the Hudson's Bay Company ship 'Llama' and taken to Fort Vancouver." Numerous primary sources for this information published in the 1830s are cited. The kind Dr. John McLoughlin attempted to return these shipwrecked Japanese to Japan via London (England), and Macao, China–but Japan would not accept them. These were apparently the first Japanese in the U.S.A. and the incident inspired MacDonald to travel to Japan to learn more about the Japanese. At age 24, in July 1848, he arrived in the Japan Sea on the American whale ship 'Plymouth' under captain Edwards. He then left the whale ship alone in a small boat. After going ashore on 3 small islands (Teure, Yankeshiri, Rishiri) inhabited by Ainu off the coast of Yesso (Yeso, now called Hokkaido), he landed at Soya on the northernmost tip of Hokkaido. Then, treated as a prisoner, he was sent on the ship Tenjinmaru to Nagasaki and saw the small island of "Dessima" (Deshima, Dejima) in the harbor. He was confined to a sort of prison which he was never allowed to leave and made to wait about 7 months until the next Dutch ship arrived. During this time he taught English to various eager pupils and interpreters. He was the first English instructor in Japan. His best student was the brilliant Yeanosuke Murayama, who was already fluent in Dutch. He

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stayed in Japan until 26 April 1849 when he was removed on the American ship 'Preble' under commander James Glynn.

While in Japan MacDonald compiled a glossary or dictionary of about 550 Japanese words and their English equivalents. Among these were tofu (he wrote "tove"; see p. 288), and shoyu [soy sauce] (he wrote "shon" or "son"; see p. 297). After further travels to China, India, Australia and Europe, he returned to America in 1853 to live his later years in his native homeland near the Columbia River, in the Pacific Northwest.

Note: This book is extremely well written and carefully documented, with extensive scholarly footnotes. There are numerous appendixes, a glossary, and two bibliographies. One of the appendixes (II-C, p. 280-84) is a deposition taken by commander Glynn on 30 April 1849; it tells of MacDonald's life and the story of his stay in Japan up to that time. It appears in U.S. Senate, Executive Docket, 32nd congress, 1st session, No. 59, p. 25-28.

An illustration (p. 208) shows Maruyama and Tokojiro, two Japanese men in Edo period dress. Both pupils of Ranald MacDonald, they were the chief interpreters in negotiations with Commodore Perry.

Footnote 238 (p. 209) states: "During the period of exclusion, Occidental knowledge of Japan was derived through the Dutch. Three physicians attached to the Dutch factory at Nagasaki contributed principally to this knowledge of Japan: Englebrecht [Englebert] Kaempfer (Japan 1690-1692), author of a "*History of Japan and Siam,*" London, 1727; Charles Peter Thunberg (Japan, 1775-1776), author of *Travels in Europe, Africa and Asia;* and Philip [sic, Philipp] Franz von Siebold (Japan 1822-1830), author of *Nippon, an Archive towards the description of Japan.* In addition to these, three directors of the Nagasaki factory, Isaac Titsingh, J. F. van Overmeer Fisscher and G. F. Meijan, furnished further information. Additional information was received through Russian sources from the published account of Georg Heinrich von Langsdorff, a German physician attached to the Reasanoff expedition (1804), and from Captain Vasili M. Golownin's *Memoirs of His Captivity in Japan, 1811-1813.*

"In like manner whatever Japan received of the material civilization of the Occident during these years was obtained principally through the Dutch." Address: 2. Head, School of Music, Imperial Univ., Tokyo. Formerly head of the Dep. of Foreign Languages at the Imperial Univ.

2494. Moore, Alice. 1923. Chinese recipes: Letters from Alice Moore to Ethel Moore Rook. Garden City, New York: Doubleday, Page & Co. 113 p. 10 x 13 cm.

• ***Summary:*** The Preface (p. viii to ix) states: "The Chinese use no butter, no milk, no cheese, and no bread." "One of the most startling differences between this cuisine and ours is the complete absence of salt. Its place is taken by a sauce made from the soy, or soya, bean. The beans are allowed to ferment in big pots for two months under the blazing sub, an enormous amount of salt and other seasoning is added during the process and the result is an inexpensive brown sauce which is very salt [sic, salty?] and very appetizing. It is much like Worcester sauce of which it is the base. Soy may be had in bottles or in imported brown jugs.

"The fat used in these recipes is always sesame oil, made from the sesame seeds. It has a more delicate flavour than peanut oil which is sometimes substituted. Like soy sauce, it is inexpensive, like it also it gives a piquant flavour to ordinary dishes."

Page 3: "North (the Chinese use the points of the compass always, and always correctly, I mean in front, right being east) is a dish of Chinese (Soy) sauce."

This book contains 66 recipes. On page 104-05 is a recipe for Buddha Dish, which calls for "½ cup of fried bean curd and ¼ cup of soy sauce."

Note: A review of this book in the *New York Times* by Nicolas Poussin (16 Dec. 1923, p. BR20) begins by asking if anything will ever dethrone the French culinary art, then adds: "But Alice Moore,... who has lived a dozen years in China, eaten all manner of things in the East and Near East and is familiar with American and European cooking, awards the palm for delicious cookery to the Chinese. Again and again she emphasizes her conviction that the Chinese are 'past masters of the culinary art' and the best cooks in the world." Among the dishes "declared to be delicious by the author [Poussin] are... tea eggs–made by soaking hard boiled eggs in a concoction of hot water, soy sauce, tea leaves and cinnamon..."

2495. Photos showing the process of making shoyu at Noda Shoyu Co. (later Kikkoman) in Noda, Japan. 1923.

• ***Summary:*** (1) Wheat being roasted in a shallow round metal container (like a large wok) over a wooden fire.

(2) Soybeans being steamed in a large wooden steamer set over a caldron.

(3) "Fermentation room: wooden vats holding fermenting soy sauce; note the planks on which the moromi stirrer would stand to perform his task."

(4) Running the mature moromi (mash) into strong sacks in preparation for pressing out the sauce.

(5) An older method of extraction and pressing, using many large stones at the end of a long wooden lever press; bags filled with moromi are in the porous-bottom wooden box near the fulcrum.

(6) Another method of pressing: "a windless type of device for applying pressure to a porous-bottom box (*age-fune*) in order to separate sauce from lees" (residue).

(7) Yet another method of pressing using a sort of windlass urned under foot.

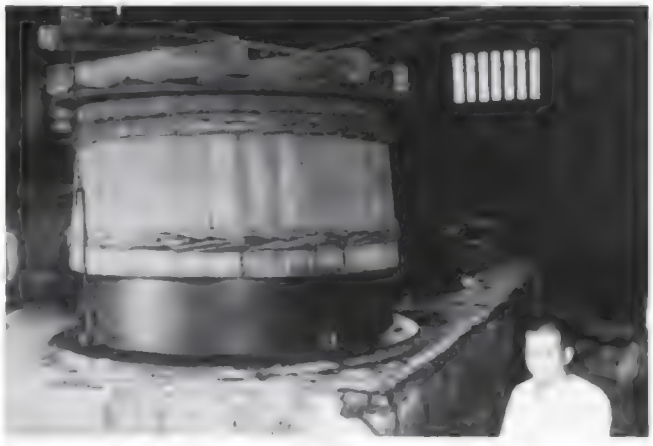
(8) A modern method of pressing using hydraulic presses. Taken in 1923.

(9) A room partly filled with the presscake or residue

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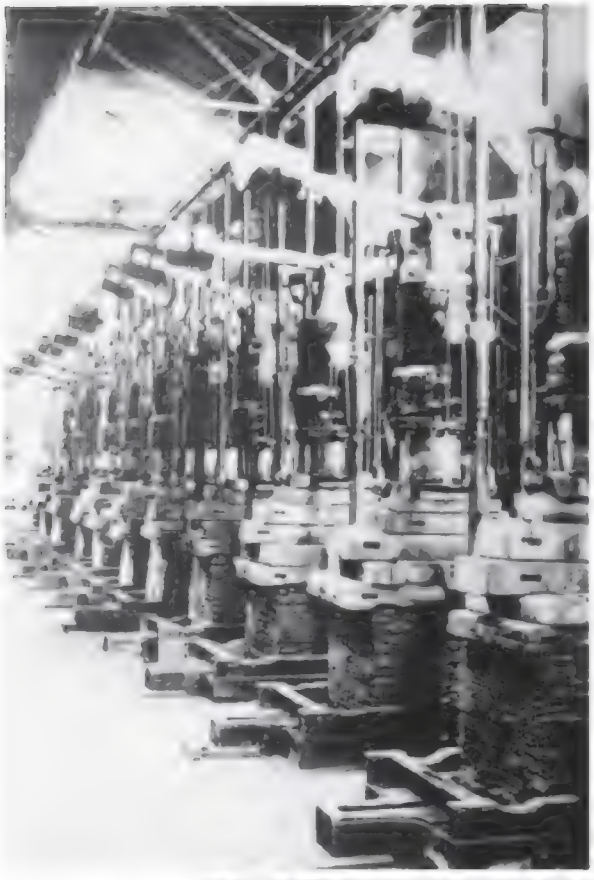
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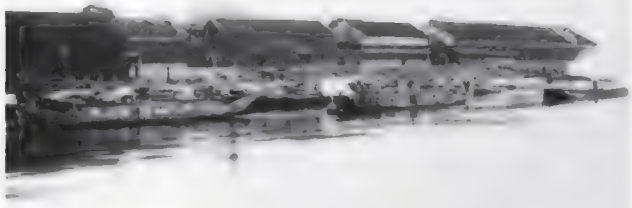






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remaining after the soy sauce has been pressed out.

(10) Soy sauce being run into wooden kegs to be sold.

(11) A line of bottles being filled with soy sauce. Bottles [and cans] were introduced by Noda Shoyu in 1923.

(12) Shallow wooden boats on the Tone River waiting to carry shoyu downstream to Tokyo. A railway had largely taken over this function, starting in 1911.

(13) Typical homes of factory workers in Noda.

These photos were sent by W. Mark Fruin (via Kikkoman) to Soyfoods Center in 1983 with permission to publish them. The photos are from the Kikkoman archives in Noda, Japan. Mark thinks that some of them may have been taken at Kikkoman's small *Goyo Gura* where the shoyu made for the Imperial Household was always made by hand. Several of the photos appeared in Fruin's classic history of Kikkoman titled *Kikkoman: Company, Clan, Community* (1983, Harvard University Press). See p. 32, 34.

2496. Sensemann, Harley Le Roy, comp. 1923. Catalogue of graduates, non-graduates, officers, and members of the faculties, 1837-1921. Ann Arbor, Michigan: University of Michigan. viii + 1379 p. See p. 235, 257.

• ***Summary:*** Page 235–Graduated in 1917: "Mitsuji Kiyohara, AB, Secy. and Treasurer of Oriental Show-You Co., 208 N. Wabash Ave., Chicago, Illinois."

Page 257–Graduated in 1919: "Wallace Julian Smith, A.B., La Choy Corp., 12507 Oakman St., Detroit, Michigan."

Note: This is the earliest document seen (Oct. 2008) that mentions La Choy, a fairly early importer and manufacturer of soy sauce in the USA. Address: Univ. of Michigan.

2497. Watson, Ernest. 1923. The principal articles of Chinese commerce (import and export) with a description of the origin, appearance, characteristics, and general properties of each commodity; an account of the methods of preparation or manufacture together with various tests, etc., by means of which the different products may be readily identified. Shanghai, China: Statistical Dept., Inspectorate General of Customs; sold by Kelly & Walsh [etc.]. xi + 630 p. Illust. 28 cm. The Maritime Customs. II. Special Series No. 38.

• ***Summary:*** Section II, titled "Oils, fats, and waxes" (p. 76-149) contains detailed definitions of the following: Bean oil (*Tou-yu* or *Oleum dolichos*) obtained from the soya bean of China, and the residual meal (*tou-ping-fên*) (p. 85-86). "In China bean oil is used as a food; for cooking purposes; for mixing with lacquer; in making varnish and printing ink; in soap making; and, to a slight extent, as an illuminant, although for this purpose it has been almost superseded by kerosene. It is also used in water proofing cloth and paper for making umbrellas and lanterns. In foreign countries, where the demand for the oil is practically unlimited, bean oil is used chiefly in the manufacture of soap and in preparing salad oils. On account of its drying properties bean oil is not very suitable for use as a lubricating oil.

"Bean oil appears in Chinese commerce packed in wooden tubs, paper-lined baskets, or in earthenware jars, of no standard weight. It is exported in great quantities from many of the northern ports, particularly from Dairen and Newchwang, and, to a smaller extent, from Hankow and other Yangtze ports."

Section VI, titled "Miscellaneous products" contains a long subsection on "Beans, Soya" (Tou) (p. 320-21). "Soya beans, or 'soy beans'... are cultivated in enormous quantities in Central Manchuria... It is estimated that about 1,600,000 tons are produced annually in Manchuria alone... The beans are small,... the yield per acre being from 1,100 to 1,600 pounds [18.3 to 26.6 bushels]. Several varieties are grown in China and are commonly classified by the Chinese according to form, colour, size, use, and other characteristics. The best known of these varieties are (with Chinese characters for each term): -

(1) Yellow beans (*huang-tou*), subdivided into *pai-mei-tou* or 'white eye-brow bean,' so called from the whiteness of the prominent hilum; *chin-yüan-tou* or 'round golden bean'; and *hei-ch'i-tou*.

(2) Black beans (*wu-tou*), subdivided into (*ta-wu-tou*) or 'large black bean'; (*hsiao-wu-tou*) or 'small black bean'; and (*pien-wu-tou*) or 'flat black bean.'

(3) Green beans (*ch'ing-tou*), subdivided into two varieties, one of which has a green epidermis and green interior, the other a green epidermis and yellow interior.

Three subspecies [of soya beans], yielding very small beans, are known as: (*hsiao-pai-tou*) or 'small white bean'; (*hsiao-hung-tou*) or 'small red bean'; and (*hsiao-lü-tou*) or 'small green bean.'" Note 1. The writer may be mistaken in calling these last three subspecies of soya beans. They are probably white azuki beans, red azuki beans, and mung beans.

Soya beans "are valued chiefly as a source of bean oil, but are also extensively used as food, either whole or ground to flour in making beancurd, bean milk, bean sauce, or 'soy,' and salted relish (*ta-tou-shih*) [fermented black soybeans], which is used both as a food and as a medicine. The black beans, which are not much used as food because they are supposed to make the body too heavy, are used in medicine, to impart strength and vigour, as a carminative, and also as an antidote for vegetable poisons, such as aconite, croton oil, etc. The hulls of green [soy] beans are applied to smallpox ulcers and other sores; the bruised leaves of the plant are used in treating snakebite; the flowers are used in treating diseases of the eyes. Young bean sprouts (*tou-ya*) are used as a vegetable food." Details are given on the following products made from soya beans: "Beancurd (*tou-fu*), bean milk (*tou-fu-chiang*), bean sauce (see under 'soy'), and bean vermicelli (*Fen-ssu, Tou-fen-ssu, Hsi-t'iao-mien*, or *Kua-mien*.–A very famous vermicelli made in the Chefoo district, from beans most of which are originally imported from

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Manchuria).

Note 2. This is the earliest English-language document seen (Nov. 2011) that uses the term "salted relish" to refer to fermented black soybeans.

The section titled "Soy (*Chiang or Chiang-yu*"–with Chinese characters for each term) states: "Soy is a sauce made in China from the soya bean (*Soja hispida*). In preparing it, a quantity of beans are slowly boiled, an equal quantity of coarsely ground wheat or barley being added. The mixture, after being allowed to ferment for some time, is put into a jar with an equal amount of salt, a few aromatics, and three times as much boiling water as there were beans at first; the whole is then allowed to stand for several weeks exposed to the sun, after which the liquor, which constitutes the soy, is separated by pressing and straining the mass. The finished product is afterwards packed into jars or bottles ready for the market.

"Soy is thin, and, in colour, very dark brown or almost black; it becomes brighter and clearer on being kept, has an agreeable salty flavour, and produces a yellowish froth when even slightly shaken. It is much used by the Chinese as a sauce and condiment, as it creates an appetite and is supposed to counteract the injurious properties of contaminated food; it is also used in medicine as an application for burns, scalds, eczema, leprous sores, etc. Soy is often exported from China to foreign countries, where it is extensively used in the manufacture of many European sauces."

Also discusses: Groundnut oil (*Hua-shêng-yu*), also called peanut oil, earth-nut oil, and arachis oil (*Oleum arachis*) (p. 105-06). Hemp-seed oil (*Ma-yu or Ma-tzu-yu*) (p. 106).

Sesamum-seed oil (*Chih-ma-yu or Hsiang-yu; Oleum sesame*) also known as "gingelly oil," "teel oil," or "benne oil" (p. 133-35). Groundnuts (p. 421-22). Wheat gluten (*Mien-chin*, p. 574). A second edition was published in 1930. Address: Chief Appraiser, Chinese Maritime Customs.

2498. Photograph of Shinzaburo Mogi. 1923? Undated.
• ***Summary:*** He is a member of the Kikkoman Mogi clan. Various later records tell the story of his life and work in the United States. In 1923 he was treasurer of Oriental Show-You Co. and resided at 6210 Dorchester Ave., Chicago, Illinois. Neither the date nor place of this photo are known.

2499. Loew, Oscar. 1924. The soy bean, a superior crop. *Porto Rico Agricultural Experiment Station, Agricultural Extension Notes* No. 64. p. 1-2. Jan. 15.
• ***Summary:*** "The soy bean originated in Eastern Asia and has been introduced during the past 30 years into different countries of the world. It can be grown successfully even in a rather poor soil, in the absence of nitrogenous manure, provided the specific root-nodule bacteria are present. This plant is far superior to other leguminous crops, even those very rich in protein, as the lupin, which it equals in protein and highly surpasses in fat content. In fact, the soy bean is richer in fat than all other leguminous crops and is, therefore, sometimes called the oil bean. The soy bean does not contain alkaloids and bitter tasting matters like the lupin..."

A table compares the nutritional composition of the pea, common bean, lupin, and soy bean. "From the analyses it would appear to be of great advantage for the people of Porto Rico to replace the common bean now serving as an essential part of the daily food, by the soy bean, it providing a higher percentage of protein and fat... Since the Soy bean needs prolonged boiling until it reaches a sufficient degree of softness, it is best soaked for a day in water to which some soda and common salt are added (about a teaspoonful of each to half a liter) followed by washing two to three times with fresh water and then boiling for an hour or so. The taste of this dish is very agreeable.

"In Japan the soy bean serves for several preparations, called 'tofu,' 'yuba' and 'miso,' which might be prepared in Porto Rico. Also, a dressing or condiment similar to the English Worcestershire sauce, is prepared from the seeds." The preparation of tofu is described. It is "generally fried like cakes and represents an excellent food."

"The milky liquid can also doubtless be used as a suitable nutrient, but it can never replace the mother's or cow's milk for children, since the lime content is exceedingly small and the protein differs widely from the casein of the milk.

"In our trials with soy beans at the Experiment Station, Mayaguez, the results at first were disappointing. This was found to be due to the fact that the soil was not inoculated with the proper bacteria for assimilating nitrogen for the roots. We now have inoculated soil, and before planting on ground new to this crop inoculating material should be secured from the Station for mixing with the seed at the time of planting. When the soil is once inoculated it will remain so for all succeeding crops."

Note: Who was Dr. Oscar Loew and how did he learn about soyfoods? From 1897 to 1906 he was a Professor of Agricultural Chemistry at the Imperial University of Tokyo, Japan, where he wrote articles about soy sauce, tofu, soymilk, and yuba. In 1911 he was in Munich, Germany, where he wrote an article about soymilk. When he speaks of "our trials with soy beans at the Experiment Station, Mayaguez," he seems to indicate that he was living at the Station in Porto Rico in about 1924. Address: Mayaguez, Porto Rico.

2500. Slosson, Edwin E. 1924. Soy. *Scientific Monthly* 18:109, 111. Jan.
• ***Summary:*** "The recent rise in restaurant prices has sent economical Americans flocking to the chop sueys, where a savory and satisfying meal can still be obtained for a small sum. The Chinese, in their efforts to keep three hundred

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million people above the starvation point for three thousand years, have been forced to figure closely on food values... With us Americans meat has been the main part of the meal with vegetables on the side. With the Chinese this is reversed, and meat has in many cases been reduced to a condiment...

"The chief difficulty of a vegetarian diet is to get a sufficient amount and variety of proteins. Beans and peas are the richest in proteins, but they are not of the sort and proportion found in meats and needed for our muscle-making.

"But there is one exception and that is the soy-bean... The soy bean resembles animal foods in being rich in fat and protein and devoid of starch. What is more remarkable, the soy bean contains a dozen kinds of protein compounds that are the same as those found in milk. In fact a 'vegetable milk' can be made from soy beans and from this vegetable curds and cheese. These form a large part of the diet of Chinese and Japanese who abstain from animal food either because they are Buddhists or because they are poor. By milking the soy bean they can get ten times as much lacteal fluid per acre as if they pastured cows on the land. Italian physicians who used soy milk as infant food during the war report that it was better tolerated than cow's milk by some of the babies.

"The soy milk products have not yet come into use with us, but the American patron of the chop suey has acquired a taste for another product of the bean, the little glass cruet of brown sauce that seasons the rice. It looks and tastes like meat extract, such as we use in making beef tea, and is really much like it in composition and nutritive value. This shoyu or soy sauce is made by long fermentation and ripening of a mixture of beans and wheat in brine. The longer the process the better the product. Six months or a year may suffice for the masses, but to suit the taste of the Oriental connoisseur it must be sunned for five years or even thirty, the jars being patiently uncovered every day and covered every night or whenever it rains. Over two million barrels of soy sauce are made in Japan every year."

2501. Macy & Co. (R.H.). 1924. The world cook (Ad). *New York Times*. Feb. 2. p. 4.
• ***Summary:*** "She who keeps pace with things international will probably... initiate you into such milkless, cheeseless and breadless dishes as Chop Suey or Chow Mein.

"Did you know that the Chinese use sesame oil instead of butter in their cooking and in place of salt, a sauce made from the soya bean?"

"We suggest:... *The Chinese Cook Book*, by Shiu Wong Chan ($1.54). *Chinese Recipes*, by Alice Moore ($1.74)."

2502. Hamburger's 1924. The Lenten menu... (Ad). *Los Angeles Times*. March 6. p. 8.
• ***Summary:*** This ad features the "Delicatessen Department." Under fish sauces: "Harvey's Sauce, Japanese Shoyu Sauce, Oyster Cocktail Sauce, Tartar Sauce, Escoffier Sauce Diable,... Lee [sic, Lea] and Perrin's Genuine Worcestershire Sauce."

An illustration shows two people dining at a table with candles.

Note: Hamburger's was renamed "The May Co." (at the same location) by Sept. 1924. Address: Broadway at Eighth–Groceries–Fourth Floor. Phone: Broadway 3940.

2503. Nishimura, Torazô; Kinoshita, A.; Katsuyama, M. 1924. Kôji-kin shu haigô shiken hôkoku [Mixing test for koji starter used in shoyu brewing]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 92. p. 479-564. March. [Jap]
Address: Jozo Shikensho. 1. Moto Gishi; 2. Gishi; 3. Joshu.

2504. Tanaka, Yasujiro. 1924. Shôyu kôji no saikô ondo ni tsuite [Maximum temperature during the process of shoyu koji manufacture]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 1(8):625-28. [Jap]
Address: Kumamoto Zeimu Kantoku Kyoku; Ken Sagaken, Gishi, Japan.

2505. Lea and Perrins. 1924. Lea & Perrins' Sauce (Ad). *Times (London)*. April 24. p. 5, cols. 6-7.
• ***Summary:*** "... is half the battle in preparing delightful dishes–Never be without it in the kitchen." At the left of this display ad is an illustration showing the cover of a booklet titled "Kitchen recipes for Lea & Perrins' Sauce." Across the bottom: "Free to housewives–The Lea & Perrins' Recipe Book, containing over 150 suggestions for new dishes. Send ½*d.* stamp for return postage with your name and address to Lea & Perrins, 2, Midland Road, Worcester." Address: [England].

2506. *Nautical Gazette*. 1924. Sidelights. 106:457. April 26.
• ***Summary:*** The third full paragraph on the right side of the page reads: "When the *President Adams*, the first steamer in the new around-the-world service of the Dollar Line to arrive at the Panama Canal reached Colon [a sea port on the Caribbean Sea coast of Panama] she gave an order for the following supplies, intended for her Chinese crew: Chinese cabbage,... black beans (salted) [fermented black soybeans], bean sticks [dried yuba sticks], salted eggs, seaweed, salted ginger,... [soy] bean sauce, plum sauce, dried flat fish..."

2507. F.H.H. 1924. A spring week-end at Choshi on the Cape Cod of Japan. *Christian Science Monitor*. May 6. p. 9.
• ***Summary:*** Describes a trip from urban Tokyo to rural Choshi. The tip of the promontory that juts out into the Pacific Ocean is crowned by a tall lighthouse of white stone, constructed 50 years ago. The pride of the neighborhood, the emblem "figures on all Choshi products, from the labels

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on the bottles of the excellent shoyu (soy sauce) to the bath towels that the Japanese inn presents to each departing guest."

Note: Choshi is a city located near the tip of a promontory on the Pacific Ocean, in Chiba prefecture, Japan. It lies almost due east of Central Tokyo, and is the easternmost city in the Greater Tokyo Area. The Tone River runs through it. Address: Special to the Monitor.

2508. *Los Angeles Times*.1924. China has most things Chinese but chop suey isn't to be found there. May 25. p. I2.
• ***Summary:*** Although most Americans believe that chop suey is a Chinese dish, it cannot be found there–excepts perhaps in the American quarter of Shanghai.

The invention of chop suey is attributed to the genial Li Hung Chang, who, during a visit to the USA, was at a loss when asked to entertain some American guests who wanted to enjoy a Chinese banquet.

"His cook, collecting such ingredients as were available, concocted a dish to which he gave an exotic tang by adding a piquant sauce made from the soya bean." When asked what the dish was called in China, "his merry eye happened to light upon the chop sticks and the bottle of soya sauce, and he answered 'chop soya,'" which has been corrupted into chop suey. He communicated his discovery to his compatriots in San Francisco, where America's chop suey is thought to have started.

So what do Chinese eat? They "eat enormously and yet so economically that what is wasted in the United States would feed 60,000,000 Chinese in comparatively luxury." "The cost of feeding one adult in China averages two cents a day. A coolie never drinks milk or eats butter. He seldom tastes sugar or meat." His typical diet is described. A Chinese laborer, eating a simple diet derived from plants, accomplishes a prodigious amount of work.

"'Two cubic inches of bean curd, four walnuts, five peanuts, fifteen roasted beans, and twenty melon seeds make a meal, says Prof. Edward Alsworth Ross..." [Source: Thomas Steep in the *New York Tribune*].

Note: The rest of this article is highly condescending and racist.

2509. *Toronto Daily Star* (*Canada*).1924. Chop suey just hash says a Chinese girl: Thrown together in desperation by waiter in Washington years ago. A guest liked it: Came back for some more and smart proprietor went into business. July 18. p. 11.
• ***Summary:*** Purports to describe the origin and early history of chop suey, according to Eva C. Chang in the New York Tribune. She says chop suey was invented in the USA, and few Chinese living there like it. "The only thing that gave it a Chinese flavor was the Chinese bean sauce [soy sauce] or chiu yiu sauce, bamboo shoots, water chestnuts and bean sprouts."

2510. Osaki, Masao. 1924. Shôyu jôzô-hô ni tsuite. I-V. [On the method of shoyu brewing. I-V.]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 2(1):54. Aug. 15; 2(2):127, 2(3):274-81, 2(4):359-65, 444. [Jap]
Address: Osaka Koto Kogyo Gakko, Kyoju, Japan.

2511. Eddington, Jane. 1924. The Tribune Cook Book: Condiments. *Chicago Daily Tribune*. Aug. 28. p. 21.
• ***Summary:*** "... horseradish, chili sauce, Worcestershire and soy sauces and ketchup are reckoned as condiments. In fact a condiment often means a mixture of spices with some fruit or vegetable base."

"... the chili sauce is not strained or sieved and the ketchup is,..."

2512. Kinoshita, Asakichi. 1924. [Time and temperature of pasteurization of bottled shoyu]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 2(1):11. [Jap]*

2513. Kamper's. 1924. New arrivals at Kamper's (Ad). *Atlanta Constitution* (*Georgia*). Sept. 24. p. 2.
• ***Summary:*** "La Choy Sprouts, jars–50¢. La Choy Shoyu Sauce, bottles–40¢."

Note: This is the earliest document seen (Sept. 2008) in all major U.S. newspapers digitized by ProQuest that uses the term "La Choy" to refer to a U.S. company that makes and sells Oriental foods. The new term appears in 2,504 documents between 1924 and the present, including 18 in the 1920s, etc. Address: Atlanta, Georgia.

2514. *Japan Magazine* (*The*): *A Representative Monthly of Things Japanese*.1924. Japanese child games: The "Oden-ya." 15(1):10-11. Sept.
• ***Summary:*** Page 10: "*Oden* is a kind of Japanese popular food." Among the many things it contains are *yaki-dofu* (broiled beancurd), *ganmodoki* (bean-curd fried with condiments), potatoes, etc., which are cooked in a soup of soy [sauce], after which they are skewered and eaten, usually with mustard. The seller of *oden* is called *oden-ya*.

In this game, "boys and girls imitate this familiar food hawking in their play. It is an outdoor game [played] by at least 6 or 7 children.

"There are two taggers chosen at first. One hawks *oden* and another buys, the rest forming the *hanpen, chikuwa, konnyaku, yaki-dofu, ganmodoki* and potatoes respectively. The *oden-ya* arranges in a line these foods beside him, waiting for one coming to buy them..."

Note 1. This is the earliest English-language document seen (May 2012) that contains the term *yaki-dofu* or the term "broiled beancurd." Both refer to grilled tofu.

Note 2. This is the earliest English-language document seen (May 2012) that contains the word *ganmodoki* (written as one word); it refers to deep-fried tofu burgers.

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Note: This remarkable periodical was founded by Baron Hirayama, P.C., in 1910.

2515. Matsuoka, Chokichi. 1924. Japanese soy and method of making the same. *U.S. Patent* 1,514,554. Nov. 4. 3 p. Application filed 3 Dec. 1923.
• ***Summary:*** Crushed soy bean is extracted with boiling water, and the extract is treated with salt and *Aspergillus* and fermented at 30°-50°C for 3 weeks. The product is filtered and sterilized by heating at 100°C. Address: Los Angeles, California.

2516. Nishiwaki, Yasukichi. 1924. Soja-Bereitung mit *Oidium lupuli*, *Aspergillus oryzae*, und *Rhizopus japonicus* [Preparation of soy sauce with cultures of *Oidium lupuli*, *Aspergillus oryzae*, and *Rhizopus japonicus*]. *Zentralblatt fuer Bakteriologie. Series 2.* 63(1/8):28-30. Nov. 27. [2 ref. Ger]
• ***Summary:*** The author reports experiments concerning the production of soy sauce using three different types of mold: Oidium [one of the early names for Neurospora before the sexual stage was described in 1927], Aspergillus (the mold generally used in soy sauce production in Japan), and Rhizopus (the mold widely used to make tempeh). Surprisingly, the soy sauce fermented with Oidium was considered to be the best quality. It can also be used to make good quality miso. The quality of soy sauce made with Rhizopus molds was considered to be poor, and the yield of soy sauce was low. Onchom is not mentioned. Address: Professor, Technischen Hochschule zu Osaka, Japan.

2517. *Bean-Bag (The) (Lansing, Michigan).* 1924. Manchuria: Home of the soy bean. 7(6):11-12. Nov.
• ***Summary:*** This article is based on (and quotes widely from) a bulletin released by the National Geographic Society (Washington, DC).

"Manchuria's major crop is the soy bean–and it is soy bean sauce which lends flavor to chow mein, chop suey, yakamin [sic], and other American versions of Chinese cooking.

"The soy bean's rise from obscurity, only 15 years ago, to its present importance is a wonder of modern commerce."

"Not only does the soy bean provide a sauce which is the Worcestershire of China, but it also masquerades as cheese [tofu], candy, fertilizer, flour, oil for lighting and lubricating and it does further duty in waterproofing umbrellas and cloth.

"The Japanese use it widely [in the form of kinako, or roasted soy flour] as the basis of confectionery. In this form it is highly palatable and the Japanese consider their candies and pastries more wholesome than ours–indeed they are appalled by the quantity of sugar which Americans consume."

"Only a fraction of the bean oil that comes to this country is used in edibles. Much of it is utilized in making soaps, paints, lubricants and toilet powders. After oil is extracted from beans and the residue is made into bean cakes. These are manufactured extensively in Mukden. They are retained in the east, and serve as fertilizer and cattle feed both in China and Japan.

"Aware of its enormous soy bean crop, and its heavy yield of sorghum and millet, the visitor expects to see great farms of these products. The Manchurians, like most Chinese, are gardeners rather than farmers. The vast aggregate of these grains and vegetables come from patches of an acre or so. Tens of thousands of farmers with tens of thousands of the primitive plows, shaped like crude shovels, turn up millions of ridges, and drop seeds into the loose earth. Then they run a roller over their patches and wait until it is time to spread their beans or their grain on clay floors. They thresh the grain with flails or with oxen to trample it.

"Southern Manchuria has the best railroads in China; some of the busiest cities, such as Mukden, Harbin, Kirin, and Port Arthur; and its general prosperity is high."

2518. Cullison, W.V. 1924. The soy bean and commerce. *Oil Miller* 20(3):17-18, 20-22. Nov. Reprinted from The Staley Journal.
• ***Summary:*** Contents: Introduction and history. Three methods of producing soybean oil: Old hydraulic method, extraction process using "light petroleum naptha" [naphtha], and by the Anderson Expeller mill (continuous process). Crude soy bean oil. Use of oil in hard soaps and paints. Soy bean meal: Soy bean flour as food. Food uses of soy beans in China and Japan: Soy bean or vegetable milk, tofu or soy bean curd, miso or soy bean paste, soy bean sauce (shoyu). Soy beans and the farmer: North Carolina led in acreage until 1923, when Illinois gained first place. Growing soy bean, history of the soybean, uses, methods of oil production, and uses for the oil and meal.

"The soy bean has been grown in the United States since 1804, under the names of Coffee bean, Japan pea, Soja, Soy, Soya and Stock pea. During the period of the Civil War the soy bean was used rather extensively in the southern States as a coffee substitute. For a considerable while seedmen sold certain varieties under the names Coffee Berry and Coffee Bean.

Note 1. This is the second earliest document seen (Nov. 2005) which states that soybeans were used as a coffee substitute during the Civil War in the United States.

The 2nd process for producing soy bean oil is the "Extraction Process wherein the ground seed is leached with light petroleum naptha, which dissolves the oil, leaving a meal containing less than 4 per cent oil. The naphtha extract is distilled, the naphtha recovered and used over again, and the soy bean oil obtained as a residue from this distillation."

"The demand and market for soy bean products, especially the oil, is here and now. Whether or not this

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demand will be filled by American grown beans, or by beans and oil imported from Manchuria depends upon the American farmer."

A map shows where soy beans are produced in the USA. A flow sheet shows the basic steps in making soy bean oil, meal, and other chief products. A photo shows a line of expellers, powered by overhead belts, as they "extract soy bean oil."

Note 2. This article says nothing about the A.E. Staley Manufacturing Company's work with soybeans. Address: Research Chemist, A.E. Staley Mfg. Co., Decatur, Illinois.

2519. Slosson, Edwin E. 1924. Soy. *School Science & Mathematics* 24(8):855-56. Nov. Whole No. 208. [2 ref]
• ***Summary:*** This article is reprinted from *Scientific Monthly* (Jan. 1924, p. 109, 111).

2520. *NZ Truth* (*National, New Zealand*).1924. Answers to correspondents. Dec. 6. p. 14.
• ***Summary:*** "A highly recommended recipe for home-made Worcester Sauce is the following: 1 pint Indian soy [sauce]; 1 oz black pepper; 1 oz powdered mace,..."

2521. Lady Mary. 1924. The ladies chain: Facts & fiction for femininity. *NZ Truth* (*National, New Zealand*). Dec. 13. p. 15.
• ***Summary:*** A reader in New Zealand writes: "In several works of fiction I have read recently, reference is made to people consuming 'chop suey,' which is apparently a favorite Chinese dish." She then requests a recipe.

Lady Mary gives a recipe she found in an American publication. The ingredients include "2½ tablespoons of soy sauce."

2522. **Product Name:** Maruman Shoyu, and Marua Shiro Miso.
Manufacturer's Name: America Honolulu Shoyu K.K.
Manufacturer's Address: Banyan St., Honolulu, Oahu, Hawaii.
Date of Introduction: 1924.
New Product–Documentation: Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." States that the company was founded in about 1924 by a merger of the Honolulu Shoyu Co. (1906, N. King St.) and the America Shoyu Jozo K.K. They are still in business, presently making miso.

2523. *Biblioteka Naroden Universitet* (*Library Popular University*).1924. Soiata. Neinoto otglejdane i izpolzvane. Gotvene na zryalata i suha soia; soevo brashno; sos ot soia: kjufteta: mlieko i sirene ot soia; med ot soia [Soya. Its cultivation and use. The cooking of the ripened dry soy beans, soy flour, soy sauce, croquettes, milks, soya cheese and honey from soya]. No. 42. 16 p. Veliko Tirnovo: Novo Vreme [New Times Printer]. [Bul]*
Address: Bulgaria.

2524. Fujii, M. 1924. [Studies on Japanese shoyu. Influence of shoyu (Kikkoman) on digestion of foods]. *Minami Manshu Igakukai* (*South Manchuria Medicine*) 12:243-. [Jap]*

2525. **Product Name:** Shoyu.
Manufacturer's Name: Kanda Soy & Miso Factory (Kanda Seizo-sho).
Manufacturer's Address: 62 Quinn Rd., Honolulu, Oahu, Hawaii.
Date of Introduction: 1924.
New Product–Documentation: Directory of Honolulu and the Territory of Hawaii. Company started in 1920 making miso. 1924 Directory. Kanda Soy & Miso Factory, 62 Quinn Lane. 1926 Directory. Listed as Kanda Shokwai. 1927 Directory. Address listed as Koula, corner of Halekauila, Honolulu. 1928-29 Directory. Kanda Shokwai [Shokai]. T. Kanda, president. R. Watanabe, v.p. K. Kanda, manager. Soy and Miso Manufacturers. Koula corner Halekauwila. Phone: 5135. P.O. Box 934.

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Says: "Kanda Seizo-sho, founded by Takejiro Kanda in the 1920s. On Cooke St., Honolulu." Wm. Higa. 1980. History of Miso Companies in Hawaii; Shurtleff & Aoyagi. 1983. The Book of Miso. 2nd ed. p. 234. This was the second miso company in Hawaii and the United States, started in 1920 by Mr. Takejiro Kanda. No longer in business.

2526. Kinoshita, Asakichi. 1924. [Relation between the ripening of tastes and bacteria of shoyu]. *Nogaku Kaiho* (*J. of the Scientific Agricultural Society, Japan*) No. 256. p. 151-55. [Jap]*

2527. Kinoshita, Asakichi. 1924. Shôyu jôzô ni wa ikanaru shio ga mottomo tekitô de aru ka [What salt is most suitable for shoyu brewing?]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 19(10):14-16. [Jap]
Address: Jozo Shikensho Gishi, Japan.

2528. Matsumoto, K. 1924. Shôyu no chûwa oyobi hiire ni yotte chinden suru rinkagôbutsu [Phosphorus compound precipitate from neutralization and pasteurization of shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 19(6):14-18. [Jap]
Address: Jozo Shikensho Gishi, Nôgaku-shi, Japan.

2529. Matsumoto, K. 1924. Shôyu jôzô ni funmatsu kôbo ôyôbi nyûsan kinrui no ôyô [Application of powdered yeast and lactic acid bacteria for shoyu brewing]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 19(8):15-

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68. [Jap]
Address: Jozo Shikensho Gishi, Kôgaku-shi, Japan.

2530. Nishimura, Torazô; Kinoshita, A.; Katsuyama, M. 1924. Sanrui shinseki daizu sei kôji shiyô shiken [A test manufacturing soy sauce with koji that was made using soybeans submerged in acidic water]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 92. p. 372-80. [Jap]
Address: Jozo Shikensho. 1. Moto Gishi; 2. Gishi; 3. Joshu.

2531. Osaki, Masao. 1924. [Pale-colored and dark-colored of shoyu]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 1:584. [Jap]*

2532. Sheffield plate. 1924.
• ***Summary:*** During the 18th century, there was a demand for objects of beauty for the table that were less costly than solid silver and better in appearance than pewter. In 1742 Bolsover made a discovery that led to the manufacture of Sheffield plate. He found a way to make an imitation silver by beating out a thin layer of silver, placing it on a copper foundation, then using heat to fuse the two metals. This soon became a great and prospering trade. This article concerns what is known as the "copper mount" period, which ended in about 1790.

Fortunately a few of the original manufacturers catalogues have survived. A very fine one, issued by Nathaniel Smith & Co., contains many illustrations showing the various objects made by this firm--including some "charming cruet-frames, and frames for soy bottles..."

2533. Tanaka, Y. 1924. Shôyu koji no saikô ondo ni tsuite [Maximum temperature during the production of shoyu koji]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 19(4):43-46. [Jap]
Address: Kumamoto Zeimu Kantoku Kyoku Gijutsukan, Japan.

2534. Minami Manshû Tetsudô K.K. Kôgyô-bu, Nômu-ka. [South Manchuria Railway Co., Industrial Div. Bureau of Agriculture]. 1924. Daizu no kakô [Soybean processing]. Dairen, Manchuria: SMRC. 777 p. 30 cm. (Sangyo Shiryo 21). [250 ref. Jap]
• ***Summary:*** Name of company with diacritics is: Minami Manshû Tetsudô K.K. Kôgyô-bu, Nômu-ka. This important, major work was written by Yoshitane Satô. Contents: Photos (on unnumbered pages at the front of the book) show 16 scenes of soybean transportation, storage, and processing in Manchuria, as follows: (1) Mule drivers whipping mules trying to pull carts loaded with large sacks of soybeans over muddy roads. (2) Cylindrical osier storage bins for soybeans. (3) Row upon row of sacks of soybeans piled high in storage near docks. (4) Soy sauce being made in a courtyard; each earthenware jar is covered with a woven conical lid. (5) The inside of a huge and modern soy sauce plant. (6) Wooden kegs and glass bottles of Yamasa shoyu. (7) Soy sprouts growing in round woven baskets. (8-11) Soy oil being pressed using vertical screw presses [as an alternative to hydraulic presses]--four views. (12) Boilers used in a soybean mill. (13) A wooden barrel of soybean oil being sealed. (14) Soy oil packaged in many small containers, each surrounded by a wicker basket. (15) Round soybean cakes stacked high on railway flatcars. (16) The inside of a modern soy oil factory.

Contents: 1. Current status of soybean production and consumption: A. Production: Overview (p. 2), Japan (p. 4), Korea (p. 12), Manchuria (p. 16), China (except 3 eastern provinces, but including Eastern Inner Mongolia, p. 31), USA (p. 34), British colonies (p. 37), European countries (p. 40). B. Consumption: Japan (p. 41), Korea (p. 52), Manchuria (p. 57), China (p. 59), Dutch East Indies (Indonesia, p. 60), USA (p. 61), European countries (p. 63).

2. Characteristics of soybeans: A. From a physical sciences viewpoint (p. 67): Structure (overview, cotyledons, hypocotyl, seed coat), contents of each system (p. 70), appearance (p. 73; color, gloss, shape, size, hilum (*fusuma*) color, young plumule leaf color, ratio of seed to seed coat). B. From chemical viewpoint (p. 82): General composition, structure of each component (p. 109; protein, oil, carbohydrate, ash/minerals, vitamins). C. Appearance and relationship between oil and protein content (p. 126): Oil and protein color related to color, glossiness, shape, size, hilum color, young plumule leaf color. D. Evaluating soybean quality (p. 140): Overview, key points (sizes, shapes, colors, glossiness, hilum color, young plumule leaf color, ratio of seed coat to seed, dryness of seed, volume, weight, smell, mixing of different varieties, ratio of imperfect seeds, amount of other types of seeds), collection of materials for testing, testing and evaluating commercial soybeans.

3. Soybean usage and processing (p. 175). A. One view of main usage of soybeans. B. Nutritional value of soybeans as food (p. 183): Nutritional value of soy protein. C. Processed soyfoods (p. 208): Soy sprouts (p. 208), natto (*itohiki nattô*, p. 212, Hamanatto, p. 224), types of tofu (regular tofu [*nama-dôfu*, p. 226], *kori-dofu* or *koya-dofu*, p. 240, aburaage, p. 245, tofu curds [*tofu nô*, p. 247], hard tofu [*tofu-kan*, p. 247], fragrant hard tofu [*kô-kan*, p. 248], *senchô tofu*, p. 249, fermented tofu [*nyûfu or funyû*, p. 249]), *tofu-p'i* or yuba (p. 256), soymilk and artificial cow's milk, p. 259, soybean flour raw, or roasted (kinako, p. 263), shoyu (p. 266; overview of miso and shoyu, Japanese traditional regular shoyu, p. 267, Japanese traditional special shoyu and tamari, p. 269, Chinese soy sauce, p. 272, recent shoyu research and development, p. 274), miso (p. 280; Japanese traditional regular miso, Japanese traditional special and processed miso, p. 282, Chinese miso, recent miso research and development, p. 285). D. Soybeans as feed or fodder (p. 287;

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green soybeans as feed, p. 290): Fresh forage, dried forage or hay. E. Soybeans as manure or fertilizer (*hiryô*, p. 297; in the Kaijô area of Manchuria, have been roasted and steamed, and mixed with compost, and used for green manure (*ryokuhi*) or soybean cake (*daizu kasu*). This method has also been used in the northeastern provinces (*Tohoku Chiho*) of Japan in rice fields). F. Soybeans as oilseeds (p. 302). G. Use of soybean protein in industrial products (p. 304).

4. The soy oil extraction industry (p. 305): A. Methods of removing the oil (origins, traditional methods, hydraulic pressing, extraction method, p. 340). B. Advantages and disadvantages of each method (p. 348). C. The soy oil industry in Manchuria (p. 357): History of development, important places for soy oil on the Manchurian Railway, economic condition of the Manchurian oil industry (p. 420), oil extraction in Japan (history, p. 437, commercial factories, p. 442, development of these factories, p. 451).

5. Soybean meal or cake and its composition (p. 464). A. The varieties of soybean meal or cake and the composition of each. B. Evaluation of quality (p. 473). C. Soybean meal or cake as a fodder (p. 478): Feeding value and digestibility, incorrectness of the theory that there are bad effects from feeding soybean meal or cake (p. 479). D. Soybean meal or cake as a fertilizer (p. 490). E. Soybean meal or cake as food (p. 504): Use as a raw material for shoyu production (p. 506), use to make soy flour (p. 509). F. Soybean meal or cake as a source of protein in industrial products.

6. Soy oil and its processing (p. 526). A. Characteristics of soy oil: Composition, physical characteristics (p. 535), chemical characteristics, testing and evaluating soy oil (p. 564), the quality of commercial soy oil products (p. 577). B. Refining soy oil (p. 587). C. The use and processing of soy oil (p. 631): Overview, refined soy oil as a food, substitute for salad oil, or for deep-frying oil, as an illuminant, as a cutting oil, lard substitute, margarine, in paints, soap, hardened oil, for waterproofing, substitute for petroleum oil, glycerin, fatty acids, stearine.

7. Exports and imports of soybeans, soybean meal or cake, and soy oil (p. 708). A. Manchuria. B. Manchurian exports. C. China. D. Japan. E. Korea. Appendix: Bibliography of soybeans (Japanese-, German, and English-language works: p. 748). List of photos.

Note 1. This is the earliest Japanese-language document seen (Oct. 2011) that mentions fermented tofu, which it calls *nyûfu* or *funyû*.

Note 2. This is the earliest Japanese-language document seen (Feb. 4) that uses the term *itohiki nattô* to refer to natto. Address: Dairen, Manchuria.

2535. **Product Name:** Oriental Show-You Sauce (Japanese-style Fermented Soy Sauce), and Mung Bean Sprouts.
Manufacturer's Name: Oriental Show-You Co.
Manufacturer's Address: Columbia City, Indiana.
Date of Introduction: 1924. January.
New Product–Documentation: Letter from Shinzo OHKI of "Oriental Show-You Company (Brewers- packers-Distributors, Columbia City, Indiana)" to Shinzaburo MOGI of Noda Shoyu Co. 1928. Nov. 2 (Bound in Log of Dorsett-Morse Expedition to East Asia, p. 51). States that Mr. Ohki visited the Noda Shoyu factory in 1917.

L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal*. June 25. p. 14. "Soy bean–The magic plant. Article XI." "Oriental Show-You Company, Columbia City, Indiana: Show-You sauce." A photo shows Commercial Soyfoods Products in William Morse's Office. 1936; Gray. 1936. All About the Soya Bean. p. 123; International Inst. of Agriculture. 1936. *Le Soja dans le Monde* [The Soybean in the World]. See: Manufacturers of edible soy products. p. 206. Show-You Sauce. Soybean Blue Book. 1947. p. 73; 1955. p. 106. Company name is now written "Oriental Showyou Co., Inc." Columbia City is in northeast Indiana, southwest of Warsaw and northwest of Fort Wayne. Chicago is about 100 miles to the northwest.

Ad in: Hokubei Shinpo-sha. 1948. *Nyuyoku Benran: Tsuketari jushoroku, 1948-1949 nendo* [*New York Japanese American directory: 1948-1949*]. Ad p. B-14. Oriental Show-You Company. Manufacturers of Oriental Show-You (Ad). Columbia City, Indiana.

Thomas' Wholesale Grocery... Register. 1955. July. p. 1474. Soy sauce. Indiana, Columbia City: Oriental Show-You Co.

Interview with Esta Keirn. 1981. Dec. 5. The Oriental Show-You Company began production began production of Japanese-style fermented soy sauce (shoyu) in Columbia City, Indiana, in 1924. The company had been started in 1918 in Detroit, Michigan, by Shinzo Ohki, a Japanese man, who began by importing shoyu and tea from Japan. In 1922 Mr. Ohki went to Japan to learn the method for making shoyu, then late that year he moved his business to Columbia City and by 1924 was making shoyu, along with mung bean sprouts, Chow Mein noodles, Chop Suey, and Jigg's Corn Beef and Cabbage. The company was quite small, making about 12,000 gallons of shoyu a year; this was sold mostly in the Midwest, and only east of the Mississippi River. In 1932 Mr. Esta Keirn joined the company and soon became production manager. In 1963 Beatrice Foods (which had sold La Choy HVP soy sauce since the early 1930s) acquired the company.

2536. The Nanking cook book: An enlargement and revision of The American Red Cross book of recipes for the use of Chinese foodstuffs. 1924. Shanghai, China: Published by the Woman's Auxilary of The University of Nanking. Printed at the Presbyterian Mission Press. 165 p. 22 cm. Published with the permission of the Nanking Chapter of the American Red Cross.
• ***Summary:*** The "List of foodstuffs" (p. 160-64) is a long table with three columns: English name, Chinese

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name (characters), and Notes. The foodstuffs are listed alphabetically by English name. Under "Beans" (p. 160) are listed: Hwang [Huang] deo = soya bean. Also tsang deo, ma deo, si gi deo, and giang deo.

Under "S" is "soy sauce." Address: Nanking, China.

2537. **Product Name:** Yamaizumi Shoyu.
Manufacturer's Name: Yamaizumi Miso Shoyu Seizo-sho.
Manufacturer's Address: 1436 Cahuenga Ave., Hollywood, Los Angeles, California.
Date of Introduction: 1925, January.
New Product–Documentation: The Japanese American Directory. 1925, p. S-44 (directory, New phone number: HEmpstead 3666) and p. S-110 (directory, Yamaizumi Miso Shoyu Seizô-sho, 1436 Cahuenga Ave., Hollywood. Phone: HEmpstead 3666). Ad (¼ page), p. S-234. Yamaizumi Miso Shoyu Seizô-sho. Note: This is the first entry that mentions "shoyu." Also in 1926, p. S-35 (directory) and p. S-75 (¼-page ad).

Ad (¼ page) in The Japanese American Directory. 1930. p. S-41. Yamaizumi Miso, Shoyu Seizô-sho is located at 1506 Fishburn St., City Terrace, Los Angeles, California. A large illustration shows the company logo. The source of the Yamaizumi brand (*Seizô hanbai moto*). There follows a poetic message in Japanese: Like a mountain spring, daily spring out our highly acclaimed sweet white miso (*shiro miso*), shoyu, chop suey sauce, koji, Kanro (sweet) Koji, and Japanese-style Kyushu pickles (*Kyushu-zuke*). The directory entry (p. S-53) contains the same name, address, and phone number. Note: City Terrace is about 3 miles east of downtown Los Angeles, near today's USC Medical Center.

Also in 1932, p. 346 (directory; name is given as Yamaizumi Miso Seizô-sho. New phone number: ANgelus 6336). Note: The word "Shoyu" is no longer in the company name; they apparently no longer make shoyu. However, the use of a shorter company name in the directory than in the ad may reflect space limitations in the free directory. Also in 1934, p. 297. Ad (1/8 page). Yamaizumi Miso Shoyu Seizô-sho. Note: "Shoyu" is back in the company name. 1532 Fishburn St., City Terrace, Los Angeles. Phone: ANgelus 6336. Also in 1936, p. 374 (directory; Yamaizumi Miso Seizô-sho) and p. 375 (¼-page ad; company name: Yamaizumi Miso, Koji Seizô-sho). Also in 1937, p. 320. Also in 1938, p. 348. Also in 1939, p. 339.

The Japanese American Directory. 1940. p. 326-27. Listed in the category "Foodstuff Factory." Yamaizumi Miso Seizô-sho (Yamaizumi Miso Koji Mfg. Co.), 1532 Fishburn Ter., Los Angeles, California. Phone: ANgelus 6336. The address has changed, but not the phone number. Also in 1941, p. 328.

Shurtleff & Aoyagi. 1983. The Book of Miso. 2nd ed. p. 234. (Based on an interview with Noritoshi Kanai, president of Miyako Oriental Foods). The company started in 1948 under the direction of Mr. Nagai, a craftsman from Fukuoka, Japan. During the 1960s their business declined, and in 1972 they started repacking Marufuku-brand miso imported from the American-Hawaiian Soy Company in Honolulu, and selling it in America under the Yamaizumi brand. In 1975 Miyako Oriental Foods bought the rights to the Yamaizumi brand from Mrs. Nagai and the Yamaizumi company ceased operations.

Note: This is the earliest record seen (April 2009) related to Miyako Oriental Foods.

2538. **Product Name:** Miso, and Koji.
Manufacturer's Name: Yasuhara Shoyu Seizo-sho (Yasuhara Soy Sauce Mfg. Co.).
Manufacturer's Address: 219-221 Jackson St., Los Angeles, California. Phone: TUcker 1458.
Date of Introduction: 1925, January.
New Product–Documentation: Ad (1/8 page) in The Japanese American Directory. 1925, p. S-49. All in Japanese. Yasuhara Shoyu Seizôsho, 219-21 Jackson St., Los Angeles, California. Phone: TUcker 1458. Owner: Kei Yasuhara. In addition to soy sauce (shoyu), also makes miso and koji.

Same ad in 1930, p. S-40. The directory entry (p. S-53) contains the same name, address, and phone number. Also in 1932, p. 346 (directory) and p. 347 (1/8-page ad). Also in 1936, p. 374 (directory).

The Japanese American Directory. 1940. p. 326-27. Listed in the category "Foodstuff Factory." In characters: Yasuhara Shoyu Seizô-sho. In English: Yasuhara Shoyu Mfg. Co., 219 Jackson St., Los Angeles. Note: They were not listed in this directory in 1937, 1938, or 1939. They apparently no longer make miso or koji. Also in 1941, p. 328.

2539. May Co. (The). 1925. Grocery store (Ad). *Los Angeles Times*. Jan. 23. p. 8.
• ***Summary:*** "Listed below are many of the rare, out-of-the-ordinary delicacies to be found in this complete Grocery Store–helpful suggestions for the discriminating hostess."

"China and Japan: Jasmine tea. Hong Kong ginger in crocks. Shoyu sauce. Boiled bamboo shoots."

"Imported health foods–from Dr. Huedebert, Paris; Dr. Charasse, Marseilles; Brusson Jeune, Ville Mur–for diabetes, dyspepsia, constipation, indigestion and reducing weight." Includes Aleurone bread muffins, Gluten bread, Levulose powder, Mignonettes of gluten–small bread balls for soup.

"Battle Creek Sanitarium Health Foods [Michigan]. These famous preparations will also be found in our Health Food Section, and include Colax, an agar biscuit; Lacto auxiliary food; Lacto Dextrine, antitoxic food; Casein-Gluten Flour, a superior food; Canned fruits, vegetables for restricted diet; Charcoal tablets; Vegex–the wonderful vitamine food." Address: Broadway at Eighth. Grocery store–Fourth Floor [Los Angeles].

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2540. Kurono, Kanroku. 1925. [On the future of shoyu brewing]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 1(13):1011-22. [Jap]

2541. Lea and Perrins. 1925. A steak and–Lea & Perrins' Sauce (Ad). *Times (London)*. March 18. p. 5, col. 7.
• ***Summary:*** "'What may I get you, Sir?' The waiter turned to my friend.

"'Tigers!' replied the little man fiercely, 'Tigers! Why, I've killed scores of them. Shooting big game my dear fellow is a passion with me–I revel in it. I was born for it.'" The long dialogue ends with this: "The waiter interposed. 'Pardon me, Sir, but you said steak and -?'"

Below this: "Lea & Perrins Sauce." At the top of this display ad is a stylized illustration of a waiter, dressed in a black tuxedo, with a white napkin draped over his left forearm. Address: [England].

2542. Kinoshita, Asakichi. 1925. Y-ji gata shôyu sokujô-hô [Y-form method of quick shoyu brewing]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 2(9):797-99. [Jap]
Address: Jozo Shikensho, Gishi, Japan.

2543. Tsuchida, Takeo. 1925. Shôyu kôbo no kenkyû. I. and II. [Studies on shoyu yeasts. I and II.]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 2(10):965-70; 2(11):1078-97. [Jap]
Address: Tsuchida Jozo Joshu, Japan.

2544. Tsugano, Akijirô. 1925. Y-ji gata shôyu sokujô-hô [Y-form method of quick shoyu brewing]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 2(10):904-07. [Jap]
Address: Nôgaku-shi, Japan.

2545. Haskell-Adams Co. 1925. Chop Suey at home! La Choy Chinese food products (Ad). *Boston Daily Globe*. June 23. p. A17.
• ***Summary:*** "Now you can serve genuine Chinese Chop Suey at home, using La Choy imported ingredients and recipes. La Choy Sprouts, Chow Mein Noodles, Sub-Kum, Soy Sauce and Brown Sauce are the necessary materials for a wide variety of Chinese dishes. Write for recipe booklet.

An illustration shows a man in a coat and tie seated alone at a dining table with a plate and metal vessel in front of him. In the background a woman in an apron is carrying a steam bowl toward him. Address: Wholesale grocers, Cambridge, Massachusetts.

2546. Ochse, J.J. 1925. Tropische groenten. Geteelde en in 't wild groeiende gewassen, die door de Indische bevolking worden gegeten [Tropical vegetables: Cultivated and wild plants eaten by the Indonesian people]. Weltevreden: Uitgave en Druk Volkslectuur. 215 p. July. See p. 92-95. Illust. Also listed as series #686. [Dut]
• ***Summary:*** This is the original Dutch-language edition, which was revised in 1931 as *Indische Groenten* and translated into English in 1931 as *Vegetables of the Dutch East Indies*. Ochse lived 1891-1970. After describing the plant, the author notes that there are two varieties of soybeans: one is yellowish brown and the other is black. The first is used to make tempeh and tofu; the second to make kétjap. Very popular soy products in the Indonesian market are tofu and firm tofu (*tahoe* and *takoäh*). Also discusses *tao tjo* (Indonesian-style miso; has a consistency like paste or porridge), tao dji (fermented black soybeans), témpé, and ontjom. The process for making each of these soyfoods is described.

Illustrations show: (1) A young soybean plant with leaves and pods (half size).

(2) A bamboo scaffolding or curing frame, in tripod form with 3 horizontal supports, used for drying bunches of soybeans.

Note: This is the earliest document seen (April 2001) that contains the word *takoäh*. Address: Buitenzorg [Bogor], Java.

2547. Morse, W.J. 1925. Re: Soybeans mentioned in Mr. Bain's letter to Dr. Taylor. Letter to Walter B. Lydenberg, Office of Forage Crops, BPI, USDA [Washington, DC]. Aug. 13. 2 p. Handwritten, with signature on lined paper.
• ***Summary:*** Morse is writing from Lafayette, Indiana. "Dear Lydenberg: Am sending herewith statement relating to soybeans mentioned in Mr. Bain's letter to Dr. Taylor. I spoke to you regarding this matter the day I left and advised I would send to you. I wish you would have it typewritten and submitted to Dr. Piper for attention. Am also sending Mr. Bain's letter and I wish you would bring the matter to Dr. Piper's attention as soon as possible so that he may get the material in a form as he sees fit to Dr. Taylor and Secretary Jardine.

"Have had an excellent trip so far. Spent yesterday at the soybean sauce factory and count it as one of the most profitable days I have ever had on a trip."

Note: The soy sauce factory Morse visited was probably the Oriental Show-You Co. in Columbia City, Indiana, founded by Shinzo Ohki in 1918 in Detroit, Michigan. He moved the company to Columbia City in 1922 and began making fermented soy sauce there in 1924.

"I find very great interest in our [illegible].

"Will mail you in a day or two some material which I wished to have mimeographed. With best wishes,..."

Location: National Archives, College Park, Maryland. Record group 54–Bureau of Plant Industry, Soils and Agricultural Engineering. Subgroup–Div. of Forage Crops and Diseases. Series–General Correspondence, 1905-29. Box 92–Morgan-Morse.

Sent to Soyinfo Center by Matthew Roth of Rutgers Univ., March 2012. Address: Lafayette, Indiana.

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2548. Evelyn, Mary. 1925. Strengthening foods. *Manchester Guardian* (*England*). Sept. 28. p. 6.
• ***Summary:*** "The following foods are useful in cases of debility and in convalescence from illness:–Almonds, meat (beef and mutton),... chestnut, chocolate, cream, eggs,... potatoes, raisins, salmon, soy sauce, sugar,..."

Note: This is the earliest reference seen (Sept. 2008) to "soy sauce" (or "soya sauce") in the *Observer* (London) (1791-2003) or the *Manchester Guardian* (1828-1959) as they have been digitized by ProQuest.

2549. Meharry, Charles L. 1925. Second annual field meeting: Illinois–September 1, 1921. *Proceedings of the American Soybean Association* 1:42-46.
• ***Summary:*** "The Second Annual Field Meeting of the National Soybean Growers' Association was held on 1 Sept. at the University of Illinois and at the A.P. Meharry Farm near Tolono, Illinois, the University of Illinois Extension Service, the Champaign County Soybean Growers' Association cooperating in arranging and conducting the program. The Champaign County Soybean Association and the Champaign County Farm Bureau furnished transportation and lunch was served by the Crittenden Unit of the Champaign County Farm Bureau.

"More than 1,600 people representing 35 counties in Illinois, 9 counties in Indiana, 3 counties in Kentucky, one county each in Missouri, Ohio and Wisconsin and the United States Department of Agriculture assembled at the South Farm of the University of Illinois, where representatives of the Extension Department explained the various soybean experiments, and the use and place of soybeans in rotations for Corn Belt conditions. Field plot tests of varieties suitable for different uses, soil types and latitude were inspected and the characters and behavior of each variety discussed. A special feature of variety demonstration was a test of sixteen varieties secured from each of ten different states... Visitors were then shown the work of Dr. Woodworth and others who are developing new varieties through selection and breeding. Dr. Woodworth discussed quite fully the principles of breeding and their application to natural and artificial crossing."

"At 10:30 the visitors started in automobiles for the A.P. Meharry Farm near Tolono... After arrival at the farm, several hay varieties, Illinois 13-19 (Ilsoy), Virginia, Mongol (Mid-west [Midwest]) and others were inspected. Several large fields of the Manchu, A.K., and Mongol (Midwest) for seed production were viewed."

"At noon a cafeteria lunch was served in the grove. In addition to the regular lunch, the A.P. Meharry Farm served a number of soybean dishes, including baked soybeans, soybean coffee, soybean milk, and soy sauce. An exhibit of soybean products consisting of soybean oil, soybean oil meal and flour, various paints and varnishes, soaps and photographs of various operations in the soybean field was furnished by County Agent C.H. Oathout.

"After luncheon President Riegel called the meeting to order, and Professor J.C. Hackleman, Illinois Extension Specialist in Farm Crops, presided.

"Mr. Charles L. Meharry welcomed the visitors to the A.P. Meharry Farm and spoke briefly of the place and importance of soybeans on the Meharry Farms.

Mr. Henry J. Waters, former President of the Kansas State Agricultural College, addressed the growers on the economic distress of the times and the economic situation at the close of the World War.

Professor E.J. Kinney, of the Kentucky Experiment Station, told briefly of the soybean in Kentucky... For Kentucky conditions the Mammoth Yellow was recommended for forage and the Haberlandt for seed.

"Mr. Charles Caldwell, soybean grower of Kentucky, told briefly of ten years' experience with soybeans."

"Mr. Taylor Fouts, soybean grower of Indiana, stated that he had been growing soybeans for a great many years, and emphasized their value as a soil-building leguminous crop on poor soils, especially where clover fails. He suggested that while corn is King of the midwest crops, the soybean would be known as the Queen, when we realize the wonderful possibilities and many uses of the crop.

Note: This is the earliest English-language document seen (July 2007) that uses the word "Queen" to refer to the soybean.

"Mr. C.E. Carter, of the Missouri Experiment Station, reported on the soybean situation in Missouri... The Morse and Medium Yellow (Midwest) are regarded as the best seed varieties and Wilson and Virginia as the best forage sorts.

"Professor George M. Briggs, of the Wisconsin Experiment Station, praised the performance of soybeans in his state."

"Mr. W.J. Morse, of the United States Department of Agriculture, gave a general review of the soybean situation in the United States. He stated that the interest in soybeans has increased very rapidly during the past few years, not only in the Middle West, but also on the Pacific Coast, in New England and throughout the Northern and Southern States."

"Mr. O.L. Cunningham, Kentucky, reported that soybeans were so generally grown and favored in Fulton County that soybean demonstrations were not essential. Of the 20,000 acres of corn, at least 16,000 acres were said to be planted with soybeans. The Mammoth Yellow variety was grown with late corn and the Haberlandt with early corn for pasturage. In Fulton County the corn is cut off and the hogs allowed to pasture the soybeans.

"Mr. C.B. Newton, Ohio, reported on soybeans growing in Ohio."

"Mr. W.E. Riegel, manager of the A.P. Meharry Farm, in a brief talk, stated that there was a place for soybeans on every farm to produce whatever amount of feed could be fed upon the farm, and that farmers should produce their protein

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feed instead of buying tankage, cottonseed meal and other high-priced feeds. It was also thought that soybeans should be developed as a human food in the United States as already had been done in the Orient."

"Chairman Hackleman emphasized his belief that the farmer should think of the soybean crop as a feed, forage, and pasture crop, and as a legume to enrich the soil. He made the point very emphatically that farmers should not depend on growing the soybean crop for seed alone, and more converts are needed to soybeans for their value on the farm. When the farmers get this attitude towards the crop, the seed crop will take care of itself.

"A demonstration of threshing soybeans followed the program of speakers. Several loads of unhulled beans of the 1920 crop were threshed to demonstrate that the proper adjustment of an ordinary grain separator is all that is necessary to successfully thresh beans. The growers were shown the necessary adjustments and attachments in the way of different sized pulleys which reduced the cylinder speed without reducing the speed of the remainder of the thresher.

"The growers and guests after a unanimous vote of thanks to the hosts of the A.P. Meharry Farms departed about sundown."

Four small photos (p. 41) show "The Second Annual Field Meeting of the Association at the A.P. Meharry Farm near Tolono, Illinois, September 1, 1921." (1) Men standing in a field with silos and barns in the background. (2) People and children standing around luncheon tables covered with white table cloths. (3) Many men seated on the ground under trees, wearing white dress shirts (some wearing straw hats) and listening to a speaker. (4) Men standing around talking under trees. Address: Acting secretary.

2550. Wilson (R.G.) and Co. Pty. Ltd. 1925. The best house for groceries (Ad). *Argus (The)* (*Melbourne, Victoria, Australia*), Nov. 4. p. 8.
• ***Summary:*** "Dried yeast: To convenience people we import regularly stocks of Royal Yeast Cakes, 5 tablets in a packet." Note: These are probably use for baking, typically bread, muffins, etc. at home.

Seasonable goods: Biscuits, Lindebooms,... Tabasco Sauce, 2/3 [2 shillings 3 pence]; India Soy, 1/6: China Soy, 1/6;...

"These can be suitably packed and sent to any part. If desired we can prepay all charges. Postal maximum is 11 lb. gross."

Note: This is the most recent of 283 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "China Soy." Address: 56-58 Elizabeth Street (East Side) [Melbourne]. Phone: Cent. 612, 613, 11003.

2551. *Times of India (The)* (*Bombay*).1925. Imports [at Bombay harbour]. Nov. 24. p. 6.
• ***Summary:*** "S.S. Toyooka Maru [Toyôka Maru] from Yokohama [Japan], Agents: N.Y. Kaisha.

"From Osaka.–15 cases shell buttons;... 100 casks red lead; 20 casks Japanese soy [sauce]; 18 cases cotton hosiery under shirts..."

2552. Burnham (M.J.). 1925. A fresh week-end assortment: Everything in the line of meat, groceries, fruit, vegetables (Ad). *Hartford Courant* (*Connecticut*), Nov. 28. p. 22.
• ***Summary:*** "We have a full line of La Choy Brand imported Chinese products for making home made Chop Suey." Address: West Hartford Center.

2553. Yoshida, Toru. 1925. Honpo shôyu kôgyô rôdô jijô [Labor situation in the Japanese shoyu industry]. *Shakai Seisaku Jiho* (*Social Policy Review*) 62:127-30. Nov. [Jap]*

2554. Hikosaka, I. 1925. Shôdoshima shôyu-gyô no keizai-teki kenkyû. II. [Economic research on the shoyu industry in Shodoshima. II.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 21(1):69-73. [4 ref. Jap]
• ***Summary:*** Shodoshima is an island in the inland sea of Japan off the coast of Okayama. It has long been known as a traditional center of shoyu brewing. During the 1970s and early 1980s its shoyu was imported to the USA by natural foods companies. This article contains no production or financial statistics. Address: Nagoya Koto Shogyo Gakko Seito, Japan.

2555. Ishida, A. 1925. Shôyu-chû no isseibun ni tsuite (roishin) [One component of shoyu: Leucine]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 20(6):33-35. [Jap]
• ***Summary:*** The beautiful crystal that was extracted from shoyu was an unpure form of leucine, an amino acid. Address: Jozo Shikensho, Japan.

2556. Kinoshita, Asakichi; Matsumoto, K.; Takada, R.; Onoie, S. 1925. Shôyu moromi ni nyûsan-kin no tenka shiken [Addition of lactic acid bacteria to shoyu moromi (mash)]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 93. p. 237-45. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Gishi; 3. Joshu; 4. Shokutaku.

2557. Kinoshita, Asakichi; Katsuyama, M.; Takada, R. 1925. Dasshi daizu shiyô shiken [Shoyu brewing with defatted soybean meal and soybean cake]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 93. p. 167-87. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2-3. Joshu.

2558. Kinoshita, Asakichi. 1925. Anka genryô shôyu jôzô-hô. V-XV. [Shoyu brewing using inexpensive materials.

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V-XV.]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 21(2):41-45; 21(3):56-62; 21(4):56-59; 21(5):37-39; 21(6):58-61; 21(7):38-41; 21(8):29-31; 21(9):32-36; 21(10):48-51; 21(11):41-43; 21(12):55-57. [Jap]

• ***Summary:*** The articles in this series examine mostly carbohydrate sources: Barley and rye, oats, wheat bran, kaoliang (*koryan*), corn, broomcorn millet (*kibi*) and barnyard millet grass (*hie*), long grain rice, ground rice, rice bran. They also examine protein sources: defatted soybean presscake (*mame kasu*), raw peanut presscake. The last two sections are general ideas about soybean presscake, and how to process soybean presscake. Address: Jozo Shikensho Gishi, Japan.

2559. Kurono, K. 1925. Jôzôgyô no shôrai. Fu: Shôyu no kagaku [On the future of the brewing industry. Addendum: The chemistry of shoyu]. *Sapporo Norin Gakkaiho (J. of the Society of Agriculture and Forestry, Sapporo)* 17(75):229-43. [Jap]
Address: Nôgaku Hakase, Japan.

2560. Kurono, K. 1925. Jôzô-gyô no shôrai. Fu: Shôyu no kagaku [On the future of the brewing industry. Addendum: The chemistry of shoyu]. *Nogaku Kaiho (J. of the Scientific Agricultural Society, Japan)* No. 276. p. 328-39. [Jap]
Address: Nôgaku Hakase.

2561. **Product Name:** Marumasa Soy Sauce.
Manufacturer's Name: Marumasa Soy Co. (Marumasa Shoyu Factory).
Manufacturer's Address: 616 Cooke St., Honolulu, Oahu, Hawaii. Phone: 814911.
Date of Introduction: 1925.
Ingredients: Soy beans, wheat, salt, caramel coloring, monosodium glutamate, and 1/10 of 1% of sodium benzoate, a chemical preservative.
Wt/Vol., Packaging, Price: 1 pt 8 oz bottle.
How Stored: Shelf stable.
New Product–Documentation: Polk-Husted's Directory of Honolulu and the Territory of Hawaii. 1925. Marumasa Soy Co., 616 Cooke, Honolulu. 1927 Directory. Address given as 618 Cooke.

Hawaiian Japanese Annual & Directory. 1936-37, p. 103. Goichi Miyagi (from Okinawa prefecture), shoyu, miso, and koji manufacturer, 618 Cooke St., Honolulu.

1938-39 Polk's Directory. Mrs. Oto Yamashiro, 618 Cooke; 1948 and 1949 Directories. Shigeru Kawakami, 618 Cooke; 1954 Directory, p. 537. Marumasa Shoyu Factory (Mildred K. Kawakami), 618 Cooke. 1955 Directory, Marumasa Shoyu Factory, 618 Cooke. Not listed in 1953. 1966-67 Directory. Marumasa Shoyu Factory, 2132 Kaliawa. Not listed 1967-68.

A photo shows an early circular Label. Marumasa



Soy Sauce. Choice. Made by natural fermentation process. Brewed and bottled by Marumasa Shoyu Factory, 2132 Kaliawa St., Honolulu, Hawaii. Tel. 814911. Sheaves of wheat and soybean around the perimeter. Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows one label. This company has closed but their brand is being carried on by the Honolulu Sake Brewery and Ice Co. Ltd.

2562. **Product Name:** Shoyu.
Manufacturer's Name: Masuhara (T.M.).
Manufacturer's Address: 463 N. King, Honolulu, Oahu, Hawaii.
Date of Introduction: 1925.
New Product–Documentation: Husted's Directory of Honolulu and the Territory of Hawaii. 1925 T.M. Masuhara, 463 N. King, Honolulu. 1926 Directory. Address changed to 30 N. Vineyard.

2563. Matsumoto, K. 1925. Shôyu seibun-chû no yûki-san rui no kenkyû [Studies on organic acids in shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 20(2):23-29; 20(3):10-18; 20(4):23-30; 20(5):12-21. [Jap]
Address: Jozo Shikensho Gishi, Japan.

2564. Matsumoto, K. 1925. [On the molds used in soy sauce fermentation]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 99. p. 1-178. [Jap]*
Address: Japan.

2565. Nishimura, Torazô; Kinoshita, A.; Katsuyama, M. 1925. Daizu no shinseki-sui oyobi kôeki shiyô shiken [Brewing shoyu using the soybean soak water and cooking liquid]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 93. p. 152-60. [Jap]

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Address: Jozo Shikensho. 1. Shokutaku: 2. Gishi: 3. Joshu.

2566. Saito, K. 1925. [On the microbes of shina shoyu]. *Minami Manshu Tetsudo K.K. Shiken (South Manchuria Railway Co. Experiment Station)* 10:397-. [Jap]*

2567. Buckley, Francis. 1925. A history of old English glass. London: Ernest Benn Limited. xxviii + 154 p. Plus 60 plates on unnumbered pages at end. Foreword by Bernard Rackham. Illust. Index. 28 cm. [2 ref]

• ***Summary:*** The foreword states: Following the pioneer work of the late Albert Hartshorne, Mr. Buckley has given long hours of toil to the patient exploration of written records; official documents, newspapers and books of all kinds have yielded to a mass of information which has enabled him to make clear much that was obscure, and to add greatly to our knowledge and understanding of a worthy English art." On p. xii is a list of titles and years of 18th century newspapers he has searched–a formidable job!

Chapter XI, "The development of glass-cutting in England: Bottle forms," includes a good discussion of cruets during the 1700s.

Appendix I, well indexed, contains references and quoted text regarding the cut glass trade in England during the late 1600s and 1700s. They are listed by city, and within each city chronologically. The four earliest documents that mention cruets are dated 1702-17, 1706, 1710, and 1711 (p. 143-44). The word is spelled cruets, cruits, crewits, and crewets.

The two references to "Soy cruets" are as follows: (1) *Bath and Bristol Chronicle*. 1768. Oct. 20. "To be sold by hand at the Sadler's Arms in Bath, the stock in trade from a glass cutter in London, consisting of a great variety of cut engraved and gilt glasses:" Incl. "Soy Cruets" (p. 122-23).

(2) *Bristol Journal*. 1774. June 4. "Sale... crewet frames with ground glass castors and silver tops. Soy ditto" (p. 134).

Two plates show cruet bottles in the Victoria and Albert Museum: (1) Plate XLI, four early cruet bottles, 1727-1760. No. 4 is a silver mounted and mallet-shaped cruet, diamond faceted, of a type common in 1752 and later (see p. xxiii for explanation). (2) Plate XLII, four later cut bottles, 1760-1800. No. 1 is a silver-mounted cruet (London 1798). No. 4 is a Sheffield plate-mounted cruet, probably from Whittington 1775-1785. Address: England.

2568. Canning Age food packers directories: Listing the packers of preserved foods in the United States, Canada, Hawaii, and Porto Rico. 1925. New York, NY: Canning Age. 229 p. See p. 68.

• ***Summary:*** Page 68: "La Choy Food Products, Inc., Oakman Blvd. and Richton St., Detroit. Specialties."

2569. Carqué, Otto. 1925. Natural foods: The safe way to health. Los Angeles, California: Carqué Pure Food Co., Inc. 359 p. Illust. Index. 20 cm.

• ***Summary:*** Contents: Part I: Fundamental facts about food and health. 1. The old and new conceptions of the cause of disease. 2. Drug medication, vaccination, and serum therapy. 3. Nature's healing factors: Sunlight, fresh air, exercise, rest, water, the importance of natural foods for life and health, why denatured foods (white flour, refined sugar, candies, etc) are injurious. 4. The constituents of food considered in the light of modern physiology and biology: Proteins, carbohydrates, fats and oils, cellulose, fruit acids are organic acids, organic salts, the alkaline or base-forming elements (iron, sodium, calcium, magnesium, potassium, manganese, and aluminum), the acid-forming elements (phosphorus, sulphur, silicon, chlorine, fluorine, iodine, bromine, arsenic), the vitamins. 5. Rational soil culture essential for the production of superior foods. 6. The conservation of vital force (stimulants, narcotics, elimination of waste, quality of foods, prolongation of life, alkaline and acid-forming foods). 7. Why the calorie theory is misleading. 8. Fruit, man's best friend (the fruit of the tree, sulphured and unsulphured fruits). 9. Nuts–Nature's most concentrated foods. 10. Vegetables–Nature's blood purifiers (Great hygienic value of green leaves, proper soil fertilization most essential to vegetable culture, loss of organic salts in cooking, classification of vegetables–5 classes). 11. Cereals and legumes (Cereals falsely called "The staff of life," whole grain products are the best, the great waste of food elements by modern milling processes, legumes–an important food). 12. Milk and dairy products (Milk not a perfect food for adults). 13. Meat–the least essential and most expensive of all foods (the vegetarian alternative).

Part II: Practical dietetics. 14. How to live well on less food. 15. The feeding of infants and children (lactation, almond milk, soy bean milk). 16. The rational preparation of foods. 17. Rational food combinations (importance of simplicity of eating, the mono-diet and its advantages). 18. Simple and well balanced menus for all seasons. Appendix: Tables and statistics. A1. Analyses showing the amount of sodium, calcium and iron in foods. A2. Amount of food materials necessary to supply one ounce of protein. A3. Amount of calories contained in one pound and one ounce of 200 food products. A4. Average time required for gastric digestion of foods. A5. Annual consumption of sugar, soft drinks, salt, spices, coffee, tobacco, drugs, alcohol, etc., in the United States. A6. Regulations for the enforcement of the Food and Drug Act. Important information about chemical preservatives and artificial colors.

The Preface (and the book) begins: "Two powerful superstitions are impeding the welfare and progress of the human race. The one is the conviction that disease is an entity, a mysterious something that attacks us without warning from the outside, either in the form of germs or as inclemency of weather. The other–perhaps the more harmful of the two–is the belief that for each disease specific

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remedies must be found, such as drugs, serums, vaccines, glandular extracts, etc., and that, when we are afflicted, we have to submit to a specialist's treatment or even to the affected parts or organs."

The average individual tries "to shift the responsibility for his sins of omission or commission to some imaginary cause, rather than to hold himself accountable for the violation of nature's laws." There is "almost universal ignorance of the fact that disease is merely an effort on the part of nature or the universal life force to restore normal conditions in the organism. Our present system of commercialism has taken advantage of this situation by misleading people through clever advertising to persist in their errors in order to maintain the demand for drugs and serums, proprietary medicines,..."

Chapter 11, "Cereals and Legumes," briefly discusses many types of soyfoods–soy sprouts, milk, flour, tofu, soy sauce, and oil (p. 142). Page 196 discusses the use of soy bean milk and almond milk for feeding infants and children. Chapter 16, titled "The Rational Preparation of Foods," contains a long and detailed section on soy beans (266-71), with subsections on boiled soy beans, soy bean milk, tofu, soy sauce, and soy bean sprouts. Home preparation of each is described. Miso, yuba, natto, and hamananatto are also mentioned (p. 268). Soy-related recipes include: Baked soy beans (p. 269). Soy bean loaf. Soy bean croquettes. Soy bean bread (p. 270).

Chapter 9, about nuts, states: "The making of nut butters is not a difficult process. At present peanuts and almonds are chiefly used for this purpose... The blanching of peanuts and almonds is now done on a large scale by special machinery, and the blanched nuts can be procured in nearly all the larger cities." Break the blanched nuts into small pieces by running them through the Climax Grater or a food chopper. Put them into a moderately hot oven for a few minutes to make them dry and crisp, then run them through a tightly adjusted nut mill to create a "smooth, palatable nut butter." A large table (p. 122) compares the composition of various nuts and nut butters (almond butter, peanut butter) with meat, cheese, eggs, cow butter, and whole wheat bread. "The pecan contains the largest amount of fat, about 70%, closely followed by the hickory nut, brazil nut, filbert and pine nut, which all contain over 60% of fat. The pignolia imported from Spain ranks highest in the amount of protein, containing nearly 34%; the peanut comes next with 29.8%; the butter nut, almond, pistachio, all contain over 20% protein, excelling the best cuts of meat in that respect. The almond does not contain any starch as is, therefore, the nut best suitable for infants, especially in the form of almond milk." Chufa contains 3.5% protein and 31.6% fat.

The section titled "Fruit and nut confections" (p. 212-15) discusses and has recipes for natural candies and confections.

The section titled "How the American people deplete their vitality by their favorite poisons: The tremendous waste of our material wealth" (p. 328-43) discusses (p. 338-43): The amount spent in 1924 on each of 15 "adulterated foods and drinks and of poisonous stimulants and narcotics" ($5,040 million) compared with the amount spent on foods and vegetables ($850 million, or 16.8% as much). Refined sugar. Coffee. Tobacco. Condiments, etc. Alcoholic beverages. Drugs. Regulations for the enforcement of the Food and Drug Act (due to untiring efforts of Dr. Harvey W. Wiley, former chief of the Bureau of Chemistry, USDA). Sodium benzoate and sulphur dioxide. Salt. Saltpeter. Boric acid and borax. Saccharine. Mineral and coal tar dyes. Laxity in enforcement of the Pure Food Law.

On pages 344-47 is information about the Carque Pure Food Company (incorporated 1912) and its founder and owner Otto Carque, including a brief biography of Otto, a list of leading Carque food products, and a full page photo of the company's new home at 729 Seward St., on 1 Oct. 1925 (2 story brick building).

The food products are arranged by groups: Fruits: Sun-dried and dehydrated, without bleaches or preservatives (Black mission figs, white Smyrna-type figs, prunes, dates, olives, raisins, apricots, peaches, pears). Nuts: Fresh, selected and unroasted (almonds, walnuts, Brazil nuts, pecans, pignolias, pistachios, peanuts). Confections: Of assorted fruits, nuts and honey, without sugar, salt, glucose or preservatives (delectables, fruit nuggets, Kandy-Andy). Stamina and laxative foods (Nut-Fruto, Prunola {prunes and olives}, fruit laxative). Nut butters: Ground from whole nuts, uncooked and unsalted (almond, nut cream, peanut). Cereals and products: Made from re-cleaned whole grain (wheat flour, yellow corn meal, brown rice, breakfast food, crackers). Miscellaneous (olive oil, strained honey, raw sugar, fig-cereal breakfast drink {instead of coffee}). Price list and descriptive circulars on request.

Note: This is the earliest English-language document (or book) seen (June 2004) with the term "Natural foods" in the title that also discusses soy. Address: Los Angeles.

2570. La Choy Food Products, Inc. 1925. La Choy book of Chinese recipes. Detroit, Michigan: La Choy Food Products, Inc. [10] p. 9 cm. *

• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home.

2571. Lecourt, Henri; Nachbaur, Albert. 1925. La cuisine Chinoise [Chinese cuisine]. Peking: Published by the authors. 141 p. (on double leaves–unnumbered). 26 cm. [Fre]

• ***Summary:*** The section titled "Sauces fermentés et condiments" notes that this 8th chapter is the indispensable complement to the preceding recipes, for it discusses the condiments and fermented sauces which are widely used in Chinese cuisine and which are included in almost all the recipes in this book. Here you will find the recipe for *mienn*

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tsiang (Cc = Chinese characters given) [mian jiang], a sauce of wheat flour fermented with salt, more commonly known as *t'ienn mi tsiang* [*tian mian jiang*].

Each person should be able to make the famous *ts'ing tsiang* (Cc), also known as *tsiang yeou* [*jiang-you;* soy sauce], which is used in almost all the recipes mentioned.

The generic sauce is *tsiang* (*Cc*) [*jiang*], which refers to a fermented sauce of soya or beans, a condiment used for seasoning. This product is the base of all fermented things.

2572. Mogi family creed adopted (Early event). 1925.
• ***Summary:*** In "The Kikkoman Chronicles" (1998, p. 37-38) author Ronald Yates states: "More than 70 years ago, the Mogi families and the Takanashi and Horikiri families adopted a written family code of business. It is an informal 17-pount document that has played an important role in Kikkoman's corporate governance since eight families merged to create the company [Noda Shoyu Co.] in 1917. This creed "is evidence of tradition and loyalty–qualities still highly regarded in Japan and Asia,..."

"The Mogi family creed is much more ambitious than one of those pithy vision statements that so many companies create... it remains a document that members of the Mogi family still conduct their professional and private lives by. It reads:

"1. Family members should recognize that harmony is of utmost importance. Harmony fosters mutual respect which permits family members to focus on prosperity in business and on the longevity of the fortunes of the families.

"2. Worshipping and respecting a Supreme Being is the foundation for nurturing virtue. Keeping faith nourishes your own mind.

"3. Loyalty and patriotism are an obligation. Respect and serve your country and observe the fundamental character of your country.

"4. Family members should recognize that courtesy is a fundamental element. If, as a senior member, you lack courtesy, junior family members will not give allegiance to you. If junior members lack courtesy, there may be serious repercussions. Mutual courtesy will result in a self-governing, peaceful family.

"5. Always keep in mind that virtue is the origin and wealth is its product. Do not judge a person by his wealth or lack of wealth.

"6. Strict discipline should be maintained. valuate each employee with fairness. Demand the utmost in diligence. The hierarchy in any organization must be maintained.

"7. Human resources are the most valuable treasure of a company. Each employee should be treated without personal prejudice and be placed in the most appropriate position according to his capability and achievements. Each employee should be respected and his self-worth should be maintained or enhanced.

"8. The education of our children is our responsibility to our nation and to our community. The body and the mind should be trained with moral, intellectual, and physical education.

"9. Benevolence should be extended to all living things. Benevolence is the source for discipline and the mother of virtue. Words are the door to both fortune and misfortune. A harsh tongue can hurt others and also yourself. A kind demeanor will make you feel at ease, even in times of turmoil. Be careful of each word you speak.

"10. Simplicity and frugality have been the time-honored tradition of the family for generations. Live within your means.

"11. True profit comes from hard work and maximum effort. Speculation is not the best road to follow. Business which is done contrary to social order and by taking advantage of others' weakness should be prohibited.

"12. Competition is essential to progress. Excessive and unethical competition should be avoided.

"13. Any judgment should be made clearly and fairly. Rewards and penalties should be fully recognized. Rewards will encourage challenges and penalties will discourage thoughtless mistakes.

"14. When beginning a new business, consult with family members. Do not make decisions by yourself. You should recognize that absence of a business loss is akin to making a profit.

"15. Do not fall into debt carelessly. Do not act as a guarantor for any loan. Never lend money to make a profit.

"16. Give as much money from your personal earnings as possible. Never ask for a reward or think highly of yourself.

"17. Do not decide important maters by yourself. Always consult with the people who have a direct interest in the subject matter prior to making a decision. Shared decision-making results in people having a positive attitude toward their work."

Letter (e-mail) from Kikkoman corporate office via Kikkoman Sales USA. 2012. May 14. The Mogi 17-point family creed was written in 1925.

2573. Salazar, Leopoldo G. 1925. The manufacture and chemical control of some soybean products under Los Baños conditions. Bachelor of Agriculture thesis, Dep. of Agricultural Chemistry, College of Agric., University of the Philippines, Los Banos. Publ. No. 231. *
Address: Univ. of the Philippines, Los Baños.

2574. *Chicago Daily Tribune.*1926. Japan to ease tax burden on common people. Jan. 5. p. 6.
• ***Summary:*** "Tokio, Jan. 4.–Possibly with an eye to the ten million recently enfranchised voters who are to join the heretofore three million in the next general election, the present government will revise radically the taxation system," or at least try to by introducing measures "that

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will greatly lessen the taxation upon the masses and correspondingly increase it upon the wealthy classes."

The finance minister proposes doing away with "the tax upon shoyu, the sauce used every day by every Japanese, the income tax on small incomes,..."

2575. Cottington-Taylor, D.D. comp. 1926. Subtle seasoning: A little book of recipes [1st ed.]. Worcester, England: Lea and Perrins Ltd. viii + 54 p. Introduction by X. Marcel Boulestin. Illust. (by John Austen). Recipe index. 20 cm.
• ***Summary:*** A booklet of recipes that call for Lea & Perrins' Worcestershire Sauce. Contents: Introduction by X. Marcel Boulestin. Some domestic details of interest to the young hostess, Mrs. D. D. Cottington-Taylor. The recipes: Stocks and soups. Fish dishes. Egg dishes. Curries. Meat and entrées. Sauces. Salads.

The Lea and Perrins' sauce bottle, with its distinctive orange label, is shown on the front cover. Address: Director of Good Housekeeping Inst. [England].

2576. Togano, Meijiro. 1926. [On rapid brewing of shoyu]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 3(7):691. [Jap]*

2577. *Times of India* (*The*) (*Bombay*). 1926. Imports [at Bombay harbour]. March 6. p. 7.
• ***Summary:*** "S.S. Hakata Maru, from Tokyo [Japan]. Agents: N.Y. Kaisha.

"From Osaka.–96 cases and 11 bales Japanese yarn... 11 cases cotton goods, 20 cks. [casks] Japanese soys, 11 pkgs [packages] match paper,..."

2578. Kinoshita, Asakichi; Kanamori, Kichiro. 1926. Shôyu no "jiasutaaze" ni kansuru kenkyû [Studies of shoyu diastase]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 3(8):753-64. [Jap]
Address: 1. Gishi; 2. Kenshu-in. Both of Jojo-shi Shokusho, Japan.

2579. Horvath, A.A. 1926. Soy sauce as a stimulative agent in the development of beriberi in pigeons. *National Medical J. of China* (*Shanghai*) 12(2):176-77. April. [Eng]
• ***Summary:*** Abel and Kubota found that histimine is one of the substances that accounts for the stimulating action of soy sauce on the intestinal plain muscle, and that it also plays an important rôle in digestion as a dilating agent for the capillaries of the gastric and intestinal mucosa. Recently Kubota found that in vitro peptic and tryptic digestion of foods is stimulated from four to eight times by soy sauce. Soy sauce also possesses a strong amylolytic function.

In an investigation, 7 pigeons were fed on polished rice and water, the latter containing five per cent of Pekinese soy sauce. Five control pigeons were fed on polished rice and pure water. Within one month five of the seven experimental pigeons developed beriberi and of the controls none. Therefore soy sauce in some way stimulates the development of beriberi in pigeons. Address: Chemical Lab., Dep. of Medicine, Peking Union Medical College, Peking, China.

2580. Yamada, Masakazu. 1926. Yûki enki bunri ni nafutooru o no ôyô ni tsuite (jiamin no shin bunri-hô) [Application of naphthol yellow to the isolation of organic bases. (A new method for the isolation of diamines)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 2(4):246-67. English abstract bound in the back. Vol. 2, No. 4. p. 39-41. [10 ref. Jap]
• ***Summary:*** The author applied to sake and shoyu the method proposed recently by A. Kossel and K.E. Gross (*Z. Physiol. Chem.*, 135, 167-74, 1924) for the isolation of arginine and aphthol yellow. He was able to obtain much crystalline precipitate in the shoyu, but none in the sake. This precipitate was easily recrystalized from boiling water in beautiful rosettes, which were found to be the mixture of the double salts of putrescine and cadaverine with the naphthol yellow. The precipitation in shoyu was caused by "salting out." The author also used naphthol yellow to precipitate bases (cadaverine picrate) from tamari shoyu, Hatcho miso, inaka miso, and natto. Address: Nôgaku-shi, Japan.

2581. Yamada, Masakazu. 1926. A new method for the isolation of diamines. *J. of the Agricultural Chemical Society of Japan* 2(4):39-41. April. Whole issue no. 19. [Eng]
• ***Summary:*** 1.08 g kadaverin pilerat is obtained from 1 kg of natto.

Note: At the top of p. 39 is written: "Abstracts from original papers."

2582. *Volksernaehrung* (*Die*) (*Berlin*). 1926. Ueber den Wert der Sojabohne [The value of the soybean]. 1(16):262. June 20. [Ger]
• ***Summary:*** As the result of thorough cultural trials in Silesia (*Schlesien*) [in Germany], Inspector Locke comes to the following conclusion: "The soybean, the Orient's most important and oldest crop, is, in its ground state, a superb feed concentrate and deserves without question to be cultivated in our homeland (Germany). It would be desirable if many farmers would decide to start cultivating soybeans."

"The soybean is rich in protein and fat. The oil presscake serves as a feed concentrate and in the production of baking aids. In addition, it serves as the raw material for making an excellent seasoning [soy sauce]. Its utilization is therefore similar to that of the lupine, a versatile crop, and its cultivation on appropriate soil is worthwhile and profitable."

2583. Eddington, Jane. 1926. Tribune Cook Book: Soy sauce. *Chicago Daily Tribune*. July 7. p. 38.
• ***Summary:*** "Soy sauce is what made chop suey a strange and secret thing for some years, years ago. It is made in China and Japan, most of it in the latter country." A recipe

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is found in: Church, Margaret B. 1923. "Soy and related fermentations." *USDA Department Bulletin* No. 1152. 26 p. May 12. Several quotations from this bulletin are given.

2584. *Times of India (The) (Bombay).* 1926. Imports [at Bombay harbour]. July 10. p. 7.
• ***Summary:*** "S.S. Tacoma Maru, from Nagoya [Japan]. Agents:–O.S. Kaisha.

"From Osaka–90 bales grey cotton sheeting... 125 cases red lead, 20 cases soys, 20 cases Japanese soys, 5 cases glass tubes..."

2585. *Jozogaku Zasshi (J. of Brewing, Osaka).* 1926. Shojo: Seimai, daizu, komugi, mugiyasu, ômugi, seishu, shoyu, miso, tsukemono [State of commerce: Prices of rice, soybeans, wheat, rye, barley, refined sake, shoyu, miso, pickles]. 4(1):88-91. Aug. [Jap]
• ***Summary:*** Soybeans are used mainly in making tofu and fermented foods. Gives the price of soybeans at various places in Japan. Likewise gives prices of shoyu and miso at various locations.

2586. Kuwaki, Seiichi. 1926. Tamari koji seizo-jo narabini kanso-jo kaizen [Improvements in the production and drying of tamari koji]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 4(1):53-56. Aug. [Jap]
Address: Osaka Jozo Gakkai, Riji, Japan.

2587. Morse, W.J. 1926. The distribution of soybeans in the United States. *Proceedings of the American Soybean Association* 1:132-37. Seventh annual field meeting. Held 9-12 Aug. in Mississippi.
• ***Summary:*** "The soybean, according to our earliest records, was first grown in the United States in 1804 and until about 1880 was considered chiefly as a curious plant from the Orient. Since about 1880, when the soybean was first looked upon as having agricultural possibilities, the crop has greatly increased in acreage, production and utilization.

"Available statistics show that about 500,000 acres of soybeans were grown in 1917 and more than 2,500,000 acres in 1924. The production of seed increased from about 3,000,000 bushels in 1917 to more than 9,500,000 bushels in 1924. The statistics for 1924 also show that about 1,200,000 acres were grown for hay, about 1,000,000 acres for pasturage and silage, and more than 500,000 acres for seed.

"What has been the cause of this marked increase in acreage and utilization of the soybean crop? The development of varieties, adapted to a wide range of conditions and uses, undoubtedly, has been one of the most important factors. The number of varieties has been increased extensively in the past fifteen years. Soybeans vary widely in their adaptation to climate and soil. Some varieties are especially suitable for fertile land, others for less productive land; some for a seed crop, others for forage; some for planting with corn for pasturage or silage, others for planting with sorghum or Sudan grass. One may, however, find a few varieties or even a single variety adapted to the climate of a certain section, which will fill all of the local requirements of the crop.

"Other factors, such as improved methods and greater use of inoculation, improved and more economical methods of planting, culture and harvest, and successful results in extensive feeding trials by experiment stations, without doubt, have played no small part in extending the popularity of the soybean. A careful study of the history of the development of the soybean in the United States shows, however, very clearly that increased acreage and utilization of the crop has followed increased development of varieties.

"At this point–for it fits well into a logical discussion of the adaptability and distribution of the soybean in our country–I wish to pay a brief tribute to a man, who, more than two decades ago, very frequently prophesied that the soybean would, in the not distant future, be one of our major farm crops, especially in the eastern half of the country. I refer to Dr. C.V. Piper of the Office of Forage Crops of the United States Department of Agriculture, who passed away last February. Dr. Piper was responsible for the many hundreds of introductions received from the soybean regions of the Orient. Not only was Dr. Piper interested in the development of new varieties, and he held this of the greatest importance, but he also urged a greater utilization of the soybean, as an oil crop, for human food in various forms, and a more general use for pasturage and forage purposes. We, of the Association, owe much to Dr. Piper, and I know of no greater tribute to the man than to carry on his work and fulfill his prophesy."

"The culture of the soybean is confined at present, almost entirely, to the eastern half of the country. The states, however, bordering the west bank of the Mississippi River are increasing their soybean acreage. The distribution and adaptability of the soybean, perhaps, will be more clearly understood if we draw a line from Canada through the center of North Dakota, South Dakota, Iowa, Kansas, and Oklahoma, which is about the 99th meridian west. Then from the Atlantic Ocean at the northern border of North Carolina let us extend a line west and along the northern borders of Tennessee, Arkansas, Oklahoma, New Mexico, Arizona, and take in the southern third of California. We now have the country divided into four sections, the northeast, southeast, northwest and southwest." There follows a discussion of each of these four sections. Concerning the southwest section:

"In the irrigated districts of California, especially the orange section and the river valleys of Arizona, the soybean has proved a valuable summer cover crop. In California, the Virginia variety has given best results while in Arizona, the Otootan and Laredo are used mainly. Variety tests in eastern New Mexico show that the soybean has possibilities for

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forage and seed.

"In California and Arizona the soybean seldom develops seed normally, although an excellent growth of forage is produced. This abnormal development of seed is undoubtedly due to the prevalence of extremely hot weather during the period when the seed is forming."

The greatest increase in soybean acreage and utilization has been in the northeastern section of the United States, especially in the Corn Belt area. "In this region the soybean is used mainly for pasturage, hay and ensilage, although considerable quantities of seed have been crushed during the past two or three years for oil and oil meal in the Corn Belt states. Food companies in this section have for several years manufactured special soybean flour products. Such concerns have increased to a considerable extent during the last few years. Soybeans are now being made into breakfast foods, soy flour, soy sauce, bean curd, and special flour preparations for various purposes. Two of the most recent developments are the manufacture of soy sauce and bean curd. Soy sauce, especially, has found a very favorable and extensive market throughout the United States." Address: USDA, Washington, DC.

2588. Nishiwaki, Yasukichi. 1926. "Tapioka" oyobi tômorokoshi o komugi daiyo genryô toshite shiyô suru shôyu jôzô shiken hôkoku [Shoyu brewing using tapioca and corn as substitutes for wheat]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 4(1):34-37. Aug. [Jap]
Address: Osaka Jozo Gakkai, Kaicho, Japan.

2589. Zlatarov, Asen. 1926. Die Soja und ihre Verwertung als Nahrungsmittel [The soybean and its use as food]. *Fortschritte der Landwirtschaft* 1(7):543-47. Sept. 1. [8 ref. Ger]
• ***Summary:*** On this document, the writer's name is written "Prof. Dr. Assen Zlataroff."

In Bulgaria as elsewhere in Europe, people have started to plant lots of soybeans. The soybean can serve as a source of healthy and rich nutrition, but also as a new source of income. There is much recent interest in Hungary and Germany.

Tables show: (1) Thirteen nutritional analyses of soybeans planted in Bulgaria between 1917 and 1922. (2) Nutritional analyses of black beans (non-soy), black peas, white beans, white lentils, Garbanzo beans (Chick-peas / chickpeas / *Kichererbsen*), And soybeans (*Soja*). The soybean is low in purines. (3) Soy oil constants (yellow variety, ether extract), including specific weight, saponification number, Reichert-Meissel number, iodine number, Hennersche number. (4) Nutritional composition of Papuda beans in 4 districts of Bulgaria in 1920 and 1921. (5) Weight of distilled water absorbed by 100 gm (800 beans) of soybeans after seven lengths of time ranging from 15 minutes to 12 hours. (6) Nutritional composition of soymilk (*Sojamilch*). (7) Comparative nutritional composition of various mammalian milks: Human milk, cow's milk, buffalo milk, sheep's milk, goat's milk. (8) Nutritional composition of tofu (*Tevu-fou, Sojakäse*, based on previous analyses by Champion and Lhote, Prinsen, and König {both fresh and dry}). He notes that tofu resembles quark. (9) Nutritional composition of soy casein (*Kaseo-Sojain*).

The value of the soybean as food: In China and Japan the soybean is used in large quantities as food. These foods include soymilk, soya cheese (*Sojakäse*), soya casein (*Sojakasein*), soybean meal, natto, miso, shoyu (*Schoyou*), Tao-you, Indonesian-style soy sauce (*Ketjap*), Vietnamese-style miso (*Tuong*), *Kiju-ize*, soya coffee (*Sojakaffee*), soya salad (*Sojasalat*), etc.

The soybean as a vegetable (green vegetable soybeans).

He then describes briefly how to make various soybean food products (based on Li Yu-ying and Grandvoinnet) including soya flour (*Sojamehl*), soy dumplings (*Sojaklösse*), soymilk (*Sojamilch*, discovered by the Chinese philosopher Whai Nain-Tze), tofu (*Sojamehl*, made by coagulation of soymilk; he calls it *Sojamilchquark, Sojakäse, Tevu-fou* and notes that in China it is called "The meat without bones"). As far as taste is concerned, the writer has tasted tofu and he finds that this fresh cheese tastes very nice and the type of cheese made from it (by Li Yu-ying) such as Roquefort, Gruyere, Holländer, etc. are in no way inferior to the renowned real cheeses. Making tofu could be a new industry, which would be a good source of income for the nations where the soybean thrives and conducive to the nutrition of the people. Fresh tofu has many uses in cookery. With eggs it makes a fine omelet, likewise cheese dumplings and sausages. All these products have a fine taste and are very nutritious. In 1921 Dr. Assen Zlatafoff (a nutritionist) and J. Trifoneff wrote (in Bulgarian) a brochure on the soybean, its cultivation, composition, and food value. Address: Sophia Medizinisch-chemisches Institut, Bulgaria.

2590. *Chinese Economic Bulletin*. 1926. Soy manufacturers in Peking. 9(289):135-37. Sept. 4.
• ***Summary:*** "Soy" is a word of Japanese (rather than Chinese) origin. It refers to a dark brown liquid sauce (soy sauce; known in Chinese as *tsiang-yu* [*pinyin: jiang-you*]), made from a semi-liquid substance known in Chinese as *tsiang* [*jiang*]. Both are used as table condiments in China although the liquid soy sauce is more popular. "To avoid confusion, the word 'sauce' in this article will stand for *tsiang* and 'soy' for *tsiang yu*.

"In Peking there are about 140 soy manufacturers most of whom, however, are grocers doing soy manufacturing on a small scale as a side line. The large manufacturers, who confine their operations exclusively to soy manufacturing number only about a dozen or two, being divided into native and southern groups. The products of the former taste stronger than do those of the latter." Two kinds of sauce

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(*tsiang*) are turned out by Peking soy manufacturers. The 'soy sauce' (*t'ou-tsiang* [*dou-jiang*]) is made from a mixture of wheat and soy bean, whereas 'wheat flour sauce' (mien-tsiang) is made from wheat flour. "Commercially, the former is far more important than the latter, because all the soy consumed in Peking households is made from soy sauce.

"The manufacture of soy or soy sauce requires a long process of fermentation. It begins with the boiling of soy beans." After the beans are cleansed of impurities [foreign matter] they are boiled in a big iron cauldron having a capacity of 4-6 piculs of beans. "After they are thoroughly boiled, they are mixed with wheat flour, the proportion being 100 catties of flour to every 140 catties of beans. he admixture is ground in a crude stone roller mill and cast in wooden molds into rectangular pieces about 8-9 inches long and half an inch thick. These are known as *hwang chih* (literally "yellow child"), and they are then placed in a dark and not well ventilated room and covered with mattings to start the fermentation process. After a week or so the *hwang chih* are dried in the sun for 30-40 days. After they are perfectly dried, the minute fungi growing on the *hwang chih* are removed by brushing and the *hwang chih* are then placed in big earthenware vessels known as *kongs* into which salt is poured; typically 50 catties of salt is dissolved in 200 catties of water for every 100 catties of dried *hwang chih*. After the *hwang chih* are dissolved in an earthenware container, the contents are constantly exposed to the sun. The vessel is covered only on rainy days since rain water tends to spoil the taste. According to the manufacturers, the taste of the sauce or soy depends entirely upon sunning. The longer the contents of the vessel are exposed to the sunshine, the better the taste. To make the sunning thorough in every part of the vessel, the contents are stirred with a wooden spade every morning. The stirring must not be done at a later hour or the sauce would turn sour.

The manufacture of the 'wheat flour sauce' is done by the same process. *Hwang chih* made of wheat flour goes through the same process of fermentation and absorption in the earthenware vessel, the only difference being that a smaller quantity of salt is used. he sauce so made has a sweetish taste. The best seasons for manufacturing sauce are spring, from February to May, and autumn, from September to October, during which time weather conditions are always favorable for the preparation of *hwang chih*. The summer months are too hot and humid for making *hwang chih*. The temperature at which the *hwang chih* will ferment best and other particulars are known only to the expert manufacturers by personal experience. Into these secrets no outsider can pry; they are too jealously guarded.

"The best kind of sauce or soy is made from *hwang chih* prepared in the autumn and made into sauce the next spring." But this approach takes a much loner time for the sauce or soy to become marketable. "The spring crop of *hwang chih* yields much quicker returns and hence leaves the manufacturer a broader margin of profit. For this reason, most of the sauce or soy is made from *hwang chih* of the spring crop.

When the sauce (*tsiang*) has been sunned to a certain degree, generally for several months or longer, it is removed from the earthenware vessel, placed in cotton cloth bags and pressed in a wooden press. The liquid squeezed out is soy (*tsiang-yu*). The process is extremely simple; no other ingredients are needed to complete the manufacture. Generally 350 catties (3.5 piculs) of soy can be obtained from 240 catties of *hwang chih*. High grade soy is made chiefly from old sauce, or sauce made in the previous year. Soy made new sauce (made in the same year) does not taste so good. The soy sold retail by the grocers on the market is generally diluted with water.

As a side line soy manufacturers also prepare pickled vegetables for the market. The vegetables are put into cloth bags and put into the vessel containing the sauce during the process of converting the *hwang chih* into sauce. At a certain time the bas are taken out and the vegetables are ready for the market. The pickling is usually done in wheat flour sauce. The vegetables so prepared include cabbage, mustard, radish, turnip, ginger, cucumber, and egg plant. This branch of business is not so profitable as formerly, owing to the high cost of the vegetables.

Some of the soy manufacturers also make vinegar from *kaoliang*, millet, barley, and other related cereals. Two types of vinegar are made by Peking soy manufacturers.

Most of the big soy manufactures in Peking have a long history. Yung Fu Fang, Pei Hsu Tai, and Liu Pi Chu have been in existence since the Ming Dynasty [1368-1644]. Quite a few others began their business operations in the early Manchu dynasty [1644-1912]. The comparatively new ones are a century or so old. About 40% of the soy manufacturers in Peking are owned by Shantung capitalists, another 30% by Shansi proprietors, while the rest are opened by people from various districts in Chihli province. The first requirement for a soy manufacturing plant is a spacious compound to accommodate the numerous earthenware vessels. A big plant has more than 1,000 such vessels on its premises. This is why most of the plants are located in the less populated in the less populated quarters of the city where rents are cheap.

The earthenware vessels (*kongs*) used by soy manufacturers are of several types. "The *nan kongs*, imported from the southern provinces, are the best. The *tung kongs*, made by Tangshan potters, fetch a lower market price. The *Tzechow kong*, made in Tzechow, Chihli province, is of the cheapest kind. The size of the various types of *kong* is not uniform. A *kong* is generally over three feet high and a little less than three feet (Chinese measure) in diameter. The value of a *kong* increases with age. The oldest *kong* is said to be the most efficient in making sauce or soy.

"A big soy manufacturer employs between 70 and 80 operatives who are occasionally reinforced by extra job ands

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during the busy seasons. In ach soy manufactory there is an expert who directs the whole staff. The pay of this expert is about $160 a year with food. Most of the soy manufactory hands are natives of Tanghsien. They meet once in the spring of every year at certain temples, were they offer sacrifices to their patron saints and hold some socio-religious festivities.

"The soy manufacturers dispose of their products to the local wholesalers wholesale, although they also do retail business themselves. The current wholesale quotations for soy bean sauce (*tsiang*) is from $7 to $8.50 a picul, and for soy (*tsiang-yu*) $6 to $20. The retail prices are from 24 to 28 coppers a catty for soy bean sauce, 48 coppers a catty for wheat flour sauce, and 16 to 64 coppers a catty for soy. Pickled vegetables are sold for 12 to 20 cents a catty. The price of soy has advanced nearly 100 per cent in the past twelve months, and the price of pickled vegetables by 70 per cent in the past five years."

2591. Associated Press (AP). 1926. 'Sukiyaki' appears chop suey's rival. *Hartford Courant* (*Connecticut*). Sept. 27. p. 8.
• ***Summary:*** "Boston–The American public long ago accepted chop suey, chow mein, and even foo young (with various spellings) but sukiyaki has still to make itself generally known."

Boston [Massachusetts] has one Japanese restaurant (opened within the last 3 months, on the South End) compared with more than 20 that serve Chinese dishes. Ingredients in sukiyaki include "squares of yellow bean cake" [tofu] and some "soy bean sauce." Later the hostess brings "toasted crackercakes with a seaweed leaf wrapped about each as a special delicacy."

2592. Kawakami, Tojiro. 1926. Shôyu jôzô genryô toshite mugi tokuni komugi no garasu-shitsu funshitsu-shu no tokusei ni tsuite [On the special glass-type of wheat used as a raw material in shoyu brewing]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 4(2):107-13. Sept. [Jap]
Address: Hiroshima Jozo Shikenjo, Gishi, Japan.

2593. Salazar, Leopoldo G. 1926. The manufacture and chemical control of some soybean products under Los Baños conditions. *Philippine Agriculturist* 15(4):219-31. Sept. [12 ref]
• ***Summary:*** "The Chinese and Japanese manufacture a large variety of food products from the soybean, among which may be mentioned soy sauce or *toyo*, bean curd or *tokua*, soybean milk, flour, salad oils, and lard substitutes.

"Of these products, the sauce and curd are the most important. To the Americans the sauce is known as *soy sauce*, to the Japanese as *shoyu*, to the Chinese as *ch'au yau*, or drawing oil; to the Filipinos as *toyo*. The curd, cake, or cheese is known as *teou-fu* and *tao-hu* in China; *tofu* in Japan; and *tokua* in the Philippines. Soybean cheese is a misnomer as the product is obtained without any ripening process.

"The objects of this work were: (a) to determine the possibility of preparing toyo [soy sauce] and tokua [tofu] under Los Baños conditions; and (b) to determine the time at which the toyo contains the highest percentage of nitrogen. This work was performed in the laboratory of the Department of Agricultural Chemistry, University of the Philippines, Los Baños, Laguna, from April, 1924, to February, 1925."

A review of the literature shows that in the Philippines, only three prior investigations on this subject have been reported, those of Barrett (1911), Gibbs and Agcaoili (1912), and Gibbs, Agcaoili, and Shilling (1912). A photo shows the hand-turned stone mill and other tools used for making tokua, following the method used by the Chinese in Manila. The residue left after making tofu (okara) is called "sapal," and that left from soy sauce is called "tahuse."

"After 8 weeks of fermentation, the toyo was found to be ready for the first drawing. Analyses showed that the toyo prepared in the laboratory compared favorably in composition, odor, and flavor with the superior grade product of the market."

Note 1. This is the earliest document seen (Feb. 2004) that uses the word "tokua" to refer to tofu.

Note 2. This is the earliest English-language document seen (March 2007) that uses the word "sapal" to refer to okara.

Note 3. This is the earliest English-language document seen (March 2007) that uses the word "tahuse" to refer to the residue left after making soy sauce. Address: College of Agriculture, No. 231, the Philippines.

2594. Kamper's. 1926. Special canned goods sale (Ad). *Atlanta Constitution* (*Georgia*). Nov. 5. p. 2.
• ***Summary:*** In the section "Imported canned foods" we read: "La Choy [Mung] Bean Sprouts–No. 2 cans. Regular 35¢. Special, 3 for 93¢; dozen–$3.72." Address: Atlanta, Georgia (four stores).

2595. *Chinese Economic Bulletin*. 1926. Soy industry in Foochow. 9(301):316-17. Nov. 27.
• ***Summary:*** Soy manufacturers in Foochow [pinyin: Fuzhou], the capital of Fukien [pinyin: Fujian] province, "total about 250, including 100 in the city and suburbs and 150 in the surrounding villages. The leading ones are Kwo Pen-yi (Cc = Chinese characters given), Tang Sen-hsing (Cc), and Tung An (Cc), the first two capitalized at upward of $100,000, and the third a little below $50,000. Mr. Kwo is an experienced soy manufacturer of Yuki (Cc), and Mr. Tang of Kwantow (Cc [pinyin: Guantou]). The former started the Foochow branch manufactory at Shangtuwei (Cc), Nantai (Cc), in 1920, and the latter at Tientangchieh (Cc) in 1925. Tung An is the oldest establishment in Foochow, having been operated at Howyangli (Cc), Nantai, by a Chuanchow (Cc)

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man for about half a century."

"These manufacturers are organized into two guilds: The City Guild (Cc) and the Nantai Guild."

The small manufacturers try to compete with the large manufacturers by offering a better product, but so far they have not been successful.

"Soy is a sauce manufactured from soya beans. The name 'soy' is derived from the Japanese *shoyu*, the Chinese name being *shi yiu* (Cc [for fermented black soybean sauce]) *chiang yiu* (Cc [for soy sauce]). The raw material used, especially by the manufacturers in Kwantow, is the green [soy] bean from Newchwang, sold in Foochow at $10 per 100 catties. The Foochow manufacturers, however, prefer the yellow [soy] beans from Tengchow (Cc), Shantung province, where they are cheaper than the green variety by several hundred cash per hundred catties.

"The method of manufacture is briefly as follows. The beans are first cooked, then mixed with wheat flour and table salt, and put in a slightly closed wooden jar. The contents of the jar are afterward sprinkled with salt solution, and then transferred into a porcelain *kong* [earthenware vessel], in which they are hard pressed. Finally they are heated in the sun: the longer they are exposed to sunlight, the better the taste of the soy produced.

The soy [sauce] produced in Foochow is inferior in quality to the Kwantow product. The general processes of manufacture are practically the same, the only difference being in details, which remain a commercial secret among the manufacturers."

Other reasons for the superiority of Kwantow soy sauce "may be enumerated as follows: (1) Absence of adulterants. Soy [sauce] is generally divided by its color into two kinds, the light color soy and the dark color soy. The former is pure and has a pleasant taste; it is sold at 1,280 cash per catty. The latter is adulterated with molasses, so as to reduce the cost of manufacture; it is therefore much cheaper in price, not exceeding 32 cash per oz.

(2) Longer exposure to the sun. The Foochow manufacturers are less spacious and less sunny than the Kwantow manufactories. The soy in the former is exposed to the sun for eight or nine hours a day, while the soy in the latter is exposed from sunrise to sunset." This partly accounts for the superior quality of the Kwantow soy.

(3) Long period of preservation. Having been prepared, the soy should remain in the sun for a year before being sold. Old soy is better than fresh soy, as old wine is better than new. However, small manufacturers cannot afford to keep their output for such a lengthy period and often sell it after a few months.

"While Tang Sen-hsing and Kwo Pen-yi confine their business to soy, the Tung An also deals in the following: Table salt; chiang [jiang] (Cc) a semi-solid soy, distinguished from *chiang-yiu*, which is a liquid soy; distiller's grain; vinegar; dried bean curd [probably Chinese-style pressed tofu, *doufu-gan*], pickled bean curd [probably fermented tofu]; salt eggs; salt vegetables and melons; prawn oil; samshu; sesame seed oil; salt turnip; &c. Tang Sen-hsing and Kwo Pen-yi are the best soy makers in Foochow, while Tung An produces excellent pickles.

"Soy and pickles in store are kept in porcelain *kongs* or sometimes wooden barrels. Soy to be transported to other cities is packed in glass bottles or bamboo bottles, the former having a capacity between half a catty and two catties, the latter between three catties and ten catties.

"Owing to the increase in the price of salt from $6 to $8 per 10 catties, soy manufacturers in Foochow have raised the price of soy by 16 cash pr catty in May. Prices of other products have also been advanced by the following rates. Dried bean curd, from 8 cash to 10 cash a catty. Pickled bean curd, from 20 cash to 24 cash a catty..."

2596. Ishida, S. 1926. Shôyu-chû no isseibun ni tsuite (Roishin) [On a component of shoyu (Leucine)]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 94. p. 342-45. [Jap]
Address: Jozo Shikensho, Joshu.

2597. Iwasaki, K. 1926. Muon shitsu de kome kôji jikayô shôyu miso seizô-hô [Making rice koji, shoyu, and miso without using warm incubation rooms]. *Dainippon Nokaiho* (*J. of the Agriculture Society of Japan*) No. 549. p. 47-49. [Jap]
Address: He is head of the village. Kagawa-ken Sanpo Gunasa Mura.

2598. *Jozogaku Zasshi* (*J. of Brewing, Osaka*).1926. Zappo 2. Dai 3 kai Osaka Shoyu Hinpyokai [Miscellaneous reports 2: The third competitive shoyu exhibition in Osaka]. 4(4):355. [Jap]

2599. *Jozogaku Zasshi* (*J. of Brewing, Osaka*).1926. Shojo: Seimai, daizu, komugi, mugiyasu, ômugi, seishu, shoyu, miso, tsukemono [State of commerce: Rice, soybeans, wheat, rye, barley, refined sake, shoyu, miso, pickles]. 4(4):360-61. [Jap]

2600. Kinoshita, Asakichi; Takeda, R. 1926. Komugi daiyôhin to shite enbaku shiyô shiken [The use of oats as a substitute for wheat in shoyu manufacture]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 94. p. 152-63. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Joshu.

2601. Kinoshita, Asakichi; Matsumoto, K. 1926. Shôchû kasu riyô shiken [The utilization of shochu cake in shoyu manufacture]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 94. p. 126-33. [Jap]
• ***Summary:*** Shochu is a type of cheap/low-class distilled

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alcoholic beverage, sometimes made from potatoes. Address: Jozo Shikensho. 1. Gishi; 2. Gishi.

2602. Kinoshita, Asakichi; Takada, R. 1926. Shôyu jôzô shiken. I. Seikôji teire dosû hikaku shiken [Brewing test of shoyu. Comparative tests on stirring the koji]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 94. p. 97-108. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Joshu.

2603. Kinoshita, Asakichi; Seko, M. 1926. Shôyu shin jôzô-hô. Baiyô saikin oyobi baiyô kôbo ôyô no ikô [A new shoyu brewing method: Excellent results with the application of cultured bacteria and yeasts]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 21(7):18-27. [Jap]
Address: 1. Jozo Shikensho Gishi; 2. Jozo Shikensho Kenshu-in, Japan.

2604. Kinoshita, Asakichi; Kanamori, Y. 1926. Shôyu-chû no "jiasutaase" ni kansuru kenkyû [Studies on the diastase in shoyu. I.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 21(3):27-41. [Jap]
Address: 1. Jozo Shikensho Gishi; 2. Jozo Shikensho Kenshu-in, Japan.

2605. Kurono, Kanroku; Katsume, E. 1926. Shôyu no kagaku ôyôbi sono ôyô. Shôyu shikiso no kagaku-teki sosei [The chemistry of shoyu and its application. On the chemical composition of shoyu pigments]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 21(1):23-28; 21(2):13-18; 21(3):8-14; 21(4):50-55. [25 in part I ref. Jap]
• ***Summary:*** Note the relatively early use of references in this Japanese journal article. Address: 1. Jozo Shikensho Gishi, Nôgaku Hakase; 2. Jozo Shikensho Kenshu-in, Kôgaku-shi, Japan.

2606. Matsumoto, K. 1926. Shôyu seibun-chû no yuki-san-rui no kenkyû. II. [On the organic acids in shoyu. II]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 94. p. 260-302. [Jap]
Address: Jozo Shikensho, Gishi.

2607. Matsumoto, K.; Kubota, K. 1926. Kôji "jiasutaaze" no saiteki suiso "ion" nôdo to sono kettei-hô [On determining the optimum hydrogen ion concentration for the activity of koji diastase]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 94. p. 237-59. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Kenshuin.

2608. Matsumoto, K.; Chin, K.; Sano, Z. 1926. Shôyu jôzô ni kansuru saikin-rui ni tsuite [On the bacteria in shoyu brewing]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 21(10):28-33; 21(11):23-30; 21(12):27-38. [Jap]
Address: 1. Jozo Shikensho Gishi, Nôgaku Hakase; 2-3. Jozo Shikensho Kenshu-in, Japan.

2609. Matsumoto, K.; Kakegawa, K. 1926. Shôbo ôyô shôyu sokujô-hô ni tsuite [Application of yeast to rapid brewing of shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 21(6):27-32. [Jap]
Address: 1. Jozo Shikensho Gishi, Nôgaku Hakase; 2-3. Jozo Shikensho Shokutaku, Japan.

2610. Nishimura, Torazô. 1926. Shôyu jôzô sôdan (95-96). No. 262-63. Daizu ni taisuru shochi to "fuichin" shûkakuryô [Shoyu fermentation: Treatment of soybeans and yield of phytin]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 21(2):46-48; 21(3):63-65. [Jap]
Address: Moto, Jozo Shikensho Gishi, Japan.

2611. Taira, T. 1926. Shôyu kôki busshitsu no kenkyû [Research on flavoring substances in shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 21(11):31-37. [6 ref. Jap]
Address: Taikei (Taiwan Keizai?) Sotokufu Chuo Kenkyujo, Taiwan.

2612. Tsugano, Akijiro. 1926. Shuzoka wa shoyu-gyo o kengyo subeshi (Suzoka hokenho) [Owners of sake breweries should also be able to also make shoyu (Sake brewers' insurance law)]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 4(4):279-82. [Jap]
• ***Summary:*** Note: On four pages (unnumbered) from the front of this issue are two interesting photos: Top half of page: Many Japanese students from an Osaka technical school, celebrating its anniversary, standing behind a table with a labeled bottle in front of each. Based on the sampling containers in front of each, the students on the left appear to have sake bottles, whereas those on the right seem to have shoyu bottles. Lower left: A pyramid-shaped stack of labeled wooden shoyu kegs, each tied with rice straw ropes. The labels include 11 different brands, including Yamasa.
Address: Nihon Jozo Kogyo Kabushikigaisha Senmu Torishimariyaku Shacho Nogakushi, Japan.

2613. Allen, Paul W. 1926. Industrial fermentations. New York, NY: The Chemical Catalog Co., Inc. 424 p. See p. 123-27. Chap. 14. Soy-Bean Sauce Manufacture. [10 ref]
• ***Summary:*** Chapter 14. Soy-Bean Sauce Manufacturer. The chapter is chiefly a series of quotations from M. Church of the United States Department of Agriculture, on the preparation of soy sauce and the possibilities for the industry in the U.S. Other authorities are cited on the industrial applications of the fungus used in soy sauce. Address: Prof. of Bacteriology, Univ. of Tennessee.

2614. Freshel, Maud Russell Lorraine (Mrs.). 1926. The

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golden rule cook book: Six hundred recipes for meatless dishes. Originated, collected and arranged by M.R.L. Freshel. New ed. New York, NY: Dodd, Mead and Co. 323 p. Illust. Recipe index. 21 cm.

• ***Summary:*** This important, well written, early vegetarian cookbook was first published in 1908 under the title *Six hundred recipes for meatless dishes*. The author's full name was Mrs. Maud Russell (Lorraine) Sharpe; thus her maiden name was Maud R. Lorraine. Born in 1867, she sometimes writes her first name "Emmarel."

This 1926 edition is very similar to the 1908 edition except for four things: (1) There is a new publisher, Dodd, Mead in New York. (2) The copyright page uses the 1910 copyright date, but lists a 4th printing in Feb. 1926. (3) The Preface is titled "Preface to the Fifth Edition." (4) At the end of the Preface we read: "M.R.L.F., New York, Feb., 1926." Address: Providence House, Chestnut Hill, Massachusetts.

2615. Kirtland, Lucian Swift. 1926. Finding the worth while in the Orient. New York, NY: Robert M. McBride & Co. xii + 462 p. See p. 77. Illust. Index. 20 cm.

• ***Summary:*** This is guidebook to Asia–but with the author's favorites clearly expressed. In Chapter 1, "Japan, Land of the Rising Sun," the author is discussing Nara and its many festivals year-round. However, certain dates are of major importance (p. 77). On the nights of February 2 and 3 all three thousand lanterns in the Park are lighted. On the second of these two nights the townspeople go "to the Kasuga-no-Miya shrine for the ceremony known as 'bean scattering,' everyone taking the precaution to be present as he or she becomes safeguarded against harm from evil spirits for a year."

Note: This is the earliest English-language document seen (Sept. 2011) that uses the term "bean scattering" to refer to *mame maki* (in Japan at the lunar New Year).

In the section titled "The Japanese menu," soy sauce is mentioned (p. 23).

Chapter 3 (p. 113-28) is titled "Manchuria, the kingdom of the soya bean." Page 113 states: "Manchuria's three provinces never were part and parcel of the Chinese empire. China 'proper' stops at the Great Wall. When the Manchu dynasty seized the Dragon Throne of China, it retained Manchuria as a private affair. The emperors did not lump their ancestral provinces in the common pool... They sought to keep the Chinese and everybody else out."

2616. Mayerhofer, Ernst; Pirquet von Cesanatico, C. eds. 1926. Lexikon der Ernaehrungskunde [Dictionary of dietetics]. Vienna, Austria: J. Springer. viii + 1205 p. Illust. 25 cm. [Ger]*

• ***Summary:*** Included in the long list are: Akamiso, miso, shiromiso, tofukasu [okara], daizu [soybeans], fu [dried wheat gluten cakes], kingyo-fu, kiri-fu, kiri-mochi [frozen and dried rice cake], ame [malt extract], mirin, aburage [tofu fried in vegetable oil], natto–Bohnenkäese, Tofu–Sojatopfen, Tonyu–Sojamilch [soymilk], azuki [small red beans], kwansen-fu, kinako–Sojabohnenmehl, geröstet, amasake [amazake]–unvergorener Sake, umeboshi, koritofu [frozen and dried tofu], midzuame [soft ame = rice syrup], shoyu–Sojasauce, yuba–eine Bohnenspeise. Note that a number of these terms are Japanese.

Note 1. This is the earliest German-language document seen that mentions amazake, which it calls "amasake."

Note 2. This is the earliest document seen (Aug. 2002) in any language that uses the term *tonyu* (or tônyû or tonyû) to refer to soymilk.

2617. Saito, Akio. 1926. [Chronology of soybeans in Japan, 1900 to 1926, last half of the Meiji period and all of the Taisho period] (Document part). In: Akio Saito. 1985. Daizu Geppo (Soybean Monthly News). Feb. p. 12-14. [Jap]

• ***Summary:*** 1901–Crushing of soybeans starts in Japan. Owada Seisakusho of Tsuruga, Fukui prefecture, Japan, starts making soy oil and soybean cakes using the press method (*assaku-ho*).

1901–Nakahara Kota is issued a patent on his process for making dried-frozen tofu indoors in a freezer (*jinko kôri-dofu*). This makes it possible to produce a good-quality product year round. This year there are 453 makers of dried-frozen tofu in Nagano. Nagano prefecture encouraged production of this product during the Russo-Japanese War as a side home industry.

1901–Soybean production in Japan reaches 525,000 tonnes, topping 500,000 tonnes for the first time.

1905–After Japan's victory in the Russo-Japanese War, it is said that maybe, because of the victorious mood, tofu makers start to blow a horn while selling tofu.

1905–At about this time, soybean cake (*daizu kasu*) passes fish cake to become the main fertilizer for crops in Japan.

1905–Shin Sawamura (lived 1865-1931) discovers the main natto bacteria and names it *Bacillus natto* Sawamura.

1906–Neda Tadamasa of Akita prefecture develops a new type of soybean. Named the Akita, it is a cross between Shirosaya and Itoi's Ani.

1907 March–Nisshin Mamekasu is founded (initial capitalization is 3,000,000 yen). The next year its soybean crushing plant in Dairen, Manchuria, starts to operate. In 1918 the company merged with Matsushita Mamekasu to become Nisshin Seiyu K.K.

1908–At about this time the retail price of tofu in Tokyo is 1 *sen*. The average cake of tofu weighs over 100 monme (1 monme = 3.7656 gm or 0.1325 oz), so over 376 gm. In 1982 the average price of tofu is 100 yen per cake and the average cake weighs 300 gm.

1914–The Mogi Saheiji family in Noda starts to sell shoyu in 1-sho bottles (1 *sho* = 1.805 liters or 3.81 pints). Before this time a ceramic sake bottle (*tokkuri*) was used.

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1914–Yamada Hikozaburo of Nagano prefecture succeeds in making dried-frozen tofu (*Koya-dofu*) for the first time in the *Shimi-dofu* area.

1915–From this year until 1919, the soybean oil industry in Japan is in a period of prosperity. In 1914 Japan produces 7,105 tonnes of soy oil and 92,325 tonnes of soybean cake. Just 5 years later, in 1919, these figures have risen about 13-fold to 30,658 tonnes of soy oil and 353,288 tonnes of soybean cake. Soybean cake becomes very widely used in Japanese agriculture.

1918–The mayor of Tokyo, Tajiri Inataro, recommends that people eat low-fat soybean cake cooked with rice (*mamekasu meshi*) to protect themselves from the rapidly increasing price of rice; he himself eats this dish every day. Hiroetsu? Takako (a woman educator, lived 1867-1949) cooked soybean cake and rice (*mamekasu gohan*). Dr. Saei Tadasuke (1876-1959, a nutritionist) introduces an inexpensive meal (it costs 3 *sen* 5 *rin* for 5 people) using tofu and fish bones for breakfast and dinner at the Inexpensive But Nutritional Cookery Seminar (*Eiyo Anka Ryori Koshukai*). This year 30-50% of Japanese don't have enough to eat. The demand for beef tendons and okara increases. The price of high-quality meat increases faster than the price of tofu.

1919–Artificially cultured pure-culture natto starts to be used. Hanzawa Jun of Hokkaido University (1879-1972), using this method, invents a new "Sanitary Natto Container" (*Eisei Natto Yoki*) made of thin slabs of wood (*kyogi*). He also founds the "Natto Container Improvement Association" (*Natto Yoki Kairyo-kai*)

1919–Soybean production in Japan reaches 502,200 tonnes, and soybean imports rise to 168,000 tonnes. Production of soybean oil reaches 8,853,600 gallons or 33,573,000 liters, equal to that of rapeseed oil.

1919–A machine or kit for making tofu or soymilk easily at home (*kateiyo tonyu-ki*) is marketed.

1920–Soybean production in Japan reaches a record 559,000 tonnes.

1920–Tsugano Akisaburo of Tokyo invents a quick method for fermenting shoyu (*shoyu sokujo-ho*). By adding salt water to soybean koji to make moromi, he is able to make shoyu in less than 10 days.

1922 April–The oil production department of Suzuki Shokai [which went bankrupt in 1922] becomes independent and founds Hohnen Oil Co., Ltd. (*Hohnen Seiyu*).

1923 Sept.–The Great Kanto / Tokyo Earthquake (*Kanto Daishinsai*) strikes. 70% of the miso factories in the area are burned down, causing a shortage of miso. But miso makers in other parts of Japan use this opportunity to ship their miso to Tokyo, and the people of Tokyo come to realize the good taste of miso made elsewhere in Japan.

1924–Kodama Shizutoshi? (or Shintaro) invents another quick method for fermenting shoyu (*shoyu sokujo-ho*) using acid or alkali to hydrolyze soybeans or soybean cake to make shoyu.

Note: This is the earliest document seen (April 2001) that mentions shoyu made by acid hydrolysis. Address: Norin Suisansho, Tokei Johobu, Norin Tokeika Kacho Hosa.

2618. Takenobu, Y. 1926. Japan Year Book. Tokyo: The Japan Year Book Office. 626 + 162 p. Index. 23 cm. [360* ref]

• ***Summary:*** The total area of Japan proper is 147,652 square miles (382,861 square kilometers). Japan's population (as of Oct. 1925) was 59,736,704. A large area of Japan is very mountainous, and it is estimated that the cultivated area is about 6 million hectares. According to Prof. Shimizu of Keio University the population density per square kilometer of cultivated area in Japan is much larger than various European countries. Japan 969. Belgium 394. Italy 305. Netherlands 273. England 226. Germany 195. Switzerland 168. France 108. Spain 90.

In chapter 29, Agriculture, the section titled "Beans, potatoes and sweet potatoes" (p. 449) begins with a graph showing the production (in 1,000 koku; 1 koku = 180 liters) of these crops from 1921 to 1923, inclusive. Soybean production decreased from 4,261 koku in 1921 to 3,434 koku in 1923. The text continues: "Among subsidiary farm crops there is perhaps nothing that plays so important a part in the Japanese kitchen as soy beans. The three daily articles of diet for all classes, viz., soy [sauce], miso and tofu are manufactured with this bean either in part or wholly. The 'tofu' (bean curd) is one of the most popular articles of diet, being cheap and highly nutritious; the 'miso' makes Japanese soup and is used in various other ways. The 'soy' is indispensable in Japanese cooking. Then for extracting oils, as manure, and food for horses beans are equally important. The supply being insufficient, a large quantity comes in from Manchuria and Korea. In Japan, Hokkaido is the principal centre of the production. Red beans [azuki], also very extensively produced in the northern island, are used for making confectionery."

In the section on "Breweries" (p. 512+) the subsection titled "Soy" [meaning shoyu or soy sauce] (p. 514) states: "For soy the prefecture of Chiba, which is contiguous to Tokyo municipality, heads all other places on the list as to output. Parched wheat mixed with salt and beans is a principal ingredient. The process is still far from scientific, requiring about 12 months before the liquid is ready for sale. It is also costly, as it does not much admit labor-saving appliances. To obviate these disadvantages have been tried several patented processes, but most of them have failed. In 1917 the leading soy manufactures of Chiba-ken combined and formed the Noda Soy Co., capital ¥7,000,000 p.u. with capacity of about 250,000 'koku' i.e. about 60 per cent. of the total output of the Prefecture."

A table (p. 514) shows production of sake, beer, and soy from 1919 to 1922 (year ending in March). Production of soy

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(in 1,000 koku) grew from 2,940 in 1919 to 3,268 in 1922. Address: Prof. at the Waseda Univ. and late of the "Japan Times".

2619. Tetsudo Shounyukyoku. 1926. Shio satô shôyu miso ni kansuru chôsa [Survey concerning salt, sugar, shoyu, and miso]. Tokyo: Tetsudo Shoun'yu Kyoku. 1 vol. 23 cm. Series: Juyo Kamotsu Jokyo, no. 9. [Jap]*
• ***Summary:*** This is a Japanese government publication. Address: Japan.

2620. Thom, Charles; Church, Margaret B. 1926. The Aspergilli. 1st ed. Baltimore, Maryland: Williams & Wilkins Co. ix + 272 p. See p. 64, 198-207. [250* ref]
• ***Summary:*** In this work, with its good bibliography, the authors "sought to bring together all of this taxonomic literature, as published before that date, and to present a critical opinion as to the proper relationship of the species described, whether retained in the genus or placed elsewhere. Some 350 names were thus accounted for, but the actual number of species accepted as known in culture or probably determinable from existing literature was given as 69 (p. 252). These were more or less arbitrarily considered in 11 groups."

Chapter 6 titled, "Enzymic and fermentative activities of Aspergilli and their industrial significance" (p. 58-75) includes sections on koji (incl. Takamine, Taka diastase), diastase, protease, soy fermentation (incl. soy sauce), and miso (with 7 references). Address: Microbiological Lab., Bureau of Chemistry, USDA.

2621. Togano, Meijiro. 1926. Saishin shôyu miso jôzô-hô [Principles of modern shoyu and miso brewing]. Tokyo: Jôzô Hyôron-sha. 1052 p. [Jap]*

2622. Horvath, A.A. 1927. The soybean as human food. *Chinese Economic Journal* 1(2):175-92. Feb. [25 footnotes. Eng]
• ***Summary:*** Contents: Soybean cake, soybean meal, and soybean flour for food: Soybean press cake, soybean extraction meal, soybean flour (Berczeller, *Soyama, Aguma, Ehrhorn*), *Sojawurze* (*Suppenwurze*, Maggi cubes), digestibility of soybean flour, value for infants, some medical aspects of the use of soybean flour, soybean flour in diabetes (incl. Sarton).

Concerning soybean extraction meal (p. 177-79): This meal is shipped in bags and traces of benzine are easily removed. The process used at the Suzuki extraction plant in Dairen (the only extraction plant in Manchuria) is described; the solvent is benzine. "A new extraction plant (at the Borodin-Takata Alcohol Factory) is now under construction at Imienpo, in North Manchuria. By the new process, beans are first pulverized, then operated upon with alcohol, for the extraction of the oil content... The owner claims that 'there is no foreign taste left which would make the oil or the bean cakes unsuitable for human food.'" Analyses conducted at the S.M.R. Co. Central Laboratory, Dairen, show that this "bean meal" contains: water 7.90%, protein 57.04%, oil 3.41%, carbohydrates 16.92%, coarse fibre 8.63%, and ash 6.69%.

"The solvent method of extraction, involving the use of benzine or gasoline, is used by many of the large oil mills in European countries, especially England." Mills in the USA do not yet use the solvent method; they use traditional hydraulic and expeller processes. "The new process used by the Hansa Mill at Hamburg (Germany) called the Bollmann process, is so economical that the profits of bean milling can be enormously increased. By this process the beans are first pressed and then extracted. The extracted meal is utilized for the manufacture of a highly valuable soybean flour for food (Footnote: But extracted soybean meal (flour) does not contain any fat soluble vitamin, as shown by Hornemann [1925]). The oil is submitted to refining, during which crude lecithin is extracted. It is purified and sold in a form of pure lecithin.

(Footnote: "The soybean contains 1.64 per cent lecithin (an organic phosphorus compound), the price of which in China is about $18.00 (Mex.) per pound. It shows that the value of the lecithin contained in soybeans is greater than the market price of the beans themselves. Extracted soybean meal is therefore deprived of lecithin, which is a highly valuable food constituent, especially for the nervous system. Ordinary beans (navy beans, etc.) contain only 0.81 per cent lecithin)" (p. 178).

Note 2. This is the earliest English-language document seen (March 2001) that contains the term "crude lecithin."

Page 182 states: "Soybean flour is also utilized in the manufacture of breakfast foods and can be used in the preparation of vegetable milk and bean curd."* (Footnote: *"In the United States some very good breakfast foods and an excellent finely powdered soybean milk powder "Soy Lac" is made by J.A. Chard, Soy Products, 263 W. 12th St., New York City, who has been experimenting for some time with soybeans.)" Note 3. This Soy Lac appears to be the first commercial soymilk made in America.

Berczeller (p. 183-84): "A few years ago the Hungarian food physiologist, Prof. L. Berczeller, elaborated a process for manufacturing a soybean flour containing a large percentage of fat. This does not become bitter if kept for over a year, and has a very pleasant taste. The process is patented in nearly all the countries of the world. Its chemical composition is given in the above table and its food value in a previous chapter. This flour contains the expensive fat-soluble vitamin which is deficient in the food of the white race. It is of yellow colour, has a sweet, agreeable nutty taste, and does not produce obesity, notwithstanding the fact that it contains a high percentage of fat. According to Berczeller, the uses of this soybean flour "O" are as follows:

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"1. As roasted flour, with an equal part of wheat flour for soups or vegetables;

"2. For pastry, 10-15 per cent soybean flour is mixed with wheat flour. In this case no eggs or only a few need be added. The soybean flour gives to the dough a beautiful yellow colour;

"3. As an addition to meat, 25-50 per cent of soybean flour can be mixed with chopped meat for meat balls, sausage stuffing, etc.

"4. All sorts of flour dishes can be baked with the addition of soybean flour. The taste of the dishes thus prepared becomes better and the nutritive value higher (besides the economy in butter, eggs and sugar);

"5. The addition of even 5 per cent soybean flour in making wheat bread causes a much longer keeping capacity of the bread in a fresh state, the fat preventing the bread from getting stale;

"6. The soybean flour can be used also on a large scale in the foodstuff industry, and in different ways; e.g., in the manufacture of paste products (as a substitute for eggs), cakes, biscuit products, milk-bread (10-16 per cent soybean flour instead of milk), sausages and pastry products (as a substitute for meat).

"Berczeller's soybean flours can be manufactured with little trouble in rice mills or pea mills, where they are decorticated. Eighty-five per cent of soybean flour can be recovered from soybeans. The residue forms a valuable food for animals. According to Berczeller, the cost of production of soybean flour in a European country is as follows:

"One ton of soybeans: 245 shillings. Ten per cent milling expenses: 25 shillings. Total: 270 shillings. Subtracting the value of the bran: 20 shillings. Cost of 850 kg of soybean flour: 250 shillings. Or one ton costs: 294 shillings.

"According to Berczeller, soybean flour is an ideal concentrated food for soldiers, sailors, tourists, etc., in the form of biscuits, etc., because it furnishes a substitute for animal foodstuffs which spoil easily. Berczeller points out that soybean flour is not a substitute for wheat flour but a natural vegetable complement to wheat flour, and one which can be substituted for expensive animal foodstuffs for lowering the living rates [cost of living] of humanity to a degree that could not be reached either by potatoes, maize, or by intensive farming. Austria and Hungary are planning to start a very intensive utilization of Berczeller's soybean flour. This flour, being cheap and easy to manufacture in native rice mills, may be of great importance to China."

Note 1. This is earliest document seen (May 2010) showing that Dr. A.A. Horvath was aware of the work of Prof. Berczeller, who patented a process for improving the flavor / palatability of soya flour.

Page 185 states, in a discussion of soybean flours: "In Bollmann's process the oil is completely removed from the soybean material and the flour is therefore deprived of both the lecithin and the fat soluble vitamin."

Sojawurze (p. 187-88): "The profit from Ehrhorn's process could be much increased if part of the soybean flour were used for the manufacture of products similar to beef extracts, called in German 'Suppenwurze.' They are able to give to soup the taste and flavour of beef bouillon. They are used extensively in Germany, e.g., the well-known 'Maggi' cubes, and were manufactured in large quantities in pre-War and War time from soybean flour at the Aguma factory under Ehrhorn's supervision."

Reprinted in 1927 as part of an 86-page monograph titled "The Soybean as Human Food" (Peking, China). Address: M.D., Peking Union Medical College, China.

2623. Horvath, A.A. 1927. The soybean as human food. *Chinese Economic Journal* 1(3):298-309, March. [24 footnotes. Eng]

• ***Summary:*** Contents: Soybean milk for food: Introduction. Preparation of soybean milk. Properties (Yu-P'i is Chinese for yuba; Laxa). Market prices. Composition. Nutritive value. New methods in the manufacture of soybean milk (Prof. Laxa in Prague [Czechoslovakia], Li Yu-ying, Soyama). Some dietetical advantages and applications of the soybean milk. Condensed soybean milk and milk powder (Soy Lac soybean milk powder made in America by Chard). Soybean cake, soybean meal and soybean flour as material for soybean milk. Yu p'i and yu ba (yuba; also fu chu).

"In 1905, Li Yu-ying submitted a paper on the subject [of soybean milk] to the 2nd International Milk Congress in Paris, in which he emphasized that the introduction of soybean milk to Western countries 'will be highly beneficial to public health as well as to the budget of the poor.' Also by those who advocate and urge a vegetarian diet, a very strong case can be made for this Oriental substitute" (p. 298).

According to Prof. Laxa: "Soybean milk, supplemented with lactose and inoculated with a culture of yoghurt [yogurt] bacteria, coagulates at 40° C. in 4 hours and gives a curd-like acid mass" (p. 300).

"Market prices. In Peking soybean milk is sold in small bottles in portions of about 200-220 cc. labeled 'Bean milk, a Chinese product, the most nourishing food, made by...' For such a bottle, delivered daily, the big factories of Peking asked in 1925 $1.00 (Mex.) per month. One liter of such milk costs, therefore, about 15 cts. (Mex.)... A fine soybean milk powder, called *Soy Lac*, has recently been prepared in America by Chard" (p. 300-01). Note: This company (Chard) was first referred to by Piper and Morse in 1916 in *USDA Bulletin* No. 439, "The soy bean, with special reference to its utilization for oil, cake, and other products." Soy Lac is mentioned again by Horvath on p. 307.

A table (p. 302) compares the composition of soymilk made in 3 locations (Tsinanfu, China; Peking, China; and Japan) with that of human, cow, and goat milk. Human milk has the lowest protein content (1.25%) and ash content (0.25%); soymilk has about the same protein content as

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cow's milk (3.3%) but an ash content (0.40%) which is higher than that of human milk but lower than that of cow's milk. Footnote: "To supplement the deficiency of the soybean milk in mineral constituents [such as calcium], it is recommended by von Noorden and Salomon to add to it the salt mixture of Pirquet, which consists of: sodium chloride, 0.3 gm.; potassium chloride, 1.1 gms.; calcium glycerophosphate, 1.7 gms.; magnesium lactate, 0.5 gm.; ferrum glycerophosphate, 0.1 gm. This mixture is called *Nemsalz*. If diluted in 1 liter of water it gives the same percentage of salts as in women's milk" (p. 302).

"In Germany the Soyama factory (in Frankfurt) manufactures soybean fresh milk (mostly from soybeans), soybean normal cream, and also condensed bean milk and cream. Soyama bean milk looks like cow's milk, contains the same constituents, even in larger amount and in a state of finer dispersion. Only its taste is different. According to Fuerstenberg, Soyama milk can be qualified as a special, very valuable dietetic nutrient. The high lecithin content of this preparation adds to its value too" (p. 306). A table (p. 306, based on the analyses of Dr. G. Popp of Frankfurt) shows the nutritional composition of 6 types of Soyama milk and cream preparations: Normal milk. Milk for diabetics. Milk for baking purposes. Normal cream. Cream for diabetics. Cream extra rich in fat (especially for diabetics). "According to von Noorden and Salomon, Soyama preparations may be kept as long as almond milk and Paranut milk. Soyama milk looks just like cow's milk. By keeping, cream separates and it must be shaken before using" (p. 306).

"In using Soyama milk and cream preparations, v. Noorden confirms the following statement of Fischer (for vegetable milk in general): '1. In the stomach soybean milk gives a much finer flocculent precipitate than does cow's milk, produced by acid or even rennet. 2. The ingestion of soybean milk results in a feebler (smaller) secretion of gastric juice; the period of secretion is also shorter. 3. The period of stay in the stomach of the finely flocculent precipitate of the soybean milk is shorter than that of the casein-fat coagulum of cow's milk. 4. The peristaltic motion of the stomach is less after the ingestion of soybean milk and more coordinated than in the case of cow's milk, as shown by X-ray investigation'" (p. 307).

"On the basis of these observations soybean milk is recommended by v. Noorden in cases of gastric and duodenal ulcer, states of peritoneal irritation, hypersecretory conditions of the stomach, disturbances of the motility of the stomach, uric acid diatheses, kidney disturbances, conditions with edema where a food poor in sodium chloride is required, Basedow's disease, cholecystitis, cirrhosis of the liver, diabetes, and in cases where a very nutritious diet is required" (p. 307).

"Soybean milk powder will undoubtedly have a successful future in the Orient as well as in European countries and the United States. Its great advantage in comparison with cow's milk powders is its cheapness. Soybean milk powder can be easily stored and transported... It is believed that at present some of the commercial milk powders contain an admixture of soybean milk powder" (p. 307-08).

"*Yu P'i* and *Yu Ba* are the Chinese and Japanese names of the pellicula formed on the surface of soybean milk when the latter is gently heated. Good *Yu Ba* has a bright yellow color when properly dried. The best *Yu Ba* is that obtained after the first heating. In repeating the heating of the remaining soybean milk, pellicules of gradually inferior quality and color are obtained. As much as 30 pellicules can be secured from the same portion of soybean milk. In China, a product called *Fu Chu* is manufactured in a way similar to *Yu Ba* (Footnote: See this journal, Vol. VIII, 1926, p. 179). Recently an improved method for the manufacture of *Yu Ba* was patented in Japan, consisting in the use of an electric fan adjusted over the surface of a kettle containing the soybean milk heated to a temperature of 90°C.

"*Yu Ba* has a great nutritive value, as it contains a high percentage of protein and fat,..."

A table (p. 309) gives the nutritional composition of five types of yuba: Common yuba, Kyoto yuba, Shimada yuba, Peking yuba, and Fu chu.

Note: The values for Fu chu are based on those previously reported by Adolph. Fu chu contains much more water (53.68%) than any of the other four types of yuba; common yuba contains only 21.85% and Peking yuba only 9.15%. So it is either fresh or reconstituted.

"In Japan, Kyoto and Nikko are noted for *Yu Ba*. *Yu Ba* is in much demand in China and Japan and is used in numerous ways as an essential ingredient in many very palatable dishes. Its price is high and therefore yuba is used only by the rich."

Reprinted in 1927 as part of an 86-page monograph titled "The Soybean as Human Food" (Peking, China). Address: M.D., Peking Union Medical College, China.

2624. Horvath, A.A.; Liu, Shin-Hao. 1927. The effect of soy sauce on blood sugar and phosphorus. *Japan Medical World* 7(4):105-08. April 15. [18 ref]

• ***Summary:*** "Introduction: Shoyu, or soy sauce, is a dark-brown, moderately thick liquid, very popular in China and Japan as relish or condiment to increase the flavor and palatability of the diet (Footnote: The now famous Lea and Perrins Worcestershire Sauce is a highly spiced soy sauce). In order [sic, odor] and taste it is not unlike a beef extract of good quality."

"Summary: 1. In rabbits, subcutaneous injections of Taka-Diastase gives no definite results for conclusions, but seems to be capable of affecting the blood sugar in both directions. 2. In men the results of oral administration of soy sauce are varying and at present no definite conclusion concerning the effect of soy sauce on blood sugar and

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phosphorus can be drawn. But in some cases soy sauce seems to be capable of affecting the blood sugar and blood phosphatides." Address: Dep. of Medicine, Peking Union Medical College, Peking, China.

2625. Horvath, A.A. 1927. The soybean as human food. *Chinese Economic Journal* 1(4):415-25. April. [34 footnotes. Eng]

• ***Summary:*** Contents: Soybean curd (tofu) for food: Preparation and types ("The Chinese classical name for *tofu* is *li chi*, probably meaning 'the morning prayer'"), historical, present state (of tofu in China), chemical composition, digestibility, utilization (incl. frozen tofu and fried tofu).

Fermented soybean products for food. Soy sauce: Kibiki and sobiki tamari, composition of various soy sauces. Natto. Miso. Conclusion. Bibliography.

Tofu–Historical (p. 416): "The manufacture of soybean curd (*tofu*) was started in China in 164 B.C., during the reign of the Emperor Han Wen, by a man named Liu An, the duke of Hwai Nan. Liu An was a great friend of the Buddhist monks, and it seems quite probable that he made this bean curd to provide a change or delicacy to break the monotony of the monastic ration (Adolph). *Tofu* was introduced into Japan from Korea for the first time during the Toyotomi government, and Buddhist priests and some other people used it for their daily food among others before it was generally used in Japan.

Tofu–Utilization (p. 418-19): "Both the composition and the digestibility of *tofu*, therefore, prove it to be a very nutritious food material. In the Orient *tofu* forms a very popular and almost indispensable dietary article for the Buddhist priests, as well as the strict adherents to Buddhism, who eat no animal food [i.e., are vegans]. A common saying in some parts of China terms 'bean milk the poor man's milk, and bean curd the poor man's meat.' *Tofu* is also called 'the meat without the bones.'

Note: This is the earliest English-language document seen (Dec. 2010) that contains the phrase "the meat without the bones." Note that it refers to tofu and not to soybeans.

In Indo-China the daily consumption of *tofu* by an adult is about 3/4 of a pound. *Tofu* in its various forms is also used very extensively by all classes of Japanese. In the interior of the country where fish cannot be easily obtained, it is a most important source of protein.

"In the Orient *tofu* is eaten in a fresh condition simply with a little *shoyu*, though it is also frequently cooked in soup. Fried *tofu* is also a very popular article of food. Rape-seed oil, sesame oil or soybean oil are generally used in frying.

"*Tofu* may also be prepared for preservation and transportation. For this purpose fresh *tofu* is cut into smaller pieces and exposed to severe cold weather, to remove the water by freezing, and is then dried in an oven. As thus prepared it can be preserved for several years. When the *tofu* is frozen the water collects in fine needles of ice distributed throughout the mass. When the ice melts and the water runs out, it leaves the *tofu* porous and it may be easily dried. If it is not frozen, it is difficult to dry and the resulting material is dense and horn-like. The *tofu* also cooks very well if cooked in diluted soy sauce and smoked in the same manner as meat. The resulting product forms in the Orient the basis for the manufacture of various 'artificial meat' preparations.*" Footnote: * "In Germany, the Soyama factory prepared during the Great War [World War I] a meat supplement from soybeans. It was cheaper than beef, contained less carbohydrates and had a nutritive value of about 1500 Calories in 1 kilo."

"In Peking, at the Kai Cheng Bean Products Company, various preparations manufactured from tofu may be purchased, such as different kinds of soybean meat, soybean sausages, etc. The company has established a restaurant in Peking (at 86 Morrison Street, the name is written in Chinese characters) where one can get a Chinese dinner of numerous dishes prepared mostly from soybean products (chicken meat, pork, ham and beef, manufactured from *tofu*). Also discusses Dr. Yamei Kin.

A note at the end of this April issue states: "A reprint of Dr. Horvath's paper in booklet form may be obtained from the Bureau of Economic Information. Price $1, Peking Currency.–Ed." Thus, these six articles were reprinted in 1927 as part of an 86-page monograph titled "The Soybean as Human Food" (Peking, China). Address: M.D., Peking Union Medical College, China.

2626. *Wall Street Journal*.1927. Large increase noted in soy-bean planting: Acreage of 500,000 in 1917 has grown to 2,600,000, principally in the corn belt states. May 26. p. 15.

• ***Summary:*** "Largely increased acreage and production of soybeans in the United States in the last decade indicate that the crop is destined to become of great economic importance." Of the more than 2,600,000 soybean acres last year, about 520,000 acres [20%] were for seed production. Total soybean production last year was 6,517,000 bushels. "No other crop has advanced so rapidly from a position of minor to major importance."

The most dramatic increases in recent years have been in the corn belt states and in a few southern states, according to the United States Department of Agriculture. Illinois, the leading state in soybean acreage, with more than 700,000 acres, is followed by Missouri, North Carolina, Indiana, and Tennessee.

In the future, soybeans will be used increasingly for the production of oil and meal. Soybean oil can be used like almost all other vegetable oils. Oil mills in the major production centers "now crush large quantities of domestic beans, and find ready markets for oil and meal."

Companies making soybean food products have recently increased greatly; the beans can be processed

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to make breakfast foods, crackers, soy sauce, bean curd, wafers, soy flour, and special flour preparations. Soy sauce is now widely sold in the USA. Soybean oil is increasingly used to make soaps, paints, varnishes, lubricating oils, linoleum, waterproof goods, printing ink, and solid oils [by hydrogenation]. Oil cake, which remains after the oil is extracted from the beans, is a valuable livestock feed.

The discovery that soybeans can be efficiently harvested using a "combined harvester and thresher" has given addition impetus to soybean production. Its value in crop rotations insures the soybean an increasing role in American agriculture.

2627. Horvath, A.A. 1927. The soybean as human food. Peking and Shanghai, China: Chinese Government Bureau of Economic Information. Booklet Series No. 3. 86 p. May. Reprinted from Chinese Economic Journal, Sept. and Nov. 1926, and Jan. to April 1927. No index. 21 cm. [38 ref]
• ***Summary:*** A very original and important book. Contents: Preface by Macey F. Deming, Tappan New York, from an address at a meeting of the National Soybean Growers', held at Washington, DC, Sept. 1925. Introduction. 1. General ingredients of the various Manchurian beans. 2. Composition of some Japanese soybeans and of the common American varieties. 3. Value of the soybean as food. 4. Soybean oil for food. 5. Refined soybean oil: As substitute for salad or frying oil, as substitute for hardened oil and lard (hydrogenation), in oleomargarine and vegetable butters. 6. Whole soybean as food: Immature or green soybeans, mature or dry soybeans, the digestibility of the boiled soybean seeds, boiled soybeans as a food of predominant importance in China, soybean coffee, soybean chocolate, soybean sprouts.

7. Soybean cake, soybean meal and soybean flour for food: Soybean press cake, soybean extraction meal, soybean flour (Berczeller, Soyama, Aguma, lecithin, Ehrhorn), Sojawurze (Suppenwurze, Maggi cubes), digestibility of soybean flour, value for infants (p. 53, based on the research of Dr. Ruhrah in the USA), some medical aspects of the use of soybean flour, soybean flour in diabetes. 8. Soybean milk for food: Introduction, preparation of soybean milk, properties (incl. inoculation with a culture of yoghurt [yogurt] bacteria to give a curd-like acid mass), market prices, composition, nutritive value, new methods in the manufacture of soybean milk (Prof. Laxa in Prague [Czechoslovakia], Li Yu-ying, Soyama), some dietetical advantages and applications of the soybean milk, condensed soybean milk and milk powder (Soy Lac soybean milk powder made in America by Chard), soybean cake, soybean meal and soybean flour as material for soybean milk, yu p'i and yu ba (yuba; also fu chu).

9. Soybean curd (tofu) for food: Preparation and types (classical name is *li chi*), historical, present state (of tofu in China), chemical composition, digestibility, utilization. 10. Fermented soybean products for food. Soy sauce: Kibiki and sobiki tamari, composition of various soy sauces. Natto. Miso. Conclusion. Bibliography.

On page 9 we read: "An industry which promises to be of importance in a further utilization of the soy bean is the manufacture of 'vegetable milk.' At the present time a factory in New York State is being equipped for this purpose." Address: Peking Union Medical College, China.

2628. Kurono, Kanroku; Katsune, Ei. 1927. Shôyu no shikiso no kagaku-teki sosei [Chemical composition of coloring matter of shoyu]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 3(5):594-613. May. [25 ref. Jap]
• ***Summary:*** Includes a discussion of Soyamelanin acids (*Soyamelaninsaeure*). Address: Okura-sho Jôzô Shiken-jô.

2629. Macy's. 1927. Macy's groceries (Ad). *New York Times*. June 12. p. 26.
• ***Summary:*** "Maggi seasoning: Our own imported from Switzerland. A product that greatly improves the flavor of gravies, soups, sauces, meat, and vegetable dishes. 30 ounce bottle $3.49; 13½ ounce bottle, $2.39; 6 3/4 ounce bottle, $1.39; 3¼ ounce bottle, 66¢; 1 3/4 ounce bottle 44¢."

Note: Several earlier documents suggest that miso was used as an ingredient.

2630. Davis Company. 1927. Factory disposal sale (Ad). *Chicago Daily Tribune*. July 5. p. 11.
• ***Summary:*** "New merchandise from 2,133 factories priced as low as 50¢ on the dollar." "Specials from our food shop" includes: "La Choy Chow Mein Noodles, No. 2 cans, each, 22¢." Address: Detroit, Michigan.

2631. Gallagher, Patrick. 1927. Deadly blow held aimed at American industries in China: Quick action is indicated to safeguard huge United States tobacco trade. Increase in impost tariff is announced. *Washington Post*. July 17. p. 4.
• ***Summary:*** "Chinese are rapidly overtaking Americans as cigarette consumers." Most of China's imports of cigarettes and leaf tobacco are from America. The United States how has on the scene two officials thoroughly capable of dealing with this American trade crisis. One is Julean Arnold, doyen of American envoys of commerce and United States commercial attache in China.

"Meanwhile the practical Japanese have resumed physical possession in Shantung. One reason is Shantung's salt deposits. Japan needs that salt for her Sakhalin fish industries and her Manchuria soya industries."

2632. Gonzalez, B.M. 1927. Education and agricultural promotion in Japan. IV. Promotion of agriculture. *Philippine Agriculturist* 16(2):67-71. July. [1 ref. Eng]
• ***Summary:*** Contents: Introduction. Intensification of culture. Land reclamation. Land adjustment. Price regulation.

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Rice conservation. Agricultural experiment stations.

The Central Experiment Station was first organized in 1890 as an experimental farm of the Department of Agriculture. Address: Delegate from the Univ. of the Philippines and the Government of the Philippine Islands to the Third Pan-Pacific Science Congress.

2633. Nagaki, Kyosaburo. 1927. Shôyu no kabi ni tsuite [On the mold of shoyu]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 4(12):1048-51. [Jap]
Address: Okayama-ken Shoyu Jozo Dogyo Kumiai, Gishi, Japan.

2634. *USDA Bureau of Animal Industry, Service and Regulatory Announcements.* 1927. United States Department of Agriculture Service and regulatory announcements. July. p. 41-42. For June 1927.
• ***Summary:*** The first section, titled "Changes in directory: Meat inspection granted" includes: "322. Mandarin Sauce Co. (Inc.), 750 Ceres Ave., Los Angeles, California."

Note: This company may well make soy sauce, but we cannot be certain.

2635. Morse, W.J. 1927. The present outlook of the soybean industry in the United States. *Proceedings of the American Soybean Association* 1:167-71. Eighth annual field meeting. Held 9-12 Aug. in North Carolina.
• ***Summary:*** "In 1907, the soybean was considered but a minor crop in America, less than 50,000 acres being devoted to its culture. North Carolina had the largest acreage at that time, and produced at least 90 per cent of the seed, possibly more."

Note: This is the earliest document seen (May 2008) that gives statistics for soybean production in the USA before 1909. It is also the earliest document seen (May 2008) that mentions the number "50,000 acres" in connection with the year 1907–statistics that were repeated by many subsequent publications. Yet we have been unable to find Morse's source for these earliest baseline statistics. He may have somehow derived the figures from those in: U.S. Department of Commerce, Bureau of the Census. 1913. Thirteenth census of the United States taken in the year 1910. Volume V. Agriculture, 1909 and 1910.

"Not more than six varieties were being grown [in America]. The most important of these were the Mammoth Yellow, Ito San, Ogemaw, and Medium Green, varieties limited as to soil and climatic conditions, and also as to purpose. At this time, it seemed unlikely, to all except a few soybean enthusiasts or 'soybean cranks' as they were then called, that the soybean would ever amount to much more than a minor or emergency crop. Several experiment stations had conducted tests with the crop as pasture, hay and silage, and with the seed as a concentrated feed... One soybean enthusiast, the late Dr. C.V. Piper, then Chief of the Office of Forage Crops, United States Department of Agriculture, had a remarkably clear vision of the great potential value of the soybean as a major crop in American agriculture. After studying the soybean in the Orient, it seemed to Dr. Piper that more and better varieties were essential to meet the widely diverse conditions found in the United States... Through the Office of Foreign Plants, therefore, numerous introductions were made from the soybean regions of China, Manchuria, Korea, and Japan."

"The soybean undoubtedly will be utilized primarily for forage purposes, and by forage purposes is meant as hay, pasture, ensilage, and soilage."

"To me, the production of soybean seed for oil and oil mill appears to be one of the bright spots in the future of the soybean which will firmly establish it as a major crop. Increasing imports of soybeans, soybean oil, and soybean cake from China and Japan, in spite of a tariff on the beans and oil, indicate a ready market for these products in the United States. Soybean oil is a strong competitor of other vegetable oils and is used extensively in the manufacture of butter and lard substitutes, paints, enamels, waterproof goods, rubber substitutes, linoleum, and edible oils; and constantly new uses are being found for this valuable oil."

"Soybean seed is employed for various other purposes and its uses, no doubt, will further increase. There are established in the United States several factories for the manufacture of soy sauce, which in previous years was imported in large quantities from China and Japan." Address: USDA, Washington, DC.

2636. *New York Times.* 1927. Weird food for gourmets: Paris scientists test with relish the new gastronomic discoveries of the year. Sept. 18. p. SM18.
• ***Summary:*** Those who enjoy dining at "foreign restaurants and tasting strange dishes would have relished the opportunity of attending the dinner that the Société Nationale d'Acclimatation [Society for Acclimatization] recently offered to its members in Paris." Some of the dishes were of exotic origin and all were extremely rare.

Dr. Gauducheau has developed a recipe for roasted chicken, called "inter-sauced" chicken, in which the sauce is injected into the veins of the chicken after the blood has been removed. He gets the "best results from sho-yu [shoyu], the juice of the Soja bean, and from nuoc-mam, the juice of salted fish prepared by the Annamites" [from today's central Vietnam].

2637. *Toronto Daily Star (Canada).* 1927. Odd queries answered. Oct. 6. p. 33.
• ***Summary:*** "Q. How is plain chop suey made?

"A. Use 8 pork chops, 3 stalks celery, 2 cups of mushrooms and 2 large onions." Plus other ingredients. Chop, blend and fry "until brown, then add the mushrooms, onions and celery, 1 tablespoon of Worcestershire sauce,

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3 of bean sauce [soy sauce] and 1 cup of wheat sprouts, if desired." Stirring constantly, cook until brown and thick.

2638. Fukai, Tôshi. 1927. Shôyu no shikiso no hishoku teiryô-hô ni tsuite [Comparative determination of shoyu pigment. Biological formation chemical synthesis]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 3(10):1206-14. Oct. [Jap]
• ***Summary:*** Discusses: Arabinose, melanin, raffinose, soyamelanin, soyamelanin saeure, tyrosin, tyrosinase, xylose, Zygosaccharomyces soya. Address: Jôzô Shiken-jô.

2639. Kurono, Kanroku; Fukai, F.; Kanno, S. 1927. Shôyu shikiso no seiri-teki seiin ni tsuite [Biological origin of shoyu pigment]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 3(10):1193-1205. Oct. [11 ref. Jap]

2640. Bois, Désiré. 1927-1937. Les plantes alimentaires chez tous les peuples et à travers les âges. Histoire, utilisation, culture. 4 vols. [The food plants of all people across the ages. History, utilization, culture. 4 vols.]. Paris: Paul Lechevalier. See vol. 1, p. 119-30. Vol. 3, p. 153-55 (shoyu). (Encyclopedie Biologique, vol. I, III, VII, XVII. Fourth edition of Le Potager d'un Curieux by Paillieux and Bois). Illust. Index + Index of Illust. 25 cm. [12 ref. Fre]
• ***Summary:*** Vol. I. Phanérogames légumières. The section on the soybean (*le Soya*) (p. 120-130), discusses the history of the plant in various countries, the oil and its uses, the preparation of soybean cheese and soy sauce, the nutritive value of the soybean, the place of the soybean in the culture of various countries including the United States, yields of various varieties, and use as a forage crop.

At its annual lunch on 15 May 1911, following its tradition of introducing new products from little-known plants, the Society for Acclimatization (in France) served samples of various soyfoods (*plusieurs préparations à base de Soya*) prepared by Mr. Li Yu-Ying, technical director of a factory established on the outskirts of Paris for the preparation of various products from this legume: vegetarian ham (*jambon végétal*), soy cheese (*fromage de Soya*), soy preserves (*confitures de Soya*), soy bread (*pain de Soya*), etc. (p. 126).

Vol. III. Plantes à épices, à aromates, à condiments. The section on shoyu (p. 153-155) describes soy sauce and its preparation. Note: Désiré Bois lived 1856-1946. Address: Prof., France.

2641. **Product Name:** [HVP made from hydrolyzed soybean meal. Used in Maggi seasoning cubes].
Foreign Name: Sojawurze.
Manufacturer's Name: Ehrhorn Co.
Manufacturer's Address: 1 Bergstrasse, 36, Harburg on the Elbe, Germany.
Date of Introduction: 1927.
New Product–Documentation: Horvath. 1927. The Soybean as Human Food. p. 42-53. Extracts similar to beef extracts are use to season soups. "They are used extensively in Germany, e.g. the well-known 'Maggi' cubes, and were manufactured in large quantities in pre-War and War time from soybean flour at the Aguma factory under Ehrhorn's supervision. Ehrhorn claims that his new patent soybean flour is very suitable for the manufacture of such 'Suppenwurze.' He calls the new product 'Sojawurze.' Its appearance and taste is very similar to a fluid meat-bouillon extract, but may also be easily obtained in a dry state. The manufacturing process takes only 10 hours. The bean flour is hydrolyzed in a chemical way. A hundred kilo of Ehrhorn's flour gives 200 kilo of such 'Wurze,' specific gravity 1.25. According to Ehrhorn, the market price for such 'Suppenwurze' in Europe is very high in comparison with the cost of its production from soybean flour."

2642. Fukai, Tôshi. 1927. Shôyu no kagaku ôyôbi sono ôyô. Shôyu shikiso no hishoku teiryô-hô ni tsuite [The chemistry of shoyu and its application. I. Comparative determination of shoyu pigment. II. Physiological origin of shoyu color pigment. III. Chemical biosynthesis of shoyu oil pigment]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 22(7):11-20; 22(8):12-25; 22(9):9-19. [Jap]
Address: Jozo Shikensho Gishu, Nôgaku-shi, Japan.

2643. Kuriyama, M. 1927. [Antimold substance for shoyu]. *Kyushu Kaigaku Kogyo-iho* 2:129-. [Jap]*

2644. Kurono, Kanroku; Kinoshita, A.; Fukai, T.; Tateno, M. 1927. "Pentoosu" tenka shiken [The addition of pentose to shoyu moromi (mash)]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 96. p. 120. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Gishi; 3. Gishu; 4. Joshu.

2645. Kurono, K.; Katsume, E. 1927. Shôyu shikiso no kagaku-teki sosei [Chemical composition of the coloring matter of shoyu (Soja melanin)]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 95. p. 1-30. [25 ref. Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Kenshuin.

2646. Matsumoto, K.; Kakegawa, I.; Takada, R. 1927. IV. Funmatsu nyûsan-kin ôyô sokujô shiken. V. Shôbo ôyô onjo shiken. VI. Kôryan to oomugi to no hikaku shiken [IV. The application of powdered lactic acid bacteria for making quick shoyu. V. The use of shoyu yeasts in heated shoyu fermentation. VI. Comparison of kaoliang and barley as raw materials for shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 96. p. 121-52. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Shokutaku; 3. Joshu.

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2647. Matsumoto, K.; Chin, K.; Sano, Z. 1927. Shôyu jôzô ni kansuru saikin-rui ni tsuite. IV-XII. [On the bacteria in shoyu brewing. IV-XII.]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 22(1):27-34; 22(2):19-25; 22(3):27-33; 22(4):17-21; 22(5):25-28; 22(6):14-17; 22(7):21-24; 22(8):26-29; 22(9):30-37. [Jap]
Address: 1. Jozo Shikensho Gishi, Nôgaku Hakase; 2-3. Jozo Shikensho Kenshu-in, Japan.

2648. Heyne, K. 1927. De nuttige planten van Nederlandsch Indië [The useful plants of the Netherlands Indies. 3 vols.]. The Hague, Netherlands: W. van Hoeve. 1662 + CCXLI p. See vol. 2, p. 789-90, 814-20. Index. 28 cm. See also 3rd ed. 1950. [14 ref. Dut]
• ***Summary:*** Contents: Ontjom. Dagé. The soybean (Sojaboon, Kedele). Cultivation. Seeds. Utilization: Témpé [tempeh], tao hoe [tofu], tao koan [pressed tofu; doufu-gan], tao tjo [Indonesian-style miso], including tao tji [Fermented black soybeans; according to De Bie (1901) tao tji is tao tjo], soja (kètjap).

Note: One other edition of this work (same author and title) was published in 1927: 2nd improved and expanded edition, 3 volumes, published in the Dutch East Indies (Buitenzorg) by Departement van Landbouw, Nijverheid en Handel. Printed by Ruygrok & Co. (Batavia) (1662 + ccxli p.). OCLC Accession No.: 756-9335 and 588-3707. Owned by 30 + 24 = 54 libraries worldwide. Address: Hoofd van het Museum voor Economische Botanie te Buitenzorg (Bogor).

2649. Horvath, A.A. 1927. The soybean as stock feed and human food. *Vestnik Manchzhurii (Manchuria Monitor)* No. 8, p. 5-7. English edition, p. 13-23. Russian edition. [19 ref. Eng; Rus]
• ***Summary:*** A brief but good introduction to soybeans and soybean products including soybean meal, soybean flour, soybean oil, bean milk [soymilk], to-fu, frozen to-fu, soy sauce, and mizo [sic, miso] or tsiang [jiang].

"When boiled with gypsum or chlorate of magnesia bean milk curdles, and is known as 'to-fu.' Its constitution varies dependent upon the method of preparation employed. Fresh soy curd contains on the average, 8% protein and 3% fat. 'To-fu' when smoked or fried, owing to loss of water, becomes somewhat allied to meat, thereby substantiating the Chinese proverb that—'to-fu is meat without bones.'"

Note: This is the earliest English-language document seen (Jan. 2011) that contains the phrase "meat without bones." Note that it refers to tofu and not to soybeans.

"Frozen 'to-fu' prepared during the cold season contains up to 50% protein. Bean curd is almost totally assimilated, and may be used in the preparation of a considerable number of European dishes, the recipes for which have been published by the U.S. Department of Agriculture. The Chinese prepare an unlimited number of dishes based upon this comestible, including artificial meat. In order to obtain the specific taste of meat, smoking soybean sauce is used."
Address: Manchuria.

2650. Kellogg, John Harvey. 1927. The new dietetics: A guide to scientific feeding in health and disease. 3rd ed. Battle Creek, Michigan: The Modern Medicine Publishing Co. 1031 p. See p. 188-93, 322-28. Illust. Index. 24 cm.
• ***Summary:*** This is an encyclopedia of food, diet, and nutrition. Earlier editions were published in 1921 and 1923. The author, a physician and a vegetarian, lists his credentials on the title page: "Fellow of the Royal Society of Medicine of Great Britain, of the American Medical Association, Member of the American Economic Association, and of the National Geographical Society, Member of the Société d'Hygiene of France, Late Member of the Michigan State Board of Health, Editor of "Good Health," Superintendent of the Battle Creek Sanitarium, President of Battle Creek College.

Table XIV (p. 188) lists soy beans as a food rich in lime (calcium), containing 0.46%. Pages 189-93 discuss "Acids and bases of food–The acid alkaline balance." It begins: "As pointed out by Bunge many years ago, and as further shown by an extensive research conducted by Sherman, of Columbia University, foodstuffs differ in relation to their acid and basic contents. In certain foods, bases or alkalies predominate, while in others the mineral acids predominate.

"The waste products of the body are predominantly acid; consequently it is desirable that the foodstuffs should be predominantly basic. If acids predominate in the ration, and this condition continues for a considerable period of time, the effect will be to disturb the nice balance between acids and bases which is normally maintained in the body fluids and which is essential for life. A deficiency of alkalies constitutes acidosis.

"It is necessary that the alkalinity of the blood should be constantly maintained as the only means by which the acid wastes of the body which are constantly accumulating as the result of all sorts of vital work may be promptly removed." All flesh foods leave highly acid residues. Eggs are also acidic, though less strongly than meat. Cereals and bread are acidic, though much less so than meats. Milk is slightly alkaline. Most fruits, and all green and root vegetables are strongly basic and tend to alkalinize the tissue fluids... Generally it is better to select foods which afford a large basic margin so as to add to the alkali reserve of the body, which always tends toward diminution, especially in old age. A strongly basic diet is especially indicated in cases of arteriosclerosis and disease of the kidneys, in fevers, in pregnant women, in all forms of acidosis, and in old age...

"At the present time all physiologists are agreed that the highest degree of physical vigor and efficiency may be maintained on a diet which excludes flesh foods and physiologists the world over are unanimous in advising a

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curtailment rather than an increase in meat consumption."

Table XVI (p. 192-93) is titled "Excess of acid or alkali in one ounce and in 100 calorie portions of common foodstuffs." The Soy bean has an excess of base (alkali), 12.0 units per 100 calories or per 1 ounce.

In the chapter on Legumes, pages 322-28 give a detailed and accurate discussion of the soy bean and various soyfoods, including the history and nutritional composition of the soy bean, soy bean milk, to fu [tofu], soy sauce, and soy bean sprouts. On the first page, Dr. Kellogg states: "The soy is the best of all beans."

In the chapter titled "Infant Feeding," under "Vegetable Milk" (p. 956), Dr. Kellogg states: "The Chinese have for ages made from the soy bean a preparation which so closely resembles the dairy product that it may not inappropriately be called vegetable milk. A much better preparation is made from walnuts, almonds, and even peanuts... Milk prepared from walnuts and almonds is used in China, the Philippines and throughout the Orient, as a food for nurslings for whom a wet nurse can not be provided. This custom prevails extensively in those Asiatic countries in which cow's milk is but little used.

"A nut milk commonly known as 'Malted Nuts' has been made in this country for more than thirty years and has come into extensive use... These plant protein milks render great service especially in the treatment of infants and invalids who are sensitized to cow's milk. They are also valuable resources in the treatment of colitis in infants and in cases in which change of the flora is found difficult, so that the suppression of all animal proteins becomes necessary."

Also discusses quinoa, kaoliang, and the adsuki bean.

Note: This is the earliest English-language document seen (Feb. 2004) that uses the word "alkalinize" to refer to making a food more alkaline. Address: Battle Creek, Michigan.

2651. Khorbat, A.A. 1927. Maslianichnye (soevye) boby kak kormovoe i pishchevoe rastenie [Oil-bearing (soy) beans as fodder and food plants]. Kharbin (Harbin): Obschestvo Izucheniia Man'chzhurskogo Kraia. Torgovo-Promyshlennaia Sektsiia. [Society for the Study of the Manchurian Area. Trade and Industry Section]. Series D, No. 7. 126 p. [Rus]
Address: Harbin, Manchuria.

2652. Lovell, Philip M.; Press-Lovell, Leah. 1927. Diet for health by natural methods: Together with health menus and recipes. Complete instructions for the cure of the sick without the use of drugs. Los Angeles, California: The *Times-Mirror* Press. xiii + 428 + [7] p. No index. 21 cm.
• ***Summary:*** Part I: Treatment and diet, by Dr. P.M. Lovell. Part II. The preparation of health foods, by Leah Press-Lovell (recipes, p. 129-428). Some of the recipes in this book first appeared in the "Care of the Body" section of the *Los Angeles Times*, which Dr. Lovell has edited for the past few years. "This is the pioneer health department of any newspaper in the country, undoubtedly the most widely read and unique, in so far as it advocates drugless, natural therapy" (p. 4). "This book is based on vegetarian principles. Meat recipes... are not included." Many reasons for this are given. Meat includes fish and fowl (p. 8-9).

Soy-related: "Soy sauce or shoyu is made from soy beans and can be bought at Japanese stores. It gives a tasty flavor to gravies and to cereals" (p. 134). Chop suey (3 types), each served with "Soy bean sauce" (p. 290-91). Soy gravy (with soy–also called soy sauce or shoyu, p. 305). Chapter 14, "Legumes" (p. 366-70) discusses chick peas (Garvanza), lentils, peanuts, and "Soy beans: Best known in China and India. Rich in oil. Contain almost no starch. Require slow cooking to bring out flavors. Hulls are difficult to digest. Therefore remove them by rubbing through a colander." "About the soy bean: The soy bean is very important in the Orient. When three-fourths grown it makes a nutritious green vegetable [yes] known as 'bean sprouts' [no]. Products of soy beans re soy bean flour, soy bean milk, soy bean cheese (tofu), soy sauce, soy bean oil, sprouts, etc. Soy bean products can be bought at Japanese and Chinese grocery stores." Contains 3 recipes: Soy roll or bread (replace 25% of the whole wheat flour with soy flour in any whole wheat bread recipe). Soy bean porridge (cook 1 cup soy bean flour with 3 cups water for 2 hours in a double boiler. Cool, slice, roll in corn flour and bake with butter or oil to make croquettes). Soy bean croquettes. Soy bean milk (made from soy bean flour, p. 420; also almond milk and cocoanut milk).

Also discusses: Of the general advice given to patients, "the subject of diet occupies the leading position" (p. viii). Agar flakes (vegetable gelatine) are better than animal gelatine (p. 135). Almonds–How to prepare almond milk, cream, and meal (p. 152). Cocoanut–To prepare cocoanut milk. Peanuts–How to prepare raw peanut butter (p. 153). Garvaza [garbanzo] beans and meal (p. 308-09). Nut loaf (Vegetable turkey) (with peanuts, p. 315). Carqué's unfermented whole wheat bread (p. 351). Carqué's unleavened fruit bread (p. 351). Recipes using Graham flour (different from whole wheat flour, p. 356-59).

Ads on the last 7 (unnumbered) pages are for: (1) Lovell Health Offices. (2-3) Lovell's drugless health library (39 titles on diseases and health problems; pocket edition size). (4) Health of the Child, by Dr. Philip M. Lovell. (5) Carqués California Pure Natural Food Products: Fruits–sun-dried and dehydrated without bleaches, fumigants or preservatives (incl. black mission figs), nuts, confections, stamina and laxative foods, nut butters, cereals and products (incl. soy bean flour), miscellaneous. And Carqué Pure Food Co., Inc. (6) Cubbison's Cracker Co., 3419 Pasadena Ave., Los Angeles. And Cubbison's Whole Wheat Flaxseed Crackers. Cubbison's also sells Whole wheat crackers, and Whole

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wheat nut bread (See p. 32-33, 104). (7) The Cary Health Cooker (for steaming and baking; Elmer E. Cary Co., Los Angeles).

Note: This is the earliest published document seen (April 2004) that gives the address of Cubbison's Cracker Co. as 3419 Pasadena Ave. Address: 1. Dr., drugless practitioner, Health Offices, 238 Chamber of Commerce Bldg., 1151 So. Broadway, Los Angeles, California; 2. His wife. Phone: WEstmore 8275.

2653. Maliareffsky, G.I. 1927. [Manufacture of Chinese soy sauce in North Manchuria]. *Vestnik Manchzhurii* (*Manchuria Monitor*) No. 12. p. 56-61 + additional photographs. Russian edition. [Rus]
Address: Manchuria.

2654. Morse, W.J. 1927. Soy-bean output increasing in United States. *Yearbook of Agriculture* (*USDA*) p. 671-73. For the year 1926.
• ***Summary:*** In 1917 less than 500,000 acres in the U.S. were devoted to soy beans for all purposes. From this land about 2,283,000 bushels of seed were produced.

"As an article of food, the use of the soy bean in the United States has been very limited. For many years a few food companies have manufactured special soy-bean flour products. The number of such concerns producing soy-bean food products has increased to a considerable extent during the last few years. Soy beans are now being made into breakfast foods, crackers, wafers, soy sauce, bean curd, soy flour, and special flour preparations for various purposes. One of the most recent developments is the manufacture of soy sauce and bean curd from domestic grown beans. This has been found a most profitable industry in some parts of the Corn Belt, and soy sauce has now a fairly extensive market in the United States." Address: USDA, Washington, DC.

2655. Nadkarni, Krishnarao Mangeshrao. ed. and pub. 1927. The Indian materia medica. 2d ed. Bombay, India: K.M. Nadkarni. 5 + xviii + 1142 + clxix + lxxxviii p. Index. 20 cm.
• ***Summary:*** The body of this book (1142 p.) appears to be titled *The Indian Materia Medica with Ayurvedic, Unami & Home Remedies*. Soybeans are mentioned in three different places, almost as if each was thought to be different plant.

Page 313-14, "305. Dolichos Soja–(English–Soya bean, German–Soja bohne, Bengali–Gari kulaj, Hindi–Bhatwan, Kumaon–Bhut) is a species cultivated in some part of India for its seeds which are eaten and which contain a high percentage of protein and fat."

Page 399: "396. Glycine Soja & G. Hispida are species (English–Soya bean, Hindi–Bhatwan, Bengali–Gari kulay, Kumaon–Bhut, Eastern Terai–Khajuwa) met with on the tropical Himalayas from Kumaon to Sikkim and Khassia and Naga Hills. A decoction of the root is said to possess astringent properties."

Page 803: "886. Soja Hispida or Glycine Soja (English–Soya bean; Soy-bean) has taken the place of meat in the diet of Chinese, Japanese and other Asiatics. Its notable characteristics are its large proportion of assimilable protein and fat, and its lack of starch and small content of sugar. Being so highly nutritious, it is not adapted for use as a side-dish, like ordinary vegetables, but, like meat, supplies a chief food. Among the preparations mentioned as common in China and Japan are 'tofu' resembling cottage cheese; 'Shoyu or Soya' which has been soaked to remove the skin and then boiled and seasoned; 'Miso' or soy-bean milk, prepared by soaking pulverized beans and straining; and 'Natto' obtained by fermenting the boiled beans. The lack of starch gives the beans favour as a diabetic food, and soy-bean meal and soy-bean bread have been prepared. The beans have been also tried as a coffee substitute–(Popular Science Siftings). For more particulars see also Dolichos Soja etc."

Also mentions *Sesamum indicum* (p. 788-90). Sanskrit.–Tila. English–Gingeli. French–Sesame. German–Sesom [Sesam]. Hindi, Cashmeri, Punjabi & Bengali–Til. Mahrathi & Konkani–Teel. Telugu–Nuvvulu; Guvvulu. Tamil–Ellu. Canarese–Uru-Ellu. Malayali–Karuellu.

The author was born in 1864. A 3rd edition was published in 1955. First published in 1908 under the title "Indian Plants and Drugs." Address: India.

2656. Wong, Nellie C. 1927. Chinese recipes. New York, NY: Published by the author. 28 p. unnumbered. 20 x 15 cm. Handsewn with pink cord.
• ***Summary:*** One of the first pages states: "Recipes from 'The Only Place in Peking.' The Nellie Wong Tea Shop, Peking, China. Addition copies of this book for your friends may be had from my little store 1226 Amsterdam Avenue, or from my printer." Signed: Nellie C. Wong.

The page titled "Explanatory notes" states: "Soy bean sauce and ginger are universally used in China for seasoning. Soy bean sauce in many instances takes the place of salt."

All of these supplies may be obtained in New York City at the Chinese Grocery, Quong Yuen Shing and Company, 32 Mott Street, Chinatown; The Cathay Tea Garden, 164 East 86th St.; Yeong's Restaurant, Broadway and 48th St.; or the College Inn, Broadway near 124th St.

This booklet contains 28 recipes, printed by the American Rehabilitation Committee in New York. Has a Chinese coin knotted into the binding cord.

2657. Y.W.C.A. 1927. Chinese cook book. Peking: Young Women's Christian Association. 41 p. 23 cm.
• ***Summary:*** In the section on "Soups," (p. 3) is a recipe for Egg soup which calls for "Soy sauce (Chiang yu)" and "1 teaspoon epicurean powder (Ajinomoto powder, a Japanese

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powder procurable in bottles)."

On the same page, the recipe for Spinach soup calls for "Bean curd diced (1 piece 3 in. square). Add salt and chiang yu to 4 cups of boiling water... Be careful not to break the bean curd by stirring."

A recipe for "Bean curd soup" (p. 6) begins: "Buy *hsin tou fu* (new / fresh bean curd less than 6 hrs. old that has not been pressed into cakes)" [i.e. fresh soymilk curds].

In the chapter on "Meats" (p. 12), the recipe for Shredded beef calls for "Soy sauce" and "Black chiang yu." The recipe for Meat-vegetable dish to be served with Shao ping (p. 14) calls for "Tou Fu Kan (Dry bean curd [pressed tofu], 5 flat cakes, 2 inches in diameter)." The recipe for Spiced mutton (p. 14) calls for 2 tsp. "Soy bean paste."

On pages 39-41 is a "Vocabulary" with three columns: Name in English. Romanization of Chinese name (Wade-Giles) with accents. Name in Chinese characters. Soy related words: Bean curd–tou fu. Bean curd (dry)–tou fu kan. Bean curd pickled–chiang tofu fu. Soy bean paste–hei chiang. Soy bean oil [sic, sauce] (black)–hei chiang yu. Soy sauce–chiang yu. Address: Peking, China.

2658. Fukai, Tôshi. 1928. Shôyu shikiso ni kansuru chiken [On the knowledge of shoyu pigment]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 5(6):451-80. [23 ref. Jap]
Address: Jozo Shikenjo, Japan.

2659. Matsuoka, Komakichi. 1928. [A declaration concerning the Noda labor strike]. Feb. 2. Mimeographed. 3 p. Unpublished manuscript. [Jap]*

2660. *USDA Bureau of Animal Industry, Service and Regulatory Announcements.* 1928. Changes in directory: Meat inspection granted. Feb. p. 1. For Jan. 1928.
• ***Summary:*** The first entry is: "110. Oriental Show-You Co., Columbia City, Indiana."

2661. Ohta, Kiyoshi. 1928. Shôyu bôfuzai toshite zettai-teki no kôryoku o yûsuru. "Fueniiru gurikooru," "fueniiru aranin" ni kansuru kenkyû yohô [On the preservatives of shoyu which are absolutely effective: Phenylglycol and phenylalanine]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 5(8):584-88. [Jap]

2662. Oshima, Kokichi. 1928. Protease and amylase of *Aspergillus oryzae*. *J. of the College of Agriculture, Hokkaido Imperial University* 19(3):135-244. March. [109 ref. Eng]
• ***Summary:*** Contents: Introduction. Methods used for the quantitative estimation of amylase and protease, a formula to determine digestibility, and precautions in the use of Van Slyke's method. Enzymes found in *Aspergillus oryzae*. Conditions influencing enzyme production. Properties of protease from *Aspergillus oryzae*. Properties of amylase from *Aspergillus oryzae*. Disinfectants for preserving the amylase solution of *Aspergillus oryzae*. General summary.

"There are at least four large manufacturing industries in Japan, in the manufacturing process of which *Aspergillus oryzae* is of the first importance... The total yearly quantities of these products are approximately as follows: Sake (rice wine) 4,500,000 'koku' (=813,000 kilolitres). Shoyu (soy sauce) 5,000,000 'koku' (=902,000 kilolitres). Miso (soy cheese [paste]) 450,000,000 'koku' (=1,690,000 kilograms). Shochu (distilled alcoholic liquor calculated as 95% alcohol) 220,000 'koku' (=39,700 kilolitres)." Address: Chemical Lab., School of Fishery, Hokkaido Imperial Univ., Japan.

2663. Yabuta, Teijirô; Kôbe, Katsuji. 1928. Furfural no riyô ni kansuru kenkyû. I. Shôyu kabidome-zai toshite Furanacrylic acid no kôryoku narabini sono seizô-hô ni tsuite [Studies on use of furfural. I. Furanacrylic acid as an anti-mold substance for shoyu–its effectiveness and preparation]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 4(3):214-20. March. [8 ref. Jap]
Address: Rikagaku kenkyu-jô, Suzuki (Ume) Kenkyû-shitsu.

2664. Ishimaru, Yoshio. 1928. Shôyu sando no denki-teki sokutei ni tsuite [Electrical determination of acidity of shoyu]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 5(9):653-68. [Jap]

2665. Kinoshita, Asakichi; Tanigawa, Sei. 1928. Mamekasu shiyô shôyu jôzô shiken seiseki [Brewing shoyu with soybean cake]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 5(9):700-10. [Jap]

2666. Yabuta, Teijirô; Shimose, Rinta. 1928. Furfural no riyô ni kansuru kenkyû. II. Furfural no denkai sanka ni yoru maleic acid, fumaric acid oyobi kohaku-san no seizô ni tsuite [Studies on use of furfural. II. Preparation of maleic acid, fumaric acid and succinic acid with electric oxidation of furfural]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 4(4):304-09. April. [15 ref. Jap]
Address: Rikagaku kenkyu-jô, Suzuki (Ume) Kenkyû-shitsu.

2667. Houck, Bertha Anne. 1928. Gastronomic adventures. *Los Angeles Times*. May 13. p. K12.
• ***Summary:*** About the many restaurants of foreign-born Americans visited by the writer in Los Angeles. "The last compromise which foreign groups make to the customs of an American city is in their food."

Chinese restaurants are found on San Pedro street, south and east of the Plaza. "A vegetable soup is safe to start with, being a watery, peculiar dish with strange and delightful vegetables and soya bean curd it. Each dish is prepared to be eaten with rice as American eat bread, for soya bean sauce, which is used extensively, is too strong to be pleasant without it."

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"Japanese food is similar to Chinese, but, because of the Buddhistic laws against the taking of life, no meat except fish, is eaten. As with the Chinese, soya is the important flavoring. Suimono, a bean-curd soup, a broiled fish and an omelette, or boiled chestnuts and rice, form the typical Japanese dinner." Japanese restaurants are "found in the Japanese section on First street, east of Los Angeles street, or on Weller street, just south of First street."

2668. Grey, Egerton Charles. 1928. The food of Japan. Geneva: League of Nations, Health Organization. 161 p. May. Index. 22 cm. [82 ref. Eng; fre]

• ***Summary:*** Detailed information and analysis. Contents: Preface. 1. Quantity of food in Japan: Exports, imports, production and consumption of food in Japan in the year 1925. 2. Quality of food in Japan: Definition of quality. 3. Distribution of food in Japan: Natural and artificial distribution. 4. Chemical composition of Japanese foods as consumed: Methods of analysis. 5. Chemical composition of Japanese food as purchased. Appendices: I. Literature relating to the chemical and physical properties of the food of Japan, with list of authors. II. Food materials and the plants and animals serving as sources of food in Japan.

Table 7 (p. 25) shows the amounts of major foods consumed in Japan. The percentage of the total food consumed is: Rice 50.83%, barley 10.15%, potatoes 8.63%, wheat 6.63%, soy bean 4.76%, other beans 3.71%, other cereals 3.24%, fish 1.72%, seaweed 1.23%.

On page 54, the author discusses the "Alkalinity of the ash [of foods]. This figure is of considerable importance as indicating the capacity of the food material to produce alkali in the body." On pages 61-111 the author lists the nutritional composition of all major Japanese foods, grouped by food type: 1. Cereals and cereal products. 2. Legumes, pulses, and legume products. 3. Roots, greens, and other vegetables. 4. Mushrooms and seaweeds. 5. Fruits, nuts, and seeds. 6. Vegetable oils. 7. Other vegetable products. 8. Dairy products. 9. Eggs. 10. Meat and animal fat. 11. Fish. 12. Condiments, beverages, etc. The name of each food is given in both English and French, usually with a brief explanation.

In a table (p. 65-69), in category "II. Legumes, pulses, and legume products," the section titled "Fresh legumes" includes (p. 64-65): Edamame (Soy bean in pod) = *Fève de soya en cosse.* The section titled "Dry legumes (pulses)" includes (p. 64-67): Azuki (Small red bean) = *Petit haricot rouge.* Dainagon (Small red bean) = *Petit haricot rouge* Ao daizu (Soy bean [with green seed coat]) = *Fève de soya.* Kuro daizu (Black soy bean) = *Fève de soya noire.* Shiro Daizu (White soy bean) = *Fève de soya blanche.* Rakkasei (Pea nut) = *Pistache de terre.*

The section titled "Bean products" includes (p. 66-69): Aburage (Fried-bean curd) = *Pâte de haricots frite.* Aka miso (Soy-bean paste) = *Pâte de fèves de soya.* Gammodoki (Fried-bean curd) = *Pâte de haricots frite avec mixture d'algues marines.* Kinako (Soy-bean powder) = *Poudre de fèves de soya.* Kori dofu = *Pâte de haricots séchée.* Namaage (Fried-bean curd) = *Pâte de haricots frite.* Natto (Fermented soy bean) = *Fève de soya fermentée.* Sarashian (Red-bean powder) = *Poudre de haricot rouge* [Sarashi-an from azuki beans]. Shiro miso (White soy-bean paste) = *Pâte blanche de fève de soya.* Tofu (Soy-bean curd) = *Pâte de fèves de soya.* Tofu kasu (Soy-bean residue) [okara] = *Déchets de fèves de soya.* To nyu (Soy-bean milk) = *Lait de fève de soya.* Yuba.

Note 1. This is the earliest English-language document seen (May 2012) that contains the word *gammodoki;* it refers to deep-fried tofu burgers, or that contains the word *namaage,* which refers to deep-fried tofu cutlets.

Also: Mushrooms and seaweeds includes (p. 73-75): Arame, Asakusanori [Asakusa nori], aonori, hijiki, kanten, kombu, mozuku, ogonori, tororo kombu, wakame. Fruits, nuts and seeds includes (p. 77): Asanomi (Hemp seed), Goma (sesame, white and black). Vegetable oils includes (p. 79): Daizu yu (Soy bean oil) = *Huile de fève de soya.*

Condiments includes (p. 92-93): Hamana natto [fermented black soybeans], Kiriboshi (Dried daikon), Misozuke [miso pickles], Narazuke, Shoyu [soy sauce], Takuan (Pickled radish), Umeboshi (pickled plum) = *Prune confite.* Beverages includes (p. 92-93): Amazake, Mirin (fermented rice), Sake (Rice wine).

For each food, the following values are given in both English and French: Water, protein (N x 6.25), fat, carbohydrate, ash, calories, alkali value, total nitrogen, water-soluble nitrogen, phosphoric acid (anhydrous), sodium chloride (salt), water-soluble ash, water-insoluble ash, alkalinity due to soda and potash, alkalinity due to lime and magnesia, calcium oxide, ferric oxide, factor for converting to dry food.

Note 2. In Japan, the typical person is well aware of which foods are alkaline (*arukari-sei*) and which are acidic (*san-sei*). The alkaline foods are generally considered more healthful and health-protecting. For the alkaline values given by Grey for many basic Japanese foods, see SoyaScan Notes. 1991. Sept. 20.

Note 3. This is the earliest English-language document seen (March 2009) that uses the term "soy-bean paste" to refer to miso.

Note 4. This is the earliest English-language document seen (June 2009) that uses the term "Edamame" to refer to [green] soy beans in their pods.

Note 5. This is the earliest English-language document seen (Feb. 2004) that uses the term "kori dofu" to refer to dried-frozen tofu.

Note 6. This is the earliest English-language document seen (Dec. 2006) that uses the term "pickled plum" to refer to umeboshi salt plums.

Note 7. This is the earliest English-language document seen (Nov. 2011) that uses the term "Hamana natto" to refer to fermented black soybeans.

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2669. Kurono, Kanroku; Fukai, Tôshi. 1928. Shôyu no kôki seibun ni kansuru kenkyû [On the flavorous substances of shoyu]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 5(4):361-83. May. [Jap]
Address: Jozo Shikensho.

2670. Kurono, Kanroku; Fukai, Tôshi. 1928. Shôyu no kôki seibun ni kansuru kenkyû (Zokunô) [On the flavorous substances of shoyu]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 4(6):415-36. June. [24 ref. Jap]
• ***Summary:*** Discusses Soyanal. Address: Jozo Shikensho.

2671. Suzuki, Kozo; Misikawa, Tetusaburo. 1928. Shôyu kasu no shôka shiken [Digestibility of 'shoyu' cake]. *Nippon Chikusan Gakkaiho* (*Japanese J. of Zootechnical Science*) 3(1):28-33. June. [Jap; eng]
Address: Imperial Zootechnical Exp. Station, Chiba, Japan.

2672. Lea and Perrins. 1928. Fish, flesh, fowl–With every course ask for Lea & Perrins Sauce (Ad). *Times* (*London*). July 19. p. 12, cols. 6-7.
• ***Summary:*** Printed in bold letters across the bottom of this display ad: "Make sure of the original Worcester [sic, Worcestershire] sauce! Say 'Lea & Perrins, please.'" An illustration at the upper left shows a waiter (standing) looking down at a gentleman seated, with a table napkin in both hands. Address: [England].

2673. Buckley, Francis. 1928. Great names in the history of English Glass. V. Thomas Betts. *Glass* (*Redhill, Surrey, England*) 5(7):299-300. July. [1 ref]
• ***Summary:*** Thomas Betts' accounts show that in 1753 he made "1 Pr. [Pair] Cut Soy Cruits." In 1755 he made "1 P. Cutt Soy Cruits" and "3 Soy Cruits Stopt [Stoppered]."

Glass cutting and engraving was introduced to England in about 1718, and that business was first conducted by expert Bohemians hired for that purpose by the London Glass-sellers. One of the first Englishmen to gain fame as a glass-cutter was Thomas Betts of London. In 1738 we first hear of him at a shop in Bloomsbury, where he started business as a glass polisher or grinder of glass for mirrors. Shortly after 1738 he took to the more delicate cutting of table glass using machines; we find him at the King's Arms Glass Shop, Charing Cross. At first he wisely employed a Bohemian glass cutter, but by 1744, when this man unexpectedly deserted him, Betts had been initiated into the practical side of artistic glass-cutting. When he died in 1767, his reputation as a glass-cutter had already begun to spread.

Note: This document contains earliest date seen (Feb. 2004) for soy cruets. Address: [England].

2674. Oota, Kiyoshi. 1928. Shôyu no bôbai-ryoku to kagaku kôzô ni kansuru shiken [Relation between the antiseptic action and chemical structure of shoyu]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 5(12):914-29. (Chem. Abst. 23:1697). [16 ref. Jap]

2675. Togano, Meijiro. 1928. Shôyu, miso oyobi kyarameru seizô-hô [Production methods for shoyu, miso, and caramel]. *Kojo Kenkyu-kai, Sokki-roku* (*Factory Research Society, Collected Notes*) No. 38. 46 p. July. [Jap]
• ***Summary:*** On this document, Kôjô Kenkyu-kai is translated as "Japan Workshop Committees Association;" They published this lecture. The author's last name is romanized as "Tsugano."

2676. Wu, Hsien. 1928. Nutritive value of Chinese foods. *Chinese J. of Physiology, Report Series* No. 1. p. 153-86. July. Issue title: Metabolism. [7 ref. Eng; chi]
• ***Summary:*** The nutritive value of many Chinese foods (water, protein, fat, ash, crude fiber, carbohydrate, calories) is given (with the English name, scientific name, and name in Chinese characters), including the following: wheat gluten, sesame seed (p. 155), yellow soy bean, black soy bean (large or small), green soy bean, soy bean sprout (yellow or green), soy bean flour, soy bean curd, soy bean dregs [okara], bean curd (doufu-gan, boiled in salt and spices and partially dried), oil skin ([yuba], from boiled soy bean milk), bean curd skin ([yuba], dried, or rolled like bamboo), soft bean curd, soy bean milk (p. 156), smoked bean curd, sheet bean curd, fermented bean curd, pickled bean curd, soy bean (fresh) (Characters: hair + bean = mao tou), wild soy bean, red gram bean (red small bean, Phaseolus mungo [azuki bean], p. 157), cucumber pickled in soy bean paste (p. 175).

Condiments: Thick soy bean paste, thin soy bean paste, fermented soy bean, fermented bean (dried), thin soy bean sauce (white), thick soy bean sauce (white), thin soy bean sauce (black), thick soy bean sauce (black), soy bean sauce ("chemical"), sweet flour paste (p. 176).

Table 4 (p. 180) gives the calcium, phosphorus, and iron content of some Chinese foods in percentages of edible portion, including the following: Wheat gluten, job's tear, yellow soy bean, black soy bean, red gram bean [azuki], green soy bean (fresh), soy bean flour, soy bean milk, bean curd (Southern style and Northern style).

Table 5 (p. 182) lists foods as sources of vitamins A, B, C, or D, including the soy bean (an excellent source of vitamin B).

Note 2. This is the earliest English-language document seen (Feb. 2004) that uses the word "doufu-gan" (or "doufu gan") to refer to Chinese-style firm tofu. Address: Dep. of Biochemistry, Peking Union Medical College, Peking, China.

2677. Oshima, Kokichi. 1928. Shôyu kôji daiyô-hin toshite no kani kanzô ni tsuite [Liver of crab as a substitute for

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shoyu koji]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 6(1):21-24. [Jap]
Address: Hokkaido Teikoku Daigaku, Suisan Senmon-bu, Kyoju Nôgaku hakase, Japan.

2678. Good Housekeeping. 1928. Confidence creates sales: Everywoman's magazine. Every manufacturer's market (Ad). *New York Times*. Sept. 24. p. 10-11.
• ***Summary:*** "Ask any of the more than 1,600,000 progressive *Good Housekeeping* families what monthly page in the magazine serves them as a Buying Directory. They will reply out of their satisfactory experiences: *'Good Housekeeping's Index of Guaranteed Advertisements!'*"

"Herewith we present a list of advertisers in October *Good Housekeeping...*"

The category "Food products" includes Grape Nuts, Kellogg's All Bran, La Choy Chinese Food Products, Lea & Perrins' Sauce, etc. Address: New York, Chicago, Boston, Detroit, San Francisco.

2679. Dyson, G. Malcolm. 1928. Mould food of the Far East. *Pharmaceutical J. and Pharmacist (London)* 121:375-77. Oct. 20.
• ***Summary:*** Discusses *Aspergillus* molds, soya sauce or shoyu, shoyu-koji, tane-koji, the shoyu-yeast (a strain of *Zygosaccharomyces*), the sodium salt of glutamic acid (which imparts a meat-like flavor to these purely vegetable preparations), *aji-no-moto*, red miso and white miso (*shiromiso*), natto, the protein-splitting powers of the enzymes secreted by the molds mentioned above.

Red soya cheese is a type of tofu. The ripened curd is immersed in a brine and the maturing is finished by a purple mold–*Monascus purpureus* (Went.)–which imparts a red color to the finished tofu.

Note: This is the earliest English-language document seen (Oct. 2011) that uses the term "Red soya cheese" to refer to fermented tofu. Address: Ph.D., A.I.C.

2680. Dorsett, P.H.; Morse, W.J. 1928. Agricultural explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon (Log–unpublished). Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished typescript log. Illust. Partially indexed. 28 cm.
• ***Summary:*** Also called the "Log of the Dorsett Morse Expedition to East Asia" and (by the National Archives) "Dorsett-Morse Expedition to the Far East, 1929-31," this is one of the most important documents ever produced on soybeans and soyfoods. Covering the period from late 1928 until 1932, it consists of 17 volumes of typewritten unpublished manuscript plus handwritten notebooks.

The two explorers, who were gone on the expedition for a little more than two years, initially planned to be gone for about three years. They took 3,369 photos of which 95% appear in the report; the original prints are pasted on the pages, each with a number and a caption. The first negative number is #43196 (p. 238) and the last is #46514. The last numbered page of the report is #8818, but most of the index pages are not numbered and some special reports at the end of the main report each start with page 1.

The first quarter of the pages (to about page 2,500) are indexed, using 4 separate indexes. The only original and 2 microfilm copies were at the American Soybean Assoc. (St. Louis, Missouri), however as of Aug. 2011 they are on permanent loan to Rare and Special Collections at the National Agricultural Library (Beltsville, Maryland)–which also has 7 photograph albums that accompany the 7 log books. A list of the missing pages has been compiled. One photocopy of a microfilm copy is at the Soyinfo Center (Lafayette, California). One microfilm copy is at the National Archives in Washington, DC, in Records of the Bureau of Plant Industry, Soils, and Agricultural Engineering, Record Group 54. See: "National Archives Microfilm Publication No. M840. Expedition Reports of the Office of Foreign Seed and Plant Introduction of the Department of Agriculture, 1900–1938." Rolls 16-20, volumes 56-73. These microfilm rolls may also be available for viewing or duplication at one of the various regional branches of the National Archives (e.g. San Bruno, California).

A brief itinerary of the trip is as follows: 1929 Feb. 18–The party of 5 people leaves Washington, DC, for Los Angeles by train. It consists of Morse, his wife Edna, their daughter Margaret (age 7), Dorsett, and his daughter-in-law Ruth (Bobbie; the widow of Dorsett's son, she served as Dorsett's secretary and general helper).

March 1–They sail from San Francisco to Yokohama on the S.S. *President Grant* of the Dollar Steamship Lines. March 29–Arrive in Yokohama, proceed directly to Tokyo, establish headquarters with rooms at the Imperial Hotel, and hire an interpreter, Mr. Suyetake, who works with them for the next 2 years. May 21–The Morses go to Hokkaido, the Dorsetts to Kyoto, by sleeper train. Morse returns to Tokyo.

Aug. 17–The entire party arrives in Hokkaido and establishes headquarters in Sapporo to study soybeans. Oct. 8–Leave Hokkaido for the Northeast Provinces, then arrive in Tokyo on Oct. 15. Oct. 22–Arrive in Keijo (Seoul), Korea, then take many side trips. Note: 1929 Oct. 29–Great Depression begins in USA with stock market crash. Dec. 8–Return to Japan via Kyushu, then to Tokyo to study soyfoods. They buy and photograph many!

1930 April 1–Travel by steamer to Dairen, Manchuria, where they set up headquarters. Dorsett very sick from April 11 to June 11; taken to a Japanese hospital in Dairen, he almost dies of double pneumonia. Morse does the work of both men and does not inform USDA of Dorsett's critical condition. June 24–Morse takes a quick trip to northern Korea, via Mukden and Antung (Tan-Tung), to look for

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Zoysia grass.

July 1–Returns to Manchuria via Mukden. July 21. Dorsetts leave for Peking by train; Morses and Mr. Suyetake stay in Dairen. Aug. 21–Morse party travels to northern Korea, staying in Heijo (Pyongyang / P'yongyang); takes a 4-day side trip to Seoul. Sept. 28–Morse returns to Dairen, Manchuria.

Oct. 19–Morse party leaves Dairen, arriving in Peking the next day. Nov. 9–Morse party returns to Dairen. Nov. 30–Morse arrives in Harbin, north Manchuria, then passing through Mukden, returns to Dairen. Dec. 18–Morses leave Dairen for Japan, passing through Kobe on Dec. 21 and arrive in Tokyo on Dec. 23.

1931 Jan. 12–Travel to Kyoto, Himeiji, and Tatsuno Shoyu. Jan. 16–Visit Okazaki and Hatcho miso. Jan. 17–Return to Tokyo. Feb. 17–Morse party leaves Tokyo by boat for the USA, arriving in San Francisco on March 4. March 15–Dorsett party leaves Peking for Tientsin, Shanghai, and Hankow. March 27. Dorsetts sail from Shanghai to San Francisco.

Note 1. The title of this report is puzzling since the expedition never went to Taiwan, Singapore, Java, Sumatra, or Ceylon. It was proposed several times that they visit these places, but the plans did not work out.

Note 2. This is the earliest log (unpublished) seen (Oct. 2001) that mentions soy. Address: Agricultural Explorers, USDA, Washington, DC.

2681. Ohki, Shinzo. 1928. Re: Introducing William J. Morse to Noda Shoyu Co. Letter to Mr. Shinzaburo Mogi of Noda Shoyu at 133 Onden, Aoyama, Tokyo, Nov. 2. 2 p. Typed, without signature (carbon copy). Typed. Bound in Log of Dorsett Morse Expedition to East Asia, p. 51-52. [Eng]
• ***Summary:*** "This is to introduce you to Dr. [sic] W.J. Morse of the Bureau of Plant Industry, U.S. Department of Agriculture. Dr. Morse has been investigating soybeans for a number of years and has written a book entitled 'Soybeans with Dr. Piper' [sic, 'The Soybean'], which book I presented to you before you left the United States... I wish you would direct him to Noda Shoyu Company and show him the wonderful plant your company is operating... He also wishes to visit some company manufacturing Tofu."

Note: Mr. Ohki's company makes fermented, Japanese-style shoyu in Indiana. On the next page (p. 52) of the Log, in a similar letter to Noda Shoyu Company in Noda, Japan (with the same date, translated from Japanese into English), Mr. Ohki notes: "When I visited your factory in 1917, I was greatly impressed by the magnitude of your plant, as well as the improved machineries [sic] you are using."

Note: This is the earliest document seen (Sept. 2011) concerning the Dorsett-Morse Expedition to East Asia. Address: Oriental Show-You Company, Brewers-Packers-Distributors, Columbia City, Indiana.

2682. Kinoshita, Asakichi; Isawa, Shinobu; Tanigawa, S. 1928. Shôyu to tamari no setchû jôzô shiken [Intermediate method of brewing, shoyu and tamari]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 6(4):277-89. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2-3. Joshu (Assistant).

2683. Ishimaru, Yoshio. 1928. Shôyu shikiso no seisei to saikin to no kankei ni taisuru ichi kôsatsu: Shôyu moromi-chû*Bacillus mesentricus* [*sic, mesentericus*] *niger* shu no sonzai oyobi igi [Relation between pigment formation and bacteria: Presence of *Bacillus mesentericus niger* in shoyu moromi and its significance]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 6(4):235-42. Dec. [10 ref. Jap]

2684. Fukai, Tôshi. 1928. Shôyu shikiso no hishoku teiryô-hô ni tsuite [On the determination of shoyu color by colorimeter]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 97. p. 76-89. [Jap]
Address: Jozo Shikensho. Gishu.

2685. Ishimaru, Yoshio. 1928. Shôyu shikiso no seisei to saikin to no kankei ni taisuru ichi kôsatsu (Shôyu moromi-chû Bacillus messentricus niger no sonzai oyobi igi) [Relation between pigment formation and bacteria in shoyu. Presence of *Bacillus mesentericus niger* in shoyu moromi and its significance]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 23(11):19-27. [10 ref. Jap]
Address: Nôgaku-shi, Japan.

2686. Kinoshita, Asakichi; Isawa, S.; Tanigawa, S. 1928. Shôyu to tamari no secchû jôzô shiken [Test of the intermediate method of brewing shoyu and tamari]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 23(12):7-20. [Jap]
Address: 1. Jozo Shikensho Gishi; 2. Jozo Shikensho Shokutaku; 3. Jozo Shikensho Kenkyu-in, Japan.

2687. Kinoshita, Asakichi; Tanigawa, S. 1928. Mamekasu shiyô shôyu jôzô shiken seiseki [Results of brewing shoyu made with soybean cake]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 23(4):22-31; 23(5):35-41; 23(6):34-39; 23(7):45-53. [Jap]
Address: 1. Jozo Shikensho Gishi; 2. Jozo Shikensho Kenshuin, Japan.

2688. Kinoshita, K.; Tanigawa, S. 1928. Kuki kakuhan teido hikaku shiken [On the degree of stirring of shoyu moromi (mash) with air]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 98. p. 158-69. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Joshu.

2689. Kinugawa, Y. 1928. [Antiseptic test of arcylic acid and paraamido azobenzol for shoyu]. *Eisei Shiken* 32:147-. [Jap]*

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2690. Kurono, Kanroku; Fukai, T.; Tateno, M. 1928. Shôyu shikiso oyobi kôki no seiri-teki seiin ni tsuite [On the physiological formation of color and aroma during shoyu manufacture]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 97. p. 90-109. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Gishu; 3. Joshu.

2691. Kurono, Kanroku; Fukai, Tôshi. 1928. Shôyu no kôki seibun ni kansuru kenkyû [On the flavor components of shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 97. p. 1-75. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Gishu.

2692. Kurono, Kanroku; Fukai, Tôshi. 1928. Shôyu shikiso no kagaku-teki gôsei [Chemical synthesis of the colors of shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 97. p. 110-25. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Gishu.

2693. Kurono, Kanroku; Kinoshita, A.; Fukai, T.; Tateno, M. 1928. "Pentoosu" shiki shôyu jôzô shiken. I-IV. [The use of pentose as raw material in shoyu. I-IV.]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 97. p. 126-37, 138-55, 156-75, 176-93. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Gishi; 3. Gishu; 4. Joshu.

2694. Kurono, Kanroku; Fukai, T.; Tateno, M. 1928. "Pentoosu" seizô shiken [The production of pentose as raw material for shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 97. p. 194-226, 227-78. [Jap]
• ***Summary:*** This article has 2 parts. E. Katsune is an additional author in Part II. Address: Jozo Shikensho. 1. Gishi; 2. Gishu; 3. Joshu.

2695. Kurono, Kanroku; Fukai, T.; Katsune, E.; Tateno, M. 1928. "Soya meranin" seizô shiken [The production of Soja melanin (coloring matter of shoyu)]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 97. p. 279-305. No. 100. p. 1-21. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Gishu; 3. Shokutaku. 4. Joshu.

2696. Matsumoto, K.; Chin, K.; Sano, Z. 1928. Shôyu jôzô ni kansuru saikin-rui ni tsuite. XVI-XXII. [On the bacteria in shoyu brewing. XVI-XXII.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 23(1):30-37; 23(5):19-25; 23(6):30-33; 23(7):42-45; 23(8):15-18; 23(9):37-40; 23(10):29-36. [Jap]
Address: 1. Jozo Shikensho Gishi, Nôgaku Hakase; 2. Jozo Shikensho Kenshu-in; 3. Jozo Shikensho Kenkyu-in, Japan.

2697. Matsumoto, K.; Kakegawa, I.; Tanigawa, S. 1928. Shôbo ôyô sokujô shiken [Application of yeast to the accelerated brewing of shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 98. p. 120-30. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Shokutaku; 3. Joshu.

2698. Matsumoto, K.; Chin, K.; Sano, Z. 1928. Shôyu jôzô ni kansuru saikin-rui ni tsuite [On the bacteria involved in shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 99. p. 1-187. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Kenshuin; 3. Joshu.

2699. Oshima, Kokichi. 1928. Shin gyo-shôyu ni tsuite [A new fish shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 23(4):2-6. [Jap]
Address: Hokkaido Teikoku Daigaku, Suisan Senmon-bu, Kyoju Nôgaku hakase, Japan.

2700. Babinski, Henri (Ali-Bab). 1928. Gastronomie pratique: études culinaires suivies du Traitement de l'obésité des gourmands [Practical gastronomy: Culinary studies aimed at treating the obesity of gourmands. 5th ed.]. Paris: Ernest Flammarion. 1281 p. 29 cm. [Fre]*
• ***Summary:*** The author (whose pseudonym is Ali-Bab) refers to soy, Worcestershire, catsups, tabascos and other such frequently bought condiments as "sauces violentes" which mask out all other flavors.

2701. Babinski, Henri (Ali-Bab). 1928. Gastronomie pratique: études culinaires suivies du Traitment de l'obésité des gourmands. Huitième ed. [Practical gastronomy: Culinary studies aimed at treating the obesity of gourmands. 8th ed.]. Paris: Ernest Flammarion. 1281 p. 28 cm. [Fre]
• ***Summary:*** In the chapter titled *Pâtes. Légumes secs. Légumes verts* is a recipe (p. 874) for *Soja au jus* which calls for 1,000 gm soy sprouts (*germes de soja*), 100 gm veal or poultry, 40 gm butter, 40 gm white wine and salt and pepper (to taste).

In the chapter on *Salades* (Salads), after the recipe for Salad of salsify are two notes (p. 957): In the same spirit, one can prepare salads of artichoke hearts, of *crosnes* (an edible tuber), of soy sprouts (*germes de soja*), etc.

One can also add relish to a salad with a little Worcestershire sauce, to taste.

Various editions of this book were published but all those from 1928 on have the same number of pages (1283 p.): 2nd ed. 1912. 3rd ed. 1923. 5th ed 1928. 8th ed. 1950. 9th ed. 1967.

The *Joy of Cooking* (1963, p. 542) states that the author "refers to soy, Worcestershire, catsups, tabascos, and other such commercial condiments as 'sauces violentes,' which mask out all other flavors." Note 1. We have been unable to find the page on which this statement appears.

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Note 2. The author, whose real name was Henri Babinsky, was of Polish ancestry, born in 1855 in Paris and died in 1931. The 1st edition (314 p., 20 cm) was published in 1907 by the same publisher in Paris. The 2nd edition (636 p., 26 cm) was published in 1912.

2702. Ducceschi, V. 1928. La soja e l'alimentazione nazionale [Soya and the Italian national diet]. Milano, Italy: Francesco Vallardi. x + 246 p. (Biblioteca Encyclopedia Vallardi). [117 ref. Ita]
• ***Summary:*** Contents: 1. Introduction. 2. Natural history of the soybean. 3. Chemical composition of soybean seeds. 4. Biological value of the nutrients contained in soybean seeds. 5. Foods furnished by the soybean and their digestibility: Whole soybeans, soy oil, whole soy flour, bread made with soy flour, pasta, soy milk and cheese (Il latte ed il formaggio di soja [tofu]), fermented products (sauces: natto, miso, koji, soy sauce {called *shoyou* or *soyou* in Japanese, *tsiang-yeou* in Chinese}). 6. Medical and therapeutic applications of the soybean. 7. The economic problem of soybeans. 8. Conclusion.

Note 1. This is the earliest Italian-language document seen (April 2012) that uses the words *shoyou*, *soyou*, or *tsiang-yeou* to refer to soy sauce.

Note 2. This book's large bibliography contains more errors than any other soy-related bibliography ever seen. Address: University of Padova, Italy.

2703. Hikosaka, Itarô. 1928. Hompô shôyu-gyô no hattatsu to sono rôdô mondai: Noda rôdô sôgi no ichi kenkyû [Development of Japan's shoyu industry and its labor problems: A study of the great Noda strike (1927-28)]. Noda: Tamotsu Kato. 44 p. Series: Noda Rodo Daisogi Shiryo Shusei. Reprinted 1973 by Ron Shobo in Nagareyama, Chiba prefecture, Japan. [Jap]

2704. Lewis, Norman. 1928. Samples, demonstrations and packaging: Their use in advertising. New York: The Roland Press Company. vii + 250 p. See p. 215. Illust. Index. 22 cm.
• ***Summary:*** In Chapter 19, "Designing the regular-sized package," the section titled "Packages of all kinds" states (p. 214-15): "The La Choy Assortment Package is made up of individual packages of ingredients used in the making of chop suey and other Chinese dishes." Address: Vice-President, Chappelow Advertising Co., author of "How to Become an Advertising Man".

2705. Maliareffsky, G.I. 1928. Preparation of Chinese soy bean sauce in North Manchuria. *Vestnik Manchzhurii* (*Manchuria Monitor*) No. 1. p. 11-12. English edition. [Eng]
• ***Summary:*** Combined with the Russian text, this 10-page document contains 15 black-and-white photos. Discusses the process, technology, and equipment used to make fermented soy sauce in Manchuria in the late 19th and early 20th centuries. Photos show: Materials used. The Li-tung Company at Fushiatien. Boiler house with vats where beans are dried for fermenting. Earthen pots containing corn 'miso' during fermentation. Coopers shop where vats are made. Rye for making into koji. Grinding stones for crushing rye koji. The wood press. Address: Harbin, Manchuria.

2706. Matsuoka, Komakichi. 1928. Noda dai rôdô sôgi [The great Noda strike]. Tokyo: Kaizosha. 415 p. [Jap]*
• ***Summary:*** This is the most detailed account ever written of the strike against the Noda Soya Sauce Co., today's Kikkoman.

2707. Matsuoka, Komakichi, ed. 1928. Noda sôgi no shin'in keika oyobi genjô. Kaisha no kodai ?? ni kyôkô no sen?? o ??su [The Noda strike]. Japan: Nihon Rodo Sodomei Kanto Rodo Domeika. 24 p. Series: Noda Rodo Daisogi Shiryo Shusei. Reprinted in 1973 by Ronshobo in Nagareyama, Chiba prefecture, Japan. [Jap]*
• ***Summary:*** A summary account of the strike against the Noda Soya Sauce Co., today's Kikkoman.

2708. Namiki, Shigetarô, ed. and pub. 1928. Noda sôgi no tenmatsu [Detailed account of the great Noda strike]. Noda, Japan: Published by the author. 374 p. 19 cm. With support from Noda Shoyu K.K. [Jap]*
• ***Summary:*** The author was the labor relations specialist for the Noda Shoyu Company, today's Kikkoman. This is one of the two most detailed accounts of the strike ever written. It discusses events from the management's viewpoint. Address: Noda, Japan.

2709. Namiki, Shigetarô, ed. and pub. 1928. Noda sôgi no keika nichiroku [Daily record of the development of the great Noda strike]. Noda, Japan: Published by the author. 15 + 172 p. 19 cm. With support from Noda Shoyu K.K. [Jap]*
• ***Summary:*** Mr. Namiki was the labor relations specialist for the Noda Shoyu Company, today's Kikkoman. This is one of the two most detailed accounts of the strike ever written. It discusses events from the management's viewpoint. Address: Noda, Japan.

2710. New, Ilhan. 1928. When I was a boy in Korea. Boston, Massachusetts: Lothrop, Lee & Shepard. 190 p. Frontispiece (2 portraits). Illust. 19 cm. Series: Children of other lands books. *
• ***Summary:*** New was born in 1894, the first born son of New Kee Yun, a silk manufacturer and a successful business man. A patriot and a leader among the converts to Christianity, New lived part of his life in Manchurian villages. With 35 black and white photos.

2711. Nihon Shakai Mondai Kenkyujo [Japan Social Problems Research Center]. ed. 1928. Roda sôgi Noda

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kessenki [The Noda strike: A record of the bloody battle]. Tokyo. 8 + 442 p. Illust. 19 cm. [Jap]*
• ***Summary:*** About the major Noda Shoyu (Kikkoman) strike of 1927-28. Address: Tokyo, Japan.

2712. Nippon Joyukai. 1928. Jôzô ronbun-shû [Collected dissertations on fermentation]. Tokyo: Nippon Joyukai Shuppan-bu. 943 p. [Jap]*

2713. Nippon Jozo Kyokai Chubu Shibu. 1928. Shôyu tamari jôzôhô kôgi [Lectures on shoyu and tamari fermentation]. Nagoya: NJKCS. 369 p. [Jap]*

2714. Noda Shoyu Kabushiki Kaisha. 1928. Noda sôgi no keika nichiroku [A daily record of the development of the Noda strike (1927-28)]. Nodacho, Chiba prefecture. 15 + 172 p. 19 cm. [Jap]*
• ***Summary:*** See S. Namiki, 1928. About the major Noda Shoyu (Kikkoman) strike of 1927-28. Address: Noda, Japan.

2715. Noda Shoyu Kabushiki Kaisha. 1928. Noda sôgi no tenmatsu [A detailed account of the Noda strike (1927-28)]. Nodacho, Chiba prefecture. 374 p. [Jap]*
• ***Summary:*** See S. Namiki, 1928. This was the bitterest strike in the history of the company that was later named Kikkoman, Inc. Address: Noda, Japan.

2716. Suzuki, Umeshiro. 1928. Noda no rôshi sôgi [The conflict between labor and management at Noda]. Japan: Jitsuseikatsusha. 140 p. Reprinted in 1973 by Ron Shobo in Nagareyama, Chiba prefecture, Japan. Series: Noda Rodo Daisogi Shiryo Shusei. [Jap]*
• ***Summary:*** About the great Noda Shoyu Strike of 1927-28.

2717. Matsumoto, Kenji. 1929. Shôyu jôzô ni kansuru saikin-rui ni tsuite [On the bacteria in shoyu brewing]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 24(1):23-31. Jan.; 24(2):18-23. Feb.; 24(3):32-36. March; 24(4):25-30. April; 24(5):25-30. May; 24(6):26-30. June. [Jap]
Address: Jozo Shikensho Gishi.

2718. Taira, Tomotsune. 1929. Shôyu no sarichiru-san kenshutsu-hô ni tsuite [Detection of salicylic acid in shoyu]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 5(2):156-58. Feb. [11 ref. Jap]

2719. Tamiya, Hiroshi; Morita, Shinkichi. 1929. Bibliographie von Aspergillus 1729 bis 1928 [Bibliography of Aspergillus from 1729 to 1928]. *Botanical Magazine* (*Tokyo*) 43(506):60-71. Feb.; 43(507):145-56. March; 43(508):179-89. April; 43(509):237-49. May; 43(510):281-91. June; 43(511):321-32. July; 43(512):371-81. Aug.; 43(513):427-38. Sept.; 43(514):501-15. Oct.; 43(515):577-89. Nov.; 43(516):625-33. Dec. [2424 ref. Ger]
• ***Summary:*** A superb bibliography of 2,424 citations listed chronologically by year, and within each year alphabetically by author. Part 1, 1929, covers the years 1729 to 1920 and contains 1,655 references. At the end of the last installment (1930) there is a complete author index. Continued in the Jan. 1930 issue. Address: Japan.

2720. Kinugasa, Y.; Hattori, Y. 1929. Shôyu bôfuzai anzen-jô no shôyu ni taisuru bôfu kôryoku shiken seiseki hôkoku [Effect of a preservative "Anzen" tablet on the preservation of shoyu]. *Eisei Shikenjo Iho* (*Bulletin of the Imperial Hygienic Laboratories*) No. 33. p. 187-88. March. [Jap]
Address: Tokyo Eisei Shikenjo. 1. Gishi; 2. Gishu.

2721. Noda Shoyu K.K. 1929. Noda Shôyu Kabushiki Kaisha annai [Introduction to Noda Shoyu, Inc.]. Noda-machi: Japan. 43 p. March 5. Illust. [Jap]
• ***Summary:*** This book contains many interesting photos. Address: Noda, Japan.

2722. *Japan Advertiser*. 1929. Farm experts talk to Pan-Pacific Club: W.D. Morse and T.H. Dorset [sic, P.H. Dorsett] are here to study agricultural conditions. April. 13. [Eng]
• ***Summary:*** At this talk in Tokyo, Morse notes that has been working at the USDA on the soybean and other Oriental crops for 22 years. He is interested in their utilization and adaptation. Soybean cultivation in the United States has increased tremendously during the last ten years. One of Morse's principal tasks in the Orient is to find soybean varieties with a low oil content, which will not produce soft pork.

"I doubt if we will ever use the soy bean as you use it here. We are using the soy sauce; we have a Japanese who has established a factory, and his shoyu sauce is becoming quite popular all over our country. He is also canning little bean sprouts, as we can peas and beans."

Note 1. Reprinted in the Log of the Dorsett Morse expedition to East Asia, p. 628-29. The Japanese date on this article is Taisho 13, first month, 9th day.

Note 2. The Japanese man to whom Morse is referring is probably Mr. Shinzo Ohki of Oriental Show-You Company in Columbia City, Indiana. The "bean sprouts" he made were mung bean sprouts.

2723. Dorsett, P.H.; Morse, W.J. 1929. Soy sauce (shoyu) in Japan, China, and Manchuria (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.
• ***Summary:*** Page 655 (16 April 1929). "A representative of

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a Shoyu Sauce Company called on us and wished to give us a demonstration of a new process of soy sauce manufacture. This company had developed a chemical compound which when added to the regular soy sauce doubles the amount and makes an excellent soy sauce." However, in exchange, the company wanted the Americans' endorsement to use in advertising. He was politely refused.

Page 847 (May 2). Visited the soy sauce and rice wine experiment station [*Jozo Shikensho*] at Nishigahara. Met Prof. Dr. K. Kurono, who was said to be in charge. His young assistant took them through the soy sauce factory and rice winery. "We were able to get considerable data about the making of soy sauce as all the various steps involved were in operation and we were able to obtain seed of the soybeans and wheat used especially in making soy sauce.

Page 1222 (May 27). Dr. Ito made arrangements for Morse to visit a large soy sauce factory on the outskirts of Sapporo, Hokkaido. The Tomoe Shoyu Factory consisted of several large buildings covering several acres. Morse was shown through the entire plant. The wheat and soybeans are grown in Hokkaido, but each consists of a mixture of varieties; samples were sent to the USA. This factory uses the most modern machinery and methods. "In one of the large vat rooms more than 120 vats were counted in which the wheat and bean mash [moromi] is cured for about 18 months. The mash from which the soy sauce was pressed out is sold as cattle and hog feeds around Sapporo. The manager was interested in the possibility of selling soy sauce in the United States." A photo shows the outside of the factory's headquarters in Sapporo.

Note 1. This is the earliest English-language document seen (July 2011) that contains the term "bean mash" or the term "wheat and bean mash." The latter almost certainly refers to *moromi*.

Page 3341 (24 Dec. 1929). "Today [in Tokyo] Morse and Suyetake went to call upon soy sauce and natto manufacturers for the purpose of getting acquainted and also if possible to arrange for getting still and motion pictures of their places, equipment, and operations."

Page 3499 (9 Jan. 1930). They got six good photos of steps in the making of soy sauce at the Noda Shoyu Co. It is probably "the first time that such a picture has been made." "Detailed notes and descriptions of these soybean products will be found in the special report on soybean and soybean products which is a part of this report."

Page 4341 (March 11). A photo (neg. #45026) shows numbered specimens of various ingredients (in bottles) used in the manufacture of soy sauce, including soybeans, wheat, soy mash [moromi], malt from curing tub, soy sauce, soy sauce oil, and a small wooden cask. Purchased in Tokyo.

Page 4356. Photo (neg. #45033) of "a small quantity of mash left after the sauce has been pressed out. It is known locally as 'shoyu kasu.' It is used for feeding hogs and cattle and also for a fertilizer."

Page 4357 (March 17). "About 11 a.m. we went to the Yamasa Shoyu Factory at 576 Nakano-machi, Tokyo, Japan. There we met Mr. S. Yamaguchi, the manager, who allowed us to make pictures in the factory culture room and storage and curing sheds."

Pages 4358-4366. Photos (negatives #45034-42) of Yamasa Shoyu Sauce Factory in Tokyo. 1. Hydraulic press with thin bags for pressing out the sauce. 2. Factory interior, incl. cookers, pump, large casks. 3. Interior of wheat roasting and preparation room, with roaster, pile of small [koji] trays, huge wooden rafters. 4. Interior of culture room, with lines of small boxes [koji trays] on both sides. 5. Large iron double-boilers in which soy sauce is cooked [pasteurized?]. 6. Storing and aging room containing 4 rows of 16 casks each, taken at level of rim of casks. Each cask is about 8 feet across and 8-10 feet deep. The company has 8 such rooms and all are kept at full capacity. 7. Storage and curing shed (same room), taken from ground level. 8. Pile of "roasted wheat mixed with bacterial germs for shoyu sauce." Note 2. Actually, this contains soybeans and koji mold spores, about to be put into trays to make koji. Morse failed to understand these two basic facts. 9. Small wooden casks "ready for filling with shoyu sauce."

Page 5649-50 (28 Aug. 1930). Heijo, Chosen [Pyongyang, North Korea]. Morse visited the branch office of the Grain Inspection Office of the Neian Nando Prefecture to learn about soybeans. Last season (1 Nov. 1928 to 1 Nov. 1929) some 263,090 bags of soybeans (of 2 bushels each) were inspected and shipped out from various points in the prefecture. "The Noda Soy Sauce Co. obtains most of its soybeans from here. The beans are shipped entirely to the Main Island [Honshu, Japan] for miso, soy sauce, and natto. Note 3. Chosen has been a Japanese colony since 1910.

Pages 6339-43 (3 Nov. 1930). In Peiping [Beijing], China. After tiffin they visited the Lan Hsin Chai "soy sauce, soy jam [chiang / jiang], and pickle" factory of Mr. Wang in the outer city to the southwest–not far from Hsuan Wumen Street. It is about 300 years old and many of the large earthen glazed jars are the same age as the establishment.

Note: This is the 2nd earliest English-language document seen (Nov. 2011) that uses the word "jam" to refer to *chiang / jiang*.

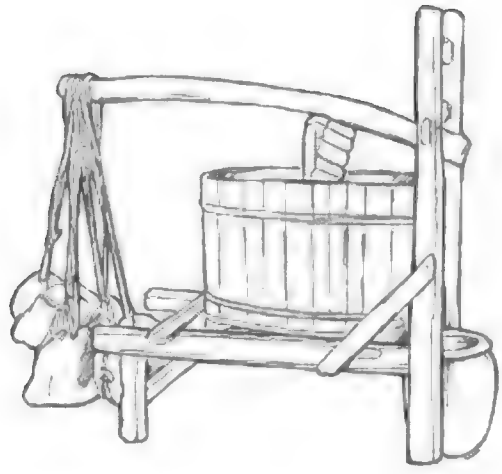
Pages 6341-45 (negatives #46157-61) show photos of this factory. 1. Side view "of one of a number of old Chinese lever soy sauce presses." 2-3. Other views of soy sauce press, with jar in foreground. 4-5. Many large earthen jars, some covered with reed grass matting, in outdoors compound / courtyard.

Page 6802 (16 Dec. 1930). At Dairen, Manchuria, Morse met Dr. Kato at the Central Laboratory of the South Manchuria Railway Co. Concerning Japan, Dr. Kato said Ajimoto [a type of HVP] was made from wheat proteins, not soybean proteins. However, in and around Kyoto a product named Soyamint was very similar to Ajimoto but was made

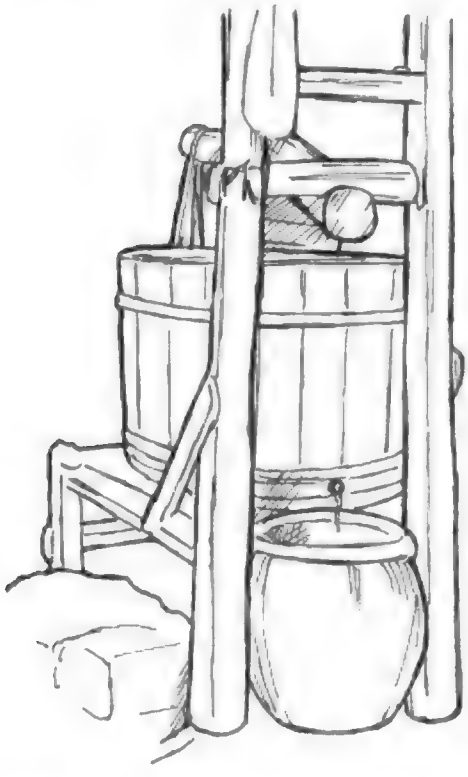
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from soybeans.

Pages 7008-09 (21 Jan. 1931). In Tokyo, Morse visited the Institute of Physical and Chemical Research, where he met Dr. U. Suzuki, Prof. of Biological Chemistry at Tokyo Univ. "With reference to Soyamint, Dr. Suzuki advised that it is a soy sauce substitute–one half chemical and one-half fermentation" [i.e., a mixture of equal parts HVP and fermented shoyu].

Pages 7035-36 (24 Jan. 1931). In Tokyo, Morse "learned that soy sauce is prepared in nearly 12,000 establishments throughout the Japanese Empire and in addition it is made in private homes, especially farm homes. When 5 koku [1 koku = 47.6 gallons or 180 liters] (liquid measure) of soy sauce are made, a permit must be obtained from local authorities. Various sections in Japan are noted for brands of soy sauce such as Noda, Chiba Prefecture, for its "Kikkoman' and 'Higeta' soy sauces. In the Kwansei [Kansai, Osaka-Kyoto] district the 'Marukin' soy sauce is made while in the Tatsuno district [in western Japan's Hyogo Prefecture] the light colored [*usukuchi*] soy is made. The various brands are made in slightly different ways regarded as trade secrets by the various companies. Many experiments by chemical laboratories are being conducted to make artificial soy sauce and also to shorten the period of fermentation.

"Considerable quantities of Japanese soy sauce are exported, China being the chief market. Recently America and Europe have made increasing demands. In shipping to some countries, especially America, condensed soy sauce is exported, then water added and bottled."

Pages 7066-67 (30 Jan. 1931). In Tokyo, Morse has been trying for some time to locate the company that makes Soyamint. Finally, Mr. Suyetake found that it was made by the Japan Fertilizer Co. Morse visited the main office and met one of the directors, Mr. Koshiro Horie, who said that "his company supplies 65% of the commercial fertilizers used in Japan. One of the principal by-products of the manufacture of fertilizers is used with soybean oil meal in producing an artificial soy sauce. The process of manufacture is more or less secret so that it is not possible to visit the factory. As yet 'Soyament' is not on the market in large quantities as it is of only recent manufacture. It is said that soy sauce can be made in slightly over one month with this process, allowing one month for curing. It has quite a different flavor from that of soy sauce and it may take some time to establish it on the market. It can be produced much more cheaply than the ordinary soy and being cheaper may help it to take more quickly with the poorer classes." Mr. Horie gave Morse some literature about Soyament and promised to send samples of two grades of commercial products which differ principally in specific gravity. Address: Agricultural Explorers, USDA, Washington, DC.

2724. Morse, W.J. 1929. Re: Soybeans and Japan. Letter to R.A. Oakley, USDA, Washington, DC, April 27. 3 p. Handwritten, with signature on hotel letterhead.

• ***Summary:*** "Have been thinking about writing you for more than two weeks but just couldn't get around to it. Sure do keep busy night and day... As we are sending our first lots of seed, bulbs, etc. in which are many soybeans, adsuki, etc., thought I had better write about the planting.

"Before leaving Washington, I explained to Mrs.

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Donavan about taking small samples of each number as it came for our sample cases. All of the soybeans can be grown at Arlington Farm [Virginia] even if they are not planted before June 20." He gives planting instructions for the adsuki beans, mung beans, cowpeas, hyacinth beans (*Dolichos lablab*), jack beans and sword beans; they "can be planted at the Sandhill in Columbia, South Carolina, and also at McNeill, Mississippi."

"This trip has more than opened my eyes on the soybean plan. Soy sauce, the green vegetable bean, and possibly miso are the only products now used extensively in the Orient that have possibilities in the United States as foods. The oil industry, of course, will be our great development... I just saw an article in one of the daily papers here where soybean oil meal led all fertilizers used in the Japanese Empire and is the largest imported one... The main object in the Orient as I see it is to obtain as many varieties as possible to fit in our diversified conditions and then work out the other problems so they fit in with the sections.

"I have taken about 500 feet of motion picture films with the DeVry which Dr. Pieters bought for me and have had very good results."

Location: National Archives, College Park, Maryland. Record group 54–Bureau of Plant Industry, Soils and Agricultural Engineering. Subgroup–Div. of Forage Crops and Diseases. Series–General Correspondence, 1905-29. Box 93–Morse-Napier. Folder–Morse, W.J.-#4 F.C.I.

Sent to Soyfoods Center by Jacob Jones of Purdue Univ., Aug. 1998. Address: The Imperial Hotel, Tokyo, Japan.

2725. Morse, W.J. 1929. Re: Impressions of Tokyo, Japan. Letter to Lena and John Morse (his parents), Washington, DC, May 10. 10 p. Typed, without signature (carbon copy).
• ***Summary:*** "Dear Folks, Well things have been going so fast since I last wrote that I hardly know where to begin and so much that to tell it all would take a book, seems to us that there is always some festival going on, a holiday or something.

"On May 5 was the boy's festival and one sees fish, paper or cloth, flying from houses where there is a boy." Describes a visit to an experiment station to see the manufacture of soy sauce (experiments carried on in a small factory size) and many journeys in the Japanese countryside. Morse is struck by the beauty of the countryside, temples, gardens, and flowers, and by the strong smells in villages from the "manure pits" containing well-rotted night soil (human excrement). Signed: Will, Edna and Margaret–Morse, is wife and daughter. Address: Imperial Hotel, Tokyo, Japan.

2726. Dorsett, P.H.; Morse, W.J. 1929. Miso in Japan (Document part). In: P.H. Dorsett and W.J. Morse, 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.
• ***Summary:*** Pages 1009-10 (14 May 1929, Tokyo). "Copied from Mr. Morse's diary. In the afternoon we went to Matsuzakaya store to look over bean products and as a result we secured seventeen different soybean products. We found that they had 20 different forms of miso, a product which we think may have possible value at home."

Page 1053 (16 May 1929, Tokyo, Japan). A photo shows a natural sized picture of a small wooden box of miso. The Japanese name is given but is illegible.

Page 1054. "Natural sized picture of a small wooden box of miso. Native name: "Kansai miso." It is made in the Kansai district [the Kyoto-Osaka area] and is used in making miso soups (neg. #43659).

Page 1068. Photo of a "small wooden box of 'Edomiso' [Edo miso] which is made in the Tokyo District. Miso which is quite salty is used in making soups. In the city, miso soup is used for breakfast, which in the country miso soup is used for lunch and supper."

Page 1070. Photo of a small wooden box of "Shiromiso" [shiro miso], meaning white miso. "This form contains rice and is used in making miso soup."

Page 1202 (26 May 1929, Sapporo, Japan). Mr. Morse visited the Hokkaido Agricultural Experiment Station at Kotoni. Mr. Takatsugo Abiko explained that "The soybeans grown in Hokkaido are used entirely for food purposes such as natto, bean curd, green vegetable bean, soy sauce, miso, bean paste and roasted beans."

Page 2004 (29 July 1929). Morse visited the Saitama Experiment Station at Urawa, Saitama prefecture. Met Mr. Tadashi Hashigawa, who is in charge of the soybean work of this prefecture, which is third in soybean acreage in the Japanese Empire. His main work is developing varieties to be used for making soy sauce, tofu, miso, and natto. This station grows about 50 varieties, nearly all yellow-seeded and medium in size.

Page 2445-46 (19 Sept. 1929). Visited the Tokachi Branch Experiment Station in Hokkaido. Met Mr. Seiji Kawase and Yoshio Fujine. 60% of the crops grown in Hokkaido are legumes; of these, field beans are first, followed by soybeans, then field peas. The Tokachi district is very well adapted to soybean culture. There are five grades of soybeans plus a special grade for beans that will be used for soy sauce, miso, etc. Of the 1,837,325 bushels of soybeans produced in Hokkaido, 58% is exported [to outside of Hokkaido] and 42% is consumed in Hokkaido as follows: Miso 9%, soy sauce 9%, seeding 6%, tofu and other products 18%. In 1923 Hokkaido was Japan's leading soybean producing region with 17% of the nation's production, followed by Ibaragi [Ibaraki] 5%, Saitama 5%, Nagano 4%, Kumamoto 4%, Aomori 4%, Niigata 4%, etc. Address:

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Agricultural Explorers, USDA, Washington, DC.

2727. Dorsett, P.H.; Morse, W.J. 1929. Tofu and other soybean products in Japan (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.
• ***Summary:*** Page 1051, 1056 (16 May 1929). Tokyo, Japan. A photo shows: "Nearly natural sized picture of a package of dried bean curd or tofu. Native name is 'Koya tofu.' The fresh bean curd is first frozen and then dried. This dried form of curd is used in general cooking with vegetables and meats." The front label on the rectangular package is attractive (neg. #43661).

Page 1057. A photo shows: "Section of a large bamboo culm [the round, hollow stem] which has been transformed into a package for holding (for sale commercially) vegetable pickles. The handle is of kudzu vine. The stopper is of cedar [*hinoki*], *Cryptomeria japonica* (neg. #43662).

Page 1059. "Slightly larger than natural sized picture [photo] of a package of roasted soybeans imbedded in very small rice flour cakes. Beside the package are some of the beans in the rice cakes. This article of food is known as "Mame taro" [as written on the label]. The skin of the bean is dyed green. These are eaten as confections and may be had at all confectionary stores" (neg. #43664).

Page 1060. "Natural sized picture of rice flour cakes in which are imbedded small black seeded soybeans. Native name is 'Mameiri abura age kaki mochi.' Meaning roasted beans on fried rice cakes" (neg. #43665).

Page 1064. Two packages of mungbean noodles or vermicelli obtained from the Matsuzakaya Department Store. The vermicelli is known in Japanese as "Tomen'" [sic, Harusame] (neg. #43669).

Page 1065. "Natural sized picture [photo] of a sample of sugared soybeans (native name 'Sato Daidzu') and of a sample of roasted soybeans (native name 'Nori-mame' or daidzu) over which, during the last stage of roasting, finely cut [nori] seaweed is scattered. Both products are used as confections and are to be had at all confectionary stores" (neg. #43670).

Page 1067. "Natural sized picture of roasted soy beans imbedded in very small rice flour cakes. The skins of the beans are dyed green" (neg. #43672).

Pages 1201-02 (26 May 1929). While visiting the Hokkaido Agricultural Experiment Station at Kotoni, Sapporo, Mr. Morse notes: "The soybeans grown in Hokkaido are used entirely for food purposes, such as natto, bean curd, green vegetable bean, soy sauce, miso, bean paste and roasted beans." Address: Agricultural Explorers, USDA, Washington, DC.

2728. Dorsett, P.H.; Morse, W.J. 1929. Hama Natto and Daitokuji Natto in Japan and salted soybeans in Peiping, China (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.
• ***Summary:*** Page 1053 and 1055 (16 May 1929). Tokyo, Japan. A photo shows: "A little more than one-half sized picture of a box of Natto–native name 'Hama Natto.' It is made in the Hamamatsu District [Shizuoka Prefecture, central Japan]. It is known as dry natto. The beans are soft and of a flavor like dill pickles. The beans are eaten as a relish. D. & M. #246" (neg. #43660).

Note 1. This is the earliest English-language document seen (Nov. 2011) that contains the term "Hama Natto" (unhyphenated, regardless of capitalization); it refers to a type of traditional Japanese fermented black soybeans.

Pages 3229, 3230, and 3231 (10 Dec. 1929, Kyoto). Contains long lists of the vegetables and fruits seen in the Kyoto morning market. "We got two nice soybeans, one a fine large black one, the other as nice a yellow one as we've seen."

"We then went to a Natto manufacturing place near an old temple known as Daitokuji. Here we tried out a kind of natto [Daitokuji natto = fermented black soybeans] which we think might take with the American people, also miso, both are different from any we have previously seen. A detailed account of the manufacture of these products is to be found in our special report concerning the soybean and its products."

Note 2. This is the earliest document seen and the earliest English-language document seen (Nov. 2011) that mentions Daitokuji as a place that manufactures fermented black soybeans in Kyoto, Japan, near the old temple named Daitokuji. Daitokuji is a Rinzai Zen Buddhist temple in northern Kyoto. Here "Daitokuji natto" have long been made as both a seasoning in the vegan diet of the monks and as a well-known souvenir for tourists.

Page 3231. "We left Kyoto on the 10:14 p.m. train and are due to arrive in Tokyo about 9:00 a.m. tomorrow morning, Wednesday, December 11, 1929." Pages 3469 and 3483 (8 Jan. 1930). Tokyo, Japan. A photo shows: "Box of dried form of Natto sold under the name of 'Hama-natto.' Purchased at the railway station of Hamamatsu, Japan, December 11, 1929. This form is only made in the Hamamatsu district. Eaten as it is, when one drinks tea. Box 7½ inches long and 4¼ inches wide. D. & M. #3442" (neg. #44743).

Page 3484. "Box of soybean 'Natto' purchased from a Natto factory in Kyoto, Japan, December 10, 1929. Native name 'Tsubunatto' [Tsubu-natto; slightly crushed natto] or

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'Daitokuji' Natto. This is a dried form of Natto, commonly known as 'Hamanatto,' and is only made in Kyoto and Hamamatsu, Japan. The name 'Daitokuji' Natto is taken from the Daitokuji Temple, of which a priest first made this product. Generally eaten when drinking tea. Box is 7 inches long and 4 inches wide D. & M. #3071" (neg. #44744).

Page 3486. Box of Natto, known as 'Hamanatto,' purchased at a small store in Tokyo, Japan, December 24, 1929. This is a dried form of Natto and is made in Hamamatsu, Japan. Hamanatto is eaten when one drinks tea. Box 6 inches wide; 7½ inches long. D. & M. #3073" (neg. #44746).

Page 6264 and 6274 (24 Oct. 1930). Peiping, China. P.H. Dorsett. A photo shows: "Soja max. Salted soybeans... Life sized pictures. Dry form, D. & M. #47531; moist form D. & M. #47530. Dry form consists of small flat black beans cured like string natto and then dried. Moist form, soybeans cured like string natto" (neg. #46124). Note 3. Natto (stringy natto) is unknown in modern China. The salted black soybeans may well be fermented black soybeans (fermented, salted black soybeans).

Page 6945 and 6946 (13 Jan. 1931). Kyoto, Japan. "Notes by Mr. W.J. Morse... We were taken to the Chemical Laboratory where Mr. Katagiri is doing some work on soybean products, especially soy sauce. Concentrated soy sauce is shipped to the United States in rather large amounts and then diluted and bottled. We were shown a sample of soyamint which is a practical soysauce product and made in about three months. It is said that the soybeans are treated with an acid solution, then neutralized and rice Koji added. After three months of curing, the soy sauce is ready for use.

Note 4. This is the earliest English-language document seen (April 2012) that contains the word "soysauce" (spelled as one word).

"After lunch we went to the Taitokuji [sic, Daitokuji] Temple where the famous Taitokuji Natto [sic, Daitokuji Natto] is said to have been originated by one of the Temple priests more than 400 years ago.

"Mr. Sekkai Ota, one of the temple priests, very kindly explained the history of the dried form of Natto as well as the whole process of its manufacture. This form of Natto will keep indefinitely and is eaten when sprinkled with a mustard sauce or sweet liqueur. The Hamamatsu Natto is made in the same manner but is allowed to dry more."

Page 6947 (13 Jan. 1931). Soybean Natto. Photo shows: "Group at the Kyoto Imperial College of Agriculture: Prof. Matsumoto, Prof. Kamikawa, W.J. Morse, U.S. Department of Agriculture, Washington, D.C. and Mr. Sekkai Ota, Priest of the Taitokuji [sic, Daitokuji] Temple at Mr. Morse's right, who explained the method of manufacture of Taitokuji [sic] Natto. A dried form of Natto originated at the Temple more than 400 years ago" (neg. #46446). Address: Agricultural Explorers, USDA, Washington, DC.

2729. Dorsett, P.H.; Morse, W.J. 1929. Natto in Japan (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.

• ***Summary:*** Page 1179 and 1180 (25 May 1929). Sapporo, Japan. "Copied from Mr. Morse's diary:..." "After our visit with Dr. Ito we went to the Natto Laboratory of which Dr. [Jun] Hanzawa is in charge. We were given bulletins regarding the history, making and varieties of Natto, and served bottles of different sizes of Nattokin [Natto bacteria] (liquid pure culture) for the making of different kinds of Natto. We were then shown the various forms of Natto and taken through the various rooms and given detailed information on the various steps involved in the production of natto."

Page 1202 (26 May 1929). Sapporo, Japan. Mr. Morse visited the Hokkaido Agricultural Experiment Station at Kotoni. Mr. Takatsugo Abiko explained that "The soybeans grown in Hokkaido are used entirely for food purposes such as Natto, bean curd, green vegetable bean, soy sauce, miso, bean paste and roasted beans."

Pages 2003 and 2004 (29 July 1929). A letter from Mr. Ryerson dated 3 June 1929 noted that at least some of the colored motion pictures were good. "He wrote as follows: 'The last material received from Vitacolor was a great improvement. The azalea scenes were gorgeous.'"

"We were deeply grieved to note in the same letter the following paragraph concerning Dr. Galloway: 'Dr. Galloway has had to give up and go home. He will be leaving for a cooler section within a week. His nerves have gone back on him and he is facing the same siege that he had 10 years ago, much to the regret of all of us.'"

Mr. Morse added: "A visit was first made to the Saitama Experiment Station located at Urawa, Saitama Prefecture. We met here Mr. Tadashi Hashigawa, Agricultural Engineer, who is in charge of the soybean work of the Saitama Prefecture, which is the third in acreage of soybeans in the Japanese Empire. The work with soybeans consists mainly of developing varieties for seed to be used in making soy sauce, tofu, miso, and natto. This station is growing about 50 varieties nearly all yellow-seeded sorts with seed of medium size. In looking over these varieties in the trial grounds we found some very excellent varieties that no doubt will have value in the United States from southern Virginia southward. Especially North Carolina, Tennessee, and the upper delta of Mississippi. Mr. Hashigawa promised to send us samples of seed of all the varieties being grown at the station."

Page 3341 (24 Dec. 1929). "Today Morse and Suyetake went to call upon soy sauce and natto manufacturers for the purpose of getting acquainted and also if possible arrange for getting still and motion pictures of their plants, equipment

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and operations."

Page 3479 (8 Jan. 1930). Tokyo, Japan. *Soja max*, soybean. Photo of: "Three specimens of 'String Natto' [itohiki natto], one package (made of rice straw) unopened; one opened; and the natto without the package. These were purchased at a Natto factory, Tokyo, Jan. 6, 1930. The [rice-straw] packages are 15 inches long and 2½ inches wide. String natto is eaten after having mixed it with a mustard paste" (neg. #44739).

Note: This is the earliest English-language document seen (Jan. 2012) that uses the term "String Natto" to refer to natto or *itohiki natto*, or that uses the word "string" in connection with natto.

Pages 3925, 3929 (18 Feb. 1930). "It is one year ago today since we left Washington for Japan... We have found much of interest in connection with our special line of work, much more even than we expected, and therefore the time has passed all too quickly..."

"Morse and Suyetake searched for soybean products today, and were successful in bringing in a collection of two dozen things slightly or entirely different from those previously secured."

Page 3929. Photo shows: "Small triangular packages, one as purchased, the other unwrapped. They contain string Natto. The native name is 'Hygienic Miyako Natto.' There is at one side a small triangular paper containing dried mustard; this is inclosed [sic] with the Natto. Purchased in Tokyo, Feb. 16, 1930. Soybean dish measures 3 inches across" (neg. #44937).

Pages 6822-23 (22 Dec. 1930). Kyoto, Japan. Mr. Morse's notes. At the Imperial Agricultural College they met Isawo Namikawa, Professor of Horticulture, who said that Kyoto is noted for several special soy products such as white miso, soy sauce, and natto.

Page 6937 (10 Jan. 1931). Tokyo. Notes by Mr. Morse. Spent most of the day in the Shinjuku district looking up soybean products. "More String Natto in rice straw packages was observed in this section than any we have visited." Address: Agricultural Explorers, USDA, Washington, DC.

2730. Fukai, Tôshi. 1929. Shôyu hakkô to shiyu no kankei. I. Shôyu abura ni ganyû seraruru shibô-san echiiru esutaa narabini yûri shibô-san ni tsuite [On the relation of fat and brewing shoyu. I. On the ethylester of fatty acid and free fatty acid in shoyu]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 5(5):458-70. May. [7 ref. Jap]
Address: Jozo Shikensho.

2731. Morse, W.J. 1929. Japan travel notes, April 5 to May 17. Handwritten manuscript. 27 p. Unpublished manuscript.
• ***Summary:*** Morse wrote these notes by hand in ink, early in the trip to East Asia, in a personal unlined notebook that was about 9 cm (3.62 inches) wide and 14.5 cm (5.75 inches) high. Most of the pages are unnumbered, no date or place is given for many of the entries, and the handwriting is occasionally faded or hard to read.

The purpose of this notebook and how Morse used it is unclear. These may have been his field notes that he used each evening as the basis for his official typewritten USDA trip report. Or was this a personal diary in which he kept personal observations that would not become part of the official report? This seems less likely.

This is apparently the first notebook in a series of many that Morse wrote. He kept the notebook after the trip and in April 1986 his daughter, Mrs. Walter A. Thalman (22 Interlaken Dr., Eastchester, New York 10709), who kindly photocopied it for Soyfoods Center.

Here are some quotations: "After a few minutes, we were served tea and cigarettes. Dr. Anda told us where the soybean work is being conducted. The soybeans are grown mostly in northeastern Japan, and specially on the island of Hokkaido where considerable breeding work is being done. At the Imperial Station in Tokyo, much chemical work is being done in the study of the manufacture of shoyu sauce and miso.

"After a visit to the Exper. Station we went to Ueno Park to visit and look over the cherry trees. The trees are in bud and should be in full bloom in about one week. Many of the trees are very large and quite old."

Food show: The International Food Show was being held in the large building in the park [Ueno]. A small admission fee was charged. The show lasts from April...

"Soybean products: The manufacture of shoyu or soy sauce was shown in several different booths. In one booth, samples of soy sauce made by the various soy manufacturers was shown in various sized bottles and kegs. In another booth, the ingredients used and the method of manufacture were shown. Large yellow soybeans were shown, a bottle of wheat, a bottle or jar of the rice ferment [sic, wheat ferment, koji], the product consisting of roasted wheat, cooked soybeans, after addition of the ferment. Then a jar of the product after the addition of salt and water, and curing for a certain length of time [shoyu moromi]. Then a jar of the sauce was shown which was pressed out of the preceding jar. The cake or ___ which was left after pressing out the liquid was shown.

"Tofu or bean curd: The different materials used in the manufacture of bean curd were shown. 1st were shown a bushel tub of large yellow soybeans (sample sent to Washington as coming from the national food show). 2nd was shown the beans soaking in water. 3rd was shown the bean milk. 4th was shown a jar of magnesium sulfate water used in precipitating the protein of the tofu milk (as it is called in Japan)... salts in precipitating the protein. Then were shown the blocks of tofu or bean curd. Many kinds of bean curd are made, depending on the amount of pressing. The soaking of beans in warm water or longer soaking in

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cold water. The amount of the water added in making the bean milk. Tofu is not made in large factories, but in small factories or stores scattered throughout the city. Small dealers or hucksters with the two tubs one at each end of a pole slung over their shoulder. Tofu (blocks) are in these tubs and the huckster has his route passing along blowing a horn which has a peculiar sound. He also passes back in alleys to his customers, leaving his tubs on the street. He cuts off from the slabs of bean curd whatever amount his customer desires."

"Buddha's Birthday. Hibiya Park, Tokyo. April 8, 1929." "... it is quite generally agreed that the Buddha was born in the sixth century B.C. The birthday is known as Hanamatsuri or Floral Festival..." Address: USDA, Washington, DC.

2732. Matsumoto, Kenji. 1929. Shôyu jôzô ni kansuru saikin-rui ni tsuite [On the bacteria in shoyu brewing]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 24(7):27-33. July; 24(8):5-9. Aug.; 24(9):13-18. Sept.; 24(10):18-24. Oct.; 24(11):25-31. Nov.; 24(12):11-19. Dec. [Jap]
Address: Jozo Shikensho Gishi, Japan.

2733. *Times* (*London*).1929. Japanese wrestling: Sumo and its champions. Aug. 29. p. 14, col. 4.
• ***Summary:*** From a correspondent. "In professional wrestling all the wrestlers engaged in any particular contest belong to one or other of the great wrestling companies or schools. In addition to fees, these schools are financed by generous admirers, and even during a match there are frequent interruptions while it is announced that this or that patron has given to a favorite giant or to the school in general, say, 10 bottles of *saké*, five sacks of rice, a barrel of *Shoyu* sauce, a few legs of pork,..."

2734. Morse, W.J. 1929. Letter from Dr. [sic] Morse. Tokyo, Japan, July 20, 1929. *Proceedings of the American Soybean Association* 2:50-52. Tenth annual field meeting. Held 22-23 Aug. at Guelph, Ontario, Canada.
• ***Summary:*** This letter from W.J. Morse was read before the 1929 convention of the American Soybean Association at Guelph, Ontario, Canada. This is the first annual ASA meeting he has missed. He begins with a brief description of the "Oriental Agricultural Exploration Expedition" headed by Mr. P.H. Dorsett and himself. They plan to study soybeans in Japan first. "The largest soybean section is the Island of Hokkaido which has an acreage of 215,212 [planted to soybeans] and produces 3,184,245 bushels of beans" [yield = 14.8 bushels/acre].

"On our arrival and after establishing headquarters in Tokyo, we first began to look up varieties which we might send back to the United States for the 1929 planting. We succeeded in packing up about 100 lots which are now growing in the variety plots at Arlington Farm [Virginia]. In hunting out this seed, we were very much surprised to find the soybeans listed with the garden beans and as garden beans. For the most part these are grown as green vegetable beans. These sorts are black, brown, greenish yellow, and yellow seeded varieties of early, medium, and late types. Some of the yellow seeded varieties are listed as most suitable for bean curd, soy sauce, miso, natto, and confectionery purposes, such as sweet bean paste, candied beans, roasted beans (like our peanuts), and sugared beans." Note: Azuki beans, rather than soybeans, are usually used to make "sweet bean paste" in Japan.

"It is amazing, the extent to which the soybean is used for food in Japan. Whether or not it can be used in the United States in all of the ways used here is extremely doubtful, that is for human food." There is no doubt that American soybeans will be used mostly to produce oil and oil meal. "It may interest you to know that the beans produced in Japan are used entirely for human food, green manure, and planting purposes. The grain varieties have seed of higher quality than those produced in Manchuria and are not used for oil and oil meal production as [are] the beans of Manchuria. The great soybean oil and meal production of the Orient is confined almost entirely to Manchuria.

"Another thing which surprised us greatly was the extent to which soybeans are used for green manure purposes in the rice paddies." The plants are turned under in the mud after water has been run into the paddies.

"Another extensive use of the soybean is for bean curd, or tofu, which is manufactured only... in small shops scattered about the cities and country villages. This curd is used in many ways, being the meat of the poorer classes. It is used, however, quite generally in making bean-curd soup [miso soup with tofu] which is sometimes served at breakfast and nearly always at supper. The bean curd is peddled about from house to house by men with two tubs suspended from a bamboo pole over their shoulders. The sound of the little horn of the bean curd man as he announces his coming has become quite a familiar sound to our ears as we go along the streets or hear him pass under our office windows.

"Soy sauce is manufactured on a very large scale and is universally used by the Japanese, rich and poor. We have had the pleasure of visiting the large experimental laboratory of an experiment station given wholly to soy sauce and saké experiments. In Hokkaido we visited a soy sauce factory, the buildings of which covered several acres. In one of the curing vat buildings where the mash is allowed to cure for about 18 months, we counted ninety large vats.

"Soybeans are used to a very considerable extent for confectionery purposes. The large black, brown, and green seeded varieties are used in making sweet bean paste which is put up in small thin slabs and then done up in very attractive packages. Roasted beans, similar to our roasted peanuts, may be found at nearly all confectionery stores. Roasted beans are also sugar coated and others are sprinkled

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with small pieces of sea-weed during the roasting, which gives an appearance of mottled beans (rather a familiar sight to our mid-west farmers). Then, there are the candied beans, that is, beans which have been boiled in syrup.

"Miso and natto are two forms of bean foods in which the beans are first cooked and then treated with certain bacteria [sic, microorganisms]. Miso is used largely in soups which are consumed at breakfast. Both of these foods are quite largely used.

"Other products used for food are roasted soybean flour, soybean vermicelli, pickled green beans in the pod, yuba–the film produced by boiling soybean milk, and dried frozen bean curd." Note 1. This is the earliest English-language document seen (Feb. 2004) that uses the term "dried frozen bean curd" to refer to dried-frozen tofu.

Note 2. This is the earliest English-language document seen (Dec. 2005) that contains the term "roasted soybean flour."

"Another surprising thing is the very extensive use of the soybean as a green vegetable bean. As early as May, small bundles of plants with full grown pods were seen on the market. At the present time the market is virtually flooded with bundles of plants with full grown pods, the seeds of which are also full grown. The pods are boiled in salt water and the beans eaten from the pods.

"During the past two weeks we have visited large sections near Tokyo where soybeans are grown for green vegetable purposes. The beans are grown in rows 2 feet apart and in 95 per cent of the cases there are other crops planted between the bean rows, such as early cabbage, onions, lilies (for the edible bulbs), late varieties of soybeans, late plantings of soybeans, and other early truck crops." Address: USDA, Washington, DC.

2735. Nouelle, Georges. 1929. Les emplois du soja [Uses of soybeans]. *Annales Coloniales (Les)* No. 137. Sept. [Fre]*

2736. Lovell, John H. 1929. Soy bean as a honey plant. *Gleanings in Bee Culture* 57(10):646-48. Oct.

• ***Summary:*** The soy bean "belongs to the same family as the pea, bean, and clovers, plants which produce their seeds in a legume or pod."

"Up to the present time it has been cultivated chiefly as a hay or forage crop; but, with our population increasing twenty times faster than the food production, it must soon become important as a food for the human race.

"Soy beans, before they have fully ripened, may be shelled and used as a green vegetable like green peas. A few hills might well be planted in every garden. They may also be canned and used in winter, or they may be sprouted and the sprouts used like asparagus tips, to which, however, they are much inferior. The dried beans when cooked also make a palatable dish, and more than 100,000 bushels are packed annually by American canning factories. As the seeds are used as a substitute for coffee, soy bean is often called coffee berry."

"By boiling the crushed beans in water a vegetable milk may be obtained, which may be used in making cakes and custards... From the milk a curd or cheese [tofu] is prepared, which is on sale in the Chinese markets of America. This may be flavored with fruits and jams and made into puddings, and used for sandwiches and luncheon novelties.

"But of all the preparations made from the soy bean, none is more widely distributed or better known than soy sauce, a dark brown liquid which in odor and taste resembles a good meat extract. In Japan alone the annual production is more than 2,000,000 barrels. While it is largely consumed by the Chinese and Japanese it has been introduced into both Europe and America and may be purchased at all Chinese markets."

There is conflicting evidence as to whether or not soybean flowers are a source of sugar-rich nectar from which bees make honey. The soy bean plants "grown in my garden, had small inconspicuous flowers, with the corolla hardly visible. They were odorless and apparently nectarless and wholly unattractive to bees. Plants under glass from which all insects were excluded formed pods in great abundance which were well filled with large seeds. The soy bean is self-fertile and not dependent on bees for pollination.

"The flowers, the young leaves, and the stems are densely hairy as can be seen in the illustration [photo], but the older leaves are smoother. The specific name *hispida* was evidently selected because of the roughness of the stems. But this coating of hairs is not sufficient to defend the plants from insect attack."

"If it is honeydew which is stored by the bees from soy bean, then the erratic, scattering and infrequent reports of honey flows would be fully explained." Note: Honeydew is a sugar-rich sticky substance, secreted by aphids and some scale insects as they feed on plant sap.

"Therefore without more reliable evidence than is at present available, the writer does not think that soybean should be ranked as a honey plant."

A photo shows the upper part of a soy bean plant with stems, leaves, and blossoms. Address: Waldboro, Maine.

2737. Dorsett, P.H.; Morse, W.J. 1929. Miso in Chosen (Korea) (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.

• ***Summary:*** * = Best photos. Page 2965 (14 Nov. 1929). Again visited the Shariin Agricultural Experiment Station near Shariin and met Dr. Takahashi, the director, who demonstrated the common Korean practice of planting soybeans in 4' hills on ridges among the other crops.

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"In the afternoon we visited a nearby village and tried photographing scenes and operations in the making of soybean mash balls for the home manufacture of soybean miso and soy-sauce.

Note: This is the earliest English-language document seen (July 2011) that uses the term "soybean mash balls" to refer to what in Korean are called *meju* and in Japanese are called *misodama*.

Photos (p. 2966-67) show women planting soybeans on the side of ridges using a small, short-handled hoe.



Photos (p. 2968-69) show close-up views of "Tenjan [doen jang = Korean soybean jang], soy sauce, and Kanjan [Kanjang = Korean soy sauce]; back row, left to right, two balls of freshly made bean mash, on the right, two made three weeks or more ago, these are pretty will cracked and covered with mould."

Note 1. Each ball is wrapped in straw which is joined and twisted at the top.

Note 2. This is the earliest document seen (April 2012) that uses a Korean name for Korean-style soybean jang (miso), or that uses the word "Tenjan" to refer to Korean-style soybean jang.

Note 3. This is the earliest English-language document seen (April 2012) that uses the word "Kanjan to refer to Korean-style soy sauce.

Same photo but with a crock of miso in the back. Photo of Korean planting soybeans using a large plow and oxen.

Page 2972 (14 Nov. 1929). Shariin, Chosen [Korea]. * "Pouring boiled soybeans into a wooden mortar for crushing" (neg. #44570).

Page 2973. "Crushing the boiled soybeans in a wooden mortar for use in making Miso balls for the growing of curing bacteria" [sic, koji mold] (neg. #44572).

Page 2974. "A Korean farmer's wife working the mashed soybeans into balls similar to the ones in the background, which are already more than two weeks old and are full of molds and bacteria, which apparently are necessary for the making of miso" (neg. #44575).

Page 2975. "A nearby view of the new and the old. From left to right, the first two are the newly made miso bean balls and the two with the [rice straw] strings tied about them are more than two weeks old. They are cracked and already pretty well covered with moulds of various kinds and also, presumably, bacteria of various kinds" (neg. #44576).

Note: The various types of traditional Korean miso and soy sauce are made from a dried soybean koji called *meju*, which is prepared in much the same way as Japan's *miso-dama*. The word *jang* is closely related to the Chinese word *chiang* [pinyin: *jiang*]. Traditional Korean miso and soy sauce contain no wheat, rice, barley, or other grain. For details, see *The Book of Miso*, 2nd ed., by Shurtleff & Aoyagi (1983, p. 245-47). Address: Agricultural Explorers, USDA, Washington, DC.

2738. O'Brien, Harry R. 1929. Soy beans for profit: Combines and a cash market cause acreage to mount. *Country Gentleman* 94(11):19, 120-21. Nov.

• ***Summary:*** "While soy beans have been known in this country for 125 years, it was about fifty years ago that they were first grown in North Carolina as a farm crop and about 25 years ago when they were first introduced into the Middle West. In 1917 it was estimated that perhaps 500,000 acres were being grown for all purposes. Since then the acreage has increased annually until in 1928 around 3,000,000 acres were being grown in twenty or more states. Rapid as this growth may seem, it has been handicapped by difficulties of harvesting and lack of a commercial market for the beans.

"But within the past two years the situation has been radically changed" because of the combine harvester and the new cash market provided by the Peoria Plan and A.E. Staley. "These things I learned when late in the past summer I drove my car for more than 1200 miles through the Midwest to get the details of what was stirring in soy beans... There are soy beans everywhere, I found."

A star performer in many roles, "Soy beans offer another cash crop for the farmer. They are about immune to chinch bugs and the corn borer. Planted in corn, they shade the ground and protect the corn from the chinch bugs.

"Then there is the use being made of soy beans in industry, as beans, as oil, as meal. The oil is expressed out of the beans by the same process used with cottonseed. A ton of beans yields roughly from 1600 to 1700 pounds of cake or meal and from 250 to 300 pounds of oil.

"The beans are usable for coffee substitutes, soups, baked beans, confections, meat substitutes, vegetable casein, vegetable milk and cheeses. There are now several factories in this country making soy sauce. I know of one plant making chocolate out of soy beans.

"The oil is suitable for use in soap stocks, enamels, varnishes, paints, rubber substitutes, linoleum, waterproof goods, celluloid, explosives, glycerin, salad oil, lard

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substitutes and edible oils.

"Soy-bean meal, in addition to use as livestock feeds, is used for flour, diabetic foods that are supplanting gluten flour, infant foods, macaroni, breakfast foods, fertilizers and adhesive glue. Much of the glue used in furniture veneering is coming from soybean meal.

"Such are some of the qualities of this many-sided farm legume." The author then gives five reasons why soy beans have made such rapid growth in the past ten years: 1. Farmers have tried them and liked them, and the news has spread. 2. The influence of the agricultural colleges, experiment stations, extension services, and county agents. Experiments have been conducted on varieties, and methods of growing and feeding. 3. There have been "certain focal points where a few farmer pioneer enthusiasts grew them for seed and from these points the acreage has spread in concentric circles. There are a dozen of these points."

4. Improved harvesting methods; "and this is a story that is tied up with that of another focal point, Christian County, Illinois, where Claire E. Hay was county agent from 1918 to 1928. Hay knew beans from boyhood. When he came to Christian County chinch bugs had been bad for several years. So Hay began boosting soy beans as a means of outwitting the bug.

"Now in Christian County among the biggest growers of soy beans are the Garwood brothers, Frank and Harry. They had heard of combine harvesters being used out West for harvesting and threshing wheat in one operation in the field. They had a hunch that maybe this same machine would work with soybeans. Some Indiana farmers had rigged up a homemade affair that had already been used.

"But the manufacturers were skeptical. Two firms turned them down, refused to sell a combine for such a purpose. But a third did sell, and in 1924 what was possibly the first combine ever used in Illinois for any purpose, surely for beans, came to the Garwood farms and a public demonstration was held.

"To most people's surprise, the combine worked. So in one day the Garwood brothers had revolutionized soy-bean harvesting. Other growers were quick to seize on the idea, as were wheat and oat farmers too."

5. The newest development is the creation of a commercial market for soy beans. "Lack of a market was holding back farmers from growing the soys. So a committee of three count agents, headed by Hay, called on A.E. Staley, a feed manufacturer of Decatur, and asked him to use soy beans in his feeds. Staley built an oil mill, began buying beans and a commercial market was opened up.

"Oil mills were built later at Peoria and Bloomington. These mills have bought the beans and thus Illinois has taken the lead in growing them.

"The next step in the story came when along in 1927 Hackleman at the University of Illinois figured out that the marketing of soy beans would be much more stabilized if farmers could grow them on contract for the mills. He and Doctor Burlison, chief in agronomy, suggested this plan to H.A. Atwood, a feed manufacturer in Peoria. The idea simmered on and several conferences were held.

"In the spring of 1928 Illinois farmers were faced with a wholesale killing out of their winter wheat. A conference was called at Urbana in April to consider what to recommend as an emergency crop, to which farmers, county advisors and feed manufacturers were invited. The advisors said that soy beans was [sic] the logical crop but there was no use to urge them because of a lack of a market.

"Mr. Atwood announced that his firm stood ready to contract at a guaranteed price for a million bushels of beans or the crop from 50,000 acres. A firm at Bloomington was associated with him in the offer.

"Back of the offer was the Grange-League-Federation, representing New York dairy farmers, which farm organization buys its feeds from Mr. Atwood's firm. The G.L.F. representative said in effect that if the Illinois farmers would grow the beans, the farmers of New York would buy the feed made out of them.

"The outcome was that a minimum price of $1.35 per bushel was set, based on farm cost-account records from four states in comparison with the price the G.L.F. had been paying for other protein feeds. County advisors circulated blank contracts through Farm Bureau membership lists, and 1344 farmers signed up to deliver beans from 48,444 acres, which, when marketed, totaled about 1,200,000 bushels of beans [24.77 bu/acre yield]. After paying freight and handling charges, the crop netted farmers around $1.20 a bushel."

A large photo shows two farmers, each with a team of four horses pulling a piece of farm machinery, on the farm of Finis Fouts, Deer Creek, Indiana. The first is cutting soy beans with a binder. The second, 10-15 feet behind, is drilling wheat for the next crop. Address: Central Ohio.

2739. Dorsett, P.H.; Morse, W.J. 1929. Year's end in Tokyo, Japan. Early 1930 in Korea (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.

• ***Summary:*** Page 3341 (24 Dec. 1929). "Today Morse and Suyetake went to call upon soy sauce and natto manufacturers for the purpose of getting acquainted and also if possible arrange for getting still and motion pictures of their plants, equipment and operations.

"Dorsett worked at the office packing seed and making packages to go in the next outgoing diplomatic pouch..."

"The streets of Tokyo are a-blaze with colored banners, price lists, decorations and gaily dressed women and

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children." All this in preparation for the New Year. "The streets and stores are packed from early morning until late at night.

"At the Matsuya Department store on the Ginza, they have a spruce Christmas tree in the stairway well which looks to be fully... 50 feet or more in height. It is really very attractive and beautiful."

Page 3369 (31 Dec. 1929). "Introduction cards were finished on the 1,003 samples of soybeans secured from the Suigen Agricultural Experiment Station, Suigen, Chosen [Korea]. These samples showed a wide range in size, color and shape of seed, and also in the color of the hilum. Some most excellent and interesting varieties are included in this collection.

"One of the most interesting is a very small seeded yellow sort, the seed being about the size of a mung bean. This is the smallest seeded variety of soybean we have ever seen and it should prove valuable as a bean for sprouting. We are in hopes that in this collection will be found the high oil strains for our oil mills and low oil strains for our hog and cattle feeders in the United States. All in all we consider the collection the most interesting and valuable in our exploration work thus far." Address: Agricultural Explorers, USDA, Washington, DC.

2740. Chung, H.L.; Ripperton, J.C. 1929. Utilization and composition of Oriental vegetables in Hawaii. *Hawaii Agricultural Experiment Station, Bulletin* No. 60. 64 p. Dec.
• ***Summary:*** Soybeans are discussed as follows: (1) Large or soybean sprouts (*Glycine hispida*) (p. 3-4). Chinese name: Dai-tau-nga. Japanese name: Not given. A photo shows these sprouts, together with "Small or mungo bean [mung bean] sprouts (*Phaseolus aureus*). The stem and root are 3 to 3½ inches long. "The large bean sprouts are prepared daily for the vegetable market in Honolulu. The sprouts are obtained by germinating the soybean" for 4-6 days. "The beans are washed, submerged in water in a container for 24 hours, and then drained. A damp cloth, sack or grass-woven mat is placed over the container. A fresh supply of water is added to the container at 6-hour intervals during the 24 hour period to prevent the beans from heating. In the market the sprouts are kept submerged in water so that they may retain their crispness and succulency." A recipe is given for "large bean sprouts" with pork.

Green soybeans in the pods (p. 42-43). Chinese name: Chang-wong-tau. Japanese name: Daizu or soya mame. This "is a rather unusual Orient-grown vegetable. Unlike the snap bean, green soybeans are sold in their pods attached to the plant. The plants with their pod-laden branches are tied in bunches of 4 to 10. Each plant is about 15 inches long and has very hairy stems and leaves. The pods also are hairy and are borne in clusters. Each pod contains three to four seeds. The soybean is an all-season crop in Hawaii. It makes its best growth, however, in April. It requires about 75 days from the date of planting to reach the green-pod stage."

"*To cook plain.*- Wash one-half pound fresh soybean pods, and boil until they are soft. Season with soy sauce and sugar, and serve in the pod. The beans are removed for the pods when eaten."

A photo shows two uprooted soybean plants with pods attached.

Other vegetables of interest are also described, each with a photo: Ginger bracts (*Zingiber mioga*). Japanese name: Mioga (p. 12). Mugwort (*Yomogi*, p. 19). Perilla (*Perilla frutescens*). Japanese name: Shiso (p. 20). Cowpeas (*Vigna sinensis*). Japanese name: Sasage. Goa beans (*Psophocarpus tetragonolobus*). "Although the Goa bean, also known as asparagus pea and winged bean, has long been known and used in the Orient, it has only recently been introduced into Hawaii, where it is as yet little known" (p. 40). Chinese name: See-kok-tau. Japanese name: Not given. Note: This is the earliest document seen (Aug. 2006) giving the name "winged bean" as one of the names of *Psophocarpus tetragonolobus*.

Kudzu (*Pueraria thunbergiana, P. hirsuta, Dolichos japonica*). Chinese name: Fan-kot. Japanese name: Sasage. Oriental radish (*Raphanus sativus longipinnatus*). Chinese name: Loh-bak choi. Japanese name: Daikon. Yam (*Dioscorea batatas*). Also known as Chinese yam, Chinese potato, and cinnamon-vine. Chinese name: Tai-sue. Japanese name: Naga-imo.

In the section titled "Composition" (p. 57-63), tables give nutritional analyses of all foods discussed in this bulletin, including calcium, phosphorous, iron, and "alkalinity" (expressed as cubic centimeters of normal acid solution required to neutralize excess of base per 100 grams of fresh vegetable). The analysis of the green soybeans is with the pods removed. Address: 1. Agronomist; 2. Chemist. Both: Honolulu, Hawaii.

2741. *Gazette* (*Indiana, Pennsylvania*).1929. Soybeans.
• ***Summary:*** This article seems to be based on a USDA press report of early 1929: "W.J. Morse, forage-crop specialist, Bureau of Plant Industry, U.S. Department of Agriculture, who has been in Japan for several months collecting new varieties of soybeans, reports that to date he has collected more than 5,000 lots, representing every type of soybeans grown in Japan."

"Samples from every lot of seed collected by Mr. Morse will be planted at the United States experiment farm at Arlington, Va. [Virginia], this spring, and when the seed is harvested tests will be made for oil content. In this way it is hoped that selections may be made which will ultimately develop into varieties with a wide range of oil content.

"Mr. Morse writes that the Japanese use the soybean in a number of ways in their diet. They grind the beans and make flour, they serve the green beans as we would green lima beans, and they cook the dried beans in a manner similar

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to navy beans. Besides this, they make soy sauce, soybean curd [tofu], beverages, and bean sprouts from the soybean. He believes that the use of soybeans as a human food in this country will increase steadily.

"Mr. Morse is now spending the winter in Tokio [sic], studying the Japanese methods of utilizing soybeans. While he expects soybeans to grow in favor as a feed for livestock and food for people, he feels that the largest future development of the crop in the United States will be in the utilization of the oil and meal in industry.

"Samples of the seed collected in Japan will be sent to some of the State experiment stations for trial, but will not be available for distribution to individuals."

2742. Kinoshita, Asakichi; Tanigawa, S. 1929. Yushutsu muke shôyu jôzô shiken [Tests on brewing shoyu for export]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 105. p. 22-28. Dec. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Joshu.

2743. Kinoshita, Asakichi; Tanigawa, S. 1929. Komugi daiyô-hin shiyô shiken [Shoyu brewing using substitutes for wheat]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 105. p. 13-21. Dec. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Joshu.

2744. Kinoshita, Asakichi; Tanigawa, S. 1929. Shôyu no roka to chozô-sei ni tsuite [The effect of filtration on shoyu preservation]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 105. p. 1-14. Dec. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Joshu.

2745. **Product Name:** Shoyu.
Manufacturer's Name: American-Hawaiian Soy Co., Ltd.
Manufacturer's Address: Mauka, end Banyan, Honolulu, Oahu, Hawaii.
Date of Introduction: 1929.
New Product–Documentation: Polk Husted Co.'s Directory of Honolulu and the Territory of Hawaii. 1928-29. Note that this may be a new name for American Soy Brewing Co. Ltd., which existed by 1912 on Banyan St.

Hawaiian Japanese Annual & Directory. 1936-37. p. 47. Hirazô Iinuma (from Niigata prefecture), shoyu company, Banyan St. (Box 838), Honolulu. Also, p. 71 lists Tsutomo Kimura (from Yamaguchi) as a worker at this shoyu company on Banyan St. Also, p. 90 lists Seitarô Masuhara (from Tokyo), residing at 30 N. Vineyard St., in "shoyu sales." But the company whose shoyu he sells is not given. Also, p. 108 lists Shinichi Morita (from Yamaguchi prefecture) as a worker at this shoyu company on Banyan St.

1955 Polk's Directory. Address is now 274 Kalihi in Honolulu. 1967-68 Directory. Listed as American Hawaiian Soy Co. Ltd., 274 Kalihi St. They are under the category of "Soy Bean Products". This is the first time this category appears in the Honolulu directories. 1987. Appears in all Honolulu directories up to the present.

2746. Fukai, Tôshi; Katsume, E. 1929. Shôyu genryô "pentoosu" oyobi "meranin" shikiso seizô shiken [Preparation of pentose and melanin as raw material of shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 24(7):43-48; 24(8):20-24; 24(9):28-31; 24(10):24-29; 24(11):32-36; 24(12):19-24. [Jap]
Address: 1. Jozo Shikensho Sishu, Nôgaku-shi; 2. Jozo Shikensho Shokutaku, Kôgaku-shi, Japan.

2747. Fukai, Tôshi; Ono, S. 1929. Shôyu hakkô to shiyu no kankei. I. Shôyu abura ni ganyu serareru shibôsan "echiru esutaa" narabini yûri shibôsan ni tsuite [On the relation of fat and shoyu brewing. I. On the ethylester of fatty acid and free fatty acid in shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 24(1):37-41; 24(2):34-41; 24(3):47-50. [Jap]
Address: 1. Jozo Shikensho Gishi, Nôgaku-shi; 2. Moto Jozo Shikensho Kenshu-in, Nôgaku-shi, Japan.

2748. Fukai, Tôshi. 1929. Shôyu hakkô to shiyu no kankei. I. Shôyu ni ganyû seraru shibôsan "echiru esutaa" narabini yûri shibôsan ni tsuite [The relationship of oils to shoyu fermentation. I. Fatty acid and its ethyl ester contained in shoyu oil]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 102. p. 214-33. [Jap]
Address: Jozo Shikensho, Gishu.

2749. Kinoshita, Asakichi. 1929. [Necessity of amydase enzyme in shoyu moromi]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 7:127. [Jap]*
Address: Jozo Shikensho, Gishi.

2750. Kinoshita, Asakichi. 1929. [Amylolytic enzyme and proteolytic enzyme in shoyu]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 7:44. [Jap]*
Address: Jozo Shikensho, Gishi.

2751. Kinoshita, Asakichi. 1929. Shôyu moromi-chû no "amidaaze" sei kôso no kôyô [Necessity of amydase enzymes in shoyu moromi]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 24(9):26-27. [Jap]
Address: Jozo Shikensho Gishi.

2752. Kinoshita, Asakichi. 1929. Kagaku shôyu ni tsuite [On chemical shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 24(9):8-12. [Jap]
Address: Jozo Shikensho, Gishi.

2753. Kinoshita, Asakichi; Isawa, S.; Mitsuhashi, K. 1929. Shôyu-chû no tôka kôso oyobi tanpakushitsu bunkai kôso ni kansuru kenkyû [Amylolytic enzymes and proteolytic

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enzymes in shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 24(8):14-19. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Shokutaku; 3. Kenshu-in.

2754. Kinoshita, Asakichi. 1929. Shôyu no genryô to shite Sakuramame shiyô no yôketsu [The keys and secrets to using Sakuramame as raw material in brewing shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 24(10):13-17. [Jap]
• ***Summary:*** Sakuramame is soybean flakes made by crushing selected soybeans between rollers. It is not clear whether or not the flakes are defatted. Address: Jozo Shikensho, Gishi.

2755. Kinoshita, Asakichi; Isawa, S.; Tanigawa, S. 1929. Kansho shiyô shiken [The use of sweet potato as raw material of shoyu]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 103. p. 151-60. [Jap]
Address: Jozo Shikensho. 1. Gishi: 2. Shokutaku; 3. Joshu.

2756. Kinugasa, Y.; Hatsutori, Y. 1929. Shôyu bôfuzai "anzen" jô no shôyu ni taisuru bôfu kôryoku shiken hôkoku [Results of an experiment on antiseptic power of "anzen," a shoyu preservative (Abstract)]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 24(9):71. [Jap]
• ***Summary:*** The word "anzen" means "safe."

2757. Kinugasa, Y. 1929. [Detection of furfuracrylic acid in shoyu]. *Eisei Kagaku (J. of Hygienic Chemistry)* 1:3-. [Jap]*

2758. Kinugasa, Y. 1929. [Detecting method of beta-naphthol in shoyu]. *Eisei Kagaku (J. of Hygienic Chemistry)* 1:197-. [Jap]*

2759. Kurono, Kanroku; Kinoshita, A.; Fukai, T. 1929. "Pentoosu" shiki shôyu jôzô shiken. Dai go-kai yobi shiken [Test of the pentose system for shoyu brewing]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 24(5):16-25. [Jap]
Address: Jozo Shikensho. 1. Gishi, Nôgaku Hakase; 2. Gishi; 3. Gishu, Nôgaku-shi.

2760. Kurono, Kanroku; Kinoshita, A.; Fukai, T.; Tateno, M. 1929. "Pentoosu" shiki shôyu jôzô shiken. V. [The use of pentose as a raw material for shoyu. V.]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 102. p. 50-62. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Gishi; 3. Gishu; 4. Moto Joshu.

2761. Kurono, Kanroku; Kutou, Tatsuma. 1929. Shôyu no aji no chôjuku ni tsukite [Modification of the taste of shoyu]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 102. p. 234-41. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Kenshuin.

2762. Yoshino, E. 1929. [Reports on brewing shoyu]. *Minami Manshu Tetsudo K.K. (South Manchuria Railway Co. Experiment Station)* 14:75-, 95-. [Jap]*

2763. Yoshino, E.; Seki, K. 1929. [Preparation of soy sauce from soybean cake. II]. *Minami Manshu Tetsudo K.K., Chuo Shikenjo Hokoku (South Manchuria Railway Co., Central Research Institute, Report)* 14:21-22. [Jap]*
• ***Summary:*** As a potential outlet for soybean cake, an attempt has been made to prepare soy sauce. The product brewed from the cake and kaoliang, wheat bran, etc. at 24-32°C for 100 days was comparable to the commercial material. At room temperature the rate of decomposition was too low to be practicable. The yield was improved by the addition of soybean oil.

2764. Yoshino, E.; Seki, K.; Yamamoto, K. 1929. [Preparation of soy sauce from soybean cake. III. Composite Y-type fermentation]. *Minami Manshu Tetsudo K.K., Chuo Shikenjo Hokoku (South Manchuria Railway Co., Central Research Institute, Report)* 14:22-23. [Jap]*
• ***Summary:*** Koji was prepared from soybean cake and wheat separately, and the fermentation products of different ages were united to form a material of satisfactory color, flavor, etc.

2765. *Directory of the Bureau of Animal Industry (USDA).*1929. Meat-inspection establishments, by stations. Corrected to March 1. See p. 34.
• ***Summary:*** Stations are arranged alphabetically by city. Page 34: "Columbia City, Indiana (Substation of Chicago, Illinois). 110. Oriental Show-You Co." Note: Lack of an asterisk (*) indicates that they do not do slaughtering. So they apparently buy meat and use it in their food products.

This same company also appears in: Corrected to April 1, 1930 (p. 36). Corrected to April 1, 1930 (p. 36). Corrected to Feb. 16, 1932-1937 (p. 36). Corrected to July 1, 1937 (p. 36), etc.

2766. Ferrée, Christian Johan; Tussaud, J.T. 1929. The soya bean and the new soya flour. London: William Heinemann (Medical Books) Ltd. xi + 79 p. Illust. No index. 22 cm. Revised translation from the Dutch by C.J. Ferree and J.T. Tussaud of Die Sojaboon en Duurzaam Sojameel. [29 ref]
• ***Summary:*** Contents: Foreword, by Sir Wm. Arbuthnot Lane, President of The New Health Society. Preface, by C.J. Ferrée (London). 1. Introduction. Literature. Name of the plant. Origin. Botanical particulars. Assimilative power of the soya plant. Inoculation. Soil requirements. Production and cost. 2. General ingredients of the various Manchurian beans. Composition. The value of soya protein. Vitamin in

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the soya bean. Digestibility of the soya bean and its products. 3. Use in China and Japan: Bean sauce, soy, or shoyu, Chinese chiang (paste), tou-fu or beancurd, beans consumed as a table vegetable, bean refuse and bean cake are used as a fertiliser and for fattening hogs, bean oil is used as an illuminant (where it has not been superseded by kerosene), as a substitute for lard in cooking, and as a lubricant for greasing axles and parts of native machinery, miso and natto. First imports into Europe. Exports during the last five years from China and Japan. Imports during the last five years into Europe and America. The increasing rate of its cultivation. Manchuria–Production. Estimate of the world's production of the soya bean. London the principal market. Future importance.

4. America. Australia. South Africa. Other British possessions and protectorates. Java (Dutch East Indies). Europe. 5. Unsuccessful experiments with soya flour. Ordinary soya flour. Extracted soya flour. Dr. L. Berczeller's discovery. The new soya flour. Comparison with other cereal flour and other foods. Comparison in price with other cereal flour and other foods. Comparison in price of soya protein compared with other cereal foods. Comparative analysis of cereals. 6. Soya milk. Vegetable casein. Lecithin. 7. Increase in food value. Savings. Industrial application in foodstuffs. The importance of Dr. L. Berczeller's soya flour for the food industry. Soya flour and the food laws. Uses of soya flour in: Bread, pastry, cake, biscuits, confectionery, sausages, infant foods and food for invalids, cocoa, chocolate, soup cubes, pudding flour. Uses in the kitchen. Soya flour recipes (for flour made using the Berczeller process), soya flour for diabetics, recipes for diabetics.

The Preface states: "In the following pages the writer has endeavoured to give an account of the numerous uses to which the soya bean has so far been put, and to visualise its future service to humanity through the means of a totally new and practical process by which this legume... may in future be used as an important article of food for general consumption throughout every quarter of the globe.

"In compiling the details relative to the soya bean flour, with which this brief summary principally deals, he trusts that he has succeeded in giving sufficient data to enable the reader to fully realise its value as a staple food from the economic point of view, as well as from the more domestic standpoint, so that the important fact may be fully realised that a new foodstuff of a very valuable nature... has now been brought within the reach of all nations to serve them in a most practical manner as an economic article of food."

The book includes statistics on the imports and exports from 1923 to 1927 of "soya beans, soya oil, and soya cake in various countries including China, Japan, England, France, Germany, Holland, Norway, Denmark, Sweden, and USA.

The "new soya flour" is that developed by Dr. Berczeller. This book repeatedly praises that flour. "A few years ago Dr. Laszlo Berczeller, a Hungarian physiologist in Vienna, succeeded scientifically in finding a method which enables us to prepare from the soya bean a digestible and pleasantly flavoured flour without detracting from its nutritive value, and this method entirely succeeds in preserving all the good qualities contained in the bean itself. Physiological experts and analysts withhold no praise, as the following extracts will show: -" There follow words of praise from: (1) Dr. Alfred Schwicker, M.P., Royal Hungarian State Institute, Central Depot for Experimental Chemistry. (2) Dr. Stefan Weisser, King's Counsellor, Royal Veterinary Physiological Experimental Station, Budapest. (3) Prof. A. Durig., The Physiological Institute, University of Vienna.

Marakujew (1928) estimates the production of soya beans in "Manchuria at 6 million tons at the utmost, the production of the whole of China at 16 million tons, and he is led to this figure by the conclusions of the Economic Bureau of the South Manchuria Railway, which estimates that the Manchurian crop in 1927 amounted to 37.1 million kobu (5.88 million English tons), of which 2.6 million tons originated from South Manchuria, 3.3 million tons from North Manchuria" (p. 32). A table (p. 33) gives estimated world production of soya beans from 1923 to 1929 (6.6 million tons, forecast). The leading producers in 1929 (in million tons) are: China 5.250, Japan 0.580, USA 0.250, Java and Dutch East Indies 0.120, Other Asiatic countries 0.400. A soya milk factory was recently established in Denmark (p. 54). Although this book contains a bibliography of 29 references, most are very incomplete.

Photos show: (1) A soybean plant with roots, pods, and leaves. (4) Nodules growing on soybean roots. (5) One pod and seed each from inoculated and uninoculated soybean plants. (7) An immense field of soya beans in Manchuria. (8) Soya beans awaiting shipment, in house-shaped stacks under tarps, at Dairen. (13) Seeds of the most important varieties of soya beans now grown in the United States. (10) Two horses and a farmer cultivating a field of soybeans. (11) Harvesting soya beans. (12) Well selected, clean soybean seeds.

A map (frontispiece) shows where soybeans are cultivated worldwide. An illustration (facing p. 2) shows "Shen-Nung, Emperor [of China] in 2838 Before Christ, called 'The Heavenly Farmer.' Reproduced from a print in a Vienna museum."

One bar chart compares the nutritional composition of soya flour with that of cereals and animal products, and other foodstuffs (p. 13), another compares the calories (p. 46), and a third compares the cost of 1,000 calories (p. 48). Marakujew (probably spelled Marakiev or Marakuyev), in "The Export of Manchurian Soya Beans and its Finance" (1928, in Russian, probably an article rather than a book) "estimates the production of Manchuria at 6 million tons at the utmost, the production of the whole of China at 16 million tons, and he is led to this conclusion by the Economic Bureau of the South Manchuria Railway, which estimates that the Manchurian crop in 1927 amounted to

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37.1 million kobu (5.88 million English tons), of which 2.6 million tons originated from South Manchuria, 3.3 million tons from North Manchuria. According to the calculations of this bureau, the home consumption of North Manchuria is something like 40 of the production, viz., 1.3 million tons; the remaining 2 million tons are for export. The exports of South Manchuria were estimated at 1 million tons" (p. 32). Address: London.

2767. Machida, Tatsujirô. 1929. Rôdô sôgi no kaibô [An analysis of labor strikes]. Tokyo. [Jap]*
• ***Summary:*** This book gives special attention to the strike against the Noda Shoyu Co. (today's Kikkoman). The author was a member of the board of the Harmonization Society and was directly concerned with the conciliation of the dispute. Address: Japan.

2768. Sprecher von Bernegg, Andreas. 1929. Tropische und subtropische Weltwirtschaftspflanzen; ihre Geschichte, Kultur und volkswirtschaftliche Bedeutung. II. Teil: Oelpflanzen [Tropical and subtropical plants in international commerce; their history, cultivation, and economic significance. Vol. II. Oilseeds]. Stuttgart: Verlag von Ferdinand Enke. See vol. 2, p. 128-70. Illust. Index. 25 cm. [48 ref. Ger]
• ***Summary:*** The soybean (p. 128-70). Contents: Introduction. Name, place of origin and history. Description of the plant: Systematic, morphology, varieties, selection. General conditions for growth: Climate, soil. Cultivation of the plant: Planting, care. Harvest and storage. Composition and products. Utilization: As a fodder plant, as a coffee substitute, industrial non-food uses, as a food (as a green vegetable, soy sprouts, soy chocolate, soymilk, casein, tofu and soybean quark {*tofu oder Sojabohnenquark*}, natto {*Buddhistenkäse*}, hamananatto, yuba, miso, shoyu or soy sauce {*Sojasauce*}). Production and trade.

Concerning green vegetable soybeans, the author states: "Three-quarter ripe soybean seeds yield a good, green vegetable (*Dreiviertelreife Sojabohnen geben ein gutes, gruenes Gemuese*)." Address: PhD, Titularprofessor an der Eidgenoessischen Technischen Hochschule, Zurich, Switzerland.

2769. Thorpe, W.A. 1929. A history of English and Irish glass. 2 vols. London: The Medici Society: Boston: Hale, Cushman & Flint. Illust. Index. 27 cm. [200+* ref]
• ***Summary:*** A superb book. Appendix II (p. 308-09) is titled "Thomas Bett's Accounts: From the bills in the possession of Mr. Ambrose Heal, printed by Mr. Francis Buckley, in *Glass*, Vol. V, p. 300 (July 1928)." Entries, starting in 1747, are listed chronologically. At 1752 is the first mention of any cruets cut by Betts. At 1753 we read: "1 Pr. [pair] Cut Soy Cruits. 6 shillings."

At 1755 we read: "1 P. [pair] Cut Soy Cruits. 5 shillings... 3 Soy Cruits Stopt. 7 shillings 6 pence."

On page 309 are some explanatory notes: In 1738 Betts is first mentioned as a cutter of fine glass; he had a shop at Charing Cross [London] called the King's Arms Glass Shop. He died in 1767. "Stopt = with stoppers." "Soy cruits = bottles for soy, a sauce made from beans (Chin. *shi* = salt beans, *yu* = oil)."

In 1677, the word "cruets" or "cruits" was spelled "crewitts" (p. 127).

Volume II of this set consists of glossy photos. Some show "cruet-bottles" (plates 137, 151, 154), but none show soy cruets. Address: The Victoria and Albert Museum, London, England.

2770. Wilson, Sadie Mai. 1929. What do you know about China? A source book of materials. Nashville, Tennessee: Cokesbury Press. 266 p. Illust. 20 cm. [56* ref]
• ***Summary:*** In Chapter 7, "Recipes," the section titled "Home life in China: Dining," states (p. 256): "The Chinese are rated among the best cooks in the world... Vegetables are cut up and stewed in oil (usually [soy] bean oil), or with meat that has first been cut into small pieces."

"Soy-bean sauce is a favorite seasoning."

"It should be understood that the people of China have never heard of chop suey, which is an American concoction."

Page 257: "A more elaborate menu might consist of oranges, water chestnuts, peanuts (fried in oil and served cold), watermelon seeds, rice, salted chicken cold, salted pork, clover leaf and bamboo, fish with rich gravy, shark's fin, and fermented bean-curd soup. In a Chinese meal, the fruits and sweetmeats come first, and if there is soup, it comes last."

Page 258: "Peanut oil, sesamum seed oil, and soy sauce are used instead of butter." Address: Assoc. Secretary of Missionary Education, General Sunday School Board, Methodist Episcopal Church, South.

2771. Dorsett, P.H.; Morse, W.J. 1930. Visit to the Noda Shoyu Company, Ltd. in Chiba, Japan (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.
• ***Summary:*** Pages 3465-67 (7 Jan. 1930). "Today we really got started on our work of looking up and getting information about soybean products. In accordance with plans made yesterday, we left Tokyo this morning (Ueno Station) at 8:15 for Noda-Machi, Japan, where we arrived at 9:45. We went direct to the office of The Noda Shoyu Company, Ltd., of Noda-Machi, Prefecture of Chiba, Japan, makers of the famed Kikkoman Shoyu.

"This company embracing 19 plants, is one of, if not the

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largest plants in the world brewing shoyu sauce. According to their literature, Kikkoman Shoyu was first brewed by Mr. Saheiji Mogi, in the second year of Meiwa [sic, Hoei?] (corresponding to the year 1704) in Noda-Machi, Japan.

"We met Mr. Ota, one of the assistant directors, we also met Mr. Hichizaemon [Shichizaemon] Mogi, President and Director, also a Mr. Jutaro Namiki. We spent about 1½ hours with these gentlemen in the office. Then Mr. Ota and Mr. Namiki showed us over one of their large plants. It impressed us as an up-to-date modern institution. We were in the grading and mixing room. They have 30 incubating chambers or curing rooms where the germ on the 50-50 mixture of soybean and wheat mash is grown.

"The cement vats, or aging vats, of which there are 1,500 under one roof, are made of cement and are 12 feet square and about 8 feet in depth.

"In the manufacture of shoyu sauce, this concern uses annually about 20,000 bushels of soybeans, primarily from Manchuria, and also 20,000 bushels of wheat, Japanese grown when available. They import from Australia. This year, however, they are getting their supply of wheat from Canada.

"They have 200 square (about 4 ft. by 4 ft.) hydraulic presses and 200 oblong ones about 4 ft. by 6 ft. They age their shoyu sauce 1½ years in the curing vats."

Page 3466-68. Photos show: (1) Racks of small trays, outdoors, each about 2 inches deep, 18 inches long, and 10-12 inches wide, used to cure soybean and wheat mash [koji] for making shoyu sauce (neg. #44709). (2) A nearby view of the interior of one of the small trays (neg. #44710). (3) Many round bundles of cask stock of spruce, stored outdoors. The wood will be used to make kegs for storing shoyu sauce. A part of one warehouse of the Noda Shoyu Co. is in the background (neg. #44711). (4) A horse pulling a cart on a railroad track. On the cart are bundles of spruce stock that will be used to make soy sauce casks (neg. #44712). (5) A nearby view of portions of ricks or bundles of short pieces of spruce for staves, tops and bottoms of small casks for shoyu sauce (neg. #44713).

Page 3474. A 5 by 7-inch photo (taken Jan. 9) shows: 1. Small bottle (with label) of soy sauce made by Noda Shoyu Co., and materials used in its manufacture. 2. Salt from Formosa. 3. Mixture of boiled beans and crushed roasted wheat with white mold [shoyu koji]. 4. Mixture of boiled soybeans and cracked wheat after one day in fermentation room. 5. Cracked roasted wheat. 6. Roasted wheat. 7. Wheat (Canadian). 8. Soybeans (Manchurian variety). (neg. #44734).

Page 3475. Photo of *Pueraria Thunbergiana*, Kudzu. Five "small packages of kudzu flour purchased in a store in Tokyo, Japan, December 24, 1929. This flour is made from kudzu roots and is used in making soups." Each package is 7/8 inches wide; 3½ inches tall.

Page 3482. A photo shows three identical bottles of Kikkoman brand soy sauce, each from a different angle so that all parts of the label are visible. Each bottle is 7½ inches tall and 2 inches in diameter, and holds one-fifth liter of sauce. Obtained on Jan. 7 from the Nodashoyu Co. [Noda Shoyu Co.]. D&M item #3074. This company is the largest in the Orient (neg. #44742). Address: Agricultural Explorers, USDA, Washington, DC.

2772. Morse, W.J. 1930. Re: Soybean products collected. Trip to Manchuria and China. Letter to Dr. E.A. Hollowell, Office of Forage Crops, USDA, Washington, DC, Jan. 12. 2 p. Typed, with signature on USDA letterhead.

• ***Summary:*** "Dear Holly: I have your letter of December 16 with reference to the soybean products and the more I collect over here the less inclined I am to loan them out... In my last such experience, I fitted up a soybean product exhibit for some sort of health food show in New York City and I never did get it back although we had considerable correspondence about it. As I recall I even took it up with the Secretary [of Agriculture] because they wanted it for a permanent exhibit and so I was out a nice exhibit which it took me considerable time to get up. After that I would not let anything go out unless I had several products of the same kind but it cured me of fixing up exhibits for any one or letting out products or pictures that I could not easily duplicate.

"Therefore, even with Dr. Burlison I do not know of any of the products we have in the office that I care to let out..."

"Last week we visited a large soy sauce factory [almost certainly Kikkoman] at Noda-Machi, about a three hours' run from Tokio... They use twenty thousands of bushels of soybeans annually and the same amount of wheat."

"I was rather anxious about the work but as you state if the Arlington [Farm in Virginia] work can be arranged, you and Lee can hold things until I return. I think that this can be arranged so that Lee will not be over-loaded with the work now on hand and the new introductions we are sending in...

"Dorsett is making pictures of the various [soybean] products as they are collected and making pictures that can not be beat.

"The beancurd, miso and natto factories are mighty interesting and we are getting lots of good data and pictures as well as samples of the varieties of beans used. The beancurd factories are only small places but they are very numerous and each has its own way of making the curd."

Location: National Archives, College Park, Maryland. Record group 54–Bureau of Plant Industry, Soils and Agricultural Engineering. Subgroup–Div. of Forage Crops and Diseases. Series–General Correspondence, 1905-29. Box 93–Morse-Napier. Folder–Morse, W.J.-#4 F.C.I.

Sent to Soyfoods Center by Jacob Jones of Purdue Univ., Aug. 1998. Address: Tokio, Japan.

2773. Kinoshita, Asakichi. 1930. Shôyu no roka to chozô-sei ni tsuite [On filtration and preservatives of shoyu]. *Jozogaku*

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Zasshi (J. of Brewing, Osaka) 8(1):54-63. Jan. 15 [Jap] Address: Jôzô Shikenjo gishi.

2774. Morse, W.J. 1930. Soybean utilization. *Farmers' Bulletin (USDA)* No. 1617. 27 p. Jan. Revised 1932.
• ***Summary:*** Contents: Introduction. Soybeans for human food: Dried beans ("The Easycook and Hahto varieties, however, cook fully as soft as other beans." Also used as a substitute for coffee or for salted peanuts), green or vegetable beans ("The Hahto and Easycook varieties have been found especially valuable for use as green beans"), soybean flour, soybean oil, soy sauce, soybean sprouts, soybean vegetable milk ("used so extensively in China." Also mentions the residue [okara]), soybean curd. Soybeans for livestock: For swine, dairy cattle, beef cattle, sheep, poultry. Soybeans for oil: Methods of processing beans for oil, utilization of soybean oil. Soybean meal: Soybean meal for human food, soybean meal for stock feed, for swine, for dairy cattle, for beef cattle, for poultry. Soybean meal as a fertilizer. Miscellaneous uses of soybean meal. Soybeans for hay: Soybean hay for dairy cattle, for beef cattle, for horses and mules, for sheep, for swine, for poultry. Soybeans for pasturage: Swine, sheep, or poultry on soybean pasturage. Soybeans for silage. Soybeans for soilage [green crops for feeding confined animals; a term first used in 1928]. Soybeans for soil improvement. Soybean straw: Feeding value, and fertilizing value of soybean straw.

"Soybean milk in the form of a powder is a commercial product in some European countries, and in parts of the United States it has been used in special feeding cases" (p. 5). "In many cities in the United States having a large oriental population fresh bean curd may be found in the Chinese and Japanese markets" (p. 6).

Photos show: (1) Six men steaming soybeans while making miso in Japan. (2) Muffins made from wheat flour and soybean flour. (3) Making soy sauce in a Chinese courtyard. (4) Grinding soybeans with a stone mill to make soybean milk in China. (5) "Blocks of freshly made bean curd, 'tofu,' as sold in the markets of the Orient." (6) Loading soybean oil in tanks at a soybean oil mill, Harbin, Manchuria. (7) Soybean cakes awaiting shipment at a Manchurian port. (8) Hogs in a field of soybeans. (9) "Pasturing soybeans and corn with sheep is a common practice in the Corn Belt states." (10) Corn and soybean plants growing together for use as silage; a boy is standing by the plants. (11) "A fine growth of soybeans to be used for soiling." Address: Senior Agronomist, Office of Forage Crops and Diseases, Bureau of Plant Industry, Washington, DC.

2775. Tamiya, Hiroshi; Morita, Shinkichi. 1930. Bibliographie von Aspergillus 1729 bis 1928 [Bibliography of Aspergillus from 1729 to 1928]. *Botanical Magazine (Tokyo)* 44(517):1-7. Jan.; 44(518):79-89. Feb.; 44(519):139-50. March; 44(520):209-18. April; 44(521):251-61. May; 44(522):305-16. June (Supplement 1794-1928, refs. #2293-2424); 44(523):375-86. July (Author index I–A-L); 44(524):421-31. Aug. (Author index II–M-Z). [2424 ref. Ger]
• ***Summary:*** This is the 1930 continuation of a superb bibliography of 2,424 citations listed chronologically by year, and within each year alphabetically by author. Part 1, 1929, covers the years 1729 to 1920 and contains 1,655 references. At the end of the last installment (1930) there is a complete author index. Address: Japan.

2776. Potter, Paul. 1930. Soy beans find place in menus of Americans: Oriental countries know their worth. *Chicago Daily Tribune*. Feb. 28. p. 17.
• ***Summary:*** "Soy beans, utilized for ages in oriental countries in the preparation of numerous fresh, fermented, and dried food products, are gradually finding a place on the American table." Soy bean flour has long been used in diabetic diets and in a gruel for infants allergic to cow's milk. In recent months food manufacturers have begun to make soy sauce, breakfast foods, and edible oil from soy beans. W.J. Morse, who pioneered the soy bean's adaptation to the corn belt, says the 1929 crop is worth $70 million. Soy bean oil is becoming an important ingredient in the manufacture of soap, paints, linoleum, rubber substitutes, and glycerin.

2777. Dorsett, P.H.; Morse, W.J. 1930. Visit to the Nippon Jojo Kogyo & Co. Ltd. and Mr. Togano in Tokyo, Japan (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.
• ***Summary:*** Pages 4337-39 (15 March 1930, Tokyo, Japan). "In our study of soy sauce manufacture, we received information about a factory manufacturing an artificial soy sauce. A visit was made to this factory which is known as Nippon Jojo Kogyo & Co., Ltd., 102 Omoto-cho, Koishigawa-ku, Tokyo. We were taken to the office of the President, Mr. Togano, who was a student at the Nishigahara Agric. Experiment Station Soy Sauce Laboratory. Mr. Togano made a special study of soy sauce brewing under Dr. Kurono, Chief of the Soy Sauce Laboratory, and is recognized as an expert on the brewing of this sauce.

"It was learned through Mr. Togano that his method of manufacture is not an artificial one but merely a different method whereby only one-sixth of the time is required in the curing, and less wheat is required. Mr. Togano in his investigations found that by certain changes in the old method of making soy sauce, economy in time or curing and in amount of wheat used could be gained. In the old method, the cracked roasted wheat and steamed soybeans are mixed

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and treated with the rice culture. In the improved method the cracked roasted wheat and the steamed soybeans are treated separately with the culture, and then mixed. The treatment of the roasted wheat is a secret process and has been patented in Japan and the United States.

"After the mixing of the treated soybeans and roasted cracked wheat, salt and water are added. This mixture is then placed in the curing vats, and only 20 days of curing are required for a good quality of soy sauce. However, the mixture is left in the tubs for 60 days before being removed for pressing out the sauce. This time is one-sixth of that used by other soy sauce factories, as most of them cure the mash for at least one year and in some cases, a year and a half is allowed.

"Three grades of the ordinary sauce are manufactured by the Nippon Jojo Kogyo & Co. A special brand known as "Marujo Kanro Shoyu" [a brand of saishikomi] is also made. This sauce is much heavier than the common sauce and is made by adding to the soybean-roasted wheat mixture, the ordinary sauce instead of salt and water. Note: This is the earliest document seen (April 2012) that mentions "Kanro Shoyu" or "Marujo Kanro Shoyu" or any type of saishikomi shoyu. Yet the word "saishikomi" is not used.

"The Nippon Jojo Kogyo Co. soy sauce sells much cheaper than that of other factories. A two litre bottle sells for 45 sen, whereas the soy sauce of other companies sells for 60 sen for two litre bottle. This company has four factories in the Tokyo District, and has several more distributed about in different parts of the Japanese Empire. There is also a large factory near Hongkong, China. This company uses about 150,000 koku (750,000 bushels) of soybeans yearly in the manufacture of soy sauce at its four Tokyo factories.

"Mr. Togano asked much about the soy sauce and soybean situation in the United States. He advised that he sells considerable rice culture for soy sauce manufacture in Los Angeles, Chicago and San Francisco. From information gathered, he evidently has looked into the proposition of starting a soy sauce factory in the United States.

"The advertising of products by this firm is the most extensive of any of the firms putting out soybean products we have yet seen in Japan. Attached herewith is a folder used in advertising. The wrestler represents the health and strength of the Japanese people while the cask of soy sauce he is holding represents the health and strength of Japanese foods for the people."

A label of the company's Maru-Jo soy sauce (in a wooden keg) appears on p. 4339. A sumo wrestler is holding a large keg of the product over his head. On his right leg is written "miso" and on his left leg, "shoyu." Address: Agricultural Explorers, USDA, Washington, DC.

2778. Dorsett, P.H.; Morse, W.J. 1930. In Dairen, Manchuria (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.

• ***Summary:*** Page 4525 to 4526 (10 April 1930, Dairen, Manchuria). "This morning we called at the office of Mr. K. Matsushima and a little later, in company with Mr. Yoshitane Sato of the Bureau of Agriculture of the South Manchuria Ry. [Railway Co.; S.M.R.] we visited the soybean exchange.

"Here, as in all other grain exchanges, of which we have had an opportunity to see everything, pandemonium raged on the floor of the chamber.

"The room looked to be 40 feet or more in width and 75 or so in length, with a gallery extending around the entire room." Of the 100 members, 60 are Chinese, 30 Japanese and 10 are of other nationalities–Russian, Danes, British, etc.

Page 4526. "From the exchange, we went to one of the research laboratories of the Agricultural Branch of the S.M.R., where we met Mr. Takamori, also the assistant director of the Bureau of Economic Research, Mr. Igarashi. These gentlemen offered to assist in any way possible; both speak good English and understand a good deal. We next visited Dr. Y. Nakanishi, Secretary of the Soybean Oil Association."

"After lunch we visited a good sized shoyu sauce factory and looked over the plant, including culture chambers and ageing mash vat rooms. They demonstrated for us their method of vat mash stirring by compressed air. It is a simple method. The air passes through a one-inch pipe to the bottom of the tank, as the pipe is moved about over the bottom the air expelled from the pipe forces its way up through the mash, which gives the impression of boiling. The practice appears to be much more effective and easier than the hand or paddle method of stirring the mash which is pretty generally followed.

"The refuse left after pressing out the soy sauce is sold for cattle feed (we understand primarily for hog feeding). It is also resoaked and used for making a much inferior and cheaper grade of soy sauce, for which this concern has quite a demand."

Page 4541 (15 April 1930, Dairen). In the morning visited Mr. Satoh of the S.M.R. with reference to soybean oil mills and soap factories using soybean oil in Dairen. Arrangements were made to visit the oil mill of the Mitsubishi Trading Co."

"This Oil Company crushes about 300,000 tons of soybeans yearly, producing about 270,000 tons of bean cake and about 30,000 tons of bean oil."

Page 4542. "For Japanese trade, where bean cake is used chiefly for fertilizer, and to a slight extent for poultry feed, the cakes are ground into a very coarse meal. Permission was given to take any pictures we might wish within the mills or mill yard."

Page 4543 (16 April 1930, Dairen). "In the morning

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visited the Mangylku Soap Mfg. Co. where crude soybean oil and hydrogenated soybean oil are used in the manufacture of soap."

"Mr. Satoh suggested that we get in touch with Dr. Satoh, botanist and author of the bulletin [on wild legumes which shows 28 genera and 102 species] as he might be of assistance to us in our collections of wild legumes in Manchuria, North China, and Chosen" [Korea].

Page 4546. "The wild soybean is very abundant throughout this vicinity." "Mr. Nakatomi assured us of his hearty cooperation in our studies of Manchurian agriculture."

Page 4558 (21 April 1930, Dairen). "This morning we went to the office of Mr. Satoh of the S.M.R. and found a package of fifteen varieties of soybeans that had been sent to us from the S.M.R. Experiment Station at Kungchuling. This station is the principal soybean breeding station and the varieties sent us represent selected varieties from their 1929 variety test of over five hundred varieties." A table gives the D. & M. number, varietal name, and use of each of the 15; the three uses are grain, forage, and pasture.

"In the afternoon samples of different forms of soy bean oil cake and oil cake meal were received from Mr. Yoshida, manager of the Mitsubishi Soybean oil Mills." They are: (1) "Coarse flakes. Made for export to Japan for cattle feed and fertilizer. Moisture 11%. Protein 44%. Fat 7.5%." (2) Finely cracked like cracked corn. Made for export to Japan for cattle feed; 10%, 44.5%, 7%. (3) Coarse meal for export to the United States for cattle feed. 9.11%, 45.6%, 7%. (4) Finely ground meal for export to the United States. 9.10%, 45.6%, 7%. (5) Medium coarse flakes for export to Japan for poultry feed. 10%, 44.5%, 7%. (6) Coarse flakes for export to Japan for fertilizer. 11%, 44%, 7.5%.

Page 4565 and 4566 (25 April 1930, Port Arthur, Manchuria). "We then visited the museum and looked over the agricultural exhibits of the Kwantung Province. The Nisshin Oil Mills of Dairen has rather an extensive exhibit of various forms of soybean oil and oil cake. The Manchuria Paint Co. has a very good exhibit of many kinds of paints, enamels, varnishes and plastic paints in the manufacture of which soybean oil was used." Address: Agricultural Explorers, USDA, Washington, DC.

2779. Nouelle, Georges. 1930. Les emplois du soja [Uses of soybeans]. *Revue Agricole (Guadeloupe)* 3(4):118-20. April. Reprinted from Les Annales Coloniales, No. 137, Sept. 1929. [Fre]

• ***Summary:*** Describes the various food uses of the soybean, including soymilk, concentrated, powdered, or fermented soymilk, soy flour, soy oil, soybeans consumed as a vegetable (fresh soybeans are prepared like peas), soy sprouts, soy sauces, soy confections, soy chocolate, and soy coffee.

The soybeans also has uses other than for food, in making candles, colors, and in the form of Sojalithe as an electrical insulator.

2780. Washizu, Shakuma. 1930. Zaibei Nihonjin shi kan [A history of Japanese in America]. Los Angeles, California: Rafu Shimpo-sha. [31] + 295 + [88] p. Plus 32 unnumbered leaves of plates at end. April 1. See p. 36-38. Illust. 23 cm. [Jap]

• ***Summary:*** Page 36-37. "Pioneers of tofu and konnyaku production in America. A person named Chieto HIRATA, who lived in Sacramento, California, imported konnyaku from Japan. He came to the USA in about 1891. He is one of the old timers who transmigrated Hawaii. A native of Hiroshima prefecture in Japan, he was very clever and business-minded. In 1893 his wife began a company making konnyaku in Sacramento, California. Shortly after that she started making tofu.

"Footnotes: (1). Mr. Hirata is presently engaged in business in Korea. (2) Since the Chinese were the most skilled in making tofu, only recently [in the last 20 years] have Japanese started specializing in its production. There are many who claim to be the first; I am afraid of making any errors."

2781. Shen, Chennen. 1930. The importance of soybean. *China Critic (The) = Chung-kuo Ping-lun Chuo Pao (Shanghai)* 3(18):416-19. May 1. [Eng]

• ***Summary:*** Contents: Introduction. Domestic consumption of soybeans. Foreign consumption of soybeans. Future prospects.

Soybean, called yellow bean in China, is "cultivated in all parts of the country, but most abundantly in Manchuria. While in 1913 the export of soybean amounted only to about ten percent of the total export and ranked next to silk and tea in importance, it has in sixteen years increased five times in value, risen to twenty percent of the total export and taken the premier place in our export trade! No other commodity has ever experienced such an overwhelming prosperity in such a short time in the history of China."

"Everybody knows that we Chinese live on rice and wheat. But not everybody realizes that we live just as much on soybeans. The soybean is consumed in large quantities by the northerners as well as by the southerners. Its numerous forms of preparations are common articles of food found in every household. Recent scientific investigations have shown that the soybean satisfies a particular requirement in the Chinese dietary."

The human body is like a machine. It needs carbohydrates and fats for fuel and motive power, and protein for repairing worn-out parts. A table compares the nutritional composition of soybean, rice and wheat. "It is evident that soybean is entirely different from either wheat or rice. Whereas wheat and rice supply carbohydrates in the form of starch, soybean is mainly the source of protein. It is interesting to note that the poorer class of people in

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China consumes very little meat but seems to have sufficient amount of protein. Remembering that every Chinese takes a large amount of soybeans in various forms of preparation, we can readily understand how the protein requirement is satisfied. As soybean contains more than twice as much protein as does any meat and is much cheaper, we can satisfy our protein requirement at one-tenth of the cost of meat."

Exact data regarding soybean production in China are lacking. "The Manchurian crop is more accurately estimated at 5,200,000 tons [probably metric tons] in 1928. The production of soybean in all other provinces has been estimated at 2,000,000 tons by Horvath and 10,000,000 tons by Marakujew [in Russian]. The total exports of soybeans, soybean oil and soybean cake is about 3,500,000 tons, leaving 3,750,000 to 11,750,000 tons for domestic consumption. The consumption per capita is thus 20 to 65 lbs. per year. These two figures at least represent the two extremes. Marakujew's figure is probably nearer to the actual. These 65 lbs. of soybean are used: -"

1. As soybean oil. 2. As soybean milk, "a very popular drink in China," "which is to the Chinese as cow's milk is to the Westerners." The process for making this milk is described briefly and a table compares its nutritional composition with human milk and cow's milk. The composition of the three are "very similar. One of the products of "soybean milk is the pellicula (Cc = Chinese characters given) (doufu-pi [yuba]) which is a thin sheet coagulated on the surface of the milk when it is heated. It is especially rich in protein and fat and used as a table delicacy."

"4. As soybean curd (Cc: doufu), one of "the most universal preparations" of the soybean. "It is relished by the poor as well as the rich. When a coagulating agent like gypsum is added to the bean milk, a thick mass separates out." "It is very similar to meat in chemical composition." A table compares the composition (only protein, fat, and carbohydrate on an "as is" basis) of soybean curd, beefsteak, pork chops, and eggs. "Although the protein content of 'tofu' is only half of that of meats, we see the economy of it even if we have to use a double quantity of it. The solid bean curd (Cc: doufu gan) is more like meat as it contains less water than 'tofu' and is also extensively used in China.

"4. As soy sauce, another popular soybean preparation..." "Other fermentation products like the fermented soybeans (Cc: douchi) and the fermented 'tofu' (Cc: furu) serve similar purposes." Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "fermented soybeans" to refer to these Chinese-style "fermented black soybeans."

"5. As a vegetable. Cooked [green vegetable] beans are also used by the Chinese but not very extensively. Experience has taught us that the cooked whole beans are not so digestible as 'tofu' or other preparations. However, soybean sprouts, obtained by germination in water, are highly digestible and contains the antiscorbutic vitamin C, which is lacking in the original seed."

"The chief demand for soybean in foreign countries is for the oil and the bean cake." The oil is used for either edible or technical [industrial] purposes and the cake is used as a fertilizer or as cattle feed. "The soybean owes its popularity to its resemblance to cottonseed oil which is widely used in making soap, lard [substitutes] and oleomargarine. The first shipment to Europe was attempted by Japanese in 1908. It was warmly received..."

"Due to its peculiar smell, the raw soybean oil is rarely used in western countries for cooking. But now it is possible to refine this oil and render it entirely palatable to the western taste. It has been put on the market as salad and cooking oils. By the process of hydrogenation, the liquid oil can be transformed into a solid fat, which is an excellent substitute for animal lard" [or butter].

"Thus we see that in a period of twenty years, soybean has extended its usefulness from the Chinese dietary into industries of world-wide importance and is now one of the most valuable agricultural products not only of China but of the whole world."

"In Germany and Denmark artificial milk is regularly manufactured from soybean and sold on a commercial scale. Soybean milk powder is also being manufactured.

"The soybean curd has also a good future, as it can be used to make meat substitutes. Artificial meat has been prepared by a German soybean factory.

"The biggest possibility in the popularization of soybean as a food is the soybean flour. From the bio-chemical point of view, white bread made from the wheat flour is deficient in protein and vitamins. Therefore a substance like soybean should be a valuable addition to the wheat flour. In fact, half a dozen kinds of soybean flour are already on the market in Europe and America."

"The phenomenal rise of the soybean as a universal article is not a matter of accident: It is the result of years of intensive scientific research. We should be thankful that we Chinese are not only the biggest consumer but also the biggest producer of this valuable article. But in the face of keen competition at the present time, we should look out lest this leguminous seed should fall into the same pit as did our silkworm and the tea plant. Up to the present we have been benefited by the researches of foreign countries and also the laboratories of the South Manchuria Railway and the Chinese Eastern Railway, whose immediate interests are not purely Chinese. Are we going to lead the world in soybean production? The future is by no means bright. Already the Chinese soybean oil mills are suffering due to their out-of-date equipment and inefficient process. America is rapidly increasing the acreage for soybean planting. When the American soybean crop is big enough to supply herself and other countries, China will have a difficult battle to fight. China should take an active part in studying and widening

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the usefulness of soybean as a food and as an industrial raw material."

2782. Dorsett, P.H.; Morse, W.J. 1930. Soybean chiang and salted black beans in Manchuria and China (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.

• ***Summary:*** * = Best photos. Page 4620 (2 May 1930, Hsiungyaocheng, Manchuria). The South Manchuria Railway agricultural experiment station here is testing about 60 soybean varieties under the direction of Mr. Kaneyasu Hisatake [Japanese name], agricultural engineer. "About 90% of the soybeans planted in this area consists of a greenish yellow variety called *Te-cha-chin* which is used for oil and is also utilized by the farmers for bean curd, miso, and other food purposes." Page 4641 to 6142 (May 8, Kungchuling, Manchuria). Mr. Kanda [Japanese name] is director of the Kungchuling experiment station. Kungchuling is the center of a very extensive soybean growing section and the experiment station is doing much work with the improvement of native [indigenous/domestic] soybean varieties. Over 500 varieties are under test yearly and more than 2,000 varieties have been experimented with. "The great range in size, color, and shape of the seed was very interesting." Visited "some Chinese stores where Chinese soybean miso and soy sauce were sold. The Chinese miso is more liquid (like a thin paste) than the Japanese and not ground, but both taste very much alike."

Page 6252 to 6255 (23 Oct. 1930, Peiping, China). Went to the "pickle factory of Chang Shun Kung, where we got information about soybean jam [*chiang / jiang*], pickles, etc." Photos taken at the factory of Mr. Chuang Shun Kung: (1) "View across soybean jam and pickle jars covered with matting." Factory buildings in the background. (2) "Looking along a portion of a line of large earthen jars filled with soybean jam [chiang].* These jars hold about 800 catties of jam." (3) Same factory. Mr. W.J. Morse standing by the end jar in one of the rows of jars.* (4) "The end and half the length of a dry brick of wheat and soybeans, curing stock for Chinese jam made of soybeans." This product is used in making soy sauce and three forms of soybean jam or paste. Chinese name *Ton chih* [sic, *Tou chih*] meaning "salted beans" [fermented black soybeans]. Note: This is the earliest English-language document seen (Nov. 2011) that uses the word "jam" or "soybean jam" to refer to *chiang / jiang*.

Pages 6339, 6344 to 6345 (3 Nov. 1930, Peiping, China. P.H. Dorsett's notes). "After tiffin we went to the soy sauce, soy jam and pickle establishment of a Mr. Wang in the outer city to the southwest. This establishment is some 300 years old and many of the large earthen glazed jars are of the age of the establishment." Photos of Mr. Wang's Lan Hsin Chai Soy Sauce Factory: (1) "View from the northeast corner of the compound just in front of the soy sauce pressing room, looking over the large earthen jars of jam [jiang], pickles, etc." Some jars are covered with reed grass matting or conical lids.* (2) Another view from the southwest corner of the compound.

Note: This is the earliest English-language document seen (July 2003) that uses the term "soybean jam" or "soy jam." Address: Agricultural Explorers, USDA, Washington, DC.

2783. Ishimaru, Yoshio. 1930. [Studies of pH buffer action of quinhydron electrode method]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 8(5):335-63, May. [1 ref. Jap]

• ***Summary:*** Contents: Introduction. Part 2: The relationship between ripening of shoyu moromi and the buffer action (p. 336-39). Part 3: The effect of buffering action on yeasts in shoyu moromi (p. 339-42). Part 4 The effect of buffering action on bacteria in shoyu moromi (p. 432-).

2784. Morse, W.J. 1930. Utilizacion de la soya [Utilization of soya]. *Cuba* (*Santiago de las Vegas*). *Estacion Experimental Agronomica, Circular* No. 69. 40 p. May. Translation by Emma L. Sena of USDA Farmers' Bulletin 1617. [Spa]

• ***Summary:*** In the introduction, Ing. Francisco B. Cruz, Director of the Agronomic Experimental Station, E.C., praises an imported soy oil named "Aceite comestible de Soya." A full-page ad for this product (just before p. 36), apparently with the brand name Excelsior, is also shown. Address: USDA, Washington, DC.

2785. *Fortune*. 1930. Soy beans: Which may be glue, milk, cheese, sauce, varnish, axle grease, fertilizer, soap, soup, buttons, artificial leather, enamel. 1(5):102, 104. June.

• ***Summary:*** Discusses the history of the soybean in various countries. Its uses in the United States are outlined. A plastic named Satolite is used to make combs and buttons. In "Paris there is a cheese factory that makes Rocquefort [Roquefort] from soy bean curd." Soy bean "milk has more proteins than cow milk and little danger of contamination. Its flour contains four and one-half times more fat, four times more proteins, half as much water, and nearly half as many carbohydrates as the flour of wheat. These chemical ingredients make it a food, more interesting, perhaps, than palatable. Though the milk is supposed to be good for one (it arrests cases of retrogression, causes normal growth), it has generally to be drunk sweetened with sugar. Soy bean sauces are better spiced. (For the Chinese taste Lean & Perrins Worcestershire is too hot. The Chinese themselves make their sauces by exposing the crushed bean to sunlight and actually melting it. Certain Korean sauces are thus matured thirty years before they are considered palatable.) But if the

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bean's chemical make-up only indirectly contributes to its success as human food, it is nevertheless the basis of the bean's industrial importance. Because of its nitrogen, the bean is valuable as fertilizer and also as poultry and stock feed. And the bean's hereinbefore mentioned oil has proved of value to many a manufacturer of paints, enamels, lacquers, and even explosives."

The Anglo-Chinese Company at Harbin and the Suzuki Mill at Dairen, both of which use chemical solvent extraction, have succeeded in extracting virtually all of the oil from the soybean; Manchuria's traditional crude stone presses were able to extract only about half the soybean's oil content.

"Perhaps the greatest economic and industrial triumph of the soy bean occurred, oddly enough, in Denmark. Until some thirty years ago this pleasant country was more than self-supporting in the production of cereals, especially wheat. But U.S. mass production and low prices made for perilous and in some cases disastrous competition, even in Denmark's home markets. The Danes bethought themselves of raising live stock, imported the soy bean (using the oil for its usual purposes), and used it as feed for their live stock and poultry. Today 70 per cent of Denmark's export trade consists of live stock and animal products: milk, butter, cheese, bacon, ham, eggs, and the like. And for their country's regained economic health Danes give thanks to the soy bean...

"In the United States the paramount importance of soy bean is still its agricultural use. But it is significant that 75 per cent of the soy bean oil consumed in United States is being used by paint and varnish industries and in manufacture of linoleum, oil cloth, artificial leather. Lesser quantities are utilized in printer's ink, liquid soaps. Few soy beans are imported into this country."

Note: This is the earliest English-language document (Feb. 2007) seen that contains the term "mass production."

2786. Wong, Nellie Choy. 1930. The story of chop suey. *Christian Science Monitor.* July 25. p. 6.

• ***Summary:*** The true story of the origin of chop suey, which is seasoned with "soy-bean sauce." It was originated in the USA by the chef of Minister Li Yuan Hung when Minister Li was Minister in America. In Cantonese, "chop" means a mixture of everything and suey means "small."

Note: According to the *Oxford English Dictionary*, the term "chop suey" first appeared in English in 1888.

2787. Dorsett, P.H.; Morse, W.J. 1930. Tofu, soybeans in the pod, and soybean sprouts in Peiping, China (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.

• ***Summary:*** Page 5431 and 5432 (13 Aug. 1930). "We visited an open street market in the northwestern part of the city this morning." Vegetables include: (1) "Soybeans in the pod, quite abundant." Also: "Pea sprouts. Soybean sprouts." "In the afternoon we went to the Temple of Heaven grounds and got more seed..."

Page 5434. Vegetable market scene. Hei Tan Pai Lou, Peking. Cucumbers, eggplants, soybeans,... displayed on the ground for sale" (neg. #45540). At the same market, photo of bean curd. "This Chinese bean curd looks firmer than the Japanese curd" (neg. #45541).

Page 5435. "Peiping. Square cakes of brown bean curd. The cakes of white curd are put into cold soy sauce and when the combination is brought to a boil the cakes are of a brown color" (neg. #45543).

Pages 5436 and 5437. Four photos taken in an open-air show: "Southern soybean curd, Peiping. This curd appears quite firmer than the ordinary curd. The curd, that is the grain, appears to be finer and is considered much better than ordinary curd. It also sells for more money." (2) "White and brown cakes of soybean curd in a Chinese market." (3) "To the left is a pile of shredded soybean curd, on the right a pile of the sheets of curd from which the shredded curd is made" (negs. #45544-46). Note: Pressed tofu sheets are called (in Wade-Giles transliteration) *pai-yeh* or *ch'ien-chang p'i*. Pinyin: *Qian zang pi*. Tofu is pressed into very thin sheets that look like a 6-to-12-inch square of canvas.

Page 5455 and 5456. Letter dated 14 Aug. 1930 written by P.H. Dorsett in Peiping to W.J. Morse, c/o Yamato Hotel, Dairen, Manchuria. "Yesterday we visited an open street fruit and vegetable market which extends for several blocks along Chien-men [Chienmen] Street. It was surely an interesting experience. We saw bean curd at quite a number of stands, also soy sauce. The curd was in several different forms. The white, in somewhat thinner and smaller pieces, small pieces in different forms fried, also round and square brown cakes which they call dry curd [*doufu-gan*]. It is not really dry but is pressed much dryer than the ordinary curd and can readily be handled without breaking. The brown color, we learned, is the result of putting the curd in cold soy sauce and bringing the sauce to a boil."

Pages 5779 and 5780 (18 Aug. 1930). Letter from Mr. W.J. Morse in Dairen, Manchuria, to Mr. P.H. Dorsett, c/o U.S. Legation, Peiping, China. "Today by mail I sent you all of the negatives of pictures that I have taken up to date. The negatives were sent in two lots–one of the 3¼ by 4¼ and the other of the panoramas. Tomorrow I will send you the field reports to date which may be destroyed after they are copied in the report.

"I am planning to go to Korea for two to three weeks in the very near future to complete our movie story of the soybeans as well as the still picture story. We lack the connecting links–scenes of varieties, fields, methods of culture and harvesting–and I hope to get these if possible in

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a short time to complete the whole soybean story of Korea. I also desire to get some data on the growing varieties for you will recall that we did not see the beans growing at all. The Manchurian maturing season soon will be here and again I want to take notes on varieties and make a complete story of the Manchurian soybean. You can rest assured that I am going to collect all possible data, seed and products of the crop. I trust that my allotment holds out for I do not want to miss anything."

"I regretted very much to learn of Dr. Harvey Wiley's death [on 30 June 1930] as I knew him very well. Several years ago he came to see me about soybeans for his dairy farms up at Bluemount [Note: After leaving government in 1912, Wiley raised dairy cows became head of the laboratories at *Good Housekeeping* magazine]. I started him with the Virginia as a silage bean and it was a great success. He became quite a soybean man and occasionally came around to talk soybeans with me.

"Your comments on the bean-curd at the Chinese market are very interesting and I hope to be able to see some of these different things when I come down to [China] some time this fall. I doubt if I will find anywhere in the Orient such a collection of products as we picked up in Japan last year. You will note in the field reports being sent you that lately we have stumbled across a few new products and we are always on the lookout for new ones." Address: Agricultural Explorers, USDA, Washington, DC.

2788. Kellogg, John Harvey. 1930. Soybeans as human food. Paper presented to the American Soybeans Grower's Association, Sept. 11. 20 p.

• ***Summary:*** Dr. Kellogg shows that he has an excellent knowledge of the world literature on soybeans and soyfoods, much of which he summarizes in this speech. "Many years ago (1899), the United States Department of Agriculture, called upon me to undertake the preparation of a vegetable meat. The Assistant Secretary, Dr. Charles Dabney, wrote me, suggesting that the navy bean might be used for the purpose. I found, however, as I expected, that this legume was not suited to the purpose. At that time the soybean was not grown to any extent in this country, I was wholly unacquainted with it, and so naturally sought to find in nuts, especially the peanut, a solution of the problem, and succeeded in producing a vegetable meat, Protose, of which several thousand tons have since been made and consumed. But the introduction of the soybean renders quite unnecessary any other substitute for flesh meats." The author discusses his belief that primitive man subsisted wholly upon plant products (i.e. ate a vegan diet "according to Prof. Elliot of Oxford University, Prof. Ami of Montreal, and other distinguished paleontologists"), and the nutritional value of soybeans and their basic-ash quality. "All meats yield a highly acid ash. The excess of acid in these foods produces a lowering of the alkalinity of the blood and tissue fluids when they are freely used, a condition which is known as acidosis." He also discusses soya sauce (which is now being manufactured in the USA), miso (which like soy sauce has a flavor resembling that of the osmazomes found in meat and meat sauces), roasted soy nuts (resembling roasted peanuts), pressure cooking whole soybeans, adding soy meal (flour) to breads, soymilk being distributed in bottles in parts of China and Japan, soy cheese [tofu], and the many health benefits of soy milk described in the medical literature, the many health problems caused by consuming flesh foods.

"Von Noorden, the world famous German physician, has demonstrated that the soy bean is of very great service in changing the intestinal flora." Note: This is the earliest document seen (June 2003) concerning soy and changing the intestinal flora. It is also the earliest document seen (June 2003) that uses the phrase "changing the intestinal flora" in connection with soy.

"In spite of the frantic efforts of vested interests to promote the uneconomic live-stock industry, it will no doubt gradually disappear as a true science of agriculture is developed and the country becomes more densely populated. The conversion of vegetable into animal protein by feeding to steers and pigs, is one of the most wasteful of all human activities. Armsby has shown that 100 pounds of digestible vegetable protein are required to produce 3 pounds of meat protein..."

Discusses Stefansson's absurd so-called meat-eating experiment, which was really a publicity stunt. Stefansson took no more than 20% of his calories in the form of lean or muscle meat. The rest of his diet was fat. "Excessive meat consumption is one of the begetting sins of the people of this country. Our per capita meat consumption is 5 ounces per day, just 5 times that of Italy (1.0 oz.) and ten times that of North China (0.5 oz.), while the average native of South China eats no meat at all, and is one of the hardiest and most industrious of workers."

"Thanks to the efforts of our efficient Plant Introduction Bureau, the soybean is beginning to get a start toward recognition and appreciation in this country; but it is evident that a plant possessed of such superlative values and such astonishing versatility and adaptability should receive far more serious attention than has heretofore been given it by the agriculturalists of this country... There can be no doubt that it is destined to play a large part in the feeding of America's millions..."

Note: This is the earliest English-language document seen that uses the term "soy nuts" to refer to soynuts. Address: Battle Creek, Michigan.

2789. Morse, W.J. 1930. La utilizacion de la soja en diversas industrias [The utilization of soya in various industries]. *Hacienda (La) (Buffalo, New York)* 25:298-301, July; 25:347-49, Aug; 25:394-96, Sept. [1 ref. Spa]

• ***Summary:*** This is a translation of USDA Farmers' Bulletin

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1617, but with excellent new illustrations. Contents: Introduction. Soybeans in the human diet: Whole dry soybeans, green vegetable soybeans, soy flour, soy oil, soy sauce, soy milk, tofu (*cuajada de soja*). Soybeans in the feeding of domestic animals. Soy oil: Extraction, use. Soybean cake: as a human food, as a livestock feed, as a fertilizer. The value of soybean forage. Soybean in silage. Soya as green forage. Soybeans for the improvement of soils. Soybean straw.

This article contains many interesting photos: 1. A man with a hand turned stone mill in China grinding soybeans to make soymilk. 2. Soybean cakes stacked and partly covered with tarpaulins at a port in Manchuria. 3. Earthenware vats used for making soy sauce in a courtyard in China. 4. Steamed soybeans being cooled to make miso in Japan. 5. Soybeans intercropped with corn. 6. Manchurians outside a soy oil factory in Dairen. The equipment was installed by the French Oil Mill Machinery Co. 7. Carrying round soybean cakes in a cart at the same factory. 8. A soybean mill at Yokohama, Japan. 9. An Anderson Expeller for the extraction of soy oil. 10. A tractor pulling rotary disks for cultivating soybeans in the USA. 11. Harvesting soybeans with a tractor in the USA. 12. A tractor pulling a harvester-thresher combine in the USA. Address: USDA, Washington, DC.

2790. Morse, W.J. 1930. Soybeans in the Orient. *Proceedings of the American Soybean Association* 3:96-100. Eleventh annual field meeting. Held 10-12 Sept. 1930 in Illinois.
• ***Summary:*** This letter (which appears on pages 5196 to 5199 of the unpublished Dorsett-Morse Log) was written by William Morse on 20 July 1930 from Dairen, Manchuria, to Dr. W.L. Burlison, President of the American Soybean Growers Assoc. at the University of Illinois. It describes the travels of Dorsett and Morse as agricultural explorers for the USDA, studying soybeans and soyfoods, in Manchuria, Japan (Hokkaido and Tokyo), and Korea (Seoul).

"It is recalled that last season the use of the soybean as a green vegetable was described. Throughout the season, it was found that the green vegetable was a very popular food with the Japanese from one end of the Japanese Empire to the other. The vegetable soybean is classed as a garden bean and as such is extensively grown by the Japanese truck farmers."

The authors were in Hokkaido from mid-August until early October, and they visited all the principal soybean sections. "The Obihiro station in the eastern part of the island [of Hokkaido] is conducting the most extensive work in breeding and variety testing. We succeeded in collecting a very large number of varieties and selections of this northern region as well as information on culture, harvesting, threshing, insect pests, and diseases. To supplement this material, we obtained a large number of still and motion pictures of very interesting scenes of the Hokkaido soybean industry."

They arrived in Korea on 20 Oct. 1929 and established headquarters at Keijo (Seoul). "We found Korea to be a most interesting country and different from anything we had seen in Japan. One of the most amazing things was the extent to which soybeans are grown. Almost equally amazing was the large number of native Korean soybean varieties we found in the various sections and at the experiment stations. At the Suigen Experiment Station, they have more than one thousand native Korean varieties and selections under test. The authorities were very generous and gave us samples of each. In addition to this collection, we obtained a few hundred samples from Korean farmers, grain merchants on village market days and from village and city grain dealers. The Korean Department of Agriculture added about 300 samples to our collection by obtaining seed of the principal varieties from the village agricultural societies in each of the prefectures of Korea.

"Altho the Koreans do not use the soybean as extensively for food as do the Japanese, considerable quantities are used and in quite different ways. The beans are used principally boiled with other grains such as millet or kaoliang. They are also used in making miso and soy sauce, but these products are made quite differently from those of Japan or China. Soybean sprouts are found very abundantly in all of the markets and at all of the small food stores. The beans produced in Korea are for the most part excellent quality and are largely shipped to Japan for the manufacture of miso, soy sauce, bean curd, and natto. Soybeans when soaked with chopped millet or kaoliang straw are used universally for feeding oxen and cows, the common work animals of Korea.

"We left Korea about the first week of December [1929] for our Tokyo headquarters and collected seed samples and products as we went along. From the latter part of December until the latter part of March, we put in full time collecting soybean products and learning of their use and manufacture. We succeeded in collecting a large number of interesting products, as the Japanese use the soybean very extensively in their daily diet. In the making of cakes, candies, and numerous other confections, the roasted soybean is used in a similar manner to the peanut in America. Of course, soy sauce, miso, bean curd, and natto are the principal soybean products and the ones most extensively used. As an example of the large use of miso, which is used as a breakfast soup with vegetables and also in preserving fish, vegetables, and meat, we visited three large miso factories in the Tokyo district and found that each produced about one million pounds of miso yearly. In addition to these three large factories, there were numerous small factories scattered thruout the same district.

"As the planting time was approaching in Manchuria, we left Tokyo the latter part of March and arrived in Dairen, Manchuria, the first of April... This country is the real land of the soybean and Dairen, the real city of the soybean. In 1929,

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29.2 percent of the total cultivated area of Manchuria was devoted to the growing of soybeans, producing more than 178,000,000 bushels of seed, thus leading all other crops in acreage and production. The Port of Dairen handles about eighty (80) percent of the exports of beans, bean cake, and bean oil.

Note: This is the earliest document seen (Aug. 2011) that uses the term "land of the soybean" in connection with or to refer to Manchuria.

"The planting season for soybeans in Manchuria begins about the first of May and extends to about the 25th of May in some northern sections. We, therefore, had an opportunity before the planting season, to study the methods of grading, storage and transportation of [soy] beans, bean cake and bean oil in the oil mills. The storage yards and warehouse yards of the South Manchurian Railway cover several hundred acres and the immense quantities of bags of beans and bean cakes stored in the open storage yards and in the warehouses are well worth seeing..."

"We had rather expected to find a large number of products made from beans, bean cake, and bean oil but our findings thus far have been very meager. The oil is used in the manufacture of soaps, paints, lard substitutes, and salad oils, but only a very few factories are engaged in producing these products. The beans are used chiefly for oil and oil cake, but during the last three or four years, the demand of European mills for beans has had a serious effect, not only on the Dairen soybean oil mills, but also on the oil mills throughout North and South Manchuria. In Dairen, at the present time, only about forty-five soybean mills are active during the crushing season, whereas four years ago there were about ninety. The oil cakes are for the most part shipped to the Japanese Islands for feed and fertilizer (chiefly fertilizer), to China and the East Indies for fertilizer, and to America and Europe for cattle and poultry feed."

"Our experience in the field up to the present time has been the study of methods of planting and cultivation practiced in different sections of North and South Manchuria."

"We have collected quite a large number of seed samples during our travels thus far in Manchuria and have obtained some very interesting types. It may interest the members to know that we have visited Yingkou (Newchwang), the source of the Virginia and Wilson varieties... At the Kunchuling Experiment Station, more than one thousand varieties and selections have been tested but at the present time only five hundred are under test. The Manchurian varieties do not succeed in the Japanese Islands or Korea and neither do the Japanese varieties succeed in Manchuria or Korea..."

"With this letter we are sending some lantern slides illustrating various scenes of the soybean industry in oriental countries... With best wishes for a most interesting and successful 1930 meeting."

Note 2. This is the earliest English-language document seen (Feb. 2004) that uses the term "vegetable soybeans" (not preceded by the word "green") to refer to green vegetable soybeans.

Note 2. This letter was reprinted in *Soybean Digest* (April 1945, p. 11-12). Address: USDA, Washington, DC.

2791. Morse, W.J. 1930. Utilizacion de la soya [Utilization of soybeans]. *Revista de Agricultura, Comercio y Trabajo (Cuba)* 11:43-60. Sept. [Spa]

• ***Summary:*** This is a translation of *USDA Farmers' Bulletin* No. 1607 titled "Soybean Utilization" (Morse, Jan. 1930). With an introduction by Ingeniero Francisco B. Cruz, Director de la Estacion Experimental Agronomica, de Santiago de las Vegas, Cuba. Translation by Emma Lopez Seña. Contents: Introduction. Soybeans for human food: Dried beans (*los frijoles secos*), green or vegetable beans (*los frijoles verdes*), soybean flour (*la harina de soya*), soybean oil (*aceite de soya*), soy sauce (*salsa de soya*), soybean sprouts (*vástagos de soya*), soybean vegetable milk (*leche vegetal de soya*), soybean curd (*cuajada de la soya*). Soybeans for livestock: For swine, dairy cattle, beef cattle, sheep, poultry. Soybeans for oil: Methods of processing beans for oil, utilization of soybean oil. Soybean meal: Soybean meal for human food, soybean meal for stock feed. Soybeans for hay. Soybeans for pasturage. Soybeans for silage. Soybeans for soilage. Soybeans for soil improvement. Soybean straw.

Note: This is the earliest Spanish-language document seen (June 2009) that uses the term *frijoles verde* to refer to green vegetable soybeans. Address: USDA, Washington, DC, USA.

2792. May Company. 1930. The May Company's market: The world's finest foods moderately priced (Ad). *Los Angeles Times*. Oct. 19. p. B26.

• ***Summary:*** "Genuine soy sauce: the Worcester of China: from black soy beans–75¢."

"'Maggi' seasoning. Vegetable essence from Switzerland. For salad, soup, stew!–90¢. Also in $5 bottles.

Note: Several earlier documents suggest that miso was used as an ingredient in Maggi.

2793. Dorsett, P.H.; Morse, W.J. 1930. Soybean sprouts, soybean milk, bean mash [okara], and bean curd [tofu] in China (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.

• ***Summary:*** Page 6252 (23 Oct. 1930, Peiping, China). P.H. Dorsett's notes. "Today we went to the market and saw a number of bean curd [tofu] dealers, also those handling soybean sprouts."

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Pages 6264 to 6268, and 6275 (24 Oct. 1930). P.H. Dorsett's notes. "Tomorrow we plan to visit one of the many places around Peiping engaged in bean sprouting and the making of other bean products."

Page 6265. Photo shows soybean sprouts in a market in Peiping (neg. #46113).

Page 6266. Photo taken in same market. "At the extreme left, back, soybean sprouts and string beans, in front soybeans, cauliflower and radishes. At the back left are dry bean curd [doufu-gan, pressed tofu] and Chinese cabbage" (neg. #46114).

Page 6266. "Chinese curd man shaving from thin sheets narrow strings of soybean curd" (neg. #46115).

Page 6267. "Peiping, China. Very near life sized picture. Fresh bean curd pressed into thin sheets and fried in soy sauce for five hours. These sheets are sliced into fine strings. Chinese name 'Chien chang'" (neg. #46116).

Page 6268. "Peiping, China. Small stand along the street selling various forms of soybean curd that have been fried in soy sauce" (neg. #6268).

Page 6268 (bottom). Peiping. "Most of the baskets contain a greater or less amount of sprouted soybeans; they show in three baskets."

Page 6275. A photo shows: "Soja max. Fried soybean curd. Peiping [Beijing], China. Between 3/4 and life sized picture. Small squares of fresh bean curd are fried in deep fat (sesame oil). Sometimes several of these fried squares are strung on pieces of grass. D. & M. #7256 (neg. #46125).

Page 6276. "Almost life sized picture. Round and oblong pieces of fresh bean curd fried in soybean sauce for 5 hours. The cakes are dark reddish brown. Chinese name 'Toufu kan' [doufu-gan] meaning 'dry bean curd'" (neg. #46126).

Page 6277. "Peiping, China. Life sized picture. Small squares of bean curd that have been boiled in soy sauce for 5 hours. Cakes are dark reddish brown" (neg. #46127).

Page 6280 (25 Oct. 1930). Peiping, China. "In the forenoon we went to the bean sprouting place of Mr. Chang Tzu Hsien, in the southwestern part of the city. His sprouting house or room is just back of the large public well where water is pumped by coolies and sold to big wheel-barrow men for a few coppers per load. Mr. Hsien sprouts mung beans, yellow and green soybeans; about six days are required to sprout the beans. He uses large earthen bowls are wide shallow jars, about two feet at the bottom, three feet on top and 16 to 20 inches deep, in which to sprout the beans.

"About 1 peck of dry beans are required to make one of the above vessels full of sprouts. Green soybeans are grown and sold with shorter sprouts than either the yellow soy or mung beans. We were told that the best beans for sprouting come from the Kalgan region [Zhangjiakou, a city in Heibei province of North China, adjacent to Beijing to the southeast], but that on account of the price he cannot afford to use these and so he gets his stock from the southeast of Peiping [Beijing].

"The beans are first soaked overnight in hot water and then put into vessels and sprinkled two or three times a day with cold water.

"Mung bean sprouts sell for two cents Mex. per cattie. Yellow soybean sprouts for three and one-half cents per cattie. Green soybean sprouts sell for four cents per cattie.

We next went to the Chi Shun Hung Co., 8 Lien Hua Ssu Street, Peiping, soybean curd and milk manufactory where we spent some little time getting information and pictures.

"Mr. Hao produces both dry and fried curd and milk. He sells soybean milk in about 10 ounce bottles at 1.00 Mex. per bottle, one bottle each day, delivered to his customers. He makes square and round cakes of soybean curd. The are from one-half to three-quarters of an inch thick and about three inches in diameter. These are called dry curd because most of the water is pressed out. They also fry these cakes in soybean oil.

"Mr. Hao also told us that the soybeans from the Kalgan region make the best curd, but that on account of their expense he cannot afford to use them, and buys his from local growers in the vicinity of Peiping.

"In the afternoon we finished up the nearby pictures of soybean products and then took the negatives made in the field and at the hotel to the Hartung Photo Shop to be developed and printed."

Page 6282. Peiping, China. "Wheel cart with baskets used by the peddler of sprouts of mung beans and soybeans" (neg. #46132). "Side view of wheel cart and baskets used by the peddlers of sprouts of soybeans and mung beans" (neg. #46133).

Page 6283. "Small grass baskets or forms for shaping fresh bean curd into small round cakes and then from which excess water is pressed out" (neg. #46134). "Small grass basket forms used in shaping small round cakes of soybean curd for pressing out moisture and the cakes are then fried in soy sauce" (neg. #46135).

Page 6284. "Basket of square and round cakes of fresh soybean curd from which excess water has been pressed. These cakes are now fried in soy sauce for five hours" (neg. #46136). "Tub of bean mash [okara] left after straining out the soybean milk which is used in the manufacture of bean curd" (neg. #46137).

Note: This is the earliest English-language document seen (July 2011) that uses the term "bean mash" to refer to okara.

Page 6288 (27 Oct. 1930). P.H. Dorsett's notes in Peiping. "Early this morning we visited the mung bean sprouting of Mr. Chang, at 66 Pei Yang Shih Kou, Peiping. This gentleman uses tubs in which to sprout his mung beans. The tubs are 12-14 inches across, 24 inches long, and 18-20 inches in height, with about eight small holes in the bottom for draining off surplus water..." The process is described and photos given.

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Page 6289. "In the afternoon we called on the establishment of Mr. Chiang who makes what is locally known as 'Southern bean curd.' He uses yellow soybeans. The milk is boiled three times. This curd seems quite different from that ordinarily seen."

Page 6792 (14 Dec. 1930). Peiping en route to Kalgan, China. P.H. Dorsett's notes. "Owing to the fact that when the Morses were in Peiping in November, and Morse, Suyetake, Liu and I, while looking up soybean products, learned that the best soy and mung beans for use in sprouting and making bean vermicelli come from the Kalgan region, we thought it worth while to go there for a collection of soybeans, mung beans and other legumes." Address: Agricultural Explorers, USDA, Washington, DC.

2794. Mo, Fenn. 1930. Chinese recipes. San Francisco, California: Fenn Mo. 14 p. Nov. 18 x 14 cm.

• ***Summary:*** Title page reads: "To Do Mo (Miss Donaldina Cameron) and her Chinese daughters, whose gracious hospitality has taught many friends to appreciate more than rare viands." Contains 12 recipes. Jacqueline Newman of New York, who owns the book, notes: The book is held together with silk thread. It may be the first item of Donaldina Cameron House Presbyterian Church in San Francisco. The recipe for Chicken with Chestnuts calls for "2 tablespoons Bak Yow Sauce (Soy Sauce)."

Note: This is a collection of recipes by different people.

2795. Dorsett, P.H.; Morse, W.J. 1930. Miso in Japan (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Unpublished log.

• ***Summary:*** Page 6820 (21 Dec. 1930, Kobe, Japan. Mr. Morse's notes). "Mr. Saito at Dairen had advised us that there were many places in Kobe where meat was preserved in soybean miso." Had no difficulty in finding three such places, where "we found the men busy in packing meat in white miso. In the Kobe and Kyoto districts white miso is manufactured quite extensively. Small meat shops are the only establishments putting up the miso-preserved meat. For this product beef is used and white miso. Small slices of beef about the size of the palm of the hand and about ¼ inch thick are placed on a layer of miso (about ¼ inch thick), then a layer of miso and another layer of meat. About 1½ pounds of beef are packed with miso in each tub which sells for two yen. The meat is best after being preserved in miso about 7-10 days and does not keep well after two weeks except in rather cold weather. Miso preserved meat is always boiled. White miso is always used for preserving fish and meat (beef) while red miso is used for preserving vegetables, the red miso being considered too salty for meat. Several meat shops were visited and we always found the same products and same methods of preserving the beef. Apparently this product is very popular in the Kobe district. At one of the shops we were advised that there are some miso-meat preserving places in the Tokyo district." Photo: Small tubs of miso preserved meat displayed in front of a meat shop in Kobe.

Pages 6822-23 (22 Dec. 1930, Kyoto, Mr. Morse's notes). At the Imperial Agricultural College they met Isawo Namikawa, Professor of Horticulture, who said that Kyoto is noted for several special soy products such as white miso, soy sauce, and natto. Kyoto soy sauce is lighter in color, not so heavy, and not quite as salty as soy sauce made in other parts of Japan. "In looking around Kyoto in our little spare time we saw no places where meat is preserved in miso."

Pages 6931-32 (7 Jan. 1931). Morse went to the Imperial Department of Agriculture in Tokyo and met the director, Mr. A. Manabe, who provided information, statistics, and recent publications on soybean acreage, production, utilization, and industries in Japan, Chosen [Korea], and Taiwan. These are the most complete yet received. Mr. Manabe stated that soybean acreage and production is gradually decreasing in Japan proper. This is due mainly to the increased acreage of more intensive farming, especially truck crops and rice. However the acreage of soybeans for green manuring purposes is increasing rapidly, especially in the southern half of the main Island and Kyushu Island.

Japan proper produces more than 2,500,000 koku of soybeans but uses over 7,500,000 koku; the difference is imported from Chosen and Manchuria. The soybeans imported from Manchuria are "are of much lower quality than beans from Japan proper and Chosen and are used primarily for the manufacture of soy sauce, miso, bean oil and bean cake. The beans from Japan proper and Chosen are utilized primarily for food, such as bean curd (Tofu), confections, flour and green vegetable beans. The following table gives the ratio in percent of soybean utilization in Japan:

Miso 22.7%. Soy sauce 22.7%. Bean oil and bean cake 21.6%. Bean curd [tofu] 15.4%. Green vegetable beans 0.8%. All other food uses 6.0%. Feeding purposes 6.2%. Green manure 2.5%. For planting [seed] 1.6%. Miscellaneous uses (other than food) 0.5%. Note: These figures total 100%. Thus, 22.7% of the soybeans used in Japan are used to make miso, 22.7% are used to make soy sauce, 21.6% are crushed to make soybean oil and cake, etc.

Page 6937 (10 Jan. 1931, Tokyo, Notes by Mr. Morse). Spent most of the day in the Shinjuku district looking up soybean products. "More String Natto in rice straw packages was observed in this section than any we have visited. At the stores we found considerable quantities of fish preserved in white miso and also fish preserved in sake mash. The latter is said to keep much longer than the miso preserved fish and if it keeps long enough might afford a good article of export

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to the United States, for undoubtedly it would prove far less harmful than some of the products [alcohol] now used in violation of the 18th amendment... Nearly all food stores carried a variety of vegetables preserved in red miso."

Page 6943 (12 Jan. 1931, Kobe). Visited a large miso meat preserving place that packs 5,000 to 6,000 tubs of miso preserved meat yearly. The proprietor said that about 3,000,000 tubs are sold each year in the Kobe district. The small tubs, costing 70 sen each, hold about 2 pounds of beef. The Kobe district is noted for its fine quality of beef. Photos (p. 6946-47) show these small flat tubs.

Page 6945-46 (13 Jan. 1931). Kyoto, Japan. Visited a large miso factory, where both red and white miso are made. White miso is manufactured quite extensively in the Kyoto and Kobe districts; it keeps only about 1 month in the summer, but about 3 months in the winter. A table shows the most famous forms of miso made in Japan: Sendai miso–red. Kanto miso–red. Okazaki miso–black. Country miso–red. Kinzanji miso–red. White miso–white.

Pages 7003-04 (19 Jan. 1931). Tokyo, Japan. Morse's notes. "At evening supper we had for dinner beef preserved in white miso. After broiling, the flavor of the meat reminded one of that of the sugar cured hams of the Southern States. The meat had been cured just eight days and was well flavored through."

Page 7116 (29 Jan. 1931). In a letter to Dorsett in Peking, Morse states that the broiled, miso preserved beef was "delicious" and tasted like ham. "I also had some white miso preserved fish. Although it was good, I did not care nearly so much for it as I did the beef." Address: Agricultural Explorers, USDA, Washington, DC.

2796. Kellogg, John Harvey. 1930. Soybeans as human food. I. *Good Health* (*Battle Creek, Michigan*) 65(12):5-7. Dec. Continued Jan. 1931. Paper first read at the meeting of the American Soybean Assoc., held 11 Sept. 1930 at Urbana, Illinois. [1 ref]

• ***Summary:*** Contents: Introduction. An age-long esculent. The soybean is richer in protein than beefsteak. An extraordinarily versatile food. The soybean replaces milk and eggs as well as meat in China.

"Many years ago (1899), the USDA called upon me to undertake the preparation of a vegetable meat. The Assistant Secretary, Dr. Charles Dabney, wrote me, suggesting that the navy bean might be used for the purpose. I found, however, as I expected, that this legume was not suited for this. At that time the soybean was not grown to any extent in this country. I was wholly unacquainted with it, and so naturally sought to find in nuts, especially the peanut, a solution to the problem, and succeeded in producing a vegetable meat, Protose, of which several thousand tons have been since made and consumed.

"But the introduction of the soybean renders quite unnecessary any other substitute for flesh meats. As a matter of fact, the protein rich foods of vegetable origin, such as nuts, which the soybean resembles, as Professor Sherman of Columbia University suggests, are not meat substitutes, but are the original meats for which the flesh of animals became a substitute when the glacial cold of the Ice Age drove our prehistoric forbears into the caves and grottoes of Southern Europe.

"The proteins of the soybean are, according to McCollum, distinctly more valuable from the point of view of nutrition than are those of the other legumes. The work of my own laboratory as well as that of others has shown that this bean is almost unique among seeds in its vitamin content." Address: Battle Creek, Michigan.

2797. Matsumoto, K. 1930. Shôyu jôzô ni kansuru saikin-rui ni tsuite. IV. Tokuni shôyu jôzô genryô ni fuchaku seru saikin-rui [Microbes involved in shoyu brewing. IV. Especially those adhering to basic raw materials]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 109. p. 1-87. Dec. [7 ref. Jap]
Address: Jozo Shikensho, Gishi.

2798. **Product Name:** [Kanemasa brand Soy Sauce, Koji, Japanese-Style Pickles].
Foreign Name: Kanemasa Shoyu, Koji, Tsukemono.
Manufacturer's Name: Fujimoto Miso, Shoyu Seizo-sho (Fujimoto Miso & Soy Sauce Manufacturing Co.).
Manufacturer's Address: 238 Jackson St., San Francisco, California. Phone: DOuglas 1216.
Date of Introduction: 1930.
New Product–Documentation: The Japanese American Directory. 1930. p. A-11 (full page ad. The top of this ad is in bold English: "Fujimoto Co. Main office cable address 'Fujimoto' 'San Francisco.' Importer. Manufacturer. Exporter. 238 Jackson St., San Francisco, California." The rest of the ad (75%) is in Japanese: Fujimoto Shokai. Makes Kanemasa brand shoyu, miso, koji, and Japanese-style pickles, *tsukemono*) and p. 18 (directory; new company name: Fujimoto Miso, Shoyu Seizô-sho, 238 Jackson St., San Francisco. Phone: DOuglas 1216. Note: The company has apparently started to make shoyu / soy sauce). In the lower right corner of the ad is a capped bottle (it looks like a modern 1-liter/quart beer bottle) of something named *katsu shio-mizu* ("energy/active salt water"); it could be nigari. But why isn't it named simply "nigari." And if it is nigari, why isn't it sold as a solid, which weighs much less and is more compact?

Also in 1932 directory, p. 17, but the name has returned to Fujimoto Miso Koji Seizô-sho. Same address and phone (Douglas 1216).

2799. Fukai, Tôshi; Nakajima, W. 1930. Shôyu hakkô to shiyu no kankei. II. Kôkyû shibosan-rui no kôbo no zôshoku hakkô yokusei sayô ni tsuite (1) [Relation between oil and

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shoyu brewing. II. On the influence of first-class fatty acids on the growth of yeast and fermentation]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 25(1):34-36; 25(2):42-44; 25(3):43-47; 25(4):45-50; 25(6):36-43. [Jap]
Address: 1. Jozo Shikensho Gishu, Nôgaku-shi; 2. Jozo Shikensho Kenshuin, Nôgaku-shi.

2800. Fukai, Tôshi; Katsume, E. 1930. Shôyu genryô "pentoosu" oyobi "meranin" shikiso seizô shiken (15) [On the preparation of pentose and melanin as raw materials for shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 25(10):40-42; 25(11):29-33; 25(12):37-43. [3 ref. Jap]
Address: 1. Jozo Shikensho Gishu, Nôgaku-shi; 2. Jozo Shikensho Shotaku, Nôgaku-shi.

2801. Fukai, Tôshi; Nakajima, W. 1930. Shôyu no "nafutooru" hannô ni tsuite. II. Kôjisan no shin teiryô-hô narabini shôyu moromi ni okeru unmei [On the reaction of naphthol in shoyu. II. A new quantitative method for determination of kojic acid, and its fate in shoyu moromi]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 25(10):42-44; 25(11):18-21. [Jap]
• ***Summary:*** Naphthol (1849) is (1) either of two isomeric derivatives of naphthalene found in cola tar or made synthetically and used as antiseptics in the manufacture of dyes. (2) any of various hydroxy derivatives of naphthalene that resemble the simpler phenols. Address: 1. Jozo Shikensho Gishu, Nôgaku-shi; 2. Jozo Shikensho Joshu, Nôgaku-shi.

2802. Fukai, Tôshi; Nakajima, W. 1930. Shôyu hakkô to shiyu no kankei. II. Kôbo no zôshoku narabini hakkô ni oyobosu daiichiretsu kôkyû shibôsan no eikyô [The relation between oil and shoyu brewing. II. The influence of first class fatty acids to the growth of yeast and fermentation]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 106. p. 186-210. [Jap]
Address: Jozo Shikensho. 1. Gishu; 2. Kenshuin.

2803. Fukai, Tôshi; Nakajima, W. 1930. Shôyu no nafutôru hannô ni tsuite. I. "beeta nafutooru" to ruiji hannô o teisuru shôyu seibun (chiramin, kôji-san) ni tsuite. II. Kôji-san no teiryô-hô narabini shôyu moromi ni okeru unmei [On the naphthol reaction in shoyu. I. Components of shoyu which present a reaction resembling beta-naphthol (tyramine, kojic acid). II. Quantitative method of kojic acid and its fate in shoyu moromi]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 106. p. 211-27, 228-36. [Jap]
• ***Summary:*** Nakajima was an author only on part II.
Address: Jozo Shikensho, Gishu.

2804. Fukai, Tôshi. 1930. Shôyu kasu no okeru "shitosuterin" narabini "puro bitamin" D no sonzai ni tsuite [On the detection of mitosterin and provitamin D in shoyu-cake and oil. I.]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 110. p. 158-68. [Jap]
Address: Jozo Shikensho, Gishu.

2805. Kakinuma, S. 1930. [Detection of furfuracrylic acid in shoyu]. *Eisei Kagaku* (*J. of Hygienic Chemistry*) 36:1-. [Jap]*

2806. Kakinuma, S. 1930. [Detection of naphthol-resembling substance in shoyu]. *Eisei Kagaku* (*J. of Hygienic Chemistry*) 2:34-. [Jap]*

2807. Kinoshita, Asakichi. 1930. [Again, on chemical shoyu]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 8:16. [Jap]*

2808. Kinugasa, Y. 1930. [Method for detection of beta-naphthol in shoyu]. *Eisei Shiken* 36:7-. [Jap]*

2809. Kinugasa, Y. 1930. [Mustard oil as an antimold substance for shoyu]. *Eisei Shiken* 36:171-. [Jap]*

2810. Kurono, Kanroku; Kinoshita, A.; Fukai, T.; Katsume, E. 1930. Pentoosu shiki shôyu jôzô shiken [The use of pentose as a raw material for shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 106. p. 90-100. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Gishi; 3. Gishu; 4. Shokutaku.

2811. **Product Name:** Shoyu [Soy Sauce].
Manufacturer's Name: Kushi Shoyu Seizo-sho.
Manufacturer's Address: 105 5th Ave., South, Seattle, Washington. Phone: MAin 4585.
Date of Introduction: 1930.
New Product–Documentation: The Japanese American Directory. 1930. p. S-332. In Japanese: Kushi Shoyu Seizô-sho. Also in 1932, p. 626. Also in 1934, p. 534. Also in 1937, p. 551 (directory: In Japanese: Kushi Shoyu Seizô Shoten. In English {the address has changed}: "Kushi Bros. [Brothers], 8150 E. Marginal Way, Seattle. Phone: GL. 1241").

Hokubei Nenkan–The North American Times Year Book. 1936. p. 16. Ad (½ page). Marukushi Jirushi (brand) Shoyu. Kushi Kyodai Shoyu Seizô-sho [Kushi Brothers Shoyu Mfg. Co.]. Office: 602 Main St., Seattle. Phone: Main 4585. They also work with canaries [birds].

2812. **Product Name:** Shoyu [Soy Sauce].
Manufacturer's Name: Marudai Shoyu Seizo-sho.
Manufacturer's Address: 616 N. 6th St., San Jose, California. Phone: BAllard 1463.
Date of Introduction: 1930.

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New Product–Documentation: The Japanese American Directory. 1930. p. 116.

2813. Matsumoto, K.; Sano, Z.; Tanigawa, S. 1930. Shôyu jôzô shiken. I. Saikin-rui tenka shiken. II. Sakana kasu tenka shiken [Shoyu brewing tests. I. Adding bacteria during shoyu brewing. II. Adding fish cake]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 108. p. 180-95, 196-210. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2-3. Joshu.

2814. Matsumoto, K.; Misawa, K. 1930. Kôeki no kenkyû. I. Koeki o shôyu kôbo baiyô ni shiyô suru kiso-teki shiken [Studies on soybean cooking liquid. I-VI.]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 107. p. 1-15. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Kenshuin.

2815. Miyaji, K. 1930. [On the action of bacteria separated from brewing shoyu]. *Kagami Ken* 9:1-. [Jap]*

2816. Nakashima, S. 1930. [The separation of shoyu-oil]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 8(2):141. [Jap]*

2817. Oota, Kiyoshi; Sugawa, E. 1930. Shôyu no kabi-dome-zai ni tsuite. Inshokubutsu bôfuzai no kenkyû (1) [On the anti-mold substances for shoyu. Research on preservatives for beverages (1)]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 25(8):2-11; 25(9):9-14. [35 ref. Jap]
Address: 1-2. Igaku hakase.

2818. **Product Name:** Shoyu [Soy Sauce].
Manufacturer's Name: Toyo Shoyu Kaisha.
Manufacturer's Address: 325 W. Monroe St., Chicago, Illinois. Phone: FRanklin 3787.
Date of Introduction: 1930.
New Product–Documentation: The Japanese American Directory. 1930. p. S-311. A shoyu maker.

2819. **Product Name:** Shoyu [Soy Sauce].
Manufacturer's Name: Toyo Shoyu Seizo Kabushiki Gaisha [K.K.].
Manufacturer's Address: 429½ W. Slausen Ave., Los Angeles, California. Phone: JEfferson 1492.
Date of Introduction: 1930.
New Product–Documentation: The Japanese American Directory. 1930. p. S-53.

2820. Yamada, M. 1930. Seishu, shôyu-chû "arugin" no sonzai ni tsuite [The existence of arginine in sake and shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 25(8):31-32. [5 ref. Jap]
• ***Summary:*** Arginine (German: arginin) is a crystalline basic amino acid derived from guanidine. Address: Jozo Shikensho Gishu, Nôgaku Hakase (Hakushi) (Doctor of Agriculture).

2821. Yamada, M. 1930. Shôyu kabi ni taisuru "arudehaido" rui no shiyô [The action of aldehydes on the molds of shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 106. p. 136-40. [4 ref. Jap]
Address: Jozo Shikensho, Gishu.

2822. Yamada, M. 1930. Seishu, shôyu-chû "aruginin" no sonzai ni tsuite [The existence of arginine in sake and shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 106. p. 141-44. [5 ref. Jap]
• ***Summary:*** Arginine (German: arginin) is a crystalline basic amino acid derived from guanidine. Address: Jozo Shikensho, Gishu.

2823. Bragg, Paul Chappius. 1930. Professor Bragg's live food cook book and menus. Hollywood, California: National Diet and Health Association of America; and, Live Food Products. 170 p. No index. 24 cm.
• ***Summary:*** About raw food and vegetarianism. Contents: 1. Why I write this book. 2. Our daily food, is it nourishment or poison? 3. There are no meat recipes in this book. 4. Poisonous white sugar. 5. Dairy products not human food. 6. Coffee and tea are drugs. 7. Don't use condiments. 8. Salt–The enemy of life and health. 9. Pure food. 10. Don't use aluminum cooking ware. 11. Gas, indigestion and stomach trouble. 12. Acknowledgment of recipes and suggestions fork other health food writers. 13. Salads. 14. Fruit salads. 15. Salad dressings. 16. Directions for making nut butter and nut milk. 17. Relishes. 18. Soups (incl. Carque's nut milk soups, made with his nut milk). 19. Cooked vegetables. 20. Meat substitutes and main dishes. 21. Desserts. 22. Breads and bread foods. 23. Sauces and gravies. 24. Drinks. 25. Health confections. 26. Health sandwiches... 30. Baby's diet from birth to 18 months. 31. Diet schedule for the growing child.

Chapter 1 (p. 11) states: "The drug doctor has been a failure. After hundreds of years of his reign there is still universal sickness and suffering which, instead of abating, is unmistakably on the increase."

Chapter 12 (p. 26) acknowledges: "A few of the recipes in this book were taken from the works of some of the most prominent men in the field of Natural Living. I have considered, in giving a cook book to my people, that they should have, not only my own favorite recipes, but also the best of other men who have experimented along this line. I have therefore included recipes from the books of: Dr. John T. and Mrs. Vera Richter, the leaders of the Raw Food movement in the West. Dr. Philip M. Lovell, distinguished editor of the most widely read Health column in the world, the Care of The Body section of the *Los Angeles Times*. Dr. Henry Lindlahr, the great pioneer Nature Doctor. And Otto Carque, chemist, research worker and crusader in the fight

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for natural foods."

Chapter 16, "Directions for making nut butter and nut milk," begins with a long passage from *Natural Foods: The Safe Way to Health*, by Otto Carqué (1925). It contains recipes for: Cocoanut milk. Nut milk (made by mixing 1 level tablespoon nut butter with 1 cup warm water, plus a little honey or sweet fruit juice if desired). Almond milk for infants. Nut cream (made from unroasted nut butter, warm water, and honey). Combination nut butter (peanuts, pignolias, cocoanuts). Apple and almond butter. Nut meal.

Chapter 20, titled "Meat substitutes and main dishes" (p. 111-18), contains largely cooked dishes, and makes widespread use of the "Battle Creek Sanitarium product, Protose, being available at most fancy grocers." Vegex and Savita are also widely used in recipes. Soy sauce is used to season Vegetable chop suey (p. 114). It "may be purchased at a Chinese store or any fancy grocers."

The National Diet and Health Association of America is located at 1109 North Hudson, Hollywood, California.

Note: This is the earliest document seen (March 2007) by or about Paul C. Bragg that mentions soy. No juicer is mentioned in this book. A portrait photo (just after the title page, p. 5) shows handsome "Prof. Paul C. Bragg." Address: Professor, California [Los Angeles].

2824. Fuggles, N.R. 1930. Soy bean selection in Trinidad, together with investigations of nodule formation in college soil. Dissertation presented for the Associateship of the Imperial College of Tropical Agriculture. 27 p. 1929-30.
• ***Summary:*** Contents: A. Part I: Selection. 1. Introduction. 2. Aim of investigations. 3. Work achieved in the last two years. 4. Current year's work (1929-30). 5. Field management. 6. Selection work. 7. Conclusions and suggestions for future work.

B. Part II: Inoculation. 1. Introduction. 2. Investigations 1929-30. 3. Conclusions and suggestions for future work. C. Bibliography. D. Appendixes: I. Rainfall graph. II. Sketch of the position of continuous growth plot of inoculated & uninoculated beans.

Soybeans can be used to make many food products, including oil, flour, biscuits, milk powder, chocolate, soy sauce... The black varieties are not greatly favoured as they give a bad coloured cake and have a lower oil content."

"In Trinidad during the past two years in which investigations on Soy Bean have been going on, the plant has definitely grown once the seed has germinated and good sets of pods have been obtained... The difficulty in Trinidad has been in inducing germination in the seeds. Germination was poor in 1927-28 and again in 1928-29, which while in 1929-30 it has been bad enough to cause the loss of certain selections (p. 8). The bad germinating power of the seed under Trinidad conditions seems to be the limiting factor in its growth here. It has been suggested that the bad germination is due to some fault in the storage of the seed, combined with its high oil content, but different strains showed considerable difference in their powers of germination."

In Trinidad, the soy bean recommends itself as a cover crop on sugar cane estates for three main reasons: (1) It is a legume and this brings to the soil much nitrogen by nodulation; (2) It produces high yields of a bean which gives valuable products; (3) Of the products one, oil, can bring in a monetary return. The other, as a cake, yields good feed for the stock on the estate.

A Chinese strain of soy beans from the Usine Ste. Madeline has been introduced as a cover crop with some success. Although prolific, it has an undesirable black seed. This year, further trials of the Venezuelan and Darjeeling [India] strains will be conducted.

"Conclusion: The acidity of the soil on the College plots is not in itself sufficient to prevent nodulation of the plants. When the seed has been inoculated nodules will develop although at first only in small quantities. Liming, while increasing the pH value of the soil, does not seem to increase the power of the bacteria to infect the plants more strongly. The bacteria, once established in the soil, can stand the dry season and inoculation every year for several years seems to be indicated.

Thanks "to Professor E.E. Cheeseman for his help and suggestions in the foregoing investigation." A rainfall graph shows that their was little rain from late November until early January. Address: Trinidad.

2825. Fujimoto Shokai. Fujimoto Co. 1930. Fujimoto Co.: Importer, manufacturer, exporter (Ad). In: The Japanese American News. 1930. The Japanese American Directory (*Nichibei Jûshoroku*). No. 26. p. A-11. [Jap: Eng]
• ***Summary:*** Ad (full page). The top ¼ of this ad is in English. Fujimoto Shokai's factory (238 Jackson St.) makes Kanemasa brand shoyu, miso, koji, and Japanese-style pickles (*tsukemono*). The San Francisco Branch (Shiten; 1640 Post St.) also imports and exports Japanese- and Western-style foods and goods. Main office cable address: "Fujimoto" San Francisco. Address: Factory: 238 Jackson St.; Office: 1640 Post St. Both: San Francisco, California. Phone: Factory: DOuglas 1216. Imports: WEst 0733 & 0734.

2826. Shôyu seizô no hajimari: Yamamori Kôhei [The origin of shoyu production (by Japanese in America): Yamamori Kohei]. 1930. In: Shakuma WASHIZU, ed. 1930. Zaibei Nihonjin Shikan (History of Japanese in America). Rafu Shinpo-sha, 1619 Laguna St., San Francisco, California. See p. 38. [Jap]
• ***Summary:*** In about 1897 Mr. Kohei Yamamori started making shoyu in San Jose, California (on North 6th St.). The prospects looked good since good quality wheat, soybeans, and salt could be purchased inexpensively. But he ran into business problems and had to work in a Japanese grocery

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store in San Francisco to earn some money while continuing to run his shoyu business. Eventually the business failed, but in about 1907 many other shoyu makers started in various other parts of the country. This time, some succeeded, but others failed. Address: San Francisco, California.

2827. Watson, Ernest. 1930. The principal articles of Chinese commerce (import and export) with a description of the origin, appearance, characteristics, and general properties of each commodity; an account of the methods of preparation or manufacture; together with various tests, etc., by means of which the different products may be readily identified. 2nd ed. Shanghai, China: Statistical Dept., Inspectorate General of Customs; sold by Kelly & Walsh [etc.]. ix + 630 p. Illust. Index. 28 cm. The Maritime Customs. II. Special Series No. 38.

• ***Summary:*** The first edition was published in 1923. There are sections on "bean oil" (*tou-yu*), the residual meal from the extraction process (*tou-ping fên*), and cakes (*tou-ping:* p. 85-86), soya beans (p. 320-21) including yellow, black, and green varieties, beancurd [tofu], bean milk (tou-fu-chiang), bean sauce (see soy sauce), and bean vermicelli. The latter product, named *fên-ssu, tou-fên-ssu, hsi-t'iao-mien,* or *kua-mien,* is a "famous vermicelli made in the Chefoo district from [soy] beans, most of which are originally imported from Manchuria. It is exported in great quantities from Chefoo to Hongkong, South China, and the Straits Settlements, and forms a favourite and very nutritious food."

Soy or chiang-yu (p. 538) is the name for a "sauce made in China from the soya bean (*Soja hispida*). In preparing it, a quantity of beans are slowly boiled, an equal quantity of coarsely ground wheat or barley being added. The mixture, after being allowed to ferment for some time, is put into a jar with an equal amount of salt, a few aromatics, and three times as much boiling water as there were beans at first; the whole is then allowed to stand for several weeks exposed to the sun, after which the liquor, which constitutes the soy, is separated by pressing and straining the mass. The finished product is afterward packed into jars or bottles ready for market."

"Soy is thin and, in colour, very dark brown or almost black; it becomes brighter and clearer on being kept, has an agreeable salty flavour, and produces a yellowish froth when even slightly shaken. It is much used by the Chinese as a sauce and condiment, as it creates an appetite and is supposed to counteract the injurious properties of contaminated food; it is also used in medicine as an application for burns, scalds, eczema, leprous sores, etc. Soy is often exported from China to foreign countries, where it is extensively used in the manufacture of many European sauces."

"Wheat gluten (*mien-chin*) is prepared in China by washing starch and is used as a nutritious food. The Chinese also prepare "dextrin" (*mai-ch'ao*) from wheat, using it chiefly as a medicine, and considering it to be very nutritious, antifebrile, and quieting..." Address: Tariff Expert, Chinese Maritime Customs.

2828. *Los Angeles Times.* 1931. Why import soy? We can grow this bean to perfection. Jan. 11. p. J6.

• ***Summary:*** This article seems to be based on: Morse, W.J. 1927. "Soy beans: Culture and varieties." *USDA Farmers' Bulletin* No. 1520. 34 p. April. It begins: "Californians are accustomed to thinking of the soy bean as a cover crop. It is interesting to note that in its native land, Manchuria, this use of the soy bean is of small importance." There the soy bean is used mainly as a food product; only the by-products, such as bean cake and straw, are used as fertilizer.

Food products include a paste [jiang], fermented for about 2½ months, soy [sauce], bean curd [tofu], dry bean curd cakes, bean curd wafers, flour, and "milk." The expressed oil is used locally mainly for illumination [in lamps]. The better grades are used for cooking and the poorer grades for lubricating, for making printer's ink and varnish, and "as a waterproofing material in the manufacture of cloth, paper umbrellas, and lanterns.

The bean cake is used to fatten pigs and cattle. In Japan, the cake is used as a fertilizer for mulberry trees and rice fields. "In Manchuria the cake is crushed and mixed with oil and arsenic and placed on the roots of trees to poison insect pests." This insecticide is used to kill the pests that injure the wild trees where silkworms live.

The soy bean was grown in the United States as early as 1804, but only as a curiosity. In Europe it was mentioned as early as 1790. The soy bean first became known worldwide during the war between Russia and Japan [1904-05]. During the war, the may troops quartered in Manchuria created a large demand for soybeans as food. Local farmers increased their acreage. But after the war they found they had a surplus that was for too great for the demand in the local market or the Orient. The price dropped and a trial shipment was sent to London. The timing was perfect, since English vegetable oil mills were running part time because of a small crop of cottonseed and the failure of linseed in the USA and the Argentine. For the rest of that season, the English mills ran full time on soy beans.

2829. Morse, W.J. 1931. Visit to Kyuemon Hayakawa Miso Co. in Okazaki, Japan (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. See p. 6997-7000. Unpublished log.

• ***Summary:*** W.J. Morse took notes and photos of his visit to Okazaki on 16 Jan. 1931. He was told by an innkeeper in Okazaki that there a "two factories in Okazaki making

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the famous Okazaki black miso... We found the Kyuemon Hayakawa Miso Co. factory about 3 miles from the inn. The master of the factory took us through the plant and explained each step of manufacture. Okazaki miso is made entirely from soybeans while other forms of miso are made from rice and soybeans. It takes twenty months to cure black miso. This company sells about 50,000 kan yearly.

"Okazaki miso keeps indefinitely and is used in making soups and preserving vegetables. At breakfast at the inn this morning we had black miso soup and found it had a much better flavor than red miso soup. The black miso is also sometimes used in making forms of soy sauce [tamari] by adding water."

Photos (p. 6999-7000) show: A large wooden cask or tub filled with Okazaki black miso and held together by many wide braided bamboo hoops. The cask is several feet taller than the miso maker (wearing an apron with a crest symbol or *mon* on the front) standing next to it. The top of each cask is piled high with about 1,200 pounds of stones to weight the miso (3 photos).

Page 7031 (17 Jan. 1931, Tokyo). In a letter to Dorsett in Peiping, China, Morse comments on the two factories making black miso in Okazaki.

Page 7053 (27 Jan. 1931). Morse notes in a cover letter accompanying two parcels sent from the American Consulate in Tokyo to Mr. K.A. Ryerson, Foreign Plants, B.P.I. [Bureau of Plant Industry], Washington, DC: "Of the products the most interesting is the famous Okazaki Black Miso under [product] numbers 6670 and 6671 which were obtained on a recent trip to Okazaki to learn the process of manufacture. This form of miso is the only one made wholly from soybeans as other forms are made with soybeans and rice. Black miso has been made at the same factory for about three hundred years and no improvements have been made in the methods of manufacture." Address: Agricultural Explorers, USDA, Washington, DC.

2830. Morse, W.J. 1931. Re: Sayonara. Outline for part of a "special report" on soybeans in the Orient (Document part). In: P.H. Dorsett and W.J. Morse. 1928-1932. Agricultural Explorations in Japan, Chosen (Korea), Northeastern China, Taiwan (Formosa), Singapore, Java, Sumatra and Ceylon. Washington, DC: Foreign Plant Introduction and Forage Crop Investigations, Bureau of Plant Industry, USDA. 8,818 p. Feb. 16. Unpublished log.

• ***Summary:*** Pages 7231 and 7232. Letter dated 16 Feb. 1931 from Mr. W.J. Morse, c/o American Consulate, Tokyo, to Mr. P.H. Dorsett, c/o Wagons-Lite Hotel [Wagons Lit Hotel, or *Grand Hotel des Wagons-Lits*], Peiping, China.

"Our last night in Japan and this is my 'Sayonara' letter in the Orient. Two years tomorrow or rather day after tomorrow we left Washington, DC, and embarked on agricultural exploration work. After two years I agree with the words I often heard you say:

"It's a great life"–if you don't weaken. Morse quotes the entire poem.

Note: This poem was created by cartoonist Gene Burns and syndicated by the *New York Evening Telegram* from 1915 to 1919; the phrase became a rallying cry for American soldiers during World War I.

"At odd times I have been raking over the accumulation of data collected in Japan, Korea, Hokkaido and Manchuria and written up tentative outlines which I want to revise somewhat going back [to the USA]. I am enclosing a copy of the one on Manchuria which you may glance over to see the kind of data I have been collecting. It is not for the report (quarterly) but merely an outline for separate reports and I thought you might be interested. I may have gotten myself in 'Dutch' [in trouble] getting so detailed information on the soybean in the soybean country of the world (and where they look on America as their soybean enemy), but I secured it here, there and everywhere."

Note 1. The "Agricultural Report on Manchuria" mentioned above was finished by Morse in 1932 and titled "Soybeans–Manchuria." It contains 181 pages (28 cm = 8½ x 11 inches), 174 numbered photos with excellent captions, and 28 tables. Typewritten, but never published, it was attached to the end of this long log. A detailed description is given. This report on Manchuria is probably only a part of the "special report" referred to on pages 3230, 3497, 3555, and 6196 of this main report, since that "special report" promised to contain detailed information on the processes used to make different soyfoods such as miso, shoyu, yuba, and tofu. Morse apparently was never able to find the time or will to write the complete "special report," however this part of it is very detailed, useful, and impressive.

Note 2. Talk with Knowles A. Ryerson, 1983, Aug. 28. W.J. Morse definitely did not write the entire special soybean report he intended to after returning from his trip to the Orient. Why? He got swept up in the growth of the U.S. soybean production and processing industries and had no one to help him with his work during the Great Depression. He was swamped! Address: Agricultural Explorer, USDA, Washington, DC.

2831. Given, Meta. 1931. Quick cooking is secret of Chinese dishes: This tells about Oriental culinary methods. *Chicago Daily Tribune*. Feb. 27. p. 17.

• ***Summary:*** Typical Chinese foods include [mung] bean sprouts, and soy bean products of various kinds. "Soy sauce, which is made from the soy bean, is an indispensable flavoring or seasoning with the Chinese. They also obtain from soy beans a curd [tofu] that looks very much like our cottage cheese." A photo shows Mrs. James Loo in her kitchen.

2832. Buckley, Francis. 1931. Fine old English glasses. XIV.–Miscellaneous articles: Cruet bottles, plates, rummers,

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carafes. *Glass (Redhill, Surrey, England)* 8(2):65-66, 71. Feb.
• ***Summary:*** Only gradually were the old fashioned casters of silver displaced and superseded by glass cruet bottles. Even then, in the fashionable sets, the glass bottles were always "mounted with caps and handles of silver or Sheffield plate. It is this hybrid nature of the cruet bottle, the combination of silver and glass work, that is mainly accountable for its rejection by collectors of silver and glass alike."

For cruet bottles, sets of silver casters in stands seem to have come into fashion in the early 1700s; "one of the first sets that included glass bottles is dated 1719. Even then the two bottles in the set had little cutting on the sides. Perhaps the need for bottles of glass was occasioned by the inclusion on the caster stand of Vinegar, Oil and Soy, for which silver bottles were obviously unsuited. Eventually, the old casters for sugar, pepper and mustard (which was scattered in powdered form originally) gave way to glass casters and a glass mustard pot, restoring harmony to the contents of the cruet stand."

A photo shows two cruets, both in the Victoria and Albert Museum. Address: [England].

2833. Kellogg, John Harvey. 1931. Soybeans as human food. II. *Good Health (Battle Creek, Michigan)* 66(2):20-22. Jan.
• ***Summary:*** Contents: Introduction. How to cook the soybean (in a stone jug in salt water under pressure). The extraordinary supporting qualities of the soybean (nutritional value, gives stamina). The soybean combats acidosis (basic-ash quality). A wonderful vegetable milk from the soybean (relieves food allergy caused by dairy milk). The great value of soymilk as a remedy. The easy digestibility of soy milk. The soybean, the vegetable analogue of meat.

A large photo (p. 21) shows soybean sauce being made commercially in Japan. Address: M.D., Battle Creek, Michigan.

2834. Omura, Osamu. 1931. Shôyu no gurutamin-san ni tsuite [On glutaminic acid of shoyu]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 9(2):81-82. [2 ref. Jap]
Address: Kyûshû Teikoku Daigaku Nôgaku-bu, Yukawa Kyôju Kenkyû-shitsu.

2835. United States Department of Agriculture (USDA), Office of Information, Press Service. 1931. U.S. plant explorer collects new soybean varieties in Orient (News release). Washington, DC. 2 p. March 28.
• ***Summary:*** "After a two-year search for new varieties of soybeans in Japan, Korea, and Manchuria, Wm. J. Morse of the U.S. Department of Agriculture has returned from the Orient with a collection of about 4,000 lots of seed and more than 300 samples of products made from soybeans.

"Mr. Morse, who is in charge of soybean investigations for the Bureau of Plant Industry, hopes that some of the many varieties represented in his collection will meet the needs of the wide range of industries using soybeans in this country."

Note: This is the earliest document seen (Aug. 2011) stating that W.J. Morse is "in charge of soybean investigations" (or "head of soybean investigations" or "director of soybean investigations") at USDA.

"Oil manufacturers, he says, want soybeans with high oil content, whereas farmers who feed hogs want low oil content. Packers discriminate against hogs fed or pastured on soybeans because of the soft pork which results from the oil. Few varieties of soybean grown on a large scale in this country have an oil content less than 15 per cent or more than 20 per cent. Some of those grown in Manchuria, however, run as high as 22 per cent in oil...

"The manufactured products in Mr. Morse's collection range from high-quality oils to beans specially treated to drive devils away during certain religious festivals [*mame-maki* at *Setsubun*].

"'Next to rice,' he says, 'the soybean is the principal food crop in the Far East, and it is the principal source of protein in the Oriental diet. No one variety is adapted to all parts of the Orient, nor is any one variety suited to all the many uses to which the beans are put. For instance, certain varieties are grown solely for oil, those that thrive in Manchuria being noteworthy for their high oil content. Other varieties are planted with a view to making soy sauce, a condiment already in favor in the United States, bean curd, used by Buddhists as a meat substitute, or miso, a common ingredient of Japanese soups. Some varieties are grown to provide a green vegetable that is to the eastern table what green peas are to the western table. Part of the crop in certain sections is roasted for use as a coffee substitute or in confections where it answers the same purpose as peanuts in American candy and cakes.'

"The beans were gathered from a wide territory varying greatly in climate and in cultural conditions. As soon as they reached Washington [DC] they were sent to the experiment farm at Arlington, Virginia, for observation and quarantine. When it has been determined that they harbor no insect pests or plant diseases the beans will be grouped and sent to the department's field stations, each group to the section best suited to its growing requirements, and planted. Recommendations for their ultimate introduction into the United States will depend on the results of these field tests. If they do as well here as in their native fields, Mr. Morse says, some of these new introductions will probably become staple sorts here." Address: Washington, DC.

2836. Kinoshita, Asakichi; Tanigawa, S. 1931. Yushutsu muke shôyu jôzô shiken [Tests on shoyu brewing for export]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 111. p. 173-80. March. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

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2837. Kinoshita, Asakichi; Tanigawa, S. 1931. Assaku mamekasu-rui shiyô shiken [The use of various soybean presscakes as a raw material for shoyu]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 111. p. 181-89. March. [Jap]
Address: Jozo Shikensho. 1. Gishi: 2. Moto Joshu.

2838. Rokusho, B. Assignor to South Manchuria Railway Company. 1931. [Seasoning material]. *Japanese Patent* 90,551. March 3. [Jap]*
• ***Summary:*** A material similar to Japanese sauce is prepared by partially hydrolyzing soy-bean cake with diluted acids or alkalies, mixing with other ingredients for the sauce and keeping it under proper conditions for formation of amino acids, etc.

2839. Tihon, L. 1931. A propos d'une variété nouvelle de soja O-too-ton [Concerning a new variety of soybean, O-too-ton]. *Bulletin Agricole du Congo Belge* 22(1):120-23. March. [Fre]
• ***Summary:*** "The management of the plantations has sent us, in the chemical laboratory [at Leopoldville, Belgian Congo], a rather important sample of seeds of the soybean variety O-too-ton [Otootan], recently introduced from Atlanta, Georgia, USA, to the botanical garden at Eala. At the time of a former shipment of two other varieties, we have pointed out in the report of our studies (10 October 1928) the interest in this legume and given some generalities concerning its cultivation and possibilities for various uses." Tables compare O-too-ton with the former two varieties (Jaune [yellow] and Violette) in terms of size, weight, chemical composition, and mineral content. A detailed analysis of the oil of the yellow soybean is given.

The author then discusses the physiological value of the soybean and its by-products. It contains about twice as much protein as locally-consumed beans and much more oil. It can therefore help in improving the diet of the indigenous people, which is deficient in protein (*albuminoides*). It is also a rich source of vitamin E and other key nutrients. As noted in the author's previous report, the people of East Asia use the soybean to make a milk, a curded milk (probably tofu), and various fermented foods such as miso and soy sauce. Various studies have shown the milk to be very nutritious and digestible.

"The information given above has been, in large part, extracted from the *Bulletin de la Société d'Hygiène alimentaire et d'Alimentation rationalle de l'homme* (Vol. 18, no. 1, 1930)."

Note: This is the earliest document seen (Aug. 2003) stating that vitamin E is found in soybeans. Address: Director, Laboratoire de Chimie, Leopoldville [Congo Belge].

2840. McCoy, Frank. 1931. Health and diet advice: The Oriental vegetable meat. *Los Angeles Times*. April 7. p. A6.
• ***Summary:*** For centuries Chinese and Japanese have been living on a diet that contains very little meat. They have been able to do this by using the soy bean to supply a large amount of the protein in their diets. "This bean is superior to all other dried beans inasmuch as it contains little or no starch and a very large amount of balanced protein." A table shows the high food value of soy bean flour by comparing its composition with that of spring wheat and lean beef. Soy beans almost always contain less than 2% starch, "the mature beans having no starch. This is one of the reasons why soy bean flour is often preferred over other flours in the diet of those suffering with diabetes." It is not possible to make bread of "entire soy bean flour" because it tends to agglutinate instead of forming a paste.

"The Chinese make a kind of cheese [tofu] of the soy curd which closely resembles our cheese in appearance and food value, but has an entirely different flavor. The Japanese prepare a vegetable milk by grinding the soaked beans and boiling thirty minutes in three times their bulk of water and then straining. This milk compares favorably with cow's milk and is often used for feeding infants."

Soy beans tend not to cause flatulence "because they do not contain much of the hemicelluloses which are abundant in other beans. The carbohydrates of the soy bean seem to be much more digestible."

Also from soy beans the Japanese manufacture a sauce known as shoyu. "This is made by mixing cooked and ground soy beans with salted water and inoculating the mixture with a rice ferment. The sauce tastes a good deal like a salty meat extract."

There follows a recipe for making soy bean muffins using soy bean flour, baking powder, salt, egg, and milk. No wheat flour is used. Address: Dr., author of "The Fast Way to Health".

2841. Udo, S. 1931. Shôyu no aji ni kansuru kenkyû. I. [Studies on the taste of shoyu. I.]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 7(4):322-27. [12 ref. Jap]

2842. Horvath, A.A. 1931. The soy bean as human food. *Industrial and Engineering Chemistry, News Edition* 9(9):136. May 10.
• ***Summary:*** Contents: Historical background. Properties and uses. Growing interest in soy bean preparations in different countries. Soya foundation proposed.

This article begins: "The soy bean is a plant of early cultivation in China. Its use dates back to the beginning of China's agricultural age under the Emperor Shen Nung. It is mentioned in the *Ben Tsao Gang Mu*, the ancient 'Materia Medica' written in the year 2838 B.C. This bean is remarkable for its richness in oil (average 20 per cent),

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protein (average 40 per cent), and ash (average 5.5 per cent), and the almost complete absence of starch.

"Since time immemorial the soy bean has been the most universal article in the Chinese dietary. It is also extensively used for food in Korea, Japan, Indo-China, the Philippine Islands, the Dutch Indies, Siam, and India. The Chinese make practically no use of dairy products, and the bulk of the people consume a very meagre amount of meat. Yet, in spite of this, they have lived for centuries on what appears to be a remarkably well-balanced diet by the use of the soy bean."

Also discusses: Soy bean milk, tofu, fried tofu ("called in China 'the meat without the bones'"), miso, chiang, Worcestershire sauce ("liquid soy sauce... when spiced, is sold under the label 'Worcestershire sauce.'"), W.J. Morse of the USDA, soy bean foods in Europe, Prof. Berczeller, and work at the Physiological Institute of the University of Vienna under Prof. Durig and Dr. Wastl.

"In Russia, the soy bean is fondly called 'our young revolutionary Chinese ally.' 'Plant soy beans and you plant meat, milk, egg omelets,' is the newspaper cry. Efforts have been made all year to introduce soy bean dishes to restaurants and homes. A Soy Institute was recently organized in Moscow, as well as a special exhibition of soy foods at which 130 varieties of soy dishes, including cutlets, pastry, salads, candy, and beef, were shown. A dinner, prepared entirely of soy beans, was served to representatives of trade unions, factories, Red Army, and the Soviet press. The food was unanimously declared excellent...

"Soya foundation proposed: There are reasons to expect that the United States will become the leader in introducing the soy bean in the daily diet of the white race. An important step should be the establishment of a soya foundation in order to promote the creation of a national soya food research institute." Address: Health Section, Bureau of Mines, Pittsburg, Pennsylvania.

2843. Wong, Nellie Choy. 1931. Two unique Chinese meals. *Christian Science Monitor.* Aug. 28. p. 10.
• ***Summary:*** The meals are a light luncheon and a dinner. The luncheon includes a recipe for "Chow mein, Cantonese style," which is seasoned with "1 tablespoonful of soy-bean sauce." The six-course dinner has "Course One–Soy-bean curd soup." The ingredients include "2 squares soy-bean curd" and "2 teaspoonfuls of soy-bean sauce." Two other dinner recipes are also seasoned with soy-bean sauce.

2844. Saito, Kendô. 1931. Shôyu kôji yori bunri seru Endomyces kin ni tsuite [Endomyces fungi isolated from shoyu koji]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 9(9):632-33. [Jap]
Address: Rigaku Hakase, Osaka Kôgyô Daigaku, Jôzôgaku Kyôshitsu, Osaka, Japan.

2845. Horvath, A.A. 1931. The soybean. *Co-operative Manager and Farmer* 21(2):38-40. Oct. Address delivered at the laboratory of the Harshaw Chemical Co., Cleveland, Ohio. 21 May 1931. [2 ref]
• ***Summary:*** "The following address was delivered by Dr. A.A. Horvath at the laboratory of The Harshaw Chemical Company, 1945 East 97th St., Cleveland, Ohio, May 24th, 1931.

"Twelve years ago [i.e., in about 1919] I had the good fortune to go to China and my first impression was that Occidentals have a number of things to teach the Chinese, but I have found that we have more to learn from them than we have to teach them. If we consider what nation was able to preserve its national character and its independence for a long period of time we must come to the conclusion that really the Chinese nation is the only nation which exists after 5,000 years. So we have to learn from the Chinese how to live and how to live in a reasonable way. China has suffered not once but many times from severe economic depressions but has recovered from them and I think we must pay more attention to the way the Chinese live and what they are using as food."

"During the Civil War in this country, soybeans were roasted and used by the Southerners. They were called 'coffee beans'... Soybean flour is used in ice cream. It is said that manufacturers are using it for the same reasons,– better taste, more smooth and better keeping qualities. (See article in Journal of Confectioners and the Ice Cream World of August, 1930)." Prof. Abel of Johns Hopkins found soy sauce stimulated digestion of carbohydrates.

"The soybean is peculiar for its richness in phosphorus and also richness in a certain substance, lecithin. This lecithin is an organic compound of phosphorus and belongs to a group of lipoids. Soybean contains around 1.6 per cent lecithin. This substance is one of the constituents of egg yolk and is the one which gives it its high value. It is a necessary constituent for the building up of the nervous system of human beings. Dr. Levine, of the Rockefeller Institute in New York, found that in soybean there is cephalin, a constituent of the human brain, and so we have two particular substances, which are used as material for the building of our nervous system."

The Chinese soak soybeans overnight and then grind them between millstones, to get a cream. This cream is filtered through cheesecloth, then diluted with water and boiled. "They get a milk such as almond milk which is made from sweet almonds. Soybean milk contains oil and protein necessary to emulsification.

"This soybean milk has been used in China since time immemorial and in the streets of Peking one can see men carrying bottles labeled similar to our milk here. This soybean milk, if kept at room temperature for hours, will turn acid and coagulate. Curds are formed exactly as curds are formed in ordinary milk. But the Chinese cheese [tofu] is made not by turning the milk acid but by curding it in a

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special way. They use the mother liquid from sea water after table salt manufacture [nigari] or a little plaster of paris" [calcium sulfate].

2846. Webber, P.A. 1931. Facts concerning the soybean. *Madison Survey* (*Madison, Tennessee*). Nov. 18. p. 177-78; Nov. 25. p. 181-82.
• ***Summary:*** "The soy bean is the only seed, as far as we know, which contains both the water soluble and the fat soluble vitamins."

"In 1917 during the World War, a special committee appointed by the Department of Agriculture, while searching for a cheaper source of protein for human consumption, discovered the soy bean. Shortly afterwards, soy bean in the form of flour was manufactured and this has been on the market now for some time. The entire soy bean ground into flour contains double the amount of protein and calories present in beefsteak."

"The soy bean is also very rich in lecithin. It has been clearly shown the soybean oil contains fat soluble vitamins A, D, and E."

A soybean milk can be prepared "in the same way as almond milk... Many tests have been made in the pediatrics departments of various universities in the United States showing that soybean milk can be used as the only source of protein in the nutrition of young infants." Also gives details on tofu. "In the Orient, 'tofu' forms a very popular and almost indispensable dietary article. This 'tofu' can be used in many different dishes, taking the place of meat or eggs. It is delightful as a constituent of roasts, omelets, etc."

"In Russia the soybean is taking prominence in the dietary of the people there. 'Plant soybeans and you plant meat, milk, egg omelets,' is the newspaper cry. A Soy Institute was recently organized in Moscow as well as a special exhibition of soy foods at which one hundred thirty varieties of soy dishes, including cutlets, pastry, salads, candy, and beef were shown. There is every reason to believe that the United States will become the leaders in introducing the soybean in the daily diet of the white race."

"The following are a few of the ways in which it is being prepared and used in the United States at the present time: Soybean flour is being used by large bakeries as a constituent of bread, rolls, pastry for pies, cakes, etc. Baby foods are coming on the market containing certain percentages of soybean milk. Chocolate malted milk containing a good per cent of soybean products is now manufactured and sold by several companies. For some time, manufacturers of diabetic foods have been placing on the market productions made largely from the soybean. The soy sauce, otherwise known as Oriental 'Shoyu' has been popularized by the Chinese chop suey restaurants, and is now being used in many dishes made in the home. The bean curd is being canned and manufactured in various other ways and sold on the market. Powdered soybean milk has become a commercial product."

"For several years the Health Food Department of the Nashville Agricultural Normal Institute has been experimenting with this most interesting legume, and is now offering two basic products which may be used in many nutritious and appetizing dishes: the soy cheese and soybean flour. These two products have been used in scores of recipes tested out at the Madison Rural Sanitarium, the Nashville Vegetarian Cafeteria, and other health food places. Just recently several different recipes for the use of soybean flour bread, rolls, and cakes have been perfected. These with other recipes, will be sent free to those who inquire for them."

"A move to substitute vegetable proteins for animal proteins is a move in the right direction, and there is no plant so promising as the soybean. A soybean research foundation has been suggested. Large space at the coming World's Fair in Chicago [Illinois] will do much to bring this important but neglected food to the attention of the American people."

Note: This article was reprinted as a little 8-page booklet (15 x 9 cm, undated) by T.A. Van Gundy of La Sierra Industries. This shows that Van Gundy was aware of the pioneering work of Madison Foods at an early date. On the last page of the booklet is the following paragraph which does not appear in P.A. Webber's original article: "For some time the founders of La Sierra Industries, Arlington, California, have been experimenting with this most interesting legume and are now prepared to offer a number of products which may be used in many nutritious and appetizing dishes: canned soys, soy soup, soy flour, soy cheese, soyco (a coffee substitute), smoein (vegetable smoked meat), soy breakfast food and soy-loaf." What a shame that this little booklet is not dated! At least we know it was printed after November 1931. Address: PhD, Madison, Tennessee.

2847. *Washington Post.* 1931. Timely tested recipes from the Bureau of Home Economics, Department of Agriculture. Nov. 29. p. MF12.
• ***Summary:*** A recipe for Chicken chop suey with fried noodles calls for "4 tablespoons soy sauce."

2848. **Product Name:** La Choy Soy Sauce.
Manufacturer's Name: La Choy Food Products.
Manufacturer's Address: Detroit, Michigan.
Date of Introduction: 1931. November.
Wt/Vol., Packaging, Price: Glass bottle.
New Product–Documentation: W.L. Burlison and O.L. Whalin. 1932. *Journal of the American Society of Agronomy* Aug. p. 594-609. "The production and utilization of soybeans and soybean products in the United States." See p. 608. "La Choy–soy sauce" is listed as a soybean product produced in the United States.

W.L. Burlison. 1936. *Industrial and Engineering Chemistry* 28(7):772-77. July. "The Soybean: A Plant Immigrant Makes Good." See Table II, p. 775. States that La

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Choy-Soy sauce was on the market during the latter part of 1931.

Ad in *Soybean Digest*. 1944. Sept. p. 12. "Genuine soy sauce." Soybean Blue Book. 1947. p. 72-73. The 2¼ by 3½ inch display ad is titled: "Genuine Soy Sauce" from "LaChoy Food Products, Archbold, Ohio. Division of Beatrice Foods Company."

Shurtleff & Aoyagi. 1982. History of Soy Sauce. p. 105. "One of the earliest importers and marketers of soy sauce in America was La Choy Food Products. The company was founded to produce mung bean sprouts in Detroit, Michigan, by Mr. Ilhan New (a Korean) and Wally Smith. Soon they were doing a booming business and by 1922 they were importing fermented soy sauce from China in wooden barrels to use as a seasoning in their Asian food products. In the early 1930s they began buying HVP soy sauce from Huron Milling Co. (now Hercules) and A.E. Staley, and selling it in small bottles as La Choy Soy Sauce. In 1942 the company moved to Archbold, Ohio, and the next year was acquired by Beatrice Creamery Co. (now Beatrice Foods) which by 1944 was advertising the soy sauce widely. In 1963 Beatrice/La Choy acquired the Oriental Show-You company and began making and marketing their first fermented soy sauce. In 1981 La Choy was the world's largest Chinese food plant... Their fermented soy sauce, which accounted for 10-15% of their fermented soy sauce sales, was sold under the brand Oriental Soy sauce. In addition to the traditional soybeans, wheat, salt, and water, it also contained HVP, corn syrup, caramel color, and sodium benzoate preservative."

Joe Staudt. 1985. Horizons (Beatrice Grocery Group). Summer. p. 1-7. In 1920 Wally Smith and Ilhan New, two friends from the University of Michigan, founded La Choy Foods in Detroit. Their first product was bean sprouts. In 1922 the business was incorporated as La Choy Food Products. The first La Choy-owned plant was built in Detroit in 1937. The Archbold, Ohio plant was built on its present site in 1942. The Company's long association with Beatrice started in 1943, when La Choy was bought by the Chicago-based company and became Beatrice's first non-dairy operation.

Note: This is the earliest known HVP soy sauce sold at retail in the United States. With this product began the long battle (still fierce in 2004) concerning the definition of soy sauce. In our opinion, U.S. regulations should have required that the La Choy product be labeled "imitation soy sauce"–but soy sauce was a minor product in America in the early 1930s, the nation was in the midst of the Great Depression, and nobody cared very much about soy sauce terminology.

2849. *Argus (The) (Melbourne, Victoria, Australia)*.1931. A Chinese luncheon. Dec. 5. p. 8.

• ***Summary:*** The recipe for Tomato-flower soup calls for "one teaspoonful of soy-bean sauce;..."

The recipe for Chow-mein, Cantonese style calls for "one tablespoonful of soybean sauce." Later in the same recipe it is also spelled "soy-bean sauce."

2850. *Argus (The) (Melbourne, Victoria, Australia)*.1931. A Chinese dinner. Dec. 12. p. 8.

• ***Summary:*** "Last week were published directions given by Nellie Choy Wong in the 'Christian Science Monitor' for the preparation of a Chinese light luncheon. The following are her directions for preparing a Chinese dinner. The ingredients may be bought at Chinese shops in Melbourne: -

"Course One.–Soy-bean Curd Soup.

"Course Two.–Mung Chi...

There follows a recipe for "Soy-bean curd soup" that includes "2 squares of soybean curd." "Season with soy-bean sauce, salt, and pepper to taste."

Note: This is the earliest document seen (Oct. 2009) stating that soybean curd [tofu] is available in Australia. That strongly implies that it was also being made in Australia, probably in the area of Melbourne, primarily for the Chinese community living there.

2851. Harada, Taichi. 1931. Preparation of *Aspergillus oryzae* enzymes. *Industrial and Engineering Chemistry* 23(1):1424-27. Dec. [29 ref]

• ***Summary:*** *Aspergillus oryzae* enzymes are widely used in the food and textile industries in the Far East. They are used to make soy (Shoyu) sauce, miso, and saké. The source of the enzymes [koji] contains two important enzymes–diastase and protease. This paper describes "certain properties of *Aspergillus oryzae* enzymes which were obtained by Takamine's method" (described in this journal, 1914). Address: Dep. of Biochemistry, New York Post-Graduate Medical School, Columbia Univ., New York, N.Y.

2852. Morse, W.J. 1931. Utilization of soybeans and soybean products in Oriental countries. *J. of the American Society of Agronomy* 23(12):1067. Dec. Presented as part of Symposium on Soybeans. Leader: W.J. Morse.

• ***Summary:*** Manchuria, the largest soybean-producing country in the world, had a production of more than 5,000,000 tons of which more than 400,000 tons were used for food, 253,000 tons for feed, and 225,000 tons for seed. The remainder, more than 4,000,000 tons, was used in the production of oil and oil meal and for export. Japan in 1929 used over 39,000,000 bushels of soybeans of which only 13,000,000 bushels were grown in Japan proper, the difference being imported from Manchuria and Korea. The following shows the various ways in which this large amount of beans was utilized by the Japanese people: Miso, 22.7%; soy sauce, 22.7%; soybean oil and oil cake, 21.5%; bean curd, 15.4%; confections, 6.1%; forage, 6.2%; green vegetable beans, 0.8%; green manure, 2.5%; seed, 1.6%; miscellaneous, 0.5%.

Note: This is the earliest document seen (Oct. 2001)

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that gives industry or market statistics on green vegetable soybeans by geographical region. Address: USDA, Washington, DC.

2853. *Manchouko (Manchuria) Yearbook*.1931-1934. Serial/periodical. Tokyo: East-Asiatic Economic Investigation Bureau (Toa-Keizai Chosakyoku). Annual. [Eng]

2854. Photographs of the Amano Brothers / T. Amano Co. soy sauce factory in Vancouver, British Columbia, Canada. 1931-1937. Vancouver, British Columbia, Canada.





• ***Summary:*** These four photocopies of black-and-white photos were sent to Soyfoods Center in 1981 by T. Amano Co. of British Columbia, with permission to reprint. (1) Ca. 1928-31 showing the end and roof of a building (at far left) with a sign that reads "Amano Brothers. Shoyu Bean Sauce." A street is in the foreground. (2) A sign about 12 feet long in the lower window of a building, ca. 1935. The three lines read: "T. Amano Co. Manufacturer of soya bean sauce. Bean & rice products." (3) The inside of the shoyu plant in 1937 showing many wooden vats and koji trays. A board walkway along the side of three tanks is used by the person stirring the moromi. A wooden ladder leans against a fourth vat. No people are present. (4) Five Japanese men working in the shoyu plant. Three are standing on top of or near the top of the vats, apparently stirring the moromi. A fourth, wearing



suspenders, is standing on the floor (see next page). Address: Vancouver, British Columbia, Canada.

2855. Fukai, Tôshi. 1931. Shôyu no "bitamin" ni kansuru kenkyû. II. Shôyu kasu abura ni okeru "shitosuterin" narabini "purobitamin" D no sonzai ni tsuite (2) [Research on vitamins in shoyu. II. On the detection of mitosterin and provitamin D in shoyu-cake and oil (2)]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 26(11):22-28. [Jap]
Address: Jozo Shikensho Gishu, Nôgaku-shi.

2856. Fukai, Tôshi; Komatsu, S. 1931. Shôyu hakkô to shiyu no kankei. VI. Kakushu hakkô kinrui no hanshoku ni oyobosu kapurin-san no seiri sayô [The relation between shoyu brewing and fatty oils. VI. The toxic action of capric acid on the propagation of several fermentation microorganisms]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 119. p. 219-29. [Jap]
Address: Jozo Shikensho. 1. Gishu; 2. Kenshuin.

2857. Kinoshita, Asakichi; Tanigawa, S.; Nakajima, W. 1931. Assaku mame kasu rui shiyô shiken [Shoyu brewing using soybean presscake]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 26(5):18-24. [Jap]
Address: 1. Jozo Shikensho Gishi; 2. Jozo Shikensho Moto Joshu; 3. Jozo Shikensho Joshu Nôgaku-shi.

2858. Matsumoto, K. 1931. "Bakuteriumu, rakuchisu, ashide, raihiman" henshu [Bacteria from shoyu brewing (4).]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 112. p. 51-56, 57-60. [Jap]
Address: Jozo Shikensho, Gishi.

2859. Matsumoto, K. 1931. Genryô yori bunri seru "fuakarutateibu bakuteria" ni tsuite [Facultative bacteria isolated from the raw materials of shoyu]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 112. p. 27-50. [Jap]

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Address: Jozo Shikensho, Gishi.

2860. Rokusho, B. 1931. [Preparation of shoyu with hydrolysis method]. *Minami Manshu Tetsudo K.K. (South Manchuria Railway Co. Experiment Station)* 15:119-. [Jap]*

2861. Togano, Meijiro. 1931. Shôyu sokujô-hô ni kansuru kenkyû [Research on quick shoyu fermentation]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 26(1):1-4; 26(2):1-6; 26(3):1-3; 26(4):1-4; 26(5):1-3; 26(8):1-4; 26(9):1-6; 26(10):1-3; 26(11):1-4; 26(12):1-3. [Jap]
Address: President (shacho) Nihon Jozo Kogyo K.K., Nôgaku Hakase.

2862. Udo, S. 1931. Shôyu no aji ni kansuru kenkyû. II. Shôyu-chû no yûki enkirui ni tsuite [Studies on the taste of shoyu. II. On the organic bases in soy sauce]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 7:852-58. (Chem. Abst. 26:783). [5 ref. Jap]

2863. Yosino, E. 1931. [Trials of brewing shoyu]. *Minami Manshu Tetsudo K.K. (South Manchuria Railway Co. Experiment Station)* 15:85-. [Jap]*

2864. Kwang, Yü-chow. 1931. Enzymes d'Aspergillus et biochimie de la "fermentation" du soja [Enzymes of *Aspergillus* and biochemistry of the fermentation of soy sauce]. Louvain: Universite Catholique, Institut Agronomique. Memoires. Collection in 4*, vol. 4. 93 p. [Fre]
• ***Summary:*** Contents: Introduction. 1. Extraction, separation at properties of the proteinase and amylase of *Aspergillus tamarii*. 2. The proteolytic and amylolytic power of some Aspergilli. 3. The biochemistry of the fermentation of soy sauce. Summary and conclusions. Address: Louvain, France.

2865. Ochse, J.J. 1931. Vegetables of the Dutch East Indies. Buitenzorg (Bogor), Java: Archipel Drukkerij. xxxvi + 1005

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p. See p. 366, 389-93, 398, 407-08, 732, 943-71. An entirely revised and greatly enlarged second edition of his Tropische Groenten (1925). Translated by Mr. C.A. Backer. Illust. 25 cm. Index. [10 ref. Eng]

• ***Summary:*** This translation (by Mr. C.A. Backer, the reputed ex-Botanist for the flora of Java) of Ochse's classic "may be taken as an entirely revised and much enlarged second edition of *'Tropische Groenten'* (Tropical Vegetables), which booklet was published in July 1925." The author, a Dutchman who confined his research to Java and Madoera, described the tempeh-making process in detail, saying that the mold used was *Aspergillus oryzae* and that it was obtained from a former batch of tempeh.

Page 366 discusses ontjom (témpé boongkil in Javanese), tetèmpè, and dagè, all made from peanuts. Page 372 notes that the pigeon pea (*Cajanus cajan*) can be used to make témpé bosok.

Pages 389-93 discuss the soya bean, which has various names in local languages. Malay: Katjang djepoon or Kedele. Javanese: Dekeman or Dekenan, Dele, Demekan, Gadele, Kedele, Kedoongsool, or Dangsool. Sundanese: Kadele, Katjang booloo, Katjang djepoon, Katjang kadele. Madura: Kadhele, Kadhellee, or Kedeleh. A description of the plant is given.

Illustrations show: (1) A young soybean plant with leaves and pods (half size). (2) A bamboo scaffolding or curing frame, in tripod form with 3 horizontal supports, used for drying bunches of soybeans.

Soybeans come in two main forms: Light yellowish-brown seeds, and black seeds. The latter are used to make *ketjap* (Indonesian soy sauce). "Of the ripe seeds *pélas* (Jav.) is made, by mixing them with grated young coco-nut [coconut], salt, and other ingredients. The mixture is wrapped in a banana leaf and steamed.

"The seeds can also be roasted and afterwards pounded. The *boobook* [*bubuk*, roasted soy flour], *boobook* or *boobookan* (Jav.) is eaten in the shape of powder, usually with the addition of lombok and other ingredients.

"The seeds are mixed with a porridge of rice-meal and water and afterwards fried in coco-nut oil. This dish is called *rempeyek* (Jav.). It consists of brown slices in which the black *kedele*-seeds are scattered. *Rempeyek* is eaten either as a delicacy or with the rice table. "Témpé [tempeh, p. 391] is a much used product. In East- and Central-Java it takes the same place as the ontjom in West-Java. It is prepared in much the same way as *ontjom*, and the reaction is brought about by the same fungus, *Rhizopus Oryzae*, Went et Prinsen Geerligs, which is transmitted by *ragi*. The seeds are cooked and, after they have cooled, put in a basket. By stirring, rubbing and even by treading, coupled with repeated washing with fresh water, one tries to remove the testa [seed coat / hull] from the seeds. When this has been done, the seeds are put on hurdles (*sasak*) covered with banana- or waroo-leaves. Now the so-called *beeang*, i.e. rests of the fungus used for a former batch, is sprinkled over them and the mass is turned over on other sasaks. The *témpé*-cakes treated in this way are kept indoors and after two or three days the fungus has spread sufficiently for giving a light grey colour to the cakes, which then are soft and dry and ready for use. They are sold on the markets either cut into small pieces or divided at pleasure, according to the amount of money the buyer wishes to spend. *Témpé* is used, fried, in the *sayor* or prepared with all sorts of ingredients.

"Other products for the native market are *tahoo* [tofu] and *takoäh* [pressed tofu; Chinese: doufugan]. Both are eaten either boiled or cut into small slices, fried and added to *gado-gado* or, lombok rawit being added, as a side dish.

"For the preparation of *tahoo* or *takoäh* the seeds are soaked, ground fine, boiled and pressed through a cloth. The juice which is pressed out is mixed with salt, vinegar, coco-nut milk or with unburned gypsum (so-called *batoo tao*), imported from China. By this treatment a white gelatinous mass is formed, which, after cooling, can be cut into pieces."

"Wet *tahoo* does not keep well for a long time. For this reason it is soon made into *takoäh*. For this purpose the *tahoo* is cut into pieces, folded in pieces of cloth, pressed in order to remove part of the water and next boiled in a decoction of koonir [turmeric]. The product obtained in this way has an intense yellow color and is a much relished delicacy, especially with lombok rawit [fiery dwarf chilies]."

Taotjo [Indonesian-style miso] is a porridge made of soybeans and rice meal. The soybeans are soaked, dehulled (the testa removed), cooked, and left to cool. Then they are mixed with the meal of rice (regular or glutinous), which has been previously roasted. "The porridge obtained in this way is poured on winnows (*tampah* [winnowing trays]) covered with waroo-leaves, sprinkled with *ragi* or *beeang*, probably of *Aspergillus Wentii*, Wehmer, and covered with leaves. The filled tampahs are piled on each other and left alone till the cakes are very mouldy. Then they are dried in the sun, soaked in brine and mixed with sirup of *arèn* [sugar palm] and with *tapè* [*tapai;* a sweet fermented cake] of rice or glutinous rice. Next the porridge is placed out of doors. After the seeds have become soft by this treatment, which takes three or four weeks, the *taotjo* is ready for use.

"*Taotjo* must be boiled, otherwise the smell is to strong. It is eaten with cooked or raw vegetables. It is used for dressing some dishes of meat or fish, whilst it is also a material of which diverse side dishes are made."

Note 1. This is the earliest English-language document seen (March 2009) that uses the word "taotjo" to refer to Indonesian-style miso.

"According to De Bie (1901), *tao djee* [*tao dji; doushi, douchi*] is *taotjo* alternating with layers of cooked whole *kadelè*-seeds. This stuff is put into a pot or basin with some salt and boiled arèn-sugar. The mass is left to itself during a few days till the *taotjo* has become pervaded by the salt and the sugar and has assumed a uniformly brown colour. Note 2.

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Tao djee [*doushi*] is fermented black soybeans, which are not the same as *Taotjo* [Indonesian-style miso]. De Bie (1901) seems to have made a mistake.

"Of the black *kadelè*-seeds *soya* [soy sauce] is made, exclusively by the Chinese and the natives. First the seeds are cooked in a strong solution of salt. After diverse manipulations the cooked seeds are mixed with arèn-sugar and so-called soya-condiments and the mixture is concentrated till the salt begins to crystallize. By diluting this product with more or less water one obtains the diverse qualities of *kètjap* or *soya* found in commerce."

The "Pemimpin Pengoesaha tanah" of 15 Jan. 1915 lists various ingredients that can be used with black soybeans in making ketjap. "Young seedlings, obtained, like *taogè* [*taugé*, soy / bean sprouts], by fermenting, are called *ketjambah kedele;* they are cooked and eaten as *petjel* (Jav.) with the rice (*ganteng*, Jav.)"

"Finally young leaves of *Kadele* can be eaten, raw or steamed, as *lalab*.

Page 398 describes *dagè* and *tempé bengook* made from these seeds of the velvet bean (*Mucuna pruriens*). Roasted tempeh are also discussed.

Pages 407-08 states that the seeds of the *Katjang oji* (rice bean) can be used for the preparation of tempeh.

Pages 414-15 state that, when they have no soybeans, the Chinese use mung beans (*Katjang eedjo*) to make tofu and takoah, but they are most widely used to make mung bean sprouts (*taogè*). Page 634 mentions tempé bosok (overripe tempeh) made with the foul-smelling bruised leaves of the plant *Paederia foetida*. Page 732 also mentions overripe tempeh.

Note 2. This is the earliest English-language document seen (Dec. 1998) which contains detailed information about tempeh, or which refers to tempeh as "tempé."

Note 3. This is the earliest English-language document seen (Feb. 2004) that uses the word "tahoo" or the word "takoáh" to refer to tofu. Address: Buitenzorg (Bogor), Java, Indonesia.

2866. Ochse, J.J. 1931. Indische Groenten [Vegetables of the Dutch East Indies]. Buitenzorg (Bogor), Java: Department Landbouw. 1005 p. See p. 388-92. Index. Illust. 27 cm. [10 ref. Dut]

• ***Summary:*** For details, see the English-language translation, also published in 1931.

Under soybean utilization, the following food products are discussed in detail on pages 390-92: Tempeh (*tèmpè*), tofu (*tahoe*) and firm tofu (*takoä*), Indonesian-style miso (*taotjo*), fermented black soybeans (*tao dji*), and Indonesian-style soy sauce (*kètjap*). "Témpé is a much used product. In East- and Central-Java it takes the same place as the ontjom in West-Java. It is prepared in much the same way as *ontjom*, the reaction is brought about by the same fungus, *Rhizopus Oryzae*, Went et Prinsen Geerligs, which is transmitted by *ragi*."

On pages 943-970 is an alphabetical "List of Vernacular Names of Objects, Properties or Actions." For example: Kedele oongaran (p. 390, Jav.) is a soybean plantation on a sawah, immediately following the paddy [rice] harvest. Kedele apeetan (p. 390, Jav.) is the second harvest of the year or the second plantation in the same year of Kedele (soybeans; Glycine Soja). Address: Buitenzorg (Bogor), Java.

2867. Takenobu, Yoshitaro, ed. 1931. Kenkyusha's new Japanese-English dictionary. Tokyo: Kenkyusha. xvi + 2266 p. 24 cm.

• ***Summary:***

Food words that are not related to soy:

akameshi: see sekihan.

amanatto: sugared red beans [a very popular snack of cooked azuki beans coated with sugar].

amazake: a sweet drink made from fermented rice.

an: bean jam. an no haitte iru: stuffed with bean jam. an o ireru: to stuff with bean jam. an ni kurumu: to cover with bean-jam.

anko: bean-jam = an.

azuki: a red bean; an India bean. azuki meshi [azuki gohan]: rice boiled with red beans. azuki-iro: reddish brown, russet.

azuki-aisu: iced bean-jam.

azuki-gayu: red-bean gruel.

beni-shôga: red pickled ginger.

kaiseki: a light [vegetarian] meal served before (a) ceremonial tea.

kaisô: seaweeds, marine plants; algae; seaware (hiryô-yo). kaiso-hai: ash from kelp. kaiso-fun: kelp meal [for food].

konbu: (sea) tangle; kelp; a devil's apron. *Laminaria*. kizami konbu: sliced tangle. konbu-maki: a tangle roll. tororo konbu: scraped tangle. konbu-cha: a sea-weed drink [tea].

mochi: rice-cake. mochi o tsuku: to pound steamed [glutinous] rice into cake. mochi wa mochi-ya: Every man has his forte = A specialist has his own strength (= strong point). = Every man to his trade.

nankin-mame: a groundnut. (American) a peanut; a monkey nut.

nori: laver, sloke. hoshi (ajitsuke) nori: dried (seasoned) nori. ao (Asakusa) nori: green (Asakusa) nori. nori no tsukudani: laver boiled down in soy [sauce].

okowa: = kawa-meshi, sekihan. Note 2. Okowa is usually made by cooking azuki beans with glutinous rice, whereas sekihan is made by cooking azuki beans with regular (nonglutinous) rice.

sekihan: rice boiled together with red beans; cooked rice and red beans.

shiruko: red bean soup with rice cake. shiruko-ya: a *shiruko* store; a bean-soup house.

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wakame: *wakame* seaweed. *Undaria pinnatifida.*

zôni: rice cakes boiled with vegetables. zôni o iwau [to celebrate]: take the New Year's breakfast of rice cakes boiled with vegetables.

Words or terms not mentioned: Daitokuji natto. Hamananatto. Hamanatto. Misuzu. Address: General editor, Japan.

2868. Takenobu, Yoshitaro. ed. 1931. Kenkyusha's new Japanese-English dictionary. 2nd ed. Tokyo: Kenkyusha. iv + 2280 p. 19 cm. Title also in Japanese: *Shin Wa-Ei Daijiten.* [Eng; jap]

• ***Summary:*** The first edition of this dictionary (titled *Takenobu's Japanese-English Dictionary*) was published in 1918. In 1931, Kenkyusha undertook a major revision in the dictionary by expanding upon former entries and adding newer ones. The British diplomat George Sansom, who later became a renowned historian of Japan, was a major contributor to and editor of this 2nd edition.

Soy related words:

abura[a]ge = aburaage or aburage: fried bean-curd. [Tonbi ni aburaage o sarawareta yôni]: with a stupid look of surprise. [literally, as when a kite {a bird of prey} snatches away your aburaage]. This is the earliest English-language document seen (May 2012) that contains the word *aburaage.* It refers to deep-fried tofu pouches.

atsuage: not listed.

age [tôfu]: fried bean-curd.

ama-miso: not listed.

Daitokuji-natto: not listed.

daizu: a soya (soy) bean. [daizu kasu]: a [soy] bean cake [a co-product of soy bean oil].

daizu abura: not listed.

dengaku: baked bean-curd daubed with miso. [dengaku-zashi ni sareru]: to be transfixed; be pierced through (with a spear).

eda-mame: green soy-beans.

ganmo: not listed.

ganmodoki: not listed.

Hamana-natto: not listed.

Hama-natto: not listed.

hiryozu: not listed.

[inari-zushi]: a kind of 'sushi' (fried bean-curd stuffed with boiled rice).

kinugoshi no: strained through silk cloth [no mention of tofu].

kogori-dôfu: not listed.

koi-kuchi [shoyu]: not listed.

kôji: malt (mugi); yeast; leaven (kôbo); [kôji-ya]: a maltster [a maker of kôji]. [kôji ni suru]: [to] malt.

kôri-dôfu: frozen bean-curds.

kuro-mame: a black soy-bean.

miso (chomiryô = seasoning): bean paste; miso.

[miso shiru]: miso soup.

[miso o kakeru]: to put miso on (some food); (shuppai suru): to make a mess (sad work) of it; put one's foot in it.

[]: mash the miso.

[]: to speak meanly of (a person); speak of (a person) in the most disparaging terms; say everything bad about (a person); denounce scathingly (roundly).

[]: a pretty mess you have made of it. [miso mo kuso mo isshoni suru]: his ideas are confused; He confuses one thing with another. [miso no miso kusaki wa, jô miso ni arazu]: The secret of art lies in concealing art [Akiko never heard this saying].

misokoshi: a miso strainer. [misokoshi de mizu o sukuu]: weave a rope of sand; attempt impossibilities [literally, to try to scoop up water with a miso strainer].

miso-mame: a soja (soy) bean.

miso-zuke: anything pickled in miso.

momen: cotton [no mention of tofu].

nama-age: not listed.

nattô: fermented soy-beans.

nigari: bittern, brine. [nori no tsukudani]: laver boiled down in soy [sauce].

oboro: not listed.

okabe: not listed.

okara: not listed.

saishikomi [shoyu]: not listed.

shimi-dôfu: not listed.

shiro-shoyu: not listed.

shitaji: soy [shitaji sosogi]: a soy pot [soy sauce dispenser].

shôyu: soy [sauce].

tamari: (a kind of) soy.

tôfu: bean-curds; tôfu.

[tofu itcho]: a piece (cake) of bean-curds.

[tofu-ya]: a bean-curds dealer (seller).

[kare ni iken shita totte, tôfu ni kasugai da]: advice to him is like water sliding off a duck's back. It is a mere waste of words (It is just as well to pour water into a sieve) to advise him.

[tofu-ya e ni ri, saka-ya e san ri to iu tokoro da]: there is no human habitation within five miles of the place. [It's out in the boondocks].

unohana: (1) Flowers of the *Deutzia scabra.* (2) [tofu no kara]: bean-curd refuse.

usukuchi shoyu: not listed.

yaki-dôfu: broiled bean-curd.

yuba: dried bean-curds [sic, the film that forms atop soymilk when it is heated]. Address: General editor, Japan.

2869. Togano, Meijiro. 1931. Saishin shôyu miso jôzô-hô [Brand-new methods of brewing shoyu and miso]. Tokyo: Jôzô Hyôron-sha. 1052 + 13 p. Illust. 22 cm. [Jap]*

• ***Summary:*** This is apparently a revision of the 1926 edition, with 13 additional pages, separately numbered.

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2870. Wenham, Edward. 1931. Domestic silver of Great Britain and Ireland. New York, London, Toronto: Oxford University Press. xxiii + 186 p. Plus 95 plates on unnumbered pages at end. See p. 87, 142. Illust. Index. 26 cm. [15* ref]

• ***Summary:*** Chapter 5, titled "Traditions of table silver," in the section on "Standishes and inkstands" states (p. 87) that "no few snuffer-trays, soy-frames, and other like pieces have been adapted by the addition of bottles or silver holders."

Chapter 10, titled "Methods of forging old silver marks," discusses genuine hall-marks and notes (p. 141-42) that "snuffer-trays and soy-frames can be and are made into attractive inkstands,... so long as buyers fail to examine them..."

Note 1. "Soy-frames" are holders for high-quality glass bottles containing soy sauce. Note 2. A "hallmark" (a word first used in 1721) is derived from Goldsmith's Hall in London, where gold and silver articles were assayed (tested) and stamped. A hallmark is this official mark attesting to the purity of an article. A leopard's head for London, a crown for Sheffield, etc. Address: Formerly editor of *The Antiquarian* and of *Arts and Decoration Quarterly*, and managing editor of *Arts and Decoration* [England].

2871. Yang, Ximeng; Tao, Menghe. 1931. A study of the standard of living of working families in Shanghai. Peiping: Institute of Social Research. 86 + lvi p. See p. xxxii. 23 cm. Series: Social Research Publications, Monograph No. III. Facsimile edition reprinted in 1982 by Garland Publ. Co. (New York). [40 ref]

• ***Summary:*** Note 1. On the title page, the authors' names are given as Simon Yang and L.K. Tao.

Contents: Part I: General results. Part II: Statistical tables.

In Part I, section IX is titled "The standard of living food" (p. 47-55). The 2nd most important type of food, after "(a) Cereals and products" is "(b) Legumes and products," which states (p. 48): "Of beans, the young soy bean (Chinese characters: mao dou) formed the principal kind, but among the bean products, bean sprouts, bean curds of various makes and mung bean starch were consumed in considerable quantities."

Page 49: "(g) Fat and oil: Bean oil [soy] formed the most important article in this class, of which the average consumption was 4.78 catties (2.8 kg) per family per month. Lard, the second in order, lagged far behind..."

"(h) Condiments: Salt and soy sauce were the principal articles of this class."

Page 50: Whereas rice accounts of 44.6% of total expenses, legumes and products account for only 7.6%. More rice and legume statistics appear on page 53.

In Part II, "Statistical tables," six long tables mention soy as follows: I. "Average quantity of and expenditure for the principal articles purchased per family per month, by income groups" (p. ii-iii): Yellow soy bean sprouts, 0.15 expenditures. Soy bean curd, 0.26. Sheet bean curd, 0.18 [pressed tofu sheets, pai-yeh or ch'ien-chang]. Bean curd, fried, 0.10. Bean curd, dried [doufu gan] 0.16. Soy bean oil, 1.19. Soy bean sauce 0.38.

II. "Average quantity of and expenditure for the principal articles purchased per family in each of the twelve months under investigation (p. viii-xxx): There are entries for: Yellow soy bean sprouts, 1.87 annual expenses. Soy bean curd, 3.14. Sheet bean curd, 2.15. Bean curd, fried, 1.19. Bean curd, dried [doufu gan] 1.95. Yellow soy bean, 0.38. Young soy beans with pods [mao dou, edamame], 0.81.

III. "Average quantity of and expenditure for the "other" articles of food purchased per family in a year" (p. xxxii, xxxvii). Bean curd, fermented, odorous, 0.05 annual expense [ch'ou toufu]. Soy bean milk, 0.17. Fried beans, with salt, 0.21. Fermented bean curd, fried, 0.05. Bean curd skin, 0.02. Bean curd, fermented, with fragrant malt, 0.05. Bean curd, frozen, <0.005 [tung-toufu, ping-toufu]. Bean curd skin, cooked in skein forms, <0.005. Dried bean curd, fried, 0.005. Bean curd, fermented, 0.6. Soft bean curd, 0.05. Soy bean dregs, 0.02 [okara?]. Sheet bean curd, in skein [netlike] forms, > 0.005. Soy bean paste, 0.01.

Note: This is the earliest English-language document seen (Oct. 2011) that uses the word "odorous" or the term "Bean curd, fermented, odorous" to refer to *ch'ou toufu*.

VI. "Average quantity and fuel value of food consumed per family in a year" (p. l-li). This table has 6 columns. (1) Classes and articles of food. (2) Quantity, total (grams). (3) Quantity of protein, grams. (4) Quantity of fat, grams. (5) Quantity of carbohydrates, grams. (6) Fuel value, calories. Note 2. For soy products we will give only the quantity / amount purchased each year per person in grams. Yellow soy bean sprouts, 34,229. Soy bean curd, 55,080. Sheet bean curd 8,34. Bean curd, fried, 6,163. Bean curd, dried, 13,218. Yellow soy bean, 2,407. Mung bean sprouts, 15,257. Note 3. The weight of mung bean sprouts purchased was less than half (44.5%) the weight of yellow soy bean sprouts purchased. Young soy beans with pods, 7,180. Bean curd, fermented, odorous, 364. Soy bean milk, 6,963.

At the end of the book is a very interesting bibliography of the best books on China's economic and social development, divided into these periods: China during the interregnum [Republic of China] (1912-1949). Modern Chinese economy: The late imperial period (late 19th and early 20th centuries), the agrarian economy, foreign trade and investment, 20th century economic development, labor and the economy. The wartime economy and postwar problems.

Note 4. This book would have been much more useful if the Chinese names of these foods (in both Chinese characters, and transliterated) had been given. We are unsure of the exact identity of: (1) Fried beans with salt. Are these salted, oil-roasted soybeans? (2) Bean curd fermented with

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fragrant malt vs. bean curd, fermented, odorous. Address: China.

2872. Mason, Walt. 1932. Rippling rhymes: The approach. *Los Angeles Times*. Feb. 3, p. A4.
• ***Summary:*** America is in the midst of the Great Depression. A bum approaches the writer and says: "I'm badly busted, I am broke in seven styles. I would like to buy a collar and a pint of Canton soy; if you stake me with a dollar it will fill my life with joy."

Note: This is the most recent English-language document seen (April 2012) that contains the term "Canton Soy," which apparently refers to soy sauce made in Canton, China.

2873. Blokhuis, D.F.; von Liebenstein, E.R. 1932. Over de beteekenis van de sojaboon als handelsproduct [On the commercial significance of the soybean as a commodity]. *Landbouw (Buitenzorg, Java)* 7(9):571-96. March. English-language summary, p. 743-74. Also in: Dutch East Indies Dept. of Agriculture..., ed. 1932. Kedelee. Buitenzorg, Java: Departement van Landbouw, Nijverheid en Handel. Afdeeling Landbouw. p. 5-30, 177-78. [1 ref. Dut; eng]
• ***Summary:*** "Annually Java requires considerable quantities of the soybean, about one half of which is imported... On Java the soybean is used principally for the preparation of soy sauce (*soja of ketjap*), tahoe, tempe, and taotjo (various dietary preparations). Our investigations have proven that the Java-grown soybean can be used for making ketjap, tahoe and tempe just as effectively as the imported soybean. In western Java the manufacturers of soy prefer the imported article, those in central and eastern Java prefer the home-grown bean. This preference, which must be attributed chiefly to habit and conservatism, is also partially to be ascribed to the fact that in western Java but little of this article is grown, whilst in central and eastern Java the production is much more considerable, which causes the former region to be more dependent upon the imported article than the latter districts. For the preparation of tahoe a certain preference is indeed shown for the imported bean, in view of the greater keeping properties of the article prepared therefrom; nevertheless, the soybean grown on Java is also widely used for that purpose. The same holds good for the preparation of tempe, where the imported article is preferred chiefly on account of its larger size. Generally speaking, the imported kinds of soybean are preferred for the preparation of tahoe and tempe because they satisfy to a greater extent the demands of the manufacturers, and also because they are readily obtainable. Taotjo, however, is practically exclusively prepared from the imported bean.

"The general conclusion is that the imported soybean can be replaced, if not entirely, at a rate to a very great extent by the soybean grown on Java, thus indicating that the furtherance of its cultivation in this country can only be of advantage...

"The principal import harbours are Semarang [Central Java], Sourabaia [Surabaya], Tandjong Priok, Tjilatjap, and Cheribon." Address: 1. fd. Hoofd van Afdeeling Handel te Buitenzorg; 2. Vakkundig Ambtenaar bij de Afdeeling Handel, Java.

2874. Blumenthal, Saul; Thuor, L. 1932. Worcestershire sauce manufacture. *Fruit Products J. and American Vinegar Industry*. March. p. 207, 223.
• ***Summary:*** "Most people who are uninformed about the preparation of Worcestershire Sauce are generally under the impression that it is a very simple matter to make this product. This is not so, however. A Worcestershire Sauce of good quality represents a combination of nourishing foods, the essential ingredients being soy sauce, vinegar, extractions of spices and seeds, sugar, salt, water, beef extract, gums and other less important ingredients. The soy sauce is made from soybeans, abundant in proteins and amino acids. Its flavor is characteristic of the taste of the Orientals.

"The soy sauce is the fundamental ingredient of Worcestershire Sauce. A discussion of the method of making the sauce in the Orient may be of interest to the reader." A description is given, but it is not clear in which country this soy sauce is made; it is probably made in China since so much molasses / sugar is added. "As a rule, the above natural soy-sauce is diluted with blackstrap molasses and exported to America. The extent of the dilution depends upon the price paid for the sauce. The United States Department of Agriculture has no definitions or standards for Soy-sauce. Therefore, one must depend entirely upon the chemical examination to find out how much soy-sauce is present and also upon the organoleptic examination. The findings, given below, show the average chemical examination of soy-sauce shipped into this country over a three-year period: Total solids 77.5%, protein (N x 6.25) 1.93%, ash 9.4%, salt 3.13%, reducing sugars 19.62%, cane sugar 29.70%, corn syrup 0.00%.

"The following is a typical formula for a good quality Worcestershire Sauce. This makes 100 gallons. Cider vinegar 50 gallons, spiced vinegar 10 gallons, soy-sauce 15 gallons, walnut catsup 15 gallons, pure lime juice 1 pint, terpenless [sic, terpeneless] oil of lime 30 drops, sugar 10 pounds, table salt 15 pounds, water to the 100 gallon mark, Galagum C 6 pounds." Details are given on how to make the spiced cider and the walnut catsup used in the Worcestershire Sauce recipe. The latter contains 3 gallons of soy sauce, the main ingredient other than water.

"The spices are thoroughly mixed with the vinegar and allowed to stand for several weeks before use. In transferring the required amount of this spiced vinegar to the main formula run same through several layers of cheese cloth to remove large pieces. Mix in the other ingredients in the order described in a wooden tank with a stirring paddle. Run

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through a 20 or 30 mesh screen to filter out solid particles, then fill the finished sauce into bottles or kegs." Address: Shirley Laboratories, New York.

2875. Donath, W.F. 1932. De voedingswaarde der sojaboon en enkele daaruit bereide specifiek Indische voedingsmiddelen [The food value of soybeans and some specifically East Indian foods prepared from them]. *Landbouw (Buitenzorg, Java)* 7(9):705-40. March. English-language summary, p. 759-61. Also in: Dutch East Indies Dept. of Agriculture..., ed. 1932. Kedelee. Buitenzorg, Java: Departement van Landbouw, Nijverheid en Handel. Afdeeling Landbouw. p. 139-74, 193-95. [48 ref. Dut; eng]
• ***Summary:*** Discusses the composition of the soybean. "In contrast with Manchuria, where it is a common article of diet, the soybean is rarely used as such in these parts; but by means of various operations, among which is the action of certain fungi, several products are prepared from it.

"These products, such as *tempe kedele, taotjo, tahoe, taokoan* and *ketjap* are important items in the native diet. Except for the last mentioned, the preparation of these products is such that the albumins are preserved practically intact, so that, especially in tempe, as we were able to point out, the biological albumin value is very high...

"*Soymeal,* which is prepared by removing the husks and then pounding what is left, has the drawback that it tastes somewhat bitter and, in consequence of the high percentage of fat, soon becomes rancid... Berczeller, however, seems to have succeeded in obtaining an improved soy meal...

"Finally, in discussing the importance for the native diet of these beans and the products prepared from them, the author arrives at the conclusion that it is especially the albumins that are important, the people being practically vegetarian and these foods being, in addition, rich in carbohydrates.

"Thus the author expresses his approval of the fact that of late years the *Department of Agriculture, Industry and Commerce* has advocated the growing of the soybean and the consumption of the products prepared therefrom."

Note 1. This is the earliest English-language document seen (the summary) (Sept. 2005) that contains the word "soymeal," which apparently refers to whole (full-fat) soybean flour.

Note 2. This is the earliest document seen (April 2001) that contains the word *taokoan*. Address: Hoofd van het Analyselaboratorium te Buitenzorg, Java.

2876. Dugard, Jean. 1932. La valeur alimentaire et industrielle du soja [The food and industrial value of soya]. *Genie Civil (Le)* 100(17):419-20. April 23. [3 ref. Fre]
• ***Summary:*** Contents: Introduction. *USDA Farmers' Bulletin* No. 1617, by W.J. Morse. Botanical characteristics of the soybean. Composition and food value of the soybean. Products derived from soya eaten by humans: Tofu, soy oil, shoyu [soy sauce] (called "soy" in English), soy flour, soy sprouts, miso, natto. The use of soya as forage. Industrial uses of soy oil and cake. The soybean in western Europe: Hansamuehle in Hamburg, Germany; Englehardt & Cie. in Frankfurt, Germany (making powdered soymilk, soy caseine, soy lecithin, etc.); Soybean cake used for animal feed in England, Denmark, Holland, Sweden, and–above all–in Germany, where more than 2 million tons/year are consumed.

2877. Lovell, Philip M. 1932. The care of the body. *Los Angeles Times.* April 24. p. 120. Sunday magazine.
• ***Summary:*** In the section titled "Soy bean" (p. 21) the following letter is reprinted in full: "Torrance, California. Dear Dr. Lovell. In the health section of the Los Angeles Times Magazine several weeks ago I read an article about soy beans.

"As a Japanese farmer I raised and used soy beans for many years but since coming to this country I have not seen soy beans grown. I believe this is too bad, as I believe soy beans are a valuable crop.

"For many centuries the people in Japan used this product for their main supply of protein. They also used it for nitrogen for their lands.

"Contrary to common belief, the Japanese have not used much fish for their diet and no animal meat at all, for Buddhism does not recommend its followers to kill and eat their fellow animals.

"Many due to Buddhism or the difficulty in transporting fresh fish, did not use much fish. The only thing they could depend upon for the protein was a cake made of soy beans, called tofu. We also make a sauce of the soy beans [soy sauce].

"In the Orient this is a staple crop. The farmers raise it as one of the rotating crops. I should really like to see more soy beans raised here but on account of the lack of popular usage there is not much demand for them.

"Could you give me more information about the use of this product which would appeal to the popular taste? I would appreciate it very much.

"Sincerely yours, Tatsuo Inouje [Inouye].

Lovell responds that, as he has stated before, 80% of the people worldwide are "vegetarians, either by religion or economic necessity." The Japanese are a progressive race. What they have accomplished during the past 70-80 years is "a miracle of the century. Yet they have done it essentially on a vegetarian diet."

The soy bean has replaced animal protein for the Japanese and for most followers of Buddhists and Confucianism. "It is the roast beef of the Orient. It contains twice as much protein as the richest of meats. It is a very fine food indeed. The health food stores are slowly building up a sale for it. Recently I ran across a soy bean bread. I believe the average health food store can procure it." Address: N.D.

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[Naturopathic Doctor].

2878. Safeway Stores. 1932. Safeway's ambassadors visit with you (Ad). *Los Angeles Times*. April 29. p. A3.
• ***Summary:*** This large ad includes: "Soy sauce. Mandarin. 5½ oz. bottle–25¢."
"Peanut butter. Max-i-muM brand. 2 lb. jar–19¢."
"Safeway Stores: Distribution without waste."

2879. Squirrell, W.J.; Laughland, J. 1932. Soybeans in Ontario. *Ontario Department of Agriculture, Bulletin* No. 366. 16 p. April.
• ***Summary:*** Contents: Origin and importance. Description. Composition. Climatic adaptation. Rotation. Soil and soil preparation. Manures and fertilizers. Varieties. Seed selection. Inoculation. Harvesting. Threshing. Uses of the crop: Hay, as a soiling crop, ensilage, pasture, soil improvement, ripe seed, straw, soybean oil, meal, other products. What farmers think of soybeans (Extracts from reports by 21 men who have grown and fed the crop from the following places (mostly counties): Durham, Dundas, Brant, Elgin, Frontenac, Grenville, Halton, Hastings, Kent, Lambton, Middlesex, Oxford, Perth, Simcoe, Welland, Wellington).

"Soybeans were first tested in the experimental plots at the Ontario Agricultural College in 1893 and first distributed for co-operative tests from the College to farmers in 1901."

"More than one hundred varieties of soybean have been tested for fodder and grain production by the Field Husbandry Department of the Ontario Agricultural College. Some of these varieties matured sufficiently early to be successfully grown in Ontario. Many, however, are too late for the climatic conditions of the Province and do not even reach the best fodder conditions before the arrival of killing frost."

Two tables (p. 6-7) show the average results for 6 years in testing 21 varieties of soybeans for fodder and for grain by the Department of Field Husbandry at the Ontario Agricultural College. In each table the varieties are sorted by descending yield of green fodder or grain [seed]. The varieties are: O.A.C. No. 211, Habaro No. 20405 (Wash. [Washington, DC]), Ito San Soja, Black Eyebrow (Jeffrey), North's, Minnesota No. 167 (Minnesota Exp. Station), Manchu, Early Yellow (O.A.C. No. 111), Elton, Medium Green (O.A.C.), Mandarin, Chestnut, Tsurunoko, Oyaji, Shiro Kotsubu, Early Yellow, Black Ontario, Quebec No. 92, Black Manchurian (Jeffrey), Brown, Ogema. For fodder, the "O.A.C. No. 211, which stands first with an average yield of 10.16 tons of green fodder per acre for the 6-year period, is a plant selected strain, developed by the Ontario Agricultural College, from the Habaro variety and is the only variety of soybeans eligible for registration in Canada." The plants were cut on Sept. 7. For grain/seed production Black Ontario has the highest average yield over the 6 years at 28.47 bushels/acre, followed by North's (28.42), O.A.C. No. 211 (27.73), and Black Manchurian (Jeffrey; 27.12). The plants were cut for harvest between Sept. 23 and Oct. 9. The Black Ontario was received from a grower in the Manitoulin Island in 1924. It produces small, black grain and straw of medium length. "The O.A.C. No. 211 has proven to be the best general purpose soybean tested at the College."

Soybean oil "is used in the manufacture of soaps, paints, rubber substitutes, printers ink and other articles. It is also used as a salad oil and as a substitute for butter and lard."

"In China and Japan soybeans are used in many ways as human food. The green pods, dried seed cakes, soy sauce and soybean milk, all have their place. In America soybean flour is made into cakes, biscuits, muffins, and being low in starch it has a special place as a diabetic food."

The article contains 11 photos, including one of 2 horses pulling a rotary hoe, and fields of soybeans growing in Peel, Welland, Dundas, Kent, Middlesex, and Lincoln counties. Address: Dep. of Field Husbandry, Ontario Agricultural College, Guelph.

2880. Cruz, Aurelio O.; West, Augustus P. 1932. Composition of Philippine soy beans and soy-bean oil. *Philippine J. of Science* 48(1):77-88. May. [32 ref]
• ***Summary:*** In 1930 the Philippines produced 4,218 tons of soybeans. In 1911 O.W. Barrett, Chief of the Division of Experiment Stations, Philippine Bureau of Agriculture, strongly encouraged the Philippine Agriculturist to "to take up soy bean culture in earnest." But 20 years "after this advice was given we find the Philippines are producing an annual yield of only a few thousand tons of soy beans although, as shown by experiments, this is a very suitable and appropriate crop for this country. With this idea in view," in 1931 staff members of the Philippine Bureau of Science wrote various newspaper articles to popularize soybeans and gave a display of food products made from soy beans at carnival in Manila.

A short survey of the nutritional factors of soy beans is given. The Philippine beans are rich in fats (20%), proteins (39.1%), and carbohydrates (24.96%). The oil had iodine value 128.4, saponification value 193.3, unsaponifiable matter 1.0%, unsaturated fatty acids (corrected) 81.5% (iodine value 151.3), saturated fatty acids (corrected) 12.65%. The composition of the fatty acids is given as: (α-)linolenic 2.1%, linoleic 53.0%, oleic 30.1%, palmitic 8.9%, stearic 3.8%, and arachidic 0.6%. Address: Bureau of Science, Manila.

2881. Ishimaru, Yoshio. 1932. Shôyu jôzô ni kansuru saikin no kenkyû [On microbes for brewing shoyu]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 8(5):581. May. [Jap]
Address: Yamasa Shoyu, Japan.

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2882. Takata, Ryôhei. 1932. Shôyu jôzô no eiyôgaku-teki kôsatsu. I. Shôyu-chû no vitamin B-1 [Nutritional investigation of shoyu brewing. I. Vitamin B-1 in shoyu]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 10(5):355-60. May. [15 ref. Jap]
Address: Kôgaku-shi, Osaka Kôgyô Daigaku, Jôzôgaku Kyôshitsu, Osaka, Japan.

2883. Williams, Edward Thomas. 1932. China yesterday and to-day. 5th ed., revised. New York, NY: Thomas Y. Crowell Co. xxiv + 743 p. Illust. (plates). Portraits. Map. Index. 22 cm. Previous editions were 1923, 1927, 1929. [369* ref]
• ***Summary:*** This remarkable, sympathetic and very comprehensive book has been revised to May 1932. The author has lived for many years in China, starting before the downfall of the Manchu Dynasty, and for 35 years has had close association with Chinese affairs. The 1st edition was published in 1923. While focusing on the Era of Reform (1902-1911) and the period of the Chinese Republic, established on 1 Jan. 1912 by Sun Yat-sen, the book contains many interesting features and appendixes, including a chronology of "Important dates in Chinese history" (p. 673-680a), and a lengthy bibliography.

In Chapter 8, "The Craftsman," the section titled "Bean curd" states (p. 174-75): "I stopped at a neighboring door to watch a great, lazy-looking water buffalo turning a heavy mill-stone grinding beans. In a shop down the street the bean flour was being cooked, mixed with a little gypsum and turmeric to curdle it. The cooked paste, wrapped in cloths, was placed in a cheese press from which, after it should be properly solidified, it would be taken, cut into small cakes, and exposed for sale. It is the cheese of the Chinese and a very popular article of diet, rightly so, indeed, in a land where meat is too dear a luxury to be the daily food of the poor. There are several varieties of this bean-curd; one known as the 'stinking bean-curd' rivals the choicest cheeses of Europe in odor.

"At an oil-mill another variety of [soy] beans was being ground and pressed for its oil. The refuse finds a ready sale for fertilizing purpose. Vegetable oils are in great demand in China for culinary and other domestic purposes, animal fats not being abundant enough to supply the need. Besides [soy] beans, cotton-seed, rape-seed, peanuts, a variety of tea, or camellia seed, hemp-seed, sesamum, seed of the castor oil plant and nuts of the wood-oil tree are all used for this purpose. The oils of the cotton, rape, beans, hemp and peanut are all used in cooking, and the bean and rape-seed oils are also used for lamps [illumination]. The lamp of the poor man is merely a shallow cup with a spout at one side, like the classic lamp of ancient Rome. A piece of rush pith is placed in it for a wick. The soja bean is used for making soy, the common sauce of the rich and poor alike. It is said to have been suggested to the English [for] the manufacture of their Worcestershire and other sauces."

Note: This is also the earliest English-language document seen (Oct. 2011) that contains the term "stinking bean-curd." Address: Agassiz Prof. of Oriental Languages and Literature, Univ. of California, Berkeley, California; Formerly American Chargé d'Affaires, Peking, China; Recently Chief of the Division of Far Eastern Affairs, Department of State (U.S.).

2884. Yukawa, Matao; Omura, Osamu. 1932. Shôyu no okishigurutamin-san ni tsuite [On oxyglutaminic acid of shoyu]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 8(5):584. May. [Jap]
Address: Kyûdai Nohaku [Kyushu Univ., Dr. of Agriculture], Japan.

2885. Krauss, F.G. 1932. Soybeans, their culture and uses in Hawaii. *Hawaii Agricultural College, Extension Service, Agricultural Notes* No. 24. 4 p. June 21.
• ***Summary:*** Contents: Introduction. Cultural methods. Fertilization. Inoculation. Time to plant. Distances to plant and rate of seeding. Varieties. Harvesting. Soy beans for soil improvement.

"The soy bean is destined to become an important supplementary crop in Hawaii's increasingly diversified agriculture." "As human food, the soy bean may be cooked either green or dried like snap or shell beans, and as such offer possibilities for canning commercially. The mature seeds are also ground into culinary meals and bolted for flour. The Orientals utilize vast quantities of soy beans for the manufacture of a number of nutritious and highly-priced foodstuffs, including the well-known tofu, miso, and soy sauce. The Japanese of Hawaii import about $70,000 worth of the beans annually from Japan for the above purposes, the manufacture of which could be greatly extended if the soy bean were grown locally. A considerable amount of soy bean cake meal is also imported for poultry and dairy stock feeding. It is estimated that Hawaii could consume to advantage at least a half million dollars worth of soy bean products annually if the crop were grown extensively enough."

2886. Meade, Mary. 1932. Dessert served first at real Chinese dinner: The birds nest soup is second course. *Chicago Daily Tribune*. Aug. 24. p. 14.
• ***Summary:*** "China, for thousands of years mysterious, inscrutable, aloof, today has taken up a new job–that of counselor and inspiring genius in many of America's swankiest cuisines."

"Miow, an oil like our peanut oil, seow, a black salty sauce [Cantonese: *shi-yau* or *si-yau*, meaning "fermented black soybean sauce"], and queow, a thick, black, molasseslike flavoring sauce, are one or all found in most chow meins, chop sueys and war meins."

A recipe for Chop suey with pineapple states: "Let the

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mixture simmer for fifteen minutes, then stir in enough seow or seasoning sauce to flavor,..."

2887. Burlison, W.L.; Whalin, O.L. 1932. The production and utilization of soybeans and soybean products in the United States. *J. of the American Society of Agronomy* 24(8):594-609, Aug.

• ***Summary:*** Contents: Introduction. Acreage. Yield per acre. Acreage harvested for beans. Acreage harvested for hay. Acreage harvested with livestock. Imports of certain soybean products. Production of important oils in the United States. Net imports of oils and fats into the United States. Import duties levied on soybeans and soybean products. Utilization of soybeans in United States. Soybean products. Summary.

"Soybean acreage harvested for beans has expanded rapidly in the United States since 1925, reaching an estimated production of approximately 18,000,000 bushels for 1931. More than half of the acreage grown each year has been cut for hay. The acreage harvested with livestock has not shown any increase since 1927.

"Imports of soybeans and soybean cake and meal have always been of minor importance. Soybean oil imports represented significant quantities at the close of the World War, however, but have since diminished to negligible amounts as import duties have become effective. The imports of such competing oils as cocoanut and linseed have been of greatest importance.

"Approximately one-fourth of the soybean oil being utilized in the United States is going into paints and varnishes, another one-fourth is finding its way to the soap kettle, nearly one-fifth is being used in edible products, and about one-eighth is being consumed in linoleum and water-proofing products. The number of commercial products being placed on the market that contain soybeans or soybean products is increasing rapidly. A most encouraging feature of soybean progress has been the research development in utilization of soybeans and soybean products within the last two years and the corresponding expansion in demand along commercial lines." Contains numerous statistical tables illustrating these facts. Tables show: (1) Production of soybeans harvested for beans, selected states and the United States, 1924-31, 1,000 bushels. (2) Total equivalent solid acreage of soybeans, selected states and the United States, 1922-30, 1,000 acres. (3) Yield in bushels per acre. (4) Acreage of soybeans harvested for beans, selected states and the United States, 1922-31, 1,000 acres. (5) Acreage of soybeans harvested for hay, selected states and the United States, 1922-30, 1,000 acres. (6) Acreage of soybeans harvested with livestock, selected states and the United States, 192230, 1,000 acres. (7) Imports into United States of soybean oil, soybean meal and cake, and soybeans, 1915-31. (8) Domestic production of soybean oil and other oils and fats from domestic materials, 1916-30, 1,000 pounds. (9) Net imports of animal and vegetable oils and fats, with special reference to soybean oil and five other kinds of vegetable oils, oil equivalent being used for imported materials, United States, 1916-30, 1,000 pounds. (10) Exports of soybean oil and other leading vegetable oils, United States, 1919-31, 1,000 pounds. (11) Duties levied on soybean oil, soybean cake and meal, and soybeans by the tariffs of 1909, 1913, 1921, 1922, and 1930. (12) How the 1929 and 1930 crops of soybeans were utilized in the United States. (13) Utilization of soybeans and soybean products in the United States, 1930 crop. (14) List of soybean products produced in the United States.

Table 13 (p. 607) "Utilization of soybeans and soybean products in the United States, 1930 crop." The 13,323,000 bushels of soybeans were used as follows: Crushed 4,800,000 bu, seed 4,623,000, feed 3,500,000, ground 400,000 (half used for feed and half for food). The 37,200,000 lb of soybean oil was used as follows: Edible: Oleomargarine 750,000 lb, lard substitutes [shortening] 500,000, other food products 4,750,000. Industrial uses: Paint and varnish 9,000,000 lb, soap kettle 8,500,000, linoleum and oil cloth 4,000,000, other 3,500,000. Increased stocks including oil equivalent 5,700,000. The 110,000 tons of soybean meal was used as follows: Commercial feeds 89,100 tons, other feed 20,000, edible soy flour 850, diabetic foods 50. The 100,000 tons of soybean meal was very small compared to its competing products: Cotton seed meal 2,350,000 tons, and linseed oil meal 1,750,000.

Table 14 (p. 608) "List of soybean products produced in the United States." The accompanying text states that this list "does not pretend to be complete. Attention is called to the large number of food products actually being placed on the market in the United States from soybeans at the present time. This list has grown rapidly during this last year." The extensive list includes commercial food, feed, and industrial products derived from soybeans. Some products have brand names and others only generic names.

"Food products–USA: Soybean flour. Soybean meal flour. Refined edible soybean oil. Soybean salad oil. Chocolate bars (30% soybean flour). Cocoa (up to 60% soybean flour). Sausages (up to 50% soybean flour). Bread (7½% soybean flour). Rolls (10% soybean flour). Macaroni (20% soybean flour). Soybean muffins. Soybean cookies. Soybean doughnuts. Vegetable shortening. Infant foods. Diabetic foods. Oleomargarine. Lard substitutes. Filled sweets. Soybean sprouts. Soybean cheese. Soybean milk. Soybean buns. Soybean ice cream [perhaps that served in Sept. 1930 in Illinois at the American Soybean Association's annual meeting]. Soya cream biscuits. La Choy-soy sauce. Soyolk (flour). Soy biscuits. Soy flour. Vi-Zoy. Lektizoy. Zoy soup. Zoybeans (cooked beans). Bacon and Zoy beans. Zoy bouillon. Soy bean biscuit. Casein gluten flour. Non-fat mayonnaise. Fatless spread. Fluffo.

Canadian food products: Milqo (soy milk). Vi-Tone (chocolate). Soya flour. Soyex-Malt-Cocoa drink. Soyex.

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Macaroni

"Feed products: Cake or meal. Commercial feed. Dairy feed. Hog chow. Poultry chow. Dog chow. Chicken chowder. Steer fatena. Calf chow. Lay chow. Rabbit chow. 34% protein chow chow. 24% protein chow chow. Chick startena. Chicken fatena. Olelene. Grainola.

"Industrial uses: Paint. Varnish. Enamels. Oil cloth. Linoleum. Printers ink. Glycerine. Celluloid. Lauxtex plastic wall coat. Lauxein waterproof soybean glue. Lauxein emulsifier (all 3 made by I.F. Laucks, Inc., Seattle, Washington). Soap (liquid). Soap (potash). Core binders. Rubber substitutes."

Note 1. This is the earliest document seen that mentions the following commercial soy products: La Choy-soy sauce. Soyex-Malt-Cocoa drink. Zoybeans (cooked beans). Lauxtex plastic wall coat. Lauxein waterproof soybean glue. Lauxein emulsifier. All were on the market by late 1931.

Note 2. This is the earliest English-language document seen (Feb. 2008) that uses the term "vegetable shortening" to refer to shortening made without animal products. Address: Univ. of Illinois, Urbana.

2888. Shikazono, Naohara; Tomoda, Yoshinori. 1932. Daizu kasu kasuibunkai butsu to shôyu no hikaku kenkyû [Comparative studies on shoyu and the hydrolytic product of soybean cake, "Soyament"]. *Kogyo Kagaku Zasshi (J. of the Society of Chemical Industry, Japan)* 35(8):892-94. Aug. English abstract in Supplemental Binding 35(8):368B-69B. Aug. [Jap; eng]

• ***Summary:*** Soya and "Soyament" (obtained by hydrolysis of soybean cake with concentrated hydrochloric acid, neutralization, and fermentation with wheat koji) contain, respectively, moisture 68.42%, 57.53%; ash 17.24%, 20.87%; fat 2.34%, 1.42%; protein 6.94%, 15.25%; carbohydrate 5.06%, 4.93% Analysis of total, protein-, and amino-nitrogen shows that Soyament contains more amino-acids than does soya. Address: Dep. of Applied Chemistry, Faculty of Engineering, Tokyo Imperial Univ., Japan.

2889. Horvath, A.A. 1932. El frijol "Soya" como alimento nacional [The soybean as a national food]. *Revista de Agricultura, Comercio y Trabajo (Cuba)* 14(3):43-56. Sept. [Spa]

• ***Summary:*** This is a translation of Horvath 1927, "The Soybean as Human Food." Address: Peking Union Medical College, China.

2890. Peirier, J.C.; Nguyen, Kim Kinh. 1932. Analyse chimique d'un tuong-dau, sauce de soja [Chemical analysis of tuong-dau, Vietnamese soy sauce]. *Annales de Medicine et de Pharmacie Coloniales* 30:509-16. July/Sept. [Fre]

2891. La Choy Food Products, Inc. 1932. Thousands of perplexed housewives: Will cheer this new variety in menus (Ad). *Chicago Daily Tribune*. Nov. 1. p. 16.

• ***Summary:*** "Here's a hint for any woman who ever wished for new delicious dishes to serve.

"One word discloses the mystery of Chinese cooking at home. The word is *La Choy*. Just remember that name, and any good grocer can supply the inexpensive ingredients for home-made chop suey, chow mein or a score of delicious Chinese dishes."

Of course La Choy Chinese products "are packed by Americans in a spick-and-span American factory. But they are *real*.

"Get a can of new La Choy Chinese vegetables today. Recipe on the label. Keep La Choy Soy Sauce and Brown Sauce (honest Chinese condiments) always on hand. They add new zest to gravies, stews, omelets, etc.

"Learn more about La Choy at the Tribune Cooking School. Mrs. Chitwood uses La Choy Chinese food products in her demonstrations."

"Tune in Billy Hughes every Tuesday and Thursday morning over WGN and the Columbia network. 10:00 o'clock C.S.T. Popular songs and chat with housewives about men and menus." Address: Detroit, Michigan.

2892. *Bulletin des Matieres Grasses (Paris)*.1932. Notes et brevets: La préparation de la Worcester sauce à base de soja [Notes and patents: The preparation of soy-based Worcestershire sauce (Abstract)]. 16(11):339-40. Nov. [Fre]

• ***Summary:*** This is a French-language summary of a German-language article from *Allgemeine Oel- und Fett-Zeitung* (Oct. 1932). Address: Chimiste de l'Institut Colonial de Marseille [Marseilles], France.

2893. Woodruff, Douglas. 1932. A gourmet's tour around old England: Every part of the tight little isle has its own tasty dishes, some of which the holiday season recalls. *New York Times*. Dec. 25. p. SM8. Sunday magazine.

• ***Summary:*** Worcestershire: No other county in England has a china so delicate and popular. No other county has the tomb of the famous King John. "And no other county has invented and popularized such a sauce, an imperious blending of cayenne, anchovy, soy and vinegar and walnut ketchup that overpowers and obliterates the quiet flavors of whatever may be eaten with it."

"It is even said, but not altogether truly, that Worcestershire sauce is the defensive mechanism of envious Worcester men driven mad by the odors of that [Shropshire] pie.

A map shows England and its favorite regional or local foods–including Worcestershire Sauce. Address: London.

2894. Stewart, C.L.; Burlison, W.L.; Norton, L.J.; Whalin, O.L. 1932. Supply and marketing of soybeans and soybean products. *Illinois Agricultural Experiment Station, Bulletin* No. 386. p. 425-544. Dec. [34 ref]

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• ***Summary:*** Loaded with statistics, graphs, tables, maps, and photos, this is one of the best reports on soybeans in America published to date. Contents: Introduction. The supply of soybeans and soybean products: Domestic production of soybeans, production of soybeans in Illinois, soybean varieties in Illinois, costs and returns in producing soybeans, imports of soybeans and soybean products (soybeans, soybean oil meal and cake, soybean oil, net imports, exports including reexports, export-import balance), import duties levied on soybeans and soybean products, supply of soybean oil and competing oils and fats. Consumption of soybeans and soybean products: Disposition of the domestic crop, utilization as beans, utilization of soybean oil meal, utilization of soybean oil (in food and industrial products), methods of processing soybeans for consumption (expeller, hydraulic press, solvent extraction), competition from other oils, distribution of gathered soybeans by uses. Practices in marketing soybeans and soybean products: Sources of market information, time of movement, varieties marketed in different sections of Illinois, selling soybeans for seed, selling soybeans for industrial uses (the Peoria Plan of 1928-29, Grange League Federation Exchange of Ithaca, New York, the Soybean Marketing Association of Illinois formed in Oct. 1929 {p. 490-91}), selling soybean oil and oil meal (National Soybean Oil Manufacturers Association of Chicago). Elements of cost in marketing soybeans: Marketing mill beans, processing beans, marketing seed beans, exporting beans. The inspection system and soybean grades. Special considerations applying to the valuation of soybeans and soybean products: Use-values of soybeans and soybean products in feeding, derivative products as factors in the market valuation of soybeans. Prices of soybeans and soybean products: Prices of seed beans, prices of soybean oil, prices of soybean oil meal, use as affected by prices. Meeting the price risks in marketing. International trade in soybeans and soybean products. Summary. Literature cited. Sources of data.

"In Manchuria in 1930 there were 13 districts in which over 40% of the crop land was devoted to soybeans, the highest proportion being 65%. The proportions for the three Manchurian provinces as units were as follows: Kirin (eastern) 33.2%; Hailungkiang [Heilungkiang] (northern) 30.7%; and Liaoning (southern) 22%." Some soybeans were grown in Inner Mongolia.

Illinois was the largest soybean producer in 1924, followed by North Carolina, Missouri, and Indiana. "Few soybeans were grown in Illinois previous to 1890, when J.C. Utter of Mt. Carmel, Wabash county, began production of this crop. Frank Hurrelbrink of Taylorville, Christian county, known because of his work with the Hurrelbrink variety of soybean, started his work in 1897. He has grown soybeans continuously since that time, experimenting with many varieties. C.A. Rowe and his father, of Jacksonville, Morgan county, grew soybeans about 1899. Somewhat earlier than this the late Ralph Allen of Delavan, Tazewell county, became interested in soybeans and furnished seed beans to Illinois farmers as well as to interested persons in other states, in Hawaii, and in Alaska. C.L. Meharry of Attica, Indiana, who owns a large tract of land near Tolono, Champaign county, Illinois, has been an active soybean grower since 1909. The year following the Meharry venture, John T. Smith, also near Tolono, began to grow soybeans on a very limited scale, and in 1921 undertook active production. During the last decade soybeans have become an increasingly popular crop on Illinois farms."

Of the 1915 U.S. soybean crop, 52% of the entire crop acreage was used for hay, 15% was grazed, 4% was plowed under, and only 29% was harvested for beans; 18.2% was used for seed, 0.9% for human food, and 9.9% as beans for feed.

In 1930 some 11,975,000 bushels of soybeans were gathered or harvested in the U.S. Of these soybeans, 40.1% were crushed, 33.6% were used as seed, 23.0% were used whole directly as feed, 1.7% were ground and used as feed, and 1.7% were ground and used as food.

From the soybeans crushed in 1930, some 37,200,000 lb of soybean oil were produced. Its four main uses were: (1) Paint and other industries: Paint and varnish 24.2% of the total oil, linoleum and oil cloth 10.8%, other uses 9.4. (2) Soap kettle 22.8%. (3) Edible uses: Oleomargarine 2.0%, lard substitutes 1.3%, other food products 12.8%. (4) Increased stocks including oil equivalent 16.7%.

In 1930 some 110,000 tons of soybean meal resulted from crushing. Of this, 76.5% was used in commercial feeds, 13.6% in other feeds, 0.8% as soybean flour for food, 0.045% as infant and diabetic foods, and 9.0% as other uses including glue.

Page 460 lists the types and brand names of many commercial soybean food, feed, and industrial products. Consumption of soybeans as foods has increased appreciably since 1930. U.S. food products include chocolate bars (30% soybean flour), cocoa (up to 60% soybean flour), sausages (up to 50% soybean flour), bread (7½% soybean flour), soybean cheese, soybean milk, soybean ice cream, Soya Cream Biscuits, La Choy Soy Sauce, Soyolk (flour), V-Zoy, Lektizoy, Zoy Soup, Zoybeans (cooked soybeans), Bacon and Zoy Beans, Zoy Bouillon, Soy Bean Biscuit, etc. Canadian food products are: Milqo (soy milk), Vi-tone (chocolate), Soya Flour, Soyex-Malt-Cocoa Drink, Soyex, Macaroni.

"In the foreign trade of the United States imports of soybean oil have appeared since 1910 and of soybeans since 1914. The United States exported domestic soybeans to Europe in quantity for the first time during the fall of 1931, more than 2 million bushels being shipped from the 1931 crop." Address: 1, 3-4. Dep. of Agricultural Economics; 2. Dep. of Agronomy. All: Univ. of Illinois.

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2895. Toa-Keizai Chosakyoku (East-Asiatic Economic Investigation Bureau). 1932. Manchuria year book 1932-33. Tokyo, Japan: Toa-Keizai Chosakyoku. 530 p. [Eng]
• ***Summary:*** The Preface begins: "Those who have been following the development of events in Manchuria since the fateful September of 1931 will not fail to understand in what circumstances we have compiled this volume... The last issue, which was the first published, appeared in November, 131, while Manchuria was in a chaotic condition, but the manuscripts for it were completed before the Sino-Japanese dispute over Manchuria occurred in September." There was the establishment of Manchuokuo in March, the signing of the Japan-Manchuokuo protocol in September, and the despatch [dispatch] of the League [of Nations] Commission of Enquiry and the publication of its report."

Chapters 2 and 3 give a Japanese version of the history of Manchuria, in four periods, from 311 B.C. to the present, and of its administration.

In Chapter 7, "Agriculture," the section on "Agricultural products" contains tables: (2) Agricultural production of 9 major crops in 1930 (incl. soya beans) in three provinces, total, Kwantung Leased Territory and South Manchuria Railway (S.M.R.) Zone, and grand total. (3) Cultivated area classified by crops, 1930. (4) Production of ordinary crops, 1924-1930. (5) Cultivated area of ordinary crops, 1924-1930. (6) Production index of ordinary crops, 1924-1930. (7) Index number of cultivated area of ordinary crops, 1924-1930. (8) Percentage of production and cultivated area of ordinary crops, 1924-1930. (9) Production and cultivated areas of ordinary crops classified by districts, 1930. (10) Value of exports of agricultural products (Haikwan taels), raw products and manufactured goods. (11) Exports of agricultural products (metric tons and Haikwan taels), 1921-1930. (12) Exports of principal agricultural products classified by destination (metric tons and Haikwan taels), 1930. (13) Amount of soya beans and cereals consumed in the three eastern provinces, 1930 (as food, fodder, or seed; in South and in North Manchuria). (14) Percentage of agricultural products shipped to the markets (in South and North Manchuria). Map of distribution of crops [and railways] in Manchuria (p. 111). Sub-section titled "Soya beans" (p. 110-12). A photo (facing p. 112) shows Soya bean at Tailai, piled in sacks near a railway. The soybean is the principal resource of Manchuria in terms of both production and acreage. In recent years, the annual production has reached more than 5 million tons, which is 60% of world soybean production.

Chapter 12, "Industry," includes table (6) Manufacturing production in the Kwantung Lased Territory and the S.M.R. Zone, 1926-1930 (both volume and value). Products include [soya] bean oil, [soya] beancakes, miso, and soy [sauce]. In Section 2, "Oil and fat industry" is a subsection (p. 188-97) titled "Oil milling" with these contents: Introduction. Diagram of utilization of soya beans. History, oil extraction methods, table (7) "Beancake producing capacity of oil mills per 24 hours, 1925-1931" (in major cities), table (8) "Beancake production in Manchuria (1,000 pieces), 1926-1930, in major cities and regions, table (9) "Exports of beans and bean oil from Dairen, Antung, Yingkow and Vladivostok, 1920-1931," table (10) "Exports of soya beans, beancake and bean oil (1927-1931)," table (11) Exports of beancake classified by ports, 1929-32," table (12) "Export of beancake classified by destination, 1929-1931" (Japan gets 62%), table (13) "Export of bean oil, 1931, by destination, "Solidified bean oil industry" [hydrogenated], table (14) "Production of solidified bean oil (by the Dairen Oil Fat Manufacturing Co., established 1916)." Miso and soy [sauce] manufacture (p. 230).

In Chapter 15, "Foreign trade, table (9) shows the "Quantity and value of exports at Manchurian ports (Value in H.K. taels). The main exports are soya beans, other beans, maize, kaoliang, and millet. The ports are Antung, Dairen [the main port for soya beans], Newchwang, Harbin, Aigun, Hunchun, and Lungchingtsun. The main destination countries are British Empire, USA, Germany, France, Russia, Other countries, Total, Chinese ports, Grand total. Note that Japan is not mentioned; it is probably concealed within "Other countries." The source of the statistics in table 9 is: Research Office of S.M.R. Co. *Trade Returns of North China,* 1930 and previous issues.

A large fold-out map at the end of the book shows all of Manchuria, incl. province boundaries, railways, steamer routes, and cables.

2896. Leplae, Edmond. 1932-1933. Traité d'agriculture générale et de cultures spéciales des pays tempérés, subtropicaux et tropicaux [Treatise on general agriculture and special crops for temperate, subtropical, and tropical countries. 3rd ed. 2 vols]. Louvain, Belgium: Librairie Universitaire. Vol. 2, 796 p. See p. 306-07. 25 cm. [Fre]
• ***Summary:*** The author classifies the soybean among the leguminous forage plants, among starchy (*féculentes*) plants, and among oilseeds. "Soybean seeds have a nutritive value for humans greater than that of all other seeds, except peanuts." The peoples of East Asia prepare soybeans and their flour in 100 different ways, many of which are now also known in Europe. The Chinese make from soybeans an artificial milk and a cheese [tofu]. Soy flour is easy to digest and can be mixed with wheat in making bread and pastries. The soybean is used in the production of so-called "English sauces" [such as Worcestershire], which are widely consumed in Europe and America. Finally, soybeans are imported into Europe at the rate of 600,000 tonnes/year and the oil is used to make soap and margarine. Address: Prof. à l'Univ. de Louvain, Directeur général de l'Agriculture au Ministère des Colonies.

2897. Fukai, Tôshi; Komatsu, S. 1932. Shôyu hakkô to

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shiyu no kankei. III. Kôbo no zôhanshoku narabini hakkô ni oyobosu 2, 3 shibôzoku kôkyû arukoru-rui no eikyô [The relation between shoyu brewing and the fatty oils. III. Influence of several higher fatty alcohols on propagation and fermentation of yeast]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 115. p. 142-54. [Jap]
Address: Jozo Shikensho. 1. Gishu. Kenshuin.

2898. Fukai, Tôshi; Nagahashi, K.; Komatsu, S. 1932. Shôyu hakkô to shiyu no kankei. IV. Kôbo no seikatsu saibô narabini sono kôjô sayô ni oyobosu kapurin-san no seiri-teki sayô ni tsuite [The relation between shoyu brewing and fatty oils. IV. The physiological action of capric acid on the living yeast cell and its enzyme action]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 115. p. 155-74. [8 ref. Jap]
Address: Jozo Shikensho. 1. Gishu; 2. Joshu; 3. Kenshuin.

2899. Hara, T. 1932. [Studies on the utilization of rice bran]. *Eiyo Ken* 2:483-. [Jap]*

2900. Kobayast, S. 1932. [Studies on the antimold of mustard oil in shoyu]. *Osaka Shiritsu Kogyo Kenkyujo Hokoku* (*Bulletin of the Osaka Municipal Technical Research Institute*) 7:1-, 30-, 35-. [Jap]*

2901. Matsumoto, K.; Dei, S. 1932. Saikin-rui tenka shôyu jôzô shiken [The application of the pure culture of several kinds of bacteria in shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 115. p. 189-92. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Joshu.

2902. Matsumoto, K.; Dei, S. 1932. Kôji-kin shu hikaku shôyu jôzô shiken [The comparison of several kinds of *Aspergillus oryzae* in shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 115. p. 193-207. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Joshu.

2903. Matsumoto, K.; Dei, S. 1932. Shobo ôyô shôyu jôzô shiken [Brewing trials of shoyu with moto mash. The special culture of lactic acid bacillus and shoyu yeast]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 115. p. 175-81. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Joshu.

2904. Shoji, Kenjiro; Konuki, H. 1932. Porarogurafu ni yoru hakkô seisei butsu no kenkyû. VI. Shôyu kôki ni kansuru chiken [Studies on fermentation products with a polarograph. VI. On the flavor of shoyu]. *Rikagaku Kenkyujo Hokoku* (*Report of the Institute of Physical and Chemical Research*) 11(2):277-83. (Chem. Abst. 26:5377). [6 ref. Jap]

2905. **Product Name:** Soyament Soya Bean Sauce (HVP Based).
Manufacturer's Name: Soya Bean Products Co. (Distributor).
Manufacturer's Address: 3522 East Third St., Los Angeles, California.
Date of Introduction: 1932.
New Product–Documentation: Shikazono and Tomoda. 1932. Kogyo Kagaku Zasshi. 35:892-94. "Comparative studies on shoyu and the hydrolytic product of soybean cake, Soyament." Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 47. This was apparently an HVP-based soy sauce, marketed to the natural/health foods trade.

2906. Udo, S. 1932. Shôyu no aji ni kansuru kenkyû. IV. Shôyu-chû no seibun to shôyu no aji ni tsuite [Studies on the taste of shoyu. IV. Chemical components and the taste of soy sauce]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 8:675-84. (Chem. Abst. 27:1059). [7 ref. Jap]
Address: Nôgaku-shi, Japan.

2907. Udo, S. 1932. Shôyu no aji ni kansuru kenkyû. III. [Studies on the taste of shoyu. III. Change in succinic acid during soy sauce fermentation]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 8:673-75. (Chem. Abst. 27:1084). [7 ref. Jap]*
Address: Nôgaku-shi, Japan.

2908. Abadal, D. Jose; Soroa, Jose Maria. 1932. Cultivo y aplicaciones de la soja [Cultivation and applications of the soybean]. Madrid: Patronato Central para la Proteccion de Animales y Plantas. 44 p. Illust. [Spa]
• ***Summary:*** Contents: Introduction (preliminary notes). Part I: Cultivation and applications of soya. Chart of utilization of the soybean seed. Agronomic notes and details on soybean cultivation. Part II: Soya as a food. Nutritional value, soya as a vegetable (green vegetable soybeans; *Soja, como verdura*), soy sauce (*salsa de soja*), soymilk (*leche*), condensed soymilk (*leche concentrada / condensada*), powdered soymilk (*leche en polvo*), fermented soymilk (*leche fermentada*), soy cheese (*queso de soja*) [tofu], soy casein (*caseina de soja*), soy flour (*harina de soja*), soy bread (*pan de soja*), Soyolk (soy flour made by Dr. Berezeller), whole-grain soy bread (*pan integral*), soy flour tablets (*comprimidos*), pastries, biscuits, puddings, etc. (*pasteles, bizcichos, puddings*), soy oil (*aceite de soja*), fermented soy products (*productos de la soja fermentada: natto, miso, shoyu*), confectionery products (*productos de confiteria*), chocolate (*chocolate*), coffee (*café*), soy ferments/enzymes (*fermentos de soja*), products made by Caséo-Sojaïne (*Caseo-Sojaina de Paris*). Soy as a livestock food. Appendix.

"As early as 1918 a Spanish public official, Don Julio de Palencia, the Spanish Consul in Shanghai, sent the State

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Department (*Ministeria de Estado*) a magnificent report specifying the great attention that representatives of the principal countries of the world were giving to this crop [the soya bean], and the relevance that it would have in the agricultural economy of the future. What a pity that Spain has been the only civilized country to ignore the study of the soya bean and its exploitation on a large scale" [p. 5].

"Finally we must make public our thanks to the spokesmen of this foundation/board (*Patronato*) for the special work they have done in writing this booklet: Don José Maria de Soroa, secretary of the Special School for Agricultural Engineers (*Escuela Especial de Ingenieros Agrónomos*), and Dr. Don José Abadal, chief of the Bureau for the Inspection of Pharmaceutical Services of the Ministry of War (*Negociado de la Inspección de Servicios Farmaceuticos del Ministerio de la Guerra*)" [p. 6].

"In 1917 the Spanish Consul in Shanghai, Don Julio Palencia, sent to the State Department a study on cultivation of soya, proposing that tests be done to acclimatize this valuable crop to our country.

"In Motril and later at the southern agricultural station of Malaga, the agricultural engineer D. Arsenio Rueda has been cultivating soya for the past 10 years [i.e. since 1923] in plots of 5 ares [1 are = 100 square meters], obtaining 60 liters (each liter weighing 780 gm) in each one.

"The white as well as the black varieties give good results, though the white ones do best. The seeds have been distributed to farmers who have noticed that, even though at first the goats that were given them as food rejected them, after a few days of getting used to this grain preferred them to such an extent that one must avoid growing this plant near the herd's path lest the herd be attracted and devour it all.

"Although soya is a legume which draws many nutrients out of the soil (*esquilmante*), it has according to Mr. Rueda, sufficient interest since it allows usage of terrains where field beans cannot be used due to the invasion of the pest called *Orobanche speciosa*, commonly called 'Jopo.' This parasite does not attack soya...

"Besides the quoted trials, it has been more than 25 years since soy has been grown in Spain with success due to the interest and zeal that in their patriotic work, the agricultural engineer Mr. Eduardo Noriega undertook with his partner, Mr. Ortiz, on the farm of 'Jerez.'

"He was successful during many years using the yellow and black varieties, later on also cultivating it in the Spanish central region.

"We think it useful also to state in writing the following data about soy grown by Dr. D. Jose Abadal in Lerida during the years of 1925-1926.

"The experiment was done only out of curiosity, with the intention of seeing if it could be grown in said province. Japanese seeds of the hirsute soy variety, yellow seed, used as food for diabetes, were used. The planting was done in a garden with seeds that had been soaked for ten hours, with no more care or fertilizers than those used for all the existing plants of that garden. The terrain of course was one of easy irrigation and located in Lerida where it is very hot all during the summer.

"This brief essay demonstrates that soy can be grown in irrigated terrain in very hot places and with little care.

"Fifteen years ago, the agricultural Engineer D. Jesus Andreu, in the province of Pontevedra [in the northwest corner of Spain, just north of Portugal, bordering the Atlantic ocean], did some tests with good results on growing soy as a forage plant.

"We also have news, though not concrete, of other successful tests done in the provinces of Madrid and Toledo." Address: 1. T.C. Farmaceutico Militar; 2. Ingeniero Agronomo e Ingeniero Sanitario, Spain.

2909. Au, Man Sing, comp. 1932. Chinese cookery. Honolulu, Hawaii: Creart Publications. 46 p. Index. 21 cm.
• ***Summary:*** Subtitle on cover: "Genuine Chinese dishes you can prepare in your kitchen." Chapter 1, "The nine-course dinner," states (p. 7): "A small plate is used to hold soyu [shoyu] or Chinese sauce. A morsel of food is picked up in the chopsticks, dipped into the sauce and then put into the mouth."

The section titled "Seasonings and gravies" (p. 10) notes: "Chinese sauce or soyu, used instead of salt, adds zest and delicacy."

"Bean sauce, which is mashed preserved white beans, comes in white and red varieties. The white sauce is salty, while the red has a sweet taste. Both give meat that strange 'aging' taste."

"Tou-see, a preserved and cured Chinese black bean [soybean], tones down the strong smell and taste of deep ocean fish when used with it."

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "Tou-see" or the term "preserved and cured Chinese black bean" to refer to fermented black soybeans.

On pages 33-34 is a section titled "Bean curd."

2910. Cottington-Taylor, D.D. comp. 1932. Subtle seasoning 1932: A little book of recipes. 5th ed. Worcester, England: Lea and Perrins Ltd. 70 p. Illust. Recipe index. 20 cm. 1st ed. Feb. 1926.
• ***Summary:*** A booklet of recipes advertising Lea & Perrins' Worcestershire Sauce. The sauce bottle, with its distinctive orange label, is shown on the front cover.

Contents: Subtle seasoning: Introduction. Domestic details: Cooking terms explained, menu making, marketing guide, table appointments, hints on entertaining, a lesson in frying, cooking temperatures, some facts on Lea & Perrins' Sauce. Recipes: Soups, fish dishes, vegetarian dishes, meat dishes and entrées, rechauffé [reheated] dishes, sauces, salads, snacks meals and sandwiches, sandwiches and

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rolls. Lea & Perrins' Mayonnaise. Lea & Perrins' Salad Cream. Handy household hints. Address: Director of Good Housekeeping Inst. [England].

2911. La Choy Food Products, Inc. 1932. The art and secrets of Chinese cookery. Detroit, Michigan: La Choy Food Products, Inc. 15 p. 15 cm.

• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home. A photo of each La Choy product appears on at least one page, and at least one of these products is called for in each recipe. The products and the page on which they appear are: Bean Sprouts (mung bean, canned, p. 4). Vegetables (canned, incl. sprouts, water chestnuts, bamboo shoots, mushrooms and sweet peppers, p. 5). Chinese Soy Sauce (in small table dispenser bottle, p. 8). Chow Mein Noodles (deep-fried, canned, p. 9). Cooked rice (canned, p. 12). Chop Suey (canned, p. 12). Brown Sauce (jar, p. 13). Without photos: Bamboo shoots, Kumquats, Water chestnuts (p. 14).

Concerning Soy Sauce (p. 8): "Brewed and aged by slow and painstaking processes according to the age-old Chinese recipe, this savory sauce is imported for you, and is now obtainable at your grocer's in sterilized and hermetically sealed bottles.

"LaChoy Chinese Soy Sauce is the essential seasoning and blending ingredient in nearly every type of genuine Chinese food. Being wholesome and pure, as well as highly palatable and nutritious, it is indeed a culinary need in every household. LaChoy Soy Sauce will add a piquant flavor to all soups, gravies, hashes and stews, and is a delightful condiment for use on steaks, chops, roasts and sea food. All salads are made more tasty by the addition of a few drops of this sauce to whatever dressing is used." There follows a recipe for "Egg Foo Yong." Address: 4461 West Jefferson, Detroit, Michigan.

2912. Lea & Perrins, Inc. 1932. Success in seasoning. New York, NY: Lea & Perrins. 49 p. Illust. (color). Index. 17 cm. Reprinted in 1934 and 1936.

• ***Summary:*** Recipes for using Lea & Perrins' Worcestershire Sauce. Contents: The art of serving appetizing meals. Appetizers. Soups. Fish. Meats. Eggs and cheese. Entrées. Sauces. Spaghetti and rice. Vegetarian dishes. Garnishes. Stuffings. Salads and salad dressings. Sandwiches. Bridge party and Sunday night supper dishes. Vegetables. Hot dishes for cold days. Relishes. Dishes men like. Items–Small but important [kitchen tips].

The inside front cover states: "Nearly a century ago, Lea & Perrins of Worcester, England, compounded a sauce from the recipe of an English nobleman, who had spent many years in India. They began production on a large scale, and its local importance was followed by ever increasing demand.

"Where the flag of civilization went, Lea & Perrins Sauce, the Original Worcestershire, followed. Scarcely a ship left Britain without a supply among its stores. Soon the great hostelries at the ports of call featured in their menu attractions. Branch distributing houses were established in all parts of the world, thus making it available at even the remotest points."

Note: Lea & Perrins, Inc., New York, NY, also issued the following leaflets and booklets, all of which are owned by the Texas Woman's University Library (Denton, Texas) and cataloged as Title: "Recipe leaflets collection. Corporate author: Lea & Perrins, Inc. Publication: New York, NY: Lea & Perrins, Inc. Year: 1934.

Success in seasoning (1934).

Success in seasoning (1936).

The secret of seasoning (1946).

Dishes men like (1952).

A guide to tempting dishes (n.d. [no date = undated]) [about 1950s].

Exciting ideas cookbook (n.d.) [about 1960s].

Light & elegant (n.d.) [about 1980s]. Address: 241 West St., New York, NY.

2913. Orosa, Maria Y. 1932. Soybeans as a component of a balanced diet and how to prepare them. *Manila (Philippines) Bureau of Science, Popular Bulletin* No. 13. 53 p. [16 ref]

• ***Summary:*** Contents: Introduction. The cooking of soy beans (89 Filipino recipes, p. 7-35), incl. roasted soy beans, soy-bean soups etc.–most recipes use whole soybeans, but quite a few use tofu (*tokua*), soy sauce (*toyo*), soy-bean flour, or soy-bean milk, and a few use *tahuri* (brine fermented tofu) or soy-bean sprouts. Some common foods made from soy beans and methods of preparing them (p. 35-53): Soy-bean milk, condensed soy-bean milk, soy-bean milk powder, soy-bean casein, soy-bean curd (tofu; *tokua* or *toqua*). *Tahuri* or *tahuli* (fermented tofu). Frozen tofu. Bean curd brains or *tofu nao*. Dry bean curd or *topu khan* (tofu-kan, dipped in burnt millet sauce and rubbed with fine salt). Fragrant dry bean curd. Thousand folds (thin layers of fresh tofu pressed in cheesecloth. "On standing, the thousand folds mold and develop a meatlike flavor. This is fried in sesame oil and served in place of meat"). Fried bean curd. Soy sauce (called by the Chinese "ch'au yau," or drawing oil; or "pak yau" or white oil; by the Japanese "shoyu"; and the Filipinos, "toyo"). Natto. Hamanatto (p. 49). Yuba. Miso. Soy-bean flour. Soy-bean oil (used in the manufacture of lard and butter substitutes; also in paints, printing inks, etc.). Soy-bean meal. Soy-bean coffee. Soy-bean sprouts.

Note 1. This is the earliest English-language document seen (Oct. 2008) that uses the term "soy-bean casein" (or "soy bean casein" or "soybean casein"), probably to refer to soybean protein.

"When and by whom the soy bean was first introduced into the Philippines, no one can ascertain. The Filipino people have long known some important soy-bean

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preparations, such as soy sauce, or 'toyo,' bean curd, or 'tokua,' fermented bean curd or 'tahuri,' not knowing that they were prepared from this bean. The seed is known in some parts of the Philippines, where it is grown, as 'utao.'"

"The main object of this pamphlet is to encourage the Filipino people to use more soy beans, and preparations made from them as food" (p. 3-4).

"Soy beans are grown in some parts of the Philippines. According to Doctor Roxas, Director of the Bureau of Plant Industry, 2,481 tons were grown in Batangas in 1921 and 4,218 tons, in 1930. However, the importation of soy beans in 1924 was 4,657 tons. Doctor Roxas says that soybeans can be grown in all parts of the Philippines" (p. 6). "Immature soy beans may be cooked in the same way as lima beans (*patani*)" (p. 7).

"The soy-bean curd was first produced by Whai Nain Tze, before the Christian Era and was introduced into Japan from China by the Buddhists. It was introduced into the Philippines by the Chinese and has become a very popular food in Manila and in places where there are Chinese who manufacture it for sale. 'Tokua' on account of its high fat, protein, and mineral content, is called by the Chinese as 'meat without bone,' or 'the poor man's meat.'" The Chinese use burnt gypsum (about 1.5% by weight) as a coagulant. In some cases, the curds are wrapped in individual pieces of fine cheesecloth about the size of a small handkerchief, then pressed lightly for a few minutes. They are "unwrapped, spread on shallow bamboo trays (*bilao*) and partially dried at room temperature. Then they are dipped in a weak solution of turmeric to coat the outside in light yellow coloring. Some manufacturers soak the small cakes of curd in brine solution for a short time, then dip them in a solution of burnt sugar or molasses and bake them slightly before putting them on the market." 100 gm of dry soybeans typically yield 350 gm of tofu (*tokua*) (p. 41).

The section titled "'Tahuri' or 'Tahuli'" begins with 2 paragraphs and ends with a table very similar to those from Gibbs and Agcaoili (1912): "'Tahuri' is manufactured in China and exported to the Philippines in large stone jars or in small tin cans. There are some 'tokua' manufacturers in Manila that manufacture 'tahuri' for local consumption. Those that are imported from China are preserved in strong brine solution and the cakes are broken during the shipment so the liquid becomes like a thick emulsion containing pieces of the cured curd." It then contains a new paragraph: "In Manila, the Chinese method of manufacture is to pack the large pieces of soy-bean curd, about 5 inches long, 4 inches wide, and 2.5 inches thick, with much crude salt, in empty gasoline cans. The curd is allowed to cure for a period of several months. During the curing period the bean curd changes from white to a brownish yellow color and develops a peculiar salty flavor to which the Chinese and many Filipinos are educated" (p. 42). Note 2. No information about a fermentation microorganism or process is given.

"The bean curd brains known to many Filipinos as 'tojo' is the unpressed soy-bean curd. The method of making 'tojo' is almost the same as the method used in making 'tokua', only that a smaller amount of the coagulating agent is used, and the very soft but solid mass formed is left undisturbed in the wooden container until used. The Chinese used to peddle this preparation in a wooden pail-shaped container, through different parts of Manila, but on account of the Philippine Health Service regulations, this product is now sold in the markets only. / "The 'tojo' is served with a few tablespoonfuls of medium thick brown-sugar syrup, which gives it flavor, the 'tojo' being almost tasteless. Sometimes it is eaten with sweet oil, sauce, and vinegar, or with finely cut meat and spices." (p. 43).

"Dry bean curd: The fresh bean curd when dipped in burnt millet-sugar sauce and rubbed with fine salt will keep longer than the 'tokua' and is called 'topu khan.' This preparation is usually eaten is soups."

Fragrant dry bean curd or *hsiang khan* ("fragrant dry") has the consistency of smoked sausage. "It is made by subjecting the fresh bean curd to great pressure, which eliminates much of the water content. The pieces of semidry curd are soaked in a weak brine solution in which is dissolved burnt millet-sugar and to which is added powdered spices. The curd is then dried to hardness. This preparation keeps indefinitely and is used in soup making and in vegetable dishes" (p. 43).

Note 3. Cruz and West (1932, p. 78) state that as part of a campaign by the Bureau of Science to encourage the Filipino people to use more soy beans, Miss Orosa "has made excellent cakes, cookies, puddings, sauces, soups, custards, ice cream, and other tasty preparations from Philippine soy beans."

Note 4. The author pioneered the branch of the branch of the Home Extension Service in which home demonstrators helped women in solving their home problems. She started the organization as a food preservation unit under the Bureau of Science in 1923, starting with six home demonstrators that she herself trained. That group became the forerunner of the Home Extension Service in the Philippines. For details on her work see: In: A Half Century of Philippine Agriculture. Manila, Philippines: Liwayway Publishing. p. 236-37.

Note 5. This is the earliest English-language document seen (Nov. 2003) that contains the word "meatlike." Address: Chief, Div. of Food Preservation, Bureau of Science, Manila.

2914. Searle, Townley. 1932. Strange newes from China: A first Chinese cookery book. With 101 rare and choice Chinese recipes and decorations by the author. London: Alexander Ouseley, Ltd. 231 p. Illust. 22 cm.

• ***Summary:*** Page 83 states that "'Chow' means 'fry,' 'Too Foo' is 'Bean Curd,' and the 'Chop Suey,' although not real Chinese (see Encyclopedia) stands for almost any mixed dish." Soy-related recipes in include: Tou fu hah chi

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tong–Bean curd and prawn soup (p. 92; The author states: "In trying this recipe we used tinned prawns: Beneath the trade-mark of the tin was the following warning against infringement: 'If any man imitate this mark, may his sons be thieves and his daughters prostitutes.'"). Tou fu yuk ming tong–Bean curd and meat soup (p. 93). Tou fu gai pin tong–Bean curd and sliced chicken soup (p. 95).

On pages 108-09 are the names and prices of many Chinese foodstuffs, including Chinese soya sauce (1 lb. or 3 lb. net)–$0.25 or $0.45 per jug, Chinese bean sauce–$0.15 per can, Chinese red bean curd [fermented tofu]–$0.18 per can, Dried Chinese beanstick [yuba]–$0.22 per lb., Chinese bean cheese [fermented tofu]–$0.50 per jar, Chinese bean cake [tofu]–$0.30 per can.

Note: This is the earliest English-language document seen (May 2012) that uses the term "Chinese beanstick" or the term "Dried Chinese beanstick" to refer to dried yuba sticks.

The Encyclopedia (p. 215-17) contains descriptions or definitions of the following: Chop Suey ("an American 'Pidgin English' term originally coined in San Francisco..."). Tou foo (see Bean curd). Soya bean–*Glycine hispida* ("One of the most valuable foods in the world." "Flour made from the soya bean has immense value as a foodstuff as it contains the only plant albumen which is equal in value to the very much more expensive animal albumen. The Chinese soak the beans in water, then roast them and eat them in much the same way as peanuts." "It is claimed that the soya bean will soon become the chief food of the civilised world as it contains a large proportion of protein which is as valuable as the casein in milk..." "The best way to cook the soya is undoubtedly by means of a pressure-cooker..."). Bean sprouts ("come from the seeds of the soya and can be used as green vegetables all the year round." Describes how to make them). Bean curd ("It is of about the same consistency as ordinary thick cream cheese and is ordinarily used fried with vegetables etc. in lard and in omelettes etc.").

2915. Winton, Andrew Lincoln; Winton, Kate Barber. 1932. The structure and composition of foods: Vol. I. Cereals, starch, oil seeds, nuts, oils, forage plants. New York, NY: John Wiley and Sons; London: Chapman & Hall, Ltd. xiv + 710 p. See p. 512-24. Illust. Index. 24 cm. [67 soy footnotes]
• ***Summary:*** Volume 1 of this 4-volume set contains 274 superb illustrations by the authors. The book is divided into three parts: I. Cereals. II. Oil seeds. III. Forage plants.

In the chapter on "Seeds of the pea family (Leguminosæ)" (p. 497+) the section titled "Soy bean" (p. 512-24) has the following contents: Scientific and common names. Introduction. Macroscopic structure. Microscopic structure: Spermoderm, hilum cushion, endosperm, embryo (palisade cells, oxalate crystals, starch, aleurone grains and fat), chief structural characters. Chemical composition: Changes in composition during growth, soy bean cake, meal, and flour, proteins, carbohydrates, phosphorus-organic compounds, saponins, enzymes, mineral constituents, minor mineral constituents.

The chapter begins: "A native of the Far East, the soy bean has been cultivated since the dawn of civilization in China and Japan, where the seeds furnish millions of human beings with food. From the seeds are prepared soy cheeses (tofu, natto, miso [sic, none of these three are "soy cheeses"]), soy milk, and soy sauce, the latter being used in chop suey. Because of the absence of starch in many varieties soy bean flour has come into use in the Occident as a diabetic food. Soy bean oil is of growing industrial importance."

An illustration by Winton (p. 512; Source: Winton 1906, p. 248) shows the outer portion of the soy bean seed in cross section, with each of the layers (X 160 magnification).

In the introductory section on "Forage legumes," soy beans are discussed under the following headings (p. 642-45): Comparative macroscopic structure, comparative microscopic structure (table), comparative chemical composition of green fodder (p. 644) and of hay (p. 645). The section titled "Soy bean" (as forage plant, p. 666-67) has the following composition: Introduction. Macroscopic structure. Microscopic structure: Stem, petiole, petiolule, leaf, stipule, flower, chief structural characters. Chemical composition (values from Pellet, Schwackhöfer, and Haskins for: Total ash, potassium oxide, sodium oxide, calcium oxide, magnesium oxide, ferric oxide, phosphoric acid, sulfur trioxide, silicon dioxide, and chlorine).

Note: This is the earliest English-language document seen (Jan. 2004) that uses the word "petiolule" in describing the soybean plant.

This book also discusses: Lecithin (p. 8, 14). Kudzu starch (*Pueraria hirsuta* Schneider, p. 37). Gluten (p. 57-59, 72-73, 199-200, 211-25). Coix (Job's tears, p. 100-04). Hemp seed (p. 413-21). Almond (p. 476-85). Peanut (p. 497-512, 642-43, 663-66). Linseed (p. 525-35). Sesame seed (p. 598-605). Alfalfa (p. 642-43, 646-59).

Note: Andrew L. Winton lived 1864-1946. Kate Grace Barber Winton was born in 1882. Address: 1. Sometime state and federal chemist; 2. Sometime state and federal microscopist.

2916. *Times* (*London*). 1933. Official record of dealings. Jan. 12. p. 19, col. 5.
• ***Summary:*** The section titled "Banks and discount companies" contains the following entry: "Indust. of Japan (SOY), 43/-++." Note: The meaning of this is not clear. This entry last appeared on 22 June 1938 (p. 27, col. 5).

2917. Hansen, Louis A. 1933. The soy bean as human food. *Life and Health* 48(2):21-23, 27. Feb. Also in J. of the Jamaica Agric. Soc., March 1933, p. 147-50.
• ***Summary:*** This is a good introduction to the soybean, based largely on information provided by Dr. A.A. Horvath

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(until recently of the health section, U.S. Bureau of Mines) and William J. Morse (senior agronomist at the USDA Bureau of Plant Industry). Discusses: History of the soy bean in Asia (especially China), nutritional benefits, soy bean flour, soy bean milk, and soy sauce.

Photos show: (1) Two men standing in a field of tall soybeans. (2) A person grinding soybeans with a stone mill to make soy bean milk in China. (3) A "Chinese courtyard with pots of fermented soybeans and brine from which the well-known soy sauce is made." (4) Steamed soy beans about to be made into miso in Japan.

Note: In 1968 Hansen wrote a book titled *From So Small a Dream*, about Madison College (Madison, Tennessee), which pioneered soyfoods in the United States.

2918. DeBoth, Jesse Marie. 1933. Chinese luncheons proving popular: Clever hostess finds chop suey or chow mein pleases. Prepared easily: Place cards in fantastic characters simulate Chinese lettering. *Toronto Daily Star* (*Canada*). March 4. p. 26.
• ***Summary:*** A recipe for "Chop suey or chow mein" calls for "2 tablespoons soy sauce." The word "soy sauce" is mentioned three times in the directions.

2919. DeBoth, Jessie Marie. 1933. New and different are these recipes: They are especially suited for birthday and other parties. Rainbow cake gay: Checkerboard ice cream provides many opportunities for novel color combinations. *Toronto Daily Star* (*Canada*). March 16. p. 27.
• ***Summary:*** A recipe for Oriental shrimp omelette calls for "1 teaspoon Chinese soy sauce." The word "soy sauce" is mentioned once in the directions.

2920. *Madison Survey* (*Madison, Tennessee*).1933. Soybean on exhibition at World's Fair. March 22. p. 39-40.
• ***Summary:*** "According to Sherman R. Duffy, the soybean will be the only vegetable crop having an exhibit all to itself at the Century of Progress Exposition, and will occupy 6,000 square feet of space in the Agricultural Building." The soybean is known to urban dwellers only as the "material from which chop suey sauce is made... In the soybean exhibit will be soybean flour, diabetic foods, infant foods, macaroni, breakfast foods, and a vegetable milk which is being used in a variety ways in the manufacture of foods and confections."

2921. Baker, Wilson; Robinson, Robert; Simpson, N.M. 1933. 75. Synthetical experiments in the isoflavone group. VII. Synthesis of daidzein. *J. of the Chemical Society* (*London*) 1933. p. 274-75. March. [5 ref]
• ***Summary:*** "The monoglucoside daidzin was isolated in 1931 by Waltz (*Annalen*, 489, 118) from the bean *Soja hispida* and was found to yield the aglucone, daidzein..." Address: The Dyson Perrins Lab., Oxford Univ., England.

2922. Hansen, Louis A. 1933. The soy bean as human food. *J. of the Jamaica Agricultural Society* 37(3):147-51. March.
• ***Summary:*** This is a reprint of an article first published in *Life and Health*, Feb., 1933 (p. 21-23, 27).

2923. Izume, Seiichi; Yoshimaru, Y.; Hidaka, T. 1933. Vitamin D ni kansuru kenkyû. IV. Shôyu abura-chû ni okeru Ergosterol no sonzai, narabini Vitamin D no shigen to shite kan taru shôyu abura no keizaiteki kachi [Research on vitamin D. IV. Ergosterol in soy-sauce oil and the economic value of soy-sauce oil as a source of vitamin D]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 9(3):246-54. March. [14 ref. Jap]
• ***Summary:*** The sterol, melting point 136-137°C (acetate, melting point 131-132°C), contains 19.8-20.0% (by absorption spectrum) ergosterol.

2924. Kurono, Kanroku; Iwashita, N.; Toriyama, S. 1933. Paraokishi ansoku kôsan oyobi sono esuteru no seishu bôfusei narabini shôyu bôbai-sei ni tsuite (Ueber die Wirkung der Paraoxybenzoesaeure und ihren Estern als Schuetzmittel auf das Saké und Schoyu) [On the effect of para-oxy benzoic acid and its esters as a preservative for sake and shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 117. p. 1-5. March. [2 ref. Jap]
• ***Summary:*** A German-language translation of the title appears below the Japanese title: Über die Wirkung der Paraoxybenzoesäure und ihren Estern als Schützmittel auf das *Sake* und *Schôyu*. Address: Jozo Shikensho. 1 Gishi; 2. Joshu; 3. Kenshuin.

2925. L'Heureux, L. 1933. Le soja [Soya]. *Congo: Revue Generale de la Colonie Belge* 1(2):214-36. Feb.; 1(3):365-83. March. (Bulletin de l'Office Colonial, Bruxelles). [14 ref. Fre; eng+]
• ***Summary:*** This early publication on soyfoods in Africa describes food uses and methods of preparing soymilk, in both condensed and powdered forms. Tunisia was a French protectorate from 1881 to 1956, when it became independent. France grew soybeans there, apparently at about the same time it started growing them in Algeria (p. 214).

At the exposition of Nanking in 1910 some 400 varieties of soybeans were assembled (p. 214).

In 1908 the firm of Mitsui was the first to try to transport, by sea, soybean seeds from Dairen to Liverpool. It was the beginning of a new industry in England (Liverpool and Hull), in Germany, Denmark (Copenhagen), and Holland (Rotterdam & Amsterdam).

A former Belgian missionary in Jehol (West Mongolia), Father De Preter (*Le T.R.P. Fl. De Preter, Supérieur de la Maison des Pères de Scheut à Yvoir*) has corresponded with the author about soybeans, tofu, and soybean cake in that city. Soybeans are not cultivated on the best soils, which are

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reserved for wheat. One of his colleagues at Jehol, Father Cyr. De Puydt has worked to improve the soybean crop (p. 219).

Father De Preter has often helped in making tofu (*fromage de soja*), using magnesium chloride as a coagulant. If one uses calcium sulfate, the tofu is softer and the taste seems better. Father de Puydt has improved the manufacture of tofu by using magnesium salts (probably Epsom salts) in place of magnesium chloride. The tofu is eaten after being boiled in water or fried in fat. It is best when fresh. In winter, it is allowed to freeze [frozen tofu in northeast China] so that it can be kept for a long time; it becomes spongelike. But fresh tofu has a special aftertaste to which the European palate finds it difficult to get accustomed. This taste does not come from the coagulant but from the soybeans. When one eats more than two pieces of tofu in succession, one experiences indigestion. It does not produce gas like the beans. Notes that the factory of the Caséo-Sojaïne near Paris, of which Mr. Li Yu-ying is the director, makes tofu and various tofu products. Cooked with eggs, tofu makes an excellent omelet. Cooked with the juice of meat, it takes on entirely that flavor. It can be used to make patés or smoked. Use firm tofu and cook in a mixture of 4:1 water to soy sauce. Then smoke it like meat. This can, for example, replace ham or bacon in an omelet. Tofu paté has much the same consistency and taste as paté de foi gras. Thus, there are many ways that tofu can replace meat (p. 221-24).

Using caséine or légumine of soymilk, the French pioneered industrial soy protein isolates in 1911 (see Beltzer). They were used in various glues, and in coating paper (p. 224-25).

The margarine industry employs only the finest quality oils. Soy oil was not introduced to margarine manufacture in Europe until about 12 years ago [i.e., 1921], but it has rapidly taken an important place on account of its good properties and low cost. Describes how to make synthetic rubber from soy oil. One of the main uses of soy oil in Europe is in making soaps. Some is also used to make explosives. Mr. Tihon is the distinguished director of the Laboratory of Industry and Commerce at Leopoldville, Belgian Congo (p. 227-28).

Soybean cake (*Tourteau*): Father de Preter in Jehol has assured me that soybean cake is used there to nourish and fatten beasts. For horses, this cake has a surprising effect. If a horse, returning from a trip lean and exhausted, is put on a regimen of soybean cake, it will return to normal in 15 days (p. 230).

Just like the oil, the cake is more and more in demand in Europe, and in certain countries the effect of soybeans on the economy is quite remarkable. Until about 30 years ago, Denmark was a super producer of wheat. But Dutch products were defeated by the lower prices of American goods. Aided by soybeans, the Danes were able to expand their livestock. Soybeans are now imported, the oil is extracted and used to make margarine, while the cake is used to feed livestock–some 18.5 million heads in 1926, not including poultry. The result has been the development of an enormous trade in animal products, butter, cheese, ham, bacon, lard, eggs and even livestock–all accounting for about 70% of Danish exports. Holland is in a similar position (p. 230-31).

In 1912 the "Dairen Mill Owners Association" was founded. By June 1923 all but 7 of the mills in Dairen were members of the association. The oil in the Suzuki mill is extracted using benzine solvent, the most modern method. 32 of the mills, mostly owned by Japanese, use hydraulic presses, while those owned by the Chinese generally use hand-turned screw presses (p. 231-32).

A large table (p. 323) shows exports of soybean seeds, cake, and oil from the ports of Dairen, Newchwang, Vladivostok, and total, from 1908 to 1917. During this time, because of Manchurian mills, the amount of seed decreased, while the exports of cake and meal increased.

Condiments: Shoyu (*shoyou*) is the main one. Several processes for making soy sauce are described in detail. Lea & Perrins Worcestershire Sauce is nothing but a highly seasoned soy sauce (p. 234).

Continued (p. 365): Mr. L. L'Heureux is director of the chemical service of the Belgian Congo. Let's see what the soybean is doing in the Congo. M. Tihon of Leopoldville, said in an interesting report titled *A propos du soja hispida:* Encountered 30 years ago [i.e., about 1903] at Stanleyville by commander Lemaitre, it figured in the collection of the botanical garden of Eala and was the object of experiments at Sankuru in 1914-15 (p. 365).

In this report, Tihon analyzed 3 varieties of soybeans from the plantations of Eala. The soybean would be good for all our [Belgian] colonies; it could replace meat and be used in the rations of black workers (p. 366-67).

Soymilk: Describes how to prepare it and its properties. According to Prof. Laxa of Prague, fresh soymilk has an acid reaction. Mentions the work of Li Yu-ying. Notes that by adding lactose and a bacterial culture, Yogourth [yogurt] can be made from soymilk (p. 370).

In Peking, soymilk is sold in small bottles of 200-220 cc carrying the title *Lait de pois–Un produit chinois. La nurriture la plus nourrissante. Préparé par* ___. In 1925 one bottle of soymilk daily cost 1 dollar Mex per month. In 1919 in Shanghai, Peking and Dairen, Chinese companies furnished hospitals and private individuals 8-10 oz of concentrated soymilk in bottles (p. 371-72).

A table (p. 373) compares the composition of 3 types of soymilk with mother's milk, cow's milk, and goat's milk; all but the cow's milk (87.00%) contain 90.71% water. The soymilks are: (1) From Tsinan fu, China. (2) From Peking, China. 3. From Japan. The soymilk from Peking was low in fat, so yuba had probably first been removed from it (p. 372).

In China, soymilk is habitually drunk sweetened with sugar. Li Yu-ying reports that one of his parents was

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nourished from birth with soymilk and for 37 years he has always been in excellent health (p. 374).

A new method for making soymilk. In 1916 Prof. Laxa of Prague develop a method for making soymilk in homes in Europe. The cost of a liter of soymilk in Prague in 1916 was estimated by Laxa as being about 40 centimes if it was homemade. Before the war, there was in London a soymilk factory which intended to place its products regularly on the market. Plans were made to construct two other plants, one in Manchester and one in Liverpool. The synthetic milk syndicate launched a soymilk on the market that was adapted to European tastes. The syndicate's factory, established in Liverpool, used the method of F. Goessel to make 100 liters of soymilk using the following formula (which is given). A Dutch patent (No. 2122 of Sept. 1917) and a Japanese patent (No. 28346) are also cited (p. 375-77).

A table shows the composition of 6 types of Soyama soymilk according to the analyses of Dr. G. Popp of Frankfurt. The protein ranges from 2.5% to 3.77%. Normal soy cream contained 11.5% fat, whereas that which was extra rich for diabetics contained 30% fat. It is very difficult to tell the difference between tea, coffee or chocolate to which one has added Soyama soy cream compared with regular dairy cream (p. 379).

In using the Soyama milk and cream, von Noorden confirms the following statement of Fischer, who studied vegetable milks in general: 1. In the stomach, soymilk gives a flocculent precipitate which is finer [smaller clumps] than that produced by cow's milk. 2. The digestion of soymilk requires only a weak secretion of gastric juice; the period of secretion is therefore short. 3. The time that soymilk protein resides in the stomach is shorter than that of cow's milk protein. 4. The peristaltic action of the stomach is less after ingestion of soymilk and better coordinated. Therefore, based on these observations, von Noorden recommended soymilk over cow's milk (p. 380).

Hatmaker made powdered soymilk. A table shows its composition, as analyzed by a laboratory in Paris (p. 380).

Yu P'i and Yu Ba are the Chinese and Japanese names of yuba, respectively. Recently a new method for making yuba has been patented in Japan. It consists in the use of an electric ventilator placed above the surface of the cooking pot containing soymilk that is not heated above 90°C. A table (based on analyses of the Tokyo Laboratory of Hygiene, of Embrey, and of Adolph) then gives the nutritional composition of 5 types of yuba, including Fu Chu (dried yuba sticks) which (surprisingly) contain 53.68% water.

Note: Maybe this Fu Chu was either fresh or reconstituted yuba. Address: Directeur du Service Chimique du Congo Belge.

2926. DeBoth, Jessie Marie. 1933. Long, slow cooking makes better stew: Meat becomes tough and stringy if boiled fast. Pork chop suey: Chinese vegetables and soy sauce make appetizing meal. *Toronto Daily Star* (*Canada*). April 6. p. 30.
• ***Summary:*** A recipe for Pork chop suey calls for "1 tablespoon soy sauce." The word "soy sauce" is mentioned twice in the directions. "Serve soy sauce with the chop suey."

2927. Meade, Mary. 1933. Sukiyaki party is novel idea in entertaining: Japanese dishes are still as much of thrill to the hostess as to guests. *Chicago Daily Tribune*. April 30. p. D1.
• ***Summary:*** Among Nipponese foods, Sukiyaki is "the greatest temptation of all." One key ingredient is "soy sauce (sometimes known as chop suey sauce)." "Japanese diners are much nearer being vegetarians than we are." The writer gives a detailed recipe for Sukiyaki: the Otsuyu (soup) includes: "4 cups boiling water, ½ teaspoon ajinomoto {a powdered seasoning on the market}, ½ tablespoon soy sauce, etc.

Note: Tofu is not mentioned anywhere in this article.

2928. *Food Manufacture* (*London*). 1933. The manufacture of soy in Japan. 8(5):161-63. May.
• ***Summary:*** Describes the process for making soy sauce, with 4 photos.

2929. Wieland's. 1933. Now–Chicago is calling: Delaware 6202 (Ad). *Chicago Daily Tribune*. June 9. p. 2.
• ***Summary:*** "Wieland's Shon-Ping Chop Suey. This delicious food of the Orient is prepared by Oriental chefs for discriminating Americans, in immaculate American kitchens... Delivered within 3 minutes of your phone call. 2 very generous portions with rice and soya sauce–60¢. 4 very generous portions with rice and soya sauce–$1. Delivery charge is 15 cents additional. Why not order your Sunday dinner now?"

Also offers "Glori-Roast Chicken" and "Glori-Fried Chicken–$1 each. 4 kitchens to serve you: 543 N. Dearborn. 4850 W. Madison. 4659 N. Clark. 552 E. 63rd St."

An illustration shows a telephone. Note 1. An example of Chinese-style fast food with home delivery–during the Great Depression. Note 2. This ad appeared 9 more times in this newspaper from June 11 to Sept. 6. Address: 543 N. Dearborn. Phone: DELaware 6202.

2930. Remy, W. 1933. Die Sojabohne in Japan [The soybean in Japan]. *Ernaehrung der Pflanze* (*Die*) 29(12):234-36. June 15. [Ger]
Address: Tokyo.

2931. *Boletin de Agricultura y Trabajo* (*Nicaragua Ministerio de Agricultura y Trabajo*). 1933. Soya o soja (Soja Hispida Moench) [Soya or soja]. 5(48):19-20. June. 2nd Series. [Spa]
• ***Summary:*** Contents: Introduction and history of the soybean ("it is also called 'soya'"), with its extension in the United States. Climate. Soil. Fertilizer. Inoculation. Varieties

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widely cultivated in the USA (Biloxi, Peking, Virginia and Wilson Five for hay and ensilage, Ito-San, Manchu, Mandarin, and Tokio [Tokyo] for seed. Habito for use as a food legume at the table {*legumbre de mesa*}). Uses of the plant: Green manure, forage, pasture (*pastaderos*), hay, green forage. Food products made from the seeds: Flour, oil, soy sauce, cooked whole soybeans, coffee substitutes, soups, soybean roasts or steaks (*soyas asadas*), porridge or mush, soymilk (*leche vegetal*), condensed soymilk, fresh soymilk, casein, confections, soy cheese (tofu: fresh, dry, smoked, or fermented; *queso fresco, seco, ahumado, fermentado*). Food products: Dry soybeans (*semillas secas*) are used to make soy sauce, cooked soybeans, coffee substitutes, soups, roasted soybeans, vegetable milk [soymilk], condensed milk, fresh milk, casein, confections or sweets, and soy cheese ([tofu] fresh, dried, smoked, or fermented), and green vegetable soybeans (*semillas verdes*) are cooked and canned or served in salads. Enemies of the soybean.

Note 1. This is the earliest document seen (Feb. 2009) concerning soybeans in connection with (but not yet in) Nicaragua.

Note 2. This is the earliest Spanish-language document seen (Oct. 2011) that mentions fermented tofu, which it calls *queso fermentado*.

Note 3. This is the earliest Spanish-language document seen (June 2009) that uses the term *semillas verdes* to refer to green vegetable soybeans.

2932. Ishimaru, Yoshio. 1933. Shôyu jôzô ni kansuru saikin no kenkyû. I. [Research on the bacteria involved in shoyu fermentation. I.]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 11(6):439-65. [Jap]

• ***Summary:*** Discusses 28 species of bacteria involved in shoyu fermentation. The main genera involved are *Bacillus, Pediococcus, and Micrococcus* species. Part I discusses: 1. *Bacillus mesentericus vulgatus var. Soya* No. 1. 2. *Bacillus mesentericus vulgatus var. Soya* No. 2. 3. *Bacillus mesentericus vulgatus var. Soya* No. 3. 4. *Bacillus mesentericus fuscus var. Soya*. 5. *Bacillus mesentericus niger var. Soya*.

Note: This is the earliest document seen (Jan. 2009) which mentions that *Pediococcus* bacteria are involved in the shoyu fermentation. Address: Nôgaku hakase, Japan.

2933. USDA Bureau of Home Economics. 1933. Nutritive value of soybean and soybean products (Leaflet). Washington, DC. 2 p. June 10. [5 ref]

• ***Summary:*** Table 1 gives the nutritional composition and fuel value of soybeans and soybean products: Green shelled soybeans, soybean sprouts, dry whole seed soybeans or whole ground meal, soybean flour (sifted, from the whole bean, from the press cake), soybean curd or cheese (fresh), soybean milk, soy sauce. Includes recipes for: Whole wheat bread with soybean flour, and White bread made with soybean flour. Mentions that Soyex Co., Inc., was at 60 John St., New York City, on 5 May 1931; An analysis of their flour made from whole soya beans is given.

Note: This is the earliest English-language document seen (June 2009) that uses the term "Green shelled soybeans" to refer to shelled green vegetable soybeans. Address: Washington, DC.

2934. *Christian Science Monitor*. 1933. Popular dishes of Japan. July 7. p. 6.

• ***Summary:*** "These Japanese recipes comes to us by way of a resident in the legation quarter of Peiping, China. We have been told that American and European residents in China enjoy Japanese food and often patronize Japanese restaurants there. Japanese food is nourishing yet light. The mainstays of their diet are fish and vegetables" [sic, rice].

The recipe for "Suimono, or Japanese consomme" calls for: "Soy sauce, which is easily obtainable from Japanese and Chinese grocers or other importers. If not, any good fish-and-meat sauce such as Worcestershire will produce a similar effect if desired."

The recipe for Teriyaki states: "(A fish recipe whose name means merely 'Broiled' [sic, it means 'shining broiled' or 'glazed broiled']).

"Wash thoroughly and cut into pieces: 1 piece tunny fish or salmon of medium size. Soak [marinate] for about 10 hours in a mixture of: 1½ cups sweet white wine-flavoring (non-alcoholic) [perhaps mirin] and

"¼ cup soy sauce or other fish sauce, such as Worcestershire. Then broil the same liquid mixture over a slow fire for about 15 minutes, or until the fish appears done when poked lightly with a fork. The recipe need not be salted unless desired, as the soy or other sauce contains salt flavoring."

The recipe for "Mitsu mame ('Honeydew beans')" states: "The sweet red beans known as *adzuki*, which are similar to our dried [kidney] beans and dried peas, are a predominant ingredient in many Japanese sweets."

Note 1 The main ingredient in this teriyaki dish is fish, not beef or poultry.

Note 2. The teriyaki [sauce] is extremely simple compared with later recipes.

Also contains recipes for: Rice–Japanese style. Chawan mushi.

2935. Ishimaru, Yoshio. 1933. Shôyu jôzô ni kansuru saikin no kenkyû. II. [Research on the bacteria involved in shoyu fermentation. II.]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 11(7):576-96. [4 ref. Jap]

• ***Summary:*** Part II discusses: 6. *Bacillus subtilis var. Soya*. 7. *Bacillus noudiastaticus var. Soya* No. 1. 8. *Bacillus noudiastaticus var. Soya* No. 2. 9. *Bacillus alcaligenes var. Soya*. 10. *Bacillus megatheroides var. Soya*. 11. *Bacillus citreus var. Soya alpha*. 12. *Bacillus citreus var. Soya Beta*.

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Address: Nôgaku hakase, Japan.

2936. *Jozogaku Zasshi* (*J. of Brewing, Osaka*).1933. Shojo: Shoyu, daizu.... [State of commerce: Prices of shoyu, soybeans, etc.]. 11(7):649-51, July. [Jap]
• ***Summary:*** Gives the price of shoyu and soybeans at various places in Japan.

2937. Ishimaru, Yoshio. 1933. Shôyu jôzô ni kansuru saikin no kenkyû [On bacteria in shoyu brewing]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 9(8):859-904, 953-1004, 1143-83. Aug. [Jap]
• ***Summary:*** Sixteen aerobes and 12 anaerobes have been studied. Most of the bacteria produce ethanol, acetaldehyde, acetone, furfuraldehyde, ammonia, fusel oil, and methyl acetate. Note: Part II (p. 1143+) is titled: The significance of shoyu bacteria in practical applications. It has two parts: (1) Shifting paths and the rise and fall of shoyu bacteria during brewing. Address: Nôgaku Hakase.

2938. Ishimaru, Yoshio. 1933. Shôyu jôzô ni kansuru saikin no kenkyû [Research on the bacteria involved in shoyu fermentation]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 9(8):859-904; 9(9):953-1004; 9(10):1143-83. [3 ref. Jap]
• ***Summary:*** Discusses 28 species of bacteria involved in shoyu fermentation. The main genera involved are *Bacillus, Pediococcus, and Micrococcus* species. At the end of this 3-part article (after p. 1174) are several large tables, many numbered microscopic round photographs of the bacteria, and photos of the bacteria on a culture medium in 28 different test tubes.

Note: A similar if not identical series of articles was published in *Hakko Kogaku Zasshi* in 1933. Address: Nogaku Hakase, Japan.

2939. Ishimaru, Yoshio. 1933. Shôyu jôzô ni kansuru saikin no kenkyû. III. [Research on the bacteria involved in shoyu fermentation. III.]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 11(8):689-701. [Jap]
• ***Summary:*** Discusses: 13. *Micrococcus Soya liquifaciens nov. sp.* 14. *Micrococcus percitreus var. Soya.* 15. *Micrococcus aurantiacus var. Soya.* 16. *Micrococcus flavus tardigradus var. Soya.* Address: Nôgaku hakase, Japan.

2940. Takata, Ryôhei. 1933. Shôyu jôzô no eiyôgaku-teki kôsatsu. II. Shôyu jôzô-chû no vitamin B-1 no henka [Nutritional investigation of shoyu. II. Changes in vitamin B-1 during shoyu fermentation]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 11(8):680-88. [5 ref. Jap]
Address: Jokyôju, Kôgaku Hakase, Osaka Teikoku Daigaku, Osaka, Japan [Osaka Imperial Univ].

2941. Ishimaru, Yoshio. 1933. Shôyu jôzô ni kansuru saikin no kenkyû. IV. [Research on the bacteria involved in shoyu fermentation. IV.]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 11(9):778-97. [Jap]
• ***Summary:*** Part IV discusses: 17. *Bacillus mycoides var. Soya.* 18. *Bacillus Soya gasformans nov. sp.* 19. *Bacillus panis var. Soya.* 20. *Bacillus Soya nonliquifaciens nov. sp.* 21. *Bacillus Delbrücki var. Soya.* 22. *Bacterium Soya var. Ishimaru.* Address: Nôgaku hakase, Japan.

2942. Sayer, M. Wynne. 1933. Soybean (Glycine hispida Maxim.). *Agriculture and Live-stock in India* 3(5):470-74. Sept. [10 ref]
• ***Summary:*** Contents: Introduction and history. Economic importance of the soybean. Cultivation. Green fodder for cattle. Green manure. Standard varieties of soybean of the Pusa Farm.

"Green Fodder for cattle: The soybean has been tested here [on the Pusa Farm] for a number of years against other important leguminous crops such as meth (*Phaseolus aconitifolius*), cowpeas, and guar. The results of 12 years trials from 1917-18 to 1928-29 are given below." Soybeans yielded 1,166 lb/acre of grain and 7,453 lb/acre of "green stuff."

Note: This article contains the following sentences and phrases which are of linguistic interest: "Soybean is a monsoon crop" (p. 470). "... by growing soybean mixed with maize..." "Soybean has been tested here for yield" (p. 471). "In India, soybean is considered one of the best fodder crops" (p. 472). "Soybean occupies an important place in the grazing cycle." In standard American or British English, the word "soybean," in each of these examples, would be preceded by the word "the." Address: Offg. Imperial Agriculturist.

2943. Takata, Ryôhei. 1933. Shôyu jôzô no eiyôgaku-teki kôsatsu. III. Shôyu oyobi tanpakushitsu sanbun kaibutsu-chû no ganchisso seibun no eiyôka [Nutritional investigation of shoyu. III. Nutritional values of the nitrogenous material in the substances from acid hydrolysis of shoyu and protein]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 11(9):764-71. [2 ref. Jap]
Address: Jokyôju, Kôgaku Hakase, Osaka Teikoku Daigaku, Osaka, Japan.

2944. Ishimaru, Yoshio. 1933. Shôyu jôzô ni kansuru saikin no kenkyû. V. [Research on the bacteria involved in shoyu fermentation. V.]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 11(10):882-902. [Jap]
• ***Summary:*** Part V discusses: 23. *Pediococcus acidi lactici var. Soya* α. 24. *Pediococcus acidi lactici var. Soya Beta.* 25. *Pediococcus albus var. Soya* α. 26. *Pediococcus albus var. Soya Beta.* 27. *Micrococcus acidi lactici var. Soya nov. sp.* 28. *Micrococcus candicans var. Soya.* Address: Nôgaku hakase, Japan.

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2945. Ishimaru, Yoshio. 1933. Shôyu jôzô ni kansuru saikin no kenkyû. VI. [Research on the bacteria involved in shoyu fermentation. VI.]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 11(11):986-1002. [Jap]
Address: Nôgaku hakase, Japan.

2946. Miller, Carey D. 1933. Japanese foods commonly used in Hawaii. *Hawaii Agricultural Experiment Station, Bulletin* No. 68. 43 p. Nov. See p. 1-10, 28-43. [18 ref]
• ***Summary:*** Contents (p. 1-10): Introduction. Soybean products. Edamame (green soybeans). Tofu (soybean curd). Kirazu (tofu residue) [okara]. Tonyu (soybean "milk"). Aburage (fried soybean curd). Miso (fermented rice and soybeans). Natto (fermented soybeans). Shoyu (soybean sauce). Koji (fermented rice). Pages 24-15: Kinoko (mushrooms). Fu (gluten cakes). Goma (sesame seeds).

Pages 28-43 (Ingredients and nutritional composition of prepared foods or recipes): Miso soup with tofu. Miso soup with wakame. Miso soup with daikon. Miso soup with milk. Tofu soup with lemon. Tofu shoyu soup. String bean shirae [shira-ae] (with tofu and miso). Carrot shirai. Konnyaku shirai. Eggplant with miso. Green onions with miso. Fish cakes with miso. Sesame seed sauce for vegetables (with shoyu). Nishime (with shoyu). Nigome (with aburage and shoyu). Kirazu with vegetables (with okara, aburage, shoyu). Noodles (somen or udon, with shoyu). Vinegar sauce for sushi. Inari-sushi (with aburage and shoyu). Maki-sushi. Appendix: Composition of some Japanese foods used in Japan.

Concerning edamame: "The Japanese use several varieties of fresh green soybeans. In Honolulu whole plants are purchased from the vegetable market. The pods are removed from the plants, placed in boiling salted water, and boiled for about 25 minutes. They are then drained and cooled, and the beans are kept in the pods until eaten. Often children eat them out of bags as they would candy. The fresh green soybeans appear to be an excellent food. They are good sources of calcium, phosphorus, and iron, yield a basic ash, and, as compared with other fresh vegetables and fruit, have a remarkably high protein content. Vitamin tests in progress at the nutrition laboratory of the Hawaii Agricultural Experiment Station show that the cooked beans are very good sources of vitamins A, B, and G. The more general use of green soybeans should be encouraged in the home, and their consumption may be increased by selling them in school cafeterias."

Concerning Kirazu (tofu residue): "Kirazu, or the residue of the soybeans left when tofu is made, has a crude fiber content of 3 to 4 percent, contains 4 to 5 percent of the protein of the beans, more than 1 percent of the fat, and 5 to 6 percent of the carbohydrate. Only a small part of kirazu is used for human food in Hawaii, by far the greater part being used as hog feed. Kirazu, however, is a utilizable, inexpensive food and might be more generally used than it is... Kirazu is used in combination with vegetables, or with fish, or dried shrimp, and seasonings."

Concerning natto: Describes the process for making natto on a commercial scale in Honolulu. After cooking (without soaking) for about 8 hours in a large iron kettle, the "beans are thoroughly drained and placed on paper plates covered with wax paper. The plates are stacked one above another in large wooden boxes, covered with rice straw mats, and kept at a temperature of approximately 30°C. for 35 to 36 hours, when the product is ready for use... The fermented product is covered with a gray, slimy substance that forms strings or threads when the beans are pulled apart, indicating good quality... Although no molds or yeasts are added to the cooked soybeans, O.N. Allen, of the botany department of the University of Hawaii, who examined several samples of fresh natto from Honolulu, found 2 molds, 4 bacteria, and an aspergillus present. The enzymes of some of these organisms probably caused the conversion of a small part of the protein to simpler substances."

Concerning Inari-sushi (p. 37): The "ingredients required for this dish are rice, water, salt, aburage, carrots, mushrooms, string beans, gobo, flaked bonito, water, sugar, shoyu, and vinegar sauce." A detailed recipe is given.

Photos show the following (each food accompanied by its Japanese name written in both Chinese characters and *katakana):* Edamame, in the pods on the plant, and shelled in a dish. Tofu kasu [okara] on a plate. Tofu on a dish. Soymilk in a glass. Three triangles of aburage on a dish. Miso on a dish. Natto in a white rectangular commercial paper tray about 3½ by 6 by 1 inch deep. Koji on a plate.

Note 1. This is the earliest English-language document seen (June 2009) that uses the term "fresh green soybeans" to refer to green vegetable soybeans.

Note 2. This is the earliest English-language document seen (Oct. 2001) that uses the Japanese word *kirazu* to refer to okara.

Note 3. This is the earliest document seen (July 2003) that mentions commercial natto production in Hawaii.

Note 4. This is the earliest English-language document seen (Jan. 2012) that uses the word "strings" or "threads" in connection with natto. Address: Specialist in Nutrition, Honolulu.

2947. Chachin, Toshio. 1933. Shôyu no vitamin B oyobi sono jôzô kôtei-chû no henka ni tsuite [Vitamin B and its change during the process of brewing shoyu]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 9(12):1297-1319. Dec. [17 ref. Jap]
• ***Summary:*** The quantity of vitamin B-1 decreased with progress of fermentation, becoming zero after the third month.

2948. Ishimaru, Yoshio. 1933. Shôyu jôzô ni kansuru saikin

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no kenkyû. VII. [Research on the bacteria involved in shoyu fermentation. VII.]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 11(12):1076-1101. [Jap]
Address: Nôgaku hakase, Japan.

2949. Fukai, Tôshi; Komatsu, S. 1933. Shôyu hakkô to shiyu no kankei. IV. Kôbo no seikatsu saibô narabini sono kôso sayô ni oyobosu kapurinsan no seiri teki sayô ni tsuite (1) [The relation between oil and shoyu fermentation. IV. Living cells of yeast and the biological action of capric acid on its enzymatic action]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 28(5):22-29; 28(6):25-34. [8 ref. Jap]
Address: Jozo Shikensho.

2950. Ishimaru, Yoshio. 1933. Kôshuha onpa ni yoru shôyu kôbo sakkin no kokoromi [On the sterilization of shoyu yeasts with high frequency waves]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 28(7):8-9. [5 ref. Jap]
Address: Nôgaku-shi, Japan.

2951. Ishio, M.; Endo, Y.; Wada, K. 1933. Kikuna to shôsuru mono no shôyu ni taisuru bôbai kôryoku shiken seiseki hôkoku [Antimold effect of "Kikuna" on shoyu (Abstract)]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 28(7):101. [Jap]

2952. Ishio, M.; Tsuboi, R.; Endo, Y. 1933. Ichi kamaboko bôfuzai no kamaboko ni taisuru bôfu kôryoku shiken seiseki hôkoku. Fu: Tannin-san no shôyu ni taisuru bofu koryoku shiken seiseki hôkoku [Antiseptic effect of tannic acid for kamaboko and shoyu]. *Eisei Shikenjo Iho (Bulletin of the Imperial Hygienic Laboratories)* No. 41. p. 153-59. [2 ref. Jap]
Address: 1. Gishi; 2-3. Gishu.

2953. Ishio, M.; Endo, Y.; Wada, K. 1933. Kikunaa to shôsuru mono no shôyu ni taisuru bôbai kôryoku shiken seiseki hôkoku [Antimold effect of "kikunaa" for shoyu]. *Eisei Shikenjo Iho (Bulletin of the Imperial Hygienic Laboratories)* No. 41. p. 149-52. [Jap]
• ***Summary:*** Kikunaa is not the plant (a cypsela); not clear what it is. Address: 1. Gishi; 2. Gishu; 3. Joshu.

2954. Izume, S. 1933. [Existence of ergosterol in shoyu; economical value of shoyu as a source of vitamin D]. *Minami Manshu Tetsudo K.K. (South Manchuria Railway Co. Experiment Station)* 17:1-. [Jap]*

2955. Shikazono, N.; Tomoda, N. 1933. Daizu kasu kasui bunkai butsu "soyamento" to shôyu no hikaku kenkyû [Comparative studies on the hydrolysate of soybean presscake called "Soyament" and original shoyu (Abstract)]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 28(1):84. [Jap]

2956. Simose, Rinta; Aoyama, Isao. 1933. Ringo-san sôda o karami shuseibun to suru shôyu ni tsuite [Sodium malate as a salting substance for shoyu]. *Rikagaku Kenkyujo Hokoku (Report of the Institute of Physical and Chemical Research)* 12(7):609-13. [13 ref. Jap]

2957. **Product Name:** Staley Soy Sauce.
Manufacturer's Name: Staley (A.E.) Manufacturing Co.
Manufacturer's Address: Decatur, Illinois.
Date of Introduction: 1933.
New Product–Documentation: A.R. Staley. 1935. Food Industries. 7(2):66-67. Feb. "Soy Sauce Goes American."

L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal.* June 25. p. 14. "Soy bean–The magic plant. Article XI." "Staley Sales Corporation, Decatur, Illinois: Soy sauce." International Inst. of Agriculture. 1936. *Le Soja dans le Monde* [The Soybean in the World]. See: Manufacturers of edible soy products. p. 206. Soybean Blue Book. 1947. p. 73.

2958. Carqué, Otto. 1933. Vital facts about foods: A guide to health and longevity with 200 wholesome recipes and menus and 250 complete analyses of foods. Los Angeles, California: Published by the author. 208 p. Index. 24 cm. [20+* ref]
• ***Summary:*** This manual of food reform discusses the importance of a simple vegetarian diet of natural foods, sunlight and sunbaths, fresh air, pure water, exercise and rest. Also talks about acid and alkaline foods, the influence of mind on health, the failure of synthetic foods, why refined sugar is injurious, the dietetic value of sea plants, table salt is unnecessary and harmful, fruit is man's best food, sulphured and unsulphured fruits, nut butters, food preparation, and the treatment of disease.

The germ theory of disease has not been proven since potentially harmful germs are omnipresent yet often fail to harm healthy individuals (Pasteur was a chemist and laboratory worker, not a physician. Germ action is always secondary; "when germs invade a living organism it is a sign that the organism is enervated and its chemistry perverted." p. 114-15).

The section titled "Fruit and nut confections" (p. 133-35) begins: "Fruit and nut confections made without refined sugar and glucose should take the place of candies." These "sweet-meats"... "should be the only kind of confections allowed to growing children, which have a natural craving for sweets." Recipes include stuffed dates, date caramels, nut fruitose, carob confection, raisin-nut balls, and honey cocoanut balls. For Nut fruitose: Mix dates, figs, raisins, almonds and walnuts. "Run through a food chopper twice. Press the mixture into a flat pan in a layer about 1 inch thick, let stand overnight, and cut into convenient sizes." Note:

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Carque was a pioneer in the development of healthy, natural treats. The last recipe could be considered a forerunner of the less-healthful "nutrition bar" of the 1990s.

The next section, titled "Nuts and nut butters," states that "salting and roasting greatly impair the nutritive value of nuts and prevent their proper assimilation. The proteins become coagulated by roasting, and the fats split into glycerine and free fatty acids, while the vitamins are destroyed. Nut butters made from salted nuts should, therefore, have no place in our dietary." Rather, the peanuts or almonds should be blanched (scalded or parboiled in water or steam). "Since few people, on account of defective teeth, can masticate nuts well enough to be acted upon by the digestive juices, the mechanical emulsification of nuts by means of nut butter mills is quite dispensable."

The section titled "Melba toast" and "Melbettes" (p. 156) states: "These are delicious dextrinized whole wheat products made by the Cubbison Cracker Co., Los Angeles." Melbettes are also made from whole rye. "Calavo Melba Toast is another tasty whole wheat product; it contains the natural fruit fat of the California Avocado or Alligator Pear as shortening."

The section titled "Natural whole rice" (p. 156) notes: "Whole rice, also called brown rice, contains the bran, cuticle, and germ of the cereal. In milling nothing has been removed but the husk and dirt."

The section titled "The Soy Bean, a Remarkable Food" (p. 158-61) discusses boiled soy beans, soy bean milk, tofu ("it is called by the Chinese 'the meat without a bone...' Other preparations of the soy bean, which are but little known in this country, are *natto, hamananatto* [*hamanatto*], *Yuba* and *Miso*. The principal use of miso, which is a slightly [sic] fermented mixture of soy beans and rice or barley, is for making soups and for cooking vegetables"), soy sauce, soy bean sprouts, and various recipes. Under "Ready made soy bean products" (p. 161) we read: "As the preparation of the soy bean in the average household is often not convenient, the author has arranged to supply the following products at reasonable prices: Canned Soy Beans, Soy Bean Spread, Soy Bean Stew, Soy Bean Loaf, Soy Vegetable Onion Soup, Soy Bean Vegetable Bologna, Soy Bean Tasty Lunch, to which others will be added in the course of time. These products have met with ready approval, as they fill a long felt want for tasty, nutritious and wholesome vegetable protein foods to substitute meat and dairy products."

The author's signature appears at the end of the Preface. Address: Los Angeles, California.

2959. Century of Progress International Exposition. 1933. Official guide book of the fair. Chicago, Illinois: A Century of Progress. 194 p. See p. 178-79. Index. 23 cm.
• ***Summary:*** Under "List of fair exhibitors" (p. 179): "Oriental Show-You Company" (listed under "Reynolds Exhibits Corporation").

2960. Fukai, Tôshi. 1933. Bankin shôyu jôzô kakôron [Modern shoyu manufacturing]. Tokyo: Chômi Kenkyûkai [Chomi Kenkyukai]. 2 + 3 + 8 + 571 p. Illust. 23 cm. [Jap]*
• ***Summary:*** The author was born in 1888. Address: Japan.

2961. Hawcock, Emory. 1933. Practical and profitable Chinese recipes. New York, NY: J.O. Dahl. 32 p. 16 cm.
• ***Summary:*** The section on "Flavoring ingredients" (p. 6) states: "Thin soy, which is the essential flavoring medium used in all Chinese dishes, plays a most important part. This sauce takes the place of salt, as well as extracts, in all Chinese cooking. It is prepared in China by grinding and fermenting the soy bean with water and salt. The liquid thus produced is refined and clarified and sent to this country in Chinese earthenware pots or square tin cans. It is also sold in this country in different sized bottles with shaker tops for use at the table.

"Thick soy, which is used to color and slightly flavor soups, gravies and braised meats, is a caramel preparation similar to the many ones on the market to-day.

"Sesamum oil is the strongest and most pungent flavored oil used by the Chinese. It has a pronounced smoky, nut-like flavor and is made by [usually roasting] grinding and pressing the dried sesamum seeds."

2962. Kincaid, Zoë. 1933. Tokyo vignettes. Tokyo & Osaka: The Sanseido Co., Ltd. [8] + 284 p. See p. 101. Illust. No index. 23 cm.
• ***Summary:*** Page 2: When the author is at her home in Tokyo: "Into the morning's routine comes the call of the bean-curd seller, announcing to every household that he is at hand to supply its wants;..."

Page 67: "My hostess served me with soba... which the farmer had made himself, together with relish of seaweed, and soy [sauce] of their own manufacture."

Pages 100-103: At the Kwannon Temple in Tokyo, seven old women sell soaked or sprouted beans and rice for a few small coins, and the visitors to the temple throw the food to the birds. "Well the doves know the ways of their benefactors, and divine prospective distributors of largess, for they watch with bright eyes for the bean scattering and fly from all directions to be in on the banquet! The charge for the contents of one bean tray is two sen."

Page 209: "For breakfast there is soup made from slightly fermented beans, miso, thick with vegetables, tasty and hot. Later the tofu vendor runs thorough the streets calling out that he has white bean curd to sell."

Page 212: Among the ingredients of oden were "fried bean curd." Address: Tokyo, Japan.

2963. Morse, W.J. 1933. Soybeans now a major crop in United States; Few grown before 1898. *Yearbook of Agriculture* (*USDA*) p. 198-205. For the year 1933.

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• ***Summary:*** Contents: Variety adaptation. Variety utilization (incl. bean curd, bean milk, soy sauce, miso (bean paste), bean sprouts, green vegetable beans, bean flour, roasted beans, bean confections, beverages, oil and meal, special fermented bean products). Soybean oil and meal industry. Soybean meal. Soybean oil. Soybeans for human food. Soybeans as an export crop.

"Variety adaptation: The Virginia, Laredo, Manchu, and Biloxi have a greater range than most other varieties. The Virginia, Mansoy, and Harbinsoy varieties excel on the less productive types of soil, while on better soils the Mansoy and Harbinsoy give inferior results.

"Since the Department of Agriculture began to introduce soybean varieties more than 7,000 samples of beans have been collected from Japan, Chosen [Korea], Manchuria, China, Taiwan (Formosa), Java, Sumatra, and India. There are more than 2,000 distinct types in this large collection, ranging from 75 to more than 200 days in reaching maturity. At present about 40 varieties are generally grown in the United States."

"In Japan, where the soybean is used extensively as a green vegetable, more than 60 varieties, ranging in maturity from 75 to 160 days and differing in flavor, are grown solely for this purpose. The soybean in used in the United States primarily as forage, being preserved either as hay or silage, or cut and fed green as soilage, and is also pastured extensively with hogs and sheep." Address: Bureau of Plant Industry, Washington, DC.

2964. Wong, Nellie C. 1933. Chinese dishes for foreign homes: A revised and enlarged edition of the popular "Chinese Recipes." London: Kegan Paul, Trench, Trubner & Co. Ltd. xii + 98 p. Illust. 19 x 13 cm. Handsewn on exterior. Printed in Shanghai.

• ***Summary:*** This book contains 86 recipes. The Explanatory Notes (p. vii) begin: "Soy bean sauce and ginger are universally used in China for seasoning. Soy bean sauce in many instances takes the place of salt. Names and addresses of suppliers of Chinese foodstuffs in New York and London are given. Soy-related recipes include: Bean curd soup (p. 8). Shia-mi tao-fu (Fried shrimps with bean curd and soy bean sauce, p. 51). Soy bean sauce is also used to season Lobster chop suey, and Shrimp chop suey (p. 68-69).

A 1932 edition of this book was published in Shanghai by Kelly and Walsh, Ltd. (xii + 87 p.; 19 cm).

2965. Madison Food Co. 1933? Madison soy cheese. Madison, Tennessee. 6 p. Undated.

• ***Summary:*** Contains a brief introduction to tofu with 8 American-style tofu recipes. "The principal protein of the Soybean is much like the protein casein of milk, and when the bean is properly treated a milk quite comparable in appearance, taste, and food value can be manufactured from it. From this milk, when allowed to become acid, or when a slight amount of a precipitating agent is added, a cheese can be prepared in consistency much like cottage cheese. This vegetable cheese (tofu) has been one of the principal articles of diet in the Orient for many centuries.

"In order that the people of America may have this most important food as an article of diet, a method of manufacturing and preserving has been perfected at the Madison Food Factory.

"For several years it has been used as a daily article of diet in the Madison Rural Sanitarium, Nashville Vegetarian Cafeteria, and many other Good Health places. It has proven its value as a diabetic food, and as a splendid meat substitute."

Tofu recipes include: Soy cheese salad. Stuffed egg with soy cheese. Tomato soy sandwich. Soy sandwich filling. Soy croquettes. Soy cheese loaf. Soybean omelet. Soybean cutlets.

On the back panel is a list of "Health foods manufactured and distributed by Madison (Sanitarium) Food Company, Madison, Tennessee: Nut Meat, Vigorost, Peanut Butter, Fruit Sticks, Sterilized Bran, Psyllium Seed, Cereal Drink, Soy Flour, Soybeans (Dry), Malta (Malt Syrup), Soy Fruit Crackers, Soybeans (Canned with Tomato Sauce), Madison 3 Minute Breakfast Wheat, Sanitarium Baked Beans, Steamed Whole Wheat, Malted Breakfast Crisps, Whole Wheat Fruit Crackers, Sweetened Whole Wheat Crackers, Soybeans (Canned Plain), Soy Cheese (Bean Curd), Madison Fruit Candy, Regulose (composed of Lactose and Dextrine). Write for descriptive literature."

Note that the company is now named "Madison Food Company." Address: Tennessee.

2966. North American Mercantile Co., Inc. (Hokubei Boeki Kabushiki-gaisha). 1934. [Export & import company] (Ad). In: The Japanese American News. 1934. The Japanese American Directory (*Nichibei Jûshoroku*). No. 30. p. A-9. [Jap; Eng]

• ***Summary:*** Ad (full page). Japanese American Directory. 1934, p. A-9. Food and grocery wholesale. Yamasa Shoyu. Branch at 409 2nd St., Los Angeles. Address: 330-342 Front St., San Francisco, California. Phone: Garfield 3214.

2967. Narahara, Hanbei. 1934. Shôyu moromi no jukusei ni tsuite [On ripening of shoyu moromi]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 12(1):57-63. [Jap]

2968. Tetsumoto, -. 1934. Chômiryô no chô-chifusu-kin oyobi korera-kin ni taisuru sakkinryoku [The sterilizing power of various seasonings toward typhoid Salmonella bacteria and cholera bacteria]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 10(2):123-27. [1 ref. Jap]

• ***Summary:*** Worcestershire sauce, an important constituent of which is soy sauce, is reported to have a strong sterilizing

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action.

2969. Oriental Show-You Co. 1934. Display ad: The perfect hostess serves Oriental. *Christian Science Monitor.* April 6. p. 3.

• ***Summary:*** "Your bridge party, or lunch at home after the theatre, will be immensely if you serve Oriental Show-You foods–chop suey and chow mein–both in cans. Just heat and serve. Takes only a few minutes. You can rely on their true Oriental flavor. You might open a can of Oriental Show-You bean sprouts which, with mayonnaise, makes an intriguing salad. Don't forget Oriental Show-You Sauce for seasoning."

Illustrations show: (1) The company's logo. (2) The NRA [National Rifle Association] logo. (3) A bottle of Oriental Show-You Sauce. (4) A Japanese Torii gate. Address: Columbia City, Indiana.

2970. *Miami Daily News.*1934. Food products of soy bean urged for daily table use: Milk, cheese, roasts, bread and other preparations made from herb claimed to have high nutritive values. April 8. Sport section. p. 5. Sunday. Facsimile printed in Back to Eden by Jethro Kloss, 1982 ed.

• ***Summary:*** Two photos by Rinc above the article show: (1) A small insert portrait of Dr. Jethro Kloss. (2) His daughter, Mrs. Harry C. Engelhardt, standing next to her daughter, Joyce, age 5. The caption states that "Dr. Jethro Kloss is devoting his life to the dissemination of knowledge pertaining to soy bean milk." Both his daughter and granddaughter were raised on this milk."

"Dr. Kloss prides himself on having once been a 'farmer.' He is credited with having spent a fortune in philanthropic work, the greater part having gone toward introducing a bean which he feels is destined to eventually revolutionize the economic structure of this country and become of incalculable value in time of war.

"Approximately 6,000 persons recently heard Dr. Kloss in Bayfront park explain how he apparently performs miracles when he transmutes beans into 24 or more different foods which in addition to being delectable also retain various life-giving elements usually attributed to cow's milk...

"He exhibited 21 articles made from soy beans and invited the public to taste them. These were soy bean milk, bread, pie, cakes, buns, cookies, roast, buttermilk, coffee, cottage cheese, cream cheese, yellow cheese, soy bean sauce, pancakes, broth, butter, 'mashed potatoes,' mayonnaise, soy bean roast not like that from meat, ice cream, sprouted beans. None of these contained white flour nor cane sugar, making such foods especially valuable for diabetics. Soy bean foods are also recommended for arthritis.

"He advocates the teaching of edible food preparation from soy beans as part of school curriculum and drew a parallel tending to show how the government spends millions to spread hog and other stock-feeding knowledge while almost ignoring the phases which would create well-fed humans.

"Dr. Kloss pointed out that he was merely in this country revealing something which for centuries had been common knowledge throughout the Orient... He quoted Dr. S. [sic. A.] Horvath of the Rockefeller institute as one of the world's leading authorities who said: 'The Chinese nation exists today because of the use of the soy bean as a food.'"

A sidebar at the lower left of the article shows another portrait photo of Dr. Kloss and announces: "By the request of thousands who heard Dr. Kloss speak in Bayfront Park, he has consented to give further instructions in the preparation of the wonderful Soy Bean Products.

"He will give two food demonstrations in the Miami School of Applied Arts, 406 N.E. 2nd Ave., Monday afternoon at 2:30 and Monday evening at 8, April 9.

"Dr. Kloss makes more delicious table foods from soy bean than any one else known. The soy bean is a complete food, and is highly alkaline. Following is a partial list of the foods he makes:

"Soy bean milk, soy bean buttermilk, cottage cheese, ice cream, bread, buns, pies, cake, cookies, roast, coffee, pancakes, butter [probably soynut butter], mayonnaise, broth. These foods do not contain any cane sugar or other harmful ingredients. They are most economical, simple to prepare, and very healthful and inexpensive. The use of the articles would mean a great saving of money, and preserving of health. They must be seen and tasted to be appreciated."

Note 1. This is the earliest document seen (March 2000) that mentions soy mayonnaise.

Note 2. This is the earliest document seen (March 2007) that mentions a "cream cheese" or "yellow cheese" made from soy beans (one of two documents).

Note 3. This is the earliest document seen (March 2007) that mentions Jethro Kloss' work with soy bean ice cream.

Note 4. As of Nov. 1990 the *Miami Daily News* no longer exists. Its name was changed to the *Miami News*, it was owned by Cox, and it went out of business in about 1988. Back issues would probably be available at the Univ. of Miami.

Note 5. This is the second earliest document seen (March 2007) that uses the word "miracles" (or "miracle" or "miraculous") in connection with soy beans. Address: Florida.

2971. Come and see: The wonders of the 20th century (Poster). 1934. Dr. Jethro Kloss, 500-44th St., N.W., Miami, Florida. 1 p.

• ***Summary:*** By special request Dr. [Jethro] Kloss is giving two more free lectures and food demonstrations at the Miami School of Applied Arts, 406 N.E. 2d Avenue, Monday, April 9, in the afternoon and evening. Following is a list of food Dr. Kloss prepares from the soybean. They do not contain any cane sugar, white flour, or other harmful ingredients:

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Soy bean milk, bread, buns, pies, cakes, roast, buttermilk, ice cream, jelly, sauce, cream cheese, cottage cheese, yellow cheese, coffee, pancakes, broth, mashed potatoes, mayonnaise, butter.

"Learn to make this alkaline milk from soybeans, it taste's [sic] better than other milks, and has a better analysis than cow's milk, or goat's milk. Dr. Kloss will show a table of comparative analysis prepared for him by Dr. LeClerc, Senior Chemist of the Government. This milk can be made in any home, and costs less than 2 cents per quart... Dr. Kloss' ice cream made from the soybean milk is as delicious as any on the market, and very inexpensive and healthy. Learn to make these products in your own kitchens."

Note: This is the earliest document seen (March 2007) that mentions a "cream cheese" made from soybeans (one of two documents). This cream cheese was developed by Jethro Kloss. Address: 500 44th St., N.W., Miami, Florida. Phone: Edgewater 1128-J.

2972. Morris, H.T. 1934. Story of soybeans. *Flour & Feed.* 34(11):9, April; 34(12):9, May.

• ***Summary:*** This two-part article begins with the [probably mythical] story of the A.E. Staley Company's role in pioneering the soybean industry in America. The soybean first came to America in 1804. Then, about a half century ago [i.e. about 1884], "a missionary, returning to his home in America, brought with him some peculiar looking beans. These, by chance, fell into the hands of an observant chap [A.E. Staley] who was a tiller of the soil. Upon being told that these beans were the main crop of the Orient and furnished sustenance to both man and beast, the observer planted the seed and from actual experience saw that it enriched the ground and that livestock relished the beans and hay. Little did he realize that half a century later his intimate knowledge of the soybean would perhaps be a factor in shaping the destiny of the industry.

"The farms of Illinois had been worked overtime. The ground had been 'corned to death.'" The observer "began to preach 'diversify with soybeans.' He was so sincere and intent that this gospel should be spread that through the Staley company [which he owned] a promotional department was created. This staff had one specific job–that of selling the farmers on the possibilities of soybeans. In conjunction with the Staley company, soybean trains were operated throughout the country–stopping at all stations and demonstrating soybeans and soybean products.

"From a comparatively few fields, the seed took root." "Ten years ago, the Staley company built its first crushing plant with sufficient capacity to more than take care of all beans offered for sale. Prospects of an adequate supply of raw material, an organization, an up-to-date crushing plant and oil refinery, all called for action, as there had to be an outlet for the finished product. The same method of introducing soybeans was applied to soybean products" such as soybean oil meal.

A portrait photo shows "A.E. Staley, Sr., Founder of A.E. Staley Mfg. Co., Decatur, Illinois."

Note: This is the earliest document seen (April 2001) that tells the story of A.E. Staley first obtaining soybeans from a missionary. The story gets embellished each time it is retold during the years ahead. See especially: Staley, 1947. *The Wonder Bean.*

Part two of this article discusses: Soybean oil meal. Poultry rations. Milling methods. The writings of Dr. A. Horvath. Soybean milk, tofu, and soy sauce in China. Address: Staley Sales Corp.

2973. Morse, W.J. 1934. Utilizacion de las habas soya [Utilization of soybeans]. *Revista de Agricultura, Comercio y Trabajo (Cuba)* 14(52):77-90. April. [Spa]

• ***Summary:*** Contents: Introduction. Soybeans for human food: Dried beans, coffee substitute, toasted soybeans, fresh green or vegetable beans (*Habas frescas o legumbres*), soybean flour, soy sprouts (*retoños tiernos*), soy sauce, soybean vegetable milk, tofu (*cuajada o queso de habas soya*), soy oil. Soybeans for livestock: Soybeans for hay, for pasture, for ensilage, for fresh forage, for grain. Soybeans for oil. Soybean flour and cake. Soybeans for soil improvement. Address: USDA, Washington, DC, USA.

2974. Torres Herrera, José M. 1934. El haba soya, su cultivo y beneficio [The soybean, its culture and benefits]. *Boletin Agricola (Medellin, Colombia)* 8(189):1180-92. April. [Spa]

• ***Summary:*** Contents: Introduction. Climatological conditions. Soils appropriate for this crop. Inoculation with bacteria. Preparation of the soil. Soya in crop rotations. Sowing the seeds. The work of cultivation. Calculation of the cost of production for 6,400 square meters (Data taken from the Palmira Agricultural Experiment Station, Bulletin No. 1; the cost is $0.45 per arroba = ca. 25 lb). Soybean varieties ("Agriculturists interested in planting this crop which has no equal, can obtain seeds free of charge from the Pamira [sic, Palmira] Agricultural Experiment Station or the Antioquia Agricultural Society [Sociedad Antioqueña de Agricultores, Colombia]"). Production of seeds. Yields of various varieties. Harvesting and threshing of the grain. The uses of soya (*la soya*).

Utilization of the plant and seeds of the soybean (*de las habas soyas*): I. The plants as hay, pasture, green forage, ensilage, green manure. II. The seeds as: 1. Whole dry soybeans (*habas secas*, for making infant foods, flour, soup, butter, diabetic foods and breads, cooked whole soybeans, confections, health foods (*alimentos para sano*): soymilk, soybean roasts or steaks, soy sprouts. Breakfast foods: Vegetable curd or cheese (*cuajada o queso vegetal*), soy sauce, malted milk, soy coffee cakes, flour, livestock feed). 2. Green vegetable soybeans (*habas verdes*). 3. Soy flour (*harina de habas*). 4. Soy oil (*aceite de habas*).

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Soya as human food. The composition of various legumes. Soy flour. Soy oil. Soy milk (*leche de soya):* Nutritional comparison of soy milk and cow's milk, powdered soymilk, fermented soymilk, tofu (*queso soya*), soy casein (*Caseína*).

Whole dry soybeans: Roasted soybeans (*habas tostadas*), soy coffee (*café de soya*), soy chocolate (*chocolate de soya*). Green-seeded soybeans (*habas soyas verdes o legumbres*): Soy sprouts, soy sauces. Edelsoya (soy flour made by Berczeller).

The value of soy forage. Soybeans in mixtures with other crops. Green manure. The concept of Dr. Uribe Echeverri, minister in Brazil.

Page 1180 states: "Climatological conditions. The soybean is suited to the temperate zones but it can become acclimatized to warmer climates and it has succeeded at the agricultural experiment stations of Valle de Cuaca and of Tolima and in various regions of the Intendencia del Chocó. It is probable that some varieties from England and from the north of Canada can acclimatize themselves in good conditions in our cold lands.

Note 1. This is the earliest document seen (May 2009) concerning soybeans in Colombia, or the cultivation of soybeans in Colombia. Note 2. No mention is made of soya in Nicaragua.

Note 3. This is the earliest Spanish-language document seen that uses the term *habas tostados* to refer to soynuts.

Note 4 This is the earliest Spanish-language document seen (June 2009) that uses the term *habas verdes* to refer to green vegetable soybeans. Address: Agrónomo Nacional de la Intendencia del Chocó [Colombia].

2975. Uchida, S. 1934. Shôyu abura no seibun. II. Esuteru to shite sonzai suru fuhôwa shibô-san seibun [Constituents of shoyu oil. II. Composition of unsaturated fatty acids existing as esters]. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*) 37(4):444-47. April. [Jap]
Address: Tokyo Kogyo Daigaku, Oyo Kagaku-ka, Kenkyu-shitsu.

2976. Uchida, So; Shimoyama, K.; Kyocho, S.; Toyota, E. 1934. Shôyu abura no seibun. I. Ippan seishitsu, fuken kabutsu narabini esuteru to shite sonzai suru hôwa shibô-san seibun [Constituents of shoyu oil. I. General properties, unsaponifiable substances, saturated fatty acids, esters]. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*) 37(4):442-44. April. [Jap]
Address: Tokyo Kogyo Daigaku, Oyo Kagaku-ka, Kenkyu-shitsu.

2977. Uchida, So; Shimoyama, K.; Hsu, T.T.; Toyoda, E. 1934. Constituents of waste fatty oil from soy-manufactory. I-II. *J. of the Society of Chemical Industry, Japan* 37(4):195B-97B. April. Supplemental binding to Kogyo Kagaku Zasshi. [2 ref. Eng]
• ***Summary:*** In the production of soy [sauce], "fatty oils contained originally in the soy-bean and wheat separate out as an almost black coloured layer. This is called 'soy-oil,' and owing to its dark colour and strong odour characteristic to soy, it is less valued on the market. It is used chiefly as a raw material for manufacturing detergent soap, especially powdered soap. The other use is found in the mechanical workshop as a cutting oil."

The dark, mobile, odorous waste oil from soy [sauce] production consists largely of ethyl esters of higher fatty acids. The orange oil obtained after refining with concentrated sulfuric acid and Japanese acid clay deposited a white precipitate (ethyl esters of saturated fatty acids) on keeping at 0°C, and this had acid value 32.3, saponification value 193.2, unsaponifiable matter 1.4%, including a sterol, melting point 137-137.5°C (corrected). Hydrolysis yielded glycerol 2% and ethanol 9% (on the oil). Palmitic, stearic, arachidic (very little), oleic, linoleic, and linolenic (small amount) acids were identified. Address: Dep. of Applied Chemistry, Tokyo Technical Univ., Tokyo-Okayama.

2978. Chen, ?; Wang, ?; Feng, ? 1934. [How to shorten the soy sauce brewing process: Kwantou method]. *Kung Yeh Chung Hsin* (*The Industrial Research/The Industrial Center, Nanking, China*) 3(5):168-75. May. [Chi]
• ***Summary:*** Wang and Ni (1936, p. 285) state that the Kwantou method, one of the many methods developed to shorten the time require to make soy sauce, deserves special mention. This method, used in the Kwantou district of Fukien [Fujian] province, requires about 3 months. The superior flavor obtained is attributed to washing the mold mycelia from the culture after 12 days, followed by a second fermentation. "The Kwantou process of soy bean sauce manufacture uses soy bean alone as its raw material and carries out the fermentation at room temperature for not more than three months, yielding a product of high quality and of a flavor superior to that obtained by Togano's method. In spite of these superiorities, the Kwantou process is little known and it has not received the attention it deserves." Address: China.

2979. Pierce (S.S.) Co. 1934. Spring and summer mail order catalog. *The Epicure* (*Boston and Brookline, Massachusetts*) 48(1):1-72. May. Illust. Index. 28 cm.
• ***Summary:*** This company, which delivers fine specialty foods throughout New England, was established in 1831 and incorporated in 1894. Soy related items: Chinese foods–Ingredients for making Chop Suey: La Choy Soy Sauce (6½ oz bottle, $0.23, p. 40). Flour and meal–Dietetic flour: Cellu Soy Bean Flour (5 lb tins, $1.00, p. 43). Sauces–Worcestershire sauce: Lea & Perrins (large, $0.57; small, $0.29, p. 50). Note: Under "Sauces," no soy sauces are listed. But there is Harvey Sauce from Crosse & Blackwell, and

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H.P. Sauce.

Vegetables–Dried vegetables. Beans: Soy ($0.12/lb, p. 53).

Battle Creek Foods Department [Michigan] (full page, with photo and illustrations, p. 72)–Crackers: Soy Bean Biscuits ($0.60/package). Soy Gluten Bread ($0.35/tin). Flour: Soy Flour ($0.35/14 oz tin). Vegetables: Soy Beans, Baked ($0.18/11 oz tin).

Battle Creek Foods also offers: Psyllium seed. Bran-Gluten Flakes. Zo (a cereal rich in food iron and vitamin B). Kaffir tea (made from a shrub native to South Africa). Malted Nuts ("a vegetable substitute for milk, containing malt sugar"). Minute Brew (cereal beverage with coffee-like flavor). Bran biscuit. Gluten bread. Gluten biscuits. Rice biscuits. Nut butters: Almond butter and peanut butter. Savita (yeast extract, bouillon cubes, sal-Savita salt). Vegetable meats: Nuttolene, Nuttose, Protose, Saucettes. Vegetable gelatin (agar, flaked).

Note: Inserted in this catalog is an undated leaflet titled: "You are invited to attend a special demonstration of Battle Creek Special Purpose Foods, conducted by Miss Minnie Duffy, Oct. 12 to Oct. 17 at Park Grocery Co., 18-20 North Diamond, Mansfield, Ohio." Small photos show: (1) Battle Creek Sanitarium. (2) Miami Battle Creek Sanitarium [Florida]. (3) Battle Creek Food Co. Address: Importers and Grocers, Boston and Brookline, Massachusetts.

2980. *Food Industries*.1934. Men, jobs and companies: Industry. 6(6):282. June.

• ***Summary:*** Left column, bottom: "La Choy Food Products Co., Detroit, recently opened a Chicago [Illinois] factory, with French Jenkins as manager. Plants at New York, Boston [Massachusetts], Philadelphia [Pennsylvania], Cleveland [Ohio], and St. Louis [Missouri] are planned during the year."

Note: These other plants never materialized.

2981. Takata, Ryôhei. 1934. Shôyu jôzô no eiyôgaku-teki kôsatsu. IV. Shôyu-chû no kôkyû gan chisso seibun [Nutritional investigation of shoyu. IV. Nitrogenous compounds in shoyu]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 12(7):497-503. [7 ref. Jap]
Address: Osaka Teidai Kôgaku-bu, Jôzôgaku kyôshitsu, Takada Kenkyû-shitsu, Osaka, Japan.

2982. Takei, T. 1934. Shôyu abura no shuseibun ni tsuite. I. [Principal constituents of shoyu oil. I.]. *Kogyo Kagaku Zasshi (J. of the Society of Chemical Industry, Japan)* 37(7):831-33. July. [Jap]
Address: Raion Sekken K.K. Kenkyujo (Lion Soap Research Lab.).

2983. Takei, Toshiro. 1934. On the composition of "soy" [sauce] oil. I. *J. of the Society of Chemical Industry, Japan* 37(7):356B-57B. July. Supplemental binding to Kogyo Kagaku Zasshi. [Eng]

• ***Summary:*** "Soy oil is obtained as a by-product of soy [sauce] brewing. The oil is found floating on the surface of soy after pressing. It has dark brownish red colour and appears opaque on reflected light. Its odour bears resemblance to that of soy. It has hitherto been considered to be very difficult to bleach the color and remove the objectionable odour by either chemical or physical processes.

"Soy oil finds its chief industrial applications in lubricants and in manufacture of powdered soaps of low grade. Hitherto it has been believed that the oil is a mixture of the oils of soy-bean and wheat which are the chief raw materials of soy and contains some decomposition products."

Three samples of the oil had acid value 39.15-45.19, saponification value 186.12-186.66, iodine value 102.13-132.12, density at 15°C 0.89266, refractive index at 20°C 1.4630, relative viscosity 13.155/16°C, flash point 76.5°C. The oil is soluble in ethanol at room temperature and consists chiefly of ethyl esters of various fatty acids with about 16% free fatty acids and a small amount (0.29%) of glycerol. It can be refined by distillation, typical fractionations being detailed. Address: Lab. of Lion Soap Co.

2984. Ford Motor Co. 1934. Menu of dinner served at Ford Exhibit, Century of Progress, August 17, 1934. Dearborn, Michigan. 1 p.

• ***Summary:*** "Tomato juice seasoned with soy bean sauce. Salted soy beans. Celery stuffed with soy bean cheese. Puree of soy bean. Soy bean cracker. Soy bean croquettes with tomato sauce. Buttered green soy beans. Pineapple ring with soy bean cheese [tofu] and soy bean dressing. Soy bean bread with soy bean relish. Soy bean buscuit [sic, biscuit] with soy bean butter. Apple pie (soy bean crust). Cocoa with soy bean milk. Soy bean coffee. Assorted soy bean cookies. Soy bean cakes. Assorted soy bean candy."

Note 1. No mention is made of soy ice cream being served at this meal in Aug. 1934. Yet shortly thereafter, and definitely by Aug. 1935 soy ice cream for dessert was served at similar meals in the pine-panelled dining room in the Ford Engineering Laboratory (Strother 1961).

Note 2. A 1936 recipe book published by the Edison Institute describes how to make "Soy bean butter: Mix hydrogenated soy oil with salt, coloring matter and diacetyl to color and taste." Thus this product is similar to today's soy margarine.

Note 3. This is the earliest menu seen on which soyfoods appear prominently. Address: Dearborn, Michigan.

2985. Ishimaru, Yoshio. 1934. Shôyu no chozô-sei ni tsuite [On the preservability of shoyu]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 12(8):610-16. [Jap]
Address: Nôgaku hakase, Japan.

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2986. Adriano, F.T.; Oliveros, S.B.; Santos, D.S.; Villanueva, E.R. 1934. The physical characteristics and chemical composition of various brands of toyo (soy sauce) sold in the Philippines. *Philippine J. of Agriculture* 5(3):171-86. July/Sept. [14 ref. Eng]
• ***Summary:*** Gives detailed descriptions of methods of manufacture of soy sauce, and an analysis of 21 samples (18 from Philippine factories, two from China, and one from Japan). Table 3 (p. 179) gives the brand name, and the name and address of the manufacturer of these 21 sample products. Most Philippine soy sauce is made in and around Manila using traditional Chinese methods, including large earthenware jars with conical, woven bamboo covers; these jars are left in the open for sunning. Most of the soy beans used are imported from China, the yellow variety being the most commonly used. When ready, the "brown liquid is siphoned off with a foot valve made out of bamboo at the intake end of the siphon. The drawn sauce may be boiled, but generally it is bottled without heat treatment to be sold as first-class toyu. The residue is brined and sunned again to obtain succeeding lower grades of toyo. The practice of admixing molasses is widespread. Of the 21 samples analyzed, 12 contained reducing sugars analyzing about 10%.

Toyo is not as widely used in the Philippines as it is in other Oriental countries because in the Philippines there is a counterpart of toyo, the native *patis* (a Tagalog word), which is a high protein extract from brine-fermented small fish and shrimps. But "with the growing consciousness of the real nutritive value of the soy bean as a human food, the increasing popularity of the properly made toyo is assured."

Table 4 gives the physical characteristics and chemical composition of each of the 21 samples tested. The average specific gravity at 28°C is 1.2624. Total solids: 37.31%. Proteins: 4.56% (N x 6.25). Sucrose: 0.59%. Sodium chloride: 19.90%. Address: Labs. of Agricultural Chemistry, Bureau of Plant Industry, Manila.

2987. Cheng, Yu-Ching; Adolph, William H. 1934. Note on the preparation of d-glutamic acid. *J. of the Chinese Chemical Society* 2(3):221-24. Sept. [5 ref. Eng]
• ***Summary:*** "Summary: Very distinct improvements are shown to result from the application of copper or ferric chloride as catalysts in the preparation of glutamic acid from wheat gluten. Experiments also indicate the peanut press cake and soybean press cake are economical raw materials in the preparation of glutamic acid." Address: Yenching Univ.

2988. Mogi, Masatoshi. 1934. Miso jôzô ni kansuru saikin no kenkyû ni tsuite. I. [Research on the bacteria involved in the manufacture of miso. I.]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 10(9):983-96. Sept. English-language summary in Bulletin of the Agricultural Chemical Society of Japan 12:52-53, bound at the back of Nippon Nogei Kagaku Kaishi. [20 ref. Jap; eng]
• ***Summary:*** The value of miso production in Japan in recent years is more than 20 million yen per year. Address: Brewing Laboratory, Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

2989. Mogi, Masatoshi. 1934. Miso jozo ni kansuru saikin no kenkyu ni tsuite. I. [Studies on the microorganisms in the manufacture of "miso." I.]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 10(9):983-996. [20 ref. Jap]
• ***Summary:*** All the organisms isolated appear to play a part in the maturation of miso. Address: Kikkoman.

2990. Kahn, Dorothea. 1934. Marko can cook in many languages: As chef of the International House, University of Chicago, he feeds students of 47 nationalities from his 'melting pot of menus.' *Christian Science Monitor.* Oct. 10. p. WM10.
• ***Summary:*** About Mr. Marko Yerkovitch, who ancestry goes back to Yugoslavia. A recipe is given for Egg foo yung, which includes "Soy bean sauce to flavor."

"Now it wouldn't do to give a Chinese recipe without a Japanese one to follow... Miss Doris Foresman, who is in charge of the catering department of the House, says she has learned to be very careful to serve Japanese soy bean sauce at Japanese parties, and Chinese soy bean sauce at Chinese parties." There follows a recipe for Tempura (served with "Japanese soy bean sauce").

2991. Laming (W.C.) & Co., Ltd. 1934. Display ad: Derive the great benefit of the Soya Bean by adding Kikkoman, the sauce without vinegar, to your diet. *Times* (*London*). Oct. 10. p. 17, col. 1.
• ***Summary:*** "Nature has given to the World in the Soya Bean a vegetable food that contains valuable and essential properties for counteracting digestive and gastric disorders. And in Kikkoman scientists have produced from this natural food a piquant sauce that immediately appeals to the palate and which can be used with great benefit with your every meal. Get a bottle to-day and try it with Fish, Poultry, Joints, Savouries, Soup, etc. Kikkoman is highly concentrated and should, therefore, be used sparingly. Obtainable at all leading Grocers and Stores at 1/- [1 shilling] per bottle, or order direct, adding 3*d.* part postage [=for part of the postage]. Sole Distributors for U.K. (Trade enquiries invited)." A small illustration shows Kikkoman's trade mark (see next page).

Note: This is the earliest document seen (Dec. 2005) in the *Times* (London) that mentions Kikkoman. A fairly similar ad appears in the 27 Feb. 1935 issue (p. 17, col. 1). Address: 29, Tooley St., London, S.E. 1.

2992. Laming (W.C.) & Co., Ltd. 1934. Display ad: The sauce for epicures! Kikkoman, the sauce without vinegar. A

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Derive the great benefit of the SOYA BEAN

by adding—

Kikkoman

TRADE MARK

The SAUCE without Vinegar

TO YOUR DIET

Nature has given to the World in the Soya Bean a vegetable food that contains valuable and essential properties for counteracting digestive and gastric disorders. And in KIKKOMAN scientists have produced from this natural food a piquant sauce that immediately appeals to the palate and which can be used with great benefit with your every meal. Get a bottle to-day and try it with Fish, Poultry, Joints, Savouries, Soup, etc. KIKKOMAN is highly concentrated and should, therefore, be used sparingly.

Obtainable at all leading Grocers and Stores at 1/- per bottle, or order direct, adding 3d. part postage.

Sole Distributors for U.K.:

W. C. LAMING & CO., LTD. (Dept. T.)
29, TOOLEY STREET, LONDON, S.E.1
(Trade enquiries invited.)

The healthful SOYA BEAN in Kikkoman

TRADE MARK

DOUBLES THE VALUE OF YOUR DAILY FOOD!



Nature has given to the World in the Soya Bean a vegetable food for counteracting digestive and gastric disorders and in KIKKOMAN scientists have produced from this natural food a piquant sauce with an appetising saline flavour that immediately appeals to the palate. Get a bottle to-day and try it with Fish, Poultry, Joints, Savouries, Soup, and all Egg, Cheese and Vegetarian dishes, etc. KIKKOMAN **CONTAINS NO VINEGAR**, is highly concentrated and is unrivalled for children and invalids.

SEE AND TEST IT AT THE IDEAL HOME EXHIBITION
Stand No. 337 (Gallery National Hall)
Obtainable everywhere. If any difficulty send 1/-, plus 3d. part postage, for a bottle to:

W. C. LAMING & CO., LTD. (Dept. T)
14, TOOLEY STREET, LONDON, S.E.1
Trade Enquiries Invited.

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product of the healthful soya bean. *Times (London)*. Oct. 24. p. 17, col. 7.
• ***Summary:*** "Kikkoman is the only product of its kind in the world. Made from the wonderful Soya Bean, it is an important Health Food that should be included in everyone's diet. Kikkoman is a real tonic, appetiser and stimulant, increases vitality and is decidedly nourishing. Kikkoman adds to Soups..." Address: 29, Tooley St., London, S.E. 1.

2993. Koerber, Lili. 1934. Japanese banquet: Translated from the *Prager Tagblatt*, Prague German Language Daily. *Living Age (The)* 347:117-20. Oct. See p. 118.
• ***Summary:*** "At this point the girls begin preparing the main dish, the *skiaki* [sukiyaki]... Then they put a frying pan on the stove, cover it with a generous layer of fat and add green onions, beans that look like earth worms, sugar, soya-bean sauce, and finally pieces of meat." Note 1. This is the earliest English-language document seen (April 2012) that uses the term "soya-bean sauce" to refer to soy sauce.

Note 2. This is the third in a series of three articles in this issue titled "A Mirror to Japan."

2994. Laming (W.C.) & Co., Ltd. 1934. Display ad: The wonderful soya bean in its most delectable form. Kikkoman, the sauce without vinegar. Nature's tasty tonic! *Times (London)*. Nov. 8. p. 17, cols. 1-2.
• ***Summary:*** "Kikkoman is the only product of its kind in the world. Made from the wonderful Soya Bean,..." Address: 29, Tooley St., London, S.E. 1.

2995. *Food Industries*.1934. Promoting the product. 6(11):519. Nov.
• ***Summary:*** Page 282 (right column, top): "La Choy Food Products, Inc. will conduct an institute of Chinese cookery this winter."

2996. Takei, Toshio; Tomiyama, Shin-ichi. 1934. On the composition of Tamari soy oil. *J. of the Society of Chemical Industry, Japan* 37(11):650B. Nov. Supplemental binding to Kogyo Kagaku Zasshi. [Eng]
• ***Summary:*** "Tamari soy oil is obtained as a by-product of Tamari soy [sauce] brewing. The oil is found floating on the surface of Tamari soy after pressing. Tamari soy is a sort of soy which is made from soy bean only. A large quantity of tamari soy is brewed in the prefectures of Aichi, Gifu, Miye [Mie], Shizuoka and Nagano. Tamari soy oil resembles soy oil in colour and in odour, yet these oils differ considerably from each other in viscosity. On account of its dark colour and strong odour Tamari soy oil is estimated at a low price."

A sample, consisting of glycerides, ethyl esters of fatty acids, and free fatty acids (50%) yielded approximately 2.13% crude glycerin and 2.46% ethanol, and had (values for ordinary soy oil in parentheses) acid value 105.9 (41.9), saponification value 185.6 (186.3), iodine value 149.4 (102.1), refractive index at 20°C 1.4749 (1.4630), density at 15°C 0.9172 (0.8926), flash point 218°C (76.5°C), Redwood viscosity (50 cc at 20°C) 5 feet 57 inches (1 foot 17.6 inches).

Note 1. This is the earliest English-language document seen (Jan. 2000) with the term "soy oil" in the title. However it refers to the dark oil that rises to the surface during soy sauce fermentation, rather than to the clear vegetable oil to which it refers today.

Note 2. This is the earliest English-language document seen (March 2012) that uses the term "tamari soy" to refer to tamari soy sauce. Address: Lion Soap Co., Ltd.

2997. Torres Herrera, José M. 1934. El haba soya, su cultivo y beneficio [The soybean, its culture and benefits]. *Boletin de Agricultura y Trabajo (Nicaragua Ministerio de Agricultura y Trabajo)* 6(54):24-26. Aug.; 6(55):6-8. Sept.; 6(56-57):6-12. Oct/Nov. 3a Epoca. [Spa]
• ***Summary:*** The article begins with the following: "In previous editions of this bulletin we inserted various articles concerning the cultivation of soya; however, given the large importance of this legume, we decided to reprint this article by José M. Torres Herrera from the *Boletín Agrícola* of Medellín, Colombia" [April 1934. 8(189):1180-92]. The soybean variety Brazilian Yellow can be obtained in Sao Paulo for 10 cents gold at the most" (i.e., it is inexpensive).

Contents: Part I. Introduction. Climatological conditions for different varieties. Soils appropriate for this crop. Inoculation with bacteria. Preparation of the soil. Soya in crop rotations.

Part II. Sowing the seeds. The work of cultivation. Calculation of the cost of production for 6,400 square meters (Data taken from the Palmira Agricultural Experiment Station, Bulletin No. 1; the cost is $0.45 per arroba = ca. 25 lb). Soybean varieties ("Agriculturists interested in planting this crop which has no equal, can obtain seeds free of charge from the Pamira [sic, Palmira] Agricultural Experiment Station or the Antioquia Agricultural Society [Sociedad Antioqueña de Agricultores, Colombia]"). Production of seeds. Yields of various varieties.

Part III. Harvesting and threshing of the grain. The uses of soya (*la soya*). Utilization of the plant and seeds of the soybean (*de las habas soyas*): The plants as hay, pasture, green forage, ensilage, green manure. The seeds as whole dry soybeans (*habas secas*, for making infant foods, flour, soup, butter, diabetic foods and breads, cooked whole soybeans, confections, health foods [alimentos para sano]: soymilk, soybean roasts or steaks, soy sprouts. Breakfast foods: Vegetable curd or cheese [cuajada o queso vegetal], soy sauce, malted milk, soy coffee cakes, flour, livestock feed), green vegetable soybeans (*habas verdes*), soy flour (*harina de habas*), soy oil (*aceite de habas*). Soya as human food. The composition of various legumes. Soy flour. Soy oil. Soy milk (*leche de soya*): Nutritional comparison of soy milk

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and cow's milk, powdered soymilk, fermented soymilk, tofu (*queso soya*), soy casein (*Caseína*). Whole dry soybeans: Roasted soybeans (*habas tostadas*), soy coffee (*café de soya*), soy chocolate (*chocolate de soya*). Green-seeded soybeans (*habas soyas verdes o legumbres*): Soy sprouts, soy sauces. Edelsoya (soy flour made by Berczeller). The value of soy forage. Soybeans in mixtures with other crops. Green manure. The concept of Dr. Uribe Echeverri, minister in Brazil.

Note: No mention is made of soya in Nicaragua. Address: Agrónomo Nacional de la Intendencia del Chocó [Colombia].

2998. Laming (W.C.) & Co., Ltd. 1934. Classified ad: Kikkoman.–The sauce for Christmas fare. *Times* (*London*). Dec. 12. p. 1, col. 6.

• ***Summary:*** "Made from the wonderful Soya Bean. No Vinegar. Aids digestion, assists appetite, nourishes and tones the system. Unrivalled with hot and cold joints. Poultry, Savouries, Soups, and Salads. 6*s*. per half-dozen bottles, or singly at leading Stores and Grocers." Address: 29, Tooley St., London, S.E. 1.

2999. Don Avon Marketeria Limited. 1934. Toronto's show place of fine foods (Ad). *Toronto Daily Star* (*Canada*). Dec. 13. p. 7.

• ***Summary:*** In the upper right corner of the ad: "La Choy vegetables, tin–37¢. Chow mein noodles, tin–25¢. Bean sprouts, tin–28¢. "Soy Sauce, tin–15¢."

Note: This soy sauce was probably made by La Choy in the USA.

A similar ad appeared in the Dec. 20 (p. 36) issue of this newspaper. In the upper left corner of the ad we read: "Imported delicacies: Bean sprouts, tin–15¢. Soy Sauce, bottle–28¢... La Choy vegetables–37¢." Address: 837 Danforth Ave., Toronto.

3000. Carqué, Otto. 1934. Vital facts about foods: A guide to health and longevity with 200 wholesome recipes and menus and 250 complete analyses of foods. 2nd ed. Los Angeles, California: Published by the author. 208 p. Index. 24 cm. [20+* ref]

• ***Summary:*** This so-called 2nd edition is identical to the first edition (1933) except that: (1) Two lines on the 2nd page of the Preface have been moved to the first page; both pages are unnumbered. (2) Two paragraphs, titled "Preface to the second edition" have been added to the end of the Preface and dated "November, 1934." The author's signature again appears at the end of the Preface.

Note: The first 5,000 copies were exhausted in about a year. Address: Los Angeles, California.

3001. Yamaguchi, H.S.K.; Garis, Frederic de; Sakai, Atsuharu. 1934-1950. We Japanese: Being descriptions of many of the customs, manners, ceremonies, festivals, arts and crafts of the Japanese, besides numerous other subjects. Yokohama, Japan: Yamagata Press. 592 p. 889 illust. Index. 21 cm.

• ***Summary:*** "Written with great style, this work brings traditional Japan to life in a way that no contemporary guide book can, explaining all the curious features of daily life in Japan." This is a combination of 3 books. Book I (p. 1-183), written by Frederic de Garis for H.S.K. Yamaguchi, was first published in Dec. 1934. Book II (p. 183-375), written by Atsuharu Sakai for H.S.K. Yamaguchi, in June 1937. Book III (p. 377-592), with the same authorship as Book II, was first published in June 1949. All contain entertaining information on Japanese culture and foods.

They discuss: Red rice (*sekihan*, with azuki beans, p. 361. The Broken Needles Mass or Hari-Kuyo (p. 160, needles are stuck into tofu on Feb. 8 or Dec. 8). Sukiyaki (p. 264-66, incl. its origin and history), sembei (p. 267, senbei or rice crackers, incl. shoyu). Miso or bean-paste (p. 269-70). Shoyu or Japanese soy (p. 271-73, incl. Kikkoman, Higeta, Yamasa, Kagi-Yamasa, and Marukin logos and wooden kegs). Sekihan and hot water (p. 292, azuki beans as part of a taboo for Japanese girls). Setsubun or Bean-Throwing Ceremony (p. 554-55, mame-maki held on setsubun).

Note: This is the earliest English-language document seen (March 2009) that uses the term "bean-paste" (not preceded by the word "soy" or "soya") to refer to miso. Address: Manager, Fujiya Hotel, Miyanoshita, Japan.

3002. Fukai, Tôshi. 1934. Shôyu hakkô to shiyu no kankei. V. Shibô-zoku esuteru-rui no shôyu bôbai-sei ni tsuite [The relation between shoyu brewing and fatty oils V. The toxic action of several fatty esters on the shoyu mold yeast]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 119. p. 209-17. [Jap]
Address: Jozo Shikensho. 1 Gishu; 2. Kenshuin.

3003. Kurono, Kanroku; Toriyama, S. 1934. Suiso ion nôdo chôsetsu shôyu jôzô yobi shiken [Preliminary brewing experiment of shoyu regulating the hydrogen ion concentration in the moromi (mash)]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 29(11):2-8. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Kenshuin.

3004. Kurono, Kanroku; Nagahashi, K.; Toriyama, S. 1934. Papain tenka shôyu jôzô skin [Brewing trial of shoyu by the addition of papain]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 119. p. 351-59. [Jap]
Address: Jozo Shikensho. 1 Gishi; 2. Moto Joshu; 3. Moto Kenshuin.

3005. Kurono, Kanroku; Toriyama, Shiro. 1934. Suiso ion nôdo chôsetsu shôyu jôzô yobi shiken [Preliminary shoyu brewing experiment regulating the hydrogen ion

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concentration in the moromi (mash)]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 119. p. 361-67. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Kenshuin.

3006. Kurono, Kanroku; Takisawa, S.; Toriyama, S. 1934. Kôji-kin no tanpaku bunkai kôso ni kansuru kenkyû. III Shôyu moromi-chû no tanpaku bunkai kôso ryô (Ueber die proteolytische Enzyme des Aspergillus oryzae. III. Proteolytische Enzymmenge in die Maischen von Schoyu) [On the proteolytic enzyme of koji mold. III. The amount of proteolytic enzyme in shoyu moromi]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 119. p. 53-54. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Joshu; 3. Moto Kenshuin.

3007. Kurono, Kanroku; Iwashita, N. 1934. Paraokishi ansoku kôsan oyobi sono esuteru no seishu bôfu-sei narabini shôyu bôbai-sei ni tsuite (Ueber die Wirkung der Para-oxybenzoesaeure und ihren Estern als Schuetzmittel auf Sake und Schoyu). II. [On the effect of para-oxy-benzoic acid and its ester as anti-mold agents for sake and shoyu. II.]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 119. p. 37-. [Jap]*
• ***Summary:*** P-oxy-benzoic acid or para-hydroxybenzoic acid exists and is probably a preservative. Address: Jozo Shikensho. 1. Gishi; 2. Joshu.

3008. Miyata, K. 1934. [On anti-mold substances]. *Aichi-ken Kogyo Shikenjo* 6:85-. [Jap]*

3009. Nakaya, K. 1934. [Studies on the treatment of soybean for the soy sauce fermentation]. *Noda Soy Sauce Co. Ltd., Report* 4:83-108. [Jap]*

3010. Oota, Kiyoshi. 1934. Shôyu no kabi-dome-zai ni tsuite. Inshokubutsu bôfuzai no kenkyû, sono san no ichi [On the anti-mold substances for shoyu. Research on preservatives for beverages, 1 of 3]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 29(1):23-49; 29(2):22-29; 29(3):18-29. [12 ref. Jap]
Address: Igaku Hakase.

3011. Oota, Kiyoshi. 1934. Shôyu no kabi-dome-zai ni tsuite [On the anti-mold substances for shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 29(8):19-27; 29(9):24-37; 29(10):18-27; 29(13):10-20. [86 ref. Jap]
• ***Summary:*** This research on preservatives for beverages is particularly interested in biodipal B ("biojiparu"). Address: Nôgaku Hakase.

3012. Ota, K. 1934. [Studies on the preservatives for foods. III-I. Chemical preservatives for soy sauce]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 29(1):23-49. [Jap]*

3013. Adachi, Isamu; Sakurai, Shigeru. 1934. Nihon shokumotsu-shi [History of Japanese foods]. Tokyo: Yuzankaku. 480 p. [Jap]
• ***Summary:*** This is the best book seen on the history of Japanese foods. The following soyfoods are discussed: Firm tofu, soymilk and okara (p. 290-91; discusses the *Teikun Orai* by Iseno Teijo, tofu-kan, tofu-jiru = soymilk, setsurun-sai = okara), yuba (p. 336), shoyu and tofu (p. 370-71), unohana (okara, p. 377), tofu and natto (p. 382-83).

3014. Dominion Bureau of Statistics, Ottawa, Canada. 1934. Imports into Canada for consumption, years ended 31 March 1929 to 1933. *Trade of Canada*. Fiscal year ended March 31, 1933.
• ***Summary:*** Under Imports–Sauces–Soy, Soya (Table 36, p. 285), statistics are given from 1929-1932 for gallons and dollar value from United Kingdom, Hong Kong, China, Japan, Syria, United States. Japan was the leading supplier for all four years. In 1929, the peak year, 104,606 gallons were imported worth $45,359. The leading supplier by far was the Japan (67,541 gallons), followed by Hong Kong (33,396 gallons). No statistics are given for soy sauce imports from Syria for 1929, 1930, 1931, or 1932. However, for total imports and for general tariff, under *montant*, a figure of 132 gallons is given for Syria.

Imports of peanut oil and soya bean oil [grouped together as one, so we cannot tell how much was soya bean oil] (p. 300). The United Kingdom was the leading supplier for all four years. In 1931, the peak year, 197,753 gallons were imported worth $129,581. The leading supplier by far was the United Kingdom (118,480 gallons), followed by China (38,941 gallons).

Imports of soya beans, soya bean cake and soya bean meal, for use exclusively in the manufacture of cattle food and of fertilizers (p. 338, in cwt = hundredweights; 1 cwt = 112 lbs). China was the leading supplier for all four years. In 1933, the peak year, 46,129 cwt were imported worth $57,097. The leading supplier was China (25,491 cwt), followed by the United States (15,899 cwt).

Imports of peanut oil and soya bean oil for the manufacture of soap, and peanut oil for canning fish [grouped together as one, so we cannot tell how much was soya bean oil] (p. 342). The United States was the leading supplier for all four years. In 1929, the peak year, 941,072 gallons were imported worth $652,323. The leading supplier by far was the United States (743,866 gallons), followed by the UK (100,590 gallons) and China (96,616).

Note: This is the earliest document seen (Dec. 2007) concerning soybean products (soy sauce) in Syria. This document contains the earliest date seen for soybean products in Syria (1932); soybeans as such had not yet been

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reported by that date. Address: Ottawa, Canada.

3015. *Manchoukuo Year Book (The)*.1934. 1934. xxix + 852 p. See p. 234-35, 256-59, 267-79, 350-51, 396-97, 399-409, 466. Published by Minami Manshu Tetsudo Kabushiki Kaisha, Toa-Keizai Chosakyoku (South Manchuria Railway Co., East-Asiatic Economic Investigation Bureau), Tokyo. [Eng]

• ***Summary:*** Chapter 10, "Agriculture," discusses soya beans in detail. Some 34% of the "value of the manufacturing products represent the products of bean oil mills using soya beans as raw material" (p. 234).

Table 1 shows that agricultural products occupy about 50% (of the value in Haikwan taels) of total exports from Manchuria during 1929, 1930, and 1931. Of the manufactured products, [soy] beancake, [soy] bean oil and bran, which are directly produced from agricultural raw materials, constitute 80% of the total (p. 235).

The South Manchuria Railway (S.M.R.) has played a leading role in developing Manchurian agriculture (especially [soy] bean production) and expanding exports. A table (p. 256) shows the SMR's revenues from passengers and freight for selected years from 1907-1931. Freight revenues are, overall, about seven times as large as passenger revenues. The main source of freight revenues is coal, followed by [soy] beans and beancake (Source: SMRC' Business Report). "The export of soya beans, beancake, and bean oil has increased three to four times in the past twenty years." The SMRC as established an Agricultural Experiment Station where crops (such as beans) and animals have been improved, bringing much benefit to Manchurian farmers. SMRC"s work has contributed both directly and indirectly to the agricultural development of Manchuria by Han Chinese and by Korean settlers (p. 256).

Before the Manchurian incident, Japanese farmers were oppressed by the Northeastern military leaders and found it practically impossible to farm outside the South Manchuria Railway zone. Thus, before the Manchurian incident, only 730 Japanese households were engaged in agriculture in Manchuria. "The contribution made by Koreans to the development of agriculture in Manchuria cannot be overlooked... their entrance into the interior of Manchuria began only after the Russo-Japanese War" [1904-05]. A table (p. 257) shows the number of Japanese settlers and Korean settlers in Manchuria from 1908 to 1930. The number of Japanese settlers increased from 56,433 in 1908 to 288,784 in 1930. The number of Korean settlers increased from 51,070 in 1910 to 607,119 in 1930.

The Wanpaoshan incident happened just before the Manchurian incident (p. 257). Note: The Wanpaoshan Incident (Jap: *Manpozan jiken*) was a minor dispute between Chinese and Korean farmers which occurred on 1 July 1931, prior to the Mukden Incident [best known in Japan as the Manchurian Incident]. Although the issue was trivial, it was highly sensationalized in the Japanese and Korean press, and used with considerable propaganda effect to increase anti-Chinese sentiment in the Empire of Japan prior to the invasion of Manchuria [in Sept. 1931] (Source: Wikipedia, May 2009). As of May 2009 Mukden is known as Shenyang.

"The agricultural development in Mongolia was suddenly brought about after the Russo-Japanese War, and particularly after the establishment of the Republic of China [on 1 Jan. 1912], as the former policy of protecting the ancient kings of Manchuria was abolished, and the settlement of the Han [Chinese] race was encouraged. The Mongolians were more and more oppressed and obliged to retreat gradually to the inner desert districts, and the barren fields of Mongolia came to be rapidly cultivate by the Han settlers.

"Manchuria was made a great agricultural country by the joint efforts of the Hans, Japanese, Koreans, and Russians, with the Hans as the main factor; Manchuria came to have intimate relations with the world economy through its export agricultural products."

Agricultural products in the three provinces of Fengtien, Kirin, and Heilungkiang: Among the legumes are soya beans, Indian beans, and green peas. Table 13 shows the cultivated area (hectares) and production (metric tons) of these crops: (1) In the three provinces: Soya beans: 4,102,990 ha and 5,124,760 metric tons. Other legumes: 353,190 ha and 54,467 metric tons. (2) In the Kwantung Leased Territory and South Manchuria Railway Zone: Soya beans: 31,923 ha and 17,595 metric tons. Other legumes: 54,467 ha and 160,193 metric tons. Statistics are also given in Table 13 for Kaoliang (#2 crop after soya beans in area and production), millet (#3), maize (#4), wheat (#5), etc. Soya beans account for nearly 30% of the total acreage (p. 258-59).

Table 22 (p. 267) shows that area and production of soya beans in 1933 was larger Northern Manchuria than in Southern Manchuria. A long section titled "Soya beans" (p. 267-70) gives details about all aspects of soya beans, bean oil, and beancake, including exports.

Table 23 (p. 278), titled "Exports of principal agricultural products," gives statistics from 1922 to 1931 for quantity exported and value (in H.K. Taels) for 9 major products. The leading every year is either soya beans or beancake; bean oil is also important.

A section titled "Export of soya beans, beancake, and bean oil in recent years" (p. 279) includes Table 24, "Export of soya beans, beancake, and bean oil through the four ports of Dairen, Yingkow, Antung, and Vladivostok," total tons and relative index from 1926-27 to 1932-33.

The Dairen Agricultural Company, established in 1929, brings Japanese immigrants to Manchuria and helps them to become land-owning farmers; it does not operate any farms directly (p. 300).

The origin of Japanese administration on the Liaotung peninsula, the southern end of Manchuria, started in 1905

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during the Russo-Japanese War. In Nov. 1906 Japanese first began to administer agricultural programs in Manchuria by issuing the regulations for the Kwantung Government Agricultural Experiment Station, and the establishment of the agricultural experiment station at Dairen. This station is now located at Chinchow (Chin-chou, or Jinzhou, in Liaoning province, as of 2009) (p. 300-01). On p. 302 is a full page of references to Japanese documents that served as the sources for the tables in this chapter on agriculture in Manchuria. Almost all were compiled and published by the South Manchuria Railway Co. (SMRC).

Chapter 14, "Industry," begins with a "General outline" (p. 350-51). Although Manchuria is rich in natural resources, modern industry did not develop until about 30 years ago. Before that, small enterprises supplied the needs of immediate neighborhoods. With the eastern advance of Russian influence and the establishment of Russian administration in Manchuria near the end of the 19th century, several modern industries appeared. "Before any general industrial development could take place, however, the Russo-Japanese War (1904-05) broke out, and as the result of the war, Japan came to administer the Kwantung Leased Territory and the railway zone. Since that time modern industry has developed in Manchuria"–including oil milling. Industry in North Manchuria [where Harbin is located] is inferior to that in South Manchuria in capital and equipment. Discusses the North Manchuria Railway.

A section on "Chemical industry" (p. 396-409) discusses oil milling in great detail.

Page 466 shows miso and soy sauce production in Manchuria. The 17 Japanese-run plants make 2,800 tonnes of miso and 4,550 tonnes of soy sauce. The 44 Manchurian-run plants make no miso and 1,381 tonnes of soy sauce. The number of factories in each major city and the capital assets of the companies are listed. Dairen is the main center of Japanese miso and soy sauce production, followed by Mukden, then Port Arthur. Hsinking is the main center of Manchurian soy sauce production.

Note: This Year Book was published from 1931 to 1941 by Japanese interests (SMRC) to justify the Japanese occupation and development of Manchuria after the "Manchurian incident."

3016. McGuire, Ray F. 1934. Soybean values. Cedar Rapids, Iowa: Soybean Production Advisory Board. 15 p. [24 ref]
• ***Summary:*** Contents: Values as farm crop. Commercial possibilities. Valuable human food. Modern method of producing oil and oil meal. Utilization of soybean oil. Utilization of soybean oil meal. Soybean flour. Imports, exports and the tariff. Marketing soybeans, oil and meal. Potential markets. Production last year (in the United States). Graphs show the domestic production of soybean oil, 1927-1932, and the increasing seed production in Iowa 1924-1933. A map shows the principal soybean producing counties in Iowa. Address: Iowa.

3017. White, William C. 1935. The Japanese in America: A close-up. Citizens or aliens, it is hard for them to join in the life of the country. *New York Times*. Jan. 6. p. SM9.
• ***Summary:*** Begins by describing "Little Tokyo," the Japanese section of Los Angeles–which is just 3 blocks from the main business section of Los Angeles. Includes a description of the chrysanthemum festival, drug, stores, newspapers, and restaurants which "serve hamburgers and hot dogs as well as soya bean curd [tofu] and rice."

About 135,000 Japanese live in America, and 97,000 of those (72%) live in California. Only about 6,000 live in New York. More than 45,000 live in or near Los Angeles, where they are considered a problem. They live by themselves in certain sections and have no social contacts with white Americans–except that their children attend public schools.

Significant numbers of Japanese began to arrive in California after 1880. By 1910 more than 80,000 had entered as immigrants. The 1906 "gentleman's agreement" stopped almost all Japanese immigration and the Congressional act of 1924 stopped it entirely. But all Japanese born in the USA (*nisei*) are American citizens, and this latter group now slightly outnumbers those immigrants born in Japan [*issei*]–who are barred by law from becoming naturalized citizens.

The average age of the *issei* in America is less than 45, yet they are prevented by law from owning land in most Western states. "The laws which prohibit marriages between any two races apply to them." Children offer one way of getting around the land laws. The parents simply buy land and register their children as the legal owners. Unlike German immigrants, for example, they make little effort to assimilate, yet they also take care of themselves and rarely appear on charity rolls.

The feeling in California against Japanese is based primarily on two issues: (1) They are believed (incorrectly) to have a high birth rate, which could lead to the "yellow peril." (2) They can live more simply than whites and therefore "undersell the whites" in goods and labor. There is growing conflict between Japanese-American youth, educated in American schools and often wanting to become part of American culture, and their parents–who want to keep Japanese culture alive.

"Within recent weeks there have been terroristic raids on Japanese families settled around Phoenix, Arizona. There have been similar affairs at various times in California. There have been night riders, occasional bombs. Part of the Arizona terror is directed at the fact that the Japanese, 750 of them, half of them born in this country and therefore American citizens, are making a living on land where white farmers, settlers from Oklahoma and Texas, have failed."

Note 1. See also interview: Tadano, Mary; Tadano, Michiko. 2002 "History of Showa Shoyu Brewing Co.: Sept. 17.

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Note 2. This is the earliest document seen (Feb. 2012) that concerns the Tadano family (later makers of soy sauce) near Phoenix, Arizona–however it does not mention the family by name.

Photos show: (1) A Japanese religious ceremony in Los Angeles. (2) Japanese children in a Los Angeles classroom. Address: Los Angeles.

3018. Laming (W.C.) & Co., Ltd. 1935. Display ad: For greater health benefit from food–use Kikkoman, the sauce without vinegar. *Times* (*London*). Jan. 18. p. 15, col. 1.
• ***Summary:*** "Made from the wonderful Soya Bean, rich in the valuable vitamins A, B and D, and acclaimed by experts as the most valuable vegetable food known to mankind, Kikkoman is at once a tonic, digestive, appetiser and nourisher. Ordinary food assumes a new health value when Kikkoman is added." An illustration to the right of the text shows a bottle of Kikkoman sauce. Address: 10, Tooley St., London, S.E. 1.

3019. Ralston Purina Co. 1935. Soybeans: A cash crop. St. Louis, Missouri. 10 p. Prepared by E.F. Johnson. Jan. 23 cm.
• ***Summary:*** This booklet (also prepared by E.F. Johnson) is somewhat similar to that titled "Soybeans for beginners," published by Ralston Purina in March 1934. Contents: Map of the Midwest showing the company's soybean processing plants in St. Louis, Missouri, Lafayette, Indiana, and Circleville, Ohio. "Our soybean mills located to serve you best." Introductory message from J.H. Caldwell, Vice-President of Ralston Purina Co. (15 Jan. 1935, St. Louis, Missouri). Soybeans–A cash crop: Introduction, three outstanding reasons for great interest in soybeans this year (1) Year-round cash market now established. (2) Chinch bugs leave soybean alone. (3) Soybeans can be planted on corn-reduction acres. Established markets necessary for expansion. Soybeans are an easy crop to grow: Seedbed preparation most important operation (weeds, stand, yield), a simple prescription for a good seed bed. Varieties recommended for commercial production (Dunfield, Manchu, Illini), recommended new varieties (Mandell, Scioto, Manchuria, Mukden. Note: Virginia, Wilson, Ebony, Pekwa and Kingwa are not recommended due to low oil content and less attractive meal). Growing soybeans commercially: Inoculation, solid or row seeding, rate of seeding, date of seeding, don't plant too deep, cultivation. Harvesting: Combine method recommended, grain binders used in many sections, mowing machine and windrower preferred by some growers, use regular grain separator for threshing. Yield of grain ("Soybeans will yield from 20 to 40 bushels to the acre... Yields of 40 to 45 bushels per acre are not uncommon in Illinois"). Storing and marketing soybeans: Sell through your local elevator, value of meal and oil determines price of soybeans. Future outlook for soybeans in U.S.: Introduction, increased acreage next year anticipated, wide diversity of use of soybean products: Flour, soybean oil meal, soybean oil, other uses (milk, cheese [tofu] bean sprouts, flavoring sauce, substitutes for coffee and peanuts). Using soybeans to check chinch bug movement. A soybean program. Ad: Use the products that make a market for your soybeans: "Three Purina soybean processing plants are located in the heart of the Soy Belt..." Soybean oil meal is used in Purina Chows.

Photos show: (1) E.F. Johnson (facing p. 1). (2) The 7-story Purina Mills plant at Circleville, Ohio, "complete with new modern soybean processing machinery" (p. 6). Purina Mills plants at Lafayette, Indiana, and St. Louis, Missouri (p. 7).

"Future outlook for soybeans in U.S.: Previous to 1934, 4,000,000 bushels was the largest amount of soybeans to be processed from a single crop. At least 9,000,000 and possibly 10,000,000 bushels of the 1934 crop will be processed into meal and oil... We predicted last year that the reduction in cotton-seed meal through the passage of the Bankhead Bill would result in a big increase in demand for soybean meal and in higher prices on soybeans. Both of these predictions have already been proven. The big increase in soybean meal this year still is far short of supplying the loss in cottonseed meal." Address: St. Louis, Missouri.

3020. Laming (W.C.) & Co., Ltd. 1935. Display ad: Double the health value of food with Kikkoman, the sauce without vinegar. Made from the wonderful Soya Bean. *Times* (*London*). Jan. 31. p. 17, col. 1.
• ***Summary:*** "Nature has given to the World in the Soya Bean a vegetable that contains valuable and essential properties for counteracting digestive and gastric disorders. And in Kikkoman scientists have produced from this natural food a piquant sauce that immediately appeals to the palate..." An illustration shows a bottle of Kikkoman. Address: 14, Tooley St., London, S.E. 1.

3021. Laming (W.C.) & Co., Ltd. 1935. Display ad: There is no adequate substitute for Kikkoman, the sauce without vinegar. *Times* (*London*). Feb. 13. p. 15, col. 1.
• ***Summary:*** "Kikkoman is more than a condiment; it is an essential food item, made from the wonderful Soya Bean. Men-folk particularly appreciate its palate-freshening qualities." An illustration shows a bottle of Kikkoman. Address: 14, Tooley St., London, S.E. 1.

3022. Barnett, Harold M. Assignor to S.M.A. Corporation, Cleveland, Ohio. 1935. Manufacturing of flavoring materials. *U.S. Patent* 1,992,462. Feb. 26. 4 p. Application filed 9 June 1933.
• ***Summary:*** "This invention relates to methods for the manufacture of flavoring materials from protein matter and, more particularly, to methods of treating protein materials capable of yielding appreciable quantities of glutamic acid.

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"Protein materials of various kinds may be hydrolyzed to yield mixtures of amino acids which have a very characteristic meat-like flavor, this flavor being obtainable as the result of hydrolysis of proteins from purely vegetable sources as well as from animal proteins. The characteristic flavor, is found to be a property of the glutamates, particularly monosodium glutamate, although other amino acids also contribute to the 'bouquet' of flavor. Glutamates or a mixture of amino acids containing a considerable proportion of glutamates, constitute valuable condiments or sauces which may be used on food dishes, such as meats, soups, gravies, macaroni, rice, vegetables, etc., to improve the flavor of these. In addition to its value as a flavoring agent, monosodium glutamate has a certain food value in itself and is thought to be an aid to digestion."

Example (claim) 1. "A method of preparing a flavoring material which comprises, hydrolyzing protein matter in the presence of hydrochloric acid, and neutralizing the resulting hydrolysate to a hydrogen ion concentration of about pH 5.2 to 5.8."

Soy is not mentioned. Address: Garfield Heights, Ohio.

3023. Laming (W.C.) & Co., Ltd. 1935. Display ad: Derive the great benefit of the Soya Bean by adding Kikkoman to your daily food. *Times* (*London*). Feb. 27. p. 17, col. 1.
• ***Summary:*** "Nature has given to the World in the Soya Bean a vegetable food that contains valuable and essential properties for counteracting digestive and gastric disorders... Kikkoman contains no Vinegar,..." Address: 14, Tooley St., London, S.E. 1.

3024. Monnier, Emile. 1935. Les préparations à base de graines de soja dans l'alimentation des Annamites [Preparations based on soybeans in the diet of the Annamites (of Central Vietnam)]. *Bulletin Economique de l'Indochine* (*Hanoi*) 38:66-86. Jan/Feb. Also in Annales de Medecine et de Pharmacie Coloniales (1935) 33. p. 34-57. [11 ref. Fre]
• ***Summary:*** An excellent, very precise and detailed discussion of the subject. Contents: Introduction, botany of the plant, nutritional composition, and utilization. Soymilk (used to make tofu–*le fromage de soja–dau-phu*). Tonkin soy sauce (*La sauce de soja = dau-tu'o'ng*. It is made by fermentation of a mixture of glutinous rice and roasted soybeans. It is made on a family level. It corresponds roughly to Japanese shoyu and Chinese soy sauce (*téou-yeou*). Describes exactly how it is made). Soy cream [yuba] (*La crème de soja = dau-phu-chuc*). It comes in the form of sheets. Address: Chef du Laboratoire de Chimie de l'Institut Pasteur, Hanoi.

3025. Staley, A.R. 1935. Soy sauce goes American: Formerly made by crude Oriental methods, now a scientifically controlled product. *Food Industries* 7(2):66-67. Feb.
• ***Summary:*** Describes Staley's American method of manufacture. The soybeans are first run through high-pressure expellers to remove a portion of the oil before the fermentation process. When the fermentation is complete, the product is clarified, then goes to the barreling and bottling department. Photos show: (1) Filling wooden barrels (with metal hoops) with soy sauce. (2) Expellers in the Staley plant removing part of the oil from the soy beans. (3) Fermentation tanks, where the proteins of soy beans are converted to compounds that give the sauce its characteristic flavor. Address: Manager, Special Products, Staley Sales Corp., Decatur, Illinois.

3026. MacConkey, C.A. 1935. Soybeans. Ottawa, Canada: Div. of Research Information, National Research Council, Ottawa. 93 p. March. 28 cm. [152 ref]
• ***Summary:*** A very important and interesting book. In 1932 the first two sections of this report were prepared; in 1934 the third section was added in order to bring it up to date. Contents: Summary of Part I. Summary of Part II. Summary of Part III. Part I (p. 14): Cultivation, utilization and trade. Introduction. Cultivation: Varieties, differences, maturity, hardiness, color of bean, climate, soil, seeding, harvesting. Production of oil and cake. Applications: Introduction, the plant (forage, hay, pasturage, silage, soilage, straw, soil improvement and fertilizer), the bean (grain, flour, soy sauce, bean curd [tofu], vegetable beans, other uses), the cake (cattle feed, flour, fertilizer, other uses), the oil (general, the soap industry, the paint and varnish industry, the food industry). The soybean industry in the United States: Importance of the crop, history and development (incl. Henry Ford who is said to have 10,000 acres under cultivation), standards (classes of soybeans), production of oil and cake, consumption of soybean oil, export trade in soybeans. Statistics of world trade: Beans (production, exports, imports [statistics, pre-war average {1909-13} + 1926-1931 for Germany, Japan, Denmark, UK and British Empire countries, Dutch East Indies, Sweden, Italy, Formosa, and Holland], consumption [net imports], prices), oil (production, exports, imports, consumption, prices), cake (production, exports and imports). Statistics of the German oil seed industry: Oil seeds in Germany [by far the world's largest soybean importing country and largest European producer of soybean oil] (imports and exports), vegetable oils (production, consumption and value), oil cake and meal (production, imports, exports, consumption and relative values), soybean experiment stations in Germany.

Part II (p. 56): Development in Canada. The difference between growing soybeans for forage and for seed. Present status of soybean cultivation in Canada. The future for soybeans on the Prairies. Extent of Canadian Experimentation. Varieties suitable for Canada. The climates of Manchuria and Canada. Planning the development of soybeans in Canada. Consumption of vegetable oils in Canada by industries. Consumption of oil cakes in Canada.

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Firms engaged in the soybean industry in Canada. Casein in Canada.

Part III (p. 69): Survey of the Literature, 1931-34. Cultivation. Green manure. Breeding. Germination of seeds. Diseases and parasites. Soil. Manufacture of oil cake. Composition of the soybean. Properties and composition of soybean oil. Feedstuffs. Edible products. Detection in food (e.g. detection of soybeans in wheat flour, pasta, meat products, etc.). Inedible products. Economics. Table (p. 79-80)–Imports of soy products into Canada: Soy sauces (1931-1933), edible peanut and soyabean oil, peanut and soyabean oil for the manufacture of soap and peanut oil for canning fish, soybeans, soyabean cake and soyabean meal for use exclusively in the manufacture of cattle food and of fertilizers. References (102). Other references (Nos. 103-117). References not consulted (35).

The section titled "Development in Canada" (p. 56-62) states: "Soybeans are at present being grown for seed on a commercial scale in southern Ontario, chiefly in Kent and Essex Counties [the Niagara Peninsula]. Prior to 1931 the acreage under soybeans was about 1000 or 1500. The efforts of persons interested in establishing oil mills increased this to about 5000 in 1931 and to 6000 or 7000 in 1932. The average yield of seed has been about 23 bushels per acre, which is quite equal to yields in the U.S., while another variety, the A.K., has yielded at the rate of nearly 40 bushels per acre during a six-year test at Harrow, Ontario."

"T.B. Macaulay, President of the Sun Life Assurance Company of Canada has been experimenting for a number of years on the growing of soybeans in the hopes of being able to make the western farmer more free from his dependence on wheat, and believes that he is near to discovering suitable varieties...

"A statement appearing in the *Montreal Financial Times* (Nov. 18, 1932) reports that a number of varieties introduced from Urbana [Illinois] and tried in various parts of Alberta made an excellent growth of forage...

"The work being carried out at T.B. Macaulay's experiment farm at Hudson Heights, Quebec, is particularly worthy of mention. Here the testing of varieties has been in progress for 8 years. Mr. Macaulay's method of approaching the problem consists in obtaining samples of hitherto untried varieties from the most northerly regions where soybeans grow and the earliest varieties from Asia and elsewhere... Mr. Macaulay has a new variety which he calls Toyanaga. It matures 5 days to a week earlier than the variety called Manchu, which is being grown to a small extent in southern Ontario."

"Varieties suitable for Canada: Besides O.A.C. 211 which is the one outstanding variety that has shown itself suitable for cultivation in Canada albeit only in southern Ontario, a number of other varieties have been tried and experimented with such as Mandarin, Manchu, Wisconsin Black, Quebec 92, Quebec 537, Early Yellow, Early Brown, and Manitoba Brown, but none of these have been very satisfactory."

Table 29 (p. 60) gives a summary of current (1932) Canadian experiments with soybeans: Ontario Agricultural College (Guelph), grown for 39 years (i.e. since 1893), tested 125 varieties. Dominion Experimental Farms (Ottawa and Harrow, Ontario), 9 years, 100 varieties. Macdonald College (Quebec), 20 years, 16 varieties. Manitoba Agricultural College (Winnipeg), 10 years, 12 varieties. University of Alberta, Edmonton, 3 years, 7 varieties. Brooks (Canadian Pacific Railway Irrigation Experimental Station, Alberta), unknown number of years and varieties. Pointe Platin (Quebec, by J. deLothinière [deLothiniere]), unknown number of years and varieties. Hudson Heights (Quebec, by T.B. Macaulay), 8 years, 100 varieties. University of Saskatchewan, 10 years, 25 varieties.

Page 65 lists "Firms Engaged in the Soybean Industry in Canada." The Soy Bean Oil and Meal Co-operative Company of Canada, Ltd., Chatham, Ontario; Canadian Soyabeans Ltd., Milton, Ontario; The Vitone Co., Hamilton, Ontario; Dominion Soya Industries, 355, Place Royale, Montreal, Quebec.

Note 1. This is the earliest document seen (Jan. 2010) that mentions Dominion Soya Industry, Ltd. (Montreal, Quebec, Canada) in connection with soybeans.

Table 33 (p. 67) gives "Consumption of oilseed cake and meal in Canada" for the calendar years 1926 to 1931. Figures (taken from *Trade in Canada*) are given for cottonseed, linseed, palm nut, soya and total. Consumption of soya cake and meal (in tons) were: 200 in 1926 (0.6% of total); 680 in 1927; 560 in 1928; 1,560 in 1929 (5.0% of the total); 1,190 in 1930; and 2,500 in 1931. The value in dollars role from $8,000 in 1926 to about $50,000 in 1931. Apparently all of this soyabean cake and meal was imported.

Note 2. This is the earliest English-language document seen (Dec. 2005) that uses the term "soyabean meal" to refer to ground, defatted soybeans. Address: Div. of Research Information, National Research Council, Canada.

3027. Laming (W.C.) & Co., Ltd. 1935. Display ad: The healthful Soya Bean in Kikkoman. Doubles the value of your daily food. *Times* (*London*). April 11. p. 17, col. 1.
• ***Summary:*** "Nature has given to the World in the Soya Bean a vegetable food that contains valuable and essential properties for counteracting digestive and gastric disorders... Kikkoman contains no Vinegar,..." (see previous page). Address: 14, Tooley St., London, S.E. 1.

3028. Eaton (T.) Co., Limited. 1935. Wake up your appetite! (Ad). *Toronto Daily Star* (*Canada*). April 23. p. 43.
• ***Summary:*** In the lower right corner of this full-page ad: "Make your own chop suey. It's fun. It's economical. It's good–You can make it with La Choy.

"Vegetables (40¢), Bean sprouts (18¢), water, chestnuts

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(65¢). Noodles (30¢).

"Serve it with Brown Sauce (35¢) or Soy Sauce (35¢)." Address: College St., Toronto. Phone: AD. 5211.

3029. *Los Angeles Times.* 1935. Foreign "atmosphere" and fine food at home: Novel cafes discovered. April 25. p. B5.
• ***Summary:*** In the Japanese quarters of Los Angeles, several cafes specialize in sukiyaki–the "national dish that Americans know best. At one of the best, a Japanese girl, wearing a kimono, escorts you into a private room, separated by sliding panels in the true oriental fashion.

At one end of the table is a glowing brazier, surrounded by platters of sukiyaki ingredients. "Soon the pungent odor of soy bean sauce pervades the atmosphere as a dainty Japanese maid mixes the beef, soy bean cakes [tofu, probably grilled], bamboo shoots, Japanese horse-radish, green onion, etc., in the brazier." Warm saki [sake] is served soon after the food. The girls will be more than happy, if encouraged, to return after the meal to play Japanese music on their peculiar stringed instrument.

3030. Chin, -; Lin, -. 1935. [The Togano or Y-type process of soy sauce fermentation]. *Kung Yeh Chung Hsin (Industrial Research, Nanking, China)* 4(4):170-73. April. [Chi]
• ***Summary:*** Most of the soy sauce research in recent years as been dedicated to finding a way to shorten the fermentation process. The one that deserves special mention is Togano's process which has been widely used in Japan and which is recently introduced to China under the name of 'Y-type' process. Address: China.

3031. Ishimaru, Yoshio. 1935. Shôyu kôbo ni tsuite [On shoyu yeasts]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 13(4):295-318. April. [Jap]

3032. Bowdidge, Elizabeth. 1935. The soya bean: Its history, cultivation (in England), and uses. London: Oxford University Press. xii + 83 p. Foreword by Sir John T. Davies (Director, Ford Motor Co., Ltd.). Illust. 20 cm.
• ***Summary:*** Contents: 1. Introduction. 2. The soya bean in the East: Europe, United States, Canada. 3. Description of the plant: Results of experiments in England, the 1934 experiment in Essex, yields from the four varieties, description of the four varieties, composition of English and other varieties. 4. Culture of the soya bean: Soil requirements, inoculation of the seed, preparation of soil, rates of seeding, sowing seed, cultivation, fertilizers, harvesting the crop, threshing, storage, yields in various countries, soya bean prices. 5. Soya bean hay: Feeding values, time of cutting, soya straw, soya in the mixed crop (in mixed cropping plans with sorghum, maize, etc.). 6. Soya beans for soil improvement. 7. By-products of the soya bean: Oil and its uses, notes on experiments in breeding for oil, methods of extraction, soya cake and meal, results of comparative feeding tests. 8. Food products of the soya bean.

This book describes the successful introduction and cultivation of soybeans in England. The Foreword notes (p. v): "In past years no sustained effort has been made to grow the plant on a large scale in England. The Royal Agricultural Society devoted several years to experiment at Woburn, but in 1914 they reported that the plant was quite unsuitable for growth in this country as it required more warmth than could be obtained here. The British Board of Agriculture reported in 1916 that 'the Japanese and Manchurian varieties hitherto tested cannot be relied upon to produce seed in this country."

In the Preface (p. ix) Ms. Bowdidge acknowledges: "That very able and unique work *The Soybean*, by Messrs. Piper and Morse, has been my principal source of information."

"Efforts to introduce the [soy] bean to English agriculture were begun in 1909 and given up in 1914, and except for the work of Mr. J.L. North nothing further has been done" (p. 9).

The section titled "Results of experiments in England" (p. 15-17) states: "One of the first attempts to acclimatize the soya bean in England began in 1914 at the Royal Botanic Gardens, Regents Park, when it was shown by Mr. North that certain varieties could be 'advanced' sufficiently to produce a mature crop towards the end of September. Many years devoted to careful selection of seed from the varieties in his collection had resulted in several early strains. In 1928, a hybrid was received from Canada which, on passing the experimental stage, was planted out on a number of small plots in various parts of the country. It proved to be a very reliable cropper and matured earlier than any of the sixty varieties previously under test. Planted in the first week in May it was harvested at the beginning of September, and reports of good results came from Middlesex, Essex, Berkshire, Oxfordshire, and Hampshire.

"The largest experimental test ever conducted in this country took place in 1933 at Boreham, Essex, when forty-seven different varieties of the soya bean originating from North America, Canada, Manchuria, and Japan were grown under observation. The selection included four varieties which had been acclimatized by Mr. North. Mr. North was engaged to supervise operations, and 50 lb. of his special seeds was purchased. The results obtained were most interesting."

"There is no doubt at all that the four varieties acclimatized by Mr. North were a great success; two reached maturity on September 1st and two on September 6th. In many cases plants bearing between 300 and 400 seeds were harvested."

"It has been found by Mr. North in the course of more than twenty years' study of the subject, mainly with foreign beans grown in various parts of the country, that no variety of soya bean has any chance of success in England unless it matures in less than 100 days in America. Varieties requiring

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this length of time in America need nearly a month more in this country and, owing to our colder spring weather, no advantage is gained by earlier sowing. Mr. North's seeds require 124 to 127 days to reach maturity in England but, if grown in America, they would only require 85 to 90 days.

The section on "The 1934 Experiment in Essex" (p. 17-23) notes: "The result of the 1933 experiment was so encouraging that it was determined that a further attempt should be made in 1934 to ascertain whether it would be possible to grow the plant profitably as a field crop and, with this in view, a field of nearly 20 acres was specially prepared for the acclimatized seeds from the 1933 crop."

Joseph Bramah, an English engineer, invented the hydraulic press in 1796, leading to a "great advance in the oil-extraction industry." All "old methods in the western world immediately gave place to the new appliance." More recently the method of solvent extraction has been developed; it is now used throughout the world and removes nearly all the oil from the seeds (p. 69).

"There is plenty of evidence as to the efficiency of soya meal in live-stock feeding, yet it does not appear to be used in this country as widely as its feeding value merits. The prejudice formed when it was first introduced in England as dairy food seems still to exist. It was thought at that time that the use of the meal might affect the taste of milk and butter; but, although this was disproved later, England remains a small user" (p. 72).

Food products of the soya bean (p. 80-83): "It is unfortunate that the inherent conservatism of English people to anything new has been the cause of past failures to popularize soya bean food products for consumption in this country. The bean contains iron, magnesium, calcium, and other mineral salts; phosphorus in the form of lecithin makes it valuable in cases of nervous disorders...

"Soya 'sprouts,' which have been grown and used for centuries in the East, have recently been introduced as a green vegetable. The beans gathered before ripe and prepared in the same manner as green peas are a very satisfactory vegetable and the dried beans, if soaked for forty-eight hours, may be cooked like haricot or butter beans and make a most delicious and nutritious vegetable dish."

There is no doubt that soybean products are gradually becoming established in Western countries. We sometimes eat soybeans without knowing it. "The bean, when properly prepared by roasting, makes an excellent cereal beverage which looks, smells, and tastes like coffee; a sauce, appropriately seasoned with spices, is the so-called 'Worcester Sauce', and soya soups made from the bean taste like beef extract. During the late war, when Germany found herself on the verge of starvation, glutamic acid, produced from the soya bean, was used in German hospitals to form the basis of beef-tea, and it is said that the ground bean also was used at that time for the making of bread. Soya bread, made from properly prepared flour, is obtainable in England and is stated to be of high nutritive value" (p. 81).

Soya flour has long been used in foods for diabetic persons requiring a low starch diet. "The flour contains more protein and fat, and less carbohydrates than ordinary cereal flours, and a certain variety manufactured in England is stated by the proprietors to contain 42 per cent. protein and 20 per cent. fat, having good keeping qualities, 0.13 per cent lecithin phosphoric acid and the vitamins A, B, D, and E. There are many food products on the London market under the names that conceal their soya bean origin. Just before the late war [World War I] an enterprising English firm was making great strides with soya products. Vegetable butter, biscuits, cocoa, milk chocolates and other confectionery, cream, cakes, bread, &c., proved quite a success until a war-time embargo placed upon the importation of soya beans put a stop to the business: the organizers eventually went to America! (p. 82).

The author concludes (p. 83): "The soya bean is by far the most valuable of all known beans and our farmers ought to make a serious effort to grow it. It has already been shown that the acclimatized bean will grow in this country, and if crops can be raised profitably and on a commercial basis, a service will be rendered both to the farmer himself and to the country."

Excellent photos show (see p. xiii): (1) A typical example of the soya bean plant grown at Boreham, County of Essex, in 1933. (2) The soya bean plant in full maturity. (3) Bags of English acclimatized soya beans harvested on Fordson Estates, Boreham, Essex, in 1933. Left to right: Brown 'C,' yellow 'J,' black 'O,' and green 'Jap.' (4) A sturdy specimen of the 'Jap' soya bean plant grown at Boreham, Essex in 1934. (5) The 'J' variety. (6) The 'O' variety (for hay) at the seed stage. (7) Aerial view of the soya bean field as it appeared on 29 Aug. 1934. (8) Soya beans inoculated the previous day being fed into the horse-drawn drill prior to sowing. (9) A man seated on an ordinary horse-drawn grain-drill, planting soya beans in rows wide enough to enable cultivation later on. (10) Six men stooping in a field, planting small quantities of different varieties of soya beans by hand in 30-inch rows. (11) A man walking beside a horse pulling a cylindrical roller, which helps to give the seeds a better growth and even stand. (12) Harvesting soya beans with a reaper and binder pulled by a tractor. (13) Threshing soya beans in 1934 with a mechanical 'Ruston' Thresher; many beans were split. (14) Loading sacks of soya beans onto an open-bed truck for conveyance to storage barns. (15) The first English rick of soya hay, grown in 1933. (16) Baled and trussed soya bean straw being ricked; a man is shouldering a bale atop the rick with a ladder propped against one side. (17) Heated cakes of crushed soya beans ready for hydraulic pressing at Erith Oil Mills, Ltd. (18) Soya bean cakes, after leaving the press, are passed through a paring machine where the edges are trimmed at Erith Oil Mills. Address: England.

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3033. Dittes, Frances Linda. 1935. Food for life: The art and science of preparing food. Madison, Tennessee: Associated Lecturers, Inc. xii + 332 p. Spring. Recipe index. 23 cm.
• ***Summary:*** This early Seventh-day Adventist vegetarian cookbook contains more soyfoods recipes that any published up to this time. The author, a soyfoods pioneer born in 1891, first attended Madison College in 1910 and joined the faculty in 1912. She did her graduate work in nutrition, specializing in soyfoods nutrition, at George Peabody College for Teachers (in Nashville, Tennessee), from which she received her MA degree in 1929. This book was printed by the "Rural School Press" (Madison College's school press) and published in the spring of 1935.

Contents: Part I: Food and nutrition. Milk. The acid-base balance. Fruit acids. Balancing the food. Measuring food values. Menu planning. The art and science of food preparation (preceded by this quotation: "Food will be the medicine of the future"–Harvey W. Wiley). Food combinations. Condiments. Suggestions for flavoring. Garnishings. Measurements. Part II: Recipes (listed by recipe type such as breads {some recipes call for Crisco shortening}, soups, salads, desserts, etc.). One chapter titled "Dishes to take the place of flesh foods" (p. 149-65) contains many interesting recipes such as: Preparation of gluten. Gluten pot pie. Gluten loaf. Glutose (with 5 cups ground cooked gluten, plus potatoes, eggs, and cream). Cold sliced Nut Meat or Vigorost (Nut Meat is sold in 2-lb cans, Vigorost in 14 oz cans). Peanut roast. Chow mein (with soy cheese or Nut Meat). Boiled peanuts. Soy-related recipes are given below. Another chapter is "Nutritive value of the soy bean. Soy bean dishes" (p. 166-86).

Appendixes: A. Classification of carbohydrates. B. Canning. C. Sample menus. D. 100 calorie portions of foods. E. Approximate servings and values of a few common foodstuffs. F. Protein, calcium, phosphorus, and iron in 100 calories of food material. G. Ash constituents of foods in percentage of edible portion.

The author uses the term "soy cheese" to refer to tofu. Soy-related recipes include: Soy bread (20% soy flour and 80% white wheat flour; p. 96). Soy gems (18-20 muffins using soy flour; p. 108). Tomato-soy sandwich (with grated soy cheese; p. 114). Soy noodle soup (with grated soy cheese browned in butter; p. 122). Jellied soy salad (with grated soy cheese; p. 138). Potato soy salad (with grated soy cheese; p. 138). Tomato and soy salad (with soy cheese). Waldorf soy cheese salad (with grated soy cheese; p. 139). Lentil-soy loaf (with soy bean puree; p. 157). Savory soy loaf (with soy cheese). Soy souffle (with grated soy cheese browned in butter; p. 159). To fu chi (deep-fried soy cheese stuffed with rice and seasoned with soy sauce). Soy gravy (with 3 parts soy flour and 2 parts white wheat flour).

The chapter titled "Nutritive Value of the Soy Bean" (p. 167-86) discusses the general nutritional composition, then gives details on protein, fats (including lecithin), minerals (including tofu made with magnesium chloride or calcium sulphate). Recipes are given for: Cooked soy beans. Soy milk (after soaking 1 lb of Mammoth variety soy beans overnight in water, "Wash several times in hot water to remove undesirable taste."). Soy milk no. 2. Soy acidophilus milk. Soy bean cheese [tofu, curded with calcium sulphate]. Soy bean cake [okara] loaf. Browned soy cheese. Green soy beans. Escalloped green soy beans. Dried soy beans. Baked soy beans. Soy beans southern style. Roasted soy beans. Soy beans in tomato sauce. Chop suey (with soy cheese). Sauce (with soy sauce). Soy bean omelet. Lentil soy bean loaf (with soy bean puree). Soy bean loaf. Soy bean pie (with soy bean pulp). Soy bean meat. * = made with soy bean flour. Soy bean muffins*. Soy muffins*. Soy biscuits*. Soy bread*. Soy nut bread*. Escalloped onions with soy cheese. Baked rice with soy cheese. Escalloped potatoes with soy cheese. Spaghetti and soy cheese. Stuffed pepper with soy cheese. + = with soy cheese. Left-over croquettes+. Soy croquettes+. Soy cheese with rice. Stuffed baked potato with soy cheese. Soy fritters+. Soy cutlets+. Savory soy loaf+. Spanish chop suey+. Soy souffle (with grated soy cheese browned in butter). Cream of soy soup. Soy noodle soup+. Soy soup+. # = made with soy milk. Soy cream of tomato soup#. Soy cream of pea soup#. Soy cream custard#. Jellied soy salad+. Waldorf cheese salad+. Potato soy salad+. Stuffed egg with soy cheese. Soy bean salad. Soy bean sprout salad. Soy Vegex sandwich+. Tomato-soy sandwich+. Egg and soy sandwich+. Soy and cucumber sandwich+. Celery and soy sandwich+. Banana soy sandwich+. Scrambled egg and soy cheese sandwich. Diabetic crackers (with soy meal). Diabetic pie crust (with soy meal). Diabetic soy bean mush*.

Vegetables: Soy cheese sauce (with grated soy cheese and soy sauce, p. 195). Steamed cucumbers with soy cheese (grated, p. 201). Escalloped onion with soy cheese (p. 204). Spinach with soy cheese sauce (and Vegex, p. 207).

Desserts (p. 215-36), Cakes (p. 237-53), Pies (p. 255-60), Cookies (p. 261-68), and Ice creams and sherbets (p. 269-74). Some of these sweet recipes use agar-agar, gelatin, Malta (malt syrup), Health Koko, and Crisco. Some desserts call for 1-2 cups sugar per 4 servings and 1 pound of sugar is used in an icing for pound cake (p. 242). No soy is used in any sweet recipes. Note: It is surprising that Ms. Dittes and Madison had not discovered the use of tofu or soymilk in ice creams, other desserts, or dressings. Nor is peanut butter mentioned.

The chapter titled "Milk" (p. 17-21) states: "Since milk is an important food constituent, especially for children, those responsible for planning dietaries should see that each child has one quart of clean milk or its equivalent each day; adults, about one pint... *Grade A* is a raw milk from cows free from disease, having a bacteria count of not more than 100,000 per cubic centimeter at the time of delivery. *Grade B* must be pasteurized and the bacteria count must not exceed

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1,000,000 per cubic centimeter. It must also come from cows free from disease." All other milk is Grade C.

The chapter titled "The acid base balance" (p. 23-24) states: "Most foods when burned in the body leave an ash in addition to the carbonic acid which is thrown off by the lungs. This ash may be either alkaline, neutral, or acid in reaction. The principal base-forming (alkaline) elements are calcium, potassium, magnesium, and sodium, while the chief acid-forming elements in foods are sulfur, phosphorus, and chlorine... A neutral or slightly alkaline condition will produce a feeling of buoyancy, health, vigor, and clear mental activity... In general, all fruits and vegetables (with a few exceptions) are potent in producing alkaline ash. Meat, eggs, breads, and cereals are acid-formers."

The chapter titled "Condiments" (p. 51-52) states: "Spices, such as mustard, ginger, pepper, horseradish, curry, and cloves, are among the most irritating of the seasonings used. It would be better if these exciting substances were not added to the food... Vinegar contains acetic acid which is burned in the body with difficulty. Citric acid as found in the lemon juice is more easily oxidized in the tissues. Lemon juice, therefore, makes a good substitute for vinegar, both as to ease of oxidation and flavor." Address: Director, Food and Nutrition, Nashville Agricultural Normal Inst., Madison Rural Sanitarium and Hospital, Madison, Tennessee.

3034. Ishimaru, Yoshio. 1935. Shôyu kôbo ni tsuite [On shoyu yeast (Abstract)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 11(5):116A-17A. May. [Jap]

3035. Fukai, Tôshi. 1935. Shôyu ni konnyû seraretaru sosei amino-san no kenshutsu ni tsuite [On the detection of hydrolyzed vegetable protein (HVP) mixed into soy sauce]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 122. p. 67-71. June. [Jap]
• ***Summary:*** Nakazawa, in his bibliography on fermented foods, translates the title as "On the detection of the decomposed liquid of protein-containing materials added to soy sauce." Note: This is earliest publication seen on HVP soy sauce. Address: Jozo Shikensho, Gishu.

3036. Fukai, Tôshi. 1935. Sosei amino-san eki no shûki-seibun ni tsuite. I. Rebyurin-san sono ta no yûki-san rui [On the component of odor in the decomposed liquid of protein containing materials I. On levulinic acid and other organic acids in HVP liquid]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 122. p. 59-65. June. [17 ref. Jap]
• ***Summary:*** This is earliest Japanese document seen that uses the term "amino-san-eki" (regardless of hyphenation), meaning "liquid hydrolyzed vegetable protein (HVP)," in connection with soy sauce. Address: Jozo Shikensho, Gishu.

3037. Kennedy, L.W. 1935. The soybean... A new American. *Purdue Agriculturist* (*Indiana*) 29(9):83, 86. June.
• ***Summary:*** "This article was written with the aid of material taken from an undergraduate thesis submitted by E.A. Johnson, '34 [class of 1934]. Products of the soybean are rapidly becoming more important to agriculture and various manufacturing industries of the nation." Soybean oil meal is an important livestock feed for cattle, hogs, sheep, and poultry. It is also "used extensively in the making of glue, water paints, fertilizer, celluloid substitutes, [plastic] gear shift knobs, etc. Breakfast food, diabetic food, infant food, macaroni, crackers, bean curd, soy sauce, vegetable casein, and meat substitute are popular in the list of foods made from soybean oil meal. The meal possesses a nut-like flavor and lends itself well to be used as human food."

Crude soy bean oil is dark brown in color and has a "beany" odor. It is largely refined to make special oils for use as paints, varnishes, glycerine, enamel, the waterproofing of cloth, fabrics, papers, and sandpapers, the making of oilcloth, shade cloth, rubber substitutes, printers ink, lubricants, hard and soft soaps, insecticides, foundry core oil, and lighting fuels. The food products, salads, edible oils, and lard and butter substitutes are also prepared by a commercial process from soybean oil. In 1930 about 6,000,000 pounds of soybean oil, or one-sixth of the domestic crop, were used in the preparation of edible products.

Note: This is the earliest document seen (Sept. 2001) concerning the use of soybean oil in insecticides or other crop-protecting chemicals (pesticides).

"A new auto body finish from soybean oil is the result of experiments made by the Ford Motor Company of Detroit, Michigan."

Also discusses "the vegetable soybean" which can serve as a supplement to the garden pea or lima bean. "In China vegetable soybeans have long been used as a delicacy on the table. They may be used green, or canned, or made into salads."

"Dried soybeans serve as a good substitute for coffee and peanuts when properly roasted and prepared. The dried beans are also used in preparing soy sauce, boiled beans, baked beans, breakfast food, soaps, and vegetable milk. From the vegetable milk, meat substitutes, infant food, confections, cheese, and fresh, dried, condensed, and fermented bean curd is prepared. Soybean milk has not received serious consideration in this country, but it has been successfully used as a food for growing infants in China." Address: Class of 1936.

3038. Lager, Mildred. 1935. Food facts. Los Angeles, California: House of Better Living. 228 + 10 p. No index. 23 cm. [34 ref]
• ***Summary:*** Contents: 1. Purpose of food. 2. Classes of food. 3. Natural foods are best. 4. Acid-alkaline balance. 5. Minerals. 6. Vitamins. 7. Proteins. 8. Carbohydrates. 9. Fats.

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10. Fruits. 11. Vegetables. 12. Beverages. 13. Better cooking. 14. Food combinations. 15. The mental side of health. 16. What is the "House of Better Living."

Pages 67-68 contain a very positive section on soy beans and foods made from them, including whole soybeans, "curd cheese, resembling cottage cheese [tofu], and soy bean milk... Other soy food products are soy butter [no description is given; this is probably soynut butter from T.A. Van Gundy's La Sierra Foods, but it could be margarine made from soy oil], soy loaf (combined with gluten), soy sandwich spread, soy bologna, soy oil, soy sauce, soy ready-to-serve breakfast foods, coffee substitute, as well as soy flour. Soy flour is yellow and fluffy, and can be used in all baking... Soy macaroni, noodles, spaghetti, bread, and pancake flour are also on the market. Soy beans are also sugar coated for candy and toasted as peanuts. They are a wonderful food for animals and have been used in that way in this country for years. Today the governments of Europe and America are devoting a great deal of attention to the soy bean as human food and the next few years will see an increased consumption, as well as many new soy products."

Page 75 contains a nutritional analysis of soy beans.

In the chapter on Acid-alkaline balance (p. 22-25), foods with the most acid ash are egg yolk and oysters, followed by eggs, most fish and meats. Foods with the most alkaline ash are lima beans, string beans, dried beans, spinach, raisins, figs, dates, and dried milk, followed by soy beans, soy bean tea, and most vegetables. The author believes that one should keep an alkaline balance in the body. Sleep is a great alkalinizer.

The subsection titled "Lima beans: states: "Dr. Sansum of Santa Barbara was instrumental in having lima bean flour made, and Bill Baker of Ojai, California pioneered this field, developing the original lima bean bread and lima bean pancake flour."

This is not a vegetarian book. Meat and dairy products are discussed at length, and their consumption is not discouraged. However this is the earliest book seen that uses the term "natural foods" prominently–in this case as a chapter title.

Also discusses (see index for page numbers): Acidophilus milk, alfalfa (alfalfa tea has alkaline ash, p. 35), almonds, almond oil, aluminum, avocado, bran, carob beans, chufas, cottonseed, cottonseed oil, garbanzas, kephir, lentils, lima beans, linseed, margarine / oleomargarine, olive oil, olives, palm oil, palm kernel oil, peanuts, peanut oil, rape seed oil, sago, sesame oil.

Note 1. This is the earliest document seen (Sept. 2009) concerning Mildred Lager and soy.

Note 2. This is the 2nd earliest document seen (July 2005) that mentions a food or drink product ("alfalfa tea") made from alfalfa. This is also the earliest English-language document seen (July 2005) that contains the term "alfalfa tea." It was used for its alkaline ash. Address: House of Better Living, 1207 West 6th St., Los Angeles, California. Phone: Mutual 2085.

3039. Matsumoto, K.; Dei, S. 1935. Shôbo ôyô shôyu jôzô shiken [The application of cultured yeast for the rapid brewing of shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 122. p. 175-91. June. [Jap] Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3040. Matsumoto, Kenji; Dei, Shinpei. 1935. Nuno doko shiki tane kôji seizô to sono ôyô shiken [The manufacture of koji starter on cloth and its applications for soy sauce brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 122. p. 193-204. June. [Jap] Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3041. Chin, -; Lin, -. 1935. [The Togano or Y-type process of soy sauce fermentation]. *Kung Yeh Chung Hsin* (*Industrial Research, Nanking, China*) 4(7):384-89. July. [Chi]
• ***Summary:*** Most of the soy sauce research in recent years as been dedicated to finding a way to shorten the fermentation process. The one that deserves special mention is Togano's process which has been widely used in Japan and which is recently introduced to China under the name of 'Y-type' process. Address: China.

3042. Holmes, Marie. 1935. Cooking chat: Milk drinking health measure for all the family–Timely recipes. *Toronto Daily Star* (*Canada*). Aug. 31. p. 13.
• ***Summary:*** Includes: "Question: Would you be kind enough to tell me what is meant by 'anchovies' and 'soy'?"

"Answer: Soy sauce is made from cooked soy beans, roasted wheat flour and salt.

"Anchovies are small fish..."

A small portrait photo shows Marie Holmes.

3043. Durkee Famous Foods, Inc. [Div. of The Glidden Company]. 1935. Soybean oil as a food product (Ad). *Proceedings of the American Soybean Association* p. 16.
• ***Summary:*** The top half of this full-page black-and-white ad is a photo showing containers and labels of the following: Durkee's Worcestershire Sauce, Durkee's Salad Dressing and Meat Sauce, Durkee's Mayonnaise, Durkee's Salad Aid, Durkee's Oleomargarine.

The text states that soybean oil, when refined and hydrogenated, "forms a prominent constituent of vegetable shortening and oleomargarine."

"One of the important products derived from the extraction process of obtaining soybean oil from soybeans is Lecithin. Lecithin is not only used in medical practice as a nerve food, but it is used in the baking and confectionery industries in assisting the application and proper spreading of icing and chocolate coatings, and also has other industrial uses as a vegetable dispersing agent."

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"In our opinion, the soybean is one lever the farmer can use to lift his living standard to higher levels." Address: Elmhurst [Illinois], Chicago, Berkeley [California].

3044. Morse, W.J. 1935. Green vegetable soybeans. *Proceedings of the American Soybean Association* p. 44-45. 15th annual meeting. Held 21-22 Aug. 1935 at Evansville and 23 Aug. at Lafayette, Indiana.
• ***Summary:*** "The green, immature soybean is used extensively as a green vegetable in oriental countries. Experiment stations in Japan have developed many varieties solely for use as green beans which are classified by growers and seedsmen as garden beans. About 60 such varieties have been collected during agricultural explorations in Japan by the U.S. Department of Agriculture. These varieties, which range from 75 to 170 days in maturity, have been found to differ markedly in flavor, ease of cooking, and soil and climatic adaptations. Cooperative studies with state experiment stations and special cooperators during the past two years indicate some very promising early, medium, and late green vegetable types for regions adapted to the soybean. The most valuable of these varieties are being increased by several state experiment stations for more extensive studies.

"For green vegetable beans, the soybean should be picked when the beans have reached full size and are still green and succulent. The green beans resemble young, tender Lima beans but they have a richer and more nutty flavor... The immature beans are difficult to shell but if first boiled for about 3 minutes they shell quite readily... The usual oriental way of cooking green soybeans is to boil the beans in the pods, in water flavored with soy sauce or salt and serve them to be eaten from the pod. Many people prefer to cook the beans in the pods, boiling them in salted water for 20 to 30 minutes. The beans then shell readily and may be used as a vegetable, in salads or in soups.

"When soybeans are planted in the garden for table use, it is best to use varieties recommended for green beans. One may, however, use the common varieties although they are smaller, not so easily cooked, and usually lack the distinctive flavor of green vegetable varieties. Green soybeans are not available before midsummer and for continued use, a succession of plantings of the same variety or of varieties of different periods of ripening would be desirable. The Hahto, a medium variety, is the only green vegetable variety at present handled by growers. The Rokusun, a late type, and two or three early Japanese varieties are being increased rapidly and should be in the hands of growers and seedsmen in the near future."

Note 1. This is the earliest document seen (June 2009) that mentions the soybean variety Rokusun.

Note 2. This is the earliest English-language document seen (June 2009) that uses the term "vegetable types" or "green vegetable types" or "green, immature soybeans" to refer to green vegetable soybeans. It is also the earliest English-language document seen (June 2009) that with the term "Green vegetable soybeans" in the title. Reprinted in *Good Health*, Oct. 1937. Address: Bureau of Plant Industry, USDA, Washington, DC.

3045. Morse, W.J. 1935. Soybeans: Ancient and modern uses. *Proceedings of the American Soybean Association* p. 34-35, 37. 15th annual meeting. Held 21-22 Aug. 1935 at Evansville and 23 Aug. at Lafayette, Indiana. [1 ref]
• ***Summary:*** The soybean "was sown yearly with great ceremony by the Emperors of China and poets in the ages before the Christian Era extolled the virtues of the soybean in its services to humanity.

"The soybean was included in the 2nd class of drugs and was regarded as having many medicinal virtues. We learn from a materia medica written about 452 A.D. that the soybean was not poisonous but was a specific remedy for proper functioning of the heart, liver, kidneys, stomach and bowels. It was also used as a remedy for constipation, as a stimulant for the lungs, eradication of poison from the system, improving the complexion by cleaning the skin of various impurities, and stimulating the growth and appearance of the hair. We also find that the fresh or green bean was used as a remedy for the following: Dropsical affections, gastric fever, paralysis, bladder trouble, improper circulation of the blood, catarrh or improper flowing of the fluids of the vital organs, heart, liver, kidneys, stomach and bowels, chills and poisoning from eating aconite. Further, it is learned that when the bean was cooked in a powder or meal-like form, the taste was sweet and good and was a remedy for gastritis, fevers, tumorous swellings, paralysis, inability to digest grain foods, and abdominal dropsy. The yellow soybean was used to increase lung power, make the body plump, and beautify the complexion. The beans were also cooked until they were of an oily consistency, mixed with hog's fat and taken in the form of pills in order to fatten and increase the strength of the body, and as a remedy for hoarseness. The soybean was said to have a cooling effect on the human system. If the beans were boiled into a liquid form and eaten, they eradicated all poison from the system and cured gastric fever, paralysis, pains, and bladder troubles. Bean or soy sauce was considered an antidote for poison caused by eating fish, fresh meat, vegetables, mushrooms, etc. It was also said to cure poison from bites of worms, insects, and bee stings. The yellow, green, and white varieties were regarded as valuable foods for the use of mankind. The black beans were used for food and it was also customary when taking a long journey to feed the horse black beans in order to make it strong. In addition to the use of the beans, many references are made on value of bean sauce, bean milk, bean curd, and bean sprouts for various diseases and other bodily ailments. The stems and leaves of the young bean plants were boiled and eaten by the farming people. No mention is found of the use of bean oil so it is concluded the

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crushing of beans for oil occurred at a much later date.

"In reviewing the old records, it is most interesting to find that many of the ways in which the ancient Chinese used the soybean as a remedy for human ills are now being found applicable to the same ailments by scientific research in America and Europe." Address: Bureau of Plant Industry, USDA, Washington, DC.

3046. Kobata, Yotarô. 1935. α-oxycaprinsaeure no shôyu bôbai sayô ni tsuite [The antiseptic action of α-oxycapric acid on shoyu]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 11(9):789-90. Sept. [4 ref. Jap]
Address: Kyôdai Nôgaku-bu Seibutsu Kagaku Kenkyû-shitsu (Kyoto Univ.), Japan.

3047. Miyaji, Kenji; Kaneko, Mamoru. 1935. Tamari abura-chû no fukenka-butsu tokuni suchirooru ni tsuite [Unsaponifiable substances, especially sterol, in tamari oil]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 11(9):715-19. Sept. [6 ref. Jap]
Address: Agricultural College of Gifu, Japan.

3048. Nakamiya, Ziro. 1935. Gadusene, an unsaturated hydrocarbon occurring in animal and vegetable oils. *Scientific Papers of the Institute of Physical and Chemical Research* (*Japan*) 28(597):16-26. Sept. [6 ref. Eng]
• ***Summary:*** The hydrocarbon gadusene was isolated from the non-saponifiable fraction of soy oil, rice germ oil, and some fish liver oils. It had the same absorption spectrum as the samples that Tsujimoto and Drummond et al. had prepared from other sources.

Table 1, titled "Saturated hydrocarbons and perhydrocarbons," gives constants for Shoyu oil. These are further detailed on pages 19 and 21. Address: Japan.

3049. R.A.L. 1935. Les produits dérivés du soja [Products derived from soybeans]. *Bulletin des Matieres Grasses* (*Paris*) 19(9):232-40. Sept. (Institut Colonial de Marseille). Summarized in Bulletin Economique de l'Indochine (Hanoi) 38:830. [4 ref. Fre]
• ***Summary:*** This is a excerpt from an article said to be published in the *Revue des Produits Chimiques*. However, after a long search, we cannot find the original. So here is the contents of this excerpt:

Uses of soya. Soymilk. Soy caseine (*La Caséine de soja*), defatted soybean oil cakes (*les torteaux deshuilés*), vegetable caseine (*caséine végétale*) as made in Vietnam. Industrial, food and feed applications of the soybean and the products derived from it (... *des produits dérives*): Shoyu or soy sauce, green vegetable soybeans, soy flour (free of starch, which is good for in diabetic diets), use as an incomparable forage plant, soymilk for humans or young animals (it is free of tuberculosis bacteria), powdered soymilk, a type of cheese called tofu (which can be fermented, dried, salted, or smoked), soy oil (for food or industrial uses–such as paints, varnish, lubricants, printing inks, candles, and oilcloth), hydrogenated soy oil, soybean cakes (which make excellent animal feed). Address: Ingénieur chimiste ICMp, Licencié ès Sciences, France.

3050. *Economisch Weekblad voor Nederlandsch-Indie*.1935. Kedelee-cultuur en sojabereiding in Atjeh [Soybean cultivation and soy sauce preparation in Atjeh]. 4(42):1650. Oct. 18. [Dut]
• ***Summary:*** Note: Atjeh (also called Achin, Acheen, or Atchin) is a province of Indonesia in northern Sumatra. Its capital is Banda Atjeh. Address: Jakarta, Java, Indonesia.

3051. Wilson, Judith. 1935. Ingenuity makes novel dishes of simple ones. *Gazette* (*The*) (*Montreal, Quebec, Canada*). Oct. 18. p. 9.
• ***Summary:*** The section titled "Sukiyaki" describes this as a delightful and economical "Japanese stew." "The unusual items called for are bamboo sprouts and soya bean sauce, but these can be found at most delicatessens and in many ordinary grocery stores." Place an electric grill on the table. Bring in the colorful uncooked ingredients on a large platter. Describes how to make sukiyaki. A "mound of lean beef cut into thin shavings" is one ingredient. Tofu is not mentioned.

3052. Laming (W.C.) & Co., Ltd. 1935. Display ad: Kikkoman shoyu: Doubles the health value of your food. Made from the healthful soya bean. *Times* (*London*). Oct. 31. p. 17, col. 1.
• ***Summary:*** "If you have a poor appetite or poor digestion, take this piquant Health Sauce with your food. Kikkoman contains no Vinegar and promotes naturally a free flow of the digestive juices, essential for correct assimilation. Kikkoman in a tonic nutrient with an appetising saline flavour and is Unrivalled for Children and Invalids... the basis of the perfect Tomato Cocktail!" Illustrations show: (1) The Kikkoman trade mark, (2) A large slanting bottle of Kikkoman Shoyu Sauce, with the image on Mt. Fuji on the label. Address: 14, Tooley St., London, S.E. 1.

3053. *Bulletin Economique de l'Indochine* (*Hanoi*).1935. L'extraction des dérives du haricot "Soya" [The extraction of soybean derivatives]. 38:823-24. July/Oct. [Fre]
• ***Summary:*** From the monthly communication of the French commercial attache in Tokyo. Address: D'apres la chronique mensuelle de l'Attache commercial de France a Tokio.

3054. Takeda, Yoshito. 1935. Rhizopus-zoku shijô-kin no kenkyû. III. Nanyô-san Rhizopus-zoku mo bunri gakuteki kenkyû oyobi saidai tôka-ryoku kin no kensaku [A study on filamentous molds of the genus *Rhizopus:* III. Research on classification of *Rhizopus* species from tropical regions and

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investigation of the microorganisms possessing maximum saccharification capability]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 11(10):845-920. Oct. [26 ref. Jap]

• ***Summary:*** Contains extensive information on tempeh and onchom. In April and May 1926, samples of tempeh were gathered at Semarang and Medan, shoyu koji and ketjap koji were gathered at Buitenzorg, and ragi was gathered at many places in Indonesia. The tempeh, shoyu koji, and ketjap koji were all found to have *Rhizopus* as the dominant microorganism. But a shoyu koji collected at Semarang was found to have *Aspergillus* as the main microorganism. Address: Taiwan Sôtoku-fu Chûô Kenkyû-jo Hakkô Kôgyô-ka (Central Research Inst., Taiwan Governor General's Office).

3055. Iwasaki, Kazuo. 1935. Shôyu no kanshô sayô ni tsuite. I. Fuki–Shôyu tekitei sando sokutei-hô ni taisuru ichi ginmi [On the buffer action of shoyu. I. Additional note–One study on the method of measuring shoyu acidity]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 13(11):1087-99. [Jap]

3056. *Manchester Guardian (England).*1935. Mould and foodstuffs: Research work on activities of fungi. Dec. 7. p. 17.

• ***Summary:*** The section title "Ripening cheese" states: Moulds "were widely used in Japan and China for the conversion of starch into sugar before alcoholic fermentation, and in the fermentation of soya bean during the manufacture of soya sauce."

3057. Laming (W.C.) & Co., Ltd. 1935. Classified ad: Kikkoman shoyu.–Excellent for Christmas fare. *Times (London).* Dec. 21. p. 1, col. 7.

• ***Summary:*** "Made from the wonderful Soya Bean. No Vinegar. Appetising saline flavour. Aids digestion, nourishes and tones the system. Unrivalled for flavouring, cooking and table use. 6s. per half-dozen bottles, or singly at leading Stores and Grocers." Address: 14 Tooley St., London, S.E. 1.

3058. *Harijan.*1935. More about soya beans. 3(46):366-68. Dec. 28. [1 ref]

• ***Summary:*** Mahadev Desai introduces the article by stating, "A friend who is now in America has brought together the following article information about soya beans collected by him from books and various institutions." Much of the information apparently came from the Bureau of Home Economics, Washington, DC. Under the subtitle "Soybean and soybean products for table use," it discusses the nutritional composition of soybeans, green soybeans and their varieties (including Hahto and Easy Cook [Easycook], with 3 recipes including ones for salted soya beans [soy nuts], and whole dry soybeans used in soup), soybean sprouts, soybean flour, soya bean sauce, soya bean milk, and soya bean cheese (to fu). Details of how each food is prepared are also given. Continued in Harijan on 4 Jan. 1936. Address: India.

3059. Carque Natural Foods of California. 1935. Kar-Kay Hygienic Worcestershire Sauce (Ad). *House of Better Living (Newsletter, Los Angeles)* 1(3):3. Nov/Dec.

• ***Summary:*** "Wholesome natural meatless fluids, including Kar-Kay (imitation) vinegar, along with quality spices and pure vegetables enter into its competition."

A circular logo with diagonal slash through the middle shows the company's name. Note: This ad also appeared in the Jan. 1936 issue (p. 3).

3060. Chow, T.Y. 1935. Chemistry and manufacture of chemical soy sauce in China. *Chemistry (China)* 2:280-95. *

3061. Dominion Bureau of Statistics, Ottawa, Canada. 1935. Imports of soy products into Canada. *Trade of Canada.* *

• ***Summary:*** Imports of soy sauce to Canada from 1931 to 1933 have increased as follows: 1931: 75,325 gallons worth $34,360; 1932: 78,311 gallons worth $34,625; 1933: 85,737 gallons worth $34,868.

See also imports of peanut and soyabean oil, edible.

Imports of soyabeans, soyabean cake and soyabean meal for use exclusively in the manufacture of cattle food and of fertilizers: 1931: 50,085 cwt [1 cwt = hundredweight = 112 pounds in Canada] worth $23,873 [Canadian dollars]. 1932: 38,393 cwt worth $52,296. 1933: 28,992 cwt worth $49,214. Address: Ottawa, Canada.

3062. **Product Name:** Durkee's Worcestershire Sauce, Durkee's Salad Dressing and Meat Sauce, Durkee's Mayonnaise, Durkee's Salad Aid, Durkee's Oleomargarine.
Manufacturer's Name: Durkee Famous Foods, Inc.
Manufacturer's Address: Elmhurst, Chicago, Berkeley.
Date of Introduction: 1935.
New Product–Documentation: Ad in Proceedings of the American Soybean Assoc. 1935. p. 18. "Soybean Oil as a Food Product." Plants in Elmhurst, Chicago, Berkeley.

Note: This is the earliest commercial salad dressing seen in which soy oil is used as an ingreddient.

3063. *Economisch Weekblad voor Nederlandsch-Indie.*1935. Invoer van sojaboonen, soja en taotjo [Import of soybeans, soy sauce and taotjo (Indonesian-style miso)]. 4(28):1082. [Dut]

3064. Fukai, Tôshi; Nagahashi, K. 1935. Bôfusei shôyu jôzô shiken [Brewing trial using a preservative in shoyu]. *Jozo Shikensho Hokoku (Report of the Brewing Experiment Station)* No. 122. p. 229-37. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

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3065. Fukai, Tôshi; Shirai, S. 1935. San ni yori taishoku sezaru shôyu chakushoku-zai gôsei shiken [On the manufacture of coloring materials for soy sauce which is stable in the presence of acids]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 122. p. 73-77. [Jap]
Address: Jozo Shikensho. 1. Gishu; 2. Moto Kenshuin.

3066. Fukai, Tôshi; Nagahashi, K. 1935. Sangen-shiki shôyu sokujô shiken [A new special quick method of soy sauce manufacture]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 122. p. 234-47, 249-58. [Jap]
Address: Jozo Shikensho. 1. Gishu; 2. Moto Joshu.

3067. Ishimaru, Yoshio. 1935. Shôyu hinshitsu jo ni okeru sanrui tenka no kôka [The effect of adding acid to improve shoyu quality]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 30(5):421-24. [8 ref. Jap]
Address: Nôgaku Hakase, Japan.

3068. Ishio, M. 1935. [Antiseptic actions of nipagin A, nipagin M, nipasol M on shoyu]. *Eisei Shiken* 45:171-. [Jap]*

3069. Iwasaki, Kazuo. 1935. Shôyu sando ni taisuru ironteki ikkôsatsu [Theoretical investigation on the acidity of shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 30(11):1095-1104. [Jap]
Address: Iwasaki Shoyu-ten Jikkenshitsu, Japan.

3070. Kan-Kito. 1935. [Detection of dulcin in shoyu]. *Eisei Kagaku* (*J. of Hygienic Chemistry*) 7:321-. [Jap]*

3071. Kinoshita, Asakichi; Matsumoto, K.; Nagahashi, K. 1935. Sei-kôji ondo hikaku shôyu jôzô shiken [The comparison of temperature of koji manufacture in brewing soy sauce]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 122. p. 205-11. [Jap]
Address: Jozo Shikensho. 1. Moto Gishi; 2. Gishi; 3. Moto Joshu.

3072. Matsumoto, K.; Dei, S. 1935. Saikin-rui tenka hikaku shôyu jôzô shiken [The application of several kinds of pure culture bacteria in shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 122. p. 165-73, 175-91. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Gishu.

3073. Matsumoto, K.; Dei, S.; Misawa, K. 1935. Kô tenka shôyu jôzô shiken [On the addition of soybean cooking liquid during soy sauce brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 122. p. 221-227. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu; 3. Moto Kenshuin.

3074. Matsumoto, K.; Nagahashi, K. 1935. [The comparison of two kinds of *Aspergillus oryzae* for the brewing of soy sauce]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 122. p. 213-20. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3075. Sekiguchi, H. 1935. [A study on anticorrosion steel for shoyu]. *Kinzoku* 12:67-78. [Jap]*
• ***Summary:*** Corrosion is small in steels containing > 7% chromium. Steel having 25% nickel is not corroded.

3076. Shoji, Kenjiro. 1935. Shôyu no kôki. I. [Flavor of shoyu. I.]. *Rikagaku Kenkyujo Hokoku* (*Report of the Institute of Physical and Chemical Research*) 14(9):872-77. [Jap]

3077. **Product Name:** [Light House brand Soy Sauce, Soybean Jiang, Fermented Tofu].
Foreign Name: Jiang-you, Dou-jiang, Furu.
Manufacturer's Name: Yeo Hiap Seng.
Manufacturer's Address: 410 Outram Road, Singapore 3, Singapore.
Date of Introduction: 1935.
How Stored: Shelf stable.
New Product–Documentation: Letter from Alan Yeo of Yeo Hiap Seng, 1982, April; YHS news release 1990, Oct.; Letter from Charles Yeo of Yeo Hiap Seng, 1984 and 1991. Yeo Hiap Seng started in China in 1900. In 1935, during the Japanese invasion of China, when life was difficult and unsettled in Fukien [Fujian] province, Yeo Keng Lian sent his eldest son, Yeo Thian In, to Singapore to investigate possibilities there. The son founded the Yeo Hiap Seng Sauce Factory at 410 Outram Road, Singapore 3. He was joined shortly by the rest of the family. The company continued to make the same three fermented soy products that it had made since 1900 in China. In 1947 the growing business was moved into larger quarters at 950 Dunearn Road, its present location. The move out of China was a wise one, for in 1949 the three Yeo Hiap Seng plants in Fukien were taken over by the Chinese Communists. By the mid-1940s, Yeo's quality soy sauce was a common sight in Singapore.

Note: This is the earliest known commercial soy product made in Singapore, or in Southeast Asia.

3078. Bragg, Paul C. 1935. Paul C. Bragg's personal health food cook book and menus. Burbank, California: Published by the author. Printed by Aetna Printing Co., Los Angeles. 201 p. No index. 24 cm.
• ***Summary:*** The Introduction to Chapter 22, titled "Meat substitutes or main dishes" states (p. 112): "Variety is the spice of life... Many people can live a vigorous, active,

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healthful life on a strictly vegetable diet, particularly those who are not engaged in a hard mental occupation. Even then, vegetable proteins, such as soy beans and nuts, can be substituted for meat. To take the place of meat there are the vegetables rich in protein–peas, soy beans, lima beans, kidney beans, Mexican beans, and lentils, and there are on the market many meat substitutes made of nuts and grains. The Battle Creek Sanitarium [Michigan] product, 'Protose,' is available at most fancy grocers and health-food stores. 'Savita' is a seasoning which gives a delicious meat-like flavor to all vegetable cooking. 'Vegex' is a product similar to 'Savita,'...

"The vegetable diet is a very alkaline diet, and should be used three or four times a week by everyone. Vegetable foods are porous, furnish bulkage to the intestines, and enrich the body with valuable organic minerals that are very necessary to maintaining perfect health.

"Soy beans are a marvelous source of vegetable protein, and should be fed to the family several times a week, and they furnish a rich source of energy-building food. They can be soaked over night, and then baked in tomato sauce, with a small amount of onion and chopped mushrooms. The soy bean is a food that the American public has not yet cultivated." Surprisingly, neither this chapter nor this books contains any soy bean recipes! However Vegetable shop suey (p. 116) is served with Savita Gravy or Soy sauce.

Bragg urges his readers to eat "real, natural, live food" (including whole wheat bread–the staff of life) to eat simply with a small number of foods at each meal, only when hungry. Do not worry about combining foods. Avoid white sugar, coffee and tea, salt, seasonings and spices, aluminum cooking ware, alcohol, preservatives, dyes, and white flour. He believes that eating meat (rare and unfried), fish, and eggs are important for building perfect health. Note 1. The 1930 edition of this book contained no recipes using meat or dairy products.

Chapter 11 acknowledges the use of recipes and suggestions from several health food writers and men in the field of Natural Living: (1) Dr. John T. and Mrs. Vera Richter, the leaders of the Raw Food movement in the West. (2) Dr. Philip M. Lovell, distinguished editor of the most widely read health column in the world, the Care of the Body section of the Los Angeles Times [Sunday Magazine. Note 2. The section contained many fascinating ads]. (3) Dr. Henry Lindlahr, the great pioneer Nature Doctor. (4) Otto Carque, chemist, research worker and crusader in the fight for natural foods. (5) Fannie Merritt Farmer's *The Boston Cooking School Cook Book.*

The last three pages each contain a full-page ad for mail-order products available from Bragg at Box 428, Burbank, California: (1) Bragg Dextronized [sic, Dextrinized] (Toasted) Meal with Wheat Germ will keep your energy high and your weight right. 60 cents for a 2 lb. box. (2) "Drink health." An illustration shows a hand-turned Live Food Juicer. Also mentions a large new book titled *Health Cocktails*, by Paul C. Bragg, "nationally famous Health Lecturer." The book "is full of live juice treats." Send $5.95 for both, postpaid to Live Food Products Co., Box 428, Burbank, California. (3) O.K. Lax is a marvelous laxative for relief of constipation and cleansing agent for internal sanitation. 50 cents for one package. Address: P.O. Box 428, Burbank, California.

3079. Burkill, I.H. 1935. A dictionary of the economic products of the Malay Peninsula. 2 vols. Published for the Malay Government by Crown Agents, London. 2,400 p. See p. 1080-86.

• ***Summary:*** These two densely-written volumes might be described as updates to the works of Sir George Watt. In the Malay peninsula, the soy bean is generally known as *Kachang bulu rimau* or *Kachang jepun* [the Japan bean]. In Java it is called *Kachang kedele, Dele, Gadele, Dekeman,* or *Dekenan;* in Sundanese, *Kachang bulu, Kachang jepun,* or *Kedele;* in Sumatra, *Kachang rimau* or *Kachang ramang;* and in Siam, *Tua luang* or *Tua praluang* [accents are included by Burkill].

"The word 'soy' came from a Japanese name for this plant, through the Dutch, who made it [the word 'soy'] known to Europeans. The first account was a result of the residence of their embassy surgeon, Kaempfer, in Japan, in 1691 and 1692; the second of the long service of their merchant, his contemporary, Rumpf, in Amboina."

The soy bean "is frequently cultivated in Siam, and seems to be a familiar plant in Kelantan [a state of Malaysia bounded on the north by Thailand]. Repeated experiments have been made with it elsewhere in Malaya; the Chinese, indeed, continually make them, usually without success, their failure being conspicuous when any available seed is used, instead of seed of races known to stand more or less tropical conditions. In 1918 advantage was taken of experiments in the Philippine Islands, to try, in Singapore, races which succeeded there and grew well. Races from the warmer parts of the United States were on trial in Selangor [Malaysia] in 1922. In 1924 a Chinese race was successfully grown by settlers in villages in the southern parts of Pahang [a state of Malaysia, bounded on the north by Kelantan and Trengganu].

"The soy bean has long been cultivated in Java, and in recent times this cultivation has become almost universal except at the western end of the island, where the climate is most uniformly humid. Probably it came to Java from India, for the name by which it is most known is Tamil and the seed is flattened as are North Indian races, while the Manchurian races have round seeds."

Note: Roxburgh (1832), in discussing the earliest known date for cultivation of soybeans in India states: "Reared in the Honourable Company's Botanic garden [across the Hooghly / Hugli River from Calcutta] from seeds received from the Moluccas [in today's Indonesia] in 1798.

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"In Java a soy crop immediately follows rice, and this was the rotation apparently which Spring found the Chinese to use in Pahang."

The seed of the soy bean is rich source of nutrients. It "replaces meat very largely among the Chinese; and as rations for Japanese troops has played a large part." Because the ripe seed contains little or no starch, it is widely used in diabetic diets. "A kind of artificial milk can be made from the seed, and is in common use in Japan and China... This milk has only three-quarters of the full food-value of cow's milk." Soy-bean coffee, made from roasted soy beans, "is sold regularly in Japan, and into the coffee can be put soy-bean milk. The Chinese germinate the beans and eat the seedlings.

Legumin, or vegetable casein is best made commercially from defatted soy beans. The casein is precipitated from the milky fluid [soymilk] by calcium sulphate. "The liquor is strained through muslin, and the precipitate treated with soda lye, which dissolves the casein; filtering gets rid of the impurities and acetic acid precipitates the casein from the filtrate in a more or less pure state. This casein is fit for use in all the industrial processes for which casein from cow's milk is used."

Soy beans can also be fermented to make témpé or "flavourings used in small quantities to make uninteresting dishes appetizing... Témpé is a food product made in Java from soy beans. It occupies a very important place in the diets of those who live in central and east Java." Detailed descriptions are given of two methods of preparation. (1) Initially, the seeds are parboiled then left soaking in water for 2-3 days. The "mush" [sic, cooked beans] is spread upon frames in flat cakes and inoculated with the fungus *Aspergillus oryzae* by the addition of some of the previous preparation. The cakes are wrapped in banana leaves; (2) This method requires greater care and time. "Meanwhile, a preparation of the fungus has been made in a somewhat elaborate manner, as follows: a portion of an older preparation is wrapped in a rather young teak leaf freely punctured with holes; this preparation is allowed to dry for two days, during which the fungus spreads to the teak leaf. Next, the soy-kernel mush [sic, the cooked soybeans] being ready, the teak leaf is emptied of its contents and sprinkled over the mush in order to convey the fungus. The mush is now put up in packets in banana leaves, heaped together, and covered up for twenty-four hours, after which it is exposed again to the air and cooled; the packets are then ready for sale." Note: This is the second English-language work to contain information about tempeh.

"The Chinese, throughout their own country and those domiciled in Malaysia, make a yet greater variety of preparations. Chief among these is teou-fu [tofu, usually precipitated with imported calcium sulphate]. "The 'teo-fu' does not keep well in a moist state, but can be treated for preservation. First, the cakes are colored yellow by a solution of turmeric or Gardenia flowers, then they are wrapped in cotton cloth and submitted to pressure. Thus made drier, they keep better. The use of this preparation is spreading."

The Chinese also make tao-cho and soy kechap (each fermented with an *Aspergillus* mould). K. Heyne describes how kechap is made in Java using black soy beans, hibiscus leaves, and *Aspergillus oryzae* mold. Finally the sauce is boiled with Arenga sugar, star anise, and other flavourings until the solution is so thick that the salt begins to crystallize.

Large amounts of soy-bean oil ("kachang oil" [perhaps soy sauce]) are imported to Malaya. "In the East [East Asia] it is used chiefly as food, but has other uses such as lubricating, varnish-making, making printer's inks, waterproof goods (Chinese umbrellas and lamps) and also for illumination. A process was patented 20 years ago for making artificial rubber, starting with soy oil. Note: Burkill was a British authority on the flora of southern and southeastern Asia.

"Criminal use: The hairs on the pods seem to be capable of causing a certain amount of irritation within the digestive tract. Gimlette (Malay Poisons, ed. of 1929 p. 169) records a case of administration of them with food in a criminal attempt to poison. He calls them a substitute for bamboo hairs in such circumstances.

"Joss-sticks: Ash of the stem, mixed with resin of *Canarium*, is said to make joss-sticks in Indo-China (Crevost and Lemarié, Cat. Prod. Indochine, 1917 p. 106)."

3080. Crespí, Luis. 1935. La soja y su cultivo [The soybean and its cultivation]. Spain. 32 p. Series: Catechisms for Farmers and Cattlemen/Stock-Farmers (*Catechismos del Agricultor y del Ganadero*). 17 cm. [Spa]

• ***Summary:*** Contents: I: Cultivation of the soybean (*la soja;* p. 3-18): 1. Description of the plant. 2. Origin of the soybean. 3. Varieties of soybeans (*Variedades de sojas):* Early maturing, semi-late, late. 4. Needs of the soybean: In water, in soil, in fertilizer. Fixation of nitrogen from the air in soybeans. 6. Place in the rotation. 7. Preparatory work. 8. Planting: Carrying out the sowing, the necessary seeds, depth of planting. 9. The seeds sprout. 10. Cultural care. 11. Maturity. 12. Diseases (*enfermedades*). 13. Harvest: As a forage plant, as a producer of seeds. 14. Yield.

II: Applications of the soybean (p. 19-28). 1. Composition of the plant: Composition of soybean forage, composition of the seeds, composition of the straw (*la paja*). 2. The soybean in the feeding of animals: As a forage plant, as a plant that produces seeds, soybean cakes (*tortas de soja*), soybean straw. 3. The soybean as a human food. 4. Industrial products from the soybean (from the oil: paints and varnishes, soap). 5. The soybean as a fertilizer.

III: Geographic distribution: 1. Worldwide cultivation of the soybean. 2. The soybean in Spain.

The soybean as a human food (p. 27): The seed is rich in protein. Whole soybeans (*Semillas de soja*) can be used like French beans and peas, mature and dry, and toasted

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like peanuts. The first two leaves of very small soybean plants (*Plantitas de soja*) can be used in salads or cooked. Soy flour can be used in bread, pastries, biscuits, or diabetic diets. Condiments, widely used in China and Japan, include natto, miso, tou-chiang, and shoyu. One can make soymilk (*leche de soya*), and use it to make soy cheeses (*quesos de soja*). The seeds of certain varieties can be roasted to make substitutes for cocoa or coffee.

Soybean cultivation worldwide (p. 29-30): In France, starting in 1880, the house of Vilmorin, started selling the variety Etampes. Also in 1880, the soybean was cultivated in Portugal in the Botanical Garden at Coimbra (in west central Portugal).

"The soybean in Spain (p. 30): Thirty five years ago [i.e. in 1900] my father tried cultivating soybeans in Pontevedra. [Note: Pontevedra is a province and city in the northeast corner of Spain, just north of Portugal, on the coast of the Atlantic Ocean. The city is near the mouth of the Ria de Pontevedra, at about 42.4° north latitude]. For two consecutive years, and using seeds of the variety Etampes from the House of Vilmorin seedsmen, he obtained identical results: excellent vegetation, but a small yield of seeds because the plants failed to fully mature.

"More than thirty years ago [i.e. before 1905], the count of San Bernardo tried growing the soybean, with excellent results, on his estate "El Alamillo," at Ecija (near Seville).

"In 1910 the soybean was cultivated by Mr. Noriega in Jerez (near Cádiz [Cadiz]), and the results obtained seem to indicate that the harvest was of medium size due to the poor condition of the seeds; but the plant responded brilliantly, showing healthy growth and resistance to the drought.

"In 1917 the ambassador of Spain stationed in Shanghai forwarded to the Commercial Information Center of the Spanish Secretary of State three varieties of soybean seeds: small black, yellow, and green. These seeds were very probably used in cultural trials, even though we do not know the results that were obtained. In the same year Mr. Juan Abril reported in the periodical *Revista Ibérica* [*Iberian Review*] of his successful soybean trials conducted in Tortosa (in Tarragona province [in northeastern Spain]).

"Finally, during the years 1914 and 1915, Mr. Santiago F. Valderrama, the brigadier general from Artillería [Artelleria], conducted soybean cultural trials in Montilla (in Córdoba / Cordova province).

"To his cultivation and enthusiastic encouragement of the cultivation of this plant in Spain, we owe the photograph on the cover of this little instruction book. It shows the top of a mature soybean plant grown by him in Montilla. Two more generations of soybean plants were cultivated in the same locality."

Illustrations (line drawings) show: (1) Leaves of the soybean and the common bean (*judía = Phaseolus vulgaris*) (p. 4). (2) Flowers of the soybean and the common bean. (3) A soybean stem, with 3 leaves and 2 pods; an opened soybean pod showing 3 seeds (p. 5). (4) An uprooted soybean plant, showing nodules on the roots, and abundant pods (p. 12). (5) Comparison of two soybean plants, with and without nodules. The one with nodules is larger and has many more and larger pods (p. 13).

Note: This is the earliest document seen (Feb. 2001) concerning soybeans in Portugal, or the cultivation of soybeans in Portugal. This document contains the earliest date seen for soybeans in Portugal, or the cultivation of soybeans in Portugal (1880 at the botanical garden in Coimbra). The source of these soybeans is unknown. Address: Catedratico de Agricultura de Instituto-Escuela, Spain.

3081. Morphy, Marcelle, comp. and ed. 1935. Recipes of all nations. New York, NY: William H. Wise & Company. 824 p. 22 cm.

• ***Summary:*** Soy is mentioned frequently in the chapter on Japan. "One sauce reigns supreme in Japan–*Shoyu*, which replaces salt in many dishes and which is used in the cooking of almost everything: soup, fish, poultry, meat, and vegetables. It is the popular condiment with cold fish or meat and is added to salad dressing. It is made from the Soya bean seeds, wheat, and pure salt, and has a pleasant and distinctive flavor, unlike that of any of our European bottled sauces."

Soy-related recipes include: Nan yoy kow yook (Broiled pork steamed with Chinese cheese [fermented tofu], p. 737). Misoshiru (miso soup with tofu and miso, p. 755). Misozuke (fish with red or white bean curd and red or white miso, p. 758). Seki han (with azuki beans, p. 759). Suki yaki [Sukiyaki] (beef and vegetables, with tofu and shoyu, p. 761). Yokan (Japanese cakes with azuki beans, p. 762). Misso (miso, homemade with soya beans, malt, and salt, p. 763). Tofu (dried bean curd, p. 763).

Miso is said to be made as follows: "The proportions are 1 bushel of Soya beans, 1 bushel of malt, and 3 bushels of salt. The beans are squeezed and mixed with the malt and salt and kept in a cask for 6 months to mature."

Concerning tofu: "Cubes of tofu are frequently mentioned in Japanese recipes. Tofu is made by soaking the dry beans in water for a day, pounding them in a stone mortar, straining into square molds and mixing with brine. They are then boiled till they become hard and firm." Address: Countess.

3082. Sia, Mary Li (Mrs. Richard H.P. Sia). 1935. Chinese chopsticks: A manual of Chinese cookery and guide to Peiping restaurants. Peiping, China: Printed by Peiping Chronicle. Published by the author. x + 106 p. 20 x 25 cm.

• ***Summary:*** Contains 100 recipes. The names of dishes, restaurants, and their addresses are in English and Chinese (with Cc = Chinese characters given). A recipe (p. 37) for "Steamed fish with black salted soy beans" (Cc tou ch'ih) calls for "1 T. [tablespoon] black salted soy beans, 1

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small piece ginger, chopped, 1 piece garlic, chopped." The instructions read: "Clean and smear fish with wine, salt, sugar and soy sauce mixture (which includes wine, salt, and sugar). Place on deep plate. Cover fish with black salted soy beans, onion, ginger, garlic and lard. Steam for 20 minutes."

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "Black salted soy beans" to refer to fermented black soybeans.

Tofu recipes: Bean curd and shrimp egg (p. 1). Bean curd and prawns (p. 30). Bean curd, eggs and chicken blood (p. 57).

Among Mutton Restaurants the Tung Lai Shun (p. 99) offers Huo-kuo (Hot Pots), including "Tou-fu (Bean Curd)... per plate .06."

A full page menu (p. 100) for Vegetarian shen lung fan chuan (Cc). The price is $6.00 per table; the price of each of the 12 dishes is also given.

A full page "List of foodstuffs" (p. 101) gives for each English name, Chinese name (in characters), Chinese name (in Wade-Giles romanization). Soy-related foods include: Bean curd (tou fu). Black salted soy bean (tou ch'ih).

3083. Thorpe, W.A. 1935. English glass. London: A. & C. Black Ltd. xvi + 301 p. Illust. Index. 22 cm. Series: The Library of English Art. [150+* ref]

• ***Summary:*** Soy is not mentioned in this excellent history of English glass. However cruetts are often mentioned. By the late 1st century AD, decorative clear glass bowls were being made by Romans. Four such bowls found in England were bade by the Romans in Italy or Alexandria. For example, one is ice-green, mould-pressed, fire-polish, ground rim, 7 inches diameter (p. 5). There was a slump in glass-making during the Middle ages. The period from 1592 to 1660 was the "period of monopolies." After the English Civil War (1642-49) and the Commonwealth (1649-1660) came the rise of English crystal. Lead crystal was developed by Ravenscroft in 1675. The Worshipful Company of Glass Sellers had received a charter of incorporation in 1635 for the distribution of Mansell's wares. In about 1665 the Company decided to have its own glass made in London. "Long cruits," "Creuits–with or without feet," and "cruits for oijle and Vinegar" are first mentioned at about this time (p. 148-50). A biography of George Ravenscroft (1618-1681) is given (p. 154-60). He was interested in chemistry, and he may have made cruets (p. 160). Before 1696 there were five flint glasshouses in Stourbridge. "No one will deny that in metal and in cutting Stourbridge is technically the best in the world (p. 161, 232).

In the 1660s, John Green designed cruets (p. 174). An alliance with silver is seen in the cruet-set, silver with two lead-crystal bottles, in the Laing Art Gallery. The silver, fashioned by Charles Adam, has the London hall-mark of 1708. "The two glass cruets have vestigial string rims derived from the service-bottle and in form are Queen Ann flint decanters marvered [i.e., rolled on a marver of flat slab] to fit sockets. This is one of the earliest extant sets with its original glass cruets... and its design would not be easy to improve" (p. 189, photo facing p. 170).

In the mid-1700s, cruet bottles were made in the Rococo style (p. 203). John Akerman made rococo cruets in about the 1750s. An illustration (facing p. 213) shows the trade card of Thomas Betts (ca. 1738-1748), London. There follows a biography of Thomas Betts (p. 213-15). "To Betts also we must attribute the main development of flat facetting in hollow diamond cuttings with their rococo curves and points, frequent in cruets, decanters, and port glasses; Betts sold... 'cutt cruits stopt,"... "hollowed" was a favorite word with him (p. 214).

The famous Jewish firm of Lazarus and Isaac Jacobs (fl. 1790), glassmakers to George III, were inclined to mark their gilt glass in cold... The same idea of form is evident in taper cruets made for cruet-sets during the 1780s and 1790s, and partly determined by their socket (p. 224-25).

Cut-glass snobbery was in existence as early as 1810, when Yorkshire glasshouses were producing Adam cruets (p. 232).

From 1832 George Bontemps, near Paris, was closely associated with Chance's new process for making sheet glass [as for windows]. Address: Asst. Keeper, Victoria and Albert Museum, London.

3084. Laming (W.C.) & Co., Ltd. 1936. Display ad: Kikkoman shoyu: The sauce for epicures! Made from the healthful soya bean. *Times* (*London*), Jan. 24, p. 15, col. 1.



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• ***Summary:*** "Free recipe book, edited by Elizabeth Craig, obtainable from all Grocers and Stores or direct for 1½*d.* in stamps to cover postage, etc." A large illustration shows a slanting bottle of Kikkoman Shoyu Sauce. Address: 14, Tooley St., London, S.E. 1.

3085. Laming (W.C.) & Co., Ltd. 1936. Display ad: Kikkoman shoyu: For keener appetite & better digestion. Made from the nourishing soya bean. *Times* (*London*). Feb. 14. p. 17, col. 1.
• ***Summary:*** "Free recipe book...." A large illustration shows a slanting bottle of Kikkoman Shoyu Sauce. Address: 14, Tooley St., London, S.E. 1.

3086. Laming (W.C.) & Co., Ltd. 1936. Display ad: 'Oui madame!' Kikkoman: Unrivalled for flavouring, cooking and table use. *Times* (*London*). Feb. 28. p. 19, col. 1.
• ***Summary:*** "'Eet ees marvellous, zis Kikkoman. I use heem zo many ways. And see guests zey considaire my dishes zo pairfect.'" Free recipe book. An illustration shows a French-looking chef with a pointed mustache, goatee, and white top hat (toque). Address: 14, Tooley St., London, S.E. 1.

3087. Kita, Gen-itsu. 1936. Amino-san chômiryô seizô ni kansuru kenkyû. 7. Daizu kasu o genryô to suru gurutamin-san no seizô [Preparation of amino acid seasoning. 7. Preparation of glutamic acid from soybean presscake]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 14(2):123-29. Feb. [15 ref. Jap]

3088. Laming (W.C.) & Co., Ltd. 1936. Display ad: Add 'palate appeal' to very meal. Add Kikkoman: Appetising–nourishing. *Times* (*London*). March 3. p. 17, col. 1.
• ***Summary:*** Free recipe book. A horizontal illustration shows a hand pouring Kikkoman from its bottle into a steaming bowl of soup. Address: 14, Tooley St., London, S.E. 1.

3089. Khankhoje, Pandurang. 1936. El frijol soya, Glycine hispida, Max [The soybean]. *Campesino* (*El*) (*Mexico*) 1(7):14-15. March. Revista Mensual. [Spa]
• ***Summary:*** "In Mexico, various experiments for the introduction of the soybean were made starting in 1911. There were repeated sporadically, always with poor results, until the years from 1928 to 1932 and 1933 when in Chapingo and Jalapa, the acclimatization of five varieties was achieved. In the following years, seeds from these 5 varieties were grown and matured in the experimental fields of the Biotechnical Institute (*Instituto Biotécnico*). The varieties Virginia and Laredo also did well there; it was hoped they would soon produced seeds suited for each of our climates."

Also discusses the importance, utilization (as oil, cheese [tofu], shoyu, and flour), and cultivation of the soybean. A photo shows two Laredo variety soybean plants and one Virginia variety soybean plant.

Note: This is the earliest document seen (Feb. 2009) concerning the cultivation of soybeans in Mexico or Central America (one of two documents). This document contains the second earliest date seen for soybeans in Mexico (1911), and the earliest date seen for the cultivation of soybeans in Mexico (1911) or Central America. The source of these soybeans is unknown. Note, however, that soybeans may well have been cultivated in Mexico as early as 1874 (see Carriere 1880). Address: Ingeniero, Jefe de la Oficina de Genetica, Ecologia y Botanica, Dirrecion de Agricultura, San Jacinto, D.F [Mexico City, Mexico].

3090. Lager, Mildred. 1936. The House of Better Living Catalog. Los Angeles, California: Published by the author. March. 14 p. March. 28 cm. Second expanded edition, March 1938.
• ***Summary:*** On the front cover is a large illustration of the exterior of the House of Better Living, and a 4-stanza poem about the House by Mildred Lager. Below the poem we read: "Catalog. The most unusual store in Southern California. Owned and operated by Mildred Lager, food economist, author, and radio lecturer."

The first section, titled "The origin of the House of Better Living!" (p. 1) begins: "Is it fate? Often the handicaps and obstacles that we have to overcome lead us into our life work, help us to find ourselves. A few years ago a young school teacher was forced to give up her chosen profession because of arthritis deformans. It was a severe obstacle to overcome, but it was that experience that led Mildred Lager into the study of foods and their relation to health, and led to the founding of the House of Better Living. No one *has* gained recognition as rapidly as Miss Lager. In a little over two years she has won her place among the 'leaders,' has received both national and international recognition, and has established the House of Better Living as an institution in Southern California... Her perfect radio voice reaches thousands who cannot attend her classes.

"Miss Lager is teaching the ounce of prevention, the health insurance that pays dividends in years of health and happiness. Her slogan is that Pure Air, Pure Water, Pure Food and Constructive Thought plus exercise and sunshine build health.

"The House of Better Living is more than a Health Food Store. It is a bureau of food information and a place and means where Miss Lager can conduct her classes free of charge–and *that* is her goal. Two years ago it seemed an impossibility–very few thought it would ever succeed. They did not know the sincerity and the spirit behind it... It is but two and a half years old. We cannot predict its future nor that of its charming founder–we can only wait and see, knowing that achievement and not time is the measure of success.–By one who has watched the growth from the start."

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At the top of page 2 in large letters: "The House of Better Living offers you: 1. The best of natural foods at reasonable prices. 2. Free delivery of all $3.00 orders in Los Angeles. 3. Free cooking classes every Wednesday afternoon at 1:30. 4. Food classes Monday and Thursday afternoon at 1:30 (except during June, July and August). 5. Miss Lager's Radio talks every Monday, Tuesday, Wednesday and Thursday morning at 7:45 over KFAC."

Product categories and products mentioned include: Coffee substitutes (Soyco, Hollywood Cup, Breakfast Cup, Ficgo, Sipp). Broths (Vegebroth, Vegemineral Broth Concentrate, Hauser's Meatless Bouillon). Nut butters–Freshly ground (Soy Bean Butter, Almond butter, Cashew butter, peanut butter–dextrinized). Whole grain flour, meal, etc. (Soy Bean Flour, Bill Baker's Prepared Lima Bean Pancake or Waffle Flour, Bill Baker's Prepared Soy Bean Pancake or Waffle Flour {2 lb for $0.30}, whole wheat flour, wheat germ, bran, buckwheat flour, dextrinized flour, gluten flour, breakfast cereals–to cook {Cubbison's cracked wheat}). Ready to serve cereals (Soy bean breakfast food, wheat germ). Macaroni, noodles, etc. (Soy bean macaroni, garbanza shells). Legumes (soy bean {imported}, garbanza peas, natural brown rice, sesame seeds). Melba toast, crackers, cookies, etc. (Bill Baker's Soy Toast {$0.30/lb}, Cubbison's Melba Toast, Cubbison's Melbetts, Soy bean gluten cracker, Cubbison's whole wheat crackers, Cubbison's Whole Wheat Dunkeretts, Cubbison's wheat soda cracker, Cubbison's honey wheat cookies, Cubbison's Melba cookies, Soy bean wafers, soy bean macaroons, Bill Baker's 100% Soy Bean Fruit Cookies {$0.18/dozen}, Bill Baker's 100% Lima Bean Fruit Cookies {$0.18/dozen}, Olson's soy bean bread, sliced {$0.12}, Bill Baker's soy bean bread–unsliced {$0.16}, Bill Baker's Lima Bean Bread, unsliced {$0.16}). Natural aids (Agar, flaxseed, psyllium, Burbank kelp, kelp, Green kelp, Santay sea greens). Oils (Soy bean oil, sesame oil, Lindsay Cold Pressed California Oil). Meat substitutes (11 products, 5 with "Soy" in the name, such as Soyatose). Soy bean products (25 products! Makers incl. La Sierra, Loma Linda, etc.).

The 27 different soy products are: La Sierra Soy Beans, plain or with tomato sauce; Loma Linda Soy Beans, plain or with Proteena; Soy Beans, imported; Soy Beans, roasted; Soy Bean Loaf (meat substitute); Soy Bean Bologna; Soy Bean Spread; Soy Bean Butter (like peanut butter); Loma Linda Soy Mince Sandwich Spread; Soy Bean Sauce; Soy Bean Milk; Soy Bean Oil; Soy Bean Noodles, Macaroni, and Spaghetti; Soyco (Soy Coffee); Soy Bean Breakfast Food; Soy Bean Sprouts; Soy Bean Flour; Bill Baker's Prepared Soy Bean Pancake or Waffle Flour; Bill Baker's Soy Bean Bread; Olson Soy Bread (sliced); Bill Baker's Soy Toast; Bill Baker's Soy Bean Fruit Cookies; Soy Bean Macaroons; Soy Bean Wafers; Soy Bean Gluten Crackers.

Photos show: (1) A portrait of Mildred Lager smiling (p. 1). (2) Mildred conducting a free cooking class in her kitchen at The House of Better Living. Many men and women, all wearing hats, are seated around the perimeter of the kitchen (p. 6-7). (3) Packages of various "Bill Baker's Soy & Lima Bean Products" including Lime Bean Wafers, Pancake Waffle & Biscuit Lima-Bean "Neat Flour," Lima Bean Toast, Pancake Waffle & Biscuit Soya-Bean "Neat Flour," Lima Bean Bread, and Soy Bean Bread" (p. 10).

A small ad (3½ by 2¼ inches, p. 6) by the Cubbison Cracker Co. (3417-19 Pasadena Ave., Los Angeles, California) states: "Dextrinized and whole wheat products: Melba Toast, Melbetts, Cracked Wheat, Whole Wheat Crackers and Cookies." Note: This is the earliest document seen (June 2004) concerning the work of Sophie Cubbison with soyfoods.

A ¼-page ad (p. 12) titled "Hain 100% pure foods," describes Vege-Jell Puddings, Mal-Ba-Nuts (a powdered beverage), Potassium broth, and Col-Lax (whose ingredients are: Powdered psyllium, Powdered agar, and lactose). Address: 1207 West Sixth St., Los Angeles, California.

3091. Narahara, Hanbei. 1936. Usukuchi shôyu to tanshoku shôyu ni tsuite [On usukuchi shoyu and usuiro shoyu]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 14(3):263-64. [Jap]

3092. Holmes, Marie. 1936. Cooking chat: The unexpected characteristic of Chinese cookery–soy sauce, native vegetables. *Toronto Daily Star (Canada)*. April 2. p. 35.
• ***Summary:*** In Chinese cookery, one finds "chopped meats and the smell everywhere of bean sauce" [soy sauce].

In the average Chinese home kitchen, "Chinese cookery owes much of its savoriness to the bean sauce and native vegetables."

"Soy or bean sauce should be used to flavor soups or main dishes."

One recipe calls for "1 tablespoon Chinese sauce"–apparently referring to soy sauce. A recipe for Chop suey calls for "1 tablespoon Worcestershire sauce." A small portrait photo shows Marie Holmes.

3093. Holmes, Marie. 1936. Cooking chat: Parts of motor car and baby foods made from soy bean. *Toronto Daily Star (Canada)*. April 16. p. 34.
• ***Summary:*** A long article, with recipes, focusing on the rise of the soy bean in Canada's public awareness.

"What's all this talk about soy beans? Why are they bursting into headlines, causing heated debates in the House of Commons and revolutionizing the food and industrial world?

"When a product whose name is foreign to most of us becomes the subject of much discussion publicly or privately, we are anxious to know why."

"A small bean, known for thousands of years by the Chinese, is about to become the culture plant of the future. This ancient food with new importance is the soy bean."

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The story of the soy bean is a romantic one, for its origin dates back thousands of years to Manchuria and Mongolia [sic], where it is still largely grown today. Henry Ford is discovering new uses for it in the automobile industry. It is used [in the form of fermented soymilk] in the scientific formulas fed to the Dionne quintuplets. As many as 595 products are now made from the soy bean. Several of the 500 varieties of soy beans are now grown in Ontario, and are of high quality.

The soy bean is a rich source of oil, from which many industrial products have been developed, such as soaps, paints, varnishes, printers' ink, linoleum, and artificial leather. This oil is also rich in lecithin, which can be added to dye baths and to finishing solutions for artificial silks and for cotton. Soy bean glue is used to make furniture and plywood from pine trees.

The soy bean is also an excellent source of food, feed, and ammunition. "Dr. A.A. Horvath, probably the greatest chemical authority on the subject of the soy bean says: 'As an economical source of valuable and wholesome dietary elements it probably has no peer."

Pediatricians have found "soy milk" beneficial for feeding infants when mother's milk is not available. Roasted soybeans [soynuts] can be used as a peanut substitute. Flour made from the soy bean can replace part of the wheat flour in cakes, puddings, and breads, and because of its high protein and low starch content, is suited for diabetic and reducing diets. Soy bean cereals are now on the market.

"The hardy Mongolians, giants of strength and stature, have, through the ages, been nourished by the soy bean, the growing of which is the greatest industry of Mongolia [sic, Manchuria].

The soy bean is widely used in Chinese cookery, in forms such as the famous soy sauce. And the soy bean is a rich source of high quality, low cost protein (and minerals)–rivaling that in milk, meat, fish and eggs.

Recipes: Vegetable casserole (with "1 cup soy bean cereal"). Raisin soy muffins (with "1 cup soy bean cereal"). Chocolate soy cake (with "½ cup soy flour"). Health pudding (with "2 tablespoons soy bean cereal"). Soy bean cookies (with "2 cup soy bean cereal").

A large photo, titled "Manufacture of new foods," shows a man (wearing a white lab coat) pouring a ladle of soy beans into the hopper of a mechanical mill.

A small portrait photo shows Marie Holmes.

3094. Kaempfert, Waldemar. 1936. The week in science: Chemistry's expanding field. *New York Times*. April 19. p. XX4.

• ***Summary:*** The section titled "In praise of soybeans" discusses a soybean symposium held in Kansas City [Missouri], incl. presentations by Dr. A.A. Horvath and Dr. N.F. True. Chinese have long made fermented "soy foods," including soy sauce–which is used in the USA to season chop suey. In the USA soybean protein is use to coat and size paper. Soybean glue holds plywood together. Dr. H.E. Barnard, director of research for the Farm Chemurgic Council thinks artificial wool might be made from soybean proteins. "In a Wellslike glimpse of the future, Dr. Barnard saw the 'passing of the cow and the sheep' if the soybean lives up to his hopes."

3095. *New York Times*.1936. Chemistry's expanding field: Notable papers presented in Kansas City [Missouri] meeting show wide scope of research. In praise of soybeans. April 19. Section 10. p. 4.

• ***Summary:*** The soybean was the subject of one of the symposiums at the American Chemical Society meeting last week in Kansas City, Missouri. Dr. A.A. Horvath of the University of Delaware's Agricultural Experiment Station stated: "In 1932 some 9 million pounds of soybean oil were used in soap-making." Dr. N.F. True discussed food uses of soybeans noting that the Chinese farmer "likes his soy foods fermented by molds, just as we like pickles and cheese fermented with the aid of bacteria. The soybean sauce that the Chinese waiter hands you with chop suey is a fermented soybean product, in case you don't know it."

Dr. E.F. Ware added that paint-makers use enormous quantities of soybean oil. "The buildings of Chicago's Century of Progress Exposition [in Illinois] were coated with soybean paints." "Soybeans can be used for every thing from hay to hairpins it seems."

Dr. H.E. Barnard, director of research of the Farm Chemurgic Council, said that "artificial wool might be made out of these same proteins." The Italians are now trying to make wool out of the casein of milk.

"There is a boon in soybeans as a result of all this chemical activity. About 5,000,000 acres in this country are given over to their cultivation. But the world's center for commercial [soy] beans is still in Manchuria." Today more than 60 soybean varieties are listed in seedmen's catalogues. "If the industrial and food uses of the soybean increase it will rank with corn as a major American crop in two decades."

A large photo shows a coolie in Manchuria carrying a large sack of soybeans on one shoulder.

Note: This is the earliest English-language document seen (Dec. 2004) that uses the term "artificial wool" to refer to spun soy protein fiber used like a textile fiber (such as wool).

3096. Iwasaki, Kazuo. 1936. Shôyu no kanshô sayô ni tsuite. II. [On the buffer action of shoyu. II.]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 14(4):347-64. [Jap]

Address: Iwazaki Shôyu-ten Jikkenshitsu, Japan.

3097. *Agricultor Venezolano (El) (Ministerio de Agricultura y Cria, Caracas)*.1936. El cultivo de la "soya" [The cultivation the soybean]. 1(1):24. May. [1 ref. Spa]

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• ***Summary:*** A short paragraph at the top of the article states: We have translated the monthly bulletin of the Royal Bank of Canada [actually The Royal Bank of Canada Monthly Letter, April 1936] which discusses the extraordinary importance acquired recently by the soybean, an agricultural product whose cultivation is being tested in Venezuela. The intensification of this crop in our country can come to signify a new and important source of national wealth.

The article begins: "To many people, the soybean has an oriental flavour: they know it as the basic ingredient in some of the most famous English meat sauces [Worcestershire, etc.] and have heard that it is an important Manchurian export. Against this background it is something of a surprise to learn from the *Wall Street Journal* of February 17, 1936, that in the previous year it had become, from the viewpoint of cash return to the farmers, the fourth most important cereal crop in the United States. The crop of 1934 was about 50 per cent larger than that of 1933 and the crop of 1935 was doubled that of 1934."

The many uses of the soybean are discussed, including soybean flour (with and without the original oil content of the seed), soybean milk, butter, cheese [tofu], and coffee. Among industrial uses, in 1934, 10 million lb of soybean oil were used by the paint industry in the USA. "In varnish and lacquers soybean oil is the principal base. The Ford car is finished with a soybean lacquer and the Ford Company is erecting a $5,000,000 plant in Detroit [Michigan] to make soybean products. In soaps, glues, linoleums and rubber substitutes, the ingredients of the soybean have come to be of predominant importance."

3098. Mogi, Masatoshi. 1936. Miso jôzô ni kansuru saikin no kenkyû. II. [Studies on the microorganisms in the manufacture of "miso." II.]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 12(5):367-77. May. English-language summary in Bulletin of the Agricultural Chemical Society of Japan 12(5):54-55, bound at the front of Nippon Nogei Kagaku Kaishi. [1 ref. Jap; eng]
• ***Summary:*** The soluble breakdown products of starch and protein in miso may be produced equally well by bacteria or by koji molds. Three experiments were made using the aerobic bacteria isolated from miso: (1) Diastatic and starch liquefying power. (2) Liquefying power of gelatine (all the bacteria liquefy gelatine). (3) Liquefying power of "Tofu" (The degrees of liquification are not always parallel to the liquefying power of gelatine). Address: Nôgakushi, Brewing Laboratory, Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3099. The Royal Bank of Canada Monthly Letter, April 1936. 1936. In: National Research Council of Canada. 1936. Proceedings of the Second Conference on Soybeans. Ottawa, Canada. 18 p. See Appendix C, p. C1-C2. Held on 4 May 1936 in the National Research Building, Ottawa, Ontario, Canada. [1 ref]
• ***Summary:*** An overview of the rapid growth of soybeans in the United States, and their potential as a crop in Canada. "To many people, the soybean has an oriental flavour; they know it as the basic ingredient in some of the most famous English meat sauces [Worcestershire, etc.] and have heard that it is an important Manchurian export. Against this background it is something of a surprise to learn from the *Wall Street Journal* of February 17, 1936, that in the previous year it had become, from the viewpoint of cash return to the farmers, the fourth most important cereal crop in the United States. The crop of 1934 was about 50 per cent larger than that of 1933 and the crop of 1935 was doubled that of 1934."

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3100. *Chicago J. of Commerce and La Salle Street Journal.* 1936. Soy bean field study is urged: Illinois manufacturers advised to investigate possibilities for use. June 2. p. 12.
• ***Summary:*** "Illinois supplies considerably more than one-half of the entire yield of soy beans in the United States."

"Some of the best known industrial uses for soy beans are soy bean milk, soy chocolate, soy sauce and other foods, including confectionery. It is used for feeding live stock by packing companies and baking companies substitute a portion of soy bean flour for wheat flour in bread. There is an increasing demand for soy bean oil in edible products, in paint, varnish, linoleum, soap and in foundries for core binding purposes. It is also utilized in glue.

"'Horn buttons, insulation material, tool handles are being made in increasing quantities from the residue of soy beans after the oil has been extracted.'"

"Fifth in State's Crops: 'The soy bean crop is now fifth among the various farm crops of the state, both in harvested acreage and in gross farm value.'"

3101. *Chicago J. of Commerce and La Salle Street Journal.* 1936. Etymology–Soy bean. June 20. p. 16.
• ***Summary:*** Many readers of the current series of articles in this newspaper have asked about the etymology of the plant's name. "Also many, pointing to the different terms and spellings–soybean, soy bean, soya bean, soja bean, soja beban, sojax max, soja plant–which appear in the limited but highly specialized literature on the plant, ask what is the

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correct term."

For salted soybeans, the early Chinese used a word pronounced *shi* [fermented black soybeans]. Another word, *yu*, was given to the oil used as a condiment. Later the term *shi-yu* was applied to the plant and to the raw beans. "Outside of Manchuria the term became *shi-yau* [Note: This is the Cantonese term meaning "soy sauce"].

The rest of the article contains incorrect information about the etymology of the term "soy bean."

Note: In 1689 John Ovington, who traveled to Suratt, in India, coined the word "souy" to refer to soy sauce.

3102. Breedlove, L.B. 1936. Soy bean–The magic plant: Source of manifold foods for man, woman, and child. Article X. *Chicago J. of Commerce and La Salle Street Journal*. June 23. p. 11.

• ***Summary:*** Introduction and composition of "soy milk" (also called vegetable milk and soya milk). Producing soy bean milk (method of Max Adler). Food for diabetics. Curd base for many dishes (To Fu). American soya sauce superior.

"Soy bean milk is now produced, on a factory basis, in this country by five companies, of which three offer the soy milk in powdered form."

"The addition of magnesium or calcium salts or lactic acid to soy milk when hot, precipitates out a good part of the protein, forming a grayish white curd, leaving a yellow water liquid [whey]. This curd, after being drained and pressed, is the product known as 'To Fu,' which is an extensive article of diet among oriental, and also forms the basis for numerous fermented, smoked and dried cheeses in China and Japan. In all of the large cities of this country having a large oriental population such curd, made fresh each day, may be found in the food stores which cater to such populations.

Such cheeses or curds have not yet appealed to the occidental taste. They seem too strong in flavor and are of a sponge-like consistency... With the newer methods of conditioning the beans, it seems quite likely that the curds–not unlike cottage cheese–may be more palatable to the western taste.

"On the oriental table these curds, prepared in an infinite number of ways–it is said that most any self-respecting oriental chef knows at least 500 recipes–may appear in one form for an appetizer, in another form as the 'meat' course, in another as the salad, and in still another as the dessert."

"American soya sauce superior: Soya sauce, used extensively by oriental peoples in cooking, as a relish or condiment to increase the flavor of all dishes and as an aid to food assimilation, is made by crushing and grinding a mixture of cooked [soy] beans and pulverized barley, inoculating with a culture known as rice ferment and leaving in vats for six to eighteen months to ferment. The juice is then drained and filtered, salt and spices added.

"The recipe for this dark-brown liquid, used on chop suey and other typical dishes, has been a closely guarded secret handed down for generations in a limited number of Chinese families. However, within the last few years, the chemists of one American firm [Oriental Show-You Company, Columbia City, Indiana] discovered a more satisfactory recipe and the output of this factory, making the sauce from domestic beans, has so captured the market in this country among the oriental reared citizens that imports of the sauce have been greatly reduced."

"Until very recently, when methods were found to remove the bitter taste, very little soy bean oil was used in this country for edible purposes. When properly treated, however, soy bean oil may serve in any one of the three important uses–either in lard substitutes, in margarin [margarine], or in cooking oils." Address: Staff member, Chicago Journal of Commerce.

3103. Lajtha, Edgar. 1936. 5-cent ration for Japan: Scientist works it out for 500 daily menus after analyzing 6,000 foods. *New York Times*. June 28. p. X9.

• ***Summary:*** "Professor Tasasu Saiki, director of the Imperial Government Institute for Nutrition in Tokyo, broadcasts recipes for concentrated food, and he is paving the way for a peaceful revolution in Japan, the revolution of nutrition." "Dr. Saiki also is preparing for time of war." Recipes include Grasshoppers "served with soy-bean sauce..." He was formerly attached to the League of Nations Health Office at Geneva.

3104. Burlison, W.L. 1936. The soybean. A plant immigrant makes good. *Industrial and Engineering Chemistry* 28(7):772-77. July. [23 ref]

• ***Summary:*** Contents: Introduction and brief history. Description of the bean. Soybean culture. Industrial uses. Imports. Composition of soybean seed. Composition of soybean oil. Composition of soybean-oil meal. Methods of processing soybeans for consumption: Expeller method, hydraulic-press method, solvent extraction process. Disposition of the domestic crop. Products derived from soybeans. Industrial use of soybean oil. Soybean oil in the paint industry. Soybean oil as a core binder. Other uses for soybean oil: Lecithin, sulphonated oil. Plastic industry. Soybean glue. Further investigation needed.

This article begins: "The soybean is one of the oldest crops grown. It was described in a Chinese book on Materia Medica, *Ben Tsao Gang Mu*, written by Emperor Shen-Nung about 4800 years ago... Soybeans were introduced into the United States in 1804, yet a hundred years there were very few grown outside the southern states."

The section titled "Products derived from soybeans" (p. 775) contains an extensive list of commercial food, feed, and industrial products derived from soybeans and compiled from letters received by the University of Illinois during the latter part of 1931. "This list is increasing from month to month." Some products have brand names and others only

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generic names. The following products were on the market in the USA and Canada at that time.

"Food products: Soybean flour. Soybean-meal flour. Refined edible soybean oil. Soybean salad oil. Chocolate bars (30% soybean flour). Cocoa (up to 60% soybean flour). Sausages (up to 50% soybean flour). Bread (7½% soybean flour). Rolls (10% soybean flour). Macaroni (20% soybean flour). Soybean muffins. Soybean cookies. Soybean doughnuts. Vegetable shortening. Infant foods. Diabetic foods. Oleomargarine. Lard substitutes. Filled sweets. Soybean sprouts. Soybean cheese. Soya cream biscuits. La Choy soy sauce. Zoybeans (cooked beans). Bacon and Zoybeans. Zoy bouillon. Casein gluten flour. Non-fat mayonnaise. Fatless spread. Soyex-malt-cocoa drink. Soybean milk. Soybean ice cream.

"Feed products: Cake or meal. Commercial feed. Dairy feed. Hog chow. Poultry chow. Dog chow. Calf chow. Rabbit chow. 34% protein chow chow. Chick Startena.

"Industrial products: Paint. Varnish. Enamels. Oilcloth. Linoleum. Printers' ink. Glycerol. Celluloid. Lauxtex plastic wall coat. Lauxtein waterproof soybean glue. Lauxein emulsifier. Soap. Core binders. Rubber substitutes. Plastics."

Photos show: (1) "A beautiful field of Illini soybeans, a variety extensively used for industrial purposes." (2) "A soybean plant loaded with pods and ready for harvest.

Tables show: (1) "Utilization of soybeans and soybean products in 1930" For example: Soybeans ground for food: 200,000 bu (bushels). Soybean oil used in various edible products: Oleomargarine: 750,000 lb. Lard substitutes: 500,000 lb. Other food products: 4,750,000 lb. Soybean oil used in industrial products: Paint and varnish: 9,000,000 lb. Linoleum and oilcloth: 4,000,000 lb. Soap kettle: 8,500,000 lb. Soybean meal used in: Commercial feed: 84,100 tons. Other 15,000 tons. Soy flour for food: 850 tons. Infant and diabetic foods: 50 tons. Other uses, including glue: 10,000 tons.

Table 2: "Adaptability of soybean oil to various products." Drying products: Paint, varnish, linoleum and oilcloth, waterproof goods. Soap products: Hard soaps (toilet, household, laundry), soft soaps (shampoos, automobile soaps). Edible products: Lard compounds, cooking oils, salad oils, fountain drinks, candy, mayonnaise, margarine. Miscellaneous: Foundry core oil, printers' ink.

Note: A revised and considerably expanded version of this article, with the same title and author but a somewhat different format, was published two months later as *Illinois Agric. Exp. Station, Circular,* No. 461. 15 p. Sept. Address: Univ. of Illinois, Urbana, Illinois.

3105. Horvath, A.A. 1936. The soybean points the way to agricultural recovery. *Scientific Monthly* 43:63-69. July.
• ***Summary:*** "The soybean is a vivid example of a crop with an amazing diversity of industrial uses... In 1934 soybean oil constituted 11.6 per cent. of the world's production of vegetable oils. The United States production of soybean oil for the same year amounted to 1.6 per cent. of the total U.S. production of vegetable oils..."

"When hydrolysed by acids or enzymes, soybean protein is converted into soy sauce, which is used for bouillon extract preparations and has been for decades as the base of Worcestershire sauce."

Soybean protein "is capable of taking the place of casein (which is much more expensive and is being imported to the U.S.) in a large number of industries, such as sizing for paper, glue (waterproof) and plastics, all of which are already in existence in our country. At the 1933-34 International Exposition in Chicago [Illinois] all exterior walls and sub-floors of the Hall of Science were constructed of plywood panels glued with soybean glue. To-day soybean meal is used by the Ford Motor Company for the manufacture of horn buttons, gear shift lever balls, light switch handles, distributor bases, distributor cover and window trim strips... With the completion of a new $5,000,000 River Rouge plant for soybean plastics, the use of soybean meal will extend to making dashboards and probably also automobile bodies."

Soybean meal can also be used for making floor coverings, for hardening and strengthening steel and iron, in water paints, as an emulsifier for asphalt in roads, and as an emulsifier for mineral oils for dormant sprays. Soya lecithin also has many applications. One million pounds of soya phosphatides are used annually in the margarine industry in Germany. It can be used for making and softening leather and for milling rubber to a powder.

In 1934 the main commercial uses of soybean oil were (in million pounds): Paint and varnish 10.4. Linoleum and oilcloth 2.8. Compounds and vegetable shortenings 2.7. Soap 1.35. Printing ink 0.059.

During the last decade "whole soya flour" has steadily gained in popularity. It "contains over 2 per cent. of phosphatides, nearly all the known vitamins, and an ash of high alkalinity." Address: M.D., Chemist, Agric. Exp. Station, Newark, Delaware.

3106. Iwamura, Iwao. 1936. Determination of cystine in "shoyu." *Bulletin of the Agricultural Chemical Society of Japan* 12(7):89. July. Bound in the front of Nippon Nogei Kagaku Kaishi (J. of the Agricultural Chemical Society of Japan). [2 ref. Eng]
• ***Summary:*** "Shoyu" contains 0.0424-0.0544% cystine. Address: Agricultural Chemical Lab., Tokyo Imperial Univ., Tokyo.

3107. Miyaji, Kenji; Oguri, Motozo. 1936. Shôyu abura, tamari abura, tamari kôji abura nado fuken kabutsu-chû no bôkabi seibun ni kansuru kenkyû [Studies on antimold substances in the unsaponifiable substances of oils of shoyu, tamari, tamari koji, etc.]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 12(7):661-74.

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July. [10 ref. Jap]
Address: Gifu Koto Norin Gakko, Nôgaku Hakase, Japan.

3108. Monnier, Emile. 1936. La graine de soja: Les préparations à base de graines de soja dans l'alimentation des Annamites [The soybean seed: Preparations based on soybeans in the diet of the Annamites (of Central Vietnam)]. Marseille, France: Imprimerie Ant. Ged. 106 p. 24 cm. [91 ref. Fre]
• ***Summary:*** The title pages states that this is the published version of the author's PhD thesis at the Mixed Faculty of General and Colonial Medicine, and of Pharmacy at Marseille. The thesis was presented and defended before the Faculty of Medicine of Marseille on 10 July 1936 to obtain the degree of Doctor of Pharmacy. The author was born on 19 Nov. 1905, at Sarzeau (Morbihan); he is a *Licencié ès Sciences, Pharmacien-Capitaine des Troupes Coloniales.*

Contents: 1. Introduction. 2. The soybean: Historical summary and overview. Soybean botany, the production of soya; its cultivation in Indochina, soybean commerce and trade, chemical composition of the soybean seed (analysis of soybeans from Tonkin), the chemical constituents of the soybean seed, soy oil, food use of soya in Europe, industrial uses of soya, soya in therapeutics and dietetics. 3. Soy-based food preparations from Indochina: Soymilk, the fermentation and preservation of soymilk, tofu (*dâu-phù*), soy sauce, yuba (La crème de soja, *dâu-phù-chuc*). 4. Conclusion.

3109. Thone, Frank. 1936. The soybean goes to town: Used in scores of products, from noodles and beer to steering-wheels and paint, Chinese bean shows versatility. *Science News Letter* 30(799):74-76. Aug. 1.
• ***Summary:*** Contents: Introduction. Food for recovery. Wallpaper and glue. Oil requires processing. Economical and efficient. For mixing with silage. Fifty varieties listed. A one-ingredient meal.

Under the latter heading (p. 75-76): "The beans themselves are boiled for the table, and eaten in a dozen other ways, including the succulent bean sprouts you fish for in your plate of chow-mein, and salted parched soybeans that are much like roasted peanuts. It is quite possible to make up a reasonably complete, appetizing meal out if soybeans alone.

"We are beginning to appreciate their value as food, too, in the Occident. Canned soybeans are on the market and soybean flour is at a premium among knowledgeable housewives.

"And finally there is our old friend, the soybean sauce of the chop-suey restaurants–that dark stuff in the hair-tonic bottles, that has such a tangy, salty taste. It is made by fermentation, and after proper aging is shipped to this country. That is, the cheaper kind of 'dragon's blood' comes here. The really choice varieties, aged in jars for years, with daily exposure to the sun, are for merchants and mandarins, not export."

Three photos show: (1) Two men in a field of beans. "The crop looks good: in a soybean field down south." (2) William Morse standing in front of a cupboard in his office, with many shelves well filled with soybean products. (3) The upper part of a soybean plant, showing pods, leaves and seeds. Address: Dr.

3110. *Business Week.*1936. Soybean sits pretty: Becomes so important that Chicago Board of Trade may establish futures trading. Aug. 8. p. 21-22.
• ***Summary:*** "The soybean is advancing so rapidly in importance among American Farm products that the Chicago Board of Trade is considering the establishment of soybean futures trading." Note: Soybeans were soon admitted by the CBOT. The first transaction, in October 1936, was for 5,000 bushels at $1.20.

"Prime mover in the industrial development of soybeans has been Henry Ford and the Farm Chemurgic Council, which he sponsors. Not only has he found a multitude of uses for soybean products in the Ford car, but he has been instrumental in increasing use of it for human consumption. Latest figures show use of 560,000 bu. of soybeans in the production of a million Ford cars (more than ½ bu. per car)."

The soybean is used in certain soaps, and it is a fairly good drying oil for use in paints (11,000,000 lb in paints last year) and varnishes, with an iodine value of about 136 compared with 185 for linseed oil. "The oil is used in lard substitutes, margarin [margarine] and cooking oils, bakery goods–to mention but a few of a growing list. The familiar soya sauce for chop suey is an ancient product of the plant."

"Factors responsible for the sharp increase in 1935 acreage to 2,691,000 from 1,511,000 in 1934 included the AAA [Agricultural Adjustment Administration (USDA)] restrictions on production of other grains and the growing realization by farmers that soybeans are valuable as a source of nitrogen for land and suitable for rotating purposes." The competition of soybean oil with tung oil is discussed.

3111. Akabori, Shiro. 1936. Shôyu no kôki seibun ni tsuite. I. [On the aroma of soy sauce. I.]. *Nippon Kagaku Kaishi (J. of the Chemical Society of Japan)* 57(8):828-31. Aug. [7 ref. Jap]
Address: Osaka Teikoku Daigaku, Rigaku-bu, Kagaku Kyoshitsu.

3112. Kaltenbach, D.; Legros, J. 1936. Soya: Selection, classification of varieties, varieties cultivated in various countries: Oceania (Document part). *Monthly Bulletin of Science and Practical Agriculture (International Institute of Agriculture, Rome)* 27(8):294T-97T. Aug.
• ***Summary:*** "1. Commonwealth of Australia: A. Southern Australia. Apart from a very few trial plots, soya growing is not practised in this State as the conclusion has been reached

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that local climatic and soil conditions are not suitable for this crop.

"B. New South Wales. Several years ago, the Department of Agriculture tried to introduce soya into the agricultural economy of the State, either as a green manure or forage or for the multiple uses of the seed. During the last 20 years, numerous varieties have been introduced and many trials have been carried out in all parts of the country. Generally speaking, the results were not satisfactory and efforts to introduce soya into the economy of the country were not successful. The growth of the soya plant was very poor and the yields in seed low. One of the reasons why soya does not succeed seems to be the absence of the bacteria of root nodules in the soil of this State. Utilised as a spring green manure, soya is inferior to cow peas in the coastal regions. In the Table-lands soya cultivation appears to give better results.

"C. Queensland. Soya has been grown experimentally in this country for a great number of years, but the results were more or less negative and the areas now cultivated with soya are almost negligible.

"A few very tall varieties, such as Biloxi and Otootan, have proved to be suitable as forage, but they have not been adopted by farmers, who obtain forage more easily in cultivating cow peas or other leguminous plants.

"Trials in inoculating soya seeds do not appear to have given any results though other trials should be carried out in the agricultural districts before this crop can be said to be quite unsuited to this State.

"The internal market for soya and its derivatives is limited as it is supplied by imports from Manchuria and Japan.

"Owing to the abundant production of all kinds of feeds for live-stock, the use of soya will be difficult to establish unless it is utilised in crop rotation with cotton or maize.

"D. Victoria. No systematic attempts have yet been made to introduce soya growing into this State. Various trials previously made for experimental purposes showed that this crop was not of sufficient economic interest to replace the existing crops of leguminous plants.

"In 1933, however, the Department of Agriculture undertook a series of trials in soya growing in East Gippsland...

"Imports into Australia are of no great importance. In 1932-1933, 40,808 gallons of soya [soy sauce] were imported; value £1778. Of these imports 90% came from China. During the same period 12 tons of seed were imported from Japan; value £148.

"3. New Caledonia. Soya cultivation was introduced in 1928. No native varieties are grown, only foreign varieties, seeds of which were introduced on two occasions by the Chamber of Agriculture and the Administration. The principal variety is *Soja hispida*. Medium yields are obtained. There appears to be no future for soya as New Caledonia is abundantly provided with similar products which are in current use."

Note: This is the earliest document seen (March 2010) concerning soybeans in New Caledonia, or the cultivation of soybeans in New Caledonia. This document contains the earliest date seen for soybeans in New Caledonia, or the cultivation of soybeans in New Caledonia (1928). The source of these soybeans is unknown. The history and present status of the cultivated soybean, *Glycine max* is unclear. Address: Rome, Italy.

3113. Meade, Mary. 1936. Soy beans are new dish on American table. *Chicago Daily Tribune*. Sept. 9. p. 26.
• ***Summary:*** It has taken agricultural America a long time to discover the soy bean. For centuries it has been a valuable human food in the Asiatic diet, "but only within the last few years has it come to the American table. And in what variety!" We have fresh and dried soy beans. We are using soy bean flour to make breads, drinking a soy bean milk, and cooking many of our foods in soy bean oil. "There is a soy bean 'coffee' on the market, a soy bean butter, which resembles peanut butter, soy sauce, and a roasted soy bean which is eaten like peanuts and which is gaining in popularity every day."

Soy beans are a valuable food, rich in "good quality protein and having a superior caloric content." Their low starch content makes them valuable for diabetics. Describes how to cook fresh soy beans and dried soy beans.

"Among the most edible varieties of soy beans are Easycook, Mammoth Yellow, Manchu, Dunfield, and Haberlandt. All are light in color." Gives a recipe for Soy bean nut bread: the nuts are chopped tree nuts.

3114. Ramsbottom, J. 1936. The uses of fungi. *British Association for the Advancement of Science, Annual Report*. Sept. 9-16. p. 189-218. See p. 206-08, 212. 106th year.
• ***Summary:*** This was an address to Section K (Botany) of the British Association for the Advancement of Science at Blackpool, Sept. 10, 1936. Discusses: Koumiss (effervescent drink), Egyptian Leben, Arrack, Japanese koji, shoyu, tamari, and miso, fermented tofu.

"There is a wide range of oriental foods produced by fermentation with *Aspergillus*. Chinese curd, To-fu, is made from soy-bean milk fermented with mould and ripened in brine. The curd is cut into squares which soon become covered with fungus. They are then placed in brine for further ripening. The curd is canned as white or red squares in a salty liquid."

In Japan, four large industries are built on the use of *Aspergillus oryzae*. Their approximate total yearly output is as follows: Saké (rice wine) 812,000 kiloliters, shoyu (soy sauce) 902,000 kiloliters, miso (soy cheese) 1,690,000 kilograms, and shocho (distilled alcoholic liquor) [sic, shochu or shôchû, cheap spirits] 39,700 kiloliters. The annual

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value of all the fermentation industries is approximately £40,000,000.

"Molds of the genus *Penicillium* play a large part in the ripening of the Camembert-Brie, and the Roquefort-Gorgonzola-Stilton series of cheeses. Milk is first coagulated with rennet or dried calf-stomach linings." Also: Mycorrhiza, Takadiastase, production of glycerin and yeasts in Germany during World War I. Address: O.B.E., President of the Botany Section.

3115. Burlison, W.L. 1936. The soybean. A plant immigrant makes good. *Illinois Agricultural Experiment Station, Circular* No. 461. 15 p. Sept. First printed in Industrial and Engineering Chemistry. 1936. 28(7):772-77. July. [24 ref]
• ***Summary:*** A shorter version of this article, with the same title and author but a somewhat different format, was published two months earlier in *Industrial and Engineering Chemistry* 28(7):772-77. July.

Contents: Introduction and brief history. Description of the soybean. Soybean culture. Industrial uses. Disposition of the domestic crop. Products derived from soybeans: Food, feed, and industrial products. Imports. Chemical composition: Soybeans, soybean oil, soybean oil meal. Methods of processing soybeans: Expeller, hydraulic-press, solvent extraction. Industrial use of soybean oil. Use of soybean oil in the paint industry. Soybean oil as a core binder. Other uses for soybean oil: Lecithin, sulphonated oil. Plastic industry uses soybean oil meal. Glue from soybean oil meal. Soybean oil meal for fertilizers. Further investigation needed.

The section titled "Products derived from soybeans" (p. 6-7) gives is an extensive list of commercial food, feed, and industrial products derived from soybeans. This list is almost identical to that published two months earlier. Address: Chief in Crop Production.

3116. Fors, Alberto J. 1936. El frijol soya, materia prima para la produccion de aceite [The soybean, raw material for the production of oil]. *Revista de Agricultura (Cuba)* 19(8-9):64-66. Aug/Sept. [Spa]
• ***Summary:*** Briefly describes the importance of the soybean as a raw material for the production of oil. At the end of the article are listed the products obtained from the soybean. These include 24 food products (incl. refined soy flour, refined soy oil, chocolate and cocoa with soya, sausages with soy flour, soy bread, soy macaroni, gluten flour and soy casein, soy lard (*mantecado de soya* = shortening), foods for children and diabetics, oleomargarine, soy sprouts (*retoños de soya*), soy cheese (*queso de soya* = tofu), biscuits made with soy cream, La-Choy soy sauce, soya bouillon, low-fat soy mayonnaise, soymilk), 6 concentrated feeds for domestic animals, and 14 industrial soy products (incl. paints, enamels, linoleum, glycerine, varnish, artificial adhesive rubber, candles, lubricants).

The article begins: "The soybean (*el frijol soya*) is a bush which grows to a height of, at most, 3½ feet, but its industrial possibilities and its agricultural worth are gigantic. One cannot explain why the cultivation of this plant in Cuba is still at the test stage. During the past year of 1935, the United States harvested not less than 24 million quintales [1 quintal = 100 pounds] of this bean. The soybean also does well in our climate and in the majority of our soils, with the advantage over the black bean that two crops per year can be harvested.

"We are importing for our consumption about 6 million kg of oil extracted from this bean which, with some industrial products derived from the same, represent an annual expenditure which approximates, on average, one million pesos. The soybean is not a future possibility: it is money in the hand of those who plant it. Cuba has oil extraction plants which can process all the soybeans we can harvest. Why don't you plant soya? Not only do we import large quantities of soy oil, for we are large consumers of oils and fats, but we also bring in concentrated feeds for milk cows, chickens, and various other substances derived from the soybean." The article ends with these words written in large letters: Plant soybeans! Address: Propagaganda de la Inspeccion Provinical de Agricultura de la Habana. A Cargo de Ingeniero A.J. Fors.

3117. Ishimaru, Yoshio. 1936. Shôyu jôzô-jô kûki-chû no kinga ni tsuite [Microorganisms in the air in shoyu breweries]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 14(9):737-50. [Jap]

3118. Kibi, Masajiro. 1936. Shôyu jôzô-yo kôji-kin ni tsuite. I. Kakuchi jôzô-jô shiyô-kin no keitai [On the koji molds used in shoyu fermentation. I. Morphology of Aspergilli used for brewing in several provinces]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 12(9):885-97. Sept. English-language summary in Bulletin of the Agricultural Chemical Society of Japan 13(8):130-31, bound at the front of Nippon Nogei Kagaku Kaishi. [12 ref. Jap]
• ***Summary:*** The author isolated 54 strains of molds from many samples of koji, the starter used in manufacturing shoyu (Japanese soy sauce). Morphological and physiological investigations show that these molds belong to 28 varieties of *Aspergillus oryzae*. A table shows the morphological characteristics of these 28 varieties, including length of stalk in mm, and diameter of conidia in micrometers. General characters: Colonies green. Stalks colorless and not septate. Outer walls of stalks pitted or rough (except No. 6). Vesicles globose or subglobose. Sterigmata in 1 series. Conidia globose. Conidial wall smooth at first (except No. 6). Address: Yamasa Shoyu K.K. Kenkyusho, Biseibitsu Jikkenshitsu, Japan (Microbiological Lab. of Yuasa Shoyu Co.).

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3119. Hermano, A.J. 1936. Soybeans a national food for Filipinos. *Agricultural Life* (*Exponent of Philippine Agriculture and Allied Industries*) 3(9-10):21-23. Sept/Oct.
• ***Summary:*** Rice is the chief staple food of the Filipinos. But the local diet would be improved by the addition of soybeans and their products. In April 1934 the Nutrition Research Laboratory, Bureau of Science, began to manufacture soybean milk. The method is described, the milk was used with good results in experiments with school children in Paco. Presently 8 liters/day of soybean milk are prepared for the Tondo and San Nicolas Community Health Social Centers.

The article concludes: "Various soybean products, like 'tokua' [tofu], 'toyo' or sauce, 'tahore' 'toho' 'tohu' and other products made by the Chinese are prepared in rather simple ways and could be easily made by the Filipinos."

Note: This is the earliest English-language document seen (Oct. 2011) that contains the word "tahore" which probably refers to fermented tofu. Address: Chief, Nutrition Research Lab., Bureau of Science [Manila, Philippines].

3120. Matsumoto, K.; Takahashi, T. 1936. Beikoku riyô shôyu jôzô shiken [The utilization of rice for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 329-42. Oct. [Jap]
Address: Nôrinshô Itaku Shôyu Jôzô Shiken.

3121. Matsumoto, K.; Takahashi, T. 1936. Genmai oyobi fusuma shiyo shikomi shôyu jôzô shiken [The utilization of rice and wheat bran for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 343-53. Oct. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3122. Lehmann (R.) Co., Ltd. 1936. Display ad: The finest appetiser you can include in any meal: Kikkoman. *Observer* (*London*). Nov. 22. p. 21.
• ***Summary:*** "A product of the wonderful Soya Bean, rich in Vitamins A, B and D. Kikkoman assists the gastric juices in correct assimilation of food. It induces healthy appetite, nourishes the blood stream, and tones up the system..."

Note: This is the last mention of Kikkoman seen (Sept. 2008) in the *Observer* (London) or *Manchester Guardian* until Nov. 1981. Address: Peninsular House, Monument St., London, E.C. 3.

3123. Lehmann (R.) Co., Ltd. 1936. Display ad: The finest appetiser you can include in any meal: Kikkoman. *Times* (*London*). Dec. 4. p. 19, col. 1.
• ***Summary:*** "Produced from the wonderful Soya Bean, Kikkoman aids digestion, nourishes the system and stimulates appetite. Kikkoman contains no Vinegar... Delightful as a nightcap with hot or warm milk." Free recipe book. Illustrations show: (1) The Kikkoman trade mark. (2) A hand holding up a bottle of Kikkoman.

Note: This is the last mention of Kikkoman seen (Dec. 2005) in the *Times* (London) until June 1980. Address: Peninsular House, Monument St., London, E.C. 3.

3124. *Argus* (*The*) (*Melbourne, Victoria, Australia*).1936. Fire signals warn luggers. Dec. 31. p. 8.
• ***Summary:*** There have been reports of flagrant invasions of Australia's northern territorial waters by Japanese ships–such as those gathering pearls. And there is evidence: "Tobacco tins of a brand unobtainable in Australia, scattered tins of Japanese tinned goods, and soya bean sauce containers littered the beach."

Note: This is the earliest of 6 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "soya bean sauce."

3125. Akabori, S.; Kaneko, T. 1936. Shôyu no kôki seibun ni tsuite. II. Shôyu-chû no ganryû kôki busshitsu no bunrui oyobi gôsei [On the aroma of soy sauce. II. Isolation of (r-methylmercapto)-propyl alcohol and its synthesis]. *Nippon Kagaku Kaishi* (*J. of the Chemical Society of Japan*) 57:832-36. [6 ref. Jap]

3126. Fukai, Tôshi; Takahashi, T. 1936. Anmoniumu en-rui tenka shôyu jôzô shiken [Brewing trials of soy sauce with the addition of several ammonium salts]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 261-67. [Jap]
Address: Jozo Shikensho. 1. Gishu; 2. Moto Joshu.

3127. Fukai, Tôshi; Takahashi, T. 1936. Sangen-shiki shôyu jôzô shiken. III. [A new special method of soy sauce manufacture III.]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 246-56, 257-60. [Jap]
Address: Jozo Shikensho. 1. Gishu; 2. Moto Joshu.

3128. Iwamura, I. 1936. Shôyu-chû no shisuchin no teiryô [Determination of cystine in shoyu (Abstract)]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 31(10):84. [1 ref. Jap]
• ***Summary:*** Abstracted from the *Bulletin of the Agricultural Chemical Society of Japan* 12(7):79 (1936). Cystine (German: cystin) is a crystalline amino acid that is widespread in proteins (as keratins) and is a major metabolic sulfur source.

3129. **Product Name:** [Kimlan soy sauce].
Foreign Name: Kinran.
Manufacturer's Name: Kimlan.
Manufacturer's Address: Taiwan.
Date of Introduction: 1936.

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New Product–Documentation: Manufacturer's Catalog. 1981? 15 p. Page 15 notes: "For over 40 years, Kimlan soy sauce has been the favorite of the Chinese people and now it is fast becoming a favorite the world over... Kimlan, established in 1936, is one of the most experienced soy sauce makers in Taiwan. It has grown to become Taiwan's most popular soy sauce. As it has grown, production facilities were expanded in 1957, 1967 and 1970. Yet the expansion did not keep up with the demand. Therefore, in 1977, a totally new plant was built at Tao Yuan, Taiwan. Daily production is now 15,000 kg."

3130. **Product Name:** Soyalex (Refined Soybean Cake Resulting from Alcohol Solvent Extraction).
Manufacturer's Name: Manchuria Soya Bean Industry Co.
Manufacturer's Address: Dairen, Manchuria.
Date of Introduction: 1936.
Ingredients: Soybeans.
How Stored: Shelf stable.
New Product–Documentation: Akagi. 1936. Bean Oil Industry in Manchuria.

Contemporary Manchuria 1937. "Bean Oil Industry in Manchuria." p. 26. "Refined Bean Cake. ('Soyalex'). The Refined Bean Cake is obtained after the oil content is extracted by the use of pure alcohol. It contains abundant protein and carbohydrate but no impurities and a negligible amount of water... Its use as a raw material for shoyu, miso, candy, or noodles adds a high degree of nutritive value."

South Manchuria Railway Co. 1937. Bean Oil Industry in Manchuria. p. 2. "A new process of extracting oil by using alcohol as solvent was recently discovered by the Central Laboratory of the South Manchuria Railway Co. This method is now utilized by the Manchuria Soya Bean Co. at Dairen." p. 4. This method produces the largest amount of oil of fine quality, and the best quality cake for use as food or feed. It is the only method that "produces priceless lecithin as a by-product."

3131. Matsumoto, K.; Takahashi, T. 1936. Genmai shiyô shôyu jôzô shiken [Utilization of unpolished brown rice for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 225-34. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3132. Matsumoto, K.; Takahashi, T. 1936. Genmai oyobi fusuma shiyô shikomi shôyu jôzô shiken [Use of unpolished brown rice and wheat bran for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 343-53. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3133. Matsumoto, K.; Takahashi, T. 1936. Genmai shiyô-ryô hikaku shôyu jôzô shiken [Comparison of various quantities of unpolished brown rice used for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 355-67. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3134. Matsumoto, K.; Takahashi, T. 1936. Shôbo ôyô moromi renyô shiken [Use of the yeast and bacteria from shoyu moromi (mash) for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 235-40. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3135. Matsumoto, K.; Takahashi, T. 1936. Daizu, genmai, shiro nuka shiyô shôyu jôzô shiken [Utilization of soybeans, unpolished brown rice, and its white rice bran for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 369-75. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3136. Matsumoto, K.; Takahashi, T. 1936. Kôryan shiyô shôyu jôzô shiken [Use of kaoliang as raw material for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 241-47. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3137. Matsumoto, K.; Takahashi, T. 1936. Genmai niji shikomi shôyu jôzô shiken [The application of unpolished brown rice for shoyu brewing, using it partially as steamed rice and as koji]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 335-42. [Jap]
• ***Summary:*** This method uses equal amounts of steamed brown rice and brown rice koji. The meaning of *niji shikomi* (double brewed) is not clear. Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3138. Matsumoto, K.; Takahashi, T. 1936. Genmai shiyô koikuchi shôyu jôzô shiken [Utilization of unpolished brown rice for the manufacture of regular (*koikuchi*) shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 124. p. 383-87. [Jap]
Address: Jozo Shikensho. 1. Gishi; 2. Moto Joshu.

3139. Miyata, K. 1936. [Pilot test of miso-tamari with special microorganisms]. *Aichi-ken Kogyo Shikenjo* 8:67-. [Jap]*

3140. Nishida, Kotaro. 1936. ni, san tokushu jôzô butsu no kagaku-teki kenkyû: Sotetsu shôyu [Chemical studies on several specialty fermented products: Cycad shoyu]. *Kagoshima Koto Norin Gakko Gakujutsu Hokoku* (*Bulletin of the Kagoshima Imperial College of Agriculture and Forestry*) 11:209-224. [Jap]*

3141. Oota, Kiyoshi. 1936. Shôyu no kabi-dome-zai ni tsuite. Inshokubutsu bofuzai no kenkyû, sono roku kara kyû [On the anti-mold substances for shoyu. Research on

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preservatives for beverages, 6-9]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 31(1):20-29; 31(2):90-101; 31(3):102-14; 31(4):127-48. [81 ref. Jap]
Address: Igaku Hakase.

3142. Shoji, Kenjiro. 1936. Shôyu no kôki. II and III. [Flavor of shoyu. II and III.]. *Rikagaku Kenkyujo Hokoku (Report of the Institute of Physical and Chemical Research)* 15(3):166-70; 15(4):223-29. [11 ref. Jap]

3143. Shoji, Kenjiro. 1936. Shôyu no kôki. III. [Flavor of shoyu. III.]. *Rikagaku Kenkyujo Hokoku (Report of the Institute of Physical and Chemical Research)* 15(4):223-29. [11 ref. Jap]

3144. Soma, Z. 1936. [Detection of dulcin in shoyu]. *Nippon Eiseikagaku* 1:12-. [Jap]*

3145. Suminoe, K. 1936. Shôyu kabi-dome-zai no hikaku kenkyû [Comparative studies of anti-mold substance of shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 31(11):990-94. [Jap]
Address: Nodai Kyoju, Nôgaku Hakase.

3146. Wang, Tiao-Hsin; Ni, Sung-Mou. 1936. Chemical studies on the manufacture of soy bean sauce by the Kwantou process. *Hua Hsueh Kung Ch'eng (J. of Chemical Engineering, Tientsin)* 3:284-96. [20 ref. Eng]
• ***Summary:*** Based on a thesis presented by Mr. Ni to the Faculty of Fukien [Fujian] Christian University in partial fulfillment of BA degree, January 1936. Because the importance of soy sauce, both economically and in the human diet, many scientific studies on its method of production have been carried out in recent years, in both Japan and China. "However the major amount of research on soy bean sauce was confined to the finding of means by which time for fermentation might be shortened, since either by the original Chinese of by the Japanese methods the time required to carry out fermentation was about 1 year. As a result of these efforts, about 120 new modifications on the process have been proposed and 110 of them patented. A critical study made by Togano (1931-34) on these modifications revealed that nearly all of them have but little practical value. The one that deserves special mention is Togano's process which has been widely used in Japan and which is recently introduced to China under the name of 'Y-type' process."

"The Kwantou process of soy beans sauce manufacture uses soy bean alone as its raw material and carries out the fermentation at room temperature for not more than 3 months, yielding a product of high quality and of a flavor superior to that obtained by Togano's method. In spite of all these superiorities, the Kwantou process is little known and it has not received the attention it deserves."

In the first stage of manufacture using the Kwantou process (the preparation of koji), the main changes are hydrolysis of the protein and carbohydrate of the bean meal by molds. The subsequent washing and soaking of the koji (unique to the Kwantou process) results in the removal of mold mycelia which would, if retained, give an unpleasant flavor to the sauce. The loss of enzymes is regained in the second fermentation. In the final fermentation, when the koji is mixed with common salt (NaCl) in wooden vats, further protein and carbohydrate decomposition occurs. Concentration of raw soy bean sauce by heating was accompanied by chemical changes which will be of much interest for further study. The fat constituent of soya beans has no important role in the processes of manufacture.
Address: Dep. of Chemistry, Fukien [Fujian] Christian Univ., China.

3147. **Product Name:** Yamajyu Shoyu.
Manufacturer's Name: Yamajyu Shoyu & Koji Miso Co.
Manufacturer's Address: 395 Buckle Lane, Honolulu, Oahu, Hawaii. Phone: 68772.
Date of Introduction: 1936.
New Product–Documentation: Directory of the City and County of Honolulu. 1938-39. p. 614. Yamajyu Shoyu & Koji Miso Co. (Taro Higa). Soy & Miso Manufacturers. Wholesale and retail. 395 Buckle Lane. Tel. 68772. Note: Taro Higa had the Yamajifu Shoyu & Koji Miso Co. the previous year. Wm. Higa. 1980. History of Miso Companies in Hawaii: Oda. 1983. Hawaii Herald. Oct. 7.

3148. Akabori, Shiro. 1936. Shôyu no kôki seibun ni tsuite. I. [On the aroma of soy sauce I. (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 12:A286. [1 ref. Jap]
• ***Summary:*** Abstracted from *Nippon Kagaku Kaishi* 57(8):828-31 (1936).

3149. Au, Man Sing, comp. and ed. 1936. The Chinese cook book: Covering the entire field of Chinese cookery in the Chinese order of serving. From nuts to soup. Reading, Pennsylvania: Culinary Arts Press. 47 p. See p. 39-40, back cover. Illust. by Warren G. Troutman. 24 cm.
• ***Summary:*** Compiled and edited for the American cook. The index is on p. 12-13. "A small plate is used to hold soyu or Chinese sauce. A morsel of food is picked up in the chopsticks, dipped into the sauce, and then put into the mouth" (p. 14).

Seasonings and gravies (p. 16-17). "The whole secret of what makes Chinese dishes unusually savory is the special seasoning and appetizing gravy. Items used for seasoning may be purchased in Chinese shops. Chinese sauce or soyu, used instead of salt, adds zest and delicacy." Chinese gravy calls for "Chinese sauce" as an ingredient. Soyu beef tongue (p. 32). Soyu chicken (p. 34).

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The section titled "Bean curd–Tofu" (p. 39-40) states: "There are three forms of tofu, to be found almost daily in Chinatown shops. First, the Sai-Tofu–water tofu, which is a watery custard. Second, the Slab Tofu, which comes in a block about three inches square and half an inch thick. Third, the Yau-Tofu [deep-fried tofu], which is bean curd, cooked in hot boiling oil, much like the way doughnuts are made." Tofu recipes: Pork hash tofu. Dried oyster tofu. Tofu far [fah = flowers]: "This is extra fine custard tofu." Not always found in grocery stores, "it may be ordered from the tofu maker. Fill six cups with tofu-far. Melt Chinese brown sugar into syrup and pour over the custard." Pork tofu. Soyu tofu. Tofu soup. Mullet tofu. Chop suey tofu. Bean sprout tofu. Fried tofu ("Brown one dozen slabs of tofu in frying pan"). Au Man Sing was born in 1906. Address: USA.

3150. Carqué, Otto. 1936. Vital facts about foods: A guide to health and longevity. 3rd ed. Los Angeles, California: Published by the author. 208 p. *
• ***Summary:*** About vegetarianism. Address: Los Angeles.

3151. Colegrove, Kenneth W. 1936. Militarism in Japan. Boston and New York: World Peace Foundation. 78 p. See p. 45. Series: World Affairs Books No. 16. 21 cm.
• ***Summary:*** "General Sadao Araki is, in many respects, the symbol of the movement that has pressed so strongly toward a military dictatorship... He came from a most humble home, and he worked as a boy for a manufacturer of *shoyu* (a Japanese sauce)." Address: Prof. of Political Science. Northwestern Univ.

3152. Gray, George Douglas. 1936. All about the soya bean: In agriculture, industry and commerce. London: John Bale, Sons & Danielsson Ltd. ix + 144 p. Introduction by James L. North. Late curator, Royal Botanic Gardens, Regent's Park, London. Index. 28 cm. [19 ref]
• ***Summary:*** A comprehensive, early work on the soybean. Gray was a Scotch physician. Contents: 1. Introducing the soya bean. 2. The soya bean plant and its cultivation. 3. The soya bean as food: Dieteties, immature green beans, mature dried beans, soya bean coffee, soya bean chocolate, soya bean sprouts, soya bean milk, soya bean flour (incl. Berezeller flour, Soyvita bread made by Messrs. Wm. Beattie, Ltd., Glasgow), bean curd [tofu], soy (also called soya bean sauce, Chinese bean sauce, or shoyu), miso, fermented bean curd (p. 66-67). 4. Soya bean oil. 5. Soya bean trade. 6. The soya bean in agriculture.

Addenda: Soya bean products in the USA. Dieting and recipes. Statistics. India. Bibliography.

In the chapter on "Soya bean oil" we read (p. 75): "In England, the bean oil trade is carried on by the following firms:–The British Oil and Cake Mills Ltd., the ordinary shares of which are held by Lever Bros., Ltd., so that they are a branch of Unilever. Ltd.

"The Hull Oil Manufacturing Co., Ltd., Hull, now merged in the foregoing concern.

"The Premier Oil Extracting Mills, Ltd., Hull.

"Messrs. Wray Sanderson & Co., Hull.

"The Medina Refinery Ltd., Deptford, London.

"Messrs. J. Bibby & Sons Ltd., Liverpool.

"The Erith Oil Works Ltd., Erith" [Kent].

The first addendum, titled "Soybean products exhibited by the American Soybean Association" (at Washington, DC, p. 120-24) lists the following companies and each of the soy products that they manufacture: American Lecithin Corp. (Atlanta, Georgia), Archer-Daniels-Midland Co. (Milwaukee, Wisconsin), Armstrong Paint and Varnish Works (Chicago, Illinois), Battle Creek [Food] Factory (Battle Creek, Michigan), The Blanton Co. (St. Louis, Missouri), Cereo Co. (Tappan, New York), The Davies-Young Soap Co. (Dayton, Ohio), Detroit Graphite Co. (Detroit, Michigan), Eastern Health Food Stores Association (Washington, DC), Funk Brothers Seed Company (Bloomington, Illinois), Harshaw Essential Foods, Inc. (Cleveland, Ohio), Keystone Macaroni Mfg. Co. (Lebanon, Pennsylvania), Kloss, Jethro (Takoma Park, Maryland: Fresh [soybean] milk. Pumpkin pie [soybean milk and soybean flour]. Soybean cheese. Soybean bread [20% soybean flour]. Soybean buns. Soybean sprouts. Soybean cake), Laucks, I.F., Inc. (Bloomington, Illinois–home office, Seattle, Washington). Madison Food Company (Madison, Tennessee; Vigorost, Cheese [Tofu], Soybeans canned with Tomato, Soybeans canned plain, Dixie Fruit Crackers), Mead Johnson and Co. (Evansville, Indiana; Makes Sobee [Infant Formula]), Oriental Show-You Co. (Columbia City, Indiana), Paintcraft Co. (Galesburg, Illinois), Prince Macaroni Mfg. Co. (Boston, Massachusetts), Purina Mills (St. Louis, Missouri; makes Cresol disinfectant, Purina turkey and growing fattening chow, Purina lay chow, Purina egg chowder, Purina breeder egg chowder, Purina fitting chow, Purina rabbit chow, Purina chick Growena chow, Purina 34% cow chow, Purina chowder, Purina bulky cow chow, Purina 24% cow chow, Purina pig and hog chow, Protena all mash starting and growing food), Shellabarger Grain Products Company (Decatur, Illinois), Soyex Company, Inc. (Nutley, New Jersey), Staley Sales Corporation (Decatur, Illinois), The Stamford Rubber Supply Company (Stamford, Connecticut), Dr. Roy Monier, President, Board of Managers, State Hospitals (Jefferson City, Missouri), United Drug Company (Boston, Massachusetts), Vi-tone Company (Hamilton, Canada), Woolsey Paint and Color Co., C.A. (Jersey City, New Jersey), Bureau of Chemistry and Soils, Department of Agriculture (Washington, D.C.). Page 120 adds: "The exhibit also contained some 200 soybean products, mostly foods, brought from the Orient by Mr. W.J. Morse, Senior Agronomist, Department of Agriculture, Washington, DC, U.S.A." Note: Morse and P.H. Dorsett were in East Asia from 1929 to 1931, when they collected many samples of

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soybeans and soyfoods.

In the second addendum, recipes, the author notes that soy flour is widely used in diabetic diets. Two leading firms who make soy flour in England and who also incorporate it in various products are: Soya Foods, Ltd., Rickmansworth, Herts, and Dietetic Foods Ltd. 124 Victoria St., London, S.W. 1. "The former specialize in Soyolk which is flour prepared on the principles laid down by Professor Berczeller; it is a mealy powder, fatty to the touch. The latter firm are the sole distributors in Great Britain of the well-known 'Heudebert' Dietetic Food products, a French concern which makes different kinds of diabetic breads." The following recipes are then given; * = Calls for Soyolk soy flour: Soybeans, southern style. Soybean salad. Roasted soybeans [like dry-roasted peanuts]. Soybean croquettes. Soybean soufflé. Stuffing for baked fish*. White sponge pudding*. Shortbread*. Madeira cake*. Soya soup à la Reine (uses Heudebert soya flour). Soya chocolate (with soya flour). Soya vegetable soup (with soya flour). Soya bean sprout salad.

Note: This is the earliest English-language document seen (Feb. 2000) that uses the term "soya bean sprouts" to refer to these sprouts. Address: M.D. (Scotch physician) England. Late medical officer to H.B.M. Legation, Peking, China. Lieut.-Colonel, Retired.

3153. Institut International d'Agriculture (International Institute of Agriculture). 1936. Le soja dans le monde [The soybean in various countries of the world]. Rome, Italy: Imprimerie de la Chambre des Deputes, Charles Colombo. viii + 282 p. Bibliography, p. 276-82. No index. 25 cm. [90 ref. Fre]

• ***Summary:*** A superb early work, containing extensive original information, looking at developments with soybeans and soyfoods country by country, worldwide. Contents. Preface (p. 1). A. Culture of soy (*soja;* p. 4): 1. Botanical description, selection, classification of the varieties. 2. Culture properly said. 3. Enemies and illnesses.

4. Culture in the various countries: 4a. The Americas (p. 38): Antigua, Argentina, Bermuda, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, USA (gives details on all varieties grown, and describes production, history, varieties, and cultural practices in North Carolina, Illinois, Indiana, Iowa, Maryland, Massachusetts, Mississippi, Missouri, New York, Ohio, West Virginia, Wisconsin, Conclusion), Guadeloupe, Guatemala, British Guiana, Dutch Guiana, British Honduras [Belize], Jamaica, Barbados, Martinique, Mexico, Montserrat, Peru, Puerto Rico, El Salvador, Trinidad and Tobago, Uruguay.

4b. Europe (p. 101): Germany, the Danubian countries, Austria, Spain, France, Great Britain, Hungary, Italy, Netherlands, Poland, Romania, Switzerland, Czechoslovakia, Turkey, USSR.

4c. Asia (p. 128): Ceylon, China and Manchuria, Cyprus, Federated States of Malaysia, British India (incl. Punjab, Bihar and Orissa, Burma, Berar, Madras Presidency, Bombay Presidency, Bengal (incl. Nepal, Bhutan, Sikkim, and the district of Darjeeling), Assam, North-West Frontier Province, United Provinces), Netherlands Indies, Indochina (incl. Tonkin, Annam, Laos, Cambodia, and Cochinchine), Japan, Palestine, Siam.

4d. Africa (p. 146): French West Africa, Algeria, Belgian Congo, Cyrenaica, Egypt, Eritrea, Madagascar, Morocco, Mauritius (Ile Maurice), Reunion (Réunion), Rhodesia, Anglo-Egyptian Sudan, Tripolitania, Tunisia, Union of South Africa.

4e. Oceania (p. 153): Australia, Fiji Islands, Hawaii, New Caledonia, New Zealand, Philippines.

B. Utilization of soya (p. 158): 1. The soybean in human nutrition and in industry: Whole soybeans, chart of the uses of whole soybeans, use of soya in the green state (green vegetable soybeans), soy sauce (*dau-tuong* of the Annamites, or *toyo*, named shoyu by the Japanese, or *chau-yau* or *chiang yoo* by the Chinese), condiments and sauces based on soya in the Netherlands Indies (*tempe, ontjom, tempemori* and *tempe kedele* [various types of tempeh and onchom, p. 168-70]), *tao tjo* [Indonesian-style miso], *tao dji* [fermented black soybeans], *ketjap, ketiap benteng* [Indonesian-style soy sauce], soymilk (*le lait de soja*), yuba (*crème de lait de soja*), tofu (*le fromage de soja*) and fermented tofu (*des fromages fermentés*, made by Li Yu-ying near Paris), soymilk casein (*caséine du lait de soja*, for industrial use, including vegetable albumin, or galalithe [galalith]" [isolated soy protein], and artificial wool), soy lecithin (*lécithine de soja*), soy flour (*la farine de soja*, incl. soy bread, soy pastries, and soy cocoa).

Note 1. This is the earliest document seen (Sept. 2010) that uses the term *benteng ketiap benteng* to refer to an Indonesian-style soy sauce.

2. Soy oil (p. 194): Food uses, industrial uses (including soaps, products resembling petroleum, paints, varnishes, linoleum, and artificial rubber), extraction, directory of U.S. manufacturers of materials and equipment for soybean processing, directory of U.S. and Canadian manufacturers of food products based on soya (*produits alimentaires à base de soja*, p. 205-06), directory of U.S. manufacturers of industrial soy products (p. 206-07).

3. Soybean in the feeding of domestic animals (p. 207): Forage, hay, silage, pasture, soybean seeds, the minerals in soybeans, soya as a feed for dairy cows, cattle, buffaloes, sheep, hogs, horses and mules, poultry.

4. Use of soya as fertilizer (p. 257). C. The trade of soya and of its by-products (p. 363): Production of soybeans in the principal countries, economic importance of soybean culture in the USA, soybean trade/commerce including tables of the major importers and exporters, and amounts traded annually in 1931-1934, price of soybeans, cost of production.

List by region and country of people and organizations

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that responded to a questionnaire sent by IIA (p. 273-76). Bibliography of main publications consulted, listed by region and country of publication.

Reunion (*Ile de la Réunion):* "The soybean (Le Soja) is only cultivated as an experimental crop, on a few square meters at the agronomic station" (p. 148).

Fiji (*Iles Fidji):* Soybean cultivation is not yet practiced in this colony; however soybean seeds are currently being imported in order to conduct a trial.

New Caledonia: In 1928 soybean cultivation was introduced to New Caledonia.

Note 2. This is the earliest document seen (Dec. 2007) concerning soybeans in Bhutan, Costa Rica, Dominican Republic, El Salvador, Guatemala, Israel, Jamaica, Madagascar, Morocco, New Caledonia, Palestine, Peru, or Réunion, or the cultivation of soybeans in Bhutan, Costa Rica, Dominican Republic, El Salvador, Guatemala, Israel, Jamaica, Madagascar, Mexico, the Middle East, Morocco, New Caledonia, Palestine, Peru, or Réunion. It is also the earliest document seen (Dec. 2007) concerning soybeans in connection with (but not yet in) Cyprus; it is stated that soybeans are not grown on the island of Cyprus. Soybean culture is not practiced in the Italian colonies of Eritrea (Erythrée, now part of Ethiopia) or Cyrenaica (Cyrénaïque, now part of Libya).

Note 3. This document contains the earliest date seen (June 2007) for soybeans in Bhutan, New Caledonia, or Réunion, or the cultivation of soybeans in New Caledonia (1928), or Bhutan or Réunion (1936) (One of two documents).

Note 4. This is the earliest French-language document seen (Sept. 2011) that mentions tempeh, which it calls "tempe" (p. 168). It notes that, in general, the indigenous people of the Netherlands Indies use soybeans mainly to make *tempe*, a product which, throughout central and eastern Java, takes the place reserved for *ontjom* in western Java. Tempeh is found in two forms: either in large flat cakes which are cut at the time of sale into small square morsels, or wrapped in folded banana leaves. A detailed description of the preparation of each of these two types of tempeh is given as well as another type of tempe, called *tempemori*, which is made with soybeans and coconut presscake.

Soybean culture is not known to be practiced in the following countries or colonies: Antigua, Barbados, British Honduras (renamed Belize in about 1975), Trinidad and Tobago. Address: Rome, Italy.

3154. Ishimaru, Yoshio. 1936. Shôyu jôzô-jô kûki-chû no kinga ni tsuite [Microorganisms in the air in shoyu breweries (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 12:A261. [1 ref. Jap]

• ***Summary:*** Abstracted from *Jozogaku Zasshi* 14(9): (1936).

3155. Iwasaki, Kazuo. 1936. Shôyu no kanshô sayô ni tsuite. I. Fuki, shôyu teki teisando sokuteihô ni taisuru ichi ginmi [On the buffer action of shoyu. I. Additional remark: A close examination of a method of measuring the acidity of shoyu by titration (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 12:A50. [1 ref. Jap]

• ***Summary:*** Abstracted from Jozogaku Zasshi 13(11):1087-99 (1935).

3156. Nishida, Kotaro. 1936. Ni, san tokushu jôzô butsu no kagaku-teki kenkyû: Sotetsu shôyu [Chemical studies on several specialty fermented products: Cycad shoyu (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 12:A324 (at rear of volume). [1 ref. Jap]

• ***Summary:*** Abstracted from Kagoshima Koto Norin Gakko Gakujutsu Hokoku 11:209-224 (1936). Address: Kagoshima.

3157. Read, Bernard E. 1936. Chinese medicinal plants from the "Pen ts'ao kang mu" of 1596. 3rd edition of a botanical, chemical and pharmacological reference list. Peking, China: Peking Natural History Bulletin. Sales Agent: The French Bookstore. xvi + 391 p. See p. 114-18.

• ***Summary:*** Contents: Introduction in Chinese. Introduction to the third edition (Shanghai 1935). Provincial abbreviations. Abbreviations for parts of plants. Bibliographical abbreviations (journals and books). Secondary references helpful to a study of Chinese materia medica. Comparative table of Western, Japanese, and Chinese dates (1868-1935). Table of classes, general, and species for which references are listed. Index of Romanized Chinese names modified from Wade's system. Index of common English names, with foreign names given in italics. Latin index.

References related to soybeans are subdivided as follows (p. 114-18, 256): Soybeans, black variety (var. *nigra;* the fresh hulls used in medicine are known as *Ta Tou P'i*). Soybean sprouts, black variety (Ta Tou Huang Chüan). Bean relish, black variety (Ta Tou Ch'ih). Bean ferment, black variety (Tou Huang; Natto in Japanese). Yellow soybean (Glycine soja S. et Z., var. flava; Huang Ta Tou). Soybean oil (Tou Yu). Soybean sauce, yellow variety (Chiang Yu; thick or thin). Soybean paste (Chiang). Bean curd, yellow variety (Tou Fu). White soybean (Glycine soja, S. et Z., var. alba). Soy sauce made with wheat flour (p. 256).

References for azuki beans (red mung bean, P. mungo, L. var. subtrilobata, Fr. et Sav. [HN. Br.]) are given on page 122. References for wheat gluten (Mien Chin) are given on page 256.

This book is largely a list of references relating to plants listed in the Pen Ta'ao Kang Mu. It is not a translation or summary of the latter work.

Note: This is the earliest English-language document

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seen that uses the term "the fresh hulls" to refer to soy bran. Address: PhD, Head of the Div. of Physiological Sciences, Henry Lester Inst. of Medical Research, Shanghai, China.

3158. Rombauer, Irma S. 1936. The joy of cooking: A compilation of reliable recipes with a casual culinary chat. Indianapolis/New York: Bobbs-Merrill Co. v + 628 p. Illust. by Marion Rombauer Becker. 24 cm.

• ***Summary:*** This is the first edition of *Joy* published by Bobbs-Merrill. Soy is not mentioned in the index; neither is "vegetarian"–although recipes for three "meatless" soups are given (p. 29-30). However soy sauce is used in: Chow mein with fried noodles (p. 96). Chicken chop suey (p. 96). Soy sauce is not mentioned as a seasoning for gravy, sauces, or soups–but Worcestershire sauce is (p. 248). Under "Soups" (p. 22) we read: "Canned bouillon and beef cubes are in general use, but Savita, a meatless Battle Creek product, is a better substitute..." The amount of meat and sugar used in this cookbook is surprising. Address: St. Louis, Missouri.

3159. Rouest, Leon; Guerpel, Henry de. 1936. Le soja français et ses applications agricoles et industrielles [The French soybean: Its agricultural and industrial applications]. Chateauroux, France: G. Langlois. xxiii + 99 p. 28 cm. [42 ref. Fre]

• ***Summary:*** Contents: Preface, by L Brétignière (Prof. at Grignon, Member of the Academy of Agriculture). Preface to the first edition, by Louis Forest (1921). Introduction to this new edition: Soviet Russia and the soybean (*le Soja;* includes the story of Rouest's stay in the Northern Caucasus, Russia, from 1930 to 1933), Germany and Poland take up the soya question, the canons [guns] of Germany versus the Manchurian soybean, a secret contract to provide the weapons of war, organization of a Polish bank in Manchuria, Germany cultivates soybeans in Romania and Bulgaria in preparation for the war, France and the cultivation of soybeans.

1. What is soja? 2. History of the propagation of soja: Introduction of the soybean into France and Europe, the soybean is cultivated in central Europe, in Austria, in 1875, in France the soybean is the object of numerous trials from 1876 to 1881, its cultivation worldwide, the study and acclimatization of soya become generalized.

3. Botanical characters of the soybean: And the varieties of soybeans. 4. Chinese varieties: The soybean in China, the production of soya in China in 1916 and 1917, production of soya in the Far East during the year 1928, exportation of soya from the Far East to Europe.

5. Japanese varieties: The soybean in Japan, varieties of soya from Indochina and from other Asian countries. 6. The soybean in America: American varieties, cultivation of soybeans in Ohio, selection of soya using pure lines in Connecticut.

7. The soybean in Europe: Italy, Russia, France, French climatic zones for the cultivation of Soja hispida, the Atlantic zone, the continental zone, the Mediterranean zone and climate, can the soybean be cultivated in all the French climates including those in the north, northeast, and northwest, speedy production of soybeans in view of agricultural production and of the creation of early varieties for the regions in north and northeast France.

8. Instruction for growing soja in France. 9. Soja in Manchuria. 10. Soja seeds. 11. Selection of soja. 12. Varieties of soja. 13. Different ways of planting soya seeds. 14. Soy yield. 15. Nitrogen fixation in soya seeds. 16. Tilling and preparing the earth. 17. Soja fodder. 18. Soja, striking and improving. 19. Harvesting soja grain. 20. Soja oil. 21. Soja oil-cake for animal feeding. 22. Vegetable milk, soja milk and industrial casein.

23. Soja in human food: Soy flour and its applications, soy bread with wheat, nutritional composition of soja compared to dry legumes, soy viewed as a dry legume to replace meat, comparative production of nutritive elements among the various legumes used for human food, comparative value in calories of the usual foods and of soja, preparation of soy soups and meals in compressed tubes, what varieties of soy can serve the special needs of human nutrition, Sojenta, potatoes stuffed with soy, force meat balls (*boulettes*) of rice and soy, bread of rice and soy, pudding of soy and rice, soy sprouts and their food value, fresh soy sprouts in a salad, soy sprouts with vegetables, soy preserves and confections, soy chocolate, soy coffee, soybeans conserved in containers, soy with smoked fish, soup with soy vegetable meat, soymilk soup, omelet with smoked soy vegetable ham, green soy sprouts, soy cake, soy force-meat fritters.

24. The utilization of soja in the Far East: Vegetable cheese (tofu), soy-based condiments, Japanese natto (2 types), Japanese miso, Chinese miso, soy sauce (*soyou* or *schoziou*), making soy sauce in Kwantung, China, making soy sauce in Japan, koji or molded rice.

25. The culture of soja in North Africa (Rouest has varieties that would grow and yield well in the French colonies of Tunisia, Algeria, and Morocco). 26. Opinions of some authors on soja. Conclusions. Bibliography on soja.

A small photo on the "Dedication" page shows Léon Rouest (born in Paris on 11 Nov. 1872).

Concerning soy in Russia (USSR) (p. 52-53): In Russia, the soybean has been known for quite a long time, specially in the Ukraine and Bessarabia, but it was never grown over a large area, and was given a back seat (low priority) in agriculture until after the revolution of 1917. It was not until 1926-27 that cultural trials were conducted on farms in the state of Northern Caucasus (*d'Etat du Caucase du Nord*). In the regions of Rostov-on-Don (*Rostow-sur-Don; Rostov-na-Donu*), Eisk (near Krasnodar), Stavropol, Prim-Koumsk, Yessentuki / Essentuki in the Kuban and Kuban River area of the North Caucasus region of southern Russia, the yields

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were 11 to 16 quintals.

In 1927 there were 600 ha planted to soybeans, increasing to 17,000 in 1928, in the *kolkhoz* (collective) farms or the *sovkhoz* (state owned) farms.

In 1929-1930 and until 1932-1933 there were very laudable / praiseworthy efforts to propagate soybeans in favorable regions, especially in the North Caucasus, but the soils of this region, although they are very rich and well suited to soybeans are also very rich in bad weeds and the results obtained up to the present do not seem favorable. As I said earlier, the soybean is a technical plant of the intensive type which is well suited to the soil and climate of Russia, but is much less suited to the indolent character of peoples who are accustomed to cultivating only small areas. In spite of the remarkable efforts at mechanization, the peasants who submit to collectivization and who do not yet understand it very well, the cultivation of soybeans does not assume the importance hoped for. Address: France.

3160. Shoji, Kenjiro. 1936. Shôyu no kôki. I. [The flavor of shoyu. I. (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 12:A9-A10. [1 ref. Jap]

• ***Summary:*** Abstracted from *Rikagaku Kenkyu Hokoku* 14(9):872 (1935).

3161. Tezuka, Kaneko. 1936. Japanese food. Tokyo: Maruzen Co. Ltd. 84 p. See p. 28. 20 Cm. Half-title: Tourist Library: 14. [Eng]

• ***Summary:*** The chapter titled "Common everyday food" (p. 22+) notes that the three breakfast dishes are boiled rice, *misoshiru* (bean-paste soup [miso soup]), and *kô-no-mono* (pickles). With them are served "shell-fish *tsukudani* (foods boiled down in soy [sauce]), *shiokonbu* (the laminaria boiled in brine and soy), *nori* (laver), *nimame* (boiled beans [soy]), various kinds of bean-paste [miso] dishes, pickled plums [umeboshi], etc." A brief description of how to make miso and miso soup is given (p. 24). Under "Dinner dishes" we read: The most simple of foods is bean-curd." Fresh raw fish, "cut into shining thin slices (*sashimi*) is served with fresh grated radish or horse radish, and eaten dipped in vinegar or soy."

The section titled "How Bean-curd is Made" (p. 28) states: "Tôfu (bean-curd) is made by soaking soy beans in water, mashing them, straining the mass through cloth and solidifying with the addition of magnesium chloride. It is a very nutritive food. The mush left over after straining *tôfu* is called *u-no-hana* (deutzia flowers) [okara] and is used in cooking vegetables." A photo shows a "Vendor cutting bean-curd."

A photo (p. 64) shows a hall full of Buddhist priests dining at Soji-ji temple, Tsurumi, Japan. In Japan, March 24 and Sept. 24 are national holidays–Spring and Autumn Worship of the Imperial Ancestors. To worship all the Imperial Ancestors, the people hang out the Japanese flag and "to honor the spirits of their own ancestors, make *Inari-zushi* (vinegar-spiced rice wrapped in fried bean-curd) and *botan-mochi* (boiled rice slightly kneaded and covered with [azuki] bean jam). They offer these to the spirits of the dead by placing them before the Buddhist altar in the home and sending them to the family temple and the homes of relatives."

The chapter titled "Japanese Cakes" notes that the two basic types are *higashi* (dried cake) and *namagashi* (undried cake). "*Namagashi* is made of [azuki] bean-jam for the most part. Bean-jam is just like a cream made of red beans and sugar. *Namagashi* is divided into *yôkan* and others." Yôkan is made of bean-jam gelled with agar (Japanese isinglass). A photo (p. 83) shows a bean-jam factory and show case of products.

Note 1. Editorial note signed: Board of Tourist Industry, Japanese Government Railways.

Note 2. This is the earliest English-language document seen (Oct. 2001) that uses the word "mush," or the term *u-no-hana*, or the term "deutzia flowers" to refer to okara.

Note 3. This is the earliest English-language document seen (March 2009) that uses the term "bean-paste" to refer to miso.

Note 4. This is the earliest English-language document seen (March 2006) that uses the term "bean jam" (or "bean-jam") to refer to sweet azuki bean paste [*azuki-an*]. Address: Prof., Japan.

3162. Van Gundy, Dorothea. 1936. La Sierra recipes. Campus and Maitland, Ontario, California: Published by the author. 47 p. 19 cm.

• ***Summary:*** Most (but not all) of the recipes in this book call for soy-based ingredients. Contents: Dedication. "This book is lovingly dedicated to the memory of my father." Foreword: "Due to the increase of disease in the animal kingdom, the diet should be as free as possible from these elements, including meat, eggs, and milk." Approximate composition for La Sierra Products: Soy butter [soynut butter] (27.6% protein, 47.1% fats). Soy breakfast food. Soy flour. Cooked soy beans. Soy loaf. Milk. Bean sprouts. Soy cheese [tofu]. Soy spread. Soy bologna. Dry soy beans.

1. The soy bean as a human food: Nutritional value, varieties of soy beans, flour, soy milk, soy milk from flour, soy milk from raw beans, soy cream (made by homogenizing / blending equal parts of soy milk and soy oil or other vegetable oil), soy cheese, soy bean sprouts, soy sauce.

2. Soups: Incl. Soyament bouillon. Many use Soyament (Soy Sauce), soy milk, or soy cream. 3. Entrees. Recipes incl. Soy croquettes (with Soy Bean Pulp and Smoein). Walnut Loaf (with Smoein and soy milk). Soy protose (with soy butter and Mamenoko flour). Gluten patties (with Smoein). Soy cheese with tomato sauce. Soy cheese croquettes. Soy cheese and Soyament sauce. Baked macaroni

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with La Sierra Vegetable Bologna. Soy loaf. Soy loaf a la king. Baked soy noodles. Chow mein (with La Sierra Soy Cheese). Lentil patties (with Smoein).

4. Sauces and gravies: Many use soy milk, Smoein, or soy sauce. 5. Vegetables. Incl. Creamed vegetables (with soy milk). 6. Salads and salad dressings. Soy recipes include: Carrot and soy cheese. Tomato and soy cheese. Pineapple and soy cheese. Stuffed celery (with soy cheese). Soy loaf salad. Cabbage and banana salad (with soy mayonnaise). Head lettuce (with soy butter dressing). Salad dressing (uses soy milk in place of eggs). Soy mayonnaise [Note: This is the earliest recipe seen for a soy mayonnaise]. Tomato mayonnaise (tomato juice beaten into soy mayonnaise). Thousand island dressing (with soy mayonnaise). Parsley and olive dressing (with soy mayonnaise; uses ¼ cup chopped olives, not olive oil). Soy cream dressing. Soy butter dressing [with soynut butter]. Cream golden dressing (with soy cream). French dressing (with soy oil or any vegetable oil).

7. Desserts. * = with soy milk. + = with soy cream. Cream rice pudding*. Rice pudding+. Blanc mange*+ [Blancmange]. Orange cream pudding+. Lemon fluff+. Fruit fluff+. Cream tapioca*+. Frozen pudding*+. Vanilla Ice Cream*+. Almond cream [Almond ice cream] (incl. 1 cup chopped almonds)*+. Strawberry sherbet+. Raspberry sherbet+. Butterscotch chiffon pie+. Lemon pie+. Banana cream pie*+. Pumpkin pie without eggs*. Soy pastry with soy flour. Soy cookies+.

8. Bread: Soy bread (with 4 cups entire wheat flour and 1 cup soy flour). Entire wheat bread (with 2 cups soy milk). Entire wheat sticks (with 3 parts wheat flour and 1 part soy flour). Corn meal crisps (with 4 parts corn meal, 3 parts wheat flour, and 1 part soy flour). Short cake (with 2 parts soy milk, 5 parts wheat flour, 1 part soy flour). Waffles (with 12 parts wheat flour, 2 parts soy flour, and 7 parts soy milk).

9. Sandwiches: Soy bean filling. Vegetable bologna. Soy delight filling (with soy[nut] butter). Soy cheese and raisin sandwiches. Soy butter (soynut butter thinned with tomato juice). Soy butter and honey. Soy cheese and olive [chopped green olives]. Soy spread [Made by La Sierra]. Sandwich salad (with many soy possibilities).

10. Beverages: "A very fine coffee substitute is made [by La Sierra] from the Soy Bean, and tastes remarkably like Coffee. It is particularly fine from an alkaline standpoint, and is particularly excellent to be used in connection with high alkaline diets." Soy-co (Beverage) Add 1 rounding teaspoon to 1 cup of water. "Percolate or boil until desired strength. Serve plain or with Soy Cream." Also delicious iced. Soy-co (Made with soy milk). Soy milk shake. Soy banana drink. Mamenoko drink (uses 3 tablespoons Mamenoko, which is processed soy flour). Soyament cocktail ("A very refreshing beverage may be made by using 1 to 2 tablespoons Soyament sauce to 1 cup of water").

11. Healthful confections: Beanut brittle (2 cups each soy Beanuts and brown sugar). Victoria fudge (with soymilk).

Use of soy beans in the diet: Outline for 3 meals. Suggestion for 3 days' menus, using soy products.

La Sierra Industries manufactures the following 14 foods from soy beans: Canned soy beans, plain or with tomato sauce. Soy loaf. Soy vegetable bologna. Soy milk. Soy breakfast food. Soy butter [like peanut butter]. Soy-co (beverage) [coffee substitute]. Smoein (smoked meat flavor). Soy spread. Soy flour, raw and processed. Soy beanuts (parched soy beans).

Soyament brand bean sauce. This soya bean sauce is "prepared from soya beans by splitting up the bean protein by a special process which thoroughly decomposes it into Amino Acids. A number of Amino Acids, each possessing a sweet taste, is the most remarkable feature of the Soyament Sauce and makes it different from many of the so-called soy sauces... On sale at all grocery stores or write to Soya Bean Products Co., 3522 East Third St., Los Angeles."

In the section on "Soy milk" (p. 8) is a long quotation from Dr. [Walter] Siegmeister: "So well has the Soy bean served as a source of vegetable milk, that the records tend to show that it has proven superior to cow's milk in certain important respects. The most marked of these is the almost complete absence of rickets in China, which is quite probable in view of the fact that not only is the Soy bean rich in Vitamin D, but also in Calcium and Phosphorous, the chief requirements for healthy bone development."

Note: This is the earliest document seen (Dec. 2003) that mentions a soy-based shake. It is also the earliest English-language document seen (Dec. 2003) that uses the term "Milk Shake" to refer to a non-dairy soy milk shake or that contains the term "Soy Milk Shake" (p. 41). The recipe with that title states: "Soy Milk may be mixed with any of the fruit juices and beaten with a small amount of chipped ice. It fluffs up and is very palatable. Soy Milk and orange juice combine splendidly." Address: Dietitian, Box 203, Ontario, California.

3163. Jones Grain Mill. 1936? Natural foods: Catalog, recipes, information. Los Angeles, California. 74 p. Undated. 22 cm.

• ***Summary:*** On the cover is a white mill behind a mill wheel (unrealistic) on a mill pond. Contents: Foreword. Health recipes: Cereals (incl. Soy bean or Mamenoke [Mamenoka, Mamenoko] breakfast cereal), breakfast cakes (incl. soy hot cakes with soy milk and Mamenoka flour, soy waffles, soy bean griddle cakes), desserts, breads (incl. soy bean flour gems, whole wheat bread), candies. Vital information: Vitamins and minerals essential to life.

Price list (prices are given for each item listed on pages 46-72): Alberty products, Alvita products, Battle Creek Sanitarium Health Foods [Michigan] (p. 47-48), beverages–coffee substitutes (Loma Linda Breakfast Cup, Soyco [soy

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bean coffee], Javex [soy bean], Carque's Soy Bean Coffee), books (by Dr. Benjamin Gayelord Hauser, Paul C. Bragg, Mrs. Alberty, Martin W. Pretorius, Otto Carque, Clark Irvine, Dr. Harry Finkel), Dr. Paul Bragg products, Jones Grain Mill Bakery (operated by Alberty Specialty Bakers), Burbank products, Carque's products, crackers and toast (Cubbison's bulk or packaged), honey, jams & jellies, juices (fruit & vegetable), KAL products, kelp products (products of the sea, incl. sea lettuce, dulse, Parkelp), Kovac products, Loma Linda Foods (Soy products: Soy beans–plain, tomato, or tomato and Proteena, Soy milk–8½ oz, No. 1, or No. 2, Soy Mince sandwich spread), macaroni & noodles (incl. soy bean macaroni, soy bean noodles), meat substitutes (incl. Simoein [Smoein], Soy loaf, Alfa Soy Spread, Soy Mince) McCollum products, maple syrup and candies, Martin Pretorius products, nuts and butters, Nature Ade products, Nutro Links (Santay, Swiss, Hauser), oils, olives, Radiance products, salts (vegetable, vegetized, and vegetablized), salad dressing and mayonnaise (made with lemon and vegetable oil), health sugars and sugar substitutes, seeds, soya bean products, teas.

The price list of "Soya bean products" (p. 72) reads as follows: "Breakfast Cereal with Carob Flour ([and soya beans] tastes like Grape Nuts), pkg., 25¢. Breakfast Cereal (prepared [with soya beans]), pkg., 25¢. Soya bean flakes, pkg., 30¢. Soya bean grits, pkg., 25¢. Soya bean bread, lb. loaf, 14¢. Soya bean melba toast, lb., 30¢. Soya bean wafers, lb., 40¢. Soya bean cookies (sweetened with dextrose), doz., 15¢. Soya bean coffee cakes (sweetened with honey), each, 5¢. Soya beans cooked: Soya beans (plain cooked), No. 2 can, 13¢. Imported soya beans from Manchuria, lb., 10¢. Pre-cooked soya beans (easily prepared in 30 minutes), lb., 15¢. Soya beans with tomatoes (ready to serve), No. 2 can, 15¢. Cooked soya beans with Proteena, No. 2 can, 15¢. Other soya bean products: Non-fattening [sic] soya bean oil (for all cooking purposes), pint, 40¢. Soya bean coffee, lb., 25¢. Soya bean flour, lb., 10¢; 3 lbs., 25¢. Dextrinized soya bean flour, lb., 15¢. Soya bean milk flour, lb., 60¢. Soya bean candy (with pure chocolate and Dextrose), lb., 50¢. Soya bean sandwich spread, 25¢. Soy sauce, 20¢. Soya bean loaf, No. 2 can, 25¢. Soya bean milk, No. 2 can, 15¢. Soya bean cheese (made from soya bean milk), lb., 30¢. Soya bean mince, 8-oz. can, 25¢. Soya bean spaghetti, lb., 25¢. Soya bean macaroni, lb., 25¢. Soya bean noodles, lb., 25¢. Soy beverage (Cocoalette), 10¢.

Ads include: Hollywood Cup (p. 20). Otto Carque Co. (Glendale, California, p. 30). Loma Linda Foods (p. 33, sells soy wafers, three styles of soy beans, liquid soy milk, soy mince). Vita-Pekan (p. 46, formula includes soya bean as a major ingredient). Alberty dried brewers yeast (p. 50). Kovac Laboratories (p. 67). Cubbison (p. 73, incl. Soya Toast, Soya Cookies, Soya Gluten Crackers).

Note: This catalog was probably published in 1933, since the company's location in Beverly Hills is not mentioned; it opened in 1934. Moreover, the book titled *Vital Facts about Foods*, by Otto Carque was first published in 1933. Address: 322 So. Hill St. and 504 So. Broadway. Both: Los Angeles, California.

3164. **Product Name:** Maru-sho brand Shiro-miso, and Koji.
Manufacturer's Name: Tsuruda Company (Tsuruda Goshi-gaisha).
Manufacturer's Address: 1535 Laguna St., San Francisco, California. Phone: WE 6800.
Date of Introduction: 1937, January.
New Product–Documentation: The Japanese American Directory. 1937. p. 8 (directory: Importers of groceries. "Tsuruta Co.") and add (½-page; top 1/3 of ad is in English: "Tsuruda Company. Importers, manufacturer & exporters. 1535 Laguna St., San Francisco"). Also Tsuruta Goshi Gaisha in San Jose. Miso & Shoyu manufacturer. 472 Josefa St.; BAllard 5539. Note: This company appeared in San Jose in 1936. The ad is divided vertically into halves; one for San Francisco, the other for San Jose. The company spells its name "Tsuruta" in the romanized directory but "Tsuruda" in English part of its ad. Same in 1938. p. 6 (directory).

3165. Akabori, Shiro; Kaneko, Takeo. 1937. Shôyu no kôki seibun. III. Beta-methylmercapto-propionaldehyd ni tsuite [On the aroma of soy sauce. III. Beta-methylmercapto-propionaldehyde]. *Nippon Kagaku Kaishi* (*J. of the Chemical Society of Japan*) 58(2):236-37. Feb. [4 ref. Jap] Address: Osaka Teikoku Daigaku, Rigaku-bu, Kagaku Kyoshitsu.

3166. *Los Angeles Times*. 1937. Japan: Japanese make ritual of dining–Harmony of color stressed in dainty servings. April 21, p. B16.
• ***Summary:*** "Soya beans provide shoyu, the favorite sauce which replaces salt in many dishes and which is used in the preparation of meat, vegetables, soup, fish and poultry."

Gives six Japanese recipes including: Vegetable soup (*Misoshiru*) (with "tofu [dried bean curd]"). Beef and vegetables (Suki Yaki) (with "tofu [dried bean curd]" and shoyu).

3167. *Los Angeles Times*. 1937. Southland cafes: World's choicest menus found in Southland. April 21, p. B39, B41.
• ***Summary:*** Most of us who live in California have a favorite Chinese restaurant, where you can order the usual chop suey and chow mein, as well as the more typical Chinese dishes of distinction. The dollar dinner includes "almond chicken, made with bamboo shoots, water chestnuts, dried mushrooms, diced chicken and soy sauce." And there are crispy "fried shrimps which you dip into ketchup and mustard sauce,..." Or try the "bock choy served with Chinese cheese, which is really bean cake [tofu] fermented in wine and tasting much like Roquefort."

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3168. *Contemporary Manchuria.* 1937. Bean oil industry in Manchuria. 1(1):15-42. April.

• ***Summary:*** Contents: Methods of oil extraction: Wedge system (round cake), screw system (round cake), hydraulic system (round cake or plate cake; the plate cake system, which is the most advanced method of pressure extraction, is used only by Nisshin Oil Mills at Dairen and Anglo-Chinese Trading Company {Kabalkin Oil Mills} at Harbin), benzine-benzol system, alcohol system (recently developed by Central Laboratory of the SMRC and now utilized by the Manchuria Soya Bean Industry Company at Dairen). Characteristics of the various extraction methods (merits and demerits): The hydraulic system is gradually displacing the screw system, the alcohol extraction system is the best and it produces priceless lecithin as a by-product, most of the soybean oil mills in Europe use the benzine system. Varieties of bean cake: Round cake (6 types), plate cake, flake cake [soybean meal], refined bean cake (Soyalex; extracted with pure alcohol. Its use as a raw material for shoyu, miso, candy, or noodles adds a high degree of nutritive value). Utilization of soya beans (a chart on page 27 shows many uses): Uses of soy beans, uses of bean cake (as fertilizer, for manufacturing shoyu, for making bean flour {*kinako*}, as raw material for Ajinomoto, in making liquid paint {Solite as invented by Mr. Yosei Suzuki and manufactured by the Solite Company at Dairen}, as a raw material for various protein products {including sizing for paper}), uses of bean oil (food oil, lard substitute, butter substitute or margarine, paint diluent, soap, glycerine and fatty acid, waterproof material {Tantalus}, petroleum substitute, gum substitute and other), lecithin. Factory construction expenses.

In the Far East, the solvent extraction system is used by only 3 firms: (1) The Honen [Hohnen] Oil Manufacturing Company with mills at Dairen (capacity 200 tons/day), Naruo (200 tons), and Shimizu (610 tons); (2) the Nikka Oil Manufacturing Company with its mills at Wakamatsu (200 tons); and (3) the Manchuria Soya Bean Industry Company with its mills at Dairen (100 tons). The total capacity of these 3 companies is 1,310 tons/day, of which Honen has 77%. Their combined annual production of Flake Cake [soybean meal] is about 270,000 tons, which is negligible in comparison with the total amount of round-cake production in Manchuria.

The latest method of extracting oil from soya beans is by the use of benzine or benzol as chemical solvents. The Honen Oil Mills at Dairen is the only one which uses this method at present.

Candies and noodles are already being manufactured from soybean flour. An experimental station of the Department of Agriculture and Commerce has experimented with the use of Flake Cake in the manufacture of shoyu and obtained encouraging results in terms of cost and quality.

3169. South Manchuria Railway Co. 1937. Bean oil industry in Manchuria. South Manchuria Railway Co., English Section. 37 p. April. 29 cm. See also original 1936 edition with same author and title. [Eng]

• ***Summary:*** Contents: I. Methods of bean oil extraction: Wedge system (round cake; the most primitive and small scale but still extensively used in remote interior districts), screw system (round cake; the most widely used method in Manchuria), hydraulic system (round or plate; the latter allows application of much greater pressure. Used only by the Nisshin Oil Mills at Dairen [capacity 150 tons/day of soybeans] and the Anglo-Chinese Trading Co. [Kabalkin Oil Mills] at Harbin, capacity 220 tons/day), benzine-benzol system (only used by Honen [Hohnen] Oil Mills at Dairen), alcohol system (a new process discovered by the Central Laboratory of the South Manchuria Railway Co. and now used by the Manchuria Soya Bean Industry Company at Dairen).

II. Characteristics of various extraction methods: 1. Comparison of wedge, screw, and hydraulic systems. 2. Comparison of round cake (hydraulic), plate cake, benzine extraction, and alcohol extraction systems: Constituent elements of bean cakes, merits and demerits of each type. Alcohol is considered the best. It gives the best quality oil and meal, and is the only system that "produces priceless lecithin as a by-product. The only demerit of this system at present is the high cost of production as compared with other systems. This is due to the large amount of capital required in the installation of machinery and plant and the necessity of using expensive alcohol as solvent." p. 5.

III. Varieties of bean cake. 1. Round cake: This is the original Chinese bean cake, which comes in several specialized forms: Fodder bean cake used as feed, "Pien Ping" (untrimmed cake), "Kuang Ping" (junk wharf cake), dried round cake (patented by the Dairen Soya Bean Industry Research Inst.), crushed cake, miscellaneous cakes. 2. Plate cake (rectangular). 3. Flake cake (from solvent extraction). In East Asia only 3 companies and 5 mills use solvent extraction. Daily capacity of these mills is as follows: Honen [Hohnen] Oil Manufacturing Co.–Dairen 200 tons, Naruo 200 tons, Shimizu 610 tons. Nikka Oil Manufacturing Co.–Wakamatsu 200 tons. Manchuria Soya Bean Industry Co.–Dairen 100 tons. The total annual production of flake cake is about 270,000 tons and is negligible in comparison with round cake production. 4. Refined bean cake ("Soyalex"). Resulting from alcohol extraction, it is considered to be the best quality for use in foods (shoyu, miso, candy, noodles) or feeds.

IV. Utilization of soya beans. 1. Uses of soya beans (a chart shows many uses): Foodstuff, animal feed, refined oil, lecithin. 2. Uses of bean cake: Directly as fertilizer (it contains nitrogen, phosphoric acid, and potassium, put is being replaced by ammonia sulphate), and as or animal feed. Processed for making foods such as shoyu, miso, bean

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flour ("kinako"). To make Ajinomoto, Solite liquid paint, and various protein products such as paper sizing, celluloid substitute, or medicine. 3. Uses of bean oil: "The bean oil was used originally by the Chinese people for cooking, lighting, and lubricating (carts) purposes and the demand was limited within China. In less than 30 years, however, it began to occupy an important place in the world market." The chief reasons are its relatively low cost and many potential uses for foods (lard substitute, butter substitute) or industrial products such as soap or paint, glycerine or fatty acids, waterproof material, petroleum substitute, gum substitute, etc. 4. Lecithin: Used for making leather, margarine, or restoratives. The alcohol extraction process produces lecithin, vitamins, and saponins as by-products. The yolk of an egg contains 7-10% lecithin. "The soyalex lecithin, obtained through the alcohol extraction method, is the most excellent lecithin produced through applied chemistry. It contains 3 to 10 times more lecithin than egg yolk and is more economical for general use.

V. Factory construction expenses: Machinery, installation, and building for a plant that can process 100 tons of soya beans per 24 hours. Screw system round cake, 102,880 yen. Hydraulic system round cake, 111,856 yen. Alcohol or benzine extraction, 719,365 yen.

Tables of statistics: Exports of soya beans, bean cake, and bean oil from 1926-1935: A. From individual ports (Dairen [by far the largest], Yingkou, Antung, Vladivostok, total). B. To various countries (Japan, Europe, China, USA, others, total). Value of exports in 1935 (M. yen; p. 36): Soya beans 130,053,055, beancakes 51,370,086, bean oil 20,132,208. Soya bean crop area and production in Manchoukuo, 1924-1935 based on statistics compiled by the Manchoukuo Dept. of Industry.

On the last page is written, Dr. Roy H. Akagi, S.M.R. Co., as if he were author.

Note: This is the earliest English-language document seen (March 2002) that uses the word "beancakes" to refer to ground, defatted soybeans.

3170. Holmes, Marie. 1937. Cooking chat: Artistic dishes delight Occidental when dining in Japanese manner. *Toronto Daily Star* (*Canada*). May 20. p. 36.

• ***Summary:*** Several weeks ago, the writer was served a complete, authentic Japanese meal at a Japanese restaurant in New York City. Sukiyaki was cooked at her table. Over the simmering vegetables, the waiter poured "some soy or shoyu sauce,..." Floating in her delicious soup was "a little flower of pink bean curd, and a slice or two of white mushroom." She finds that Japanese food is the most artistic in the world, and artistically served. "Since modern hostesses are turning more and more to dishes of other countries and, in fact, placing before their guests whole foreign menus," now is a good time to start learning about the dishes of Japan. The recipes for a Japanese menu are given, including: Beef sukiyaki (with "¼ cup soy sauce" and "1 square piece bean curd") prepared in a frying pan. Japanese directions for Miyako sukiyaki (seasoned with "shoyu sauce").

A small portrait photo shows Marie Holmes.

3171. *Popular Mechanics*.1937. The bean that made good. 67:660-62, 120A, 122A. May.

• ***Summary:*** Photos show: (1) William Morse in his office at USDA in front of shelves of soybean food products. (2) Native 2-wheeled carts drawn by horses or mules (and widely used to carry soybeans) in front of storage silos in Manchuria. (3) "Soybeans from Japan used as green vegetables"–their pods. (4) A soybean storage yard Manchuria, with many horse-drawn wooden carts and tall cylindrical storage containers. (5) William Morse inspecting candied soybean products. (6) Two men in a hay-strewn field. (7) Boiled soybeans being crushed in a wood mortar in Japan. (8) Earthenware jars for making soy sauce in China; each is topped with a conical woven bamboo lid. (9) Two men, possibly including Morse, examining the root systems of soybean plants.

A chart (p. 120A) is titled "Soybean Utilization."

This digital photo, with caption and date, was sent to Soyfoods Center by Joyce Garrison (William Morse's granddaughter) of West Hartford, Connecticut (July 2004).

3172. *Revista de Agricultura* (*Cuba*).1937. El frijol que se ha hecho famoso [The bean that has become famous]. 20(4-5):30-36. April/May. [Spa]

• ***Summary:*** Describes the soybean, its history in the United States, the advantages of planting it, its uses as oil and vegetable milk, its use in industry, and prospects for the future. Contains eight photos: (1) William Morse of the USDA standing in front of many floor-to-ceiling shelves filled with food products made from soybeans. (2) Green vegetable soybeans in their opened pods. (3) Horse-drawn carts with sacks of soybeans and silos filled with soybeans in Manchuria. (4) William Morse pouring whole soybeans into his left hand from a can held in his right hand. On a nearby wooden box, apparently containing the same type of soybeans, is written in Japanese (from right to left) "*Hakka mamé,*" which means "peppermint soybeans." (5) Two farmers in a field of shocked soybeans. (6) A Korean girl pounding soybeans in a tall wooden mortar. (7) A Chinese courtyard filled with vats of fermenting soy sauce, each covered with a conical braided bamboo lid. (8) Two farmers wearing straw hats inspecting soybeans in a field.

3173. Megee, C.R. 1937. Soybean production in Michigan. *Michigan Agricultural Experiment Station, Circular Bulletin* No. 161. 14 p. June.

• ***Summary:*** Contents: History, adaptation, and uses. A high protein emergency or annual hay crop. Digestible nutrients and feeding value per acre of soybeans and

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other Michigan crops. Soybean oil meal. A supplementary protein feed. Soybeans for silage. A cash crop. Soybeans as a soil improving crop. Cultural practices: Varieties, time of planting, rate and methods of planting, inoculation, cultivation, harvesting for hay, harvesting for seed, threshing, storage of soybean seed. Industrial and commercial uses of soybeans: Soybean oil, soybean oil meal, dried beans, for human food.

"As early as 1902 and for 20 years afterwards, E.E. Evans of West Branch, Michigan, took an active part in introducing, breeding, and distributing varieties of soybeans. The Ogemaw is an introduction of Mr. Evans and is the result of a cross between his No. 6 Early Black and Dwarf Brown. Since 1918 the Michigan Agricultural Experiment Station has conducted numerous variety tests for both hay and seed production at East Lansing and at various points over the state" (p. 3).

Table 4, titled "Soybean variety adaptation" (p. 10) lists the following: Manchu, Ito San, Mandarin (Canada), OAC 211 (Ontario), Dunfield, Illini (Illinois), Mandell (Indiana), Sciota (Ohio), Cayuga (New York), Ogemaw (Early Michigan), Wisconsin Early Black, Virginia, Wilson, and Mammoth Yellow. For each variety is given the name, maturity, seed color, and adaptation. "The Manchu is the leading general-purpose variety for hay, seed, and commercial uses in Michigan."

Under "Industrial and commercial uses of soybeans," a table shows 10 industrial and food uses of soybean oil, 15 industrial and food uses of soybean oil meal (incl. diabetic foods, flour, crackers, soy milk, bean curd [tofu], soy sauce), and 12 industrial and food uses of dried beans (incl. roasted beans, coffee substitutes, soups, baked beans, boiled beans). "When soybeans are to be used as a green vegetable, the Easycook and Hahto are preferred because of their milder flavor." Address: Section of Farm Crops, East Lansing.

3174. Radcliffe, Jack B. 1937. Soybean: The perfect protein. *Nature's Path* (*New York City*). June. p. 210.
• ***Summary:*** "Packed into the tiny soya bean is a wealth of nutrition; minerals, tiny vitamins, easily assimilated carbohydrates, and the greatest hoard of proteins that any food in the vegetable kingdom contains." Just imagine. "A vegetable product equal to most, and superior to some animal products in proteins, the body building element in food, without which there would be no life."

Unlike meat and fish, the soybean is one of those rare foods that alkalinize the body. Milk and butter made from soybeans are better than their dairy counterparts. Its oil is equal to the best grade of olive oil. It is the world's leading source of lecithin, and the source of protein-rich soy flour, soy sauce, roasted soybeans, vegetables, cheese, etc. Dr. Kellogg is making increasing use of "soy acidophilus."

3175. Horvath, A.A. 1937. Re: Hydrolysis of soybean protein. Letter to Dr. John Harvey Kellogg, The Battle Creek Sanitarium, Battle Creek, Michigan, Aug. 13. 1 p. Typed, with signature on letterhead. [1 ref]
• ***Summary:*** "I have your letter of August 10-th with an inquiry regarding the hydrolising of soybean protein. As the hydrolysis of proteins of various nature for commercial purposes is usually done by acids under pressure at moderate heat, and since the Vitamins B-1 and B-2 are quite resistant to acids, one should not expect much destruction of these vitamins during such hydrolysis.

"I have been interested in the commercial angle of products of hydrolysis from soybean protein, and have done some work along lines of the manufacture of soy sauce and sodium glutamate by chemicals. If you feel that a closer cooperation between the Battle Creek Food Company [Battle Creek, Michigan] and myself would be profitable commercially, I would be glad to discuss it with you."

Horvath plans to drive to Ontario, Canada, with his family to present a paper. "On Sept. 14-th I could stop for a day or two at Battle Creek (with my family) to discuss soya matters with you." Address: Chemist, Univ. of Delaware, Agric. Exp. Station, Newark, Delaware.

3176. *Washington Post*. 1937. Lowly soybean startles capital as exhibit illustrates varied uses. Aug. 18. p. 15.
• ***Summary:*** "The soybean, chameleon of agriculture, made its formal debut in Washington [DC] last night when an exhibit of its wonders, mounted in a Pennsylvania Railroad car, stopped for two hours in Union Station." It met with popular approval as shown by the continuous flow of visitors which filed through the car. The "spectators were all amazed to see one little bean pop up under so many different guises."

A series of charts showed how the U.S. soybean crop has developed from 5,000,000 bushels in 1925 to 37,000,000 in 1935 and about 20,000,000 more [i.e., 57,000,000 bushels] this year.

Describes many of the different ways that soybeans can be used. Handfuls of roasted salted soybeans, courtesy of the American Soybean Association, were served to visitors. They tasted like a cross between peanuts and almonds. Madison Agricultural College, a Seventh Day Adventist institution in Madison, Tennessee, has developed a "number of meat substitutes, including an enticing 'ham' loaf, and a coffee substitute.

A series of harvest scenes showed how harvesting methods have changed. "The biggest step forward was the perfection of the combine, the forerunner of which was developed in 1925 by the late Harvey Spaulding Clapp, son of the late Moses Edwin Clapp, of Minnesota. Clap grew soybeans on his Virginia estate, which used to be part of Mount Vernon. According to Russell G. East, general agricultural agent for the Pennsylvania Railroad and director of the exhibit, it was Clapp who conceived the idea of a machine which would beat the beans from the pods as the

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plants stood in the field." The plants are left standing and gradually turn to hay.

In 1804, the soybean was introduced to the United States from China, "where natives have grown it for roughly 5,000 years. Orientals use it solely for food. Soybean sauce is familiar to all lovers of Chinese dishes."

3177. League of Nations Health Organization–Bandoeng Conference. 1937. Report of the Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene. *International Conference of Far Eastern Countries on Rural Hygiene* (*Preparatory Papers*) Vol. 3, page 74-76. Held 3-13 Aug. 1937 at Bandoeng, Java. Published 8 Sept. 1937. Official No. C.H. 1235.

• ***Summary:*** In Chapter 4, titled "Nutrition," section I discusses "Composition of food and methods of its preparation." The soya bean and its uses in French Indo-China (today's Vietnam) are discussed on pages 75-76. "Apart from rice an maize, one of the most important food crops in that Far East is the soya bean (*Glycine hispida*). This bean is rich in proteins and fatty matter, but has a very low carbohydrate content. Eaten in its natural state as a vegetable, or better still, in the form of a variety of appetising preparations in which the casein is partly disintegrated, the soya bean makes good the deficiency of fatty and nitrogenous matter in the native diet, which consists almost entirely of the rice carbohydrates.

"Its chief derivatives are nuoc-dâu, or soya milk; dâu-phu, a fresh soya cheese obtained by precipitating the casein of soya milk; dâu-tuong, or soya sauce, which is often used instead of nuoc-mam, especially in Tongking; and dâu-phu-chuc, or soya cream [yuba].

"Soya milk is a yellowish-white liquid with a slight smell of burnt bread and a peculiar flavor greatly appreciated by the Annamites. It is prepared by peeling the beans, pounding them in water, straining, and boiling up the resulting liquid.

"Soya cheese [tofu] appears in trade in the form of faintly yellowish-white rectangular cakes, weighing about 150 grammes each. Ten kg. of soya beans will produce 100 liters of milk, which in turn yield 300 cakes, or 45 kg., of cheese. This very cheap product, of which several thousand kilogrammes are sold every day in the Hanoi market alone, is eaten either raw with salad, or stewed with vegetables, or fried in oil.

"Soya sauce, or dâu-tuong, is a preparation obtained by fermenting a mixture of glutinous rice [*Oryzae sativa glutinosa*, called 'nêp' by the Annamites] and roasted soya beans. It is a condiment both salty and sweet, which frequently replaces nuoc-mam, a relatively dear food, especially in regions distant from the sea.

"Dâu-tuong is commonly found in commerce in the form of a heterogeneous mixture, consisting of a liquid (nuoc-tuong) in which floats a somewhat coarse paste called tuong-cai, made of incompletely powdered soya beans.

"Dâu-phu-chuc is prepared by drying the skin that forms on the surface of soya milk after prolonged heating. It is sold in shiny, pale yellow, crinkly sheets, and smells like cow's milk. It is a food rich in proteins and fatty matter, and is consumed by the Annamites in small pieces, either in soup, or in pork, beef, or chicken stew."

Note: This is the earliest English-language document seen that uses the term "Roasted soya beans" to refer to soynuts. Address: Geneva, Switzerland.

3178. A&P Food Stores. 1937. Fill up your pantry now! (Ad). *Hartford Daily Courant* (*Connecticut*). Oct. 15. p. 17.

• ***Summary:*** "Ming Foy Soy Sauce–bot. [bottle] 10¢... Ketchup–Ann Page–14 oz. bot. 14¢." "A&P established 1859."

3179. *Nature's Path to Health* (*Melbourne, Australia*). 1937. Soy bean–The perfect protein. Sept/Oct. p. 34.

• ***Summary:*** "Packed into the tiny soya bean is a wealth of nutrition; minerals, tiny vitamins, easily assimilated carbohydrates, and the greatest hoard of proteins that any food in the vegetable kingdom contains. Think of it! A vegetable product equal to most, and superior to some animal products in proteins, the body building element in food, without which there would be no life. And this same Soya Bean, so rich in all the food essentials, produces an alkaline reaction in the body. It sounds almost unbelievable!

"The chief argument against a heavy meat diet is the acid reaction in the human system. So it is with all highly protein foods commonly used as meat substitutes–fish, eggs, etc.; but here is the most nearly perfect substitute for meat known to man, and it is one of the extremely rare foods which alkalinize the body."

"Milk and butter made from soya beans are richer and more satisfactory than dairy products. Its oil equals the best grade of olive oil."

"Lecithin, in which the soya bean is rich, is a nerve, brain, and sex building food. Calcium builds bone, teeth, finger nails and accessories.

"From the seed comes meal and oil. Out of the meal can be made a flour for use of infants, macaroni, breakfast foods, bread, cakes... From the dried beans come soya sauce, soups, roasted beans, vegetable, milk, liquid and powder, cheese, soy cultures that taste like buttermilk, beverages, confections and so-called candy.

"Another valuable property of the soy bean is its high alkalinity, which amounts to twenty-four times that of cow's milk. Concerning this point, Dr. Kellogg says: 'We are certainly eating too much meat and not enough alkaline products.' A meat diet is heavily charged with acids which lower the alkalinity of the blood and tissue fluids and tend to cause acidosis, thus inducing chronic fatigue, lowered resistance to disease, and setting up degenerative processes

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in the liver, kidneys, blood vessels and other parts of the body. More people die in this country from these causes than from any other." Address: Australia.

3180. Fujikawa, Fukizawa. 1937. [On the anti-mold action of phenol carbonic acid from lichen]. *Nippon Eisei* 9:262-. [Jap]*

3181. Kazuno, T. 1937. [On unsaponifiable substance in shoyu]. *Gakujutsu Kyoho* 12:530-. [Jap]*

3182. Oota, Kiyoshi. 1937. Shôyu no kabi-dome-zai ni tsuite. (Toku ni "biojiparu" no jitsugaku-teki igi. Inshokubutsu bôfuzai no kenkyû) [On the anti-mold substances for shoyu. Especially the practical significance of biodipal. Research on preservatives for beverages]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 32(6):118-29; 32(8):136-40; 32(9):149-52. [24 ref. Jap]
Address: Igaku Hakase.

3183. Togano, Meijiro; Arimura, H. 1937. Beikoku o shiyô suru shôyu jôzô shiken hôkokusho [Shoyu brewing trials using rice]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 32(3):70-73; 32(4):98-101; 32(5):106-11; 32(6):116-17; 32(7)141-; 32(8):153-; 32(10):156-58. [Jap]
Address: 1. President, Nihon Jozo Kogyo Kabushiki Gaisha, Nôgaku Hakase; 2. Gishi cho.

3184. Bordas, Jean. 1937. Le soja et son rôle alimentaire [The soybean and its role as a food]. Paris: Hermann & Cie. 36 p. 24 cm. Series: Actualités Scientifiques et Industrielles, No. 557. [24 ref. Fre]
• ***Summary:*** Contents: Introduction. 1. Botanical characteristics and principal varieties. 2. Chemical composition of soya. 3. Alimentary physiology and the nutritional uses of soya: Seeds (energy value, protein, vitamins, use as a milk substitute), forage. 4. Different uses of soya: Agricultural, industrial (oil, casein, sterol), as human food (sprouts, tofu, fermented tofu, shoyu, miso, tuong of Annam, roasted soy coffee, soy bread for diabetics, the future of soya). 5. The economics of soya: Production, imports, exports. Conclusions. Address: Director, Station d'Agronomie et de Pathologie vegetale d'Avignon, France.

3185. Dominion Bureau of Statistics, Ottawa, Canada. 1937. Imports for consumption: Agricultural and vegetable products. *Trade of Canada.* Fiscal year ended March 31, 1936. See p. 283, 289, 299, 335, 340. [Eng: Fre]
• ***Summary:*** Table No. 37 (p. 283) gives figures (gallons and dollar value) for imports of soy sauce to Canada each year from 1932 to 1935 from United Kingdom, Hong Kong, China, Japan, Syria, and the United States. Total soy sauce imports (in gallons) were as follows: 1932 = 78,581, 1933 = 72,389, 1934 = 89,249, 1935 = 79,321.

Page 289 shows imports of soya beans in 1935 only from United Kingdom, Hong Kong, Japan, and United States. Some 259,460 lb of soybeans were imported worth $7,822. The main source country was Japan, followed by the USA.

Page 299 gives import figures for soybean oil in 1934 and 1935 from United Kingdom, China, Germany, Japan, Netherlands, and the USA.

Page 335 shows imports of soya bean cake and meal from 1932 to 1935 from United Kingdom, China, and USA.

Page 340 shows imports of soya bean oil (and peanut oil) for the manufacture of soap in 1934 and 1935 from the United Kingdom, China, Denmark, Germany, Netherlands, and United States. Address: Ottawa, Canada.

3186. Fuji, Fugoro. 1937. Dainihon kaigai iminshi [Great history of Japanese immigration overseas]. Japan: Kaigai Chôsa-kai. See vol. 2, p. 21-22, 95. [Jap]*
• ***Summary:*** Pages 21-22 repeat the information from Morita 1915 about Haruhachi Shimada being the first to brew shoyu in Hawaii.

Page 95 in the "people" section states: "Nobuyuki Yamagami was born in 1882 and came from Fukuoka prefecture. He studied in Fukuoka and also in Tokyo. Later he developed ambition and traveled to England, France, Germany, and other European countries for several years. Next he went to Australia, and finally to the USA. In San Francisco he opened a seafood products store and studied foods. In 1905 in Honolulu, Hawaii, he founded Yamakami/Yamagami Shoyu Jozo-sho, which was successful. Later he changed the company's name to Hawaii Shoyu Kaisha. He delegated the work to Tashiro Kumataro, and went to China for fun. In Korea he founded a soap factory and succeeded in getting orders from the army and navy. His shoyu was developed based on his original research, and suited for the tastes of modern people. He called it 'kenfu,' which means 'wise wife/women.' It became very popular. His elder brother, Sogen Yamakami/Yamagami, was a great Zen monk/priest. Also he was very famous for his great kindness to his parents."

3187. Kale, F.S. 1937. Soya bean: Its value in dietetics, cultivation and uses. With 300 recipes. 2nd ed. Baroda State, India: Baroda State Press. xxx + 375 p. Illust. (35 leaves of plates, described in a separate record). Index. 22 cm. 2nd ed. 1937. [66 ref]
• ***Summary:*** Contents: 1. Deficiencies in the Indian diet and soya bean as a means to rectify them. 2. History of the origin and growth of soya bean: Derivation of the word soya bean, origin of soya bean, literature, primitive man and soya bean, name of the plant, home of soya bean and its expansion, varieties of soya bean, the culture of soya bean is very remote (It "has been the chief article of diet in China for over 7,000 years."), reference of soya bean in old Chinese records,

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how and when soya bean became known to Europeans, soya bean in England (from 1890; J.L. North and Henry Ford), soya bean in France (from 1739), soya bean in Italy, soya bean in other countries of Europe, soya bean in United States of America, India and soya bean.

3. The use of soya bean: Importance of soya bean, dietetic importance, industrial importance, agricultural importance (Russia, Mussolini in Italy), medical importance, soya bean is alkalising in its effect ("Soya bean milk as well as its flour is used in foods for invalids and infants, like Nestle's food"), longevity and soya bean.

4. World trade in soya bean: Imports to Europe, production of soya bean in Manchuria (58% in North Manchuria), exports from Manchuria, oil and cake industry in Manchuria, soya bean production in Japan, in America, in Africa, in Australia, in Europe, in Java, in India, in other British possessions, estimate of world production of the soya bean, the desirability of the expansion of soya bean cultivation, imports and exports of soybeans, soya bean oil, and soya cake–1913-1927: Denmark, Holland, United States, Great Britain, Japan, France, Russia, China, Germany, Norway, Korea. Source: International Institute of Agriculture, Bureau of Statistics, 1921, p. 420-21. A table (p. 38) shows statistics for world production of soybeans "as estimated by the leading firm of London soya bean dealers" for various years from 1923 to 1929. This includes individual statistics each year for China [incl. Manchuria], Japan, and USA. The world totals in tons are: 3,095,000 (for 1923-25), 3,397,000 (for 1926), 4,325,000 (for 1927), 6,000,000 (for 1928), and 6,570,000 (for 1929; incl. China 5,250,000; Japan 550,000; USA 250,000; Java & Dutch East Indies 120,000; Other Asiatic countries & Africa 400,000).

5. Botany of the soya bean plant. 6. Classification of soya bean. 7. Cultivation of soya bean. 8. Diseases and pests of soya bean. 9. Cultivation of soya bean in India. 10. The constituents of soya bean. 11. Soya bean milk. 12. Soya bean flour. 13. Industrial uses of soya bean. 14. Enriching soil by addition of nitrogen and use of soya bean as fodder. 15. Food requirement of the human body. 16. European and American soya bean recipes. 17. Diabetic dishes, Mahatma Gandhi's experiments at Magan Wadi and opinion of scientists on soya bean. 18. Chinese and Japanese soya bean dishes: Toffu [tofu] or soya bean curd: Digestibility, utilization, toffu khan, toffu nao, tze toffu (fried bean curd), chien chang toffu (thousand folds), hsiang khan, kori toffu (frozen toffu), preservation of toffu. Natto. Tokio natto and Kyoto natto etc. Hamanan natto [Hamanatto]. Yuba. Misso [miso]. Soya sauce. Soya bean confectionery. Roasted beans (Chinese).

19. Indian soya bean dishes: Hindustani dishes, Moglai dishes, Gujarati dishes, Maharashtrian dishes, Bengali dishes, Goa dishes, Tanjore dishes. Appendixes. 1. Acreage of soya bean in Manchuria during the last 5 years. 2. Total figures of export during last 5 years. 3. Bibliography. 4. Some opinions about the first edition of this book.

The preface begins (p. iii): "This little book is written in response to innumerable inquiries I have had from time to time after the inauguration of the plantation ceremony of Soya Beans at the State Agricultural Experimental Station by H.H. the Maharaja Gaekwar of Baroda in November 1933.

"A few months after this a food exhibition was held in Baroda where many Soya Bean dishes–Indian, European and Chinese–were exhibited. The leading papers and journals all over the country spoke in very glowing terms about the Soya Bean dishes that were exhibited... Later on at the request of Messrs. Mitsui Bussan Kaisha Ltd., a leading Japanese Firm in Bombay, a Soya Bean Exhibition and Restaurant were run in the Japanese village at the H.O.H. fete. So keen was the interest and enthusiasm evinced by the cosmopolitan public of Bombay that seats in the restaurant had to be reserved in advance. The presence of H.E. the Governor and Lady Brabourne and many Indian princes was an additional evidence of the ever growing popularity of the tasty Soya Bean dishes served there.

"At the closing of the H.O.H. fete many prominent people of Bombay requested me to continue the restaurant at a convenient place in the city, and asked me to open soya-bean milk centres for the children of the poor who could not afford to buy cow's milk. Many were ready to finance any scheme that I would propose, but unfortunately my time was not my own as I had to attend to my duties in the State and could not take advantage of their generous offer.

"The Departments of Agriculture of the various provinces of India as well as many Indian States asked me to supply them with literature regarding the cultivation and the uses of this most useful bean. The Department of Commerce and Industry of the Government of Bombay inquired if I could furnish them with information about the machinery for the extraction of Soya-bean milk. Letters of inquiries from private individuals kept pouring in daily from all parts of India. All this has induced me to undertake the preparation and the publication of this book...

"From the number of experiments carried on in the Baroda territories and outside it, I feel sure that the Indian soil is most suitable for the cultivation of soya bean...

"The leading thought of the day in India is, 'Village uplift,' and 'Rural reconstruction.'

"Baroda, 7th January 1936, F.S.K. (p. iv)

"Preface to the Second Edition: I feel grateful to the public for having given such a hearty reception to the first edition of my book. It is running into a second edition within a year...

"Now, Soya Bean Bakeries and Restaurants have been started in the city of Bombay and in many other towns in India, and Soya Bean products are exhibited in almost all the exhibitions...

"I feel highly thankful to His Highness the Maharaja of Baroda who gave me an opportunity last year of visiting Russia, where I have seen that seven to ten per cent. of Soya

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Bean flour was being added to the wheat flour in order to enhance the nutritive value of the bread. The Soya Research Institute at Moscow is making researches into the nutritive, industrial and economical values of Soya Bean. I have seen there the actual working of the Soya-bean milk extracting plant. They make casein out of Soya-bean milk. Soya-bean cream is sold in the market.

"I visited the dietetic clinics in England, France, Germany, Austria and other European countries, where doctors prescribe Soya Bean bread for diabetic patients. In Russia, rickets and consumption are treated by Soyolk extracted out of Soya Bean...

"France is growing Soya Bean on côlt de jura [sic, Côte d'Azur, on the Mediterranean?]. In England, through the efforts of Mr. J.L. North, Soya Bean is realised as a field crop for the last two years.

"Paris, 3rd April 1937. F.S.K. (p. ix)." Address: Food Survey Officer, Baroda State, India.

3188. Kale, F.S. 1937. Soya bean: Its value in dietetics, cultivation and uses. With 300 recipes. 2nd ed. Chapter 9. Cultivation of soya bean in India (Document part). Baroda State, India: Baroda State Press. xxx + 375 p. See p. 79-111. • ***Summary:*** Contents: Experiments in Baroda State (1934 and 1935) (p. 79-83): In June 1934, 15 lbs. of good seed was acquired by F.S. Kale, the Officer in Charge, Food Survey Department, Baroda state. Describes: Preparatory tillage, sowing on July 12, germination, interculturing [hoeing], gap filling, pod formation, ripening of pods on Sept. 26, harvesting, thrashing (by beating of sticks), yield (167 lb of seed total), cost of cultivation, net profit, and net profit per acre (in rupees). Experiment of 1935, using acclimatized seed from last year's crop. The germination rate increased to 95% from 60% in 1934. The average number of pods per plant increased to 130 from 110. The yield doubled (given in maunds and seers). Signed: Hargovind Bavabhai Patel. Food Surveyor's remarks.

Cultivation of soya bean in Surveys Nos. 199-212, supervised by Ranchhod Raghav Baria, head man of the village, Kerianagas, Amreli District, Gujarat (p. 83-85): The seed was given to 16-17 farmers; some intercropped it with cotton and others with Bajri [pearl millet]. After sowing, the soya bean was attacked by a beetle and so about 1/3 of the seed was spoiled. After 15 days only half the crop had survived. When pod formation began, crows and parrots began to attack the plants; half the pods were spoiled or damaged by them. Then the monsoons brought less rain than usual. The growth of both cotton and bajri was clearly aided by the soya bean. Food surveyor's remarks: "We are very hopeful that this part of Gujarat will be very well suited for soya bean crop."

Experiments of 1934 at the Baroda Agricultural Experiment Station. Soya bean–fodder type (p. 86-90): Two varieties of soya beans were planted in 1934: Poona greenish white, and Poona yellowish white, both brought from Poona Agricultural College. Both were planted on July 3, flowered on Sept. 28 and 29 respectively, pod formation on Oct. 20 and 15 respectively, both harvested on Dec. 4. A photo shows one plant that had more than 500 pods. Description of varieties. For Poona greenish white: Preparation of the soil, cultivation, ripening, harvesting (using a sickle), how to cure it for hay, the yield (900 lb per acre of seed, or 3-4 tons per acre of green crop). "We have given the green fodder to the bullocks on the farm and it seems that they relish it much and they put on more fat and seemed to be healthy and strong. The plants when uprooted showed the growth of big nodules on the roots. For Poona yellowish white, the seed yield was 460 lb per acre and the yield of green matter was only about 75% as much. Mammoth Yellow soya beans from Baroda contained 41.1% protein and 9.9% moisture; the same soya beans from Manchuria contained 38.5% protein and 9.7% moisture.

Dep. of Agriculture, Central Provinces and Berar (p. 90-94): Soya bean ("In this province the Agriculture Department started some preliminary work on this crop as early as 1911. A collection of different varieties from foreign countries was made and grown on the Nagpur farm. Particular attention was given to acclimatize it and to obtain suitable high-yielding early strains, possessing at the same time a satisfactory percentage of oil. The work continued for some years but the results obtained were not satisfactory as none of the varieties were acclimatized. Further work was, therefore, dropped and the growing of Soya beans did not make any headway.

"In 1927, the Botanical station started the investigation of fodder supplies, and in this connection a large number of leguminous crops including Soya beans were tested. Of the Soya beans, two varieties, viz., Java black and Wilson early, were tested and gave encouraging results as regards their yield of green fodder" per acre (the sum of two cuttings)):

In a table of 7 crops: #1. Alysicarpus rugosus (Shevra) 20,105 lb per acre. #2. Glycine hispida (Soya bean Java black) 12,505 lb per acre. #4. Glycine hispida (Soya bean Wilson early) 11,905 lb per acre.

In recent years, tests of seed production have also been carried out on soybean. "A large number of fresh varieties from Kalimpong (Bengal), Kuala Lumpur (Federated Malay States), Barberton ([Ohio] USA) and Leningrad, etc. were obtained and tested. Of these, three white seeded and one black seeded varieties gave promising results as regards their adaptability, earliness and yield." An analysis (see table) of their chemical composition shows "that these selected strains are about 1½ times more nutritious than *mung* and *urid* and also contain a high percentage of oil" [12.8 to 15.2% compared with 0.73 to 1.46%].

"With a view to test its taste and other cooking qualities, the selected and acclimatized varieties were distributed for trial in small quantities amongst garden servants and some

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officials in Craddock Town, Nagpur. Their report shows that the soya bean is quite palatable and does not suffer from bad taste on account of the high percentage of oil. When ground into flour it can be mixed with wheat flour to make *chapatis, puris, kachoris,* fritters (*bhajias*) and other Indian preparations. One drawback, however, which has been noticed, is that it does not very well mix with [absorb] water in the preparation of 'dal' like other pulses."

The biggest problem is that India conservative farmers "take a long time to add a new crop to those already grown, unless they can be persuaded that the crop will bring them more profit per acre."

Soya beans in Berar, by Mr. R.R. Dokras, B.A., LL.B., Chandur, Berar (p. 94-98): Improves soils ("It is of great value to persons who must abstain from meat and thus is a great help to the vegetarian population of the country"). Can be grown in Berar ("all over on a profitable commercial basis"). My experience ("growing soya bean from 1931 to 1934). A helpful crop. Best cattle feed.

Imperial Department of Agriculture of India, by Mr. Wynne Sayer, Esq., B.A., Dip. Agri. (Cantab.) Offg. Imperial Agriculturist, Pusa, Bihar (p. 98-101): Summarizes the strengths and weakness of the crop. "3. In India it is generally used as green vegetables, *dal* and *sattoo.*" "4. Experts in India and outside are unanimously of the opinion that extension of soya bean cultivation is of great economic value as human food, cattle food and as seed of commercial interest in various industries."

"The only drawback is that there is no ready market for its disposal in India as the people of this country are generally ignorant of its valuable properties–an ignorance which can only be removed with the advancement of scientific knowledge and propaganda among the people."

Soya Bean (*Glycine hispida* Maxim), by M. Wynne Sayer, Esq., B.A., Dip. Agri. (Cantab.) Offg. Imperial Agriculturist, Pusa, Bihar (p. 101-07): Introduction: "The soya bean... is cultivated extensively throughout India, chiefly in the north Indian tract which extends from the Punjab to the Khasia and Manipur Hills and Burma. It is also grown on the slopes of the Himalayas up to an altitude of 6,000 feet" (Duthie 1905, Watt 1890). Economic importance of the soya bean: "The bean is much appreciated as human food on account of its protein and vitamin contents of high physiological value... It occupies a position next to rice in China and Japan. Various preparations such as *Tofu* (Soy-cheese), *Miso* (Soy-paste), *Shoyu* (Soy-sauce), etc. are made from the bean and widely used in those countries... In India it is used in various forms such as *sattu, atta* and *dal*. Cultivation of fodder-type soya-bean. Green fodder for cattle: At Pusa farm, cattle are grazed on soya bean in November. Green manure. Standard varieties of soya bean on the Pusa Farm: A table shows 10 varieties from 1917-1923, with the yield of each. The varieties: Local (Pusa), Nepali twining, Riceland, Barchet, Black early, Black late, Yellow hilum brown (highest yield, 1127.9 lb/acre), Chocolate (#2 highest yield, 1026.5 lb/acre), Assam, Barmeli. Chemical composition (table) of Yellow, Chocolate, and Black early.

Soya bean, by R.R. Rao Bahadur D. Ananda Rao Garu, B.Sc., Director of Agriculture, Madras (p. 107-08): "Soya bean is under trial from 1932 in the Research stations Adutural, Maruteru, Hagari, Nandyal and Samalkota. The two varieties of Soya bean from Burma *viz.* Behrum and Pengypi have done well and the trials are being continued.

Soya bean, by K.S. Kulkarny, Professor of Agriculture, Agricultural College, Poona (p. 108-09). Gives basic information about cultivation of soya bean.

Soya bean, by H.H. Stewart, Esquire, I.A.S., Director of Agriculture, Punjab (p. 109-110): "The area under soya bean crop in this province is practically nil. The crop has been tried on a few experimental farms of the Agricultural Department, where it yielded 12 to 16 maunds of seed per acre."

Soya bean, by the Superintendent of Agriculture, Darjeeling, Kalimpong (p. 110-11) [as of Sept. 2010 Darjeeling and Kalimpong are neighboring towns in the Indian state of West Bengal]: "Soya bean is cultivated chiefly as a secondary crop in rotation after maize or on the Alis or ridges of the paddy fields. The approximate 5 years' average under this crop in the Darjeeling District is about 200 acres; but in the neighbouring independent States, such as Sikkim, Bhutan and Nepal the approximate average is 750 to 800 acres. The average yield for 5 years would be about 7,500 to 8,000 maunds and there are 6 or 7 varieties of soya beans grown in and around this district." The crop is grown mainly for seed and human consumption, also as a green-manuring crop in Tea Estates. Address: Paris, France; Formerly: Food Survey Officer, Baroda State, India.

3189. La Choy Food Products, Inc. 1937. The art and secrets of Chinese cookery. Detroit, Michigan: La Choy Food Products. 16 p. Illust. (some color). 10 x 14 cm. *

• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home.

3190. Woertge, Karl Heinz. 1937. Entwicklung und weltwirtschaftliche Bedeutung der Sojabohnenerzeugung und -verarbeitung [Development and international economic significance of soybean production and processing]. Thesis, Friedrich Alexander University, Erlangen, Coburg, Germany. 119 p. 28 cm. [112 ref. Ger]

• ***Summary:*** Contents: Foreword. Part I: History and culture of the soybean. 1. History, natural requirements and technology of soybean production; chemical composition of the soybean. 2. Occurrence of the soybean and methods of production in various countries: Asia (Manchuria and China, Japan, Korea, Formosa, Dutch East Indies, other Asian countries incl. British India, Cochin China, Ceylon), America, Europe (Southeast Europe, Austria, USSR, France,

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Italy, England, Poland, Switzerland, Czechoslovakia, Germany), Africa and Australia.

Part II. Scale and global economic significance of soybean production in the main producing areas. 1. General overview of world soybean production: Production for seeds, for fodders. 2. Scale of soybean production in the main producing areas: Asia (Manchuria, Japan, Korea, Formosa, Dutch East Indies [Java and Madura/Madoera]), America, Europe (Southeast Europe, USSR).

Part III. Development and global economic significance of soybean processing. 1. Soybean processing possibilities: A. Processing soybeans to make foods: Asia (general, methods used in China and Japan to make vegetable-type soybeans and salads, koji, soymilk, shoyu [soy sauce], miso, natto, tofu, methods used in the Dutch East Indies), Europe (general overview, preparation of soybean meal, soymilk, coffee- and chocolate substitutes). B. The soybean as an oilseed: General, methods of obtaining the oil (in Asia, Europe, USA), use of soy oil (as human food, other). C. Obtaining lecithin from the soybean. D. Use of soybean press-cake for livestock feed. E. Use of the soybean meal for fertilizer. 2. World trade in soybeans, soy oil and soybean cake/meal (*Sojakuchen/Sojaschrot*): World trade in soybeans (Manchuria, Asia, Europe, USA), world trade in soy oil, world trade in soybean meal.

Closing remarks: The state of the world soybean market with special consideration for the current German conditions. Appendixes and tables. Address: Nuerenberg, Germany.

3191. Yamaguchi, H.S.K.; Sakai, Atsuharu. 1937. Shoyu or Japanese soy (Document part). In: H.S.K. Yamaguchi. 1937. We Japanese. Yokohama, Japan: Yamagata Press. 592 p. See p. 271-73. Book II.

• ***Summary:*** "Neither the origin of shoyu nor the date of its invention is known for sure, but it is first mentioned in a record found in the Shoso-in, of the Totai-ji [Todai-ji] Temple, where the personal belongings of the Emperor Shomu (the 45th) and some other emperors are preserved. Also, it is mentioned in the Engishiki, a book of regulations of the Engi era (901-922). Chinese shoyu was imported during the early days of the Ashikaga regime (1338-1574), and it was in large quantities manufactured at Kyoto during the Shogunate of Yoshiharu Ashikaga (1521-1545). But it is certain that shoyu in those early days was not in liquid form, and it was not until the early period of the Tokugawa regime (1603-1867) that liquid shoyu was first made in Japan.

"Tradition has it that in 1228 Gakushin, a Buddhist priest from China, taught the people of Wayakama the method of making shoyu, and the village of Yuasa in that province is known to be the oldest centre of shoyu manufacture. Shoyu was manufactured for the first time at Choshi, another centre, in Chiba prefecture, in 1616, and one shoyu maker, Hamaguchi by name, came to Choshi from Wakayama in 1645 to coach others in shoyu manufacture. Noda in the same prefecture of Chiba began the manufacture of shoyu during the era of Genroku (1685-1703), and it is now the largest centre of shoyu manufacture in Japan. Shoyu was much used during the Tokugawa period (1603-1867) and greatly improved during the Meiji era (1868-1912). In 1933 Japan produced 512 million litres of shoyu valued at 57 million yen, of which the share of Chiba prefecture where Choshi and Noda are situated, amounted to 111 million litres valued at 17 million yen. These figures are not inclusive, as the farmer makes shoyu for his own use.

"Professor L. Lunge and A. Langgardt [sic, Langgaard], who taught at the Tokyo Imperial University, in the early years (about 1877) took such a great interest in the manufacture of shoyu that they often visited the shoyu centres to study it in the making. Professor A. Langgardt on his return home to Germany, made an imitation of Japanese soy and got it patented in Germany and 'Moggi' [Maggi] now manufactured in Europe is a corruption of the name Mogi, who was a shoyu- maker of Noda...

"There are several brands of Japanese soy, of which the following are the chief: Yama-sa [Yamasa], Kikko-man [Kikkoman], Higeta, Kagi-yamasa, Maru-kin [Marukin]." An illustration of each brand and its meaning is given.

There are illustrations of Kikkoman, Higeta, and Yamasa brand shoyu in wooden kegs. Photos shows a shoyu bottling factory and a yard filled with wood for shoyu barrels. Address: Manager, Fujiya Hotel, Miyanoshita, Japan.

3192. Yamaguchi, H.S.K.; Sakai, Atsuharu. 1937. Sukiyaki: How "sukiyaki" is served. Origin of "sukiyaki" (Document part). In: H.S.K. Yamaguchi. 1937. We Japanese. Yokohama, Japan: Yamagata Press. 592 p. See p. 264-66. Book II.

• ***Summary:*** To create the Japanese atmosphere at the Sukiyaki party, the guests must sit on cushions on the floor. For a party of four guests, a circular table is best, with the charcoal brazier (on which a *nabé* is set) or electric cooker in the middle. On plates surrounding the *nabé* are the ingredients required for the meal: Tender beef, thinly sliced. Cut leeks and often some onions mixed with the leeks. "Now comes the highly nutritious bean-curd known as *tofu* in Japan. This is very light and digestible, and of great value in Japanese soups and other dishes." *Konnyaku*, a gelatin-like vegetable, is cut into strings (*shirataki*) that look like silvery spaghetti. Japanese doctors say that *konnyaku* has considerable medicinal value.

"As seasoning the Japanese usually put a little of what is called *Ajinomoto*, along with a little soup stock. This *Ajinomoto* is one of the most marvelous seasonings in the world, recognized even by the French as superior to their *sel de celeri*, in which French chefs have so much faith. It ought to be better known to housewives throughout the world. Housewives travelling make inquiries about it and buy quantities in Japan to take home.

"Now come two important liquids. The first, *shoyu* or

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soy, is indispensable. It is the Oriental sauce which is the basis of almost all sauces in the world, with the difference, however that whereas so many Western sauces are strongly spiced and therefore too piquant, and consequently harmful to delicate stomachs, the Japanese *shoyu* is a natural soy bean-sauce, highly nutritious and an irresistible appetizer." Address: Manager, Fujiya Hotel, Miyanoshita, Japan.

3193. Snelling, Walter O. 1938. Preparation of soy sauce. *U.S. Patent* 2,107,133. Feb. 1. 3 p. Application filed 12 Jan. 1937.

• ***Summary:*** An acid hydrolyzed liquid product is first prepared from protein material, preferably soybean meal. Then it is mixed with roasted wheat or equivalent cereal and fermented in a manner conventional for soy sauce. The overall time of sauce production is greatly shortened by the acid predigestion. Preferably, the acid treatment should not completely hydrolyze the protein material to constituent amino acids. Address: Allentown, Pennsylvania.

3194. *Toronto Daily Star* (*Canada*). 1938. Toronto Chinese welcome W.C. Liu, Nanking emissary: Nationalist flag flies over Elizabeth St. while Orientals celebrate–Are informed Japanese is not cause of worry. Feb. 7. p. 9.

• ***Summary:*** More than 150 Chinese attended a dinner given by the patriotic league in the Asia Cafe. The men were in their western clothing, but the women wore gorgeous Chinese gowns. "It was a real Chines meal, not the chop-suey feast so familiar to Occidentals.

"Beside each guest was placed his soup bowl, his chop-sticks, his China spoon, his rice bowl, tea bowl and soya sauce, while the food was placed one dish at a time in the centre of the table..." A large photo shows Liu.

Note: Elizabeth Street was one of the main streets in Toronto's Chinatown until the late 1950s.

3195. Lager, Mildred. 1938. The House of Better Living Catalog: Finer natural foods. Los Angeles, California: Published by the author. 36 p. March. 23 x 10 cm.

• ***Summary:*** The single most important document showing the creative development of commercial soyfoods in California in the late 1930s. This catalog contains a large section on Diabetic Foods, consisting mostly of soyfoods, and an even larger section titled "Soy Bean Products."

The Foreword (p. 1) begins: "The House of Better living is as unusual as its name. Its aim is to teach better living, and has made possible Mildred Lager's free educational program by radio and class work. Become a member of our ever-growing family. Secure one of our creed cards–Realize life can be a game and not a battle, and if you give to the world the best you have, the best will come back to you.

"The House of Better Living has grown in four years from what was called a brain storm to an institution. It is outstanding, unique, and built on the ideals of sincerity and service. It is teaching the ounce of prevention–the health insurance that pays dividends in years of health and happiness. It carries for you, Finer Natural Foods, selected by Mildred Lager."

A full page of delivery and order information (p. 2) shows that Mildred was shipping foods (such as California nuts and fruits, fresh and dried) all over the United States.

This catalog contains a total of 42 soyfood products, including 26 such products not found in the 1936 catalog. Soy (and other interesting) products are listed as follows (prices and weights are given for each): Beverages–Coffee substitutes: Radcliff's soy bean, Soy-Co. Other beverages: Dr. Fearn's Proteinized Cocoa, Radcliff's Malted Soya Milk, Radcliff's Soya Bean Cocolette, Soy-Malt (plain or chocolate). Sugars and syrups: Radcliff's Golden Soya Honey Spread (4-oz. glass). Natural sweets–Candies: Carque's health candies, bar, 5¢. Halvah bars, Sesame brittle, Soya candy sticks, 1¢ each, Soy milk "chocolate" bars, in Bavarian, cocoanut, mint, cherry, pineapple, and creme de mint flavors, Soy milk "chocolates," ½-lb. box or 1-lb. box, Soy chocolate, 1¢ square, ½-lb, 1 lb, 60¢, or bulk.

Desserts: Agar–Parfait mix, Agar–Hain Vege-Jell, Agar–Sanitarium vegetable gelatin. Diabetic foods: Gluten flour, Soy bean flour, 10¢ lb, Soy Bean Pancake and Waffle Flour (Bill Baker's Prepared; 2-lb. pkg. 30¢), Dr. Fearn's Soya Cereal, Dietetic Soyrina Cereal, Dr. Fearn's Soya-Date Breakfast Food, Battle Creek Dietetic Bran, Battle Creek toasted gluten bran flakes, Soy breakfast food, Cubbison's soy-gluten crackers, Soy-gluten wafers, Loma Linda soy bean wafers, Bill Baker's 100% soy-fruit slices, Bill Baker's soy bean bread, Olson's soy bread, Soy bean macaroni, spaghetti and noodles, Soy beans–imported, Soy beans–cracked, Soy beans–red, Soy beverages (without sweetening), Bill Baker's soy melba toast, Cubbison's soy melba toast.

Nut butters: Almond butter, Almond meal, Cashew butter, Peanut butter (dextrinized or raw), Pecan butter, Soy bean butter (lb or 8-oz. can). Whole grain flours, meals, etc.: Lima bean flour, Soy bean flour (1 lb, 3 lbs, or 10 lb), Soy bean pancake and waffle flour (Bill Baker's prepared), Soy bean pancake and waffle flour (Mrs. Hauser's), Whole wheat flour, wheat germ. Breakfast cereals (to be cooked): Mildred Lager's quick cooking cracked soybeans, Dr. Fearn's soya cereal, Dietetic Soyrina Cereal. Breakfast cereals (ready to eat): Battle Creek Zo, Dr. Fearn's soya-date breakfast food, Soya breakfast food, Bill Baker's 10% soya cereal. Melba toast, crackers, cookies: Cubbison's soy toast, Bill Baker's soy toast, Cubbison's Soy-Gluten crackers, Soy-gluten crackers, Loma Linda soy bean wafers, Cookies: Cubbison's soy cookies, Bill Baker's 100% soy fruit slices. Bread: Olson's soy bean bread (sliced loaf), Bill Baker's soy bean bread (unsliced loaf 16¢). Macaroni noodles: Soy bean macaroni, spaghetti and noodles. Legumes: Soy beans–imported, Soy beans–cracked, Soy beans–red. Meat

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substitutes: Nuteena (7 oz. can 15¢), Nut Meat, Nuttose (Battle Creek), Proteena, Protose, Soy bean butter (30¢ lb.), Soy mince sandwich spread, Soy bean spread, Soy bean ravioli (12¢ and 20¢ can).

Soy bean products (40 products; those mentioned above may be omitted here): Loma Linda soy beans (plain or tomato flavored, No. 1 can), Loma Linda soy beans with Proteena (No. 1 can), Dry soy beans (quick cooking red), Soy bean spread, Soya bean honey spread, Loma Linda soy mince sandwich spread, Soy bean sauce (5 oz for 18¢ or 2 oz bottle for 10¢), Soy bean oil (45¢ pint bottle), Soyco (Soy coffee), Soya bean milk powder, Milk of soya bean (6 oz or 12 oz can), Soy-Malt, Proteinized cocoa, Radcliff's 100% soya bean beverage (1 lb package), Cubbison's soy bean cookies, Cubbison soy-gluten crackers, La Sierra Soy breakfast cereal, Diamel Soyarina cereal, Diamel breakfast cereal. Salad dressings: Imitation Worcestershire sauce (Carque's, 5 oz bottle for 25¢). Powdered dry vegetables: Dulse, Dulse leaf, Irish moss, Kelp, Kelp–fancy, Sea lettuce (leaf or powdered), Soy-banana powder. Laxative foods: Agar, Psyllium, Swiss Kriss, Sym, Tam (laxative jam). Natural aids: Savita yeast tablets, Sesame seeds, Theradophilus (4 oz bottle 75¢, 8 oz bottle $1.25). Electric appliances: Electric juicers are not yet on the market. Index (p. 36).

There are ads for the following: Battle Creek Sanitarium Foods (p. 5; ask for literature). Figo coffee substitute (display ad, p. 6). Racliffe's Soya Products (p. 9, 21). Mildred Lager's quick cooking family (incl. cracked soy beans), Bill Baker's soy and lima bean products (photo display, p. 16). Therapy, Ltd.–Foods for Better Living (Theradophilus, soy bean milk, p. 19, 29).

A photo (p. 1) shows Mildred Lager. Address: 1207 West Sixth St., Los Angeles, California.

3196. Knight, Henry G. 1938. Industrial accomplishments at the new Soybean Laboratory. *Industrial and Engineering Chemistry, News Edition* 16(10):291-93. May 20.
• ***Summary:*** "There are at present approximately 35 mills crushing soybeans, 15 plants engaged in the manufacture of soybean flour, 20 in the manufacture of soybean food products, and more than 50 in the manufacture of other industrial products."

"There has been a large increase in the use of soybean seed for industrial and food products such as paints, enamels, varnish, glue, printing ink, linoleum, plastics, shortenings, margarine, foundry cores, livestock feeds, flour, soy sauce, dietetic foods, infant foods, beverages, and so on."

Thirty-six different varnishes containing 100% soybean for their oil content have been developed and are now undergoing exposure tests to determine their aging properties.

Photos show: (1) The old agricultural building housing the Regional Soybean Industrial Products Laboratory at Urbana, Illinois. (2) Interior view of the analytical division of the new Soybean Laboratory at Urbana, Illinois. (3) Henry G. Knight applying soybean varnish to a cabin cruiser. Address: U.S. Bureau of Chemistry and Soils, Washington, DC.

3197. Tsuda, Kyosuke; Kazuno, Taro. 1938. Shôyu abura no shin suterin to Soja-Sapogenol B to no hikaku ni tsuite [Comparison of a new sterin in shoyu oil and soja-sapogenol B]. *Yakugaku Zasshi* (*J. of the Pharmaceutical Society of Japan*) 58(6):522. [4 ref. Jap]
• ***Summary:*** This article all appears in German, by the same authors (vol. 58, p. 142), under the title "Ueber die Identitat des Soja-Sapogenols B mit einem neuen Sterin aus 'Shoyu-öl.'" Address: 1. Tokyo Teikoku Daigaku Yakugaku Kyoshitsu; 2. Okayama Idai Seikagaku Kyoshitsu.

3198. Mogi, Masatoshi. 1938. Miso jôzô ni kansuru kôbo no kenkyû [Studies on the yeasts of miso fermentation]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 14(8):951-88. Aug.; 14(9):1175-1207. Sept. [34 ref. Jap]
• ***Summary:*** Contents: I. Materials for experiments. II. Morphological characteristics. III. Physiological characteristics. Address: Brewing Laboratory, Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3199. Guy, Ruth A.; Yeh, K.S. 1938. Peking diets. *Chinese Medical Journal* 54(3):201-22. Sept. [20 ref]
• ***Summary:*** Two distinct types of diets are eaten in Peking. Whole cereal-legume diets tend to be eaten by the poor, whereas milled cereal-meat diets are eaten by the rich. "Both, at their best, are excellent," as can be seen from the tables of composition or from "the ultimate test, the health and vigor and reproductive performance of the people who eat them." Both include fresh vegetables. The diet in Table 2 is entirely vegetarian. "A little meat is usually eaten three or four times a year at festival times, but it cannot be considered nutritionally significant. The great bulk of the rural population of North China eat it,..."

There are, however, a number of modifications in these two basic diets which render them highly unsatisfactory. In the first, lower-class, diet, extreme poverty leads to a reduction or omission of the vegetables and even of the yellow maize and soya bean. Or, the social prestige conferred by the use of milled [polished] cereals sometimes leads to a deficiency of vitamin B-1. The second, rich diet, is often rendered unsatisfactory with respect to protein and vitamin B-1, and with respect to vitamins A and C, by reductions in the amount of pork and leafy vegetables, respectively.

Contents: Composition of common foods. Whole cereal-legume diets. Milled cereal-meat diets. Distortions in whole cereal-soybean diets. Distortions in milled cereal-meat diets.

Mixed flour, which are sold in the Peking market, vary

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considerably in composition. "Some shops say they mix corn eight parts with soybean two parts (called *pang tzu mien*), millet five parts with soybean five parts (called *hsiao mi mien*). Other shops say the mixtures are: corn nine parts and soybean one part, or millet six corn nine parts and soybean one part. "The latter have been chosen as more probably true because of the higher price of soybeans. In any case no measurements are made, both cereal grain and soybeans being put into the mill and ground together."

Soyfoods whose composition is given in the tables are: Soybean meal [flour]. Ground mixture of 9 parts maize and 1 part soybean meal (*pang tzu mien*). Ground mixture of 6 parts millet and 4 parts soybean meal (*hsiao mi mien*). Soybean curd (tou fu). Soybean sauce.

Tables: (1) Composition of common foods. (2) Whole cereal-soybean diet (excellent; vegetarian). (3) Milled cereal-meat diet (excellent). (4) Whole cereal-soybean diet (deficient; vitamin C absent, vitamin A low, calcium low). (5) Milled cereal-meat diet (deficient; vitamin A absent, vitamin C absent, calcium very low). (6) Whole cereal-soybean diet (deficient in calories, protein, calcium, phosphorus, vitamin C). (7) Milled cereal-meat diet (deficient; vitamin B-1 low, protein of poor quality, calories low). (8) Milled cereal-meat diet (deficient; calcium low, vitamin A very low, vitamin C low). (9) Milled cereal-meat diet (deficient; vitamin B-1 low). Address: 1. M.D., Dep. of Public Health, Peiping Union, Medical College, China.

3200. Kibi, Masajiro. 1938. Shôyu jôzô-yô kôji-kin ni tsuite. II. Seiiku no jôken [On the varieties of koji molds employed in the brewing of shoyu. II. Conditions for growth]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 14(9):1094-1102. [8 ref. Jap]
• ***Summary:*** Discusses the effects of temperature and pH on growth. Address: Yamasa Shoyu K.K. Kenkyusho. Biseibutsu Jikken-shitsu: Nôgaku-shi.

3201. Lyman, J.F. 1938. The soybean as food for man. *Proceedings of the American Soybean Association* p. 25-30. 18th annual meeting. Held 12-14 Sept. at Wooster and Columbus, Ohio.
• ***Summary:*** "The Chinese and other Eastern peoples have solved the problem of food seasoning without the use of meat. They have found that a meaty flavor can be obtained from the soybean through a fermentation process. Soy sauce is to the Chinese what gravy is to the American. Even more important is soy sauce in China because the use of food flavors and condiments in that country is much more restricted than with us. The Chinese have simple tastes. Soy sauce, salt and pepper are the only food flavors commonly used by them.

"While the chemist has made but little study of food flavors and the physiologist has done but little also, enough is known of the problem so that soy sauce can be made by chemical methods as well as by the ancient fermentation process. The chief meaty-like taste of soy sauce is known to be the salt of an amino acid, mono-sodium-glutamate. This salt is now manufactured for use as a condiment. The process involves the disintegration of the soybean of other protein, preferably wheat gluten, with hydrochloric acid. A mixture of about 20 amino acids is obtained among which mono-sodium-glutamate makes up about one-fifth in the case of soybean protein and two-fifths in the case of wheat gluten.

"The mono-sodium-glutamate can be crystallized from the mixture by adjusting the acidity to pH 3.2, or the mixture can be neutralized to a desired acidity and used without refining just as soy sauce is used" (p. 25).

"In Japan mono-sodium-glutamate of good purity is sold at a wholesale price of about two dollars a pound under the name Ajinomoto" (p. 26).

A diagram (p. 28) shows "Some possible food products from the soybean," including sprouts, soybean milk, soybean curd, soybean cheese, soy sauce, meat sauce, meal, flour (for use in breakfast cereal, bread, sausage, meat loaves, or ice cream), refined oil (for use in lard substitutes), crude oil (for us in margarine or dressing), and lecithin (an anti oxidant or emulsifier). Address: Dep. of Agricultural Chemistry, Ohio State Univ.

3202. Mogi, Masatoshi. 1938. Miso jôzô ni kansuru kôbo no kenkyû. III. Seirigaku-teki seishitsu [Studies on the yeasts of miso fermentation. III. Physiological characteristics]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 14(9):1175-1207. Sept. [Jap]
Address: Nôgaku-shi, Brewing Laboratory, Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3203. Horvath, Artemy A. 1938. Soya meal for feed. *U.S. Patent* 2,132,621. Oct. 11. 1 p. Application filed 2 Nov. 1937.
• ***Summary:*** "This invention pertains to improvements in soya meal for feeding animals.

"Soya meal is used extensively as feed for stock, such as cattle, hogs, etc."

"An object of this invention is to treat comminuted soya in general, and preferably to treat soya meal, so as to avoid flatulence in animals ingesting this feed. A further object is to improve the digestibility of soya meal and the assimilation of food values and generally to improve the utilization of food in the alimentary tract of cattle, hogs and the like."

"According to this invention important benefits result from incorporating with soya feed for animals certain strains of bacteria. In particular, certain effective strains of bacteria for this purpose are developed by growth during fermentation of soy beans with cereal grains and salt. Such preferred strains are of the following: *B. mesentericus, B. subtilis,* and *B. vulgatus.*"

"Soy sauce is manufactured by fermenting a mixture of boiling soy beans, barley or wheat, sodium chloride and

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water... The soy sauce fermentation lasts many months, during which are developed specific strains of bacteria useful in the present invention,..." Address: Newark, Delaware.

3204. USDA Bureau of Chemistry and Soils. Food Research Div. 1938. Selected references on manufacture of soy sauce. Washington, DC. 2 p. Oct. 28. Mimeographed unpublished manuscript. [16 ref]
• ***Summary:*** The 16 references from 1895 to 1936 are listed in chronological order. Address: Washington, DC.

3205. Akabori, Shiro; Kaneko, T.; Mochizuki, S. 1938. [On the aroma of soy sauce. V. The synthesis of methionol and related compounds]. *Nippon Kagaku Kaishi* (*J. of the Chemical Society of Japan*) 59(10):1135-38. Oct. [7 ref. Jap]

3206. Akabori, Shiro. 1938. Shôyu no kôki seibun ni tsuite. IV. [On the aroma of soy sauce. IV. β, gamma-butylenglycol and its pinacolin rearrangement]. *Nippon Kagaku Kaishi* (*J. of the Chemical Society of Japan*) 59(10):1132-34. Oct. [5 ref. Jap]

3207. Berg, D.J. v.d.; Toit, F.M. du. 1938. The soybean: Its production and industrial use. *Farming in South Africa* 13(151):391-93. Oct.
• ***Summary:*** Part I, by Berg, is titled "Soybean production in South Africa." It discusses adaptation, uses of soybeans as a fodder crop, for industrial purposes, and for human consumption, cultural practices, and soybeans in diversified farming systems. Concerning use in human foods, the author notes: "But it is in the meal, after the oil is extracted, that its greatest value lies. The meal contains nearly 43 per cent. of protein, an ingredient so often absent from the diet of a very large proportion of South Africa's population. The value that this meal, judiciously mixed with maize meal, would have in the feeding of the working classes and the native population of South Africa cannot be overemphasized."

Part II, by Toit, is titled "The importance of the soybean in industry." Fig. 2 (photo) shows ten soybean food products, including soybean flour (Soyolk, 7 lb), Worcestershire sauce (Lea and Perrins), soybean biscuits, soybean cocoa, soybean chocolate (Eden Chocolat au Soja), soft soap, laundry soap, invalid and diabetic food, soybean meal, and compressed soybean cake for stock feed. With the exception of the chocolate and cocoa which originated in France, all of these products were made in England. Fig. 3, shows auto parts made of soybean protein and oil made at the Ford River Rouge plant. "One firm in this country is treating and milling soybeans and preparing a meal which is becoming increasingly popular as a source of protein in the rations of mine natives. This firm is to-day forced to import a large proportion of its requirements owing to the low production of soybeans in the Union." Address: 1. Research Officer and Superintendent, Summer Cereal Station, Kroonstad; 2. Field Husbandry Section, Div. of Plant Industry.

3208. Kawamori, Toshio. 1938. Tanpaku sanbun kaibutsu to shôyu no eiyô shiken [Nutritional experiment on shoyu and the decomposition of protein with acid]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 16(10):829-35. [5 ref. Jap]
Address: Osaka Teikoku Daigaku, Kôgaku-bu, Jôzôgaku Kyôshitsu, Takada Kenkyûshitsu, Osaka, Japan.

3209. Kawamori, Toshio. 1938. Shokuryô mondai toshite shôyu jôzô-hô no kentô. I. Shôyu jôzô ni okeru genryô seibun no royô-ritsu [Examination of soy sauce fermentation as a food resources problem. I. Utilization of raw materials in soy sauce fermentation]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 16(10):860-73. [13 ref. Jap]
Address: Osaka Teikoku Daigaku, Kôgaku-bu, Jôzôgaku Kyôshitsu, Takada Kenkyûshitsu, Osaka, Japan.

3210. Kishlar, Lamar. 1938. Soja max–The soybean. In: Soybean Nutritional Research Council, ed. 1938. The Composition and Nutritive Properties of Soybeans and Soybean Oil Meal: A Literature Review. Chicago: SNRC. 62 p. See p. 7-9. Oct. [9 ref]
• ***Summary:*** "This is the success story of an immigrant plant which came in to America and made good. This is the story of Soja Max, the soybean, who waited 5,000 years for his big chance, and, when opportunity knocked, made a lasting place for himself in American agriculture and commerce on the basis of merit and merit alone.

"The soybean is a native of Asia. It is one of the oldest crops grown. How long ago man started to cultivate the soybean no one knows. Some say that soybeans have been grown for 25,000 years (Breedlove, 4 June 1936, p. 12). The first written record seems to be a Chinese book on Materia Medica, *Pen Ts'ao Kong Mu* written by Emperor Shen-nung about 4,800 years ago (Horvath, May 1931, p. 36).

"Even the name is cloaked with mystery. For the salted soybeans [fermented black soybeans], the early Chinese had a word pronounced 'Shi.' Another word, 'Yu,' was given to the oil used as a condiment. Later the term 'Shi-yu' [fermented black soybean sauce] was applied to the plant and to the raw beans" (Chicago J. of Commerce, 20 June 1936, p. 14).

"Linnaeus, the first botanist to make a scientific study of the leguminous plants, applied the Greek word, glycine, meaning sweet, to all the ground nut species of legumes. Since the soybean had very large nodules on the roots, he called it Glycine Max. Many years later Moench found that the soybean was a distinct genus. He renamed it Soja Hispida. More modern authorities have shown a preference for Soja Max, the name which has become generally accepted.

"The soybean was a long time in coming to America. In 1804 a Yankee Clipper ship, searching the Chinese ports for

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a return cargo, loaded several bags of soybeans as reserve food supply and brought the first importation to America" (Burlison 1936).

"More than one hundred years passed. A few soybeans were raised mostly as botanical curiosities. In 1907, Dr. C.R. Ball of the United States Department of Agriculture, described twenty-three varieties of soybeans, all that were then known in the United States." Address: USA.

3211. Mogi, Masatoshi. 1938. Miso jôzô ni kansuru kôbo no kenkyû (kan). IV. Bunri seru kôbo no bunrui narabini ruien oyobi hyôchô [Studies on the yeasts of miso fermentation (conclusion). IV. Classification, relation, and diagnosis of isolated yeasts]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 14(10):1297-1324. Oct. [34 ref. Jap]
Address: Noda Shoyu K.K. Shikenjo, Nôgaku-shi (Brewing Laboratory, Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan).

3212. Page, Nancy. 1938. Timely topics for housewives. *Toronto Daily Star* (*Canada*). Nov. 11. p. 31.
• ***Summary:*** Gives a recipe for fried canned shrimps seasoned with "one teaspoon soy sauce."

3213. Keely, T. Southwell. 1938. At sea in a Japanese pearling lugger: A white man describes the ceaseless hunt for shell on the Arafura seabed. *Argus* (*The*) (*Melbourne, Victoria, Australia*). Nov. 19. p. 8. The Argus Week-end magazine.
• ***Summary:*** "Give him a few sticks of wood, some scraps of meat, and a trifle of soya bean sauce and Kenzo could produce an appetizing meal." For the white guests, sliced raw fish was seasoned with the "inevitable soya sauce."

Note: This is the earliest of 4 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "soya sauce." Address: Darwin [Australia].

3214. Kihara, Kiyoshi. 1938. Shôyu oyobi aminosan-eki no yûki-san hikaku kenkyû [Comparative studies of organic acids in shoyu and so-called "amino acid solution" or liquid HVP]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 16(11):919-36. [25 ref. Jap]
Address: Kagawa-ken Shôyu Shiken-jô.

3215. Miyaji, Kenji; Oguri, Motozo. 1938. Tamari abura fukenka butsu-chû no bôkabi seibun ni kansuru kenkyû. II. [Studies on an antimold substance in the unsaponifiable substance in tamari oil]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 14(12):1523-25. Dec. [5 ref. Jap]
Address: Gifu Koto Norin Gakko, Nôgaku Hakase.

3216. Fukai, Tôshi; Inamori, S. 1938. Shôyu oyobi miso no chakushoku ni tsuite. I. Shôyu saikin to shikiso seisei [On coloring of shoyu and miso. I. Bacteria in shoyu and pigment formation]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 127. p. 91-114. [14 ref. Jap]
• ***Summary:*** Includes a discussion of Bacillus melanicus soya.

3217. Fukai, Tôshi; Yabu-uchi, Y.; Nonomura, S. 1938. Usukuchi shôyu jôzô shiken [A new special method for manufacturing light-colored shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 127. p. 195-204. [14 ref. Jap]

3218. Kinoshita, Asakichi. 1938. Shôyu genryô to shite dasshi daizu no gôriteki sei kôji hô [A rational method for making koji using defatted soybean meal]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 33(4):406-08. [Jap]
• ***Summary:*** Kinoshita was head of his own research laboratory. Address: Kinoshita Jozo Kenkyu Shocho.

3219. Matsumoto, K.; Toki, R. 1938. Dasshi kasu kôji no kôso o shiyô shitaru gantô "amino" san eki no chôjuku jikken (Dasshi kasu to shôyu jôzô sono 8) [Taming of HVP (amino acid liquid) containing sugar using the enzymes from defatted bran-koji]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 33(2):168-73. [Jap]
• ***Summary:*** Part 8 in the series on using defatted meals in shoyu brewing.

3220. Matsumoto, K. 1938. Jôzô butsu ni taisuru kôshuha denryû ôyô to sono ichi, ni no jikken [Application of high frequency electric waves to fermentation products. I.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 33(12):1326-30. [11 ref. Jap]

3221. Matsumoto, K.; Takahashi, T. 1938. Shôyu jôzô-yô sui hikaku shiken [The comparison of waters for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 127. p. 125-30. [Jap]

3222. Matsumoto, K.; Yabu-uchi, Y.; Nonomura, S. 1938. Kenki-teki baiyô moromi tenka shôyu jôzô shiken [On the application of special shoyu moromi (mash) by anaerobic culture for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 127. p. 131-39. [Jap]

3223. Matsumoto, K.; Nagahashi, K. 1938. Kôji kinshu hikaku shôyu jôzô shiken. II. [Comparison of several kinds of *Aspergillus oryzae* for shoyu brewing. II.]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 127. p. 141-48. [Jap]

3224. Matsumoto, K.; Takahashi, T.; Nonomura, S. 1938.

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Kakushu dasshi daizu shiyo shôyu jôzô hikaku shiken [Comparison of various kinds of fat-free soybeans as a raw material for shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 127. p. 149-57, 159-71. [Jap]

3225. Matsumoto, K. 1938. Genryô o kotonishitaru kakushu shôyu moromi narabini beni-funyû-chû no saikin ni tsuite [Bacteria in shoyu moromi made from various raw materials and in chian-tao-fu (red fermented tofu)]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 127. p. 123-298. [8 ref. Jap]

3226. Matsumoto, K.; Yabu-uchi, Y.; Nonomura, S. 1938. Shiro nuka shiyô shôyu jôzô shiken [Application of white rice bran for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 127. p. 173-79, 181-94. [3 ref. Jap]

3227. Mogi, Masatoshi. 1938. Miso jôzô ni kansuru kôbo no kenkyû [Studies on the yeasts in miso fermentation (Abstract)]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 33(10):1186. [Jap]
Address: Brewing Laboratory, Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3228. Rokusho, B. 1938. Sanbunkai-hô o ôyôseru sokujô shôyu no hinshitsu ni tsuite [On the quality of rapid shoyu made using the acid decomposing method]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 33(2):162-63. [Jap]
Address: Mantetsu Chuo Shikensho (Manchurian Railway Central Research Lab).

3229. Sumi, M.; Tsuzuki, J. 1938. Ni. san shokuhin-chû no furabin (vitamin B-2) ryô (1) [The flavin (vitamin B-2) content of several foodstuffs (1)]. *Rikagaku Kenkyujo Hokoku* (*Report of the Institute of Physical and Chemical Research*) 17(12):1296-99. (Chem. Abst. 34:2939). [12 ref. Jap]
• ***Summary:*** The following foods contain the following percentage of moisture and number of units per 100 gm. The unit of measure is not known: Miso: Shinshu miso 50.5% moisture/28-35 units, sweet red miso 52.5%/12-63, Sendai red miso 54.0%/15-78, Farmhouse (Inaka) miso 53.0%/18-83, Sanshu Hatcho miso 48.5%/20-51, sweet white miso 53.0%/16-50. Shoyu 21-27 units. Shoyu presscake (kasu) 16%/710-753. Amazake 23-68 units.

3230. Suzuki, T. 1938. Shôyu genryô daizu ichibu daiyô to shite no amino-san shikomi ni tsuite [Utilization of amino acids as a substitute for part of the soybeans in shoyu brewing]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 33(15):576-78. [Jap]
Address: Tatsuno Shoyu Dogyo Kumiai Shikensho.

3231. Yamada, M.; Ishimaru, Yoshio. 1938. Shôyu-chû no tôbun no teiryô ni tsuite [On the estimation of sugars in shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 127. p. 115-21. [Jap]

3232. **Product Name:** Shoyu.
Manufacturer's Name: Yamajifu Soy Factory. Apparently changed to Yamajyu Shoyu & Koji Miso Co. the next year.
Manufacturer's Address: 1402 N. School, corner Houghtailing, Honolulu, Ohau, Hawaii. Phone: 89181.
Date of Introduction: 1938.
New Product–Documentation: Directory of Honolulu and the Territory of Hawaii. 1937-38. p. 592. Yamajifu Soy Factory. (Taro Higa). Soy manufacturers, Wholesale and retail dealers. 1402 N. School, corner Houghtailing. Tel. 89181. Note: The next year Taro Higa started Yamajyu Shoyu & Koji Miso Co. at 395 Buckle Lane.

3233. Abreu Velho, H. de L.; Gossweiler, John. 1938. A soja [The soybean]. Luanda, Angola: Imprensa Nacional. 48 p. (Conselho de defesa da producao e do comercio). [8 ref. Por]
• ***Summary:*** Cover title: Soja; o que os agricultores devem saber sobre a sua cultura (Soya: What farmers must know about its culture). In the section titled "Possibilities for soybean culture in Angola," it is noted: "Although on a relatively small scale, some soybean trials have been conducted in Angola. At the Experimental Station of Algodao, in Catete, some soybean trials were conducted in 1929 and 1930 with a yellow variety, with the intent of studying the crop for use in rotation with cotton and with maize (corn). The sowing went well and the germination was rapid and uniform, but none of the plants grew to a height of more than 30 cm (1 foot)."

At the experiment station of *Policultura Planáltica at Bié*, from 1928 to 1931, the soybean was one of the crops tested for use as a green manure. A summary of the results was given by the station's director in the *Boletim da Direcçao dos Serviços de Agricultura e Comércio*, volume 4, numbers 12-15, 1931. A long extract from that Bulletin concerning the soybean is given, focusing on the year 1930.

Soybean trials have also been conducted at the Station for the Reproduction and Improvement of Seeds and Plants (*Estaçao de Reproduçao e Melhoramento de Sementes e Plantas*) at Planalto de Malanje, since the beginning of 1935.

This publication also contains a long section on food uses of the soybean, including soy flour (*farinha de soja*), soy milk (*leite de soja*), tofu (*queijo de soja; queijo duro*), soy sauce (*Shoju, Soyu, Shoyu, tao yu*), and soy oil (*óleo de soja*). In Austria and America, and also in the Orient, soybean seeds are roasted, ground, and used as a substitute for coffee (*substituto de café*).

Note 1. This document contains the earliest date seen for

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soybeans in Angola, or the cultivation of soybeans in Angola (1928). One source of these soybeans was France.

Note 2. This is the earliest Portuguese-language document seen (March 2001) that refers to soy coffee, which it calls a substitute for coffee (*substituto de café*).

Note 3. This is the earliest Portuguese-language document seen (Oct. 2003) that mentions soymilk, which it calls *leite de soja*. As of Oct. 2003 *leite de soja* is the modern Portuguese term for soymilk.

Note 4. This is the earliest Portuguese-language document seen (Sept. 2006) that mentions soy oil, which it calls *óleo de soja*.

Note 5. This is the earliest Portuguese-language document seen (April 2012) that uses the word *Shoju* or the word *Soyu* or the word *Shoyu* or the term *tao yu* to refer to soy sauce. Address: Angola.

3234. Balzli, Hans. 1938. Kleine Soja-Fibel. Geschichte, Anbau und Verwertung einer einzigartigen Nutzpflanze [A little soybean primer. History, culture, and utilization of a unique useful plant]. Zurich and Leipzig: Albert Mueller Verlag. 88 p. Index. 16 cm. [26 ref. Ger]

• ***Summary:*** Contents: Foreword. Economic questions. Botanical. Historical. Chemical composition of the soybean seed. Utilization in East Asia: Koji, miso, shoyu, soymilk, yuba, tofu (*Sojakäse*, like Quark), soy oil and press-cake. Utilization in Europe and America: As fertilizer and feed, as food (soy flour, roasted soybeans, soy coffee, green vegetable soybeans (*den jungen Sojakern... wie junge gruene Erbse*), soy sprouts), and industrial products (incl. "soybean steel," an invention of Henry Ford). Medicinal significance. Cultivation and yield. Epilogue. Bibliography. Author-subject index.

In the chapter on History (p. 24), the author notes: "The poet Johann Heinrich Voss (lived 1751-1826) once said: 'Young Calcuttans... with your sharp soy sauce from Jakarta (*Junge Kalkuten... mit scharfer batavischer Soja*).' Then he adds to that the observation: 'Soy sauce (*Soja*) is a powerful sauce, which is prepared from soybeans (*Sojafasele*), Dolichos Soja, which originate in the East Indies and are subject to fermentation, together with brine and spice.'"

Balzli continues on page 25: "The *Deutsche Woerterbuch der Naturgeschichte* (German Dictionary of Natural History) contained in the *Allgemeinen Polyglotten-Lexikon der Naturgeschichte* (General Multilingual Encyclopedia of Natural History) by Philipp Andreas Nemnich (1793) contains the entry: 'Sojablume. Dolichos soja.' (Soya flower. Dolichos soja)."

"In the world-famous work *Geist der Kochkunst* (Spirit of the Culinary Art), the art historian C.F. von Rumohr (lived 1785-1843) also mentions soya in the second edition (1832, p. 155) and conjectures that the Garum sauce of the Romans was an imitation of the East Indian sauce (Sulze) made from soybeans (Soja)."

Page 29 reports that "During the war of 1870 (*des siebziger Krieges*, in which Bismarck of Germany defeated Napoleon III of France) the German head artillery man, O. Wehrman, saw in the botanical garden of Montigny-les-Metz a plant that was unknown to him. It was the soybean. He took 4-5 seeds with him and planted them in early 1872 on his property / estate near Meissen (in Sachsen/Saxony, near Dresden in today's Germany). He harvested 80 to 100 seeds, with which he continued his investigations successfully for some years" [Note: Haberlandt (1878, p. 5) tells this same story].

On page 57 the author uses the term "Sojaspeisen" to refer to soyfoods. Address: Switzerland.

3235. Dominion Bureau of Statistics, Ottawa, Canada. 1938. Imports into Canada for consumption, years ended March 31, 1933 to 1937: Agricultural and vegetable products. *Trade of Canada*. Fiscal year ended March 31, 1937.

• ***Summary:*** Table No. 37, titled "Imports into Canada for consumption, Years ended March 31, 1933 to 1937, shows: Imports of soy sauce–from United Kingdom, Hong Kong, China, Japan, Syria, United States (p. 287). It shows that 133 gallons of soy sauce with a value of $15 were imported from Syria in 1933, but none in 1934, 1935, or 1936.

Imports of soya beans (*Fèves de soja*, p. 288). Imports of peanut oil (*Huile d'arachide*, p. 303). Imports of soya bean oil (*Huile de soja*, p. 300).

Imports of soya bean cake and soya bean meal, for use exclusively in the manufacture of cattle food and of fertilizers (Included "Soya Beans" prior to April 1, 1934; to April 1936, p. 339.7).

Imports of soya bean oil meal, for use exclusively in the manufacture of cattle food and of fertilizers (From May 1, 1936, p. 339.8).

Imports of soya bean oil meal (*Tourteaux d'huile de fèves de soja*) and soya bean flour (*Farine de fèves de soja*), when imported by manufacturers of glues or adhesives for use exclusively in the manufacture of such glues or adhesives (From May 1, 1936, p. 339.9; Note: 5,600 cwt was imported from the USA only) [1 cwt = hundredweight = 112 pounds].

Imports of peanut oil and soya bean oil for the manufacture of soap, and peanut oil for canning fish (p. 344.1). Imports of soya bean oil for the manufacturing of soap (p. 344.5). Address: Ottawa, Canada.

3236. Fairchild, David. 1938. The world was my garden: Travels of a plant explorer. New York, NY: Charles Scribner's Sons. xiv + 494 p. Assisted by Elizabeth and Alfred Kay. Illust. Index. 25 cm.

• ***Summary:*** This wonderful book, an autobiography of David Fairchild, also tells the story of the early days of the USDA and its Section of Foreign Seed and Plant Introduction, and of the pioneering work with plant introduction to the United States. It contains about 207

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black-and-white photos, mostly taken by the author. One of these (p. 472A) shows Howard P. Dorsett (standing) and David Fairchild (seated), who "spent twenty happy years in close association, trying to increase the number and improve through introductions the quality of the fruits and vegetables of the United States."

Contents: 1. Background. 2. Kansas. 3. I enter government service. 4. I meet Barbour Lathrop and reach Naples [Italy]. 5. Breslau, Berlin, and Bonn [Germany]. 6. Java ho! 7. The Lathrop-Fairchild odyssey begins. 8. The Cannibal Isles (Incl. Hawaiian islands). 9. American interlude (in 1897 his father resigned as president of Kansas State College of Agriculture after the wave of Populism engulfed the college). 10. The West Indies and South America. 11. Cotton in Egypt. 12. Across the Java Sea. 13. From Finland to Dalmatia. 14. Land of the Pharaohs. 15. Malta, Tunis, Algiers, and Spain. 16. England, America, and west to the Orient once more. 17. The Persian Gulf and Bagdad [Baghdad. Note: Iraq was established in 1921 out of former Turkish territory]. 18. A glimpse of Saïgon [Saigon] and a long stay in Japan. 19. I visit Luther Burbank and circumnavigate Africa. 20. I meet Alexander Graham Bell. 21. A grand tour of these United States. 22. Mostly personal. 23. Washington, Madeira, and "In the Woods." 24. Baddeck, Nova Scotia. 25. Mostly aviation. 26. Lacquer and wild wheat. 27. Aaron Aaronsohn and Joseph Rock. 28. More plants, introduction gardens, and Mr. Bell. 29. Florida in 1912. 30. Monsters of the backyard. 31. The flowering cherry trees are planted in Washington. 32. Quarantine increases and war [World War I] begins. 33. Seeds from Afghanistan. 34. The plains of Canada. 35. The war and dried vegetables. 36. The Allison Armour expeditions. 37. Aloha.

In 1889 Beverly T. Galloway, head of USDA's Division of Plant Pathology, brought David Fairchild, age 19, to Washington, DC, to join five plant pathologists who were working in attic rooms of the old red brick department building. P. Howard Dorsett, Galloway's Wisconsin classmate, soon joined the group. Soon shy and scholarly Walter T. Swingle, Fairchild's Kansas State classmate and close friend since their student days in Germany, arrived with his growing library of agricultural references in 5 or 6 languages. Seeking an opportunity to learn about the flora of foreign countries, Fairchild accepted a Smithsonian fellowship to study entomology in Naples, Italy, and resigned from the USDA. Fairchild's pioneering work with plant introduction traces its roots back to late 1893. On board a ship, the young plant pathologist met Barbour Lathrop, a wealthy San Francisco gentleman who later took him on an extended tour of the Pacific and showed him fruits, grains, and ornamental plants that could be valuable in America. In 1895 Lathrop gave Fairchild the money to begin his study of the plant treasures of the tropics. Returning to the USA in 1897 (with Mr. Lathrop), after an absence of 4 years, David Fairchild knew exactly what he wanted to do with his life. He visited his parents in Manhattan, Kansas, and learned that a wave of "Populism" (resembling Bolshevism) had caused his father to resign as president of the college (p. 105). In August 1897 he reached Washington, DC—without a job. James Wilson, the Secretary of Agriculture, firmly believed that "what agriculture needed most was more knowledge." "The idea of plant introduction as a government activity was germinating in other minds besides Lathrop's and mine" (p. 106). Secretary Wilson's first act after taking office had been to send N.E. Hansen to Russia in search of cold-resistant cereal grains and fruits for America's great plains. Swingle has recently presented a paper on introducing subtropical plants to Florida.

Fairchild and Swingle conceived a plan to divert $20,000 dollars of the funds appropriated for the wasteful Congressional Seed Distribution Service (which was already spending several hundred thousand dollars a year) in order to finance a section for the specific purpose of introducing new, useful, and carefully selected crops into the United States. He enthusiastically presented the idea to Secretary Wilson, who approved the plan and asked him to organize the new Foreign Seed and Plant Introduction Section (p. 107). Housed on the fifth floor under the eaves of the old Department of Agriculture building and staffed by one teenage secretary, it became a reality when Congress passed the revised appropriation bill in July, 1898.

"In 1899, all that existed of the Department of Agriculture was housed in an ugly old building with a mansard roof topping its red-brick walls. It was situated in a park south of Pennsylvania Avenue, just beyond one of the most disreputable quarters of the city" (p. 18).

In 1916 David and Marian Fairchild purchased a piece of property located in Coconut Grove on Biscayne Bay, Florida; they named it The Kampong. On the property was a very old stone barn, a huge stone entrance gate, and many fine old tropical trees (p. 452-53, 456A, 472C). A Kampong is a Malay word (first used in English in 1844) meaning "a native hamlet or village in a Malay-speaking country."

Good photos show: (1-4) Members of the USDA Section of Plant Pathology taken in the early 1890s: Walter T. Swingle, Joseph James, David Fairchild, Theodore Holm, Beverly T. Galloway, Merton B. Waite, and P. Howard Dorsett (p. 26A-B). (5) Barbour Lathrop and David Fairchild in the cabin of a boat, off Sumatra, Christmas, 1895. (6) The uniform of a worker at Mr. Suzuki's nursery in Tokyo, Japan. The back is decorated with large Chinese characters. (5) Fermentation vats with conical bamboo covers in a soy sauce factory at Ichang (I-ch'ang or Yichang), a city in west Hupeh / Hubei province in Central China (p. 256F, probably taken by Frank N. Meyer in 1917). (6) page shows "A prolific Soy Bean plant ripe for harvest" and loaded with pods (p. 256F). (7) David Fairchild (seated) and Howard Dorsett (standing), each in two-piece suits, by at a desk, examining various fruits (p. 472A). Address: USDA.

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3237. Fairchild, David. 1938. A long stay in Japan: Encounters with soy beans, tofu, soy sauce, and green soy beans in the pods (Document part). In: D. Fairchild. 1938. The World Was My Garden: Travels of a Plant Explorer. New York, NY: Charles Scribner's Sons. xiv + 494 p. See p. 258-59, 327-28. Assisted by Elizabeth and Alfred Kay.
• ***Summary:*** In 1902 at Kusafuka, Japan, Fairchild visited the home of Mr. Tsuboi. He had "considerable difficulty digesting the raw fish and seaweed, but became very fond of the egg dishes, the bean cheese or 'tofu,' and the universal soy sauce... But the dish which I afterward served in Washington [DC] was a delicate variety of the soy bean. The young, flat, rather hairy pods–much smaller than the lima bean–are boiled in salted water and served in the pod in a little lacquer bowls. I enjoyed opening the pods and taking out the delicate green beans, which have a pleasant, nutty flavor. Some Americans complain that it takes too long to empty the pods, and of course there is no reply to such an objection" (p. 258).

Japanese "cuisine is conspicuous for the absence of gravies, for which they substitute a sauce made from the soy bean by a complicated process of fermentation. Almost every meal includes boiled rice, often served with delicate, soy bean curds [tofu]... and pretty bits of colored soy bean candy" (p. 259). Note: This is the earliest English-language document seen (Feb. 2004) that uses the terms "soy bean curds" to refer to tofu.

"From Mr. Tsuboi's delightful home, we journeyed to a branch experiment station at Anjo where there were fields of the chief agricultural crops of the country. The soy beans particularly interested me, as in 1898 I had imported both beans and some soil from a Tokyo soy bean field. Waite [Merton B. Waite, of the USDA Section of Plant Pathology] and I discovered that root nodules could be induced on soy bean plants by growing them in Japanese soil, but, when they are grown on new soil, they will not develop the nodules unless the soil is inoculated. In Virginia, Maine, Michigan, and Kansas, a general interest in the soy bean and its possibilities had developed among the experiment station workers, although it was only used as cattle food.

"I hope that a book will be written describing the vast soy bean industry which has developed in America since those early beginnings, and the important part played by the varieties introduced by Frank Meyer and later by W.J. Morse and P.H. Dorsett. Morse has devoted the best years of his life to a careful and penetrating study of the soy bean, and he should receive the full measure of credit for his contributions to an industry now measured by millions of acres under culture in America each year" (p. 259).

After Fairchild was married, he and his wife, Marian, started a garden by their home in Maryland, about 10 miles outside of Washington, DC. A delightful Japanese peasant boy names Mori served as their gardener. In the garden: "We grew soy-beans as a vegetable and had to endure the criticism that they took too long to shell (p. 327-28).

A photos show: Mr. Tsuboi, an authority on bamboo, enjoying his dwarf plants in charming porcelain bowls and trays (p. 256D). A prolific soy bean plant with many hairy pods (p. 256F). Address: USDA.

3238. Hauser's (Mrs.) Food Products Co. 1938. Mrs. Hauser's recipe book: Soya formulas for better nutrition. Los Angeles, California. 32 p. 24 cm.
• ***Summary:*** The cover of this booklet is light blue on beige. Contents: The purpose of this book. The nutritional marvel–*Soy or Soya Beans "Soya max."* Soya Bean high lights. Analysis of Soya Bean Flour. Soy Bean facts. Soya briefs. Hot and cold food stuffs. Eat relaxing alkaline foods. Breathe correctly. Five day efficiency diet. The water we drink. Practical "low carbohydrate" diets. Soups. Drinks. Salad dressing. Bread–biscuits–muffins. Meat substitutes. Recipes to be used when preparing Mrs. Hauser's paste goods. Cakes. Cookies. A good breakfast for health. Desserts. Sandwiches. Miscellaneous (incl. Baked delight {with ground Soya Nuts}, Tofu or Soya Bean Cheese {made from soya milk curded with lemon juice or citric acid}). About vitamins: Vitamin A, B, C, D, E, G. Soya beans are a good source of vitamin G. Foods and their minerals. Soya beans are rich in copper, iron, phosphorus, and calcium. Food which are alkaline: Incl. soya beans.

The types of soyfoods called for in these recipes include: Mrs. Hauser's "Soy" Sauce. "Soy" Brand Elbow Macaroni (p. 18-19). "Soy" Brand Hot Cake and Waffle Flour. "Soy" Brand Macaroni. "Soy" Brand Noodles. "Soy" Brand Spaghetti. Soya bean flour (also called "Soya flour"–by far the most common ingredient called for). Soya bean mush (p. 25). Soya beans (canned or cooked). Soya milk. Soya nuts (p. 15-16). Soya oil.

The booklet ends with these words (p. 32): "A liberal use of the Soya Bean and Soya Bean Products in the average diet is a very distinct aid in the digestion of meats, poultry, fish, and, in fact, all animal foods. (Recipes of this nature will be given in future publications.)"

Note 1. Many of the recipes call for "Mrs. Hauser's Sea Salt." Note 2. Mrs. Hauser is apparently not related to Gayelord Hauser, who is also in the health foods business in Los Angeles. Address: 4617 Melrose Ave., Los Angeles, California.

3239. Kihara, Kiyoshi. 1938. Shôyu oyobi aminosan-eki no yûki-san hikaku kenkyû [Comparative studies of organic acids in shoyu and so-called "amino acid solution" or liquid HVP (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15(2):A23. [1 ref. Jap]
• ***Summary:*** Abstracted from Jozogaku Zasshi 16:919 (1938).

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3240. Montagné, Prosper. 1938. Larousse gastronomique [Larousse gastronomique]. Paris: Librairie Larousse. 1087 p. See p. 989-90. [Fre]
• ***Summary:*** The following are defined under *"Soja ou Soya":* Introduction. Tofu (*fromage de soja*), soymilk, (*lait de soja*), soy sauce (*sauce ou extrait de soja*), soy meat (*viande de soja; viande végétale*). The soy meat, which resembles smoked ham, is said to be very complicated to make, requiring industrial equipment. An illustration (p. 990) shows a soybean plant, including enlarged insets of the flowers and pods.

Note: This is the earliest French-language document seen (Nov. 2003) that uses the term *viande de soja* or *viande végétale* to refer to meat alternatives. Address: France.

3241. Photograph of the Yamajyu Shoyu & Koji Miso Co. factory in Hawaii. 1938.
• ***Summary:*** This 4 by 6 inch black-and-white photo was sent to Soyfoods Center in Sept. 1984 by William Higa of the Hawaiian Miso & Soy Co., Ltd. (1714 Mary St., Honolulu, Hawaii 96810). The original company made Shiro Koji Miso and Yamaju Shoyu. Standing by wooden kegs of miso are the founders Henry, Shinyei, and George Taru Higa. The company sign appears clearly over the factory door. Long, dark automobiles from the 1930s are parked at the left and right.

Note: A nice large print of this photo appeared on the front page of the *Hawaii Herald* on 7 Oct. 1983.

3242. Oriental Show-You Company. 1938? Oriental Show-You recipes. Columbia City, Indiana: Oriental Show-You Co. 24 p. Undated. Illust. Recipe index. 18 cm.
• ***Summary:*** Contents: Chop-Suey. Eggs. Entrees. Fish. Fritters. Meats. Miscellaneous. Noodles. Rice. Salads and dressings. Sandwiches. Soups.

"In addition to shoyu we are marketing canned Chop-Suey, [Mung] Bean Sprouts, Chow-Mein Noodles (fried), and Mixed Vegetables" (p. 1).

"Chop-suey sauce: No matter how skillful you deft fingers may be, you cannot make good chop-suey and other Oriental dishes with inferior sauce. It is absolutely necessary to use the best chop-suey sauce (soy) to get the tang of the orient.

'There are two or three qualities of soy, but the Japanese soy is reckoned the best'–*The Century Dictionary and Cyclopedia.* Oriental Show-You Sauce, being the purest soy brewed according to the secret Japanese formula, is considered the best by the thousands of people who have used it" (p. 2).

Sukiyaki is referred to as "Japanese chop-suey" (p. 4). "The Red Sun and the 'Show-You' on the labels are absolute guarantee of superior quality" (p. 22). Address: Columbia City, Indiana.

3243. Nakae, Tadashi. 1939. Amino-san chômiryô seizô ni kansuru kenkyû. XIII. Tanpakushitsu genryô toshite no keshi abura kasu [Studies of preparation of amino acid seasoning. 13. Poppy oil cake as raw material]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 17(1):9-12. Jan. 15. [2 ref. Jap]
• ***Summary:*** Soybeans are mentioned briefly. Address: Osaka Teikoku Daigaku, Kôgaku-bu, Jôzôgaku Kyôshitsu, Takada Kenkyûshitsu, Osaka, Japan.

3244. Matsumoto, Tsuyoshi. 1939. Shihan shoyu no eiyo-ka ni tsuite [Nutritional value of commercial shoyu]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 17(2):97-102. Feb. 15. [Jap]
• ***Summary:*** This is part of a larger 3-part article, about the nutritional value of commercial food products, that starts on p. 97.

3245. Sinclair, Gordon. 1939. Refugees may look dull but some of them spies: Life goes on peacefully in British territory in China. 30,000 in cars. *Toronto Daily Star* (*Canada*). Feb. 23. p. 7.
• ***Summary:*** Shum Chun, China–"The priest brings me tea and some warm duck skin flavored with soy sauce..."

Note: The Sham Chun River (also called Shenzhen River or Shenzhen He) serves as the natural border between Hong Kong and mainland China. Sham Chung is a place in Hong Kong.

3246. Pynaert, L. 1939. Le Soja au Congo Belge [The soybean in the Belgian Congo]. *Revue Internationale des Produits Coloniaux et du Materiel Colonial* 14(158):61-65. Feb. Summary in Revue de Botanique Appliquee (1939) 19:233. [3 ref. Fre]
• ***Summary:*** Contents: Preface. Soybean yields obtained in the Belgian Congo. The utilization of soya in Europe: Dry seeds (whole dry soybeans), soy sauce, soymilk, yuba, tofu, soymilk casein, soy lecithin, soy flour and chocolate, soy oil. Net cost. In short, Pynaert describes all the basic types of soyfoods and encourages their introduction to the Congo.

Yields: "In 1915 the agronomist Mestdagh made it known that at the end of an experiment well conducted at Lusambo in the district of Sankuru [Belgian Congo], he had harvested 1,472 kg/ha of a light yellow variety of soybean, and 1,786 kg/ha of a black variety.

"The agronomist J.B.H. Lejeune, who worked in the Congo for nearly 20 years, recently furnished information of great interest on the subject of the soybean cultivation which he had undertaken in the colony as well as in Rwanda-Urundi.

"In 1922 he cultivated a yellow soybean which he had obtained from Vilmorin-Andrieux & Co. in Paris under the name of Mammoth Yellow. He obtained yields ranging from 500 to 1,500 kg/ha.

"In 1926 the same agronomist introduced the black

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soybean O-Too-Ton [Otootan] cultivated in Georgia. This variety adapted itself remarkably well to the conditions of the Eala milieu and gave soybean yields of 1,000 to 2,000 kg/ha.

"In 1927 trials were recorded at four stations in Rwanda-Burundi, a country of higher altitude with conditions that are very different from those forested central Africa.

"At Lusunyu, which enjoys a temperate climate, the yields of a variety of O-Too-Ton varied from 90-540 kg/ha during a 4 month cycle. At Bugarama, in a much warmer climate, the average yield of seeds was 556 kg/ha. At Kisozi the variety O-Too-Ton gave yields of 100 to 400 kg/ha. A variety named Biloxi furnished a yield of more than 500 kg/ha. At Rubona, still in Rwanda-Urundi, the following seed yields were obtained from 1931 to 1935. Biloxi: 300 to 652 kg/ha. O-Too-Ton: 150 to 1,300 kg/ha. Eala Yellow (Jaune d'Eala): 214 to 261 kg/ha." Also discusses yields at: Kisozi from seeds introduced by Mr. Lejeune; at the Agronomic Station at Yangambi, near Stanleyville, from 1937; at Nioka in Upper Ituri (*Haut-Ituri;* Ituri is a district in the oriental province of the Belgian Congo) where yields are 450-500 kg/ha in poor soil but 700-800 kg/ha in good soil, and even up to 1,000 kg/ha; it is concluded that indigenous crops will probably not give yields of greater than 400-500 kg/ha.

This document contains the earliest date seen for soybeans in Ruanda-Urundi, or the cultivation of soybeans in Ruanda-Urundi (1927) (one of two documents). Address: Directeur du Jardin Colonial de Laeken (Belgian Congo?).

3247. *Argus (The)* (*Melbourne, Victoria, Australia*).1939. Queries answered. March 11. p. 32.
• ***Summary:*** "A. A. M. (Gunbower) asks for a recipe for Worcestershire sauce.

"The following has been recommended:–Take ½lb. each of whole black pepper, whole ginger, eschalots, and garlic, two quarts of vinegar, one pint of Indian soy sauce, 1oz. of ground black pepper, ½oz of powdered mace, ½oz of bruised cloves. Put all the ingredients into an earthenware vessel, let them stand for two weeks closely covered, stir them every day with a wooden spoon. At the end of two weeks boil the mixture for 30 minutes. Strain through a fine sieve, bottle when cold and seal tightly. The Indian soy is a vegetable sauce, and if it is unobtainable mushroom ketchup might be tried instead."

Note: This is the most recent of 144 documents seen (Oct. 2009) in the Australian Newspapers database that contains the term "India Soy."

3248. Kihara, Kiyoshi. 1939. Shôyu to aminosan-eki no 2, 3 muki seibun [Some inorganic constituents of shoyu and "amino acid" solution]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 17(3):162-73. March 15. [Jap]
Address: Kagawa-ken Shôyu Shikenjô, Japan.

3249. Nakae, Tadashi. 1939. Aminosan chomiryo seizo ni kansuru kenkyu. Dai 14 ho. Tanpakushitsu genryo toshite no koridofu kezurikuzu [Research on making amino acid seasoning. XIV. The crumbs from trimming dried frozen tofu as a protein source]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 17(3):182-84. March 15. [Jap]*
Address: Japan.

3250. DeBoth, Jessie Marie. 1939. Advises planning to obtain well-balanced meals. *Toronto Daily Star (Canada)*. March 16. p. 28.
• ***Summary:*** Miss DeBoth includes a recipe for Sub kum chop suey (with "1 tablespoon soy sauce").

3251. DeBoth, Jessie Marie. 1939. Shows how meal may be 'whipped up' on little. *Toronto Daily Star (Canada)*. March 17. p. 28.
• ***Summary:*** Miss DeBoth taught thousands who attended yesterday's session of The Star Cooking school. She included a recipe for Egg foo yong [young, yung] that called for "soy sauce" as a seasoning.

3252. Fuzikawa, Fukuziro [Fujikawa, Fukujiro]. 1939. Über die antiseptische Wirkung der Orsellinsäureester auf Shoyu (Sojasauce). II. Uber die antiseptische Wirkung der Phenole, Phenolcarbonsäuren, aus denen die Flechtenstoffe zusammengesetzt sind, sowie deren Ester [The antiseptic effect of Orsellin acid esters on shoyu (soy sauce)]. *Yakugaku Zasshi (J. of the Pharmaceutical Society of Japan)* 59(4):240-42. [1 ref. Ger; Jap]
• ***Summary:*** This article all appears in German, by the same authors (vol. 59, No. 4, p. 93-94), under the title shown above. Address: 1. Aus der Pharmaceutischen Fachschule zu Kyoto.

3253. Kawano, Yoshio. 1939. Koji-kin koso ni yoru daizu tanpakushitsu no bunkai. III. Bunkai ni taisuru shoyu joken no sokutei [The hydrolysis of soy protein by enzymes of koji mold. III. Gathering data on the conditions of hydrolysis when making shoyu]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 17(5):303-12. May 15. [6 ref. Jap]
Address: Japan.

3254. Mihaeloff, S. 1939. L'utilité économique d'introduire et d'encourager la culture du soja en Égypte [The economic benefit of introducing and encouraging the culture of soybeans in Egypt]. *Egypte Contemporaine (L')* 30(185):493-501. May. [2 ref. Fre]
• ***Summary:*** The soybean is one of the most ancient and important crops cultivated in East Asia. It is of interest both as a food and industrial crop. From it is made the famous liquid shoyu. Its flour is useful in making bread for diabetics, a vegetable milk can be made from the seeds, and its casein has many industrial applications. In France, Mr. J. Bordas,

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Director of the Agronomic Research Station at Avignon, has shown that it can play an important role in solving the current agronomic and economic difficulties in France. Various tables give the nutritional composition of soybean seeds from Egypt and France. The author then discusses soybean cultivation and production worldwide, including Algeria. Based on this information, the author believes that soybeans have a good chance of success in Egypt, and should be tested in lower (north) Egypt, with tests gradually moving toward upper (south) Egypt.

In addition to the role it can play as a human food, the soybean can also be used as a feed for animals (in the form of forage, defatted cake, or milk), and as a source of vegetable oil. The oil can be used as a solvent for rubber, in the production of dynamite or margarine, as a lubricant for automobile motors, and in making soaps. The soy protein (casein) can be used as a binder for lime in agriculture, to make industrial plastics, and as a substitute for gelatine in the manufacture of paper.

In short the soybean could play a very useful role in Egyptian national economy. Address: Doctor of Sciences (*Docteur ès-sciences*).

3255. *Brewer and Wine Merchant (The)*.1939. Brewing in Worcester. June. p. 48. [1 ref]
• ***Summary:*** "The Worcester *News and Times* recently contained a well produced industrial supplement, in which were described the many and varied industries of Worcester. One is apt to look upon Worcester merely as an old quiet cathedral city. It is true the cathedral was one of its principal charms..."

After a section on "Vinegar brewing in Worcester" comes a section titled "The Origin of Worcestershire Sauce" which quotes from the *News and Times:* "The origin of the firm is based like all romantic histories, on tradition. The great grandfather of the present managing director, Capt. J.A. Dyson Perrins, was in partnership with a brother in a chemist's shop at Evesham. On October, 1828, a split occurred for some unknown reason, and Mr. William Perrins went into business with Mr. John Wheeley Lea in the shop at present occupied by Mr. A.E. Coverdale in Broadstreet, Worcester.

"Here, it is supposed, one day Sir Marcus Sandys, who had held many offices out East, including that of Governor of Bengal, came in with the recipe of a certain sauce to be made up. The two partners worked on this recipe and in due course brought forth 'Lea & Perrins Worcestershire Sauce, made from the recipe of a nobleman in the Country.

"In 1897 Mr. C.W. Dyson Perrins built the present factory in Midland-road, and the whole business was transferred from Broad-street.

"In 1930 the firm was amalgamated [merged] with H.P. Sauce, but the two ventures were kept quite distinct. There is also a Lea & Perrins, Incorporated, in New York, and Lea & Perrins (Australia) Ltd., in Sydney."

Note: This is the earliest document seen (Feb. 2012) that uses the word "Bengal" in connection with Lea and Perrins' Worcestershire Sauce. It is also the earliest document published in England that mentions "Sandys" or "Sir Marcus Sandys" (Governor of Bengal) in connection with this sauce. Address: England.

3256. Kaneko, Takeo. 1939. Shôyu yori hisutamin oyobi mechionin no bunri ni tsuite [On the isolation of histamine and methionine from shoyu]. *Nippon Kagaku Kaishi (J. of the Chemical Society of Japan)* 60(6):539-41. June. [6 ref. Jap]

3257. *American Cookery (Formerly The Boston Cooking School Magazine)*.1939. Peking diets. 44(1):55. June/July *
• ***Summary:*** Diets in Peking may be classified into two main types, according to an article by Guy and Yeh in the *Chinese Medical Journal*. "The diet consumed by the poorer classes consists chiefly of maize and millet, soya bean and vegetables. The diet of those living at a higher economic level includes the milled cereals, chiefly wheat and rice, with pork, soya bean curd and vegetables."

3258. Binsted, Raymond H. 1939. Pickle and sauce making. London: Published by the author (Food Trade Press). 128 p. July. Illust. 22 cm. *
• ***Summary:*** A second edition (128 p.) was published in 1944.

3259. Kono, Michitoshi; Nagata, Norio. 1939. Seishu, shôyu, su, gurutamin-san sooda, amino-san oyobi mizu ni yoru kinzoku zairyô no fushoku shiken [Corrosion test of metals with sake, shoyu, vinegar (*su*), monosodium glutamate, amino acids and water]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 17(9):618-26. Sept. 15. [4 ref. Jap]
Address: Hiroshima Kôtô Kôgyô Gakkô, Jôzô Gakka Kyôshitsu, Hiroshima, Japan.

3260. Borth, Christy L. 1939. Pioneers of plenty: The story of chemurgy. Indianapolis, Indiana and New York: Bobbs-Merrill. 303 p. Portraits. 22 cm.
• ***Summary:*** Soy is discussed at length (usually in connection with Henry Ford Sr. and Edsel A. Ruddiman) on p. 22, 40, 42, 202-06, 208-11. Henry Ford is also discussed on p. 21-22, 30, 69, 76-77, 118, 144, 246.

"A few years ago, Henry Ford was ridiculed when he said the time would come when most of an automobile would be grown on the farm. Since then, Ford chemists have perfected processes whereby soy beans are converted into plastic substitutes for automobile parts formerly made of metal. Ford Chemist Russell Hudson McCarroll estimated that the use of plastics for interior window moldings alone would increase that company's use of farm-grown metal-

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substitutes twenty-five million pounds annually." (p. 21-22).

"Dearborn was selected as the [first chemurgic] conference site because it was the home of Henry Ford, an industrialist who had demonstrated his understanding of the meaning of the farm problem, and because there were, in near-by Edison Institute, working exhibits of the processing equipment which Ford researchers had developed to convert soy beans into some thirty industrial products." (p. 40).

At the chemurgic conference Russell Hudson McCarroll, a Ford chemist, described how soy beans are converted into raw materials for industrial use. "From the bean oil Ford chemists make a lacquer which is claimed to be superior to the pyroxylin paints usually used in coating metals. From the residue of meal after extraction of oil, Ford chemists make plastic parts for automobiles, these farm-derived parts being substitutes either for metals formerly mined or for rubber formerly imported." (p. 42).

Chapter 10, titled "Ford links farm and factory" (p. 200-12) is about Henry Ford, chemurgy, and soy beans. "Do you recall the gibes that greeted his [Henry Ford's] prediction that man would one day find a substitute for the cow, as revolutionary as the automobile which displaced the horse? It was very funny when the cartoonists and columnists leaped upon it gleefully–but it may not be so fantastic as it once seemed.

"Let's investigate it.

"Come now to the foot of Elm Street, in Dearborn, to a rejuvenated farmhouse whose homelike exterior masks a modern laboratory."

"Follow the truant chemurgists inside and meet Ford's boyhood companion, Dr. Edsel a. Ruddiman, the food-chemist whose services were enlisted by his old deskmate. In the back room, once a farm kitchen, is an electric refrigerator, filled with food made from soy beans. Milk, butter and cheese–the latter, fresh, dried, smoked and fermented–are there, soy-bean products all. In the pantry are breakfast foods, macaroni, salad oils, crackers, diabetic foods, infant foods, flour, bouillon cubes, soups, confections, coffee substitutes, sauces, gravies and beef substitutes–all produced from the soy" (p. 202-03).

A wonder bean indeed!" "During the World War [I], when Germany faced famine, German chemists extracted from the soy the glutamic acid which became the basis of the 'beef-tea' that kept patients alive in hospitals." The soy bean "gets into Heinz and Lea & Perrins' sauces and into oleomargarine" (p. 203).

A full-page photo (between pages 206 and 207) shows Irénée du Pont and Henry Ford talking and enjoying a meal together at a table.

3261. Tomiyasu, Yukio. 1939. Shôyu-chû beta-hydroglutaminic acid no sonzai ni tsuite [On the existence of β-hydroglutaminic acid in shoyu]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15(9):871-75. Sept. (Chem. Abst. 34:583). [5 ref. Jap]
Address: Kyushu Taikoku Daigaku, Nôgaku-bu, Nosan Seizo-gaku Kyoshitsu.

3262. Mogi, Masatoshi. 1939. Miso jôzô ni kansuru kôbo no kenkyû (zokuhô). I. Keitaigaku-teki seishitsu [Studies on the yeasts found in miso. (Supplementary contributions). I. Morphological properties]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15(10):921-32. Oct. English reference in Bulletin of the Agricultural Chemical Society of Japan 15(10), bound at the back of Nippon Nogei Kagaku Kaishi (p. 137). [Jap]
Address: Brewing Laboratory, Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3263. Saito, Kendo. 1939. Tôyô-san kinrui chikin. VII. Kôbo-rui (1). Torulopsis Soya nov. spec. [Understanding East Asian microorganisms. VII. Yeasts (1). Torulopsis Soya, new species]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 17(11):772-73. Nov. 15. [Jap]
Address: Japan.

3264. Mogi, Masatoshi. 1939. Miso jôzô ni kansuru kôbo no kenkyû (zokuhô). II. Seirigaku-teki seishitsu. (3). Seirigaku-teki seishitsu. VII. Himaku no seisan [Studies on the yeasts found in miso. (Supplementary contributions). II. Physiological properties. (3). Physiological properties. VII. Film production]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15(11):1023-36. Nov. English-language summary in Bulletin of the Agricultural Chemical Society of Japan 13:24-25, bound at the back of Nippon Nogei Kagaku Kaishi (p. 143). [Jap]
Address: Brewing Laboratory, Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3265. Terui, Gyôzô. 1939. Yûki-san hakkô ni kansuru seirigaku-teki kenkyû. I. Kyôshi-kin (*A. niger*) no keitai-teki oyobi seiri-teki seishitsu ni tsuite [Biological investigation of organic acid fermentation. I. Morphological and physiological characteristics of *Aspergillus niger*]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 17(12):829-38. Dec. 15. [31 ref. Jap]
Address: Osaka Teidai, Kôgaku-bu, Jôzôgaku Kyôshitsu, Osaka, Japan.

3266. Terui, Gyôzô. 1939. Yûki-san hakkô ni kansuru seirigaku-teki kenkyû. II. Kuen-san hakkô no shojô-ken (1) [Biological investigation of organic acid fermentation. II. Various conditions of citric acid fermentation (1)]. *Jozogaku Zasshi (J. of Brewing, Osaka)* 17(12):839-45. Dec. 15 [11 ref. Jap]
Address: Osaka Teidai, Kôgaku-bu, Jôzôgaku Kyôshitsu, Osaka, Japan.

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3267. Mogi, Masatoshi. 1939. Miso jôzô ni kansuru kôbo no kenkyû (zokuhô). III. Bunri seru kôbo no bunrui narabini ruien oyobi hyôchô. (4). Bunri seru kôbo no bunrui narabini ruien oyobi hyôchô [Studies on the yeasts of miso fermentation (continued). III. Classification, relation, and diagnosis of isolated yeasts]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 15(12):1221-32. Dec. [Jap]
Address: Noda Shoyu K.K. Shikenjo (Brewing Laboratory, Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan).

3268. Fujii, T. 1939. Kome kasu riyô no shôyu jôzôhô [Brewing shoyu using rice bran]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 34(9):920-25. [Jap]

3269. Fukai, Tôshi; Nonomura, Seiichi. 1939. Sosei aminosan-eki no shûki seibun ni tsuite. II. Asetoin kei busshitsu no sonzai [On the component of odor in liquid hydrolysed vegetable protein (HVP). II. Presence of acetoin derivatives]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 128. p. 99-. [Jap]

3270. Fukai, Tôshi. 1939. Shôyu ni konnyû-seru sosei amino-san eki to karameru no kenshutsu [Detection of the liquid hydrolyzed vegetable protein (HVP) and caramel mixed into soy sauce]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 128. p. 105-08. [Jap]

3271. Fukai, Tôshi; Nonomura, Seiichi. 1939. Komugi daiyô genryô to shite dasshi daizu, shiro muka, tapioka ruuto shôyu jôzô shiken [The utilization of soybean cake, white rice bran and tapioca root in place of wheat for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 128. p. 365-73. [Jap]

3272. Fukai, Toshio; Nonomura, Seiichi. 1939. Seihaku kôryan shôyu jôzô shiken [Use of polished kaoliang for brewing shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 128. p. 357-63. [Jap]

3273. Fukai, Tôshi. 1939. Shôyu no chisso to sono hokyû ni tsuite (Junkai kôen ichibu no hoi) [Shoyu nitrogen and its supply]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 34(11):1073-81. [Jap]

3274. Kono, M.; Nagata, N. 1939. Seishu, shôyu, su, gurutamin san sooda, amino-san, kyûsui ni yoru kinzoku zairyô no fushoku shiken [Corrosion test of metals using sake, shoyu, vinegar, monosodium glutamate, and amino acids (Abstract)]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 34(11):1141-42. [Jap]

3275. Kurano, K.; Itai, J.; Nonomura, S. 1939. Rizopusu kin ôyô shôyu jôzô shiken (Die Anwendung des Rhizopus anstatt des Aspergillus fuer das Syoyu brauen) [Application of *Rhizopus* instead of *Aspergillus* for brewing shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 128. p. 289-95. [Jap]

3276. **Product Name:** Stake-Lets (Meatless Meat Loaf in a Rich Meatlike Sauce) [Sliced, or Bite-Size].
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1939.
Ingredients: Gluten, soybeans, soy sauce, seasonings. In 1960 the ingredients were gluten, whole wheat, soy flour.
Wt/Vol., Packaging, Price: No. 2 can. 20 oz.
How Stored: Shelf stable.
Nutrition: Protein 18.2%, fat 4.3%, carbohydrates 2.1%, ash 0.5%, calories 120/100 gm.
New Product–Documentation: Ad (2¼ by 3 inches) in *Nature's Path* (USA). 1941. July. p. 273. "A treat without meat." Stake-Lets is one of five basic food products made and sold by Madison Foods.

Madison Health Messenger. V. 49-2. p. 5. Taylor. 1944. The Soy Cook Book. p. 201.

3277. Matsumoto, K. 1939. Shinko shôyu moromi no kôso sayô no hikaku [Comparison of enzyme action and the age of shoyu moromi]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 34(3):239-42; 34(4):373-77. [9 ref. Jap]

3278. Matsumoto, K.; Narimiya, K. 1939. Shôyu bareisho kin no koso-ryoku to baiyô no kankei [The relationship between the enzymatic strength of potato bacteria for shoyu and their cultivation]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 34(7):675-79; 34(8):774-77. [Jap]

3279. Matsumoto, Kenji; Nonomura, Seiichi. 1939. Gyo fun shiyô shôyu jôzô shiken [The use of fish meal for brewing shoyu]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 128. p. 297-308. [Jap]

3280. Matsumoto, K.; Nonomura, S. 1939. Dasshi nuka riyô shôyu jôzô shiken [On the use of defatted rice bran for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 128. p. 317-22. [Jap]

3281. Matsumoto, K.; Nonomura, S. 1939. Aka nuka oyobi dasshi nuka hikaku shôyu jôzô shiken [Comparison of rice bran and fat-free bran for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 128. p. 323-33. [Jap]

3282. Matsumoto, K.; Nonomura, S. 1939. Kôso eki ôyô shôyu jôzô shiken [Application of enzyme solutions for shoyu manufacture]. *Jozo Shikensho Hokoku* (*Report of the*

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Brewing Experiment Station) No. 128. p. 335-42. [Jap]

3283. Matsumoto, K.; Nonomura, S. 1939. Awa oyobi hakumai senjôsui shiyô shôyu jôzô shiken [Use of millet and waste water gained in washing of polished rice for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 128. p. 343-47. [Jap]

3284. Matsumoto, K.; Nonomura, S. 1939. Tokushu baiyô shôbo ôyô shiken [Application of yeast and bacteria cultured specially for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 128. p. 349-55. [Jap]

3285. Matsumoto, Kenji; Nonomura, Seiichi. 1939. Kenkiteki baiyô shôbo ôyô shôyu jôzô shiken [On the application of shoyu yeast and lactic acid bacteria cultured in an anaerobic state for shoyu brewing]. *Jozo Shikensho Hokoku* (*Report of the Brewing Experiment Station*) No. 128. p. 309-16. [Jap]

3286. Mogi, Masatoshi. 1939. Miso jôzô ni kansuru kôbo no kenkyû (Zokuhô) [Research on yeast in miso manufacture. Morphological and physiological properties of the yeast (Abstract)]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 34(12):1251. [Jap]
Address: Brewing Laboratory, Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3287. Soetisna, Mas. 1939. Kedelé mas Toegoemoeljo [The yellow soybean of Toegoemoeljo]. *Kolonisatie Bulletin* 6:9-11. [Ind]
• ***Summary:*** In the author's name, the term "Mas" may be a Javanese title, of lower rank than Raden. "Toegoemoeljo" (presently spelled Tugumulyo) is a place name but it can also be translated as "Column/Pillar of Glory," in Javanese culture refers to the manifestation of the highest level of happiness. The document tells about yellow soybeans from this place. Address: Adjunct-landbouwconsultent di Loeboek Linggau.

3288. A handbook of Philippine agriculture. 1939. Manila, Philippines: College of Agriculture, University of the Philippines. vii + 803 p. No index. 18 cm.
• ***Summary:*** On the title page: "Issued in commemoration of the thirtieth Anniversary." The University of the Philippines was founded in 1908. The Foreword (by L.B. Uichanco, Dean, College of Agriculture) states that its College of Agriculture opened on 14 June 1909, at which time "scientific Philippine agriculture was virtually nonexistent." The idea for the book originated with the former dean of the College of Agriculture, Dr. B.M. Gonzalez, before he was appointed president of the University of the Philippines. Soybeans and soyfoods are discussed extensively.

"Coffee adulterants" (p. 104), commonly mixed with ground coffee, include roasted ground corn, soybean, peanut, mungo, cashew, and sometimes ipil-ipil (*Leucaena glauca*).

In Chapter 1, "Field crops" is a long section titled "Peanut, soybean, cowpea" (p. 132-43). Contents of "Culture of soybean" (p. 134-41): Varieties. Preparation of the land. Planting. Cultivation. Harvesting and threshing. Yield. Green and yellow seeds of Ami soybean. Soybean sprouts. How to prepare–Soybean coffee, soybean cake [dessert, with baking powder], soybean milk, "tao-si" (salted soybean [fermented black soybeans]; Method furnished by Superintendent of the Davao Penal Colony), "toyo" or soy sauce.

Note: This is the earliest document, and the earliest English-language document seen (Jan. 2012) that mentions fermented black soybeans from the Philippines, or that uses the term "tao-si" to refer to this type of salted, fermented soybean food.

The section titled "Method of preparing 'tao-si'" (p. 139-40) gives a full-page description of making tao-si on a small commercial scale–as follows: Wash dry soybean seeds and soak in clean water overnight. In the morning, remove the water. Transfer the soaked soybean seeds into a pot containing fresh clean water; boil until beans are soft. Remove boiled beans from the pot and place in shallow baskets to drain the excess water; allow them to cool. Dry beans in the shade for about one-half hour or one hour in the sun. For every 2½ petroleum cans of boiled soybeans, add 1-2 kg of wheat flour. Stir the mixture until beans are thoroughly coated with flour, then dust over about ½ kg of yellow fungus known as *Aspergillus oryzae;* thoroughly stir again. Cover open mouth of basket with a piece of abaca cloth or clean Manila paper and place in a dark room to allow the fungus to incubate. After 2-3 days the mixture will be thoroughly covered with a thick growth of yellow fungus and is now ready for salting. Transfer mixture into an earthen jar (*tapayan*), and to every 2½ petroleum cans of it, add 16 kg of native salt dissolved in two petroleum cans of water. Sun the jar for five days to facilitate curing, then move jar into a shed for further fermentation. "The 'tao-si' is ready for use after two months, but the longer it is left to cure, the better the quality becomes."

The two main kinds of insecticides in 1939 (p. 223-31) were stomach poisons (which kill when eaten; incl. lead arsenate, calcium arsenate, Paris green) and contact poisons (incl. concentrated tobacco decoction, as in Black Leaf "40").

"Diseases of beans and other legumes (p. 319+) include downy mildew of soybean and rust of soybean.

A table (p. 448) gives the content of five vitamins found in various feeds incl. soybean seeds, soybean leaves, soybean meal, peanut meal, and peanut seeds.

"Leguminous silage" includes that from cowpea, soybean, and mungo [mung bean] (*Phaseolus aureus*). Tables give: (1) The "Average digestible nutrients in feeds" incl.

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soybean (p. 459, 462).

(2) The "Nutritive value of foods" incl. seaweeds (ara-rosip, *Gracilaria crassa*, p. 534), mungo sprouts (p. 536), green soybeans (p. 537), seguidilla or kalamismis (*Psophocarpus tetragonolobus*, fresh and sun-dried seeds, p. 538), soy products (p. 538-39) incl. soy sauce (toyo, Superior {Senkee and Co.}, Commercial), soy milk–boiled, soy residue (sapal), soy residue after second drawing of toyo, soy curd (toqua [tofu]).

(3) "Foods as sources of minerals" (calcium, phosphorus, iron; p. 580-81), incl. miso or soybean mush, soybeans–baked flour, soybeans–baked sprouts, soy curd or toqua, soy sauce or toyo (four brands: Solo, Great Eastern, Violin, Rooster), tahuri or soybean curd preserved in strong brine solution (solid portion).

(4) "Foods as sources of vitamins" (p. 593-94) incl. bean–asparagus or cigarillas (*Psophocarpus tetragonolobus*), bean–mungo (in pods or sprouts), bean–soy (dry, green, or leaves), peanut butter, seaweed, sesame (p. 601). Address: Manila, Philippines.

3289. Embree, John Fee. 1939. Suye Mura, a Japanese village. Chicago, Illinois: University of Chicago Press. xxxi + 354 p. Index. 21 cm. Reprinted in 1964 with new Foreword.

• ***Summary:*** This is the first detailed anthropological study of Japanese village life. John Embree is a pioneer anthropologist who lived (with his wife) in the remote mountain Japanese farming village of Suye Mura in Kumamoto prefecture (on Japan's southern island of Kyushu) from Aug. 1935 to Dec. 1936. Mr. Toshio Sano, a graduate of Tokyo Language School, lived with Embree and acted as his interpreter and translator.

Soybeans and soyfoods (particularly tofu) are discussed throughout the book.

Page 41: "Tôfu (soy-bean curd) is prepared in the *mura* by several *tôfu*-makers and sold to the rest of the villagers. It is made by grinding soybeans in a stone quern. It is eaten a great deal in soup and is used as a cheap substitute for fish at some social gatherings.

"The diet is largely vegetarian, though fish and occasionally chicken accompany a banquet. Plenty of proteins are available in the many foods made of soy beans, especially the soy-bean soup (*miso-shiru*), soy-bean sauce (*shôyu*), and soy-bean curd cake (*tôfu*) (see Table 1).

Pages 42-43: Table 1, titled "Agricultural products by season," has four columns for each of the four seasons. Azuki beans and sasage are harvested in summer and autumn; soy beans and sesame seed in autumn. Note: Edamame is not mentioned.

"Page 45: "Pigs are raised for outside sale by most of the *tôfu* makers. A piglet is bought for 5 yen from some city broker, fed on *tôfu* waste [okara] and general garbage (very scanty in a farmer's house) for about a year, after which time the broker comes back and buys the grown pig for from 15 to 20 yen." The "villagers never think of eating pig meat themselves." "Some people make flour at home on revolving grind-stones (*hikiusu*), similar to those used in making the bean-curd *tôfu*.

A photo (facing p. 52) shows the front of a local *tôfu* shop (Kakui), with two ladies seated on the low wooden platform. The caption reads: "This woman makes *tôfu* daily. Her shop carries a few tinned goods, some candy, beer, geta, thongs, etc. It is a favorite gathering-place for people to sit about and talk."

Page 53: "Some widows and farmers' wives, usually of the poorer families, make *tôfu* as a means of increasing the family income. Such a family has only a little farmland, otherwise the wife would not have the time to devote every morning to making and selling *tôfu*." "Each *buraku* [village, community] has a *tôfu* maker." Sometimes the wives of fishermen make *tôfu*.

Pages 60-61. In the *yakuba* (village office) there are frequent parties. Two man, paid as messengers, go to buy *tôfu* for these parties.

Page 115: On Kwannon Day, a party is held and a square of *tôfu* is served with *shôchû* to each person present. Tofu is also served at other types of parties and sometimes taken as a gift (p. 118, 122, 124, 128, 147).

Page 160: The author identifies six social classes in this village. Small shopkeepers and *tôfu* makers belong to the 4th class, the "lower middle."

Page 241: Of the Seven Gods, Daikoku and Ebisu are the patron saints of shopkeepers and *tôfu* makers.

Page 254: Inari is the god of crops, especially of rice. "People always refer to Inari as *Oinarisan* (Honorable Inari)."

Pages 292-93. "The eleventh month" of the lunar calendar. On the 15th day is the old Ichifusa Shrine Day. On the evening of the 14th day, *tôfu* is roasted on special bamboo sticks in the fire pit. This preparation, called *dengaku* is made in honor of Otakesan (Ichifusa Shrine).

Page 315: Most *tôfu* makers specialize in doing just that, but some shopkeepers also make *tôfu*.

Page 318: Household expenses. Most miso is made at home. Tofu and other goods purchased at local stores may be paid for with rice instead of money.

3290. Fukai, Tôshi; Nonomura, Seiichi. 1939. Sosei aminosan-eki no shûki seibun ni tsuite. II. Asetoin-kei busshitsu no sonzai [On the bad-smelling constituents of crude amino acid solution (liquid HVP). II. The presence of acetoin derivatives (Abstract)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 15:A150. [1 ref. Jap]

• ***Summary:*** Abstracted from Jozo Shikensho Hokoku 128:99 (1939).

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3291. Fukai, Tôshi. 1939. Shôyu ni konnyu seru sosei aminosan-eki to karameru no kenshutsu [Detection of liquid hydrolyzed vegetable protein (HVP) and caramel mixed into to soy sauce (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15:A152. [Jap]
• ***Summary:*** Abstracted from Jozo Shikensho Hokoku. No. 128. p. 105. (1939).

3292. Fukai, Toshio; Nonomura, Seiichi. 1939. Seihaku kôryan shôyu jôzô shiken [Use of polished kaoliang for brewing shoyu (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15:A152. [1 ref. Jap]
• ***Summary:*** Abstracted from Jozo Shikensho Hokoku. No. 128. p. 357-63 (1939).

3293. Fukai, Tôshi; Nonomura, Seiichi. 1939. Komugi daiyo genryô toshite dasshi daizu, shironuka, tapioka ruuto shôyu jôzô shiken [Use of soybean cake, white rice bran and tapioca root in place of wheat for brewing shoyu (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15:A153. [1 ref. Jap]
• ***Summary:*** Abstracted from Jozo Shikensho Hokoku. No. 128. p. 365-73. (1939).

3294. Fukai, Toshi. 1939. Shôyu oyobi miso [Soy sauce and miso]. Tokyo: Taiyokaku. 7 + 398 p. Index. 23 cm. [Jap]*
• ***Summary:*** The author was born in 1888. Address: Japan.

3295. Kihara, Kiyoshi. 1939. Shôyu to aminosan-eki no 2, 3 muki seibun [Some inorganic constituents of shoyu and "amino acid" solution (liquid HVP) (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15:A63. [1 ref. Jap]
• ***Summary:*** Abstracted from Jozogaku Zasshi 17:162 (1939).

3296. Kloss, Jethro. 1939. Back to Eden: A book on herbal remedies for disease, and other natural methods of healing. 1st ed. [Washington, DC]: Published by the author. vii + 667 + [25] p. Illust. Portrait. Index. 21 cm.
• ***Summary:*** This treasury of herbal lore and vegan cookbook (it uses no dairy products or eggs, replacing them with soy products) is one of the most creative and original sources of early soyfoods recipes. Contents: Foreword. 1. Personal experiences. 2. Soil. 3. History of medicine. 4. Fresh air and exercise. 5. Fasting. 6. Effects of devitaminized, adulterated foods on the body. 7. Fruit diet. 8. Meat-eating. 9. Foods. 10. Diet. 11. Aluminum utensils. 12. Cooking under steam pressure. 13. Disease of animals. 14. History of water cure. 15. Water. 16. Water-effects and treatment. 17. Water-its effect in sickness. 18. Baths. 19. Compresses and fomentations. 20. Massage. 21. High enemas. 22. Nursing. 23. Fruits. 24. The eliminating diet. 25. Minerals found in the body. 26. Herbs. 27. Medical trees. 28. Tonics. 29. Herbs (Their description and use in treating disease). 30. Definitions of medicinal properties of herbs. 31. Herbs indicated for specific diseases. 32. Directions for use of non-poisonous herbs. 33. Treatment of disease. 34. Food preparations of various kinds. 35. Oranges. 36. Potatoes; gathering and preserving of herbs.

The Foreword states: "This book contains tried, safe, and inexpensive remedies for the prevention of disease and sickness, remedies which are the result of my own practical experience of nearly forty years." "No matter how many germs get into the body, if the blood stream is clean and the blood corpuscles are in a healthy condition, you will be safe. Everyone comes in contact with many kinds of germ, but these organisms will not harm you or cause you sickness and death unless they have a place in which to propagate themselves." Sickness and illness are "caused by violating the laws of nature and health. "If then they would resort to simple means and follow the basic laws of health that they have been neglecting–proper diet, use of pure water, fresh air, sunshine, rest, and nature's remedies, herbs, etc., nature would restore the body to its original health." "God has provided a remedy for every disease that might afflict us." "The fundamental principle of true healing consists of a return to natural habits of living."

Virtually all of the information on soybeans and soyfoods is in chapter 34, "Food Preparations of Various Kinds" (p. 582-633). First come two sections of text: "The nutritional value of the soybean" (p. 582-84; "Taken from an address delivered by Dr. J.A. LeClerc, before the annual meeting of the American Soybean Association. Sept. 15, 1936"). "Uses of the soybean for industrial purposes" (p. 585).

Then comes an introduction soy-related recipes (p. 585-87): "The knowledge of the value of the soybean here in America is one of the greatest things that was ever launched in the food line in the history of the nation, and at this time of great poverty [the Great Depression], want, and disease, it is the most important thing that could be given the people." "Soybean milk can be made from soybeans at home for less than two cents a quart." Soybean milk "is not only a good food, but a real medicine." It is easily digested and highly alkaline. "I have experimented with soybeans for fifteen years [since about 1924] and have produced a fine, acceptable soybean milk as well as many other soybean products." "I use soybeans in more than fifty dishes."

Then come recipes (p. 587+): Soybean cheese (fermented soybean milk, peanut butter, and tomato puree, p. 587). Soybean cream cheese (from fermented soybean milk, p. 588). Nut cheese no. 1 (fermented soybean milk, peanut butter, and soybean butter {see p. 613}, p. 588). Nut cheese no. 2 (raw peanut butter, ground oatmeal flour, water and salt [no soy], p. 589). Nut milk (made with raw peanut butter and cow's milk [no soy], p. 590). Canned soybeans

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(p. 592). Soybeans and rice (with sprouted soybeans). Baked beans with tomato sauce (incl. soybeans, p. 593; "Soybeans are, no doubt, the best of all beans, but the flavor is not as pleasant. This can be overcome by using various seasonings, such as tomato sauce, a little onion, and celery). Vegetable protein (wheat gluten seasoned with soy sauce, p. 597). Nut loaf (seasoned with soy sauce). Kloss' granola (with soybean milk and soybean mash [okara], p. 599). Baked rice (natural brown rice baked in soybean milk, p. 600). Soybean coffee plus 2 recipes for Cereal coffee based on rye or wheat bran [real coffee with caffeine is not included]. Soybean broth (with soybean milk and oatmeal, p. 604-05). Oatmeal broth (with soybean milk). Soybean buttermilk (fermented, p. 605-06; "Buttermilk is an excellent article of diet for everyday use, but is especially beneficial in malnutrition, tuberculosis, toxic conditions, and intestinal infections. Soybean buttermilk has the advantage of producing an alkaline effect and is more nourishing than ordinary buttermilk. It is rich in minerals and very palatable. More nourishing than yogurt buttermilk used under various names."). Soybean cheese (fermented soybean milk, raw peanut butter, and tomato puree). Soybean cottage cheese (fermented soybean milk, p. 608). Soybeans and rice (with sprouted soybeans, p. 608-09). To sprout soybeans, lentils, or grains (p. 609). Soy patties (with soybean pulp [probably ground soybeans, not okara] and soy sauce). Gluten patties (seasoned with soy sauce, p. 610). Soybean loaf. Soybean cottage cheese loaf. Soybean milk. Soybean milk no. 2 (made from "soy meal, p. 611). How to curd [soybean] milk (p. 612). Soybean jelly (soybean milk jelled with agar-agar flakes and sweetened with malt sugar). Soybean butter (made with 1 cup water, 2 tablespoons soybean flour, and 2 cups soybean oil, p. 613). Soybean cream (blend rich soybean milk and soybean oil). Soybean ice cream (made with 2 quarts rich soybean milk, 2 lbs. malt sugar, ½ pint soybean butter or soybean mayonnaise, and 1 tbsp. agar-agar). The yolk of an egg (made with soybean flour, p. 614). Pancakes (with cornmeal and soybean mash [okara]). Tomato soup (with soybean flour, soybean flour, soymilk, and/or soy sauce, Savita, or Vegex, p. 618). Cream of tomato soup (with soybean milk, p. 620). Cream of celery soup. Cream of lentil soup. Vegetable oyster soup (with rich soy milk, p. 622). Eggplant soup (with soybean milk). Cream of spinach soup. Potato soup. Soybean gravy. French toast (made with soybean bread soaked in soybean milk, p. 624). Soy oil mayonnaise (with soy oil and finely ground soy flour, p. 628). Vanilla sauce (with soybean cream, p. 632). Vegetable gelatin (with agar-agar and soybean cream dressing, p. 632). Orange jelly (with soybean cream). Strawberry jelly (with soybean cream). Rice pudding (cooked in soy cream, p. 633). Cream tapioca (with soy cream and soybean milk). Soybean bread no. 1 (with whole wheat flour, soybean mash or soybean flour, p. 648). Soybean bread no. 2. Soybean buns or cinnamon rolls (with soybean meal, p. 650). Cornmeal gems (with soybean milk, p. 651). Oatmeal or soybean gems (with soybean meal). Soybean gems (with soybean mash [okara] out of which soybean milk has been washed, p. 652). Pones (with soybean milk). Beaten biscuit (with soybean milk). Unleavened pie crust (with soybean flour or mash, p. 655). Raised pie crust (p. 656). Soybean pumpkin pie (p. 656). Fig marmalade pie (with soybean milk, p. 657). Mashed potatoes (with rich soybean milk, p. 666).

This book does not call for the use of dairy milk or eggs. Concerning cow's milk, Kloss states (p. 75): "Cow's milk is not suited for human consumption. Half the invalids in the world suffer from dyspepsia, and milk should not be taken. Milk causes constipation, biliousness, coated tongue, headache, and these are the symptoms of intestinal auto-intoxication. Soybean milk and nut milks are excellent substitutes, and have practically the same analysis, and the danger of disease is removed." A recipe on page 614 uses a mixture of soybean flour and soya bean oil as a substitute for the yolk of an egg.

This book contains the same detailed information on the possible dangers of aluminum cooking utensils found in the 1935 edition.

Ads on unnumbered pages in the rear include: (1) Dominion Herbal College, Vancouver, BC, Canada. (2) "Horta" Pure Vegetable Extract. "Of strong aromatic meat flavor, though made from leguminous materials only." F. Behrend, Inc., New York, NY. Established 1886. (3) Old-fashioned Quaker mill. No. 4 Quaker City Mill. Ad: Enterprise No. 69, Hand Mill. A.W. Straub Co., Philadelphia, Pennsylvania. (4) Nature's Original Food Co., Falmouth, Virginia. "Nuts, grains, fruits and vegetables are Nature's original foods for men. Animal flesh has been substituted. If you want health, don't use it. "Try our [canned vegetarian] meats–see the difference." Meatose. Vegetose. To-Meta. Note: This latter company was almost certainly founded and is owned by Jethro Kloss.

According to Doris Gardiner (Oct. 1990), the original book (of which she and her aunt each have copies) has a green hard cover. The first printing was probably done by a Mr. Brunck, who worked for the College Print Shop in Takoma Park, Maryland. She thinks Jethro self-published the book. He paid for the printing and sold the books himself. Jethro and his wife moved to Coalmont, Tennessee. There they lived with the Hiatt family, and Mr. Hyatt, owner of Longview Press (renamed The Message Press by 1964) became the book's first legitimate publisher. His wife died in 1944. Jethro died in 1946 at age 83. The page numbers from the 1939 edition are unchanged in later editions.

Note 1. This is the earliest English-language document seen (March 2007) that uses the term "Soybean cream cheese" to refer to soy cream cheese.

Note 2. This is the earliest English-language document seen (May 2011) that uses the term "soybean mash" to refer to okara. Address: Washington, DC.

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3297. Matagrin, Am. 1939. Le soja et les industries du soja: Produits alimentaires, huile de soja, lécithine végétale, caséine végétale [Soya and soya industries: Food products, soy oil, vegetable lecithin, and vegetable casein]. Paris: Gauthier-Villars. x + 390 p. 18 cm. [300 ref. Fre]

• ***Summary:*** Contents: Introduction. 1. The agricultural, industrial, and commercial history of soya: Asiatic origins and propagation in Europe, soya in America (its cultivation and industries), soya in Europe, Asia, Africa, and Oceania (1936) (1. Admission of soya in the agriculture and industry of European nations (p. 35): Soya in France, soy industry and commerce in central and northern Europe {England, Germany, Holland, Denmark, Sweden, Poland, Austria and Hungary, Switzerland}, penetration of soya into southern Europe {Iberian peninsula, Italy, Balkan countries of Dalmatia, Istria, Yugoslavia, Greece (p. 47), Bulgaria, Romania, Ukraine}, the grandeur and decadence of soya in Russia. 2. Soya in modern Asia (p. 51): China and Manchuria, Japan, Korea, Formosa, French Indochina {Tonkin, Cambodia, Cochin China}, the British and Dutch Indies {Siam, Assam, Bengal, Burma, Ceylon, India, Straits Settlements [later Singapore] / Malacca}, western Asia {Turkestan, Persia (p. 57)}. 3. Soya in Africa and Australia (p. 57-58): South Africa, Rhodesia, Nigeria, Gold Coast [later Ghana], Cote d'Ivoire, Dahomey, Togo, Algeria, Tunisia, Morocco, Egypt, Australia {Queensland, New South Wales, Victoria}, Tasmania, New Zealand, not yet in British New Guinea [later Papua New Guinea], Philippines, Java).

2. The botany and agronomy of soya: The plant, its names, its botanical characteristics, its varieties (original and created by selection), the cultivation of soya.

3. The general chemistry of soya: Chemical composition of the plant, structure and chemical composition of the beans.

4. Using soya in soyfoods and soyfood products: Whole soybeans (whole green, dry, sprouted, roasted and salted {*soja á l'état vert, fève de soja sèche, fève grillée, fève salée de soja, fèves de soja salées*, p. 166-67}, soynut butter {*un mélange rappelant les beurres végétaux*}, soy coffee, soy confections {*confiture de soja*}, soy chocolate, soy sprouts {*fèves de soja germées, germes de fèves de soja*}), soymilk and tofu (*le lait et le fromage de soja;* soymilk cream, concentrated soymilk, soymilk powder / powdered soymilk, fermented soymilk {*lait fermenté, yoghurt, kéfir, koumys*, p. 189}, fermented tofu {*fromages de soja*}), okara (*pulpe résiduaire de la préparation du lait de soja*), fermented soy products (solid, paste, and liquid condiments: natto, miso, and shoyu [soy sauce]; kiu-tsee and lactic ferments), soy flour and bread.

5. The soy oil industry and products derived from it: Extraction and refining of soy oil, properties and use of soy oil.

6. The vegetable lecithin industry: Extraction of vegetable lecithin, properties and use of vegetable lecithin.

7. The vegetable casein industries and plastic materials based on soya: Soybean cakes and flours from which the oil has been removed, use of such cakes and flours, in the crude state, as a raw material for plastics, manufacture and use of vegetable protein, soybean cellulose for artificial silk, soya furfural and furfuraldehyde (phenolic resins). Conclusion: How to launch soya industries in France. Important terms:

Note 1. This is the earliest French-language document seen that uses the terms *Fève grillée, fève salée de soja,* or *fèves de soja salées,* "roasted soy beans" to refer to soynuts.

Note 2. This is the earliest French-language document seen (April 2005) that mentions soynut butter, which it calls *un mélange rappelant les beurres végétaux.* Address: France.

3298. Matsumoto, Kenji; Nonomura, Seiichi. 1939. Gyofun shiyô shôyu shiken [The use of fish meal for brewing shoyu (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15:A152. [1 ref. Jap]

• ***Summary:*** Abstracted from Jozo Shikensho Hokoku, No. 128, p. 297-308 (1939).

3299. Matsumoto, Kenji; Nonomura, Seiichi. 1939. Kenki-teki shôbô ôyô shôyu jôzô shiken [Application of anaerobic "shobo" to shoyu brewing (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15:A152. [1 ref. Jap]

• ***Summary:*** Abstracted from Jozo Shikensho Hokoku 128:309 (1939). Shobo is a mixture of lactic acid number G6 and a new shoyu yeast from Higeta.

3300. Matsumoto, Kenji; Nonomura, Seiichi. 1939. Awa oyobi hakumai senjôsui shiyô shôyu jôzô shiken [Use of millet and waste water gained in washing polished rice for brewing shoyu (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15:A152. [1 ref. Jap]

• ***Summary:*** Abstracted from Jozo Shikensho Hokoku, No. 128, p. 343-47 (1939).

3301. Nakae, Tadashi. 1939. Amino-san chômiryô seizô ni kansuru kenkyû. XIII. Tanpakushitsu genryô toshite no keshi abura kasu [Studies of preparation of amino acid seasoning. XIII. Poppy oil cake as raw material (Abstract)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 15:A21. [1 ref. Jap]

• ***Summary:*** Abstracted from *Jozogaku Zasshi* 17(9):14. Soybeans are mentioned briefly.

3302. Thomas, Charles Marion. 1939. Thomas Riley Marshall: Hoosier statesman. Oxford, Ohio: Mississippi Valley Press. 296 p. See p. 280. Illust. (portrait). 23 cm. Series: Men of America: Vol. II. [75+* ref]

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• ***Summary:*** Marshall was Vice President of the United States from 1913 to 1921 under Woodrow Wilson, and Governor of Indiana from 1909 to 1913 (Democrat). Page 280: Among the "Sources and acknowledgments" is: "Shinzo Ohki of Columbia City,..." [Indiana].

Thomas Riley Marshall lived 1854-1925. Address: Jacksonville, Indiana.

3303. Yang, Ling-Fu. 1939. Mei shu shih p'u = Artistic cooking. Shang-hai, China: Published by the author. 43 p. Port. 21 cm. Series: Translations of my art, by Yang Ling-Fu, vol. 2. [Eng]
• ***Summary:*** The recipe for Egg-fuyong in country style (p. 4) calls for "2 tablespoonfuls soya bean sauce."

3304. **Product Name:** Soyco brand Shoyu, and Soya Club brand Shoyu.
Manufacturer's Name: Soya Bean Products Co. (Sooya Bin Prodakutsu Kaisha, Shoyu Jozo-bu).
Manufacturer's Address: 1235 S. Lorena St., Los Angeles, California. Phone: AN. 14076.
Date of Introduction: 1940. January.



New Product–Documentation: The Japanese American Directory. 1940. p. 326-27 (directory; listed in the category "Foodstuff Factory." No hint is given of the type of soyfood products they make) and p. B-7 (1/3 page ad; The top 40% is in English: "Soya Bean Products Co., 1235 So. Lorena St., L.A. Phone AN. 14076. Soyco brand. Soya Club brand." In characters: *Beikoku seigan yuitsu no shoyu seizô-sho* {The only shoyu maker on the West Coast of the United States}). *Bimi, jiyo shoyu* (Delicious and nutritious shoyu). *Sooya Bin Prodakutsu Kaisha, Shoyu Jozo-bu* (Soya Bean Products Co., Shoyu Manufacturing Dept.).

3305. Macheboeuf, Michel; Reiss, Charlotte. 1940. Documentation sur les graines de soja et leur utilisation pour l'alimentation de l'homme et des animaux, suivie de quelques considerations sur l'importance industrielle du soja [Documentation on soybeans and their utilization as a food for humans and animals, according to some considerations of the industrial importance of soya]. Paris: Ministère de l'Education Nationale, Centre National de la Recherche Scientifique, Section de la Recherche Appliquée. 48 p. Unpublished typescript. Jan. 30 cm. [200+ ref. Fre]
• ***Summary:*** Contents: Introduction. Chemical composition of soybean seeds: Proteins, nutritional value of the proteins, lipids, phosphatides, sugars, sterols, enzymes, minerals, vitamins. Soy flour. Soybean cake. The role of soya as a food. Some physiological effects of soya. Feed for cattle. Feed for pigs. Feed for sheep. Feed for birds. Experiments on animal feeding. General considerations on the feeding value of soya for animals. The soybean as human food. Various culinary preparations based on soya: Soy sauce, fermented soy beverages, soy sprouts, tofu, soymilk, soy bread or soy and wheat bread, soy oils and hydrogenated soy oil products, soy coffee, summary. Brief survey of industrial utilization of soybeans: Oil for preserving fish, cake for fertilizer, oil for foundry use, lubricants, plastics incl. sojalithe, other uses of soy proteins, glue, paint emulsions, artificial textiles, paints and varnishes, interior enamel, soaps, petroleum substitutes, explosives. Note: The extensive bibliography is full of errors. Address: 13, Quai d'Orsay, Paris (7eme), France. Phone: Invalides: 45-95 & 45-96.

3306. Mogi, Masatoshi. 1940. Miso jôzô ni kansuru kôbo no kenkyû (Zoku-hô). IV. Kôsatsu oyobi sôkatsu. (5). Kosatsu [Studies on the yeasts in miso fermentation. IV. Considerations and summary. (5). Considerations]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 16(1):7-17. Jan. [27 ref. Jap]
Address: Noda Shoyu K.K. Shikenjo: Brewing Laboratory, Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3307. Takata, Ryôhei; Nakae, Tadashi; Shimano, Asao. 1940. Amino-san chômiryô seizô ni kansuru kenkyû. XVII. Tanpakushitsu genryô toshite no tô-rui, dasshi daizu oyobi 2-3 kasu-rui [Preparation of amino acid seasoning. XVII. Beans, defatted soybean cake, and 2-3 other cakes as nitrogenous raw materials]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 18(1):24-28. [1 ref. Jap]
Address: Osaka Teikoku Daigaku, Kôgaku-bu, Jôzôgaku Kyôshitsu, Takada Kenkyûshitsu, Osaka, Japan.

3308. Yenko, F.M.; Baens, Luz. 1940. Rice as a substitute cereal in the manufacture of soy sauce. *Philippine J. of*

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Science 71(1):1-3. Jan. [2 ref]
• ***Summary:*** Rice is the most abundant cereal grain in the Philippines. Rice flour was found to be a good substitute for wheat flour or barley in the preparation of soy sauce by the mold-hydrolysis method. Soy sauce obtained after a month of fermentation contained 5.3% protein, and after 3 months 7.5% protein. Address: 1. Lissar Company; 2. Bureau of Science. Both: Manila, Philippines.

3309. Savarin Dutch Terrace. 1940. Where discriminating diners enjoy Sunday dinner (Ad). *Toronto Daily Star (Canada).* Feb. 3. p. 27.
• ***Summary:*** Sunday's huge full menu, which is given, includes "Chicken chop suey with rice and soy sauce." The cost, with live music: $0.75. Address: Bay at Adelaide, Toronto.

3310. *South China Morning Post (Hong Kong).*1940. Soya bean milk factory opened: War on malnutrition and T.B. March 10. [Eng]
• ***Summary:*** The article begins: "'What is wanted in the colony today is a source of supply of nutritious food which is cheap enough to be within the reach of the masses; and if we can meet a part of this urgent need, one of our main objectives will have been achieved,' said Mr. K.S. Lo, Managing Director of the newly-established Hong Kong Soya-bean Products Company, Limited, at the inaugural ceremony of the company's factory at Causeway Bay [on George Street, in Hong Kong] yesterday afternoon. Turning on a switch which set the factory in operation, the Hon. Mr. M.K. Lo officially declared the factory in open in the presence of a large gathering.

"Among those present were the Hon. Dr. P.S. Selwyn-Clarke, Director of Medical Services, and Mrs. Selwyn-Clarke, Dr. F.I. Tseung, Dr. J.E. Dovey, Dr. T.C. Li, the Hon. Mr. and Mrs. W.N. Tam. The guests were conducted over the works by Mr. K.S. Lo and Mr. Y.C. Kwan.

"Welcoming the guests, Mr. K.S. Lo said: 'To most of us, the soya bean needs no introduction. We come in contact with it every day in one form or another. It is the first thing that greets us on our breakfast table in the form of soy sauce, and to many Chinese it is also the last dish served on the dinner table in the form of a hot delicious soup. Its food value, long recognized by our fore-fathers, has been verified by chemists in modern laboratories. What is new here this afternoon is not Soya Bean, but the birth of our pet baby "Vita." And although "Vita" comes from the age-old soya bean family, she is as modern as our lass of 1940.

"'Vita is nursed and brought up in a hygienic home, scrupulously attended by its expert doctor, Mr. H.L. Hoover and a string of white-uniformed nurses. It is dressed up in modern romper with a hood as white as that of Snow White's. To make doubly sure that it will turn out to be a strong and healthy thing, we are feeding it with calcium, cod-liver oil and all the vitamins.

"'As "Vita" grows up, it will be followed by Vita butter, Vita cream, Vita biscuits, and Vita ice-cream.'" Some of the equipment from the United States for the factory has not yet arrived.

"'The present Director of Medical Services has set a new mile-stone in social progress in the Colony by his determined campaign against malnutrition and tuberculosis. The better-off community are well supplied with the best milk obtainable. It remains for us to look after the needs of the less fortunate, among whom are thousands of school children and wage-earners.'" Mr. M.K. Lo then gave a speech about the importance of good nutrition, and of an adequate intake of the "'protective foods' containing vitamins and mineral salts... Their absence has especially deleterious effects upon children and nursing and pregnant mothers.'"

Dr. Selwyn-Clarke, as Director of Medical Services, is making an energetic attack on tuberculosis and malnutrition, especially among the poor in the Colony. "'It seems to me that any concern which could produce, under approved hygienic conditions, soya bean milk in such quantity as to be available to the poorer section of the community, and at such low prices as to be within their means, would be rendering a public service to the Colony. I understand that the Hong Kong Soya Bean Products Company seeks to fill this role. It has imported the latest machinery and will produce soya bean milk cheaply and under hygienic conditions. I wish the promoters and the Company all prosperity and success.'"

Note 1. According to Vitasoy's 50th anniversary history (1990, p. 102), the English-language name of the company's first product was "Vita Milk." The name was changed on 11 June 1940 to "Sunspot."

Note 2. This is the earliest document seen (July 2000) concerning Vitasoy (named Hong Kong Soya Bean Products Co. Ltd. before 24 Sept. 1990).

3311. **Product Name:** Kreme O'Soys [Plain].
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1940. April.
Wt/Vol., Packaging, Price: 14 oz can. Retails (by mail order) for $0.15.
New Product–Documentation: Madison Health Messenger. 1940. 2(3):5. "Large jumbo hand-packed soy beans, a new variety in a special soy sauce, await your trail in Kreme O'Soys. So completely different are these extra-large delicious soy beans that you will be surprised with this new flavor and another new food."

3312. *Eat For Health (Rosenberg's, San Francisco).*1940. The versatile soy bean: Food of a thousand uses. Spring. p. 6-9.

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Address: Rosenberg's Original Health Food Store, 1120 Market St., San Francisco, California. Phone: MArket 3033.

3313. Mogi, Masatoshi. 1940. Miso jôzô ni kansuru kôbo no kenkyû (hoi). I. Keitaigaku-teki seishitsu [Studies on the yeasts in miso fermentation (addenda). I. Morphological characteristics]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 18(6):543-54. June. [Jap]
Address: Noda Shoyu K.K. Shikenjo (Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan).

3314. *Chicago Daily Tribune.*1940. Soy bean feast served 35 at cost of $10.87. July 4. p. 23.
• ***Summary:*** "A full seven-course dinner–everything from 'soy' to 'bean'–was served 35 members of the Chicago chapter of the Society of Grain Elevator Superintendents. And yesterday the diners, while admitting that even a good thing can be carried too far, said they had no regrets.

The idea of a soy bean feast originated with Dean Clark, national secretary of the organization." Recipes were obtained from a California firm.

Here's the menu: "Soy-carrot juice appetizer. Hors d'oeuvre (celery stuffed with soy bean paste [soynut butter]). Soy-mince soup and soy wafers. Soy-vegelona 'meat' course (tasted like bologna). Pineapple salad made with soy bean sandwich spread. Soy bean (100 per cent) bread. Soy butter. Side dish of (you guessed it) baked soy beans with soy sauce. Ice cream made with soy milk and soy fruities wafer. Coffee with soy milk. Roasted soy beans (for variety's sake)."

The superintendents were then given "a tour of the Glidden company's new elevator at 5165 West Moffat street–a soy bean extraction plant." The retail cost of the entire banquet was just $10.87.

3315. Simmons, Roscoe Conkling. 1940. The week. *Chicago Defender.* July 13. p. 15. National ed.
• ***Summary:*** Dr. George Washington Carver may have missed a report on the stylish seven-course soy-bean dinner given recently in Chicago by the Society of Grain Elevator Superintendents. "Beans have enjoyed Dr. Carver's important attention, but goobers have increased their fame under his spell." The full soy bean menu is given: "Soy-carrot juice appetizer. Hors d'oeuvres (Celery stuffed with soybean paste [soynut butter]). Soy-mine soup and soy wafers. Soy-vegelona 'meat course' (bologna like). Pineapple salad made with soybean sandwich spread. Soy bean (100%) bread. Soy butter. Side dish of baked soy beans with soy sauce. Ice cream made with soy milk and soy fruities wafers. Coffee with soy milk. Roasted soy beans."

"The cost of the banquet came to $10.87. This writer asked one of the superintendents about the after-effects of the feast. 'Easy on the pocket, pleasant to the appetite, agreeable to health,' he replied."

3316. LeClerc, J.A. 1940. Re: Manufacture of soy sauce. Letter to Dr. Harry W. Miller, International Nutrition Laboratory, P.O. Box 326, Mt. Vernon, Ohio, Aug. 19–in reply to inquiry. 2 p. Typed, without signature. [16 ref. Eng]
• ***Summary:*** "I was very glad to get your letter of August 12, and to learn that it will be possible to see you at Mount Vernon on the 23rd. I hope, of course, to see you also in Detroit at the meeting of the Soybean Convention."

In answer to Dr. Miller's request for information regarding the manufacture of soy sauce and its supplementation with "sodium glutamate," Dr. LeClerc encloses one bulletin from the Philippines, and cites 9 scientific articles, 15 U.S. patent numbers, and one British patent number.

The following are all interested in the manufacture of sodium glutamate: (1) Dr. W.O. Snelling, 110 South 13th Street, Allentown, Pennsylvania; (2) R.W. Greef, 10 Rockefeller Center, New York City; (3) Huron Milling Co., Harbor Beach, Michigan; and (4) Amino Products Company, Rossford, Ohio. Address: Senior Chemist, Food Research Unit, Agricultural Chemical Research Div., USDA Bureau of Chemistry and Soils, Washington, DC.

3317. *Food Industries.*1940. Formulas for foods. 12(8):99, 102. Aug.
• ***Summary:*** Page 102: Formula No. 104: Worcestershire sauce, No. 2. "Indian black soy sauce... 1 gallon."

Note: This is the earliest English-language document seen (April 2012) that contains the term "black soy sauce" or the term "Indian black soy sauce."

3318. National Tea Co. Food Stores. 1940. Our low prices mean big savings for you (Ad). *Chicago Daily Tribune.* Sept. 13. p. 25.
• ***Summary:*** The section featuring Chinese foods includes: "Soy sauce, Chinese Maid. 2 3-oz. bottles–17¢." Also includes Chinese Maid brand Chop Suey, Chow Mein, and Bean Sprouts.

3319. Balzli, Jean. 1940. La culture du soja "magique" et sa contribution au redressement de la France [The cultivation of the "magical" soybean and its contribution to the recovery of France]. *L'Eclaireur de Nice et du Sud-Est.* Sept. 17. Later published Revue Internationale du Soja, March 1941, p. 41-45. [1 ref. Fre]
• ***Summary:*** Includes a discussion of uses for human foods, including defatted soy flour, soy coffee, soy chocolate, Worcestershire sauce, soymilk, tofu, and soy sprouts. Other uses include lecithin and industrial uses of soy oil and soy proteins.

3320. *Food Industries.*1940. Formulas for foods. 12(9):101, 104. Sept.

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• ***Summary:*** Page 104: Formula No. 113: Worcestershire sauce, No. 3. "Japanese black soy sauce... 1 gallon."

3321. McBride, Gordon W. 1940. What's happening with soybeans? *Food Industries* 12(10):55-57. Oct.
• ***Summary:*** "Greatly increased production, with accompanying increase in soybean oil output and wider utilization of other soybean products, is influencing all food industries." Discusses, with many statistics, the utilization of soybeans in the USA, including the amount used for oil (crude and refined; nonfood and food), meal, industrial proteins, and foods. An interesting table on page 56 states that the following foods are made from soybean meal: bean powder, bean curd, soy sauce, soy milk, breakfast food, invalid foods, soy flour, infant foods, ice cream, baked goods, macaroni, and sausage. Whole soybeans are used to make sprouts, cooked beans, soy sauce, confections, breakfast foods, meat substitutes, and coffee substitutes. Either whole soybeans or soy flour are used to make "fresh vegetable milk," which can be further processed to make condensed milk, dried milk, confections, cheese, or casein.

"In addition to the increasing quantities of soybeans that are brought to the market as a fresh green vegetable, larger quantities of the green beans are being canned each year. One unofficial estimate placed the 1939 pack at 15,000 cases (24 one-pound cans each)."

A photo shows the soybean products plant of Archer-Daniels-Midland Co. recently erected at Decatur, Illinois. Address: Chemical Engineer, Washington, DC.

3322. Noda Shoyu K.K. 1940. Noda Shôyu K.K. Nijûnen-shi [Twenty-year history of Noda Shoyu, Inc.]. Noda, Japan: Noda Shoyu K.K. 733 p. Illust. No index. 22 cm. [Jap]
• ***Summary:*** This is the first major history of Kikkoman, written largely by Mr. Morio Ichiyama. Contents: Preface. 1. History: Before the establishment of Noda Shoyu K.K. (The origin and its changes {Thoughts on its origin, Tokugawa period, Meiji period, beginning of the Taisho period}, development of shoyu industry and the town of Noda, Noda Shoyu Jozo Kumiai, family trees and family traditions of the Mogi, Takanashi, Horikiri, and Ishikawa families, virtues of the family), foundation of Noda Shoyu K.K. {the opportunity to unite, the establishment of a joint undertaking}, 20 years after the establishment. 2. Organization and management. 3. Plants (17): Korea, Jinsen?, Keijo plants. 4. Fermentation process: Special products (mirin, miso, sauce), testing center. 5. Business. 6. Cultural welfare facilities. 7. Connected enterprises: K.K. Noda Shoyu Ginko, Sobu Tetsudo K.K., Noda Transportation K.K., Gomei Company Senshukai, Foundational Juridical Perdon Kofukai, Manchuria Noda Shoyu K.K., Choshi Shoyu K.K.

Appendixes. Timeline / time table / chronology: Ranking of capital investments of shoyu producing companies in Japan, graph of yearly shoyu production in Japan, sales of shoyu, mirin, and miso by the company, sales of the company's shoyu comparing by area and also container, the company's shoyu exporting map, average sales of the company's shoyu, prices of raw materials of shoyu production, prices of shoyu in different type containers.

Pages 461-65 give an introduction to and description of each of the major brands produced by companies presently in the Noda Shoyu group. Under the Kikkoman brand, we learn that the producer of this brand of shoyu is the Saheiji MOGI family. It is said that the logo was designed by Manpei SARANUMA. It is said that the meaning and origin of the brand is as follows. The first "big army of God" in Japan was honored at a place named *Shimousa no Kuni, Kikkô mountain* (*Kikkô-zan*), *Katori Shrine* (*Jingu*). The name of the mountain, Kikkô, was used in the brand. The tortoise (*kamé*) symbolizes long life and is thus a symbol of happiness. It is said that a tortoise lives for 10,000 [*ichi-man*] years. The grace with the tortoise is born shows high-class dignity with supernatural power.

Pages 466-480 show all of the shoyu brands (including minor ones) produced by companies in the Noda Shoyu group. For each brand, the name, year of introduction, quality rank, and area where sold are given. Early brands, those introduced before the start of the Meiji period (1868), are read from top to bottom, right to left.

The Saheiji MOGI line produced a total of 15 shoyu brands. The earliest was introduced in 1784. Early brands were: Kikkôman (Tenmei 2 = 1784), Kikkôdai (Tenmei 2 = 1784), Azumaichi (Tenmei 2 = 1784), Yamataika (Tenmei 2 = 1784).

The Shichirouemon MOGI line produced a total of 58 shoyu brands. The earliest was introduced in 1772. Early brands were: Kihaku (Anei 1 = 1772), Kagikashiwa (Anei 1 = 1772), Fujikashiwa (Anei 1 = 1772), Shôchikuba (Anei 1 = 1772), Kikkôkashiwa (Tenmei period = 1781-89), Hôzan (Kaei 2 = 1849).

The Shichizaemon MOGI line produced a total of 30 shoyu brands. The earliest was introduced in 1830. Early brands were: Kushigata (Tenpo 1 = 1830).

The Hyôzaemon TAKANASHI line produced a total of 39 shoyu brands. The earliest was introduced in 1772. Early brands were: Jôjû (Anei 1 = 1772), Betatakara (Anei 1 = 1772), Tachitakara (Anei 1 = 1772), Jigamisakari (Anei 1 = 1772), Fundonokina (Genji 1 = 1864), Fujitakara (Kaei 2 = 1849).

The Fusagoro MOGI line produced a total of 48 shoyu brands. The earliest was introduced in 1753. Early brands were: Minakami (Ansei 2 = 1855), Fujimasa (Hôreki 3 = 1753).

The Noda Shoyu Goshi Gaisha produced a total of 13 shoyu brands, the Keizaburo MOGI line produced a total of 7 shoyu brands, the Monjiro HORIKIRI line and the Kanzaemon YOSHIDA line each produced one brand, and the Nihon Shoyu K.K. produced 2 brands, but all were

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introduced after the start of the Meiji period (1868).

A section on exports (p. 650-) notes that it is not clear when direct exports of shoyu from Japan to the western world began, but at some time during the Bunsei (1818-1830) or Tempô (1830-1844) periods it was shipped to Holland along with other goods. In 1854 (at the start of the Ansei period, 1854-1860) an American ship came to Japan and during the stay they bought some Japanese shoyu. Also during this same Ansei period it is said that special shoyu was made for export. Made by Sairinko SHIMAZU, it was bottled and shipped via Holland House (Oranda Yashiki) in Nagasaki.



Contains many photos and illustrations. Two of these, on unnumbered pages near the front of the book, are of special interest: (1) MOGI Shichirouemon (lived 1860-1929) was the first president and CEO (*shodai torishimaru shacho*) of Noda Shoyu Inc., which began operations on 1 Jan. 1918 and was the forerunner of today's Kikkoman. An inspiring tribute and eulogy to him appears in: Fruin, W. Mark. 1983. *Kikkoman: Company, Clan, and Community* (Harvard University Press, see p. 129-54). In 1889 he assumed headship of the Kashiwa family branch, then became the most influential director of the Noda cartel. After 1900 he was probably the most widely known and respected shoyu maker in Japan.



(2) MOGI Saheji was the first senior executive manager (*jomu torishimaruyaku*) of Noda Shoyu Inc. Saheji succeeded Shichirouemon as president of Noda Shoyu Inc. Saheiji is the name of a *bunke* or branch family. Anyone born or adopted into the family takes the name. So at one time this Saheiji was the head of a branch family of the Mogi clan that had among its brands, the Kikkoman brand.

Note 1. Fruin (1983, p. 302-03) further clarifies the relationships: Since the establishment of Noda Shoyu, Inc. "in 1918, kinship has been employed not for interfamily cooperation but for interfamily rivalry. Household membership has become all-important in determining access to the upper reaches of corporate power. Consider the following statistics... Of the twenty-eight main and branch households in the three Mogi, Takanashi, and Horikiri *dôzoku* (see figure A-1).... the percentage of households" by lineage that engage in shoyu manufacture is as follows: "Horikiri, 13; Takanashi, 50; Mogi, 53." But "within the overall Mogi clan one main and two branch households contend. The importance of the subdivisions within the Mogi clan is revealed by the fact that, although eight of the company presidents to date have been Mogis, within the greater Mogi lineage 63 percent of the company presidents can be traced to the Kashiwa branch household of Mogi Shichirouemon, 25 percent from the Mogi-sa group of Mogi Saheiji, and only 12 percent from the main house of Mogi Shichizaemon. Household hegemony was reflected as well

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on the first board of directors, with 67, 22, and 11 percent representation for the households of Mogi Shichiroeumon, Saheiji, and Shichizaemon respectively."

Note 2. A *dôzoku* is a lineage or clan composed of several stem families or descent groups, called *ie* (Fruin, p. 343, Glossary). Address: Noda, Japan.

3323. *Ohio Farmer.* 1940. Now its soybean milk! This and other foods produced by new Ohio plant. 186(11):10. Nov. 30. Whole No. 4606.

• ***Summary:*** About the work of Dr. Harry W. Miller (of Ohio and China) with soymilk. Today, because of the Japanese invasion of Shanghai, there now stands in Mt. Vernon, Ohio, a plant producing soybean milk, powder, and a number of products from the edible soybean. The head of this company, International Nutrition Laboratory, is Dr. H.W. Miller, who was born in Miami County, Ohio, and educated as a surgeon. For many years he was head surgeon in an American mission hospital in China. During this time he saw the need for milk and other dairy products in China; they were unavailable to most people due to the high cost and short supply. So he and his associates started a plant in Shanghai for the production of soybean milk. In 1937, at the time of the Japanese invasion, they had 15 delivery boys going out each day on bicycles to deliver the soybean milk to thousands of customers.

When Japanese bombs destroyed the plant in 1937, Dr. Miller decided to relocate near Mt. Vernon, in Knox County, Ohio. He and his sons built the plant, and also designed and built much of the equipment in it. According to Dr. Miller, soybean milk "is more quickly assimilated by the body than animal milk, it gives a quick recovery from exhaustion and fatigue, and is especially desirable as a food for infants and invalids. The liquid and powdered soybean milk produced in this plant is sold to doctors and hospitals all over the United States..." The steps in the process are described. They also make Mien Jing, based on wheat gluten, to which are added fresh vegetables and soya sauce to make a nutritious food with a meat-like flavor.

"During the past summer this plant also packed a quantity of edible soybeans. These were canned, both as green beans, and dried beans with tomato sauce added. Another product is a soybean flour..."

Some of the edible soybeans used in this plant were grown on the farm run by Dr. Miller near Mt. Vernon and by farmers in the neighborhood. However it has been necessary to import a large portion of the soybeans from other states.

Dr. Miller's organization is presently establishing another plant for the production of soybean milk in the Philippines. Moreover, 2,000 pounds of powdered soybean milk were recently shipped to China from Mt. Vernon.

Photos show: (1) Dr. Harry Miller, seated at a desk in a coat and tie, examining samples of edible varieties of soybeans. (2) The plant of the International Nutrition Laboratory near Mt. Vernon, Ohio. (3) A worker inspecting a can of edible soybeans, which are packed in cans and labeled, ready to ship to all parts of the USA.

3324. **Product Name:** Miller's Mien Jing. Renamed Savory Vegetable Cutlets. Renamed Miller's Vegetarian Cutlets by Sept. 1946, then Miller's Vegetarian Cutlets (Mien Jing) by Jan. 1946, and Miller's Vegetarian Gluten Cutlets by 1948.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1940, November.
Ingredients: Incl. wheat gluten and probably soy sauce.
Wt/Vol., Packaging, Price: Canned, No. 10, 30 oz. or 20 oz.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: *Ohio Farmer.* 1940. Nov. 30. p. 10. "Now it's soybean milk!" At their plant in Mt. Vernon, Ohio, Dr. Miller and his sons make Mien Jing, based on the "gluten of wheat flour, to which is added fresh vegetables and soya sauce, making a nutritious food with a meat-like flavor."

International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 4. Miller's Mien Jing: Wheat "gluten, or cereal protein, is the basic food element in Miller's Mien Jing. Mien Jing is the Oriental name meaning processed gluten. A high protein wheat flour is washed free of starch, and small slices of the remaining gluten are processed with fresh vegetables and soya sauce, making a highly nutritious food, quite meat-like in taste. This gluten food was first introduced into this country by us, and our Mien Jing, or gluten cutlets, has the genuine flavors that have popularized this food in the Orient... It requires only a little cooking to make Mien Jing into many savory dishes, such as stews, croquettes, entrees, and also Oriental dishes such as Chow Mien and Chop Suey."

Ad in *Soybean Digest.* 1942. Sept. p. 16. "Miller's Soya Products." Ad in *Soybean Digest.* 1944. Sept. p. 61. "Meet the Vegetable Cow." International Nutrition Laboratory now sells Miller's Vegetarian Cutlets in uniform slices or diced form. This popular product has a high protein value.

Ad in *Soybean Digest.* 1946. Sept. p. 79. "No meat?–Try Cutlets." A large photo shows the can. The front panel states: "Delicious when grilled or broiled. Protein food for meat pies, grills, chop suey." The ad text reads: "You may be one of those many folk who will consider Vegetarian Cutlets as a more satisfactory article of diet than fish, fowl, or meat. This tender meat-protein substitute is manufactured from a selected portion of the wheat [gluten], healthfully prepared and tastily flavored, providing a highly nutritious and tempting food for any meal. Cutlets are very low in starch, high in body building qualities, resemble meat in taste.

"Miller's Cutlets may be prepared and served in many ways–lightly grilled as they come from the can–dipped in egg and rolled in cracker crumbs, corn meal, or potato flour

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and browned–used in stews, pot pies, and chop suey. With these delicious cutlets a quick meal, balanced in protein, can readily be prepared.

"Miller's tenderized cutlets are packed in three sizes: No. 10, 30 ounce, 20 ounce. If your dealer does not have Miller's Cutlets, write for information."

Note: The Chinese name on the label probably indicates that Dr. Miller learned about this gluten-based product during his years as a physician in China, and that he was marketing it to Chinese-Americans (as well as Caucasians) in the USA.

Soybean Blue Book. 1948. p. 84. Talk with Clarence Miller. 1986. The best seller at Mt. Vernon was Miller's Vegetarian Cutlets, a canned gluten entree, but they were not so profitable since they cost so much to make. 100 lb of flour yielded only 30 lb of gluten and 70 lb of starch. The latter was sold for wallpaper glue.

3325. Kihara, Kiyoshi. 1940. Untersuchungen ueber den Geruch von Syôyû, I-III. [Investigations on the aroma of soy sauce. I-III]. *J. of the Society of Chemical Industry, Japan* 43(11):403B. Nov. Supplemental binding to Kogyo Kagaku Zasshi. [Ger]

• ***Summary:*** Contents: I. The volatile constituents. II. The less volatile constituents. III. On the similarity between shoyu and the products resulting when soybeans are hydrolyzed with hydrochloric acid. Address: Kagawa prefecture Shoyu Laboratory, Japan.

3326. Kihara, Kiyoshi. 1940. [Investigations on the aroma of soy sauce. I-III.]. *Kogyo Kagaku Zasshi* (*J. of the Society of Chemical Industry, Japan*) 43(11):876-83. Nov. German summary p. 403-B. Supplemental Binding. [Jap; ger]

• ***Summary:*** I. Volatile constituents. II. The nonvolatile constituents. III. Comparison between soy sauce and chemical hydrolyzate of soybeans. Address: Kagawa prefecture Shoyu Laboratory, Japan.

3327. Lager, Mildred. 1940. New items not listed in our catalog. *House of Better Living* (*Newsletter, Los Angeles*) 12(59):4. Nov.

• ***Summary:*** Items are listed by category in 2 full-page columns. Bakery goods: Penna 100% soy cookies, pkg. 18¢ (Lemon, almond, vanilla and chocolate flavor). Soy orange drops, doz. 15¢. Bill Baker's 100% soy bean cookies, pkg. 10¢.

Breakfast foods: Soy grits, lb. 20¢.

Coffee substitutes: Brevy. Nuveco. Ficgo in bags, box 25¢. Soy Koff, regular or drip, pkg. 25¢. Kofy Sub. Dr. Jackson. Cassa Fistula Bean. Date sugar.

Figs: Black Mission. Kadota. Calimyrna.

Dulse tablets. Thompson. Cereophyl tablets or powder (powdered grass [like chlorophyll]).

Juices–unsweetened: Soy and carrot juice, 8-oz. 10¢; 16-oz. 15¢.

Kitchen equipment: Zippy juicer, $49.50. Juice-O-Mat, $3.29. Hollywood Liquifier, $24.75. Note 1. This is the earliest English-language document seen (July 2006) that uses the word "Liquifier" to refer to an electric blender, or that mentions the "Hollywood Liquifier," an early brand of electric blender, or that contains the word "Hollywood" in the name of an electric blender.

Meat substitutes: Vegelona, 10¢, 25¢ can. Yum, 10¢, 25¢, 50¢ can. Gluten steak, 17¢, 27¢ can. Note 2. This is the earliest English-language document seen (Feb. 2005) that contains the term "Gluten steak."

Noodles: Pfaffman [Williamsport, Pennsylvania] soy noodles, pkg. 13¢; 2 for 25¢. Gluten noodles, pkg. 25¢. Peanut oil, unrefined.

Penna Soya Products: Toasted soy nuts, pkg. 5¢; ½-lb 20¢; 1-lb. 36¢. Tenderized soy bean, 1-lb pkg. 25¢. Rokusun soy bean, lima type, 1-lb. pkg. 25¢. Soya puffs, ½-lb. can 25¢. Soya malt, ½-lb. 23¢; 1-lb. 43¢. Soya cocoa malt, ½-lb. 23¢. Soya cocoanut, ½-lb. 23¢. Soya banana, ½-lb. 30¢. Soya milk powder, plain, 1-lb. can 25¢. Soya milk powder, sweetened, 1-lb. can 25¢. Soya roast, 15-oz. 25¢. Soya loaf, 15-oz. 25¢. Soya sauce, 4-oz. 12¢; 8-oz. 19¢; 16-oz. 35¢. Soya virgin oil, 4-oz. 15¢; 8-oz. 23¢; pint 37¢; quart 67¢; ½-gallon $1.05; gallon $1.95. Soya cookies, 100%, pkg. 18¢.

Salt: Bragg Sprinkle, can 50¢. Soy-B-Malt, Cubbison, 8-oz. 25¢.

3328. **Product Name:** Yum (Bologna-Like Canned Meatless Loaf with Tofu).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1940. November.
Ingredients: Soybeans, gluten, soy cheese [tofu], whole peanut meal, seasonings.
Wt/Vol., Packaging, Price: No. 2 can. 20 oz.
How Stored: Shelf stable.
Nutrition: Protein 19.1%, fat 11.1%, carbohydrates 11.5%, ash 2.5%, calories 221/100 gm.
New Product–Documentation: Ad (2¼ by 3 inches) in *Nature's Path* (USA). 1940. Nov. p. 428. "Yum, a new food." "For years Madison Laboratories have been experimenting with this new food to make it very tasty and yet being ever careful not to season it to the point of limiting its appeal to those who like the very spicy foods... Compounded from wheat gluten, soy beans, nut meal and vegetable seasonings, this new food... is right on the front row of body-building protein foods." Gives two recipes: Yum meatless balls. Breaded Yum cutlet. "Free: the *Madison Health Messenger* with new health news, soy bean information, new recipes, charts, etc. Obtain from your health food store or write to: Madison Foods, Madison College, Tennessee."

Madison Health Messenger. V. 49-2. p. 5. Can be used hot or cold. Taylor. 1944. The Soy Cook Book. p. 201.

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Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Yum contains 16.00% protein, 5.20% fat, and 11.26% carbohydrate. Not listed in the 1965 *Diet Manual.*

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Yum (Madison)." The ingredients are now: Wheat protein [wheat gluten], processed soybean, peanuts, soya flour, rolled oats, soy sauce, vegetable oil, tomato puree, onions, yeast extract, salt, garlic, MSG, hydrolyzed vegetable protein, sage.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned product resembling cold cuts, made from wheat [protein] soy, and peanuts. It can also be used in salads or sandwiches. Now made by Worthington Foods.

3329. **Product Name:** Soy Sauce.
Manufacturer's Name: Penna Soya Products (Marketer-Distributor).
Manufacturer's Address: Williamsport, Pennsylvania.
Date of Introduction: 1940. November.
New Product–Documentation: House of Better Living. 1940. Nov. p. 4. 4 oz. for $0.12, 8 oz. for $0.19, 16 oz. for $0.35.

3330. Read, Bernard E.; Wagner, W. 1940. Shanghai vegetables. *China Journal (The)* 33(5):206-20. Nov.; 33(6):259-71. Dec.
• ***Summary:*** In the "Science" department, the Introduction begins: "Recent advances in the science of nutrition show the great need for more so called Protective Foods in the diet. This term refers to those things which are rich in essential vitamins and minerals."

In section 2, "The Legumes" (p. 210+), the first two entries are: (1) The soybean. Latin names. Chinese name: (Cc = Chinese characters given), Ta Dou. "The yellow, black and green varieties are common in China and marketed from Manchuria, Tsingtao and Shanghai. The young soybean in the pod is a common article of diet in Shanghai, Chinese name, Cc. Shanghai: *Mau Deu;* Peking, *Mao tou.* Followed by: season, price, nutritive value, and a recipe.

(2) Soybean sprouts. Chinese name, Cc. Shanghai: *Waung Deu Nga;* Peking, *Huang Tou Ya.* Followed by: season, price, how to make, nutritive value, and serving suggestions.

"There are very many other soybean preparations of high nutritional value well worth adding to the diet. Soybean sauce (soy) with added spices is the basis of such things as Worcester [Worcestershire] sauce. Beancurd is really a king of junket containing good digestible protein, it can be added to soups or stews. Made fresh daily... A dry cake is made [pressed tofu], also spiced, pickled, fried and fermented. The latter is just like a kind of strong cheese." Soybean milk is made by "grinding the [soy] bean with water, one part of bean to about 9 of water

Photos (on unnumbered pages, against a black background, with a small cm ruler show): (1) Four young soybean pods with beans inside. Four soybean sprouts 8-10 cm long.

Also discusses many other edible Chinese legumes. Address: 1. Henry Lester Inst. of Medical Research; 2. Public Health Dep., Shanghai Municipal Council.

3331. LeClerc, J.A. 1940. Re: Soy sauce. Letter to Mr. E. Bradley Fairchild, P.O. Box 2, Manila, Philippine Islands, Dec. 10. 1 p. Typed. [1 ref. Eng]
• ***Summary:*** "Dear Sir: I have been requested by Mr. W.J. Morse, of the Bureau of Plant Industry, to send you such information as we have on the preparation of soy sauce by the use of hydrochloric acid.

"Is is my understanding that most of the soy sauce made in this country at the present time is produced by the modern process of using hydrochloric acid for the conversion of protein rich material such as gluten, soybean pressed oaks, etc. This process can be completed in about two days, whereas the old process used in China requires from six months to two years. Furthermore, the new process is much more sanitary. On a laboratory scale we have made soy sauce in this way as follows:

"Take 15 grams of wet gluten and 80 cc of 3.7% HCl [hydrochloric acid] (1+9). This is heated in an autoclave at 20 pounds pressure for 3 to 4 hours. The digested material is then concentrated to one-half its volume and neutralized with an alkali, or rather almost neutralized. This is then filtered and the product thus obtained is similar in most respects to soy sauce." Address: Senior Chemist, Agricultural Chemical Research Div., USDA.

3332. Rabbit, James A. 1940. Rice in the cultural life of the Japanese people. *Transactions of the Asiatic Society of Japan* 19:187-257. Dec. Series 2. Plus 6 pages of unnumbered plates at end. A lecture delivered before the Asiatic Society of Japan, Nov. 1939. [33 ref]
• ***Summary:*** This is an in-depth article by an expert on the subject. Contents: Foreword. The sacredness of rice. The honorable rice throughout the year. Rice in Japanese literature. Rice and religion. Socio-economic influences.

Page 243: "Intercourse with foreign countries, limited as it was from the 16th to the middle of the 19th centuries, has not been without its influence on the national cookery, as is evidenced by the introduction of such exotic foods as *sukiyaki* or *gyûnabe* (beef and vegetables fried in a flat pan with *shôyu* sauce), *torinabe* (fowl and vegetables fried in a flat pan with *shôyu* sauce), tempura (fried in batter) and many other dishes which are still considered to be almost a part of the Japanese menu, particularly in the thousands of eating houses of the metropolitan cities."

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Page 244: "The trinity which constitutes the bulk of Japanese daily fare consists of rice, *miso* (bean paste) [sic, soup], and *tsukemono* (pickled vegetables cured with salt or a mixture of rice bran and salt)."

On p. 245 is an interesting discussion of *genmai* (uncleaned rice [brown rice]). "This *genmai* with a generous mixture of wheat was for a long time the staple food among farmers... Although the superior nourishment of *genmai* is well known at the present time and has received much publicity, those who favor its universal adoption are looked upon as faddists, similar to the attitude toward vegetarians in western lands."

Page 255: In Japan there a huge variety of places to eat, "which range from a street stall selling soba (hot buckwheat noodles covered with soy [sauce] with a sprinkling of green onions) to the semi-private club-like *machiai* (waiting house)...

Pages 256-57 discuss the origins, history, and present status of sushi. Today there are an estimated 1,500 to 1,600 sushi shops in Tokyo alone; in addition to these about 500 small stalls appear each night. Describes the arts of making and eating sushi. "After dipping it into a dish of *shôyu* (soya bean sauce), place the dripping sushi into your *kuchi* (mouth) without the loss of one drop of sauce and in such a manner that the fish side comes in contact with the tongue before the rice." Address: Japan.

3333. Fujii, T. 1940. Shôyu jôzô narabini sonota 2, 3 no genryô to shite shiken seru "kiyatsusabaruto" (mata wa katsusaba) [Shoyu brewing using cassava root and several other raw materials]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 35(5):456-60. [Jap]

3334. Fujii, T. 1940. Shôyu tanpakushitsu genryô daizu aruiwa daizu kasu daiyô toshite sufu zansa no riyô [Brewing shoyu using "sufu" residue as a protein source substitute for soybeans or soybean cake]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 35(6):532-33. [Jap]
• ***Summary:*** Sufu means "staple fiber," not "fermented tofu." It is a by-product of artificial wool made from soybeans or defatted soybean cake.

3335. **Product Name:** Granose Saviand (A Meatless Savoury).
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1940.
Ingredients: Wheat protein, cashew nuts, soya flour, yeast, salt, hydrolised vegetable protein, onion, caramel.
Wt/Vol., Packaging, Price: 284 gm (10 oz) can.
New Product–Documentation: *The British Vegetarian.* 1960. Sept/Oct. p. 249. Granose produces Saviand, containing wheat gluten, ground nuts, yeast extract, onion, and caramel.

Manufacturer's catalog. 1980. April. "A product similar to Protose but with the addition of onion flavouring."

Form filled out and Label sent by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1940. Label. 1990. 8.5 by 3.75 inches. Orange, black, and yellow on white. Two color illustrations of a Savoury (like a U.S. turnover, with a crust) on a plate with a spatula underneath it. "A blend of wheat protein and nuts. Contains no animal products. Saviand is a delicious savoury which is ready to serve either cold with salads or hot in pies, hot pots, etc. Slice or dice it. Ingredients: Wheat protein, water, peanuts, soya flour, yeast, salt, hydrolysed vegetable protein, onion powder, caramel. Dietary analysis upon request." This canned product is similar to Spam or Nuttolene. It is not sold in the pastry crust.

3336. **Product Name:** Miller's Soya Curd. Renamed Miller's Soya Cheese.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1940.
New Product–Documentation: International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. "3. Miller's Soya Curd: This delicate protein food is made by coagulating Miller's Soya Lac with lactic acid and then blending this soft curd with tomato puree, pimento and Soya Sauce. It is a pleasing protein addition to salads, or for spreading crackers and sandwiches."

Ad in *Soybean Digest.* 1942. Sept. p. 16. "Miller's Soya Products."

3337. **Product Name:** Miller's Soya Sauce (Importer-Marketer). Made in South China.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1940.
How Stored: Shelf stable.
New Product–Documentation: International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 5. Miller's Soya Sauce: "Produced in South China where the finest soya sauce is made, insuring a pure and highly concentrated product. It should be used in flavoring all protein dishes where a meat-like flavor is desired."

3338. Suzuki, T. 1940. Shôyu kasu sei tane kôji ni tsuite [Koji starter made from shoyu cake]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 35(6):539-40. [Jap]

3339. Bragg, Paul C. 1940. The four generation health food cook book and menus. Los Angeles, California: Published by the author. Printed by Aetna Printing Co., Los Angeles. 169

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p. Illust. No index. 24 cm.
• ***Summary:*** This book is especially interesting for the genealogical information and family photos it contains. Paul Bragg is now a grandfather [with two grandchildren], apparently unmarried, with three living children: Lorraine Bragg Stoddard, Polly Bragg, and Bobby Bragg. Lorraine has a son named Shocky. Paul's father, also apparently no longer married [to Carrie Chappius], is called "Daddy Bragg" and "Grand-daddy" Bragg; his true name [Robert E. Bragg] is not given. A nice portrait photo shows each of the family members separately; they all look healthy and happy. The cover photo shows Paul Bragg standing by a stove wearing a chef's white top hat and white clothing, and holding up a tasting spoon. The frontispiece is a half page photo showing Paul, his father, Lorraine, and Shocky seated, side by side on a wall, facing forward, each with arms around the back of the person setting next to him or her. The text states: Each of them displays the highest type of physical perfection in normal weight, abundance of energy, vitality, and absolute freedom from sickness." They attribute this perfection to their diet, but they "are not faddists."

Contents: Part I: Four generation menus. 1. Daddy Bragg's first generation menus: Everyday menus for the 'past middle age' group, high energy diet for the youthful maturate. 2. Paul Bragg's second generation menus: The gaining diet, the reducing diet, maintaining normal weight, supreme vitality diet. 3. Lorraine's third generation menu: The modern housewife's health and beauty menu. Polly's third generation menu. Bobby's third generation menus: The athlete's menu, the camper's menu. 4. Shocky's fourth generation menus: Baby's diet, children's foundation diet.

Part II: Important principles of modern health food cookery: Introduction, food combinations–are they necessary? (no), condiments (avoid vinegar, cayenne pepper, Worcestershire sauce), cooking utensils (avoid aluminum and tin), health cocktails (made of fruit or vegetable juices), should we drink liquids at meals? (is fine if you wish), how to enjoy food, milk (important for its calcium), shortenings (some are OK, as from peanut oil, sesame seed oil, soybean oil, corn oil, etc.), salt (use in moderation, or use Sprinkle), white sugar (avoid), white flour (avoid), foods to avoid (long list, starting with alcoholic beverages, soft drinks, tea, coffee, tobacco, and drugs), the adequate diet (includes as serving of soybeans once a week, and 2 tablespoons of vegetable oil, such as soybean oil, daily), the importance of supplementary feeding (vitamin and mineral supplements plus orange juice and Tava–a drink rich in vitamins).

Part III: Recipes. 1. This is the way to prepare delicious, healthful soups. Chapter 10 is about meat substitutes, and calls frequently for Bragg Meal Wafers, Bragg Broth or Bevron, Bragg Meal cereal, etc. Chapter 11, which is about meats, begins: "Meats are one of the greatest energy building foods we have when properly prepared." Recipes call for steak, chicken liver, sweetbreads, veal kidney, boiled heart, scrambled brains, stewed tripe, roast beef, meat loaf, leg of lamb, roast chicken, roast turkey, etc.

The most important principle is (p. 25): "Eat food as close to Nature as you possible can. Keep it primitive." Brown rice is the best type of rice. Molasses must not contain sulphur dioxide. Honey is the best sweetener, followed by raw sugar or brown sugar. Raw milk is preferred. Avoid foods that contain "benzoate of soda or lye" [preservatives] or any other synthetic ingredient. Unsulphured dry fruits are the best. Use natural cheese, not processes. Avoid cured meats such as ham, bacon, corned beef, salami, bologna, or frankfurters. Buy whole grain flour and cereals. Avoid vinegar and baking soda. Try to save and eat the skins of vegetables, such as potatoes, carrots, beets, tomatoes, etc.

Note: Polly Bragg married a Mr. Sorrel and on 10 Feb. 1936 gave birth to a boy, Robert Paul Sorrel, in Los Angeles. Address: P.O. Box 428, Burbank, California.

3340. Carqué, Otto. 1940. Vital facts about foods: A guide to health and longevity with 200 wholesome recipes and menus and 250 complete analyses of foods. 4th ed. Glendale, California: Natural Brands, Inc. 239 p. 23 cm. Revisions and supplements by Mrs. Lillian R. Carqué.
• ***Summary:*** This manual of food reform discusses the importance of a simple vegetarian diet, fresh air, pure water, exercise, and rest. Also discusses acid and alkaline foods, the treatment of disease, and food preparation. The author lived 1867-1935.

The nutritional value of soy beans is discussed briefly on pages 113, 145, 153, 162, and 174. The section titled "The Soy Bean, a Remarkable Food" (p. 176-78) describes and discusses boiled soy beans, soy bean milk, tofu, soy sauce, and soy bean sprouts; recipes for Baked soy beans, Soy bean loaf, and Soy bean bread are given. A table (p. 221) gives the average chemical composition of various legumes, including soy beans. Address: Los Angeles.

3341. Fukai, Tôshi. 1940. Kagaku shôyu to daiyô genryô shikomihô [How to make HVP / chemical shoyu and shoyu using substitute ingredients]. Tokyo: Konno Shoten Shuppanbu. 151 p. 23 cm. 2nd ed. 1941 (164 p.). [Jap]*
• ***Summary:*** The author was born in 1888. Address: Japan.

3342. La Choy Food Products, Inc. 1940. The art and secrets of Chinese cookery. Detroit, Michigan: La Choy Food Products. 18 p. Illust. (some color). 11 x 16 cm. *
• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home.

3343. Mariposa. 1940. Hollywood glamour cook book. Miami, Florida: Glamour Publications. Distributed by M. Barrows & Co. xviii + 427 p. Portrait. No index. 21 x 16 cm. [3 ref]

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• ***Summary:*** The author presents herself as a glamour girl, who lives in Miami, Florida. She is "Your 'Mystic Pot, with herbs and spice. I charm your meals and make them nice." "Foreword: You must have wondered how the Movie Stars keep so glamorous, vivacious, young-looking and slender, they seem more like gods and goddesses than real people. No wonder they are fairly worshipped by the Movie Fans! This book will disclose to you the beauty secrets of the Movie Stars..." The key is a healthy diet and herbs.

Recommended foods: Whole wheat and soy bean spaghetti, La Choy Soy Sauce and La Choy Molasses Sauce, Soy bean crackers, goat's milk (not cow's milk), all seafoods, fish, poultry, rabbit, venison, lamb, frogs' legs. Foods to avoid: White bread, white flour, white sugar, white rice, spaghetti etc, made of white flour, beef, veal, pork, lard, suet, grease, sulphur dried fruits, table salt ("free running," iodized, but "bag salt" is OK), most soda fountain drinks, "pop" or any drink put up with carbonated water, gassed, dyed, or faked foods. Soy-related: "Legumes" include soy beans (p. xi). Soy honey bread (with soy bean flour and soy milk, p. 7). Soy honey rolls (p. 8). Soy corn sticks (with soy bean flour, p. 22). Soy vegetable flour sticks (p. 23). Soy waffles (p. 24). Soy [pie] crust (p. 35-36). Soy short cake (p. 52). To make soy bean milk and corn milk (from soy bean flour, p. 78-79). Soy milk and carrot juice (p. 79). Soy bean coffee (p. 83). Coffee substitutes (incl. soy, p. 85). Canapes d'amour (with soy bean bread, p. 102). To cook Soy Sea Shells or Soy Macaroni (p. 122). Soy kidney pie (p. 132). Soy macaroni or spaghetti (with soy or Savita Sauce, p. 200). Soy beans–highlights (p. 213-14). Soy baked beans (p. 214). Proteins (incl. soy, p. 386-87).

Also discusses: Garbanza pie crust (p. 36, 212). Electric vegetable juicer (p. 68). Importance of alkaline diet (p. 68-69, 238-39, 388-91). A table (p. 101), titled "Raw nut butters," lists 12 types: "Peanut, butternut, lychees, almond, pecans, pignolia nut, pistachio nut, paradise nut, cocoanut, hazelnut, beechnuts, cashew, walnut, chestnut, Brazil nut, and sesame tahini. Note: These butters are sold at the fancy grocer's or Health Food Stores." Note: This is the earliest English-language document seen (May 2011) that mentions "tahini" or "sesame tahini"–a smooth paste of sesame seeds. According to *Webster's Dictionary*, the word "tahini" comes from the Turkish *tâhin* and was first used in English in about 1899.

Carrot peanut butter canape (p. 101). Mock liverwurst. Vegetarian dinner party (p. 287).

Glamour guide (p. 360-61). Planetary foods and menus (by astrological sign, p. 277-341). Tables showing the best food sources of various vitamins and minerals (p. 365-417).

In the chapter titled "Snacks and Beverages" is a recipe (p. 76-77) for a Date and goat's milk shake, which is "better than any soda treat" and which calls for use of an "electric blender." The recipe for "Orange honey nanny shake" (p. 77) states: "For a more frothy drink, whip with electric blender..." See recipe for soymilk made from soy flour. Recommends buying foods and herbs in health food stores.

In the section titled "Recognition and gratitude" (p. 392) near the end of the book, she thanks "Henry Lindlahr, M.D.," "Otto Carqué, Mausert, M.D.," and many other lesser-known people.

Talk with Akasha Richmond. 2004. June 5. Akasha has been able to find out very little about the author of this book, who she thinks self-published it. Although she lives in Florida, she talks about "glamour girls" and Hollywood. Address: 1265 S.W. 11th St., Miami, Florida.

3344. Oriental Show-You Company. 1940. Oriental recipes. Columbia City, Indiana: Oriental Show-You Co. 24 p. Illust. 19 cm. *

• ***Summary:*** These recipes describe how to use the company's shoyu (naturally fermented, Japanese-style soy sauce).

3345. Prescott, Samuel Cate; Dunn, Cecil Gordon, eds. 1940. Industrial microbiology. New York, NY: McGraw Hill Book Co. x + 541 p. Illust. Index. 23 cm. [53* ref]

• ***Summary:*** In Chapter 8, titled "Yeast: Its manufacture, vitamins, and uses," p. 155 states that soybeans, freed of bitter principles, sugar-beet juice, and various other substances have been proposed either to increase the yield of yeast or to act as the source of nutrient material (See Chrzaszcz and Janicki 1936).

Chapter 24 titled "The molds" (p. 339-57) discusses: Some important Aspergilli (members of the *Aspergillus flavus-oryzae*, especially strains of the *A. oryzae* series are of major industrial importance in the Orient [East Asia]). They are used to make sake, shoyu, miso, and *mizuame*, a sugar syrup made from rice (p. 350). Divisions of Penicillia (the genus Penicillium). The genus Rhizopus (used in the amylo process for converting starch to sugar by the use of selected molds–see p. 48-50). Mold enzymes. Apparatus for cultivating molds. References on molds (42).

Chapter 32 titled "Mold enzyme preparations: Uses and products" (p. 419-24), has the following contents: Introduction. Commercial amylase and its preparation. Koji and its preparation. Some mold products (in Japan): Soy sauce or shoyu, tamari, miso. The uses of mold enzymes (industrially): Amylases, invertase, proteases, and pectinase. The authors cite the industrial applications of members of the *Aspergillus flavus-oryzæ* group especially strains of *Aspergillus oryzæ*. Commercial amylase or diastase is marketed under a variety of trade names such as Taka-diastase, Kashiwagidiastase, Digestin, Polyzyme, Protozyme, and Oryzyme. These are generally mixtures of enzymes, however purified enzyme preparations (such as Taka-amylase) may be obtained.

Koji may also be used to make sake (rice wine) and shocho (distilled alcoholic liquor). "The use of *koji* in

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the United States was introduced by Takamine" (p. 420). Address: Cambridge, Massachusetts.

3346. Sampaio, Sebastiao C. 1940. Soja [Soybeans]. Sao Paulo, Brazil: Tipografia Brasil, Rothschild Loureiro & Cia, Ltda. 43 p. Secretaria da Agricultura, Industria e Comercio do Estado de Sao Paulo. [20 ref. Por]

• ***Summary:*** Contents: Introduction: Soya. Botanical description. Varieties. Composition of the plant. Culture/cultivation. Enemies and pests. Improvement of the seeds: Improving the oil (*óleo dos graos de soja*), improving the cake and flour, other improvements. Commerce and trade.

This general book draws heavily on U.S. publications, including Piper and Morse, 1923. The section titled "other improvements" briefly mentions many food uses of soybeans, including vegetable-type soybeans (Easycook and Hahto), green vegetable soybeans (*Quando verdes... elas constituem ótimo legume verde = when green... they constitute an excellent green vegetable*), soy sprouts, soy flour, soymilk (*leite de soja*), soy casein, soy cheese (*queijos e requeijoes*) [tofu], shoyu, and miso. The Japanese colony in Sao Paulo makes shoyu in commercial quantities.

Note 1. This is the earliest Portuguese-language document seen (June 2009) that mentions green vegetable soybeans, which it describes as shown above.

Note 2. This is the earliest Portuguese-language document seen (Sept. 2006) that uses the term *óleo dos graos de soja* to refer to soybean oil. Address: 3a Seccao Tecnica do Departamento do Fomento da Producao Vegetal, Sao Paulo, Brazil.

3347. Zaibei Nihonjin Kai. 1940. Zaibei Nihonjin shi [History of Japanese in America]. 1619 Laguna St., San Francisco, California. [Jap; eng+]

• ***Summary:*** The section titled *"MUTO Yamaji no Shôyu-gyo"* (Yamaji Mutô's shoyu business) (p. 59) states that in 1887 Yamaji MUTO tried to sell Kikkoman shoyu in San Jose, California in beautiful pottery containers. Initially the venture was a success, but the product was purchased more for the container than for the shoyu. The container was used for a flower vase. Sales dropped rapidly after 1 month, and the venture soon failed. Address: San Francisco, California.

3348. International Nutrition Laboratory. 1940? Miller's soy bean foods (Brochure). Mt. Vernon, Ohio: International Nutrition Laboratory. 12 p. Undated.

• ***Summary:*** A description (probably written by Dr. Harry W. Miller) of each of the following foods is given: 1. Miller's Soya Lac: A liquid milk packed in 13 oz. and 30 oz cans. It is available in both natural and chocolate flavors. 2. Miller's Soy-A-Malt: A spray-dried powder available in both natural and chocolate flavors, packed in 1-pound cans, which make 1 gallon of "vegetable milk." 3. Miller's Soya Curd: "This delicate protein food is made by coagulating Miller's Soya Lac with lactic acid and then blending this soft curd with tomato puree, pimento and Soya Sauce. It is a pleasing protein addition to salads, or for spreading crackers and sandwiches."

4. Miller's Mien Jing: Wheat "gluten, or cereal protein, is the basic food element in Miller's Mien Jing. Mien Jing is the Oriental name meaning processed gluten. A high protein wheat flour is washed free of starch, and small slices of the remaining gluten are processed with fresh vegetables and soya sauce, making a highly nutritious food, quite meat-like in taste. This gluten food was first introduced into this country by us, and our Mien Jing, or gluten cutlets, has the genuine flavors that have popularized this food in the Orient... It requires only a little cooking to make Mien Jing into many savory dishes, such as stews, croquettes, entrees, and also Oriental dishes such as Chow Mien and Chop Suey."

5. Miller's Soya Sauce: "Produced in South China where the finest soya sauce is made, insuring a pure and highly concentrated product. It should be used in flavoring all protein dishes where a meat-like flavor is desired." 6. Miller's Soya Loaf: "Made from especially selected high protein edible soya beans, low in fat and carbohydrates. This food will be found to be a very pleasing entree that can be served as it comes from the can, or made into appetizing roasts, pot-pies, sandwiches, and other meat substitute dishes."

7. Miller's Soya Spread: This canned product can facilitate the making of tasty and nutritious sandwiches. 8. Miller's Whole Soya Bean Flour: This flour "is not made from oil extracted 'bean cake,' but fresh selected edible soya beans are ground to produce this rich golden flour. Wheat flour is classed among the acid foods while soya bean flour is strongly alkaline... One part of Soya Flour will neutralize the acidity of four parts of wheat flour." 9. Miller's Green Soya Beans: These delicious canned green beans "are an abundant source of Vitamins A, B, and G, and a splendid source of calcium, phosphorus and iron... rich in protein, they can be served just as they come from the can. They make a splendid addition to a vegetable salad. They combine well with many of the vegetables in cooking. Surprise your family and friends by serving this new food.

10. Miller's Giant Soya Beans: These soy beans are high in protein (43.18%) and low in fat (18.7%). "Miller's soy beans are processed so that the nutlike flavor is brought out and they are rendered entirely digestible. The eating of the soy bean creates an alkaline reserve so necessary for the healthful functioning of the body." 11. Miller's Soya Beans with Tomato Sauce: Edible soy beans are canned with tomato puree and malt. "This is truly a treat for the picnic lunch."

This leaflet contains 8 recipes using Miller's products. Three panels discuss the "Dietetic advantages of the soy bean;" across the bottom is written in large letters "Alkalinize with Miller's Soy Bean Foods." These panels

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note of the soya bean: "So highly does it stand in the list of foods from the vegetable kingdom that the International Nutrition Laboratory is devoting 95% of its effort to the output of foods made from the soya bean." Edible Soy Beans are a remarkable food, a complete protein with adequate calcium for optimum metabolism, a ready alkalinizer, rich in Lecithin and Cephalin–the nerve foods, and "The only vegetable protein that is biologically able to substitute for animal protein... It is indeed unfortunate that so little interest has been aroused here in America in the culture of the so-called vegetable or edible type of soy beans... The International Nutrition Laboratory uses only these edible beans for canning and food manufacture.

"This institution now located at Mount Vernon, Ohio, first began its work in Shanghai, China, where extensive nutrition experiments were carried out in the feeding of infants, children and adults on soya milk. It operated a Soya Bean Dairy, providing daily milk distribution of plain and chocolate soya milk to thousands of persons. But as this plant was practically demolished during the recent war in the Orient, it was organized again in 1939 in Mount Vernon, Ohio as the International Nutrition Laboratory, and is producing from the edible soya bean all the valuable foods described in this folder."

Another panel describes the "Advantages of vegetable milk." Large letters across the bottom state: "Alkalinize with Miller's soy bean foods."

Note: This is the earliest document seen (April 2002) with the term "soy bean foods" in the title. Address: Mt. Vernon, Ohio.

3349. Ishimitsu Shoten. 1941. Ishimitsu (S.) Co. (Ad). In: The Japanese American News Inc. 1941. The Japanese American Directory (*Nichibei Jûshoroku*). No. 37. p. A-10 (near front). [Eng; jap]
• ***Summary:*** Ad (half page vertical). The top ¼ of this ad is in English. A direct import and export merchant, they sell grocery and household goods including shoes, plus Kikkoman shoyu (the Kikkoman logo is shown), miso and Ajinomoto. Address: 224 Commercial St., San Francisco, California. Phone: SUtter 2748.

3350. Sooya Been Purodakutsu Kaisha (Soya Bean Products Co.). 1941. Shoyu [Soy Sauce]. 1239 So. Lorena St., Los Angeles, California. [Jap; Eng]
• ***Summary:*** Ad (3/8 page) in The Japanese American Directory. 1941. p. B-3 (in middle of book, just before Los Angeles directory). This company claims to be the only maker of shoyu (soy sauce) on the west coast of the United States. Their shoyu is tasty and nutritious. Their shoyu production department (*Shoyu Jozo-bu*) makes and sells two brands of shoyu: Soya Club brand and Soyco brand.

Note: Soya Bean Products is apparently *not* the only shoyu maker on the west coast, unless Yasuhara Shoyu Mfg. Co., which also makes shoyu in Los Angeles at 219 Jackson St., is their shoyu production department (see p. 328).

Note: Soya Bean Products Co. also has a directory entry on p. 328 (under the category "Foodstuff Factory"), at the address and phone number shown in the ad above, but we are not told what soyfoods they make! Address: Los Angeles, California. Phone: ANgelus 14276.

3351. Turner, Grace. 1941. Real Chinese food is delicious food: Pearl Buck, authority on China, talks of the art of cooking there–and gives rare recipes. *Los Angeles Times*. Jan. 12. p. H14. Sunday. This Week magazine.
• ***Summary:*** In private life, Pearl Buck is now Mrs. Richard J. Walsh, at home on a farm which she and her husband own in Pennsylvania. He is president of a New York publishing company, and she is "chairman" of the China Emergency Relief Committee. "The Chinese have known for centuries that soybeans are good food. Out of soybean curd, for instance, they make a kind of cheese... Most cooking in North China is done with soybean oil, but in South China it is done with peanut oil." Soy sauce is called for in one of the recipes.

3352. Von Struve, A.W. 1941. The soybean crop in the United States. *Science* 93(2404):86-87. Jan. 24.
• ***Summary:*** According to the 1939 Census of Manufactures, 47 U.S. firms were engaged primarily in the production of soybean oil, cake, and meal, worth $43.9 million, and employing 1,481 wage earners who drew wages amounting to $1,889,457 and to salaried personnel who drew $663,469 in salaries. In 1937, only 26 firms were reported in this industry, making products worth $24.3 million.

In 1909 the Census of Agriculture shows that only 16,835 bushels of soybeans were produced in the USA. Cultivation was reported on 339 farms.

Today soy bean oil is used primarily in shortening and oleomargarine. Census reports show that of the 369.7 million pounds of soybean oil consumed in American factories during 1939, some 201.6 million pounds (54.5% of the total) were use in the manufacture of shortening and 70.822 million pounds (19.2%) became an ingredient in oleomargarine.

"The oil is also used in manufacturing candles, celluloid, core oil, disinfectants, electrical insulation, enamels, fuel, glycerin, insecticides, linoleum, lubricants, oilcloth, paints, printing ink, rubber substitutes, varnish, waterproof goods and food products such as butter substitutes, cooking oil, lard substitutes and salad oils and medicinal oil.

"Lecithin is derived from soybean oil and is used as an emulsifier and in the manufacture of candies, chocolate, cocoa, margarine, medicines and in dyeing of textiles. (Egg yolk was the chief source before.)

"Dried soybean flour is used in baked products, breakfast foods, candies, diabetic foods, health drinks, ice-

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cream cones, ice-cream powder, infant foods, macaroni products and as filler in meat products.

"Soy sauce and sprouts are produced from dried beans." Vegetable casein is used in paints, size for paper, textile dressing, and waterproofing. "The first record of the plant is in the writings of Emperor Shang Nung of China in 2838 B.C."

Note: See comment in this journal (21 Feb. 1941, p. 183-84) by L.C. Goodrich refuting this latter statement. Address: Bureau of the Census, Washington, DC.

3353. Roux, Charles. 1941. Le soja [The soybean]. *Revue Internationale du Soja* 1(1):4-20. Feb. [Fre]
• ***Summary:*** An introduction and overview. Contents: Introduction: Varieties, composition. Soybean cultivation. Feed, food, and industrial uses of soybeans.

The author has recently discovered a way of making petroleum from soybeans (p. 18). Address: Directeur General de l'Association Technique Africaine.

3354. Magnell, A.E. 1941. New Milford site for new food plant. *Hartford Courant (Connecticut)*. March 1. p. 14.
• ***Summary:*** Maggi, Inc. of New York, the U.S. branch of a Swiss company of the same name, plans to build a new manufacturing plant in New Milford, Connecticut. It is expected to be in production in early 1942. Initially, two hundred people will be employed. Maggi makes food seasonings and bouillon cubes.

The parent company in Switzerland has been in business for more than 50 years. Its products have been sold in the USA for about 50 years.

3355. Balzli, Jean. 1941. La culture du soja "magique" et sa contribution au redressement de la France [The cultivation of the "magical" soybean and its contribution to the recovery of France]. *Revue Internationale du Soja* 1(2):41-45. March. Originally published in the "Free Zone" on 17 Sept. 1940 by *L'Eclaireur de Nice et du Sud-Est.* [1 ref. Fre]
• ***Summary:*** Includes a discussion of uses for human foods, including defatted soy flour, soy coffee, soy chocolate, Worcestershire sauce, soymilk, tofu, and soy sprouts. Other uses include lecithin and industrial uses of soy oil and soy proteins.

3356. Roux, Charles. 1941. Le soya [The soybean]. *Revue Internationale des Produits Coloniaux et du Material Colonial* 16(181):8-25. March. [Fre]
• ***Summary:*** Contents: Introduction. Chemical composition. Cultivation. Food and industrial uses of soybeans: Incl. soymilk, tofu, soya casein, soy flour, soy bread, soy oil, soybean cake, green vegetable soybeans, fermented soy condiments (natto, miso, shoyu), roasted soy coffee, industrial uses, petroleum substitute.

Appendix A: Composition of various parts of the soybean plant: (1) Green–stems, leaves, pods. (2). Dry–stems, leaves, pods. (Averages based on analyses by M. Lechartier). (3) Composition of soybean seeds: Whole seeds, cotyledons, embryos, seed coats (based on analyses by the Municipal Laboratory of Paris and the Laboratory of the Biological Society of the Far East [*la Société Biologique d'Extrême-Orient*]).

Appendix B. Composition of the seeds of various soybean varieties by various analysts: Steuf, Pellet, By Steuf: From Hungary, Yellow from Mongolia, From China, Chinese reddish brown. By Pellet: From China, from Hungary, from Etampes. By Giljaransky [Giliaranskii, Giljarinsky, Giljaranskii, Giljaranski, Gilyaranskii, Gilyaranskii]: Yellow from Russia, Yellow from China, Yellow from Japan, Black from China, Black from Japan, Green from Japan. By Lechartier: From Etampes, Etampes dry, Black, Black dry. By Jardin Colonial: Soja from Laos, Soja from Tonkin, Soja from China. By Schroeder: Reddish brown dry, Yellowish brown dry, Tumida pallida yellow. By König: Tumida castanea brown, Tumida astrospermal [sic, atrosperma] black.

Appendix C. (1) Composition of soybeans (maximum and minimum) compared with four other legumes. (2) Composition of soybeans and beef compared. (3) Composition of soy flour and wheat flour compared. Address: Director General of the Association Technique Africaine.

3357. Wolman, Minka. 1941. There is no indigestion in Japan. *Argus (The) (Melbourne, Victoria, Australia)*. April 5. p. 15S.
• ***Summary:*** "Polished rice is the principal food.... Shoyu (soy) sauce and the many preparations of the soya bean are used in almost every dish."

"Shoyu sauce" is used to season sukiyaki, tempura, sashimi, and kabayaki (grilled eels; "A thick tasty sauce made from shoyu is poured over them").

3358. *Soybean Digest.* 1941. Hawaiians make many soybean foods. July. p. 8-9.
• ***Summary:*** Carey D. Miller, nutrition specialist at the Hawaii Agricultural Experiment Station, has described a large number of the soybean foods that Hawaiians make in Bulletin No. 68 of the Hawaii Station, "Japanese Foods Commonly Used in Hawaii" (1933). These foods include: Edamame (Green Soybeans; "The whole pod of the fresh green beans is placed in boiling salted water and cooked for about 25 minutes"), Tofu (Soybean Curd, incl. the residue known as "kirazu"), Aburage (Fried Soybean Curd), Miso, and Shoyu. A brief description is given of how each is made. Photos show: Three triangles of aburage on a dish. A dish of tôfu kasu (okara or kirazu).

Note: This is the earliest English-language document seen (Sept. 2011) with the term "soybean foods" in the title.

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3359. *New Canadian (The)*. 1941. Shoyu supplies cut off–Local firm prepared to meet demand. Community consumes fifty thousand gallons annually. Aug. 22. p. 8.

AMANO BROS. LTD.

Manufacturers of
SHOYU BEAN-SAUCE
MISO VINEGAR

Highland 5526
2141, 2135, 2131 Dundas Street
Vancouver, B. C.

• ***Summary:*** Mr. Teiichi Amano, head of Amano Bros. Ltd. makes Maruten brand shoyu bean-sauce, miso, and vinegar in his plant at 2141, 2135, 2131 Dundas Street, Vancouver, BC, Canada. In January 1941 he started to brew shoyu, which used to be imported from Japan before budget import restrictions took effect. It must age for 7-12 months. His soybeans are imported from California. For 12 years he has made miso and vinegar, and in Japan his father and grandfather made shoyu. Mr. Amano estimates that shoyu consumption in British Columbia exceeds 48,000 gallons/year. A photo shows the inside of the shoyu plant.

A large ad (5 x 4 inches) at lower left of page is titled "Amano Bros. Ltd.: Manufacturers of shoyu bean-sauce, miso, vinegar."

Note: This is the earliest English-language document seen that uses the term "shoyu bean-sauce" to refer to soy sauce or shoyu. Address: British Columbia, Canada.

3360. Ukil, A.C. 1941. Soya bean as a component of balanced diet. *Science and Culture (Calcutta)* 7(1):49-53. July; 7(2):111-16. Aug. [3 ref]

• ***Summary:*** This article is largely a summary of: Orosa, Maria Y. 1932. "Soybeans as a component of a balanced diet and how to prepare them." *Manila (Philippines) Bureau of Science, Popular Bulletin* No. 13. 53 p.

It begins: "In view of the interest recently created in the value of the soya bean to make up for the deficiency of protein in the diet of starch-consuming agricultural populations of countries lacking a sufficient supply of high quality proteins like milk, fish, meat and eggs in their diet and in view of its extensive use in China, Japan, the Philippines, U.S.A. and more recently the German army, the following..."

"Although isolated attempts [have been made and] are being made in India to cultivate the bean, no systematic efforts have yet been made to encourage its use on a sufficiently large scale for commercial purposes and to supplement the food resources of the country... Soya bean is not only much more nourishing but has many more uses than *dal*."

Foods discussed include: Soya-bean flour, soya-bean milk (regular or condensed), coffee made from roasted soya beans, soya bean sprouts (a table shows they are much more nutritious than mung bean sprouts), soya bean oil, soya bean casein, soya bean curd [tofu].

August issue: "Some common foods and their methods of preparation:" Soya sauce (using koji, based on Groff 1919). Soya-bean flour. The cooking of soya beans (immature [green vegetable soybeans] and mature). Some food recipes with soya beans: Of the 22 recipes given, 17 call for boiled whole soya-beans, 2 for dry roasted soya-beans [soy nuts], one for soya-bean flour (Angel cake), and 3 for soya-bean milk (two puddings and a custard). Address: Member, Sanitary Board, Bengal [India].

3361. USDA Office of Foreign Agricultural Relations. 1941. Some culinary uses of soybean flour: Translation of Oberkommando 1938. Washington, DC. 90 p. Aug. 28 cm.

• ***Summary:*** This is a translation of a German-language publication titled *Speisenzusammenstellung unter Mitverwendung von Edelsoja mit Kochanweisungen* (1938. Berlin: Oberkommando der Wehrmacht [Army High Command]). The introduction to the translation, "Problems and possibilities of using Full Soya Flour," explains that, in German, this flour is called *Vollsojamehl* ("full soya flour") or *Edelsoja* ("pure soya"), however throughout the translation the term "pure soya" is used. This flour is used in many recipes as a substitute for eggs, milk, meat, and fats.

"A reduction in the use of animal products in the German diet is desirable for economic reasons, as these products must be manufactured from plant materials in a roundabout way by the bodies of the animals themselves. In this process, the animals use up the major part of the plant material consumed, about 80 percent, in preserving their own lives. This is an extravagant use of food. A restriction in the use of animal products is likewise to be desired for military reasons, as it is very much harder to accumulate stocks of meat and livestock products, and greater resources are

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necessary for their transportation." (p. 3)

The best plant product for replacing animal products is "full-fat soya flour," also called pure soya (p. 3). "This flour is made from the soybean, the cultivation of which in the Reich, and particularly in Austria, is becoming yearly more important." Pure soya flour is made from dehulled soybeans without the use of chemicals. It has good keeping qualities in spite of the high percentage of oil that it contains.

A table shows its high nutritive value compared with 1 kg of wheat flour, rye flour, pea flour, lean beef, pat pork, whole milk, and eggs; it contains more protein and more calories than any of these. Pure soya "provides very high nutritive value in a very small compass: 1 kg (2.2 lb) of full soya flour is equivalent in nutritive value to about 54 chicken eggs, 2500 g of clear beef, or 7.5 liters (nearly 8 quarts) of whole milk. In other words, one heaping tablespoonful of pure soya weighing 20 g is equivalent in protein and oil content to one chicken egg." It is also a good source of lecithin (an important "nerve food") and vitamin B.

"In making up the menus, the dishes are to be chosen so that at least 30 grams of pure soya shall be used per person per week" (p. 6).

Outline of the menus: Main dishes (for noon meal): 1. Foods cooked separately. 2. One-dish meals. 3. Supper dishes. Supplementary dishes: 4. Soups. 5. Sauces and gravies. 6. Salads. 7. Fruit dishes and desserts.

Maggi is widely used as a "seasoning sauce (*Speisewürze*). Not all recipes contain soy.

Note 1. Laszlo Berczeller, a soy pioneer from Austria, developed *Edelsoja* which was identical to the product used in this cookbook.

Note 2. Whole soy flour was the most widespread way of using soybeans as food in Germany during World War II. Address: USDA.

3362. Mogi, Masatoshi; Nakajima, Shigeji. 1941. Miso jôzô shiken: "Homare shiro-miso" no kenkyû. XIV. [Studies on miso fermentation: Research on "homare" white miso. XIV]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 19(10):757-72. Oct. [8 ref. Jap]
Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan (Noda Shoyu Kabushiki-gaisha, Shikenjo).

3363. Mogi, Masatoshi; Nakajima, Shigeji. 1941. Miso jôzô shiken: "Homare shiro-miso" no kenkyû. XV. [Studies on miso fermentation: Research on "homare" white miso. XV]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 19(10):772-79. Oct. [20 ref. Jap]
Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan (Noda Shoyu Kabushiki-gaisha, Shikenjo).

3364. **Product Name:** Choplets (Resembling Pork Chops).
Manufacturer's Name: Special Foods. Renamed Worthington Foods, Inc. in Dec. 1945.
Manufacturer's Address: Worthington, Ohio.
Date of Introduction: 1941, October.
Ingredients: In 1971: Wheat protein slices [wheat gluten] in broth consisting of extract of Brewer's yeast and vegetables, soy and other hydrolyzed vegetable proteins, mushroom broth, MSG, salt, dextrose, corn oil, caramel coloring.
Wt/Vol., Packaging, Price: 8 oz, 17 oz, and 30 oz can. 20 oz can retails for $2.75 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Wholesale price list. 1941. Oct. 1. 10 oz retails for $0.20 and 30 oz for $0.60; Ad by Worthington Foods, Inc. in *Health*. 1947. Feb. p. 2. "Good foods for every occasion." Choplets are mentioned.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual*. 1st ed. p. 95. Chaplets + their liquid contain 15.62% protein, 0.56% fat, and 5.40% carbohydrate. *Chopletter* (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods," April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include Choplets.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan*. 3rd ed. p. 161. Lists the ingredients in "Choplets (Worthington)."

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Choplets (Worthington)" are "wheat protein slices in a broth consisting of water, HVP, yeast extract, soy sauce, dextrose, L-lysine mono-hydrochloride, mushrooms, salt, corn oil, caramel color."

Interview with James Hagle? 1983. The name Choplets was suggested by Dr. George Harding's 11-year-old son. Choplets resembled Dr. Harry Miller's Cutlets. They were a unique best-seller into the 1960s.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. Ingredients are the same as those listed below.

By July 1990 the product had been reformulated to include textured soy protein concentrates.

3365. Mogi, Masatoshi; Nakajima, Shigeji. 1941. Miso jôzô shiken: "Homare shiro-miso" no kenkyû. XVI. [Studies on miso fermentation: Research on "homare" white miso. XVI]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 19(11):835-50. Nov. [16 ref. Jap]
Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan (Noda Shoyu Kabushiki-gaisha, Shikenjo).

3366. *Soybean Digest*.1941. Derivation [of the term "soybean"]. Nov. p. 12.
• ***Summary:*** "Julean Arnold of Berkeley, California, who spent more than 35 years in China as Commercial Attache, believes that the name 'soybean' came from the Chinese

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through the Japanese. He describes its probable origination as follows: The name is really taken from the Chinese 'chiang-yiu' which means soy-sauce, and which in Japanese is pronounced 'shou-yu,' contracted also by the Japanese into 'so-ya' but with the fundamental Chinese character for 'chiang-yiu' pronounced 'gee-ang yu.' The 'yiu' or 'yu' is the Chinese character for oil or sauce. In any event, 'chiang-yiu' means soy-sauce. The Chinese character for 'ya' means sprouts, thus the word 'tou' combined with 'ya' means bean sprouts. The Chinese equivalent for soybean is 'hwang' or 'huang-tou,' the 'huang' meaning yellow. Thus the word 'soy' carries us back to 'chiang-yiu' pronounced by the Japanese 'shou-yiu' and corrupted into 'so-ya' and further corrupted into 'soy-a' or 'soya' but really meaning soy sauce, while in English used for the whole category of legumes known as soybeans." Address: Commercial Attache, China.

3367. Savon S., Julio. 1941. La soya: Un vegetal marvilloso [The soybean: A marvelous vegetable]. *Agricultor Venezolano (El) (Ministerio de Agricultura y Cria, Caracas)* 6(67-68):5-9. Nov/Dec. [Spa]
• ***Summary:*** What is the soybean? It is a legume which was cultivated for more than 5,000 years in the Celestial Empire, which has the important characteristic of being a food of major value as a source of protein, and which can provide a large quantity of derivative foods, forage, and industrial products.

In the Soviet Union there is a Soy Institute (*el Instituto de la Soya*), which is continually experimenting with new soybean varieties.

A table gives the chemical composition of whole soy flour–which contains 38% protein and 22.5% vegetable oil. The soybean is also a source of many other nutrients, including vitamins and minerals. It is also a source of milk, called soymilk (*leche de soya*), which can be made at home from soybeans. There is no danger of tuberculosis in soymilk as there is in cow's milk. Discusses various published experiments feeding soymilk to infants, and gives the chemical composition of Soybee and Sobee, two soy-based infant formulas. There follows one paragraph on each of the following foods: Soy cheese or tofu (*el queso de soya or teo-fu*). Soy sauce or shoyu (*la salsa de soya o shoyu*). Soybean puree (*el puré de soya;* made from dehulled, ground soybeans, boiled for a long time). Soy cottage cheese and butter. Soy oil and lecithin. Soy coffee and chocolate. Soy bread (bread enriched with 10-20% soy flour; good in diabetic diets). Soymilk: A table compares the chemical composition of mother's milk, cow's milk, and soymilk. Address: Dr.

3368. **Product Name:** Maruten Shoyu Bean Sauce.
Manufacturer's Name: Amano Brothers.
Manufacturer's Address: 2141 Dundas St., Vancouver, BC, Canada.
Date of Introduction: 1941.
New Product–Documentation: The New Canadian. 1941. Aug. 22. p. 8. "Shoyu supplies cut off–Local firm prepared to meet demand. Community consumes fifty thousand gallons annually." An ad in the lower left corner shows the bold black Maruten logo, with the character meaning "heaven" (*ten*) in a circle (*maru*). Amano Bros. Ltd. is at 2141, 2135, and 2131 Dundas St., Vancouver, BC. Phone: Highland 5526.

Shurtleff & Aoyagi. 1983. The Book of Miso. 2nd ed. p. 234. "There were several semi-commercial makers of miso and shoyu in Canada, in the Vancouver area, prior to World War I, and at least one commercial miso manufacturer was in the area prior to 1927. In that year Mr. T. Amano started Amano Brothers. In 1982 the T. Amano Co. was still making fermented shoyu." Talk with Michael Weiner. 1987. Dec. 16. Amano is presently the largest manufacturer of fermented soy sauce in Canada. They may soon break ground for a large new miso and shoyu plant.

3369. Matsumoto, K.; Murakami, H. 1941. [On the sediment during the pasteurization of shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 36:63-71. [Jap]* Address: Japan.

3370. van Veen, A.G. 1941. [The protein supply in infertile districts of Java]. *Natuurwetenschappelijk Tijdschrift voor Nederlandsch Indië* 101:321-23. [Dut]*

3371. Westenberg, J. 1941. De visserij-producten van Indo-China [The fishery products industry in Indo-China]. *Institute of Seafisheries, Batavia. Communication* No. 6. p. 16-45. [Dut]*

3372. Chiang, Madame. 1941. Madame Chiang's Chinese cook book (Translated in English). Winona, Minnesota: Chinese Cookbook Company. 64 p. 23 x 16 cm.
• ***Summary:*** At bottom of cover: "Price 20 cents. Surprise your guests by preparing a real Chinese dinner." Contains 57 recipes. A number of recipes (incl. Green pepper chop suey [p. 8] and Beef chop suey [p. 9]) call for the use of "Chinese Soy sauce (See-Yeou)."

3373. Fallon, F. (Baron). 1941. Le soja [The soybean]. *Belgique. Ministere des Colonies. Direction Generale de l'Agriculture et de l'Elevage. Propagande et Vulgarisation Agricoles* No. 21. 39 p. Bruxelles: Impr. Industrielle et Financiere. [17 ref. Fre]
• ***Summary:*** Contents: Botanical description: Introduction, the plant's needs, varieties. Soybean cultivation in Europe: Introduction (for some countries preferred early, medium, and late varieties are listed), France, Great Britain, Hungary, Poland (selection has been done at the Wilna experiment station using varieties imported from Hungary and

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Czechoslovakia), Romania (About 30,000 ha are devoted to soybeans, primarily in Bessarabia [Besarabia], Dobrouja [Dobrudja, Dobrogea], Bukovina [Bucovina], Walachia or Wallachia or Valachia [now called Muntenia, a fertile belt across southern Romania], and Moldavia. Most of these varieties came from Austria), Switzerland, USSR (the main soybean regions are all warm ones–the Caucasus, Ukraine, and Transcaucasia). Soybean cultivation in America. Soybean cultivation in Africa (especially in South Africa, mainly for forage in the Natal and Transvaal). Soybean cultivation in Asia: China and Manchuria, Malaysia, British Indies, Dutch Indies, Indochina, Japan. Soybean cultivation in Oceania (mainly Philippines).

Cultivation: Crop rotation, inoculation, planting and propagation, maintenance and manuring the land, harvest, seed storage, yield, selection of varieties. Soybean utilization: As human food (dry soybeans, soy sauce, soy flour, soymilk, tofu, soy oil), industrial uses (soy oil, refining and use, soymilk casein). Soya as a fertilizer: Green manure, or soybean cakes. Soya as a feed for domestic animals: Green forage, hay, silage, pasture, seeds, cakes. Soybean cultivation in the Belgian Congo. Soybean trade.

In the Congo various soybean trials have been undertaken since 1936 at the stations of the National Institute for Agronomic Study of the Belgian Congo (l'Institut National pour l'Etude agronomique du Congo Belge). Numerous varieties from the USA and Manchuria have been tested. Address: Directeur au Ministere des Colonies, Professeur a l'Institut Agronomique de Gembloux [Belgium].

3374. Photo of John Takeo Tadano, owner of Marusho Shoyu. 1941.
• ***Summary:*** The inscription on the photo reads: "To Nakatsu family. Always, John Tadano. '41." Sent to SoyInfo Center by Barbara Y. Peters, his daughter (Nov. 2008). Barbara writes: "My father was a food broker, I believe, for Japan Foods. He had attended Phoenix College, but when World War II started he was not able to continue. I gather he was also on the football team as quarterback when the war broke out. He was stripped of the title Homecoming King too."

3375. Thunberg, Karl Peter. 1941. Tsunberugu no nihon kikô [Thunberg's voyages in Japan]. Tokyo: Okugawa Shobo. Translated by Yamada Tamaki from original edition of 1796. [Jap]*

3376. *Miso Shoyu Kogyo* (*The Miso and Shoyu Industries*).1941--. Serial/periodical. Tokyo: The Soy Society. Monthly. [Jap]*
• ***Summary:*** The book *Japanese Serial Publications in the National Agricultural Library* gives the English title as "The Soy and Miso Sauce Industry." Address: Tokyo, Japan.

3377. **Product Name:** College Inn Chop Suey.
Manufacturer's Name: College Inn Food Products Co.
Manufacturer's Address: Chicago, Illinois.
Date of Introduction: 1941?
Ingredients: Choice cuts of lean pork, crisp celery, onions, mushrooms, bean sprouts, imported bamboo shoots and Chinese Suey Sauce.
Wt/Vol., Packaging, Price: 10½ oz. can.
New Product–Documentation: Photocopy of label (from canned product) sent to Soyfoods Center (in late 1981) by Esta Keirn, formerly of Oriental Show-You Company (Columbia City, Indiana). "Chop Suey: Place contents in sauce pan or chafing dish. Heat thoroughly. Serve with rice. Season with Chinese Chop Suey Sauce as desired... It is as fine a chop suey as you ever tasted. Just the thing for the Mah Jongg party, the midnight supper, the emergency meal–and a welcome variation from daily cooking. Always keep a few cans in your pantry... U.S. Inspected and Passed by Department of Agriculture, Establishment 449." In top half of front panel is an illustration of a waiter, dressed in a tuxedo, carrying a tray on top of which is an elegant covered serving dish. On a 3rd panel is an illustration of the towering "Hotel Sherman, Chicago. Owning and supervising College Inn Food Products Co., Chicago, Illinois."

3378. La Choy Food Prods. 1941? Brief history of La Choy. 2 p. Undated. Unpublished manuscript.
• ***Summary:*** In 1941 Beatrice Foods acquired La Choy. This 1-page typescript originated at about that time.

"Archbold, Ohio, with a population of only 3,200 is the home of La Choy Food Products, largest producer of canned Chinese foods in the world–including China!

"The business actually was started in 1920, by Wally Smith and Ilhan New, who became friends while attending the University of Michigan." Smith, who owned a grocery store in Detroit, wanted to sell freshly grown [mung] bean sprouts. New, a Korean by birth, knew how to grow them.

"Sometime later the pair conceived the idea of canning bean sprouts in glass jars. The next logical step was to use metal cans, and this was accomplished in 1922, when the company was incorporated. New left the company shortly after 1930 and Smith was killed by lightning in 1937.

"After several moves, each time to larger quarters, the first La Choy plant was built in 1937 in Detroit." At the start of World War II, this plant was sold to the government and the firm moved to its present 25-acre site in Archbold, Ohio.

"Today, after several additions, including a new 42,000 square foot Frozen plant, La Choy houses approximately 8½ acres under one roof.

"'Chinatown USA' is more strategically located for the efficient and economical production of Chinese foods than a glance at a map would indicate. Just to the north are the famed celery beds of Michigan. La Choy is the largest single user of Michigan celery in the nation. More than 5,000 tons are used annually in the new process developed by La Choy

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which produces up to 50 tons a day of extra-fancy fine cut celery for chop suey and chow mein dishes.

"To the east is the famed Pennsylvania mushroom belt, and La Choy is among the largest users of fresh mushrooms in the nation. Archbold is the largest cattle auction center between New York and Chicago [Illinois] and a major poultry area. More than 100,000 beef cattle were sold here last year.

"The fertile farm country in and surrounding Fulton County yields many of the other necessary ingredients, while such items as flour and shortening for chow mein noodles readily are available from Toledo, only 40 miles distant, and Chicago, Columbus, Detroit, Cleveland and Cincinnati, merely a few hours away by fast freight.

"Into this Northwest Ohio town, located on the main line of the New York Central between Chicago and New York, flow bamboo shoots and water chestnuts from Formosa and mung beans from Peru, Brazil and Thailand as well as Oklahoma and Texas, and other exotic imports that are essential ingredients of Chinese delicacies."

Note: This is the earliest document seen (Sept. 2005) concerning the work of Koreans overseas with soy. Address: La Choy.

3379. Smith, A.K. 1941? Soy sauce producers. 1 p. Undated. Unpublished manuscript.

• ***Summary:*** This handwritten, undated list seems to have been written sometime after 1940.

San Francisco: Wing Nien Soya Sauce Co. (fermented).

Los Angeles: Mrs. Hauser's Soya Foods Co., 4617 Melrose Ave.

Chicago: Great China Foods Co.

Decatur, Illinois: A.E. Staley Mfg. Co.

Columbia City, Indiana: Oriental Show You Co.

Rochester, New York: Vegetable Products Co., 15 Circle St.

Lexington, North Carolina: Vitro Nu Foods Co. [Corp.].

Mt. Vernon, Ohio: International Nutrition Laboratory.

Philadelphia, Pennsylvania: Tastee Soy Foods, 254 E. Girard Ave.

Williamsport, Pennsylvania: Soya Products Co. Address: [NRRL, Peoria, Illinois].

3380. Mogi, Masatoshi; Nakajima, Shigeji. 1942. Miso jôzô shiken: "Homare shiro-miso" no kenkyû. XVIII. "Waki." sokushin shiken [Studies on miso fermentation: Research on "homare" white miso. XVIII Test to promote *waki*]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 20(2):107-13. Feb. [6 ref. Jap]

• ***Summary:*** In this article, the Japanese noun *waki* is difficult to translate into English. Related verbs are *wakikaeru* = to seethe, ferment, or boil up; *wakideru* = to bubble up; *wakiagaru* = to boil up, arise. Two possible translations are "overfermentation" or "bubbling from fermentation." Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan (Noda Shoyu Kabushiki-gaisha, Shikenjo).

3381. Warden, Philip. 1942. Soy beans rise on seed buying by government. *Chicago Daily Tribune*. March 17. p. 23.

• ***Summary:*** "Commodity Credit corporation purchases of seed soy beans gave the bean futures market independent strength yesterday" at the Chicago Board of Trade in Illinois.

"Processing plant operators in Decatur, Illinois, soy bean capital of the United States, informed Chicago grain men that the government agency was seeking to buy as much as 100,000 bushels of high grade seed beans for eastern shipment." Such high oil yielding varieties were reported to be selling for $2.50 to $3.00 a bushel.

Government buyers said they wanted only soy beans with a low moisture content; tests at the University of Illinois agricultural experiment station show that these have a higher germination rate.

An interesting diagram, titled "Some of the principal soy bean products," shows whole soy beans falling into a hopper, below which are many branching "pipelines" of products made from the whole soy beans: (1) Soysauce, condiments, other uses. (2) From the meal: Stock feed, fertilizer, glue, plastics, other. (3) From the flour used industrially: Vegetable casein, paper coating, adhesives, other. (4) From the flour used as food: Bread, crackers, wafers, macaroni, ice cream, sausage, infant & invalid foods, other. (5) From the crude oil used industrially: Soaps, glycerine, paint, varnish, core oil, linoleum, other. (6) From the crude oil used as food: Lecithin, confectionary, medicinal. (7) From the refined oil: salad oils, cooking oil, mayonaise [mayonnaise], lard compounds [vegetable shortening], other uses.

Note 1. This is the earliest published English-language document seen (April 2012) that contains the word "soysauce" (spelled as one word).

Note 2. This is the 2nd earliest document seen (Oct. 2006) which uses the term "soy bean capital" (of the United States) in connection with Decatur, Illinois.

3382. Quail, Betty. 1942. Vary your menus with Chinese foods: While their cooking techniques are different from ours, we can adapt some of their vegetables to our advantage. *Los Angeles Times*. March 29. p. F5.

• ***Summary:*** The Chinese, our old friends and new allies [in World War II] have long used soybeans as a staple in their diet. But in America, until recently, they were grown solely as a forage crop. "Fresh green soybeans rank higher in food value than any of our common table beans..." Dried soybeans contain about 12 times as much fat as other beans. Today soybean flour and bread are widely available in American food stores.

"The Chinese, however, were not content with just beans. They set to work with the skill of alchemists and

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accomplished some surprising results. They sprouted the dried beans..." to yield bean sprouts, now starting to be sold in American markets. Then they made a milk out of crushed soybeans and turned it into bean curd. Cut it into squares and try adding it to an omelet, to hard-cooked eggs, or meat loaf. It may also be seasoned and be used as a stuffing for tomatoes, celery, or green pepper rings for salad. Soybean milk can be substituted for cow's milk. And of course there is "soy sauce, or mandarin sauce." Unfortunately most Americans limit its use to those "half-caste dishes, chop suey and chow mein. As a matter for fact, this dark brown seasoning should have a place of honor on every American pantry shelf..." Like all good seasonings, it brings out the best in other foods, remaining in the background, "completing a dish while claiming no recognition for itself." A photo shows bean curd.

3383. Mogi, Masatoshi; Nakajima, Shigeji. 1942. Miso jôzô shiken: "Homare shiro-miso" no kenkyû. XIX. "Waki," bôshi shiken [Studies on miso fermentation: Research on "homare" white miso. XIX. Test to stop *waki*]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 20(3):155-68. March. [6 ref. Jap]
• ***Summary:*** In this article, the Japanese noun *waki* is difficult to translate into English. Related verbs are *wakikaeru* = to seethe, ferment, or boil up; *wakideru* = to bubble up; *wakiagaru* = to boil up, arise. Two possible translations are "overfermentation" or "bubbling from fermentation." Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan (Noda Shoyu Kabushiki-gaisha, Shikenjo).

3384. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1942. Shoyu, rice arrive. 1(4):2. April 22.
• ***Summary:*** On Sunday morning, 130 sacks of rice and 50 gallons of shoyu arrived in the camp. Most of it has "already been distributed to the mess halls."

Note 1. Manzanar (literally "apple orchard") was the name of the Japanese internment / concentration camp in the Owens Valley, Southern California (about 230 miles northeast of Los Angeles), during World War II. At elevation 4,000 feet, at the base of Mt. Whitney, it was extremely cold and dusty. Manzanar, which opened in March 1942, was the first of the ten camps to open. It eventually had a maximum population of 10,046. Each of the camps was intended to be self-sufficient.

Note 2. The Manzanar Free Press, the "Official publication of the Manzanar Relocation Center," was run entirely by Japanese in the camp. By Nov. 1943 it consisted of an editorial staff (4 members), reporting staff (8), typists (2), Japanese section (7), and an advertising department (3). It was published every Wednesday and Saturday and distributed without cost to every apartment. "Subscription rates: 5 cents per copy; 45 cents per month, $4.75 per year. Editorial office, 1-1-2."

Note 3. This is the earliest document seen (July 2011) concerning Japanese in the United States in internment / relocation camps during World War II.

Note 4. This is the earliest document seen (July 2011) concerning soy sauce such camps.

3385. Guillaume, A. 1942. L'utilisation du Soja dans l'alimentation et dans l'industrie [The utilization of soybeans in food and industry]. *Revue de Botanique Appliquee & d'Agriculture Tropicale* 22(247-248):191-97. March/April. [7 ref. Fre]
• ***Summary:*** Contents: Introduction. Food uses: Whole soybeans, soy sprouts, soy coffee, soy milk, tofu, shoyu, miso, natto, soy flour. Industrial uses: Soy oil, Henry Ford and hexane solvent extraction, lecithin, soybean cake, animal feeds, plastics, green forage. Address: Professor, Univ. of Strasbourg.

3386. Mogi, Masatoshi; Nakajima, Shigeji. 1942. Miso jôzô shiken: "Homare shiro-miso" no kenkyû. XX. "Waki" kôbo ni tsuite [Studies on miso fermentation: Research on "homare" white miso. XX. The yeasts involved in *waki*]. *Jozogaku Zasshi* (*J. of Brewing, Osaka*) 20(4):258-63. April. [6 ref. Jap]
• ***Summary:*** In this article, the Japanese noun *waki* is difficult to translate into English. Related verbs are *wakikaeru* = to seethe, ferment, or boil up; *wakideru* = to bubble up; *wakiagaru* = to boil up, arise. Two possible translations are "overfermentation" or "bubbling from fermentation." Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan (Noda Shoyu Kabushiki-gaisha, Shikenjo).

3387. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1942. To make shoyu here. 1(15):1. May 23.
• ***Summary:*** "To replenish stocks of shoyu and miso formerly purchased from Japanese merchants, the Manzanar production office is now planning to manufacture these food items here."

3388. Booher, Lela E.; Hartzler, E.R.; Hewston, E.M. 1942. A compilation of the vitamin values of foods in relation to processing and other variants. *USDA Circular* No. 638. 244 p. May. See p. 182-85. [298* ref]
• ***Summary:*** This is "a summary of the vitamin A, thiamin, ascorbic acid, vitamin D, and riboflavin values of foods in terms of International Units or absolute weights of these vitamins, as recorded in the literature through December 1940."

Information on the vitamin content of soybeans and soyfoods was extracted from 10 scientific studies. The foods were green, freshly shelled soybeans, mature dry soybeans, soybean meal, soy sauce, and the residue (press-cake) from soya sauce.

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The content of vitamin A in immature green soybeans grown in Alabama ranges from 1,175 I.U. to 353 I.U., while the vitamin A content of dry soybeans (6-9% moisture) ranges from 406 to 70 I.I. Address: USDA Bureau of Home Economics.

3389. Rouest, Antoine. 1942. Le Soja dans l'alimentation humaine [The soybean in human nutrition]. *Revue Horticole: Journal d'Horticulture Pratique (Paris)* 114(2089):112-14. June 1. (New Series, Vol. 28, No. 5). [Fre]
• ***Summary:*** Discusses the reasons that soya has a poor image as a food. Discusses individually: Soymilk, soy oil, lecithin, soybean cake, whole soy flour, soya coffee, and soy sauce (which forms the base of Worcestershire sauce from England). Address: In 1946: Professeur d'Agriculture, Conservatoire National des Arts et Metiers, France.

3390. Mogi, Masatoshi. 1942. Miso jôzô ni kansuru kôbo no kenkyû (hoi). II. Seirigaku-teki seishitsu [Studies on the yeasts in miso fermentation (addenda). II. Physiological characteristics]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 18(7):629-41. July. [Jap]
Address: Noda Shoyu K.K. Shikenjo (Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan).

3391. USDA Bureau of Plant Industry. Div. of Forage Crops and Diseases. 1942. Firms manufacturing or handling soybean food products. 3 p. July. Mimeographed unpublished manuscript.
• ***Summary:*** The companies are listed alphabetically by state, and within state by city. Numbered codes after each company, keyed to a list of 35 soyfood types in the back, explain which foods are made by each company. Unfortunately, it is not clear from this list which companies are manufacturers and which are "handlers" (retailers or distributors).

California: Arlington (Loma Linda Foods), Berkeley (Golden Gate Food Products Co.), Glendale (Hygenic [Hygienic?] Food Co.), Los Angeles (El Molino Mills, Mrs. Hauser's Soya Foods Co. {4617 Melrose Ave.}, Kevo Co., Klein Soup Co.), San Francisco (Radcliffe Soya Products {146 Fillmore St.}), Santa Cruz (Daglish Health Food Service). Delaware: Milton (Draper Canning Co.). Illinois: Bloomington (Funk Bros. Seed Co.), Chicago (Allied Mills, Armour & Co., Dewey Food Products Inc., Dietetic Supply House, Durkee Famous Foods, Fearn Soya Foods Co. {355 W. Ontario St.}, Glidden Co., Great China Foods Co., Griffith Laboratories {1415 W. 37th St.; handles soy flour and grits}, John F. Jelke Co., Soybean Products Co. {210 N. Carpenter St.}, Swift & Co.), Decatur (Spencer Kellogg and Sons, A.E. Staley Manufacturing Co.), Elgin (B.S. Pearsall Butter Co.), Urbana (Prehn's Health Food Store). Indiana: Columbia City (Oriental Show-You Co.), Decatur (Central Soya Co.), Indianapolis (Standard Margarine Co.). Iowa: Des Moines (Soy Products Co.). Maryland: Baltimore (J.H. Filbert, Inc., The Wm. Schluderberg–T.J. Kurdle Co.), Takoma Park (Hillcrest Health Products Co.). Massachusetts: Boston (Prince Macaroni Co.), Newton Centre (W.L. Cummings & Co.). Michigan: Battle Creek (Battle Creek Food Co.), Detroit (Shedd Products Co.). Minnesota: Minneapolis (Archer-Daniels-Midland Co.). Missouri: Kansas City (Harrow-Taylor Butter Co.), St. Louis (Blanton Co.). New Jersey: Vineland (George A. Mitchell). New York: Brooklyn (Agash Refining Corp., Cosmo Packing Co., Soy-Malt Co. {234-A Marion St.}), Elmhurst, Long Island (American Lecithin Co.), Glandale, Long Island (Beskor, Inc. Note: As of May 1997 there is no place named "Glandale"–or "Glendale"–on Long Island), New York City (Barrett & Eastwood, Borden Company, Enco Chemical Corporation, Franklin Mills Co., National Biscuit Co., Soya Corporation of America {Rockefeller Plaza}, Stein, Hall & Co.), Rochester (Vegetable Products Co.). North Carolina: Asheville (Judd's Health Foods), Lexington (Vitro Nu Foods Corp.). Ohio: Cincinnati (The Churngold Corp., Miami Butterine Co.), Circleville (Winoor Canning Co.), Cleveland (Barton Nut & Candy Co., Pfaffman Egg & Noodle Co.), Columbus (Capital City Products Co.), Greenville (O'Brien Milling Co.), Mount Vernon (International Nutrition Laboratory [Dr. Harry Miller]), Worthington (Special Foods, Inc.). Pennsylvania: Paoli (Great Valley Mills), Philadelphia (J.S. Ivins' Son, Inc., C.F. Simonin & Sons, Tastee Soy Foods), Williamsport (Penna Soya Products Co.). Tennessee: Madison College (Madison Foods). Wisconsin: Hortonville (Fox Valley Canning Co.), Oostburg (Oostburg Canning Co.), Owen (Owen Canning Co.).

The soy food types are: "1. Albumin or protein. 2. Beans–baked. 3. Beans–canned green. 4. Beans–roasted. 5. Breakfast foods. 6. Butter–soy. 7. Candies. 8. Chips or meats. 9. Chocolate. 10. Chocolate and other beverages. 11. Coffee substitute. 12. Crackers, wafers, cookies, puddings, etc. 13. Curd or cheese. 14. Diabetic foods. 15. Flakes. 16. Flavorings. 17. Flour. 18. Flour–prepared. 19. Grits. 20. Health foods. 21. Ice cream powder. 22. Infant foods. 23. Lecithin. 24. Macaroni products. 25. Malted products. 26. Meat-like products. 27. Milk. 28. Molasses–bean. 29. Oil. 30. Puffs. 31. Sauce. 32. Shortening. 33. Soups. 34. Soybeans. 35. Spreads–sandwich. 36. Toast."

Note: This is the earliest document seen (Nov. 2002) that mentions Griffith Laboratories. Address: Washington, DC.

3392. Mogi, Masatoshi. 1942. Miso jôzô ni kansuru kôbo no kenkyû. III. Bunri seru kôbo no bunrui narabini ruien oyobi hyôchô (4) [Studies on the yeasts in miso fermentation. III. Classification of isolated yeasts (4)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 18(8):733-41. Aug. [Jap]
• ***Summary:*** Genera discussed include Zygopichia,

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Hansenula, Pseudohansenula, Torulopsis, Pseudomycoderma, and Pseudomonilia. A number of new species are claimed. Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3393. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1942. Shoyu dispute truce declared. 2(27):1. Sept. 21.
• ***Summary:*** "An amicable settlement was finally effected late last week by the residents of Block 1 and the production division over the placing of the 'shoyu' and 'miso' manufacturing equipment in the block's laundry room."

3394. *Minidoka Irrigator* (*Minidoka Internment Center, Hunt, Idaho*).1942. Shoyu retails at $4 a gallon in Salt Lake. 1(4):4. Sept. 25.
• ***Summary:*** "A Salt Lake City Japanese merchant is asking $8 for a two-gallon can of 'shoyu' sauce and getting it, George S. Kashiwagi told friends this week following his return from Salt Lake City [Utah] Monday."

"The supply of Japanese foodstuffs has dwindled to almost nothing, Kashiwagi said, because inter-mountain Japanese merchants have sold their stock to various relocation centers."

3395. *Poston Chronicle* (*Poston Internment Center, Arizona*).1942. Daily output of 500 tofu planned for Poston III. 4(32):1. Oct. 2.
• ***Summary:*** Five hundred tofu a day for the tables of Poston III dining halls will soon become an actuality, it was declared yesterday by the food industry, Sim Togaseki, who revealed that half of warehouse 320 will be occupied as a production plant for this Japanese food under the management of Ray Hara.

"The large scope of this undertaking alone was indicated by the quantity of material to be used, which included 500 gallons of water daily.

"The tofu production, however, is but the first step in the industrial production of various Japanese foodstuffs. On the proposed list were the manufacture of such material as noodles, shoyu, etc.

"An advisory council of experienced business men is working on the industrial project."

Note: The Poston War Relocation Center, located in Yuma County (now in La Paz County) of southwestern Arizona, was the largest (in terms of area) of the ten American internment camps operated by the War Relocation Authority during World War II.

"The Center was composed of three separate camps arranged in a chain from north to south at a distance of three miles from each other. Internees named the camps Roasten, Toastin, and Dustin, based on their desert locations. The Colorado River was approximately 3 miles (4.8 km) to the west, outside of the camp perimeter.

"Poston was built on the Colorado River Indian Reservation, over the objections of the Tribal Council, who refused to be a part of doing to others what had been done to their tribe. However, officials of the Bureau of Indian Affairs overrode the Council, seeing the opportunity to bring in improvements and develop agricultural land on the War Department budget and with thousands of 'volunteers,' which would remain after the war and aid the Reservation's permanent population.

"The combined peak population of the Poston camps was 17,814, mostly from Southern California. At the time Poston was the third largest 'city' in Arizona. It was built by Del Webb who would later become famous building Sun City, Arizona, and other retirement communities" (Source: Wikipedia, Poston War Relocation Center, 12 April 2011).

3396. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1942. Shoyu project ready. 2(35):1. Oct. 10.
• ***Summary:*** "Manzanar's first manufacturing project was all set to go as the shoyu production division reported all machinery and equipment ready to start production of 5,000 gallons of this Japanese staple food a month.

"With an estimated capacity of 7,500 gallons, enough to supply all centers, the project will employ 4 workers under the leadership of Foreman Nobutaro Nakamura.

"The temporary factory is located in laundry room 1 where it will share the building with the bean sprout product. The shoyu equipment formerly belonged to Nakamura who operated a shoyu business in Los Angeles."

"Shigeki Tomita will head the bean sprout production which will employ a crew of three."

Note: It is not clear whether the bean sprouts are made from mung beans (probably) or soybeans.

3397. *Gila News-Courier* (*Gila River Internment Center, Phoenix, Arizona*).1942. Soy sauce mill at Manzanar. 1(11):3. Oct. 17.
• ***Summary:*** "Approximately 5,000 gallons of shoyu per month will be produced in Manzanar [internment camp, California] according to the Manzanar Free Press of October 10. With an estimated capacity of 7,500 gallons, enough to supply all centers, a superior grade of shoyu is expected, due to the quality of the water."

3398. Mogi, Masatoshi. 1942. Miso jôzô ni kansuru kôbo no kenkyû. IV. Kôsatsu oyobi sôkatsu. (5). Kôsatsu [Studies on the yeasts in miso fermentation. IV. Considerations and summary. (5). Considerations]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 18(10):940-44. Oct. [23 ref. Jap]
• ***Summary:*** The main genera discussed include Saccharomyces, Zygosaccharomyces, Zygopichia, Hansenula, Pseudohansenula, Torulopsis, Pseudomycoderma, and Pseudomonilia. A number of new species are claimed.

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Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3399. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1942. Gas tanks installed for shoyu factory. 2(47):1. Nov. 7.
• ***Summary:*** "With plans tentatively set, the production department announced that all equipment for the gas tanks has been installed for the shoyu factory and the arrival of the bean grits will start off production.

"The schedule for the bean sprouts project has been changed so that 1500 pounds of moyashi can be distributed to the mess halls once a week instead of a few pounds two or three times a week."

Note: "Moyashi" means "bean sprouts" in Japanese, however it is unclear whether these were sprouted mung beans (probably) or soybeans.

3400. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1942. Name for local shoyu sought. 2(52):1. Nov. 19.
• ***Summary:*** "Wanted: A name for Manzanar soy sauce.

"A contest, sponsored by the Manufacturing Division, to find a trade name is open to all center residents. The contest will close at noon Saturday, Nov. 21.

"The person submitting the prize-winning name will be awarded one case of shoyu (4 gallons), while those submitting the second and third best names will be given two gallons and one gallon of shoyu respectively."

The names and titles of the 7 judges (both Japanese- and Caucasian Americans) are given.

3401. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1942. Record output of shoyu made. 2(53):1. Nov. 21.
• ***Summary:*** "In a period of nine days, the shoyu factory produced more than 1500 gallons of sauce. The total production capacity for the local factory is 5,000 gallons per month."

"Manzanar is the first relocation center to manufacture shoyu. As soon as the production exceeds more than the requirements here, shoyu will be shipped to other relocation centers."

Note 1. This product, although called "shoyu," appears to be HVP soy sauce–judging from the ingredients and the time required to make it. Traditional shoyu typically takes at least 6 months to ferment, whereas HVP soy sauce takes only a few days.

Note 2. This is the earliest document seen (July 2011) that mentions actual large scale production of soyfoods (soy sauce) in any Japanese internment camp during World War II.

3402. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1942. Shoyu name contest. 2(57):1. Nov. 30.
• ***Summary:*** "With so many excellent names submitted for the shoyu naming contest, Justus G. Sato, assistant superintendent of the manufacturing division, expressed that the department is experiencing a difficult time in selecting the winner. He announced that the outcome of the contest will be announced later."

Note: Could the delay have been caused by many Japanese giving the so-called "shoyu" unflattering or HVP-type names?

3403. *Scientific American*.1942. Miracle beans: Long called "The Cow of China," the soybean is now invading almost every field of endeavor. 167(5):216-18. Nov.
• ***Summary:*** This article begins: "America in general has just begun to 'discover' the widely varied possibilities of the soybean. Henry Ford makes steering wheels of it, midwestern farmers look on it as a promising money crop, diet and health practitioners are starry-eyed about its protein, calcium, and iron content... the little bean is a capital meat substitute; that coffee, cheese, candy, salad oil, lubricating oil, printer's ink and celluloid and glue, airplane bodies and rubber substitutes are made from it. It's good for cattle–good for dog food and linoleum and paint and rayon panties, good for explosives, good for building bone and muscle in fighting men. It's a fine forage crop and, like alfalfa, it will enrich the soil.

"But five years from now, when the present war has made the soybean as familiar an institution in America life as cellophane and synthetic rubber, it will be well to remember that the 'discovery' of today was known to the Chinese thousands of years before the birth of Christ. The emperor Shen Nung speaks of it in his "Materia Medica," written in 2838 B.C. Whole ages before this... a legend was current which had been handed down in northern China and Manchuria to the present day, telling how man first became acquainted with the soybean.

"A caravan of merchants, says the legend, was homeward-bound, loaded with gold after a successful trading expedition, when it was attacked by bandits. Taking shelter in an easily defended ravine, the traders held off the attackers for several days until their food ran low. Starvation threatened–until one of the servants returned to camp with a sack of beans he had found on a vine-like plant which the animals were eating. They mashed up these beans to a paste with a little water and baked them–and on this crude biscuit the famished men regained enough strength to hold off the attackers until help arrived.

"The Chinese have looked on the soybean as their staff of life for ages." Many have never tasted milk except that from the soybean, which costs one-fourth as much as cows milk. "Long it has been called the Cow of China. The Orient uses the bean not so much as a vegetable as for making cheese [tofu], [soy] sauce, bread, and meat substitutes. For

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thousands of years it has been the basic protein food in Manchuria, China, Korea, Japan, and the Malay Peninsula.

"Soybeans first came to America in 1804 on a clipper ship whose Yankee master had ordered several bags tossed in the hold in case his provisions ran low."

William J. Morse, now senior agronomist at the USDA, worked for 34 years "with the quiet fervor of a missionary to bring the miracle bean prominently into the agriculture of this country."

In 1929 some 9 million bushes of soybeans were grown in the USA, increasing to 91 million bushels in 1939. The soybean is now America's fourth largest cash grain crop; "we grow as much as Manchuria. The cow of China has become a hundred-million-dollar American industry.

More than 75% of America's soybean oil goes into food products; most of the rest goes into paint, lacquers, and soaps. About 95% of the soybean meal is fed to livestock; the remaining 5% is used to make plastics, flour for baking, glue, fertilizer, dog food, breakfast cereals, macaroni, baby foods, reducing diets, and diabetic foods.

Discusses (at great length) the work of Henry Ford and Robert Boyer with soybeans, including soy fiber (which has the potential to replace wool), Ford's suit made of 25% soybean fiber, plastic parts in cars, the car of the future with a plastic body over a tubular steel framework (it will weigh only 85% as much as 1942 models did), and his solvent extraction system.

Note: This is the earliest document seen (Dec. 2011) with the term "Cow of China," referring to the soybean, in the title.

3404. *Granada Pioneer (Camp Amache / Granada Internment Center, Granada, Colorado).* 1942. Tofu merchant arrives here. 1(18):3. Dec. 24.

• ***Summary:*** "George T. Nagamoto of Swink, Colorado, arrived here to renew his contract with this center to supply tofu for the next three months.

"Nagamoto, a pioneer seed merchant, has been doing business in Swink for many years. At present his business is limited to wholesale and retail distribution of koji, miso, shoyu, age, and tofu."

3405. **Product Name:** Marumasa Soy Sauce.
Manufacturer's Name: Honolulu Sake Brewery and Ice Co., Ltd.
Manufacturer's Address: 2150 Booth Rd., Honolulu, Oahu, Hawaii.
Date of Introduction: 1942.
Ingredients: Water, soy beans, salt, wheat, disodium 5-inosinate, caramel coloring, and sodium benzoate, a preservative.
Wt/Vol., Packaging, Price: 16 fluid oz (1 pint), 50.7 fluid oz (1 quart 1 pint 2.7 fluid oz), or 101 fluid oz (3 quarts 5 fluid oz).
How Stored: Shelf stable.
New Product–Documentation: Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows one label. Marumasa Soy Co. has closed but their brand is being carried on by the Honolulu Sake Brewery and Ice Co. Ltd. Hawaii Herald. 1981. May 15. p. 6-7. "Honolulu sake: Bending with the winds of change." When World War II started, a law prohibiting the use of rice in making sake was enforced. So the company switched to making shoyu. Under the label of Marumasa Soy sauce and later Diamond Shoyu, the locally made products soon became popular in Hawaii. It was another innovation that kept the company alive. Owners include Tajiro, Daizo, and Shinzaburo Sumida; Label. Received Feb. 1988 from Honolulu Sake Brewery & Ice Co., Ltd. 4.5 x 3.5 inches. Red, black, blue, green, gold, and white. "Choice. New improved. Natural brewed and aged."

3406. Office of Alien Property, United States Office of Alien Property. 1942. Report. Washington, DC: U.S. Government Printing Office. See p. 46, 48, 108. Report year ends June 30. 23 cm. *

3407. **Product Name:** Marusho Shoyu.
Manufacturer's Name: Showa Shoyu Brewing Co.
Manufacturer's Address: P.O. Box 246, Glendale, Arizona. Phone: 457.
Date of Introduction: 1942.
Wt/Vol., Packaging, Price: Gallon, quart, and pint bottles.
New Product–Documentation: Soybean Digest. 1945. "Grits and flakes... from the world of soy: John Tadano is erecting a plant for the production of soy sauce in Glendale, Arizona." Aug. p. 22. Mr. Tadano has had soy sauce on the market there since 1941. "Capacity of the expanded plant, one of the largest in the country, is expected to be 3,500 gallons monthly."

Soybean Blue Book. 1947. p. 73; 1949. p. 103. The name is now written "Showa Shoyu Brewing Corp." No hyphen.

Nichi-Bei Jiji Jushoroku [Japanese American Times Directory]. 1952, p. 451. Under "Glendale, Arizona." In Japanese: Showa Shoyu Jôzô Kaisha. In English: Showa Shoyu, P.O. Box 246, Glendale. Phone: 457.

Chicago Shimpo, Inc. 1958. Chicago Japanese American directory.

Page 19: An outstanding two-page ad. On the left page a photo shows three sizes (1 gallon, 1 quart, 1 pint) of glass bottles of "Marusho Shoyu. Distributor: Modern Food Products Co., San Francisco, Los Angeles, Denver. Brewed by Showa Shoyu Brewing Corp., Glendale, Arizona." The company logo (the character "sho" in a circle) is in the upper right and lower left corners. On the right page, horizontal photos show: (1) An outside, ground-level view of two large, side by side, buildings, with a towering smokestack, on

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which is written "Marusho" in English. The smaller one on the right was the soy sauce factory. (2) A long tractor trailer distribution truck. On the side is written in English "Marusho Shoyu" with the company logo between the two words. (3) A man in a warehouse with many cases of Marusho Shoyu stacked high. In a box in the lower right corner is written: "Manufacturers–Distributors. Post Office Box 246, Glendale, Arizona. Telephone 457. John T. Tadano."

Glendale-Peoria [Arizona] Telephone Directory. 1954. "Showa Shoyu Brewing Corp., 1150 East Glendale Ave. John and Joe Tadano."

Hokubei Mainichi Nenkan (Year Book). 1970. Page 761. Residential / personal directory for Phoenix, Arizona: Tadano, John. 3539 W. Colter Ave. Tadano, Joe. 2207 W. Cactus Wren Dr. Tadano, Tadashi. 3632 N. 59th Ave. Tadano, Yoneo. 2609 N. 59th Ave. Barbara Takesuye (e-mail of 22 Aug. 2008) states: Tadanos in the area would have been Tadashi (Wife: Michiko), Takeo Frank (Grace), Yoneo George (Rena), John (Mary), and Joe (Kimi)–the five brothers. There are 23 cousins from these families.

Talk with Karl Matsushita, Director of Japanese-American Library in San Francisco. 1990. May 8. He saw the building of a shoyu factory that used to exist in Glendale, Arizona. He thinks it began before World War II. He does not recall the name.

Talk with Julie Havir, reference librarian at Glendale Public Branch Library. 2002. Aug. 30. She went to school in Glendale with many Tadano children. The family owned lots of land in Glendale after World War II and was very active in agriculture. Her phone: 623-930-3431. The Glendale Historical Society has an excellent collection of older telephone directories. She may also be able to get in touch with the Tadano family.

Talk with Mary Tadano (widow of John T. Tadano who founded this company) and Michiko Tadano. 2002. Sept. 17. She thinks the company was founded shortly after the Japanese attacked Pearl Harbor, so in late 1941 or 1942.

Letter (e-mail) from Betty Takesuye, John Tadano's niece. 2008. Oct. 4. She would guess the company started selling shoyu in 1942. "It was founded by Takeshi Tadano, John's father, but due to the language barrier, it probably got started under John Tadano since he acted as president of the company and was an American citizen and fluent in English."

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Note 1. Concerning the date, 1941 or 1942. *Soybean Digest* says John Tadano had soy sauce on the market by 1941. Yet Mary Tadano (John's widow) says: "Leaving his farm under the supervision of his two grown sons, in about mid-1940 he [Takeshi Tadano, John's father] returned to Japan, learned how to make shoyu from a large shoyu manufacturing company (nobody remembers where), then after about one year, returned to the United States in about September 1941, on the last Japanese ship allowed to reach the United States before the Japanese attack on Pearl Harbor.

"Arriving in Glendale that fall, he immediately set to work constructing a large wooden building on his farm in which to make shoyu." Mary recalls that the first shoyu made by the Tadano family was sold in about 1942.

E-mail from Betty Takesuye. 2011. July 1. Photos show 8 bottles of Marusho shoyu–with the shoyu in them! "Those bottles belonged to my mother. After she passed away, the contents of the house went to my sister Arlene Tadano who lived with my mother (Michiko)." Betty took these photos at Arlene's home.

Note 2. This is the earliest known soy product made in Arizona.

3408. **Product Name:** Soy sauce.
Manufacturer's Name: Wing Nien.
Manufacturer's Address: Montgomery and Jackson Streets, San Francisco, California.
Date of Introduction: 1942.
New Product–Documentation: Thomas' Wholesale Grocery... Register. 1955. July. p. 1474. Soy sauce. California, San Francisco: Wing Nien Soy Sauce Mfg. Co., 832 Sansome.

3409. Giraud-Gilliet, J. 1942. Le soja, aliment d'avenir: manière de le cultiver; 2 à 300 façons de le consommer [Soya, food of the future: How to cultivate it; 200-300 ways to consume it]. Saigon: Imprimerie de C. Ardin. 285 p. Index. [Fre]

• ***Summary:*** Contents: Dedication. Introduction. Part I: Summary study of soya (the soybean): Its cultivation. 1. The nature of soya: Its area of expansion. 2. Cultivation of soya: Soil, manure & fertilizer, seeds. 3. Interest in soya: Its richness in nutritive elements and comparison with other foods. Various possibilities for utilization: therapeutic uses for hygiene and diseases (vegetarian diet, diabetes, beriberi, diseases of the nervous system, anemia, slimming, milk diet), agricultural uses for fixation of nitrogen in the soil and as a fertilizer, use in the feeding of animals (green forage, dry forage, soybean cake, flour, seeds, germinated seeds, straw and pods, soymilk, milk), industrial utilization (soybean oil and its derivatives, glycerine, soy casein), use as human food (whole dry soybeans, soy sprouts, soybeans mashed or ground after they are cooked, soybeans cracked or crushed before they are cooked, fermented soybeans, soymilk, soymilk derivatives / foods made from soymilk {tofu / *dâu-phu*, yuba / *tao hu ky*, dry yuba rolls / *phu chuc*, beverages}, edible oil), utilization for social work (drops of milk, bowls of soya, inexpensive restaurants, battle against malnutrition and degeneration, for school gardens, pagodas, waste lands).

Part II: The main soyfood products and how to prepare

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them at home. 1. Soymilk, soymilk curds (*tau hu hoa*), small white cheeses (*petits fromages blancs* {*dâu-hu miêng*}), folded sheets of yellow yuba (*feuille jaune plissée de crème de soja* {*dâu-hu ky vang*}), white sheets of yuba (*feuille blanche unie* {*dâu-hu ky trang*}), dried or smoked yuba (*plaquettes séchées ou fumées* {*dâu-hu ky ngot*}), fermented tofu–like cream cheese (*fromages fermentées: cancoillotte comtoise au soja*). 2. Soy flour: Roasted soy flour, soy bread, sojenta (soy polenta), pasta (soy vermicelli and vermicelli of mung beans {*dâu xanh*} or *song than*). 3. Soy condiments. Solid condiments: natto and douchi (*taotché*), condiments that are pastes: miso and doujiang (*tao tjiung*) and koji [sic, not a paste but used to make miso, doujiang, shoyu, and jiang-you], liquid condiments: shoyu, jiang-you (*tsiang yeou*), (*tao yu*), ketjap (Indonesian soy sauce), Vietnamese soy sauce (*tuong*).

Part III: Recipes. 1. Introduction: Essential recommendations, the cookery of the poor, comparative cuisine, general recipes. 2. Soups and paps. 3. Hors d'oeuvres and salads. 4. Vegetables. 5. Meat, fish and egg dishes. 6. Breakfasts, sweets, and desserts.

Conclusion. Appendix. Errata. Address: Administrateur des S.C. de l'Indochine; Vietnam.

3410. Jouven, Maurice. 1942. Les plantes des huiles [Oil bearing plants]. Paris: Editions de Montsouris. 160 p. See p. 82-101. Illust. No index. 18 cm. Series: Collection Rustica. [Fre]

• ***Summary:*** Contents related to soy: Part V: Exotic oil-bearing plants susceptible to cultivation in France. 1. The soybean–Characteristics of the plant, Origin and distribution. Importance of the crop. Varieties (overseas and developed for France). Composition of the plant (as for green forage). Climate. Nature of the soil. Elements needed from fertilizers. Manure / fertilizer (*engrais*).

2. Cultivation of soybeans–Place in the crop rotation. Preparing the soil. Planting. Transplanting. Nitrogenation, incl. inoculation and nitrogen-fixing bacteria. Cultural styles (*façons culturales*). Enemies of the soybean.

3. Harvesting the soybean–Threshing. Yield. Storage.

4. Utilization of the soybean–As animal feed. As human food. Soy flour. Soy bread. Soy oil. The soybean as a vegetable [green vegetable soybeans]. Condiments (made with molds, such as soy sauce. The Chinese consume each year 700 to 800 million liters of soy sauce). Various other products (soy chocolate, soy coffee, soy wine, fermented soymilk). Industrial uses (soaps, candles, paints, soy caseine for sojalithe, artificial petroleum, soy gasoline {by distillation of the petroleum}).

Organizations actively involved with soya: (1) Institut National du Soja, 5, rue de Logelbach, Paris 17eme. (2) Institut Agricole et Industriel du Soja, 13, rue des Saussaies, Paris 8eme. (3) Centre National de Soja, 8, cours de Gourgues, Bordeaux. (4) *Revue Internationale du Soja*, (Editions E.-V. Letzgus, 97, rue Saint-Lazare, Paris 9eme).

Illustrations show: (1) A soybean plant with enlarged pods (p. 83). (2) A weeder (*Extirpateur*) (p. 89). (3) Many ways to plant soybean seeds (p. 93). (4) Devices for drying soybean forage (p. 96).

5. The peanut.

6. Castor-oil plant, sesame seed, and niger seed (*Guizotia oleifera / abyssinica*). Address: Ingenieur Agronome.

3411. La Choy Food Products, Inc. 1942. The art and secrets of Chinese cookery. Detroit, Michigan: La Choy Food Products, Inc. 26 p. Illust. (some color). 10 x 16 cm. *

• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home. Address: 4461 West Jefferson, Detroit, Michigan.

3412. Löbbe, Henrique. 1942. Cultura da soja no Brasil. 6a ed. [Culture of soybeans in Brazil. 6th ed.]. Rio de Janeiro, Brazil: Serviço de Informaçao Agrícola, Ministerio da Agricultura. 35 p. 23 cm. 4th edition, 1939, 33 p.; 7th ed., 1945, 74 p. [Por]

• ***Summary:*** Contents: History (in East Asia, Europe, and the USA). Markets. Soybean trials in Brazil (from March 1921 at Campo de Sementes de Sao Simao). Letter dated 28 Sept. 1926 from W.J. Morse of the USDA to Dr. Henrique Lobbe (after Lobbe's visit with Morse to Arlington Farm [Virginia], Morse sent Lobbe one ounce each of 51 varieties of named American soybeans, plus 17 varieties of cowpeas). Table showing the 48 varieties of soybeans tested at Sao Simao in 1927, with the dates of planting, germination, flowering, maturation, and harvest, days to maturity, resistance to pests (*vagens*), height of the plant, and yield (in grams). Botanical description. Nomenclature (in Brazil the soybean is called "soja," "feijao China," "ervilha oleaginosa do Japao," "feijao Japones," and "fava da Mandchúria"). Varieties (divided into 5 groups from very early [80-90 days] to late [130-150 days]). Green manure. Climate and soil. Chart showing products of the soybean (from Piper & Morse, *The Soybean* 1923). Preparation of the soil. Inoculation with bacteria. Sowing. Chemical fertilizer. Things to be careful of during cultivation. Diseases and pests. Harvest and yield. Cost of cultivation. Use as forage. Chemical composition of the seeds. Oil. Cake. Use as a food for humans: Hahto and Easycook, soy sauce, soymilk and tofu (*leite e queijo de soja*), use in diabetic diets, soy flour. Address: Brazil.

3413. Onuki, Motoi. 1942. Chômi shokuhin [Foods that are seasonings]. Tokyo: Yuzankaku. 233 + 6 p. 22 cm. [Jap]* Address: Japan.

3414. Quinn, Vernon. 1942. Vegetables in the garden and their legends. Philadelphia and New York: J.B. Lippincott Company. x + 261 p. Illust. by Louise Mansfield. 21 cm.

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• ***Summary:*** The author is a woman. Soybeans are discussed on page 65.

3415. Rotondi, Pietro. 1942. Vegetarian cookery. Los Angeles, California: Willing Publishing Co. 151 p. Recipe index. 23 cm. 2nd edition 1948 (150 p.).

• ***Summary:*** This book, dedicated "To Humanity," is basically a vegan cookbook–except for the use of a little honey. It uses no dairy products or eggs, and views a raw food diet as the ideal–although many recipes call for cooking. Following the dedication is this quote: "The human body is the temple of God and as real as God himself, because He dwells in it..."

Under "Substitutions" (p. 21) the author notes that "Soy milk may be substituted for cow's milk..." Under "For the infant" we read: "Advice to the mother–Almond milk is the most perfect and ideal food for the infant both in nutritional value and digestibility." Soy sauce (p. 70-71, etc.), Savita, and Vegex are widely called for a seasonings. The soy-related recipes in this book seem extremely original and innovative; they include: Baked lima beans (with soy bean milk, p. 58). French-fried onions (with soy bean milk, p. 61). Peas cooked with potatoes and soy bean milk (p. 67). Whole wheat or barley chowder (with soy bean milk, p. 68). Ripe olive croquettes (with soy milk, p. 71). Vegetable hamburgers (with soy bean milk, p. 72). Carrot loaf I (with soy milk, p. 73). Tofu (fried in flour breading, p. 74). Tofu loaf (baked, p. 74). Tofu omelet (p. 74). Tofu and garbanza [garbanzo] beans (p. 75). Gluten steak (with 1 cup soy sauce, p. 75). Chop suey (with [mung] bean sprouts and soy sauce, p. 78). Savory lima patties (with soy bean bread, p. 85). Soy bean loaf (with cooked and ground soybeans, p. 85). Soy gravy (with soy milk and soy sauce, p. 87-88). Wholewheat bread and rolls (p. 89-92; many call for the use of soy milk). Tofu cake I (like a baked cheesecake with shredded coconut, lemon, and agar, but no crust, p. 99). Tofu cake II (like a cheesecake with a wholewheat or graham cracker crust, p. 99). Note: This is the earliest document seen (Oct. 2003) that mentions a tofu cheesecake, and the earliest recipe seen (Oct. 2003) for a tofu cheesecake.

"All Bran" muffins (with brand and soy milk, p. 112). Soy wheat germ muffins (with soy pastry flour, p. 113). Corn meal muffins (with soy milk, p. 113-14). Soy bean chocolate frosting (with "2 squares soy bean chocolate," p. 116). Soy bean chocolate date pudding (with 5 oz "soy bean chocolate" and 1 tablespoon soy bean milk, p. 120). Rice pudding deluxe (with 1 quart soy milk, p. 121). Soy bean chocolate ice cream (with 1/3 pound soy bean chocolate and a pint coconut milk, p. 127). Fruit ice cream, Maple sugar candy, Maple fudge (each with soy milk, p. 129). Soy bean chocolate fudge (with 1 cup "grated soy bean chocolate" and 3 tablespoons soy milk). Peanut butter fudge (with soy milk, p. 130). Soy bean chocolate caramels (with 3 squares soy bean chocolate and ½ cup "soy milk," p. 131).

On pages 141-43 are two charts: (1) Alkaline, acid and neutral foods (soy beans [dried or fresh], soy bean bread, and soy bean milk are listed as having an alkaline ash, whereas flesh foods, eggs, cheese, and most nuts are listed as having an alkaline ash). (2) Vegetable protein vs. animal protein. Divides various foods that are high in protein content into vegetable and animal, then ranks them in descending order of protein content. Included in the vegetable protein are: 1. (highest) Soy bean flour 39.5%, 4. soy beans 34.0%. The highest ranked animal product is dried beef 39.2%. The average protein content of 26 vegetable foods is 25.89%, compared with 21.79% for 26 animal foods.

The author, a chiropractor, died in about 1986 in a fire at about age 92. A videotape of him has been produced by the Rotondi foundation in Los Angeles.

Note: This is the earliest English-language document seen (Jan. 2007) that contains the term "Vegetable hamburgers" (or "Vegetable hamburger"). Address: Los Angeles, California.

3416. Rouest, Antoine. 1942. Le soja français [Soya in France]. Argenton, France: Langlois. 48 p. Preface by J. Bordas. [9 ref. Fre]

• ***Summary:*** Contents: Preface, by L Brétignière (Prof. at Grignon, Member of the Academy of Agriculture). Preface to the first edition, by Louis Forest (1921). Introduction to this new edition: Soviet Russia and the soybean (*le Soja;* includes the story of Rouest's stay in the Northern Caucasus, Russia, from 1930 to 1933), Germany and Poland take up the soya question, the canons [guns] of Germany versus the Manchurian soybean, a secret contract to provide the weapons of war, organization of a Polish bank in Manchuria, Germany cultivates soybeans in Romania and Bulgaria in preparation for the war, France and the cultivation of soybeans.

1. What is soja? 2. History of the propagation of soja: Introduction of the soybean into France and Europe, the soybean is cultivated in central Europe, in Austria, in 1875, in France the soybean is the object of numerous trials from 1876 to 1881, its cultivation worldwide, the study and acclimatization of soya become generalized.

3. Botanical characters of the soybean: And the varieties of soybeans. 4. Chinese varieties: The soybean in China, the production of soya in China in 1916 and 1917, production of soya in the Far East during the year 1928, exportation of soya from the Far East to Europe.

5. Japanese varieties: The soybean in Japan, varieties of soya from Indochina and from other Asian countries. 6. The soybean in America: American varieties, cultivation of soybeans in Ohio, selection of soya using pure lines in Connecticut.

7. The soybean in Europe: Italy, Russia, France, French climatic zones for the cultivation of Soja hispida, the Atlantic zone, the continental zone, the Mediterranean

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zone and climate, can the soybean be cultivated in all the French climates including those in the north, northeast, and northwest, speedy production of soybeans in view of agricultural production and of the creation of early varieties for the regions in north and northeast France.

8. Instruction for growing soja in France. 9. Soja in Manchuria. 10. Soja seeds. 11. Selection of soja. 12. Varieties of soja. 13. Different ways of planting soya seeds. 14. Soy yield. 15. Nitrogen fixation in soya seeds. 16. Tilling and preparing the earth. 17. Soja fodder. 18. Soja, striking and improving. 19. Harvesting soja grain. 20. Soja oil. 21. Soja oil-cake for animal feeding. 22. Vegetable milk, soja milk and industrial casein.

23. Soja in human food: Soy flour and its applications, soy bread with wheat, nutritional composition of soja compared to dry legumes, soy viewed as a dry legume to replace meat, comparative production of nutritive elements among the various legumes used for human food, comparative value in calories of the usual foods and of soja, preparation of soy soups and meals in compressed tubes, what varieties of soy can serve the special needs of human nutrition, Sojenta, potatoes stuffed with soy, force meat balls (*boulettes*) of rice and soy, bread of rice and soy, pudding of soy and rice, soy sprouts and their food value, fresh soy sprouts in a salad, soy sprouts with vegetables, soy preserves and confections, soy chocolate, soy coffee, soybeans conserved in containers, soy with smoked fish, soup with soy vegetable meat, soymilk soup, omelet with smoked soy vegetable ham, green soy sprouts, soy cake, soy force-meat fritters.

24. The utilization of soja in the Far East: Vegetable cheese (tofu), soy-based condiments, Japanese natto (2 types), Japanese miso, Chinese miso, soy sauce (*soyou* or *schoziou*), making soy sauce in Kwantung, China, making soy sauce in Japan, koji or molded rice.

25. The culture of soja in North Africa (Rouest has varieties that would grow and yield well in the French colonies of Tunisia, Algeria, and Morocco). 26. Opinions of some authors on soja. Conclusions. Bibliography on soja.

A small photo on the "Dedication" page shows Léon Rouest (born in Paris on 11 Nov. 1872). Address: Directeur de la Station des Recherches Agronomiques d'Avignon.

3417. Takenobu, Yoshitaro, ed. 1942. Kenkyusha's new Japanese-English dictionary. Cambridge, Massachusetts: Harvard University Press. iv + 2280 p. 24 cm. American edition. Reproduced by a photolithographic process from the 82nd printing of 1939." Title also in Japanese: *Shin Wa-Ei Daijiten*. [Eng; jap]

• ***Summary:*** "The present war has necessitated the publication in the United States of a new edition of Kenkyusha's Japanese-English Dictionary because this country is cut off from the former source of supply of the dictionary and because the demand and need for all Japanese dictionaries has greatly increased. To meet this need, the Department of Far Eastern Languages of Harvard University has undertaken the project of publishing in the United States this dictionary as well as other essential Chinese and Japanese dictionaries, and the Rockefeller Foundation has supplied the necessary funds for the enterprise.

"This American edition of the dictionary has been reproduced by a photolithographic process from the eighty-second printing of 1939. No changes have been made in this edition except to increase slightly the size of the print and the book."

The very first page, titled *Kaisetsu* ("explanation"), shows the Japanese syllabary and the romanization of each.

Near the end are two appendixes: (1) Pages 2264-74: *Saishin-go oyobi gairai-go ichiran* [List of most recent words and foreign words]. (2) Pages 2275-80: *Chugai hikaku nenpyo* [List of Japanese emperors and era names, with Japanese years and Western calendar years–starting with the first legendary emperor Jimmu (660-585 BC)].

The content of this pirated American edition is basically the same as that of Kenkyusha's 1931 second edition of this dictionary. Address: General editor, Japan.

3418. Von Loesecke, Harry W. 1942. Outlines of food technology. New York, NY: Reinhold Publishing Corporation. 505 p. Illust. 24 cm. 2nd ed. 1949. [1 soy ref]

• ***Summary:*** The section titled "Soybeans" (p. 139) states: "At he present time there are about six commercial canneries in the United States canning green soybeans. The beans are blanched, drained, and run into containers. Hot brine with sugar (about 2 ounces of sugar for each gallon of water) is added and the cans sealed. Pieces of pork are sometimes added. No. 2 cans are processed 85 minutes at 240°F."

Brief recipes for making soy sauce and Worcestershire sauce are given (p. 364). In the latter (whose source is Blumenthal and Thuor, 1932), soy sauce is one of the major ingredients. Address: Senior Chemist, in charge, U.S. Citrus Products Station, Bureau of Agricultural Chemistry and Engineering, USDA, Winter Haven, Florida.

3419. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1943. New implements boost output of local shoyu. 3(4):1. Jan. 13.

• ***Summary:*** "Addition of implements for shoyu manufacture has raised the potential output of the local factory from 250 gallons per month to 450 gallons per month. The time is near when this camp will be supplying other relocation centers with the favorite Japanese sauce without which many dishes would be quite incomplete, said Nobutaro Nakamura, foreman of the shoyu and miso manufacturing.

"A picture of the steps in the manufacture of shoyu consists of four distinct processes: Two separate boilers, a cooling system, comprising six vats, and a large receptacle called the mixer are the implements required. Boiler No.

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1 contains soy beans and wheat. Boiler No. 2 contains salt and sugar. The output of the two boilers is sent through the cooling system to the mixer which with the addition of Amino Acid finishes the product.

"Miso manufacturing advanced to proximity of production, still requires an answer from Mr. Bennett of the regional office who is in Gila, Ariz., and whose knowledge to certain matter is essential to the production of this oriental cheese."

Note: These implements and the description of the manufacturing steps show clearly that the "shoyu" is actually unfermented HVP soy sauce–which is considered greatly inferior to traditional fermented shoyu by Japanese.

3420. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1943. Manufacturing and industrial. 3(23):7. March 20.

• ***Summary:*** "'Shoyu,' or soy sauce, a necessary commodity of the Japanese began production in November to supply the center and other centers in the future. Since production began, 2000 gallons per month has been the total but since January this has been increased to 5,000 gallons. Foreman of this project is Nobutaro Nakamura."

Production of bean sprouts [the type of seeds used is not mentioned; probably mung] began in late October. Production now averages 1,600 pounds a week. The foreman is Shigeji Tomita.

A project to make "tofu" is being contemplated, with Henry Toda as foreman. Also a project to make "miso."

Note: This "Special Anniversary Edition," 18 pages long, summarizes the events at the Manzanar center / camp during the past year.

3421. *Gila News-Courier* (*Gila River Internment Center, Phoenix, Arizona*).1943. Tofu manufacture contemplated here. 2(35):3. March 23.

• ***Summary:*** "Equipment to manufacture tofu is being sought by the Mess Division, stated Harold E. Keadle, supervisor.

"It as disclosed that Manzanar and Poston had been making 'tofu' and 'shoyu' for some time."

Note: The Gila River camp, located 30 miles southeast of Phoenix, was located on the Gila River Indian Reservation–over the strong objections of the reservation's American Indian government. The camp opened in July 1942 and had a maximum population of 13,348.

3422. *Denson Tribune* (*Jerome Internment Center, Denson, Arkansas*).1943. Manufacturing of 'tofu' to start here. 1(9):4. March 30.

• ***Summary:*** "Manufacturing of 'tofu,' or soy bean cake, and 'miso, or soy bean curd [sic] is expected to get underway within a week.

"Installation of the equipment for the factory in Dining Hall 36 was started last week.

"The products will not be for sale. They will be manufactured solely for dining hall consumption.

"Gonshiro Harada, who operated a 'tofu,' 'miso' and 'shoyu factory prior to evacuation, will head the project. He will be assisted by Mineso Yamagami.

"The manufacture of 'shoyu' or soy bean sauce, in the factory may also be started in the near future, according to Dee Jay Hudson, mess management head."

3423. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1943. Soap, shoyu sale starts this week. 3(27):4. April 3.

• ***Summary:*** "A sale of soap and toilet paper at the General Store and rice and 'shoyu' (soy bean sauce) at the Canteen in effect this week was announced by Frank Kanichi Kurahashi, assistant manager of the Co-op.

"Although hard to procure, Kurahashi disclosed that the Co-op managed to secure a limited supply."

3424. Schmidt, Frances M. 1943. Soybean flour (Ad). *Nature's Path* (*New York City*). June. p. 238.

• ***Summary:*** "Use in all your baking to increase protein in your diet. 5 lbs. for 75 cents, 10 lbs. for $1.30. Not postpaid. Also try soybean lecithin for $2.00 lb. and soy sauce at 50 cents a quart." Address: Plainfield, Illinois.

3425. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1943. Manufacture of tofu commences following delay. 3(62):1. Aug. 4.

• ***Summary:*** "Commencement of the manufacturing of tofu (bean cakes) got under way this week at block 1-20 after months of delay, according to the Industrial Division."

"Schedule planned: The Mess Division announced that a schedule has been planned whereby tofu may be distributed on block by block basis, beginning from block 1, since only about five to six blocks can be served daily.

"Tofu section is headed by S. Okugawa and assisted by Henry Toda."

"Shoyu production: Production on shoyu (bean sauce) got under way this week after weeks of experimentation and shoyu will be distributed to the Mess Division by the end of this week for local consumption, it was also reported.

"Out of five different brands of shoyu, a committee, consisting of Project Director Ralph P. Merritt, block leaders and mess hall chefs chose brand No. 2. Every brand was given a taste and cooking test, the Manufacturing division declared."

"Output unknown:... Rumors circulating around the center stating that Shoyu Supervisor Nobutaro Nakamura has turned in his resignation has been confirmed by this division. The name of the new supervisor has not as yet been disclosed."

3426. *Manzanar Free Press* (*Manzanar Internment Camp,*

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California).1943. Residents taste home-made tofu. 3(63):1. Aug. 7.
• ***Summary:*** "Tofu, the first to be manufactured and distributed here, was distributed and served at the first five blocks on Wednesday, the Industrial Division announced."

"Alteration of the shoyu plant is now under way and the division hopes to get production started by the end of the week."

3427. *Topaz Times* (*Topaz Internment Camp, Topaz, Utah*).1943. Around the circuit. 4(19):2. Aug. 14.
• ***Summary:*** From Manzanar Free Press [California]. "After months of delay, manufacturing of tofu (bean cakes) got under way, according to the industrial division.

"Also, production on shoyu (bean sauce) got under way after weeks of experimentation and shoyu will be distributed to the mess division soon for local consumption."

3428. *Chicago Daily Tribune*.1943. Beatrice buys La Choy Food; seeks listing. Sept. 28. p. 29.
• ***Summary:*** The Beatrice Creamery Co. of Chicago, Illinois, disclosed yesterday that it has purchased "La Choy Food Products, Inc., a Michigan corporation whose principal plant is at Archbold, Ohio." Beatrice is "applying to the New York Stock exchange to list 20,900 additional shares in connection with the purchase."

La Choy, which was organized in 1922, has 167,000 shares of capital stock outstanding. Beatrice "will issue one share of its common stock for each eight shares of La Choy."

3429. *Wall Street Journal*.1943. Beatrice Creamery asks listing of more shares: Application to NYSE follows purchase of La Choy Food Products, Inc. Sept. 28. p. 24.
• ***Summary:*** From the Wall Street Journal Chicago Bureau. Chicago–The first part of this article is similar to that published in the Chicago Daily Tribune today.

La Choy owns and operates its main plant on 23 acres of land in Archbold, Ohio. Its business consists of processing and packing [mung] bean sprouts, tomato products, salted black beans, chow mein noodles, meat products of all kinds, Worcestershire sauce [soy sauce], fruit butters, and other food specialties.

In the future, Beatrice will distribute many of these products. This is a step in Beatrice's further diversification, according to president Clinton H. Haskell.

La Choy's net worth is $564,086 and net plant value is $442,687. Current assets are $267,558 and current liabilities are $65,407. Beatrice will assume a long-term loan of $115,000.

The president of La Choy, French Jenkins, will continue as general manager of the La Choy division of the Beatrice Creamery Co. The reorganization will be voted on by La Choy stockholders at a special meeting to be held on 30 Sept. 1943.

3430. Glidden Company (The), Soya Products Div. 1943. From Glidden: Always a new development (Ad). *Soybean Digest*. Sept. p. 53.
• ***Summary:*** Lists all products made by Glidden's Soya Products Division. "For bakery, meat products, confectionery, cereals, and institutional use–Soya flours and Soyalose grits. Available products include: Soyarich Flour–A full-fat soya flour. Soyalose Flour–A low-fat soya flour. Soyafluff Flour–A practically fat-free soya flour. Soyalose Grits -Low-fat soya grits–sized for specific uses in many food preparations.

For household use–Watch for the names: Durkee Soyarich Flour and Durkee Soya Bits–Two new products for home use. Durkee Oleomargarine. Durkee Worcestershire Sauce. Durkee Salad Dressing.

"For confectionery use–Albusoy: A water-soluble proteinaceous material derived from the soybean–of a non-coagulating nature–used as a whipping agent."

Note. This is the earliest document seen (May 2002) that mentions Albusoy.

For industrial use, soya protein products include: Alpha Protein–An isolated protein for industrial uses. Prosein–A special soybean protein adhesive product. Spraysoy–A special soybean product for use as a sticker and spreader for agricultural spray materials. Mulsoya–A water-soluble isolated soybean protein derivative for textile sizing. Prosoy-G–A filler and extender in molding resins.

For pharmaceutical use: Two products synthesized from soybean sterols used in replacement therapy for endocrine deficiencies.

This ad also appeared in the Oct. 1943 issue. Address: 5165 W. Moffat St., Chicago, Illinois.

3431. *Manzanar Free Press* (*Manzanar Internment Camp, California*).1943. Shoyu factory goes into full production. 4(12):3. Oct. 16.
• ***Summary:*** "Located at 1-20, the shoyu factory under the temporary supervision of Minoru Takechi, swung into full production last week and is producing 1000 gallons monthly, according to the Industrial Division.

"The delay in production was due to periods devoted to testing and sampling of various shoyu sauce in order to obtain the best grade possible. The sauce which was accepted by the various mess hall chefs now in production is known as Formula Two.

"At present, both sugar and glucose are being used to make shoyu but glucose is reported to be much better, according to this division's announcement. The factory has two workers at present. The two are Minoru Takechi and his son, Harry."

3432. O'Harra, Michaela. 1943. Japs in Arizona camp create community in desert setting. *Arizona Daily Star*. Oct. 17. p.

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1.
• ***Summary:*** The section titled "Food preparation" states about 1,350 evacuees prepared food for their people in the project's mess hall. Rice is served twice daily. Most of the people, when questioned, say they don't like the food. "They usually confess, however, a fondness for various pickled vegetables, pickled in salt rather than in vinegar, soy sauce and miso, a relish paste made of soy beans. These are being prepared now in the project."

Note: Poston (also know as Colorado River) Relocation Center was the name of one of two Japanese internment camps in Arizona during World War II. Each of the ten camps was intended to be self-sufficient. Built on the Colorado River Indian Reservation (over the objection of the Tribal Council), it was the largest of the 10 internment camps operated by the War Relocation Authority (WRA), and the 4th largest community in Arizona. It was located in the southwest corner of Arizona.

3433. Drown, Marion Julia. 1943. Soybeans and soybean products as food. *USDA Miscellaneous Publication* No. 534. 14 p. Dec. [1 ref]
• ***Summary:*** Contents: Introduction. Nutritive value of soybeans: Why soybean protein is important, minerals and vitamins of soybeans, the fat of soybeans–soybean oil. Recent increase in soybean production [in the USA]. Soybean products: Soya flour, soya grits, flakes and meats, soya with sausage and in soup. Soybeans as a green or dried vegetable: Varieties, growing and harvesting, preparation and cooking. Soybean "milk." Soybean curd. Soybean sprouts. (Note: A description is given of how to make the three previous foods at home.) Other edible soybean products (Soy sauce, Worcestershire sauce, soya crackers and breakfast foods, a coffee substitute, and salted soys [soynuts]).

"In 1942 nearly 210 million bushels of soybeans were produced on about 11 million acres [yield = 19.1 bushels/acre]. If the 4.6 million acres on which soybean plants were grown for forage and other purposes are added to this figure, only five other crops–corn wheat, hay, oats, and cotton–occupied more land in the United States in that year. These figures contrast strikingly with those of 1924, when less than 5 million bushels of soybeans were harvested from 448,000 acres" [yield = 11.16 bushels/acre]. Figure 1 shows soybean production in the USA (in million bushels) from 1924 to 1942. The rapid increase in production began in 1934. In 1942 production doubled as a result of wartime needs.

"Soybean meats are split or coarsely ground soybeans, dehulled and debittered. They are chiefly used in place of roasted peanuts in confectionery and baked goods, but they can also be cooked and eaten like navy beans.

Vegetable soybeans make an excellent Victory Garden crop. "The most suitable varieties for green shelled or dried beans have straw-yellow or olive-yellow seeds that cook easily and have a mild flavor." A table (p. 8) shows: "Some of the desirable garden varieties for green and dried beans, classified as to their length of growing season" (from Morse & Stuart, Nov. 1943). State experiment stations can usually supply information about the "seeds of vegetable varieties of soybeans... Many State experiment stations furnish pure cultures of soybean bacteria at cost, and commercial seed firms also sell them" (p. 9).

"When soybeans follow corn on fertile land, they should produce a good crop without direct application of fertilizers. The use of fertilizers, however, is recommended on sandy soils or soils of low fertility, the best results being obtained with stable manure or superphosphate and muriate of potash. Wood ashes may be used if the potash is not available."

Note: This is the earliest English-language document seen (May 2005) that uses the word "debittered" (or "debitter," "debitters," or "debittering") in connection with flavor problems in soybeans. Most early documents that used the term were written in German. Address: Associate editor, Bureau of Plant Industry, Soils, and Agricultural Engineering.

3434. **Product Name:** Durum and Soy Macaroni, Spaghetti, Noodles, Soy Flour (Full-Fat), Meatless Food, Specialty prepared Soybeans, Soya Sauce, and Diabetic Cookies.
Manufacturer's Name: H.W. Walker Co.
Manufacturer's Address: 918 Armitage Ave., Chicago, Illinois.
Date of Introduction: 1943. December.
How Stored: Shelf stable.
New Product–Documentation: D.S. Payne. 1943. The story of soya products. Dec. p. 12-14. "... and The Walker Company, Chicago, Illinois, continue to market retail packages of full-fat soya flour in specialty stores throughout the Nation."

USDA War Food Administration, Food Distribution Administration, Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. H.W. Walker Co., 918 Armitage Ave., Chicago, Illinois, sells Durum and Soy Macaroni, Spaghetti, Noodles, Soy Flour, Meatless Food, Specialty prepared Soybeans, Soya Sauce, and Diabetic Cookies. "Distribution in Health and Department Stores."

3435. *Ladies' Home Journal.* 1943. How to sprout soybeans. 60:63. Dec.
• ***Summary:*** Wash ½ cup of this-year's soybeans. Soak overnight in warm water to which a pinch of chlorinated lime has been added. In the morning, drain the beans and rinse with water. Have ready a clean six-inch pot or quart jar. For the jar–put in the beans and cover opening with cheesecloth or wire screening. Turn upside down on a rack and put in a dark place. "(The secret of success in sprouting is to keep the beans in a cool and dark place). Make up a batch of chlorinated water. (Blend 1/3 teaspoon chlorinated lime to a paste with a little water. Add 1 gallon water and keep this

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handy and labeled). Four or five times a day, rinse the beans thoroughly with clear water–right in the jar or pot. At night, rinse with the chlorinated lime water. In 3 or 4 days, the beans will be well sprouted and ready to cook: ½ cup dry beans yields 1½-2 cups sprouted beans. Rinse thoroughly. You don't need to remove the loosened skins of the beans. Of the two methods, we had much the better success sprouting beans in a flowerpot, though the jar method is preferred by some.

"Cooking the sprouts. You eat the bean and cook the sprout. Cook them quickly, 15 to 30 minutes. They never get really soft and mealy like other beans when cooked, but have a nutlike texture. You may have to try them on your family once or twice before they become real devotees. But that's often true of anything new. Try cooking them 20 minutes, chilling and mixing them with other vegetables in a salad. Use them in soups and chow mein." A recipe is then given for "Sprouted soys with mushrooms." It also contains chopped onion and cornstarch, and is seasoned with soy sauce and salt.

3436. Morse, W.J. 1943. Introducing the soybean. In: U.S. Food Distribution Administration, War Food Administration, ed. 1943. Soybeans and Soya Products. Program for Meeting of Interdepartmental Nutrition Coordinating Committee. 25 p. See p. 1-2. Dec. 7. [1 ref]

• ***Summary:*** The soybean has many uses. Fermented, it yields different sauces; "pressed, it gives oil for cooking; sprouted, it gives a fresh vegetable rich in vitamins; picked when green, it makes an excellent green vegetable; ground dry, it makes flour; soaked, ground, and with water added, it provides milk; and the curdled milk furnishes the famous bean curd–the boneless meat of the Orient–used in the form of various cheeses and as a meat substitute."

"Strange to say, the first published use of the soybean in the United States, other than for forage purposes, was as a coffee substitute by the Indiana Experiment Station in 1892 [sic, 1894]. It was revealed that an Indiana farmer and his neighbors had been using the roasted beans for coffee for about 8 years. During the past two years, as many of you know, the soybean has been sold as 'Coffee Berry", and 'Coffee Plant', and used extensively to blend with coffee."

"The soybean was first used for food in America, beginning about 1910, as a flour prepared chiefly for infant foods and for persons requiring a food of low starch content" [diabetics].

"In 1925 the American Soybean Association held its annual meeting in Washington [DC] and in the exhibit of products, the only articles of food shown were canned baked soybeans, diabetic and infant foods, soy sauce, and health soy flour. At the present time more than 50 different foods made wholly or in part from soybeans by about 200 manufacturers are on the market."

"Vegetable soybeans led the list of new vegetables planted in the rural gardens in 1942 in South Carolina. Approximately 2000 home demonstration club women in 44 of the 46 counties in South Carolina planted them in the vegetable garden for the first time. In the winter and spring of 1943, 10,000 one-pound packages of dry vegetable soybeans were sold throughout South Carolina." Address: Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, USDA, Washington, DC.

3437. **Product Name:** Diamond Soy Sauce (Later renamed Diamond Shoyu).
Manufacturer's Name: Honolulu Sake Brewery & Ice Co. Ltd.
Manufacturer's Address: 2150 Booth Rd., Honolulu, Oahu, Hawaii.
Date of Introduction: 1943.
Ingredients: Diamond Soy Sauce: Soya beans, salt, wheat, caramel, and 1/10 of 1% sodium benzoate.
Wt/Vol., Packaging, Price: Bottle.



New Product–Documentation: Directory of Honolulu and the Territory of Hawaii. 1930-31. p. 241. The company is currently named Honolulu Ice Co. Ltd. Tomokuni Iwanaga is president. They are at 2153 Booth Rd. In the 1934-35 Directory (p. 211) the name changes to Honolulu Sake Brewery & Ice Co. Ltd. Daizo Sumida is president. Same address. They are never listed as a shoyu manufacturer in any index up through 1954. But Diamond appears as a brand in the 1961-62 index under "Soy Manufacturers." 1966-67 Directory. Listed under the Shoyu Mnfrs. category as Honolulu Sake Brewery & Ice Co. Ltd. (Diamond Shoyu), 2150 Booth rd, Telephones 59-068, 59-069, 574-451. Not listed 1967-68.

1968-69 Directory. Listed in Buyers' Guide, p. 145. Established 1908, cable address "Honosake" Honolulu, phones 537-9068, 537-9069, 537-4451, P.O. Box 1266,

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Honolulu 7. The ad lists Diamond Shoyu, Diamond Su [vinegar], and Marumasa Shoyu as products. Not listed 1973. Re-listed in 1975 directory.



Black-and-white photo of early rectangular Labels. About 1943. Diamond Soy Sauce. One gallon. Manufactured and bottled by Honolulu Sake Brewery & Ice Co., Ltd., Honolulu, T.H. Later color Label. Diamond Highest Quality Shoyu (soy sauce). "Naturally Brewed and Aged." Same ingredients and manufacturer. 1 pint 8 oz. Both labels have illustrations of wheat and soybeans. Note: This is the earliest document seen (Oct. 2009) in which the term "naturally brewed" (with or without hyphenation) is used in connection with soy sauce.

Ad by Honolulu Sake Brewery & Ice Co., Ltd. in Hui Manaolana. 1951. *Japanese Foods: (Tested Recipes).* Honolulu, Hawaii. See p. 44. "Highest quality natural brewed Diamond Shoyu (Soy Sauce). Patronize your local products. Sold at all grocers. 2150 Booth Rd., Honolulu." Note: This same ad appears on the same page in the 1956 edition.

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows an old and a new label and gives the address. The company is still in business. Label. Received Feb. 1988 from Honolulu Sake Brewery Co. Ltd. 4.5 by 3.5 inches. Red, black, brown, blue, green, and white. "Highest quality. Naturally brewed and aged. 50.7 fl. oz. Ingredients: Water, soybeans, salt, wheat, disodium inosinate, caramel coloring, and sodium benzoate a preservative." Size: 50.7 fl. oz. (1 qt. 1 pt. 2.7 fl. oz) or 101 fl. oz. (3 qts. 5 fl. oz.). Letter from Takao Nihei. 1988. July 19. Diamond Shoyu was first made in 1943 by the Honolulu Sake Brewery & Ice Co. Ltd. It still exists as Diamond Soy Sauce, made by the Honolulu Sake Brewery Co. Ltd. in Honolulu.

3438. Han, Suyin. 1943. Destination Chungking: an autobiography. London: Jonathan Cape. 287 p. See p. 208. 23 cm.

• ***Summary:*** This is the autobiography of a young Chinese woman. "The facts are autobiography, the elaboration only is fiction. The material submitted by Han Suyin was rewritten, with such additions and descriptions as would make it more intelligible to American readers unfamiliar with Chinese customs. The author's name, Han Suyin, is fictitious..."

Chapter 11, "Burning City–Chungking," states (p. 208): "The first of May, 1939. My duties as host in Third Uncle's house were unexacting. The servants knew far better than I could instruct them all the routine of the household. There were eight or ten servants."

"Lao Li was the cook and a very good one." He was from Szechwan. "He was very jealous of his dignity. Once when I ventured the suggestion that he serve the noodles 'white'–that is, unseasoned with red soy sauce, oil, and pepper, but plain as we eat them in the north–Lao Li gave me a pitying look, and addressing the kettle he muttered, 'Boiled noodles and water! It must be they have no good cooks in the north!'"

Note: "Han Suyin is the pen name of Elizabeth Cober, who was born Rosalie Elisabeth Kuanghu Chow in 1917. She is Chinese-born Eurasian. Han Suyin was born in Xinyang, Henan, China. Her father was a Belgian-educated Chinese engineer, Chow Yen Tung (pinyin: Zhou Yintong), of Hakka heritage, while her mother was a Flemish Belgian. In 1938 Han Suyin married Pao H. Tang (Tang Paohuang), a Chinese Nationalist military officer, who was to become a general. They adopted one daughter (Yungmei).

"She began work as a typist at Beijing Hospital in 1931, not yet fifteen years old. In 1933 she was admitted to Yenching University [in Beijing] where she felt she was discriminated against as a Eurasian. In 1935 she went to Brussels to study science. In 1938 she returned to China, working in an American Christian mission hospital in Chengdu, Sichuan. She described her wartime experiences in her memoir, Destination Chungking" (Source: Wikipedia, Oct. 2010).

A map facing the title page shows the main places mentioned in this book.

3439. Huebscher, Adolf. 1943. Die Soja: Ihre Kultur, Verwendung, Zukunft! [Soya: Its culture, use, and future!]. Grenchen, Switzerland: A. Niederhaeuser. Published by the author. 52 p. Undated. Illust. with 18 line drawings. [Ger]

• ***Summary:*** Contents: Foreword. Soya–The dispenser of work and bread. Botanical description of the soybean. Cultivation and manuring of the fields. Seeds and sowing. Nutritional composition and food value. Harvest, storage and use as silage. Enemies of the soybean. Economic significance of the soybean. Preparation of the soybean for use as food. Soya minestra (an Italian dish, also consumed in Switzerland). Soya beefsteak. Soya cutlets. Tomatoes stuffed with soya. Soy sauces–Japanese shoya [sic, shoyu]

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and Shimosa. Vegetable cheese [tofu]. Miso-cheese. Natto cheese. Soy coffee. Soy flour (Soja-Mehle, made by Morga S.A. or Ennat-Kappel, Switzerland). Soya cakes. Soya salad. Green vegetable soybeans (*Soja-Gruengemuese*). Soya Muesli. Soya Kasha (*Soja-Kascha*, the newest food for soldiers, athletes, and heavy laborers. It consists of a mixture of soy flakes, rolled oats, corn flakes, sugar, salt, and powdered milk). Soymilk (The first soymilk in Europe was made in Paris in 1882). Soy yogurt (*Soja-Yoghurt*). Soy cream for the tropics (*Soja-Crème-Tropenmilch*). Address: Dr. and veterinarian, villa Bel-Air, Corseaux (Vaud), Switzerland.

3440. Lee, M.P. 1943. Chinese cookery: A hundred practical recipes. London: Faber and Faber. 74 p. With decorations by Chiang Yee. 20 cm. Published in the USA in 1945 in New York, NY, by Transatlantic Arts, Inc. (74 p.).
• ***Summary:*** The Introduction (p. 12-13) notes: "The third important factor in Chinese cooking is the seasoning... There is an erroneous idea that soy bean sauce is indispensable to every dish of Chinese food. Soy bean sauce is only essential in braising, but Bovril, Oxo or Marmite, which has a vegetable basis, can be a good substitute when soy bean sauce is unobtainable. Soy bean sauce is not used in stewing at all. In semi-frying there are two styles, namely, the 'white' in which salt is used, and the 'brown' for which soy bean sauce is required. The most satisfactory way of applying soy bean sauce is to coat the meat slightly with very thin cornflour paste first and to apply the sauce in small doses a few minutes before serving. Soy bean sauce has a strong flavour of its own and would destroy the original taste of food if it were applied too liberally."

Page 69 gives a recipes for Bean curd with mushrooms and spring onions, seasoned with soy bean sauce. Page 72 lists the names and addresses of 7 Chinese restaurants and 2 Chinese food shops in London. Address: London.

3441. Mathews, R.H. comp. 1943. A Chinese-English dictionary. Revised, American ed. Cambridge, Massachusetts: Harvard Univ. Press. Published for the Harvard-Yenching Institute. xxiv + 1226 p. Index. 26 cm. [3 ref]
• ***Summary:*** This excellent dictionary, which romanizes Chinese words using the Wade-Giles system and arranged them in alphabetical order by sound, is a condensed version of the multi-volume dictionary by Giles, and a revised version of Matthews' 1931 dictionary. Soy-related characters include:

Chiang (No. 661, p. 90)–Soy [sauce], pickled vegetables, pickled bean curd (*chiang toufu*) [fermented tofu].

Fu (No. 1930, p. 285)–Tofu.

Ju (No. 3144, p. 473)–Milk. The breasts; a teat, a nipple. To suckle. *Fuju* ("rotten milk")–A milky preparation from beans. [Note: Probably fermented tofu].

Shih (No. 5805, p. 813)–Cantonese soy [sauce], salted beans [fermented black soybeans] eaten with rice, gruel, etc.

Note: This is the earliest English-language document seen (April 2012) that contains the term "Cantonese Soy," which apparently refers to soy sauce made in Canton, China.

Tou (No. 6478, p. 939-40)–See No. 6481.

Tou (No. 6481, p. 940)–Beans, oil expressed from beans, young bean plants, bean stalks, bean flour, bean curd, dried cakes of bean curd usually flavored with soy, underlings = bean curd officials, soft hearted, bean sprouts [mung]–used as a vegetable, bean pods, soy [sauce], bean-cake, four kinds of soya beans (ta-tou, hei-tofu, huang-tou), (*Glycine hispida*).

Note: At Mao (No. 4357, p. 614, meaning "hair") there is no entry for *Mao tou* = "green vegetable soybeans." Address: China Inland Mission, Shanghai.

3442. Nishino, Shoji. 1943. Shôyu miso shokusu kikaku bunsekihô [Methods of analyzing the standards of shoyu, miso and vinegar]. Osaka: Konno Shoten Shupan-bu. 109 p. 22 cm. [Jap]*
Address: Japan.

3443. Noda Shoyu. 1943. Noda Shôyu enkaku-shi [History of Noda Shoyu]. Noda: Noda Shoyu K.K., Shain Jitsumu Koshukai. 38 p. 2 vols. 20 cm. [Jap]
Address: Noda, Japan.

3444. Ricino, soja y sesamo: Siembra, cultivo, cosecha e industrializacion de estas tres plantas oleaginosas. 2nd ed. [Castor-oil plant, soybeans and sesame: Sowing, cultivation, harvesting, and industrialization of these three oleaginous plants. 2nd ed.]. 1943. Buenos Aires, Argentina: Editorial Atlantida, S.A. 148 p. See p. 41-150. Illust. 17 cm. (Biblioteca de "La Chacra" Dirigida por Waldemar Martínez Pintos). [Spa]
• ***Summary:*** Contents: Introduction. Products obtained from the soybean (chart). As a human food. The seeds (*los porotos;* the soybean is called *poroto soja*). Green vegetable soybeans (*porotos verdes*). Soy flour. Soy oil. Soy sauce. Soy sprouts (*vastagos*). Soy milk (*leche vegetal*). Tofu (*queso*). Curd (*cuajada*). For livestock or cattle destined for slaughter. For sheep and poultry. Preparation of the seeds for obtaining oil. Utilization of the oil. Defatted soybean flour (*harina de torta*). Soybean cake for animals. Soybean cake for fertilizer. Other uses of the cake. The soybean for hay. For pasture. For silage. Address: Buenos Aires, Argentina.

3445. *Minidoka Irrigator* (*Minidoka Internment Center, Hunt, Idaho*).1944. Rare foodstuffs received here from internees. 2(49):1. Jan. 29.
• ***Summary:*** "Word received from the International Red Cross and the Washington [DC] office of the WRA indicates

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that residents will receive a large quantity of shoyu sauce and other commodities brought to the United States on the exchange ship Gripsholm.

"The shipment includes 440 barrels [kegs] of shoyu sauce, 15 barrels of bean mash [miso], 15 cases of green tea, 2 cases of drugs, 1 case of musical instruments and 1 case of books."

Note: This is the earliest English-language document seen (May 2011) that uses the term "bean mash" to refer to miso.

"These are being shipped to Hunt residents from internment camps at Kooskia [Idaho] and Missoula [Montana] and from Rohner, Gehrig and Company, New York, for the benefit of Japanese nationals in this project."

Note 1. Concerning Kooskia: "The long-awaited account of Idaho's World War II Kooskia Internment Camp is now available. Titled *Imprisoned in Paradise: Japanese Internee Road Workers at the World War II Kooskia Internment Camp*, it describes a unique, virtually forgotten, World War II detention and road building facility that was located on the remote, wild, and scenic Lochsa River in north central Idaho at the site of an earlier CCC camp and a former federal prison camp above Lowell, Idaho. Between mid-1943 and mid-1945 the Kooskia (KOOS-key) camp held an all-male contingent of some 265 so-called 'enemy aliens' of Japanese ancestry. Most came from 21 states and 2 territories, but others were from Mexico; some were even kidnapped from Panama and Peru. Two alien internee doctors, an Italian and later a German, provided medical services; 25 Caucasian employees included several women; and a Japanese American man censored the mail."

"Despite having committed no crimes, but suspected of potential sabotage, these noncitizen U.S. residents of Japanese descent had been interned elsewhere in the U.S. following Japan's attack on Pearl Harbor in December 1941. They volunteered for transfer to the Kooskia Internment Camp and earned wages for helping build the Lewis-Clark Highway, now Highway 12, between Lewiston, Idaho, and Missoula, Montana, supervised by U.S. Bureau of Public Roads employees."

"Knowledge of their rights under the 1929 Geneva Convention empowered the Kooskia internees to successfully challenge administrative mistreatment, thereby regaining much of the self-respect they had lost by being so unjustly interned. Here, finally, is their story."

A slide presentation and book signing will be held in Portland, Oregon, Thursday, May 12, 2011, 5:00 p.m., at the Oregon Nikkei Legacy Center, 121 NW 2nd Avenue, (503) 224-1458. Hosted by the Oregon Nikkei Endowment and sponsored by Oregon Humanities (Website announcement).

Concerning Fort Missoula: "Fort Missoula Internment Camp was an internment camp operated by the United States Department of Justice during the World War II. Japanese Americans and Italian Americans were imprisoned here during this war.

"Fort Missoula was established near Missoula, Montana as a permanent military post in 1877 in response to citizen concerns of conflict with local Native American tribes. In 1941 Fort Missoula was turned over to the Department of Immigration and Naturalization for use as an Alien Detention Center [ADC] for non-military Italian men.

"1,200 Italian citizens were interred at Fort Missoula, including merchant seamen and World's Fair workers who were in the U.S. and could not be returned to Italy, as well as the crew of an Italian luxury liner seized in the Panama Canal. In addition, 650 Japanese American men were interred at the camp for questioning before being transferred to other facilities" (Source: Wikipedia, at Fort Missoula Internment Camp, May 2011).

"Following the bombing of Pearl Harbor on December 7, 1941, the FBI arrested more than a 1,000 of the most prominent Japanese leaders on the west coast as potential security risks. Ultimately, over 1,000 Japanese men–all resident aliens barred by law from American citizenship–were held at Fort Missoula for loyalty hearings. None was ever charged with any act of disloyalty but all were held at Fort Missoula or other camps for the duration of the war." "Fort Missoula is currently the largest intact World War II internment site with most major buildings of the era still in use...." (Source: "The Historical Museum at Fort Missoula." "Alien detention center," website).

3446. *Topaz Times* (*Topaz Internment Center, Topaz, Utah*).1944. Japanese Red Cross sends shoyu, miso. 6(11):1. Jan. 29.

• ***Summary:*** "Three hundred sixty barrels of shoyu and 1000 pounds of miso were received from the Japanese Red Cross, it was learned today. The foodstuffs, which arrived on the exchange ship, Cripsholm, last month, were relayed here from the Missoula Internment Camp in Montana.

"The community council is discussing plans for distributing the foodstuffs to the residents."

3447. Paddleford, Clementine. 1944. New year in Chinatown: The cooks are busy–it's a great day for feasting! *Los Angeles Times*. Jan. 30. p. F15.

• ***Summary:*** When Chinese greet each other this week they say "Kung Hay! Kung Hay!" Food is at the heart of this Chinese celebration–especially in New York's Chinatown. In 2 of the 3 recipes given, soy sauce is used as a seasoning.

3448. *Nature's Path* (*New York City*).1944. Directory of health aids (Ad). Jan. p. 37-38.

• ***Summary:*** On page 38, column 1: "Edible soybeans. A protein food, full of vitamins, minerals, nutty flavor, easy to cook. New crop, 10 lbs. for $1.50. Soybean flour, 5 lbs. for 75¢. 10 lbs. for $1.30. 30 recipes included with order. Not postpaid. Frances M. Schmidt, Plainfield, Illinois."

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On page 39, column 2: "Soya bean products. Dried soya beans, 10 lbs.–$1.00. Low fat soya flour, 5 lbs.–$0.75. High fat soya flour, used as milk powder, 4 lbs.–$1.00. Soya flakes (Cereal), 4 lbs.–$1.00. Soya bean oil, 1 gallon (send 40 meat points)–$2.00. Postage not included in these prices. Also Soya Cookies, Soya Bread, Noodles, Butter, Grits, Lecithin, Coffee, Candles, Sausages, Nuts, Milk, Crackers, Sauce, etc. All made from Soya Beans, Huni Health Products, 205-207 East 87th St., New York, N.Y."

3449. Sakaguchi, Kinichiro; Yamada, K. 1944. Kôji-kin no keitai to sono bunrui ni tsuite. I. [On the morphology of the koji molds (Aspergilli) and their classification. I.]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 20(1):65-73. Jan. [8 ref. Jap]
Address: Tokyo Teikoku Daigaku, Nôgaku-bu, Nogei Kagaku Kyoshitsu.

3450. *Argus (The) (Melbourne, Victoria, Australia)*.1944. Try this recipe from China. Feb. 3. p. 6.
• ***Summary:*** "The British Ministry of Food has culled the cook-books of the world to bring tasty and economical recipes to the British housewife, and her Australian sister now coping with rationing will also find them of great value. Try this interesting recipe:

"Chop Suey (Tsap Sui, Chinese origin)." After cooking, "add the gravy mixture. A few drops of Worcester sauce would be an improvement to the gravy, and would take the place of the Soya bean sauce, so much used in China. Stir the gravy in well..."

3451. Shipment of goods from Japan. 1944. Feb. 6.
• ***Summary:*** This photo was taken by George Ochikubo on 4 Feb. 1944 in Amache, Colorado. "Group in front of Block 7-F, the camp's Block Information Office. Japan's Red Cross sent barrels of soy sauce, packages of miso and tea to Amache via the exchange ship USS Gripsholm. Each block received a portion of the shipment." On each wooden keg of shoyu is a Kikkoman logo (see next page).

Courtesy of George Ochikubo Collection and Densho Digital Archive. Address: Granada incarceration camp, Amache, Colorado.

3452. Holt, Jane. 1944. News of food: Experts point out many advantages of adding soy beans to American diet. *New York Times*. Feb. 16. p. 20.
• ***Summary:*** Soy is a bean, and for many people "beans symbolize all that is humdrum in cookery." This may be one reason that some people have given soy beans a cool reception. As they struggle for recognition (with not much success), soy beans must confront the "natural suspicion with which people regard new foods and the resistance they show to efforts to 'reform' their eating habits." Another problem "may be the indifferent quality of some of the soy products that have been offered at retail and that have prejudiced customers."

"These explanations of why the bean is not more popular despite Federal and State campaigns urging its greater use were advanced yesterday by speakers at a luncheon given under the joint auspices of the New York State Emergency Food Commission and the Neighborhood Luncheon Club." The meeting took place at the Hotel Wellington, which has been exhibiting various soy products this week. Those now available in New York City stores include oil, flour, grits, sauce, etc.

Miss Adeline Hoffman, a nutritionist on the staff of the commission, gave an address in praise of soy beans; "she reminded her audience that they were an admirable stand-in for meat," and gave numerous reasons why.

Pre-cooked, canned whole soybeans are very convenient for the woman who doesn't like to spend much time in the kitchen. They can be "served cold in a salad or hot with seasonings, or they may be enhanced with a tomato sauce" or transformed into other dishes. One such product, sold under the trade name of "Miller" in a tin weighing 1 lb. 4 ounces, is available at Gimbels for 25 cents.

Another interesting and tasty product is soy macaroni, which is sold at Health Food Distributors, 123 East 34th St. A 7-ounce cellophane bag sells for 15 cents.

For more information on soy cookery and recipes, write to the commission's offices, 247 Park Ave., New York City 17.

Note: This is the earliest document seen (Sept. 2009) that discusses the slow acceptance of soy food products during World War II.

3453. *Gila News-Courier (Gila River Internment Center, Phoenix, Arizona)*.1944. Canal to start making tofu. 3(77):5. Feb. 17.
• ***Summary:*** "Tofu, which is being produced at mess hall 45 in Butte, will soon be in production at Canal, too, stated Mets Ando, chairman of the Canal Community Council.

"Ando had appointed a committee of three councilmen, Errol Ishii, Ben Iida, and J. Kirihara, to investigate ways and means to start production. The steam boiler and all equipment except a grinder are ready to go at the old dehydration plant, Ando said. He also hinted the possibility of making miso and shoyu."

3454. *Poston Chronicle (Poston Internment Center, Arizona)*.1944. Shoyu, tea, miso, gifts of Japanese International Red Cross distributed to blocks. 17(28):3. Feb. 24.
• ***Summary:*** "The food items originally sent by the Japanese International Red Cross to the Japanese in the United States have been distributed to the various blocks under the direction of the local Red Cross chapters.

"The Poston III allocation includes 103 barrels of

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'Kikkoman' shoyu, 19 boxes of tea and six barrels of miso.

"The amount distributed to the blocks will be according to its population as of February 13, 1944, it was stated.

"Other articles which have been sent include magazines, phonograph records and medicines."

3455. Paine, Florence. 1944. I was skeptical about soy beans. *House Beautiful* 86:33, 88, 97, 101, 104. Feb.

• ***Summary:*** The first page contains a large photo of a housewife standing by a table filled with commercial soy products including Soy-B-Prep, Battle Creek soy beans, Arcadia soya puffs, Golden wheat-soy mix for griddle cakes and waffles, Walker's soya sauce, Me-T-Soy extender, and Vivasoy (a high protein soya product). All are available from Kubie's Health Shop in New York City.

The article describes how to sprout soybeans at home and contains recipes for: Chopped bean sprouts with beef. Baked soy beans. Soybean perfection salad (with soybean sprouts). Tangy soy bean soup. Soya nut bread (with soy flour). Meatless chop suey (with soy sauce).

The author was originally turned off to soy after eating a "Soy Bean Loaf" at a vegetarian restaurant. "My shifting from soy-bean avoider to booster began last summer after attending a luncheon given [in New York] by Governor Dewey at which soy beans were fed to a critical and skeptical group in salads, souffles, bread, and as vegetables. The dishes really were delicious, and I could hardly wait to get home and do some experimenting myself. I have been trying them out ever since on my family and friends. I'll let you in on a secret, though. At first I made the mistake of telling my guests what they were being served. In nine cases out of ten they were anti-soy beans because of some previous experience, and so were antagonistic right away and I could seldom change their opinion. So I changed my tactics. I now wait until I get a favorable verdict before I make my announcement. The new system works like a charm."

3456. Sakaguchi, Kinichiro; Yamada, K. 1944. Kôji-kin no keitai to sono bunrui ni tsuite. II. [On the morphology of the koji molds (Aspergilli) and their classification. II.]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 20(2):141-54. Feb. [Jap]

Address: Tokyo Teikoku Daigaku, Nôgaku-bu, Nogei Kagaku Kyoshitsu.

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3457. *Tule Lake Bulletin (Tule Lake Internment Center, Newell, California)*.1944. Internees to send shoyu to families and friends. March 2. p. 2.
• ***Summary:*** On February 1, a number of internees at the Santa Fe Internment Camp [in New Mexico; one of 27 run by the U.S. Department of Justice] consolidated 58 barrels of shoyu sauce which is to be sent to their respective families or friends in this center.

"This shipment is not to be confused with the International Red Cross shipment from the said camp. The express charges on the 58 barrels of shoyu sauce have been apportioned among the internees.

"Names of the senders and their respective families or friends are as follows:..."

3458. *Sentinel Supplement (Heart Mountain Internment Center, Heart Mountain, Wyoming)*.1944. Shoyu distributed to residents. No. 183. p. 2. March 28.
• ***Summary:*** "The food committee of the community council announced that 376 kegs of shoyu received from the Japanese Red Cross were distributed Thursday to mess hall 30 of every block. It was issued in proportion to the population of the blocks, the committee said.

"Block 1, 2, 8, 14, 29 and 30 received 19 kegs each. Blocks 6, 9, 12, 15, 17, 20, 21, 22, 23, 24, 27 and 28 were issued 20 kegs each, while blocks 7 and 25 received 7 and 15 kegs, respectively."

3459. Paddleford, Clementine. 1944. Lunchtime in Washington: What do the nation's executives eat? These sandwiches and salads. *Los Angeles Times*. April 16. p. F18.
• ***Summary:*** "These hard-working men want their sandwiches made with basic foods–meat, cheese, eggs and fish–tuna fish!... And regardless of the governmental push for the soy, the executives shun sandwiches and salads made with this 'little miracle' bean from the Orient."

Everyone in Washington, it seems, drinks a half pint of milk a day. One executive keeps a small condiment cupboard in his desk drawer–"salt shaker, pepper grinder, a shaker of chili powder, and a bottle of Worcestershire. If he can't get a meat sandwich he likes toasted double-deckers" with peanut butter.

Contains 6 recipes, two of which call for ½ or 1 teaspoon "Worcestershire sauce."

3460. Eaton (T.) Co., Limited. 1944. Order food Monday for delivery Tuesday (Ad). *Toronto Daily Star (Canada)*. April 22. p. 30.
• ***Summary:*** Under "Fifth floor provisions": "... Soya Sauce, Chinese, 6-oz. jar–21¢." Address: College St., Toronto. Phone: TR. 3311.

3461. Beeskow, Herbert C. 1944. Bean sprout production in the home. *Michigan Agricultural Experiment Station, Quarterly Bulletin* 26(4):346-52. May.
• ***Summary:*** Contents: Introduction. Suggestions for sprouting soybeans. Suggestions for sprouting mung beans. Soy and mung beans and bean sprouts as food. Suggestions for cooking bean sprouts (The author is indebted to Stephen Djang of Nanking, China, for many of these suggestions).

The author sprouted Chief, Ebony, Illini, Manchu, Mandarin, and Viking soybeans, among others, and found that Ebony produced the best sprouts while those produced by the other varieties were satisfactory.

The author believes that failures in sprouting soybeans may be traced to a lack of understanding of the principles of seed germination. During germination, the seedling requires oxygen and moisture and as the embryo develops, carbon dioxide and heat are liberated. Ventilation during sprouting is important to maintain the oxygen supply and to eliminate carbon dioxide. Washing with cool water prevents a killing temperature from being reached and aids in removing carbon dioxide and other metabolic products. The room temperature recommended for sprouting is between 65 and 75°F. Mold does not develop if the proper conditions for sprouting are maintained.

Contains 2 Chinese-style recipes for cooking soybean sprouts: 1. Fried or sauteed soybean sprouts (*chao dou yea tsai*). 2. Baked soybean sprouts (*djen dou yea tsai*). Also contains two recipes using mung beans: 3. Egg foo yung (*foo yung dan;* to 1 cup blanched mung bean sprouts, "add 2 beaten eggs, a small amount of flour to thicken, ¼ teaspoon of salt, ½ teaspoon of sugar, and 1 tablespoon of soy sauce. Bacon and onions may be added. Mix well, shape into a patty and fry in an oiled pan. Brown on both sides"). 4. Mung bean sprout salad (*lian ben dou yea tsai*).

Note: This is the earliest English-language document seen (Aug. 2002) that mentions "Egg foo young." Other common early spellings of the last word are "yung" and "yong." Address: Section of Botany.

3462. *Sentinel (Heart Mountain Internment Center, Heart Mountain, Wyoming)*.1944. Shoyu firm opens branch in Denver. 3(26):6. June 24.
• ***Summary:*** "The Showa Shoyu Brewing company, brewers of Marusho shoyu, has opened a distributing office at Lawrence street in Denver, Colorado.

"The office is under the management of Fred Ota, former general manager of Poston community enterprises. He is assisted by Bob Uragami, former buyer of Poston enterprises.

"The company is entering the brokerage business and will handle other food products. The main office is located in Glendale, Arizona."

Note: This is the earliest document seen (July 2011) that mentions either the "Showa Shoyu Brewing company" or their product, "Marusho Shoyu."

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3463. Barthélemy, M. 1944. Contribution a l'étude du soya en France [Contribution to the study of soya in France]. Clermont-Ferrand, France: Jean de Bussac. 91 p. June 20. Based on his thesis, Strasbourg Univ., Faculty of Pharmacy. [34 ref. Fre]

• ***Summary:*** This is a published thesis, presented to the Faculty of Pharmacy at Strasbourg. Contents: Introduction. Part I: The cultivation of soybeans. 1. History of cultivation (its origin and importance). 2. Botanical characteristics. 3. Soybean cultivation in detail. 4. Conclusions. Part II: Chemical composition of soybean seeds. Proteins, lipids, oil and lecithin, carbohydrates (*glucides*), minerals, diastases, vitamins, sterols–soyasterol.

Part III: Utilization of soya as a food and in industry. 1. As food (nutritional value, whole soybeans, soy sprouts, roasted soybeans, soy coffee, condiments liquid and solid, soymilk, Li Yu Ying, products derived from soymilk {kefir, yogurt, tofu}, shoyu, miso, natto, soy flour, soy confections, recipes and formulas). 2. In industry: Oil, lecithin, cake. 3. Other uses of the plant.

Part IV: Laboratory work. 1. In human nutrition. 2. Animal feeds for the farm. 3. In industry. General conclusions. Address: Univ. of Strasbourg, France.

3464. *Soybean Digest.*1944. Lack of soy sauce worries Nisei workers. July. p. 11.

• ***Summary:*** In Urbana, Illinois, a shortage of soy sauce at "the chow shack in the work camp manned by Nisei evacuees threatened the morale of these workers in their pea vining operations..." These are "American citizens of Nipponese parentage, who had been evacuated from Pacific Coast areas to avoid trouble there... Barrels or 10 and 15 gallon tins were what they needed. Soy sauce seems as essential to these evacuees as coffee to the average American worker."

3465. LaChoy Food Products. Div. of Beatrice Creamery Company. 1944. Genuine soy sauce (Ad). *Soybean Digest.* Sept. p. 12.

• ***Summary:*** This small black-and-white ad (2¼ by 3½ inches) shows a bottle of the soy sauce and states: "Famous cooks and expert chefs insist on La Choy Sauce not only in making genuine Chop Suey, Chow Mein, and other Chinese dishes, but also in frying steaks, chopped meat, meat balls and hashes–in making gravies and stews–for serving on the table as a condiment for steaks, chopped meat, roasts, chops, croquettes, spaghetti, fried eggs and sea food."

Note: This the first time this ad has appeared in *Soybean Digest.* It may have been run in response to the article titled "Lack of soy sauce worries Nisei workers" in the July 1944 issue of this magazine (p. 11).

This ad also appeared in the *Soybean Blue Book.* 1947. p. 72. However Beatrice was now "Beatrice Foods Company." Address: Archbold, Ohio.

3466. Umeda, Isao; Tateno, M.; Matsumoto, M. Assignors to Noda Shoyu K.K. 1944. Chômiryô seizô-hô (shinshiki 1 gô) [Method of preparing a seasoning (semi-fermented soy sauce #1)]. *Japanese Patent* 167,668. Oct. 18. Application filed 12 April 1943. [Jap]*

• ***Summary:*** This Shinshiki #1 patent for making chemical soy sauce was opened by Kikkoman to other shoyu brewers in Japan free of charge (Yokotsuka 1980). In 1948 the same offer was made with the Shinshiki #2 patent for a soy sauce made by a combination of fermentation and chemical processes. Address: Noda Shoyu Co., Noda, Japan; 1. Head of research lab.; 2. Actual discoverer; 3. Asst. researcher.

3467. Markham (James E.). 1944. Display ad: Notice of sale. Invitation for bids for the purchase of shares of stock of Oriental Show-You Company. *Chicago Daily Tribune.* Dec. 3. p. A6.

• ***Summary:*** World War I is now raging. This company in Indiana was founded and owned by a Japanese man, Mr. Shinzo Ohki. Japanese were not allowed to become American citizens if they had been born outside the USA.

This fairly large, prominent ad begins: "James E. Markham, Alien Property Custodian, invites bids for the purchase as a whole of 132 shares of common stock, of par value $100 each, (constituting approximately 39% of the outstanding common stock) and 20 shares of preferred stock, of the par value of $100 each (constituting approximately 17% of the outstanding preferred stock) of *Oriental Show-You Company,* an Indiana corporation, engaged in the manufacture and sale of Oriental Show-You sauce and food products, with its office and place of business at Columbia City, Indiana..."

"All bids must be presented at the office of the Alien Property Custodian, 123 South LaSalle Street, Chicago, Illinois, on or before 12:00 o'clock noon, Central War Time, on December 20, 1944, at which time and place all Bids will be opened publicly. The stock will be sold only to American citizens." Address: Alien Property Custodian, Chicago.

3468. Junior, Vesta. 1944. Test and tell: Festive cooking in China gives hints for Christmas cooks. *Argus (The) (Melbourne, Victoria, Australia).* Dec. 19. p. 9.

• ***Summary:*** The recipe for La Si Che (Chinese wishes) calls for "Soya bean sauce."

3469. Loosli, J.K. comp. 1944. Manufacturers and distributors of soybean products (Brochure). In: New York State Emergency Food Commission. 1944. 4 p.

• ***Summary:*** The names and addresses, of sources most readily available to the New York State trade, appear under the following headings: Soy flour and flakes: Manufacturers, wholesale distributors. Flour mixes for pancakes, muffins,

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etc. Dry soybeans: For cooking, for sprouting. Canned soybeans. Sprouted soybeans (LaChoy Food Products, Inc., Archbold, Ohio. Most Chinese restaurants).

Macaroni, spaghetti, noodles (The Pfaffman Co., 6919 Lorain Ave., Cleveland, Ohio). Beverages. Bakery products: Soy bread, Soy cookies, crackers, wafers, etc. (Incl. Cubbison Cracker Co., 3407 Pasadena Ave., Los Angeles, California. Tom Soya Foods, Inc., P.O. Drawer 510, Williamsport, Pennsylvania). Breakfast cereals (Soyawheat, Soyawheat Co., Red Wing, Minnesota. Tom Soya Puffs and Exploded Soybeans, Tom Soya Foods, etc.).

Soybean curd [tofu] (International Nutrition Laboratory, P.O. Box 326, Mt. Vernon, Ohio). Meat-like products (The Battle Creek Food Co., Battle Creek, Michigan. Madison Foods, Madison College, Tennessee. Natural Health Products, 143 W. 41st St., New York, New York). Soups. Soy nuts (Dewey Food Products, Inc., 2251-3 N. Knox Ave., Chicago, Illinois. La Choy Food Products, Inc., Archbold, Ohio. Soybean Products Co., 9025 Monroe, Chicago, Illinois. Tom Soya Foods, Inc., etc. Vegetable Products Co., Rochester, New York). Spreads. Address: Vice-Chairman, Soybean Committee, Cornell Univ., New York.

3470. **Product Name:** Soya Sauce (Seasoning Sauce).
Manufacturer's Name: Loeb Dietetic Food Co. (Marketer).
Manufacturer's Address: 4378 Broadway, New York, New York.
Date of Introduction: 1944.
New Product–Documentation: Taylor. 1944. Soy Cook Book. p. 200.

3471. **Product Name:** Vege-Salt (Table Seasoning Containing Soybean Extract).
Manufacturer's Name: Modern Products Inc.
Manufacturer's Address: 1428 N. 24th St., Milwaukee, Wisconsin.
Date of Introduction: 1944.
New Product–Documentation: Taylor. 1944. Soy Cook Book. p. 200.

3472. Bordas, Jean. 1944. Le Soja: Agronomie du soja, utilisations agricoles et alimentaires, usages industriels, économie du soja, état actuel de la question en France. Dieuxème ed. [The soybean: Agronomy, agricultural and food uses, industrial uses, economics, and present status in France. 2nd ed.]. Montpellier, France: Dubois et Poulain. 32 p. The 1st edition (36 p.) was published in 1937. [39 ref. Fre]
• ***Summary:*** Contents: 1. Introduction (he notes that World War II is "the war we have just lost"). 2. Soybean agronomy: Botanical characteristics, varieties (in Japan, China, Manchuria, USA), acclimatization trials in Europe, soybean cultivation (incl. inoculation). 3. Food and agricultural uses of soya: Chemistry of the soybean, alimentary physiology, as a feed for animals (soybean cake, forage, soybean seed and flour, soymilk mixed with 25% animal milk), other agricultural uses, as a human food (soy sprouts, tofu, fermented tofu, smoked tofu, how to make tofu), condiments–sauces (soy sauce, miso, tuong of the Annamites, soy coffee, provisions / rations), human therapy (incl. infant foods).

4. Industrial uses: Soybean oil, casein, plastic materials (Sojalithe), vegetable lecithin, cellulose, sterol.

5. Soy in the economy: Production, imports and exports.

6. The present state of the soybean question in France–Conclusion.

A full-page table (p. 7) shows varieties developed and acclimatized to various countries. France: Rouest 29. Rouest 250. Rouest 104. Rouest 14. Rouest 71. Rouest 60. Rouest 178. Rouest 16. Rouest 36. Rouest 85. Rouest 6. Rouest 67. Rouest 40. Rouest 500 M. Rouest 13. Vilnensis.

Russia: Schribaux (Rouest). Lawes et Gilbert (Rouest). Miège (Rouest). Staroukrainskaya. Halton 502/2. Kouben 0.354. Kouben 0.375. Kharbinskaya 190.

Germany: Früheste Mittelhôhe gelbe. Mittel Frühe. Mitteleurope. Diekmanns frühgelbe. Diekmanns hel'gelbe. Diekmanns grungelbe. Platter silo. 236 Pappelsdorf. 238 Pappelsdorf.

England: Green Jap. Brown C. Yellow J.

United States: Cayuga. Manchu. Illini. Tokio noir [Tokyo Black]. Mandell. Black Eyebrow. Wisconsin. Chestnut. Mandarin. Lisbonne.

On page 8 is an interesting map of France which shows: (1) Twelve centers of agronomic research. (2) A shaded zone which is the area of optimal production of soybean seeds. It is in the southeast of France and along the eastern side of France all the way to the northern border. This zone includes (from southwest to northeast) the following centers: Toulouse, Montpellier, Avignon, Antibes, Clermont, Dijon, and Colmar (in Alsace).

Pages 5-6: The first trials made by the agronomic stations in France date from 1901. Mr. Lechartier, director of the station at Rennes, concluded at the end of his observations, that the production of soybean seeds would be more advantageous in a climate that was drier and warmer than that of Brittany (Bretagne).

These were the same conclusions that Mr. Brioux, director of the agronomic station at Rouen, arrived at some years later.

Starting in 1924 the agronomic station at Avignon, the central station for plant improvement at Versailles, in 1935 the stations at Colmar, Clermont-Ferrand and Dijon, and in 1940 the School of Merle (Bouches-du-Rhône), established soybean [germplasm] collections which originated in many different places, in order to test the earliest and most productive varieties that were adapted to each region.

Rouest and Rondet in the south of France, Dr. Balzli in Alsace and de Guerpel in Normandy were the main agronomists and selectionists who were passionately

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interested in the cultivation of Soya in France.

Note: Rouen is the historic capital city of Normandy, in northern France on the River Seine. Address: Ingénieur Agronome, Directeur de la Station Régionale de Recherches Agronomiques d'Avignon, France.

3473. De Gouy, Louis Pullig. 1944. The bread tray. New York, NY: Greenberg. vii + 463 p. Foreword by Dorothy Thompson. 21 cm.

• ***Summary:*** This is a book about bread. The 1st chapter is "A short history of breads." The chapter titled "Soy flour breads and biscuits" (p. 401-24) includes the following (p. 404-05): In New York's Chinatown, stroll inquisitively along Mott, Pell, and Doyer Streets, and you will see how important the soy bean is in everyday Chinese life. "Fresh bean sprouts–some from soy and some from other beans–stand in large hampers in the shops; on the shelves around them are jugs and bottle of soy sauce, for the kitchen or the table."

In Chinese shops corresponding vaguely to our delicatessen stores you will see *Teou-fu*, or *tofu*, made fresh daily, in cream-white cakes like Philadelphia cream cheese, kept cool and moist in pans of water. It is made from soy bean milk much as cheese is made from cow's milk or goat's milk, and it was a staple commodity in Chinese cities more than two thousand years ago. The Chinese prepare it for breakfast, dinner or supper in many ways, and a favorite form is ready for you in the shops–*Tsa tofu*, the little cheeses fried in deep fat [deep-fried tofu puffs], that look like well-browned and rather robust doughnuts without holes. You can get them hot from the kettle and eat them with syrup or without; a Chinese laborer finds them sustaining and satisfying as a noon-hour meal."

Note: This is the earliest English-language document seen (May 2012) that contains the term *Tsa tofu*, a type of deep-fried tofu.

"*Tofu nao* is of custard consistency and is eaten in soups and as a custard; *Chien chang*, or thousand-fold *tofu*, is made in thin layers rolled together and cut up like noodles for soup or fried in sesame oil. A brown, dry *tofu*, *Hsiang khan* [pressed tofu] is colored and flavored with caramelized millet sugar and eaten with soups and salads. There are many forms of preserved *tofu cheese:* smoked, salted, spiced and packed in wine and brandy to be used in cooking or as a delicacy like cheeses of the Western World. *Yuba*, as old as soy beans from which it is made, is the dried creamy film from boiling soy milk, sold in flakes or sheets, or rolled into "bean sticks" [dried yuba sticks], and it has been one of the most popular commodities in China and Japan for centuries."

Note: This is the earliest English-language document seen (Oct. 2011) that uses the term "preserved tofu" or the term "tofu cheese" or the term "preserved tofu cheese" to refer to Chinese-style fermented tofu. Address: Chef Steward, Consulting food editor of *Hotel Management* and *Restaurant Management* magazines, food columnist of *Gourmet* magazine and author of various cook books.

3474. La soya: Excellente alimento para el hombre como para el ganado y valiosa materia prima de numerosos usos industriales: Indicaciones para su cultivo y aprovechamiento [The soybean: Excellent food for people and for livestock and valuable raw material with numerous industrial uses. Remarks on its cultivation and utilization]. 1944. New York, NY: Reader's Digest. 32 p. [Spa]*
Address: New York City, New York.

3475. Matagrin, Am. 1944. Le soja: Culture et utilisations [Soya: Cultivation and utilization]. Paris: Gauthier-Villars. 72 p. Illust. No index. 28 cm. [Fre]

• ***Summary:*** Contents: Introduction: Why does soybean culture remain little known in France? 1. What is the soybean (*le Soya*)? Why should it be cultivated?: The plant and its varieties, the soybean (*la fève de soya*) and its general characteristics, alimentary interest in soya, agricultural interest in soya, industrial [non-food] interest in soya.

2. Soybean cultivation: The question of climate, choice of the variety to cultivate, choice and preparation of the land/soil, fertilizers for soya, soya in crop rotations, seeds, sowing, and seedlings, mixed cultures or intercropping, soybean vegetation and crop management, maturation, harvest, yield, and storage.

3. Use of the soya plant and its seeds: Soya in agriculture and livestock feeding, soya in human foods, recipes, industrial uses of soya, people and organizations connected with soya, contracts for growing soybeans in 1944. Table of contents.

The section on soya in human foods, based on the author's 5-6 years of personal experience, discusses, with recipes: green vegetable soybeans (*soya en légume vert*), whole dry soybeans (*soya en légume sec*), soy sprouts (*germes de soya*), fermented soy condiments (shoyu, miso, natto), soy flour (bread containing soy flour was made at Paris and even at Vichy in 1939), soymilk and tofu (*lait de soya et fromage végétal*), roasted soybeans and a coffee substitute (*soya grillé, substitut de café*), soy oil (*huile de soya*). Address: France; In 1946: Technical Consultant to Bureau Francais du Soja.

3476. Nourse, Mary Agusta; Goetz, Delia. 1944. China, country of contrasts. New York, NY: Harcourt, Brace and Company. x + 229 p. Illust. Map. 22 cm.

• ***Summary:*** This is "A wartime book... produced in full compliance with the government's regulations for conserving paper and other essential materials."

In Chapter 3, "At home with the Chinese," we read (p. 48): "... to most Chinese cheese is a disgusting food. We have many strange ideas of Chinese food, because we have heard more about the unusual food that they sometimes eat

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than their more usual dishes... And Chinese have heard that in our own country we eat rattlesnakes, porcupines, chicken feet, and very malodorous cheese. Of course, those things do not represent our usual diet,..."

Page 50: One thing a Chinese cook must always have is many sauces; "one of the favorites is soy sauce, and peanut oil and black sauce are also necessities."

Page 51: "To the Chinese a good meal is a work of art, and they make a ceremony of eating it."

Chapter 5, "China's fields and their harvest," states (p. 80): "The soy bean, another of the five sacred grains of Chinese legend, grew first in China. Today it is China's great cash crop. From there it was taken to Europe. When Benjamin Franklin was in Europe in the eighteenth century he sent soy beans home and advised people in the United States to experiment with growing them. It is only recently that people have realized their value, but now they have become one of our most valuable and nutritious foods. Today soy bean products are filling our grocery shelves, appearing on candy counters, and are part of an increasing number of dishes on restaurant menus." Soy bean oil is used to make many products. The cakes, left over after the oil is removed, "are used for fertilizer and are especially good for feeding the mulberry trees."

3477. Office of the Chief of Naval Operations (United States). 1944. Civil affairs handbook: Taiwan (Formosa). Tainan, Taiwan: Office of the Chief of Naval Operations (U.S.). 106 p. See p. 32. *

3478. Tanner, Fred Wilbur. 1944. The microbiology of foods, 2nd ed. Champaign, Illinois: Garrard Press. viii + 1196 p. Index. 24 cm. [135* ref]

• ***Summary:*** Contents of Chapter 12, "Fermented milks": Introduction, lactic acid bacteria and intestinal therapy (Lactobacillus bulgaricus {Bacterium bulgaricum}, characteristics of Lactobacillus acidophilus and Lactobacillus bulgaricus, implantation of Lactobacillus bulgaricus in the intestines, Lactobacillus acidophilus, implantation of Lactobacillus acidophilus in the intestines, unfermented acidophilus milk, permanence of results of acidophilus therapy, preparation of acidophilus milk {7 methods}, storage of acidophilus milk, other Lactobacillus acidophilus preparations {2}), therapeutic use of acidophilus milk (psychoses, constipation, diarrhea, epilepsy, typhoid and paratyphoid carriers, Lactobacillus bifidus {Bacillus bifidus}, buttermilk, busa, cieddu, dadhi, kefir, kumiss {kumys}, leben, mazun, taette, yogurt {yoghurt}, kuban, survival of pathogenic bacteria in fermented milks). Contains a good review of the benefits of acidophilus milk, a sour milk in which *Lactobacillus acidophilus* is the fermenting organism.

Contents of Chapter 13, "Intestinal microbiology": Introduction, intestinal flora in childhood, effect of diet on intestinal flora, effect of fasting and low-protein diet on intestinal flora, effect of copious water drinking intestinal flora, effect of high-protein diet on intestinal flora, influence of hydrogen-ion concentration on intestinal flora, effect of intestinal absorption on intestinal flora, relation of vitamin-deficient diets to bacterial flora, relations of a milk diet to intestinal flora, effect of carbohydrates on intestinal flora, effect of a high-fat diet on intestinal flora... vitamin synthesis by intestinal microorganisms, destruction of vitamins by intestinal microorganisms, action of bile on bacteria, autointoxication, changes in bacterial content of stored normal feces. Bacterial study of fecal material:...

In Chapter 17, "Microbiology of bread," is a section (p. 702) titled "Soy bean flour and meal."

In Chapter 18, "Fermented foods," is a section (p. 752-53) titled "Soy and related fermentations" which discusses the "soybean sauce," the process by which it is made, and its microbiology.

In Chapter 21, "Meat and meat products," is a section (p. 906-08) titled "Ferguson, Racicot, and Rane's precipitation test for the determination of soybean flour in sausages" (1942).

Note: This book contains an excellent, well-documented review of fermented milks and their effects on intestinal flora. Address: PhD, DSc, Prof. of Bacteriology and Head of the Dep., Univ. of Illinois [Champaign].

3479. Union Nacional de Cooperativas del Campo. 1944. Instrucciones sobre el cultivo de la soja y sus aplicaciones. 2nd ed. [Instructions on the cultivation of the soybean and its applications. 2nd ed.]. Madrid. 16 p. [Spa]

• ***Summary:*** Pages 12-14 list industrial uses of soybeans, give a nutritional analysis of white and black soybeans (Soja blanca, Soja negra) done by the Central Agricultural Station (*Estación Agronómica Central*) using samples from Granada, and briefly describe several soyfoods, including soy flour, soymilk, and tofu (*queso de soja*). Thus section concludes: "Outdoing the known anecdote of Permantier, who offered Louis XVI a succulent feast in which all the dishes were made of potatoes, today one could make a menu that was more varied, rich and select in which the delicacies as well as the serving utensils would all be derived from soya." Address: Madric, Spain.

3480. U.S. Senate, Committee on Appropriations. 1944. War Department Civil Functions Appropriation Bill, 1945: Hearings, Seventy... Washington, DC: U.S. Government Printing Office. See p. 199. *

• ***Summary:*** Page 199: "Ralph Motto and Yasu Motto, Oriental Show You Co."

3481. White, Julius Gilbert. 1944. Abundant health: Expounding the Learn-how-to-be-well system of daily living. 4th ed. Madison College, Tennessee: Published by the author. xix + 437 p. Illust. 24 cm. [21+ ref]

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• ***Summary:*** The maintenance of physical and mental health can be achieved through a vegetarian diet and wholesome living. Interesting sections include: Meat not necessary (p. 150-52; 13 quotes from authorities). Denmark's food experiment under Dr. Hindhede during World War I (p. 152-53). Sixteen reasons for vegetarianism (p. 153-). The animal kingdom a reservoir for disease (p. 165-). Note that Madison College is a Seventh-day Adventist college and sanitarium.

Soya is discussed on the following pages: Soybeans and soybean products as a replacement for meat (p. 151-52). One section titled "The Soybean: The Wonder Food" (p. 345-59) discusses many aspects of soybeans and how to use soybeans: In baking. In general cooking. As beans. As beans ready-cooked. As meat. As milk (gives 3 recipes for making soybean milk and ways for using "the pulp left after making milk"). As cream. As cheese ("A very satisfactory soybean cheese is now available in the health food stores. It has a texture something like cottage cheese..."). As butter. As oil. As home-made soy butter (made from 4 tablespoons each soy flour and water, 1 cup of oil, a little salt and butter color if desired). As home-made soy mayonnaise (based on the above home-made soy butter). As soy acidophilus milk (also often called soy buttermilk). As greens (soy sprouts). As soy sauce. As coffee. As substitute for egg white.

On page 389 begins a long treatise on the safety of aluminum in connection with cooking and foods, a subject which is causing much debate. Address: Madison, Tennessee.

3482. Williams-Heller, Annie; McCarthy, Josephine. 1944. Soybeans from soup to nuts. New York, NY: The Vanguard Press. 119 p. Index. 20 cm. Foreword by Walter H. Eddy, Ph.D., Professor Emeritus of Physiological Chemistry, Columbia University.

• ***Summary:*** Contents: Introduction. Part 1. The soybean: Vegetable of tradition and high nutritional value, "fresh green soybeans," dried soybeans, sprouted soybeans, soybean oil, soybean flour, soy grits and soy flakes, soybean milk and curd, soy sauce, soy nuts. Part 2. How to prepare soybeans: General directions; fresh green soybeans, dried, and sprouted soybeans; soybean milk, curd, pulp or mash; soy grits and flakes. Part 3. Recipes: Appetizers, soups, meat stretchers, meat substitutes, croquettes and fritters, side dishes, salads, salad dressings, sauces, sandwich spreads, breads and quick breads, desserts, soybean-milk drinks, soybean nuts. Part 4. "One soybean dish a day" (Menu suggestions).

The section titled "Soybean-milk drinks" (p. 107-08) contains 5 interesting recipes: Banana soybean-milk shake (with 4 cups soybean milk, 1 ripe banana, 1 tablespoon honey, and 1 teaspoon lemon juice or vanilla or almond flavoring, to taste; it used no ice cream). Eggnogg (with 4 cups soybean milk, 3 eggs, 3 tablespoons honey, nutmeg and cinnamon to taste, and flavoring to taste). Hot cocoa with soybean milk. Spiced soybean milk (with 4 cups soybean milk, 2 tablespoons honey, ½ teaspoon cinnamon, and a pinch of nutmeg, or mace [somewhat like chai]). Vanilla soybean-milk shake (with 4 cups soymilk, 2 tablespoons honey, vanilla flavoring to taste). Note 1. This is the earliest document seen (Dec. 2003) that contains a recipe (in standard format with the amount of each ingredient) for a non-dairy soybean-milk shake, or for soy eggnog. It is also the earliest English-language document seen (Dec. 2003) that contains the term "soybean-milk shake."

Note 2. This is the earliest English-language document seen that uses the term "Soybean Nuts" to refer to soynuts. Address: 1. Nutritionist and Food Consultant; 2. Home Economics Director, American Inst. of Food Products ("Ella Mason" on the Dr. Eddy Food and Home Forum). Both: USA.

3483. Wing, Fred. 1944. New Chinese recipes: Using only ingredients easily obtainable in neighborhood stores. New York, NY: United China Relief.

• ***Summary:*** On the copyright page: "These recipes have all been tested by Mabel Stegner, B.S., University of Wisconsin, Home Economics Consultant." The Foreword notes that these Cantonese-style recipes are delicious, good for you, and money savers. "One pound of lean meat combined with a pound or two of vegetables, the flavors of both skillfully blended by a delicious soy-flavored sauce, makes a satisfying, nutritious, complete main course for four people."

For each recipe, both the Cantonese (large bold caps) and the English (smaller, non-bold, title-style capitalization) names are given. The only soy ingredient used is soy sauce, which (according to the book's title) is "easily obtainable in neighborhood stores." Many recipes are seasoned with soy sauce, including Char-Shew (Chinese Roast Pork), Young-Moo-Goo (Stuffed Mushroom Caps with Pork), Shew-Pye-Gult (Roast Spareribs), etc.

3484. Spencer, Cornelia. 1945. The Chinese people at home. *Chicago Daily Tribune*. Jan. 11. p. 14.

• ***Summary:*** Chapter three: The section titled "Soy bean curd" begins: "A man is making soy bean curd and setting it out for sale. It stands in shivering squares of white on a cloth which lines the flat bamboo tray." Why is this artistic? Well, behind the man is "brown dried, pickled bean curd" which is used to enhance flavors. Also beautiful are the "brilliant red bean curd cubes hot with red pepper," which add zest to breakfast. Also framed in the scene are "jars of soy sauce." Making this sauce is an art unto itself, for the kind of water used, the amount of fermentation, etc. each affect the finished soy sauce, which is the foundation of Chinese cooking.

An illustration shows a handsome and vital "Horse," by Ju Pei-hung, part of an exhibition titled "Fifteen Contemporary Chinese Painters," organized by the East and West Association, New York. Address: Author of "The Exile's Daughter," "Made in China," etc.

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3485. U.S. Regional Soybean Laboratory. 1945. Sources of edible soybeans. Urbana, Illinois. 3 p. Jan. 30.
• ***Summary:*** This 3-page table contains 4 columns: Varieties and sources, addresses, amount, and price. Varieties: Aoda (5 sources). Bansei (28). Easycook (2). Etum (3). Funk Delicious (5). Giant Green (2). Higan (2). Hokkaido (5). Imperial (1). Jogun (5). Kanro (2). Mendota (7). Rokusun (1). Sac (2). Sanga (1). Soncei [sic, Sousei] (1).

Growers include: Associated Seed Growers, Inc., 301 Kentucky Ave., Indianapolis, Indiana. E.F. Johnson, 1337 McCutcheon Ave., Richmond Heights, Missouri. Farmers Seed & Nursery Co., Faribault, Minnesota. Fred H. Scholl, Memphis, Tennessee. Holmes Seed Co., 224 Cleveland Ave., Canton, Ohio. International Nutrition Laboratory, Mt. Vernon, Ohio. LaChoy Food Products, Archbold, Ohio. L.L. Olds Seed Co., Madison, Wisconsin. G.G. McIlroy, Farm Management, Inc., Irwin, Ohio. Ray Monier, Carrollton, Missouri. Rufus Gillett, R.R. 2, Mazomanie, Wisconsin. Russell-Heckle Seed Co., 16 S. Trout Street, Memphis, Tennessee. J.A. Saltzer Seed Co., LaCrosse, Wisconsin. Strayer Seed Farms, Hudson, Iowa. T.W. Wood & Sons, 11 South 14th St., Richmond, Virginia. W. Atlee Burpee Co., Clinton, Iowa.

Footnote: *"This list is compiled for the convenience of those interested in edible soybeans. We recognize that it is not complete but does include all of those who have replied to our questionnaire. We make no statement as to the varietal purity or seed quality since we did not request producers to send in samples of the seed they had to sell. We will welcome names of any additional growers."

Note: This is the earliest document seen (June 2009) that mentions the soybean variety Sanga. Address: 178 Davenport Hall, Urbana, Illinois.

3486. Morse, W.J. 1945. Soybeans in the land of our enemies. *Soybean Digest.* Jan. p. 6-7.
• ***Summary:*** Text of a letter to the American Soybean Assoc., Guelph, Canada, written from Tokyo, Japan on 20 July 1929. This is the first ASA meeting Morse has missed. He and Dorsett, comprising the Oriental Agricultural Exploration Expedition, arrived in Japan on March 18 and set up headquarters in Tokyo. "It is amazing, the extent to which the soybean is used for food in Japan." For details, see Morse 1929 ("Letter from Dr. Morse"). Address: USDA Bureau of Plant Industry, Washington, DC.

3487. Wang, Cheng-I. 1945. Chinese soy bean sauce as a transmitting agent of bacterial gastro-intestinal infections. *American J. of Tropical Medicine* 25:47-50. Jan.
• ***Summary:*** "Thirty samples of sauces were examined; 35% of these samples showed evidence of contamination either with *Escherichia coli, E. typhosa, S. dysenteriae,* or *Salmonella* bacilli. The hypertonicity and acidity of the samples have no significant germicidal effect on these organisms, and *E. typhosa* inoculated into the sauce can survive for many days. The fact that the soy bean sauce is frequently consumed raw and often contaminated with the typhoid-dysentery group of organisms suggests the possibility that they play a part in the dissemination of intestinal [typhoid and dysentery] infections in this country." Address: Szechwan Provincial Inst. of Infectious Disease, Chengtu, Szechwan, China.

3488. McCay, Jeanette B.; Loosli, J.K.; Adolph, W.H.; Brewer, Lucille; Munn, M.T.; Neidert, Marion; et al. 1945. Soybeans: An old food in a new world. *Cornell University, Extension Bulletin* No. 668. 65 p. Feb. Illust. Index. 28 cm. Produced by the Soybean Committee of the New York State Emergency Food Commission. [38 ref]
• ***Summary:*** Contents: A potential food resource: Introduced into the United States, new American industries. Composition and food value of soybeans: Proteins, fats, carbohydrates, minerals, vitamins, the enzymes of the soybean. How to use soybeans and soy products (contains many recipes): Fresh green soybeans (how to cook, how to can, how to freeze), dry soybeans (how to cook, how to can, how to freeze, 3 recipes, salted soybeans [oil-roasted soynuts], how to prepare bean pulp {by running drained cooked soybeans through a meat chopper}, 4 recipes), sprouted soybeans (vitamin C forms during sprouting, exposure to light does not affect vitamin C, riboflavin and niacin are also increased, how to sprout soybeans at home {9-step process}, store sprouts in refrigerator, how to freeze sprouted soybeans, how to cook sprouted soybeans, illustration of apparatus [equipment] for sprouting soybeans in quantity, 6 sprouted soybean recipes), grits, flakes and flour (protein equivalents {one pound of low fat soy flour is equal in protein value to two pounds of cheese, 2 pounds of navy beans, 2½ pounds of beefsteak or chicken, 3 dozen eggs, 5 pounds of bread, or 12 pints of milk}, a little soy flour with wheat flour improves protein quality, amount of protein, iron, and calcium also increased, 23 soy-grits and flour recipes {divided into 3 main dishes, 3 quick breads, 17 desserts}), a stronger staff of life–bread (rats fed bread containing only 5% soy flour grow much better than those eating white bread, does soy bread taste good?, little change required in baking with soy flour, 6 yeast bread recipes), soybeans in large-quantity cooking (6 recipes), other soybean products (soybean curd, soybean milk, soy sauce). Production, varieties, and culture of soybeans. Soybeans in animal feeding: For cattle, for sheep, horses, swine, and poultry, soybean hay a substitute for alfalfa, for dogs and fur-bearing animals. References. Index.

Contains nine bar charts in the form of illustrations / pictorial drawings / symbolic graphics (which may be by Kenneth Washburn).

Tables show: 1. Proximate and mineral composition of soybeans and soy flours. Essential amino acids in servings

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of certain protein-rich foods (lean meat, eggs, cooked soybeans). 3. Calcium, iron, and B vitamins (thiamine, riboflavin, niacin) supplied by common serving portions of certain foods. 4. Vitamin composition of 7 soy products. 5. Food values of sprouted soybeans and of some common vegetables per 100-gram edible portions. 6. Thiamine, riboflavin, and niacin content of soybeans during sprouting, storage, and dehydration. 7. Soybean milk, cow's milk, and human milk (typical nutritional analyses). 8. Composition of some [seven] soybean products used for food in the Far East. 9. Varieties of soybeans most suitable in New York State for animal feed and human food (For green vegetables: "Garden varieties such as Green Giant, Hokkaido, Jogun, Bansei, Fuji, Tortoise Egg, and Willomi").

Concerning "Fresh Green Soybeans: When gathered from the garden while the pods are still greenish and the seeds are still soft but fully developed, the soybean is a new green vegetable that some persons say is more attractive and delicious than the fresh lima bean. Many Victory gardeners have grown them for the first time, and they may be purchased commercially canned as are green peas."

Note: This is the earliest English-language document seen (Aug. 2003) that contains the term "protein quality." Address: New York.

3489. Yamazaki, Momiji. 1945. Tôa hakkô kagaku ronkô [East Asian studies/theses on fermentation chemistry]. Tokyo: Daiichi Shuppan K.K. han. 436 p. Published 20 March 1945. [160* ref. Jap]

• ***Summary:*** This remarkable work, published in a limited edition of 1,000 copies, was written by Dr. Yamazaki, a microbiologist, who graduated from the Department of Agricultural Chemistry, Tokyo University, in 1914. The book is a review of existing Asian literature on fermented foods, with a good bibliography. Dr. Yamazaki may have been employed by the laboratories of the Manchurian Railway.

Contents: Introduction: Preface, origin of alcoholic beverages, various alcoholic beverages of the world, summary. Chinese fermentation chemistry documents: Preface, Chinese ancient grains, Chinese ancient grain foods, Various types of Chinese-made koji, Various Chinese-made alcoholic beverages, summary. Japanese fermentation chemistry documents: Preface, Japanese land, inhabitants on Japanese land, Japanese New Stone Age culture, conclusions. Real papers: Japanese ancient foods, Various types of Japanese-made koji, Japanese-made various alcoholic beverages, summary. Korean fermentation chemistry documents: Preface, Korean produced grains, Various types of Korean-made koji, Various Korean-made alcoholic beverages, summary. Tables.

3490. **Product Name:** Pitman Nutmeats [Soya, Savoury, and Nuto Cream].
Manufacturer's Name: Pitman Health Foods Ltd.
Manufacturer's Address: Vitaland, Four Oaks, Sutton Coldfield, England.
Date of Introduction: 1945. April.
Wt/Vol., Packaging, Price: Hermetically sealed tin. Retails for £1/- to £1/11 (4/45, England).
How Stored: Shelf stable.
New Product–Documentation: Ad (half page) in *Vegetarian Messenger and Health Review (Manchester, England)*. 1945. April. Opposite inside front cover. "Pitman Nutmeats are still available to all who enjoy a tasty and palatable dish. In three varieties: Soya, Savoury, and Nuto Cream. Ask your Health Food Store for these grand foods." Note: It is not clear whether these are soynuts, or tree nuts seasoned with soy sauce. And it is not clear what Nuto Cream is made of.

Ad in Vegetarian Messenger. 1946. Nob. p. iii. "Pitman Nutmeats" The Soya is £1/1 per tin.

3491. Shelledy, E.H. 1945. Japanese trade studies: Soybeans. *U.S. Tariff Commission, Special Industry Analysis* No. 13. 6 p. May. [3 ref]

• ***Summary:*** Contents: Foreword. Introduction and summary. Description and uses. Production. Imports. Post-war problems.

This "report is one of a number which were prepared during 1944 and 1945 for the Foreign Economic Administration..." Most of the data "were taken from official and semi-official Japanese sources." Errors and inconsistencies in these data have frequently been detected.

"Japan is not important as a world producer of soybeans. It is, however, normally the world's principal soybean importer. Its annual production during 1928-39 was only 10 to 14 million bushels. By comparison, the production in the United States was 90 million bushels in 1939 and more than 190 million bushels in 1943 and 1944; the average annual production of soybean in Manchuria during the thirties was more than 150 million bushels annually.

"Prior to the present war Japan took most of the exportable surplus of Manchuria, the principal world exporter of soybeans, as well as substantial quantities from Korea, a country which produces almost twice as many soybeans as does Japan. During the 10 years 1928-1938, Japanese imports averaged 26 million bushels annually, approximately double its own production."

"If an annual per capita consumption of 0.5 bushels [30 lb] of soybeans were to be maintained in Japan in the post-war period," Japan would require a total supply of about 37 million bushels/year, based on a 1940 population of 73.1 million. An estimated 10-14 million bushels could be produced in Japan in the short term period after the war. The rest must be imported.

Uses of soybeans include miso, soy sauce or shoyu, and tofu. The main center of soybean production in Japan is the island of Hokkaido. The soybean is the principal oilseed

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imported into Japan.

Tables show: (1) Soybeans: Production, imports, exports, and apparent consumption, Japan Proper and Karafuto, 1928-39. Columns show: Production. Imports from Empire. Other imports. Total imports. Exports. Apparent consumption: Total and per capita. (2) Soybeans: Imports into Japan from principal sources, average 1928-32, annually 1933-39. The graph has two main parts: Quantity (1,000 bushels), and value (1,000 yen). Empire areas: Manchuria (incl. Kwantung), Korea, Formosa, total. Non-Empire areas. Grand total. Source: Monthly and annual returns of foreign trade of Japan, Korea, and Formosa. Address: U.S. Tariff Commission, Washington, DC.

3492. Thom, Charles; Raper, Kenneth B. 1945. Manual of the Aspergilli. Baltimore, Maryland: The Williams & Wilkins Co. v-ix + 373 p. May. Illust. 7 color plates. Index. 24 cm. [260* ref]

• ***Summary:*** Contents: Preface. Part I: General discussion. 1. Historical introduction. 2. Classification, generic diagnosis, and synonymy. 3. Morphology and description. 4. Cultivation and examination. 5. Preservation of cultures. 6. Variation.

Part II: The manual proper. 7. The use of the manual. 5-21 contain descriptions of 14 Aspergillus groups incl. 18. The *Aspergillus wentii* group. 19. The *Aspergillus tamarii* group, and 20. The *Aspergillus flavus-oryzae* group.

Part III: Reference material. 22. Topical bibliography. 23. General bibliography. 24. Check list of species and genera. 25. Accepted species, varieties, and mutations.

"After the development of the microscope, men began to see structure in molds. In 1729, Micheli distinguished conidiophores and heads. "He noted that the heads were rough, the spore chains or columns producing an uneven surface, hence he gave the name Aspergillus (rough head). He then marked with Latin phrases his sketches of differently colored moldy substances... *Aspergillus capitulo pulla* for a black form, etc."

"After DeBary's group began to study organisms in comparative culture, the number of publications began to increase rapidly... Titles appeared in the 125 years before DeBary's 1854 paper: 73 appeared in the next 18 years preceding Brefeld's 1872 papers; 236 in the next 19 years just preceding Wehmer's oxalic acid reports in 1891. All of this may be called the period of physiological morphology. The remaining two thousand, published between 1891 and 1928, represent the pure culture period. This may equally well be called the biochemical period" (p. 4-5).

"*Aspergillus wentii* is a cosmopolitan species that is fairly common in soils, upon moist grains and other vegetable matter undergoing slow decomposition... In the Orient, it is often included with *Aspergillus tamarii, A. flavus,* and *A. oryzae,* all under the latter name as a rule, in the 'Koji' preparations used in the manufacture of various soy products."

Aspergillus tamarii is "a cosmopolitan mold upon vegetable material undergoing slow decomposition and can be isolated from almost all soils examined. Like *A. niger* and *A. flavus,* it is more frequently recovered from warm and semi-tropical soils than from cool, temperate soils, although it occurs in the latter. The species commonly appears with *A. flavus* and *A. oryzae* as a constituent part of the 'koji' used in the fermentation industries of the Orient. Certain strains apparently produce appreciable amounts of diastatic and proteolytic enzyme, while other strains are known to produce kojic acid...

"Kita's culture was isolated from a soybean sauce termed 'Tamari', hence the species name. Tamari is made by a shorter fermentation process than soy sauce or shoyu, and differs from it in flavor. Kita believed that where it was made empirically, it owed its individuality to the particular aspergillus which he isolated and described."

"Two species names are widely used for members of this cosmopolitan group. *Aspergillus oryzae* is applied quite generally, without regard to morphology, to the strains used by the Japanese and Chinese in the fermentation of rice and soy products. Although purified cultures are used in many places, the nomenclature is based more upon utilization than upon morphology. There appears, however, in these industries, a series of strains with long conidiophores, radiate heads, mostly greenish-yellow, with the green often fading completely in old cultures. These strains appear to be most commonly used in the production of the diastatic type of ferments and to be distributed in the great culture collections as *Aspergillus oryzae* (Ahlb.) Cohn. Such strains seem to be mostly oriental or tropical in origin." The other species is *Aspergillus flavus.* This chapter (p. 262-65) contains many excellent high-magnification illustrations of *A. oryzae.*

3493. King, Pei-Sung. 1945. Chinese soy sauce and cheese. *University of Wisconsin, Fermentation Journal Club, Report* No. 22. p. 1-4. June 27. [15 ref]

• ***Summary:*** Contents: Introduction. Review of the literature. Making soy sauce: Laboratory procedure, grades and composition of soy sauce (there are 3 grades; the lower the grade, the lower the specific gravity of the soy sauce). Soybean cheese (sufu).

The laboratory procedure for making soy sauce involves three steps:

1. Mold culture, growing *Aspergillus oryzae* or *A. soya* on 30 grams of rice that has been steamed and is incubated at 30°C for 4 days.

2. Yeast culture, growing *Zygosaccharomyces soya* on one sterilized culture medium at 30°C for two days and *Lactobacillus delbrückii* on another at 37°C for 2 days.

3. Fermentation, using four basic raw materials: Soybean (or bean cake) 300 gm, whole wheat (or other starchy material) 200 gm, NaCl (table salt) 280 gm, and

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water (including steeping water) 1600 ml. Details of the process are given. "It usually takes from two to three months for fermentation to become complete, but it is possible to be fermented completely within three weeks. A table shows the chemical composition of 3 grades of soy sauce. The source of this information is cited as: "(13) King, P.S. Bulletin No. 115, N.B.I.R. [National Bureau of Industrial Research], China 1941.

Note: This is the earliest document seen (April 2012) that describes how to make fermented soy sauce at home or on a laboratory scale–that will actually work. All known previous descriptions on this scale omitted the "mold culture" or koji stage.

"An important microorganism for making soybean cheese is *Mucor sufu*, which was first isolated by N.S. Wei [sic, Wai] (J. of Chinese Agr. Soc. 1926). Other useful microorganisms for making this product are Monascus (e.g., *M. anka, M. purpureus, M. faligiosus* [sic, *M. fuliginosus*], *M. major*, and *M. pilosus*), yeasts and bacteria. Some of these have been isolated by the writer in the *National Bureau of Industrial Research*, China (Bulletin No. 126, 1941).

The procedure for making soybean cheese is described, starting with 300 gm of whole soybeans. After pressed tofu cubes are inoculated on the surface with any of various mold species, they are incubated at 25°C for 3 days. Then 600 ml of a 16% solution of table salt (NaCl) is added. The 2nd fermentation "usually takes two months after which the cheese and liquid are bottled, sterilized, and marketed."

Note: This is the earliest document seen (Nov. 2011) that describes how to make fermented tofu at home or on a laboratory scale. Address: Univ. of Wisconsin.

3494. Marriage of John Takeo Tadano and Mary Mariko Taguchi, on 1 July 1945 at Rocky Ford, Colorado (Photograph). 1945.
• ***Summary:*** John was later the owner of Marusho Shoyu in Glendale, Arizona. Sent to Soyinfo Center by Barbara Y. Peters, their daughter (Nov. 2008). Barbara writes: "My dad met my mother through her sister Lucy Seo. My Mother graduated from Colorado University as a Medical Technologist."

3495. Minor, Lewis J. 1945. Soya sauce processes and how they can be improved. *Food Industries* 17(7):758-60. July. [12 ref]
• ***Summary:*** Contents: Introduction. Present status in U.S. Composition. Methods of manufacture (two). Costs and equipment. Acid method: Digestion, finishing, bottling. Mold-enzyme vs. acid: Quality and equipment. Quality control. Patent review.

Describes the preparation of a sauce by hydrochloric acid hydrolysis and by mold enzyme digestion of a mixture of soybeans and wheat.

All of the Worcestershire sauces contain soy sauce. The better varieties contain as much as 30% while the less expensive ones have only 10-15%. Before World War II, American soy sauce manufacturers were probably producing less than 1,000,000 gallons per year. Chinese restaurants were using possibly an additional 2,000,000 gallons imported from China.

When using the acid hydrolysis method of certain protein-bearing grains, constantly boiling hydrochloric acid (a 20% solution of hydrogen chloride gas in water) is generally used, in the proportion of 3-5 parts of acid to one part protein. "Hydrolysis is carried out by refluxing the mixture until a maximum concentration of amino acids is obtained," as estimated by the amino-nitrogen method of Van Slyke.

Two firms in the USA are making HVP soy sauce in 6-8 weeks "through modernization of the ancient process." Address: McKay Davis Co., Toledo, Ohio.

3496. *Soybean Digest*.1945. Grits and flakes... from the world of soy: John Tadano is erecting a plant for the production of soy sauce in Glendale, Arizona. Aug. p. 22.
• ***Summary:*** Mr. Tadano has had soy sauce on the market there since 1941. "Capacity of the expanded plant, one of the largest in the country, is expected to be 3,500 gallons monthly."

Note 1. The Tadano family began making shoyu in a wooden building on their property in Glendale, probably in early 1942, but perhaps as early as late 1941. For details, see *SoyaScan Notes* interview with Mary and Michiko Tadano, Sept. 2002. The wooden building was constructed specifically for making shoyu. It had very wide sliding doors so the large vats could be brought into the building.

Note 2. Mr. Tadano may have been selling soy sauce made by another company in 1941.

3497. Junior, Vesta. 1945. Test and tell: This is a "request number" in which queries are answered. *Argus* (*The*) (*Melbourne, Victoria, Australia*). Oct. 9. p. 11.
• ***Summary:*** The recipe for "Dim sums" says: Mince pork thoroughly. "Season with salt, pepper, and a little soya sauce.

"Roll pastry as thin as possible and cut into rounds about 4 in. in diameter. Fill with mince and shape into pies. Steam for an hour and serve with soya sauce."

3498. Paddleford, Clementine. 1945. Food for conversation: Here's a traditional Thanksgiving dinner, with some new touches. *Los Angeles Times*. Nov. 18. p. F21.
• ***Summary:*** Before putting his turkey in the oven, Emery Herrett (of Dover Plains, New York) likes to paint it with a "mixture of two-thirds cup made frisky with two tablespoons of soy sauce and one tablespoon of tarragon vinegar." This imparts a honey-sweet taste to the skin.

3499. **Product Name:** Loma Linda Soy Sauce.

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Manufacturer's Name: Loma Linda Food Co. (Marketer-Distributor).
Manufacturer's Address: 11503 Pierce Place, Arlington, California.
Date of Introduction: 1945.
New Product–Documentation: Wholesale price list. 1945; Soybean Blue Book. 1949. p. 103. Also listed in 1955, 1960, 1970. They were not a manufacturer. Today's Food. 1964. Autumn. p. 5. Wholesale price list. 1968. Sold in 4 oz., pint, and gallon sizes.

3500. Chao, Buwei Yang. 1945. How to cook and eat in Chinese. New York, NY: The John Day Co. xviii + 262 p. Foreword by Hu Shih. Preface by Pearl S. Buck. Illust. Index (of both recipe numbers and page numbers). 21 cm. An Asia Press Book. New editions, 1949 and 1963.
• ***Summary:*** A superb, funny, authentic Chinese cookbook. The "Author's note" begins: "I am ashamed to have written this book. First, because I am a doctor and ought to be practicing instead of cooking. Secondly, because I didn't write the book... You know I speak little English and write less."

The section on "Conventions and hints" states: Clear-simmering is slow cooking without soy sauce. Red-cooking is slow-cooking with soy sauce (p. xvi).

In Chapter 2 titled "Eating materials," the section on "Grains" (p. 21-22) notes: There are two important supplementary starchy foods in the Chinese diet: Sweet potatoes (the poor man's luxury) and "beans: red beans [probably azuki], horse beans, and above all soy beans and their products. Bean milk and bean curd [tofu] are regarded in this country [America] as specialties. But in China, cabbage and bean curd mean a poor family's home cooking. Soy beans not only give starch, but are also the most important source of protein, since most people cannot afford much animal food."

In Chapter 3, "Cooking materials": "The commonest vegetable oils in China are [soy] bean oil and peanut oil" (p. 24). Soy sauce is a "salter," which is not freely exchangeable with salt. It is never used in the white kind of cooking but it is used (sometimes with salt) in red-cooking and red-stir-frying (p. 25).

"Flavorers.–The most important flavorer of Chinese food is soy-bean sauce or soy sauce for short. With soy sauce you can cook an untiring series of Chinese dishes with nothing but those foods you can get at any American chain market. In fact even pretty good soy sauce can now be bought at such chain markets. Chinese dishes are called red-cooked or white-cooked according as soy sauce is or is not used. But even in the white-cooked dishes, especially the slow-cooking ones, the morsels, or rather the chopstickles [chopsticks], of food are often dipped in soy sauce before eating. One thing we never do, however, is to pour soy sauce on rice. When Americans do that, it looks funny. It must taste funny too.

"Soy sauce is made from fermented boiled soy beans in which salt is added. Several kinds are now seen in this country. The least useful is called in Cantonese *chü-yau*, "pearl sauce," a dark thick sauce without too strong a taste, which lends much color to the dish and is much used in restaurants. Next is *shang-ch'au* "raw extract," which is light brown, tastes very fine, but is not colorful enough for red-cooking and not available in any great quantity. The sauce most suitable for general purposes is called *ch'au-yau*, "extracted sauce," which fortunately is made by several manufacturers in this country and Canada. All varieties of soy sauce are also called by the general name *shi-yau* in Cantonese.

"Similar to soy sauce is a soy jam [chiang], which is much thicker in consistency. In China, fermented flour jam is even more common. Good samples of such jams are scarce in this country.

"There is a whole class of whitish savory powder made mostly from gluten of flour. We shall call it **taste powder** in the recipes. The oldest form of this is made from the dried fermented muscle-of-flour (flour gluten), often made in old Chinese households. Almost thirty years ago the Japanese manufactured, from hydrolized gluten, a powder called *ajinomoto*, 'prime element of taste.' Later a Chinese firm manufactured *ve-tsin* [*vetsin*], "essence of taste, which is still found on some shelves of Chinatown. 'Pickup' and *mee boan* taste powders are made in this country and sold mostly in Chinatown.

"You will note that relatively few recipes in this book call for the use of taste powder." "Other common flavorers are oyster sauce, sesame oil, and soy bean cheese (*fu-yü*) (p. 27-28).

A table (p. 29) list widely used Chinese foods and seasonings in four columns: Chinese characters, Mandarin, Cantonese, and English. Soy related ingredients (in English, Mandarin, and Cantonese) are: (4) Oyster sauce: hao-yu, hou-yau. (6) Soy sauce (1): chiang-yu (M). Soy sauce (2): shi-yau (C). Soy sauce (3): ch'au-yau (C). (7) First quality soy sauce: sheng-ch'ou (M), shang-ch'au (C). Note 1. The first character means "fresh" or "live."

Note 2. This is the earliest English-language document seen (April 2012) that uses the term "sheng-ch'ou" (Mandarin) or the term "shang-ch'au" (Cantonese) or the term "chü-yau" to refer to a type or grade of Chinese soy sauce."

(8) Flour jam: t'ienmien-chiang (M), t'inmin-cheung (C). (9) Bean sauce: Yuanshih chiang (M), yünshi-cheung (C). Note 3. The middle character (shih / shi) refers to fermented black soybeans. (10) Hoisin sauce: haihsien chiang (M), hoisin-cheung (C). Note 4. This is the earliest document seen (April 2012) that mentions Hoisin sauce.

Chapter 6, "Methods of cooking," includes a discussion of red-cooking (stewing with soy sauce, which gives a

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reddish color. "Red-cooking is the typical family cooking." Cooking time varies from 2-6 hours) and clear simmering (without soy sauce).

Soy-related recipes include: Bean curd stirs meat slices (p. 61). Bean curd stirs shelled shrimps (p. 118). Meat sauce meets lobsters ("Variation: As done in Chinese restaurants in America–Get from Chinatown 2 tb-sp salted small black beans [fermented black soybeans]. Wash off visible salt, boil 10 minutes, crush, and add to the stirring sauce," p. 125). Arhat's fast or Vegetarian's ten varieties (with wheat gluten, bean curd skin [yuba], fried puffy bean curd, soy sauce, etc., p. 156-57).

Note 5. This is the earliest English-language document seen (May 2012) that contains the term "fried puffy bean curd." It refers to a type of Chinese deep-fried tofu. "Get in Chinatown. The best is to get them ready fried...."

Plain stirred bean curd (p. 158-59). Oyster sauce bean curd. Mushrooms stir bean curd. Scallions stir bean curd (p. 159-60). Pot-stuck bean curd (p. 160). Bean curd and meat-slice soup (p. 164). Huichou pot (with fried bean curd [large triangles or small cubes], p. 181-82). Sandy-pot bean curd (p. 183). Soy jam noodles (p. 201-02, with ½ can *yiinshi* soy jam [get in Chinatown]; this is typical northern food).

Page 158 states: "Bean curd is made of soy beans. It has only a faint flavor of its own. That is why it can be easily combined with other materials. Bean curd has the same nourishment value as bean, but in a much more digestible and palatable state and forms an important ingredient of the food for the poor people in China. It is cheap and easy to prepare. Those who can afford fancy dishes often combine it with meat, fish, and other sea foods. But just plain (Chinese) cabbage and bean curd connotes home sweet home. Bean curd is a versatile cooking thing. It can be boiled plain, with a little of any flavoring. It can be fried in deep oil by whole pieces so that the outer surface will become browned. We often stuff seasoned ground meat inside it like stuffed cucumber and then red-cook the whole thing. Bean curd can even be eaten as part of an American salad." The Chinese characters for all recipe names are given on pages 232-46. Address: Cambridge, Massachusetts.

3501. Lager, Mildred. 1945. The useful soybean: A plus factor in modern living. New York and London: McGraw-Hill Book Company, Inc. xii + 295 p. Illust. General index. Index of recipes. 22 cm.

• ***Summary:*** One of the most important and innovative books on soyfoods ever written. Contents: Preface. 1. Agriculture's Cinderella: America discovers the soybean, our wonder beans, soy as a food in the United States, soy in rehabilitation food programs, soybeans as an emergency crop, soybean terminology. 2. World-wide use of soybeans: A real antique, monarch of Manchuria, soybeans in mechanized warfare–Germany, soybeans in other countries (USSR, Italy, Spain, Belgium, Holland, Norway, Denmark, Sweden, Great Britain, Canada), soybeans in Lend-Lease and United States Agricultural Marketing Administration, Food for Greece, soybeans and the Mexican Indian, soybeans in Hawaii (Mr. C.G. Lennox). 3. Soybeans and industry: The versatile soy, uses of soybean in industry, soybean paint (from soy oil, incl. Duco finishing), soybean protein (used in making plywood, plastics, water paints, paper sizing, leather finishes, and insecticide sprays), Henry Ford and soybeans, soybean glue (I.F. Laucks and the firms he has licensed turn out some 30,000 tons of soybean glue annually), rubber substitute (Norepol), paper industry (Glidden), plastics, soy-cotton helmets, firefighting compounds, lecithin, fertilizers. 4. Nutritional nuggets: Food value of soybeans and soy products (vegetable or edible types of soybeans, protein, fat & carbohydrate, minerals, vitamins, lecithin, alkaline ash, economy, exaggerated claims), principal uses of soybeans and soy products (meat substitutes, meat enrichers, fortifying foods with soy flour). 5. From soup to nuts: Green beans, dry beans, frozen beans, roasted soybeans, sprouted soybeans, the cow of China–soy milk, the meat without a bone–tofu or soy cheese, the little giant among protein foods–soy flour, soy grits, puffed grits, soy oil, miscellaneous soy products (soy butter [soynut butter, p. 99-100], sandwich spreads, malts, coffee substitutes, soy sauce, soy albumen–a new product, greatly improved during the past two years, is now used to "replace egg albumen in candy manufacture" [as in marshmallows]).

Note 1. This is the earliest English-language document seen (March 2001) that refers to tofu as 'the meat without a bone.' In 1938 Horvath called tofu 'the meat without the bones.' Note 2. This is the second earliest document seen (Aug. 2002) in which the soybean is called the "cow of China."

Note 3. This is the earliest English-language document seen (Aug. 2003) that uses the term "soy albumen" (or "soy albumens") to refer to isolated soy protein as a product.

6. The blazed trail: Introduction (history and pioneers), our tardy acceptance, food pioneers (health-food stores, Dr. W.D. Sansum of Santa Barbara and soy bread, allergy studies, vegetarians, Seventh-day Adventist food companies, meatlike products, Madison College of Tennessee, Loma Linda Food Co., the International Nutrition Laboratory and Dr. H.W. Miller, special dietary concerns and diabetic diets), establishing soybeans in the kitchen (The Edison Institute and Henry Ford, the USDA and the U.S. Bureau of Home Economics, the Agricultural Marketing Administration, U.S. railroads, the Soy Products Division of the Glidden Co., the Soy Flour Association). 7. The challenge of nutrition: The dangers of hidden hungers, nutrition and health, corrective nutrition, starch-restricted diets, meatless diets, allergy diets, bland diets, building diets, reducing diets, acidophilus culture, lecithin. 8. Our wonder crop: Jack and the beanstalk, early history, new varieties, aids to the industry (Regional Soybean Industrial Products Laboratory, American railroads,

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American Soybean Association, Fouts Brothers of Indiana, *Soybean Digest* and George Strayer in Hudson, Iowa, Soy Flour Association with Edward Kahl as first president, Soya Kitchen in Chicago (Illinois) opened in Jan. 1943, National Soybean Processors Assoc., National Farm Chemurgic Council), educational program, restrictive regulations. 9. Soybeans and the farmer: Varieties, sources of information, seeding and inoculating, harvesting, grading, soybean diseases, crop rotation, damaged beans. 10. Tomorrow: Acreage and production, soybeans on the farm, soybeans in nutrition, postwar industrial uses, future improvements. 11. A few suggestions for better living: Kitchen diplomacy, personal opinions, soybeans for everyone. Recipes: Green soybeans, dry soybeans, sprouted soybeans, roasted or toasted soybeans, meat-substitute dishes, soy-enriched meat dishes, soy noodles, macaroni, spaghetti, sauces and gravies, soups, salads, dressings, soy spreads, soy milk, tofu or soy cheese, soy butter, soy cereals, soy desserts, soy candies, soy beverages, soy-flour recipes, bread and muffins, pancakes and waffles, soy gluten recipes, baking-powder biscuits, pastry, cookies and doughnuts, cakes.

Contains recipes for "Soy milk molasses shake (p. 238). Soy puddings. Soy ice cream (p. 250; "Soy milk may may be used in place of milk in ice-cream recipes... adding whipped cream"). Soy fruit ice cream. Soy chocolate dessert (Eggless) (p. 250-51). Soy shake "(p. 254, made in a "liquefier or mixer").

The story of Allied aid to Greece [p. 24-26] is one of the great mercy stories of World War II. Starting in March 1942, as many Greeks were starving, the first mercy ship sailed to Greece with food and medicine. Up to Nov. 1943, the United States through Lend-Lease sent 82 million pounds of food to Greece. A number of these foods (including soup powders, stew mixes, and spaghetti) were based on soy flour and grits, and specifically developed to suit Greek tastes.

Concerning Henry Ford (p. 35-38), his "first experiments were made in a laboratory in connection with the Edison Institute in 1930. In these experiments, several tons of wheat were used, also several thousand bushels of carrots; sunflower seeds, which have a high oil content; cabbages; onions; and cornstalks. It was not until December, 1931, after a long series of experiments with the soybean, that Mr. Ford and his chemists felt that they were at last approaching a solution to the problem of finding a basic farm material from which the ordinary farmer could develop a commercially profitable product."

Note 4. This is the earliest English-language document seen (March 2007) that uses the term "Soy ice cream" (p. 250).

Note 5. This is the earliest document seen (July 2007, one of two) that uses the word "Cinderella" in connection with the soybean. The author, however, does not elaborate on this idea.

Note 6. This is the earliest English-language document seen (June 2011) that uses the term "soy-flour." Address: Southern California.

3502. Lautensach, Hermann. 1945. Korea: Eine Landeskunde auf Grund eiener Reisen und der Literatur [Korea: A geography based on the author's travels and literature]. Leipzig, Germany: K.F. Koehler Verlag. xv + 542 p. Illust. (black & white photos). Maps (part folding, part color). 24 cm. Series: Geographische Handbücher. [1038* ref. Ger]

• ***Summary:*** A superb, scholarly work, with a huge bibliography, printed just as Germany was losing World War II.

Chapter 6, titled "The anthropogeographical character of ancient Korea" (p. 141+) contains extensive information about agriculture and food. Page 154: In wealthier sites, the farm buildings enclose a courtyard, to which an entrance gate gives access (Fig. 21e, p. 151). Some enclosures are so complete that a square courtyard results. In some corner or other of the courtyard stand the huge brown earthenware jars, in which soy sauce (*Sojabohnensosse*, jap. *shoyu*) is prepare and stored.

Page 176-77: In East Asia, after cereal grains, pulses / legumes are the next most important crop. In Korea, by far the most important is the soybean (*Sojabohne*, jap. *daitsu* [*daizu*] = large bean) which makes few demands on the soil. Korea's climate is ideal for soybeans (Tanaka 1931, p. 18); it is even better than Manchuria's climate, because of the large amount of precipitation during the summer. Today, soybeans are an indispensable part of the various dry-field crop rotations. After planting of the paddies has finished, soybeans are planted on the ridges too; there they grow extremely well without being fertilized. Soybeans are grown throughout Korea, but least in the Kaema upland because of the warmth they require. In northern Korea, on dry fields, they are planted between the end of March and beginning of May. Toward the south, planting is delayed until the end of June. They are generally harvested in October, except in Chejudo, where they are not harvested until early November. Soybeans are the crop that is left standing the longest, and they are not harvested until their leaves have turned brown and started to fall.

Soybeans are used as a very nutritious food for both humans and horses. Also, cooked soybeans are used as a fertilizer for the rice paddies. Above all, though, the hot brown soy sauce (*Shoyusosse*), which is never lacking on any Korean or Japanese table, is made of them, using salt and pepper and a process of fermentation. Bean curd (*Käse*, jap. *tohu* [*tofu*]) and soybean paste (*Mus*, jap. *miso*) are also made of them."

Page 180: The place of soybeans (*Soja*) in rotations, such as soya/hemp is mentioned. The winter crops consist of wheat, barley, or rye; the summer crops of soybeans, other beans or cotton. Page 181 mentions soybeans as a summer

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crop. Page 196: Soybeans are planted on the bunds of the rice fields. Page 199. Those who farm in central Manchuria are likely to grow soybeans. Page 224: Soybeans are mentioned several times.

A fold-out map facing p. 400 shows the distribution of soybeans in Korea. They seem to be slightly more densely grown in the south than in the north.

Page 435: Soybean oil mills (*Sojabohnenmühlen*) are mentioned. Page 460: Discusses imports and exports of soybeans. The main beans exported from Korea to Japan are soybeans, amounting to a weight of 1.3 to 1.9 million dz. in 1939. Note: One dz (*doppelzentner*) = 100 kg. Exports to other countries was small. By comparison, Manchurian soybeans were exported to the northern harbors of Germany and England. In addition, a significant amount of Manchurian soybeans were imported to Korea (0.29 to 1.02 million dz.). Also, a significant quantity of soybean products made in Korea were exported to Japan (Soy oil up to 11,550 dz. and soybean cake up to 1.2 million dz.). Likewise, up to 3,210 dz of soy oil and up to 1.3 million dz of soya cake were imported to Manchuria from Korea.

Page 466-67: A comparison of soybean production in Korea and Japan is given. 85% of the imports of soy oil to Japan came from Korea.

Page 473. Soybeans are grown in the deep valleys of Korea.

Facing p. 144: A photo shows a man carrying a large, empty, pottery soy sauce jar on a rack on his back.

Hermann Lautensach lived 1886-1971. Korean place names are the old ones in the Japanese system. Address: PhD, Prof. of Geography at the University of Greifswald [northeastern Germany].

3503. Lobbe, Henrique. 1945. Cultura da soja no Brasil. 7th ed. [Culture of soybeans in Brazil. 7th ed.]. Rio de Janeiro, Brazil: Directoria de estatistica da producao, Ministerio da Agricultura. 74 p. 2nd ed. was 1935. [Por]
Address: Eng. Agronomo, Brazil.

3504. Swingle, Walter T. 1945. Our agricultural debt to Asia. In: Arthur E. Christy, ed. 1945. The Asian Legacy and American Life. New York: The John Day Co. x + 276 p. See p. 84-114. Index. 21 cm. Also published by The Asia Press, 1942. [2 ref]

• ***Summary:*** "The beginning and foundation of the Library of Congress Orientalia Collection was the great Chinese encyclopedia, the *Ssu k'u ch'uan shu*, a gift of the Empress Dowager of China.

"About 1914, Dr. Swingle, then head of the Office of Crop physiology and Breeding, Bureau of Plant Industry, U.S. Dept. of Agriculture, was able to secure the services of a Cornell graduate, Dr. Hing Kwai Fung, to make abstracts and/or translations of information in the *Ssu k'u ch'uan shu* regarding economic plants. Dr. Swingle interested Dr. Herbert Putnam, Librarian of Congress in increasing the holdings of Chinese books, especially gazeteers [sic, gazetteers] which contain local information. When Dr. Fung returned to China, he was given a modest sum for purchasing books. Dr. Fung was able to persuade the Commercial Press (the largest publishing firm in China, located in Shanghai) to act as receiving agent for books for the Library of Congress, and to ship them to Washington [DC]. Soon after, Dr. Swingle was sent to the Orient–in March 1918–by the Dept. of Agriculture." There he made arrangements for collecting books in Tokyo and Shanghai.

"As American merchants and missionaries gradually penetrated into China, they sent home more and more plants and trees. The Arnold Arboretum, organized and directed by the great tree expert, C.S. Sargent, financed extensive trips to the Orient to obtain botanical specimens and seeds of ornamental trees and shrubs as well as photographs of them as they grew in their native habitat. These trees and shrubs revolutionized the garden and park plantings of the northern parts of the United States. The illustrated popular books of E.H. Wilson, who made many trips to the Orient for the Arnold Arboretum, helped to arouse interest in the very rich arboreal flora of China...

"The Plant Introduction Service of the U.S. Department of Agriculture was organized by David Fairchild in 1897; he did very extensive exploring for foreign economic and ornamental plants from 1898 on, and directed the Plant Introduction Service from 1909 to 1928. I was fortunate enough to be one of the first 'agricultural explorers.'" Of these men Frank N. Meyer and P.H. Dorsett were outstanding, not only for the number and value of the plants they secured, but also for the detailed and accurate descriptions of every plant they sent to Washington.

"P.H. Dorsett some years later, during the twenties, traveled widely in North China taking many fine photographs of Chinese crop plants and writing descriptions of the culture, harvesting and curing of each. On these trips he collected many varieties of soy beans largely through the utilization of a new and potent method of securing the willing cooperation of all educated Chinese people. A complete translation, prepared by Michael J. Hagerty under my direction in 1917 of the chapter on soy beans contained in a standard Chinese work on economic plants (the *Chih Wu Ming T'u K'ao* by Wu Ch'i-chun) had been furnished the plant explorers looking for soy bean varieties. This translation, covering eighty-two pages, discussed several hundred varieties, telling where they were largely grown. In all cases the name of the variety and the name of the locality where it was grown were not only spelled out in English but also written carefully in Chinese characters. An index made it easy to turn to any variety under discussion and see what was said about its culture.

"This was a turning point in field explorations in China. Such indexed translations in the hands of foreign plant

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explorers insured the attention of all educated Chinese, who gladly directed the explorer to the nearest source of the various named varieties. I had learned this at first hand in 1915 when studying varieties of Citrus in southern China. Surprise and skepticism about the foreigners knowledge of Chinese books gave way to astonishment and warm approbation."

"The soy bean is a striking example of the introduction of a new crop... Soy beans were sent from China to France as early as 1740 and from 1779 were grown in the famous Botanic Garden of Paris. Benjamin Franklin, who had been a member of the French Academy of Sciences since 1772, sent seeds back to the United States and urged that they be given a trial. But in spite of his plea, the soy bean remained merely a curiosity in this country for more than a century.

"In the late eighties [sic, 1890] Prof. C.C. Georgeson brought soy bean seeds from Japan, where he had been teaching at the Agricultural College at Komaba, and planted them in a field on the campus of the Kansas State Agricultural College. I could see the stunted soy bean plants from the windows of the botanical laboratory where I was a teen-age research assistant. This variety, adapted to the perpetual spring climate of Komaba near Tokyo, did not do well on the bare Kansas hills, often swept by hot dry winds. And nothing happened. Soy beans did not arouse interest among Kansas farmers until many years after this failure.

"In the third decade of the twentieth century Dorsett sent to Washington more than 800 named soy bean varieties from China, Manchuria and Japan. These together with shipments secured by Dr. David Fairchild from his numerous correspondents in the Old World, especially in Asia, amounted by 1928 to a total of more than 2800 packages of soy beans, almost all named varieties but many of them duplicated, some of them many times. Meantime tests made by W.J. Morse, in charge of soy bean culture for the Bureau of Plant Industry, showed that many varieties had a narrow range of adaptability. Accordingly, from 1929 to 1931, Morse joined Dorsett in the Orient and these two experts, with trained Chinese helpers, brought to this country the largest single collection of soy bean varieties ever assembled. As soon as Morse returned from studying soy beans in Asia and attacked the problem of finding which Asiatic varieties adapted to the different regions and selecting and breeding to make them fit various American soils and climates, a remarkable change occurred in soy bean culture. Yields went up and plantings increased year by year...

"One of the best-known industrial uses for soy bean proteins is for making water-resistant glue. No less than 30,000 tons of soy bean glue were made in 1942 by a single firm and its licenses annually, most of it being used in the rapidly growing plywood industry. Soy bean proteins have been enthusiastically used by Henry Ford in his automobiles, being mixed with the more expensive phenolic resins, thereby reducing costs and also yielding a more plastic, freer-flowing mixture which takes dyes better...

"As long ago as 1917-1918 Dr. Yamei Kin set up under my general supervision for the U.S. Department of Agriculture a soy bean mill in New York City in the hope of supplying tofu to increase the bulk and food value of meat dishes served to soldiers in training at near-by camps. Dr. Kin succeeded in making excellent tofu. She even served to a group of army officers a meal composed entirely of soy bean dishes! However, it proved impossible to test tofu on a large scale at that time, since we could not get priority for transportation of soy beans from North Carolina, then the nearest region where they were grown on any considerable scale.

"A splendid example of a double fermentation is the soy bean cheese called *nam yüe* by the Cantonese and *sufu* in North China. It is preferred even to the best Roquefort as a salad dressing constituent by those who have had the opportunity to try it. It is made by Chinese masters of the cheesemaker's art who believe that its fermentation is an insoluble mystery.

"Shih Chi-yien, then working in the American University of Soochow, published in 1918 the first English account of the most important fermented bean foods. He traced the making of *tofu* from soy beans back to the Han dynasty (A.D. 22). Ten years later Wai Ngan-shou [Nganshou], one of the first scientifically-trained Chinese microbiologists and fermentation experts, was able to isolate and identify as a new species of Mucor the mold that makes possible the *nam yüe* fermentation. It is a curious fungus, *Mucor sufu*, distantly related to the miraculous *Penicillium notatum* whose marvelous curative action has only recently been discovered. A third fermentation expert, Shih You-kuang, studied another soy bean fermentation product, *meitauza*, made by another species of Mucor, and published an illustrated account of it in German in 1937. In his review of the literature of Mucor fermentations, Shih You-kuang cites no fewer than thirty articles by eighteen authors all based on Chinese fermentations...

"Miss Elizabeth Groff, under my direction in 1918, made a thorough study of the fermentation of soy sauce in the famous factories of Canton, China, and published the first detailed account of the process in the *Philippine Journal of Science* for 1919."

"It has been my privilege to assist in building up a great Chinese library in the Library of Congress, under the enlightened policy of Dr. Herbert Putnam, beginning in 1912. The Orientalia Division, headed by Dr. Arthur Hummel, is now the largest Chinese library outside of Asia and is probably larger than all the European libraries of Chinese books combined. It now contains, Dr. Hummel estimates, about 230,000 Chinese volumes (*Chüan*) and some 20,000 more will soon be added in the form of bibliofilm [a type of microfilm] copies of very rare works from the Chinese National Library, sent to Washington for safekeeping."

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Note 1. This is the earliest secondary document seen that mentions the early introduction of soybeans to America by Benjamin Franklin.

Note 2. This is the earliest English-language document seen (Oct. 2011) that uses the term *nam yüe* to refer to Chinese-style fermented tofu. It is 2nd earliest English-language document seen (Oct. 2011) uses the word "sufu" to refer to Chinese-style fermented tofu, and the first such document written by a Westerner. Photos show Dr. Walter Tennyson Swingle, and his wife Maude K. Address: Collaborator, Bureau of Plant Industry, USDA; Consultant on Tropical Botany, Univ. of Miami, Florida.

3505. **Product Name:** Sovex.
Manufacturer's Name: Sovex Co?
Manufacturer's Address: Marin County, California.
Date of Introduction: 1945?
Ingredients: Incl. nutritional yeast and soy sauce.
How Stored: Shelf stable.
New Product–Documentation: Talk with Craig Klatt, manager of the Seventh-day Adventist Book Center in Pleasant Hill, California. 1990 July 19. The original Sovex product, which was in existence by 1945, was a seasoning based on hydrolyzed or autolyzed nutritional yeast made by a Mr. Sampson in his garage in Marin County, California, where Craig grew up. It was a paste sold in quart mayonnaise jars, and used more as a spread on bread than as a soup base. It was always based on nutritional yeast.

3506. Eaton (T.) Co., Limited. 1946. Order foods early Tuesday for delivery Wednesday (Ad). *Toronto Daily Star* (*Canada*). Jan. 7. p. 29.
• ***Summary:*** "Soya Bean Sauce, 7½-oz. bottle–15¢.

"Eaton's Tuck Shop Worcestershire Sauce, 5-oz. bottle–15¢." Address: College St., Toronto. Phone: TR. 3311.

3507. *Honduras Agricola*.1946. La soya: Excellente alimento para el hombre como para el ganado y valiosa materia prima de numerosos usos industriales [The soybean: Excellent food for people and for livestock and valuable raw material with numerous industrial uses]. No. 14 & 15. p. 7-9. Jan/Feb.; No. 16. p. 10-11. March; No. 17. p. 16-17. April; No. 18. p. 18-19. May; No. 19 & 20. p. 17-18. June/July; No. 21. p. 10-13. Aug. [Spa]
• ***Summary:*** Contents continued: No. 14 & 15: Varieties. Fertilizer and manure to prepare the soil. Inoculation with bacteria. Time of sowing. Methods of sowing. Plant density. Depth of sowing.

No. 16: Tillage (*Labores*). Rotations. Mixed cultures: Soya and maize, soya and Sudan grass pasture, Soya and sorghum (*zahina*). Harmful animals (especially insects). Diseases. II: The harvest. Introduction. Cutting and preparation of soya for dry forage or hay. Time of harvest and reaping

No. 17: Method of harvest. Curing the pasture or hay. Baling the hay. Exhaustion of the soil. Harvest and preparation of the grain. Time of gathering. Methods of reaping. Curing and manipulation. Threshing.

No. 18: Special machines. Exhaustion of the soil. Storage of the seeds. II. Uses of soybeans. Introduction: The plant. The flour made from the seed. Green vegetable soybeans and sprouts (*Las soyas verdes y grillos*). Dry soybeans (*Las soyas secas*) and products made from them. The oil and its uses. The soybean as a human food: Introduction, dry soybeans, green vegetable soybeans (*Soyas frescas*). Soy sprouts.

No. 19 & 20: Introduction. Flour. Oil. Soy sauce. Soymilk. Soy curds or tofu (*Cuajada o requesón de soya*). Soybeans as food for animals. Soy oil. Extraction of soy oil.

Issue No 21: Uses of the oil. Soybean meal (*pulpa, o bagazo de soya;* which remains after extraction of the oil). Use of soy meal [or flour] in human foods. The meal as a feed for livestock, for poultry, and as a fertilizer. Soy hay: For fattening cattle, for dairy cows, for mules and horses, for other animals. Soya pastaderos. Fresh soy forage. Soya for ensilage. Soy straw. Soya as a green manure.

On page 10 of this last part is a full-page cartoon of a woman with fruits and a cooked chicken. "Soya is the ideal food for children; it nourishes more and costs less. It is a good source of proteins, oils, carbohydrates, and vitamins. It can serve as a substitute for milk, eggs, meat, fruits, and pulses or vegetables (*legumbres*)." Page 11 states that people interested in planting soybeans can contact Prof. Raul Zaldivar, Director of the Rural School at Toncontin for Training Elementary Teachers (*Director de la Escuela Normal Rural de Toncontin*), Tegucigalpa, Honduras. Address: Honduras.

3508. Simpson's. 1946. Luxury fancy fruit baskets. No charge for delivery within Simpson's suburban delivery area. Phone orders filled (Ad). *Toronto Daily Star* (*Canada*). April 8. p. 15.
• ***Summary:*** "Victory Soy Bean Sauce, 7½-oz. bottle–15¢." Address: Basement, Toronto. Phone: TRinity 8111.

3509. Raper, Kenneth B. 1946. Chinese soya sauce directions from Raper's Chinese student at University of Illinois. 1 p. Undated. Unpublished manuscript.
• ***Summary:*** The author of these handwritten, dated instructions, on lined paper, is not given.

"I. Materials: 300 gm whole soybeans steeped with 60 ml water for 8 hours. Wheat: 200 gms parched and ground. NaCl [table salt]: 300 gm. Water: 1,000 ml.

"II. Inoculum: 1. *Aspergillus oryzae*. 20 gm in 40 ml water. Inoculate [Incubate?] 4 days at 30°C. 2. *Aspergillus soya*. 20 gm rice, 40 ml water. Inoculate 4 days at 30°C. 3. *Zygosaccharomyces soya*. 10% glucose, 2% maltose, 0.5% yeast extract, 5% NaCl. Inoculate 2 days at 30°C.

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"III. Fermentation: Combine beans, wheat & inoculation materials. Incubate 24-36 hours at 30°C. Add NaCl 300 gm + 1,000 cc water. Ferment at 37°C for 2-3 weeks. Test by the taste & flavor & determine percentage of nitrogen (0.06 gm / 100 gm).

"IV. Pressing: Filter through cloth. Filter through filter cell on Buchner funnel. Sterilize at 15 lbs [15 psi] for 15 minutes." Address: [NRRL, Peoria, Illinois].

3510. *Sun (Baltimore, Maryland).*1946. Palace kitchen invaded by Japs: Demonstrators eye menu and demand leftist cabinet. May 14. p. 1.

• ***Summary:*** The end of World War II has left many hungry in Japan. On Sunday, about 100 men and women, some with children strapped to their backs, invaded Emperor Hirohito's Imperial Palace in Tokyo demanding to see the emperor and to ask why rations were two weeks late.

When they were told that the emperor was "out of town," they demanded to see his kitchens, where they found preparations underway for a banquet. The menu included: "Blue cod cooked in soysauce... Vegetables cooked in bean paste" [miso].

The spokesmen for these demonstrations are often said to be members or leaders of the Communist party, and economic complaints are often viewed as tied to political goals. The marchers waived red flags.

3511. Paddleford, Clementine. 1946. UN's honor dishes: From the chef-in-charge comes a parade of recipes. *Los Angeles Times.* May 19. p. F18.

• ***Summary:*** At the cafeteria in United Nations headquarters in New York, chef Dirk Eykelhoff creates international fare to promote gastronomic peace. The recipe for Chow San Mein (Noodles with chicken–China) features 2 tablespoons soy sauce.

3512. Hall, Lloyd A. 1946. Protein hydrolysates–Flavor ingredients for foods. *Food Industries* 18(5):681-84, 808, 810, 812, 814, 816. May.

• ***Summary:*** The subtitle reads: "Acid digestion of casein, corn or wheat gluten yields an amino acid mixture with a meaty or other flavorful taste. The digest is clarified, neutralized and dried for addition to soups, sauces, meat products and spice mixtures."

"To the best of our knowledge, the first commercial use of hydrolysates was in China and Japan about 1908. Several patents pertaining to them were granted to the Japanese scientist, Ikeda, in 1912. The Japanese were the first to make commercial use of mono-sodium glutamate, one of the salts of glutamic acid. It was used to impart or intensify a meat flavor, especially in soups, broths, gravies, and like foods.

"Production of glutamate: Until 1935, most of the mono-sodium glutamate used in this country was purchased from Japan. About 1935, domestic commercial production of mono-sodium glutamate from wheat gluten began. Shortly afterwards commercial production of it from Steffen's waste water, a by-product from beet sugar factories, was started by an Ohio plant.

"The proportion of the various amino acids in the hydrolysates varies with the protein material used. Wheat and corn glutens, yeast, soybean meal and casein are the most commonly used proteins."

"Three basic methods: The three types of hydrolytic methods which may be used are: (1) enzymic hydrolysis; (2) alkaline hydrolysis; and (3) acid hydrolysis.

"Enzymic hydrolysis is usually carried out with pancreatic trypsin and papain." Acid hydrolysis of proteins is often preferred over the other methods because it does not destroy the tryptophane content of the proteins. Alkaline hydrolysis has the advantage that very little humin is formed, but the hydrolysate does not contain all of the amino acids nor does it have the good flavor of the acid hydrolysate.

In its commercial process, Griffith Laboratories uses the acid hydrolysis process with hydrochloric and sulphuric acids. The ten steps in the process are described, as follows: 1. Run water acidified with hydrochloric acid into a steam-jacketed, glass-lined kettle. "2. Heat to 113°C. 3. Stir in the protein material. 4. Heat at atmospheric pressure for about 9 hours to obtain complete hydrolysis. 5. Filter to remove the humin. 6. Pump filtrate into a glass-lined vacuum kettle. 7. Distil under vacuum to remove about 50% of hydrochloric acid content. 8. Dilute with water to the desired specific gravity and add activated carbon to decolorize. 9. Boil for a few minutes and filter. 10. Pump to another kettle and neutralize with sodium carbonate to pH 5.2-5.4 to obtain best flavor value." The higher the amino nitrogen content of the hydrolysate, the better the taste. The authors believe that higher quality standards should be established for protein hydrolysates to be used in food products; the amino acid content is now rarely shown. "Mono-sodium glutamate and other 'non-essential' amino acids, such as glycine," impart a good taste to food products. There is a prejudice against protein hydrolysate powders because they are hygroscopic; this problem can be overcome by using liquid hydrolysates.

Three photos show the equipment used in the process. Address: Director of Research, Griffith Laboratories, Inc., Chicago, Illinois.

3513. Marquis, Arnold. 1946. The Pacific story. Radio broadcast. National Broadcasting Company (NBC). Hollywood, California. June 2. 30 minutes. 23 p. transcript.

• ***Summary:*** This radio broadcast is a fascinating story–told by many voices–of how the Japanese scientifically developed soybean production, utilization, and export in their puppet state of Manchukuo, and, how the USA intends to capture the soybean export markets lost by the Japanese when they lost World War II.

The Chinese speak of the soybean this way: "It is the

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poor man's meat. It is the cow of China. It is meat without bones. The Japanese speak of it this way: If we could have held Manchuria, it would have guaranteed that Japan could never be starved out. American nutritionists speak of it this way: It is high in protein. It is rich in vitamins–in A, B-1, C, G, and E–and also in the bloodclotting vitamin K. Weight for weight it contains several times as much B-1 as beefsteak. And as for minerals: One-half cup of soy flour contains as much calcium as a whole cup of milk... [and] as much phosphorus as two cups of milk. And weight for weight, it contains as much iron as liver, twice as much iron as molasses, and three times as much iron as whole wheat flour. The soybean is a wonder food. One pound of soy beans is almost a complete one-day ration for an adult."

The USA is now developing two famine-relief foods based on soybeans. The first contains 50% soybean, plus split peas, wheat flour, and a little peanut-meal, onion, salt, and fish-oil. Four million pounds of this mixture and twelve million pounds of another soy-based mixture are being sent "to the famine areas of China." In other words, soybean are being sent from the USA to the land of their origin, "where they have been a mainstay for five thousand years."

Discusses: The growing of soybeans in Manchuria. The Japanese takeover and extension of their control via the South Manchuria Railroad, whose terminus is Dairen. The importance of Manchurian soybeans to Japan. The Japanese Central Laboratory at Dairen and its research on soybeans. The two Japanese agricultural experiment stations in Manchukuo. Development of the benzine [benzene] solvent extraction process for soybean oil, "until there were 200 large bean plants in southern Manchuria." Soybeans as a livestock feed in Manchuria. Use of soybeans as food in China: "Tofu is bean-curd... This is fermented tofu. It is very good. Tofu is eaten in several forms. Fresh, fermented, dried or frozen. Just about any way it is prepared, its food value is preserved... We also use the oil of the soy bean. And with the soy bean we make soy sauce." Many Asiatic peoples also use soybeans to "make bean milk and bean flour." "They roast them for confections [kinako]. They eat them green [green vegetable soybeans]. They sprout them [soybean sprouts] and they even make drinks of them.

Note: This is the earliest English-language document seen (Oct. 2011) that contains the term "fermented tofu.

Industrial uses of soybeans in America. How Dairen became Japan's great center of the soy bean industry in Manchuria, and the Mixed Storage System. "About 55% of the soybeans grown in Manchuria are used for human food."

"You see, its all tied together. The growing of the bean, the processing, the transportation, and the export. Since 1937, the economy of Manchuria has been developed for the benefit of Japan." The Japanese and the Bank of Manchukuo (which is an instrument of the powerful Mitsui and Mitsubishi financial combines) are "buying up all the soybean business" and trying to eliminate the major European companies that were exporting soybeans before the Japanese moved in, such as Dreyfus Co. (France), and Wassard Co. (Denmark). Although the Japanese claim that Manchukuo is an independent nation, other nations realize it is a puppet state. The Chinese Eastern Railway, which was built by the Russians and has its terminus at Vladivostok, is in competition with the Japanese-controlled South Manchuria Railroad for the soy bean business of Manchuria. The latter uses rebates (kickbacks) to try to eliminate competition.

In 1937, after 6 years of dominating Manchuria, Japan invaded China proper–using Manchuria to supply their troops. "By 1941, Manchuria was yielding some four million tons of soybeans. The Japanese controlled every pound of it. And by 1941 they had fostered the growing of soybeans in Korea, and also in Japan itself. Also, by this time, the Japanese had seized a good part of the soybean country of Japan itself. But by Pearl Harbor [7 Dec. 1941], the United States was also growing soybeans: Over 3 million tons in 1941. By 1945 it was nearly 6 million tons.

Now that the war is over, the Japanese have lost the entire soybean industry in Manchuria–including the laboratories, bean oil mills, Dairen, the South Manchuria Railroad, and the Bank of Manchukuo which controlled it. China, which now controls Manchuria, "will consume much of the soybeans which, before the war, were exported to European countries, and to Japan." The United States has begun to supply this soybean export demand, and in fact "is already shipping soybean products back to the Far East–to the famine stricken areas of China."

America Doctor: "So far most of our soybeans have gone for feeding livestock. But now we known what they can mean to man. Narrator: Now, in this great crisis, we are learning what the Chinese have known for thousands of years. Chinese: It is the poor man's meat. It is the cow of China. It is meat without bones... Announcer: This is the story of the wonder food and the part it has played in our time."

Next comes a 5-minute segment in which W.J. Morse of the USDA Bureau of Plant Industry (Beltsville, Maryland) talks about the significance of the soybean and its development, and the new Pacific Program. Then the conclusion: "For a reprint of this program, send ten cents in stamps or coin to University of California Press, Berkeley, California. The Pacific Story is written and directed by Arnold Marquis. The original musical score was composed and conducted by Thomas Peluse. Your narrator–Gayne Whitman... This program came to you from Hollywood. This is N.B.C.–The National Broadcasting System." Address: USDA.

3514. Worthington Foods, Inc. 1946. Dealer order blank. Worthington, Ohio. 1 p. Catalog. Aug. 1.
• ***Summary:*** Products include: Mung bean sprouts. Soy

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beans in tomato sauce. Beta Broth. Tastex. Tastex food yeast. Protein foods (Alternates for meat): Choplets (vegetable fillets packed in savory sauce). Choplet-Burger (vegetarian ground meat with a texture like hamburger). Proast and Numete (dark or light vegetable meatloaf). Soy sauce (table). Wheatlets (Delicious whole wheat cooked breakfast cereal). A fairly detailed description of each product is given. Address: Worthington, Ohio. Phone: 2-5359.

3515. Hilbert, G.E. 1946. Soybean research at the Northern Regional Research Laboratory, 1936-1946. *Soybean Digest.* Sept. p. 33-34, 72.
• ***Summary:*** "In 1936 the U.S. Regional Soybean Industrial Products Laboratory was established at Urbana, Illinois. The chemical and engineering research of that laboratory was transferred by an act of Congress from Urbana to the Northern Regional Research Laboratory at Peoria in July 1942.

"Removal of part of the laboratory to Peoria has resulted in an expansion of all phases of soybean research." Dr. Reid T. Milner, formerly director of the U.S. Regional Soybean Laboratory, is now head of the analytical and physical chemical division of the NRRL "Technological and fundamental research on soybeans is being carried out by the oil and protein division of which J.C. Cowan is in charge. This group is concentrating practically all its activities on soybean oil and meal. Most of our new developments originate in this division." The engineering and development division, headed by C.T. Langford, is translating laboratory developments to a pilot-plant scale. This division obtains cost data and evaluates the economic feasibility of the developments. "The fermentation division, headed by A.F. Langlykke, has examined the conversion of soybeans to soybean cheese [fermented tofu] and soya sauce." Address: Director, NRRL, Peoria, Illinois.

3516. Stahel, Gerold. 1946. Foods from fermented soybeans as prepared in the Netherlands Indies. I. Taohoo, a cheese-like substance, and some other products. *J. of the New York Botanical Garden* 47(563):261-67. Nov.
• ***Summary:*** Contents: Introduction. Sprouts and milk from soybeans. Cheese-like products. How taohoo is made. Condiments made with Aspergillus.

In East Asia–as in Surinam–people have developed "means for overcoming the rather bitter taste of soybeans and their failure to cook soft. They have learned to ferment the soybeans with quick-growing fungi, thus making several palatable and wholesome foods.

"Most important of these foods are *taohoo* and *tempe;* also *taokoan,* a cheese made from *taohoo; taotjo,* a fermented paste-like condiment, and *ketjap,* which is soy sauce. Soybean milk is also made, but without a fungus, and sprouted soybeans are widely used by orientals."

"In the Netherlands East Indies [later Indonesia] sprouted soybeans are called *tokolán* or *taogé.* They are one of the ingredients of every 'rijst-tafel' (rice table, or combination of dishes) and therefore are never lacking in the 'passar' (market). Even in our Paramaribo market *tokolán* is displayed every day."

In China, soy milk is used in the same manner as cow's milk. It is also consumed in the United States, though on a very limited scale. In the Netherlands East Indies, soy milk "is only slightly known as food, but it is produced in large quantities for the manufacturing of soy cheese, called *taohoo* or *tahoo.*"

The curd [tofu] "is either eaten fresh or baked in oil or lard. In China it is sometimes processed further into a kind of real cheese by impregnating the curd with turmeric and reducing the water content by heavier pressing. This cheese, called *taokoan* [Chinese: doufugan], has a yellow color and can be shipped abroad."

"After tempe [made with *Rhizopus Oryzae*], taohoo is the most common form of soybean product eaten in the Netherlands East Indies. In China, it is the most important soy product. Taohoo is manufactured here in Surinam only on a very limited scale, by a single Chinese store-keeper close to the Paramaribo market-halls along the Surinam river. Twice daily, between 2 and 4 o'clock in the morning and again in the afternoon, he manufactures 11½ kilograms of taohoo, to be sold after 6 o'clock the next morning." A detailed eyewitness description of the tofu-making process is then given.

Describes briefly how to make taotjo (a kind of paste) and ketjap (soy sauce) with *Aspergillus oryzae,* another fungus. Taotjo is not made in Surinam, but ketjap is. "To make taotjo, boiled soybeans are mixed with roasted meal of wheat or glutinous rice. The mass is wrapped in hibiscus leaves, which commonly harbor the *Aspergillus* fungus." After 2-3 days the moldy mass is immersed in brine, where it is kept for several weeks. "Palm sugar is added at intervals. Taotjo must be made in the dry season, because every day it has to be brought outside into the sun and air for hours." This dish is eaten in East Asia with the 'rijst-tafel.'"

To make ketjap, soybean are boiled, cooled, then wrapped in hibiscus leaves–but without mixing in roasted meal. After fermenting for 2-3 days, the mass is immersed in brine, as with taotjo. Each day, for one to several months, it is exposed to the sun. A little palm sugar is added at intervals. Then the fluid is filtered off and the solid residue is cooked several times with fresh water to extract all the soluble material. "The fluid is then concentrated by slow boiling. Spices and other piquant materials are added, according to the *specialité de la maison.* These may include galangal, ginger, cloves, Jew's ear fungus, and dried and ground fish and chicken meat."

Photos show: (1) Chinese kitchen [shop] equipped with implements for tahoo manufacture, with hand-turned millstones, soybean mash flowing into cheesecloth bag

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hanging in wooden barrel, press, earthenware pot filled with brine for the "coagulation of the curd." (2) Four pieces of fresh taohoo, four-fifths natural size. (2) Four pieces of freshly baked taohoo, four-fifths natural size.

Note: This is the earliest English-language document seen (Feb. 2004) that uses the word "taohoo" or "taokoan" to refer to tofu. Address: Agric. Exp. Station, Paramaribo, Surinam.

3517. **Product Name:** Soy Sauce.
Manufacturer's Name: Worthington Foods, Inc. (Marketer-Distributor).
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 2-2539.
Date of Introduction: 1946.
Wt/Vol., Packaging, Price: 4.5 oz glass dispenser.
New Product–Documentation: Wholesale price list. 1946. Aug. 1; Ad in Health Magazine. 1947. 14(2):2. Feb. "Good Foods for Every Occasion." Interview with James Hagle. 1981. Probably made by La Choy. Sold in 4.5 oz. table dispenser bottles.

3518. Bergeron, Trader Vic. 1946. Trader Vic's book of food and drink. New York, NY: Doubleday & Co. 272 p. Illust. Index. 20 cm.
• ***Summary:*** The only soyfood mentioned in this books is soy sauce. "Soya sauce, which was once eyed distrustfully and termed 'bug juice' by the uninformed, is now accepted on familiar terms and we are even beginning to appreciate its usefulness in our own kitchens" (p. 157).

The recipe for Chicken livers with water chestnuts (p. 183) concludes: "For added flavor, dip the livers first in soya sauce." The next recipe, Chicken livers in egg batter (p. 183-84), begins: "Cut chicken or duck livers in small strips, dip them first in soya sauce and then in a very light..."

The chapter on "Barbecuing" contains the most information on recipes using soya sauce (p. 237-41): "A word about soya sauce before we proceed. The use of this little-known ingredient in cooking introduces an indescribable flavor that cannot be equaled. It gives a beautiful brown glaze to all meats and makes the fat crisp and appetizing. Most people associate soya sauce with the little jugs on the tables in Chinese restaurants; it is vulgarly called 'bug juice' by the uninitiated. It belongs in the kitchen right along with your other seasonings and as you experiment with it you'll find yourself using it as often as you would salt and pepper. Try basting a leg of lamb with it–the flavor and color are superb. Lamb chops, too, whether you fry, broil, or barbecue them, are improved by the use of soya sauce" (p. 237).

"Steak Hawaiian: This recipe illustrates perfectly the value of cooking with soya sauce. You'll find the steak has color and an indescribable flavor, and the fat has a crisp brownness that can't be achieved in any other method of cooking." The steak is marinated on both sides for about 15 minutes total in a mixture of finely minced garlic and ½ to 1 cup of soya sauce. Then it is barbecued, fried, or broiled.

"Barbecued squab [young domestic pigeon]: Brush whole squabs inside and out with soya sauce and barbecue" for 20-25 minutes. Or roast for about the same time. If desired, the "squab may be basted occasionally with a mixture of soya sauce and melted butter while cooking."

Barbecued lamb, first marinated in a mixture that contains 6 tablespoons soya sauce. Javanese Saté calls for "4 teaspoons Saté spice," which is sold in Jars at Trader Vic's Trading Store, 6500 San Pablo Ave., Oakland, California. Note: It probably contains soya sauce. Saté is an Indonesian / Malay word.

Barbecued shrimp: "Peel large gulf shrimp; dip them in soya sauce..." Smoked oysters: "Dip oysters in soya sauce," skewer, then barbecue. Barbecued chicken livers: "Dip in soya sauce, skewer on wire, and barbecue..."

A recipe for Trader Vic's daiquiri (p. 92-93) states: "This drink should be made in a Waring type mixer with one large handful of fine ice, and no more than three should be made at one time."

Note 1. This is the earliest document seen (May 2010) concerning soy ingredients used in Indonesian-style recipes, food products, or dishes outside of Indonesia.

Note 2. In this book Trader Vic shows his love of rum and of swearwords. Address: Oakland, California.

3519. El Salvador Ministerio de Agricultura. 1946. La soya [Soya]. San Salvador. 89 p. [Spa]
• ***Summary:*** The two Latin American countries in which soybean cultivation has acquired importance are Argentina and Brazil. In Argentina, cultivation began in 1908. In 1940 Argentina produced 15 tonnes of soybeans on 300 hectares, increasing in 1941 to 204 tonnes on 5,000 hectares. Rio Grande do Sul in Brazil exported 6,420 kg of soybeans in 1937, rising to 40,000 kg in 1939. Address: El Salvador.

3520. Hauser, Gayelord. 1946. The Gayelord Hauser cook book: Good food, good health, good looks. New York, NY: Coward-McCann, Inc. viii + 312 p. Illust. 21 cm.
• ***Summary:*** This is a health food (but not a vegetarian) cookbook; it uses meats, poultry, and fish. Soy-related recipes include: Soya tomato soup (with soya flour, p. 48). Soya soup (with soya flour and soy sauce, p. 49). Soya cheese sticks (with soya grits, p. 111). Roasted soybeans (p. 115; p. 114 notes that the soybean is a first-class protein food). Cranberry soya pudding (p. with soya flour, p. 154). Caramel soya custard (with soya milk, p. 163). Rice pudding (with soya milk, p. 164). Soya ice cream (with soya milk and agar-agar, p. 167).

In the chapter on baked goods, p. 179 shows that soya flour is rich in protein, vitamin B-1, riboflavin, and niacin. And pages 180-81 give a detailed discussion of the benefits

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of soya flour and how to use it. Page 182 discusses gluten flour. Recipes include: Whole-wheat soya bread (p. 183). Soya nut waffles (p. 186). Soya muffins (p. 188). Steamed soya bread (p. 189). Four nutritious sandwich spreads with ½ cup soya flour (p. 191). Delicious soya cake (p. 193-94). Quick service cake (p. 195-96). Soya-flour pie crust (p. 197). Soya cookies (p. 204). Soya sand tarts (p. 206).

Fletcherizer (p. 221, a type of electric blender). Fletcherized drinks: Cream of soya milk (with soya flour, p. 222), vege-nut milk (with soya flour), almond-, pecan-, walnut-, filbert-, or cashew milk. Cream of soybean soup (p. 224).

In the chapter titled "Yogurt, brewer's yeast, and other special foods" is a long section on soybeans and gluten (p. 237-42) including basic information on soybean oil, soya flour and grits, soy flakes, soy meats (split or coarsely ground soybeans), soybeans as a vegetable [fresh-green soybeans], soybean milk, and soybean curd or tofu. Instructions are given for making soybean sprouts at home. Recipes include: Boiled soybean sprouts. Fried soybean sprouts. Green soybeans. Baked soybeans. Soybean milk. Soybean parsley croquettes. Soybean nut croquettes. Vanilla soya ice cream. Homemade gluten dough. Gluten steaks or chops. Address: Beverly Hills, California.

3521. Lea & Perrins, Inc. 1946. The secret of seasoning: With illustrated lessons in carving. New York, NY: Lea & Perrins. 96 p. Illust. Index. 18 x 10 cm.
• ***Summary:*** Mostly recipes for using Lea & Perrins' Worcestershire Sauce. Contents: The Englishman's secret. Preparing flavorful meals. The table trio. Appetizers. Soups. Fish and sea food. Meats and entrées. Stuffings. Stews and hashes. Eggs and cheese dishes. Tempting sauces. Spaghetti and rice. Savory vegetables. Garnishes and relishes. Salads and salad dressings. Sandwiches. Party and snack dishes. Lessons in carving. Pages 87 to the end, titled "Recipe scrapbook: Notes," are blank pages. The first section, titled "The Englishman's secret," begins (p. 4): "Over a hundred years ago an English nobleman who had spent many years in India returned to England.

"He carried with him a treasure from the Orient. Not gold or jewels but a recipe: the recipe for a marvelous Sauce, a secret blend of rare spices and seasonings that lent to food a new savor and delight.

"From this recipe, a Sauce was compounded by Lea & Perrins, of Worcestershire, England."

"Many have tried to imitate the Original Worcestershire... of course. But the blend remains a secret. It is easy to tell the genuine: just be sure that the name 'Lea & Perrins' is written diagonally across the label."

The front and back covers are color; the inside photos and line drawings are black and white / monocolor. On the front cover is a plump, smiling chef wearing a toque and holding a frying pan. On the rear cover is a large photo of a bottle of Lea & Perrins Sauce: The Original and Genuine Worcestershire–wrapped in tan paper with red writing. Address: 241 West St., New York 13, N.Y.

3522. Mogi, Masatoshi. 1946. Taigai miso [Making miso with nongrain koji]. Tokyo: Seikatsu-sha. 408 p. [Jap]*
• ***Summary:*** Discusses substitutes for miso raw materials. Descriptions of making miso koji using potatoes, chestnuts, buckwheat, millet, etc. No history. Note: Mogi was born in 1907. Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3523. Mogi, Masatoshi. 1946. Daitai miso [Miso substitutes (approximately miso)]. Tokyo: Seikatsu-sha. 407 p. [Jap]* Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3524. Oriental Show-You Company. 1946. Oriental recipes. Columbia City, Indiana: Oriental Show-You Co. 15 p. *
• ***Summary:*** These recipes describe how to use the company's shoyu (naturally fermented, Japanese-style soy sauce). A 24-page edition was published in 1940.

3525. Platt, B.S.; Webb, R.A. 1946. Fermentation and human nutrition. *Proceedings of the Nutrition Society (London)* 4(1):132-40. [15* ref]
• ***Summary:*** Fermented soy and cereal-soy products found in East Asia may have special nutritive properties as a result of microbial action and they may fall into the group of products of the process which the author calls "biological ennoblement." Table 1 includes various fermented soy protein foods from Asia: Soya sauce, fermented whole soya beans, and fermented bean curd. Address: Medical Research Council Human Nutrition Research Unit, National Hospital, Queen Square, London, W.C.1, EnglandEngland.

3526. Rombauer, Irma S. 1946. The joy of cooking: A compilation of reliable recipes with an occasional culinary chat. Indianapolis, Indiana, and New York, NY: The Bobbs-Merrill Co. 884 p. Illust. by Marion Rombauer Becker. Index. 22 cm.
• ***Summary:*** This is the first edition of *The Joy of Cooking* since the end of World War II. It was actually printed from the 1943 plates with very few changes. It has the same number of pages as the 1943 edition, but less emphasis on soy. Soy-related recipes: Chicken chop suey (with soy sauce, p. 143-44). Sukiyaki (with soy sauce, but no tofu, p. 163). Chow mein with fried noodles (with soy sauce, p. 164). Dried bean loaf (with whole dry soybeans, p. 176). Soybeans, green (p. 280). Soybeans (dried) (p. 280). Seasonings and ingredients for sauces (incl. soy sauce, p. 379).

Includes a delightful Foreword and "Preface to the 1943 edition." Also well-known recipes for Peanut butter cookies

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and Peanut brittle. Worcestershire sauce is used to season many sauce or gravy recipes (p. 379-92). Words notably missing from this edition: Blender, milk shake. Address: St. Louis, Missouri.

3527. Walworth, Arthur. 1946. Black ships off Japan: The story of Commodore Perry's expedition. New York, NY: Alfred A. Knopf. xviii + 277 p. + viii. See p. 191, 263-64. Introduction by Sir George Sansom. 22 cm. [83* ref]
• ***Summary:*** On about 13 March 1854, the Japanese permitted the U.S. officers to walk about the towns of Yokohama and Kanagawa. Dr. James Morrow, the expedition's agriculturist, went on land also. The Treaty of Kanagawa was signed by Japanese and American representatives on 13 March 1854 and proclaimed on 22 June 1855. The Japanese celebrated the occasion with a big meal that included fish, shrimp, sea weed jelly, side dishes of confections, soy sauce, condiment, rice, saké, etc.

Appendix L, titled "Presents received by Americans from the Japanese government, March 24, 1854," notes that "1 box, 10 jars of soy" were received from Udono, 4th commissioner. The term "soy" here refers to shoyu (Japanese-style soy sauce); no mention is made of soybeans as such. Arthur Clarence Walworth was born in 1903.

3528. **Product Name:** Fermented Shoyu.
Manufacturer's Name: Unknown Japanese-American Run Company.
Manufacturer's Address: San Francisco, California.
Date of Introduction: 1946?
New Product–Documentation: Talk with Esta Keirn of Oriental Show-You Co. 1981, Dec. 5. The only other early maker of shoyu that Keirn knows of was a Japanese man in San Francisco who started in about 1945-46. Esta talked with him, obtained a sample of his shoyu, and analyzed it.

3529. Worthington Foods, Inc. 1947. Good foods for every occasion (Ad). *Health* 14(2):2. Feb.
• ***Summary:*** Ad for Choplet Burger, Beta Broth, Soy Sauce, Soy Beans, Tastex, Choplets, Numete, Proast, Tastex food yeast. Photos show each package and ready-to-serve product. Address: Worthington, Ohio.

3530. *Soybean Blue Book*.1947-1966. Serial/periodical. Hudson, Iowa: American Soybean Assoc. Annual. Titled Soybean Blue Book from 1947-1966; Soybean Digest Blue Book from 1967-1979; Soya Bluebook from 1980 to present.
• ***Summary:*** A directory and information book for the soybean production and processing industries–but with much greater emphasis on processing and utilization. One of the most valuable sources of worldwide information on soybeans. During the period from 1947 to the 1960s, the Blue Book was usually published in March or April of each year.



In the 1966 Blue Book (p. 28-29) are two full-page tables titled "World Soybean Production." The first gives acreage in 1,000 acres, yield in bushels per acre, and production in 1,000 bushels. The second gives hectarage, yield in kilograms per hectare, and production in 1,000 metric tons. Figures are given for: 1950-54 (average), 1955-59 (average), 1963, 1964, and 1965. Statistics are given for the following countries: North America: Canada, United States. South America: Argentina, Brazil, Colombia, Paraguay. Europe: Italy, Rumania, Yugoslavia, Other Europe (excluding USSR), USSR (in Europe and Asia). Africa: Nigeria, Rhodesia, Tanzania. Asia: Turkey, China (Mainland), Cambodia, China (Taiwan), Indonesia, Japan, Korea (South), Thailand. Estimated world total. Address: Hudson, Iowa.

3531. *Soybean Blue Book*.1947. Edible soybean growers and distributors. p. 89.
• ***Summary:*** In this section, published in the first issue of the *Soybean Blue Book*, the varieties grown are listed alphabetically. Under each variety is the name and address of the grower or distributor offering that variety. The edible soybean varieties are: Aoda (2 growers), Anwei (1), Bansei

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(28–by far the most popular), Chuku, Easycook, Emperor, Etum, Funk Delicious, Giant Green, Higan, Hokkaido, Imperial, Jogun, Kirin, Kanro, Mendota, Sac, Sanga (70210-1), and Willomi.

The companies growing these varieties include: Associated Seed Growers, Inc. [Asgrow] (New Haven, Connecticut; or Indianapolis, Indiana), Burpee (W. Atlee) Co. (Clinton, Ohio), International Nutrition Laboratory (Mt. Vernon, Ohio), LaChoy Food Products (Archbold, Ohio), Soybean Johnson (Richmond Heights, Missouri), Strayer Seed Farms (Hudson, Iowa), and Wood (T.W.) & Sons (Richmond, Virginia).

Note: This is the earliest document seen (May 2009) that mentions the soybean varieties Chuku or Kirin. Both came from LaChoy Food Products in Archbold, Ohio. Note: They could be "sprout types."

3532. *Soybean Blue Book*.1947. Manufacturers and handlers of soy foods. p. 69-73.
• ***Summary:*** Arranged alphabetically by product category: Beverages; Breakfast Foods; Soy Butter (probably like margarine; the only source is Daglish Health Foods in Santa Cruz, California); Canned Green Soybeans (Note: These are probably canned mature green vegetable type soybeans. In the 1948 Bluebook this section is titled "Canners of Green Vegetable Soybeans." List compiled from 1947 edition of *Canners' Directory*, published by the National Canners Association); Coffee Substitutes; Cookies, Crackers, Toasts and Wafers; Soybeans for Cooking and Sprouting; Soy Flour, Flakes and Grits; Soy Flour Mixes; Soy Food Consultant (Donald S. Payne); Health Food Stores, Supply Houses; Lecithin; Macaroni, Spaghetti, Noodles; Meat Substitutes; Soy Milk; Sprouts; Roasted Soybeans or Nuts; Sausage Binders; Salad and Cooking Oils, Shortening; Soy Sauce; Toppings [Whip]; Whipping Agents.

3533. *Soybean Blue Book*.1947. Uses of soybeans. p. 97.
• ***Summary:*** This is a full-page diagram with four columns. In the left column are: Forage, green manure, and pasture. Meal. Oil. Green bean. Dried bean.

In the second column, for example: After green bean, listed vertically, are: Canned, frosted, green vegetable, salad. After dried bean, listed vertically, are: Baked, boiled, breakfast foods, feeds, flour, roasted, soy sauce, sprouts, vegetable milk.

In the third column: After feeds, listed vertically, are: Cattle, hogs, poultry, sheep. After roasted are: Candied, coffee substitute, salted.

In the fourth column after flour (with a dotted line crossing the second and third columns), listed vertically, are: Baked products, breakfast foods, candies, chocolate, diabetic foods, health drink, ice-cream cones, ice-cream powder, infant foods, macaroni products, meat products (filler). Note: There are too many uses on the diagram to describe them all here.

3534. *Revue Horticole: Journal d'Horticulture Pratique (Paris)*.1947. Le grand congrès du soya à Paris [The great soya congress in Paris]. 119(2140):277-78. April. [Fre]
• ***Summary:*** On Monday, March 16, 1947, at 2:30 p.m., at the City University, the first Grand Soya Congress ever held in Europe took place. It was organized by the French Bureau of Soya (*Bureau Français du Soya*), the Laboratory of Soya Experiments (*Laboratoire d'Essais du Soya*), and the France-China Association (*l'Association France-Chin*). Mr. Marius Moutet, the Minister of French Colonies and Territories (*Ministre de la France d'Outre-Mer*) presided. The two presidents were Prof. Blaringhem, president of the Academy of Sciences, and his excellency the Chinese Ambassador to France.

It was indeed a brilliant assembly of numerous scientific and agronomic personalities, including Mr. Lévèque, delegate from the Belgian Soy Group (*Groupement Belge du Soya*).

Includes a brief summary of the presentations by the following people: René Brochon, president of the French Bureau of Soya (*Bureau Français du Soya*). Mr. Schad, director of the Agronomic Research of Clermont-Ferrand (*la Station de Recherches Agronomiques de Clermont-Ferrand*). Mr. Simonet, Director of Scientific Research for Vilmorin (*Etablissements Vilmorin*), who discussed the varieties he had developed at the Center for Agronomic Research of Antibes (in southeastern France). Mr. Salaberry, an agronomic engineer. Mr. Blanchard, head of works at the Station for Seed Trials at the Ministry of Agriculture. Mr. Chouard, Prof. of Agriculture at National Conservatory of the Arts and Crafts. Messrs Brochon and Matagrin discussed the nutritional value of soy.

Mr. Chin Kuo Chun, director of the Laboratory of Soya Experiments (*Laboratoire d'Essais du Soya*), discussed the results of his work on manufacturing soymilk, tofu, and soy sauce in France, using traditional Chinese processes. Prof. Gounelle, Director of the Foch Hospital gave a brilliant discussion on the use of soy flour to combat nutritional edema and diabetes. Mr. Boutroux showed brilliantly that soymilk can successfully replace cow's milk in the feeding of defective babies.

Mr. Siao Yu, former Chinese Minister of Agriculture, recounted how Mr. Li Yu Ying, presently vice-chancellor (*recteur*) of the University of Peking, established in 1908, near Paris, a soyfoods factory; it made soymilk, tofu, cakes, etc. He saluted with emotion the members of this first Soy Congress to be held in Europe.

Mr. Villars, director of a cooperative for the production of soybean seeds. Mr. Matagrin, technical consultant to the French Bureau of Soya. Mr. Vançon, president of the Family Association of the Gardens of the north of France (*du Nord de la France*).

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The Congress was closed by three excellent speeches by conference leaders Blaringhem, Bineau, and the Chinese Ambassador.

A reception in honor of China, cradle of the soybean, was then held and a buffet was served consisting of soy pastry and cakes, soy chocolates, and soymilk.

3535. *Revue Internationale du Soja.* 1947. Congrès du Soja [Soy Congress (Europe's first, held in Paris, March 16, at the City University)]. 7(37-38):30-31. March/April. [Fre]
• ***Summary:*** Li Yu-ying (President of the National Peiping Research Academy) was there, along with a luminous throng of the greatest soy devotees in France, including: M. Brochon (President du Bureau Français du Soja), M. Simonet (director of scientific research at Etablissements Vilmorin), M. Blanchard (chef de travaux à la Station d'Essais de Semences of the Ministry of Agriculture), and M. Chouard.

Mr. Chin Kuo Chun (director of the laboratoire d'Essais du Soja) discussed the results of his work on the production in France of soymilk, tofu, and soy sauce using the traditional Chinese processes, and of projects to organize family gatherings to taste these products. Prof. Gounelle (director of the Foch Hospital) showed how soy flour can be extremely beneficial in curing edema and malnutrition, and is perfectly suited for diabetics. Mr. Boutroux showed brilliantly that soymilk (*lait de soja*) is beneficial in replacing cow's milk in the diets of undernourished babies, and spoke of the industries presently producing soy products (*produits au soja*) in France. Note: This is the earliest English-language document seen (Nov. 2002) that uses the word "undernourished."

Mr. Siao YU, former Minister of Agriculture in China, recalled how Li YU Ying created in 1908 near Paris a factory for food products from soya: milk, cheese (tofu), cakes, etc. He saluted with emotion the First Soy Congress to be held in Europe. Address: Paris, France.

3536. Chin, Kuo-Chun. 1947. Contributions à l'étude du soja [Contributions to the study of the soybean]. *Revue Internationale du Soja* 7(39-40):51-54. May/June. [Fre]
• ***Summary:*** Contents: I. First attempts at production of soy sauce. II. The nature of soya, and vegetable meat (tofu). III. The nature of soymilk (*lait végétal de Soja*) and precautions to take in its use. IV. The nature of soybean cake and its judicious use. Address: Directeur du Laboratoire d'Essais du Soja, France.

3537. Morse, W.J. 1947. The versatile soybean. *Economic Botany* 1(2):137-47. June.
• ***Summary:*** An excellent overview of the multifaceted soybean, by the world's leading expert on the subject, written at about the time of his retirement. Contents: Introduction. Nomenclature. History. Present day production. Diseases. Use as food. Use as a source of oil. Soybean meal.

In oriental countries, the soybean is used mainly for food; "pressed, it gives oil for cooking; sprouted it gives a fresh vegetable rich in vitamins; picked when green, it makes an excellent green vegetable; ground dry, it makes flour; soaked and ground with water, it provides milk, and the curdled milk furnishes the famous bean curd or tofu–the boneless meat of the Orient–used in the form of various cheeses and as a meat substitute; roasted beans are used as salted beans and in cakes and candies; roasted beans and bean flour enter into numerous health drinks [resembling coffee]; fermented bean pastes are used in soups and for preserving vegetables; and boiled beans are eaten with millet, rice, or kaoliang."

Contains 11 photos. Address: USDA.

3538. *Soybean Digest.* 1947. Stock organisms for preparing soy sauce. June. p. 24.
• ***Summary:*** "The U.S. Department of Agriculture has announced that strains of four organisms desirable in preparing soya sauce have been added to the culture collection of industrial ferments at the Northern Regional Research Laboratory at Peoria, Illinois... The fermentation division of the Bureau of Agricultural and Industrial Chemistry credits Pei Sung King of the National Bureau of Industrial Research, Chungking, China, with aid in selecting the strains of organisms and standardizing a process of fermentation that yields a high-quality sauce. Mr. King has been a guest worker at the Northern Laboratory.

"The preparation of soya sauce calls for a brine fermentation of the beans for from 30 to 90 days. But the 'starter' used in this process is a mixture of three previously prepared cultures: (1) of a mold that develops on cooked rice; (2) of a yeast working on soya broth; and (3) of a bacterial fermentation of soya broth."

3539. Associated Press (AP). 1947. Sauce's poison traced to weed killer caustic. *Los Angeles Times.* July 26. p. 3.
• ***Summary:*** "San Francisco, July 25. (AP) Two carloads of processing caustic soda manufactured by a Chicago weed killer concern eventually found their way into soya sauce that poisoned consumers throughout the U.S., City Health Director, Dr. J.C. Geiger said today."

"Thousands of gallons of the arsenic-tainted sauce was [sic] was marketed from the" A.E. Staley Manufacturing Co. plant in Decatur, Illinois, "poisoning people in San Francisco [California], Los Angeles, Salt Lake City [Utah], Boston [Massachusetts], New York, Chicago [Illinois], Baltimore [Maryland], Philadelphia [Pennsylvania], New Orleans [Louisiana], and possibly elsewhere, said Joe O'Leary, Federal food and drug inspector here."

Meanwhile "the California Department of Health released a list of 21 brands and 5 distributors of the sauce, which it announced was sent to" the 5 distributors in California by the A.E. Staley Co.

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The names of all of the brands (including "Shin Kikkoman") and distributors are listed.

Note: This is the earliest document seen (July 2011) that mentions a soy sauce brand-named "Shin Kikkoman." This "Shin Kikkoman," which was an HVP-based soy sauce, was probably unrelated to Kikkoman of Japan (Noda Shoyu Co.).

3540. Horvath, A.A. 1947. Produits fermentés et antibiotiques au soja [Fermented products and antibiotics from the soybean]. *Revue Internationale du Soja* 7(41-42):79. July/Aug. Presented at the First European Soy Congress, 16 March 1947. [Fre]
Address: Professor, Princeton Univ., Princeton, New Jersey.

3541. Leonard, Warren H. 1947. Barley culture in Japan. *J. of the American Society of Agronomy* 39(8):643-58. Aug. [2 ref]
• ***Summary:*** Contents: Introduction. Geographical distribution. Regional types and varieties. General cultural practices. Cultural methods on upland fields. Culture on paddy fields. Diseases and insect pests. Utilization. General summary.

Barley, one of the most important crops grown in Japan, is used for both food and forage. Almost all barley grown in Japan is the common six-row barley, *Hordeum vulgare*, as in the United States. In Japan, most of the crop is spring barley, seeded in the fall. The two basic types are covered barley and naked barley; about 60% of the crop is naked barley (which threshes free from the glumes, as does common wheat) and 40% covered. During the period 1936-1940, the cultivated area devoted to barley was about 14% of Japan's arable land area. When the covered and naked types are included together, barley ranks second in acreage among all Japan's cultivated crops, being exceeded only by rice, which occupies 53% of the cultivated area. Barley is grown throughout Japan.

Table 6, titled "Uses of barley in Japan, 1942" gives the number of bushels and percentage for covered barley / naked barley for the following uses: Meal (eating use) 64.42% / 75.88%. Fodder or feed 22.83% / 14.36%. Seed 2.96% / 3.39%. Bean paste [miso] and soysauce 2.99% (1.032 million bu) / 6.03% (1.826 million bu). Beer 5.00% / -. Other uses (candy, medicine, yeast, etc.) 1.80% / 0.34%.

Note that both covered barley and naked barley are used to make miso and soysauce, but about 77% more naked barley is used in terms of bushels per year.

Barley is generally preferred to wheat for cooking with rice: it is pearled when used in this manner. Barley straw is used for straw braids, roof-thatching, litter, and mulches for vegetables.

Covered barley is grown almost exclusively in the United States, primarily for use as livestock feed and for malting. Address: Prof. of Agronomy, Colorado A. and M. College, Ft. Collins, Colorado.

3542. Seiler, Hans G. 1947. Soja in der japanischen Kueche [Soya in Japanese cookery]. In: Dr. Wolfgang von Schuh, ed. 1947. Bericht Ueber die Erste Deutsche Soja-Tagung in Weissenburg, Bayern, 28-31 Aug. 1947. Heilsbronn bei Ansbach, Mittelfranken: Arbeitskreis fuer Landwirtschaft, Deutsche Arbeitsgemeinschaft Soja. 24 p. See p. 10-11. [Ger]
Address: Studienrat and Dr., Erlangen.

3543. Lockwood, Lewis B. 1947. The production of Chinese soya sauce. *Soybean Digest*. Oct. p. 10-11. [2 ref]
• ***Summary:*** In its quest for a method for preparing Chinese soya sauce that would retain the artistry of the Orient but be adaptable to Occidental methods, the Northern Regional Research Laboratory has been fortunate in enlisting the aid of Mr. Pei Sung King, of the National Bureau of Industrial Research, Chungking, China.

"The preparation of soya sauce involves two distinct steps: (1) the preparation of kojis (Chinese for cultures), and (2) the brine fermentation. The first step consists of four different activities: a. Preparation of the mold kojis. b. Preparation of the yeast koji (using a suitable strain of *Zygosaccharomyces soyae* or of the genus *Hansenula*). c. Preparation of the lactic acid bacterial koji. d. Preparation of the soya koji.

The basic ingredients are 5 lb of soybeans and 1 gallon of brine, which should yield 12½ pounds of first grade and 10 pounds of second grade sauce, or about 2½ gallons total.

Four microorganisms suited to the preparation of the soya sauce are available from NRRL: *Aspergillus oryzae* NRRL 1988. *Aspergillus oryzae* NRRL 1989. *Hansenula* NRRL Y1996. *Lactobacillus delbrueckii* NRRL B445.

Photos show: (1) A single spore of *Aspergillus oryzae* in "full bloom." (2) A petri dish culture of the mold. (3) Separate portraits of Lewis Lockwood and Pei Sung King.

Note: This is the earliest publication seen on fermented soyfoods from the new USDA Northern Regional Research Laboratory (NRRL), established in 1942 at Peoria. During the next 40 years, and especially after 1960 the NRRC would become one of the world's leading centers of research on this subject. Address: NRRL, Peoria, Illinois.

3544. *Food Industries*.1947. Soybean oil not lost in storage, USDA reports. 19(11):1536-37. Nov.
• ***Summary:*** Research on the oil content of soybeans shows that no oil is lost from the beans while they are stored prior to processing–contrary to the commonly held belief.

The research was conducted by the USDA Bureau of Agricultural Chemistry's Northern Regional Research Laboratory at Peoria, Illinois. It was reported to the American Soybean Association by Dr. G.E. Hilbert, director of the lab.

The NRRL Has also completed studies on the utilization of soybeans as human food. "One study has established a

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scientific basis for the Chinese art of making soya sauce." Strains of microorganisms from the lab's culture collection are available to the industry.

3545. Rodrigo, P.A. 1947. Soybean culture in the Philippines. *Philippine J. of Agriculture* 13(1):1-22 + 5 plates. Third quarter. Summarized in Soybean Digest, May 1948, p. 41. [14 ref. Eng]

• ***Summary:*** Contents: Introduction. Description and history. Climatic and soil requirements. Varieties. Propagation. Preparation of the soil. Fertilizers and lime. Inoculation. Planting. Care of the crop. Harvesting and production: For day, for seed. Cost of production. Uses of soybeans. Diseases. "In the big cities in the Islands, many of the soybean products like soy sauce or toyo, tokua, tajuri [fermented tofu], tojo [soymilk curds], miso, etc. are becoming more popularly used by the Filipinos, and will be more so as their nutritive values become more fully realized. Already, in some sections of the country where soybean is being grown, the seed is used either as a green or as a dry vegetable. The dried bean is roasted and is eaten offhand or is used in adulterating coffee, and the bean in the dough stage is boiled and eaten like peanut" (p. 2).

Note 1. This is the earliest English-language document seen (Oct. 2011) that uses the word *tajuri* to refer to fermented tofu.

Table 1 shows annual imports (in kg) of soybeans and soybean products into the Philippines from 1929 to 1940, including dried beans, soy sauces, soybean meal, tausi (fermented black soybeans, salted), paste (miso), and total. By far the leading import (by weight) from 1929 to 1937 was dried soybeans. In 1929 some 4,574,497 kg were imported. This figure rose gradually (with ups and downs) to a peak of 5,660,575 kg in 1937, then fell sharply to only 237,666 kg in 1940. Soybean sauces were the No. 2 import, starting with 606,231 kg in 1929, rising to a peak of 1,441,563 kg in 1932, then remaining above 1,000,000 for most years thereafter. Imports of soybean meal started in 1935 with 660,699 kg; they reached a peak 1,023,303 in 1936 (the next year), then remained near 1,000,000 thereafter. Tausi was first imported in 1940, the amount being 151,571 kg.

Table 2 shows the value of these items (in pesos). In 1940 the imports of greatest value were soy sauces (120,346 pesos), soybean meal (50,682), and tausi (20,280).

"In the Philippines, while the plant has been under cultivation since the Spanish regime [1571-1898], it has not gained much headway due mainly to the lack of a variety suitable for commercial planting, and perhaps due to want of interest among farmers" (p. 4-5). The Philippine Bureau of Plant Industry has, to date, introduced more than 200 soybean varieties to the Philippines from the USA, China, Japan, Hawaii, Java, and India, but it presently recommends only a few varieties for commercial planting. These include Ami, which has long been cultivated there and is well adapted to the varied soil and climatic conditions.

Based on the results of a number of years' trials in different regions of the Islands, the following varieties have been found to be productive: Yellow Biloxi Hybrid (introduced from Hawaii in 1936), Mis 28 E.B. Str. 3910 (introduced from India in 1937), Mis 33 Dixi (introduced from India in 1937), Head Green (introduced from the USA in 1935), and American Black. All of these varieties are good for May and June planting, and all but Yellow Biloxi Hybrid are good for September to December planting (dry season).

"In the Philippines, the green but fully developed pods are harvested, and the seed is cooked and eaten in practically the same way as lima bean or patani... In Lipa, Batangas, soybean in the dough stage is boiled in the pod and sold and eaten offhand" like peanuts. The more common soy products made in the Philippines are soy sauce or *toyo*, tokua [tofu], tausi [fermented black soybeans], and miso. "Soybean milk is being manufactured by the Bureau of Plant Industry in a limited scale and a big modern firm has started putting soybean milk and other products in the local markets" (p. 15-16).

Note 2. This is the earliest English-language document seen (Nov. 2011) that uses the word *tausi* to refer to fermented black soybeans. Address: Chief, Horticulture Research Section, Bureau of Plant Industry.

3546. **Product Name:** Aloha Barbecue Sauce.
Manufacturer's Name: Aloha Shoyu Co. Ltd.
Manufacturer's Address: 609 Waiakamilo Rd., Honolulu, Oahu, Hawaii.
Date of Introduction: 1947.
Ingredients: Water, salt, soy beans, wheat flour, sugar, garlic, ginger, caramel coloring, and 1/10 of 1% sodium benzoate.
Wt/Vol., Packaging, Price: 12 fluid oz.
How Stored: Shelf stable.
New Product–Documentation: Black-and-white photo of rectangular Label. "Aloha Barbecue Sauce. Time-saving. Ready-to-use. Quick tasty preparation. Steak: Soak for 6 minutes for each ¼ inch of thickness. Baste while broiling. (Best over charcoal). Chicken: Cut into pieces and soak from ½ hour to 1 hour. Baste while broiling. Spare ribs: Cut into 3 inch pieces and soak about ½ hour. Fry or broil to taste. Fish: Soak steaks or fillets for about ½ hour. Fry or broil to taste. Always best with Aloha Barbecue Sauce. Ask for the best... Aloha."

Ad by Aloha Shoyu Co., Ltd. in Hui Manaolana, 1956. *Japanese Foods: (Tested Recipes)*. Honolulu, Hawaii. See p. 16. "Time saving, ready to use, quick tasty preparation." Steak, chicken, spare ribs, fish. "Always best with Aloha Barbecue Sauce."

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows two labels and gives the address. The company made and

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still makes HVP soy sauce, and is still in business. Letter from Takao Nihei. 1988. July 19. The company is still in business making amino acid shoyu.

3547. **Product Name:** Club Shoyu, Mitsuba Soy Sauce, Hilo Shoyu (All "Genuine Brewed Shoyu").
Manufacturer's Name: Brewery Industries Ltd.
Manufacturer's Address: 45 Omao St., Hilo, Island of Hawaii. Phone: 3079.
Date of Introduction: 1947.
Ingredients: Club: Water, soybeans, wheat, salt, caramel coloring, and 1/10 of 1% of sodium benzoate.
Wt/Vol., Packaging, Price: ½ gallon bottle.
How Stored: Shelf stable.

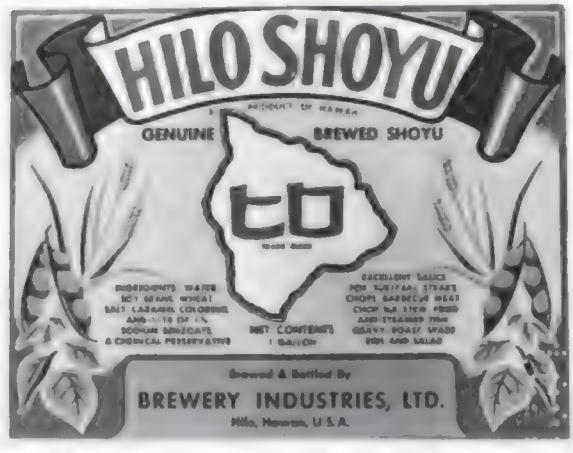


New Product–Documentation: Black-and-white photo of early rectangular Label. Probably about 1947. Club Shoyu, Hawaii's quality soy sauce. Genuine brewed shoyu. Excellent sauce for sukiyaki, steaks, chops, barbecue meat, chop sui [suey], stew, fried and steamed fish, gravy, roast, spare ribs [pork], and salad. $1.45 per ½ gallon. Illustrations of wheat and soy. Brewed and bottled by Brewery Industries, Ltd., Hilo, Hawaii.

Similar photos of Labels for Mitsuba Soy Sauce and Hilo Shoyu. These had similar ingredients and similar text. The Hilo Shoyu was produced for the mainland USA.

Ad by Brewery Industries Ltd. in Hui Manaolana. 1956.





Japanese Foods: (Tested Recipes). Honolulu, Hawaii. See p. 110. "Buraku." Y. Hata & Co., Ltd., Ala Moana Market Center, Warehouse #1.

Hawaii, Maui, Kauai Directory. 1957. p. 209. Brewery Industries Ltd. (Teruo Togashi, manager). Brewers of quality club, Hilo, and Mitsuba shoyu, 45 Omao, Hilo, Island of Hawaii. P.O. Box 1462. 1960 Directory. Hilo and Mitsuba Shoyu distributed on Hawaii and Oahu by Y. Hata & Co. Ltd., on Maui by Valley Isle Produce, and on Kauai by American Factors Ltd. (See yellow page 68). We have this advertisement.

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows all three labels. States that company was founded in 1947. Gives address. Still in business.

3548. **Product Name:** Chun King Soy Sauce [HVP Type].
Manufacturer's Name: Chun King Sales (Marketer-Distributor).
Manufacturer's Address: Duluth, Minnesota.
Date of Introduction: 1947.
Ingredients: HVP soy sauce.
How Stored: Shelf stable.
New Product–Documentation: Display ad: May Co. 1949.

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"Chun King–Chicken Chow Mein dinner." *Los Angeles Times*. Oct. 2. p. A3. "Plus a tin of chow mein noodles and a bottle of soy sauce. Three to four generous delicious servings. Ready to eat. All you have to do is heat and serve it." A photo shows the front of a can of Chicken Chow Mein with what appears to be a bottle of soy sauce next to it. Note 1. This ad does NOT prove that the soy sauce bore the Chun King brand. In fact, it may suggest the opposite.

Display Ad: Chun King Sales Co. 1954. "Chun King–Chicken Chow Mein." *Chicago Daily Tribune*. Sept. 12. p. M5. "Call the folks. They'll douse on Chun King Soya Sauce." Note 2. This is the earliest document seen (Feb. 2011) that mentions "Chun King Soya Sauce."

Talk with Jeno Paolucci. 1982. April 30. Brief history of Chun King soy sauce (Interview). Jeno founded Chun King in 1945. The company first began selling ready-made soy sauce in about 1947; they never made fermented soy sauce. Chun King bought this soy sauce by the barrel from a plant in Toledo, Ohio, run by the Donofrio Brothers, then repackaged it under the Chun King label. He does not remember the company's name but their technician was a man (perhaps Lou Minor) who had worked for La Choy. This man first got Jeno interested in soy sauce before he started buying from A.E. Staley. In the late 1940s and 1950s Jeno was not aware of any fermented soy sauce being made in the USA: it was all made from HVP. During the 1950s the soy sauce market in the USA was a battle between La Choy and Chun King.

Soya Bluebook. Soyinfo Center has searched that section in Soya Bluebook that gives the name and address of soy sauce makers in the USA from 1947 to 1977. We are unable to find any mention of Chun King.

3549. **Product Name:** Fuji Soy / Shoyu. Hawaiian Soy Sauce.
Manufacturer's Name: Fuji Sake Brewing Co. Ltd.
Manufacturer's Address: 539 Cooke St., Honolulu, Oahu, Hawaii.
Date of Introduction: 1947.
Ingredients: Water, soya beans, wheat, salt, caramel coloring, and 1/10 of 1% sodium benzoate as chemical preservative.
Wt/Vol., Packaging, Price: 1 gallon.
How Stored: Shelf stable.
New Product–Documentation: Not listed in the index under soy sauce in any Honolulu city directory from 1905 to 1966; Black-and-white photo of Label. About 1947. Oval. "Brewed under natural process."

Ad by Fuji Sake Brewing Co., Ltd. in Hui Manaolana. 1951. *Japanese Foods: (Tested Recipes)*. Honolulu, Hawaii. See p. 39. "For added taste in your menus use... Fuji Soy." 539 Cooke St. Note: This same ad appears on the same page in the 1956 edition of this book.

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49.



"Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows one label. Gives address. No longer in business. Letter from Takao Nihei. 1988. July 19. This product was first made in 1947 by Fuji Sake Brewing Co. Ltd. They closed in 1963.

3550. **Product Name:** Soy Sauce.
Manufacturer's Name: Great China Foods Co.
Manufacturer's Address: 2520-58 S. State St., Chicago, Illinois.
Date of Introduction: 1947.
New Product–Documentation: Soybean Blue Book. 1947. p. 73; 1957. p. 99. Company name is now "Great China Food Products Co."

3551. **Product Name:** Maru-Hi Miso [Mellow White, or Red], and Shoyu.
Manufacturer's Name: Hawaiian Miso & Soy Co.
Manufacturer's Address: 1714 Mary St., Honolulu, Oahu, HI 96819. Phone: 87488. Later 808-841-7354.
Date of Introduction: 1947.
New Product–Documentation: Directory of the City and County of Honolulu. 1949. p. 354. Hawaiian Miso and Soy Co. (George T. and Henry T. Higa; Doris K. and Seiboku Kiyabu), Manufacturers of Miso and Soy. 1714 Mary. Tel. 87488. Hawaii Directory of Manufacturers. 1953. p. 10. Miso (Soy bean paste). Hawaiian Miso & Soy Company, 1714 Mary St. Honolulu City Directory. 1956. The company is the only miso manufacturer listed for this year. Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." States that Hawaiian Miso Shoyu Kaisha was founded by William Higa. Gives address. No founding date given. Still in business. Wm. Higa. 1980. History of Miso Companies in Hawaii; Shurtleff & Aoyagi. 1983. The Book of Miso. 2nd ed. p. 234, 240, 255. The company was founded in 1947 by George Higa Sr., William Higa, George Higa Jr., Hisako Higa, and Alvin Higa. They left American Hawaiian Soy Co. By the

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1980s HMS was Hawaii's largest miso manufacturer, and the second largest in the USA with 512 tonnes/year in 1983. Ad in Hawaii Herald. 1983. Oct. 7. p. 5.

3552. **Product Name:** Kokusui Shoyu.
Manufacturer's Name: Nichibei Shuzo KK. (Japanese-American Sake Brewery).
Manufacturer's Address: Waiakea, Hilo, Island of Hawaii.
Date of Introduction: 1947.
New Product–Documentation: Hawaii, Maui, Kauai Directory. 1957. p. 454. Listed as Kokusui Co. Ltd. (Kamezo Matsuno, president). 1965 Kamehameha Ave., Hilo, Island of Hawaii. Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." No label. Gives address. No longer in business. Letter from Takao Nihei. 1988. July 19. Kokusui Shoyu was launched in 1947. Closed in 1956. Mr. Nihei deleted Panda Shoyu as one of this company's brands.

3553. Bragg, Paul C. 1947. Paul Bragg's health cookbook [1st ed.]. New York, NY: Alfred A. Knopf. xii + 402 + xxx p. Index. 21 cm.
• ***Summary:*** Contents: Section I: Flavor. 1. Flavor, the soul of food. Section II: Recipes. 2. Salads (7 types). 3. Salad dressings. 4. Soups. 5. Vegetables. 6. Meats. 7. Fish. 8. Poultry and game. 9. Vegetarian entrees and cheese dishes. 10. Eggs and egg dishes. 11. Cereals. 12. Bread, rolls, and muffins. 13. Pancakes and waffles. 14. Pies and fillings. 15. Cakes and frostings. 16. Cookies. 17. Desserts (fruit desserts, other desserts). 18. Sauces. 19. One world cookery ("Health" foods in many lands, Mexican, Creole, From France, the Near East, the Far East, etc.). 20. Candies. 21. Drink health the new way ("cocktails" made without alcohol, from fresh fruit and vegetable juices). 22. Canapés. 23. Sandwiches and fillings. 24. Canning.

Section III: Special-purpose recipes. 25. Reducing. 26. Gaining. 27. Food allergies. 28. Invalid food or bland diets. Appendixes. Herb chart. How to grow a savory herb garden. The window-box herb garden. Organic gardening: Good nutrition starts in the ground. How to make a compost pile.

Soy-related recipes: Substitutes. Soybean milk for cow's milk. Beans and especially soybeans for meat. Whole-grain flours for white flour (p. 5). Sprouted soybean salad (p. 45). Soybean soup (with whole dry soybeans [WDS], p. 72). Black soybean soup (p. 72-73). Sour-cream bean soup (p. 73).

In the chapter on "Vegetables" there is a section titled "Soybeans" (p. 92-95) with this contents: Introduction ("The soybean is one of the richest of all foods in protein and in minerals, and it also makes a very delightful addition to good meals... but only in recent years have Americans and Europeans become awakened to its possibilities as a meat substitute and also its great value as a food staple"). How to make soybean sprouts. Soybean sprouts en casserole. Sprouted soybean omelet. Soybean sprouts with onions and mushrooms. Soybean recipes ("for preparing the magic soybean"). Green soybeans (in pods). Dried soybeans. Canning recipes. Soybeans used as meat substitutes. Soy milk. Soybean cheese [tofu].

Chapter 9: Vegetarian entrees and dishes. Lentil loaf with milk or soy milk. Soybean loaf (with WDS and soy milk). Soybean macaroni loaf. Vegetable and soybean stew. Soy vegetable roast (with 1½ cups cooked soybeans). Vegetable hash (with soy sauce). Boston baked soybeans. Stuffed peppers with soybeans. Vegetarian sausages (with cooked soybeans). Vegetarian chop suey (with soy sauce and gluten steaks). Soybean cheese (homemade tofu made from soy milk allowed to curdle in a warm place; cut and serve with soy sauce).

Whole-wheat soy bread (with soy flour, p. 195). Soybean waffles (with soy flour, p. 212). Whole-wheat soy pie crust (with soy flour, p. 213). Canned [green vegetable] soybeans (p. 324, 336). Soybean waffles (wheatless, with soy flour, p. 369). For those with food allergies: Soy milk and Soybean cheese (see p. 95).

In this book, Bragg uses the word "aminos." "The link between protein and body tissues is the amino acids. When the aminos enter the blood stream, they are carried to every part of the body, where they set to work repairing, rebuilding, and maintaining body tissue, building up rich red blood, and 'conditioning' the various organs" (p. 6).

Note 1. Throughout his life, Paul Bragg seems to have had an ambivalent feeling about eating and recommending red meat and poultry. In his later years, fish became his favorite flesh food.

Note 2. This book contains no autobiographical information about Paul Bragg. Address: P.O. Box 428, Burbank, California.

3554. Burt, Elinor. 1947. Far Eastern cookery. Boston, Massachusetts: Little, Brown & Co. xi + 349 p. Illust. by Samuel Bryant. 22 cm. *
• ***Summary:*** Elinor Burt was born in 1899.

3555. Cole, A.B. ed. 1947. A scientist with Perry in Japan: The Journal of Dr. James Morrow. Chapel Hill, NC: University of North Carolina Press. 307 p.
• ***Summary:*** For background on Commodore Perry and the opening of Japan, see Fairbank, Reischauer, and Craig. 1973. *East Asia: Tradition and Transformation*, p. 327; a summary is given in this bibliography.

In 1854, Dr. James Morrow of South Carolina, agriculturist with the U.S. Perry expedition to Japan, East Asia, spent 18 weeks in Japan. He took seeds, plants, and scientific information from the USA to distribute as gifts for the shogun Tokugawa Iesada, and was instructed to collect the same and make observations, which he recorded in this journal. He explored the Great Liu Ch'iu (Okinawa),

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and sampled fried bean sprouts (we are not told what type [probably mung bean]) and soy sauce in "a little sauce of bean soy" in Canton (p. 48).

In April 1854 in Kanagawa, Japan, he "put in small papers more than two hundred papers of seed, and sent one of each kind to Mr. Allen, gardener of New York,–to Mr. Landreth, gardener in Philadelphia,*" (p. 155) (Endnote 89, p. 286: *"Probably Richard L. Allen, formerly of A.B. Allen & Co, dealers in agricultural implements in New York, and probably David Landreth of David Landreth & Son {David & Oliver Landreth & Thomas F. O'Neil} in Philadelphia."), "also to Mr. Buist, gardener in Philadelphia,–to Henry Gourdin, Esq., of Charleston,–and to Gen. Wade Hampton, of Columbia, South Carolina [a planter and congressman]. I sent the large Japanese papers to the Department of the Interior at Washington [DC].

Appendix G (p. 228) shows a list of seed bought in Simoda [Shimoda] Bay in large quantities in April 1853 (1854?) [sic, probably 1854]. Included are "Small red Beans (soya) [azuki?]," and "Black beans (another variety)."

Appendix H (p. 228-30) contains a "List of seed presented to me [Morrow] by the Japanese gentleman who was the principal in making the treaty & collected by himself as he said with great pains. These were principally from Yeddo [Edo, today's Tokyo] and Conagowa" [Kanagawa; an important port in 1854, a town north of Yokohama and a prefecture whose capital is Yokohama]. Included in the list of 56 plants are "Dolichos pease (green), Red Beans, Black pease, Red pea–Dolichos, and Small red Bean (soya) [azuki?]."

A photo (frontispiece) facing the title page shows Dr. James Morrow. Note: Morrow's soybean seeds were sent to the Commissioner of Patents, whence they were distributed to farmers, and planted from 1855 on.

3556. Fritzsche, Curt. 1947. Die Sojabohne: Anbau und Verwertung [The soybean: Cultivation and utilization]. Lueneburg [near Hamburg], Germany: Metta Kinau Verlag Nachf. 48 p. Series: Kurzschriften fuer Landwirtschaft, Gartenbau und Siedlung, 11. [Ger]
• ***Summary:*** Contents: Introduction. 1. Origin of the soybean (in Asia and Europe, including the work of Haberlandt in central Europe, plus instructions for making Chinese-style chiang, soy sauce, and tofu). 2. Description of the soybean. 3. The culture of the soybean. 4. Diseases and enemies of the soybean. 5. The economic significance of the soybean: As a food, as an oilseed, and in applied science/industry. 6. Advantages of the soybean: For the farmer, for the economy. 7. Effect of soybean culture on the national diet. 8. Tested recipes for the household. Conclusion. Address: Friedersdorf & Berlin.

3557. Radwansky, Andor (pseudonym of Dr. A. Medriczky). 1947. Der "Gelbe Gottessegen," die Sojabohne im Haushalt und Kleingarten [The "golden blessing," the soybean in home and garden]. Murnau (near Munich): Verlag Sebastian Lux. 31 p. Series: Die kleine Reihe, 4. 17 cm. [21 ref. Ger]
• ***Summary:*** Contents: Foreword. 1. Soybeans and nutrition. 2. What does the soybean look like? 3. The soybean–commercial products (Edelsoja whole soya flour, soy flakes, soy oil, soy margarine, soy lecithin, soymilk and tofu [these were once made by a German firm in Frankfurt], soy sauce, Worcestershire sauce, soy chocolate and cocoa). 4. Soybeans in the household (incl. the above commercial products plus soy coffee, soy sprouts). 5. Growing soybeans on farms and in home gardens. Hope for the founding the "Society of Soybean Producers and Friends of Soya" (*Gesellschaft der Soja-Anbauer und Sojafreunde*). 6. The different methods of soybean production. Growing soybeans in a small garden.

On page 15 the author uses the term "Sojaspeisen" to refer to soyfoods. On page 17 he uses the term "Gruenbonen" to refer to green vegetable soybeans. Address: Herwegstr. 5, Stuttgart, Germany.

3558. *U.S. General Imports, Schedule A, Commodity by Country*.1947--. Serial/periodical. Washington, DC: U.S. Dept. of Commerce, Bureau of Census. Monthly and Annual.
• ***Summary:*** Gives statistics for imports of soy sauce to the USA. In the book titled *Soyfoods Industry and Market*, by Shurtleff & Aoyagi (1982), statistics for the years 1947 to 1981 are given for soy sauce imports to the USA (in both a full-page graph and a full-page table) from: Japan, China (PRC), Hong Kong, total (1,000 lb), and total ($1,000). The major source of U.S. imports has always been Japan; this figure peaked at 18,672,000 lb in 1972, then fell after Kikkoman's plant opened in the USA. Total imports increased from 220,000 lb in 1947, to a peak of 23,098,000 in 1972 (worth $3,116,000), falling to 8,093,000 in 1974, then rising to 19,613,000 in 1981 (worth $7,044,000).

3559. La Choy Food Products, Inc. 1947? Essential characteristics of genuine soy sauce, compared with synthetic or imitation substitutes (Leaflet). Archbold, Ohio. 6 panels. Undated.
• ***Summary:*** Contents: Origin of Soy Sauce. Modern processes. Food values. Essential characteristics. Synthetic and imitation substitutes. La Choy Brown Sauce. Suggestions for using genuine soy sauce.

Note: This leaflet tries, quite deceptively, to present the viewpoint that traditional Chinese fermented soy sauce is inferior to La Choy's "genuine" HVP sauce.

"The Chinese method of preparing the sauce consisted of storing crushed soya beans in casks or wooden tanks, openly exposed to the elements for several months to ferment and mold, after which the liquid sauce was drained or pressed out and stored in vats or kegs.

"Modern processes: Although the Chinese are still using their crude methods, processors of genuine Soy

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Sauce in this country have greatly improved the process through development of enzymatic and hydrolytic methods of fermentation. The best grades of Soy Sauce are manufactured from whole or parts of soya beans. Parts of wheat or corn with water and salt, are often added to achieve a more desirable color and flavor. Such products are under laboratory control to achieve predetermined specifications and scientifically filtered and blended to evenly diffuse and suspend the solids and preclude precipitation of sediment to the bottom of the container... Genuine Soy Sauce is distinguished from other varieties of Chop Suey or table sauces by the presence of amino acids and purines..."

"Many imitations of Soy Sauce are on the market. Such synthetic sauces are ordinarily made from various grades of molasses, syrups, and caramel combined with water and salt to achieve and imitate the appearance and consistency of Soy Sauce." Address: Archbold, Ohio.

3560. Berrehsem, Marion. 1948. Cookery from the Orient has many a recipe helpful to Americans learning to save meat. *Christian Science Monitor.* Jan. 8. p. 10.
• ***Summary:*** "Centuries ago the Asiatics learned the value of the soybean, which is not inferior to meat in nutritional value." The widespread acclaim for Asiatic cookery "can be attributed in no small measure to the fact that cooks in these countries have devised many delicious menus which use meat in small quantities, or not at all.

Recipes include: Egg foo yung, with soy sauce as optional but recommended ingredient. Cream soy sauce, with 1 cup rich cream or milk, "1 to 3 tablespoons soy sauce," plus butter and flour.

3561. *Soybean Digest.* 1948. Grits and flakes... from the world of soy: Bee Gee Products, Oak Park, Illinois is featuring a meatless chop suey dinner... Jan. p. 36.
• ***Summary:*** "... as an economical, tasty and easy-to-serve meal. The dinner is a complete meal for four persons and includes tea and soy sauce."

3562. *New York Times.* 1948. John Duncan, aide of Lea & Perrins: Treasurer of sauce concern since 1930 dies at 44– Was officer in navy. Feb. 11. p. 27.
• ***Summary:*** John P. Duncan, treasurer of Lea & Perrins, Inc., 241 West Street [New York City], manufacturers of Worcestershire Sauce, died yesterday at age 44 after an illness of several months; he lived in Ridgefield, Connecticut.

Born in Tuxedo Park, New York, he was graduated from Groton School [in Groton, Connecticut] and, in 1925, from Harvard [in Massachusetts].

"In 1925 Mr. Duncan became associated with one of the predecessor companies of Lea & Perrins and he had been the latter's treasurer since its incorporation in 1930. His father, Stuart Duncan of New York, is the retired board chairman of Lea & Perrins."

3563. Smith, Allan K. 1948. Re: Request for information available on the production of foods by fermentation, particularly from soybeans: Soya sauce, miso paste, and soya cheese. Letter to Lewis Lockwood, PhD in Shanghai, China, April 1. 2 p. typewritten. Typed, without signature (carbon copy).
• ***Summary:*** Attached is Smith's 7-page response from the Metropole Hotel, Shanghai, China, dated 7 June 1948. He gives details on the processes for making miso, soya cheese [fermented tofu], katsuobushi, and soy sauce. "The questions on soy sauce were answered largely by Mr. Kung and Mr. C.T. Siao of the National Bureau of Industrial Research, 1313 Szechum Road, N. Shanghai, China. The questions on miso were answered by Quo Sih Gwan, a Chinese worker that has spent a number of years in Japan. No one around Shanghai knows anything about miso."

A second letter from Dr. Smith dated 7 June 1948 (also from the Metropole Hotel, Shanghai), to Dr. Lewis Lockwood at NRRL, Peoria, Illinois, answers questions about miso, katsuobushi, and species of *Aspergillus* mold (3 pages).

Another letter from Smith to Lockwood contains questions concerning soysauce fermentation from Drs. King and Siao.

The final letter from Smith to Lockwood, also dated June 7, contains a questionnaire originally from King and Siao about soya sauce and miso. Smith sends a copy of his responses to Lockwood and asks for suggestions Address: NRRL, Peoria, Illinois.

3564. Arsenio Manuel, E. 1948. Chinese elements in the Tagalog language: with some indication of Chinese influence on other Philippine languages and cultures, and an excursion into Austronesian linguistics. Manila, Philippines: Filipiniana Publications. 139 p. April. With a historical introduction by H. Otley Beyer. [110* ref]
• ***Summary:*** Page 58-59: Tahó [Taho]: *tau* (bean) + *hu* (anything very soft); Bean curd. Variations: toho, tojo. Same in Bikol. Tahu in Sambal. Soybean curd brains are unpressed soybean curd served with medium-thick brown sugar syrup.

Táhuli [Tahuli]. Variation of táhuri [tahuri], which see.

Táhuré [Tahure]. Variation of táhuri, which see.

Táhuri [Tahuri]: *tau* (bean) + *hóe* (semi-liquid, comestible); Fermented soybean curd. Magtatahuri, a maker or seller of tahuri. Variations: tahure, tahuri, tahuli. In Aklanon, Bikol, tawri. Takim: *tau* (bean) + *kim* (salty): Salted beans.

Note: This is the earliest English-language document seen (Oct. 2011) that uses the term "Fermented soybean curd" refer to Chinese-style fermented tofu.

Page 64: Tokwa: *tau* (bean) + *koa* (dried, desiccated); Pressed soy-bean curd, or soy-bean cheese; used as an

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ingredient in *pansit*, which see, or fried. Magtotokwa, maker or vendor of tokwa.

Tokua. Variation of tokwa, which see.

Page 65: Toyo: *tau* (bean) + *iu* (oil); Soy-bean sauce, soy. Magtoyo, to dress or season with such sauce, to use toyo. Same in Sambal. Tawyo in Bikol. In Mandarin: tou yu. Address: Dep. of Oriental Languages, Univ. of the Philippines.

3565. Funabashi Shôten. 1948. Maruman Shoyu [Maruman Shoyu (Ad)]. In: Nichi Bei Times. 1948. *Kikan Fukkôshi Narabi Jûshoroku* [Evacuation Resettlement Report, 1948 Directory]. 138 + 243 p. Page 98. [Eng; jap]



• ***Summary:*** Ad (¼ page, lower left). All in Japanese: This shoyu was produced by an authentic Japanese method. Dealer / seller.

Another ¼-page ad (p. 110) has the company's logo at its center. The top 2/3, which is in Japanese, states: The shoyu was produced in an authentic Japanese method. Dealer / seller. Funabashi Shôten. 1209 4th St., Sacramento. Phone 2-2934. Maruman Shoyu Co., C. Sakamoto, proprietor, Route 8, Box 535, Sacramento, California.

Note: The relationship between Funabashi Shoten and Maruman Shoyu is unclear? Does Maruman make the shoyu and Funabashi sell it? Address: 1206 4th St., Sacramento, California. Phone: 2-3924.

3566. Hokubei Shokuryo Shokai (North American Food Distributing Co.). 1948. [Exporters–Importers–Wholesale Distributors (Ad)]. In: Nichi Bei Times. 1948. *Kikan Fukkôshi Narabi Jûshoroku* [Evacuation Resettlement Report, 1948 Directory]. 138 + 243 p. Page 245 (unnumbered, near end). [Eng; jap]

• ***Summary:*** Ad (full page). Top one-fourth in English. In Japanese: The main company office is in Walnut Grove. Branches are at Boyle (?) High Market, 2506 E. First St., Los Angeles, and Star Market, Karn St. and G. St. in Fresno. Selling Red Star Jirushi (brand) Shoyu, Fuji Jirushi (brand) Shoyu, and Shin Kikkoman Shoyu.

Note: This "Shin Kikkoman Shoyu" is probably not related to real Kikkoman Shoyu made in Noda, Japan. Address: 1. 2506 E. First St., Los Angeles, California; 2. P.O. Box 446, Walnut Grove, California.. Phone: Walnut Grove 3436.

3567. Mandarin Market. 1948. [Meat, fish, vegetables and groceries (Ad)]. In: Nichi Bei Times. 1948. *Kikan Fukkôshi Narabi Jûshoroku* [Evacuation Resettlement Report, 1948 Directory]. 138 + 243 p. Page 140. [Eng; jap]

• ***Summary:*** Ad (¼ page, lower left). The top one-third is in English. In Japanese: Mandarin Maaketto. Fish and other Japanese products. Manager: Kanichi Ooshima. Selling shoyu. Address: 139 S. Center St., Stockton, California. Phone: 2-2502; 3-5615.

3568. **Product Name:** [Maru Man Shoyu].
Foreign Name: Maru Man Shoyu.
Manufacturer's Name: Maru Man Shoyu Co. (Maru Man Shoyu Seizô-sho).
Manufacturer's Address: Route 8, Box 535, Sacramento, California.
Date of Introduction: 1948. May.
New Product–Documentation: Entry in Nichi Bei Times. 1948. Evacuation-Resettlement Report. Directory of manufacturers, p. 100 (top right). In Japanese: Maru Man Shoyu Seizô-sho. In English: Maru Man Shoyu Co., Rt. 8, Box 535, Sacramento. No phone number is given.

Page 98: Ad (¼ page, lower left). All in Japanese: This shoyu was produced by an authentic Japanese method. Dealer / seller.

Note: It is not clear whether this company actually makes the shoyu it sells. On page 100 it is included in a list of manufacturers.

3569. Mitsuwa Shokai (Mitsuwa Company). 1948. Modaan Bôeki Shôkai [Marusho Shoyu–Best quality (Ad)]. In: Nichi Bei Times. 1948. *Kikan Fukkôshi Narabi Jûshoroku* [Evacuation Resettlement Report, 1948 Directory]. 138 + 243 p. Rear cover. [Eng; jap]

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• ***Summary:*** Ad (full page, rear cover). The company sells Marushô Shoyu. Address: 309 "O" St., Sacramento, California. Phone: 2-3440.

3570. Modern Food Products Co. (Modaan Bôeki Shôkai). 1948. Modaan Bôeki Shôkai [Modern Food Products Co. (Ad)]. In: Nichi Bei Times. 1948. *Kikan Fukkôshi Narabi Jûshoroku* [Evacuation Resettlement Report, 1948 Directory]. 138 + 243 p. Unnumbered inside front cover. [Eng; jap]
• ***Summary:*** Ad (full page, inside front cover). The company sells Marushô Shoyu. Address: 1. 24 California St., San Francisco 11, California; 2. 228 E. 2nd St., Los Angeles 12, California. Phone: EXbrook 2-1531 [SF]; MAdison 6-4335 [LA].

3571. **Product Name:** [Soy Sauce, Fresh Koji, Red Miso, Barley Miso, Tekka Miso, Joban Miso, Kinzanji Miso, Kocho Miso, Moromi].
Foreign Name: Shoyu, Nama Koji, Aka Miso, Mugi Miso, Tekka Miso, Joban Miso, Kinzanji Miso, Kocho Miso, Moromi.
Manufacturer's Name: Mukai Miso Shoyu Seizo-sho (Mukai Brewing Co.).
Manufacturer's Address: P.O. Box 528, Isleton, California. Phone: 2201.
Date of Introduction: 1948, May.
New Product–Documentation: Entry in Nichi Bei Times. 1948. Evacuation-Resettlement Report. Directory of manufacturers, p. 137 (top center). In Japanese: Mukai Miso Shoyu Seizôsho. In English: Mukai Brewing Co., P.O. Box 528, Isleton, California. Phone: Not listed.

Also: Ad (full page) in Nichi Bei Times. 1948. *Kikan Fukkôshi Narabi Jûshoroku* [Evacuation Resettlement Report, 1948 Directory]. Full page (p. 246, unnumbered near rear). Top one-fourth of this ad is in English. "Brewed by Mukai Brewing Co., P.O. Box 528, Isleton, California." The company logo is a bold hexagon inside of which are the two characters for Nagaiki?, Nagao? Chosei? ("Long Life"; Too many ways of reading these two characters). They make: Nama Koji (fresh koji), Aka Miso (red miso), Mugi Miso (barley miso), Tekka Miso ("tekka" is written with the characters for iron + flower instead of the typical iron + fire), Joban Miso, Kinzanji Miso, Kocho Miso, Moromi.

Ad (¼ page) in Hokubei Mainichi Year Book, 1951, p. 304. The company logo is a bold hexagon inside of which are the two characters for Nagao or Nagasei. The ad reads: In English: Trade mark. Soy sauce. In Japanese: Honzukuri [made in the real traditional way]. Saijô [The best]. Honba shoyu [Authentic Japanese-style soy sauce]. Directory entry at Isleton, California under "Business" (p. 302), Mukai Brewing Co. (Jap: *Kikko Chôsei Miso Shôyu Jôzô-sho*), P.O. Box 171, Isleton. No phone.

Ad (1/8 page) in Nichi-Bei Jiji Jushoroku [Japanese American Times Directory]. 1952, p. 218. The top 1/3 of this ad is in English: Mukai Brewing Co., P.O. Box 171, Isleton, Calif. Phone 2201. In Japanese (right to left): Honzukuri. Saijô [Made in the real way. The best]. Kikko Nagao? (Nagasei?) [Their trade mark]. Honba shoyu [Authentic shoyu].



3572. Nakayama Shokai. 1948. Marunaka Brand Shoyu (Ad). In: Nichi Bei Times. 1948. *Kikan Fukkôshi Narabi Jûshoroku* [Evacuation Resettlement Report, 1948 Directory]. 138 + 243 p. Page 11. [Eng; jap]
• ***Summary:*** Ad (¼ page, top right). In Japanese: Yûshû shoyu [excellent shoyu]. Completely safe. Good flavor. If you find a checked proof seal on the bottle, you can use it safely. Nakayama Shokai: Exclusive dealer. Also at 6th St. in Oakland. Address: 1418 Turk St., San Francisco, California. Phone: WEst 1-3861; WAlnut 1-9833.

3573. Nichi-Bei Jijisha. 1948/31-. Kikan fukkôshi narabi jûshoroku [Evacuation resettlement report, 1948 directory]. San Francisco, California: Nichi-Bei Jijisha. 138 + 243 p. May 31. Illust. 25 cm. [Eng; Jap]
• ***Summary:*** Note: The 1948 directory is in the 1948 Evacuation Resettlement Report. On the last unnumbered page of photos near the front (page 11) half-page photos show: (1) The front of the Nichi Bei Times office in San Francisco, with three cars parked out in front. (2) Two men standing in front of the huge printing press, with two large rolls of paper in place.

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Page 87 (top center left) states (in characters), under the heading Tofu shops, there are 4 workers and 2 shops in Marysville. Note: The explanations for the numbers cannot be found on this page but on the previous page. We are guessing that that larger number is the number of workers and the small number is the number of shops.

Page 90 (top right): Tofu shop, Stockton. Just one shop is listed but with no name or address.

Page 92 (top left): One shoyu maker in the Walnut Grove area of Isleton (California); no name or address is given. Note: This could well be Mukai Brewing Co., which in Feb. 1951 was located at P.O. Box 171, Isleton, California. Address: Ellis Street, San Francisco, California.

3574. Pacific Mutual Sales Inc. (Taiheiyo Kyodo Shoji Kabushiki-gaisha). 1948. Imports and exporters (Ad). In: Nichi Bei Times. 1948. *Kikan Fukkôshi Narabi Jûshoroku* [Evacuation Resettlement Report, 1948 Directory]. 138 + 243 p. Page 143 (right half). [Eng; jap]
• ***Summary:*** Ad (half page, vertical). The top one-fourth is in English. Company name with diacritics is: Taiheiyô Kyôdo Shôji Kabushiki-gaisha. They are the exclusive seller of Kurabu (Club) brand shoyu. Address: 1537 Buchanan St., San Francisco 15, California. Phone: JOrdan 7-4979.

3575. Pacific National Mercantile Co. 1948. [Ichi-Man Brand Shoyu Sauce, Importer (Ad)]. In: Nichi Bei Times. 1948. *Kikan Fukkôshi Narabi Jûshoroku* [Evacuation Resettlement Report, 1948 Directory]. 138 + 243 p. Page 8. [Eng; jap]
• ***Summary:*** Ads (¼ page, lower left). In Japanese: Over 30 years of long shoyu making experience. This shoyu, made by Honolulu, Fikushima Shoyu, is the strongest enemy of importing shoyu after the War. The quality of the product speaks for itself; good for use with sashimi [fresh, raw fish, thinly sliced], pickles, and Hiyayakko [Chilled Tofu]. Address: 1844 Buchanan St., San Francisco, California.

3576. San Okin Shokai (San Joaquin Mercantile Co.). 1948. [Jobbers–Distributors (Ad)]. In: Nichi Bei Times. 1948. *Kikan Fukkôshi Narabi Jûshoroku* [Evacuation Resettlement Report, 1948 Directory]. 138 + 243 p. Page 178. [Eng; jap]
• ***Summary:*** Ad (¼ page, lower left). Top one-fourth in English. In Japanese: Hanamurasaki (brand) shoyu. Fujimoto Kanemasa (brand) miso. Address: 1305 I St., Reedley, California. Phone: 424.

3577. Yamate Brothers (Yamate Burazaasu). 1948. [Imports–Exports, Ltd. (Ad)]. In: Nichi Bei Times. 1948. *Kikan Fukkôshi Narabi Jûshoroku* [Evacuation Resettlement Report, 1948 Directory]. 138 + 243 p. Page 140. [Eng; jap]
• ***Summary:*** Ad (full page). The top ¼ of the ad is in English; the body is in Japanese. Top: The company was established in 1921. Codes: Bentley, Commercial, Acme. Cable address: Sayama–San Francisco.

Bottom: The company imports and sells: Bunka Shoyu [Culture Shoyu] and U.S. Kanro Shoyu [Sweet Shoyu = twice-fermented shoyu].

Owner: Mr. Sasato Yamate. Branch office in Tokyo, Japan: Yakei Saka Nobori, Oomori, Tokto-to. Phone: Oomori 1313. Shunin (manager): Mr. Sanzo Yamate. Address: 1619 Lyon St., San Francisco 15, California; 510 Battery St., San Francisco 11, California.. Phone: WEst 1-8731; EXbrook 2-0764.

3578. Morse, W.J. comp. 1948. Soybean varietal names used to date. Washington, DC: Appendix to the mimeographed report of the Fourth Work Planning Conference of the North Central States Collaborators of the U.S. Regional Soybean Laboratory. Urbana, Illinois. RSLM 148. 9 p. May 26.
• ***Summary:*** This is a 9-page two-column table. Column 1 is "Variety name." Column 2 is "Source." P.I. refers to the Plant Introduction number. Acadian–Louisiana Experiment Station 40-293. Acme–P.I. 14954. Adams–A5-2683 (A3-176). Agate–P.I. 81037. A.K.–Manchuria 1912. A.K. (Harrow)–Dominion Exp. Station, Canada. Akasoya–Japanese variety (Indiana). Aksarben–P.I. 36576. Allison Black–D.T. Allison, Tennessee. American Oil King–Same as Midwest. Amherst–P.I. 17275. Anwei–La Choy Co. (Ohio). Aoda–P.I. 81043. Arikara–O. Will Co. (North Dakota). Arisoy–P.I. 86736. Arkan–P.I. 87050. Arksoy–P.I. 37335. Arksoy 2913–Arkansas Exp. Station (Marianna). Arlington–P.I. 22899. Armredo–Arizona Station selection. Auburn–P.I. 21079A. Austin–P.I. 17263. Austrian Green–Same as Tokyo. Avoyelles–Avoyelles Parish, Louisiana, selection. Baird–P.I. 22333. Bakaziro–Same as Amherst. Banner–Same as Midwest. Bansei–P.I. 81031. Barchet–P.I. 23232. Bavender Special–Bavender selection (Iowa). Bell–Same as Midwest. Best Green–Same as Hope. Best White–Same as Amherst. Biloxi–P.I. 23211. Biltan–Otootan selection (South Africa). Black–Same as Buckshot. Black Beauty–Same as Ebony. Black Champion–Same as Peking. Black Eyebrow–P.I. 30744. Blackhawk–A6K-937 (A3K-884). Black Sable–Same as Peking. Boone–P.I. 54563-3. Bopp–Same as Chernie. Brindle–P.I. 20407. Brooks–P.I. 16789. Brown–Same as Mammoth Brown. Brown Otootan–Same as Tanner. Brownie–P.I. 17256.

Buckeye Cross (BX)–Same as Mt. Carmel. Buckshot–P.I. 17251. Burnette–Farmville, North Carolina, selection. Buster Brown–Same as Trenton. Butterball–P.I. 17273. Capital–Central Exp. Farm (Canada). Cayuga–P.I. 65393. Chame–P.I. 80473. Chang–P.I. 54610-2. Charlee–P.I. 71663. Chernie–P.I. 18227. Cherokee–P.I. 93057. Chestnut–P.I. 20405B. Chief–Illinois Exp. selection. Chinaton Echo–Harrow, Canada. Chiquita–P.I. 27707. Chuku–La Choy Co. Chusei–P.I. 80472. Cibao–Salvador variety. Clay–Same as Midwest. Claybank–Same as Midwest. Clemson–P.I. 71659. Cloud–P.I. 16790. Cluster Bean–Same as Midwest.

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C.N.S.–J.E. Wannamaker (South Carolina; Note 1. This is the earliest document seen [Dec. 2004] concerning John E. Wannamaker). Coker's Black Beauty–Same as Oloxi. Coker's 31-15–Same as Pee Dee. Columbia–P.I. 22897. Columbian–Same as 22897. Creole–P.I. 71614. Delnoshat–Delta Station selection 6679. Delredo–Mississippi selection. Delsoy–P.I. 85355. Delsta–Delta Station #6677. DeSoto–Reported by Ohio grower. Dixie–P.I. 37330. Dortchsoy #2–Dortch Co., Arkansas. Dortchsoy #6–Dortch Co., Arkansas. Dortchsoy #7–Dortch Co., Arkansas. Doxie–Georgia Exp. Station. Duggar–P.I. 17268C. Dunfield–P.I. 36846. Dunland–Ohio report (Dunfield?). Dwarf Brown–Same as Ogemaw. Dwarf Early Yellow–Same as Ito San. Dwarf Green–Same as Guelph. Earlyana–Indiana Exp. Station C-28. Early–Same as Ito San. Early Black–Same as Buckshot. Early Brown–P.I. 25130 & 25161. Early Green–Same as Medium Green. Early Indiana Laredo–Same as Norredo. Early Japan–Same as Butterball. Early Korean–No source given.

Early Laredo–Same as Norredo. Early Mammoth Black–Same as Buckshot. Early Mandarin–Same as Mandarin. Early Virginia Brown–Same as Virginia. Early White–Same as Ito San. Early White Eyebrow–Source unknown. Early Wilson–Same as Wilson. Early Wilson Black–Same as Wilson. Early Wisconsin Black–Same as Wisconsin Black. Early Woods Yellow–No source given. Early Yellow–Same as Ito San. Easycook–P.I. 34702. Ebony–P.I. 17254. Eda–P.I. 17257. Eda Mame–Ito San and Eda. Edgecombe–R.P. Cocke, Williamsburg, Virginia. Edna–P.I. 17252C. Edsoy–Changed to Delsoy. Edward–P.I. 14953. Elton–P.I. 20406. Emperor–P.I. 97155. Essex–Same as Peking. Etampes–Same as Ito San. Etum–P.I. 86100. Extra Early Black–Same as Buckshot. Fairchild–P.I. 19184. Farnham–P.I. 22312. Feed All–A.M. Johnson (North Carolina). Feeser's Prolific–Same as Midwest. Flambeau–Wisconsin selection 839-14. Flat Black–Same as Flat King. Flat King–P.I. 17252. Flava–P.I. 16789A. Foster's Prolific–Same as Midwest. Fungi–P.I. 81029. Funk Delicious–Funk Brothers (Illinois). Funman–Funk Brothers (Illinois). Gala–Georgia Exp. Station. Galaway–Same as Midwest. Gatan–Georgia Exp. Station. Gem–P.B. Hutchins (Missouri). George Washington–Virginia selection. Georgian–P.I. 71583. German Coffee Berry–Same as Ito San. Giant Brown–Same as Mammoth Brown. Giant Green–Illinois Exp. Station. Giant Yellow–P.I. 22415. Gibson–Indiana Exp. Station. Goku–P.I. 80480. Golden–Canada Exp. Station, Harrow. Goldsoy–Ontario Station, Canada. Gosha–Same as Manhattan. Goshen Prolific–Farmer selection (North Carolina).

Granger–Ohio selection 31-4. Green–Same as Guelph. Green and Black–P.I. 84784. Greenfield–Probably Illini. Green Samarow–Same as Samarow. Guelph–P.I. 17261. Habaro–P.I. 20405. Haberlandt–P.I. 17271. Hahto–P.I. 40118. Hakote–P.I. 81039. Hamilton–Ohio-9035. Hankow–P.I. 6559. Hansen–P.I. 20409. Harbinsoy–P.I. 54606-3. Harman–Canada Exp. Station. Hawkeye–Iowa A45-251. Hay Boy–Farmer selection (North Carolina). Hayseed–P.I. 71525. Herman–North Carolina selection. Hidatsa–P.I. 81038. Higan–P.I. 80475. Hiro–P.I. 86038. Hokkaido–P.I. 85666. Hollybrook–Wood Seed Co. (Virginia). Hollybrook Early–Same as Midwest. Hongkong–P.I. 22406. Hoosier–P.I. 30746. Hope–P.I. 17267. Hudson Manchu–T.B. Macauley [sic, Macaulay] (Canada). Hurrelbrink–Farmer selection (Illinois). Ignotum–E.E. Evans (Michigan). Illington–Source unknown. Illini–Illinois Exp. selection. Illinois 13-19–Same as Ilsoy. Illinois Champion–Same as Midwest. Ilsoy–Same as Merko. Imperial–P.I. 81780. Indiana Hollybrook–Same as Midwest. Indiana Meadow–Ohio Report. Italian–Canada Exp. Station. Ita Mame–Same as Tokyo. Ito San–P.I. 17268. Jackson–P.I. 82581. Japanese #15–Same as Kingston. Japan Pea–Same as Ito San. Jefferson–P.I. 82202. Jet–P.I. 17861. Jogun–P.I. 87615. Johnsoy–A.E. Johnson (North Carolina). Kabott–Canada Exp. Station. Kagon–Source unknown. Kanro–P.I. 84928. Kanum–P.I. 84668-1.

Kentucky A–Kentucky Exp. Station selection. Kia–Illinois Exp. Station selection. Kingston–P.I. 17255. Kingwa–West Virginia Exp. Station selection. Kirin–La Choy Co. Kungchuling–Manchuria selection. Kura–P.I. 81042. Laredo–P.I. 40658. Large Black–Same as Buckshot. Large Brown–Same as Mammoth Brown. Large Yellow–Same as Mammoth Yellow. Late–Same as Mammoth Yellow. Late Ita Mame–Same as Tokyo. Late Yellow–Same as Mammoth Yellow. Lexington–P.I. 17862E. Lincoln–Illinois Exp. Station selection. Little Wonder–Farmer selection (Missouri). Looney #2–Farmer selection (Tennessee). Lowrie–P.I. 22898A. Loxitan–Delta Exp. Station selection. Ludeke–Farmer selection (North Carolina). LZ–Louisiana Exp. Station selection.

Note 2. This is the earliest document seen (Sept. 2004) that mentions the soybean varieties Brown Otootan, Early Mammoth Black, or Hidatsa.

Note 3. This is the earliest document seen (Sept. 2004) which states that Black Champion is the same as Peking, or that Best Green is the same as Hope, or that Brown Otootan is the same as Tanner, or that Early Mammoth Black is the same as Buckshot, or that Hollybrook Early is the same as Midwest. Continued. Address: USDA, Bureau of Plant Industry, Soils & Agricultural Engineering, Div. of Forage Crops & Diseases [Beltsville, Maryland].

3579. Morse, W.J. 1948. Soybeans yesterday and today. *Foreign Agriculture* 12(5):91-95. May. Summarized in Soybean Digest, June 1948, p. 32.

• ***Summary:*** A good overview of soybeans and their history in China, Manchuria, Korea, and Japan (the principal regions of world soybean production), plus thoughts on their relatively recent introduction to the Western world.

"In China, the soybean is one of the leading and most ancient of crops, ranking fifth in extent of culture and occupying about 9% of the total cultivated area. Although

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grown everywhere in China, about 60% of the soybean acreage and production is confined largely to 3 northern Provinces, Shantung, Kiangsu, and Honan. China consumes practically all its production, estimates indicating 55% for food, 27% for oil extraction and other purposes, 10% for stock feed, and 8% of the total cultivated area of Manchuria and is a dominating factor in the life of that country. As a cash crop, it provides fully half the total volume of freight handled by Manchurian railroads. Estimates have indicated that from one-third to two-thirds of the production of soybeans was exported; 15 to 20% utilized for food, feed, and planting; and the remainder processed for oil and oil meal.

"Korea occupies third place among the soybean-producing countries of Asia. Acreage and production are confined largely to the central and northern areas, because southern Korea, growing chiefly cotton and rice, seems less well adapted to soybean-seed production. The entire seed production is used for food, stock feed, export, and planting, none being used for oil extraction.

"Japan, although a large producer of soybeans, has consumed all its own production and imported large quantities of seed from Manchuria and Korea. Since World War I, production of soybeans in Japan has decreased to some extent, more emphasis being placed on the greater production of rice. The proportion of soybeans used by Japan for various purposes was: Miso (soybean-rice fermented paste), 22%; soy sauce, 22%; oil and oil cake, 21.5%; bean curd, 15.5%; confections, 7.2%; forage, 6.2%; green manure, 2.5%; seed, 1.8%; green vegetable beans, 0.8%; and miscellaneous 0.5%.

"In the Soviet Far East the soybean is said to be one of the chief industrial crops and in some districts to constitute 20% of the cultivated area. Acreage and production have increased markedly since 1926, especially in the Khabarovsk territory.

"Previous to 1935 soybean oil in the United States was utilized chiefly in soap, paint, and varnish. Since that time, however, 70 to 85% of the soybean-oil supply has been used in the food industries... The soybean has become one of the most valuable, if not the most valuable, of China's gifts to the Western World."

Photos show: (1) Manchurian soybean in bags being loaded on a freighter at the Dairen wharves for shipment to European oil mills. (2) Two horses pulling a plow, and a 2nd man planting soybeans on ridged rows in Manchuria. (3) Soybean plants growing along the edges of rice paddies, as is common in oriental countries; the green beans will be used for home consumption. (4) Two Korean men threshing soybean plants in a courtyard with bamboo flails. "In Korea, as well as in many other oriental countries, bamboo flails are used in threshing soybeans." (5) A man with a sickle in a field of dried soybean plants. "Soybeans are harvested by hand in all the soybean-producing countries of the Orient." (6) A combine harvesting soybeans in the USA. It has "been one of the important factors in the economic production of soybeans in the United States." (7) "General view of a Chinese oil-mill yard in Manchuria, showing mill, storage of soybeans in osier bins, and steel tanks." Address: Principal Agronomist, USDA Div. of Forage Crops and Diseases, BPI [Bureau of Plant Industry], SAE [Soils and Agricultural Engineering], ARA, Beltsville, Maryland.

3580. Smith, Allan K. 1948. Manufacturing of soya-sauce. Peiping, China. 1 p. June 18. Unpublished typescript.
• ***Summary:*** Part one, titled "Method of manufacture of Soya-sauce," describes nine steps used at Peiping No. 2 plant. To begin: Roast separately, 150 kg soya beans and 100 kg wheat. Mix and ferment for one week. Then mix with salt water, put in outdoor "crockeries," and allow to stand for months. "However, the longer the better. The colour and taste of the sauce become better in sunshine than indoors." Stir daily, filter out the liquid when done, and boil. Yields 500 kg of soya-sauce. "As the condiment the licorice plant is used to sweeten the sauce. (Sugar is too expensive)."

"(1) Nearly 400 soya-sauce manufacturers in Peiping. (2) The manufacturing shop we visited is making soya-sauce and soya-paste at the same time. (3) This shop has the history of 40 years. (4) Besides soya beans and wheat, the following are used as materials for making soya-sauce: barley, soya cake and wheat bran. Sample No. 18. is soy sauce taken from this plant." Address: Peiping, China.

3581. Smith, A.K. 1948. Manufacturing soya-sauce in Peiping No. 2 plant (China). Unpublished manuscript, written in China. 1 p. June 18.
Address: Traveling in China; Normally at NRRL, Peoria, Illinois.

3582. Smith, Allan K. 1948. Re: Visits to plants in China making soy sauce, soy paste, and soy cheese. Letter to Drs. K.B. Raper and L.B. Lockwood, Northern Regional Research Laboratory, Peoria, Illinois, June 23. 1 p. Typed, without signature (carbon copy). [Eng]
• ***Summary:*** "I am enclosing further information on soy sauce and soy paste processing. The samples listed by numbers on the descriptions will eventually reach you I hope. In visiting this plant I had two interpreters."

Note: This is the earliest English-language document seen (March 2009) that uses the term "soy paste" to refer to miso or to Chinese-style miso.

"I have visited two other soy sauce plants but am not reporting on them at this time. One of these is the Peiping Municipal Soy Sauce Plant which operates much like the pilot plant in Shanghai. I have also visited a sauce plant that claims to have been operating for more than 400 years in the same family and a soy cheese [fermented tofu] plant that has been operated by the same family since the latter part of the

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Ming Dynasty [mid-1600s]. I doubt if they have changed much in all that time. All of the samples will be in the mails soon... I may have to take some of them back to Shanghai to get them started." Address: Hotel Wagon Lets, Peiping, China.

3583. Smith, A.K. 1948. Re: Making soy sauce and soy paste in China, incl. samples. Letter to Drs. Kenneth Raper and Louis Lockwood, Northern Regional Laboratory, Peoria, Illinois, June 23. 1 p. Typed, without signature (carbon copy).
Address: Traveling: At Hotel Wagon Lets [Lits], Peiping, China; Normally at NRRL, Peoria, Illinois.

3584. Smith, Allan K. 1948. Re: Discovery of a new process for making soy sauce in Peiping, China. Letter to Drs. K.B. Raper and L.B. Lockwood, Northern Regional Research Laboratory, Peoria, Illinois, July 5. 2 p. Typed, without signature (carbon copy). [Eng]
• ***Summary:*** "The so called new process uses a high frequency current to shorten the aging process. The process was developed in Japan and the operators in Peiping are Japanese who have stayed in China after the evacuation of the Japanese... What I know now is rather sketchy. The effect of the high frequency current is not in the immediate acceleration of the action of the organisms in the system, but rather it is supposed to decompose or breakdown the substrate so that it is more readily acted upon by the organisms or enzymes so that the work of the organisms becomes easier. The process is still in the experimental stage in Peiping." A description of the process, which takes two months, is then given. A hand drawn illustration (sketch) shows a wooden tank, an external generator, and two electrodes in the soy mash in the tank–one on the bottom and one floating on top. Address: Shanghai, China.

3585. Smith, A.K. 1948. Re: Using high-frequency current to shorten soy sauce aging process in China and Japan. Letter to Drs. Kenneth Raper and Louis Lockwood, Northern Regional Laboratory, Peoria, Illinois, July 5. 2 p. Typed, without signature (carbon copy).
Address: Traveling in Shanghai, China; Normally at NRRL, Peoria, Illinois.

3586. Murata, Hideko. Assignor to King Shoyu Company (Honolulu, Hawaii). 1948. Sauce preparation. *U.S. Patent* 2,444,577. July 6. 3 p. Application filed 20 Jan. 1947. [3 ref]
• ***Summary:*** "This invention relates to sauce preparation and more particularly to a process for the production of shoyu, a Japanese type soy sauce."

"It is [the] object of this invention to provide a process for the production of a soy sauce which may be carried out in a few days,... [is] inexpensive,... [and] comparable in taste and in composition to that produced by the older methods requiring a considerably longer period to complete."

"I have now discovered that an excellent soy sauce may be prepared from vegetable proteins without utilizing the slow process of enzymatic degradation," by hydrolysis with a strong mineral acid such as hydrochloric acid at elevated temperatures. "This new method requires only 4 to 5 days for completion in contrast to the older fermentation methods which require weeks, months or even years to complete." Address: Honolulu, Hawaii.

3587. Onuki, Motoi. 1948. Shôyu [Shoyu]. Tokyo: Takeuchi Shobo. 414 p. Illust. Index. July. 21 cm. [Jap]
• ***Summary:*** The author, now president of Yamasa Shoyu in Chôshi, Japan, graduated from Tokyo Teikoku Daigaku, Nogeikaku-ka (Tokyo Imperial University, Dept. of Agricultural Chemistry). He lived 1895-1960. Chôshi is a seaport town at the mouth of the Tone River, 60 miles east of Tokyo, on the tip of Cape Inubo (Jap. *Inubô-saki*). Address: Presently: Yamasa Shôyu K.K., Torishimariyaku (President), Nôgaku Hakase. Chôshi-shi, Kitaogawa-machi 2504, Chiba prefecture, Japan.

3588. Banks, George Heartsill. 1948. South goes east [to Korea]. *Soybean Digest.* Oct. p. 16-18.
• ***Summary:*** Mr. Banks, formerly associated with Ralston Purina Co., recently returned from a governmental mission of almost 2 years in Korea. In this paper, presented at the American Soybean Convention in Memphis, Tennessee, tells of soybeans in Korea, where there is no national debt, no income tax, and where women do all the work. South Korea is about the size of Arkansas. 75% of the land is steep and mountainous, and thus entirely unsuited for crops. On the remaining small area of arable soil struggle about 20 million Koreans. The farms are small; in some provinces they average less than 2.5 acres. In South Korea every farmer grows some soybeans but one has "to look hard and long to find even a small field of soybeans. They are grown in gardens, on the dikes in the rice-paddies, and among the trees. The most widely grown varieties are large-seeded yellow beans with a short, stiff stalk. Almost all of the beans are consumed at home. Soybean processing [i.e., crushing] plants as we know them do not exist... The Koreans eat soybeans in many ways, including soysauce, soy sprouts, soy curd, and green soybeans. They press out some oil in the home or farm village and use the oil for cooking and the meal for feeding farm animals." Rice is the predominant crop. "Korea, along with its neighbors in the Orient, is definitely a 'have-not' nation." They waste nothing, recycle everything, and use human wastes (night soil) for fertilizer. Agriculture is run by hand-power.

3589. Fairchild, David. 1948. Early experiences with the soybean. *Soybean Digest.* Nov. p. 14-15. [2 ref]
• ***Summary:*** "It was not until 1897 that I first saw soybeans

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growing... I found my friend Merton B. Waite had been trying to grow soybeans on his farm outside Washington [DC, in Maryland; see Fairchild, Oct. 1948], but with little success. They had been sent in by some American consul or missionary, I believe. At about the same time Dr. George T. Moore [who by 1903 was Physiologist in Charge of the Lab. of Plant Physiology, Bureau of Plant Industry, USDA, working on soybean root bacteria] in working on the root nodules of leguminous plants had discovered that the nodules contained bacteria. Waite and I talked over the matter of the failure of his soybeans and wondered if they might require special bacteria, so I wrote out to Japan and imported several pounds of soil from a soybean field.

"We made a little experiment, planting alternate rows of soybeans with and without the addition of this Tokyo soil. The effect of the imported soil was immediately apparent as the plants grown in it made a far better growth and had their roots covered with bacterial nodules, whereas the control were practically without any.

"Photographs had yet to come into any general use as records of agricultural experiments, but Waite had taken up photography as a hobby and made excellent photographs with his stand camera. So at harvest time he pulled up an equal number of soybean plants from the soil-treated rows and from the controls, and the only photographic record in existence of this little experiment (the first of its kind, I suppose, in the world) is this negative taken by Waite in the autumn of 1897.

"Although these experiments did not at the time lead to more extensive trials, they indicate the awakening of our interest in soybeans.

"In that fall of 1897 it was my privilege to organize the office of plant introduction in the Department of Agriculture. We began introducing a great number of different kinds of plants, among them, as I see from our inventories printed at the time, occasional small collections of soybeans from China and Japan. They were obtained mostly through correspondence with missionaries and consuls stationed there.

"At that time the Department had no testing ground near Washington where we could grow miscellaneous vegetables, including these soybean collections. It was not until several years had passed that facilities were provided on the so-called 'Potomac Flats' [in Washington, DC] and James H. Beattie, an enthusiastic young horticulturist, took over the planting of our introduced seeds.

"The soybeans did well and Beattie soon had on his hands a quantity of seeds. But we didn't know just what to do with these strange beans. When cooked in the way other beans were prepared they had a strange flavor that nobody seemed to like...

"It was not, I think, until the office of forage crop investigations was organized and C.V. Piper took charge that the soybean as a forage crop attracted attention and Beattie's experiments came to be looked upon as important. We planted larger patches of soybeans on a tract of land near Bethesda, MD...

"And then we ran into the difficulty of harvesting the soybeans. P.H. Dorsett of the office, one of the most ingenious and most indefatigable workers I have ever known, and his friend Rankin, who was running the little experimental farm, put their heads together and adapted a bean picker then in use–in California I think–and discovered that it was perfectly possible to harvest soybeans mechanically...

"I went out exploring again and my travels with Mr. Lathrop this time took me into the soybean fields of Japan. The tremendous importance of the crop as I saw it there made a great impression on me. Also the almost universal use of soy sauce, which Americans were just beginning to appreciate, fixed my interest...

"Dr. Yamei Kin, an extraordinary Chinese woman whose acquaintance I had made on the boat returning from Japan, made a visit to Washington and captivated us all by her enthusiasm over soybeans. She introduced us to 'tofu,' a delicate cheese which has not even yet attracted the attention it deserves from the American public.

"In 1903 A.J. Pieters came to me one day and told me of an amazing young Hollander who had been a gardener of the great geneticist, Hugo de Vries. He was then on his way back from a trip on foot to Mexico, and I wired him to come to Washington. For 13 years, as agricultural explorer of our office, Frank N. Meyer tramped from village to village over much of China. He gathered soybeans whenever he saw them, for he felt it was important to secure all the local varieties he could for our plant breeders before they should have disappeared as the result of the spread of standard varieties he thought was bound to come.

"The importance of getting as many as possible of these local varieties and these, or selections from them, form, I believe, the basis of the very extensive soybean breeding that has been done by the various plant breeders of America."

Note: According to Vivian Wiser of the USDA and to the Washington D.C. Historical Society (13 Feb. 1991; phone 301-785-2068, Mrs. Offut), in 1897 Merton Waite lived in downtown Washington, D.C. in a built-up area. There is no record of his owning a farm outside Washington D.C., but he may have owned the farm as a sort of summer home or he may possibly have worked with the group at the USDA farm at Somerset, Montgomery County, Maryland. He was a plant pathologist and physiologist, in charge of diseases of orchard fruit trees, especially pears and peaches. There is a collection of David Fairchild's materials at Coconut Grove. His personal residence, The Kampong near Coconut Grove, is still (as of 1998) well preserved and open to the public. Address: "The Kampong," Coconut Grove, Florida.

3590. **Product Name:** Aloha Shoyu.

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Manufacturer's Name: Aloha Shoyu Co. Ltd.
Manufacturer's Address: 807-E Waiakamilo Rd., Honolulu, Oahu, Hawaii. Phone: 87720.
Date of Introduction: 1948.
Ingredients: Water, wheat flour, salt, soy beans, sugar, caramel coloring, and 1/10 of 1% sodium benzoate, a chemical preservative.
Wt/Vol., Packaging, Price: ½ gallon.
How Stored: Shelf stable.



New Product–Documentation: Directory of the City and County of Honolulu. 1947-48. p. 52. Aloha Shoyu Co. Ltd., Clarence S. Okita, president. Nobuichi Kaminaka, vice president. Manufacturers of shoyu and vinegar. 807e Waiakamilo Rd. Tel. 87720. Same in 1955 Directory. Not listed in the 1941-42 directory. Black-and-white photo of rectangular Label from about 1947. Aloha Shoyu Co. Ltd., 609 Waiakamilo Rd., Honolulu. Half gallon. Hawaii Directory of Manufacturers: Vinegar.



Ad by Aloha Shoyu Co., Ltd. in Hui Manaolana. 1951. *Japanese Foods: (Tested Recipes).* Honolulu, Hawaii. See p. 50. "Ask for the best. It's best because it's Aloha Shoyu. Good for: Barbecue. Sukiyaki. Flavoring."

1964. Aloha Shoyu Company, Ltd., 807-E Waiakamilo Rd., Honolulu. Phone: 817411. Not listed in directories 1967-68. Hawaii Directory of Manufacturers. 1969. p. 16. Aloha Shoyu Co. Ltd. at 609 Waikamilo Rd. has only vinegar (no shoyu) listed as its product.

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows two labels and gives the address. The company made and still makes HVP soy sauce, and is still in business. Letter from Takao Nihei. 1988. July 19. The company is still in business making amino acid shoyu. However, the company is not listed in any Honolulu directory from 1967–1987. Label. 4.25 by 3.75 inches. Paper. Red, black, brown, green, white on yellow.

3591. **Product Name:** Shoyu Sauce.
Manufacturer's Name: Eastern Manufacturing Co. Ltd.
Manufacturer's Address: 925 Kokea, Honolulu, Oahu, Hawaii. Phone: 86259.
Date of Introduction: 1948.
New Product–Documentation: Directory of the City and County of Honolulu. 1947-48. p. 246. Eastern Manufacturing Co. Ltd. Thomas M. Shaw, president-Manager. Manufacturer of Shoyu Sauce and Other Oriental and American Food Products. 925 Kokea. Tel. 86259. This company is listed but not indexed this year. It is indexed under soy manufacturers in 1949.

3592. **Product Name:** Crown Soy.
Manufacturer's Name: George J. Russell & Co.
Manufacturer's Address: 913a Sheridan, Honolulu, Oahu, Hawaii. Phone: 903365.
Date of Introduction: 1948.
New Product–Documentation: Directory of the City and County of Honolulu. 1947-48. p. 862. Russell George J. & Co. (George J. Russell, Kunichi Murata, Masaichi Akiyama, and Seigi Uehara). Importers and Wholesalers. Manufacturers of Crown Soy. 913a Sheridan. Tel. 903365. P.O. Box 1193. Cable Address "Crown."

3593. **Product Name:** Miso, and Shoyu.
Manufacturer's Name: Honolulu Miso & Shoyu Factory (Honoruru Miso Shoyu Seizo-gaisha).
Manufacturer's Address: 405d Buckle Lane, Honolulu, Oahu, Hawaii. Phone: 66254.
Date of Introduction: 1948.
New Product–Documentation: Directory of the City and County of Honolulu. 1947-48. p. 392. Honolulu Miso & Shoyu Factory (Shigeo Yamada). Wholesale Miso & Shoyu. 405d Buckle Lane. Tel. 66254. Same in 1955 Directory.

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Note: (1) Shigeo Yamada was apparently making miso on Maui by 1935. (2) This is the only miso company in Honolulu listed in the early 1960s. The index category disappears in the 1961-62 directory. Hawaii Directory of Manufacturers. 1953. p. 10. Miso (Soy bean paste). Honolulu Miso and Shoyu Factory. 405 Buckle lane.

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." States that Honolulu Miso, Shoyu Seizo K.K. was founded by Mr. Shigeo Yamada. Address: 405 Ruckle, Honolulu. No longer in business. Wm. Higa. 1980. History of Miso Companies in Hawaii; Shurtleff & Aoyagi. 1983. The Book of Miso. 2nd ed. p. 234. The company was founded ca. 1942-1950 by Mr. Shigeo Yamada. No longer in business.

3594. **Product Name:** King Shoyu. Soy Sauce, and Broil King Barbecue Sauce.
Manufacturer's Name: King Shoyu Factory. Renamed King Shoyu Co. Ltd. by 1955.
Manufacturer's Address: 1215 Kona St. near Piikoi (P.O. Box 976), Honolulu, Oahu, Hawaii. Phone: 566-744.
Date of Introduction: 1948.
Ingredients: Water, wheat flour, soy beans, salt, sugar, caramel coloring, and 1/10 of 1% sodium benzoate (chemical preservative).
Wt/Vol., Packaging, Price: ½ gallon or bottle.
How Stored: Shelf stable.
New Product–Documentation: Directory of the City and County of Honolulu. 1947-48. p. 512. King Shoyu Factory (Jukichi, Yoshiko, Hideko, and Toshiko Murata) 1215 Kona. Tel. 66744. P.O. Box 976. This is the earliest listing seen for this company. Not listed in 1941-42. Note: The 1947-48 Directory has the first index category for "Shoyu Manufacturers." and King Shoyu Factory is the only company listed there. 1955 Directory. King Shoyu Co. Ltd., 1215 Kona.



Black-and-white photo of rectangular Label from about 1955. King Shoyu Co. Ltd., Honolulu. ½ gallon. Illustration of a cartoon stick figure king as the "I" in the word King. Wearing a tall crown. Page 143. Buyer's Guide. Ad headed "Soy." King Shoyu Co. Ltd., Manufacturers of the famous King Soy Sauce. Broil King (Barbecue Sauce). For finer flavor, better cooking.

Ad by King Shoyu Co., Ltd. in Hui Manaolana. 1956. *Japanese Foods: (Tested Recipes)*. Honolulu, Hawaii. See p. 50. "The king of barbecue sauces: Broil King. Ready mixed, richly flavored, rightly blended." 1215 Kona St., Honolulu. Phone: 66744. An illustration shows a bottle of Broil King Barbecue Sauce.

Hawaii Directory of Manufacturers: Vinegar. 1964. King Shoyu Co., Ltd. 1215 Kona St., Honolulu. Phone: 566744.

Ad in Hawaii City Directory. 1968-69. p. 145. King Shoyu Co. Ltd. Manufacturers of the famous King Soy Sauce and Broil King Teriyaki Sauce. Illustrations (line drawings) show both bottles and labels. Address: 1215 Kona near Piikoi, P.O. Box 976. Zip Code 96808. Not listed 1979.

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows a label. They make amino acid soy sauce. The company is still in business. Letter from Tadao Nihei. 1988. July 19. They ran the business during the war, making chemical soy sauce, but closed in about 1978. Also made Barbecue Shoyu.

3595. Fukai, Tôshi. 1948. Shôyu jôzô-hô [Method of brewing shoyu]. Tokyo: Sangyo Tosho. 426 p. 22 cm. 2nd ed. 1952 (2 + 24 + 426 p.). [Jap]*
• ***Summary:*** The author was born in 1888.

3596. Fukai, Tôshi. 1948. Daiyô genryô shôyu seizôhô [Substitute ingredients for making shoyu]. Tokyo: Sangyo Tosho Kabushiki Kaisha. 10 + 418 p. Illust. 22 cm. [Jap]*
• ***Summary:*** The author was born in 1888. Address: Japan.

3597. Geechoun, Roy. 1948. Cooking the Chinese way. Melbourne, Australia: W.D. Joynt. 59 p. 19 x 12 cm. Illust. by Ruth Shackel. *
• ***Summary:*** Book has 34 recipes written with ingredients listed. Contains short essays on bean curd and soy bean sauce.

3598. Hamada Brokerage Co. 1948. Importer-Exporter and wholesale jobbers (Ad). In: Hokubei Shinpo-sha. 1948. *Nyuyoku Benran: Tsuketari jushoroku, 1948-1949 nendo [New York Japanese American directory: 1948-1949]*. Ad p. B-14. [Eng]
• ***Summary:*** Ad (¼ page). The top ¼ of this ad is in English. The top left illustration shows that they sell Daruma Shoyu–which is probably imported from Japan. Address: 3336 N. Halsted St., Chicago 13, Illinois. Phone: LAkeview 5-7135.

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3599. Hokubei Shinposha. 1948. Nyuyoku benran: Tsuketari jushoroku, 1948-1949 nendo [New York Japanese American directory: 1948-1949]. New York, NY: Hokubei Shinposha. 53 + 33 + 99 + 33 p.. Illust. 24 cm. [Eng; Jap]

• ***Summary:*** This book, which is read from "back to front" (except for the last 33 pages, which are in English) is approximately 70% in Japanese and 30% in English. It is divided into the following sections, each paginated separately: (1) Pictorial history (53 p.).



(2) Who's who (33 p. One person per page, with a photo and a brief biography in both Japanese and English). (a) A full-page biography of Mr. Shinsaku Nagano (p. 11) states: "Soy bean sauce" was virtually unknown in the USA until 1906, when it was introduced and subsequently popularized by an enterprising Issei [first generation] pioneer from Chicago, Shinsaku Nagano. He was the first to successfully commercialize "shoyu," and today he continues to direct the vast commercial enterprises of his Fuji Trading Co., founded 32 years ago. This company, a large scale manufacturer and canner of "soy bean sauce" and Oriental foods, is now located at 441-459 W. Huron St. [at N. Hudson Ave.], in central Chicago, Illinois. "A native of Shizuoka prefecture [Japan], which he left in 1906, Nagano gained prominence for relief work during the Depression years of the 1930s when he opened his factories at huge expense to house the unemployed. This magnanimous gesture, duly noted by the *Chicago Tribune*, was deserving of the paper's story in his honor." He is now anxiously waiting for resumption of trade with Japan. In the meantime he continues his hobby, working energetically, which is also the story of his success. Note 1. It is not clear from this biography (in English or Japanese) how Mr. Nagano introduced soy sauce to the USA, when he started making it in Chicago, and what the first name of his soy sauce manufacturing company was. He may have begun by importing it (in 1906) through Fuji Trading Co. When he saw that it was selling well, he may have constructed a factory to make it in Chicago. His facing biography in Japanese says that in 1910 he started "large scale production and sales" (*tairyô seisan hanbai*); if this is referring to soy sauce, then he started making it by 1910.

(b) A full-page biography of Mr. Kaijiro Tanaka (p. 22) states: A native of Fukuoka prefecture, Mr. Tanaka has the distinction of being the only Japanese tofu manufacturer in New York. He also owns two stores that sell general merchandise and Japanese foods (such as senbei / Japanese rice crackers). In 1906 he first arrived in the USA in San Francisco, California, where he was greeted by the great earthquake and fire. He moved to Denver, Colorado, where he became the city's first Japanese chauffeur. In 1914, after a brief visit to Japan, he returned to the U.S., settling in New York, where he soon entered his present business. He continued the tofu shop until the outbreak of World War II. In 1942 he moved into his present shop at 159 East 53rd St [between Lexington and 3rd Ave.]. He continued his pre-war business and also ran another business (*Tanaka Shokai*, Japanese Export and Import) at West 65th St. He is a member of the executive committee of the New York Japanese American Committee for Japan Relief Inc. and during the war was also on the executive committee of the Red Cross War Fund campaign, Japanese division. He is also a director of the Japanese Christian Institute. Note 2. It is not clear when (probably in about 1914) and at what address he began making tofu in New York–nor what the name of his tofu company was. On the facing page (p. 23) is a biography of Mrs. Kikue Tanaka. Born in Kumamoto prefecture, she came to New York in 1919 while a very young girl. For about 20 years she has been a successful woman restaurateur, owning and managing Suehiro's at East 29th St. Note 3. There is no indication that she is related to Mr. Kaijiro Tanaka, the tofu maker.

(3) Nyuyoku Benran, 1948-1948, published by Hokubei Shimpo-sha (99 p., all in Japanese). On page 29 of this section is a subsection on tofu business. See Tanaka 1914. (4) Ads at back (p. A1 to A13, B1-B18). (5) Classified business directory (33 p. all in English, numbered in the opposite direction as most of the book. Encompasses points as distant as Ohio and Florida). There are ads between most sections of the book. Address: New York City, New York.

3600. Koens, A.J. 1948. Peulgewassen [Leguminous crops]. In: C.J.J. van Hall and C. van de Koppel, eds. 1948. De Landbouw in de Indische Archipel [Agriculture in the Indonesian Archipelago]. 'S-Gravenhage: N.V. Uitgeverij W. van Hoeve. Vol. IIA. 905 p. See p. 241-42, 258-274, 473. In collaboration with G.G. Bolhuis. [79 ref. Dut]

• ***Summary:*** Contents: The plant. Varieties. Selection. Soil and climate. Methods of cultivation. Insects and diseases.

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Economics. Planting. Utilization. Value as a food (source of nutrients) for the people of Indonesia (*Indonesië*). Trade and commerce (*Handel*). Contains an excellent bibliography.

The section on "Utilization" mentions (and describes briefly how each is made): green vegetable soybeans (*de halfrijpe planten*), whole dry soybeans, roasted soybeans, ketjap (or soja or shoyu or taoyoe), tofu (*tao-hoe, bonenkaas*), baked tofu, firm tofu (*tao koan;* also simmered with *Curcuma longa*), sprouts (*taogè*), Indonesian-style miso (*tao-tjiong*), fermented black soybeans (*tao-dji*), tempeh (*tempe*), MSG (*Vetsin*), soybean meal (*sojameel*).

3601. Komaki (Joe T.); Kalifornians Enterprise. comp. 1948. Shikago Nenkan Chicago Japanese American year book. Chicago, Illinois: Joe T. Komaki, KE. 176 p. 22 cm. [Eng; jap]

• ***Summary:*** This directory is mostly in English.

It contains advertisements for: Showa Shoyu Brewing Co., Glendale, Arizona (p. 38-39). "Club" Shoyu, distributed solely by Pacific Mutual Sales Co., San Francisco, California (p. 40). Tofu–Ageh [Agé] Manufacturer. Asato Soy Bean Food Shop (p. 40). Mori Tofu Co., Chicago: Manufacturers of tofu (p. 43).

The pages in the 1948 Year Book are numbered continuously from beginning to end (p. 176), but the pages that contain bleed photos do no bear numbers. Very little of the 1948 Year Book is in Japanese; any Japanese appears under an English head. The 1948 Year Book does not contain alphabetical listings of businesses. The 1949 Year Book does, but the only apparent businesses that make soy products are Asato and Mori. Address: 1833 N. Bissel St., Chicago 14, Illinois.

3602. Lear, Edward. 1948. The complete nonsense book: Containing all the original pictures and verses, together with new material. New York, NY: Dodd, Mead & Co. xv + 430 p. See p. 74.

• ***Summary:*** The original edition of this book was published in 1862, in London (which see). This edition, edited by Lady Strachey, was copyrighted in 1912. Address: London.

3603. Li, Ch'iao-p'ing [Qiaoping]. 1948. The chemical arts of old China. Easton, Pennsylvania: Journal of Chemical Education. viii + 215 p. See p. 170-80. Illust. 24 cm.

• ***Summary:*** Chapter 14, titled "Soybean products," begins: "Three kinds of soybean products, fermented soybean, soybean sauce and soybean curd, have been largely produced in China and Japan and exported to other countries where they are used to a smaller extent. The first kind called in China 'chiang' or 'shih' (1 Cc = Chinese character of each is shown), the second 'chiang yu' or 'chih-yu' and the last one 'tou-fu' (2 Cc) are all considered by the Chinese and Japanese as important articles of diet.

"Both the fermented soybean and soybean sauce are made by the fermentation of either soybean alone or the mixture of soybean and wheat flour in salt solution. Their manufacture originated in the Chou Dynasty [pinyin: Zhou, 1045-256 BC]. It is stated in *Chou li* [pinyin: Rites of the Zhou dynasty, ca 300 BC] that an officer, i.e. the Imperial Cook, was appointed to take charge of making and providing one hundred and twenty of the fermented soybean per year for imperial use. According to another book, the invention of this condiment was attributed to the Duke of Chou. The History of the Han Dynasty 91.7 and the *Shih shi* 129.15 also say that many merchants enriched themselves or obtained titles by the sale of these products in the time of the Ch'in [pinyin: Qin, 221-206 BC] and the Han [202 BC to AD 220] dynasties. From this it is obvious that they were already largely consumed by the Chinese people in ancient times.

Bean curd also had its origin in early times. It is said to have been made first by Liu An (2 Cc) (died 122 B.C.) and was early known as *li-ch'i* (2 Cc) *Shih wu yüan hui* 30.6, Materia Medica 25.2.

"During recent years a considerable amount of scientific investigation of soybean sauce has been carried on in China. Methods of manufacture described in early Chinese texts have been modified in many respects..."

"The ancient method of preparing fermented soybean:" A detailed (2¼-page) translation is given of the method for making jiang and shih described in the *Ch'i min yao shu* 8.2b-7a.

The introduction to the translation states: "The process of making the fermented soybean consisted of subjecting the mixture of soybean and wheat flour to the action of certain species of mold and mixing and storing the product with brine in a large container to allow the fermentation to take place."

Note: This book was first written in Chinese, entitled "History of Chemistry in China," and published by the Commercial Press Ltd., Shanghai, China. The 1st edition appeared in 1940 and the 2nd ed. in 1941. It was also translated into Japanese and published there in 1941. Address: 10A Hua Yuan Ta Yuan, Fu Ch'ien Chieh, Peiping, China.

3604. Oriental Show-You Company. 1948. Manufacturers of Oriental Show-You (Ad). In: Hokubei Shinpo-sha. 1948. *Nyuyoku Benran: Tsuketari jushoroku, 1948-1949 nendo [New York Japanese American directory: 1948-1949]*. Ad p. B-14. [Eng]

• ***Summary:*** Ad (½ page horizontal; see next page). The top 1/3 of this ad is in English. "Canning and wholesale of [mung] bean sprouts, Chow Mein, noodles and vegetable chop suey." In Japanese: Oriental Shoyu Jozo Kabushiki Kaisha, President Mr. Shinzo Ooki, shoyu maker. Address: Columbia City, Indiana.

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3605. Pacific Mutual Sales Co. 1948. "Club" Shoyu (Ad). In: Chicago Shimpo, Inc. 1958. Chicago Japanese American directory. See p. 40. [Eng; jap]

• ***Summary:*** Ad (½ page). The top line and the bottom ¼ of this ad are in English. The word "Kurabu" is written in katakana characters inside an octagon that is wider from left to right than from top to bottom. In the top right, in Japanese, is written vertically "Honzukuri Kurabu shoyu" (truly / traditionally made Club Shoyu) Pacific is the sole distributor. We are not told where the product is made, or by what company.

Ad also appears in 1948 in Nichi Bei Times. Evacuation resettlement report. p. 143 (half-page ad on right). May 31. Address: 1498 Ellis St., San Francisco, California. Phone: WAlnut 1-2932.

3606. Rotondi, Pietro. 1948. Vegetarian cookery. 2nd ed. Hollywood, California: Published by the author. 150 p. Recipe index. 21 cm. 1st edition was 1942.

• ***Summary:*** This book is identical to the original 1942 edition except that: (1) It is now published in paperback by the author; (2) A color photo of the smiling author, standing at the door of his office by a sign "Dr. P. Rotondi, Chiropractor, Nature Cure," appears on the front cover; (3) The author's business card, which includes the address of his chiropractic office, appears at the bottom of the copyright page; (4) The last page of the index, p. 151, was accidentally not printed. Address: 1916 Vista Del Mar Ave., Hollywood, California. Phone: 463-2972.

3607. Smith, A.K. 1948. Microorganisms collected in China, Japan, and Korea. 7 p. Unpublished typescript.

• ***Summary:*** Dr. Smith collected 100 samples in Shanghai (58 samples), Nanking (13), Hangchow, Canton, Tokyo, Noda (near Tokyo, Japan), Korea (7).

3608. The Indian cookery book: A practical handbook to the kitchen in India; Containing original and improved recipes in every department of Indian cookery... By a thirty-five years' resident. 7th ed. 1948. Calcutta, India: Thacker, Spink & Co. x + 135 p. 1st edition 1869. *

3609. Watkins, James M.; Severen, Mario Lewy van. 1948? Produccion y usos del frijol soya en El Salvador [Production and uses of the soybean in El Salvador]. San Salvador: Ministerio de Agricultura e Industria, Centro Nacional de Agronomia. 12 p. Undated. 25 cm. [Spa]
Address: El Salvador.

3610. Larson, Roy F.; Liggett, Robert Winston; Mussulman, Wayne C. Assignors to A.E. Staley Manufacturing Company. 1949. Flavoring materials. *U.S. Patent* 2,459,563. Jan. 18. 4 p. Application filed 19 May 1947.

• ***Summary:*** This method for production of a synthetic soy sauce reduces fermentation time from years to weeks. It substitutes fermentation of a single ingredient for the fermentation of entire product required in the making of genuine soy sauce. The results, the inventors claim, approach the characteristic odor and flavor of genuine soy sauce more closely than do soy-type condiments prepared by chemical methods alone.

The opening paragraph of the patent states that "it pertains to methods for improving the aroma and flavor of unfermented liquid flavoring materials resembling the condiment known as soy sauce." The first step in the process typically involves hydrolyzing defatted soybean meal with acid. "Combining chemical hydrolysis of the protein material with subsequent fermentation of the hydrolyzate, as suggested by the prior art, may tend to overcome the aroma and flavor disadvantages of the straight chemical sauce and may also reduce the fermentation time required by the conventional soy sauce process, but it still requires a preparation time that is quite long compared with that of a chemical sauce." Address: Staley.

3611. Moyer, Wendell W. Assignor to A.E. Staley Manufacturing Company (Decatur, Illinois; a corporation of Delaware). 1949. Flavoring materials. *U.S. Patent* 2,459,574. Jan. 18. 4 p. Application filed 19 May 1947. [4 ref]

• ***Summary:*** "This invention... has to do with novel methods for improving the aroma and flavor of unfermented liquid flavoring materials resembling the condiment known as soy sauce.

"Genuine soy sauce is made by a fermentation process requiring from about two months to several years to complete. The fermentation liquid has a characteristic pleasant aroma and flavor. In general, the sauces prepared by the longer fermentations have superior aroma and flavor."

"Example 1: Unfermented liquid sauce similar to soy sauce was prepared by acid digestion of soybean meal

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according to directions given in United States Patent No. 1,992,462. A mixture of 19 parts of refinery cane molasses and 1 part of the unfermented sauce was diluted with water to 40 percent solids, was inoculated with a culture of *Zygosaccharomyces nussbaumeri* and incubated for five days at 100°F..." Note: This is a co-patent to No. 2,459,563. Address: Decatur, Illinois.

3612. Nakajima, Minoru; Imaki, Takashi; Takei, Sankichi. 1949. Shôyu kôki seibun no kenkyû. I. Shôyu kôki-chû no tei futten busshitsu oyobi sansei busshitsu ni tsuite [Studies on the flavorous components of soy sauce. I. On the lower boiling compounds and acidic compounds in soy sauce aroma and flavor]. *Nippon Kagaku Kaishi (J. of the Chemical Society of Japan)* 70(1-2):40-42. Jan/Feb. [10 ref. Jap] Address: Kyôdai [Kyoto Daigaku] Nôgaku-bu, Nôsan Seizôgaku Kenkyû-shitsu, Kyoto, Japan.

3613. Nakajima, Minoru; Takei, Sankichi. 1949. [Studies on the flavorous ingredients of soy sauce. II. On the isolation of shoyu-aldehyde and its chemical structure]. *Nippon Kagaku Kaishi (J. of the Chemical Society of Japan)* 70(3):47-49. March. [13 ref. Jap]

3614. Nakajima, Minoru; Takei, Sankichi. 1949. [Studies on the flavorous ingredients of soy sauce. III. Synthesis of γ-acetylbutyaldehyde (soyanal) and acetovanillon]. *Nippon Kagaku Kaishi (J. of the Chemical Society of Japan)* 70(3):47, 49-52. March. [13 ref. Jap]

3615. Smith, Allan K. 1949. Oriental use of soybeans as food: Notes on Oriental farming practices. II. China. *Soybean Digest.* March. p. 26-28, 30, 32, 34.
• ***Summary:*** Contents: Soy sauce in China. Sweet flour paste–Tien Mien Chang [Chiang]. Soy or vegetable milk (incl. Willis Miller, yuba). Soybean curd or tofu (incl. use in Buddhist restaurants to look like meat, poultry, or fish dishes).

Soybean cheese [fermented tofu]. Fen-t'iao from mung beans (vermicelli). Fermented soybeans [fermented black soybeans] (made from small black soybeans). Vinegar fermentation process. Address: Northern Regional Research Lab., Peoria, Illinois.

3616. Smith, Allan K. 1949. Oriental use of soybeans as food: Soybean cheese [fermented tofu] (Document part). *Soybean Digest.* March. p. 30.
• ***Summary:*** "Soybean curd, previously described, is the starting material for making all types of soybean cheese. In making the curd, it is pressed hard enough so that it can be cut into small cubes, these varying in size for different cheese preparations. Significant variations in the process, besides the microorganisms, are the proportions of salt and type of solution in which the cheese is aged. The cheese appears to vary somewhat with the locality in which it is produced, a variation due probably to the influence of climatic conditions on the activity of the fermenting microorganisms.

"At Hangchow they make a cheese product known as 'Chee-fan,' 'Chee' meaning cheese and 'fan' meaning small cube, hence a literal translation is 'small cheese cube. This type of cheese was reported to be made in only two localities, Hangchow [pinyin: Hangzhou] and Shoshing [sic, Shao Hsing; pinyin: Shaoxing, in Chekiang (pinyin: Zhejiang) province], the home of the famous Shoshing wine.

"*Chee-fan* is a brownish soft cheese. It has both an agreeable smell and taste. The following materials and proportions are recommended for making this cheese." A table shows: Soybeans 70 kg. Salt 25 kg. Yellow wine (Shoshing) 55 kg.

"In making the cheese the pressed soybean curd, prepared from the recommended amount of beans, is cut into cubes about ½ by ½ by ¼ inches. The cubes are inoculated with mold, salted, and placed in an appropriate storage house for about 7 days for development of mold. The mold (*Mucor*) is grown on wheat flour. It exists in Chinese mold of wine and is white in color. Also, *Aspergillus glaucus*, blue in color, apparently takes part in the cheese development. The cubes are next placed in an earthen crock or wide-mouth bottle of about 2-gallon capacity, and yellow wine and mold of wine are added. It is allowed to age in the wine for about 1 year.

"*Tsue-fan* is another type of cheese that translated literally means "drunken cheese". The name probably reflects the use of wine in making the cheese. The materials and proportions for this cheese are: A table shows: Soybeans 70 kg. Salt 15 kg. Wine 35 kg.

"The pressed soybean curd, cut into cubes 1½ by 1½ by ½ inches, is boiled in water, cooled, and partly dried. It is molded and placed in yellow wine (rice wine) with wine mold added and aged for 6 months.

"*Hon-fan* is a red cheese that makes use of soy sauce in its preparation. The materials and their proportions are as follow: A table shows: Soybeans 70 kg. Salt 30 kg. Soy sauce 10 kg. Red mold (from Foochow) 0.75 kg.

"This cheese is made in the same manner as "drunken cheese" except that soy sauce rather than wine is used in aging the cheese. It was reported that red cheese is made only in the fall of the year."

Note: This is the earliest document seen (Oct. 2011) that uses the term "Chee-fan" or the term "Tsue-fan" or the term "drunken cheese" or the term "Hon-fan" to refer to fermented tofu. Address: Northern Regional Research Lab., Peoria, Illinois.

3617. Oriental Show-You Co. 1949. Display ad: Chop suey: Make it at home. *Washington Post.* April 8. p. 8.
• ***Summary:*** A horizontal rectangular ad. An illustration shows a large bottle of Oriental-brand Show-You sauce.

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"Send for free Oriental recipe book." Address: Columbia City, Indiana.

3618. Smith, Allan K. 1949. Oriental uses of soybeans as food: With attention to fermented products. Notes on Oriental farming practices. IV. Japan. *Soybean Digest.* May. p. 24-26, 28, 30.

• ***Summary:*** Contents: Introduction. Production of miso. Soy sauce in Japan. Monosodium glutamate. Trends in soy sauce production.

"The Kikkoman Shoyu Co. Ltd. was founded in 1764. This is the largest soy sauce plant in Japan and probably the largest in the world for making a fermented type sauce. The annual shoyu production at Noda has been as much as 23 million gallons, consuming 30,000 tonnes (11 million bushels) of soybeans, 27,000 tonnes of wheat, and 29,000 tonnes of salt. The Noda city factory includes 8 brewing plants, 1 barreling plant, 6 auxiliary plants for the construction of barrels and other materials used in their process, and a research laboratory with a staff of more than 30 workers. The factories of Noda city are spread over 2,333 acres of land... The koji is made in wooden trays about 14 by 24 by 4 inches deep. There are 1,500 cement fermenting tanks in one plant. For a good grade of soy sauce, the mash is fermented for 8-12 months. But owing to the current pressing need for the sauce, the fermenting period is now often shortened to 3 months." Address: Northern Regional Research Lab., Peoria, Illinois.

3619. Culbertson, Raymond E.; Smith, Allan K. 1949. Oriental uses of soybeans as food: With attention to fermented products. Notes on Oriental farming practices. V. Korea. *Soybean Digest.* June. p. 15-18, 20, 22.

• ***Summary:*** Contents: Introduction. Breeding work. Topography. Land use. Soybean varieties. Climatic relations. Soils of Korea. Cultural practices. Marketing. Soybeans as foodstuff. Soya sauce. Green pods on the bush. Bean sprouts. Parched beans. Curd (soybean curd [tofu]) and milk. Kochuchang. Other uses.

"Prior to World War II, North Korea planted (1940-44 averages) slightly more than 905,000 acres of soybeans annually which yielded some 7,700,000 bushels. During the same 5-year period South Korea was planting 626,000 acres which yielded a little over 5 million bushels. The latest available figures (1947) for South Korea show a production of 4,480,000 bushels from 662,000 acres."

Concerning food uses of soybeans in Korea: "Soya sauce:... is found on the tables of all Koreans, where it is used quite generally on rice, sukiaki [sukiyaki], fish, chicken, and other meats and for the flavor it adds to the soup. It is a very popular appetizer. Most families make soya sauce and are allocated 2.7 kilograms of salt per person annually for this purpose. Yearly consumption is about 6 liters per person. In addition to homemade soya sauce, a supply is also available from many small factories making it. There are more than 10 plants in Seoul, the capital city. Making soya sauce in the home starts about January or February. It is the custom at this time to take a batch of beans and boil them in water until soft, following which they are mashed and formed into a ball, placed in a rice-straw bag and hung up in a heated room to ferment for a 3-month period. Following fermentation, the ball is cut open, broken into pieces and allowed to dry in the sun. When dry, water and salt are added, inoculant (yeast) introduced and the mixture allowed to stand in an earthen crock 2 to 3 months. The liquid is then poured off, boiled about 2 hours and filtered, following which it is considered to be sauce. The sediment remaining in the crock is known as paste. This is used primarily for making soup. In both home and commercial production of soya sauce parched and browned wheat or barley is frequently used in conjunction with the soybeans.

"Green pods on the bush: It is common practice to market early beans on the bush. The plants are pulled, dirt shaken from the roots and the leaves removed. The braches are tied with a string (usually hemp) and the plants are taken to market where they are sold by the bunch. The housewife prepares them for eating by picking off the pods and boiling, and the plant stem is used for fuel.

"Bean sprouts: Bean sprouts are much in demand especially during the winter months. They are used in combination with meat, Chinese cabbage, spinach, turnips, soups and various other cooked dishes. Sprouts are nourishing and supply much-needed vitamins to the Korean's usual polished rice diet. In some instances the beans are left on the sprouts, in others they are removed. The beans are sprouted in central places and usually peddled in two-wheeled, man-drawn carts. Sprouting requires about a week. They are sold on a weight basis.

"Parched beans: For parching, soybeans are simply placed in a pan over a fire and heated slowly until the skin breaks and part of the beans are slightly blackened. They are

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eaten like peanuts or mixed with other foods. Most varieties are quite palatable and well liked for parching. Note: The Korean name for parched soybeans is *kong*.

"Curd and milk: Soybean milk is consumed in Korea but not so extensively as in China. The milk is made in a manner similar to the Chinese method which was described in an earlier report.

"A large percentage of the soybeans' growth in Korea are consumed as soybean curd. In addition to the huge quantities made at home, curd is also made in literally hundreds of small factories. In Seoul alone there are more than a hundred. Small units, which on the average employ five men, can work up about 10 bushels of soybeans daily.

"Kochuchang: Practically every Korean family makes kochuchang. Boiled [soy] beans are mashed and hung up in sacks to cure well for 2 or 3 months. This material is then broken up, dried in the sun, and ground to a fine powder, usually in an old type hand-operated stone mill. Red peppers are ground fine, the lot is mixed and salt and water added, then it is allowed to stand in crocks 2 to 3 months. To prepare kochuchang for the table, it is taken from the crock and boiled with the addition of ground meat and sugar, if the latter is available."

Note: This is the earliest (and only) English-language document seen (March 2009) that uses the word "kochuchang" to refer to Korean-style red pepper and soybean paste (miso).

Photos show: (1) A man standing in a field of sorghum interplanted with soybeans in Korea. (2) A Korean woman examining different varieties of soybeans in woven baskets in the market place in Seoul, Korea (Aug. 1948). (3) A boy carrying a wooden bucket on each end of a wooden shoulder pole. The buckets are used for transporting night soil to the land in Korea. (4) Soybean curd (cut into cakes) and vegetables in the market place at Seoul, Korea (Aug. 1948).

An outline map of South Korea and its provinces shows the principal varieties of soybeans grown, the section where each variety is grown, acreage and production. A chung or chungbo is 2.45 acres, and a suk is 5 bushels. The yields appear very low but this may be due to the custom of interplanting soybeans with other crops.

Tables show: (1) The 15 chief varieties of soybeans grown in Korea. For each is given: The name of each variety (romanized, with a translation of each word). Days to maturity. Flower color. Stem length. Color of seed coat and hilum. Weight of 1,000 seeds. Yield per acre. Rank in test. Year approved (1921-1939). For example: Chang Tan Paik. "Chang Tan" is the name of a town in Korea; Paik means "white."

(2) Analytical data for improved varieties of soybeans on the basis of the size of the bean. The 3 sizes are large, medium, and small. Examples of locations are: Southeast Korea. Northeast Korea. Central Korea. Southeast Korea. Address: Northern Regional Research Lab., Peoria, Illinois.

3620. Smith, Allan K. 1949. Oriental methods of using soybeans as food: With special attention to fermented products. Notes on Oriental farming practices. *USDA Bureau of Agricultural and Industrial Chemistry*. AIC-234. June. 40 p.

• ***Summary:*** Page 1 states: "The text of this bulletin, with slight revisions, is as it appeared serially in *The Soybean Digest*, issues of February through June, 1949, although many additional photos appear herein. It is processed with the publisher's permission." Note: An enlarged 65 page edition was issued in July 1961.

Photos show: (1) Nine people in a field cultivating soybean with hoes near Nanking, China. All of these workers but one are women. July 1948. (2) "The three-man shovel, Korean version of the turning plow. The motive power is supplied by the mean holding the ropes." (3) A man and donkey threshing wheat with a stone roller. (4) A water buffalo and man pumping water from the rice fields. All parts of the pump and elevator are made of wood. Near Nanking, China, July 1948. (5) Windmill used for pumping water. The sails or vanes are mats woven from grass. (6) Children with baskets of soybean sprouts and inflated Chinese national currency in the market place at Canton, China. Aug. 1948. (7) Soybean milk for sale on the streets of Canton, China. Aug. 1948. It is in bottles, carried using a shoulder pole. (8) A wedge press for oilseed operations at Canton, China. Preformed disks of the flaked or ground meal are inserted in the slot and turned clockwise in the hollow log; pressure is applied with wooden wedges. July 1948. (9) Equipment for steaming soybeans preparatory to making soy sauce. Steam is passed upward through the wooden tanks from a boiler beneath. Peiping, China. 1948. (10) Soy sauce preparation. Steamed soybeans are placed in woven baskets or trays for 3 to 7 days to permit the growth of the mold *Aspergillus oryzae*. Nanking, China. July 1948. (11) Many earthenware jars for soy sauce production in a courtyard surrounded by houses. "Following the growth of a thick mold on the soybeans, they are mixed with parched and cracked wheat and placed with salt solution in earthenware jars for fermentation, which lasts 3 months to 2 years. Soy paste [chiang] is fermented in a similar manner but it contains less water and the fermentation period is about 3 months. Shanghai, China. Aug. 1948." (12) "Soybean curd and vegetables displayed for sale in market place. Seoul, Korea. Aug. 1948." (13) Squares of soybean curd covered with white mold on round, woven bamboo trays. "This is the first step in making soybean cheese. Canton, China. Aug. 1948." (14) Two rows of large hydraulic presses in the mill of the China Vegetable Oil Company, Shanghai. June 1948. (15) Men loading round, hydraulic-pressed soybean cakes onto a truck, on the Bund. Shanghai, July 1948. (16) Men and an ox preparing a seed bed at a Japanese agricultural experiment station near Tokyo. 1948. (17) "A miso plant in Tokyo. The

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large tubs [vats] in foreground are used for the fermentation of miso. A part of this plant was destroyed by bombs during the war. Aug. 1948." (18) Three men standing by presses destroyed during bombing raids over Tokyo. These presses formerly were used for filtering monosodium glutamate. July 1948. (19) Many stacked wooden tubs of ajinomoto (monosodium glutamate) ready for shipment at a plant located between Tokyo and Yokohama, Japan. Aug. 1948. This plant had a maximum production of 7.5 million pounds of ajinomoto in 1937. (20) Agricultural Experiment Station near Seoul, Korea. This station was built by the Japanese during their occupation of Korea. Later it was taken over and administered by the newly formed Korean Government. Aug. 1948. (21) A Korean boy standing in a field of sorghum interplanted with soybeans; this is a common practice in Korea. 1948. (22) A boy using a shoulder pole to carry two wooden buckets of night soil to the land. Korea. 1948. (23) A wooden shopper looking over the different varieties of soybeans in the market place at Seoul, Korea. Aug. 1948. (24) Outline map of Korea showing where principal varieties of soybeans are grown, the section in which each variety is found, the acreage, and production. Address: Head of Meal Products Investigations, Oilseed Crops Lab., Northern Utilization Research and Development Div., Peoeia, Illinois.

3621. *Soybean Digest.* 1949. New soy sauce method. July. p. 21.
• ***Summary:*** "A new method for the production of synthetic soy sauce, cutting fermentation time from years to weeks, has been developed at Decatur, Illinois, by Roy F. Larson, Robert Winston Liggett, and Wayne C. Mussulman."

3622. Iguchi, Nobuyoshi. 1949. Kôji-kin ni kansuru kenkyû. I. Shigai-sen shôsha ni yoru shôyu-yô kôji-kin no heni ni tsuite [Studies on *Aspergilli.* I. Mutation of *Aspergillus sojae* Sakaguchi et Yamada by irradiation of ultraviolet rays]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 23(1):16-18. Aug. [4 ref. Jap; eng]
Address: Noda Industrial Science Lab., Noda, Japan (Noda Sangyo Kagaku Kenkyusho).

3623. Iguchi, Nobuyoshi. 1949. Kôji-kin ni kansuru kenkyû. II. [Studies on *Aspergilli.* II. The production of ultraviolet-induced mutations in *Aspergillus sojae* (continued)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 23(8):357-60. March. Colored plate on unumbered page after p. 360. [15 ref. Jap; eng]
Address: Noda Industrial Science Lab., Noda, Japan (Noda Sangyo Kagaku Kenkyusho).

3624. Bureau of Entomology & Plant Quarantine, Bureau of Animal Industry–U.S. Food & Drug Administration. 1949. Food and Drug–Agriculture. List of Imports Detained by the Federal Food and Drug Administration. July 22 to Aug. 19. 1949. *American Import & Export Bulletin* 31(3):684-89. Sept.
• ***Summary:*** This is a long (6-page) table with 3 columns: (1) Product and port of entry. (2) Quantity. (3) Reason for detention. Note that the country of origin is not given.

Page 684: Port of Chicago. "Thin Soy [Sauce]–2 cases–Labeling inadequate." "Chinese Foods (Canned Fish and Thin Soy)–35 cases–Labeling incomplete, decomposed."

Page 684: Port of San Francisco–continued.

Page 686: Port of New York–continued "Tuna (solid pack in soybean oil)–600 cartons–Decomposed; no English label; not "Tuna" but "Bonita."

Page 687: Port of San Francisco. "Bean Sauce–480 lbs–Filthy." "Bean Curd–320 lbs–Filthy." "Cnd. [Canned] Bean Sauce–720 lbs–Filthy." "Dried Bean Curd Sticks [probably dried yuba sticks]–400 lbs–Filthy." "Cnd. [Canned] Salted Bean Curds–200 lbs–Insect infected." Note 1. This may well be fermented tofu.

Page 688: Port of San Francisco–Continued. "Bean Curd–400 lbs–Filthy." "Dried Bean Curd–400 lbs–Filthy." Note 2. "Dried Bean Curd" is probably dried yuba rather than dried tofu. "Cnd. [Canned] Bean Curd–48 lbs–Filthy." "Dried Bean Curd–280 lbs–Filthy." "Bean Sticks–800 lbs–Filthy."

Note 3. This periodical was published once a month, 2 volumes a year (6 numbers per volume), from July 1934 to March 1974 by the North American Publishing Co. (New York). 80 volumes total.

3625. May Co. 1949. Display ad: Chun King–Chicken Chow Mein dinner. *Los Angeles Times.* Oct. 2. p. A3.
• ***Summary:*** "Plus a tin of chow mein noodles and a bottle of soy sauce. Three to four generous delicious servings. Ready to eat. All you have to do is heat and serve it." A photo shows the front of a can of Chicken Chow Mein with what appears to be a bottle of soy sauce next to it.

Note: This is the earliest document seen (Feb. 2012) concerning Chun King and soy sauce. Address: Modern Market, Downtown, Street Floor.

3626. Chatfield, Charlotte. 1949. Food composition tables for international use. *FAO Nutritional Studies* No. 3. 56 p. Oct. [158* ref]
• ***Summary:*** A table on page 11 shows "Food composition in terms of retail weight ("as purchased") for soybeans and various soybean products: Whole seeds, dry; Flour, full fat (seed coat removed); Flour, low fat–grits, flakes (partially defatted); Curd, tofu (yield 3.5); Fermented beans–Japanese natto; Fermented beans–Chinese tsiang [chiang]; Soybean milk (yield 7.5); Paste, miso (made with small amounts of rice or other starchy materials) (yield 2.5); Shoyu sauce (yield 3.5). The following are given for each product: Calories per 100 gm, percentage of protein and fat, and yield from 1 kg of soybeans.

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Similar but expanded information is given on p. 25, including carbohydrate, fiber, ash, and refuse. Address: Nutrition Div., FAO, Rome, Italy.

3627. Chia, Ji Chiao; Mu, Hsian Kuan; Lang, Chuan Feng. 1949. Preparation of soy sauce. Translated by Mr. Hoo. Shanghai, China: National Bureau of Industrial Research Laboratory. 14 p. Oct. 11. [Eng]
• ***Summary:*** Contents: Introduction. The factory and its equipment. The procedure. Treatment of raw materials: For soybean, treatment of wheat. Growth of culture: sterilization of culture room and culture dishes, stirring of culture, the culture. Preparation of soy mash. Preparation of chemical soy sauce. Preparation of soy color and caramel. Pressing, sterilization and additional treatment. Address: National Bureau of Industrial Research Lab., Shanghai, China.

3628. *Vegetarian News Digest* (*Los Angeles*).1949. Health in the news: The soy bean–wonder food of many uses. 1(9):21. Sept/Oct.
• ***Summary:*** "Allan K. Smith of the Northern Regional Research Laboratory, Peoria, Illinois, recently returned to the United States from the Orient where he learned of countless uses for soy beans. In China, Japan and Korea he found soy beans being fermented, ground, and processed in various ways. In its motherland, Smith discovered, the soybean is a source of flour and cake, oil, bean sprouts, vegetable milk, various sauces and pastes, curd, cheese, and several other foods." Describes how soy milk is made in China. One restaurant that Smith visited prepared more than 25 different dishes from soybeans.

3629. Wang, Fu-Sheng. 1949. Bacterial examination of soy-bean-sauce in Peking. *Chinese Medical Journal* 67:542-46. Oct. Summarized in Soybean Digest, Jan. 1951, p. 37. [4 ref. Eng]
• ***Summary:*** In 1945 it was reported from Chengfu (see Wang 1945, *American J. of Tropical Medicine*) that Chinese soy-bean sauce was transmitting gastro-intestinal bacterial infections. "The author found positive cultures in as many as 35% of the samples examined. If this finding can be confirmed, it seems to be" a serious public health problem.

"In contrast to the findings of Wang in Chengfu, the present examination of 51 samples of soy-bean sauce in Peking showed an absence of the common gastro-intestinal pathogens. However, the finding of coliform bacteria in some of the samples examined might indicate a certain amount of fecal contamination. This point is worthy of further study." Not a single mold was found in the 51 samples examined. Address: Dep. of Bacteriology and Immunology, Peking Union Medical College, Peking.

3630. Brant, Burl. 1949. CARE packages use soy products. *Soybean Digest.* Nov. p. 39.
• ***Summary:*** "Since April 1948, when the Japanese Food Package for CARE was developed, two soybean products have been continuously included in those packages. They are soy sauce, known as 'shoyu' and a bean curd [sic] preparation, known as 'miso.'" Both the miso and shoyu shipped to Japan were made in the USA. The annual production of shoyu in America is estimated at about 500,000 gallons. The shoyu sent to Japan is made by blending traditional fermented shoyu with HVP soy sauce. Address: Asst. Executive Director, Cooperative for American Remittances to Europe, Inc. (CARE).

3631. Kagawa, Aya. 1949. Japanese cookbook (100 favorite Japanese recipes for Western cooks). Tokyo: Japan Travel Bureau. 162 p. Illust. (line drawings, and color-, and black and white photos). 19 cm. Series: Tourist Library No. 11.
• ***Summary:*** Contents: Preface. General remarks (The why of Japanese food, its nutritive value, table utensils, an ordinary meal, meals for guests, table etiquette, kitchen utensils, how to cut up fish and vegetables, glossary {incl. aburaage, miso, shoyu, tofu}). Japanese cookery: Table of measures, soups, boiled foods, broiled foods, fried foods, saucepan foods, steamed foods, *hitashimono* (boiled greens in soy [sauce]), aemono (dressed vegetables), vinegared foods, sliced raw fish (sashimi), rice foods, sushi (vinegared rice foods), pickles, seasonal menus, New Year's foods, Girls' Festival foods. How to make Japanese cakes (incl. bean paste from red beans).

Many recipes call for "shoyu" [soy sauce]. Soy related recipes: Scrambled egg soup (with shoyu or Worcester sauce, p. 42). Tofu and Japanese leek soup (p. 49). Miso soups (p. 50-51). Broiled egg-plants (with miso, p. 70). Beef sukiyaki (with tofu, p. 79-80). Fish stew (with tofu, p. 81). Odamaki mushi (with yuba, p. 85). Boiled greens in soy (p. 91-92). Dressed food with white sesame [seeds] and vinegar (and aburaage {fried beancurd}, p. 96). Dressed carrot and kidney beans in pod (with tofu, p. 97).

On p. 14 we read: "Soy beans are used very much in Japanese food; especially in hilly regions where fish is scarce, or in vegetarian menus (in connection with Buddhism). Beans are not only simply boiled but eaten in various ways. They are made into *tôfu* (beancurds), *aburaage* (fried tôfu), *nattô* (steamed and fermented beans), *shôyu*, *miso*, [azuki] bean-paste used in cakes, etc." Key flavorings are miso, shoyu, sugar, and vinegar. Sake, mirin, dashi and ajinomoto (seasoning powder) are also important. "Seaweeds are usually eaten dry. Nori (seasoned laver), kombu (tangle), wakame (lobe leafed undaria), hijiki (spindle-shaped bladder-leaf), and so on, are rich in iodine,..."

Note: This is the earliest English-language document seen (May 2012) that contains the word *aburaage* or the term "fried tôfu" (with diacritics). They refer to deep-fried tofu pouches.

"Of flavorings, *miso*, *shôyu*, sugar and vinegar are

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the most important. *Sake* (Japanese wine), *mirin* (a sweet kind of *sake*) and *dashi* are used in this way to give flavor. Properly speaking, *dashi* is formed by boiling shaving [sic, shavings] of *katsuobushi* (dried bonito) or *kombu* (tangle, a kind of kelp), but *ajinomoto* (seasoning powder) may take its place. Usually, however, *dashi* is not made, and instead *niboshi* (a small dried fish) is boiled together with the food to give it flavor. Besides, ground walnuts sesame, peanuts etc., are used to dress vegetables. In addition to these, mustard, red pepper, horse radish [wasabi], the leaves and berries of *shiso* (a kind of highly flavored leaf), the leaves and berries of *sansho* (Japanese pepper), Japanese leeks [negi], *myôga* (myôga ginger [*Zingiber mioga* Roscoe]), ginger [shôga, the root of *Zingiber officinale*], are used as flavorings, being found growing in most kitchen gardens."

"Our special thanks are due to Dr. R.H. [Reginald Horace] Blyth, professor of Gakushin University, who translated the original Japanese manuscript into English." Aya Kagawa was born in 1899. The book was first published in December 1949 but not copyrighted until 1952. The almost identical 9th printing appeared in April 1955. Only the color photos were changed (upgraded) by 1955. The first true revision and 2nd edition was the so-called "Fourteenth & revised edition" of 1962. Address: M.D. and president of Joshi Eiyô Tanki Daigaku (Women's Nutrition College), Tokyo, Japan.

3632. Yokotsuka, Tamotsu. 1949. Shôyu kôki seibun ni kansuru kenkyû. I. Shôyu kasu ni yoru kôki seibun no bunri, shu toshite teifutten kôki seibun ni tsuite [Studies on flavorous substances in soy [sauce]. I. Isolation of flavorous substances from soy-cake, chiefly the flavors substances of lower boiling point]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 23(5):200-05. Dec. [13 ref. Jap: eng]
Address: Noda Industrial Science Laboratory, Noda, Japan (Kikkoman).

3633. **Product Name:** [Higashimaru Shoyu].
Manufacturer's Name: Higashimaru Shoyu Co. Ltd.
Manufacturer's Address: 100-3 Tominaga, Tatsuno city 679-41, Japan.
Date of Introduction: 1949.
New Product–Documentation: Fruin. 1984. History of Five Japanese Shoyu Companies. Soya Bluebook. 1986. p. 105.

3634. Index of trademarks issued from the United States Patent Office. 1949. Washington, DC: U.S. Government Printing Office. See p. 565. *
• ***Summary:*** Page 565: "Oriental Show You Company, Inc., Columbia City, Indiana. Canned chop suey, canned chow mein noodles, canned [mung] bean sprouts, etc."

3635. La Choy Food Products, Inc. 1949. The art and secrets of Chinese cookery. Archbold, Ohio: La Choy Food Products, Div. of Beatrice Foods Co. 27 p. Illust. (some color). 10 x 16 cm. *
• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home.

3636. Loma Linda University, School of Dietetics. 1949. Lesson outlines in nutrition & cookery. 2nd ed. Mountain View, California; Brookfield, Illinois; Cristobal, Canal Zone; Omaha, Nebraska; Portland, Oregon: Pacific Press Publishing Assoc. 128 p. 20 cm. [13 ref]
• ***Summary:*** "Foreword: The purpose of this little book is to serve as a guide in the study of simple facts about nutrition and healthful cookery, primarily prepared to be used in community nutrition classes." The guidelines, in outline format, are also helpful in teaching the principles of healthful vegetarian nutrition and cookery.

Also discusses: Soybeans as a good source of high quality protein (p. 29). The meatless diet: Meat is not a nutritional necessity, disadvantages of flesh foods (animals are diseased; rich in nitrogenous waste products, which kidneys must eliminate. These act as a stimulant; poor source of most vitamins and calcium; expensive), importance of knowing how to make proper substitution when discontinuing a meat diet, protein content of average servings of some [non-flesh] foods (including soybeans) (p. 31-33). Homemade Vegex (with ½ pint soya sauce, p. 113). Protein foods (gives the composition of soybeans, p. 118). Loma Linda Foods (nutritional composition of their commercial products; Vegemeat Burger, Vegemeat Steaks, Nuteena, Proteena, Peanut butter, Vegex: p. 119). Calcium content of foods (incl. turnip greens, mustard greens, soy bean curd, kale, dry soybeans; p. 120). Iron content of foods (incl. mustard greens, soybean curd). Address: Loma Linda, California.

3637. *Madison Health Messenger* (*Madison, Tennessee*).1949. The story of Madison Foods. Vol. 49-3. p. 1-6. Undated.
• ***Summary:*** "Over 45 years ago [actually in 1904] a group of educators founded an institution in Madison, Tennessee, where special study was given to healthful living. They began by operating a school on a farm. Later a sanitarium was built. And, finally, a food production department was opened, now known as Madison Foods... People who came to the sanitarium were helped by the treatments and the plain wholesome food. However, because when they returned to their homes, they were unable to obtain some of the foods which proved helpful, many sent their orders to us for these foods. The popularity of the foods increased and now they are available in many stores throughout the 48 States."

"In 1941 a building program was started to completely rebuild the Madison Foods plant on the original site. Modern

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offices, adequate storage and shipping facilities, a five story production section, complete revamping of processing equipment, and a re-arrangement of the plant were realized step by step, and now the Madison Food plant, built of concrete, blocks, and steel, with tile and plastered interior, and a building of modern design for greater efficiency, stands as a monument to the devotion of its founders and the perseverance of those who carried the torch onward.

"A character builder: As part of the vocational training program at Madison College, Madison Foods is primarily concerned with building strong physical bodies and strong minds."

Photos show: East side view of the new Madison Foods plant. A can (with label) of Stake-Lets (the original gluten-soy product, a complete protein food, sold in 14, 20, and 30 oz sizes). A young man standing next to a large autoclave used for cooking canned foods. Four young ladies hand picking peanuts to insure quality. Front view of the new Madison Foods plant ranging from 2 to 5 stories in height. A can of Yum (14 oz. made with grains, legumes, and vegetables). A young man operating an homogenizer that is homogenizing Kreme O'Soy. A student operating a machine that is labeling cans.

Page 5 contains a description of the various products, with their ingredients, made by Madison Foods: Zoy-Koff–an alkaline beverage used in place of coffee. Contains no coffee–no nerve stimulants. Two grinds–regular and fine. Prepare like coffee. Ingredients: Soybeans, bran, brown sugar. 1 lb bag.

Kreme O'Soy–a rich-bodied, homogenized soy beverage. May be used in place of milk. Ingredients: Soybeans, soy oil, dextrose, calcium phosphate, sodium chloride. 20 oz cans.

Zoyburger–excellent for sandwich spread, serve like steak with onions. Ingredients: Soybeans, gluten, raw peanut meal, vegetable seasonings. 14 & 20 oz cans.

Stake-Lets–a combination of gluten and soybeans sliced in meatlike sauce. Ingredients: Gluten, soybeans, soy sauce, seasonings. 14, 20 & 30 oz cans.

Not-Meat–a smooth-textured loaf for vegetable roasts, salads, sandwiches, etc. Ingredients: Whole peanut meal, soybeans, and seasonings. 14 & 20 oz cans.

Vigorost–a fibrous-textured vegetable steak used like meat. Also for sandwiches, salads, etc. Ingredients: Gluten, soy cheese, whole peanut meal, seasonings. 14 & 20 oz cans.

Yum–a mild bologna-like-flavored, meatless loaf, used hot or cold. Ingredients: Soybeans, gluten, soy cheese, whole peanut meal, seasonings.

Cheze-O-Soy–a curd made from soybean milk, to be used in salads, sandwiches, spaghetti, etc. Ingredients: Coagulated soybean proteins, seasonings. 14 & 20 oz cans.

Bite-Size Stake-Lets–gluten and soy bits in rich sauce simulating stewed bits of beef in rich gravy. A choice food. 20 oz cans.

"A statement of ingredients, use and recipes is on each package and can of Madison Foods."

3638. Mogi, Masatoshi. 1949. Shôyu miso [Shoyu and miso]. Tokyo: Daiamondo-sha. viii + 283 p. [4] p. of plates. Illust. 19 cm. [Jap]

• ***Summary:*** The first four pages of this book contain 10 small photos relating to shoyu production and 10 relating to miso production. Contents: I. Shoyu. Commercial products: 1. History of shoyu (p. 3). 2. Varieties of shoyu (p. 8). 3. Supply and demand of shoyu (p. 25). 4. Quality of shoyu (p. 28). 5. Containers used for shoyu (p. 36). Production: 6. Fermented shoyu (*Jôzô shoyu*) production method (p. 40). 7. Amino-san shoyu production method (p. 90). 8. Semi-chemical shoyu production method (p. 108). 9. Methods of preventing formation of undesirable mold on and gas in bottled shoyu (kabi, p. 110). 10. About steaming equipment (jôki kikan) in the shoyu plant (p. 115). Industry: 11. Structure of the shoyu industry (p. 123). 12. The structure of selling and buying of shoyu (p. 141). 13. Supply and demand for shoyu, and the future of the industry (p. 149).

II. Miso. Commercial products: 1. History of miso (p. 173). 2. Supply and demand for miso (p. 175). 3. Varieties of miso (p. 179). 4. Standards for miso (p. 188). 5. Nutritional composition of various types of miso (p. 189). 6. Storing miso (p. 191). Production: 7. Regular miso production methods (p. 193). 8. Methods of making miso using substitute raw materials (p. 223). Industry: Structure of the miso industry (p. 245). 10. Financial condition of the miso industry (p. 254).

The author was born in 1907. Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3639. Saito, Akio. 1949. [Chronology of soybeans in Japan, 1927 to 1949] (Document part). In: Akio Saito. 1985. Daizu Geppo (Soybean Monthly News). Feb. p. 14-15. [Jap]

• ***Summary:*** 1927 Sept. 15–Noda Shoyu [Kikkoman] has the longest strike in pre World War II Japan. The labor system becomes more modern and employer-employee problems start to be handled in new ways.

1928–The production of soy oil reaches 38,000 tons, passing rapeseed oil which is 30,000 tons. Soy oil is now Japan's leading vegetable oil.

1931 Sept.–Japan invades Manchuria, using the Mukden incident as a pretext. 1932–Japan attacks China. By early 1932 Japan had conquered all of Manchuria.

1932 Feb.–The Rikagaku Kenkyujo in Tokyo makes salt-free shoyu for the first time.

1935–At about this time, systematic cultivation of soybean seeds begins.

1938–The average retail price of good quality shoyu is 62 *sen* for 18 liters (10 *sho*).

1938 Sept.–The *Kokusaku Daiyohin Fukyu Kyokai* is founded. This organization encourages the substitution of

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less expensive or more abundant ingredients in shoyu, such as barley for rice, millet or barn yard millet grass (*hie*) for barley, or the chrysalis of a silkworm for soybeans and wheat in making HVP shoyu (*amino-san shoyu*).

1939–The first soybean is registered in Japan; it is named "Ministry of Agriculture and Forestry, Number 1" (*Norin ichi-go*).

1939 Dec.–The Japanese government puts its energy into controlling the rising prices of rice, miso, shoyu, salt, matches, fresh produce, etc. (i.e. essential foods for daily life).

1940 March–The "Central Price-Fixing Organization" (*Chuo Bukka Iinkai*) sets ceiling prices for the following to control inflation: soy oil, soybean cake, Japanese soybeans mixed with Manchurian soybeans, salted salmon, salted trout, dried nori, and eggs.

1940 April–The "Price Setting Central Committee" (*Kakaku Keisei Chuo Iinkai*) decides to use a ticket (rationing) system for ten items including rice, miso, shoyu, salt, matches, charcoal, and sugar.

1940 June–The Ministry of Agriculture and Forestry (*Norinsho*) and the Ministry of Commerce and Industry (*Shokosho*) proclaim the new revision of the regulation for controlling excessive profits (*Borikoi Nado Torishimari Kisoku Kaisei*), and on responsibility relating to prices.

1940 Sept.–Even though people are under control, summer resorts become crowded and people take home rice and miso and souvenirs. The government asks them not to do this.

1940 Oct.–The Japan Soybean Control Corporation (*Nihon Daizu Tosei K.K.*) and the Cooperative Soybean Products Marketing Corporation (*Daizu Seihin Kyohan K.K.*) are founded.

1941 June–The home use food oil ticket (rationing) system starts.

1941 Dec. 7–Japan attacks Pearl Harbor. War with the USA begins. 1942 Feb.–The ticket rationing system starts for miso and shoyu.

1943 June–The regulations for emergency food production are decided. They start to use unused lands for production of various small grains and legumes (*zakkoku*).

1943 Nov.–A record book rationing system is established for tofu, to ensure fair distribution.

1945 Aug. 14–Japan surrenders to the USA in World War II after atomic bombs are dropped on Hiroshima and Nagasaki (Aug. 6 and 9).

1945–Because of unusually cold weather, Japan's soybean production drops dramatically, resulting in one of the smallest crops since 1878. It is only 170,400 tonnes, 36.3% lower than the previous year.

1947–The production of shoyu this year is only 1,868,500 *koku*. Since there is not enough shoyu, a lot of substitute shoyu and powdered shoyu (*kona shoyu*) appear; neither of these two products are regulated.

1947 May 3–A new constitution is adopted in Japan in which the country renounces the right to wage war, the emperor gives up claims to divinity, and the Diet becomes the sole law-making authority.

1948 Oct.–At about this time, the food situation in Japan starts to improve. Address: Norin Suisansho, Tokei Johobu, Norin Tokeika Kacho Hosa.

3640. Sasaki, Kyota. 1949. Amino-san shôyu seizô-hô. Fu gurutamin san sooda [Method of manufacturing HVP or amino-acid soy sauce. With a supplement on monosodium glutamate]. Tokyo: Fuminsha. 181 p. [Jap]
• ***Summary:*** Amino acid. Address: Kôgaku-shi, Japan.

3641. Shimizu, Ken'ichi. 1949. Kindai shôyu jôzô no shinzui [The essentials of modern shoyu brewing]. Tokyo: Sanpo Shobo. 327 p. [Jap]

3642. *SoyaScan Notes.* 1949. Chronology of the macrobiotic movement in North America, 1949-1966. 25 Jan. 1995. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1949–Michio Kushi, a student of George Ohsawa, arrives in New York City from Japan, in connection with the World Federalist Movement. He writes letters back to Japan, and Ohsawa reads them to his students at his center (*Maison Ignoramus*) in Yokohama, near Tokyo, Japan.

1951–Aveline Tomoko Yokoyama falls in love with Michio's letters, wins a trip to America by being the best seller of Ohsawa's newspapers, and meets Michio in New York.

1952, early–Herman Aihara, age 31 (born Nobuo Nishiyama on 28 Sept. 1920), arrives in America, and settles in New York City. As early as March 1952 he was selling macrobiotic foods in New York; he imported them from Ohsawa in Japan.

1953–Michio Kushi and Aveline Tomoko Yokoyama are married in New York. They had exchanged letters before she arrived.

1955 Dec.–Herman Aihara and Chiiko (Cornellia) Yokota are married in New York. Cornellia arrived in the United States from Japan in Oct. 1955. They had exchanged many letters before she arrived.

1959 or 1960–Zen Teahouse, the first macrobiotic restaurant in the USA, is started in New York City by Alcan Yamaguchi. It was located at 317 Second Ave. and consisted of a small (4-table) main room containing a kitchen. Miso and shoyu were served regularly. This restaurant was later renamed Paradox.

1959 Nov. or Dec.–George Ohsawa arrives in America for the first time, staying in New York City with Herman Aihara, his closest associate. After a week he flies to California to find a source of short-grain brown rice; he locates Koda Brothers (in Dos Palos), but also gives lectures in San Francisco and Los Angeles. After one week in

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California, he returns to New York City.

1960 Jan.–Ohsawa presents the first of three series of lectures designed to introduce macrobiotics, and the philosophy and medicine of the Orient, to America; each for ten nights during January, February, and March of 1960 at the Buddhist Academy in New York City. During these lectures his first work in English is published, a mimeographed edition of *Zen Macrobiotics*. He and the Aiharas duplicated and bound these in the Aiharas' apartment, then sold them at the lectures for $0.50. He also lectured at the Universalist Church, The New School for Social Research, Columbia University, and New York City College (See: *Macrobiotics: The Art of Longevity and Rejuvenation*, p. 188-89).

1960 May 10–Herman Aihara starts publishing *Macrobiotic News*, a magazine consisting mainly of Ohsawa's lectures, plus some current news.

1960 July–Ohsawa returns to America (after a trip to Europe) and lectures daily for two months at the first American macrobiotic summer camp at Southampton, Long Island, New York. Mrs. Lima Ohsawa, aided by Cornellia Aihara, gives macrobiotic cooking classes. Many people attend, especially writers, actors, artists, musicians, and intellectuals.

1960–To serve this growing interest, a tiny restaurant named Musubi is started in Greenwich Village and run by Alcan Yamaguchi, Romain Noboru Sato, Herman Aihara, and Michio Kushi. In late 1961 Musubi was moved to 55th Street.

1960–The first macrobiotic food store (combined with a gift shop), named Ginza, is started by Herman Aihara.

1961 Feb.–At a meeting of the Ohsawa Foundation, Inc. (New York City) Herman Aihara is elected president while he was traveling in Europe. He accepted the position when he returned later that month.

1961 summer–George and Lima Ohsawa come to America again for the second macrobiotic summer camp, this time in the Catskill Mountains at Wurtsboro, New York. Lima and Cornellia Aihara give cooking classes. After the camp, at the time of the Berlin Wall crisis (August 1961, before the Cuban missile crisis of Oct. 1962), Ohsawa feared that a nuclear war might be near. He urged his followers to leave New York and find a place that was safer from radioactive fallout and good for growing rice. After extensive research, they choose Chico, California.

1961 Oct. 1–Thirty four people (11 families) arrive in Chico from New York City in a caravan of vans, buses, and station wagons. Among the active people in the group are Bob Kennedy, Herman Aihara, Teal Ames, Lou Oles, and Dick Smith.

1961 Nov.–The first printed edition of *Zen Macrobiotics*, by G. Ohsawa is printed in Japan (218 pages). It has been edited and the parts rearranged.

1962 March 6–The group in Chico establishes a new food company named Chico-San as a retail store and an import and wholesale business. It was capitalized with $10,000. In addition to a line of whole-grain products, they soon began to import a variety of macrobiotic foods from Ohsawa in Japan. The first store and food plant (they made sesame salt or *gomashio* and repackaged foods) was in the basement of a small hearing aid shop in Chico. It became the first macrobiotic food production company in the USA.

1962 July 7–Third summer camp opens in Wurtsboro, New York, under the direction of Irma Paule and Sam Chapman; it continued until Labor Day.

1962 Christmas–George Ohsawa visits Chico and lectures on macrobiotics.

1963–Ohsawa lectures in Boston, New York City, and at the fourth macrobiotic summer camp (the first on the West Coast) at Chico. Lima Ohsawa and Cornellia Aihara give cooking classes. In Chico, Ohsawa suggests that the group try making rice cakes. He sends them a rice cake machine from Japan and production began in the fall of 1963. Rice cakes soon became Chico-San's first really popular and successful product.

1963 May–Junsei Yamazaki arrives in the USA (in San Francisco) from Japan. He first goes (by bus) to Chico, California, to help with the installation of small rice cake machines. After the July 1963 summer camp in Chico, California, he goes to New York, arriving in August.

1964 summer–Ohsawa lectures in California at the fifth macrobiotic summer camp (2nd on the West Coast) at Big Sur. Lima Ohsawa and Cornellia Aihara give cooking classes.

1964 Sept.–After the macrobiotic summer camp on Martha's Vineyard, the Kushi family moves from the island to Cambridge, Massachusetts (101 Walden St., on the outskirts of Boston to the northwest). Michio stops all his outside business activities and directs his full attention to teaching macrobiotics.

1964 Nov.–The first edition of *Zen Cookery*, edited by Teal Nichols, a book of macrobiotic recipes (83 p.), is published by The Ohsawa Foundation in Chico, California.

1965–The macrobiotic movement in America, though small, is growing rapidly. Ohsawa lectures again in California at Mayoro Lodge, near Pulga.

1965–Michio Kushi organizes the first East West Institute out of his home in Cambridge and begins teaching macrobiotics, cosmology, and cooking to mostly young people.

1965–The second edition of Ohsawa's *Zen Macrobiotics* is prepared and published by Lou Oles of the Ohsawa Foundation in Los Angeles. It contains much more information (including much more about soyfoods) than the original 1960 mimeographed edition.

1965–*You are All Sanpaku* by William Dufty is published.

1965 Nov. 9–Beth Ann Simon, a young heroin addict

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from New Jersey, dies while following a strict macrobiotic diet. This is the movement's first major setback. Ohsawa and the macrobiotic diet receive much adverse publicity, and the incident brands macrobiotics among many in the medical and health professions as a dangerous and extreme form of food faddism. The image was hard to get rid of. The U.S. Food and Drug Administration closes the New York branch of the Ohsawa Foundation, run by Irma Paule.

1966 April 24–George Ohsawa dies unexpectedly in Tokyo, Japan, at age 72–just as his teaching is beginning to spread rapidly in the West. The cause of his death: a heart attack, perhaps caused by filarial parasites he had picked up at Lambarene, Gabon.

1966 April–Erewhon opens as a tiny (10 by 20 foot) retail store downstairs at 303-B Newbury Street in Boston.

1966, summer–Michio Kushi begins to lecture each Monday and Wednesday evening in a back room of the Arlington Street Church in Boston. These talks were supplemented by cooking classes with Aveline Kushi in Brookline.

3643. Umeda, Isao. 1949. Shôyu [Shoyu (Japanese soy sauce)]. Tokyo: Sankyo Shuppan Co. 312 p. Revised eds. 1954-55. 326 p.; 1963. 232 p. [117 ref. Jap]
Address: Noda Shoyu Shiken-shi cho. Head, Noda Shoyu Research Lab.

3644. Von Loesecke, Harry W. 1949. Outlines of food technology. 2nd. ed. New York, NY: Reinhold Publishing Corporation. vii + 585 p. 24 cm. 1st ed. 1942. [7 soy ref]
• ***Summary:*** Soybeans are discussed in several places: Canned soybeans ([green vegetable soybeans]; use the vegetable variety, harvested just before any white or yellow beans appear), and soybean sprouts (p. 150). Soybean flour (p. 294-96). Soybean oil and lecithin (p. 323-24). Soy sauce and Worcestershire sauce (p. 416-17, of which soy sauce is a major ingredient). Address: Chemist, USDA, Washington, DC.

3645. Meade, Mary. 1950. Expert teaches class to prepare Hawaiian specialties. *Chicago Daily Tribune*. Jan. 23. p. B3.
• ***Summary:*** Chicago home economist Dorothy Roost Bates, just back from four years in the Hawaiian paradise, was the teacher in the last of these foreign fare classes.

"The teriyaki is expensive since it requires a tender cut of beef, preferably the rib eye. Mrs. Bates used sirloin...

Teriyaki (A Japanese appetizer): 1 pound tender beef steak, ¼ cup soy sauce, 1 tablespoon sugar, 1 clove garlic, 1 teaspoon ginger (fresh), chopped fine.

"Slice meat in thin strips across grain. Place on bamboo sticks [skewers] (100 for 25 cents in Chinatown)." Mix soy sauce with other sauce ingredients. Soak meat in sauce 30 minutes or more, turning to marinate evenly. Broil 5 minutes on each side before serving hot.

"These are usually done over charcoal, but broiling [in an oven under an overhead gas flame] works very well. The skewered beef may be arranged on a cooky [cookie] sheet for broiling." Also contains recipes for Hawaiian curry. Chicken luau.

Note 1. This is the earliest teriyaki recipe seen (Nov. 2006) that uses beef (or any other kind of red meat) and the main ingredient.

Note 2. It is also the earliest teriyaki recipe seen that has a complex sauce, similar to modern teriyaki sauces.

3646. Umeda, Isao; Tateno, M.; Naoi, T.; Uchida, H. Assignors to Noda Shoyu K.K. 1950. Shôyu jôzôhô (shinshiki 2 gô) [Method of brewing shoyu (semi-fermented soy sauce #2)]. *Japanese Patent* 181,616. Jan. 27. Application filed 18 Aug. 1948. [Jap]"
Address: Noda Shoyu Co., Noda, Japan; 1. Head of research lab.; 2. Actual discoverer; 3-4. Asst. researchers.

3647. **Product Name:** Dr. Bronner's Balanced Mineral Bouillon.
Manufacturer's Name: Dr. Bronner & Associates.
Manufacturer's Address: 447 South Hope St., Los Angeles, California. Phone: 619-745-7069.
Date of Introduction: 1950, January.
Ingredients: Soya bouillon base, blackstrap molasses, vitamin C, lemon and orange juice solids, soya lecithin (oil free), ocean dulse, papain enzymes.
Wt/Vol., Packaging, Price: 8, 16, or 32 fluid oz (quart) glass bottle with screw-on cap (2/90). Quart retails for $6.85.
How Stored: Shelf stable.
Nutrition: Per 2 fl oz or 4 tablespoons: Calories 60, protein 7.4 gm, iron, fumarate 18 mg, copper 1 mg, iodine (protein-bound iodine or PBI from ocean dulse) 150 mcg, calcium 120 mg, phosphorus 100 mg, magnesium 60 mg, vitamin B-6 complex 2 mg, vitamin B-12 complex 6 mcg, vitamin C 360 mg, papaya enzymes 500 mcg, lecithin form unrefined soya bean 100 mg.
New Product–Documentation: Talk with Bob Gerner. 1990. Feb. 7. He first saw this product in about 1981, after he was carrying a similar product from Dr. Bronner. Label. 1989. 11 by 4.5 inches. Pea green on yellow. "All vege amino broth survival food base concentrate: Always dilute! Enjoy thin look! Sip 2 hot cups or add to food: Don't cook! Concentrated: Dilute! Salty flavor from natural complete vege-amino-acid protein, mineralized with balanced potassium, calcium, phosphorus, iron, magnesium chloride mineral salts. 100% balanced–without alcohol, animal products, or synthetics! Concentrated: Shake well before using. Packed and Guaranteed by All One God Faith, Inc. Rabbi Emanuel H. Bronner, Assoc., SMMC, DD Soapmaker, Master Chemists & Essene Rabbis, Escondido, Box 28, California 92025. Made in USA. Enjoy as instant NRG drink. Complete balanced meal, instant seasoning or gravy.

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Concentrated: Shake well before using. Minerals settling out, remain 100% balanced and 100% edible. Therefore, re-dissolve with extra water & enjoy in salads that same week. For instant pick-me-up, makes a complete meal and NRG drink, balanced seasoning & instant gravy. Enjoy 1 tablespoon bouillon in cup hot water instead of meal. Also, mineralize carrot and other vegetable juices with a dash bouillon. Survival food base. Keeps a lifetime if undiluted!

Talk with Dr. Emanuel H. Bronner himself. 1990. Feb. 8. He is a rabbi and soap maker, age 82. He introduced this liquid product in Jan. 1950, just one year after he introduced essentially the same product in powdered form. So many people wanted a liquid that he took soy sauce and replaced some of the sodium with potassium, to make a more balanced product. He also added PBID (protein bound iodine from ocean dulse) and slowly improved the product until the soy sauce was only 50% of it. The other 50% is potassium, calcium, and vitamin C.

3648. Kikkoman Shoyu K.K. 1950. [Annual report–1949]. Noda, Japan. Jan. [Jap]*
Address: Noda, Japan.

3649. Oriental Show-You Co. 1950. Display ad: For tasty Chop suey: With true-to-nature Oriental flavor. *Washington Post*. March 7. p. 2.
• ***Summary:*** A horizontal rectangular ad. An illustration shows a can of Oriental-brand Show-You Bean Sprouts. "Send for free recipe book." Address: Columbia City, Indiana.

3650. Kubo, Takahashi. 1950. Shôyu abura ni kansuru kenkyû. I. Shôyu abura seisei kiko ni tsuite (1) [Studies on shoyu oil. I. The mechanism of formation of shoyu oil (1)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 23(8):335-42. March. [17 ref. Jap]
Address: Noda Shoyu Co. Ltd., Noda-shi, Chiba-ken, Japan.

3651. *Hartford Courant (Connecticut)*.1950. Feminine topics, by Jacqueline. April 16. p. A4, col. 2.5.
• ***Summary:*** The recipe for 'American Chop Suey,' which is practically a meal in itself, calls for "one teaspoon thick soy sauce."

Note: This is the earliest document seen (April 2012) in all major U.S. newspapers digitized by ProQuest that uses the term "thick soy sauce." The new term appears in 21 documents between 1950 and the present.

3652. *Sun (Baltimore, Maryland)*.1950. On making things taste more like themselves. April 17. p. 10.
• ***Summary:*** Monosodium glutamate has been garnering a lot of publicity lately. In fact, the name is now so well known that it is popularly known in commercial circles as MSG.

"The virtue of monosodium glutamate is that it intensified flavor. This has been known to the Chinese for generations. The knowledge was passed on to the Japanese," who started manufacturing it and sold it in the United States prior to the start of World War II.

"However, what with the running out of Japanese patents and the disruption of the war, manufacture of MSG was commenced in this country," where annual production is now some 9 million pounds. It is used chiefly in canned soup and soup powders.

MSG is a type of amino acid. It may be extracted [sic, hydrolyzed] from corn gluten, wheat gluten, or soybean gluten [sic]. "Another important source is the molasses from beet sugar which yields a product [substance] known as Steffens waste."

"The Chinese extracted their MSG from soybean gluten [sic] and called it ve-tsin." When the Japanese began to manufacture it commercially, they named it ajinomoto, which means 'element [basis] of taste.'"

You can add a dash of MSG to any dish, just as you would Worcestershire sauce or paprika.

It is claimed that, under certain circumstances, "glutamic acids increase the mental ability of persons with low I.Q.'s."

3653. Oriental Show-You Co. 1950. Display ad: Like tasty Chop suey? Make it at home. *Washington Post*. May 19. p. 12.
• ***Summary:*** A vertical rectangular ad. An illustration shows a large bottle of Oriental-brand Show-You sauce. "Send for free Oriental recipe book." Address: Columbia City, Indiana.

3654. Nakano, Masahiro; Ebine, H.; Shijo, N. 1950. Budomari o kotoniseru shobaku ni tsuite [On "shobaku" (wheat bran used for shoyu making) produced from wheat at various milling rates]. *Shokuryo Kenkyujo Kenkyu Hokoku (Report of the Food Research Institute)* No. 3. p. 107-20. June. [14 ref. Jap; eng]
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan (Hakko Shokuhin-bu, Sogo Shokuryo Kenkyujo).

3655. Worthington Foods, Inc. 1950. Wholesale price list and order blank. Worthington, Ohio. 1 p. July 31.
• ***Summary:*** Products include: Beta Broth. Tastex. Soy sauce. Tastex food yeast. Lacto-psyllium. Protein foods (Alternates for meat): Soyloin Steaks. Meatless Wieners. Choplets. Choplet Burger. Proast. Numete. Veelets.

Worthington breading meal. Sav-Ree brown gravy. Honey bear peanut butter. Kel-jel.

Note: A wholesale price list dated 10 Dec. 1950 shows that Worthington was selling the following line of Miller's Foods products (purchased from Harry W. Miller of Mt. Vernon, Ohio): Miller's Cutlets, Miller's Cutlet Burger (regular and smoke flavors), Vegetable Stew.

Note: This is the English-language document seen (Jan.

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2007) that contains the term "Cutlet Burger" (or "Cutlet Burgers"). Address: Worthington, Ohio.

3656. Nickerson, Jane. 1950. News of food: Higeta shoyu shipped here. *New York Times*. Aug. 29. p. 30.
• ***Summary:*** The first shipment of Higeta soy sauce (shoyu) ever made to the United States has just arrived from Choshi, Japan, imported by George Saiki. It is made by that venerable company, Choshi Shoyu, which has been brewing soy sauce in Japan since 1616. Long located in the village of Choshi, in Chiba prefecture, its factory is now equipped with modern equipment. A 22-oz. bottle of Higeta shoyu retails for $0.74 at Macys.

Saiki says that Higeta shoyu has long been used in Japan's imperial household. It is now fermented for 6-18 months. Mr. Saiki, like most Orientals, recommends its use in a wide range of dishes, from soup and fish, to fowl, meat and vegetables.

3657. Paddleford, Clementine. 1950. How America eats: Best cook in Phoenix. *Los Angeles Times*. Oct. 8. p. H18.
• ***Summary:*** Ben Projan likes his steaks to be 2 inches thick and weigh at least one pound. His favorite marinade has "1 quart soya sauce" as its main ingredient, along with beef consommé, lemon juice, liquid smoke, and garlic. Address: *This Week* food editor.

3658. Panday, Daulat. 1950. Chinese dishes: Cookery corner. *Times of India (The) (Bombay)*. Oct. 8. p. 10.
• ***Summary:*** Four Chinese recipes are given: Meat shred soup. Chinese chicken salad. Eight-jewel duck. Canton rice. Each calls for "soy sauce." The first recipe states: "...: 1 tablespoon of soy sauce (obtainable from China Town, or any good Chinese Restaurant);..."

Note: This is the earliest of 40 articles or ads seen (Sept. 2010) in *The Times of India* that contains the term "soy sauce." This term is usually used in connection with foreign foods or cookery.

3659. Brown, Lucia. 1950. Clever appetizers make a party. *Washington Post*. Oct. 18. p. C1.
• ***Summary:*** "Little appetizers with a flavor all their own" were served to 144 food editors from across the USA at the recent National Food Editors conference in New York.

"For instance there were Teriyakis. Ever try them? The Dole Pineapple people brought the idea from Hawaii for the occasion. They're a hot, hearty appetizer made of crunchy pineapple and broiled beef on skewers. Provide about two per guest for an afternoon party."

"Teriyakis: 1 pound tender top beef round or sirloin. 1 No. 2 can (2½ cups) pineapple chunks, drained. ½ cup syrup drained from pineapple. ¼ cup soy sauce. 1 clove garlic, chopped fine. 1 teaspoon chopped fresh ginger root or 3/4 teaspoon ground ginger. 1 small jar stuffed olives, drained (about 22). 22 short metal or wooden skewers (about 4 inches long)."

Cut meat into bite-sized chunks, about the same size as pineapple chunks. Combine pineapple, soy sauce, garlic and ginger. Pour over meat cubes in a container and set aside for at least an hour. Alternate cubes of meat and pineapple on skewers, then finish off with a stuffed olive. Broil 3 inches from heat, turning once, for 10-12 minutes. Serve hot. Makes 20-22 servings for 8-10 people.

Note 1. This is the earliest English-language document seen (April 2012) that contains a good recipe for homemade teriyaki sauce. It is also the first to use fruit or vegetables with meat on the skewers. The pineapple chunks and juice are a delicious addition; the juice replaces sugar.

Note 2. This is the earliest English-language document seen (April 2012) that contains the word "Teriyakis" (plural).

3660. Panday, Daulat. 1950. More Chinese dishes. *Times of India (The) (Bombay)*. Oct. 22. p. 10.
• ***Summary:*** The first of three recipes given for "appetising Chinese dishes" is Bamboo shoots with pork slices, which calls for "2½ tablespoonfuls soy sauce (also to be had in China Town);..."

3661. Paddleford, Clementine. 1950. Soup to nuts–From cans: To a man's heart. *Sun (Baltimore, Maryland)*. Oct. 23. p. 8.
• ***Summary:*** The section titled "Grilled appetizer from Hawaii" states: "Teriyakis is a grilled appetizer. The idea is straight from Hawaii. A hearty tidbit; pass the skewers once and then once again and that's quite enough, no endless shuffle of hors d'oeuvre trays and refilling."

The ingredients are tender top round of beef, canned pineapple chunks and syrup, "one-fourth cup soy sauce," a clove of fresh garlic, fresh ginger root, and ground ginger. The detailed recipe is given.

Note: This section is quite similar to one published in the *Washington Post* on Oct. 18–five days earlier.

3662. Radom, Edyth. 1950. Teriyakis, Hawaiian recipe. *Hartford Courant (Connecticut)*. Nov. 5. p. SM10.
• ***Summary:*** Quite similar to (with exactly the same recipe for Teriyakis): Brown, Lucia. 1950. "Clever appetizers make a party." *Washington Post*. Oct. 18. p. C1.

Note: This is the earliest English-language document seen (April 2012) with the word "Teriyakis" (or "teriyaki") in the title.

3663. *Soybean Digest*.1950. Japan shifts from whole beans to meal. Nov. p. 24.
• ***Summary:*** Two pie charts show Japanese usage of soybeans in 1940 and 1948. In 1940 the Japanese were consuming about half of their 562,000 tonnes of soybeans as whole soybeans used to make various foods such as

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shoyu, miso, and tofu. But by 1948 nearly all their soybeans were being used in the form of soybean oil meal, especially to make miso, shoyu, and amino acids. Consumption of miso and shoyu have greatly increased, while other uses (especially tofu) have shrunk.

"During the 10 years preceding the end of World War II, Japan imported an average of about 700,000 tons of soybeans, chiefly from Manchuria. This inflow of soybeans was stopped almost entirely immediately after the war, which resulted in critical protein and oil supplies. But imports since then have increased, overcoming the extreme shortage. About 80 percent of total soybean imports during 1946-48 were from the U.S."

3664. *Soybean Digest.* 1950. Adopts new bottle. Nov. p. 40.
• ***Summary:*** "New no-drip bottle for La Choy Soy Sauce shown above has been adopted by La Choy Food Products, Archbold, Ohio, for its nationally distributed product.

"The soy sauce is recommended for use on chop suey, chow mein or other Chinese dishes, hamburgers, steaks, roasts, chops, and to flavor soup, gravy, hash, stew, meat loaf and other dishes." A photo shows the new bottle and its predecessor.

3665. Tammes, P.M.L. 1950. Bereiding van ketjap [Preparation of soy sauce]. *Landbouw* (*Bogor, Java*) 22(10-12):568-69. Dec. [Dut]
• ***Summary:*** Contains a brief description of how to make Japanese-style soy sauce, and an analysis of its composition in both volume per 100 cubic centimeters, and grams per 100 grams. Address: Makassar (Algemeen Proefstation, Landbouw).

3666. Yuasa shôyu enkaku-shi [Record of Yuasa shoyu]. 1950-1960? Kubo-san no ie, Yuasa-cho, Arita-gun, Wakayama-ken, Japan. 46 p. Unpublished manuscript. Handwritten. 19 x 25 cm. [Jap]
• ***Summary:*** According to Heiji Tamura (*Shoyu no Hon*, 1971, p. 31), there is a lovely poem in this work titled "The Song of Shoyu" (*Shoyu no uta*) that reads as follows:

Smell the aroma from the depths of the brewing keg!
Waves of fragrance, deep purple, tamari;
Flowers of wisteria.
Its origins reaching back to the Antei period,
Its brewing lineage inherited from the great teacher.
Tamari from Yuasa is the first in the Emperor's kingdom.
Its aroma is of the finest quality,
Its flavor most excellent,
Its fame, noblest and purest flower of Arita.

Note: Arita is the early name of the Yuasa region. This poem was translated by Shurtleff and Aoyagi and published in *The Book of Miso* (1976, p. 220). The original Japanese reads like this: *"Nachi no ura. Soko made niou murasaki no namiuchi tsuzuku fuji no hana. Nezashi wa furuku Antei ni. Hoto Kokushi no nagare o kumite kamosu Yuasa no shoyu wa Kokoku ni okeru hajime nari. Kaori wa takaku, aji yoshi to, homare Arita no seika."*

Note: This book is not in the Wakayama Prefectural Library nor in the Yuasa Choritsu Library (8/89).

Talk with Seiichi Ando. 1989. Sept. 12. He saw this book, which he believes was never published, 20-30 years ago at the home of a shoyu maker named Mr. Kubo located at Yuasa-cho in Yuasa, Wakayama prefecture, Japan. The manuscript is a basically a history of this company and household. It was definitely written after the start of the Meiji period in 1868. The first word of the Japanese title is the logo or symbol of this house's brand of shoyu.

Letter from Wakayama Univ, Keizaigaku-bu, Sakaedani 930, Wakayama city 640, Japan. The unnamed writer of this letter was not able to locate this book in his Keizaigaku-bu, the university library, the city library, the prefectural Kyoiku Iinkai, the Yuasa Kyoiku Iinkai, and the prefectural history Hensan-shitsu. Finally he located a shoyu maker in Yuasa who had a copy of the original work but would not lend it to be photocopied for fear it might be damaged. The shoyu maker's name was Chobei KANO, Yuasa 7, Yuasa-cho, Arita-gun, Wakayama-ken. Phone: 0737-62-2035. His brand is Kakucho (*Tsuno + nagai*). He can also be reached (in Yuasa-cho) at Kokudo-ten (Country + road + shop) Yuasa 147. Phone: 0737-63-5243. Address: Arita-gun, Wakayama-ken, Japan.

3667. Nakazawa, Ryoji, ed. 1950-1964. Hakkô oyobi seibutsu kagaku bunken-shû [Bibliography of fermentation and biological chemistry]. Tokyo: Nihon Gakujitsu Shinkokai/Hirokawa Publishing Co. 11 volumes. In European languages and Romanized Japanese. [500 soy ref. Eng; Jap]
• ***Summary:*** Contains extensive, excellent bibliographies on the following soy-related subjects (listed here alphabetically): Amazake (p. 139, only 2 references). Kôzi (Koji) (p. 398-410). Mirin (p. 464-65). Miso (p. 465-68). Natto (p. 8-9). Natto bacteria (p. 9-10). Penicillium (p. 210-63; see p. 240 for tempeh and ontjom). Rhizopus (p. 81-97). Soybean and soybean cake (p. 271-77). Syôyu [Shoyu] (p. 436-49). Tôhu (p. 498, only 3 references, all for nonfermented tofu).

Each bibliography lists the documents in approximately chronological sequence. An unnumbered page near the beginning titled (in Japanese characters only) *Shuyô Inyo Bunken* [Main Periodicals Cited] lists 51 such periodicals, of which 12 are in Japanese. Of these twelve, all have the title written in Chinese characters, with an English translation, and a Chinese plus a romanized abbreviation of the Japanese title.

Two examples: No. 2. *Nippon Nogei Kagaku Kaishi.* J. Agr. Chem. Soc. Japan [J. of the Agricultural Chemical Society of Japan]. *Nô-ka.* No. 4. *Nihon Jozo Kyokai Zasshi.*

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J. Fermentation Association Soc. Japan. *Zyô-Kyô*. Note that much of the romanization throughout these 11 volumes is based on a system that is no longer used. Nakazawa was born in 1878. Address: Japan.

3668. **Product Name:** [Mieki Soy Sauce (HVP)].
Manufacturer's Name: Ajinomoto Co. Inc.
Manufacturer's Address: Kyobashi 1-5-8, Chuo-ku, Tokyo 104, Japan.
Date of Introduction: 1950.
New Product–Documentation: Yokotsuka (1980) notes that in 1950 Ajinomoto began to sell Mieki or Ajieki (HVP), a major event in Japanese soy sauce history. Soya Bluebook. 1986. p. 105.

3669. Photograph of the T. Amano Co. in Vancouver, British Columbia, Canada. 1950. Vancouver, British Columbia, Canada.
• ***Summary:*** This black-and-white photo, sent to Soyfoods Center in 1981 by T. Amano Co. of British Columbia, shows the front of a small, modern building. A floor-to-ceiling panel of glass bricks are to the left of the main door near the center. Over the door, in large letters is written: "T. Amano Co." On the right front window, partly covering venetian blinds, in smaller letters, we read on five lines: "T. Amano Co. Manufacturers–Soya sauce & rice paste [miso]. Oriental food products. Importers & exporters." Address: Vancouver, British Columbia, Canada.

3670. Adachi, Isamu; Sakurai, Shigeru. 1950. Nihon shokumotsu-shi [History of Japanese foods]. Tokyo: Yuzankaku. 480 p. [Jap]
• ***Summary:*** Best book seen on the history of Japanese foods. The following appears in chapter 8. Edo Period:

"Amazake and Shirozake (p. 375-76). In ancient times there was Kozake and hitoyo-zake (one-night sake). They became known as amazake at a later date. But kozake was different from subsequent amazake; sometimes it was made using sake instead of water in the fermentation. The term 'amazake' first appeared in the literature of the Keicho period, which started in A.D. 1596. Later, during the Kan-ei period (1624-1630) there was Shirakawa Amazake.

"In Rokujo, in Kyoto, the Yamashiro-zake was very old and famous. Within the city of Edo (today's Tokyo), in the Yokayama-cho section, during the Temmei period (1781-89), Sangoku Ichi Amazake was sold. After taking it home, the consumer would add an equal amount of boiling water to the amazake and stir while simmering. The names Sangoku Ichi (three countries are one) and Shirayuki (white snow) came from the fact that it was sold in a container with a plum flower crest drawn on it (*umebachi*) and also Mt. Fuji was drawn in the shop. This was because the goddess of the Mt. Fuji shrine is named *Konohana Sakuya Hime* ("Tree Flower Blooming Princess"); she got pregnant overnight. Since amazake was known as "one-night sake" in ancient times it was connected with this goddess.

"Amazake used to be sold only in winter. Around the Bunka period (1804-1817) it was sold year-round. There were 5-6 amazake shops in Edo (Tokyo). Among them, the one in front of the Asakusa Honganji temple was famous. Although at that time amazake was sold during the summer, it later returned to being a winter drink."

3671. Brown, Helen Evans. 1950. Chafing dish book. Los Angeles, California: The Ward Ritchie Press. [21] + 141 + 8 p. Index. 16 x 16 cm.
• ***Summary:*** This stylish little cookbook reflects the growing influence of Asian (especially Chinese) culture and cuisine in California–and the author's enthusiasm for it. The recipe for sukiyaki (#93) calls for "a soy bean cake" [a cake of tofu]. A footnote to the recipe for Chinese spinach (#117) states: "The Chinese would add a piece of fermented bean cake to this; a piece of bleu cheese gives much the same effect."

Helen Brown uses "soy sauce" to season all of her Chinese- and Japanese-style recipes: Nos. 32, 60, 64, 73, 77, 87, 89, 91, 93, 117.

Note: This is the earliest English-language document seen (Feb. 2004) that uses the term "soy bean cake" or "a soy bean cake" to refer to tofu. Address: Pasadena, California.

3672. Circle, Sidney J. 1950. Proteins and other nitrogenous constituents (of soybeans). In: K.S. Markley, ed. 1950. Soybeans and Soybean Products. Vol. I. New York: Interscience Publishers or John Wiley & Sons. xvi + 1145 p. See p. 275-370. Chap. 8. [495 ref]
• ***Summary:*** Contents: 1. Introduction: Distinction between isolated and *in situ* proteins, classification of proteins, denaturation and denaturing agents. 2. Soybean meal: Criteria for denaturation of meal protein (water- and salt-dispersible nitrogen, moisture-holding capacity, urease activity, "pat" test), denaturation during meal processing (heat and moisture, effect of solvent, oxidation, storage of soybeans, aging of meal, effect of grinding), detection of soybean meal or flour in other materials. 3. Isolation of proteins from mature seed: Number and classification (earlier work–globulin, glutelin, albumin, proteose; other protein fractions, more recent work, discrepancies in characterizing glycinin, relation of glycinin to glutelin, nomenclature of soybean protein fractions, enzymes and minor protein fractions), practices in isolation (introduction, pilot plant production), peptization of protein from meal (water as extractant, saline extracts, acidic extractants, alkaline extractants, neutral salts, effect of acids and bases, combined effect of hydrogen ion and neutral salts, peptization of dialyzed meal, peptization in water-alcohol mixtures, dispersion behavior of soybean and other seeds, reactions of various chemicals with soybean meal intended for adhesive and other purposes), removal of acid-leachable soluble

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material, separation of insoluble residue, precipitation (acids and electrodialysis as precipitants, bases as precipitants, miscellaneous precipitants, precipitation of soluble proteins from whey), dewatering, drying and grinding, modification of protein properties during isolation (introduction, effect of hydrolysis on yield of protein), summary of procedures in protein isolation.

4. Chemical and physical properties of protein: Dispersion behavior (water, salts in neutral or slightly alkaline solution, alkalis and alkaline salts, inorganic acids, salts with acid reaction, organic bases, acids, phenols and other dispersants, plasticizers), reactions with various chemicals (formaldehyde, other tanning agents, carbon disulfide, peroxides, esterification and etherification), heat and other denaturants (heat, reprecipitation, conversion of globular to fibrous form), nitrogen factor and purity (effect of alcohol extraction, effect of hulls, effect of pH of precipitation, other impurities, nitrogen factor), protein-phytic acid relationship, isoelectric points and electrophoretic behavior (methods for determining isoelectric points, isoelectric points), viscosity of soybean protein dispersions, miscellaneous physical properties (absorption spectra, foaming capacity, heat of combustion, colloid stabilizing properties, x-ray structure). 5. Partial hydrolysis of soybean protein: Hydrolysis by steam, hydrolysis by acids, hydrolysis by alkalis, hydrolysis by enzymes, hydrolysis by yeasts, molds, and bacteria, soy sauce. 6. Complete hydrolysis of protein: Hydrolyzing agents, nitrogen distribution, amino acid content of soybean meal and protein.

7. Other nitrogenous constituents in mature seed: Suppressive, toxic, and other factors (antioxygenic factor, allergenic factor, plant growth factor, goitrogenic factor, blood coagulant factors, antiamylase factor, antigrowth and antitryptic factor, anticoagulant action of crystalline antitrypsin, preparation of various antitrypsin factors), enzymes other than urease (introduction, allantoinase, amylase, ascorbic acid oxidase, carboxylase, catalase, Beta-glycosidase, glyoxylase, lipase, lipoxidase, phytase, protease, uricase), urease (variation in urease content, detection and preparation, action and activators, inactivators, effect of temperature and other factors, physiological effects, uses), nonprotein nitrogen (introduction, determination of nonprotein nitrogen in soybeans). 8. Nitrogenous constituents of germinating seeds: Biochemical changes during germination, enzymes, nucleoproteins and nucleic acid, asparagine and other nitrogenous constituents. Address: Soya Products Div., The Glidden Co., Chicago, Illinois.

3673. Coorengel, G.B. 1950. Katjang kedelai [The soybean]. Jakarta: Balai Pustaka. 34 p. 20 cm. [Ind]
Address: Jakarta, Indoensia.

3674. Feng, Doreen Yen Hung. 1950. The joy of Chinese cooking. New York: Greenberg. 227 p. Illust. Index. 24 cm.

• ***Summary:*** The section on "Ingredients" describes each basic ingredient, and gives the Cantonese name plus Chinese characters, including: (1) "Soya sauce" (*jeung yow*) is an absolutely essential basic ingredient. It "can nowadays be found in almost all neighborhood delicatessen or grocery shops" (p. 21). (2) "Bean sprouts" (*dow ngaah*). "They are usually golden yellow in color and possess a strong flavor and a rather crunchy texture." An illustration shows these sprouts, which appear to be soybean sprouts (p. 22-23).

(3) Two types of dried yuba (*fooh jook* and *tiem jook*), both illustrated. When soya bean milk is boiled, it separates into various layers; "the rich cream that rises is called *fooh jook*, and the settling sediment is called *tiem jook*. When dried, they look like stiff boards glazed with enamel, but after they have been cooked they become creamy and gelatinous. *Tiem jook* is used in fish dishes; while *fooh jook* is usually cooked in soup" (p. 30-31).

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term *fooh jook* to refer to dried yuba sticks.

Note: This is the 2nd earliest English-language document seen (May 2012) that uses the term *tiem jook* to refer to sweet dried yuba–specifically to the thicker, sweeter, less expensive bottom yuba, called *ama-yuba* in Japan. In the illustration, the shapes of the two types of dried yuba are completely different. The *tiem jook* looks like a stiff rectangle about 1/4 inch thick.

(4) Chinese sauces (*jeung*) come in bottles or cans (p. 32): (4a) Soya sauce (*jeung yow*) is an almost black sauce made from soya beans. The best substitute is Maggi. (4c) Bean-curd cheese (*fooh yü*) [fermented tofu] "Grayish-white little cubes of pressed bean-curd fermented in strong wine." It may be used in cooking. (4d) Bean-curd cheese, Eastern style (*naam yü*) [fermented tofu]. Fermented in a brick-red sauce, it is usually used for cooking. (4f) Tiny black fermented beans (*dow see*) [fermented black soybeans]. In cooking, these are generally crushed and used to season other strong-smelling ingredients such as fish. They add "a delightful spiciness to the sauce."

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "black fermented beans" to refer to *dow see* or fermented black soybeans.

(4g) A famous red sauce (*hoy sien jeung*) [Hoisin sauce]. This famous red sauce is often used in cooking shellfish and duck; it is widely served with Peking roast duck. There follows a description (p. 33) of how to make bean-curd cheese from fresh bean curd. (5) Oils and fats, incl. vegetable oils like soya bean oil, peanut oil, or sesame oil.

Note 1. This is the earliest English-language document seen (Oct. 2011) that uses the terms "Bean-curd cheese" (with hyphen) or "fooh yü" or "naam yü" to refer to fermented tofu.

Note 2. This is the earliest document seen (Sept. 2008) that mentions Hoisin sauce, whose Chinese name is *hai-*

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hsien chiang (Wade-Giles) or *haixian jian* (pinyin). Its main ingredient is soybeans.

Soy related recipes include: Pig's feet soya bean soup (*Jüh gerk fooh jook tong*, with yuba, p. 80). Oyster sauce bean curds (*Ho yow dow fooh*, with fresh bean curd, p. 155). Many other recipes use soya sauce as a seasoning.

Note: This book was first published in 1950 by Greenberg in New York City (227 p., 24 cm). It was next published in 1952 by Faber and Faber in London (227 p., 23 cm). Grosset & Dunlap (1954) appears to be the third.

3675. Heyne, K. 1950. De nuttige planten van Indonesië. 2 v. [The useful plants of Indonesia. 2 vols.]. The Hague, Netherlands: W. van Hoeve. 1660 + ccxli p. Tables. 25 cm. [Dut]*

• ***Summary:*** Contents: Ontjom. Dagé. The soybean (Sojaboon, Kedele). Cultivation. Seeds. Use: Témpé, tao hoe, tao koan, tao tjo, soja (ketjap).

Note: This book by K. Heyne was formerly published under the title *De Nuttige Planten van Nederlandsch Indië*. This is not a new edition; only the title has been changed. Address: Hoofd van het Museum voor Economische Botanie te Buitenzorg (Bogor).

3676. Lautensach, Hermann. 1950. Korea: Land, Volk, Schicksal [Korea: The land, the people and its destiny]. Stuttgart, Germany: K.F. Koehler. 135 p. Illust. Maps (1 folded in pocket). 25 cm. [Ger]*

• ***Summary:*** Hermann Lautensach lived 1886-1971. Address: Prof., Dr.

3677. Mahyudin, R. 1950. Chasiat kedele dan tomat: Sebagi makanan rakjat [The use of soybeans and tomatoes as foods]. Jakarta: Pustaka Rajkat. 42 p. [Ind]
Address: Indonesia.

3678. Masuno, Minoru. 1950. Daizu to sono riyô [The soybean and its utilization]. Tokyo: Sangyo Hyoron-sha. 197 p. [Jap]

• ***Summary:*** A very nicely done predecessor to Watanabe et al.'s book *Daizu Shokuhin*. Address: Tokyo Daigaku Kyoju, Kôgaku Hakase, Japan.

3679. Morse, W.J. 1950. History of soybean production: 5. World distribution (Document part). In: K.S. Markley, ed. 1950. Soybeans and Soybean Products. Vol. I. New York: Interscience Publishers or John Wiley & Sons. xvi + 1145 p. See p. 10-14.

• ***Summary:*** "The production of soybeans, which for many centuries was confined to the countries of Asia, spread rapidly after World War I to the western world, and since World War II practically all leading nations have become more and more interested in the culture and production of the crop. Agricultural experiment stations throughout the world have become engaged in the development of varieties suited to their soil and climatic conditions through introduction, selection, and hybridization. Successful results have been obtained in many countries and, in a few, acreage and production have increased to the extent that the crop has become an important factor in that nation's agriculture. This is especially true of the United States, Netherland Indies, Rumania, U.S.S.R., Austria, Bulgaria, and Poland.

"The principal zones of soybean production in the Orient are China, Manchuria, Korea, and Japan. In Manchuria, the soybean occupies about 25% of the total cultivated area and is a dominating factor in the economic life of the country. As a cash crop it provides fully half the farm income in the north and more than half the total volume of freight handled by the railroads. It is estimated that from one- to two-thirds of the production of soy beans is exported; 15 to 20% is utilized for food, feed, and planting, and the remainder is used for oil extraction.

"In China, the soybean is one of the principal and most ancient of crops, ranking fifth in extent of culture and occupying about 9% of the total cultivated area. Although grown everywhere in China, about 60% of the soybean acreage is confined to three northern provinces, Shantung, Kiangsu, and Honan. China consumes practically all of her production, estimates indicating more than 50% for food, 27% for oil extraction and other purposes, 10% for stock feed, and 8% for planting.

"Korea occupies third place among the soybean-producing countries of Asia. Acreage and production are confined largely to central and northern Korea, as southern Korea, which grows principally cotton and rice, seems to be less suited to the successful production of soybeans. The entire Korean production is used for food, stock feed, planting and export, and none is used for oil extraction.

"Japan, although a large producer of soybeans, has consumed all her production and has imported large quantities from Manchuria and Korea. Acreage and production of soybeans in Japan have decreased since World War I and greater emphasis has been placed on increased production of rice. The proportions of soybeans used by Japan for various purposes are: 'miso' (soybean-rice fermented paste), 22%; soy sauce, 22%; oil and oil cake, 21.5%; soybean curd [tofu], 15.5%; confections, 7.2%; forage, 6.2%; green manure, 2.5%; seed, 1.8%; green vegetable beans, 0.8%; and miscellaneous, 0.5%.

"In the Soviet Far East, the soybean is said to be one of the chief industrial crops and in some districts constitutes 20% of the cultivated area. Acreage and production have increased markedly since 1926, especially in Khabarovsk territory, the largest seed-producing area.

"South of China, the soybean is cultivated to some extent in the Netherland Indies, India, Siam, Cochin China, Philippines, and Australia. Until 1932, the production of soybeans in the Netherland Indies was not sufficient to meet

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the domestic demand. Since then, acreage and production have gradually increased until soybeans began to be exported to Holland about 1936. The soybean has been widely cultivated for a long time by the natives of the hilly regions from the borders of Afghanistan eastward to Burma, to northern Siam, and French Indo-China. The crop in India has been grown for its forage and food value rather than for commerce. Although successful results have been obtained in some of the provinces with varieties of good oil content, the growing of the crop as an oil seed does not appear to have been popular with the native farmers. In Australia successful results with American varieties have greatly increased acreage and production, especially in the states of Queensland, New South Wales, and Victoria.

"Although attempts to grow soybeans in European countries have extended over many years, it is only within the past few years that there has been any appreciable production. At present, production is confined largely to European U.S.S.R., Bulgaria, Yugoslavia, Austria, Rumania, and Czechoslovakia, production being largest in Rumania, Bulgaria, and Yugoslavia. In the development of adapted varieties, some progress has been made in Sweden, Poland, Netherlands, and Hungary. Because of the economic importance of the soybean, scientists of the U.S.S.R. have carried on extensive experiments with it, especially in the development of adapted varieties and utilization. At present, the principal areas of production are Ukraine, Moldavia, and certain regions in the North Caucasus.

"Experiments have been conducted with the soybean in nearly all regions of Africa but as yet it is an unfamiliar crop to the majority of African farmer. It has been grown successfully in the upland, midlands, and coastal districts of Natal [South Africa] and throughout Gambia, Nigeria, Egypt, the Gold Coast Colony, and also in the corn- and cotton-growing districts of the Belgian Congo.

"Although the soybean has been the subject of considerable experimental work in practically all countries of the Americas, little progress has been made in commercial culture except in the United States and Canada."

Note: This is the earliest document seen (Oct. 2010) that clearly refers to soybeans in Afghanistan, or the cultivation of soybeans in Afghanistan. This document contains the earliest clear date seen for soybeans in Afghanistan, or the cultivation of soybeans in Afghanistan (long before 1950). The source of these soybeans is unknown. Address: 6809 Fifth St. N.W., Washington, DC; formerly Principal Agronomist, Div. of Forage Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, USDA, Beltsville, Maryland.

3680. Morse, W.J. 1950. History of soybean production: 3B. Modern history in the United States (Document part). In: K.S. Markley, ed. 1950. Soybeans and Soybean Products. Vol. I. New York: Interscience Publishers or John Wiley & Sons. xvi + 1145 p. See p. 6-9.

• ***Summary:*** "The first mention of the soybean in the United States is by Mease in 1804, who stated that 'the soybean bears the climate of Pennsylvania very well and should be cultivated.' In 1829, Thomas Nuttall grew a variety in the botanic gardens at Cambridge, Massachusetts. From observations he wrote, 'Its principal recommendation at present is only a luxury, affording the well-known sauce, soy, which at this time is only prepared in China and Japan.' The Perry expedition to Japan in 1854 brought back two varieties of soybeans which were distributed by the United States Commissioner of Patents. Frequent references to the soybean occurred thereafter in agricultural literature under such names as Japan pea, Japan bean, and Japanese fodder plant. [Note: The last two names do not appear in the SoyaScan database as of Nov. 1991.]

"The Mammoth Yellow variety, cultivated extensively in the southern states for many years, is said to have originated from seed sent from China by missionaries in 1873. In 1878, G.H. Cook of New Brunswick, New Jersey, obtained seed of the soybean from the Bavarian station and James Neilson obtained several varieties from Vienna. Crops of these varieties were harvested in 1879. Undoubtedly these varieties were some of those grown and distributed throughout Europe by Haberlandt. In 1890, C.C. Georgeson of the Kansas Agricultural Experiment Station brought in three varieties from Japan and in 1889 W.P. Brooks of the Massachusetts Agricultural Experiment Station brought back several varieties from the same country.

"Previous to the numerous introductions by the United States Department of Agriculture beginning in 1898, there were not more than eight varieties of soybeans grown in the United States and these with quite limited adaptation to soil and climatic conditions. With the introduction and development of new and improved varieties adapted to a greater range of soil and climatic conditions and uses, acreage and production gradually increased. Until about 20 years ago, most of the soybeans in this country were grown in the southern and eastern states. In 1919, the five leading states in soybean acreage were North Carolina, Virginia, Mississippi, Kentucky, and Alabama. By 1924, the relatively more rapid expansion of the crop in the north central region of the country brought Illinois into the leading position, followed by Indiana, Tennessee, North Carolina, and Missouri. Illinois has held the lead in acreage and production ever since, and the north central region has grown in importance as a region of soybean production and processing.

"Soybeans at first, and for several years, were grown primarily as a forage and pasture crop. Previous to 1930 the acreage harvested for seed was less than one-fourth the total acreage grown for all purposes. With the adaption [adoption] of improved methods of culture, improvement of machinery for planting, cultivating, and harvesting, adapted

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improved varieties for processing for oil, and with the development of markets for soybeans for crushing purposes, a gradual increase in the proportion of acreage harvested for soybeans took place. In 1939, 40% of the total soybean acreage was harvested for seed. The proportion for this purpose increased rapidly during the war years. In 1944, 72% of the total planted acreage was harvested for seed and in 1947, 84.5%. An important factor in the marked increase in acreage of soybeans in 1934 was the severe drought, which ruined large acreages of corn, small grains, and tame hay in the early season of the year–as a result of which soybeans were planted as an emergency crop. The program of the Agricultural Adjustment Administration, United States Department of Agriculture was a stimulus to the expansion in acreage of soybeans in the last half of the 1930's. Corn acreage limitations and allotments restricted the acreage of corn and so increased the acreage of cropland available to other crops. Soybeans for seed, although classified as a soil-depleting crop in the principal producing regions, competed effectively for part of this acreage. The greatest annual increase in acreage of soybeans harvested for seed occurred in 1942, in response to the urgent appeal by the Government early that year for a large increase in soybean production to meet wartime demands for oil and fats. Programs of production goals and guaranteed support prices have contributed to maintaining production at a high level since 1942. The Government program for soybean processors, which greatly reduced their risks, was also of importance.

"Standards for use in grading and marketing soybeans were set up by the United States Department of Agriculture as early as 1925 and in 1936 a future [futures] market for soybeans was established in Chicago. In 1929, a soybean laboratory was established in Ohio by the United States Department of Agriculture to conduct research toward the development of high-oil and high-protein varieties. In 1936, the United States Regional Soybean Industrial Products Laboratory was located at Urbana, Illinois, and in co-operation with the experiment stations of the 12 north central states began agronomic investigations in the development of new improved varieties for industrial purposes and chemical research on the development of new industrial uses for soybeans. In 1942, the laboratory work devoted to industrial uses was transferred from Urbana to the Northern Regional Research Laboratory at Peoria, Illinois. At this time the agronomic research remaining at Urbana was designated the United States Regional Soybean Laboratory and was expanded to include 12 southern states in addition to the 12 north central states originally served. The Regional Research Laboratory at Peoria conducts research on soybean processing and on processing and utilization of the oil and oil meal for food and industrial purposes.

"Numerous commercial concerns as well as many public research institutions, are conducting research designed to develop more efficient techniques in processing soybeans for food and industrial uses. Much research is also being conducted on methods for improving the quality of oil and flour, and for adapting these products to specific uses." Address: 6809 Fifth St. N.W., Washington, DC; formerly Principal Agronomist, Div. of Forage Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, USDA, Beltsville, Maryland.

3681. Noda Shoyu Co. 1950. [Labor agreement]. Tokyo: Yoshida Shuppansha. 50 p. [Jap]*
Address: Noda, Japan.

3682. Pan Ku. 1950. Han Shu [The Han dynasty book]. Translated and edited by Nancy Lee Swann. In: Food and Money in Ancient China: The Earliest Economic History of China to A.D. 25. Han Shu 24 with related texts Han Shu 19 and Shih-chi 129. Princeton. [Chi]
• ***Summary:*** See Nancy Swann 1950. Address: China.

3683. Swann, Nancy Lee, trans. 1950. Food and money in ancient China: The earliest economic history of China to A.D. 25. Han Shu 24, with related texts, Han Shu 91 and Shih-Chi 129. Princeton, New Jersey: Princeton University Press. xii + 482 p. Plus 79 unnumbered pages of illustrations. Illust. Maps. 25 cm. Plus unpaginated Chinese text at end. [1 ref. Eng]
• ***Summary:*** This translation of the ancient Chinese book titled *Han Shu* contains extensive annotation and footnotes by the author. The *Han Shu*, written by members of the Pan family (father, son, and daughter), is one of China's most important early historical works, rivaled only by its great predecessor and model, the *Historical Record* (*Shih-chi*) written by Ssu-Ma Ch'ien and his father, Ssu-Ma Tan, completed between 100 and 90 B.C. Pan Ku (A.D. 32-92), the son, to whom the work is generally attributed, inherited his father's writings. The book is basically a treatise on certain economic phases of the Western/Former Han period (206 B.C. to A.D. 8; HS 24AB) together with sketches of 41 rich merchants and wealthy industrialists (HS 91). It is similar in many ways to the *Historical Record*.

Page 419 notes that "the poor only had soybeans to chew and water to drink."

The section on the "Wealth of Ch'in Han Times" (Han Shu 91), which describes the period from about 250 B.C. to A.D. 24, it is stated (p. 434): "[Whoever in] market towns and commercial metropolises [sold] annually [any one of the following categories to the specified quantity] was also equal [in wealth with the head of a great hereditary] family *chia* of a thousand chariots. 1. Liquor, a thousand brewings. 2. Pickles and sauces *chiang-yu*, * a thousand jars. 3. Sirups *chiang***, a thousand jars. 4. Slaughtered cattle, sheep, and swine, a thousand [animals including] skins."

The square brackets are in the translation. This is sections 91:7a/4 and 8b/1 of the original Chinese text. The

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authors two footnotes, indicated here by asterisks, read as follows: * "Consult *Li-Chi* 2:23b, Sacred Books of the East, xxvii, 79. The west has learned of the sauce under the Japanese pronunciation *soy*. It is a 'black, thin liquid, having an agreeable saltish flavor (Stuart 191-195). There are several forms, such as that made from wheat or barley flour, and from various kinds of beans. It is the universal sauce of the Chinese and Japanese, and is to be distinguished from bean relishes *shih*, HS91:11b/5."

** "Chiang, consult *Li-Chi* 2:24a, SBE xxvii, 79. The *Chou Li* listed four drinks and sirups (5:16a), and also six drinks and sirups (5:24b), and in both lists *chiang* is included. Commentators gave opinions that *chiang* was obtained in part from meats."

On page 459, in the section on "Nos. 26-32. Seven Wealthy Men of the Capital," we read that Fan Shao-weng (no. 31), and Wang-sun Ta-ch'ing (no. 32), were both merchants of bean relishes [shih, fermented black soybeans]' they lived in the city of Ch'ang-an. Address: Princeton, New Jersey.

3684. Worth, Miklos. 1950. Soyabeans: The fabulous food that supplies meat, milk, cheese, proteins, amino acids, vitamins, minerals. New York, NY: Ideal Health Books. 62 p. A MacRichard publication.

• ***Summary:*** This book consists of many short chapters. Contents: The bean that is not a bean. A therapeutic substance. Chemical requirements of life. Natural foods supply basic needs. Disease–A disturbance of mineral salt balance. Essentials in man's diet. The big five. A balanced mineral supply. Soybean oil valuable to health. Carbohydrates in soybeans. A storehouse of vitamins. How vitamins are to be used. Soyabeans in Rheumatism. Nervous exhaustion. Rickets. Gastro-intestinal disorders. A perfect food for invalids. Constipation. Obesity–An easy way to reduce. Loss of weight. Dandruff and loss of hair. Eczema and other skin disorders. Sciatica. Hardening of the arteries. Excellent food for diabetics. An excellent blood builder. Soyabeans influenced civilization. The poor man's meat. Introduction to America. Revolutionizing modern economy. Soyabeans could enrich the diet. How to make soya milk. Soyabean sprouts. Soyabean curds. Soyabean coffee. Soyabean oil. How to cook soyabeans. Soyabean flour in baked products. Its use in green salads. Soyabean sauce. Health through soyabeans.

Chapter 1 begins: "Soyabean, the wonder-plant of the Far East that has given sustenance to the peoples of the Orient since time immemorial, is not only a nourishing food, but plays a host of roles in natural health because of its medicinal and therapeutic properties... There is no other single plant known to man which yields such bounty of goodness. All the essential ingredients for health and long life are gathered and packaged in this singular food."

Note 1. This is the earliest English-language document seen (Feb. 2004) that uses the term "soyabean curds" to refer to tofu.

Note 2. This is the earliest English-language document seen (Feb. 2000) that uses the term "soyabean sprouts" to refer to these sprouts.

Note 3. This is the earliest English-language document seen (March 2001) that uses the term "soyabean coffee" to refer to soy coffee.

Note 4. This is the earliest English-language document seen (April 2012) that uses the term "soyabean sauce" to refer to soy sauce.

Note 5. This is the earliest English-language document seen (Oct. 2001) that uses the term "soyabean flour."

3685. Yuasa Shoyu Jozo Dogyo Kumiai [Yuasa Shoyu Brewers' Assoc.]. ed. 1950? Yuasa shôyu enkaku taiyô: Nihon shôyu jôzô no biso. Wakayama-ken jûyô bussan [Summary of the history of Yuasa shoyu: The originator of Japanese shoyu brewing. An important product of Wakayama prefecture]. Yuasa-cho, Arita-gun, Wakayama prefecture, Japan. 200 p. [Jap]

• ***Summary:*** Company name with diacritics is: Yuasa Shôyu Jôzô Dogyo Kumiai. The head of the Brewers' Assoc. is Seshichi Kubo. Included in this history of Yuasa shoyu are logos of at least 6 major Yuasa shoyu manufacturers, together with the company name. Histories of individual companies are not included. One of the companies is Kadocho Shoyu; the founder of its parent company (honke) was Kodaya Umataro.

Yuasa shoyu originated in 1230 A.D., the 4th year of the Antei period. It started to be produced and sold during the Bunreki period by Bo Iwasa. It started to be shipped to Osaka in 1535 (the 4th year of the Temmon period) by Akagiri Zenuemon (or Yoshiuemon). The Yuasa shoyu dealer in Osaka (Yuasa Zogyojo) was Ihei Komatsuya. The Osaka shoyu distributor was established in 1782 (the 2nd year of Temmei) by Matsutaro Kochiya. The Yuasa Shoyu Brewers' Assoc. was founded on 21 June 1899 (the 32nd year of Meiji). Production is 52,700 koku (1 koku = 180 liters, so 9,486,000 liters), worth 850,000 yen. Address: Yuasa, Wakayama prefecture, Japan.

3686. Pacific Trading Co. (Taiheiyo Boeki Kabushiki-gaisha). 1951. Import–Export–Wholesale (Ad). In: Hokubei Mainichi Nenkan [Hokubei Mainichi Year Book]. 1951. p. 26. [Eng; jap]

• ***Summary:*** Ad (half page). The top third of this ad is in English, as is the bottom line. In the center are three large logos: Kikkoman [shoyu], Liberty brand Bluerose rice, and Aji-no-Moto [MSG]. Cable address: "Pacmuco" S.F. Address: 249 Davis St., San Francisco 11, California. Phone: YUkon 2-3820.

3687. **Product Name:** Shoyu [Soy sauce].

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Manufacturer's Name: Rafu Shoyu Jozo-gaisha (Rafu Shoyu Co.).
Manufacturer's Address: 3500 Larimer, St., Denver, Colorado. Phone: KE 4782.
Date of Introduction: 1951, January.
New Product–Documentation: Hokubei Mainichi Year Book, 1951, p. 662. Category: "Food Products." In Japanese: Rafu Shoyu Jôzô-gaisha. English: Rafu Shoyu Co., 3500 Larimer St., Denver. Phone: KE 4782.

Nichi-Bei Jiji Jushoroku [Japanese American Times Directory], 1952, p. 485. Under "Food Products." In Japanese: Rafu Shoyu Jôzô Gaisha. In English: Rafu Shoyu Co., 3500 Larimer St., Denver, Colorado. Phone: KE. 4782.

Hokubei Mainichi Nenkan (Year Book). 1970. Page 899. Directory entry, under "Food Products." In Japanese: Rafu Shoyu Jôzô-gaisha. In English: Rafu Shoyu & Bean Sprouts Co., 3500 Larimer St., Denver, Colorado. Phone: 534-4782.

3688. **Product Name:** Shoyu.
Manufacturer's Name: Yamasa Shoyu Kaisha (Yamasa Shoyu Co.).
Manufacturer's Address: 845 Naomi Ave., Los Angeles, California. Phone: TR 5805.
Date of Introduction: 1951, January.
New Product–Documentation: Hokubei Mainichi Year Book, 1951, p. 435. Category: "Food Products." Yamasa Shoyu Kaisha, Yamasa Shoyu Co., 845 Naomi Ave., Los Angeles. Phone: TR 5805. Note: Yamasa is an old and famous maker of shoyu in Japan. It is not clear whether or not this company is related to the Yamasa of Japan, and whether this company makes shoyu or just sells it. However Japan's old and famous Yamasa company does not yet make shoyu in the USA.

3689. Morse, W.J. 1951. What's in a name? *Soybean Digest.* Jan. p. 22-24.
• ***Summary:*** "Ancient Chinese literature recording the advice of agriculturists on the best varieties of soybeans to plant under different soil and climatic conditions and the utilization of certain varieties for specific purposes, indicates that the soybean was perhaps one of the oldest crops grown by man [sic]. Varieties of soybeans are very numerous in oriental countries, especially Korea. There during agricultural explorations by the United States Department of Agriculture in 1929 to 1931 more varieties showing a wider range of color, size, and shape of seed and plant characters were found than in China, Manchuria, and Japan.

"The soybean is peculiarly sensitive to changes of soil and climatic conditions and this explains undoubtedly to a very great extent why practically every locality in the soybean regions of eastern Asia has its own varieties. Explorations in small villages in China and Korea revealed that nearly every family had its own favorite varieties for different uses.

"It is noteworthy that of the large number of varieties introduced into the United States from the Orient the same variety has rarely been secured a second time unless from the same locality. Obviously, centuries of experience aided by natural crossing and selection have brought about the development of the vast number of varieties for special purposes under local conditions in China, Korea, and Japan.

"Prior to the introduction of numerous varieties of soybeans by the Department in 1898, not more than eight varieties had been grown in the United States. The culture of these was limited to a few well-defined areas. During the past 50 years the Department has made several thousand introductions of soybeans from China, Korea, Manchuria, Indonesia (Java), and India, representing many hundreds of distinct types.

"This large collection, ranging in maturity from 75 to 200 or more days, has shown wide differences in color, size, shape, composition and quality of seed, plant characters, utilization, and in adaptation to the various soil and climatic conditions in the United States.

"In a recent review of all introductions received from eastern Asia, it was noted that a large number of those from China, Korea, and Japan were sent in under their native varietal names, the translation of which revealed some very interesting and perplexing names. It was interesting to note among the oriental names three–Chief, Chestnut, and Hawkeye–that breeders in the United States have assigned to varieties developed for their own local conditions.

"The many peculiar oriental varietal names of soybeans suggested the title of this article. It was thought that American soybean breeders and growers would be interested in knowing the sort of varietal names soybeans have in other parts of the world.

"It is obvious that the oriental breeder or grower, in naming some of the varieties, must have been in a poetic frame of mind in assigning such names as 'Heaven's Bird,' 'White Spirit of the Wind,' 'Flower Garden,' and 'Clasped Hands.'

"The large number of varietal names is quite understandable as they indicate various seed and plant characters, temples, villages, prefectures, animals, birds, uses, and occasionally a breeder's name. This will be noted in the following lists and selected classification of varieties.

"It is not to be assumed that these lists of names represent all of the varieties grown in these countries. In fact, they are only a selected number from the varieties introduced into the United States during the past 50 years. It was interesting to note that some of the Chinese varietal names were the same as those in Chinese literature dating back 100 years ago."

"Selected classification of Chinese soybean varieties:

"Seed Color: Black Belly, Chicken's Foot Yellow, Crow's Eye Yellow, Crow's Skin Green, Flesh Yellow, Musk Deer's Skin Yellow, Parrot Green, Raven's Eye Yellow, Tiger

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Skin.

"Seed Size: Great White, Large Black, Large Green, Large White Eyebrow, Small Golden.

"Seed Shape: Flat Black Golden Round, Large Round Black, Pearl Shape, Round Pearl, Small Round Green.

"Hilum (Seed scar): Flowery Eyebrow, Large White Eyebrow.

"Maturity: August Green, Autumn Azure, Burst Pods in Six Months, Eighth Month White, Filth Month Yellow, Melon Ripe, Midsummer Yellow.

"Pods: Five Month Broad Pod, Four Grain Green, Four Grain Yellow, Iron Pod Green, Three Bean Pod, White Podded Green.

"Leaf: Long Large Green Leaf.

"Pubescence: Hairy Green, Red Hair Green, Sixth Month White Hairy, Yellow Hair Green.

"Utilization: Black Curd, Follow Rice, Round Cattle Feed, Vegetable.

"Odd Names: Entwined Silk, Moon Tooth, Sparrow's Cackling, Unknown Water."

"Selected classification of Korean varieties:

"Seed Color: Barbarian Blue, Black Chestnut, Castor Bean Skin, Golden, Indigo, Lacquer Black, Red Striped, Rich Black, Widower (Black and White), Yellow Dragon's Eye.

"Seed Size: Big Green, Large Black, Small Blackeye, Small Blue.

"Flower: Early White Flower, Large White Flower, White Flower Pure Yellow.

"Hilum: Chotan White Eye, Green Eye, Purple Mouth, Rensen Brown Eye, Small Blackeye, White Eye.

"Maturity: Aid For New Land, Black Sprout, Black Vegetable, Edible, Millet Friend, Plant In Millet, Plant in Wheat, Plant Between Crops, Rainy Season, Roasting, Sprout.

"Habit: Climbing.

"Leaf: Bamboo Leaf.

"Birds: Crow's Early, Domestic Geese, Pigeon, Skylark, Swallow, Water Rail.

"Animals: Deer, Horse, Mouse, Red Rat, White Horse.

"Village: Anpen, Chotan, Tansen.

"Superior Varieties: Great Happiness, Plentiful, Prolific, Rich, Rich and Virtuous.

"Odd Names: Beheaded, Clasped Hands, Cow's Knee, Flying Fish, Flower Garden, Peaceful, South Sea, Spirit of the Wind, Turtle Nest, White Priest's Foot, Wild Boar's Hip."

"Selected classification of Japanese varieties:

"Seed Color: Black Autumn, Black Saddle, Brown Spotted, Green Fool, India Ink, Mink Skin, Pretty Flesh Color, Silver White, Yellow Jewel, Yellowish White Blackeye.

"Seed Size: Large Green, Large Jewel, Large White, Large White Ring, Small Blackeye, Small Bullet, Small White.

"Seed Shape: Gingko Seed Shape, White Ball, Water Caltrop Shape.

"Hilum (seed scar): Blackeye, Green Eye, No Eye, White Eye, White Mouse Eye.

"Pods: Black Eye Long Pod, Black Pod Gold, Four Seeded Yellow, Fox Pod, One Seed, Red Pod, Three Seeded Pod, Two Seeded Pod, Yellow Pod, White Pod.

"Pubescence: Early Smooth, Green Non Hairy, Half Smooth, Middle Season Smooth, Naked Devil, Non Hairy, Smooth White, Smooth Devil, White Hair.

"Stems: Fan Shape Stem, Red Stalk, Single Stalk, White Stem.

"Leaf: Five Leaf Saddle, Monbetsu Long Leaf.

"Habit of Growth: Akita Bunch, Bunching Maiden, Doesn't Touch The Earth, Dwarf, Very Bunched Pods.

"Maturity: August, Black Autumn, Early Gold, Middle Season, October, Very Early Abundant, Yellow Fall, Midseason Fox, Through Frost, White Autumn.

"Utilization: Devil Chaser [for roasted soybeans–irimame], Forage, Miso, Natto, Paddy Field Boundary, Produces in Shady Places, Soy Sauce, White Sprout.

Superior Varieties: Abundance, Abundant Pods, Brings Treasure, Early Increase, Excessive Yield, Fortune, Heavy Yield, One Hundred Percent Good, Small, Fortune, One Thousand Pod.

"Animals: Early Fox, Mink, Mouse, Small Donkey, Tiger.

"Birds: Crane's Friend, Dove, Dove Killer, Sparrow, Wild Duck, Wild Goose, Young Crane.

"Persons: Bingo's White, Chichanari, Hachiya.

"Prefectures (states): Aizu, Chiba, Echigo.

"Shrines: Goshanari, Miyashiro, Zankonji.

"Villages: Chizuka, Hachirihan, Iwakiri.

"Odd. Names: Covered with Frost, Bright Country, Elder Brother, Enter Priesthood, Heaven's Bird, Old Woman's Cane, Pretty Girl, Through the Water, Under The Snow, White Dog's Foot."

Photos show: (1) Bean curd [tofu] cakes being sold by vendors on streets in Peking, China. In the Orient special varieties of soybeans are used in the manufacture of bean curd and many other soy products. (2) Korean farmers' market day held weekly in the small villages. This offers a rich source of soybean varieties. (3) Japanese farm girls planting seed of the Azemame (Paddy Field Boundary Soybean) variety on the land bounding a rice paddy. The beans are used in making miso (salty soy paste), soy sauce, and other foods for human consumption.

Note: This is the earliest English-language document seen (Aug. 2011) that uses the term "salty soy paste" to refer to miso. Address: Retired Principal Agronomist, Div. of Forage Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, U.S. Department of Agriculture, USDA.

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3690. Nicholls, Lucius. 1951. Tropical nutrition and dietetics. 3rd ed. London: Baillière, Tindall and Cox. ix + 476 p. Feb. Illust. 24 cm. [40+* ref]

• ***Summary:*** Table XI (p. 22), "Chemical and biological evaluation of proteins for growing rats," contains 6 columns: Foodstuff, digestibility, Biological Value, Net Utilisation [NPU], Protein efficiency ratio, chemical score, and limiting amino-acid. "There is agreement in all methods of the high value of milk, eggs, and other foods of animal origin, and among those of vegetable origin, the proteins of soya bean flour hold a high place." Values for soya bean curd [tofu] are also included. The next section is on supplementing proteins.

The long section titled "Pulses (legumes)" (p. 219-35) has this contents: Introduction. Dhals (Dals; peas which have been shelled, split and polished). Peanut. Bambara earth pea (*Voandzeia subterranea*). Soya bean: Importance in Asia, used in may forms: Nearly-ripe seeds [edamamé or green vegetable soybeans], dry seeds, soya bean emulsion ('Milk'–contains a detailed description of how soya milk [Vitasoy] is made in Hong Kong, including exact amounts of all ingredients for 800 oz and the nutritional composition (%)), soya bean curd (may be smoked or dried), fermented curds [fermented tofu], fermented beans (témpé), soya bean sauce, sprouted soya beans, soya bean flours, mixtures of soya beans and cereals, milk substitutes (for infant feeding in China). The genus Phaseolus may be divided into two types: Those of Asian origin and those of New World origin (Americas). Cow pea (*Vigna sinensis, V. unguiculata, V. sesquipedalis*). Egyptian kidney bean (Dolichos lablab). Horse gram. Chick pea. Cluster bean (*Cyamopsis psoralioides*). Four-angled bean or Goa bean (*Psophocarpus tetragonolobus*). Locust bean (*Ceratonia siliqua*). African locust bean (*Parkia biglobosa, P. filicoidea*). Sword bean (*Canavalia gladiata*). Jack bean (*Canavalia ensiformis*). Velvet bean (*Mucuna* spp.). Honey locust (*Prosopis juliflora*). Garden pea (*Pisum sativum*). Broad bean (*Vicia faba*–not a tropical plant). Yam bean (*Pachyrrhizus erosus*). West Indian locust (*Hymenæa courbaril*). Madras thorn (*Pithecellobium dulce*).

Phaseolus–Asian: *Phaseolus aureus:* green gram [mung bean]. *Phaseolus mungo:* black gram. *Phaseolus calcaratus:* rice bean. *Phaseolus actinifolius:* moth bean. *Phaseolus angularis:* adzuki bean. New World: *Phaseolus lunatus:* lima bean. *Phaseolus vulgaris:* kidney bean. *Phaseolus multiflorus:* scarlet runner. The subsection titled "Substitutes for milk" (p. 231-35) discusses soya milk. Goitrogenicity of [raw] soya beans (p. 376). Saponins in foodstuffs (incl. soya bean; p. 385). Table 62 (p. 404-05) gives the botanical name and composition of pulses, incl. soya bean, soya bean curd, soya bean milk, carob bean, Goa bean, tepary bean. Table 66 (p. 410-11) does the same for fresh legumes, incl. broad bean, French beans, pea, pea nuts, and sprouted soya. Table 67 does the same for nuts, oil seeds, and miscellaneous seeds, incl. almonds, coconut, coconut "water," coconut "milk," linseed, pumpkin seed, sesame (gingelly), sunflower seed, and sunflower seed (kernel).

Note 1. This is the earliest English-language document seen (Oct. 2011) that uses the term "fermented curds" to refer to fermented tofu.

Note 2. The title C.M.G. (Companion of St. Michael and St. George) is an honor conferred upon those for distinguished service in the British colonies or commonwealth.

Also discusses: Marmite (autolysed yeast, p. 158, 302). Fluorine in teeth and fluorosis (p. 170, 38). The many species of millet and sorghum (p. 216-18). Coconut, coconut milk, palm oil, red palm oil benniseed of Nigeria, gingelly oil, sesame, sim-sim, til (p. 254-60). Yeast (dried; Torula utilis, Brewers' yeast, Bakers' yeast, Marmite) (p. 302-03).

Lucius Nicholls was born in 1884. Address: C.M.G., M.D., B.C., B.A. (Cantab.). Late Director of Bacteriological and Pasteur Institutes, and Director of Div. of Nutrition, Ceylon; Lecturer in Nutrition, Ceylon Univ.; Late Lecturer on Tropical Medicine, Ceylon Medical College; Nutrition Adviser to Commissioner General, South East Asia. Presently at Cookham Dean [just west of London, England].

3691. Bening, W. 1951. First published report on soybeans. It was written in Germany in 1712. *Soybean Digest*, March. p. 20-22.

• ***Summary:*** This book was the *Amoenitatum Exoticarum* ("Exotic Novelties") by Engelbert Kaempfer. The book, itself, is located in a locked glass case at the Engelbert Kaempfer Museum, in the dreamy medieval town of Lemgo, Germany, where Kaempfer was born on 16 Sept. 1651. When he died, he left behind his extensive diaries, drawings, and manuscripts, some of which are still among the rare materials of the British Museum in London. Kaempfer had a lifelong desire to travel abroad and an "unbelievable capacity for learning foreign languages... An amateur in almost all fields of science, with profound knowledge in medicine, botany, and pharmaceuticals, at the age of 32 Engelbert managed in 1713 to be engaged as secretary to the Royal Swedish Ambassador Extraordinary on a special mission to Persia. And some years later, after many story book adventures, he was assigned as surgeon in the colony of the Dutch East India Company in Japan."

The author then gives an English-language translation of what Kaempfer wrote about the soybean. "This [Dutch East India] company operated at that time the only European colony in Japan. It was licensed by the emperor of the country. The colony was hermetically sealed from the country and its inhabitants. Laws were extremely severe on foreigners as well as the natives.

"Kaempfer, whose only wish was to study the country and its population, despaired. Yet under these hard circumstances, he wrought the masterpiece of his life. His open character and untroubled friendliness to all, and his

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extraordinary gift of learning languages overnight, opened to him the minds and hearts of the Japanese people...

"Engelbert Kaempfer in those prison years on the little island of Deshima, laid the foundation of western science in Japan.

"When Engelbert returned to Lemgo 10 years after he had left home, he wrote his *Amoenitates Exoticae* in the difficult Latin language of those times."

Photos show: (1) Kaempfer's book, opened to the illustration of a soybean plant. (2) Dr. W. Bening, "a German nutritionist and soya expert, who has been connected with the program for improvement of the German diet with soy foods." (3) The outside front of the Engelbert Kaempfer Museum near Lemgo. Address: PhD.

3692. Iguchi, Nobuyoshi. 1951. Kôji-kin ni kansuru kenkyû. III. Shôyu kôji-kin heni kabu no koso ryoku to kosan seisan ni tsuite [Studies on *Aspergilli*. III. The effects of ultraviolet radiation on the power of enzyme activities and production of koji acid in *Aspergillus sojae*]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 24(6):283-87. March. [13 ref. Jap; eng]
Address: Noda Industrial Science Lab., Noda, Japan (Noda Sangyo Kagaku Kenkyusho).

3693. Kibi, Masajiro. 1951. Shôyu jôzô-yô kôji-kin ni tsuite. III. [On the varieties of *Aspergillus oryzae* employed in shoyu manufacture. III. The amylase and the protease]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 24(6):278-81. March. [10 ref. Jap; eng]
Address: Microbiological Lab., Yamasa Shoyu Co., Ltd. (Yamasa Shoyu K.K. Kenkyusho. Biseibutsu Jikken-shitsu: Nôgaku-shi).

3694. Obata, Yataro; Yamanishi, Tadashi. 1951. Shôyu no kôki. I. Tanpakushitsu bunkai-butsu oyobi amino-san yori shôjiru kôki ni tsuite [Studies on the flavors of soy (sauce). I. On the flavors developed from hydrolyzed protein and amino acids]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 24(5):226-29. March. [13 ref. Jap; eng]
Address: Lab. of Agricultural Chemistry, Hokkaido Univ., Japan.

3695. Porterfield, W.M., Jr. 1951. The principal Chinese vegetable foods and food plants of Chinatown markets. *Economic Botany* 5(1):3-37. Jan/March. See p. 5-9. [68 ref]
• ***Summary:*** The soybean "is referred to by Chinese as 'the poor man's meat and the poor man's milk.'" In New York City, soybeans are sold in Chinese shops in three main forms: seeds [whole dry soybeans], bean sprouts, and bean curd. Soy sauce and soybean oil are also available. Soy sauce "is a heavy dark fluid which is used as a condiment to supply saltiness that brings out flavor,..."

When soybean milk is heated, a skin [yuba] such as forms on milk rises to the surface. Other [Western] uses of soybeans include soybean flour, meal, lecithin, shortenings, and margarine.

Nitrogen fixation takes place in the nodules of the soybean plant, which makes it useful as a green manure. Crude soybean oil goes into the manufacture of soap (both soft and hard). Soybean meal can be used to make plastic and "protein fibers" which are called "soybean wool. "During the war about 1,000 pounds of soybean wool were produced each day, and all of it went into the winter uniforms of the armed forces."

Some 36 different varnishes with 100% of their oil content as soybean oil have been developed and given exposure tests. A rubber substitute named "norepol" has been developed and can replace rubber in "insulation, shoe heels, fruit-jar rings, gaskets, and tubing." Soybean protein has been used as a stabilizer in fire-fighting foam. Other industrial uses, which are too numerous to mention, include enamels, printing ink, linoleum, foundry cores, glycerin, notepaper, and billiard balls. In the United States, soybean crops and products create an annual income of $45 million.

Tables show: (1) Nutritional composition (on an "as-is" basis) of: "Bean cheese (Tou-fou; 13.5% protein). Soybean milk (3.13% protein). Bean oil (Tao-yu; 7.49% protein). Soy sauce (Tao-jung; 12.67%). (2) Nutritional composition of soybeans.

Half-page photos (each with a black background) show: (1) Bean sprouts ready for cooking. (2) A square of firm "Tou-fu, bean curd, a cheese made from soybeans." Address: 3334 Prospect Ave., N.W., Washington &, DC.

3696. Anthony Bros. Inc. 1951. The Bar-B-Q Chef (Ad). *Los Angeles Times*. April 22. p. G21.
• ***Summary:*** "Shish kebab is Armenian, Shashlik is Russian, en Brochett [sic, en Brochette] is French, and Teri Yaki is Hawaiian [sic, Japanese]. They all spell delicious barbecued food." A recipe for Shashlik (but not Teri Yaki) is given.

A clip-out coupon offers two choices: (1) "Please send me your Free Bar-B-Q Recipe pamphlet." (2) "Please send me an invitation to your barbecue demonstration." Note: The company sells barbecue equipment. A brochette is a skewer. Address: 270 S. Rosemead Blvd., Pasadena [California].

3697. Standard, Stella. 1951. Whole grain cookery: A gourmet guide to glowing health. New York, NY: The John Day Co. ix + 240 p. April 26. Foreword by Pearl S. Buck. No index. 21 cm.
• ***Summary:*** The basic message: Whole grains and their flours taste better and are better for you. The first third of this cookbook contains one chapter (with recipes) on each of the major cereal grains (rice, corn, oats, etc.) plus sunflower seeds. A middle chapter, titled "A miscellany of grains" (p. 111-38) gives recipes for gruenkern, oat grits, wheat

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grits, cracked wheat, bulghur, rye, rye grits, hominy grits, millet, pearl barley, barley flour, kasha (buckwheat groats), soybeans, etc. The last third is about baked goods, arranged by type (yeast breads, quick breads, hot breads, pancakes, cakes, pies, puddings, confections, etc.).

Chapter 12, titled "Whole grain," ends (p. 5) with a paragraph about the soy bean. It was introduced to the USA in 1804 "but was not cultivated extensively until after the First World War." There are 2,000 varieties. "It is becoming more and widely used as a food in various forms because it is so rich in proteins, fats, minerals, and vitamins. It is also used in the manufacture of many goods, besides its great importance as a food."

Soy related recipes: Soy grits in consommé (p. 129). Baked soybeans (p. 135-36). Fried soybean sprouts (p. 136). Soya and whole wheat bread (p. 151-52). Orange, oatmeal, and soy flour bread (p. 160-61). Soya, rye, and oatmeal flour bread (p. 161). Soya and cornmeal bread (p. 177-78). Soy sauce is used in several recipes (p. 17, 29, 114, etc). Many recipes contain meat, fish, or poultry. Address: [USA].

3698. Obata, Yataro; Yamanishi, Tadashi. 1951. Shôyu no kôki. II. Merukaputan to arudehido yori shôzuru kôki [Studies on soy sauce flavors. II. The flavors of the compounds obtained by the reaction of mercaptan with aldehydes]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 24(7):334-38. April. [15 ref. Jap; eng]
Address: Lab. of Agricultural Chemistry, Hokkaido Univ., Japan.

3699. Yokotsuka, Tamotsu. 1951. Shôyu kôki seibun ni kansuru kenkyû. II. Shôyu no hikaori (1). $C_{10}H_{22}O_3$ naru acetyl no bunri [Studies on flavorous substances in soy [sauce]. II. Flavors resulting from heating. (1) Isolation of an acetal $C_{10}H_{22}O_3$]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 24(8):355-58. May. [3 ref. Jap; eng]
Address: Noda Industrial Science Laboratory.

3700. Yokotsuka, Tamotsu. 1951. Shôyu kôki seibun ni kansuru kenkyû. III. Shôyu no hikaori (2). $C_{10}H_{22}O_3$ oyobi $C_9H_{20}O_2$ no kôzô-shiki [Studies on flavorous substances in soy [sauce]. III. Flavors resulting from heating (2) The constitutional formula of $C_{10}H_{22}O_3$ and $C_9H_{20}O_2$]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 24(8):358-62. May. [3 ref. Jap; eng]
Address: Noda Industrial Science Laboratory.

3701. Yokotsuka, Tamotsu. 1951. Shôyu kôki seibun ni kansuru kenkyû. III. Shôyu no hikaori (3) [Studies on flavorous substances in soy [sauce]. IV. Flavors resulting from heating (3) Color reaction of acetals]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 24(9):402-06. June. [2 ref. Jap; eng]
Address: Noda Industrial Science Laboratory.

3702. Yokotsuka, Tamotsu. 1951. Shôyu kôki seibun ni kansuru kenkyû. III. Shôyu no hikaori (4) [Studies on flavorous substances in soy [sauce]. V. Flavors resulting from heating (4) Decomposition of flavors by alkali or light]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 24(9):407-09. June. [4 ref. Jap; eng]
Address: Noda Industrial Science Laboratory.

3703. Obata, Yataro; Yamanishi, Tadashi. 1951. Shôyu kôki no kenkyû. III. Fuhôwa arudehido oyobi fuhôwa keton no gôsei [Studies on soy sauce flavors. III. Synthesis of unsaturated aldehydes and ketones]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 24(10):479-81. July. [10 ref. Jap; eng]
Address: Inst. of Agricultural Chemistry, Hokkaido Univ., Sapporo, Japan.

3704. Mogi, Masatoshi; Nakajima, Shigeji; Iguchi, Nobuyushi; Yoshida, Fumihiko. 1951. Kyôka miso no kenkyû. I. Furabin seisan ôki kôji-kin ni yoru miso shijô shiken [Studies on fortified miso (Fermented soybean paste). I. Trial brewing of miso with a riboflavin-producing strain of *Aspergillus oryzae*]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 29(8):302-310. English-language summary on p. 44 of this issue. [11 ref. Jap; eng]
• ***Summary:*** (1) Out of 121 strains of *Aspergillus oryzae* taken from many kinds of miso and koji starter (*Tané-koji*), eleven strains which produced riboflavin comparatively well were selected by means of culturing in Pfeffer's solution. (2) A strain that produces the most riboflavin was selected from these 11 strains by manufacturing soy-bean and rice malts.

(3) A sort of fortified miso was made on trial by using this strain, and it produced 3 times the ordinary amount of riboflavin in "rice Miso" and 2.4 times the amount of riboflavin in wheat Miso. Note: This is the earliest English-language document seen (Feb. 2009) that uses the term "rice miso" to refer to miso having rice and soybeans as its main ingredients. Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan (Noda Sangyo Kagaku Kenkyujo).

3705. Obata, Yataro; Sakamura, S.; Yamanishi, T. 1951. Shôyu kôki no kenkyû. IV. Shôyu kôki no hassei jôken [Studies on the flavor of soy sauce. IV. On the conditions of the soy flavor development]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 25(1):8-12. Aug. [13 ref. Jap; eng]
Address: Dep. of Agricultural Chemistry, Hokkaido Univ., Japan.

3706. Paddleford, Clementine. 1951. Flowers and food: Fae

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Huttenlocher's tables are beautiful, her meals delicious. And they all have a Japanese flavor. *Los Angeles Times*. Oct. 7. p. G24.

• ***Summary:*** Mrs. Tomoko Yamamoto lived in San Francisco until World War II, when she was sent to a relocation camp, then to Des Moines, Iowa, where she worked as a housekeeper for Fae Huttenlocher.

Jumbo shrimp tempura was served for dinner, to be dipped into a small bowl of soy sauce. "A touch of sugar was added to the sauce to lighten its salty taste." Address: *This Week* food editor.

3707. *New York Times*.1951. News of food: Dried minnows among the exotic foods, mostly Japanese, sold at grocery here. Oct. 23. p. 32.

• ***Summary:*** About Joe Oyama's Oriental Food Shop at 2791 Broadway (at 107th St.) in New York City. The many Japanese foods he sells include: (1) Pickles of "cucumber in bean paste" [miso]. (2) Burdock root, which is "sometimes fried in bean oil seasoned with red pepper and soy sauce." (3) "Gomoku-no-moto–a combination of [diced] carrots, bamboo shoots, lotus roots, fried bean curds [agé], and Japanese mushrooms."

During World War II he shipped parcels of such foods as rice, soy bean paste [miso], and pickled radishes [daikon] "to the Japanese-Americans, who comprised the famed 442d Regimental Combat Team."

3708. Yokotsuka, Tamotsu. 1951. Shôyu kôki seibun ni kansuru kenkyû. VI. [Studies on flavorous substances in soy [sauce]. VI. Flavors with high boiling points. (1) Palmitic acid ethyl ester and Linolic acid ethyl ester]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 25(4):206-10. Nov. [8 ref. Jap; eng] Address: Noda Industrial Science Laboratory.

3709. **Product Name:** Dr. Bronner's Balanced Protein Seasoning [Powdered, or Liquid].
Manufacturer's Name: Dr. Bronner & Associates.
Manufacturer's Address: 447 South Hope St., Los Angeles, California. Phone: 619-745-7069.
Date of Introduction: 1951.
Ingredients: Unrefined hydrolyzed vegetable protein derived from corn, whole wheat & soya bean.
Wt/Vol., Packaging, Price: 2.25 oz, 5 oz, 10.5 oz, 22 oz, or 3.5 lb (2/90). Plastic jar with screw on lid. Retails for $1.31.
New Product–Documentation: Talk with Dr. Emanuel H. Bronner himself. 1990. Feb. 8. He is a rabbi and soap maker, age 82. He introduced these two products, in powdered and liquid forms, in about 1950-51, when people demanded a seasoning alone, without the minerals. This product is high in protein and low in minerals.

Label. 1990. 5 by 2.75 inches. Pea green on yellow. "Great for good-balanced nutrition, for salt restricted diets use balanced mineral-seasoning or mineral-bouillon. Adjusted to contain 33% complete balanced vegetable amino acids protein. Guaranteed to include the essential, natural, unrefined amino-acids, none removed, giving the finished product a fine meaty taste & almost water-free high concentration. Adds delicious flavor & protein to all foods: Soup, broth, salad, meat, or as instant gravy. Fully soluble: Of 100% vegetable origin. Use enough to suit your taste. Concentrated: Keep closed since moist air will cake but not spoil it. Contains no stabilizers, synthetics or any animal products. Completely natural. Judge only by the results! Packed and guaranteed by All One God Faith, Inc. Rabbi Emanuel H. Bronner, Assoc., SMMC, DD Soapmaker, Master Chemists & Essene Rabbis, Escondido, Box 28, California 92025. Made in USA. Save 33%. Refill from 1 lb. 6 oz. quart. Keep closed since moist air may cake but not spoil it.

Ideal for picnics & lunches, gives body & taste to all food. Enjoy on sandwiches, egg, salads, meat, fruit or alone in hot water. Keep tightly closed after use. Makes all food tastier. OK as broth, gravy, meat substitute, soup, sauce & seasoning. 1 oz 54 calories. Unrefined & balanced. Suit your taste! 1 teaspoonful contains 6 calories. Nutritious and delicious to season and strengthen any meal or snack. Enjoy as a balanced seasoning, as vegetable bouillon, a meat-flavored instant soup base, delicious on meat, vegetables, gravy, juices, etc. Help unite All-One! All-One! Ask for Dr. Bronner's Peppermint Soap at your health store. Balanced food unites... [all countries] in All One God Faith! OK! All One! All One!

3710. Fukai, Tôshi; Irie, S.; Ishiguro, K. 1951. [The preservation test for harmful yeasts of soy sauce by synthesized vitamin K3]. *Mag. Shiyukai* 2:23. * Address: Japan.

3711. Harada, Y. 1951. Effect of temperature change on material in koji culture. *Tatsuno Inst. Soy Sauce, Report* 2:51-5. *

3712. Irie, T.; Yamazaki, K. 1951. [On the color of soy sauce]. *Chomi Kagaku* (*Seasoning Science*) 1(3):1-14. [Jap]* Address: Japan.

3713. **Product Name:** Chop Suey Sauce, Sirloin Club Sauce, Mushroom Sauce, and Smoke House Sauce.
Manufacturer's Name: John Sexton & Co.
Manufacturer's Address: Sexton Square, Chicago, Illinois.
Date of Introduction: 1951.
New Product–Documentation: Soybean Blue Book. 1951. p. 94. "Other plants at Long Island City, Boston, Philadelphia, Pittsburgh, Detroit, Atlanta, Dallas, and San Francisco."

Note: These are the earliest know soy products made in

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Texas.

3714. Mogi, Masatoshi. 1951. [Research on the bottom yeasts of soy sauce. I.]. *Hakko Kogaku Zasshi (J. of Fermentation Technology)* 29:317-21. [Jap]*
Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3715. Murakami, H. 1951. [Comparison between higher and lower temperatures for the culture of mold on corn meal. On the duration hours of highest temperature after second cooling, for the mold culture of soy sauce]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 46:52, 90-93. [Jap]*

3716. Ohara, H.; Orishi, R. 1951. [On the sedimentation caused by soy sauce]. *Tatsuno Inst. Soy Sauce, Report* 2:1-2. [Jap]*
Address: Japan.

3717. **Product Name:** Soy Sauce.
Manufacturer's Name: Oriental Foods Inc.
Manufacturer's Address: 4100 S. Broadway, Los Angeles 37, California.
Date of Introduction: 1951.
New Product–Documentation: Soybean Blue Book. 1951. p. 95.

3718. Ueno, T. 1951. [Private opinion on the foam of soy sauce and the black viscous material accompanying it]. *Tatsuno Inst. Soy Sauce, Report* 2:51-55. [Jap]*

3719. Yoshino, H. 1951. Paper partition chromatography ni yoru shôyu no kenkyû. II. Shôyu-chû no tôbun ni tsuite [Studies on shoyu manufacture using paper partition chromatography. II. Sugars in shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 46:105-98. [4 ref. Jap; eng]

3720. Yoshino, H. 1951. Paper partition chromatography ni yoru shôyu no kenkyû. I. Koeki-chû no tô-rui oyobi yûri amino-san ni tsuite [Studies on shoyu manufacture by paper partition chromatography. I. Sugars and amino acids in the cooking liquid of soybeans]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 46:34-28. [20 ref. Jap: eng]

3721. Yoshino, H. 1951. Paper partition chromatography ni yoru shôyu no kenkyû. III. Shôyu-chû no yûri amino-san ni tsuite [Studies on shoyu using paper partition chromatography. III. Free amino acids in shoyu]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 46:149-47. [10 ref. Jap]

3722. Burnett, R.S. 1951. Soybean protein food products. In: K.S. Markley, ed. 1951. Soybeans and Soybean Products. Vol. II. New York: Interscience Publishers or John Wiley & Sons. xvi + 1145 p. See p. 949-1002. [125 ref]
• ***Summary:*** Contents: 1. Soybean flour, grits, and flakes: Introduction, early history, types of soybean flour–standard definitions, amount of soybean flour and related products produced, methods of manufacture, soybean flour in bread, soybean flour in other baked goods, soybean flour in the meat industry, soybean flakes in breakfast foods, soybean flakes and derived peptones as brewing adjuncts, miscellaneous uses of soybean flour. 2. Isolated and modified soybean proteins: Aerating agents for confections and related products, neutral spray-dried soybean protein [isolates], soybean protein in [whipped] toppings, soybean protein and flour in confections, soybean protein and flour in ice cream, soy sauce, monosodium glutamate from soybeans, soybean vegetable milk, tofu, miso, yuba, and other Oriental soybean foods (incl. natto and Hamanatto).

The soy flour industry in the U.S. has grown steadily in recent years. Deliveries of soy flour "from the years 1930 to 1940 averaged about 25 million pounds annually. The deliveries have increased considerably since 1940 partly as a result of an increase in domestic use and partly as a result of deliveries of soybean flour to various government agencies, largely for export. In 1941, Federal purchases amounted to about 10 million pounds of soybean flour. In 1943, the amount increased to 170 million pounds when large shipments were made to Great Britain and the U.S.S.R. under lend-lease. Purchases of soybean flour by the Federal government decreased for several years, but increased in 1946 to an estimated 200 million pounds under the UNRRA [United Nations Relief and Rehabilitation Administration] program. Total soybean flour deliveries for 1946 were approximately 380 million pounds. In the domestic market the bakery industry was the largest consumer. About 40% of the domestic sales of soybean flour were for bakery use. Since the Bureau of Animal Industry has legalized the use of soybean flour as a binder in meat products, about 20% of domestic sales are to the sausage industry. The balance is used in prepared dough mixes, macaroni, candy, and in institutional feeding.

"In 1947, domestic sales of soybean flour were over 60 million pounds. This amount, plus government purchases and exports, amounted to about 415 million pounds. Two-thirds or more of the present domestic consumption of soybean flour is by the bakery, meat processing, and pet foods industries."

Table 155 (p. 953) shows Bushels of soybeans used for U.S. soy flour production (1942-1947). In 1942-43, the amount of full-fat soy flour produced in the USA was roughly 40% of the amount of defatted. In 1944-45 it was about 49%, but thereafter the percentage dropped rapidly to only 5% in 1946-47.

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America, Dr. Armand Burke, and Dr. A.A. Horvath.

Concerning soybean flakes and derived peptones as brewing adjuncts (p. 974-77): "Soybean flakes and grits have been employed by the brewing industry to improve the body and flavor of beer, to increase foam stability, and to stimulate yeast growth.

"Improvement in foam stability and flavor can also be attained by adding directly to the finished beer a hydrolyzed soybean protein which has been broken down to the peptone and proteose stage...

"The early history of the use of soybean products as whipping agents is of interest since this work stimulated the development of processes which eventually led to the production of the present soy albumens. In 1939, Watts and Ulrich pointed out that an active whipping substance could be prepared from solvent-extracted soybean flour in which the protein had not been heat denatured, by leaching it at the isoelectric point of the protein. This extract was found to whip more readily and to a much greater volume than suspensions of the original flour... The active principle in the whipping substance prepared by Watts and Ulrich was probably the nonprotein nitrogenous material present in the soybean flour which is soluble at the isoelectric point of the protein."

Tables show: (155) Soybeans used in the production of low-fat and full-fat flour and grits (1942-1947, 1,000 bushels). (156) Peroxide value of fat extracted from pastries stored at -17.8°C. (0°F.), containing different percentages of soybean flour for periods of 0-6 months. (157) Analysis of uncooked liverwurst emulsion and of processed (water-cooked) sausage containing added soybean flour and water. (158) Losses in cooking liverwurst containing added soybean flour and water. (159). Analysis of frankfurter emulsion and of smoked sausage made with 3.5% of various binders. (160) Losses in smoking frankfurters made with 3.5% of various binders and after consumer cooking. (161) Effect of the addition of soybean peptone on volume and life of foam on beer. (162) Composition and pH of soybean albumens. (163) Composition of ice creams containing soybean flour. (164) Comparison of soybean milk with cow milk. One sample of cow's milk is compared with 4 samples of soybean milk (probably Oriental) and 3 samples of modern U.S. soybean milk reconstituted (Soyalac for infants, all purpose Soyalac, Soyagen canned from Loma Linda Food Co., California).

Figures show: (199-201, p. 981) Comparison of whipping ability of egg albumen and soybean albumen in different proportions and combinations. (202) Flow sheet for the acid hydrolysis process used in making HVP soy sauce. Address: Protein By-Products Research, Research and Technical Div., Wilson & Co., Inc., Chicago, Illinois.

3723. Hong, Leon. 1951. The investigation of soy sauce manufacture. B.S. thesis, Food Technology, Massachusetts Institute of Technology. 49 p. *

Address: Massachusetts Inst. of Technology, Cambridge, MA.

3724. Hui Manaolana Foundation (formerly Niji-no-Kai). 1951. Japanese foods (Tested recipes). Honolulu, Oahu, Hawaii: International Institute, Y.W.C.A. 122 p. Illust. (some colored). Index. 24 cm.

• ***Summary:*** The Hui Manaolana was formerly named Niji-no-Kai and is affiliated with the International Institute of the Y.W.C.A. The book was inspired by Mrs. Isaac M. Cox (Catherine E.B. Cox), an educator and volunteer advisor to the Y.M.C.A. Almost all the recipes in this book have been submitted by members of the group, and that woman's name appears next to the recipe title. Shoyu is called for in many recipes.

Following a preface and an introduction, the recipes are organized by type. The many interesting ads related to soyfoods, scattered throughout the book, are cited elsewhere. Helpful hints (p. 12): "To prevent tofu from crumbling, soak in salted water for a while before using." On p. 15 are 4 menus each for breakfast, lunch or supper, and dinner. Soups: Chiri (Fish & tofu soup). Kenchin (Vegetable soup with tofu). Basic miso soup. Satsuma jiru (Miso soup with chicken & vegetables). Oio fish dumplings in miso soup. Miso soup with long rice. Rice: Azuki meshi (Rice with red beans). Sekihan (Steamed azuki rice). Inari zushi (Sushi rice in aburage).

Fish and seafoods: Ebi no teriyaki (Barbecued shrimp. The sauce consists of: 3/4 cup shoyu, 1 teaspoon gourmet powder [Ajinomoto], ½ cup sugar, 1 teaspoon grated ginger, 1 clove garlic [crushed]. Mix well). Katsuo no miso yaki (Tuna broiled with miso sauce). Katsuo teriyaki (Broiled fresh tuna). Meat and chicken: Sukiyaki (with tofu). Pork and tofu. Tofu: Gan modoki [Ganmodoki]. Ankake tofu (Boiled tofu with thick sauce). Tofu with crab meat egg roll. Tofu tempura. Okara (Bean curd residue dish). Iri dofu. Okara nira (with aburage). Yudofu with goma [sesame] miso sauce. Fried tofu cooked in miso. Koya dofu (Frozen soybean curd cooked in shoyu).

Note 1. This is the earliest English-language document seen (May 2012) that contains the term "Gan modoki" (regardless of hyphenation); it refers to deep-fried tofu burgers.

Vegetables: Kiriboshi and aburage. Nikomi oden with yakidofu. Cabbage with mustard & miso sauce. Shira ae–Watercress (With tofu dressing). Shira ae (Vegetable with tofu sauce). Daikon sumiso ae (Turnips in miso). Nikomi oden (Vegetables with miso). Nishime (with tofu). Nasu no shigiyaki (Fried eggplant with miso sauce). Negi–nuta (Green onions with miso sauce). Green pepper–miso yaki. Kuromame (black soybeans). Noodles: Kitsune udon (With aburage). Relishes: Konbu no tsukudani (Seasoned seaweed). Tekka miso (Fried miso with gobo). Kaibashira no tsukudani (Scallops cooked in shoyu). Shoyu turnips. Desserts: Many

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with kanten, azuki beans, and azuki koshi an (Sweetened bean paste).

Glossary (p. 97-98) includes: Aburage (fried bean curd). An (red bean paste). Azuki (red beans). Edamame (soybeans). Fu (gluten cake). Gourmet powder (monosodium glutamate). Kanten (gelatin made from agar-agar). Karashimiso (mustard miso). Kinako (yellow soy bean powder). Kirazu (bean curd residue). Konbu (seaweed). Kuromame (black soy beans). Miso (fermented rice and soy beans). Nori (sea weed). Okara (bean curd residue). Shira-ae (vegetables with mashed tofu). Shoyu (soy sauce). Sumiso (vinegar and miso sauce). Sushi. Tare (thick shoyu sauce). Tempura (fritters). Teriyaki (barbecue). Tofu (bean curd). Ume (pickled plum). Wakame (sea weed). Yakitofu [yakidofu, broiled or grilled tofu].

Note 2. This is the earliest English-language document seen (May 2012) that uses the term "Yakitofu" to refer to grilled tofu.

Note 3. This is the earliest English-language document seen (Aug. 2011) that contains the term "bean curd residue" or that uses that term to refer to okara. Address: International Institute Y.W.C.A., Honolulu, Hawaii.

3725. Law, James Thomas. 1951. Law's grocer's manual. 4th ed. Edited and revised by W.G. Copsey. London: William Clowes and Sons, Ltd. xv + 814 p. See p. 467, 510. Illust. 22 cm. With a foreword by W.R. Austen Hudson, M.P., F.G.I.
• ***Summary:*** Page 467, under the heading "Soy bean," discusses soy sauce, tofu, natto, miso, and soy milk. Page 510 gives more details on tofu and describes (quaintly and inaccurately) how to make this "fresh bean cheese." "The beans are soaked in water for 3 or 4 hours, cooked, and reduced to a paste. The milky fluid is strained through a coarse cloth to remove stalk and fibre [okara], and when cooled is precipitated by the addition of crude salt. The precipitate, which is rich in protein and fat, is then kneaded and pressed into cakes called fresh Tofu. They are then dipped into a solution of curcuma." Address: W.G. Copsey is Secretary of the Inst. of Certified Grocers; Hudson is President of the National Assoc. of Multiple Grocers.

3726. Murakami, H.; Okuyama, K.; Sugita, S. 1951. Kôji no kenkyû. II. Jôzô kôjikin no sentaku (1) Shôyu jôzô kôjikin [Studies on koji. II. Selection of Aspergilli for the Japanese brewing industry (1) Aspergilli for shoyu brewing]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 46(12):483-77. [13 ref. Jap; eng]
• ***Summary:*** Aspergilli were selected from shoyu brewing (14 strains), miso (14), amasake (9), sake (6), submerged culture for amylase production (5), and submerged culture for protease production (5). This report describes how to select Aspergilli for shoyu brewing and their classification by availability for shoyu brewing.

3727. Noda Shoyu Co., Ltd. 1951. Soy sauce? Correction please! You mean Kikkoman soy sauce (Ad). In: Hui Manaolana. 1956. Japanese Foods: (Tested recipes). Honolulu, Oahu, Hawaii: Hui Manaolana. 118 p. See p. 40.



• ***Summary:*** "Try the new pint and ½ pint bottles. Available at all grocery stores." A cartoon character, a smiling Hawaiian girl with a lei around her neck, is pointing toward the upper right quarter of the page, where there is a large hexagonal Kikkoman logo. A photo in the lower left corner shows a bottle of "KikkoMan Soy Sauce," made by Noda Shoyu Co., Ltd. Address: 11, 3-chome, Koamicho, Nihonbashi, Tokyo, Japan.

3728. White, Julius Gilbert. 1951. Abundant health: Expounding the Learn-how-to-be-well system of daily living. 5th printing. Pine Mountain Valley, Georgia: Health and Character Education Institute. xix + 477 p. Illust. 24 cm. See p. 367-82. [25 ref]
• ***Summary:*** About vegetarianism, diet, and hygiene. Note that the author was formerly (for 11 years) head of the Lecture Bureau at Madison College, a Seventh-day Adventist

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college and sanitarium. A portrait photo (p. vi) shows Julius G. White.

One chapter titled "The soybean: The wonder food of the world" (p. 367-82) discusses (with some recipes) the nutritional value of soybeans, Soybean milk and the pulp left after making it, soy flour, whole soybeans, vegetable meat (meat substitutes), soybean cheese [tofu], home-made soy butter (made from 4 tablespoons each soy flour and water, 1 cup of oil, a little salt and butter color if desired), soy mayonnaise, soy acidophilus milk, soy sprouts, soy sauce, soy coffee, and soy protein substitute for egg-white.

3729. Safeway. 1952. Win family praises with this favorite (Ad). *Washington Post*. Jan. 18. p. 11.
• ***Summary:*** The section titled La Choy products (lower left corner) includes: "Soy sauce. 3 oz. bottle–10¢."

This section also includes: Chinese dinner (meatless). Chow mein noodles. Bean sprouts [mung beans]. Chop suey vegetables.

3730. **Product Name:** Dr. Bronner's Balanced Mineral Salt (Powdered).
Manufacturer's Name: Dr. Bronner & Associates.
Manufacturer's Address: 447 South Hope St., Los Angeles, California. Phone: 619-745-7069.
Date of Introduction: 1952, January.
New Product–Documentation: Talk with Dr. E.H. Bronner himself, 1990, Feb. 8. He is a rabbi and soap maker, age 82. He introduced this powdered product in Jan. 1949. He was born and raised in Germany, in a family of soap-makers. The first soap plant was started by his grandfather. He is a nephew of Albert Einstein. Neither a PhD nor an M.D. (physician), he has a German doctor of chemistry degree (SSMC: Seifensieder Meister Chemiker, or SMMC: Soap Maker Master Chemist, recognized by the American Chemical Society). He came to America in 1929 and became superintendent of a large soap plant in Pennsylvania. From 1929 to 1944 he built 3 soap factories in America.

His discovery of this product went through at least 6 steps, but there were two main ones. First, in 1933-34, when Hitler came to power and German imports were unpopular in America, he began to look for potassium salts (potassium hydroxide) for soap making. The imported German potassium source made a better product. He found a natural mineralized dulse (that had been overlooked by others) which he used with good results in his soaps.

Second, in 1938, as a young man with 3 lovely children, he had dental plates–he had lost his teeth. His body had craved calcium since he was a young boy in Germany and he would eat eggs with the shells. In 1941 he read the front-page headlines about "The town without a toothache." Hereford, Deaf Smith County, Texas. The American Dental Association (83rd annual convention, Houston, TX) discovered that the high calcium, phosphorus, magnesium, vitamin D, and fluoride content of the food and water was instrumental in preventing tooth decay. That article plus his own personal experience led him to believe that there was a great need for a balanced mineral seasoning that contains calcium, phosphorus, magnesium, potassium, sodium, iodine, iron–all the minerals in the right proportion. He wanted to make both a seasoning and a mineral / vitamin supplement that was a balanced food. He started by using what the Romans called *sal digestivus* or "digestion salt," a red mineral salt containing potassium, sodium, iron, chloride, found in deposits on the surface of the earth, produced by Chief Chemist God from ocean dulse (a sea vegetable), i.e. mineralized dulse. He uses it to this day as the source of potassium in his mineral seasoning. The only ingredient listed on the original product was "mineralized dulse." This innovative ingredient became the key ingredient in his various products. In about 1952, to add more flavor, he first began to add a powdered HVP (made by hydrolysis of corn, whole wheat, and soybeans), which he bought as powdered HVP (from a company whose name he no longer remembers and which no longer exists) and blended it with the minerals and vitamins in the right proportions. HVP was developed in America in the 1930s and became commercially available in the 1940s. His present source of HVP is a "military secret." This powdered mineral seasoning was his first soy product. It got off to a very slow start. This product (which still exists) has remained basically unchanged since 1952. It and its liquid counterpart are doing well, especially considering the fact that he has no salesmen and no advertising. His original company was located on Hope Street (at 5th and Hope) in Los Angeles, in a 10-story building. In 1955 he got his current building at Box 28, Escondido, CA 92025. From 1955 to 1962 he commuted between the two locations and in 1962 moved everything to Escondido.

He became a rabbi in 1962-63 after a lecture in Watts, the black ghetto near Los Angeles. The 200 blacks applauded but a white man shouted: "You stole that brilliant speech. You stole it from Rabbi Hillel's 2,000 year old Torah. You stole it." Hillel was a top man in the Dead Screen Scrolls. Hillel said that "A great teacher must first a self-supporting, creative handworker be." Otherwise he can be bought and sold. In about 1963 he changed the name of his company from Dr. Bronner & Associates to All God One Faith, he changed the name of this product to Dr. Bronner's Balanced Mineral Seasoning, and he began to add spiritual messages to the labels of his products. But only the quart sizes are large enough to contain his full message. The pint is too small to make sense.

From 1949 to about 1970, 90% of his sales were food products. From 1970 on, about 90% of his sales have been his soaps and the food is only 10%.

Today Dr. Bronner is totally blind. In 1944 he buried his wife in central Illinois. Weighing 71 pounds, her jaw bones broken, she had been beaten and starved to death by

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Jewish people. She was German Catholic and he is German Jewish. In 1941 he lived in Chicago as director of research for a soap and perfume company. A relative wired him for funds (which he did not have) to save their mother from the Nazis. His wife tried to commit suicide, so she was sent to a state hospital where Jewish refugees were in charge. The day before she was to go home, she was forced to do demeaning work by a a Jewish doctor. She refused and said "No you damned Jew." The doctor sent her to a ward where she was further starved and beaten. *Readers Digest* (Feb. 1962) did an article on the subject, titled "The progeny of the same people who get put away." Now Dr. Bronner began to investigate what was going on and to speak on peace. At the University of Chicago he was captured as a Jew and for 3 months was unconscious and almost dead, having been given shock treatments that burned the back of his eyes. He escaped from that place in Central Illinois and fled to California to forget the whole thing. Between 1971 and 1973 he went blind from the electrical shock. He has two sons: A teacher in Milwaukee, and chemist in Glendale, California. They will continue his business. Though Hitler killed 6 million Jews, the Soviet Communists, especially Stalin, killed 66 million people, including 16 million Jews. Today there is a great danger of a nuclear warehouse exploding; it would destroy the world. Dr. Bronner says that no good, in-depth article has ever been published about his work with food.

Paul Bragg was a brilliant lecturer and personal friend of Dr. Bronner's. His product was introduced after Dr. Bronner's, in about 1955.

3731. **Product Name:** Sauce.
Manufacturer's Name: Hana Murasaki Shoyu Kaisha (Hanamurasaki Shoyu Co.).
Manufacturer's Address: 702 E. Olive St., Compton, California. Phone: ME 44407.
Date of Introduction: 1952, February.
New Product–Documentation: Hokubei Mainichi Year Book, 1951, p. 435. Category: "Food Products." In Japanese: Hana Murasaki Shoyu Kaisha. In English: Hanamurasaki Shoyu Co., 702 E. Olive St., Compton, California. Phone: ME 44407. Note: Compton is located about 12 miles south of downtown Los Angeles.

Nichi-Bei Jiji Jushoroku [Japanese American Times Directory]. 1952, p. 379. Under "Compton, Calif." In Japanese: Hana Murasaki Shoyu Jôzô Kaisha. In English: Soya Beans Products Co., 702 E. Olive St., Compton, California. Phone: ME. 4-4470 (new company name and phone number).

3732. Inaba Co. (Inaba Shoten). 1952. [Inaba Co. (Ad)]. In: Nichi Bei Times. 1952. *Nichi-Bei Jiji Jushoroku* [*Japanese American Times Directory*]. [Eng; jap]
• ***Summary:*** Ad (¼ page), p. 215. Name of company with diacritics is: Inaba Shôten. The company sells shoyu. Address: P.O. Box 466, Walnut Grove, California. Phone: 3436.

3733. Modern Food Products Co. (Modan Boeki Gaisha). 1952. Yushutsu nyû sho [Import & export (Ad)]. In: Nichi Bei Times. 1952. *Nichi-Bei Jiji Jushoroku* [*Japanese American Times Directory*]. Unnumbered page at front. [Eng; jap]
• ***Summary:*** Ad (full page). The company sells Marushô Shoyu. They have a Japan office in Tokyo. Los Angeles cable: Mofood. Address: 1. 25 California St., San Francisco 11, California; 2. 849 E. 6th St., Los Angeles 21, California. Phone: EXbrook 2-1531; MAdison 6-4335.

3734. Mutual Supply Co. (Kyodo Shohi Kaisha). 1952. [General importer & exporter (Ad)]. In: Nichi Bei Times. 1952. *Nichi-Bei Jiji Jushoroku* [*Japanese American Times Directory*]. Page 2. [Eng; jap]
• ***Summary:*** Ad (full page). Company name with diacritics is: Kyôdo Shôhi Kaisha. The company is a special dealer for Kikkoman shoyu.

The company's Los Angeles office is at 406 East Third St., Los Angeles 13, California. Phone: MUtual 9461. Cable address: "Togasaki" San Francisco. Address: 200 Davis St., San Francisco 11, California. Phone: YUkon 2-5703; YUkon 2-0520.

3735. **Product Name:** Miso, and Shoyu.
Manufacturer's Name: Nakamura Miso Shoyu Jozo Gaisha (Nakamura Miso-Shoyu Mfg. Co.).
Manufacturer's Address: 1935 Ararahoe St., Denver, Colorado. Phone: TA. 6773.
Date of Introduction: 1952, February.
How Stored: Refrigerated.
New Product–Documentation: Nichi-Bei Jiji Jushoroku [Japanese American Times Directory]. 1952, p. 485. Under "Food Products." In Japanese: Nakamura Miso Shôyu Jôzô Gaisha. In English: Nakamura Miso-Shoyu Mfg. Co., 1935 Arapahoe St., Denver, Colorado. Phone: TA. 6773.

3736. Pacific Mutual Sales Inc. (Taiheiyo Kyodo Shoji Kabushiki-gaisha). 1952. Yushutsu nyû shô [Import & export merchant (Ad)]. In: Nichi Bei Times. 1952. *Nichi-Bei Jiji Jushoroku* [*Japanese American Times Directory*]. Unnumbered page at front. [Eng; jap]
• ***Summary:*** Ad (full page). The top one-fourth is in English. Company name with diacritics is: Taiheiyô Kyôdo Shôji Kabushiki-gaisha. Sells Kikkoman shoyu. The company advertises itself as Kikkoman's special dealer shop. They have branches in Chicago (Illinois) and Los Angeles (California). They sell "Wel-Pac" brands. Address: 249 Davis St., San Francisco 11, California. Phone: YUkon 2-3820.

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3737. San Joaquin Mercantile Co. (San Okin Shokai). 1952. [Jobbers–Distributors (Ad)]. In: Nichi Bei Times. 1952. *Nichi-Bei Jiji Jushoroku* [*Japanese American Times Directory*]. [Eng; jap]
• ***Summary:*** Ad (½ page), p. 278. Name of company with diacritics is: San Okin Shôkai. The top 1/3 of this ad is in English. The company sells Hanamurasaki brand Shoyu. Address: 955 I St., Reedley, California. Phone: 424.

3738. Yamate Trading Co., Ltd. (Yamate Burazaasu Shokuhin Seizo Oroshi Sho). 1952. [Importers–Exporters. Yamate Brothers (Ad)]. In: Nichi Bei Times. 1952. *Nichi-Bei Jiji Jushoroku* [*Japanese American Times Directory*]. Page 3. [Eng; jap]
• ***Summary:*** Ad (full page). The company is a food manufacturer and wholesaler. They make and sell Bunka Shoyu [Culture Shoyu] and Kanro Shoyu [Sweet Shoyu = twice-fermented shoyu].

The export department is Yamate Bôeki Kabushiki Gaisha. CEO: Sasato Yamate. Branch in Japan in Tokyo, Oomori, Yakei (Hakkei) saka agari. Phone: 1313. Manager: Sanichi? or Sankazu? Yamate. Address: 1619 Lyon St., San Francisco, California. Phone: WEst 1-8731.

3739. Cooking with a foreign accent: A collection of international recipes for everyday kitchen use–each one tested in the *Sunset* magazine kitchen. 1952. Menlo Park, California: Lane Publishing Co. (A Sunset Book). 64 p. Feb. Illust. Index. 28 cm.
• ***Summary:*** Contents: About this book. Soup. Fish. Breads and pancakes. Cereal products. Meats and poultry. Vegetables. Pastries and desserts.

Soy related recipes: Stuffed clams (with soy sauce, China, p. 12). Chinese lobster (with [mung] bean sprouts and soy sauce, p. 12). Fried fish (China, with soy sauce, p. 12).

Note 1. Soy sauce is called for in many other East Asian recipes in this book (p. 13, 25, 27 {incl. Worcestershire sauce}, 39, 41, 45, 47, 48). Sukiyaki (with soy sauce but without the usual tofu, p. 47).

Note 2. Most of these recipes are from European countries. Of the Asian recipes, there are 17 from China, 4 from India, 1 from Japan (Sukiyaki), and none from Indonesia, Korea, or the Philippines. Neither tofu nor miso is mentioned. Address: Menlo Park.

3740. Mogi, Masatoshi; Nakajima, S.; Ando, T. 1952. [Studies on harmful yeasts which ferment sterilized soy [sauce]. II. Morphological characters of isolated yeasts]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 30(2):49-59. Feb. English-language summary at start of issue, p. 5. [1 ref. Jap; eng]
Address: Noda Industrial Science Lab., Japan.

3741. Morse, W.J.; Cartter, J.L. 1952. Soybeans for feed, food, and industrial products. *Farmers' Bulletin* (*USDA*) No. 2038. 41 p. Feb. Supersedes Farmers' Bulletin No. 1617 (Morse 1930, 1932).
• ***Summary:*** Contents: Importance of the soybean and its byproducts. Direct use of soybeans on the farm: Soybean hay (for dairy cattle, beef cattle, horses and mules, sheep, swine, poultry), soybeans for pasturage (hogging down soybeans, sheep, beef and dairy cattle, poultry on soybean pasturage), soybean for soilage, for silage, for soil improvement, for livestock feed (feed for swine, dairy cattle, beef cattle, horses, sheep, poultry, wild game {quail, pigeons}), soybean straw (feeding value, fertilizing value).

Soybeans processed for meal and oil: Processing methods, meal for livestock (for dairy cattle, beef cattle, poultry, swine, sheep, dogs {in dog-food industry}, rabbits, fur-bearing animals, quail and pheasants), meal as fertilizer, for industrial purposes, in food products, use of oil (in food products, industrial uses such as paints and varnishes). Soybeans and products for human consumption: Vegetable soybeans, dry soybeans, soy flour, grits, and flakes, Oriental soybean foods, soy milk, soy curd, soy sauce, soy sprouts, soy beverages. Miscellaneous uses of the soybean: Honey production (the soybean as a honey plant, soy flour for honey bees), soy flour and grits in dog food, soy flakes in brewing beer, soy flour for insecticides.

Under "Soybean utilization," page 3 notes: (1) The roots and coarse stems are used as fuel in China, Manchuria, and Korea. (2) In many parts of China the plants, when 3 to 4 inches high, are used as greens. (3) In Manchuria and Korea, the leaves are cured and smoked as tobacco.

Under "Soy milk," page 38 states: "The ground soybean pulp or mash [okara] left after separating the liquid from the solid material is still of good nutritive quality, but it has very little flavor. It can be dried and made into flour for human food, combined with foods of more pronounced taste, or used for animal feed."

Under "Soy curd" [tofu], page 38 states: "Chinese and Japanese markets and restaurants in many cities in the United States sell fresh soy curd. Several firms in the United States can soy curd."

Under "Soy sprouts," page 40 states: "A few companies have successfully canned soy sprouts [in the USA]. The New York (Cornell) Agricultural Experiment Station found that sprouts lend themselves admirably to quick-freezing." Address: USDA.

3742. *Los Angeles Times*. 1952. International flavors spark Hawaiian food. March 2. p. E11.
• ***Summary:*** Take your wife to Hawaii and you may come home with an international cook, who has a knowledge of ajinomoto, Japanese shrimp tempura, teriyaki steak on bamboo skewers, seaweed salads, or charcoal-broiled octopus covered with miso sauce.

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At the Honolulu YMCA, a full five-week course of cooking classes costs $5 plus a $5 lab fee.

3743. Nakano, Masahiro; Matsuura, Shinji. 1952. [Research on koji starter (*tane-kôji*). III. On the rate of germination of the mold spores]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 6. p. 157-60. March. English-language summary bound at the end of No. 6, p. 30. [Jap; eng]
• ***Summary:*** The hourly rate of germination for koji starter mold spores was examined by the direct counting method, as reported in part I, and the so-called "active spore numbers" were calculated. Nine samples of koji starter were examined: For miso (4), shoyu (3), and shochu (3), and each was given a code letter, M, S, and T respectively in the figures 1-9.

Conclusions: (1) Germination starts at about 3 hours and arrives at a stationary phase at about 6 hours in practical koji making; at this stage no control of mycelium growth is required. (2) There are products with rapid or with slow germination according to the blends of the makers. (3) Distinct differences in "active spore numbers" were found. In practice, the greater the "active spore numbers," the smaller the amount of koji starter required for making koji. Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

3744. Yokotsuka, Tamotsu. 1952. Shôyu kôki seibun ni kansuru kenkyû. VII. [Studies on flavorous substances in soy [sauce]. VII. Flavors with high boiling points. (2) Amyl alcohol and amyl acetate]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 25(8):401-05. March. [13 ref. Jap; eng]
Address: Noda Industrial Science Laboratory.

3745. Yokotsuka, Tamotsu. 1952. Shôyu kôki seibun ni kansuru kenkyû. VIII. [Studies on flavorous substances in soy [sauce]. VIII. Flavors with high boiling points. (3) Benzaldehyde and benzoic acid ethyl ester]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 25(8):446-50. March. [4 ref. Jap; eng]
Address: Noda Industrial Science Laboratory.

3746. *Shoyu to Gijutsu* (*Soy Sauce and Technology*). 1952-1969? Serial/periodical. Tokyo: Nippon Shoyu Gijutsukai. Biweekly (28 issues a year). No. 1. April 1952. [Jap]
Address: Japan.

3747. *Christian Science Monitor.* 1952. Open letter from Korea: A navy man writes home. April 23. p. 19.
• ***Summary:*** Previously, while in Japan, Bob (the writer) and a friend (Brooks) visited the Usami family in the suburban town of Atumi, near Kobe. "They had a big Sukiyaki dinner waiting for us." They sat on the floor, with their legs under the table, in the center of which and sunken was a charcoal hibachi. "Thin slices of beef, spinach, onions, Hakusai (Chinese lettuce), Tofu (bean curd), mushrooms, and other ingredients are put into the pan over the hibachi and flavored with soy sauce, sugar, and so on. The bubbling food is picked out of the pan by the individuals, with chopsticks.

"You have a little bowl with a raw egg in it, and you dip the hot slices of beef into that before eating. Everything was very good... and it was all most enjoyable."

3748. Iguchi, Nobuyoshi. 1952. Kôji-kin ni kansuru kenkyû. V. X-sen ni yoru shôyu-yo kôji-kin no heni ni tsuite [Studies on *Aspergilli*. V. The production of X-ray induced mutations in *Aspergillus sojae*]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 25(9):459-65. April. [26 ref. Jap; eng]
• ***Summary:*** The author's name is incorrectly written as "Iguhi" on the document. Address: Noda Industrial Science Lab., Noda, Japan (Noda Sangyo Kagaku Kenkyusho).

3749. Mogi, Masatoshi; Nakajima, S.; Ando, T. 1952. [Studies on harmful yeasts which ferment sterilized soy [sauce]. III. Physiological characters of isolated yeasts]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 30(4):152-59. April. English-language summary at start of issue, p. 16-17. [2 ref. Jap; eng]
Address: Noda Industrial Science Lab., Japan.

3750. Sakaguchi, Kinichiro; Ishitani, Chiyoko. 1952. Kôji-kin no shizen heni ni kansuru kenkyû. I. [Studies on the natural variation of koji molds (*Aspergillus oryzae* and *Aspergillus sojae*). I. On the relation between the morphological characteristics of various strains and the occurrence of variation, and the morphology of the variants obtained and their related strains]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 26(1):18-24. May 20. [13 ref. Jap; eng]
Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo, Japan.

3751. *Connecticut Agricultural Experiment Station, Bulletin.* 1952. The 55th Report on Food Products and the 43rd Report on Drug Products, 1950. No. 558. p. 60-63. May. See p. 60.
• ***Summary:*** The section titled "Miscellaneous" states: "E.S.-568. Chun King Complete Vegetable Chow Mein Dinner. Chun King Sales, Inc., Duluth, Minnesota. This sample consisted of a carton containing a can of 'Chun King Chow Mein Noodles,' a can of 'Chun King Vegetable Chow Mein Without Noodles,' and a bottle of soy sauce. The bottle of soy sauce was completely unlabeled, and the sample was therefore misbranded."

3752. Mogi, Masatoshi; Nakajima, S.; Ando, T. 1952.

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[Studies on harmful yeasts which ferment sterilized soy [sauce]. IV. Test for fermentation of soy by isolated yeasts]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 30(5):194-204. May. English-language summary at start of issue, p. 22. [19 ref. Jap; eng]
Address: Noda Industrial Science Lab., Japan.

3753. Ohara, Yuwao; Tsumura, Yukio. 1952. [Studies on some bacteria found in tamari-shoyu. I. On *Bacillus tamaridiastaticus* n. sp.]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 30(5):179-85. May. English-language summary at start of issue, p. 21. [7 ref. Jap; eng]
Address: College of Agriculture, Gifu Univ., Japan.

3754. Nickerson, Jane. 1952. News of food: Books on how to prepare Chinese dishes suggest savory but hard-to-make items. *New York Times*. June 7. p. 16.
• ***Summary:*** *The Chinese Cookbook*, by Wallace Yee Hong, was published a few days ago by Crown. This book more nearly approaches the real cooking of China, and more specifically of Canton, than any such book written for Americans. It calls for such ingredients as snow pea pods, dried bean curd stick, Chinese red dates, dried lilies, bitter melon, winter melon, bird's nests, ginsing [ginseng?], and so on.

Mr. Hong, born in Canton and a restaurateur in the USA for 35 years, owns the Ho Lee Garden Restaurant in Boston's Chinatown. "There are two types of soy sauce, according to Mr. Hong, and he gives recipes for each in his book. The light is made simply from soy [beans], salt and water [no wheat or additives] and is the only type to be used in cooking. The dark, with which Americans are more familiar, has molasses and sometimes rice wine added." This can be put on the table as a salt substitute but is not employed in cooking.

Note: This is the earliest English-language document seen (Sept. 2008) that uses the term "dried bean curd stick" to refer to dried yuba sticks.

3755. Sakaguchi, Kinichiro; Ishitani, Chiyoko. 1952. Kôji-kin no shizen heni ni kansuru kenkyû. II. Kôji-kin no heni no saibôgaku-teki kenkyû [Studies on the natural variation of koji molds (*Aspergillus oryzae* and *Aspergillus sojae*). II. Cytological studies on the natural variation of koji-molds]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 26(2):85-90. June. [11 ref. Jap; eng]
Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo.

3756. Nickerson, Jane. 1952. News of food: Introduction of new anchovy catsup recalls U.S. ruling on sauce names. *New York Times*. July 31. p. 26.
• ***Summary:*** There is an old saying that the French have many sauces but only one religion, whereas Americans have many religions and only one sauce. When most Americans cooked at home, that sauce was white sauce. But now that they no longer cook so much, that sauce has become the ready-prepared catsup."

A new kind of catsup is now on the market–an anchovy catsup–made by J. Ossola Co., a maker of Italian foods. The U.S. Food and Drug Administration has ruled that catsup (also spelled ketchup or catchup) must be made largely from tomatoes–and indeed the new type is. But that was not always the case.

"Until a few years ago any relish or sharp sauce could be, and was, called catsup. We had walnut catsup and mushroom catsup..." But the FDA found all this very confusing, so it found that manufacturers could use the words "ketchup," "catsup" or "catchup" only for a product made predominantly from tomatoes. "Americans love uniformity."

So what used to be called "walnut ketchup" is now called "walnut sauce." This product "is a mixture of walnut-flavored malt vinegar, soy sauce, spices and what not. Malt vinegar is also the basis for the mushroom sauce. Both are prepared in England and bottled here."

3757. Yamanishi, Tadashi; Obata, Y.; Sano, M. 1952. Shôyu no kôki. V. Ganryû kagô-butsu no gôsei [Studies on soy sauce flavors. V. Synthesis of sulfur-containing compounds]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 26(3):125-28. July. [13 ref. Jap; eng]
Address: Lab. of Agricultural Chemistry, Hokkaido Univ., Japan.

3758. Safeway. 1952. Smart shoppers are loading up with fresh fruits at Safeway (Ad). *Los Angeles Times*. Aug. 21. p. 14.
• ***Summary:*** The section titled "Chinese food suggestions" (column 1) includes: "Soy sauce, Chinese Maid, 6 oz. bottle–18¢."

This section also includes: Chinese Maid noodles. Chinese Maid Chicken chop suey.

3759. Brownstone, Cecily. 1952. American regional cookery. *Hartford Courant* (*Connecticut*). Sept. 21. p. SM12.
• ***Summary:*** A review of two cookbooks with one recipe for Southern fried chicken. "Coast to Coast Cookery," well edited by Marian Tracey, "is a collection of recipes to which over 100 newspaper editors from all parts of the United States and Canada have contributed." It contains a recipe for "teriyaki steak from Hawaii."

3760. Hauser, Gayelord. 1952. Be happier, be healthier. New York, NY: Farrar, Straus and Young. 278 p. No index. 22 cm. [63* ref]
• ***Summary:*** This book advocates natural health and prevention using the sun, earth, air, water, and food.

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His faithful companion is Deucey, his dog. The chapter titled "Discoverers and recoverers" (p. 71-90) discusses: Priessnitz, Father Kneipp (began treatment in 1855), Louis Kuhne (first of the urban pioneers in natural healing, he established a clinic in Leipzig, Germany. A vegetarian, he wrote *Die Neue Heilwissenschaft*, which enjoyed worldwide success), Schweninger, Edward Hooker Dewey, Adolf Just (his Jungborn clinic was in the Harz mountains), Dr. Bircher-Benner, Arnold Rikli, Samuel Hahnemann (founder of homeopathy), Dr. Lahmann (his Weisser Hirsch Sanatorium in Dresden was famous; Hauser was partly cured by his Lacto-Vegetarian Diet), Dr. Möller (taught fasting in Dresden), Ragnar Berg (Swedish chemist; from 1909 to 1921 he was in charge of Dr. Lahmann's sanitorium), Mikkel Hindhede (story of his nationwide experiment in Denmark during World War I; he practiced what he preached). A table (p. 129) gives the idea weight for men and women of different height and 3 different frames (small, medium, large).

The chapter titled "Food is our salvation" (p. 138-66) discusses: The appestat (discovered by Dr. Norman Jolliffe), the food cure idea (started by Dr. Heinrich Lahmann in Dresden; Möller, Berg, and Bircher-Benner), the value of vegetables and vitamins, start all meals with fresh (raw) food, Dr. Brauchle's sanatorium at Schoenau (Black Forest, Germany), breakfast, lunch and dinner (which should include "a good protein. Your choice of meat, fish, eggs, cheese, nuts, soya beans or mushrooms (p. 249)), beware of harmful snacks, hidden hunger test (eat liver, kidney, or heart twice a week; incl. broiled meats and fish), get your chlorophyll from mixed greens, eat natural, unprocessed foods.

The chapter on "Happilogue" tells how he and Marion Preminger, in Sept. 1952, had an unforgettable visit with Albert Schweitzer who was doing organ recordings of Bach in his native town of Guensbach near Strassburg. "It was one of the great experiences of my life." They had dinner with Dr. Schweitzer at his home: Green salad with tomatoes, "delicious cold cuts of meats with two kinds of cheese–Swiss and cottage. There was one cooked vegetable, a basket of grapes, and yes there was a bottle of dry Rhine wine. This simple meal turned out to be a feast for me, the place, the food, the company." Schweitzer was very familiar with Bircher-Benner and Dr. Gerson of New York City. "There was a bowl of soya beans on the table and I took some because I love them and told him that even in America protein foods were getting more and more expensive, only the rich can afford steak and roast, and for years I have looked for cheaper proteins and that the best I found and popularized were powdered skim milk, dry food yeast, and soya bean flour." Dr. Schweitzer said that "he has now planted soya beans. He realizes they are a good protein, but the natives [in Gabon] so far won't eat them, and all the arguments about how good and how healthful they are will not make them change their minds–they won't touch them." Then Schweitzer said, with a twinkle in his eyes, that he would do with his soya beans what Parmentier did with potatoes when they were first introduced into France from America. At first the French people did not like their taste and refused to eat them. Then Parmentier had a brilliant idea–which Schweitzer describes. "And that is what I'll do to my soya beans." After dinner, Dr. Schweitzer showed his guests a large oil painting of his hospital in Gabon (p. 213-15).

Note 1. This is the earliest document seen (Aug. 2009) concerning soybeans in Gabon, or the cultivation of soybeans in Gabon. This document contains the earliest date seen for soybeans in Gabon, or the cultivation of soybeans in Gabon (1952 or before). The source of these soybeans is unknown.

Note 2. André Parmentier (1780-1830) was a well-known horticulturist, who was born in Enghein, Belgium, but lived the last 6-7 years of his life in the USA.

Soy-related recipes: When baking bread at home, "substitute unbleached flour for white flour and try adding a tablespoon each of wheat germ, brewers' yeast, skim milk powder and soya flour for each loaf you bake" (p. 220). Dinnertime: Vegetable chop suey with [mung] bean sprouts and soy sauce (p. 233). Many recipes call for the use of red meat (steak), chicken, fish, and shellfish. Food tables, showing "percentages of daily recommendations," include soy beans (p. 261) plus many meats (p. 266-69). A photo (rear cover) shows Hauser standing by the sea at Taormina, Sicily, Italy in Sept. 1952. Address: Los Angeles, California.

3761. Mogi, Masatoshi; Nakajima, S.; Iguchi, N. 1952. Kyôka miso no kenkyû. II. Shigaisen shôsha ni yoru miso kôji-kin no furabin seisan ni tsuite [Studies on fortified bean-paste (miso). II. On the riboflavin production by ultraviolet-induced mutants of *Aspergillus oryzae*]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 30(9):363-69. Sept. English-language summary on p. 39. [10 ref. Jap; eng]
• ***Summary:*** By treating the most excellent strain of *Aspergillus oryzae* (described in a previous report) with ultraviolet rays, 743 mutants were obtained. The authors classified them into 13 types. Of these mutants, 19 strains which produced exceedingly large amounts of riboflavin were selected culturing in Pfeffer's solution. Four strains produced 3 times as much riboflavin as the parent strain in soybean koji and 3 strains twice that of the latter in rice koji. A fortified miso, made by using the most abundant riboflavin producing strain, contained twice as much riboflavin as that made with the parent strain. Address: Noda Industrial Science Lab. Japan (Noda Sangyo Kagaku Kenkyujo).

3762. Sakaguchi, Kinichiro; Ishitani, Chiyoko. 1952. Kôji-kin no shizen heni ni kansuru kenkyû. III. Shizen heni no genin ni kansuru kenkyû (heterokarioshitsu) [Studies on the natural variation of koji-molds (*Aspergillus oryzae* and *Aspergillus sojae*). III. Studies on the mechanism of natural

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variation based on heterocaryosis]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 26(6):279-85. Oct. [9 ref. Jap; eng]
• ***Summary:*** Anastomosis occurs between various strains of koji molds. Natural variation in koji molds (*Aspergillus oryzae* and *A. sojae*) is largely caused by heterocaryosis, which generally produces conidia of increased diameter. Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo.

3763. Dworschack, R.G.; Koepsell, H.J.; Lagoda, A.A. 1952. Proteolytic enzymes of microorganisms. Evaluation of proteinases produced by molds of the *Aspergillus flavus-oryzae* group in submerged culture. *Archives of Biochemistry and Biophysics* 41(1):48-60. Nov. [19 ref]
• ***Summary:*** The survey medium consisted of 2% whole corn meal, 1% whole soybean meal, and 0.5% calcium carbonate, sterilized. Some 491 strains of the *Aspergillus flavus-oryzae* group were tested in submerged culture. Eighty one strains produced sufficient proteinase activity to warrant further study. Overall, the greatest enzyme activity was found at pH 7.5; it was much less at pH 5.0 and almost nil at pH 2.5. Seventeen strains showing superior proteinase or α-amylase activity are listed with quantitative data regarding their enzyme activities. Address: Fermentation Div., NRRL, Peoria, Illinois.

3764. Morse, W.J. 1952. Some export history (Letter to the editor). *Soybean Digest.* Nov. p. 30, 32.
• ***Summary:*** "I have read with interest your editorials on the export beans." During the 1930s, American soybeans were the cleaner, better color, and better quality than Manchurian soybeans. This was one reason that European mills preferred to buy soybeans from the USA rather than from Manchuria, and "would pay 5 cents more per bushel for American soys."

During the early 1930s: "In Japanese-held Manchurian territory and Korea, the Japanese soybean inspectors did a pretty thorough job of inspection. All of the beans I saw from those places–and I saw plenty–were clean and seemed to be of good quality. Of course these beans were taken largely by the Japanese mills and the Chinese mills in Manchuria. The Korean beans all went to Japan and were mostly used for food products. The Japanese soy sauce factories used the Manchurian beans."

Now Mr. Morse laments: "I just cannot see why with all our good modern machinery we send such trashy beans abroad. Must be a colored gentleman in the woodpile somewhere!" "It is quite obvious that if America wants to hold the European market they must ship something beside trashy beans."

3765. Sakaguchi, Kinichiro; Ishitani, Chiyoko. 1952. Kôji-kin no shizen heni ni kansuru kenkyû. IV. Shizen heni no genin ni kansuru kenkyû [Studies on the natural variation of koji-molds (*Aspergillus oryzae* and *Aspergillus sojae*). IV. Studies on heterocaryotic strains induced by irradiation of ultraviolet rays]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 26(8):435-39. Dec. 1. [15 ref. Jap; eng]
• ***Summary:*** Interestingly the real translation of the Japanese subtitle is "Studies on the causes of natural change." The S- (sporogenous) and F-type (floccose) strains of *Aspergillus oryzae*, which are the constant natural variants of the basic X-type, were irradiated with ultraviolet rays and the resultant mutants were studied cytologically. Address: Inst. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo.

3766. Ohara, Yuwao. 1952. [Classification of *Aspergillus tamarii-oryzae* group. II. Production of kojic acid from various compounds as an aid for identification (Supplement to Part I)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 26(10):547-51. Dec. [5 ref. Jap; eng]
Address: College of Agriculture, Gifu Univ.

3767. Shimoda, Chûjiro; Shimada, Shirô; Sugita, Osama. 1952. [Studies on an antibiotic substance *Oryzacidin* produced by *Aspergillus oryzae*. II. The mutation of *Aspergillus oryzae* sp. A-33 by irradiation with ultra-violet rays]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 26(12):645-47. Dec. Color photo on unnumbered page after p. 646. [4 ref. Jap; eng]
Address: The Yamamura Sake-Brewing Lab.

3768. Shimoda, Chûjiro; Nishiwaki, Yoshinobu. 1952. [Studies on an antibiotic substance *Oryzacidin* produced by *Aspergillus oryzae*. III. Chemical changes of media in tank fermentation]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 26(12):648-50. Dec. [1 ref. Jap; eng]
Address: The Yamamura Sake-Brewing Lab.

3769. Tsunoda, Toshinao; Ishizuka, Z.; Miyazawa, S.; Tamura, G. 1952. Bisei-butsu teiryô-hô ni yoru jôzô shôyu no amino-san sosei ni tsuite [The microbiological determination of formation of amino acids in "shoyu"]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 26(9):477-80. Dec. [15 ref. Jap; eng]
• ***Summary:*** Includes an analysis of Kikkoman special shoyu. Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo.

3770. Brown, Helen Evans. 1952. Helen Brown's West Coast cook book. Boston, Massachusetts: Little, Brown and Company. xvi + 443 p. See p. 396. Index. 21 cm. [85* ref]
• ***Summary:*** Reflects the history and ethnic diversity of West Coast cookery, including the Asian (especially the Chinese)

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influence–and the author's enthusiasm for it. For Helen Brown is a superb writer!–as much an artist with words as she is with foods. This informal book is a labor of culinary love, about the foods she has cooked and enjoyed in three Pacific Coast states–California, Oregon and Washington.

Soy related recipes: Sukiyaki (p. 108-09), with "soy bean cake [tofu] (if desired), cut in cubes." At each place put "small dishes for soy [sauce] (shoyu, to the Japanese)...." Sculpin Serisawa (p. 160-61). Sculpin is a type of fish. To make the basting sauce, "mash a cake of Fu Yu (soy bean cheese [fermented tofu], available in Oriental markets) or 2 tablespoons of blue cheese, and add 2 tablespoons of soy sauce,..." Chinatown spinach (p. 396), calls for "a slice of fermented bean curd if it is available. (If not, 2 tablespoons blue of cheese may be substituted–it's not the same but has a similar sharp flavor").

Note 1. This is the earliest English-language document seen (Oct. 2011) that uses the term "Fu Yu" to refer to fermented tofu.

Soy sauce is called for in Asian (mostly Chinese) recipes on the following pages: 17, 19, 82, 102, 103, 140-41, 142, 160-61, 163, 165-67, 171, 173, 198-99, 253, 255, 262, 273, 276, 288, 297, 298, 301 307, 311, 331, 337, 352, 363, 369, 370, 376.

A large photo of lovely Helen Brown in her kitchen adorns the rear dust jacket.

Talk with Akasha Richmond, 2004, Feb. 19. Helen Evans Brown and James Beard were very close friends. He wrote a nice passage of praise for this book on the dust jacket and their collected correspondence has been published as a book. When Beard died, Janet Jarvitz bought his superb book collection, opened a bookstore in the Los Angeles area, and preceded to sell it. Helen Brown married a cookbook collector, Philip, who was also her skilled editor. She made good use of his vast collection in developing her own recipes.

Note 2. Before she met her husband, Philip, Helen Evans Brown had a career as a successful caterer and was running a restaurant in New England. Philip courted her and persuaded her to head to the West Coast with him. Married for almost 30 years, they lived in Pasadena, California, from 1937 until her untimely death in 1964. In Southern California, Helen started work as a consultant to a Hollywood bakery and Philip began working in an antiquarian bookshop. Philip did much to build Helen's book collection. He also acted as a taster, research assistant, and typist on book projects. Address: Pasadena, California.

3771. Engler, George E. 1952. Japanese-American cookbook: Hibachi cookery in the American manner. Rutland, Vermont; Tokyo: Charles E. Tuttle. ix + 306 p. Index). 21 cm. [Eng; Jap]
• ***Summary:*** All text, recipes, and indexes are given in both English and Japanese on facing pages. These are mostly American-style recipes using mostly American-style ingredients–but cooked over a hibachi–a Japanese charcoal broiler. Engler was a chef at the "American Club (the first club in Tokyo for civilian employees of the United States Army...).

A few recipes call for "soy sauce" as a seasoning: Steak Polynesian (p. 92). Chicken chop suey American style (p. 132). Roast chicken, Chinese style (p. 144). Chicken stew, Chinese style (p. 144). Chicken and cauliflower, Chinese style (p. 145). Lobster Malayan style (p. 150; Lobsters should be alive when cooked; plunge head first into rapidly boiling water). French fried clams (p. 174). No other soy ingredients are used. Address: Tokyo, Japan.

3772. Lea & Perrins, Inc. 1952. Dishes men like: New recipes and old favorites. Easy to prepare–Sure to please. New York, NY: Lea & Perrins. 64 p. Illust. Index. 20 cm.
• ***Summary:*** Contains 168 recipes that call for Lea & Perrins' Worcestershire Sauce. Contents: If you have a husband who likes to cook, pamper him. The cocktail hour. Soups and chowders. When the main dish is meat. When the main dish is chicken. When the main dish is seafood. When the main dish is cheese, eggs. When the main dish is beans, spaghetti, rice. The barbecue: indoors and out. Salad specialties. Good "go-togethers." How to carve.

The first section, titled "If you have a husband..." contains the following: "Yellowed with time this framed parchment expresses the sentiment that for more than a century has made Lea & Perrins a world favorite. It hangs in the company offices in New York." Inside the red frame, on a parchment-like background, is printed: "Tell Lea & Perrins that their sauce is highly esteemed in India and is in my opinion the most palatable as well as the most wholesome sauce that is made." Below the parchment, also inside the frame, we read: "Extract of a letter from a medical gentleman at Madras, to his brother at Worcester, May 1851."

The front and back covers are color; the inside photos and line drawings are black and white / monocolor. The front cover is divided into 15 rectangles, each of equal size with a color photo of a prepared dish in it. On the rear cover is a large photo of a bottle of Lea & Perrins Sauce: The Original Worcestershire–wrapped in tan paper with red writing.

Owned by Texas Woman's Univ. (Denton, Texas), Woman's Collection. Address: 241 West St., New York 13, N.Y.

3773. Lockwood, Lewis B.; Smith, A.K. 1952. Fermented soy foods and sauce. *Yearbook of Agriculture* (*USDA*) p. 357-61. For the year 1950-51. Crops in Peace and War.
• ***Summary:*** Contents: Introduction (The whole soybean is not usually eaten. In East Asia, the people favor mostly fermented soy products). In East Asia people live largely on a vegetable diet (In China it is estimated that meat and eggs comprise less than 3% of the food of the peasants, compared

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with 21% among Americans. An estimated 95% of the protein consumed in China is of vegetable origin, and much of it comes from soybeans, which constitute about 20% of the basic diet in northern China).

Japanese soy sauce or shoyu. Soybean paste. Soybean cheeses are made by fermenting soybean curd. Chinese soy sauce–a two-step fermentation and its organisms (the process is described in detail). Making soy sauce by the chemical method. How to make miso (red miso, black miso). Soybean cheeses–how to make them: Sufu, Red sufu, Chee-fan (a brownish soft cheese made with Shaoshing wine), Tsue-fan, Honfan. Soy sauce in the United States.

"Red sufu is a red cheese. It is prepared in much the same way that sufu is, except that the curd cubes and red rice are placed in alternate layers in deep vessels where the brine fermentation is started. The red rice is a Chinese product made by growing the mold *Monascus ruber* in the grains of polished white rice until the entire grain is permeated with the coloring matter. The red rice contributes a pleasant taste and aroma to the red sufu cheese.

Note: This is the earliest document seen (Oct. 2011) that uses the term "Red sufu" or the term "red sufu cheese" refer to fermented tofu.

Note: By 1975 Lockwood was at the Biology Dept., Western Kentucky Univ., Bowling Green, KY (see Smith & Berry 1975). Address: U.S. Dep. of Agriculture (Smith; NRRL, Peoria, Illinois).

3774. Lodder, Jacomina; Kreger-van Rij, N.J.W. 1952. The yeasts: A taxonomic study. Amsterdam, Netherlands: North-Holland Publishing Co. xi + 713 p. Illust. 25 cm. [200+* ref]
• ***Summary:*** Onishi (1957) states: In a 1952 monograph titled *The Yeasts: A Taxonomic Study*, by J. Lodder and N.J.W. Kreger-van Rij, the subgenera *Zygosaccharomyces* is no longer recognized. In this classification almost all of the *Zygosaccharomyces* known as the osmophilic yeasts were included in only two species and one variety, *Saccharomyces rouxii* Boutroux, *Saccharomyces rouxii* Boutroux var. *polymorphus* Lodder and Kreger-van Rij, and *Saccharomyces mellis* (Fabian et Quinet) Lodder and Kreger-van Rij. For example, *Zygosaccharomyces major, Z. soya, Z. salus*, and *Z. japonicus*, known as soy yeasts, were all included in one species, *Saccharomyces rouxii*.

Note 1. This book is a condensation revision of three monographs: Die sporogenen Hefen, von N.M. Stelling-Dekker in 1931; Die anaskosporogenen Hefen. 1. Hillfte, von J. Lodder in 1934; 2. Hillfte, von H. A. Diddens und J. Lodder in 1942.

Note 2. The category "yeasts" is poorly defined–especially the boundaries. Yeasts are probably one of the earliest domesticated microorganisms. Yeasts do not form a specific taxonomic or phylogenetic grouping. At present it is estimated that only 1% of all yeast species have been described. The term "yeast" is often taken as a synonym for S. cerevisiae, but the phylogenetic diversity of yeasts is shown by their placement in both divisions Ascomycota and Basidiomycota. The budding yeasts ("true yeasts") are classified in the order Saccharomycetales.

Yeasts are eukaryotic micro-organisms classified in the kingdom Fungi, with about 1,500 species currently described; they dominate fungal diversity in the oceans. Most reproduce asexually by budding, although a few do so by binary fission. Yeasts are unicellular, although some species with yeast forms may become multicellular through the formation of a string of connected budding cells known as pseudohyphae, or false hyphae as seen in most molds. Source: Wikipedia (Aug. 2009). Address: 1. Mycologist, Koninklijke Nederlandsche Gist- en Spiritusfabriek, Delft; 2. Mycologist, Centraalbureau voor Schimmelcultures, Yeast Div., Delft [Netherlands].

3775. Nichols, Nell Beaubien. 1952. Good home cooking across the U.S.A.: A source book of American foods. Ames, Iowa: Iowa State College Press. 560 p. Illust. by Ray Irwin. Index. 22 cm. [79* ref]
• ***Summary:*** The recipes are arranged by region of the USA.

The Southwest: Mulligan stew, Arizona style (p. 275, with soy sauce–a reminder of the Chinese cooks in the cow and mining camps. They also used soy sauce to season Spaghetti chop suey).

The Great Lakes: Broccoli, cauliflower and cabbage seasoned with butter and cheese (p. 324, "Women sometimes send a cruet of soy sauce or vinegar to the table with them").

The Farm Belt: Illinois soy chili (p. 384, with 3 cups cooked soy beans). Illinois baked beans (p. 391, with 3 cups cooked soy beans and 2 teaspoons Worcestershire sauce).

The Pacific Northwest: Barbecued crab (p. 457, with soy sauce and Worcestershire sauce).

California: Fried rice Chinese style (p. 494, with soy sauce). "Californians appreciate seasonings–not as a substitute for good cooking, which they consider basic, but to give a dish distinction. For instance, they borrow from the centuries of experience of Chinese epicures and keep soy sauce on the kitchen shelf. With it they baste chicken, turkey, lamb, pork, and veal during roasting; they say it encourages beautiful, rich browning and oozes fine, subtle flavor" (p. 505).

The Hawaiian Islands: Teriyaki steak (p. 533-34. Ingredients: 3 pounds beef, ½ cup soy sauce, 2 tablespoons sugar, 1 clove garlic, 1 small piece ginger root, crushed).

Hawaiian barbecues and beach picnics are much like those of California. "The sauces for basting meats as they broil reveal one difference. They contain more soy sauce and frequently a seasoning of curry powder" (p. 538).

Note: Worcestershire sauce is used in more than 25 recipes in this book. Address: Topeka, Kansas.

3776. Petelot, Alfred. 1952. Les plantes médicinales du

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Cambodge, du Laos et du Vietnam [The medicinal plants of Cambodia, Laos, and Vietnam. Vol. 1]. *Archives des Recherches Agronomiques au Cambodge, au Laos et au Vietnam* No. 14. 408 p. See p. 276-81. [20 ref. Fre]
• ***Summary:*** The section on the soybean (*Soja hispida* Moench, p. 276-81) includes the vernacular names: Vietnamese: *Dau nanh, Dau tuong, Dau hon, Dau xa.* Cambodian: *Sandek sieng.* Laotian: *Mak toua kon, Ta ton.*

Discusses: Whole dry soybeans, green vegetable soybeans (*Elles peuvent... être consommées à l'état jeune à la façon des flageolets,...*), soymilk (*elles donnent une sorte de lait mousseux et crémeux,...*), nutritional composition, tofu (*le graines sont utilisées pour la préparation d'un fromage, le Teau-fou des Chinois, le dau-phu des Vietnamiens*), composition of fresh and moisture-free tofu, soy oil and its properties (In Europe, above all in England, this oil is used to make soap and margarine. Its drying properties enable it to be used to make paint), soybean cake (used as animal feed; it is rich in lysine), lecithin, vitamin B, the Agronomic Institute of Ankara, Turkey, has found soya to be superior as an animal feed to all other legumes cultivated in Turkey, defatted soybean meal, useful in diabetic diets, Haberlandt of Vienna suggests use as human food, fermented soy products and rice koji, natto, miso, shoyu, *Tsao Yu* of China, tuong dau of Vietnam, Japanese natto, MSG. Address: Chargé de Cours à la Faculté Mixte de Médecine et de Pharmacie de Saigon [Vietnam].

3777. Takenobu, Yoshitaro, ed. 1952. Kenkyusha's new Japanese-English dictionary. Tokyo: Kenkyusha. iv + 68 + 2266 + [2] p. 19 cm.
• ***Summary:*** This interim edition, between the 1931 second edition and the 1954 third edition has two dates written in Japanese in the front matter: March 1931 and April 1949. On the last page, the publication date is given in Japanese as 1 Feb. 1951.

This edition has two main parts: (1) "New Words (1949) consisting mostly of mostly English language words that entered the language due to the social and cultural influence of the American occupation of Japan. The words, a mini-dictionary on 68 pages, include words such as aakeedo = arcade (written in both rômaji and katakana). There are also some new Japanese words.

(2) The entire content of the 1931 second edition– exactly the same, page for page.

New words related to soy: daizu [abura]: [soy] bean oil. Address: General editor, Japan.

3778. Tracy, Marian Coward, ed. 1952. Coast to coast cookery. Lafayette, Indiana: Indiana University Press. 318 p. 24 cm. *
• ***Summary:*** Recipes submitted by American newspaper food editors.

3779. Paddleford, Clementine. 1953. Quick tricks: Myrna Johnston has so much to do that she's an expert time-saver. Here are some of her drop-of-the-hat recipes to try. *Los Angeles Times.* Feb. 15. p. H34.
• ***Summary:*** A recipe for "Speedy fish fry" includes soy sauce. Address: *This Week* food editor.

3780. Manners, Marian. 1953. Lacking ideas for menus? New cookbooks should help. *Los Angeles Times.* March 15. p. C16.
• ***Summary:*** Includes a review of the new book *Good Home Cooking Across the U.S.A.*, by Nell Nichols. Reproduces a recipe from that book (which see) titled Teriyaki steak.

3781. Church, Ruth Ellen. 1953. Soy sauce is a necessity for most Oriental foods. *Chicago Daily Tribune.* April 10. p. A1.
• ***Summary:*** "Ten years ago [during World War II] there was a rather intensive campaign among people interested in improving the state of nutrition of all Americans to promote the use of soybeans in the human diet. The campaign, for the most part, was a big flop. Admittedly, soy beans are nutritious as all get out; but nobody likes them.

"One of the few forms in which soybeans are acceptable on the American table is in soy sauce, which is a staple in oriental cooking. Most of us dote on chop suey and other Chinese [or pseudo-Chinese] dishes, and chop suey without soy sauce isn't worth the rice it's served upon.

"Soy sauce is the salt of a Chinese meal." A recipe, given in *Far Eastern Cookery*, by Elinor Burt, is summarized here.

"Soy sauce is an ingredient in most of the brown seasoning sauces we use in cookery, and is the essential sauce for worcestershire sauce."

A recipe for "Eggs foo yung" is given. It was submitted by a Japanese from the Island of Maui [Hawaiian Islands], first published in the Mary Meade column in 1949, and is enjoyed by both Japanese and Chinese; it calls for "2 teaspoons soy sauce." Cartoons show: (1) Black soy beans, a soybean plant, a Chinese person with a conical hat carrying baskets at each end of a shoulder pole, and a Chinese pagoda. (2) Five Chinamen, each with a pigtail, Chinese-style hat, and elevated wooden shoes, each carrying a bowl of steaming rice.

3782. **Product Name:** Bragg Liquid Aminos.
Manufacturer's Name: Live Food Products, Inc. (Distributor).
Manufacturer's Address: Burbank, CA 93102. Phone: 805-968-1028.
Date of Introduction: 1953, April.
Ingredients: Pure water & specially formulated vegetable protein (soybeans only [HVP]).
Wt/Vol., Packaging, Price: 16 and 32 fluid oz plastic bottles with flip-up plastic spout cap (2/90). 16 oz retails for

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$3.99.
How Stored: Shelf stable.
New Product–Documentation: U.S. Patent and Trademark Office website. Trademarks. The trademark "Bragg" was registered for use with "Minerals for use as dietary supplements, antacids,... amino acids." Filing date: 18 Aug. 1952. Registration date: 31 March 1953. Registrant: Live Food Products Co. (corporation, California), 33 East Magnolia Ave., Burbank, California. First use in commerce: 1928 First renewal: 31 March 1973.

Federal Trade Commission Decisions: Findings, Orders, and Stipulations. 1955. "8448. Food and drug products–Therapeutic properties, relevant facts, comparative merits, etc." Vol. 49, p. 1634-35. This decision is dated March 24, 1953.

Bragg, Paul C. 1968. How to Keep the Heart Healthy and Fit [1st ed.]. Burbank, California: Health Science. 128 p. See p. 121. "Then add a tablespoon of liquid aminos, which gives the Chinese soy sauce flavor."

Lorna J. Sass. 1989. Mid-Island Times (Hicksville, New York). Feb. 10. "A seasoning for all seasons." This interesting alternative to soy sauce, created by the American Paul C. Bragg, contains 18 amino acids.

Talk with Bob Gerner. 1990. Feb. 7. He first saw this product in about 1981, after he was carrying a similar product from Dr. Bronner.

Label. 1989. 8 inches by 5 inches. Red, black, white, green, and purple on yellow. Illustration of hills, trees, sun, and clouds. "All natural. Try a dash for new taste delights. Delicious, healthy gourmet alternative to tamari-soy sauce. Vegetable protein for delicious broth, gravy, soups, and all purpose seasoning. Super concentrated. Lasts longer. Bragg, the pioneer health line–serving America for over 75 years. Delicious, healthy family favorite for over 75 years. This original formula by Paul C. Bragg, America's health pioneer. Originator of health stores. Contains no additives and no coloring agents. No preservatives. This product is not fermented. Bragg Liquid Aminos contain the following amino acids: (18 are listed and 9 are starred as essential). Essential amino acids in naturally associated amounts and derived from a specially formulated liquid-form from soybeans. No MSG. No preservatives. No chemicals. Taste you love. Nutrition you need. A dash of Bragg Aminos brings new taste delights to season salads & dressings, soups, vegies, rice & beans, tofu, tempeh, wok & stir-frys, casseroles, potatoes, meats, poultry, fish, popcorn, gravies & sauces, macrobiotics. Aminos broth: 1-2 teaspoons Bragg Aminos to 1 cup hot water, or add to hot or cold vegetable juices. Ideal 'pick-me up' at work, home, or gym–for more healthy living the Bragg Aminos way. Healthfully replaces salt and soy sauce. Take some home today. Send $1 for delicious Amino recipes to..."

Talk with Pat Calligan of Health Science (the publishing arm of Bragg's company), in Goleta. 1990. Feb. 7. He is quite sure, and he thinks the label says that this product has been around for 75 years (i.e. since 1915). He has seen receipts for the product from the early 1950s. Paul Bragg's adopted daughter, Patricia Bragg, who lives in Goleta, and who is an active health foods teacher, would know the whole story.

Talk with Dr. E.H. Bronner. 1990. Feb. 8. Paul Bragg was a brilliant lecturer and personal friend of Dr. Bronner's. His product was introduced after Dr. Bronner's, in about 1955.

Ad in *Natural Foods Merchandiser.* 1996. July. p. 90. "Bragg super health products." Photos show: (1) A bottle of Bragg Liquid Aminos. "A delicious alternative to tamari & soy sauce." (2) "Patricia Bragg, N.D., Ph.D. Nutritionist to Stars Eastwood, Seleck, Beach Boys, etc." Live Food Products / Health Science, Box 7, Santa Barbara, CA. (800) 446-1990.

3783. Iguchi, Nobuyoshi. 1953. Kôji-kin ni kansuru kenkyû. VII. Nitrogen mustard ni yoru shôyu kôji-kin no heni ni tuite (1) [Studies on *Aspergilli.* VII. Induction of induced mutations in *Aspergillus sojae* by nitrogen mustard (1)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(5):229-33. May. [22 ref. Jap; eng] Address: Noda Sangyo Kagaku Kenkyusho (Noda Industrial and Scientific Research Lab., Noda, Japan).

3784. Yokotsuka, Tamotsu. 1953. Shôyu kôki seibun ni kansuru kenkyû. IX. Kô futten-bu no kôki seibun (4) Phenol-sei kôki seibun no bunri [Studies on flavorous substances in soy [sauce]. IX. On a high boiling point fraction (4) Isolation of phenolic flavorous substances]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(5):276-81. May. [8 ref. Jap; eng]
• ***Summary:*** Hydroxy-2- methoxy-4- ethyl-benzene was isolated as phenylurethane (melting point: 104°) from the steam distillate of soy sauce presscake. It has proved to be an important component of soy sauce flavors. Address: Noda Industrial Science Laboratory [Noda, Japan].

3785. Beck, Mrs. Fred. 1953. Farmers market today (Ad). *Los Angeles Times.* June 17. p. 4.
• ***Summary:*** "The *hibachi* is the little charcoal-fired stove of Japan." It "is the very best charcoal broiler we've seen." It looks something like an old-fashioned iron pot, but its main advantage over "most charcoal broilers and braziers is an ingenious but simple draft control. It has a damper that works."

"With the *hibachi* comes a book of special recipes including one for Sukiyaki–and for Teriyaki Sauce. The price–$19.95."

Note: This is the earliest English-language document seen (April 2012) that contains the term "Teriyaki Sauce."

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3786. Nakano, Masahiro; Ebine, Hideo. 1953. Shôyu jôzô-yo kôji-kin to kôso ryoku ni tsuite [On the enzymatic activity of the *Aspergilli* for shoyu manufacture]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 8, p. 169-72. June. English-language summary p. 16. [3 ref. Jap; eng]

• ***Summary:*** Molds of the genus *Aspergillus* which produce highly active protease were selected by a simple, suitable method as suitable for making shoyu. The optimal ratio of soy bean cake to wheat bran for the formation of amylase by the Aspergilli appears to be 1-3 to 7, and for the formation of protease it appears to be less.

The optimal ratio of soybean cake to wheat bran differs according to the strains of Aspergilli. Asp. 0-3-6 (*Aspergillus oryzae*) produces more active amylase and protease on the wheat bran. *Aspergillus Okazakii* produces more active protease on the media containing more soy bean cake.

Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

3787. *Soybean Digest.*1953. The cover picture: Soy sauce popular. June. p. 9 + cover.

• ***Summary:*** About La Choy soy sauce. La Choy Food Products (Archbold, Ohio), a division of Beatrice Foods Co., states that its "Chinese foods have approximately tripled in volume since World War II, and soy sauce has more than kept pace."

"People are not only using soy sauce on their Chinese foods and in various Chinese recipes, but are also finding that it makes a delicious sauce on steaks, chops, roasts, and hamburgers. Many people like to marinate their steaks in the sauce before cooking as well as use the soy sauce in gravies, stews, and chops."

La Choy is now in the midst of the largest advertising campaign in the company's history. It includes over 50 radio stations, plus *Saturday Evening Post* and four national women's magazines.

Photos show: (1) Cover: A bottle of La Choy Soy Sauce in the midst of a table set with both Chinese and American dishes (chop suey), ingredients (sprouts, mushrooms), and utensils (knife, fork, and small wok). (2) A small photo of a small dispenser of soy sauce with egg foo yong [egg foo young] (p. 9).

3788. Yokotsuka, Tamotsu. 1953. Shôyu kôki seibun ni kansuru kenkyû. XI. Tei futten kôki seibun (2) [Studies on flavorous substances in soy [sauce]. XI. Flavors of lower boiling fractions (2)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(6):359-63. June. [6 ref. Jap; eng]

Address: Noda Industrial Science Laboratory, Noda, Japan (Kikkoman).

3789. Yokotsuka, Tamotsu. 1953. Shôyu kôki seibun ni kansuru kenkyû. X. [Studies on flavorous substances in soy [sauce]. X. Flavors with high boiling points. (5) Precursors of phenolic flavorous substances]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(6):334-39. June. [4 ref. Jap; eng]

• ***Summary:*** The flavorous substances in the steam distillate of soy-cake [soy sauce presscake; *shoyu kasu*] (boiling point 185-325°) were investigated by means of hydrolysis and oxidation. Address: Noda Industrial Science Laboratory.

3790. Hukinbara, Takashi; Muramatsu, Keiichiro. 1953. [The action of mold amylase on alcohol fermentations. I. The saccharogenic effect of Takadiastase and alcohol fermentation by the saccharifying agents of the differential enzymic ratios]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(7):398-402. July. [Jap; eng]

Address: The Scientific Research Inst. Ltd..

3791. Iguchi, Nobuyoshi. 1953. Kôji-kin ni kansuru kenkyû. VIII. Nitrogen mustard ni yoru shôyu kôji-kin no heni ni tuite. (2). Biochemical mutant ni tsuite [Studies on *Aspergilli*. VIII. Induction of induced mutations in *Aspergillus sojae* by nitrogen mustard. (2). Biochemical mutants]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(8):541-44. Aug. [8 ref. Jap; eng]

Address: Noda Sangyo Kagaku Kenkyusho (Noda Industrial and Scientific Research Lab., Noda, Japan).

3792. Yokotsuka, Tamotsu. 1953. Shôyu kôki seibun ni kansuru kenkyû. XII. [Studies on flavorous substances in soy [sauce]. XII. Flavorous substances in raw soy [sauce] (1)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(8):549-53. Aug. [4 ref. Jap; eng]

Address: Noda Industrial Science Lab.

3793. Omata, Shojiro; Ueno, Teruo. 1953. Shôyu no iro ni kansuru kenkyû. I. Shôyu no shikichô narabini kasseitan ni taisuru tokusei [On the color of shoyu. I. Color of shoyu and its characteristics for the active charcoal]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(9):570-75. Sept. [5 ref. Jap; eng]

Address: Naniwa Daigaku Nôgaku-bu, Nogei Kagaku Kyoshitsu (Faculty of Agriculture, Naniwa Univ.).

3794. Omata, Shojiro; Ueno, Teruo. 1953. Shôyu no iro ni kansuru kenkyû. II. Chozô-chû no iro no henka ni kanshite [On the color of shoyu. II. Factors causing the color change during storage]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(9):575-80. Sept. [6 ref. Jap; eng]

• ***Summary:*** The main cause of color change in shoyu is air oxidation. The effects of enzymatic reaction, temperature and light are not important. Aeration causes darkening of color.

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Address: Faculty of Agriculture, Naniwa Univ.

3795. Sakaguchi, Kinichiro; Ishitani, Chiyoko; Takamori, Shosaku. 1953. Kôji-kin no shizen heni ni kansuru kenkyû. V. Anastomosis no jôken no kentô [Studies on the natural variation of koji molds (*Aspergillus oryzae* and *Aspergillus sojae*). V. Studies on the environmental effects upon anastomosis]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(9):638-42. Sept. [8 ref. Jap; eng]

• ***Summary:*** "The environmental effects upon anastomosis of Koji-molds have been studied by means of hanging drop culture and mixed point-inoculum plate culture, using the color mutants of *Asp. sojae.*" Address: Tokyo Daigaku Nôgaku-bu, Nogei Kagaku Kyoshitsu (Dep. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo).

3796. Yamanishi, Tadashi; Obata, Yataro. 1953. Shôyu kôki no kenkyû. VI. Merukaputaaru oyobi merukaputooru rui no gôsei [Studies on soy sauce flavors. VI. Synthesis of mercaptals and mercaptols]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(9):652-54. Sept. [11 ref. Jap; eng]

• ***Summary:*** "We have synthesized 16 kinds of mercaptans and 2 kinds of mercaptols. Eight of them are unknown substances. The odors of them are illustrated." Address: Hokkaido Daigaku Nôgaku-bu, Nogei Kagaku Kyoshitsu (Inst. of Agricultural Chemistry, Hokkaido Univ., Sapporo, Japan).

3797. Fern, Stewart. 1953. Hawaii offers summer's sun without heat: Tribune travelers' guide. *Chicago Daily Tribune.* Oct. 25. p. G7.

• ***Summary:*** "Eating costs about the same as at home. Even budget meals are interesting when vegetables are strange, crisp oriental varieties, the fruit is fresh, and the entree is mahimahi, teriyaki beef, or Hawaiian laulau."

3798. Lager, Mildred. 1953. Nutritional news and recipes: Read labels. *Let's Live* 21(10):16-17, 23. Oct.

• ***Summary:*** "Choose soy powder." Soy flour and soy powder are often confused. "Soy flour is flour made from soy beans. It may contain the oil of the beans and may be a full fat flour or the oil may be removed and it is a low fat flour. Soy powder is a blend of powdered soy beans, milk solids, minerals, etc., that when added to water will result in a product with the food value of milk. Soy powder has more food value than soy flour. Many persons will think them the same but reading the label on the package will show the difference."

"Soy bean scores: One of the easiest and least expensive ways to add protein to the diet is the use of the little soy bean or soya bean. It is available in many forms and is very delicious in taste. Soy malt for instance, can be added to milk, hot or cold, for a delicious protein rich drink. Soy powder can also be used in this way. Soy cereal has more protein than cereal grains, and you can also get a soy wheatless cereal for those allergic to wheat. Pre-cooked grits are also sold which can be used in meat loaves, vegetable roasts, and it is an easy and very inexpensive way to add protein to a vegetable soup. If you have never used soy products find out about them the next time you are in a health food store. And if you wish an interesting folder, write to Mary McBride's Products, Box 19, South Pasadena, California."

Recipes include: Soy stuffed tomatoes (with soy grits, seasoned with a dash of soy sauce). Soy cereal pudding.

Also discusses carob powder (made from the seeds only), which is superior to carob flour (made from the seeds and pods). Address: Los Angeles, California.

3799. Yamanishi, Tadashi; Obata, Yataro. 1953. Shôyu kôki no kenkyû. VII. Acetals oyobi aldol shukugôbutsu no gôsei [Studies on soy sauce flavors. VII. Synthesis of acetals and aldol-condensation products]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(10):657-59. Oct. [10 ref. Jap; eng]
Address: Hokkaido Daigaku Nôgaku-bu, Nogei Kagaku Kyoshitsu (Inst. of Agricultural Chemistry, Hokkaido Univ., Sapporo, Japan).

3800. Yamanishi, Tadashi; Obata, Yataro. 1953. Shôyu kôki no kenkyû. VIII. Methylsulphides no gôsei [Studies on soy sauce flavors. VIII. Synthesis of methylsulphides]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 27(10):660-61. Oct. [7 ref. Jap; eng]
Address: Hokkaido Daigaku Nôgaku-bu, Nogei Kagaku Kyoshitsu (Inst. of Agricultural Chemistry, Hokkaido Univ., Sapporo, Japan).

3801. *Life.* 1953. Chun King 1¢ sale (Ad). 35(18):97. Nov. 2.

• ***Summary:*** A full-page color ad featuring canned Chun King Chicken Chow Mein and Chun King Chop Suey, each can having a 2nd can of Chun King Chow Mein Noodles with it and selling for only 1 cent.

An illustration shows a special stand-alone sales rack of Chun King products in a grocery store. "Shop at the Chun King Menu Magic Bazaar in your grocery store. Now stocked with *all* varieties of Chun King Chow Mein and Chop Suey. Also look for Chun King Bean Sprouts, Chinese Noodles, Bamboo Shoots, Water Chestnuts, Soya Sauce and other exciting Chun King treats.

"To make mealtime or any occasion sing, Chun King is 'just the thing.'"

"Packed by Chun King Sales, Inc., Duluth, Minnesota."

3802. Vialard Goudou, A. 1953. Etude bactériologique,

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chimique et Valeur alimentaire de la sauce de poisson viênamienne *nuoc mam* [Bacteriological, chemical and food-value study of the Vietnamese fish sauce *nuoc mam*]. In: Proceedings of the Eighth Pacific Science Congress, Manila, Philippines. Nov. [Fre]*
Address: Bordeaux, France.

3803. Ishizuka, Z.; Saito, N.; Umeda, Isao. 1953. Shôyu no gurutamin-san oyobi yûki-san ni tsuite [On the determination of glutamic acid and organic acids of soy sauce]. *Chomi Kagaku* (*Seasoning Science*) 1:29-40. [14 ref. Jap]
Address: Noda Shoyu Kabushiki Kaisha Gijutsu-bu.

3804. Ohara, H.; Morita, S.; Nishiyama, T. 1953. [The color of soy sauce]. *Chomi Kagaku* (*Seasoning Science*) 1(4):23-32. [Jap]*
Address: Japan.

3805. Onuki, M.; Chiba, H. 1953. [On the color of soy sauce]. *Chomi Kagaku* (*Seasoning Science*) 1(3):1-14. [Jap]*
Address: Japan.

3806. **Product Name:** Sovex.
Manufacturer's Name: Sovex Co?
Manufacturer's Address: Holly, Michigan.
Date of Introduction: 1953.
Ingredients: Incl. nutritional yeast and soy sauce.
How Stored: Shelf stable.
New Product–Documentation: Talk with John Goodbrad, president of Sovex. 1980. Nov. 26. Sovex was founded in 1953 by the Hurlingers in Holly, Michigan. The company's original product was Sovex, a flavor concentrate paste, made from a mixture of brewer's yeast and soy sauce. In 1964 John bought the business [actually the formula and brand name] and moved it to Collegedale, Tennessee.

Note: This is the earliest solid record seen (March 2001) concerning Sovex.

3807. David-Perez, Enriqueta, comp. and ed. 1953. Recipes of the Philippines. Philippines: Published by the author. Printed by Capitol Publishing House, Inc. (Philippines). 124 p. Illust. by S. Serna. No index. 23 cm.
• ***Summary:*** Almost all the recipes in this book have Filipino names, with no English translation of those names. A surprisingly large number contain soyfoods, especially *toyo* (soy sauce). The glossary (p. 121-23) states: Misu is miso–a paste made of fermented rice and soy beans. Tajure is "fermented soy beans, caked" [fermented tofu]. Tausi is "fermented [black] soy beans" with salt [fermented black soybeans]. Tokua is "soy bean curd" [tofu]. Toyo is Filipino-style soy sauce. Recipes followed by an asterisk (*) call for toyo.

Soy-related recipes include: Chicken relleno–1 * (p. 15). Chicken pastel * (p. 27). Lengua (with soy sauce, p. 20). Morcon * (p. 21). Pancit molo * (p. 22). Adobo * (p. 24). Arroz caldo with chicken (with 3 tbsp. patis or soy sauce, p. 28). Bañgus en tocho–1 (with 1 cube tajure, p. 34). Bañgus en tocho–2 (with 2 tbsp. each tajure and tausi, and 1 cake tokua cut into pieces 3/4 inch long and 1/8 inch wide, p. 35). Bulanglang–1 (with 1 cup tokua, cubed and fried, p. 38). Burong isda (with 1 tbsp. angkak–fermented red rice, p. 39). Sauce for pipi-an (with 1 small jar peanut butter, p. 41). Escabecheng apahap (with 4 pieces tokua, p. 46). Escabeche–Macao style * (p. 71). Escabeche with papaya * (p. 48). Fritada * (p. 50).

Kari-karing pata (with ½ cup ground toasted peanuts or peanut butter, p. 51). Lengua estofada * (p. 53). Lumpia labong–Bamboo shoot (with 5 bean cakes–tokua, p. 55). Lumpia sauce (with ½ cup toyo sauce, p. 56). Lumpia with papaya * (p. 56). Lumpia with peanuts (with 2 squares tokua–diced, 2 tbsp. toyo–soy sauce, and 1 cup ground peanuts, p. 57). Lumpia with ubod–2 (with 2 cakes tokua, and toyo to taste, p. 58). Meat balls with "sotanghon" * (p. 59). Menudo de rabo * (p. 60). Misu-tomato sauce (with 2 tbsp. misu–soy bean paste, p. 61). Paksiw na pata * (p. 64). Paksiw–pork (with soy sauce, p. 64). Paksiw na lechon (with 3 tbsp. soy sauce, p. 65). Pancit guisado * (p. 65). Pancit "luglug" (with ½ cup soy bean cake–tokua–cut into small cubes, p. 66). Pork tapa * (p. 72). Umba (with 2 tbsp. toyo and 1 heaping tbsp. tausi, p. 80). Pastillas de mani (with 1 can ground peanuts, p. 89).

A glossary at the end contains brief definitions of uncommon ingredients. Definitions of the soy-related ingredients above are taken from this glossary. Angkak is "red-colored grains of rice used as coloring for fermented fish."

Note 1. This is the earliest English-language document seen (Oct. 2011) that uses the word *tajure* to refer to fermented tofu, or the word *misu* to refer to miso.

Note 2. On the title page is printed "4th printing–May 1956." Address: P.O. Box 3288, Manila, Philippines.

3808. Fisher, A.W.; Burlew, John S. 1953. Nutritional value of microscopic algae. In: John S. Burlew, ed. 1953. Algal Culture: From Laboratory to Pilot Plant. Washington, DC: Carnegie Institution of Washington. ix + 357 p. See p. 303-10. Chap. 20.
• ***Summary:*** The last section,"Algae as human food" (p. 309-10) states that there has not yet been an opportunity for feeding microscopic algae to human subjects. However: "In recent studies in Japan reported by Dr. Hiroshi Tamiya (private communication, May 1952), dry powdered *Chlorella ellipsoiidea* has been described as tasting like a dried seaweed or powdered green tea, both popular in Japan... Hydrolysates of powdered algae showed promise as a substitute for soy sauce."

Table 1 titled "Protein content of Chlorella compared with that of typical animal feeds" (p. 304) shows: Fish meal

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60%, Chlorella 50%, brewer's yeast (USP) 48%, soybean meal (typical) 44%, dried skim milk 36%, brewers' dried grains 25%, wheat 12%. Chlorella has a low methionine content. Address: 1. Arthur D. Little, Inc., Cambridge, Massachusetts; 2. Carnegie Institution of Washington, Washington, DC.

3809. Ohara, Yuwao; Nonomura, Hideo. 1954. Tamari moromi oyobi kôji kara bunri shita kôbo. I. *Pichia mogii* nov. sp. [Yeasts occurring in a moromi (mash) and koji of tamari soy sauce. I. *Pichia mogii* nov. sp.]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(2):122-25. Feb. 15. [3 ref. Jap; eng]
• ***Summary:*** Six strains of *Pichia* were identified and isolated from the mash (moromi) and koji of tamari shoyu. All were identified as new species of *Pichia mogii* nov. sp. Address: Research Inst. of Fermentation, Faculty of Agriculture, Yamanashi Univ., Japan.

3810. Nickerson, Jane. 1954. News of food: New portable grill is introduced–Use is not limited to outdoors. *New York Times*. Feb. 20. p. 14.
• ***Summary:*** Hamilton Metal Products, which makes the new grill held a party at Peter's Back Yard (64 West Tenth Street) in New York City. Hamilton asked James Beard, the food authority, to host the party. Mr. Beard said the grill worked well for making teriyaki and sukiyaki, two cooked-on-the-spot Japanese dishes which have become very popular with Americans.

"Teriyaki consists of thin slices of beef which, after having been marinated in a savory liquid, are skewered and then broiled briefly." Sukiyaki is a combination of beef and vegetables that the Japanese cook at the table on a small charcoal brazier.

3811. Onishi, Hiroshi. 1954. [Studies on soy [sauce] yeasts. I. Methods of determining viable counts of yeasts separated from mixed culture with molds (1)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(2):134-40. Feb. [21 ref. Jap; eng]
Address: Noda Industrial and Scientific Research Laboratory.

3812. Yokotsuka, Tamotsu. 1954. Shôyu kôki seibun ni kansuru kenkyû. XIII. Jôzô shôyu no bôbi seibun narabini shôyu hiire ni yoru bôbai-sei no zôka ni tsuite [Studies on flavorous substances in soy [sauce]. XIII. On the yeast-static substances in brewed shoyu and their increase in heated shoyu]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(2):114-18. Feb. [4 ref. Jap; eng]
• ***Summary:*** Phenolic substances increased in heated soy and "showed more resistance to the harmful yeasts of Soy than raw-Soy.

"Two phenolic substances were newly isolated from Soy;" one was obtained as crude crystals and the other was believed to be vanillin based on its *Rf* value from paper chromatography. Address: Noda Industrial Science Laboratory (Kikkoman), Japan.

3813. Ando, Seiichi; Ishi, Shojiro; Shoda, H. 1954. Yuasa shôyu-gyô no kenkyû [Research on the Yuasa shoyu industry]. *Wakayama-ken Juyo Kogyo Chosa* (*Surveys of Important Industries in Wakayama Prefecture*) No. 6. 31 p. (Wakayama-ken Keizai-bu). [Jap]
• ***Summary:*** Chapter 1 gives an in-depth discussion of the origins and history of shoyu in Yuasa. Note: This is the earliest publication seen on Yuasa shoyu written by Ando. Address: Wakayama Daigaku, Keizai Kenkyujo (Wakayama Univ., Economics Research Dep.).

3814. Chatfield, Charlotte. 1954. Food composition tables: Mineral and vitamins, for international use. *FAO Nutritional Studies* No. 11. 117 p. March. [539* ref]
• ***Summary:*** Table 1 gives "Food composition in terms of the retail weight, ("As purchased"). The section on "Pulses, nuts and seeds" (p. 13-14) includes values for: Groundnuts, peanuts. Soybeans (*Glycine max*) and soybean products– Whole seeds, dry. Flour, full fat (seed coat removed). Flour, low fat; grits, flakes (partially defatted). Curd, tofu. Fermented beans, Japanese natto. Fermented beans, Chinese tsiang [jiang]. Soybean milk. Paste, miso (made with small amounts of rice and other starchy materials). Shoyu sauce. Sprouts: See No. 86a.

Also: Broad beans. Common beans. Hyacinth, lablab, and twinflower beans. Jack beans and sword beans. Lima beans. Mung beans and urd beans. Voandzeia (without shell). Chickpeas. Cowpeas. Lentils. Peas. Pigeonpeas (*Cajanus* spp.).

Table 2 gives "Composition of the edible portion (E.P.) and refuse in the material as purchased (A.P.)." The section on "Pulses, nuts and seeds" (p. 31-33) gives values for the same foods listed in Table 2.

These tables contain corrections to the Food Composition Tables of Oct. 1949. On pages 52+ is an index to the scientific names of plants in the tables. Address: Nutrition Div., FAO, Rome, Italy.

3815. Shimoda, Ch.; Shiro, T.; Kunisada, N. 1954. [Studies on formation of acetoin-series compounds by *Aspergillus oryzae*. I. Production by a selected *Aspergillus oryzae*]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(3):223-27. March. [Jap; eng]*
Address: Noda Industrial and Scientific Research Laboratory.

3816. Shimoda, Ch.; Shiro, T.; Kunisada, N. 1954. [Studies on amylase formation by *Aspergillus* species. I. On the effect of C-sources on the amylase formation by *Aspergillus oryzae* 557]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural*

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Chemical Society of Japan) 28(3):227-32. March. [Jap; eng]*
Address: Noda Industrial and Scientific Research Laboratory.

3817. Kamada, Hidemoto; Sakurai, Yoshito. 1954. Shôyu (usukuchi) no chozô-chû no iro no henka ni tsuite [On the discoloration of (usukuchi) shoyu under storage conditions]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 9. p. 115-19. April. [2 ref. Jap]
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

3818. Morimura, Yuji; Tamiya, Nobuko. 1954. Preliminary experiments on the use of Chlorella as human food. *Food Technology* 8(4):179-82. April. [2 ref]
• ***Summary:*** Discusses the uses of unicellular algae, such as chlorella (*Chlorella ellipsoidea*), as a food supplement. Its taste is very similar to that of the powdered green tea (*matcha*) used in the traditional Japanese tea ceremony, and to powdered aonori (*Enteromorpha compressa*), which is used as a seasoning in Japanese cookery. An acceptable alternative to soy sauce can be made from chlorella. Address: The Tokugawa Inst. for Biological Research, Tokyo, Japan.

3819. Ohara, Y.; Onozaki, H. 1954. [A taxonomic study of the koji molds. I. Genetic segregations in the *Aspergillus tamarii-oryzae* group demonstrated through single spores]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(4):292-96. April. [Jap; eng]*
Address: Noda Industrial and Scientific Research Laboratory.

3820. Hino, T.; Iwashita, S. Assignors to Ajinomoto Company. 1954. [Semichemical fermentation of soybean sauce]. *Japanese Patent* 3249. June 5. [Jap]*

3821. Sakaguchi, Kinichiro; Ishitani, C.; Takamori, S. 1954. Kôji-kin no shizen heni ni kansuru kenkyû. VII. *Asp. oryzae* var. *magnasporus* no segregation ni tsuite (1) [Studies on the natural variation of koji molds (*Aspergillus oryzae* and *Aspergillus sojae*). VII. Studies on the segregation of *Asp. oryzae* var. *magnasporus* (1)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(6):441-44. June. [7 ref. Jap; eng]
Address: Dep. of Agriculture, Faculty of Agriculture, Univ. of Tokyo.

3822. Sakaguchi, Kinichiro; Ishitani, Chiyoko. 1954. Kôji-kin no shizen heni ni kansuru kenkyû. VIII. *Asp. oryzae* var. *magnasporus* no segregation ni tsuite (2) [Studies on the natural variation of koji molds (*Aspergillus oryzae* and *Aspergillus sojae*). VIII. Studies on the segregation of *Aspergillus oryzae* var. *magnasporus* (2)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(6):445-49. June. [10 ref. Jap; eng]
Address: Inst. of Applied Mycology, Univ. of Tokyo.

3823. Sakaguchi, Kinichiro; Ishitani, Chiyoko. 1954. Kôji-kin no shizen heni ni kansuru kenkyû. VI. Kinrui no zoku oyobi tane kan no anastomosis ni tsuite [Studies on the natural variation of koji molds (*Aspergillus oryzae* and *Aspergillus sojae*). VI. On the occurrence of anastomosis between species and genera of molds]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(6):435-41. June. [12 ref. Jap; eng]
• ***Summary:*** Numerous photomicrographs show anastomosis–self-fusion, and interspecific or intergeneric fusion. Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo.

3824. Irie, Toshio. 1954. Eki kôji ni yoru shôyu jôzô ni kansuru kenkyû. I. Shijô-kin no ekinai baiyô ni yoru Protease seisan ni tsuite [Studies on brewing soy sauce by enzymes obtained by submerged culture of molds. I. On the protease production under shaking culture of molds (1)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(7):550-56. July. (Chem. Abst. 50:15020). [18 ref. Jap; eng]
Address: Lab. of Zymology and Industrial Fermentation, Faculty of Agriculture, Kyushu Univ.; Nihon Chomiryo Brewing Co., Ltd., Koga Factory.

3825. Onishi, Hiroshi. 1954. [Studies on soy yeasts. II. Methods for determining viable counts of yeasts in soy mash (1)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(7):546-50. July. [10 ref. Jap; eng]
• ***Summary:*** This is an early study on osmophilic yeasts in soy sauce. The following species were tested: *Zygosaccharomyces major, Z. soya, Z. salsus.* Soy sauce mash is different from sake mash because of its high content of sodium chloride (about 18%) and its high nitrogen concentration (total N of 1.0 to 1.5%). It was found that the viable count of yeast cells grown in soy sauce mash experienced a remarkable fall when ordinary media without sodium chloride were used for the plating. Address: Noda Industrial and Scientific Research Laboratory.

3826. Chun King Sales Co. 1954. Display ad: Chun King–Chicken Chow Mein. *Chicago Daily Tribune*. Sept. 12. p. M5.
• ***Summary:*** The Chun King new "divider pack" is actually two cans in one. The meat is in the top can–"Chun King Cantonese Chicken Chow Mein (without vegetables)." The vegetables are in the lower can. The crisp fried noodles are a separate product.

"Oriental recipe 'magic' combines with modern American care and skill in the selection and preparation of the 19 different quality ingredients used in this new Chun King Chow Mein. There's succulent chicken, Pascal

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celery, young bean sprouts, imported bamboo shoots, tender mushrooms, pimientos and water chestnuts. Plus the exotic seasonings that Chun King chefs use so skillfully. A wonderfully delicious combination of flavors.

"Spoon it onto crisp fried noodles (Chun King noodles are best; they are made with fresh eggs!). Call the folks. They'll douse on Chun King Soya Sauce. It will do your heart good, the way appetites respond to this new and better Chow Mein."

There is a coupon at bottom of ad, and a "Guaranteed by Good Housekeeping" seal of approval. It is a "Garry Moore special introductory offer. See the Garry Moore Show Mondays through Fridays 10 to 10:30 A.M., EDST, CBS-TV."

Note 1. This exact same ad appeared in the Los Angeles Times on this same date, p. L39.

Note 2. This is the earliest document seen (Feb. 2011) that mentions "Chun King Soya Sauce." Address: Duluth, Minnesota.

3827. Ohara, Yuwao; Nonomura, Hideo. 1954. Tamari moromi oyobi kôji kara bunri shita kôbo. II. [Yeasts occurring in a moromi (mash) and koji of tamari soy sauce. II. A taxonomic study on the four strains of *Cryptococcaceae*]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(9):717-21. Sept. 15. [6 ref. Eng; jap]
• ***Summary:*** Four authentic strains of rather unusual yeasts were identified: *Candida polymorpha* nov. sp. strain S-3. *Cryptococcus diffluens* (Zach) Lodder var. non-membranaefaciens nov. var strain K-10. *Trichosporon behrendii* Lodder et Van Rij strain K 3-3. *Candida rugosa* (Anderson) Diddens et Lodder strain K 7. An illustration shows each of these yeasts. Address: Research Inst. of Fermentation, Faculty of Agriculture, Yamanashi Univ., Japan.

3828. Ohara, Yuwao; Nonomura, Hideo. 1954. Tamari moromi oyobi kôji kara bunri shita kôbo. III. *Saccharomyces rouxii* Boutroux [Yeasts occurring in a moromi (mash) and koji of tamari soy sauce. III. *Saccharomyces rouxii* Boutroux]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(9):721-24. Sept. 15. [18 ref. Jap; eng]
• ***Summary:*** Four strains of osmophilic yeasts most frequently isolated from tamari-shoyu mash were identified. "Two of them were recognized as *Saccharomyces rouxii* Boutroux, and two other strains were considered as identical with it."

Tables show: (1) Origins of the strains studied: A mash (1 year old) of tamari from Asano Co. in Gifu prefecture. A mash (3 months old) of tamari from Asano Co. in Gifu prefecture. A mash of tamari from Gifu Shoyu K.K. in Gifu prefecture. Tamari miso [Hatcho miso] from Hayakawa Co. at Okazaki, Aichi prefecture. (2) Morphological properties. (3) Sporulation and physiological properties. Two illustrations show spores and cells of *Saccharomyces rouxii* Boutroux. Address: Research Inst. of Fermentation, Faculty of Agriculture, Yamanashi Univ., Japan.

3829. Sakaguchi, Kenji. 1954. [The activities of bacteria in the soya-sauce fermentation. I. A method of viable counts of bacteria from the culture of mixed molds and yeasts]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(9):758-64. Sept. 15. [30 ref. Jap; eng] Address: Noda Industrial and Scientific Research Lab.

3830. Shibuya, Yoshikazu. 1954. [Soy sauce from the mother liquor of glutamic acid]. *Japanese Patent* 6198. Sept. 27. (Chem. Abst. 50:2118e). [Jap]*
• ***Summary:*** Soybean cake is heated with 3-10% hydrochloric acid for 60 hours at 85°C until the production of furfural reaches a maximum. The product is mixed with an equal weight of mother liquor from glutamic acid, heated for 3 hours at 60°C, neutralized, fermented at 25-30°C with a mold culture, and filtered. Address: Japan.

3831. *Hartford Courant* (*Connecticut*). 1954. Street hawker remains familiar figure in Tokyo. Oct. 24. p. D14.
• ***Summary:*** No longer seen in the USA, street hawkers do a brisk business in Tokyo. The sellers of each product have their unique call. "The juvenile vendor is likely to be repeating 'Natto,' 'Natto' in young and earnest tones. He is selling fermented beans, which are served with soya sauce over warm cooked rice."

"'To-fu ya-san' appears with bean curds'" [tofu].

The 'chin-don-ya-san' is a one man band and children's theater. The ragman, and the peddlers of shell-fish and bamboo poles can also be heard.

3832. *New York Times*. 1954. News of food: Variation in soya sauces. Oct. 25. p. 30.
• ***Summary:*** There are many variations. Some are sweeter than others, some saltier, and they can vary in consistency from very thin to almost as thick as molasses.

Some soy sauce is made in the USA, but most is made in Japan, Hong Kong, and Formosa, and imported from those countries. A brief description of the ingredients and process is given.

When people of Japanese or Chinese backgrounds were asked to name their favorite soya sauce, their answers followed strictly national lines. The Japanese say that their soya sauce is not as sweet and thinner than its Chinese counterpart. But Chinese say that "Japanese soya sauce has a molasses-like odor and consistency."

Soy sauce is used in Japan as often as (and much like) salt in used in the USA. In both China and Japan, soy sauce is the most important seasoning or flavoring.

American per capita consumption of soy sauce is

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steadily increasing; it is used in preparing Chinese and Japanese dishes, as well as in typically Western dishes.

"In California, the land of outdoor cookery, soya sauce is often used in the marinade for meats and poultry that are cooked on a spit over an open fire. The sauce is also used as an ingredient in many Western barbecue sauces." And it works well as a basting sauce.

China Beauty is an American-made product; a 3-oz. bottle sells for 10¢. Katagiri & Co. (224 East 59th St., New York City) sells two brands of soy sauce imported from Japan: Yamasa Shoyu and Kikkoman Shoyu. Charles & Co. (340 Madison Ave.) sells another Japanese import, Higeta Shoyu. Walter's, an oriental grocery store (685 Amsterdam Ave., NYC), sells several brands of Chinese soy sauce from Hong Kong and Formosa [Taiwan].

3833. Ichikawa, Kunisuke. 1954. Kôso shôka ni yoru shôyu seizô ni kansuru kenkyû. I. Kôji-kin no junbai-yô hôhô no sentei [Studies on soy manufacture by enzymatic digestion. I. Selection of a submerged culture method suitable for soy bean digestion by *Aspergillus*]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 32(10):379-84. English-language summary on p. 37 of this issue. [8 ref. Jap; eng]
Address: Dep. of Industrial Chemistry, Faculty of Engineering, Kyoto Univ., Kyoto, Japan (Kyoto Daigaku, Kôgaku-bu, Kôgyô Kagaku Kyôshitsu, Takada Kenkyûshitsu, Kyoto, Japan).

3834. Ohara, Yuwao; Nonomura, Hideo. 1954. Tamari moromi oyobi kôji kara bunri shita kôbo. IV. [Yeasts occurring in a moromi (mash) and koji of tamari soy sauce. IV. On the four strains including *Debaromyces tamarii* nov. sp.]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(10):837-40. Oct. [11 ref. Jap; eng]
Address: Research Inst. of Fermentation, Faculty of Agriculture, Yamanashi Univ., Japan.

3835. Meade, Mary. 1954. Japanese dish, sukiyaki, should be prepared at table: Chafing dish or hot plate can be used. *Chicago Daily Tribune*. Nov. 16. p. A5.
• ***Summary:*** The recipe for Beef sukiyaki calls for "12 pieces tofu (soybean curd) in 1 inch cubes... Sauce: 1 cup shoyu (soy sauce), ¼ cup sake (rice wine), 1/3 cup sugar." Eat sukiyaki with bowls of rice.

3836. Yamaguchi, S.; Ebihara, K. Assignors to Noda Shoyu K.K. 1954. [Treatment for soybeans or fat-free soybeans]. *Japanese Patent* 7646. Nov. 19. [Jap]*
Address: Noda, Japan.

3837. Paddleford, Clementine. 1954. Dinner at Trader Vic's: Who ever heard of steak with pineapple? Here's an exotic secret from a famous West Coast kitchen. *Los Angeles Times*. Nov. 21. p. L16.
• ***Summary:*** Trader Vic is a famous name in San Francisco. In 1934 his name was Victor Bergeron; an auto parts salesman, he was tired of his job. Since his father was in the restaurant business, he thought he'd give it a try, investing his $500 of savings. He was an immediate success.

He opened his first restaurant (a mere shack with a tin roof, loaded with South Sea paraphernalia) as a trading post across the bay in Oakland. Two Chinese barbecue ovens were the chief equipment. It was famous for fabulous rum drinks, and for the Trader himself, hopping along on his wooden leg. Soon he began opening more shacks. Today the menu is called Polynesian, but it is actually Chinese–or perhaps uniquely his. A recipe for Skewered barbecued pineapple and steak calls for ½ cup soy sauce. A small photo shows Trader Vic. Address: *This Week* food editor.

3838. Ishitani, Chiyoko; Sakaguchi, Kinichiro. 1954. Kôji-kin no shizen heni ni kansuru kenkyû. IX. Ryokushoku no coronii seisei no jitai ni tsuite [Studies on the natural variation of koji molds (*Aspergillus oryzae* and *Aspergillus sojae*). IX. Studies on the production of green colonies from the yellow mutant strains]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(11):898-903. Nov. [Jap; eng]
Address: Tokyo Daigaku Nôgaku-bu, Nogei Kagaku Kyoshitsu (Dep. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo).

3839. Ishitani, Chiyoko; Sakaguchi, Kinichiro. 1954. Kôji-kin no shizen heni ni kansuru kenkyû. X. Ryokushoku no conidia seisei no saibôgaku-teki kenkyû [Studies on the natural variation of koji molds (*Aspergillus oryzae* and *Aspergillus sojae*). X. Cytological studies on the green conidium formation from the yellow mutant strains]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(11):903-09. Nov. [19 ref. Jap; eng]
Address: Inst. of Applied Mycology, Univ. of Tokyo.

3840. Ohara, Yuwao; Nonomura, Hideo. 1954. Tamari moromi oyobi kôji kara bunri shita kôbo. V. [Yeasts occurring in a moromi (mash) and koji of tamari soy sauce. V. On the *Trichosporon cutaneum* and its new variety]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 28(11):886-89. Nov. [7 ref. Jap; eng]
• ***Summary:*** A taxonomic study was made of 13 authentic yeast strains (Table 1) that produced arthrospores regularly and blastospores rarely. All of them were identified with *Trichosporon cutaneum* (7068) and one of them (K 32) was found to be a new variety, *Trichosporon cutaneum* var. *curvatum* nov. var. Address: Research Inst. of Fermentation, Faculty of Agriculture, Yamanashi Univ., Japan.

3841. *Soybean Digest*.1954. To La Choy Foods. Nov. p. 28.

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30.
• ***Summary:*** "Edward M. Muldoon, general manager of La Choy Food Products, division of Beatrice Foods Co., has announced the appointment of W.P. McCarthy as general sales manager."

"Mr. McCarthy comes to La Choy after 16 years with Lever Brothers Co."

"Gordon Swaney started in the La Choy sales department seven years ago."

3842. Nickerson, Jane. 1954. Japanese culinary art for the New Year. *New York Times*. Dec. 26. p. SM30.
• ***Summary:*** Describes the food that Japanese-Americans prepare in New York City to celebrate the New Year. The first seven days of the New Year, called Matsu-no-Uchi, are a time for fun and feasting. They enjoy traditional foods, such as "rice-cake [mochi] soup (*zoni*), black beans (*kuromame*), sake (warm rice wine),... and *toso*, a sweet sake flavored with spices."

The rice cakes are "formed from a glutinous rice that is pounded into a starchy mass after being boiled..." "Black [soy] beans, sweetened, boiled, and eaten cold, carry with them the idea of a new year devoted to enterprising hard work. That is because the Japanese word for beans" [*mamé*] sounds the same as the word meaning 'industrious.'

3843. Bisson, F.C. 1954. Soybeans–Agricultural miracle. *Board of Trade News* (*Chicago Board of Trade*). Dec. p. 3-4.
• ***Summary:*** This is the first of two articles with this title. It begins: "As little as a generation ago it is doubtful if more than a small handful of the membership of the Chicago Board of Trade had ever actually seen a soybean. And, in all probability, the only actual contact that any may have had up to that time with the many products and by-products made from this legume, was when on an occasional 'after the show' visit to a Chinese restaurant near Wentworth and Twenty Second Street, they might have used that mysterious appearing black sauce on a heaping platter of chop-suey or chow-mein."

"No one seems certain about the actual origin of the soybean... we learn that "in an ancient Chinese thesis–(so old that the author is not even known, with the opus identified simply as having been penned thirty centuries before Christ)–there were in it more than three hundred separate and distinct medical formulae with each having soybeans as basic source. How much older the soybean might be is anyone's guess.

"Just as the actual origin of the soybean seems to be rather well shrouded in antiquity, modern history is equally bare of facts and figures on how and when the first ones found their way to American shores. But in the absence of anything more specific, it seems like a good guess that a few of them first were brought to this country early in the nineteenth century. And without doubt, they came here more as a curiosity than with the thought of their serving any utilitarian purpose.

"Near the turn of the century–1890 to be exact–our own government took the first official cognizance of the presence of this agricultural visitor from the Far East by providing for some exploratory research on the adaptability of the soybean to our climate, with particular respect to the possibility of its augmenting our clover, alfalfa and timothy crops as a source of animal forage."

One table (p. 4) shows the rapid increase from 1925 to 1954 in U.S. soybean acreage (sown alone, or harvested as beans), total production (in bushels), and yield in bushels per acre. The yield almost doubled, from 11.7 bu/acre in 1925 to 21.6 bu/acre in 1950. "Never in the agricultural history of the United States, has there been such a phenomenal increase in production of any crop within such a short space of time. From 1925 through 1954 the United States soybean crop has been multiplied more than 67 times.

"It is rather apparent that if there had not been present some very well defined incentive for these year-to-year increases in soybean production, they never would have materialized. That incentive came in a two-fold manner–(1), a vastly expanded broadening in the demand for the two main by-products of the soybean–oil and meal, and (2), a step-by-step increase in the processing facilities of the country which has matched both the greatly enlarged production of the raw beans on one hand, and the increasing substitution of bean oil and bean meal for other oils and proteins, respectively."

A second table (p. 4) shows the increase in U.S. production of soybean oil and soybean meal from 1925 to 1952. Soybean oil grew almost 100-fold from 2.5 million lb to 2,478 million lb during that period. Likewise, soybean meal grew from 8,600 tons to 5,551,000 tons. Address: Director of Market Research.

3844. Ichikawa, Kunisuke. 1954. Kôso shôka ni yoru shôyu seizô ni kansuru kenkyû. II. Hyômen baiyô to shintô baiyô ni okeru protease no seisan [Studies on soy manufacture by enzymatic digestion. II. Surface culture and production of protease by submerged culture]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 32(12):501-06. English-language summary on p. 48 of this issue. [4 ref. Jap; eng] Address: Dep. of Industrial Chemistry, Faculty of Engineering, Kyoto Univ., Kyoto, Japan (Kyoto Daigaku, Kôgaku-bu, Kôgyô Kagaku Kyôshitsu, Takada Kenkyûshitsu, Kyoto, Japan).

3845. Ishitani, Chiyoko; Sakaguchi, Kinichiro. 1954. Kôji-kin no shizen heni ni kansuru kenkyû. XI. Biochemical mutant [Studies on the natural variation of koji molds (*Aspergillus oryzae* and *Aspergillus soyae*). XI. Genetic examination of heterokaryosis using biochemical mutants (single-less strains)]. *Nippon Nogeikagaku Kaishi* (*J. of the*

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Agricultural Chemical Society of Japan) 28(12):939-45. Dec. [20 ref. Jap; eng]
Address: Inst. of Applied Microbiology, Univ. of Tokyo, Tokyo, Japan.

3846. **Product Name:** Soy Sauce.
Manufacturer's Name: Custom Food Products, Inc.
Manufacturer's Address: 701 N. Western Ave., Chicago, Illinois.
Date of Introduction: 1954.
New Product–Documentation: Soybean Blue Book. 1954. p. 107. "Manufacturer."

3847. Ebihara, K. Assignors to Noda Shoyu K.K. 1954. [Synthetic aroma for soy sauce]. *Japanese Patent* 5250'54. [Jap]*
Address: Noda, Japan.

3848. Furuta, T.; Ohara, K. 1954. [The influence of iron on the color of soy sauce]. *Chomi Kagaku* (*Seasoning Science*) 2(2):6-12. [Jap]*
Address: Japan.

3849. **Product Name:** [Handmade Shoyu: Yuasa Tamari].
Foreign Name: Tezukuri Shôyu: Yuasa Tamari.
Manufacturer's Name: Kadocho K.K.
Manufacturer's Address: Yuasa 7, Yuasa-cho, Arita-gun, Wakayama-ken, Japan. Phone: 0737-62-2035.
Date of Introduction: 1954.
Ingredients: Whole soybeans grown in Japan, wheat, unrefined salt, and water.
Wt/Vol., Packaging, Price: 0.72 liters or 1.8 liters.
How Stored: Shelf stable.
New Product–Documentation: Labels. 1989, Oct. received from manufacturer. For the 0.72 liter container, the label is 5.25 by 4.25 inches. Brown on blue. Illustration (with caption) shows Yuasa Tamari shoyu being made by hand in the traditional way during the Tokugawa period (1600-1868), with men emptying wooden buckets into a large vat.

For the 1.8 liter container, the label is 4.25 inches square. Red, yellow, and green on white. The trademark is a thick-walled "O" with a roof over the top. "Yuasa: The homeland of shoyu. Founded 1831 (the 2nd year of Tempo)."

3850. Mogi, Masatoshi. 1954. Shôyu-zukuri no hensen: Kenkyûshitsu no mado kara mita 50 nen mae, 25 nen mae oyobi genzai [Changes in shoyu production: 50 years ago, 25 years, and today see from the laboratory window]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 49:290-94, 327-30, 377-81. [Jap]
Address: Brewing Lab., Noda Shoyu Co. Ltd., Noda-machi, Chiba-ken, Japan.

3851. **Product Name:** Soy Sauce.
Manufacturer's Name: Som Toy Chinese Food Products, Inc. (Bottler of Soy Sauce).
Manufacturer's Address: 65 Grove St., Rockland, Massachusetts.
Date of Introduction: 1954.
New Product–Documentation: Soybean Blue Book. 1954. p. 107.

3852. Takeda, R. 1954. [Studies on the culture for the yeasts for soy sauce fermentation]. *Chomi Kagaku* (*Seasoning Science*) 2:23-28. [Jap]*

3853. Teramoto, S.; Hashida, W. 1954. [Control of harmful yeasts of soy sauce by sorbic acid]. *Chomi Kagaku* (*Seasoning Science*) 2(2):1-6. [Jap]*

3854. Barnhart, John Donald; Carmony, Donald Francis. 1954. Indiana: From frontier to industrial commonwealth. 4 vols. New York: Lewis Historical Publ. Co. See p. 476. 29 cm. *
• ***Summary:*** Page 476: "... Funeral Home is vice president of the Oriental Show-You Company, and is a director of the Farmers Mill and Elevator Company, all of Columbia City..."

3855. Feng, Doreen Yen Hung. 1954. The joy of Chinese cooking. New York: Grosset & Dunlap. 226 p. Undated. Illust. Index. 21 cm.
• ***Summary:*** This hardcover Chinese cook book retails for $3.95. The contents and pagination are the same as in the original 1950 edition of the same title.

3856. Iwanami Shoten Henshu-bu, comp. 1954. Shôyu [Shoyu (Japanese soy sauce)]. Tokyo: Iwanami Shoten, Iwanami Bunko. 52 volumes. [Jap]*
Address: Tokyo, Japan.

3857. Katsumata, Senkichiro, ed. 1954. Kenkyusha's new Japanese-English dictionary. Entirely new ed. [3rd ed.]. Tokyo, Japan: Kenkyusha. xvi + 2136 p. 24 cm.
• ***Summary:*** Soy related words:
aburaage: see aburage.
aburage: fried beancurd.
age: a piece of fried bean-curd.
ama-miso: slightly salted bean paste.
atsuage: not listed.
Daitokuji natto: not listed.
daizu: a soya (= soy) bean. daizu kasu: a [soy] bean cake [a co-product of soy bean oil]. daizu abura: [soy] bean oil.
dengaku: bean curd baked and daubed with miso. dengaku-zashi ni sareru: to be transfixed; to be pierced through (as with a spear).
edamame: green soybeans.
ganmo: not listed.
ganmodoki: not listed. Hamananatto: not mentioned.

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Hamanatto: not mentioned.

inarizushi: fried bean-curd stuffed with boiled rice.

Note 1. This is the earliest English-language document seen (May 2012) that contains the word *inarizushi* (one word without hyphenation).

kogoridôfu = kôyadôfu.

koikuchi: not listed.

koikoku: a carp cooked in bean (= miso) soup.

kôji: malt (mugi); yeast; leaven (kôbo); kôji-ya: a maltster [a maker of kôji]. kôji ni suru: to malt something.

kôridôfu: a frozen bean curd.

kuromame: a black soy bean.

miso (chomiryô = seasoning): bean paste; miso. miso o suru: to mash the miso [as in a suribachi]. miso kakeru: to put miso on something (as food). (2) (tokui to ten) sore ga kare no miso da: that is what he takes pride in [that is what he is good at]. (3) (hikakuteki-ni) miso o kakeru (shuppai suru): to make a mess (=sad work) of something; to make a miserable (=poor) showing. miso o suru (hetsurau): to flatter [someone, as one's superiors]. [Modern is goma suru; kare, shatcho ni goma shitte-iru: he is flattering his boss. A grinding gesture goes with it. goma-suri: a person who flatters]. kuso miso ni iu: to speak meanly of a person; to speak of a person in the most disparaging terms. miso mo kuso mo isshoni suru: to mix up good and bad things. miso no miso kusaki wa, jô miso ni arazu: The secret of art lies in concealing art [Akiko never heard this saying]. soko ga miso darô: perhaps that's the point he takes pride in [=the key point].

misokoshi: a *miso* strainer.

miso-mame: soy (= soya) beans.

misuzu-dofu: not listed.

momen: no meaning related to tofu is listed.

nama-age: fried bean curd.

Note 2. This is the earliest English-language document seen (May 2012) that contains the term *nama-age* which refers "fried bean curd."

nattô: fermented soybeans. nattô uri: a vendor of fermented soybeans. nattô-jiru: miso soup with ground fermented soybeans.

nigari, nigashio: bittern, brine.

nori [no tsukudani]: laver boiled down in soy [sauce].

oboro: not listed.

okabe: = tofu.

okara: bean curd refuse.

shimidôfu = kôridôfu [frozen tofu].

Note 3. This is the earliest English-language document seen (May 2012) that contains the term *shimidôfu* (written as one word, with diacritics) which it says is the same as kôridôfu.

shitaji (7): soy [sauce].

shôyu: soy [sauce].

tamari: [a kind of] soy; soy sauce; sauce from refined soy.

tôfu: beans curds (=cheese): tôfu. [tôfu itcho; in characters]: a piece (=cake) of bean-curds. [tôfu-ya]: a bean-curds dealer (=seller). [yaki-dôfu]: roasted bean-curd. kare ni iken shita totte, tôfu ni kasugai da: advice to him is like water sliding off a duck's back = It's a mere waste of words (=It is like pouring water into a sieve) to advise him. [tofu-ya e ni ri, saka-ya e san ri to iu tokoro da]: there is no human habitation within five miles of the place. [It's out in the boondocks].

tônyû: bean soup; soya-bean juice [sic, soymilk].

u-no-hana: (1) flowers of the *Deutzia scabra*. (2) (tôfu no kara) bean-curd refuse.

yuba: dried bean curds [sic, the film that forms atop soymilk when it is dried]. Address: General editor, Japan.

3858. Kay, Tutu. 1954. Wiki wiki kau kau. Honolulu, Hawaii: Watkins Printery, Ltd. 77 + [2] p. Illust. 22 cm. [Eng]

• ***Summary:*** Cover text: "Quick cooking recipes from Hawaii." Contains a glossary of Hawaiian words, a brief history and: "How to have a luau, make a lei, sew a muumuu, speak Hawaiian, and entertain simply."

Soy-related recipes: Meat sticks (with "shoyu sauce," p. 15). Deviled macadamia nuts (with Worcestershire sauce, p. 19). Lorie Bachran's spareribs, a la apricot (with shoyu, p. 22). Taylor Mercer's filet de boeuf flambe (with "shoyu sauce," p. 23). Suggested dinner menus: Japanese miso soup and sukiyaki (p. 24). Abalone with cucumber (and shoyu, p. 25). Meat sticks (with "Soy Sauce," p. 26). Hot buttered abalone (with shoyu, p. 27). Note: Many other meat, poultry and fish dishes are also seasoned with shoyu or Worcestershire sauce.

Sukiyaki (with tofu and shoyu, p. 54). Address: [Hawaii].

3859. La Choy Food Products. 1954. The art and secrets of Chinese cookery. Archbold, Ohio: La Choy Food Products. Div. of Beatrice Foods. 30 p. Illust. (some color). 10 x 16 cm. *

• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home.

3860. Pietschman, Ann, comp. 1954. Food for thought: Over three hundred delightful recipes–mostly vegetarian. Los Angeles, California: Institute of Mentalphysics. 341 p. Undated. Illust. 22 cm. Series: A Mentalphysics Publication.

• ***Summary:*** Soybeans and/or soybean meal or flour are listed as good sources of vitamin B (thiamin), vitamin G (riboflavin), niacin (nicotinic acid), and protein (p. 4-6). Try using soy sauce to season swiss steak (p. 13). Soy-related recipes include: Scalloped soy beans (p. 136, 185). Soy bean loaf (p. 138). Whole-wheat bread with soya flour (p. 298). Soya nut bread (with soy flour, p. 306). Soy muffins (with soy flour, p. 312). Address: 213 South Hobart Blvd., Los

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Angeles 4, California.

3861. Thorpe, Jocelyn Field; Whiteley, M.A. 1954. Soya bean. In: J.F. Thorpe and M.A. Whiteley. 1937-1956. Thorpe's Dictionary of Applied Chemistry. 12 vols. 4th ed. London, New York, Toronto: Longmans, Green & Co. See vol. XI, p. 46-48. 23 cm. [15 ref]
• ***Summary:*** The section titled "Soya Bean" has the following contents: Introduction. Composition of soya beans. Soya-bean products: Oil, cake and meal, flour, milk, soy sauce ("known in Japan as 'Shoyu' and in the west under such names as 'Worcester Sauce,'..."), miso, tofu, immature soya beans, roasted soya beans (eaten like peanuts), coffee substitute, chocolate substitute. Agricultural uses (green fodder, hay, silage, bean pods and straw). Sir Jocelyn Field Thorpe lived 1872-1940.

3862. Thorpe's dictionary of applied chemistry. 4th ed. Revised and enlarged. Vol. XI. Soil–Z. 1954. London, New York, Toronto: Longmans, Green and Co. x + 1145 p. See p. 46-48. Illust. Index. 23 cm. [16 ref]
• ***Summary:*** The entry for "Soya bean" (p. 46-48) was written by A.W. Marsden, M.Sc., D.I.C., A.R.C.S., F.R.I.C., Director, Commonwealth Bureau of Dairy Science, Shinfield, near Reading, England. Contents: Introduction. Composition of soya beans. Soya-bean products: Oil, meal, flour, soya-bean "milk," soy sauce, Worcestershire sauce, miso, tofu, immature soya beans (eaten, after shelling and cooking, just like green peas), sprouts, roasted soya beans (eaten like peanuts), coffee substitute, chocolate substitute. Agricultural uses. Soya bean oil (see Vol. IX, 27a, 29a, 53c, 55c). Address: London, England.

3863. *Zenkoku Miso Shoyu Nenkan* (*Miso and Shoyu Yearbook*). 1954--. Serial/periodical. Taito-ku, Tokyo: Shokuhin Sangyo Shinbunsha. [Jap]*
• ***Summary:*** Includes 2 parts: A directory and industry statistics. Address: Tokyo, Japan.

3864. **Product Name:** [Yuasa Shoyu].
Foreign Name: Yuasa Shôyu.
Manufacturer's Name: Yuasa Shoyu Co. Ltd.
Manufacturer's Address: Yuasa, Wakayama prefecture, Japan.
Date of Introduction: 1954?
New Product–Documentation: Ando and Ishi. 1954. Yuasa shoyu-gyo no kenkyu. 31 p. Fruin. 1984. History of five Japanese shoyu companies.

3865. Hughes, G. Bernard. 1955. Old English cruets. *Country Life* (*London, England*). Jan. 20. p. 178-80.
• ***Summary:*** An excellent history of early records of food-related domestic cruets in England: 1459–The *Paston Letters* state that the majority of cruets are made of glass.

1521–Dame Hungerford's inventory includes a set of "cruettes of sylver, parcel gilte." These were matching pairs of flasks for serving oil and vinegar, used to enhance the taste of the preserved foods of the period.

1611–Cotgrave defines the domestic cruet as "a Violl wherein Oyle or Vinegar is served to the Table." 1675–George Ravenscroft introduces glass-of-lead under the name of "improved flint glass." He soon made flint-glass cruets in 3 sizes. 1690–Cruet frames appear; they are silver frames for carrying pairs of cruets, thus simplifying passing at the table.

1760–"At about this time began the half-century vogue of soy [sauce] as a relish with food. Soy was described in 1776 as 'a sauce as thick as treacle, and of a clear black colour.' It was prepared from the beans of the *soja hispida* and salt mixed with ground barley or wheat. This created a demand for special soy frames complete with silver-mounted cut-glass bottles hung by silver bottle tickets on chains. Such a cruet frame might contain six to ten sauce bottles and a pair of pepper casters. The bottle tickets might number many more than the bottles, each being named differently, such as soy, catsup, anchovy, lemon, tarragon, kyan, chili vin and so on."

1765-1773–"The trade-card of Thomas Heming, goldsmith to the king" [London]... "illustrates an example with three glass cruets, their necks and bodies cut with shallow diamonds. The third bottle was for soy. This card, issued between 1765 and 1773, is in the collection of Sir Ambrose Heal."

1820s to 1830s–"In a range of two, four, six, seven, and eight containers they were catalogued as 'Cruet and Soy Frames.'"

Contains many large photos but none showing a soy cruet. Address: [England].

3866. Iguchi, Nobuyoshi. 1955. Kôji-kin ni kansuru kenkyû. X. Jinkô heni ni yoru kôso-ryoku no henka narabini kyoryoku tanpaku bunkai-kin no zôsei [Studies on *Aspergilli*. X. Changes of enzyme activities and induction of a mutant having higher proteolytic activity in *Aspergillus sojae* by induced mutations]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 29(1):73-78. Jan. [8 ref. Jap; eng]
Address: Noda Industrial and Scientific Research Lab., Noda, Japan.

3867. Kuninaka, A. 1955. [Studies on the decomposition of nucleic acid by microorganisms. II. On the ribonucleolytic enzyme system of *Aspergillus oryzae* employed in shoyu manufacture]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 29(1):52-57. Jan. [13 ref. Jap; eng]
Address: Microbiologiocal Lab., Yamasa Shoyu Co. Ltd., Choshi, Japan.

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3868. Millstein, Gilbert. 1955. On a Sunday in Chinatown. *New York Times*. Feb. 27. p. SM22-23, 53.
• ***Summary:*** A fascinating study of New York City's Chinatown on a typical Sunday. It takes place on Mott Street, and Pell, Doyers, Bayard, and the Bowery; there the Chinese gather to talk, shop, visit, and eat. People typically enjoy a late breakfast, which is large and with many dishes, including *"dow foo sui mei* (bean curd and meat bun)." One may also visit a coffee shop, tiffin house, or noodle shop. When finished, "the Chinese then goes to his family association. The outstanding family associations in Chinatown are those of the Chins, the Lees, the Wongs, the Ngs, the Leongs, the Chus,..." Chinese laundrymen may visit their laundrymen's association.

While visiting Chinatown, visitors can buy "brown bean sauce, black bean sauce,... soy sauce,... and oyster sauce."

3869. Human Nutrition Research Branch, Agricultural Research Service. 1955. Money-saving main dishes. *USDA Home and Garden Bulletin* No. 43. 48 p. Feb. See p. 3-4, 9, 36, 38, 40. Reprinted in 1962.
• ***Summary:*** The section titled "What shall we have for dinner?" (p. 3) states: "You get top-rating proteins (as well as other important nutrients) in foods from animal sources, as in meat, poultry, fish, eggs, milk, cheese. Some of these protein foods are needed each day; and it is an advantage to include some in each meal.

"Next best for proteins are soybeans and nuts and dry beans and peas. When these or grain products are featured in main dishes, try to combine them with a little top-rating protein food, if you can."

A table (p. 4) titled "Approximate amounts of some foods that provide about ½ ounce (15 grams) protein" includes various meats (3-4 ounces) and "Soybeans, dry–1½ ounces (about 3 tablespoons)."

Recipes: Soy meat loaf (with 3/4 pound chopped meat and 3/4 cup soy grits, p. 9). Soybean chop suey (with 1½ cups cooked dry soybeans, plus soy sauce, p. 38). Soybean souffle (with 2 cups cooked dry soybeans, p. 38).

The section titled "Dry peas and beans" (p. 36) notes: "In this country, varieties grown and used in some sections are practically unknown in others. The South has its blackeye peas and black beans, the East and Middle West have their pea beans, soybeans, and kidney beans, and the Southwest and West like pinto beans and chickpeas."

"Soybean protein is of higher quality than protein of most beans commonly used in this country. For high nutritive value and distinctive flavor from your food dollar, use soybeans sometimes instead of navy or lima beans in favorite bean recipes, or use some soy flour in making breads and hot breads."

Page 40: "Milk, eggs, soy flour or grits, meat, or fish help to bring up the protein content and protein value of a cereal main dish." Address: USDA, Washington 25, DC.

3870. Omata, S.; Ueno, T.; Nakagawa, Y. 1955. [On the color of soy sauce. III. On the substances increasing color intensity of soy sauce]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 29(2):165-68. Feb. [12 ref. Jap; eng]
Address: Faculty of Agriculture, Naniwa Univ., Japan.

3871. Paddleford, Clementine. 1955. Cooking team: The Dunlops work together in their own kitchen. Jim specializes in barbecues. *Los Angeles Times*. March 20. p. K27.
• ***Summary:*** James R. Dunlop and his wife, June, are a cooking team, famous around Chevy Chase, Maryland. A recipe for Marinade for steaks calls for 6 tablespoons soy sauce. Another for Barbecued spareribs calls for 1/3 cup Worcestershire sauce. Address: *This Week* food editor.

3872. Omata, S.; Ueno, T.; Nakagawa, Y. 1955. [On the color of soy sauce. IV. On the effect of furfural on the color of soy sauce]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 29(3):215-19. March. [28 ref. Jap; eng]
Address: Faculty of Agriculture, Naniwa Univ.

3873. Nickerson, Jane. 1955. Sukiyaki and tempura. *New York Times*. April 24. p. SM50.
• ***Summary:*** Describes how to prepare each of these famous Japanese recipes. The recipe for sukiyaki is adapted from one used at the Miyako, the oldest Japanese restaurant in New York. Like most such recipes it calls for "soybean curd (tofu)..." "The soy sauce (shoyu) used in the dish should be Japanese; it has a marvelous intensity which makes it different from other such sauces." *Suki* means "plow" and *yaki* means "roasted." The legendary history of the dish is given.

For tempura, the traditional Japanese sauce is composed of soy sauce heated with dashi and other ingredients–including "monosodium glutamate, the vegetable protein seasoning sold here under such trade names as Accent and known in Japan as *aji-no-moto.*" Japanese make tempura from shrimp, seaweeds, string beans, eggplant, mushrooms, and many other kinds of vegetables. Four photos show views of these two dishes.

3874. Omata, Shojiro; Ueno, Teruo; Nakagawa, Yasushi. 1955. Shôyu no iro ni kansuru kenkyû. V. Reductone no shôyu chakushoku ni oyobosu eikyô ni tsuite [On the color of soy-sauce. V. The effect of reductone on the color of soy-sauce]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 29(4):251-56. April. [22 ref. Jap; eng]
Address: Naniwa Daigaku, Nôgaku-bu, Nogei Kagaku Kyoshitsu.

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3875. Omata, Shojiro; Ueno, Teruo; Nakagawa, Yasushi. 1955. Shôyu no iro ni kansuru kenkyû. VI. Shôyu shikiso ni tsuite (1) [On the color of soy-sauce. VI. On the soy-sauce pigment (1)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 29(4):256-60. April. [14 ref. Jap; eng]
Address: Naniwa Daigaku, Nôgaku-bu, Nogei Kagaku Kyoshitsu.

3876. *Times (London)*.1955. Ah Luk: From China to England and back. May 3. p. 12, col. 5.
• ***Summary:*** "From a correspondent." Ah Luk is a Chinese woman. "She derived much pleasure from serving visitors with Chinese 'chow' and merriment from watching them use chopsticks more often as instruments of chase than of capture. Guests, for their part, liked the chicken and pork, served with rice and soya sauce, and fried lettuce, which had become her main food in this country."

Note: This is the 2nd earliest English-language document seen (Dec. 2005) in the *Times* (London) that contains the term "soya sauce." The first was in 1905 in a letter from a Japanese man, Mr. C. Kadono.

3877. Owen, June. 1955. News of food–Chinese dishes: Oriental foods are now being prepared for take-home trade. First supermarket that features Chinese items opens its doors. *New York Times*. June 15. p. 27.
• ***Summary:*** A good, early history of Jeno Paulucci and his company Chun King Sales. "Several years ago, when Jeno F. Paulucci was traveling about the country as sales representative for a food company, he noted that virtually every city and town of any size had a Chinese restaurant or one that claimed a Chinese cuisine."

Mr. Paulucci, age 37, is a native of Minnesota. Growing up in Hibbing, Minnesota, he helped his mother with her Italian catering business.

Eight years ago, in an improvised Quonset hut in Duluth, Minnesota, Mr. Paulucci and 20 employees started canning chow mein. Today his company, Chun King Sales, produces twenty products and is the largest plant for the production of oriental foods in the country.

Mr. Paulucci's products are meant for Americans, not for people of Chinese ancestry.

Another young man with a commercial interest in Chinese foods is Raymond C. Tong. He recently opened China Food Fare, the first supermarket in New York City dealing in oriental groceries (at 20 East Broadway, Chinatown). His customers are mainly those of Chinese ancestry; his store sells "bean curd and what may be the widest selection of soy sauces" in New York City. These sauces are made in Hong Kong, Japan, Korea, and the USA. The two basic types are light and dark. "The light is used in cooking and in marinating foods." The dark is meant to be used at the table, to be sprinkled on dishes as each person desires. Mr. Tong says that a fine soy sauce is neither too bland nor too salty. It should have a good savory or meaty flavor.

3878. Associated Press (AP). 1955. Condemned soy sauce flavors Formosa river. *Chicago Daily Tribune*. June 22. p. 25.
• ***Summary:*** Taipei, Formosa, June 21 (AP)–Muddy Tansui river, which flows through Taipei, was flavored with the contents of 250,000 bottles of soy sauce. "The sauce was poured into the river after health officials found it to contain chemicals injurious to health."

3879. Fujisawa, Shinkichi. 1955. Shokuhin moshiku wa shôyu, miso shikomi genryô to shite tekisuru butsuryô no seizô hôhô [Food product for brewing of soy sauce or fermented soybean paste]. *Japanese Patent* 30-4442. June 28. 3 p. (Chem. Abst. 51:13311b). [Jap]
• ***Summary:*** A protein-rich food product is prepared from sweet or white potatoes by addition of organic and inorganic nitrogen sources followed by cultivation with microorganisms. The product contains large amounts of vitamins and proteinaceous components and can be used as a food or as an ingredient in the production of soy sauce (at 60%) or miso (at 30%). Address: Gifu-ken, Inaba-gun, Numa-machi?, Okan 698, Japan.

3880. Fujisawa, Shinkichi. 1955. Shokuhin moshiku wa shôyu, miso shikomi genryô to shite tekisuru butsuryô no seizô hôhô [Food product for brewing of soy sauce or fermented soybean paste]. *Japanese Patent* 30-4443. June 28. 2 p. (Chem. Abst. 51:13311c). [Jap]
• ***Summary:*** Soybeans or defatted soybeans are hydrolyzed with acid or alkali, neutralized, mixed with fish meal or pressed cake of chrysalis and inorganic nitrogen sauces, cultured with slime bacteria, and fermented with yeast. Address: Gifu-ken, Inaba-gun, Numa-machi? Okan 698.

3881. Kawakami, Yasota. Assignor to Keikichi Endo. 1955. [Improvement of the flavor of soy sauce]. *Japanese Patent* 4444. June 28. (Chem. Abst. 51:13311e). [Jap]*
• ***Summary:*** Ethyl esters (100 parts) of fatty acids consisting mainly of linoleic and oleic acids are dissolved in 50-100 parts of ethanol by employing 50-150 parts of polytoxyethylene sorbitan monooleate or -palmitate) as an emulsifier. Then 0.1-3 parts of the solution is added to 100 parts of a soy sauce of inferior flavor. The ethyl ester of cottonseed oil is also effective.

3882. Mino, Shoichiro; Mino, Yosuke. 1955. [Koji for the brewing of Mieki]. *Japanese Patent* 4445. June 28. (Chem. Abst. 51:13312c). [Jap]*
• ***Summary:*** *Mieki*, an amino acid solution produced as a by-product of sodium glutamate manufacture, has an off-flavor and a disagreeable fluorescence. These disadvantages

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are not removed by brewing with the usual koji. Vanillin can change the off-flavor to an agreeable soy-sauce flavor, and a red food color can remove the fluorescence and form a good soy-sauce color. These substances and alanine, glycine, and sodium glutamate are added to the usual koji. For example, a mixture of 5 gm alanine, 5 gm glycine, 5 gm sodium glutamate, 0.1 gm vanillin, 0.5 gm red food color, 700 ml Mieki, and 1.3 liter water was sterilized by boiling, and cooled. Cultures of 90 ml each *Zygosaccharomyces major* and *Z. soya* were added and the mixture was mixed with 5 kg roasted and crushed wheat and cultured with *Aspergillus candidus* at 28°C for about 3 days to give 6.7 kg of a new koji. The koji (3 kg) was used with 10 liters of Mieki containing 2% total nitrogen to produce a soy sauce of superior flavor and color. Address: Japan.

3883. Takeda, Yojuro; Kagami, Motoo. Assignors to Takeda Foods Company. 1955. [Concentration of soy sauce by use of ion-exchange resins]. *Japanese Patent* 4441. June 28. (Chem. Abst. 51:13311d). [Jap]*

• ***Summary:*** Soy sauce is passed through a column of cation-exchange resin regenerated with hydrochloric acid, sulfuric acid, or sodium chloride, and the filtrate concentrated to ¼ volume. The flavor of the soy sauce, which is adsorbed on the column, is eluted with hydrochloric acid, adjusted to pH 4.4-4.6 with sodium hydroxide, and added to the concentrated filtrate to give a concentrated soy sauce of a superior fresh flavor.

3884. Iguchi, Nobuyoshi; Yamamoto, Kishiro. 1955. Kôji-kin ni kansuru kenkyû. XII. Jinkô heni kabu X-816 to oya kabu no tanpaku bunkai kôso-kei ni tsuite no hikaku (2) [Studies on Aspergilli. XII. The comparison of the proteolytic enzyme system between the induced mutant X-816 and the parent strain (2)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 29(6):394-99. June. [18 ref. Jap; eng]

Address: Noda Industrial and Scientific Research Lab., Noda, Japan (Noda Sangyo Kagaku Kenkyusho).

3885. **Product Name:** Oriental Soy Sauce.
Manufacturer's Name: La Choy Food Products.
Manufacturer's Address: Archbold, OH 43502.
Date of Introduction: 1955. June.
Ingredients: "Naturally fermented from soy beans, wheat, soy bean and corn protein extracts, salt, corn syrup, and caramel coloring with 0.1% sodium benzoate added as a preservative."
Wt/Vol., Packaging, Price: 10 fl. oz. bottle.
How Stored: Shelf stable.
New Product–Documentation: Thomas' Wholesale Grocery... Register. 1955. July. p. 1474. Soy sauce. Ohio, Archbold: La Choy Food Products, Inc. (Chinese).

Label (see below) sent by Milan Drake. 1981. Dec. 8. 8 by 3.75 inches. Red, yellow, and tan on white. "Authentic." Contains recipes for: Burger Joes. Oriental salad dressing. Easy chicken Oriental.

3886. Thomas' wholesale grocery and kindred trades register: The official buyers' and sellers' guide... 57th annual ed. 1955. New York, New York: Thomas Publishing Co. See p. 789, 1470-74.

• ***Summary:*** Page 1123: "Oriental Show You Co., 20 Woodbridge E. (Imported Japanese)..." Address: New York 1, New York.

3887. Maners, Marian. 1955. Chinese dinner in patio is delightful. *Los Angeles Times*. Aug. 19. p. B4.



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• ***Summary:*** A perfect Chinese dinner might include: Sweet and sour pork. Chicken chop suey or Pork chop suey. Fried rice. Egg Foo Young. "For extra touches: Fried Noodles, Fortune Cookies, Soy Sauce." And tea, of course.

3888. *Times* (*London*).1955. Limehouse nights in the 1930s: Chinatown of romance and fable receives its death blow from the planners. Aug. 31. p. 10.
• ***Summary:*** From a correspondent. He and his party would visit a little Chinese restaurant in Limehouse Causeway [in London's Chinatown]. Most ordered ham and eggs but some "were daring enough to order noodles..., but never dried seaweed, dried fish, soya bean sauce, bamboo shoots, or other of the delicacies favoured by Chinese customers."

3889. Lager, Mildred. 1955. Suggestions for the arthritic, with menus and recipes. Burbank, California: Published by the author. 46 p. Aug. No index. 20 cm. Saddle stitched.
• ***Summary:*** The dedication page states: "Dedicated to all arthritics–everywhere." Copyright 1938 by Mildred Lager. Seventh edition (Revised and enlarged) May 1948. Eighth edition [printing] January 1951. Ninth edition May 1952. Tenth edition August 1955.

Contents: Part I. Introduction. Types of arthritis (inflammation of the joints; rheumatoid and osteo-arthritis). Causes of arthritis. Suggestions. Foods for the arthritic (diet can make a big difference). My own case. Juice diet. Kind of juices. How to take juices. Limited diet: Breakfast, lunch, dinner. Salisbury diet. General diet: Breakfast, lunch, dinner, dessert. Other suggestions: Heat, baths, sweats, etc., massage, digestive aids (natural laxative foods and bulky foods), supplements, vegetarian diet. Mental attitude (positive mental attitude and healthy emotions are very important). Additions August 1955 (p. 28; "It is now more than 30 years since I began my battle with arthritis... Thanks to my diet I have led a very active life. I am still on the fundamental diet because I do not know of anything better... Cortisone and ACTH have been heralded as miracle drugs. I do not believe these drugs are the solution to the problem. In many cases they have brought temporary relief...").

Part II. Menus (p. 29-31). Vegetarian menus (p. 31-32). Approximate carbohydrate content of fresh fruits. Carbohydrate content of dried fruits. Carbohydrate content of fresh vegetables. Recipes (p. 33-46).

"My own case" (p. 10-14). Note: Mildred M. Lager was born on 19 Dec. 1900 at Superior, Wisconsin, of Swedish parents, who immigrated to America. In 1925 she started her lifelong battle with arthritis. "As diet was the greatest factor in my recovery, I am going into detail about my experience." After graduating from college, she began teaching. She continued trying every possible cure for more than two years. "As a last resort, I half-heartedly turned to diet. I found, to my surprise, that when I left out starches and sweets I felt better, but I still did not realize that I must make an about face and a complete change in my eating habits. I became very interested in food, however, and read every book and article I could read on the subject... I don't know how long I would have continued in this half way stage had not my doctor bluntly told me *the truth* as he put it He said that nothing could be done and I might as well know it. By this time my elbows were locked (ankylosed)" and my wrists, hands, knees, ankles, and feet were badly affected. "I felt as if my body were nothing but 'sore joints.'"

So she started a strict diet of natural unsweetened fresh fruit juices only. She found orange, grapefruit, tomato, pineapple, and apple to be the best for her. One month later she took a teaching job in northern Michigan, arriving there in twenty degrees below zero. Within 9 months she had won her battle. There follows a list (p. 13) of six foods to avoid plus two general tips. Also, when using dried fruits, use only the unsulphured kind. "Liquified [sic] drinks: A liquefier is a blessing to any one who for some reason cannot tolerate raw green leafy vegetables" (p. 35).

By 1955 Mildred had already authored two books on soybeans and soyfoods, the first one (*The Useful Soybean*, 1945) a classic. This book contains soy in many of the menus and recipes: Soy oil for salad dressing (p. 18-19). Soybean melba toast (p. 20, 29, 31). The best sources of vegetable protein in a vegetable diet include soybean protein (p. 27). Baked soybeans for dinner (p. 31). Cooked soy grit cereal for breakfast (p. 32). Soy melba toast with avocado for lunch (p. 32). Recipes for: Soy bread, soy melba toast, soy gluten bread (p. 37). Meat substitute dishes (p. 39-42): Cooked soybeans with soy sauce. Canned or baked soybeans (available in most markets and all health food stores). Soy loaf (with cooked soybeans and melba toast crumbles). Soy grits. Cooked soy grits. Soy vegetable hash. Soy cheese or tofu. Tofu steak. Mock fish tofu. Gluten steak. Nut butters. Almond butter. Pecan spread. Nut sauce or gravy. Cashew gravy. Almond hamburgers. Address: Burbank, California.

3890. Ishitani, Chiyoko. 1955. Kôji-kin no shizen heni ni kansuru kenkyû. XIII. Hakushoku kabu to ôshoku kabu no heterocaryon kara shinkabu (eizoku-teki ryokushoku kabu) no ikusei ni tsuite [Studies on the natural variation of koji molds (*Aspergillus oryzae* and *Aspergillus sojae*). XIII. The formation of new recombinants (stable green strains) from the heterocaryons between albino- and yellow-type mutant strains in *Aspergillus sojae*]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 29(9):682-89. Sept. [23 ref. Jap; eng]
Address: Inst. of Applied Mycology, Univ. of Tokyo (Tokyo Daigaku Oyô Biseibutsu Kenkyû-jo).

3891. Meade, Mary. 1955. Consul general's wife gives us Japanese recipes. *Chicago Daily Tribune*. Oct. 21. p. B1.
• ***Summary:*** Here is Mrs. Okuma's recipe. "Teriyaki (Six servings): 1 2½ pound frying chicken. ½ cup soy sauce. ½

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cup sake. ½ teaspoon sugar. 1 teaspoon ginger juice (or 1 minced clove garlic). ¼ teaspoon aji-no-moto (monosodium glutamate).

Soak pieces of chicken for 1½ hours in a mixture of the other ingredients. Place in a baking pan and bake at 350 degrees [F.] for 45 minutes. Turn pieces several times and baste with sauce in which chicken was soaked. Serve with relishes: pickled horseradish, white onions, and cucumbers.

Note: This is the earliest English-language document seen (Nov. 2006) that uses chicken or poultry as the main ingredient in a teriyaki recipe. It is also the earliest that calls for baking (rather than broiling) the ingredients.

3892. Lager, Mildred. 1955. Nutritional news and recipes: The power of gratitude. *Let's Live* 23(11):22-23, 53. Nov.
• ***Summary:*** "We all have so much to be grateful for, as there is an abundance of wonder and loveliness in the world if we will but look at it. Gratitude brings both healing and comfort. Start your day with gratitude..."

Discusses nuts as food, with recipes, including: Almond breakfast with "raw almond butter." Almond milk. Peanut butter mayonnaise. Vegetables in nut gravy (with "raw or toasted cashew butter"). Almond hamburgers [meatless] (seasoned with soy sauce). Address: Los Angeles, California.

3893. Komiya, Akira. 1955. Japanese soy sauce offers market for U.S. soybeans. *Soybean Digest.* Dec. p. 14-15.
• ***Summary:*** The best quality Japanese soy sauce, which is a dark brown color, turns red-yellow when water is added. It stimulates the appetite. The mixed ingredients are fermented at natural temperatures for about a year, then pressed with a hydraulic press. Japan is expected to produce 271,440,000 gallons of soy sauce during the year ending in March 1956. Since Japan's population is about 88 million, per capita consumption is about 3.1 gallons/year. The raw materials needed to produce this say sauce for one year are: Soybeans 30,000 tons. Soybean cake 200,000 tons (made from 250,000 tons of soybeans). Wheat 200,000 tons. Salt 250,000 tons. "This means that Japanese soy sauce makers are annually using 280,000 tons of American soybeans. Japanese soy sauce makers imported all their soybeans from Manchuria before World War II. The situation has since changed entirely."

Photos show: (1) A tank truck used for transporting soy sauce in Japan. (2) A hydraulic press for compressing the mash. Address: Managing Director, Japan Soy Sauce Brewer's Assoc.

3894. *Soybean Digest.* 1955. Staley is largest U.S. maker of soy sauce. Dec. p. 14-15.
• ***Summary:*** "A.E. Staley Manufacturing Co., while claiming to be the largest manufacturer of soy sauce in the United States, sells none under its own label. The entire output of the Decatur, Illinois, firm is sold in drums or tankers to manufacturers and bottlers who use it in their own products or in blending their own brands of soy sauce." The company began experimenting with making soy sauce about 25 years ago [i.e. about 1930] on the recommendations of some of its customers who reported that the soy sauce they were importing "was not always uniform in quality and that shipping schedules were uncertain."

Staley's sauce is made by acid hydrolysis of soy grits from which the oil has been extracted. "In the age-old Oriental process the sauce is fermented naturally, which requires from 3 to 12 months to ferment. That which ferments in 3 months the Japanese refer to as made by the new method [*shinshiki shoyu*]. Some large manufacturers in the Orient are now using an amino acid method which shortens the process to 8 hours, but sauce so made there is used almost exclusively for blending."

"While it is conceded that the Staley product has less bouquet than the long-fermented oriental type, it is estimated that the U.S. production now is larger than the approximately 3 million pounds [about 305,500 gallons or 1,156.4 kiloliters] imported last year from the Orient."

A photo shows a tanker being filled with soy sauce by George Truebe, foreman in charge of special products at the Staley Co.

3895. Strayer, George M. 1955. Why Japan wants clean soybeans. Blow to U.S. exports to Japan. *Soybean Digest.* Dec. p. 4-5.
• ***Summary:*** "Japan is a country of over 80 million people. Total area is about the same as California. Only a very small part is tillable."

"Last year Japan imported a total of about 750,000 metric tons of soybeans (27.5 million bushels). About 250,000 tons were crushed in oilseed mills. The remainder went directly into foods usage, producing soy sauce, soybean paste [miso], and soybean curd [tofu]. Over 90% of the flakes from the soybean crushing at the oil mills went to these same food plants.

"Soybeans are the life blood of Japan. They are an absolute necessity, for they are the food of the people. They are used directly, not indirectly, as is our soybean meal in the form of livestock products.

"There are over 3,000 vegetable oil mills in Japan, all except about 30 of them small community plants. Only 33 are on the list to receive imported soybeans. There are over 6,000 manufacturers of soy sauce in Japan. There are over 50,000 manufacturers of tofu or soybean curd, and there are several thousand small manufacturers of soybean paste or miso.

"These small plants do not and cannot have cleaning facilities. They must use the soybeans as they come. They prefer domestic beans, second choice is Chinese beans, and next come our beans. Why? Only one answer–foreign material. Their reaction is exactly as would be yours under

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similar conditions. They merely ask–why can you not sell us clean soybeans?"

The Japanese are importing more and more soybean from Red China. The Ministry of International Trade and Industry (MITI) favors increased trade with China. "Authorized imports of soybeans [to Japan] to 335,000 metric tons. Of these, 203,000 metric tons were allocated directly to oil mills and food manufacturers. They may be purchased on a global basis–wherever the buyer can buy at the lowest price and find acceptable supplies. Oil millers will favor U.S. beans because of higher oil content, while food manufacturers will probably buy Chinese beans when available.

"The remaining 132,000 tons were allocated to import firms. If a firm had a record of U.S. imports during the previous year the quota for that firm is based on 50% of the tonnage handled. But if a firm imported Chinese soybeans during that same period, the firm's quota is based on 100% of that tonnage.

"As soon as I discovered the content of the allocation I called it to the attention of embassy officials here in Tokyo, and a protest was filed with the Japanese government. However, at this writing much more work remains to be done.

"As closely as can be figured about 9 million bushels of soybean business was lost by the U.S. in this one allocation.

A large photo shows George Strayer standing behind a podium, addressing a room full of men seated in chairs. A movie projector is visible in the center aisle. The caption reads: "Strayer addressing meeting of 110 representatives of the soybean industry in Japan at the University Club in Tokyo Nov. 14. Invitations were issued by W.D. Termohlen, Agricultural Attache in the American Embassy, to the leadership of oilseed crushers, miso, soy sauce and soybean curd associations of Japan. At his side is Hiroshi Nakamura of Honen Oil Co., who served as interpreter. Mr. Nakamura was a Fulbright scholar in the United States during the 1954-55 university year."

Note 1. This article was written by Strayer in Tokyo, where he is conducting a marketing study for the U.S. Department of Agriculture.

Note 2. This is the earliest document seen (March 2001) concerning the activities of the American Soybean Association in Asia, in East Asia, or in Japan. This is also George Strayer's first trip to Japan.

3896. Morohashi, Tetsuji. 1955-1960. Daikanwa jiten [Chinese-Japanese historical dictionary]. Tokyo: Taishukan Shoten. 12 vols. + index (alphabetic by phonetic Japanese pronunciation). Cites earliest references (usually in Chinese documents) for Japanese words. [25+ ref. Jap]
• ***Summary:*** This is widely regarded as one of the greatest Chinese dictionaries. Volume 11, pages 394-95. The following pronunciations of Chinese words may not be correct. (33) Sho. Hishiomiso. Incubate rice or barley or beans, etc. Let them ferment and add salt to make these. (35) Chiang Yuan. Miso and shoyu shop. The shop where miso, shoyu, and pickles are sold. (36). Shoko. A big earthenware pot in which hishio is kept. (37). Shokyu. Shishibishio in a hot soup. (39). Chiang tsai. Miso pickled vegetables. (40). Shosho. Miso and shoyu craftsmen. (41). Shosui. Soup or porridge (Zosui) cooked with miso. Ruiju Meibutsuko, Shakuso orai. (42). Shosei. Hishio with flavor. (43). Shotsui. Hishio pot. (45). Chiang fang. Miso and/or shoyu shop. See (35). (46). Shobutsu Hishio. (47). Hishio no kame. Hishio vat. (48). Chiang-yu. Chinese soy sauce. Cooked soybeans, roasted barley and salt are fermented. The liquid is extracted; a salty seasoning, also called shitaji or murasaki.

3897. Ohara, H.; Moriguchi, S. 1955. [Soy sauce fermentation under various conditions in the preparation of the saline. II. On the ratio of C and N]. *Chomi Kagaku (Seasoning Science)* 3(3):12-26. [Jap]*
Address: Japan.

3898. Plagnol, H. 1955. Sauces chinoises [Chinese sauces]. *Rapport annuel sur le fonctionnement technique de l'Institut Pasteur de Saigon.* See p. 50-51. [Fre]*

3899. Sato, K. 1955. [Studies on the determination of sodium chloride in soy sauce. I. Direct titration method by silver solution]. *Chomi Kagaku (Seasoning Science)* 3(3):6-12. [Jap]*
Address: Japan.

3900. Yokoyama, Yoshikuni; Takahashi, J.; Miura, K.; Kawarai, H. 1955. Miso oyobi shôyu no bitamin B-12 ganryô ni tsuite [Studies on vitamin B-12 in miso (fermented bean paste) and soy (sauce)]. *Utsunomiya Daigaku Nogakubu Gakujutsu Hokoku (Bulletin of the College of Agriculture, Utsunomiya University)* 2(3):411-12. [5 ref. Jap; eng]
• ***Summary:*** The vitamin B-12 content of miso and soy sauce was biologically tested using the microorganism *Euglena cracilis* var. *bacillaris*. The content differs by product type. Miso ranged from 83-316 m gamma% (probably 0.083-0.316 micrograms/100 gm) and shoyu averaged 450 m gamma% (probably 0.450 micrograms per 100 gm). In miso, the highest level was found in salty Edomiso (316) and the lowest level (83) in Sendai miso made at Utsunomiya University. Address: Utsunomiya Univ.

3901. *Federal Trade Commission Decisions: Findings, Orders, and Stipulations.* 1955. 8448. Food and drug products–Therapeutic properties, relevant facts, comparative merits, etc. 49:1634-35.
• ***Summary:*** These Decisions, which cover the period July 1, 1952 to June 30, 1953, are published by the Commission.

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The date at the end of this section, March 24, 1953, is probably the date of the decision.

Section 8848 begins: "Live Food Products Co., a California corporation, with its principal office and place of business located in Burbank, California, and Paul C. Bragg sole owner of the issue capital stock of said corporation, engaged in the business of offering for sale and selling in commerce products designated 'Bragg Calcium,' 'Bragg Hy-Trytion,' 'Bragg Floramucin Regular,' 'Bragg Floramucin With Cascara' and 'Bragg Liquid Aminos,' which:

"... (d) Represents that 'Bragg Liquid Aminos' conditions the body organs or that it is a complete nutritional substitute for meat,..."

Note 1. This is the earliest document seen (Dec. 2011) that mentions "Bragg Liquid Aminos," a product which is still on the market and selling well.

Note 2. From this document we can conclude that Bragg Liquid Aminos was being sold commercially by March 1953.

3902. Glacken, Clarence J. 1955. The Great Loochoo: a study of Okinawan village life. Berkeley and Los Angeles, California: University of California Press. xvi + 324 p. See p. 280. Illust. Maps. 23 cm. [134 endnotes]

• ***Summary:*** A very interesting study in human geography and culture, and of the details of life in three villages (incl. Hanashiro and Matsuda) on the island of Okinawa starting in 1951. This book is doubly interesting because by the year 2000 Okinawans were widely considered to be the longest-lived and healthiest people in the world (Willcox 2001).

The author decided to select a village whose economy was based on agriculture–this meant primarily the cultivation of rice, sugar cane, sweet potatoes, and soybeans (p. vii).

Okinawan villages have a striking "dependence on plants, not only for food but for other uses" (p. 3). Chapter 1 is about the geography and cultural history of Okinawa, which has long been pulled between and paid tribute to China and Japan. Okinawa is the largest and most populous of the Ryukyu islands. These islands are generally divided into four island groups (*gunto*); the Okinawa, Amami, Yaeyama, and Mikado groups. Three maps and a table (p. 8-16) shows these relationships. Naha, the capital of Okinawa island, is in the southwest.

Bean paste [miso] or bean curd [tofu] are used in the cooperative ceremonies of housebuilding (p. 70-71).

The most typical shops in rural Okinawa include import stores, which carry rice, flour, soybean sauce, and wheat (p. 74). Small retail shops sell foods, including soybean oil and Ajinomoto (p. 76).

"In the farming areas, sugar and rice are the only significant sources of cash income. Sweet potatoes, rice, eggs, and soybeans may be sold," but they do not provide much cash. The farmer "can produce much of his food and need spend little money if he is willing to subsist on sweet potatoes, bean curd, and bean-paste soup" (p. 86).

Chapter 7, titled "Agriculture" states: "Soybeans, grown for home consumption, are used for making bean curd (*tôfu*) and bean paste (*miso*)" (p. 131, 151). For soybean cultivation and crop rotation, see pages 136, 138, 151. Soybean plants are harvested with a small sickle and threshed by a flail; the residues are used for either fertilizer of fuel. Whereas soybeans are always used to make tofu or miso, soy sauce is always purchased.

Another type of bean is the "red dwarf bean (*adzuki*)" (p. 151).

Table 16 (p. 153) shows that soybeans are grown as a dry-land (rainfed) crop; in Hanashiro in 1952 they occupied 19.2% of the total land area; sweet potatoes occupied 50.8% and rice 15.5%.

The term "waste bean curd" (*tofu no kasshu* [*kasu*]) is used to refer to okara (p. 158-59); it is fed to horses and oxen.

When a person dies, if his descendants are devoted, his life will be remembered and celebrated periodically until 33 years after his death (p. 204).

Page 280: "One of the most significant links between family, village, and school is the annual athletic meet (*undôkai*)... There is much bustle, laundering, hair washing and cooking in a village the day before the meet. Special lunches including rice dyed red, bean curd, slices of fish paste, beef or pork are prepared." The infant is with the mother "when she is turning the quern to make bean curd" (p. 204).

The main difference is the basic diet is that the poor eat more sweet potatoes and less rice. For most people, breakfast includes a "soup made of hot water and bean paste, perhaps with bits of other foods. For dinner: "Bean-paste soup, rice or sweet potatoes, bean curd and tea" (p. 223).

"Home-made bean curd (*tôfu*)" and bean paste (*miso*) are an important foods, but miso is the more important of the two, in the daily diet. The present diet is better than before the war, when it consisted of mostly of the sweet potato and bean-paste soup. The latter usually has a few shred of shreds of fish or meat in it. "In times of scarcity, or if the family is poor, only the paste is used; when it is dissolved in hot water, it makes a kind of clear bouillon which is jokingly referred to as 'mirror soup' (*kagami miso*) because one can see his face in it; it is also called 'nothing in it soup' (*nnshiru*)" (p. 224)

The method of making bean curd is described (in part incorrectly). The remaining whey is used for pig food. "Bean curd, fried, boiled in a soup, in a mixture with vegetables, or as an ingredient in *sukiyaki* is always served at a party."

"Most families serve bean-paste soup (*misoshiru*) every meal every day. It [miso] has four basic ingredients: soybeans, rice or barley–occasionally the cycad, salt, and water. Recipes differ considerably among families... It is put in a large jar (*tsubo*) which is placed in the kitchen or in a storeroom and allowed to stand for at least a year, sometimes for three. With age, the paste becomes sweeter and is

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considered to be better; when ready for use, it is very soluble in water" (p. 225).

An excellent photo (p. 239) shows a woman making bean curd using a hand mill.

In observances in memory of the dead, when the "tomb is revisited on the seventh day, rice cakes [mochi], bean curd, favorite foods of the deceased, and a little sake may be taken as offerings" (p. 248).

After New Year, the next public holiday is *Jûrokunichi* (literally, sixteenth day), the 16th day of the first lunar month (Feb. 21, 1951); it "is a day of devotion and prayer at the family tomb." In Hanashiru, food is taken in two lacquer boxes (*jûbako*), the second of which includes bean curd (p. 253).

In historical times, Okinawan culture was for centuries exposed to Chinese culture, especially from the 14th to the early 17th centuries. "The most significant borrowings, either directly from China or via Japan," have included "articles of diet, such as bean curd" (p. 298).

Soybean or soybeans are mentioned on pages vii, 74 (soybean sauce), 76-77 (soybean oil), 86, 138 ("The second month (March 8 to April 5, 1951) is devoted to soybean planting which continues until about the middle of the month..." The soybean plots are weeded), 131 ("Four crops are the mainstays of Okinawan agriculture: rice, sweet potatoes, soybeans, and sugar cane"), 135-36 (soybeans in crop rotation), 138-39 (Soybeans are harvested in the fifth month, June 5 to July 3, 1951), 151 (After the soybean, the daikon is the most important of the minor crops grown for home use. Soybeans are planted once a year), 297 (sweet potatoes, soybeans, and sugar cane can be grown freely on land unsuited for rice). Address: Geographer, Berkeley, California.

3903. Griffin, Stuart. 1955. Japanese food and cooking. Rutland, Vermont, and Tokyo, Japan: Charles E. Tuttle Co. 167 p. Illust. No index. 19 cm.
• ***Summary:*** This basic introduction by an American contains about 70 Japanese recipes. The best known of these in the USA is Sukiyaki. The chapter titled "Ingredients" states (p. 3-4) that ingredients available in the USA include *"fu*, or wheat gluten; *tofu*, or bean curd; *yuba* or dried bean curd [sic]; and *udon*, or macaroni... sugared red beans [azuki],... bean paste squares and jellies, seaweed rice-cakes [probably mochi], painted with *shoyu* sauce." Sauces and flavorings are very important to Japanese cookery. "Foremost among these is *shoyu*, or soy sauce, made from wheat or barley, soybeans, salt, and water A dark, inky, thirst-provoking liquid, it is similar to that found in Chinese restaurants. The wheat is grilled in a big iron pan until burnt-brown in hue. It is then crushed. [Soy] Beans are boiled in an adjacent cauldron, with a heavy weight on the lid. Boiling lasts three to five hours, then the fire is put out, and the beans are kept in the kettle overnight. Steaming may be used as a method of bean preparation. This process lasts for five or six hours. The grilled wheat and boiled beans are mixed and placed in a malt-room [sic, koji room] where malt seed [sic, koji starter] are added The mixture turns to malt [koji] in a few days. Salt water is put over the malt and left for a few more days, being stirred occasionally until fermentation takes place. This overall mixture is pressed, and the [soy] sauce obtained is bottled.

"*Miso* is another necessity. This is a mixture of malt [koji], salt, and mashed soybeans, the liquor of which is drained off in tubs and allowed to ferment. *Miso* will be discussed later in the soup chapter" (see p. 64). Soy sauce and Aji-no-Moto are frequently mentioned. Soy-related recipes: Chirashi-zushi (with beancurd, p. 31-34). Sashimi (with shoyu, p. 36-41). Miso soups (p. 49, 64-69). Bean curd soup (p. 52-53). Roasted on a plough (sukiyaki with bean curd, p. 70-81). Vegetables, white sesame & vinegar (salad, with "1 *aburaage*, a kind of fried Japanese bean curd," p. 1124-25). Shoyu spinach (salad, p. 134). Turnips in shoyu (p. 134-35). Sweet soy beans (a festival dish at New Year's, p. 154-55).

Also mentions: Red rice (with azuki beans and glutinous rice, p. 17-18). Norimaki-zushi (sushi wrapped with nori, p. 27-30). Red bean cake (*yokan*, with bean paste, made from red kidney beans, and agar-agar, p. 145-46). Red kidney bean soup cake (*shiruko* [with azuki beans and mochi], p. 148-49). Bean & jam cake (*kuzumanju*, [with azuki bean paste and kuzu], p. 150-51). Address: [Japan].

3904. Hardjohutomo, Harsono. 1955. Sedikit mangenai kecap [A little bit about kechap (Indonesian soy sauce)]. In: Pewarta Balai Teknologi Makanan III, Th. I. Djakarta, Indonesia: Publikasi & Dokumentasi Djawatan Pertanian Rakjat. See p. 20-30. [Ind]*
Address: Indonesia.

3905. Hsu, Pin-ju. 1955. Shih p'in hua hsueh kung yeh chih tsao fa [Processes of manufacturing chemical food items (incl. tofu and soy sauce)]. Hsiang-kang: Shanghai jin shu kuan yin hsing. 1 volume. Various pagings. 18 cm. [Chi]
Address: Shanghai, China.

3906. Ichiyama, Morio, ed. 1955. Noda Shôyu keizai shiryô shûsei [Economic and statistical data about the Noda Shoyu Co.]. Noda, Japan: Noda Shoyu Research Dept. 126 p. No index. 21 cm. [Jap; dut; eng+]
• ***Summary:*** Much of this information describes the development of Kikkoman and its predecessors during the Edo period. Pages 61-63 give information on early Dutch exports of shoyu from Japan. Bibliographic references are given for shoyu export documents, all written in old Indonesian Dutch (which is quite different from old Dutch of the same period), from 1668 to 1776 (Kanbun 8 to Anei 5) located at the Waran Bunsho-kan (Japanese-Dutch Document House at The Hague, Netherlands).

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1. Copy of a letter dated 17 Dec. 1668, written by the governor, Balthasar Bort, and the Council of the Moluccas [Malacca? Malaccas?] near Ceylon to Ryklof van Goens. To: India, Southeast Coromandel area. To Coromandel: Sake 30 kegs (*taru*) and shoyu 12 kegs.

2. Copy of a letter dated 13 Feb. 1670 (Kanbun 10), written by the governor Antehong Pavilioen and the Council of Negapatonam. This is an order form for goods needed by the company, plus some other things. India, East Coast Ceylon island, northwest of opposite shore. Order from Japan: Sake 30 kegs, shoyu 12 kegs, miso 6 kegs.

3. Original general letter dated 13 Feb. 1677 by the Governor General and the Council of the Dutch East Indies from Batavia [today's Jakarta] (Northern part of India, east Coast Madras). To Coromandel: Palliacatta, Various types of Japanese shoyu 17 kegs.

4. Original general letter dated 13 Feb. 1679 (Enhô 7) by the Governor General and the Council of the Dutch East Indies. (India west north corner Surat). To Surat: Shoyu 4 kegs.

5. Original general letter dated 11 Dec. 1679 by the Governor General and the Council of the Dutch East Indies, from Batavia. To Coromandel: Miso 1 keg, shoyu 10 kegs, oil 8 kegs. To Ceylon: Shoyu 20 kegs, sake 2 layered kegs–6 kegs, miso 2 layered kegs = 20 kegs.

6. Original general letter dated 29 April 1681 (Tenwa 1) by the Governor General and the Council of the Dutch East Indies, from Batavia. Coromandel: Shoyu large keg(s) (ôdaru)–half kegs (handaru). Ceylon: Shoyu large keg(s) (ôdaru)–three-quarter kegs.

7. Memorandum, dated 8 Jan. 1681, concerning a list of merchandise imported by ship [from Japan] on Chinese junks and ships from other foreign countries in Tonkin. Offerings to the former king: Sake 5 kegs, shoyu 10 kegs. Offerings to the assistant king (fuku-ô): sake 5 kegs, shoyu 10 kegs.

8. Copy of a letter dated 14 March 1683 (Tenwa 3) from the Governor and Commissioner, Jacob Joris Pitch, and the Council of Palliacatta near Batavia. Sake: large keg(s), half keg(s). Shoyu: large keg(s), half keg(s). Miso: 6 kegs.

9. Copy of a letter dated 20 Jan. 1699 from governor Govert van Hoorn and the Council of Malacca. Ceylon: Sake 2-layer kegs–6 kegs. Shoyu 2-layer kegs–8 kegs. Miso 2-layer kegs–2 kegs. Bengal: Shoyu 5 kegs, miso 5 kegs. Nagapatnam [probably Nagapatinam, a seaport town in southeast Tamil Nadu, in south India, on the Coromandel Coast 160 miles south of Madras]: Sake 2-layer kegs–3 kegs. Shoyu 3 kegs.

10. Thunberg's *Travels in Japan* (*Nihon Kiko*) published in 1796 noted in 1776 (Anei 5) that the Japanese do not export much tea to the surrounding countries since Japanese tea is quite inferior in quality to tea from China. However the Japanese make shoyu that is far better than Chinese shoyu, and many kegs of shoyu have been shipped to Batavia [Jakarta], India, and Europe. The Dutch in Japan discovered how to use heat to prevent over-fermentation of shoyu. They boiled the shoyu in an iron cauldron, then bottled it and sealed the mouth with painting pitch (*rekisei*). Shoyu heat-treated in this way will retain its strength and can then be used in making various sauces.

Note: In various of the above reports, shoyu was written as Zoya or Soya; sake was written as Saky with an umlaut (2 dots) over the "y," and miso was written as Miso. These products were listed along with other Japanese goods. It is clear that these things were exported from Japan ports in India.

Also includes: Regulations of the Tokyo Shoyu Company (1881), p. 89-91. Address: Noda Shoyu, Noda, Japan.

3907. Kaikoku Hyakunen Kinen Bunka Jigyo-kai (Cultural Enterprise Assoc. for the 100th Anniversary of the Opening of Japan in the Meiji Era). 1955. Nihon bunka kôshô-shi [History of Japanese Cultural Negotiations]. Japan: Yoyo-sha. See vol. 5. Iju-hen (Immigration section), p. 409. [Jap]* • ***Summary:*** Repeats the information from Morita 1915 about Haruhachi Shimada being the first to brew shoyu in Hawaii.

3908. Lager, Mildred. 1955. How to use the soybean: A plus factor in modern nutrition. Burbank, California: Published by the author. Printed at La Sierra College Press, Arlington, California. 115 p. Index. 23 cm. Lay-flat comb bound. • ***Summary:*** Contents: Preface. Nutritional nuggets–food value of soybeans. The versatile soybean. Soup to nuts–soybeans and soy products. Recipes: Green soybeans. Dry soybeans. Sprouted soybeans. Roasted or toasted soybeans. Meat-substitute dishes. Soy-enriched meat dishes. Soy noodles, macaroni, spaghetti. Sauces and gravies. Soups. Salads. Dressings. Soy spreads. Soy milk. Tofu or soy cheese. Soy butter (made from finely ground soybeans or soy flour, it may be raw or roasted, and resembles peanut butter; p. 73-74). Soy cereals. Soy desserts. Soy candies. Soy beverages. Soy-flour recipes. Breads and muffins. Pancakes and waffles. Soy gluten recipes. Baking-powder biscuits. Pastry. Cookies and doughnuts. Cakes. Contains 350 recipes.

A so-called "second edition" of this book was published in 1959, but it was identical to this first edition.

Ad in *Let's Live*. 1960. April. p. 39. Mildred Lager Publications [perhaps her home] is now located at 4118 Warner Blvd., Burbank, California. Mildred died in Aug. 1960. Address: Burbank, California.

3909. Lundqvist, Eric. 1955. In eastern forests. Translation of Vildarna finns i väst. London: Hale. 264 p. Illust. 27 cm. * • ***Summary:*** "Only white crayfish with ketjap sauce and paprika. We went ashore to look for turtles' eggs. The island is high and hilly, and covered with dense jungle."

Note 1. The "eastern forests" refer to those of Indonesia.

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Note 2. This is the earliest English-language document seen (April 2012) that uses the term "ketjap sauce" to refer to (probably) ketjap (Indonesian soy sauce).

3910. Noda Shoyu K.K. 1955. Noda Shôyu Kabushiki Kaisha Sanjugonen-shi [Thirty-five-year history of Noda Shoyu, Inc.]. Noda, Japan: Noda Shoyu K.K. 865 p. Illust. No index. 28 cm. [Jap]

• ***Summary:*** This is the second major history of Kikkoman, written largely by Mr. Morio Ichiyama. Concerning the Mogi Saheiji family line (p. 107): The third generation Mogi in this line started a shoyu brewing business in 1782. The trademark, first used in 1784, is identical to the Kikkoman trademark used today; it was designed by Manbei SARANUMA, who was a grain merchant. Earlier in 1784 another trade mark named Kikko-dai was used briefly.

In the section on exports (p. 560), subsection "Development of exports," it is written that shoyu was allowed to be exported during the period of Japanese isolation (*sakoku*) that started in the early 1600s (early Tokugawa period). According to Dr. Iwao, whose source of information was the Hague Library in the Netherlands (*Waran Haagu Bunshokan;* probably Nederlandse Vereiniging van Bibliothecarissen, Documentalisten en Literatuuronderzoekers (NVB)), in 1668 the Japanese sent 12 kegs of shoyu to Coromandel, India (a coast region of southeast India on the Bay of Bengal), in 1670 to the island of Ceylon, in 1677 to Coromandel again, in 1679 and 1681 to Surat in northwest India and to Coromandel, in 1681 to Tonkin (part of French Indochina from 1887, today in North Vietnam) where 10 kegs of shoyu were offered to both the ex-king and the vice-king, and in 1699 shoyu was shipped [by Dutch merchants] (together with sake and miso) to Ceylon, Bengal, and Nagapattinam (a seaport town in southeast Tamil Nadu, south India, on the Coromandel coast, 160 miles south of Madras). Shoyu was written as "Zoya" or "Soya." Sake was written as "Saky" with two dots over the "y." And miso was written as "miso." These exported products were sold at various places in India.

Pages 453-56 discusses the *Mankin Sangyotai* or *Bankin Sugiwai Fukuro* (1731 or 1732), noting that koji starter (*moyashi*) was now being made specifically for shoyu. Sake is made mostly during the cold season (*kanzukuri*). Shoyu should be fermented during the summer (*dôyo shikomu*) and pressed at the end of fall.

Pages 529-30 discuss the size of the wooden kegs *taru* in which shoyu was shipped and retailed. During the Tokugawa or Edo period (1600-1868) the kegs typically had a capacity 8 *sho;* since 1 *sho* = 1.80 liters or 0.476 gallons, a typical shoyu keg had a capacity of 14.40 liters or 8.568 gallons. And they typically contained 7.5 *sho* of high-class shoyu or 7 *sho* or regular/low-class shoyu. Starting in the year Meiji 1 (1868), a keg with 9 *sho* capacity was introduced. Then in Meiji 33 (1900) a larger size keg (called the *ô-dara-zumé*) was introduced; its capacity is not given. A keg of half this capacity (called the *ô-dara no handaru*) was also introduced. Contains many photos and illustrations.

Note 1. *Webster's New Geographical Dictionary* (1988) defines Coromandel Coast as a coast of southeast India from Point Calimere north to the mouths of the Krishna River. It has a low shoreline with no good harbors. The chief ports are Nellore, Madras, Pondicherry, Cuddalore, Tranquebar, and Nagapattinam.

Note 2. This document contains the earliest clear date seen (Oct. 2010) for soybean products (Japanese shoyu) in Ceylon (today's Sri Lanka; 1670), or Tonkin (today's North Vietnam; 1681); soybeans as such had not yet been reported. Address: Noda, Japan.

3911. Sasmito, -. 1955. Pembuatan ketjap di Tanggerang [Making kechap in Tanggerang]. In: Pewarta Balai Teknologi Makanan IV, Th. I. Djakarta, Indonesia: Publikasi & Dokumentasi Djawatan Pertanian Rakjat. See p. 32-34. 25 cm [Ind]*

• ***Summary:*** Tanggerang (also spelled Tangerang) is a city in Banten, Indonesia, located about 20 km west of Jakarta. An industrial and manufacturing hub on Java, it is home to over 1,000 factories. Address: Indonesia.

3912. Springer, Gertrude Anders. 1955. Natural food cookery: Nature's sweets, herbs and wholegrain flours. Milwaukee, Wisconsin: Lee Foundation for Nutritional Research. 71 p. No index. 23 cm.

• ***Summary:*** An early natural-foods cookbook. Contents: 1. Foreword. 2. Fundamental food concepts ("The way to build this vibrantly alive soil is by practicing the Science of Organiculture, or the organic method"). 3. Wholegrain flours. 4. Wholegrain meals and grits. 5. Other valuable foods. 6. Herb cookery. 7. Pies. 8. Cookies. 9. Cakes. 10. Cake frostings. 11. Doughnuts. 12. Confections. 13. Fruits. 14. Health beverages. 15. Salads. 16. Salad dressings. 17. Breads, rolls and muffins. 18. Meat, fish and eggs. 19. Vegetable dishes. 20. Soups and stews. 21. Pancakes and waffles. 22. Jams and preserves. 23. Quick desserts. 24. Article "Sesame seed–An important food." 25. Practical methods in preparing health-building foods. Note 1. Chapters 24 and 25 (on unnumbered pages) are written by Royal Lee, D.S.S. [dentist].

Soy-related recipes: Chapter 3, "Wholegrain flours," contains a photo of bags of five such flours, including "Soya flour." A paragraph (p. 5) explains: "Soya flour can be a full fat flour (all of the fat left in) which many consider nutritionally superior, or it can be a low fat flour (part of the fat removed) for low calorie diets." Note 2. This is the earliest English-language document seen (Nov. 2003) that uses the term "low caloric" or "low calorie diets" positively in connection with soybeans for human diets. Throughout most of human history, people wanted calories, which

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provide energy.

Unleavened Indian chapatis (with ½ cup soy flour, p. 52). Basic muffin recipe–Soya muffins variation ("Substitute ½ cup soya flour for ½ cup of the pastry [flour]. Gradually increase the soya and decrease the pastry until you are using half and half after several batches have been made." p. 54). Chinese chow mein (with up to ½ cup "Show You sauce," p. 62). Japanese sukiyaki (with about ½ cup "Show You sauce," p. 63). Egg white leavened waffles (with a bit of soya flour, p. 67). In Chapter 25, the section on "Vegetables" contains brief instructions for making soy bean milk, and using soaked, "liquefied beans direct from the blender" in making bread. The Chinese never eat soy bean products without first soaking the beans. "It is the secret of successful soy cookery." The chapter on sesame seeds notes: "Sesame seed ground into a butter like peanut butter is used in some countries–Turkey in particular–like our dairy butter is here, and is used in almost every food in some degree. It makes first-class salad dressing when mixed with vinegar and prepared mustard. With honey and milk powder a very tasty cream candy can be made... In Roman times the emergency ration for soldiers was a candy made from sesame seed and honey. A very tasty and nutritious ice cream can be made from sesame butter, honey and milk powder. The sesame seed can be used for these purposes instead of the sesame butter if the seed is liquefied with the honey in a blender or Osterizer. Sesame butter is an ideal shortening for bread and cookies." Note 3. This is the earliest English-language document seen (May 2011) that contains the term "sesame butter"–a smooth paste of ground sesame seeds.

This book also discusses: Carob brownies, peanut butter, sunflower seeds, how to sprout mung beans, herbs, etc.

Note 4. This is the earliest English-language book seen (June 2003), published after World War II, with the term "natural food" in the title.

Note 5. This is not a vegetarian cookbook. Recipes (p. 55-58) call for steak, pork, ground beef, spare ribs, lamb chops, ham, chicken, tuna, and salmon.

3913. Umeda, Isao. 1955. Shôyu [Shoyu (Japanese soy sauce) 2nd ed.]. Tokyo: Sankyo Shuppan Co. 326 p. [100+ ref. Jap]*
Address: Noda Shoyu Shiken-shi cho. Head, Noda Shoyu Research Lab.

3914. Yauchi, J.; Takita, K.; Amemiya, K. 1955. [On the adding of cultured yeasts into soy sauce moromi (mash)]. *Chomi Kagaku* (*Seasoning Science*) 3(4):18-22. Based on an MSc thesis, Cornell University, Ithaca, NY. [Jap]*

3915. Lea & Perrins, Inc. 1955? A guide to tempting dishes. New York, NY: Lea & Perrins. 47 p. Illust. (color). *
• ***Summary:*** Mostly recipes that call for Lea & Perrins' Worcestershire Sauce. Owned by Texas Woman's Univ. (Denton, Texas), Woman's Collection. Address: New York, NY.

3916. Goodsell, Alice Forn. 1956. Tokyo restaurants cater to global appetites. *Christian Science Monitor.* Jan. 17. p. 12.
• ***Summary:*** Sukiyaki is a delicious sort of stew, cooked before your eyes at the table. Ingredients include "lotus root, bamboo sprouts, or tofu (custardy bean curd)–all cooked in a sauce of soy and other ingredients."

3917. Paddleford, Clementine. 1956. Chinese chops: Sweet-and-sour pork chops made in a new way. It's a one-dish meal served with rice. *Los Angeles Times.* Jan. 29. p. L15.
• ***Summary:*** A recipe for Sweet-and-sour pork chops calls for 1 teaspoon soy sauce and ½ teaspoon Worcestershire sauce. Address: *This Week* food editor.

3918. Strayer, George M. 1956. We must remember, U.S. soybeans are food for the Japanese. *Soybean Digest.* Jan. p. 8-10.
• ***Summary:*** This is the first in a series of reports by the editor covering his recent marketing study for the USDA in East Asia. Above all, Japan wants clean soybeans from the U.S., with less foreign material. New U.S. standards allow No. 2 soybeans to contain up to 2% foreign material. U.S. standards classify all particles of soybeans which go through a 8/64-inch round hole screen as foreign material. Manchurian standards classify such broken particles of soybeans as unsound soybeans but not as foreign material. An estimated half of U.S. foreign material is these broken particles–which still end up making adequate soy products. "Because Manchurian [soy] beans have for years arrived with a foreign material content of ½% or less, the approximately 3,000 oil mills, 6,000 soy sauce plants, 5,000 soy paste [miso] plants and the 50,000 tofu or soybean curd plants in most cases do not have cleaning facilities... The role played by milk, meat, and eggs in the diets of America is taken by soybeans in the diets of Japan." The industries that uses soybeans are well organized, and each has its own trade association.

Photos show Strayer with the heads of the Yokkaichi oil mill and the Japan Oil and Fats Manufacturers Assoc., the plant of the Hohnen Oil Co. at Shimizu which processes only soybeans into edible oil, glue, flour, and flakes for miso and tofu production (capacity 300,000 tons/year), K. Sugiyama, chairman of the board of Hohnen Oil Co. receiving a medal, and examining soybeans at Takeya miso plant.

3919. Elson, Katharine. 1956. Two Japanese shops cater to capital: For soya sauce or seaweed. *Washington Post, Times Herald.* Feb. 19. p. F13.
• ***Summary:*** The House of Hanna (1468 T st. nw.) was started in 1948 by Clara Hanaumi, wife of an American ex-GI, Harold Hanaumi, who was born in Hawaii and is of

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Japanese descent. A photo shows Harold Hanaumi in his shop discussing the "merits of a can of Japanese soy sauce with Mrs. Robert Overhuel."

The 2nd shop, Friends Market (1633 11th st. nw) is run by Harry Asaka. At first, Mr. Asaka featured just three items that are basic to "Japanese cooking–miso, a soybean paste; shoyu, the soya sauce, and rice."

3920. Baens-Arcega, Luz; Marañon, Joaquin; Palo, Macario A. 1956. Proteolytic enzyme from a Philippine strain of *Aspergillus oryzae* (Ahlburg) Cohn. *Philippine J. of Science* 85(2):189-201, June. [7 ref. Eng]

• ***Summary:*** Strains of the mold *Aspergillus oryzæ* are used in Japan to make shoyu, miso, mizuame [rice syrup], and sake, and used in the manufacture of commercial enzymes such as Takadiastase, Polyzyme, Digestin, Oryzyme, and Kasiwagidiastase.

The authors isolated several protease-forming yellow-green molds. By repeatedly culturing the isolates in copra meal and rice bran media, one was found to produce protease of excellent digestive potency as evaluated by the Oshima and Church method. Optimum temperatures for protease production was 27ºC in copra meal and 22 to 27ºC in rice bran.

"The potency produced by the Philippine strain of *A. oryzæ* in copra meal is 3 times that of the most efficient *A. oryzæ* and 2 times that of the *Aspergillus effusus* type cultured in wheat bran by Oshima and Church." Address: Inst. of Science & Technol. Manila, Philippines.

3921. *Washington Post and Times Herald.* 1956. Anne's trading post: Travelers bring recipes from afar. July 29. p. F14.

• ***Summary:*** Sukiyaki is the most popular of saucepan dishes. This recipe is taken from the *Japanese Cookbook* published by the Japan Travel Bureau. The ingredients include Soy sauce, 3 tablespoons and Tofu, 4 ounces. "Tofu is a bean curd which can be purchased here [in Washington, DC] however I omit it because it doesn't appeal to American palates."

3922. Owen, June. 1956. Food news: Other lands offer menu. *New York Times.* July 31. p. 26.

• ***Summary:*** "Oriental: Oriental Food Shop, 2791 Broadway, offers all the ingredients necessary for Japan's most noted dish, sukiyaki. These include tinned bean curd, bamboo shoots, and Japanese soya sauce."

Katagiri, 223 East 59th Street, is another good source for imported Japanese foods, especially canned, ready-to-eat products, including "scallions in soya sauce."

3923. Pineda, Felix A. 1956. The economic value of soybeans and its manufacture for food products. *Agricultural and Industrial Life (Manila)* 18(June):8-9, 30; 18(July):8-9, 37.

• ***Summary:*** Contents: Introduction. Economic food value of soybeans. The manufactured food products from soybeans and their utilization. Methods of food preparation from soybeans: Soybean-rice, Soyalac or soybean milk, soybean cheese [fermented] or cheap meat, soybean cocoa or Nutribean, soybean coffee, toyo sauce or toyo [includes detailed instructions for making this Philippine-style soy sauce], salted beans or tau-si [fermented black soybeans], "soybean flour or soyaflour," soybean sprouts, dried and green beans ("The green soybeans with pods can be used for gulay, like the green mongo."). Conclusion and recommendation.

"Soybean milk" is suitable for the diabetic. Its food value approaches cow's milk.

Note: This is the earliest English-language document seen (Oct. 2001) that uses the word "soyaflour." Address: Sugar Agronomist, Philippines.

3924. Walley, Ersel. 1956. The Japanese-American Soybean Institute: Soybean marketing development program project No. 2. *Soybean Digest.* July, p. 12-13.

• ***Summary:*** Under agreement with the USDA's Foreign Agricultural Service, the American Soybean Association is charged with carrying out a year-round soybean marketing development program in Japan. This is the first such project to be conducted by an American commodity group in foreign sales promotion–so there were few guidelines or examples of how to proceed.

Walley went to Japan and initiated the first project, the soybean exhibit at the Osaka Trade Fair. The next project was the formation of this institute [JASI]. Mr. Shizuka Hayashi was hired as managing director. He "enjoys unusual respect and prestige throughout the entire Japanese soybean industry. He speaks and writes English excellently." He has devoted most of his life to oils and fats, and has visited the United States.

The Japanese members are the manufacturers of oil and fat, miso, tofu, and shoyu, plus the fat and oil importers-exporter associations.

Photos show: (1) Walley and Hayashi. (2) Signs above the American soybean exhibit at the Osaka Trade Fair. A large round sign shows two pods filled with soybeans plus soybean leaves at the top. Two rectangular signs read "Soybeans" in Japanese and English.

Note: According to a report titled "The Evolution of the Market Development Programs and the Public / Private Partnerships," by the U.S. Agricultural Export Development Council (USAEDC) concerning the cooperator program: "The first cooperative agreement was signed with the National Cotton Council in 1955, followed quickly by one with the Oregon Wheat Council. Soon the agreements expanded to include tobacco, soybeans, dairy, millers, poultry and rice in 1956, followed by prunes, raisins, Florida citrus, Sunkist (California / Arizona), canned peaches,

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red meat, tallow and grease, hides and skins in 1957 and Northwest apples and pears and a small feed grains project in 1958." Address: Special Representative and Past President of the American Soybean Assoc.

3925. *Washington Post and Times Herald*.1956. Would you like to learn how to cook an octopus? Anne's trading post. Aug. 5. p. F14.

• ***Summary:*** This recipe from F.V. calls for: "1 pound squid (or octopus). 2 teaspoons light soy sauce."

Note 1. This is the earliest English-language document seen (April 2012) that uses the term "light soy sauce" refer to light colored soy sauce.

Note 2. This is the earliest document seen (Sept. 2008) in all major U.S. newspapers digitized by ProQuest that contains the term "light soy sauce." The new term appears in 572 documents between 1956 and the present, including this one in 1956, 10 in the 1960s, etc.

3926. Platt, B.S. 1956. The soya bean in human nutrition. *Chemistry and Industry (London)* No. 32. p. 834-37. Aug. 18. [25 ref]

• ***Summary:*** The author worked in China during the period in 1933-37, and there had "some experience of preparations made from the soya bean in infant feeding; also rarely a day passed in that period when I did not eat something of one or more of the Chinese soya bean food products–sauce, oil, bean curd or sprouts."

The author gives figures to refute the common misconception that "millions of Chinese have lived for centuries on a diet of rice and soya beans. For example (according to Buck 1938) in northeast China (Manchuria) where soya beans were used most, "very little rice was eaten, 25% of the calories in the diet came from wheat, and 5% from the soya bean... Only 2% of the calories in the Chinese farm diet were derived from vegetable oils which included oils from groundnuts, rape seed, sesame, and soya bean; the first three together occupy rather more than the acreage under soya bean crops. Learmonth (1956, p. 360) has stated that the soya bean has only been grown as an oil-bearing crop since the 19th century. There is, however, a Chinese work dated A.D. 1637 called 'The exploitation of the works of nature,' the second volume of which is devoted to oils and fats. From this work it may be deduced (according to information supplied by Dr. G.D. Lu) that the soya bean was grown for its oil as early as the third century A.D. According to Buck's data on most frequent yields, broad beans and field peas yield on average 18 bushels per acre compared with 14 bu/acre for soya beans. Peanuts or groundnuts give 64 bu/acre but it is not clear whether they are shelled or not.

"Anyone who, at a Buddhist feast, has eaten the delectable dishes made from the soya bean cannot but agree that, gastronomically, the merits of a wide range of soya bean products are outstanding. The 'vegetable' varieties of soya bean are, in fact, often simply immature ones. They are green and look like young lima beans but they have a richer and a distinctive and more delicious flavour... Soya bean curd (tou fu) is used in a variety of dishes. It is prepared from the mature beans, not usually in the home, but by the village 'specialist.'... With appropriate culinary treatment, it can be made to imitate a variety of meat dishes; traditionally it is given to young Chinese children."

The author also discusses soy sauce, tempeh, soy oil, and soya "milk".

"I recently had a visit from a professor of pediatrics at a hospital in Djakarta [Jakarta], Indonesia, who reported that about 50 infants put on a soya milk preparation, *all*, after two months, had some gastro-intestinal disturbances; none of them was thriving. In my view, it is still too early to replace human milk for infants and certainly not by a vegetable substitute for animal milk...

"In my own experience soya bean curd is a suitable product for feeding young children and I suggest that its superiority over soya milk may be the separation in the 'whey' of substances that have been shown to be toxic for animals.

The contents of this paper were first presented as a contribution to the discussion on "Soya in the Field of Nutrition" by E.M. Learmonth, published in *Chemistry and Industry* on 12 May 1956. The author mentions an ad for "Sun Spot" soya milk.

The article begins with a poem written by "a medical nutritionist and his wife": "'Little Soybean who are you / From far off China where you grew?' / I am wheels to steer your cars, / I make cups that hold cigars. / I make doggies nice and fat / And glue the feathers on your hat. / I am very good to eat, / I am cheese and milk and meat. / I am soap to wash your dishes, / I am oil to fry your fishes, / I am paint to trim your houses, / I am buttons on your blouses. / You can eat me from the pod, / I put pep back in the sod. / If by chance you're diabetic / The things I do are just prophetic. / I'm most everything you've seen / And still I'm just a little bean.'"

Note: This poem, written by Dr. and Mrs. J.W. Hayward, was first published in the *Proceedings of the American Soybean Assoc.* 1940. Aug. p. 6. Address: C.M.G., Ph.D., M.B., Ch.B., Human Nutrition Research Unit, Medical Research Council Laboratories, Holly Hill, London, N.W. 3.

3927. *Manchester Guardian (England)*.1956. Advertising soya beans. Aug. 24. p. 7.

• ***Summary:*** The U.S. Department of Agriculture [USDA] plans to launch an advertising campaign to make U.S. soy beans and soya bean products popular in Europe. Soya beans are grown mostly in China and Japan [sic, USA] and are used for sauces as well as other purposes–British United Press.

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3928. Murata, Hisato; Bingo, Fujihiko. Assignors to Asahi Electrochemical Company. 1956. [Plasticizer from soy sauce oil]. *Japanese Patent* 7522. Aug. 30. (Chem. Abst. 52:10639i). [Jap]*
• ***Summary:*** A cold weatherproof plasticizer is made from soy sauce oil by its esterification with lower alcohols, followed by epoxidation. The resulting epoxidiated ester is shown to be superior to diocotyl phthalate, especially with respect to resistance against cold weather.

3929. Chun King Sales, Inc. 1956. In 15 minutes you create a meal with a new mood. *Reader's Digest* 69:18. Sept.
• ***Summary:*** "Truly it's been said 'variety creates an appetite.' So go all the way... create a meal with an entirely new mood. Get Chun King Chicken Chow Mein in the new flavor-guard Divider-Pak. Here is Cantonese food at its finest because it has been cooked and packed by Chun King in a very special way.

"Meat and sauce are in the top can. Six choice chow mein vegetables are cooked individually, then packed in the bottom can. That way flavors stay fresh, vegetables stay crisp. You just heat the contents of the two cans together, pour over crisp Chun King Chow Mein Noodles, sprinkle on Chun King Soya Sauce- and you've created an entirely *new mood* in food.

3 kinds: Chun King Chicken Chow Mein, Beef Chop Suey and Mushroom Chow Mein.

3930. Hamada, Shigeo; Gamô, Kiyoshi; Kadosawa, Taichi; Aso, Kiyoshi. 1956. Shôyu-chû no to-rui ni tsuite [Studies on the sugars in soy sauce]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 34(9):407-410. English-language summary on p. 29 of this issue. [12 ref. Jap; eng]
Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Tohoku Univ., Sendai, Japan.

3931. Hori, Shinichi; Ogawa, T.; Aoki, R.; Kondo, Y.; Ota, Y. 1956. Shôyu-chû no L-gurutamin san no shôchô ni tsuite. I. Shôyu-chû no L-gurutamin san no keitai oyobi seisei kiko ni tsuite [Studies on the behavior of L-glutamic acid in shoyu. I. Studies on the various types of L-glutamic acid and their formation mechanism in shoyu]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 30(9):519-23. Sept. [7 ref. Jap]
Address: Kawasaki Factory, Ajinomoto Co., Inc.

3932. Nickerson, Jane. 1956. Japan big contributor to American table: Products sent here to go on exhibition.–Recipes offered. *New York Times*. Oct. 25. p. 38.
• ***Summary:*** Japan exports more than 80 food products to the United States–more than the writer had expected. The variety of Japan's food contributions to America will be the subject of the Japanese Food Show, which opens to the public next Tuesday at the Japan Trade Center, 393 Fifth Ave., Manhattan. About 50 imported foods will be on display, some will be for sale, and the preparation of popular recipes (such as sukiyaki) will be demonstrated.

Imports to be displayed include "shoyu (soy sauce)."

Three Japanese specialty foods shops plan booths at the show: the Oriental Food Shop (2791 Broadway), Katagiri (224 East 59th St.), and Tanaka (144 West 65th St.).

A recipe for "Beef teriyaki" calls for: "½ cup shoyu (Japanese soy sauce)... 1 cake tofu (soy bean curd), cut into cubes..."

3933. Takahashi, Jûsaku. 1956. Bitamin B-12 kyôka shokuhin ni kansuru kenkyû. I. Shokuhin-chû bitamin B-12 no anteido ni tsuite [Studies on the fortification of some foods [incl. miso and soy sauce] with vitamin B-12. I. On the stability of vitamin B-12 in foods]. *Bitamin* (*Vitamins, Kyoto*) 11(4):385-88. Oct. 25. (Chem. Abst. 51:15816i). [11 ref. Jap; eng]
• ***Summary:*** The change of vitamin B-12 content in enriched miso, soy sauce, jam, and cream during storage and heating was tested by a microbiological method using *Euglena gracilis* var. *bacillaris*.

Vitamin B-12 added to miso was relative stable during storage for 30 days; 89% remained at 3-5°C and 35-59% remained at 30°C. However vitamin B-12 added to soy sauce was relatively unstable during storage; only 75% remained at 30°C.

Vitamin B-12 added to miso was relative stable during heating; only 6% was degraded after 30 minutes at 100°C. However vitamin B-12 added to soy sauce was so unstable on heating that 28-54% was degraded after heating for 12-30 minutes at 100°C. In short, the enrichment of soy sauce with vitamin B-12 seems unsuitable. Address: Faculty of Agriculture, Utsunomiya Univ., Utsunomiya, Japan.

3934. *Hercules Mixer* (*Hercules Powder Co., Wilmington, Delaware*). 1956. Hercules expands in to field of food products with purchase of Huron Milling in Michigan. 38(9):17-18. Oct.
• ***Summary:*** "Huron Milling Company of Harbor Beach, Michigan [on the shore of Lake Huron about 100 miles north of Detroit], with more than 500 employees and annual sales of $12 million in proteins for food supplements, natural food flavoring, and wheat starch, is to become part of Hercules. Under the plan for acquisition, Hercules would operate the Huron business as a division of Virginia Cellulose Department.

"This is the first major expansion by Hercules into a field involving food products. Huron buys millions of pounds of wheat flour each year as the raw material which it converts for use of the food flavoring industry, breakfast cereals producers, bakeries, starch and adhesives manufacturers in the United States and abroad." Huron makes monosodium glutamate, hydrolyzed vegetable proteins, enriched protein.

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and wheat starch. It sells most of its products as ingredients to industry; it makes few consumer retail products. "When you buy 'enriched' breakfast cereal, bread, and bakery products, they may contain Huron's vital gluten, the protein fraction of wheat." Hercules will acquire Huron in exchange for about 100,000 shares of Hercules common stock. The acquisition is expected to be finalized in mid-December 1956.

Note: This is the earliest document seen (Oct. 2001) concerning HVP (hydrolyzed vegetable protein).

3935. Kenney, Harry C. 1956. Exquisite Japanese display woos trade on New York's Fifth Avenue: Tokyo bids for global markets. *Christian Science Monitor.* Nov. 17. p. 17.
• ***Summary:*** At the Japanese Trade Center on Fifth Avenue you find an exquisite display of the products of postwar Japan. Japan, whose economy is now making real growth, is working to develop long-term overseas markets. The man the New York office is Masato Yamamoto, an executive in the Japan External Trade Recovery Organization (JETRO). A quiet man, he told the writer the remarkable story of Japan's 10-year recovery since the end of World War II.

Japan is, in many ways, like Britain in that both are islands which must import raw materials and export finished products. The key to survival is trade and exports.

Japan has a population of 90 million on an area about the size of Montana, only about 17% of which is arable.

"As I took leave of Mr. Yamamoto he handed me a bottle of shoyu, or Japanese soy sauce, from a display of about 50 other Japanese food products."

He explained that the Japanese have been making this sauce for about 1,000 years. Address: Staff correspondent.

3936. Hayashi, Shizuka. 1956. The work of the Japanese-American Soybean Institute. *Soybean Digest.* Nov. p. 20.
• ***Summary:*** This Institute was established in May 1956. The initial work has concentrated on a study of the condition of soybean from the USA and other countries when they arrive in Japan. Additional studies have been made of the shoyu and miso industries in Japan.

The Japanese soybean crop this season has been a poor one, estimated now at about 170,000 tons, far below the earlier estimate of 220,000 tons. These domestic soybeans are preferred by makers of miso, shoyu, tofu, glue, and feeds. To make up the total requirements of 954,130 tons, some 784,130 tons must be imported. This includes 10,000 tons of Brazilian soybeans and at least 86,000 tons of Chinese soybeans–both depending on the price.

New-crop U.S. soybeans purchased by Japan are estimated as follows: 60,000 tons for October shipment, 110,000 tons for November shipment, and 30,000 tons for December shipment. Total: 200,000 tons. The average price is about $112 to $113/ton, C&F Japanese ports. A small photo shows Shizuka Hayashi. Address: Managing Director, JASI, Tokyo.

3937. Iguchi, Nobuyoshi. 1956. Kôji-kin ni yoru shomondai. Jinkô heni ni yoru shôyu-yô kôji-kin no kairyô [Various problems concerning koji spores. Improvement in *Aspergillus sojae* used in making shoyu by induced mutation]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 34(12):553-59. [26 ref. Jap]
• ***Summary:*** Mutagens used to induce mutation in koji spores were ultraviolet radiation, x-rays, and N-mustard. The longer the dosing time, the lower the survival rate. Address: Noda Sangyô Kagaku Kenkyûsho.

3938. Kuninaka, Akira. 1956. Shôyu-chû no purin, pirimijin enki ni tsuite [Purine and pyridimine bases in soy (sauce)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 30(12):787-91. Dec. [19 ref. Jap] Address: Microbiologiocal Lab., Yamasa Shoyu Co. Ltd., Choshi, Japan.

3939. Sugita, Noboru. 1956. Shôyu kôji no kantei to shôyu no hinshitsu ni tsuite [Evaluation of soy sauce koji and its relation to the quality of soy sauce]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 34(12):607-12. Dec. [Jap] Address: Tatsuno Shoyu Kyodo Kumiai Shikensho, Japan.

3940. *Fair Trade.*1956. [In re Noda Shoyu Kabushiki Kaisha, 7 FTC 108]. 1:18-27. [Jap]*
• ***Summary:*** The Federal Trade Commission decision on Noda Shoyu was handed down on 27 Dec. 1955.

3941. Han, Suyin. 1956. ... and the rain my drink. Boston, Massachusetts; Toronto, Ontario, Canada: Little, Brown and Co. 306 p. See p. 180. 22 cm.
• ***Summary:*** A work of juvenile fiction. In Chapter 10, "Seed of ants," Rosie Yip is a Chinese policewoman. "The policewomen under Rosie often brought some dishes for her,... cooked chicken sprinkled with chopped ginger and sesame oil, duck's feet simmered and steeped in thick black soy sauce, smoked ham, stuffed mushrooms, crinkly pork with red sauce..."

Note: This is the earliest English-language document seen (April 2012) that contains the term "thick black soy sauce."

3942. **Product Name:** Soybean Hydrolyzate for Flavoring (HVP).
Manufacturer's Name: Staley (A.E.) Manufacturing Co.
Manufacturer's Address: Decatur, Illinois.
Date of Introduction: 1956.
New Product–Documentation: Soybean Blue Book. 1956. p. 99. Is this the same product they were making in the 1930s? Do they also now sell an HVP soy sauce?

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3943. Umeda, I.; Saito, N. 1956. [On the standard color of soy sauce]. *Chomi Kagaku* (*Seasoning Science*) 4(2):1-20. [Jap]*

3944. Chao, Buwei Yang. 1956. How to cook and eat in Chinese. London: Faber and Faber. 286 p. Illust. Index. 21 cm.

• ***Summary:*** The basic information about soy in this 1956 British edition is quite similar to that in the original 1945 American edition except: (1) British spelling is used (e.g., flavour instead of flavor), and additional information about European ingredients or substitutes; (2) The same (or almost the same) text appears on different pages. See pages 20-21 (Vesop is very much like soy sauce. Clear-simmering is slow-cooking without soy sauce. Red-cooking is slow-cooking with soy sauce), p. 43-44 (red beans, [probably azuki], horse beans, soy beans and their products, bean milk and bean curd [tofu]), p. 46 ([soy] bean oil and peanut oil), p. 47 (soy sauce), p. 49-50 (soy-bean sauce, soy sauce or *shi-yau* in Cantonese. "Acceptable substitutes for soy sauce in the order of preference, are as follows: 'Vesop' sauce (Italian), 'Maggi' (German), and 'Kub' (French))." "Similar to soy sauce is a soy jam, fermented flour jam. "In Cantonese the soy jam is called *mo-shi*." Oyster sauce, sesame oil, soy bean cheese (*fu-yü*).

Soy-related recipes include: Bean curd stirs meat slices (p. 84-85). Bean curd stirs shelled shrimps (p. 144). Arhat's fast or Vegetarian's ten varieties (with wheat gluten, bean curd skin [yuba], fried puffy bean curd, soy sauce, etc., p. 180-81). Plain stirred bean curd (p. 181-82). Oyster sauce bean curd. Mushrooms stir bean curd. Scallions stir bean curd (p. 182-83). Pot-stuck bean curd (p. 184). Bean curd and meat-slice soup (p. 188). Huichou pot (with fried bean curd [large triangles or small cubes], p. 204-05). Sandy-pot bean curd (p. 205-06). Soy jam noodles (p. 224-25, with ½ can *yünshi* soy jam [also called *mo-shi* in Chinese foodshops]).

Pages 181-82 discuss bean curd. The Chinese characters for all recipe names are given on pages 257-71. Address: Cambridge, Massachusetts.

3945. Chen, Philip S.; Chen, Helen D. 1956. Soybeans for health, longevity, and economy. South Lancaster, Massachusetts: The Chemical Elements. xii + 241 p. Illust. Index. 21 cm. 2nd ed. Jan., 1962. 242 p. [24 ref]

• ***Summary:*** A comprehensive review of the subject. Contents: Preface, by the author (South Lancaster, Massachusetts, July 1956). Foreword, by Geo. M. Strayer, Vice-President and Secretary-Treasurer, American Soybean Association. Introduction. Part I: Nutritive value of the soybean. 1. Protein (incl. Dr. Wolfgang Tiling of Hamburg, Germany; Dr. Harry Miller). 2. Fat (incl. phosphatides, sterols and hormones). 3. Carbohydrates and caloric value. 4. Minerals. 5. Vitamins. 6. Soybeans and world population. 7. Soybeans and disease (incl. Dr. Wolfgang Tiling of Germany).

Part II: Soy products. 8. Soybean oil: Composition and properties, processing and refining, reversion, uses, phosphatides, margarine, mellorine (vegetable frozen dessert). 9. Soybean oil meal: Heat treatment, Gelsoy, Multi-purpose Food. 10. Soy flour: Uses, soy bread vs. enriched white bread. 11. Soy milk. 12. Soy cheese (or soybean curd, "aptly described by the Chinese as 'the meat without bones'"–incl. pressed tofu sheets and yuba). 13. Soy sauce: Preparation of kojis, brine fermentation, production yields, microorganisms are available. 14. Soybean sprouts.

Part III: Soybean culture and preservation. 15. Soybean culture: Two types of soybeans (commercial field vs. edible or vegetable varieties), inoculation, fertilizer, cultivation, harvest. 16. Preservation of soybeans: Shelling, canning, freezing, dehydration, harvesting dry mature soybeans.

Part IV: Recipes. 17. Soybeans and soybean pulp: Green or fresh soybeans, dry soybeans, soybean pulp ("prepared by pressing cooked soybeans through a coarse sieve or by grinding them in a food grinder"), recipes (incl. Soyburger, Scalloped green soybeans, and Roasted soybeans–dry roasted or deep-fried. Describes how to make wheat gluten at home and praises monosodium glutamate for its ability to improve the flavor of recipes–though its use is called for only in the recipe for Soyburger). 18. Soy flour: Breads, cakes, cookies, pies, soups, other recipes. 19. Soy grits and soy flakes. 20. Soy milk. 21. Soy cheese. 22. Soybean sprouts.

Appendices: A. Soybean utilization (chart). B. Manufacturers and handlers of soy foods (Source: 1956 *Soybean Blue Book*). C. References.

Chapter 1, "Protein," begins: "The soybean is best known for its high protein content (p. 7). It then discusses the work of Dr. Harry Miller (p. 14-15).

Chapter 15, "Soybean Culture," describes how to grow soybeans in a garden. Pages 126-27 discuss the two types of soybeans: the commercial field type and the edible vegetable type. Five major differences between the two types are discussed (p. 126). The edible varieties are larger in size, do not yield as heavily (though they yield more heavily than snap beans or lima beans), are more prone to shatter as they near maturity in the field, are superior in flavor, texture, and ease of cooking, and some edible varieties are also superior in the manufacture of soybean flour, soybean milk, roasted beans and other products. Table 31 (p. 130) lists eleven varieties of edible soybeans: Very early–Giant Green. Early–Bansei, Fuji. Midseason–Hokkaido, Jogun, Willomi. Late: Illington, Imperial, Funk Delicious, Emperor, Higan. Commercial–Illini.

Chapter 16, "Preservation of Soybeans," describes how to preserve "green soybeans" by canning, freezing, and dehydration.

Photos show: (1) A sack of Lincoln soybeans (facing p. 1). (2) Soybean plants, showing pods and leaves (p. 3 and

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4). (3) A beam balance with a small amount of soy flour balancing many animal products. "The protein value of soy flour: 1 lb. of soy flour contains protein values equal to 2 lbs. beef, or 34 eggs, or 6 quarts milk." Source: Health and Character Education Institute (p. 6). A similar photo (p. 24) states: "1 lb of soy flour contains food calories equal to 3½ lbs beef, or 3 quarts milk, or 29 eggs. (4) Two views of a child. Left, suffering from marasmus. Right, after six months on a soy milk diet. Courtesy Dr. Wolfgang Tiling (p. 62). (5) A machine at the Northern Utilization Research Branch of USDA treating soybean oil with alkali (p. 72). (6) The distribution of MPF [Multi-Purpose Food] to starving Indian children (p. 91; Courtesy Meals for Millions Foundation). (7) Quaker City No. F4 grinding mill (p. 102; Courtesy Straub Co., 4059 Ridge Ave., Philadelphia, Pennsylvania). (8) Early soy cheese (tofu) production in the United States (p. 108; perhaps at Madison Foods). (9) The Northern Utilization Research Branch, Agricultural Research Service, USDA– shows outside of the huge building (p. 113). (10). How to grow soy sprouts in a glass jar at home (p. 119). (11) Well nodulated soybean roots (p. 129; Courtesy The Nitragin Co.). (12) Baked soybeans in a crock (p. 144). (13) Soy flour used in numerous baked products (p. 159; Courtesy ADM). (14) Griddle cakes [pancakes] made with soy flour brown quickly (p. 173). (15) Soy peanut butter cookies (incl. peanut butter and soy flour; p. 185). (16) Soy grits in a glass jar (p. 198). (17) Freshly-cooked crisp soybean sprouts in a raw vegetable salad (p. 219).

Note 1. The first printing of this book (1956) was dedicated "To Li Yu Ying and William J. Morse, *The Soybean Champions of the Eastern and Western Hemispheres,*" but by the second printing (April 1957) the dedication had changed "To William J. Morse and Harry W. Miller, *The Soybean and Soy Milk Champions of Our Time.*"

The publisher of this third printing was unable to sell all the books printed, so Chen apparently arranged for a company named "Outdoor Pictures" (Box 1326, Escondido, California) to sell them. On the title page, Outdoor Pictures pasted their name and address over that of "The Chemical Elements."

Note 2. According to the *National Union Catalog*, Philip Stanley Chen was born in 1903. The rear cover states that he was born in China and is now a naturalized U.S. citizen. He is a graduate of Emmanuel Missionary College [in Berrien Springs, Michigan] and Michigan State University. Before writing this, his first book on diet, health, or soybeans, he wrote several books on chemistry: (1) The Chloro Derivatives of *m*-cresol. 1933. Easton, Pennsylvania: Mack Printing Co. 7 p. (Abstract of his PhD thesis, Michigan State College of Agriculture and Applied Science); (2) *The Chemical Elements, Rev. ed.* 1948. South Lancaster, Massachusetts: Chemical Elements (fold chart). (3) 500 Syntan Patent Abstracts, 1911-1950. 1950. South Lancaster, Massachusetts: Chemical Elements. 125 leaves. (4) Syntans and Newer Methods of Tanning. 1950. South Lancaster, Massachusetts: Chemical Elements. 128 p.

In 1962 Chen wrote *A New Look at God*, published by Chemical Elements (288 p.). Address: 1. Prof. of Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

3946. Chiu, Y.T. 1956. Meditations of a Christian Chinese. New York, NY: Pageant Press. [5] + 101 p. No Index.
• ***Summary:*** The author says that he has previously written 24 books in Chinese. This, his first English-language book, includes a compilation of much of his best material in Chinese. Soy is mentioned in two chapters.

Chapter 7, titled "Child welfare in China," states (p. 22-26): "Very few mothers [in China] know how to feed their babies. If the infant were fed with mother's milk, it would be better for the child." Cow's milk is so expensive in South China that very few mothers can afford to buy it for their children. "The writer has analyzed several kinds of milk substitutes made locally and sold in the stores in Canton and found that they consist of starch and a little sugar (less than one-half of one per cent of this substituted milk is protein). In North China soya bean milk is used in feeding babies. This is much cheaper than cow's milk." A brief description is given of how this soya milk is made. "One pound of soya beans would make seven or eight pounds of bean milk. As soya bean milk is deficient in fat, sugar, and calcium, the latter should be added to the bean milk to increase its food value. Dr. Siddall [1931] used this milk to feed a baby in the Canton hospital and got pretty good results. If soya bean milk is prepared in a sanitary condition, it should be a good and cheap food for poorer babies."

Superstitions are widespread in South China. "Some people think that bean curd, a product made from soya bean, should not be given to infants lest they have an offensive odor on their breath."

Chapter 18, titled "Feeding a hungry world," states (p. 57-61) that the price of food in South China is now 5 to 10 times higher than before the war, while wages and salaries have not increased proportionally. "The increase in food prices is so great that the average family in China does not have enough to eat and many of them suffer malnutrition" and nutritional deficiency diseases. "As milk is so expensive in Hong Kong and China, children have to be contented with soya bean milk which has been used to feed babies in China for two thousand years." In times of famine, some parents have "had to sell their children in order to have money to buy food. Because of poverty, ninety percent of the parents in China cannot afford to send their children to school and these youngsters must either stay home to work or work as servants in the homes of the rich or in the factories."

"Poorer people in China and Hong Kong eat rice, soya beans, [mung] bean sprouts, bean curds and salt fish or green vegetables. The poorest people have only rice, sweet

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potatoes, which are cheaper than rice, and soy sauce made from soya beans."

Talk with Luke Fetters of Huntington College, Indiana. 2005. May 23. Luke is writing a biography of the author for this PhD thesis. Chiu wrote this book at about the same time he graduated from the seminary at Huntington College. "He was a Renaissance man. He was an educator, a scientist, a theologian." Luke's field is missiology, the study of missions. He believes that too much mission history has been written about the missionaries; not enough has been written about the heroes and hard-working people within the host culture. Address: Rev., Dr. (PhD.), Assoc. Prof. of Chemistry, Huntington College, Huntington, Indiana.

3947. Council of Scientific and Industrial Research. 1956. The wealth of India: A dictionary of Indian raw materials and industrial products. Raw materials. Vol. IV: F-G. New Delhi, India: CSIR. See p. 142-50 (Glycine), plus p. XIII-XXI (bibliography). [51 ref]

• ***Summary:*** "Attempts to popularise and extend soybean cultivation in India have not met with much success so far. Various reasons have been assigned to this. The market demand for the seeds is not steady and there are few indigenous industries based on soybean. Further, there are other pulse and oilseed crops adapted to varied climatic and soil conditions in India which satisfy the dietetic habits of the people. It is considered, therefore, suitable for introduction only in regions where pulses are not grown at present, e.g. regions at elevations about 5,000 ft. This view has been considered by some to be based on incomplete data."

Table 2, titled "Estimated acreage and production of soybean in some Indian states," gives statistics for 1948-1952. The leading state is Jammu and Kashmir (India's northernmost state). In 1948-49 (the latest year for which complete data is available) Jammu and Kashmir produced 502 tons of soybeans on 1,757 acres. Corresponding figures for other states, ranked in descending order of acreage, are Assam (208 tons/1,230 acres), Orissa (147/988), West Bengal (147/800), Madhya Pradesh (12/67), and Uttar Pradesh (1/33).

Note 1. This is the earliest document seen (Jan. 2009) that gives soybean production or area statistics for South Asia.

"Soybean is grown in India mainly for food and forage. It is generally raised as a *kharif* crop, sown at the outbreak of the monsoon in June or July and harvested in December-January... Soybean is raised either pure or in mixture with maize; in some parts of Assam it is grown along with *aus* paddy. Being a legume, soybean can be cultivated with advantage as a rotation crop with potato, as in Assam, or with sugarcane, as in Bihar. It is grown as a green manure or cover crop in tea estates...

"Uses: Soybean ranks high among the leguminous crops of the world. It is grown mainly as a food crop in China, Japan and other countries of east Asia. The seeds are consumed green, dry or sprouted, whole or split. Green seeds are used as vegetable; roasted and salted seeds are used in cakes and candies. The seeds are ground into flour and used for bakery products. They are also processed to give a milk-like product, curd or cheese. A variety of fermented products is prepared, including sauces which furnish the basic flavouring in Chinese and Japanese dishes. Soybean has been used as a raw material in a variety of processing industries in U.S.A. The fatty oil extracted from the seeds is used for edible and industrial purposes...

"In India, soybean has not attained much importance as a food crop. The seeds are consumed locally after splitting as *dal*. They are also parched and used as *bhunja* or ground into a meal (*sattu*) and used in food preparations; a fermented product is prepared from soybean in Manipur. Soybean possesses a characteristic nutty or beany flavour which is not much favoured in India. Efforts have been made to select types devoid of the flavour and to popularise the use of soybean in non-cereal catering organizations for such preparations as porridge and biscuits. Considerable work has also been done to popularise the use of soybean 'milk'."

A detailed discussion is given of each of the following "soybean products: Soyflour, soysprouts, soymilk, soybean oil, soybean lecithin, soybean meal." Table 5 (p. 148) gives the "composition of some soybean products," based on earlier publications: "Soyflour (defatted or full fat), soysprouts, soycurd."

Note 2. This is the third earliest English-language document seen (May 2006) that contains the word "soymilk" (one of two documents).

Note 3. This is one of the earliest English-language documents seen (Sept. 2006) that uses the term "soy bean" in a new way–as a singular noun, like corn or wheat, not preceded by "the." Examples: "... there are few indigenous industries based on soybean." "Estimated acreage and production of soybean in some Indian states." "Soybean is grown in India mainly for food and forage." This usage originated in developing countries. Address: India.

3948. Fukai, Yoshibei / Kichibei. 1956. Shôyu dokuhon [The shoyu reading book]. Tokyo: Ariake Shobo. 128 p. [Jap]

• ***Summary:*** The section on shoyu exports from Japan notes that on 25 April 1868, 153 Japanese emigrated to Hawaii on the ship Scioto (called *Shiotto-go, Scioto-go, or Saioto-go* in Japanese). They took with them several hundred kegs of miso and shoyu, marking the beginning of large scale exports of these products from Japan. In 1879 Mr. Komoto started to sell shoyu under the Kikkoman shoyu brand in California.

Note: This document contains the earliest date seen for soybean products (miso and shoyu) in Hawaii (1868); soybeans as such had not yet been reported by that date.

3949. Hori, Shinichi. 1956. Kagaku-shôyu (Gosei shôyu)

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[HVP soy sauce: Its development and significance]. In: N. Tomoda and K. Sakaguchi, eds. 1956. Fermented Foods. Tokyo: Kyoritsu Shuppan. 370 p. See p. 225-50. [Jap; eng+]

3950. Hui Manaolana. 1956. Japanese foods: (Tested recipes). Honolulu, Oahu, Hawaii: Hui Manaolana. 118 p. Illust. (some colored). Index. 24 cm.



• ***Summary:*** This 1956 edition is quite similar to the original 1951 edition: The text, recipes, and glossary are exactly the same and on the same pages. The ads on the following pages are the same: 23 (American-Hawaiian Soy Company), 39 (Fuji Masamune and Kinpyo Masamune), 40 (Kikkoman, but a different ad for Kikkoman Soy Sauce), 44 (Honolulu Sake Brewery & Ice Co., Ltd., same ad for Diamond Shoyu), 62 (Kanai Nissei Shokwai). The differences are few and superficial: (1) The title page and copyright page both mention "International Institute Y.W.C.A." The Hui Manaolana was formerly named Niji-no-Kai and was formerly affiliated with the International Institute of the Y.W.C.A. (2) The color photos are different and of better quality reproduction. (3) Many of the ads are different (e.g., p. 6, 8, 10, 16, etc.): the 1956 edition has more soy-related ads. (4) The back matter (from p. 98 to the end) is quite different. The 1956 edition has fewer ads after p. 98. In the 1956 edition, the ads end on p. 100 and the index starts on p. 101. But in the 1951 edition, the ads end on p. 110 and the index starts on p. 113. Address: Honolulu, Hawaii.

3951. King Shoyu Co., Ltd. 1956. The king of barbecue sauces: Broil King (Ad). In: Hui Manaolana. 1956. Japanese Foods: (Tested recipes). Honolulu, Oahu, Hawaii: Hui Manaolana. 118 p. See p. 50.

• ***Summary:*** "Ready-mixed, richly-flavored, rightly blended. Save time, labor, money and a host of ingredients. Give Broil King a try. Best by test, East or West." An illustration shows a bottle of Broil King Barbecue Sauce. Next to it is a recipe for Barbecued meat with Teriyaki sauce–with an "X" drawn through it–since it is unnecessary when you have broil king. The recipe for Teriyaki sauce (legible beneath the "X" is): ½ cup shoyu, 1 tablespoon sake, 3 tablespoons sugar, 1 teaspoon ginger (grated), 1 clove garlic (grated). Mix well. Address: 1215 Kona St., Honolulu, Hawaii. Phone: 66744.

3952. Noda Shoyu Co., Ltd. 1956. KikkoMan: the world's finest soy sauce! (Ad). In: Hui Manaolana. 1956. Japanese Foods: (Tested recipes). Honolulu, Oahu, Hawaii: Hui Manaolana. 118 p. See p. 40.



• ***Summary:*** "Prepare barbecues, hamburger, chop suey and other dishes the Kikko-Man way. You will find it the secret to better flavoring. Surely a bottle of Kikko-Man is an asset which should grace every housewife's kitchen shelf–illustrated recipe booklets tell you all about it. Write for a copy." Below the KikkoMan logo inside a hexagon is written: "Since 1630." A photo shows a large can of KikkoMan Shoyu. Line drawings (illustrations) show various world-famous buildings.

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ダイヤモンド醤油

Highest Quality Natural Brewed

Diamond Shoyu

(Soy Sauce)

Patronize your
local products

Sold at all grocers

Honolulu Sake Brewery & Ice Co., Ltd.
2150 Booth Road, Honolulu, Hawaii







Quality Soy

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Note: This is the earliest English-language document seen (July 2011) linking the date "1630" with Kikkoman. Address: 11, 3-chome, Koamicho, Nihonbashi, Tokyo, Japan.

3953. Soetan, Sanif. 1956. Kedelai [Soybeans]. Jakarta: Dinas Penerbitan Pustaka. 23 p. [Ind]
• ***Summary:*** Contains descriptions of the preparation of tempeh, tautjo (Indonesian-style miso), ketjap (soy sauce), and tahu (takoa; tofu).

Note: This is the earliest English-language document seen (Feb. 2009) that uses the word "tautjo" to refer to Indonesian-style miso. Address: Indonesia.

3954. Tomoda, Yoshinori; Sakaguchi, Kinichiro, eds. 1956. Hakkô shokuhin [Fermented foods]. Tokyo: Kyoritsu Shuppan K.K. 359 p. Series: Bisei-butsu kôgaku koza (Microbial technology course), no. 8). [Jap]
• ***Summary:*** Contains long sections on miso (p. 1-92), shoyu (p. 93-248), HVP shoyu (p. 225-50), pickles (p. 251-74), vinegar (p. 275-304), Japanese-type "sauce" and Worcester sauce (p. 307-329), and fermented dairy milk products (p. 331-59; incl. acidophilus milk, kefir, and koumis).

3955. Tanaka (K.) Co., Inc. 1957. Importers of Chinese type food products (Ad). *New York Times*. Jan. 3. p. 64.
• ***Summary:*** "Condiments. Food sauce for sukiyaki. Bamboo sprouts. 'Marukin' soy sauce." Cable: Tofutanaka, N.Y. Address: 144 W 65th St., New York City. Phone: TR 4-6600.

3956. *Times* (*London*). 1957. And spice and all that's nice. Jan. 21. p. xvi, cols. 5-6.
• ***Summary:*** Spices were first used to disguise the flavour of meat. Eventually it was found that thin sauces, "made with spices and vinegar, would keep and could be used from meal to meal. These were the first sauces to be manufactured. Perhaps the oldest firm of 'oilmen,' or 'oilermen' as they were then known, was founded in 1706. The firm–then West and Wyatt, some years later to become Crosse and Blackwell–produced their sauces in china containers of rare beauty. Some of their sauces were issued in containers of Wedgwood china.

"These thin sauces were mostly designed to hide rather than to enhance the flavour of meat. But early in the nineteenth century the first of the piquant sauces, Lea and Perrins' Worcestershire sauce, was produced. Mr. William Perrins and Mr. Wheeley Lea, a chemist who founded the firm in 1838, were asked by Lord Sandys, of Ombersley Court, who had returned to England from his Governorship of Bengal, to make a sauce from (presumably) an Indian recipe, for use at his table. A four-gallon jar of the sauce was first made, but the demand was so great that the next brew was made in a 25-gallon container. Lea & Perrins still use the original recipe, a closely guarded secret, for their sauce, which matures is vats for a long time before being bottled. They now export over a million bottles a year, about 50 per cent of their production, to all countries except Russia and her satellites.

"The sauce list of Crosse and Blackwell of 1838 shows that they were producing 38 different types of sauces..."

Alexis Soyer, inventor of the Soyer stove, was one of the most famous chefs of his time and *maitre de cuisine* of the Reform Club.

3957. *Hercules Mixer* (*Hercules Powder Co., Wilmington, Delaware*). 1957. Case of the multimillion-dollar gray bag flown from Port Huron to Wilmington. 39(1):1-4. Jan.
• ***Summary:*** The gray travelling bag was filled with legal documents which transferred on 3 December 1956 the multimillion-dollar assets of the Huron Milling Company to Hercules Powder Company in exchange for 100,000 shares of Hercules stock. A 17-page legal document, and agreement to purchase subject to certain specified conditions, was signed in Sept. 1956. Former Huron President Robert Farr is available to Hercules in an advisory capacity. An aerial photo taken from over Lake Huron shows the Huron Milling Co. with the town of Harbor Beach in the background. A large pond, probably for starch disposal, appears at the far right.

3958. Hori, Shinichi; Kato, Jiro; Wakamatsu, H.; Hayashi, K. 1957. Tanpakushitsu no kasui bunkai ni yoru chômiryô no seizô. III. Dasshi daizu ensan kasui bunkaieki-chû no yûki-san [Preparation of seasonings by the hydrolysis of protein. III. Organic acids in the hydrochloric acid hydrolysate of soybean meal]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 31(1):22-25. Jan. [6 ref. Jap]
Address: Research Laboratory of Ajinomoto Co., Inc.

3959. Hori, Shinichi; Kato, Jiro; Hino, Tetsuo; Mizokuchi, Naomasa. 1957. [Preparation of seasonings by the hydrolysis of proteins. I. On the hydrolysis of soybean meal with hydrochloric acid (1)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 31(1):17-19. Jan. [5 ref. Jap]
Address: Research Lab., Ajinomoto Co., Inc.

3960. Hori, Shinichi; Kato, Jiro; Hino, Tetsuo; Mizokuchi, Naomasa. 1957. [Preparation of seasonings by the hydrolysis of proteins. II. On the hydrolysis of soybean meal with hydrochloric acid (2)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 31(1):19-22. Jan. [25 ref. Jap]
Address: Research Lab. of Ajinomoto Co., Inc.

3961. Hori, Shinichi; Kato, Jiro; Wakamatsu, Hachiro; Hayashi, K. 1957. [Preparation of seasonings by the hydrolysis of proteins. III. Organic acids in the hydrochloric acid hydrolysate of soybean meal]. *Nippon Nogeikagaku*

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Kaishi (J. of the Agricultural Chemical Society of Japan) 31(1):22-25. Jan. [6 ref. Jap]
Address: Research Lab. of Ajinomoto Co., Inc.

3962. Ozawa, Hiroko; Kojima, H.; Uemura, T. 1957. [Studies on the choline requiring shoyu-yeast. III. Changeability of choline response]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 31(10):738-743. Oct. [6 ref. Jap]
Address: Faculty of Agriculture, Univ. of Tohoku.

3963. Sato, Masahiro; Saito, Kyoko; Ozawa, Hiroko; Kojima, H.; Uemura, T. 1957. Korin yôkyû-sei shôyu kôbo ni kansuru kenkyu. I. Korin yôkyû-sei kôbo no tanri [Studies on the choline requiring shoyu-yeast. I. Isolation of choline requiring yeast]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 31(9):675-679. Sept. [5 ref. Jap; eng]
Address: Faculty of Agriculture, Univ. of Tohoku [Japan].

3964. Sato, Masahiro; Saito, Kyoko; Uemura, Teijiro. 1957. Korin yôkyû-sei shôyu kôbo ni kansuru kenkyu. II. Korin yôkyû-sei kôbo no bunri ni tsuite [Studies on the choline requiring shoyu-yeast. II. Taxonomic investigation of choline requiring shoyu-yeast]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 31(9):680-685. Sept. [10 ref. Jap; eng]
Address: Faculty of Agriculture, Univ. of Tohoku [Japan].

3965. Burt, Leland H. 1957. Now wheat has been added. *Huron Chemist (Hercules Powder Co., Wilmington, Delaware)* No. 29. Feb. p. 1-3.
• ***Summary:*** "The Huron Milling Company was acquired by Hercules Powder Company on December 3, 1956, and is now operating as the Huron Milling Division of Virginia Cellulose Department. Huron Milling employs over 500 people and last year did a gross business of over $12 million.

Hercules is now in the business of making products derived from wheat flour. Huron Milling is located at Harbor Beach, Michigan, on a beautiful harbor on Lake Huron. Founded in 1876 as a flour mill, Huron hired a chemist named Billy Rossman from Michigan State Agricultural College in 1896. It was probably one of the first flour companies that had a research laboratory and a chemist, and was certainly one of the earliest flour mills to study the chemistry of wheat flour. Rossman separated wheat flour into starch and gluten and a thriving starch business resulted. Starches were developed for specialized uses. At first the gluten, a by-product, was discarded but over the years it came to but over the years it came to be more a more important product for Huron than starch. Huron Milling was the first American producer of MSG. Huron MSG is sold to leading food processors and canners as a flavor accentuator. Glutamic acid is widely used for medicinal purposes.

"Hydrolyzed gluten contains polypeptides and amino acids (other than glutamic), which are separated from the mixture and designated as Hydrolyzed Vegetable Protein (HVP). HVP is used in liquid sauces to season foods such as chop suey, gravy, and meats; it has a distinctive, meaty flavor. HVP together with enzymes produces 'Age-it' which both tenderizes and improves the taste of meat."

"Wheat gluten, the whole protein from wheat, finds wide use in breads and cereals for increasing the protein content" and adding functionality in baking characteristics and texture. Gluten may also help to overcome the world-wide protein gap.

3966. Kohzu, Tokuichiro. 1957. Daizu kasu no ensan kasui bunkai ni yoru gurutamin-san seizô no kiso-teki kenkyû. I. Gurutamin-san no shûryô tsuite [Fundamental studies on manufacturing glutamic acid from soybean meal by the hydrolysis with hydrochloric acid. I. On the yield of glutamic acid]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 31(2):80-87. Feb. [1 ref. Jap]
Address: Nagano Junior College, Japan.

3967. Morawetz, Gudrun de. 1957. Soya, carne sin huesos [Soya, great profit and little trouble. II.]. *Revista Nacional de Agricultura (Bogota)* 51(622):31-33. Feb. [Spa]
• ***Summary:*** Describes use of soybean flour.

3968. Onaga, D.M.; Luh, B.S.; Leonard, S.J. 1957. Quality evaluation and chemical composition of soy sauce. *Food Research* 22(1):83-88. Feb. [18 ref. Eng]
• ***Summary:*** The quality of soy sauce varies greatly with the raw materials used and with the method of manufacture–by fermentation or by acid-hydrolysis. In the fermentation process, cooked soya beans and roasted wheat flour are fermented by the mold *Aspergillus oryzae* and then by yeasts; this is followed by a long digestion in brine.

Soy sauce samples obtained from markets in California showed significant differences in flavor and aroma. The importance of various chemical constituents to flavor is discussed. Address: Dep. of Food Technology, Univ. of California, Davis. 1. Moved to Herschel California Fruit Prods., Woodland, CA.

3969. Raper, Kenneth B. 1957. Charles Thom: 1872-1956. *Mycologia* 49(1):134-50. Jan/Feb. [114 ref]

3970. Paddleford, Clementine. 1957. What Paris does with Easter: They're not hard-boiled and pastel, but poached and served in tarragon aspic. *Los Angeles Times*. April 21. p. Q26.
• ***Summary:*** Eggs in tarragon jelly are a prelude to the main course of broiled duckling, which is brushed during the cooking with honey blended with soy sauce.

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3971. Shurtleff, William. 1957. Journal of trip the Hawaiian Islands. 2 vols. Lafayette, California. Unpublished manuscript.
• ***Summary:*** April 22. Fly to Maui (Hana) where we enjoy a delicious shish kebab dinner (thin slices of marinated and grilled, skewered beef) outdoors. I learn a teriyaki sauce recipe (the first recipe I've ever learned for anything) from the chef: 1 cup soy sauce, 4 tablespoons oil, 1½ tablespoons sugar, 1 tablespoon vinegar, 1 pinch each ginger and garlic.

Note 1. For many years afterward, Shurtleff prepared this recipe for teriyaki sauce and used it at barbecues for family and friends.

Note 2. This is the earliest document seen (Nov. 2010) that mentions William Shurtleff in connection with any soy product. Address: Lafayette, California 94549.

3972. Umeda, Isao. 1957. Saikin ni okeru shôyu seizô gijutsu-jô no shomondai [Some problems on the recent brewing technology of soy-sauce]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 31(4):A48-A52. April. [29 ref. Jap]
• ***Summary:*** Contents: 1. On the processing of protein raw materials. 2. Various problems related to making koji. 3. On the glutamic acid in shoyu. Address: Noda Shoyu Co. Ltd.

3973. Kohzu, Tokuichiro. 1957. Daizu kasu no ensan kasui bunkai ni yoru gurutamin-san seizô no kiso-teki kenkyû. II. Bunkai seisei-butsu ni tsuite (1) [Fundamental studies on manufacturing glutamic acid from soy-bean meal by hydrolysis with hydrochloric acid. II. On the products produced by hydrolysis (1)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 31(5):323-28. May. [1 ref. Jap]
Address: Nagano Junior College, Japan.

3974. Onishi, Hiroshi. 1957. Studies on osmophilic yeasts. I. Salt-tolerance and sugar-tolerance of osmophilic soy-yeasts. *Bulletin of the Agricultural Chemical Society of Japan* 21(3):137-42. May. [6 ref. Eng]
• ***Summary:*** The first experiment involved the reversibility of salt-tolerance in osmophilic soy yeasts. Three strains of *Zygosaccharomyces major* were cultured successively in NaCl-free and NaCl 18% koji extract media. The growth of osmophilic yeasts in a medium of high sodium chloride concentration involved a process of physiological adaptation.

For growth of the yeast *Zygosaccharomyces major*, the order of the toxicity of salts was as follows: K+ < Na+ < Mg++ < Ca++ < Li+. Address: Noda Inst. for Scientific Research [Noda City, Chiba-ken, Japan].

3975. Onishi, Hiroshi. 1957. Studies on osmophilic yeasts. II. Factors affecting the growth of soy yeasts and others in the environment of a high concentration of sodium chloride (1). *Bulletin of the Agricultural Chemical Society of Japan* 21(3):143-50. May. [14 ref. Eng]
• ***Summary:*** The following named yeasts were grown: *Zygosaccharomyces major, Z. soya, Z. salsus, Z. miso* α, *Saccharomyces miso* α, and *Pichia miso*. The following unnamed yeasts were also grown: N 5, N 8, N 24, A 31, A 34.

The pH range for the growth of soy yeasts (such as *Zygosaccharomyces major*) was found to be very wide (pH 3.0–7.0) in a NaCl-free medium, but quite narrow (ph 4–5) in a medium that contained 18% NaCl–as is typical of soy sauce. Address: Noda Inst. for Scientific Research [Noda City, Chiba-ken, Japan].

3976. Onishi, Hiroshi. 1957. Studies on osmophilic yeasts. III. Classification of osmophilic soy and miso yeasts. *Bulletin of the Agricultural Chemical Society of Japan* 21(3):151-56. May. [13 ref. Eng]
• ***Summary:*** Most of the salt-tolerant yeasts isolated from soy sauce and miso belonged to *Saccharomyces rouxii*. Some of them produced luxuriant pellicles (surface films) on culture media containing sodium chloride, but pellicles were not formed on salt-free media. A new variety was isolated from these yeast species: *Saccharomyces rouxii* Boutroux var. halomembranis nov. var. A few strains were identified as *Saccharomyces acidifaciens* (Nickerson) Lodder et Kreger-van Rij. Two new species were also described: *Torulopsis halophilus* nov. sp. and *Torulopsis nodaensis* nov. sp. These two species showed high salt tolerance, especially the former, which was a facultative halophile.

In a 1952 monograph titled *The Yeasts: A Taxonomic Study*, by J. Lodder and N.J.W. Kreger-van Rij, the subgenera *Zygosaccharomyces* is no longer recognized. In this classification almost all of the *Zygosaccharomyces* known as the osmophilic yeasts were included in only two species and one variety, *Saccharomyces rouxii* Boutroux, *Saccharomyces rouxii* Boutroux var. *polymorphus* Lodder and Kreger-van Rij, and *Saccharomyces mellis* (Fabian et Quinet) Lodder and Kreger-van Rij. For example, *Zygosaccharomyces major, Z. soya, Z. salus,* and *Z. japonicus*, known as soy yeasts, were all included in one species, *Saccharomyces rouxii*. Address: Noda Inst. for Scientific Research [Noda City, Chiba-ken, Japan].

3977. Mogi, Masatoshi. 1957. [Problems of the "miso" making]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 31(6):A72-A74. June. [29 ref. Jap]
Address: Noda Inst. of Scientific Research, Noda, Japan.

3978. Specht, Hermann. 1957. Die proteolytische Aktivitaet von Schimmelpilzkulturen bei der Rohstoffkonversion [Proteolytic activity of molds in raw material conversion]. *Zentralblatt fuer Bakteriologie. Series 2.* 110(16/20):540-47. July 5. [11 ref. Ger]

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Address: Institut fuer Gaerungsgewerbe, Berlin, West Germany.

3979. Kagaya, Akira; Inaba, Yakumo; Abe, Takashi; Takata, Ryohei. 1957. Bitamin kyôka shôyu jisshi seiseki (Hiromae chihô shôni eiyô ni kansuru kenkyû, No. 66) [Effect of enriched soy [sauce] upon riboflavin deficiency of children in a farm village]. *Bitamin* (*Vitamins, Kyoto*) 13(1):52-57. July 25. [5 ref. Jap; eng]
• ***Summary:*** Soy sauce was fortified with 75 mg of thiamine, 75 mg of riboflavin, and 750 mg of niacinamide per 2 liters of sauce, and was introduced to a Japanese farm village where ariboflavinosis was found endemically among the inhabitants. Observations on its effects were made from Feb. to Oct. 1956. Vitamin fortification improved the diet and reduced symptoms. Address: 1-3. Dep. of Pediatrics, Faculty of Medicine, Hirosaki Univ., Hirosaki, Japan; 4. Kyoto Univ.

3980. Brown, Seletha. 1957. Hawaiian luau brings East and West together in foods. *Christian Science Monitor.* Aug. 15. p. 10.
• ***Summary:*** Honolulu, Hawaii–"Terruyaki [teriyaki] steak is an island favorite [but no recipe is given]. "Japanese Hekka soon becomes as commonplace to the Haole (Caucasian) table as hot dogs and mustard. A recipe for "Meat Hekka" includes: "1 cup diced soy curd (Tofu), optional... ¼ cup soy sauce." "Add the rest of the vegetables in individual piles and mix the Tofu with the meat."

3981. Nickerson, Jane. 1957. Japan sets the table. *New York Times.* Aug. 18. p. SM25.
• ***Summary:*** "Japan is helping Americans set their tables in unusual, appetizing fashion, exporting to the United States an increasing variety of delicacies."

Before World War II, U.S. food imports totaled $25 million. By last year this figure had increased to $60 million--more than double.

A recipe for Yosenabe (a meal-in-one-dish), whose name in Japanese means "gathered in one pan." The basic recipe calls for "3 pieces bean curd, sliced one-quarter inch thick." The Broth for cooking calls for "½ cup Japanese soy sauce" and "3 three-inch squares seaweed (kombu)."

3982. *Times of India* (*The*) (*Bombay*). 1957. Confectionery & foodstuffs. Aug. 20. p. 18.
• ***Summary:*** The foods of Japan have changed noticeably since World War II. The islands of Japan, whose combined area is 15% smaller than that of California, are much much too small to grow enough staple food crops (such as rice) to feed the 80 million inhabitants. So Japan, which has been shorn of its overseas empire (Korea, Taiwan, Manchuria, etc.) has now become a major importer of wheat flour, and the number of bread eaters has been rapidly increasing.

Great efforts have also been made to incorporate more protein into the daily diet. "Scientists today have begun to view time-honored seasonings like miso and soy sauce, made largely from soybeans, from a new angle."

The most popular confections are *namagashi* which are traditional Japanese. They include *yokan* (hard red bean paste) [made from azuki beans].

3983. Hayashi, Shizuka. 1957. Tofu takes large volume of soybeans. *Soybean Digest.* Aug. p. 26-27.
• ***Summary:*** "There are approximately 45,000 tofu manufacturers in Japan, of which about 23,000 are members of the Tofu Association. There is one large factory in Osaka, the largest in Japan, which consumes 2 tons of soybeans a day." In 1957 Japan will use 1,070,000 tons of soybeans, including approximately 350,000 tons for shoyu, 230,000 tons for miso, 160,000 tons for tofu, and 120,000 tons for other foods. But the Tofu Association says 308,000 tons will be used for tofu.

Note: This is the earliest English-language document seen that gives the number of tofu manufacturers in Japan, and statistics on the amount of soybeans used for making tofu in Japan. Address: Japanese-American Soybean Inst., Tokyo, Japan.

3984. Komiya, Masashi. 1957. The seven wonders of soy sauce. *Foreign Agriculture* 21(8):4. Aug.
• ***Summary:*** In spite of its salt content of 18%, shoyu does not taste excessively salty. By contrast, when sea water, which contains a mere 3% of salt is swallowed, the salty taste is almost unbearable. It is estimated that the average Japanese obtains one-third of the salt he needs from shoyu. Japan expects to produce 1,527,000 tons of soy sauce in 1957. Address: Managing Director, Japan Shoyu Assoc.

3985. *Report of the Noda Institute for Scientific Research, Japan.* 1957--. Serial/periodical. Published by Noda Institute for Scientific Research, Noda-shi, Chiba-ken, Japan. Director: Masatoshi, Mogi. No. 1 is Aug. 1957. [Eng]
• ***Summary:*** This institute is owned and run by Kikkoman Shoyu Co., Ltd. Address: Noda-shi, Chiba-ken, Japan.

3986. *Chicago Daily Tribune.* 1957. On our cover. Sept. 6. p. B4.
• ***Summary:*** On the cover of *Today's Food Guide*, is a photo of Kay Westfall in her kitchen, preparing her American version of Japanese sukiyaki. The recipe, which is given, includes: "1/3 cup soy sauce, 1 cake soy bean curd, sliced thin." The main ingredient is steak.

3987. Paddleford, Clementine. 1957. The captain's herb chicken: A barbecue party is Joe Canet's idea of fun. Try his poultry and Lazy Man's Chili Beans. *Los Angeles Times.* Sept. 22. p. M36.
• ***Summary:*** Joseph and Dorothy Canet of Mill Valley,

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California, like to cook. Before barbecuing chickens, Joe marinated them for several hours in peanut oil with wine vinegar, Worcestershire sauce, and soy sauce, with pepper and garlic, which he pulverized with salt.

3988. *Life*.1957. Easy surprise meal is all Oriental (Ad). 43(14):104. Sept. 30. *

• ***Summary:*** A full-page color ad featuring canned Chun King Chicken Chow Main as the main dish. A color photo shows the various dishes on a dining table ready to serve. In the upper right corner a bottle of "Soya Sauce" barely visible. The caption reads: "You fix it at home... in minutes! For the appetizer-starter: Chun King frozen Egg Rolls. Mustard and sweet sour sauce to go with them. The hearty main dish: Chun King Chicken Chow Mein over crisp Fried Noodles... to be sprinkled with Soya Sauce..."

"The most romantic place in town to eat is where the food is Oriental. And tonight at home you can enjoy foods as delicious as those in fine Cantonese restaurants. Give your family a Chun King meal of chow mein or chop suey..."

3989. Hayashi, Shizuka. 1957. The Japanese-American Soybean Institute. *Soybean Digest*. Sept. p. 33-34, 36.

• ***Summary:*** Subtitle: "The Japanese know the quality of U.S. soybeans is improving. Mr. Hayashi expects every Japanese family to include soybeans in the daily diet as a result of the Institute campaign."

"Membership in the Japanese-American Soybean Institute [JASI] is made up of the Japanese Oil Processors Association, the Japan Soy Sauce Association, the Japan Miso Industry Association, the Japan Tofu Association, and the Oil and Fat Importers and Exporters Association–in other words all groups connected with the soybean industry in Japan. The American Soybean Association is also a member of the Institute.

The Institute carries out a variety of research and educational programs. Under the initial agreement, JASI was established in April 1956 for a period of 1 year with a total budget of $75,000; it began functioning on 1 May 1956. Each of the Institute's main projects and contracts signed during the first year is described. The production of a movie film, approved by USDA's Foreign Agricultural Service (FAS), is now in progress. "This will be a documentary colored film in three rolls of about 24,000 feet long. The theme of this film involves grammar school children working on a special subject of soybeans in their practical science room."

Before JASI was established, most Japanese did not realize that soybeans were grown in the U.S.–except on a small scale. "Before the war [World War II] we knew that Manchuria, China, was the only major soybean growing country. I was in Manchuria for more than 10 years before the war as an exporter of soybeans to Europe and Japan. We [Japan] imported about 1.5 millions tons of soybeans annually from China. Production in China was then around 6 million tons. In 1948 I visited this country [USA] and was surprised to learn for the first time of America's huge production of soybeans. After the war when Japan was still under the SCAP's [Supreme Commander Allied Powers = General Douglas MacArthur] control, soybeans were not available from China. It was then that Japan received soybeans from America for the first time in history. It is since then that Japan has gradually become familiar with American [U.S.] soybeans.

"However, soybeans coming into Japan right after the war were very bad. They contained enormous amounts of foreign material, worm-eaten damaged beans, broken beans; besides sizes were irregular and color was bad. The quality of American beans was so bad that it gave Japanese users the impression that U.S. soybeans were not comparable with Chinese soybeans. Everywhere we went we received complaints of foreign material." No makers of miso or tofu wanted to buy them.

Now, a year after JASI was established, the situation has improved. Everybody in the soybean industry now knows about U.S. soybeans, and knows their quality is improving. JASI sends these people a newsletter, the *Soybean Digest Late News*, translated into Japanese. A photo shows Shizuka Hayashi. Address: Managing Director, JASI, Tokyo.

3990. Kohzu, Tokuichiro. 1957. Daizu kasu no ensan kasui bunkai ni yoru gurutamin-san seizô no kiso-teki kenkyû. III. Bunkai seisei-butsu ni tsuite (2) [Fundamental studies on manufacturing glutamic acid from soy-bean meal by hydrolysis with hydrochloric acid. III. On the products produced by hydrolysis (2)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 31(9):658-64. Sept. [3 ref. Jap]
Address: Nagano Junior College, Japan.

3991. Kohzu, Tokuichiro. 1957. Daizu kasu no ensan kasui bunkai ni yoru gurutamin-san seizô no kiso-teki kenkyû. IV. Gurutamin-san ensan-en no shôshutsu ni tsuite [Fundamental studies on manufacturing glutamic acid from soy-bean meal by hydrolysis with hydrochloric acid. IV. On the crystallizing of glutamic acid hydrochloride]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 31(9):664-69. Sept. [4 ref. Jap]
Address: Nagano Junior College, Japan.

3992. Yamamoto, Kisirô. 1957. Studies on koji. II. Effects of some conditions of medium on the production of mold protease. *Bulletin of the Agricultural Chemical Society of Japan* 21(5):313-18. Sept. [22 ref. Eng]
Address: Noda Inst. for Scientific Research, Noda, Japan.

3993. Yamamoto, Kisirô. 1957. Studies on koji. I. A new analytical method of koji. *Bulletin of the Agricultural*

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Chemical Society of Japan 21(5):308-12. Sept. [5 ref. Eng]
• ***Summary:*** Describes the "paste medium" technique.
Address: Noda Inst. for Scientific Research, Noda, Japan.

3994. Yamamoto, Kisirô. 1957. Studies on koji. III. Effects of cultural temperature on the production of mold protease. *Bulletin of the Agricultural Chemical Society of Japan* 21(5):319-24. Sept. [9 ref. Eng]
Address: Noda Inst. for Scientific Research.

3995. Hayashi, Shizuka. 1957. Miso maker switches to U.S. beans. *Soybean Digest.* Nov. p. 24-25.
• ***Summary:*** A week-long soybean promotional program was held in the city of Sendai in September. The Institute participated in the name of the "Food Life Improvement Association." The speaker was J. Sasaki [probably of Sendai Miso Shoyu], vice president of the All Japan Miso Assoc. The biggest miso maker in the district and one of the largest in Japan, he also manufactures shoyu, and he has been using U.S. soybeans only since the early part of this season. Why? More uniform and consistent quality, less purple colored beans, lower price, larger quantities of the same variety available. Address: Managing Director, Japanese-American Soybean Inst., Tokyo, Japan.

3996. Omata, S.; Ueno, T.; Nakagawa, Y. 1957. Shôyu no kappen genshô ni kansuru kenkyû. VIII. Shôyu kôji no kappen genshô (1) [On the browning reaction of soy-sauce. VIII. On the browning reaction of soy-sauce koji (1)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 31(11):822-26. Nov. [12 ref. Jap]
• ***Summary:*** Substances which effect browning are amino acids, reducing sugars, reductones and carbonyl compounds.
Address: College of Agriculture, University of Osaka prefecture, Japan.

3997. Choi, S.H. 1957. [Biochemical studies on Korean fermented foods. VI. The variation of nitrogen content during the fermentation of Kanjang (Korean soy sauce)]. *Report of the National Chemical Laboratory, Seoul, Korea* 6:2-3, 36-38. [Kor; eng]*

3998. Choi, S.H. 1957. [Biochemical studies of Korean fermented foods. VI. On the changes of nitrogenous compounds during soy-sauce fermentation]. *Report of National Chemistry Laboratories (Korea)* 6:36-38. [Kor]*
Address: National Chemistry Laboratories, Seoul, Korea.

3999. **Product Name:** [Kikko Siyau–Japanese Style Shoyu (Light)].
Foreign Name: Kikko Siyau.
Manufacturer's Name: Fabrica de Siyau Kikko Sociedad de Responsibilidad Limitada.
Manufacturer's Address: Av. Colombia 171, Pueblo Libre, Lima, Peru. Phone: 32-3754.
Date of Introduction: 1957.
Ingredients: In 1957: Common beans (*Phaseolus vulgaris*) grown in Peru, wheat, water, salt. In 1960 the common beans were replaced by whole soybeans.
Wt/Vol., Packaging, Price: 1957: 20 liter drum, 3.6 liter glass bottle, 500 mg glass bottle. As of 1997: Plastic bottles of 85 ml, 160 ml, 350 ml, 500 ml, and 5 liters, and sealed plastic buckets of 18 liters.
How Stored: Shelf stable.
New Product–Documentation: Company history form filled out and label sent by Marco Kamego, a present owner of Kikko Corporation S.A. 1997. Dec. 29. Label: 8.5 by 2.75 inches. Red, blue, and black on yellow. Color photo of turkey meat, potatoes, and vegetables. "Kikko Siyau: Salsa Oriental." Produced by Kikko Corporation S.A., Calle Robert Fulton No. 115, Lima 3, Peru. Phone: 236-1358 or 326-0955. Ingredients: Soybeans, wheat, salt, sugar, and sodium benzoate. Follow-up letter from Marco of 13 Feb. 1998. The product was originally made from native beans, replaced by soybeans in 1960. "Fermentation process and chemical process were applied at once." The product was originally sold in 20 liter drums, 3.6 liter glass bottles, and 500 mg glass bottles. Now it is made from defatted soybeans using a fermentation process.

4000. Hahn, Y.S.; Park, B.D. 1957. [Studies on the manufacture of soy sauce. I. On *Aspergillus oryzae* in Korean soybean meju and wine kokja mould cultured with wheat bran]. *Report of the National Industrial Research Institute (Seoul, Korea)* 7:51-55. [Kor]*
• ***Summary:*** Two kinds of *Aspergillus oryzae* were isolated from Korean soybean meju and wine kokja. Microscopic and physiological characteristics were investigated. Five kinds of powerful amylolytic moulds and four kinds of powerful proteolytic moulds were isolated. Address: National Industrial Research Institute, Seoul, Korea.

4001. Hong, S.S. 1957. [On the amino acid composition of Korean soy sauce]. MSc thesis, Seoul National University. [Kor]*
• ***Summary:*** Soysauce is one of the important condiments used by oriental peoples. There are various types of soy-sauce, such as Chinese, Korean, Japanese and amino acid soy-sauce. The author has detected the kinds of amino acids contained in the Korean soy-sauce by means of paper chromatography. The result of qualitative analysis of amino acids of Korean soy-sauce by means of paper chromatography led to the following conclusion.

1. The amino acids found in the Korean soy-sauce are as follows: alanine, arginine, aspartic acid, glutamic acid, leucine, lysine, phenylalanine, proline, serine, threonine and valine.

2. The amino acids found in the amino acid soy-sauce

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are as follows: alanine, arginine, aspartic acid, cystine, glutamic acid, leucine, lysine, phenylalanine, proline, serine, threonine, tyrosine and valine.

3. The 11 types of these amino acids found in the Korean soy-sauce are similar to the kinds of amino acids found in the Japanese soy-sauce. Address: Seoul, Korea.

4002. **Product Name:** Soy Sauce.
Manufacturer's Name: Kauai Shoyu Factory.
Manufacturer's Address: Kapaia, Kauai.
Date of Introduction: 1957.
New Product–Documentation: Hawaii, Maui, Kauai Directory. 1957. p. 425. Kauai Shoyu Factory (Sen Watanabe, proprietor). Kapaia, Kauai. Not listed 1965.

4003. Mitsui, M.; Kusaba, E. 1957. Shôyu no iro ni kansuru kenkyû. II. [Studies on the color of soy sauce. II.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 52(10):822-816. [12 ref. Jap]

4004. Mogi, M.; Iguchi, N. 1957. [Soy sauce and miso in 1956]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 52:109-16. (Chem. Abst. 51:17080g). [87 ref. Jap]
Address: Noda Inst. of Scientific Research Lab., Chiba.

4005. Noda Shoyu K.K. 1957. [Company statistical tables]. Noda, Japan. 100 p. Unpublished manuscript. [Jap]*
• ***Summary:*** This handwritten document contains internal company statistics, such as production and sales figures from different *kura* (warehouses), prices of raw materials. In about 1956 the record keeping system was reorganized. Address: Noda, Japan.

4006. Benet, Sula. 1957. Festival menus 'round the world. New York, NY: Abelard-Schuman. 196 p. See p. 37, 39. Index. 23 cm. [1 ref]
• ***Summary:*** Page 37: A recipe calls for "2 cakes Foo Yu (Chinese cheese)."

Page 39: A recipe for Tiem shuen yu (Sweet and sour fish) calls for "1 tablespoon thick soy sauce." Note: *Shi yau* is *soy sauce*. More precisely, it is "fermented black soybean sauce."

4007. La Choy Food Products. 1957. The art and secrets of Chinese cookery. Archbold, Ohio: La Choy Food Products. Div. of Beatrice Foods. 31 p. Illust. (some color). 10 x 16 cm. *
• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home.

4008. Miyamoto, Kazuo. 1957. A nisei discovers Japan. Tokyo: Japan Times. [x] + 282 + [4] p. See p. 181. Illust. Port. No index. 20 cm.

• ***Summary:*** The author, a physician and American citizen, lived with his wife and two children for two years in Japan between 1937 and 1939 "just after the beginning of the China Incident." He spoke and wrote Japanese fluently.

Page 7: On 29 Sept. 1937, after just arriving in Japan, they enter Tokyo. He notes that prices are high, protein consumption is therefore insufficient, and the general population seems undernourished. Beans, including soya beans, ought to be used more extensively. Except for misoshiru [miso soup] and natto, they are apparently not widely used. He suggests that the government welfare department develop and publish soy recipes for the health of the people.

Page 48: On 8 Feb. 1938 on a trip into Yusawa, Niigata, in northeastern Japan, he went skiing. For lunch at a inn he had "natto with lots of onions to erase the odor."

On a train from Ueno station, Tokyo, he has breakfast in the diner of miso-shiru [miso soup], tsukemono [pickled vegetables], and rice for 25 *sen*.

Page 129: In Aomori at the hotel for breakfast they enjoy delicious eggplant fried in butter with shoyu, pepper, and pieces of chiso [beefsteak leaves].

Page 171: At Aoyama hot springs in Hokkaido, caught in a blizzard, he has a bento [Japanese box lunch] from the hotel that includes miso-shiru.

Page 181: On 21 March 1938 they are at the port of Shimonoseki, Japan (in southwestern Honshu, just north of Kyushu, in Yamaguchi prefecture, facing the Tsushima Strait). He notes that many people pass through this port on their way to Chosen [Korea] and Manchukuo [Manchuria].

Shimonoseki is known for its *fugu* or balloonfish (also called globefish or swellfish) for it is here that the largest catch in Japan is taken each year.

They found an eating place, Fujitomo, that served the delicacy. The raw sliced meat was arranged on a huge platter in three rows of semi-circles, so thinly sliced that it was transparent. "The above were dipped in a sauce prepared with murasaki, lime and onions. Tai, considered the king of fishes, must be allotted second place to this delicacy..."

Note 1. The word "murasaki" means purple in Japanese, and is still used in sushi shops and other specialty eating places to refer to soy sauce.

Note 2: This is the earliest English-language document seen (April 2012) that uses the word "murasaki" to refer to soy sauce.

The balloonfish is so poisonous it can kill a person; the toxin is contained in the ovaries. "At Shimonoseki, the season comes to an end at the end of March for then the spawning season begins and the danger of poisoning becomes greater."

Page 201: On a trip to Korea he enjoys *manul zany*, garlic pickled in shoyu.

In April 1955, the family returned to Japan to visit new relatives. Near Furukawa, in northeastern Japan, they

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inspected a "miso and shoyu factory."

Also discusses: Nori (p. 128). Wakame (seaweed, near Idzu / Izu) (p. 276). Address: Honolulu, Hawaii.

4009. Onishi, Hiroshi. 1957. Studies on osmophilic yeasts. III. Classification of osmophilic shoyu and miso yeasts. *Noda Sangyo Kagaku Kenkyusho* (*Report of the Noda Institute for Scientific Research, Japan*) 1:30-35. [13 ref. Eng]
• ***Summary:*** Reprinted from *Bulletin of the Agricultural Chemical Society of Japan* 21(3):151-56. May. Address: Japan.

4010. Onishi, Hiroshi. 1957. Studies on osmophilic yeasts. I. Salt-tolerance and sugar-tolerance of osmophilic soy-yeasts. *Noda Sangyo Kagaku Kenkyusho* (*Report of the Noda Institute for Scientific Research, Japan*) 1:16-21. [6 ref. Eng]
• ***Summary:*** Reprinted from *Bulletin of the Agricultural Chemical Society of Japan* 21(3):137-42. May. Address: Japan.

4011. Onishi, Hiroshi. 1957. Studies on osmophilic yeasts. II. Factors affecting growth of soy yeasts and others in the environment of a high concentration of sodium chloride (1). *Noda Sangyo Kagaku Kenkyusho* (*Report of the Noda Institute for Scientific Research, Japan*) 1:24-29. [14 ref. Eng]
• ***Summary:*** Reprinted from *Bulletin of the Agricultural Chemical Society of Japan* 21(3):143-50. May. Address: Japan.

4012. Tanizaki, Junichiro. 1957. The Makioka sisters. Translated from the Japanese by Edward G. Seidensticker. New York, NY: Alfred A. Knopf, Inc. 530 p. See p. 293. [1 ref]
• ***Summary:*** Page 293: "He always used white Kobe vinegar, never yellow Tokyo vinegar, and always a thick soy sauce not seen in Tokyo. He offered only fish taken before his very eyes, so to speak, here along the shores of the Inland Sea."

Note: What is the word for "thick soy sauce" in Japanese?

The title of the novel in Japanese is *Sasameyuki*, which means lightly falling snow. The translator, Edward Seidensticker, struggled over the title. Translations like "Fine Snow" and "Snow Flurries" do not convey the elegance or layers of meaning in the Japanese title. The novel follows the lives of the Makiokas, a wealthy Osaka family, from the autumn of 1936 to April, 1941. In Japan, the book has been called by Nakamura "the greatest cosmopolitan novel since the Meiji Restoration."

"In Osaka in the years immediately before World War II, four aristocratic women try to preserve a way of life that is vanishing. As told by Junichiro Tanizaki, the story of the Makioka sisters forms what is arguably the greatest Japanese novel of the twentieth century, a poignant yet unsparing portrait of a family-and an entire society-sliding into the abyss of modernity" (Publisher's description).

4013. Yamada, S. 1957. [Manual of the fermented food industries of Japan]. Tokyo. [Jap]*

4014. *Times* (*London*). 1958. A truly festive season: New Year exchanges of hospitality in Japan. Jan. 25. p. 8, cols. 6-7.
• ***Summary:*** "From a correspondent." The writer gives a detailed, accurate description of New Year in Japan. Once the caller has entered a house, he must be offered food and drink, which includes: "[black soy] beans in sugar; lotus root in soya sauce; and bean curd [tofu]. The great New Year delicacy is mochi, or rice cake, made from boiled, pounded rice..." Also sake.

4015. Yokotsuka, Tamotsu. 1958. Shôyu kômi seibun ni kansuru kenkyû. XV. Hiire shôyu no kôki seibun (2) [Studies on flavorous substances in shôyu. XV. Flavorous substances in heated shôyu (2)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 32(1):23-26. Jan. [4 ref. Jap]
Address: Noda Inst. for Science Research.

4016. Okuhara, Akira; Yokotsuka, Tamotsu. 1958. Shôyu bunseki-hô ni kansuru kenkyû. I. Shôyu-chû no guriserin to sono teiryô-hô [Studies on the analytical methods of soy sauce. I. Glycerine in soy sauce and its estimation]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 32(2):138-43. Feb. [10 ref. Jap]
Address: Noda Soy Sauce Co. Ltd.

4017. Sakasai, Toshio; Yokotsuka, Tamotsu. 1958. Shôyu bunseki-hô ni kansuru kenkyû. II. Shôyu-chû no yuki-san oyobi forumôru chisso no denki-teki teihô [Studies on the analytical methods of soy sauce. II. Potentiometric titration of acidic ingredients and of formol nitrogen in soy sauce]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 32(2):144-51. Feb. [33 ref. Jap]
Address: Noda Soy Sauce Co. Ltd.

4018. Koss, Mayburn. 1958. Food: From Japan. Store on the Upper West Side offers wide variety of Far East delicacies. *New York Times*. March 12. p. 37.
• ***Summary:*** About the Oriental Food Shop at Amsterdam Ave. and 124th St., run by Joseph Oyama.

"Soy sauce from Japan, lighter and less sweet than the American and Chinese varieties, comes in bottles and tins in a wide range of sizes. The most popular brand is Kikko Man" [Kikkoman].

"The foods most frequently requested at the Oriental Food Shop are those that go into Sukiyaki, probably the best known Japanese dish among foreigners." It can be cooked quickly, and at the table. Ingredients called for in a recipe

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include: "1 Tofu (fresh bean curd)... ½ cup soy sauce... ½ teaspoon Aji-No-Moto (monosodium glutamate)."

4019. *Washington Post, Times Herald.* 1958. Spicy Japanese sauce gives character to meats: Discovered in Hawaii. March 14. p. C9.
• ***Summary:*** The "spicy Japanese sauce" is teriyaki sauce, which is featured in this article. Contains recipes for Teriyaki sauce (with "3 tablespoons brown sugar, ¼ teaspoon ginger, 2 cloves garlic cut, 3/4 cup soy sauce, 1 tablespoon whisky or brandy, optional, and 1¼ cups of water"), Beef teriyaki (with 1 cup soy sauce, 1 clove garlic, 1/3 cup saki [sake] or sherry, 1 inch piece fresh ginger or 1 teaspoon powdered ginger, 4 tablespoons dark brown sugar, 3 tablespoons grated onion; the beef is always cut into very thin strips, and each strip then skewered), and a variation on the latter–Liver or beef teriyaki (with "2 tablespoons shoyu {Japanese soy sauce}").

4020. Mogi, Kôya. 1958. Ekitai kôji-hô ni yoru shôyu no seizô ni kansuru kenkyû. II. Koji-kin puroteaze seisan-yo ekitai baiyochi no sentaku [Studies on soy-sauce production by submerged culture. II. Selection of suitable media for the production of protease in submerged culture]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 36(3):91-95. March. English summary on p. 9 of this issue. [7 ref. Jap; eng]
Address: Tokyo Daigaku Nôgaku-bu, Nogei Kagaku-ka, Japan (Dep. of Agricultural Chemistry, Faculty of Agriculture, Tokyo Univ).

4021. Mogi, Kôya. 1958. Ekitai kôji-hô ni yoru shôyu no seizô ni kansuru kenkyû. I. Teki-sei koji-kin kabu no sentaku [Studies on soy-sauce production by submerged culture. I. Selection of suitable strains for the production of protease in submerged culture]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 36(3):87-90. March. English summary on p. 9 of this issue. [12 ref. Jap; eng]
Address: Tokyo Daigaku Nôgaku-bu, Nogei Kagaku-ka, Japan (Dep. of Agricultural Chemistry, Faculty of Agriculture, Tokyo Univ).

4022. Sakurada, Seiichi; Yamaguchi, Mitsuo. Assignors to Hohnen Oil Manufacturing Company. 1958. [Molded raw material for brewing]. *Japanese Patent* 1598. March 7. (Chem. Abst. 53:2534a). [Jap]*
• ***Summary:*** Defatted soybean flour (20 mesh, and containing 10-12% water) is mixed with 15% of its weight of water, pressed between iron plates at 100°C to form a sheet 3 mm in thickness, cut into 3 mm cubes, heated with steam for 5-30 minutes, and dried. The product is suitable for use as a raw material (in place of whole soybeans) in fermented soy sauce.

4023. Spier, Robert F.G. 1958. Food habits of nineteenth-century California Chinese. *California Historical Society Quarterly* 37(1):79-84. March; 37(2) 129-36. June. [40 ref]
• ***Summary:*** Large-scale immigration of Chinese to California began in 1850, shortly after gold was discovered. In California, the Chinese continued to eat their customary foods, which were imported from China. In 1857 J.D. Borthwick wrote, with reference to the period 1851-1854 (when he traveled in California), that Chinese stores were stocked with Chinese foods. Spier examined the records of the U.S. Custom House at San Francisco and found that "As early as 1852, substantial shipments of foods arrived from Hongkong, consigned to Chinese firms" in San Francisco. Items listed on the invoices included "salt beans" [probably fermented black soybeans], "dry bean curd," "shrimp soy" [soy sauce with shrimp], "bean sauce," as well as dried seaweed, oranges, bamboo shoots, plus staples such as rice, noodles, sugar, tea, and vinegar. "A check of invoices in this collection covering the years 1850 through 1854 reveals that the majority of the shipments from the Far East contained food or potables (tea, brandy, etc.). Specifically, food or drink appeared on 79 of 118 invoices."

Within 2 decades of their landing in force, the Chinese on the West Coast were growing considerable amounts of food. "By 1872 Nordhoff wrote that the Chinese were producing two-thirds of all vegetables eaten in California... Seaweed was collected by members of the Monterey fishing colony before the turn of the century...

"One receives the general impression... that during the 1850's and 1860's, the Chinese laborers ate a better diet than did whites in substantially the same lines of work." A Caucasian schooner captain in southern California told Nordhoff that, in his estimation, the Chinese fishermen he knew lived "far better, and at any rate have a more varied bill of fare, than most of the ranchmen in California." On the railroads, the Chinese drank mostly tea, while their white counterparts drank large amounts of alcoholic beverages. "Virtually every western town had its 'Chinatown,' large or small, which was essentially a self-contained separate entity."

Note 1. This is the earliest document seen (March 2011) concerning soybean products (soy sauce, and probably fermented black soybeans) in California. This document contains the earliest date seen for soybean products in California (1852); soybeans as such had not yet been reported by that date.

Note 2. Most of these Custom House records were destroyed by fire. Spier is no longer living. Address: California Historical Society, 2090 Jackson Street, San Francisco, California.

4024. Manners, Marian. 1958. Japanese have diversified menus typical of place, season, occasion. *Los Angeles Times*. April 17. p. A7.
• ***Summary:*** A recipe for Beef sukiyaki calls for: "1 block

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tofu (bean curd), cut into cubes... 2 cups shoyu (soy sauce)." One dish eaten by Japanese families every day is "bean-curd soup."

Note: "Bean-curd soup" probably refers to miso soup with many small cubes of fresh tofu in it.

4025. Wood, Morrison. 1958. Hamburgers with that magic touch! These recipes here are sure to intrigue you. *Chicago Daily Tribune*. April 18. p. B10.
• ***Summary:*** Contains a recipe for oriental-style hamburgers that calls for "1½ teaspoons Japanese soy sauce," which is mixed with 1 teaspoon each of ground ginger and hot Chinese mustard, then spread thinly on both sides of two patties.

4026. Black, H. 1958. Die Sojabohne–Ein Hauptnahrungsmittel der Zukunft [The soybean–A major food for the future]. *Ernaehrungs-Umschau* 5(2):33-34. March/April. [Ger]
Address: Bonn, West Germany.

4027. Mogi, Kôya. 1958. Ekitai kôji-hô ni yoru shôyu no seizô ni kansuru kenkyû. III. Ekitai kôji ni yoru mushi-ni daizu no kosoku-teki bunkai (1) [Studies on soy-sauce production by submerged culture. III. Enzymic decomposition of steamed soybeans by submerged koji (1)]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 36(4):125-28. April. English-language summary on p. 13 of this issue. [2 ref. Jap; eng]
Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Tokyo Univ., Japan (Tokyo Daigaku Nôgaku-bu, Nogei Kagaku-ka, Japan).

4028. Mogi, Kôya. 1958. Ekitai kôji-hô ni yoru shôyu no seizô ni kansuru kenkyû. III. Ekitai kôji ni yoru mushi-ni daizu no kosoku-teki bunkai (2) [Studies on soy-sauce production by submerged culture. IV. Enzymic decomposition of steamed soybeans by submerged koji (2)]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 36(4):128-31. April. English-language summary on p. 13 of this issue. [5 ref. Jap; eng]
Address: Tokyo Daigaku Nôgaku-bu, Nogei Kagaku-ka, Japan (Dep. of Agricultural Chemistry, Faculty of Agriculture, Tokyo Univ).

4029. Smith, Allan K. 1958. Use of United States soybeans in Japan. *USDA Agricultural Research Service*. ARS-71-12. iii + 36 p. April. April. Illust. 28 cm. Typewritten.
• ***Summary:*** An extremely well researched, interesting document based on a survey conducted in 1957 in Japan. Contents: Definitions of Japanese food products. Introduction. 1. Problems of Japanese food processors in using U.S. soybeans: Food production problems, foreign material, broken and dark-colored soybeans in exports. 2. Analysis of the problems. 3. Research proposals. 4. Miso: Processing, uses, production, composition. 5. Tofu and its modifications: Processing fresh tofu and frozen tofu, aburage. 6. Natto. 7. Hamanatto. 8. Kinako. 9. New products research: Soybean "milk," fermented cheese, soybean flour and isolated protein for foods, isolated soybean protein. Acknowledgments.

A graph on the front cover (and on p. 6) shows soybean production in the USA from 1938 to 1957 (in millions of acres harvested). Photos show: (1) Drying soybeans before threshing in Japan. (2) Manually operated threshing machine. (3) Power operated threshing machine. (4) Modern small-scale equipment for cleaning soybeans and grading for size. (5) Straw weaving equipment. Straw bags are used for soybeans, rice, and other farm products. (6) Cooling roasted soybeans and hand cleaning for making kinako. (7) Soybean varieties: Lincoln, White Hilum Iwate, and Acadian (six photos, showing each variety wet and dry). (8) Wooden vats used for fermenting miso; each stands a little taller than a man, and is bound with 4 bamboo hoops. (9) Miso in wooden tubs [kegs] ready for market. (10) Hand assembly of wooden tubs for shipping miso and shoyu. (11) Stone mill for wet grinding of soybeans to make tofu. (12) A modern tofu shop, with boiler, pressure cooker, filter, and precipitation vat. Photos 11 and 12 courtesy of Sugiyama Chemical Research Inst., Tokyo. (13) Deep fat frying of tofu for making aburage. (14) Wooden kegs used for fermenting hamanatto. Stone weights are used to compact the beans during fermentation.

Other figures: (1) Flow diagram of the miso manufacturing process (incl. koji). (2) Table showing total production of miso in Japan (about 1957) as reported by All Japan Miso Industrial Association. Factory made miso consists of: Rice miso 379,000 tonnes (metric tons), barley miso 146,000 tonnes, soybean miso 58,000 tonnes, total factory made 583,000 tonnes. Homemade miso of all types is 391,000 tonnes (67% of factory made). Total factory and home made: 974,000 tonnes. Ingredients used in this grand total: Soybeans 361,000 tonnes, rice 115,000 tonnes, barley 58,000 tonnes, salt 159,000 tonnes. (3) Table showing nutritional composition of rice miso, barley miso, and soybean miso. (4) Table showing composition of sweet miso, salty miso, and enriched miso. (5) Diagrammatic sketch of equipment used in making fresh tofu. (6) Flow diagram of a frozen tofu factory.

Note: The author was in Japan from Oct. 24 to Dec. 24, 1957. The principal localities visited were: Tokyo, Yokohama, Tochigi City, Nagano, Matsumoto, Suwa, Hamamatsu, Nagoya, Kyoto, Osaka, Fukuoka, Kumamoto, Nagasaki, and Sendai. His trip was sponsored by the Agricultural Research Service and the Foreign Agricultural Service of the USDA, and the American Soybean Association (Hudson, Iowa).

Note: This is the earliest document seen (July 2000) that mentions "barley miso"–a type of miso made with barley

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koji, soybeans, and salt. Address: Head of Meal Products Investigations, Oilseed Crops Lab., NRRL, Peoria, Illinois.

4030. *Washington Post.* 1958. Menu boasts Far East flavor: Anne's reader exchange. May 9. p. C6.
• ***Summary:*** A reader sends in a recipe for Sukiyaki, which calls for "1 cake bean curd (tofu), cut in small squares." It should be cooked in "cooking soy sauce," which includes "½ pint Japanese soy sauce."

4031. Hori, Shinichi; Motosaki, S.; Yoshida, T.; Hino, T.; Ito, K. Assignors to Ajinomoto Company. 1958. [Decolorization of amino acid soy sauce and simultaneous separation of aromatic amino acids]. *Japanese Patent* 3789. May 16. (Chem. Abst. 53:5586g). [Jap]*
• ***Summary:*** A hydrochloric acid hydrolyzate of protein is treated for separation of glutamic acid. The mother liquor (1000 ml) is treated by passing it through 300 gm of a non-ion-exchanging decolorizing resin at a rate of 10 ml/minute to obtain 85% decolorized soy sauce. The resin is washed with 300 gm water and the effluent concentrated to 30 ml to separate 0.7 gm tyrosine. Further concentration of the mother liquor gave 2.7 gm phenylalanine-hydrochloride.

4032. Kohzu, Tokuichiro; Mori, H.; Tadokoro, Y. 1958. Daizu kasu no ensan kasui bunkai ni yoru gurutamin-san seizô no kiso-teki kenkyû. V. Mi shori daizu kasu no kasui bunkai [Fundamental studies on manufacturing glutamic acid from soy-bean meal by hydrolysis with hydrochloric acid. V. Hydrolysis of raw soy-bean meal]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 32(5):333-37. May. [1 ref. Jap]
Address: 1. Nagano Junior College; 2. Tohoku Univ., Sendai; 3. Quartermaster Section, General Staff Office, Japanese Self-Defense Force.

4033. Subrahmanyan, V.; Bhagavan, R.K.; Swaminathan, M. 1958. The place of processed foods in the treatment and prevention of protein malnutrition in children. *Indian J. of Pediatrics* 25(123):216-27. May. [57 ref]
• ***Summary:*** Contents: Introduction. Treatment of kwashiorkor: Vitamin therapy, the use of dried stomach preparations (e.g., hog's stomach), the use of protein hydrolysate, human serum, plasma and blood, treatment with skim milk powder and proprietary casein foods, treatment with plant protein diets, soybean-banana mixture (Dean 1952), Bengal gram and banana diet mixture, low-fat groundnut flour–Bengal gram–skim milk diet mixture, possible sources of processed protein rich foods for the prevention of protein malnutrition, better utilization of soya and groundnut products, soya and groundnut milks (7 studies are summarized briefly), low-fat oilseed flours, balanced malt food containing soya flour and groundnut flour, Multipurpose food based on low-fat soya flour and groundnut flour, predigested foods, fish flour. Conclusion.

"Introduction: It is now well recognized that protein malnutrition is widely prevalent among children in many tropical and subtropical countries (Trowell et al. 1954) (p. 216).

"The foods that have been most extensively used in the treatment of kwashiorkor, are skimmed milk powder and calcium caseinate" (p. 217).

"Treatment with plant protein diets: Of late it is being increasingly recognised that skim milk powder, though the cheapest protein food available so far for the treatment of protein malnutrition, cannot provide the basis for a large scale solution of the problem in underdeveloped countries, where skim milk powder is not available in sufficient quantities and has to be imported" (p. 218).

"Better utilization of soya and groundnut products:... Both these foods are by themselves highly concentrated and difficult to be cooked properly. Consequently children may experience difficulty in digesting cooked [whole] soyabean or roasted groundnut (Aykroyd and Krishnan 1937). Recent investigations carried out in India and other countries have shown that both soyabean and groundnut could be suitably processed into milk which is highly nutritious and can be readily digested by young children (Dean 1953; Indian Council of Medical Research 1955). Low-fat flours obtained from soyabean and groundnut are also highly nutritious and can be incorporated in various ways in the diet of children (Autret and Van Veen 1955).

"Predigested foods" [fermented]: Mentions soy sauce, and tempeh in Southern Rhodesia.

"Conclusion: It is evident from the foregoing account that besides cereals and pulses which form important sources of protein in the diet of the low income groups in tropical countries, oilseeds and oilseed meals represent an abundant and a most important source of proteins which have not been fully utilised so far for supplementing human diet." Address: Central Food Technological Research Inst. (CFTRI), Mysore, India.

4034. Hori, Shinichi; Matsumi, M.; Yoshida, T. Assignors to Ajinomoto Company. 1958. [Removal of iron from amino-acid soy sauce]. *Japanese Patent* 4546. June 9. (Chem. Abst. 53:9567c). [Jap]*
• ***Summary:*** A solution of 84 gm pyrogallol, 36.7 gm resorcinol in 363 ml water, and 50 ml 1 normal sodium hydroxide at 60°C is treated with 25.4 ml of 35.5% formalin and let stand for 15 minutes to obtain a precipitate. This precipitate is mixed with water, heated for 2 hours at 180°C in an autoclave, and the product ground to 20-30 mesh. Then 250 ml amino-acid soybean sauce (containing 9.51 mg iron/100 ml and 2.85 mg nitrogen/100 ml) of pH 7 is treated by passing through a glass tube containing 50 ml of the ground product to obtain an effluent containing 1.23 mg iron/100 ml. The resin can be regenerated by washing with

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0.1 normal hydrochloric acid and water.

4035. *Life.*1958. Have a Cantoneasy kitchen holiday. Hurry to your grocer's for special values on Chun King. Special savings now on Chun King frozen foods (Ad). 44(25):56. June 23. *
• ***Summary:*** A full-page color ad featuring Chun King frozen foods. Color photos show the front panels of packages of Chun King Chicken Chow Mein, Chun King Egg Rolls, and Chun King Sweet & Sour Pork. In the lower right corner is a can of Chun King Chicken Chow Mein.

"We've coined a new word–Cantoneasy. Right now you'll see signs in your food store that say Chun King Cantoneasy Kitchen Holiday." "The royalty of American-Oriental Foods–Canned and frozen."

4036. Tanaka, S.; Ueda, R. 1958. [Studies on the inorganic components in shoyu. I. On calcium and magnesium contents]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 36(6):251-57. June. English summary on p. 24 of this issue. [2 ref. Jap; eng]
Address: Dep. of Fermentation Technology, Faculty of Engineering, Osaka University, Japan.

4037. Hayashi, Shizuka. 1958. Hold 1-day meeting for Tokyo teachers. *Soybean Digest.* July. p. 24.
• ***Summary:*** The Japan Shoyu Association and the Japanese American Soybean Institute jointly sponsored a 1-day meeting to promote shoyu consumption. Attended by approximately 250 high school teachers who specialize in cooking courses, it was held in the Shoyu Association's hall. Mr. Shoda, president of the Shoyu Association, gave the opening speech. He was followed by Mr. Komiya, managing director of the Association, who explained that the Association is always working to improve shoyu quality and to produce shoyu that will be welcomed by housewives. "Mr. Komiya said a poor quality shoyu, which is produced in a few days time by a simple method, is by no means comparable to naturally produced shoyu in quality and flavor. The Association is discouraging the production of such low quality shoyu. He suggested that housewives learn to distinguish good quality from inferior shoyu. Low quality shoyu spoils the appetite while high quality shoyu which has a pleasant flavor and a bright scarlet color, enhances the appetite and gives better taste to food prepared from shoyu."
Address: Managing Director, Japanese American Soybean Inst., Nikkatsu International Building, No. 1, 1-Chome, Yuraku-cho, Chiyoda-ku, Tokyo, Japan.

4038. Fukushima, D.; Mogi, M. 1958. [Treatment of soybeans]. *Japanese Patent* 6817. Aug. 19. [Jap]*
• ***Summary:*** Describes solvent extraction using ethyl alcohol.

4039. Asao, Yasuo; Yokotsuka, Tamotsu. 1958. Shôyu kômi seibun ni kansuru kenkyû. XVI. Nama shôyu no kômi seibun (2) [Studies on flavorous substances in soy sauce. XVI. Flavorous substances in raw soy sauce. (2).]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 32(8):617-22. Aug. [14 ref. Jap]
• ***Summary:*** Discusses acidic compounds. Address: Noda Soy Sauce Co., Ltd., Noda, Japan.

4040. Asao, Yasuo; Yokotsuka, Tamotsu. 1958. Shôyu kômi seibun ni kansuru kenkyû. XVII. Shôyu-chû no guayashiru seibun (1) [Studies on flavorous substances in soy sauce. XVII. Guaiacyl compounds in soy sauce (1).]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 32(8):622-28. Aug. [16 ref. Jap]
Address: Noda Soy Sauce Co., Ltd., Noda, Japan.

4041. **Product Name:** Hydrolyzed Vegetable Proteins.
Manufacturer's Name: Hercules Powder Co. (Huron Milling Co.).
Manufacturer's Address: Harbor Beach, Michigan.
Date of Introduction: 1958, September.
New Product–Documentation: Jenks. 1958. Chemurgic Digest. Sept. p. 9-10.

4042. Jenks, J.V. 1958. Wheat is raw material for Huron's chemurgic output. *Chemurgic Digest.* Sept. p. 9-10.
• ***Summary:*** "In recent years Hercules Powder Company, producer of some 800 chemical products, has become increasingly interested in the utilization of the inexhaustible raw materials derived from the soil. For this reason, in December, 1956, it acquired the plant of the Huron Milling Company, a firm that had been doing business in the 'Thumb' of Michigan since 1902.

"The operations of the Huron Milling Division are in every sense chemurgic since the principal raw material is wheat flour and chemistry is involved in nearly all the steps of manufacturing the finished products." Wheat gluten, extracted from wheat, is dried in either of two ways to denature the proteins. It is then used for the manufacture of monosodium glutamate (MSG) and hydrolyzed vegetable proteins (HVP). The process for making both products begins by "boiling the gluten in hydrochloric acid for several hours. The gluten goes into solution and the protein is hydrolyzed or split into its individual amino acids, some twenty-two in number. Wheat gluten is unique in that it contains a much higher percentage of glutamic acid, one of the amino acids, than any other protein that has thus far been analyzed. It contains about 38% while corn gluten, for example, contains only 30%.

"Glutamic acid contains two carboxyl groups and one amino group, and therefore, like all amino acids, is amphoteric and forms salts with both acids and bases. As soon as it is split from the protein it reacts with the hydrochloric acid to form the hydrochloride." This salt

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crystallizes and is removed by filtration to become MSG, which is used as a flavor enhancer in many food products.

"The filtrate from the glutamic acid hydrochloride crystals contains all the other amino acids originally present in the gluten protein. Some glutamic acid is also present. The filtrate is neutralized and forms a solution similar to the familiar soy sauces produced in the orient. The latter are usually made from a mixture of soy beans and wheat, and the hydrolysis, instead of being carried out by the use of hydrochloric acid, is effected by enzymes produced by a mold. The Huron sauce in the liquid form is sold principally as an ingredient in table and cooking sauces. It is also condensed into a paste, which is used in bouillon cubes, and is dried to a powder, used as an ingredient, along with M.S.G., in the manufacture of dried soups." Address: Consultant, Research Dep., Hercules Powder Co.

4043. *Journal Star* (*Peoria, Illinois*).1958. Two Japanese scientists here to study soybean processing. Oct. 30. p. A-5.
• ***Summary:*** A large photo shows C.W. Hesseltine and A.K. Smith of the USDA Northern Utilization Research and Development Division [NRRL], and visiting Japanese scientists Tokuji Watanabe and Kazuo Shibasaki. The two Japanese scientists have arrived in Peoria to start a year's search for ways to increase the use of U.S. soybeans in Japanese foods–especially tofu and miso. The studies will conducted under an agreement between the Agricultural Research Service (ARS), the USDA's Foreign Agricultural Service, and the American Soybean Association. The research is part of USDA's research and development program to find new outlets for U.S. farm crops.

Dr. A.K. Smith of the Northern Division spent several months in Japan last year studying soybean utilization. He found that Japanese prefer U.S. soybeans for oil-mill processing, which accounts for about half of all Japanese soybeans. The other half is used to make traditional foods, and only a limited quantity of U.S. soybeans are used in this way.

"Dr. Shibasaki is an associate professor in the department of agriculture chemistry at Tohoku University, Sendai, Japan, and an adviser of Miyagi Prefecture Miso and Shoyu Industry Association.

"Mr. Watanabe is chief of the grain processing section of the Food Research Institute, Ministry of Agriculture and Forestry."

Note: Soyfoods Center owns a copy of this black-and-white photo (8½ by 11 inches); it was a gift of the USDA National Center for Agricultural Utilization Research (Peoria, Illinois), which owns the photo.

4044. *Hercules Mixer* (*Hercules Powder Co., Wilmington, Delaware*).1958. This is Harbor Beach, Michigan, where more than 400 Herculites turn millions of pounds of flour into protein for food supplements, natural food flavoring, wheat starch, and adhesives. 40(9):1-11. Oct.
• ***Summary:*** About the Hercules Powder Co. (formerly Huron Milling Co.) which is the only industrial plant in Harbor Beach. Many of the townspeople work at the plant. The plant makes Hercules MSG, HVP, and vital wheat gluten. An aerial photo taken from over Lake Huron shows the Huron Milling Co. with the town of Harbor Beach in the background. A coal dock juts out into the harbor. A large pond, probably for starch disposal, appears at the far right.

4045. *Life*.1958. From Chun King's frozen food bazaar... you come up with meals as excitingly different as this (Ad). 45(19):92. Nov. 10. *
• ***Summary:*** A full-page color ad featuring Chun King frozen foods. Color photos show the front panels of packages of Chun King Fried Rice, Chun King Egg Rolls, and Chun King Chicken Chow Mein.

"You can do it... Canton-easy (R). You can discover all sorts of ways to make meals sparkle, your meal-planning fresh and new. The place to look is your grocer's frozen food cabinet." "The royalty of American-Oriental Foods–Canned and frozen." In the lower right is a small cartoon of a Chinaman on snow shoes, with outstretched arms, wearing a pink robe and a yellow crown.

4046. Mogi, Masatoshi. 1958. [Shoyu, a Japanese sauce]. *Japanese Patent* 10,199. Nov. 25. (Chem. Abst. 53:4650a). [Jap]*
• ***Summary:*** Koji is prepared from 550 gm soybeans, 129 gm wheat, and 66 gm soy wheat. Then 660 cc of 7.5% sodium chloride solution is added, and the mixture is inoculated with the enzyme glutaminase obtained from the natto bacterium, *Bacillus subtilis*. After 7 days, sodium chloride is added to 18% concentration. The mixture is kept at 30°C for 3 months to give shoyu containing 23.5 mg/cc glutamic acid. Address: Noda, Japan.

4047. *Hercules Mixer* (*Hercules Powder Co., Wilmington, Delaware*).1958. Come in for a visit with Herculites at Harbor Beach plant. Part II. 40(10):14-23. Nov.
• ***Summary:*** Harbor Beach is in Michigan. Flowcharts show how each Huron Milling product is made. From wheat protein is made vital gluten and Vicrum. Devital gluten is digested in an acidic solution, filtered, decolorized, and crystallized. From glutamic acid is made MSG. From the rest of the crystallized substance is made HVP liquid, which ends up as HVP pastes (Dee-S, Luxor, Jarvis), blended "with enzyme" to make Age-It, used in sauces (Prozate, E-610, L-625), or spray dried to make HVP powders (5-SD Seasoning, HVP-A). From the wheat starch are made laundry starches, edible wheat starches, Starbake, etc.

4048. Inoue, Takashi. 1958. Tamari jôzô-yô kokei kôji ni kansuru kenkyû. II. Miso-dama ni tsuite [Studies on the use

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of solid koji for making tamari. II. On "Miso-dama" (1)]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 36(11):458-62. Nov. English-language summary at start of issue, p. 42. [4 ref. Jap; eng]

• ***Summary:*** Miso-dama are balls made of cooked soybeans. The size of each ball has a great influence on the fermentation. Address: Nagoya Miso and Tamari Co., Ltd. (Nagoya Miso Tamari K.K.), Japan.

4049. Sakaguchi, Kenji. 1958. Studies on the activities of bacteria in soy sauce brewing. III. Taxonomic studies on *Pediococcus soyae nov. sp.* the soy sauce lactic acid bacteria. *Bulletin of the Agricultural Chemical Society of Japan* 22(6):353-62. Nov. Bound in the back of Nippon Nogei Kagaku Kaishi (J. of the Agricultural Chemical Society of Japan). [21 ref. Eng]

• ***Summary:*** "Thirteen strains of salt-tolerant specific lactic acid bacteria were isolated from soy sauce brewing mashes, and their taxonomical characteristics investigated." Details are given.

"From these facts the author proposed the name *Pediococcus soyae* nov. sp. for this sort of organism."

This bacterium requires two specific nutrients–a peptide-like substance (P-factor) and a dialyzable unknown substance (S-factor). Address: Noda Inst. for Scientific Research, Noda City, Chiba prefecture, Japan.

4050. Sakaguchi, Kenji. 1958. Studies on the activities of bacteria in soy sauce brewing. II. The proteinases and the existence of *Bacilli* spores in the soy mash (moromi). *Bulletin of the Agricultural Chemical Society of Japan* 22(6):345-52. Nov. Bound in the back of Nippon Nogei Kagaku Kaishi (J. of the Agricultural Chemical Society of Japan). [22 ref. Eng]

• ***Summary:*** The activity of proteinases [enzymes that break down / hydrolyze protein] in soy mash [*moromi*] juice was measured. "Compared to proteinases of purely cultured soy koji digest which consisted of only *Aspergillus* proteinases, no difference was observed with the proteinases of usual soy mash through the studies of pH-proteinase activity curves, the inhibition test, and inactivation by acid and alkali treatment. It is supposed, therefore, that the proteinases in soy mash are mostly of *Aspergillus* origin."

Very few *Bacilli* vegetative cells were found in the soy mash. Therefore the researcher "assumed that *Bacilli* mainly grow in the koji and survive in the soy mash mostly in the form of spores. This work also suggested that the so-called '*Aspergillus* alkaline proteinase' consists of two distinct proteinases, and further the existence of an inhibitor which only acts at pH 8." Address: Noda Inst. for Scientific Research, Noda City, Chiba prefecture, Japan.

4051. Goodhue, Norma H. 1958. Epicure series features Japan chef: Feast for eyes, palate. *Los Angeles Times*. Dec. 25. p. A1.

• ***Summary:*** A recipe for Beef sukiyaki (Tokyo style) includes "1 tofu (soy-bean cake)," and "8 ounces (1 cup) soy sauce."

Monosodium glutamate is mentioned in the recipes for Suimono (Clear soup) and Tempura sauce. Address: Staff writer.

4052. *Hercules Mixer* (*Hercules Powder Co., Wilmington, Delaware*). 1958. The Huron Milling story. Part III (conclusion). Many skills are needed to run Harbor beach plant, to improve its products, and to sell them. 40(11):2-8. Dec.

• ***Summary:*** The story (with many photos) shows the various activities at the Harbor Beach plant in Michigan. Each of the articles in this three-part series has a strong focus on the people/employees who make the company run.

4053. *Soybean Digest*. 1958. Japanese scientists start work at Peoria. Dec. p. 21.

• ***Summary:*** "Two Japanese scientists, Kazuo Shibasaki and Tokuji Watanabe, have arrived at the Northern Utilization Research and Development Division, Peoria, Illinois, to start a year's search for ways to increase the use of U.S. soybeans in Japanese foods...

"Dr. Shibasaki and Mr. Watanabe will study the use of U.S. whole soybeans in making tofu and miso, traditional Japanese foods... Dr. Shibasaki is an associate professor in the department of agricultural chemistry at Tohoku University, Sendai, Japan, and an adviser of Miyagi Prefecture Miso and Shoyu Industry Association. Mr. Watanabe is chief of the grain processing section of the Food Research Institute, Ministry of Agriculture and Forestry."

4054. Choi, S.H.; Haw, K. 1958. [Biochemical studies on Korean fermented foods. VII. A study on biochemical process during the fermentation of "kanjang"]. *Report of the National Chemical Laboratory, Seoul, Korea* 7:11. [Kor; eng]*

4055. Choi, S.H.; Haw, K. 1958. [Biochemical studies on Korean fermented foods. VII. A study on biochemical process during the fermentation of kanjang]. *Report of National Chemistry Laboratories* (*Korea*) 7:11-13. [Kor]*

• ***Summary:*** In order to confirm the biochemical process of the fermentation from soybean to Maiju [Meju; soybean koji] and of the fermentation from Maiju to Kanjang and Dainjang [Doenjang], the nitrogen distributions of soybean, Maiju, Kanjang, and Dainjang are studied on protein nitrogen, peptide nitrogen, amino nitrogen and volatile nitrogen. And the contents of amino nitrogen, peptide nitrogen, and true protein nitrogen to the total nitrogen of soybean, Maiju, Kanjang, and Dainjang are shown in table I and the ratios are shown in table 2 and the figure. According to the results

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indicated in the tables and figure, the following conclusions are summarized:

1. The main biochemical process at the fermentation from soybean to Maiju would be the degradation from protein in soybean to peptide compounds in Maiju.

2. The main biochemical process at the fermentation from Maiju to Kanjang and Dainjang would be the degradation from peptide compounds in Maiju to amino nitrogen compounds in Kanjang and Dainjang.

3. However, because the protein nitrogen indicated as the ratio of protein nitrogen to total nitrogen content is higher in Dainjang, it is assumed that there might be two kinds of proteins in soybean; one is the protein which could be converted to peptides at the Maiju fermentation and to amino nitrogen compounds lastly at the Kanjang fermentation. The other is the protein which would not be affected at these fermentations at all, remaining as the protein nitrogen in Dainjang, one of the finished products.

4. It can be indicated that the process from Maiju to Kanjang and Dainjang would be due to the fermentation as indicated by Haw and Choi. Address: National Chemistry Laboratories, Seoul, Korea.

4056. Hahn, Y.S.; Park, B.D. 1958. [Studies on the manufacture of soy sauce. II. On *Aspergillus oryzae* in Korean soybean meju and wine kokja mould]. *Report of the National Industrial Research Institute (Seoul, Korea)* 8:75-82. [Kor]*

• ***Summary:*** In a previous paper, pioneer work with the genus *Aspergillus* in Meju [Korean soybean koji] and wine Kokja was reported. This is a continuation of that work. 24 kinds of long-type conidia head and 21 kinds of round-type conidia head were isolated in the genus *Aspergillus* from Kokja. Five results are given.

1. The long type has longer sporangiophores and smaller vesicles than the round type, and the former's sterigmata is in a single line, while the latter is in a double line.

2. The propagative velocity of the round type is faster than the long type, and spore formative velocity of the long type is faster than the round type.

4. In general, the amylolytic power of the long type is stronger than the round type, therefore the researchers the molds distributed in Kokja consist of almost entirely the long type. They obtained 4 superior round types and 6 superior long types.

5. The proteolytic power of the round type is generally stronger than that of the long type. They obtained superior round types. Address: National Industrial Research Institute, Seoul, Korea.

4057. Kim, S.C.; Choi, D.H. 1958. [Research on improvement of soy sauce]. *Report of the Scientific Research Institute M.N.D. Korea* [Kor]*
Address: The Scientific Research Institute M.N.D. Korea, Seoul, Korea.

4058. Toyama, N.; Kamata, M. 1958. Shinshiki ni-gô shôyu jôzô-hô no shin henhô ni tsuite [An improvement in brewing Japanese semi-fermented shoyu]. *Miyazaki Daigaku Nogakubu, Kenkyu Hokoku (Bulletin of the Faculty of Agriculture, University of Miyazaki)* 3(1/2):18-22. [6 ref. Jap; eng]

• ***Summary:*** Edible soy products manufactured by the Noda Shoyu Company of Japan.

4059. **Product Name:** [Flower Brand Sweet Soy Sauce].
Foreign Name: Ketjap Benteng Manis.
Manufacturer's Name: Vanka-Kawat.
Manufacturer's Address: Dr. Augustijnlaan 40, 2283 CH Rijswijk Z.H., Netherlands.
Date of Introduction: 1958.
Ingredients: Extract of soy beans, sugar, salt.
Wt/Vol., Packaging, Price: 115 ml, 250 ml, 500 ml, 1 liter bottle.
How Stored: Shelf stable.
New Product–Documentation: Form filled out and labels sent by Marianne Westra of Vanka Kawat. 1990. July 2. Ketjap Benteng Manis was introduced in 1958. Labels: 4 sizes. Red, yellow, black, and white. In Dutch: Soja Saus Zoet. In German: Soja Sosse Gesuesst. "Superior quality. Used as seasoning and also as ingredients by Chinese / Indonesian cooking."

Note: This is the earliest English-language document seen (April 2012) that uses the term "Ketjap Benteng Manis" to refer to a type of Indonesian soy sauce.

4060. **Product Name:** [Flower Brand Salted Soy Sauce].
Foreign Name: Ketjap Benteng Asin.
Manufacturer's Name: Vanka-Kawat.
Manufacturer's Address: Dr. Augustijnlaan 40, 2283 CH Rijswijk Z.H., Netherlands.
Date of Introduction: 1958.
Ingredients: Extract of soy beans, salt.
Wt/Vol., Packaging, Price: 115 ml, 250 ml, and 500 ml bottle.
How Stored: Shelf stable.
New Product–Documentation: See next page. Form filled out and labels sent by Marianne Westra of Vanka Kawat. 1990. July 2. This product was introduced in 1958. Labels: 3 sizes. Red, yellow, black, and white. In Dutch: Soja Saus Zoet. In German: Soja Sosse Gesuesst. "Superior quality. Used as seasoning and also as ingredients by Chinese/ Indonesian cooking."

4061. **Product Name:** [Flower Brand Yellow Label Black Soy No. 1: Soy Sauce Salt].
Foreign Name: Soja Saus Zout: Pikante Saus.
Manufacturer's Name: Vanka-Kawat.

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Manufacturer's Address: Dr. Augustijnlaan 40, 2283 CH Rijswijk Z.H., Netherlands.
Date of Introduction: 1958.
Ingredients: Soybean extract, salt, water, sugar.
Wt/Vol., Packaging, Price: 1 liter (33 oz) bottle.
How Stored: Shelf stable.
New Product–Documentation: See previous page. Form filled out and label sent by Marianne Westra of Vanka Kawat. 1990. July 2. This product was introduced in 1958. Label: Green and yellow. In German: Soja Sosse Salz.

4062. **Product Name:** [Tiger Brand Soy Sauce: Black Soy, Salt].
Foreign Name: Tiger Brand Soja Saus, Zout.
Manufacturer's Name: Vanka-Kawat.
Manufacturer's Address: Dr. Augustijnlaan 40, 2283 CH Rijswijk Z.H., Netherlands.
Date of Introduction: 1958.
Ingredients: Extract of soy beans, salt, spices.
Wt/Vol., Packaging, Price: 250 ml and 500 ml bottle.
How Stored: Shelf stable.
New Product–Documentation: Form filled out and labels sent by Marianne Westra of Vanka Kawat. 1990. July 2. This product was introduced in 1958. Labels: 2 sizes. Black on yellow. Originally this spiced soy sauce was apparently made by Vanka Kawat, but now it is imported from Chuen Cheong Sauce Factory in Singapore and bottled by Vanka-Kawat in the Netherlands.

4063. Asai, Toshinobu; Arima, Kei. 1958. Summaries of papers presented by Prof. Teizo Takahashi and Prof. Kin-ichiro Sakaguchi. Tokyo: Kasai Publishing. 206 p. The lengthy front matter is unnumbered. [584 ref. Eng; jap]
• ***Summary:*** This work was compiled and published by "The Committee of Commemorative Meeting of 35 Year's Anniversary of Professor Kin-Ichiro Sakaguchi." Contents: Foreword, by T. Asai. Chronology of the professional career of Teizo Takahashi (1875-1952; he was Prof. Sakaguchi's teacher). Chronology of the professional career of Kin-ichiro Sakaguchi (1897-1958). A brief review of the researches of Prof. Teizo Takahashi (mainly with saké). A brief review of the researches of Prof. Kin-ichiro Sakaguchi. Prof. Takahashi has 190 references, and Sakaguchi has 394 references. Address: Tokyo, Japan.

4064. Caleva, Harry. 1958. Chinese cookbook for quantity service: Authentic professional recipes. New York, NY: Ahrens Publishing Co., Inc. 169 p. See p. 150-53. Index. 24 cm.
• ***Summary:*** This is basically a Cantonese cookbook; the Chinese words are written in Cantonese.

The chapter titled "Sauces" (p. 150-53) includes recipes for the following: Soy sauce (light) (*Yuen You*). With 1½ lbs. soy beans (crushed). Soy bean jam (*Mien-Shee Ding*). With 1½ lbs. soy beans. Rice jam (*Dow-Ding*). With 1¼ lbs. roasted soy beans (mashed). Subgum sauce (Sweet and sour) (*Sub Gum Tien-Soon Wu*). With "1 tsp. soy sauce (heavy)." Oyster sauce (*Hoo You*). With ¼ cup soy sauce (light). Chinese brown gravy. With 1 tsp. soy sauce (heavy). Onion sauce, Cantonese style. With 3/4 cup soy sauce (light).

Black soy sauce (*Chow You*). With soy bean 1½ lbs. Salt 2 tbs. [tablespoons]. Water 3 quarts. Molasses 1 pint. Rice wine ½ cup.

"1. Combine soy beans, salt, and water; bring to a boil and simmer for five hours; remove and strain. Pour into a jar and seal airtight, then age in the sun for six months.

"2. At the end of six months, add remaining ingredients, reseal and let age in the sun another six months.

"Note: This sauce is used for seasoning food. Not used in cooking."

Note: None of the many recipes that call for months of aging in the sun will work; they do not contain koji (*Qu*). Glossary of Chinese terms [Cantonese] (p. 161-64): *Dow Foo*–Bean curd. *Dow Ngaah*–Bean sprouts. *Dow See*–Black bean sauce [sic, fermented black soybeans]. *Foo Jook*–Soy bean cream [dried yuba sticks]. *Foo Yu*–Chinese cheese [fermented tofu]. *Gee Yeou*–Black sauce. *Gna choy*–Bean sprouts. *Jeung*–Sauces. *Jeung Yow* (*you*)–Soy sauce. *Jook*–Congee. *Mien See*–Brown bean sauce. *Naam Yu*–Red bean curd cheese in red sauce. *Nom Yu*–Red cheese. *Saang Se Jeung*–Red bean sauce (thick). *See Yeou* (*you*)–Soy sauce [fermented black soybean sauce]. *Tiem Jook*–Dried bean curd [sweet dried yuba]. *Woo Dow*–Dried black [soy] beans.

Note 1. This is the earliest English-language document seen (Oct. 2011) that uses the term *Foo Jook* to refer to dried yuba sticks.

Note: This is the earliest English-language document seen (April 2012) that contains the term "Soy sauce (light)" plus its Cantonese name (*Yuen You*) or the term "Black soy sauce" plus its Cantonese name (*Chow You*).

4065. Chicago Shimpo, Inc. 1958. Chicago Japanese American directory. Chicago, Illinois: The Chicago Shimpo, Inc. 30 cm. [Eng; jap]
• ***Summary:*** In Japanese characters at the top left of the cover: *Nikkei-jin Shikago Jushoroku.* This directory, which sells for $1.00, also contains many space ads. On the cover is a photo of the Chicago skyline behind a public park in which there is a white band shell (a bandstand having at the rear a sounding board shaped like a huge concave seashell) and in the distance a fountain.

Page 14: Half-page ad for: "Pacific Trading Co. General importer and exporter. 884 W. Erie St., Chicago 22, Illinois. They also have offices in Los Angeles (119 S. Central Ave.) and New York City (57-10 38th Ave.). Items they import include Kikkoman shoyu, Ajinomoto, and rice.

Page 15: Half page ad for Aji-no-moto (Tokyo, Japan) titled "Mother knows best." "When it comes to cooking

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food with hearty, old-fashioned flavor, mother knows best–she always seasons with Aji-no-Moto," "99+% pure monosodium glutamate."

Page 19: 1/8 page ad for: "Tanaka Tofu Mfg. Co., 1358 N. Clark (rear). WH 4-3938." The top 30% of the ad is in English; the rest is in Japanese. Same page: ¼ page ad for Fujimoto & Company, 302 South 4th West, Salt Lake City, Utah. Tel. EMpire 4-8279. Illustrations show: (1) The company's Kanesho brand; (2) A Japanese woman kneeling behind a porcelain mortar (*suribachi*), holding a wooden pestle (*surikogi*), and using it to grind miso until it is smooth. The top 25% of the ad is in English; the rest is in Japanese. The company also makes and sells koji.

Page 46: Under "Food manufacturers" and again under "Food markets and groceries" are listings (entirely in English) for Tanaka Tofu Mfg. Co. at the address and phone shown above. Plus: "After 2 pm call DI 8-9703."

Talk with Karl Matsushita, director, Japanese-American National Library in San Francisco. 2008. Feb. 1. He thinks these directories were first published after World War II. His library has only one volume of this periodical published in 1985; he does not know when the first volume was published. The War Relocation Authority (WRA), after World War II, pushed Japanese to relocate in Chicago and the Midwest, where they felt there would be less anti-Japanese sentiment. Address: 1310 N. Wells St., Chicago 10, Illinois. Phone: WHitehall 3-2326.

4066. Ch'ing kung yeh pu. Shih p'in erk chu (Ministry of Light Industry. Second Food Bureau). 1958. Ku t'ai wu yen fa hsiao niang tsao chiang yu [Making soy sauce by the solid saltless fermentation method]. Peking, China: Ch'ing kung yeh ch'u pan she (Light Industry Press). 52 p. [Chi] Address: Peking, China.

4067. La Choy Food Products, Inc. 1958. The art and secrets of Chinese cookery. Archbold, Ohio: La Choy Food Products. 31 p. Illust. (some color). 10 x 16 cm. *
• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home.

4068. Motoyama, Tekishu. 1958. Inshoku jiten [Encyclopedia of food and drink]. Tokyo: Heibonsha. 604 p. Illust. 27 cm. [Jap]
• ***Summary:*** Includes listings for the following soy-related terms: Aburage (deep-fried tofu pouches), aemono (Japanese-style salads), agedashi-dofu, daizu (soybeans), dengaku, fu (wheat gluten; but the term "seitan" is not listed in this book), ganmodoki (tofu burgers), gisei-dofu, goma-dofu (sesame tofu), goma-miso (sesame miso), inari-zushi, iri-dofu (scrambled tofu), kenchin-jiru, miso, namemiso, natto, oboro-dofu (soymilk curds), oden (stew), okara, shira-ae (tofu salad), shoyu, sukiyaki, tekka, teriyaki, tofu, tonyu (soymilk), tsuto-dofu, unohana (okara), yakimiso (broiled miso), yuba.

Separate entries, with detailed information, are given for some of the above words or terms.

4069. Motoyama, Tekishu. 1958. Inshoku jiten: Shôyu [Encyclopedia of food and drink: Shoyu (Document part)]. Tokyo: Heibonsha. 604 p. See p. 278-80. [Jap]
• ***Summary:*** Contents: Ways of using soy sauce. Brewing soy sauce. Chemical soy sauce.

"Ways of using soy sauce (*shoyu*): It goes without saying that the spread and development of soy sauce is due to its ability to enhance the flavors of foods and create new combinations of flavors. The fact that *namasu*, a dish of raw fish and vegetables seasoned with rice vinegar and soy sauce, is a favorite and representative way of serving sashimi is due largely to the flavor contributed by the soy sauce. On the whole, it cannot be denied that soy sauce tantalizes the palate. The basic significance of soy sauce lies in its ability to supplement the rather simple flavor given food when only salt is used as a seasoning. It is generally thought that the true flavor of soy sauce can best be enjoyed in *kijoyu* or plain, fresh unpasteurized soy sauce. Shoyu surpasses other seasonings in its ability to make each dish unique by evoking complex and delicate flavors inherent in the food itself.

"It is important that its users recognize this point from the beginning. Simply speaking, to experience the quintessence of the flavor of soy sauce, try serving it plain as *kijoyu* over fresh sashimi. In some cases the flavor of fish broiled lightly with salt (*shio-yaki*) or salted pickles can be improved by the addition of a very small amount of soy sauce, however basically these are esteemed for the flavor imparted by the salt. And if high-quality *koikuchi* is heated above a certain temperature–as is the case in broiling–a strong and unpleasant flavor will result. In order to compensate for this, *usukuchi* was created. Although pale in color, it contains a relatively large amount of salt. Able to harmonize well with other seasonings, it has a simple flavor and dissolves easily in water. It is used for soups and *nimono* (dishes simmered in liquids) since there are considered best when their flavors are light and simple. Used by itself it is too salty, and its flavor is inferior to that of regular shoyu. Unless used with liquids in broths, it does not harmonize well with other flavors.

"In broiled eels (*kabayaki*), in the mirin soy sauce (*mirin-joyu*) used with teriyaki, in tsukudani (preserved foods simmered in soy sauce), even in foods simmered in liquids (*nimono*) and especially in cooking where water is not used, *koikuchi* is preferred to *usukuchi* since it was originally developed for its rich, distinct flavor, slightly heavier consistency and darker color. The reason it is heated in *mirin-joyu* is to help unite both ingredients. It is also said that the longer-lasting the seasoning soy sauce (*tare*) used for broiled eels, the better; after several years of use, the oil from the eels and fish becomes mixed with the soy seasoning

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sauce. Each time the sauce is used afresh in broiling, the heat helps the soy, mirin, and oils to "marry." If the sauce is reheated in a pot, the fire should be turned off just before the liquid comes to a boil. Most fish are first broiled without seasoning sauce, and the sauce then applied later. In the case of tsukudani, it is more important that it last well than that it have a fine flavor so the problem is slightly different.

"Usukuchi is used largely in the Kyoto area and koikuchi in the Tokyo area. However Kyoto cooks use both types of soy sauce in restaurants and at home whereas Tokyo cooks use koikuchi almost exclusively, especially at home. When seasoning foods, if they are too bland or weak, we usually add shoyu, and if they are too salty we usually add sugar. Flavors in which sugar and soy sauce are combined have never been considered high class. Throughout most of Japan's culinary history, seasonings, herbs and spices have been used to a very limited extent. Shoyu and salt have been used to evoke the flavors inherent in foods, and the people have come to a deep appreciation for salt from the point of view of both economy and flavor. If you are well versed in the way of using salt in foods, there is no need to use *usukuchi*, and the efficiency of regular shoyu will rise.

"In recent years, for the sake of portability and preservation, soy sauce has been spray dried to make soy sauce powder and crystals. These of course, have a flavor and fragrance which is inferior to that of regular soy sauce. Since a small amount of mold often forms on the surface of shoyu during the warm summer months, this is often removed by heating the shoyu to 50-60°C or straining it through cotton cloth. It can also be prevented by adding a small amount of mustard oil to the shoyu.

Note: This is the earliest document seen (April 2012) that mentions spray-dried or dehydrated soy sauce. After instant noodles were first marketed in Japan in Aug. 1958, sales of spray-dried increased as a seasoning for the noodles.

"Brewing soy sauce: Soy sauce is made from a fermented mixture of soybeans and wheat to which water and salt are added. The three basic varieties are *koikuchi* (literally: dark mouth) or regular dark soy sauce, *usukuchi* (literally: light mouth) or the lighter, milder, less common soy sauce used in the Kyoto area and *tamari*. Each of these is made by a somewhat different process. However in the case of the most common soy sauce, it is said that the finest flavor is attained if the koji is prepared from equal quantities of soy and wheat. The amount of salt ranges from 90-110% of the combined amounts of the soybeans and wheat. Thus the amount of water is generally twice the amount of salt. The finest soy sauce contains a relatively small percentage of both salt and water. Inferior grades contain 110% salt or water, as measured above.

"It is not absolutely necessary that soybeans contain all of their natural oils in order to use them in soy sauce. Although a certain percentage of the beans may be defatted soybeans, this percentage is very delicate. When a large percentage of defatted soybean meal is used, it is necessary to use a chemical process for adding amino acids to the soy sauce in order to obtain satisfactory fragrance in the soy sauce.

"Ordinarily, the wheat is roasted until golden brown and cracked into small pieces. The soybeans are rinsed, soaked overnight in water and then either boiled or steamed. After they have cooled somewhat, they are mixed with the cracked roasted wheat, koji spores (*tane koji*) are added and the mixture placed in a warm incubation room (*muro*). By the fourth day the mixture will have turned into *koji* and be covered with a bloom of fragrant white mold. At this time the salt and water solution are added in order to make *moromi*, the mash of soy sauce, wheat and soybeans. This mixture is stirred from time to time and allowed to ferment and age for at least one year.

"It is commonly said that one-year-old moromi has only fragrance, two-year moromi also has flavor and three-year-old moromi has fine color as well. In order to attain the perfect blend of fine qualities, these three different types of moromi are often mixed in the following proportions: 5 parts 1-year moromi, 2 parts 2-year and 1 part 3-year moromi. When the mixture is placed in a cotton sack and pressed, about 70-80% of the weight can be extracted as soy sauce liquid. This is allowed to settle and become clear for 2-3 days. After removing the oil which floats to the surface and the dregs on the bottom, the remainder–called *nama-tamari* (fresh-tamari)–is heated to 60-70°C to sterilize or pasteurize it. It is then known as *Hi-ire* (put into fire), and is ordinary soy sauce made in Japan" (Continued).

4070. Motoyama, Tekishu. 1958. Inshoku jiten: Shôyu [Encyclopedia of food and drink: Shoyu (Document part II)]. Tokyo: Heibonsha. 604 p. See p. 278-80. [Jap]

• ***Summary:*** Continued: "In recent times, in order to maximize profits and employ capital most efficiently, various methods of high-speed brewing and processing have begun to be used. And due to the relationship between supply and demand, substitute varieties of each of the main types of soy sauce have been developed and are now being produced.

"*Usukuchi* soy sauce is made to have a light color due to the way it is used in cooking. The basic method of manufacture is the same as for regular soy sauce, however to give it a lighter color, the water in which the soybeans are cooked is changed during cooking and then drained off as soon as the beans come to a boil. The wheat is also roasted for a shorter time than for regular soy sauce to give it a lighter color and prevent scorching. The koji is prepared in more or less the same way as for regular soy sauce however the koji is removed from incubation when the mold is in the state called shimofuri or 'salt and pepper' so that there is less (?) mold than for regular soy sauce koji. A larger amount of brine is mixed with the koji and the mixture is allowed to age for 6-12 months. Before pressing, sweet sake (amazake) is

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added as a natural sweetener. The liquid is heated to a lower temperature (60°C) for a shorter time (20-30 minutes) during sterilization. Therefore usukuchi cannot be kept as long as regular soy sauce without spoiling.

"In regular soy sauce–which is generally seen as a slightly lower quality product than tamari–salt water is also added to the pressed moromi and the mixture re-pressed to yield a liquid called *bansui*. This is used as one of the raw materials in the even lower quality chemical soy sauce. The main areas which have produced *koikuchi shoyu* since ancient times are Choshi and Noda in Chiba prefecture and Shozushima in Kanagawa prefecture. The main area producing *usukuchi shoyu* is Tatsuno in Hyogo prefecture, however it is also brewed in large quantities in farmhouses for home use. *Kanro shoyu* is a product originally developed in Yanaitsu in Yamaguchi prefecture. Made by reprocessing koikuchi shoyu into a thick, sweet liquid, it is prized in the Kyoto area where it is served with *sashimi* from white fish meat.

"Chemical *shoyu* (*daiyô* {substitute} *shoyu*): Ordinarily, at least one year is required to brew regular soy sauce so that at the large breweries, huge aging cellars or warehouses are necessary. Since this ties up a large amount of capital and reduces profits, studies were first made of ways to speed up the traditional process and then of ways to make soy sauce using chemicals and new raw materials. Soon a large number of varieties of 'amino acid shoyu' appeared on the market. Inexpensive defatted soybean meal began to be used in place of whole, natural soybeans. The meal is first broken down by hydrochloric acid and then neutralized by soda ash to produce crude amino acid. If this product is mixed with brine, the resulting liquid has much the same color and flavor as natural soy sauce. However since the fragrance is poor, ready-made moromi is then added and the mixture reheated. The amino acids in the protein break down in to starches which are also added to produce sugars.

"By the discovery of sugar-containing amino acids, it became possible to devise soy sauce which had both sweetness and viscosity. After experiencing some difficulty with using low-priced defatted soybean meal, research began in the use of fish whose level of freshness had fallen, fish meal, viscera, chrysalis dregs, sesame seed dregs [defatted sesame meal left the oil was removed], and cotton seed dregs. Products were also developed by placing the pressed dregs of regular soy sauce in a liquid made by simmering fish, shell fish and seaweeds in order to impart their flavor to the soy sauce. Another variety of chemical soy sauce was developed for kidney disease patients who are unable to use salt in their food. Malic acid soda made from apples was used to simulate a salty flavor."

4071. Motoyama, Tekishu. 1958. Inshoku jiten: Teriyaki [Encyclopedia of food and drink: Teriyaki (Document part)]. Tokyo: Heibonsha. 604 p. See p. 397. [Jap]

• ***Summary:*** This is a Japanese cooking method used to make grilled dishes (*yakimono ryori*). Fish meat is brushed or dipped in Mirin-shoyu then grilled.

Use the following types of fish: *Tai* (a sea bream, a red snapper, a porgy), *sawara* (a Spanish / spotted mackerel), *buri* (a yellowtail), or fresh salmon (*nama sake*).

Mirin is used as the final touch to give a glossy or shinier appearance. In Japanese, the term *teri o dasu* is used to mean "bring out the gloss / luster" or "to make it shine." Therefore it is called teriyaki (glossy / shiny grill).

Note: The meaning of "Mirin-shoyu" is unclear. Are the only two ingredients mirin (sweetened sake for cooking / seasoning) and shoyu (regular Japanese-style soy sauce)? If yes, in what proportions are they used? If no, what are the other ingredients and the proportions of each?

4072. Richards, Janet; Richards, Charles. 1958. Basic Chinese and Japanese recipes. 3rd ed. rev. and expanded. San Francisco, California: City Lights Books. 75 p. Index of recipes. 17 cm.

• ***Summary:*** Contents: Introduction (General. For epicures, vegetarians, and dieters). Chinese recipes. Japanese recipes. General information: Buffet, party foods & hors d'oeuvres. To brew tea. Special imported ingredients. Where to get ingredients & equipment.

Introduction: "Most of the recipes in this book appear constantly on the menus of the Chinese and Japanese restaurants of San Francisco, New York, and a few other cities that have a population segment with Chinese or Japanese ancestry." Many recipes call for "soy sauce" and up to 1 teaspoon "MSG powder."

The section "For epicures, vegetarians, and dieters" states: "Of the special foods of the Orient, the most versatile is the soy bean. The number of widely differing foods made from soy beans is very large, including bean thread, noodles, soy sauce, soy milk with its derivatives such as dofu, the fermented nam yu and fu yu of China and miso of Japan. Western food technology has also added to the list."

Soy-related recipes–Chinese: Lo han chai (with dofu and seaweed, p. 19-21). Dofu with oyster sauce ("1 block of Japanese tofu, or 2 cakes of Chinese tofu," p. 22). Steamed fish with dofu (p. 29-30). Chicken in soy (with 1 cup soy sauce, p. 31-32). Chinese sauce [commercial]: Foo yü (sharp thick sauce [fermented tofu]). Jeung yow (soy sauce).

Note: This is the earliest English-language document seen (Oct. 2011) that uses the terms "nam yu" or "fermented nam yu" or "Foo yü" to refer to fermented tofu.

Japanese recipes: Miso soup (with tofu. Miso is "fermented soy beans," p. 48). Konbu salad (with soy sauce, p. 49). Egg plant with miso (p. 50). Turnips in soy (soy sauce, p. 50). Misoyaki (p. 54-55). Joints of chicken teriyaki (with Teriyaki sauce, p. 56). Beef sukiyaki (with tofu, p. 59-60). Beef teriyaki (cook on a hibachi, p. 60). Teriyaki sauce (p. 61: Ingredients: ½ cup table syrup {light cane molasses},

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1 quart shoyu {high quality Japanese soy sauce}, 3/4 lb. sugar, 2 pieces dashi konbu {dried kelp} 6 inches long, ½ teaspoon MSG powder, 2 tablespoons sake). Quick teriyaki sauce (p. 61; Ingredients: 3/4 cup soy sauce, 3 tablespoons sake {or sherry}, ¼ cup sugar, 1 teaspoon grated ginger, ½ tsp. MSG powder). Buta dofu (with "soy bean curd," p. 63).

Special imported ingredients (p. 68-71): Japanese–Canned foods: Bean curd, prepared black soy beans. Packaged foods: Miso (the light variety, fermented soy bean paste). Bottled foods: Fuyü (Chinese bean cake: Order top quality such as Quong Hop brand). Shoyu (soy sauce; Order top quality such as Kikkoman, Higeta, or Marukin). Chinese–Bottled foods: Soy sauce. Black beans (Dow Shee; for black bean sauce).

4073. Smith, Allan K. 1958. Vegetable protein isolates. In: A.M. Altschul, ed. 1958. Processed Plant Protein Foodstuffs. New York: Academic Press. xv + 955 p. See p. 249-76. Chap. 10. [143 ref]

• ***Summary:*** Contents: Introduction. Source materials for protein isolates: Oilseeds, cereal grains. Processing meal for protein isolation. Preparation and properties of isolated protein: Native proteins, commercial protein isolates, isolated proteins for food uses. The hull problem. Uses of protein isolates: Industrial applications, food uses. Selected oilseed protein isolates: Soybean (properties, soybean whey, commercial isolation, industrial and food uses), peanut (properties, utilization), cottonseed (properties, utilization), flaxseed, sunflower seed (source materials, isolation and properties). Cereal grain proteins: Corn protein (corn fractions, zein isolation, utilization), wheat proteins (gluten isolation, utilization).

The most important uses for wheat gluten "are for manufacture of monosodium glutamate and fortification of weak flours to produce high-protein bread... The monosodium salt of the L-form of glutamic acid has the unique power... of enhancing the flavor of many foods. Also, it is this salt which is largely responsible for the flavoring quality of soy sauce. Monosodium glutamate was developed to a commercial stage in Japan during the 1920's under the name Ajinomoto and was first produced in the United States in 1934." Five companies in the United States are now producing glutamate with an estimated annual capacity of 18 million pounds.

"The raw materials for glutamate in order of their importance are Steffen's waste (Manning 1948), a by-product of beet sugar refining, wheat gluten, and corn gluten; soybean meal has been used extensively in the Orient. The so-called Steffen's waste... is now the cheapest raw-material source for glutamic acid and accounts for an estimated 50% of production." Address: USDA NRRL, Peoria, Illinois.

4074. *Chicago Daily Tribune.*1959. Costly gospels. Jan. 21. p. 16.

• ***Summary:*** Sotheby's of London held a notable auction in October, 1958. "This time some books and manuscripts collected by the late C.W. Dyson Perrins {of Lee {sic, Lea} & Perrins' Worcestershire sauce} were for sale. Fifty lots brought almost a million dollars, said to be the largest amount ever realized in a single auction of literary property."

Later a 12th century Latin gospel on vellum was sold for £39,000 (about $109,200). Note: 1 British pound sterling is worth about $2.80.

4075. *Life.*1959. Most happy Chinese New Year from Chun King frozen foods (Ad). 54(4):11. Jan. 25. *

• ***Summary:*** A full-page color ad featuring Chun King frozen foods. Color photos show (from top to bottom): A baby wearing black silk top had and a banner across his chest with the numbers "4661" on it. A white bowl heaped with fried rice. Caption: "(Who needs potatoes?)." A serving tray of chow mein. Caption: "If you don't like chicken chow mein, we have shrimp chow mein too." Four party tooters: "Go on a Chinese food toot tonight."

"With the most scrumptious array of Chinese food to ever come out of a freezer. Chun King frozen is the great new way to enjoy authentic Chinese delicacies–flash-frozen to arrive in your kitchen as fresh as they leave our stoves. And that's very fresh. So join the frozen Chun King celebration and have yourself a New Year's Eve party." In the lower right are chopsticks and firecrackers.

4076. Fukushima, Danji. 1959. Studies on soybean proteins. I. Water dispersibility of protein of defatted soybean flour as a criterion for degree of denaturation. *Bulletin of the Agricultural Chemical Society of Japan* 23(1):7-14. Jan. [19 ref. Eng]

• ***Summary:*** Denaturation was measured by a change in the susceptibility of the protein (in a water extract of the flour) to the action of protease from *Aspergillus oryzae* before and after heat treatment. "It was found that the decrease of water dispersibility did not always run parallel with denaturation." Address: Noda Inst. for Scientific Research, Noda-Shi, Chiba-Ken, Japan.

4077. Fukushima, Danji. 1959. Studies on soybean proteins. II. A new method for quantitative determination of the degree of denaturation of protein in soybean flour. *Bulletin of the Agricultural Chemical Society of Japan* 23(1):15-21. Jan. [2 ref. Eng]

Address: Noda Inst. for Scientific Research, Noda-Shi, Chiba-Ken, Japan.

4078. Sakaguchi, Kenji. 1959. Studies on the activities of bacteria in soy sauce brewing. IV. Proteases, transaminases of *Pediococcus soyae nov. sp.* and its numerical transition in soy mash [shoyu moromi]. *Bulletin of the Agricultural Chemical Society of Japan* 23(1):22-28. Jan. [20 ref. Eng]

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• ***Summary:*** Figure 2, a graph titled "Change of viable counts of lactic acid bacteria in soy mash," shows the numbers of two bacteria (in counts per ml) during a 12-month fermentation period. The number of salt-sensitive lactic acid bacteria plummets from 150 million on day 1 to zero shortly before 2 months. The number of *Pediococcus soyae* rises rapidly for zero on day 1 to a peak of 150 million after 4 months, then decreases to about 10,000 after 9 months.

The pH decreases steadily from about 6.0 on day 1 to about 5.0 (more acidic) after 6 months. Address: Noda Inst. for Scientific Research [Noda City, Chiba-ken, Japan].

4079. Claiborne, Craig. 1959. Expert suggests dishes for Oriental celebration. *New York Times*. Feb. 5. p. 34.
• ***Summary:*** Enjoying a New Year's feast is an old Chinese custom. This is the year 4,657 according to the ancient Chinese calendar. Calvin Lee has suggested the menu and recipes. The excellent book *Chinese Cooking for American Kitchens*, by Calvin Lee was recently published by Putnam. One of the four recipes given is Bean curd soup (Dow foo tong), whose ingredients include "1 brick bean curd (dow foo)" and "½ teaspoon monosodium glutamate (Ac'cent)," plus chicken gizzard, liver, and heart, pork, bok choy, and canned bamboo shoots. Two other recipes call for "soy sauce."

4080. Mogi, Masatoshi. 1959. Shôyu jôzô ni okeru saikin no kenkyû [Recent studies on soy-sauce brewing]. *Hakko Kyokaishi* (*J. of the Fermentation Association*) 17(2):78-86. Feb. [58 ref. Jap]
• ***Summary:*** A review with 58 references. Address: Noda Sangyo Kagaku Kenkyu-jo, Noshi.

4081. Nakano, Masahiro. 1959. Miso to shôyu [Miso and shoyu]. *Shokuhin Kogyo* (*Food Industry*). Feb. p. 45-57. [19 ref. Jap]
• ***Summary:*** One graph shows miso production in Japanese factories from 1930 to 1955, and total and total supply in Japan from 1950-55. The difference between factory production and total supply would be accounted for by home production or imports. Factory production was about 590,000 tonnes (metric tons) from 1930 to 1940. It dropped during World War II, reaching a low of 200,000 tonnes in 1947. By 1955 it had recovered to about 500,000, but total supply was about 900,000 tonnes.

A second graph shows shoyu production in Japanese factories from 1930 to 1955 and total supply in Japan from 1950 to 1955. Factory production was about 1,040,000 tonnes from 1930 to 1940. It dropped during World War II, hitting a low of about 400,000 tons in 1947. By 1955 it had risen to about 1,180,000, surpassing the pre-war high of about 1,080,000. Total supply in 1955 was about 1,350,000. Thus in 1955 total miso supply was about 180% of factory production, whereas total shoyu supply was about 14% more than factory production. Miso factory production never surpassed its pre-war high. After the war, 35% of the miso and 15% of the shoyu was homemade, but thereafter it has decreased steadily. The rest of this article is mostly about the nutritional benefits of miso and shoyu.

Miso and shoyu were developed because of our need for salt. In the West, salt was also important. The Latin word for salt is salsa [actually, sal], and this word is the origin of the word salary, the payment for workers. The word sauce also stemmed from sal. Address: Shokuryo Kenkyujo Hakko Shokuhin Bucho.

4082. Walley, Ersel. 1959. India a logical protein market: Soybean Council of America, Inc. *Soybean Digest*. Feb. p. 20.
• ***Summary:*** "From an address before the Delhi Rotary Club, New Delhi, India, Jan. 8. Mr. Walley of Fort Wayne, Indiana, chairman of the market development committee of the American Soybean Association, and Howard L. Roach, president of the Soybean Council of America, Inc., were in charge of the soybean exhibit at the U.S. Trade Fair in New Delhi, Dec. 10 to Jan. 10.

"The soybean crop, introduced into the United States from the Orient at the turn of the century, did not assume commercial importance until after World War I. The estimated production for 1958 was 574 million bushels, and increase of 70-fold in 30 years.

"As a pioneer grower it was my privilege to be identified with this very important and significant development in American agriculture."

"In 1935 your own Mr. Gandhi said, 'The soybean stands at the top of all known articles of diet...'"

"My personal enthusiasm for the extended use of soybean products for direct human consumption began in Germany in 1948 when I saw the remarkable results secured from adding full fat soy flakes to the diet of emaciated men being returned as released war prisoners from the slave labor camps of Siberia. This interest in promoting the use of soybeans as an economic and valuable source of protein and fat for those whose diets are deficient in these essential elements has continued since that time.

"In the past 3 years it has been our privilege to cooperate with the Japanese soybean industries in promote the use of soybeans as food in Japan through increased use of such foods as tofu, miso, soya sauce and many other soya products more generally known. Hundreds of nutritionists have been trained to carry the story of soy proteins and fats to Japanese households."

In Europe, the Soybean Council of America, Inc. is teaching processors how to blend "soybean oil with olive oil to produce an acceptable and cheaper cooking oil which will be available in larger quantities to more people."

"Another important achievement in Europe is the

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increased use of soy flour in bread. Adding 5% soy flour greatly increases bread's protein content and value.

"You may ask why we came to India. India is important. Here you have one-seventh of the world's population and one-fifth of the free people of the world. Your future holds great promise. As you industrialize we feel you can and will need to import additional proteins and fats for food." Address: American Soybean Assoc.

4083. Sakaguchi, Kenji. 1959. Studies on the activities of bacteria in soy sauce brewing. V. The effects of *Aspergillus sojae, Pediococcus soyae, Bacillus subtilis,* and *Saccharomyces rouxii* in purely cultured soy sauce brewing. *Bulletin of the Agricultural Chemical Society of Japan* 23(2):100-106. March. Bound in the back of Nippon Nogei Kagaku Kaishi (J. of the Agricultural Chemical Society of Japan). [20 ref. Eng]

• ***Summary:*** This research found that the "The soy koji mold *Aspergillus oryzae* was undoubtedly the most important organism for soy sauce brewing. By its biochemical actions during the koji making stage, and by its enzymatic actions in soy mash, the mother body of soy sauce was produced." Most of the proteinases in soy mash come from *A. oryzae* (p. 103).

The salt tolerant yeast *Saccharomyces rouxii*, the former name of which was *Zygosaccharomyces major*, grows well in soy mash if it sufficiently aerated. This yeast consumes reducing sugars and produces ethanol (ethyl alcohol). The mixed inoculation of *Pediococcus soyae* (a bacterium) with *Saccharomyces rouxii* (a yeast) gave the best aroma and flavor, most closely approximating those of normal soy sauce.

Note: This is the earliest document seen (June 1999) that mentions the yeast *Saccharomyces rouxii* in connection with soy sauce fermentation. Address: Noda Inst. for Scientific Research, Noda city, Chiba-ken, Japan.

4084. Ueda, Ryuzo; Nagai, Shiro; Moriguchi, Shigehiro. 1959. Shôyu yuki-san ni kansuru kenkyû. I. Shôyu yûki-san no teiryô-hô ni tsuite [Studies on the organic acids in shoyu. I. Determination of the organic acids in shoyu]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 37(3):94-99. English-language summary on p. 10 of this issue. [9 ref. Jap; eng]

• ***Summary:*** The authors determined the organic acid content of *kiage shoyu* and *aminosan-eki* (HVP) separately by partition chromatography. Address: 1-2. Dep. of Fermentation Technology, Faculty of Engineering, Osaka Univ.; 3. Research Lab., Tatsuno Shoyu Co., Ltd., Japan.

4085. Ueda, Ryuzo; Nagai, Shiro; Moriguchi, Shigehiro. 1959. Shôyu yuki-san ni kansuru kenkyû. II. Shôyu oyobi aminosan-eki chû no yûki-san sosei ni tsuite [Studies on the organic acids in shoyu. II. Composition of the organic acid in shoyu and aminosan-eki]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 37(3):99-104. English-language summary on p. 10 of this issue. [7 ref. Jap; eng]

• ***Summary:*** Using 23 samples, the authors determined the composition of *kiage shoyu, tamari shoyu, sokujo shoyu, aminosan-eki* (*HVP*) *shoyu* and commercial retail shoyu. The HVP shoyu had the greatest content of levulinic acid (65-80%), followed by formic acid and acetic acid. Address: 1-2. Dep. of Fermentation Technology, Faculty of Engineering, Osaka Univ.; 3. Research Lab., Tatsuno Shoyu Co., Ltd., Japan (Tatsuno Shôyu K.K. Kenkyu-jô).

4086. Yamamoto, Kishirô. 1959. Studies on koji. IV. Mold protease production by replacement culture and inactive form protease in cell free extract. *Bulletin of the Agricultural Chemical Society of Japan* 23(2):110-15. March. [17 ref. Eng]

• ***Summary:*** "The effects of growth temperature on protease producing abilities of washed mycelial cells of *Aspergillus soyae* KS were investigated." The maximum ability of the cells grown at 35°C to produce protease was almost the same as that of the cells grown at 20°C. Address: Noda Inst. for Scientific Research [Noda City, Chiba-ken, Japan].

4087. *Life*. 1959. Chun King's fascinating frozen foods... give you menus as exotic as a fine Cantonese restaurant (Ad). 46(16):140. April 20. *

• ***Summary:*** A full-page color ad featuring Chun King frozen foods. Color photos show the front panels of packages of Chun King Fried Rice, Chun King Egg Foo Young, and Chun King Chicken Chow Mein.

"Follow the leader the leader in frozen Cantonese foods." In the lower left is a small cartoon of a Chinaman skiing, with outstretched arms, wearing a red robe with gray trim, and a yellow crown. "The royalty of American-Oriental Foods–Canned and frozen."

4088. Inoue, Takashi; Tsuge, Yoshimi. 1959. [Studies on tamari. IV. On the precipitate separated from tamari by heating]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 37(4):152-55. [10 ref. Jap] Address: Nagoya Miso and Tamari Co., Ltd., Japan.

4089. Nishimura, Toshihizô; Morinaga, Takamasa; Domoto, Yasuhiko. 1959. Saisei shôyu ni tsuite [Studies on double-brewed shoyu]. *Shoyu to Gijutsu* No. 249, p. 13-15. [Jap]* Address: Hiroshima-ken Shokuhin Kogyo Kenkyujo.

4090. *Times* (*London*). 1959. No U.S. transit for Chinese shrimps: Canadian lorries held up. Customs ruling. May 4. p. 10, col. 5.

• ***Summary:*** "From a correspondent in Ottawa, Canada." The United States Customs office prohibited Canadian lorries carrying Chinese goods (including "soya sauce and

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herbs") from Vancouver, B.C., from using U.S. roads due to American legislation concerning trade with China. There are no roads yet in British Columbia or Alberta suitable for shipping huge refrigerated vehicles.

4091. Motosaki, Shinichi; Ogasahara, T.; Ito, K.; Adachi, S. Assignors to Ajinomoto Company. 1959. [Iron-free amino acid solution for flavoring purposes]. *Japanese Patent* 4387. May 9. (Chem. Abst. 53:20618b). [Jap]*
• ***Summary:*** Soybean cake is hydrolyzed with hydrochloric acid. Then to 100 liters of the resulting amino acid solution, 3 kg magnesium chloride is added, brought to pH 12 with sodium hydroxide solution, kept overnight at room temperature, and filtered to give an iron-free product.

4092. **Product Name:** Amoy Soy Sauce.
Manufacturer's Name: Amoy Canning Corp. (Hong Kong) Ltd.
Manufacturer's Address: 51 Bonham Strand East, Hong Kong.
Date of Introduction: 1959. May.
Wt/Vol., Packaging, Price: Bottle.
New Product–Documentation: Francis Kalnay. 1959. House Beautiful. May. p. 174-75. "Soybean has all the answers." A photo shows the bottle and label. Company name is given as Amoy Canning Corp. (Hong Kong) Ltd. No address is visible.

U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 36. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Lists 7 soybean sauce manufacturers in Hong Kong. Amoy Canning Factory (which also manufactures soybean cheese) is at 51 Bonham Strand East.

4093. Kalnay, Francis. 1959. Soybean has all the answers (or nearly all). *House Beautiful* 101:174-75, 207-12. May.
• ***Summary:*** The opening 2-page spread contains photos of many commercial soyfood products available in America at the time: Dr. Fearn's Soy-O pancake flour (one with whole wheat and soya, and the other with just wheat and soya), Pure soya bean powder, and Soya bean granules, Wuest's soya-protein bread, Wuest's cookies, Wel-Pac kinako [roasted soy flour], Yamasa shoyu, Kikkoman shoyu, Oliver Tonkatsu Sauce (Tonkatsu are breaded pork cutlets), Hain soy oil (cold pressed), Amoy soy sauce, Prosperity soy sauce, Golden Sang Chan soy sauce, Madison Zoy-Koff, Hime aka-miso (Pacific Trading Co.), Hime yakidofu, Hime frozen bean curds, Delicious Edamame (Packed by Tokai Kanzume Co. Ltd., Nagoya, Japan), Quong Hop & Co. bean cake [tofu], Schiff soy lecithin, Oriental food shop black soybeans, Climax wheat and soy pure egg noodles (The Pfaffman Co., Cleveland, Ohio), and Prince Veta-Roni (Mezzani or Spaghetti; Prince Macaroni Co.).

The subtitle reads: It's a choice gourmet food. It's as nutritious as vitamin pills. It comes in a dozen forms and makes a hundred dishes.

The author uses soy-related words in a very modern way: "Have you ever noticed the way people who know food pronounce the simple word 'soy'? Their facial expression changes instantly, and their tone of voice turns positively lyric. There are two serious reasons for their extraordinary respect for a bean so little and so innocent. The soybean is enormously rich in protein. This wealth of protein is apparent in both quality and quantity... And because soy oil is high in unsaturated fatty acids, it fits well into today's popular low-cholesterol diets.

"In our country soy is relatively new... Soy is the most versatile legume imaginable... The glittering star in soy's troupe of players is soy sauce (also called soya and shoyu)... The soy food industry is still in its infancy in the U.S. Yet the variety of soy products available is impressive."

Note 1. This is the earliest publication seen (April 2001) that mentions Quong Hop & Co. in connection with tofu.

Note 2. This is the earliest English-language document seen (Aug. 2003) that contains the term "soya-protein" (or "soya-proteins").

4094. **Product Name:** [Oliver Breaded Pork Cutlet Sauce].
Foreign Name: Oribaa Tonkatsu Soosu.
Manufacturer's Name: Oliver. Made in Japan.
Manufacturer's Address: Japan.
Date of Introduction: 1959. May.
Wt/Vol., Packaging, Price: Bottle.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Francis Kalnay. 1959. House Beautiful. May. p. 174-75. "Soybean has all the answers." Photo of the bottle and label. The bottle is wrapped in paper.

4095. Tanaka, Shigetaka; Ueda, Ryuzo. 1959. [Studies on the inorganic components in shoyu. III. On the phosphorus and potassium contents]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 37(5):203-07. May English-language summary on p. 20 of this issue. [15 ref. Jap; eng] Address: Osaka Univ., Japan.

4096. Manners, Marian. 1959. What shall I cook? Menu ideas. *Los Angeles Times*. June 11. p. A5.
• ***Summary:*** Wednesday's dinner has a recipe for Mandarin meat balls, that calls for "¼ cup Japanese soy sauce."

Note: Suddenly, starting at about this time, the term "Japanese soy sauce" starts to be used in place of the term "soy sauce"–especially in the *Los Angeles Times*. Is this a coincidence or a commercial "pay for coverage" deal? We suspect the latter–a deal between Kikkoman and the Times. Consider the following timeline:

1957 June–Kikkoman International Inc. (KII) is established in San Francisco, California–Kikkoman's first overseas office in the United States or the Western World.

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1958–The first KII branch is established in Los Angeles.

1960–The second KII branch is established in New York.

4097. Manners, Marian. 1959. Guests cook their own fare at Japanese table. *Los Angeles Times*. June 18. p. A8.
• ***Summary:*** A dinner party was given by Mr. and Mrs. George Nakatsuka of Pasadena, California; he is vice-president of the Japan Food Corp. Co-hosts included three West Coast executives with the firm and Kikkoman International, Inc.

"An honored guest was Gunzo Sugihara [age 76], board chairman with the Pacific Trading Co., which he founded in San Francisco in 1906, and a director of the Kikkoman firm." In 1899 he made his first journey to the USA. Each guest cooked his own food using an *okariba yaki*. Imported Japanese soy sauce, made from an ancient formula, requires 18 months to process, age and filter, so as to attain its "smooth flavor, deep, rich color, and freedom from sedimentation." The Kikkoman firm imports soybeans and wheat from the USA for the sauce it makes in Japan, and "only 1% of the 45 million gallons made annually is exported; the major portion is used by the Japanese." A recipe for Barbecue sauce, featuring "1 cup imported Japanese soy sauce" is given. A photo shows Marian Manners and Gunzo Sugihara–both having fun. Address: Times home economics director.

4098. Manners, Marian. 1959. What shall I cook? Menu ideas. *Los Angeles Times*. June 18. p. A9.
• ***Summary:*** Tomorrow's dinner includes "cucumbers in vinegar soy sauce (use Japanese soy sauce)."

4099. Claiborne, Craig. 1959. Food: Oriental fare. Another Chinese restaurant opens–Menu lists cellophane-wrapped fowl. *New York Times*. June 19. p. 16.
• ***Summary:*** This is a review of the Chinese restaurant Esther Eng (1085 Second Ave., near 57th St., Manhattan, New York City). One appetizer is listed on the menu "as cellophane wrapped chicken. To prepare it, small bits of chicken are marinated in a mixture of hoisin sauce and peanut butter, wrapped in cellophane and deep-fried. Hoisin sauce is an inscrutable mixture of spices and plums."

Note: This is the earliest document seen (Sept. 2008) in all major U.S. newspapers digitized by ProQuest that uses the term "hoisin sauce," which is typically sold in bottles or cans and has soybeans as its main ingredient. The new term appears in 805 documents between 1959 and the present, including this three in 1939, 17 in the 1960s, etc.

4100. Manners, Marian. 1959. What shall I cook? Menu ideas. *Los Angeles Times*. June 25. p. A8.
• ***Summary:*** Tuesday's dinner includes "mixed Chinese vegetables with imported Japanese soy sauce,..."

4101. Davis, R.N. 1959. The soyabean deserves to be grown. *Indian Farming* 9(3):35, 37, 38. June. Series 2.
• ***Summary:*** Contents: Introduction. Food value. Many uses (soyabean flour, milk, and sauce). Dependable crop. Yeotmal trials. Nine [maturity] groups. Soyabean vs. groundnut.

Trials with 28 varieties of soyabeans were conducted at Yeotmal, Vidarbha, in eastern Maharashtra state in central India, from 1953 to 1958, under the direction of Dr. Jackson Cartter of the University of Illinois. Of the 28 varieties, 23 were from the USA and 5 were from India. He also sent soyabean inoculum.

A table shows the results of the trials. Five columns show variety name, number of years raised, seed spacing in rows (in inches), percentage of germination, average yield per acre in maunds (1 maund = 37.3242 kg). The best yields by far came from Mamotan (24.19), followed by Acadian (19.31) Improved Pelican (16.32), and Biloxi (16.50).

4102. Williams, Robert R.; McGanity, William J.; Combs, Gerald F.; Kertesz, Z.I. 1959. A nutrition survey of the armed forces of the Republic of Korea. *J. of Nutrition* 68(Supplement 1):1-80. June. See p. 12-13. [42 ref]
• ***Summary:*** An endless variety of soups (which are thick like U.S. stews) are served, mostly in winter; they usually contain some soy products. Seaweed is a delicacy, used in cooking or served with soy sauce. A recent survey based on food disappearance, conducted by the USDA Foreign Agricultural Service, calculated average civilian calorie intake at about 2,058 per day, of which 81% comes from cereals, 5% from meat, fish, eggs, and milk, 4% from oilseeds, oils and fats, 4% from white and sweet potatoes, 2% from fruits and nuts, 1.6% from vegetables and seaweed, and 1% from sugar (p. 8).

The typical formula for Korean Army soup, in grams per man for one meal, is: Cabbage 70, soybean curd [tofu] 30, soybean mash [probably soybean paste, doen jang] 30, large white radishes [*daikon, Raphanus sativus*] 30, red pepper mash [kochu jang] 10, salt 10, onion 3, melchi (small dried fish) 2, and red pepper powder 1 (p. 9).

The section titled "Soybeans and soybean products" (p. 12-13) states: "Soybean products are extensively used in the Korean diet and by the ROK Armed Forces." Soybean curd (Japanese: tofu), which is precipitated with calcium or magnesium salts, is used almost daily in making thick soups. It is also "fried in deep fat and used in a composite ROK Army food called 'seasoned vegetable and bean curd' containing small fish (12%), soy sauce (23%), bean curd (25%), seaweed (16%), dry radish (14%), and red pepper, sugar, and cottonseed oil. This latter product was observed in one ROK Army mess only."

Soybean sprouts are a favorite and very nutritious civilian food in Korea, but their "use in troop feeding is limited, presumably because of the low germination of the

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soybeans available at the time of our visit."

Fermented soybean sauce is a widely used and nutritious seasoning.

"Seasoned soybeans are a delicacy much liked by Koreans and obtained by boiling soybeans in sweetened soybean sauce. The weight proportions used in the preparation are said to be cooked and roasted soybeans 70%, soybean sauce 25%, and sugar 5%.

"Soybean mash [*doen jang*] and pepper mash [*kochu jang*] are fermented foods popular in this part of East Asia. Barley is cooked, allowed to cool and then treated at about 90°F for one day with a commercially prepared enzyme made from *Aspergillus oryzae*. [i.e., barley koji is made]. The barley is then milled together with cooked soybeans and salt, and fermented in concrete tanks for about 3 months. The finished paste-like product is rich in amino acids and protein and is extensively used directly and in cooking. Pepper mash is a similar preparation which contains in addition 10% powdered red pepper." Address: National Institutes of Health, Bethesda, Maryland.

4103. Manners, Marian. 1959. Backyard barbecue: New glory for July 4 picnic. *Los Angeles Times*. July 2. p. A7.
• ***Summary:*** Contains a recipe for Spicy barbecued spareribs, which calls for "1 tablespoon Japanese soy sauce."

4104. Manners, Marian. 1959. What shall I cook? Menu ideas. *Los Angeles Times*. July 9. p. A5.
• ***Summary:*** Monday's dinner includes "Pepper steak (use round steak, green pepper strips and Japanese soy sauce)."

4105. Manners, Marian. 1959. What shall I cook? Menu ideas. *Los Angeles Times*. July 16. p. A9.
• ***Summary:*** Sunday's dinner includes "barbecued turkey breast teriyaki style (use Japanese soy sauce, white wine, ginger, garlic)."

4106. Onishi, Hiroshi. 1959. Studies on osmophilic yeasts. IV. Changes in permeability of cell membranes of the osmophilic yeasts and the maintenance of their viability in the saline medium. *Bulletin of the Agricultural Chemical Society of Japan* 23(4):332-39. July. [10 ref. Eng]
• ***Summary:*** "A striking increase in the permeability of cell membranes of *Saccharomyces rouxii*, a typical salt-tolerant yeast, occurred when they were cultivated in the saline medium." Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4107. **Product Name:** Sona Soy Sauce.
Manufacturer's Name: Sona Food Products Co.
Manufacturer's Address: Los Alamitos, California.
Date of Introduction: 1959, July.
Ingredients: Hydrolyzed vegetable protein, water, salt, soy bean, caramel color.
Wt/Vol., Packaging, Price: 8 oz (pint) bottle for $0.49 (1959, Los Angeles).
New Product–Documentation: Ad (full page) in *Let's Live*. 1959. July. p. 17. "Free offer to introduce Sona Soy Sauce." "Special amino enriched formula. All vegetable ingredients. High in protein values. Contains 13 life-sustaining amino acids. Excellent for meatless dishes. Use freely in broths on meats. Full strength and flavor. Adds zest to your food. Now! Free. Sona Soy Sauce. With your purchase of a pint size of Sona Saf-Flower [Safflower] Seed Oil." Two photos show 1-pint bottles of both the soy sauce and the saf-flower seed oil.

4108. Claiborne, Craig. 1959. Fit for a Kentucky colonel. *New York Times*. Aug. 2. p. SM35.
• ***Summary:*** Bourbon is so named because it was first distilled from corn in Bourbon County, Kentucky. Contains five recipes that call for Bourbon as an ingredient. One of the recipes, titled "Lamb kebabs hoisin" calls for "½ cup hoisin sauce,... 1 teaspoon soy sauce," etc. The two sauces are used in a marinade for the meat.

4109. Davies, Lawrence E. 1959. Women's world: Hawaii. Mainlander shopping in Honolulu market likely to think she is on the mainland. *New York Times*. Aug. 13. p. 31.
• ***Summary:*** Hawaii's population of 645,000 is composed racially of 32% Japanese (persons of Japanese ancestry), 30% Caucasian, 17% Hawaiian or part Hawaiian, 11% Filipino, 6% Chinese, and 4% other races.

The shelves of Honolulu food markets are stocked with a mixture of mainland, East Asian, and local Hawaiian foods, including (from Japan) seaweed, jars of pickled gingerroot, "prepared seaweed seasoned with soy sauce and sugar," and "broiled eels canned with sugar, soy sauce, and sweet sake."

Note: The term "sweet sake" probably refers to *mirin*, but it might possibly refer to *amazake*.

4110. Hayashi, Shizuka. 1959. Japanese users react to U.S. beans. *Soybean Digest*. Aug. p. 34.
• ***Summary:*** "The fact that soybean in Japan are used 100% as food should by now be well realized by those in the soybean industry as well as by the growers. It has been repeatedly emphasized that soybean trade between the United States and Japan is to be based on the complete understanding of this fact."

One of the first projects of JASI "was to find out the causes of the unpopularity of U.S. soybeans among the Japanese users, especially the manufacturers of soybean products." The major complaints concern excessive "foreign material, broken beans, irregularity of sizes, and mixture of different varieties received. All these problems have been time and again called to the attention of interested parties in the United States." Considerable improvement has been made but there is still work to do. "The writer believes in the

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very near future specific varieties can be chosen for different food manufacturers and business will be done on the basis of [those] specific varieties."

A list gives the specifications for soybeans desired by Japanese oil processors (6 specs), miso manufacturers (3 specs), shoyu makers (3), tofu makers (2), frozen tofu makers (1), kinako makers (3), and natto makers (3). For example, for miso: (1) Soybeans with white hilum with rich protein content and of big size are preferred. (2) Soybeans should be stored separately by varieties [identity preserved]. (3) Foreign material, especially seeds of other plants, sand and stones should be eliminated.

And for tofu: (1) Soybeans should be rich in protein content with thin seedcoat. (2) Soybeans should be free from foreign material, especially that of poisonous seeds of other plants.

A photo shows Shizuka Hayashi tasting miso made from the U.S. soybean varieties Dorman, Mamloxi, and Jackson at the Inamari miso factory in Shizuoka city. Arthur Rollefson, U.S. assistant agricultural attache, is also shown.

Note: This is the earliest document seen (Feb. 2010) that introduces the concept of "identity preserved" ("Soybeans should be stored separately by varieties"). Address: Japanese-American Soybean Inst., Tokyo.

4111. Nakano, Masahiro. 1959. Traditional methods of food processing. Paper presented at Regional Seminar on Food Technology for Asia and the Far East. 15 p. Held 1-8 Aug. 1959 at Mysore, India. [Eng]

• ***Summary:*** Contents: General. Soybean foods: Miso, syoyu (soy sauce), aspects on the miso and syoyu, natto, tofu, koridofu. Technological methods of food processing: Koji, miso, syoyu [shoyu] (soy sauce), natto, tofu. Conclusion.

Note: This paper was sent as a gift, with note and autograph, to Dr. A.K. Smith of the Northern Regional Research Lab., Peoria, Illinois. Address: Food Research Inst., Ministry of Agriculture and Forestry, Tokyo, Japan.

4112. Sapin, P. 1959. Le soja dans le monde [The soybean in various countries of the world]. *Bulletin Agricole du Congo Belge et du Ruanda-Urundi* 50(4):897-948. Aug. [39 ref. Fre; dut]

• ***Summary:*** This articles focus on soya at Yangambi in the Belgian Congo. Content: Introduction. Climatic adaptation: Comparison of the climates in Harbin (central Manchuria) and Yangambi (near the equator), photoperiodic and thermal characteristics of soybeans, comparative study of the behavior of soya at Yangambi and its main zones of cultivation, eco-climatic chart of soya, classification of soybeans (*des sojas*) into fundamental climatic types and directives for the realization of their introduction to Yangambi. Selection: Classification of the soybean varieties, genetics, and selection. The cultivation of soya. Characteristics of the seed and its utilization: Composition of the seed. Oriental preparations based on soya (soy sprouts, soymilk, tofu, natto, Hamanatto, yuba, miso, soy sauce or shoyu), soy oil and by-products, soybean cake, use of soya in the West. A glance at soybean production. The situation in the Belgian Congo.

The author identified a number of soybean varieties adapted to different ecological zones in the tropics, which helped soybeans spread to tropical countries, especially in Africa. Address: Assistant à la Division des Plantes Vivrières de l'INÉAC, à Yangambi [Belgian Congo].

4113. Onishi, Hiroshi. 1959. Studies on osmophilic yeasts. V. Factors affecting growth of soy yeasts and others in the environment of a high concentration of sodium chloride. (II). *Bulletin of the Agricultural Chemical Society of Japan* 23(5):351-58. Sept. [14 ref. Eng]

• ***Summary:*** It was found that many osmophilic yeasts were able to grow in a saline medium at a high temperature such as 40°C, whereas in a "NaCl-free medium no growth occurred at the same temperature." Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4114. Onishi, Hiroshi. 1959. Studies on osmophilic yeasts. VI. Glycerol production by the salt-tolerant yeast in the medium with high concentrations of sodium chloride. *Bulletin of the Agricultural Chemical Society of Japan* 23(5):359-63. Sept. [15 ref. Eng]

• ***Summary:*** "*Saccharomyces rouxii*, which is a typical salt-tolerant yeast and plays an important sole in 'soy-brewing' [soy sauce fermentation], was found to ferment glucose giving high yields of glycerol in a high saline medium under aerobic conditions. However, only a small amount of glycerol was produced in the ordinary medium." Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4115. Claiborne, Craig. 1959. Use of native spices adds interest to unusual cuisine of Balinese: Variations of native dishes possible. Rare ingredients are available here. *New York Times*. Oct. 8. p. 46.

• ***Summary:*** "One of the most fascinating of the many Far Eastern restaurants here is A Bit of Bali, 242 East Fifty-eighth Street." Describes a visit with four recipes. The recipe for Sate kambing Madura (Skewered broiled lamb) calls for ½ cup soy sauce. A note at the bottom of this recipe states: "Indonesian soy sauce is available at A Bit of Bali."

4116. Manners, Marian. 1959. Teahouse perfect setting for serving Japanese meals. *Los Angeles Times*. Oct. 22. p. A1.

• ***Summary:*** A stylish, real Japanese Teahouse is one of the main attractions at the 10th annual Southern California Decorators Show.

The section titled "Soy sauce tops" notes that Japan exports to the United States nearly 100 different kinds of

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canned foods. The most popular among these is "Japanese soy sauce."

Recipes are given for: Shrimp and vegetables (with soy sauce). Kyuri aka-nasu sarada goma-shi (Cucumber tomato salad with sesame seeds; with "¼ cake fried bean curd"). Tamago-yaki (Japanese egg roll, with soy sauce). Chawan mushi (Steamed chicken and egg custard; with soy sauce).

A photo shows the approach to and exterior of the Teahouse. Address: Times Home Economics Director.

4117. *New York Times.* 1959. Food news: No tipping allowed in Red China. Oct. 26. p. 32.
• ***Summary:*** Mr. Gerald Clark, a Canadian, and author, and a correspondent for the Montreal Star, has just returned from China. He said that his favorite dish was Peking duck, a specialty of that city.

"'It's really something,' he said. The ducks are specially fed and spend the latter part of their short lives tethered. It seems cruel, but the result is an unusually tender and succulent dish. After roasting, the duck is carved into very thin slices covered with wonderfully crisp skin. The pieces are wrapped pancake fashion in a 'doily' made of wheat flour, and dipped in hoisin sauce and scallions."

4118. Kikkoman International Inc. 1959. Kikkoman soy sauce: Turkey more tantalizing that you've ever tasted! (Ad). *Los Angeles Times.* Nov. 25. p. A2.
• ***Summary:*** A large black and white ad (see next page). "Simply baste with a marinade of: 1 cup Kikkoman soy sauce*, ½ cup sherry wine, 1 tbsp. [tablespoon] sugar (brown preferred), ½ tsp. [teaspoon] ground pepper. Gives that beautiful golden-brown color! Marvelous for left-overs, too! * = Recommended by Gene Beals, manager of the California Turkey Promotion Advisory Board."

Photos show: (1) A turkey with tail feathers fanned. (2) A bottle of Kikkoman soy sauce. "All-purpose seasoning. Since 1630. Made by Noda Shoyu Co., Ltd. Made in Japan." (3) A small portrait photo of Gene Beals wearing a white chef's top hat. (4) The Kikkoman logo with the stylized character meaning ten thousand inside of a hexagon, the symbol for a turtle.

Note: This is the earliest ad seen (July 2011) for Kikkoman soy sauce in a major American newspaper.

4119. Onishi, Hiroshi; Saito, Narimasa. 1959. [Studies on the polyalcohols in soy sauce]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 37(11):457-61. English-language summary on p. 43 of this issue. [30 ref. Jap; eng] Address: Noda Inst. for Scientific Research, Japan.

4120. Kamada, Hidemoto; Sakurai, Yoshito. 1959. Daizu seihin no chakushoku ni kansuru kenkyû. IV. [Browning reaction of soybean products. IV. Relationship between amino-carbonyl reaction and the color formation of miso or shoyu (Abstract)]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 14. p. 126. Dec. [1 ref. Jap]
• ***Summary:*** Reprinted from *Nosan Kako Gijutsu Kenkyu Kaishi* (*J. for the Utilization of Agricultural Products*) 6(3):104+ (1958). Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4121. Nakano, Masahiro. 1959. FAO Ajia chiiki shokuhin kakô kaigi ni shusseki shite [Attending the FAO Asian food processing conference]. *Nosan Kakko Gijutsu Kenkyu Kaishi* (*J. for the Utilization of Agricultural Products*) 6(6):292-302. Dec. [Jap]
• ***Summary:*** Discusses Korean meju and soy sauce, Indonesian tempeh (tenpe), ontyom (onchom) and pongrek [sic, bongkrek], and Vietnamese nuoc-mam. Address: National Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4122. *Soybean Digest.* 1959. Soybean recipe book issued by Institute. Dec. p. 25.
• ***Summary:*** The Japanese-American Soybean Institute (JASI) recently issued a "Book of Recipes Using Soybeans." Edited by the Japan Nutrition Association (JNA), this booklet includes 108 recipes which have been introduced by the JNA at 2,200 "short courses in dietary improvement" held last year at the 800 Japanese health centers. Attendance at these courses (which were partly sponsored by JASI) was 220,000 people! The booklet, which is available at the health centers, contains articles on frozen and bagged tofu, shoyu, miso, natto, and "golden ajinomoto" (a seasoning made by the Ajinomoto Company).

4123. Hahn, Y.S.; Park, B.D. 1959. [Studies on the manufacture of soy sauce. III. On the genus *Rhizopus* and *Mucor* in Korean wine kokja]. *Report of the National Industrial Research Institute* (*Seoul, Korea*) 9:147-61. [Kor]*
• ***Summary:*** Fourteen kinds of genus *Rhizopus* (G.R.) and 16 from the genus *Mucor* (G.M.) were isolated from Korean wine Kokja; their properties were examined morphologically and physiologically.

1. Extinctive temperature: The G.R. was 65°C to 75°C. The G.M. was 65°C to 70°C.

2. Propagative optimum pH. The G.R. was 4.0 to 6.6. The G.M. was 3.5 to 6.6. Address: National Industrial Research Institute, Seoul, Korea.

4124. **Product Name:** [Tamari (but actually shoyu)].
Foreign Name: Tamari.
Manufacturer's Name: Lima Foods.
Manufacturer's Address: Edgar Gevaertdreef 10, B-9830 Sint-Martens-Latem, Belgium.
Date of Introduction: 1959.
New Product–Documentation: Letter from Pierre Gevaert.

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1981. Nov. 19. Note: This appears to be the first commercial soy sauce named "tamari" sold in the Western world.

4125. Park, T.W.; Whang, K.S.; Lim, S.U.; et al. 1959. [Studies on the soybean moromi (mash). III. Studies on the variation of the free amino acids content in soybean moromi during its fermentation]. *Kwayon Huibo* (*Bulletin of the Scientific Research Institute, Korea*) 4(1):31-34. [Kor]*

4126. Bush, Lewis William. 1959. Land of the dragonfly. London: Robert Hale. 224 p. Illust. Index. 23 cm.
• ***Summary:*** Chapter 20, titled "Mainly About Food," notes (p. 162-63) that sukiyaki is "cooked with soy, water, sugar, vegetables, bean curd..." And sashimi is "dipped in soy..."

"Miso is indispensable in Japanese cookery and is a paste made from beans and fermented rice, used for soups–particularly at breakfast, for preserving, and also as a condiment."

Buddhism was well established in China and Korea by the fourth century and was introduced into Japan between A.D. 500 and 600. Note: It may very well be that the cultivation of soybeans and their use in food, including fermented foods, were then introduced into Japan.

4127. Cai Tinglan. 1959. Hainan zazhu [Miscellaneous notes from the southern seas]. Taipei, Taiwan: Taiwan Yinhang Yinshuaso. See p. 55. [Chi]
• ***Summary:*** Cai Tinglan was director of an academy on the island of Penghu in the Taiwan Straits. In 1835, while returning to the Island from the port of Xiamen in Fujian province, China, he was blown off course by a typhoon. After landing in central Vietnam, he traveled overland to China, recording everything of interest to him along the way.

Commenting on what was lacking in Vietnamese culinary habits, he stated: "They do not have soy sauce. Instead they use 'fish sauce,' which has a real stench to it."

Note: Cited in "Batavia Through the Eyes of Vietnamese Envoys," at www.hawaii.edu.

4128. Egami, Tomi. 1959. Typical Japanese cooking. 1st ed. Translated by V.A. McKenzie Skillman. Tokyo: Shibata Publishing Co. Ltd. Exclusive distributors: Japan Publications Trading Co., Ltd (Tokyo). [viii] + 146 p. Illust. (incl. color photos by Yoshikatsu Saeki). Index. 27 cm.
• ***Summary:*** Foods marked with an asterisk (*) are exported from Japan to the USA. Many recipes include "soy sauce" and monosodium glutamate (Ajinomoto). Soy related recipes include: Aburage * ("fried soy bean curd"–4 recipes). Broiled soy bean curd [*yakidofu*] (3 recipes, Sukiyaki, Yasainabe, Osechi). Chu-miso paste * ("made from soy beans, salt and rice malt [koji], seasoning for miso soup"–2 recipes). Ganmodoki * ("fried soy bean curd and vegetables"–Nikomi oden). Nama-age ("half fried soy bean curd"–Boiled vegetables).

Note: This is the earliest English-language document seen (May 2012) that contains the term "fried soy bean curd" or the term "half fried soy bean curd."

Okara ("soy bean curd leftovers"–Yoshino sushi). Red miso paste * ("made from soy beans, salt and rice malt [koji], seasoning for miso soup"–2 recipes). Soy bean (3 recipes). Soy bean curd * (14 recipes, incl. Gizeidofu / Gisei-dofu, p. 39). Soy bean powder * [kinako] (2 recipes: Kinakomochi, Kushi dango). Soy sauce ("Kikkoman"). White miso paste ("made from soy bean, salt and rice malt [koji], seasoning for miso soup"–2 recipes). Worcestershire sauce (Skewer nibblers).

Other interesting recipes include: Amazake. Azuki-sarashian ("red bean powder"–7 recipes). Black sesame seed (in Sekihan). Mochi rice. Red bean [azuki] (Sekihan). Rice cake ("made of mochi rice"). Seaweeds (kanten / agar-agar, kombu / konbu, nori / green laver & purple laver, wakame). White sesame seed. Yamaimo ("Japanese yam"). Tomi Egami was born in 1899. Address: [Japan].

4129. Inoue, Takashi; Tsuge, Yoshimi. 1959. [Studies on tamari. IV. On the precipitate separated from tamari by heating]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 37(4):152-55. English-language summary on p. 15 of this issue. [10 ref. Jap; eng]
Address: Nagoya Miso and Tamari Co., Ltd., Japan.

4130. Keys, Ancel; Keys, Margaret. 1959. Eat well and stay well. Garden City, New York: Doubleday. 359 p. Foreword by Dr. Paul Dudley White. 2nd ed. 1963. [80* ref]
• ***Summary:*** Note: In 1936, Ancel Keys became a professor at the University of Minnesota, where he established the Laboratory of Physiological Hygiene. Keys directed the laboratory from 1939 until his retirement in 1975. After that he moved to Pioppi, a small village of fishermen in southern Italy where he lived until 2003 (for 28 years) studying food habits of the locals, leading to the foundation of health evidence for the Mediterranean Diet.

Ancel Keys died on 20 Nov. 2004, two months before his 101st birthday. Address: Univ. of Minnesota.

4131. Kirkbride, Ronald. 1959. Tamiko. London: Cassell & Co. Ltd. 197 p. See Chap. 7, p. 54. 21 cm.
• ***Summary:*** A novel about war-torn Japan shortly after World War II by an author who knows the country well. Ivan takes his friends to Donzoko's, a high-class, expensive Geisha house in Tokyo. "They had hors d'oeuvres of raw wild vegetables, sashimi, thin slices of raw tuna and sea bream with soy sauce, fried honey-bees and salted thrush hearts served with turtle-dove soup... The food was endless."

4132. La Choy Food Products. 1959. The art and secrets of Chinese cookery. Archbold, Ohio: La Choy Food Products. 31 p. Illust. (some color). 11 x 16 cm. *

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4133. Lee, Calvin. 1959. Chinese cooking for American kitchens. New York, NY: G.P. Putnam's Sons. 190 p. Illust. by Mabel Wong Lilienstein. Index. 22 cm.
• ***Summary:*** An excellent book, says Craig Claiborne. The many styles and forms of Chinese cooking "can be grouped into five schools: Canton, Fukien, Honan, Shantung [incl. Peking], and Szechuan. Cantonese cooking is the most popular, even in China itself." This is a Cantonese cookbook. "Fukien probably produces the best soy sauce in China" (p. 20). Canton is known for its steamed bass with black bean sauce (*Jing yu*) (p. 22).

Soy related recipes: Steak à la Lee (with "2 tablespoons Worcestershire sauce," p. 33). Pork chops à la Lee (with "2 tablespoons Worcestershire sauce," p. 35).

"Perhaps the most interesting of the condiments used in authentic Chinese cooking is the lowly soy bean." It is a rich source of oil. "The pulp of the bean is ground to make a curd extremely high in protein content. These bean curds (dow foo) look somewhat like little rectangles of white custard and can be boiled, stir-fried, or baked. Some of the fresh bean curd is permitted to ferment, making a richly aromatic and tangy cheese. Commonly called Chinese cheese, foo yu [fermented tofu] is sold in bottles and does not require any cooking." "Dow see [fermented black soybeans] are small fermented [soy] beans which are used commonly for seafoods such as strong-smelling fish, shrimps or lobsters. They have a delightful spicy flavor and should be rinsed in water and crushed before using" (p. 46-47).

Vegetables: "Bean sprouts (ngar choy). Sold fresh by the pound. Also sold in supermarkets canned." Used in many recipes (p. 50). Note 1. It is unclear what type of bean is used to make these sprouts.

"Black beans (dow see)." Sold by the ounce. Wash and soak for 10 minutes before using. Recipes: Lobster Cantonese (Chow lung har). Beef with green peppers and tomatoes (Fon care lot tzu ngow). Pork with tomatoes (Fon care gee) (p. 50).

Seasonings and sauces: Bean curds (dow foo). Sold fresh or canned in Chinese or Japanese groceries. Recipes: Beef with bean curds (Dow food ngow). Steamed fish with bean curds (Dow foo jung yu). Bean curd soup (Dow foo tong) (p. 52). Brown bean sauce (mien see). Sold canned in groceries (p. 52). Haisien sauce [Hoisin sauce]. Sold canned or bottled in Chinese groceries. Used chiefly as a condiment.

Fried fish with bean curds (Dow foo jeen yu, p. 106). Steamed fish with bean curds (Dow foo jing yu, p. 107). Soy sauce cooked chicken (See yow gai, p. 116). Beef with bean curds (Dow foo ngow, p. 135). Roast pork with bean curds (Dow foo char shu, p. 145).

Note 1. Most recipes call for ½ to 2 teaspoons "monosodium glutamate."

Note 2. This is the earliest English-language document seen (April 2012) that uses the term "See yow" to refer to a type of Cantonese soy sauce. Address: [New York City].

4134. National Canners Association. 1959. Canners directory. Washington, DC: National Canners Association. 125 p. See p. 47. Commodity index. 24 cm.
• ***Summary:*** Under "Indiana" (p. 47): "Oriental Show-You Company, Columbia City. Products–Bean sprouts [mung], chow-mein noodles, assorted vegetables, mixed vegetables, bamboo shoots, water chestnuts, meatless chop-suey..."

4135. Nippon Shoyu Kyokai. 1959. Nippon shôyu gyôkai-shi [History of the Japanese shoyu industry]. Tokyo: Nippon Shoyu Kyokai. 613 p. [Jap]
• ***Summary:*** Contains good histories of Kikkoman, Yamasa, Choshi/Choshu, Marukin. Address: Tokyo.

4136. Obata, Yataro. 1959. Mieki [Mieki (Leaflet)]. Tokyo: Aji-no-moto Co. Ltd. 2 p. [Jap; eng+]
• ***Summary:*** "It was no other than shoyu which was shipped exclusively by Dutch merchants from Japan to Europe, where it was called the essence or flower of the cuisine at the palace of Louis XIV [in France]. These Dutchmen exported the shoyu in bottles or earthen jars, sealed with pine resin and sterilized [pasteurized] by boiling in hot water. From Japan, they sailed southwards into the Indian Ocean, then northwards into the Atlantic Ocean, finally arriving in Europe with the shoyu. It as very expensive but the quality was good. At parties held by the Bourbon kings of France [incl. Louis XIV and Louis XV], shoyu was loved. Shoyu was praised by Thunberg, who came to Japan in 1774 and later became head of Uppsala University in Sweden. The reason that this well-like shoyu was not served in the first-class dining rooms of European boats later in the Meiji period (1868-1912) was that the flavor was no longer as good, primarily because the moromi mash was no longer fermented for three years, but also because the second pressing (*niban shibori*) with water.

Note 1. This is the earliest document seen (April 2012) that mentions the use of shoyu by Louis XIV [who reigned from 1643 to 1715]. But the author is wrong! In a June 1983 discussion with William Shurtleff in Japan, Obata admitted that this is his speculation with no documentary evidence whatsoever to support it.

Note 2. Mieki is a type of HVP made by the Ajinomoto Co. Address: Ajinomoto Co., Ltd.

4137. Prescott, Samuel Cate; Dunn, Cecil Gordon, ed. 1959. Industrial microbiology. 3rd ed. Revised by Cecil Gordon Dunn. New York, NY: McGraw-Hill Book Co., Inc. 942 p. Illust. Index. 23 cm.
• ***Summary:*** Chap. 41, titled "Mold enzyme preparations: Uses and products" (p. 666-83) discusses: Mold enzymes: Submerged culture method, continuous tray method for producing mold enzymes, rotating drum method for

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producing mold enzymes (described by Underkofler et al. 1947), glucose oxidase, uses of mold enzymes (proteases, fungal enzymes). Some mold products: Use in Japan and China, soy sauce (koji from *Aspergillus flavus-oryzae*, Chinese soy sauce, preparation of the "kojies," chemical soy sauce), soy sauce yeasts, tamari, miso, koji. The section on patents (p. 682) cites 15 patents by J. Takamine yet (amazingly) Takamine's name does not appear in the extensive index at the end of the book–though he is considered by some to be the father of industrial microbiology.

The amylo process and a modified amylo process are discussed on pages 864-66. The amylo process is used primarily for converting starch to sugar by the use of selected molds (*Mucor, Rhizopus*), some of which have the ability to produce small quantities of alcohol from sugar.

Soy is also discussed on the following pages: Soybean oil and meal are used in the production of vitamin B-12 by *Streptomyces olivaceus* (p. 485-86). In the production of pentonic acids, several drops of soybean oil were used as an antifoam agent (p. 508). In the production of sodium gluconate, small amounts of soybean oil could be used as an antifoam agent, though they decreased the sugar utilization to an impractical value. (p. 594). L-Glutamic acid can be produced in a number of ways. One is by the hydrolysis of wheat gluten, soybean cake, or other protein-rich food material (p. 713-16). The commercial process now being used in Japan employs sweet potatoes as the chief raw material in a one-stage fermentation process with a strain of *Micrococcus* (p. 712-13).

In the chapter on Saccharifying Agents, Takamine is discussed in the section on "Mold bran" (p. 844). "Takamine, in 1914, advocated the use of mold enzymes (from *A. oryzae*) in the distilling industry. Studies were carried out in distilleries in Canada using his mold-bran preparation (*Taka-koji*) in place of malt to saccharify grains. Although the yields of alcohol obtained through the use of mold bran were reported to be higher than those obtained through the use of malt, the process was not adopted."

A table (p. 857) lists 19 sources of microbial amylase, including Taka-Diastase, made by Parke, Davis & Co., and Alase, made by Takamine Lab. Also in this chapter, in the section on submerged culture of mold amylases, a table (p. 859) shows that soybean meal is used as a protein source in the production of dextrinizing enzyme by *Aspergillus niger* NRRL 337. Address: 1. Sc.D., Prof. of Industrial Biology (Emeritus), Former Head of the Dep. of Biology and Public Health and Dean of the School of Science, MIT; 2. Assoc. Prof. of Industrial Microbiology in the Dep. of Food Technology, MIT (Massachusetts).

4138. Tamura, Zenta. 1959. Tatsuno shôyu kenkyû shiryô [Tatsuno shoyu research materials]. Tatsuno city: Tatsuno Shoyu Kyodo Kumiai. 254 p. [Jap]

Address: Tatsuno city, Japan.

4139. Thompson, Edna. 1959. The yoga cook book. New York, NY: Philosophical Library. 156 p. Index. 19 cm.
• ***Summary:*** The Yoga diet, as presented here, is not vegetarian. This book contains recipes for meat (liver, heart), fish, and shellfish. "Yogans" are said to eat at least some food each day which carries the life principle (fresh, raw food), to prefer whole foods in modest amounts, to avoid inert demineralized foods (such as white flour and white sugar), and alcohol. Yoga is not a religious movement; its followers practice self discipline in eating, without fasting. The rear dust jacket states: "This book banishes the idea that the modern Yogin as an ascetic with caveman dietary habits." The true Yogin regards his food as sacred and has heightened powers.

Soy-related recipes include: Soybean soup (p. 18). Shoyu sauce (soy sauce, p. 26). "Auxin" salad (freshly sprouted mung beans sprinkled with soy oil, etc., p. 48). Eggs foo yung (with bean sprouts, water chestnuts, green onion, celery, 4 beaten eggs, salt to taste. "Brown desired size patties of the mixture in soy oil." Serve with a brown sauce made with cornstarch, soy sauce, monosodium glutamate, sugar, and salt. p. 58-59). Vegetable sukiyaki (with Tofu {bean curd} and shoyu sauce, p. 65). Soyburgers (with mashed cooked soybeans, p. 66). Vegetable chop suey (with soy oil, bean sprouts, and soy sauce, p. 68). Korean soybean noodles (made with soybean flour, p. 72). Soy spoon bread (with soy flour and soy oil, p. 97-98). Making soy bean cheese (tofu, coagulated with vinegar, p. 104). Yoga puddings and desserts (white flour is replaced by soy flour and lard is replaced by soy oil, p. 114). Chinese sweet soy beans (p. 122). Manchurian soy bean milk drinks (p. 136).

Also discusses: Japan yokan cakes (with red beans [azuki], p. 116-17). Oat peanut butter wafers (p. 123). Red bean cake (Korea, with red kidney beans [azuki], p. 131-32).

Note: This is the earliest document seen (Jan. 2009) that describes the use of soy ingredients in Korean-style recipes outside Korea.

4140. Kikkoman International Inc. 1960. Kikkoman soy sauce: "All-purpose" seasoning (Ad). *Los Angeles Times*. Jan. 12, p. 84.
• ***Summary:*** A small black and white ad. "Taste-tantalizing flavor!–Imported. Since 1630. Delicious for Sukiyaki, tempura, meats, poultry, fish, basting, gravies, soups, vegetables, rice, noodles, salad dressings."

Photos show: (1) A bottle of Kikkoman soy sauce. (2) The Kikkoman logo.

Note: This is the earliest ad seen (Oct. 2006) for Kikkoman soy sauce in the *New York Times*. Address: Importer. Head office: 900 Marin St., San Francisco 4, California. New York Office: 33-59 Vernon Blvd., Long Island City 6, N.Y.

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4141. Winkel, Johanna G. 1960. Recipes from Asia: Indonesian rijsttafel favorite dinner. *Christian Science Monitor.* Jan. 25. p. 4.
• ***Summary:*** Have ready beforehand: "Babi ketjap: This is made by dicing pork and rolling it in a mixture of asem (tamarind), garlic, salt, and *ketjap benteng* (concentrated sweet soy sauce)."

Note 1. This is the earliest document seen (April 2012) in all major U.S. newspapers digitized by ProQuest that uses the term "ketjap" to refer to Indonesian-style soy sauce. The new term appears in 43 articles between 1960 and the present, including five in the 1960s, 16 in the 1970s, etc.

Note 2. This is the earliest English-language document seen (April 2012) that uses the word *benteng* or the term *ketjap benteng* to refer to an Indonesian-style soy sauce.

Note 3. It is also the earliest document seen (April 2012) that uses the term "sweet soy sauce" or the term "concentrated sweet soy sauce" to refer to *ketjap benteng*, an Indonesian-style soy sauce.

An illustration shows a "wadjan," a Javanese frying pan, which looks exactly like a Chinese wok.

4142. Kikkoman International Inc. 1960. Lose five pounds in six days with "No Hunger" diet: Kikkoman soy sauce at leading grocers (Ad). *Los Angeles Times.* Jan. 26. p. 4.
• ***Summary:*** A small black-and-white ad. "See the January 1960 issue of *Coronet* magazine... citing health and reducing values of rice and soy sauce." A photo shows a bottle of Kikkoman soy sauce.

Note: This ad also appeared in the Jan. 27 and 29 issues.

4143. Hino, Tetsuo; Ito, K.; Hayashi, K.; Abe, N. 1960. Shôyu oyobi chômi eki-chû no enki-sei amino-san ni tsuite no kenkyû. I. Dattan-san kôso ni yoru L-rijin no teiryô ni tsuite [Studies on the basic amino acids of the soy sauces and the seasoning liquids. I. L-lysine determination by L-lysine decarboxylase]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 34(1):22-27. Jan. [16 ref. Jap]
Address: Ajinomoto Co. Ltd.

4144. Kropotkin, Alexandra. 1960. Lose 5 lbs. in 6 days with "No hunger" rice diet. *Coronet* 47(3):74-78. Jan.
• ***Summary:*** Cites the health and reducing values of rice and soy sauce. Dr. Walter Kempner, of Duke Univ. [Durham, North Carolina], believes in the health value of rice, since it "contains no cholesterol–which many doctors believe dangerous to the heart, kidneys and blood circulation." Note: All plant foods are free of cholesterol.

The writer prefers long grain brown rice, with long grain polished as a 2nd choice. She enjoys "a bowl of room-temperature rice with nothing but soy sauce, cold spinach and a small helping of 'pickled' vegetables"–in short a Japanese peasant diet. She seasons 3/4 cup cooked rice with 1 teaspoonful soy sauce: total 100 calories. She also uses 1 teaspoon soy sauce in her "geisha girl" salad dressing. Address: Princess.

4145. May Co. (The). 1960. Our gourmet shop brings you fine foods from the exotic Far East (Ad). *Los Angeles Times.* Feb. 18. p. 29.
• ***Summary:*** "Kikkoman Soy Sauce. The most versatile sauce to come from the Orient. 25-oz. bottle 79¢." Address: Downtown, Valley, Wilshire, South Bay, Lakewood [Los Angeles area].

4146. Ueno, Takahiro; Kuramochi, Taira. 1960. Shinshiki shôyu ni kansuru kenkyû. I. Shinshiki shôyu seizô kôtei ni okeru ippan seibun henka [Studies on shinshiki shoyu (semi-chemical soy sauce). I. On the change of general components in the course of manufacture]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 34(2):187-93. Feb. [20 ref. Jap]
Address: Noda Soy Sauce Co. Ltd.

4147. Holland, Madeline. 1960. Japanese dishes with American airs! Chicagoans share culinary delights. *Chicago Daily Tribune.* March 4. p. B1.
• ***Summary:*** A recipe for Mizudaki [Mizutaki] beef calls for: "½ cup light colored soy sauce, 1½ tablespoons dark soy sauce."

Note: This is the earliest document seen (Sept. 2008) in all major U.S. newspapers digitized by ProQuest that uses the term "dark soy sauce" to refer to dark colored soy sauce. The new term appears in 444 documents between 1960 and the present, including three in the 1960s, etc.

4148. *Los Angeles Times.* 1960. Oriental omelet with fruit juice. March 17. p. A10.
• ***Summary:*** "For an Oriental omelet, add a little tomato juice to beaten eggs, season with Japanese soy sauce and salt, and a dash of monosodium glutamate."

4149. Siqueira & Son. 1960. Classified ad: Toms Chinese Soya Sauce... *Times of India (The) (Bombay).* March 23. p. 2.
• ***Summary:*** "... Chilli Sauce, Egg Noodles, Plain Noodles for hotels, restaurants, ships sold everywhere. Agents Siqueira & Son." Address: Post Box 437, Bombay.

4150. *Los Angeles Times.* 1960. Dip with oriental flavor made easily. March 24. p. A12.
• ***Summary:*** Combine "one cup commercially soured cream, two tablespoons Japanese soy sauce, one tablespoon lemon juice and one-half teaspoon ground ginger." Mix well and serve with potato chips or crisp vegetable sticks.

4151. American Soybean Association. 1960. Soybean Blue

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Book. Hudson, Iowa: American Soybean Assoc. 144 p Advertisers' index. 22 cm.

• ***Summary:*** Contents: American Soybean Association. Japanese American Soybean Institute. National Soybean Processors Association. Soybean Council of America. Midsouth Soybean and Grain Shippers Association. Ontario Soya-Bean Growers' Marketing Board. U.S. Department of Agriculture: Agronomic Research (ARS), Disease Research, Entomological Research, Utilization Research and Development (Northern Utilization Division [NRRL], Eastern, Southern, Western), Marketing Research.

Tables: (1) World soybean production. (2) Canadian soybean production. (3) Soybean production, utilization and value, 1936-1959 Canada. (4) Soybean crushings in Canada. (5) Soybean production–United States (with acreage and yield), 1924-1959. (6) U.S. Soybean production by states (1959). (7) U.S. soybean production, supply, and utilization (incl. exports, carryover), 1924-1959. (8) U.S. soybean production, acreage, and yield by state, 1924-1959. (9) U.S. soybeans: Inspected receipts. (10) U.S. soybeans–supply and distribution, 1952-1959 (1,000 bushels). (11) U.S. Soybean oil meal and cake production, supply and utilization, 1924-1959 (1,000 tons). (12) Soybean oil, meal and cake production and stocks by states, 1955-1958. (13) Oilseed cake a meals, supply and distribution, Oct. 1950-59. Incl. soybean, cottonseed, linseed, peanut, copra, total. (14) Production of protein concentrates (cake and meal), 1937-41 (avg.) to 1951-59. Incl. soybean, linseed, cottonseed, copra, gluten feed and meal, tankage and meat scraps, fish cake and meal, dried milk products (dried and concentrated skim milk, buttermilk, and whey used for animal feed), other milk products (fed on farms), total. Note: In 1953-54,395,000 tons of dried milk products were fed to animals. (15) U.S. soy flour production. (16) Production and exports of soy flour and grits (incl. full fat, low fat, and defatted products, exported commercially or to military). (17) Production of mellorine [frozen dessert where vegetable oil replaces butterfat], 1953-59, by month. (18) U.S. fats and oils production, 1937-41 (avg.) to 1959. Incl. Butter, lard, edible beef fats, total edible animal fats, corn oil, cottonseed, edible olive oil, peanut oil, soybean oil, total edible vegetable oils, inedible oils. (19) Soybean oil utilization, 1931-1959 (million lb). Incl. Foods: Margarine, shortening, other, total. Non-food products: Soap, paint & varnish, other drying oil products, miscellaneous, loss, total, total domestic disappearance. (20) Same as No. 19 but in percentages.

(21) Utilization of soybean products, 1955-56 to 1958-59. Incl. meal and oil: Livestock feed, industrial, fertilizer, export. (22) Prices of U.S. soybeans, by month and season average, 1923-1959. (23) Same as No. 22 but only for No. 1 yellow: Chicago, Illinois country shipping points, Minneapolis. (24) Same as No. 21 but soybeans for crushing, No. 2 yellow. (25) Value of U.S. soybean crop, 1925-59 (thousand dollars) in these states: Total USA, Illinois, Iowa, Indiana, Ohio, Missouri, Minnesota. (26) Soybean price support operations, 1932-33 to 1959-60. Started in 1941-42 and has continued to the present, with a peak of $2.56 per bushel in 1953-55. (27) Price spread, soybeans and end products, 1945-1958. Spread between price received by farmers and value of products. (28) Prices of U.S. soybean oil meal (44% protein), 1929-1959 by month. (29) Prices of U.S. crude soybean oil, by month, 1929-30 to 1959-60. (30) Imports, exports, soybeans, oil and meal.

(31) Soybeans: Inspections for export, 1957-59, with country of destination and port of departure. (32) U.S. trade in soybeans, fats and oils. (33) Oil and fat exports under P.L. 480. Total, cottonseed oil, soybean oil, Oct. 1954 to Sept. 1959. Incl. country of destination, the top four being Turkey, Pakistan, Israel, and Egypt. (34) Imports, exports cake and meal, 1929-1958, incl. cottonseed, soybean, linseed, peanut, copra. Exports incl. country of destination. (33) Soybeans: Crushings and yields of oil and meal. (35) Bar chart: Major markets for U.S. soybeans since 1953: West Germany, Netherlands, Other Europe, Japan, Canada, Other. (36) Composition of soybean seeds, by variety, incl. Maturity Group No., % protein, % oil, weight of 100 seeds in grams. (37) Amino acids of soy protein. (38) Composition of Lecithin. (39) Composition of soybean oil, by variety. Incl. linolenic acid, linoleic acid, oleic acid, saturated acids.

Official standards for soybeans, Revised effective Sept. 1, 1955. Soy flour standards, for full-fat, low-fat, and defatted. Densities of various soybean products. Map of the USA showing the best adapted soybean varieties for each major soybean producing state. Directories: Processors of soybeans, by state, with address and names of officers (p. 56-74). Canadian soybean processors (p. 74). Manufacturers of 50% protein soybean meal (by state, p. 76). Foreign soybean processors, by country (p. 78-81). Refiners of soybean oil, by state (p. 82-84). Manufacturers and handlers of soy foods (p. 86-93): Beverages, breakfast foods, canners of green vegetable soybeans, canners of mature soybeans, cookies, crackers, toasts and wafers, frozen desserts (companies that make vegetable oils used in frozen desserts), health food store & supply houses, lecithin, macaroni, spaghetti & noodles, margarine, meat substitutes, proteins (Griffith Labs, Gunther, Worthington Foods), pudding powders (Brockville, Ontario, Canada), Salad and cooking oils, shortening, sausage binders, seasonings, soups, soybean oil, soybeans for cooking and sprouting, soy butter, soy cheese [tofu], soy flour, grits and flakes, soy flour mixes, soy milk, soy sauce, sprouts, vitamins, whipping agents.

Manufacturers of industrial products employing soybeans (p. 94-95): Caulking compounds & floor tile, coated papers & leather dressing, fire-fighting foam, glues, plywood & adhesives, insecticides, laminating, lecithin, oilcloth and coated fabrics, paints and varnishes (13 companies), paper sizings, wallpaper and wallboard coatings, resins, soaps, soybean fatty acids (8 companies),

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soybean oil. Services for the industry (p. 96-109): Analysts, appraisals, brokers, commission merchants & jobbers, consultants, engineering services, export elevators, exporters & importers, export warehousing and handling, farm management, field warehousing, futures market, market analysis, mill construction contractors, milling service, miscellaneous services, oil transports, transportation.

Equipment and supplies for the soybean industry (p. 110-32): Aspirators, bagging equipment, belting, chains, conveyors, elevators, defoliants, drying and aeration equipment (farm driers, grain driers, meal driers), dust control systems & dust collectors, elevator buckets, fans, farm equipment, fertilizers, fumigants, fungicides, germinators, grain and seed cleaning and separation equipment, grain grading equipment & moisture testers, grain handling equipment, granulators, grinding & mixing equipment, herbicides, insecticides & pesticides, inoculants, laboratory equipment, man-lifts, material level indicators, materials handling equipment, miscellaneous equipment, packaging materials, pelleting machines, power transmission equipment, pumps, respirators, seed protectants, sifters, soil testing, soybean storage (elevator & processing units, farm units), spraying and irrigating equipment, temperature systems, transportation equipment, truck lifts, unloaders, waterproofing, weighing and packaging equipment.

Soybean processing [crushing] and oil refining equipment and supplies (p. 134-42): Bleaching and filtering equipment, catalysts, complete plants [for crushing], continuous counter-current solvent extractors, continuous screw presses, degumming, deodorization, fractionation, hydraulic pressing equipment, hydrogenation, margarine, miscellaneous equipment, neutralization, shortening, solvent recovery, solvents, soybean seed [suppliers and private breeders], vegetable soybean seed. Advertisers' index. Incl. Allied Mills, V.D. Anderson, ADM, Arkansas Grain Corp., Big 4 Cooperative Processing Assn., Blaw-Knox Co., Buhler Mill Engineering Co., Cargill Inc., Central Soya Co., Crown Iron Works Co., Dannen Mills Inc., Delphos Grain and Soya Products Co., Albert Dickinson Co., Louis Dreyfus Corp., Esso Standard Oil, Farmers Cooperative Assn., Farmers' Cooperative Co., Felco Soybean Oil Meal Dealers, French Oil Mill Machinery Co., Funk Bros. Seed Co., Galesburg Soy Products Co., General Mills Inc., Jacob Hartz Seed Co., Inc., Honeymead Products Co., Huntley Mfg. Co., Illinois Soy Products Co., Iowa Milling Co., Iowa Soya Co., Jensen Mills, Kansas Soya Products Co, Inc., Spencer Kellogg & Sons, Inc., Lauhoff Soya Co., Albert Lea Engineering Co., North Iowa Cooperative Processing Assn., Penola Oil Co., Phillips Petroleum Co., Pillsbury Co., Port of New Orleans, Quincy Soybean Products Co., Rice Grain Corp., Seedburo Equipment Co. (measures oil content of soybeans in 10 minutes), Skelly Oil Co., A.E. Staley Mfg. Co., T.W. Wood & Sons (Seedsmen since 1879; Richmond, Virginia). Address: Hudson, Iowa.

4152. Ando, Seiichi. 1960. Yuasa shôyu [Yuasa shoyu]. In: Chihô-shi Kenkyû Kyôgi-kai, ed. 1960. Nihon sangyo-shi taikei. Vol. 6: Kinki Chihô-hen. Tokyo: Tokyo Daigaku Shuppan-kai. [Jap]*

• ***Summary:*** In this book titled "Outline of Japanese Industry," there is one volume on the Osaka-Kyoto (Kinki) area. In that volume is a discussion of Yuasa shoyu from an economic history viewpoint. Address: Osaka Sangyo Daigaku, Osaka, Japan.

4153. Hayashi, Shizuka. 1960. Public relations seminar by JASI. *Soybean Digest*. March. p. 20.

• ***Summary:*** At this seminar JASI taught Japanese manufacturers of soybean [food] products how sales of these products can be much increased through the use of public relations, including marketing research. "This is particularly true of marketing new products." Previously, these very manufacturers have lacked interest in public relations because they "have been enjoying a reasonably profitable business under the funds allocation system, which has afforded them a sort of protection."

At JASI's first seminar on PR [public relations] and marketing, held recently in Tokyo, about 40 companies and organizations from various parts of Japan participated. "There were two lectures. The first was by Professor Naoyoshi Horikawa on public relations and top management. The other, by T. Shimizu, was on sales promotion. Never in the history of the soybean industry [in Japan] has there been a gathering like this where the so-called 'big shots' of leading organizations sat side by side at the table."

A table shows estimated consumption of soybeans (S) and soybean meal (SM) during 1961 as planned by the Japanese government (tonnes = metric tons). The totals are 1.467 million tonnes of soybeans and 707,000 tonnes of soybean meal. Details: Oil processing: 928,000 S. Livestock feed: 303,000 SM. Tofu and fried tofu: 280,000 S + 20,000 SM. Shoyu: 29,000 S + 200,000 SM. Miso: 130,000 S + 50,000 SM. MSG: 73,000 SM. Other miscellaneous foods: 20,000 S + 40,000 SM. Frozen tofu: 40,000 S. Natto: 30,000 S. Other uses: 21,000 SM. Kinako: 10,000 S.

Note: This is the earliest document seen (Jan. 2012) that contains industry or market statistics for natto by geographical region.

A large photo shows about 13 Japanese men seated at a long table at JASI's recent public relations seminar. The name and position of each man is given. They represented the following organizations: Miso Association, Tatsuno Shoyu, Shoyu Association, Frozen Tofu Association, Masuko Miso. Address: Managing Director, Japanese American Soybean Inst., Nikkatsu International Building, No. 1-Chome Yurakucho Chiyoda-Ku, Tokyo, Japan.

4154. Ohsawa, George S. 1960. Zen macrobiotics. New

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York, NY: Ohsawa Foundation. 103 p. Undated. 28 cm.
• ***Summary:*** This bound, hardcover book was owned by Herman Aihara, and is now (April 2011) in the library of the George Ohsawa Macrobiotic Foundation in Chico, California (President: Carl Ferre). The size is 8½ by 11 inches. The cloth cover is pea green and on it, near the top, is written (on two lines): "Zen macrobiotics" with the word "Zen" in large bold capital letters. In the middle: "George S. Ohsawa," the author. And near the bottom (on two lines): "Ohsawa Foundation: New York–Paris–Brussels–Tokyo."

The book consists of leaves and the text is typewritten. All of the leaves in this edition are edited, some heavily, in two colors of ink: red edits by George Ohsawa, and blue by Lou Oles (According to Herman Aihara). There is no table of contents or copyright page. On the first leaf, near the top, the title is typewritten again on two lines: "Zen Macrobiotics." Then the book begins: "Two ways to happiness through health. Happiness is the goal of everyone in the world. But what is happiness?... In the Orient happiness was defined by sages some thousands of years ago as consisting of five factors, as follows: 1. The first fundamental factor of happiness is joyfulness, an amusing, interesting, brilliant and healthy longevity. 2. The second, not to be worried about money. 3. The third, instinctive capacity to avoid accidents and difficulties that would cause premature death. 4. A loving realization of the order of the infinite universe at all levels. 5. Not to become the first as you will become the last. But try to become the last so that you will become the first forever.

"... School education is completely unnecessary, and even detested. All great men are autonomous and self-made..."

Note 1. This section (two leaves) becomes the Forward in the next edition, which was printed in Japan.

The third leaf is a title page: Like the cover, it has text on 3 levels, but is typewritten. Title: "Macrobiotics: The Biological and Physiological Foundation of Zen Buddhism." Author: George Ohsawa. Publisher: Ohsawa Foundation: New York–Paris–Brussels–Tokyo.

Note 2. The relationship between this title page, the title page of the mimeographed edition, and the cover is unknown.

The next two leaves, are titled "Health to Peace" and numbered "i" and "ii." Note 3. They become the Preface in the next edition, which was printed in Japan.

Next is "iii" which is the Foreword in this mimeograph edition but becomes Chapter 1 in the next edition, printed in Japan.

Next are leaves "iv" through "xxii" which are the Introduction in this edition, but become Chapter 1-3 in the next edition printed in Japan. After leave xxii, the leaves are numbered "8" through "86," and after that is the back cover. The last section of the book is titled "The Case of Mr. E" (leaves 77-86). Note 4. It becomes the first appendix in next edition printed in Japan, which also contains a second appendix titled "The Pro-Forma Death Certificate..."

The mimeograph edition is thus missing pages 3-7. Moreover, all the pages are renumbered by Ohsawa by hand in the upper right corner. In Ohsawa's numbering there are no pages numbered 1, 2, 5, 6, 7, 8, 10, 33 and 34 (a total of 9) and thus his page is numbered 112.

Because the mimeograph edition is bound, it appears that the pages were rearranged after typing but before publication and distribution.

Page 19: "With the conception of Principal Food and that of secondary food clearly distinguished, people of the Orient could live a happy, free and peaceful life from the beginning up to the importation of the brilliant Occidental civilization, more or less violent, with its industrial and scientific instruments... The Principal Food should occupy at least 60% of your eating."

This bound, mimeograph book contains many recipes, all of which are numbered. Soy-related recipes include the following: In the section titled "Beans": 117. Boiled soy beans with miso (the soy beans are first roasted until they pop). 118. Boiled beans ("Boil soy beans until tender. Seasoned with soy sauce and salt. Boil until liquid is gone. Prepare black beans in the same way)." Note 5. Later writings by Ohsawa show that by "black beans" he meant black soy beans, *Kuro mame* in Japanese. 119. Gomoku beans (boiled soy beans with vegetables). 120. Gozu soup (Gôjiru; ground soaked soybeans with vegetables). 121 and 122. "Aduki" beans. 159. Hiziji with age (seasoned with "soyu" [sic, shoyu]). 160. Hiziki [Hijiki] and soyabean (seasoned with syoyu [shoyu]).

In the section titled "Miso and syoyu preparation": "Both miso and syoyu should be of traditional make." 201. Sauce miso (miso-tahini sauce). 202. Miso cream. 203. "Muso" (miso and tahini with minced orange peel). 204. "Miso" soup (5 persons). 205. Carrot and onion au "miso" (15 persons). 206. Vegetable au miso. 207. "Oden" au miso. 208. Buckwheat "dango" au "miso." 209. "Miso-ae." 210. "Tekka" no. 1 (miso with minced yang vegetables–lotus root, burdock root, ginger–fried in sesame oil until very dry. Good for all yin diseases).

In the section titled "Syoyu": Recipes 212-221 are seasoned with "syoyu" (shoyu, traditional fermented soy sauce). "Use the traditional syoyu in all cooking (vegetables and fish). Syoyu diluted with a little water is very good for 'Sasimi' [sashimi] and fried oyster, 'Tempura', fish 'Sukiyaki', 'Tohu' ([tofu] vegetable cheese of soya beans), etc."

803. "'Tohu' plaster. Squeeze 'tohu' (white soya bean cheese) add 10% of flour; stretch this directly on the front or any part painful with inflammation. All pain or inflammation will go away soon." Note 6. This book does not use tofu in any recipes, probably because Ohsawa considered it too yin. However Ohsawa was the one person most responsible for introducing the word "tofu" to popular American culture; his

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later writings and especially his students and admirers spread the word to the four corners of the United States.

Note 7. This is the earliest macrobiotic document seen that mentions tofu.

Note 8. This is the earliest English-language document seen (July 2000) that mentions "Tekka" (spelled that way, which is now the proper romanization) or that gives a recipe for making it.

Note 9. This is the earliest English-language document seen (March 2006) that uses the word "aduki" beans to refer to azuki beans. This spelling was subsequently widely used, but only in macrobiotic publications.

Note 10. This is the earliest macrobiotic cookbook seen (Jan. 2012).

Also discusses: In the section on "Egyptian beans" (p. 30): Pois "chiche" (chickpeas, basic preparation by boiling). "Beignet" pois chiche (deep-fried balls of mashed chickpeas mixed with flour). Pois chiche croquette (chickpea croquettes).

Publication: "Published by Ohsawa Foundation, 331 Riverside Drive, New York City, U.S.A. (Secretary Aihara, 44 W. 96th St., New York City, U.S.A.)." Underneath this is "Printed in Japan."

Note 11: Concerning the date of publication, we read: "My first two books in English will arrive beginning of November: *Zen Macrobiotics* and *The Philosophy of Oriental Medicine.*" (Source: G.O. [George Ohsawa]. 1960/09. "Letter from the editor." *Macrobiotic News* (New York, NY). No. 6. Sept. p. [7]). Address: New York, USA.

4155. Ohsawa, George. 1960. Zen macrobiotics [Continued, Part II]. New York, NY: Ohsawa Foundation. 103 p. Undated. 28 cm.

• ***Summary:*** This mimeograph bound book with the pea green cover, the only known copy of which is owned by the George Ohsawa Macrobiotic Foundation in Chico, California, raises many interesting questions about the publication history of this and closely related titles.

Carl Ferré, an expert on this subject, believes: (1) That there were several "printings" of mimeographed edition and that "printings" may vary. (2) There is a strong possibility that the first editions were sold in Jan., Feb., and March of 1960, before there was any editing on them. (3) It is unlikely that any books were sold with only Ohsawa's red edits on them. (4) It is probable that no books were sold with both Lou Oles' blue editing and George Ohsawa's red editing on them.

Was there a printed edition prior to and different from this edition?

Does anyone own such a copy?

How many pages did it contain and how were the pages arranged? For example, did the original book start with the title page, followed by ages i, ii, iii, etc?

Were the original pages reshuffled to create this bound edition? In this edition, why are there xxi pages of front matter numbered in roman numerals followed by pages 8 through 86 in Arabic numerals.

Why do some pages seem to be missing from this edition. Carl Ferre believes that someone typed the entire book, then Ohsawa decided to move some of the pages around, which they did before they bound and sold the books (for $0.50 each) at Ohsawa's lectures.

How did they bind the books? Did they bind the books by themselves or send them out to a professional bookbinder? Or did a person (who attended the lectures) who was in the bookbinding business offer to bind the books free of charge so they could be sold for only $0.50 each. Was it originally hardcover or paperback? Is the pea green book in Chico simply an example of all the books sold in 1960 at Ohsawa's lectures? Or is it unique–one of a kind? When and where did Ohsawa make all this handwritten changes in red? Was someone suggesting the changes to him? If yes, who?

Why is the title on the cover different from the title on the title page.

Why was the original title page numbered "9" in Ohsawa's handwriting.

What do the Japanese characters under the handwritten "9" mean?

Why is there content before the title page?

We are told the original mimeograph edition was duplicated and bound in the Aihara's apartment in New York City; how was it bound?

Carl Ferre reminds us (e-mail of 2 May 2011): Lou Oles took the recipes out of *Zen Macrobiotics* to create a separate book, *Zen Cookery*. "The problem that has always existed is that *Zen Macrobiotics* has numbers in it that refer to numbers in *Zen Cookery* and they have never corresponded. For example *Zen Macrobiotics* says "See *Zen Cookery* No. 103" and you go to *Zen Cookery*, find that number, and its something totally different–or even nonexistent." Address: New York, USA.

4156. Onishi, Hiroshi. 1960. Studies on osmophilic yeasts. VII. Production of polyalcohols by *Saccharomyces rouxii* in the concentrated media of sodium chloride and sugars, and identification of the polyalcohols produced. *Bulletin of the Agricultural Chemical Society of Japan* 24(2):126-30 March. [11 ref. Eng]

• ***Summary:*** The author identified polyalcohols which were produced in large amounts by Saccharomyces rouxii under aerobic fermentation in the concentrated media of sodium chloride and sugar; he began by isolating these products in crystalline form from the fermented broth.

The products were determined to be glycerol and D-arabitol. Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4157. Onishi, Hiroshi. 1960. Studies on osmophilic yeasts.

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VIII. Polyalcohol production by various genera and species of yeasts. *Bulletin of the Agricultural Chemical Society of Japan* 24(2):131-40. March. [12 ref. Eng]
• ***Summary:*** "*Pichia miso*, an osmophilic yeast, was isolated from miso-paste. It could produce very high yields of glycerol, erythritol, and D-arabitol.

Table 1 shows production of polyalcohohols by various genera and species of yeasts: *Saccharomyces* (25 species), *Zygosaccharomyces* (21 species), *Hansenula* (10 species), *Debaryomyces* (16 species), *Pichia* (14 species). Other genera of yeasts (30 species). Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4158. *Los Angeles Times.* 1960. Garnish adds zest to baked salmon. April 7. p. A11.
• ***Summary:*** "When baking salmon, drizzle the fish with lemon juice, Japanese soy sauce and sprinkle with rosemary."

4159. **Product Name:** Vegetarian Burger.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1960. April.
Ingredients: In 1971: Wheat protein [wheat gluten], water, yeast extract, salt, soy sauce, Brewer's yeast, MSG, seasonings, algin, caramel color.
Wt/Vol., Packaging, Price: 20 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: *Chopletter* (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include Vegetarian Burger.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Vegetarian Burger (Worthington)."

Ad in Whole Foods. 1983. Sept. p. 45. in 20 oz. cans. This product and Vegetable Skallops are being promoted as "Salt Shakers." Both are available in versions with and without salt and MSG. For the hypertensive and sodium-conscious. A black-and-white photo shows the can and label. The text reads: "Contains no meat. A vegetable protein product. No added salt or MSG."

Worthington Yesterday and Today. 1984. p. 11. Nutrition Action Healthletter. 1987. Oct. p. 13. Critical treatment of this product which contains 790 mg of sodium vs. only 65 mg for lean beef. Much of the sodium comes from MSG. The "no salt added" label is highly misleading though technically legal. It also contains caramel coloring. Thus it is not necessarily more healthful than beef.

4160. Kikkoman International Inc. 1960. Barbecue fun and better eating begin with Kikkoman (Ad). *Los Angeles Times.* May 11. p. 17.
• ***Summary:*** "Easy does it with this magic marinade! ½ cup Kikkoman soy sauce. 1 tbsp. sugar (to taste). ½ cup sherry wine. 1 clove garlic crushed. Marinate the ribs, steak, lamb, halved chicken or turkey about 20 minutes. Place on the grill, turn occasionally and baste with Kikkoman marinade until a deep golden brown. Simple–but sensational! All-purpose Kikkoman soy sauce: basic for better barbecue."

Photos show: (1) A family of four people standing around a barbecue. (2) A bottle of Kikkoman soy sauce.

4161. Manners, Marian. 1960. Allspice in barbecue sauces gives tangy taste, aroma. *Los Angeles Times.* May 12. p. A11.
• ***Summary:*** A recipe for Barbecue steak sauce calls for "¼ cup Japanese soy sauce." Address: Times Home Economics Director.

4162. *Los Angeles Times.* 1960. Wine flavors shrimp salad. May 26. p. A9.
• ***Summary:*** "A chef's salad with shrimp: Marinate cooked shrimp or prawns in California rose wine with some finely chopped green onion, and Japanese soy sauce..."

4163. **Product Name:** Loma Linda Dinner Cuts (Meatless Cutlets) [With Salt, or with No Salt Added].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Arlington, CA 92505.
Date of Introduction: 1960. May.
Ingredients: In 1971: Wheat protein [wheat gluten], water, soy sauce, yeast extract, salt, MSG, dextrose, powdered onion, celery and parsley extracts.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 2 dinner cuts (3.5 oz–100 gm): Calories 110, protein 21 gm, carbohydrate 4 gm, fat 1 gm, cholesterol 0 mg, sodium 30 mg, potassium 75 mg.
New Product–Documentation: *Today's Food* (Loma Linda Foods, Arlington, California). 1960. Spring. p. 4. Today's Food. 1964. Autumn. p. 7. 20 oz. can retails for $0.74, serves 5, and provides 65 gm of protein: Ad. 1981, undated. "Try improved Dinner Cuts. Its no longer a tough choice. Let's face it, our old Dinner Cuts–as delicious as they were–took a lot of chewing. We took a lot of kidding... Dip in batter and wheat germ and brown in a skillet."

Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Dinner Cuts contain 18.79% protein, 1.00% fat, and 3.49% carbohydrate. One serving, 1 patty, weighs 125 gm.

Loma Linda Food Co. 1969. "Wholesale Price List." Dinner Cuts are now sold in 14 oz, 19 oz, 28 oz, and 48 oz cans. A version with no salt added is sold in 20 oz cans.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet*

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Manual, Utilizing a Vegetarian Diet Plan. 3rd ed. p. 161. Lists the ingredients in "Dinner Cuts (Loma Linda)."

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned steak or burger-like product based on wheat protein.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Dinner Cuts (Loma Linda)" are "wheat protein, soy sauce, yeast extract, MSG, salt, powdered onion, L-lysine, dextrose, celery, parsley extract."

Label sent by Loma Linda Foods. 1988. Oct. 5. The ingredients are now, for "No salt added": Wheat gluten, water, oat flour, wheat flour, soy protein isolate, caramel color. Broth: Water, natural (vegetable) flavors, onion powder, mono potassium glutamate, dextrose, L-lysine, spice. This product was introduced in 1963.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

4164. Onishi, Hiroshi. 1960. Studies on osmophilic yeasts. VIII. Isolation of a new obligate halophilic yeast and some considerations on halophilism. *Bulletin of the Agricultural Chemical Society of Japan* 24(3):226-30. May. [10 ref. Eng]
• ***Summary:*** The writer has isolated this yeast from year-old "soy mash and named it *Torulopsis halonitratophila nov. sp.*" Although it is an obligate halophile at 30°C, "it exhibits facultative halophilism when tested at a lower temperature such as 20°C. This observation suggests that cultural temperature is one of the most important factors for halophilism." Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4165. *Los Angeles Times.* 1960. Soy sauce gains favor here. June 9. p. A9.
• ***Summary:*** Soy sauce, long a favorite in the Orient, is increasing in popularity in California with the return of travelers [and of military personnel] who have experienced the charms of Japanese cooking.

Soy sauce has come to be used in barbecuing, which is similar to preparing the famous Japanese teriyaki. "Soy sauce is also an indispensable ingredient in some marinade recipes. It adds sweet-tart piquancy, deep color, and distinctive flavor."

A recipe for Marinated shrimp calls for "½ cup Japanese soy sauce." A recipe for Teriyaki marinade for kebabs calls for "1 cup Japanese soy sauce."

4166. All American. 1960. Sunday is father's day and pop's the tops! (Ad). *Los Angeles Times.* June 16. p. D13.
• ***Summary:*** A full-page ad for many foods sold at this supermarket–including: "Kikkoman Soy Sauce. 6-oz. bottle 29¢. 12-oz. bottle 39¢." Address: Ten locations in the greater Los Angeles area].

4167. Masiluñgan, Victoria A.; Ramos, Milagros A.; Palo, Macario A. 1960. Studies on some important factors involved in the mold process of making soy sauce. *Philippine J. of Science* 89(2):149-62. June. [16 ref]
• ***Summary:*** The Chinese introduced soy sauce into the Philippines as a seasoning for their various dishes, and it was readily accepted by Filipinos. It is rapidly becoming an important condiment as shown by yearly increases in its use since 1951. Consumption in 1956 was valued at 2,667,025 pesos compared with only 327,112 pesos in 1951–an 8-fold increase in only 5 years. Local production of soy sauce has also expanded, from an estimated 93,120 pesos in 1953 to 2,573,977 pesos in 1956.

Three major methods of making soy sauce are described.

The summary describes the various important factors studied in the mold process of making soy sauce. These include the strain of *Aspergillus oryzae* mold used. The ratio of soybeans to wheat. The concentration of salt (20%) in the salt solution "for brining the molded beans" [soybean koji]. "6. The temperature considered to be optimum for brewing molded beans [koji] in 20 per cent salt solution into quality soy sauce" ranged from 40-45°C.

"7. A molding period of 4 days was found to be sufficient to induce maximum proteolysis in molded beans in subsequent fermentation in the brine."

The total fermentation time for the molded beans [koji] was found to be complete after 4 weeks. Address: National Inst. of Science and Technology (NIST), Manila, Philippines.

4168. Onishi, Hiroshi. 1960. Studies on osmophilic yeasts. X. Influence of the environmental factors on the change of microflora during the ripening process of soy-mash. *Bulletin of the Agricultural Chemical Society of Japan* 24(4):386-96. June. Supplement. [10 ref. Eng]
• ***Summary:*** "Soy-mash" means "soy sauce mash" or moromi. Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4169. Siqueira & Son. 1960. Classified ad: Toms Chinese Soya Sauce... *Times of India (The) (Bombay).* July 7. p. 2.
• ***Summary:*** "... makes good cooking even better. A wonderful seasoning sauce with zestful flavour. Agents Siqueira & Son." Address: Post Box 437, Bombay.

4170. McLendon, Winzola. 1960. He steers true culinary course now: Gourmet Marshall. *Washington Post.* July 28. p. C10.
• ***Summary:*** Vice Admiral William Marshall, who divides his time between New York City and Virginia, loves gourmet cooking. He went to cooking school in Yokohama, and today his favorite recipes have Oriental overtones. "He has learned the culinary value of a dash of soya or a bit of hoisin."

He gives several of his favorite recipes including:

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"Hoisin sauce, a venison marinade." This recipe for the marinade calls for "½ cup Hoisin sauce (comes from Hong Kong, may be purchased in any oriental specialty shop...),... 1 dash Soy Sauce." Mix all seven ingredients to make the marinade.

"Venison in hoisin sauce: Marinate venison in Hoisin sauce [mixture] for 48 hours, turning occasionally."

4171. Hayashi, Shizuka. 1960. Discuss problems of soybean usage. *Soybean Digest*. July. p. 26.
• ***Summary:*** Japanese "soy food manufacturers" were addressed by Charles Elkinton, U.S. agricultural attache. During fiscal year 1959 the total quantity of soybeans used by Japanese crushers and food manufacturers amounted to 1.2 million metric tons or 46.7 million bushels, up 12% over the previous year. Japan's total imports during fiscal 1959 were 1,073,477 metric tons of which 1,010,444 metric tons came from the USA.

The total amount of soybeans used by Japanese food manufacturers is as follows, in metric tons. Makers of tofu and frozen tofu used 340,000 tons in 1959/60 rising to 370,000 tons in 1960/61. Shoyu makers used 218,400 tons in 1959/60 rising to 220,537 tons in 1960/61. Miso makers used 186,400 tons in 1959/60 rising to 177,180 tons in 1960/61.

Oil processors crushed 768,870 metric tons or 28,218,000 bushels in 1958/59. A photo shows "Japanese soy food manufacturers," seated on cushions on tatami mats at two long tables, as they are addressed by Charles Elkinton. Address: Managing Director, Japanese American Soybean Inst., Nikkatsu International Building No. 1, 1-Chome Yurakucho, Chiyoda-ku, Tokyo, Japan.

4172. *Macrobiotic News (New York, NY)*. 1960. Our activities in July. No. 4. July. p. 4.
• ***Summary:*** (1) Live with Mr. & Mrs. Ohsawa joyful and happy summer time at the New Horizon Camp, Southampton, L.I. [Long Island, New York City].

(2) Lecture on Macrobiotics by Mr. G. Ohsawa. Thurs. Fri. Sat. & Sun at 8:30 p.m. Fee: $2 for one. Macrobiotic meal cooked by Mrs. G. Ohsawa–Three meals a day.

Fee: special reduction has been done by Mr. G. Ohsawa. Lectures, meals:

$40.00 per week & other activities without sleeping accommodations.

$75.00 per week with sleeping accommodations.

$6 per day.

(3) Distribution of Macrobiotic Foods: (Unrefined Rice [Brown Rice], Yannoh [Ohsawa coffee], Kokko [Kokkoh; grain milk], Azuki, Goma [sesame seeds], Sea Salt, Miso, Tamari–Ohsawa Sauce, Mu-Tea, Sesame Oil, Tahin [Tahini] and Umeboshi, etc.): sold at Azuma Inc. & Ginza Inc.

(4) Presents to Mr. & Mrs. Ohsawa–Smith-Corona Portable Electric Typewriter–has been done by the attendants of the Welcome Party at Am. Buddhist Academy [American Buddhist Academy, founded in 1951, later renamed American Buddhist Study Center] on June 30.

Note 1. This is the earliest document seen (March 2012) that mentions "Tamari" in connection with macrobiotics.

Note 2. This is the earliest document seen (May 2011) that mentions "Kokko" (or "Kokkoh"), a milk alternative containing soy, developed and used by macrobiotics. Address: Ohsawa Foundation, 331 Riverside Dr., New York 25, NY.

4173. Mathews (Mr.). 1960. Imported fine foods (Ad). *Los Angeles Times*. Aug. 7. p. GB10.
• ***Summary:*** Among these foods are "Kikko-man Soy Sauce, 4/5 qt. [quart]–75¢. Whale meat, 7 oz.–45¢. Aji-no-moto super seasoning, 7 oz.–$1.75." An illustration shows a bottle of KikkoMan soy sauce. Address: 600 San Fernando Road, L.A.

4174. Shapiro, Lorraine. 1960. Barbecued turkey spells good eating. *Los Angeles Times*. Aug. 11. p. F4.
• ***Summary:*** A recipe for Summer marinade and basting sauce calls for "1 cup Japanese soy sauce." Address: Marian Manners' staff.

4175. Kawashima, Robert. 1960. Here's the way to prepare sukiyaki, the hottest item in the trade. *Los Angeles Times*. Sept. 18. p. K18.
• ***Summary:*** "The trade" refers to Japanese restaurant food in the USA. "The three big dishes, both in Japan and in the United States, are sukiyaki, tempura, and beef or chicken teriyaki." Each requires the use of soy sauce.

A recipe for Sukiyaki cooking sauce calls for "½ cup Japanese soy sauce."

A recipe for Teriyaki sauce calls for "1 cup Japanese soy sauce."

4176. Hayashi, Shizuka. 1960. The Japanese American Soybean Institute: We can supply the Japanese market with another 26 million bushels of soybeans if we seriously desire it. *Soybean Digest*. Sept. p. 31-32, 34.
• ***Summary:*** Contents: Introduction. Severe criticism (of U.S. soybeans by soybean users in Japan, and work to overcome this bad impression). Next on the consumption and import of soybeans. Now about the future outlook. Possibility of cutting down cost of oil prices. Price of soybean oil can be reduced. Soybean meal as a mixed feed has a big potential market. Soy flour expected to increase.

Before World War II "the soybean requirements of Japan were taken care of mostly by soybeans from Manchuria and China. Soybean oil and low-quality soybean meal were imported into Japan from Manchuria for use mostly as fertilizer." Whole soybeans were used for make shoyu and miso, and for crushing.

"The Japanese soybean industry has stepped into a new

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era since the war. The crushing industry has been shifted from Manchuria to Japan and it has developed quickly to the present important and prosperous stage. With expanded crushing capacity, the need for soybeans has increased and the major part of the requirements has been supplied by soybeans from the United States, with only a limited quantity from China."

"The break in trade between China and Japan since 1957 has given a chance for U.S. soybeans" to overcome their bad image in Japan.

"Consumption of various soy foods has shown substantial increase" and so have total soybeans imposts into Japan, and the U.S. percentage share of total imports. Table show: (1) Consumption of soybeans and oils in Japan (metric tons), annually from 1955-56 to 1960-61, for tofu and frozen tofu (increased from 319,000 to 370,000), miscellaneous (increased from 167,000 to 214,000), shoyu (increased from 248,000 to 272,000), oil mills (increased from 505,000 to 760,000), and per capita daily (increased from 7.52 gm to 10.80 gm). (2) Imports of soybeans to Japan (metric tons) annually from 1955-56 to 1959-60. In 1955-56: Total 767,099. From USA 571,612. U.S. share of total 74.5%. In 1959-60: Total 1,073,477. From USA 1,010,444. U.S. share of total 94.1%.

"Soybeans have now become the largest item volumewise of all U.S. agricultural products imported into Japan." They now top cotton, which had been the largest. Of all U.S. imports to Japan, soybeans are the second largest after scrap iron. This shows that the market development for U.S. soybeans in Japan has been successful–even under the present controlled currency allocation system which limits imports.

Four years ago the expression "P.R." [public relations] was known by very few people and there was little investment in P.R. in Japan. Today almost everyone in Japan knows what P.R. means. As an example of this change among soybean groups, the Miso Association had no budget for P.R. activities 3 years ago. Today its budget for fiscal year 1960 contains approximately 32 million yen or $90,000 for this purpose. "The same can be said of shoyu, tofu, and other groups." The "Shoyu Association has decided to send a team of 7 top executives of the leading shoyu makes to the United States in October 1960 to study the soybean industry. They are doing this at their own expense but with the cooperation of American Soybean Association.

The total investment in the soybean market development program in Japan over the past 4 years by Foreign Agricultural Service has been $425,000 and the contribution by various Japanese groups has been about $257,000 in cash and services combined.

A 1958 survey showed that the 1,368 oil mills in Japan were operating at 36.8% of capacity. This low percentage is due to the fact that 1,210 oil mills (about 90% of the total) are small factories with a daily processing capacity averaging 10 metric tons; they produce oil mainly from domestic rapeseed at low efficiency.

"If the import of soybean becomes free under the "Automatic Allocation system it is obvious that soybean oil production will be concentrated in the larger oil mills (61 crushers) occupying 85% of the nation's total daily extraction capacity of 8,289 tons. This will bring down the price of edible oil for Japanese consumers. A table shows that 159,000 tons of oil are made in Japan from domestic materials as follows: Rapeseed oil 65%. Fish and whale oil 25%. Rice bran oil 6%. Hog grease 4%. Since Japan has little possibility of increasing oil production from domestic raw materials, it must rely on imports. The price of domestic rapeseed is supported by Japan's government.

Another table shows the rapid growth in production of "concentrated feed" in response to the government's policy to encourage livestock production and the dairy industry. In 1955 it was 509,279 metric tons, rising to 1,310,098 tons in 1958, with 2,000,000 projected for 1960. The percentage of soybean meal used in mixed feeds has been about 4.5% because of the priority given to miso, shoyu and other food industries. However the Livestock Bureau has been requesting an increase in the import of soybeans for feed. Hayashi ends by estimating potential import growth of 700,000 metric tons or 26 million bushels, and by urging U.S. soybean growers to seize the opportunity. "If more funds for market development become available, first preference should be given to soybeans to meet the need for more oil, for more soy flour in bread, and for soybean meal as animal feed."

Photos show Shizuka Hayashi and Hiroshi Nakamura (delivering Hayashi's speech). Address: Managing Director, Japanese American Soybean Inst., Tokyo.

4177. Moriguchi, Shigehiro; Ishikawa, Hiroshi. 1960. Maru daizu to dasshi daizu no usukuchi shôyu e no iro ni tsuite. II. [Studies on the browning of the light-colored shoyu made from raw and defatted soy-beans. II. On the chemical antioxidation factors in soy-beans]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 38(9):413-18. Sept. English summary on p. 42 of this issue. [9 ref. Jap]

• ***Summary:*** The authors reported in a previous paper that shoyu made from raw whole soybeans was lighter in color than that made from defatted soybeans. Address: Tatsuno Shoyu Co., Ltd., Japan.

4178. Moriguchi, Shigehiro; Ishikawa, Hiroshi. 1960. Maru daizu to dasshi daizu no usukuchi shôyu e no iro ni tsuite: III. Maru daizu-chû no butsuri-teki sanka bôshi yôin ni tsuite [Studies on the browning of the light-colored shoyu made from raw and defatted soy-beans. III. On the physical antioxidation factor in soy-beans]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 38(9):418-22. Sept. English summary on p. 42 of this issue. [5 ref. Jap]

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Address: Tatsuno Shoyu Co., Ltd., Japan.

4179. Watanabe, Toshiyuki; Aso, Kiyoshi. 1960. Shiro shôyu no tôsosei ni tsuite [On the sugar composition of Shiro Shoyu (clear soy sauce)]. *Hakko Kogaku Zasshi (J. of Fermentation Technology)* 38(9):435-40. Sept. English-language summary on p. 43-44 of this issue. [11 ref. Jap] Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Tohoku Univ., Sendai, Japan.

4180. All American. 1960. It's All-American for family favorites (Ad). *Los Angeles Times*. Oct. 6. p. F14.
• ***Summary:*** A full-page ad for many foods sold at this supermarket–including: "Kikkoman Soy Sauce. 6-oz. 29¢. 12-oz. 45¢. (KTTV Feature)." Address: Ten locations in the greater Los Angeles area].

4181. Manners, Marian. 1960. There's more than chop suey to Chinese cooking: Food. *Los Angeles Times*. Oct. 16. p. 44.
• ***Summary:*** "Chinese cooking need not be limited to chop suey or chow mein... If you have been discouraged from trying authentic Chinese recipes because they are long and complicated, made with obscure ingredients such as fermented bean curd sauce, bitter melon or bok choy heart, try the following..."

Five Chinese-style recipes are given; three call for "soy sauce" as an ingredient.

4182. Motosaki, Shinichi; Ogasawara, T.; Kawai, J.; Hino, T.; Ito, K. Assignors to Ajinomoto Company, Inc. 1960. [Seasoning solution]. *Japanese Patent* 15,835. Oct. 21. (Chem. Abst. 55:10742h). [Jap]*
• ***Summary:*** Hydrochloric acid was used to hydrolyze fat-free soybean cake, to make hydrolyzed vegetable protein.

4183. Alden, Robert. 1960. Advertising: 'Guarantee' due for extinction. *New York Times*. Oct. 24. p. 38.
• ***Summary:*** The U.S. Federal Trade Commission has just issued stringent regulations regarding use of the word "guarantee" in advertisements.

The section "Accounts" states: "Kikkoman International, Inc., to Gotham-Vladimir Advertising, Inc. for advertising of Kikkoman Soy Sauce in the New York area."

4184. Kikkoman International Inc. 1960. Kikkoman all-purpose soy sauce: Recipe of the week (Ad). *Los Angeles Times*. Oct. 27. p. A14.
• ***Summary:*** The recipe is Fish fancier's delight. This is Kikkoman's first "Recipe of the week" ad. For the first time there appears a tiny cartoon of the head of a cute little girl (like Shirley Temple) wearing a chef's hat; it becomes Kikkoman symbol in this series of recipes. This cartoon and a bottle of Kikkoman soy sauce appear as graphics in subsequent ads in this series.

4185. Hayashi, Shizuka. 1960. Japanese soy sauce team in United States. *Soybean Digest*. Oct. p. 22.
• ***Summary:*** "A group of top executives of the Japan Soy Sauce Brewers Association is making a 36-day tour of the U.S. soybean industry as guests of the American Soybean Association. The trip was arranged by the Japanese American Soybean Institute. The soy sauce manufacturers are traveling at their own expense, however."

They arrived in Waterloo, Iowa, Sept. 25. They plan to "visit farms where soybeans are grown and harvested, U.S. elevators, and soybean processing [crushing] plants; the Northern Regional Research Laboratory at Peoria, Illinois; grain grading and export facilities; and the U.S. Department of Agriculture in Washington, D.C.

The team from Japan includes Keizaburo Mogi, managing director, Noda Shoyu Co., Ltd.; Yoshiro Hamaguchi, managing director, Yamasa Shoyu Co., Ltd.; Kichiemon Hamaguchi, president, Choshi Shoyu Co., Ltd., and Mrs. Michiko Hamaguchi; Motoyashi Kinoshita, president, Marukin Shoyu Co., Ltd.; Heibei Yamashita, president, Kinoeno Shoyu Co., Ltd.; Chujiro Yamanouchi, vice president, Japan Shoyu Association, and president, Kyushu Shoyu Association; and Akira Komiya, managing director, Japan Shoyu Association.

"The team will be accompanied on their tour by David R. Farlow, assistant to the executive vice president of the American Soybean Association." Address: Managing Director, Japanese American Soybean Inst., Nikkatsu International Building, No. 1, 1-Chome Yurakucho, Chiyoda-Ku, Tokyo, Japan.

4186. Strayer, George M. 1960. Entertain Japanese trade teams [Editorial]. *Soybean Digest*. Oct. p. 4.
• ***Summary:*** "Japan is our No. 1 customer for U.S. soybeans. Out of total exports now estimated at nearly 140 million bushels during the 1959 crop year closed on Sept. 30, Japan took over 40 million bushels [i.e., more than 28%].

"Very significant is the tour of the soybean industry of the United States now being made by the team representing the Japan Soy Sauce Brewers Association." Shoyu manufacturers are the largest users of soybean meal; they also use some whole soybeans.

"This type of activity is obviously a means of creating more markets for U.S. soybeans." Address: American Soybean Assoc.

4187. Kikkoman International Inc. 1960. Kikkoman all-purpose soy sauce: Recipe of the week (Ad). *Los Angeles Times*. Nov. 3. p. A10.
• ***Summary:*** The recipe, Savory cream vegetable sauce, includes ¼ cup Kikkoman soy sauce.

4188. Kikkoman International Inc. 1960. Kikkoman all-

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purpose soy sauce: Recipe of the week (Ad). *Los Angeles Times.* Nov. 10. p. A13.
• ***Summary:*** The recipe, Family-favorite teriyaki meatballs, features a sauce which calls for ½ cup Kikkoman soy sauce, 1½ tsp. brown sugar, ½ clove chopped garlic, ½ tsp. fresh or powdered ginger, and ½ cup water. The sauce is poured over meatballs, which are then baked.

4189. Caviarteria. 1960. So–What's a Caviarteria? (Ad). *New York Times.* Nov. 12. p. 9.
• ***Summary:*** "Its a place where you can browse freely among 2,000 exciting packaged foods from 28 countries."

The section titled "Sauces & condiments" includes "Chin. [Chinese] or Japanese Soy Sauce, 6 oz.–39¢."

4190. UPI Telephoto. 1960. A pointed reminder (Photo with caption). *Chicago Daily Defender.* Nov. 15. p. 16.
• ***Summary:*** This is an excellent, large photo of Shinzo Ohki, founder of Oriental Show-You Co. The caption reads: "Shinzo Ohki holds a Samurai sword estimated at more than 300 years old, from the collection of William Jones of Columbia City, Indiana. Tedious search has resulted in identifying the owners of two other swords which have been sent back to the families in Japan who prized them so highly."

The same photo, but smaller, appeared in the Nov. 26 issue (p. 8).

4191. Kikkoman International Inc. 1960. Kikkoman all-purpose soy sauce: Recipe of the week (Ad). *Los Angeles Times.* Nov. 17. p. 11.
• ***Summary:*** The recipe, Paradise island broiled chicken, calls for ½ cup Kikkoman soy sauce. "A super-surpriser–do it tonight!"

4192. Kikkoman International Inc. 1960. Kikkoman: Recipe of the week (Ad). *Los Angeles Times.* Nov. 21. p. A4.
• ***Summary:*** The recipe, Famous encore salad dressing, calls for 2 tbsp. Kikkoman soy sauce. "Shake well before using. Kikkoman soy sauce makes the lively difference!" The word "Kikkoman" is written in a bigger, bolder typeface. Across the bottom of the ad: "All-purpose Kikkoman Soy Sauce."

4193. Aljat, -. 1960. Food & utilization of food resources (Indonesia). In: Proceedings of the Fourth Pan Indian Ocean Science Congress. Section G. Human Ecology. See p. 65-68. Held 14-24 Nov. 1960 at Karachi, Pakistan.
• ***Summary:*** Gives detailed instructions for making the following soybean products: tempeh (tempe, soya-cake, moulded), tofu (tahu, soya curd, coagulated with gypsum / sakow powder), miso (taotjo), and sweet Indonesian soy sauce (Ketjap [perhaps ketjap manis], made with black soybeans). Also describes how to make onchom (ontjom) from peanuts, plus krupuk, and lempers. Table 1 compares the nutritional composition of powdered Saridele and cow's milk. Table 2 compares the amino acid composition of various mixtures containing soy.

Note 1. This is the earliest English-language document seen (Feb. 2004) that uses the term "soya curd" or the word "tahu" to refer to tofu.

Note 2. This is the earliest English-language document seen (April 2012) that uses the term "sweet Indonesia soy sauce" to refer to what is probably *kecap manis*. Address: Nutritional Inst. Labs., Djakarta, Indonesia.

4194. Hayashi, Shizuka. 1960. The tour of the soy sauce team. *Soybean Digest.* Nov. p. 24-25.
• ***Summary:*** "Shown on the opposite page are some of the pictures taken of the Japan Soy Sauce visiting team during their tour of the U.S. soybean industry in September and October." A list of many of the places visited is given.

Ten photos of the group and of individual members are shown; each has a detailed caption. Address: Managing Director, Japanese American Soybean Inst., Nikkatsu International Building, No. 1, 1-Chome Yurakucho, Chiyoda-Ku, Tokyo, Japan.

4195. Ohsawa, G. 1960 Zen macrobiotics: The art of longevity and rejuvenation. New York, NY: Ohsawa Foundation. Printed in Japan. 218 p. Undated. Index. 17 cm.
• ***Summary:*** This is the first printed edition of Zen Macrobiotics. The cover is gray. The author is George Ohsawa. The content is basically the same as the original mimeograph edition, however it has been edited and several of the parts have been rearranged and renamed to create a Forward [sic] (p. 3-5), a Preface (p. 6-8), and Chapters 1-3 (p. 15-43). At the end are two appendixes: One, which was titled "The Case of Mr. E," appeared at the end of the mimeograph edition. The second, which has been added is titled "The Pro-Forma Death Certificate of the American World Empire and its Gold Dynasty."

Concerning the date of publication: Although the date is not given in or on the book, the periodical *Macrobiotic News* announced it as being available in November 1960.

Distinguishing marks of this printing: Page 3: "Forward" is misspelled. Page 7: "... hundreds of ways of cookin [sic] and eating. They are all aim [sic] to create..." Page 62: "The yellow part is most yound [sic]...."

These four errors were corrected in the next printing.

Both printings have 218 pages. However, pages 217 and 218 are different in the two books.

At least two printings were done in Japan. As of April 2011, Carl Ferré, President, George Ohsawa Macrobiotic Foundation (Chico, California) has one original of each.

Carl adds (e-mail of 30 April 2011): "Page 218 of the book you have (*Macrobiotics: The Art of Longevity and Rejuvenation*, by G. Ohsawa) appears to be exactly the same as the second Japan printing. It seems to confirm my

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hypothesis of a first printing in Japan in 1960, a second printing in Japan around 1962, and a third printing of the same edition in the U.S. after the 1962 Japan printing (and might even be the 1964 book referred to in Yin Yang). I believe the first reference in Macrobiotic News to a printed book is November 1960. Because editions of *Zen Macrobiotics* may have been printed at the same time as *Philosophy of Oriental Medicine*, we may need to look into that title as well in order to determine the full story." Address: Ohsawa Foundation: 331 Riverside Dr., New York City. Secretary Aihara, 44 W. 96th St., New York City, U.S.A.

4196. *Soybean Digest.*1960. The cover picture: Mrs. Michiko Hamaguchi. Nov. p. 23.
• ***Summary:*** Mrs. Hamaguchi was the guest of Mrs. George Strayer in Hudson, Iowa. She is a member of the Japan Soy Sauce Brewers Association visiting team which toured the USA in September and October.

"Mrs. Hamaguchi is not only the wife of K. Hamaguchi, a director of the Soy Sauce Association and president of the Choshi Soysauce Co., but she is also a well-known soprano singer in Japan."

4197. Kikkoman International Inc. 1960. Kikkoman all-purpose soy sauce: Recipe of the week (Ad). *Los Angeles Times*. Dec. 1. p. 21.
• ***Summary:*** The recipe, Easy does it steak superb, calls for ½ cup Kikkoman soy sauce.

4198. Kikkoman International Inc. 1960. Kikkoman all-purpose soy sauce: Recipe of the week (Ad). *Los Angeles Times*. Dec. 8. p. 28.
• ***Summary:*** The recipe, Fish fancier's delight, calls for a marinade containing ¼ cup Kikkoman soy sauce.

4199. USDA ARS Northern Utilization Research and Development Division, Peoria, Illinois. 1960. Definitions of foreign foods of current interest (Brochure). Peoria, Illinois. 4 p. Dec. 13. 28 cm.
• ***Summary:*** The first section, titled "Japanese foods from soybeans" (p. 1-2) includes: Aburage, frozen tofu, Hamanatto (Hamananatto), kinako (A form of full-fat soy flour made by grinding roasted soybeans), koji (A culture prepared by growing *Aspergillus oryzae* on cooked rice, wheat or other cereal for a few days. Serves as a source of enzymes for making miso, soy sauce, saki [saké, sake] and other fermented foods), kori tofu, miso, monosodium glutamate (a seasoning compound first isolated from soy sauce), nama-age, natto, satsumage [satsuma age], soybean milk or tonyu, soy sauce or shoyu, tofu, yaki-dofu, yuba.

The second section, titled "Indonesian fermented foods" (p. 3-4) includes: Arak, ketjap (soy sauce made with black soybeans), ontjom, ragi, sajur asin, tapé ketan (fermented glutinous rice), tapé katella (fermented arrowroot), tempeh (or témpé or témpé kedelé), tuwak. Address: Peoria, Illinois.

4200. Jones, Stacy V. 1960. Variety of ideas in new patents: Japanese trade-mark. *New York Times*. Dec. 24. p. 19, 25.
• ***Summary:*** Yamasa Shoyu Company of Japan wishes to register with the "Patent Office an arrangement of Japanese characters, as a trade mark for soy sauces." On top of the Yamasa logo is an inverted "v," meaning "high mountain." Underneath it is a "character designating Kihei Hiroya, the founder of the business."

4201. **Product Name:** [Ajieki (HVP Soy Sauce)].
Foreign Name: Ajieki.
Manufacturer's Name: Ajinomoto K.K.
Manufacturer's Address: Tokyo, Japan.
Date of Introduction: 1960.
New Product–Documentation: Ogasawara. 1960. Jozo Kogyo Rinji Zokan (Brewing Industry, Special Edition). p. 207-16; Ajinomoto K.K. 1978. Ajieki (Leaflet). 8 p. Soya Bluebook. 1984. p. 76. Ajinomoto Co., Inc., Kyobashi 1-5-8, Chuo-ku, Tokyo, Japan.

4202. Aoyama, Torahiko. 1960. Amino-san eki [Liquid hydrolyzed vegetable protein (HVP)]. *Jozo Kogyo Rinji Zokan* (*Brewing Industry, Special Edition*) p. 225-30. [6 ref. Jap]
Address: Professor, Ibaraki Univ., Ibaraki-ken, Japan.

4203. Choe, C.E.; Song, P.S. 1960. [Fermented soybeans of Korea]. *Kwayon Huibo* (*Bulletin of the Scientific Research Institute, Korea*) 5(1):29. [Kor]*
• ***Summary:*** Mentions *meju*–fermented soybeans of Korea.

4204. **Product Name:** Diamond Shoyu Lower Salt Soy Sauce.
Manufacturer's Name: Honolulu Sake Brewery & Ice Co. Ltd.
Manufacturer's Address: 2150 Booth Rd., Honolulu, Oahu, Hawaii.
Date of Introduction: 1960.
Ingredients: Water, soybeans, wheat, salt, malic acid, disodium 5-inosinate, caramel, sodium benzoate, a preservative.
Wt/Vol., Packaging, Price: 16 fluid oz (1 pint) bottle.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows a label and gives the address. The company is still in business. Label. Received Feb. 1988 from Honolulu Sake Brewery Co. Ltd. 5 by 3 inches. Red and black on white. "Lower Salt. Salt content: approximately 5.0%. Sodium 2055 mg/100 gm, 111 mg/teaspoon (5 cc). Refrigerate after opening." Letter from Takao Nihei. 1988.

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July 19. Gives date of introduction as 1960.

4205. Kanno, Masaaki? 1960. Shinshiki 2-gô shôyu [Shinshiki No. 2 soy sauce, semifermented]. *Jozo Kogyo Rinji Zokan (Brewing Industry, Special Edition)* p. 217-24. [4 ref. Jap]
Address: Noda Sangyo Kagaku Kenkyusho, Noda, Japan.

4206. Ogasawara, Takeshi. 1960. Ajieki ni tsuite [On Ajieki, HVP soy sauce]. *Jozo Kogyo Rinji Zokan (Brewing Industry, Special Edition)* p. 207-16. [7 ref. Jap; eng+]
Address: Prof., Ibaraki Univ., Japan.

4207. **Product Name:** Cutlets.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 800-628-3003.
Date of Introduction: 1960.
Ingredients: In 1971: Wheat protein [wheat gluten], extract of Brewer's yeast, hydrolyzed vegetable proteins, MSG, salt, caramel coloring, water to process.
Wt/Vol., Packaging, Price: 50 oz (1417 gm) can. Retails for $6.25 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Cutlets plus their liquid contain 15.50% protein, 0.62% fat, and 4.94% carbohydrate. Not listed in the 1965 *Diet Manual.*

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Cutlets (Worthington)."

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Cutlets (Worthington)" are "wheat protein, yeast extract, HVP, soy sauce, mushrooms, MSG, salt, lysine, dextrose, corn oil."

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

By 1990 this product had been reformulated with textured soy protein concentrates.

4208. Chiang, T'ien-chiang. 1960. Ta tou ying yang yu chia kung [Soybeans and soyfoods?]. China. 183 p. [10+ ref. Chi]
Address: China.

4209. Doi, Tadao, ed. 1960. Nippo Jisho: Vocabulario da lingoa de Iapam [Vocabulary of the language of Japan]. Tokyo: Iwanami Shoten. 822 p. 22 cm. [Por; Jap]
• ***Summary:*** This is facsimile edition of the original 1603 edition, the second earliest dictionary of the Japanese language compiled by Europeans.

Soy-related terms in this dictionary include: Abura ague [Abura-agé]. Aburidôfu. Amazaqe [Amazake]. Cabe [Tofu]. Côji [Koji]. Daizzu [Daizu]. Dengacu [Dengaku]. Fanben [Hanben]. Icchô. Mame. Graos, ou feijoes de Iapao [Soybeans]. Miso [made with rice]. Misocoxi [Misokoshi, a miso strainer]. Misoya [A shop which sells miso]. Misoyaqijiru [Miso-yaki-jiru, a soup made with grilled miso and diced tofu]. Misôzzu [probably a soup seasoned with miso resembling Zosui]. Nattô. Nattôjiru. Tofu. Tofuya [A shop which makes and sells tofu]. Tamari. Vdondôfu [Udon-dôfu]. Xôyu [Shoyu, or soy sauce]. Yudôfu. Address: Nagasaki College of Japan.

4210. Hayward, Helena, ed. 1960. The connoisseur's handbook of antique collecting: A dictionary of furniture, silver, ceramics, glass, fine art, etc. New York, NY: Hawthorn Books Inc. 320 p. See p. 261. Illust. 22 cm. [110* ref]
• ***Summary:*** The purpose of this book is to provide a glossary of terms used by antique collectors. On page 261 we read: "Soy frame: silver or plated oblong or oval stand with ring frame for holding soy or sauce bottles. Introduced in the late 18th century. Found *en suite* with larger cruet (q.v.) frames."

At "Cruets" (p. 89) we read: "(1) the vessels containing the wine and water for use at the Eucharist... (2) bottles for condiments, contained in cruet frames." They typically held fine glass bottles containing oil and vinegar. An illustration shows two cruets (glass bottles) in a cruet frame.

4211. Huang, Lin. 1960. Seni bunga Tionghoa [Chinese flower arrangement]. Djakarta, Indonesia: Keng Po. xiv + 97 p. See p. 99. Illust. 22 cm. [Ind]*
• ***Summary:*** Mentions *ketjap manis* and *ketjap asin* as ingredients in one recipe (XIX. Tambahan, p. 99).

Note: This is the earliest document seen (Oct. 2010) and the earliest Indonesian-language document seen (Oct. 2010) that contains the term *ketjap manis*. Indonesians have been making a sweet, thick soy sauce since at least the early 1800s (see Titsingh 1824 and Prinsen Geerligs 1895). Traditionally, it was typically sweetened with a dark sugar from the areng palm and flavored with star anise and other seasonings and herbs.

4212. Joya, Mock. 1960. Things Japanese. Tokyo: Tokyo News Service, Ltd. [vi] + 782 + xliv p. Index. 21 cm.
• ***Summary:*** In Chapter 7, titled "Food, 'Sake' and Tobacco" (p. 275-331) the following may be of interest: Asakusa-nori (includes shoyu), azuki (incl. soybeans, tofu, miso, shoyu, natto), bento and kashi, cattle, chameshi, chawan-mushi ("somewhat similar to Western custards." Make katsuobushi {shaved dried bonito} soup stock, cool, pour into individual *chawan-mushi* bowls {each has a cover}. Mix in an equal quantity of beaten eggs. Add additional flavoring ingredients, cover, and steam until set. "One of the few Japanese dishes that resemble Western dishes in taste").

Chazuke, cooking (incl. sukiyaki and tempura), daikon

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(incl. miso), drinking cups and customs, eel-eating day (eels are broiled, steamed, then put in a specially prepared shoyu and broiled again), ginnan (ginkgo nuts), gobo (burdock, incl. miso soup and shoyu), gohan (boiled rice), kabayaki (eel), kamaboko, kashi (confections and sugar), katsuo-bushi (incl. shoyu), kawara-senbei (incl. miso), konnyaku (its shredded form, called shirataki, is used in sukiyaki), manju, matsutake mushrooms (widely used in sukiyaki in the fall), menrui (noodles, incl. soba, udon, shoyu), mikan (mandarin oranges), misoshiru (miso soup, incl. tofu, shoyu, tekka-miso, tai-miso, yuzu-miso, wakame), mochi, mochi-tsuki (pounding), myoga (*Zingiber mioga*), oden (with tofu, miso, and shoyu), one-sided fish, red rice (*sekihan*, made with azuki = red beans), ringo (apples), sakana (fish, incl. shoyu and tofu), sake drinking, sake eating, sashimi (incl. shoyu and mirin), satsuma-imo, seaweeds (sea vegetables), shincha (new tea), shoyu (Japanese-style soy sauce; per capita consumption is nearly 4 gallons a year), snake eaters, soba (incl. shoyu), souvenir cakes, sugar, suimono (clear soup, incl. miso and shoyu), sukiyaki (incl. tofu and shoyu), sushi (incl. Inari-zushi made with fried tofu), sweets in season, tea varieties, tea water, tempura (incl. sesame oil and shoyu), tobacco tradition, tofu (incl. bittern/nigari, yaki-dofu, aburage, ganmodoki, Koya-dofu, fried tofu, hiyayakko, sukiyaki, dengaku, miso, miso-shiru, shoyu), tokoroten (kanten, tengusa), tsukemono (pickles, incl. miso), umeboshi, wasabi (incl. shoyu), yasai (vegetables), yokan, and yonaki-soba. Note: Different types of yokan (yôkan, a paste made of azuki beans and sugar) include: mizu-yokan (soft azuki-bean jelly) and mushi-yokan (steamed yokan). Yokan-iro is a liver or rusty color.

Other subjects related to soy: Home cures (p. 66-67, for burns, apply the white of an egg or shoyu). Setsubun (p. 119, incl. mame-maki or throwing roasted soybeans). Brother mountains (p. 192, the most loved one, Fudo-iwa, was fed azuki or red beans but the unloved Gongen-yama was fed soya beans). Fox messengers (p. 207-08, aburage or fried tofu). Kuyo (p. 373-74, incl. hari-kuyo or mass for broken needles–but tofu is not mentioned). Azuki (p. 276-77). Red rice (sekihan, p. 303). Lunar calendar (p. 400, setsubun and bean throwing). Bamboo (p. 410, incl. bamboo shoots served with shoyu). Hi-no-kami (p. 474, incl. amazake). Sacred rice (p. 504, incl. setsubun and throwing roasted soybeans). Shoulder-chipped Jizo (p. 517, concerns the stone statue of Jozo at the Kiunji Temple, Tozaki-machi, Bunkyo-ku, Tokyo, and foxes and a tofu shop). Inari-san (p. 616-17, Inari-sushi and aburage). Address: Japan.

4213. Joya, Mock. 1960. Sukiyaki (Document part). In: Mock Joya. 1960. Things Japanese. Tokyo: Tokyo News Service, Ltd. [vi] + 782 + xliv p. See p. 316-17.

• ***Summary:*** Sukiyaki is mentioned throughout this book, on pages 281 (Cooking, Japanese), p. 293-94 (Konnyaku, incl. shirataki), p. 295-96 (Matsutake, a mushroom used in sukiyaki in the fall), and p. 325-26 (Tofu, a typical ingredient in sukiyaki).

The main entry for sukiyaki (p. 316) states: "Sukiyaki is a modern addition to the Japanese menu, and although it is only about 80 years old, it has become one of the most popular dishes of the people. Furthermore, sukiyaki has now become famous all over the world. Sukiyaki and tempura are pointed out by foreign visitors as the two outstanding dishes of Japan.

"There are a few controversies over the origin of the name, and the most commonly accepted theory is that formerly it was cooked on blades of plows, and therefore this way of cooking was called sukiyaki or plows, roasting. However, there is no proof that this story is authentic.

"Sukiyaki is the cooking of sliced beef, pork, chicken or duck meats over thick iron pans. Beef is the most common meat used for sukiyaki, but chicken and pork are equally good.

"In making sukiyaki, the first requirement is the flat thick iron pan, as when the pan is thin, it is impossible to make good sukiyaki. In the Imperial duck hunting party, small individual thick iron pans are used in cooking the duck meat. This pan is oblong in shape and extremely thick, and its top is almost level with only a slight depression to hold the meat. This pan reminds one of the shape of the Japanese plow, and there might be some relation between sukiyaki and plow (*suki*) as generally believed.

"There are different ways of cooking sukiyaki. The method used in cooking duck meat at the Imperial hunting parties may be the original one. Slices of duck meat are put into a mixture of *shoyu* and *mirin* (sweet sake), and then put on the heavy iron pan placed over a charcoal fire, when the pan becomes hot. The meat is almost instantly cooked, and it is turned over swiftly and eaten. It is extremely delicious. This method is believed to be the original way of cooking sukiyaki. The same method can be used in cooking the ordinary sukiyaki at home in the common sukiyaki pan with beef or pork.

"Then, the next method is to melt the fat of meat or butter on the hot pan, and then cook the meat on the pan. The cooked slices of meat are eaten with *shoyu* or salt. This method is quite new, but yet it is liked by many persons. This method, however, enables the people to eat enormous quantities of meat, as the thin slices will just melt in their mouths.

"The third method is the most common one. In the sukiyaki pan is first put a specially prepared sauce made with *shoyu*, *mirin*, *kombu* or *katsuo-bushi*. Then sliced Japanese onions, *tofu*, *shirataki* (kneaded devil's tongue and root), other vegetables, and sliced beef are added to be cooked. When they are cooked, the people sitting around eat from the pan. In autumn, *matsutake* and other mushrooms are also cooked together with meats. Beef, pork, duck meat, and other kinds of meat are cooked in the same manner.

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"The last-mentioned is the most popular way of cooking sukiyaki, but originally perhaps, slices of meat were merely cooked on heated iron pans.

"There is no other new dish that has become so popular throughout the country within such a short period. At present, sukiyaki is a national dish, and particularly preferred by foreigners to other dishes of the country." Address: Japan.

4214. Kihara, Yoshijiro; Takeuchi, Etsuko. 1960. [Organic acids in food products. I. Estimation of organic acids in food products by column chromatography]. *Eiyo to Shokuryo* (*J. of Japanese Society of Food and Nutrition*) 13(4):253-57. (Chem. Abst. 59:12077). [3 ref. Jap]*

• ***Summary:*** The organic acids in the food products such as soy sauce, soybean paste (miso), natto, pickle, vinegar, tea, coffee, bread etc. were estimated by the silica gel column chromatography. The kinds of the raw materials and the processing methods gave remarkable effects on the distribution of organic acids in each food product.

Soy sauces which were suspected to contain the acid-hydrolysate of soybean showed the presence of levulinic acid.

The miso varieties, fermented for a longer time, contained valeric [pentanoic], butyric and propionic acid, while only acetic acid was detected in the other products as volatile acid. (From journal@rchive).

4215. Korea: Its land people, and culture of all ages. 1960. Seoul, Korea: Hakwon-Sa, Ltd. 718 p. See p. 114, 602. Illust. (part color). No index. 26 cm.

• ***Summary:*** This large book contains a comprehensive view of Korean history and culture, with each chapter written by one or more Korean specialists and illustrated by hundreds of photos. Unfortunately, the book has no index.

A photo on an unnumbered page inserted 2 pages after p. 112, titled "Jars for food storage" shows a Korean woman with several of these jars. The caption reads: "Every home prepares such various earthenware jars for storing food such as soy-bean-sauce, doenjang (soy-bean-paste), kochujang (pepper sauce) and kimchi.

Note 1. This is the earliest English-language document seen (March 2009) that uses the word "doenjang" to refer to Korean-style soybean jang (miso).

In the section on "Agricultural products," table 3 (p. 246), titled "Food supply and demand schedule for Fiscal 1959 throughout South Korea" gives the requirement for "Soybean sauce and cakes" as 768,000 *sok*. Under supplies, the "Bean crops of 1958, estimate, were 1,291,000 *sok*. An Appendix, (p. 714) shows that 1 *sok* (a unit of capacity) = 180.391 liters or 47.600 gallons.

Title 12, "Manners and customs" notes (p. 600): "... the farmers' wives in the country still know nothing more than the traditional *kimchi* and rice with some inexpensive fish cooked with home-made soybean sauce... The unique Korean foods–the *kimchi*.... soybean sauce and soybean mash are still the most important diets of both the rural and urban people and they are still prepared at home by the housewives despite the possibility of more efficient factory mass production."

The section titled "Food and dwelling," under "The main and side dishes" states (p. 602): "Other essential foods are bean paste and soybean sauce, both of which are used to make soup and flavor other side dishes of all kinds. The bean paste and the soybean sauce are as a rule prepared at each home. The beans are first cooked, then mashed and rolled into balls about 5 inches in diameter. The balls are then fermented for several days, finally to be immersed in salt water, to turn the salt water into soybean sauce. The residue balls of the fermented beans, an the other hand, become the soybean paste. Being for the most part prepared at home, rather than mass produced in factories on a commercial basis, the soybean sauce and bean paste of each house taste different. Since the two home-made foods find their way into almost all kinds of side-dishes, to be mixed with meat, seafoods, and vegetables, the soybean sauce and [soy] bean paste have a decisive say in the taste of all the foods prepared at each particular home."

Kong-namul and bean sprouts are mentioned on p. 606. Nori (*kim*) is called "paper food."

Chapter 17, "Literature: An outline of Korean literature, its heritage," includes a discussion of many early works.

An excellent "Chronology chart of Korean history compared with world history" appears on pages 715-18. At the rear is a color fold-out map of Korea.

In the section on "Proverbs" we read (p. 660): In Korea, "reservation is more frequently encouraged, and especially volubility is strictly warned against as in the sayings: 'Talkative families turn their sweet soybean sauce into bitters.' 'Go to the home of sweet soybean sauce, but not to the home of sweet words.'"

Note 2. This is the earliest English-language document seen (April 2012) that contains the term "sweet soybean sauce."

4216. Leach, Bernard. 1960. A potter in Japan, 1952-1954. London: Faber and Faber Ltd. 246 p. Portrait. Illust. Index. 22 cm.

• ***Summary:*** The author is as fine a writer as he is a potter and artist. June 15, 1953 (p. 98). Near the great extinct volcano of Daisen on the borders of Tottori Province, the author and friends climbed up the old rough stone-paved pilgrims' way to the Kongoin temple. "There we were served the best meal I have eaten in Japan, vegetarian priests' food, over which infinite pains had been taken... mountain potatoes, crisp fried bean curd and some soft curd mixed into a paste with crushed sesame seed."

July 1, 1953 (p. 105): "A great feed of Continental sausages and Chinese riceballs stuffed with mincemeat and

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'Funiu.' The last is a strange and fascinating decoction of fermented bean curd something like a smoky Camembert in taste and texture."

August 19, 1953 (p. 132). In Nagano, Japan, the author and friends visited the very large and famous temple of Zenkoji. They noted "all the commercialized signs of Buddhist decadence, as far from Sakya Muni [Shakyamuni, the Buddha] as Rome from Christ... the vulgarized business of popular religion is equally sickening, East or West.

After that they made their way to a soba shop and the author ordered Soba Gaki which was not on the menu. "This was a kind of porridge no longer in fashion... We ate it first with shoyu sauce and then with sweet adzuki beans."

Oct. 22, 1953 (p. 166). In Toyama the author and his friends had "lunch at a Buddhist vegetarian restaurant [probably serving *shojin ryôri*] which made me wish once again that I could share the meal and its setting with artist and craftsman friends in the West. The manner of serving surpassed all, it was the service of the heart. There is a saying that the Chinese eat with their stomachs and the Japanese with their eyes. The sheer beauty of each tray or dish of food, the quiet discretion. This represents a peak of culture and its home is in Japan." Address: Japan.

4217. Lin, Tsuifeng Liao; Lin, Hsiangju. 1960. Secrets of Chinese cooking. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. xviii + 238 p. With an essay by Lin Yutang. Illust. (line drawings by Siu Lan Loh). 21 cm.

• ***Summary:*** Lin Tsuifeng is married to the well-known author Lin Yutang, and Lin Hsiangju is their daughter. Both worked to popularize Chinese cuisine in the United States. "This book is the result of many years spent away from China,..." The introductory essay by Li Yutang is titled "The art of cooking and dining in Chinese" (p. ix-xviii). In it he says (xvi-xvii): "Soya sauce is pretty well known; its quality and its possibilities in combination with sugar, wine, vinegar or sesame oil is not yet known." "There are other important ingredients which a good Chinese cook cannot do without. Among these are the pickled black beans (*toushi*), essential in preparing sea bass... They just fit in like a perfect match. This *toushi* appears as tiny black spots in the sauce of 'lobster Cantonese style' and is essential to its peculiar flavor. There is wined bean curd (*fuju*, or *toufuju*), tasting like an exotic cheese, but unlike any other flavor known before... There is the seafood sauce (*haishientsiang*) [hoisin sauce] which strengthens the flavor of any food that takes sweet and sour well... But above all I place the greatest importance on *toushi*, pickled black beans, one of the greatest creations of Chinese cuisine. It helps digestion to the extent that it takes away all feeling of heaviness after a sumptuous dinner. Given a bit of this crushed black bean, the stomach has a feeling of positive happiness in doing its duties."

Soy related recipes: Soy sauce fish (with "3 tablespoons soy sauce," p. 41-42). Soy sauce chicken (with "1 cup soy sauce," p. 92). Soy sauce eggs (p. 111-12). Fried eggs with soy sauce (p. 113).

Chapter 9, "Seasonings and sauces," notes (p. 135, 137): "Monosodium glutamate is a marvelous discovery which has recently been introduced to America from the Orient. In the United States, it is sold under such trade-mark names as Accent, Enhance. Unlike salt or sugar, it has no individual or original taste, but it enhances the flavor of the food it seasons... This will do much to restore the taste of frozen foods, or foods otherwise altered by new methods of packaging..."

Soy sauce contains both salt and monosodium glutamate... Soy sauce has been for years an ingredient of Worcestershire Sauce, but it has only recently come into its own in America. The soy sauces available in Chinese groceries are on the whole more full-bodied than those sold elsewhere.

"The Chinese way of making soy sauce is to boil soybeans, mix the beans with roasted wheat and introduce a mold. Three kinds of mold may be used. When the molds have developed sufficiently, the mixture is placed in a salt solution,..."

Black beans [fermented black soybeans] are sold in cans. They are very salty and have a pungent odor. Use only about 2 tablespoons to season 2 or more cups of food. "Bean Cheese or Bean Cakes [Fermented tofu] are a kind of vegetable cheese made from the fermentation of boiled soybeans and crushed rice or barley. The cakes are sold in jars in a semi-liquid form. The taste closely resembles that of Camembert cheese, being strong and pungent. This is a ready-to-eat condiment which is often served in a little dish along with salted peanuts, pickles, scrambled eggs, or as an accompaniment to congee" [rice gruel].

More recipes: Bean curd soup (with "1 or 2 cakes bean curd," p. 153-54). Fried bean curd ("Drain on absorbent paper, 4 cakes bean curd," p. 171-72). Bean curd salad (p. 172). Pressed bean curd (How to make at home from regular bean curd, p. 173). Spinach or watercress with bean cheese [fermented tofu] (with "1 tablespoon bean cheese mixed with 1 tablespoon water," p. 173). Sea bass with bean cheese [fermented tofu] (and bean curd [tofu], p. 174). Fish with black beans [fermented black soybeans] (p. 174-75). Address: USA.

4218. Ma, Nancy Chih. 1960. Mrs. Ma's Chinese cookbook. Rutland, Vermont; Tokyo, Japan: Charles E. Tuttle, Publishers. 178 p. Illust. 27 cm. [1 ref]

• ***Summary:*** About the author: Because she was born in a Manchurian banker's family, she never had the opportunity to prepare even a single Chinese dish while in China. Only after her arrival in Japan did she become enthusiastic about learning how to prepare Chinese dishes. She did most of her study in Hong Kong. In 1957 her first Chinese cookbook, *Chugoku no Katei Ryori* [Chinese Home Cookery] was

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published in Japan by Fujin no Tomo. This book is a translation of the Japanese edition.

The section "Sizes and amounts of ingredients" (p. 15-16) mentions "Bean curd," which is called *tou fu* in Chinese and *tôfu* in Japanese.

The section "Spices and flavourings" (p. 17-18) mentions: "Bean paste (*mien chiang* in Chinese, *miso* in Japanese): Thick, syrupy paste made from soy beans and used for added flavor in such dishes as Pancake Rolls." Monosodium glutamate (and its many names). Soy sauce.

Recipes include: Braised salmon with soy beans (soak 1 cup dry soy beans overnight, p. 49). Fish with bean curd (with 2 cakes bean curd, cut into 1-inch squares, p. 49). Chilled bean curd with shrimp (p. 56). Braised shrimp with bean curd (p. 58). Bean curd with ground beef and chili peppers (and soy sauce, p. 76). Bean curd with sliced pork and chili pepper sauce (and bean paste {*mien chiang*}, p. 85). Molded steamed bean curd (p. 90). Pressed bean curd with assorted meat (p. 112-13). Braised bean curd (p. 116).

Note 1. This is the earliest English-language document seen (May 2012) that uses the term "braised bean curd" but it does *not* refer to grilled tofu. To make the recipe: 1. Wrap 2 cakes "bean curd in cheesecloth and press gently to drain off liquid. Cut each cake into 8 square pieces. Mix flour, eggs and salt to form batter. 3. Heat 6 tablespoons oil. Coat bean curd squares with batter and fry on both sides to light brown. Remove to plate...

Bean curd paper sheet rolls (with 3 rolls dried bean curd {*tou fu pei chüan*} in Chinese, dried yuba in Japanese, p. 118). Spiced soy beans (with 3 cups green soy beans, unshelled [edamamé], p. 126). Pancake rolls (with bean paste {*mien chiang* in Chinese, *miso* in Japanese}, p. 133. Note 2. These rolls are used in many different recipes).

The section titled "Foodstuffs" (p. 171-72) is a glossary of major Chinese ingredients, with the name of each given first in English (they are arranged in alphabetical order), then in Mandarin (Wade-Giles), then in Chinese characters. These foods include: Bean curd, *Tou fu*. Bean paste, sweet, *Tou sa* ("bean + sand." Note 3. This appears to be azuki bean paste). Oil, soybean, *Tou yu*. Soy bean paste *Chiang*. Soy beans, green *Mou tou* [*Mao tou*]. Soy beans, dried *Ta tou*. Soy sauce *Chiang yu*. Address: [Japan].

4219. Quei, Mimie. 1960. The art of Chinese cooking. New York, NY: Random House. x + 242 p. Illust. by Jeanyee Wong. Index. 21 cm.

• ***Summary:*** The author was the daughter of a diplomat and she learned how to cook from the family's chief cook (*Ta Shih Fu*) who always traveled with them–and from whom she learned the recipes in this book.

"There were no recorded recipes of the Chinese cuisine until the twentieth century, and even then only in Western countries. In China, cooking was done by feel and taste, and its secrets were passed on from one generation to another" (p. 4).

One chapter titled "Soy beans and bean curd" (p. 171-83) begins: "The story of the soy bean: This miracle bean is a legume..." Tells the legend of how, 2,000 years ago a party of explorers sailing up the Yangtze in a flat-bottomed boat, discovered accidentally how to sprout soybeans, when they found that some beans in a damp bag in the bottom of the boat had sprouted. "The soy bean is so nutritious it is known as the cow of China."

The next brief section, "How to sprout the soy bean," begins: "Mung beans are used to grow bean sprouts." No instructions are given for soy beans! And only "bean sprouts" are called for in the following recipes. Recipes are given for: Roasted soy bean nuts (Ts'an tou). Beef with bean sprouts (Tou ya niu jo). Bean sprouts and celery. Bean sprouts and pork. Soy bean milk (homemade; To fu chiang). Soy bean curd (homemade; Tou fu). Fried bean curd (Cha tou fu). Bean curd cheese (homemade; Fu ju). Stuffed bean curd (Tou fu chen jo, with "3 squares bean curd"). Bean curd with sea bass. Bean curd with flounder. Stewed bean curd. Braised pork with bean curd. Bean curd with braised pork. Bean curd with shrimps. Bean curd with scallions. Bean curd with mushrooms. Bean curd with eggs. Bean curd soup. Mushrooms and bean curd soup. Pork with red bean curd cheese (Nan ju jo, with "2 tablespoons red bean curd cheese in sauce {nan yu}").

Note 1. This is the earliest English-language document seen (May 2012) that contains the term *Cha tou fu*, a type of deep-fried tofu.

Also: Soy paste noodles (Cha chiang mien, with "6 tablespoons vegetable paste (Hoisin), p. 189).

The Glossary (p. 223-30) includes entries for: Beans, black [black beans] (*Hei tou*). Beans, black, fermented [fermented black beans] [fermented black soybeans] (*Tou shih*). Bean, yellow paste [yellow bean paste] (*Tou chiang*). Bean curd (*Tou fu*). Bean curd cheese (*Tou fu ju*). Bean curd cheese in sauce (*Nan ju*). Beans, red [red beans] (*Tou sha; Hung dow;* "For making sweet black bean fillings"). Bean sprouts (*Tou ya; Da dow ngah;* "Specially grown soy bean sprouts, gold in color"). Monosodium glutamate (*Wei ching; Mei ching;* "Brings out food flavors"). Soy jam (*Chu yu;* "A thick sweet and salty soy paste. Residue of soy sauce"). Soy bean skin (*Fu tsu; Foo jook;* "Creamy-colored dried bean curd skin").

Note 2. This is the earliest English-language document seen (Nov. 2011) that uses the term "fermented black beans" to refer to fermented black soybeans.

Note 3. This is the earliest English-language document seen (July 2011) that uses the term "Soy bean skin" to refer to yuba, or to Dried yuba sticks or rolls.

Soy sauce, light (*Chiang yu; pronounced jeung yow;* Used for cooking). Soy sauce, thick [thick soy sauce] (*Chiang yu; pronounced jeung yow;* "Imported and suited for table condiment or for special cooking"). Vegetable paste

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(*Hai hsien chiang; pronounced hoi sin*). Address: New York City, New York.

4220. Tatsuno Shoyu Kyodo Kumiai. 1960. Tatsuno shôyu no ayumi [History of Tatsuno Shoyu]. Tatsuno city. 8 p. 11 x 18 cm. [Jap; eng+]

• ***Summary:*** Name of company with diacritics is: Tatsuno Shôyu Kyôdo Kumiai. It is written that in 1857 shoyu making started in Tatsuno. They made a little bit of sake and shoyu there an in 1590 the number of manufacturers increased. In 1595 among sake and shoyu makers, sake production became very strong and popular. Around 1666 one shoyu maker invented a unique light-color shoyu and began selling it. They received an unexpected positive response from the people who used it, so they were encouraged, improved the product, and established the base of today's Tatsuno Usukuchi Shoyu.

During the period 1714-1740, with the rising popularity of sake production, many new sake makers opened new shops. Some 100 shops sake on a scale of 20 to 300 koku (1 koku = 180 liters or 47.6 gallons) per year. But for some reason, later, sake gradually lost its popularity and the shoyu industry became more popular. The climate of this place was suited for making shoyu. They had the advantages of easy access to good quality wheat, soybeans, and salt. Also there was a river for transportation of their products to Kyoto and Osaka. These were the reasons that Tatsuno was started.

In 1672 Wakizaka Yasumasa-ko of Shinshu Iida became Lord of that place and grew interested in making shoyu. He thought it was a promising industry and encouraged it. It is told in 1741, that as a result of that, exports of shoyu to Kyoto and Osaka grew to over several thousand kegs (*taru*) per year.

In 1809 the idea of adding amazake to shoyu (*Tatsuno usukuchi shoyu*) was invented. The new product became popular among a wide range of people. At about this same time they invented the idea of using the liquid from cooking soybeans when they age (*shikomi*) shoyu.

In 1830 records show that there were 35 shoyu producers in Tatsuno; they made about 20,000 *koku* (1 koku = 47.6 gallons or 180 liters; so 952,000 gallons or 3,600,000 liters) a year. Of this they exported 49,400 *taru* (kegs) to the Kyoto and Osaka areas. Note: 1 taru = 3 *to* and 6 sho = 3.6 *to* = 17.1 gallons or 64.8 liters. So 49,400 kegs would be 844,740 gallons or 3,201,120 liters, i.e. they exported about 88.7% of their shoyu to Osaka and Kyoto.

In 1848 Lord Wakizaka became a very important position of the *Kyoto Shoshi Dai* and further encouraged shoyu production. He gave low-interest loans, helped expand the market, and gave the name *oshiire-dokoro* to shoyu manufacturers. Therefore the name of Tatsuno usukuchi shoyu became more widely known.

During 1869-70 the number of companies making Tatsuno shoyu grew very rapidly, and with the intensive competition, the quality of the product fell drastically as output increased. Many companies went bankrupt. In June 1871 (Meiji 4) the Tatsuno Han Seisankyoku (Tatsuno feudal domain production office) was established to try to sell Tatsuno shoyu nationwide and treat sale of this shoyu as the work of the Han. But the next year the Han system was changed, largely ended–unfortunately for Tatsuno. At this difficult time, one shoyu maker named Shôzo Yokoyama (he was the first head of the Tatsuno shoyu union) became worried about the future of their industry, and met with other local shoyu makers to discuss this problem. In May 1897 (Meiji 9) they established regulations and worked hard to improve their business. As a result they laid the groundwork for today's Tatsuno usukuchi shoyu, which has become the most famous type of usukuchi shoyu. By 1882-83 the Tatsuno Shoyu Association had 65 members who produced over 200,000 koku/year (9,520,000 gallons or 36 million liters/year). Tatsuno proudly became one of Japan's top 3 shoyu manufacturing places.

All went well until 1937, when a war unexpectedly broke out between Japan and China. Things got worse during World War II, and from 1945 the lack of raw materials and workers caused major declines in both quality and quantity. Production dropped to 50,000 koku/year of regular shoyu; a decade of government economic controls (from late 1941 until March 1950) prohibited the production of usukuchi shoyu.

In Dec. 1949 the Tatsuno Shoyu Association was re-established with about 40 members, and in July 1950 the regulations concerning production and distribution of miso and shoyu were cancelled. The members had a lot of ideas and energy to rebuild their industry making Tatsuno usukuchi (light-colored) shoyu. Production and quality increased steadily, soon reaching 250,000 koku/year. In April 1952 the trade Association established the Tatsuno Shoyu Technical Training Center, where people can learn how to make better shoyu. In 1953 they cooperatively built a place to burn amino acid presscake. They found a way to reuse the salt with good results, so the government supported the project with one million yen.

Since there are few documents available to study the history of Tatsuno shoyu, in 1959 the members worked to collect this information and published it in October 1959. Since then, more interesting materials have been found, and the union is planning to publish a second volume. Address: Tatsuno city, Japan.

4221. Umeda, Isao; Ebine, H.; et al. 1960. Hakkô shokuhin [Fermented foods]. Tokyo: Kyoritsu Shuppan Co., Ltd. Microbiological Industry Series. [Jap]*

4222. Yokotsuka, Tamotsu. 1960. Aroma and flavor of Japanese soy sauce. *Advances in Food Research* 10:75-134. [236 ref]

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• ***Summary:*** The best review of the literature on soy sauce up to this time, this is Dr. Yokotsuka's first major publication in English. He was born on 25 March 1917. Contents: Introduction. Composition: Analysis, nitrogen containing compounds, carbohydrates, sugar, alcohols, and extractive, acids, salts, and related compounds, color. Chemical components of flavor: Fraction I, fraction II (b.p. < 78°), fraction III (b.p. > 78°), fraction IV (the acetal fraction), fraction VI. Sources of aroma and flavor development: Raw materials, processing, koji, mash (moromi), pasteurization. Flavor ingredients as natural preservatives: Natural yeast-static and bactericidal compounds, artificial preservatives for soy sauce. Summary: Acknowledgements, references. Address: Noda Inst. for Scientific Research, and Research Inst. of Noda Soy Sauce Co., Ltd., Noda-shi, Chiba-ken, Japan.

4223. Shapiro, Lorraine. 1961. Spareribs offer dinnertime treat. *Los Angeles Times*. Jan. 15. p. WS_A14.
• ***Summary:*** A recipe for Spareribs with broiled peaches calls for "¼ cup Japanese soy sauce." Address: Times Home Economist.

4224. Hayashi, Shizuka. 1961. A visit to two Choshi shoyu plants. *Soybean Digest*. Jan. p. 18.
• ***Summary:*** Each year Japan produces about 1,200,000 metric tons (tonnes) of shoyu (soy sauce), using approximately 150,000 tonnes of soybean meal and 23,900 tonnes of whole soybeans, or the equivalent of 195,000 tonnes of whole soybeans.

Before World War II, shoyu manufacturers in Japan used only whole soybeans, and no soybean meal. The use of meal has been encouraged by the Japanese government under the allocation system. Japan's shoyu industry is the largest consumer of soybean meal for edible purposes, taking about 35% of the meal produced by the processing mills.

There are seven large manufacturers among some 5,000 shoyu makers in Japan. The shoyu production of these larger factories constitutes about 30% of Japan's total shoyu production. The author recently visited the two largest plants in Choshi City: "the Yamasa Shoyu Co., and the Choshi Shoyu Factory." The Choshi factory is the only shoyu company in Japan with oil processing equipment. This equipment is used to crush approximately 15,000 tons of soybeans annually. The meal is used exclusively for making shoyu but is insufficient to take care of the company's needs.

"According to the report of the six-member Japanese shoyu team that recently visited the United States the amino acid soy sauce made in the United States is altogether different from the shoyu produced in Japan."

"With a little promotion it will not take long before a bottle of naturally brewed shoyu will be found on the table of every family on the globe."

A photo shows David Harlow of the American Soybean Assoc. in the factory of the Yamasa Shoyu Co. with the two Hamaguchi brothers who own the plant. Y. Hamaguchi was a member of the Japanese shoyu team that recently visited the USA. Address: Managing Director, Japanese American Soybean Inst., Nikkatsu International Bldg, No. 1-Chome, Yurakucho, Chiyoda-ku, Tokyo, Japan.

4225. Ito, Hiroshi; Ota, Teruo; Matsuura, Shinji; Ebine, Hideo; Hieda, Harukiyo; Nakano, Masahiro. 1961. [Soy sauce fermentation / brewing trial with special tane-koji (koji-starter) containing lactic acid bacteria and yeast in lyophile form. I. Change of microflora and enzymatic activity of koji during preparation]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 15. p. 135-39. Feb. [9 ref. Jap]
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4226. Ito, Hiroshi; Ebine, Hideo; Ota, Teruo; Manabe, Masaru; Nakano, Masahiro. 1961. [Soy sauce fermentation / brewing trial with special tane-koji (koji-starter) containing lactic acid bacteria and yeast in lyophile form. I. Change of microflora and enzymatic activity of shoyu mash [moromi] during ripening / aging]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 15. p. 140-45. Feb. [6 ref. Jap]
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4227. Kamada, Hidemoto; Sakurai, Yoshito. 1961. Daizu seihin no chakushoku ni kansuru kenkyû. V. [Browning reaction of soybean products. V. Relationship between color and 2,6-dichlorophenol indophenol reducing substances in miso and shoyu (Abstract)]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 15. p. 162. Feb. [1 ref. Jap]
• ***Summary:*** Reprinted from *Nosan Kako Gijutsu Kenkyu Kaishi* (*J. for the Utilization of Agricultural Products*) 7(3):105+ (1960). Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4228. Kamada, Hidemoto; Sakurai, Yoshito. 1961. Daizu seihin no chakushoku ni kansuru kenkyû. VIII. [Browning reaction of soybean products. VIII. Discoloration of shiro-shoyu in storage (Abstract)]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 15. p. 165. Feb. [1 ref. Jap]
• ***Summary:*** Reprinted from *Nosan Kako Gijutsu Kenkyu Kaishi* (*J. for the Utilization of Agricultural Products*) 7(3):118+ (1960). Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4229. Onishi, Hiroshi; Saito, N.; Koshiyama, I. 1961. Studies on osmophilic yeasts. XI. Various factors affecting

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polyalcohol production by *Pichia miso*. *Agricultural and Biological Chemistry* 25(2):124-30. Feb. [13 ref. Eng]
• ***Summary:*** *Pichia miso* is a highly osmophilic yeast (one that thrives in high osmotic pressure); it is not a type of miso, although it was isolated from miso (soybean paste). A polyalcohol (also known as a polyol, sugar alcohol, or polyhydric alcohol) is a hydrogenated form of carbohydrate, whose carbonyl group (aldehyde or ketone, reducing sugar) has been reduced to a primary or secondary hydroxyl group (hence the alcohol). Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4230. *SoyaScan Notes*.1961. Official figures for per capita annual consumption of shoyu in Japan (1952-1961) (Overview). Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1952–12.9 kg/year = 35.3 gm/day = 5.934 sho/year.
1953–13.1 kg/year = 35.8 gm/day = 6.026 sho/year.
1954–14.1 kg/year = 38.5 gm/day = 6.486 sho/year.
1955–14.3 kg/year = 39.1 gm/day = 6.578 sho/year.
1956–14.6 kg/year = 39.9 gm/day = 6.716 sho/year.
1957–13.7 kg/year = 37.5 gm/day = 6.302 sho/year.
1958–13.4 kg/year = 36.8 gm/day = 6.164 sho/year.
1959–13.7 kg/year = 37.4 gm/day = 6.302 sho/year.
1960–13.6 kg/year = 37.3 gm/day = 6.256 sho/year.
1961–13.0 kg/year = 35.6 gm/day = 5.980 sho/year.
Note: The peak year during this early postwar period was 1956. A *sho* is the traditional unit for measuring capacity / volume. 1 *sho* = 1.800 liters = 1.903 quarts = 0.476 gallons.

4231. Diser, Gleason M. comp. 1961. Glossary of soybean terms. *Soybean Blue Book*. p. 61-64.
• ***Summary:*** This is the first glossary with this title in the *Soybean Blue Book*. However in the first *Blue Book* (1947, p. 17-19) there was a somewhat similar section titled "Terminology: Definitions and product descriptions for the soybean industry."
The following terms are defined in this glossary: Soybean(s), soybean processor, soybean processing (solvent extraction, mechanical pressing, hydraulic pressing), soybean oil, crude soybean oil, edible crude soybean oil, refined soybean oil, edible refined soybean oil, hydrogenated soybean oil, degummed soybean oil, winterized oil, technical grade refined soybean oil, soybean fatty acids, soybean soapstock, acidulated soybean soapstock, soybean lecithin, break material, sludge.
Soybean products: Ground soybeans, soybean hay meal, soybean flakes, 44% protein soybean oil meal, dehulled soybean flakes, 50% protein solvent extracted soybean oil meal, soybean proteins, soy flour, soy grits, soybean oil meal, defatted soy flour, low-fat soy flour, high-fat soy flour, full-fat soy flour, lecithinated soy flour, protein, isolated protein, toasting. Oriental soy foods: Soy sauce (shoyu), soy milk, miso, frozen tofu, aburaage, kinako, namaage, ganmodoki, tempeh, natto, yuba, moyashi (soybean sprouts). Address: Archer-Daniels-Midland Co., Minneapolis, Minnesota.

4232. Shurpalekar, S.R.; Chandrasekhara, M.R.; Swaminathan, M.; Subrahmanyan, V. 1961. Chemical composition and nutritive value of soyabean and soyabean products. *Food Science* (*Mysore, India*) 10(3):52-64. March. Published in 1961 as a 32-page book by the Soybean Council of America in Hamburg, Germany. [178 ref]
• ***Summary:*** Contents: Introduction. Chemical composition and nutritive value. Soyabean oil. Carbohydrate in soyabean. Minerals in soyabean. Vitamins in soyabean. Factors affecting nutritive value: Trypsin and growth inhibitors, heat processing, other factors. Digestibility and biological value: Animal experiments, supplementation with sulphur amino acids, human feeding experiments. Supplementary value to other food proteins. Processed foods from soyabean: Soyabean milk, dried milk substitutes from soyabean, malt foods containing soyabean, soyabean flour, multipurpose food (fortified soyaflour), dehydrated soup mixture, balanced food, soyabean protein isolate. Fermented soyabean products: Soy sauce, tofu or soyabean curd, miso, natto, tempeh. Conclusion.
Note 1. This is the earliest document seen (Jan. 2001) from India that mentions tempeh.
Note 2. This is the earliest English-language document seen (Aug. 2003) that contains the term "soyabean protein" (or "soyabean proteins").
Note 3. This is the earliest English-language document seen (Aug. 2003) that contains the term "soyabean protein isolate" (or "soyabean protein isolates"). Address: Central Food Technological Research Inst. (CFTRI), Mysore, India.

4233. *Hartford Courant* (*Connecticut*).1961. La Choy offers chopsticks premium. April 16. p. 30A.
• ***Summary:*** La Choy will offer four pairs of chop-sticks, made of choice hardwood, lacquered Mandarin red, free of charge, in return for a label from one can of its shrimp chop suey or chow mein.
La Choy now sells 20 products. "The George Wm. Bentley Co. represents La Choy in New England."

4234. Hayashi, Shizuka. 1961. Favor U.S. soybeans for shoyu. *Soybean Digest*. April. p. 22.
• ***Summary:*** Gives the results of laboratory tests, conducted by the Soy Sauce Research Institute, comparing Japanese-grown soybeans (No. 2 grade Hokkaido Takachi small size variety) with U.S. soybeans (Illinois No. 2 yellow). The U.S. soybeans scored higher in the amount of soy sauce produced, and the taste and nitrogen content of that soy sauce.
An analysis of a sample of U.S. soybeans shows: Perfect beans 85.88%. Broken beans 11.81%. Damaged beans 0.84%. Foreign material 0.69%. Soybean hulls 0.61%.

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Morning glory seeds 0.15%.

The lab tests must be confirmed by large-scale experiments on a commercial basis before final conclusions can be made. Address: Managing Director, Japanese American Soybean Inst., Nikkatsu International Building, No. 1, 1-Chome Yurakucho, Chiyoda-Ku, Tokyo, Japan.

4235. Kawakishi, Shunro; Hirano, Susumu; Yoshii, Hisao. 1961. Mamemiso, tamari jôzô ni okeru yûki-san. I. Miso-dama kôji-chû no yûki-san [Organic acids formed in the process of brewing soybean miso and tamari. I. Organic acids of soybean koji (miso-dama)]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 35(4):347-50. April. [11 ref. Jap]
Address: Aichi-ken Shokuhin Kogyo Shikenjo.

4236. Park, Roy H. 1961. Food–Key to a travel kingdom. *Rotarian (The)* 97:31-33. April. *
• ***Summary:*** In Japan, teriyaki sauce contains soy sauce as the marinade's major ingredient. Sashimi, raw fillet of fish (such as tuna, sea bass), is dipped in hot mustard and soy sauce. The ingredients in the *bento* (Japanese box lunch) are also seasoned with soy sauce and sugar.

A photo shows people seated around a low table at a *ryokan* (traditional inn) in Japan as a "maid prepares tempting sukiyaki" right in their room. Address: Editor-in-Chief, Duncan Hines Inst., Inc. Rotarian, Ithaca, New York.

4237. Yoshii, Hisao; Kawakishi, Shunro; Hirano, Susumu. 1961. Mamemiso, tamari jôzô ni okeru yûki-san. II. Mamemiso jôzô-chû no yûki-san no ugoki [Organic acids formed in the process of brewing soybean miso and tamari. II. Changes in amounts of organic acids during miso brewing]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 35(4):351-54. April. [5 ref. Jap]
Address: Aichi-ken Shokuhin Kogyo Shikenjo (Aichi Inst. of Food Technology).

4238. Onishi, Hiroshi. 1961. Studies on osmophilic yeasts. XII. Characteristic aspects on the assimilation and fermentation of sugars by osmophilic yeasts in the environment of a high concentration of sodium chloride. *Agricultural and Biological Chemistry* 25(5):341-49. May. [14 ref. Eng]
• ***Summary:*** "Sugar assimilability and fermentability are the most important criteria in the taxonomy of yeasts." The researchers found that "these properties of the salt-tolerant [halophilic] yeasts can be drastically altered by changing the concentration of NaCl [common salt] in the medium,..."

Assimilation of galactose and maltose by *Saccharomyces rouxii*, a typical salt tolerant yeast that plays an "important role in soy-brewing" [soy sauce fermentation], was negligible or extremely poor in a medium containing 18% NaCl, even though the assimilation was vigorous in the ordinary (NaCl-free) medium. Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4239. Smith, Allan K.; Wolf, Walter J. 1961. Food uses and properties of soybean protein. I. Food uses. *Food Technology* 15(5):4-6, 8, 10. May. [34 ref]
• ***Summary:*** Contents: Summary. Introduction. Commercial soybean protein fractions. Soybean foods: Soybean varieties (garden varieties vs. field varieties, main differences between them. U.S. soybean breeding program). Trends in protein requirements (worldwide protein shortage). Soybeans and fractions used in food: Whole soybeans, defatted soybean meal, isolated proteins, protein concentrate (called "protein concentrate 70" in the summary), Gelsoy.

Whole soybeans may be baked or boiled, or used to make sprouts, fresh or dried tofu, vegetable milk (or "soybean milk"), yuba, and many fermented food products, including "miso or soy paste, natto, hamanatto, shoyu (soy sauce), tempeh, and some less important foods."

"Protein concentrate: Extraction of dehulled and defatted meal with dilute acid (pH 4.5) removes soluble sugars, nonprotein nitrogen, and other low-molecular weight components and a small amount of protein. The flavors are also mostly removed in the extract or in drying. The dried concentrate contains about 70% protein unless soybeans containing above-average protein are used.

"This product, having a manufacturing cost between that of soy flour and isolated protein, has been introduced recently into the food industry. This protein concentrate is a combination of the acid-precipitated protein plus the residue normally obtained in isolating the acid-precipitated protein... A protein concentrate can also be made by extraction of SOM [soybean oil meal] with about 70% ethanol at 50°C or higher. This type of product is finding its place in the food industry."

Note: This is the earliest English-language document seen (Dec. 2005) that uses the term "protein concentrate 70" or the term "protein concentrate" to refer to a product containing 70% protein on a dry-weight basis. Address: NRRL, Peoria, Illinois.

4240. Kikkoman International Inc. 1961. Wonderful flavor: Excitement imported from Japan. Kikkoman all-purpose soy sauce (Ad). *New York Times*. June 29. p. 23.
• ***Summary:*** This is Kikkoman's first large ad in the *New York Times*. "Try these taste-tempting recipes–So easy and so good!" Recipes are given for: Shishkebab! [Shish kebab]. Steak superb! Heavenly hamburger! Chicken exotique! Fish favorite!

A sidebar across the bottom of the ad states: "Kikkoman soy sauce now on sale at these leading markets: A&P Food Stores, Acme Super Markets, Associated Food Stores, Big Apple, Cracker Barrell, D'Agostino Supers, Daitch-Shopwell Super Markets, Davidson Super Markets, Einhorn Super

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Markets, Fair-Mart Supers, Felco Food Stores, Food Farm, Food King Super Markets, Food Queen Stores, Food Town, Garden Markets, Grand Union Stores, Gristede Stores, Hill's Super Markets, Key Food Stores, Korvelle's Lou-Mac Stores, Mayfair Super Markets, Mutual Super Markets, Olinsky Markets, Packard-Bamburger, Peter Reeves Stores, Royal Farms, Sloan's Super Markets, Smilen Foods, Sunrise Super Markets, Supreme Food Stores, 2 Guys, Valley Fair Super Markets (Many additional markets are currently being supplied and will have Kikkoman on display shortly.)"

"So superior. It's sensational." Photos show the Kikkoman bottle and each of the dishes prepared from the recipes. An illustration (line drawing) shows an American man wearing a white chef's hat (with the Kikkoman logo on the front) and a white barbecue apron.

4241. *Washington Post.* 1961. Add zest to summer salads with special dressings: Anne's reader exchange. June 29. p. C4.
• ***Summary:*** In the section titled "Lobster Cantonese," Anne offers this recipe in reply to a request. "The black beans and fresh ginger" in Chinese grocery stores. The ingredients include: "2 tablespoons black fermented beans" [fermented black soybeans]. These beans are crushed, then mixed with soy sauce and other ingredients.

4242. Hayashi, Shizuka. 1961. Soybeans in the nutrition of Japan. *Soybean Digest.* June. p. 31.
• ***Summary:*** "Japan, with a population of 95 million people on a land area smaller than that of the state of California, is confronted with the problem of how best to feed its population. With the population increasing at a rate of 1 million annually, the problem perhaps will become permanent. According to 1959 government statistics, the following amounts of soybeans (in tonnes or metric tons) were used to produce oil and soyfoods in Japan: Crushed for oil 840,583, tofu 318,150, shoyu (soysauce) 217,686, miso 173,933, frozen tofu 40,000, natto 35,000, kinako [roasted soy flour] 13,000.

Japan uses 420,000 tonnes of soybeans that are grown domestically and 1 million tonnes imported from the U.S. Of the 26.7 gm of fats and oils available to each Japanese daily, 7.6 gm (28%) is supplied by soybeans. Of the 67.7 gm of protein available to each Japanese daily, soybeans provide 10.6 gm (15.7%).

"Meat is not only scarce but the price is too high to meet the daily needs of average people. Annual per capita meat consumption in the United States is 237 pounds while in Japan it is only 2.3 pounds." "The Japanese intake of fats and oils is less than 10 pounds per capita in comparison with about 50 pounds in western countries."

"The Japanese live too much on carbohydrate foods. Rice eating must be minimized and more protein foods eaten. The obvious conclusion is the increased consumption of soybeans."

Note: This is the 2nd earliest document seen (Jan. 2012) that contains industry or market statistics for natto by geographical region. Address: Managing Director, Japanese American Soybean Inst., Nikkatsu International Building., No. 1-chome Yurakucho, Chiyoda-ku, Tokyo, Japan.

4243. Namiki, Mitsuo; Okazawa, Y.; Matsuyama, A. 1961. Miso oyobi shôyu no gamma-sen shôsha. I. Miso no waki ni taisuru shôsha kôka [Gamma irradiation of miso and soy sauce. I. Radiation effects on "waki" (generation of gasses) of miso]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 35(6):528-33. June. [5 ref. Jap]
• ***Summary:*** Miso generates gasses during storage at high temperatures. This phenomenon called "Waki" is a disadvantage for commercial packaging. Irradiation reduces this gas generation. Address: 1-2. Inst. of Physical and Chemical Research; 3. Dep. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo.

4244. Okazawa, Yoshishige; Namiki, M.; Matsuyama, A. 1961. Miso oyobi shôyu no gamma-sen shôsha. II. Bisei-butsu ni taisuru shôsha kôka [Gamma irradiation of miso and soy sauce. II. Radiation effects on microorganisms]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 35(6):533-40. June. [16 ref. Jap]
Address: 1-2. Inst. of Physical and Chemical Research; 3. Dep. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo.

4245. Nakamura, Hiroshi. 1961. The Japanese soybean market. *Illinois Agricultural Economics* 1(2):7-13. July.
• ***Summary:*** Contents: Introduction. Soybeans in the Japanese diet. Patterns of soybean consumption. Changes in tastes and preferences. Preferences for types of soybeans. Supply of soybeans to Japanese market. Soybean production in Japan. Future of soybean consumption in Japan. Japanese government import policy.

Table 1 shows "Soybean supply and consumption in Japan, 1934-1936 average and 1950-1959." Vertical columns show domestic production, imports, crushings, used as whole soybeans, and percent of imports from United States. By 1951, 95% of imports were coming from the USA.

Table 2 shows total and per capita consumption (in kg and lb) of miso, shoyu, and edible oils (all types) in Japan, 1934-1936 average and 1950-1959. In 1957, compared with the 1934-36 average, per capita consumption of miso is 19.62 lb (down 14.4%), shoyu is 30.20 lb (down 0.8%), and edible oils is 7.05 lb (up 350% from 1.98 lb).

"In Japan, soybeans are considered a food grain like rice and wheat and, in fact, serve as an important source of protein supply in the Japanese diet. Total annual consumption exceeds 1,500,000 metric tons; but as production in Japan is only 400,000 tons, more than a million tons of soybeans are

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imported each year, mostly from the United States. Of all the agricultural exports of the United States to Japan, soybeans today occupy the most important position, amounting to nearly 100 million dollars per year."

4246. Smith, Allan K. 1961. Oriental methods of using soybeans as food. With special attention to fermented products and notes on Oriental farming practices. *USDA Agricultural Research Service*. ARS-71-17. 65 p. July. Illust. 27 cm.

• ***Summary:*** Contents: Part I: China. Introduction. Farming conditions in China. Oilseed production. Soy sauce in China. Sweet flour paste–Tien mien chang [chiang]. Soybean or vegetable milk (incl. Willis Miller and the Henningsen Produce Co. in Shanghai). Yuba. Soybean curd or tofu. Soybean cheese [fermented tofu]: Chee-fan ("cheese" + "small cube"), tsüe-fan ("drunken cheese"), hon-fan ("red cheese"). Fen-T'iao from mung beans. Fermented soybeans [fermented black soybeans]. Vinegar fermentation process.

Note: This is the earliest document seen (Oct. 2011) that uses the term "tsüe-fan" ("drunken cheese") to refer to a type fermented tofu.

Part II. China–Chinese Institutions. Henry Lester Institute (in Shanghai; Dr. Bernard Read). Academia Sinica (headquarters in Nanking). China Vegetable Oil Corporation (CVOC, Shanghai). The China Oils and Fat Industries Ltd. (Shanghai). National Bureau of Industrial Research. Catholic University (Fu Jen, at Peiping). Yen Ching University (Peiping). Agriculture Experiment Station (Peiping).

Part III: Japan. Introduction. Production of miso in Japan. Soy sauce in Japan. Trends in soy sauce production. Part IV: With Raymond E. Culbertson. Korea. Introduction. Breeding work. Soybean varieties. Climatic relations. Soils of Korea. Topography. Land use. Cultural practices. Marketing. Soybeans as foodstuff. Soy sauce. Acknowledgment.

Page 19 states: "The China National Government has taken an active interest in soybean milk for use by its army. Mr. Willis Miller, with offices and business connections with the Henningsen Produce Company in the Dollar Building (7th Floor) at 51 Canton Road, Shanghai, had just completed, at the time of my visit, the building of a soybean milk plant for the Chinese Government. The process is patterned after that of the International Nutritional Laboratories at Mt. Vernon, Ohio, for making a powdered or spray-dried milk. Mr. Miller also was supervising the installation of a vegetable canning plant for the same purpose."

The text of this bulletin was previously published, serially, with slight revisions, in *Soybean Digest*, from Feb. to June 1949. Address: Northern Utilization Research and Development Div., Peoria, Illinois.

4247. Yamamoto, Kishiro. 1961. Studies on the mechanism of mold protease production. III. Activating factors of inactive protease in cell-free extracts of *Aspergillus sojae* KS. *Agricultural and Biological Chemistry* 25(7):519-26. July. [16 ref. Eng]

• ***Summary:*** Several kinds of metals were found to be involved in activation. "The velocity of the activation was maximal around pH 10 as well as around pH 5. It was proved that a kinase (enzyme) capable of activating the inactive protease in alkaline solutions does exist in the cell-free extract." Address: Noda Inst. for Scientific Research, Noda, Japan.

4248. Kikkoman International Inc. 1961. Kikkoman: Recipe of the week (Ad). *New York Times*. Aug. 10. p. 30.

• ***Summary:*** The recipe, Chef's choice chuck, calls for ½ cup Kikkoman soy sauce. Across the bottom of the ad: "All-purpose Kikkoman Soy Sauce." A photo shows the Kikkoman bottle. A small illustration (cartoon) shows the cute little girl in the chef's hat.

4249. Claiborne, Craig. 1961. Chinese cook will teach ancient art: Mrs. Chu, chef who taught herself, to conduct course. *New York Times*. Sept. 14. p. 25.

• ***Summary:*** Her recipe for Cucumber sliced pork soup (Hwang Kua Jo Tang) calls for "1 teaspoon salt, 1 tablespoon light soy sauce, ¼ teaspoon monosodium glutamate."

Her recipe for Steamed dumplings (Cheng Chiao-tzu) calls for "2 tablespoons dark soy sauce, 1 tablespoon sesame seed oil." A photo shows Mrs. Grace Chu standing behind a traditional wok and bamboo steamer.

4250. *Washington Post*.1961. Some good books for the ladies: Leafing through. Sept. 17. p. F16.

• ***Summary:*** A brief review of the book *Best Recipes from Home and Abroad* (Hearthside Press, Inc., $2.95), submitted by Navy wives worldwide; a project of the Navy Wives Club of America. Gives a recipe for Chinese roast chicken with lemon, which calls for "1 tablespoon dark soy sauce." The first step in making the recipe is to "Rub outside of chicken with soy sauce."

4251. Kikkoman International Inc. 1961. Kikkoman (Ad). *New York Times*. Sept. 24. p. 111.

• ***Summary:*** "Teriyaki sauce: 2/3 cup Kikkoman [i.e., soy sauce]. 2 tbsps sugar, ¼ cup white wine, ½ tbsp. ginger... Marinate [meat] 1 hour in Teriyaki sauce."

Note 1. This is the earliest English-language document seen (March 2006) that contains the term "teriyaki sauce." The Oxford English Dictionary Online (Draft additions March 2004) defines teriyaki as: "A mixture of soy sauce and various other flavourings (typically including mirin, sake, and sugar) used as the marinade or glaze for teriyaki dishes, and often sold ready-made. Also: teriyaki marinade, teriyaki sauce."

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4252. Asao, Yasuo; Yokotsuka, Tamotsu. 1961. Shôyu kômi seibun ni kansuru kenkyû. XVIII. $C_7H_{12}O_5$ no tanri to sono kôzô (1) [Studies on flavorous substances in soy sauce. XVIII. Isolation of $C_7H_{12}O_5$ compound in soy sauce and its structure (1)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 35(9):831-37. Sept. [13 ref. Jap]
Address: Noda Soy Sauce Co., Ltd., Noda, Japan.

4253. Lee, Dorothy. 1961. House & Garden's Chinese cook book part 1. *House and Garden* 120(3):149, 151-56. Sept. See p. 152.
• ***Summary:*** The introductory paragraph states: "... Following are the basic principles of Chinese cooking as well as recipes for soups, meats, fish, and vegetables. Part 2 of the H&G's Chinese Cook Book will appear in the October issue."

The section titled "Glossary of recipe terms, ingredients" includes: "Bean curd: Squares of tender white 'soy bean cheese' made by precipitating the protein from soy bean milk."

"Fen szu: Also called bean threads or cellophane noodles. Fen szu is made of pea starch [not soy]... When soaked in hot water, it resembles vermicelli but is translucent. When deep-fat fried in dried form, it puffs up light and crisp."

"Fu Ju (or Foo Yee): Fermented bean curd, preserved in wine-flavored brine."

On page 149 is a color photograph of a picture frame framing several Chinese food items with a Buddha figure in the middle background of the frame. The title of the article is across the top of the frame. The text starts on page 151 along with the author's name.

4254. Yokotsuka, Tamotsu; Asao, Yasuo. 1961. Shôyu kômi seibun ni kansuru kenkyû. XIX. $C_7H_{12}O_5$ no kôzô (2) narabini shôyu-chû no α-jiketon kagô-butsu (1) [Studies on flavorous substances in soy sauce. XIX. The structure of $C_7H_{12}O_5$ compounds (2) and α-diketon compounds in soy sauce (1)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 35(9):837-45. Sept. [25 ref. Jap]
Address: Noda Soy Sauce Co., Ltd., Noda, Japan.

4255. Lee, Dorothy. 1961. House & Garden's Chinese cook book part 2. *House and Garden* 120(4):179, 181-86. Oct.
• ***Summary:*** Bean curd [tofu] is used in two of the recipes, and soy sauce also is used in several.

4256. Onishi, Hiroshi; Saito, Narimasa. 1961. Studies on osmophilic yeasts. XIII. Conversion of polyalcohol fermentation to ethanol fermentation. *Agricultural and Biological Chemistry* 25(10):768-72. Oct. [Eng]
• ***Summary:*** In a medium containing a high concentration of yeast extract, researchers observed aerobic formation of a large amount of ethanol by various yeasts of non-fermenting or extremely poor fermenting types such as *Torulopsis famata*, *Candida polymorpha* and *Pichia membranaefaciens* etc.

"Acetaldehyde formed as a metabolic intermediate leading to ethanol formation was trapped by the addition of sulfite and was identified as 2,4-dinitrophenylhydrazone."
Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4257. Spilsbury, Calvin A. 1961. Japan's oilseed and fats and oils industry. *USDA Foreign Agricultural Service*. FAS M-120. iv + 52 p. Oct. Illust. 28 cm. [9 ref]
• ***Summary:*** Contents: Introduction. Summary. The fats and oils industry: Total supply of fats and oils, edible fats and oils industries (oilseed crushing and refining industry, rice bran processing, margarine and shortening, oilseed food industries), industrial fats and oils (the soap industry, paint and protective coating industry). Domestic production of oilseeds and oil-bearing materials: Soybeans (farm income and management, research), rapeseed, other oilseeds, rice bran, marine oils, including whale, animal fats. Foreign trade: Soybeans, other oilseeds, marine oils, animal fats, oilcake and meal, trade controls. Demand and price: Price supports. Consumption. Marketing and market development: Marketing vegetable oils, marketing oilseeds (storage, inspection, soybeans, rapeseed), market development. Bibliography. No names of Asian crushers are given.

Japan's margarine and shortening production in 1960 was 88,600 metric tons, nearly 4½ times that of 1950... Margarine production in 1960 was 43,000 tons. Shortening production was only 41,600 tons in 1960. The margarine and shortening industry in Japan consists of 26 manufacturers, but a large percent of plant capacity is found in only a few plants: 4 plants have one-third of the industry capacity, which is around 400 metric tons per 8-hour day... 67% of the oils used to make margarine and shortening in Japan are animal and marine oils, with whale oil being the most widely used (26% of the total) followed by tallow and lard (21%), then fish oil (20.0%). Palm oils comprise 19.0% of the total and vegetable oils 14.0%.

Concerning oilseed food industries (p. 17-20), in 1960 some 532,218 tonnes (metric tons) of soybeans were used directly as foods or manufactured into foods in Japan. Substantial amounts of peanuts and sesame seeds were also so used. "The Japanese American Soybean Institute in Tokyo is actively promoting U.S. soybeans for food uses and has promoted soybeans as the meat of the field because of the excellence of their amino acids."

Note: This is the earliest document seen (Jan. 2005) containing the phrase "the meat of the field." Notice that it refers to soybeans and was apparently coined by an American organization in Japan.

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"More soybeans are used directly for food than are grown in Japan, and the cake and meal from an additional 420,000 tons of soybeans are now used each year. The main soybean foods are: Miso, shoyu, tofu, aburaage (fried tofu), frozen tofu, natto, kinako, monosodium glutamate (extract of fermented soybeans and rice used as a seasoning compound; a low-grade shoyu is a by-product), tonyu (soybean milk, cooked water-extract of soybeans, not widely produced in Japan at the present time).

Miso: There are about 3,200 to 3,800 miso plants in Japan, and a large amount of home-made miso is also produced. "About 117,600 tons of soybeans and 52,300 tons of defatted soybean meal (expeller cake is thought to be the best) are required by this industry. Miso consumption is estimated at 28.9 grams per capita per day." Domestic Japanese soybeans, such as white hilum soybeans from Aomori are preferred to U.S. beans, which cook unevenly because of their hard seed coats.

Shoyu: There are about 5,000 producers; some have very large plants but many are small. Per capita consumption is about 3 gallons per year. This requires about 18,500 tonnes of soybeans and 155,000 tonnes of defatted soybean meal per year. A small amount of soybean oil (about 1,000 tonnes/year) is skimmed off the top of shoyu and used for a cutting oil. The cake that remains after pressing out the shoyu contains 4% salt, but it is an ideal hog feed as well as a fertilizer. Around 80,000 to 100,000 tonnes a year are produced. A taru (4½ gallons) of shoyu wholesales for about $3.60. A large volume of soy sauce is now being exported to the USA.

Tofu: There are around 50,000 small tofu plants in Japan. Their demand for soybeans is large and increasing. In 1960 production of tofu and aburaage required 254,800 tonnes of soybeans and 20,000 tonnes of defatted soybean meal. More soybeans and meal are used to make tofu than any other food in Japan, followed by shoyu, then miso. About three-fifths of the soybeans used are imported. In 1960 production of frozen tofu required 27,100 tonnes of soybeans.

In 1960 about 22,800 tonnes of soybeans were required to make natto, 6,200 tonnes to make kinako, 64,800 tones of defatted soybean meal were required to make monosodium glutamate, and 10,000 tonnes of soybeans plus 30,000 tonnes of defatted meal were required to make other soybean food products [such as whole soybeans, soybean milk, etc.].
Address: USDA Fats and Oils Div.

4258. Ko Swan Djien; Hesseltine, C.W. 1961. Indonesian fermented foods: Made from soybeans. *Soybean Digest*, Nov. p. 14-15. [6 ref]
• ***Summary:*** Focuses on tempe (tempeh), ketjap, and studies at the Northern Laboratory. Photos show: (1) Dry soybeans in a Petri dish. (2) Soybeans in a Petri dish after soaking, dehulling, cooking and inoculating, ready to be placed in incubator. (3) Mature tempe [round cake, with wedge-shaped slice removed], prepared with Rhizopus sp. NRRL, removed from the Petri dish. Note growth of mycelium throughout the cake. Address: NRRL, Peoria, Illinois.

4259. Mogi, Koya; Ui, H.; Hayashi, T. 1961. Ekitai kôji-hô ni yoru shôyu no seizô ni kansuru kenkyû. VII. Ekitai kôji oyobi doro-jô kôji no heiyô ni yoru shôyu no shijô [Studies on the soy-sauce production by submerged culture. VII. Test brewing of soy-sauce by a compromised method between "liquid koji" and mushy koji methods]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 39(11):665-69. Nov. [12 ref. Jap; eng]
Address: Central Research Lab. of Noda Shoyu Co., Ltd., Japan.

4260. Ueno, Takahiro. 1961. Shinshiki shôyu ni kansuru kenkyû. XI. Bunkai genryô yori tansuikabutsu no jôkyô oyobi ni bunkai-eki no kassei tanshori to hakkô-sei [Studies on shinshiki shoyu (semi-chemical soy sauce). XI. Improving the effects of extracting the carbohydrate from defatted soybeans and the active charcoal treatment of acid hydrolysates for yeast fermentation]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 35(12):1193-98. Dec. [11 ref. Jap]
Address: Central Research Lab., Noda Soy Sauce Co. Ltd., Noda, Japan.

4261. Ueno, Takahiro. 1961. Shinshiki shôyu ni kansuru kenkyû. X. Kôbo ni yoru teikyû shibô-san no bunkai [Studies on shinshiki shoyu (semi-chemical soy sauce). X. Oxidation of short-chain fatty acids by yeast]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 35(12):1189-92. Dec. [11 ref. Jap]
Address: Central Research Lab., Noda Soy Sauce Co. Ltd., Noda, Japan.

4262. Ueno, Takahiro. 1961. Shinshiki shôyu ni kansuru kenkyû. IX. Dasshi daizu ensan bunkai-eki no hakkô sokaisei [Studies on shinshiki shoyu (semi-chemical soy sauce). IX. Inhibitory effects of acid hydrolysate of defatted soybean against yeast fermentation]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 35(12):1184-89. Dec. [27 ref. Jap]
Address: Central Research Lab., Noda Soy Sauce Co. Ltd., Noda, Japan.

4263. Cho, H.O. 1961. [Studies on the increased production of amylases and proteases by combination of raw materials of koji for soy sauce and soy bean paste]. MSc thesis, Graduate School, Seoul National University. [Kor]*
• ***Summary:*** Previous studies of the koji starter for soy-sauce and soybean paste, which are the main condiments in Korea, indicated that the amylases and protease activities of the koji

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differ by that kind of substrate, whether soybean or barley.

In order to try to increase those enzyme activities, koji was prepared by various combinations of soybeans and barley with the following results.

1. Koji prepared from the combination of soybean, barley and wheat at the ratio 4-6 to 6-4 to 2 was greatly superior to that prepared from a single substrate with respect to alpha-amylase, saccharifying and protease activities.

2. Variation of alpha-amylase, saccharifying and protease activities depending on the combination of raw materials, showed similar tendencies on the whole.

3. The possibility of improving the processing of soysauce, and soybean paste by the use of koji prepared from different substrates was discussed. Address: Seoul, Korea.

4264. Kobayashi, Kojin. 1961. Iida no miso shôyu shi [History of miso and shoyu in Iida City]. Iida: Shinano Kyodo Shuppansha. 120 p. [Jap]

4265. Mendoza, Jose M. 1961. Philippine foods, their processing and manufacture. Manila: Published by the author. 421 p. See p. 152-59. Chap. XV, Sauces and Similar Products. [7 soy ref]

• ***Summary:*** Contents of Chapter 15 titled "Sauces and similar products" (p. 152-58): Soybean sauce (*toyo*). Japanese soya sauce: Preparation of the starter, preparation of the material, inoculation, fermentation. Modified Chinese soya sauce. Coco sauce or coprameal sauce (The taste compares favorably with Chinese soy sauce and Japanese soy sauce). Hints and suggestions. Philippine bean sauces. The tao-si [fermented black soybeans], tokua [tofu, not fermented], tahore [taori, taore; probably fermented tofu], the tajo (unpressed tofu curds, usually served with medium brown sugar), mongo [mung bean] sprouts, soybean sprouts, Vetsin (contains 1 part monosodium glutamate, 7 parts lactose, and 3 parts salt). Includes a formula for Worcestershire sauce (which contains no soy sauce).

Note 1. This is the earliest document seen (May 2003) that contains any Filipino word (*tajo*) for unpressed tofu curds, usually served with medium brown sugar.

Note 2. The section titled "Tahore" (p. 157) states: "This product is simply taori whereby the already prepared taore is macerated to mass. Tokua [tofu] is used frequently with tahore. They are both popular food [sic, foods] among Chinese. The Chinese eat them with soft-boiled rice called 'barabasa.'" Address: Lecturer in Food Technology and Fermentation Technology, Manuel L. Quezon Univ., Manila.

4266. Mendoza, Jose M. 1961. Philippine foods, their processing and manufacture. Manila, Philippines: Philippine Educational Co. 524 p. See p. 186-93. Chap. XV, Sauces and Similar Products. [7 soy ref]

• ***Summary:*** The contents of this edition is basically identical to that of the other 1961 edition published by the author. However the typesetting and the page numbers are different. Address: Lecturer in Food Technology and Fermentation Technology, Manuel L. Quezon Univ., Manila.

4267. Montagné, Prosper. 1961. Larousse gastronomique: The encyclopedia of food, wine & cookery. New York, NY: Crown Publishers, Inc. 1101 p. See p. 925. Illust. Index. 26 cm. [Eng]

• ***Summary:*** The following are defined under "Soya Bean. *Soja*" (p. 925): Introduction. The soya bean is "the richest and cheapest source of vegetable protein." 1. Soya bean curd. *Fromage de soja.* Gives a completely inaccurate and useless description of how to make tofu at home. 2. Soya meat. *Viande de soja.* This "vegetarian meat," which resembles cooked ham, is said to be too complicated to make at home, but requires industrial equipment. 3. Soya milk. *Lait de soja.* 4. Soya sauce or extract. *Sauce, Extrait de soja.*

Note: This English-language edition is a translation from the original 1938 French-language edition by Nina Froud, Patience Gray, Maud Murdoch, and Barbara Macrae Taylor. Address: France.

4268. Ochse, J.J.; Soule, M.J., Jr.; Dijkman, M.J.; Wehlburg, C. 1961. Tropical and subtropical agriculture. 2 vols. New York, NY: Macmillan Co. Vol. 1, iv + 1-760 p. Vol. 2, xv + 761-1446 p. See vol. II, p. 1067-76. 22 x 14 cm.

• ***Summary:*** This is a truly prodigious work. The chapters in volume 2 deal with individual crops. The section titled "Soybean" (vol. II, p. 1067-76) discusses the following: Vernacular names in various languages. Overview of world production. Botany. Varieties. Breeding and selection. Climatic and soil requirements. Culture. Harvesting. Uses (incl. soy sauce, tempeh, and tofu). Future possibilities. Diseases. Ochse was born in 1891. Address: 1. Consultant, Tropical and Subtropical Agriculture, Research Consultant in Economic Botany, Univ. of Miami, Coral Gables; 2. Assoc. Prof. of Fruit Crops, Univ. of Florida, Gainesville; 3. Prof. of Applied Tropical Botany and Genetics, Univ. of Miami, Coral Gables; 4. Asst. Plant Pathologist, Univ. of Florida, Everglades Experiment Station, Belle Glade. All: Florida.

4269. Shufu-no-tomo-sha. 1961. Ryôri hyakka [Encyclopedia of Japanese cookery]. Tokyo: K.K. Shufu-no-tomo-sha. 768 + 20 p. Illust. Index. 21 cm. [Jap] Address: Tokyo.

4270. *SoyaScan Notes.*1961. Overview of total miso production in Japan (1934-36, 1952-61). Source: *Shokuhin Kanri Tôkei Nenpo* (Food Industry Statistics Annual Report). [1 ref]

• ***Summary:*** These statistics are from a bundle of documents found in the Kikkoman *kura* in Noda, Japan. Mark Fruin donated a photocopy of all the documents to Soyfoods Center. Statistics are given each year for miso, vinegar,

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sauce, tomato ketchup, monosodium glutamate, and mayonnaise (from 1952 -1961).

Miso production grew from 596,996 tonnes (metric tons) in 1934 to a peak of 600,750 tons in both 1935 and 1936. No statistics are given from 1937 to 1951, years of disaster for Japan, ending with defeat in World War II.

Starting again, production grew from 381,713 tonnes in 1952, to a peak of 530,078 in 1956, then decreased slowly to 482,357 tonnes in 1961.

4271. *SoyaScan Notes.*1961. Overview of factory production of miso in Japan (1930-1961). [1 ref]

• ***Summary:*** These statistics are from a bundle of documents found in the Kikkoman *kura* in Noda, Japan. Mark Fruin donated a photocopy of all the documents to Soyfoods Center. Statistics are given each year for miso in 1,000 *kan*, where 1,000 *kan* = 3,750 kg. Farmhouse and home production are not included. Miso production grew from 157,196 in 1930 to a peak of 160,200 in both 1935 and 1936, then fell gradually to 150,221 in 1940, 128,60 in 1942, 140,226 in 1943, and 129,679 in 1944. Then, as Japan was clearly losing the war, it plunged to 77,495 in 1945, 69,887 in 1946, and a low of 50,264 in 1947. In the postwar years, as Japan began to recover, it increased to 94,468 in 1948, dropped to 66,510 in 1950, then began steady growth–101,790 in 1952, rising to a peak of 198,779 in 1956. Then it began to decrease slowly to 180,884 in 1961.

4272. *SoyaScan Notes.*1961. Chronology of Chico-San, Inc. (Chico, California). 24 March 2011. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** 1955 Dec.–Herman Aihara and Chiiko (Cornellia) Yokota are married in New York. Cornellia arrived in the United States from Japan in Oct. 1955.

1961 summer–George Ohsawa, fearing that a nuclear war might be near, urges his followers to leave New York and find a place that was safer from radioactive fallout and good for growing rice. After extensive research, they chose Chico, California.

1961 Oct. 1–Thirty two people (11 families) arrive in Chico (in the Sacramento Valley of northern California) from New York City in a caravan of vans, buses, and station wagons. It is an area of fertile farmland where rice is already being grown. Among the people in the group who remained active in work with macrobiotic foods were Bob Kennedy, Herman and Cornellia Aihara, Teal Ames, and Dick Smith.

1961 Dec. 8–The group in Chico has started a bakery named "Chico-San" (Shumway 1961).

1962 March 6–The group in Chico incorporates a new food company named Chico-San, Inc.; it consists of a retail store and an import and wholesale business. It is capitalized with $10,000. In addition to a line of whole-grain products, they soon began to import a variety of macrobiotic foods from Ohsawa in Japan. The first store and food plant (they made sesame salt or *gomashio* and repackaged foods) was in the basement of a small hearing aid shop in Chico. The address was apparently 64, 5th Ave., Chico, California. It became the first macrobiotic food manufacturing company in the USA. Note: Infinity Foods in New York City was apparently the first macrobiotic import and wholesale company.

1962 Christmas–George Ohsawa visits Chico and lectures on macrobiotics.

1963–Ohsawa lectures in Boston (Massachusetts), New York City, and at the fourth macrobiotic summer camp in Chico. Lima Ohsawa and Cornellia Aihara give cooking classes. In Chico, Ohsawa suggests that the group try making rice cakes. He sends them a rice cake machine from Japan and production began in the fall of 1963. Rice cakes soon became Chico-San's first really popular and successful product.

1963–Junsei Yamazaki emigrates to Chico, California, from Japan.

1964–Yamazaki starts to make miso and shoyu for Chico-San.

1966 April 24–George Ohsawa dies. The Ohsawa Foundation now has offices in Los Angeles, New York, Paris and Tokyo.

1968 fall–Bob Kennedy of Chico-San signs a contract with the Lundberg brothers of Wehah Farm (Richvale, California) to grow short-grain brown rice organically, exclusively for Chico-San. Chico-San agrees to buy all brown rice planted in 1969.

1969–Lundberg brothers plant 78 acres of brown rice, which is harvested in the fall. Because of Chico-San's successful advertising campaign, one third of this crop as sold in advance and all was sold before the next year's crop was available. The rice

1969 fall–Wendell Lundberg visits Erewhon.

1970–Chico-San contracts for 200 acres of brown rice this year with Lundberg.

1970–Spiral Foods is organized by Chico-San and Peter Milbury to distribute Chico-San products directly to retail stores in the greater San Francisco Bay Area.

1970–Herman Aihara and Bob Kennedy establish the George Ohsawa Macrobiotic Foundation (GOMF). Junsei Yamazaki makes his first big batch of miso. First summer camp at French Meadows. Herman and Cornellia make their first nationwide teaching tour.

1971–Noboru [not Naboru] Muramoto sensei arrives.

1972–The book *Miso and Tamari*, by Herman Aihara published.

1972 Sept. 14.–Fire destroys the Chico-San plant. It started as a short in a rice-cake machine. Chico-San is out of business for several months. The company resumed business at another location across town. But Chico-San lost its exclusive right to distribute Lundberg organically grown brown rice as the company had been unable to package and

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ship rice and rice products for several key months during the peak sales season.

1973–Herman Aihara establishes the Vega Institute in San Francisco. Noboru Muramoto lectures and his first book, *Healing Ourselves*, is published.

1974–Herman Aihara moves GOMF to Oroville from San Francisco. *Soybean Diet*, by Herman published.

1976. Muramoto moves to Glen Ellen.

1984 Nov. 19–Heinz U.S.A. acquires Chico-San Inc. a manufacturer and marketer of rice cakes and related products. Privately held Chico-San (headquartered in Chico, California) operates rice-cake production facilities in California, Mississippi, and New Jersey. Founded in 1962, the company has about 340 employees.

1985 Jan.–The Quaker Oats Company acquires the Arden Rice Cakes business. The natural foods portion of the business is incorporated under the Mother's brand. Chico-San is based in Chico, California; Arden in North Carolina.

4273. Umeda, Isao. 1961. Shôyu [Shoyu (Japanese soy sauce). 3rd ed.]. Tokyo: Sankyo Shuppan Co. 238 p. See also 1963 ed. [100+ ref. Jap]
Address: Noda Shoyu Shiken-shi cho. Head, Noda Shoyu Research Lab.

4274. Wong, Ella-Mei. 1961. Chinese cookery. London: Angus and Robertson; New York, NY: Arco Publ. Co. [xi] + 100 p. Illust. Index. 23 cm. *
• ***Summary:*** *Foo Jook* [dried yuba sticks] and "red bean curd" are mentioned.

4275. Yokoyama, Yohan. 1961. Shôyu no jôzô to gôseihô: fu sôsu seizô-hô [Shoyu: Fermentation and synthetic methods, with a supplement on the manufacture of Worcestershire style sauce]. Tokyo: Meibundo. 435 p. [Jap]

4276. Binsted, Raymond; Devey, James D.; Dakin, John C. 1962. Pickle and sauce making. 2nd ed. Revised. London: Food Trade Press. viii + 274 p. Jan. Illust. Index. 22 cm.
• ***Summary:*** Soya is discussed only in chapter 5, titled "Thick and Thin Sauces." "Worcester sauce is traditionally a thin sauce, very spicy in flavour and made so that a sediment is present in the bottle" (p. 88). Many of these sauces use 20's vinegar as the main ingredient. In England, this means normal malt vinegar. "The vinegar should be of approximately 20's strength, i.e., contain about 5 per cent of acetic acid" (p. 89). Soy (i.e. soy sauce) is used as a relatively minor ingredient in various thick fruits sauces which also contain many other minor ingredients: With mango chutney and dates (p. 96). With tomato puree, mango chutney and dates (p. 97). With tomato puree (p. 98). As a major ingredient with garlic and sugar (p. 99). With vinegar, molasses and onions (p. 99). With syrup and tomato puree (p. 105). In Mushroom Ketchup, soy [sauce] is the second most predominant ingredient after mushrooms in brine. In Walnut Ketchup, soy [sauce] is the third ingredient after walnuts in brine and 20's vinegar.

Concerning thin sauces (p. 108-23), "By far the most popular of thin sauces on the market is Worcester sauce, so much so that when a reference is made to thin sauce it is often assumed that Worcester sauce is referred to" (p. 108). "Recipes are legion and are jealously guarded by the leading manufacturers of the product, but general principles may be considered. Soy [sauce] tamarinds, anchovies, garlic and spices are basic ingredients, while some sauces contain, in addition, citrus juices, wines and meat extract" (p. 111).

Four recipes for Worcester Sauce are given, with the leading ingredients (in descending order of predominance) as follows: Good quality: Vinegar 17 gallons, walnut catsup 11 gallons, mushroom catsup 10 gallons, sherry wine 5 gallons, soy sauce 4½ gallons, ground hogs livers 21 lb, salt 11 lb, tamarinds 10 lb, plus ground cayenne pepper, black pepper, allspice, and coriander, plus mace and brandy. Medium quality: Vinegar 198 gallons, walnut catsup 1¼ gallons, soy sauce 1 gallon, sugar 25 lb, salt 7½ lb... Cheap quality: Vinegar 15 gallons, soy sauce 3½ gallons, water 2½ gallons, salt 2 lb... Basic Worcestershire Sauce: 20's vinegar 35 gallons, tamarinds 30 lb, walnut ketchup 6 gallons, soy 3 gallons, lemon pulp 2 gallons, anchovies 10 lb, sugar 10 lb, etc. The complex method is then given.

The section on flavorings in sauces (p. 121) lists "Soy, a fermented soya bean and wheat liquor produced in the Far East, is a dark brown liquid with a piquant and salty flavor."
Address: 2. A former pickle and sauce factory chief chemist; 3. Head of Dep. of Pickle and Sauce Products, British Food Manufacturing Industries Research Assoc., Leatherhead, Surrey, England.

4277. Chen, Philip S.; Chen, Helen D. 1962. Soybeans for health, longevity, and economy. 2nd ed. South Lancaster, Massachusetts: The Chemical Elements. xii + 242 p. Jan. Illust. Index. 21 cm. 1st ed. 1956. [24 ref]
• ***Summary:*** This book is identical to the original 1956 edition, third printing (the dedication is to William J. Morse and Harry W. Miller), except that: (1) Table 1, titled "Soybean production in the United States" (p. 2) gives statistics to 1960, instead of 1958. (2) Appendix B (p. 224-36) has been updated based on the 1961 *Soybean Blue Book*. (3) The dust jacket has been updated. On the rear dust jacket is a portrait photo of Dr. Philip Chen and a biographical sketch. (4) The paper is slightly thicker.

Note: In 1962 Chen wrote *A New Look at God*, published by Chemical Elements (288 p.). Address: 1. Prof. of Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

4278. Hino, Tetsuo; Tsunoda, T.; Tsuchiya, T.; Narui, K.;

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Tsuchiya, M.; Usui, A. 1962. Tanpakushitsu no kasui bunkai ni yoru chômiryô no seizô. IV. Dasshi daizu no ensan kasui bunkai ni okeru amino-san no shôchô [Preparation of seasonings by the hydrolysis of proteins. IV. Studies on the liberation and the degradation of amino acids during hydrochloric acid hydrolysis of soybean meal]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 36(1):82-85. Jan. [9 ref. Jap]
Address: Ajinomoto Co., Inc.

4279. Hino, Tetsuo; Kimizuka, A.; Ito, K.; Takenishi, T.; Ogasawara, T. 1962. Tanpakushitsu no kasui bunkai ni yoru chômiryô no seizô. V. Dasshi daizu ensan kasui bunkaieki-chû no chûsei karuboniiru kagô-butsu no kensaku ni tsuite [Preparation of seasonings by the hydrolysis of proteins. V. Research on neutral carbonyl compounds in the hydrochloric acid hydrolysate of soybean meal]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 36(1):85-91. Jan. [9 ref. Jap]
Address: Ajinomoto Co., Inc.

4280. Paddleford, Clementine. 1962. Japanese dishes making hit in U.S. *Los Angeles Times*. Feb. 8. p. C12.
• ***Summary:*** New York–Japanese foods are everywhere in neighborhood and specialty shops throughout America." This week the writer sampled 50 Oriental delicacies. "The basic Japanese food exports remain with us as always the king crab meat, the Mandarin orange, the white tuna fish. Old friends are also the seasonings, Japanese Shoyu sauce, rice wine vinegar, the ajinomoto which is the monosodium glutamate to enhance the natural food flavors of meat, poultry, fish and vegetables." Also mirin, instant rice with seaweed, and *yuechizuke* which is "egg plant in soya bean paste" [miso].

Note: This is the earliest English-language document seen (March 2009) that uses the term "soya bean paste" to refer to miso.

"The Japanese soy sauce called shoyu is claimed more delicate than the Chinese version. Delicious for gravies and barbecue sauces." Address: Herald Tribune News Service.

4281. **Product Name:** Amoy Soy Sauce.
Manufacturer's Name: Amoy Canning Corp. (Singapore) Ltd.
Manufacturer's Address: 13 KM Bukit Timah Rd., Singapore.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 37. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Amoy Canning Corporation, Singapore, Ltd. is one of the two largest manufacturers of soybean sauce in Singapore. No address is given.

Soya Bluebook. 1981. p. 69. Address: 13 KM Bukit Timah Rd., Singapore.

4282. **Product Name:** Soy Sauce.
Manufacturer's Name: Cheong Chan (Hup Kee).
Manufacturer's Address: 36 Jalan Penchala, Petaling Jaya, Selangar, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4283. **Product Name:** Soy sauce.
Manufacturer's Name: Cheung Wo Soy Factory.
Manufacturer's Address: 159 Main St., Aplichau [Apleichau], Hong Kong.
Date of Introduction: 1962. February.
How Stored: Shelf stable.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 36. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Lists 7 soybean sauce manufacturers in Hong Kong. Note: Apleichau is a small island southwest of Hong Kong Island.

4284. **Product Name:** Soy Sauce.
Manufacturer's Name: Chong Pang Chan.
Manufacturer's Address: 327 Telaga Ayer Road, Butterworth, Province Wellesley, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4285. **Product Name:** Soy Sauce.
Manufacturer's Name: Chop Chow Tuck Woh.
Manufacturer's Address: 54 Tranquerah Road, Malacca, Malacca, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4286. **Product Name:** Soy Sauce.
Manufacturer's Name: Chop Woh Chun.
Manufacturer's Address: 192 Patani Road, Penang, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4287. **Product Name:** Soy Sauce.
Manufacturer's Name: Chop Yuen Chan Chun.
Manufacturer's Address: 19 Chan Sow Lin Road, Kuala Lumpur, Selangor, Malaysia.
Date of Introduction: 1962. February.

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New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4288. **Product Name:** Soy sauce.
Manufacturer's Name: Chue Lung Sauce, Soy Factory.
Manufacturer's Address: 80 Castle Peak Rd., Kowloon, Hong Kong.
Date of Introduction: 1962. February.
How Stored: Shelf stable.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 36. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Lists 7 soybean sauce manufacturers in Hong Kong.

4289. *Foreign Agriculture.*1962. Soybean markets in Southeast Asia. 26(2):17. Feb.
• ***Summary:*** Four areas in Southeastern Asia–Hong Kong, Malaya, Singapore, and possibly Sarawak–are growing commercial markets for U.S. soybeans and soybean oil. Communist China has long been the main source of soybeans for Southeast Asia. The use of U.S. soybeans in the four areas is limited largely to those foods for which splits and broken beans are suitable–namely, soybean curd, soybean sauce, and soybean cheese.

4290. **Product Name:** Soy Sauce.
Manufacturer's Name: Hang Chan Woh Kee.
Manufacturer's Address: c/o 1-3 Pudu St., Kuala Lumpur; Factory: 4¼ mile, Klang Gate Rd., Setapak, Kuala Lumpur, Selangor, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4291. Hino, Tetsuo; Kimizuka, A.; Ito, K.; Takenishi, T.; Ogasawara, T. 1962. Tanpakushitsu no kasui bunkai ni yoru chômiryô no seizô. VI. Dasshi daizu ensan kasui bunkai eki-chû no tansosû 5 no chûsei karuboniiru kagô-butsu ni tsuite [Preparation of seasonings by the hydrolysis of proteins. VI. Neutral C_5 carbonyl compounds in the hydrochloric acid hydrolysate of soybean meal]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 36(2):120-23. Feb. [6 ref. Jap]
Address: Ajinomoto Co., Inc.

4292. Kamada, Hidemoto; Nakano, Masahiro; Higurashi, Yasuo. 1962. Daizu seihin no chakushoku ni kansuru kenkyû. IX. [Browning reaction of soybean products. IX. Color formation of shoyu during brewing (Abstract)]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 16. p. 114. Feb. [1 ref. Jap; eng]
• ***Summary:*** Color formation of shôyu (soy sauce) and of an amino acid-sugar system during browning were investigated.

Color formation in shoyu was caused by the reaction between amino acids and sugar, especially pentose (a monosaccharide sugar with five carbon atoms). It was found to be unlikely that the reaction between amino acids and reductone or active carbonyl compound would be significant in color formation of shoyu during brewing (fermentation).

Color formation during fermentation of the mash (*moromi*) and pasteurization (at 82°C for 30 minutes) of shoyu obtained from the mash were accompanied by a decrease in the pentose content.

Concentration of pentose had a significant effect on the rate and extent of browning of an amino acid-sugar system.

The presence of oxygen had a marked effect on color formation in the mash, but no effect on color formation during pasteurization of shoyu.

Reprinted from *Nosan Kako Gijutsu Kenkyu Kaishi* (*J. for the Utilization of Agricultural Products*) 8(1):6+ (1961).
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4293. Kamada, Hidemoto; Nakano, Masahiro. 1962. Daizu seihin no chakushoku ni kansuru kenkyû. X. [Browning reaction of soybean products. X. Characteristics of color of mieki [HVP soy sauce] (Abstract)]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 16. p. 115. Feb. [1 ref. Jap; eng]
• ***Summary:*** The majority of color constituents of Mieki (HVP soy sauce launched by Ajinomoto in 1950) was precipitated by mixing with an equal volume of ethanol (ethyl alcohol).

The color intensity of Mieki stored at 38°C for 30 days developed slightly, but never developed in the absence of oxygen.

The addition of amino acids had no effect on the color intensity of Mieki stored at 38°C for 30 days.

Addition of the sugars xylose, galactose, and glucose caused significant browning in Mieki stored at 38°C, however sodium bisulfite, sodium sulfite, and sodium cyanide inhibited browning.

Sunlight caused browning of Mieki, but not in the absence of oxygen.

Reprinted from *Nosan Kako Gijutsu Kenkyu Kaishi* (*J. for the Utilization of Agricultural Products*) 8(1):12+ (1961).
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4294. Kato, Hiromichi; Sakurai, Yoshito. 1962. Daizu seihin no kappen kikô ni kansuru kenkyû. II. Hiire shôyu no chakushoku nôka genshô ni okeru 3-deokishioson-rui, hekisôsu oyobi pentôsu no yakuwari [Studies on browning mechanisms of soybean products. II. Roles of 3-deoxyosones, hexoses and pentoses for the darkening of pasteurized soy-sauce]. *Nippon Nogeikagaku Kaishi* (*J. of*

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the Agricultural Chemical Society of Japan) 36(2):131-37. Feb. [15 ref. Jap]
Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo.

4295. **Product Name:** Soy sauce.
Manufacturer's Name: Keon Chun Hing Kee.
Manufacturer's Address: 12 Tatit St., Kowloon, Hong Kong.
Date of Introduction: 1962. February.
How Stored: Shelf stable.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 36. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Lists 7 soybean sauce manufacturers in Hong Kong.

4296. **Product Name:** Soy Sauce.
Manufacturer's Name: Kian Guan Sauce Factory.
Manufacturer's Address: 2¼ mile, Tampin Road, Seremban, Negri Sembilan, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4297. **Product Name:** Soy sauce.
Manufacturer's Name: Ko Sang Yick Ching Kee Co.
Manufacturer's Address: 135 Second St., Ground Floor, Hong Kong.
Date of Introduction: 1962. February.
How Stored: Shelf stable.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 36. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Lists 7 soybean sauce manufacturers in Hong Kong.

4298. **Product Name:** Soy Sauce.
Manufacturer's Name: Kong Chang.
Manufacturer's Address: 226 Jelutong Road, Penang, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4299. **Product Name:** Soy Sauce.
Manufacturer's Name: Kong Guan Tong Kee.
Manufacturer's Address: 232 Bagan Ajam, Butterworth, Province Wellesley, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4300. **Product Name:** Soy Sauce.
Manufacturer's Name: Kum Cheong.
Manufacturer's Address: 202 Jelutong Road, Penang, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4301. **Product Name:** Soy Sauce.
Manufacturer's Name: Kwan Loong & Co.
Manufacturer's Address: 214 Jelutong Road, Penang, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4302. **Product Name:** Soy Sauce.
Manufacturer's Name: Kwong Ban Wah Factory.
Manufacturer's Address: 6 MacCallum Street, Penang, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4303. **Product Name:** Soy Sauce.
Manufacturer's Name: Kwong Bee Chun Sauce Factory.
Manufacturer's Address: P.O. Box No. 20, Taiping, Perak, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4304. **Product Name:** Soy Sauce.
Manufacturer's Name: Kwong Bee Woh Sauce Factory.
Manufacturer's Address: 19 Chinese Club Road, Taiping, Perak, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4305. **Product Name:** Soy sauce.
Manufacturer's Name: Lung Chun Co.
Manufacturer's Address: 68 Fook Lo Tsun Rd., Kowloon, Hong Kong.
Date of Introduction: 1962. February.
How Stored: Shelf stable.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 36. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Lists 7 soybean sauce

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manufacturers in Hong Kong.

4306. **Product Name:** Soy Sauce.
Manufacturer's Name: Man Sang Sauce Manufacturer.
Manufacturer's Address: 39 Patani Road, Penang, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4307. **Product Name:** Soy sauce.
Manufacturer's Name: Mee Chun Canning Co.
Manufacturer's Address: 128 Queen's Road, C. 2nd floor, Hong Kong.
Date of Introduction: 1962. February.
How Stored: Shelf stable.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 36. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Lists 7 soybean sauce manufacturers in Hong Kong.

4308. **Product Name:** Soy sauce.
Manufacturer's Name: Mui Lam Yuen Sauce Factory.
Manufacturer's Address: 42 Yeung Oak Village, Tsun Wan, Kowloon, Hong Kong.
Date of Introduction: 1962. February.
How Stored: Shelf stable.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 36. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Lists 7 soybean sauce manufacturers in Hong Kong.

4309. **Product Name:** Soy Sauce.
Manufacturer's Name: Nanyang Sauce Co.
Manufacturer's Address: Lot 6774 Tambun Road, Ipoh, Perak, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4310. **Product Name:** Soy sauce.
Manufacturer's Name: Plum Garden Soy Sauce & Canning Mft.
Manufacturer's Address: 6 Yeund Uk Village, N.T., Hong Kong.
Date of Introduction: 1962. February.
How Stored: Shelf stable.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 36. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Lists 7 soybean sauce manufacturers in Hong Kong.

4311. **Product Name:** Soy Sauce.
Manufacturer's Name: Sin Hin Leong.
Manufacturer's Address: 6A Jalan Kampong Perak, Alor Star, Kedah, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4312. **Product Name:** Soy Sauce.
Manufacturer's Name: Soon Cheong Co.
Manufacturer's Address: 4076 Bagan Ajam, Butterworth, Province Wellesley, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4313. **Product Name:** Soy Sauce.
Manufacturer's Name: Soon Hing Sauce Factory.
Manufacturer's Address: 191 Burmah Road, Penang, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4314. Spilsbury, Calvin C. 1962. Southeast Asia as a market for U.S. soybeans and vegetable oils. *USDA Foreign Agricultural Service*. FAS-M-126. 41 p. Feb. Summarized in Soybean Digest, March 1962, p. 26.
• ***Summary:*** Gives an excellent, detailed discussion, with many statistics, of the soybean markets in Hong Kong, Singapore, Malaysia, Indonesia, British Borneo (Sarawak, Brunei, and North Borneo [Sabah]), and Burma.

"The 350,000 Chinese of British Borneo are large consumers of soybean food products and fats and oils, but this market is small. Domestic production of soybeans in North Borneo is more than sufficient to supply domestic demand for that country, and some exports are made each year. Imports of soybeans into Sarawak and Brunei, though small, have been growing each year. In 1960 Sarawak's imports were 608 long tons, compared with 526 tons in 1959 and 403 tons in 1958. Thailand, Mainland China, Vietnam, and Cambodia are the main suppliers, as U.S. soybeans have been scarce in this market."

Burma: "The domestic production of soybeans in Burma has been small, but output is large enough to provide demands of the Burmese people in the Shan State, population approximately 500,000, who use soybeans for food." The peanut is the main oilseed crushed in Burma. The majority of peanut crushing mills are located in Rangoon, Insein, Mandalay, and Myingyan.

Table 6 (p. 29) shows imports (in piculs; 1 picul = 133

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lb) of soybeans to Sarawak, by country of origin, annually 1958-1960. The main source countries are Thailand, Mainland China, and Indochina. Imports increased from 6,853 piculs in 1958 to 10,343 piculs in 1960.

Appendix: Hong Kong: Importers of U.S. soybeans, manufacturers of wet and dried bean curd for export to U.S., soybean sauce manufacturers. Singapore: Importers of U.S. soybeans, importers agents providing services to soybean importers, manufacturers of soybean curd, largest soybean sauce manufacturers, soybean milk companies. Federation of Malaya: Importers of soybeans, soybean sauce factories (Penang, Province Wellesley, Kedah, Perak, Selangor, Malacca, Negri Sembilan). Sarawak: Soybean importers and dealers (all of Kuching). Burma: Fats and oils importers (Rangoon), vegetable oil mills (Rangoon).

Note 1. Sarawak became part of Malaysia in 1963. Note 2. This is the earliest document seen (May 2010) concerning soybeans in Brunei. This document contains the earliest date seen for soybeans in Brunei (Feb. 1962). Address: Fats and Oils Div.

4315. **Product Name:** Soy Sauce.
Manufacturer's Name: Swee On Woh Sauce Pty Ltd.
Manufacturer's Address: 52/4 Bridge Street, Penang, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4316. **Product Name:** Soy Sauce.
Manufacturer's Name: Tai Tong.
Manufacturer's Address: 20 Sungei Rambai, Bukit Mertajam, Province Wellesley, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4317. **Product Name:** Soy Sauce.
Manufacturer's Name: Thye Woh.
Manufacturer's Address: 33C Kampong Perak, Alor Star, Kedah, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4318. **Product Name:** Soy Sauce.
Manufacturer's Name: Tin Chan Sauce Factory.
Manufacturer's Address: Chan Sow Lin Road, Kuala Lumpur, Selangor, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4319. **Product Name:** Soy Sauce.
Manufacturer's Name: Tong Fong.
Manufacturer's Address: 2 Kajang Road, Penang, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4320. **Product Name:** Soy Sauce.
Manufacturer's Name: Woh Chun.
Manufacturer's Address: 21-H Kampong Perak, Alor Star, Kedah, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 39. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4321. **Product Name:** Soy sauce.
Manufacturer's Name: Yee Chun Soy Factory.
Manufacturer's Address: 29 Sheung Sha Po., Kowloon, Hong Kong.
Date of Introduction: 1962. February.
How Stored: Shelf stable.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 36. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Lists 7 soybean sauce manufacturers in Hong Kong.

4322. **Product Name:** Soy Sauce.
Manufacturer's Name: Yee Yuen.
Manufacturer's Address: 840 Perak Lane, Penang, Malaysia.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4323. **Product Name:** Soy Sauce.
Manufacturer's Name: Yeo Hiap Seng Canning & Sauce Factories.
Manufacturer's Address: 23, 7 M.S. Bukit Timah Rd., Singapore.
Date of Introduction: 1962. February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126. Feb. p. 37. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Yeo Hiap Seng Canning and Sauce Factories is one of the two largest manufacturers of soybean sauce in Singapore. The address appears to be at 23, 7 M.S. Bukit Timah Rd.

Soya Bluebook. 1981. p. 69. Yeo Hiap Seng Ltd., 950

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Dunearn Rd., Singapore 21.

4324. **Product Name:** Soy Sauce.
Manufacturer's Name: Yip Heong.
Manufacturer's Address: 3 Lines Road, Penang, Malaysia.
Date of Introduction: 1962, February.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126, Feb, p. 38. "Southeast Asia as a market for U.S. soybeans and vegetable oils."

4325. **Product Name:** Soy sauce.
Manufacturer's Name: Yuet Heung Yuen.
Manufacturer's Address: 175 Main St., Aplichau [Apleichau], Hong Kong.
Date of Introduction: 1962, February.
How Stored: Shelf stable.
New Product–Documentation: U.S. Foreign Agricultural Service. FAS-M126, Feb, p. 36. "Southeast Asia as a market for U.S. soybeans and vegetable oils." Lists 7 soybean sauce manufacturers in Hong Kong. Note: Apleichau is a small island southwest of Hong Kong Island.

4326. Lee, Elinor. 1962. Goodwill grows in climate of culture: Food promotes friendship. *Washington Post.* March 22, p. C7, 20.
• ***Summary:*** In Washington, DC, the "Cultural Evenings in Asian Embassies" is a flavor venture, sponsored by the Buddhist Center of the U.S.A. to help promote international goodwill and understanding. The dinner menu at the Royal Thai Embassy on Saturday night will include "Kung Lon (Boiled coconut cream with shrimp and soya bean sauce)." The recipe is given. A second recipe, Mee Krob, which contains "3 tablespoons finely cut bean curd" and "soya bean sauce" to season, is also given. A third recipe, Yam Yai, includes ½ cup bean curd (cut fine). "Thailand's top recipes aren't in any cookbooks."

4327. Onishi, Hiroshi; Saito, Narimasa. 1962. Studies on osmophilic yeasts. XIV. Partial purification of polyol dehydrogenase from *Pichia miso* and the properties of this enzyme. *Agricultural and Biological Chemistry* 26(4):245-51. April. [37 ref. Eng]
Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4328. Claiborne, Craig. 1962. Food news from Tokyo: Cuisines of virtually every country offered at all prices in restaurants. *New York Times.* May 30, p. 7.
• ***Summary:*** The article begins: "There is probably no city in the world today with a more fascinating and varied cuisine than Tokyo." The Imperial, perhaps the city's most famous hotel, offers a wide selection, including sukiyaki.

In Tokyo, the typical Japanese restaurant is small and does not offer a menu. It will often specialize on one or two full-course "dinners built around one particular food. That food may be game, for example, or raw fish, or tofu, which is soy bean curd, or beef."

Tofu is typically found in sukiyaki. For "batayaki, slices of matsuzaka beef, spectacularly marbled," are served with a dipping sauce, which includes "grated long radish [*daikon*] in shoyu (soy sauce), mustard and seven spices, including Japanese pepper, ground poppy seed, cayenne pepper, sesame seeds, seaweed, dried orange peel and hemp seed."

In recent years, "beer seems to have replaced sake as Japan's national drink." Address: Special to the New York Times.

4329. Claiborne, Craig. 1962. Food news from Noda: Soy sauces. *New York Times.* June 4, p. 24.
• ***Summary:*** The writer, on a trip to Japan, is now visiting Noda and Kikkoman, maker of one of Japan's finest soy sauces, "which, within recent months, has become widely distributed in the United States.

There are two Kikkoman soy sauce plants in Noda. One, which covers several acres, is equipped with the most modern processing and bottling equipment. The other is a picturesque, ancient building at the edge of a lake encircled by iris. Here, "soy sauce for the imperial household is made almost entirely by hand." The soy sauce is fermented in wooden vats, whose outside is painted vivid tangerine red and bamboo green.

Behind the soy sauce made in Noda stands a wealth of tradition, for here (as family records show) the Mogi family has supervised the production of soy sauce for three centuries. The current president of the company is Keizaburo Mogi, a tall gentleman, who takes pride in showing the writer around the premises. Yuzaburo Mogi, his son, age 27, also a company officer, earned his master's degree last June in business administration at Columbia University (New York City).

The company now makes 55 million gallons per year of soy sauce, of which about 3% is shipped to the USA, and much of that to Texas, where it is popular at barbecues.

The process for making soy sauce is described. The moromi mash is fermented for 12-18 months, until it has fully matured.

Soy sauce is believed to have originated in China and to have been introduced into Japan in 552 A.D. together with Buddhism. At that time, the seasoning was named *hishio*, "and like salt in ancient Rome, was supplied to civil and military officials of the Imperial Court as part of their salary."

It was not until about 1532 that the word shoyu, the present name for soy sauce in Japan, came to be used. The soy sauce plant at Noda was started about 100 years later.

Formerly, China was the chief supplier of soy beans to Japan. Today the great majority of soy beans used at Noda are imported from Illinois and Iowa. Address: Special to the

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Times.

4330. Fukushima, D. Assignor to Noda Industrial Science Research Institute. 1962. [Modification of alcohol treatment of soybeans for fermented products]. *Japanese Patent* 6313. June 28. [Jap]*
• ***Summary:*** Describes solvent extraction using ethyl alcohol. Address: Kikkoman.

4331. Shibasaki, K.; Hesseltine, C.W. 1962. Miso fermentation. *Economic Botany* 16(2):180-95. June. [32 ref]
• ***Summary:*** The role of miso in the Japanese diet is reported. The *Aspergillus oryzae* strain used for miso and sake has high amylolytic as well as proteolytic action. (That used for soy sauce has high proteolytic action). In miso fermentation, the koji starter is prepared by inoculating trays of cooked rice and vegetable ash. After good growth, the fungus is dried without killing its spores. Cooked soybeans are mixed with rice, salt and the koji starter. Chemical changes during fermentation are reported. Many microorganisms are present in miso. Address: 1. College of Agriculture, Tohoku Univ., Japan; 2. NRRL, Peoria, Illinois.

4332. Fujiwara, Kozo; Tokuda, M.; Nanba, A. 1962. Shôyu chû no amino-san ni kansuru kenkyû. II. Tennen jôzô moromi ni okeru shuyô amino-san no shôchô [Studies on amino acids in Japanese soy sauce. II. Changes in the amounts of the main amino acids during the ordinary moromi (mash) process]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 40(7):327-32. July. [6 ref. Jap; eng]
• ***Summary:*** The term "ordinary moromi (mash) process" refers to the natural fermentation process. Changes in free amino acids were studied by microbioassay. Considerable amounts of free arginine disappeared during maturation of the mash. The amounts of free isoleucine, leucine, methionine and phenylalanine steadily increased in the course of maturation from the beginning of the mash process to the 396th day, while free glutamic acid, glycine, lysine and valine showed maxima. Address: 1. Dep. of Fermentation Technology, Faculty of Engineering, Osaka Univ.; 2-3. Osaka Joshigakuen Junior College, Japan.

4333. Fujiwara, Kozo; Tanaka, S.; Fujita, E. 1962. Shôyu-chû no amino-san ni kansuru kenkyû. I. Kakushu shôyu no amino-san genryô ni tsuite [Studies on amino acids in Japanese soy sauce. I. The contents of amino acids in soy sauces of various types]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 40(7):321-27. July. [13 ref. Jap; eng]
• ***Summary:*** "The contents of 10 amino acids (arginine, glutamic acid, glycine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, valine) in soy sauces of various types were determined by microbiological assay methods. Each amino acid content was expressed in mg/ml of soy sauce whose total nitrogen content was converted into 1%. Arginine contents in fermented soy sauces and 'aminosan-eki' (chemical hydrolyzate of protein-containing materials) were 0.7 mg/ml and 3 mg/ml, respectively. Glutamic acid contents in 'kiage' (fermented soy sauce), 'tamari' (ditto) and 'sokujo' (quickly fermented soy sauce) were about 8.5 mg/ml, 6.5 mg/ml and about 4.7 mg/ml, respectively. 'Aminosan-eki' contained 8.5 mg/ml or more of glutamic acid, while 'Il go aminosan-eki' about 5 mg/ml." Address: 1-2. Osaka Univ., Japan; 3. Osaka Joshigakuen Junior College.

4334. Herb-Mueller, Lene. 1962. Die Soja und Ernaehrungsfragen in Entwicklungslaendern [The soybean and nutrition problems in developing countries]. *Ernaehrungs-Umschau* 9(5):143-46. July. [Ger]
• ***Summary:*** Nutritive value of soybean products. Address: Bonn.

4335. Baker, Lois. 1962. 'Round the food stores: For a look at the latest ideas. *Chicago Daily Tribune*. Aug. 3. p. B2.
• ***Summary:*** "Of Japanese origin are Kikko-man Soy Sauce and Geisha White Peaches. All these items are stocked in every Jewel store."

4336. Fujiwara, Kozo; Ishikawa, H.; Nanba, A. 1962. Shôyu-chû no amino-san ni kansuru kenkyû. III. Kaon sokujô shomi ni okeru shuyo amino-san no shôchô [Studies on amino acids in Japanese soy sauce. III. Changes in the amounts of the main amino acids during the mash process accelerated with elevating temperature]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 40(8):384-89. Aug. [7 ref. Jap; eng]
Address: 1. Osaka Univ.; 2. Tatsuno Shoyu Co.; 3. Osaka Joshigakuen Junior College.

4337. Chambers, John A. 1962. Soya as a foodstuff. *Arkady Review* (*Manchester, England*) 39(3):39-41. Sept.
• ***Summary:*** Discusses briefly soy oil, defatted soya flour, American Multi-Purpose Food (50% protein, 1% fat, 31% carbohydrate), soy sauce, tempeh, and tofu. Address: Research Chemist, British Arkady Co. Ltd., Skerton Rd., Old Trafford, Manchester 16, England.

4338. Nagafuge, Emilio. 1962. Los productos alimenticios derivados de la soya [Food products derived from the soybean]. *Tierra* (*Mexico*) 17(9):678. Sept. [Spa]
• ***Summary:*** Contents: Preface. Soymilk. Soy cheese [tofu]. Soy flour. Soy oil. Soy lard and butter (*Manteca y mantequilla de soya*). Soy sprouts (*Los brotes de soya*). Soy sauce. Miso.

Note: This is the earliest Spanish-language document seen that uses the term *mantequilla de soya* to refer to margarine. Address: Mexico.

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4339. Watanabe, Toshiyuki; Aso, Kiyoshi. 1962. On the sugar composition of Shiro Shoyu (clear soy sauce). *Tohoku J. of Agricultural Research* 13(3):265-71. Sept. Originally published in 1960 in Hakko Kogaku Zasshi (J. of Fermentation Technology) 38:435-40. [11 ref]
• ***Summary:*** The main sugar was glucose and it constituted about 70% of the total sugar. Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Tohoku Univ., Sendai, Japan.

4340. Meade, Mary. 1962. Eye-catching Oriental treats. *Chicago Daily Tribune*. Oct. 19. p. B1.
• ***Summary:*** "Look to the Orient for beauty in food arrangement." Two photos, including one of sukiyaki served on a table, amplify this theme. The recipe for Sukiyaki, which is given, includes "3 cubes soy bean curd (optional)" and ½ cup soy sauce.

4341. Hanaoka, Yoshio. 1962. Shôyu hozon ni kansuru kenkyû. I. *Aspergillus sojae* no seisan suru esterase ni tsuite [Studies on preservation of soy sauce. I. On the esterase produced by *Aspergillus sojae*]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 40(12):610-614. Dec. [7 ref. Jap; eng]
• ***Summary:*** n-Butyl p-hydroxy benzoate is widely used as a preservative for soy sauce, but this material is enzymatically decomposed in raw soy sauce. This enzyme is produced by Asp. sojae and has the following characteristics: It is a kind of esterase and its optimal pH is 6.0. It is almost inactivated after heating at 50°C for 10 minutes, but in the presence of sodium chloride this enzyme inactivation is altered. The longer the period of aging of soy sauce mash, the more the enzyme activity is depressed. Address: Central Research Inst. of Noda Shoyu Co., Ltd., Noda, Japan.

4342. Olson, Harvey Stuart. 1962. Olson's Orient guide [1st ed.]. Philadelphia, Pennsylvania and New York: J.B. Lippincott Co. 1008 p. Illust. (by Cy Ferring). Maps. Index. 20 cm. 1st ed., 1962 [1963].
• ***Summary:*** In Chapter 5, "On dining out in the Orient," we read (p. 229): In Japan, much loved and widely consumed items include "bean sprouts and pastes [miso] and sauces made from soy beans." The Japanese, like many "foreign visitors are fond of sukiyaki made of thin beef strips simmered in a tasty soy sauce garnished with fresh vegetables, served with a raw egg, and accompanied by rice. They enjoy tempura, too...." The dip is made of finely grated radish [daikon] "and spicy soy sauce."

The section on "Chinese cuisine" states (p. 236): "Cantonese which is the blandest, most subtle, and least greasy of the varieties of Chinese cooking..." Features "bean curd and minced pork."

The section titled "Japanese specialties" (p. 245+) starts with Sukiyaki (One "bowl contains small pieces of lotus root, scallions, bamboo shoots, bean curds, mushrooms, and other greens," p. 246). Also (p. 249) "Batayaki is the first cousin to sukiyaki," but with the difference that "batayaki is prepared with a sauce less pungent than that used for sukiyaki." This sauce has "a soybean base, but mixed liberally with butter" [*bata*].

The entry for "Soy sauce" (p. 252) taken from the Random House *American College Dictionary* "defines soy sauce as 'a salty fermented sauce much usd on fish and other dishes in the Orient, prepared from soy beans.' I cannot emphasize too strongly how important a part this sauce plays in the Japanese cuisine. It is not only usd in connection with fish but as a sauce for sukiyaki. It is also used generously in preparing chicken and steak and is utilized as a garnish as well as an ingredient.

"As a matter of fact I can think of no place where this tasty bit is not likely to appear. I, for one, like soy sauce." However, if you wish, you can ask your waiter to omit it.

The section on Thailand (p. 278-79) notes: "*Haw Mok*, a flaming hot Thai specialty, is made by pounding dry chili peppers, shrimp paste, lemon grass, onions, garlic and salt, and blending them with steamed coconut milk and soy sauce decorated with egg and slices of raw fish. It is served in a large banana leaf."

The section on night clubs in Osaka, Japan says of Yen Kyo (p. 312), "Another quality Chinese restaurant... Taste the spring rolls, the chicken in papers, and the vegetable bean curd dishes."

In Chapter 12, "Japan," the section on Tokyo states (p. 692): "One can eat squid, lotus roots, roasted sparrows (head, claws and all), raw lobster, embryonic eggs on a stick, cuttlefish painted with soy sauce, blowfish, mud eel, mock turtle, fermented bean curd, bamboo shoots, and quail's eggs...."

Note: The 1st, 2nd, and 3rd editions all contain 1008 p.

4343. Vieira, Clibas. 1962. A soja e sua cultura [The soybean and its culture]. *Boletim de Agricultura* (*Belo Horizonte, Brazil*) 11(7-12):16-33. July/Dec. [19 ref. Por]
• ***Summary:*** A large chart (p. 18-19) lists the various ways of using the soybean plant and its seeds, including many foods and non-food industrial uses. From the cake or meal (*torta*) one can make adhesive materials, fertilizers, animal feeds, glue (*cola*), and plastics. Also food products: Flour, sauce (*môlho*), milk, etc. And industrial protein (*proteína industrial*).

From soy oil one can make various food products including margarine (*margarina*), salad oil (*óleo para salada*), cooking oil (*óleo para cozinha*). The green seeds can be used to make conserves or canned foods (*conservas*), salad (*salada*), or cooked dishes (*cozida*). The dry seeds can be cooked, sprouted, or used to make flour, milk, or animal feeds.

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Note 1. This is the earliest Portuguese-language document seen (Aug. 2003) that uses the term *proteína industrial* to refer to isolated soy protein for industrial uses.

Note 2. This is the earliest Portuguese-language document seen that uses the term *margarina* to refer to margarine.

Note 3. This is the earliest Portuguese-language document seen (June 2009) that uses the term *graos verdes* to refer to green vegetable soybeans. Address: Prof. de Agricultura Geral–E.S.A. da U.R.E.M.G.–Vicosa, Brazil.

4344. Chang, K.H.; Lee, K.H.; Park, S.O. 1962. [Studies on koji for soy sauce brewing. I. Isolation of *Aspergillus* species]. *Report of the Army Research and Testing Laboratory (Seoul, Korea)* 1:40-45. [Kor]*

• ***Summary:*** 1. Four hundred eighty species of *Aspergillus* were isolated from koji, Meju (fermented soy bean) and soil which were collected from 56 sources / locations in South Korea.

2. Four hundred eighty strains of *Aspergillus* were screened for protease, saccharogenic amylase, and dextrinogenic amylase productivity and activity.

3. Three strains of *Aspergillus oryzae*, S56-9, S-10, and M17-2, were selected as having the best enzyme activity among all of these. Address: Army Research and Testing Laboratory, Seoul, Korea.

4345. **Product Name:** Lima Tamari Soy Sauce.
Manufacturer's Name: Chico-San Inc. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 1004, Chico, CA 95927.
Date of Introduction: 1962.
New Product–Documentation: Note: This is the earliest known soyfood product imported to the USA from Japan by a Caucasian-run U.S. company. The product is actually shoyu, named after Lima Ohsawa.

Midwest Natural Foods Distributors, Inc. 1972. Catalog and price list. Nov. 1. Ann Arbor, Michigan. 58 p. See p. 7. "Lima Tamari Soy Sauce." Sold in 8 fl. oz, pints, and quarts.

Chico-San Products. 1973. July. p. 4, 13. "Made in a little rustic factory in Northern Japan operated by the same family for more than ten generations. Aged for two years." Same publication, 1981. Jan. p. 13. Ad by Chico-San Inc. in Macrobiotic Review (Towson, Maryland). 1980. 2(2):2. "The soy sauce story. For almost twenty years Chico-San, Inc. has imported the very best natural, traditional soy sauce. Our Lima Soy Sauce is made with handcrafted techniques, using only natural ingredients... It is aged through two yearly cycles of seasonal changes in large wooden casks." Leaflet. 8½ by 11 inches, color. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. "Taste the difference. Only Chico-San's Lima Soy and Tamari Sauces bring you the real taste of traditional Japanese preparation."

4346. Chung, Y.S. 1962. [Microbiological studies on soysauce: Isolation and identification of bacteria from soysauce brewed by the conventional process]. *Misaengmul Hakhoe Chi (Korean J. of Microbiology)* 1:30-37. [Kor]*

• ***Summary:*** Ten strains of aerobic bacteria and two strains of microaerobic bacteria were isolated from soy sauce which had been brewed by the conventional process. The following bacteria were identified by studying their morphological and physiological characters. *Bacillus punillus* R-2; *Bacillus subtilis* var., *aterimus* S-1, *Bacillus licheriformis* var-S-2, *Bacillus subtilis* T-1, *Sarcina maxima* T-2, *Pediococcus acidi lactici* Z-2, *Bacillus citreus* var., *soya B* Z-5. T-2 and Z-5 of the isolated bacteria were found to grow well even in the 24% salt medium, and Z-5 was more vigorous than T-2 though stinking. S-1 produced black-brown pigment from the medium containing various kinds of carbohydrates and the medium of soysauce which are available to S-1. Address: Army Research and Testing Laboratory, Seoul, Korea.

4347. Hahn, Y.S.; Park, B.D.; Chun, K.S. 1962. [Studies on the manufacture of soy sauce. IV. On the genus *Rhizopus* and *Mucor* in Korean wine kokja]. *Report of the National Industrial Research Institute (Seoul, Korea)* 11:52. [Kor]*

• ***Summary:*** As part of these ongoing studies on Korean wine kokja, the researchers isolated 15 kinds of the genus *Mucor* and 16 kinds of the genus *Rhizopus* from other regional wine kokja by the same methods used previously. A detailed discussion of similar variables is given. Address: National Industrial Research Institute, Seoul, Korea.

4348. Hahn, Y.S.; Kim, K.J. 1962. [Studies on the manufacture of soy sauce. V. On the genus *Rhizopus* and *Mucor* in Korean soybean Meju]. *Report of the National Industrial Research Institute (Seoul, Korea)* 11:140-52. [Kor]*

• ***Summary:*** As part of these ongoing studies on the same subject, the researchers isolated 8 kinds of the genus *Rhizopus* 25 kinds of the genus *Mucor* from Korean soybean Meju. Their properties were examined morphologically and physiologically.

1. Extinctive temperature: Most of the genus *Rhizopus* were 60 to 70°C and most of the genus *Mucor* were 70 to 75°C.

2. Propagative optimum pH: The genus *Rhizopus* were 2.5 to 7.0 and the genus *Mucor* were 4.0 to 6.5.

3. The multiplication of the genus *Mucor* in carbohydrates as a nutrient source was weak or did not occur, but the genus *Rhizopus* were good in all kinds of carbohydrates and R-32 [*Rhizopus*], R-36, and R-37 were especially superior. On many nitrogen compounds, genus *Rhizopus* multiplied well, and always better than the genus *Mucor*.

4. Liquefied action of gelatin: M-37 [*Mucor*], M-38,

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and M-52 finished the reaction in the short time of 25-30 minutes. Address: National Industrial Research Institute, Seoul, Korea.

4349. Doi, Masaru. 1962. The art of Japanese cookery. Tokyo, Japan: Shibata Publishing Co., Ltd. [x] + 110 p. Illust. (some color). No index. 22 cm. [Eng]

• ***Summary:*** Soy-related recipes include: Tempura sauce (*Tentsuyu*, with soy sauce, p. 5). Miso soup with soy bean curd (p. 5). *Kuya-mushi* (Egg custard with tofu, p. 13). *Kenchin-mushi of Kodai* (Sea bream steamed with tofu filling, p. 17). *Kayaku-gohan* (With aburaage, fried soy bean curd, p. 24). *Koya-dofu* (Dry frozen bean curd as an ingredient in sushi, p. 39). *Chirashi-sushi* (With Koya-dofu, p. 46). *Sukiyaki* (With tofu, and shoyu in warishita, p. 50-52). *Mizutaki* (With tofu, and shoyu in tsuke-jiru dipping sauce, p. 58-61). *Yudofu* (With tofu, and shoyu in tsuke-jiru, p. 62-63). *Dote-nabe* of oysters with white miso paste (p. 63-64). *Shigiyaki* of eggplants (With tsuke-miso, p. 66-69). *Teri-yaki* (Meat, fish, with *tare* of 2 parts soy sauce and 3 parts mirin, p. 73-73). Miso soup (with akamiso, shiro-miso, soy bean curd, wakame, etc., p. 94, 96-99). Ohagi (with kinako [soy bean powder] and sesame seeds, p. 106). *Shoyu-sashi*–A small soy sauce dispenser (p. 110).

Also discusses: *Sekihan* (Rice with azuki beans and gomashio, p. 24-25). *Sushi with nori* (p. 37). Toasted *fu*–Light wheat gluten cake (p. 77). "How to make red bean paste. Red beans, 1½ c[ups], Sugar, 9 oz."(p. 106).

Note 1. This is the 2nd earliest English-language document seen (May 2001) that contains the word "Teri-yaki" (or "Teriyaki"). The text reads: "In *Teri-yaki* rich sauce which gives a sheen to ingredients is used as seasoning. *Teri-yaki* is preferred for fatty ingredients."

Note 2. This is the earliest English-language document seen (July 2003) that uses the Japanese word "gomashio" to refer to "sesame salt."

Note 3. This is the earliest English-language document seen (March 2006) that uses the term "red bean paste" to refer to sweet azuki bean paste [*azuki-an*].

4350. Gernet, Jacques. 1962. Daily life in China on the eve of the Mongol Invasion 1250-1276 (trans. by H.M. Wright from French original ed. of 1959). New York, NY: Macmillan Co. 254 p. Series: Daily Life Series #7. 23 cm. Published by Stanford University Press in 1970. *

• ***Summary:*** This is a translation of *La vie quotidienne en Chine, a la veille de l'invasion mongole, 1250-1276*. Paris: Hachette (1959).

Note: The Mongol's takeover of China took more than a generation. By 1279, the Yuan forces had successfully annihilated the last resistance of the Southern Song Dynasty, and Kublai thus became the first non-Chinese Emperor who conquered all of China. The takeover ended with the announcement of the Yüan dynasty. In 1271 Kublai Khan (ruled 1260-1294) adopted the Chinese dynastic name Yüan, meaning "The First Beginning" or "The Origin," the first dynastic name not derived from a place name.

4351. Harris, Sara. 1962. House of 10,000 pleasures: a modern study of the geisha and of the streetwalker of Japan. New York, NY: E.P. Dutton & Co., Inc. 273 p. See p. 26. No index. 21 cm.

• ***Summary:*** This is a book about *geisha*, *pan-pans* or streetwalkers, maikos and *shikoni* (young geisha in training). It is equally a book about self-sacrifice–at times almost spiritual.

Page 26: "All these are either raw or cooked with bamboo sprouts, mushrooms, and persimmons in a heavy soy sauce. Sueko sits beside me all through the meal and feeds me with her chopsticks. Kazuko, dividing her time between them, does the same..."

Note: This is the earliest English-language document seen (April 2012) that uses the term "heavy soy sauce" to refer to a type of Japanese soy sauce.

Page 53: "Laying awake in the darkness, Kimiko heard the sounds of a winter night in Kyoto... The howling of the *oinarisans* peddling pickled rice wrapped in fried bean curd" [*inari-zushi*].

Kyoto's Gion, with its narrow streets, is a geisha section well known throughout Japan.

Pages 55-56: For Kimiko, on ordinary days like this, breakfast "consisted of two pickled plums, a bit of raw fish with soy sauce, and green tea. A small breakfast...."

Page 60: "For Kimiko's first afternoon at Plum Tree House, lunch consisted of bean soup [miso soup] and hot tea."

Page 67: "Next to the days when she could prove her worth at games of skill, Kimiko loved the days when the peddlers came round to Gion. There was first the *tofu*, the bean-curd man. He walked with his bucket precariously balanced on bamboo poles on his back. How Kimiko enjoyed him whenever she was in possession of *sen* enough to buy some curd for herself and perhaps for Sumiko too! It was fun to eat the curd, and even better fun to treat your best friend. On the days when the *tofu* man stayed away from Gion, the *chindonya* couples were likely to come..." selling candy and lollipops.

Page 71: The long-awaited New Year's morning meal included "*mochi*-cake symbolizing 'happy congratulations.... the crisp seaweed, the fried bean curd,..."

4352. Hayashi, Shizuka. 1962. Problems involved in increasing world-wide use of soybean products as foods in Japan. In: USDA Northern Regional Research Laboratory, ed. 1962. Proceedings of Conference on Soybean Products for Protein in Human Foods. Peoria, IL: USDA NRRL. iii + 242 p. See p. 200-06.

• ***Summary:*** Contents: Price, Quality, Margarine and

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shortening. Mayonnaise. Miso, shoyu, tofu. Soybean meal. Soy flour. Soy milk. Frozen tofu. Food sources of Japan.

The 400,000 tons of soybeans produced in Japan are used for foods. From approximately 1 million tons of imported soybeans, Japan produces 150,000 tons of oil and 700,000 tons of meal. "Japanese oil consumption is the poorest [i.e. lowest = best] among the world nations. We need to consume oil at more than 5 times the present quantity to reach the level of the western countries." In 1952 Japanese consumption of edible oils was 7.52 gm per person per day, increasing to 11.52 gm in 1960. Soybean oil supplies about 30% of Japan's total oil supply. The main obstacles to greater consumption are price and quality (due to flavor reversion). The leading oil is rapeseed oil. The main oils used in margarine and shortening are fish oil (35.8% of total), beef tallow (25.4%), whale oil (10.0%), and coconut oil (8.0%).

New developments with traditional Japanese soy foods include: Dried, powdered miso in instant form is now available. Soybean meal is now the main ingredient in shoyu, rather than whole soybeans. A few soy milk plants have been erected and bottled soy milk is now sold in the market in limited areas. A certain culture is used to eliminate the beany flavor. Today, soybeans and soybean products provide the average Japanese with 10.6 gm/day of protein (16% of total protein consumption of 67.7 gm), and 7.6 gm/day of fat (28% of total fat consumption of 26.7 gm). During the period 1934-38, average Japanese protein consumption was 54.9 gm per person per day and fat consumption was 13.2 gm (less than half what it is today). Address: Managing Director, Japanese American Soybean Inst., Nikkatsu International Building, Room 410, No. 1, 1-Chomo Yurakucho, Chiyoda-Ku, Tokyo, Japan.

4353. Hesseltine, C.W. 1962. Research at Northern Regional Research Laboratory on fermented foods. In: USDA Northern Regional Research Laboratory, ed. 1962. Proceedings of Conference on Soybean Products for Protein in Human Foods. Peoria, IL: USDA NRRL. iii + 242 p. See p. 74-82. [9 ref]

• ***Summary:*** "Three types of fermented foods have been investigated at the Northern Regional Research Laboratory, namely, soya sauce, miso, and tempeh. The first was studied shortly after World War II and the others have been studied within the last 2 or 3 years. The three fermentations have in common a mold fermentation of soybeans, with the soybeans being altered by the enzymes produced microbiologically."

"A third fermentation of soybeans which we have studied most recently is the Indonesian fermented soybean food called tempeh or tempe. We were fortunate in having Mr. Ko Swan Djien from the Laboratory of Microbiology, Institute of Technology, Bandung, spend part of last year with us in the study of this fermentation. Since he was acquainted with this food and we had cultures available, we began with a study of the pure culture fermentation paralleling the actual process carried out in Indonesia. The flowsheet of the process on a laboratory scale shown in Figure 4 is as follows:" Each step is described. The mold culture used is *Rhizopus* sp. NRRL 2710.

Note: This is the earliest document seen (Oct. 2011) that mentions the *Rhizopus* strain "NRRL 2710." Address: Head, ARS Culture Collection Investigations, Fermentation Lab., Northern Utilization R&D Div., Peoria, Illinois.

4354. Hrdlicka, Jiri. 1962. Prispevek k Hodnoceni Bilkovinnych, zejmena sojovych proteolysatu [Contribution of evaluation of protein, especially soybean proteolysates]. *Prague. Vysoka Skola Chemicko-Technologicka. Sbornik... Oddil Fakulty Potravinarska Technologie* (*Scientific Papers from Institute of Chemical Technology, Prague. Food Technology*) 6(3):145-51. [27 ref. Cze; eng]

• ***Summary:*** Foreign products of the type "shoyu" were analyzed and organoleptic properties were evaluated in order to compare them with Czechoslovak products. "The Czechoslovak product 'Vitana' differed substantially from all other samples analyzed and appeared more favourable." Address: Katedra chemie a zkouseni potravin, fakulta potravinarske technologie, Vysoka skola chemicko-technologicka, Prague.

4355. La Choy Food Products, Inc. 1962. The art and secrets of Chinese cookery. Archbold, Ohio: La Choy Food Products. 31 p. Illust. (some color). 10 x 16 cm. *

• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home.

4356. **Product Name:** [Seitan].
Foreign Name: Seitan.
Manufacturer's Name: Marushima Shoyu K.K.
Manufacturer's Address: Kamigata-dori Ko 881, Uchiumi-cho, Shodo-gun, Kagawa-ken, Japan.
Date of Introduction: 1962, January.
Wt/Vol., Packaging, Price: 3.5 oz jar.
How Stored: Shelf stable.
New Product–Documentation: Note: This is the world's earliest known commercial seitan product. It was first imported to the USA by Erewhon Trading Co. in 1969.

Talk with Aveline Kushi, 1992, April 9. The first seitan imported to America was made by Marushima Shoyu Co. on Shodoshima in Japan. George Ohsawa went to visit the company, talked with Mr. Mokutani (who is still the chairman, and a close friend of the Kushis, and a great admirer of Ohsawa), and showed him how to make it. Marushima began to make seitan commercially in the late 1960s. It was imported to America by Muso Shokuhin at about the same time the first miso and shoyu were imported. She thinks it came in small jars, and was so salty that she used it as a seasoning in place of soy sauce in stews (such as soybean stews) or cooked it with vegetables; this cooking

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made it softer. This seitan probably started to be imported to America in about 1969.

Letter (fax) from Yuko Okada of Muso Co. Ltd., Japan. 1992. July 2. "I remember the term 'seitan' since I was a kid; it was probably coined by George Ohsawa. *Sei* means 'is' and *tan* is the first character in the Japanese term *tanpaku*, which means 'protein.' So *seitan* means something like 'right protein substitute.' Marushima Shoyu Co. developed seitan commercially in Japan and Muso has carried their seitan since Feb. 1966 when we started. We shipped seitan to Erewhon on a regular basis from 1968. [Note: Kotzsch. 1984, Dec. *East West Journal* p. 14-21 states that Muso began to export foods in 1969.] We also exported it to Chico-San [in the USA]. In Europe, we exported seitan to Paris, France." This seitan went to Institut Tenryu, which had a little macrobiotic food shop in Paris run by Madame Francoise Riviere. The first seitan Muso exported to Australia went to Spiral Foods.

Muso Shokuhin. Pure Heart–Muso general catalogue. 1990 July. p. 41. A color photo shows a 180-gm jar of Seitan. The product name is written in English (i.e., in roman letters). Under that, it is written smaller in katakana. Above the company name and address is written: "Sakurazawa Nyoichi shido" which means, "Made under the guidance of George Ohsawa."

Talk with Mr. Kiyoshi Mokutani, president of Marushima Shoyu K.K. in Japan. 1992. July 12. "The invention and development of seitan in Japan." He invented seitan in 1961-62 and took a sample to George Ohsawa, who coined the term "seitan" upon seeing it. Commercial production began in 1962. For details, see interview.

4357. Muljokusumo, E. Sudigdo. 1962. Ketjap, kedelai, bungkil katjang, ikan [Soy sauce, soybeans, peanut flakes, fish]. Bandung, Indonesia: Penerbit Tarate. 44 p. Illust. No index. 21 cm. Kita membuat sendiri (3) [Series: We make these foods ourselves No. 3]. No. 131. [Ind]
• ***Summary:*** Describes how to make Indonesian-style soy sauce from soybeans, peanut press-cake, or fish. Contains many excellent illustrations (line drawings). Address: Science specialist [Indonesia].

4358. Obata, Yataro. 1962. Shôyu no shôrai [The future of shoyu]. In: 1962. Nihonjin no Tabemono [Foods of the Japanese People]. Tokyo: Kawade Shobo. See p. 316-22. [Jap; eng+]

4359. Griffith Laboratories, Inc. 1962? Griffith's Vegamine: And other hydrolyzed plant proteins–for high flavor satisfaction. Chicago, Illinois. 4 p. Undated. 28 cm.
• ***Summary:*** This undated glossy brochure has two black-and-white photos on the cover below an orange band with white letters. On the left is a sliced ham; on the right are various foods in bowls and on trays and dishes.

The two inside panels contain many photos. The company makes four types of hydrolysates; a typical analysis is given for all 8 products: (1) Spray-dried light-colored acid hydrolysates: Vegamine (from soy and wheat), and C.W. Hydrolysate (from casein and wheat). Vegamine has long been famous. (2) Spray-dried non-decolored hydrolysates: Hy Veg and Hy-C.W. Hydrolysate. (3) Hydrolysate pastes: Vegamine Paste and Hy-Vegamine Paste. (4) (1) Liquid hydrolysates: Liquid Vegamine (since 1940), and Vegatol No. 1.

The top of the inside two panels folds up and we read: "Griffith's unique flavor experience began with spice blending in the early 1920s... the Griffith Research and Experimental Kitchen was established in 1938." "Griffith's extensive experience in hydrolyzing soy and wheat proteins, and casein and wheat gluten dates back to 1940. Even then, Griffith had a background of twenty-one years in flavor formulation." The back panel gives details on labeling and packaging. Five of the products which contain no casein may be "Declared as: A hydrolyzed plant protein (Amino Acid Salts) from which none of the Mono Sodium Glutamate has been removed."

Griffith also has facilities at: (1) 4900 Gifford Ave., Los Angeles 58, California. (2) 855 Rahway Ave., Union, New Jersey. Note: Since these addresses have no Zip codes, which were introduced in the USA in 1963, this booklet was probably published before that year. Address: 1415 W. 37th St., Chicago 9, Illinois.

4360. Ohsawa, G. 1962? Zen macrobiotics: The art of longevity and rejuvenation. New York, NY: Ohsawa Foundation. Printed in Japan. 218 p. Undated. Index. 17 cm.
• ***Summary:*** This is the second printed edition of Zen Macrobiotics. The cover is gray. The author is George Ohsawa. The content is basically the same as the first printed edition, except that (1) Typographical errors on pages 3, 7, and 62 have been corrected; (2) A folded, undated insert, titled "Dictionary of Macrobiotic Terms" was found in this printing between pages 216 and 217 (for details, see below). The insert is 17.0 cm / 6.69 inches high by 30.0 cm / 11.81 inches wide. Folded crosswise into thirds, it fits perfectly into these books; (3) The information on pages 217 and 218 is different and updated. The following appears on page 218: Brazil (Casa Longavida, Sao Paulo), Sweden (Miss Ilse Clausnitzer, Stockholm), U.S.A. (Ohsawa Foundation, 61, W. 56th St., New York; Ohsawa Foundation, P.O. Box 238, Chico, California; Chico-San, Inc., 64, 5th Ave., Chico, California; Musubi, 61, W. 56th St., New York–Macrobiotic Restaurant).

Concerning the date of publication: Although the date is not given in or on the book, Carl Ferré (who owns an original of this 2nd Japan printing) notes (8 May 2011): "Chico-San is listed. This means it was after Nov. 1961 at the earliest and most likely very early in 1962. I say this because the address

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given is not the Mangrove Ave. one." "There is no 'Printed in Japan' in this book either but it is so similar to the earlier one that it has to be printed in Japan. It is also undated. It is not 'revised'..."

In the 3-column "Dictionary of Macrobiotic Terms" (insert), for each entry there is the word or term, its definition, and one page number on which that word appears. Because the page numbers refer to pages in this edition, the dictionary was probably published at about the same time as this book–or at the time of the previous edition in 1960. The following is a selection from the Dictionary, with pages given for soy-related words: Aduki: Japanese red bean. Ae: Dressing (vegetables) with soy bean paste [miso], orange juice, etc. (p. 96). Aemono: Japanese salad (p. 88). Age: Fried bean curd. An: Red [aduki] bean jam. Ankake: Pouring [aduki] jam. Bancha: Coarse green roasted a few minutes. Bansho: Bancha with soy sauce (p. 152). Daikon: Long, white Japanese radish. Dango: A dumpling. Dentie: Head of eggplant salted, kept, dried and then burned into a powder. Egoma: A type of sesame seed–most yang. Gobo: Burdock. Gomashio: Sesame salt. Goma Tofu: Sesame curds (p. 87). Goziru [gôjiru, gojiru]: Soup made of grated soy beans and vegetables ("Ziru" means soup in Japanese) (p. 84). Gyoza: A Chinese food–vegetable mixture wrapped in pieces of thin dough. Hako: A mold or box in Japanese. Haru Tea: A very yang herb beverage. Hiziki [Hijiki]: Spindle-shaped, small, black seaweed. Jinenjo: A wild potato or a Japanese yam. Karinto: A kind of deep-fried cookie. Kasha: Russian buckwheat grain preparation. Kayu: Thin rice preparation [porridge]. Kinpira: Burdock and carrots preparation. Kitune [Kitsune]: Boiled rice or noodles cooked with thin fried bean curds [*agé*] (p. 68). Kobu (or Konbu): A (sea) tangle coming from deep ocean waters. Kobu Maki: Kobu stuffed with vegetables. Koi-Koku: A special carp and miso soup (p. 109). Kokkoh: A creamed blended cereal. Konnyaku: A paste made from flour of this Japanese tuberose [tuber]. Kuzu: Powdered plant-gelatine obtained from kuzu plant. M.U. tea: A tea made of 15 blended herb's roots. Matuba [Matsuba]: Pine leaves. Miso: Soy bean paste (p. 65). Miso Ae: Boiled vegetables served with miso cream (p. 96). Misoni: Carrots and onions cooked with miso (p. 129). Mochigome: Glutinous rice. Moti [Mochi]: Rice cake. Musubi: A knot. Nisime [Nishime]: Same as Nituke. Nituke [Nitsuke]: Vegetables sauteed. Nori: Laver or sloke–a kind of seaweed. Ogura: Aduki (red bean) preparation. Omedato: Dessert made of roasted rice and red beans. Originally Japanese word for congratulation. Oshitashi: Boiled vegetables, served with Tamari (p. 97). Ransho: Egg–Tamari preparation. Renkon: Lotus root. Sashimi: Sliced raw fish. Sarashina: A kind of buckwheat dish. Originally it means the name of a place famous for producing good buckwheat. Siitake [Shiitake]: A kind of Japanese mushroom. Sio [Shio]: Salt. Sio Kobu [Shio Kombu]: A kobu (seaweed) preparation. Soba: Buckwheat. Sukiyaki: Fish (or beef) and vegetables cooked a la japonaise. Sushi: A rice preparation. Syo-ban [Sho-ban]: Coarse green tea with soy sauce (p. 101). Tahini: Sesame butter. Tai: A red snapper [fish]. Tamari: Traditional soy sauce (p. 62). Tekka: A preparation of minced lotus root, burdock root, carrot, ginger, and miso (p. 96). Tempura: Japanese process of deep-frying in oil. Tofu: White soya bean cheese (p. 134). Tororo: Wild potato [wild yam]. Udon: Wheat vermicelli or noodle or macaroni. Umeboshi: Japanese plum salted and conserved for years. Ume-sho-ban: Medicinal beverage [containing umeboshi and shoyu] (p. 156). Yannoh (Ohsawa coffee): A cereal coffee made of roasted rice, wheat, aduki, chick peas and chicory. Yomogi: Mugwort (or wormwood). Yuba: Soybean protein prepared into transparent paper-like sheets (p. 77). Zosui: A rice preparation. Zaru: A bamboo basket. Address: Ohsawa Foundation: 331 Riverside Dr., New York City. Secretary Aihara, 44 W. 96th St., New York City, U.S.A.

4361. Ontario Soya-Bean Growers' Marketing Board. 1962? About soybeans: "A know your industry presentation." Chatham, Ontario, Canada. 12 p. Undated. 23 x 11 cm.
• ***Summary:*** Contents: A message from Dick Smith, Chairman, OSGMB. The big three: Soybeans, soybean oil, and soybean meal. Other soybean products: Soybean flour, milk, cheese (tofu), sauce, and sprouts. Where soybeans are grown worldwide. The position of soybeans in world fats and oils production. The import and export pictures in 1961. Production of soybeans by county in Ontario. Marketing the crop. Soybean grades. Activities of OSGMB.

In 1961 Canadian soybean production accounted for only 30.5% of Canada's need for soybean oil, and 31% of the country's needs for soybean meal; the rest had to be imported. In 1954, in order to establish a healthy market situation, OSGMB initiated a soybean export program. "The establishment of this 'second market' has proven its intended worth in helping to maintain price levels in Canada. In 1961, Canadian exports of soybeans and the bushel equivalent of meal and oil totalled 11.7 million bushels." Address: Box 668, 143 Wellington St. West, Chatham, Ontario, Canada.

4362. Brandemuhl, William. 1963. Soybean history: Aspects of Buddhist influence. Anthropology Dept., University of Wisconsin, Madison. 15 p. Jan. Unpublished manuscript. 28 cm. Summarized as "Early Soybeans Were Spread by Buddhists" in Soybean Digest, July 1963, p. 21. [52 ref]
• ***Summary:*** This research paper (which is not a thesis) was prepared for Anthropology 150a, taught by Dr. R.J. Miller. Contents: Purpose of study. Method of study. Botanical history: Naming the soybean, the *Glycine ussuriensis* case, other genetic evidence, claim on the origin of the soybean. Initial utilization. Botanical dissemination. Soybean history–non-botanical: Legend, recorded Chinese soybean history, concluding notes on soybean origin and cultivation history. Buddhist influence on the development of the soybean:

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Soysauce or shôyu, miso, tofu, natto, ancient soybean food products, the soybean grows.

"Another principal concern of this paper is the Buddhist connection to soybean development. The introduction of soybeans, although an approximation at the very best, coincides quite closely with the spread of Buddhism in Japan. As shown later, Buddhism has a very close connection with soybean history and in many product sectors of soybean development, may have created or at least popularized them" (p. 1).

"Contrary to the above statement I submit the following data which I believe can easily be documented: 1. Emperor Sheng-nung is a mythical character (letter from Herbert W. Johnson, Research Agronomist, USDA / ARS Crops Research Div., Beltsville, Maryland, 30 Aug. 1962). 2. Emperor Shen-nung was a legendary character who cannot be pinpointed to a date of 2838 B.C. (letter from Jung-pang Lo, Research Asst. Prof., Far Eastern and Russian Inst., Univ. of Washington, 6 Sept. 1962). 3. Shen-nung is a mythical ruler, never living at the date attributed to him or at any other date (letter from Edward H. Schaefer, Professor of Oriental Languages, Univ. of California, Berkeley, 6 Sept. 1962). 4. A work attributed to Shen-nung is called *Shen nung pen Ts'ao Ching* but since it contains many Han Period facts (around the beginning of the Christian era) it is believed to be a Post-Han work. This work is first mentioned by T'ao Hung-ching (who edited it) early in the 6th century A.D. (Jung-pang Lo). 5-6. The *Pen Ts'ao Kang Mu* was written by L. Shih-chen (1518-1593) in A.D. 1596 or 1597 (Jung-pang Lo, Schaefer)... 9. The word 'Shiyu' cannot be found in Chinese dictionaries. The name for the soybean in China being 'Ta-tou,' meaning big bean (Jung-pang Lo)."

"Concluding notes on soybean origin and cultivation history: *The Book of Poetry* (Shih-ching) mentions boiling shu (pulse) and the *Erh-ya* (a Chou period lexicon, authorship attributed to Confucius or his disciples) mentions Jung-shu. Kao yu, the commentator, remarked that the Jung-shu (pulse of the Hu people) which was also known as Ta-tou (the soybean). Jung was a term used by the Chinese in the Chou period for the non-Chinese people of the North and Ju was a term used by the Chinese people of the North and West. This would seem to indicate that the soybean was introduced to China from the non-Chinese people of the North. Also supporting this is the *Chou-shu* by Hsi meng, in which there is a reference to Shan-jung shu (pulse of the Jung people of the mountains). A commentator explains that the Shan-jung were tribes in the Northeast (Manchuria).

"The Kuang-Tzu contains a passage saying that after Duke Huan of Chi (7 B.C.) defeated the Shan-jung the Jung-shu came to be known throughout China. Chia su-hsieh (5 A.D.) in his book *Ch'i-min Yao-shu* (Ts'tung-shu Chi-ch'eng, editor) quoted the *Shen-nung pen Ts'ao* as saying that Ta-tou (the big bean) was the Hu-Tou (Hu peoples' bean) which Chang Ch'ien brought back from his exploration of central Asia in the first century B.C., there being two varieties. In the Han period both Ts'ui shih and Fansheng in their books on farming techniques mention cultivation of the Ta-tou and its use in famine relief. The *Pen Ts'ao Kang Mu* (1596), mentioned earlier, has a long discourse on the medical properties of the Ta-tou (Jung-pang Lo)."

"Buddhist influence on the development of the soybean: Although references to the Buddhist influence on soybean development are particularly sparse I believe Buddhism deserves credit for initiating the spectacular expansion of soybean utilization in Japan which triggered utilization in the rest of the world. The Buddhist connection is certainly true if oil utilization is excluded. Below lie the reasons for my belief.

"Buddhism was introduced into Japan around 500-600 A.D. (Bush 1959, p. 28-29). Among the priests the traditional hate of flesh was present and agriculture of the field type was encouraged by the government (Tezuka 1936, p. 13). The introduction of soybeans fits well into this historical development. The recent finding of soybean seed in *Shôso In* (Japan) which was established in the Nara era for the storing of legumes of that era that were introduced from China (Nagata 1960, p. 97) proves as does the record of ceremony and taxation system of the Nara era (Nagata, p. 75) that soybeans did exist in Japan at that time.

"Soysauce or more properly shôyu, the now renowned Japanese flavoring, is said to have originated during the Chou dynasty (1134-246 B.C.) (Komiya 1955, p. 14) and was introduced into Japan when Buddhism was being established although not becoming popular until 1300 (Joya 1951, p. 31-33).

"Miso, soybean paste, is a much used breakfast and soup dish in Japan that was introduced to Japan from China or Korea (Horvath 1927, p. 83). It was definitely used by the priests when they first entered Japan, in fact they popularized it among their new vegetarian converts (Joya, p. 21-23).

"An ancient Chinese book states that the Philosopher Hamintze, a prince of the Han dynasty, was the inventor of Tofu or soybean curd (Horvath, p. 6) while another source attributes the tofu innovation to the Chinese Philosopher Whai Nain Tze (Piper & Morse 1923, p. 234). The manufacture of soybean curd (tofu) was started in China in 164 B.C. during Emperor Hwai Wen's reign by Liu An, duke of Hwai Nan. Liu An was a great friend of the Buddhist monks and it seems quite likely that he made this bean curd to provide a change or delicacy to break the monotony of the monastic ration." Note: Whai Nain = Huainan. Liu An was the duke (*tze*) of Huainan. So all of these people are one and the same person.

"Tofu was introduced into Japan from Korea for the first time during the Toyotomi government (Horvath, p. 73) and was undoubtedly introduced into Japan from China by the Buddhists (Piper & Morse, p. 234) being used for their daily food before it was generally used (Horvath, p. 73).

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"The true Buddhist monk was carried through the period of childhood growth on a rather heavy diet of bean curd (Horvath, p. 17). Even the naming of soybean curd has its esoteric connotations as the Classical Chinese name for tofu is Li chi which probably means morning prayer (Horvath, p. 72).

"Natto, a sort of vegetable cheese prepared from soybeans has long been used by the Buddhists and is now used extensively by the Japanese (Piper & Morse, p. 224).

"Buddhism seems to have been a major reason for the development of Japan for main soybean products. With the existence of these products Japan opened the world to soybeans." Address: Univ. of Wisconsin, Madison, Wisconsin.

4363. *Canner / Packer.* 1963. Industry news. 132:87. Jan.
• ***Summary:*** "La Choy Food Products, Archbold, Ohio, has purchased the assets and equipment of Oriental Show-You Co., Chinese food processor of Columbia City, Indiana."

4364. Nagai, S.; Igarashi, M.; Taguchi, H.; Teramoto, S. 1963. [Studies on the filtration and compression of fermentation mashes. I. On the constant pressure filtration of shoyu and sake mashes]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 41(1):1-6. Jan. [6 ref. Jap; eng] Address: Dep. of Fermentation Technology, Faculty of Engineering, Osaka Univ., Japan.

4365. *Hartford Courant* (*Connecticut*). 1963. La Choy launches big newspaper campaign. March 3. p. 26A.
• ***Summary:*** La Choy has scheduled almost 400,000 lines in 143 newspapers in the top U.S. markets. Gordon E. Swaney, general manager of the American-Chinese foods company, said this advertising program is the largest in the company's 43-year history.

"Products to be featured include La Choy's three new Bi-Packs, chow mein noodles, [mung] bean sprouts, soy sauce and chop suey / chow mein dinners. Maxon, Inc., Detroit, is the company's agency."

4366. Umeda, Isao. 1963. Shôyu genryô no renzoku mushini [Continuous steaming of the raw materials in soy sauce brewing]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 41(4):205-07. April. [3 ref. Jap; eng]
• ***Summary:*** Continuous steaming of soybeans and wheat in a screw conveyer was tested using rotary valves. Address: Nihon Shoyu Kenkyujo (Japan Soy Sauce Laboratory, Tokyo).

4367. *Times* (*London*). 1963. Japan seeks expansion of trade with China: Five-year programme in full-swing. May 17. p. 20, cols. 4-5.
• ***Summary:*** From a correspondent in Tokyo. "With extreme caution, the Japanese Government has begun to tiptoe through the door that leads to expansion of trade with Communist China... with many anxious backward glances toward Washington" [DC]. Last year Japan concluded a £36 million trade agreement with China, and the programme is now in full swing.

But there is not much that the Japanese want to buy. "American soya beans are of better quality than China's, and the demand for Chinese soya beans is not likely to go beyond what is needed for purely culinary purposes."

4368. Senti, Frederic R. 1963. Current status of soybean utilization research under P.L. 480. *Soybean Digest.* May. p. 28, 30-34.
• ***Summary:*** This is the third in a series of USDA research reports under the P.L. 480 program. Discusses progress on active projects: Soybean oil in Seville, Spain; Chemical changes in sterols during refining of soy oil by Prof. H. Niewiadomski in Gdansk, Poland; Flavor stability of soy oil in by Prof. Y. Toyama at Toyo Univ. in Japan; Improving the frying quality of soybean oil by Prof. G. Varela at Univ. of Granada, Spain; Meal constituents.

Oriental foods: Production of shoyu (soy sauce) using U.S. vs. Japanese soybeans, use of dehulled soybean grits for making miso, miso-type food in Israel, use of U.S. soybeans in making tofu, or soybean curd, by the Japan Tofu Association, Tokyo.

Industrial applications: Polymerization studied in Milan, Italy. Soybean constituents. Oriental foods #2: Dried tofu in Japan, *Saccharomyces rouxii* yeast in shoyu and miso, development of fermented products from soybean milk in Japan, fermented soybean cheese in Taiwan, fermented soyfoods (tempeh, ontjom, ragi) in Indonesia.

Domestic research for increasing imports: Work with soy oil, UNICEF trainees from Brazil studying tempeh, projects saponins, protein complexes, and isolated protein quality in Israel.

A small portrait photo shows F.R. Senti. Address: Director, Northern Utilization Research and Development Div. (also known as the Northern Regional Research Lab.), Agricultural Research Service, USDA, Peoria, Illinois.

4369. Morimoto, Shigemi; Kagoshima, Yayoko. 1963. Sokujô shôyu ni kansuru kenkyû. II. Arukooru hakkô ôyô shinsoku-jô shôyu seizô-hô ni tsuite. Arukooru no nôdo henka ga shôyu kôji no yôshutsu-sei ni oyobosu eikyô [Studies on a quick ripening process for soy sauce. II. A new quick ripening process based on alcohol fermentation. Relationship between the change of alcohol concentration and hydrolyzing power of soy sauce koji]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 41(6):331-36. [2 ref. Jap; eng]
• ***Summary:*** Process based on alcohol fermentation. Address: Shoin Junior College, Kobe, Japan.

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4370. Fukushima, D. 1963. [Soybean meal recovery]. *Japanese Patent* 11,937, July 12. [Jap]*
• ***Summary:*** Describes solvent extraction using ethyl alcohol.

4371. Kato, H.; Sakurai, Yoshito. 1963. Daizu seihin no kappen kikô ni kansuru kenkyû. III. Hiire shôyu no kappen ni okeru 3-deokishioson-rui narabini furufuraaru-rui no igi [Studies on browning mechanisms of soybean products. III. Roles of 3-deoxyosones and furfurals for the darkening of pasteurized soy-sauce]. *Nippon Nogeikagaku Kaishi (J. of the Agricultural Chemical Society of Japan)* 37(7):423-25. July. [8 ref. Jap]
Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Univ. of Tokyo, Japan.

4372. Onishi, Hiroshi. 1963. Studies on osmophilic yeasts. XV. Effect of high concentrations of sodium chloride on polyalcohol production. *Agricultural and Biological Chemistry* 27(7):543-47. July. [13 ref. Eng]
• ***Summary:*** "*Pichia miso*, an excellent polyalcohol producing yeast, produced only one kind of polyalcohol, namely glycerol, in the medium containing sodium chloride at high concentration...." Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4373. Republic of Vietnam, Department of Rural Affairs, Commissariat General for Land Development and Rural Affairs, Directorate of Rural Affairs. 1963. Demonstration and extension of field crops and pest control. In: Annual Work Progress Report on Crop Improvement Program of Rice, Sugarcane, Vegetable and Field Crops (for the period July 1962 to June 1963). Vietnam: Directorate of Rural Affairs. 266 p. July. See p. 234-49. [Eng; vie]
• ***Summary:*** At bottom of cover page: "A cooperative project between the Directorate of Rural Affairs (DRA), and the Chinese Technical Mission to Vietnam on Crop Improvement (CIM)."

Soybean is a minor crop in Vietnam. Unlike China, Vietnam uses coconut oil instead of soybean oil, and fish sauce (*Nuoc-Mam*) instead of soysauce. Vietnam does not use soybean as a food or vegetable (bean-sprouts, bean curd, bean milk, etc.) and does not use it as a feed for pigs (soybean cakes, after extraction of the oil). Taiwan, with about the same population as Vietnam, grows about 50,000 hectares of soybean, but still has to import more than 60,000–75,000 metric tons (tonnes) every year to meet its demand.

In Vietnam the total acreage of two crops of soybean (planted in mid-May, and mid-July to mid-August) is only 5,940 ha, 80% of which grows in Long-Khanh Province, concentrated in the 3 villages of Xuan-Loc, Gia-Kiem, and Phuong-Tho. The yield averages 664 kg/ha. This low yield could be increased to 2,000 kg/ha or more based on tests at the Hung-Loc Experiment Station.

In order to promote economic cooperation between Vietnam and China, the export of soybean to Taiwan will play an important role to balance the trade between the two nations.

A regional trial planting of soybean was conducted, and based on it recommendations were made concerning soybean planting, fertilization, weeding, pest control, harvest, and disease control.

4374. Smith, Allan K. 1963. Foreign uses of soybean protein foods. *Cereal Science Today* 8(6):196, 198, 200, 210. July. [28 ref]
• ***Summary:*** Contents: Introduction (world food shortages). Technological assistance (by NRRL). Oriental traditional foods: Tofu, shoyu or soy sauce, miso or soy paste, monosodium glutamate, natto and kinako, soy beverage, tempeh (tempe). Recent food developments. Address: NRRL, Peoria, Illinois.

4375. Baker, Lois. 1963. 'Round the food stores: For a look at the latest ideas. *Chicago Tribune*. Aug. 2. p. B2.
• ***Summary:*** La Choy Bead Molasses is now being imported from the orient and sold here in 5½ oz jars. "As you may know, bead molasses was first used by the ancient Chinese, who called it a thick soy sauce and served it as a condiment along with regular soy sauce." The pungent, dark molasses can be used to flavor such oriental dishes as chow mein and chop suey.

4376. Mitani, Kazuma. 1963. Edo shôbai zu-e [Illustrations of merchants, artisans and peddlers during the Edo period in Japan]. Tokyo: Seiabo. 271 p. Illust. No index. 20 x 27 cm. [Jap]
• ***Summary:*** A stunning book, filled with large, lovely illustrations (mostly wood-block prints or line drawings) from the Edo period (1600-1867) in Japan. Soy-related illustrations:

(1) A tofu shop (p. 18), showing a man sitting on a wooden lever-press pressing the soymilk out of cloth straining bag while his wife, with a baby on her back, turns a hand-turned stone mill that grinds soaked soybeans into a smooth puree, which falls into a wooden tub. Large blocks of tofu are shown immersed in cold water in a sort of wooden sink, with a tofu knife on top. In the background, up a step inside the house, an elderly person is deep-frying tofu.

(2) A tofu seller (p. 19), walking in the street with two wooden tubs of tofu at both ends of a shoulder pole. He is wearing getas on his feet and a large round straw hat.

(3) A shoyu seller (p. 23), walking in the street from door to door with several layers of wooden tubs at both ends of a shoulder pole and a kerchief over the head (see next page).

(4) A man in a shop with Kinzanji hishio in wooden vats of various sizes, each bound by braided bamboo hoops (p.

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26).

(5) A woman in a kimono (p. 26), serving two cups of amazake.

(6) A man selling dengaku (p. 28), skewered tofu above hot coals in a brazier. He is fanning the coals and hunkering behind the brazier.

(7) A seller of oden (p. 29). He is standing, resting on the shoulder pole, which rests atop two tall boxes.



(8) A man making Inari-zushi (p. 49) at a street stall. An illustration below the roof shows a fox running.

(9) A man selling woven bamboo baskets and miso strainers (*zaru* ya *miso-koshi*) (p. 210).

(10) A woman (*edamamé uri*) with a child on her back as she walks (p. 239), selling edamamé (green vegetable soybeans) in a basket under her right arm.

The author collected these illustrations from many sources; the source of each is given in an "accompanying source book"–which we have been unable to locate. He re-drew each of the old originals, but tried to be true to the original. He eliminated a few things that he felt were not needed in some illustrations and added a few more things to others to make them clearer for today's readers. There are no illustrations that he created. Most of the originals are from the mid-Edo period, especially the Kansei, Bunka, and Bunsei eras (1789-1830), with 2-3 things from the Kyoho period (1716-1735).

To make this book he went to many libraries, archives, and other places where historical documents are kept; he was helped by many other people. He was born on 15 March 1912 (Meiji 45). He graduated from Tokyo Bijutsu Daigaku. Nihon ga-ka (Tokyo Fine-Arts Univ., Japanese Art Dept.). He is a member of the Bijutsu Shuppan Renmei (Art Related Publishing Bureau). He presently lives at Setagaya-ku, Tokyo. The book has a detailed table of contents, but no index. Address: Japan.

4377. Nelson, Kay Shaw. 1963. Humble vegetable with a glorious past: In praise of the lowly pumpkin. *Christian Science Monitor.* Oct. 25. p. 17.

• ***Summary:*** In the USA we think of pumpkins in connection with Halloween jack-o'-lanterns, pumpkin pie, and Cinderella. "In Japan the whole pumpkin, scooped out

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and filled with a mixture of minced chicken, sliced carrot, mushrooms, soy sauce, sugar, tofu, green peas, and eggs, is steamed." Address: Washington, DC.

4378. *Foreign Agriculture*.1963. Japanese marketing toasted soybean meal. 1(47):13. Nov. 25.
• ***Summary:*** A large oilseed processor in Japan is scheduled to start marketing toasted soybean meal this month. This will be the first time that roasted soybean meal has been placed on the domestic market. It is expected that toasting will be widely adopted, because of the additional nutritive value of meal so treated. Each of the plants will continue to produce some untoasted meal for soy-sauce production.

4379. Standal, Bluebell R. 1963. Nutritional value of proteins of Oriental soybean foods. *J. of Nutrition* 81(3):279-85. Nov. [18 ref]
• ***Summary:*** Hawaii imports 680-907 metric tons/year of soybeans from the United States mainland and most of it is used for food. "Oriental soybean products are used daily by all nationalities in Hawaii. They constitute important items in the diet. All soybean products used in these islands, e.g., tofu, natto, miso, shoyu, and sprouts, are prepared from the matured beans by the methods used in Japan and China. A certain amount of the beans is grown locally and picked green for use as will be described later" (p. 279).

The commercial process for making each product is described. Concerning natto: "The preparation had a characteristic cheesy odor which attracted flies and apparently stimulated the appetite of rats. Agar smears of the preparation show that it contained an almost pure culture of gram-positive rods in long chains, without spore formation for 2 days at 31°C. Three brands of natto were available."

The Net Protein Utilization (NPU) values, at 10% protein in the diet for rats, were determined to be: powdered whole egg (control) 90.4, *edamame* (green soybeans; "picked green and used as a vegetable") 72.2 (the highest of any soyfood in this study), tofu 65.0, [soy] bean sprouts 56.0, natto 44.4, and mung bean sprouts (*Phaseolus aureus* Roxb.) 35.6.

"Natto, which was prepared from matured soybeans, gave NPU and PER values below reported values for the matured beans. It is possible that a substance or substances were formed during the incubation process which contributed to lower values of NPU" (p. 283-85). Address: Dep. of Nutrition, Hawaii Agric. Exp. Station, Univ. of Hawaii, Honolulu.

4380. Chang, C.H. 1963. [Free sugars in ordinary Korean soysauce]. *Theses Seoul Municipal College of Agriculture*. p. 35-37. [Kor]*
• ***Summary:*** Ordinary Korean soysauce samples obtained from several homes in Seoul were analysed for free sugars by the paper partition chromatography method.

Galactose, glucose, arabinose and xylose were detected in ordinary soysauce.

In descending order of abundance of free sugars: Galactose, arabinose, xylose, and glucose. Address: Seoul Agricultural College, Seoul, Korea.

4381. Chang, C.H. 1963. [Studies on chemical composition and free amino acids in ordinary and improved Korean soysauce]. *Theses Seoul Municipal College of Agriculture*. p. 212-23. [Kor]*
• ***Summary:*** Korean soysauces were prepared by the ordinary and improved method; analysis indicated the following results:

(1) Substances influencing taste, such as amino acids, organic acids, and reducing sugars, were found more in improved soy sauce than in ordinary soy sauce.

(2) The fact that much ammonia nitrogen is contained in ordinary soy sauce was one of the most important elements. Therefore, it is necessary for *meju* [Korean soybean koji] to be improved.

(3) Amino acids in ordinary soy sauce, which were identified by two-dimensional paper chromatography and colorimetric methods, were found to be aspartic acid, glutamic acid, serin, alanine, tyrosine, valine, phenylalanine, leucin, lysine, histidine, proline, cystine, and methionine.

(4) Amino acids in improved soy sauce, which were identified by two-dimensional paper chromatography and colorimetric methods, were found to be aspartic acid, glutamic acid, serin, alanine, tyrosine, valine, phenylalanine, leucin, lysine, histidine, proline, cystine, methionine, and threonine.

(5) The total free amino acids were not different from each other, especially in quantity, but methionine and histidine are found more in improved soy sauce than in ordinary soy sauce. Address: Seoul Agricultural College, Seoul, Korea.

4382. Cheng, Hsu. 1963. [Comparative studies on the mixing fermentation of soy sauce prepared from different cultures of *Aspergillus*]. *Chung-hua Nung Hsueh Hui Pao* (*J. of the Agricultural Association of China, Taipei*) 43:52-57. New Series. [4 ref. Chi; eng]
Address: Formerly Associate Chemist, Joint Industrial Research Institute, Taiwan.

4383. Chung, Y.S.; Lee, K.H.; Song, S.H.; Kim, C.H.; Chang, K.H. 1963. [Studies on microbiological standards of foods. I. The occurrence of coliform organisms in several samples of soybean mash, soy sauce, and red pepper mash]. *Report of the Army Research and Testing Laboratory* (*Seoul, Korea*) 2:47-50. [Kor]*
• ***Summary:*** The presence of coliform bacteria in or on foods depends on many environmental factors, each of which must be determined separately for each food item. When a

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correlation is found to exist between unsanitary methods of food production and the presence of *Escherichia coli* in the finished product, the presence of confirmed fecal strains of coliform organisms can be interpreted as having sanitary significance. Address: Food Div., Army Research and Testing Laboratory, Seoul, Korea.

4384. Kim, Y.H.; Kim, Z.U. 1963. [Effects of the ratio of raw materials on the quality and taste of soy sauce. I. Studies on the changes of enzymatic activities and chemical components during koji preparation with various ratios of raw materials]. *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 4:17-22. [Kor]*

• ***Summary:*** Changes of enzymatic activities and chemical components during koji preparation of soy sauce with various ratios of soy beans and wheat were studied as the first step in checking the current ratio of raw materials for improved soy sauce and determining the proper ratio for them with respect to its quality and taste. The following results were obtained.

(1) The protease in the dried koji were mainly composed of one part which was active at the neutral pH (about 6.0) range, while other parts that were active at acid and alkaline pHs were inferior. The more wheat in the koji, the stronger the protease activities at acid and neutral pH and the weaker at alkaline pH.

(2) The activity of enzymes increased rapidly in early stages, then gradually in later stages protease and beta-amylase rapidly throughout except the drying of alpha-amylase during the course of koji preparation. The greater the amount of wheat as a raw material, the stronger the protease and the beta-amylase activity.

(3) Reducing sugars, amino nitrogen, and total nitrogen were increased, while total sugar was decreased during the course of koji preparation.

(4) The more wheat used as a material, the more reducing sugar and total sugar there was. While the total nitrogen was decreased, no noticeable differences were observed in the amino nitrogen among the dried kojies. Address: College of Agriculture, Seoul National University, Suweon, Korea.

4385. Lee, K.H.; Chang, K.H. 1963. [Studies on koji for soy sauce brewing. II. On the optimum conditions of growth and identification of *Aspergillus* species]. *Report of the Army Research and Testing Laboratory* (*Seoul, Korea*) 2:24-25. [Kor]*

• ***Summary:*** These experiments concern the identification, growth conditions, and lethal temperatures of three previously-identified superior strains of *Aspergillus* species, which were isolated from the soils and Meju (fermented soy bean [koji]) in Korea.

The results obtained in light of the manual of Raper and Thom for identification of the *Aspergilli* show that the three strains of *Aspergillus* species all pertain to the *Aspergillus flavus oryzae* group.

The optimum temperature, pH and the lethal temperatures of the three species have been measured. Address: Army Research and Testing Laboratory, Seoul, Korea.

4386. Song, S.H.; Kim, J.H.; Lee, K.H.; Chung, Y.S.; Chang, K.H. 1963. [Studies on the preservation of soy sauce. I. Isolation of the pellicle forming yeasts from soy sauce]. *Report of the Army Research and Testing Laboratory* (*Seoul, Korea*) 2:32-37. [Kor]*

• ***Summary:*** Soy sauce is one of the most widely used seasonings for Korean foods. About 4.5 million liters per year is consumed by the military alone. The quality of soy sauce is often made to deteriorate by harmful microorganisms, especially yeasts which form a film or pellicle on the surface of the sauce during long-term storage. At the end of deterioration, the sauce gives off an offensive odor and a thick pellicle grows on the entire surface of the sauce; then it goes bad and rots. Many investigators have reported on this problem. In this study, the harmful yeasts are isolated from soy sauce in military storage and their microbiological characteristics are identified. Such yeasts have been identified as *Hansenula anomala* group, *Zygosaccharomyces japonicus* group, and another group of *Zygosaccharomyces*. Address: Food Div., Army Research and Testing Laboratory, Seoul, Korea.

4387. Song, S.H. 1963. [Studies on the preservation of soy sauce. II. The pellicle forming yeasts as influenced by fungicides]. *Report of the Army Research and Testing Laboratory* (*Seoul, Korea*) 2:38-42. [Kor]*

• ***Summary:*** The quality of soy sauce is often made to deteriorate by harmful microorganisms, especially by yeasts which form a film or pellicle on the surface of the sauce during long-term storage. At the end of deterioration, the sauce gives off an offensive odor and a thick pellicle grows on the entire surface of the sauce; then it goes bad and rots.

Heretofore many fungicides such as capric acid [decanoic acid], benzoic acid, esters of benzoic acid, vitamin K compounds, sorbic acid and surface active agents (Tweens and Emulgens) have been applied in order to prevent growth of the yeasts–regardless of their effects on human health.

These experiments found the following fungicides (and their minimum concentrations) to be effective against pellicle forming yeasts: Vitamin K group (0.05%). Esters of p-hydroxy benzoic acid (0.007%). Sorbic acid (0.05%). Emulgen-106 (0.1%). Capric acid (0.003%).

In addition, the following mixtures are effective: Emulgen-106 + p-hydroxylbutyl benzoate; Vitamin-K3 + Emulgen-106; and sorbic acid + benzoic acid. Address: Food Div., Army Research and Testing Laboratory, Seoul, Korea.

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4388. Chao, Buwei Yang. 1963. How to cook and eat in Chinese. 3rd ed. New York, NY: Random House. xxvi + 249 p. Foreword by Hu Shih. Preface by Pearl S. Buck. Illust. Index. 21 cm.

• ***Summary:*** This edition is quite similar to the original 1945 edition, except that it has some new front matter (such as introductions to the second [1949] and third revised editions), new pages added here and there plus 16 pages of recipes added between pages 228 and 229, and new cooking techniques. The page layout is basically unchanged, but when new pages were added, they were numbered 160a, etc; thus the contents of page 203 is identical in all editions.

However, among the new pages added, there is a nice new chapter 22 titled "Soybean Foods" (p. 228c-228h). Its contents: Introduction and Buddhist mock meats. Homemade tofu: Equipment needed (electric blender, form for setting), ingredients (curded with gypsum), grinding and straining, heating and setting, forming, bean curd recipes. Homemade soybean milk. Using soybean lees (okara; dregs are the leftovers you throw away and lees are those you keep). Frozen bean curd. Soy sauce beans [Soybeans baked in soy sauce]. Preserved soybeans: Homemade fermented black soybeans with salt, ginger, and optional hot chili powder or hot red pepper.

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "Preserved soybeans" to refer to fermented black soybeans.

The introduction (p. 228c) states: "Under various guises the soybean is used in vegetarian restaurants, often under Buddhist auspices, to produce sumptuous dinners, featuring "sliced chicken breast," "roast duck," "baked ham," that not only fool the eye, but also the tongue, almost, but as always, I want to concentrate on the important, everyday things and de-emphasize the fancy and elaborate. Dishes with bean curd are cheap and easy to prepare. Those who can afford fancy dishes can combine it with meat, etc., but just plain cabbage and bean curd connotes home sweet home."

Pages 158-59 contain 3 new soy-related recipes: Fried bean curd. Oyster sauce friend bean curd. Sweet-sour fried bean curd.

Recipe 14.27 (p. 155-56), titled "Red-in-snow stirs fava beans" begins: "Horse beans look like lima beans but are not. They are also called Fava beans and frequently sold by Italians. In China they are known as 'silkworm beans.'" Address: Berkeley, California.

4389. Chaves, Nelson. 1963. Proteínas vegetais e trópicos [Vegetarian and tropical proteins]. Recife, Brazil: Imprensa Universitária. 151 + 5 p. Illust. Series: Coleçao nordestina, 2. [75+* ref. Por]

• ***Summary:*** Soyfoods and their nutritional value are discussed on pages 65-67, incl. soymilk (*leite de soja*), tempeh, miso, tofu, shoyu, and natto.

Note: This is the earliest Portuguese-language document seen (Sept. 2011) that mentions tempeh, which it calls "tempeh." Address: Universidade do Recife, Instituto de Fisiologia e Nutricao.

4390. Cruz, N.B. 1963. Determination of the protein content of soy sauce from different local materials. Thesis, Araneta University, Philippines. *

• ***Summary:*** The author studied the protein content of soy sauce in different mixtures prepared by mold-enzyme hydrolysis. Address: Araneta Univ., Philippines.

4391. Kagawa, Aya. 1963. Japanese cookbook: 100 favorite Japanese recipes for Western cooks. [14th & rev. ed.]. Tokyo: Japan Travel Bureau. 198 p. Illust. (some color). Index. 19 cm. Series: Tourist Library No. 11.

• ***Summary:*** The first edition was published in 1949. This is actually the 2nd ed., which is 36 pages longer. Most of the information about soyfoods in the 1st edition is also in this 2nd edition, but often on different pages: Several examples: Long passage about soybeans and soyfoods (p. 16). Glossary (soy entries, p. 40-42). Nameko miso soup (p. 81). Miso-shiru (introduction, p. 82). Tofu and Japanese leek soup (p. 89). Four kinds of miso soup (p. 90-92).

The last two pages in the 1963 printing are devoted to full-page ads: (1) "Zest that's best with Kikkoman." "Brewed by Noda Shoyu Co., Ltd., Tokyo, Japan. Sole agent in U.S.A.: Kikkoman International Inc., 900 Marin St., San Francisco 24, California. 930 San Mateo St., Los Angeles, Calif. 11-31 31st. Ave., Long Island City 2, New York." Photos show a can and a bottle of Kikkoman All-Purpose Soy Sauce.

(2) "Try Aji-no-Moto: The super seasoning." "Just add a pinch of Aji-no-Moto before, during, or after cooking and see how it unlocks those hidden flavors in all foods–raw, cooked, dried, canned, or frozen." A illustration show an Italian chef with a white chef's hat (*toque blanche*), moustache, kerchief, and upward pointing right index finger. Illustrations show a small glass shaker and a metal can of Aji-no-Moto.

Aya Kagawa was born in 1899. Address: M.D. and president of Joshi Eiyô Tanki Daigaku (Women's Nutrition College), Tokyo, Japan.

4392. Kan, Johnny; Leong, Charles L. 1963. Eight immortal flavors. Berkeley, California: Howell-North Books. 246 p. Illust. (by Jake Lee). Index. 24 cm. 2nd edition 1980.

• ***Summary:*** An interesting book, by a master cook and an excellent researcher and writer. Full of new and useful information.

From the publisher's description: "This is the first cookbook–written by a Chinese-American to emanate from San Francisco's Chinatown–the mecca for both Oriental and Occidental gourmets. It is the only cookbook dealing strictly with Cantonese cookery." The Foreword, written by the famous food writer James Beard (of New York City) in

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Oct. 1963, notes that he grew up in Portland, Oregon, and was a close childhood friend of the Kan family and of their cousin Johnny Kan, who came to visit from San Francisco's Chinatown [in California]–a "city within a city." Kan's mother was an excellent and ingenious cook. Beard considers Kan's Restaurant "the outstanding Chinese restaurant today."

The "Eight Immortal Flavors" of Chinese cookery are *Hom*–salty, *Tom*–bland (like rice), *Teem*–sweet, *Seen*–sour, *Foo*–bitter, *Lot*–hot (as in chili peppers), *Heong*–fragrant (smell more than taste), *Gum*–golden (as in citrus peel or kumquat). They are always referred to in this order. Note: In Western cookery there are only four traditional flavors–sweet, sour, salty, and bitter. The Japanese add a 5th, "umami."

The chefs and cuisine of Kwangchow (the ancient name for Canton, now spelled Guangzhou) are considered the finest in all of China (p. 28).

The chapter titled "Native condiments, sauces, and ingredients" (p. 43-55) includes: Bean curd (*Dow Fu*): "One of the most useful of Chinese ingredients," it is usually pressed into ½-inch by 3-inch squares. Bland in flavor, it is a great mixer for highly flavored foods. "It is even delicious in its fresh state with spicy condiments and is known as 'the meat without bones."

Black [soy] bean, Dried (*Woo Dow*).

"Soybean skin (*Foo Jook*): Dried skin of soybean milk. Sold in packages, it is flat and thin, with a creamy-glaze appearance. Soak it before using in soups, or in smother-cooking recipes." It has an enjoyable chewy texture and slightly nut-like flavor.

"Soybean skin, sweet (*Teem Jook*): Similar but thicker than *Foo Jook*, its taste is slightly sweeter."

Illustrations (p. 46-47) show: Soy bean skin (foo jook). Bean curd (dow foo).

Condiments (p. 51-54)–"Black beans, salted (*Dow see*): Cured, fermented small black beans... Should be soaked briefly and washed before use. A common use is to mash beans with garlic, creating a seasoning popular for both seafood and meats."

Monosodium glutamate (*Mei Jing*): This flavor accent powder had its origin centuries ago in old China. "A charming story, which we like to believe, involved a contest in which several monks with gourmet tastes competed with each other to produce the most delicious batch of *Loh Han Jai*, the standard monks' food consisting of a variety of various vegetarian ingredients... The winner had added one precious secret ingredient the others did not have–a powdered dried seaweed [*konbu, Laminaria japonica*] which was later discovered to be the first crude source of monosodium glutamate. It was not until 1908 that Dr. Kikunae Ikeda, the great Japanese scientist successfully extracted Glutamic Acid from edible seaweed and from it crystallized monosodium glutamate and marketed it under the name of *Aji-no-Moto*. Then in 1921 Chinese scientist Poo-Nien Wu of Shanghai developed a process for extracting monosodium glutamate from wheat protein and was marketing his discovery, Ve-Tsin, in China, Singapore, Malaya, and the Philippines to the amount of 350,000 pounds a year. Other raw material sources are corn, soybean protein, and desugared beet molasses.

Sauces (p. 54-55)–Bean sauce (*Min See Jeung*): A brown salty bean paste. Oyster sauce (*Ho Yow*). Red seasoning sauce (*Hoy Sin Jeung* [*Hoisin Sauce*]): A thick red sauce that contains soybeans as an ingredient. "A table condiment for Peking duck."

Spiced red bean curd (*Nom Yee*): "A variation of bean cake fermented." It has a slightly harder consistency, a brick-red color, and a pungent, aromatic flavor.

Soy sauce (*See Yow*): "For Chinese cooking, soy sauce is the great all-purpose and most indispensable of all sauce." There are many grades and types. "For the 'red cooking' method, ingredients are incarnadined by the dark sauce. It may be used as a table dip, by itself, or mixed with mustard." Unlike salt, it has "the taste of a beef essence." It is made by the fermentation of cooked soybeans, roasted wheat, a yeast mold and salt. The best grades of Chinese soy sauce are still made by the old-fashioned, aged, natural fermentation process, rather than by the quickly made chemical hydrolysis method [HVP soy sauce]. The type know as *Sang Chau*, light and color and density, is the premier kind for flavoring and dipping." But unless you ask for it by name, "you will get the darker soy sauce or *See Yow*. There is no definitive record of the origin of soy sauce. "Reference to the sauce has been made as early as the Chou Dynasty [1045-256 BC], some 200 years before Christ!... Undoubtedly since its very origin soy sauce has been made in the home or as a village industry. As a manufactured product it started in 1688. With its long condimentary life, no wonder that, to the Chinese, soy sauce is the Sauce of Life."

Note: This is the earliest English-language document seen (April 2012) that uses the term "Sang Chau" to refer to light Cantonese soy sauce."

Vegetables (p. 81-87): Bean sprouts (*Ngah Choy*): This common and inexpensive little vegetable is overused in some Chinese restaurants as a "filler." The name "literally means 'vegetable for the teeth,' implying a crunchy sensation. Bean sprouts are tiny shoots which grow from the soy bean. They are one of the trio of basic Chinese foodstuffs–bean sprouts, bean curd and soy sauce–derived from the wonder bean. The sprouts average two inches long, are opaque white and the bean head is yellow... Another variety of bean sprouts, germinated from a larger type of bean, is the Dow Ngah, or Big Bean Sprout. This variety grows a little longer, with a larger golden head, and the sprout is crunchier, but has a more raw 'beany' flavor. This variety is not used in Chinese restaurants."

Soy-related recipes: Spinach with foo yee sauce (Baw choy foo yee, with "2 preserved bean cakes (*Foo Yee*)

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mashed with 2 teaspoons juice from jar," p. 89). Shows how "any commonplace vegetable can be turned into an epicurean dish by simply adding preserved bean cake" [fermented tofu] and a touch of garlic. Try it "and you will discover why Foo Yee is often referred to as the miracle ingredient among Chinese condiments."

Bean cake sauteed with meat (Dow foo yuke, with "8 bean cakes (*Dow foo*). Slice each bean cake into 6 pieces," p. 99). Fresh asparagus chicken with black bean sauce (Lei soon gai kow, with "1 full tablespoon mashed fermented black beans (*Dow see*), combined with 1 clove mashed garlic and 1 tablespoon soy sauce, with a dash of monosodium glutamate," p. 100).

Note: This is the earliest document seen (Nov. 2011) that uses the term "black bean sauce" and clearly shows how to make it in the kitchen as part of preparing the dish.

Chinese cabbage with foo yee sauce (Siew choy foo yee, with "2 fermented bean cakes (*Foo Yee*) with 2 teaspoons juice from the jar," p. 107). Mustard greens with foo yee sauce (Gai choy chow foo yee, with "2 fermented bean cakes (*Foo Yee*) mashed with 2 teaspoons juice from the jar," and 1 teaspoon soy sauce, p. 109).

Steamed salmon with black bean sauce (Dow see jing sah-mon yee, with "2 tablespoons fermented Black Beans (*Dow See*), crushed to paste," p. 131). Prawns with black bean sauce (See jup hah kow, with "2 tablespoons Black Bean Paste (*Dow see*), p. 133). Steamed fish with black bean sauce (Dow see seen gee jing yee, with "2 tablespoons fermented Black Beans (*Dow see*), crushed to a paste," p. 141).

Dried oysters with bean curd skim (Ho see munn foo jook, with "6 sheets Bean Curd Skim (*Foo jook*) pre-soaked in cold water for 2 hours. Drain thoroughly. Cut in 2 to 3-inch pieces," p. 143).

Note: This is the earliest document seen (Dec. 2010) that uses the term "Bean Curd Skim" to refer to dried yuba sticks. Continued. Address: 1. Chef, Chinatown; 2. Historian of Chinese life in America.

4393. Kan, Johnny; Leong, Charles L. 1963. Eight immortal flavors (Continued–Part II). Berkeley, California: Howell-North Books. 246 p. Illust. (by Jake Lee). Index. 24 cm. 2nd edition 1980.

• ***Summary:*** Continued from page 146. Fish stuffed in bean cake (Jow yeong dow foo, with "8 square Bean Cakes (*Dow Foo*)," p. 146). Chicken wings with black bean sauce (See jup gai yik, with "¼ cup fermented black beans (*Dow See*). Rinse, drain and crush," p. 158). Soy sauce chicken (See yow gai, with "10 cups soy sauce," p. 170). Red bean curd chicken (Nom yee gai, with "2 tablespoons spiced red bean curd (*Nom Yee*),... 3 tablespoons soy sauce," p. 171). Soy squab red fried (Hoong siew bok opp, with "2 quarts soy sauce," p. 174). Taro root duck with nom yee sauce (Nom yee woo tow opp, with "1 square red bean cake (*Nom Yee*), mashed," p. 184).

Spareribs with black bean sauce (See jup pai gwut, with "2 teaspoons fermented Black Beans (*Dow See*), crushed into paste, p. 192). Spareribs with red bean cake sauce (Nom yee pai gwut, with "2 tablespoons Red Bean Cake (*Nom Yee*)," p. 193).

Winter chafing dish (Dah bin lo, with "Pure soy sauce (*Sin Cho*) devoid of caramel coloring [soy sauce, (*See Yow*), contains caramel coloring] and with "2 squares of bean cake [tofu] cut in cubes, p. 212-13).

Note: In 1953 Johnny Kan opened his de luxe Kan's Restaurant at 708 Grant Ave. in San Francisco, California. Address: 1. Chef, Chinatown; 2. Historian of Chinese life in America.

4394. Keys, John D. 1963. Food for the emperor: recipes of Imperial China with a dictionary of Chinese cuisine. New York, NY: Gramercy Publishing Co. xxii + 121 p. Introduction by Kee Joon. Illust. Index. 18 x 17 cm.

• ***Summary:*** This book is about the Mandarin or Peking school of Chinese cooking. Contents: Introduction, by Kee Joon. Food for the emperor (recipes; for each recipe is given the name written vertically in large Chinese characters, the Cantonese transliteration of that name, and the English translation of that name. On some left-hand pages are short translations from old books related to food). A dictionary of Chinese cuisine (arranged alphabetically by English name of food). Index to the recipes (by recipe type, and within that by English recipe name).

Almost all recipes in this book are based on meat, fish, or poultry. There are no soy-related recipes in this part of the book, although many recipes call for "soya sauce."

The Dictionary includes: Bean curd (dou foo, with 2 recipes). Bean curd cheese [fermented tofu] (the two varieties are white bean curd cheese [foo yoo] and red bean curd cheese [narm yoo]). Bean curd, dried (tim jook [sweet dried yuba; also spelled tiem jook]).

Note: This is the earliest English-language document seen (May 2012) that uses the term *tim jook* to refer to sweet dried yuba.

Bean filling, sweet (*doe sha*, made from black soya beans, sugar, and a little oil. "This paste is available in Chinese bakeries, and is used in New Year's cakes and other sweet pastries").

Note: This is the earliest document seen (March 2011) that uses the term "Bean filling, sweet" to refer to a sweet paste, made of black soybeans, that is used as a filling like for cakes, like sweet red bean paste [azuki bean paste].

Bean sauce–see Soya bean condiment. Black bean sauce–see Soya beans, black fermented. Black beans–see Soya beans, black fermented. Brown bean sauce–see Soya bean condiment. Cheese, red–see Bean curd cheese. Fermented black beans–see Soya beans, black fermented. Red bean sauce (sharng she jerng; a popular canned cooking

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sauce consisting of mashed red soya {or often azuki} beans). Red cheese–see Bean curd cheese. Seaweed (purple laver, hair seaweed). Sesame oil (jee ma yo). Sesame seeds (jee ma).

Soya bean condiment (yewn she jerng. "Variously called soy jam and brown bean sauce, this condiment is prepared from the residue left when making soya sauce. Wheat is sometimes added to the condiment, which is fermented and then called Meen She Jerng. These condiments are most commonly use in cooking fowl; also in meat dishes).

Soya beans, fermented black (doe she. "Tiny fermented beans which are washed, crushed, and used to add a pleasant spiciness to dishes. They are often used in fish dishes to alleviate any strong smell. It is a prime ingredient in Cantonese lobster").

Note: "Black bean sauce" is not explained here, as expected.

Soy jam–see Soya bean condiment. Soya sauce. "The general term in Cantonese for soya sauce is She Yo. There are three main subdivisions: (1) Shang cho: Light brown, fine taste, light color. Used in cooking delicate foods were a heavy soya flavor is not desired. (2) Cho yo: Dark and thick, containing molasses, yet not too strong a taste. Used mostly in restaurants. (3) Jew yo: Most suitable for general cooking purposes and for use at the table. Also: Japanese soya sauce, which is prepared with the addition of malt [koji], is much respected by the Chinese."

Sweet-sour sauce: The recipe, which is given, contains 1 teaspoon soya sauce.

Sweet vegetable sauce (hoi seen jerg [hoisin sauce]). "A canned red sauce prepared from soya beans, red rice, and garlic. It is used in preparing Peking Roast Duck, fish and shellfish dishes."

"Tomato Catsup: Tomato catsup originated in China, as can be seen from the pronunciation of the Cantonese (Kair = tomato; Jup = sauce). Used in some braised dishes such as Shrimp Braised in Tomato Sauce." Address: San Francisco.

4395. Lager, Mildred; Jones, Dorothea Van Gundy. 1963. The soybean cookbook: Adventures in zestful eating. New York, NY: Devin-Adair Co. xiv + 240 p. Foreword by Ruth Stout. Index. 22 cm.

• ***Summary:*** The copyright page states: "Note: This is a revised and updated version of a privately printed book, *How to Use the Soybean*, by Mildred Lager which was first printed in 1955 and reprinted in 1959." This lacto-ovo-vegetarian cookbook contains over 350 recipes, including 72 tofu recipes.

Contents: Preface to 1955 edition. Preface to 1963 edition. Part I: The versatile soybean. History of the soybean. Nutritional value. Abbreviations and special terms. Soup to nuts: Introduction, green soybeans [green vegetable soybeans], dry soybeans, roasted soybeans, sprouted soybeans, the cow of China–soy milk (kinds of soy milk), "the meat without a bone"–tofu or soy cheese, the little giant among protein foods–soy flour, soy grits and bits (puffed grits), soy oil and soy butter, meat replacement foods, sandwich spreads, malts, coffee substitutes, soy sauce, other soy products (soy albumen, Glidden's product that contains on a dry basis 96.6% protein [soy protein isolate]).

Part II: Soybean recipes. Green soybeans. Dry soybeans. Roasted or toasted soybeans. Sprouted soybeans. Meat replacement dishes. Soy noodles, macaroni, and spaghetti. Sauces and gravies. Soy soups. Salads. Soy spreads and soy butter ["a butter resembling peanut butter may be made from finely ground soybeans or soy flour... Roasted soy butter is made from the roasted beans that have been ground into a fine flour."]. Soy milk. Tofu or soy cheese. Soy cereals and breakfast dishes. Soy desserts. Soy candies. Soy flour breads: Full-fat soy flour, low-fat or fat-free soy flour. Pastry. Cookies. Cakes. Extra tips. Appendix. Menus.

The chapter titled "History of the Soybean" (p. 3-7) discusses: W.J. Morse and the U.S. Department of Agriculture. Dr. J.A. LeClerc, the American Soybean Association (which has held a national convention every year since it was founded in 1920), its publication *Soybean Digest*, Henry Ford and his work with both industrial and edible soy products, T.A. Van Gundy, Harry W. Miller, M.D., Dr. Clive McCay of Cornell University (Ithaca, New York), and the Sept. 1961 Conference on Soybean Products for Protein in Human Foods (held at Peoria, Illinois).

Concerning T.A. Van Gundy we read (p. 5): "The father of one of the authors, T.A. Van Gundy, became interested in the nutritional value of soybeans while attending the World's Fair in San Francisco in 1915, where they were featured in the Oriental exhibits. Upon going home he purchased some soybeans and began experimenting in them. As far as we know he was the first person on the Pacific Coast to develop a line of commercial foods from this wonder bean. By 1927 he had developed a number of palatable products which he manufactured and sold through health food stores. Soybean foods were virtually unknown at this time, and it took courage and perseverance to put them across."

Recipes for "Soy Ice Cream" (p. 175-76) now include vanilla, maple nut, orange, and strawberry flavors. A recipe for "Granola" (p. 161) calls for 1 cup soy flour. The rest of the ingredients (such as wheat and barley flour) appear to be similar to those found in the earliest granola recipes of the mid-1800s. Address: Southern California.

4396. Mei, Yu Wen; Adams, Charlotte. 1963. 100 most honorable Chinese recipes. New York, NY: Thomas Y. Crowell Company. xi + 140 p. Illust. by Wen Mei. Index. 24 cm.

• ***Summary:*** Contents: Introduction. Chinese ingredients. Chinese cooking utensils and Western equivalents. Some tips on Chinese cookery. Menu for a Chinese dinner party. Daily dishes. Cold wine dishes. Hot wine dishes. Main dishes.

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Soups. Rice dishes. Desserts. General recipes. Mail order shops. Geographical locations of honorable recipes.

This is a collection of the greatest classical recipes of China. All five major "schools" of Chinese cooking are represented: Shanghai, Peking, Yang Chow (120 miles northwest of Shanghai; pinyin: Yangzhou; Wade-Giles: Yang-chou), Szechuan, and Canton. Yu Lin Chuan, one of Old China's most renowned restaurateurs, has selected these recipes, all of which were translated by his daughter, Yu Wen Mei, and carefully tested by Charlotte Adams–to ensure ease of preparation by American homemakers.

The chapter on "Chinese ingredients" describes the following soy-related ingredients: Agar-agar, bean curd (fresh, or fermented), Hoisin sauce, laver (seaweed), red beans [azuki] (tiny beans used for making sweet bean paste), sesame oil, soy bean paste (very salty, or lightly salted). Hoisin sauce is "A delicious, thick, dark-brownish-red condiment, often used as an ingredient in cooked dishes, also as a side-dish sauce for dipping" (p. 2).

The chapter titled "Some tips on Chinese cookery" states (p. 7). Peanut oil is the preferred type of oil. If food is truly fine, "there is no reason whatsoever to add monosodium glutamate to it, and you will note that it is required in none of the recipes." "We strongly suggest that you buy imported soy sauce by the quart. The soy sauce made here is much saltier than that which comes from Hong Kong, and its use therefore alters the recipes." Many recipes are seasoned with soy sauce or soy bean paste

Soy-related recipes: Shrimp and bean curd (Yang Chow: p. 24). Crabmeat and bean curd soup (p. 94). Shrimp ball, ham, and bean curd soup (p. 103). Red roast pork (Yang Chow, with soy sauce: p. 113). Almond bean curd (Peking: p. 121). Red bean paste I and II (p. 127-28). Address: New York City.

4397. Onishi, Hiroshi. 1963. Osmophilic yeasts. *Advances in Food Research* 12:53-94. [150+* ref]

• ***Summary:*** Since the word "osmophilic" was first used by von Richter (1912) for the group of yeasts that can grow well in an environment of high osmotic pressures, a large number of yeasts showing sugar- and salt-tolerant properties have been described.

Soy sauce mashes differ significantly from other brew mashes in their high content of sodium chloride (about 18%) and nitrogen (1.0 to 1.5% as total nitrogen). Thus, in Japan, osmophilic yeasts have been investigated mainly for "effective utilization in the soy sauce and miso paste industry."

Soy [sauce] yeasts and miso yeasts: The first report on soy [sauce] yeasts appeared in 1906, when Saito isolated 5 strains of salt-tolerant yeasts from soy sauce mashes in the Choshi district and classified them into *Saccharomyces soya*, *Zygosaccharomyces japonicus*, *Pichia farinosa*, *Mycoderma* sp., and *Torula* sp. Subsequently, many taxonomic studies were carried out on soy yeasts (Mitsuda, 1910; Nishimura, 1910; Kita, 1911; Ishimaru, 1935). However, none of these observations explained which yeast played an important role in the ripening of soy mashes. Takahashi and Yukawa (1911) showed that *Zygosaccharomyces major* and *Zygosaccharomyces soja* were useful in ripening soy mashes, giving the characteristic taste and flavor through their fermentation. *Zygosaccharomyces japonicus* and *Zygosaccharomyces salsus* were shown to be harmful because they were the main cause of the formation of pellicles leading to deterioration of the commercial quality. This work has been believed to give the most reliable information on both microbiological and applied aspects of soy yeasts.

"As for miso yeasts, extensive and detailed studies were conducted by Mogi (1938-1942). Unlike soy sauce, miso pastes were commercially produced in great variety with different raw materials and various contents of NaCl. Mogi described many new species of miso yeasts belonging to *Saccharomyces*, *Zygosaccharomyces*, *Debaryomyces*, *Hanseluna*, *Pseudohanseluna*, *Pseudohanseluna*, *Pichia*, *Zygopichia*, *Torulopsis*, *Pseudomycoderma*, and *Pseudomonilia*. Among them, the dominants were *Saccharomyces*, *Torulopsis*, *Zygosaccharomyces*, and *Zygopichia*, and the last two were found chiefly in miso paste of relatively high salt content."

Salt tolerant yeasts, especially *Saccharomyces rouxii*, play an important role in soy sauce and miso fermentation in Japan. They play a key role in creating the characteristic flavor and taste, and when added, can shorten the ripening period of the mash while improving its quality. Especially with semichemical soy sauce, involving acid hydrolysis of the soybeans, it is very important to add yeasts that cause vigorous fermentation of the mash, which improves the flavor and taste.

But osmophilic yeasts can also cause food spoilage–especially the dry white pellicles or films that form on the surface of (usually raw) soy sauce, and may cause gaseous fermentation. These pellicles are caused by the growth of film-forming yeasts such as *Saccharomyces rouxii* var. *halomembranis* and *Pichia;* the result is deterioration of soy sauce quality. "This spoilage cannot be seen in well-matured soy sauce of good quality, because it contains yeast-static compounds."

Note: This is the earliest document seen (June 1999) that mentions the yeast *Zygosaccharomyces rouxii* in connection with soy sauce or miso. Address: Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

4398. Rombauer, Irma S.; Becker, Marion Rombauer. 1963. Joy of cooking. Indianapolis/New York: Bobbs-Merrill Co. [x] + 849 p. Illust. by Ginnie Hofmann and Ikki Matsumoto. Index. 24 cm.

• ***Summary:*** One of the great American cookbooks. A classic

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and an all-purpose cookbook, this is the first authorized edition prepared by Marion Rombauer Becker–who transformed the book. Irma, her mother, died in 1962.

Soy-related recipes: Chop suey or Chow mein (with soy sauce, p. 229-30). Soybeans, green (p. 260). Shrimp teriyaki (with "½ cup pineapple juice" and "2 to 4 tablespoons soy sauce"–but no recipe for teriyaki sauce, p. 377). Sukiyaki (with "½ cup 3/4-inch squares bean curd: Tofu" and "2 cups bean sprouts or cooked, drained Shirataki," p. 402).

Vegetable milks (incl. soy bean milk, almond milk, p. 487-88). About non-wheat flours (incl. soy flour, corn meal, rice flour, rye flour, potato flour, tapioca and sago flour, arrowroot flour or starch, barley flour, cotton seed flour, peanut flour, oat flour and oatmeal, bean flour, p. 498-501). About commercial sauces (incl. soy sauce and Worcestershire sauce, p. 542. Note: Soy sauce is not mentioned as an ingredient in Worcestershire sauce). Cornell Triple-Rich flour formula (with 1 tablespoon soya flour, p. 556).

Also discusses Whole-grain or Graham flour (p. 498). And how to make "coconut milk" and coconut cream. "Coconut milk and cream are very sensitive to high heat. For this reason they are added to hot sauces at the last minute or are cooked over hot water." They are prized in curries [and many Indonesian tempeh recipes].

4399. Sato, Makoto, ed. 1963. Kuki, hishio, misho, miso, shôyu nado ni kansuru shiryô [Historical documents about kuki (fermented black soybeans), hishio or chiang, misho, miso and shoyu]. Noda: Noda Kofukai Toshokan. 230 p. Illust. No index. 28 cm. [189 ref. Jap]
• ***Summary:*** Reprints of 189 old documents on shoyu and miso, and their progenitors, in chronological sequence. The alternate title is "Shoyu miso shiryo shusei." Makoto Sato was born in 1907. Address: Head, Kofukai Library (Kofukai Toshokan Cho).

4400. Sato, Makoto, ed. 1963. Shôyu miso shiryô shûsei [Collected historical documents about shoyu and miso]. Noda: Okikazekai Toshokan. 230 p. 22 cm. [Jap]*
• ***Summary:*** See the other entry for Sato 1963. Address: Japan.

4401. Tanaka, Heihachi; Nicholas, Betty. 1963. The pleasures of Japanese cooking. Englewood Cliffs, New Jersey: Prentice Hall, Inc. viii + 247 p. Illust. Index. 22 cm.
• ***Summary:*** Contents: Introduction. 1. A chat about Japanese food: Seasonings and flavorings, table settings and utensils, kitchen utensils, etiquette, cooking and serving a Japanese meal. 2. Appetizers. 3. Soups. 4. Broiled dishes. 5. Steamed dishes. 6. Saucepan foods. 7. Fried foods. 8. Salads. 9. Vegetables. 10. Rice and noodle dishes. 11. Thirst-quenchers. 12. Desserts. 13. Festival foods. Glossary [of Japanese foods and utensils]. List of retail outlets for Japanese food products (national chains and alphabetically by state in the USA).

The book begins (p. 1): "To many Westerners, the cuisine of Japan consists almost entirely of *sukiyaki*, *tempura*, rice and soy sauce. Nothing could be further from the truth."

Vegetables "are harvested at the height of their season," when tender and full of flavor, then cooked lightly and used (for example) "as an ingredient in *misoshiru* (thick soup [miso soup]) or pickled" (p. 3).

"If one were to single out the most important vegetable cultivated in Japan it would be the soybean. For this legume,... is such a versatile food that it is served in some manner at practically every Japanese meal.

"In the hilly interior of the country where fish is scarce, or in the vegetarian menus of the Buddhists, soybeans are called the 'fish of the field' and relied upon as a valuable source of protein. A favored way of preparing the green soybean is simply to boil and hull it. Dried soybeans are ground [sic], soaked in water, cooked and mashed, sieved through silk, and finally cooked again to produce bean curd or *tofu*.

"Steamed and fermented beans become *natto*. *Miso*, a bean paste made by boiling soybeans, mashing them, adding wheat ferment [sic] and salt and allowing this mixture to ferment for several months, lends itself to use in countless dishes. *Moyashi*, the tender young sprouts of the soybean, are cultivated on indoor racks to conserve precious space in the fields." In a few days, a single cup of soybeans will produce 3-4 pounds of succulent sprouts (p. 3-4).

"Queen of Japanese seasonings is *shoyu* or soy sauce, a dark, red-brown, thirst-provoking liquid made from wheat or barley, soybeans, salt and water. *Shoyu* is loved by the Japanese for its piquant flavor and its use is so extensive that almost no dish is conceivable without it." A brief history of shoyu and its forerunner, *hishio*, and the process for making shoyu are given. Shoyu "mash is allowed to ferment and mature naturally for a full eighteen months when it is pressed and the sauce obtained pasteurized to become refined *shoyu*.

"Another multi-purpose seasoning and foodstuff is *miso*, a paste made from fermented rice and soybeans." Most miso "lasts for years without spoiling or deteriorating. There are two types of *miso*–red and white. Both are widely used in Japan but western palates seem to prefer the white type. Both are highly nutritious and are used in literally hundreds of ways: as a seasoning, a main dish and the basis of many hearty, potage-type soups" (p. 5-6).

"For centuries [sic] Japanese cooks have used a dashi of *aji-no-moto*, a seaweed or vegetable protein derivative, to intensify the natural flavors of the foods they cooked. Translated, *aji-no-moto* means 'essence of taste' (it is often referred to as taste powder) because the minute white crystals heighten the inherent flavors of foods,... but lending no flavor of their own" (p. 6).

Yakimono are broiled foods. "Flavor broiling includes

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yakitori (broiled chicken), *teriyaki* (fish marinated in a sauce containing shoyu and then broiled),... Miso-broiling is used for such vegetables as eggplant as well as for fish or meat" (p. 13).

"Inasmuch as *shoyu*, or soy sauce, is such an all-important seasoning and is called for in almost every Japanese recipe, it should be noted that the use of genuine *shoyu* is quite essential. Most other soy sauces, while excellent for other types of cuisine, really don't do justice to Japanese cooking" (p. 19). Also discusses wasabi, sesame seeds, sesame oil, katsuobushi, konbu, sake, and various mushrooms (p. 20-22).

"*Tofu*, or soybean curd, is such a versatile foodstuff–it may be boiled, fried, steamed, sautéed or marinated–that it is included as an ingredient in many recipes in this cookbook. Fresh *tofu* is sold in cakes; refrigerated, it will keep about one week. It is also available in cans and, while the processed product is not quite as tender as the fresh, it does make a satisfactory substitute. The consistence of *tofu* resembles thick custard and it should be handled carefully to avoid breaking and crumbling. Western taste buds seem to find *tofu* bland and a bit flavorless, but when deftly sauced it is very delicious–and also nutritious. Note: *tofu* must not be overcooked or it will toughen and develop a rubbery texture" (p. 24).

Recipes include: Norimaki-Sushi (with nori, shoyu, and sashimi). Tiny teriyaki (ingredients: 2 pounds beef tenderloin, 1 cup shoyu, 3/4 cup water, ½ cup mirin, 3/4 cup honey, 1 clove garlic, crushed, and 1 one-inch piece fresh gingerroot, grated; p. 46). Liver tsukudani (with shoyu; p. 55). Fish and tofu stew (p. 69). Oyster miso (p. 71). Vegetable and noodle miso (p. 72). Shrimp or prawn miso (p. 73).

Chapter 4 is titled "Broiled foods." "... almost all cooking in Japan is done over a charcoal fire,..." "Without a doubt, the most popular of all broiled dishes with the Japanese people is *yakitori*, or broiled chicken... Almost as popular as *yakitori* is *teriyaki*, usually fish marinated in a *shoyu* sauce, arranged on long skewers, and then broiled over charcoal. *Teriyaki* means 'glaze broiled'–*teri* meaning 'shiny' and *yaki* 'broiled' or 'roasted.' Actually any meat may be *teriyaki*," but all have in common "the marinade of shoyu, sake, and sugar" (p. 75-76). Recipes include: Salmon teriyaki. Shrimp teriyaki. Stuffed beef teriyaki (p. 88-90). Shoyu marinade basting sauce (p. 93). Sukiyaki (with tofu and shoyu; p. 110). Tempura sauce (with shoyu, p. 121). Fried tofu with sauce (p. 127). Pickled seaweed (with konbu and shoyu, p. 140). Sesame-shoyu dressing (p. 151). Vegetables with tofu sauce (p. 154). Cabbage with mustard-miso sauce (p. 157). Eggplant with miso sauce (p. 164). Azuki meshi (red beans and rice; p. 181). Domburi soboro (with tofu; p. 182-83). "Red bean paste (sweetened)." Ingredients: "2 cups red beans (azuki), 2 cups sugar, 2 teaspoons salt." (p. 203.) Also called "sweetened red bean paste" (p. 200; Jap. *azuki an;* p. 200-203). Yokan (with "1½ cups strained red bean paste"–*koshi-an;* p. 204). Hikishamanju (Bean jam buns with strained red bean paste; p. 207). Shiruko (Red bean soup [azuki] with rice cakes {mochi}; p. 209). Zoni (Rice cake soup, with mochi; p. 215-16). Sweetened soybeans (for New Year's, p. 217-18).

The glossary includes abura-age, azuki ("red beans"), azuki-an ("red bean paste"), daizu (soybean), ganmodoki, kanten, konbu, konnyaku, miso (aka miso, shiro miso), misoshiru, mochi, mochigome, mochiko, nori, shiru-miso, shoyu, teriyaki, tofu, wakame, yakidofu.

Note: This is the earliest English-language document seen (March 2006) that uses the term "sweetened red bean paste" to refer to sweet azuki bean paste [*azuki-an*] or that uses the term "strained red bean paste" to refer to strained azuki bean paste [*koshi-an*]. Address: 1. Head Chef, Japanese Cuisine, Japan Airlines.

4402. Teriyaki and sushi: Selected 72 recipes. 1963. Elmsford, New York: Japan Publications Trading Co. 58 p. Illust. Index. 21 cm.

• ***Summary:*** On title page: "Compiled by the Japanese cooking companions." The 12th printing was Jan. 1976. Contents: Rice dishes (incl. How to cook delicious sushi rice, oshi zushi, norimaki). Vermicelli dishes (incl. tsukejiru, kakejiru, somen, soba, udon). Soups. Broiled dishes (inc. teriyaki). Marinated dishes. Boiled dishes. Steamed dishes. Fried dishes. Casseroles. Tart dishes. Pickles. Confectionery. Glossary. Note: Brands promoted in the recipes throughout this book, by appearing in large boldface type, are: Kikkoman soy sauce, Aji-no-Moto, Manjo mirin (sweet rice wine).

Soy-related recipes include: Kenchin-jiru (with "½ tofu (bean curd) (1/3 lb)," p. 17). Miso soup (with 4 tbsp. bean paste (miso)" and "2 aburage," p. 19). Konnyaku (devil's tongue) and carrots with white bean curd paste dressing (with tofu, p. 29-30). Bean curd with liquid starch (with tofu, p. 32). Meat and vegetables in aburage-bags (with "2 large aburage, p. 34). Bonito cooked with bean paste (with miso, p. 35). Steamed squid ("stuffed with tofu and vegetables," with "1 tofu (bean curd)," p. 38-39). Sukiyaki (with "2/3 lb. broiled bean curd," p. 46). Yudofu (with "1 lb. bean curd," p. 47). Yosenabe (with "1/3 lb bean curd," p. 47).

Note 1. This is the earliest English-language document seen (May 2012) that uses the term "broiled bean curd" to refer to grilled tofu.

Note 2. This is the earliest document seen (May 2012) that calls for the use of grilled tofu ("broiled bean curd") in sukiyaki. That is the standard way of making sukiyaki in Japan.

The recipe titled simply "Teriyaki" (p. 22) states: "Teriyaki is fish or meat marinated in a mixture of mirin and saké, sugar and soy sauce and roasted directly over fire. This method of roasting is most suited for oily fish, fish with

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thick meat, chicken and beef." The sauce contains: "2 tbsp. Kikkoman soy sauce, 2 tbsp. Manjo mirin, 1 oz. ginger, and sweetened vinegar (mixture of 1 tsp. vinegar, 1 tsp. sugar, and a few shakes of salt)" (p. 22-23).

The Glossary (p. 47) includes: "Aburage–fried soy bean curd. An–[azuki] bean jam [also called 'red bean jam' in index]. Miso–bean paste. Misozuke–pickles in bean paste. Tofu–bean curd. Yudofu–boiled soy bean curd."

4403. Umeda, Isao. 1963. Shôyu [Soy-bean sauce]. Tokyo: Sankyo Shuppan K.K. 232 p. Index. 28 cm. Final technical report. USDA P.L. 480. Project UR-A11-(40)-C. [95 ref. Jap]
• ***Summary:*** Contents: Part I. 1. Raw materials. 2. Treatment of raw materials. 3. Making koji. 4. Moromi: Fermentation (*shikomi*), methods of fermentation, mixing, ripening (*jukusei*), research on ripening, microorganisms in moromi. 5. Pressing out the shoyu. 6. Refining (*seisei*): Method of heat treatment (or pasteurization; *hiire*), changes during heat treatment, flavor, composition (*seibun*) of regular shoyu and of special shoyu [*tokushu*], methods of analyzing shoyu.

Part II: Special subjects. 1. Substitute raw materials: Substitutes for soybeans, for wheat, for both soybeans and wheat (copra meal, wheat bran [*fusuma*]). 2. Tamari shoyu and usukuchi shoyu: Tamari and soybean miso, usukuchi shoyu. 3. Secondary products (*fukuseihin*): Shoyu presscake (*shoyu kasu*), shoyu oil, soybean soak water, ? eki, use of koji spores. 4. Kegs (*taru*). 5. Semi-fermented shoyu #2 (*Shinshiki nigo*): Research on its production. Address: Nôgaku Hakase, Tokyo Daigaku Nôgaku-bu, Tokyo, Japan.

4404. Yang, Hao-jan. 1963. The development and rational utilization of soybean. *U.S. Joint Publications Research Service. Translations from Communist China's Agriculture, Animal Husbandry and Materials* 41:39-51. Translated from *Ta Kung Pao* (Peiping), 11 March 1963, p. 3. [Eng]
• ***Summary:*** A general article about the problems connected with the utilization of soybeans as food, feed and for industrial purposes. Contents: Introduction. The functions of soybeans on the development of agricultural production. Several problems of the development of soybeans. The rational utilization of soybean resources.

Note: This "is a translation of an article by Yang Hao-jan (2799 3185 3544) in *Ta Kung Pao*, Peiping, 11 March 1963, p. 3." Address: China.

4405. Yang, Pyong-yong. 1963. Chang saengsan solbi [Soy sauce production equipment]. South Korea. 195 p. 21 cm. [Kor]
Address: South Korea.

4406. La Choy Food Products. 1963? La Choy operates the world's largest Chinese food plant. 1 p. Undated. Unpublished manuscript.
• ***Summary:*** A large photo in the middle of the page shows an aerial view of the expanded La Choy food plant in Archbold, Ohio. This multimillion dollar facility was expanded in 1958, leading to a doubling of La Choy production. "No other Chinese food processing plant anywhere production. No other Chinese food processing plant anywhere approaches it in output." The plant is situated on 25 acres.

"La Choy became a division of Beatrice Foods Company in 1943, a year after it moved to Archbold, Ohio, from Detroit, Michigan, where the company was started in 1920." Since it became a Beatrice unit, sales have increased more than 700%...

A portrait photo shows Gordon E. Swaney, who was named general manager of La Choy Food Products in 1962. Address: Archbold, Ohio.

4407. Claiborne, Craig. 1964. How to solve an Oriental eating puzzle: Learn Chinese, adopt a relative, or get to know the waiter. *New York Times*. Jan. 21. p. 20.
• ***Summary:*** New York City is probably home to more Chinese restaurants than any city in the world outside of China, Formosa and Hong Kong. Yet knowing what to order in a previously undiscovered Chinese restaurant remains a daunting problem. Two recent visits to the Harbin Inn (2637 Broadway, at 10th St.) proved the point. His second visit, in the company of Mrs. Grace Chu, the expert on Chinese cuisine and cookbook author, was a vastly better experience. He enjoyed "chicken splendidly complemented with crisp walnuts and flavored with hoisin sauce...." Mrs. Chu explained the above lessons to be learned–and added the importance of ordering in advance.

4408. André, Émile. 1964. Sur l'utilisation des graines de soja dans l'alimentation humaine par les populations d'Extrême-Orient [On the dietary utilization of soya beans in the Far East]. *Oleagineux* 19(1):37-39. Jan. English-language summary p. XXVIII. [1 ref. Fre; eng]
• ***Summary:*** The author gives the results of his research on lipoxidase, initially inspired in early 1931 by a young Chinese student M. Kiawo Hou. He also discusses soymilk (lait de soja or téou-jou), tofu (fromage de soja or téou-fou), yuba (téou-fi), soy oil (huile de soja), soy sauce (tsing yeou [sic, tsiang yeou?]), miso (miso de soja), and soy sprouts (germes de soja). The residue from making tofu and soymilk (okara) is fed to poultry and pigs. Soya oil is made by an archaic process that is very inefficient. "The residue, not perfectly separated from the oil, is consumed by the poorer classes." Address: France.

4409. James, Isabel. 1964. Domestic science bureau. *British Vegetarian*. Jan/Feb. p. 37-39.
• ***Summary:*** The article begins with a question from a reader: "Can you please tell me something about the value and use of soya bean and soya flour?" The author gives a Bircher

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Benner recipe for Soya Pancakes (with soya flour), and notes that Soyolk and Hi-Soy soya flours are sold in Health Food Stores. The latter product is made by The British Arkady Co. Ltd. and is good for use in confectionery.

She then discusses soya milk and tofu. In the UK, Dr. Frank Wokes, of the Nutritional Research Centre, has done a great deal of work on the "preparation of a soya based vegetable "milk" that would be a suitable substitute for cow's milk and acceptable to children who could not take cow's milk. Largely as a result of this work *Velactin* is now available from Health Food Stores, made by Messrs. A. Wander Ltd." She then gives a recipe for home-made Soya Cheese (also known as Soybean Curd or Tofu), made from full-fat soya flour and coagulated with lemon juice.

She also mentions soya sauce and gives details on growing soya beans in England. "If the crop matures some of the green beans may be used in salads or as green vegetables." Address: B.A.

4410. *Sun* (*Baltimore, Maryland*).1964. International buffet for your next party. March 22. p. TW16-17.
• ***Summary:*** Recipe No. 6 in the international buffet is *Sate Manis* (beef on skewers) from Indonesia. It includes a special sauce, *Saos Sate Ketjap* (Soy sauce with butter), which includes ½ cup soy sauce.

4411. Ito, Hiroshi; Ebine, Hideo; Kosaka, Shokichi. 1964. Shihan jôzô-yô nyûsan-kin no seijô [On the properties of lactic acid bacteria in commercially available starter for making miso and soy sauce]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 18. p. 28-35. March. [14 ref. Jap; eng]
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4412. Kamada, Hideomoto; Ebine, Hideo; Nakano, Masahiro. 1964. Daizu seihin no chakushoku ni kansuru kenkyû. XVI. [Browning reaction of soybean products. XVI. Browning of bottled soy sauce during storage]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 18. p. 154-57. March. [8 ref. Jap; eng]
• ***Summary:*** The color of pasteurized soy sauce was relatively stable compared with that of raw (unpasteurized) soy sauce, and it was protected from browning at 38°C for 1 month by bottling and storing in an oxygen-free environment.

Bottled soy sauce can be prevented from browning by storing it at a temperature below 20°C [68°F, or by refrigerating it].

Reprinted from *Nihon Shokuhin Kogyo Gakkai Shi* 10(3):99-101 (1963). Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4413. Hewitt, Jean. 1964. Food news: The flavors of Indonesia. *New York Times*. April 29. p. 44.
• ***Summary:*** Food will be a major part of the forthcoming Indonesian Pavilion at the World's Fair to be held in New York (1964/1965). Defines several terms: Sambals are hot sauces; atjars are relishes. A recipe for Sates [skewered ingredients] calls for "¼ cup ketjap bentang [benteng] (sweet Java soy sauce)."

Note: This is the earliest document seen (April 2012) that uses the word "bentang" or the term "ketjap bentang" (or "kecap bentang") to refer to a type of sweet Indonesian soy sauce. However "bentang" may is not an Indonesian word, and probably should be written "benteng."

4414. Hercules Powder Co. 1964. 12 ways Hercules HVP can beef up flavor (Ad). *Food Processing* (*Chicago*) 25(4):28-29. April.
• ***Summary:*** "Hercules is the largest producer of Hydrolized Vegetable Proteins–and the most economical source of these low-cost flavoring agents, reminiscent of well-browned beef." The ad describes 12 popular types of HVP that come in the form of liquids (38-52% solids), pastes (85-89% solids), or powders (97% solids). Hercules also makes Vicrum vital wheat gluten, Huron MSG (monosodium glutamate), etc. Address: Cellulose & Protein Products Dep., 910 Market St., Wilmington, Delaware 19899.

4415. Komiya, Akira. 1964. The shoyu industry in Japan. *Soybean Digest*. May. p. 43-44.
• ***Summary:*** Table 1 (which does not include data from farm villages) shows the average yearly expenses for seasonings per household in Japan: 1. Refined sugar 19.7% of total expenses. 2. Shoyu 18.3%. 3. Miso 14.3%. 4. Luxury items 13.1%. 5. Edible oils 9.4%. 10. Margarine 2.3%. 11. Salt 2.0%.

Table 2 shows the quantity and value of shoyu produced in Japan from 1958 to 1962 (according to 3 different sets of data). According to the Japan Shoyu Association, the amount has increased from 1,117,800 kl in 1958 to 1,160,750 kl in 1962, an increase of 4%.

Shoyu has been used daily as a seasoning in Japanese for 800 years [i.e. since about 1164]. Five reasons are given to explain why it is "now becoming a daily necessity." Foreigners like to use shoyu for barbecue and Sukiyaki. Address: Managing Director, Japan Shoyu Assoc.

4416. Yokotsuka, Tamotsu. 1964. Shoyu. Paper presented at International Symposium on Oilseed Protein Foods, Institute of Food Technologists, USA. See p. 31-48. Held 11-15 May 1964 at Lake Yamanaka, Japan.
• ***Summary:*** Contents: General situation of shoyu in the Orient with emphasis on Japan: The 3 types of shoyu now available in Japan (*koikuchi, usukuchi, and tamari;* about 90% of Japanese shoyu is of the koikuchi type, whose color is between that usukuchi [light] and tamari [dark]).

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Note: This is the earliest English-language document seen (April 2012) that contains the word *koikuchi* (it refers to the type of shoyu / soy sauce most widely used in Japan) or the word *usukuchi* (it refers to light-colored shoyu made and used mostly in the Kyoto-Osaka area).

Government regulation of the quality of shoyu in Japan. History of shoyu in the Orient. Development of technology and research in recent years, and problems for the future: Utilization ratio of the total nitrogen, use of defatted soybeans instead of whole ones, reduction of fermentation period, technical aspects (growing koji 50 cm deep without the use of small wooden trays, reducing the two major production costs of growing koji and pressing the mash, pressing once with great pressure for a long time to avoid water washing which causes oxidation), three keys to shoyu production (culturing the mold, stirring the mash, and pasteurization), academic research on microbes in and flavorous compounds of shoyu problems for the future.

The total production of shoyu in Japan is about one million kiloliters, and per capita consumption is about 10 liters/year; this has been decreasing. Japanese get about 50% of their daily salt intake from shoyu, plus about 2 grams of protein. There are more than 5,000 commercial shoyu manufacturers in Japan. They produce about 95% of all Japanese shoyu; the remaining 5% is produced by farmers in the countryside. The biggest manufacturer's market share [Kikkoman's] is about 20%. About 50% of the total output is produced by 35 factories. As is the case with many industries, there has been a growing concentration of shoyu production among the larger companies.

It takes one year or more to finish shoyu fermentation at the natural (ambient) temperature. One-year mash [moromi] has the best flavor, two-year mash has the best taste, and three-year mash has the best color. Up until World War II, these three kinds of mash were blended to produce the highest grade shoyu.

The by-products of the shoyu industry are soy cake and soy oil [shoyu cake and shoyu oil]. Soy cake usually contains about 3.5% of total nitrogen and about 10% of carbohydrate; it is used chiefly for animal feeds. The oil layer, which rises to the top of shoyu, is ethylesters of higher fatty acids, including 30 to 40 free fatty acids. It is removed before pasteurization and utilized for cutting oil, as a raw material in lower grades of soap, as a source of linoleic acid, etc.

The glycerol content of shoyu produced from whole soybeans and wheat is about 1.0 to 1.2%, while that of shoyu produced from defatted soybeans and wheat is about 0.3 to 0.5%.

In Japan, shoyu is sold in two types and sizes of containers: wooden kegs (72 liters and 18 liters), and glass bottles (2 liters, 1.8 liters, and 1 liter). The most popular of these in Japan is the 2 liter glass bottle, which presently costs 100 to 250 yen.

All shoyu exported from Japan has been regulated by government law since 1950. The inspection consists of both organoleptic and analytical tests involving baumé, sodium chloride content, extract, and total nitrogen. Wartime circumstances gave rise to very diluted shoyu which still contained 18% salt, but got its dark brown color from caramel and had a nitrogen content of only 0.1 to 0.2%. These circumstances also led to the chemical hydrolysis of oilseed protein such as defatted soybean meal, copra meal, peanut meal, and sometimes cottonseed meal in order to get shoyu-like substances. MSG manufacturers were chemically hydrolyzing soybean and wheat protein. They succeeded in refining and processing the mother liquor of glutamic acid [HVP] to be used as a very inexpensive way of increasing the quantity of shoyu. Even today this accounts for about 30% of Japanese shoyu.

All of these circumstances delayed the restoration of the quality of Japanese shoyu for a long time after World War II. In 1963 new quality standards were implemented by the Japanese government, supported by the Japanese Shoyu Association and many technicians. The law of the Netherlands forbids the use of the name "soy sauce" for all products except those made from soybeans by fermentation, and with a nitrogen content more than a certain amount. This law excludes most Japanese soy sauce, and Japanese shoyu makers would like to see the law changed.

History: The word shoyu first appeared in Japan in 1596, and in China in 1618, as far as is known in Japan. "Years ago several kinds of beans and corn were used as raw materials; nowadays, however, only soybeans and wheat are used in Japan." Soybeans were first introduced into Europe in 1723 by Thunberg, later president of Upsalla University. In 1723, the population of Tokyo was one million and there were nine associations of shoyu makers in Japan, including the Noda association, which consisted of 19 manufacturers.

Export history: "Japanese shoyu was exported to European countries by the Dutch about 300 years ago. According to old records shoyu was presented to Louis XIV, and it was kept as a secret ingredient by the cooks of the court; the same period when coffee from Ethiopia was first brought to him." For 200 years after that time, export of shoyu was not widely permitted by the Japanese government. Meanwhile Chinese soy sauce became popular all over the world. Though the export of Japanese shoyu was reopened in the Meiji period (1868-1912), the market share of Japanese shoyu worldwide is still very small. Only about 0.2% of the shoyu made in Japan is presently exported, but the amount is increasing year after year. Note: This is the second earliest document seen stating that Louis XIV used shoyu; the first was by Obata (1959). However Obata admitted in 1983 that his statement was pure speculation, with no document to support it.

Defatted soybeans: "The advantages of the use of defatted soybeans are lower cost per unit weight of nitrogen and the reduction of fermentation period. The period to get

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the highest content of glutamic acid in mash is 10 to 12 months for defatted soybean mash, while it is 18 months for whole-soybean mash at one natural temperature. The disadvantages of defatted soybeans are inferior stability of the final product with respect to oxidation and heating, lower glycerol content and higher acidity, and a little difficulty in alcoholic fermentation. This higher acidity is caused by higher lactic acid content.

To reduce the fermentation period: Use defatted soybeans, treat the soybeans adequately, make koji with high enzymatic activity, and warm the mash. Several years ago a warming temperature of 40°C (104°F) was used, but nowadays there is a trend toward the use of lower warming temperatures (30-35°C maximum) in order to avoid inferior odor and a decrease in the amino acid content. A lower temperature during the beginning stage of fermentation is widely believed to be preferable to promote high nitrogen yield, especially higher content of glutamic acid, and to promote alcoholic fermentation.

Since ancient times the 3 most difficult processes have been culturing the mold, stirring the mash, and pasteurization. The various functions of pasteurization are examined. During and after World War II, when the quality of shoyu declined sharply, and it was easily damaged by filmforming surface yeasts, the pasteurization temperature was raised to more than 80°C and butyl-para-hydroxybenzoate, an artificial preservative approved by the government, was added. Nowadays, however, since the quality has been restored, this pasteurization temperature cannot be lowered, because consumers are accustomed to the flavor from the higher temperature.

Future problems: Concentration and dehydration of shoyu, more economical containers, new methods of pressing the mash for higher efficiency, further reduction of the fermentation period, export of shoyu, development of highly processed secondary products, etc. Address: Noda Shoyu Co., Ltd.

4417. Will, Joanne. 1964. He puts on a show in the kitchen. *Chicago Tribune*. June 26. p. B1.
• ***Summary:*** "Dick Kallman, star of the musical 'How to Succeed in Business Without Really Trying,' is a bachelor and a cook. His recipe for Veal piccata calls for soy sauce and monosodium glutamate. He says that 'soy sauce gives the veal a nice tang. It's my favorite and poultry seasoning.'" Four photos show Kallman cooking.

4418. Norin Suisan-sho, Nosan Engei Kyoku, Hatasaku Shinko-ka. 1964. Daizu ni kansuru shiryo [Statistics concerning soybeans]. Tokyo, Japan. 26 cm. [Jap]
• ***Summary:*** This yearly report, published by Japan's Ministry of Agriculture, Forestry, and Fisheries (MAFF), is packed with detailed statistics on soybean production, trade, and utilization in Japan. Address: Tokyo, Japan.

4419. Lerner, Michael D. 1964. Sliver of a shop has big trade in its stock of 700 exotic foods. *Washington Post, Times Herald*. Aug. 15. p. A3.
• ***Summary:*** Irving Karabell owns the 4½ foot wide specialty foods store at 1749-A Pennsylvania Ave. One of his "fastest moving items is a soja sauce favored by Indonesians that is called ketjap benteng."

Karabell says of Indonesians that if they don't have this sauce, "'they have to go back to their country.'"

4420. **Product Name:** Emsoy Sauce.
Manufacturer's Name: Eustace Miles Foods Co., Ltd. (Marketer).
Manufacturer's Address: Colnbrook, Bucks. [Buckinghamshire], England.
Date of Introduction: 1964, August.
Ingredients: HVP, sea salt.
Wt/Vol., Packaging, Price: Bottle.
How Stored: Shelf stable.
New Product–Documentation: Ad in *The British Vegetarian*. 1964. July/Aug. p. xv. "Eustace Miles: Specialists in Foods." This is a "piquant liquid seasoning made from hydrolised vegetable protein, extract of soya beans, and genuine sea salt." Add to stews, pies, and savouries.

4421. Smith, A.K. 1964. The Mount Fuji meeting. An international symposium on oilseed protein foods. *Soybean Digest*. Aug. p. 18-20.
• ***Summary:*** The symposium, sponsored by the International Institute of Food Technology, was held on May 11-15 at the Mt. Fuji Hotel, Lake Yamanaka, Japan. "The 85 technologists participating in the program represented 20 countries and included 30 from Japan and 20 from the United States. An additional 26 technical observers represented the Japanese food industry." "The Mount Fuji symposium was a historic occasion for the advancement of oilseed protein foods, being the first time an international conference was devoted solely to this subject."

"Dr. Y. Sakurai of Tokyo University and George F. Stewart of the University of California, Davis, were co-chairman for the meeting. Dr. T.M. Anson, assisted by others, developed the program. Dr. Masahiro Nakano was chairman of a committee to collect and display oilseed protein foods."

"Soybeans, peanuts, cottonseed, sesame, and coconut were the five oilseeds included in the program as sources of food proteins. Because of their long history and extensive use for food, soybeans were the topics of a major part of the papers and discussion."

"Among the newer developments in the Orient, K.S. Lo of Hong Kong reported on his successful commercial operation in the daily production of 24,000 cases of soybean milk in his two plants. His milk is made from well-washed

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and dehulled soybeans. It contains about 3% protein, 2-3% fat, and 5-7% carbohydrates, with added vitamins and calcium. Mr. Lo's methods for marketing soymilk are unique; he is also a large dealer in bottled soft drinks, and he markets soy milk as a soft drink. His milk competes with soft drinks rather than with other forms of milk or other health foods. Regardless of his method of marketing, he feels that the product is serving an important nutritional function in the Hong Kong area." Note: Vitasoy is once again being fortified with vitamins and calcium.

Dr. Tokuji Watanabe of the Food Research Institute reported on new ways of making tofu, such as "packed or bagged tofu" which is increasing in popularity. The soymilk is coagulated with calcium sulfate inside a polyethylene or vinylidene chloride plastic bag followed by heating in a water bath. This new process saves time and labor. Several plants are now producing 20,000 bags per day. Tofu is now also being freshly prepared in the home from spray-dried soy milk, coagulated with calcium. "More than 285,000 metric tons of soybeans and 65,000 metric tons of soybean meal are consumed annually for making fresh tofu in Japan, and because of low cost and high food quality, its consumption is said to be increasing.

Concerning miso, koji is now being made by a continuous method in 20-inch deep metal trays. Miso soup is now sold in a dried form. Shoyu production consumes 250,000 metric tons of soybeans of the equivalent as meal.

"The use of soy flour and grits in the United States for edible purposes was estimated at 200 million pounds and in England at 40 million pounds. The largest use of soy flour in the United States was estimated at 50 million pounds for bread and other baked products. In England, most soy flour is the full fat, enzymatic active type and is used at about 0.75% for improving color and flavor of baked goods."

"While isolated soybean protein for industrial uses has been produced since 1937, the production for food protein dates only from 1959. The production of industrial protein is carried on by two U.S. producers and annual production was estimated to be in the range of 40-50 million pounds. Four U.S. companies were reported to be producing or engaged in extensive research on isolated protein for food uses. The newest to be manufactured is referred to as a protein concentrate. It is prepared by washing soy flakes either with 80% alcohol or with water at the isoelectric point of the protein (pH 4.5). The concentrates must contain 70% protein whereas the isolate is 95% or more. The largest use of the isolate and concentrate is in comminuted or ground meat products, also referred to as sausage-type meats. Soy protein concentrate can be legally used in sausage-type meats up to 3.5% of the finished product." Address: NRRL, Peoria, Illinois.

4422. Sim, K.S. 1964. [Studies on the antifungal activity of capsaicin for Ganjang soy sauce]. *Yakhakhoe Chi* (*J. of the Pharmaceutical Society of Korea*) 8(3):69-73. Sept. [Kor]*

• ***Summary:*** Cayenne pepper has been used traditionally as a hot seasoning and an antifungal agent in Ganjang soysauce in Korea. However the correlation between its components and antifungal activity has been unknown. Capsaicin is known as a hot component of cayenne pepper. Antifungal activity of capsaicin in Ganjang soy sauce was studied and the results are as follows: (1) In Ganjang soy sauce, antifungal activity of capsaicin is as strong as butyl-p-hydroxybenzoate.

(2) Antifungal activity of capsaicin was intensified by the addition of sodium chloride.

(3) The antifungal activity of capsaicin was increased by the lower pH (pH 5.5-4.5) of Ganjang soy sauce.

Note: This is the earliest English-language document seen (Jan. 2012) that contains the word "Ganjang." It appears in the English-language summary of the article. Address: College of Pharmacy, Seoul National Univ., Seoul, Korea.

4423. Hardjo, Suhadi. 1964. Pengolahan dan pengawetan kedelai untuk bahan makanan manusia [Soybean processing and preservation for human consumption]. Paper presented at Seminar Kedelai (Soybean Seminar, Rapat Kerdja Kedelai). 14 p. Held 28-30 Sept. 1964 at Bogor, Indonesia. [Ind]*

• ***Summary:*** Describes several methods of processing and preserving soybeans in Indonesia, including the production of tempeh, tofu (tahu), soy sauce (kecap), tauco (soybean paste), koji, and soybean flour.

Note: This is the earliest document seen (March, 2009) uses the word "tauco" (spelled in that way) to refer to Indonesian-style miso.

4424. Poorwo, Soedarmo. 1964. Kedudukan katjang kedelai sebagai makanan di Indonesia [Soybeans as a food for Indonesians]. In: Seminar Kedelai, Bogor. (Soybean Seminar, Rapat Kedelai Kerdja, Bogor). See p. 5. Held 28-30 Sept. 1964. [Ind]*

4425. Prawiranegara, Dradjat D. 1964. Pentingnja kedelai dalam menu Indonesia [The importance of soybeans in the Indonesian menu]. In: Seminar Kedelai, Bogor. (Rapat Kedelai Kerdja, Bogor). See p. 5. Held 28-30 Sept. 1964. [Ind]*

4426. Kikkoman Shoyu Co., Ltd. 1964. Kikkoman Shoyu Co., Ltd. (Leaflet). Noda City, Chiba prefecture, Japan. 2 p. Oct. Front and back. 17 x 18 cm.

• ***Summary:*** On one side of this leaflet are many facts about the company, including capital (¥2,700 million), yearly output (66 million gallons of shoyu), products, plants in Japan, offices in Japan, top management team, international offices in USA (San Francisco, Los Angeles, New York), Japan Calpak Co. Ltd (Del Monte), other divisions.

On the other side is a map of Japan showing the locations of Kikkoman plants and offices, and a map

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showing how to get from Tokyo to Noda by train or road. Address: Noda City, Chiba prefecture, Japan.

4427. *Foreign Agriculture.* 1964. Japan now using U.S. soybeans in food. 2(46):7. Nov. 16.
• ***Summary:*** More than 10% of the nearly 49 million bushels of U.S. soybeans exported to Japan during the 1963 marketing year went into the production of three staple foods–shoyu, tofu, and miso. Until 6 years ago, Japan imported no soybeans from the U.S. for food manufacture–all U.S. imports were processed into oil and meal.

4428. New Ginza. 1964. The finest in Japanese cuisine: Japanese theatre restaurant (Ad). *Los Angeles Times.* Nov. 20. p. D11.
• ***Summary:*** "Traditional turkey dinner... Roast turkey with rice and chestnut soysauce. Dressing and cranberry sauce.

Or: Baked ham $3.25, including "Japanese style soybean cake [tofu] turkey roll, Chestnut soysauce rice."

Or. Japanese teriyaki ham. Address: 254 E. 1st St., Los Angeles. Phone: MA. 5-2444.

4429. Jones, Dorothea Van Gundy. 1964. Soybean magic. *Today's Food* (*Loma Linda Foods, Riverside, California*) 9(3):4-6. Autumn.
• ***Summary:*** The author is on her way to Tokyo, Japan, where the American Soybean Association has asked her to participate in a soybean seminar and fair; she will lecture and demonstrate the use of soybeans in human nutrition.

"My interest in soybeans goes back many years when our family came in contact with them at the world's fair in San Francisco. They were featured in one of the Oriental displays. My father became so enthusiastic, he promptly bought a hundred pound sack of soybeans and we began experimenting. We discovered they were hard to cook and had a peculiar flavor. It was some time before we found a way to mask their beany taste and prepare them properly... My father [T.A. Van Gundy] became a real pioneer in introducing this king of the legume family and often was referred to as 'Soybean Van Gundy.'

"Many years ago, Loma Linda Foods became aware of the nutritional value of soybeans and began manufacturing a few products. Today there are twenty-five soybean foods under the famous Loma Linda label–some made entirely from soybeans and others incorporating them in some form. One of the latest additions to the Loma Linda line is Boston Style Baked Soybeans.

A photo shows Dorothea Van Gundy Jones with Miss Kojima, assistant manager of the Japanese Soybean Association [sic, Japanese American Soybean Institute], who is visiting the USA as part of her world tour to study uses of the soy bean.

Page 5 shows that the following Loma Linda brand soy products are now available: Soy Flour, Soyagen (All Purpose or Malt), Sandwich Spread, VegeChee, Smokene, Boston Baked Soybeans, and Soy Sauce. A photo on the cover of this issue of Loma Linda's quarterly magazine shows a can of Loma Linda VegeBits. Address: Nutritionist, Loma Linda Foods, 11503 Pierce Place, Riverside, California.

4430. Nichols, Teal, ed. 1964. Zen cookery. Chico, California: The Ohsawa Foundation. 83 p. Index. 22 cm. A second edition appeared in 1965.
• ***Summary:*** This is the first macrobiotic cookbook written by an American, and its influence was profound.

Note 1. The Nov. 1964 edition of *Yin Yang* magazine, published in Chico, California, announced that the book had been published that month (Nov.).

"Acknowledgements: Our heartfelt gratitude goes to Lima Ohsawa, the foremost authority on Macrobiotic Cookery, without whose patient assistance and teaching this book would not have been possible. Many of the recipes appearing in Zen Cookery are from her collection in an earlier edition of Zen Macrobiotics. The Editor wishes further to thank the following people for recipes, suggestions, and invaluable comments: Joanne Hirsh, Dorothy Salant, Nina Bauman, Cornellia Aihara, Penny Smith, Shayne Oles, Betty Kennedy, and Jane Andrews."

"Zen Cookery is a collection of recipes gleaned from the files of many people, all of whom have adjusted their salt intake to suit their own needs. Their recipes reflect this."

Contents: 1. Grains. 2. Noodles. 3. Vegetables. 4. Soups. 5. Sauces. 6. Salads. 7. Inspirations from around the world. 8. Special dishes. 9. Miso soy bean paste. 10. Tamari soy sauce. 11. Breads. 12. Pancakes and crepes. 13. Pie doughs. 14. Desserts. 15. Beverages.

Note 2. This is the earliest English-language document seen (March 2012) that contains the term "tamari soy sauce." It is also the earliest English-language cook book seen that contains the word "tamari" or the term "tamari soy sauce."

Each recipe is numbered. Recipes mentioning soy in recipe name (and a few other recipes introducing foods new to the USA): 2. Rice with tamari soy sauce. 3. Rice with aduki beans. 4. Rice & aduki pudding. 7. Sesame rice. 9. Rice with chick peas (garbanzo). 21-28. Buckwheat recipes. 34. Bulghur. 48. Buckwheat noodles in soup (Soba with kombu). 50. Buckwheat noodles with fried bean curds [tofu]. 54. Buckwheat noodles with miso sauce. 55-56. Buckwheat noodles in kuzu sauce. 61. Udon with aduki. 62. Carrot sesame nituke [nitsuke]. 75. Scallion nituke with miso (soybean paste). 76. Carrot and onion nituke with miso. 77. Onion nituke with miso. 78. Vegetable miso stew. 79. Boiled pumpkin with miso. 80. Vegetable sauces with kuzu arrowroot (and tamari soy sauce).

81. Vegetables with tamari soy sauce and tahini. 98. Jinenjo (5 recipes). 101. Miso-vegetable relish. 102. Aduki beans, black [soy] beans, chick peas. 105. Baked chick peas. 106. Buckwheat-aduki pancakes. 107. Udon with

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aduki beans. 108. Chestnut-aduki gelatine. 109. Chick pea party dip (with tahini and tamari). 110-118. Sea vegetables (kombu, nori, hiziki, wakame, most with tamari). 119. Clear broth (with tamari). 122. Tamari-vegetable broth. or stock. 123. Miso soup (2 types). 124. Creamed miso soup. 125. Root vegetable soup with miso. 131. Soybean soup. 134. Wakame soup (with miso). 149. Sesame sauce. 150. Miso sauce. 151. Miso salad dressing. 152. Thick tamari soy sauce. 153. Tahini tamari soy sauce. 154. Onion tahini sauce (with tamari). 172. Wakame salad.

189. Clam miso. 190. Scallop miso-lemon. 203 Miso spread [with tahini]. 204. Miso sauce [with tahini and orange rind]. 205. Sauce for vegetables [with black sesame and miso]. 206. Scallion miso. 207. Miso salad dressing. 208. Miso-vegetable relish. 209. Miso soup. 210. Udon with miso sauce. 211. Rice porridge with miso. 212. Deep fried miso balls. 213. Carrots and onions miso. 214. Vegetables miso. 215. Tekka (2 types). 216. Tea with tamari soy sauce. 217. Tamari broth. 218. Stringbeans. 219. Dried radish (daikon). 220. Shredded sea vegetables (hiziki). 221. Thick tamari soy sauce. 222. Tahini-tamari sauce. 223. Vegetables with tahini-tamari soy sauce. 234. Aduki muffins. 238. Miso spread (for sandwiches). 239. Tahini-tamari spread. 246. Buckwheat aduki pancakes. 272. Aduki pudding. 273. Chestnut-aduki gelatine. 274. Kanten jello (with agar).

291. Grain Milk (Kokkoh [Kokoh]: a finely ground combination of roasted rice, glutinous rice, oatmeal, soybeans, and sesame seeds). 294. Tea with tamari soy sauce (syo-ban).

Note 3. This is the earliest document seen (Feb. 2005) that mentions Kokkoh (or Kokoh), a grain milk introduced by macrobiotics.

Note 4. Tofu, amazake, and seitan are not mentioned in this book. 287 is Ohsawa Coffee (Yannoh) and 288 is Dandelion Coffee.

Note 5. This is the earliest document seen (June 2000) that mentions the use of miso in a salad dressing (Nos. 151 and 207).

Note 6. In 1985, when writing a revised edition of this book titled *The First Macrobiotic Cookbook*, Herman Aihara wrote (p. v) that this 1964 edition, published by the Ohsawa Foundation of Chico, California, was first the edition of the various subsequent and very influential books with this title.

Note 7. This is the earliest document seen (March 2011) concerning Herman or Cornellia Aihara and macrobiotics (or soyfoods).

Note 8. Along with soyfoods, this cookbook (and its many successors) also introduced numerous other basic Japanese foods such as aduki [azuki] beans (3-4, 102, 106-08, 234, 272-73), sea vegetables of all types, and soba.
Address: Chico, California.

4431. Sakurai, K. 1964. The role and significance of soy bean foods in Japan. University of Tokyo. Unpublished manuscript. *
Address: Tokyo, Japan.

4432. **Product Name:** Sovex Flavoring Concentrate (Thick, Dark Brown Paste).
Manufacturer's Name: Sovex Natural Foods, Inc.
Manufacturer's Address: Basement of Goodbrad home, Collegedale, Tennessee. Later–9104 Apison Pike, Box 310, Collegedale, TN 37315. Phone: 800-227-2320.
Date of Introduction: 1964.
Ingredients: Soy sauce (water, salt, hydrolyzed vegetable protein, corn syrup, caramel coloring), primary grown yeast, lecithin, vegetable flavorings. In 1971: Pure dry yeast, water, salt, soybean protein derivations [hydrolyzed vegetable protein], corn syrup, coloring, vegetable flavoring.
Wt/Vol., Packaging, Price: 9 oz plastic jar. Retails for $2.44 (7/90, California).
How Stored: Shelf stable.
Nutrition: Per 1 teaspoon (6 gm): Calories 11, protein 1 gm, carbohydrate 1 gm, fat 0 gm, cholesterol 0 mg, sodium 300 mg, potassium 50 mg.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 160. Lists the ingredients in "Sovex (Sovex Inc.)."

Talk with John Goodbrad, president of Sovex. 1980. Nov. 26. Sovex was founded in 1953 by the Hurlingers in Holly, Michigan. The company's original product was Sovex, a flavor concentrate paste, made from a mixture of brewer's yeast and soy sauce. In 1964 John bought the business [actually the formula and brand name] and moved it to Collegedale, Tennessee. Note: Ruth Goodbrad, John's wife, made the product in the basement of their home.

Talk with Glen Fuller, President and CEO of Fuller Life Inc. 1998. Oct. 28. Glen is interested in the history of Sovex, which is now named Fuller Foods, Inc. John Goodbrad did not buy any business from the Hurlingers in Michigan. Rather, he bought their formula for making Sovex spread and the brand name. The word "Sovex" is derived from the words "soy vegetable extract." The soy part of it was real soy sauce, and still is. Glen has heard of the Hurlingers in Holly, Michigan, but they didn't call their company Sovex. Glen does not know the name of the Hurlinger's company, but he thinks he could find it in the company archives. In about 1961 Ruth Goodbrad, John's wife, began making Sovex in their basement in Collegedale, Tennessee. In the early years, Sovex was basically Ruth's business.

4433. Tat, P.V. 1964. Nuoc mam [Nuoc mam fish sauce]. *Vietnemese Bulletin of Science and Technology* No. 45. [Vie]*

4434. Tat, P.V. 1964. [Soyabean sauce]. *Vietnemese Bulletin of Science and Technology* No. 45. [Vie]*

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4435. Aykroyd, Wallace R.; Doughty, Joyce. 1964. Legumes in human nutrition. *FAO Nutritional Studies* No. 19. xi + 138 p. Reissued by FAO in 1982 (152 p.). [119 ref]
• ***Summary:*** Contents: Preface. Introduction. History of legumes. Production and consumption. Composition and nutritive value. Methods of processing and cooking: Soybean preparations in East Asia (p. 48-52)–Germination (sprouted soybeans), soybean curd (tofu, incl. *chou tofu* or "stinking soybean curd"), soy sauce (shoyu), soybean paste (miso), tempeh, natto, hamanatto, soybean "milk," fermented preparations from groundnuts. Groundnut flour.

Effects of processing on nutritive value: Soaking, decortication, heating, germination, fermentation (mentions tempeh), effects of storage.

Toxic substances. Legume proteins. Observations on the value of legumes in human feeding. The place of legumes in human diets. Appendixes: (1) Legumes eaten by man. (2) Nutritive value of important legumes. (3) Amino acid content of legumes. (4) Account of lathyrism in central India by General Sleeman. (5) Bibliography of soybean (11 references). Some legume recipes. References.

Soybeans are also mentioned on pages 15 (Table 1. "Important legumes"), 23 (Indonesia, soybean curd, soy sauce, tempeh), 23-24 (Japan, miso, shoyu, natto, tofu, Korea, Taiwan), 39-40 (carbohydrates in soybeans include "galactans, pentoses, and hemicelluloses which are poorly utilized." Fats: only the groundnut and soybean are important sources of it), 55 (heating and trypsin inhibitor, methionine and cystine, raw unheated soybean meal, saridele), 58 (fermentation, tempeh, PER), 75-76 (protein values), 81 (Dean used soybeans to treat a protein deficiency), 84 (soybeans in India), 97 (soybean curd).

Appendix 1, titled "Legumes eaten by man" (p. 101-14), lists the various legumes by their Latin names. The entry for *Psophocarpus tetragonolobus* gives its vernacular names as "Goa bean, asparagus pea, winged pea, winged bean, sesquidillas."

Note: This is the earliest English-language document seen (Aug. 2007) that uses the word "sesguidillas" to refer to the winged bean. Address: 1. Dep. of Human Nutrition, London School of Hygiene and Tropical Medicine; Former Director, Nutrition Div., FAO, Rome, Italy.

4436. Jones, Dorothea Van Gundy. 1964. The soybean cookbook: Adventures in zestful eating. New York, NY: Gramercy Publishing Co., a divison of Crown Publishers Inc. Paperback published by Arco Publishing Co. Inc. xii + 240 p. Foreword by Ruth Stout. Index. 21 cm.
• ***Summary:*** This lacto-ovo-vegetarian cookbook is identical to the 1963 edition published by Devin-Adair except: (1) Mildred Lager, who died in Aug. 1960, is no longer listed as the author. Note: Mildred's husband, Ed Jones, married Dorothea Van Gundy, the present author. (2) The dust jacket is white, yellow, green and black on a blue background. A face, made of yellow and green soybeans, is wearing a chef's hat. (3) The publisher of the hardcover edition is now Gramercy rather than Devin-Adair. The copyright date (written in hard-to-read Roman numerals) is 1963, the same as the Devin-Adair edition. The date of publication is not given, but it must have been after 1963. We have taken the liberty of giving it as 1964. (4) The title of the second preface has been changed to "Preface to the revised edition" from "Preface to the 1963 edition." Both were written by Dorothea Van Gundy Jones of Arlington, California. Address: Arlington, California.

4437. Ohsawa, George. 1964. Le Zen macrobiotique; ou, L'art du rajeunissement et de la longévité [Zen macrobiotics, or the art of rejuvenation and longevity]. Paris: Librairie Philosophique J. Vrin. 212 p. [Fre]*
• ***Summary:*** The author (lived 1893-1966) lists his name on the title page as "Georges Ohsawa (Nyoiti Sakurazawa)."

4438. Watanabe, Minoru. 1964. Nihon shokuseikatsu-shi [History of Japanese food culture]. Tokyo: Kichikawa Kobunkan. 330 p. Illust. Index. 21 cm. [Jap]
• ***Summary:*** Amazake (p. 43), tofu (p. 3, 129), natto (p. 147), miso (p. 3, 88, 102, 130, 149, 203-05, 241, 288, 301, 314), shoyu (3, 149, 202, 241, 301).

Amazake: There were two types of fermented foods in Japan prior to the 8th century A.D.: The sake line and the hishio (*chiang*) line. The sake line used mainly rice as an ingredient but barley (*mugi*), broomcorn millet (*kibi*), glutinous mountain yam (*yama imo*), and fruits were also used. The hishio line led to miso and soy sauce. Both the early Japanese classics Kojiki (A.D. 712) and the Nihon Shoki (A.D. 720) mention sake. From burial mound tombs created during the period A.D. 300 to 600 have been excavated groups of stone burial objects which are thought to be sake making implements. The earliest sake was made from glutinous rice (*mochi-gome);* it was quite sweet, thick, and glutinous/sticky, and was called "one night sake" (*hitoyo-zake*). It was thick like today's amazake base before it has been diluted, and was probably served on tree leaves and eaten, rather than being drunk as a beverage. After the arrival of foreigners in Japan bringing brewing methods, regular rice started to be used to make drinks with a high alcohol content. Salty and/or pungent condiments (*karami*) were also added. Japanese cedar or cryptomeria (*sugi*) or bamboo leaves may have been used as preservatives. All of these beverages were thick grogs, not clarified sake. Moreover, unlike in later eras, they were not used to add color/pleasure to people's daily life. Rather they were used mainly at religious festivals and ceremonies.

4439. *Daizu ni Kansuru Shiryo (Statistics on Soybeans and Soyfoods in Japan).*1964--. Serial/periodical. Tokyo: Norin-

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sho, Engei Kyoku, Tokusan-ka (Japan Dep. of Agriculture, Forestry, and Fisheries). Annual. 26 cm. [30 ref. Jap]

• ***Summary:*** This annual publication of the Ministry of Agriculture, all in Japanese, is the single best unified source of statistical information on soybeans and soyfoods in Japan. By the 1970s the name of the publishing organization had changed to Norin Suisan-sho, Nosan Engei Kyoku, Hatasaku Shinkoka. The average length of a volume was 146 pages in the 1960s, increasing to 170 pages in the 1980s.

Table of Contents for the 1984 Edition reads: I. Finding where soybeans fit (in Japanese agriculture) (p. 1). 1. Changes in the size of area of the cultivated fields (p. 1). 2. Changes in usage of land (p. 2). 3. Changes in the rate of usage of cultivated fields (p. 6). 4. Converting rice fields to other crops (p. 7).

II. Production trends (p. 14). 1. Results of production (p. 14). 2. Present status of management (p. 28).

III. Grant money system (p. 56). 1. Outline of grant money system for soybeans and rapeseeds (p. 56). 2. Changes in the standard price of soybeans and the amount of soybeans subject to the grant money (p. 58). 3. Results of the regulated sales of soybeans (p. 59). 4. Monthly changes in the price of soybeans (p. 60). 5. Standards of inspection of soybeans (p. 62). 6. The present status of inspecting and ranking soybeans (p. 66).

IV. Outlines of the budget of the countermeasure of promoting the production of soybeans (p. 70). 1. Changes in the budget (p. 70). 2. Outline of budget of soy-related items in 1984 (p. 72). 3. The present status of enforcement of the enterprises (p. 82).

V. Varieties of soybeans (p. 86). 1. Table of the soybean varieties which were registered as Norin Bango (agriculture & forestry number) (p. 86). 2. Table listing the main existing varieties (p. 96). 3. Table of the varieties which each prefecture recommends (p. 102). 4. The status of planting different varieties of soybeans (p. 104).

VI. The present status of management techniques of cultivation (p. 109). 1. The season of soybeans in the main producing prefectures (p. 109). 2. Outline of the national association of promoting the improvement of management of beans in 1983 (p. 112).

VII. Trend of demand for soybeans (p. 132). 1. Changes in the demand for and the rate of self supply of soybeans (p. 132). 2. The status of demand for soybeans by year (p. 133). 3. Changes in the amount of soybeans imported for food use and the amount of soybeans used in various items (p. 133). 4. The results of production, shipping, and the usage of raw materials of miso and shoyu (p. 136). 5. The status of consumption of processed soybean products (p. 140). 6. Nutrients of soybeans and soybean products (= soyfoods) (p. 144). 7. Long term view (p. 150). 8. Changes in the rate of making soybeans as merchandise (p. 150). 9. The status of the production of soybeans in main producing countries (p. 151). 10. Changes in the amount of soybean production in the USA (p. 152). 11. The amount and the price of exported soybeans of main exporting countries, by countries (p. 153). 12. The amount and the price of imported soybeans of the main importing countries, by countries (p. 154). 13. The Japanese import situation for soybeans, by years and countries (p. 156). 14. The imported amounts, exported amounts, and the domestic prices by years (p. 162). 15. Changes in the soybean tax (p. 164).

4440. Kikkoman International Inc. 1964? The Japanese way with food and flowers (Brochure). San Francisco, California. 16 p. Undated. 12 x 17 cm.

• ***Summary:*** On the cover of this color brochure is a red flower with green leaves hanging from a aged board, against a light gray background. In the lower right is the red Kikkoman logo. The first six pages contain text and photos related to the Japanese way with flowers–flower arranging. The rest of the brochure concerns the Japanese way with food, including recipes and color photos of the dishes prepared from those recipes. All the recipes except two feature meat, fish, or poultry. These two are: Kikko-cream vegetable sauce (for asparagus, cauliflower, or cabbage), and Shoyu corn on the cob. This brochure is printed in Japan. Kikkoman soy sauce is "Brewed by Noda Shoyu Co., Ltd, Japan."

4441. Kikkoman International Inc. 1964? Delicious sukiyaki, tempura, teriyaki made by Kikkoman way (Leaflet). San Francisco, California. 4 panels. Each side. Undated. 21 x 8 cm each panel.

• ***Summary:*** On the cover of this color leaflet (see next page) is a large bottle of Kikkoman of Kikkoman All-purpose Soy Sauce to the left and in front of some red meat–on a pink background. The first two inside folds show color photos of Kikkoman soy sauce in 7 different sizes and containers (from 5 fl oz glass dispenser to 4.75 gallon wooden keg, all "Brewed by Noda Shoyu Co., Ltd., Japan"), the addresses of Kikkoman's offices in San Francisco, Los Angeles, and New York, a blue and white aerial view illustration of a huge Kikkoman plant in Japan, a half-page article about Kikkoman and Japanese cooking, and the bold statement that Kikkoman is "The purveyor to the Imperial Household." The next 4 inside panels contain definitions of sukiyaki, tempura, and teriyaki, and their corresponding recipes–all using beef, seafood, or chicken. There are short recipes for steak sauce, salad dressing, vegetable sauce, and seafood sauce. On the back panel are black-and-white photos of Japanese table utensils, with their names.

Note: This leaflet was published before 1966 because in 1965 Kikkoman opened a branch office in Chicago, Illinois. That office is not mentioned in this leaflet. Address: 900 Marin [Main] St., San Francisco 24, California.

4442. Ohsawa, G. 1964? Macrobiotics: The art of longevity

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and rejuvenation. New York, Paris, Brussel [sic], Tokyo: Ohsawa Foundation. Printed in the U.S.A. by Eastern Technical Publications (Boston & New York). 218 p. Undated. Index. 17 cm.

• ***Summary:*** This is the first American printing of "Zen Macrobiotics." The word "Zen" was removed from the title at Michio Kushi's suggestion. The cover is yellowish tan. The author is George Ohsawa.

Contents: Foreword: Two ways to happiness through health. Preface: Health to peace. Books by the same author (7 in French, 9 in Japanese, one in English, plus 4 periodicals). Table of contents. 1. Macrobiotics and Oriental medicine. Why I have written this book. What is the philosophy of the Far East? 2. What is my therapy? Unhappiness, illness, crime. Incurable disease. Three categories of cure. What we must not cure. Satori. Courage, honesty justice. Tolerance. 3. The six main conditions of health and happiness. 4. Nothing shall be impossible to you. You should have infinite freedom. You must be your own doctor. 5. Ohsawa's macrobiotic cuisine. 6. Principal foods: Rice, buckwheat, udon etc., millet, raw rice etc. (p. 62-71, with recipes). 7. Secondary foods (p. 72-103, with recipes): Nituke, soup (lotus root ankake, kuzu gruel, cracknel yuba), pie, gyoza (piroshiki), chapati, jinenjo (wild potato, tororo). Egyptian beans (chick peas, *pois chiche*), beans (boiled soy beans with miso, gomoku beans, goziru [gojiru] soup, aduki beans), corn, aduki (ogura vermicelli), goma-tohu [sesame tofu], aemono (salads), varieties (chou farci, buckwheat crepe), wild vegetables, seaweeds (shi kobu [shio kombu], kobu maki, fried kobu, musubi kobu, kobu soup, matsuba kobu, salmon head kobu-maki, hiziki with lotus root, hiziki nitsuke, hiziki with "age," hiziki and soyabean, gomoku hiziki, hiziki rice), wild plants (dandelion leaves or root, aozu {wild spinach}, fuki), miso and tamari preparation (sauce miso, miso cream, muso [miso with tahini and orange peel], miso soup, carrot and onion au miso, vegetable au miso, oden au miso, buckwheat dango au miso, miso ae, tekka no. 1 and 2), syoyu [shoyu] (sakura rice, sauce au shoyu, sauce au sesame, bouillon au shoyu, ositasi [ohitashi], oatmeal cream, potage oatmeal, sauce bechamel a la sauce shoyu, mayonnaise a la sauce shoyu, sauce Lyonnaise; "Shoyu diluted with a little water is very good for Sasimi [Sashimi = raw fish] and fried oyster, tempura, fish Sukiyaki, tofu {vegetable cheese of soya beans}, etc."), beverages (rice tea, wheat tea, dandelion coffee, Ohsawa Coffee {Yannoh: incl. roasted and ground rice, wheat, aduki, chick peas, and chicory}, Kokkoh {incl. roasted rice, glutinous rice, oatmeal, soya beans, and sesame seeds}, Mu tea, syo-ban {coarse green tea with soy sauce}, kuzu [cream, with shoyu] {"A good drink for everyone"}, aduki juice, radish [daikon] drink no. 1 and 2, ransyo {one beaten egg + 50% of traditional Ohsawa shoyu}, soba tea, umeboshi juice, ume-syo-kuzu, special rice cream).

8. Special dishes. Desserts. 9. Yin and Yang. 10. Macrobiotic suggestions for various symptoms of disease (p. 131-36, with recipes): General suggestions (by disease), macrobiotic external treatment (tofu plaster, soya bean plaster, Dentie). 11. Specific curative dietary suggestions: Examples of diseases and their macrobiotic treatments. 12. Kokkoh: Macrobiotic food for baby. 13. On cooking. Salt. Folk medicine. Your history. Appendix: The case of Mr. E. (Cure in 10 hours). "Pro-forma death certificate of the American World Empire and its Gold Dynasty."

Ohsawa centers and friends (p. 217-18): England (Trustin Foods, London; Mrs. R. Takagi, London), France (Centre Ignoramus, Longue Vie, Guenmai [Genmai = brown rice], Yamato, Ohsawa-France; all in Paris), Germany (Miss M. Arnoldi, Heidelberg; Dr. P. Martin, Munich; Dr. Henning, Hamburg), Italy (Miss H. Onoda, Rome; Mrs. Baccolis, Rome), Japan (Nippon Centre Ignoramus, 8 Kasumi-cho, Minato-ku, Tokyo; Shinsekai, Osaka), Brazil (Casa Longavida, Sao Paulo), Sweden (Miss Ilse Clausnitzer, Stockholm), U.S.A. (Ohsawa Foundation, 61, W. 56th St., New York; Ohsawa Foundation, P.O. Box 238, Chico, California; Chico-San, Inc., 64, 5th Ave., Chico, California; Musubi, 61, W. 56th St., New York–Macrobiotic Restaurant).

This book is undated, but it contains clues as to when it was published. On page 190 is reference to an article in *Time* magazine dated 7 March 1960 about the sad state of health in the United States. Then on page 189, Ohsawa states: "Upon my arrival in the United States last November, I began my lectures on the philosophy and medicine of the Orient. I gave some in Los Angeles and San Francisco [California], but mostly in New York institutes and schools such as the Universalist Church, The New School for Social Research, Columbia University, New York City College, and the American Buddhist Academy. I have postponed my departure twice. But I am very happy as I have confirmed my assumption: marriage between paradoxical philosophy of the Orient and the materialistic techniques of precision of American science, which must be realized for the infinite freedom of Man and for world peace" (p. 189).

Concerning the date of publication, which is not given in or on the book. One guess is about 1964, because when you do a printing of a book, you want to print enough to last for at least two years. This 1962 + 2 = 1964. A pretty weak reason! Carl Ferré (6 and 8 May 2011) states: I've done enough printing to know that the book printed in the USA uses the same plates as the second printing in Japan except for two changes. They added "Printed in the USA by..." (in a different type face) to the back side of the first page, which is blank; and, they whited out "Zen" and the smaller "Macrobiotics" on the cover and title page and replaced both with one word: "Macrobiotics" (again, in a different type face). The rest of the book appears to be exactly the same as the second printing from Japan."

"My thinking is that 1964 is a pretty good guess because I believe it may have been arranged by the East Coast Group–thus, the word 'Zen' was off the title and it

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was printed by a printer in Boston and New York. This would be about the time Michio Kushi was getting settled in Massachusetts."

Note 1. These lines almost certainly describe Ohsawa's first visit to the United States. He arrived in November 1959 and stayed well into 1960.

Note 2. All recipes in this book are numbered, from No. 1 (Unpolished rice, p. 162) to No. 816 (Rice plaster, p. 136). The recipe numbers are identical to those published in the mimeograph edition of *Zen Macrobiotics* (also titled *Macrobiotics–The Biological and Physiological Foundation of Zen Buddhism*), published in early 1960.

Note 3. The contents of this book is very similar to that of the earliest published edition of *Zen Macrobiotics*, which was printed in Japan and was 218 pages long.

4443. Matsumoto, Kenji. 1965. Miso shôyu no aji [The flavor of miso and shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 60(1):30-33. Jan. [Jap]
Address: Nihon Jozo Kyokai.

4444. Fukushima, Danji. Assignor to Zaidan Hojin Noda Sangyo Kagaku Kenkyusho (Chiba-ken, Japan). 1965. Method for treatment of soybean proteins. *U.S. Patent* 3,170,802. Feb. 23. 10 p. Application filed 14 Dec. 1960. [6 ref]
• ***Summary:*** Describes solvent extraction of soybean meal using ethyl alcohol. Note: As of 1969 most of the soybean meal used in Japan for making fermented soy sauce has been extracted with alcohol, and this has made a great contribution to increasing soy sauce yields. Address: Yono-shi, Saitama-ken, Japan.

4445. Koshiyama, Ikunori; Iguchi, Nobuyoshi. 1965. Studies on soybean protein. I. A ribonucleoprotein and ribonucleic acids in soybean casein fraction. *Agricultural and Biological Chemistry* 29(2):144-50. Feb. [24 ref. Eng]
Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4446. Ito, Hiroshi; Ebine, Hideo; Nakano, Masahiro. 1965. Kôtanpaku teien miso. I. Seizô shori hôhô [High-protein, low-salt miso. I. Investigation of the manufacturing process]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 19. p. 127-36. March. [8 ref. Jap; eng]
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4447. Mogi, Masatoshi; Iguchi, N. 1965. Showa 39 nendo no shôyu, miso no kenkyû gyôseki [Accomplishments of shoyu and miso research during 1964 (Including HVP semi-fermented soy sauce and other related substances)]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 60(3):218-39. March. [440 ref. Jap]
Address: Noda Sangyo Kagaku Kenkyusho.

4448. Ohsawa, George. 1965. Zen macrobiotics: The art of rejuvenation and longevity. Revised, edited and annotated by Lou Oles. Los Angeles, California: Ohsawa Foundation, Inc., The Ignoramus Press iii + 120 p. No index. 22 cm. Series: The Philosophy of Oriental Medicine, Vol. 1. [20 ref]
• ***Summary:*** This is probably the 3rd English-language edition of *Zen Macrobiotics*. The 1st edition was published in Nov. 1960 in New York. Address: Los Angeles, California.

4449. Chang, C.H. 1965. [Chemical changes during the fermentation of Korean soy sauce, in connection with its fermentative period]. *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 6:8-13. April. [12 ref. Kor; eng]*
• ***Summary:*** Korean Mejues

Mejus were prepared by means of ordinary, improved, and compromised methods, and analysis of the changes in various chemical compositions of the soy sauces throughout the fermentation period of 10 weeks Now, their results are as follows:

(1) In all of the soy sauces under study, the content of organic acids showed a slight increase for several weeks, followed by a marked increase after this period.

(2) In all of the soy sauces the total nitrogenous content indicated a rapid increase for the first four weeks, followed by a slower increase.

(4) In all of the soy sauces the content of reducing sugars indicated a slight increase for the first four weeks, followed by a rapid decrease until 8 weeks in the improved soy sauce. Then, it maintained an almost flat curve. In the ordinary and compromised soy sauces, there was a rapid decrease in reducing sugars for the first six weeks, followed by an almost flat curve.

(5) In the ordinary soy sauces, the *Samwol-zang-bub* (soy sauce prepared in March) is considered to be based on a comparatively scientific ground during the fermentative period.

(6) In order to improve the taste in ordinary soy sauce it is favorable to delay the period of preparation. The adequate period of waiting appears to be at least 8 weeks. It is recommended to mix the materials with carbohydrate sources.

(7) According to the *Samwol-zang-bub*, in the improved soy sauce it is thought that 8 weeks were adequate for fermentation.

(8) The compromised method may be recommended for the improvement of homemade soy sauce, and it may also be superior in quality to the ordinary soy sauce. Address: Seoul Municipal College of Agriculture.

4450. Hesseltine, C.W. 1965. A millennium of fungi, food.

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and fermentation. *Mycologia* 57(2):149-97. March/April. [38 ref]

• ***Summary:*** A landmark, widely cited work on indigenous fermented foods. Interestingly, it makes no mention of amazake, or kanjang (Korean soy sauce). Contents: Tempeh. Ragi. Sufu (describes process, mentions pehtzes and the mold *Actinomucor elegans* NRRL 3104).

Color photos (sent by Dr. Clifford Hesseltine) show: (1) Luxuriant growth of *Actinomucor elegans* mold on some skewered cubes of tofu in an incubator; on the top row are uninoculated cubes. (2) Cubes of sufu in their final form after removal from brine.

Thamnidium (meat tenderizer and flavor enhancer from the mold *Thamnidium elegans*). Miso. Shoyu (incl. tamari. "In China, shoyu is more of the tamari type, that is, more soybeans are used and less wheat,..."). Tea fungus. Ang-Kak (p. 179-81). Advantages of fermenting foods. The future of food fermentations.

The glossary gives brief descriptions of aga-koji, akakoji, amylo process, anchu, angkak, angkhak, ang-quac, anka, ankak, arack, arak, arrack, atsumandie, awamori, bagoong, bakhar, beni-koji, benikoji, braga, brem, busa, chao, ch'au yau (Chinese name for shoyu), chee-fan (a type of Chinese cheese or sufu), chiang (Chinese equivalent of miso), chicha, Chinese cheese (sufu), Chinese red rice (ang-kak), chiu-chu (Chinese yeast), chiu-niang (Chinese term for koji), chou [*ch'ü*] (Chinese equivalent of koji), dahi, dawadawa (made from African locust bean–*Parkia filicoidea;* soy is not mentioned), dhokla, dosai, fermentation of citron, fermented fish, fermentation of maize, fermented minchin (wheat gluten), fermented soybeans ("a Chinese food prepared from small black soybeans." See A.K. Smith 1961 [fermented black soybeans]), fish paste, fish sauce, fish soy, fu-yu, fu-yue, fuyu (see sufu [fermented tofu] for all 3), ginger beer plant, grib, hamanatto, hon-fan [fermented tofu], hongo, hung-chu, idli, injera, jamin-bang, java yeast, jotkal, kaffir beer, kanji, katsuobushi, katyk, kefir, ketjap, kimchi, kishk, kisselo mleko, koji, kombucha (tea fungus fermentation), kome-miso, kuban, kumiss, kumys, kushik, kushuk, kvass, kwass, kyoku-shi, lao-chao, leben, lebeny, levain of khasia, levain of sikkin, lontjom (ontjom), magou, mahewu, maize fermentation of the maoris, mazun, medusen tee, meen, meitauza, meju (fermented soybeans of Korea), mén, mien (Chinese yeast), mirin, mish, miso, moromi, mugi miso, murcha, nappi, nata, natto, ngapi, nuoc-mam, nukamiso, ontjom, patis, paw tsay, peh-khak, pehtze, peujeum, peyem, poi, prahoc, pulque, raggi, ragi, ranu, red pepper sauce, red rice, red sufu, sajur asin, saraimandie, sekihan, shiro koji, shottsuru, shoyou, sho-yu, shoyu, soja japonais (shoyu), sonti (a rice beer wine of India), South African fermented corn, soy, soybean cheese [fermented tofu], soy sauce, sufu, su fu [both fermented tofu], sweet flour paste, taette, tahuli, tahuri [both "Philippine fermented soybean curd"], takuwan, tamari, tane koji, tao-cho [taotjo], taokoan [pressed or firm tofu, not fermented], tao dji (see taotjo {sic}), tao-si ([fermented black soybeans]; see Handbook of Philippine Agriculture, 1939, p. 132-43), tao-tjung, tao-yu, taotjo, tapej, tape ketan, tape ketella, tarhana, tea beer, tea cider, tea fungus, teekwass, teeschwamm, tempe, tempeh, tempeh bongkrek, tempeh kedelee, thamnidium, thumba, tibi, tien mien chang [chiang], tojo, tokua, torani, tosufu, toyo, trassi, tsue fan, tuwak, uri, u-t-iat, wunder pilz, yen-tsai.

Note 1. This is the earliest document seen (Oct. 2011) that mentions *Actinomucor elegans* in connection with sufu [fermented tofu]. In 1966 Hesseltine describes it as the best mold for use in making this fermented food.

Note 2. This is the earliest English-language document seen (Oct. 2011) that uses the terms "fuyu" or "fu-yue" or "chao" to refer to fermented tofu.

Note 3. This is the earliest document seen (July 2000) that mentions "mugi miso"–a type of miso made with barley koji. By the mid- to late-1960s, macrobiotic companies in the USA were importing barley miso from Japan and labeling it "Mugi Miso."

Photos show: (0) Clifford W. Hesseltine (portrait). (1-3) *Rhizopus oligosporus* mold, used to make tempeh (3 views). (4) Skewered cubes of sufu in an incubator, with one skewer of uninoculated tofu cubes and three rows of tofu inoculated with *Actinomucor elegans* showing luxuriant growth of mold. (5) Cubes of Chinese cheese [fermented tofu] removed from brine. (6) Dilution plate of tane koji showing different types of *Aspergillus oryzae*. Address: NRRL, Peoria, Illinois.

4451. Manners, Marian. 1965. Thundering herd: U.S. stampedes for beef. *Los Angeles Times*. May 6. p. G1.

• ***Summary:*** Includes a recipe for Sukiyaki, with "3 or 4 cubes soy bean curd, optional" and ½ cup soy sauce. A large photo bears this caption: "Culinary adventure–Sukiyaki is an exciting dish to prepare in the patio or dining room. Ingredients to be assembled in advance include slices of beef, mushrooms, spinach, bamboo shoots, soy bean curd."

4452. Jones, Dorothea Van Gundy. 1965. Nutritionist Jones praises low-fat foods of Japan: To Tokyo for tofu. *Today's Food* (*Loma Linda Foods, Riverside, California*) 10(1):4-6. Spring.

• ***Summary:*** In the fall of 1964 Dorothea was invited by the American Soybean Association to travel to Tokyo, Japan, to participate in a soybean seminar and fair. It was held in August and sponsored jointly by the U.S. Government and the American Soybean Association. She also lectured and demonstrated the use of soybeans in human nutrition. This article describes the trip. Part of her time was taken up with television, radio, and newspaper interviews. Miss Kojima went along to interpret. On a side trip to rural Japan, they had the privilege to stay in a Japanese Inn. Photos show: (1) Nutritionist Dorothea Van Gundy Jones demonstrates

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Western cookery at a stove while Soybean Institute Vice-President Miss Kojima translates for the audience. (2) Ingredients for making sukiyaki (incl. Loma Linda Tender-Bits and Loma Linda Soy Sauce). (3) Dorothea Jones and her husband standing behind ace carvings at a banquet.

4453. Fukushima, D. 1965. Internal structure of soybean protein molecule (11S protein) in aqueous solution. *J. of Biochemistry (Tokyo)* 57(6):822. June. [6 ref]
Address: Central Research Lab., Kikkoman Shoyu Co. Ltd., Noda-shi, Chiba-ken.

4454. *Soybean Digest.* 1965. Research leads to a new food market for soybeans. June. p. 16.

4455. Claiborne, Craig. 1965. Saga of Jim Lee: From Vienna sausage omelet to Chinese woks. *New York Times*. July 22. p. 20.
• ***Summary:*** His recipe for Foh opp (Chinese roast duck) calls for "¼ cup mein seen diung (yellow bean paste, available in Chinese grocery stores), ¼ cup hoi seen diung (black bean paste [hoisin sauce; hai hsien chiang], available in Chinese grocery stores)... 2 tablespoons dark soy sauce (available in Chinese grocery stores)."

His recipe for Bok sui ngui (Poached sea bass, Chinese style) calls for "1 tablespoon dark soy sauce, 1 tablespoon light soy sauce."

A photo shows Jim Lee, a ceramist, teacher and cookbook author, standing by a wok in his kitchen.

4456. *Times (London).* 1965. Eating Japanese. July 26. p. 13, cols. 6-7.
• ***Summary:*** From a correspondent. Interest in things Japanese is waxing strong in Britain, "stimulated, perhaps, by last year's Tokyo Olympics. Several small shops selling solely Japanese goods have opened in London... On the subject of Japanese food, however, most people would confess their complete ignorance. In the whole of Britain there is not one restaurant specializing in Japanese meals, compared with thousands of Indian and Chinese establishments that have shot up since the war."

Contains 3 recipes. For sushi: "Brush each one lightly with *shoyu* (soy bean sauce), using a pastry brush." Mizutaki calls for 1 teaspoon of *shoyu* as an ingredient.

4457. Kushi, Michio; Fulton, Robert E.; Blum, Cecil. eds. 1965. Macrobiotics study report: The way of life according to the order of the universe. Vol. 1. Cambridge, Massachusetts, East-West Institute. 41 p. 27 cm. [4 ref]
• ***Summary:*** Contents: Seven principles of the order of the universe. Twelve theorems of the unifying principle (both-inside front cover). Editorial, by the 3 editors. Cigarettes and cancer, by George Ohsawa (age 73), founder, world macrobiotic movement [Conclusion: smoking cures cancer]. The new discovery of the transmutation of the atom, by Michio Kushi, Director, East West Institute [he has given numerous lectures for the past 8 years in New York, Boston, Philadelphia [Pennsylvania], and Washington, DC; discusses Louis Kervran and Sanchide Komaki]. My conclusions in biological research, by Kikuo Chishima, M.D., Prof., Gifu Univ., Japan. Thoughts of man, by Michio Kushi. Love, by George Ohsawa.

What is macrobiotics?, by Roger E. Fulton, Cambridge, Massachusetts. Order of the macrobiotic diet (from No. 7 to No. -3). One week's menu (No. 7) for health and happiness, by Aveline Kushi (p. 29-30); includes miso soup, azuki beans, bulgur with tahini sauce, and sesame rice. Sakura meshi (rice with tamari). "1. Grain: Brown rice, whole wheat, buckwheat,... azuki beans, "2. Seasoning: Sea salt, tamari (soy sauce), miso (soy bean paste), gomashio (roasted sea salt and sesame seeds mixed), kuzu, umeboshi (salted plums), sesame oil, corn oil. 3. Beverage: Grain coffee, bancha tea, mu tea, dandelion tea, etc." Note 1. This is a vegan menu. Note 2. This is the earliest English-language document seen (Dec. 2006) that uses the term "salted plums" to refer umeboshi salt plums.

EWI news (a chronology of events from Sept. 1964 to the present). Miraculous events [and cures]. Leprosy cured in Argentina. Testimonials. Open letter to Dr. Frederick Stare, Harvard School of Public Health, by Simone Billaudeau. George Ohsawa's schedule (May to Aug. 1965). Literary contributions. Financial contribution and subscription. Announcement: 1965 Macrobiotic summer camp. Useful addresses: USA, Brazil, Argentina, Sweden, Belgium, France, Germany, England, Spain, Italy, India, Japan. Key CI = Centre Ignoramus. E = Editor. R = Restaurant. MC = Macrobiotic Camp. MF = Macrobiotic Foods. MFF = Macrobiotic Foods Factory. OC = Ohsawa Center. OF = Ohsawa Foundation. Classification of yin and yang (inside rear cover). Poem titled "Wind chimes" by Cecil Blum on rear cover (11 June 1965).

EWI News: 1964 Sept.–After the Macrobiotic Summer Camp on Martha's Vineyard, Michio Kushi and his family moved from the Island to Cambridge, Mass. For the previous year, Mr. Kushi's lectures were conducted almost every month in Boston at the Mattson Academy of Karate. George Ohsawa was also in Boston and Martha's Vineyard in 1964. In Sept. 1964, East-West Institute was incorporated as a non-profit educational establishment. Mr. David Levin and Mr. Ramsay Wood initiated it with several others. Address: East-West Institute, 101 Walden St., Cambridge, Massachusetts.

4458. *Christian Science Monitor.* 1965. Just cook it all at table. Aug. 19. p. 6.
• ***Summary:*** Gives recipes for Sukiyaki and for rice. Sukiyaki calls for: "1 tofu (optional) (This is a bean curd made fresh daily of soya). 1 cup shoyu sauce."

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4459. Findlay, W.P.K. 1965. Fermented foods. *British Vegetarian.* July/Aug. p. 282-83. [1 ref]
• ***Summary:*** In 1964 at the Botanical Congress in Edinburgh, Scotland, an American mycologist, Dr. C.W. Hesseltine, gave a fascinating account of the studies he has made of foods fermented with molds. A full account of his work has just been published in *Mycologia.* 1965. 57(2): March/April. This is a summary of that article, focusing on tempeh, sufu or Chinese cheese, miso, and shoyu or soy sauce. Address: D.Sc.

4460. Koshiyama, Ikunori. 1965. Purification of the 7S component of soybean proteins. *Agricultural and Biological Chemistry* 29(9):885-87. Sept. [12 ref]
• ***Summary:*** Describes the earliest isolation, in 1965, of the 7S protein of soybean in its ultracentrifugally pure state. Address: Noda Inst. for Scientific Research, Noda City, Chiba-ken, Japan.

4461. *Foreign Agriculture.* 1965. Japanese soybean study. 3(42):12. Oct. 11.
• ***Summary:*** The Japan Shoyu Research Institute, Tokyo, will compare Japanese and U.S. soybean meals for making shoyu (soy sauce), under a grant awarded by the U.S. Dep. of Agriculture. Previous research at the Institute showed that whole soybeans from the United States yielded slightly higher quantities of shoyu than Japanese beans, and that the quality of shoyu was about equal. In recent years, defatted soybean meal has replaced whole beans as the foremost raw material for making soy sauce.

4462. Cannon, Poppy. 1965. The fast gourmet. *Chicago Daily Defender.* Oct. 25. p. 17.
• ***Summary:*** A recipe for Five minute beef with pea pods states: "Add 4 tablespoons light soy sauce (preferably Chinese)."

4463. Ohsawa, George. 1965. Zen macrobiotics: The art of rejuvenation and longevity. Revised, edited and annotated by Lou Oles and Shayne Oles Suehle. Los Angeles, California: Ohsawa Foundation, Inc. xiv + 128 p. No index. 17 cm. Series: The Philosophy of Oriental Medicine. Vol. 1. [20 ref]
• ***Summary:*** Note: This book was probably published after July 1970, even though the copyright date is 1965. This is probably the 4th English-language edition of *Zen Macrobiotics.* The 1st edition was published in Nov. 1960 in New York and the 2nd edition in 1965 in Los Angeles, revised by Lou Oles.

Note 1. Shayne's maiden name was apparently Shirley S. Federbush. The California marriage records state that she married Ferdinand E. Suehle on 24 July 1970. So this book was almost certainly published after their marriage date.

Note 2. The date on this book is too early, as explained by Carl Ferre (e-mail of 15 April 2011), president of the George Ohsawa Macrobiotic Foundation. "The libraries are going by copyright dates and do not correspond to when they were printed and made available to people. The second one was printed after Lou Oles had died, which was in 1967 if I recall correctly, and she had remarried! It should have had a new copyright date, but didn't.

"From the early magazines, it appears Lou and Shayne Oles moved to Los Angeles in December, 1965. He announced the move in the January 1966 issue of the magazine and there is nothing about an intended move in the November 1964 issue... Note also that they used 'Ignoramus Press' for some of their books." Address: Los Angeles, California.

4464. Fukushima, D.; Arai, A. Assignors to Kikkoman Shoyu K.K. 1965. Daizu o genryô to shita kabi-chiizu no seizô-hô [Process for making a mold-fermented cheese from soybeans]. *Japanese Patent* 21,228. 2 p. Application filed 19 June 1964. [Jap]
Address: Kikkoman.

4465. Han, P.J.; Min, B.Y.; Kim, K.S. 1965. [Studies on the manufacturing of fermented soybean paste and soy sauce using defatted soybeans]. *Research Reports of the Office of Rural Development* 8:333-46. [Kor]*
• ***Summary:*** To ensure better utilization of soybean, comparative trials were conducted pertaining to the manufacturing of Korean condiments, bean paste, and soy sauce using the defatted soybean and whole soybean.

As a starter of fermentation, some elite microbes were cultured in carbohydrate resources such as barley, wheat, and sweet potato flour, which may be an important subsidiary material for well-flavored final products.

(1) From wild strains of microbes, 2 strains were preliminarily pure cultured to select an excellent strain, which is referred to as *Aspergillus oryzae* A.

(2) Through the comparative test among four strains already identified (*Aspergillus* original, *Aspergillus oryzae* #612, *Aspergillus sojae*, *Aspergillus oryzae* E209 E2 and *Aspergillus oryzae* A) the *Aspergillus oryzae* A was selected as an available strain for this purpose, and this strain has revealed conspicuously high activities of enzyme, amylase, and protease 2.5-3 days after culture.

(3) With the progress of bean paste fermentation, the sugars were decreased, while the total acid and amino-nitrogen were decreased by the relatively higher degree of defatted soybean plot. There was a possibility of manufacturing fairly good bean paste utilizing the defatted soybean within the shorter time requested, though the product has shown slightly inferior quality compared to bean paste made from whole bean.

(4) In the soy fermentation there was no marked difference between whole bean and defatted plot with regards to progressive sugar decrease and total acid and

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amino-nitrogen increase. However, total nitrogen value was higher in the defatted plot. It was found that within the relatively shorter time requested to reach full maturity of soy sauce, quality of soy could be as good when made from defatted soy beans as when it was made from whole beans.

(5) The paper chromatographic analysis of soy sauce gave no difference between the whole bean and defatted plot in the features of amino acid pattern, of which more than 12 kinds of amino acids were identified. This data implies the precise relevance of the availability of the defatted soybean.

(6) Costs of defatted soybean are calculated to 10.90 won to produce 1 kilogram of bean paste and 18.25 won to produce 1 liter of soy sauce. These are comparatively reduced costs compared to 14.60 won and 25.75 won for the cost of the soybean required. Address: Inst. of Agriculture & Engineering Utilization, Ministry of Agriculture & Forestry, Suweon, Korea.

4466. **Product Name:** Diamond Teriyaki Sauce, Hawaiian Barbecue Marinade.
Manufacturer's Name: Honolulu Sake Brewery & Ice Co., Ltd.
Manufacturer's Address: Honolulu, Oahu, HI 96813.
Date of Introduction: 1965.
Ingredients: Water, soy beans, wheat, salt, sugar, spices, mirin (sweet rice wine for cooking), disodium 5'-inosinate, and sodium benzoate, a preservative.
Wt/Vol., Packaging, Price: 16 fluid oz (1 pint) bottle.
How Stored: Shelf stable.
New Product–Documentation: Label. Received Feb. 1988 from Honolulu Sake Brewery Co. Ltd. 8.25 by 3.25 inches. Black, white, and pink on yellow, with color illustration of a skewer being barbecued. "Our 'Original' Teriyaki Sauce from Hawaii." Suggestions for using on steak, chicken, pork, lamb, spareribs, fish, hamburger, meatballs. Letter from Takao Nihei. 1988, July 19. Gives year of introduction as 1965.

Note: This is the earliest known commercial teriyaki sauce; it is made in Hawaii. The first four ingredients are for the soy sauce.

4467. Lee, K.H.; Chang, K.H. 1965. [Studies on koji for soy sauce brewing. III. On the abilities of UV-induced mutants of *Aspergillus oryzae* to produce protease, amylase, and vitamins]. *Misaengmul Hakhoe Chi* (*Korean J. of Microbiology*) 3:9-14. [Kor]*
• ***Summary:*** The enzyme producing potential of industrially important strains of *Aspergillus* was studied. Irradiation of three original isolates of *Aspergillus oryzae* to ultra-violet rays resulted in the production of mutants that differed from the parent riboflavin and vitamin B-12 in culture media.

(1) Irradiation of three strains of *Aspergillus oryzae* to ultra-violet light produced mutants. Two of these strains were selected for soy sauce brewing.

(2) The two strains are the physiological mutants of *Aspergillus oryzae*. Both were found to have superior enzyme activity to their relatives.

(3) *Aspergillus oryzae* UV-induced mutants 172-722 and 569-713 were more powerful than others in the production of riboflavin and vitamin B-12. The enzyme activity of these strains was high and decreased only slightly even in a 20 percent solution of NaCl.

(4) *Aspergillus oryzae* UV-induced mutant 172-722 had more powerful protease producibility in wheat bran media than in modified Czapek's solution. On the contrary, *Aspergillus oryzae* UV-induced mutant 569-713 had more powerful producibility for saccharogenic and dextrinogenic amylase in modified Czapek's solution than in mold bran.

(5) *Aspergillus oryzae* UV-induced mutant 172-722 formed the spore rapidly and *Aspergillus oryzae* UV-induced mutant 569-713 did so ordinarily.

(6) *Aspergillus oryzae* UV-induced mutant 172-722 is valuable material for the manufacture of soy sauce because of its high protease activity in 20 percent solutions of NaCl. *Aspergillus oryzae* UV-induced mutant 569-713 is suitable for soybean mash and for fermented red pepper sauce because of its high saccharogenic and dextrinogenic amylase activity in 20 percent solutions of NaCl. Address: Army Research and Testing Laboratory, Seoul, Korea.

4468. [Report on the present status of the shoyu industry]. 1965. Norinsho (Japanese Ministry of Agriculture and Forestry). [Jap]*

4469. Arimoto, Kinitaro; Sakurai, Yoshito. 1965. Food and nutrition in Japan. In: Martin S. Peterson and Donald K. Tressler, eds. 1965. Food Technology the World Over. Vol. II. South America, Africa and the Middle East, Asia. Westport, Connecticut: AVI Publishing Co., Inc. ix + 414 p. See p. 359-94. Illust. Index. 24 cm. [13 ref]
• ***Summary:*** This chapter, after the Introduction, is divided into two parts: 1, titled "Nutrition (p. 360-74)" by Arimoto, and 2, titled "Food technology" (p. 374-94)" by Yosito [Yoshito] Sakurai. In Part 1, table 110, "Food supply in Japan" includes average statistics on soybeans, miso, and shoyu in kg/year and gm/day for 1944-1948, 1961, and 1961, in kg/year for the three periods: Soybeans: 3.5, 5.4, and 5.0. Miso: 10.6, 8.1, and 7.7. Shoyu: 15.9, 13.0, and 11.1. Source: Ministry of Agriculture and Forestry, Balance Sheets. Surprisingly, supplies were greater for each during and immediately after World War II than in the early 1960s.

Table 116, "Intake of foods classified into food groups and type of work (gm per capita per day), 1963" gives statistics for the entire nation, agricultural households, and non-agricultural households, as follows: Soybeans: 1.3, 1.7, 1.0. Miso: 25.1, 30.1, 22.5. Soybean products: 37.3, 29.9, 41.5. Seaweeds: 4.6, 4.2, 4.7. Shoyu: 26.2, 30.0, 23.6. Soybean products as a source of high quality protein are

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discussed (p. 366).

Part 2 begins with a section on "Rice" (p. 374-77) which notes that rice supplies half the calories in the Japanese diet. Japan produces all of the rice it needs–about 13 million tons. Imported rice (about 150,000 tons) is used only as a raw material in confections and miso. Japan imports most of its soybean from the USA and China, and these soybeans are processed by characteristically Japanese methods to make tofu, miso, and shoyu (p. 377).

Animal husbandry is not widely practiced in Japan, largely because the land is hilly with few grazing lands. Thus most beef, pork, and chicken are imported. The production of cow's milk is gradually increasing; it is now 27 million hectoliters.

Packaging of foods has changed greatly during the past decade. Packaged foods are now common. Shoyu and miso, once sold by the measure, are now sold in bottles and plastic bags, respectively. Table 128 (p. 378), titled "Supply of raw materials and food consumption of their products in 1959 (Japan)" shows the following for soybeans (in metric tons = tonnes). Soybeans–Domestic supply: 410,000 tonnes. Imports: 1,000,000 tonnes. Miso consumption: 850,000 tonnes. Shoyu: 1,280,000 tonnes. Tofu: 640,000 tonnes. Aburaage 170,000 tonnes. Natto 60,000 tonnes. Meat 330,000 tonnes. Fishery products: 6,170,000 tonnes.

The section titled "Soybeans" (p. 380-86) has the following contents: Introduction. Miso, shoyu, natto, tofu, koritofu (dried tofu) [dried-frozen tofu], yuba. Photos show: (1) Shoyu brewing in tanks in a large factory. (2) Pressing and washing of tofu in koritofu manufacture in a large, modern factory. (3) Aerial view of a large, modern plant for koritofu production. (4) The thawing operation in making koritofu. (5) The drying operation in making koritofu. Address: 1. PhD, Director, National Inst. of Nutrition, Tokyo, Japan; 2. PhD, Prof., Dep. of Agricultural Chemistry, Faculty of Agriculture, Tokyo Univ., Tokyo, Japan.

4470. Brandemuhl, William. 1965. Soybean utilization in Japan. San Francisco, California. xxii + 478 p. Unpublished manuscript. 28 cm. [189 ref]

• ***Summary:*** A superb, in-depth, pioneering study, based on extensive original field research in Japan. It is carefully documented with hundreds of original interviews and published sources properly cited in two different lists of sources (numerical and alphabetical) Contains 30 tables and 190 excellent photos–including 7 of the author.

Table of contents: Preface. Notes. List of tables. List of figures. Map. Part I: Background. 1. The soybean: Birth and spread (legend, botanical inception, Nagata's theory of origin, spread to Japan and beyond, the American story).

Part II: Japan's production and supply of soybeans. 1. Japan the country and supply of domestic soybeans (Japan the country, domestic soybean production, planting and harvesting, marketing domestic soybean). 2. Importation of Red Chinese soybeans (background, mechanics, advantages, and prospects). 3. Importation of U.S. soybeans (history, method and mechanics of importation, the American shippers, concluding comments on importation). 4. Distribution (use in brief, super-wholesaler, wholesaler, retailer wholesaler, Japan's grain exchange).

Part III: Soybean utilization in Japan. 1. Utilization of soybeans for oil and meal (oil crushing history, soybean source, delivery of soybeans, the crushing industry, liberalization of soybean oil and meal, oil utilization in Japan, meal utilization in Japan). 2. Tofu (history, use of soybeans, manufacture, the tofu factory, marketing tofu products, recently developed tofu products, tofu as food, concluding comments). 3. Miso (importation, home production of miso, quantity of miso produced, soybean used for producing miso, kinds of miso, fermentation time, comparison of miso firms, manufacturing, packing and marketing, price, instant miso, use of miso, miso consumption outlook). 4. Shoyu (introduction, production and manufacturers, manufacture, raw materials, preparation of raw materials for natural shoyu, preparation of materials for chemical method shoyu, preparation of materials for mixed method shoyu, fermentation, filtering and pressing, sterilization, bottling, price, use of shoyu, miscellaneous shoyu products, concluding comments). 5. Natto (description, history, Daitokuji natto, the natto industry, consumption, natto soybeans, processing, making cost and price, marketing, use of natto, problems, new ideas and natto products). 6. Frozen tofu (history, development, frozen tofu soybeans, processing, freezing, defrosting, drying, treatment with ammonia and packing, marketing, preservation, use). 7. Kinako. 8. Yuba (history and development, the plight of the yuba industry, soybeans for yuba, manufacture, classification of yuba, use). 9. Tsukudani and nimame (description, soybean tsukudani, nimame). 10. Hamanatto (history, manufacture, use). 11. Edamame. 12. Moyashi (manufacture, use). 11. Miscellaneous products (fermented soybean curd, MSG, confectionary products, other products). Conclusion. Sources (numerically arranged). Sources (alphabetically arranged).

Tables: 1. U.S. soybean production, 1924-1963. 2. United States, Red China, and world production of soybeans (bushels), 1950-1963. 3. U.S. soybean importation, exportation and amount processed for oil and meal, 1924-1963. 4. U.S. exportation of soybeans (1,000 bushels) total, by continent, and to six largest importing countries, 1958-1962. 5. Japan's soybean acreage, production, and merchandising rate. 6. Japan's importation of soybeans, total, and Red China's portion, 1945-1963. 7. Japan's total importation of soybeans and U.S. portion, 1945-1963. 8. Soybean usage in Japan, 1963. 9. Japan's processing of oilseeds, 1963. 10. Crushing capacity of selected Japanese oilseed crushers. 11. Eight largest crushers of soybeans and amount of soybeans crushed per month in 1963. 12.

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Total quantity of soybeans crushed in Japan, 1950-1963. 13. Japan's daily per capita intake of edible fats and oils. 14. Japan's consumption of edible fats and oils, 1945-1961. 15. Use of soybean meal. 16. Chemical composition of tofu and aburaage. 17. Quantity of soybeans and soybean meal used for tofu-aburaage productions (all Japan), 1950-1963. 18. Miso production and quantity of soybeans and soybean meal used, 1950-1963. 19. Composition of miso. 20. Daily per capita consumption of miso in Japan, 1950-1963. 21. All Japan production of shoyu and use of soybeans and soybean meal, 1950-1963. 22. Composition of shoyu. 23. Yearly per capita consumption of shoyu, 1950-1963. 24. Composition of natto. 25. Production of frozen tofu and use of soybeans. 26. Composition of frozen tofu. 27. Yearly per capita consumption of frozen tofu. 28. Composition of kinako. 29. Composition of yuba. 30. Monosodium glutamate production and use of soybeans and soybean meal. Continued.

This typed manuscript was sent to Soyfoods Center in July 2004 by Tomoko Brandemuhl, the wife of the author. About the author (based on several interviews with Tomoko, July 2004): William Victor Brandemuhl was born on 30 Nov. 1940 at Iron Mountain, Michigan. He grew up in Florence, Wisconsin, then attended the University of Wisconsin at Madison. He roomed for 3-4 years with various Japanese cancer researchers at the university. He also became close to Tomoko Arai (born 12 Dec. 1937 in Tokyo), a Japanese woman, who was doing graduate studies in social work there as a Rotary International Fellowship student. William initially intended to graduate in June 1962, but stayed an extra year in order to pursue independent studies in Japanese language and soybeans. He became interested in the soybean and its history in an anthropology class taught by Dr. R.J. Miller; William finished his excellent research paper on soybeans in Jan. 1963. He also took one year of Japanese language instruction (night classes). William graduated in Jan. 1963 with a BSc degree in economics.

William obtained a grant (no strings attached) from Honeymead Products Co. of Mankato, Minnesota, to study soybean utilization in Japan. Only one American had studied this subject in Japan after World War II–Alan K. Smith of the USDA, who visited Japan and wrote short but detailed reports in 1948-49 and 1958. In Jan. 1963 Brandemuhl arrived in Japan and became a research fellow at the Department of Agricultural Economics, Kyoto University, Kyoto, Japan. Between Feb. 1963 and May 1964 (15 months) he conducted field research on soybean utilization in Japan. In June 1963 (after William had been in Japan for 4 months), Tomoko completed her graduate studies, graduated from the University of Wisconsin, and (since her scholarship was finished), returned to Japan–to be with William and to help him with his research in Japanese, which he spoke only moderately well. She traveled with him throughout Japan and translated for him during the many interviews he conducted. At each destination, she spoke about America to the local Rotary club–which paid her transportation, room, and board. William's monthly check from Honeymead paid for his room and board–but not for his travel and research, so he had to work part time doing English translation for a Japanese company. On trips, he took many photos using his expensive Nikon camera. Tomoko's family lived near Kobe, where she and William were married on 8 Aug. 1964–three months after he finished his field research. Several days after the marriage, they returned to the USA to visit his parents in Florence, Wisconsin, and enjoy a wedding party there.

William now knew he wanted to pursue a career in international business. He was soon offered a job at Crocker Citizen National Bank (International Division) in San Francisco, California. They drove to San Francisco and got an apartment at 1701 21st Avenue; he began work that fall, and was soon learning the basics of international business. Every evening after work at the bank he returned home to work on transforming his field notes into a manuscript. As he wrote the rough draft, Tomoko (a skilled pianist but not a skilled typist) typed it on a manual typewriter. The next day he would correct any mistakes and she would retype each page into final form. In 1965 he had the best carbon copy bound and sent it to Honeymead; he kept the original. It was never published and he received no academic credit for it.

On 26 May 1966 their first son and only child, Konrad Victor Brandemuhl, was born in San Francisco. They bought a house in Pacifica. In 1967 he was offered a job with Caterpillar Tractor Co. (International Div.) in Peoria, Illinois. In 1968 he moved with his boss to work at Allis-Chalmers Manufacturing Co., West Allis, Wisconsin. In 1969 he was transferred to Tokyo, Japan, as Far East Representative of the company. In 1970 he was transferred to Singapore as Far East Manager of the company.

William and Tomoko later lived for about 10 years near Tokyo, Japan (mostly in Mitaka), and for a while in Singapore. Over the years he showed his typescript on "Soybean Utilization in Japan" to many people, but nobody was interested. In 1986 he started his own trading company, specializing in textiles, natural rubber, latex thread, and various machine mechanisms. Tragically, William died on 2 April 1998 in Bangkok, Thailand, of pneumonia, during a business trip. He loved the excitement of international business and interaction with people of different cultural backgrounds. Address: San Francisco, California.

4471. Brandemuhl, William. 1965. Soybean utilization in Japan: Figures (Document part). San Francisco, California. xxii + 478 p. Unpublished manuscript. 28 cm. [189 ref]
• ***Summary:*** 1. Black soybeans from Japan's Tanba region and American Harosoy soybeans. 2. Soybeans growing on a dike. 3. Soybean plants drying on rack. 4. Soybean plants drying just prior to harvesting. 5. Soybean plants drying just prior to harvesting. 6. Soybean harvester. 7. Depodding rack and pod filled stalk. 8. Depodding soybeans. 9. Entrance

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to the Red Chinese Trade Fair held in Tokyo, during April, 1964. 10. One of the agricultural exhibits at the Chinese Trade Fair (corn and soybeans). 11. Soybeans and soybean plants exhibited at the Chinese Trade Fair. 12. Soybeans and other bean products that Red China is capable of exporting (exhibition at the Red Chinese Trade Fair). 13. Soybeans on display at retail store. 14. Soybeans on display at retail store. 15. Barge unloading of soybeans at oil mill. 16. Barge unloading of soybeans at oil mill. 17 Soybean tank receiver at oil mill. 18. Multi-spout soybean feeder at barge side. 19. An oil gift assortment.

20. Selling oil at a small oil retail shop. 21. Dispensing oil. 22. Selection of oil at oil retail shop (notice birds in cage at right). 23. Vegetable oil displayed with petroleum products. 24. Vegetable oil displayed with petroleum products. 25. Bottling facilities at oil wholesaler's. 26. Bottling facilities at oil wholesaler's. 27. Prepackaged oil products displayed at wholesaler's. 28. Seafood fried in soybean oil. 29. Selling soybean oil fried products. 30. Temperature controlled fryer. 31. At a chicken farm. 32. Handling 20 kilograms bags of chicken feed. 33. Soybean meal on top of other components of mixed feed prior to hand mixing. 34. Bag fastener for mixed feeds packed at wholesaler. 35. Fermenting agent for bakery (contains equal quantities of soybean flour, yeast, and water). 36. Silk worms eating mulberry leaves. 37. Silk worms eating soybean protein mixed with mulberry leaves. 38. Tofu. 39. Soybean grinder.

40. Soybean grinder. 41. Soybean grinder. 42. Open pit live steam cooker. 43. Open pit wood-stoked cooker. 44. Okara tank and press. 45. Outdated okara press. 46. Tonyu [soymilk] receiving tanks (precipitation tanks). 47. Removing water from precipitating curd. 48. Pressing tofu with stone weights. 49. Yakidofu. 50. Yakidofu being dippered into a shaping box. 51. Mechanical press for pressing yakidofu. 52. Cutting yakidofu. 53. Roasting yakidofu. 54. Kinugoshi tofu. 55. Aburaage. 56. Aburaage prior to being deep fried. 57. Frying sushiage, a product similar to aburaage. 58. Frying aburaage. 59. Hirosu: left front; atsuage: right front; sushiage: left rear; aburaage: center rear.

Note 1. This is the earliest English-language document seen (May 2012) that contains the word *atsuage;* it refers to deep-fried tofu cutlets.

60. Okara for use as cattle feed. 61. Okara for food use. 62. Overall view of production portion of tofu plant. 63. Tofu peddler. 64. Tofu on display. 65. Bagged tofu. 66. Miso-shiru soup. 67. Dengaku (yakidofu covered with miso and placed over low heat). 68. Aburaage formed as a bag with rice inside. 69. Yudofu, Japan's most famous but not often eaten tofu dish. 70. Yudofu. 71. Miso. 72. Fermentation starting material (rice inoculated with bacteria). 73. The first step in making home miso. 74. Mashing soybeans for home miso. 75. Rice koji being used for home produced miso. 76. Salt being added to soybean and koji for the making of home miso. 77. Mixing home miso components. 78. Mixing home miso components. 79. Freshly made home miso.

80. Home miso after one year natural fermentation. 81. Koji maker. 82. Koji filled boxes. 83. Autoclave for steaming soybeans. 84. Koji mixed with salt. 85. Wooden vat for miso fermentation. 86. Weights for pressing miso. 87. Removing miso from fermentation vat. 88. Mixing and grinding miso. 89. Degraining [grinding] miso. 90. Miso on display. 91. Miso packing and sealing instrument. 92. Packing miso in a plastic bag. 93. Beef and rice miso preserver. 94. Seafood and rice miso preserver. 95. Receiving soybean meal at shoyu factory. 96. Saline solution for shoyu production. 97. Fermenting moromi. 98. Equipment used for bubbling moromi. 99. Temperature control of moromi.

100. New moromi. 101. Moromi which has fermented nearly one year. 102. Hydraulic press for pressing moromi. 103. Running moromi into filter cloth. 104. Filter cloth containing moromi. 105. Raw shoyu storage tank. 106. Open press for previously pressed moromi. 107. Opening moromi filter cloth. 108. Removing shoyu kasu (shoyu presscake) from filter cloth. 109. Bagging shoyu kasu for sale as cattle food. 110. Quick method shoyu kasu. 111. Shoyu sterilization instrument. 113. Shoyu bottler. 114. Bottling shoyu by hand. 115. High speed labeling. 116. Hand labeling. 117. Preparing sauce for shipment. 118. Shoyu cold sauce. 119. Filling plastic bottles with shoyu for use in box lunches.

120. Broiled chicken coated with shoyu. 121. Fish marinated in shoyu. 122. Fish baked with shoyu. 123. Grilled eels basted with shoyu. 124. Daitokuji natto (look like raisins spread on a sheet of paper).

125. Cooker for steaming soybeans for natto. 126. Pressurized container for inoculating soybeans. 127. Inoculating soybeans for natto. 128. Traditional method of packing natto. 129. Traditional method of packing natto. 130. Incubation rack and traditional packages of natto. 131. Packaging inoculated soybeans prior to incubation. 132. Packaging inoculated soybeans prior to incubation. 133. Inoculated soybeans in recently introduced containers. 134. Natto incubation room. 135. Natto on display at egg shop.

136. Overall view of frozen tofu factory. 137. Precipitation containers for frozen tofu tonyu. 138. Smoothing frozen tofu curd. 139. Frozen tofu curd flowing into shaping box.

140. Shaping box for frozen tofu curd equipped with sheet metal guide. 141. Removing formed frozen tofu curd from sink. 142. Cutting formed curd into freezing size. 143. Sized curd in -20°C freezer. 144. Sized curd in -5°C degree freezer. 145. Defrosting frozen tofu. 146. Removing frozen tofu curd from centrifuge. 147. Inspecting frozen tofu curd for dryness. 148. Drying frozen tofu. 149. Grinding frozen tofu into marketable size. 150. Packing frozen tofu. 151. Frozen tofu on display. 152. Cooked frozen tofu displayed in

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food shop. 153. Cooked frozen tofu mixed with vegetables. 154. Packing kinako. 155. Kinako on display. 156. Covering pounded rice cake [mochi] with kinako. 157. Yuba. 158. Yuba hanging on rack above tonyu tank. 159. Lifting yuba from tonyu tank.

160. Fresh yuba. 161. Rolling fresh yuba into marketable form. 162. Combining fresh yuba with vegetables. 163. Rolling dry yuba. 164. Yuba on display. 165. Shoyu vats at tsukudani factory. 166. Tsukudani cooker. 167. Cooling tsukudani. 168. Nimame being marketed. 169. Nimame with shoyu and shrimp. 170. Nimame with shrimp. 171. Selling nimame. 172. Nimame as served. 173. Hamanatto. 174. Sun drying Hamanatto. 175. Close-up of sun-dried Hamanatto. 176. Pressing Hamanatto. 177. Grading Hamanatto. 178. Hamanatto on display. 179. Edamame.

180. Sprouting soybeans. 181. Sprouting soybean covered with straw. 182. Close-up of sprouting soybeans. 183. Sprouting soybeans. 184. Wetting down sprouting soybeans. 185. Soybean sprouts. 186. Mappe sprouts [Note 2. "Mappe" is not a Japanese word; mappe beans are imported from Burma]. 187. Soybean roasting oven. 188. Roasting soybeans. 189. Soybeans and seaweed. 190. Black soybeans in pounded rice cake [mochi].

Map of Japan. Address: San Francisco, California.

4472. Brandemuhl, William. 1965. Soybean utilization in Japan: List of interviews (Document part). San Francisco, California. xxii + 478 p. Unpublished manuscript. 28 cm. [189 ref]

• ***Summary:*** Between Feb. 1963 and May 1964 the author interviewed people from the following organizations (listed alphabetically) related to soybean utilization in Japan. In many cases he interviewed the owner, president, or managing director.

1. Agricultural Experimental Farm, Kamigori, Hyogo-ken. 2. Akutagawa Candle Co., Kyoto. 3. Aoki Miso Co., Nagano-ken. 4. Aoki Umbrella Co., Kyoto. 5. Aoyama Candy Co., Kyoto. 6. Bunge Far East Agent, Osaka. 7. Choko Shoyu Miso Co., Nagasaki. 8. Continental Overseas Corp., Tokyo. 9. Daiichi Trade Co., Kobe. 10. Dainihon Ink and Chemical Co., Osaka. 11. Dainihon Pharmaceutical Co., Osaka. 12. Daiya Frozen Tofu Co., Suwako-gun, Nagano-ken. 13. Daizu Yuryo Wholesale and Broker, Kobe. 14. Franceya Chocolate Co., Kyoto. 15. Fuji Oil Co., Osaka. Note: This is the earliest document seen (June 2009) concerning the work of Fuji Oil Co. (Osaka, Japan) with soy.

16. Genroku Brewing Co., Kyoto. 17. Gion Mameheto Candy Co., Kyoto. 18. Hamamoto Tofu Co., Kyoto. 19. Hamano Tofu Co., Kyoto. 20. Hanamura Bread Co., Kobe. 21. Harada Miso Co., Kyoto. 22. Hasegawa Oil Co., Kyoto. 23. Hashizume Tsukudani Co., Kyoto. 24. Hirota Sauce Co., Kyoto. 25. Hohnen Oil Co., Osaka. 26. Honda Miso Co., Kyoto. 27. Ishino Miso Co., Kyoto. 28. Itoh Trade Co., Osaka. 29. Itoh Trade Co., Tokyo.

30. Iwai Trade Co., Osaka. 31. Kaihara Natto Co., Kyoto. 32. Kamejirushi Shinshu Miso Co., Nagano-ken. 33. Kanegabuchi Chemical Co., Takasago-shi, Hyogo-ken. 34. Kanemasu Grain Wholesaling Co., Osaka. 35. Kanematsu Trade Co., Osaka. 36. Kansai Paint Co., Osaka. 37. Kansai Shoji Wholesale Co., Kyoto. 38. Kanto Miso Co., Kyoto. 39. Kasakura Natto Co., Tokyo. 40. Kato Kinako Co., Tokyo. 41. Kido Tofu Co., Tokyo. 42. Kobata Farm, Kyoto. 43. Kobayashi, Michiharu, Kyoto University, Kyoto. 44. Koya-san Frozen Tofu Co., Ito-gun, Wakayam-ken.

45. Kurosawa Miso Co., Nagano-ken. 46. Kyoto Prefectural Agricultural Cooperative, Kyoto. 47. Louis Dreyfus and Co., Tokyo. 48. Mame Masa Candy Co., Kyoto. 49. Marubeni Iida Trade Co., Osaka. 50. Meiji Chocolate Co., Osaka. 51. Midori Natto Co., Tokyo. 52. Mitsui Trade Co., Osaka. 53. Mitsui Trade Co., Tokyo. 54. Moriguchi Natto Co., Kyoto. 55. Morita Frozen Tofu Co., Sasayama, Hyogo-ken. 56. Moriwaki frozen Tofu Co., Taka-gun, Hyogo-ken. 57. Nagata, T., Dept. of Plant Breeding, Hyogo University of Agriculture, Sasayama, Hyogo-ken. 58. Nagoya Miso Co., Nagoya. 59. Nakai Wholesale Co., Osaka.

60. Nakamura Yuba Co., Kyoto. 61. Nakayama Farm, Kamigori-cho, Hyogo-ken. 62. Nakazawa Soap Co., Kyoto. 63. Namikawa Tofu Co., Kyoto. 64. Naruse Natto Bacteria Co., Tokyo. 65. National Agricultural Cooperative Assoc., Osaka. 66. Nihon Paint Co., Osaka. 67. Nikka Oil Co., Tokyo. 68. Nisshin Meal Co., Kobe. 69. Nisshin Oil Co., Yokohama. 70. Noda Shoyu Co., Takasago-shi, Hyogo-ken. 71. Nomura Meal Co., Kyoto. 72. Nomura Tsukudani Co, Kyoto. 73. Nunoura, Hiroshi, Kyoto Women's University, Kyoto. 74. Oguchi, K., Nagano-ken Shinshu Miso Assoc., Nagano-ken.

75. Ohashi, Taiji, Japan Soap Assoc., Tokyo. 76. Okazaki Natto, Tokyo. 77. O-mame Candy Co., Kyoto. 78. Osaka Grain Exchange, Osaka. 79. Osaka Prefectural Miso Assoc., Osaka. 80. Otsuya Agricultural Brokers, Kyoto. 81. Ryo Tofu Co., Kyoto. 82. Sawai Wholesale Co., Kyoto. 83. Senmaru Yuba, Kyoto. 84. Shimamoto Tofu Co., Kyoto. 85. Shinseimame Candy Co., Kyoto. 86. Sugimori, T., Marukin Shoyu Brewing Co., Kyoto. 87. Tada, H., Kyoto Prefectural College, Kyoto. 88. Taiyozakoku Wholesale Co., Kyoto. 89. Takeya Miso Co., Suwako-shi, Nagano-ken.

90. Tanaka Narazuke, Kyoto. 91. Tatsuno Higashimaru Shoyu Co., Tatsuno-shi, Hyogo-ken. 92. Tawa Chicken Farm, Kyoto. 93. Tofu Aburaage Assoc., Kyoto. 94. Toyo Menka Trade Co., Osaka. 95. Uchida Tsukemono, Kyoto. 96. Ueda Miso Assoc., Ueda-shi, Nagano-ken. 97. Uemura Suhama Candy Co., Kyoto. 98. Uno Tofu Co., Kyoto. 99. Yamajirushi Miso Co., Nagano-ken. 100. Yamamoto Farm, Taki-gun, Hyogo-ken. 101. Yamanaka Oil Wholesale Co., Kyoto. 102. Yamato Bean Sprout Co., Kyoto. 103. Yamaya Hamanatto Co., Shizuoka-ken. 104. Yazura Yahata, Kyoto Textile University, Kyoto.

105. Yoshihara Oil Co., Osaka. 106. Yoshimura, Hyogo

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University of Agriculture, Sasayama-shi, Hyogo-ken. 107. Yoshizabaru Retail Co., Kyoto. 108. Yubahan Co., Kyoto. 109. Yubakichi Co., Kyoto. Address: San Francisco, California.

4473. Burke, Helen; Tong, Fu. 1965. Chinese cooking for pleasure. London: Paul Hamlyn Ltd. 151 + 5] p. Illust. (some color). Index. 29 cm.

• ***Summary:*** Preface, by Fu Tong ("Food is my whole life"). Introduction, by Helen Burke. The recipes are largely Cantonese, and fermented black soybeans (*dow see*) appear in quite a few: Pacific prawns and black soya beans (with "2 tablespoons canned black soya beans," p. 40). Duck with black beans (with "1 tablespoon canned black [soya] beans," p. 65). Chicken and black beans (with "1 tablespoon canned black beans," p. 73). Soya eggs (with "2 tablespoons dark soy sauce," p. 138).

The "Glossary" (p. 150-51) includes: "Red bean curd;" comes in 6-oz cans. "Yellow and black soya beans:" sold in 6-oz. cans.

Note: Many recipes call for "Ve-Tsin or monosodium glutamate." It is known under many brand names; Accent (made in USA), Aji no Moto (made in Japan), Mei Yen (made by the Spice Islands Co. of California), Stress (made in Great Britain) and Ve-Tsin (made in Hong Kong). "Home cooks, in the wake of food manufacturers, are realising, more and more, the virtue of 'M.S.G.' under whatever name it is bought and it is growing in popularity. Like all seasonings and flavourings, 'a little goes a long way.'" Address: 1. Food writer, London, England, and, British Columbia, Canada; 2. Owner of four Chinese restaurants in Europe.

4474. David-Perez, Enriqueta, comp. and ed. 1965. Recipes of the Philippines. Philippines: Published by the author. Printed by Capitol Publishing House, Inc. (Quezon City). 86 + [14] p. Illust. No index. 22 cm.

• ***Summary:*** This is an expanded edition of the author's 1953 book of the same title. Almost all the recipes in this book have Filipino names, with no English translation of those names. A surprisingly large number contain soyfoods (See Glossary at end). Misu is "a paste made of fermented rice and soy beans" [miso]. Tajure is "fermented soy beans, caked" (fermented tofu). Tausi is "fermented soy beans" [fermented black soybeans or fermented black soybeans with salt]. Tokua is "soy bean curd" (tofu). Toyo is Filipino-style soy sauce.

Soy-related recipes include: Chicken pastel (with toyo, p. 26). Arroz caldo with chicken (with 3 tbsp. patis or toyo, p. 45). Bañgus en tocho–2 (with 2 tbsp. each tajure and tausi, and 1 cake tokua, cut into pieces 3/4 inch long and 1/8 inch wide, p. 54). Bañgus in soy sauce (with 2 tbsp. soy sauce, p. 54). Bulanglang–1 (with 1 cup tokua, cubed and fried, p. 57). Burong isda (with 1 tbsp. angkak–fermented red rice, p. 59). Escabecheng apahap (with 4 pieces tokua, p. 71). Escabeche–Macao style (with 3 tbsp. toyo sauce, p. 71).

Kari-karing pata (with ground toasted peanuts or peanut butter, p. 79). Lumpia labong (with 5 bean cakes–tokua, p. 83). Lumpia sauce (with ½ cup toyo sauce, p. 84). Lumpia with peanuts (with 2 squares tokua–diced, 2 tbsp. toyo–soy sauce, and 1 cup ground peanuts, p. 85). Lumpia with ubod–2 (with 2 cakes tokua, and toyo to taste, p. 87). Misu-tomato sauce (with 2 tbsp. misu–soy bean paste, p. 92). Pancit "luglug" (with ½ cup soy bean cake–tokua–cut into small cubes, p. 97). Umba (with 2 tbsp. toyo and 1 heaping tbsp. tausi, p. 118). Pastillas de mani (with 1 can ground peanuts, p. 133).

On the page facing p. 186 is a full page ad for Suki Soy Sauce, made by the Philippine Shoyu Co., Liloan, Cebu, Philippines. It is "Pure and fully aged."

Seven unnumbered pages later is a full-page ad for "Aji-no-Moto super seasoning... The purest vetsin ever."

A glossary at the end contains brief definitions of uncommon ingredients. Definitions of the soy-related ingredients above are taken from this glossary. Angkak is "red-colored grains of rice used as coloring for fermented fish."

Note: On the title page is printed "10th printing–1965" but no original publication date is given. Address: Philippines.

4475. Li, Shih-chen, comp. 1965. Pen-ts'ao kang-mu [Collected essentials of herbs and trees. Illustrated compendium of pharmacopoeia with commentaries]. Hong Kong: Commercial Press. [Chi]*

• ***Summary:*** This 1965 edition of the classical work incorporates the following works on plants by earlier authors, now largely unpreserved, which were cited extensively by Schafer (1977) in his chapter: Chen, Ch'üan. *Yao hsing pên ts'ao.*

Ch'en, Ts-ang-ch'i. *Pên ts'ao shih i.*
Hsiao, Ping. *Ssu sheng pên ts'ao.*
Li, Hsün. *Hai yao pên ts'ao.*
Meng, Shen. *Shih liao pên ts'ao.*
Su, Kung. *T'ang pên ts'ao chu.*
Sun, Ssu-mo. *Ch'ien chin shih chih.*

4476. Ochse, J.J.; Soule, M.J., Jr.; Dijkman, M.J.; Wehlburg, C. 1965. Cultivos y mejoramientos de plantas tropicales y subtropicales [Cultivation and improvement of tropical and subtropical plants. 2 vols.]. Mexico: Wiley. See vol. II, p. 1162-63. [Spa]*

• ***Summary:*** The section titled "Soybean" discusses the following: Vernacular names in various languages. Overview of world production. Botany. Varieties. Breeding and selection. Climatic and soil requirements. Culture. Harvesting. Uses (incl. soy sauce, tempeh, and tofu). Future possibilities. Diseases. Ochse was born in 1891.

Note: This book was originally published in English

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in 1961 by Macmillan Co. in New York. Address: 1. Consultant, Tropical and Subtropical Agriculture, Research Consultant in Economic Botany, Univ. of Miami, Coral Gables; 2. Assoc. Prof. of Fruit Crops, Univ. of Florida, Gainesville; 3. Prof. of Applied Tropical Botany and Genetics, Univ. of Miami, Coral Gables; 4. Asst. Plant Pathologist, Univ. of Florida, Everglades Experiment Station, Belle Glade. All: Florida.

4477. Raper, Kenneth B.; Fennell, Dorothy I. 1965. The genus *Aspergillus*. Baltimore, Maryland: The Williams & Wilkins Co. 686 p. Illust. Index. 24 cm. [400+* ref]
• ***Summary:*** The authors discuss the koji molds in Chapter 18 titled "Aspergillus flavus group." Contents: Outstanding characters. General considerations (incl. *A. oryzae*, *A. oryzae* var. *effusus*, *A. flavus*, *A. tamarii*, and *A. flavo-furcatis*). Occurrence and significance: Introduction, enzymes (amylolytic, proteolytic, lipolytic). "Members of this group are widely distributed in nature. They are regularly isolated from soils, particularly those from tropical and subtropical areas, from forage and decaying vegetation, from stored seeds and grains, and from various types of food products. They contribute to decomposition processes... Except for *A. Niger* and allied species, they have been used more widely in industry than any other group of molds, particularly for the production of enzymes.

"Members of the *Aspergillus flavus* group produce diastatic and proteolytic enzymes abundantly. In large measure the alcoholic and soy food industries of the Far East are based upon these molds and their enzymes. In the soy industries, closely related molds, or even the same strains, are used as a source of proteolytic enzymes. In 1894 Takamine secured a series of U.S. patents covering the production of diastatic enzymes and the making of alcoholic liquors. Subsequent to this, other investigators, mostly Japanese, published a number of papers in this field. Oshima, in 1922 and 1928, reported on the production of protease by members of the *A. flavus-oryzae* group. Today, considerable quantities of diastatic enzymes, proteolytic enzymes, and mixed diastatic and proteolytic preparations are being manufactured from these molds for use in the food, textile, and tanning industries." Address: Dep. of Bateriology, Univ. of Wisconsin, Madison, Wisconsin.

4478. Sakurazawa, Nyoiti [Ohsawa, George]. 1965. You are all sanpaku. English version by William Dufty. Secaucus, New Jersey: University Books. 224 p. Index. 22 cm. First paperback edition published in 1980 by Citadel Press, Secaucus, NJ.
• ***Summary:*** Contents: Introduction. The divine ritual. A land of sanpaku. Faith and medicine. The cause. The cure. The daily check-up. Food and sex. Prayer and fasting. The sacred act. About salt. About sugar. About milk. About liquids. About chewing. About principal foods. Soulfood: Brown rice, rice cream, buckwheat, buckwheat cream, wheat, cous cous, chapati, millet, raw rice, bread, gomasio [gomashio] (sesame salt), umeboshi plums, miso and shoyu, tahini, miso cream, about tea, coarse green tea (bancha), soya ban (coarse green bancha tea with soy sauce), mu tea, lotus tea, lotus tea, mint tea, thyme tea, Ohsawa coffee (Yannoh; made of rice, wheat, aduki beans, chick peas, chicory, and a little oil), Dandelio (dandelion coffee substitute), kokoh, kuzu, umeboshi juice, ume syo kuzu (umeboshi + shoyu + kuzu), aduki juice, radish drink (daikon #1 and #2), special rice cream, brown rice tea, wheat tea. The oneness of the universe [Ohsawa's profound and beautiful credo]. Tables: 1. Macrobiotic table of daily food in order of yin to yang. Note: The most yin foods are indicated by 3 downward-pointing triangles; the most yang foods by 3 upward-pointing triangles. Beans (except aduki) are quite yin, being symbolized by 2 downward-pointing triangles. Eggplant, tomato, and potato are the most yin vegetables. The most yang cereal is buckwheat, followed by rice. 2. Physical phenomena–Yin/yang table. Biographical note on Ohsawa (p. 213-18).

This was the first popular book in English to explain the principles of macrobiotics. "*Sanpaku* describes a condition in which they white of the eye can be seen between the pupil and the lower lid as the subject gazes directly forward. This, we quickly learn, connotes a grave state of physical and spiritual imbalance." It is the Oriental sign of impending disaster.

Soy-related recipes and information include: Soya bean plaster (p. 140). Tofu plaster (p. 141; tofu is called "white soya bean cheese"). Tekka [miso] for anemia and general weakness (p. 143). Miso and shoyu (p. 190). Miso cream (with tahini, p. 190-91). Soya ban: Coarse green bancha tea with soy sauce (p. 194). Ume syo kuzu (p. 199; a proven medicinal beverage [made from umeboshi, shoyu, and kuzu]).

About sugar (p. 165): "I am confident that Western medicine will one day admit what has been known in the Orient for years: sugar is without question the number one murderer in the history of humanity–much more lethal than opium or radioactive atomic fallout–especially for those people who eat rice as their principal food."

About milk (p. 169): "There is no reason for man to live on the milk of an animal–especially an animal inferior to him biologically and intellectually." People of the Orient avoid milk "because they respect the biological natural laws of the Order of the Universe... Once the young offspring of animals have their teeth and are weaned from nursing, they no longer drink milk... No animal ever does." "The quality and quantity of a mother's milk controls her child's destiny. In cases where the mother's milk is not available, babies can be fed with *Kokoh*–a macrobiotic cereal milk made with roasted rice, glutinous rice, oatmeal, soya beans and sesame seeds reduced to powered form" (see recipe p. 198).

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Miscellanea: The Ohsawa Foundation at 317 Second Avenue in New York City, located on the first floor of an old tenement, had a 4-table restaurant in the front and a kitchen in the rear. There were several macrobiotic restaurants in Paris, plus a tiny macrobiotic food store named Les Trois Epis and the Librarie Ohsawa, both on Rue Lamartine Guy Massat was editor of the French monthly journal *Yin/Yang*. The author: "I could not remember a single doctor, out of dozens who treated me, who had ever shown the slightest curiosity about what I ate and drank."

"The stark facts presented to the President of the U.S. by his Special Commission on the Nation's Health in December of 1964 are staggering: In 1963 heart-artery disease caused 55% of all U.S. deaths, and cancer 16%. Strokes 210,000; diseases of arteries outside the brain combined with diseases of the heart to kill 793,000. Cancer killed 285,000" (p. 66). Occidental medicine is symptomatic medicine; it does not seek to cure the basic causes. And it is microscopic/analytical. It seeks the truth in a maze of details; but the "truth is whole." The "ultimate cause of every illness is violation of the order of the universe through ignorance or through arrogance,..." (p. 80-81). "Disease is a divine warning, a message from nature seeking to guide us to the correct path" (p. 98). The essential factor in the proper nutrition of the human body is the proper proportion of Yin and Yang. The best proportion of Yin/Yang or Potassium/Sodium is 5 to 1. All those foods whose K/Na ratio is greater than 5 to 1 are Yin. The books ends with a "Biographical Note: Sakurazawa-Ohsawa" who is said to have "published some 300 works in Japanese and more than 20 books in Western languages, principally French." His wife, Lima, is a professor of traditional Japanese music. There is a selected bibliography of Ohsawa's books, especially those published in French. Address: New York.

4479. van Veen, A.G. 1965. Fermented and dried seafood products in Southeast Asia. In: G. Borgstrom, ed. 1965. Fish as Food. Vol. 3. New York: Academic Press. See p. 227-38, 247-50. [78 ref]
• ***Summary:*** Contents: Introduction. Fish sauces: Nuoc-mam, other types (incl. patis, nam-pla). Fish pastes. Salted fish not (or partially) dried. Miscellaneous. Summary and conclusions. Soy is not mentioned. Address: Graduate School of Nutrition, Cornell Univ., Ithaca, New York.

4480. Kikkoman International Inc. 1965? Kikkoman's wonderful world of flavor (Brochure). San Francisco, California. 16 p. Undated. 10 x 7 cm.
• ***Summary:*** A small (1/8 inch diameter) hole in the upper left corner of this tiny brochure indicates that it is a "neckhanger," designed to be tied to a string or elastic loop and hung around the neck of each bottle of Kikkoman soy sauce. On the cover of this color brochure is a photo of a bottle of Kikkoman all-purpose soy sauce above five prepared meat dishes. On the rear cover, on a yellow background, we read: "Kikkoman–delicious directly on meats! A hand is holding a bottle of Kikkoman soy sauce and pouring it onto a hamburger. Above of the Kikkoman logo is written "Since 1630."

On the inside front cover we read: "Eighteen months maturing of select quality soy beans and wheat are required to achieve Kikkoman's distinctive quality–the winner of *thirty major international awards.*" On each little page inside is a half-page recipe and a half-page color photo. The recipes are: Kikkoburgers. Paradise isles fried chicken. "Best ever" beef short ribs. Pork roast royale. Savory fish sauce. Beef teriyaki. Kikko-qued chicken. Salad dressing. How to make delicious fried rice. Tuna pilaf. Lamb stew superb. Meat loaf.

This brochure is printed in Japan.

Note: This brochure must have been printed after 1964 because in 1965 Kikkoman International opened a branch office in Chicago, and that office is listed on the back of the brochure. Address: San Francisco, Los Angeles, New York, Chicago.

4481. Hoffman, Marilyn. 1966. A taste of China in old Manhattan. *Christian Science Monitor.* Jan. 20. p. 6.
• ***Summary:*** A recipe for Chicken wrapped in paper calls for: "2 tablespoons light soy sauce. 1 teaspoon salt." Then: "Marinate chicken in soy sauce, salt, sugar, ginger, and scallion for 30 minutes."

4482. Kamada, Hidemoto; Ebine, Hideo; Nakano, Masahiro; Chiba, Akira. 1966. [Effect of manufacturing method on the properties of shoyu koji]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 21. p. 141-44. Jan. [3 ref. Jap; eng]
• ***Summary:*** Reprinted from *Nihon Shokuhin Kogyo Gakkai Shi* 12(6):242-45 (1965). Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4483. Claiborne, Craig. 1966. New Yorkers take to tempura and chopsticks with gusto. *New York Times.* March 10. p. 22.
• ***Summary:*** "But gastronomically there has been no phenomenon in recent years to equal the proliferation of Japanese restaurants [in Manhattan], East Side, West Side and up and down the town."

There have been Japanese restaurants in New York for many years but in the early days, unless one spoke Japanese, the choice was between tempura and sukiyaki. Today the choice of dishes is almost unlimited.

The first of the "grand luxe Japanese restaurants" in Manhattan was the Saito; it offered tatami mat rooms (*ozashiki*). Next came the Kabuki, then the Nippon.

Mizutaki is "boiled chicken and vegetables served with soy and lemon sauce." Appetizers include "bits of tuna with soy [sauce] and ginger, and stashi, the traditional dish with

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soy and ginger." Kabayaki is [eels] "glazed with a light soy sand sugar sauce." Three recipes are given: Shabu-shabu calls for "2 pieces tofu (bean curd), each cut into four pieces." Ponzu sauce (Soy and lemon sauce) calls for ½ cup each lemon juice and "Japanese soy sauce, ¼ teaspoon ajinomoto (monosodium glutamate)..." Gomazu sauce (sesame sauce) calls for "4 ounces sesame seeds or one-half cup tahini (sesame paste...), ½ cup Japanese soy sauce, ¼ teaspoon ajinomoto (monosodium glutamate)..."

4484. Watanabe, Tokuji; Ebine, H.; Ohta, T. 1966. Daizu shokuhin no kakô gijutsu [Technology of soybean processing]. *Shokuryo Kenkyujo, Shokuryo Gijutsu Fukyu Shiriizu (National Food Research Institute, Extension Series of Food Technology)* No. 4. 61 p. March. [Jap]
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan (Norinsho Shokuryo Kenkyujo).

4485. Meade, Mary. 1966. Raw chicken best in many oriental dishes. *Chicago Tribune*. April 4. p. C13.
• ***Summary:*** Japan Air Lines says there is much interest in authentic Japanese sukiyaki, but adds that it would be almost impossible to duplicate the dish as it is served in Japan.

"Tofu is bean curd." If not available, it may be omitted. "Shoyu is Japanese soy sauce. It is important to use this instead of American or Chinese soy sauce because it is less salty.

The recipe for Sukiyaki includes "12 1-inch cubes of tofu" and "½ cup shoyu."

4486. McCormick, Sally. 1966. Azuma Sukiyaki House: For leisurely dining in the Japanese manner–5120 N. Broadway, Chicago (Advertorial). *Chicago Tribune*. April 7. p. H12.
• ***Summary:*** Next came the Sukiyaki. "Chieko glided in once more with an hibachi stove, large frying pan, and an attractive tray full of appetizing, fresh vegetables, thinly sliced prime rib, and soy cakes... She removed the suet and added generous slices of beef, fresh mushrooms, bamboo shoots, Tofu (soy bean cakes), Shiratake [Shirataki] (yam noodles) and assorted fresh vegetables." The restaurant also serves Beef Teriyaki, Chicken Teriyaki, and Salmon Teriyaki. Three photos show Azuma.

Note 1. This might be called an "advertorial." This ad also appeared in the 29 Sept. 1966 issue of this newspaper (p. J9).

Note 2. Shirataki are thin noodles of konnyaku, a gelatinous paste made from the root of the devil's tongue plant, *Amorphophallus konjac*. Konnyaku has no flavor, and no nutritional value, because its starch is not digestible by the human body. However it is an excellent source of dietary fiber and is appreciated for its chewy texture.

4487. *SoyaScan Notes*.1966. Chronology of Erewhon. Renamed Erewhon Trading Co. in 1967. 12 Dec. 1991. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1966 April 9–Erewhon opens as a small (10- by 20-foot) macrobiotic and natural foods retail store at 303-B Newbury Street (below street level) in Boston. Aveline and Michio Kushi are the founders, but Aveline is the sole owner. Evan Root is the first retail store manager. The origin of the natural foods industry and movement in America can be traced to this date. Erewhon is the first store of its kind in America and it soon serves as a model for many other similar natural food stores across the nation. Erewhon sells several soyfoods, mainly miso and shoyu purchased from Howard Rower's Infinity Foods or Japan Foods Corp., both in New York.

1967 Aug.–Paul Hawken takes over the management of Erewhon (one small retail store) from Evan Root. He changes the name to Erewhon Trading Co. (from simply "Erewhon") and starts to expand the business.

1968 May–Paul Hawken incorporates Erewhon Trading Company. Paul later states that he and Aveline Kushi each own 50% of the stock. However Aveline Kushi and her attorney, Morris Kirsner, agree that they offered him 50% of the Erewhon stock shortly before he left for Japan (in March 1969) but he did not accept it. To this day (Feb. 1999) Aveline has no idea why Paul did not accept such a generous offer.

1968 June–Hawken establishes his first supplier of organically grown grains, Ted Whitmer, a wheat farmer in Montana. By 1973 Erewhon had established and contracted with 57 farms in 35 states to provide the company directly with organically-grown foods.

1968 Aug.–Erewhon starts to import foods from Japan, initially from Muso Shokuhin, later by correspondence with Mr. Akiyoshi Kazama, who worked for an import/export company named Mitoku, which sold no food at the time. The initial orders contained red miso (made by Sendai Miso Shoyu Co.) and natural shoyu (made by Marushima).

1968 Nov.–On Thanksgiving day, Erewhon moves up and across the street to a much bigger and nicer location at 342 Newbury St. Paul had hired Bruce Macdonald, a carpenter, to remodel this store. The company now has 6 employees: Paul Hawken, Roger Hillyard, Bruce Macdonald, Bill Tara, Jim Docker, and Jean Allison. One day later, Bill Tara leaves to start a macrobiotic East West Center in Chicago. The original downstairs room is taken over by Tao Books, then Redwing Books. Tofu, curded with calcium sulfate and made by a Chinese company in Boston, starts to be sold.

1969 March–Paul Hawken and Evan Root leave for Japan. Bruce Macdonald takes over as general manager of Erewhon. Paul stays in Japan for 9 months, arranging for individual packaging of products that were formerly imported in bulk, and finding new items for Erewhon to import. He visits suppliers, works with Mitoku and Muso, and studies Japanese language and culture.

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1969 spring–Erewhon starts wholesaling foods, under the direction of Bruce Macdonald. Their first wholesale product is natural sesame oil.

1969 Aug.–Aveline Kushi moves to Los Angeles where her youngest son, Hisao, undergoes traditional Japanese bone massage therapy. In Los Angeles, she establishes the first macrobiotic study house at 7511 Franklin Ave. Bill Tara arrives about a month later to set up a retail store, Erewhon West, which opens on 8001 Beverly Blvd. in about September.

1969 Oct. (early)–Bruce Macdonald leaves for Los Angeles with his new bride, Maureen Traill, to run the new Erewhon West retail store there. Roger Hillyard takes over as general manager of Erewhon in Boston.

1970 Jan. 1–Erewhon's earliest existing catalogue seen (wholesale and retail) lists 7 pages of natural food products–most of them imported from Japan. By March 1970 Erewhon lists 96 products in its catalog.

1970 July–Erewhon's rapidly expanding distribution business moves into a large (20,000 square feet) fifth-floor leased brick warehouse at 33 Farnsworth St., on the docks in South Boston. *East West Journal* and Tao Books soon move to the same area.

1970 fall–Erewhon receives its first shipment of brown rice from the Lundberg brothers in Richvale, California; it is "unsprayed" but not organic. Chico-San has exclusive rights to all Lundberg's organic brown rice.

1971 Jan.–*East West Journal* begins publication in Boston, Massachusetts.

1971–Erewhon Trading Company of Los Angeles has expanded and is now at 8001 and 8003 Beverly Blvd., Los Angeles, CA 90048.

1971 March–Roger Hillyard is replaced as general manager of Erewhon–Boston.

1971 March–Paul Hawken finalizes a contract with Carl Garrich of Lone Pine, Arkansas, to grow short-grain brown rice organically and exclusively for Erewhon. 330 acres are planted in April. That fall, Erewhon starts to retail and wholesale its first organic brown rice.

1971 May–Bruce Macdonald leaves Erewhon in a dispute over ownership of the company.

1972–John W. Deming Jr. plans to invest $150,000 in Erewhon in exchange for stock, and Advest Co. plans to conduct Erewhon's first public stock offering–but neither happens after Michio Kushi nixes the plans.

1972 fall–Erewhon first buys organic brown rice from Lundberg brothers of California; a fire that destroyed Chico-San's plant in early Aug. 1972 rendered their exclusive contract with the Lundbergs null and void.

1973 Aug.–Paul Hawken writes a critical history of Erewhon and its problems. Published in *East West Journal* it is titled "Erewhon: A Biography. The View Within." Shortly thereafter Paul Hawken resigns, saying that running Erewhon was a nightmare. Some say he sells his 25% ownership back to the company, which was subsequently managed by Bill Garrison, Tyler Smith, Jeff Flasher, and Tom Williams, in that sequence.

1974 July to 1977–Erewhon becomes the exclusive representative and agent for both the Muso and Mitoku companies in North America. The labels of all products imported from these companies must bear the Erewhon label.

Starting in late 1969 a number of macrobiotic and/or natural foods companies grew into distributors following the models established by and with help from Erewhon: Eden Organic Foods in Ann Arbor (started by Bill Bolduc on 4 Nov. 1969), Food for Life (started in 1970 by Bill Tara as a retail store on the 10th floor of a Chicago office building), Janus in Seattle, Washington (Jan. 1972, by George Gearhart and Blake Rankin, formerly of Spiral Foods), Essene in Philadelphia, Pennsylvania (by Feb. 1971), Laurelbrook in Maryland (Aug. 1971), Ceres in Colorado Springs (1973), and The Well in San Jose, California (1973, by Phil Parenti). These macrobiotic distributors had a strong influence on the numerous other non-macrobiotic natural food distributors, such as Lifestream (started in 1969 as a retail store), Westbrae in Berkeley, California (wholesale distribution: July 1970, by Bob Gerner; retail: Feb. 1971, Gerner), Shadowfax (New York, 1971), and Tree of Life in St. Augustine, Florida (retail: May 1971; wholesale distribution: Feb. 1972, by Irwin Carasso).

1975 Aug. 1–Erewhon sells all of its West Coast Division in California (Los Angeles and Culver City) to John Fountain and John Deming for cash and notes, realizing a net gain of $86,872.

1977 March 23–Erewhon sues natural foods retail stores in several states for boycotting Erewhon for selling to co-ops. Erewhon eventually wins the case, but its legal bills are something like $250,000. There was not enough money to pay these fees and Erewhon never recovered.

1978 (early)–Erewhon moves into a huge warehouse and office complex at 3 East St., Cambridge, Massachusetts 02141.

1979 April 27–The workers in Erewhon's production, trucking, shipping, and kitchen departments vote 42-19 to form a union affiliated with Local 925, the Service Employees International Union.

1979–John Deming steps in to liquidate all the assets of financially failing Erewhon–Los Angeles. Tom DeSilva, Tyler Smith, and Jeff Flasher buy the retail store at 8001 Beverly Blvd.

1981 Feb.–Erewhon currently lists 4,000 products in its catalog–in its bid to become a full-line distributor. It services 2,000 customers and provides jobs for 175 people in its warehouse and retail stores.

1981 Nov. 10–Erewhon files for bankruptcy protection under Chapter 11 of the Federal Bankruptcy Act because of debts totaling $4.3 million. At this time, Aveline Kushi is the sole owner of Erewhon. Stow Mills picked up the lion's

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share of the Erewhon business, with Westbrae also getting a significant part of it.

1982 May–A $1.3 million offer by Ronald Rossetti, president of Nature Food Centres, is accepted as the reorganization plan in the Erewhon, Inc. bankruptcy. Rossetti purchased Erewhon as an individual; it was never part of Nature Food Centres.

1986–Erewhon acquires U.S. Mills, which had been founded in 1908. In effect U.S. Mills and Erewhon were merged, and U.S. Mills was chosen as the corporate name, largely since it had been around longer.

1988 May–Chuck Verde (who was the president of Erewhon) and Cynthia Davis acquired the U.S. Mills / Erewhon business. They became the main joint shareholders. Address: 303-B Newbury St., Boston, Massachusetts.

4488. James, Isabel. 1966. The use of whole foods. *British Vegetarian*, March/April, p. 141-48.
• ***Summary:*** This is the revised text of a lecture given by the author at the 18th International Vegetarian Union Congress at Swanwick in 1965. After defining whole foods she discusses vegetarian protein foods, including nuts, pulses, and yeast. Under Pulses, the main variety discussed is the soya bean. "This is truly a Wonder Bean!" It can be used to make flour, milk, curds and cheese [tofu], and soy sauce. Or the beans themselves can be soaked and cooked for a long time. "The by-products of the bean are also valuable for pasturage, dry fodder and silage. It seems a pity that such a valuable food should also be used for the production of soap, paint and high explosives!" Address: B.A.

4489. Hayashi, Shizuka. 1966. There's an increasing trend to soybean oil in Japan. *Soybean Digest*. May, p. 68-69.
• ***Summary:*** In 1965-66 some 1,852,000 tonnes of soybeans were used in Japan. Of this, 1,341,000 tons (74.5%) were crushed, 297,000 tons (16.0%) were made into tofu and frozen tofu, 150,000 tons (8.1%) were made into miso, 32,000 tons (1.7%) were made into natto, and 32,000 tons were made into soy sauce and other soy products.

Crushing the soybeans yielded 1,073,000 tons of soybean meal. Of this, 736,000 tons (68.6%) was used for animal feeds (largely as a component of mixed feeds), 174,000 tons (16.2%) to make shoyu, 65,000 tons to make tofu, 63,000 tons for other food uses, and 35,000 tons for other non-food uses. Thus, a little over 50% of all soybeans used in Japan in 1965 were used to make foods–not including soy oil.

Per capita consumption of edible oil in Japan has increased dramatically, from 7.52 grams per day in 1956 to 18.44 grams in 1965. During the same period, total soybean oil consumption has risen from 74,010 tonnes to 219,967 tonnes. In recent years a number of the large soybean crushing companies, such as Hohnen, Nikkoh, Nisshin, Showa, and Yoshiwara have expanded their extraction plants. "The various soybean food processors including soy sauce, miso, and tofu are consolidating into fewer large-scale plants with financial support from the government for improvement and better efficiency." Address: Japanese American Soybean Inst.

4490. Baens-Arcega, Luz. 1966. Feasibility of mold-process production of sauce from copra and soybean mixture with authentic Philippine strain of *Aspergillus oryzae* (Ahlburg Cohn). *Araneta J. of Agriculture* 12(2):80-105. June. [21 ref]
• ***Summary:*** People in various countries have developed a preference for the sauce produced in their native countries. "The Filipinos relish 'patis'; the Thailanders, 'nam-pla'; and the Vietnamese and Cambodians, 'nuoc-mam.' These sauces are prepared by the natural fermentation and hydrolysis of fish which is salted with a suitable proportion of salt, usually 25 to 30 per cent, to prevent the growth of undesirable bacterial contaminants... In Europe the favorite sauce is 'maggi,' a food seasoning prepared from meat.

"Perhaps the most popular sauce is 'toyo,' or shoyu,' a condiment made from the highly nutritive soybean... In the United States this typical oriental soy sauce is used as an important condiment and a basic constituent of quality Worcestershire sauce, a compound spicy food seasoning."

"Figures obtained from the Bureau of Census and Statistics and the Department of Agriculture and Natural Resources" show that local Filipino production of soy sauce, which may roughly represent home consumption of soy sauce, from 12 selected establishments alone amounted to 3,031,957 pesos in 1959. "It may be reasonably estimated that should all manufacturers of soy sauce submit reports on their production, the amount could easily be doubled." Since soybean, a major "raw material for the production of soy sauce, is not yet commercially produced in the Philippines," importation of these protein-rich beans amounts to thousands of pesos annually.

The experimental work described in this article was conducted from Nov. 1962 to Sept. 1963 in the laboratory of the Biological Research Center, National Institute of Science and Technology, covering a period of ten months. Different proportions of molded copra meal (a coconut by-product containing 25% protein) were used to supplement the regular soy sauce koji. The sauces were harvested after 2 months of brine fermentation.

"A supplementation of 50 parts copra meal to 50 parts soybean was selected as the ideal combination of proteinous substrate which yielded, after 2 months of fermentative brining, a clear, yellow-red, appetizing sauce containing 5.51 per cent of protein..."

Table 7 gives the names of 8 commercial soy sauces sold in the Philippines (2 imported, 6 made locally) together with their content of protein and of sodium chloride.

Contains 7 tables, 3 graphs (incubation time vs. proteolytic activity, etc) and two photos. Address: Araneta

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4491. Bharath, Sam. 1966. A note on the cultivation of soyabeans and groundnuts with special reference to Trinidad and Tobago. *J. of the Agricultural Society of Trinidad and Tobago* 66(2):171-82. June.

• ***Summary:*** Contents: Introduction to soyabean. Varieties. Climatic requirements. Soils. Culture. History of production in Trinidad. Possibilities of increasing production in Trinidad and Tobago. Summary. Groundnuts.

The soyabean is not a tropical species. "Except for Indonesia, there is no important producing country in the tropics. Attempts have been made to develop the crop in tropical Africa but these have been only moderately successful. Nigeria produced 27,000 tons and Tanganyika 2,000 tons in 1962. In the latter country soyabeans have been found to be a more economic crop than groundnuts, chiefly because of the ease of mechanisation and consequent lower labour requirement."

"History of production in Trinidad: In order to increase local food production during the War [World War II], several varieties were imported and released to farmers and school gardens. Some of the varieties formed pods but the crop did not become popular since the flavour of both green beans and dried seeds are not as attractive as other legumes already grown, such as red salad beans or black-eyed peas [cowpeas]. These locally grown legumes also give higher yields."

"In 1948 R. Moosai-Maharaj introduced a Venezuelan variety to the farmers of the Oropouche Lagoon and some crops were grown in the dry season but again the crop never caught on. The author compared a black-seeded variety with the Venezuelan cream variety at the St. Augustine Station in 1957 and 1958 and yields of 1,000 lbs. per acre of dried beans were obtained from the black-seeded variety but only 500 lbs. per acre from the cream variety. The seeds have since been lost at the St. Augustine Station but Darsan at the U.W.I. has maintained these varieties in a museum plot. Incidentally the black-seeded varieties are used for the preparation by fermentation of soy sauce (*Se-ow*) and yields of these varieties are generally lower than cream or yellow seeded varieties."

Conclusion: Soyabeans can be grown in Trinidad and Tobago, but it is unlikely that Trinidadians will ever find the soyabean an attractive addition to their diet. Varieties better adapted to Trinidad and better information on cultivation are needed before farmers can be asked to grow the crop commercially. Address: M.Sc.

4492. Kilpatrick, James J. 1966. Right to be let alone is the most precious of all. *Los Angeles Times*. July 12. p. A5.

• ***Summary:*** Benevolent paternalism has become rampant in the USA; Big Brother is watching you–and is sure he knows what's best for you. "Nowhere is this arrogance of power less restrained, or more abused, than in the Food and Drug Administration" [FDA]. "For example, in New York City, on the complaint of the FDA, marshals recently swooped down upon the Ohsawa Foundation at 317 Second Ave., and there confiscated a large quantity of 'macrobiotic foods,' and a large quantity of books and pamphlets on Zen cookery."

The confiscated foods were not mislabeled, not contaminated in any way, and not adulterated. The Azuki beans were pure and natural–as were the soy sauce, rice cakes, millet, and sesame oil.

It was the ideas behind the food that were bad. The Zen philosophy holds that a certain type of diet is good and that certain of these foods will cure certain diseases. "Such diets are dangerous," says the FDA is a press release. Four persons are known to have died in New Jersey and one in California for following strictly these dietary precepts.

If a handful of Zen Buddhists think they will enter nirvana by eating soybean paste [miso], why should the FDA care? Is this a major threat to public health? Judge Brandeis once said that the most precious of all rights is the right to be left alone. Note: Supreme Court Justice Louis Brandeis said this in 1928, invoking a right to privacy.

4493. *Los Angeles Times*. 1966. Patio show-stopper in a Japanese mood. July 31. p. 16.

• ***Summary:*** Sukiyaki is a shining example of the eye appeal for which Japanese food–Nipponese cuisine–in famous. Although it is cooked at the table, the most impressive feature is the flower-like arrangement of the uncooked ingredients.

One of the ingredients is "cubed soy bean curd (tofu)." A key ingredient in the pungent sauce is "½ cup soy sauce." Suet is normally used, but vegetable oil can be substituted.

Note: Suet is raw beef or mutton fat, especially the hard fat found around the loins and kidneys. Suet is usually made into tallow in a process called rendering, which involves melting and extended simmering, followed by straining, cooling and usually a repetition of the entire process.

Several large photos show the arrangement of the uncooked ingredients like petals on flowers.

4494. Kirchner-Dean, Otto, comp. 1966. Soybean processing and utilization: A selected list of references, 1955-1965. *USDA Library List* No. 83. iv + 183 p. Aug. Author index. Subject index. 28 cm. [2218 ref]

• ***Summary:*** Contents: Part I: Processing. Meal. Oil. Beans. Part II: Utilization. Meal in feed. Oil in feed. Beans in feed. Meal in food. Oil in food (General, margarine). Beans in food (general, flour, milk, soy sauce). Meal for industrial uses (general, coatings). Oil for industrial uses (general, coatings, drying oils, paints, resins, soaps). Beans for industrial uses. Part III: Chemistry and research. Amino acids, bibliography, biochemistry, chromatography, composition, enzymes, fatty acids,

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lecithin, lipides, lipoxidase, organic chemistry, pesticide residues, phosphatides, proteins, research, sterols. Part IV: Miscellaneous. Argentina, Australia, Brazil, California, Canada, China, Congo, cook books, Far East, government loans, India, industry, international trade, Japan, laws and legislation, markets and marketing, nutrition, pesticide residues, varieties.

"All citations except those to patents have been examined and verified by the compiler. Patents cited were obtained from Chemical Abstracts. All foreign language titles have been translated into English with the original language indicated. [Warning: Many patent titles listed in this are different from those appearing on the actual patent.]

"Sources consulted: Agricultural Index, Bibliographic Index, Bibliography of Agriculture, Biological and Agricultural Index, Card Catalog of the National Agricultural Library, Chemical Abstracts, Dissertation Abstracts, Engineering Index, Food Science Abstracts, Journal of the Science of Food and Agriculture, Nutrition Reviews, and Pesticides Documentation Bulletin." Address: National Agricultural Library, Div. of Reference, Special Bibliographies Section.

4495. Morimoto, Shigemi; Murakami, Michiyo. 1966. Sokujô shôyu ni kansuru kenkyû. VII. Arukooru hakkô ôyô shinsoku-jô shôyu seizô-hô ni tsuite. Gasu kuromatogurafii ni yoru kôki seibun no teiryô [Studies on a quick ripening process of soy sauce. VI. A new quick ripening process based on alcohol fermentation. A quantitative analysis of the flavor components using gas-liquid chromatography]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 44(8):476-82. Aug. [2 ref. Jap; eng]
Address: Shoin Junior College, Kobe, Japan.

4496. Morimoto, Shigemi; Murakami, Michiyo. 1966. Sokujô shôyu ni kansuru kenkyû. VII. Arukooru hakkô ôyô shinsoku-jô shôyu seizô-hô ni tsuite. Gasu kuromatoguralii ni yoru kôki seibun no teisei [Studies on a quick ripening process of soy sauce. V. A new quick ripening process based on alcohol fermentation. A qualitative analysis of soy sauce flavor components using gas-liquid chromatography]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 44(8):467-75. Aug. [9 ref. Jap; eng]
• ***Summary:*** "The flavor components such as isoamyl alcohol, n-butyl acetate, ethyl maleate, ethyl levulinate and ethyl caprate, which have not been reported until now, were detected in at least 2 or more columns" of the 4 used.

"The other components, i.e., ethyl alcohol, ethyl acetate, n-propyl alcohol, isobutyl alcohol, n-butyl alcohol, acetic acid, butyric acid, ethyl lactate, furfurol, 2,3-butyleneglycol, benzaldehyde, methionol, ethyl succinate, ethyl benzoate, Beta-phenylethyl alcohol, ethyl isovalerate, isobutylaldehyde, isopropyl alcohol and diacetyl were detected in at least 2 or more columns." Address: Shoin Junior College, Kobe, Japan.

4497. Chong, Y.H.; Beng, C.G.; Ponnampalam, J.T.; Lim, R.K.H. 1966. Moulded soy beans as a potential source of aflatoxin contamination. *Far East Medical Journal* 2(9):298-300. Sept. [14 ref]
• ***Summary:*** The authors isolated *Aspergillus flavus* from moulded soybeans obtained from local soy sauce factories. However these strains of *A. flavus* did not produce aflatoxins in laboratory cultures. Neither were the authors able to detect the presence of aflatoxins in the moulded material or their products by the method of thin-layer chromatography. However the authors were able to demonstrate aflatoxin production with *A. parasiticus* NRRL 2999.

Note: This is the earliest document seen (March 2002) that uses the word "aflatoxins" in connection with soybeans. Address: Inst. for Medical Research, Kuala Lumpur, Malaysia.

4498. *Los Angeles Times*. 1966. Fish dish with flavor of Orient. Oct. 13. p. D2.
• ***Summary:*** "Ginger root, black beans (a flavoring) and soy sauce are responsible for the distinctive flavor of Chinese steamed fish." A recipe for "Chinese steamed fish" calls for "½ tsp. [teaspoon] fermented black beans or salt."

4499. Swaminathan, M. 1966. The use of soyabean and its products in feeding infants and in the prevention of protein malnutrition in weaned infants and pre-school children in developing countries. *Indian J. of Nutrition and Dietetics* 3(4):138-50. Oct. [63 ref]
• ***Summary:*** Contents: Introduction. Chemical composition: Carbohydrates, fat, minerals, vitamins, proteins. Factors affecting the nutritive value of soya proteins: Trypsin and growth inhibitors, heat processing, other factors. Nutritive value of soya proteins (with or without methionine supplementation): Experiments with animals, experiments with human beings, supplementary value to other food proteins. Processed foods from soyabean for feeding infants and preschool children: Milk substitutes and infant foods, processed protein foods based on soya (soya flour, Multipurpose Food or MPF, soup powder). Foods based on soyabean and other oilseed meals: Precooked roller dried foods, extrusion-cooked full-fat soybean flour. Other soya products (soy protein isolate, tofu, natto, miso, tempeh, soy sauce). Conclusion. Address: Central Food Technological Research Inst. (CFTRI), Mysore, India.

4500. Tonery, Susan J. 1966. Miss Tachibana will entertain at concert. *Hartford Courant* (*Connecticut*). Nov. 24. p. 48.
• ***Summary:*** Miss Tachibana is a superb dancer. She agreed to share two of her favorite recipes. Yosenabe calls for "2 cakes soy bean curd cut in 1 inch cubes." Sukiyaki calls for "2 cakes soy bean curd." Both also call for soy sauce and

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monosodium glutamate.

4501. Hesseltine, C.W.; Shotwell, Odette L.; Ellis, J.J.; Stubblefield, R.D. 1966. Aflatoxin formation by *Aspergillus flavus*. *Bacteriological Reviews* 30(4):795-805. Dec. [39 ref]
• ***Summary:*** Introduction. Fungi producing aflatoxins and other toxins of *A. flavus*. Natural occurrence of aflatoxin. Factors affecting aflatoxin formation in nature. Production of aflatoxin in culture. Aflatoxin studies at the Northern Regional Research Laboratory.

The occurrence of mycotoxins has been known for several decades. In 1913 Alsberg and Black of the USDA studied the biochemistry of toxins of certain molds isolated from corn meal. *Penicillium puberulum* was found to produce penicillic acid which was toxic. Interest in aflatoxins arose after the death of a large number of young turkeys in Great Britain in 1960. At least 4 aflatoxins are known to exist, produced by certain strains of *Aspergillus flavus* Link, *A. parasiticus* Speare, and *Penicillium puberulum* Bainier.

"*Aspergillus oryzae* and its near relatives are widely used in the preparation of koji for such food fermentations as shoyu (soy sauce), miso, black beans [fermented black soybeans / fermented black soybeans], and sake" (p. 802). *A. oryzae* is a close relative of *A. flavus;* they are distinguished on the basis of minor morphological characteristics. Aflatoxin has been found on only two commercial commodities: Peanuts and cottonseed cake. Although *A. flavus* can be made to grow on soybeans, none of the strains produced much aflatoxin regardless of the conditions. Aflatoxins have not been found in commercial soyfoods produced by *Aspergillus oryzae*.

The authors obtained very low toxin production (0.03 micrograms/milliliter) on pearled soybeans (Hawkeye variety) using a strain of *Aspergillus flavus*. Address: NRRL, Peoria, Illinois.

4502. Takeuchi, Tokuo; Yoshii, Hisao. 1966. Miso, shôyu no peptides ni kansuru kenkyû. III. Miso jukusei-chû no henka [Studies on the peptides in miso and soy sauce. III. Changes in the amounts of peptides during miso ripening]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 44(12):934-39. Dec. [12 ref. Jap; eng]
Address: Food Research Inst. of Aichi prefecture, Nishi-ku, Nagoya, Japan.

4503. Baens-Arcega, L. 1966. Accelerated soy sauce production. *Philippine Patent* 2,553. *

4504. **Product Name:** La Choy Teriyaki Sauce.
Manufacturer's Name: La Choy Food Products.
Manufacturer's Address: 901 Stryker St., Archbold, OH 43502.
Date of Introduction: 1966.
New Product–Documentation: Fred Marken's brochure. Talk with Milan Drake. 1988. Jan. 4. He thinks this was launched in about 1966. Chun King may have had an earlier Teriyaki Sauce. He thinks Kikkoman came later. For details, contact Karen Johnston in Fullerton: 714-680-1430. A packaged teriyaki dinner was launched in about 1970. Note that La Choy was part of Beatrice Foods before Hunt-Wesson bought it.

4505. Burkill, I.H. 1966. Dictionary of the economic products of the Malay Peninsula, 2nd ed. 2 vols. Kuala Lumpur, Malaysia: Ministry of Agriculture and Co-operatives. xiv + 2444 p. See vol. 1 (A-H), p. 1098-1103. Index. 24 cm. [11 ref]
• ***Summary:*** Information on the soy bean (*Glycine max*) is found under Glycine. Contents: Origin. Man has selected the more tropical races and is still selecting. Search for a race suitable for Malaya. Java, long ago, found one suitable for the drier parts of the island. Secondary uses as fodder, a cover crop, and green manure. High food-value of the seed. The seed, ripe or nearly ripe, as food. Its special use in diabetes. Artificial milk. Vegetable casein [for industrial uses]. substitute for coffee. Seedlings [sprouts] eaten. Sauces, &c., from the bean. Témpé made in Malaysia with the aid of a fungus. Teou-fu [tofu] prepared by the Chinese. Tao-cho prepared [in Java] with the aid of fungus. Sho-yu or soy kechap. Miso, a Japanese preparation. The making of soy kechap in Java. Organisms in fermentation. Oil [soy-bean oil, or kachang oil]. Criminal use (hairs on the pods cause irritation within the digestive tract). Fibre (in the stem). Joss sticks (Ash of the stem is said to be used in joss-sticks in Indo-China). The soybean is frequently cultivated in Burma and Siam.

A photo (frontispiece) facing the title page shows Isaac Henry Burkill (1870-1965). This second edition is only slightly different from the original 1935 edition of which 2,000 copies were sold. This edition was published on behalf of the governments of Malaysia and Singapore by the Ministry of Agriculture and Cooperatives, Kuala Lumpur, Malaysia. Address: Director of Gardens, Straits Settlements (Singapore; 1912-1925).

4506. Ebine, Hideo. 1966. Fermented soybean foods in Japan. Tokyo: Tropical Agricultural Research Center, Ministry of Agriculture and Forestry. 20 p. *
Address: National Food Research Inst., Tokyo, Japan.

4507. Heer, Jean. 1966. World events 1866-1966: The first hundred years of Nestlé. Vevey, Switzerland: Nestlé. 326 p. Illust. 27 cm. [45* ref]
• ***Summary:*** This is an English-language translation of *Reflets du Monde 1866-1966: Présence de Nestlé*, which was also published in German, Italian, and Spanish. It is a good overview of a century of world history, with emphasis on Europe, food, and politics. Enriched with many color photos,

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it unfortunately has no index.

Nestlé was founded in 1866 making infant milk foods. Initially it consisted of two separate businesses, 120 miles apart, at Cham and Vevey, Switzerland. They were rivals until 1905, when they merged to form the Nestlé and Anglo-Swiss Condensed Milk Company. Now Nestlé makes milk, cocoa, and coffee. In the war of 1870 [Franco-Prussian War], France was defeated by Germany. In 1947 Nestlé acquired Maggi in Kempttal; Maggi has archives. In 1960 Nestlé acquired the share capital of Crosse & Blackwell worldwide, selling canned soups, pickles, canned peas, beans and fish. This move increased Nestlé's manufacturing capacity by the addition of 11 factories, six of which were in Great Britain (including two at Dundee in Scotland). Crosse & Blackwell traces its origins back to 1706, but it got its present name in 1830 when two friends and employees, Edmund Crosse and Thomas Blackwell, bought out a firm that preserved foods for victualling long-distance vessels. In 1892 it became a limited company. After World War I they bought out two companies; one was E. Lazenby & Son Ltd., which had started in the kitchen of a middle-class housewife, Elizabeth Lazenby, wife of a London grocer, who prepared a sauce [Harvey's Sauce] which acquired a great reputation as a seasoning for meat dishes. Manufacture commercially was started in 1776, and remained a family business until taken over by Crosse & Blackwell in 1919. Address: Nestlé.

4508. Light, Luise. 1966. In praise of vegetables. New York, NY: Charles Scribner's Sons. xxii + 265 p. Illust. Index. 22 cm.

• ***Summary:*** Soy-related recipes include: Soya sauce dressing (p. 134).

4509. Miller, Gloria Bley. 1966. The thousand recipe Chinese cookbook. New York, NY: Antheneum. First Grosset & Dunlap edition 1970. xiv + 926 p. Illust. magnificently by Earl Thollander. Index. 26 cm.

• ***Summary:*** This excellent, massive volume, by the blond-haired wife (a professional writer; photo shown on dust jacket) of a Greenwich Village sculptor, offers an in-depth introduction to Chinese cooking and ingredients, though it is unusually heavy on flesh foods and light on grain and vegetable dishes–as the following listing of recipes will show. In describing "The Chinese Diet" (p. 3-4) the author notes, "Meat does not predominate, vegetables do:... There are no dairy products: Butter, cheese and milk are practically unknown to Chinese cooking. (Cattle, few and far between, were more profitably put to work as beasts of burden.) Yet, with nutritional ingenuity, the Chinese created their own 'cow' which produced its own 'dairy' products. They took the lowly soybean, whose protein closely resembles that of meat, and transformed it in innumerable ways. They softened and ground the soybean, then mixed it with water, converting it first to milk, then to curd, and finally to cheese. (They also put it to many other uses: made it into sauce and jam; served its sprouts as vegetables; fermented, dried and roasted it; used it salty as a condiment, sweet in pastries.)"

Page 75 notes: Soy sauce should be used discreetly in light soups. If possible, it should be light soy. The dark variety can destroy a soup's lightness and clarity; its strong taste can overwhelm flavors.

Soy-related recipes include: Basic bean curd soup (p. 99-100). Basic cold bean curd (p. 114). Slivered bean curd and shrimp (p. 115). Stir-fried pork and bean curd (p. 133). Stir-fried pork with deep-fried bean curd. Stir-fried pork with pressed bean curd (p. 135). Stir-fried roast pork and bean curd I and II (p. 156-57). Basic steamed minced pork (with "fermented black beans," p. 167-68). Steamed sliced pork with ham and bean curd (p. 170). Steamed sliced pork with white cheese [white fermented tofu] (p. 171). Basic braised pork with bean curd (p. 174-75). Braised pork with red bean cheese (p. 176). Braised pork with chestnuts, mushrooms and ginkgo nuts (p. 176-77) has a variation that calls for "¼ pound dried bean curd sticks."

Note: This is the earliest English-language document seen (June 2011) that uses the term "dried bean curd sticks" to refer to dried yuba sticks. Braised pork and bean curd (p. 180). Braised five-flower pork and red bean cheese (p. 180-81). Red-simmered pork (with soy sauce, p. 186-88). Stir-fried spareribs with black bean sauce (with "1 to 2 tablespoons fermented black beans." "Soak fermented black beans... Mince garlic and scallion stalk, then mash with soaked black beans. Combine with sherry, water and soy sauce... Stir in black bean mixture" with other ingredients, p. 202-03). Steamed spareribs with black bean sauce ("Mince garlic and mash with soaked black beans; then combine with cornstarch, soy sauce and sugar. Pour mixture over ribs," p. 206). Braised spareribs with black bean sauce ("Mince garlic and ginger root, then mash with soaked black beans," p. 206). Braised spareribs with red bean cheese (p. 206). Stir-fried beef and bean curd (p. 215). Red-simmered beef (with soy sauce, p. 245-46). Red-simmered (or cooked) duck (with soy sauce, p. 267-71). Stir-fried chicken with soy jam (p. 325-26). Stir-fried chicken and tomatoes with black beans ["fermented black beans"] (p. 327-28). Stir-fried deep-fried chicken with brown bean sauce (p. 329). Stir-fried deep-fried chicken with soybean paste (p. 330-31). Red-cooked or soy chicken (p. 366-69). Steamed fish topped with black bean sauce ["fermented black beans"] (p. 411-12). Braised soy fish (p. 429-32). Braised fish with deep-fried bean curd (p. 434). Braised fish steaks with bean curd (p. 435). Deep-fried bean curd stuffed with minced fish (p. 448). Braised dried oysters with bean curd sticks [dried yuba sticks] (p. 483). Stir-fried shrimp with bean curd I and II (p. 496). Stir-fried shrimp with deep-fried bean curd (p. 497). Stir-fried shrimp with black bean sauce ["fermented black beans"] I and II (p. 500). Poached shrimp with ham and bean curd (p. 527). Basic omelet with bean curd I and II (p. 551-52). Fried eggs with

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soy sauce (p. 569). Soy eggs (also called pot-stewed or red-stewed eggs). Soy duck eggs (p. 574). Basic stir-fried bean curd (p. 593). Basic deep-fried bean curd (p. 594). Deep-fried bean curd with dried shrimp sauce. Steamed stuffed bean curd (with pork, p. 595). Miscellaneous bean curd (p. 595-96). Stir-fried spinach and white cheese [fermented tofu] (p. 618-19). Stir-fried string beans and white cheese [fermented tofu] (p. 620-21). Basic Buddhist vegetable dish (A vegetarian dish known as Lo Hon Ji or Lohan Tsai; "Variation: In step 4, stir 2 tablespoons Chinese red cheese, mashed, into the water-soy mixture;..." p. 623). Soy jam noodles (p. 660). Noodles in brown bean sauce (and hoisin sauce, p. 661). Dips (incl. Dip for deep-fried bean curd; many use soy sauce or hoisin sauce, p. 709-14). Soy-vinegar dressing. Soy-sesame dressing (p. 715, with soy sauce and sesame oil). Soy-oil dressing (with soy sauce and peanut oil, p. 716). Marinades (many use soy sauce, hoisin sauce, brown bean sauce, or red bean cheese, p. 717-24). Sauces (many use soy sauce or yellow bean paste, incl. Sweet-and-pungent sauces, p. 725-39).

The chapter titled "Other Useful Information" tells more about bean curd.

The extensive Glossary of Chinese Ingredients (p. 844-72) contains the following soy-related entries: Bean curd (bean cakes; note that recipes call for a certain number of "cakes" of tofu). Bean curd sauce (see cheese, Chinese white).

Bean curd sticks (dried bean curd [dried yuba sticks = foo jook]; "Long, dried, cream-colored sticks, about ½ inch wide and 20 inches long, but bent in two. Are stiff and striated with an enamel-like surface. Sometimes called 'Second Bamboo' because they come from the residue or second layer of creamy bean curd [yuba]. Must be soaked; then they become chewy in texture, nutlike in flavor. Used as a vegetable with soup, steamed fish, stir-fried and braised pork... Other dried varieties include sweet bean curd sticks [tim jook or tiem joke], which are similar but thicker, and are used in fish and vegetarian dishes; and glazed bean curd skin in the form of stiff thin sheets").

Bean paste, yellow (yellow sauce). Bean sauce, brown (see brown bean sauce). Bean sprouts. Yellow soybean sprouts are larger and coarser than mung bean sprouts, and must be husked. "They also have a stronger, more woodsy flavor." Because of their crunchiness, Chinese call them "teeth vegetable." Beans, black (Type of beans not given. "Note: Sweetened black beans used as a pastry filling sold in Chinese bakeries"). Beans, black fermented beans (black bean sauce or salted black beans). Brown bean sauce. Cheese, Chinese red (red bean curd cheese, spiced red bean curd, or southern cheese). Cheese, Chinese white (bean curd sauce, white bean curd cheese, or white bean sauce). Five Spices (five-flavored powder or five-fragrance spice powder; star anise, anise pepper, fennel, cloves, cinnamon). Hoisin sauce (haisien sauce, Peking sauce, red seasoning sauce, red vegetable sauce, sweet vegetable paste, or sweet vegetable sauce; another variety is called Ten-Flavored Sauce). Pickles, Chinese (pickled vegetables; pickled in soy sauce). Red bean sauce. Soy jam (soybean paste). Soy sauce (light, black, or heavy varieties). Hoisin sauce (p. 855) is a "Thick, dark brownish-red sauce, made from soy beans, spices, garlic and chili. Sweet and spicy." Used in cooking and as a table condiment.

The chapters titled "Storing Information" and "Soaking Information" include such information on many of the foods listed in the glossary.

The chapter titled "Chinese terminology" (p. 886-91) is especially valuable because it gives the Cantonese names of Chinese foods. It contains the following soy-related entries: Bean curd: Dow foo or dau foo. Bean curd, deep fried: Dow foo pok. Bean curd, spiced: Dow foo kon. Bean curd, watery: Dow foo fa [literally "tofu flowers"; tofu curds]. Bean curd sticks: Foo jook or foo joke. Bean curd sticks, sweet: Tim jook or tiem joke. Bean paste, red: Dow sha or dow cha [azuki]. Beans, black: Woo dow. Bean paste, yellow: Wong dow sa [soy]. Beans, black fermented: Dow see or doe shee. Beans, sweet black: Dow sa. Beans, red: Hoong dow [azuki]. Bean sprouts, soy: Dow gna or dow ngah. Brown bean sauce: Min see jeung or mien see jeung. Catsup: Fon ker jeung. Cheese, Chinese red: Nom yee or Narm yoo [fermented tofu]. Cheese, Chinese white: Foo yee or Foo yoo [fermented tofu]. Hoisin sauce: Hoy sin jeung or hoy sien jeung. Oil, peanut: Far sung yow. Oil, sesame: Jee ma yo or jee ma yow. Peanuts: Far sang or far sung. Red bean sauce: Saang see jeung or shargn she jeung [azuki]. Sesame paste: Jee ma jeung. Sesame seeds: Jee ma. Soy jam [chiang]: Yewn she jeung. Soy sauce: See yu or shee yau or sho yu. Soy sauce, light: Sang chau. Soy sauce, dark: Chow yau or cho yo. Soy sauce, heavy: See yau or jeow yau.

Note: This is the earliest English-language document seen (April 2012) that uses the term "shee yau" to refer to Cantonese soy sauce, or the term "See yau" or "jeow yau" to refer to heavy Cantonese soy sauce.

Illustrations show: A bottle of Chou Soy sauce made by Amoy Canning Co. (p. 112). A brick-shaped can of "Thick Soy" made by Tung Chun Canning Co. (p. 126). An earthenware jug of "Ho Sang Yick Soy Sauce" (p. 203). A Mason-type jar of fermented bean curd made by Tung Chun Soy (p. 596). A bottle of Koon Chu* soy [sauce] (p. 715). Address: Greenwich Village, New York City.

4510. Nakamura, James I. 1966. Agricultural production and the economic development of Japan, 1873-1922. Princeton, New Jersey: Princeton University Press. xxiii + 257 p. Illust. Index. 24 cm. Series: Studies of the East Asian Institute, Columbia University. [149* ref]

• ***Summary:*** Japan's economic growth is usually described in superlatives and agriculture is widely viewed as playing an unusually important role in this growth. In reexamining

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government statistics about Japan's historical agricultural growth, the author finds that the median growth rate was not 2.4% as previously believed, but probably no more than 1.0%. This remarkable finding dispels much of the mystery surrounding Japan's miraculous "take-off" in the Meiji period.

Japan was a net food exporter until about 1895. By 1920 Japan had become heavily dependent on food imports, including wheat, soy beans, sugar, and animal products (p. 126).

During the Meiji period and until relatively recently, most rural households in Japan were nearly self-sufficient, producing almost all of their own cloth, clothes, footgear, housing, many farm implements, and most processed foods and beverages including "soy sauce, bean paste sauce (*miso*), pickles, rice wine (*sake*), etc. (p. 127, 139-40).

Table 5 (p. 228-30) gives the yield of ten Japanese crops from 1879 to 1925. The yield of soy beans increased from 0.516 *koku/tan* [10.45 bushels/acre] in 1879 (1 koku = 4.96 bushels; 1 tan = 0.245 acres) to 0.778 *koku/tan* in 1900 to 0.915 *koku/tan* [18.52 bu/acre] in 1919.

Soybeans are also mentioned on pages 97, 231, and 233. Address: New York.

4511. Nelson, Andrew Nathaniel. 1966. The modern reader's Japanese-English character dictionary. Revised ed. Rutland, Vermont, and Tokyo, Japan: Charles E. Tuttle Co. 1109 p. Index. 24 cm. [15 ref. Jap; Eng]

• ***Summary:*** Radical 37 = dai or oh = big + 3 strokes = #1171 = *daizu* or *ômame* = soy bean (p. 290).

Radical 75 = tree; at left = ki hen. #2211 = eda of edamame. Radical 82 = Hair of animals, ke. Radical 85 = Water + 11 strokes = soymilk. Radical 151 = Bean + 7 strokes = mame (bean) or tou = toufu. Radical 164 = Liquid (Sake sukuri) + 11 strokes = shoyu no sho. Radical 201 = Yellow (variant is 11 strokes).

Soy related words: (1) Miso: *miso* (fermented [soy] bean paste; flattery, p. 247). *miso o tsukeru* (to make a mess of, p. 247). *miso shiru, misojiru* (bean-paste soup, p. 247). *miso mame* (soybeans, p. 247). *misoni* (boiling with bean paste, p. 247). *misozuke* (pickled in bean paste, p. 247). *misokoshi* (bean-paste strainer, p. 247). *misosuri* (grinding bean paste; flattery, p. 247). *temai miso* (self praise; bean paste of one's own making, p. 420). *miso dengaku* (tofu baked [grilled] with miso, p. 621). *konamiso* (powdered miso, p. 691). *nuka miso* (salted rice-bran paste, for pickling, p. 694). *karamiso* (salty miso, p. 869).

(2) Tôfu [tofu]: *yakkodôfu* [yakkodofu] (tofu cut in cubes, p. 47). *kôridôfu* [kori-dofu] (frozen tofu, p. 75). *unohana* (refuse from tofu, p. 119). *shimidôfu, kogoridôfu, kogodôfu* [shimi-dofu, kogo-dofu, kogori-dofu] (frozen tofu, p. 192).

Note 1 This is the earliest (and only) English-language document seen (May 2012) that contains the word *kogoridôfu* or the word *kogodôfu* (written as one word, with diacritics) which it says is the same as *shimidôfu*, all of which it defines as frozen tofu.

age (fried tofu, p. 447). *kara, okara* (tofu refuse, p. 525). *aburage* (fried tofu, p. 543). *yuba* (dried tofu [sic], p. 561). *yakidôfu* [yaki-dofu] (broiled bean curd, p. 578).

Note 2 This is the earliest English-language document seen (May 2012) that contains the word *yakidôfu* (written as one word, with diacritics).

nama-age (fried tofu, p. 618). *dengaku* (tofu baked with miso, p. 621). *inarizushi* (fried tofu stuffed with seasoned rice, p. 668). *tofu* (bean curd, tofu, p. 843). *kirazu* (tofu refuse [okara], p. 941). *kôyadôfu* (frozen tofu, p. 978).

toshi no mame ([soy] beans of the bean scattering ceremony, p. 88).

mitsumame (boiled [soy] beans with treacle / molasses, p. 328).

edamamé (green soybeans, p. 494). *irimame* (parched [soy] beans, p. 576). *nimame* (boiled [soy] beans, p. 578).

nattô (fermented soy beans, p. 697).

tamari (soy sauce, p. 564).

azemame (soy beans grown on rice-field ridges, p. 624). *moyashi* (artificially sprouted beans, p. 780). *moyashi mame* (beans for sprouting, p. 781). *hôrai mame* (sugar-coated beans, p. 786).

kuromame (black soy bean, p. 992).

mame abura (soybean oil, p. 843). *tônyû* (soybean milk, p. 843). *kinako* (soybean flour, p. 991). Address: PhD, Tokyo, Japan.

4512. Nippon Shoyu Gijutsukai. 1966. [Analytical methods of soy sauce. 2nd ed.]. Tokyo: Sanyusha Publishing Co. * Address: Tokyo.

4513. Schenk, E.G.; Naundorf, G. 1966. Lexikon der tropischen, subtropischen und mediterranen Nahrungs- und Genussmittel [Dictionary of tropical, subtropical, and Mediterranean foods and food adjuncts (stimulants / enjoyables)]. Herford, Germany: Nicolaische Verlagsbuchhandlung Herford. xiv + 199 p. Index. 21 cm. Series: Manualia Nicolai 1. [200* ref. Ger]

• ***Summary:*** Pages 70-71 give a list of Japanese foods (after Mayerhofer and Pirquet 1926) in no apparent order, with the Japanese name followed by a translation of that name into German. Included in the long list are: Akamiso, miso, shiromiso, tofukasu [okara], daizu, fu [dried wheat gluten], kingyo-fu, kiri-fu, kiri-mochi [frozen and dried rice cake], ame [malt extract], mirin, aburage [tofu fried in vegetable oil], natto–Bohnenkäse, Tofu–Sojatopfen, Tonyu–Sojamilch, azuki [small red beans], kwansen-fu, kinako–Sojabohnenmehl, geröstet, amasake–unvergorener Sake, umeboshi, koritofu [frozen and dried tofu], midzuame [soft ame = rice syrup], shoyu–Sojasauce, yuba–eine Bohnenspeise. Plus many types of sea vegetables.

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On pages 140-42 the following terms are defined in German: Soja [soya], Sojabohne [soybeans], Sojabohnenkäse [soy cheese or tofu], Sojabohnenmehl [soybean meal], Sojabohnenöl [soybean oil], Sojakäse [fermented soy cheese], Sojamilch [soymilk], Soja-Nahrungsmittel [soyfoods]: Koji, Miso, Tofu, Nato [sic, natto], kondensierte Soja-Milch [condensed soymilk]. Japanische Verarbeitungen [Japanese processed foods: Japanische Soja-Sauce Shoju (Shoyu), Miso, Tofu], Soja-Nahrungsmittel, javanische [Javanese] soyfoods: Tao-Hoe, Tempeh, Ketjap, Tao-Tjiong [a term, and perhaps a product, between *doujiang* and *tao-tjo*, Indonesian-style miso], Sojatunken, Soja-Verarbeitungen: Sojamilch, Bohnenkäse, Teoufou (China), Tofu (Japan), Dan Phu (Vietnam), Natto (Japan), Tao-tehe (China).–Bohnenbrei Miso (Japan), Tao-tjiung (doujiang, China).–Sojasauce: Shogu [sic, Shoyu] (Japan), Tsiang-Yeou, Tao-yu (China), Ketjap (Java), Tuong (Vietnam).–Gärmittel: Kiut see (Japan). Then a table shows the nutritional composition of 8 of these foods.

Note 1. This book contains more than its fair share of errors and could be better organized.

Note 2. This is the earliest German-language document seen (May 2005) that uses *Sojabohnenkäse*, the German word meaning "soybean cheese," to refer to tofu. Address: 1. Prof. Dr. med. habil., Dr. phil. nat, Laurensberg ueber Aachen, Germany.

4514. Sun, Ying-Hsing. 1966. *T'ien Kung K'ai Wu:* Chinese technology in the seventeenth century. Translated by E-tu Zen Sun and Shiou-Chuan Sun. University Park & London: Pennsylvania State University Press. xiv + 372 p. See p. 24, 29, 31, 215-16. Illust. 28 cm. [3 soy ref. Eng]

• ***Summary:*** The *T'ien Kung K'ai Wu*, by Sung Ying-Hsing (pinyin: *Tiangong Kaiwu*, by Song Yingxing) was published in 1637. The title can be rendered as "The Creations of Nature and Man." This English-language translation of the 17th century work on Chinese technology contains 18 chapters, 151 superb illustrations, and extensive information on soybeans. The author concluded his preface in 1637 by warning "An ambitious scholar will undoubtedly toss this book onto his desk and give it no further thought; it is a work that is in no way concerned with the art of advancement in officialdom."

In Chapter 1, "The growing of grains," the section on "General terms" states (p. 3) that "the 'five grains' are sesamum, legumes, wheat, panicled millet, and glutinous millet. Rise is not included because the ancient sages who wrote on the subject were natives of northwestern China. Nowadays 70 per cent of the people's staple food is rice, while wheat and various kinds of millet constitute 30 per cent. Sesamum and legumes are used exclusively as vegetables as [for making] oil, although tradition still classifies them among the grains."

The section on "Hemp" (p. 24) notes that the seeds of hemp and sesame are only two kinds that can be used as grain or for oil. "Sesame is both delicious and nutritious; indeed it would be no exaggeration to say that it is the king of all grains."

The section on "Legumes" (*shu*, p. 24, 29, 31) states that one of these legumes is the soy bean, of which there are two varieties [colors]: the black and the yellow. They should be planted not later than the time of the Ch'ing-ming festival [in early April of the solar calendar] or thereabouts. There are three types of yellow soy beans: "fifth-month yellow," "sixth-month popper," and "winter yellow." "The yield of the first of these is small, while that of the last is always twice as much. The black variety is harvested invariably in the eighth month. North of the Huai River horses and mules that are used on long journeys must be fed this black soy bean before they can become strong and sturdy. The amount of the yield of the soy bean depends on the quality of the soil, the frequency of cultivation, and the amount of rainfall. All bean jams (*shi*) [fermented black soybeans], sauces (*jiang*), and curds (*fu*) [tofu] are made from soy.

"South of the Yangtse [River] there is another species known as 'long-legged yellow,' which is planted in the sixth month after early rice has been cut, and is harvested in the ninth or tenth month. The method of planting this bean in Chi-an, Kiangsi [Ji'an, Jiangxi], is quite amazing: After the rice stalks are cut the stubble is not ploughed over, but in the open end of each stalk are placed three or four beans, which are pushed down with fingers. The beans are nourished by the dew gathered in the stalk stubs; later when the beans begin to grow the stubs will rot, providing further nourishment for the growth of the new crop. Should the weather be dry after the shoots appear, one pint of water [per plant?] is fed to the plants. In all, one watering and two cultivations are sufficient to bring forth a plentiful harvest. Birds must be kept away after the beans have been planted and before the young shoots appear, and man is the only effective guard against them."

There are also "black-skin and brown-skin varieties of soybeans." "In cultivating the fields of soybeans and green lentils [sic, mung beans], the land should be lightly ploughed, because the roots of the legumes are short and the shoots straight. If the furrows are deep the clods will pile up, preventing half the seeds from growing. Our ancient agriculturists did not know that deep ploughing was not suitable for legumes" (p. 29).

Other legumes include: (2) The green lentil (*lüdou*) [sic, mung bean], "shaped small and round like a pearl." (3) The pea (*wandou, Pisum sativum*). "It is round like the green lentil, but it has a black spot and is larger in size." (4) The broad bean (*candou, Vicia faba*), "with its pod shaped like a silkworm and seeds larger than the soybean."

(5) The small lentil (*xiaodou*) [sic, azuki bean]. "The red variety (*chixiaodou*) is effective when used medicinally, while the white variety (*baixiaodou*) (also known as the

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rice bean), is good as a vegetable. Planted at the time of the summer solstice, this variety is harvested in the ninth month, and is prevalent in the Huai and Yangtse river regions."

(6) The black lentil (*lüdou*). "which is now a common garden vegetable in north China. Its flour, made into thin sheets, serves the same purposes as that of the green lentil [sic, mung bean]. In Peking the street peddlers cry their 'black lentil sheets' all day long, indicating that the amount produced is considerable.

"A further kind is the white bean (*baibiandou*) [*Dolichos lablab*], which grows along trellises and is also known as the 'eye-brow bean.' In addition there are long string beans, tiger-spot beans, knife beans (large French beans [jack beans, *daodou*]), as well as the black-skin and brown-skin varieties of soybeans, and so forth, which are too numerous to describe. In all, they can serve as a vegetable and take the place of grains in the feeding of mankind. How can students of Nature ignore them?"

In Chapter 4, titled "The preparation of grains," a section on "Preparing millet, sorghum, sesamum, and beans" describes (p. 106) how to separate beans from their pods using a flail or a stone roller pulled by an ox. These two processes are shown in full-page illustrations (p. 83, 105).

In Chapter 12, "Vegetable fats and oils," the section on "Gradation of vegetable oils" begins (p. 215-16): "For eating, the oils of sesame seeds, turnip seeds, yellow soy beans, and cabbage (also called 'white cabbage' [i.e., celery cabbage]) seeds are the best. Next in quality come *Perilla ocymoides* ([the plant] resembles *Perilla nankinensis;* the seed is larger than that of sesame) and rape-seed oil (in the South it is called 'vegetable seed'); next, camellia or tea-seed oil;... the last in quality is hemp-seed oil..."

The yield of oil (in catties per *tan*) is given (p. 216) for many Chinese oilseeds. The two oilseeds with the lowest / worst yields of oil are: cotton seeds 7, and yellow soy beans 9. By contrast, sesame, castor, and camphor seeds yield 40 and rape seeds yield 30-40. In "Kiangsu [Jiangsu] the bean oil is used as food for humans, and the meal cakes are fed to pigs..." Note: 1 catty = 1 *jin* = 590 gm = 1.3 lb = 20.7 oz. 1 *tan* = ca. 180 liters. Thus, for soybeans, 9 catties = 5.31 kg of oil from ca. 180 liters of soybean seeds.

The next section in this chapter, titled "Methods and implements [for oil-extraction]" gives details of wedge presses and processes–but soybeans are not mentioned. Large illustrations show: Roasting and steaming oil seeds (p. 214). Press for making vegetable oils in China (p. 217). Pounding and grinding vegetable tallow tree seeds (p. 220).

Also discusses: Hemp seeds and oil (p. 24, 216). Sesame seeds and oil (p. 3-4, 24, 106, 215-16, 219). Address: China.

4515. The sacred books of China. Translated by James Legge. 1966. Deli, India: Motilal B/Vanarsidass. Illust. 23 cm. *

• ***Summary:*** This is the Sacred Books of the East, Vol. 3, 16, 27-28. UNESCO Collection of representative works, Indian Series. The Li-Chi is Part IV.

4516. Wong, Ella-Mei. 1966. Chinese cookery. New York, NY: Arco Publ. Co. [xi] + 100 p. Illust. Index. 23 cm.

• ***Summary:*** A charming book by an Australian born woman of Chinese ancestry, copyrighted in 1961. She presently "conducts the Chinese Cookery course at East Sydney Technical College... She has also published features in the *Australian Woman's Weekly.*" The foreword is by D.W. Grover, 1961 Head of Food School, East Sydney Technical College.

Chapter 1, "Chinese ways and means," includes three sections on ingredients. The first such section, "Dried ingredients," has an entry for "Bean curd (*foo jook*) [dried yuba sticks] (p. 7). This is sold in sticks or sheets [yuba]; soak in warm water for 10 to 15 minutes. It has little flavor of its own but is highly nutritious and is served with other foods to absorb their flavours. Used in soups and braised dishes–the latter are served on days of fasting."

The third such section, "Sauces and seasonings," includes (p. 10-11): "*Hoysin jeung* [Hoisin sauce, *hoy sin jeung*]: Obtainable in tins. This is made of [soy] bean flour and spices, very rich in flavour and color. It is easy to become accustomed to this taste."

"Monosodium glutamate... It is of vegetable origin and used very sparingly and with discretion it enhances the natural flavour of foods. The Chinese version is a fine white powder called Ve-tsin. In Australia it is known as Zip."

"Red bean curd [red fermented tofu]: A soy bean product, obtainable in tins. The red colour is added."

"Soy sauce: Made from salted and fermented soy beans. No Chinese kitchen is ever without it. There are different grades, ranging from thin to thick, and the colour varies from light brown to dark reddish brown..."

"*Taofu* [tofu]: Made from soy bean curd, a similar texture to soft cheese. It has no flavour of its own, but is highly nutritious. It is usually cut into blocks about one inch by 3 inches. In its fresh state it has a milky colour and is also cut into one-inch cubes and deep-fried."

"White bean curd: Made from soy bean, salted and used as an appetizer or with vegetable dishes."

In Chapter 4, "Vegetables" (p. 31): "Bean sprouts can be cultivated in the kitchen by sprinkling green beans [mung beans] with warm water... The soy bean can also be sprouted, but usually the sprout is tougher." In this chapter, the recipe for "Fasting food" (*jie*) (p. 33) calls for "3 sticks bean curd (foo jook)" and "4 blocks bean curds (taofu)." "This dish is eaten during the Moon Festival and on the second day of the New Year." Each recipe has an English name and a Cantonese name.

In Chapter 7, "Seafood," the recipe for Steamed whole fish with black beans (*dow see jing yee*) calls for "1 tablespoon preserved Chinese black beans (dow see)" (p.

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69).

Note 1. Soy sauce and monosodium glutamate (typically ½ teaspoon per recipe) are called for in many recipes in this book.

(2) Rice with red beans (*Hoong dow farn*) calls for "4 tablespoons red beans (*hoong dow*)" (azuki beans) (p. 87). Address: [Australia].

4517. Zen cookery: The philosophy of Oriental culture. Vol. I. Practical macrobiotics. 1966. Los Angeles, California: Ohsawa Foundation, Inc., The Ignoramus Press. 84 p. Index. 22cm.

• ***Summary:*** The revolutionary little reddish-orange or yellow book, with a black plastic comb binding, that introduced many to macrobiotic cooking. No author or editor is listed. The Ohsawa Foundation has branches in Los Angeles, New York, Wellesley, Paris, and Tokyo. Contents and format are identical to the 1964 edition edited by Teal Nichols, published by the Ohsawa Foundation of Chico–which see. Address: Ohsawa Foundation, Inc., 1434 N. Curson Ave., Los Angeles, California.

4518. Hanaoka, Yoshio. 1967. Shôyu hozon ni kansuru kenkyû. V. B.H.B., B.A. no kakushu shôyu-chû no kôbo nyûsan-kin ni taisuru sayô ni tsuite [Studies on preservation of soy sauce. V. The effects of B.H.B. and B.A. in several soy sauces on yeast and lactic acid bacteria]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(1):22-28. Jan. [25 ref. Jap; eng]

• ***Summary:*** B.H.B. is n-butyl-p-hydroxybenzoate and B.A. is benzoic acid. Both have germicidal effects on yeasts and lactic acid bacteria. B.H.B. is more effective in killing yeast than bacteria. Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda, Chiba, Japan.

4519. Kuroshima, Eizaburo; Oyama, Y.; Matsuo, T. 1967. Shôyu jôzô ni kanyo suru bisei-butsu no gurutamin san shôchô ni oyobosu eikyô ni tsuite. II. Shôyu baichi ni ni okeru gurutamin-san bunkai to seigôsei [Biosynthesis and degradation of glutamic acid in microorganisms relating to soy sauce brewing. II. Biosynthesis and degradation of glutamic acid in soy sauce medium]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(1):9-16. Jan. [15 ref. Jap; eng]

• ***Summary:*** "The degradation of glutamic acid in soy sauce medium was less than that in the synthetic medium. The degradation of glutamic acid by organisms relating to soy sauce brewing was observed using *Saccharomyces rouxii* variety *halomembranis* and *H. anomala*, but not when using *S. rouxii* and genus *Bacillus*.

"Biosynthesis of glutamic acid in soy sauce medium was decreased remarkably in comparison with that in synthetic medium. Biosynthesis of glutamic acid by test organisms was detectable using *S. rouxii* variety *halomembranis* and *H. anomala*, but very hard to observe in other organisms." Address: Research Inst. of Marukin Soy Sauce Co., Kagawa prefecture, Japan.

4520. Kuroshima, Eizaburo; Oyama, Y.; Matsuo, T. 1967. Shôyu jozô ni kanyo suru bisei-butsu no gurutamin-san shôchô ni oyobosu eikyô ni tsuite. I. Gôsei baichi ni okeru gurutamin-san bunkai to seigôsei [Biosynthesis and degradation of glutamic acid in microorganisms relating to soy sauce brewing. I. Biosynthesis and degradation of glutamic acid in synthetic medium]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(1):1-8. Jan. [18 ref. Jap; eng]

Address: Research Inst. of Marukin Soy Sauce Co., Kagawa prefecture, Japan.

4521. Morimoto, Shigemi; Sakaguchi, Y.; Murakami, M. 1967. Sokujô shôyu ni kansuru kenkyû. VII. Arukooru hakkô ôyô shinsoku-jô shôyu seizô-hô ni tsuite [Studies on a quick ripening process of soy sauce. VII. A new quick ripening process based on alcohol fermentation. The composition of organic acid]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(1):17-21. Jan. [18 ref. Jap; eng]

• ***Summary:*** Organic acids studied include oxalic, malic, and lactic acids. Address: Shoin Junior College, Kobe, Japan.

4522. Umeda, Isao. 1967. Kore kara no shôyu seizô-hô. I. [Future shoyu production methods. I.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 62(1):39-42. Jan. [8 ref. Jap]

Address: Nihon Shoyu Kenkyujo.

4523. Yokotsuka, Tamotsu; Sasaki, M.; Kikuchi, T.; Asao, Y.; Nobuhara, A. 1967. Kôji-kin no seisan-butsu ni kansuru kenkyû. I. Hôsan tane kôji-kin no seisan suru shû toshite keikô seibun ni tsuite [Studies on the compounds produced by molds. I. Fluorescent compounds produced by Japanese industrial molds]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 41(1):32-38. Jan. [22 ref. Jap; eng]

• ***Summary:*** Shows the absence of aflatoxins in Japanese fermented foods such as shoyu and miso–based on extracts of 60 strains of molds. Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

4524. Lebumfacil-Davide, Clara S. 1967. Corn and sorghum as possible substitutes for wheat in soy sauce production. *Philippine Agriculturist* 50(9):843-60. Feb. [10 ref]

• ***Summary:*** Soy sauce was made from three different cereal-soy combinations: Wheat-soybean, corn-soybean, and sorghum soybean. Chemical analysis showed that the traditional wheat-soybean substrate had the highest pH, highest total titratable acidity, and highest percentage of total

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nitrogen, proteins, amino nitrogen in total nitrogen, non-chloride solids, amino nitrogen and reducing sugars.

In the soy sauce made from the sorghum-soybean substrate, the amino acids tryptophane, lysine, and histidine were relatively higher.

In the soy sauce made from the corn-soybean substrate, the aspartic and glutamic amino acids were relatively higher. In all the soy sauces, cystine was present in traces only.

"Results obtained showed that neither corn nor sorghum can suitably substitute for wheat in the combinations mentioned. Organoleptic tests for aroma and flavor of the soy sauce showed that wheat-soybean" was the best of the three substrates.

Introduction: For many years Japanese and Chinese food companies have had monopoly on the manufacture of soy sauce for the Philippine market. "However a number food companies in the Philippines are making headway towards soy sauce manufacturing." However one of the basic problems facing these local companies is the high cost of production, and especially the high cost of importing raw materials, such as soybean and wheat. Unless Filipino farmers can produce and provide these raw materials, a local soy sauce industry will never flourish.

Contains 7 tables. Address: Univ. of the Philippines.

4525. McCormick, Sally. 1967. Azuma Sukiyaki House: A bit of the Orient in the heart of Chicago–5120 N. Broadway, Chicago (Advertorial). *Chicago Tribune*. March 23. p. E9.
• ***Summary:*** "We were then served Steak Teriyaki, a tenderloin steak, marinated in Teriyaki sauce and thinly sliced..." Next came Beef Teriyaki, with "soy bean cakes [tofu], soy sauce, dry onions and rice wine" stirred into the pan. Although its piece d'resistance is Sukiyaki, the restaurant also offers Chicken Teriyaki and Salmon Teriyaki. Three photos show Azuma Sukiyaki House.

4526. Hayashi, Shizuka. 1967. Serve Japanese soy noodles. *Soybean Digest*. March. p. 24.
• ***Summary:*** "A soybean exhibition was recently held for 3 consecutive days in Yokohama at the Takashimaya Department Store, one of the three largest department stores in Japan. The exhibit, devoted exclusively to soy foods, was under the sponsorship of the store, the prefectural government of Kanagawa, and various soybean groups.

"It was held to promote increased consumption of various soy products such as salad and cooking oils made from soybean oil, soy sauce, miso, frozen tofu, tofu products, and soy flour. Approximately 25 booths were used by manufacturers to display their products."

The Japanese American Soybean Institute set up a snackbar named "Protein House" (Tanpaku-an) and served Japanese udon noodles made with a mixture of 15% soy flour and 85% wheat flour. The noodles were very popular and crowds swarmed the booth. "It was emphasized that the soy noodle has over three times the nutritional value of an ordinary noodle." 7,000 people visited the 3-day exhibition and 381 entered the contents to name the noodle. The name selected by a committee was "Protein Noodle" (Tampaku-Udon). Address: Managing Director, Japanese American Soybean Inst.

4527. Kato, Hiroshi; Yoshii, Hisao. 1967. Shôyu-chû no taien-sei kôbo no zôshoku sokushin busshitsu ni kansuru kenkyû. I. Kôji-jiru ni taisuru shôyu no hosoku kôka [Studies on growth promoting substances in soy sauce for osmophilic yeasts. I. Effects of soy sauce as a koji extract supplement on yeast growth]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(3):191-96. March. [16 ref. Jap; eng]
Address: Inst. of Food Technology, Aichi prefecture, Nagoya, Japan.

4528. Kato, Hiroshi; Yoshii, Hisao. 1967. Shôyu-chû no taien-sei kôbo no zôshoku sokushin busshitsu ni kansuru kenkyû. II. Zôshoku sokushin busshitsu no bunkaku [Studies on growth promoting substances in soy sauce for osmophilic yeasts. II. Separation of growth promoting substances from soy sauce]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(3):197-203. March. [13 ref. Jap; eng]
Address: Inst. of Food Technology, Aichi prefecture, Nagoya, Japan.

4529. Saito, Nobuo; Tanaka, Teruo. 1967. Shôyu no kanno kensa-hô ni kansuru kenkyû. I. Mikaku handan ni kansuru tôkei-teki kenkyû [Studies on sensory evaluation of soy sauce. I. Statistical research on the taste judgment]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(3):246-53. March. [3 ref. Jap; eng]
Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Noda, Chiba, Japan.

4530. Hanaoka, Yoshio. 1967. Shôyu hozon ni kansuru kenkyû. VI. Lactobacillus ni yoru shôyu-chû no gurutamin-san, asuparagin-san no bunkai ni tsuite [Studies on preservation of soy sauce. VI. Enzymic decomposition of L-glutamic acid and L-aspartic acid in soy sauce *Lactobacilli*, browning reaction products on antifungal activity]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(4):312-19. April. [12 ref. Jap; eng]
Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda, Chiba, Japan.

4531. Sasaki, Masaoki; Kikuchi, T.; Asao, Y.; Yokotsuka, T. 1967. Kôji-kin no seisan-butsu ni kansuru kenkyû. II. Hôsan tane kôji-kin no seisan suru shû toshite keikô seibun ni tsuite (2) [Studies on the compounds produced by molds. II. Fluorescent compounds produced by Japanese industrial molds (2)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 41(4):154-58. April.

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[8 ref. Jap; eng]
• ***Summary:*** Probably shows absence of aflatoxins in Japanese fermented foods. Three fluorescent compounds, all of which were presumed to be pyrazine derivatives, were newly isolated from the culture of *Aspergillus sojae* X-1. Each of these compounds gave the R_f value resembling that of Aflatoxin B-1 in some solvent system of thin-layer chromatography. Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

4532. De, Sasanka S.; Russell, J.S.; Andrè, L.M. 1967. Soybean acceptability and consumer adoptability in relation to food habits in different parts of the world. *USDA Agricultural Research Service.* ARS-71-35. p. 20-27. May. Proceedings of International Conference on Soybean Protein Foods. Held 17-19 Oct. 1966 at Peoria, Illinois. [1 ref]
• ***Summary:*** Contents: Traditional soy products in the Far East: Soysauce, soy milk, bean curd, tempeh, natto and miso, roasted soy flour, kochu chang [Korean soybean miso], sprouted beans. Introduction [of soybeans] in other countries: Brazil, USSR, Africa, Latin America, Turkey. New types of products: Defatted soy flour, full-fat soy flour and beverages made from it developed by the Soybean Council of America. Justification: Cost of a pound of protein from different foods. Beef $4.60. Pork $4.30. Poultry $1.50. Nonfat dry milk solids $0.41. Dry beans $0.35. Soybeans $0.14. Attempted introductions: India. Factors involved in adoptability.

"Kochu chang is produced in every household in Korea from mashed boiled [soy] beans which are hung in bags for 2 to 3 months. The product is broken up, dried, and ground. It is then mixed with ground red pepper [plus salt and water] and kept for some time before use."

This paper was presented by Leon Marie Andrè.

Note 1. This is the earliest English-language document seen (Jan. 2007) that contains the term "roasted soy flour." We read (p. 22): "This product is produced in small amounts and consumed with rice cake [mochi]. There is hardly any information on the nutritive value of the product."

Note 2. This is the earliest English-language document seen (March 2009) that uses the word "kochu chang" (or "kochu-chang") to refer to Korean-style red pepper and soybean paste (miso). Address: 1-2. Food and Agriculture Organization of the United Nations, Rome, Italy; 3. FAO Liaison Officer and adviser to UNICEF.

4533. Fischer, R.W. 1967. The use of soy in food products. *Soybean Digest.* May. p. 29, 31-32, 35-36, 38.
• ***Summary:*** An excellent overview, with considerable history. Contents: Introduction. Grisly hand of hunger. Soybean oil. Oriental soy foods. Soy flour and grits (with a good history of Berczeller, A.E. Staley, Shellabarger, Allied Mills, J.R. Short Milling Co. and Wytase). Isolates and concentrates. The war years (during and immediately after World War II, soy flour and grits come to be widely disliked). New products and know-how.

"Oriental soy foods:... In the Orient soybeans have, for centuries, played an important part in human diets as soy milk for infants, shoyu, or soy sauce as we call it, miso, tofu, tempeh, kinako, natto, yuba, etc."

"Isolates and concentrates: In the mid-1930's processes for further refining the protein factors of soy began to appear. The first 70% soy protein concentrate was turned out by Mead Johnson Co. using the Bonato process of sulfur dioxide and sulfurous acid extraction, but was discontinued for lack of adequate markets for the product. In 1936 the Glidden Co. began working on the production of an isolated protein [90-100% protein] from extracted soy flakes for industrial uses. Glidden, as a major manufacturer of resin, wanted the isolate as a stabilizer for the resin used in sizing paper to provide wet strength. By 1939 Glidden was producing an enzyme hydrolyzed isolated protein to be used with egg albumen for its whipping capacity in producing food toppings... Over the years soy protein isolates have found their greatest application in the industrial field, particularly as paper coatings for high gloss products."

A photo shows cans of Worthington Choplets, Soyameat (3 varieties), and Numete–all made from spun soy protein fibers. Address: Soypro International Inc.

4534. Hesseltine, Clifford W. 1967. Fermented products: Miso, sufu, and tempeh. *USDA Agricultural Research Service.* ARS-71-35. p. 170-80. May. Proceedings of International Conference on Soybean Protein Foods. Held 17-19 Oct. 1966 at Peoria, Illinois. [12 ref]
• ***Summary:*** Discusses: Miso. Sufu, or Chinese cheese [fermented tofu]. Tempeh. Absence of aflatoxin in fermented food products. Table 1 shows mold fermented food products tested for aflatoxin and found negative. These include shoyu, miso, Chinese black beans (Fermented black soybeans from Taiwan), Hamanatto, moromi, soy tempeh, wheat tempeh, rice tempeh, wheat-soybean tempeh.

Concerning sufu: "The pehtzes [molded tofu cubes] are next brined in various solutions depending on the flavor desired. A typical brine would consist of 12% NaCl and 10% ethanol (sometimes added as rice wine). In other instances, only a salt brine may be used. The molded cakes are allowed to age for about 2 months. The finished cheese along with the brine is bottled, sterilized, and marketed as sufu."

Of all the various *Mucor* species tested for use in making, the *Actinomucor elegans* used commercially is the best proteinase and almost the best lipase producer. "This same fungus is used in China to produce a food made by fermentation of wheat gluten" Address: Northern Utilization R&D Div., ARS, USDA, Peoria, Illinois.

4535. Orr, Elizabeth; Adair, David. 1967. The production of protein foods and concentrates from oilseeds. *Tropical*

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Products Institute Report No. G31. 104 p. June. Also titled T.P.I. Report (London). [44 ref]

• ***Summary:*** Contents: Foreword. Acknowledgements. Introduction. 1. The use of oilseeds as a source of protein. 2. Oilseed resources. 3. The manufacture of protein flours by standard oil milling processes. 4. Some cost aspects of the manufacture of protein flour by standard oil milling processes. 5. Examples of the use of edible flours made by standard oil milling processes. 6. Full fat soya flours. 7. Oriental methods of processing soya. 8. Other processes for making protein products. 9. The distribution of protein products. 10. Current experience of making protein flours and foods from oilseeds. 11. The initiation of protein food programmes with particular reference to the role of the administrator. Appendices. 1. Protein nutrition. 2. Oilseed statistics. 3. Toxic hazards. 4. P.A.G. Guides [PAG]. 5. Aflatoxin. 6. Questionnaire. 7. Some examples of the cost of packaging oilseed-based protein foods. 8. Prices of edible oilseed products and protein flours and foods made from oilseeds. Bibliography. Chapters 6 and 7 are especially relevant to soyfoods.

"Full fat soya flour (FFSF) is manufactured in the USA by Archer Daniels Midland Co. and Central Soya, and in the UK by 3 firms: British Arkady Co. Ltd., Soya Foods Ltd., and British Soya Products Ltd. There are no official statistics for production in either country. A trade source of information has estimated UK usage of soya flour at 30,000 tons per annum, but this figure includes defatted soya flour made from meal imported from the USA. Full fat soya flours can be divided into 2 main categories: (a) flours used primarily for bleaching purposes in bread, and (b) general purpose flours. When the flour is to be used mainly for bleaching it is made from uncooked beans, since the natural enzymes in the bean must remain active until the bleaching process has been completed. It is estimated that about half the full fat soya flour made in the UK is used in bread manufacture."

A table lists all known commercial full-fat soy flours, their composition and prices. Describes the Promo Process and Wenger Process for making FFSF, with cost data. Gives case histories for Pronutro in South Africa and Nutresco in [Southern] Rhodesia.

Chapter 7. Kinako. Fermentation products: Soya sauce (shoyu), miso, natto, tempeh. Developing the use of fermented products. Aqueous extracts: Soya milk and tofu, kori-tofu. Soya milk as a substitute for cow's milk. The package soy milk shop (including Tetra Pak and Prepac packaging; the Prepac system, developed by the S.E.A.B. Co., Villejuif, France, has a capacity of 1,500 packs/hour). Case histories for soya milk: Rural cooperatives in Taiwan, Saridele in Indonesia, and Vitasoy in Hong Kong. Soya milk made from soya flour: The 4 known manufacturers are Promo Ltd. of the U.K. ("The product made by Promo is marketed under the brand name of 'Velactin' by the Wander company."), and Loma Linda Foods (Soyalac and Granogen), Mead Johnson (Sobee or Soybee), and Borden's Soy Processing Co., all of the USA. Promo and Loma Linda use the traditional Oriental method rather than using soy flour.

Note: This is the earliest document seen (Sept. 2002) concerning Tetra Pak and soy. Address: TPI, 56/62 Gray's Inn Road, London WC1.

4536. Soriano, Mercedes; Gonzalez, O.N.; Avelino, E. 1967. Studies on the preparation of "soy" sauce from coconut paring meal. *Philippine J. of Science* 96(2):129-37. June. [12 ref]

• ***Summary:*** In the Philippines, soy sauce (called *toyo*), is a popular seasoning in the Filipino diet because it improves the flavor of other foods. "Soybean is the primary raw material in the commercial production of *toyo*. Since the Philippines is not a producer of soybean and because of its high market price, this study was conducted..."

Summary: Sauces were prepared by both mold-enzyme and acid hydrolysis. Results of organoleptic tests showed that the sauce most preferred by the panel was prepared by enzyme hydrolysis using 2 parts coconut paring meal (the paring is the brownish coating of the coconut meat located directly adjacent to the shell) and 1 part soybean. Of the acid hydrolysates, those prepared from mixtures containing two parts of coconut paring meal and one part of soybean, and from equal parts paring meal and soybean, were most preferred in flavor and aroma by the panel. Address: National Inst. of Science and Technology, Manila, Philippines.

4537. Tada, Masakazu. 1967. Some features of Japanese Buddhism. *British Vegetarian*. May/June. p. 225-28.

• ***Summary:*** For 1,850 years Japan kept no livestock farms as one sees in Europe. The main source of animal protein was only from fish and shellfish. But modern Japanese, especially those living in big cities, think animal protein is indispensable. One important feature of Japanese vegetarianism is the development and use of fermented foods, such as miso, shoyu, and natto. Address: Dr., 718 Daisen, P.O. Nirayama, Shizuoka, Japan.

4538. Schmeal, Jacqueline. 1967. Cook says hot woks crisp food. *Christian Science Monitor*. July 10. p. 10.

• ***Summary:*** Point Orient is a Chinese restaurant in Richmond, California. Their recipe for Beef and oyster sauce calls for "1 teaspoon thin soy sauce." Their recipe for Sauce for beef calls for: "½ teaspoon prepared oyster sauce, ¼ teaspoon thick soy sauce, ½ teaspoon thin soy sauce."

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4539. Chico-San Inc. 1967. Chico-San Inc.–Unique foods: Retail price list. P.O. Box 1004, Chico, California. 2 p. July 15. 35 cm.

• ***Summary:*** This single-sheet catalog and price list, printed front and back with dark brown ink on pink paper (8½ by 14 inches), begins:

"Dear retail customer: We encourage you to buy Chico-San products through your local health food store. When you buy directly from Chico-San you must add shipping costs to the cost of food." Includes the following interesting items. Those followed by an asterisk (*) are marked "OEI" meaning "Our Exclusive Import.

Specialties: Rice cakes, buckwheat cakes, millet cakes, wheat cakes, roasted rice, rice crackers*. Condiments: Tekka [miso], Tamari soy sauce*, soybean puree (miso)*, sesame salt, sesame spread, sesame butter, kuzu arrowroot*, salt plums, salt, sesame oil. Crude salt (1 lb to 10 lb). Cereals: Rice cream. Rice: Brown short grain (2 lb to 100 lb). Sesame seeds: White-brown, Black. Beverages: Ohsawa twig tea*, 16 herb tea*, Grain beverage–Koko, Grain beverage–Yano, Lotus root tea*, green tea. Noodles. Beans: Azuki red* ($1.72/lb), Imported red, black beans [soy] ($1.37/lb).

Note 1. This is the earliest English-language document seen (March 2009) that uses the term "Soybean Puree" to refer to miso. During the next decade, many macrobiotic publications referred to miso as a "Soybean puree."

Sea vegetables: Shredded hijiki, kombu*, wakame–curly*, nori–thin sheet, kanten–sea veg gelatin. Dried foods: Lotus root, shrimp, dried fish, small fish–chirimen, tazukuri, shaved bonita [sic, bonito], dried radish [daikon], gourd strips [kampyo, kanpyo], mushrooms. Grain: Barley, buckwheat groats, corn meal, cracked wheat, millet, oat groats & oat meal, rolled oats, rye, wheat–hard red. Flour: One from each grain. Tooth powder jar. Cosmetics. Utensils.

Note 2. This is the earliest document seen (March 2006) that mentions Chico-San. It is also the earliest known Chico-San catalog and price list, and the earliest known Chico-San catalog and price that mentions "Rice cakes."

Note 3. This is the earliest document seen (Sept. 2002) concerning the use of miso in second generation products (tekka).

Note 4. This is the earliest English-language document seen (Dec. 2006) that uses the term "salt plums" to refer umeboshi salt plums.

Note 5. This is the earliest English-language document seen (Dec. 2011) that mentions seitan, which it calls "seitan." The entry for "Seitan" (actually misspelled as "Sietan") is different from all other entries in this catalog, since no weight, no price, and no explanation is given–as if Chico-San has ordered the product, but it has not yet arrived. Moreover, no "OEI" ("Our exclusive import") appears after the word "Sietan." Address: P.O. Box 1004, Chico, California.

4540. Hesseltine, C.W.; Wang, Hwa L. 1967. Traditional fermented foods. *Biotechnology and Bioengineering* 9(3):275-88. July. [8 ref.]

• ***Summary:*** Contents: Summary. Introduction. Fish fermentations. Soybean and peanut fermentations: Koji, shoyu, miso, hamanatto, natto, ontjom, sufu, tempeh. Discussion: Advantages of preparing foods by fermentation. Address: NRRL, Peoria, Illinois.

4541. Edgar, Barry. 1967. Bachelor cooks spicy Indonesian specialty: Nasi goreng. *Christian Science Monitor.* Sept. 26. p. 21.

• ***Summary:*** Mr. Edgar is an American bachelor who used to live in Holland. Indonesian food is very common in Holland since Colonial Dutchmen brought their Indonesian tastes home with them after Indonesia acquired independence. He learned how to make Nasi goreng ("Fried rice") and gives the recipe here, together with its special sauce; the ingredients include "2 tablespoons thick soy sauce–also called ketjap benteng." A good Dutch brand is Conimex. Thin soy sauce makes a poor substitute.

4542. Asao, Yasuo; Sakasai, T.; Yokotsuka, T. 1967. Shôyu kômi seibun ni kansuru kenkyû. XXVI. Shôyu kôbo ni yoru kômi no seisei (2) [Studies on flavorous substances in shoyu. XXVI. Flavorous components produced by yeast fermentation (2)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 41(9) 434-41. Sept. [12 ref. Jap, eng]

• ***Summary:*** *Torulopsis* species of yeast were found to produce alkylphenols during shoyu fermentation. Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda Inst. for Scientific Research.

4543. Hanaoka, Yoshio; Yokotsuka, Tamotsu. 1967. Shôyu hozon ni kansuru kenkyû. VII. Shôyu-chû no ansoku kôsan to sono seiin ni tsuite [Studies on preservation of soy sauce. VII. Benzoic acid in soy sauce and its mechanism of formation]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(9):826-31. Sept. [8 ref. Jap; eng]

• ***Summary:*** "Naturally fermented soy sauce contains many kinds of aliphatic and aromatic acids including trace amounts of benzoic acid (B.A.). It was found that the content of B.A. in soy sauce can be most accurately determined by gas chromatography with a hydrogen flame ionization detector."

"By this procedure the amount of B.A. in raw soy sauce was found to be about 3 parts per million (ppm), and after heating 0.3-1.0 ppm increase was observed. The occurrence of B.A. in soy sauce was found not to be derived from the metabolites of *Aspergillus sojae*, yeasts and bacteria of fermentation, but from the B.A. of raw materials, defatted soybean flour (B.A. about 18 ppm) and wheat (B.A. about 4.0 ppm)." Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda, Chiba, Japan.

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4544. *Health Food Business Review*. 1967. Here's a health food so old–it's new. Sept. p. 27, 28, 43.
• ***Summary:*** Tamari soy sauce has a history that is centuries old. This article discusses it from the viewpoint of macrobiotics and Chico-San. "Only Chico-San produces this product by the old and patient (18 months) method which is 100% natural."

4545. Yokotsuka, Tamotsu; Sakasai, T.; Asao, Y. 1967. Shôyu kômi seibun ni kansuru kenkyû. XXVI. Shôyu kôbo ni yoru kômi no seisei (1) [Studies on flavorous substances in shoyu. XXV. Flavorous components produced by yeast fermentation (1)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 41(9) 428-33. Sept. [11 ref. Jap; eng]
• ***Summary:*** Three hundred strains of yeast were isolated from several kinds of shoyu mash, which were found to have good flavor. This good flavor was shown to be caused by the formation of 4-ethylguaiacol and other phenolic components. This research was financed in part by the USDA Agricultural Research Service. Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Noda Inst. for Scientific Research.

4546. Yokotsuka, Tamotsu; Asao, Y.; Sakasai, T. 1967. Shôyu kômi seibun ni kansuru kenkyû. XXVII. Torurazoku kôbo ni yoru 4EG fukô to hinshitsu hyôka [Studies on flavorous substances in shoyu. XXVII. The production of 4-ethylguaiacol during shoyu fermentation, and its role for shoyu flavor]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 41(9):442-47. Sept. [7 ref. Jap; eng]
• ***Summary:*** "4-Ethylguaiacol, one of the important flavorous components of shoyu, was microbiologically produced by *Torulopsis* species of halophilic yeast added during the process of shoyu fermentation." Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda Inst. for Scientific Research.

4547. McCormick, Sally. 1967. Azuma Sukiyaki House. Enjoy an evening of dining Japanese style–5120 N. Broadway, Chicago (Advertorial). *Chicago Tribune*. Oct. 26. p. J15.
• ***Summary:*** "Beef Sukiyaki cooked at the table over a Hibachi grill... made with thin slices of beef, fresh vegetables, soy bean cakes [tofu] and Japanese noodles." This deluxe dinner costs only $4.75 per person. They also serve Teriyaki and Tempura with soft Samisen [Shamisen] music in lovely, authentic Tatami rooms with sliding shoji screens.

4548. Wu, Edward K. 1967. Exotic Indonesian food. In Hong Kong. *Sun* (*Baltimore, Maryland*). Oct. 26. p. D1.
• ***Summary:*** These are recipes developed by the famous chef Bambang Soegeng of Hotel Indonesia.

The recipe for Soto Madura calls for "2/3 tsp. [teaspoon] sweet soy sauce." The recipe for Sa Te [Satay] instructs: "Marinate the meat [chicken, beef or lamb] in ½ pint of sweet soy sauce mixed with white pepper and some lemon juice." The recipe for Tomis Bajam calls for "3 tbsp. [tablespoons] sweet soy sauce." Address: Hong Kong Bureau of The Sun.

4549. Dubawsky, Rebecca. 1967. Cooking with grains and vegetables plus. Booklet one–A beginning. Boston, Massachusetts. Order of the Universe Publications. 29 p. Illust. No index. 28 cm.
• ***Summary:*** This was the first macrobiotic cookbook written entirely by a Westerner. Rebecca, an older woman who never married and who later moved to Florida, collected these recipes from Aveline Kushi's cooking classes in Boston. The dedication (p. 3) states: "The teaching of Aveline Kushi has made the information that follows possible." The preface (p. 7), written by Michio Kushi on 20 Oct. 1967, begins: "Life is a dream. The purpose of our life is to realize our dream. Those who see a happy, peaceful dream shall become happy and peaceful..." The book has no copyright page, date or place of publication. It was printed by Jacques de Langre [Del.angre], 7557 Sunset Blvd., Hollywood, California 90046. Address given by Farmilant (1972) as Box 203, Prudential Center Station, Boston.

The section titled "Condiments" (p. 11-12) states: "Soya sauce–(Tamari- Japanese word for thick soya sauce)–always used in cooking–never at table, except with noodles, tempura, or soup. Miso–is a dark brown vegetable protein–much more digestible than animal protein." Recipes are given for making Scallion miso, and Carrot top miso.

The section titled "Beans" (p. 17) mentions black beans: "Dried beans–*aduki, navy, pinto, kidney, black beans and chick peas*–double in bulk on cooking. 1 cup = 4 servings (side dish to main course)–wash 3 times and soak beans 1 to 3 hours before using." It then warns: "Cook *black beans* by pot–they clog pressure cooker." The section titled "Soups, Sauces, and Spreads" (p. 19) includes a recipe for "Vegetable, soya vegetable, and miso vegetable soup." There are simple recipes for: Miso sauce (p. 22). Cooking black beans (p. 25). Vegetable soya soup (p. 27). Vegetable miso soup. Vegetable sauces (with soya or miso, p. 27).

Description of book: The covers are dark green, with the title printed in black ink and all lowercase letters. In the lower left corner of the cover is written: The Order of the Universe Publications, Box 203 Prudential Center Station, Boston, Massachusetts–02199. At the bottom of page 29 (the last numbered page): "Booklet II, *More About Grains and Vegetables*, will come out as soon as possible." Near the bottom of the rear cover: "November 1967. Revised edition–July 1969. $1.00."

Note: Jacques de Langre, Ph.D., also spelled his name

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DeLangre and Delangre. Address: Boston, Massachusetts.

4550. Ishigami, Yuzo; Ishikawa, H.; Tsujimura, T.; Ueda, R. 1967. Shôyu kôji no seizô katei ni okeru kakushu bisei-butsu no kyodô ni kansuru kenkyû. IV. Kakushu bisei-butsu no zôshoku, taisha ni oyobosu baiyô shikomi haigô wariai no eikyô [Studies on changes in microflora and its metabolism during the process of making koji in soy sauce brewing. IV. The effects of the ratio of defatted soybeans to roasted wheat on the growth and metabolism of some organisms]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(11):1015-22. Nov. [6 ref. Jap; eng]
Address: 1-2, Higashimaru Shoyu Co., Ltd., Tatsuno, Hyogo prefecture; 3, Dep. of Fermentation Technology, Faculty of Engineering, Osaka Univ., Higashinoda, Osaka, Japan.

4551. Ishigami, Yuzo; Ishikawa, H.; Tsujimura, T.; Ueda, R. 1967. Shôyu kôji no seizô katei ni okeru kakushu bisei-butsu no kyodô ni kansuru kenkyû. III. Kakushu bisei-butsu no zôshoku, taisha ni oyobosu baiyô ondo no eikyô [Studies on changes in microflora and its metabolism during the process of making koji in soy sauce brewing. III. Effects of cultural temperatures on the growth and metabolism of some organisms]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(11):1009-14. Nov. [9 ref. Jap; eng]
Address: 1-2, Higashimaru Shoyu Co., Ltd., Tatsuno, Hyogo prefecture; 3, Dep. of Fermentation Technology, Faculty of Engineering, Osaka Univ., Higashinoda, Osaka.

4552. Ishigami, Yuzo; Ishikawa, H.; Takezuru, H.; Ueda, R. 1967. Shôyu kôji no seizô katei ni okeru kakushu bisei-butsu no kyodô ni kansuru kenkyû. II. Kakushu bisei-butsu no zôshoku, taisha ni oyobosu baichi shoki suibun genryô no eikyô [Studies on changes in microflora and its metabolism during the process of making koji in soy sauce brewing. II. Effects of initial moisture content of media on the growth and metabolism of some organisms]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(11):1003-08. Nov. [10 ref. Jap; eng]
Address: 1-2, Higashimaru Shoyu Co., Ltd., Tatsuno, Hyogo prefecture; 3, Dep. of Fermentation Technology, Faculty of Engineering, Osaka Univ., Higashinoda, Osaka.

4553. Saito, Nobuo; Tanaka, Teruo. 1967. Shôyu no kannô kensa-hô ni kansuru kenkyû. I. Kagaku seibun ni yoru hinshitsu pataan no kôsei [Studies on sensory evaluation of soy sauce. III. Construction of quality pattern on the chemical factors]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(11):1033-39. Nov. [3 ref. Jap, eng]
Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Noda, Chiba, Japan.

4554. Saito, Nobuo; Tanaka, Teruo. 1967. Shôyu no kannô kensa-hô ni kansuru kenkyû. II. Shûkaku handan ni kansuru tokei-teki kenkyû [Studies on sensory evaluation of soy sauce. II. Statistical research on odor judgment]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 45(11):1023-32. Nov. [2 ref. Jap; eng]
Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Noda, Chiba, Japan.

4555. Chong, Y.H.; Ponnampalam, J.T. 1967. The effect on duckling of a diet containing moulded-soybeans. *Medical J. of Malaya* 22(2):104-09. Dec. [16 ref.]
• ***Summary:*** Recent discoveries have shown that several common species of mold (such as *Aspergillus flavus*, *Aspergillus parasiticus*, and *Penicillium puberulum*) which cause spoilage in food, "produce a group of toxic metabolites known collectively as aflatoxins. Aflatoxins are the most potent liver poisons yet discovered." Aflatoxins are also extremely carcinogenic, and can cause liver cancer.

Ducklings are particularly sensitive to aflatoxins. In this experiment day-old ducklings were fed a "diet containing moulded soybeans which had previously been shown by physico-chemical means to be free of aflatoxins. No significant difference was observed in the general appearance, growth rate, mortality and liver histology between ducklings fed the experimental diet and those fed the control diet. This not only confirmed our previous finding of the absence of aflatoxins but also appeared to rule out the possibility of other hepatotoxic principles of fungal origin in moulded-soybeans."

"Our present results taken in conjunction with those of our previous study (Chong *et al.* 1966) seem to rule out firmly the possibility of aflatoxin contamination in moulded-soybeans and their product–soy sauce." Address: Inst. for Medical Research, Kuala Lumpur, Malaysia.

4556. Murakami, Hideya; Takase, S.; Ishii, T. 1967. Non-productivity of aflatoxin by Japanese industrial strains of *Aspergillus*. I. Production of fluorescent substances in agar slant and shaking cultures. *J. of General and Applied Microbiology* (*Tokyo*) 13(4):323-34. Dec. [14 ref. Eng]
• ***Summary:*** "Two hundred and fourteen strains of the *Aspergillus* were cultured both in agar slants and in a liquid medium by shaking, and the productivity of aflatoxins was studied, respectively, by observation of the fluorescence of the medium and by fluorometry and thin-layer chromatography, using the aflatoxin-producing strain ATCC 15517 as a control." None of the resulting products were aflatoxins. "However, the fact does exist that certain strains belonging to the *Aspergillus flavus-oryzae* group or the *A. flavus* group produce aflatoxins."

"Materials and methods–Microorganisms: We used 214 strains including 176 strains of the yellow-green-spored *Aspergillus* and 38 strains of the other *Aspergillus*. All of the formers were isolated or collected in our institute during 1904 to 1965, consisting of 100 strains for Sake brewing, 32

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strains for Miso brewing and 44 strains for Shoyu brewing. Among the latter 38 strains, 16 strains were those used for manufacturing Shôchû (Japanese distilled liquor) and the remainings [sic, rest] were non-industrial strains received from the Institute of Applied Microbiology, University of Tokyo. Aflatoxin-producing ATCC 15517 was sent from the National Institute of Health, Tokyo, and used as a control." Address: Research Inst. of Brewing, Tokyo.

4557. Rakosky, Joseph, Jr. 1967. Soy proteins–Their preparation and uses in comminuted meat products. *Meat Hygiene Abstracts* 8(6) 1-11. Nov/Dec.
• ***Summary:*** Contents: Introduction. Soybean processing. Soy protein products. Soy grits and flour, textured soy proteins (TSP), hydrolyzed vegetable protein (HVP), fatted or lecithinated soy flours, soy protein concentrates (3 commercial methods are used to immobilize the protein: heat, iso-electric wash, and organic solvent wash), edible isolated soy protein (ISP). The use of soy proteins in meat applications. Summary. List of product in which soy derivatives are used, and the permitted level: Cooked or fresh sausage, chili con carne, spaghetti with meat balls, Salisbury steak, imitation sausage, soups, stews, nonspecific loaves, scrapple, tamales, meat pies, pork with barbecue sauce, beef with barbecue sauce, patties. Address: Director, Technical Services, Chemurgy Div., Central Soya, Chicago, Illinois.

4558. *Soybean Digest.*1967. State fair booth by N.C. Association. Dec. p. 10.
• ***Summary:*** In October, the North Carolina Soybean Producers Association participated in the annual state fair at Raleigh with a booth displaying the many food products in which soybeans are used as an ingredient, including meats, strawberries, coconut with artificial flavor, soy bean flour, Snowdrift, soy sauce, mayonnaise, and salad dressings. The response was excellent, according to Jim S. Gardner, executive secretary of the Association. "Surprisingly enough, many people had never had the idea of the value of the soybean to everyday living." A photo shows woman at the booth with the display of soybean products.

4559. Chang, C.H. 1967. [Organic acid in Korean soy sauce]. *Han'guk Nonghwa Hakhoe Chi (J. of the Korean Agricultural Chemical Society)* 8:1-9. [Kor]*
• ***Summary:*** Korean soy sauces were prepared by the ordinary and improved methods and the organic acid content of each was analysed–with the following results.

(1) In analysing the general components of prepared soy sauce, larger quantities of total acid, volatile acid, and non-volatile acid were found in improved soy sauce than in ordinary soy sauce.

(2) Volatile organic acids were analysed using gas chromatography. The following results were obtained:

(a) In the ordinary soy sauce, formic acid, acetic acid, propionic acid, and butyric acid were detected. Acetic acid was in the highest amount, followed by propionic acid, butyric acid, and formic acid, respectively.

(b) In the improved soy sauce, formic acid, acetic acid, propionic acid, and butyric acid were detected. Acetic acid was in the highest amount, followed by propionic aid, butyric acid, and formic acid, respectively.

(3) Non-volatile organic acid was analysed with the paper partition chromatography method. The following results were obtained:

(a) Lactic, glutaric, fumaric, malonic, malic, glycolic, oxalic, tartaric, and succinic acids, in addition to two unknown spots were detected in ordinary soy sauce. Lactic acid was in the highest amount, followed by succinic, glycolic, oxalic, tartaric, glutaric, malik, fumark, and malonic acids, respectively.

(b) Lactic, glutaric, malonic, malic, glycolic, tartaric, succinic, and galacturonic acid, in addition to two unknown spots were detected in the improved soy sauce. Lactic acid was in the highest amount, followed by succinic, glycolic, malic, glutaric, tartaric, galacturonic, and malonic acids, respectively.

(4) Alpha-keto acid was analysed with paper partition chromatography. The following results were obtained. Pyruvic acid, alpha-keto glutaric acid and an unknown spots were detected in the ordinary and improved soy sauce. Pyruvic acid was in the highest amount, followed by alpha-keto glutaric acid.

(5) Stale flavor in the ordinary soy sauces seemed to be partly affected by butyric acid and propionic acid.

(6) Substances influencing taste, such as lactic acid and succinic acid, were found more in improved soy sauce than in ordinary soy sauce. Address: Seoul Agricultural College, Seoul, Korea.

4560. **Product Name:** Shoyu.
Manufacturer's Name: Hawaiian Miso & Soy Co.
Manufacturer's Address: 1714 Mary St., Honolulu, Oahu, HI 96819. Phone: 808-841-7354.
Date of Introduction: 1967
New Product–Documentation: Honolulu City Directory, 1966-67, p. 278. Hawaiian Miso & Soy Co. Ltd., 1714 Mary, Honolulu. Not listed 1967-68. 1986 Directory. Listed again under same name and address. Not listed 1987.

4561. Kim, S.Y.; Kim, Z.U. 1967. [Studies on the changes of protein, peptides and amino acids during natto preparation]. *Han'guk Nonghwa Hakhoe Chi (J. of the Korean Agricultural Chemical Society)* 8:11-20. [Kor]*
• ***Summary:*** In order to study the change of nitrogenous compounds during the Natto preparation, the contents of insoluble protein, water soluble protein, and amino nitrogen were determined, and the pattern of peptides and amino acids was investigated by paper chromatography for the fractions

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resulting from molecular sieving. The results are as follows:

(1) Insoluble protein nitrogen, which was increased to 84% by autoclaving the native soybean, decreased to 44%. The trichloroacetic acid soluble nitrogen increased from 8% to 45% during Natto preparation. The soluble protein nitrogen showed a slight increase.

(2) Fractionation of the peptides using Dowex-50 resins showed that they consisted mostly of lower molecular weight peptides, which increased in accordance with the progress of fermentation, especially after a 30-hour period.

(3) Sixteen known and two unknown amino acids, and three peptides with different Rf values, were identified during the Natto preparation. Their appearance showed some difference in that phenylalanine appeared after 10 hours, methionine after 20 hours, and proline after 30 hours. The three peptides appeared at different stages of fermentation.
Address: Seoul Agricultural College, Seoul, Korea.

4562 **Product Name:** Village Soyburger (later renamed Village Soy Patties).
Manufacturer's Name: Village Manufacturing Co.
Manufacturer's Address: Berkeley, California.
Date of Introduction: 1967.
Ingredients: Whole soybeans, brown rice, carrots, oats, seasonings.
Wt/Vol., Packaging, Price: 3.25 oz patties, sold in packs of four.
How Stored: Frozen.
New Product–Documentation: Label and story in Living Lightly catalog, ca. 1982. "It all started in Berkeley, California, in 1967, when a student at the University of California majoring in dietetics, mixed together the ingredients, constituting the first 'Village soyburger.' They were first sold at a sandwich stand just outside the campus."

Letter from Somari Das of *Communities* magazine, Route 1, Box 191, Oroville, California 95965. 1975 or 1976 June 26. "Yes, we are *very* interested in learning to prepare tofu & miso on a community scale. We are a group of 12 adults and 3 children on 20 acres in Northern California. We have two cottage industries, one of them being a *soyburger* business, so we are pretty familiar by now with the marvelous soybean. We use miso and tamari to make our soyburgers and they are very tasty. At home, we eat a lot of tofu and miso soup, but we buy these products from local distributors rather than produce them ourselves. I am a student of Oriental medicine and feel like my education would be greatly enhanced by learning to prepare these traditional foods at home.–Om Tao, Somari Das."

Talk with Mara Devine. 1988. April 7. The business was started by two women. A collective she belonged to bought the business from these two women in the early 1970s and did it until 1973, when they sold the business. It was made with cooked soybeans (not tofu) pressure cooked with miso. They would run them thru a Hobart grinder then mix in oats as a binder, carrots, maybe onions or garlic powder, then put it through a patty machine. The patties were then frozen. They were not fried; most people fried or baked them at home. The company also made a Frozen Rice-Patti. Their plant was in Oroville, across the street from the high school. The product is still being made, probably in Oroville. Mara now runs her own company named Soy Devine (which see).

4563 Yokotsuka, Tamotsu. 1967. [Toxic substances produced by molds and nonproductivity of aflatoxin by Japanese koji-molds]. *Chomi Kagaku* (*Seasoning Science*) 14:23-37. [Jap]*
Address: Kikkoman.

4564 Berg, Sally; Berg, Lucian. 1967. New food for all palates: A vegetarian cook book. London: Victor Gollancz Ltd. 192 p. 23 cm. [10 ref]
• ***Summary:*** The glossary of ingredients (p. 17) discusses soy sauce and recommends Kikkoman for dipping. Page 85 gives a recipe for watercress cooked in soy sauce.

Gluten is mentioned repeatedly. Granose Meatless Steaks are made of wheat gluten (p. 15-16). Klops, a typical Russian-Jewish savoury, can easily be prepared with a can of wheat gluten (meatless steaks, p. 62-63). There are also gluten recipes for: Fried gluten and eggs (p. 80). Homemade gluten. Breaded gluten sweet and sour. Breaded gluten pineapple. Cold breaded gluten (p. 85-87; all in the chapter on China). Curried gluten (p. 109; India). Burgers (p. 116-17; America). Protein sources (p. 178). Address: England.

4565 Boxer, Charles R. 1967. The Christian century in Japan, 1549-1650. 2nd printing corrected. Berkeley and Los Angeles, California: University of California Press. xv + 535 p. + [9] leaves of plates: Illust. Index. 25 cm. [279 + 210 endnotes]
• ***Summary:*** Contents: Dedication. Preface. 1. From Marco Polo to Mendes Pinto. 2. Japan through Jesuit spectacles. 3. Christianity and the *kurofune* [black ships, Portuguese carracks]. 4. Jesuits and friars. 5. Christian culture ad missionary life. 6. Pirates and traders. 7. The palm of Christian fortitude. 8. Sakoku, or the closed country.

Appendixes [original documents]. I. Extracts from a letter written by Francis Xavier, S.J., to the Jesuits at Goa dated Kagoshima, Nov. 5, 1549 (p. 401). II. The Rutter of the Santa Cruz, July 5, 1585–March 30, 1586 (p. 406). III. Affidavits concerning Jesuit and Franciscan rivalry, 1593-1597 (p. 415). IV. Pedro de Baeza on the China-Japanese Trade, ca. 1609 (p. 425). V. Japanese state papers on the Macao-Nagasaki trade, 1611-1621 (p. 428). VI. The martyrdom of Omura, August 25, 1624 (p. 436). VII. Text of the Sakoku, or Closed Country Edict of June, 1636 (p. 439). VIII. Oath of Apostasy, 1645 (p. 441). IX. List of Japanese nengo or year periods, 1532-1652 (p. 443). X. List of Nagasaki Bugyo, 1587-1650 (p. 444). XI. Heads of the

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Jesuit mission in Japan, 1549-1643 (p. 445). XII. Visitors of the Jesuit Province of Japan and the Vice-Province of China, 1568-1643 (p. 446). XIII/ The apostate fathers, 1633-1643 (p. 447). XIV. Summary of martyrology, 1614-1650 (p. 448). Notes. Bibliography. Index and glossary.

Boxer provides an account [p. 348] of a Yedo (Tokyo) jail by Spanish Franciscan, Fray Diego de Francisco in 1615. "The official ration was a handful of rice daily, barely enough to sustain life for forty or fifty days,... On the other hand, the guards could sometimes be bribed to allow the prisoners' friends to smuggle in a little rice, *soy*, [sauce] or fish by way of supplementing the starvation diet." Note: This passage was first cited by Hymowitz 2007, in "History of the Soybean." Address: Camoens Prof. of Portuguese, King's College, Univ. of London, England.

4566. Indonesia. Departemen Portanian [Indonesian Department of Agriculture]. 1967. Mustika rasa, membuat resep 2 masakan Indonesia dari Sabang sampai Merauke [Gems of taste: Indonesian cookery]. Djakarta, Indonesia: Indonesia. Departemen Portanian [IDA]. xi + 1,123 p. Illust. (part color). 22 cm. [Ind]*
Address: Indonesia.

4567. Mateles, Richard I.; Wogan, Gerald N. eds. 1967. Biochemistry of some foodborne microbial toxins. Cambridge, Massachusetts: MIT Press. ix + 171 p. Papers presented at the Symposium on Microbial Toxins held at the meeting of the American Chemical Society, New York, on 12 Sept. 1966. [100+* ref]
• ***Summary:*** Contents: Part I. Bacterial and algal toxins. Part II: Fungal toxins. One chapter in each part is about soy. They are cited separately. Address: MIT, Cambridge, Massachusetts.

4568. Nakano, Masahiro, ed. 1967. Hakkô shokuhin [Fermented foods]. Tokyo: Korin Shoin. 244 p. See esp. p. 81-101. [Jap]
• ***Summary:*** Includes sections on soymilk yogurt (cultured with *Lactobacillus bulgaricus*) and *nyu fu* [fermented tofu].

Chapter 6, *Nyu fu* notes that this is an ancient food that came from China and Taiwan, but has never become a part of Japanese cuisine. In the United States (and in English) it is known as "Soybean cheese" and "Vegetable cheese," while in China it is known as "Nyufu" as well as Chaw taufu, Sufu, Funyu, etc.

6.1.2–Places of production and varieties: Nyufu is made mainly in the middle to southern four coastal provinces of China. These include (pinyin / Wade-Giles): Jejiang / Chekiang (Jap: Sekkô), Jiangsu / Kiangsu (Jap: Kôso), Fujian / Fukien (Jap: Fukken), Guangdong / Kwangtung (Jap: Kanton). A lot of Nyufu is also made in Taiwan, which is located off the coast of Fujian province.

Since nyufu has been produced for a long time over a vast area, there are many varieties. A study conducted in the 1920s found the varieties shown in chart 6.1 in the Shanghai market (Shanghai is in Jiangsu province near the mouth of the Yangtze River).

(1) Pickled without mold on the tofu: (i) Jianning-dofu: Drain then dry the tofu, add salt, and pickle in jiang or the residue / dregs left after making soy sauce.

(ii) Doufuru: Drain then dry the tofu. Sprinkle it with salt then pickle it in koji.

(2) Culture mold on small cubes of tofu until a fragrant white mycelium surrounds each cube, then pickle.

(iii) Jiangrufu: Pickle in jiang or the residue / dregs left after making soy sauce.

(iv). Honjiang rufu [red jiang fermented tofu]: Pickle in a mixture of red rice / angkak (a red koji made by growing *Monascus* mold on rice) and the residue / dregs left after making soy sauce.

(v) Zaorufu: Pickle in sake lees.

(vi) Hongrufu: Pickle in red sake lees.

(vii) Jiujia rufu: Pickle in white sake / daku-shu, like unrefined sake (*doburoku*).

(viii) Xiangrufu (fragrant rufu): Pickle in jiang with olive leaves, fragrant mushrooms, etc.

Dr. Masahiro Nakano was born in 1907. Address: National Food Research Inst., Tokyo.

4569. Nelson, John H.; Richardson, Gary H. 1967. Molds in flavor production. In: Henry J. Peppler, ed. 1967. Microbial Technology. New York: Reinhold Publishing Corp. x + 454 p. See p. 82-106. [17 soy ref]
• ***Summary:*** In this chapter is a section titled "Flavor production by molds in Oriental foods" (p. 94-103) with the following contents: Background, mold species utilized in Oriental foods (*Aspergillus oryzae, Actinomucor* or *Mucor* species, *Rhizopus* species, koji culture production, tane koji), shoyu (soy sauce) production, miso (soybean paste) production, sufu (Chinese cheese) production, tempeh production, ragi production, ang-kak (red rice) production.

Introduction to chapter ("Mold-ripened cheese was shipped to Rome from southern France a early as 250 A.D." "Sufu, or Chinese cheese, is produced on a limited scale in Formosa [Taiwan]. Research has laid the foundations for large-scale production of tempeh, an Indonesian fermented soybean food).

Mold-ripened cheese: Background (This type of cheese was first made in France during the Roman era. The name "Roquefort" first appeared in the year 1070. Roquefort is a mold-ripened cheese made from the milk of female sheep {ewes}. The trade association of Roquefort makers is the Societe de Roquefort manufacturers), species utilized for flavor production, characteristics of blue cheese flavor, production of mold-ripened cheese, a typical blue cheese manufacturing process. Production of blue cheese flavor by submerged culture techniques: Preparation of inoculum,

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flavor development, process modifications.

There are many "cheese varieties in which typical flavor development is principally dependent upon the internal and/or external growth of mold. Blue (Bleu, Blue-veined), Gorgonzola, Stilton, Wensleydale, Gammelost, Nu-World, Camembert, Neufchatel, Mycella, Niva and Brie are produced in many nations..." But Roquefort is made only in France.

Note: Roquefort (sometimes spelled Rochefort in English) "together with Bleu d'Auvergne, Stilton and Gorgonzola is one of the world's best-known blue cheeses. Though similar cheeses are produced elsewhere, European law dictates that only those cheeses aged in the natural Combalou caves of Roquefort-sur-Soulzon may bear the name Roquefort, as it is a recognised geographical indication, or has a protected designation of origin."

In 1411 Charles VI granted a monopoly for the ripening of the cheese to the people of Roquefort-sur-Soulzon as they had been doing for centuries.

"In 1925, the cheese was the recipient of France's first Appellation d'Origine Contrôlée when regulations controlling its production and naming were first defined. In 1961, in a landmark ruling that removed imitation, the Tribunal de Grande Instance at Millau decreed that although the method for the manufacture of the cheese could be followed across the south of France, only those whose ripening occurred in the natural caves of Mont Combalou in Roquefort-sur-Soulzon were permitted to bear the name Roquefort" (Source: Wikipedia at Roquefort, Oct. 2011). Address: Dairyland Food Laboratories, Waukesha, Wisconsin.

4570. *SoyaScan Notes.*1967. Chronology of the work of Arran Stephens with natural foods, vegetarianism, and Lifestream Natural Foods Ltd. (Vancouver, then Richmond, BC, Canada). Part II (1967–1971). 24 Sept. 1992. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Continued: 1967–Arran begins his first food business when he starts the Golden Lotus restaurant at 2936 West 4th Ave. (at Bayswater), Vancouver. Serving natural, vegetarian and macrobiotic foods, it is the city's first vegetarian restaurant. Before he left India, his Master had encouraged him to take up this "right livelihood" and promised to extend "all feasible help, both inside and outside." A place was found and the necessary money appeared as if by magic. Most of the workers were spiritual seekers. All lived upstairs, above the restaurant.

Arran was one of the cooks; he had learned how to cook brown rice, veggies, hijiki, wakame and miso soup while working as a waiter at the Paradox Restaurant in New York City in 1964; he learned the rest by trial and error, including the use of macrobiotic and vegetarian cookbooks such as *Vegetarian Cookery*, by Pietro Rotondi, and (later) *Ten Talents* by Frank and Rosalie Hurd.

"Amazingly, the rather monastic rules–including regular meditation and celibacy–were accepted and enthusiastically followed. In the communal setting, all worked without pay for the first 9 months. "Before the year was out, bills and loans were entirely repaid and all began receiving hourly wages, benefits, room and board. The numbers attending our weekly satsangs outgrew the upstairs, and the venue shifted downtown to the YMCA." One photo shows Arran standing in front of the Golden Lotus restaurant in 1968 and another standing inside in 1969.

1968 Oct.–Arran and three others return to India to be with Master Kirpal Singh, having received his written permission. On the way they visit Ram Das (the former Richard Alpert) who was in retreat at his father's large New Hampshire estate. In India Arran lives close to Kirpal Singh. The Master will not initiate those who beg for food, only those who earn an honest living.

1969 March 4.–Arran, with the Master's blessing, marries an Indian woman, Rattan Mala Bagga, age 22, in a traditional Sikh marriage. She comes from a good family, has an M.A. degree, and is a lecturer at a girls' school in Moradabad. The Master, who changes her name to Ratana ("jewel") encourages family life and the tender bonds of matrimonial love and responsibility.

1969 April–Arran and sari-clad Ratana return to Vancouver, Canada, after nearly 6 months in India. He has changed from ascetic to householder. They settle into a little room above the restaurant, sharing a bathroom with 14 others and working, on average, 12-16 hours a day to get the restaurant firmly established. In May and December, Kirpal Singh writes with wise advice. As a result: "In three months we saved $1,000 to make a down payment on a little two-bedroom house with a garden. Ratana was already pregnant with our first child, and we had had our fill of communal living."

"Considerable agitation began among the more left-leaning workers to turn the Golden Lotus into a commune. After a lot of soul-searching, we decided to make a clean break, and sold the restaurant to the group for a paltry $3,000, wishing them all success." Soon after the Golden Lotus restaurant became defunct.

1970 Jan.–Arran opens a little store named Jyoti Importers and Natural Foods at West 4th Ave., near Yew Street on the same street as the Golden Lotus, but on top of the hill. He sells "Indian bedspreads, clothing, classical musical instruments, and healthy and organic foods. Food soon edged out the other wares. It became obvious that my destined vocation was connected to organic foods and wholistic living." After several years of growth, the business moves into a much larger building at 1813-1817 West 4th Ave., a corner location and opens as Lifestream Natural Foods on 1 Jan. 1971. Then Lifestream expanded to a second store on Broadway at Trafalgar (See *Shared Vision* 1990, p. 9).

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1970 April 4–Arran and Ratana's first child is born at St. Paul's hospital in Vancouver by natural childbirth. Master telegrammed "You may name the baby Shanti" (the ancient Sanskrit word for "peace"). Note: All the Stephens' children were born at this same hospital. Arran writes: "I was present at the miracle of each birth. On the birth of two of our children, Ratana was blessed with the vision of our Master, and she also experienced great light within."

1970 spring–On an impulse, Arran gives half of his business, Jyoti, to Peter Harwood, his friend and fellow disciple of Kirpal Singh. Peter becomes a working partner.

1970 June–Arran attends the founding meeting of Organic Merchants (OM), held outdoors on the side of Mt. Shasta. Lifestream becomes one of the founding members. OM was the first trade association for natural food retailers on the West Coast and the first organic trade association. Arran also remembers OM meetings at Blake Rankin's, at Lifestream, and at Pajaro Dunes.

1971 (1990 Shared Vision article says Lifestream opened 1970 Jan. 1). Jan. 1–Arran opens Lifestream Natural Foods in Vancouver, British Columbia, Canada, just north of the U.S. border, at 1813-1817 West 4th Ave. (at Burrard). It is Canada's first large natural foods retail store. His father suggests the name. "Free fresh carrot juice drew in crowds, an electric powered 20-inch stone-buhr mill, visible through a window from the street, ground tons of fresh whole-grain flour every day; alfalfa sprouts were grown in our nearby warehouse / factory; fresh nut butters were roasted and milled to order; natural candy bars and cookies were extruded and baked; egg-free cakes and muffins popped from the ovens; pies, crunchy granola, bulk foods, and wholesome artisanal breads were baked and sold by the hundreds. These were all firsts in Canada." The inspiration came from many sources, but was not macrobiotic. The Lifestream brand was represented by a woman gathering sheaves of wheat into a basket. "Teachers brought classes of school children on tours to see how wholesome foods were made. The store became so busy that it was often difficult to wade through the crowds of shoppers and hangers-on... Sales doubled every year for seven years, and the business quickly branched out into wholesale distribution."

1971 or 1972–A separate small vegetarian restaurant, named Mother Nature's Inn (MNI) was started as a *separate* business in the rear of the large retail store (on West 4th Ave.) by Victor Yankowich...." But after about a year MNI was purchased from Victor (for a pittance) for Ratana, who showed her business skills by running it very successfully and profitably. The company's best-known products are its line of Essene sprouted grain breads–moist, heavy, and delectable.

1972–Lifestream opens its own Bread of Life bakery (100% owned by Lifestream) in North Vancouver because of the area's scarcity of organic and natural baked items. The original Lifestream Essene Bread, developed by Arran at that bakery, was one of the Lifestream's first baked products. Essene Bread was always made with organic grain–from the Alvin Scheresky and David Orchard organic grain farms in Saskatchewan province.

A 1971 color photo shows Arran, smiling, holding a loaf of Essene Bread.

1971–At about this time Lifestream Natural Foods Ltd. moves to 724-26 W. 6th Ave., Vancouver 9, BC, Canada. This was a combination headquarters, warehouse, manufacturing and packaging facility. It housed a flour mill, alfalfa sprout operations, nut butter operation, tamari nut roasting and packaging, plus packaging a wide range of organic grains, beans, nuts, seeds, flours, etc. When this facility opened, the only other Lifestream operation was the retail store.

1971–Since there was a scarcity of natural and organic foods, Lifestream began to do wholesale distribution. Frank Ford, founder of Arrowhead Mills in Texas, appointed Lifestream as distributor in Canada for the entire Arrowhead Mills' range of organic grains, beans, flakes, hot cereals, and flours. Hundreds of products were developed and marketed under the Lifestream brand: Breads, other baked goods, fruit & nut-based energy bars, juices, trail mixes, tamari roasted nuts and seeds, preserves, yogurt, granolas, mueslis, sprouts, soyfoods, expeller-pressed oils, and a wide range of imported Japanese macrobiotic products. During the 1970s Lifestream's profits came from a blend of manufacturing, wholesaling, and retailing–but not even the accountants knew what percentage of the total came from each of these activities. Continued. Address: 724-26 W. 6th Ave., Vancouver 9, BC, Canada.

4571. Sung, Betty Lee. 1967. Mountain of gold: the story of the Chinese in America. New York, NY: Macmillan. viii + 341 p. Illust. Map. Index. 22 cm. Reprinted in 1971. [283 ref]

• ***Summary:*** A carefully researched and well written book about the Chinese in America: their struggle for survival, acceptance, and full participation in American life, from the Gold Rush to the present.

Chapter 9, "Chinatowns," states (p. 149): "The restaurants are powerful magnets... Dinner in Chinatown may also be an occasion to entertain guests or to get together with friends and family... Restaurants in Chinatown cater heavily to Chinese clientele. More than any other reason, the Chinese love of food will prolong the life of Chinatowns. If Chinese food is served at home, the basic ingredients must be purchased from Chinatown, for where else can one buy soy sauce, bean curd, dried mushrooms, snow peas, or bamboo shoots?"

Chapter 12, "Restaurants–A natural inclination" states (p. 206): "Add seasonings of fermented bean curd, salt, and a little soy sauce. Put in just enough water to keep the food from burning. Lower the flame slightly. Cover the frying pan

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until the water boils (about two minutes)..."

4572. Thomas food industry register. 1967. New York City, NY: Thomas Publishing Co. 1590 p. See p. 597, 635, 1290. Index. 25 cm.
• ***Summary:*** Oriental Show-You Company, Columbia City, Indiana, is listed as follows:

Page 597: Under Indiana, Canned foods: Chop Suey Sauce, Bean Sprouts [mung], Noodles. Manufacturers, packers & distributors. W-C. A = Over $100,000 capital.

Page 635: Under Chinese products: Chop suey sauce.

Page 1290: Under soy sauce: W-C. A.

4573. Yokotsuka, Tamotsu; Sasaki, M.; Kikuchi, T.; Asao, Y.; Nobuhara, A. 1967. Production of fluorescent compounds other than aflatoxins by Japanese industrial molds. In: R.I. Mateles and G.N. Wogan, eds. 1967. Biochemistry of Some Foodborne Microbial Toxins. Cambridge, MA: MIT Press. ix + 171 p. See p. 131-52. [17 ref]
• ***Summary:*** Early study showing absence of aflatoxins in fermented soyfoods. "Conclusions: 1. None of the 73 seed cultures or starter strains of *Aspergilli* tested under our conditions produced aflatoxins. These findings confirm the reports of Hesseltine et al. (1965), Aibara and Miyake (1965), and Masuda et al. (1965)." Address: Noda Inst. for Scientific Research and Central Research Inst. of Kikkoman Shoyu Co. Ltd., Noda, Japan.

4574. Susan's Balanced Foods: Yin–Yang. 1968. Retail price list. Terms and prices. Valley Center, California. 4 p. Jan. 1. 28 cm.
• ***Summary:*** This catalog is printed with black ink on orangish-yellow paper. The title on page 1 is printed in red. The contents look similar to those in the Chico-San catalog. Soy products include tamari, miso, soy-beans, soy-bean flour. They also sell: Azuki red beans, sea vegetables, rice crackers, herb teas, and many breads. Address: Remy Ranch, 29757 Anthony Road, Valley Center, California 29757. Phone: 745-6336.

4575. Saito, Nobuo; Tanaka, T.; Yokotsuka, T. 1968. Shôyu no kannô kensa-hô ni kansuru kenkyû. IV. Seibun chôwa ni kansuru tôkei-teki kenkyû [Studies on sensory evaluation of soy sauce. IV. Statistical research on the harmony of chemical factors]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 46(1) 28-33. Jan. [3 ref. Jap, eng]
• ***Summary:*** Five factors contribute 88.9% to the quality of soy sauce: Preference, size of contents, glutamic acid, organic acid, and additives. Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Noda, Chiba, Japan.

4576. Wai, Nganshou. 1968. Chung yang yen chiu yüan hua hsüeh yen chin so [Investigation of the various processes used in preparing Chinese cheese by the fermentation of soybean curd with mucor and other fungi]. Taipei, Taiwan: Institute of Chemistry, Academica Sinica. 90 p. Jan. Final technical report. USDA PL 480. Project no. UR-A6-(40)-1. On USDA grant no. FG-TA-100. [24 ref. Eng, chi]
• ***Summary:*** This report is quite similar to (but more detailed than) Wai's 1964 article titled "Soybean cheese." This report may have been published in Chinese as well as in English.

Contents: Summary. Detailed report. 1. Introduction. 2. Results. Manufacture of soybean cheese (description of the process), microbiological investigations, analyses (preliminary analysis, coagulation of soybean protein by calcium ion, changes of protein components during the preparation of soybean cheese, hydrolysis of lipids during aging of soybean cheese, some characteristics of the fungus *Actinomucor elegans*), machines of laboratory scale designed for the preparation of soybean milk and soybean curd used as raw materials for soybean cheese. 3. Discussion. 4. Conclusion. 5. Need for additional research. 6. List of publications. Appendixes. A. Historical (History of tofu in China). B. The ancient process (for making 5 types of sufu, and table showing the composition of each–Rose sufu, Tsao Sufu, Red sufu, Kwantung sufu, and Yunnan sufu).

Appendix C: Report on travel to Hongkong and Kowloon for the collection and investigation of fungi used for the manufacture of soybean cheese, by Shuh-Ming Chang and Shu-Chen Sung, Assistant Research Fellows of Institute of Chemistry, Academia Sinica, Taipei, Taiwan (p. 85-88). From 20-29 June 1964 they visited the following factories and collected mold samples from fresh pehtze: (1) Lo-San-Chi Sauce Factory at Sham-Chui-Po, Kowloon. It produces 3 types of soybean cheese ([fermented tofu]; *Fusu*, *Nan-su*, and Pepper-*Fusu*), soy sauce, and "other sauced products." A description of the process for making soybean cheese is given. (2) Ming-Jean Sauce Nan-su and Canning Company near Clear Water Bay, Sing-Jea, Kowloon. (3) Chen-Mang-Chi Nan-su Fusu Factory, Chung Ching St., Sai Ying Pung, Hongkong. Sufu is the company's only product. (4) Con-Ho Fusu Factory, Fuk Lo Tsun Road, Kowloon. (5) Kowloon Sauce Company, Queen's Central Road. It makes sufu, soy sauce, and sauced products. (6) Chu-Rong Sauce Factory at Kam Tin, Sing-Jea. (7) Liao-Mar-Chi Fusu Factory, Shanghai St., Kowloon. It is located inside a market and sells tofu and soybean milk at the same time.

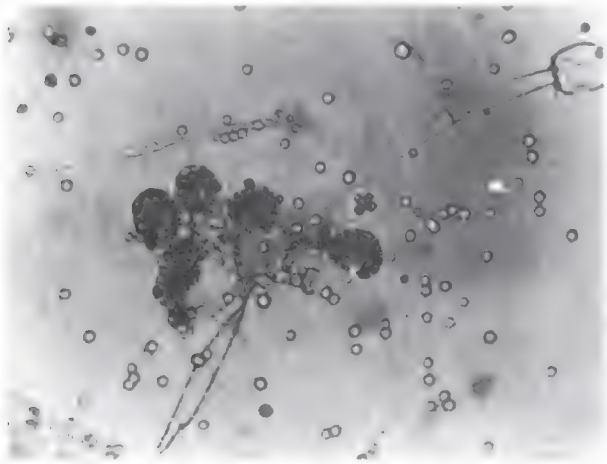
Note: This is the earliest English-language document seen (Oct. 2011) that uses the terms "Fusu" or "Nan-su" to refer to fermented tofu.

Summary: Four fungi suitable for making fermented tofu were isolated: *Actinomucor elegans*, *Mucor hiemalis*, *Mucor silvaticus*, and *Mucor subtilissimus*. "Although each fungus can be used for the fermentation, *Actinomucor elegans* is the best one. An improved method for the preparation of sufu was devised." It is described. Four different solutions (containing Kaoliang wine or ethyl alcohol, plus salt) were developed. The pehtze (freshly grown fungi on cubes of firm

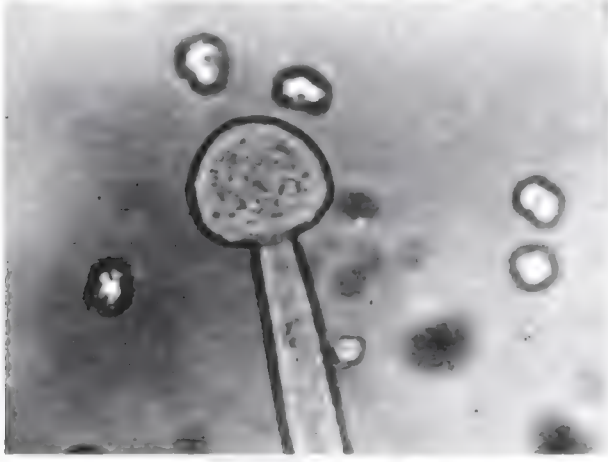
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tofu) can be preserved in these solutions for more than one year. The various enzymes and their activities were studied.



Photos (photomicrographs) show: (1) Columella of *Actinomucor elegans*. Magnification 700x. (2) Sporangia of *Actinomucor elegans*. Magnification 180x. (3) Head of *Actinomucor elegans*. Magnification 70x. (4) Columella of *Mucor hiemalis* No. 28. Magnification 700x. (5) Sporangium of *Mucor hiemalis* No. 28. Magnification 700x



(6) Head of *Mucor hiemalis* No. 28. Magnification 70x. (7) Columella of *Mucor silvaticus* 508. Magnification 700x. (8) Sporangium of *Mucor silvaticus* 508. Magnification 700x. (9) Head of *Mucor silvaticus* 508. Magnification 700x. (10) Sporangiophores and sporangia of *Mucor subtilissimus*. Magnification 60x. (11) Sporangium of *Mucor subtilissimus*. Magnification 700x. (12) Columella of *Mucor subtilissimus*. Magnification 700x. (13) Spores of *Mucor subtilissimus*. Magnification 700x.

"The cheese fungi used in Hongkong and Kowloon have been isolated and investigated. The morphological photomicrographs (Figs. 14-17) show that the fungus is the same strain of *Actinomucor elegans* as that used in Taiwan.

(14) Sporangiophores and sporangia. Magnification 180x. (15) Sporangiophores and sporangia. Magnification



180x. (16) Columella. Magnification 700x. (17) Sporangium. Magnification 700x. Address: Principal Investigator, Research Fellow and Director, Inst. of Chemistry, Academia Sinica, Taiwan.

4577. Ito, Hiroshi. 1968. Shôyu seizô kôtei ni kanren suru bisei-butsu no dôtai [On the microflora in the process of soy-sauce manufacturing]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 23. p. 14-22. Feb. [17 ref. Jap; eng]
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4578. Ito, H.; Ebine, H. 1968. Appen komugi shikomi no shôyu no bisei-butsu [Microflora in soy sauce moromi (mash) made from roll-pressed wheat]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 23. p. 23-25. Feb. [3 ref. Jap; eng]
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4579. Saito, Nobuo; Tanaka, T.; Sogabe, A.; Yokotsuka, T. 1968. Shôyu no kannô kensa-hô ni kansuru kenkyû. V. Shikôsei. kagaku setbun kan no shimyureeshon [Studies on sensory evaluation of soy sauce. V. Simulation model between preference and chemical factors]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 46(2): 107-12. Feb. [5 ref. Jap; eng]
Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Noda, Chiba, Japan.

4580. Sanae Restaurant. 1968. Introducing Sanae Restaurant, 272A Newbury Street, Boston (Leaflet). Boston, Massachusetts. 1 p. Single sided. 28 cm.
• ***Summary:*** "Dear Patrons and Friends: Sanae Restaurant has been designed as a unique, friendly eating place where everyone can enjoy genuine quality food in a family atmosphere. Since the present trend towards artificial, unnatural food is becoming more prevalent, we are trying to present real home cooking, combining food that is as natural

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as possible with the soundest old-fashioned methods of preparation. Our menu is centered around whole grains, with fresh vegetables, fish and seasonal fruits as side dishes."

"We use real sea salt, soy bean paste (miso) and soy sauce (tamari) that has been processed and aged by natural methods, and home-made sesame salt (gomasio). 'Sanae' means a young spring cereal plant which has a hope for a bright future at harvest time.

Hours: 3-10 Sunday-Thursday, 3-11 Friday & Saturday. Closed Mondays.

A photo near the top shows (between two large hearts, left to right): Peggy Taylor, Evan Root, Connie Frank, and Martin Russell, each dressed in a white cook's apron. Note: Evan Root was the first storekeeper at the first Erewhon retail store (located below street level). Address: 272A Newbury St., Boston, Massachusetts. Phone: 247-8434.

4581. McCormick, Sally. 1968. Azuma Sukiyaki House. Now you can enjoy an evening in Japan–5120 N. Broadway, Chicago (Advertorial). *Chicago Tribune*. March 21. p. W10.
• ***Summary:*** "It was a pleasure watching her prepare Beef Sukiyaki... Then soy bean cakes [tofu], dry onions and rice wine were stirred into the pan." Azuma also serves Beef Teriyaki, Chicken Teriyaki, and Salmon Teriyaki. Three photos show Azuma Sukiyaki House.

4582. Saikowski, Charlotte. 1968. America's foods expand Japan's menu. *Christian Science Monitor*. April 19. p. 6.
• ***Summary:*** Orville Freeman, U.S. Secretary of Agriculture, wants to export more American products to Japan. In Tokyo, he and his wife attended the recent "American Festival of Fun, Food, and Fashion." He noted that "The Japanese diet is still low in protein..." which means a great market for American brooder chicks.

"Such traditional Japanese foods as 'miso' (soybean paste), 'shoyu' (soy sauce) and 'tofu' (bean curd) are made for the most part from American-produced soybeans." Address: Staff correspondent.

4583. Saikowski, Charlotte. 1968. America's foods expand Japan's menu. *Christian Science Monitor*. April 19. p. 6.
• ***Summary:*** At the recent "American Festival of Fun, Food, and Fashion" in Tokyo, Japan, officials of the USDA and their wives were on a "buy-American campaign" and on a campaign to encourage Japanese officials to reduce Japan's trade restrictions [such as protective import duties and tariffs]. Mrs. Orville Freeman, wife of the U.S. Secretary of Agriculture, said that America was trying to sell "nutrition, variety, and convenience."

Japan, which does not have enough land to met its own food needs, already depends heavily on America for its food needs, importing nearly $1 billion worth last year. "Such traditional Japanese foods as 'miso' (soybean paste), 'shoyu' (soy sauce), and 'tofu' (bean curd) are made for the most part from" soybeans grown in the United States.

4584. *Soybean Digest*. 1968. Kikkoman produces soy sauce in U.S. tieup. April. p. 52.
• ***Summary:*** "Kikkoman Shoyu Co. of Japan will shortly start bottling soy sauce as well as making 'Teriyaki' sauce in Oakland, California," according to the *Japan Economic Journal*. "Teriyaki sauce is a sauce for grilling or broiling purposes processed from soy sauce." Japan's No. 1 maker of soy sauce wishes to reduce export costs, such as freight and insurance charges, by shifting completely to local bottling and packing of its products. It will use the existing factories of Leslie Salt Co., Leslie Food Products Inc., and Orrell's Food Products Inc. "Exports of soy sauce are on an increase recently with the United States, Japan's top customer, boosting its purchases by five times in the past decade. Kikkoman currently supplies about 85%-90% of the total exports of soy sauce.

"In 3 years, Kikkoman plans to raise its soy sauce and Teriyaki sauce production in the U.S. to about 35 million bottles a year."

4585. Umeda, Isao. 1968. Kore kara no shôyu seizô-hô. IX. [Future shoyu production methods. IX.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 63(4) 417-21. April. [9 ref. Jap]
Address: Nihon Shoyu Kenkyujo

4586. Pier 1 Imports. 1968. Importers of Chinese type food products (Ad). *Los Angeles Times*. May 24. p. C15.
• ***Summary:*** "Beef it up–Teriyaki steak and teriyaki chicken, two oriental delicacies, now easy to master with Marukin teriyaki sauce. A must for your kitchen, essentially a soy sauce with very special seasonings. Just pour it on–to flavor and tenderize as it marinates. 12 fl. oz.–59¢."

An illustration shows a bottle of Marukin Teriyaki sauce. Address: Los Angeles area: Westchester, San Marino, Anaheim, Encino. Phone: TR 4-6600.

4587. *Los Angeles Times*. 1968. Mizutaki says sayonara to lengthy meal preparation. May 30. p. G22.
• ***Summary:*** A general recipe for Mizutaki ("water cookery") includes "Bean curd squares (tofu)." The dipping sauce includes "½ cup soy sauce" and "½ teaspoon monosodium glutamate."

4588. Fukushima, Danji. 1968. Internal structure of 7S and 11S globulin molecules in soybean proteins. *Cereal Chemistry* 45(3):203-24. May. [36 ref.]
• ***Summary:*** The internal structure of soybean protein molecules (7S and 11S, native soybean globulins) was investigated by optical rotary dispersion (ORD), ultraviolet difference spectra, infrared absorption spectra, and other techniques. The 11S globulin contained more sulfur-

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containing amino acids than the 7S globulin. The major soybean proteins have primary, secondary, tertiary, and quatenary structures.

Native soybean proteins were found to possess a fairly compact internal structure, in which most of the peptide bonds are buried and cannot be hydrolyzed by proteinase without disruption of the internal structure. Only when the closely packed peptide chains are unfolded upon denaturation do they become accessible to proteinase molecules. Thus the substrates are hydrolyzed in proportion to the degree of denaturation of the substrate protein molecules.

Hydrolysis by proteinase appears to occur step by step, especially in the native protein. This could be explained as follows. When a peptide bond located at the surface of a tightly folded molecule is hydrolyzed, the molecule would be partly unfolded in the form close to a random coil, then it would be refolded in a new conformation after a certain time.

The "author concluded that (1) the major internal structures of both 7S and 11S globulins of soybeans are not alpha-helix, but are both the antiparallel betastructures and the disordered structures; (2) the molecules are fairly compact as a whole and even in their disordered parts; (3) the molecules are folded tertiarily and the water-impenetrable hydrophobic region is formed; (4) the hydrophobic bonds play an important role for stabilization of the internal structure; and (5) the molecules are not hydrolyzed by proteinase before the internal structure is disrupted, and the initial velocity of the hydrolysis by proteinases is proportional to the degree of its disruption." Address: Central Research Inst., Kikkoman Shoyu Co., Noda, Japan.

4589. Watanabe, Bunzo. 1968. The Japanese oilseed processing industry. *Soybean Digest.* May. p. 36, 38.
• ***Summary:*** Tables show: (1) Imports of soybeans to Japan during calendar year 1967 by country of origin: USA 81%, Red China 19%, Other countries 1%. Total imported: 2,169,000 metric tons (79,710,000 bushels). (2) Consumption of edible refined oils and fats in Japan (1963-1967). Per capita consumption rose from 13.58 lb in 1963 to 18.08 lb in 1967. (3) Total oils and fats production in Japan (1963-1967), imports and domestically grown, by oilseed type. Soybeans are by far the most important oilseed, followed by rapeseed. Rice bran is the main domestic source of oil. (4) Consumption of soybeans in Japan classified by utilization (1963-68, 1,000 metric tons). The following figures are for 1968 (1,000 metric tons): Crushed for oil 1,739. Foods: Tofu and aburage 294. Miso 170. Natto 50. Frozen tofu 40. Shoyu 15. Kinako 13. Other 70. The total used for food grew from 497 in 1963 to 652 in 1968.

Photos show: (1) American Soybean Association (ASA) executives seated around a table holding chopsticks at tempura luncheon with Mr. Watanabe, who is president of the Japanese Oilseed Processors Association, and other Japanese oilseed officials. From left, Shohei Takai, managing director Japan Oilseed Processors Association (JOPA), S. Yamada, manager oils and fats division, Ajinomoto Co., Inc; Scott Sawyers, ASA country director in Japan; Chet Randolph, ASA executive vice president; Mr. Bunzo Watanabe; and Hiroshi Higashimori, chief secretary JOPA. Tempura is a substantial outlet for soybean oil. (2) Portrait of Bunzo Watanabe. Address: Japanese Oilseed Processors Assoc., Japan.

4590. Chico-San Inc. 1968. Chico-San Inc.–Unique foods: Retail price list. P.O. Box 1004, Chico, California. 2 p. June 1. 35 cm.
• ***Summary:*** This single-sheet, dated catalog and price list, printed front and back with dark brown ink on pink paper is almost identical to the edition of 15 July 1967 in appearance, content, and pricing.

However two new condiments have been added: Dehydrated tamari, and Seitan. Address: P.O. Box 1004, Chico, California.

4591. *British Vegetarian.*1968. The Macrobiotic Restaurant. May/June. p. 239.
• ***Summary:*** This new restaurant has "just opened at 136a Westbourne Terrace, W.2, a few minutes walk from Paddington Station, where Westbourne Terrace crosses Bishop's Bridge Road (the entrance is on Bishop's Bridge Road). "Mr. Gregory Sams, who runs it, is a vegetarian and makes a specialty of vegetarian and vegan meals. The recipes are based on organically grown foods, with rice, soya, and sesame the features in a varied menu with an Asian influence; they offer a luxuriously gingery Japanese drink called ume-syo-kuzu [with umeboshi, shoyu, and kuzu]. The menu is a la carte. Phone: 01-723-7367. See also an almost identical article in the July/Aug. issue of this magazine on page 338. "The Macrobiotic Restaurant" is referred to again by this name in the Nov/Dec. 1968 issue of this periodical (p. 529); it is no longer serving lunches. And again in the May/June 1969 issue (p. 290). The name and address are unchanged. 1969.

Note: The name of this restaurant was apparently changed to "Seed" shortly after this article was written.

4592. *East* (*The–Higashi*).1968. Charming flavor, traditional fragrance: The story of shoyu for the gourmet. 4(4):45-47. June/July. [Eng]
• ***Summary:*** Contents: Introduction (Nuoc mam, sashimi, shoyu). The history of shoyu (incl. shojin-ryori, kaiseki ryori). The chance discovery of shoyu (incl. Zen priest Kakushin, Keizanji miso, Yuasa in Wakayama prefecture, tamari, Yamasa Shoyu brewery at Choshi in Chiba prefecture). How is shoyu produced?

"It is said that toward the end of the Muromachi Period around 1560, the people of Yuasa began to sell this seasoning

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[*shôyu*] in the Osaka-Kyoto area. Later, during the Tokugawa Period, around 1635, with the establishment of the alternate-year residence of the daimyôs in Edo (*sankin-kôtai*), and the accelerated urbanization of Edo, *shôyu* breweries sprang up at Chôshi and Noda in Chiba Prefecture making it available in the Kantô Plains. Production methods were gradually improved, and wheat began to be used, thus producing the present-day *koi-kuchi* [*koikuchi*] (deep-colored) *shôyu* which took the place of the old *tamari* (settled) *shôyu*. This new deep-colored *shôyu* spread from Edo throughout the whole country. Thus the Yamasa Shôyu Brewery of Chôshi became the main big enterprise producing deep-colored *shôyu*, while *usukuchi* (light-colored) *shôyu* produced in the Kansai Area [Kyoto-Osaka] and *tamari shôyu* produced in Aichi Prefecture [especially around Nagoya] also developed, and continued to hold their places on the market."

The main reasons Yamasa traditionally maintained its facilities at Choshi are because of the temperate climate and the plentiful supply of under-ground water.

4593. *East* (*The–Higashi*). 1968. Yamasa Shoyu: Authentic Japanese quality soy sauce (Ad). 4(4) ?? June/July. [Eng]
• ***Summary:*** At the center of this full-page color ad is a large, rectangular photo of sukiyaki ingredients on a plate above a Japanese table setting. The caption: "Heightens the full natural taste of foods with just the slightest touch, no matter whether cooking is Japanese or western style." Below that are small photos of a bottle and a yellow and purple can of Yamasa Shoyu. The logo reads: "Since 1645." Brewed by Yamasa Shoyu Co., Ltd., Choshi, Chiba-ken, Japan.



Note 3. This is the earliest document seen (Oct. 2009) that gives the date 1645 as the beginning of Yamasa Shoyu.

4594. Manabe, Masaru; Matsuura, S.; Nakano, M. 1968. Hakkô shokuhin-chû no keiko seibun ni kansuru kenkyû I. Kôji-kin no seisan suru kurorohorumu kayô-sei keiko busshitsu ni tsuite [Studies on the fluorescent compounds in fermented foods. I. Chloroform soluble fluorescent compounds produced by koji molds]. *Nippon Shokuhin Kogyo Gakkaishi* (*J. of Food Science and Technology*) 15(8):341-46. [15 ref. Jap; eng]
• ***Summary:*** An early study showing the absence of aflatoxins in Japanese fermented foods. Address: Food Research Inst., Ministry of Agriculture & Forestry, Koto-ku, Tokyo.

4595. Murphy, Jean. 1968. Indonesian fare: Time is worth it. *Los Angeles Times*. Sept. 5. p. J8.
• ***Summary:*** Cooking Indonesian recipes typically takes more time than Western or even Chinese recipes. A recipe for Vegetable & shrimp soup calls for "1/8 bean cake (tofu), finely sliced." A recipe for "Pork sate (Saté babi manis)" calls for "1 tablespoon sweet soy sauce (ketjap benteng)."

4596. Koshiyama, I. 1968. Chemical and physical properties of a 7S protein in soybean globulins. *Cereal Chemistry* 45(5):394-404. Sept. [35 ref]
Address: Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

4597. Koshiyama, I. 1968. Chromatographic and sedimentation behavior of a purified 7S protein in soybean globulins. *Cereal Chemistry* 45(5):405-12. Sept. [16 ref]
Address: Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

4598. Sawyers, Scott. 1968. The soybean market in Japan, Taiwan, and Korea. *Soybean Digest*. Sept. p. 68, 70-72.
• ***Summary:*** The American Soybean Assoc. office in Japan, known as the Japanese American Soybean Institute, has concentrated on mass media and consumer promotions to increase the utilization of soybean oil, meal, and traditional foods prepared from soybeans. In Japan, this means liquid cooking oil, tempura oil, salad oil, vegetable oil margarine, miso, tofu, and soy sauce. Also, the growing preference for more meat, milk, and eggs in the Japanese diet requires the use of more soybean meal to support an expanding livestock and poultry industry. Efforts were made to popularize two slogans: "Take Oil Once a Day for Foods Cooked with Vegetable oil." And: "Take Oil for Health, Stamina, and Vitality." The key focus is to encourage the Japanese to consume more soy oil in their diet. A portrait photo shows Scott Sawyers. Address: Country Director, Japanese American Soybean Inst.-American Soybean Assoc., Tokyo.

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4599. McCormick, Sally. 1968. Azuma Sukiyaki House. Dine graciously in the Oriental manner–5120 N. Broadway, Chicago (Advertorial). *Chicago Tribune*. Oct. 24. p. G17.
• ***Summary:*** "Other Japanese dinners worthy of trying are New York Steak Teri-Yaki, Filet Mignon Teriyaki, Chicken Teri-Yaki, Fresh King Salmon Teri-Yaki, marinated in soy sauce and Mirin Sake and charcoal broiled, Fresh Rainbow Trout, charcoal broiled Sansho-Miso-Yaki style, Maine Lobster tail Teri-Yaki or Curry Yaki, Tuna or Sea Bass Teri-Yaki or Shio Yaki."

The dinner menu prices range from $4.35 to $6.15.

"The menu also features many side dishes with such exotic names as Cold Tofu, Miso Shiru, Chawan Mushi and many more."

Contains three photos featuring women taken inside the restaurant.

4600. Chen, Philip S.; Chen, Helen D. 1968. Soybeans for health, longevity, and economy. 3rd ed. South Lancaster, Massachusetts: The Chemical Elements. xii + 242 p. Nov. Illust. Index. 21 cm. 1st ed. 1956. [24 ref]
• ***Summary:*** This book is identical to the original 1956 edition, third printing. Address: 1. Prof. of Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

4601. Chen, Philip Stanley; Chen, Helen D. 1968. Soybeans for health, longevity, and economy. 3rd ed. St. Catharines, ONT, Canada: Provoker Press. ix + 242 p. Illust. Index. 21 cm. [24 ref]
• ***Summary:*** This is a reprint of the 1956 edition published by The Chemical Elements (South Lancaster, Massachusetts)–except that Appendix B has been updated using the 1961 Soybean Blue Book.

On the copyright page is a detailed print history of this book: Copyright 1956, 1962 Philip Chen. Second printing, April 1957. Third printing, June 1959. Second edition, Jan. 1962. Third edition, Nov. 1968. Second printing, July 1970. Third printing, July 1975. Address: 1. Head of the Chemistry Dep. and Chairman of the Div. of Biology and Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

4602. Hanaoka, Yoshio. 1968. Shôyu hozon ni kansuru kenkyû. VIII. Hikôso-teki kappen hannô busshitsu no bobai kôka ni tsuite [Studies on preservation of soy sauce. VIII. Effect of nonenzymatic browning reaction products on antifungal activity]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 46(11):909-14. Nov. [11 ref. Jap; eng]
• ***Summary:*** "A mixture of 0.2 molar D-xylose and 0.1 molar L-amino acid, when heated at 120°C for 60 minutes, showed an inhibitory effect against the growth of *Saccharomyces rouxii* variety *halomembranic*." Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda, Chiba, Japan.

4603. Imahara, Hirotsugu; Nakahama, Toshio. 1968. Shôyu no sanmaku-sei kôbo ni kansuru kenkyû. VIII. Kôki seibun ni tsuite [Studies on pellicle producing soy yeast. VIII. On the flavor substances]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 46(11):876-84. Nov. [13 ref. Jap; eng]
• ***Summary:*** Both film forming and non-film forming yeasts are strains of *Zygosaccharomyces* yeast. They form films on top of soy sauce. Address: Faculty of Agriculture, Kyoto Prefectural Univ., Sakyo-ku, Kyoto, Japan.

4604. Izumori, Ken; Omata, Shojiro. 1968. Taien-sei nyûsan-kin *Tetracoccus soyae* no amino-san taisha ni tsuite. I. Threonine no sanka-teki taisha [On the amino acid metabolism by *Tretracoccus soyae*. I. Oxidative metabolism of threonine]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 46(11):869-75. Nov. [27 ref. Jap; eng] Address: Dep. of Agricultural Chemistry, Osaka Prefectural Univ., Sakai, Osaka, Japan.

4605. Kitahara, Seiji; Ishizuka, Zentaro. 1968. Shôyu jôzô bisei-butsu ni kansuru kenkyû. I. Saikin ni yoru moromi eki-jiru no kondaku ni tsuite [Studies on microorganisms in soy-sauce brewing. I. On turbidity of soy-sauce caused by bacteria]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 46(11):853-57. Nov. [9 ref. Jap; eng]
• ***Summary:*** Turbidity appeared to be caused by dead micrococal cells. Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda, Chiba, Japan.

4606. Claiborne, Craig. 1968. The banquet began with 4 kinds of eel. *New York Times*. Dec. 21. p. 42.
• ***Summary:*** Taipei, Taiwan–Chinese cooking is now "enjoying its greatest prestige in the history of the West." Yet it is ironic that when Americans think of Chinese cookery, they rarely think of Taipei or Taiwan.

When the instructor at a Chinese cooking class at the local Y.M.C.A. "used tofu, the common bean curd ingredient so frequent in Chinese cooking, a knowledgeable and well-oriented young American housewife told the story of how one of the military wives remarked: "'You can't even buy that here; at least we can't find it in the P.X.'"

Note: P.X. stands for "post exchange," a store operated by the Army and Air Force Exchange Service on US Army posts.

Claiborne also describes a traditional Shanghai restaurant, the Tung Sheng Lou, at 29-4 Jong Hwa Rd. in Taipei. They serve various unique dishes including "bean curd with 1,000-year-old eggs.." Crab "dipped into an excellent sauce of soy, vinegar and ginger. Followed by an extraordinary and wonderfully inventive dish of fresh pork

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cooked with fermented bean curd and fresh spinach."

4607. Photographs of Erewhon retail at 342 Newbury Street 1968. Boston, Massachusetts.

• ***Summary:*** (1) Front of the store. (2) Back of the store. To the left is the door to the office. On the pallets stacks of both multiwall paper sacks (left) and burlap bags (rear). They arrived at the store by the truckload and the workers (including Jean) had to unload them by hand–sometimes hoisting them onto one shoulder. (3) Jean Allison seated at a desk in the Erewhon office.

These photos were sent to Soyinfo Center by Jean Allison Young of Chatham, Massachusetts, in Feb. 2011.

Letter (e-mail) from Norio Kushi. 2011 Feb. 8. These photos were "both taken at 342 Newbury Street, Boston, in 1968 soon after the move from 303-B Newbury to 342 Newbury, in Boston. I am guessing that both photos were taken within minutes of each other.

"The person behind the cash register, facing towards the right in the photo is Eric Utne, who later worked at *East West Journal*, eventually becoming the editor. He later left *East West Journal* and he, along with his then wife, Peggy Taylor, started New Age Journal. When Eric and Peggy split up, Peggy retained *New Age Journal*, with Eric Utne soon thereafter starting *The Utne Reader*. Eric Utne currently lives in Minneapolis [Minnesota] with his wife, Nina...

"The person facing Eric Utne, might be Jim Ledbetter, .. or it could be a customer who I have never met. Jim Ledbetter and Jean Allison both lived at 216 Gardner Road, in Brookline with our family during this time. Eric Utne lived in one of the other study houses, 6 Ellery St, Cambridge, Massachusetts.

"The 2nd photo is of the stockroom in the rear half of the store. The size of the stockroom and how the bags of rice and other commodities are stacked would indicate the photos were taken soon after the move. Shelf space in the retail section kept growing along with business, and the rear storage room, once half the square footage of the store began shrinking as the need to expand the retail space increased, eventually necessitating the opening of the warehouse at 33 Farnsworth St. in Boston. Other than brown rice being in the burlap or paper 100 lb sacks, I don't know what any of the other products would be in the other sacks or boxes.

"As I recall, we didn't start getting the 50 lb organic rice in the paper sacks till after the opening of the Erewhon warehouse. Up till that point I recall the brown rice came in the 100 lb burlap sacks. Therefore, I feel that what is in the paper sacks would be beans and grains other than brown rice.

"I was noticing on the selves to the left there are smaller sacks. All the rice, grains, beans, etc were all packaged from bulk into these bags by hand. The item that was in these bags were rubber stamped onto the front of the bag just prior to filling them.

"We also received many Japanese items, such as shoyu (which we called tamari), miso, and umeboshi in those bulk wooden kegs. They were hand poured or scooped into bottles and jars. I don't see any of these items in this photo. The store photo was also rather Spartan, which is what lead me to feel that these photos were taken soon after moving from 303-B Newbury St. to 342 Newbury St. "I would stop by the store regularly but didn't actually 'work' there during this time. I used to come in and just help out after school or on Saturdays just for the fun of it.

"At the prior location at 303-B Newbury St, I spent many full Saturdays helping out. I was there one Saturday when we had the very first day we did over $100.00 in sales. The other person who was working on that day was Jean Mohan. At least during the 303-B Newbury Street days, people who lived in our house at 216 Gardner Rd, Brookline, MA, would take turns working at the store, although Evan Root was the manager."

Letter (e-mail) from Evan Root. 2011 Feb. 10. These two photos "are of the store at 342 Newbury St. This was the 'first edition.' It was, of course, remodeled from the shell that was rented. But it is before a bigger remodeling which yielded the whole first floor for the store, bins for grains and beans, and a walk-in refrigerator where the office was. The accounting office and storage moved to the basement and a winched lift to bring the goods up for stocking." Address: Boston, Massachusetts.

4608. Pickles, H. 1968. Are traditional fermented foods and lactic acid nutrition out of date? *British Vegetarian*. Nov/Dec. p. 520-25.

• ***Summary:*** Includes a discussion of soy sauce, Worcester Sauce, and miso, and of the writings of Dr. Johannes Kuhl (Professor, the Nuclear Research Institute in Rome), and O Warburg (the Nobel Prize winner).

"In Asia, mould-enzymes are used to break down soya-beans rich in proteins, when making the spicy sauces [i.e., soy sauce]. The well-known Worcester Sauce is made from a Japanese recipe from the enzymes of soya beans with the same mould *Aspergillus orsae* [*sic, oryzae*] that is also present in correctly-prepared muesli."

Note: The last sentence is largely inaccurate. Worcester sauce is not made from a Japanese recipe–although it traditionally contained soy sauce.

4609. Chang, C.H. 1968. Biochemical studies on stored soy sauce. *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 9:9-27. [Eng; Kor]*

• ***Summary:*** Studies were conducted in order to elucidate chemical components and microflora in three types of soy sauce: 12 year old aged soy sauce prepared by the improved method, and 7 year aged and 20 year aged soy sauces prepared by the ordinary method. The results are as follows:

(1) The following are found to be the most important factors affecting the quality of soy sauce.

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(a) Organic acids, reducing sugars and free amino acids were increased over the course of storage.

(b) In the aged soy sauces under study, non-volatile organic acid increased while volatile organic acid decreased, with the total acidity dependent on the latter.

(c) It was found that salt concentration decreased during storage.

(2) The results of investigation of microflora in the stored soy sauce are as follows. A table (a) shows the type and number of bacteria and yeasts in improved and ordinary soy sauce. The three columns show: (1) Name of microorganism, such as aerobic bacteria colony. (2) Improved soy sauce. (3) Ordinary soy sauce.

(b) In the stored soy sauces, aerobic bacteria are incapable of growth due to a drop in pH value and the influence of salt concentration.

(c) Halophilic lactic acid bacteria are incapable of growth due to a drop in pH value. Even the salt concentrations decreased during the storage.

(d) Osmophilic yeast continue growth in a low pH value and in decreasing salt concentration during this stage.

(3) The results of amino acid analysis by paper partition chromatographic and colorimetric methods are as follows:

(a) Fourteen different types of amino acids were detected in the 12 year aged improved soy sauce. Thirteen types of amino acids were detected in the 7 year aged and 20 year aged soy sauces.

(b) The contents of aspartic acid, glutamic acid, serine, valine, leucine, lysine, histidine, and methionine increased in the 20 year aged ordinary soy sauce compared to the 7 year aged soy sauce. Contents of alanine, tyrosine, phenylalanine, and cystine decreased.

(4) The results of sugar analysis by paper chromatography are as follows.

(a) In the 12 year aged improved soy sauce, galactose, glucose, arabinose, xylose, rhamnose, maltose, and an unknown were detected. Their amounts were in the above order, except maltose and an unknown. Address: Seoul Agricultural College, Seoul, Korea.

4610. Ebine, H.; Kimura, H.; Wadaka, H. 1968. [Application of *Rhizopus* for shoyu manufacturing]. *Chomi Kagaku* (*Seasoning Science*) No. 15. p. 1-. [Jap]*
Address: National Food Research Inst., Tokyo.

4611. Fukushima, D. 1968. High-protein food products. In: Proceedings of the Western Hemisphere Nutritional Congress II. See p. 95. *

4612. Komatsu, Y. 1968. Shôyu seisan ni kanyo suru 2, 3 no kôso no dôtai. I. Reisui shikomi ni okeru keiniehi-teki seibun henka to kôso kassei no shôchô ni tsuite [Changes of some enzymes in shoyu brewing. I. Changes of the constituents and enzyme activities in shoyu fermentation by low-temperature mashing]. *Chomi Kagaku* (*Seasoning Science*) 15(2):10-20. [13 ref. Jap]
Address: Hiroshima-ken Shokuhin Kogyo Shikensho (Food Industrial Experiment Station, Hiroshima prefecture)

4613. Potorzhinzkii, V.P. 1968. [The production of fermented and delicatessen soy sauces]. *Prikladnaya Biokhimiya i Mikrobiologiya* (*Applied Biochemistry and Microbiology*) 413-17. [Rus]*

4614. Takeda, Ryôsaku; Nakayama, Shigenori. 1968. Kôji-kin no pepuchidaaze ni kansuru kenkyû. III. Kôji no pepuchidaaze kyôka to shôyu sokujô-hô no isshi-an ni tsuite [Studies on the peptidase of *Aspergilli*. III. Enrichment of koji with peptidase and a proposal for rapid fermentation of shoyu]. *Chomi Kagaku* (*Seasoning Science*) 15(3):19-25. [7 ref. Jap]
• ***Summary:*** Also discusses protease, proteinase, endopeptidase, exopeptidase, and peptides. Address: Kagawa-ken Hakko Shokuhin Shikensho (Kagawa-ken Fermented Foods Experiment Station)

4615. Tenbata, M.; Morinaga, T. 1968. [Fermenting ability and the refined degree of soy moromi by addition of chemical soy sauce]. *Hiroshima-ken Shokuhin Kogyo Shikenjo Hokoku* (*Research Report of the Hiroshima Prefecture Food Research Institute*) 10:37-44. [Jap]*

4616. Abehsera, Michel. 1968. Zen macrobiotic cooking. New Hyde Park, New York: University Books/Avon. 224 p. Index. 18 cm. [15 ref]
• ***Summary:*** Abehsera's first macrobiotic cookbook contains a strict approach to macrobiotics. Includes many short stories by and about George Ohsawa.

In the Introduction, the author states (p. 13) that if he had been asked to write a cookbook 5 years ago, he would have been utterly amused, for he was in a precarious state of health and, for him, a cookbook was basically a collection of "recipes for stuffing one's belly.

"These five years have been an exhilarating adventure and happiness spent with my dear wife and children together with a 'thousand' friends. The anguished thoughts of a 28-year-old have been dissipated and he has been freed from the tortures and agony that previously pervaded his existence.

"This new and happy change has been due to the profound influence of George Ohsawa, who made it possible for me to recover my health so that I could leave France [Paris] and journey to New York, the city of my dreams. Now, I have decided to write a cookbook."

Contains the following soy-related recipes: Miso spread (with sesame butter, p. 105). Miso onion spread (p. 106). Miso in green (with green pepper and scallion, p. 106-07). Miso soup (p. 117). Chinese soup (with miso, p. 120). La

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belle jardiniere (with miso, p. 123). Koi-koku (with carp, burdock, and miso, p. 125-26). French onion soup (with tamari, p. 132). Soup stock made with miso paste (p. 137). There are no tofu or seitan recipes in this book. It is not a vegetarian cookbook, since many recipes call for fish and seafood.

Monthly publications (p. 208): (1) *Yin-Yang*, Centre International Ignoramus, 26 Rue Lamartine, Paris 9eme, France. (2) *The Macro-Biotic Monthly*, Ignoramus Press, Los Angeles, California. (3) *The Order of the Universe*, Order of the Universe Publications, Box 203, Prudential Center Station, Boston, Massachusetts.

Shopping guide (p. 209-10): Those marked with an asterisk (*) welcome mail orders. (1) Chinese products (incl. tofu, woks): Wo Fat Co., 16 Bowery, New York, N.Y. 10013. Mon Fong Wo Co., 36 Pell St., New York, N.Y. 10013. Yuit Hing Market Corp., 23 Pell St., New York, N.Y. 10013.

(2) Organic fruits, vegetables and whole grains. Also oil, sea salt and many other health foods. * Good Earth–Natural Foods, Inc., 1336 First Ave., New York, N.Y. * Nature's Cupboard, 80 E. Seventh St., New York, NY. Living Foods Coop, Inc., 165 Ninth St., New York, N.Y. * Greenberg's, 125 First Ave., New York, N.Y.

The next two stores are the same as above but no fruits and vegetables: * Brownie's Natural Food Stores, 21 E. 16th St., New York, N.Y. * Kalustyan Orient Export Trading Corp., 123 Lexington Ave., New York.

(3) Japanese food products: Bancha tea, seaweed, Japanese vegetables, Japanese knives, soba and udon noodles, dried lotus, burdock, tofu, sesame seeds, bonito and other dried fish, tawashi [vegetable scrubbing brush], daikon [giant white radish]: * Japan Mart Inc., 239 W. 105th St., New York, N.Y. Katagiri & Co., Inc., 224 E. 59th St., New York, N.Y. Tanaka (K.) Co., Inc., 326 Amsterdam Ave., New York, N.Y.

(4) Wholesale organic products and all macrobiotic products: Chico San, Inc., 1262 Humboldt, Chico, California. The Infinity Co., New York, N.Y., 10012. Balanced Foods, 2500 83 St., North Bergen, N.J. [New Jersey]. Specialty Food, 116 W. Houston St., New York, N.Y.

Glossary (p. 211-15): Aduki or azuki beans, bancha, bonito flakes, brown rice, bulgur, burdock, cellophane noodles, chapati, couscous, daikon, ginseng tea, gomasio [gomashio], hiziki [hijiki], Japanese knife, kasha, kokkoh [weaning food for babies], kuzu, lotus tea or kohren tea, miso, mu tea, nituke [nitsuke], nori, sea salt, semolina, soba, soy or soya sauce (see tamari), suribachi, tahini, tamari, tempura, tofu, udon, umeboshi plums, vegetable brush or tawashi, wok.

A few glossary definitions: "Tamari: A pure soy sauce concentrate, a byproduct of miso. Commercial soy sauce is not recommended, macrobiotic stores have the right kind."

"Tofu: A curd made of the liquid in which crushed soybeans have been softened; it is solidified by boiling" [sic].

Note: This book was published in London in 1969 by Anchor Press, Ltd. (201 p.). Address: New York

4617. Borgstrom, Georg. 1968. Principles of food science: Food microbiology and biochemistry (Vol. 2). New York, NY: Macmillan. xiv + 473 p. Index. 26 cm. [9 ref]

• ***Summary:*** In Chapter 4, "Fermentation," is a section titled "soybeans" (p. 110-12) which discusses: Tofu or teou-fu, miso, sufu, natto, tempeh, taotjo and ketjap (shoyu / soy sauce).

"Frozen tofu (kori tofu, or koya dofu) is tofu that has been frozen for several weeks and dried. Aburage is fresh tofu dried in deep fat. Namage is fresh tofu that has been surface-fried."

In Chapter 10, "Trends in food utilization," is a section titled "Soybean" (p. 297-301) which discusses: Soybean products and fermented products ("These foods are all rather unknown among Western peoples, although they are eaten by millions of people and constitute some of the most common foods on earth." Yet some "typical oriental soy foods," such as tofu and tempeh, are finding acceptance in the West. One soy product that is widely used in most parts of the world is soy sauce. Soy flour and soy grits were first made commercially in the USA in the early 1930s. Milk made from the soybean is important in China {see Vol. I, Chap. 15}. Fermented products include taotjo, soy sauce or ketjap). Soybean protein, including soybean oil and defatted soybean oil meal (In 1961, 9.5 million tons of soybean oil meal was used in the USA, mainly for animal foods, with special grades used for food and industrial products, such as isolated soybean protein. Purified proteins extracted from dehulled and defatted meal, when toasted, are used in "Civil Defense emergency rations" and by the "international organization Meals for Millions." Some 90% of the processed soybean oil in the USA now goes into food uses. Soybean oil is now the most important ingredient in oleomargarine {see Fig. 10.1}. About one-third of the soybeans moved off the farm are exported; Japan is our biggest customer {taking about 57%} followed by Western Europe {27%}, Canada {8%} and Israel {5%}). Soybean uses (Despite its nutritive value, "the soybean is not looked upon with favor in many areas" for two main reasons: it does not soften well during cooking and it is difficult to digest. Many other legumes share these problems, but they are generally require less cooking. When soy flour is used, alone or with cereal flours, the drawbacks almost vanish. "Soybean milk is not comparable to animal milk or human milk except in protein content." And it usually has an unpleasant, bitter taste, but this can be removed at least cost by bulk processing. When soybean curd is made in the typical way, "many nutritious components are lost," yet it is easy to digest. Soy sauce can be used only as a condiment because of its high salt content. Germinated soybeans make an excellent vegetable, which is rich in vitamin C).

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Table 10-1 (p. 300) shows utilization of soybean oil (in millions of pounds) (1947-49 to 1967). The columns are: Shortening (the largest use and steadily increasing), margarine, cooking, salad and other edible oils (No. 2), total for food uses, total nonfood uses.

Toasted soy protein (Made by General Mills, starting in Belmont, Iowa, and named Hi-Pro and Protein Plus. "The Belmont plant has been running at capacity to supply for American Civil Defense stockpiling of toasted soy protein"). MPF (Multi-Purpose Food) made by a joint venture between General Mills and the Meals for Millions foundation. Gelsoy (the "first vegetable protein found to have gelling properties"). Promine (an edible soy protein). Fibrotein (soy protein spun into filaments). Soybean oil (The initial purpose of the U.S. soybean crushing industry was to obtain oil. The residual meal was considered virtually useless).

Chapter 13, titled "The world food issue," is about world hunger, which is "an ever-present specter for 2.3 billion people of the present world population of 3.4 billion." These people are concentrated largely in warm parts of the globe. Also discusses "protein malnutrition" (the main problem) and the need for more animal protein. North America has an animal protein "intake nine times that of the Far East." A section on "Plant milks" (p. 428-29), which are made from pulses and cereals, includes a subsection titled "Soybeans" which begins: "Soybeans form the basis of the most widely used and successful plant milks in China, Hong Kong, Indonesia, and the Philippines. Such milk has recently become available in Europe and the United States, primarily for clinical purposes"–for children allergic to the proteins in cows' milk.

Notes: Many references, divided into English and non-English, books and papers, are given at the end of each chapter. Address: Michigan State Univ.

4618. Bragg, Paul C. 1968. How to keep the heart healthy and fit [1st ed.]. Burbank, California: Health Science. 128 p. Illust. No index. 21 cm.

• ***Summary:*** The book begins with Bragg telling his [at least partly fictitious] life story. He was "born with a weak heart–a 'blue baby'–on a plantation deep in the heart of Virginia. During the first 14 months of life, he had to fight for his life. From infancy he suffered severe attacks of heart palpitation. At age 8 he was stricken with rheumatic fever and for 11 days hovered between life and death.

His weak heart prevented him from enjoying the activities of a normal, healthy country boy. Along with this weak heart he developed other physical weaknesses–sinusitus, asthma and bronchitis. Finally in his teens, he came down with tuberculosis. He spent several years in large sanatoriums in Denver, Colorado, and at Lake Saranac (within Adirondack Park, northern New York state). Death sentences were pronounced upon him, there seemed to be no hope for his survival. Then he was "miraculously inspired to go to a famous sanatorium in Switzerland." There the famous Dr. Rollier, using only the natural methods of air, water, sunshine, exercise, and good nutrition, restored his "broken body to buoyant, radiant health."

In a short period of time he rebuilt his body and "started his climb toward super-strength and energy!"

At about this same time, he made the greatest decision of his life, to devote his life "to helping others to finding the treasure he had found–Priceless Radiant Health!" He had "found the magic formula of Natural Living" and now he wanted to pass it on to others.

In Bragg's well-balanced diet, one-fifth should be protein (animal or vegetable). Among the foods he recommends are "soya beans" (p. 76-78) and lecithin (p. 83). The soybean is the richest source of lecithin–and the most widely used (p. 83).

"Soybean powder for healthy heart and nerves: I have been recommending the use of soybean and soybean powder to health-conscious people of this country for more than 50 years" (p. 84). Bragg's "Pep" Drink (easily made at home) includes raw wheat germ, 1 tablespoon pure Soy Powder, 1 banana, and 1 tablespoon lecithin (powder or liquid) (p. 85).

In the section "Delicious Chinese recipes promote heart health," a recipe for "Mushroom chop suey" (p. 121) states: "Put these mixed vegetables into a skillet and add unsaturated oil such as corn oil, soy oil, safflower oil or olive oil. Garlic may be added if you enjoy it. (We do. We feel that garlic is a most important food to help keep the pipes of the body free from rust.) Then add a tablespoon of liquid aminos, which gives the Chinese soy sauce flavor."

Note 1. This is the earliest document see (Aug. 2011) that contains the term "liquid aminos" or "Bragg aminos" or "Bragg liquid aminos." There are no ads in this book for this product or any other food product.

Note 2. This is the earliest document seen (Sept. 2011) in which Paul C. Bragg claims to have been born on a plantation (in Virginia).

Note 3. This is the earliest document seen (Sept. 2011) in which Paul C. Bragg claims that he suffered from rheumatic fever and almost died from it.

Many useful illustrations in the front of the book show the heart, circulatory system, blood vessels, arteries, lungs, etc. The cross section of a healthy artery and a blocked artery. The urinary system. The heart is a muscle, not an organ.

Photos show: (1) Paul Bragg in a "weight lifters" outfit, showing his muscular body. (2) Paul Bragg reading a book, with his [adopted] daughter Patricia Bragg reaching both arms over his shoulders and also holding the book. (3) "Famous pioneer health team: Paul C. Bragg and Bernarr Macfadden." (4) Paul Bragg, smiling, standing next to Duncan McLean, who is holding a small barbell in each hand over his head. A photo (on the last page of this book) shows Paul Bragg and Duncan McLean (a champion sprinter, age

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83) holding up Patricia Bragg in Regents Park, London. All are smiling. Address: N.D., Ph.T., Life Extension Specialist, Box 310, Burbank, California 91503.

4619. Dickens, Charles; Stone, Harry. 1968. Uncollected writings from *Household Words*, 1850-1859. 2 vols. Bloomington, Indiana: Indiana University Press. xx + 716 p. Illust. Index. 24 cm.

• ***Summary:*** Edited, with an introduction and notes by Harry Stone. "The grocer's hot pickle's, Harvey's Sauce, Doctor Kitchener's Zest.

Note: This collection is based on 19 volumes of this weekly periodical that were published from 30 March 1850 to 28 May 1859 in London by Bradbury & Evans. Charles Dickens lived 1812-1870. Address: England.

4620. Hahn, Emily. 1968. The cooking of China. New York, NY: Time-Life Books. 206 p. Illust. (many color photos). Index. 28 cm. Series: Foods of the World.

• ***Summary:*** Another superb work in this superlative series from the editors of Time-Life Books. This book is about cooking in China, where the author lived (in Shanghai), before the 1949 Communist revolution.

Contents: Introduction. The cooking of the world's oldest civilization. 1. An ancient and honorable art. 2. "Chinese cooking" in your own kitchen. 3. Secrets of savor and spice. A reverence for good food. 5. Oriental staff of life. 6. Gentle teas and strong spirits. 7. Feasts for festivals. 8. A cuisine for all continents.

China, the world's oldest existing civilization, has the world's most ancient cuisine–as well as one that is both great and profound (p. 6). When the Red Guards of China's Cultural Revolution appeared in the 1960s, they "attacked every symbol of what they regarded as bourgeois culture. Among the targets in Peking were the city's fine restaurants." In the process they destroyed much of China's culinary heritage–but only inside of China (p. 7). An article by Peggy Durdin in the *New York Times* was titled "Mao's great crime against cuisine" (p. 184). Chinese food is, of course, about life, but it is also about health, and it can resonate on numerous symbolic levels (p. 7).

The southern provinces of China, Fukien, Kwantung, Yunnan, and Kwangsi, enjoy tropical temperatures year round and more than 80 inches of rain. Here rice is the main crop. Yet China is a mountainous country, with 60% of its land at elevation 6,500 feet or higher; only 11% of its land can be cultivated (compared with 80% in the USA) (p. 10). Fukien, a coastal province to the south, makes the best soy sauce in China, and stewing is called "red cooking" because of the color imparted by the soy sauce (p. 16, 42).

Vegetable oil is very important in China because the Chinese rarely use butter (p. 29). "For protein the Chinese depend heavily on the soybean, which has for this reason been called the cow of the East." Soybean oil is used for cooking. Soybean milk is a good substitute for cow's milk. And "doctors, even Western doctors–prescribe it for babies who cannot get mothers milk and are allergic to cow's milk" [sic]. From soymilk one can make "bean curd, an exceptionally high-protein food known in China as 'the meat without bones.'" Bean curd is made by curdling soybean milk with gypsum, then pressing the curds into pieces about 3 inches square by ½ inch thick. "The thickened curd skin [sic, yuba] is a food by itself, with a more concentrated flavor. Fermented bean curd [fermented tofu] tastes much like cheese." Both soy and mung-bean sprouts are used in China. "In one form or another the soybean can be found in dishes eaten at every meal" (p. 29).

A two-page color photo spread and legend (p. 61-63) shows (numbered) basic Chinese ingredients, incl. "13. Fresh bean curd. 14. Dried bean-curd skin" [yuba]. Buddhist monks and nuns in China are strict vegetarians; special foods that simulate meat have been developed for them. These include vegetarian "duck made from crisp beancurd skin, colored and shaped to look like the bird's flesh" and "chicken roll in *hoisin* sauce, the 'chicken' made of soft soybean curd" (p. 64, 67, 70).

Note: This is the earliest English-language document seen (May 2012) that uses the term "beancurd skin," apparently to refer to yuba.

A full-page color photo and legend (p. 74-75) shows (numbered) Chinese sauces and condiments, incl. "1. *Hoisin* sauce. 3. Soy sauce. 8. Yellow-bean paste, or thick bean sauce. 11. Fermented black beans. 14. Red bean [azuki] paste." "Among the best known of Chinese seasonings is soy sauce, which was mentioned in several Confucian classics as early as the Fifth Century B.C." [sic]. Other condiments made from soybeans are bean paste (for preserving and flavoring meat) and *hoisin* sauce (widely served with Peking duck). "It is said that the best grades of soy sauce can take as much as six to seven years of aging to reach perfection, and that the making of superb soy sauce requires 'as much art in its preparation as good French wines'" (p. 74-75, 77).

The controversy over M.S.G. is discussed. "A really god Chinese chef considers it a questionable shortcut for giving taste to second-rate foodstuffs, but most Chinese cooks admit that its use in certain dishes is perfectly valid" (p. 77-78).

The emperor Chien Lung (1735-1796), 4th ruler in the Manchu [Qing] dynasty, wrote an *Ode to Tea* (p. 91). In China there is an intimate association between eating and health (p. 91).

Recipes: "Steamed bass with fermented black beans *Tou-shih cheng hsien yu* (with "2 teaspoons fermented black beans," soy sauce, Chinese rice wine, and shredded fresh ginger root, p. 104).

Most festivals (each with a feast) in China are based on events of agricultural importance; the two most important are New Years and the Moon Festival (p. 155, 162, 164-65). A Peking duck is "brought to the exact degree of plumpness

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and tenderness through force-feeding," then roasted slowly, suspended by hooks, in a mud-lined oven "until the thick, fat skin becomes golden in color. This crackled skin is the choice part of the dish." The skin, a piece of the meat, a spring onion, and thick, sweet hoisin are served enfolded in a thin wheat-flour "pancake" (p. 158, 15).

The history of chop suey (unknown in China) and chow mein (had an honorable origin in China) are discussed (p. 178-79).

The first wave of Chinese to America came with the gold rush and transcontinental railway. Most were laborers from southern China. The first Chinatown in the USA was established in San Francisco (1850s), followed by New York City (Manhattan, 1870s). Most early American Chinese restaurants reflected their social status, serving inexpensive foods. In the early 20th century, as China's Republican revolution was gaining momentum, a second wave arrived to study. These young people, also mostly from southern China, came from far more prosperous backgrounds than those in the 1st wave and they wanted better food. Restaurants were started or upgraded to suit their tastes. Thus, it "was the southern school of cookery that first spread over the world outside China" (p. 179).

China has three great regional cuisines: Cantonese (southern), northern, and Szechuan (p. 179). Six photos show "The Americanization of the fortune cookie: Assembly line at a factory in New York City's Chinatown." A two-page spread shows many of the "fortunes" found in fortune cookies (p. 195-97).

"A guide to ingredients in Chinese cooking" (p. 198-99) includes: Bean curd, fresh: Square. Bean-curd skin [yuba] ("Thin stiff sheets of dried bean curd. Sold by weight... {5 to 6 sheets weigh about 1 ounce"}). Bean sprouts ("Young sprouts of the mung bean"). Black beans, fermented ("Strongly flavored, preserved black soybeans." Sold in cans or plastic bags). Brown bean sauce ("Thick sauce made from fermented yellow beans [huang dou = yellow soybeans], flour and salt. Sold in cans of 1 pound or more"). Hoisin sauce ("Sweet, brownish-red sauce made from soybeans, flour, sugar, water, spices, garlic and chili for use in cooking. Sold in 1-pound cans and up"). Oyster sauce ("Thick brown sauce with a rich flavor, made from oysters, soy sauce and brine"). Red bean paste ("Thick, sweet paste made from red soybeans" [sic, azuki beans]). Salted eggs and thousand-year eggs. Sesame seeds and sesame seed oil. Soy sauce ("Pungent, salty, brown liquid made from fermented soybeans, wheat, yeast [sic, mold] and salt"). Vegetable steak ("A vegetarian food that looks like a small beefsteak but is made from wheat gluten. Sold in cans"). Address: Author, lives in England with her husband.

4621. Hahn, Emily. 1968. Recipes: The cooking of China. New York, NY: Time-Life Books. 119 p. Illust. (many color photos). Index. 23 cm. Series: Foods of the World. Revised ed. 1973, 1980, 1981. [1 ref]

• ***Summary:*** A recipe for "Shua-yang-jou–Mongolian fire pot (rinsed lamb)" (p. 28-29) calls for "1 tablespoon fermented red bean curd, mashed."

Note: This is the earliest English-language document seen (Oct. 2011) that contains the term "red bean curd" or that uses the term "fermented red bean curd" (or "fermented red beancurd") to refer to red fermented tofu.

The excellent "Guide to ingredients used in Chinese cooking" (p. 115-19) is identical to that found in the larger companion volume, *The Cooking of China* (Hahn 1968, p. 198-99). Address: Author, lives in England with her husband.

4622. Hawkes, Alex D. 1968. A world of vegetable cookery: An encyclopedic treasury of recipes, botany and lore of the vegetable kingdom. New York, NY: Simon and Schuster. 274 p. See p. 213-14. Illust. by Bill Goldsmith. 29 cm.

• ***Summary:*** The section titled "Soybean" focuses on green vegetable soybeans, noting: "In the Orient and increasingly in such places as Hawaii and California in this country, green Soybeans are for sale as a fresh vegetable. The plants have pod-laden branches, each short, narrow, very hairy pod containing three or four edible seeds. The fresh Soybean pods are washed, then boiled in lightly salted water until they are soft. Drained, they are seasoned to taste with soy sauce and a bit of sugar, then served, the beans being shucked from the pods at table."

There is a casserole recipe named "Miss Diddley's Green Soybeans." Also discusses briefly dried soybeans, roasted soybeans "ground into a meal and into flours of various degrees of coarseness [roasted soy flour] and "even used as a substitute for coffee, sprouted soybeans (a recipe is given for "Soybean Sprouts Cantonese"), soy oil, soy sauce, tofu, and miso. The author notes: "I often prepare my own version of *miso*, using dried navy or other white beans (see p. 44), instead of utilizing the commercial imported variety."

"Tôfu is the curd of cooked, mashed white soybeans, which has been precipitated, then pressed into cakes. It is perishable, hence most conveniently bought in cans, water-packed. The rather soft but firm cakes–sometimes baked or even fried prior to canning, and respectively known as *yakidôfu* and *aburage*–have a bland flavor, vaguely reminiscent of a custard. It is just this suavity which makes *tôfu* so valuable, since it quickly absorbs the flavors around it in such things as soups, sukiyaki, and mizutaki, yet retains its exceptionally pleasant substance. *Tôfu* is to be found in many of our domestic markets, imported from Japan. With its high content of readily digestible protein, it should be better known by all Americans."

4623. Jones, Dorothea Van Gundy. 1968. The soybean cookbook: Adventures in zestful eating. New York, NY: Arc Books, Inc. ix + 240 p. Foreword by Ruth Stout. Index. 21 cm.

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• ***Summary:*** This lacto-ovo-vegetarian cookbook is identical to the original 1963 paperback edition by the same title except that this is a hardcover edition and the publisher is listed as Arc Books rather than Arco Publishing. The publisher's address is the same. Address: Arlington, California.

4624 Kikkoman Shoyu K.K. 1968. Kikkôman Shôyu shi [History of Kikkoman Shoyu]. Noda, Japan: Kikkoman Shoyu K.K. 804 p. Illust. No index. 26 cm. [113 ref. Jap; eng+]

• ***Summary:*** This is the third (and best) major history of Kikkoman, written largely by Mr. Morio Ichiyama. Contents: Preface. I. Overview–1. Fermented foods. 2. Japanese shoyu. II. Present status. 1. Overview of Noda (p. 15). Location, overview photo of city area. 2. Main building and facilities (p. 18). Main office, Tokyo branch, Osaka branch, plant No. 7, Kansai plant, inside the fermentation plant, bottling plant, sake making plant, food manufacturing plant, Goyo Gura traditional shoyu facility, Central Research Center. 3. The distribution and view of the buildings (p. 36). Distribution chart of the main buildings in the Noda area, view of the plant, water providing facility. 4. Products (p. 41): Shoyu, products made by food manufacturing department and sake brewing department. 5. Sales and marketing (p. 44): Domestic, overseas. 6. Welfare facilities (p. 48): Health center house, attached hospital, cultural gymnasium, dormitory and company housing quarters. 7. Connected enterprises (p. 50): ***K.K. Senshûya (Chiaki)***, foundational juridical person / (***kôfûkai***), foundational juridical person / (***Noda Sangyo Kagaku Kenkyusho***), ***Sôbu-Tsûun K.K.***, Kikkoman International, Inc., Tone Coca-Cola Bottling Co., Kikko Food Industry K.K., Seishin Seiyaku K.K. (pharmaceutical company), Mann's Wine K.K. 8. The staff members (p. 58).

III. History. 1. The history of shoyu (p. 61): History of shoyu, origin of character meaning shoyu, Daishokuzen and Shoin, Zashin of Shoin, the beginning of shoyu exports (p. 76), the first shoyu plant overseas, shoyu which was protected by the Lord of the Han (***Hanko***), references to Noda Shoyu in literature. 2. Trademarks (p. 86): The change of trademark, the origin of the Kikkoman trademark. 3. Management of the organization (p. 91): Changes in organization, changes in management, changes in bookkeeping. 4. Production (p. 118): History of the method, raw materials, processes, containers, sauce, new seasonings, various kinds of sake. 5. The plant (p. 231): Noda plant, Kansai (Osaka-Kyoto area) plant, sake making plant. 6. Research center (p. 265): History of the research center, achievements. 7. Businesses (p. 269): Sales, wholesale, business customs, export, transportation, prices, advertising, business offices, overseas activities. 8. Labor (p. 375): Changes in labor conditions, the labor union, labor relations board. 9. Welfare (p. 393): Health insurance union, medical facilities, dormitories for single workers and company housing quarters, day care center, travel club, fire department, committee for funerals, weddings, etc. (***Kyozaikai***), athletic association, cultural committee, Noda Shoyu co-op.

IV. Pre-history–Before the company's establishment. 1. Natural and environmental history of Noda (p. 415). 2. Development of the shoyu industry in Noda (p. 432). 3. Family tree (p. 440). 4. Brief description of the major contributions (p. 448, incl. Kotohira Shrine, Kameo Mogi's theory of business, founding of the Senshu-kai, the man who emphasized thrift and simplicity, the 1st president of the company, the 2nd president–Mogi-Honke, the 3rd president Chu-do Kikkoman Kuramoto).

V. Company history. 1. Developmental stage and established stage (p. 469): Outline, foundation of the company, beginning of the business, developments and labor problems, overproduction and the business world. 2. The new order and the controlled economy during World War II (p. 494): Outline, changes during the war, process under controlled economy during the war. 3. The U.S. occupation period (p. 519): Outline, development of democracy, danger of the business world, changes caused by international conditions. 4. Development period of new Japan (p. 547): Outline, quickening of economic growth, advancing technology, a step forward to modernization, diversification of the business.

Appendixes: 1. Company time table (20 p.). 2. Charts and graphs concerning the company's history (5 p.). 3. Food history and shoyu (193 p., including many old illustrations, photos, a 38-page chronology of Japanese food culture {p. 137-75}, and a bibliography {p. 191-93}). Closing remarks (2 p.). Contains many photos, illustrations, and copies of early documents.

Note: Ichiyama is not listed in this book as the author, even though he wrote it. On the copyright page the author is given as Kikkoman K.K. Continued. Address: Noda, Japan.

4625. Kikkoman Shoyu K.K. 1968. Kikkôman Shôyu shi [History of Kikkoman Shoyu (Continued–Document part II)]. Noda, Japan: Kikkoman Shoyu K.K. 804 p. Illust. [113 ref. Jap; eng+]

• ***Summary:*** The section on the beginning of shoyu exports (p. 76) states that the exporting of shoyu from Japan began when a group of merchants were allowed to do business after the closing of Japan during the Kan-ei era (1624-30) of the early Tokugawa period. In 1641 a group of Dutchmen moved to Nagasaki from Hirado. At that time, two merchants already in business were allowed to conduct trade. Their names were Koyanagi Heizaemon and Sameya Hisazaemon. They established a stock company with 16 shares. The shareholders were called ***Dejima shoshiki urikomi shônin***. To the original two merchants, in 1653 four more were added and in 1666 ten more were added.

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making a total of 16. These were called the "Comprador Merchant Guild" (*Konpura Nakama*). They started exporting shoyu from Japan. According to documents in the Hague: 1668–It was exported to Coromandel on the southeast coast of India. 1670–To Ceylon. 1699–To Ceylon, Bengal, and Nakabatanam. 1716–To Coromandel. 1717–To Suratt, in northwest India. Furthermore, the Dutch took shoyu to Europe. So we can see that in the late 1600s and early 1700s the people of Europe started to use shoyu.

The section on exports (p. 294-99) states that it is difficult to tell when shoyu from Noda was first exported from Japan. In 1879 a person named Domoto (?) got one Kikkoman brand and its logo (in the shape of a hexagon, but not the current Kikkoman logo) registered in California, and then he started to sell the product there. In about 1899 the Saheiji MOGI family's Kikkoman brand shoyu began to be exported to Hawaii via Okada-shoten, a company with offices at Koamicho 3-5 in Tokyo. In 1907 the Verleysen-Nyssens company in Brussels, Belgium, began to import shoyu in large kegs. They repackaged it in grey ceramic bottles of their own design, then published a pamphlet in French (see p. 295) describing the product (which they called "Soya") and showing a photo of two sizes of bottles. A 1.2 liter bottled retailed for 1.75 francs. Page 296 shows a gift coupon from the year 1922 from America. When a person buys a bottle of shoyu, he or she gets this $0.50 coupon.

Excerpts from Appendix 3 (p. 152+). Chronology of food history. 1610–Tamari was made in Nagoya using only soybeans when the Nagoya Castle was built. 1615–Dried nori sheets invented in Edo.

1616–Shoyu started to be made in Choshi, Shimousa.

1661–Takanashi (1661) and Mogi (1662) families in Noda started to make shoyu and miso.

1666–Usukuchi shoyu started to be made in Tatsuno, Hanshu / Banshu by a certain man. And Bizen shoyu started to be made in Bizen.

1698–Shoyu wholesaler (*tonya*) first appeared in the literature in *Sonazaki Shinju*, by Chikamatsu Monzaemon.

1781–Kanro shoyu starts to be made. Mr. Takada offered shoyu to Yoshikawa-ko and received the admiration / appreciation of *kanro* ("sweet dew").

1810–Choshi Shoyu received the *gozengoyô* Tanaka-gen han bakufu.

1829–The Takanashi house of Noda received the Bakufu's order for shoyu (*goryomaru*). Address: Noda, Japan.

4626. Kono, Tomomi. 1968. Shôyu no hyakka [Everything about shoyu]. Tokyo: Shinju Shoin. 175 p. [Jap]

4627. Manley, Charles Howland. 1968. A study of the volatile compounds and chemical reactions of hydrolyzed soybean protein. PhD thesis, University of Massachusetts. 185 p. Page 3699 in volume 30/08-B of Dissertation Abstracts International. *
Address: Univ. of Massachusetts

4628. Uphof, Johannes Cornelis Th. 1968. Dictionary of economic plants. 2nd ed., revised and enlarged. West Germany: Verlag von J. Cramer. 591 p. See Glycine max, p. 246. 25 cm.
• ***Summary:*** Lists briefly the many food, industrial, and feed uses of the soybean. For example: "Seeds are source of an oil, made into glycerine; used in enamels, varnishes, paints, waterproof goods, linoleum, hard soaps, liquid shampoo, paste soap for hospital use, oil cloth, used in metal moulding, foundry cores; used with rubber for manuf. mats, hose etc., rubber substitutes, lubricant, in printing inks. When refined used for cooking, salads, margarine, shortening." Address: Tampa, Florida. Emeritus Prof. of Botany. Formerly faculty member of the Michigan State Univ. and State Univ. of Arizona. Economic botanist to the Board of Economic Warfare, Washington, DC.

4629. Watanabe, Tokuji. 1968. Advanced technology in non-fermented soybean foods in Japan. *JARQ* (*Japan Agricultural Research Quarterly*) 3(4):9-13. [7 ref. Eng]
Address: Head, Food and Nutrition Div., Food Research Inst., Japan.

4630. Zenkoku Shoyu Kogyo Kyodo Kumiai Rengokai, ed. 1968. Nihon shôyu gyôkai shi. Dai 2 kan [History of the Japan Shoyu Association. Vol. 2]. Tokyo: Nihon Shoyu Gyokai. 473 p. [Jap]
Address: Tokyo, Japan.

4631. Kitahara, Seiji; Ishizuka, Zentaro. 1969. Shôyu jôzô bisei-butsu ni kansuru kenkyû. II. Moromi eki-jiru kondaku saikin no dôtei [Studies on microorganisms in soy-sauce brewing. II. Identification of bacteria causing turbidity in soy-sauce]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(1):1-7. Jan. [5 ref. Jap, eng]
• ***Summary:*** Two strains were identified as *Micrococcus ureae* and *Micrococcus caseolyticus*. Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda, Chiba, Japan.

4632. Okuhara, Akira; Nakajima, T.; Tanaka, T.; Saito, N.; Yokotsuka, T. 1969. Shôyu no iro. II. Iro no antei-sei [Color of soy sauce. II. Stability of color]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(1):57-68. Jan. [24 ref. Jap; eng]
Address: Central Research Lab., Kikkoman Shoyu Co. Ltd., Noda, Noda-shi, Chiba prefecture, Japan.

4633. Okuhara, Akira; Harada, M.; Saito, N.; Yokotsuka, T. 1969. Shôyu no iro. I. Sansei hakudo ni yoru dasshoku [Color of soy sauce. I. Pigment adsorption on acid clay].

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Hakko Kogaku Zasshi (*J. of Fermentation Technology*) 47(1):50-68. Jan. [6 ref. Jap; eng]
• ***Summary:*** "Acid clay can be used to decolorize soy sauce; it adsorbs the pigment but hardly adsorbs the flavor."

Note: *Webster's Dictionary* defines adsorb (a term first used in 1882) as "to take up and hold by adsorption." Adsorption is "the adhesion in an extremely thin layer of molecules (as of gases, solutes, or liquids) to the surfaces of solid bodies or liquids with which they are in contact–compare absorption." Address: Central Research Lab., Kikkoman Shoyu Co. Ltd., Noda, Noda-shi, Chiba prefecture, Japan

4634. Hesseltine, C.W.; Wang, H.L. 1969. Oriental fermented foods made from soybeans. *USDA Agricultural Research Service*. ARS-74-50. p. 45-52. Feb. Proceedings of the Ninth Dry Bean Research Conference.
• ***Summary:*** Contents: Introduction. Koji. Shoyu or soy sauce. Miso. Hamanatto. Sufu. Tempeh. Natto. Idli. Conclusion. Flow sheets (without quantities of ingredients) show the basic process used in making the following foods: shoyu, miso, hamanatto, sufu (fermented tofu), and tempeh.

A photo taken in Aug. 1948 shows a miso plant in Tokyo, Japan, with large wooden vats in the foreground. A part of this plant was destroyed during World War II. Address: Northern Utilization Research and Development Div., USDA, Peoria, Illinois.

4635. Koshiyama, Ikunori. 1969. Distribution of the 7S proteins in soybean globulins by gel filtration with Sephadex G-200. *Agricultural and Biological Chemistry* 33(2):281-84. Feb. [9 ref]
• ***Summary:*** Five photos show the ultracentrifugal patterns of each fraction of SPI separated by gel filtration with Sephadex G-20. Address: Noda Inst. for Scientific Research, Noda, Japan.

4636. Miyata, K.; Takada, R. 1969. Saikin no tamari shôyu no jôzôhô [Current method for making tamari shoyu]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 64(2):148-52. Feb. [10 ref. Jap]
Address: 1. Aichi-ken Miso Tamari Shoyu Kogyo Kyodo Kumiai. 2. K.K. Aichi Kenjosha Kenkyu Shitsu.

4637. *Soybean Digest.* 1969. Hybrid yeast for shoyu making. Feb. p. 28
• ***Summary:*** The new hybrid yeasts were "bred from *Saccharomyces rouxii*, the chief fermentation yeast used in making shoyu, in P.L. 480 research sponsored by USDA's Agricultural Research Service. Development of the hybrid is one of the most significant applications to date of yeast breeding for the production of fermented soybean foods, says Dr. Clifford Hesseltine, ARS microbiologist. Groundwork for this breakthrough was laid at the ARS Northern Utilization Research Laboratory, Peoria, Illinois, by microbiologists Dr. Lynferd J. Wickerham and Kermit A. Burton.

"The Japanese work was directed by Dr. Masatoshi Mogi. These studies were conducted at the Noda Institute for Scientific Research, Noda City, Japan."

4638. Tanaka, Teruo; Saito, N.; Nakajima, T.; Yokotsuka, T. 1969. Shôyu no kannô kensa-hô ni kansuru kenkyû. VI. Aji no sôgo kankei to baransu [Studies on sensory evaluation of soy sauce. VI. Interrelation and harmony of flavor]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(2):137-45. Feb. [13 ref. Jap, eng]
Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda, Chiba, Japan.

4639. Umeda, I.; Nakamura, K.; Yamato, M.; Nakamura, Y. 1969. Investigations on comparative production of shoyu (soy-sauce) from defatted soybean meals obtained from United States and Japanese soybeans and processed by United States and Japanese methods. Japan Shoyu Research Inst., #9, 3-chome, Koami-cho, Nihonbashi, Chuo-ku, Tokyo. 103 p. Final technical report. USDA P.L. 480. Project no. UR-A11-(40)-21. Grant no. FG-Ja-117. 1 Aug. 1965 to 20 Feb. 1969. [Eng]
• ***Summary:*** In accordance with the Europeanization and instantization of Japanese coking styles these days, soy sauce consumption per capita has been decreasing. In 1957, total Japanese production of soy sauce exceeded 1.1 million Kl [kiloliters = 1,000 liters]. Thereafter, however, production stagnated and is currently at 1.2 million Kl.

There are more than 4,000 soy sauce manufacturers in Japan, however most of them are smaller enterprises, and only five have large factories. The big five produce 35% of soy sauce made in Japan.

About 160,000 tons of defatted soybean meal and only 15,000 tons of whole soybeans are used to make soy sauce in Japan. Address: Japan Shoyu Research Inst., #9, 3-chome, Koami-cho, Nihonbashi, Chuo-ku, Tokyo, Japan.

4640. McCormick, Sally. 1969. Azuma Sukiyaki House: A bit of Japan in the heart of Chicago–5120 N. Broadway, Chicago (Advertorial). *Chicago Tribune*. March 20. p. W13.
• ***Summary:*** "It was a pleasure watching her prepare Beef Sukiyaki... Then soy bean cakes [tofu], soy sauce, dry onions and rice wine were stirred into the pan." Azuma also serves Beef Teriyaki, Chicken Teriyaki, and Salmon Teriyaki. Three photos show Azuma Sukiyaki House.

4641. Pepper, Thomas. 1969. Food kept seasonal: In Japan. *Sun* (*Baltimore, Maryland*). March 20. p. D1.
• ***Summary:*** The recipe for Mizutaki calls for "2 cans of 'tofu,' Japanese soy bean curd." It should be cut into one-inch cubes. The dipping sauce includes "5 tablespoons of Kikkoman soy sauce."

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4642. Ebine, Hideo; Kimura, Haruo; Wadaka, Hitoshi. 1969. [Application of *Rhizopus* [molds] for shoyu manufacture] *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 24, p. 125-33. March. [7 ref. Jap, eng]
• ***Summary:*** Reprinted from *Chomi Kagaku* (*Seasoning Science*) 15(3): 1-9 (1968). Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4643. Fukushima, Danji. 1969. Denaturation of soybean proteins by organic solvents. *Cereal Chemistry* 46(2): 156-63. March. [14 ref]
Address: Central Research Inst., Kikkoman Shoyu Co., Noda-shi, Chiba-ken, Japan.

4644. Spilsbury, Calvin C. 1969. Three stages in Far East soybean markets. *Foreign Agriculture*. April 14, p. 6-8.
• ***Summary:*** Today soybean markets in the Far East, the original home of the soybean, have emerged from time-honored Eastern patterns and have differentiated into what may be called three types–traditional, transitional, and industrial. In traditional markets soybeans continue to be sold and used chiefly for human protein foods, and volumes traded are comparatively small. Also, volumes processed by modern methods are small. Transitional markets are characterized by larger volume, the modern processing of considerable quantities of soybeans for oil for human consumption, and the developing use of soybean meal for human food products and for high-protein animal feeds for emerging livestock and poultry industries. In industrial markets very large quantities of soybeans are efficiently imported, marketed, and processed for oils and fats for human use and for meal for vigorous livestock industries; at the same time soybeans are still used in traditional foods and soybean meal is used to make a variety of new food products.

Korea is a traditional soybean market. Nearly all soybeans are processed into human protein foods such as synthetic milk, flour, paste for soup [miso], curd for consumption in more solid form, mash, sprouted beans, soy sauce, and even fermented "cheese". About 60 to 70% of the domestic crop of about 200,000 tonnes annually is sold in the country's food markets directly to private and commercial consumers. Total imports in 1968 were 28,000 tonnes–all from the U.S.

Most processing of soybeans for human use is done in individual homes by housewives. For example, nearly every Korean family makes a product known as kochojang, or hot bean mash, which consists of powdered, fermented soybeans mixed with red pepper, salt, and water. Some foodmaking (soybean curd and soy sauce) is organized into cottage industry. Most of the soybeans imported from the U.S. are made into traditional soybean foods for rations for the Korean army by one large food factory. Crushing soybeans and other oilseeds for oil is done by about 100 small mills throughout the country. The estimated capacity of all the mills added together is about 200,000 tonnes per year of oilseeds of all types. The largest mills have capacities less than 25 tons per day.

In Taiwan, very little of the imported soybeans are used to make traditional Far East foods. The larger crushing and extraction facilities are clustered around large cities–Taipei, Taichung, Tainan, and Kaohsiung. Only the last is a port, and even there no mills are located on deep water. Imported soybeans are discharged by ships' equipment onto docks, where they are bagged and then stored. Bagged beans are sent by truck or rail to inland processing plants. Modern deep-water bulk discharge facilities are to be built at Kaohsiung along with storage for soybeans and grain.

Japan is the giant of Far Eastern markets for U.S. soybeans. One of the most important recent improvements in soybean logistics has been the development of modern deepwater grain and soybean terminals where soybeans can be rapidly discharged from ships' holds directly to storage, interim transportation, or crushing mills. The first fast-discharge elevator on deep water for soybeans or grain was built by an American-Japanese company. At present four terminals have been built in the Tokyo and Kobe areas, and two more are under construction. Unloading is accomplished by pneumatic suction tubes with capacities of 600 to 800 tons per hour (about 6,000 tonnes per 8-hour day). In Korea and Taiwan, facilities for the fast unloading of large tankers do not exist. Many large, new crushing mills have been built on harbor frontage rather than inland so that they can benefit from bulk transportation methods. The annual capacity of the 15 large, modern mills in Japan is estimated at 1.8 million tons of soybeans. The first mills in Japan were in the mountains because most oilseed crops were grown there.
Address: Fats and Oils Div., Foreign Agricultural Service.

4645. Pier 1 Imports. 1969. Grand opening! Friday, April 18, 1969. Hollywood. 5711 Hollywood Blvd. (Ad). *Los Angeles Times*, April 18, p. H8.
• ***Summary:*** "Marukin soy sauce, a must for oriental cookery. 34 oz. Reg. [Regular] $0.99–[Now] $0.77."

An illustration shows a bottle of Marukin soy sauce.
Address: Los Angeles area: Hollywood, San Marino, Redondo Beach, Encino, Westchester, Anaheim, West Los Angeles. Phone: 466-3444.

4646. Binding, George J. 1969. The soya bean–a vegetable full of body-building protein. *British Vegetarian*. March/April, p. 155-57.
• ***Summary:*** The "soya bean has the highest protein content of any vegetable. As such it is God's gift to man and is a must for vegetarians. In the Far East it is known as 'the meat of the soil.'" The author spent many years in East Asia.

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where he studied the foods of the region. Soya beans can be used to make a wide variety of foods; the author briefly describes the following: Bean shoots [soy sprouts], soya bean milk, bean curd or vegetable cheese [tofu], yuba, natto, miso, soy sauce, and boiled whole soybeans.

Since World War II, America has become the largest producer of soya beans. Before that war, England was one of the largest importers of soya beans in the world. "All vegetarians should make certain of a sufficient daily intake of protein. There's no more effective and satisfying way of doing so than eating soya beans." Address: M.B.E.

4647. Stanton, W.R.; Wallbridge, A. 1969. Fermented food processes. *Process Biochemistry* 4(4):45-51, April. [34 ref.]
• ***Summary:*** "Fermentation of starch tubers such as cassava with fungal organisms such as Rhizopus can result in a food product with significant increases in protein content." The cassava dough is inoculated then extruded (like noodles) into fermentation trays.

Table 1 shows many different "vegetable cheeses and related fermented foods." The first such food mentioned is minchin, made from wheat [gluten] in China. The microorganisms used are *Paecilomyces, Aspergillus, Cladosporium, Fusarium, Syncephelastrum, Penicillium,* and *Trichothecium* species. This is an anaerobic fermentation of wheat gluten for 2-3 weeks at room temperature during the winter, with 10% salt added. The product is cut into strips and used as a condiment. Eaten as a meat substitute, it is rich in protein, nutritious, and healthy.

Fermented soy products include sufu, tempeh, meitauza, Hamanatto, shoyu, miso, and natto. Address: 1. PhD, Head, Microbiology Section, Tropical Products Inst., London, England; 2. Parke Davis Co.

4648. Tanaka, Teruo; Saito, N.; Sogabe, A.; Yokotsuka, T. 1969. Shôyu no kannô kensa-hô ni kansuru kenkyû. VIII. Shukaku handan ni yoru meigara hantei no datôsei [Studies on sensory evaluation of soy sauce. VIII. Accuracy of brand judgment by the sensorium]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(4):244-48, April. [5 ref. Jap; eng]
• ***Summary:*** A statistical method was developed to test the accuracy of brand judgment based on people's sense of smell. Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Noda, Chiba, Japan.

4649. Tanaka, Teruo; Saito, N.; Nakajima, T.; Yokotsuka, T. 1969. Shôyu no kannô kensa-hô ni kansuru kenkyû. VII. Shôyu no burendo kôka ni tsuite [Studies on sensory evaluation of soy sauce. VII. Statistical research on the effect of blending]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(4):237-43, April. [10 ref. Jap; eng]
• ***Summary:*** "This paper reports mathematical investigations into the effect of blending on the preference of soy sauce and the correlation among 3 components." Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Noda, Chiba, Japan.

4650. Dosti, Rose. 1969. Happy holiday for Japanese. *Los Angeles Times*, May 8, p. II20.
• ***Summary:*** On April 29th, the Emperor of Japan celebrated his birthday, and wherever Japanese live there were banzai cheers. The hurrahs were especially loud in Los Angeles, for more Japanese-Americans live here than in any other part of the United States.

A photo shows Japanese Consul General Kanji Takasugi, with his wife, Shinako. They hosted a party for 800 guests honoring the Emperor's birthday.

The meal is described and recipes are given for tempura and its dipping sauce (*tentsuyu*), based on soy sauce, mirin and grated daikon (white radish). "Plain rice is served with a thin soup called omiso [miso soup] to which soy bean cakes (tofu) and green onion pieces are added."

4651. *Time*. 1969. Cancer: A clue from under the eaves. 93:81, May 9.
• ***Summary:*** This article discusses the work of Dr. David Seel, who has studied 919 cases of stomach cancer at the Presbyterian Medical Center in Chonju, South Korea. He thinks the culprit "may be a mold used in the preparation of a favorite Oriental delicacy, soya paste."

He explained that each winter, almost every Korean household makes "loaves of soybean mash" [*meju*, soybean koji, used to make Korean soy sauce and soya paste] and stores them in a cool, dark place, often under the eaves, where they become moldy. By early spring, a mycelium of black or gray mold covers the loaves. The Koreans scrape off this mold, then immerse the loaves in brine for a month. Finally, they pour off the black liquid, which is soy sauce, and "make the debris left in the crock into a stiff soya paste," of which some Koreans consume as much as five ounces a day.

Dr. Seel believes the "soya-paste molds" might well be a cause of stomach cancer in South Korea. He suggests there may actually be two causes of the problem: "The most widely used mold is *Aspergillus flavus*, some growths of which secrete substances called aflatoxins. For some animals, these are among the most powerful cancer-causing agents known. Moreover, says Seel, the stomach lining seems especially liable to damage, including cancer. Among Koreans who had both low vitamin A readings and a high consumption of soya paste, stomach cancer was twice as common as among other groups." Aflatoxins have also been found in peanuts, which are consumed by Southern Negroes, among whom vitamin A deficiency is known to be prevalent. A photo shows a person "immersing soya loaf [meju] in brine."

Note 1. For another perspective, see the *SoyaScan Notes*

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interview on this subject with Dr. C. W. Hesseltine (Feb. 1981), an internationally recognized expert on aflatoxins.

Note 2. This is the earliest English-language document seen (March 2009) that uses the term "soya paste" to refer to miso, or to Korean-style miso.

4652. *Medical World News*.1969. Is the staff of Asian life the stuff of cancer? 10(20):12. May 16.

• ***Summary:*** This article (under the heading "Late News of the Week") seems to be based, at least in part, on a report in *Time* magazine (9 May 1969, p. 66). *Aspergillus flavus* is "a fungus often found in soya paste or soya sauce. These foods are prepared by molding [i.e. from meju]. *Aspergillus flavus* produces toxic metabolites called aflatoxins, apparently the most potent carcinogenic substances ever discovered." Research on stomach cancer patients in Korea seems to support the theory that low intakes of vitamin A or a vitamin A deficiency may open the way to stomach cancer if the diet is loaded with carcinogens. A Korean team led by American missionary doctors [incl. Dr. David J. Seel, associate director of the Presbyterian Medical Center in Chonju] examined the socioeconomic, clinical, and dietary histories of 70 stomach cancer patients and 70 controls, matched by age and sex. "A striking finding was that the average daily intake of vitamin A for the control group was around 3,331 International Units, but for the cancer patients, only 2,853. 'The typical Korean stomach cancer patient is apt to be a farmer with poor education, at the lowest income level,' reports Dr. Seel. For the poor Korean farmer, soya loaves [meju] are a staple. The loaves are prepared each winter from a bean mash and stored for molding in a cool, dark place, often under the eaves of the farmer's house.

"Should the American with exotic tastes limit his horizons to avoid carcinogenic intake?' A physician attending the meeting assured MWN [*Medical World News*] that Occidentals who are Chinese and Japanese restaurant buffs have nothing to worry about, since they are probably fully protected by the quantities of vitamin A in Western diets."

4653. Asao, Yasuo, Sakasai, T., Yokotsuka, T. 1969. Shôyu no fûmi kettei ni okeru kôbo no yakuwari [The role of yeasts in the production of shoyu flavor]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(5):318-26. May. [12 ref. Jap; eng]

• ***Summary:*** Several yeast strains isolated from various kinds of shoyu mash were studied for their ability to produce good flavor in shoyu. Besides *Saccharomyces rouxii* (which is the most indispensable yeast for shoyu fermentation), *Torulopsis* strains were studied and found to play a very important role in producing good shoyu flavor.

Alkyphenols such as 4-ethylguaiacol and 4-ethylphenol were produced by *Torulopsis* strains when they were added to the shoyu fermentation. These alkyphenols were not produced in mash fermented by *Saccharomyces rouxii*. Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Japan.

4654. Photographs of Paul Hawken and Evan Root inside the Great Buddha at Kamakura, Japan, looking out the rear window. 1969.

• ***Summary:*** This Buddha is hollow and there are windows in the rear and a staircase up through the inside. This photo was taken shortly after Paul and Evan arrived in the spring of 1969.

Evan writes (Nov. 2010): "Paul and I went to Japan together, by boat from San Francisco to Yokohama. We took the *Brazil Maru* of the Mitsui OSK line. This was a combination passenger and freight vessel taking 15 days to cross with a one day stop in Honolulu, Hawaii."

Q: Why did you go and why did Paul go? Was it Michio or Aveline Kushi's idea? "In conversations with Michio, he often said, 'when you go to Japan...' such and such. He never said 'if you go to Japan.' I had been running Sanae Restaurant for about a year and a half (a long time in those youthful days). We had gone from a few loyal customers to lines down the block waiting to get in every night. I was starting to think about opening a second restaurant. Michio counseled me not to limit myself by getting tied down to business. At that time, the Boston Macrobiotic community was like a school, and people were coming from all over the country to study. Many of these people worked at Erewhon, Sanae or other macrobiotic enterprises. I wanted to take on a new adventure, and, at the same time make room for others to grow. I did not know exactly what to do, but Michio's words 'when you go to Japan' filled that gap. Of course, I thought, the next step was to go to the country of origin of this movement.

"As far as the case with Paul, I cannot speak for him. My sense is that it was for cultural education plus business.

"Paul and I had been close friends since he arrived in Boston in the summer of '68. He hung out at the little Erewhon (303B), and picked my brain about everything. I wanted to start a restaurant and convinced Aveline that Paul was the best man to take over the store. When this was settled, Martin Russell and others filled in at Erewhon while Paul and I took a drive away car out to California so he could arrange to make the move to Boston. On the way, we stopped in all sorts of places to give classes in macrobiotic philosophy and cooking. We also visited Jacques and Yvette DeLangre, Reme's ranch and Chico-San, places where food processing was going on (Reme's tekka [miso] and onion concentrate were excellent).

"It seemed like Paul and I were both on the same timetable in terms of needing some new horizons, so it was convenient and natural that we went at the same time. Though Erewhon paid for his trip, and Sanae paid for mine, we both went on business visas connected to Erewhon."

Q: Did you stay together or see each other often?

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"Our arrival was celebrated by a big dinner party at Lima Ohsawa's. Because we were Michio's students, many people were there to welcome us. It was a testament to the esteem with which Michio was held in the Japanese *seishoku* [macrobiotic] community. Michio and Aveline themselves had not been back to Japan since leaving for the U.S.

"Note: *seishoku* is the word that was used for 'macrobiotic' in Japan when I was there. It is written with the characters for correct / proper + food. The word 'macrobiotic' was not commonly used in Japan at that time.

"Paul and I were taken here and there for some sightseeing including the trip to Kamakura. We also met Mr. Kazama [of Mitoku]. After a short time together in Tokyo, Paul went to Osaka to stay with the Okada family and connect into the food scene and make connections for Erewhon. We saw each other from time to time, once to visit some food production sources like shoyu, rice vinegar and sesame oil. Another time we went on an outing to meet Kôji Ogasawara, the noted proponent of *Kototama* (the word soul); he was the author of a book titled *Kototama: The Principle of One Hundred deities of the Kojiki*. This was something Michio had told us about, related to a kind of esoteric history of Japan. Mrs. Okada took us to Ogasawara's and we listened to him tell us about the *Kototama* and the *Kojiki*, though due to the language difference and the esoteric nature of the subject, it went largely over my head."

Q: What of importance did each of you accomplish? How long did each of you stay?

"I recollect that Paul stayed somewhere around 9 months. During that time he did a lot of relationship building for Erewhon, as well as learning about foods and processing. Certainly, the relationship with Muso Shokuhin was deepened.

"As for me, after a month or two, I realized that I didn't really know what I was doing over there. I had begun to take lessons in Japanese at the Tokyo Nippongo Gakko in Shibuya, but this was no easy language that I could pick up without really applying myself. There quickly came the day that I had to decide to let it go or really dig in. I choose to dig in. That became the what that I was doing. To me that was probably the single most important decision because it affected everything else. After about two years of study, I serendipitously met a teacher who could actually teach the language to Westerners. This was a revelation, and I began to learn the language according to the Japanese way rather than the translated from English way. This deepened my ability to relate and opened many doors for me. My last year there, I worked for Muso Shokuhin as their translator / international correspondent.

"I stayed in Japan for 3 years and 7+ months. By agreement if I did not return within 18 months, I let go of my 50% ownership position in Sanae Restaurant at a prearranged figure (a modest sum) and used that money to support my living and education in Japan until I knew enough to utilize my Japanese in gainful ways."

Note: This photo was sent by Evan Root to Patricia Smith and by Patricia to Soyinfo Center (Nov. 2010).

4655. *Guardian* (*England*). 1969. Japan: Sculptures from a hard-boiled egg. July 16. p. 16.

• ***Summary:*** A recipe for Sukiyaki calls for "½ lb tofu (bean curd) in 1-in. cakes." The dipping sauce includes "12 tablespoons shoyu." Three suppliers of Japanese food products in London are listed. Mikadoya has two locations and Cydilda has one.

4656. Fukushima, Danji. 1969. Enzymatic hydrolysis of alcohol-denatured soybean proteins. *Cereal Chemistry* 46(4):405-18. July. [24 ref.]

• ***Summary:*** The author studied the effect of denaturation conditions on the enzymatic digestion of soybean proteins. The maximum amount of hydrolysis was 5-10% higher in alcohol-denatured proteins than in water-denatured ones, although the initial speed of hydrolysis was slower in the former. The enzyme trypsin possesses the strongest ability to hydrolyze water-denatured soy proteins. During both denaturation treatments, and especially with water, some of the oligosaccharides in the soy flour disappeared. The degree of hydrolysis increases rapidly at the beginning then quickly slows. The acid-precipitated fraction and the whey fraction increased in their degree of maximum proteolysis after alcohol denaturation, as compared with water denaturation.

For soy sauce manufacture, only the maximum hydrolysis values with mold proteinases are important. Today most of the soybean meal used in Japan for making fermented soy sauce has been extracted with alcohol, and this has made a great contribution to increasing soy sauce yields. Address: Central Research Inst., Kikkoman Shoyu Co., Noda-shi, Chiba-ken, Japan.

4657. Fukuchi, Masakazu, Hishiki, N.; Mori, K.; Ueda, R.; Ishigami, Y.; Ishikawa, H. 1969. Shôyu-chû no kobunshi kagô-butsu ni kansuru kenkyû. I. Shôyu-chû no kôbunshi pepuchido, tôtanpaku oyobi tatôrui no bunri [Studies on high molecular constituents in soy sauce. I. Isolation of high peptides, glycoproteins and polysaccharides in soy sauce]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(8):510-17. Aug. [16 ref. Jap; eng]

Address: 1-4. Dep. of Fermentation Technology, Faculty of Engineering, Osaka Univ.; 5-6. Higashimaru Shoyu Co. Ltd., Tatsuno, Hyogo, Japan.

4658. Morimoto, Shigemi; Matsutani, Noriko. 1969. Shôyu no kôki seibun ni kansuru kenkyû. Furfuryl alcohol no bunri to kôbo-rui oyobi kabi-yûri ni yoru furfuryl alcohol keisei ni tsuite [Studies on the flavor components of soy sauce. Isolation of furfuryl alcohol and the formation of furfuryl alcohol from furfural by yeasts and molds]. *Hakko Kogaku*

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Zasshi (*J. of Fermentation Technology*) 47(8):518-25. Aug. [6 ref. Jap; eng]
Address: Shoin Junior College, Fukiai-ku, Kobe, Japan.

4659. Spilsbury, Calvin C. 1969. The U.S. soybean market in the Republic of China (Taiwan). *USDA Foreign Agricultural Service*. FAS M-209. 20 p. Aug. Summarized in Soybean Digest, Nov. 1969, p. 52.
• ***Summary:*** Contents: Foreword, by Howard A. Akers. Introduction. The market. The oilseed crushing industry: Organization and mill location, number and type of mills, crushing capacity. Soybean oil and foods. Soybean meal demand for swine, soybean meal demand for poultry. Domestic oilseed supplies: Soybeans, peanuts, rapeseed, sesame, minor oilseeds. Marketing. Discharging and handling facilities, freight costs, government controls, purchasing, credit, quality problems, crushing margins wide. Appendix. Directory of major soybean and oilseed crushing mills, by region.

The Foreword notes: "This small island made near-phenomenal strides in both agriculture and industry in the late 1950s and early 1960s, and by the mid-1960s was recognized as a growing dollar market for U.S. soybeans and soybean products." In 1965 Taiwan moved from aid to trade status. In 1966 soybeans were removed from controls, and with the booming economy of 1967-68, imports of soybean from the USA–all paid for in dollars,–leaped to record levels.

Today, Taiwan has one of the world's highest economic growth rates. Since the end of World War II, and especially since 1955, the Taiwan oilseed crushing industry has undergone a complete technological transformation. The country now boasts 36 solvent extraction plants, many of them with modern continuous systems.

In Taiwan today, per capita consumption of soybeans for food is estimated at around 5½ pounds/year, compared with about 4 pounds in 1958. Soybean oil is now Taiwan's major source of edible fats and oils; per capita consumption is about 6 pounds/year compared with 4 pounds/year for peanut oil. Total per capita vegetable oil consumption is about 12 pounds/year. Per capita consumption of animal fats is 6-8 pounds/year.

Domestic production of soybeans rose from 4,000 metric tons (tonnes) in 1935-39 to 72,997 tonnes in 1968. Historically, imports of soybeans and soybean products have been large. In 1938 over 45,000 tonnes of soybeans and about 164,000 tonnes of soybean cake were imported, mainly from Manchuria.

In 1950, Taiwan's vegetable oil crushing industry was first organized into a trade association by a group of 20 crushers using screw presses. By 1967 some 86 crushers were members; this included 35 solvent-extraction operators. Known today as the Taiwan Regional Association of Vegetable Oil Expelling and Refining Industries, the group is located at 82 Nan Yuan Street in Taipei. Today in Taiwan there are 99 oilseed crushing mills with a total crushing capacity of 1.3 million tonnes–up from only 400,000 tonnes in 1954-55.

As in many countries of East Asia, the Taiwanese consumer has a taste preference for crude peanut oil, sesame oil, and rapeseed oil, in that order. For this reason, soybean oil is often marketed as a blend with peanut or rapeseed oil.

The soybeans required for the manufacture of bean curd [tofu], soybean paste [jiang], [soy] sauce, milk, and other foods are largely produced domestically. In 1969 an estimated 40,000 tons of soybeans will be required for bean curd and 3,000 tons for soybean sauce. "In the rural areas of Taiwan, soybean milk cooperatives have been organized under government auspices. Members use their own soybeans and make their soybean milk at common soybean milk shops."

A map (p. 9) shows the island of Taiwan, each of its prefectures, and where each of four oilseeds (soybeans, peanuts, rapeseed, sesame) are produced. Tables show: (1) Production of four oilseeds in Taiwan from 1965-1968. Peanut production decreased from 88,000 to 74,000 tonnes. Soybean production increased from 66,000 to 73,000 tonnes but was still No. 2 after peanuts (p. 8). (2) Taiwanese soybean production, imports, and utilization from 1955 to 1968 (p. 11). Address: Fats and Oils Div.

4660. Takeuchi, Tokuo; Yoshida, M.; Yoshii, H. 1969. Miso, shôyu no peptides ni kansuru kenkyû. VII. Peptides no shôyu no hinshitsu ni ataeru kôka [Studies on peptides in miso and soy-sauce. VII. Effects of peptides on the quality of soy-sauce]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(8):502-09. Aug. [26 ref. Jap; eng]
Address: Food Research Inst., Aichi prefecture, Nishi-ku, Nagoya, Japan.

4661. Claiborne, Craig. 1969. Steamed fish–Chinese style–gains something in translation. *New York Times*. Oct. 23. p. 58.
• ***Summary:*** A recipe for "Spareribs with black beans" calls for "1 tablespoon fermented black beans (available in Chinese grocery stores),... 3 tablespoons soy sauce." A photo shows teacher and author Florence Lin.

4662. Amano, Takeo; Takeuchi, T.; Yoshii, H. 1969. Shôyu bôbai-zai ni kansuru kenkyû. X. *Aspergillus sojae* no sansei suru paraokishi ansoku kôsan buchiru bunkai kôso no shosei-shitsu ni tsuite [Studies on antiseptics [preservatives] for use in soy sauce. X. Properties of n-Butyl p-Hydroxybenzoate esterase produced by *Aspergillus oryzae*]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(10):610-16. Oct. [14 ref. Jap; eng]
Address: Food Research Inst., Aichi prefecture, Nishi-ku, Nagoya, Japan.

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4663. **Product Name:** Erewhon Soy Sauce. Later renamed Tamari Soy Sauce.
Manufacturer's Name: Erewhon Trading Co., Inc. (Importer). Made in Japan by Marushima Shoyu.
Manufacturer's Address: 342 Newbury St., Boston, MA 02115 Phone (617) 262-3420
Date of Introduction: 1969. October.
Ingredients: Water, wheat, soybeans, salt
Wt/Vol., Packaging, Price: 16 oz or 32 oz bottle, or 18 liter keg.
New Product–Documentation: Erewhon Trading Co. Inc., Wholesale Retail Catalogue 1970 Jan. 1 "Soy Sauce (imported). Aged naturally in wooden kegs at least 18 months." In 16 oz or 32 oz bottle, or 18 litre keg.

Ad in East West Journal 1973 Jan 15-30 p 24 (rear cover). "Erewhon visits a soy sauce factory [Marushima Shoyu]." Erewhon's "Tamari soy sauce" [actually shoyu] is made by Marushima Shoyu, located on Shodoshima Island It is aged in cypress wood tanks for about 3 years.

4664. Lawler, Frank K. 1969. UNIDO catalyzes food processing: 44 developing nations being assisted this year to improve and establish food industries by action-oriented UN arm Activities challenge food and equipment manufacturers *Food Engineering* 41(10):69-72. Oct
• ***Summary:*** Lawler visited UNIDO (United Nations Industrial Development Organization) headquarters in Vienna, Austria, to study activities and problems. Contents: Introduction. Opportunity knocks. Projects aid 44 countries. Needs know-how transfer (one need is for know-how for making textured protein isolates and simulated meats). Program is realistic. Recruits experts. Aims broad and specific (interested in isolated soy protein, fish protein concentrate {FPC}, and producing protein from petroleum). Supporting activities. How UNIDO was born (began activities in Jan. 1967; Light industry division is headed by M. Mautner). Wide scope of activity. Develops information (Special information is developed through discussion by technical experts at sessions arranged by UNIDO. One such session, on soy proteins, will be held in Nov. 1969, with attendance by invitation). Address: Editor, Food Engineering.

4665. Proceedings of All India Workshop Conference on Processing, Utilisation & Marketing of Soybean (Second). 1969. Experiment Station, Pantnagar, Uttar Pradesh, India (Govind Ballabh Pant Krishi Evam Prodyogik Vishwavidyalay). 181 p. Unnumbered. Held 7-9 Oct. 1969 at Uttar Pradesh Agricultural University, Pantnagar (District Nainital). 26 cm. [73 ref]
• ***Summary:*** Contents: Objectives and sponsors. Programme. Working committees. Welcome address. Inaugural address. Papers: Technology of processing soybeans, by M.W. Formo. Technology of soybean utilization, by S.S. Kalbag. Marketing of soy products, by S. Ghose. The role of the Government of India and international agencies in development of soybean in India, by P.R. Krishnaswamy & S. Ghose. Agro-economics aspects of soybean production in India, by I.J. Singh. Prospects for soybean foods in India, by N. Subramanian. Utilisation of soy flour for infant foods and foods for weaned children, by M.R. Chandrasekhara. Defatted and full-fat soy flours by conventional process, by F.E. Horan. Soy protein concentrates and isolates, by E.W. Meyer. Alternative processes for full-fat soy flours for use in developing countries, by G.C. Mustakas. Potential and use of soy protein for low-cost infant foods in India, by R.A. Hill. Potentials in marketing soy foods, by James J. O'Connor. Marketing soy protein products and problems of acceptance, by D.W. Johnson. Role of imitation milk in the feeding of tomorrow's population, by F.V. Kosikowski.

Conference sponsors: The Protein Food Assoc. of India, University of Illinois/USAID, Jawahar Lal [sic, JNKVV] Agricultural University, Indian Council of Agricultural Research, Uttar Pradesh Agricultural University. Address: Pantnagar, India.

4666. Sekine, Hiroshi, Nasuno, Seeichi, Iguchi, Nobuyoshi. 1969. Isolation of highly proteolytic mutants from *Aspergillus sojae*. *Agricultural and Biological Chemistry* 33(10):1477-82. Oct. [17 ref]
• ***Summary:*** "Mutational experiments were performed to improve the protease productivity of the mutant strain X-816 previously induced by X-ray irradiation from *Aspergillus sojae* K.S. as a high protease producer."

A significant correlation was found between the protease production in wheat bran koji and the clear zone around a fungal colony formed on a special medium containing casein. Address: Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

4667. Claiborne, Craig. 1969. New restaurant that offers Japanese fare. *New York Times*, Nov. 7. p. 54
• ***Summary:*** At Daruma (310 Third Ave., between 23rd and 24th streets), the broiled eel and the teriyaki are excellent. "Even the sukiyaki, which is not cooked at the table as it should be, is above average in its seasonings, and there is an interesting dish called buta tofu [Pork tofu] made with pork and bean curd." There is also a sushi bar.

4668. **Product Name:** Tamari Soy Sauce.
Manufacturer's Name: Eden Organic Foods, Inc. (Marketer-Distributor). Purchased from Erewhon (Boston–Importer). Made in Japan.
Manufacturer's Address: 514 East William St., Ann Arbor, MI 48104
Date of Introduction: 1969. November.
Wt/Vol., Packaging, Price: Pint and quart bottles.
How Stored: Shelf stable.
New Product–Documentation: Eden Foods Inc. 1971. July

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26. Wholesale pricelist. "Tamari Soy Sauce" is now sold in pints, quarts, or liters.

Eden Foods, Inc. 1974. Feb. 1. Wholesale prices, FOB. "Tamari Soy Sauce (Erewhon)." This is the first time the word "Erewhon" appears after Tamari. It looks like Erewhon was requiring Eden to add it–which may have caused bad feelings.

Eden Foods catalog. Winter 1975-76. Page 12 states "Tamari Soy Sauce (Erewhon). Tamari Soy Sauce (Japan-Marushima). The latter was available only in 4.75 gallon sizes. Eden has found a way to go around Erewhon, by importing from Marushima, probably via Muso Shokuhin.

Talk with Bill Bolduc, founder, original incorporator, and past president of Eden Foods. 1991. Dec. 8.

Eden Organic Foods first began selling soyfoods commercially in November 1969, starting with their first order from Erewhon in Boston. They would buy "tamari" (actually shoyu) and miso (kome = rice, mugi = barley, and Hatcho varieties) in bulk from Erewhon (which imported them from Japan). At their store, Linda Succop (Bill's wife's sister) would repackage the products, putting the shoyu into bottles and the miso into plastic bags. They were labeled using plain white self-adhesive gummed labels with a rubber stamp. One stamp contained the name and ingredients for each product, and another, that was stamped below it, gave the company name and address. They wrote in the weight or volume by hand near the bottom of the label.

4669. Kuroshima, Eizaburo; Oyama, Y.; Matsuo, T.; Shugimori, T. 1969. Shôyu jôzô ni kanyo suru eisei-butsu no gurutamin-san shôchô ni oyobosu eikyô ni tsuite. III. Shôyu-chû no gurutamin-san no keitai to sore ni 2, 3 no inshi ni tsuite [Biosynthesis and degradation of glutamic acid in microorganisms relating to the soy sauce brewing. III. Some factors affecting the glutamic acid and its related substances formation in soy sauce brewing]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(11) 693-700. Nov. [10 ref. Jap; eng]
Address: Research Inst. of Marukin Soy Sauce Co., Kagawa prefecture, Japan.

4670. *SoyaScan Notes.*1969. Chronology of Eden Organic Foods, Inc. Renamed Eden Foods, Inc. in April 1971. Part I 1969 to 1972. 31 Jan. 1992. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1969 Nov. 4–Eden Organic Foods is named and incorporated as a non-profit corporation by Bill Bolduc. Other names on the articles of incorporation are Judith Bolduc, Ronald Teeguarden, Gloria Dunn, and Linda Succop. It is a natural foods co-op retail store at 514 East William St. in Ann Arbor, Michigan. Bill is president of the company and his wife, Judy, is part-time secretary. The date of incorporation, Nov. 4, was selected by an astrologer, Michael Erlewine, because it was astrologically propitious. Michael also designed the Eden logo of four sprouts in a circle. Also in Nov. 1969 Eden begins selling soyfoods, tamari and miso purchased from Erewhon.

Prior to this, starting in about the summer of 1969, Ronnie Teeguarden and Gloria Dunn had started a loosely-knit food buying co-op–which had no name, no assets, no formal structure, and no bank account. Original or very early members included Tim and Pattie Redmond, Mark and Nancy Retzloff, Linda Succop, Iona Teeguarden, and Bob Thorson. On about 3-5 different occasions they collectively ordered macrobiotic staples (including tamari and miso) from Erewhon in Boston, Massachusetts, using the Erewhon catalog. When the foods arrived, the members got together and divided them up at the Teeguarden-Leabu General Store, at 209 South State St. in Ann Arbor. This general store, located in the basement below Marshall's Bookstore, carried mostly antique clothing and records, and the art of local artists. By September 1969, Bill and Judy Bolduc joined the food co-op. They also joined the Zen Macrobiotic Supper Club; all of its members were also members of the food co-op.

In the fall of 1969 the Teeguarden-Leabu second-hand store looked like it was about to close, which would leave the food co-op without a home. The group (especially Ronnie Teeguarden) convinced Bill Bolduc to take charge of the food co-op and find it a permanent home, which he did–in an upstairs apartment at 514 East William St. Members of the informal food-buying co-op who worked at Eden Organic Foods included Bill Bolduc, Gloria Dunn, and Tim Redmond. An environmental group named the Environmental Defense Education Network (EDEN) also operated out of the Teeguarden-Leabu General Store; it was from this group that Eden got its name. That fall, after the Eden Organic Foods co-op was up and running, Tim Redmond went to Boston to work and study at Sanae, a macrobiotic restaurant on 272A Newbury St.

1970 summer–Bill Bolduc establishes Eden's first contact with an organic food grower (Bill Vreeland of Ypsilanti, Michigan, who grows organic wheat and soybeans). He soon makes Eden's first direct purchase of organically grown wheat, which the company mills and sells.

1970 July 6–Eden Organic Foods, Inc is reorganized upon a stock basis. Bill Bolduc (who resides at 6210 Bethel Church Rd., Saline, Michigan) owns all the shares (1,000). Other people listed on this document are Judith Bolduc, Ronald Teeguarden, and Gloria Dunn.

1970 Sept –The fledgling company has an offer from Cynthia Shevel to move into a newly decorated mini-mall at 211 South State St. on the main street of campus. They need money to finance the move. Tim Redmond's father says he will help finance the expansion only if the business is reorganized as a for-profit corporation. So Eden is changed into a for-profit corporation, and Redmond invests the $10,000 he borrowed from his father in Eden in exchange for

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50% ownership. In Nov. 1970 Eden moves into the mini-mall (they register the new address on Nov. 17) and soon begins to mill flour and bake granola at the new store. Bolduc and Redmond are now equal partners.

1971 April 8–Bolduc registers a change in the company name to Eden Foods, Inc. from Eden Organic Foods, Inc. After the store was up and running, Redmond returns to Boston and Sanae restaurant, where he completed his studies.

1971 Jan.–Michael Potter is hired by Bill Bolduc. Mike had initially had a good-paying job at an art gallery in Royal Oak, Michigan. Then he began working for, and eventually became a partner in Joyous Revival, a macrobiotic and natural foods retail store in Birmingham, Michigan. At that time he and his wife, Carol Roller Potter (Ron Roller's sister), moved from Royal Oak to Walnut Lake, Michigan–to be nearer to Joyous Revival. In the fall of 1970 Michael Potter, while still working at Joyous Revival and at Bill Bolduc's request, had done volunteer work to try to help a failing new Eden retail store in downtown Detroit on the campus of Wayne State University. This store was owned jointly by Eden and two people named John and Darleen–two of the first people in the area interested in macrobiotics. By Jan. 1971 it had become evident that the store would not be able to survive financially, so Michael's first job after being hired was to make one last try to save it, then to help in shutting it down.

1971 May or June–Tim Redmond returns to Ann Arbor permanently, having finished his macrobiotic training in Boston. He planned to open a restaurant like Sanae in Ann Arbor but instead got increasingly involved with Eden Foods.

1971 June–Eden starts to wholesale natural foods out of the back of their retail store at 211 South State Street. They buy increasingly from original sources instead of other wholesalers. Buying clubs and co-ops come to the retail store to pick up their bulk foods.

1971 July–Eden's wholesale pricelist, dated July 26, shows that Eden is selling bulk (50 and 100 lb) soybeans, corn, soft wheat, and rye, which are being grown organically in Michigan (by Tom Vreeland). Eden stone-ground a portion of them into flour–on order. Eden is also selling numerous bulk and packaged grains, cereals, flours, and beans from Arrowhead Mills in Deaf Smith County, Texas; some are organically grown.

1971 early summer–Bill Bolduc asks Mike Potter to manage the Eden retail store at 211 South State St. Mike and his pregnant wife, Carol, move to Ann Arbor from Walnut Lake. By this time the company name was Eden Foods, Inc.

1971 Aug.–Eden Foods starts to distribute its wholesale bulk products, especially in the Detroit area. The company starts to bring in small trailer loads of staples from Arrowhead Mills in Texas. Bolduc and Redmond, realizing that Eden is the only natural foods store in the area, borrow some money and rent a 4,000 square foot Quonset hut warehouse on North Main Street north of Ann Arbor near the Huron River. They expand their wholesale and distribution operations.

1971 Oct.–Mike Potter is given 13.5% of the common stock of Eden Foods, Inc. largely to compensate him for his many hours of unpaid volunteer work. According to Michael Potter (Dec. 1986), at this point the common stock ownership of Eden Foods is: Between Bill and Judy Bolduc 43.5%, Tim Redmond 43.5%, and Michael Potter 13.5%. Potter later says (Feb. 1993) that Bill Bolduc and Tim Redmond now own the same number of shares, but Judy Bolduc owned a small number of shares so the Bolducs owned the largest block.

1972 fall–Ron Roller starts to work part time for Eden Foods. Continued. Address: 514 East William St. in Ann Arbor, Michigan. Phone: 313-769-8444.

4671. *SoyaScan Notes.*1969. Chronology of Eden Foods, Inc. Part II. 1973 to Nov. 1981. 31 Jan. 1992. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Continued: 1973 March–Eden moves into a larger warehouse at 310 West Ann Street in Ann Arbor, sharing it with Midwest Natural Foods, which initially was not a competitor. At about this time, Ron Roller starts working full-time for Eden. While at this warehouse, in late 1973 or early 1974, Eden receives its first shipments of imported Japanese natural foods from Mr. Kazama of Mitoku in Tokyo. Tim Redmond had ordered these foods from Mr. Kazama at a meeting of the Natural Foods Distributors Association in Florida. Initially Eden was forced to import Erewhon-branded products. Redmond recalls that at this time he was working at and managing the warehouse and Potter was working at and managing the retail store. Redmond was managing the corporation because he controlled it.

1973 summer.–The Eden retail store moves to a much larger location at 330 Maynard St. in Ann Arbor, on the University of Michigan campus. It now includes three operations under one roof in 6,000 square feet of leased space: A large natural foods retail store, a natural fast-food deli, and a natural foods bakery named Sun Bakery that had relocated itself from Kalamazoo, Michigan. This operation proved to be very profitable; it paid off all Eden's debts and paid for the new warehouse, offices, trucks, and equipment.

1973 July–Bill and Judy Bolduc leave Eden Foods, selling their stock to Mike Potter for $2,500 cash. Tim Redmond becomes president. Redmond ends up owning 51% and Potter 49% of the shares in Eden Foods. Potter recalls that he bought the stock directly from the Boldues, then gave a small amount to Redmond so that Redmond would have majority ownership. Redmond recalls that the Bolducs sold their stock back to the corporation, then Redmond sold enough shares to Potter so that he (Redmond) would keep control with 51% of the shares.

1973 late or 1974 early–Potter and Redmond become equal owners of Eden Foods after Potter loans the company

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$44,000 (entrusted to him by his father), then converts the loan into an investment in the company in exchange for equal ownership.

1973 Sept.–Mike Potter becomes president of Eden Foods at the unanimous recommendation of an employee steering committee. At about this time Midwest Natural Foods starts to compete with Eden Foods, carrying many of the same products that Eden carries plus dairy products and frozen foods. Eden has never sold dairy products or frozen foods and, in the face of new competition from Midwest, Michael Potter reaffirms this position. This decision makes it impossible for Eden to become a full-line distributor like Midwest, and lays the groundwork for Eden's eventual decision in 1986 or 1987 to discontinue distribution to retail stores and focus on manufacturing of natural foods.

1974 spring–Eden moves from 310 West Ann St. into a larger warehouse at 4601 Platt Road. This move extricates Eden from what had become a "pathetic relationship" with Midwest Natural Foods. Redmond is sure that he and Potter became equal partners before this move.

1974 March 7-8–Michael Potter represents Eden at the meeting of Natural Foods Distributors at the Janus conference room in Seattle, Washington.

1974 Oct.–Potter makes the first of his eleven trips to the People's Republic of China. On the way back he visits Yuko Okada at the Muso Company in Osaka, Japan. Potter decides to import exclusively from Muso.

1977 Aug.–Eden Foods opens Turtle Island restaurant at 315 South State St. in Ann Arbor.

1979 spring–Cliff Adler, a painter renovating apartments in Ann Arbor, is hired by Michael Potter to work for Eden in Chicago, Illinois, to try to expand their sales to natural food retail stores. During that summer Cliff lends Eden Foods $100,000, for which he is paid bank interest rates. Tim Redmond, however, believes Cliff was hired as a salesman in 1976, and that on 15 March 1979 Cliff became a shareholder in Eden Foods, buying 10% of the stock.

1979 Nov. 26–The Eden warehouse at 4601 Platt Road is destroyed by a large fire. According to the *Ann Arbor News* (Nov. 27-29) total damages are estimated at $650,000. Eden Foods, organized in 1970, employs some 100 persons in distribution and production, supplies about 500 natural food stores and restaurants, has annual sales of about $5 million, and is said by its owners to be "the largest natural foods distributorship in the Midwest." This fire burned many of Eden's key records, including records that would have helped in determining dates and facts for this chronology. Eden has never kept a written chronology of key events in the company's history.

1979 Dec.–Within 10 days after the fire, the board of directors (Potter, Adler, and Redmond) meets, authorizes a large number of additional shares of common stock, and decides to give away (free of charge) shares of Eden Foods' common stock to six key employees/managers to try to motivate them to stay with the company and help try to rebuild it. They also decide to lay off 35 other people. Shortly thereafter Cliff Adler decides to convert his $100,000 loan to stock (equity).

1980 Jan.–Tim Redmond decides to leave Eden Foods; he leaves in May, selling most of his stock (he kept 1,000 shares) in exchange for ownership of the Maynard Street Connection, Inc., which has a retail store and restaurant at 330 Maynard St., which are now separate companies.

1980 Feb.–Now Michael Potter and Cliff Adler each own 34% of Eden Foods shares. Frank Dietrich (of Natural Foods, Inc., Toledo, Ohio) owns 10% (which he bought for $100,000). Ron Roller owns 5%, Michael Gordon 4%, Mark Cook 4%, Kathy Knor 3%, Bill Swaney 3%, and Bob Duha 3%. Michael Potter notes that four things saved Eden Foods (which now had a negative net worth of more than $800,000) after the fire: (1) Cliff Adler's conversion of his $100,000, (2) The incredible cooperation, generosity, and kindness that Eden received from its suppliers in the natural foods industry, and their trust that Eden would do its best to pay back they money at a time when interest rates were over 20%; (3) Frank Dietrick's investment of $100,000 in the company; and (4) The great effort made by natural foods retail stores and consumers to go out of their way help Eden survive by purchasing more Eden products. Note that it was not until Feb. 1982 that Eden ended up receiving from its insurer (Hartford Insurance Company) $400,000 net, or $0.50 for each dollar Eden felt it was owed.

1980 Nov.–Eden Foods headquarters moves into a 20,000 square foot building at 701 Tecumseh Road in the tiny town of Clinton (population 2,000) about 60 miles southwest of Detroit.

1981 Nov.–Erewhon Trading Co. files for Chapter 11 bankruptcy protection. Trying to keep up with the super-distributors in their region (especially Balanced Foods) Erewhon had moved into an 80,000 square foot warehouse and added too many items to their product line too fast–which destroyed the company. Stow Mills picked up the bulk of their business, with Westbrae scooping up most of the business for their Japanese imports. Eden had not yet recovered enough financially to take advantage of this opportunity. Continued.

4672. *SoyaScan Notes*.1969. Chronology of Eden Foods, Inc. Part III. 1983 to present. 31 Jan. 1992. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** 1983 July–Eden Foods surprises the U.S. natural foods industry by introducing Edensoy, a long-life soymilk in plain, carob, or cranberry flavors, imported from Marusan-Ai Co. in Japan, and packaged in a stand-up foil retort pouch.

1984 Jan.–The Muso Company of Osaka, Japan, appoints Eden Foods its General Agent for North America.

1984 March 2–A series of calamities hit Eden Foods

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in quick succession. The FDA (U.S. Food and Drug Administration) informs Eden Foods, in a strongly worded letter, that it considers eleven claims in a promotional pamphlet for Edensoy to be erroneous. The FDA advised that the "Good for Babies" section of the pamphlet be deleted.

1985 June 14–The FDA informs Michael Potter that a six-month-old child in Canada had become seriously ill after being fed the company's soymilk as an infant formula. The mother said her decision to forgo regular infant formula was inspired by Eden's own literature–the promotional pamphlet cited above which said that Edensoy was "Good for Babies." Eden took the position: "There's a problem and we're responsible for it." To date some 18 million packs of Edensoy have been sold.

1985 June 23–Eden Foods voluntarily mails 10,686 requests for a recall of the pamphlet to its distributors and to individual retail stores.

1985 July–Eden Foods forms a joint venture partnership with four Japanese companies, and incorporates in the state of Michigan as American Soy Products, Inc.

1985–Eden opens a west coast sales office and warehouse in San Francisco, California.

1986 May–The Lima Company of Belgium appoints Eden Foods its General Agent for North America.

1986 Nov.–American Soy Products, Inc. launches a new generation of Edensoy soymilk products, in original, vanilla, and carob flavors. Made at a large, new factory in Saline, Michigan, they are packaged in Tetra Brik Aseptic cartons. This is the first aseptic soymilk plant in the USA.

1987 Jan. 1–Eden Foods stops distributing products directly to retail stores (which comprised only 10% of Eden's total sales), drops 150 products, and starts serving as a master distributor, selling only through other distributors. This decision had a very positive effect on Eden's growth; all the energy that was formerly required to attend to 10% of the business was now free to be focused on developing new products and the Eden brand.

1988 April 13–Cliff Adler and Michael Potter are in a serious car accident. Cliff is killed and Michael is seriously injured. Upon Cliff Adler's death, Michael immediately and automatically acquires Cliff's 34% share in the company–because Eden Foods Inc. and Michael and Cliff, jointly and severally, had a buy-sell contract that came into effect in the event that either Cliff or Michael should die. The value of Cliff's stock was $500,000. Michael pays this amount from his personal funds for the stock. Potter now owns a large majority of Eden Foods' stock.

1988 May–While Eden Foods is still reeling from the effects of the car accident, the FDA files charges against Eden for publishing inaccurate information in a pamphlet which stated that Edensoy was "Good for Babies." Eden's previous major effort to recall all of these pamphlets from retail stores apparently had little or no effect on the FDA charges.

1988–Eden Foods joins OCIA, the Organic Crop Improvement Association, for independent certification of organically-grown crops.

1989 Jan. 20–Nearly 6 years after Eden Foods published its ill-fated Edensoy pamphlet, the company is fined $110,000 by a federal judge in Detroit, and its president, Michael Potter, is fined $25,000 and sentenced to 30 days imprisonment. On Feb. 24 he begins to serve out his sentence in Bay City, Michigan.

1989 Oct. 12–Michael Potter is convicted of manslaughter and sentenced at the circuit court in Ann Arbor to 8-15 years in jail for his role in the April 1988 automobile accident that caused Cliff Adler's death. He begins to serve out his sentence in Oct. 1989 in Coldwater, Michigan. Ron Roller takes over as president of Eden Foods–the top position.

1989–Eden and OCIA establish standards for food processing as well as growing crops.

1991 mid-June–Ron Roller, president of Eden Foods, is asked to resign from his position. He chooses to leave and go to American Soy products to work full time. There he becomes CEO.

1992–Eden Foods now has 180 distributors, virtually all of whom distribute Edensoy. Owners of stock in Eden Foods include Mike Potter (who owns more than 50% of the shares), Tim Redmond, Mark Cook, Bill Swaney, and at least one other person.

1992 Aug.–Michael Potter returns to work at Eden Foods. He was re-sentenced and his sentence is changed to 60 months probation. 1993 Dec. 31–Potter purchases Tim Redmond's remaining 1,000 shares of Eden Foods stock, which Tim has kept since 1980.

4673. *Soybean Digest.* 1969. Soy sauce leader of Japan is gone. Nov. p. 50-51.

• ***Summary:*** Saihei Toriumi of Chiba, Japan, was president of one of Japan's leading soy sauce manufacturing firms. He was also one of the organizers of the All Japan Soy Sauce Brewers Association and its first managing director. He had been permanent advisor to the Association since 1956. Mr. Toriumi was a strong supporter of the Japanese American Soybean Institute, and was a director of JASI representing his Association from JASI's organization until his death. A photo shows Toriumi.

4674. Watanabe, Tokuji. 1969. Industrial production of soybean foods in Japan. Paper presented at United Nations Industrial Development Organization Expert Group Meeting on Soya Bean Processing and Use. 38 p. Document ID/WG 45/3. Held 17-21 Nov. 1969 at Peoria, Illinois. [16 ref]

• ***Summary:*** Contents: Tofu and its industrial production: Process of tofu making, tofu production as an industry, equipment for tofu production, varieties of tofu, new materials of tofu, new types of tofu, aburage and other deep

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fried tofu.

Note: This is the earliest English-language document seen (May 2012) that contains the term "deep fried tofu" (regardless of hyphenation).

Kori-tofu and its industrial production: Process of kori-tofu making, kori-tofu production as an industry, equipment for kori-tofu production, distribution of kori-tofu, utilization of by-products.

Yuba and its industrial production.

Kinako [roasted whole soy flour] and its industrial production. The Japanese word can be written either in hiragana or using two Chinese characters which mean "yellow flour." Kinako is made from whole soybeans. Sometimes the soybean hulls are removed before roasting. It is widely used as an ingredient in Japanese confections [such as kinako mochi or Abekawa mochi (toasted mochi in kinako); it was traditionally sold along the banks of the Abekawa River in Shizuoka, Japan]. About 12,000 metric tons of soybeans are used per year in making kinako.

New soybean food materials and their industrial production. New soybean food materials, usage of new soybean food materials, future of new soybean foods, other food uses of soybeans.

Natto and its industrial production. Process of natto making, equipment for natto production, natto production as an industry.

Miso and its industrial production. Varieties of miso, Process of miso making, miso production as an industry, industrialization of miso making, distribution of miso, future prospect of demand for miso, mycotoxins and fermented soybean foods.

Shoyu and its industrial production: Process of shoyu making, shoyu production as an industry, nitrogen utilization ratio in shoyu making, special shoyu.

Figures show: (1) Flow sheets of production of traditional soybean foods in Japan. Tofu, kori-tofu, yuba, kinako, natto, miso (with koji), shoyu. (2) NK-type soybean cooker (by courtesy of Kikkoman Shoyu Co. Ltd.). (capacity: 1 metric ton of defatted soybean meal). (3) (3) Continuous cooker of soybean meal (by courtesy of Yamasa Shoyu Co. Ltd.). (capacity: 1 metric ton of defatted soybean meal per hour).

Photos show: (1) Tofu soaked in water for sale. (2) Large-scale tofu factory (by courtesy of Tokyo Tofu Co., Ltd.). (3) Continuous cooker of ground soybeans (by courtesy of Masuko Sangyo Co., Ltd.). (4) Decanter, a kind of continuous centrifuge (by courtesy of Kokusan Seiko Co., Ltd). (capacity: 3,000 kg of ground soybeans per hour). (5) Factory of packed tofu from spray-dried soybean milk (by courtesy of Nippon Tanpaku Kogyo Co., Ltd.). (6) Continuous deep-fryer of aburage (by courtesy of Iwase Tekkosho Co., Ltd). (capacity: 1,000 to 1,500 pieces per hour). (7). Daiya Kori-tofu (Left one in the dish is swollen by hot water). (8) Bird's-eye view of large scale factory of kori-tofu (by courtesy of Misuzu Tofu Co., Ltd). (capacity: 10 to 15 metric tons of soybeans per day). (9) Soaking of large cake of tofu for precooling during making of kori-tofu (by courtesy of Misuzu Tofu Co., Ltd). (10) Continuous freezing equipment used in making of kori-tofu (by courtesy of Misuzu Tofu Co., Ltd). (11) Continuous thawing apparatus of frozen tofu (by courtesy of Misuzu Tofu Co., Ltd). (capacity: 10,000 to 15,000 pieces per hour). (12) Yuba plant (by courtesy of Ohara Co., Ltd). (13) Natto mixed up by chopsticks. (14) Inside of fermentation room for natto making (by courtesy of Suzuyo Kogyo Co., Ltd). (15) Two brands and varieties of miso, both in plastic bag and on dish. (16) Rotary cooker of soybean (by courtesy of Hinode Miso Co., Ltd). (capacity: 1 metric ton of soybeans). (17) Continuous rice cooker (by courtesy of Hinode Miso Co., Ltd). (capacity: 1.5 metric tons of rice per hour). (18) Rotary koji fermenter (by courtesy of Miyasaka Miso Co., Ltd). (capacity: 1.8 metric tons of rice in each fermenter) (19) Pasteurizer of miso (by courtesy of Nagata Machinery Co., Ltd). (capacity: 1 metric ton of miso per hour). (20) Fermentation tank of moromi [mash] (by courtesy of Kikkoman Shoyu Co., Ltd). (capacity: 1.5 metric tons of rice per hour). (21) Shoyu in large glass bottle and smaller plastic container. (22) (22) Large-scale koji fermenter (by courtesy of Yamasa Shoyu Co., Ltd).

Concerning natto: The surface of each natto "soybean is covered with a viscous sticky substance, which has the property of forming long stringy threads when mixed up (Photo 13). The longer the strings, the better the quality of natto." The texture of the cooked soybeans is softened by the enzymes of *Bacillus natto*. About 50,000 metric tons of soybeans are used each year to make natto. It is most popular in northeastern Japan (Tohoku region). Natto is fairly perishable, and excess ammonia will be produced by overfermentation. There are about 1,300 plants that make natto in Japan; the average plant consumes about 100 kg/day of soybeans. Recently, however, large, mechanized factories that consume 2-3 metric tons/day of soybeans have been constructed. From 10 kg of whole dry soybeans about 18 kg of natto can be made. One package of natto containing 100 gm costs 15-20 yen (about 4-6 cents U.S.).

Note: This is the earliest English-language document seen (Jan. 2012) that uses the word "sticky" to describe natto. Address: Food and Nutrition Div., Food Research Inst., Ministry of Agriculture & Forestry, Tokyo, Japan.

4675. Loring, Kay. 1969. Hancock cafe not ready, but others have fine view. *Chicago Tribune*, Dec. 7, p. F5.
• ***Summary:*** A section titled "Indonesian rice table" mentions the following: *Tahu goreng* (bean cake [tofu] with bean sprouts, green onions, celery, fried onions and soya sauce), and *ajam semur ketjap* (chicken in soya sauce).

4676. Hesseltine, C.W.; Wang, H.L. 1969. Fermented

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soybean foods. In: Proceedings of the Third International Conference on Global Impacts of Applied Microbiology. See p. 403-20. Held 7-14 Dec. 1969 at Bombay, India. [11 ref]
• ***Summary:*** Contents: Introduction. The three fundamental drives of man (food, shelter, reproduction), benefits of soybean fermentation. Sufu. Hamanatto. Natto. Tempeh. Magou (now made in South Africa on a modern industrial scale from fermented corn and soybeans). Address: Northern Utilization Research and Development Div., USDA, Peoria, Illinois.

4677. Shurtleff, William. 1969. The Tassajara food trip. Tassajara, California: Published by the author. 63 p. Dec. 28 cm. [8 ref]
• ***Summary:*** Each of the 167 recipes is numbered, all show a strong natural foods influence, and many show a macrobiotic influence. Soy-related recipes include: 60. Fresh daikon nitsuke with miso. 74. Squash in miso-tahini sauce. 76. Nori with tamari. 77. Basic soybean preparation. 78. Soybeans with hijiki. 79. Soybeans with hijiki and tahini (with miso). 80. Soybeans sauteed in miso. 81. Soybeans with lentils and buckwheat flour. 82. Soybeans with carrots and lentil sprouts. 83. Soybeans with dried daikon. 84. Soybean stew. 85. Broiled soyburgers. 86. Roasted soybeans. 87. Tofu sauteed. 96. Miso soup with tofu, carrots, burdock and mushrooms. 97. Miso soup with wakame. 98. Wakame soup with tofu. 99. Soy sauce & lemon soup. 101. Thick lentil soup with miso. 102. Thick lentil soup with miso & vegetables sauteed. 103. Lentil soup with miso and parsley garnish. 105. Aduki/azuki bean soup with miso. 107. Thick split pea soup with miso & vegetables. 110. Navy bean soup with miso. 115. Mushroom soup with dried tofu.

119. Misozuke pickles. 120. Kombu pickled in miso. 122. Bancha with tamari. 123. Kuzu cream with tamari. 125. Ume-syo-kuzu (with umeboshi, tamari and kuzu). 131. Basic soybean spread. 133. Lentil miso spread. 135. Garbanzo and miso spread. 138. Muso (miso-tahini) spread. 139. Peanut butter & tamari spread. 142. Peanut butter, miso, apples, carrot and parsley spread. 161. Sesame tofu (no soy). 163. Nut and seed loaf with miso.

San Francisco's largest natural foods store was New Age Natural Foods, 1326 Ninth Ave. run by Fred Rohé [Rohe]. Also recommended are The Food Mill, 3033 MacArthur, Oakland [founded in 1933 by John Denis, Sr.]; and Chico-San, P.O. Box 1004, Chico, California. Selling Spiral Foods miso and tamari in bulk. The General Store, 5th and Junipero in Carmel.

Note 1. This is the 2nd earliest document seen (Nov. 2010) concerning the work of William Shurtleff with soyfoods. He wrote the book on a typewriter while practicing at Tassajara Zen Mountain Center, made about 30 photocopies, and sent them to friends as Christmas presents. He did not meet Akiko Aoyagi until 25 Dec. 1971 in Tokyo, Japan.

Note 2. This is the earliest document seen (Dec. 2004) in the SoyaScan database concerning or under the subject heading "Soyfoods Movement." Address: Zen Mountain Center, Carmel Valley, California.

4678. Tanaka, Teruo; Saito, Nobuo. 1969. Studies on sensory evaluation of soy sauce. X. Relation between odor patterns and chemical factors (1). *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(12):780-89. Dec. [19 ref. Eng]
• ***Summary:*** Trng to determine which odor components play an important role in or have an important effect on the odor of soy sauce is a momentous problem. The author discuss the linear relationship that exists between odor patterns and 19 chemical factors (on the one hand) and quality patterns (on the other). Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Noda, Chiba, Japan.

4679. Tanaka, Teruo; Saito, Nobuo. 1969. Studies on sensory evaluation of soy sauce. IX. Construction of odor pattern on the odor judgment. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 47(12):772-79. Dec. [27 ref. Eng]
• ***Summary:*** The major components of soy sauce odor are related to: (1) The ratio of brewed soy sauce to amino acid solution obtained by hydrolysing soy beans with hydrochloric acid and adjusting the resulting solution to pH 5.0 with sodium carbonate. (2) Microbial contamination. (3) Medicinal dependent strains of *Aspergillus oryzae;* (4) Degree of ripening; (5) Pasteurization. These 5 factors explain 75% of the total variance. The strongest is number (1). Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Noda, Chiba, Japan.

4680. Ebine, H.; Matsuura, M. 1969. [Application of *Rhizopus* for shoyu manufacturing. (Part II) Properties of *Rhizopus* enzymes]. *Chomi Kagaku* (*Seasoning Science*) No. 16. p. 15-. [Jap]*
Address: National Food Research Inst., Tokyo.

4681. **Product Name:** Seitan.
Manufacturer's Name: Erewhon Trading Co., Inc. (Importer-Distributor). Made in Japan by Marushima Shoyu Co.
Manufacturer's Address: 342 Newbury Street, Boston, MA 02115.
Date of Introduction: 1969.
Wt/Vol., Packaging, Price: 3.5 oz jar.
How Stored: Shelf stable.
New Product–Documentation: This is the earliest known commercial seitan product sold in the USA; it was imported from Japan. Erewhon Trading Co., Inc. 1970. Jan. 1. "Traditional foods: Importers, processors, distributors. Wholesale-retail catalog." The company imports and sells "Seitan. Wheat and soy sauce cooked together for a long time. When used in soups or sauteed in vegetables it has a

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taste much like beef, 3½ oz."

Barbara and Leonard Jacobs. 1985. *East West Journal*. Oct. p. 38-39. "Flour power! Cooking with seitan, the delicious natural food from grain." "When I (Barbara) first tasted seitan, about sixteen years ago, I was fascinated by its flavor and texture. I had stopped eating meat for intellectual rather than sensory reasons, so the idea of using a grain-based product which had the texture of animal food was an appealing one. There were a few problems, however. The only seitan available at that time was expensive, and salty. And the pieces of seitan, as they came out of their jar from Japan, were tiny and hard. Perfect for beer-snacks but not really useful for other purposes."

Talk with Lenny Jacobs. 1991. Nov. 14. Leonard first heard the term seitan in about 1969. Erewhon was importing a little package of dried, salty seitan from a macrobiotic exporter in Japan. Yuko Okada of Muso Shokuhin, or his assistant Julia Yamaguchi (daughter of Alean Yamaguchi) might know details on this product.

Talk with Aveline Kushi. 1992. April 9. The first seitan imported to America was made by Marushima Shoyu Co. in Japan. George Ohsawa asked them to make it and showed them how. It was imported to America at about the same time the first miso and shoyu were imported. She thinks it came in small jars, and was so salty that she used it as a seasoning in place of soy sauce in stews (such as soybean stews) or cooked it with vegetables, this cooking made it softer. She is not sure which Japanese company (Muso or Mitoku) exported this seitan to America, or which American company imported it, but it probably started to be imported in about 1969.

Letter (fax) from Yuko Okada of Muso Co. Ltd., Japan. 1992. July 2. "I remember the term 'seitan' since I was a kid; it was probably coined by George Ohsawa. *Sei* means 'is' and *tan* is the first character in the Japanese term *tanpaku*, which means 'protein.' So *seitan* means something like 'right protein substitute.' Marushima Shoyu Co. developed seitan commercially in Japan and Muso has carried their seitan since Feb. 1966 when we started. We shipped seitan to Erewhon on a regular basis from 1968. [Note: Kotzsch. 1984, Dec. *East West Journal* p. 14-21 states that Muso began to export foods in 1969.] We also exported it to Chico-San. In Europe, we exported seitan to Paris, France."

Talk with Tom DeSilva, owner of Erewhon Natural Foods in Los Angeles. 1992. July 10. The first seitan sold at the Erewhon retail store in Los Angeles, by late 1969, was imported from Japan. "I used to eat that stuff with rice crackers like mad. It was just like jerky. I loved it. I could eat a whole package. But it was so salty that you had to keep eating rice crackers to cut the salt." Originally it was sold in a plastic bag, then later in a jar immersed in a dark liquid. Tom liked the product in the bag better.

4682. **Product Name:** Harmony Foods Miso, and Tamari.
Manufacturer's Name: Harmony Foods (Importer-Distributor). Made in Japan. Imported from Muso Shokuhin.
Manufacturer's Address: Ladbroke Rd., London, England.
Date of Introduction: 1969.
Wt/Vol., Packaging, Price: Imported bulk, in wooden kegs. Miso repacked in plastic bags. Tamari in glass bottles.
How Stored: Shelf stable.
New Product–Documentation: Interview with Bill Tara. 1991. Aug. 18. Among the early Japanese foods imported by Harmony Foods were bulk miso and "tamari" (actually shoyu), imported from Muso in wooden kegs. They repackaged the miso in plastic bags and the shoyu in glass bottles under the Harmony Foods label in London. This was the first Japanese miso and shoyu sold in England.

Listing in The Vegetarian Health Food Handbook (UK) 1974. p. 173. "Tamari Soya Sauce, and Miso (Soya Bean Sauce) by Harmony Foods."

4683. Kim, Z.U.; Cho, M.J.; Kim, S.S.; Lee, C.Y. 1969. [Studies on the digestion of soybean protein by *Aspergillus sojae*] *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 12:19-24. [Kor]*
Address: College of Agriculture, Seoul National Univ., Suwon, South Korea.

4684. Kim, Z.U.; Cho, M.J.; Kim, S.S. 1969. [Studies on the preparation of improved soysauce kojis]. *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 11: [Kor]*
• ***Summary:*** In order to determine the proper ratio of wheat to soybean in soysauce koji so that it is suited to the Korean people's taste, sensory evaluation for the soysauces made from soysauce kojis with the various above-mentioned ratios and analysis of chemical components through the brewing period of six months was carried out. The results are as follows:

(1) The specific gravity of all the soysauce increased gradually as the time passed and had maximum values in two months, with nearly constant values thereafter. Concerning soybean / wheat ratio, generally the higher soybean/wheat ratio, the lower the observed specific gravity. However, when the ratio was above 10 to 6, the specific gravity was similar.

(2) The solid material in all of the soysauces increased in the earlier stage, and there were no significant differences among the treatments. However, the soysauces without wheat had a slightly lower content.

(3) The less amount of wheat as raw material, the higher the content of total nitrogen was. The content of total nitrogen in every ratio of raw material increased as the mash aged.

(4) The amino-nitrogen levels were found to have similar tendencies to total nitrogen levels.

(5) The reducing sugar content was higher in the soysauces with more wheat and increased rapidly, up to the

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maximum level, in two months. Then, the higher the wheat / soybean ratio was, the slower the decrease of the observed sugar content.

(6) The maximum total acidity observed was in the soysauces with a soybean / wheat ratio of 4 to 6, and increased similarly in all the soysauces throughout the period.

(7) According to the sensory evaluation, the short (2-3 months) fermented soysauces showed the best taste when soybean / wheat ratio was 10 to 8 and 10 to 6 if diluted. In long (4-6 months) fermented soysauces, it was 10 to 6 and 10 to 4 diluted. Address: Seoul Agricultural College, Seoul, Korea.

4685. **Product Name:** Broil King Teriyaki Sauce.
Manufacturer's Name: King Shoyu Co. Ltd.
Manufacturer's Address: 1215 Kona St. near Pukoi (P.O. Box 976), Honolulu, Oahu, HI 96808.
Date of Introduction: 1969.
Wt/Vol., Packaging, Price: Bottle.
How Stored: Shelf stable.
New Product–Documentation: Ad in Hawaii City Directory. 1968-69. p. 145. King Shoyu Co. Ltd. Manufacturers of the famous King Soy Sauce and Broil King Teriyaki Sauce. Illustrations (line drawings) show both bottles and labels. Address: 1215 Kona near Piikoi, P.O. Box 976. Zip Code 96808. Not listed 1979.

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49. "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows a label. They make amino acid soy sauce. The company is still in business. Letter from Tadao Nihei. 1988. July 19. They ran the business during the war, making chemical soy sauce, but closed in about 1978. Also made Barbecue Shoyu.

4686. **Product Name:** Shoyu Peanuts.
Manufacturer's Name: Moilili Mochi & Candies.
Manufacturer's Address: 2563 South King St., Honolulu, Oahu, Hawaii 96814.
Date of Introduction: 1969.
New Product–Documentation: Hawaii Directory of Manufacturers. 1969. p. 18. The company makes mochi, manju, arare, shoyu, peanut [sic]. In the 1975 directory the product is first listed as "Shoyu Peanuts."

4687. Park, Y.M. 1969. [Studies on commercially produced soybean sauce in Korea]. *Kongjung Pogon Chapchi* (*Korean J. of Public Health*) 6(2):293-98. [11 ref. Kor, eng]*
• ***Summary:*** The author conducted a study on soybean sauces collected from 74 manufacturers out of the 228 in Korea from April 6 to July 4, 1969. The pH value, specific gravity, buffer force, salt content, pure extract, arsenic and heavy metals of the sources were analysed. Main findings are as follows:

(1) In the pH value test, out of 74 samples, 6 (8.1%) are outside the government-permitted range of pH 4.5 to 5.8. The mean value of all samples is 5.03.

(2) Specific gravities of 10 samples (13.6%) are lower than the government permitted value, more than 1.142. The mean value is 1.168.

(3) Buffer forces of 20 samples (27.0%) exceed the government-permitted value, more than 17.0% of the sauce. The mean is 19.09%.

(5) The contents of pure extracts of 15 samples (20.3%) are lower than the government permitted value, more than 8.0% of the sauce.

(6) All the sauces are qualified in the test of arsenic, of which the government-permitted value is less than 1.5 ppm of the sauce.

(7) The contents of heavy metals of 13 samples (17.6%) are more than the government-permitted value, less than 20 pm of the sauce. Address: School of Public Health, Seoul National Univ., Seoul, Korea.

4688. Brissenden, Rosemary L. 1969. South East Asian food: Indonesia, Malaysia and Thailand. Baltimore, Maryland, USA, and Harmondsworth, Middlesex, England. Penguin Books Ltd. 262 p. Index. 18 cm.
• ***Summary:*** Contents. Acknowledgements. A note on this American edition. Weights and measures. 1. Introduction to South East Asian Food. 2. Utensils, methods, ingredients, glossary. 3. Indonesia. 4. Malaysia and Singapore: Malay, Chinese, Indian, Miscellaneous Malaysian. 5. Thailand.

The glossary of ingredients contains descriptions of: Soya bean curd (fresh or dried), Soya sauce, and monosodium glutamate (also known as Ve-Tsin, Ajinomoto, Mei Ching, Taste Powder, Gourmet Powder, Accent, P'sst!, etc.). The 3 kinds of soya sauce used in this book are light soya sauce, dark soya sauce (which is thicker and heavier; these two kinds are available at Chinese grocers), and Javanese soya sauce, which is sweet and very thick. The latter is available in bottles named Ketjap Manis or Ketjap Benteng, under the Conimex label. To make your own "Javanese soya sauce," combine 1 cup dark soya sauce, ½ cup molasses, and 3 tablespoons brown sugar in a small saucepan over medium heat. Stir until the sugar melts. Keep in a covered jar.

Note 1. This is earliest English-language document seen (April 2012) that contains the term "Javanese soya sauce."

Note 2. This is earliest English-language document seen (April 2012) that contains the term "Ketjap Manis" (regardless of capitalization) used to refer to sweet, thick Indonesian-style soy sauce.

This book has a disproportionate number of recipes based on meat, fish, and poultry. Soy-related recipes include the following. From Indonesia: Ikan semur Djawa (Fish in soya sauce, p. 69, Java). Ajam semur Djawa (Chicken in soya sauce, p. 76-77, Java). Semur daging (Beef in soya sauce, p. 94). Tahu goreng ketjap (Fried bean curd with soya

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sauce, p. 105). Tahu pong (Bean curd omelette, p. 111).

From Malaysia and Singapore: Fried fish with soya beans (p. 149-50). Stirred tomatoes or silver beet with black beans (with Chinese black beans [fermented black soybeans], p. 169). Baked bean curd (p. 181). Steamed, dressed bean curd (p. 181-82). Address: Melbourne, Australia.

4689. Broadcasting telecasting yearbook. 1969. Broadcasting Publications. See p. 374. *

• ***Summary:*** Page 374: "... Oriental Show-You Company, Columbia City, Indiana, chop suey products. Adv. Exec.: Shinzo Ohki. S. Agency: Ross Adv., Ft. Wayne, Indiana."

4690. Cooking good food. 1969. Order of the Universe Publications, Box 203, Prudential Center Station, Boston, MA 02199. 34 p. No index. 28 cm.

• ***Summary:*** A simple, concise source of the basic macrobiotic ideas adapted to the American way. Note 1: This booklet was written by Jim Ledbetter, a student of macrobiotic teacher Michio Kushi, although his name does not appear in it.

Contents: The traditional food of man. The way of eating. Salt and oil. Special foods. Useful kitchen items. Cooking brown rice. Cooking other grains. Cooking vegetables. Cooking sea vegetables. Cooking beans. Cooking soups. Cooking with flours (Cooking noodles, cooking creams, baking bread, variations with flour). Cooking animal food. Preparing salads. Preparing condiments. Preparing drinks. Cooking desserts. Plasters. Traveling and eating out. he manner of eating. The seven levels of cooking.

In Chapter 4, titled "Special Foods" is a section on "Soybean foods" (p. 6), which states: "The soybean has been called the 'Vegetable Cow' of the Orient. It is full of good vegetable quality protein (43%). It was not traditionally eaten without special preparation, because it is fairly yin, except by monks who wished to limit their sexual desires. When cured with salt, however, it was used as a daily food. You will find these traditional preparations very helpful in your kitchen.

"Tamari is the ancient form of soysauce, fermented for at least eighteen months from soybeans, salt, wheat or barley, and water, without chemicals or preservatives. It has a very distinctive, delicious taste. It is used mainly in cooking vegetables when it is added after salting and just before the end of cooking time, and in broths. It is rarely used directly on grains, but is often found on the table to use with deep-fried foods. Some women mix tamari with an equal amount of water to make it less strong.

"Miso is a paste made from the same ingredients as tamari. There are two varieties, one (Hacho) is a little harder and darker in texture than the other. It has many uses, especially in soups, in which case it is added towards the end of cooking time so that the wonderful digestion-aiding bacteria it contains will not be destroyed. (All of these soybean condiments produce their best flavor when cooked slightly.) Miso soup has a deep, satisfying bouillon flavor, and is often taken every day as a delicious source of energy. It is helpful to thin miso in a little water before adding it to soups and sauces.

"Morromi [sic, moromi] is the pulp from which tamari has been made. It has a very special tangy flavor, and is used like miso.

"Seitan or 'Protein X' is made from the same ingredients as the above condiments. A slightly different process produces a strong jerky which, when boiled or sauteed, resembles beef in appearance and taste. It is very good in soups" (p. 6). Note 2: This is the earliest document seen (March 2011) that mentions "seitan." It is also the earliest English-language document seen (March 2011) that contains the word "seitan." By placing seitan in the category of "Soybean Foods," the author is apparently emphasizing the importance of soy sauce as one of its two main ingredients. He seems to have tasted seitan, but it is not clear that he knows what its other main ingredients are (wheat gluten, ginger, sesame oil) or how it is prepared.

"Tofu is made from fresh soybeans. This curd or 'cheese' is a good quality, strong yin food which is very refreshing for occasional use in summer when it is cooked with tamari. It is helpful to store tofu in water. The more yang pulp, which is usually thrown away, can sometimes to obtained from the Oriental stores which make tofu, and used to make delicious casseroles or well-sauteed vegetable dishes."

The section on "Condiments" (p. 6-7) discusses Gomasio (Sesame salt), umeboshi (salted plums), and Tekka. The section on "Oriental vegetables" (p. 7) discusses lotus root, daikon, ginger root, Chinese cabbage, jinenjo (Japanese potato), and kuzu arrowroot.

In the chapter titled "Cooking Beans" the author considers "Aduki Beans" to be the "King of Beans."

"Black Beans: The imported Japanese black beans are higher nutritional quality and superior taste. They are very sweet, delicious beans. They should be soaked and boiled, because their skin can become loose and clog a pressure cooker spout."

"Miso Soup: This hearty bouillon is the staple everyday soup. Prepare vegetables and boil for at least one-half hour (if you want a really good soup), thin miso with a little of the stock in a bowl and add it to the soup towards the end. Do not boil the soup after adding miso or the beneficial digestion-aiding bacteria will be harmed. If it is simmered very slowly, it can be cooked from 5 minutes to one hour.

"Tamari Soup: Prepare as above using tamari instead of miso for flavoring. A simple tamari broth with onions or carrots and onions is often served over dishes such as noodles."

In the chapter titled "Preparing Condiments" (p. 27) we read: "Vegetable Miso: Slice vegetables finely and saute. Add diluted miso and water and cook. Scallions, chives, carrot

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tops and many other vegetables are good prepared in this manner. 'Tekka' is made from lotus root, burdock root and carrots. 'Sigure' [Shigure] ('November Rain') is prepared with lotus roots, carrots, and onions. A little freshly grated ginger is often added towards the end of the cooking. A small amount of these condiments is usually sufficient."

The chapter titled "Preparing drinks" (p. 28-29) discusses Mu tea, umeboshi tea, chicory, Yannoh [Ohsawa coffee], dandelion coffee, Bardan, Kokkoh, kuzu, ume-syo-kuzu, and daikon drink.

The chapter titled "Cooking Desserts" (p. 30) states: "Amasake (Homemade Rice Wine). For special occasions this drink is very smooth and sweet."

Tofu is also mentioned in the chapter titled "Plasters" (p. 31). "Tofu Plaster. Squeeze tofu (soy bean curd, see *Special Foods*) and mix with 10% flour to make it more manageable. Apply this to any painful, feverish, or inflamed area. Alternating tofu plasters with ginger compresses often helps stubborn cases."

Note 3. This is the earliest document seen (July 2000) that mentions "Hacho" miso (spelled that way). Subsequently, many macrobiotic publications used this word and spelled it that way.

The chapter titled "Cooking sea vegetables" briefly defines kombu, wakame, hiziki (the incorrect idea concerning "black rice" comes from a casual remark by Evan Root), arame, dulse, and nori (laver).

Note 4. One original edition of this booklet, sent to Soyfoods Center by Tim Redmond (a founder of Eden Foods), has one dark blue stalk of wheat against a light blue background. In the lower right corner of the cover the following has been stamped with a blue ink stamp: "Eden Organic Food Store, 514 E. William, Ann Arbor, Mich. [Michigan] 48104." Address: [Massachusetts].

4691. Cowan, J.C. 1969. Soybeans. In: Encyclopedia of Chemical Technology. Vol. 18. 2nd ed. New York: John Wiley & Sons (Interscience Publishers). See p. 599-614. 27 cm. [44 ref.]

• ***Summary:*** Contents: Introduction. Composition, standards and trading rules. Handling and storage. Processing: Preparation, screw-press and extruder-cooker operations, solvent extraction. Soybean products: Oil, meal and meal products, soy flour and related products, soy sauce and other food specialties (soybean milk, tofu, miso, natto, tempeh, sprouted soybeans, green vegetable soybeans). Production and export. Bibliography.

"An estimated 50 million lb of soy flour was marketed in 1967. About one-half of this went into pet foods and the rest into foods for humans." Address: USDA.

4692. Hawaii Nihonjin Imimshi Kankokai. 1969. Hawaii Nihonjin imimshi [History of Japanese Immigration to Hawaii]. Japan: HNIK. See p. 211. [Jap]*

• ***Summary:*** Repeats the information from Morita 1915 about Haruhachi Shimada being the first to brew shoyu in Hawaii.

4693. Hosokawa, Nobuo; Nanba, T.; Takeuchi, T.; Yoshida, T.; Yoshida, M.; Amano, T.; Yoshii, H. 1969. Miso shôyu jôzô ni okeru kôso-zai no riyô ni kansuru kenkyû. III. Kôso-zai ni yoru tanshoku-kei kara miso no shijô [Studies on the use of enzyme preparations in miso and soy sauce brewing. III. Trials on the application of some kind of mold protease preparation for light-colored salty miso]. *Aichi-ken Shokuhin Kogyo Shikenjo Nenpo* (*Annual Reports of the Food Research Institute, Aichi Prefecture*) 9:83-88. For the year 1968. [10 ref. Jap]

• ***Summary:*** Enzymes used included Takadiastase and papain. Address: Food Research Inst., Aichi prefecture, 2-1 Shinpukuji-cho, Nishi-ku, Nagoya-shi 451, Japan.

4694. Hosokawa, Nobuo; Yoshii, H.; Takeuchi, T.; Yoshida, M.; Nanba, T.; Amano, T. 1969. Miso shôyu jôzô ni okeru kôso-zai no riyô ni kansuru kenkyû. II. Tamari shôyu ni taisurusansei puroteaze seizai no tenka kôka [Studies on the use of enzyme preparations in miso and soy sauce brewing. II. On the effect of acid protease preparation for tamari soy sauce brewing]. *Aichi-ken Shokuhin Kogyo Shikenjo Nenpo* (*Annual Reports of the Food Research Institute, Aichi Prefecture*) 9:80-82. For the year 1968. [7 ref. Jap] Address: Food Research Inst., Aichi prefecture, 2-1 Shinpukuji-cho, Nishi-ku, Nagoya-shi 451, Japan.

4695. Kwon, Shin Han. 1969. Soybeans and soybean products in Vietnam. Saigon: Republic of Vietnam: Ministry of Land Reform and Development of Agriculture and Fisheries, Agricultural Research Inst. (Saigon). 113 p. 28 cm. [60 ref. Eng]

• ***Summary:*** Contents: Map of South Vietnam showing all provinces and their names. Preface, by the author. 1. Introduction: History of soybean, production and trade in the world and in Vietnam, utilization of soybean (uses, nutritive value of the soybean). 2. Botany of the soybean plant. Seed, stem and pubescence, leaves, flower parts, root and nodule bacteria, genetics. 3. Ecological requirement. Germination, temperature, rainfall, day length, soil. 4. Cultivation and storage: Planting (land preparation, depth of seeding, methods of seeding, rate of seeding, time of seeding, rotation, erosion), fertilizer (manure, nodule bacteria, nitrogen, phosphorus, calcium, potash, molybdenum, application), insects (maggot fly, soybean insects found in Vietnam, control), diseases (root disease, foliage disease, seed disease), weed control, harvesting and threshing (harvesting time, methods of harvesting, drying). 5. Variety improvement. Aims of improvement (high yielding variety, disease resistance, insect resistance, day length, varieties tolerant to unfavorable soil conditions, seed size, seed color,

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oil and protein content in seed, palatability), introduction method, pure line selection method, breeding method (making the cross, pedigree method, bulk method), regional trials, variety purification and multiplication (breeder's seed, foundation seed, stock seed, extension seed, maintenance) 6 Seed certification standard. 7. Bibliography

The author thanks for their help: Dr. Thai-Cong-Tung, Director of the Agriculture Research Institute, and Mr Nguyen-Huu-Quyen, Manager of Eakmat Experiment Station.

"The history of soybean in Vietnam is meager, but the references by Loureiro (1790) and Rumphius (1747) mentioned the cultivation of soybean in Malaysia and Vietnam. Harmand (1877) collected wild soybean (*Glycine laotica*) in the Hue and Bassac areas, and the herbariums [herbarium specimens] are still available at the Agricultural Research Institute, Ministry of Agriculture, Vietnam." Since the history of Vietnam is closely related to that of China, it seems likely that the soybean has been cultivated for many centuries in what is today Vietnam (p. 1).

In Vietnam, the soybean is still not a very familiar crop to the majority of farmers. Although the acreage has gradually increased since 1958, production had not yet reached 10,000 tons by 1967. According to the *Agricultural Statistics Yearbook of Vietnam*, in 1966 in South Vietnam, total soybean acreage was 6,610 hectares and production was 7,585 metric tons, or 1.148 tonnes/ha (p. 7). The main soybean producing provinces are all in the southern half of South Vietnam: Long-Khanh (40% of total South Vietnamese acreage), An-Giang (20.4%), Chau-Doc, Kien-Phong, and Binh-Dinh (5%). In 1963 some 1,440 tones of soybeans were imported and in 1966 some 100 tonnes were exported (p. 6).

Table 4 shows an estimate of the costs and returns per hectare of growing soybeans at the Eakmat Agricultural Experiment Station in Ban-Me-Thuot in 1968. The net income or profit from one hectare was about VN$26,000, which is larger than for any other field crops, including cassava (VN$22,766), mung beans ($20,267), sweet potatoes ($19,269), upland rice ($6,828), corn ($6,569), and peanuts (VN$5,100).

Uses: "In Vietnam, the soybean is not commonly used in daily food, but a number of foods such as soysauce, tuong [a soft kind of miso resembling Chinese chiang in consistency, and sold in crocks], bean curd, vermicelli, soymilk, soybean wine, chao [fermented tofu, sold in bottles], soybean oil, [soy] bean sprouts, and green pods [green vegetable soybeans] are available in the market and they are gradually becoming popular among Vietnamese.

Note: This is the 2nd earliest English-language document seen (Oct. 2011) that uses the word "chao" to refer to fermented tofu.

Photos (p. 11-12) show: (3) Bean sprouts and cooked beans with tomato sauce. (4) A shop that sells soybean products in a Saigon market. Soybean paste [tuong] is in big chars, chao [fermented tofu] is in bottles in front, and bean curds [tofu] are in the front left corner. (5) A Vietnamese girl frying bean curds in the market. (6) Bottles with labels showing various kinds of soy sauces made in Vietnam.

The highest yielding soybean varieties in Vietnam are presently Palmetto and E-32. In trials, they yield about 1 tonne per hectare. Address: FAO Agricultural Officer. Phone: Saigon 91.746.

4696. Loma Linda Food Co. 1969. Wholesale price list. Arlington, California. 4 p. Undated.

• ***Summary:*** The cover states: "Quality foods since 1906. Camp Meeting Prices 1968, 1969." Soy-related products include: Soy Flour. VegeChee [Tofu]. Soy Beans Boston Style. Soybeans T.S. Smokene (Shaker bottle). Soy Sauce (3 sizes, glass bottles). Other products [probably made mostly from wheat gluten and/or peanuts include]: Nuteena. Proteena. Vegelona. Vegelet 'n Gravy. Dinner Cuts. Dinner Rounds. Vegecuts. Vegeburger (regular or no salt added). Tender Bits. Linketts [Linkettes]. Big Franks. Little Links. Loma Linda Sandwich Spread.

Note: No mention is made of spun soy protein fibers. Address: Arlington, California.

4697. Ohsawa, Georges (Nyoiti Sakurazawa). 1969. Le Zen macrobiotique: ou, l'art du rajeunissement et de la longévité [Zen macrobiotics, or the art of rejuvenation and longevity]. Paris: Librairie Philosophique J. Vrin. 212 p. Index. 19 cm. Preface by Cauvet-Duhamel. [Fre]

• ***Summary:*** Contents: Preface, by Cauvet-Duhamel. Foreword, by G. Ohsawa. 1. Macrobiotics and the medicine of the Orient. My therapeutics. 3. The seven conditions of health and happiness. 4. With faith, nothing is impossible. 5. Yin and yang. 6. My macrobiotic cuisine and the ten ways of eating properly. 7. Principal foods (*Les aliments principaux*). 8. Secondary foods. 9. Special dishes. 10. Suggestions for some illnesses / maladies. 11. Healing regimens. 12. Food for infants. 13. Some ideas.

Appendixes: A cure in 10 hours. Pro-forma death certificate for the world empire of the American gold dynasty. My talks in the United States (starting in Nov. 1959, in New York, Los Angeles, and San Francisco). The despair of American doctors according to the *Times* of 7 March 1960 (listing of the number of people with 17 incurable diseases). How much does the death of a civilization cost? The real cause of sickness, unhappiness, and war. Professional education and religion. Medicine's last cry of despair. The medical revolution in the China of Mao Tse-tung. Medicine: God alone understands it. My prophecy.

The following foods are discussed: Rice, buckwheat, millet and other cereals (p. 67-77). Azuki beans (p. 98). Sesame tofu (p. 98). Sea vegetables (konbu, hijiki, p. 101-05). Miso and miso recipes (p. 105-08, incl. Tekka). Shoyu and shoyu recipes (p. 108-10). Ohsawa coffee (Yannoh, with

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azuki, p. 111-12). Syo-ban (Natural green tea with shoyu, p. 113-14). Kuzu (p. 114). Umeboshi juice (p. 116-17). Ume-syo-ban (umeboshi and tamari shoyu, p. 117). Ume syo-kuzu (with umeboshi, shoyu, and kuzu, p. 117). Miso fried in sesame oil (p. 118).

Note 2. The author, born in 1893, lists his name on the title page as "Georges Ohsawa (Nyoiti Sakurazawa)."

Note 3. This is the earliest French-language document seen (April 2012) that uses the term *tamari* to refer to soy sauce.

4698. Rudzinski, Russ. 1969. Japanese country cookbook. San Francisco, California: Nitty Gritty Productions. xvi + 198 p. Illust. by Mike Nelson. 14 x 22 cm.

• ***Summary:*** An innovative but hard-to-read book printed with red ink on dark tan paper. The many illustrations (black line drawings) are excellent.

A surprisingly large number of the recipes in this cookbook contain soyfoods. Soy-related recipes include: Sukiyaki (with "1 block of fresh bean cake (*tofu*) or 1 can *tofu*, cut into bite-size squares," and shoyu, p. 5-10). Teriyaki (normally done on a hibachi grill; *teri* = shiny or glazed and *yaki* = broiled, p. 16). Miso shiru (p. 20). Chicken teriyaki with sesame seeds (with shoyu, p. 24). Chicken liver teriyaki (with shoyu, p. 26). Shrimp teriyaki (with shoyu, p. 28). Spicy shrimp teriyaki (with shoyu, p. 28-29). Tofu dengaku (p. 29). Tofu yaki (fried) (with tofu, miso and shoyu, p. 29). Tofu soup (p. 48). Kaki no miso suimono (Oyster soup with soybean paste, p. 55). Vegetable and noodle miso soup (p. 56). Shrimp miso (p. 56). Takara yaki (omelette with tofu, p. 65). Tofu-egg cakes (p. 66). Tofu-egg omelette with white toasted sesame seeds (p. 66). Fried tofu with egg (p. 67). Cabbage with miso sauce (p. 85). Horenso (spinach) with miso (p. 89). Karai nasubi miso (Spicy eggplant with miso, p. 94). Goma nasubi miso (Eggplant with miso and sesame seed paste, p. 95). Tofu sauce (p. 102). Inari sushi (with aburage, p. 110-11). Miso dango (meatless rice-based patties / balls, p. 117). Soba (buckwheat noodles) with miso sauce (p. 122). Tofu to niku donburi (bowl with meat and tofu, p. 127). Sakana no nitsuke (fish cooked with miso, p. 135). Shiroi sakana no nitsuke (white fish with miso, p. 136). Tofu to ebi no kuzu-ni (tofu and prawns in kuzu sauce, p. 139). Simple kaki (oyster) miso (p. 140). Kaki nabe (pot of oysters with miso, p. 141). Kaki to tofu nabe (oyster pot with tofu and white miso, p. 141). Yaki hamaguri (broiled clams with white miso, p. 143). Kawari tofu nori zuke (prawn dumplings with tofu, p. 148). Tori dango miso (fried ground chicken with miso, p. 162). Tofu, pork and vegetables (p. 167). Mashed tofu and ground pork (p. 168). Buta nabe (pot-au-pork with "4 fried tofu, fresh or canned, cut in strips," p. 168). Pork mizutaki (with tofu, p. 169). Beef mizutaki (with tofu, p. 175-76). Shabu-shabu (with tofu, p. 181). Shoyu is used in many, if not most, of the recipes in this book.

At the back is a glossary, which includes definitions of aburage, miso, shoyu, and tofu. Address: California.

4699. Saito, Akio. 1969. [Chronology of soybeans in Japan, 1950 to 1969] (Document part). In: Akio Saito. 1985. Daizu Geppo (Soybean Monthly News). Feb. p. 15-16. [Jap]

• ***Summary:*** 1950–The production of soybeans increases greatly to 446,900 tonnes (2.1 times more than in recent years).

1950–In March, the food ration system organization is closed. In July the ration systems for miso and shoyu are removed.

1951 March–The restrictions for soybeans and rapeseed are removed. From this time on, the number of natto makers increases rapidly.

1952–Soybean production in Japan reaches 521,500 tonnes, the largest since World War II.

1953 Jan.–Restrictions are imposed on imports of foreign soybeans paid for in foreign currencies.

1955. Rice production in Japan this year is 12,390,000 tonnes (up 35.9% over last year). This is the first time it has topped 12,000,000 tonnes. Irrigated rice cultivation (*suiden*) is 20% more than last year. The days of rice shortages are over and the black-market price of rice falls. The per-capita direct consumption of soybeans for the year is 4.5 kg. (This information comes from *Norin Suisan-sho, Shokuryo Jukyu-ho*).

1955 April–Soybeans from Brazil are graded using the AA system (*Yunyu jido shonin sei*).

1956–A new natto container is invented, made of shaved wood (*kyogi*) lined with a polyethylene sheet.

1956 June 13–New regulations for agricultural products and price stabilization. Domestic soybeans are added to them.

1956 Oct.–The tax on imported soybeans rises to 10% and the no-tax system for soybeans is removed.

1959–The first instant miso soup is introduced by Yamajirushi Miso in Nagano. It contains dried green onions, wakame, dried tofu [probably dried-frozen tofu], etc.

1959–At about this time research begins on meat analogs made from soy protein.

1960–Per capita consumption of shoyu drops to 13.7 kg. It has now fallen below 14 kg/person.

1960–Soybean imports rise to 1,128,000 topping the 1,000,000 level of the first time.

1961 July 1–The tax on imported soybeans is removed.

1962–A new natto container made of Styrofoam is invented (*PHP yoki, happo suchiroru*).

1963–In the USA General Mills starts to sell meat analogs made from soy protein.

1965–Per capita miso consumption drops to 7.8 kg, falling below 8 kg/person.

1965–Production of defatted soybean meal reaches 1,074,000 tonnes, passing the 1 million tonne mark for the first time. Production has risen 56% in during the past 5

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years.

1966–At about this time meat analogs based on soy protein start to be sold commercially in Japan–to institutions.

1966–Soybean imports rise to 2,168,467 tonnes, passing the 2 million tonne mark for the first time.

1966–Production of soybeans in Japan drops below 200,000 tonnes for the first time. Japan now produces only 9% of the soybeans it consumes.

1966 May–Kikkoman starts selling low-salt shoyu.

1968–Meat analogs based on soy protein start to be sold to the general public in Japan.

1968 June–Research conducted by the *Mainichi Shinbun* shows that the size and price of tofu is now different in different areas. In Tokyo it sells for 25 yen per 300 gm or over. Cakes of tofu sold in downtown Tokyo (*shitamachi*) are smaller than those sold uptown (in the hilly sections) (*yamanote*). Some tofu shops that are not members of the tofu association sell it for 15 yen per 350 gm. In Nagoya it retails for 30 yen per 450 gm, and in Northern Kyushu 25 yen per 450 gm. Per capita consumption of tofu is 33 cakes (*cho*) a year.

1969–Per capita consumption of soy oil in Japan rises to 3.2 kg, passing the 3 kg mark for the first time. In 1969 it was 1.2 kg/person. Address: Norin Suisansho, Tokei Johobu, Norin Tokeika Kacho Hosa.

4700. Shibutani, Yoshikazu. 1969. Shôyu zukuri no jissai [The reality of manufacturing soy sauce]. Tokyo: Chijin Shokan. 290 p. 19 cm. [Jap]*

• ***Summary:*** Note: Yoshikazu Shibutani was born in 1893.

4701. Shibuya, Yoshiichi. 1969. Shôyuzukuri no jissai [Practical shoyu production]. Tokyo: Chijin Shokan. 290 p. (Modern Engineering Library). [35 ref. Jap]

• ***Summary:*** A technical book with a substantial bibliography.

4702. Shinojima, Chu; Ashihara, Tamako. 1969. Practical shoyu cooking. Delicious dishes with Japanese soy sauce. Tokyo: Japan Publications Inc. 61 p. Illust. No index. 26 cm. [Eng]

• ***Summary:*** Contents: Introduction. Helpful hints on how to use this book. Egg dishes. Beef and veal dishes. Okinawan dishes. Chicken dishes. Japanese soy sauce–Shoyu. Pork dishes. Modern Japanese cooking. Canned foods and salads. Desserts. Tofu dishes and soups. Fish dishes.

Contains many full-page color photos. The word "shoyu" is used throughout the book, and all recipes call for the use of "shoyu." The chapter titled "Japanese soy sauce–Shoyu" (p. 32-33) begins: "Shoyu is the single seasoning without which the art of Japanese cooking would be impossible. Its flavor and fragrance also blend beautifully with food of other countries, and shoyu is now in use throughout the world. Japan's largest shoyu producer, the Kikkoman Shoyu Company, exports its product to 51 countries around the world." It also notes that among the traditional influences on Japanese cooking, that "of Buddhism was especially strong in regard to developing a respect for the natural flavor of each food item. The best means of bringing out the flavor of each food was found to be through the use of shoyu."

4703. Stanton, W.R. 1969. Some domesticated lower plants in South-east Asian food technology. In: Peter J. Ucko and G.W. Dimbleby, eds. 1969. The Domestication and Exploitation of Plants and Animals. Chicago: Aldine Pub. Co. xxvi + 581 p. See p. 463-690. Proceedings of a meeting... held at the Institute of Archaeology, London University. Illust. 26 cm. [10 ref]

• ***Summary:*** In this paper, "lower plants" refers to microorganisms and algae. These cultivated microorganisms include marine and lacustrine algae (nori, kombu), fungi (Aspergillus, Rhizopus species), yeasts (Saccharomyces species) and bacteria (Lactobacillus, etc.). In Indonesia, tempeh (cakes made by fermenting soybeans) and fermented groundnuts "provide about one-third of the total crude protein requirement the population..." (p. 464). A complex fermentation is used to make miso, a fermented soybean paste, in Japan; a number of different microorganisms take part at different stages. Some 75% of the households in Japan use miso daily as the main soup seasoning–according to a recent survey.

"The Japanese products represent a northward and eastward migration of the 'sho' process (a general term in Japan for the high salt fermentations). Today these fermentations are carried out under highly industrialized conditions, the organisms being given the benefit of highly specialized environments, and the domestication in consequence has proceeded here further than it has elsewhere in the region" (p. 467). Address: Tropical Products Inst., London.

4704. Steinberg, Raphael. 1969. The cooking of Japan. New York, NY: Time-Life Books. 208 p. Illust. General index. Recipe index (English). Recipe index (Japanese). 28 cm.

• ***Summary:*** A superb, elegant book, that (with its spiral-bound companion volume of recipes) captures in both words and photos (by Eliot Elisfon) the true spirit of Japanese food and cookery. Contents: Introduction: Solving the mysteries of Japan's marvelous cuisine, by Faubion Bowers. 1. The heritage of a remarkable past. 2. Foods to suit the seasons. 3. The logic of Japanese cookery. 4. The world's greatest seafood. 5. Simple, satisfying foods of home. 6. A ceremony that sired a cuisine (*kaiseki* or tea ceremony cooking, with roots in 13th century Zen Buddhism). 7. Eating out as a way of life. 8. Magnificent meals in elegant settings.

Soy-related: The writer of the introduction snacked on odorous, fermented soy beans (*natto*) at night before retiring

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(p. 6). His son said to him recently, "Please, Dad. Not *tofu* again!" (p. 7). Importance of the soybean (p. 16-17, China has had a huge impact on Japanese culture. "Perhaps the most important food innovation contributed by China was the soybean, which is various disguises is still the foundation stone of Japanese cooking"). Shoyu is the Japanese word for soy sauce (p. 26). Tofu (soybean curd), which is cooked with other foods throughout most of the year, becomes a dish in its own right during the summer, served on ice and flavored with soy sauce (as *hiyayakko*, p. 32). Photos of tofu, shoyu, green soybeans [*edamamé*] and akadashi miso in prepared festival dishes (p. 34-35). *Matsutake* mushrooms with tofu or shoyu. "The most important lesson to be learned deals with the ubiquitous role of the soybean. Generally considered by Westerners to be the most humble of vegetables, the soybean is in fact the king of the Japanese kitchen. One might almost say that Japanese cuisine is built upon a tripod of soybean products: *miso*, a fermented soybean paste; *tofu*, a custardlike soybean cake; and soy sauce, used both to season foods as they are being cooked and to make dipping mixtures that enhance the flavors of the foods as they are being eaten." Details about these three products and their uses is then given (p. 41-42). Teriyaki or "shining broil" (p. 43). Two-page color photo shows (p. 44-45): Azuki beans and *kuromame* (black soybeans), sesame seeds, sesame oil, *fu* (wheat gluten croutons), *aonoriko* (powdered green seaweed), Kikkoman shoyu, *aka miso, shiro miso, tofu*, nori and wakame.

Ponzu, a dipping sauce which is half soy sauce and half lemon or lime juice (p. 46). Sukiyaki (p. 46). Tempura (p. 49). *Aemono* and *sunomono* with tofu, miso, or soy sauce (p. 48). Photo of a tofu-slicing knife with a serrated blade (p. 50). Recipes: Clear soup with tofu and shrimp (*Sumashi wan*, p. 55). Miso soup with red and white miso (p. 56-57, 59). Miso-flavored pork and vegetable stew (*Satsuma-jiru*, p. 61). Soy and sesame-seed dressing with string beans (*Goma joyu-ae*, with "½ cup white sesame seeds, toasted and ground to a paste," p. 62). Tofu and sesame-seed dressing with vegetables (*Shira-ae*, p. 63: "Add the sesame seeds... warm them until lightly toasted. Grind them to a paste in a *suribachi* {serrated mixing bowl} or, more easily, pulverize them at high speed in an electric blender with 1/8 teaspoon of soy sauce. Transfer the sesame-seed paste to a mixing bowl...)."

Two color photos show: (1) Toasted sesame seeds in a *suribachi* with a wooden pestle. (2) When ground, they "quickly release their oil and turn into a paste." White miso dressing (*Neri shiro miso*, p. 67). Photo of *zensai*, incl. miso-marinated asparagus, and abalone cooked in soy sauce (p. 72). Sashimi dipped in soy sauce (p. 81-83, 90-91).

Undersea vegetables: nori, kombu, wakame, hijiki (p. 88-89). Recipes: Sushi (p. 95-101). Tempura (p. 103). Mirin and soy dipping sauce for tempura and noodles (*Soba tsuyu*, p. 104). Deep-fried tofu in soy-seasoned sauce (*Agedashi*, p. 105).

Tofu is the Japanese word for soybean curd (p. 108). Umeboshi (p. 109). Miso soup (p. 109-10). Natto and miso (p. 115). Tofu and shoyu in *yudofu* (p. 116). Sekihan and azuki (red beans, p. 120). *Mame* ("beans") are served at traditional wedding feasts; the word also means good health. Mochi (p. 121). Recipes: Sekihan (p. 126). Fox noodles with deep-fried tofu (*Kitsune udon*, p. 127). Bubbling tofu (*Yudofu*, p. 132-33). *Sukiyaki* (p. 134, with tofu and soy sauce). *Shabu shabu* (with tofu, p. 135).

Tofu and miso in *kaiseki* cuisine based on Zen Buddhism and the tea ceremony (p. 146-49). Teriyaki, mirin, ponzu, tofu (p. 152). Tofu and shoyu (p. 159). Sasanoyuki restaurant in Tokyo (uses tofu as a main ingredient in every dish, p. 160-61). Sukiyaki, with tofu and soy sauce (photo, p. 166-67). Broiled mackerel in miso marinade (*Miso zuke*, p. 169). Dengaku tofu (p. 172-73, with color photo). Beef teriyaki (with shoyu, p. 174-75). Yakitori (with teriyaki sauce, p. 174-75). Grilled chicken with sweet soy-seasoned glaze (*Tori teriyaki*, p. 176). Black soybeans and tofu (p. 188). At a geisha house, shoyu is called *murasaki* ("the purple").

A guide to Japanese ingredients (glossary). Incl. aji-no-moto, aonoriko, azuki, fu, goma, goma-abura, hichimi (shichimi) togarashi, kombu, konnyaku, mirin, miso, MSG, nori, shoyu, soba, tofu, umeboshi, wakame, wasabi.

Note: The spiral-bound recipe book accompanying this volume contains the recipes in the parent volume and no new information; the binding makes it easier to use in the kitchen. Address: USA.

4705. Takeuchi, T.; Joshida, M.; Hosokawa, N.; Nanba, T.; Amano, T.; Yoshii, H.; Yoshida, T.; Murai, K. 1969. [Studies on tamari brewing. I. On the factory coefficient]. *Aichi-ken Shokuhin Kogyo Shikenjo Nenpo* (*Annual Reports of the Food Research Institute, Aichi Prefecture*) 9:58-67. For the year 1968. [Jap]*
Address: Food Research Inst., Aichi prefecture, 2-1 Shinpukuji-cho, Nishi-ku, Nagoya-shi 451, Japan.

4706. Takeuchi, T.; Amano, Y.; Yoshii, H. 1969. [On the amounts of levulinic acid in commercial soy sauces]. *Aichi-ken Shokuhin Kogyo Shikenjo Nenpo* (*Annual Reports of the Food Research Institute, Aichi Prefecture*) 9:76-79. For the year 1968. [Jap]*
Address: Food Research Inst., Aichi prefecture, 2-1 Shinpukuji-cho, Nishi-ku, Nagoya-shi 451, Japan

4707. Thurmon, Jimmie Joan, comp. 1969. Adventures in vegetarian cooking: Over 200 meatless main dish recipes. Nashville, Tennessee: Southern Publishing Assoc. 128 p. 23 cm.
• ***Summary:*** The author of this Seventh-day Adventist vegetarian cookbook is a woman. Interesting recipes include Nut Cheese (no. 1 & 2, with peanuts or peanut butter and

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gluten flour, p. 11). Tomato Nuttose (with nut butter, p. 11). Homemade Nuttose (with nut butter, p. 12). Homemade Protose (with peanut butter and mashed beans (p. 12). Homemade Nutmeat (dark) (with gluten flour, peanut butter, and Vegex, p. 12-13). Homemade Nutmeat (light) (with raw nut/peanut butter and flour, wheat meal, or soybean meal, p. 13). Nuttolene (with peanut butter and eggs, p. 13). Homemade gluten (with Vegex or soy sauce, p. 14). Granola. Preparing and cooking dry soybeans (p. 15). This page describes how to make "soybean pulp," an ingredient in subsequent recipes. "Press cooked soybeans through a coarse sieve or grind in a food grinder. Use in making soups, croquettes, loaf, or soufflé. Cold, the pulp makes a nutritious and flavorful filling for sandwiches when mixed with chopped onion and enough salad dressing or milk to make it easy to spread. May be used like pumpkin or squash with milk, eggs, and spices as a filling for pie. May be used in place of burger in chili."

Soybean loaf (p. 19). Soybean cheese loaf (with 1 can (14 oz.) soy cheese [tofu] and Savita, p. 21). Gluten roast no. 1 (with gluten burger, p. 21). Soybean loaf, p. 27). Soybean-rice loaf (p. 28). Gluten roast no. 1 & 2 (p. 29). Baked soybean croquettes (with soybean pulp, p. 36-37). Soyameat patties (p. 37). Cheese-nut burgers (with VegeChee [tofu, made by Loma Linda Foods], p. 37). Soyameat tetrazzini (p. 52). Soybean casserole (with Wham, p. 52-53). Soybean soufflé (with soybean pulp, p. 53). Tofu with mushroom sauce (p. 90; Tofu is "A fresh soybean milk curd obtainable at Oriental markets, or canned under the trade name VegeChee" [by Loma Linda Foods]). Puree of soybean soup (with soybean pulp, p. 110).

Pages 121-22 list "Vegetable protein brand names." All products are made by Seventh-day Adventist food manufacturers. Brand name codes: B = Battle Creek. C = Collegedale. L = Loma Linda. M = Madison. S = Sunnydale. W = Worthington. 1. Nut meats (canned): Not-Meat (M). Numete (W). Nuteena, Proteena, and Vegelona (L). Protose (B).

2. Gluten burgers: Choplet Burger (W). Collegedale Burger (C). Madison Burger, and Zoyburger (M). Prime Vegetable Burger (B). Redi-Burger, and VegeBurger (L). 2. Gluten steaks: Big Pat, and Fry Sticks (W). Chic-Ketts (S). Collegedale Chops (C). Dinner Cuts, Dinner Rounds, Vege Cuts, and Vegetables 'n Gravy (L). Vegetable Skallops, and Vegetable Steaks (B).

Note 1. This is the English-language document seen (Jan. 2007) that contains the term "Gluten burgers" (or "Gluten burger").

4. Wieners and sausages: Big Franks, and Linketts (L). Saucettes (B). Veja-Links (W). 5. Frozen foods: Chipped Prime, Prosage, Vegetarian Luncheon Slices (Chicken and Beef Style), Wham (W). Note 2. Worthington was the first Adventist company to make frozen meatlike products.

6. Soy meats: Soyameat (Diced Chicken Style, or Diced Beef Style) (W). VegeChee [Tofu] (L).

Frequently used seasonings in vegetarian entrées (p. 122). Accent. Bac-O-Chips (General Mills). Bakon Yeast. Gravy Quik (L). G. Washington Broth. McKay's Chicken Style Seasoning. Savita. Savorex, and Smokene (L). Sovex. Tartex. Tastex. Vegex.

Update. 1995 Oct. 25. Jimmie Joan Thurmon, a Seventh-day Adventist, is retired and lives with her husband at 128 Mountain Ridge Dr., S.E., Cartersville, Georgia 30120-6951. Phone: 770-974-9218. She learned how to make wheat gluten from Seventh-day Adventist women, who had been making it for years. In addition Loma Linda Foods in California and Sanitarium Food Co. in Australia had many products containing wheat gluten on the market by the 1960s. Address: Nashville, Tennessee.

4708. Ucko, P.J.; Dimbleby, G.W. eds. 1969. The domestication and exploitation of plants and animals. Proceedings of a meeting of the Research Seminar in Archaeology and Related Subjects held [18-19 May 1968] at the Institute of Archaeology, London University. Chicago, Illinois: Aldine Publishing Co.; London: Gerald Duckworth & Co. Ltd. xxvi + 581 p. Illust. General index. Index of sites and localities. Index of authors. 26 cm. [500+* ref]

• ***Summary:*** One goal of this seminar is to gain an "insight into modern man's relationship to his habitat. In the last decade or two a change in methods of investigating these events has taken place, due to the mutual realization by archaeologists and natural scientists that each held part of the key and neither alone had the whole. Inevitably, perhaps, the floodgate which was opened has resulted in a new spate of knowledge..." "This meeting was called so that workers in the archaeological, anthropological, and biological fields could bridge the gap between their respective disciplines..." (p. ix).

"Mankind took an immensely long time to learn how to gain food by any other means than hunting, fishing and gathering. Our record of manufactured tools goes back over one million years but evidence of domesticated animals and plants only starts at a date somewhere near the end of the European Ice Age, i.e. after ca. 10,000 BC" (p. xvii).

While archaeology is presently best suited to study domestication, a movement is taking place in archaeological thought which recognizes the essential unity of the ecological approach. man is increasing being viewed as part of an ecosystem in which he has played a significant, if not dominant, role for some millennia. Increasingly man is seen as "another animal in the world of nature" (p. xxiii).

One cannot solve a problem unless one asks the right questions. And to ask the right questions one must look at the problem from a particular viewpoint. "That viewpoint, so far as the origin of domesticated plants is concerned, is, I am convinced, the ecological one ... we must look at wild and cultivated plants associated with man as an ecological

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complex and view this in relation to the ecology of man himself." Scientists must search for exact "archaeobotanical data."

Vavilov considered the soyabean a primary crop (Hawkes, p. 25). In Indonesia, "fermented cakes of soya beans and groundnut [tempeh and onchom] provide about one-third of the total crude protein requirement of the population .." (Stanton, p. 464). In Japan, advanced fermentation processes are used to make miso and shoyu. Today these fermentations take place under highly controlled, industrial conditions in highly specialized environments (Stanton, p. 467).

This book shows clearly that many crops were domesticated before the soybean. In China, foxtail millet (*Setaria italica* var. *germanica*), broom corn millet (*Panicum miliaceum*), rice (*Oryzae sativa*), and wheats (*Triticum* spp.) have been identified in neolithic contexts (Watson, p. 398-99). In Tehuacan, Mexico, radiocarbon datings for common beans (*Phaseolus vulgaris*) have been reported from 5,300 B.P. [before the present] (Smartt, p. 452-53). Chili peppers (*Capsicum annuum*) share with *Phaseolus* beans and the Cucurbits (squashes) the distinction of being among the first plants cultivated in the New World (Americas). Chili peppers have been found in early sites in both Middle and South America. In Mexico, they have been dated back to about 7,000 BC. "This antedates the development of agriculture and implies that wild plants were being exploited." The first plants cultivated in Peru appear to be gourds and squashes, but by 2,000 BC peppers were grown in the Ancon area on the central coast (Pickersgill, p. 443, 446-47). Address: 1. Dep. of Anthropology, University College, London. 2. Dep. of Human Environment, Inst. of Archaeology, London.

4709. Yamaguchi, Kozo. 1969. Jôzô kikai. Sake, miso, shôyu seizô no kindaika o hakaru [Brewing machines: Designing for the modernization of sake, miso, and shoyu production]. Tokyo: Chijin Shokan. 169 p. (Modern Engineering Library). [20+ ref. Jap]*

4710. Zycha, H.; Siepmann, R.; Linneman, G. 1969. Mucorales. Eine Beschreibung aller Gattungen und Arten dieser Pilzgruppe [The Mucorales. A description of all genera and species of this group of molds]. West Germany: Verlag von J. Cramer. viii + 355 p. See p. 74-84. Illust. Index. 25 cm. [809* ref. Ger]

• ***Summary:*** Within the Mucorales, and within the family Mucoraceae, are a number of genera that are important to fermented soyfoods: I. Mucor. VI. Actinomucor. IX. Rhizopus.

The genus Rhizopus was named by Ehrenberg in 1820 (Nova Acta Acad. Leop. 10, 1, 198). The following species of Rhizopus mold are discussed in detail, with a short bibliography of previous names for some, and some are illustrated with exquisite line drawings: 1. *Rhizopus homothallicus*. 2. *Rhizopus sexualis*. 3. *Rhizopus microsporus*. 4. *Rhizopus circinans*. 5. *Rhizopus echinatus*. 6. *Rhizopus oligosporus* (named by Went & Prinsen Geerligs 1895; In 1907 Saito named it *R. tamari* and found it in Japanese Soja-Koji). 7. *Rhizopus arrhizus* (4 illust. from Zycha 1935). 8. *Rhizopus cohnii*. 9. *Rhizopus oryzae*. 10. *Rhizopus nigricans* (6 illust. from Zycha 1935). Address: 1-2. Biologische Bundesanstalt fuer Land- und Forstwirtschaft, Inst. fuer Forstpflanzenkrankheiten, Kassler Str. 22, D-351 Hann. Muenden, West Germany.

4711. Muso Shokuhin. 1969? Tennen jôzô shôyu [Naturally fermented shoyu (Leaflet)]. Osaka, Japan. 1 p. Undated. Address: Osaka, Japan. Phone: (06) 772-5340.

4712. Erewhon Trading Co., Inc. 1970. Traditional foods: Importers, processors, distributors. Wholesale-retail catalogue. Boston, Massachusetts. 12 p. Jan. 1. 22 cm. [2 ref]

• ***Summary:*** On the cover is the silhouette of three heads of grain on the plant, by a Japanese crest. Prices are given for each item. The company sells the following types of foods: 1. Grains: Brown rice (short grain Kokuho Rose grown by Koda Brothers, in 2 lb., 5 lb., 10 lb., 25 lb., 50 lb., or 100 lb. quantities). Sweet brown rice (Koda Bros.; it is more glutinous than brown rice, in the same 6 quantities). Note: No claim is made, anywhere in the catalog, that this rice is organic, or unsprayed, or "natural" or anything other than regular brown rice.

2. Beans: Azuki beans (imported from Hokkaido), Black beans ("Kuromame, a black soy bean import"), Chickpeas (Garbanzo, imported from southern Europe).

3. Sea vegetables: Dulse (From Grand Manan Island, Canada), hiziki, kombu, nori (dried laver), wakame (the latter 4 imported from Japan).

4. Soy Bean Products: Soy sauce (Aged naturally in wooden kegs at least 18 months. 16 oz for $1.20, 32 oz for $2.25, ½ gallon for $4.25, 1 gallon for $8.00, 4.75 gallon keg {21.13 liters} for $30.00). Hacho miso ("Soybean puree made from soybeans, salt & water. No chemicals used in fermentation. Aged at least 18 months", 1 lb for $1.20, 2 lb, 4 lb, 44 lb keg for $36.00). Mugi miso ("Soybean puree. A lighter miso made with barley": 1 lb, 2 lb, 44 lb keg). Moromi ("A thick sauce removed from the bottom of the soy sauce kegs after fermentation. Its uses are unlimited in soups & sauces"; 7 oz for $1.20.). Seitan ("Wheat and soy sauce cooked together for a long time. When used in soups or sauteed in vegetables it has a taste much like beef", 3½ oz. for $1.20). Note 1. This is the earliest document seen (July 2005) that mentions seitan and clearly understands what it is.

5. Condiments: *Furikake* ("A tangy sesame condiment made from Miso, sesame seeds, soy flour, nori and bonita [sic, bonito] flakes", 3½ oz.). Daikon pickle. Sesame miso ("A hearty condiment for use on rice and other grains. Made from miso and unhulled sesame seeds", 3½ oz). Tekka ("A

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strong dark condiment; famous for its medicinal qualities. Made from carrots, burdock, lotus, ginger, sesame oil, and miso"; 3½ oz), Sesame seeds, Sesame tahini.

6. Sea salt: Grey unrefined (from the Mediterranean Sea, unwashed and unground), White unrefined. 7. Oils: Corn germ oil (unrefined, pressed. No solvents, chemicals, or preservatives), Sesame oil. 8. Noodles: Ito soba, Kame soba, Udon. 9. Beverages: Kukicha, Kohren (Lotus root powder), Mu beverage (made from 16 different herbs), Yannoh (coffee-like drink made from grains and beans).

10. Miscellaneous: Dentie toothpowder (made from eggplant and salt), Kuzu arrowroot, Umeboshi & chiso [shiso, shisonoha, or beefsteak leaves]. Umeboshi ("Salt plums aged in wooden kegs for at least 3 years").

11. Cookbooks (written in America): *Cooking Good Food*, and *Cooking with Grains and Vegetables*.

The majority of the above products are imported, mostly from Japan.

The inside front cover states: "Due to the growth of our business and our belief that good quality food should be available at low cost, we have eliminated many items from our wholesale list. We have eliminated most grains because excellent quality grains are available from many sources at more reasonable prices than we are able to charge. Two excellent sources for grains are Arrowhead Mills, Box 866, Hereford, Texas, and Pioneer Specialty Foods, Box 427, Fargo, North Dakota. Also eliminated from our wholesale list is Chico-San products. For these please write directly to Chico-San, 1262 Humboldt Ave., Chico, California, or contact any health food distributor."

Note 2. The products in this catalog do not require refrigeration; they contain no refined sugar / white sugar, no meat, and no dairy products–just like the catalogs of almost all subsequent natural food distributors during the 1970s and 1980s.

Note 3. This is the earliest existing Erewhon catalog seen (March 2011), and the earliest document seen (March 2011) concerning Erewhon and soy.

Note 4. This is the earliest document seen (March 2006) that mentions Arrowhead Mills, of Hereford, Texas. Address: 342 Newbury Street, Boston, Massachusetts 02115. Phone: 617-262-3420.

4713. Claiborne, Craig. 1970. East meets West. *New York Times*. Jan. 4. p. 196.

• ***Summary:*** The Japanese dish named shabu-shabu "is sometimes called oriental fondue in this country." The Japanese word is "onomatopoeic; it imitates the sound of chopsticks as they swirl the broth." It is served as a communal dish at Saito (131 West 52nd St.) one of New York's best Japanese restaurants.

The recipe for Shabu-shabu calls for "2 pieces tofu (bean curd), cut into 4 pieces (eight pieces in all)." There are also recipes for Ponzu, Gomatare [Gomadare], and Dashi. In the first two of these, "soy sauce" is a key ingredient. In all three call for the use of "ajinomoto (monosodium glutamate), optional," up to 1 tablespoon in the Gomatare recipe!

4714. Hellendoorn, E.W. 1970. Onbewerkte en bewerkte peulvruchten in onze voeding [Unprocessed and processed legumes in our food]. *Voeding* 31(1) 1-14. Jan. 15. [10 ref. Dut]

• ***Summary:*** The soybean (*de sojaboon*) and soyfoods (p 6-7) include: Soybean meal (*sojameel*), soy oil (*de olie*), soy sprouts (*gekiemde sojaboonen*), tofu (*tahu*), soy sauce (*sojasaus*), miso, and tempeh. Address: Doctor, Centraal Instituut voor Voedingsonderzoek TNO, Zeist.

4715. Centre de Documentation Internationale des Industries Utilisatrices de Produits Agricoles (CDIUPA). 1970--. IALINE (Industries Agro-Alimentaires en Ligne) base de donnees [IALINE (Food and Agricultural Industries On-Line) database]. 1, avenue des Olympiades–91300 Massy, France. [271542 ref. Fre]

• ***Summary:*** This is the world's best database for French-language publications related to food and nutrition. It first became available for use in Jan. 1970, and that is also the date of the earliest record in the database. It is produced by the Center for International Documentation on Industrial Utilization of Agricultural Products (CDIUPA), founded in 1965 by the French Ministry of Agriculture. CDIUPA is administered by APRIA (*Association pour la Promotion Industrie Agricole*), which is a member of the International Commission of Agricultural and Food Industries.

The current contents of the database is published in a monthly journal titled "Industries Agro-Alimentaires: Bibliographie Internationale," which began under that title in Jan. 1983. It was preceded by *Bibliographie Internationale des Industries Agro-Alimentaires. Bulletin Bibliographique* (published from Jan. 1967 to Dec. 1982). In the monthly journal, the citations are grouped under 6 broad headings: 1. General (with 8 subcategories). 2. Agro-food industries (industries agroalimentaires; with 17 subcategories; Many documents on soyfoods are cited in subcategory N titled "*Protéines d'origine animale, végétale, microbiologique, algues et levures aliments*"). 3. Fermentation industries (with 6 subcategories). 4. Food microbiology. 5. Food toxicology. 6. Utilization and adding value to agricultural and food-industry by-products. Biotechnology. The journal contains 3 indexes: Subject index. Index of sources (periodicals [with journal names written out in full], acts of congress, books, theses). Author index.

Information related to soyfoods is likely to be found under the following headings in the subject index: Aspergillus oryzae; Farine de soja (incl. soy flour, and roasted soy flour or kinako); Huile de soja (soy oil); Koji; Lait de soja (soymilk); Miso; Nato (incl. natto); Produit à base de soja (incl. dawa-dawa, kinema, soy cheese [western

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style], fermented black soybeans / Hamanatto, soynuts, soy ice cream, soy yogurt, thua-nao, yuba), Protéine de soja (soy protein products); Protéine de soja, Produit extrudé (extruded soy products); Protéines d'origine animale, végétale; Sauce de soja (soy sauce), Soja (incl. green vegetable soybeans), Soja, germe (soy sprouts); Sufu (fermented tofu); Tempeh, Tofu. Address: Massy, France. Phone: (1) 69.20.97.38.

4716 Hashimoto, Hikotaka; Yoshida, H.; Yokotsuka, T. 1970. [Removal of iron from soy sauce]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 48(1):50-55. Jan. [16 ref. Jap; eng]
Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., Noda, Chiba prefecture, Japan.

4717 **Product Name:** Tamari (Soya Sauce), Miso (Soya Bean Paste), Daiya Tofu (Bean Curd).
Manufacturer's Name: Hunzana Foods Limited (Importer-Marketer). Made in Japan.
Manufacturer's Address: 34 Dryden Chambers, 119 Oxford St., London, W.1, England.
Date of Introduction: 1970, January.
New Product–Documentation: Ad (full-page) in *The British Vegetarian*, 1970, Jan/Feb, p. 9. Hunzana imports these health foods from Japan. ½ litre of "Tamari (Soya Sauce)" sells for 6 shillings 9 pence (6/9). 1 lb of "Miso (Soya Bean Paste)" sells for 5/6. 188 gm of "Daiya Tofu (Bean Curd)" sells for 6/6. Hunzana also imports other foods from India, North Ireland, Eire, Germany, and Greece.

4718 Tanaka, Teruo; Saito, N.; Yokotsuka, T. 1970. [Studies on sensory evaluation of soy sauce. XI. Relations between odour patterns and chemical factors (2)]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 48(1):56-62. Jan. [13 ref. Jap; eng]
Address: Central Research Inst., Kikkoman Shoyu Co., Ltd., Noda, Chiba, Japan.

4719 Ebine, H.; Matsuura, M. 1970. Rizoopusu-zoku no shôyu jôzô e no riyô. II. Rizoopusu-zoku kôbo to tokusei [Application of *Rhizopus* for shoyu manufacturing. II. Properties of Rhizopus enzymes]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 25, p. 140-45. Feb. Reprinted from Chomi Kagaku 16(4):15-19 (1969). [4 ref. Jap; eng]
Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan (Norinsho Shokuryo Kenkyujo).

4720 Erewhon Trading Co., Inc. 1970. Traditional foods. Importers, processors, distributors. Mail order catalogue. Boston, Massachusetts. 16 p. March 1. [2 ref]
• ***Summary:*** On the orange cover is the silhouette of three heads of grain on the plant, by a Japanese crest. The company sells the following types of foods: 1. Whole grains: Brown rice (short grain grown by Koda Brothers, in 6 weights from 2 lb. to 100 lb). "Not strictly organic, but the finest available in the U.S. today."

Note: The previous sentence, starting with "Not strictly organic" is deceptive and misleading. According to "Erewhon, A Biography," by Paul Hawken (*East West Journal*, Aug. 1973, p. 13) the short-grain brown rice being sold by Erewhon at this time was grown by the Lundberg brothers (Wehah Farm, Richvale, California) and harvested in the fall of 1969. But this rice was the result of a secret deal, so Koda Brothers is listed in the Catalog as the grower. According to the Koda website, Koda first started to convert some fields to organic in 2004. Moreover, this rice was not "the finest available in the U.S. today." The only organically grown brown rice in the USA in March 1970 was grown by the Lundberg Brothers (Wehah Farms) in Richvale, California. 1969 was the first year they had grown rice organically, and they grew 78 acres under contract with Chico-San, who agreed to buy all the brown rice grown on that acreage in exchange for the exclusive right to sell that rice. Chico-San sold half the rice in advance and had no trouble selling all of it. But they refused to sell any of the rice to Erewhon. In 1970 Lundberg expanded their exclusive organic brown rice acreage to 200 acres; that rice was harvested in the fall of 1971.

Sweet brown rice (also grown by Koda Bros.), buckwheat groats (Kasha, from Pocono Mts. in Pennsylvania), wheat berries (organically grown in the Golden Valley of North Dakota), millet (organically grown), barley, yellow and white corn (organically grown in Deaf Smith County, Texas), oats, rye (organically grown in Deaf Smith County, Texas). Table of prices for different weights. 2. Fresh stone ground flours. 3. Cereals, made from whole grains and milled in a manner to allow quick cooking, incl. Kokoh (which can be used as a milk substitute or prepared as a cereal for children). 3. Noodles (udon, soba, and shonai fu–wheat gluten cakes). 4. Beans: Azuki beans ("The King of Beans... Organically grown on the island of Hokkaido, Japan), black beans (a sweet black soybean imported from Japan. Organically grown), chickpeas, soybeans ("Organically grown in Pennsylvania. A food high in protein, vitamins and minerals. Should be soaked many hours before cooking. Particularly good if cooked with Kombu"), pinto beans, whole green lentils, red split lentils. Table of prices for different weights.

5. Sea vegetables: Nori (dried laver), kombu, wakame, hiziki, agar-agar. 6. Dried fish and vegetables: Bonita [sic, Bonito] flakes, chirimen iriko, daikon pickle, gourd strips (dried), daikon (dried radish). 6. Order form. 7. Beverages: Kukicha, mu herbal beverage, yannoh, lotus root powder, mugicha (barley tea), peppermint tea.

8. Soybean Products (imported from Japan): Soy sauce ("aged for at least 18 months", 16 oz, 32 oz, ½ gallon, 1 gallon, 4.75 gallon keg). Mugi miso–Soybean puree ("Made

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by a special enzymatic process, this Miso is aged for 18 months. It is made from soybeans, barley, water and salt. It is ideal for making soups and sauces and blends well with tahini to make a spread for bread." 1 lb, 2 lb, 4 lb, 44 lb keg). Hacho miso–Soybean puree ("A darker, stronger miso than Mugi Miso.. "). Moromi ("A thick sauce removed from the bottom of the Soy Sauce kegs after fermentation. Its uses are unlimited in soups & sauces", 7 oz.). Seitan ("A concentrated protein source made from wheat and soy sauce. When used in soups or sauteed in vegetables, it has a taste much like beef", 3½ oz.).

9. Condiments: *Furikake*, kuzu arrowroot, tekka, umeboshi, sesame butter, Erewhon sesame tahini, sesame salt, white sea salt, grey sea salt. 10. Oils: Refined corn oil, corn germ oil, sesame oil. 11. Sundries: Sesame seeds, sunflower seeds, pumpkin seeds, popcorn, raisins (Thompsons), dried apricots, wheat germ (raw), apple butter, whole dried chestnuts. 12. Toilet articles: Dentie (tooth powder made from eggplant and salt), Aditi sesame shampoo, Orgenc [Orjenc] herbal shampoo, Fu-nori (seaweed shampoo), sesame coconut soap, vege oat soap.

13. Kitchen and tableware: Cookbooks: *Zen Cookery, Cooking with Grains and Vegetables, Cooking Good Food, Zen Macrobiotic Cooking*. Tableware: Rice paddles (bamboo), soy sauce dispenser, oil skimmer, bamboo tea strainer, vegetable press, vegetable brush, bamboo chopsticks (Japanese), chopsticks (Chinese), MAC knife (vegetable), vegetable knife, fish knife, grater, suribachi (3 sizes), Corona hand grinding flour mill ($10.95).

On the inside rear cover is a United Parcel Service rate chart. Address: 342 Newbury Street, Boston, Massachusetts 02115. Phone: 617-262-3420.

4721. **Product Name:** Hopi Seeds: Sunflower Seeds, and Pumpkin Seeds (Dry Roasted with Tamari).
Manufacturer's Name: Erewhon Trading Co., Inc.
Manufacturer's Address: 33 Farnsworth Street, Boston, MA 02210. Phone: (617) 542-1358.
Date of Introduction: 1970, March.
Ingredients: Sunflower or pumpkin seeds, tamari.
How Stored: Shelf stable.
New Product–Documentation: Erewhon Trading Co., Inc. 1971. Natural and organic foods: Price list. Effective Thanksgiving day, Nov. 1971. Talk with Nik Amartseff 1992 April 3. See long interview. These two products were developed by Jerry Sh--, were made in a corner of the Erewhon warehouse at Farnsworth Street, and were on the market by late 1969 or early 1970.

4722. **Product Name:** [Soy Sauce, and Hydrolyzed Soy Protein]
Manufacturer's Name: Glucosa S.A.
Manufacturer's Address: Naranja 159, Naucalpan, Mexico.
Date of Introduction: 1970, March.
New Product–Documentation: *Soybean Digest Blue Book*. 1970. p. 117-18. "Manufacturer and distributor."

4723. Okuhara, Akira; Saito, Nobuo. 1970. Color of soy sauce. IV. Decolorization and depression of browning by reduction. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 48(3):190-201. March. [8 ref. Eng]
• ***Summary:*** The browning of apples and apple sauce is well known in the west. This report describes the decolorization of the browning pigment and the depression of browning. The browning pigment of soy sauce and concentrated apple juice were found to be reduced using metals such as zinc, aluminum, iron, tin (Sn = stannum), sodium, and magnesium, and by electrolysis, to colorless substances.

"The browning pigments of some liquid foods were also reduced electrolytically to colorless substances." Address: Central Research Inst., Kikkoman Soy Sauce Co. Ltd., 399 Noda, Chiba prefecture, Japan.

4724. Okuhara, Akira, Saito, Nobuo. 1970. Color of soy sauce. III. Effect of reducing agents on browning of soy sauce. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 48(3):177-89. March. [11 ref. Eng]
• ***Summary:*** Non-oxidative browning (browning in the absence of oxygen) is depressed by reduction. That is, soy sauce which is kept under reductive conditions by favorable fermentation during the mash process turns brown only slowly. Address: Central Research Inst., Kikkoman Soy Sauce Co. Ltd., Noda, Chiba-ken, Japan.

4725. Okuhara, Akira; Tanaka, T.; Saito, N.; Yokotsuka, T. 1970. [Color of soy sauce. V. Application of multiple correlation analysis to analysis of browning mechanism]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 48(4):228-36. April. [6 ref. Jap; eng]
Address: Central Research Inst., Kikkoman Soy Sauce Co. Ltd., Noda, Chiba prefecture, Japan.

4726. Sugimori, Tsunetake; Jose, Hirokazu. 1970. [Studies on halotolerant lactic acid bacteria relating to soy sauce brewing. I. Isolation and taxonomic studies of *Tetracoccus* sp.]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 48(4):218-27. April. [18 ref. Jap, eng]
Address: Kyoto Research Labs., Marukin Shoyu Co. Ltd., Uji, Kyoto, Japan.

4727. Ives, Bill. 1970. Traveling gourmet finds sukiyaki. *Washington Post, Times Herald*. May 7. p. C14
• ***Summary:*** The ingredients in the recipe for Sukiyaki include "1 block tofu (bean curd) cut into one-inch cubes, optional," "1 cup soya sauce," and "1 teaspoon monosodium glutamate."

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4728. Descamps, Hubert. 1970. Tamari et kokkoh: Source d'acides aminés [Tamari and kokkoh: Source of amino acids]. *Spirale* (*Brussels, Belgium*) No. 36. p. 13-16. May. [1 ref. Fre]

• ***Summary:*** Prof. Christophe of the laboratory of biochemistry and nutrition on the faculty of medicine of the U.L.B. has done an analysis of Kokkoh (grain coffee) and tamari. The composition of 8 amino acids is given for each product.

"Miso, another source of vegetable proteins, strongly resembles tamari, except that the dry extract is superior. Miso contains about 30-40% moisture. Thus it contains about 3 times the concentration of amino acids and other nutrients found in tamari. It is also clear that one cannot consume large quantities of miso. It is interesting to note that miso is very useful for making soups."

Note: This magazine began publication in 1964.

4729. Gray, William D. 1970. The use of fungi as food and in food processing. *CRC Critical Reviews in Food Technology* 1(2) 225-329. May. (Chemical Rubber Co. Press, Cleveland, Ohio). [348* ref]

• ***Summary:*** The section titled "Oriental fungus-processed foods (p. 263)" discusses: Broad differences between fermentation processes in the Occident and Orient, miso, shoyu, Hamanatto, tempeh, ang-khak, ontjom, sufu, meitauza, ketjap, katsuobushi, and other fungus-fermented foods. Chee-fan (a type of sufu), fermented minchin (wheat gluten), fermented soybean prepared from black soybeans in China (fermented black soybeans), tao-cho, tao-si, and taotjo (the last 3 foods made from soybeans). Address: Dep. of Botany, Southern Illinois Univ., Carbondale, Illinois.

4730. Ostrolenk, Vicki. 1970. The secret of Chinese cooking Sze Ch'ang Wei. *Washington Post, Times Herald*. June 4. p. D8, D18.

• ***Summary:*** *Sze Ch'ang Wei* means "Beauty–Fragrance–Taste."

Page D18, titled "'Simple' Chinese food recipes" contains a recipe for "Red cooked beef & eggs." Mix II calls for "¼ C [Cup] dark soy sauce." Mix III calls for "2 T [tablespoons] dark soy sauce."

"1 T soy sauce (light)" and "1 t [teaspoon] sugar (or 1 T hoisin sauce)" are called for in separate recipes on the same page.

4731. Pier 1 Imports. 1970. Yen for tempura? (Ad). *Los Angeles Times*. June 7. p. P39.

• ***Summary:*** "Next time you hunger for Japanese food, begin at Pier 1! Delicate tempura's a snap with our help. Tempura pan [wok], complete with chopsticks, lifter-strainer, draining rack–$1.59. Non-fail [Hime] tempura batter mix is the quick and easy, sure way to success–$0.69. Marukin soy sauce, a genuine shoyu, will also come in handy for barbecue marinades. Economy size 34 oz. bottle–$0.99."

An illustration shows a bottle of Marukin soy sauce, the other items described, and a bottle of sesame oil. Address: Los Angeles area (11 stores).

4732. Meade, Mary. 1970. Serendipity potato salad is full of surprises. *Chicago Tribune*. June 10. p. B3.

• ***Summary:*** "The Japanese American Service Committee asked us to tell them which Japanese recipes are most requested by readers." The answer, of course, was sukiyaki. The committee's favorite sukiyaki recipe, which is given, calls for "1 tofu (soy bean curd), cut into 1-inch cubes," and "3/4 cup Kikkoman (soy sauce)."

4733. Hansen, Barbara. 1970. Former Miss America finds new frontiers in cookery. *Los Angeles Times*. June 25. p. 128.

• ***Summary:*** When Rosemary La Planche won the Miss America title in 1941, it was reported that she liked to cook. She is now married, lives in Sherman Oaks, California, and likes to cook creatively. Her recipe for Sukiyaki Rosemary calls for "1 cake tofu (bean curd), cut into bite-size pieces" and for "½ cup soy sauce."

4734. Fujimaki, Masao, Yamashita, M.; Okazawa, Y.; Arai, S. 1970. Applying proteolytic enzymes on soybean. III. Diffusable bitter peptides and free amino acids in peptic hydrolyzate of soybean protein. *J. of Food Science* 35(3) 215-18. May/June. [21 ref]

• ***Summary:*** Fujimaki and co-workers (1968) found that undesirable flavors were mostly removed from a soy protein preparation by treating it with an appropriate proteolytic enzyme. In many cases, however, the enzymic hydrolyzate was accompanied by an undesirable bitter flavor–probably due to some types of peptides.

In this paper, the authors isolated and characterized 7 types of diffusable bitter peptides made by digesting soybean cold-insoluble protein in a dilute hydrochloric acid solution with pepsin. Bitterness of the diffusable fraction was attributed to free amino acids that have a bitter flavor (such as isoleucine, leucine, phenylalanine, and valine) and to various peptides. Almost all diffusable bitter peptides investigated here had leucine at the termini. By treating these peptides with carboxypeptidase A, the bitterness decreased considerably. Moreover, applying carboxypeptidase A or Nagarse (a bacterial neutral proteinase) to the diffusable fraction of the peptic hydrolyzate was also effective in removing some of the bitterness. Address: Dep. of Agricultural Chemistry, Tokyo Univ., Tokyo, Japan.

4735. Amano, T.; Takeuchi, T.; Yoshii, H. 1970. Shôyu kasu no riyô ni kansuru kenkyû. I. Shôyu kasu-chû no to narabini amino-san sosei ni tsuite [Studies on utilization of soy sauce cake. I. Chemical composition of soy sauce cake and its amino acids]. *Hakko Kogaku Zasshi* (*J. of Fermentation*

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Technology) 48(7):425-30. [17 ref. Jap; eng]
Address: Food Research Inst., Aichi Pref., Nishi-ku, Nagoya, Japan.

4736. Wenkam, Nao S.; Wolff, Robert J. 1970. A half century of changing food habits among Japanese in Hawaii. *J. of the American Dietetic Association* 57(6):29-32. July. [15 ref]
• ***Summary:*** In about 1885, a predominantly vegetarian diet was representative of the farming and laboring classes in Japan. "The three great staples were rice, barley, and soybeans." Those who could not afford rice consumed a less expensive grain such as millet, wheat, barley, buckwheat, or even sweet potatoes. Legumes, which were used universally, included soybean products, peas, mung beans and azuki. The main soybean products were tofu, miso, natto, aburage, and shoyu. Other foods in general use included daikon radish, several types of cabbage, marine algae such as nori, konbu, wakame, etc.

"According to statistics for 1880, total plant food consumption was proportioned as follows: rice, 53 per cent; barley and wheat, 27 per cent; tubers and vegetables, 6 per cent; fruits and algae, less than 1 per cent.

"The chief animal food was fish, much used near the sea, less in the interior. Poultry and eggs were used in small amounts. Beef, mutton, pork, milk, and butter formed a minor part of the diet. The amounts of animal food available per capita per year in 1900 were: meats, 1.3 lb.; fresh fish, 27 lb.; dried fish, 2.5 lb.; and imported meats and fish, 0.3 lb."

A bar chart shows that the daily intake of protein for Japanese adults in Japan and Hawaii has increased from 62 gm in the late 19th century to 101 gm today–an increase of 63%. During the same period, daily fat intake has increased from 10 gm to 87 gm–an 8.7-fold increase! Calories per day are about the same. Address: Dep. of Food and Nutritional Sciences, and School of Public Health, Univ. of Hawaii, Honolulu.

4737. Hashimoto, Hikotaka; Yoshida, H.; Yokotsuka, T. 1970. [Studies on sediment of shoyu. II. Effect of chelating agents and surfactants on the prevention of secondary sediment of shoyu]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 48(8):501-05. Aug. [9 ref. Jap, eng]
Address: Central Research Laboratories, Kikkoman Shoyu Co., Ltd., Noda, Japan.

4738. Hashimoto, Hikotaka; Yoshida, H.; Yokotsuka, T. 1970. [Studies on sediment of shoyu. I. Factors influencing the formation of secondary sediment of shoyu]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 48(8):493-500. Aug. [14 ref. Jap; eng]
Address: Central Research Laboratories, Kikkoman Shoyu Co., Ltd., Noda, Japan.

4739. Yamagata, Ken; Fujita, Tokio. 1970. [Studies on yeasts isolated from saké-cake pickle and soya-mash. I. Identification and salt tolerance of yeasts]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 48(8):485-92. Aug. [7 ref. Jap; eng]
Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Kinki Univ., Osaka, Japan.

4740. Claiborne, Craig. 1970. Culinary cultural revolution topples the Chinese standbys. *New York Times*. Sept. 3. p. 28.
• ***Summary:*** A recipe for Beef steamed in rice powder calls for "1 tablespoon dark soy sauce, 1 tablespoon light soy sauce." A photo shows Virginia Lee and Ms. Wellington Koo (with fan) each holding chopsticks and cooking.

4741. Geffe, Philip R. 1970. A chef tells all the secrets of Chinese cooking. *Washington Post, Times Herald*. Sept. 6. p. 138
• ***Summary:*** The term "black beans" does not refer to the small, lens-shaped black beans from Cuba, but rather to "preserved black soy beans. Records of soybean culture in China go back as far as 2207 B.C." [sic, 11th century B.C.] and there are now more than 10,000 soybean varieties. "The Chinese use inscrutable techniques to process these into an astonishing variety of foods and flavors. The black soy beans (others are yellow or brown) are steamed, fermented and preserved in salt. The result is a condiment with a very strong, piquant flavor totally unlike any product of the West."

At a Chinese grocery (near 7th and H N.W.) Mr. Geffe "bought eight ounces in a plastic bag labelled 'Salted Black Bean,' for 25 cents. 'Yellow Bean Sauce,' in cans, turned out to be a nearly identical substitute for the black beans." He also bought, at reasonable prices, fresh gingerroot, light soy sauce, dark soy sauce, oyster sauce,... Hoisin sauce, five spices, and sesame oil. This last is a flavoring rather than a cooking oil.

Contains a recipe for "Spareribs with black bean sauce." The ingredients include "1 Tb. [tablespoon] black beans." Then: "While ribs are steaming, place beans in a small sieve and rinse in warm tap water. Transfer to a cup and mash thoroughly with a heavy spoon."

Note: This is the earliest document seen (Sept. 2008) in all major U.S. newspapers digitized by ProQuest which explains that "black bean sauce" and "fermented black beans" or "salted black beans" (etc., under whatever name) are actually made from black soybeans. Address: Electrical engineer, freelance writer, and amateur chef.

4742. Hansen, Barbara. 1970. Language of cookery: Soy sauce hails from number of countries. *Los Angeles Times*. Sept. 10. p. K9.
• ***Summary:*** Compares Japanese, Chinese, Indonesian, Hawaiian, and U.S. soy sauces. These can be either brewed [fermented] or mixed from various ingredients to simulate

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the flavor, color, and texture of the brewed soy sauces. The mixed sauces "are based on hydrolized vegetable proteins and are colored with caramel coloring."

Among imported Chinese soy sauces, there is "the familiar dark soy sauce and also a light soy sauce, which can be used to salt and season food when a dark color is not desired."

Shoyu is the Japanese word for soy sauce.

"If you take up Indonesian cookery, don't assume that ketjap is the thick red sauce which Americans pour on hamburgers. Ketjap is the term for Indonesian-style soy sauce, which is slightly sweetened." Note: Could this latter be ketjap manis?

4743. *Los Angeles Times*. 1970. Mastering the menu: Learn how to order your Kaffee mit Schlagobers. Oct. 2. p. I2.
• ***Summary:*** For each of 15 countries where Americans travel, gives a list of words that are useful when ordering in a restaurant. Under Japan: "Kabayaki: Broiled eels. Miso: Bean paste [soy]. Natto: Steamed and fermented [soy] bean. Sashimi: Raw fish dish. Shoyu: Soy sauce. Soba: Buckwheat noodles. Sukiyaki: A quick-cooked meat stew [with tofu and shoyu]. Sushi: Flavored rice and raw fish [sic, many kinds without raw fish]. Tempura: Deep-fried shrimp, fish and vegetables. Tofu: Bean curd. Unagi: Eel."

Note: This same article appeared under the title "Are menus a puzzle? Master a few of those foreign food phrases" in the Oct. 6 issue (p. F16) of this newspaper.

4744. Baens-Arcega, L. 1970. Sauce manufacture. *Process Biochemistry* 5(10):50-51, 56. Oct. [13 ref.]
• ***Summary:*** Discusses the manufacture of fish sauce and soy sauce in the Philippines. Soy sauce is known among the Chinese as 'Ch'au yau' (drawing oil) or 'pak yau' (white oil), and its production, which used to be a household art, made Kwantung province famous all over China."

The process for making fermented soy sauce is described in detail. Photos show: (1) Brine fermentation tanks at Hoc Guan Co., Philippines. (2) A stock of koji trays filled with koji "in sterilised moulding chambers at Silver Swan Manufacturing Co., Philippines. (3) Steam cooking of soya beans for manufacture of soya sauce at the Hoc Guan factory, Philippines. Address: Director, Biological Research Center, National Inst. of Science and Technology, Manila, Philippines.

4745. Hashimoto, Hikotaka; Yoshida, H.; Yokotsuka, T. 1970. [Studies on sediment of shoyu. IV. Precursor of secondary sediment of shoyu]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 48(10):628-34. Oct. [19 ref. Jap; eng]
Address: Central Research Laboratories, Kikkoman Shoyu Co., Ltd., Noda, Chiba prefecture, Japan.

4746. Hashimoto, Hikotaka; Yoshida, H.; Yokotsuka, T. 1970. [Studies on sediment of shoyu. III. Effect of adsorbents and precipitants on prevention of secondary sediment of shoyu]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 48(10):622-27. Oct. [9 ref. Jap; eng]
Address: Central Research Laboratories, Kikkoman Shoyu Co., Ltd., Noda, Japan.

4747. Hughes, G. Bernard. 1970. Bristol blue glass. *Canadian Antiques Collector* 5(9):17-19. Oct.
• ***Summary:*** Bristol, England, was long known for its beautiful blue (from cobalt), semi-transparent flint glass. "Bristol-blue" (as was called) was in continuous production at Bristol from about 1763 to 1799, but little if any was made from about 1800 until 1820, during the Napoleonic wars which blocked supplies of Saxon smalt. In 1821, a lavish set was presented to George IV at his coronation, thereafter it came into vogue under the name of "king's blue."

"Label cruet sets, gilded with lettering and scrollwork, were advertised in 1764, soy and sauce bottles shortly afterwards. Cruet frames in Sheffield plate were fitted throughout with Bristol-blue oil and vinegar bottles and three casters, and soy frames with three to six gold-labeled bottles. They continued in production until the 1830s, little variation being found..."

Photos show: (1) A collection of Bristol-blue glass on three shelves, ranging in tint from deep cobalt blue to smoky greyish-blue. "The pair of sauce bottles (top left) are cut with hollow diamond facets and are engraved "Soy" and Elder" (p. 17). (2) "Two sets of spirit decanters labelled [gin, brandy, and rum] and decorated in gold, with four 12-sided soy bottles with shoulder bands of diamonds cut in high relief." The soy bottles are less than half the height of the decanters, and much smaller in diameter (p. 18).

4748. Fukushima, Danji., van Buren, Jerome P. 1970. Effect of physical and chemical processing factors on the redispersibility of dried soy milk proteins. *Cereal Chemistry* 47(6):571-78. Nov. [8 ref.]
Address: Cornell Univ., Geneva, New York.

4749. Fukushima, Danji.; van Buren, J.P. 1970. Mechanisms of protein insolubilization during the drying of soy milk. Role of disulfide and hydrophonic bonds. *Cereal Chemistry* 47(6):687-96. Nov. [9 ref.]
• ***Summary:*** Insolubilization during drying was the result of polymerization, which took place through disulfide bonds, as indicated by the effects of sulfhydryl-blocking agents, and through hydrophobic bonds, as indicated by the effect of sodium dodecyl sulfate. Address: Cornell Univ., Geneva, New York.

4750. Goldman, M.C. 1970. Southern California–Food-shopper's paradise! An exciting burst of organic-living

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enthusiasm–among young, old and in-between–has created a tidal wave of food shops and more products from Santa Barbara to San Diego. *Organic Gardening and Farming* 17(11):38-45. Nov.

• ***Summary:*** "Spearheading the surge to organic foods today is the West Coast's literal Garden of Eden–the southern half of Golden California." And this should be no surprise. A climate well suited for year-round gardening and farming join with people of all ages with people interested in natural foods plus "that rapidly-enlarging segment of the younger generation now so awake to wholesome eating.

"Actually, a sizable chunk of early interest in organic ideas belongs to this paradisiacal area. Pioneers like Phil Arena, Herbert Clarence White, Maria Wilkes, Clarence Tontz, Lee Anderson and dozens more have all lent the sunny Southwest locale an aura of organic history-in-the making."

In a late July trip from Santa Barbara south to San Diego the writer observed in shop after shop (there are at least 300 "health food stores") along the beautiful Pacific coastline, streams of young folks–many with surfboards and/or children in tow–were coming in to buy fresh fruits and vegetables, whole grains, "juices, kelp and dulse, sea salt and soy products, breads and eggs."

Veteran Betty Morales, prolific writer and lecturer, notes: "The influx of young people is like a blood transfusion to the health-food business, particularly to the retailers of organically-grown foods."

Sun Circle Ranches, based in California, supplied by some 200 organic farmers (large and small), are the leading nationwide distributor of organic produce.

In Los Angeles, Erewhon Trading Co., related to the original shop in downtown Boston, Massachusetts, is only a year old, yet serves 100 West Coast stores, natural food restaurants, co-ops and various institutions. Paul Hawken, president of Erewhon [a macrobiotic company], notes that even some of the big universities, including UCLA, have become customers for the popular organic brown rice and soy sauce.

Jimmy Silver, shop manager, says the store's retail clientele consist of about half each younger and older people. Fresh produce from Sun Circle attracts both. Silver sells about 1,200 hundred pound bags of brown rice each month–90% of it wholesale to established shops in L.A. and other parts of the Southwest. Grown for Erewhon by Wehah Farms in Richvale, California, it now retails for $16.50 per 100-lb sack.

"Grains from the well-known Arrowhead Mills in Deaf Smith County, Texas, also make up a sizable segment of business, says Hawken, a young man who typifies the keen, forceful drive of the new generation in health foods marketing. Along with these and rice, soy sauce made from Japanese organic-grown beans constitutes the biggest seller–nearly 4,000 gallons a month at $8 by the gallon, down to $1.20 per pint. Various soybean pastes, such as *mugi miso* prepared with the beans, well water and salt, are also favorite products. So is seaweed ..."

Says veteran store owner Walter Lindberg: "No question about it, people are becoming more concerned about the quality of the food they buy." All store owners say that business has jumped during the past year–especially from young people. "Young people have an open communication system that far outstrips TV and radio."

At the Sun and Earth shop in Goleta, a suburb of Santa Barbara packed with students, one popular item (called the "natural foods answer to the TV dinner") is "a platter of our soyburgers, carrots and parsley," which retails for 57 cents.

Goldman concludes: "The thunderbolt of organic living has not only struck ground in the West–it's sent a strong, vital message crackling everywhere in the land."

Contains 6 photos taken inside the new breed of food shops. Address: Box 866, Hereford, Texas.

4751. Saint, Wint F. 1970. Soy foods–West. *Soybean Digest.* Nov. p. 32-33.

• ***Summary:*** With such a large number of people of oriental ancestry living along the Pacific Coast of the United States and in the islands of Hawaii–our 50th state–"plus the interest in oriental cooking by occidental people, it is hardly surprising that edible soybeans play a prominent part in the ingredients of many oriental dishes and prepared food products in the West."

"But very few people have ever heard of a food that has been a staple in the oriental diet for centuries–bean cake.

"Bean cake, which includes tofu and Chinese cheese, is an excellent food, high in protein, and containing all the essential amino acids."

"Being a soft-curd product, similar in consistency to our cottage cheese, fresh bean cake alone has no distinctive flavor. In fact, it is quite bland. However, it very quickly picks up the flavor of foods with which it is cooked... Thus it may be considered an 'extender' or 'food supplement.'"

Briefly describes how to make "fresh bean cake" on a commercial scale, with calcium sulphate used to coagulate the soy milk (also called "bean milk"). "The residue [okara] usually ends up at the local hog ranch."

The curded soy milk "is scooped into stainless steel trays, or forms, where any excess water is removed. The slabs are then put through another machine which, by means of wires or knives, cuts the cake into small cubes or rectangular pieces which are packed into jars or 'see-through' plastic trays with a very small amount of water. Printed heat-sealing cello tops are affixed along the top edges of the trays.

"The tofu-type bean cake is best when fresh, although if kept in water it will hold its freshness for several days in the refrigerator.

"During the early morning business hours the freshly packed product is delivered to the colorful oriental food

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shops and restaurants or western supermarkets of the Pacific Coast and Hawaii. A 1969 news release stated that this product accounted for close to $3 million is sales by about 20 U.S. manufacturers and that only slightly over 50% of the consumers were of Oriental descent.

"Fermented-type cake. The fermented-type bean cake–Chinese cheese–is also a soy-milk-based product, but its manufacture is somewhat more complicated, lengthier, and closely guarded than the fresh type. When the fermentation process–which is a matter of days rather than hours–has been completed,... the small yellow cubes are packed neatly in a solution of water plus alcohol, in hermetically sealed glass jars, to insure perfect keeping qualities. One large local producer [probably Quong Hop & Co.] is distributing his product in practically all the 50 states of the U.S. as well as shipping into Canada, South America, and even to Hong Kong!

"Of the fermented-type Chinese cheese, the most widely known, and used, is the yellow or Foo Yee, the taste of which can be compared to a mellow Camembert cheese, while the red, or Nam Yee, is more highly seasoned or spicy. The yellow is called for in many Chinese recipes. A jar will be found in most any Chinese-American kitchen, used mainly as a seasoning, as a cheese substitute, or a topping for macaroni or vegetable dishes.

"The red type–Nam Yee–being of a stronger, spicier flavor–is usually used as a condiment or a seasoning for flavoring roasts, steaks, or with fowl."

Note: This is the earliest English-language document seen (Oct. 2011) that uses the term "Nam Yee" to refer to fermented tofu.

"Oriental recipes calling for the use of bean cake are varied and most interesting. Very simply - bean cake can be eaten 'as is' with just a bit of sugar sprinkled over it, or dipped in soy sauce, to give it flavor. Or, it may be diced and scrambled with eggs for a breakfast dish, or prepared with pork–known as Tofu Yuk–or with beef."

A portrait photo shows W.F. Saint. Address: W.W. Saint Co., San Francisco.

4752. *Soybean Digest.*1970. A Southeast Asia soy food firm. [Yeo Hiap Seng Ltd.]. Nov. p. 3.

• ***Summary:*** "A company that started as a family business making soybean products is today one of the largest food and beverage concerns in Southeast Asia. Yeo Hiap Seng Ltd. owns a number of manufacturing plants in Singapore and Malaysia and makes soybean products and also soft drinks and canned foods.

"Yeo Hiap Seng Ltd. started off using soybeans as a base for all its products. It made soy sauce, soybean paste, and other products that are basic necessities for Chinese food..

"In 1950, Yeo Hiap Seng Ltd. decided to undertake the processing of soy milk on a commercial scale. The firm successfully launched the first soy milk in bottles in 1952. This is marketed as a food beverage known as 'Beanvit' and retailed at the same price as other soft drinks.

In 1968 the company successfully introduced soymilk in a modern one-way container. "This form of packaging, which has been widely used for milk, is the tetrahedron-shape kraft paper lined with polyethylene-coated aluminum foil. The product is sterilized before filling.

"The soy milk is heated to 142°C and held for 4 seconds, cooled instantly to the original temperature, then poured into the containers. This method of packaging under sterile conditions will enable the product to be kept for about 8 months without refrigeration. The product is much better in both appearance and taste than with the normal sterilization at 115°C for 15 minutes. The container can be discarded after use.

"Yeo Hiap Seng Ltd. has recently introduced an improved soy milk, 'Vitabean.' Packed the same way, Vitabean is enriched with vitamins A, B1, B2, B6, C, D3 nicotinamide and pantothenic acid sufficient to provide half the normal daily vitamin requirements for adults. It has been found there are no great losses of heat-sensitive vitamins processed with this UHT [ultrahigh temperature] method.

"The company says it is looking forward to establishing Vitabean plants in other parts of the world." A photo shows a machine packaging Beanvit and Vitabean, with a woman standing nearby.

4753. Dwidjoseputro, Dakimah; Wolf, Frederick T. 1970. Microbiological studies of Indonesian fermented foodstuffs. *Mycopathologia et Mycologia Applicata* (*The Netherlands*) 41(3-4):211-22. Dec. 4. [18 ref.]

• ***Summary:*** Ragi is Indonesian starter culture. From ragi-tempe (tempeh starter) and tempe were isolated *Rhizopus oryzae, R. arrhizus, R. oligosporus, R. stolonifer, Mucor Rouxii, M. javanicus* and *Trichosporon pullulans.*

From ragi-ketjap, used to prepare Indonesian soysauce, were isolated *Rhizopus oligosporus, R. arrhizus, R. oryzae, Aspergillus oryzae,* and *A. flavus,* the latter species probably being an accidental contaminant. The microflora of *tapé* (*tapeh*) is also described. Two new species are described *Candida lactosa* and *Hansenula malanga,* from ragi-tapé from Surakarta and Malang, respectively. Address: Vanderbilt Univ., Nashville, Tennessee. Dwidjoseputra now resides in Malang, Indonesia.

4754. Crane, Paul S.; Rhee, S.U.; Seel, D.J. 1970. Experience with 1,079 cases of cancer of the stomach seen in Korea from 1962 to 1968. *American J. of Surgery* 120(6):747-51. Dec. [14 ref.]

• ***Summary:*** This case-control study shows a very high incidence of stomach cancer when compared with other forms of cancer seen in a rural Korean mission hospital. Consumption of miso soup or miso ("soya paste" [doenjang]) was associated with increased risk of stomach cancer. "The

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fact that *Aspergillus flavus* is found in soya bean cakes raises the possibility that aflatoxins produced by this mold which grows on the soya cakes (from which soya bean paste is made) may be a possible etiologic factor in the high incidence of stomach cancer seen in 1,079 patients with stomach cancer in a 130 bed hospital in the seven year period from 1962 through 1968 in Southwest Korea." Soya sauce intake was also studied. Address: 1. Nashville, Tennessee; 2-3. Chonju, Korea.

4755. Cho, C.H.; Lee, W.J. 1970. Microbiological studies of Korean native soy sauce fermentation. A study of the microflora of fermented Korean meju loaves. *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 13:35-42. [Eng, Kor]*

4756. **Product Name:** [GranoVita Tender Soymeat Cutlets].
Foreign Name: GranoVita Soja-zart (Zartes Sojafleisch)
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1970.
Ingredients: Soya protein, water, corn-germ oil, egg protein, salt, dextrose, spices.
Wt/Vol., Packaging, Price: 175 gm can wholesales for DM 4.65; 350 gm for DM 6.95 (1980).
How Stored: Shelf stable; refrigerate after opening.
Nutrition: 14% protein.
New Product–Documentation: Full-page ad for 8 granoVita soy products in the book by Manfred Heide. 1977. *Vegetarische Ernährung: 193 Rezeptvorschläge und Speisepläne für ein Vierteljahr* [Vegetarian nutrition and food: 193 recipe suggestions and meal plans for a quarter of a year]. Stuttgart, West Germany: Paracelsus Verlag.

DE-VAU-GE leaflet. 1980? Rezepte aus der GranoVita Versuchskueche. Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p. Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products.

Label sent by Anthony Marrese. 1990. Jan. 10.5 by 2 inches. Red, green, and white on beige. Color photo shows the product, resembling a golden-brown tofu burger with sesame seeds showing, surrounded by peas and carrots. "Soyameat in slices (Sojafleisch in Scheiben)." Neuform certification symbol. Ingredients now read: Whole soybean puree, water, soy oil, egg protein, soy protein, wheat protein, salt, seasonings, dextrose, celery, carob bean flour and guar seed flour as thickeners, onions, spices. Sauce: Water, seasonings, soy sauce, salt. 8 slices per can weigh 200 gm, but 310 gm with sauce. Retails for DM 4.98 (1/90). Composition per 100 gm.: Protein 15 gm, fat 16 gm, usable carbohydrates 5 gm, calories 221.

4757. **Product Name:** Island Soy Sauce.
Manufacturer's Name: Honolulu Sake Brewery Co., Ltd.
Manufacturer's Address: Honolulu, Oahu, HI 96813.
Date of Introduction: 1970.
Ingredients: Water, soy beans, salt, wheat, disodium 5-inosinate, caramel coloring, and sodium benzoate, a preservative.
Wt/Vol., Packaging, Price: 16 fluid oz (1 pint), 50.7 fluid oz (1 quart 1 pint 2.7 fluid oz) or 101 fluid oz (3 quarts 5 fluid oz).
New Product–Documentation: Directory of Honolulu and the Territory of Hawaii. 1930-31, p. 241. The company is currently named Honolulu Ice Co. Ltd. Tomokuni Iwanaga is president. They are at 2153 Booth Rd. In the 1934-35 Directory (p. 211) the name changes to Honolulu Sake Brewery & Ice Co. Ltd. Daizo Sumida is president. Same address. They are never listed as a shoyu manufacturer in any index up through 1954.

Nihei. 1978. Nippon Jozo Kyokai Zasshi. 73(7):542-49 "Hawaii ni okeru Nihon-shu, miso, shoyu no rekishi." Shows one label. This company has closed but their brand is being carried on by the Honolulu Sake Brewery and Ice Co. Ltd. Label. Received Feb. 1988 from Honolulu Sake Brewery & Ice Co., Ltd. 4.5 x 3.5 inches. Red, black, yellow, pink, and white. White, pink and red hibiscus flowers on label. Letter from Takao Nihei. 1988. July 19. The product was launched in 1970 by Honolulu Sake Brewery Co. Ltd. Omit "& Ice" in company name.

4758. Kikkoman. 1970. Shoyu. Film soundtrack transcript. Noda, Japan: Kikkoman Inc. 6 p. Unpublished manuscript. [Eng]
Address: Noda, Japan.

4759. Kim, Z.U.; Cho, M.J. 1970. [Studies on the preparation of a weanling food from soybean. I. Conditions for the digestion of soybean protein by enzymes from *Aspergillus*]. *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 13(1):29-34. [Kor; eng]*
Address: College of Agriculture, Seoul National Univ., Suwon, South Korea.

4760. **Product Name:** Soy.
Manufacturer's Name: Koon Chun Sauce Factory.
Manufacturer's Address: China.
Date of Introduction: 1970.
Ingredients: Yellow beans, flour, salt, water.
Wt/Vol., Packaging, Price: Glass bottle with crown cap.
How Stored: Shelf stable.
New Product–Documentation: W. & I. Chang. 1970. *An encyclopedia of Chinese food and cooking*, p. 54. A photo shows the bottle.

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4761. Lee, T.S.; Lee, S.K.; Shin, B.K. 1970. [Studies on the yeasts for the brewing of soy sauce. I. Isolation, identification and classification of the yeasts in soy sauce koji]. *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 13: 97-103. [Kor]* Address: 2. Sampayo Soy Sauce Brewery, College of Agriculture, Chung Nam [Chungnam] Univ., Daejeon, Korea.

4762. Lee, T.S.; Lee, S.K.; Shin, B.K. 1970. [Studies on the yeasts for the brewing of soy sauce. II. Isolation, identification and classification of the yeasts in soy sauce mash]. *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 13: 171-80. [Kor]* Address: 2. Sampayo Soy Sauce Brewery, College of Agriculture, Chung Nam [Chungnam] Univ., Daejeon, Korea.

4763. Li, T. 1970. [The present condition and prospects for the future of the shoyu industry in Korea]. [Jap]*
• ***Summary:*** The fermented soy sauce industrially produced in Korea is of the Japanese koikuchi type, and in 1970 the annual industrial production was estimated to be about 220,000 kl. Assuming that the daily per capita consumption is about 20 ml, the amount cited above in equivalent to one-half the demand for soy sauce in Korea, and it is estimated the same amount is produced at home.

4764. Park, K.I.; Kim, K.J. 1970. [Studies on the manufacture of Korean soy sauce]. [10 ref. Kor, eng]* Address: National Industrial Research Inst., Food Indust. Section, Tong Soong-dong, Chongro-ku, Seoul, South Korea.

4765. Yokotsuka, Tamotsu; Asao, Y.; Sasaki, M.; Oshita, K. 1970. Pyrazine compounds produced by molds. In: Proceedings of the First U.S.-Japan Conference on Toxic Microorganisms. U.S. Dept. of Interior and UJNR Panel on Toxic Microorganisms. See p. 133. *
• ***Summary:*** Shoyu is a safe food. Address: Noda Inst. for Scientific Research and Central Research Inst. of Kikkoman Shoyu Co. Ltd., Noda, Japan.

4766. Abehsera, Michel. 1970. Cooking for life. Swan House, P.O. Box 638, Binghamton, NY 13902. xiv + 364 p. First Avon Flare Books printing, March 1972. Index. 21cm.
• ***Summary:*** Contains many imaginative and joyous macrobiotic recipes. Acknowledgments: "This book could never have been completed without the help of my wife, Claude. Most of the recipes are hers, she cooked, tested and wrote them down... Jack Garvy completed the editing of the book and made definite English corrections. My exceptional friend William Dufty gave valuable advice. Finally, my brother Charles was very helpful..."

The author uses the term "black beans" and from his definition on page 18 it seems that he is referring to black soybeans: "Black Beans, twin brothers of the red aduki in size, are sold in Chinese, Japanese and natural-food stores. They are the milk and honey of the bean family, and their flavor and texture impart a delightful sweetness and richness to any soup or vegetable dish." No definition is given of soybeans. In the section titled "Condiments" (p. 20-21), the author defines soya sauce, miso, seitan, salted plums, tofu, kuzu, etc. "Tofu is another name for soya-bean curd. In Chinatown, you'll see it in wooden barrels. It looks like Feta Greek Cheese and some people would swear it tastes like chicken. It is excellent served with sauteed vegetables, sauces, fried or cooked in Miso Soup.

"Seitan. Your guests will almost certainly mistake this for meat. Teeth find it pleasant to chew. A combination of wheat gluten, wheat soya beans [sic], water and salt, it comes in handy when mixed with vegetables, sauces and soups." Note 1. No recipe for making or using seitan appears in this book.

Soy-related recipes include: Cooking beans in a pressure-cooker (p. 66; "Do not pressure cook black beans. Their skins may come off and clog the pressure cooker spout. It is quite dangerous!"). Cooking beans in a pot (incl. soya beans, p. 67). Black-bean stew (with miso, p. 70). Soja jardiniere (with whole soya beans and miso).

In the chapter titled "Soups," the author tells the story of how the famous Japanese physician, Dr. Tatsuichiro Akizuki, used miso to strengthen his constitution and to survive the atomic bomb dropped on Nagasaki on 9 Aug. 1945. Under "Minerals" in that chapter he discusses other virtues possessed by miso, then gives a recipe for Miso soup (p. 86).

Radishes sauteed in miso (p. 114). Sandwich au gratin (with miso spread, p. 114). Macrobiotic marbles (with miso, p. 155). Claudia's pizza (with miso, p. 158). Salade au cresson (with miso, p. 169). Nato [sic, Natto] (Japanese salad with natto, p. 171, Note 2. The author describes "Nato" as "sour soy-beans, bought in a Japanese store"). Miso sauce (p. 178). Miso spread (with tahini, p. 187). Oat-miso spread (p. 188). Scallion spread (with miso, p. 188). Miso pâté (p. 189). Komoku (with tofu, deep-fried and cut into strips, p. 212). O'Sushi (with tofu, p. 217). Kasha à l'Orientale (with tofu, p. 220). Bi-Cuan (Vietnamese recipe with fried tofu, p. 226). Kagetsu ice cream (with fine soya powder [perhaps Jolly Joan from Ener-G foods in Seattle], p. 334; "Kagetsu is a beautiful restaurant in Seattle"). Yellow pompidou (with soya bean powder, p. 336).

The Foreword states (p. 1-2): "Ten years ago I was a sick man, struggling to stay alive and to finish a novel. I suspected I might fail in both matters and the doctors of Paris agreed. They abandoned me as a hopeless case. It was then that I discovered a way of life called Macrobiotics. After a year of eating grains and vegetables, my health restored, I ventured to New York to discover America and finish my

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novel."

Note 3. *Webster's Dictionary* (1985) defines feta, a word first used in English in 1940, as "a white semisoft Greek cheese made from sheep's or goat's milk and cured in brine."

Fax from Jimmy Silver 1991 Dec. 17. This was the first best-selling macro / natural food cookbook. Michel is head of a (the?) Jewish community in Montreal, Canada. He has 7-9 brothers and 1 sister. "His brother, George, founded the Nature de France clay based body care company–originally called Cattier but changed after they were sued by Cartier. I thought they would have prevailed in the suit but George didn't want to spend $500,000 to fight it even if he won." Address: New York.

4767. Benet, Sula. 1970. Festive recipes and festival menus. New York, NY: Abelard-Schuman. 196 p. 22 cm. [1 ref]*
• ***Summary:*** This cookbook was first published in 1957 under the title *Festival Menus 'Round the World*, by the same publisher with the same number of pages.

Page 39: A recipe calls for 1 tablespoon thick soy sauce.

4768. Binding, George Joseph. 1970. About soya beans: Wonder source of protein and energy. London: Thorsons Publishers Ltd. 64 p. No index. 18 cm. About series, no. 35.
• ***Summary:*** Contents: 1. Beans in general. 2. History of the soya bean. 3. Content of soya beans. 4. About lecithin–vital for retaining youth. 5. The soya bean in the Far East: La Choy Products, cooking in China, soya sauce, bean curd or tufu [sic, tofu], bean sprouts, soya bean milk, candied beans, Japan, natto, miso, Japanese soya sauce. 6. American influence on the soya bean. 7. Industrial uses in America. 8. The soya bean and world food shortage. 9. Soya bean recipes.

On page 10 we read: "For over 5,000 years this tiny seed has been the staple food of certain parts of the East, including North China, Japan, Korea, and some areas of India. The ancient Yogis, who were among the world's first vegetarians, placed great faith in the soya bean as a supplement to their meatless diet." Note: Soyfoods Center has been unable (Aug. 2004) to find any documentation for the statement that the ancient yogis consumed soya beans. The earliest date we have seen (Aug. 2004) for the soybean growing in India is 1798 (Roxburgh 1832). The earliest document we have seen concerning the soybean in India is by Beckmann (1798). The earliest document seen (Aug. 2004) for soy products in India (soy sauce) is by Locke (1679). Address: England.

4769. Chang, Wonona W.; Chang, Irving B.; Kutscher, Helene W.; Kutscher, Austin H. 1970. An encyclopedia of Chinese food and cooking. New York, NY: Crown Publishers, Inc. x + 534 p. Edited by Lillian G. Kutscher. Charlotte Adams, Consulting Editor. Illust. Index. 26 cm. International Cookbook Series edition. [52 ref]
• ***Summary:*** This comprehensive work, the result of at least 25 years of collaboration, contains over 1,000 recipes. The 4th printing (March 1977) proclaims prominently: "The first Completely Safe Chinese cookbook compiled in accordance with latest food research without MSG (monosodium glutamate)." Following introductory chapters titled "Chinese Cuisine: Background," "Regional Chinese Cooking," "Utensils for Cooking, Serving, and Eating," "Cooking Preparations," and "Cooking Techniques," there is a detailed "Guide to Ingredients" (p. 22-57), which describes the following soy-related foods and gives Cantonese / Mandarin pronunciation: beans, black (wu dow / wu do); beans–black salted fermented beans (dow si / do shih, used as a condiment or flavoring agent [seasoning]. Aroma: fragrant, appetizing). bean cake, fermented (fu yu / fu yu [fermented tofu]); bean curd (dow fu); bean curd, dried (dried bean curd [dried yuba], p. 25, 47–tiem jook or fu jook pei / t'ien ch'u or fu pi chi); bean curd cheese, red (nam yu / nan yu); bean filling, sweet (dow sa / do sa, made from red [azuki] beans or green / [mung] beans); bean sauce, brown or yellow (mien see jiong); bean sprouts (large, from soybeans) (wong dow gna / huang do ya); hoisin sauce (red seasoning sauce) (hoy sin jiong / hai hsien jiang); soy sauce (dark lo tsow / lao tsou, heavy–jiong yow / jiang yu [jiang you]; light–sang tsow / sheng tsou, table soy sauce–sin tsow / shien tsou). "Dark soy sauce has caramel added for coloring. Heavy soy sauce, which has a slightly sweet smell, is also known as black soy. Light soy sauce is the most delicately flavored and is light brown in color. Japanese soy sauce, somewhere between the Chinese light and heavy, is preferable to domestic brands but inferior to Chinese brands."

Vegetable steak (mien gon / mein jing). "Meat substitute made from wheat gluten. Shape: 3-inch square or round patty ½ inch thick." Brown, chewy, and firm. Sold in cans.

Photos (black and white, p. 47) show fermented black beans, fresh bean curd, pressed bean curd, bean curd sticks and bean curd sheets [both kinds of yuba, but "bean curd sheets" on p. 47 are called "bean curd, dried"], brown bean sauce, and large fresh bean sprouts.

Note 1. This is the earliest English-language document seen (Nov. 2008) that uses the word "dow fu" (or "dow-fu") to refer to Chinese-style tofu.

Note 2. This is the earliest English-language document seen (Nov. 2008) that uses the term "bean curd sheets" or the term "fu jook pei" or the term "fu pi chi" or the term "t'ien ch'u" to refer to yuba or to dried yuba.

Pages 58-60 contain a "Shopping list for Chinese cupboard." Foods are listed alphabetically in English, with the Cantonese term romanized and Chinese character forms. Next come the 1,000 Chinese recipes divided into chapters. One chapter is titled "Bean Curd" (p. 422-34), which includes Ma Po Dow Fu (p. 433); there are so many recipes for regular tofu (dow fu) in this book that we do not have room to list them all. The many other soy-related recipes are listed in the excellent index.

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Recipes for "bean cake, fermented" [fermented tofu] are: Scrambled eggs with fermented bean cake (Fu yu don, Canton, p. 134). Duck with fermented bean cake (Fu yu ta, Adapted, p. 276). Steamed pork with fermented bean cake (Fu yu tsing ju yoke, Canton, p. 292). Stir-fried green beans with fermented bean cake (Fu yu tsang dow, Canton, p. 391). Lettuce and fermented bean cake (Fu yu sang tsoi, Canton, p. 392). Spinach and fermented bean cake (Dow fu bo tsai, General, p. 399). Watercress and fermented bean cake (Fu yu sai yong tsoi, Canton, p. 40).

Recipes for "black beans, salted" [fermented black soybeans] are: Pork with bitter melon and salted black beans (Fu gwa yoke si, Canton, p. 305). Shrimp with bitter melon and salted black beans (Fu gwa dow si har, Canton, p. 306). Steamed spareribs with salted black beans (Dow si pai gwut, Canton, p. 320). Beef with bitter melon and salted black beans (Fu gwa ngo yoke do si jiong, Canton, p. 340). Black bean sauce (Huk dow tsup, Canton, p. 436, with garlic and ginger. Note 3. This is the earliest separate recipe seen {Nov. 2008} for "Black bean sauce").

Recipes for "bean curd, dried" [dried yuba] are: Pig's feet with dried bean curd soup (Ju gyok tiem jook tong, Adapted, p. 113; with "10 sheets dried bean curd." Soak sheets in hot water for 30 minutes. Drain, cut crosswise into pieces 1 inch wide, then add to soup). Spare ribs with dried bean curd soup (Pai gwut shiu tiem jook, Adapted, p. 321). Dried bean curd strips with soy sauce (Hung shu tiem jook, General, p. 424). Vegetarian ham dried bean curd (Sue ho twei dow fu, Shanghai, p. 429; with "20 sheets dried bean curd")

Recipes for "bean curd skin" (or bean curd sheets) [yuba sheets, fresh or dried] are: Red-cooked carp with bean curd skin (Fu pi hung sao yu, Shanghai, p. 158; with "bean curd skin to cover" carp). Red-cooked carp with bean curd skin–Approved ulcer recipe (Hung sao li yu dow fu pi, General, p. 158; with "¼ lb. dried bean curd skin {about 20 pieces, 1½ by 5 inches}. Soak for 30 minutes in hot water. Drain. Cut into 2-inch squares).

Recipes for "frozen bean curd" [frozen tofu]. Frozen bean curd with soybean sprout soup (Dung dow fu dow ya tong, Adapted, p. 90; with "2 cakes frozen bean curd" and "½ lb. soy bean sprouts." "Defrost frozen bean curd by covering with cold water, letting stand 2 to 4 hours before cooking. Then cut each piece into 10 to 12 thin slices"). Spareribs with frozen bean curd (Pai gwut shiu dung dow fu, Adapted, p. 320; with "4 cakes frozen bean curd"). Stir-fried frozen bean curd (Tsao dung dow fu, Peking, p. 422; with "6 cakes frozen bean curd. * Wrap 2 to 3 pieces fresh bean curd together in waxed paper, freeze until hard")

Recipes for "pressed bean curd" [pressed tofu]: Pressed bean curd shrimp (Sha tze gahn si, Shanghai, p. 178, with "4 pieces pressed bean curd"). Golden strips with pressed bean curd (La jiao tsao san sih, Hupeh, p. 313). Pressed bean curd and celery with stir-fried beef (Dow fu gahn ching tsai ro si, Shanghai, p. 357). Stir-fried pressed bean curd with pork (Dow fu gahn tsao ro si, Shanghai, p. 427). Stir-fried pressed bean curd with chicken (Dow fu gahn tsao gee si, Shanghai, p. 427).

Recipes for "soybean sprouts" [soy sprouts]. Spareribs soybean sprout soup (Pai gu dow ya tong, General, p. 112). Beef shank soybean sprout soup (Wu hwa niu ro hwang dow ya tong, General, p. 112). Braised soybean sprouts (Hung sao hwang do ya, Shanghai, p. 376).

Note 4. This is the earliest English-language document seen (Nov. 2008) that uses the term "hwang dow ya" or the term "hwang do ya" to refer to soybean sprouts. Address: USA.

4770. Claudio, Virginia Serraon; De Leon, Sonia Yuson. 1970. Dictionary of foods (rev. and illustrated). Manila, Philippines: G.M.S. Pub. Corp. 249 + [9] p. Illust. 25 cm. *

4771. David, Elizabeth. 1970. Spices, salt and aromatics in the English kitchen. Harmondsworth: Penguin Books. 279 p. See p. 10-13, 89-91, 249-53. Index. 20 cm. [80 ref]

• ***Summary:*** The period of the late 1600s and early 1700s gave rise to the English interest in Indian chutneys and pickles, brought to England by East India merchants. After that, together with the establishment of curry dishes as part of England's national cookery, "came the relishes, the ketchups and sauces which were the forerunners of the bottled sauces today. They too came to us via the East India Company and its traders, and like so many 18th- and 19th-century foods owe their development to the need for products which would stand up to long sea voyages and help to relieve the monotony of the food available both to the crews of ships and their passengers. The old 'store sauces' based on vinegar and horse-radish, soy and garlic, on pickled walnuts, oysters, cockles, mushrooms, lemons, anchovies, and onions gradually became known either as catsups (the word seems to have derived from caveach, a form of spiced vinegar pickle in which cooked fish was preserved. In different forms, such as seabeche, caviche, and so on, the term occurs throughout European cookery, and turns up in Mexico and Japan) or by the name of some individual who was thought to have originated a particular blend. By the mid-19th century, hundreds of British families must have had their own–or what they thought was their own–formula for some such sauce. Some of these sauces were regarded as particular to fish, some to grilled meat, others to roast game, others again were hailed as 'universal sauces.' One such, which appears to have been commercialized in the late 18th century was Harvey's. A recipe for this sauce, mentioned in cookery books and lists of necessary stores throughout the nineteenth century, is given in a cookery dictionary of 1832 (Footnote: *The Cook's Dictionary* by Richard Dolby, late cook at the Thatched House Tavern, St. James St. New edition, 1832). Ingredients were anchovies, walnut pickle,

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soy and shallots, plus a whole ounce of cayenne, three *heads* of garlic, a gallon of vinegar and cochineal for colouring. The whole lot was mixed together, stirred two or three times, every day for a fortnight, strained through a jelly bag until perfectly clear, bottled and corked down. Harvey's, like its rival Worcestershire sauce commercially launched in 1838, was used as a condiment to flavour other less ferocious compounds."

There follows a list of sauces that were popular in the late-Victorian era. Elizabeth Lazenby had a range of sauces; Harvey's was among them.

"The all-conquering tomato sauces and ketchups of today were little known before 1900. The first recipes had appeared in English cookery books during the first years of the 19th century."

The author gives a recipe for a Piquant Sauce (p. 91) that comes from a "modest little manuscript cookery book" in her possession. "The date of the manuscript is probably early Victorian [Queen Victoria reigned 1837-1901]. The recipe reads: "½ oz. of Mace, 1 oz. of Ginger, ½ oz. of Piminto (Allspice berries of Jamaica pepper), ¼ oz. of Chillies, ½ oz. of Mustard seed, 1 oz. of Long Pepper (*Piper longum*, a variety used in Indian cookery), ¼ pint Soy, 1 quart of Vinegar. Bruise the spice and simmer them in the vinegar a few minutes. Strain it, afterwards add the Soy. *Excellent.* Address: 24 Halsey St., London SW3, England.

4772. Haw, Kum; Yu, Jong Yull; Lee, K.Y.; Sung, N.E.; Tchai, B.S.; Cha, C.H. 1970. A report of nutrition survey (1969). *Hanguk Yongyang Hakhoe Chi* (*Korean J. of Nutrition*) 3:1-43. [16 ref]

• ***Summary:*** The last nation-wide nutrition survey in Korea was conducted in 1947. The authors of the present survey, with financial support from the Ministry of Health and Social Affairs, conducted this nation-wide survey (incl. dietary, clinical, and socio-economic aspects) from 29 July to Aug. 15, 1969.

Table II-6 (p. 7), titled "Average food intake per person per day (gm)" shows various categories of food in five different areas or occupations, plus the average. Soyfoods are listed under "A. Vegetable foods–2. Pulses and their products" as follows: Soybean–City 2.6, agriculture 3.6, fishery 3.7, mountainous -, mining -, average 2.4 gm/day. Soybean paste [jang]–City 7.5, agriculture 12.4, fishery 5.8, mountainous 11.2, mining 8.1, average 10.4 gm/day. In this category, figures for "Small red bean" [azuki] are also given, with an average of 1.7 gm/day.

Other tables show (with the 1st 3 columns above): II-7. Average nutrient intake per person per day. II-8. Average nutrient intake per adult per day. II-9. Average food and nutrient intake per person per day and % distribution (protein, fat, carbohydrate, energy).

IV-8. Education. IV-9. Roof materials on house. IV-10. Number of rooms in house. IV-11. Wall materials on house. IV-12. Lighting in house. IV-13. Water supply in house. IV-14. Latrine. IV-15. Bath (private, public, well, stream or spring). IV-16. Kitchen (in the house, out, public). IV-17. Fire place (number in house). IV-18. Fuels. IV-19. Kitchen equipment (no. of iron pots, bowls, small bowl, spoons or chopsticks). IV-20. Bed clothes (no. of quilts, of mattresses). IV-21. Occupation (90.6% in agriculture). IV-22. Ownership of house. IV-23. Monthly income. IV-24. Land. IV-25. Domestic animals (chicken is by far the most popular). Address: 1. College of Pharmacy, Kyung Hee Univ., Seoul, Korea.

4773. Hooker, Alan. 1970. Vegetarian gourmet cookery. San Francisco, California: 101 Productions. 192 p. Edited by Helen Morrow. Illust. by Sara Raffetto. 21 cm.

• ***Summary:*** Pages 101-02 state that one of the easiest ways to get one's daily protein is by using soya flour, which can be added to many foods. Soy-related recipes include: Baked soy beans (p. 56). Tofu with tempura vegetables (p. 132). Page 181 recommends various vegetarian food products, including Vegeburger and Choplets (made by Loma Linda Foods), Kikkoman brewed Soy Sauce, Bakon Yeast, and Gravy Quik (which contains soy and other vegetable proteins).

4774. Hosoda Bros. (Hosoda Kyodai Shokai). 1970. Importers & wholesalers (Ad). In: Hokubei Mainichi Shinbunsha, comp. 1970. Hokubei Mainichi Nenkan [Hokubei Mainichi Year Book]. San Francisco, California. p. 32. [Eng; jap]

• ***Summary:*** Ad (1/8 page). The top 1/3 of this ad is in English. In Japanese: Hosoda Kyôdai Shôkai. They import Yamasa Shoyu.

Note: This ad is confusing or misleading. They say they are *seizô oroshi moto*, meaning manufacturer and wholesaler, but in English they say only that they are "Importers & wholesalers." Address: 1596 Post St., San Francisco, California. Phone: 921-6942.

4775. Hughes, George Bernard. 1970. Sheffield silver plate. New York and Washington, DC: Praeger Publishers. 303 p. Illust. Index. 26 cm.

• ***Summary:*** The best treatment of the subject seen to date–especially as it relates to soy. Chapter 19, titled "Cruets and soy frames" (p. 197-202) begins: "Contemporaneous with the Georgian cruet frame was the soy frame." Note: George II of Great Britain ruled from 1727 to 1760.

Early in his reign the British East India Company began to import a new seasoning "known as soy, described in 1776 as 'a sauce as thick as treacle and of a clear black colour'." Note: No source is given for this quotation, nor have we ever been able to find one.

"The vogue for soy, first served from shallow saucers of silver or porcelain, created a demand for specially designed silver-mounted bottles of flint-glass. By the 1750s soy bottles

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were tabled in special frames with two or three other sauces. At first these were differentiated by gilding or engraving a label upon each bottle from the 1770s the bottles could carry silver or Sheffield plate tickets suspended by chains around their necks–miniature versions of contemporaneous wine labels (Chapter 12)

"In the nineteenth century a soy frame might accommodate as many as six, eight or ten matching bottles each containing a different sauce such as soy, kyan, chili, anchovy, catsup, quin, lemon juice, tarragon, harvey and innumerable others including the Indian sauces mogul, nepaul and carrache. Quin was a sauce evolved by the actor James Quin, its ingredients including walnut pickle, garlic, mushroom catsup, horseradish, anchovies and cayenne. The basic flavour of kyan was derived from the smooth red seedheads of the South American cayenne pepper known contemporaneously as garden coral and today as capsicum.

"The earliest soy bottles, dating to the 1740s, were tabled on a graceful frame of silver. A flat circular or quatrefoil platform supported three or four cast scroll brackets attached by soldering and topped by circular guard rings shaped from drawn silver wire to contain the bottles. The brackets also extended downward from the platform as short legs terminating in spreading feet to provide stability. From the centre a standing loop handle rose above the bottles. These were of flint-glass, their long slender necks fitted with silver covers and handles. The fashionable design was ewer shaped with spout and graceful handle curving upward and downward from a silver mount. Richard Boult's trade card of the late 1740s illustrates such a soy frame.

"Thomas Heming, goldsmith to George III, at the King's Arms, Bond Street, illustrated on his trade card the



fashionable soy frame of the late 1760s. A row of three soy bottles with shallow diamond-cut necks and bodies are shown set in pierced galleries standing in a rococo canoe-shaped dish. This design with and without uprising ends continued fashionable until the Victorian period, usually with a row of four bottles and less frequently with six or eight. These were generally facet cut, but the pattern included a narrow plain reserve to be engraved with the name of the sauce. The pantry usually contained several spare bottles inscribed with the names of fashionable sauces. Sometimes eight bottles were offered, six engraved with the sauce names and two carrying silver bottle tickets which could be selected from a set of six bearing the names of unusual sauces.

"Late Georgian silversmiths and Sheffield platers produced many costly conceptions of canoe-shaped soy frames, ornately enriched with cast and chased decoration and containing superbly cut bottles of the finest flint-glass made specially in the glass-man's piling pots.

"By the early 1770s Tudor & Leader, Sycamore Hill, Sheffield, were manufacturing light-weight soy frames, the

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platform usually of heavy wood such as Spanish mahogany to ensure stability. The upper surface and edges were concealed beneath thinly rolled silver plate or Sheffield plate silvered on one side only. The gallery of an example made by this firm in 1776 was pierced with vertical pales, ovals and lozenges and accommodated six cut-glass soy bottles with loosely fitting lift-off silver caps. Claw and ball feet continued fashionable, but foliage and bracket feet were more common. Soy bottles were now short-necked, deep diamond-cut and might be footed, round or square. They were fitted with glass stoppers, usually with ball finials and cut ornament.

"By the end of the 1780s cruets and soy bottles might be brought together to form a single unit placed conveniently in the centre of the formal or semi-formal dining table. At first the bottles were placed in guard rings fitted to a revolving stand of mahogany, its surface covered with a sheet of silver or Sheffield plate. Such pieces were catalogued by the Sheffield platers as ' cruet and soy frames '. Soon this device was enlarged into an unwieldy epergne with branches spreading from a decorative pierced ring supported on stays extending from the guard rings encircling the edges of the revolving stand. Each branch terminated in a silver or cut-glass saucer with another set high in the centre. Several elaborate variants were made: in some examples the epergne was hung with gilded baskets for pickles.

"A catalogue of about 1850 illustrates 27 examples of combined cruet and soy frames, the number of bottles ranging from five to eight and each with four cruet bottles. These are shown set in circular frames with very deep galleries elaborately pierced with festoons; in so-called Gothic patterns; with vertical pales below shaped and festooned rims; and in ovals with substantially moulded uprights at the ends and sides supporting plain guard rings. Examples of the so-called crescent may be noted too, containing three vessels, the central one projecting in front of the others, with an elaborate near-horizontal scroll handle at the back rising appreciably above the guard rings. At this time, too, there was a fashion for a soy frame consisting of four conjoined cylinders elaborately pierced and set around a central standing handle and each containing a cut-glass bottle.

"Although the majority of soy bottles were blown from clear flint-glass of varying qualities, there was a fashion for opaque white glass enriched with decorations and labels in coloured enamels, from about 1770 to the early 1790s, and again in the mid-nineteenth century when the inscription was usually black. Typically these bottles were pear-shaped. Bristol blue glass was a satisfying alternative, lettered in gold. Green soy bottles achieved some popularity in the mid-nineteenth century."

Photos show: (179) "Soy frame, 1780." (180) "Soy frame, 1790." Address: England.

4776. Kikkoman International Inc.; Kikkoman Shoyu Co., Ltd. 1970. Sekai ni aiseru aji no shuyaku [World renowned sauces (Ad)]. In: Hokubei Mainichi Shinbunsha, comp. 1970. Hokubei Mainichi Nenkan [Hokubei Mainichi Year Book]. San Francisco, California. p. 8. [Eng; jap]
• ***Summary:*** Ad (full page). The bottom 1/8 of this ad, plus one line near the top, are in English. The top line of the ad, in Japanese, means "The main character of taste, which is loved by the world." Just below that is the title in English. And to the right below that is the "Kikkoman signature" in English. Near the top left in Japanese: Kikkoman products are made using the best selected ingredients and long experience. They start with shoyu, and include teriyaki sauce, sukiyaki sauce, *Menmi* (noodle broth base), and *Manjô Mirin* (sweet saké for cooking). They are the masters of the food seasoning craft. Kikkoman is working hard in the kitchens of the world.

Photos show: (1) A large, metal 1-gallon can of "Kikkoman Shoyu" (written in English). (2) Bottle of Kikkoman Hawaiian Teriyaki Marinade and Sauce. (3) Bottle of Kikkoman Sukiyaki Sauce. (4) Bottle of Kikkoman Worcestershire Sauce. (5) Bottle of Kikkoman Memmi / Menmi. (6) Smaller and slightly flattened bottle of Kikkoman Manjô Mirin.

In the lower left corner is the Kikkoman hexagonal logo. Above: "Since 1630." Below (in Japanese): *Kunaicho goyôtatsu* (Purveyors to the Imperial Household). Address: San Francisco, Los Angeles, New York, Chicago, USA; Tokyo, Japan.

4777. Kuraun Boeki Kabushiki-gaisha (Crown Imports Co., Inc.). 1970. Crown Imports Co., Inc: Importers–Exporters (Ad). In: Hokubei Mainichi Shinbunsha, comp. 1970. Hokubei Mainichi Nenkan [Hokubei Mainichi Year Book]. San Francisco, California. p. 7. [Eng; jap]
• ***Summary:*** Ad (half page). The top half of this ad is in English. This Japanese company imports many items from Japan, including Marukin Shoyu. Their main office is in South San Francisco, but they also have an office in San Francisco. Cable Address: "Crownimp" San Francisco. Address: 1336 San Mateo Ave., South San Francisco, California 94080. Phone: 761-0266; 873-7600.

4778. Matsuura, Shinji. 1970. Aflatoxins and fermented foods in Japan. *JARQ* (*Japan Agricultural Research Quarterly*) 5(1):46-51. [6 ref. Eng]
• ***Summary:*** No aflatoxins were detected in any samples of miso or shoyu examined. However, aflatoxin-like compounds were detected in about 30% of the koji molds examined, but these compounds differed from aflatoxins in their ultraviolet absorption spectra. Address: Chief, Lab. of Fermentation Technology, Fermentation Div., National Food Research Instute, Tokyo.

4779. Mutual Supply Company (Kyodo Shohi-gaisha). 1970.

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General importer & exporter (Ad). In: Hokubei Mainichi Shinbunsha, comp. 1970. Hokubei Mainichi Nenkan [Hokubei Mainichi Year Book]. San Francisco, California. p. 9. [Eng; jap]

• ***Summary:*** Ad (half page). The top ¼ of this ad is in English. Company name with diacritics is: Kyôdo Shôhi-gaisha. They are selling many items including Mitsuba (Clover) brand shoyu (made in Honolulu, Oahu, Hawaii) and Kikkoman shoyu. Address: 1090 Sansome St., San Francisco, California 94111. Phone: (415) 982-1894

4780. Robeau, Alec. 1970. Cooking the Indonesian way. New South Wales, Australia: A.H. & A.W. Reed. 160 p. Index. 21 cm.

• ***Summary:*** The Introduction has good, long definitions of many Indonesian ingredients including: Ketjap, ketjap manis, soya beans, tahu (tofu, and how to make it at home), taotjo ("These are salted soya beans and are readily available in all Chinese stores and shops." [Note: Taotjo is Indonesian-style miso]), tempe [tempeh].

Soy-related recipes include: Sajur oblok (Smoked fish and vegetable dish, with ¼ lb diced tempe, p. 34-35). Sajur gudek (Spiced vegetables and jackfruit dish, with ¼ lb diced tempe, p. 37). Sajur kangkung (Spiced watercress, with ¼ lb diced tempe, p. 38). Tahu Surabaja (Fried soya bean cakes with vegetables, with ½ lb diced tofu, p. 46). Kuah sate II (Spiced peanut sauce (with ketjap), p. 52). Babi ketjap (Pork in soyabean sauce, with 3 tablespoons soy sauce, p. 74-75). Sambal taotjo (Spiced chilli paste with taotjo, p. 119). Tempe goreng (Fried tempe, p. 128. Serve as a snack or side dish).

4781. Ross, Shirley "Wonderful." 1970. The interior ecology cookbook. San Francisco, California: Straight Arrow Books. 134 + 8 p. Recipe index. 22 cm.

• ***Summary:*** This pseudo vegetarian cookbook contains some fish recipes. Soy-related recipes include: Soybean loaf with tomato sauce (p. 35). Tamari & noodles (p. 55). Fried tofu (with sliced scallions and mushrooms, p. 72). Tofu salad (p. 102). Tamari sauce (with flour, margarine, milk, and mushrooms, p. 115).

4782. Shokuhin daijiten [Great Japanese encyclopedia of foods]. 1970. Tokyo. [Jap]

• ***Summary:*** Contains entries for amazake, miso, natto, shoyu, and tofu.

4783. Steinberg, Rafael. 1970. Pacific and Southeast Asian cooking. New York, NY: Time-Life Books. 208 p. Illust. (color photos). Index. 28 cm. Series: Foods of the World.

• ***Summary:*** A superb book filled with beautiful recipes, text, and color photos. Accompanied by a 128-page spiral-bound book of recipes. Bean curd [tofu] is mentioned on pages 74 (in Indonesian *gudeg*) and 172 (in Vietnamese soup).

Recipes that call for *ketjap manis* (Indonesian sweet soy sauce) are Broiled skewered marinated chicken (Saté ajam, with 2 tablespoons *ketjap manis*, p. 88) and Spiced peanut sauce (Katjang saos, with 1 tablespoon *ketjap manis*, p. 93). The actual recipe for "Ketjap manis (Indonesian sweet soy sauce)" on page 106, which makes about 1 quart, calls for: 2 cups dark brown sugar, 2 cups water, 1½ cups Japanese soy sauce, 3/4 cup dark molasses, ½ teaspoon ground *laos*, ½ teaspoon ground coriander, and ½ teaspoon freshly ground pepper.

Note: This is the earliest English-language document seen (April 2012) that uses the term "Indonesian sweet soy sauce" to refer to *ketjap manis*.

The very interesting headnote (p. 106) states: "The ubiquitous American tomato ketchup, or catsup, gets its name but not its ingredients from the Malayan 'kechop' (in Chinese 'ketsiap') which originally was a pickled fish brine."

Tjolo-Tjolo (Moluccas. Broiled fish and vegetables with 3 sauces). "To prepare the ketjap sauce, mix ½ cup *ketjap manis* and 1 tablespoon of fresh lime juice in a serving bowl" (p. 107).

4784. Stobart, Tom. 1970. The International Wine and Food Society's guide to herbs, spices and flavourings. Newton Abbot, England: David & Charles. 262 p. See p. 236-37. Illust. by Ian Garrard. 26 cm. 1977 ed.–International Wine and Food Publishing Co. Penguin Books ed.

• ***Summary:*** In the Acknowledgments, the author includes thanks to "Mr Lea of Lea and Perrins Ltd., Worcester, England;"

"Worcestershire sauce (Worcester sauce). This bottled commercial sauce is so famous and so worldwide in its use in every country outside the Iron Curtain that it deserves to be mentioned. The story of its origin is probably this. About 1837, the year Queen Victoria came to the throne, a retired governor of Bengal [Sir Sandys or Lord Sandys] went to his local druggists in Worcester, one of several shops belonging to two pharmacists by name Lea and Perrins, and ordered that a recipe he had brought back from India be made up. This was done but it did not pass muster with the ex-governor and he rejected it. The matter was forgotten until some years later when Mr. Lea and Mr. Perrins were turning out the cellar and the barrel came to light. On tasting it they found it was now quite superlative. Unlike O. Henry's tale of the Apollinaris water, they still had the recipe, and began to make it up for local consumption. The sauce so rapidly became popular that ten years later it was used in the household of many noble families, and the druggists had even begun to export it. Its fame was quickly spread around the world by the pursers [those responsible for the comfort and welfare of the passengers] of the early steamships. For instance, in June 1843, it was recorded [no source is given] that 'The cabin of the Great Western had been regularly supplied with Lea and Perrins' Worcestershire Sauce which is adapted for every variety of dish–from turtle to beef, from

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salmon to steaks, to all of which it gives a famous relish. I have great pleasure in recommending this excellent sauce to captains and passengers as the best accompaniment of its kind for any voyage.' Not only does Worcestershire sauce come into most bar cures for a hangover, but it helps to soften the sight of salt pork when one is seasick.

"Worcestershire sauce is now manufactured in many countries and the same old recipe is used. Indeed, the Lea and Perrins factory in Worcester still uses the same splendid Victorian cast iron and wood machinery which, together, with vaults full of barrels of maturing sauce, convey the atmosphere of a winery, belied only by the smell of vinegar and spices.

"Worcestershire sauce is a thin piquant sauce of a general type popular in the days of the East India Company. It is based on vinegar, soy and molasses and contains the juice of salt anchovies together with red chilli, ginger, shallots and garlic, in all, over twenty different tropical fruits and spices. It is not a cooked sauce but is a product of maceration and is matured in oak hogsheads for a long period as it was in the pharmacists' cellar.

"Probably the greatest international use of 'Worcester' is in bars for flavouring tomato juice, and, as already mentioned, for reviving people with a hangover (e.g. prairie oyster). But a look through old correspondence shows that Worcestershire has been used by a surprising number of great chefs as one of their 'secrets'. It is clear that whilst nothing is worse than the excessive use of Worcestershire sauce to disguise bad cooking, it is a valuable flavouring when used with skill and moderation. There is someone to advocate its use in almost any dish: soups, fish, shellfish, meat and game and poultry, eggs, cheese, salad dressings and sauces. Cooks do better to steer clear of made-up flavourings, but an item which has been popular and unchanged for over a century and is used by chefs in so many countries must be an exception. Indeed, one could almost say that it has graduated as a basic natural ingredient."

Note: This is the earliest document seen (Feb. 2012) that tells the story about Lea and Perrins and the barrel of sauce, based on a recipe from India, being left in the cellar and forgotten, only to be later discovered and found to be delicious. Thus Mr. Lea of Lea and Perrins told Tom Stobart a tall tale (embellishing the history of his company), Mr Stobart carefully recorded it as if it were true, and (as of Dec. 2008) it has been passed down through history as if it were actually true! Address: England.

4785. Stobart, Tom. 1970. The International Wine and Food Society's guide to herbs, spices and flavourings. New York, NY: McGraw-Hill. 261 p. Illust. (part color). Index. 26 cm.
• ***Summary:*** For a book published in 1970, this book contains a great deal of original and useful information. Note that the word "seasoning(s)" does not appear in the title or the index. For many entries, the equivalent word in various European languages is given. In addition, for plants, the botanical name and family are usually given. Contents: Black and white illustrations. Colour plates. Introduction: The history of flavourings, the importance of flavourings, the origin of this book ("I come to this subject as a traveller who has lived in a number of different countries"), the scientific basis of flavouring, scientific, popular and foreign names, synthetic and harmful flavourings, flavouring in practice, growing herbs. An alphabet of herbs, spices and flavourings (The entries are in alphabetic order). Appendix.

Soy related entries: Harvey's sauce: "One of the old English sauces. In 1870, the courts decided there was no exclusive commercial right to the name 'Harvey's Sauce', as there are recipes for it dating back to at least the 17th century.

"Though there are many formulae, it is, in general, based on walnut and mushroom ketchup–flavoured with anchovy, garlic, and often soy sauce and vinegar. It has the appearance of Worcestershire sauce, but is not hot although it does contain some chilli."

Soy [sauce]–Soya bean: "The soy bean is undoubtedly the world's most important legume." It can be eaten as a fresh bean [green vegetable soybeans], as a dried bean and as soybean flour. It is a leading source of cooking oil "much used as a substitute for olive oil in Spain." From it one can make a kind of milk [soymilk]. "In the East [East Asia], it is also fermented to make various kinds of curd and bean cheese. The soy product which concerns us is soy sauce."

It originated in China and "is thought to have been brought from China to Japan by a Buddhist priest about A.D. 500. In the West it became well known during the nineteenth century. It is one of the ingredients of Worcestershire sauce and Harvey's sauce."

Worcestershire sauce (p. 236-37). See also the original 1970 ed. published in England.

Also discusses: Ketchup, M.S.G., oil ("The word 'oil' is derived from 'olive'"), sesame (incl. tahina: "The pure oil is almost without taste or smell and does not easily go rancid in hot countries, which is one reason for its popularity"). Address: England.

4786. Wiener Bordow, Joan (Sita). 1970. Victory through vegetables: With a section of recipes from the macrobiotic diet by Barbara Thralls. New York, NY, Chicago, Illinois, and San Francisco, California: Holt, Rinehart and Winston. ix + 163 p. 22 cm.
• ***Summary:*** A vegetarian cookbook. The author, whose name on the title page is given as Joan Wiener, was born in 1944. Soy-related recipes include: Soybean milk and soy chaff [Okara] (p. 15). Bean curd and instant bean curd (homemade, p. 15-16). Cream of rice and soybean soup (p. 31). Soy nut salad (with soy nuts, p. 42). Bean curd sukiyaki (p. 49). Far Eastern dumplings (filled with cooked and mashed soybeans, p. 54). Macao noodles and vegetables

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(with bean curd and soy sauce, p. 56). Whole wheat role filled with bean curd (p. 59). Soybean tomato mix in stuffed peppers (with soy chaff [okara], p. 71-72). Soybean nuts (fried in butter, with salt, p. 93). Tahini miso spread (p. 136).

4787. *Market Share Trend by Brand. Soy + Teriyaki. Dollar base.* 1970--. Serial/periodical. New York, NY: Statistical Analysis Marketing Inst. (SAMI)

• ***Summary:*** SAMI data indicates that Kikkoman's share of soy sauce sales in U.S. supermarkets rose from about 26% in 1970 (3rd place) to about 44% in 1979 (1st place). Kikkoman passed Chun King during 1971 to move into 2nd place among the big three, then passed La Choy during 1976 to move into first place.

La Choy's market share rose from about 36% in 1970 to 39% in 1975, then steadily decreased to 34% in 1979. Chun King's market share dropped steadily from about 28% in 1970 to about 17.5% in 1979.

4788. Kikkoman. 1970? Kikkoman. All purpose sauce. Delicious with meats, salad, fish & vegetables (Brochure). Tokyo: Kikkoman Shoyu Co. 12 p. Undated. [Eng] Address: Kikkoman, Tokyo, Japan.

4789. Kikkoman. 1970? Quality results require quality ingredients. Good cooks know there's no substitute for Kikkoman (Leaflet). San Francisco, California: Kikkoman. 1 p. Single sided. 28 cm. Undated. [1 ref]

• ***Summary:*** This brown and green on tan leaflet gives a 5-step comparison of "Naturally brewed Kikkoman" with "Other types of soy sauce." "1. Brewed from select quality soybeans, wheat, salt, water–aged many months, vs. Made with chemically hydrolyzed protein, corn syrup, salt, water and caramelized sugar–not aged. 2. Natural flavor and color, vs. Synthetic flavor and color. 3. Pleasantly aromatic, subtle piquant taste, vs. Relatively acrid and harsh taste."

"Kikkoman's superior quality makes it ideal; for hamburger, chicken, steaks, chops, fish, stews, meatloaf, gravies, soups, salad dressings and party dips and, of course, for all Oriental dishes. Use as an ingredient, a marinade, and as a baste. Winner of 30 international awards for distinguished flavor and quality–world's standard of excellence! Quality leadership since 1630." A photo shows a bottle of "Kikkoman naturally brewed soy sauce–All-purpose seasoning."

Note: This is the earliest document seen (Oct. 2009) in which Kikkoman uses the term "naturally brewed" (with or without hyphenation) in connection with their soy sauce. The term was coined in about 1943 in Hawaii. Address: California.

4790. Lea & Perrins, Inc. 1970? The Lea & Perrins exciting ideas cookbook: with the easy find index inside cover. Fair Lawn, New Jersey: Lea & Perrins. 32 p. Undated. Illust. (color). Recipe index. 22 cm.

• ***Summary:*** A booklet of recipes that call for Lea & Perrins' Worcestershire Sauce. Contents: Appetizers. Soups. Meat main dishes. Poultry. Seafood. Vegetables. Salads. Sandwiches and fillings.

The inside rear cover is titled "Lea & Perrins' Worcestershire Sauce: What's in it for you." An illustration shows two bottles side by side. One is full of the sauce and bears the distinctive orange label. The other contains layers of the ingredients; each layer is described by the side of the jar as follows: "Juicier red onions from the Finger Lakes. Spicier cloves from Zanzibar. Sweeter tamarinds from the West Indies. Snappier garlic from Venice. Bitier chili peppers from Mombassa. Livelier anchovies from the Cantabrian Sea. Choicer eschalots from Holland."

The bottom caption reads: "In a fast changing world we think some things should remain constant. This is why we haven't varied Lea & Perrins Sauce in over 130 years. . . only pure, natural products of the choicest grades and qualities available. And it is still aged naturally in wooden casks, like fine wine. Some things are just too good to change!"

Note 1: How about the change during World War II from soy sauce to HVP (hydrolyzed vegetable protein)? Is HVP a pure, natural product?

Note 2: Letter (e-mail) from Marlys McGuire, librarian, University of Minnesota in Minneapolis. The typeface looks like it was printed sometime in the 1970's. Also owned by Texas Woman's Univ. (Denton, Texas), Woman's Collection. Address: Fair Lawn, New Jersey 07410.

4791. Brozan, Nadine. 1971. If you've never seen a soybean before... *New York Times*, Jan. 23, p. 18.

• ***Summary:*** Denis Barber owns about 75,000 bushels of soybeans at any given time–yet he's never seen a soybean. As president of General Arbitrage, a New York commodity trading company, he buys and sells commodity futures. The soybeans he purchases are usually resold before the date he is required to take delivery; if they are not, they end up in a warehouse in Chicago.

In the financial world, the soybean is known as "the Cinderella crop." It contains more protein than any other vegetable–and costs less. Yet in America, soybeans are not widely available in food stores–except in health food stores and Chinese markets. Although supermarkets do not stock the bean, they do sell many products, ranging from salad dressings to pet foods, that contain soybean oil, meal, or flour. They also carry soy sauce and Worcestershire sauce. Babies allergic to cow's milk will probably be given soy milk. Observers of orthodox [kosher] Jewish dietary laws, which do not permit the consumption of meat and dairy products at the same meal, are now able to enjoy imitation sour cream, ice cream, or steaks–each made from the soybean. According to Mr. Barber, less than one half of one percent of the crop is used for human nutrition; its main use

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is as a meal for livestock.

Dr. Joseph J. Rackis, principal chemist for the Northern Marketing and Nutritional Research Division of USDA's Agricultural Research Service in Peoria, Illinois, agrees that most soybeans are processed into oil and meal. And even if more were available for sale as food, most people don't like their taste–according to a spokesman for General Foods.

The "future of the soybean probably rests more in what it can become than what it is." The food industry, scientists and nutritionists believe that the wave of the future lies in the simulation of foods from soybeans. Already they are transforming soybeans into "hamburgers, canned stews, bacon strips, hors d'oeuvre dips, chow mein, pasta, sea food, and a wide range of frozen dinners approximating ham, chicken and beef." A photo shows soybeans in a plastic bag.

4792. **Product Name:** Tamari-Roasted Almonds.
Manufacturer's Name: Chico-San Inc.
Manufacturer's Address: P.O. Box 1004, Chico, CA 95926.
Date of Introduction: 1971, January.
How Stored: Shelf stable.
New Product–Documentation: Talk with Bob Gerner, founder of Westbrae Natural Foods. 1992, May 11. Bob thinks that Chico-San was the first company in America to make tamari-roasted nuts–a product that was later made by many natural foods distributors and became popular nationwide. But Chico-San's product was (in Bob's opinion) crude. They would cover the nuts with soy sauce then toast them, the soy sauce would burn on the outside and not taste very good.

4793. Imahara, Hirotsugu; Iwai, M.; Nakahama, T. 1971. Shôyu no sanmaku-sei kôbo ni kansuru kenkyû IX. [Studies on the pellicle-producing soy yeast. IX. Relationship between the physico-chemical properties and pellicle formation of yeast] *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 49(1):8-15, Jan. [24 ref. Jap; eng]
• ***Summary:*** A pellicle or film is formed on the surface of soy sauce by various strains of *Zygosaccharomyces* yeast. The pellicle-forming yeast generally caused less sedimentation and a smaller specific gravity that non-pellicle-forming yeast. A strong negative charge was found on the surface of the non-pellicle-forming yeast and it was found to be lyophilic.

Note: *Webster's Dictionary* defines lyopilic (an adjective first used in about 1911) as "marked by a strong affinity between a dispersed phase and the liquid in which it is dispersed." e.g. "A lyophilic colloid." Address: Faculty of Agriculture, Kyoto Prefectural Univ., Sakyo-ku, Kyoto, Japan.

4794. *Christian Science Monitor*. 1971. Indonesian flavors furnish variety in Southeast Asian cookery. Feb. 23, p. 10.
• ***Summary:*** This is a book review of *Art of Indonesian Cooking: The ABC's*, by Agnes de Keijzer Brackman (Singapore). "Mrs. Brackman points out that the word 'ketchup' is derived from the Malay word for soya sauce, 'ketjap.'" In the West, however, ketchup now uses tomatoes as its main ingredient.

The recipe for "Spicy soya sauce–Sambal ketjap" has as its main ingredient "4 tablespoons sweet soya sauce"–along with red chili, tamarind juice, and fried onions.

Note: This is the earliest document seen (April 2012) that contains the term "sweet soya sauce." It probably refers to *ketjap manis*, which is thick, sweet Indonesian soy sauce.

4795. Eden. 1971. Eden. Organic foods, natural foods (Ad). *East West Journal* 1(2):8.
• ***Summary:*** "Organic grains and vegetables. Miso and tamari. Oils, teas, and condiments. Nuts and seeds. Fresh and dried fruits. Book and utensils. Traveling accommodations on advance notice." The Eden logo is 4 sprouts in a double circle.

Note: This is the earliest document seen (June 2001) that advertises or markets miso. Address: 211 South State St., Ann Arbor, Michigan; 347 Ludlow Ave., Cincinnati, Ohio. Phone: 313-769-8444.

4796. Essene. 1971. Essene (Ad). *East West Journal* 1(2):10. Feb.
• ***Summary:*** "Organic grains–vegetables–beans. Miso–tamari–sea vegetables. Flour stone ground on premises. Distributors of natural and traditional foods. Retail. Wholesale. Mail order. Mon. thru Sat. 9–6:30."

Note: This is the earliest document seen (March 2006) concerning Essene, an early natural foods and macrobiotic company and distributor in Philadelphia. Address: 320 South St., Philadelphia, Pennsylvania. Phone: WA2-1146.

4797. Marsh, Elisabeth. 1971. Macrobiotique pour les Américains [Macrobiotics for Americans] *Spirale* (*Brussels, Belgium*) No. 46, p. 8-11, Feb. [Fre]
• ***Summary:*** Translated from the English by Josiane Bagno. Contains 8 lines about miso and 4 lines about tamari. Spirale is located at Avenue Voltaire 141, 1030 Brussels.

4798. Mother Nature & Sons Ltd. 1971. Natural foods. Organic and macrobiotic foods (Ad). *East West Journal* 1(2):10. Feb.
• ***Summary:*** "Full line of grains, vegetables, beans, sea vegetables, miso, tamari, umeboshi, fruits, nuts, teas, baked goods. From: Lima [Belgium], Chico San, Infinity, Spiral, Hain, Caldron, and Paradox. Located at: 351 Bleeker Street, New York City, NY 10014. Phone: 212-924-7572.

Note: East West Journal is edited by Ron Dobrin [a former New York journalist], published by Order of the Universe Publications, and distributed by Tao Books & Publications, Inc., 303b Newbury St., Boston, MA 02115.

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Address: 351 Bleeker Street, New York City, NY 10014. Phone 212-924-7572.

4799. Rubini, Milton E. 1971. The many-faceted mystique of monosodium glutamate [MSG]: Editorial. *American J. of Clinical Nutrition* 24(2):169-71. Feb. [3 ref]
• ***Summary:*** "The use of seaweeds, sea tangles [kombu], and soy sauces as condiments has a history in the Orient of at least a thousand years. All contain monosodium glutamate." It is used in home economics classes, in cooking schools, and by food processors. It is on the US FDA's Generally Recognized as Safe (GRAS) list [it was grandfathered in, not approved after testing].

The so-called "Chinese Restaurant Syndrome" was recently brought to the attention of scientists and the public by Schaumberg and co-workers (1969) in the prestigious journal *Science*.

Different individuals show widely different reactions to monosodium glutamate. Some react vigorously to doses of 1-2 gm, but many develop no symptoms even if they consume 12 gm. It is hard to understand how a simple substance such as MSG that is readily absorbed is so much more toxic when given parenterally [by injection] than orally [consumed by mouth].

Recently glutamate was removed from baby foods; the real question is why it was added in the first place. Address: M.D., Editor in Chief, American J. of Clinical Nutrition, Los Angeles, California.

4800. Erhard, Darla. 1971. Nutrition education for the "now" generation. *J. of Nutrition Education* 2(4):135-39. Spring. [41 ref]
• ***Summary:*** Describes the author's efforts in Berkeley, California, to provide factual nutritional information to members of various San Francisco Bay Area counterculture groups, including Zen macrobiotics, the One World Family Commune, Krishna Consciousness devotees, and fruitarians.

"Food faddism–which used to be associated with older population groups–coupled with vegetarianism has now become the panacea for some members of the younger generation, often called 'hippies.'

"The majority of my information on the Zen Macrobiotic diet was derived from classes that I attended taught by a former pupil of George Ohsawa, believed by some to be the originator of Zen Macrobiotics. From these groups, I learned that the widely publicized, all-cereal diet originating from the seven levels of eating (dietary eating pattern with initial allowance of certain percentages of all foods with seven progressions to the ultimate all-cereal diet) was the result of mistranslation and misuse of the Zen Macrobiotic principles by the American public." The author then gives a fair and balanced description of a macrobiotic diet; miso, soy sauce and tofu are listed as part of a typical daily macrobiotic menu. Address: 323 Monte Vista Ave., Oakland, California 94611.

4801. Kim, Sang Jae. 1971. [Taxonomical studies of Korean *Aspergilli*]. *Misaengmul Hakhoe Chi* (*Korean J. of Microbiology*) 9(1):1-26. March. [39 ref. Kor; eng]
Address: Dep. of Biology, Graduate School, Kon Kuk Univ., South Korea.

4802. Koshiyama, I. 1971. Some aspects of subunit structure of a 7S protein in soybean globulins. *Agricultural and Biological Chemistry* 35(3):385-92. March. [15 ref]
Address: Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

4803. Okuhara, Akira; Saito, N.; Yokotsuka, T. 1971. Color of soy sauce. VI. The effect of peptides on browning. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 49(3):272-87. March. [10 ref. Eng]
• ***Summary:*** The browning of soy sauce is much faster than that of solutions containing only sugars and amino acids. In soy sauce, a small amount of amino acids is consumed during browning.

Peptides are among the most important components promoting the browning of soy sauce, and some part of the browning of other fermented products is also caused by peptides. Address: Central Research Inst., Kikkoman Shoyu Co. Ltd., 399 Noda, Chiba prefecture, Japan.

4804. Jose, Hirokazu; Sugimori, Tsunetake. 1971. [Studies on halotolerant lactic acid bacteria relating to soy sauce brewing. II. Effect of L-proline on halotolerance of *Tetracoccus* No. 100]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 49(4):302-12. April. [12 ref. Jap; eng]
• ***Summary:*** *Tetracoccus* No. 100 is a halotolerant lactic acid bacterium isolated from both soy koji and soy mash [moromi]. L-proline facilitates its halotolerance. Address: Kyoto Research Laboratories, Marukin Shoyu Co., Ltd., Uji, Kyoto, Japan.

4805. Mogi, Saheiji. 1971. International marketing of an oriental product: Overseas marketing of Japanese soy sauce. *Asian Productivity Organization, Translation Series* No. 23. 16 p. April. (Tokyo). First published in Japanese in the Japan Marketing Association's magazine Marketing News, No. 136, Nov. 1969. [Eng]
Address: Managing Director, International Operations, Kikkoman Shoyu Co., Ltd., Japan.

4806. Sugimoto, H.; Van Buren, J.P. 1971. Evaluations of monosaccharides, disaccharides and corn syrups as dispersants for heat-processed dried soy milk proteins. *J. of Food Science* 36(2):346-48. March/April. [11 ref]
• ***Summary:*** Addition of some of these substances to heat-

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treated soy milk before drying improved redispersibility of resultant dried products. Address: New York State Agric. Exp. Station, Cornell Univ., Geneva, New York 14456. Sugimoto is presently with Kikkoman, at Noda, Japan.

4807. *Sunset* (*Menlo Park, California*). 1971. An introduction to soybeans. 146:226, 228. April.
• ***Summary:*** "'They taste so good!' was the exclamation we heard over and over again from our taste-testers who were sampling soybeans for the first time. The intriguing nutlike flavor and tender texture of these highly nutritious legumes comes as a pleasant surprise.

"Soybeans are indigenous to China and Japan, where they have been used since before recorded history. Here in the West the dried beans are readily available in health food stores and Oriental markets."

Describes how to soak soybeans (6-8 hours or overnight; reserve liquid for cooking), and how to cook them (simmer for 3 hours). Gives recipes for: Dry-roasted soybeans [soynuts]. Baked soybeans (with onion, salt pork, molasses, catsup, salt, mustard, Worcestershire sauce, and pepper). Marinated soybean salad. Refried soybean tacos.

4808. Hansen, Barbara. 1971. Interest in Asia carries into Kitchen. *Los Angeles Times*. May 20. p. J16.
• ***Summary:*** Rosemary Brissenden, an anthropologist from the Australian National University at Canberra, has written a book (a work of love) titled "Joys and Subtleties," about the foods and cookery of Southeast Asia, especially Indonesia, Malaysia, Singapore, and Thailand. In 1957 she "spent three months in Java and Bali with a student delegation from Australia." They lived with Indonesian families and ate their food. The recipes in her book "are as authentic as close observation of cooks at work could make them." Moreover they call for the same ingredients used by the Indonesian cooks, such as Javanese soy sauce, coconut milk, laos [a root], lemon grass, trasi, tamarind, and curry leaves. These are now available in most big cities, mainly at Chinese markets.

Ms. Brissenden and her husband are just finishing a six month stay in Los Angeles.

4809. Kosuge, Takuo, Zenda, Hiroshi, Tsuji, Kunio, Yamamoto, Takeshi, Narita, Hiroko. 1971. Studies on flavor components of foodstuffs. I. Distribution of tetramethylpyrazine in fermented foodstuffs. *Agricultural and Biological Chemistry* 35(5):693-96. May. [17 ref.]
• ***Summary:*** Tetramethylpyrazine (T.M.P.) was detected in many Japanese fermented foodstuffs, especially miso (29 mcg/kg), natto (22), and soy sauce (4). Moreover, the amount of T.M.P. in miso increased almost tenfold (from 29 to 265 mcg/kg) after storage for 1 year. This fact indicates that T.M.P. may play an important part in the flavor of these fermented foods. Roasted foods, such as coffee, cocoa, and peanuts, are a rich source of alkylpyrazines. Address: Shizuoka College of Pharmacy, Shizuoka, Japan.

4810. Yamagata, Kei; Fujita, Tokio. 1971. [Studies on yeasts isolated from saké-cake pickles and soy-mash. II. Salt tolerance and cellular characteristics of Torulopsis yeasts]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 49(5):385-89. May. [4 ref. Jap. eng]
Address: Dep. of Agricultural Chemistry, Faculty of Agriculture, Kinki Univ., Osaka, Japan.

4811. *Foreign Agriculture*. 1971. Japanese imports of U.S. soybeans peak at 2.9 million tons in 1970. June 7. p. 5.
• ***Summary:*** Contents: Introduction. Soybean imports. Rapeseed imports. Peanut imports. Soybean production. Rapeseed production. Peanut production.

Soybean production in Japan has dropped steadily for several years, from 135,700 metric tons in 1969 to 126,000 tons in 1970 (down 7%).

"The [Japanese] Government—in order to encourage diversion of riceland to other crops and to promote the production of oilseeds—has proposed payment of approximately $393 per acre if soybeans, rapeseed, or other annual crops are planted on paddy fields in 1971. Certain farmers who plant soybeans cooperatively will receive approximately $450 per acre."

A photo shows 4 Americans watching a Japanese worker preparing to press moromi in a hydraulic press to make soy sauce.

4812. Nasuno, Seiichi, Nakadai, Tadanobu. 1971. Formation of glutamic acid from defatted soybeans by *Aspergillus oryzae* 460. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 49(6):544-51. June. [25 ref. Eng]
• ***Summary:*** *Aspergillus oryzae* 460, a strain which was isolated from air, liberates twice as much glutamic acid from defatted soybeans as did ordinary shoyu molds. This strain never produced aflatoxins on two different special media for aflatoxin production. Amino peptidase activity was found to have a significant correlation with the formation of glutamic acid by the isolated strain and related strains of *Aspergillus* species. A mutant exhibiting about twice as much aminopeptidase activity as that of the parent strain was obtained by UV (ultraviolet) irradiation. Address: Noda Inst. for Scientific Research, Noda-shi, Japan.

4813. Ohsawa, George. 1971. Macrobiotics: An invitation to health and happiness. Edited and appended by Herman Aihara. Oroville, California: George Ohsawa Macrobiotic Foundation. 95 p. Illust. 21 cm.
• ***Summary:*** Contents: Introduction. What is happiness? Judgment and health. Seven conditions of health. Foods for health and happiness. How to eat. Macrobiotic external treatment.

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Appendixes (by Herman Aihara). A. History of macrobiotics. B. Warning of Diet No. 7. C. How to start macrobiotics. D. Macrobiotic cooking. E. Recipes (Cornellia Aihara). F. Does the macrobiotic diet supply enough protein. G. Vitamins. H. Conclusion. Eight macrobiotic principles, the Unifying Principle, the Order of the Universe.

Soy-related recipes include: Creamed onion-miso soup (p. 41). A table showing the amount of protein in various foods includes soybeans, soy sauce, natto, and miso.

Note: In his book *Learning from Salmon*, Herman Aihara says that this was his first book, published in June 1971. The copyright page says "Copyright 1971," but the National Union Catalog seems to indicate that it was not copyrighted until 1976. The 6th printing was 1984.

4814. Pier 1 Imports. 1971. Pier 1 inspires the sizzle (Ad). *Los Angeles Times*, July 2. p. 31.
• ***Summary:*** "Orient a charcoaled steak. Steep it in Marukin teriyaki sauce. A marinade made of ginger, soybeans and wholesome wheat. Try a 10 oz. bottle. Reg. 98c. Now 79c."

An illustration shows a bottle of Marukin teriyaki sauce. Address: Los Angeles area (18 stores).

4815. Hughes, George. 1971. The economical Georgian cruet. *Country Life (London, England)*, July 15. p. 183-84. * Address: [England].

4816. Pier 1 Imports. 1971. Clearance sale (Ad). *Los Angeles Times*, July 23. p. E22.
• ***Summary:*** In the far right column: "Our manager in Redondo Beach wants to clear out these items. ... Marukin soy sauce (5 oz.). Reg. 39c. [Now only] 25c." Address: Los Angeles area (14 stores).

4817. Eden Foods, Inc. 1971. Wholesale pricelist. 211 South State St., Ann Arbor, MI 48108. 2 p. July 26.
• ***Summary:*** This is the earliest existing Eden Foods catalog seen that is dated. The company was wholesaling the following products: Bulk grains (including some organically grown: Wheat (Deaf Smith), organic [from Texas]; Rye, soft wheat, and open-pollinated corn, organic from Michigan; Brown rice (natural, unsprayed), and sweet brown rice), bulk cereals or packaged cereals (incl. organic cracked wheat, corn flakes, wheat flakes, and rye flakes from Deaf Smith, Texas), bulk flour (all flour is stone ground on order in Ann Arbor, incl. organic soy flour), beans (incl. organic soybeans from Michigan [60 lb], and azuki beans [out of stock until fall]), noodles, oil and nut/seed butters (all unrefined and pressed, incl. soy oil in pint, quart, and 5-gallon sizes), dried fruit.

Soybean products: Tamari soy sauce (pints, quarts, and liters), Hacho Miso (Soy Paste, 1 lb), Mugi Miso (Barley Soy Paste). Note: The Eden logo with 4 sprouts in a circle is shown. Many of these soy products were obtained from Erewhon, and the grains from Arrowhead Mills. The format of the catalog, the product categories, and the product names and spellings are very similar to those used in the Erewhon catalog at this time. Address: Ann Arbor, Michigan. Phone: (313) 769-8444.

4818. *Changing Times*. 1971. The story behind Lea & Perrins Sauce–The Original Worcestershire. July. p. 24.
• ***Summary:*** "Most of the history of Lea & Perrins Worcestershire Sauce is right there on the label. John Wheeley Lea was a druggist in the English market town of Worcester. William Perrins ran a chemist shop in the nearby town of Evesham. On January 1, 1823, they organized Lea & Perrins, a Worcester chemist shop that was also a distribution center for pharmaceuticals, toiletries and food products concocted on the premises.

"*From a recipe of a nobleman in the county* (inscribed on either side of the shield) refers to Lord Sandys, native of Worcester, ex-governor of the Indian state of Bengal and a connoisseur of exotic eastern sauces and spices. In 1835 Lord Sandys returned from Bengal with a recipe for what became the first *Worcestershire Sauce*–hence the words *the original* to distinguish it from the multitude of imitators.

"*Worcestershire* translates to 'county of Worcester,' and the shield emblazoned on the label is the ancient coat of arms of the county. Lord Sandys's recipe, calling for tamarinds, garlic, eschalots, onions and molasses, almost turned out to be a catastrophe. The initial batch was unpalatable. Lord Sandys rejected it, and crocks of the stuff sat unused in Lea & Perrins's basement, where, like old wine, it mellowed.

"Sometime later someone had the temerity to try another lick. It was delicious. How long did the mixture age? The company isn't telling.

"The recipe, too, is top secret and has never been changed. Neither has the shape of the bottle or its wrapping... After all, why change something that's been a best-seller for 136 years?"

4819. Hashimoto, Hikotaka; Yoshida, H.; Yokotsuka, T. 1971. [Studies on sediment of shoyu. V. Composition of sediments formed by heating of raw shoyu and isolation of precursors of sediments]. *Hakko Kogaku Zasshi (J. of Fermentation Technology)* 49(7):642-49. July. [12 ref. Jap, eng]
Address: Central Research Laboratories, Kikkoman Shoyu Co., Ltd., Noda, Japan.

4820. Bell, Don. 1971. Ohsawa and the yin and yang of health. *Chicago Tribune*, Aug. 1. p. F23.
• ***Summary:*** The film "Joe" [1970] has a scene shot in an unusual restaurant in New York City's East Village. The dishes have unusual names like miso soup, hiziki [hijiki], and wakame salad. One man calls it "Jap food," but the waiter explains that it's "food in accordance with the order

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of the universe"–a definition of macrobiotics. We are what we eat. A respected scientist has stated that each year, 98% of the atoms in our bodies are replaced by new atoms that we take in from the food we eat, the water we drink, and the air we breathe.

Popular foods in the macrobiotic diet include seaweed, tahini (made from sesame seeds, a replacement for butter), Japanese azuki beans, and miso and tamari (protein-rich seasonings).

4821. Daniels, Mary. 1971. A loaf of whole-grain bread, a jug of bancha and thou. "Food for Life" is food that's "in accord with the Universe"–even on Halsted Street. *Chicago Tribune*. Aug. 1. p. F18-F25.
• ***Summary:*** "The mecca of macrobiotics in the United States today is Boston, and its Mohammed [Muhammad] is a Japanese professor of Oriental studies, Michio Kushi. Kushi is a disciple of Georges Ohsawa, who gave his first lectures in New York's Buddhist Temple in 1959." Ohsawa's followers went in two directions. In Oct. 1961, one group went to [Chico] California under the leadership of Herman Aihara. The other followed Kushi to Boston.

The first macrobiotic study house in the Boston area was established very informally about 7-8 years ago in the Kushi's home in Brookline. Soon thereafter his students founded Tao Books and Erewhon. By word of mouth and by his writings, Michio Kushi has attracted young people from all over the USA, many of them seeking something better than drugs. Soon the demands on his time were so great that Kushi had to give up his classes at Harvard to teach from his home and lecture twice a week on the true path to happiness.

Erewhon is now almost the size of a supermarket; it owns a large warehouse near the Boston docks. Eight large photos show foods sold at Erewhon retail stores. One caption mentions miso.

Part II of this article, titled "Macrobiotics: where it's at in Chicago," is about Tom Swan and his macrobiotic food store "Food for Life." This store, around which the local macrobiotic community revolves, was started in Feb. 1970 at 2356 Seminary by Ron Kotzsch, a Harvard student who had worked at the Erewhon store in Boston.

On the shelves are cans and bottles of corn germ oil and sesame oil (both auger pressed, and both with a rich, natural flavor), sesame butter, a variety of seaweeds imported from Japan, buckwheat noodles, "a fermented soy paste rich in energy called miso (dancers down it before a performance), and a natural soy sauce called tamari that makes you realize how much the supermarket stuff cheats you in taste. All of these things are proudly labeled 'no preservatives'."

Also mentions: John Palumbo, Bill Tara, Loren McCune, The Caldron, Dr. Walter Kempner, Burl Ives, brown rice from Chico San, organic foods, Gloria Swanson, and William Dufty. Includes five macrobiotic recipes: Brown rice with gomasio [gomashio]; leftovers fried and served with tamari (soy) sauce. Seaweed and carrots. Bancha tea. Tempura batter. Raisin muffins.

4822. Hsu, Edward J. 1971. Thickened edible soy sauce and method for the preparation thereof. *U.S. Patent* 3,598,614. Aug. 10. 2 p. Application filed 29 May 1968. [2 ref]
• ***Summary:*** "A novel thickened soy sauce is prepared by heating liquid soy sauce, adjusted in pH to about 4.5-5, with mixed gelatin and agar or with mixed glutinous rice starch and tapioca starch, the preparation with starches also involving a sequence of controlled cooling steps. The thickened sauce so prepared is highly stable and is adapted to be spread over or otherwise applied to food stuffs."

Example 1 states that the following ingredients are mixed in the following proportions on a weight basis: Liquid soy sauce (adjusted to pH 4.5 to 5 by addition of sodium hydroxide) 89.7%, tapioca starch 6.0%, glutinous rice starch 4.0%, gelatin powder 0.3%. Address: 2065-D Orchard St., Urbana, Illinois.

4823. *SoyaScan Notes*.1971. Chronology of Laurelbrook in Maryland. 16 March 1992. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1971 Aug. 23–Laurelbrook Foods begins as a macrobiotic natural foods wholesale distributor in Forest Hill, Harford County, Maryland (about 25 miles northeast of Baltimore). The company started as a division of Cycle Parts & Accessories, Inc., a motorcycle parts company that Rod was planning to start in late 1970 shortly before the idea of starting a natural foods distribution company took form. Laurelbrook company never moved from its original location, but they kept a post office box (P.O. Box 47) in nearby Bel Air. Their original price list shows that they carried 11 products, mostly bulk organic grains and beans (including soybeans) purchased from Arrowhead Mills. Erewhon was their other major supplier from the outset. The company was founded by Rod and Margy Coates, the parents of five daughters (including Sally, Judy, Marion [Ronnie], and Dora Coates) and one son (Dan). Dora was Paul Hawken's first wife; they were married in June 1971 in Maryland. Judy was John Deming's first wife; they were married in Aug. 1972. Both Paul and John worked with Erewhon. Rod and Margy decided to call the company Laurelbrook since they lived on Laurelbrook Road in Fallston, Maryland. Rod and Margy first got interested in natural foods in 1967 when their next to oldest daughter, Judy, who had been studying macrobiotics with Michio and Aveline Kushi in Boston, Massachusetts, and had worked for Erewhon, offered to come home and cook for her parents for two weeks and let them try out the diet.

1971 Sept. 30–Laurelbrook is still considered by Rod Coates to be a division of his Cycle Parts & Accessories, Inc.

1973 Dec.–Laurelbrook opens a new, second warehouse in Raleigh, North Carolina (at 330 West Davie St.). Four

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people start and run the operation.

1974–Laurelbrook, which now employs 24 people, enlarges its warehouse.

1975–Feb.–Laurelbrook publishes a 6-page booklet showing that the company now distributes about 43 different food products–including soy flour, tamari, and miso.

1976 Nov.–One of Laurelbrook's employees is trying to start a labor union. Management vigorously opposes it. Laurelbrook now employees 32 people and has a fleet of 12 trucks that delivers to 350 stores. It is still a family operation, with Rod and Margy Coates, their 3 children, a son-in-law, a niece, and a nephew working at Laurelbrook.

1977–Laurelbrook outgrows its warehouse at 330 West Davie St. in Raleigh, North Carolina, so they move into a larger warehouse facility at 2319 Laurelbrook Street in Raleigh.

1977 Nov.–Laurelbrook has 44 employees. Sales last year were about $3 million.

1978 June–Laurelbrook is now importing foods from Mitoku in Japan.

1979 May–Rod Coates hires Richard Curry as accountant and general manager.

1980 March 17–At a special meeting of the board of directors, Rod informs the board that he will be retiring in one week, on 23 March 1980, his 65th birthday. He recommends that he be replaced as president by Richard Curry and that his (Rod's) official position be chairman of the board.

1981 March–Things are not going well at Laurelbrook. Rod and Marge feel that Richard is not doing a good job in running the company. Employee morale is down. But Richard blames the problems on Rod, and wants Rod to be less actively involved with Laurelbrook on a daily basis.

1981 March–Dora Hawken is fired from her position in the Laurelbrook office.

1981 July 21–Rod, Margy, and Dan Coates, constituting all the board of directors of Laurelbrook, resign, effective immediately. They are upset with the way Richard Curry is running the company.

1981 Aug.–Richard Curry offers to buy out the Coates' interest in Laurelbrook foods. They accept the offer. Rod and Margy keep ownership of the property and Richard was to pay them rent for using it.

1981 Nov. 21–Over the next 30 days Richard Curry places five large orders with Hain Pure Foods in the amount of $35,577.

1982 Feb. 15–Laurelbrook Foods files for Chapter 11 bankruptcy protection and does business under Chapter 11 for about 18 months. Richard Curry is president.

1982 Dec. 22–Rod Coates presents a list of items that he alleges Richard Curry sold illegally after the bankruptcy of Laurelbrook, and before the auction of the company's assets. Attached to this are letters between attorneys.

1983 Oct-Dec –Rod and Margy Coates have to pay off the debt of $35,577 to Hain–even though they no longer own the company. In Dec. 1983 the last of the equipment in the warehouse was auctioned off.

1990 March 4–Rod Coates dies of Alzheimer's disease. As of early 1992, Judy Coates lives in Ross, California, and Dora lives in Marin, California. Address: 505 Granary Rd., Forest Hill, Maryland 21050.

4824. Vanocur, Edith. 1971. Conscientiously natural food. *Washington Post, Times Herald*. Aug. 26. p. K1.

• ***Summary:*** Yes!, a new "natural food restaurant and carry-out," recently opened at 1039 31st Street in Georgetown. The restaurant and store (The Center for Natural Living, at the same address) are owned by artist Laura Popenoe and her husband Oliver Popenoe. Their sign reads: "Yes! Whole food. Whole people. Whole world."

Ganga Wentink is the restaurant manager. She and her husband are the East Coast leaders of a yoga organization named "3-HO" (Happy, Holy, Healthy Organization). She adopted the name "Ganga" after the Ganges River in India. Beautiful and seemingly happy, Ganga is a living advertisement for natural foods. She learned to cook while living in a teepee on a commune in New Mexico. Contains four recipes, including Whole wheat bread (with ¼ cup soy flour) and Indian Dahl Soup (with ¼ cup Tamari soy sauce {aged soy sauce}). Contains four photos.

4825. Murakami, Hideya. 1971. Classification of the koji mold. *J. of General and Applied Microbiology (Tokyo)* 17(4) 281-309. Aug. [40 ref. Eng]

Address: Research Inst. of Brewing, Tax Administration Agency of Finance Ministry, Takinogawa 2-6, Kita-ku, Tokyo 114, Japan.

4826. Lappé, Frances Moore. 1971. Diet for a small planet. New York, NY: Ballantine Books. xiv + 301 p. Illust. by Kathleen Zimmerman & Ralph Iwamoto. Index. 18 cm. [90 ref]

• ***Summary:*** This one of the most important and influential books written about food, nutrition, and world hunger during the 1970s. Published on 1 Sept. 1971, it introduced the concepts of "protein complementarity" and "eating low on the food chain" to millions of Americans. By April 1973 the book had been reprinted 7 times. The book's roots lie in the University of California at Berkeley, where Ms. Lappé was enrolled in the School of Social Work in 1968. A committed community organizer of welfare recipients, she was frustrated in her inability to find an agenda that would truly end the people's suffering. So she began to study the political economy of food in the Natural Resources library. From this research came a 1-page handout, then a 5-page handout, then a 70-page booklet, and finally this landmark book.

Contents: Acknowledgments. Foreword. Part I: Earth's labor lost. Part II: Bringing protein theory down to earth.

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Part III: Eating from the earth: Protein theory applied. Part IV: Combining non-meat foods to increase protein values. Appendixes. Notes.

Key quotes: "This book is about PROTEIN–how we as a nation are caught in a pattern that squanders it . . . I propose that our meat-centered diet is at the very heart of our waste of the earth's productivity" (p. xi). "Fully *one-half* of the harvested agricultural land in the U.S. is planted with feed crops. We feed 78% of all our grain to animals. This is the largest percentage of any country in the world" (p. 5). We feed animals "89% of our corn crop, 98% of our grain sorghum crop, 87% of our oat crop, 64% of our barley crop, as well as 95% of our unexported soybean crop. To make beef or veal, "a cow must be fed 21 pounds of protein [from feed] in order to produce 1 pound of protein from human consumption."

This vegetarian book contains 125 pages of recipes and makes extensive use of soybeans and soyfoods–though mostly in the form of whole dry soybeans or grits (*) or soy flour (÷), which are two of the least interesting ways of using soybeans. In the section titled "Getting the most protein for the least calories," subsection 5 on "Legumes" (p. 106) states: "Soybean curd (tofu) has the fewest calories for the amount of usable protein, largely because most of the fat is removed in its processing. Tofu is truly an excellent protein source. Lightly sautéed with a fresh vegetable accompaniment, one could easily eat 7 ounces of tofu and fulfill 25 to 30 percent of a day's need for proteinÄat the cost of only about 5 to 7 percent of a day's calorie allotment. I've included several tofu dishes among the recipes given later in this book."

Tofu is not mentioned in the index, but under "Soy Curd" we find one recipe titled "Leafy Chinese tofu (Soy curd)" (p. 144). It notes that soy + rice, and soy + sesame are complementary proteins.

The recipes are grouped by complementary combinations. Rice and soy (p. 140-45, combining in the proper proportions gives a 32% increase in usable protein): Crusty soybean casserole*. Stuffed cabbage leaves*. Curry rice*. Leafy Chinese tofu (soy curd). Sukiyaki (with tofu).

Rice and wheat and soy (p. 146-50; 24% increase in usable protein): Hearty vegetable soup (with miso and soy sauce)*. Sweet and pungent vegetable curry*. Mexican grains*. Rice-wheat "kasha"*.

Whole wheat and soy (p. 181-88; 32% increase): "Complementary" pizza+. Savory onion quiche+. Wheat-soy waffles+. Chameleon spice cake+. Wheat-soy pudding+.

Wheat, soy, and sesame (p. 189-94; 42% increase): Sesame crisp crackers+. Sesame dream bars+. Journey cakes+. Orange sesame muffins+. Wheat-soy-sesame bread+.

Cornmeal and soy and milk (p. 202-08; 13% increase): My favorite cornbread+. Boston brown bread+. Pineapple-corn muffins+. Corn spice coffee cake+. Cornmeal-soy waffles+. Indian pudding*.

Soy, wheat, rice, and peanuts (p. 220-26; 15% increase): Curried soybeans and peanuts*. Nutty bean tacos*. Soybean croquettes*. Spanish soybeans over mixed grains*+. Deep dish vegetable pie*.

Soy and sesame seeds (or sunflower seeds) and peanuts (p. 227-32; 25% increase): Nutty noodle casserole*. Soy-sesame-peanut spread+ (with roasted soy flour). Peanut-sesame loaf supreme+. Soy-pea sesame snacks*. Bean burgers*.

This was one of the first popular books to show the connection between intensive livestock production and environmental degradation. Part I, titled "Earth's Labor Lost," shows how: (1) Animal wastes from huge feedlots cause water pollution (p. 15-16); (2) Growing crops for livestock feed and overgrazing leads to soil erosion, loss of topsoil, and soil depletion (p. 17-18). (3) The increased pressure on our land to grow livestock feeds has led to increased use of pesticides, which kill untargeted species and cause water pollution (p. 26-27). In short, a vegetarian diet "maximizes the earth's potential to meet man's nutritional needs and, at the same time, minimizes the disruption of the earth necessary to sustain him. It's as simple as that" (p. 3).

Also gives a recipe for "Crunchy granola" (p. 251, based on rolled oats, coconut shreds, sesame seeds, and wheat germ).

Note 1. As of Sept. 1991, this book had sold about 4 million copies, and of that 3 million copies in English-language editions.

Note 2. This is the earliest document seen (May 2002) concerning the environmental impact of a vegetarian diet. Address: California.

4827. Edgar, Barry. 1971. Try Indonesian food on your Swiss guests: Bahmi goreng accessories. *Christian Science Monitor.* Oct. 7. p. 11.

• ***Summary:*** Mentions *benteng* and soy sauce.

4828. *Christian Science Monitor.* 1971. Soy sauce perks up many American dishes, especially turkey and corn. Oct. 21. p. 11.

• ***Summary:*** Kikkoman began when two families in Japan started a soy sauce company at about the same time the first English families at Plymouth Rock enjoyed their first Thanksgiving. Kikkoman now has a test kitchen in San Francisco, where a home economist uses the company's soy sauce directly on meats as a table sauce.

Soy sauce originated in East Asia. "The Chinese and Japanese names for soy sauce are very similar–'see yow' and 'shoyu' respectively." The original soy sauce in China was made from soy beans, water and salt only. But in Japan, long ago, it was found that adding crushed, toasted wheat produced more natural sweetness, better color, and additional flavor notes. In China, soy sauce is still generally made without wheat–although some manufacturers now add it.

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"The 'tamari' sauce sold by American health food stores is really a Chinese-type sauce made in Japan with a Japanese name." But it is no longer authentic tamari, made without wheat; it generally now contains some wheat.

Since 1898 Kikkoman has been the purveyor of soy sauce to the Emperor of Japan. They constructed a special factory for his sauce [the Goyô Gura at Noda].

4829. Jose, Hirokazu; Sugimori, Tsunetake. 1971. [Studies on halotolerant lactic acid bacteria relating to soy sauce brewing. III. Halotolerant effect of L-proline on several enzymes of *Tetracoccus* No. 100]. ***Hakko Kogaku Zasshi*** (*J. of Fermentation Technology*) 49(10):861-69. Oct. [18 ref. Jap; eng]
Address: Kyoto Research Laboratories, Marukin Shoyu Co., Ltd., Uji, Kyoto, Japan.

4830. Stare, Fredrick J. 1971. The diet that's killing our kids. ***Ladies' Home Journal***. Oct. p. 70, 72, 76.
• ***Summary:*** A harsh criticism of the macrobiotic diet and lifestyle. On the title page is a large photo of: Soy sauce, aduki beans, brown rice, gomashio (sesame salt), and a cup of dragon tea. The article begins: "It has nothing to do with Buddhism, inner serenity, or weight loss. All the Zen macrobiotic diet does is destroy the health of its young disciples." For a rebuttal see: The Macrobiotic. No. 74. March 1972. p. 28-32. "Dr. Stare Revisited" by Matthew Davis. Address: M.D., Chairman, Dep. of Nutrition, Harvard Univ., Cambridge, Massachusetts.

4831. Sugimoto, H.; Van Buren, J.P.; Robinson, W.B. 1971. An enzymatic process for a protein-containing beverage based on soybean protein and lemon juice. ***J. of Food Science*** 36(5):729-31. Sept/Oct. [25 ref]
• ***Summary:*** Cooked suspensions of isolated soy protein were mixed with a small amount of acid protease preparation from *Trametes sanguines*. Address: New York State Agric. Exp. Station, Cornell Univ., Geneva, New York 14456. Sugimoto is presently with Kikkoman, at Noda, Japan.

4832. Erewhon Trading Co., Inc. 1971. Natural and organic foods. Price list. Boston, Massachusetts. 4 p. Effective Thanksgiving day, Nov. 1971.
• ***Summary:*** This price list has no cover. Prices are given for each product. Products include: Grains (incl. organically grown brown rice [short, medium, or long grain. Note: The short grain was probably grown by the Lundberg Brothers of Wehah Farms, Richvale, California], Ted Whitmer [in Bloomfield, Montana] organically grown wheat, hard red spring and hard amber durum, and Deaf Smith [Hereford, Texas] organically grown wheat [hard red winter], rye, and corn). Cereals. Stoneground flours (incl. Soybean flour, full fat, organic Deaf Smith; Sweet brown rice flour). Beans (incl. azuki beans, black beans [Japanese, probably black soybeans], soybeans [organic]). Seeds. Tamari & miso: Tamari soy sauce (24 pints x $0.76 each = $18.24, 12 quarts x $1.30 each = $15.60, 6 half gallons x $2.40 each = $14.40, 4 gallons x $4.50 each = $18.00, 4.7 gallon can for $19.00, 4.7 gallon wooden keg for $22.00). Hacho miso (soy paste, 1 lb or 44 lb keg). Mugi miso (barley-soy paste, 1 lb, 2 lb, 44 lb keg). Kome miso (rice-soy paste, 1 lb, 2 lb, 44 lb keg).

Sea vegetables: agar agar (kanten), dulse, hiziki, kombu, nori (dried laver), wakame, wakame root, wakame (thin sheet). Tea: Lotus root tea. Dandelio herbal coffee. Mu herbal beverage. Kukicha twig tea.

Pasta. Crackers (Chico-San Rice Cakes, organic–salted, unsalted, with buckwheat, or with millet). Snacks (incl. Corn munchies [organic corn chips with soy sauce], Chico-San "Yinnies" organic rice candy [made in Chico, California]). Hopi seeds: Sunflower seeds, pumpkin seeds, almonds, cashews, or soybeans, each dry roasted with tamari. Dried fruits. Virgin oils (incl. Soybean oil, pressed and unrefined in pints, quarts, half gallon, gallon, and 5-gallon can). Nut butters. Condiments (incl. sesame salt, and Tekka [vegetable condiment]). Unusual foods: Umeboshi (plums pickled in brine) and Kuzu arrowroot. For cleanliness [body care products]: Sesame lotion [organic and biodegradable], Sesame shampoo, Orjene shampoo, Peppermint Castile soap, Toothpowder, charred eggplant and sea salt [Dentie in bag or jar]. Clearlake all purpose cleaner, biodegradable. For cooking (utensils, incl. 2 sizes of "soy dispenser," suribachi with pestle, Save A Tree canvas shopping bag). Flyers: The Organic Merchants NOT List. The Sugar Story. The Oil Story. The Macrobiotic Way.

On the last page is a note from Paul Hawken, with his signature, thanking customers for their orders.

Letter (e-mail) from Norio Kushi. 2011. March 31. "Rosemary Traill just reminded me of an interesting story regarding attempting to get rid of the mice at the Erewhon warehouse at 33 Farnsworth St.

"My mother [Aveline] didn't want to use chemical poisons in getting rid of the mice so someone told her about 'sonic' pest repellents that emit a high pitch sound, inaudible to the human ear, to drive the mice away. These sonic devices were placed around the warehouse and interestingly, what occurred is that the mice changed their diet. Instead of eating the grains, they started eating exclusively seaweed. Somehow, the mice, by eating the seaweed had no problem thriving under the condition of the sonic pest repellents. My understanding is that, after that, they had to resort to regular standard ways of getting rid of the rodents." Address: 33 Farnsworth Street, Boston, Massachusetts 02210. Phone: (617) 542-1358.

4833. ***Los Angeles Times***. 1971. Take a new route to the Orient with lobster Cantonese. Nov. 21. p. U38.
• ***Summary:*** In Lobster Cantonese, garlic, sherry, soy sauce and ginger are standard seasonings. "But identifying

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the other accents, black bean sauce, for example, is more difficult. This classic Chinese seasoning, also called fermented black beans, is used in tiny amounts for zestiness." Sesame oil is used to add a nutty flavor.

A recipe for Lobster Cantonese calls for "1 tbsp [tablespoon] black bean sauce," a few drops of sesame oil, and 1 tablespoon soy sauce. Then: "Soak beans in water to cover a few minutes, drain and mash. Mix beans with ..."

4834. **Product Name:** Hopi Seeds: Sunflower Seeds, Pumpkin Seeds, Almonds, Cashews, or Soybeans (Each Dry Roasted with Tamari).
Manufacturer's Name: Erewhon Trading Co., Inc.
Manufacturer's Address: 33 Farnsworth Street, Boston, MA 02210. Phone: (617) 542-1358.
Date of Introduction: 1971, November.
Wt/Vol., Packaging, Price: 1 oz. polyethylene-cellophane bags.
How Stored: Shelf stable.
New Product–Documentation: Erewhon Trading Co., Inc. 1971. Natural and organic foods. Price list. Effective Thanksgiving day, Nov. 1971.

Talk with Bill Bolduc, founder of Eden Foods. 1992, March 14. Erewhon was probably the first company in America to develop a line of tamari-roasted seeds and grains. Eden was carrying the tamari-roasted soybeans by Oct. 1972, and the full line by early 1973.

4835. **Product Name:** Corn Munchies (Organic Corn Chips with Soy Sauce).
Manufacturer's Name: Erewhon Trading Co., Inc.
Manufacturer's Address: 33 Farnsworth St., Boston, MA 02210. Phone: (617) 542-1358.
Date of Introduction: 1971, November.
Ingredients: Corn tortillas, sesame oil, soy sauce.
Wt/Vol., Packaging, Price: 24 x 4 oz.
How Stored: Shelf stable.
New Product–Documentation: Erewhon Trading Company Inc. 1971. Thanksgiving Day. [Nov.]. Price list. "Snacks. Corn Munchies, organic corn chips w/ soy sauce. 24–4 oz. $0.40 each."

4836. Sokolov, Raymond A. 1971. The food at the heart of commune life. *New York Times*, Dec. 2, p. 60.
• ***Summary:*** Lucy Horton has spent most of the past year on the road, visiting more than 40 communes and collecting country commune recipes. Now she is compiling them into a cookbook. Food is the key to understanding the communal experience. "Food has religious significance." A photo shows Lucy Horton. Contains three recipes, including "Tamari dressing" (with "¼ cup tamari soy sauce"). A note explains: "Tamari soy sauce is available at health food stores and Japanese groceries..."

4837. Chico-San Inc. 1971. Portfolio. Chico, California. 6 sheets. 8 Dec. 1971. 28 cm.
• ***Summary:*** Includes the following (all printed back-to-back with dark brown ink on golden yellow paper with a new complex spiral logo): (1) Form letter from J. Robert Kennedy to Lorenz A. Schaller, Pasadena, California, with Kennedy's signature. Spiral Foods "was formed recently for the purpose of selling direct to those who find it difficult to obtain Macrobiotic food products under the Chico-San label at their local outlets. They are the same products, however, only the label is different.

"If you don't care to order direct, Chico-San products are sold at health food stores throughout the country." Distributors in Mr. Schaller's area are given. (1) Kahan & Lessin Co., 3131 East Maria St., Compton, CA 90021. (2) Landstrom Co., 428 Talbert St., San Francisco, CA 94114.

(2) "Rice cakes is our bag." Three varieties, made from brown rice, grown organically by Wehah Farms. (3) "How Chico-San guarantees Oriental-type, organically grown brown rice," article reprinted from *Health Food Business* magazine. (4-5) Chico food news 1, about Lima soysauce and sweet brown rice, with recipes. Ingredients include soybean flour and Yinnies Grain Syrup ("made from barley and brown rice is a new product from Chico-San"). (6-7) Chico food news 2, about rice chips, corn chips, Yinnies, mochi, with recipes. (8-9) Chico food news 3, about wild American ginseng and Chico-San rice vinegar. (10-11) Chico food news 6, about sea vegetables: Hijiki, nori, wakame, kombu, kanten. Address: 1262 Humboldt Ave., Chico, California 95926. Phone: (916) 343-6770.

4838. Hansen, Barbara. 1971. Mainland China foodstuffs trickle into southland markets: A scattering of soy sauce and canned goods. *Los Angeles Times*, Dec. 9, p. J1, J8.
• ***Summary:*** Many Americans hoped that the relaxing of trade restrictions with mainland China would lead to an immediate feast of foodstuffs long missing from our markets. Instead of a flood, there has been but a trickle–and you have to search to find it.

The writer has found some new brands of soy sauce from Kwangchow. But many products are not properly labeled. Other products are easier for non-Chinese to identify. "At least the labels are in English. Among the canned goods are fried dace (a type of fish) with salted black beans, whole mushrooms, braised bamboo shoots,..."

4839. Clark, Marion; Sinick, Heidi. 1971. Try it! *Washington Post, Times Herald*, Dec. 12, p. 314.
• ***Summary:*** The section titled "Organic food feasts" states that "Mother Nature on the Run will cater organic food feasts for any occasion." This catering service was recently formed by six young health-food enthusiasts who love to cook and who believe that happy food makes happy people. At a recent church dinner, the group served a meal that included "brown

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rice with miso, tamari and natural peanut-butter sauce."

4840. Sokolov, Raymond. 1971. Commune cooking is a real taste trip. *Chicago Tribune*. Dec. 12. p. E12.
• ***Summary:*** "Foods are frequently eaten with chopsticks. Commune cooks are just as interested in taste as they are in health and, therefore, they go heavy on garlic, tamari soy sauce, and spices."

Note: A similar article by Sokolov (about Lucy Horton) titled "The food at the heart of commune life" appeared in the *New York Times* (Dec. 2, p. 60).

4841. Chico-San Inc. 1971. Products: A catalog of macrobiotic foods. Chico, California. 8 p. Undated. 22 cm.
• ***Summary:*** The cover is with dark brown ink on golden yellow paper with a new complex circular spiral logo near the top and three sheaves of grain across the bottom. The term OEI, applied to some products, means "Our Exclusive Import." Address: Chico, California. Phone: (916) 343-6770.

4842. Joyous Revival. 1971. Natural Foods (Ad). *East West Journal* 1(20):20.
• ***Summary:*** The company sells: Miso. Nuts. Seeds. Beans. Grains. Tamari. Fresh ground flours.

Note: Michael Potter, later head of Eden Foods, worked with this company in the early 1970s, until Dec. 1970. He was not a founder of the company, but he eventually rose to become a partner. Address: 1810 S. Woodward Ave., Birmingham, Michigan 48011. Phone: 313-644-9756.

4843. Spiral Foods Inc. 1971. Price list of macrobiotic foods. Chico, California. 2 p. Undated. 35 x 25 cm.
• ***Summary:*** This single-sheet catalog and price list, printed front and back with reddish-orange ink on green paper, contains 8 panels and is undated. Yet it was sent by Chico-San in a portfolio of sell sheets with a cover letter dated 8 Dec. 1971–from which we can estimate the date. It is also with larger Spiral Foods catalogs issued after the disastrous 1972 fire that destroyed the company's plant. Under the name of each food is given a brief description. It includes the following foods:

Condiments: Tekka ("A traditional flavoring prepared from carrot, burdock, ginger, lotus root, Soybean Puree {Miso}, and sesame oil"), seitan ("A meat substitute made from vegetable protein of wheat gluten and tamari soy sauce"), salt plums, kuzu arrowroot, sesame salt, sesame butter, sesame oil (from organically grown seeds), Lima sesame oil (imported), crude sea salt ("Unrefined, unprocessed, trace sea minerals retained"), white unrefined sea salt, Mishio (Lima, with kombu), moromi ("Mash of soy sauce before pressing. A pungent flavor"), furikake ("A seasoning made from Miso, sesame seed, nori, bonita [sic, bonito] powder, whole brown rice and kombu" {kelp}), Goma Muso ("A seasoning prepared from traditional Miso and whole sesame seeds"), bainiku ekisu (concentrate of green [ume] plums), sesame seeds. Dried fish. Cosmetics. Beverages: Yano (grain beverage), Whole grain cereals. Whole grain noodles. Beans: Azuki red (Dainagon, or Korean), black [soy] beans. Sea vegetables. 100% whole grain brown rice. Sweet rice–mochi gome. Rice cakes. Lima soy sauce ("A traditional soy sauce of exceptional quality"), tamari ("The traditional soysauce, fermented naturally and aged 18 months. Prepared from soybean, wheat, salt and water"). Soybean puree (Miso) ("Made from the cultivation of a special enzyme and aged 18 months. The soybean puree is ideal mixed with sesame butter and used as a spread or can be added to soups and sauces"). Utensils.

Note 1: This is the earliest document seen (April 2011) concerning Spiral Foods, a company organized in 1970 by Bob Kennedy of Chico-San and Peter Milbury to distribute Chico-San products directly to retail stores in the greater San Francisco Bay Area. When Chico-San was established in 1962 there were no natural foods stores in the Bay Area (or in the USA). However by 1970 there were many. They were not being well served by the old-line health food distributors such as K&L and Landstrom which distributed Chico-San's products, yet they wanted to buy Chico-San's products.

Note 2: This is the earliest English-language document seen (Dec. 2006) that uses the Japanese-language term "bainiku ekisu" (literally "plum flesh extract") to refer to a commercial extract of ume plums. Address: 1017 Willow Street, Chico, California 95926.

4844. **Product Name:** Protose (Meatlike Product Made of Peanuts and Wheat Gluten)
Manufacturer's Name: Battle Creek Food Co. Div. of Worthington Foods.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1971.
Ingredients: In 1971: Wheat protein [wheat gluten], water, peanuts, vegetable oil, salt, yeast extract, soy sauce, MSG.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable, refrigerate after opening.
New Product–Documentation: Ad for Protose by Sanitas Nut Food Co., Ltd. 1900. July. *Good Health* (Battle Creek, Michigan). Protose is described as an easy to digest, perfect substitute for meat. There is no evidence showing that gluten was used in this product until 1971. Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan*. 3rd ed. p. 162. Lists the ingredients in "Protose (Battle Creek)." Note that in 1960 Worthington Foods had acquired Battle Creek Food Co.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned peanut product resembling cold cuts. Can also be used in salads or sandwiches.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet*

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Manual, Utilizing a Vegetarian Diet Plan. 4th ed. p. 176. The ingredients in "Protose (Battle Creek)" are "wheat protein [wheat gluten], peanuts, wheat and soy flour, corn oil, yeast extract, soy sauce, salt, HVP, niacinamide, thiamin, iron, vitamin B-6, riboflavin, vitamin B-12."

4845 Cho, M.J.; Kim, Z.U. 1971. [Studies on a quick ripening process for soy sauce]. *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 14(1):19-27. [Kor]*

4846 Lee, W.J.; Cho, D.H. 1971. [Microbiological studies of Korean native soy sauce fermentation]. *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 14:137-48. [Kor]*

4847. **Product Name:** Loma Linda Proteena (Meatless Peanut or Gluten Loaf or Cold Cuts–with Soy Flour)
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1971.
Ingredients: Wheat protein [wheat gluten], unroasted peanut meal, tomato puree, soy flour, salt, yeast extracts, soy sauce, corn sugar, MSG, seasonings, onion powder, caramel color, water.
Wt/Vol., Packaging, Price: 20 oz (567 gm) can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: In 1988: Per ½ inch slice (2.5 oz–71 gm): Calories 140, protein 17 gm, carbohydrate 5 gm, fat 6 gm, cholesterol 0 mg, sodium 460 mg, potassium 260 gm.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. The ingredients in "Proteena (Loma Linda)" are: Wheat protein [wheat gluten], unroasted peanut meal, tomato puree, soy flour, salt, yeast extracts, soy sauce, corn sugar, MSG, seasonings, onion powder, caramel color, water.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned peanut product resembling cold cuts. Can also be used in salads or sandwiches.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Proteena (Loma Linda)" are "wheat protein [wheat gluten], unroasted peanut meal, tomato puree, soy flour, salt, yeast extract, dextrose, L-lysine, HVP, MSG, caramel color, onion powder, flavorings."

Label sent by Loma Linda Foods. 1988. Oct. 5. The ingredients now are: Wheat gluten, raw peanut butter, water, tomato puree, soy flour, salt, natural (vegetable) flavors, dextrose, L-lysine, caramel color, onion powder spices, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). This product was introduced in 1963. A product called "Soy Beans with Proteena and Tomato Sauce" was introduced in 1934.

4848. **Product Name:** Sanitarium Health Foods Soya Loaf (Canned Meatless Meatloaf)
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: Sydney, N.S.W., Australia.
Date of Introduction: 1971.
Ingredients: Soya beans, wheat protein, soy sauce, vegetable oil, peanuts, tomato, monosodium glutamate, onion, salt, herbs.
Wt/Vol., Packaging, Price: 425 gm can.
How Stored: Shelf stable.
New Product–Documentation: Label. 1980, undated. "Vegetable Protein–Ideal for casseroles, stews, patties." Letter from Sanitarium Health Food Co. 1981.

Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1971.

4849 Uchida, Kinji, Mogi, Koya. 1971. Shôyu no shibô-san oyobi sono genryô shishitsu to no kankei ni tsuite. II. Genryô shishitsu no shibôsan sosei oyobi sono shôyu shibôsan to no kankei [Fatty acid composition of shoyu oils and their relation to those of the raw materials. II. Fatty acids of the total lipids from soybeans, defatted soybeans and wheat, the raw materials of shoyu brewing]. *Chomi Kagaku* (*Seasoning Science*) 18(11):472-77. (Chem. Abst. 80:904355). [8 ref. Jap]
Address: Central Research Laboratories, Kikkoman Shoyu Co. Ltd. (Chuo Kenkyusho).

4850. Uchida, Kinji, Mogi, Koya. 1971. Shôyu no shibô-san oyobi sono genryô shishitsu to no kankei ni tsuite. I. Shôyu no shibôsan sosei [Fatty acid composition of shoyu oils and their relation to those of the raw materials. I. The composition of the fatty acids in shoyu, soybeans, and wheat, the raw materials of shoyu brewing]. *Chomi Kagaku* (*Seasoning Science*) 18(11):466-71. (Chem. Abst. 80:144504). [16 ref. Jap]
Address: Central Research Laboratories, Kikkoman Shoyu Co. Ltd. (Chuo Kenkyusho).

4851. **Product Name:** Golden Label Soya Bean Sauce.
Manufacturer's Name: Yung Hwa & Company.
Manufacturer's Address: 10 Gauder Place, Dehiwala, Wellampitiya, Sri Lanka. Phone: 713-675.
Date of Introduction: 1971.
Ingredients: Soya beans, whole wheat flour, salt, preservatives (1988).
Wt/Vol., Packaging, Price: 325 ml and 650 ml bottles retail for Rs 18/- and Rs 35/-.
How Stored: Shelf stable.
New Product–Documentation: Label. 1988. Oval 4.5

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by 3.5 inches. Yellow, gold, blue, dark pink, black, and green. "Made in Sri Lanka. For roasts, boiled meats, fish, or soups." Form filled out by Jane Gleason. On 18 March 1988 she talked with Mr. G.D. Bobby Senaveera, who with his wife are managing directors. This was the first commercial soy sauce to be marketed in Sri Lanka. It was first made widely available in the early 1970s. Presently about 3,000 bottles/month are produced. It is a "sun darkened, 2 year fermentation." The company uses about 5 tons/year of soybeans that are purchased for Rs. 7-13 from private sellers or Rs. 10 from the Paddy Marketing Board. "Quality varies so one must go from shop to shop." Demand is steady. Consumers like both the quality/flavor and the natural ingredients. It is one of at least 4 brands of soy sauce made and sold in Sri Lanka.

The company is definitely planning to move into commercial soymilk production. Has applied for government assistance and plans to start producing 30,000 packets/month. Marketing may be through schools or government.

Note: This is the earliest known commercial soy product made in Sri Lanka.

4852. Aihara, Cornellia. 1971. Macrobiotic child care. *Macroguide* No. 8. 41 p. (George Ohsawa Macrobiotic Foundation, 1544 Oak St., Oroville, CA 95965).
• ***Summary:*** Contents: What is macrobiotic? About the author (autobiographical). Two pages of photos of the Ohsawa and Aihara families. Macrobiotic child care. First solid foods for baby. Prenatal and postnatal care. How to be a beautiful and loved wife. Recipes for baby's solid food. What is the Foundation? [GOMF]

Pages 35-41 contain "Recipes for baby's solid foods." These include: Mochi made with rice flour. Miso zoni (mochi in miso soup). Amasake (describes how to make amasake at home using either (A) 2 cups sweet brown rice, ¼ cup koji, and 4 cups water, or (B) 7 cups sweet brown rice flour, 1 cup koji, and 8 cups boiling water). Address: California.

4853. Ando, Seiichi. 1971. Yuasa shôyu [Yuasa shoyu]. In: S. Ando, ed. 1971. Wakayama-ken no Rekishi [History of Wakayama Prefecture]. Tokyo: Yamakawa Shuppansha. See p. 108-11. [Jap]
Address: Wakayama prefecture, Japan.

4854. Binsted, Raymond Horatio; Devey, James D.; Dakin, John C. 1971. Pickle and sauce making. 3rd ed. Revised and enlarged. London: Food Trade Press. xi + 332 p. Illust. 23 cm. *

4855. Brissenden, Rosemary L. 1971. Joys and subtleties: South East Asian cooking [1st American ed.]. New York, NY: Pantheon Books, A Div. of Random House. 262 p. Index. 19 cm.
• ***Summary:*** Contents: Acknowledgements. A note on this American edition. Weights and measures. 1. Introduction to South East Asian food. 2. Utensils, methods, ingredients, glossary. 3. Indonesia. 4. Malaysia and Singapore: Malay, Chinese, Indian, Miscellaneous Malaysian. 5. Thailand.

Ingredients include (p. 35-36): Monosodium glutamate (use sparingly), soya bean curd (incl. "dried bean curd [yuba], used only in Chinese cooking, comes in flat sheets or in twists"), soya sauce (the 3 types used in this book are light, dark {which is thicker and heavier}, and Javanese {which is sweet and very thick}. It is "sometimes available in bottles called Ketjab Manis [Ketjap Manis], or Ketjap Benteng, under the label of Conimex"). A recipe (p. 36) is given for "Javanese soya sauce" containing dark soya sauce, molasses, and brown sugar.

A table (p. 40) gives the name for 3 soyfoods in English, Indonesian, Malay, Chinese, and Thai, respectively. (1) Soya bean curd: tahu, tauhu, tow fu, taw hu. (2) Soya sauce (dark): ketjap, kichup or tauyu, see you, nam pla siiw. (3) Soy sauce (light): -, -, sung chow, nam pla siiw.

Note: This is the earliest English-language document seen (April 2012) that uses the term "See you" to refer to a type of soy sauce.

Soy related recipes include: Ikan semur djawa (Fish in soya sauce, with "2 tablespoons Javanese soya sauce," p. 69). Ajam semur djawa (Chicken in soya sauce {Java}, with "dark soya sauce," p. 76-77). Saté ajam (Chicken saté, with "dark soya sauce," p. 77-78). Semur daging (Beef in soya sauce, with "2 tablespoons dark soya sauce," p. 94). Tahu goreng ketjap (Fried bean curd with soya sauce, with "6 squares soya bean curd," p. 105). Tahu pong (Bean curd omelette, with "3 cakes soya bean curd," p. 111-13). Fried fish with soya beans (with "2 oz. yellow soya beans {available at Chinese groceries in cans}, p. 149-50)." Baked bean curd (with "8 squares soft bean curd," p. 181). Steamed, dressed bean curd (with "1 lb. soft bean curd, roughly chopped and drained," p. 181-82). Address: Melbourne, Australia.

4856. Hesseltine, C.W.; Wang, H.L. 1971. Fermented soybean foods. In: Y.M. Freitas and F. Fernandes, eds. 1971. Global Impacts of Applied Microbiology, GIAM III. India: Univ. of Bombay. See p. 403-20. Conference held in 1969 in Bombay, India. [11 ref]
• ***Summary:*** Contents: Introduction. Nine advantages of fermenting soybeans. Sufu. Hamanatto. Natto. Tempeh. Magou (from South Africa).

"In South Africa, an interesting fermented native food (*magou*) is now made on a modern industrial scale from fermented corn and soybeans. *Magou* is prepared by the fermentation of coarsely ground white corn meal (maize). Pure cultures of *Lactobacillus* used in this fermentation were isolated from native *magou*. The culture, which is not pure, is started in coarse whole wheat flour." Then it is used to ferment corn meal for 22-24 hours. "The mash

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from the fermentation tanks is mixed with defatted soybean meal, sugar, whey, or buttermilk powder and yeast. The soybean meals used contain at least 52 per cent protein. After thorough mixing of all the ingredients, the mix is spray dried. Currently this product sells for about 10 cents a pound in 50 pound bags. . *Magou* is used principally for feeding miners and other workers employed in heavy industry. It is well adapted to being taken into the mines and reconstituted at the point of consumption." Address: NRRL, Peoria, Illinois.

4857. Hwang, Ki-hyon. 1971. Changnyu mit kimch'i yut'ong e kwanhan yon'gu [The soy sauce and kimchi industries in Korea]. South Korea. 74 p. Series: Nongop Kyongje Yon'gu Pogo, No. 34. [9 soy ref. Kor]
Address: South Korea.

4858. Korean Society of Food Science and Technology. 1971. Comprehensive review of the literature on Korean foods (1917-1968). Seoul, South Korea: 71 p. *
Address: Korea.

4859. Maull, Linda; McIntyre, Nancy Fair. 1971. Getting it all together: The down to earth cookbook. North Hollywood, California: Gala Books. 107 p. Illust. 18 cm.
• ***Summary:*** A vegetarian cookbook. Soy-related recipes include: Stuffed cabbage with soybeans (p. 36). Salted soybeans (dry roasted soynuts, p. 82-83). Japanese Teri-Yaki sauce (p. 95). Homemade bean curd or tofu (p. 105; no coagulant is used. "Cover and let the soybean milk stand in a warm place until it thickens. Separate the thickened curd from the rest of the liquid, and put it into a pan with water to cover. Simmer for 5 minutes. Remove curd and drain through cheesecloth. Season with salt. Cut into pieces"). Address: Laguna Beach, California.

4860. Mogi, Keizaburo. 1971. Watakushi no rirekisho [My personal history (curriculum vitae)]. Tokyo: Nihon Keizai Shinbunsha. 120 p. [Jap]*
Address: Noda, Japan.

4861. Ohsawa, Lima. 1971. Makurobiotiku ryôri: Shokuyô katei ryôri 700 shu [Macrobiotic cookery: Food-cure home cookery–700 recipes]. Tokyo: Nihon CI Kyokai. xix + 7 + 200 + 6 p. Illust. (many color plates). Index. 26 cm. [Jap]
• ***Summary:*** This macrobiotic classic contains many chapters and recipes related to soyfoods and other interesting Japanese foods. Azuki and bean cookery (p. 96-98). Tofu cookery (p. 99-104). Miso cookery (p. 104-08; tofu, miso, and shoyu recipes are also scattered throughout the book). The chapter titled "Other Vegetable Cookery" (p. 110-24) contains many recipes for *kôfû*, a term used to refer to fresh wheat gluten. There are recipes for Kofu cutlets and Kofu croquettes (#419, p. 112). Skewered kofu cutlets. Kofu fukume-ni. Kofu rolls (p. 113). Deep-fried kofu chunks (#423, p. 114; it states that kofu can be purchased at Chinese grocery stores). Interestingly, there is no mention of seitan. The same chapter contains 9 yuba recipes (p. 121-22). Recipes for sea vegetables are scattered throughout the book, especially in the chapter on wild vegetables (p. 135-37). Two recipes using amazake as a sweetener appear on p. 152, and homemade amazake beverage is found on p. 169.

An extensively revised English-language translation of this book was published in 1974 under the title *The Art of Just Cooking* by Autumn Press. Address: Tokyo.

4862. Sung, Betty Lee. 1971. The story of the Chinese in America. New York, NY: Collier Books. viii + 341 p. Illust. Map. Index. 21 cm. Originally published in 1967 under the title: Mountain of Gold: the Story of the Chinese in America. [283 ref]
• ***Summary:*** This 1971 edition is basically identical to the original 1967 edition titled *Mountain of Gold: The Story of the Chinese in America*–except for a new Foreword, which notes the repeal of the national origins quota.

As in the original edition in American life, from the Gold Rush to the present.

Chapter 9, "Chinatowns," states (p. 149): "If Chinese food is served at home, the basic ingredients must be purchased from Chinatown, for where else can one buy soy sauce, bean curd, dried mushrooms, snow peas, or bamboo shoots?"

Page 206: "Add seasonings of fermented bean curd, salt, and a little soy sauce. Put in just enough water to keep the food from burning. Lower the flame slightly. Cover the frying pan until the water boils (about two minutes)..."

4863. Takashima, Shizuye. 1971. A child in prison camp [1st ed]. Montreal, Canada; Plattsburg, New York: Tundra Books. [74] p. Illust. so x 25 cm.
• ***Summary:*** "The people in Japan, hearing how we have been treated by the Canadian Government, and that we are living in camps in the woods, send us barrels of soya sauce and miso paste."

Note 1: This book is written for elementary and junior high school students. A Japanese-Canadian girl recalls her experiences of the three years (1942-1945) that she and her family spent in a Canadian internment (evacuation and relocation) camp during World War II. It was the New Denver Relocation Center in eastern British Columbia. In late 1941 they had lived in Vancouver, BC.

"In December 1941, 22,000 men, women and children of Japanese origin were living on Canada's West Coast. Within a few months every one of them–whether Canadian-born, naturalized citizen or new immigrant–was stripped of all civil rights and submitted to three years of indignity on a scale that makes the episode the most disgraceful in the country's history" (inside front dust jacket). Address: Toronto, Canada.

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4864 Tamura, Heiji; Hirano, Masaaki. 1971. Shôyu no hon [The book of shoyu]. Tokyo: Shibata Shoten. 286 + vi p. Illust. Index. 19 cm. [15 ref.: Jap; eng+]

• ***Summary:*** Contents: Part I: Knowledge of shoyu. History of shoyu. How shoyu is made. Topography of shoyu: Shoyu in the provinces. Varieties of shoyu. Races of shoyu. How shoyu is used. Talk on various topics concerning shoyu. The science of shoyu. How to use shoyu and its near future. Part II: Shoyu cookery. Japanese cookery. Chinese cookery. Western cookery. One drop of shoyu can enliven. Part III: Shoyu and me. Short essays by famous Japanese about their fond, often childhood, memories of shoyu and its significance in their lives and in Japanese culture.

Mr. Tamura is a cooking teacher; he is said to have gotten most of his information other than recipes and reminiscences from another book, *History of Kikkoman Shoyu* (*Kikkoman Shoyu shi*, by Ichiyama 1968). Address: Tokyo, Japan.

4865 Tsuji, Kaichi. 1971. Kaiseki: Zen tastes in Japanese cooking. Tokyo and Palo Alto: Kodansha International Ltd. 207 p. With 96 color plates. Original woodcuts by Masakazu Kuwata. 29 cm.

• ***Summary:*** Contents: Foreword by Yasunari Kawabata (winner of the Nobel Prize for literature in 1968). Foreword: The tea ceremony and kaiseki by Sôshitsu Sen (head of the Urasenke School of Tea and the 15th generation descendent of Sen no Rikyu, founder of the school). Utensils and Kaiseki by Seizô Hayashiya (chief curator of the Ceramics Department at the Tokyo National Museum). The twelve months of kaiseki. The kaiseki courses (defines and describes each course, such as Mukôzuke, Misoshiru [pages 168-71 give a fine description of miso and miso soup], Wanmori, Yakimono, Azukebachi, Hassun, etc.). Postscript. Notes on utensils. List of recipes. Glossary: Includes descriptions of miso, natto (incl. *Daitokuji-nattô*, p. 66), shoyu, tofu, and yuba, plus azuki and Dainagon-azuki, many types of wheat gluten (fu), kuzu, mochi, sea vegetables (konbu, nori, wakame), fresh-water algae (Kamogawa-nori, Suizenji-nori {= Kotobuki-nori}), and umeboshi.

This is a magnificent, beautiful book, the finest work available on Japan's highest form of haute cuisine, Tea Ceremony Cuisine, by a great Japanese Kaiseki chef. It was first published in Japanese by Tan-kôsha Inc. of Kyoto. Soyfoods are used throughout the book–especially miso, since one of the fixed courses in a kaiseki meal is miso soup (*misoshiru*). Many recipes use soy sauce, often the light colored type, usukuchi. Most recipes are shown in an accompanying full-color photo. The tea ceremony was developed at the court of the shogun in late Ashikaga times under such men as Soami, and his father and grandfather, Geiami (1431-1485) and Noami, who were painters, landscape gardeners, and poets in Kyoto. The greatest of the tea masters, under whom the tea ceremony (*chanoyu*) took final shape, was Sen no Rikyu (1521-1591). Zen preached the importance of the simple, uncluttered life. As a Zen priest and tea instructor, "Rikyu believed that amid the solitude of calm withdrawal from worldly cares sought by those who practice *chanoyu*, there should exist an element of creativity that leads to the serene enjoyment of beauty. The heart of this creativity, according to Rikyu's Zen aesthetics, lies in the careful avoidance of the trite, the obvious, and the emphatic. Beauty has its most powerful effects when it arises from suggestion and restraint...

"Centuries ago, it was a rule that Zen priests ate only two regular meals a day–morning and noon. But since the priests engaged in rather strenuous work, by evening they were often hungry, and to assuage this hunger they would eat a light meal, which was called *yakuseki* ('hot stones'). This term came from the practice of putting heated stones inside their clothing, by which the priests staved off hunger and cold during long sessions of meditation. When the tea masters developed the custom of serving a meal during the tea ceremony, they called it *kaiseki* ('breast stones'). By evoking the image used in the Zen term, they seasoned their specialty with religious connotations."

Soy-related recipes include: Miso soup (with aonorifu, azuki beans, and mustard, p. 29, plate 1, at Opening, the first of the 12 kaiseki months). Miso soup (with sesame custard, ginkgo nuts, and mustard), and Mukôzuke (with yuba and bonito flakes, p. 41, plate 9, at Evening). Miso soup (with wakanafu, kampyo [kanpyo], and mustard), and Azukebachi (hot dish, with sea cucumbers boiled in saké and mirin, boiled yuba, citron peel garnish, p. 53, plate 17 & 22, at New Year's). Miso soup (with Sanshu miso, roasted momen bean curd [grilled tofu], and black [soy] beans), and Hassun (with natto wrapped in sea bream fillets, and miso-pickled chisha stems, p. 65-66, plate 25 & 31, at Spring).

Note: This is the earliest English-language document seen (May 2012) that contain the term "roasted momen bean curd;" it refers grilled tofu.

Miso soup (with icicle radish, temarifu, and mustard), and Azukebachi (hot dish, with octopus boiled in saké, and yuba, garnished with Japanese pepper, p. 77, plate 33 & 36, at Doll Festival). Miso soup (with yuba, warabi fern shoots, and mustard, p. 89, plate 41, at Flower Viewing). Miso soup (with walnut custard, trefoil, and mustard, p. 101, plate 49, at Brazier). Miso soup (with eggplants, bamboo shoots, and mustard) and Wanmori (abalone and bean curd custard, chisa leaves [a variety of lettuce], and grated ginger, p. 113, plate 57 & 59, at Off Season). Miso soup (with Sanshu miso, shiratamako, junsai) and Wanmori (with yuba and egg custard, asauri, and wasabi, p. 125, plate 65 & 68, at Morning). Miso soup (with Sendai and Sanshu-miso, koimo, and hojiso), and Yakimono (with deep-fried eggplant slices coated with white miso and broiled), and Hassun (broiled burdock wrapped in yuba, and deep-fried green peppers,

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p. 137-38, plate 73 & 76, at All Soul's Day). Miso soup (with namafu, shirouri, and mustard), and Azukebachi (hot dish, with deep-fried dumplings of bean curd and hamo [sea/conger eel], and broiled eggplants), and Hassun (with abalone cooked in saké and miso, soy beans in the pod [green vegetable soybeans] p. 149-50, plate 81, 85 & 86, at Moon Viewing). Miso soup (with koimo, zuiki, and sesame seeds), and Mukôzuke (with abalone, bean curd, and sesame seeds), and Wanmori (with boiled pine mushrooms and bean curd, nori, citron peel, p. 161, plate 89 & 92, at Closing).

Interesting Glossary entries: (1) ***Daitokuji-nattô***, a "variety to which extra salt has been added, from the Daitokuji temple in Kyoto where it was first made as a preserve to be eaten in times of famine." (2) "***Fu*** is the general name for a light cake make of wheat gluten. The two basic types of this cake are uncooked (***namafu***) and baked (***yakifu***). The names that precede the suffix refer to what has been added to the gluten, the shape of the cake, or the area famous for a certain kind of cake. ***Aonorifu*** is baked and contains ***Aonokiro***. ***Chôjifu*** is made long (=*cho-*) and cut to fit the bowl. ***Daitokujifu*** is fried cake that originated from the Daitokuji temple in Kyoto. ***Temarifu*** is a cake in the shape of a child's ball (=*temari*). ***Wakanafu*** contains several kinds of young greens (=*wakana*) that give it a fresh springlike color."

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term ***Daitokuji-nattô*** (with a diacritical mark above the o -> ô, and hyphenated) to refer to this Japanese type of "fermented black soybeans." Address: Kyoto, Japan.

4866. Watanabe, Tokuji; Ebine, Hideo; Ohta, Teruo, eds. 1971. Daizu shokuhin [Soyfoods]. Tokyo: Korin Shoin. 271 p. Illust. Index. 22 cm. [134 ref. Jap, eng+]
• ***Summary:*** This is the best book published to date on soyfoods in Japan; however it is written in Japanese. Contents: 1. Classifications and varieties of soybeans (p. 1). 2. Physical characteristics of soybeans (p. 5). 3. Chemical characteristics of soybeans (p. 9). 4. Standards and methods of examining soybeans (p. 47). 5. Special characteristics and problems of using soybeans for food (p. 53).

6. Current status of the soybean industry in Japan (p. 63). 7. Soymilk and various types of tofu. Aburage (deep-fried tofu pouches), ganmodoki (deep-fried tofu burgers), kôri-dofu (dried frozen tofu), soymilk, and yuba (p. 75). 8. Fermented soyfoods: Natto (p. 123-40), shoyu (p. 141-67), miso (p. 168-95), fermented tofu (***rufu***) (p. 196-202). 9. Other soyfoods: Kinako (p. 203-04), soy sprouts or moyashi (p. 206-08), tempeh or tenpe (p. 209-17). 10. Quality and usage of defatted soybeans (***dasshi daizu***) (p. 219).

11. New food uses of soybeans and especially defatted soybeans (incl. 70% soy protein powder, soy protein curds, soy protein isolate, surimi gel, spun soy protein fibers) (p. 229). 12. Advice regarding supplying protein from organizations such as the United Nations and FAO (p. 257).

A 47-page translation of portions of this book (parts of Chapter 6 and all of Chapter 7) by Akiko Aoyagi and Chapters 8.1 and 8.2 by Alfred Birnbaum are available at Soyfoods Center.

Tokuji Watanabe was born in 1917. Hideo Ebine was born in 1921. Teruo Ota was born in 1926. Address: National Food Research Inst., Tokyo.

4867. Watanabe, Tokuji; Ebine, Hideo; Ohta, Teruo, eds. 1971. Hamanattô [Hamanatto]. In: Tokuji Watanabe, H. Ebine and T. Ohta, eds. 1971. Daizu Shokuhin [Soyfoods]. Tokyo: Korin Shoin. 271 p. See p. 123, 139-40. [Jap; eng+]
• ***Summary:*** An excellent scholarly work. This subchapter was translated by Alfred Birnbaum. Chapter 8, titled "Fermented soyfoods," has four parts, beginning with "Natto."

Introduction. There are two types of natto: regular natto (***itohiki natto***), produced by the action of natto bacteria on cooked soybeans, and salty natto (***shio-natto***), produced by letting a koji mold [*Aspergillus oryzae*] grow on the cooked beans [to make soybean koji], then adding salt water. Although both are traditional fermented soyfoods that have been passed down in Japan from ancient times, the fermenting agent, production method, and nature of each product are different. The main fermenting agent for regular natto is bacteria and, as no salt is added to the basic ingredients as with salty natto, the ripening time is shorter, although the finished product does not keep well. Also regular natto has the characteristic of forming large amounts of sticky filaments. By comparison, salty natto requires that the koji-molded soybeans ripen in saltwater, the main fermenting agents being the koji mold in the beginning, and yeasts and lactic acid bacteria towards the latter end of the process. As the amount of salt present is high, the ripening time required is comparatively long, taking ordinarily from several months to about a year. Salty natto is usually sold as a blackish, semi-dried product, with absolutely no formation of sticky filaments, but rather with a distinctive flavor derived from the addition of the salt and other seasonings. The large amount of salt used also makes it keep well.

At present, the production of regular natto is by far the larger of the two, being carried out in all regions of Japan; this product is better known and is usually referred to as simply "natto." On the other hand, salty natto is produced as the specialty product of such specific places as Kyoto (***Daitokuji nattô***), Nara (***Jofukuji-nattô***), and Hamamatsu (***Hama-natto***) (p. 123).

8.1.9 Hama-nattô. Hama-natto is a variety of salty natto made in and around Hamamatsu in Shizuoka prefecture. It is unrelated to regular (***itohiki***) natto except that both are fermented soy products. Rather, it is closer to miso. It is said that the first true production of Hama-natto dates from the time when Tokugawa Ieyasu became the lord of Hamamatsu

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Castle [1568] and wrote instructions to the monks of the nearby Daifukuji temple.

(a) Production method: The basic ingredients are 100 kg soybeans, 9.2 kg wheat or barley flour, 18 kg salt, 7.5 kg of ginger, and koji starter. Large-seeded soybeans, such as those from the Orani region of Hokkaido or Tsuru-no-ko are used. The wheat or barley is roasted then ground to a no. 85 mesh or finer flour. The ginger is thoroughly washed, thinly sliced, and pickled in shoyu [Japanese soy sauce].

Fig. 8.4 is a flow chart of Hama-natto production. First inspect the large soybeans for any extraneous matter or imperfect beans, then wash them thoroughly to rid them of any sand or dirt. Soak in water at 20°C for 3-4 hours, then allow to drain for several hours. Steam for 5-6 hours at normal pressure, then leave overnight in the steaming vat. The next morning, spread out the beans and allow to cool to below 40°C. Then mix in koji starter (*tané-koji*). Sprinkle the roasted flour on top of this and mix the entire mass well.

Spread the mixture evenly in wooden koji trays and place in a koji incubation room at 30-33°C for approximately 50 hours to allow the growth of the koji mold. When the mold has grown sufficiently, remove the koji trays from the incubation room and allow to sun-dry outdoors until the moisture content of 30-35% at the time of removal from the room, falls to 20-25%, at which point place the mixture in wooden kegs or small vats. Add enough saltwater (or shoyu, which is occasionally used) to just cover the molded soybeans. Place a pressing lid and weight on top of the mixture, and allow to stand for 6-12 months as it ripens.

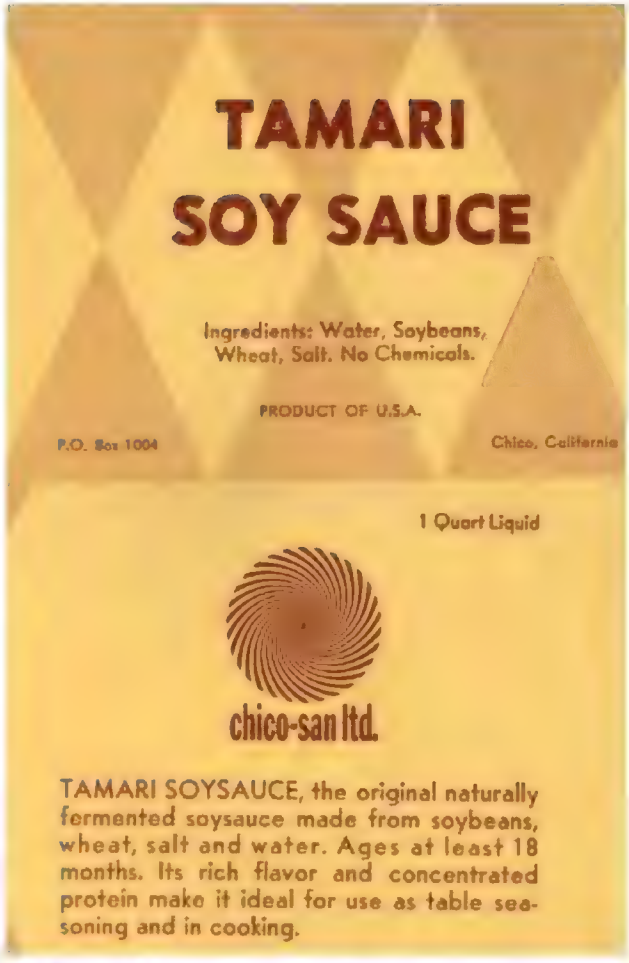
After the full fermentation is complete, spread the mixture out on a cloth to dry in the sun and mix in the pickled ginger, to make the final product.

Hama-natto is a simple food [or seasoning], dull blackish in color, but the flavor is deep and rich, and its nutritional value and storability are both excellent. Its percentage nutritional composition is shown in Table 8.10. Address: National Food Research Inst., Tokyo.

4868 Yong, F.M. 1971. Studies on soy-sauce fermentation. MSc thesis, University of Strathclyde, Glasgow, Scotland. • Address: Univ. of Strathclyde, Glasgow, Scotland.

4869 **Product Name:** Tamari Soy Sauce
Manufacturer's Name: Chico-San, Ltd.
Manufacturer's Address: P.O. Box 1004, Chico, CA 95926
Date of Introduction: 1971?
Ingredients: Water, soybeans, wheat, salt.
Wt/Vol., Packaging, Price: Glass bottle
How Stored: Shelf stable
New Product–Documentation: Label (reddish brown, beige, and yellow). Sent by Lorenz Schaller.

4870 *National Observer*. 1972. Guess who came to dinner and brought a soy-sauce factory? Japanese textiles loom nearer. Jan. 1.



• ***Summary:*** The Japanese are coming! With the dollar devaluation, many Japanese firms that used to export products to America are now building manufacturing plants here. Most intend to employ American labor. Recently the Walworth County [Wisconsin] board of supervisors voted 42 to 1 to allow construction of a $6 million Kikkoman soy sauce plant in the county. This will be "Kikkoman's only plant outside Japan, where the company has been making soy sauce for over 300 years." A photo shows two bottles of Kikkoman soy sauce next to a map of Wisconsin.

Note: This is the earliest document seen (Sept. 2008) that that announces Kikkoman's plans to build a soy sauce factory in the United States, or that mentions Walworth, Wisconsin, in connection with Kikkoman.

4871 Dimler, R.J. 1972. Oriental ceremonies at groundbreaking for a new rural industry. *Notes from the Director of the Northern Division* No. 1058, p. 2. Jan. 21.
• ***Summary:*** Describes the groundbreaking ceremonies on Jan. 19 for the new $12 million Kikkoman shoyu plant at Walworth, Wisconsin. "Kikkoman sells 100 million gallons

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of shoyu annually, besides a line of dehydrated soups, miso,.. The shoyu fermentation takes about 3 months and Kikkoman expects to start their first fermentations in October or November 1972 with the first sales in 1973. Initial production will amount to about 2,500,000 gallons annually which will use about 500,000 bushels total of wheat and soybeans per year. The plant brings to fruition the results from PL-480 research that NMN sponsored under the direction of Dr. C.W. Hesseltine (FL= Fermentation Lab), and that Kikkoman continued after the project itself terminated."

Dr. Hesseltine was among the honored guests. He found it cold standing in a corn field for almost 2 hours. Note NMN probably stands for Northern Marketing and Nutrition Division–according to Dr. Walter Wolf, who worked there for many years. Address: Director [NRRI., Peoria, Illinois].

4872. *Los Angeles Times.*1972. Search uncovers veal recipe. Culinary SOS. Jan. 27. p. I19.
• ***Summary:*** In the recipe for "Fried rice," ingredients include "short grain brown rice" and "Tamari soy sauce to taste."

4873. Chico-San Inc. 1972. Chico-San Inc. products. A catalog of unique foods. P.O. Box 1004, Chico, CA 95926. 24 p. Revised Jan. 1972.
• ***Summary:*** The cover of this catalog is printed with dark brown ink on pea-green paper. A complex, circular orange-red spiral is above the title. Three sheaves of grain are across the bottom. Soyfoods imported from Japan include Lima Soy Sauce, Soybean Puree (Miso), and dehydrated miso. They also sell black [soy] beans.

Contents: Rice cakes is our bag. "How Chico-San guarantees Oriental-type, organically-grown brown rice." Wehah Farms is mentioned often in this article. Whole grains and flours. Cereals. Whole grain noodles. Beans. Specialties (incl. Yinnies / Ame). Seeds. Condiments. Sea vegetables. Dried foods. Beverages. Cosmetics. Dentifrice. Utensils. Recipes.

"Chico-San products have gained increasing acceptance throughout the country since their introduction in 1960." The booklet contains 11 pages of recipes (p. 13-23) including: Miso-sesame spread. Miso soup (p. 20). Address: P.O. Box 1004, Chico, California 95926.

4874. Heindel, Max. 1972. New age vegetarian cookbook. 3rd ed. Oceanside, California: Rosicrucian Fellowship. 492 p. Index. 21 cm. 1st ed. 1968.
• ***Summary:*** Soy-related recipes: Soybean milk as a substitute for cow's milk (p. 14, it contains twice as much calcium, and has a higher protein value). About vegetarians (p. 17-18; the first law of occult science is "Thou shalt not kill"). Soy beans (p. 19-20; "Only in recent years has the soy bean gained acceptance in the Western World." Nutritive value, fresh green beans, sprouts, oil, soy flour, toasted soy beans [soynuts and soynut butter], shelled beans are nutritious as green vegetables, [whole dry] soybeans, soy grits, making soy bean sprouts at home). Soya milk (from soya beans, p. 126). Soy milk (from soy milk powder, p. 126). Soya pineapple tonic (drink with soya powder, p. 128). Soya carob bread (with powdered soy milk, soya carob flour, and soybean oil, p. 141). Soya muffins (with soya flour, p. 146). Soya flap jacks (with sour soya milk, p. 156). Soy waffles–wheatless (with Soya Powder, p. 158). Vegetable soy milk soup (with soy bean powder and "soy butter," p. 182). Soy noodles (with soybean flour, p. 184). Soy sponge balls (with soy flour, p. 184). Pastitsio (with soy noodles, p. 200). Baked soy beans (p. 202). Soy cheese (tofu) (p. 203, made from soybean milk coagulated with lemon juice). Soy beans and zucchini (p. 204). Soy bean patties (p. 205). Soy beans and vegetables. Baked soy cheese supreme ([tofu], p. 205). Soy slice (with "soy nuts" and peanuts, p. 206). Soy bean loaf (p. 207). Soybean omelet (with soybean pulp [see p. 241–ground cooked soybeans], p. 222).

Vegetables–Soybeans' Introduction. Soybean medley (p. 239). Cooked soybeans (p. 240). Baked soybeans. Soybean casserole. Soybean pulp (p. 241). Soybean souffle. Soy waffles (p. 241). Soy gravy (with soy sauce, p. 318). Soybean stuffing (with canned soybeans, p. 331). Soy grits stuffing (p. 332). Soy bean butter (with soybean flour, water, and oil, p. 481).

Note: The author's name "Max Heindel" is printed on the spine but not on the title page or other front matter. He is also the author of numerous other books published by the Fellowship, advertised in the back of the book, such as Occult principles of healthy and healing. The message of the stars. Mysteries of the great operas. Gleanings of a mystic. Simplified scientific astrology. The Rosicrucian cosmo-conception.

Also discusses: Almonds, nutmeat (mostly peanuts, some soybean meal), peanuts, sesame butter, sunflower seeds. Address: Rosicrucian Fellowship, International Headquarters, Mt. Ecclesia, P.O. Box 713, Oceanside, California 92054.

4875. *SoyaScan Notes.*1972. Chronology of Janus Natural Foods, macrobiotic and natural foods distributor in Seattle, Washington. And of Granum. 17 March. 1992. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1972 Jan.–Janus Foods Inc. is established at 712 Seventh Ave. South in Seattle, Washington, by George Gearhart and Blake Rankin, formerly of Spiral Foods. Some background. In 1969, while a student at UCLA, Rankin came in contact with Erewhon, Los Angeles. After graduation from UCLA he and several friends set up a small health food store in Victoria, BC, Canada. Then he spent 3 months in Boston, Massachusetts, living in a Kushi study house and working in an Erewhon warehouse. Back in Seattle,

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he worked at Spiral Foods, a wholesale operation that was an offshoot of Chico-San. Spiral Foods owned the O-Soba Noodle Nook in Seattle. Shortly after that he and George Gearhart, the proprietor, closed Spiral Foods and in Jan 1972 opened Janus Foods as a macrobiotic and natural foods wholesale and distribution company. Tim Hartman was third of the original incorporators; all three men managed the company. It was successful. From opening day, Janus sold miso and shoyu, imported from Japan; they were among the company's best-selling products. Janus never owned a natural foods retail store or restaurant, and never sold foods retail from their warehouse.

1972 Sept.–Rankin leaves Seattle on a trip to Japan via Hawaii. He leaves Hawaii for Japan in March 1973. Erewhon had given Janus permission to buy natural foods (bearing the Erewhon label) directly from Japan, so in the spring of 1973 Rankin traveled and worked with Muso and Mitoku to set up the first shipments to Janus in Seattle. Janus probably never paid any royalties or fees directly to Erewhon. He leaves Japan in Sept. 1973. Then he goes to Nepal and India on a spiritual search. In late 1973 he returns to Seattle and works for Janus.

1973–Two directories show that "Janus Foods Inc." is still located at 712 7th Ave. South, Seattle, Washington 98104. They now sell tamari and miso and distribute products from Erewhon, Spiral Foods, Deaf Smith, Pure & Simple, Chico-San, and Arrowhead Mills.

1974 March 8–Janus (Gearhart, Rankin, and Hartman) hosts the meeting of the Natural Food Distributors in Seattle; 16 people representing 12 companies attended.

1974 July 19. By this date, Janus Natural Foods, Inc. is located at 1523 Airport Way South, Seattle, WA 98134. Tim Hartman is still a manager of the company and Rankin is present. The company now sells barley koji. The company now has a lovely sprout-like logo (designed by Frederick Walsh) and a new brand called "Verity," whose labels were also designed by Walsh. Soy sauce and misos were sold under the Verity label for a while starting before Sept. 1976.

1975–The three managers decide to rotate the presidency of Janus annually. Rankin became president and Hartman left the company before his turn came around. During 1974 and 1975 Rankin and Gearhart were working on miso production.

1976 Sept.–Rankin leaves Janus and returns to Japan where he works for Mitoku and studies calligraphy. A few days after his arrival in Japan he meets his future wife, Yoko. They later had two children, but separated in 1988 and eventually were divorced.

1977–Janus leaves its large warehouse on Airport Way.

1979 Month? (before summer) Janus goes out of business, under the management of George Gearhart.

1981–Rankin returns to Seattle and in January or February starts Granum (pronounced GRAH-num, not GRAY-num) as a distributor and importer for Mitoku macrobiotic food products from Japan. The Granum logo is designed by Frederick Walsh. As of 1985 Granum has a small retail store and a 10,000 square foot warehouse, both at 2901 N.E. Blakeley St., Seattle, Washington 98105. Expected 1985 gross is more than $500,000.

As of March 1992 Granum has more than doubled its business compared with 1985. Blake has remarried to Nancy and they have a 2-year-old son, Addison. George Gearhart now lives in the suburbs to the south of Seattle. He is a sales manager, but no longer works in the natural foods industry. Address: 712 7th Ave. South, Seattle, Washington 98104.

4876. *Soybean Digest.*1972. Kikkoman plans $8 million plant [in Wisconsin]. Jan. p. 17.

• ***Summary:*** This new soy sauce plant, to be built by Kikkoman Shoyu Co. at Walworth, Wisconsin, "is believed to be the largest single investment ever made by a Japanese concern in the U.S." The plant will produce 2.6 million gallons of soy sauce annually. It will be constructed by the Austin Co. of Cleveland, Ohio. Kikkoman began exporting shoyu (to be sold in bottles) to the U.S. in 1949. It was transported in tank containers from Japan to California, where it was bottled and packed for distribution.

4877. Sokolov, Raymond A. 1972. Lobster Cantonese? They may think you mean Americanese. *New York Times.* Feb. 3. p. 28.

• ***Summary:*** Robert Tsang, a leading Chinatown restaurateur and secretary of the Chinese Restaurant Association, has finally admitted what non-Chinese Americans have long suspected: most restaurants have one menu for Americans (with a limited number of dishes), a full menu for Chinese customers (written in Chinese), and another Chinese menu for only rice and noodle dishes.

So when Americans order lobster Cantonese, they will get an "American" version of the dish. In more detail, it works like this: "The Chinese-style lobster has very little sauce and several ingredients, notably salted black beans and spices, that do not appear in the Americanized recipe." The American version, by comparison, is soupy, "with three times as much cornstarch, no dark soy sauce, a smaller amount of sesame oil, no ginger, no black beans but double the garlic."

4878. Vancour, Edith. 1972. 'Free' Chinese cooking. *Washington Post, Times Herald.* Feb. 10. p. D1.

• ***Summary:*** Mrs. Gaylord Nelson (Tia, wife of the Democratic senator from Wisconsin) is an outstanding cook. Although she can cook "in any language," her specialty is Chinese–and this article is about cooking at Chinese New Year. One of the best known meatless dishes served at this time is called "Arhats Fast or Buddhist Saints ten varieties", it contains ten ingredients, including "Gluten of flour or skin of bean curd [yuba], cut into 1-inch cubes. (Bean curd skin

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has to be boiled for ½ hour)" [sic, yuba needs only a few minutes of cooking]

Contains several recipes which call for soy sauce. A photo shows Mrs. Gaylord Nelson in the kitchen preparing a Chinese dinner.

Note: A condensed version of this article by the same author, titled "Specialty of house: Chinese cooking," appeared in the *Los Angeles Times* (Feb. 24, p. J25).

4879. *Food Engineering*. 1972. Japanese build sauce plant in U.S. 44(2):95. Feb.

• ***Summary:*** Subtitle: "Kikkoman Shoyu Co. will produce soy sauce in Wisconsin, using locally grown wheat and soy beans. Sauce will be made by applying modern technology to the traditional natural process." An illustration shows an aerial view of the plant, which will be the largest Japanese plant to be built in the USA. The initial $6 million plant will be built by Austin Co., Chicago, and be ready for operation in 1973. A description of the modern process for making "shoyu, a flavorful soy sauce," is given. A portion of the soy sauce will be blended with other ingredients to make teriyaki sauce. A powdered miso (soy bean paste) soup is under development.

4880. Huang, Su-Huei, ed. 1972. Chinese cuisine: Wei-Chuan cooking book. Taipei, Taiwan: School of Home Economics, Wei-Chuan Foods Corp. 181 p. Illust. No index. 22 cm. [Eng]

• ***Summary:*** On each page is one recipe and a half-page color photo of the prepared dish. The title of the recipe is written in English in large bold letters and is also given in (to the right) in small Chinese characters, just above the number of servings. Most of the recipes call for ¼ to ½ teaspoon of MSG, many call for soy sauce.

On unnumbered pages at the front of the book are (1) A two-page color photo, on a light blue background, of 39 special ingredients, each numbered, with the numbers and names across the bottom of the pages. These include: "9. nori. 24. pickled plum (*umeboshi*). 25. bean curd noodle [pressed tofu noodles]. 30. bean curd wrapper (*pronounced 'bai ye'*) [pressed tofu sheets]. 35. bean curd skin [yuba in large, semicircular thin sheets].

(2) Description of some other special ingredients: "Hot bean paste (*pronounced 'la jiao jiang'*). This is made with red peppers [and soy beans] and has a very hot taste." "Sweet bean paste (*'t'ien mien jiang'*). This is made with steamed, fermented bread (black color)." Note 1: Why is this called "Sweet bean paste"? What kind of beans are used to make it?

"Soy bean paste (*'do ban jiang'*). This is made with fermented soy beans (black color)." "Fermented black bean (*'do shr'*). This is black [soy] beans which are steamed, then marinated in soy sauce or salt." "Pickled bean curd [fermented tofu] (*'do fu ru' or 'Chinese cheese'*). This is bean curd which is dried and then pickled; there are many different kinds with different seasonings."

(3) Helpful hints: "In all recipes you may substitute Worcestershire sauce for dark vinegar."

In Chapter 3, "Pork and beef," soy related recipes are: Shredded pork with sweet soy bean paste (with 1.3 tablespoons "sweet soy bean paste," p. 39). Note 2: This is the earliest document seen (Feb. 2009) that contains the term "sweet soy bean paste." See also p. 104 below.

Pork ribs with dried black fermented beans (p. 41). Pork in preserved bean sauce (p. 42).

In Chapter 4, "Sea Food," is a recipe for Steamed carp with fermented black beans (p. 64).

In Chapter 5, titled "Bean curd and eggs" (p. 102-15) are recipes for: Stewed bean curd (with "1½ squares bean curd"). Assorted dish with hot sauce (with "½ tablespoon hot soy bean paste, 1½ tablespoons sweet soy bean paste," p. 104). Bean curd stuffed with minced pork. Ma-Po's fried bean curd with pork. Bean curd leaf rolls with minced pork (With "bean curd wrappers"). Beancurd noodles with celery salad (with "4 oz. {store-bought} bean curd noodles"). Vegetarian chicken (with "16 bean curd sheets").

Also: Green peppers stuffed with chopped meat (p. 122, with "1 tablespoon fermented black beans, crushed"). Bitter gourd stuffed with fermented black beans (p. 126, with "2 oz. fermented black beans"). Eggplant with bean curd skin (p. 133, with "1 sheet beancurd skin" and "1 sheet nori" [sea vegetable]). Bean curd in earthen pot (p. 142, with "3 squares bean curd"). Address: 19 West Nanking Road, Taipei, Taiwan.

4881. Sokolov, Raymond A. 1972. A maverick farmer who finds gold in natural food products. *New York Times*, March 2, p. 46.

• ***Summary:*** About Frank Ford who grows wheat on 1,800 acres in Deaf Smith County, Texas. But Ford is a maverick, who farms organically, without sprays or synthetically fertilizers. His company is Arrowhead Mills and his brand, Deaf Smith, have become household words among those who buy natural foods.

Deaf Smith County was named after Erastus ("Deaf") Smith, a hero of Texas's war for independence from Mexico. Reputed to have the richest soil in the USA, it is situated on a vast plain about 4,000 feet above sea level.

Contains two recipes. Ingredients in Rebecca Kirby's soybean chili include 1 cup soybeans and "Tamari soy sauce." A photo shows Frank Ford.

4882. Yokotsuka, Tamotsu; Aonuma, T.; Mogi, K.; Fukushima, D.; Yasuda, A.; Watanabe, H.; Tsukada, N.; Arai, A. Assignors to Kikkoman Shoyu Company, Ltd. (Noda-shi, Japan). 1972. Method of preparing soy. *U.S. Patent* 3,647,484. March 7. 7 p. Application filed 27 Feb. 1969. 1 drawing. [1 ref]

• ***Summary:*** Soybeans in any form (incl. soybean meal),

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having a moisture content of 30-70% by weight, are steamed with saturated steam having a gauge pressure of not less than 1.8 kg per square cm for a short period of time, not to exceed 10 minutes, followed by rapid cooling to a temperature not to exceed 100°C, are used as the starting material for the preparation of soy [sauce]. This method can provide soy of superior flavor and of high quality wherein the possibility of the formation of clouds [cloudiness] and precipitates when diluted and heated in its use does not occur, and can be carried out advantageously, on an industrial scale, with improved yield and good reproducibility. Address: 1. Higashikatsushikagun; 2. Kashiwa-shi, 3-8 Noda-shi. All Japan.

4883. Aihara, Cornellia. ed. 1972. The *dô* of cooking (Ryorido). Vol. 1. Macroguide No. 13. San Francisco, California. George Ohsawa Macrobiotic Foundation. 109 p. Illust. No index. March. 25 cm.
• ***Summary:*** All recipes in this macrobiotic cookbook are numbered. Contains information on soy sauce and miso (p. 44-45). Soy-related recipes include: "Top of stove" casserole noodle soup (with "dry tofu" [dried-frozen tofu] and fried wheat gluten, p. 58). Fried whole wheat noodles (with seitan, p. 60). Homemade noodles with soup (and barley miso, p. 61). Onion miso (p. 62). Rolled cabbage with tofu (p. 63). Wheat gluten (p. 71, made from 10 cups whole wheat flour and 4 cups unbleached flour). Seitan (p. 72). Fresh wheat fu (2 versions). Serving recipes–boiled fu (p. 73). Fried fu–gluten cutlet. Shish kebab (with cooked fu, p. 73-74). Making tofu (at home using 3 cups soybeans and nigari, p. 75-76). Making nigari (p. 76). Quantity tofu preparation (using 10 lb soybeans). Okara or unohana (sauteed with soybeans and vegetables, p. 76). Tofu with kuzu sauce (p. 78). Fried tofu. Shinano-age (Fried tofu with buckwheat, p. 79). Kaminari Tofu (Thunder Tofu, p. 79). Nori-maki (Tofu rolled in nori, p. 80). Age-tofu (stuffed tofu, variation, p. 80-81). Miso salad dressing (p. 90). Bean sprout miso salad (p. 91; it is not clear what kinds of beans the bean sprouts are made from–probably mung beans). Gamodoki ([Ganmodoki] mock goose, p. 99-100).

Note 1. This is the earliest (and only) English-language document seen (May 2012) that contains the word *gamodoki* or the term "mock goose, both of which refer to deep-fried tofu burgers.

French bread made with gluten water (p. 104). Amazake is not mentioned. Some recipes call for chicken or fish as ingredients.

Note 2. This is the earliest cookbook seen (July 2005) that gives a recipe for making seitan, as follows: "1 T. [tablespoon] dark sesame oil. 1 T. minced gingerroot. 1-2 cups soy sauce. 5 cups cold cooked gluten. Heat oil in a sauce pan, add minced ginger (use only fresh ginger) and saute. The amount of soy sauce used depends upon how long you intend to store the Seitan. Use a larger amount of soy sauce for longer storing and refrigerating. Add soy sauce, bring to a boil, and drop in pieces of gluten. Cook on low heat for three hours, stirring frequently. Remove cover and continue cooking until excess liquid is absorbed and evaporated. Seitan is ideal as a seasoning in noodles au gratin, stews, cooked with vegetables, etc. It will keep for long periods of time in the refrigerator."

After Volume 2 of this series of four seasonal cookbooks was issued, Volume 1 was subtitled "Spring Cooking." Address: San Francisco, California.

4884. Hashiba, H. 1972. Non-enzymic browning of soy sauce. Comparison of the browning of soy sauce with that of a sugar-amino acid model system. *Agricultural and Biological Chemistry* 36(3):390-97. March. [6 ref.] Address: Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

4885. Tamura, Shinpachiro; Ishima, T.; Saito, S.; Miyauchi, T.; Tomita, F.; Yoshikawa, S. 1972. [Studies in the patterns of six tastes of twenty drinks in Japan]. *Shokuryo Kenkyujo Kenkyu Hokoku* (*Report of the Food Research Institute*) No. 27. p. 77-83. March. [3 ref. Jap. eng]
• ***Summary:*** "Taste patterns of 20 drinks in Japan were studied." A total of 10 points were assigned to each of "six taste components, namely, sweet, salty, sour, bitter, tasty, and astringent."

These drinks included miso soup and soy sauce soup (*sumashi-jiru*, a clear soup seasoned with soy sauce). A very interesting diagram showing these relationships appears on p. 80.

"The highest pattern similarity (0.996) was found between two kinds of green tea, namely 'sen-cha' and 'ban-cha,' and the lowest one was found between soysauce soup and coffee or Coca-Cola." Address: Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo, Japan.

4886. *Hartford Courant* (*Connecticut*). 1972. Some of Shirley's concoctions. April 28. p. 22.
• ***Summary:*** The recipe for Shirley's cabbage calls for "2 tbsp. tamari sauce."

4887. Hashimoto, Hikotaka; Yokotsuka, Tamotsu. 1972. [Studies on sediment of *shoyu* (Soy sauce). VI. Sediment forming activity in fermented raw *shoyu*]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 50(4): 257-63. April. [9 ref. Jap; eng]
Address: Central Research Laboratories, Kikkoman Shoyu Co., Ltd., Noda, Chiba prefecture, Japan.

4888. Okuhara, Akira; Tanaka, T.; Saito, N.; Yokotsuka, T. 1972. [Color of soy sauce. VII. Oxidative browning]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 50(4):264-72. April. [12 ref. Jap; eng]

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Address: Central Research Inst., Kikkoman Soy Sauce Co. Ltd., Noda-shi, Chiba prefecture, Japan

4889. Brown, Dolores. 1972. A face-life for Queen Emma. *Hartford Courant (Connecticut)*. May 7. p. 2F.
• ***Summary:*** In Curacao, in the Lesser Antilles, a major restoration project is planned by the current government. "Downtown Willemstad, redolent of history and the cradle of Dutch colonial architecture, is being restored... The dear old Queen Emma pontoon bridge will be improved.

Cruise-ship passengers bound for the Caribbean and Curacao will find many bargains there. Any suburban supermarket has shelves full of interesting ingredients reflecting the Dutch heritage: "spices for bambi goreng, a favorite national dish, Indonesian soy sauce, which makes the Japanese product taste like a Japanese copy..."

4890. Farmilant, Eunice. 1972. Macrobiotic cooking. New York, NY. New American Library. 224 p. Foreword by Herman Aihara. May. Index. 18 cm. [31 ref]
• ***Summary:*** This pocketbook has a color (beige) photo on the cover of ears of wheat, one wooden spoon filled with soybeans and one filled with unpolished rice. It is "A basic introductory guide to cooking and eating the macrobiotic way." The author's interest in macrobiotics began in April 1968. Basic information on soyfoods (especially miso, tamari, and tofu) is given on pages 29, 33-38, 213-14. Soy-related recipes include: Wheat berries and black beans (i.e. black soybeans, p. 78). Sprouts (incl. soy sprouts, p. 82-83). Miso pickles (p. 124-25). Miso soup (p. 128-29). Cream of miso soup (p. 135). Black beans and wheat berries (p. 139).

There is an entire chapter on miso and tofu (p. 142-46) including: What makes miso so beneficial? Barley miso (nutritional analysis). Miso-vegetable stew. Miso-rice. Miso stew with vegetables. Miso-vegetable spoon bread. Homemade tofu (curded with fresh lemon juice).

Pizza–Macrobiotic style (with miso, p. 149). Chop suey (with tofu and miso, p. 151-52). Miso bechamel sauce (p. 159). Miso gravy. Simple tahini and tamari sauces (p. 160). Tempura dip (with tamari). Simple miso spreads (p. 161). Miso-vegetable spread. Miso-watercress spread.

There is a directory of macrobiotic stores and restaurants in the U.S. (p. 191-203, subdivided alphabetically by state, and within each state alphabetically by city). The following states have the following number of stores and restaurants: Alaska 1, Arizona 4, Arkansas 1, California 32, Colorado 4, Connecticut 18, District of Columbia 3, Florida 14, Georgia 7, Hawaii 2, Illinois 7, Indiana 2, Iowa 5, Louisiana 4, Maine 14, Maryland 7, Massachusetts 51, Michigan 12, Minnesota 3, Mississippi 2, Missouri 3, Nevada 1, New Hampshire 20, New Jersey 9, New Mexico 3, New York 61, North Carolina 5, Ohio 14, Oklahoma 3, Oregon 2, Pennsylvania 8, Rhode Island 5, South Carolina 1, Texas 4, Utah 1, Vermont 26, Virginia 4, Washington 3, Wisconsin 2.

There is also a directory of stores, restaurants, and centers outside the U.S. (p. 204-07, subdivided by country). The following countries have the following number of stores, restaurants, or centers: Australia 1, Belgium 2, Brazil 2, Canada 15, Denmark 4, France 29, Germany 1, Holland (Netherlands) 2, India 1, Italy 1, Japan 3, Portugal 1, Puerto Rico 1, Spain 1, Sweden 1, Switzerland 2, United Kingdom: England 13, Scotland 1, Vietnam 2.

A list of wholesale distributors in the U.S. (p. 208-09) includes Shiloh Farms (Route 59, Sulfur Springs, Arkansas; [Warren Clough]), Erewhon Trading Co. (8003 W. Beverly Blvd., Los Angeles, California 90048), Chico San Foods (1262 Humboldt Ave., Chico, California 95926), Erewhon Trading Co. (33 Farnsworth St., Boston, Massachusetts 02210), Deer Valley Farms (Guilford, New York 13780), Infinity Food Co. (171 Duane, New York, NY 10013), Mottel Foods (451 Washington, New York, NY 10013), Juniper Farms (Box 100, Sugar Loaf, NY 10981), Pioneer Specialty Foods (Fargo, North Dakota 58100), Merit Food Co. (Pill Hill Lane, Box 177, Bally, Pennsylvania 19503), Essene (58th & Grays Ave., Philadelphia, PA 19143).

4891. Nakano, Masahiro. 1972. Synopsis on the Japanese traditional fermented foodstuffs. In: W.R. Stanton, ed. 1972. Waste Recovery by Microorganisms: Selected Papers for the UNESCO/ICRO Work Study. Kuala Lumpur: Ministry of Education, Malaysia. See p. 27-48. Distributed in the USA by UNIPUB, New York.
• ***Summary:*** Contents: Introduction. Miso. Shoyu. Tane-koji. Koji. Natto. Sake. Concluding remarks. Appendix. Address: Tokyo, Japan.

4892. Dosti, Rose. 1972. Chinese menus are a snap for Sylvia. *Los Angeles Times*. June 22. p. J3.
• ***Summary:*** Sylvia O'Gilvie snaps together a quick Chinese dinner for herself (or friends) after work. Her recipe for "Spareribs with black bean sauce" calls for "2 tsp [teaspoons] fermented black beans," 1 teaspoon soy sauce, and ½ teaspoon MSG. Then: "Crush beans to make a paste."

4893. Ibrahim, -. 1972. Soy-sauce processing. In: Science Meeting on Food Protein and Soy-bean Processing. Bandung, Lembaga Kimia Nasional, LIPI. Held 1-2 June 1972. *
Address: Indonesia.

4894. Yutono, -; Darmosuwito, S. 1972. Proses pembuatan kecap [Process for making Indonesian soy sauce]. In: Science Meeting on Food Protein and Soy-bean Processing, Bandung, Lembaga Kimia Nasional, LIPI. Held 1-2 June 1972. [Ind]*
• ***Summary:*** Describes the 6 steps in the process for making fermented soy sauce.

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4895. Conrat, Maisie. 1972. Soybean cookery. *Organic Gardening and Farming* 19(7):89-93, July.
• ***Summary:*** Discusses the benefits of soybeans and their products: whole soybeans, soy flour, tofu, miso, and soy sauce.

"If you go into a natural food store today, you will find soybeans available in many forms. In some stores you'll find two or more varieties of whole beans as well as soy grits and soy meal, soy powder and soy flour. Most stores also carry roasted, salted soy nuts and a kind of soy cheese called tofu. They will have noodles, spaghetti, and macaroni made from soy, and they will also carry exotic soy products like miso. This may seem like a lot of things to get from one kind of bean, but in Japan, where soy is considered a protein staple, you will find more products yet.

"Both tamari soy sauce and miso are made from fermented soy beans. (Regular commercial soy sauce has been adulterated with various chemicals to simulate fermentation.) Miso is a thick paste made from black [not true] soybeans and rice, and has the same flavor as tamari soy sauce. You can use miso as you would beef extract in making soups, stews and sauces.

"Tofu is a kind of soy cheese. It is widely used throughout China and Japan, where it is available in many forms. Tofu is made from clabbered soy milk, just as cottage cheese is made from clabbered cow's milk. It is very mild and delicate, so you will probably want to serve it in a sauce or soup that has plenty of character."

Contains recipes for: Apple soy crisp (with soy meal). Soy pancakes (with soya flour). Soy cheeseburgers (with soybeans). Soy balls (with soy powder).

4896. Lee, Jai Moon; Kim, Yu Sam; Hong, Yun Myung; Yu, Juhyun. 1972. [Studies on the substitution of raw materials in soy sauce. III. Use of corn and barley]. *Hanguk Sikp'um Kwahakhoe Chi* (*Korean J. of Food Science and Technology*) 4(3) 182-86, July. [14 ref. Kor]
Address: Dep. of Food Engineering, College of Science and Engineering, Yonsei Univ., Seoul, Korea.

4897. Sokolov, Raymond A. 1972. Taking a look at one of China's most obscure cuisines. *New York Times*, Aug. 3, p. 22.
• ***Summary:*** This is a review of a new Chinese restaurant, Foo Joy (13 Division St., on the edge of Chinatown) that serves Fukinese cuisine, the food of Fukien Province. Seafood is the main ingredient, in part because the province's two leading cities, Amoy and Foochow, are both seaports with big fishing industries.

The recipes for Fried fish rolls and for Pork chops with scallion sauce each call for "1 teaspoon imported light soy sauce." The recipe for Scallion sauce calls for "3 tablespoons black (thick) soy sauce." A photo shows Henry Wong, chef at Foo Joy.

4898. Loring, Kay. 1972. Korean cafes keep growing. *Chicago Tribune*, Aug. 24, p. S_A6.
• ***Summary:*** This is a review of the restaurant Korea House in Chicago, where an estimated 10,000 people of Korean ancestry now reside. Four years ago there was only one Korean restaurant in the city; now there four. The main Korean seasonings are garlic, onion, red pepper, soy sauce, and sesame–plus kim chee (kimchi).

"No dairy products are used, because as in Japan and China, there is no room in this thickly populated country for dairy industries. Soy bean curds and soy milk are among substitutes." Vegetable oils, such as sesame oil and [soy] bean oil, are widely used in place of animal fats for cooking.

4899. Davis, Pat; Bentley, Carol. 1972. Natural foods and no smoking. *Washington Post, Times Herald*, Sept. 21, p. K1-K3.
• ***Summary:*** A new natural foods restaurant, The Golden Temple Conscious Cookery, located at 1521 Connecticut Ave. NW, opened several months ago and has had lines at lunch and dinner since that day. The restaurant was started by the Washington, DC, chapter of 3HO (the Happy, Healthy, Holy Organization), which is a yoga lifestyle group "organized in Los Angeles three years ago by Yogi Bhajan, a yoga teacher from India." In Dec. 1970 one of his student-teachers, Larry Wentick, came to Washington, DC, to start a center–now called Ahimsa House (yoga ashram) and located at 1704 Q St. NW. Larry, his wife Ganga (pronounced GUN-ga), and a group of about 15 people worked for about six months on the restaurant before it was ready to open. Most of the entrees, salads, and fruit drinks were created by Ganga, a native of California, where natural and organic foods caught on early. Ganga and Larry have both had previous experience in natural food stores and restaurants. Some years ago, Ganga was appointed cook at a commune in New Mexico, and soon she was cooking for 20-30 people a day–without recipes. Later she worked at a natural foods restaurant in Los Angeles and as a cook for Yogi Bhajan.

At the Golden Temple, all dishes are prepared with organically grown ingredients whenever available. No meat, fish, or eggs are served, and no refined sugar or flour are used. The restaurant now seats 75 and serves about 400 daily. The ashram's 25 members practice awareness, yoga, good diet, and service to others. The restaurant is bright and spotless.

Three recipes are given. One, Bhajan's banquet, calls for "Tamari (soy sauce)."

4900. Ebine, Hideo. 1972. Fermented soybean foods in Japan. *Tropical Agriculture Research Series* No. 6, p. 217-23, Sept. Symposium on Food Legumes.
• ***Summary:*** Production of fermented soybean foods in Japan in metric tons (tonnes) (1968): Miso: 553,000 tonnes;

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includes the use of 169,000 tonnes of whole soybeans, 6,600 tonnes of defatted soybeans, 84,400 tonnes of rice, 18,200 tonnes of barley, and 71,200 tonnes of salt. In addition, roughly 200,000 tonnes of miso are made at home in Japan.

Shoyu: 1,027,000 kiloliters; includes the use of 14,900 tonnes of whole soybeans and 147,320 tonnes of defatted soybeans, 126,600 tonnes of wheat, 7,700 tonnes of wheat bran, and 172,200 tonnes of salt.

Natto: 90,000 tonnes; includes the use of 47,000 tonnes of whole soybeans.

Note that miso uses more soybeans than shoyu. Annual per capita consumptions of these foods was: Miso 6.7 kg, shoyu 10.2 liters, and natto 760 gm. Address: Head, Fermentation Div., National Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo.

4901. Menezes, Tobias J.B. de. 1972. Alimentos e molhos obtidos por fermentacao da soja e de cereais [Foods and sauces obtained by fermentation of soybeans and cereal grains]. *Boletim do Instituto de Tecnologia de Alimentos (Campinas, Sao Paulo, Brazil)* No. 31, p. 49-63, Sept. [24 ref. Por]

• ***Summary:*** Contents: Introduction. Shoyu (*molho de soja*). Miso. Natto. Tempeh. Sufu. For each food, there is an introduction and a description of the process for making that food, sometimes with a flowchart.

Note 1: This is the earliest Portuguese-language document seen (Oct. 2011) that mentions fermented tofu, which it calls "sufu."

Note 2: This is the earliest Portuguese-language document seen (April 2012) that uses the term *molho de soja* to refer to soy sauce. Address: Brazil.

4902. Saio, Kyoko, Watanabe, Tokuji. 1972. Advanced food technology of soybean and other legumes in Japan. *Tropical Agriculture Research Series* No. 6, p. 209-16. Sept. Symposium on Food Legumes.

• ***Summary:*** The following amounts of whole soybeans (in 1,000 metric tons) are used in Japan to make these products: Tofu and fried tofu 295, miso 169, natto 47, Kori-tofu (dried or frozen tofu) 34, shoyu 15, kinako 12, others 70. Total 642.

The following amounts of defatted soybeans (in 1,000 metric tons) are used in Japan to make these products: Shoyu 154, tofu and fried tofu 77, miso 8, others 45. Total 284. Grand total: 926. Address: 1. Senior Research Officer; 2. Director. Both: National Food Research Inst., Shiohama 1-4-12, Koto-ku, Tokyo.

4903. Eden Foods. 1972. [Catalog and pricelist]. 211 South State St., Ann Arbor, MI 48108. 2 p. Oct. 5.

• ***Summary:*** This is the second earliest existing Eden Foods seen that is dated. Soy-related products include: Hopi Roasted Soybeans (1.3 oz snack). Soybeans (1 lb, 2 lb, and 50 lb bags). Soy flour (25 lb or 50 lb). Tamari soy sauce (pints, quarts, gallons).

Other interesting products include: Azuki beans (25 lb, 50 lb, and 100 lb bags). Sweet rice flour (25 lb). Celestial Seasonings herb teas (incl. The Red Zinger). Mu herbal tea #9, #16. Wild ginseng tea. Wild ginseng root. Wild goldenseal powder. Whole wheat noodles. Dr. Bronner's Castile Soap. Corona Hand Mill. Honey (blueberry blossom or raw clover, "This honey is strained only once and heated only to 115 degrees and not above in order to preserve the natural nutrients and enzymes in the honey").

Note: This is the earliest document seen (Jan. 2002) containing the term "Sweet rice" or "Sweet rice flour." The new term is used in place of the traditional term "glutinous rice" which is inaccurate since this type of rice contains no gluten. People with celiac disease, celiac sprue, or Duhring's disease must strictly avoid foods that contain gluten; they can eat "sweet rice." Address: Ann Arbor, Michigan.

4904. *Los Angeles Times*. 1972. Are menus a puzzle? Master a few of those foreign food phrases. Oct. 6, p. F16.

• ***Summary:*** Foods listed under "Japan" include: "... Miso: Bean paste. Natto: Steamed and fermented bean... Shoyu: Soy sauce... Tofu: Bean curd."

4905. Wong, William. 1972. The affair of Archbold and La Choy: How love sprouted, then cooled off. *Wall Street Journal*, Oct. 10, p. 4.

• ***Summary:*** "La Choy Food Products, a division of Beatrice Foods Co.," grows so many [mung] bean sprouts (700,000 pounds a week) in Archbold, Ohio, that it uses 70% of the village's water–about 355 million gallons last year. This (and general growth in the area) is threatening to dry up the village's water supply in Bush Creek Reservoir, which can hold only 308 million gallons.

The average growing cycle is six days from mung bean seed to harvest. The sprouts grow in about 24 70-foot-long bins, each about 5 feet wise and 5 feet deep.

Choy employs 330 workers and pays $175,000 a year in property taxes. But the villagers don't like the designation "Chinatown U.S.A." which has come to be applied to Archbold–even though the town's Chinese population has been zero throughout its 106-year history.

La Choy started because Wallace Smith, in his mid-20s and a business graduate of the University of Michigan, was running a grocery store in Detroit, Michigan. One of his best-selling foods was mung bean sprouts, grown by Chinese residents of Detroit, and sold to Mr. Smith through Ilhan New, a Korean who had attended college with Mr. Smith. Eventually [by 1920] the bean sprouts in his store sold so well, the Mr. Smith asked Mr. New to grow them for him.

Mr. New agreed to do this. The sprouts continued to sell so well that the two men decided to can them. Sales grew even more and the two men formed a company. The word "choy" means "vegetable" in Chinese.

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The company diversified into other Chinese foods and sauces. In 1937, shortly before completion of a new La Choy factory in Detroit, Mr. Smith was killed by lightning. So his wife took his place as a director in the budding company.

After World War II started, the U.S. government declared all of La Choy's products nonessential, denied the company tin for canning, then took over the plant for use in making rifle parts.

It so happens that Mrs. Smith came from Archbold, Ohio–as did her brother and father, both of whom were now important La Choy stockholders. The directors decide to move the company to Archbold and to temporarily enter the business of canning tomato juice–which was essential enough to qualify for tin. After the war, La Choy continued with its former business–but in Archbold.

One day in 1958, in connection with a La Choy celebration, the governor of Ohio and the mayor of Archbold designated Archbold as Chinatown U.S.A. Since then the name has stuck since La Choy has used it in news releases. But the residents still dislike it.

Today Archbold is a village of 3,100 people, two traffic lights, and not a single Chinese.

4906 *New York Times*.1972. East 60th Street between 2nd and 3rd (Ad). Oct. 31. p. 24.
• ***Summary:*** An illustration shows all the stores on this block. Below it, a brief description of each is given. "Butler's 203 East 60th. A friendly eatery where the presentation is as important as the preparation. Try the ginger fried shrimp with vegetables, sauteed in apple juice, tamari sauce and ginger root."

4907 **Product Name:** Tan Pups (Skewered Seitan Deep-Fried in a Breaded Batter).
Manufacturer's Name: Amartseff (Nik and Joanne).
Manufacturer's Address: 216 Gardner Rd., Brookline, MA 02146.
Date of Introduction: 1972, October.
Ingredients: High-protein wheat flour. Broth: Water, kombu, sauteed onions, soy sauce, fresh gingerroot. Batter: Pre-ground corn meal, fresh onions, garlic, salt, soy sauce, some of the concentrated liquid in which the seitan had been cooked, and maybe some water.
How Stored: Unrefrigerated and perishable.
New Product–Documentation: This was probably one of America's first two commercial seitan products. With this extremely innovative, all-American product, seitan was transformed from a salty black seasoning into a juicy meat substitute, and the pattern was set for most subsequent seitan products in the western world.

Talk with Nik Amartseff (P.O. Box 100, Cambridgeport, Vermont 05141. Phone: 802-869-2942, by June 20: P.O. Box 135, Chesterfield, New Hampshire 03443. Phone: 603-256-6750). 1992, May 24. Nik created this product. He and his first wife, Joanne Street Amartseff, made this product together out of their home, though they never operated under a company name. Joanne now lives in Mission Hill, near Brookline, Massachusetts. They first made the product at Gardner Road in Brookline. It was sort of the Erewhon executive house. The name was a play on two words: "Tan" came from Seitan, and "Pups" came from Hot Dogs.

Nik thinks he first made seitan at home in Los Altos, California. He learned the process by reading about it, either from an early issue of *East West Journal* (which began publication in Jan. 1971), or from a book, *Order of the Universe* (which he also read later) had started publication by 1967. He and Joanne first moved to 216 Gardner Rd. in Boston in May, 1971, when Paul Hawken invited them to Boston from Los Altos, California, where he and Joanne worked at Fred Rohé's New Age Natural Foods. Nik immediately began to work at the Erewhon warehouse and to live at the Erewhon executive house together with Paul and Dora Hawken, Bill and Renee Tara, Hy and Laura Lerner, and some single people including Wally Gorell and Bill Garrison. The women did the cooking in the house, but some of them (including his wife) also cooked the lunches for the workers at the Erewhon warehouse.

Before Nik and Joanne arrived, Renee Tara was baking ready-to-eat unyeasted macrobiotic goodies at home on Gardner Road and selling them at the Erewhon retail store. When Bill and Renee left for England, Renee asked Joanne if she would like to continue this little cottage industry. So in the early spring of 1972 Joanne stopped cooking for Erewhon and took over Renee's business, with the help of Nik's sister, Vera, baking at the Gardner Road house to supplement the family income. Joanne's project was quite successful right away, in part because she did not toe the macrobiotic line very strictly. She sweetened up Renee's strict macrobiotic line and added a number of innovative sweet baked snack foods, which apparently no one else thought of or dared to attempt, such as cookies, yeasted cinnamon-maple nut rolls, fruit tarts, and fig newtons. Nik continued to work full time at Erewhon, but during his time off he experimented with making seitan. He had two ideas: One was to use small pieces of seitan mixed with sauteed vegetables as a filling for piroshki (small cases of dough around the filling. Nik is part Russian), and the other he called Tan Pups–skewered deep-fried seitan on a stick. Joanne recalls that they may have sold these two seitan foods a few times (she is not sure) but they were not regular items. However Nik is quite certain that for at least the last few weeks before he and Joanne moved to New York state, in order to have some extra money, they "baked like crazy" and sold Tan Pups and Piroshki.

In May 1972 Nik quit Erewhon for a while, and he and his wife moved to New York state. They returned to the Gardner Road house in Boston in Sept. 1972 and Joanne resumed baking. At this point Nik began baking with Joanne,

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mainly out of necessity to make some money. Their two lines of baked products were (1) Joanne's former line of sweet snack foods, and (2) savory products (such as the Piroshki and Tan Pups). Their two seitan products were on the market by about Oct. 1972 and they soon became popular.

They made Tan Pups entirely by hand as follows: The night before make raw wheat gluten from whole wheat flour (which they bought in bulk from Erewhon). The next morning, cook the loaves of gluten in large enamel kettles with water, kombu, sauteed onions, garlic, and freshly grated gingerroot. About half way through the cooking, add soy sauce. Remove the seitan and simmer the liquid until it is reduced to about ¼ its original volume. Slice the seitan into pieces about 3/4 inch square and 3 inches long (like a hot dog with a square cross-section, the traditional New England Corn Dog influenced the product concept). Set aside any scraps or trimmings to use later in making Piroshki. In a blender, prepare a thick batter (having a consistency between crepe and pancake batter) using pre-ground corn meal, fresh onions, garlic, salt, soy sauce, some of the concentrated liquid in which the seitan had been cooked, and perhaps some water. Skewer the seitan pieces from one end, then dip them in the batter (without dusting in a dry breading), and deep-fry, placing them like spokes of a wheel in cast iron pots. When they are crisp and piping hot, deliver to stores.

These savory vegetarian foods (typically 100 Tan Pups and 50 Piroshki) were sold at only two outlets: Most at the Erewhon retail store at 342 Newbury St. in Boston, and the rest at The Organic Food Cellar, also on Newbury St. At Erewhon, they were sold on (or later in) a glass case about 10 feet from the entrance of the store. The products were sold in bulk, without packaging or labels. Nik usually delivered them by 3:00 in the afternoon, which was found to be a prime selling time. Most were sold by 6:00 and almost none were left the next day. He delivered 2-3 times a week. The work was exhausting.

But there was a lot of turmoil at the Gardner Road house, so Nik and Joanne moved in with John Deming in Allston (Massachusetts), then with friends in Saugus, then to Gloucester (27 miles northeast of Boston) by Nov. 1972. At each of the 3 houses they made the Tan Pups, Piroshki, and sweet snack foods.

In early 1973, Kathy and Mike Atherton, friends of Nik and Joanne's (Mike was employed at the Erewhon warehouse) moved to Boston from New York. Joanne was due to have a child in June 1973. The business was too labor intensive and soon the family would need more money. So the Amartseffs gave their friends the home business (free of charge) and it was moved to the friends' home in the north end of Boston. Nik gave them the recipes and his two outlets, and showed them how to make all the products. Nik was re-hired to work full time at Erewhon by Bill Garrison. Nik and Joanne's son was born in June 1973.

The Amartseffs' friends continued to sell Tan Pups and Piroshki through at least the autumn of 1973, then they moved on–and the products went off the market. The business never did have a real name.

Nik never heard of nor tasted Tan Pops, the successor of Tan Pups, made by John Weissman.

Talk with Joanne Amartseff. 1992. July 8. She just talked with Nik's sister, Vera, who both Nik and she think has an excellent memory. Vera (who now lives in San Francisco) does not recall them making any seitan products before Nik and Joanne left for New York.

4908. **Product Name:** Hopi Roasted Soybeans
Manufacturer's Name: Eden Foods, Inc.
Manufacturer's Address: 211 South State St., Ann Arbor, MI 48108. Phone: 313-769-8444.
Date of Introduction: 1972. October.
Ingredients: Whole soybeans, tamari.
Wt/Vol., Packaging, Price: 1.3 oz bag
How Stored: Shelf stable.
New Product–Documentation: Eden Foods wholesale catalog and price list. 5 Oct. 1972. "Hopi Roasted Soybeans 24 x 1.3 oz."

Talk with Bill Bolduc, founder of Eden Foods. 1992. March 14. Erewhon was probably the first company in America to develop a line of tamari-roasted seeds and grains. Eden was carrying the tamari-roasted soybeans by Oct. 1972, and the full line by early 1973. Bill learned how to make such seeds from Susan and Jimmy Silver. Susan first showed Bill how to roast sunflower seeds with tamari on their home stove.

4909. Kushi, Michio. 1972. Macrobiotic seminars of Michio Kushi. Boston, Massachusetts. 152 p. Illust. No index. 28 cm. Transcribed by Joan Mansolilli.
• ***Summary:*** This is a transcript of talk given by Michio Kushi, macrobiotic teacher, in the fall of 1972, from Oct. 10 to Dec. 20. The main subjects are: Theory and practice of natural agriculture. Principles of the ancient world calendar. Disease–Origin, causes, and cures.

Soyfoods are mentioned briefly as the cure for various ailments, including diabetes mellitus (p. 92, 94; miso, tamari), venereal disease (p. 104; tekka, strong miso), stomach cancer (p. 128-29, miso soup, fried tofu, tekka, miso pickles), toxication from cigarette smoking (p. 131; miso soup), appendicitis with high fever (p. 132-33; tofu plaster on head). Address: Boston, Massachusetts.

4910. Midwest Natural Foods Distributors, Inc. 1972. Catalog and price list 11/1/72. Offering the best in natural foods. Ann Arbor, Michigan. 58 p. Nov. 1. Index. Illust. 22 cm.
• ***Summary:*** This is a very early natural foods catalog, typewritten and mimeographed on pink paper; it contains a few logos of manufacturers but no ads. On the front

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cover is a stylized illustration of a rayed sun, with each ray represented as a fruit or vegetable. Contents: Hi! Who, where, phone, why. General information: Service, terms, freight, notes, contact (Henry Bednarz and Larry Kociela, p. 1-2). Special case lot discount–5%. Lines on which case lot discounts are not allowed (7). "Computerized billing by January 1, 1973 including Quantity, Unit, Description, Size, Sugg. [Suggested] Retail, Unit cost, extension, 10 day 2% discount, 10 day case lot discount" (p. 4).

The body of the catalog is an alphabetical listing of suppliers / manufacturers, with major brands or product categories a cross references (e.g. Bakon Yeast, see Sovex). Within each, products are listed alphabetically (shown below in parentheses). These include: Acme juicer Co. Appliances & utensils. Barth's Nutra Foods (Barth Soya Date Cereal). Books (Nutri-Books Corp., Denver, Colorado). Chico San (Rice Cakes, Lima Tamari Soy Sauce, Miso Soybean Puree, Sesame Salt, Sesame Butter, Salt Plums, Kuzu {wild arrowroot}, azuki beans, Mu Tea, kombu, soysauce tableserver–glass, chopsticks). Celestial Seasonings teas. Continental Culture Specialists (acidophilus culture, kefir grains, royal yogurt). Dr. Bronner & Assoc. (dulse sea lettuce, lecithin protein cereal, Do It Twice Soy Vege Base, pure peppermint oil soap). El Molino (7 Grain Cereal, soy beans–whole, soya flour, soya grits, soya meal, Graham flour). Fearn Soya Foods (Pancake S.F. [Soya Flour] Mix, liquid lecithin, High Protein (carob, chocolate, vanilla), soya protein 96%, Protein 600 Tablets (vanilla, chocolate), Muscle Protein, Soya Powder–Natural, Soya Powder–Low Fat, Soya Granules, cooking soybeans, Wheat Cereal Soya Mix, Corn Bread Soya Mix, Salted Plain SoyoSnax, Soybean–sprouting, lecithin granules, Soy O Snaks–Natural, barley–hulled organic, triticale flour–organic). Flavor Tree (Pernola, Pernuts {unsalted, sea salted, mild garlic, onion, carosel [carousel] carob covered}). Gides, Inc. (Nu-Life {vitamins & minerals–has the most products of any supplier}, A Soyadophilus, vitamin E natural mixed tocopherols). Lassen Foods (granola). Malt-O-Meal (Soytown) (salted soy beans [roasted], unsalted, barbecue flavor, garlic, soy spread, soy honey bar, soy nut bar). Miracle Juicer Co., Modern Products (Gayelord Hauser). Norganic (vegetable oils, incl. peanut oil, soy oil, safflower oil, sesame oil, sunflower oil. Gold Soya Mayonnaise). Richter Bros. (Familia cereals {Swissy Cereal, Fritini Mix}, Morga vegetable bouillon. Pero coffee substitute. Herbmare seasoning salt). A. Sahadi Co. (sesame tahini). Sourdough Jack's Country Kitchen (sourdough starter). Sovex (granola, Bakon Yeast). Seelect Dietary Products: Herb teas (incl. Bladderwrack, dulse leaves, saw palmetto, Irish moss). St. Laurant Peanut Butter, Sunshine Valley, Viobin (lists 16 products, incl. wheat germ oil). Mineral Waters (incl. Apollinaris, Vichy, Perrier, Mountain Valley). Grist Mill (granola, Wunder Bars, Honey Graham Cracker, Super Protein Concentrate). Norwalk Juicer Co., Parkelp (Ocean Labs, Inc.: lists 4 kelp products). Nuvita Foods (Langes; Soya Carob Macaroni). Organic Sun Valley Dried Fruits (incl. Calimyrna figs, Monukka raisins, Black Mission figs, Zahadi dates). Honey Preserves–No sugar added. Index by products and suppliers.

Note 1. This is the earliest document seen (May 2006) concerning Midwest Natural Foods.

Note 2. This is the earliest English-language document seen (June 2006) that mentions the "Acme Juicer" or the "Acme Juicer Co." Address: 310 W. Ann St. (P.O. Box 100), Ann Arbor, Michigan 48107. Phone: 313-761-2997.

4911. Blinn, Johna. 1972. Celebrity cookbook: Keye Luke cooks variation on one theme. *Chicago Tribune*. Nov. 2. p. N_A8.

• ***Summary:*** Hollywood–Mr. Luke, a veteran actor with Zen Buddhist beliefs, is an amateur cook who has one or two Chinese dishes he likes to prepare–starting with flank steak: "I throw in a little ginger, garlic, assorted black bean paste, and soy sauce. I cook it over a hot fire in a wok."

His recipe for Asparagus and beef calls for "½ cake bean curd, diced. 2 to 3 tablespoons soy sauce."

4912. Advest Co. 1972. Private placement $500,400. 1112 shares. No par value common stock. Erewhon Inc. ($450) per share. These are speculative securities. Hartford, Connecticut. 34 p. 28 cm.

• ***Summary:*** Contents. Offering. Risk factors. Use of proceeds. Capitalization. Historical statement of income. The company: Sources of supply, management, employees & facilities. The market. Recent developments. New opportunities. Exhibits: (1) 1972 financial statement. (2) Sample product labels. (3) Photographs of facilities.

Erewhon Trading Company, Inc. is a manufacturer, packager, importer, and distributor of organically grown foods and natural products. Founded in January 1968, the company is a Massachusetts Corporation with its principal offices at 33 Farnsworth Street, Boston. It proposes to issue and sell privately 1112 shares of its common stock at $450 per share. Advest Co., a member of the New York Stock Exchange, has been retained to act as the selling agent. The company reserves the right to approve each investor and to limit the number of investors to 15. The minimum number of shares purchased by any investor will be 55 shares.

"Management. The business of the company may be deemed to be highly dependent upon Paul Hawken, its president and director, and if the company should lose his services, its business may be materially adversely affected.

Use of proceeds: Net proceeds expected to be received by the company from this offering will be approximately $475,000. Approximately $250,000 of the funds raised will be used to pay back loans from the New England Merchants National Bank. An additional $50,000 will be used to pay accounts payable, and the balance ($175,000) will be available for additional working capital, to support new

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products and expanded sales, and to open a third retail store in Cambridge.

Erewhon's sales were $491,546 in 1970, then 1,864,833 in 1971, and an estimated $3,160,011 in 1972. Net profit after taxes was $31,709 in 1970, then $84,417 in 1971 and $14,663 in 1972.

Company history: "Erewhon Trading Company, Inc. was organized in May 1965 by Evan Root to sell natural and organic foods. The company's first store was a small basement level shop on Newbury Street in Boston. Paul Hawken succeeded Mr. Root as manager in August 1967. In November 1969, the company moved its retail shop to 342 Newbury Street where it presently occupies approximately 2,000 square feet of street level space. The store is decorated in a 19th century country store motif and sells a wide range of package and bulk food products, fresh produce, books, and cooking accessories. Sales from this location exceed $450,000 annually.

"This year (1972) the company also opened a West Coast retail store in Los Angeles, California and a nearby warehouse. This location serves the local retail market and distributes Erewhon labelled packaged foods to the western states. Its retail store has a 'country store' decor... This facility is operated under its own general manager.

"The tremendous interest in organic foods, as reflected by growth in the company's Boston retail store, led to the need to supply a growing number of independent health and organic food retail stores. Consequently the company opened a warehouse in late 1969. Since that time this facility has quadrupled in size and presently occupies 5 floors or 40,000 square feet of two older warehouse buildings at #33 and #29 Farnsworth Street, South Boston.

"This location serves as the company's headquarters, its processing and packaging plants, and its warehouse. Presently about 500 natural food stores throughout the country are supplied with approximately 300 different items. From its two locations [Boston and Los Angeles] the company shipped approximately 2 million pounds of wheat, 2 million pounds of rice, 50,000 gallons of soy sauce and a million pounds of oil in 1971. By dollar volume importance the ten most important product classifications in fiscal year 1972 were grains 23.7%, nut butters 10.1%, fruits 9.9%, vegetable oils 9.1%, raw seeds 7.5%, soy products 6.9%, roasted seeds 6.2%, shampoos and soap 5.8%, beans 5.3%, and pasta 3.1%. Since that time, the company has introduced its own line of granola and nut butters. Both these products are processed at the South Boston warehouse with equipment owned by the company... The greatest number of customers the company serves are in the northeast, accounting for more than 70% of its total revenues." The largest single customer is Star Market, a division of Jewel Tea, which is expected to account for about 6% of company sales in fiscal 1972. Star Market, a regional supermarket chain, purchases its organic and natural foods exclusively from Erewhon. It has 100 feet of shelf space in the form of individual gondolas expressly for Erewhon products.

"Supply: Erewhon has been a pioneer in the development of organic foods supply. The company has often encouraged farmers to switch over to organic cultivation by ensuring them a fixed price and quantity order. Erewhon presently has close relations with over 50 farms and has developed a strong reputation and high degree of loyalty among the organic farming community.

"The company purchases a large portion of its grains and oils from one source, Arrowhead Mills, Deaf Smith County, Texas. This grower-processor works closely with Erewhon to plan production and inventory the company's needs. Arrowhead maintains approximately 30,000 acres under organic cultivation. Rice is purchased from four growers in Louisiana and California." Erewhon "spends approximately $10,000 annually to have foods verified organic by two independent testing laboratories... Validity is also sometimes ensured by an independent program conducted by Rodale Press, Inc... Based on soil analysis, independent visit, and quarterly laboratory testing, this program certified 70 farmers on the West Coast in 1971." Continued.

Note: This is the earliest document seen (Dec. 2001) connected with Erewhon that uses the term "natural food" (or "natural foods"). Address: 6 Central Row, Hartford, Connecticut 06103.

4913. Chico-San Inc. 1972. Products (Document part). In: Midwest Natural Foods Distributors, Inc. 1972. Catalog and price list. Nov. 1. Ann Arbor, Michigan. 58 p. See p. 7-8.

• ***Summary:*** Rice cakes, Buckwheat cakes, or Millet cakes (salted or nonsalted, 3½ oz). Yinnies rice candy (3½ oz). Rice chips or Corn chips (5 oz). Lima Tamari soy sauce (8 oz, pint, or quart). Miso soybean puree (8 or 16 oz). Sesame salt (2, 4 or 8 oz). Sesame salt (4, 8, or 16 oz). Sea salt, white unrefined (1 lb). Salt plums (4 or 8 oz). Kuzu (wild arrowroot) (2 oz or 4 oz). Wholewheat spaghetti (OG [=organically grown], 8½ oz). Buckwheat spaghetti (8½ oz). Wholewheat macaroni (OG, 12 oz). Buckwheat macaroni (12 oz). Azuki beans (8 oz, 1 lb). Wild ginseng root (½ oz). Wild ginseng powder (25/6-pkts). Ohsawa twig tea (4 or 8 oz). Mu tea–Lima, more ginseng (24/2 or 24/8 pkts). Mu tea–Osaka [Japan] (24/2 pkts [also called "16 Herb Tea." Label shows ingredients: Ginseng, Ligusticum, Paonia root, cypress, orange peel, ginger, Rehmannia, cinnamon, cloves, peach kernels, Coptis, liquorice root, Cnicus, Atractylis, Moutan, Hoelen]). Green tea, natural leaf (6 oz). Lotus root tea (1 3/4 oz). Rice cream (OG, 1 or 2 lb). Kombu, kelp size (3½ oz). Tooth powder jar (½ jar).

Appliances: Food grater (with or without well). Vegetable knife–square end. Fish knife–pointed end. Mortar (suribachi, small or large). Pestle–wooden. Vegetable press. Oil skimmer for tempura. Vegetable scrub brush (small or large). Soysauce tableserver–glass. Rice paddle–bamboo.

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Chopsticks–lacquered. Chopsticks–long cooking.

At the bottom is the Chico-San spiral logo.

Note: Many of these products are imported from Japan. Address: [Chico, California]

4914. Bishov, S.J.; Henick, A.S. 1972. Antioxidant effect of protein hydrolyzates in a freeze-dried model system. *J. of Food Science* 37(6):873-75. Nov/Dec. [13 ref.]

• ***Summary:*** The primary antioxidants are phenolic substances, and most of them are synthetic. Their use is being questioned by consumers at a rapidly increasing rate, spurring the search for antioxidants from natural sources, and especially nonphenolic materials. Antioxidant activity has been found in many proteinaceous materials. Experiments were conducted on commercial AYP (autolyzed yeast proteins) and HVP (made by the Vico-Asmus Products Div. of A.E. Staley Manufacturing Co. and by the Food Ingredients Div. of The Nestle Co., Inc.), both were screened for antioxidant effect. Protein hydrolysates show synergistic antioxidant properties with phenolic antioxidants. Address: Food Lab., Food Chemistry Div., U.S. Army Natick Lab., Natick, Massachusetts 01760.

4915. Erewhon Inc. 1972. Distributor price list. Boston, Massachusetts. 4 p. Effective December 8, 1972.

• ***Summary:*** Includes: Three varieties of Wehah Farms organically grown rice in 50 lb bags ("Colusa" and Golden Rose" are both short grain, the third is sweet brown rice). Azuki beans (100 lb bags). Tamari & miso: Tamari soy sauce (8 oz., pints, quarts, half gallon, gallon, 4.7 gallon can). Hacho miso (30 x 1 lb or 44 lb keg). Mugi miso (24 x 1 lb or 44 lb keg). Kome miso (20 x 1 lb or 44 lb keg). Granola. Rice cream (toasted). Cereals: Infant cereal (Koko). Tsampa Tibetan barley cereal. Stone ground flours (incl. Soybean flour, full fat, organic; brown rice flour, organic). Grains & beans (incl. soybeans, organic; Barley, pearled).

At the bottom of the last page: "Thank you very much for your order. We try to get our distributor orders out as quickly as possible, but you should allow seven to ten days to be on the safe side. When placing orders please call Bill Garrison or Paul Hawken and when checking on shipping dates and rates, please check with Doug Bray. Thank you."

An illustration at the top left corner of the front page is clip-art of a man cutting barley. Address: 33 Farnsworth Street, Boston, Massachusetts 02210. Phone: (617) 542-1358.

4916. Leung, W-T.W.; Butrum, R.R.; Chang, F.H. 1972. Food composition table for use in East Asia. Atlanta, Georgia: Center for Disease Control, U.S. Dept. of Health, Education, and Welfare. xiii + 334 p. Dec. No index. 30 cm.

• ***Summary:*** Part I. Proximate composition, mineral and vitamin contents of East Asian foods, by Woot-Tsuen Wu Leung, Ph.D. (Nutrition Program, Center for Disease Control, Dep. of Health, Education and Welfare), and Ritva Rauanheimo Butrum, M.S., and Flora Huang Chang, B.S. (Federation of American Societies for Experimental Biology).

Part II. Amino acid, fatty acid, certain B-vitamin and trace mineral content of some Asian foods, by M. Narayana Rao, Ph.D., and W. Polacchi (Food Policy and Nutrition Division, Food and Agriculture Organization of the United Nations).

In Part I, Food Group 3 titled "Grain legumes and legume products" (p. 16-22) gives the composition of the following (100 grams edible portion and as purchased): Adzuki beans (*Phaseolus angularis;* incl. "Azuki-an," and boiled sweetened). Asparagus bean. See Cowpea, yardlong. Asparagus pea. See Goabean. Bambara groundnut or jugo bean (*Voandzeia subterranea*). Bengal gram. See Chickpea. Blackeyed pea. See Cowpea, catjang. Blackgram. See Mung bean. Broad bean or horse bean (*Vicia faba;* incl. "Fuki-mame" and "Otafuku mame"). Burma bean. See Lima bean. Butter bean. See Lima bean. Catjang pea. See Pigeonpea. Chickpea or Bengal gram (*Cicer arietinum*). Cowpea, all varieties (*Vigna* species). Cowpea, yardlong. See Cowpea, all varieties. Dhal. See Lentil. Dolichos, Australia pea (*Dolichos lignosus*). French bean. See Kidney bean. Goabean [goa bean], asparagus pea, or winged bean (*Psophocarpus tetragonolobus*). Golden gram. See Mung bean. Green gram. See Mung bean. Haricot bean. See Kidney bean. Hindu cowpea. See Cowpeas, all varieties. Horse grain or horse gram or Madras gram (*Dolichos uniflorus; D. biflorus*). Horsebean. See Broadbean. Note 1. This is the earliest English-language document seen (Jan. 2005) that uses the word "horsebean" or the word "broadbean" to refer to *Vicia faba*.

Horsegram. See Horse grain. Hyacinth bean or Indian butterbean (*Lablab niger; Dolichos lablab*). Indian bean. See Mung bean. Indian butterbean. See Hyacinth bean. Jackbean, common (*Canavalia ensiformis*). Jugo bean. See Bambara groundnut. Kidney bean, French bean, navy bean, pinto bean, snap bean, or string bean (*Phaseolus vulgaris;* incl. "Usura-mame"). Lentil or dhal (*Lens culinaris; Lens esculenta; Ervum lens*). Lima bean, butter bean, or Burma bean (*Phaseolus lunatus; Phaseolus limensis*).

Note 2. This is the earliest English-language document seen (May 2003) that uses the scientific name *Lens culinaris* to refer to lentils.

Note 3. This is the earliest English-language document seen (Jan. 2009) that uses the name "Burma bean" to refer to the lima bean.

Madras gram. See Horse grain. Mung bean, Indian bean, red bean, green gram, golden gram, or blackgram / black gram (*Phaseolus aureus; Vigna radiata;* incl. vermicelli, dried starch, starch jelly, instant powdered green or red products with sugar and flour added). Mung bean, black gram or urd (*Phaseolus mungo; Vigna mungo*). Navy bean.

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See Kidney bean. Peanut or groundnut (*Arachis hypogaea;* incl. raw, roasted, with or without shell, salted, parched, seasoned, fried, peanut flour, peanut butter, peanut milk, peanut cake–defatted, peanut cake–defatted and fermented [onchom]). Peas, garden or field (*Pisum* species; incl parched–salted, "Uguisu-mame"). Pigeonpea, or catjang pea (*Cajanus cajan; Cajanus indicus*). Pinto bean: See Kidney. Red bean: See Mung bean. Rice bean (*Phaseolus calcaratus; Vigna calcarata*). Soybean and soy products (Glycine max, G. hispida; G. soja; p. 19-21), incl: Whole mature seeds–dried (yellow, black), whole immature seeds dried, whole seeds–salted (black, green, green soaked, fried, fermented {natto}, pickled, roasted), flour of roasted soybeans, defatted soybeans–whole seeds. Soybean products: Curd–unpressed, curd–tofu–raw (plain, kinugoshi, fukuroiri), curd–tofu–fried (moist type, dried type–regular size, dried type–small size, canned, abura age), curd–roasted [grilled], curd–tofu–fermented (home-prepared, jarred), curd–tofu (dried–spongy square, preserved, dried–rope-like, commercial {fermented with chili pepper}–jarred), curd cheese, curd sheet (milk clot sheet {yuba}) (moist type, dried type, pickled in soysauce), curd–pressed–raw (plain, fermented, spiced, strips–semi-dry), miso (Japan) (plain, sweet {5.3% salt added}, salty–light {10.4% salt added}, salty–dark {11.7% salt added}, mame-miso {9.7% salt added}, powdered {18.5% salt added}), paste [jiang] (plain, fermented, red pepper added, sweet, malt), soybean milk (unenriched–unsweetened, "Kaset" {Thailand; canned–concentrated, fluid}, Saridele {a mixture of soybeans, sesame seeds or peanuts, with vitamins and calcium added–Indonesia}), soybean sauce (dark–thick, light–thin, unspecified), tempeh (fermented soybean product, Indonesia), "Budo-mame" (cooked–Japan). Soybean residue [okara] (liquid, powder). Urd: See Mungo bean. Velvetbean (*Mucuna utilis; Stizolobium utilis;* incl. dried or mold-treated {tempeh}). Winged bean: See Goabean, Indes.

Food Group 4 titled "Nuts and seeds (p. 23-29) includes: Almonds, hemp seeds–whole, perilla–common (*Perilla frutescens*), safflower seeds, sesame seeds, sunflower seeds (*Helianthus annuus*), watermelon seeds.

Food Group 5, titled "Vegetables and vegetable products" (p. 30-75) includes: Amaranth, mungbean sprouts, seaweeds (many types), soybeans–immature seeds [green vegetable soybeans], soybean sprouts (raw, cooked).

Note 4. This is the earliest English-language document seen (March 2004) that mentions silken tofu, which it calls (in a table): "Curd, tofu, raw: 'Kinugoshi,' Japanese preparation."

Note 5. This is the earliest English-language document seen (Dec. 2005) that contains the term "flour of roasted soybeans."

Note 6. This is the earliest English-language document seen (Oct. 2006) that uses the term "Blackeyed pea" to refer to the cow pea. Address: Dep. Health Education and Welfare.

4917. *NSC Review* (*Taiwan; National Science Council–Guo jia ke xue wei yuan hui*).1972-1977. 123. Studies on "Inyu" (Black bean sauce). See p. 88. *

• ***Summary:*** 123. Studies on "Inyu" (Black bean sauce) is in right column at #123.

4918. Akao, T.; Sasaki, T.; Sakai, M.; Takano, A.; Yokotsuka, T. 1972. A new plant for continuous production of "koji" in the "shoyu" industry. In: First Pacific Chemical Engineering Congress. See p. 127-28. Held 10-14 Oct. 1972 at Kyoto, Japan. *

4919. **Product Name:** Chef Bonneau's Premium Worcestershire Sauce [Vegetarian].
Manufacturer's Name: Bonneau Products Co.
Manufacturer's Address: 81 N.E. Columbia Blvd., P.O. Box 17180, Portland, OR 97217. Phone: 503-289-7181.
Date of Introduction: 1972
Ingredients: Soy sauce, distilled water, white distilled vinegar, cider flavor, garlic, onion, pepper, sugar, spices & other flavors.
Wt/Vol., Packaging, Price: 3.785 liters.
How Stored: Shelf stable.
Nutrition: Per ½ oz (14.3 gm): Sodium 300 mg.
New Product–Documentation: Talk with Seth Tibbott of Turtle Island Foods. 1997. This small company makes a vegetarian Worcestershire sauce. The quality is good but it contains honey so it is not vegan.

Label and laboratory analysis sent by Bonneau Products. 1997. April 30. The sweetener is given as sugar, not honey. Ph: 3.3 to 3.9. Specific gravity: 1.09 to 1.09. A handwritten note states that the company started making Worcestershire sauce in about 1972. The company's food specialties, as stated on the letterhead, are: Distilled vinegar. Vinegars. Soy sauce. Worcestershire sauce. Private label manufacturing. A photocopy of the Worcestershire Sauce label (1 gallon) is attached.

Note: This is the earliest known vegetarian worcestershire sauce made in the USA.

4920. Harada, Motô; Nakamura, Y.; Tanimura, A. 1972. Shokuhin-chû no nitorosamine ni kansuru kenkyû. IX. Shokuhin-chû no ashô sanen no bunpu [Studies on nitrosamines in food. IX. Distribution of nitrite in various foods]. *Shoku Eishi* (*J. of Food Hygiene*) 13(1):36-40. [Jap]*

• ***Summary:*** Nitrosamines [pronounced nai-TRO-suh-meens] are reaction products from nitrite and amines. Some salt-pickled foods contain considerable amounts of nitrite. But very small amounts of nitrite were found in rice, wheat, and soybeans used as raw materials for making shoyu and miso.

Interest in the safety of nitrites started in about 1970. The following nitrite levels (parts per million) were found in other Japanese foods: Shiouri shiozuki (salt pickled cucumbers) 96, red hot dogs 64-79, niboshi (small dried

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sardines) 31, ham 29, fish sausage 24. Very low levels were found in fresh bread crumbs 16, and roasted soy flour 15.

4921. Jutono, -; Darmosuwito, Suhadi. 1972. Proses pembuatan kecap [The process for making Indonesian-style soy sauce (kechap)]. In: Bandung, disajikan pada Science Meeting on Food Protein and Soysauce Processing. Held 1-2 June 1972. [Ind]*
Address: Indonesia.

4922. Kikkoman Shoyu Company Ltd. 1972. [Soy sauce condiment]. *Japanese Patent* 22 795/72. [Jap]*
• ***Summary:*** Heat denatured soybean or wheat gluten is treated with water and a proteolytic enzyme. Address: Noda, Japan.

4923. Lee, J.M.; et al. 1972. [Studies on the substitution of raw materials in soy sauce. II. Use of potatoes and sweet potatoes]. *Hanguk Sikp'um Kwahakhoe Chi* (*Korean J. of Food Science and Technology*) 10(2):79-85. [11 ref. Kor]*
Address: Dep. of Food Engineering, College of Science and Engineering, Yonsei Univ., Seoul.

4924. Nasuno, Seiichi; Ohara, T.; Iguchi, N. 1972. Shôyu kôji-kin no jinkô heni ni yoru kairyô. I. Aspergillus sojae no proteaaze choryô seisan heni kabu no chikuji-teki bunri [Improvement of koji-mold for soy sauce production by induced mutation. I. Successive isolation of proteinase hyperproductive mutants of *Aspergillus sojae*]. *Chomi Kagaku* (*Seasoning Science*) 19(10):27-31. [11 ref. Jap]
Address: Noda Institute for Scientific Research, Noda-shi, Chiba-ken, Japan.

4925. Nasuno, Seiichi; Ohara, Tadahiko. 1972. Shôyu kôji-kin no jinkô heni ni yoru kairyô. II. Aspergillus sojae no oya kabu to heni kabu no seisan suru arukari proteaaze no hikaku [Improvement of koji-mold for soy sauce production by induced mutation. III. Comparison of alkaline proteinase from hyperproductive mutants and parent strain of *Aspergillus sojae*]. *Chomi Kagaku* (*Seasoning Science*) 19(10):41-47. [22 ref. Jap]
Address: Noda Institute for Scientific Research, Noda-shi, Chiba-ken, Japan.

4926. Nasuno, Seiichi; Ohara, Tadahiko. 1972. Shôyu kôji-kin no jinkô heni ni yoru kairyo. II. Aspergillus sojae no heni kabu ni yoru proteaaze oyobi jakkan no kasui bunkai kôso no choryô seisan [Improvement of koji-mold for soy sauce production by induced mutation. II. Hyperproduction of proteinase and some hydrolytic enzymes by mutants of *Aspergillus sojae*]. *Chomi Kagaku* (*Seasoning Science*) 19(10):32-40. [19 ref. Jap]
Address: Noda Institute for Scientific Research, Noda-shi, Chiba-ken, Japan.

4927. National Institute for Chemistry. 1972. Research design for soybean processing and utilization. In: ASEAN Expert Meeting for Soybean Sauce Processing and Utilization. Bandung, Indonesia. Appendix 7, p. 16-24. *
• ***Summary:*** A research project to improve the quality and nutritional value of soybean sauce, including Indonesian "Kecap."

4928. Sudigdo, P.; Waeoroentoe, S.A.; Sutarni, Ratna. 1972. Penelitian mengenai komposisi dan karakteristik kecap, serta proses pembuatannya [Research on the composition and characteristics of soy sauce, and its preparation process]. In: Bandung, disajikan pada Science Meeting on Food Protein and Soysauce Processing. Held 1-2 June 1972. [Ind]*
Address: Indonesia.

4929. **Product Name:** Tamari Cashews, Tamari Sunflower Seeds, or Tamari Almonds.
Manufacturer's Name: Westbrae Natural Foods.
Manufacturer's Address: 1336 Gilman St., Berkeley, CA 94706.
Date of Introduction: 1972.
New Product–Documentation: Ad (full-page, color) in Whole Foods. 1979. Jan. p. 8. "We believe if you've seen one health food nut, you haven't seen them all!" A large photo with diagram shows Westbrae's many tamari nuts, nut mixes, and trail mixes, including Tamari cashews, Deluxe tamari nut mix, Tamari almonds, Tamari sunflower seeds, Tamari nutroaster's mix, Chisholm trail mix, and Jubilee trail mix. "For more information write Westbrae, P.O. Box 8611, Emeryville, California 94662. All Tamari roasted nuts and trail mixes are available in bulk and a select few in two or ten ounce Panda packages."

Interview with Gordon Bennett. 1987. Aug. 28. Westbrae's first food containing soy. The "tamari" (actually shoyu) was imported from Japan.

Talk with Bob Gerner. 1992. May 11. Bob thinks that Chico-San was the first company to make tamari-roasted nuts (by early 1971), and that Westbrae was the second–before Erewhon. This type of product was later made by many natural foods distributors and became popular nationwide. But Chico-San's product was (in Bob's opinion) crude. They would cover almonds with soy sauce then toast them, the soy sauce would burn on the outside and not taste very good. After Bob tasted Chico-San's product, he felt he could improve on it. Westbrae was the first company to process the nuts in an efficient way that made a good-tasting product. After Westbrae Natural Foods opened for business in Feb. 1971, Bob began to buy 1-2 tins of cashews at a time. Then he took a gamble, buying 50 cases. He bought them to use in their best-quality granola–which was cashew granola, but he had no idea what to do with the rest of them. Bob and Gordon Bennett developed the process for making

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tamari-roasted nuts by accident at Gilman Street. They had no idea it would work. The trick was to roast the nuts (they started with cashew pieces and sunflower seeds) in a small (home-model) horizontal rotating drum roaster (it held 25 lb at a time), then to dump the roasted nuts into a large metal bowl (the kind used at bakeries). Now pour on soy sauce (shoyu, which Westbrae initially purchased from Chico-San) from a gallon jar, and mix it in manually with a wooden paddle. Keep mixing until the heat from the nuts (375°F) had evaporated all the moisture in the soy sauce and made it stick to the nuts in a light, even coating. Bob recalls, "We guarded this secret process with out lives, since we felt we had a superior product. We didn't tell anyone we put on the liquid soy sauce after roasting." Westbrae distributed this product widely and later developed it into a very big line.

Bob also remembers a fellow in Berkeley named Crazy Robert, who lived with his mother, and who used to toast nuts and seeds with soy sauce in his home and sell them at Ma Revolution on Telegraph Avenue in Berkeley. Bob talked with him and he brought his nuts from Westbrae. Bob thinks that Westbrae and Jerry probably developed their tamari-roasted nuts independently but at about the same time. Jerry used whole cashews and Westbrae used cashew pieces. Note: Jerry's process became the basis of Erewhon's tamari roasted seeds and nuts via Nik Amartseff, who initially worked at New Age Natural Foods in Palo Alto. Bob thinks that store opened in 1971-72.

4930. Yagi, K. 1972. [Packaged bean curd product]. *Japanese Patent* 13 690/72. [Jap]*

• ***Summary:*** Dried tofu is cooked, soaked in soy sauce, then put into a bag with a mixture of soy sauce, spices, binders, and preservatives. After the air is removed from the bag, it is sealed and steam heated. Address: Japan.

4931. Yokotsuka, Tamotsu. 1972. Some recent technological problems related to the quality of Japanese shoyu. In Gyozo Terui, ed. 1972. Fermentation Technology Today: Proceedings of the Fourth International Fermentation Symposium. See p. 659-62. [40 ref]

• ***Summary:*** Contents: 1. Amino acid containing seasonings around the world and the general situation of the Japanese shoyu industry. 2. Chemical composition of Japanese shoyu, and the factors which influence the preference for shoyu. 3. Some important technical items in the production of Japanese fermented shoyu. 4. Mycotoxin problems with koji mold (research suggests that koji molds do not produce aflatoxins on TLC {thin layer chromatography}). Address: Kikkoman Shoyu Co., Ltd., Noda-shi, Chiba-ken, Japan.

4932. Aihara, Cornellia. 1972. The Chico-San cookbook. Chico, California: Chico-san, Inc. 126 p. Illust. 22cm. by Nan Schleiger. Reissued in revised form as Macrobiotic Kitchen by Japan Publications in 1982.

• ***Summary:*** All recipes are numbered and pages are unnumbered. Soy-related recipes include: 6. Brown rice in soy sauce. 16. Black [soy] beans and brown rice. 23. Inari-sushi (with agé). 24. Ohagi of 3 colors (with roasted soybean flour and miso). 32. Ojiya (with miso or soysauce). 37. Roasted rice (with black soybeans). 38. Musubi (with miso). 55. Kinako mochi. 76. Soy bean stock. 87. Oden (with agé and soy sauce). 90. Kenchin soup (with agé). 95. Cream of onion soup (with miso). 96. Hacho miso soup. 97. Mugi miso soup. 98. Kome miso. 99. Oil miso. 100. Sesame miso. 101. Walnut miso. 102. Miso salad dressing. 103. Shiguri [sic, shigure] miso (with scallops). 104. Tokiwa miso (with shiitake mushrooms, citron, and walnuts). 105. Oyster miso. 106. Tai miso. 108. Nuka miso zuke (vegetables pickled in rice bran and miso). 121. Miso pickles. 137. Daikon with agé. 138. Daikon with miso. 143. Turnip with sesame-miso. 159. Burdock-miso soup. 162. Burdock with miso. 180. Onion-miso sauce. 182. Scallion-miso. 191. Carrots with miso. 192. Carrots with soy sauce. 200. Dengaku (with miso). 220. Roasted soybeans. 221. Soybean soup. 222. Soybeans with vegetables. 223. Soybeans with miso. 224. Soybean tempura. 225. Mashed soybeans with tarako (cod fish roe). 226. Soybean croquettes. 227. Soybean potage. 228. Soybean muffins. 229. Kidney beans with miso. 237. Shigiyaki (small eggplants with miso). 241. Eggplant miso pickle. 267. Rolled shiso leaves with miso. 291. Tofu kuzu sauce. 292. Tofu chiri-nabe. 293. Tofu with vegetables. 294. Tofu salad. 295. Okara rice. 296. Torimotsu okara (with chicken giblets). 297. Okara soup. 298. Okara croquettes. 299. Egg tofu. 308. Koi-koku (carp soup with miso). 311. Loach soup (with miso). 312. River fish with miso sauce. 320. Mackerel with miso. 335. Coltsfoot with miso. 341. Dandelion miso-ai [miso-ae]. 345. Horsetail with miso-ai. 359. Watercress miso-ai. 361. Nobiru goma miso (with wild onions). 369. Shiromiso shiru [sweet white miso soup]. 371. Nimame (black soybeans). 400. Shoyu bancha (twig tea). 408. Black bean tea. 409. Amasake (homemade from koji rice and sweet brown rice). 456. Amasake manju. 461. Soba with miso-ame. 515. Tekka (with Hacho and/or mugi miso). 516. Seitan (homemade). 517. Soy sauce (homemade). 518. Miso (homemade). 519. Tofu (homemade using nigari). 520. Nigari (homemade). 521. Amasake (homemade from koji rice and sweet brown rice flour).

Cornellia Aihara was born with a heart valve defect. She was told by doctors that she could never bear children and would probably not live past her nineteenth year. She proved them wrong on both counts. In 1955 she came to America from Japan at the invitation of Herman Aihara, a man she knew only through correspondence, and they were married. Within several years their two children were born.

Cornellia has applied herself to the teaching of macrobiotic cooking, childcare, home remedies, and philosophy since 1960. Address: Chico, California.

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4933. Aihara, Cornellia. 1972. The *dô* of cooking (Ryorido). Vol. 2. Summer cooking. Macroguide No. 13. San Francisco, California: George Ohsawa Macrobiotic Foundation. 103 p. No index. 25 cm.

• ***Summary:*** All recipes in this macrobiotic cookbook are numbered. The section on "Tofu" contains recipes for: 35. Hiya yako [sic, yakko] (cold, uncooked tofu). 36. Kanten tofu (Tofu aspic). 37. Tofu kuzu aspic. 38. Harusame tofu kuzu sauce. 39. Unagi tofu [vegetarian].

The section on "Miso Soy Bean Paste" contains recipes for: 40. Soy bean miso [soybeans sauteed with miso]. 41. Vegetables with miso sauce. 42. Vegetable miso. 43. Green pepper with miso. 44. Deep fried miso balls.

Other soy recipes include: 60. Nori with soy sauce. 62. Kombu in soy sauce. 64. Hiziki tofu salad. 66. Fried koya tofu with carrot (with dried tofu). 71. Cold miso soup. 73. Split pea miso soup. 81. Tahini-tamari sauce. 89. Soy bean surprise [with miso-tahini sauce]. 92. Okara salad.

GOMF was founded in 1971. Address: 1471-10th Ave., San Francisco, California 94122.

4934. Aihara, Cornellia. 1972. The *dô* of cooking (*Ryorido*). Spring. Oroville, California: George Ohsawa Macrobiotic Foundation. 125 p. Illust. by Carl Campbell. Index. 21 cm.

• ***Summary:*** This macrobiotic book is divided into two parts. Eleven chapters followed by 14 sections of recipes. In part one, miso is mentioned on pages 15, 35, and 51 (Condiments and spices). Recipe section IV, titled "Wheat gluten" (p. 79-82) contains recipes for: Wheat gluten. Seitan. Fresh wheat fu. Boiled fu. Fried fu–gluten cutlet. Shish kebab (using 3 strips of cooked fu). French bread (made with gluten water, p. 115).

Recipe section V, titled "Tofu" (p. 83-90) contains recipes for: Tofu making (using 3 cups green soybeans and nigari coagulant; with 11 excellent illustrations). Nigari (from gray sea salt). Quantity tofu preparation (using 10 lb soybeans). Okara or unohana (using "3 cups soybean puree leftover from tofu making"). Tofu with kuzu sauce. Fried tofu. Shinano-agé (Fried tofu with buckwheat). Kaminari tofu (Thunder tofu). Nori-maki (Tofu rolled in nori, with illustration). Age-tofu (Stuffed tofu; with illustration).

Soy-related recipes include: Onion miso (p. 70). Rolled cabbage with tofu (p. 71). Bean sprout miso salad (p. 100, miso is called "mixed soybean puree {half mugi and half kome}." The sprouts are probably from mung beans). Ganmodoki (Mock goose, p. 109). Gyoza filled with seitan, dipped in a mixture of soy sauce and lemon juice (p. 111-12). Address: George Ohsawa Macrobiotic Foundation, Oroville, California.

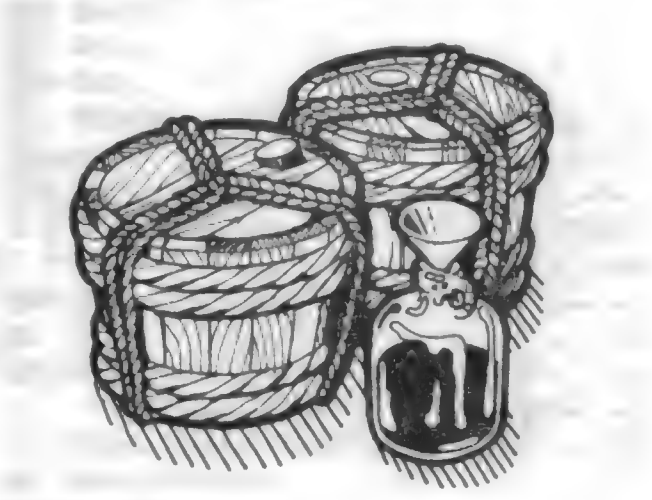
4935. Aihara, Herman. 1972. Miso & tamari. *Macroguide (San Francisco: George Ohsawa Macrobiotic Foundation)*. No. 12. iii + 34 p. [3 ref.]

• ***Summary:*** Contents: Preface. Part I: Miso. Introduction, the origin of miso, kinds of miso, ingredients (soybeans, barley, rice, salt, water) how to make miso [at home] (barley miso, rice miso, soybean miso, analytical comparison of the three kinds of miso, other types of miso, miso pickles) value of miso (protein, fat, minerals, poison prevention, heart disease, miso for beauty, stamina, miso for radiation and other diseases, miso soup), miso in the treatment of tuberculosis and atomic radiation exposure.

Part II. Tamari or traditional soy sauce. Introduction, history, chemical change of tamari, how to make tamari soy sauce at home, how to use soy sauce.

Part III: The other soybean foods. Tofu (preparation of soybean milk at home, coagulation of soybean protein, the formation of tofu in a mold [for homemade tofu], tofu for external treatment–tofu plaster, age–deep fried tofu [how to make at home]), natto (introduction, how to make natto at home).

Part IV. Appendix. Available publications, G.O.M.F. message.



Illustrations by Carl Campbell show: (1) Two traditional kegs of miso and a glass jar of tamari (title page). (2) Making mugi (barley) miso in Japan (9 steps; p. 10).

Note 1. This is the earliest English-language document seen (March 2009) that describes how to make miso at home. Recipes for three types of miso are given: Barley miso, rice miso, and soybean miso. The method is translated from *Miso University*, by K. Misumi (in Japanese). Fortunately, the exact amount of each of 5 ingredients is given, and nine excellent illustrations show the main steps in the traditional process. Unfortunately, the instructions are somewhat vague.

Note 2. This is the earliest English-language document seen (Jan. 2012) that describes how to make natto at home. Address: San Francisco, California.

4936. Almeida, Maris Elisa Wohlers de; Simao, Antonia Mattos. 1972. Aminoácidos de hidrolisados de proteína

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de soja: Dosagem de ácido glutâmico [Detection of amino acids in protein hydrolysates of soybean: Determination of glutamic acid]. *Revista do Instituto Adolfo Lutz (Brazil)* 32(1):105-12. [12 ref. Por; eng]

• ***Summary:*** "Bidimensional paper chromatography as applied in order to separate the different amino acids of industrial soybean protein hydrolysates with satisfactory results." The content of glutamic acid spots was determined by means of spectrophotometry. Address: Instituto Adolfo Lutz.

4937. Brissenden, Rosemary. 1972. South East Asian food: Indonesia, Malaysia and Thailand. Harmondsworth, Middlesex, England; Baltimore, Maryland: Penguin Books. 264 p. 18 cm. A Penguin handbook.

• ***Summary:*** After a three-month stay in Indonesia as a member of a student delegation from Melbourne University, Rosemary "realized that she could not live without Indonesian food. So she set about learning as much as she could from Asian students in Melbourne." In 1964 she was invited to write a weekly column in the Australian on South East Asian food. She is married and has three children.

"A note on this American edition. This book has been especially adapted for the American audience. British weights and measures have been converted into their American equivalents. Sources for obtaining unusual products mentioned in the recipes are given for most large American cities."

Note: This book is almost identical to the edition published in 1969 in the USA and England by Penguin Books. This American edition was published in 1972 by Penguin Books, Inc. Address: Australia.

4938. Brown, Edith, Brown, Sam. 1972. Cooking creatively with natural foods. New York, NY: Hawthorn Books. xvii + 302 p. Illust. Index. 24 cm.

• ***Summary:*** This vegetarian cookbook has been 35 years in the making. Edith was born in 1920, and Sam in 1917. "It really goes back to the birth of Brownies [Health Food Restaurant in New York City]. That was in 1936. In the beginning we were just a sliver in the wall, hardly a soybean's throw from Union Square in New York City. The address hasn't changed but *we* have." Brownies began as a tiny shop selling natural foods to people who lived or worked in the neighborhood. Today we are a restaurant-bakery -country store complex sprawled across Siamese-twin brownstone houses."

"The expansion of Brownies began modestly in 1938. Sam acquired a vegetable juice extractor and installed four stools in the shop. Vegetable-juice bars have long since become old hat, but the one on East 16th Street happened to be the first one in the country.

"The juice bar won a warm welcome. Customers 'dug' the oral vitamin shots being dispensed from the extractor. Soon people were coming from precincts far beyond the neighborhood to 'get juiced.' The word spread. There appeared a distinguished visitor in the person of the late Clementine Paddleford, the influential food editor of (alas, also the late) New York *Herald-Tribune*. Miss Paddleford came, sipped, and wrote rapturously about her discovery. That rave review really put Brownies on the map." (p. xi)

In the chapter titled "The natural foods cupboard: A glossary" we find good descriptions of various soyfoods: Soyameat (canned, Chicken or Beef Style), soybean granules, soybean powder [flour], soybeans (canned, like Boston baked beans), soybeans (dried), soy nuts [oil-roasted soybeans], Stripple Zips ("Bacony, crunchy, smoky bits of vegetable protein made from soy and yeast. A wonderful meatless flavoring."), tamari (soy) sauce, VegeBurger (canned, made from soy, wheat, and vegetables), VegeChee [tofu], Vegelona.

Soy-related recipes include: Pizza supreme (with Featn Whole Wheat Soy-O Mix, p. 17). Soy-stuffed mushrooms (with canned green soybeans, p. 17-18). Dill soybeans (p. 74). Triple-treat bean salad (p. 80). Crunchy soybean salad (with canned green soybeans and Chicken-Style Soyameat, p. 81). Soy-nut meatballs (with canned soybeans in tomato sauce, canned VegeBurger, soybean granules, and Toasted Soy Nuts, p. 109-10). Soy, garbanzo & millet pie (p. 126).

One chapter is titled "The miraculous soya–and other members of the clan (bean)" (p. 129-45). The introduction notes: At Brownies we feature soybeans on the relish tray, on the salad menu, and as a meat substitute. We use soybean flour in almost everything that comes out of our ovens." Soy-related recipes include: Basic soybeans. Zippy soybean salad. Minty soybean salad. Soybean ratatouille. Scrumptious soy pudding. Soy walnut loaf. Protein casserole (with Beef-Style Soyameat). Lentil soy casserole. Tricolor bean salad (with toasted salted Soy Nuts). Exotic bean salad. Neapolitan bean salad. Peppy bean puree. Any-night beans.

Soy recipes with pasta (p. 175-78): Savory soy spaghetti. Soy spaghetti with saucy franks. Corny spy spaghetti. Spaghetti protein casserole (with soybean spaghetti, green soybeans, and Proteena). Soy elbows in parsley mushroom sauce. Oriental elbows. Soya blueberry muffins (p. 248). Crunchy soy-nut spinach cake (with soybean powder and unsalted soy nuts, p. 264).

Brownola plus (like Granola, p. 168). Address: New York, New York.

4939. Claiborne, Craig; Lee, Virginia. 1972. The Chinese cookbook. Philadelphia and New York, NY: J.B. Lippincott Co. xxi + 451 p. Color photos by Bill Adler. Drawings by Barbra and Roderick Wells. Illust. Index. 24 cm.

• ***Summary:*** Soy related recipes: Coriander and bean curd with sesame sauce (with dried brown bean curd [soy-sauce pressed tofu] and light soy sauce, p. 34). Cold chrysanthemum leaves with sesame oil (with dried brown

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bean curd and light soy sauce, p. 35). Chicken with black beans and shallots (with fermented, salted black beans, light soy sauce and dark soy sauce, p. 58-59). Note 1. This is the earliest English-language document seen (Nov. 2011) that uses the term "fermented, salted black beans" to refer to Chinese-style fermented black soybeans. The headnote to this recipe states: "Fermented, salted black beans have an almost winy flavor, and they give an intriguing flavor to almost any dish in which they are cooked." Yet nowhere in this book do the authors state that these black beans are actually black soybeans.

Soy sauce chicken (with light soy sauce and dark soy sauce, p. 59-60). Hoi sin sauce is mentioned (or a photo shown) as an ingredient on pages 65-66, 147, between pages 282 and 283, and on 4 other pages. Spicy pork and bean curd (with "6 pads fresh white bean curd," p. 136). Note 2. This is the earliest English-language document seen (Oct. 2008) that uses the term "fresh white bean curd" to refer to fresh tofu, or that uses the word "pads" to as the counter for pieces or cakes of tofu. The headnote states: "Bean curd has as many uses in China as cottage cheese does in the Western world. It is one of those neutral dishes [ingredients] like potatoes and snails which adapt well to assertive flavors."

Cantonese roast pork (with "2 tablespoons red bean curd sauce" [nam yue?] and "2 tablespoons bean sauce"). Chinese barbecued spareribs (with "2 tablespoons red bean curd sauce," "2 tablespoons ground bean sauce," and "3 tablespoons hoi sin sauce," p. 147-48). Ginger beef and bean curd with hot pepper (with "5 pads fresh white bean curd," p. 188). Steamed fish with bean sauce (with "¼ cup bean sauce," p. 208). Stir-fry shrimps with bean curd (with "5 pads fresh white bean curd," p. 231). Shrimps in black bean sauce with ginger and scallions (with "2 tablespoons fermented salted black beans and 2 tablespoons dry sherry or shao hsing wine." "Combine the black beans with 1 tablespoon of the wine and crush lightly with a spoon." Thus, "black bean sauce" can be easily and quickly made in the kitchen from fermented, salted black beans, p. 234-35).

Clams in black bean and oyster sauce (with fermented salted black beans that are quickly made into black bean sauce as above, p. 243-44). Frogs legs with black beans (with fermented salted black beans, p. 257). Mock Peking duck (with "6 sheets dried bean curd," p. 302-03. "Bean curd comes in large, semicircular thin sheets [yuba] as well as squares [probably yuba; see below]. Because the sheets are notably fragile, they are frequently broken." The headnote states: "This dish uses dried bean curd to produce an eminently edible creation that tastes remarkably like roast duck").

Bean curd and beef ball soup (with "1 pad fresh white bean curd," p. 318). Whiting and bean curd soup (p. 327-28). Flowery bean curd soup (p. 328-29). Bean curd casserole soup (p. 330-31). Tsa chiang mien (Noodles with minced pork and bean sauce, incl. "½ cup bean sauce," p. 365-66).

One glossy color photo (between pages 282 and 283) and a numbered key shows many ingredients used in Chinese cooking, incl.: 5. Dark soy sauce. 6. Hoi sin sauce. 7. Bean sauce. 8. Light soy sauce (both in tall-neck bottles). 16. Fresh white bean curd. 28. Dried brown bean curd [soy sauce pressed tofu]. 31. Dried bean curd sheets [clearly yuba, since light yellowish brown, semi-transparent, subtly wrinkled surface, and very thin]. 32. Fermented salted black beans (small pile).

Chapter 11, titled "Chinese ingredients..." (p. 419-40) contains many interesting terms and definitions, with Chinese characters accompanying each. Soy related are: Dried bean curd sheets [yuba] ("These paper-thin, light brown half circles are very fragile and are often broken; they can be repaired by wetting and overlapping the broken edges. They are sold in packages of 10 and will keep for 3 to 4 months without refrigeration." Eventually they will turn rancid, since they have a high oil content"). Dried brown bean curd (3 Cc = Chinese characters given) [doufugan; soy sauce pressed tofu]. Dried red beans [azuki].

Fermented salted black beans (2 Cc) [douchi, dow see] "An ingredient of Cantonese cooking but virtually unknown elsewhere in China, these black [soy] beans, sometimes simply called 'Salted Black Bean' are sold in 1-pound cans or in 8- and 16-ounce plastic bags. They will keep for months if stored in the refrigerator in a covered jar." Fresh white bean curd (2 Cc) (doufu). Ground bean sauce (3 Cc): Contains "the same ingredients as Bean Sauce, except the whole beans have been ground to a paste. It is sold in oblong 1-pound cans." Hoi Sin Sauce (3 Cc): "Made from pumpkin."

Red bean curd sauce (4 Cc): "A thick sauce made from soy beans, red rice, and salt water, this is available in 11-ounce oblong cans and also in 12-ounce round cans labeled 'bean curd.'"

Note 3. This is the earliest English-language document seen (March 2011) that uses the term "Red bean curd sauce" to refer to a commercial product made with red fermented tofu.

Sesame oil. Sesame paste. Sesame seeds. Shao Hsing Wine (made from rice). Soy sauce (2 Cc) [jiangyou]: Color ranges from light to very dark. The "difference lies more in the color than in the flavor." Sold in tall-neck bottles ranging for 12-21 ounces. "The soy sauce generally sold in American supermarkets is light soy sauce–it is most suitable used as a dip or in some stir-fry dishes but in general is too light to lend an appetizing color to a dish. Dark soy sauce, usually found only in Chinese markets, is sometimes labeled 'Black Soy.' Soy sauce will keep for months and sometimes years without refrigeration."

There follows a nationwide directory of sources for Chinese ingredients.

Also mentions: Eight precious jewel pudding (with "1 cup dried red [azuki] beans," p. 406-07). Red sand rice roll

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(with "1½ cups dried red [azuki] beans," p. 408-09).

"Craig Claiborne was food editor of *The New York Times* from 1957 to 1971. During this period he was credited by the Chinese-American Restaurant Association of Greater New York with significantly raising the level of public interest in Chinese food, and thus the standard of Chinese restaurant fare." A large, excellent color photo on the rear dust jacket shows Craig Claiborne and Virginia Lee preparing a meal together in a kitchen. Address: East Hampton, Suffolk Co., New York (on the eastern tip of Long Island).

4940. Clark, Sydney, Zellers, Margaret. 1972. All the best in the Caribbean, including Puerto Rico and the Virgin Islands. New York, NY: Dodd, Mead & Company. x + 420 p. See p. 68. Illust. 21 cm. Series: All the Best travel books.
• ***Summary:*** In Chapter 6, "Some things to know," a section titled "The foods of the Caribbean" (p. 68) talks about the "Dutch islands" which are famous for their dining display, the Indonesian *rijsttafel* [Pron. = RAI-stah-fell]. "The proprietor of the Bali Restaurant in Aruba can prepare a simple ten-ingredient meal in half an hour. This will include... a 'soft-boiled' vegetable affair called *lablabs*, flavored with a Chinese sauce called *ketjab* (hence our word ketchup); and a variety of raw appetizers such as green mango, cucumber, onion shoots..."

4941. Food and Agriculture Organization of the United Nations (FAO). 1972. A selected bibliography of East-Asian foods and nutrition arranged according to subject matter and area. [Washington, DC]: Food and Agriculture Organization of the United Nations; U.S. Dept. of Health, Education, and Welfare. vii + 296 p. Dec. 27 cm. [1500* ref]
• ***Summary:*** This book has two title pages and can be cited in two ways. See Leung (1972). Address: Dep. of Health Education and Welfare.

4942. Fowles, Anthony. 1972. Double feature. New York: Simon and Schuster. 285 p. See Chap. 1, p. 20. 21 cm. *
• ***Summary:*** This is a "novel of suspense" in the mystery fiction genre. "The predictable teriyaki dinner, more edible than its infra-red mini-grilled BOAC counterpart."

Note: BOAC (British Overseas Airways Corporation) was the British state airline from 1939 to 1974.

4943. Furia, Thomas E., ed. 1972. CRC handbook of food additives. 2nd ed. 2 vols. Cleveland, Ohio: CRC Press (a Division of The Chemical Rubber Co.). Vol. 1: xi + 998 p. Vol. 2: 412 p. Index. 27 cm. [624* ref]
• ***Summary:*** The many chapters are published by various authors. Contents of Vol. 1: Introduction. 1. Enzymes. 2. Vitamins and amino acids. 3. Antimicrobial food additives. 4. Antioxidants as food stabilizers. 5. Acidulants in food processing. 6. Sequestrants in food. 7. Gums. 8. Starch in the food industry. 9. Surface active agents. 10. Polyhydric alcohols. 11. Natural and synthetic flavorings. 12. Flavor potentiators. 13. Nonnutritive sweeteners. 14. Color additives in food. 15. Phosphates in food processing.

Contents of Vol. 2: Legal considerations on food additives. Antioxidants as stabilizers for fats, oils, and lipid-containing foods. Enzymes. Nonnutritive sweeteners: Saccharin and cyclamate. New sweeteners. Natural and artificial flavors. Synthetic food colors.

Vol. 1: Chapter 12, titled "Flavor potentiators" (p. 513-21), by Loren B. Sjostrom (Vice-President, Arthur D. Little, Inc., Cambridge, Massachusetts) notes (p. 513): "In the context of flavor, the term 'potentiator' is only a few years old. The identification of flavor potentiators is a twentieth century accomplishment, an area of research still in its infancy." Yet seasonings (such as salt), as well as herbs and spices, have been used since ancient times.

The section on "Flavor enhancers" begins (p. 515): "The best known and most widely used flavor enhancer is monosodium glutamate (MSG). In 1866, a German chemist, Ritthausen, isolated glutamic acid. Later another chemist converted the acid to a sodium salt, monosodium glutamate. In doing their work, neither had any interest in flavor.

"More than 40 years later, in 1908, a Japanese chemist at the University of Tokyo, Dr. Kikunae Ikeda, discovered the flavor enhancing properties of MSG. Dr. Ikeda had set out to find out why and how a certain seaweed, *Laminaria japonica*, affected flavor. Japanese cooks had used this seaweed for centuries to improve the flavor of soups and certain other foods. Dr. Ikeda discovered that the ingredient in the seaweed that made the difference was MSG, and that it had an unusual ability to enhance or intensify the flavor of many high protein foods.

"After isolating MSG, Dr. Ikeda developed a process for extracting it from wheat flour and other flours. Working with the Japanese chemical company, Suzuki and Co., he supervised the construction of a plant and, as a partner with the company, began commercial production of MSG in 1909.

"There were several attempts to produce MSG in the United States in the years following, but it was not until the 1940's that large-scale MSG production began in this country. By 1968, U.S. production had grown to 46 million pounds per year and world consumption had increased to more than 150 million pounds per year."

The section titled "Types of potentiators" discusses 5'-nucleotides, maltol, dioctyl sodium sulfosuccinate, and several others. The 5'-nucleotides are synergistic with salt, and especially with MSG, they can have something like a multiplier effect in increasing the effectiveness of salt or MSG.

Note: Soy does not appear in the index of this book. Nor can we find it mentioned in Chapter 12. Yet there are scattered mentions throughout the book: Soy protein concentrate (p. 5). Soy sauce, tamari sauce, and miso–made for centuries in the Orient using fungal protease (p. 59).

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Studies on breads supplemented with soy, nonfat dry milk, and lysine (p. 114).

Experimental use of esters of *p*-hydrobenzoic acid in soy sauce and other foods (p. 128). Gas sterilants: Ethylene and propylene oxides. The ethylene oxide process was used during World War II to reduce the bacterial counts in soy flour and cereal products used in processed meat products for the Armed Forces (p. 156). An excellent acidulant for hams and soy bean curds [tofu] has been obtained by coating citric acid with suitable animal or plant oils (p. 242-43).

"Synthetic aroma for soy sauce," by K. Ebihara. 1954 Japanese patent No. 5250'54 (p. 258). Soy flour as a widely used binder for processed meat (p. 425). Soy flakes (31.5% parts by weight) and soy hulls (3.0%) as ingredients in "Soft moist pet food" (p. 445).

Cake doughnut mixes sometimes contain soy flour (p. 656). Completely synthetic coffee whiteners usually contain a combination of vegetable fats, sodium caseinate or soy protein, gums as viscosity stabilizers, phosphate or citrate salts as stabilizers for the proteins and as buffering agents, corn syrup solids or sugar as sweeteners and bodying agents, liquid-type emulsifiers, and colors to duplicate the color of cream (p. 671-72). Whipped toppings are used to replace high-fat cream products just as coffee whiteners are used to replace low-fat cream products. Both use protein, which may be soy protein (p. 672).

Imitation sour cream, sour cream dressings, and chip dips. Replacements for fermented cream products represent a growing market. These non-dairy products contain vegetable oil / fat, protein (either soy protein or sodium caseinate [derived from milk], gum stabilizers, etc., p. 673). When partially hydrolyzed soy protein and sodium hexametaphosphate (SHMP) are added to dried egg white, an angel food cake mix can be prepared in which all of the ingredients can be included in a single mixing stage (p. 679). Gelsoy, a patented soy protein made from specially processed, defatted and dehulled soybean flakes, is reported to have improved water- and fat-binding capabilities when treated with SHMP (p. 746, 778).

Improving protein whipping properties. Sevall and Schaeffer prepared protein whipping compositions from soy protein by combining the protein with SHMP etc. (p. 747). Gunther made an entirely new whipping protein composition by combining an enzyme-modified soy protein similar to Gelsoy, with gelatin and a polyphosphate (p. 747). A long table on the regulatory status of direct food additives mentions "Isolated soy protein" (p. 874-75); its use as a binder is regulated by the Meat Inspection Division (MID) of the USDA.

The word "soybean" is mentioned on 22 pages; all of these concern soybean oil except when noted (p. 65 {soybean protein}, 67 {soybean meal, soybean flour / flours}, 99, 114 {soybean products}, 192, 193, 197, 198, 207, 221, 222, 263, 264, 280, 289, 290, 319 {the soybean plant resembles the guar plant}, 350 {soybean protein, soybean methylcellulose}, 424, 746 {soybean flakes}, 747 {soybean protein}, 749 {soybean milk}). Address: Technical Development Manager, Industrial Chemicals Div., Geigy Chemical Corp., Ardsley, New York. President, Intechmark Corp., Palo Alto, California.

4944. Goldbeck, Nikki. 1972. Cooking what comes naturally. A natural foods cookbook featuring a month's worth of natural-vegetarian menus. Garden City, NY: Doubleday & Company, Inc. x + 230 p. Illust. by Bill Goldsmith. Index. 22 cm.

• ***Summary:*** In the section on Flour (p. 14-15), soy flour is mentioned. Under seasonings, the author advises (p. 22) to "Use Tamari or pure soy sauce, which has only water, whole wheat flour, and salt added." Recipes for Fried Brown Rice and Vegetables (p. 52) and Cabbage Salad with Carrot Dressing both use "Tamari Soy Sauce" and notes: "It is sold in all health food stores. If you cannot find it, substitute pure soy sauce to which no flavorings, colorings, or artificial ingredients have been added." Page 131 gives a recipe for Tamari Broth. In the section on "Ingredient Substitutions" under "Dairy Products," 1 cup milk is said to equal 1 cup soy milk. Address: R.D. 1, Box 452, Woodstock, New York 12498.

4945. Goldsmith, Maureen. 1972. The organic yenta. New York, NY: Antheneum. xii + 179 p. 23 cm.

• ***Summary:*** Note: *Webster's Dictionary* defines yenta (derived from the Yiddish *yente* = vulgar woman, probably from the name *Yente*, and first used in 1939) as "one that meddles; also a blabbermouth or gossip." The author describes a yenta as "a woman who likes to stick her nose into everybody's business."

Being a single, 25-year-old hippie-type young woman of Jewish ancestry "whose zest for eating good food is surpassed only by her zest for serving good food," she formed the Organic Yenta Eating Club, which allowed her to cook for 20-30 friends at her house. Initially her meals were meat-based continental favorites. Eventually she started to cook natural food, vegetarian recipes to please a man she was dating. He favorite foods (shrimp, lobster, and crab meat) were considered traif (not to be eaten) by Jews. Then she recalled the important distinction in Jewish cookery between meat meals (fleischig) and nonmeat meals (milchig)—a distinction that many non-Jews (goyim) are not aware of. So she developed many Jewish vegetarian recipes.

Soy-related recipes include: Soy sprouts (p. 19-20). Almond fried rice (with fried tofu and soy sauce, p. 48-49). Lentils and nuts (with fried tofu, p. 57). Tofu (homemade from soy flour, p. 58). Organic yenta's "meat loaf" (with cooked soybeans, p. 58-59). Roasted soybeans (p. 60). Soy-cabbage salad (with cooked soybeans, p. 117-18). Address: San Francisco, California.

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4946 Hesseltine, C.W.; Wang, H.L. 1972. Fermented soybean food products. In: A.K. Smith and S.J. Circle, eds. 1972. Soybeans: Chemistry and Technology. Westport, CT: AVI Publishing Co. xiii + 470 p. See p. 389-419. Chap. 11 [54 ref.]

• ***Summary:*** Contents: Introduction. Koji. Miso: Preparation of koji, treatment of soybeans (mixing, fermentation). Shoyu: Incl. chemical shoyu. Natto. Hamanatto. Tempeh. Sufu [fermented tofu]. New soybean products made by fermentation. Cheese-type products. fermented soybean milk, an ontjom-type product. 10. Future of fermented soybean foods.

Tables: (1) Demand for whole soybeans in Japan (1964-1967) to make miso, shoyu, and natto. In 1967, only 4.5% of the soybeans used to make miso were used in the form of defatted soybeans, whereas the same year 91.1% of the soybeans used to make shoyu were defatted. The total demand in 1967 (in 1,000 metric tons) was miso 177, shoyu 169, and natto 47. (2) Chemical composition of soybean foods. Miso (salty light, salty light, soybean miso), natto, soybeans. (3) Annual production of miso in Japan (1956-1967). Production of 530,078 tons in 1956 decreased to a low of 453,956 tons in 1962, then rose to 520,510 tons in 1967. (4) Composition of miso in relation to time of fermentation and ratio of soybeans:rice:salt for three types of miso: White miso, light-yellow salty miso, and yellow-red salty miso. (5) Average composition of shoyu made from whole soybeans and defatted soybean meal.

Illustrations (flowsheets, without quantities of ingredients) show: (1) Process for making red miso. (2) Process for manufacture of shoyu. (3) Process for making hamanatto. (4) Tempeh fermentation on a laboratory scale. (5) Preparation of sufu. (6) Preparation of soybean cheese. Address: NRRL, Peoria, Illinois.

4947 Hewitt, Jean. 1972. The New York Times heritage cook book. New York, NY: Putnam. xviii + 804 p. Illust. (full page color photos, line drawings by Ray Skibinski). Index. 25 cm.

• ***Summary:*** This monumental American cookbook contains more than 2,100 recipes organized by region, from the Northeast to the Northwest.

Soy related recipes: Teriyaki appetizer–Hawaii (with "½ cup soy sauce" and "2 pounds round steak, cut into strips,..." marinated and skewered, p. 660).

Tempura, with soy mustard sauce–Hawaii (with "1/3 cup soy sauce, preferably imported," p. 663).

Miso-shiru (Bean paste soup)–Northern California (with "2½ tablespoons miso paste {fermented bean curd paste [sic]}," and "1 fresh tofu {fresh bean curd}, cubed," p. 667).

Ruby's teriyaki–Northern California (with the sauce composed of "2 cups imported soy sauce," mirin, 1 cup sugar, grated fresh gingerroot, catchup, monosodium glutamate and crushed garlic, p. 695). Note: The sauce can be used with beef ("4 pounds boneless top sirloin") or chicken (2½-3 lb).

Ruby's sukiyaki–Northern California (with "2 cakes fresh tofu {fresh bean curd, see note"} and "½ cup imported soy sauce," p. 696-97). "Note: Tofu is available in oriental food stores."

Fried chicken in teriyaki sauce (with "2 cup imported soy sauce" and 1 cup sugar, p. 702-03).

A brief biography and portrait photo of Jean Hewitt appear on the inside rear dust jacket.

Note: Many recipes call for optional monosodium glutamate. Address: Food reporter and home economist, The New York Times.

4948 Horton, Lucy. 1972. Country commune cooking. New York, NY: Coward, McCann & Geoghegan. 232 + [8] p. Illust. by Judith St. Soleil. Index. 24 cm.

• ***Summary:*** A nostalgic memoir (for those who came of age at this time) of the world of young Americans in communes in the early 1970s, with many fine illustrations (see p. 27). The author, raised in New York City and educated at Bryn Mawr (Pennsylvania, with a major in classical archaeology), earned her traveling money by working as a live-in maid and cook for a rich "Park Avenue Lady" before embarking on the project that became this book. She hitch hiked to San Francisco, arriving in June 1971, then spent most of the next year visiting 43 communes in 12 states and Canada, and collecting recipes from each. There she found "a New Age of Food Consciousness." The main topic of conversation and common interest at these intentional communities was not God or sex, but food. This book, with her 150+ favorite recipes, features natural and organic foods (with lapses). Most of the recipes from California and the West Coast are vegetarian, but in New Mexico and eastward (especially New England) she was "surprised to find that vegetarianism was more the exception than the rule" (p. 81). Thus, Chapter 3 is titled "Meat (and one fish)." There are recipes for chicken, fish, deer, goat, beef, etc.

The Introduction notes (p. 15): "The *sine qua non* of commune cooking is tamari soy sauce, an unspeakably delicious fermented Japanese product available in natural foods stores which bears no resemblance to commercial soy sauce" * (Footnote: *"Kikkoman soy sauce, available in supermarkets, tastes like tamari but contains a preservative").

"1. Soups. The commune soups I sampled were typically of mixed vegetables with a tomato or miso (p. 159) base" (p. 27).

Tamari chickbits (p. 94, with chicken). Note about soy grits (p. 114). Sprouts (p. 135-36, many kinds including alfalfa, mung beans, soybeans, from Terra Firma, Oregon). Miso Almond Sauce (p. 158-59). Tamari gravy (p. 159). Soy-related recipes include: From Chapter 2, "Vegetarian main dishes"–Donna's soyburgers (p. 60-61, with whole

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soybeans, from California). Soy cheeseburgers (p. 61-62, with whole soybeans, from Moon Garden, Oregon). Suzy's soybean casserole (p. 63-64, from Breadloaf, New Mexico). Baked soybeans (p. 64-65, from Woolman Hill School, Massachusetts). Larry's tofu (soy cheese) (p. 65-68, homemade tofu from whole soybeans, from Om Shanti, Mendocino County, California). Breakfast cereal with roasted, salted soybeans (p. 163). Soy spread (p. 227, with soy flour, from The Motherlode, Oregon). Soy nuts (p. 229-30, baked, soaked soybeans with oil and salt). A photo on the rear cover shows the author, age 27, with long blonde hair, granny glasses, and blue denim overalls. Says Raymond A. Sokolov: "Lucy Horton has done more than collect exotic recipes ... she has assembled the crucial artifacts of a movement within The Movement."

Also discusses (see index): Adelle Davis, gluten (wheat), granola, ground nuts, macrobiotic diet, peanuts. Address: Derby, Vermont.

4949. Hosking, Richard. 1972. A dictionary of Japanese food: Ingredients & culture. Boston: Tuttle Publishing. 239 p. Illust. by Richard C. Parker. Index. 19 cm. *

• ***Summary:*** An excellent, accurate book. The basic entry for each word is given under its Japanese name (thus *daizu* rather than soybeans). Each entry includes the Japanese term in kana (usually hiragana) and (usually) kanji (Chinese characters). One hundred small illustrations are very helpful. Address: Prof. of Sociology and English, Hiroshima Shudo Univ., Japan.

4950. Jensen, J. Stoumann. 1972. Baelgplanten: Frugtens anvendelse og potentiel i menneskelig ernaering. En analyserende og diskuterende oversigt [Leguminous plants. Use of their seeds and its potential for human nutrition. An overview, with analysis and discussion]. Unpublished manuscript. Lyngby, Denmark. 110 p. Forwarded to DANIDA Sept. 1974. Unpublished manuscript. [23 ref. Dan]

• ***Summary:*** Under East Asian soyfoods, mentions soy sauce, miso, natto, sufu, and tempeh. Address: Dep. of Biochemistry & Nutrition, Technical Univ. of Denmark, Lyngby, Denmark.

4951. Kawakoshi, Kenji, ed. 1972. Shashi–Chôshi Shôyu Kabushiki Kaisha [History of Choshi Shoyu, Inc.]. Choshi, Chiba-ken, Japan: Choshi Shoyu K.K. 512 p. Illust. No index. 28 cm. [Jap]

• ***Summary:*** Contents: Preface. Part I: History before the founding of Choshi Shoyu. 1. The origin of shoyu and its development (p. 1). 2. The shoyu industry in Choshi during the Tokugawa period (1600-1868) (p. 25). 3. The Meiji period (1868-1912) (p. 69). 4. The three families that founded the company (p. 87). Part II: The history of Choshi Shoyu (p. 115). 1. The period of the limited partnership (p. 119). 2. The period of expanding development (p. 137). 3. The period of production growth and heavy competition (p. 159). 4. The period of new development conditions before World War II (p. 203). 5. The days of controlled conditions during World War II (p. 203). 6. Difficulties under the Allied occupation of Japan (p. 223). 7. The period of modernization of the industry and of new technology (p. 247).

Part III: Documents (p. 299). 1. Organization and management (p. 301). 2. Production (p. 327): Raw materials for shoyu, changes in the production process, shoyu containers, the factory. 3. The research laboratory (p. 393): Its history, its work. 4. Business (p. 401): Brands, labels (Choshi Shoyu, Higeta Shoyu, "since 1616." Includes English-language labels from 1954 and 1961), and awards, advertisements, branches, shoyu prices, shoyu taxes. 5. Labor (p. 435). 6. Social benefits and activities (p. 453). Chronology of Choshi shoyu, 1616-1971 (p. 483-509). Conclusion. Address: Japan.

4952. Kikkoman Shoyu Co., Ltd. 1972. Guide to Kikkoman (Brochure). Noda City, Japan. 10 p. 15 x 10 cm booklet. [Eng]

• ***Summary:*** Contents: Introduction by Kenzaburo Mogi, president. Shoyu: Its past and present. History. Production method. People everywhere love Kikkoman (with a photo of 19 Kikkoman products). Kikkoman all over the world. Kikkoman in Japan. Note that the product is referred to throughout as "Kikkoman Shoyu" and not "Kikkoman Soy Sauce."

"History: In the 6th century Buddhism came to Japan from China, and with it came a strict ban on the eating of meat. Buddhism also brought a new vegetable-base sauce–a paste made by fermenting various grains–which replaced previous meat or fish-base seasonings. For a thousand years or so the Japanese used this paste as one of their major seasonings. It was not until the 17th century that this seasoning was developed into the shoyu that we know today.

Kikkoman worldwide: Kikkoman Foods Inc. (KFI) was established in 1972 to produce shoyu in America, our largest overseas market. Head office and plant: Walworth, Wisconsin 53184 USA.

Kikkoman International Inc. (KII) was established in 1957 to import and distribute our products in the USA. Head Office: 1581 Webster St., San Francisco, California 94115. Branches: Los Angeles, New York, Chicago.

Japan Food Corporation (JFC) is the largest importer and distributor of oriental foods in the United States. Head Office: 900 Marine St., San Francisco, CA 94124. Branches: Los Angeles, New York, Chicago, Sacramento, San Diego, Washington [DC].

Pacific Trading Co., Ltd. (PT) was established in 1928 in Tokyo to export oriental foods, mainly to the United States. Head Office: 767 Marunouchi Bldg., Chiyoda-ku, Tokyo.

Kikkoman Daitokai (Europe) GmbH is a restaurant chain, established in 1972 to serve mainly Japanese dishes.

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Head Office: 4 Dusseldorf, Kleverstrasse 46, West Germany.

Kikkoman in japan. Kikkoman is the leading brand of shoyu in Japan. The second best-selling brand sells only 23% as much shoyu as Kikkoman and the third best-seller only 13% as much. Kikkoman's capital: $18,500,000. Sales (1972): $218,000,000. Total production of shoyu (1972): 100,000,000 gallons. Number of employees 4,400. The names of members of the Kikkoman board of directors are given. Kikkoman subsidiaries are Kikko Foods Corp., Mann's Wine Co. Ltd., Seishin Pharmaceutical Co. Ltd., Tone Coca Cola Bottling Co. Ltd.

4953. Kikkoman Shoyu Co., Ltd. 1972. Kikkoman today & tomorrow (Brochure). Noda City, Japan. 14 p. [Eng]
• ***Summary:*** On the cover of this brochure is a man, standing in the lower right corner, looking up into a dark blue sky, in which there are seven colored heavenly bodies; the large central one is yellow, and the smaller ones, equidistant from the center, are (clockwise from the top) red, orange, yellow and green, blue, violet, and magenta. On the inside front cover is a huge red Kikkoman logo on a white background.

Contents (includes many color photos): History of shoyu and Kikkoman (with a chronology from 1661 to 1972). Present state of Kikkoman (graph of financial increase from 1917-1971; board of directors, company description and spirit). Kikkoman in Japan (products, plants, sales from 1950-1971). Kikkoman export products. Kikkoman soy sauce in America. International operations. Central research laboratories. Kikkoman soy sauce production method. Kikkoman group in Japan. People every where love Kikkoman. Kikkoman and advertising. The rear cover is dark blue.

The chronology (p. 1) begins: "Kikkoman Soy Sauce first went on the market in 1661 when the Takanashi and Mogi families constructed breweries and started the brewing of soy sauce." Address: 339, Noda, Noda-city, Chiba 278, Japan. Phone: (0471) 22-1111.

4954. Korean Institute of Science and Technology (KIST). 1972. [Foodstuffs and food additives for industry in Korea]. Seoul, Korea: Ministry of Science and Technology. [Kor]*
• ***Summary:*** In 1971 production of fermented soybean foods in Korea (in 1,000 metric tons) was: Soybean sauce: industrial 107, home-made 116, total 223. Soybean paste: industrial 56, home-made 168, total 224. Red pepper soybean paste: industrial 23, home-made 89, total 112.

4955. Koshiyama, Ikunori. 1972. Purification and physico-chemical properties of 11S globulin in soybean seeds. *International J. of Peptide and Protein Research* 4(3):167-76. [34 ref]
Address: Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

4956. Kwon, Tai-wan, comp. 1972. Fermented foods in Korea: Annotated bibliography (1917-1971). Seoul, South Korea: Korea Institute of Science and Technology. 185 p. 28 cm. For Fermented Soybean Products, see p. 28-85. [248* ref. Eng]
• ***Summary:*** One of the best sources on soyfoods in Korea. A very well prepared bibliography. Of the 248 references, 83 are related to soy. Most of the documents cited were published in the 1950s and 1960s; only one (p. 28) was published before 1940.

Contents: 1. Fermented vegetable products (*kimchies* [*kimchi*]). 2. Fermented fishery products. 3. Fermented soybean products (soybean koji {meju, maju, maeju}, soy sauce {kanjang, ganjang}, soy paste {doenjang, dainjang, dwen-jang}, hot soy paste {kochojang, kochuzang}, etc.). 4. Fermented cereal products (alcoholic beverages). 5. Miscellaneous. Appendix. Author index.

Note 1. Doenjang (Korean soybean paste) is first mentioned on pages 28, 64. Dainjang (Korean soybean paste) is mentioned on page 34. Dwen-Jang (Korean soybean paste) is mentioned on page 42.

Kochojang (Korean red pepper miso) is first mentioned on pages 28, 31, 46. Kochozang (Korean red pepper miso) is first mentioned on page 36. "Red pepper sauce" (Korean red pepper miso) is first mentioned on pages 38, 39. "Red pepper paste" (Korean red pepper miso) is first mentioned on pages 71.

Kanjang (Korean soy sauce) is first mentioned on page 34.

Ganjang (Korean soy sauce) is first mentioned on page 53.

Note 2. This is the earliest English-language document seen (April 2012) that uses the word "Kanjang" or the word "Ganjang" to refer to Korean soy sauce.

Meju (Korean soybean koji) is first mentioned on pages 35, 41, 44, 60. Maiju (Korean soybean koji) is first mentioned on page 34. Maeju (Korean soybean koji) is first mentioned on pages 73, 83. Chung-Kook-Jang (Korean natto) is first mentioned on page 79.

Note 3. This is the earliest English-language document seen (Oct. 2010) that uses the word Chung-Kook-Jang (spelled exactly that way) to refer to Korean-style natto. Address: PhD, Head, Food Resources Lab., Korea Inst. of Science and Technology, Seoul, South Korea.

4957. Nakahama, Toshio. 1972. Shôyu jôzô no saishin no gijutsu to kenkyû [Early technology and research related to shoyu brewing]. Tokyo: Nihon Jozo Kyokai. 344 p. [Jap]
Address: Kyoto Fu-ritsu Daigaku-cho, Japan.

4958. Nakao, Sasuke. 1972. Ryôri no kigen [The origin of foods]. Tokyo: Nihon Hoso Shuppan Kyokai. 225 p. [Jap]
• ***Summary:*** The important chapter titled "The big natto triangle and miso," by Sasuke Nakano (p. 118-27) discusses

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natto, its relatives and ancestors in East Asia, and the "natto triangle" theory (with a map). Nakao hypothesized that natto (*itohiki natto*, made with one or more strains of bacteria) originated in the monsoon area of Southeast Asia, where there are East Asian evergreen forests. He considered Yunnan province in China to be the hypothetical center of natto's origin.

He states: We don't know much about natto in Japan. Konnyaku was clearly mentioned in the literature of the Heian period [794-1185]. But natto was first mentioned later, during the Muromachi period [1336-1573], therefore I guess it came from Java [sic] at about that time. Many new things from Europe (such as guns) also entered Japan during the Muromachi period.

What I call the "Miso Group" is salted mold-fermented soyfoods–such as miso, shoyu, tamari, and fermented black soybeans (*douchi*)–that originated in northern China outside the Big Natto Triangle, then spread to central China and to other countries such as Japan and Korea. I have shown the Miso Group on the map in an oval to the upper right. So the triangle and the oval shows the locations of these two groups of processed, fermented soyfoods.

In the Big Natto Triangle we find a number of foods that originated in northern China, including konnyaku and sushi. Sake is also fermented with a mold–the koji mold. Bean sprouts (a great Chinese invention, using beans that are hard to cook) also exist in the Miso Oval, but they spread into many areas within the Big Natto Triangle including Burma and Java.

Nyufu [dairy cheese or yogurt, literally "decayed / spoiled milk"] and tofu. Tofu was also a great invention of northern China–an easy way to eat soybeans. Seen from this point of view, European ways of cooking beans are very primitive.

Note: European beans generally contain too little protein and too much carbohydrates (especially starch) to enable them to be made into tofu.

Mr. Shinoda Osamu has developed the theory that tofu was invented in China but not in ancient times; probably in the middle of the Tang dynasty [618-906], and it became popular in the middle Song dynasty [960-1279], at which time it became an alternative to *nyufu* made from dairy milk. What I call *nyufu* here is different from *furuyu* (fermented tofu), which is made by fermenting tofu, appeared after the invention of tofu, and is found today throughout East Asia. It is difficult to know exactly what *nyufu* was, in my opinion it was probably like *dahi* from India. In any case, it is certain that there was a product in called *nyufu* shortly before the Tang dynasty and during the early Tang.

During most of Chinese history, except when the nomadic milk-consuming Mongols ruled China during the Yuan dynasty (1279-1368), animal milks were not part of traditional Chinese culture.

Tofu was in Japan by 1183 AD (see *Diary of Hiroshige NAKAOMI*, entry for 1183). Maybe tofu was brought in by Buddhist monks and consumed in and around Nara. By the end of the Muromachi period [1336-1573] the center of tofu making and use had moved to Kyoto.

Another interesting thing is that in southern China and in Sichuan province, there is a tofu named *reiki* [*li qi*, pronounced "lichi," "morning prayer]." The name originally referred to *nyufu* but later it came to refer to tofu. The origin of the word *reiki* was considered to be Sanskrit or some European language. It may have been connected with *nyufu* and/or dahi or India. Also, if we consider *reiki* to be the original name of tofu, then *nyufu* and tofu may have originated in Sichuan or southern China and migrated up to Northern China.

In summary: Nakano's theory is based on the observation that there are many varieties of non-salted fermented soyfoods and soy condiments inside the "natto triangle." Yunnan province in southwest China, Thailand, Myanmar (Burma), Bhutan, Nepal, Indonesia, and Japan all fall within this triangle.

Note 1: This is the earliest English-language document seen (Jan. 2012) that contains the term "natto triangle." Yet this term can be misleading, especially for non-Japanese. Natto is the only non-salted fermented soyfood or soy condiment indigenous to Japan. Natto is made by fermenting whole, cooked soybeans with bacteria (*Bacillus natto*, or *Bacillus subtilis*) in a warm place (ideally 104°F or 40°C) for about 24 hours. According to various Japanese legends, natto originated almost 1,000 years ago in northeast Japan when cooked soybeans were placed in a rice-straw sack strapped over the back of a horse. The natto bacteria are found abundantly on rice straw, and the warmth of the horse's body aided the fermentation. Under these conditions, the fermentation would take place naturally, without intentional inoculation.

The "natto triangle" refers to the geographical area within a large triangle in East-, South-, and Southeast Asia–the only place in the world where non-salted fermented soyfoods and soy condiments are indigenous. A number of these–such as tempeh in Indonesia and unsalted fermented black soybeans in China–are fermented primarily with molds (e.g., *Rhizopus*, *Aspergillus*) rather than bacteria. The triangle has its three corners in northeastern Japan (on the northeast, for natto), northeastern India and Nepal (on the west, for kinema), and in Java (Indonesia, on the south, for tempeh). It is incorrect to think of tempeh as a type of natto–by any definition! Applying this correction to the "natto triangle" causes it to fall apart! Extensive research after 1972 on the early history of tempeh and natto gave no support to the conjecture that natto came from Java.

However the incorrect theory actually turned out to have powerful predictive value, especially as close relatives of natto were discovered in northeast India by Tamang and co-workers starting in 1988, more than 15 years after the "natto

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triangle" hypothesis was proposed.

4959 National Food Research Institute 1972 National Food Research Institute [Japan]. NFRI, Ministry of Agriculture and Forestry, Shiohama-cho 1-4-12, Koto-ku, Tokyo. 27 p [144 ref. Eng]

• ***Summary:*** Contents: Brief history. Budget and personnel. Organization. General survey of the Institute. Major research area. Facilities and pilot plants. Reports and patents. Publications. Scholarship. Location.

In 1934, the Rice Utilization Research Laboratory was established by the national government. The first building of about 330 square meters was completed in 1935 at the present site. In 1944 the title of the Laboratory was changed to the Research Institute of the Bureau of Staple Food Administration, and investigations were directed toward the processing and utilization of unconventional food resources.

"Owing to the change in the food situation in Japan during World War II, the Institute carried out extensive research on the most efficient utilization of the nutrients in various foodstuffs, and on finding new food sources among various agricultural products, so as to meet the serious food shortage. This trend continued through the post-war period as the nation struggled with an even more acute food shortage problem. Fats and oils, fruits and vegetables, and fermented soybean products miso and soybean sauce were added as subjects of research.

"The Institute again changed its name to the Food Research Institute in 1947, and official analysis and standardization of food commodities were included in its activities . The Institute came to belong to the Food Agency in 1949 and later, in 1961, as a result of the reform in agricultural research administration, it was brought under the administration of the Agriculture, Forestry, and Fisheries Research Council together with other agricultural research establishments." The name was changed for a third time to the National Food Research Institute in 1970.

T. Watanabe is the Director of the organization. The fermentation research division is headed by H. Ebine, and consists of the following laboratories: Fermentation microbiology (M. Matsuno), fermentation chemistry (T. Ohta), industrial fermentation (H. Ito), mycotoxin (H. Ebine), resources utilization (N. Tsumura). The nutrition research division is headed by S. Kimura.

Note: This institute moved from Tokyo to Tsukuba in Feb. 1979. Address: Shokuhin Sogo Kenkyujo, Tokyo, Japan.

4960 Sakaguchi, Kinichiro. 1972. Development of industrial microbiology in Japan. In: Proceedings of the [Sixth] International Symposium on Conversion and Manufacture of Foodstuffs by Microorganisms. Tokyo: Saikon Publishing Co. viii + 297 p. See p. 7-10. Held 5-9 Dec. 1971 at Kyoto, Japan. [Eng]

• ***Summary:*** Japan has made many important contributions to the development of industrial microbiology, especially industrial mycology, because of the widespread use of koji molds (*Aspergillus oryzae*). Foods made from this one mold (including sake, miso, and soy sauce) accounted for about 1.5% of the Japanese gross national product, or ¥75,000 billion, in 1970.

Early documents show that molds were being used to make foods as early as 1,000 B.C. in China and as far back as the 6th century [A.D.] in Japan. In Japan, the use of lactic acid fermentation in the pure culture of yeast is already mentioned in "the diary of sake" [*Goshu no Nikki*] written in 1355, however the technology of adding koji starter [*tané koji* or "seed koji"] is even 400 years earlier [i.e., ca 955]. Moreover, an unmistakable description of low temperature pasteurization (*hiire*) appears in the *Tamon-in Diary* (1539-1596), "which was written about 300 years prior to Pasteur's famous invention."

When Japan began to introduce European scientific techniques during the Meiji period (Sept. 1868 to July 1912), the first subject of scientific research in Japan was the unique koji mold. One of the first major discoveries was the invention of Takadiastase [an enzyme] by Jokichi Takamine. This enzyme has a great influence on biological chemistry, enzyme chemistry, and various enzymes using microorganisms worldwide.

Soon the physiology of the koji mold and its fermentation products (especially organic acids) was studied by Japanese scientists. The determination of kojic acid by Yabuta was a major discovery. The *Rhyzopus* [*Rhizopus*] mold was also investigated; this led to the development of producing organic acids fumaric acid, citric acid, isocitric acid, itaconic acid, gluconic acid and others.

Two outstanding discoveries have recently been made in Japan: (1) The technology for making L-glutamic acid, lysine, and other amino acids; (2) The microbial technology for making flavor-enhancing nucleotides such as inosinic acid and guanylitic acid.

Japanese scientists and industries soon realized that instead of using microorganisms, the enzymes isolated from them could be used (in whole or in part) with no reduction in yield or quality. In the case of *Aspergillus oryzae*, which produces various enzymes (amylase, lipase, protease, etc.) this idea has been applied to the manufacture of alcohol, sake, mirin, miso, and soy sauce.

The classification and taxonomy by Jun Hanzawa of microorganisms used in the manufacture of *natto* (fermented soybean) and other popular Japanese fermented foods was of major importance.

Recently, Japanese scientists including Murakami and Yokotsuka [of Kikkoman] have found that the koji mold does not produce aflatoxins.

The industrial application of molds to establish a method of mass culture involves various difficult problems. Many

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Japanese manufacturers of sake, miso, and soy sauce "are practicing the conventional solid culture by using what are called Koji rooms" but large manufacturers are gradually switching over to aerobic apparatus.

To use the living action of microorganisms or their enzymatic action to make foods on a large scale will be increasingly seen "as a form of bioengineering or biotechnology," and the life sciences will increasing be spoken of as "a science for the future. 'Seek whatever is desired in microorganisms first. They will never betray you,' is my slogan." Although it may seem a little exaggerated, "I should like to ask you to take it as my firm conviction."

As I stated above, "microorganisms are the most intimate friends of the food industry," yet they are at the same time its powerful enemies. Their malignant side is as powerful as their benevolent side.

I am very glad, even proud, to see first-class microbial specialists and food specialists exchanging technological knowledge and cooperating with one another, "here in Japan where fermented foods have so long been a tradition." Address: Prof. Emeritus, Univ. of Tokyo, Tokyo, Japan

4961. Sams, Craig. 1972. About macrobiotics: The way of eating. Wellingborough, Northamptonshire, England: Thorsons Publishers Ltd. 61 p. No index. 18 cm. [7* ref]
• ***Summary:*** Chapter 5, titled "Other Important Foods," introduces miso and tamari, and gives recipes for: Miso soup. Miso spread (with tahini). Miso gravy. Tamari broth. Tamari spread. Black soybeans are discussed on page 35, and a recipe for their use is given. The tenth printing appeared in 1985. A Spanish-language edition was published in 1983 in Madrid. Address: (London).

4962. Senn, Charles Herman. 1972. Dictionary of foods and cookery terms. New York, NY: Drake Publishers. 164 p. Originally published in 1908. *
• ***Summary:*** Charles Hermann Senn lived 1862-1934.

4963. Slamet, Dewi Sabita; Gandjar, Indrawati. 1972. Pengaru *Rhizopus oryzae* dan *Aspergillus oryzae* terhadap kwalitas kecap [The influence of *Rhizopus oryzae* and *Aspergillus oryzae* on the quality of Indonesian soy sauce, kechap]. *Penelitian Gizi dan Makanan* (*Research on Food and Nutrition*) 2:88-95. [16 ref. Ind]
Address: 1. Balai Penelitian Gizi Unit Diponegoro, Departemen Kesehatan R.I., Jakarta; 2. Balai Penelitian Gizi Unit Semboja, Departemen Kesehatan R.I., Bogor, Indonesia.

4964. Smith, A.K.; Circle, S.J. 1972. Historical background (on soybeans and soybean foods). In: A.K. Smith and S.J. Circle, eds. 1972. Soybeans: Chemistry and Technology. Westport, CT: AVI Publishing Co. xiii + 470 p. See p. 1-26. Chap. 1. [53 ref]
• ***Summary:*** Contents: 1. Introduction. 2. U.S. history: Introduction of soybeans, processing for oil, soybean oil. 3. Soybean meal and protein: Animal feed industry, poultry industry, industrial uses. 4. Soybean production. 5. Oriental history: Ancient history, Oriental fermented foods (shoyu, miso, tempeh, ontjom, natto, hamanatto, tao tjo [Indonesian-style miso], kochu chang, ketjap), Oriental nonfermented foods (soybean milk, tofu), wedge press. 6. Soybeans and world food problems: Green Revolution, protein supplements (high protein food formulations, AID funded), amino acids, CSM, cottage industries.

Concerning industrial uses (p. 8-9): Soybeans rose in popularity as an agricultural crop in the USA at a time when other crops such as corn, wheat, cotton, and tobacco were being produced in surplus quantities. Soybeans took over much of the acreage vacated by these crops. "At that early period it was the hope of many leaders of agriculture, government, and industry that much of the oil and protein of the soybean could be diverted from the food and feed industries into industrial products such as paints, varnishes, soap stock, plastics, adhesives, plywood glue, paper coating and lamination, paper sizing, textile fibers, and other uses... In 1936 the US organized the Regional Soybean Industrial Products Laboratory for this purpose. These new industrial uses were expected to help relieve the problem of farm surpluses... In 1935 the Glidden Company built the first plant for the isolation of industrial grade soybean protein (transferred to Central Soya in 1958). The largest use of industrial grade protein is in the paper-making industry, for coating and sizing of paper board.

"After World War I, soybean meal, because of its low cost, replaced casein as an adhesive for Douglas fir plywood glue, where it still retains a substantial part of the market for the interior grade product."

"While soybean proteins have several important industrial applications, especially in the paper industry for coating and sizing paper, which are expected to continue for years to come, the original dream of an ever-expanding industrial market [for soy proteins] has faded. In the polymer market it appears that for most applications the proteins cannot be made competitive with the increasing number of low cost, high quality synthetic resins... It is generally recognized that the increasing demand for proteins for feed and food will greatly surpass the anticipated industrial uses."

A graph (p. 1) shows: Soybean production in the United States for seed, 1940-1970. Address: 1. Oilseeds Protein Consultant, New Orleans, Louisiana; 2. Director, Protein Research, W.L. Clayton Research Center, Anderson Clayton Foods, Richardson, Texas.

4965. Smith, Allan K.; Circle, Sidney J. eds. 1972. Soybeans: Chemistry and technology. Vol. 1. Proteins. Westport, Connecticut: AVI Publishing Co. xi + 470 p. Illust. Index. 24 cm. [500+ ref]

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• ***Summary:*** One of the best and most comprehensive reviews on the subject, with extensive information on modern soy protein products. Each of the 12 chapters is written by an expert on the subject. Volume 2 was never published. Address: 1. PhD, Oilseeds protein consultant, New Orleans, Louisiana; 2. PhD, Director, Protein Research, W.L. Clayton Research Center, Anderson Clayton Foods, Richardson, Texas.

4966. Smith, A.K.; Circle, S.J. 1972. Appendixes: Glossary of soybean terms: Terms used in conjunction with the processing of soybeans and the utilization of soy products. Official standards of The United States for soybeans. In: A.K. Smith and S.J. Circle, eds. 1972. Soybeans: Chemistry and Technology. Westport, CT: AVI Publishing Co. xiii + 470 p. See p. 438-56. Appendix. [4 ref]

• ***Summary:*** Glossary: Soybean(s), soybean processor, soybean processing (solvent extraction, mechanical processing, pre-press solvent processing), soybean oil, crude soybean oil, edible crude soybean oil, refined soybean oil, edible refined soybean oil, hydrogenated soybean oil, degummed soybean oil, winterized oil, technical grade refined soybean oil, soybean fatty acids, soybean soapstock, acidulated soybean soapstock, soybean lecithin, break material, sludge.

Soybean products: Ground soybeans, ground soybean hay, soybean hulls, solvent extracted soybean feed, soybean meal, dehulled solvent extracted soybean meal, soybean mill feed, soybean mill run, heat processed soybeans, nitrogen free extract (N.F.E.).

Standard specifications: Soybean chips, soybean cake, 41% protein soybean meal, soybean flakes, 44% protein soybean meal, dehulled soybean flakes, 50% protein solvent extracted soybean meal.

Soybean proteins: Soy flour, soy grits, soybean meal, defatted soy flour, low-fat soy flour, high-fat soy flour, full-fat soy flour, lecithinated soy flour, protein, isolated protein, toasting, textured protein products (TPP), meat analogs. Definitions: Soy grits and/or soy flour, isolated soy protein, soy protein concentrate.

Vegetable fats: Margarine, vegetable shortening.

Oriental foods: Soy sauce (shoyu), soy milk, miso, tofu, dried tofu, aburaage, kinako, namaage, ganmodoki, tempeh, natto, yuba, moyashi (soybean sprouts), vanaspati, ghee.

Official standards of the U.S. for soybeans. Soy flour standards. Analytical data range of commercial soy protein. Some U.S. companies marketing soy protein food ingredients. Nitrogen solubility index (NSI). Protein dispersibility index (PDI). Urease activity. Water absorption of soy flour. Address: 1. Oilseeds Protein Consultant, New Orleans, Louisiana; 2. Director, Protein Research, Anderson Clayton Foods, Richardson, Texas.

4967. Tatsuno Shoyu Kyodo Kumiai. 1972. Tatsuno Shôyu Kyôdô Kumiai yôran [General survey and handbook of the Tatsuno Shoyu Association]. Tatsuno city: 406 p. [Jap; eng+]

• ***Summary:*** Contents: History of Tatsuno Shoyu (before the union). Part I: Ten years under the controlled economy (1939-1949). 1. Outline and overview: Changes in the system of controlling the shoyu economy. 2. The manufacturing union period. 3. The controlled company period. 4. The food rationing/distribution public corporation period. 5. Changes of prices and standards. 6. Report from the experimental station. 7. Other records.

Part II. 20-year history of Tatsuno Shoyu Cooperative Assoc. (1950-1972). 1. Outline of the 20-year history. 2. Establishment of the Tatsuno Shoyu Cooperative Assoc. 3. Progress after the establishment. 4. Enterprises. 5. Operation of the experimental station. 6. Tatsuno Shoyu technical training center–20-year history of vocational training. 7. Undertaking structural improvements in Tatsuno K.K. 8. Changes in the production rate of Tatsuno Shoyu. 9. The financial condition of the cooperative association. 10. Tatsuno-kai and other organizations. 11. Other records.

Part III. Data. It is said that Tatsuno Shoyu was started by Maruoya? Magouemon? in about 1532-1554. However no accurate historical information is available. It is thought that Tatsuno Shoyu started as a sake manufacturing business. Address: Tatsuno city, Japan.

4968. Yokotsuka, Tamotsu. 1972. Shoyu. In: Proceedings of the [Sixth] International Symposium on Conversion and Manufacture of Foodstuffs by Microorganisms. Tokyo: Saikon Publishing Co. viii + 297 p. See p. 117-25. Held 5-9 Dec. 1971 at Kyoto, Japan. [68 ref]

• ***Summary:*** Tables show: (1) Basic characteristics of various types of soy sauce from different countries: Koikuchi (Japan), usukuchi (Japan), soy sauce (China, Malaya, Indonesia) and Fish soy (Malaya). For each is given: Baumé (density of liquids), NaCl in gm per 100 gm, Total nitrogen in gm per 100 gm, Reducing sugars in gm per 100 gm, Alcohol in ml per 100 ml, Color (dark to light).

(2) Japanese agricultural standard (JAS) for shoyu–koikuchi, tamari, and usukuchi. Grade depends most on total nitrogen content. (3) The relation between the preference for a shoyu and its chemical composition. The highest partial correlation coefficient is alcohol content = 0.35.

(4) The relation between the preference for a shoyu and its odorous components. (5) The relation between the preference for a shoyu and its taste components.

(6) Effect of cooking conditions of soybeans on the digestibility of protein in the mash. (7) Effect of cooking condition of soybeans on the enzymatic digestibility of protein (high pressure, short time has the highest digestibility).

(8) Fluorescent pyrazine compounds produced by moulds similar to aflatoxins regarding Rf values on TLC.

(9) Fluorescent isocoumarine compounds produced by

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moulds similar to aflatoxins regarding Rf values on TLC.

Graph: Yeast flora in shoyu fermentation. *Saccharomyces rouxii* has a count that peaks at about 2 months and has largely disappeared after 6 months. *Torulopsis* sp. has a count that peaks at about 15 days and again at 6 months and has disappeared after about 12 months. Address: Central Research Laboratories, Kikkoman Shoyu Co., Ltd., Chiba-ken, Japan.

4969. Chico-San Inc. 1972? Chico-San history and outline for future development. Chico, California: Chico-San Inc. 5 p. Undated. Unpublished typescript.

• ***Summary:*** A good early history of Chico-San, typewritten on the company's letterhead probably by Bob Kennedy. Atop the letterhead is printed: "Macrobiotic foods, rice cakes, cereals, sea vegetables." "By 1961 eleven macrobiotic families had packed their belongings, left their jobs behind in New York City, and headed for Chico, California, in the heart of the California rice growing country. In a short time Chico-San, Inc. was formed by some of these people for the purpose of importing foods of superior quality which were not available domestically, and locally producing foods of the highest quality for distribution throughout the United States."

One of the company's first popular products was the "Rice Cake, a light cracker made from puffed up whole grain brown rice. The first "machine," imported from Japan in 1963, made one cake at a time and was a crude, hand-operated device. Soon, three more machines were tied to the original one, still hand operated. Bob Kennedy, Dick Smith, and a few others found it necessary to work twelve hour shifts, and for six and seven days at a time to meet the steadily increasing demand for the unique new cracker. In 1965 pulled shoulder muscles ceased to be a problem when the first semi-automatic Rice Cake machine was put into operation...

"Central to the guiding philosophy behind Chico-San was the search for an organically grown brown rice–the prince of grains. This search ended in 1969 when the first organically grown short grain brown rice was harvested just south of Chico, in Richvale, California. This product, grown under exclusive contract for Chico-San, further enhanced their growing reputation...

"Back in the late fifties and sixties people who were interested in food and health were called 'food faddists', or 'health food nuts.' The food products found in most health food stores at this time consisted of a vast array of vitamin and mineral supplements, super protein concentrates, natural cosmetics, and a scattering of whole grains, few of which were organically grown.

"But little by little products with the Chico-San label found their way onto store shelves. First the Rice Cakes, then natural soy sauce, Miso Soybean paste, Sesame Butter and Sesame Salt, and organically grown Brown Rice became popular...

"In the back room too is Junsei Yamazaki, who emigrated to Chico from Japan in 1963 for the purpose of producing natural soy sauce and miso for Chico-San. These two products make up the greater percentage of the imports from Japan, and are subject to high duties and shipping costs. For 17 years Junsei was a rice farmer in Japan after graduating from Tokyo University with a degree in agriculture.

"Combined with the income from Stage I, Chico-San will be ready to begin Stage III. This stage includes the construction of a plant for the production of, at first, miso, and then soy sauce." Address: Chico-San Inc., 1262 Humboldt Ave. Chico, California 95926.

4970. Japan Shoyu Research Institute. 1972? Report on the comparative study of shoyu brewing from U.S. and Japanese soybeans (no. 6). Tokyo: 29 p. Project UR-A11-(40)-(C) * Address: Tokyo.

4971. Erewhon, Inc. 1973. Erewhon visits a soy sauce factory (Ad). *East West Journal* 2(20):24. Jan. 15-30.

• ***Summary:*** "Soy sauce has been produced in Japan since it was introduced, along with Buddhism and the vegetarian diet, from mainland China over one thousand years ago. Today there are 5000 Japanese companies brewing a total of over 300 million gallons of soy sauce each year.

"One of these companies is Marushima Shoyu, located on Shodoshima Island, four hours by boat from Osaka through the Ku Strait. Marushima is a very old company, using traditional methods of manufacture, and it is here that Erewhon Tamari soy sauce is made. All soybeans used at Marushima are of unusually high quality, and come only from the island of Hokkaido."

A description of the process for making this soy sauce is then given. Whole soybeans are washed, soaked, then "steamed and boiled in a 14-foot-high cooker." Toasted whole wheat is "ground into flour, mixed with the cooked soybeans and placed in a large room, right on the wooden floor, which is kept very clean." The *koji* is placed in vats and spring water is added. The soy sauce changes color month by month until, after about one year, it begins to turn very dark and a rich aroma permeates the storage room. It is then poured into cypress-wood tanks and left to age for two more years. Unlike this pure, aged product sold under the Erewhon label, most other brands are aged only one to three months in concrete or metal containers.

"We at Erewhon would like to thank Marushima Shoyu for the wonderful product they make available to us."

Note: This was written by Paul Hawken. An illustration (line drawing) shows a traditional shoyu keg labeled "Marushima" and a gallon glass jar labeled "Tamari." Address: Boston, Massachusetts.

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4972. Eden Foods, Inc. 1973. Catalog. 211 South State St., Ann Arbor, Michigan. Undated. Probably published about Jan. 1973.

• ***Summary:*** Eden Foods is now carrying Organic Soybean Flakes from Arrowhead Mills (34% protein), and a line named "Hopi Seeds" which includes soybeans, sunflower seeds, pumpkin seeds, almonds, and cashews–each dry roasted with tamari, each in a consumer snack-sized pack weighing 1.3 to 1.5 oz. Note: This "Hopi Snacks" line was developed by Eden.

Other interesting products include "Michigan Grain" (soybeans, corn, rye, and wheat grown organically in Michigan, mostly by Tom Vreeland in Ypsilanti), umeboshi plums in salt brine, and kuzu arrowroot. Address: Ann Arbor, Michigan.

4973. **Product Name:** Hopi Seeds: Sunflower Seeds, Pumpkin Seeds, Almonds, Cashews, or Soybeans (Each Dry Roasted with Tamari).
Manufacturer's Name: Eden Foods, Inc.
Manufacturer's Address: 211 South State St., Ann Arbor, MI 48108. Phone: 313-769-8444.
Date of Introduction: 1973, January.
Ingredients: Whole soybeans, tamari.
Wt/Vol., Packaging, Price: Soybeans and sunflower: 1.5 oz. bag. Pumpkin, almond, and cashews: 1.3 oz.
How Stored: Shelf stable.
New Product–Documentation: Talk with Bill Bolduc, founder of Eden Foods. 1992. March 14. Erewhon was probably the first company in America to develop a line of tamari-roasted seeds and grains. Eden was carrying Erewhon's tamari-roasted soybeans by Oct. 1972, and the full line by early 1973.

4974. Misko, Karin. 1973. SeVa longevity cookery cookbook. Columbus, Ohio: Soybean Press. viii + 113 p. Jan. Illust. by Judy Post. Edited by Debora Bittaker. Introduction by Catherine Bicknell. 22 cm. [45 ref]

• ***Summary:*** A vegetarian cookbook from the SeVa Restaurant, printed on 100% recycled paper. Soy-related recipes include: Soy milk (p. 18). Tahini milk. Nut milk (p. 18). Miso vegetable soup (p. 25). Variety muffins (with soy flour, p. 36). Salad for Virgo (with green soybeans and roasted soybeans, p. 45). Miso-tahini sauce (p. 51). Brown sauce (with Tamari soy sauce or miso, p. 51). Stuffed cabbage rolls (with green soybeans and brown rice, p. 65). Campfire dinner (with cooked or canned soybeans, p. 65). Soy bean loaf (p. 73). Roasted soybeans (dry roasted, p. 84). Granola (with Soya granules, p. 84).

The glossary (p. 98-100) includes listings for cold-pressed oils, fertilized eggs, ginseng, glutin [sic, gluten], miso, seaweed, tamari soy sauce, and tofu ("a bean curd made from soybeans which is used for flavoring soups and sauces.")

Brand name products we use (p. 101; Note: Each contains soya). Smokene, Soyagen (spray-dried soymilk), and Vegeburger (Loma Linda Foods). Soya Granules (Fearn Soya Foods). Stripples (bacon alternative from Worthington Foods). Vege-Sal (Modern Products; flavored with soy bean extract). "Smokene: smoked seasoning spice made from toasted soy powder, dried yeast, soy sauce and condensed wood smoke. It is used for flavoring soups and sauces." Address: Columbus, Ohio.

4975. Spiral Foods Inc. 1973. Mail order price list. Chico, California. 2 p. Jan. 35 cm.

• ***Summary:*** This single-sheet catalog and price list, photocopied front and back with black ink on tan paper, contains numerous background illustrations and the includes the following foods: Snacks: Rice cakes, corn chips, Yinnies–brown rice candy sugarless. Condiments: Lima tamari soy sauce–aged naturally over two years. Miso–soybean puree, entirely natural, rice malt vinegar, sesame butter, sesame oil–cold pressed, sesame salt, sea salt white unrefined, salt plums, kuzu–wild arrowroot starch. Grains, flours, seeds and beans: Brown rice / sweet brown rice–short grain, organically grown. Black [soy] beans–Japan import. Azuki beans–Japan import, dainagon. Whole grain noodles. Sea vegetables. Beverages. Hygienic goods. Utensils.

Talk with Robert J. Kennedy, founder of Chico-San. 1991. Oct. 3. By about 1966-1967 rice cakes and rice chips (senbei) were beginning to cut a wedge into the mass market nationwide, so Chico-San created the Spiral Foods brand for these mainstream products, keeping the Chico-San brand for the health food market. Address: 1144 West 1st Street, Chico, California 95926.

4976. Winarno, F.G.; Fardiaz, Srikandi; Daulay, Djundjung. 1973. Indonesian fermented foods. Bogor: Agricultural University Bogor. 25 p. Originally presented as a lecture by Winarno to Regional Graduate Nutrition Course, SEAMEO, Jakarta, in Jan. 1973. [11 ref]

• ***Summary:*** Also titled "Indonesian Traditional Food Processing." Address: Dep. of Agricultural Product Tech., Bogor Agricultural Univ.

4977. Wilkens, Emily. 1973. Soybeans respond to seasoning tricks: A new you. *Hartford Courant* (*Connecticut*). Feb. 11. p. 2E.

• ***Summary:*** Though bland like other beans, soybeans respond to a hundred creative seasoning tricks. They are the only vegetable that is a true meat substitute. "As a health and beauty bonus, they're rich in unsaturated oil (Soy) and super for shiny hair and babysoft skin. The cost? Ridiculously low."

While Oriental chefs have been using soybeans creatively for centuries, almost all of the American crop has traditionally been fed to livestock. Fortunately, many

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American cooks are now "getting acquainted with this super bean instead of leaving it to the animals."

Soybeans are sold in many forms. As toasted nut-like snacks, they come in cellophane bags or jars in flavors that include salty, garlicky, barbecue, or plain. Soy flour is good for adding protein power to breads, cakes, and other baked goods. "Soy oil is smashing on salad." And of course there is versatile soy sauce. "Hint: Japanese 'tamari' soy sauce is sweeter, less salty than Chinese."

"Toasted soy snacks are probably the best way to introduce your family to beautiful bean." Gives a recipe for Soy nut loaf (with "¼ cup soaked soy grits"). Also gives many other ideas for using soybeans and their products in home recipes.

4978. Benton, Gene. 1973. Wine with food a matter of taste. *Los Angeles Times*, Feb. 22. p. J14.
• ***Summary:*** "Beer and ale show a marked affinity for soy [sauce], ginger, star anise, Szechuan pepper, hoisin sauce, fermented black beans, roasted sesame oil and the myriad pungent dried foods which supply the exotic Chinese flavors."

4979. Cowan, J.C. 1973. Soybeans: Their uses are many and expanding all the time. *Crops and Soils Magazine* 25(5):10-14. Feb.
• ***Summary:*** Contents: Introduction. Processing needed. Oil products. Lecithin. Protein products. Texturized protein products. Foreign and fermented products. Future prospects. Address: NRRL, Peoria, Illinois.

4980. Stater Bros. Markets. 1973. You always save! With Stater Bros. everyday low-low prices (Ad). *Los Angeles Times*, March 1. p. L17.
• ***Summary:*** In the lower left corner of this full-page ad: "Marukin soy sauce, 34 oz.–71¢." Address: Los Angeles area (16 stores).

4981. Zell, Fran. 1973. Food: Man who skates with grace cooks with beauty. *Chicago Tribune*, March 3. p. 14.
• ***Summary:*** Sashi Kuchiki, a Japanese star with the Ice Capades, likes to cook. His recipe for Sukiyaki includes "1 block tofu (bean curd) cut into 10 or 12 1-inch cubes" and "1 cup soy sauce." A photo shows him jumping while ice skating.

4982. Townsend, Dorothy. 1973. Hanoi days filled by shared memories, ex-POW reports: 'Telling' movies and books. *Los Angeles Times*, March 5. p. A1.
• ***Summary:*** During the Vietnam war, POWs would re-tell movies to try to kill time. The food, which featured cabbage soup from Christmas on, is described. "Other side dishes might be [mung] bean sprouts or soy bean cake [tofu]." The latter wasn't bad, recalled Capt. John H. Nasmyth Jr., especially in the later years when "they started putting a sauce on it and it was pretty tasty." Note: This sauce was probably fish sauce (nuoc-mam), but it might have been soy sauce.

4983. *Chicago Defender*. 1973. 'Swing' into spring with vegetables. March 22. p. 25.
• ***Summary:*** A recipe for Vegetable shop suey calls for "1½ tablespoons soy sauce (Tamari)."

4984. Dowd, James. 1973. Walworth County Japanese plant approaching grand June opening. *Journal-Times (The) (Racine, Wisconsin)*. March 28. p. 1E.
• ***Summary:*** Photos show: (1) Kikkoman's administrative manager, William Hanchette, with T. Murai, Kikkoman's executive vice president and general manager of the Walworth facility. The grand opening is set for June 16-18. (2) The hydraulic pressing equipment. (3) The front of the plant, from outside. "Kikkoman Foods, Inc. is nearing the completion date of its 146,000-square-foot, $6 million plant, which will process, bottle, and ship 3.5 million gallons of soy sauce and teriyaki sauce annually. The Walworth plant, the first built by Kikkoman outside the firm's Japan home, will be a $12 to $15 million investment when it reaches full capacity in about four years." In Japan each person consumes an average of 3.2 gallons of shoyu each year. "Kikkoman's administrative manager, William Hanchette, said 'Kikkoman's U.S. sales have been growing at the rate of 28% per year.' Hanchette said the Walworth plant will be ready to ship soy sauce to United States, European, and Latin markets by late June or mid-July." On 14 Dec. 1972 a ceremonial switch signalled the initial starting of the power plant and the raw material conveying system. "'Making Kikkoman soy sauce is basically a natural brewing process,' Hanchette explained. Unlike American made soy sauce that employs chemical reactions, the Japanese brand is brewed naturally for about 6 months.'" The process is then described. Kikkoman has 3 sales offices and 13 regional warehouses already in operation in the USA. Five years ago a bottling operation was set up in Oakland, California. Soy Sauce was shipped by tanker from Japan, then bottled in Oakland for distribution in the States. The Walworth County site was chosen in 1971 after a thorough study of available locations. Presently there are 10 Americans employed at the plant and a total of 50 are expected to be employed by June. Once the bottling operation gets under way the plant will employ approximately 100 Americans.

"Hanchette said about 40 Japanese have been sent over to place the plant in full operation. He said eventually the Japanese employees will be phased out and replaced by American workers. The Japanese will return to Japan where Kikkoman maintains 23 plants and employs 4,300 people worldwide."

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4985. Simkowitz, Howard J. 1973. Vegetarian and macrobiotic guide Europe, 1973, or, The great European health food trip. Craftsbury Publishers, Craftsbury, VT 05826. 111 p. March. 21 cm.

• ***Summary:*** The majority of this book is a directory and often detailed individual description (including address, nearest public transport station, hours) of European restaurants that serve vegetarian and/or macrobiotic food. Also includes food shops, spiritual centers, maps, vocabulary (in English, French, German, Spanish, and Italian), useful phrases (such as "I would like brown rice with carrots and soy sauce"), and exchange rates It is arranged by country, and within each country by major cities, and within larger cities by districts. For example, in the British Isles, under London, the author states: "I counted 44 vegetarian restaurants in London. Two of these [Wheat, and Chelsea House] are excellent, and seven others [incl. Cranks, and Cyranos] are quite good."

See ad in Useful Names and Addresses. 1973. p. 49 (Published by GOMF, Chico, California). Address: Craftsbury, Vermont.

4986. Yoshikawa, Seiji; Nishimaru, Shinya, Tamura, Shinpachiro, Ishima, Toshio. 1973. Shokuhin no juyô yosoku no tame no imêeji chôsa: Sôshû-kei deeta [A sampling survey of consumer's image of 104 foodstuffs in Japan]. *Shokuhin Sogo Kenkyujo Kenkyu Hokoku* (*Report of the National Food Research Institute*) No. 28. p. 355-69. March. [3 ref. Jap]

• ***Summary:*** Soyfoods analyzed in the survey are: 21. Tofu. 22. Natto. 71. Miso. 72, Shoyu.

Reprinted from *Nihon Shokuhin Kogyo Gakkai Shi* (*J. of Food Science and Technology*) 19(4):165-79 (1972). Address: National Food Research Inst., MAFF, Tokyo, Japan.

4987. Erewhon. 1973. Supplying natural food stores, co-ops, schools and communities (Catalog). Boston, Massachusetts. 12 p. Effective April 6, 1973.

• ***Summary:*** The number of products in Erewhon's catalog has increased dramatically during the past year. An illustration at the lower center of the cover is clip-art showing a man cutting barley. A message on the inside front cover is signed "Thank you all, Paul Hawken." Below his message is a smaller reproduction of the man cutting barley and below it: "Good morning."

Contents: Grains: Incl: brown rice (short grain, "Colusa," OG {organically grown}, California; medium grain, "Golden Rose," OG {organically grown}, California; medium grain, OG, Louisiana; long grain, OG, Texas; glutenous [sic, glutinous] sweet, OG, California). Wheat (Deaf Smith, hard red winter, or hard amber durum, OG, Texas; Ted Whitmer, hard red spring, OG, Montana; soft white pastry, OG, Washington [state]). Barley, pearl. Buckwheat groats. Corn. Millet. Oats. Popcorn. Rye. Cereals: Incl. Rice cream. Soybean flakes (Deaf Smith, OG). Stoneground flours: Incl: soybean flour, full fat, OG, Texas. Sweet brown rice flour, OG. Beans: Incl. Azuki beans (100, 50, or 25 lb). Soybeans (OG, Texas, 60 lb). Seeds and nuts: Incl: Almonds. Peanuts (spanish, split). Sesame seeds. Tamari & miso: Tamari soy sauce (8 oz, pints, quarts, half gallon, gallon, 4 7 gallon can). Hacho miso soy paste (1 lb or 44 lb keg). Mugi miso barley-soy paste (1 lb or 44 lb keg). Kome miso rice-soy paste (1 lb or 44 lb keg). Sea vegetables: Agar-agar, dulse, hiziki, kombu, nori, wakame, wakame root. Tea: Incl: Mu herbal beverage No. 9 and No. 16. Kukicha twig tea. Celestial Seasonings herb teas (39 flavors). Pasta: Wholewheat spaghetti, elbows, flat macaroni, and shells. Granola: Five flavors. Snacks: Incl: Corn munchies (organic corn chips with soy sauce). Chico-San corn chips and rice chips. Soybean oil (5 gallon tin). Olive oil. Peanut oil (organic, pint, quart, or 5 gallon tin). Butters: Almond Butter (Golden Farms, OG). Peanut Butter (Erewhon, old fashioned). Sesame butter. Sesame tahini. Honey (Paradise Valley, unheated, unfiltered, clover or orange). Condiments: Sea salt. Sesame salt. Tekka (vegetable-miso condiment). Unusual foods: Ame (rice and barley malt–glucose syrup). McHenry's sorghum molasses. Kuzu arrowroot. Sauerkraut. Umeboshi (plums pickled in brine). For cleanliness: Dr Bronner peppermint castille soap. Infinity herbal products (shampoo and soap). Natural Living Company (sesame cream shampoo, sesame lotion). Orjene (herbal shampoo). Tom's coco-orange all-purpose soap. For cooking: Knives (vegetable, utility, paring), chopsticks, rice paddle, tea strainer, "soy [sauce] dispenser" (4½ inch), oil skimmer, vegetable brush, suribachi, Chinese wok, Quaker City hand grinding mill. Austria Email iron-enamel pressure cookers. Save-a-Tree canvas shopping bags, shoulder bags, and bike bags. Flyers: Organic Merchants N.O.T. list. The Sugar Story. The Oil Story. The Macrobiotic Way. Macro-Ecology. Packaged in cellophane bags with recipes (1 lb, 1½ lb, and 2 lb): Incl: brown rice, wheat kernels, pearl barley, alfalfa seeds (OG), sesame seeds, pumpkin seeds, sunflower seeds, mung beans (sprouting), soybeans (sprouting or cooking, OG), pinto beans, chickpeas, green lentils, green split peas, split red lentils, morning cereal (6-grain cereal blend), infant cereal (koko), tsampa Tibetan barley cereal, rice cream, soybean flour (full fat, OG, 24 oz), soybeans (OG, 2 lb).

A long note at the top of this list states: "In our retail store we like to sell 'bulk' whenever possible. But we have found that to many new customers coming into our store everyday, pre-packaged foods such as we are presenting here offer a better introduction to the world of whole-grain cookery. Each package has an appealing 'kitchen-tested' recipe on the front so that new friends unfamiliar with these foods can give them a try. Furthermore, some people prefer to buy packaged foods because they feel for various reasons that food sold exposed is not as clean or

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pure. There is some truth to that, of course, depending on the store, but in any case we are happy to offer a complete line of Erewhon grains, cereals and flours in attractive, biodegradable cellophane packages. We will be expanding this line of cereals and grains and welcome your comments and suggestions. Please let us know how we can serve you better."

This catalog cover was reprinted with permission from the Michio and Aveline Kushi Macrobiotics Collection, Archives Center, National Museum of American History, Smithsonian Institution, Washington, DC. Address: 33 Farnsworth Street, Boston, Massachusetts 02210. Phone: (617) 542-1358.

4988. Eden Foods, Inc. 1973. F.O.B. pricelist. 330 Maynard St., Ann Arbor, MI 48108. 3 p. Effective April 15.
• ***Summary:*** The subtitle reads: "Serving mid-America with natural foods." Eden Foods is now selling the following soy products: Soybean Flakes (25 lb bags, organically grown, from Deaf Smith, Texas [Arrowhead Mills]). Soy Flour (50 lb bags, organically grown, from Deaf Smith, Texas [Arrowhead Mills]). Soybeans (50 lb, organically grown, Michigan). Soy-Rice Shells (15 lb, organic, [probably from Erewhon]). Kome Miso (soy paste with rice, 1 lb and 44 lb). Tamari Soy Sauce. Mugi Miso. Soybean Oil (Erewhon, pints, quarts, and 5 gallons). Corn Munchies (organic corn chips with soy sauce, 4 oz.). Rice Munchies (organic rice chips with soy sauce, 4 oz.). Sunflower seeds roasted with tamari (50 lb).

Other interesting products include: Umeboshi (salt plums pickled in brine, 22 lb keg). Kukicha twig tea. Lotus root tea. Pure & Simple Apple Butter. Sea vegetables (Wakame, kombu, hiziki, nori [dried laver], dulse, agar-agar [kanten sea gelatin])

Note: This is the earliest document seen (April 2006) that mentions Pure & Simple (as a brand). Address: Ann Arbor, Michigan. Phone: (313) 769-8444.

4989. *Los Angeles Times.* 1973. Sukiyaki (Letter to the editor). April 19. p. J31.
• ***Summary:*** Mrs. K.P. requests a recipe for sukiyaki, which is given. It calls for "1 cape [sic, cake] tofu (soy bean curd)" and ½ cup soy sauce.

4990. Chow, Kin-wan. 1973. Dining out tricky in Hong Kong: Menu pitfalls. *Christian Science Monitor.* March 22. p. C7, 20.
• ***Summary:*** "I'd like to advise Americans to use soy sauce sparingly, if at all, when eating in a Chinese restaurant. Many seem to pour soy sauce on their dishes as if it were salt, which would really upset the chef if he saw it."

"For four people, you might like ... bean curd with almond cream and mixed fruit." Or try "diced chicken with soya bean sauce."

4991. Ready, Anne. 1973. Visitor echoes price complaints: High cost of sukiyaki. *Los Angeles Times.* April 26. p. J2.
• ***Summary:*** Sashi Kukichi, an ice skating champion, is preparing an authentic sukiyaki for his fiancee. "Another ingredient, tofu, is a soy bean cake that, when cooked, resembles a firm egg custard." The recipe calls for "1 8-oz. cake tofu, cut in 1-inch cubes, optional."

The recipe for *Tentsuyu* sauce with tempura calls for "1/3 cup soy sauce" and a dash of MSG.

4992. Bongartz, Roy. 1973. Lost in deepest America. *Saturday Review of Society.* 1:61-63. April.
• ***Summary:*** About La Choy Food Products Co., of Archbold, Ohio–which calls itself "Chinatown U.S.A." Located 40 miles west of Toledo, Ohio. Archbold is a nice little town of 3,000 surrounded by cornfields. Yet no men or women of Chinese ancestry were to be found. The La Choy plant uses about 360 million gallons of water a year–so much it has nearly dried up the town's reservoir. It buys none of its food locally.

The company was started in 1920 in Detroit. Two classmates at the University of Michigan, Ilhan New (Korean) and Wallace Smith (American) had started a company making bean sprouts after they graduated; soon the company was also selling a lot of soy sauce and canned foods. Mr. New eventually left the company and in 1937 Mr. Smith was struck by lightning and killed. Smith's wife, a native of Archbold, moved the business back home to Ohio, where it has remained to this day. In 1947 [sic, Sept. 1943], La Choy was purchased by Beatrice Foods, a conglomerate.

La Choy believes that are the only company in America that knows how to grow (mung) bean sprouts; they harvest 40 tons a day. Each year La Choy makes a total of 100 million cans a year of 30 different food products.

But why do they call it Chinatown U.S.A.?

Note: This is not the *Saturday Review* that began publication in 1920. Rather *Saturday Review of Society* (ISSN 0091-8571) was a short-lived magazine that ended up merging with other magazines: World (New York, 1972) ISSN 0049-8009; Saturday Review of Education, ISSN 0091-8555; Saturday Review of the Arts, ISSN 0091-8563; and: Saturday Review of the Sciences, ISSN 0091-8547, to form: Saturday review/ World, ISSN 0091-620X.

4993. **Product Name:** Corn Munchies, Rice Munchies (Organic Corn/Rice Chips with Soy Sauce)
Manufacturer's Name: Eden Foods, Inc.
Manufacturer's Address: 330 Maynard St., Ann Arbor, MI 48108. Phone: (313) 769-8444.
Date of Introduction: 1973, April.
Ingredients: Incl. soy sauce.
Wt/Vol., Packaging, Price: 4 oz.
How Stored: Shelf stable.

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New Product–Documentation: Eden Foods, Inc. 1973. April 15. F.O.B. Pricelist.

4994. Rice, William. 1973. The fair-skinned soybean. *Washington Post*. May 10. p. E1, E16
• ***Summary:*** The title of the continuation of the article on p E16 is "The treasures beneath the surface of the fair skinned soybean." Mirror, mirror on the wall . . . The soybean is the fairest vegetable of all, for its dull yellow surface covers a treasure of protein and other nutrients. It is presented in many guises: "tofu (used in Oriental cooking as bean curd), green (fresh) soybeans (prepared as fresh limas, or eaten blanched or raw when very young), dried soybeans (eaten as peanuts or used as other dried beans in cooked dishes), soybean flour (can be mixed with other flours but lacks gluten and can therefore replace only 15 per cent or so of wheat flour in recipes), soy sauce (essential in Oriental cooking and mistakenly used in the manner of ketchup by many Americans 'eating Chinese'), tamari (pure soy–preferred by vegetarians), miso (fermented soybean paste), soybean milk (liquid or powdered), soybean grits and flakes, lecithin (supplement to control cholesterol build-up) and some others. Soybeans have long been available in health food stores."

Rising beef costs have led to the use of "textured vegetable protein" as an "extender" in ground beef products. Contains 4 recipes using whole dry soybeans or soy flour

4995. Dosti, Rose. 1973. USC students boast surplus: Cooperative beats the price squeeze. *Los Angeles Times*. May 17. p. K2.
• ***Summary:*** The women graduate students and undergraduates "who live and cook cooperatively at two Soroptimist residences at USC say they can" eat royally on little money. Each of 20 girls pays $25 a month into a common food fund and volunteers to cook the evening meal for 10 residents once every two weeks.

Their recipe for Sukiyaki includes "1 cake tofu (bean curd), cut into 1-inch cubes" and "1/3 cup soy sauce." A photo shows the girls, standing, gathered around a common dinner table, buffet style at USC, the University of Southern California, in Los Angeles.

Note: Soroptimist ("best for women"), founded in 1921, is an international volunteer organization for business and professional women who work to improve the lives of women and girls, in local communities and throughout the world. The organization seeks equality, peace, international goodwill, and to improve professional skills and to support human rights, specifically women's rights. Its headquarters is in Philadelphia, Pennsylvania. In 2009 it boasted about 95,000 members in more than 120 countries worldwide.

4996. Iacobucci, Guillermo Arturo, Myers, Dirck van Buren, Okubo, Kazuyoshi. Assignors to The Coca-Cola Company and Kikkoman Shoyu Company, Ltd. (Tokyo, Japan), fractional part interest to each. 1973. Process for preparing protein products. *U.S. Patent* 3,736,147. May 29. 10 p. Application filed 5 April 1971. 6 drawings. [5 ref]
• ***Summary:*** Process for preparing plant protein products having low phytic acid content by subjecting protein isolates to ultrafiltration in the presence of a suitable chemical reagent. Address: Coca-Cola Co., Atlanta, Georgia 30301.

4997. Ewald, Ellen Buchman. 1973. Recipes for a small planet: The art and science of high protein vegetarian cookery. New York, NY: Ballantine Books. xi + 366 p. May. Foreword by Frances Moore Lappé (Hastings-on-Hudson, New York). Illust. by Diane Coleman. 18 cm.
• ***Summary:*** Lacto-ovo-vegetarian recipes based on *Diet for a Small Planet* by Frances Moore Lappe. The protein content is given for each recipe. Also contains information on complementary proteins. The author was born in 1946.

The chapter on protein complementarity discusses combinations of rice, wheat, peanuts or cornmeal with soy (in the form of whole beans, grits, flour, or tofu). A chart on protein / calorie comparisons gives the number of calories per gram of usable protein including the following: Defatted soybean flour 11, soybean sprouts 12, low fat soybean flour 12, tofu 15, full fat soybean flour 18, soybeans 20, gluten flour 23. Note that all these are relatively low in calories per gram of usable protein. By comparison: Hamburger 15, brown rice 69, cornmeal (whole, ground) 80.

Many recipes in this book contain small amounts of soy flour or grits, or soy sauce. Recipes containing significant amounts of soy include: All-protein crunchy granola (with soy grits, p. 48-49). New granola (with soy flour, p. 52-53). Orange pancakes with orange sauce (with soy flour, p. 58-59). Soy-sesame peanut spread (with roasted soy flour, p. 67). Peanut paté (with whole soybean and soy sauce, p. 70-71). Hot and sour soup (with tofu, p. 83-84). Soybean stew (p. 85). Peanut, tofu and sesame soup (p. 86-87). Exotic barley stew (with miso, p. 87-88). Cabbage soup for a meal (with soybeans, p. 91-92). Curried rice salad (with soybeans, p. 98-99). Gado gado (with tofu, p. 102-03). Soy-peanut marinade (p. 106). Dairy rich sauce (with tofu, p. 115). Chiles rellenos en casserole (with soybeans, p. 126-27). Herbed soybean bulgur casserole (p. 128-29). Garbanzo and cheese loaf (with miso, p. 133-34). Fesenjon–spiced ground beans (with soybeans, p. 135-36). Bean stroganov (p. 140-41). Crusted cauliflower (with soy flour, p. 143-44).

Breads and other baked goods (each with soy flour or grits, p. 195-274): Whole wheat soy bread. Wheat grits bread. Triple rich bread. Unusual pickle or olive juice bread. Cornmeal wheat bread. High rising bread. Spicy rye bread. Limpa bread. Oat rye soy bread. Caraway rye bread. Sourdough whole wheat bread. Egg and yogurt bread (SD = sourdough). Sun seedy oatmeal bread (SD). Four grain bread (SD). Nut and seed bread (SD). Mixed grain bread

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(SD). Crunchy nut muffins. Spiced pear muffins. Basic complementary muffins. Oatmeal muffins. Sour orange muffins. Pancake, waffle, or camping bread mix. Sourdough corn bread. Quick wheat soy bread. Quick molasses bread. Quick coconut bread. Cheese-filled coffee cakes. Walnut-and-raisin filled coffee cake. Orange coffee cake. Chocolate coconut cookies. Pumpkin cookies or bars. Fruit bar crunch. Honey almond bars. Banana spice bars. Gingerbread.

Cooking beans (p. 309-10, including soy and azuki/aduki). Putting more protein in your family's diet (Appendix F, p. 326-31).

Glossary (p. 339–44) discusses miso, soy flour, soy grits, tofu ("Tofu is soybean cheese, also known as bean curd... Some supermarkets carry tofu, and you can also get it in health food stores and oriental groceries and restaurants...") Address: Berkeley, California.

4998 Mogi, Yuzaburo. 1973. Kikkoman–American plant project–From planning to start up. Paper presented at the Governor's Conference on Business Development. 14 p. Held 16 May 1973 at American Baptist Assembly, Green Lake, Wisconsin.

• ***Summary:*** With an introduction by William C. Kidd, Secretary, Department of Business Development, Wisconsin. Mr. Mogi earned a B.A. degree from Keio Univ. in Japan, and a Master's of Business Administration (MBA) at Columbia University in New York City.

"Kikkoman soy sauce was first shipped to Hawaii in the 1860's... Kikkoman also had extensive operations in Asian countries until 1945. We had production plants in China, Korea, Malaysia, and some other countries. Our exports reached a peak before the war in 1939 and sales in the United States were about 50% of the total sales in foreign countries at that time. After the war we again started exporting in 1950. However, we lost the market in China, and in addition, because of an import duty and restrictions, it became quite difficult for us to export to other Asian countries...

"At the present time, our main overseas market is America where we are selling more than 60% of our total export... The main consumers of Kikkoman soy sauce in the United States before World War II were Japanese Americans... Our sales increased as the number of Japanese immigrants increased... After the war, we changed sales targets. Instead of limiting ourselves to the Japanese-American market we started to aim for the general American. In order to penetrate the American market we decided to market small size bottles. Before the war we sold soy sauce only in large bottles, casks, and cans... In 1957, we established an American subsidiary for Kikkoman International Incorporated, with its head office located in San Francisco. The purpose of Kikkoman International is to import Kikkoman products and distribute them in the United States. In the 1950's our first efforts were concentrated in large cities on the West coast, mainly in San Francisco and Los Angeles. The Los Angeles branch office was opened in 1958. In the early 1960's we started to approach large cities on the East coast, for example, New York City. We opened a branch in New York in 1961... and one in Chicago in 1965...

"In order for us to effectively penetrate the American market it was a must for us to have the services of good food brokers. Fortunately we have found very good brokers in various parts of the United States. For example, Myers and Sumder in California are the outstanding food brokers in the nation... Three years ago Kikkoman bought about 55% of the stock in Japan Food Corporation (JFC), the largest Oriental wholesaler in the United States.

"As to the advertising,... in 1956 when Eisenhower was elected President, Kikkoman bought election day T.V. time for vote-count announcements in San Francisco all day long... As we came to spend more money for advertisement we have broadened our advertising strategy. Now we have some national and continuous campaigns...

"About three years ago we built a test kitchen and cooking center in San Francisco, adjacent to the head office of Kikkoman International. We now have home economists there. We have been utilizing these facilities to develop new recipes for soy sauce and to educate customers as to how to use soy sauce not only for Oriental food but also American food...

"In December, 1970... we sent the first investigation team to America. The task of this team was to gather data to enable us to compare the cost of having an American plant rather than exporting the product from Japan. Then it was to find the cost difference among different possible locations for the plant, whether in the West coast, the Mid-West, or the East coast. We asked Mr. Mark Pennington, a consultant in New York, to act as a consultant for the project... We decided that it should be in the Mid-West. The reasons why we made the first decision are as follows: 1. Sales of Kikkoman soy sauce, as I mentioned, have been increasing steadily and have almost reached the stage of making it economically feasible to build a plant. 2. We have to get out from a heavy freight burden. We have been buying most of our main raw materials from the United States, mainly soy beans and wheat from the Mid-West... These freight rates have been increasing sharply every year. Still more, almost every year we suffer from strikes of dock workers. 3. Gradually the cost advantage of Japanese business over the American business has been disappearing. In the past,...labor costs in Japan were much lower than those in the United States... We do not have cheap labor in Japan any more. 4. The yen was devalued. The yen devaluation was not the main factor in our decision...

"The reasons why we made the decision to build the plant in the Mid-West are the following. 1. The present main market for Kikkoman products is the West coast... However, we can expect by looking at the various marketing indexing factors, that there is more market potential for our product in the Mid-West and the East coast. Having a plant in the Mid-

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West means that we are able to ship the product from there both to the present main market and to the future potential market easily ... 2. Our main raw materials are soy beans and wheat, as I mentioned. The Mid-West is the main center for growing these grains. By having the plant there, we can expect to be able to buy the raw materials at lower costs. 3 In the Mid-West there are many food companies. We can expect to sell our product to them for industrial use.

"We chose the Austin Company, Des Plaines, Illinois, as the general contractor... In September, 1971, the president and other top people from Kikkoman, Tokyo, visited the United States and compared six final candidates for the plant site. Then we finally chose Walworth, Wisconsin. The reasons for the decision are as follows. 1. The labor climate there is excellent. 2. The local people are quite friendly. 3. Walworth is a convenient place for transportation. We can expect to keep freight cost and warehousing costs to a minimum ... 4. The state of Wisconsin was receptive to Kikkoman from the beginning. I first visited this state in December, 1970, as a member of the first investigation team ... 5. The state of Wisconsin is regarded as a state which produces the best quality foods... 6. In Wisconsin we can enjoy beautiful nature. The air is clean, the water is pure, and we have a lot of green here.

"The total investment will be about 9 million dollars." Address: Vice-President, Kikkoman Foods, Inc., Walworth, Wisconsin.

4999. Kikkoman Food International Inc. 1973. Unique in all the world–Kikkoman Soy Sauce (Ad). *New York Times Magazine*, June 3, p. 65.

• ***Summary:*** The New York Times Magazine is part of the Sunday New York Times and may be simply listed as such.

"One expects dishes using Kikkoman to excel–and they do. Kikkoman has enriched the world of good eating since 1630. No other seasoning can match its long record of achievement. It is one of the oldest brands in existence–the winner of 30 major international awards.

"Kikkoman is naturally brewed and age-mellowed to perfection. It's made from protein-rich soybeans and wheat, fresh artesian water, and salt–plus a prized yeast culture over 300 years in development. There is *no* hydrolyzed protein, *no* corn syrup, *no* caramel, *no* artificial flavor or color of any kind. Just pure natural ingredients.

"Try Kikkoman as a seasoning directly from the bottle on chicken, meats, fish. Use as a recipe ingredient, a marinade, a baste. Add a little to gravies, soups, salad dressings and party dips. It's *unique*–an authentic original!" Recipes are given for Good day pot roast, Un-beef brown gravy, Chicken, and Hamburgers. * Soy sauces vary greatly in taste and quality–do not substitute. Kikkoman glorifies flavor!

5000. *Toronto Star (Ontario, Canada)*. 1973. The ugly soybean contains a wealth of protein, vitamins. June 6, p. 77.

• ***Summary:*** The article begins: "Mirror, mirror on the wall, what is the ugliest vegetable of all? The soybean. Some call it 'tasteless.' Others ask 'What do you do with it?' Cost-conscious cooks, nutritionists, and the food industry would be far more understanding."

Under the soybean's dull yellow surface is "a treasure of protein, more than any other vegetable, and substantial amounts of calcium, iron, other minerals and vitamins B and E. Also the soybean has more changes of clothes than any beauty queen." Consider the following guises:

"Eaten like peanuts: Tofu (used in Oriental cooking as bean curd); green (fresh) soybeans (prepared as fresh, or eaten blanched ...); dried soybeans (eaten as peanuts or used as other dried beans in cooked dishes), soybean flour (can be mixed with other flours but lacks gluten and can therefore replace only 15 per cent or so of wheat flour in recipes).

"Other aspects of the bean are: Soy sauce (essential in Oriental cooking and mistakenly used in the manner of ketchup by many North Americans 'eating Chinese'). Tamari (pure soy–preferred by vegetarians), miso (fermented soybean paste); soybean milk (liquid or powdered); soybean grits and flakes; lecithin (supplement to control cholesterol build-up) ."

"Soybeans have long been available in health food stores, and some of the larger supermarkets now carry them." The best variety for food use is said to be Banser. Canned soybeans, which take less time to prepare, make a good beef extender.

Gives recipes for: Soybeans and mushrooms (with "2 cups cooked soybeans" and 1 tbsp. tamari or soy sauce). Baked soybeans (with "1 pound yellow soybeans picked over and washed." Let the beans soak in a large freezer container for 5 hours, then place them in the freezer for at least 24 hours to reduce the cooking time required. "Place frozen beans and liquid in a large kettle. Bring to a boil and simmer gently until tender, adding more hot water if necessary. This takes 2½ to 3½ hours"). Soybean-mint salad (with 2 cups cooked soybeans or 1 can {15½ ounces}), drained. Soy mayonnaise (with ½ cup soy flour).

5001. Dosti, Rose. 1973. Climax of a study project: 4th graders go Japanese for a meal. *Los Angeles Times*, June 14, p. K16.

• ***Summary:*** At Third Street School in Los Angeles, the 4th graders are finishing a social studies project on Japan; they are using chopsticks to lunch on a typical, authentic, home-cooked (by their parents) Japanese dinner. There was teriyaki on skewers (seasoned with soy sauce), sukiyaki, tempura, Inari Sushi ("made with aburage, a soybean curd skin, in which seasoned rice is stuffed"), and another kind of sushi made of vinegared rice and codfish wrapped in seaweed (nori). Recipes are given for Teriyaki and Inari Sushi. Two photos show the kids cooking.

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5002 Mogi, Keizaburo. 1973. "A memorable day." Speech given June 16 by Keizaburo Mogi, President of Kikkoman Shoyu Co., Ltd., and chairman of the board of Kikkoman Foods, Inc. *Times (The) (Walworth, Fontana, and Williams Bay, Wisconsin)*. June 21. p. 2. Special 12-page tabloid supplement on Kikkoman Foods Grand Opening.
• ***Summary:*** Photos show. (1) Participants in the ribbon-cutting ceremony: William McKonke, Keizaburo Mogi, Governor Lucey, Japanese Ambassador to the U.S. Nabuhiko Ushiba, and Saheiji Mogi. (2) Keizaburo Mogi presenting the "grand opening address," with translator Yuzaburo Mogi at his side. "As you know, the history of our company's shoyu brewing at Noda City in Japan spans nearly four centuries... I consider today to be a truly memorable day...

"It is my desire from today to contribute to society to the best of our ability, as a good citizen of this community, of the state of Wisconsin, and of the American economy.

"For 4 centuries, under the slogan, 'A better product, at lower price, in greater abundance,' our company has tried its best to contribute to society through a more pleasurable and more abundant eating experience, and further, by always working in harmony with the local society for our mutual prosperity. This social consciousness, I believe, has been the source and the driving force of our development in Japan. As I remarked at the start-up ceremony last year, in America also I intend to put this policy into practice with all the strength at my command."

5003. Mogi, Saheiji. 1973. A thank you ... and a promise. Statement by Saheiji Mogi, President of Kikkoman Foods Inc. *Times (The) (Walworth, Fontana, and Williams Bay, Wisconsin)*. June 21. p. 2. Special 12-page tabloid supplement on Kikkoman Foods Grand Opening.
• ***Summary:*** The decision to build this plant was made in March 1971. The construction was done very effectively by the Austin Company [Des Plaines, Illinois]. The president will do his best to make this an ideal company in every way, which means: (1) Satisfy customers everywhere in their enjoyment of fine eating and make continuing efforts to achieve ever-higher product quality. (2) "As a member of the Wisconsin industrial community, we must contribute to the best of our ability to the local society and to the larger society in general, by developing our potential as a corporation to the fullest." (3) "For the company employees we will provide stable employment, with the very best prospects for happiness and prosperity."

5004. *Times (The) (Walworth, Fontana, and Williams Bay, Wisconsin)*. 1973. Kikkoman welcomes thousands at week-end open house. June 21. p. 1. Special 12-page tabloid supplement on Kikkoman Foods Grand Opening.
• ***Summary:*** The two-day celebration of the plant opening took place June 16 and 17, Saturday evening and Sunday.



It included a tour of the plant, Japanese music (including *taiko* drumming) and dancing, and buffet tables of delicious food. "The $9,000,000 facility on the Big Foot Prairie has been completed and the production of Japanese soy sauce has begun. The plant is on a 200-acre site northwest of the Village of Walworth." A description of the process for making this product is given, no mention is made of the fermentation time, or the use of solvent extracted soybean meal, and preservatives. 72 epoxy resin-lined fermentation tanks each hold 17,000 gallons of moromi. The moromi is pressed twice to obtain the soy sauce. "The company produces more than 100,000,000 gallons annually." More than 1,500 invited guests witnessed the ribbon-cutting ceremony. Before the plant was declared open, a Shinto priestess blessed the building. During the rite Keizaburo Mogi, Japan, chairman of the board of Kikkoman Foods, Gov. Patrick J. Lucey, and Charles Shirk, president of the Austin Co. which erected the building, placed holy leaves on the altar. Summaries are given of speeches by Governor Patrick Lucey, Ambassador Ushiba, John Altpeter (chairman of the Town of Walworth board), John Maillard (chairman of the California Brokers Association), and William McKonke (Deputy Director of the Department of Commerce in Washington, DC). The latter "said he wished the Japanese would build 500 more plants like the Kikkoman plant." He drives a Toyota. Master of Ceremonies Milton Neshek read a 14-line telegram (whose text is printed) of greetings and congratulations from U.S. President Nixon. Other telegrams were read from the Prime Minister of Japan, Minister of Foreign Affairs of Japan, and the Governor of Chiba prefecture, Japan.

"In the tradition of the Japanese plant opening customs, a large yellow ball suspended from the ceiling of the plant was opened, dropping colored balloons, streamers and confetti representing the release of all bad luck, evil and problems of the future. This ceremony was performed by Toyaji Murai, vice president and treasurer of Kikkoman Foods, Inc., and Miss Linda Hodges, Princess Soya, representing the American Soybean Assn."

An illustration filling the top half of the page shows the new plant and its grounds. Photos (p. 3) show the Shinto

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blessing and the balloons falling. Page 4, titled "Thousands enjoy hospitality, entertainment," shows a photo of the *taiko* drummers. Page 5 titled "Kikkoman is host at traditional Japanese celebration dinner," describes the three-tiered buffet at the Lake Geneva Playboy Club, photos show the featured guests.

5005. *Times (The) (Walworth, Fontana, and Williams Bay, Wisconsin)*. 1973. Development history of the Kikkoman plant. June 21. p. 8. Special 12-page tabloid supplement on Kikkoman Foods Grand Opening.

• ***Summary:*** "Starting with the clearing of the site in December, 1971, the plant took approximately 15 months to complete from groundbreaking to dedication.

"Jan. 18, 1972, several weeks after the clearing of approximately 50 acres had taken place, Keizaburo Mogi, president of Kikkoman Shoyu, broke ground for the production complex–a 146,000 sq. ft. plant with a capacity of 300 bottles of product per minute."

Another description is given of the shoyu-making process, but again no mention is made of the fermentation time, or the use of solvent extracted soybean meal, and preservatives. "Pasteurization is done at the lowest practical temperature in 6,000-gallon tanks.

"The bottling line is designed to handle 300 bottles per minute of the five-ounce and 10-ounce sizes and 200 bottles per minute of the 20-ounce and 24-ounce sizes.

"Kikkoman anticipates production of 2,500,000 gallons of soy sauce and 1,000 tons of soy cake for cattle feed per year. After several years, production will be doubled."

5006. *Times (The) (Walworth, Fontana, and Williams Bay, Wisconsin)*. 1973. Famous symbol. June 21. p. 10. Special 12-page tabloid supplement on Kikkoman Foods Grand Opening.

• ***Summary:*** A large illustration shows the Kikkoman logo. "The Japanese symbol of a turtle–a hexagon–is the trademark of Kikkoman Shoyu Company, Ltd., Wisconsin's new food production firm. The turtle is considered a happy animal by the Japanese. It also means prosperity. Inside the bold Kikko (turtle) hexagon is the Japanese figure called man that means 10,000 or 10,000 years. Together they form the company name and trademark that represents a happy, long life. The mark was first used in 1782 and was registered in the United States in 1906. Kikkoman's company spirit is expressed by the trademark and by 'Sangyo Damashii,' an expression that says it always tries to enrich the daily lives of people by adding to the joys and benefits of good eating. Since 1630, Kikkoman has continuously produced the all-purpose seasoning, shoyu or soy sauce."

Note: This is the earliest English-language document seen (July 2011) which states clearly that Kikkoman has been making soy sauce since 1630. Quite a few previous ads state simply "Since 1630."

5007. Oberdorfer, Don. 1973. Now even the soybean curd seems lost to Japanese. *Washington Post*. June 29. p. D11.

• ***Summary:*** Tokyo–Last night the USA announced an embargo on soybean exports–a big surprise and shock in Japan. Now even tofu, the ubiquitous and much-enjoyed soybean curd, will become more expensive. Soybeans are very important in Japan as a source of both food (beancurd, miso soup, soy sauce, etc.) and feed. 60% of the cooking oil in Japan is soybean oil. The USA supplies more than 90% of Japan's soybeans, and they are a major item of trade.

5008. Pond, Elizabeth. 1973. The day the soybeans stop--Japanese concern. *Christian Science Monitor*. June 29. p. 1-2.

• ***Summary:*** On June 27 the United States government started rationing soybean exports. This has become a new sore-spot in Japan-U.S. relations. On June 28, Japan's Foreign Minister, Masayoshi Ohira, expressed his government's concern to American Ambassador Mr. Robert Ingersoll. Mr. Ingersoll replied with a promise that the U.S. would try to meet Japan's demand for a stable supply of soybeans, cotton seeds, and cotton-seed products. He also mentioned that U.S. Secretary of Agriculture, Earl L. Butz, had stated at a press conference that "he would give special consideration to agricultural exports to Japan."

Japan could be hit hard by a shortage of soybeans. "No Japanese dinner is complete without miso soup (made of soybeans), and 92 percent of Japan's 3-million-ton annual imports of soybeans comes from the United States."

Now the Japanese are anxiously awaiting July 2, when the U.S. will issue its country-by-country export allocations [quotas]. "Japan fears that it might not even be allocated the full amount of soybean exports that have already been contracted." Once the U.S. export allocations are announced, the Japanese are hoping that the soybean export embargo will be lifted within a month–even though it is scheduled to last until the next soybean crop is harvested in September. Nevertheless, dealers will start contracting once the allocations are announced.

Japan is called a "surplus-trade" country by the U.S. meaning that the U.S. buys more from Japan than vice versa. So the U.S. has recently been browbeating Japan to buy more from the United States [conveniently forgetting that Japan has a much smaller population than the U.S.].

Last year Japan bought 3.12 million tons of soybeans worldwide," and it will buy an estimated 3.2 to 3.5 million this year if the supply is available.

"The price of tofu (bean curd) has already been shooting up in this inflationary year. Now Japan's many small and medium-size bean-curd and soy-sauce manufacturers and restaurant owners fear that the price will skyrocket 100 percent"–hitting every family budget that includes these daily necessities.

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Japan no longer grows many soybeans. Production on the small farms is inefficient, and many Japanese farmers are leaving their farms for the cities. "Even a high price support has failed to halt the decrease in Japanese soybean acreage."

5009. *Food Processing (Chicago)*.1973. 21 outstanding new food plants: For making new and better products, increasing production, lowering costs [Kikkoman's plant in Walworth, Wisconsin]. June. p. 14-15.

• ***Summary:*** Kikkoman Foods Inc. (a div. of Kikkoman Shoyu, Ltd.) has built a $9 million, 144,000 square foot plant on a 2-acre site at Walworth, Wisconsin, to make soy sauce and teriyaki sauce. With a pre-cast concrete exterior, it features two packaging lines: 40 cans/minute and 300 bottles/minute. The waste treatment system is designed for 240,000 gallons/day. It was completed in June 1973.

5010. Ichiyama, Morio. 1973. Noda no shôyu [Noda's shoyu]. Noda-shi, Chiba-ken, Japan: Noda-shi Kyodo Hakubutsukan (Noda City Local History Museum). 22 p. Noda Series III. [Jap]

• ***Summary:*** Noda is the home city of Kikkoman, and Japan's largest center of shoyu production. Contains 65 old photos (all with captions, many with dates), several maps, a condensed history with many dates, and a chronology from 1558 to 1972. Address: Noda, Japan.

5011. Kikkoman Foods, Inc. 1973. Kikkoman Foods, Inc. (Brochure). Walworth, WI 53184. 12 p. Undated. 28 cm. [Eng]

• ***Summary:*** This color booklet, with a red, white, blue, and green cover, was handed out at the grand opening of Kikkoman's shoyu plant at Walworth, Wisconsin, on 16-17 June 1973.

Contents: Message from Keizaburo Mogi (Chairman of the Board) and Saheiji Mogi (President). Profile of Kikkoman Foods Inc. (including a brief history of operations in America). Color photos of board members. Kikkoman shoyu production method. Kikkoman Foods, Inc. products. Kikkoman glorifies flavor (contains 4 recipes: Chicken teriyaki, Lamb stew superb, Kikko-burgers, and Salad dressing). The history of shoyu. Kikkoman group: Kikkoman Shoyu Co., Ltd., est. 1917 in Noda. Kikkoman International Inc. (KII), Japan Food Corporation (JFC), Pacific Trading Co., Ltd. (PT, est. 1928). Kikkoman Daitokai (Europe) GmbH (Japanese restaurant chain, est. 1972), Kikko Foods Corp. (est. 1961, for Del Monte brand), Mann's Wine Co., Ltd. (est. 1962 in Tokyo). Seishin Pharmaceutical Co., Ltd. (est. 1961 in Noda, enzymes), Tone Coca-Cola Bottling Co., Ltd. (est. 1962 in Ichikawa City, Japan). Message from Patrick J. Lucey, Governor of Wisconsin.

Kikkoman Foods, Inc (KFI) has capital of $400,000 (issued). Kikkoman's fundamental corporate aim is "to enrich the daily lives of people everywhere by adding to the joys and benefits of good eating. In this way we feel that we can best contribute to building a happier and more prosperous society." Chronology of Kikkoman in America: 1868–Kikkoman Shoyu first introduced to America when immigrants from Japan brought kegs of shoyu with them to Hawaii. 1957–Kikkoman International Inc. (KII) established in San Francisco to "streamline import and distribution of Kikkoman Shoyu in America." 1958–Los Angeles branch of KII established. 1960–New York branch established. 1965–Chicago branch established. 1968–Kikkoman begins bulk shipments of shoyu to the USA for bottling at Leslie Foods Co. Facilities in Oakland, California. 1972 Jan.–Ground-breaking ceremony for plant at Walworth, Wisconsin. 1972 March–Kikkoman Foods, Inc. is established. 1973 June–KFI plant starts operating in Walworth, Wisconsin.

Color illustrations show: (1) The Kikkoman plant from ground level. (2) A ceramic bottle of shoyu exported to Europe around 1670. Written in blue letters on a white background: "Soy. Manufactured by Sollonyama, Nagasaki, Japan. (3) Scene of shoyu production in Noda 100 years ago.

Color photos show: (1) A Japanese worker handing an American worker a soybean; both are smiling and wearing hardhats. (2) Two men with shovels breaking ground (Jan. 1972). (3) Chairman Keizaburo Mogi at the start-up ceremony (Dec. 1972). (3) The outside of the KFI plant from ground level at dawn. (4) Small circular portraits of the KFI officers: Chairman of the Board Keizaburo Mogi, President Saheiji Mogi, Executive Vice President & General Manager Toyoji Murai, Vice President and Treasurer Yuzaburo Mogi, Vice President and Secretary Harumi Kashima, Assistant Secretary Thomas G. Godfrey, Assistant Secretary Milton E. Neshek. (5) Two views of the inside of the plant plus a flow chart, which includes "seed mold" and "automatic mold culturing." However the text above, titled "Kikkoman shoyu production method," states: "Next, a yeast called Kikkoman Aspergillus Sojae is introduced and the mixture is cultured for three days. The resulting culture, 'koji' is mixed with salt and water to make a mash called 'moromi.' Then comes the most important part: the process of leisurely brewing in special fermentation tanks. It is this unhurried brewing process that creates the many compounds and elements that bring out the myriad flavors and subtle aromas for which Kikkoman Shoyu is famous."

(6) 12 Kikkoman soy sauce and teriyaki products and package sizes. The larger cans [1.1 to 4 quarts] also have the word "shoyu" on the label. (7) An American family at dinner with bottles of Kikkoman's soy sauce and Mann's Wine on the table. The mother is holding a large serving of roast beef on a platter, with recipes for chicken, lamb, and burgers overhead. The message: Kikkoman enhances the flavor of meat. (8) Small aerial view of the Kikkoman plant in Noda, Japan. (9) Outside of the KII (Kikkoman International Inc.) offices in San Francisco. (10) Patrick J. Lucey, Governor of Wisconsin. Address: Walworth, Wisconsin.

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5012 Kikkoman Shoyu Co Ltd. 1973. The Kikkoman way of fine eating. Kikkoman Shoyu Co. Ltd., No. 11, 3-chome, Koami-cho, Nihonbashi, Tokyo 103, Japan. 80 p. June 16. Illust. No index. 27 cm. Title changed in 1977 with third printing to The Kikkoman Cookbook. [Eng]



• ***Summary:*** Contents: Preface by Keizaburo Mogi, President of Kikkoman Shoyu Co., Ltd., June 1973. Contents. Part 1. All about shoyu, by Shigeru Otsuka: 1. Shoyu and Japanese food: Japanese cuisine defeated?, the Europeans come to Japan. 2. Japanese food and nature. 3. Shoyu and nature. 4. Japanization of western food. 5. The basic role of shoyu in Japanese cooking. 6. History of shoyu: Fermentation and taste, commercial production, shoyu and the West. 7. Shoyu production process. Raw materials, koji making, fermentation and brewing, pressing. 8. Shoyu and components: The components of bouquet, flavor components, the coloring of shoyu. 9. Shoyu and cooking, shoyu and health. 10. Conclusion. Part 2: Recipes with brewed soy sauce: 11. Appetizers. 12. Salads and Salad Dressing. 13. Beef. 14. Chicken and Egg. 15. Pork and Lamb. 16. Sea food. 17. Sauces. 18. Miscellaneous. 19. Japanese cooking. Postscript.

The term "shoyu" is used throughout this book, except in the recipes (see p. 7 for explanation).

In the section titled "Japanese cuisine defeated" (p. 8-9) Otsuka states that there is no true "American cuisine," not even the hamburger and hotdog. There are French, Chinese, Italian, and Scandinavian cuisines, but Japanese cuisine is not well known. "You may say that this is because there were too few Japanese in the United States, but that theory doesn't hold water. By 1940 there were 1.5 times as many Japanese as Chinese in America. But Chinese restaurants are to be found in even small towns in all parts of the United States. Moreover, they are patronized almost exclusively by non-Chinese Americans. Japanese restaurants, on the other hand, are virtually non-existent except for the West Coast and New York. Further, until very recently customers of such Japanese restaurants were almost all gastronomically homesick Japanese, or occasional Americans invited there by Japanese friends."

"Certainly there is no mistaking the fact that Japanese cuisine has utterly failed to spread to other parts of the world."

In the section titled "The Europeans come to Japan" (p. 10), Otsuka notes that Europeans first came to Japan and tasted Japanese food in the mid-1500s. The first [in about 1543] was a group of Portuguese, who landed at Tanegashima, an island off the southern tip of Kyushu. In 1549 a group of missionaries headed by the Spanish Jesuit St. Francis Xavier arrived in Kyoto, at that time the capital of Japan, and began preaching Christianity. The Dutch traders who followed the Jesuits noticed shoyu and started to export it to Europe. "It was about 100 years later that Louis XIV of France began to prize shoyu as a secret ingredient in the luxurious court fare of the time." Note 1. Louis XIV reigned from 1643 to 1715. Note 2. When we asked Mr. Otsuka for his source concerning Louis XIV's use of shoyu, he was unable to give any source. However his source may well have been a 1959 Japanese-language leaflet titled *Mieki* by Yataro Obata. Obata admitted in 1983 that his statement was pure speculation.

This books contains numerous color photos of prepared recipes. On p. 19 is a superb old woodblock print by Hiroshige (lived 1797-1858) showing shoyu being made in 19th century Japan. On page 25 are three black-and-white photos showing: (1) Koji being made in a modern, mechanized koji room. (2) Moromi aging in a large, round modern vat. (3) Shoyu being pressed from pressing cloths by modern hydraulic presses. Address: Tokyo, Japan.

5013 Sickler, Roberta. 1973. Ritual of the hearth. A cookbook of 20 menus and 117 unique vegetarian recipes in praise of life. New York, NY: Macmillan Publishing Co. x + 195 p. Illust. by the author. 26 cm.

• ***Summary:*** The recipes are grouped by season. Soy-related recipes include: Snow pea soup (with 3 bean-curd cakes [tofu] (each about 3 inches square by 3/4 inch thick), soy sauce, and hoisin sauce, p. 4). Green broth (with bean cake [tofu], p. 84). Tofu (homemade from soy flour and lemon juice, p. 86-87; "Tofu is a rich, delicate curd from soybean. It is especially good for summer, served cold with raw vegetables, or in hot soups or sauces. Tofu is

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made fresh daily in many Oriental neighborhoods, and sold in the form of small squares. It can be made at home quite successfully."). Tofu and summer vegetables (with "1 3/4 cups tofu curds, or 3 tofu cakes, cubed," p. 87). Soy bechamel sauce (with soy flour and Tamari soy sauce, p 130-31; "We use dark Tamari soy sauce because it is aged slowly in wood and has a light, deep flavor."). Soy burgers (with whole soy beans, soy oil, soy sauce, miso paste, and soy flour, p. 183-84).

5014. *New York Times.*1973. Japanese upset by U.S. soybean curbs. July 7. p. 27, 32.

• ***Summary:*** Many Japanese are angry at President Nixon for his ban on exports of soybeans last week. Japan obtains 92% of her soybeans (nearly 3 millions tons a year) from the USA. These soybeans are needed, however, to meet shortage of cattle feed in the USA. Last Monday in Washington, DC, officials replaced the embargo on soybeans with a system of export licenses. Meanwhile, the price of soybeans has skyrocketed.

Japanese use soybeans in many foods, including "miso soup, a soybean broth." Tofu (soybean curd) and fish are the two most important sources of protein for Japanese, according to Kuniyoshi Takagi, managing director of the Federation of Tofu Makers' Associations. Makers of soy sauce say the USA has supplied all of the 240,000 tons of soybeans the industry consumes each year, according to Kaoru Ito, managing director of the Japan Soy Sauce Brewers Association. There was even concern at the restaurant Sasa-no-Yuki (snow on bamboo sprouts), which serves only tofu in 12 varied dishes, a full tofu dinner of 8 tofu dishes costs not more than $3.00.

The Japanese government, deeply upset, placed soybeans at the top of a list of controlled commodities under a new regulation (that went into effect today) against hoarding and price manipulation. Japan's "stocks of soybeans stood at 400,000 tons at the end of May, and are expected to drop to 200,000 tons by Sept. 30, and be exhausted by Oct. 31 if there are no further imports," according to a spokesman for the Ministry of International Trade and Industry.

While the Ministry of Agriculture and Forestry urges the U.S. government to insure that Japan has a steady supply of soybeans, Japanese officials are also "looking for other sources and accelerating programs to increase local production."

A bar chart shows: (1) U.S. soybean exports to the world: In 1971–420 million bushels worth $1.3 billion. In 1972–441 million bushels worth $1.5 billion. In 1973 (first 5 months)–248 million bushels worth $1.3 billion. (2) U.S. soybean exports to Japan. In 1971–98 million bushels worth $311.1 million. In 1972–109.4 million bushels worth $375.4 million. In 1973 (first 5 months)–62.5 million bushels worth $347.7 million.

5015. *New York Times.*1973. Japanese upset by U.S. soybean curbs. July 7. p. 27.

• ***Summary:*** Hiroshi Higashimori, Secretary-General of the Japan Oilseed Processors Association, expressed the feelings of many Japanese in all walks of life, when he said, "We're really angry at Nixon-san."

The anger is a result of the U.S. president's ban last week of soybean exports. "In Washington [DC] last Monday, officials replaced the embargo on soybean with a system of export licenses. Exporters will be allowed to ship 50 per cent of their soybean orders on hand as of June 15 and 40 per cent of their order for soybean meal.

Not long ago, when President Nixon established détente with Peking, without first informing Tokyo, the Japanese called it the "Nixon Shokku." Now the soybean export embargo is being called the "Shoyu Shokku" [soy sauce shock].

Soybeans are used in Japan to make foods and ingredients that appear in almost every meal. They are a key source of protein in the Japanese diet. The typical breakfast, for example, includes miso soup. Fish and tofu [soybean curd] are two of the most important sources of protein in the Japanese diet, said Kuniyoshi Takagi, managing director of the Federation of Tofu Makers' Association. Yet he fears that both will become remote from the daily diet, "fish because of contamination and tofu because of the U.S. embargo."

Makers of soy sauce are also concerned says Kaoru Ito, managing director of the Japan Soy Sauce Brewers Association. The U.S. has supplied all of the 240,000 tons of soybeans that the soy sauce industry imports and processes each year in Japan.

There was even concern at Sasa-no-Yuki ("Snow on bamboo sprouts" [leaves]), a restaurant that features tofu as the centerpiece of 12 varied dishes, a full dinner of 8 tofu dishes costs a maximum of $3--which is remarkably low for Tokyo. The Japanese government, deeply upset at Washington, "has placed soybeans at the top of a list of controlled commodities under a new regulation against hoarding and price manipulation that went into effect today."

Meanwhile, Japanese officials are looking for other sources of soybeans.

A two-part bar graph shows U.S. soybean exports in millions of bushels. (1) Exports to the world grew from 420 in 1971 to 441 in 1972 to 248 for the first 5 months of 1973. (2) Exports to the Japan grew from 98 in 1971 to 109.4 in 1972 to 62.5 for the first 5 months of 1973. Source: Department of Commerce.

5016. Moorhead, John D. 1973. Little yellow bean pushing up prices: Whole world wants multipurpose soy meal. *Christian Science Monitor.* July 11. p. 1.

• ***Summary:*** Boston–"Soybeans. These unassuming yellow beans are the richest and cheapest source of protein known. And their meal makes the world's best animal feed." When

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president Nixon slapped an embargo and then strict controls on exports of soybeans, he was hoping to reduce soybean prices in the USA, and thereby eventually to reduce the price of meat.

Exports of soybean meal were 27% ahead of expected levels and a serious domestic shortage of soybeans was feared.

Nixon's soybean embargo has hurt the Japanese hardest–even though they were the best customer for U.S. soybeans. U.S. soybeans comprise 92% of all soybeans imported to Japan. Of those, 80% are "used for animal feed and the rest for such human staples as tofu (bean curd) and soy sauce."

A cartoon shows a personified soybean, wearing a big smile and a king's crown, holding in one hand a scepter with a dollar sign on it, sitting on a little mountain of dollar bills.

5017. Oberdorfer, Don. 1973. Japanese attack U.S. trade policy. *Washington Post, Times Herald*. July 17. p. A1
• ***Summary:*** Tokyo, July 16–Secretary of State William P. Rogers and other senior U.S. officials were subjected to a barrage of criticism today for alleged American deficiencies as a trading partner." At this joint cabinet-level conference on economic affairs, Rogers said that the curbs were "unavoidable and temporary."

Until just a few months ago, Washington [DC] was doing the complaining concerning the very large bilateral trade imbalance in favor of Japan. Washington made strong demands that the Japanese buy more from the U.S.

"At least four Japanese ministers, headed by Foreign Minister Masayoshi Ohira, expressed official dismay at the export restrictions during today's meeting here." Secretary of Agriculture Earl Butz was scheduled to be at the joint meeting, but he cancelled at the last minute, saying that he had urgent business to attend to in Washington. In his place he sent Undersecretary of Agriculture J. Phil Campbell.

"At a private hotel luncheon Sunday in the resort town of Hakone, Campbell and his wife heard little or nothing about Japan's special need for soybeans from the lips of their host, Agriculture Minister Yoshio Sakurauchi. However it did not escape their notice that the luncheon menu included boiled soybean snacks (edamame), Japanese soybean soup [miso soup], soybean curd squares (tofu), vegetables mixed with soybean curd [shira-ae], and cucumber with soy sauce."

5018. Chico-San Inc. 1973. Chico-San Inc. products: A catalog of unique foods. P.O. Box 1004, Chico, CA 95926. 26 p. Revised July 1973.
• ***Summary:*** Soyfoods imported from Japan include Lima Soy Sauce, Soybean Puree (Miso), and dehydrated miso. They also sell black [soy] beans.

Rice-based products include: Yinnies Grain Syrup ("a low cost natural sweetener made from whole grain barley and organically grown brown rice," in a 12 oz. jar; a photo shows the jar and label); a 3-page description tells how the product is made and gives its composition (maltose is the key natural sugar); recipes are included. Yinnies ("A traditional Oriental grain candy. The ingredients are organically grown brown rice and barley. No sugar or artificial sweeteners are used."). Rice chips with buckwheat. On the label of the Yinnies confection product the following statement appears: "The rice for the Yinnies is grown and harvested exclusively for and under the direct supervision of Chico-San by Wehah Farms of Richvale, California." A similar statement appears on the Rice Chips label.

Corn Chips. Rice Cakes (3 types, each with brown rice and sesame seeds: Plain, with Millet, or with Buckwheat). San-Wich Rice Cakes–Unsalted (Ingredients: Brown rice [organic], sesame seeds, Chico-San yinnies syrup (brown rice and barley), various sea vegetables, and kuzu).

One section (p. 9-10) is titled "How Chico-San guarantees Oriental-type, organically-grown brown rice." The words "Reprinted from *Health Foods Business* magazine" and "Wehah Farms" have been carefully deleted from the text of this article!

This is the revised edition of an earlier catalog. "Chico-San products have gained increasing acceptance throughout the country since their introduction in 1960." The booklet contains 8 pages of recipes, including: Sesame-miso spread for bread or dips. Black soy beans (p. 21). Wakame miso soup. Note: This is the earliest macrobiotic recipe seen which uses the term "Black soy beans" instead of "Black beans" to refer to black soybeans. Address: P.O. Box 1004, Chico, California 95926.

5019. Harper, Anne, comp. 1973. Soybean processing and utilization: A partially annotated bibliography. Jakarta, Indonesia: Lembaga Ilmu Pengetahuan Indonesia (Indonesian Inst. of Sciences), Jl. Tjhik Ditiro 43, Jakarta. vi + 56 leaves. 30 cm. [440 ref. Eng]
• ***Summary:*** Contents: Preface (by Prof. Sarwono Prawirohardjo, Chairman, ASEAN Permanent Committee on Science and Technology). Introduction: The soybean (Glycine max), soybean meal and oil, food uses, industrial uses, scope of the bibliography ("excludes references to non-alimentary utilisation of soybeans" and to "references to alimentary utilisation where the harvested plant has not undergone processing by either fermentation or oil extraction"), terminology of soybean processing (soybean meal, soy flours and grits, solvent extraction, miscella, desolventizer-toaster, defatted soy flour, low-fat soy flour, high-fat soy flour, full-fat soy flour, lecithinated soy flour, soy protein concentrates, soy milk, Saridele, yuba, soybean curd [tofu], aburage, koritofu [kori-dofu, dried frozen tofu], soy protein isolate, protein fibre products {spun, spinnerettes}, extrusion-expansion products, fermentation products {ontjom, Neurospora sitophila, soysauce, shoyu, Aspergillus oryzae, koji, moromi, tamari, koikuchi, natto, miso, tempeh, Rhizopus oligosporus, soybean cheese, sufu,

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Mucor sufu], Zygosaccharomyces).

General (p. 1). Fermentation products (p. 2-16). Soybean oil, meal, and protein (p. 17-42). Nutrition (p. 43-56). Note 500 copies were printed. Address: Indonesia.

5020. Ikeda, Masanori. 1973. Food additives moving into wider applications. *Business Japan* 18(7):51, 56, 61-62, 64. July.

• ***Summary:*** The section on "Shoyu (Soy Sauce)" states: "Of the various condiments used by the average Japanese over a given year, shoyu or soy sauce constantly ranks first or second, accounting for 18.2 to 20 per cent of total condiments, according to figures by the Prime Minister's Office Statistics Bureau."

"There are about 4,000 shoyu producers in Japan, turning out approximately 1,200,000 kiloliters per year. About 40 per cent of the total is produced by five leading producers, and 60 per cent by the rest." The quality of shoyu make by all companies in Japan is excellent "because the government maintains a strict inspection system under the Japan Agricultural Standards (JAS)."

"Before World War II, some shoyu was exported. But in the 10 years following the end of the war [1945-1955], Japan had little capacity to export due to the difficulty of securing sufficient raw material. Production barely met domestic demand. As the Japanese economy began to recover, exports were resumed."

"Full scale exports began in 1957. Since then Japan has shipped approximately 2,600 kiloliters annually overseas. In 1972 Japan exported approximately 8,000 kiloliters."

"Shoyu produced for export is graded into two categories–A and B–and the inspection standards are considerably higher than the JAS for domestic consumption. Only products that pass this strict examination are approved for export."

"Sauces. Sauce manufacturers in Japan (producers of fruit sauce and Worcestershire type sauce) total about 300 in number." The top ones are Kagome, Ikari, Bulldog, Kikkoman and Chicken. Address: Director General, Food and Marketing Bureau, Ministry of Agriculture and Forestry.

5021. Kikkoman. 1973. Discover new taste–Kikkoman. *Business Japan* 18(7):57. July.

• ***Summary:*** This full-page ad shows a dispenser of Kikkoman shoyu, tilted downward, at the top, and below it (from top to bottom) a set of measuring spoons, a bowl, a ladle, a dish, a metal skillet and a wok.

The bottom quarter of the ad is devoted to text, which begins: "By the spring of 1973, Americans will be able to taste the delicate flavor of genuine Japanese soy sauce brewed and bottled in a plant now under construction in Wisconsin. It is just one facet in Kikkoman's worldwide operations. Kikkoman soy sauce is exported to more than 70 countries–proof that it goes well with any kind of food anyplace."

Across the bottom of the ad are the Kikkoman hexagonal logo (Since 1630) and, in large bold letters, "Kikkoman soy sauce."

5022. Eden Foods, Inc. 1973. Wholesale prices. P.O. Box 100, Ann Arbor, MI 48107. 3 p. Catalog. Effective Aug. 1.

• ***Summary:*** The products are very similar to those in the April 1973 catalog. Address: Ann Arbor, Michigan. Phone: (313) 769-8444.

5023. Blinn, Johna. 1973. Food's a way of life for Jim: Celebrity cookbook. *Chicago Tribune.* Aug. 9. p. W8, or S8, or N8.

• ***Summary:*** Actor James MacArthur and his second wife live right on the water near Diamond, Honolulu. Currently they are "on a macrobiotic diet kick," and they eat no meat. He has lost 9 pounds without any effort and he eats as much as he wants. His mother is actress Helen Hayes. Contains a recipe for James MacArthur's vegetable omelet, which calls for "1 tablespoon tamari (undiluted soy sauce)." A portrait photo shows James MacArthur. Address: Honolulu.

5024. Erewhon. 1973. Supplying natural food stores, co-ops, schools and communities (Catalog). Boston, Massachusetts. 12 p. Effective Aug. 20, 1973.

• ***Summary:*** The structure and design of this catalog is quite similar to the previous one of April 6, however some new products and sizes have been added. The illustration and note from Paul Hawken are similar. OG = Organically grown. products: Cereals: Soybean flakes (Deaf Smith, OG, 25 lb). Stoneground flours: Soybean flour, full fat, OG, Texas, 50 lb. Beans: Azuki beans (100, 50, or 25 lb). Soybeans (OG, Texas, 50 lb). Tamari & miso: Tamari soy sauce (8 oz, pints, quarts, half gallon, gallon, 4.7 gallon can). Hacho miso soy paste (1 lb or 44 lb keg). Mugi miso barley-soy paste (1 lb or 44 lb keg). Kome miso rice-soy paste (1 lb or 44 lb keg). Pasta: Wholewheat shells (with rice and soy flour, 15 lb). Snacks: Corn munchies (organic corn chips with soy sauce). Hopi Seeds (all dry-roasted with tamari, 1.38 oz or 25 lb). Almonds, cashews, pumpkin seeds, soybeans, sunflower seeds. Vegetable oil, pressed and unrefined: Soybean oil (pint, quart, 5 gallon tin). Condiments: Tekka (vegetable-miso condiment, 3 oz). For cooking: Soy [sauce] dispenser (4½ inch). Packaged in cellophane bags with recipes (1 lb, 1½ lb, and 2 lb). Soybeans (sprouting or cooking, OG, 1 lb or 2 lb) stoneground soybean flour (full fat, OG, 24 oz), soybeans (OG, 2 lb). Address: 33 Farnsworth Street, Boston, Massachusetts 02210. Phone: (617) 542-1358.

5025. *New York Times.* 1973. How families abroad are coping at the market: Some Japanese changing diets. Aug. 28. p. 37.

• ***Summary:*** In Tokyo, there is a widespread awareness that fish is too contaminated with mercury to eat safely. The other

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traditional source of protein, soybean products, have jumped in price because of the U.S. soybean embargo. In the last two months, the price of "tofu (bean curd or bean pudding)" has gone up 13 cents to 19 cents; a bottle of soy sauce 51 cents to 64 cents, cooking oil 55 cents to 70 cents..."

Despite the rise in prices, tofu and miso soup are still regular parts of the diet for most Japanese.

A bar graph shows the percentage of income spent for food in 1971 in various countries: U.S. 17.6%, Germany 21.9%, Britain 22.3%, France 26.5%, Japan 30.7%, India 60.0%, Africa (various) 70.0. Source: Bureau of Labor Statistics, Grocery Manufacturers of America.

5026. Hawken, Paul. 1973. Erewhon: A biography. The view within. *East West Journal* 3(8):11-16, Aug.

• ***Summary:*** An early, critical history of Erewhon, written without any capital letters [all lowercase], expressing the viewpoint of one of its early, important, and very innovative presidents. "Arrogant" is a term often used to describe the attitude of the people running the company. A store by the name of "Erewhon" opened in May 1966 on Newbury St. in Boston, first manned by Evan Root, then Paul Hawken.

Paul "generally worked alone for first year [at Erewhon in Boston] with the exception of occasional help from members of the community–Elaine Sutton, Connie Frank, Peggy Taylor, and even Michio would help bag and clean.

"At that time I was much more interested in lectures, books, ideas, and more invisible things than food. I had no intention of doing Erewhon for very long, but that was before the remarkable and compelling visitations upon my brain that were precipitated by a five week fast augmented by only [brown] rice and water." Paul then describes the profound spiritual experience he had in 1966–one of great light and energy reaching down to the cellular level. "I could fully experience in that one moment the indivisibility of consciousness and body."

"Since nothing could really change until cells changed, it seemed the most logical thing was to provide the resource for that change to those who were ready for it. Soil and land would have to be found that was rich and uncontaminated... food should contain the life force inherent in natural growth. The problems posed were complex and many but all these questions gave me the answer as to the purpose of Erewhon. for those seeking the unveiling of the spirit, Erewhon would attempt to provide the renewing and cleansing power of the earth.

"This 'visceral mysticism' was a turning point for me and my relation to Erewhon. No revelation can arise unless ignorance precedes it, and the greatest lesson from this vision was the realization of how little I really knew or understood. My ignorance in the matters of spirit and consciousness were so great that I felt more at home with more plain and simple matters. Raising the quality of food seemed an area that was neglected, yet vital, in the path to higher consciousness."

In 1966 "On Thanksgiving day 1968 we opened a new store down the street [at 342 Newbury St.] which still exists today. At that time we were doing about $250 a day and the rent on the new store, with utilities, totalled over $1,000. It was a chance we took, a big chance, and seemed to set the pattern for many to come. The decision to place our economic life on the line was based on growth. By then Erewhon had grown to be six people, and all of us felt in our bones that we had a tiger by the tail. A sort of giddy optimism pervaded the new store, abetted by all of us working 12 to 20 hours a day–Bruce Macdonald, Jim Docker, Jean Allison, Bill Tara (later to leave for Chicago, Illinois), and Roger Hillyard. The intensity was so thick you could scoop it up and bag it. All of us felt like passengers on a very fast vehicle bound for unknown places. Business was increasing very rapidly and it seemed we could do no wrong. Time moved very quickly and I was soon to leave for Japan to establish a source of imported foods. My position as to coming back was ambivalent, so Roger Hillyard was appointed head in my absence. Bill Tara, who had set up Food for Life in Chicago on the tenth floor of a downtown office building, left for Los Angeles with Aveline [Kushi] and set up another Erewhon due to Aveline's prodding. It was later to prove to be our worst mistake and almost led us to bankruptcy.

"While I was away, roaming around Japan looking for pure foods and wise men, Roger [Hillyard] and others were busy establishing a wholesale business based primarily on the products that were being sent back from Japan. In retrospect, those times were chaotic, and I do not think the chaos let up until four years later, the spring of 1973. The chaos was (as I think back upon it) caused by thinly veiled ambition clothed in a stylishly cut suit of concern for our biosphere and guts. Perhaps this was a reflection of our urgent need to make up for years of bad living, bad ideas, and trash foods. In any case our actions were hasty, well-intentioned, very salty, and somewhat crude, but like a moldboard plow, we just kept coming.

"Chico-San saw us coming and promptly freaked out. They were very dismayed by their loss of New York business as our wholesale market developed. Chico-San had given us the impression in a number of personal conversations that they encouraged our self-reliance and particularly the importance of Japanese foods. Bob Kennedy, the head of Chico-San, candidly admitted that they lost money on imported items and they were able to stay in business only because they sold rice cakes. So it came as quite a surprise to us when they reversed their attitude. They began to express doubts about our motives and ability to procure good foods. Their attitude seemed to change into one where they were the 'official' food company, and that was that–appointed by the crown as it were. I can certainly see now how our brashness and youth did nothing to allay their doubts. In retrospect I have much sympathy, while realizing also that they did little

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to establish a real dialogue.

"Chico-San was formed by middle-aged people who split from New York City after Ohsawa walked into one of their meetings one night stoned on Scotch [whiskey] and announced the bomb was going to drop. This was during the Cuban [missile] crisis and there were many who shared that fear. They formed a well-organized caravan of families and trekked across the United States in a trip that got national coverage. Their purpose was to find the one place in America that was safest from radioactive fallout and also ideal for growing rice. Eureka! Chico, California. No one was more surprised than the local residents. The rift that opened between Erewhon and Chico-San has never closed. The rift could best be described as an ocean now. Peaceful coexistence. They mainly felt that their maturity and experience uniquely qualified them to be the best judge of what foods people should or should not eat. They thought that there should be only one 'label' and that we did not know enough about food to promote it... Herman Aihara who worked there then and Bob Kennedy felt that most young people had been 'ruined' by drugs and that their 'judgment' could never be completely restored,.." Continued. Address: [President, Erewhon].

5027 Hawken, Paul. 1973. Erewhon: A biography. The view within (Continued–Part III). *East West Journal* 3(8):11-16. Aug.

• ***Summary:*** Continued. Hawken returned to Boston in Dec 1969, then was fired by Aveline Kushi. He left and worked in San Francisco with Fred Rohe at New Age Natural Foods. Hawken returned to Erewhon in Boston in the summer of 1970.

In 1970 the "natural foods boom" started and swept Erewhon along with it. "If there is one person who is 'most' responsible for Erewhon being here today and not bankrupt, it is John Deming, who brought a sense of joy and happiness wherever he went in the company. He assumed the manager's position at the retail store and made it the finest part of the company. His positive attitude was in contrast to the apprehension that all of us shared about the future. He gave Erewhon some money without which we would surely have failed. On his twenty-fifth birthday John came into a trust which sort of blew his mind. He had known nothing about it. He wanted to just give it to Erewhon, but it is on the books as a loan. It came just in time to pay back overdue creditors and panting bank officers."

A table (p. 16) shows Erewhon, Inc's. sales and sources of supply in 1966 and then in 1973. In 1966 Erewhon had about 200 retail customers. The company bought Koda rice from Sam Rabinowitz; imports from Chico-San, Infinity Co., Japan Foods Corp., and Wing-Wing; Lima (Belgium) products from Merit; grains and flours from Better Foods; and flour from Walnut Acres [founded by Paul Keene].

In 1973 in Boston the warehouse served about 200,000 customers (incl. 200 retail natural food stores, 43 Star Markets, 50 co-ops, 25 schools, 9 distributors, 10 restaurants, and 5 bakeries), and the store about 10,000 customers. In Los Angeles, the warehouse served about 75,000 customers (incl. 150 retail stores, 20 co-ops, 3 bakeries, and 10 distributors) and the store about 5,000 customers. A produce company in Los Angeles was supplied by about 40 organic farmers, and sold to 20 retail stores. Concerning soy products, Erewhon bought organically grown soybeans from Lone Pine in Arkansas [Carl Garrich of the Lone Pine Rice and Bean Farm], and soy oil from California. From Muso Syokuhin in Japan they imported tamari, and kome and hacho miso [plus azuki and black beans]. From Mitoku, Inc. they imported tamari and mugi miso.

Suppliers of organically grown grains included: Short, medium, and sweet rice (Wehah Farms, California). Medium rice (Willow Farms, Louisiana). Spring and durum wheat, flax (Ted Whitmer, Montana). Long rice (Jerry Ladds?, Texas). Winter wheat (Frank Ford, Arrowhead Mills, Texas). White wheat (Lewis Cox & Bill Ingram, Washington state). Buckwheat (Penn Argyl, Pennsylvania). Corn (Bill Stockett, Texas). Millet (Chuck Moses, North Dakota). Oats (Fruen, Minnesota). Rye (Mike Skinner, Colorado). Peanuts (Chas. Warnken, Texas).

Note 1. This is the earliest document seen (July 2011) that mentions Mitoku, or Muso Shokuhin.

Note 2. This is the earliest document seen (March 2006) that mentions Food for Life (started by Bill Tara in Chicago, Illinois). Address: [President, Erewhon].

5028 Ohsawa, George. 1973. Practical guide to Far-Eastern macrobiotic medicine. Herman Aihara, editor. The George Ohsawa Macrobiotic Foundation Inc., 1471–10th Ave., San Francisco, CA 94122. xi + 260 p. Aug. 21 cm.

• ***Summary:*** This book has a red, white, and black cover with a round yin-yang (*t'ai chi*) symbol on it. The Foreword begins: "This book, a compilation of several books and writings of George Ohsawa, attempts to give the whole scope of macrobiotic medicine to everyone." It includes the first English translation from French of Ohsawa's 1956 "Guide pratique de la medicine macrobiotique d'Extreme-Orient."

Contents: Forward [sic]. Preface. Introduction. Theory of macrobiotic medicine. Curing sickness. Cure the man. Letters from students of macrobiotic medicine. Appendix.

Information on soyfoods is found on the following pages: Tamari bancha (syoban, p. 85, 102). Miso (fermented soybean puree, p. 85). Tekka (miso, p. 87, 95). Tofu plaster (p. 88, 110-11, 125-30). Miso soup (p. 96). Koi-koku (Carp soup with miso, p. 99). Aburage (Age, p. 99). Deep-fried vegetable tofu (ganmo, with "1 tofu, ½ lotus root cut small, 2/3 inch jinenjo {nagaimo}, ½ inch carrot cut small, 2 inches burdock cut small, 1 quart oil, 1 cup whole wheat flour." Grid the tofu well in a suribachi, adding a pinch of salt, p. 99). Vegetable with ganmo (p. 100).

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Note: This is the earliest English-language document seen (May 2012) that contains the word ganmo; it refers to deep-fried tofu burgers.

Dried radish with age ([aburage], see recipe 32, p. 100). Yin/yang soboro (with miso, p. 101). Scallion miso. Onion miso. Shigure miso (p. 103). Pheasant nituke [nitsuke] (with miso, p. 104).

The forward [sic] by Herman Aihara, editor, notes: "This book, a compilation of several books and writings of George Ohsawa, attempts to give the whole scope of macrobiotic medicine to everyone. The main part is treatment for sickness. However, treatment without understanding of principles and a good attitude is dangerous, therefore, the theory of macrobiotic and other articles were added. The book, like its predecessor, *The Unique Principle*, is unique not because of its name and contents, but rather in how it was translated, edited and published.

"The first part is a translation taken from Japanese books such as, *A New Dietetic Cure, How to Cure Sickness and a Sick Man*, and *Vegetarianism*. The second part is a translation from the French edition of *Practical Guide to Far-Eastern Medicine* which was done by Ann Harris. Noboru Muramoto was consulted to suit remedies to present-day American needs.

"Cornellia Aihara translated *Cooking for the Sick* which was written by Lima Ohsawa. *Massage and Palm Therapy* are based on notes taken by Cynthia McCluskey at Mirimichi Summer Camp, 1972. Photos of Cornellia demonstrating external treatments were taken by Fred Pulver. *The Manual of Macrobiotics* is a contribution of Nina Bond who took notes at George Ohsawa's lectures in New York at Summer Camp held about ten years ago.

"The third part is a translation from French and Japanese by Fred Pulver, Lou Oles and Herman Aihara.

"The last part is again taken from several articles appearing in past issues of *The Macrobiotic* magazine. The Appendix is taken from a translation of the French edition of Ohsawa's *Practical Guide to Far-Eastern Medicine*."

The preface, by George Ohsawa, states: "I am very happy to give you this short, simplified translation of my book, *Cure–Following the New Way of Eating*. It was originally written in Japanese, and is now in its 465th edition. I want to share with you the practical application of Macrobiotic healing that I have been teaching for almost 40 years–leaving aside the conceptual aspects covered in my other books and classes.

"Herein is the synthesis of my medical philosophy, which is nothing but the biological, physiological and dialectic interpretation of Far Eastern philosophy–the principles of the Order of the Universe and the Order of Man. For 30 years I have been writing on both the practical and theoretical sides of this question and have published more than 20 books and thousands of articles. But at this time I wish to limit myself to giving easily accessible information.

"My medical philosophy, the way of eating and the art of longevity and rejuvenation, is so simple and inexpensive that anyone can follow it any time, anywhere. If you decide to cure yourself before all else, you can forget about the bitter, painful and costly suffering that results from medical, physical, psychological and religious therapies.

"This system depends on you alone. No reliance on other people or on artificial means–everything depends on how you eat."

In the first chapter titled "How did I find macrobiotics? The principle of life," Ohsawa continues: "I was born at Sagano, Kyoto, Japan in 1893. My mother could not produce enough milk and I was a weak baby. I was told by mother that I almost died five times before I reached the first birthday. My family was poor. Father was a principal of an elementary school of a small village before I was born. Then my parents moved to Kyoto where he became a policeman. Mother worked at home to help finance–making strings for kimonos. Mother was an industrious woman. She studied Western science and culture through Yuzuru Niijima who was the founder of the Doshisha University. She died at the age of 30 from tuberculosis, leaving two sons. I was 10 and a younger brother was 6. Two sisters had died earlier due to the wrong diet which my mother introduced in our family through her study of Western science and culture.

"From that time we lived sad days as poor orphans. I was an apprentice in a Buddhist temple as a disciple. However, I soon started to vomit blood like my mother and sisters did. At 18, I had to give up my school, medicine, eggs and meat because I was too poor to continue such expensive living. I lived in the lowest living condition. In other words, I lived with brown rice, radish pickle and salt plum even though I was told that my sickness–tuberculosis–required eggs and meats by the doctors and my mother who gave us milk, eggs and bread every morning (which was violating natural order). We were punished for this violation. Such a diet destroyed our family's health. I, however, resented that I could not afford to continue such a diet because I didn't know the fact that such a diet was the cause of mother's and sisters' death and my sickness. If I could have afforded to continue that diet, I would have died at that time. I am so grateful that I was poor.

"Curing all my diseases and re-establishing my health at the age of 20, I realized that food is the source of life. After realization of this important fact, I decided to devote my life to preaching this doctrine.

"I traveled to France for the first time in 1914. Since then I have returned a dozen or more times."

5029. King, Seth S. 1973. The money plant: A great deal more than soy sauce. *New York Times*, Sept. 9, p. 36-37, 112+, Supplement.
Address: Head, Chicago Bureau, New York Times.

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5030. Hashimoto, Hikotaka; Yokotsuka, Tamotsu. 1973. [Studies on sediment of shoyu. VII. The significant effect of thermostable acid protease on sediment formation of *shoyu* (soy sauce)]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 51(9):661-69. [15 ref. Jap, eng] Address: Central Research Laboratories, Kikkoman Shoyu Co., Ltd., Noda, Japan.

5031. Aonuma, Tatsuo; Yasuda, A.; Yuasa, T.; Arai, A.; Mogi, K.; Yokotsuka, T. Assignors to Kikkoman Shoyu Company, Ltd. (Noda-shi, Chiba-ken, Japan). 1973. Method of preparing soy and miso-paste. *U.S. Patent* 3,764,708. Oct. 9. 8 p. Application filed 11 Aug. 1971. [1 ref]
• ***Summary:*** "A method of preparing soy and miso-paste of superior flavor and taste and of high quality, which comprises treating the starting soy-beans and/or carbohydrates with a current of superheated steam at a gauge pressure of 4-8 kg/square cm and a temperature of 200°C to 280°C for a time not exceeding 15 seconds. The treated soybeans are quickly exhausted into the atmosphere at atmospheric pressure."

The examples use either defatted soybean flakes or granular soybeans. Both the present invention and the conventional method contain 17.55 gm of common salt per 100 ml of soy sauce. Products from the present invention and the conventional method contain (in gm/100 ml) respectively total nitrogen (1.808/1.680), amino nitrogen (0.890/0.828), glutamic acid (1.484/1.376), alcohol (2.08/2.01), and yield of nitrogen (89.42%/82.93%). Address: 1. Kashiwa; 2-5. Noda; 6. Nagareyama. All: Japan.

5032. Woodland, John. 1973. Heavy Russian buying now seen as a cause of soya bean shortage: Chinese imports behind soaring cost of vegetable oils. *Times* (*London*). Oct. 25. p. 26, cols. 5-7.

5033. L.V.N. / L.V.D. 1973. [The role of enzymes and molds in Vietnamese soy sauce production]. *Khoa Hoc Thuong Thuc* (*Hanoi*). Oct. 30. [Vie; eng+]*
• ***Summary:*** For a translation of this article, see HOANG, Van Chi (25 May 1979). A table gives the composition of Vietnamese soy sauce. The mold most suited for soysauce production is *Aspergillus oryzae*. Address: Vietnam.

5034. Brown, Edward Espe. 1973. Tassajara cooking. Berkeley, California, and London: Shambhala. 256 p. 24 cm. Introduction by Zentatsu Richard Baker-Roshi. Series: A Zen Center Book. Illust. by Norval Delwyn Carlson. A Zen Center Book. Index. Oct. 23 cm.
• ***Summary:*** This friendly, nicely illustrated natural foods vegetarian cookbook is also about the spirit of Zen Buddhist practice. The chapter on "Beans" (p. 121-26) begins with a sort of eulogy: "Beans. What suffering the word evokes. Beans. When you couldn't afford meat. Oh beans! When you went camping. Beans! Beans are not meat, they're beans: garbanzo, kidney... Soy—which rarely remains as a bean... Beans are the overlooked jewels of the vegetable world. They sell at dirt cheap prices and are one of the best protein buys around... Beans take some getting used to, some familiarity. It's easy to say 'beans don't agree with me,' without having given yourself a chance to agree with them."

Soy-related recipes include: Oriental dressing (with soy sauce, p. 72). Cooking beans (p. 122-23; if presoaked, pressure cook soybeans for 20 minutes at 15 lb pressure. If not presoaked, for 25 minutes. For cooking without pressure, presoak, bring to a boil without salt, and simmer for 2 hours). Soy-sweetened beans (p. 124; "the Japanese version of an American standby"). Nut-buttered beans. Chili beans (p. 125). Blanco beans. Soy beans with hijiki & carrots (p. 126). Five thing beans (p. 126). Easy Oriental dressing (with soy sauce, p. 172). Soy sauce mayonnaise (p. 173). Tahini salad dressing (with soy sauce, p. 174). Seasoning soups (with soy sauce or miso, p. 179). Miso stew (p. 206). Potato-bean bake (p. 211). Basic recipe for burgers (with cooked, ground soybeans, p. 234). Soyburgers (p. 235-36).

Tassajara Zen Mountain Center was founded in 1967. An illustration of the Center cooking in a large skillet graces the cover of this book, which by July 1978 was in its 9th printing. Address: Green Gulch Zen Farm, California.

5035. Ilany (Feigenbaum), J. 1973. Soybean food for today and tomorrow. *Gordian* (*Hamburg*) 73(10):390-91. Oct.; 73(11):428-30. Nov.; 73(12):464-65. Dec. [21 ref. Eng, ger]
• ***Summary:*** "This is a short review of what is chiefly known at present of this wonderful bean, which only a few years ago, constituted a strange and exotic food." Contents: Introduction. Composition and nutritional value. Green soybeans. Sprouted soybeans. Soybean flours. Isolated proteins. Soy-food products of the Far East: Kinako, soymilk, yuba, "tofu or curd—soycheese," aburage, natto, Hamanatto, tempeh, miso, shoyu or soy sauce. Soybean oil. Lecithin.

Concerning tofu. Tofu made in the regular way "is called 'Fresh Tofu.' It does not keep long, even under refrigeration, unless it is further processed. For this purpose it may be canned, frozen, fried, smoked, or fermented."

Note: This is the earliest English-language document seen (Aug. 2011) that contains the term "soycheese", it uses this term to refer to regular tofu.

5036. Taira, Harue. 1973. Heat destruction of amino acids in soybean products. *JARQ* (*Japan Agricultural Research Quarterly*) 7(4):267-73. Oct. [11 ref]
• ***Summary:*** Traditional, processed soybean foods that are widely used in homes in Japan include "Shoyu (fermented soy sauce), Miso (fermented soybean paste), Natto (fermented soybeans), Tofu (bean curd), Aburaage (fried bean curd), Kori-tofu (dried Tofu) and Kinako (roasted

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soybean flour)."

One of the steps in making each of these foods is heating, which denatures the protein (making it more digestible), eliminates the peculiar soybean flavor, and develops colored substances (which "can prevent oxidation of the unsaturated fatty acid contained abundantly in soybeans during the fermentation process of Miso as an example"). Heating also eliminates antinutritional factors.

"But overheating causes excessive denaturation of soybean protein and destruction of amino acids."

Tables show: (1) Amino acid composition of 7 soybean products, including Mamemiso [soybean miso, such as Hatcho miso] and yuba. (2) Change of amino acid after three steps in the process of making Mame-miso: Soaking the soybeans, heating the soybeans, the final product. (3) Change of amino acid after two steps in the process of making natto: Heating the soybeans, final product. After heating at a rather high temperature for a short time (120°C for 30 minutes), there was no decrease in any amino acids except arginine, which decreased by 17.8%, and decreased by 29.1% in the final product. Some essential amino acids increased during the natto process. Methionine increased from 0.9 gm per 17 gm of nitrogen to 1.1 gm, an increase of 22.2%. Cystine remained unchanged at 1.0. (4) Change of amino acid after three steps in the process of making Tofu: Soaking the soybeans, heating the soybeans, the final product. No amino acids are reduced by heating, and some (such as methionine) increase. Of the 18 amino acids measured, 5 are unchanged, 10 increase, and 3 decrease slightly: Glutamic acid 19.6 > 19.3. Tryptophan 1.5 > 1.4. Serine 6.6 > 6.4.

One of the products which is heated by dry heat only (without soaking in water) is kinako. It is heated at 160°C for 10 minutes, then ground. This heating reduced lysine from 5.1 to 4.8.

Figures (graphs) show: (1) The heat destruction of lysine in defatted soybean flour at 4 different temperatures (from 100°C to 126°C) for 4 different times (from 30 minutes to 4 hours). The higher the temperature and the longer the time, the greater the destruction of lysine.

(2) The heat destruction of cystine in defatted soybean flour. Same 4 temperatures and times, roughly same results.

(3) The influence of water on the heat destruction of lysine in defatted soybean flour. Same 4 temperatures and times. Adding water reduces the destruction of lysine.

(4) The influence of water on the heat destruction of cystine in defatted soybean flour. Same 4 temperatures and times. Adding water reduces the destruction of cystine.

(5) Heat destruction of total and available lysine in defatted soybean flour. Same 4 temperatures and times.

(6) Enzyme treatment and total liberated amino acids. Address: Food Analysis and Nutrition Div., National Food Research Inst., Ministry of Agriculture & Forestry, Koto-ku, Tokyo.

5037. Eden Foods, Inc. 1973. Wholesale prices, F.O.B. P.O. Box 100, 310 W. Ann St., Ann Arbor, MI 48107. 2 p. Catalog. Effective Nov. 1.

• ***Summary:*** The products are very similar to those in the April 1973 catalog. But a new soy product is Wheat-Soy Grits (50 lb). Other products include "Umeboshi salt plums." and Kelp powder (10 lb. bulk [from California]). Address: Ann Arbor, Michigan. Phone: (313) 769-8444.

5038. Haenszel, William; Berg, J.W.; Segi, M.; Kurihara, M.; Locke, F.B. 1973. Large-bowel cancer in Hawaiian Japanese. *J. of the National Cancer Institute* 51(6):1765-79. Dec. [54* ref]

• ***Summary:*** The authors reported a significant increased risk of colon cancer among Japanese-born Issei (first generation immigrants) residing in Hawaii who consumed fermented soybeans (Relative Risk = 1.6), or red [azuki] beans (RR = 1.6). They did not find an increased risk among Nisei (second generation immigrants) or Hawaiian Japanese. Address: 1. Biometry Branch, National Cancer Inst., National Institutes of Health, Public Health Center, U.S. Dep. of Health, Education, and Welfare, Bethesda, Maryland 20014.

5039. Kunen, James Simon. 1973. Dr. Bronner's magic soap. *Esquire*. Dec. p. 218-21, 314, 316.

• ***Summary:*** This article is about Dr. Bronner's life and his Supermild Pure Peppermint Oil Soap, not his soy-based seasonings. The Bronner family had been in the soap business in Germany since 1848, but Dr. Bronner came up with this particular formula 6 years after immigrating to America, in 1935, as a diaper soap for his own children. "Dr Bronner was blind. He was wearing black goggles with opaque lenses. He was a short and wiry man of 66, tanned but unhealthy looking, too thin for his heavy bones (see full-page photo). His life changed at midnight on 1 Feb. 1962 when he delivered a speech to a black power audience in Watts. On 30 Aug. 1944 he buried his wife in a potter's field in Illinois. She weighed 61 pounds, her jawbones broken. His mother and father had been gassed as Jews in Europe. After that his wife became suicidal. After 1945 he spoke on his peace plan, then was held in a small room. 'Every night they bound me hand and foot to the slab...' Dr Bronner was committed to a mental institution in Illinois in 1946 and his blindness, though recent, may have resulted from the more than 20 shock treatments he was subjected to there. He is in deep trouble with the tax authorities who are not impressed with his idea that he is a rabbi... and do not agree that his work is religious... Recently his principal issue has been fluoridation, on which he spoke every Friday for 17 years in Los Angeles." He believes fluoridation is mass poisoning. His efforts have stopped fluoridation on at least 6 cities. His soap is selling at the rate of 150,000 gallons a year. He has no salesmen or advertisements. He has interesting religious messages on his soap bottles, and he changes them regularly.

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5040. Matsumoto, Shinichi. 1973. Executive marketing: Active promotion captures market share. *Business Japan* 18(12):112-13. Dec.
• ***Summary:*** Page 112 begins: "A number of foreign manufacturers have been making enthusiastic attempts..."

"The first was characterized by combined marketing efforts for Kikkoman Worcestershire sauce and Delmonte tomato ketchup. We came to the decision on this combined marketing effort first because they were distributed in similar marketing..." Address: Asst. Manager, Planning and Advertising, Kikkoman Shoyu K.K.

5041. Nga, B.H. 1973. *Aspergillus oryzae* in the production of soy sauce and related foodstuffs: Strain improvement and increased production. Singapore: Applied Research Corp., Research Report. *
Address: Singapore.

5042. Yasuda, A.; Mogi, K.; Yokotsuka, T. 1973. [Studies on the method of cooking protein-rich materials for soy sauce brewing. I. High temperature and short time cooking method]. *Chomi Kagaku* (*Seasoning Science*) 20(7):20-24. [Jap]*
Address: Noda, Japan.

5043. Yasuda, A.; Mogi, K.; Yokotsuka, T. 1973. [Studies on the method of cooking protein-rich materials for soy sauce brewing. II. Brewing test of soy sauce]. *Chomi Kagaku* (*Seasoning Science*) 20(7):25-27. [Jap]*
Address: Noda, Japan.

5044. Aihara, Cornellia. 1973. The *dô* of cooking (Ryoridô) Vol. 3. Autumn cooking. San Francisco, California: George Ohsawa Macrobiotic Foundation. 100 p. Illust. by Carl Campbell. 21 cm. Revised ed. 1977.
• ***Summary:*** Interesting recipes include: Buckwheat noodle gratin (with tofu, p. 29). Udon with adzuki (p. 32). Endive rolled with agé (deep fried tofu, p. 33). Fu vegetable cream cooked (with wheat gluten cakes, p. 34). Carrots and onions miso (p. 37). Vegetable miso (p. 38). Sliced kombu nitsuke (with koya [dried-frozen] tofu, p. 38-39). Vegetable stew–Chinese style (with agé and frozen tofu, p. 41). Adzuki bean soup (p. 46). Creamed miso soup (p. 46). Kenchin soup (with vegetables and tofu, p. 47). Stuffed agé with sauce (p. 49). Thick tamari soy sauce (p. 50). Tahini-tamari sauce (p. 50). Mock meat sauce (with miso, p. 51). Chrysanthemum leaves with tofu (p. 63). Unagi-modoki (mock eel, with tofu, p. 64). Chick pea vegetable nitsuke (with koya tofu, p. 71). Wheat gluten and seitan (p. 71-74, incl. homemade wheat gluten, fresh wheat fu, boiled fu, fried fu–gluten cutlet, shish kebab with fu). Autumn dish (with adzuki beans and tamari, p. 72).
Address: 1471–10th Ave., San Francisco, California 94122.

5045. Albright, Nancy. 1973. The Rodale cookbook. Emmaus, Pennsylvania: Rodale Press Book Division. 486 p. Illust. Index. 25 x 20 cm.
• ***Summary:*** This book is based on natural foods but makes widespread use of meat, poultry, fish, and dairy products. Raw, unstrained clover honey is used as a sweetener instead of white sugar which "is dangerous to health..."

Basic information on soy: Soybean oil is good for sautéing (p. 4, 20). Tamari soy sauce is used for seasoning in preference to salt (p. 5, 20). Hints for cooking whole soybeans (p. 16). Use soy powder or grits to add protein to meals (p. 21). Basic soy milk (from whole soybeans, p. 63). Cashew milk (p. 64). Sesame milk (p. 68).

Chapter 5, titled "Soybeans, eggs, and cheese," has an introduction to soybeans (p. 237-38) and many soy related recipes (p. 243-51): Methods for cooking soybeans. Baked soybeans. Barbecued soybeans. Soybean-cheese stuffed peppers (with cooked whole soybeans and cheddar cheese). Soy stuffed peppers (with pureed, cooked soybeans). Soybean chili. Soybean curry. Soybean loaf. Soybean-rice surprise casserole. Soybean-vegetable casserole. Soybean-stuffed eggplant.

Soy related recipes later in the book: Rice-bulgur-soy pilaf (with soy grits, p. 311). Wheat-soy-sesame bread (with soy flour & soy grits, p. 356). Soy milk custard (pudding, p. 400). Wheat-soy dessert (with soy flour, p. 401). Soybean pie (with chopped, roasted soybeans, p. 414). Soy peanut butter cookies (with soy flour).

Note: Neither tofu nor green vegetable soybeans are mentioned (by any name) in this book. In late 1976 (Dec. 6-7) Shurtleff and Aoyagi presented a program (lecture, slide show, food samples) at Rodale Press in Emmaus, attended by 40 members of the staff and employees. Hosts: Nancy N. Bailey and Robert Rodale. There was widespread interest in learning more about these foods. Shurtleff was "surprised they serve white sugar on their dining tables" at Fitness House.

Contains a very interesting directory of natural food stores in the United States (p. 448-76), including phone numbers and specialties.

On p. 242 are simple directions (and 2 photos) for making "yogurt 'cheese' to be used in place of cream cheese" in making dips, salads, or desserts. Address: Chef-Manager of Fitness House, the Rodale Press Dining Room, Emmaus, Pennsylvania 18049.

5046. Andersen, Lynn. 1973. Rainbow Farm cookbook. New York, NY: Harper & Row. 222 p. Illust. Index. 24 cm. Preface by Allen Gordon.
• ***Summary:*** This vegetarian cookbook, which has a macrobiotic flavor, is from Rainbow Farm, located on over 300 acres of mountain land in Phoenicia, New York. Soy-related recipes include: Basic miso broth (p. 34). Miso vegetable soup #1. Miso soup #2 (p. 35). Soy butter dressing

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(made with 2 cups each oil and water, 3 tablespoons soy flour, and the juice of 2 lemons, p. 57). Miso vegetables (p. 67). Carrots and onions with tekka (miso, p. 67). Miso-onion spread (p. 76). Miso rice (p. 85). Tahini-miso spread (p. 108). Tahini-miso spread with vegetables (p. 108). Tahini-miso spread with seeds (p. 108). Tahini-tamari spread (p. 108). Miso balls (p. 111). Soy butter (or whipped soy cream, p. 111). Soy milk (with a blender, from soy beans, p. 118). Soy milk (without a blender, from soy flour, p. 118). Soy burgers (from okara, p. 119). Soy loaf (with cooked soy beans, p. 120). Tofu "(Chinese Soy Bean Cakes)" (curded with Epsom salt, p. 120). Miso sauce #1 and #2 (p. 126). Hiziki and tofu ([hijiki], p. 132). Egg noodles (with wheat and soy flours, p. 144). Soy milk with whole beans (p. 205). Soy milk with soy flour (p. 205).

A glossary of "New or Unfamiliar Foods" (p. 212-14) includes good descriptions of tamari, miso soy bean paste, kuzu, and tekka. Address: Phonecia, New York.

5047. Carroll, Anstice; Vona, Embree De Persiis. 1973. The health food dictionary with recipes. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. vii + 200 p. Illust. by Vincenzo de Persiis Vona. Index. 24 cm.

• ***Summary:*** The foods, listed alphabetically, include: Adzuki (p. 1-2). Beans, dried (incl. soy beans, p. 17). Gluten flour (p. 74-75, incl. Gluten soy bread). Miso and Miso butter (p. 101). Morromi (p. 102). Mu Tea (p. 102). Nori (p. 106). Oil, vegetable (p. 113-14, incl. lecithin, peanut oil, olive oil, always refrigerate vegetable oil after opening, "Vegetable oils can (and should) be substituted for hydrogenated fats such as margarine, shortening, and lard in many recipes"). Peanut (p. 119-21). Peanut butter (p. 121-22). Soy grits (p. 156). Soy milk powder. Soy oil. Soy sauce (p. 156-57). Soybean (p. 159, incl. Soybean salad). Soybean, roasted (p. 160, incl. recipe for making at home). Tofu (p. 174-75, incl. recipe for Tofu-vegetable soup). Umeboshi (p. 175).

5048. Chen, Philip S.; Chung, Helen D. 1973. Soybeans for health and longer life. New Canaan, Connecticut: Keats Publishing, Inc. (A Pivot Health Book). xii + 178 p. Index. 18 cm.

• ***Summary:*** A revised and condensed pocketbook version of Chen and Chen 1956. Contents: Preface. Foreword. Introduction. Part I: Nutritive value of the soybean. 1. Protein. 2. Fat. 3. Carbohydrates and caloric value. 4. Minerals. 5. Vitamins. 6. Soybeans and world population. 7. Soybeans and disease.

Part II: Soy products. 8. Soybean oil. Phosphatides, margarine. 9. Soybean oil meal. Gelsoy, Multi-Purpose Food. 10. Soy flour. 11. Concentrated soy protein products: Soy protein concentrates (Griffith Laboratories makes Isopro and GL-301), soy protein isolates, and textured or spun soy proteins. 12. Soy milk. 13. Soy cheese (tofu). 14. Soy sauce. 15. Soybean sprouts.

Part III: Soybean culture and preservation. 16. Soybean culture. 17. Preservation of soybeans (preserving green soybeans by canning, freezing, and dehydration).

Part IV: Recipes. 18. Soybeans and soybean pulp. 19. Soy flour: Breads, cakes, cookies, pies, soups, other recipes. 20. Soy grits and soy flakes. 21. Soy milk. 22. Soy cheese. 23. Soybean sprouts. Appendix: Soybean utilization (chart). References. Address: USA.

5049. Cowan, J.C. 1973. Processing and products [soybeans]. In: B.E. Caldwell, ed. 1973. Soybeans: Improvement, Production, and Uses. Madison, Wisconsin: American Society of Agronomy. xviii + 681 p. See p. 619-64. Chap. 20. [52 ref]

• ***Summary:*** Contents: 1. Introduction. 2. Processing for oil and meal: Preparation of flakes, solvents, extraction, desolventizer-toaster, degumming. 3. Conversion to edible oil products: Refining, bleaching, deodorization, hydrogenation. 4. Edible fat products: Salad and cooking oils, status of flavor stability, shortenings and margarine oils, lecithin. 5. Essential fatty acids and atherosclerosis. 6. Industrial uses of oil. 7. Meal for livestock and poultry: Nutritional aspects, factors affecting use of meals. 8. Edible protein products: Soy flour, concentrates and isolates, textured protein products (textured soy flour or textured soy protein fibers made into "meat analogues" resembling chicken, bacon, etc.). 9. Fermented and specialty foods: Tofu, soybean milk (an intermediate step in the manufacture of tofu), miso, shoyu (tamari, light-colored shoyu), sufu, tempeh, hamanatto, and natto.

Soybeans flow through a crushing plant as follows: First, they are cracked to release or loosen the hull and to break the cotyledon into about 4 parts. Shakers and aspirators separate the hull from the cracked cotyledons and rollers flake them. "Purified petroleum hydrocarbons known as hexane extract the oil from the flakes and the solvent is recovered. Moistened flakes are heated to inactivate the antinutritional factors and are converted to feeds for livestock and poultry. A small proportion of the flakes goes to a wide variety of soybean protein products including flour, isolates, and concentrates."

Tables show: (1) Utilization of soybean in U.S. in million pounds, every 5 years from Oct. 1933 to 1970 (Kromer 1970). (2) Use of soybean meal in the USA for feeding livestock and poultry (million tons). In 1969, the estimated amounts used were as follows: Cattle 3.43. Hogs 1.69. Other livestock 1.73. Total livestock: 6.85. Broilers 3.07. Hens and pullets 1.28. Other poultry 1.10. Total poultry 5.45. Total livestock + poultry 12.30. Note that cattle are the single biggest users. (3) Bleaching soybean oil (process, % clay and type, change in Lovibond color rating). (4) Effect of bleaching, citric acid, and light exposure on soybean salad oil. (5) Specifications for soybean oil. (6) Effect of linolenate content on flavor of soybean oil at

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elevated temperatures. (7) Composition of certain edible oil products from soybean oil and related products (salad oil, hydrogenated-winterized soybean salad oil, hydrogenated soybean oil liquid shortening, plastic shortening types I and II). (8) Changes in iron and copper content of soybean oil in commercial refining. (9) Properties of all-purpose and high-stability shortenings from all-hydrogenated vegetable oils and blends of animal fat and/or vegetable oil (iodine value, melting point, % linoleic acid, solid fat index {% solid at temperatures indicated}). (10) Typical analyses for mellorine and cookie and confectioner's fat. (11) Analytical data for typical margarine oils low and high in polyunsaturates (iodine value, melting point, % linoleic acid, solid fat index {% solid at temperatures indicated}). (12) NSPA–tentative lecithin specifications (NSPA, 1969-1970). (13) Composition of soybean lecithins. (14) Approximate composition of soybeans and meal products (whole bean, cotyledon, hull, hypocotyl, meal {cake–extruded, flakes–solvent extracted, dehulled flakes–extracted, mill feed–separated hulls, mill run–separated hulls}). (15) Amino acid analysis of soybean meal (44% protein and 49% protein {dehulled}) and corn. (16) Amino acid analysis of blends of soy flour with cereals and milk (Inglett 1968; Corn soy milk {CSM}, Millet soy milk, Wheat soy milk, etc.). (17) Partial formulas for young swine and boiler rations in percent total rations. (18) Partial formulas for dairy feeds (14% protein). A supplement to forage or roughage. (19) Soybean grits and flour–screensize. (20) Composition of soy flour. (21) Composition of 4 types of soy protein concentrates. (22) Uses for high-protein soy products (protein 70 [concentrates] and protein 90 [isolates]). Note: This is the earliest English-language document seen (Dec. 2004) that uses the term "protein 90" to refer to a soy protein isolate. (23) Amino acid analysis of fractions derived from dehulled extracted flakes (Rackis et al. 1961, 1970). (24) Effect of cooking in salt solutions on texture of structured granules. (25) Composition and use (1,000 metric tons in 1964 and 1967) of soybeans for traditional foods in Japan (Use of whole soybeans in 1967 in 1,000 metric tons: Miso 169, Shoyu 15, Natto 47, Tofu 329, Total 642. Use of defatted flakes or grits in 1967 in 1,000 metric tons: Miso 8, Shoyu 154, Natto 0, Tofu 77, Total 284).

Figures show: (1) Flowchart: Processing of soybeans to oil and meal using hexane extraction. (2) Illustration: A modern soybean processing facility (aerial view, Central Soya, Inc.). (3) Schematic diagram / flowchart: Manufacture of edible soybean oil products (salad oil, salad and cooking oil, shortenings, margarines, liquid shortening). (4) Illustration: A continuous deodorizer for soybean oil. (5) Graph: Effect of prolonged storage at 100°F on flavor score of hydrogenated-winterized soybean oil or soybean salad oil (nitrogen packed, air packed). (6) Illustration: Continuous chilling and working equipment for margarine production (Votator Div., Chemetron Corp.). (7) Flow diagram: Conversion of emulsions of margarine oils and ripened milk to conventional stick, whipped stick, and tub margarines (Votator Div.). (8) Chemical structure of prostaglandin-E_2, a fatty acid with hormone activity. (9) Diagram: Vapor-desolventizer- deodorizer for soybean flakes (Blaw-Knox Co.). (10) Flowchart and diagram: Operations with extruder-cooker. (11) Flow diagram: Manufacture of protein 70 [soy protein concentrate]. (12) Schematic diagram: Manufacture of soy protein isolate (Protein 90). (13) Photo: Chicken-simulated soy protein "meat" in three forms (Swift Edible Oil Co.). (14) Photo: Protein tow containing 16,000 monofilaments spread apart to show its fibrous nature; other tows in background (General Mills, Inc.). Address: NRRL, Peoria, Illinois.

5050. David-Perez, Enriqueta, comp. and ed. 1973. Recipes of the Philippines. Philippines: Published by the author. Printed by Cacho Hermanos, Inc., Corner Pines, and Union Streets, Mandaluyong, Metro Manila, Philippines. xiv + 170 p. Plus 8 leaves of unnumbered plates. Undated. Illust. (some color). 22 cm.

• ***Summary:*** The title page of this book states that the 19th printing was 1973 (Copyright by the author), but no initial date of publication is given. The rear cover states: Reprinted and exclusively distributed by: National Bookstore Inc. Other editions include 1953 (at Library of Congress), 1954, 1960, 1965, and 1968.

Contents: Acknowledgement. Introduction. Reminder. Fiesta fare. Everyday dishes. Sweets and desserts. Breakfast and merienda. Pickles and relishes. Refreshments. Glossary. Contains 19 black-and-white photos.

Soy-related recipes include: Baguio onion with tokua [firm tofu] (p. 28). Bañgus en tocho–1 (with tajure, p. 32). Bañgus en tocho–2 (with tajure, tausi, and tokua). Bañgus in soy sauce (with "2 tablespoons soy sauce," p. 33). Bawang guisado (with "3 pieces tokua, cubed and fried," p. 33). Beef steak (with "1 tablespoon soy sauce," p. 34). Misu-tomato sauce (with "3 tbsps. misu (soybean curd)" [sic, miso, not tofu], p. 74). Paksiw (Pork) (with "¼ cup soy sauce," p. 78). Paksiw na pata (with "Salt, toyo [soy sauce] and pepper to taste," p. 78). Pancit "luglug" (with "½ cup soy bean cake (Tokua) cut into small cubes," p. 80). Pork tapa (with "6 tbsps. toyo" [soy sauce], p. 88). Taguba (pork with "¼ cup soy sauce," p. 102).

The glossary defines the following soy-related terms: Misu–paste made of fermented rice and soy beans. Tajure–fermented soy beans, caked. Tausi–fermented soy beans. Tokua–soy bean curd. Toyo–soy sauce. Address: Philippines.

5051. Dubawsky, Rebecca. 1973. Cooking with grains and vegetables. Los Angeles, California, and Boston, Massachusetts: Order of the Universe Publications. Distributed by Tao Books. 29 p. Undated. Illust. No index. 28 cm.

• ***Summary:*** This 1973 edition differs from the original 1967

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edition as follows: (1) On the cover, in the upper left corner, is an illustration of a man bent over working in a rice field. The title is written in the lower right corner rather than in the upper left. The subtitle "Booklet one–A beginning" and the name and address of the publisher (in the lower left corner) have been omitted. (2) On the inside front cover, near the bottom, is written: "Distributed by Tao Books, 8454 Steller Dr., Los Angeles, Ca. [California] 90230. Tel.: (213) 837-2739 and 303B Newbury Street, Boston, Massachusetts 02115." (3) On the next page are two illustrations apparently taken from early sources (clip art): A full head of wheat with a long awn extending upward from the husk enclosing each grain. Two pumpkins on the vine with leaves above them. Below that: Library of Congress No. 73-127918. (4) Next comes a second title page, with silhouettes of rice plants at the left. (5) Next is a page stating: "The teaching of Aveline Kushi has made the information that follows possible." Below that: "Rebecca Dubawsky." To the left is another silhouette of grasses. (6) Next is a full-page of clip art showing a German chalet in the background, with three farmers working in a field in front of it, and a cart pulled by two oxen in the foreground. (7) Table of contents (p. 5). (8) Two stalks of grain. (9) The preface (p. 7) by Michio Kushi, October 20, 1967. (10) Three full heads of different types of grain. (11) Meals (p. 9).

(12) The last numbered page is 29, which has illustrations of a rice plant standing in water and a head of rice. (13) After that is "The Order of the Universe Publications" which contains descriptions of one periodical (*The Order of the Universe*) and five books and booklets (*Cooking Good Food; Cooking with Grains and Vegetables; Food for Spiritual Development*, by Michio Kushi; *Spirals;* and *Book of Do-In Guide Pratique*, by Jacques de Langre [DeLangre]). (14) At the bottom of the last page: "Printed in U.S.A. by Jacques de Langre, 7557 Sunset Blvd., Hollywood, Calif. 90046." Address: Boston, Massachusetts.

5052 Encyclopaedia Britannica: Soybean. 1973. Chicago, London, Toronto...: Encyclopaedia Britannica, Inc. 23 volumes. See vol. 20, p. 1037-39. [6 ref]
• ***Summary:*** An excellent overview of the soybean and its history. Contents: History. Areas of production. Plant characteristics. Cultivation. Uses. Uses in Industry. Address: Chicago, Illinois.

5053 Eno, David. 1973. The little brown rice book. 2nd ed. Launceston, England: Juniper Press. 31 p. Illust. by David Eno. Calligraphy by Jenny Ivermee. No index. 15 cm.
• ***Summary:*** A vegetarian cookbook entirely hand-lettered in calligraphy. A list of basic items for the stove cupboard (p. 8-9) includes "Soya beans–important source of protein. Tamari–the real soy sauce from fermented soya beans. Red beans [azuki]." Cooked soya beans and red beans are recommended as salad ingredients (p. 20).

5054 Ford, Marjorie Winn, Hillyard, Susan, Koock, Mary Faulk. 1973. The Deaf Smith country cookbook: Natural foods for family kitchens. New York, NY: Macmillan Publishing Co. (Collier Books). London: Collier Macmillan Publishers. xiv + 352 p. Preface by Frank Ford. Illust. Index. 24 cm. [7 ref]
• ***Summary:*** A pioneering natural foods cookbook, produced and copyrighted by Arrowhead Mills, Inc. of Hereford, Texas. Soy-related recipes include: Roasted soybeans (p. 42-43). Miso soup (with wakame, p. 53). Tamari bouillon (p. 57-58). Todo en la caldera (with soybeans and miso, p. 58). Miso sauce (p. 90-91). Thick tamari sauce (p. 91). Tofu (soybean cheese or bean curd, p. 98-99; an early recipe for homemade tofu made with vinegar or lemon juice as a coagulant. Lists 6 serving suggestions for tofu and 1 for the "soy mash" [okara]). Cooking flaked soybeans (p. 132-33). Soy sesame burgers (with 1/3 cup whole sesame seeds, p. 135-36). Rice pancake with tofu (p. 136). Soybean loaf (p. 138-39). Cooking with soybean flakes (p. 156). Blazing star timbales (with soybean flakes, p. 156-57). Tamale soy pie (with cooked soybeans or soybean flakes, p. 182-83). Soy milk (homemade, p. 292). In the last chapter titled "Natural Foods from Deaf Smith County," the following soy-related foods are discussed: Soybean flakes (p. 324, 327), black beans (a type of soybeans, p. 326), soybeans and foods made from them (p. 327). Soybean flour (p. 328). Tamari roasted nuts and soybeans (p. 331). Tamari soy sauce (p. 334). Miso soybean paste (p. 334). Wheat gluten is not mentioned in this book. Frank Ford's preface shows him to be a devout Christian, organic farmer (in Deaf Smith County, Texas), and advocate of natural foods.

In about Sept. 1991 this early natural foods cookbook was reprinted with a new cover and subtitle ("Natural Foods for Natural Kitchens"). Over 300,000 copies are now in print. Address: 1. Arrowhead Mills, Hereford, Deaf Smith County, Texas, 2. Soquel, California, 3. Foods editor, *The Texas Star*.

5055 George Ohsawa Macrobiotic Foundation. 1973. Useful names and addresses. 1471–10th Ave., San Francisco, CA 94122. 55 p. 21 cm.
• ***Summary:*** This macrobiotic directory lists names and addresses of macrobiotic people, organizations, food stores and restaurants, and bookstores in the United States (each category broken down by state), Canada, and abroad. The leading states for individuals are California (7.3 pages), New York (1.5 p.), and Massachusetts (1 p.).

There are listings for the following foreign countries: Argentina, Australia, Austria, Belgium, Brazil, Costa Rica, Denmark, England, France, Germany, India, Ireland, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, South Vietnam.

There are ads for the following companies: Sunflower,

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The Queensberry Bakery (112 Queensberry St., Boston 02215), East West Foundation Center, Sanae Inc. at 2 locations (Sanae Restaurant at 272A Newbury St., Boston, and The Seventh Inn at 288 Boylston St. in Boston), Prasad (1956 University Ave., Berkeley, California) (p. 0). Eden whole earth grocery and delicatessen, and Sun Bakery (330 Maynard St., Ann Arbor, Michigan) (p. 18). Janus Natural Foods (712 7th Ave. South, Seattle, Washington 98104 Phone 206-MA4-1084) shows that they distribute (import) tamari and miso, as well as sea vegetables. They carry the following brands: Erewhon, Spiral Foods, Deaf Smith, Pure & Simple, Chico-San, Arrowhead Mills (p. 27). Cliffrose (129 Coffman, Longmont, Colorado). Ceres Harvest Natural Foods (3632 W. Colorado Ave., Colorado Springs, CO 80904; wholesale and retail) (p. 39). The Good Karma Cafe (501 Dolores St., San Francisco), and The Good Earth (123 Bolinas Rd., Fairfax, CA 94930) (p. 50). Greenberg's Natural Foods, Inc. (125 1st Ave., New York, NY 10003).

Individuals and organizations interested in macrobiotics in the United States (arranged by state): Massachusetts: James Silver, Seventh Inn, 288 Boylston St., Boston, 02116. Erewhon Trading Co., 33 Farnsworth St., Boston, 02210. Michio Kushi, 440 Boylston St., Brookline, 02146. John Deming, c/o Kushi, 440 Boylston St., Brookline, 02146. Nik & Joanne Amartseff, Top of the Harbor, Gloucester, 01930. Ken & Ann Burns, 22 Knoll St., Roslindale, 02131.

Michigan: Mr. and Mrs. Michael Potter, #1169, 1407 Charlton Ave., Ann Arbor, 48103. Judith A. Bolduc, 822 Brookwood Rd., Ann Arbor, 48104.

The George Ohsawa Macrobiotic Foundation is a non-profit organization located at 1471–10th Ave., San Francisco, California 94122. It was founded in 1971. The aim of the Foundation is to spread the teaching of the unifying principle and its practical applications in daily life. Address: San Francisco, California.

5056. Goldbeck, Nikki; Goldbeck, David. 1973. The supermarket handbook: Access to whole foods. New York, NY: Harper & Row. xvii + 413 p. Illust. by Ellen Weiss. Index. 22 cm. Second ed. published 1976 by New American Library/Plume Books. 460 p.

• ***Summary:*** This influential book is dedicated "To the Preservation of the Family Farm." The authors believe that butter is a better spread than margarine, which is made by saturating polyunsaturated oils and adding many artificial ingredients (artificial color, preservatives). The chapter on beans contains a table titled "Protein for Pennies" that includes soybeans at the top of the list: Calories/lb: 1,828, protein/lb 154.7 gm, cost/lb: $0.25. Soybeans, unlike other beans, are a complete source of protein. "Soybeans: Soybeans are the most virtuous of all beans. They are the only food in the vegetable kingdom that contains all the essential amino acids the body needs to synthesize protein. People often talk about masking the flavor of soybeans with gravies and lots of seasoning; we don't know why since these beans actually have quite a pleasant taste of their own. Although cookbooks dealing exclusively with soybeans have been written, soybeans can be used just as you would any other bean and require no special handling" (p. 124).

A quarter pound soybeans grow into about 1 pound of soy sprouts. A nutritional comparison of the whole beans and the sprouts is given, showing the increase in vitamins. An illustrated description of making sprouts is given (p. 130).

Prepared sauces: Imported natural and "tamari" soy sauces are recommended. "The American simulation of soy sauce is unfortunately doctored with sugar, caramel coloring, and preservatives. Kikkomen [sic, Kikkoman] is the purest of these, tainted only with preservatives." Lea & Perrins, "the original Worcestershire Sauce," is considered the best and the only natural one. Other brands add corn syrup, artificial coloring and flavoring, and stabilizers. Recommended soy oil brands: Melba, Hain, Hollywood. They contain no artificial additives.

"The section 'Soybeans. The greatest snack on earth' (p. 282) recommends 'Soy Ahoy, roasted, unsalted soy nuts; Flavor Tree Peruts, plain or seasoned; Parker's Soy Joys.' Flavor Tree also makes a variety of 'chips.'" But these contain no soy. Note that neither tofu nor miso are mentioned in this book. The book does not advocate a vegetarian diet, but in the chapter "Meeting the Challenge of Meat," it discusses the many health problems with meat and recommends that if you still want to eat meat, try to find a natural, good quality product.

A photo on the back of the dust jacket shows Nikki and David Goldbeck. Address: R.D. 1, Box 452, Woodstock, New York 12498.

5057. Heiser, Charles B., Jr. 1973. Seed to civilization: The story of man's food. San Francisco, California: W.H. Freeman and Co. xii + 243 p. Illust. Index. 23 cm. [83* ref]

• ***Summary:*** Chapter 6, "Poor man's meat: the legumes," contains a section on "Soybeans" (p. 131-33). Photos show: (1) A field of soybeans in the USA planted in rows, free of weeds. (2) Soybean plants ready for harvesting. For more detail, see the 1990 revised edition. Address: Prof. of Botany, Indiana Univ.

5058. Houston, Jeanne Wakatsuki; Houston, James D. 1973. Farewell to Manzanar. San Francisco, California: The San Francisco Book Company / Houghton Mifflin. xiii + 177 p. No index.

• ***Summary:*** A deeply moving, beautifully written, and very personal book about a tragic episode in American history. "A wonderful, human, feeling book ... touching, funny, affectionate, sad, eager, and forgiving. And full of understanding"–Wallace Stegner, winner of the 1972 Pulitzer Prize for Fiction.

Probably because this is a personal story, it does not

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mention that both tofu and soy sauce were made on a large scale at Manzanar. However soy is mentioned (p 27): Woody said, "'I'll find out what they're giving us for breakfast.' 'Probably hotcakes with soy sauce,' Kiyo said."

On pages xi-xii is the following interesting chronology of Japanese in America: 1869–The first Japanese to settle on the U.S. mainland arrive at Gold Hill, near Sacramento, California.

1870–U.S. Congress grants naturalization rights to free whites and people of African descent, omitting mention of Oriental races.

1886–The Japanese government lifts its ban on emigration, allowing its citizens for the first time to make permanent moves to other countries.

1911–U.S. Bureau of Immigration and Naturalization orders that declarations of intent to file for citizenship can only be received from whites and from people of African descent, thus allowing courts to refuse naturalization to the Japanese.

1913–Alien Land Bill prevents Japanese aliens from owning land in California.

1924–Congress passes an Immigration Act stating that no alien ineligible for citizenship shall be admitted to the U.S. This stops all immigration from Japan.

1941 Dec. 7–Surprise attack on Pearl Harbor by the Japanese.

1942 Feb. 19–President Roosevelt signs Executive Order 9066, giving the War Department authority to define military areas in the western states and to exclude from them anyone who might threaten the war effort.

1942 March 25–Evacuees begin to arrive at Manzanar Camp, in Owens Valley, California, the first of the permanent camps to open.

1942 Aug. 12–Evacuation completed, 110,000 people of Japanese ancestry removed from the west coast to ten inland camps.

1944 Dec. 18–U.S. Supreme Court rules [in Endo v United States] that loyal citizens cannot be held in detention camps against their will, the first major step toward the closing of the camps. Note: Following this decision, the U.S. government announced that all the camps would be closed and the detainees released. The last of the camps was closed in 1946.

1945 Aug. 14–Japan surrenders, ending World War II.

1952 June–Congress passes Public Law 414, granting Japanese aliens the right to become naturalized U.S. citizens. However, long before this, any child of Japanese parents born in the United States or one of its territories (such as Hawaii) automatically became a U.S. citizen at the moment of birth.

Terms used in this book: *Issei:* The first generation. The Issei were born in Japan. Most of them immigrated to the United States between 1890 and 1915.

Nisei: The second generation, the children of the Issei. American citizens by birth, almost all Nisei were born before the Second World War.

Sansei: The third generation of Americans with Japanese ancestry, most of them born during or after the Second World War. Address: Santa Cruz, California.

5059. Hunter, Beatrice Trum. 1973. Fermented foods and beverages. New Canaan, Connecticut: Keats Publishing Co. 116 p. Index. 18 cm. [38 ref]

• ***Summary:*** In the chapter titled "Soybeans" (p. 31-49), the author discusses tofu (and how to make it at home with or without fermentation), meitauza (fermented okara), hakko tofu (a newly developed high protein food: fermented soybean curd), sufu (Vietnamese call it Chao), shoyu, miso, ketjap (thick Indonesian soy sauce [probably ketjap manis]), tempeh, Hamanatto, natto, Tao-cho from Malaysia, and Tao-si [fermented black soybeans] from the Philippines.

Note: The author has collected her information (both correct and incorrect) for a number of sources, which she does not cite directly, although she does have a bibliography.

5060. Ito, Kazuo. 1973. Issei: A history of Japanese immigrants in North America. Translated by Shinichiro Nakamura and Jean S. Gerard. Seattle, Washington: Executive Committee for Publication of Issei, c/o Japanese Community Service, 1414 S. Weller St., Seattle, WA 98144. xxviii + 1016 p. Illust. Index of personal names only. 24 cm. Translation of *Hyakunen Sakura.* [100* ref. Eng]

• ***Summary:*** This massive book is basically a history of first-generation Japanese immigrants to Pacific Northwest (especially Washington, Oregon, and British Columbia), focusing on the great struggles and hardships they met, written from the viewpoint of individual Japanese who tell their stories (often in the first person), and compiled by a Japanese journalist. The book was first published in Japanese. Access to the wealth of information it contains is crippled by the lack of a subject index. So if one were looking for information about tofu, miso, or soyfoods, one would have to read the entire book. The index of personal names is well done.

At the very front of this book are very interesting maps of the old Japanese districts of the following cities: Seattle, Tacoma, and Spokane, Washington; Portland, Oregon; Vancouver, British Columbia, Canada. Unfortunately, none of the maps are dated. The name and location of each Japanese organization or business is shown clearly in English. In the part on "Japanese exclusion," the section titled "The smell of race" [very interesting] (p. 227-28) states: "Exclusionists especially point out that Japanese favorite foods and condiments, such as *miso*, soy sauce, radishes and pickles, are intolerable [in smell]... The neighboring whites complained loudly that they just could not stand the smell of cooking soy sauce... A Japanese smells like miso, and whites in general exude faint waves of

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the odor of butter and cheese. The smell of their underarm perspiration is really strong."

In the part on "Railroads," the section titled "Life of Yoshiichi Tanaka" notes that he worked with a gang of young Japanese bachelors who were all trying to save money. For breakfast they had miso soup, which was delicious, so everyone ate more, which caused food expenses to rise. "So we skimped on miso and merely added salt for flavor." For lunch they sometimes had "fish cooked in soy sauce, or a half cake of *tofu* (bean curd cheese), or radish, carrots and beef boiled hard with soy,..." "In the Japanese restaurant in Seattle we could fill up on miso soup, rice and pickles for only 10¢..."

The part on "Alaska" (p. 355) is mostly about work in the canneries. "We shipped Japanese foods such as rice, soy sauce, miso, dried kelp [kombu] for soup base, dried sea slugs,... fu (a light cake made of wheat gluten), dried seaweed,..." Page 359 mentions soy sauce and miso soup with salmon.

The part on "Sawmills" states (p. 402): "The food was Japanese–first class rice imported from Japan, ... and *koyadofu* (a dish made from bean curd). For breakfast they served miso soup with vermicelli in it. Lunch was rice, and fish and vegetables boiled hard with soy sauce." On Sundays they had red bean soup with mochi (rice cake).

Under "Supplementary food" (p. 408-09): The meals were mostly Japanese. Breakfast: miso soup. ... Dinner: Sukiyaki. "Some people bought things from Seattle stores like bottles of pickled bean curd (*funyu*), salted sea urchin, fermented soy beans [natto], salted plums, or seaweed preserved by boiling in soy sauce (*nori no tsukudani*),..."

In 1907 we spent $5 to $6 per month for food, and it was poor. For breakfast we ate miso soup and rice;... for lunch rice cooked together with *aburage* (fried bean curd)... I bought canned salmon and poured soy sauce and sugar on it for dinner. For Saturday dinner we had sukiyaki.

Page 410: Breakfast was tofu in miso soup with pickles and rice. Page 411: Deer meat sukiyaki.

In the part on "Agriculture," we read that Japanese immigrants to American sometimes enjoyed Japanese soyfoods. In about 1910, in Fife, a farming community near Seattle, in about 1910, Gunji Fujimoto "had miso soup and pickles for breakfast" (p. 440). In about 1916, in Hood River (northern Oregon), Henry Nakamura wrote that Japanese people could get foods from Japan, including "fried bean curd" (p. 499-500). There they also enjoyed miso soup for breakfast, cooked red beans [azuki] spread on bread for lunch, and rice, pickles, and dried radish strips cooked with soy sauce for dinner (p. 503). In the early 1920s in Oregon, breakfast typically consisted of rice, miso soup, and pickled cucumbers (Shoemon Nakamura, p. 512).

The part on "Mines" in 1917 (p. 557): "Dinner was Japanese style with stews, beef and tofu cooked together with soy, fish, miso soup, rice and so on."

Page 568: "The meals at Endo camp were notorious. Breakfast was miso soup and pickles with rice. When the population increased, the amount of soup was increased by adding water, not miso. The contents of the soup was always wakame (seaweed)" all year long "changelessly wakame. Mr. Endo laid in a huge stock of left-over seaweed and fried dried bean curd, and miso, soy sauce and pickles."

Part 20, "On the Streets," states that "The old Japanese towns in Seattle, Tacoma, Portland, and Vancouver (Canada) can hardly be traced today." The author has tried to reconstruct maps of these towns "in roughly the period of the 1920s, but not in any specific year" (p. 779-80). In Nov. 1908 Masanao Hanihara, Secretary of the Japanese Embassy, issued a report on his investigations of living conditions of Japanese in the western USA (p. 791). He found the Japanese still lived "at the level of immigrant laborers;" the conditions in their communities were "extremely low and chaotic." "The Japanese in these areas hardly mix with white residents, while sometimes they approach or mix with Chinese. There are many ill effects from clique-ishness." "The majority of Japanese workers lack knowledge of English, so whenever they make contracts they sign papers blindly" (p. 795-96). Hanihara estimated the Japanese population of various states as follows: Washington 9,000 to 10,000, Oregon 3,500 to 4,500, Wyoming 1,000 to 1,500, Idaho 1,000 to 1,500, Montana 1,000, and Alaska 1,000. The largest Japanese community in the region was in Seattle (about 4,000 Japanese). "Shinzaburo Ban of Portland is almost the top among successful Japanese on the Pacific Coast." His business, S. Ban Co., headquartered in Portland (where he arrived in 1891), acts mainly as a contract agency for Japanese laborers–a sort of employment agency, "and his store supplies sake, miso, soy sauce and other such Japanese foods and small items to the laborers" (p. 789-93, see portrait photo p. 792). A sidebar (p. 793, by Raisuke Tamura, Seattle) notes that "However long they lived in the United States, Japanese had to have Japanese food. ... Around 1906 I imported from Japan vegetables such as lotus root, Japanese radish [*daikon*], *gobo* (burdock), *zenmai* (fern), *abura-age* [deep-fried tofu pouches], *nigari* (bittern, a tofu coagulant), *tsukuneimo*, *yamaimo*, and so on, in hundred-pound baskets, and sold them to sawmills and railroad camps" (p. 793).

The 1 January 1916 edition the *Hokubei Nenkan* listed all businesses operating in various Japanese towns. These included two "tofu-makers" in Seattle, Washington (p. 800), at least one tofu maker in Tacoma, Washington (p. 804). Tacoma had a Japanese population of 931 in 1915–721 males and 210 females). Spokane didn't have a Japanese town as in Seattle and Tacoma, but in 1915 it did have a Japanese population of 536 (462 males and 74 females).

The map of old-town Portland, Oregon, probably from about 1935, shows 90 Japanese businesses located between 1st Ave. and 7th Ave. (running north-south) and between W. Burnside and N.W. Glisan (running east-west). Among these

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are two tofu manufacturing companies. "Ota Tofu Mfg." is located on 5th Ave. between Everett and Flanders. [Note: The actual address was 86½ 5th N]. "Fukei Tofu Mfg." is located is on N.W. Davis between 3rd Ave. and 4th Ave.

Contents: The book is divided into 21 parts, with each part containing several chapters (the number is shown in parentheses): 1. Sailing (6). 2. Secret passage and ship-jumping (5). 3. Japanese exclusion (15). 4. Japanese women (2). 5. Railroads (5). 6. Alaska (4). 7. Sawmills (2). 8. Agriculture (7). 9. Hotels (2). 10. Restaurants (2). 11. Mines (2). 12. Oysters (2). 13. Japanese language schools (2). 14. Studying English (3). 15. Pro-Japanese (8). 16. Furuya Company (4). 17. Lese majesty affairs (2). 18. Gambling (3). 19. Girls (2). 20. On the streets (9). 21. In Memorium [Memoriam–to the many who died]. (2). Appendixes: (1) Partial list of Japan-U.S. and Japan-Canada sister cities. (2) Japanese consulates. (3) Chronological table: Japan and America (side by side), 1868-Sept. 1972. Bibliography (p. 967-72, mostly Japanese-language books). Epilogues: To English and to Japanese editions. Index of personal names (p. 988-1016). Address: Tokyo and Seattle, Washington.

5061. Li, Shih-Chen, comp. 1973. Chinese medicinal herbs. Translated and researched by F. Porter Smith, M.D. and G.A. Stuart. San Francisco, California: Georgetown Press. 467 + [41] p. See p. 189-96, 411. Index. 24 cm. [1 ref. Eng]
• ***Summary:*** This paperback book, which has an orange and yellow cover, is a reprint, published without proper explanation or credit. It is a facsimile copy of Rev. G.A. Stuart's fine book, titled *Chinese Materia Medica* (1911), which is based on the famous *Pen-ts'ao kang-mu* and (as the title page of Stuart's work states) "Extensively revised from Dr. F. Porter Smith's Work" titled *Contributions towards the materia medica & natural history of China. For the use of medical missionaries & native medical students* (1871).

The preface to this 1973 reprint is by Beatrice Bliss, in whose name the book is copyrighted. On the rear cover, Bliss notes: "For over 4500 years Chinese scholars have been compiling medical treatises. The greatest and most complete of all was published in 1578, after 26 years of labor, by Li Shih-chên. American physicians in China, long impressed with the efficacy of organic medicine, translated, researched, and updated his herbal Pên Ts'ao, now published for the first time in the United States." The preface continues: "Unlike the Western world, China has been flooded since time immemorial with medical treatises. While the first English-language pharmacopoeia was published in London in 1618, the earliest Chinese treatise still in existence is attributed to the Yellow Emperor who, according to legendary history ascended the throne of China in the year 2698 B.C... The complete Pên Ts'ao comprises 1,892 species of drugs, animal, vegetable and mineral, and includes 8,160 prescriptions."

The plants discussed are listed alphabetically by scientific name. The sections on soybeans, which have many uses as medicinal herbs, are identical to those found in Stuart (1911).

Also discussed are: Kudzu vine, *ko*, or pueraria (*Pachyrhizus thunbergianus;* p. 299). Azuki bean or Ch'ih-hsiao-tou (*Phaseolus radiatus;* p. 316. "It is considered to be good food for donkeys, but is too heavy and heating for mankind. Medicinally, it drives away dropsy and scatters carcinomatous and purulent swellings.").

Wheat Gluten (Mien-chin; p. 445-46). "This is prepared by washing out the starch, and when a small quantity is wanted for catching birds, it is only necessary to masticate the wheat until nothing else is left. It is used as a nutritious article of diet, and is also considered to be antifebrile."

5062. Michaels, Elsa. 1973. The vegetarian menu cookbook. New York, NY: Drake Publishers Inc. 191 p. Illust. (some color). 28 cm.
• ***Summary:*** Soy-related recipes include: Soya rice (with soy sauce and margarine, p. 70). Soybean squares (with cooked soybeans and soya flour, p. 117).

5063. Muramoto, Noboru; Abehsera, Michel. 1973. Healing ourselves. New York, NY: Avon/Swan House. 150 p. Illust. Index. 28 cm.
• ***Summary:*** The author's first name is misspelled throughout. Noboru is correct; Naboro is wrong. The book is based on 4 weeks of lectures given by Muramoto. Abehsera complied and supplemented these teachings.

Note: This is the earliest document seen (Sept. 2002) concerning Noboru Muramoto.

5064. Nakayama, Tokiko. 1973. Chûgoku meisaifu [Chinese cuisine: Famous recipes]. Tokyo: Shibata Shoten. 4 Vols. [Jap]*

5065. Norinsho. 1973. Shôyu no Nihon Nôrin Kikaku [Shoyu: Japanese Ministry of Agriculture and Forestry Standards]. In: Nihon Norin Kikaku [Japanese Agricultural Standards]. Tokyo: Norinsho. See p. 1487-95. Revised 1980. [8 ref. Jap]
Address: Japanese Ministry of Agriculture and Forestry.

5066. San Jia Starch Factory. 1973. [Report on the application of liquid proteinase for soy sauce production]. *Acta Microbiologica Sinica* 13(2): 188-90. [3 ref. Chi]

5067. Smith, Margaret Ruth. 1973. Anne Seranne's good food without meat. New York, NY: William Morrow & Co. 351 p. Illust. Index. 27 cm.
• ***Summary:*** A vegetarian cookbook. The author, Anne Seranne (= Margaret Ruth Smith) was born in 1914.

Soy-related recipes include: Sweet and sour dashi sauce (with soy sauce, p. 85). Deep-fried soy-bean curd

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(with canned, baked soybean curd (*yakidofu*), p. 85). Baked soybeans (p. 175). Soy bread (p. 259, "Use half stone-ground soy flour and half unbleached all-purpose flour in basic recipe."). Gluten bread (p. 259; Gluten flour combines well with soy). Rye soy bread (p. 259, "Substitute 1 cup each rye flour and soy flour for 2 cups of the all-purpose flour ").

5068. Kikkoman Foods, Inc. 1973? Standard policy manual. Walworth, Wisconsin. 65 p. Undated. 28 cm. [Eng]
• ***Summary:*** Section I. Organizational manual. Introduction. Company objectives. Organization principles. Organization chart. Committees. Position descriptions. Section II. Personnel procedure and policy manual. Introduction. Personnel policy. Personnel procedures. Wages, hours, and benefits administration. Relocation policy. Section III. Community and public relations. Employee membership in community organizations. Corporate gifts policy and budget. Section IV. Appendix. Forms exhibit. Other. Address: Walworth, Wisconsin 53184.

5069. Kikkoman Foods, Inc. 1973? Employee handbook. P.O. Box II, Walworth, WI 53184. 16 p. Undated. 19 x 10 cm. [Eng]
• ***Summary:*** Contents: Sangyo damashi (Our company spirit is expressed in this phrase which means that we always endeavor to enrich the daily life of people everywhere by adding to the joys and benefits of good eating.) Welcome. Our plant. Our product (Soy sauce). Our process. Training. Organization chart of Kikkoman Foods, Inc. Probationary period. Wages and benefits. Rules and regulations. Grievances. Adverse business condition adjustments. Hours of work and payment schedules (three 8-hour shifts). The end or the beginning? President's message to employees. Address: Walworth, Wisconsin.

5070. Oles, Shayne. 1973? The new Zen cookery: Practical macrobiotics. Woodland Hills, California: Shayfer Corporation. 86 p. Undated. Index. 22 cm. Spiral bound.
• ***Summary:*** A revised edition of the first American macrobiotic cookbook, containing a wide variety of recipes from many sources. The cover is light orange. In the lower right corner is a sumi-e type brush illustration of some grasses and flowers. All recipes are numbered. The recipe numbers and page numbers are a little different from those in the 1966 edition published by Ignoramus Press in Los Angeles. Pages 59-62 (recipe nos. 210-21) are about Miso soybean paste. Pages 62-64 (recipe nos. 222-28) are about Tamari soy sauce.

Herman Aihara (Nov. 1990) has no idea why there are two versions of this book, both undated. Shayne Oles must have published one or both of these after Herman Aihara started the George Ohsawa Macrobiotic Foundation (any time after 1969). Only Shayne Oles would know. One clue is given in *Macrobiotics: Yesterday and Today* by Ron Kotzsch (1985, p. 170). "In 1966 Lou Oles, who with his wife Shane [sic, Shayne] had managed the revived Ohsawa Foundation, died, and Shane asked Herman [Aihara] to assist her. Herman began to travel to Los Angeles once a month to give lectures at the Foundation headquarters. He was also instrumental in the publishing of Ohsawa's books, which were selling well on the East Coast as well as the West. By 1969, however, dissention had developed over the role of Shane's new husband in the organization. Herman resigned. In 1970 the Ohsawa Foundation dissolved. Aihara, who had moved to San Francisco [from Carmichael, near Sacramento], established the George Ohsawa Macrobiotic Foundation as a new educational and publishing organization." Address: President of Ohsawa Foundation, California.

5071. Source (The). 1973? The Source (Menu). Hollywood, California. 6 p. Undated. 22 cm.
• ***Summary:*** This attractive undated menu, handwritten in calligraphy with a decorative illustrated border, is from the famous vegetarian restaurant started in 1969 by Jim Baker (Yahowa), the original is owned by the Los Angeles Public Library. Though the restaurant is usually said to be vegetarian, a chicken sandwich (tucked in pita bread) and a tuna sandwich appear on the menu under Salads; all other menu items are vegetarian.

Contents: Breakfast menu (incl. Soy or whole wheat pancakes). Juices (Fresh squeezed to order, incl. Fruit smoothie). Sandwiches. Beverages (incl. Herb tea, Mu tea, Carob milk, Red Zinger tea). Salads (incl. Chinese style salad with tamari sauce, and some with alfalfa sprouts). Fruit salads. Entrees (incl. Magic mushrooms with hizaki and "tamari sauce"). Soup. Desserts (incl. Cheesecake, Ice cream, Coffee cooler, Date shake, Carrot cake, Rice pudding).

Note 1. Since the prices in this menu are about 30% (range 18-66%) more expensive than those in the other menu seen from The Source, this one was almost certainly of a later date.

Note 2. The word "organic" does not appear in this menu. Address: 8301 Sunset Blvd., Hollywood, California. Phone: 213-656-6388.

5072. Kaibara, Ekiken. 1974. Yôjôkun: Japanese secret of good health. Translated by Masao Kunihiro. Tokyo: Tokuma Shoten Publishing Co. Ltd. vii + 133 p. Preface by Ayanori Omishi of the Japan Society of Medical History. No index. Jan. 21 cm. [Eng]
• ***Summary:*** Contents: Preface. 1. What is health preservation. 2. How to keep health. 3. Food and drink: What and how. 4. Repressing sexual desire. 5. The five sensory organs. 6. Easing nature and bathing. 7. Prudently guarding against illness. 8. Selection of a doctor: How to avoid a quack or charlatan.

"The original texts of this book are those of 'Yôjôkun,'

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published in Japanese by Chûôkôron-sha Inc., Tokyo, in 1969, and by Tokuma Shoten Publishing Co. Ltd. in 1968, and are adapted under the direction of Ayanori Onishi." The author lived 1630-1714, and this book was written in 1713. The Preface notes that the importance nurturing mental discipline lies at the very core of the author's art of staying healthy. Among his other works is *Yamato Honzo* (*Japan's Herbal*), which is still valued today and well known even abroad. A Soviet scholar has even termed it "the first great work on natural history." The German physician and naturalist Philipp Franz von Siebold (1796-1866) called Kaibara "the Aristotle of Japan."

Kaibara, who has been called the "grandfather of macrobiotics," was an avid observer of the natural and human world. He traveled widely and wrote pioneering works on botany, geography, herbal medicine, and on popular manners and morals. At the age of seventy he retired from active life, and, free to sift through a lifetime of experience and learning, wrote the *Yôjôkun*, which includes the old sage's views on health and longevity. He begins by asserting that physical well-being and long life are the natural conditions of mankind.

In Chapter One he writes: "The art of health preservation entails, first of all, keeping away from things harmful to one's body, i.e., the inner desires–the desire for food and drink, sexual indulgence, sleep, endless talk, and the seven emotions: joy, anger, worry, pensiveness, sadness, fear, and surprise–and the outer evils–the four atmospheric aspects: wind, cold, heat, and dampness... An important factor in suppression of the inner desires is temperance in eating and drinking... One should refrain from satisfying sexual desire and try to preserve one's energy. Sleep should be confined to standard hours. Oversleep is to be avoided... Of particular importance is to take a walk of a few hundred paces after meals... The art of health preservation begins with mental placidity. The way to achieve mental placidity is to keep one's mind calm and one's spirit unruffled... The human body is meant to last a hundred years... One should not rely on acupuncture, moxibustion, or medicine... A saint always expounds on the delights of living." And sickness, like health, is something which mankind creates. Quoting the *Tao Te Ching*, Kaibara observes "One's life is in one's own hands." Sickness comes only when one has willfully abused oneself. "Illness never comes without reason."

In Chapter 3, Kaibara discourses at length on the subject of food and drink. The author, a Japanese physician, recommends a balanced diet to protect against chronic diseases. Meat and sake should be consumed in moderation. "A person should prefer light, simple meals. One must not eat a lot of heavy, greasy, rich food. One should also avoid uncooked, chilled, or hard food (p. 54)... Of everything that one eats and drinks, the most important thing is rice, which must be eaten in ample amounts to ensure proper nutrition (p. 61)... Do not eat between meals or immediately before going to bed. After eating take a short walk to stimulate circulation. Massage the stomach and abdomen lightly to encourage digestion..."

The section titled "Bean paste" (p. 67) begins: "Bean paste [miso] has a soft quality and is good for the stomach and intestines. Soy sauce and the liquid that drips off bean paste [tamari] have a sharper quality than bean paste and are bad for people who suffer from diarrhea. Nor should vinegar be taken in too large amounts, for it is bad for the spleen and stomach... One must not eat too much of foods that are salty, vinegary [sour], or hot." One should also avoid tobacco.

In the chapter titled "Repressing Sexual Desire," Kaibara states that the great human frailties are gluttony and lust. He agrees with the Chinese sages that one should practice sexual abstinence in youth to reserve one's vitality and vigor. He cites the *Chien Chin Fang* by Sun Szu-miao which talks about the frequencies of sexual intercourse: "At twenty years of age, people should have a discharge [of semen] no more than once in a period of four days, at thirty once in eight days, at forty once in sixteen days, and at fifty once in twenty days. At sixty a person should no longer discharge his energy sexually unless he is particularly vigorous physically, in which case he can do so once a month." Kaibara believes that it is very important to conserve sexual energy since it deeply affects the function of the kidneys, and the kidneys are the seat of vital energy for all the other organs. Address: Japan.

5073. Prendergast, K. 1974. Protein hydrolysate–A review. *Food Trade Review*, Jan. p. 14, 16-21. [15 ref]

• ***Summary:*** Contents: Introduction. Enzymic hydrolysis. Alkaline hydrolysis. Acid hydrolysis. Manufacturing process. Raw materials. Cost effectiveness. Ease of application. Temperature stability. Water solubility. Shelf life. Safety. Nutritional. Lack of solubility in oils and fats. Hygroscopicity. Lack of specific individual flavours. Applications. Why are HVP's necessary?, soups, gravies and bouillons, meat and poultry products, fish products, sauces, savoury snacks, unusual applications, maillard reaction products, novel protein. Analysis and flavouring principles.

"The use of protein hydrolysates to improve the flavour of foods originated many hundreds of years ago in the Far East with the development of traditional soy sauce, which was made by the action of mould enzymes on steamed soyabeans and wheat. Then, in 1912, several patents were granted to Ikeda in Japan, and over the next sixty years enormous advances were made in hydrolysate technology. Now, by process refinement and formulation, manufacturers can produce grades which are tailor-made to an individual food product's requirements. Furthermore, whereas 30 to 40 years ago most manufacturers had just one or two grades, which were used for every product type, suppliers can now frequently offer a range of thirty hydrolysates, each with its own individual properties, character and flavour."

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To make HVP, protein and hydrochloric acid are cooked at an elevated temperature. When the hydrolysis is complete, the material is neutralized with sodium hydroxide or sodium carbonate to a pH in the range 4.8 to 6.0. A black sludge called humin is removed by filtration, then the filtrate is debittered and decolorized / bleached using an activated carbon. After a final filtration the resulting HVP can be spray-dried to make a powder, concentrated to a paste in vacuum pans, or sold as a liquid. Address: Hercules Powder Co., Ltd.

5074. Eden Foods, Inc. 1974. Wholesale prices, F.O.B. P.O. Box 100, 310 W. Ann St., Ann Arbor, MI 48107. 2 p. Catalog. Effective Feb. 1.
• ***Summary:*** The products are very similar to those in the Nov. 1973 catalog. The 3 types of miso (Mugi, Hacho, Kome) bear the Erewhon label. Address: Ann Arbor, Michigan. Phone: (313) 769-8444.

5075. *Los Angeles Times*. 1974. Seldom-used soybean high in protein, unsaturated fats. Feb. 7. p. F2.
• ***Summary:*** Genevieve P. Ho, PhD, of the Agricultural Extension Service, USDA, University of California, explains that soybeans and soybean products have been staples in China for 4,000 years [sic, 3,000 years]. Among these products are "soybean curd, soybean milk, soybean sprouts and soy sauce..."

"In 1972, soybeans retailed for 14 cents a pound. Today they sell for 54 cents a pound in health food stores and 31 cents a pound in Oriental markets." Describes how to cook whole dry soybeans at home. Gives recipes for: Soybean casserole. Soybean cookies (with "1 cup cooked soybeans"). Bean curd soup (with "1 cup bean curd (tofu), broken in small pieces"). Bean curd and shrimp (with "1½ cups bean curd (tofu)" and "1 tbsp. soy sauce").

5076. Dresden, Donald. 1974. Japan Inn. A good show, visually and gastronomically. *Washington Post*. Feb. 17. p. PO34.
• ***Summary:*** Dining. The Japan Inn, now in its 3rd year of operation, located at 1715 Wisconsin Ave., NW (Georgetown), continues to rank as one of the finest Japanese restaurants in Washington, DC. To make the broth for Miso soup, begin with a Japanese seaweed called "sea tangle" [kombu], then remove it after it has imparted its flavor. Add dried bonito flakes to produce a delicate, fish-tasting broth. "Bean cake [tofu], mushrooms, and chopped green onions finish the dish."

Shabu-shabu comes with two dipping sauces. One of these is made by mixing soy [sauce], vinegar, two kinds of sake, seaweed and dried bonito flakes. The other contains sesame seeds, oil, and paste. Shabu-shabu "also contains hot pepper, aged soy bean cake, soy sauce and two kinds of sake, one of them [mirin] sweet."

Note: The meaning of "aged soy bean cake" is unclear. It could be fermented tofu, although that is rarely used as an ingredient in Japanese cookery.

5077. Pellettier, Mabel. 1974. Chinese. Longtime crisis cookers. *Washington Post*. Feb. 21. p. H2.
• ***Summary:*** A recipe for Steamed spareribs or pork chops calls for: "2 tablespoons fermented black beans, crushed very lightly in 1 tablespoon water, 1½ tablespoons dark soy sauce."

A recipe for Shrimp and snow peas calls for "1 tablespoon light soy sauce."

5078. Kushi, Michio. 1974. Natural agriculture and food processing. *Michio Kushi Seminar Report (Brookline, Massachusetts)* No. 3. Feb. 26 and 27. p. 5-30. Edited by Ane & Mark Riegel.
• ***Summary:*** On Feb. 26 Mr. Kushi, a macrobiotic teacher, lectured on: Tekka–"Tekka is used not only as a condiment, but also for medicinal use. Tekka is made from three different roots–carrots, burdock, and lotus roots." The "volume of miso is flexible... Homemade tekka is traditionally made in a cast iron frying pan." The Japanese word "tekka" derives from *tetsu* (which means iron) and *ka* (fire). "For medicinal use, yang miso is better."

Miso and miso manufacturing, including how to make malt (rice koji) (8 pages). Note: This section indicates that Mr. Kushi has some basic knowledge of the subject but there are many errors. 1. Koji is not malt (which refers to soaked, germinated cereal grains), but molded cereal grains or soybeans. 2. Koji kin is not malt bacteria, but koji molds. 3. One does not add enzymes to miso and enzymes do not grow. Even modern miso factories do not add enzymes when making miso. 4. The entire mixture is not stirred after 20-25 days to add oxygen. Kushi says you must keep miso for a least 6 months, but to cure sickness it must be kept for 2-5 years. Miso soup can compensate for the bad qualities of meat and eggs–so everyone should eat miso soup daily. Soup stocks and miso soup.

On Feb. 27 he discussed: General outline for making shoyu–soy sauce (4 p.), including discussions with Kikkoman on making natural shoyu starting with whole soybeans. In the early years after 1973, Kikkoman wanted to make natural shoyu and sent Kushi several samples, but he turned them all down, in large part because Kikkoman wanted to use defatted soybean meal instead of whole soybeans. Erewhon is buying shoyu from 3 companies in Japan. But Kushi says the quality is declining compared to five years ago [i.e., 1969], when it had powerful healing effects when taken with bancha or kuzu. He adds: "Around Boston or on our Ashburnham land, I really hope we can begin to make miso or soy sauce." Kushi says that now, after pasteurization, coloring and flavoring is added [not true, except in HVP soy sauce]. "Traditionally [in Japan] for this

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they used natural herbs. For a sweeter taste and darker color they traditionally used kanzô [kanrô?] or 'sweet grass = sweet herb.'"

"Formerly, until modern technological methods started to be applied, almost each village made their own shoyu like this, either as a joint community project, or someone with money made it and sold it to several villages."

Using bean and grain sprouts–moyashi (including soy sprouts). Other soybean products. Fried tofu (two methods for agé). Ganmodoki. Kori-tofu or koya-tofu (freeze-dried tofu). Soybean milk ("Soy milk is very yin." Note: Most Japanese and Japanese scientists consider soymilk to be an "alkaline" {*arukari-sei*} beverage, which therefore promotes good health). Yuba. In the discussion, soymilk yogurt and "Chinese fermented tofu... fu nyu" (p. 28) were mentioned. The U.N. [United Nations] recommendations on food, using vegetable proteins.

Note: This is the earliest English-language document seen (May 2012) that uses the term "freeze-dried tofu" to refer to dried-frozen tofu. Address: Brookline, Massachusetts.

5079. Erhard, Darla. 1974. The new vegetarians. II. The Zen macrobiotic movement and other cults based on vegetarianism. *Nutrition Today* 9(1):20-27. Jan/Feb.
• ***Summary:*** This article is mainly a very critical assessment of the macrobiotic diet and movement introduced as a cure by George Ohsawa. It also discusses Sufi groups, the new Vrindaban International Society for Krishna Consciousness (founded in 1966 by his Divine Grace A.C. Bhaktivedanta Swami Prabhupada), and various vegan groups.

A pie chart on page 21 shows the various major food movements in the U.S. counterculture "and how they all lead to unscientific vegetarian forms of food faddism." Within the natural food movement are organic communes, Krishnas, vegans, Sufis, followers of the Ehret's mucusless diet healing system, and practitioners of Yoga. Within the health food movement are four major teachers: Paul C. Bragg, Herbert Shelton, Carleton Fredericks, and Adelle Davis. Within the "Cosmic Nutrition Movement" are Zen macrobiotics (yin/yang polarity), and the Messiah's Crusade (positive/negative polarity).

"Veganism is the philosophy and practice of compassionate living. Founded in England in 1944, the Vegan Society originally stressed the ethics of eating. The American Vegan Society, based in New Jersey, was founded in 1960 and is composed of individuals who are more health oriented. This Vegan philosophy was essentially based on Dr. Albert Schweitzer's concept of reverence for life, and Mahatma Gandhi's concept of Ahimsa, a Sanskrit term meaning non-killing and non-injury" [dynamic harmlessness] (p. 27). "Vegans who practice more restrictive diet interpretations may use Dr. Shelton's Food Combining System." Vegans and their children often use soya milk.

The reason is that the general natural foods movement is an example of unscientific food faddism is that the "Diet emphasizes natural and/or organic vegetables, fruits, legumes, grains, and usually dairy products, and restricts meat."

A sidebar briefly defines "Vegetarian terms" including amasake, miso, mochi, nirvana, tamari, tofu, and umeboshi.

Note: This is the earliest document seen (May 2002) concerning Sufism (or Islam) and Vegetarianism. Address: RD, MPH, Research Nutritionist, Clinical Study Center, San Francisco General Hospital, California.

5080. Gerner, Bob. 1974. Log of trip to Japan to study traditional natural foods, 28 Feb.–2 March 1974. Part I (Log–unpublished). Westbrae Natural Foods Inc., Berkeley, CA 94710. 26 p. Unpublished log. Handwritten. 20 x 8 cm.
• ***Summary:*** 1974 Feb. 28. Meet Bill Shurtleff and Mr. Masa Miyashita of Kikkoman export dept. (good man, speaks fluent English) at the Imperial Hotel (*Teikoku Hoteru*, built in the 1920s by Frank Lloyd Wright) in Tokyo. Talk for 4 hours. Westbrae hires Shurtleff as an interpreter and guide.

March 1. Dinner at Sasa-no-Yuki, beautiful old restaurant that specializes in tofu cuisine.

March 4, Monday. Visit Kikkoman in Noda with Shurtleff and Miyashita. Tour Plant #7, then Plant #4 (the Goyo-Gura), which produces the emperor's shoyu in the traditional, natural way. "Saw 5 batches of moromi mash from 1 month old to 12 months old, and tasted each one. Delicious. Great color change between the 1 month and the 12 month moromi. We saw all the traditional tools. The moromi vats were made of cedar and last approximately 200 years." See a movie on how shoyu is made. Lunch at a sushi shop. Visit two miso retail shops with Shurtleff near his home. One had 42-45 types of miso (mostly rice miso, with 1 each Hatcho, barley, and cooked miso), the other 32-35 types. Tasted many and learned the differences. I buy Saikyo sweet white miso and Hatcho miso.

March 5, Tues. Attend a cooking class at Lima Ohsawa's house, then have dinner with Lima and the class members. Sick for the next 2 days.

March 9, Sat. Call then meet Mr. Kazama of Mitoku. He represents Erewhon. We may import through Kikkoman's Pacific Trading. Plan trip to Sendai Miso-Shoyu. Sendai is interested in using organic soybeans to make shoyu but would like a contract stating that all of it will be purchased when done. Dinner at the natural foods restaurant, Hakumon run by a Frenchman named Pierre.

March 11, Mon. Meet Shurtleff early at Tokyo station. Take bullet train (Shinkansen) to visit two Hatcho miso plants (Hayakawa Kyuemon Shoten, and Ota Shoten in Okazaki city, Aichi prefecture). Both plants claim to be over 600 years old. They use modern steamers and koji rooms. They pile 4-6 tons of rocks atop each large vat of miso, age it for 2 summers. It becomes very mellow when fully

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aged. They also use about half of their Hatcho miso to make Akadashi miso. It also contains caramel coloring, barley syrup, MSG, shoyu, a white miso, and preservatives. They sell a lot of Akadashi but only a little Hatcho miso. Lunch at an udon noodle shop that hand makes and cuts the noodles. Lots of slurping. Then visit a plant that makes real tamari and shoyu. All the tamari is mixed with junk. Train to Kyoto; stay at Friends World College. Note: This is the earliest English-language document seen (March 2012) that contains the term "real tamari."

March 12, Tues. Visit a tofu maker, a yuba maker (*Yuba Han*), then the company that makes Saikyo sweet white miso. The owner lies to us initially about his miso aging and caramel coloring (which tastes and looks like tar). Then he reverses himself without batting an eye. Lunch at a 300 year old Zen vegetarian restaurant (*Okutan* near *Nanzenji* temple); so beautiful that I start crying. Fantastic place. Light snow falling by the pond. Enjoy Simmering Tofu (*Yu-dofu*) in a broth. Then we go to a 400-year old tofu restaurant (*Nakamura-ro*) at a shrine (*Gion*) for dessert of *amazake* and *Dengaku* (skewered and braised with sweet miso). On to a second miso factory. It is a bore and the owner does not seem sincere but he has a great reputation among macrobiotics. He makes both natural and sweet white miso. Shurtleff visited him last year. For white miso the soybeans are boiled; for red miso they are steamed. Some white miso contains sodium thiosulphate bleach. Visit another yuba shop. They use granite grinding stones to make soymilk, cast iron pot to cook it in and copper skimming tables. A very beautiful place. Meet Ty Smith at a soba shop. He is a chain smoker, just quit working for Muso, and promoting a cooperative effort between Janus, Chico-San, Erewhon, and The Well to import foods from Japan. Evening at Jittoku coffee house, owned by an American, in a large old Japanese treasury (kura). Back to Tokyo by train. Talk until 1:00 A.M.

March 14, Thurs. Meet Kazama and Shurtleff, and take express train to Sendai Miso-Shoyu. We are treated royally by Mr. Muro. Long introduction and discussion. Visit their 2 plants, one modern, one traditional, natural. They make only rice miso. Their production of natural miso is more than all that imported to America by Erewhon and Janus. They age their natural shoyu 18-24 months at the request of Michio Kushi and Erewhon. They have 9 aging vats for the first year, then it is switched to other tanks. They invite us to have a shoyu taste test among 3 products: Kikkoman regular shoyu, Sendai regular, Sendai natural. Both Bill and I choose Kikkoman as best, good aroma, color, and taste. They congratulate us on our good taste. Sendai regular had very strong salty taste. We both liked the Sendai natural least, good color, no aroma, very mild taste. Sendai people say only one year is needed to ferment shoyu naturally. We might sell them organic soybeans (we had purchased 12 truckloads from a farmer) and get shoyu back in 1 year. We meet the president (Sasaki?), born 1928. Elegant geisha-hosted tempura and sushi dinner with president, 2 vice presidents, production manager, and a consulting professor (Shibasaki sensei). After dinner to a traditional bar for *doburoku* (thick, unrefined sake with a low alcohol content [or was it nigori-zake?]), then a sushi house. Shurtleff leaves for Tokyo on night train.

March 16, Sat. Visit Shurtleff and Aoyagi's home for lunch. We have dried-frozen tofu main dish, salad with creamy tofu dressing, strawberries with tofu whipped cream. Delicious. Then we learn how to make tofu at home. It's easy. I'll make it at home in California, then at our Westbrae Natural Foods retail store on Gilman Street (Note: This led to a long series of tofu classes by Gerner, Liz Horowitz, and later Shurtleff & Aoyagi; The retail store changed its name in late 1976 to Gilman Street Gourmet).

Note 1. This is the earliest document seen (April 2006) concerning Westbrae Natural Foods.

Note 2. This is the earliest English-language document seen (Jan. 2012) that contains the term "creamy tofu dressing" (or "dressings") a term coined by Shurtleff and Aoyagi in *The Book of Tofu* (p. 108). Continued. Address: President & Chairman of the Board, Westbrae Natural Foods Inc., 1224 10th St., Berkeley, California 94710.

5081. Gerner, Bob. 1974. Log of trip to Japan to study traditional natural foods, 28 Feb.–2 March 1974. Part II (Log–unpublished). Westbrae Natural Foods Inc., Berkeley, CA 94710. 26 p. Unpublished log. Handwritten. 20 x 8 cm.
• ***Summary:*** Continued: March 19, Tues. Take bullet train to Kyoto to meet Steve Earle of Muso Shokuhin. We 3 go to Okayama to see Fuchu Miso, that makes mugi miso (the barley miso sold in our store) and sweet white miso. The president's wife is the epitome of Japanese woman. For lunch we have tofu burgers with Italian sauce and mushrooms in a bento made by Akiko. Delicious. Take a boat to Shodo-shima where Marushima Shoyu Co. is located. Island is also famous for toasted sesame oil. Arrive at a ryokan at 6:30 P.M. VIP treatment. Bath before dinner and served in private room by geisha. Too much fish! Note: This is the earliest English-language document seen (May 2012) that contains the term "tofu burgers."

March 20, Wed. Miso soup for breakfast. Visit Marushima Shoyu where Muso gets its "natural" shoyu for export to America. They have the newest wheat roasters (they roast it with sand), biggest presses. We see cement aging tanks in a temperature-controlled room, then onto a large red building with 150 aging tanks. But we see no whole soybeans, only soybean meal (*dasshi daizu*). "I feel the owner is a liar and this is a bogus operation. The scene gets heavy and ugly. Bill is great and presses on with questions." The owner claims that 40% of their shoyu is natural, aged for 3 years and made with whole soybeans; 60% made with soybean meal, temperature controlled for 7 months. Thus there should be about 120 vats of natural versus 60 regular.

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But where is the natural? Their faces turn red. We have caught them red handed. The owner take us to one musty, dirty old building with 25 vats, only 8 of which contain shoyu, some only half full. Lots of cockroaches. Looks like no one ever goes here. Still no sign of a single whole soybean. Uneasy departure. Steve Earle is embarrassed. We take a train to Tokyo. We present Earle/Muso with a list of inconsistencies and ask for a written reply.

March 21, Thurs. Visit Mr. Kazama's miso factory (*Ikeda Kojiro Miso Shoten* in Kawaguchi-shi near Tokyo), that makes barley miso, the only brown rice miso in Japan, and shoyu. Call Ty Smith of Muso. He says Muso was very happy with our findings concerning the problems at Marushima, and that they have contacted a new source in Kyushu. Marushima said their president died a year or so ago and his son took over. They have lost the old feeling and tradition.

March 22, Fri. 6:00 A.M. Meet with Bill Shurtleff at his tofu master's tofu shop (*San-Gen-Ya*, run by Mr. Toshio Arai). We watch how he makes tofu. Beautiful place (12 feet square) attached to their home. Beautiful people, they don't speak English. Both make tofu starting early in the morning. He delivers in the afternoon and she sells out of the shop. He gave me hot rich soymilk (from *kinugoshi*) with wild mountain honey. Both incredible. So sweet and delicious. They also serve us freshly made agé, kinugoshi, and natto. Lunch at Shurtleff and Aoyagi's home. Noodles and tofu. Chinese fried tofu, tofu pudding, agé, kinugoshi, and mikan orange. We go over my notes from the miso factory. We copy all of his notes. Then I leave, very sad, but the friendship will remain. Akiko is a remarkable lady. Meet Mr. Kazama and go to Pacific Trading. Lousy meeting with Mr. Masaaki Miki (sales manager), and Masa Miyashita (export dept). Go to airport.

Results of the trip: (1) Westbrae started (about 9 months later) to import many varieties of miso, plus shoyu, and other products from Mr. Kazama in Japan. Bob Gerner was the founder, president, and chairman of the board of Westbrae; (2) Bob Gerner and Liz Horowitz taught "Tofu and Miso Cookery Classes" in Berkeley during 1976, (3) Westbrae published and distributed widely two brochures, *What is Miso?* (May 1976) and *What is Tofu?* (July 1976) written by Shurtleff and Aoyagi, (4) In 1976 Westbrae Natural Foods Inc. decided to sell its retail store at 1336 Gilman St. in order to focus on being a distributor and importer. The store had been losing money. Bob Gerner bought it in June 1976 for the low price offered by the highest bidder. He remodeled the store, renamed it Gilman Street Gourmet, and re-opened it in Sept. 1976. In the spring of 1977 Gerner added a deli to the store; there he made and sold Tofu Burgers, Tofu Treasure Balls, and Tofu Steaks Sauteed in Ginger Sauce. The same week that the deli opened, Gerner sold 3,000 to 4,000 of his new Tofu Burgers out of the Westbrae booth at the New Earth Exposition in San Francisco. Bob's nephew and sister (Margaret) made the tofu burgers. The burgers sold equally well at the same Expo in 1978 and 1979. (5) Shurtleff and Aoyagi wrote *The Book of Miso* and their New-age Foods Study Center moved toward becoming Soyfoods Center.

Note: In late November 1974 Mr. Kazama came to a meeting at Pajaro Dunes by Santa Cruz, sponsored by The Well. The idea was to set up a natural foods trade association. Erewhon wanted to control all imports of Japanese natural foods from Japan. Janus and The Well both had to import through Erewhon. They said Westbrae must buy through them via The Well (Roger Hillyard/Pure & Simple), and pay a 5% commission. Kazama had to defer to them. Gerner refused and they backed off. Ty Smith, now head of Erewhon, was upset that Westbrae was not paying a commission. Gerner told him "Tough." So Westbrae ended up importing from Kazama. Address: President & Chairman of the Board, Westbrae Natural Foods Inc., 1224 10th St., Berkeley, California 94710.

5082. Photograph of people at the Erewhon warehouse–Boston. 1974. Boston, Massachusetts.

• ***Summary:*** These photos were sent in 2009 by Patricia Smith, who worked at Erewhon. They are not dated and the names of some people are unknown.

Concerning the date and place: Mark Ripa (Jan. 2011) says: "I think both photos were taken the same day, in the winter of either late 1973 or early 1974. They were taken next to the front windows of the third floor at 31 Farnsworth Street, South Boston (adjacent to the Erewhon warehouse at 33 Farnsworth). 31 Farnsworth was a three floor building adjacent to the six floors of 33 Farnsworth. That floor was used for storage by the Erewhon warehouse. *East West Journal* occupied multiple floors at 31 Farnsworth at the time. I don't remember the context other than it was a department photo of the 'warehouse crew.' Don't remember any other department photos. The photos were taken, I think, by Nik Amartseff (responsible for creating Erewhon labels and product development at the time). He may also have worked for EWJ. Last I heard Nik was living in Vermont."

(1) Photo of Mark Ripa (at Erewhon, Boston), wearing a beard, white suit (top and bottom) and necktie. On the photo, to his right, is written: "I'm Swami Bananananda and I'm here to say"–a take-off of the lyrics to a popular tune advertising Chiquita bananas, which begin: "I am Chiquita banana and I've come to say, Bananas have to ripen in a certain way..." Mark notes: "The two lines written on my photo by persons unknown, perhaps inspired by my borrowed white suit."

Mark wrote to Patricia Smith (Oct. 2010): "My title at Erewhon [Boston] changed over the years. I went back to a resume to clarify the following: April 1972 to Feb. 1974–Packaging line worker, miller's apprentice.

Feb. 1974 to Nov. 1974–Head miller.

Nov. 1974 to Aug. 1975–Buyer / merchandiser for the

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Star Market account.

Aug. 1975 to Oct. 1976–Buyer, assistant product development manager. Inventory control manager.

Oct. 1976 to June 1978–Purchasing manager. Product development manager.

June 1978 to Oct. 1979–Quality control manager.

"I had my hand in a few Erewhon labeled products, most of which were manufactured by copackers, notably organic corn chips, potato chips (I think I was the first to market a tamari potato chip), apple juice and apple juice blends (I remember formulating apple spice juice and apple mint juice on my kitchen stove) and Mark's Natural Spaghetti Sauce (2 varieties)–the first spaghetti sauce to have tamari as an ingredient (Michio Kushi wanted to balance the tomatoes with tamari, which was more workable than miso) and bagels (how could I forget the bagels–but they were discontinued as they molded before their time)."

(2) People who worked at Erewhon, Boston. Mark Ripa is in the 2nd row, far left.

John Fogg, who worked at Erewhon, Boston, identifies the people in this group as follows: Front row (three men, left to right): Dan Seamens, Don Lorenson (great guitar player, supervisor in shipping), and Tony Harnett.

Back row (seven men, L-R): Mark Ripa (probably a purchaser by then), Roger, unknown, Bill West (worked in the warehouse or was a truck driver; ended up as Trucking Manager), Warren Murrah (Receiving Manager), Paul Campbell.

Evan Root adds (Jan. 2001), Tony Harnett is now known as Anthony Harnett. "Anthony and Hugo van Seenus bought the small 'Bread and Circus' store in Brookline, Massachusetts. Soon after, Anthony bought out Hugo and developed it into a group of big supermarket sized natural food stores, with a very high quality standard. In 1990 Whole Foods bought him out for $26 million."

Steve Zoller adds (Jan. 2011), These were all macho warehouse guys who looked down on the "prods" (production guys) upstairs. The main erewhon building was at 33 Farnsworth St. I believe this was taken in the attached building (31 Farnsworth, I think). I base this on what looks like imports that were stored in that building, on the 1st floor. I would definitely date this later than the spring 1975 catalog photo.

Updates (from Steve): Dan Seamens–is at the WF Regional office in Cambridge. Bill West–married someone from erewhon (forget her name) and moved to New Mexico. Late 1980's I saw him last and he worked for a juice or soda company. Warren Murrah–Married Susan Stamps (David's sister) and worked at New Balance (maybe 1980?). Diane Markovitz–moved to St. Augustine, Florida, around 1977 to be with Greg Leonard (Tree of Life). Anthony Valenti–Married Carol (a former erewhonian). I last saw him as a waiter at a high class / priced restaurant in Boston.

5083. Saono, Susono; Gandjar, Indrawati; Basuki, Triadi; Karsono, Herry. 1974. Microflora of ragi and some other traditional fermented foods of Indonesia. *Annales Bogorienses* 5(4): 187-204. Feb. [14 ref.]

• ***Summary:*** "Studies have been conducted on the microflora of samples of 'ragi', 'tapé ketéla' [tapeh ketela, from cassava] or 'peuyeum', 'tapé ketan hitam' [from black glutinous rice], 'oncom hitam' [onchom from peanut presscake or cassava presscake], and 'oncom mérah' [onchom merah] or 'oncom beureum' [from peanut presscake or okara; both terms mean "red onchom"] from various places in West Java. Genera found in ragi include ***Candida***, ***Mucor*** and ***Rhizopus*** species.

Appendix I, titled "Fermented products of Indonesia" lists 26 different traditional fermented products. Those made from soybeans and related products include: Kécap–Soy sauce made from black soybeans. Oncom mérah–Okara onchom. Témpé kedelé–Tempeh made from soybeans. Témpé bengook–Tempeh made from the ripe seeds of *Mucuna pruriens* var. *utilis*. Témpé lamtoro–Tempeh made from the seeds of Leuceuna leucocephala. Témpé gembus–Okara tempeh. Témpé bongkrék–Tempeh made from the solid refuse of coconut meat. Many of these foods are prepared with the help of a starter called "ragi," a small, slightly flattened dry ball consisting of rice powder, spices, and microorganisms. Ragi témpé, for example, is the type of ragi used to make tempeh.

Appendix II, titled "Methods of preparation of 'ragi,' 'tapé ketela,' 'tapé ketan,' 'oncom hitam,' and 'oncom merah' in West Java" contains 1-2 paragraphs on each. On pages 200-204 are detailed illustrations showing the morphology of 14 species and varieties of yeast.

Note 1. The Treub Laboratory was named after Dr. Treub, who was associated with the founding of the Buitenzorg Botanical Gardens in the 1880s. He was there in the mid-1890s.

Note 2. This is the earliest document seen (March 2010) that contains the word "oncom" (spelled in that way). Address: 1.3-4. Treub Lab., National Biological Inst., Bogor; 2. Nutrition Research Inst., Dep. of Health, Bogor.

5084. Ziemba, John V. 1974. Authentic soy sauce brewed in Wisconsin. *Food Engineering* 46(2): 58-60. Feb.

• ***Summary:*** Gives a step-by-step description of the method used by Kikkoman to make shoyu in Walworth, Wisconsin. Eight photos show 2 different views of the outside of the plant and 6 of major steps on the inside. Both mold culture and yeast culture are mentioned. Address: Senior Editor, Food Engineering magazine, Chicago.

5085. Hughes Markets. 1974. Stick with the best blue-chip stamps (Ad). *Los Angeles Times*, March 14, p. G30.

• ***Summary:*** The section titled "Foods of the Orient" includes:

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Yamasa soy sauce, reg. & shinmi 1 gallon can $2.79.
Coconut juice, Marga Rita 7¾ oz. can, 4 for $1.
Soy beans, JFC daizu 1 lb. pkg., 3 for $1.
Won ton skins, in our produce dept., Nanka Seimin 12 oz pkg. 35¢

5086. Spiral Foods Inc. 1974. Wholesale price list. Chico, California. 4 p. March 15. 28 cm.
• ***Summary:*** This two-sheet catalog and price list, consisting of two pages stapled in the upper left corner, is printed front and back with reddish-orange ink on tan paper. The first item is five cookbooks. Soy-related products: Condiments: Lima tamari soy sauce (aged naturally over 2 yrs.). Miso--soybean puree (entirely natural--Mugi Miso, or Kome Miso). Lima kome miso. Nigari (natural coagulant to make tofu). Barley koji. Tekka. Sesame salt (toasted whole brown sesame seeds and sea salt). Salt plums (pickled in sea salt). Kuzu (wild arrowroot starch). Utensils: Soy pitcher [soy sauce dispenser]. Address: 1144 West 1st Street, Chico, California 95926. Phone: 343-2111.

5087. Chiang, Cecilia Sun Yun; Carr, Allan. 1974. The Mandarin way. Boston, Massachusetts: Little, Brown and Co. xiv + 274 p. Index. 23 cm.
• ***Summary:*** This charming, interesting book ("as told to Allan Carr" by Cecilia) is combination biography and Chinese cookbook organized by months (moons)--so that it flows with the seasons and seasonal foods. For each of the twelve moons of the old lunar calendar, there is one chapter (e.g., First Moon) of Cecilia's memories of growing up in China, as one of 13 children in a family of great wealth, followed by an "Interlude" chapter on a particular theme (e.g., "Of shopping and its pleasures") with her favorite recipes for that time of year.

Soyfoods (including "soy" or "soy sauce," "fresh bean curd," and "preserved bean curd") are mentioned throughout the book--for example: Freshwater "dancing shrimp" were "eaten raw after being dipped in a tangy sauce of preserved bean curd [fermented tofu], pepper, soy sauce, coriander and wine" (p. 8). The pork shoulder was "'red-cooked' in soy [sauce] and wine..."

Note: This is the earliest English-language document seen (Oct. 2010) that uses the term "preserved bean curd" to refer to a type of fermented tofu.

Some measure of success in reproducing authentic meals outside of China "can be achieved if the basic supplies are obtained either by purchasing them in Chinese shops or ordering them by mail (several sources, with addresses, are given...." These include: "fresh ginger root, dried bean curd, dried bean curd [pressed tofu: doufu-gan], sheets [yuba], sesame seed paste, sesame seed oil,... soy sauce,... red bean paste [azuki, also called "1 can sweet red-bean paste" (p. 164)], hot bean sauce" (p. 21))

Fish with hot spicy bean curd sauce (*Tou-pan la-yü*, with "1 tablespoon Szechwan hot bean curd paste," p. 50). Five-spiced spareribs, Peking style (with "2 tablespoons pale soy sauce," p. 71). Peking duck (with "hoisin (duck) sauce," p. 96). Red-cooked chicken with chestnuts (with "4 tablespoons dark soy sauce, Japanese Kikkoman or imported," p. 116). Chopped spinach with shredded bean curd (*Po-ts'ai pan tou-fu kan*, with "dry pressed bean curd," p. 138). Szechwan four season beans (with "1 heaping tablespoon hot soy bean paste," p. 162).

In San Francisco's Chinatown, where the shops are predominantly Cantonese, the "dry goods store provides me with pressed bean curd and bean curd sheets [yuba, doufu pi]...."

Talk with Cecilia Chiang, 2008 Nov. 15. She says that "bean curd sheets" refers to doufu pi or yuba; pressed bean curd to doufu-gan. "Hot bean sauce" is *la douban jiang*, which is *douban jiang* with hot chili peppers; both are made with soybeans. Red bean paste is the same as "sweet red bean paste," made with azuki beans (*xiao hong dou*), and the same as Japanese *an*. Address: 1. Founder and owner, The Mandarin restaurant, Ghirardelli Square, San Francisco, California.

5088. **Product Name:** Kikkoman Soy Sauce, and Teriyaki Sauce.
Manufacturer's Name: Kikkoman Foods Inc. Subsidiary of Kikkoman Shoyu Co. Ltd.
Manufacturer's Address: P.O. Box 11, Walworth, WI 53184.
Date of Introduction: 1974. March.
Ingredients: Water, wheat, soybeans, salt, sodium benzoate. Less than 1/10 of 1% as a preservative.
Wt/Vol., Packaging, Price: 10 fluid oz (296 ml).
How Stored: Shelf stable.
New Product--Documentation: *Soybean Digest Blue Book*. 1974. p. 124; 1978. Address is now P.O. Box 69, Walworth, Wisconsin 53184. Soya Bluebook. 1980. p. 54. Main office is now "Kikkoman International Inc., Subsidiary of Kikkoman Shoyu Co., Ltd., 50 California St., P.O. Box 784, Suite 3600, San Francisco, CA 94101.

Label (see next page). 1983. 3.25 by 3.75 inch oval. Paper. Red, blue, black, white and yellow. Back label. 2.5 by 3.75 inches. Paper. "All-purpose seasoning. Since 1630. Good Housekeeping seal. Back label gives recipe for "Turkey Polynesian." Contains a color photo. Soya Bluebook. 1987. p. 92. Kikkoman Foods, Inc., Hwy 14 & Six Corners Rd., P.O. Box 69, Walworth, WI 53184. Sales offices: Los Angeles and San Francisco, California; Atlanta, Georgia, Chicago, Illinois; New York, NY.

5089. Shurtleff, William. 1974. Report on visit to Kikkoman Shoyu Co. and their Goyo Gura, Noda, Japan. March 4. Tokyo, Japan. 3 p. Unpublished typescript.
• ***Summary:*** Kikkoman makes shoyu at the Goyo Gura in the

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traditional way, using traditional equipment. It is a beautiful place. A detailed description of the process and equipment is given. Address: Tokyo.

5090. Yoshikawa, Seiji. 1974. Shoyu no kikiaji shiken no kaiseki ni tsuite [Analysis of the results of taste-testing of shoyu]. *Shokuhin Sogo Kenkyujo Kenkyu Hokoku* (*Report of the National Food Research Institute*) No. 29. p. 277-82. March. [Jap]
• ***Summary:*** Reprinted from *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 68(6) 412-17 (1973). Address: National Food Research Inst., MAFF, Tokyo, Japan.

5091. Lin, Florence. 1974. East is red & west is hot. *New York Times*. May 19. p. 86, 88. Supplement.
• ***Summary:*** In eastern China, the distinctive cooking style is know as "red cooking," which has to do with soy sauce–not ideology. Shanghai is the gastronomic capital of the east, although some favor Yangchow. In western China, the food is spicy hot. Six recipes are given, most call for soy sauce (dark or regular). The first recipe, *Lo han chai* (Buddha's delight) calls for "2 ounces er chu (dried soy bean milk skin) [yuba], optional," and light soy sauce.

Note: This is the earliest English-language document seen (Oct. 2008) that uses the term "er chu" or "soy bean milk skin" or "dried soy bean milk skin" to refer to yuba. Address: Cooking teacher (China Institute) and author.

5092. Hashimoto, Hikotaka; Yokotsuka, Tamotsu. 1974. [Studies on sediment of shoyu. VIII. Mechanisms of sediment formation during the heating of raw *shoyu* (soy sauce)]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 52(5):328-34. May. [10 ref. Jap; eng] Address: Central Research Laboratories, Kikkoman Shoyu Co., Ltd., Noda-shi, Chiba prefecture, Japan.

5093. Kay, Theodore. 1974. Soybeans in the Nigerian diet. *Samaru Agricultural Newsletter* 16(1):18-22. May. [Eng]
• ***Summary:*** Contents: Introduction. Nutritional value of the soya bean. Daily amino acid requirements for men, women, and children. Suggested methods of incorporating soya bean into the Nigerian diet. Soya bean paste (soaked, uncooked soya beans, with the hulls on, ground to a white paste) and whole beans (not dehulled). Utilization of the paste: Directly for kosei (akara ball) and panke (puff-puff), for preparation of soya bean milk, which can be used to make protein-enriched pap, fu-fu, bean curd (to-fu), awara or wara. Use of the residue from preparation of soy bean milk [okara]. In Alele (moin-moin), or biscuits. Utilization of whole soya beans: baked, sweet baked powder, stew. Discussion: Why do we need soya bean in Nigeria? Five reasons are given. Acknowledgments to many co-workers.

The soya bean has been cultivated in the Far East since about 2800 B.C. It has [been] the main source of protein for all of East Asia, particularly for the vegetarian Buddhist. It has been used as bean curd (To-fu) and soya sauce in most parts of the Far East from Indonesia up to the Northern end of Japan, as soya bean milk in China, as soya paste (mi-so) in Japan, and as a fermented product (Tempe) in Indonesia.

The crop is well established in Benue Plateau State south of Makurdi, in the North-Western State around Abuja and in the southern part of North-Central State. However, it has been very difficult to cook the beans in a traditional West African way so it has never become popular in this country. Most of the soya bean produced in Nigeria has been exported as a cash crop, except a little for animal consumption. Address: Inst. for Agricultural Research, Samaru, Ahmadu Bello Univ., PMB 1044, Zaria, Nigeria.

5094. Eden Foods. 1974. Spring pricelist. P.O. Box 100, Ann Arbor, MI 48107. 4 p. Effective June 1.
• ***Summary:*** There are many more total products than in the Nov. 1973 catalog. The 8 oz tamari soy sauce and the 3 types of miso (Mugi, Hacho, Kome) in 1-lb packages bear the Erewhon brand after the product name in the catalog, but the pints and gallons of tamari soy sauce and the same 3 types of miso sold in bulk (44 lb tubs) do not bear the Erewhon brand, perhaps indicating that Eden has found a way to go around Erewhon in importing bulk miso. New products include: Kuzu arrowroot. Grade C Korean nori (Roland). Canadian leaf dulse (Atlantic Mariculture). Cicilian olives (Pure & Simple). Barley malt powder. Barley malt syrup. Maple syrup. Bee pollen. Shiu-chu finest preserved Ginseng roots (China). Kirin extra large ginseng roots, red. pres. (China).

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Ginseng balls (*fo-ti-tieng, dong kwai* [angelica root]). Mao herb (Chinese ephedra). Lemongrass. And many other herbs. Address: Ann Arbor, Michigan. Phone: (313) 769-8444.

5095. *Los Angeles Times*. 1974. Unusual offering: Fresh ginger flavors Chinese steamed fish. June 6. p. OC_C22.
• ***Summary:*** "If fresh ginger and fermented black beans are not available, they may be omitted."

A recipe for Chinese steamed fish calls for: "2 tbsp. [tablespoons] soy sauce,... 2 slices fresh ginger, minced, 1 tbsp. fermented black beans, rinsed."

Note: This recipe also appeared in the 26 Feb. 1976 issue (p. D17) of the *Washington Post*.

5096. Erewhon. 1974. Natural and organic foods: Supplying natural food stores, co-ops, schools and communities (Catalog). Boston, Massachusetts. 16 p. Effective June 1974.
• ***Summary:*** The structure and design of this catalog is quite similar to the previous one of April 6, however four pages of new products and sizes have been added. The background of the illustration has been changed but the foreground is the same; it is now copyrighted by Erewhon. The note from Paul Hawken has been replaced by a similar one signed "the erewhonians." OG = Organically grown.

New additions to the catalog: Flyers: (1) Organic Merchants: The flour story. The salt story. (2) Issues of *East West Journal*. From Vol. IV, No. 6, July 1974, "Energy" to Vol. IV, No. 9, Oct. 1974, "Healing." (3) Natural Recipes: Three by five inch tear-off pads, each pad containing 100 of the same natural-food recipe. Four assortments (A-D), eight different pads in each assortment. There is one soy-related recipe pad in each assortment: (A) Soybeans au gratin. (B) Miso soup. (C) Soybean casserole. (D) Soyburgers.

This catalog cover (blue on white) was reprinted with permission from the Michio and Aveline Kushi Macrobiotics Collection, Archives Center, National Museum of American History, Smithsonian Institution, Washington, DC. Address: 33 Farnsworth Street, Boston, Massachusetts 02210. Phone: (617) 542-1358.

5097. Claiborne, Craig. 1974. Good and bad of Amsterdam's Indonesian food. *New York Times*. July 8. p. 34.
• ***Summary:*** In Amsterdam, the Indonesian restaurant capital of the world, the writer imagines the perfect Indonesian restaurant in the perfect setting; he then proceeds to describe both. At a perfect rijsttafel (which literally means "rice table") guests would serve themselves. There would be "Delft-designed platters, lazy susans, chafing dishes and bronze grills in or on which simmered or broiled a multitude of dishes with names like ajam, babi ketjap, daging madura, sambal goreng kering, gado gado, and a dish of plain old katchang."

The two Indonesian restaurants he visited in Amsterdam fell far short of expectations. However at one of these he tasted "a delicious and hitherto unknown dish of deep-fried soy beans which resembled and tasted like a shredded meat dish."

5098. *Foreign Agriculture*. 1974. Koreans expand soybean output by planting rice paddy dikes. July 8. p. 8-9.
• ***Summary:*** Korea, which doubled its imports of U.S. soybeans last year, is again promoting a program to boost domestic oilseed production by planting soybeans on rice paddy dikes. This practice, which was mandatory under the Japanese occupation, had been abandoned until revived last year. In 1973, "dike-bean" acreage was estimated at 86,485 acres. The Ministry of Agriculture and Forestry (MAF) estimates that the maximum area for dike-beans now ranges from 93,900 to 135,900 acres. A significant portion of the crop harvested daily in the summer to be consumed as a cooked, green vegetable, much as Americans eat lima beans. Nearly all of Korea's soybean production is consumed as food. Industry sources estimate that 70% is used in homes for making soy sauce and paste, 20% for bean curd, and 10% for bean sprouts. Address: Office of U.S. Agricultural Attaché, Seoul.

5099. *Sunset (Menlo Park, California)*. 1974. Tofu in 1974: In this inflationary year tofu makes great budget sense. But this protein custard is a mystery to too many cooks. 153:104-06. July.
• ***Summary:*** This pioneering and very important, positive article was generated (at least in part) by an Azumaya P.R. campaign at a time when meat prices were skyrocketing.

"As food prices rise, Westerners are learning about soybean curd, an inexpensive protein food sold most often under its Japanese name, *tofu*. Oriental cooks have long known the value of this nearly tasteless substance with the texture of custard. (The Chinese call it *dow foo*.) And now various styles are becoming more widely available.

"Some people may hesitate to try tofu for fear their families won't accept it. They should realize that tofu is bland and readily assumes the flavors of whatever ingredients you use with it. The recipes here all have Oriental flavors, including such favorites as sweet and sour, teriyaki, and sushi; all are simple and quick to prepare. But the versatility of tofu makes it an appropriate ingredient for other dishes ranging from appetizers and soups to main dishes and desserts.

"The companies that make the various styles of tofu are frequently small family-run operations; products and their names vary slightly from company to company..."

"For all types of tofu, soybeans are ground, mixed with water, and cooked until a milky liquid [soymilk] is extracted and drained off. A coagulant is added to set the liquid, making a curd. How the curd is handled determines the product."

A table (with 4 columns) describes six types of tofu: (1)

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Fresh soybean pudding (called Dow foo fah in Chinese and having no Japanese name) is sold in portions of about 1 lb water packed in plastic tubs. (2) Soft tofu (called Suey dow foo in Chinese and Kinugoshi in Japanese) is sold in 3/4 to 1-lb blocks water-packed in plastic tubs. (3) Medium-firm tofu (Japanese style, called Dow foo in Chinese and Tofu in Japanese) is sold in 1 to 1¼-pound blocks water-packed in plastic tubs or cartons. (4) Hard tofu (Chinese style, called Dow foo yuen in Chinese and having no Japanese name) is sold as two or more slices (about 6 oz each) water-packed in bags or plastic tubs. (5) Raw-fried tofu (called *Hung siu dow foo* in Chinese and *Nama-age* in Japanese) is sold in slices or sticks of various sizes dry-packed in bags or plastic tubs. (6) Deep-fried tofu puffs (called *Dow foo bok* in Chinese and *Age* [ah-gay] or *abura-age* in Japanese) are sold in small dense cubes usually dry-packed about 15 in a 5-oz package (Chinese product) or in large puffy pieces usually dry-packed about 3 in a 1½-oz package (Japanese product).

Note: This is the earliest English-language document seen (May 2012) that contains the term "fried tofu puffs" or the term "Deep-fried tofu puffs" or the term "Raw-fried tofu."

Photos show (1) Tofu slices taken from the rinsing tank and being packed into plastic tubs at Azumaya, (2) A large photo shows 8 types of Japanese- and Chinese-style tofu on a table near a wok and skimmer: Medium firm tofu, Fresh soybean pudding, Soft tofu (Japanese style), Soft tofu (Chinese-style), Hard tofu, raw fried tofu, Deep-fried tofu puffs (Chinese-style), and Deep-fried tofu puffs (Japanese-style). (3) Teriyaki-glazed raw-fried tofu cubes.

Recipes are given for Tofu and water cress soup, Tofu orange almond pudding, Stir-fried chicken and tofu, Tofu teriyaki appetizers, Fried tofu salad with peanuts, Fried tofu with pork sauce, Rice-filled agé appetizers (Sushi), and Sweet and sour tofu.

5100. Bennett, Jean. 1974. Filipino food: A blending of flavors. The dentist cooks. *Los Angeles Times*. Aug. 1. p. K22.

• ***Summary:*** About Ida Del Mundo, a fine chef, and her cooking. Philippine cuisine has a long and complex tradition. "Much of it is Spanish in origin. Some of it is of Chinese origin such as the use of wheat, rice, noodles, soy bean curd, [mung] bean sprouts, egg rolls, and the very extensive use of steamed foods." A recipe for Sweet and sour sauce dip calls for soy sauce. A photo shows Ida cooking Filipino foods.

5101. Gandjar, Indrawati; Steinkraus, K H. 1974. Biochemical, nutritional, and organoleptic changes occurring during production of indigenous fermented foods. In UNESCO/ICRN/ITB Training Course on Indigenous Fermented Foods. 25 p. Held 12-31 Aug. 1974 at Bandung, Indonesia. •

• ***Summary:*** Discusses kecap ([pronounced kechap], soy sauce), tauco ([taucho] Indonesian-style miso), tempeh, idli, tapeh ketan, and terasi.

Note: This is the earliest English-language document seen (March. 2009) uses the word "tauco" (spelled in that way) to refer to Indonesian-style miso.

5102. Kinugasa, Yosuke. 1974. Takokuseki kigyô e no senryaku–Gendai Nihon kigyo bunseki. Kikkôman Shôyu K.K. [Toward a strategy of multinationalism–An analysis of modern Japanese companies: Kikkoman Shoyu Kabushiki Kaisha]. *Kikkoman Shoyu Kabushiki Kaisha Hanbai Shiryo* No. 694. p. 12. Aug. Reprinted from Keizai Jurai, 4 & 5 (July/Aug. 1974). [Jap]*

• ***Summary:*** This serial publication from Kikkoman is more a series of sales materials.

5103. Yamamoto, Shusaku; Hirooka, Hitoshi. 1974. Partial purification and properties of glutaminase from *Aspergillus sojae*. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 52(8):570-76. Aug. [50 ref. Eng]

• ***Summary:*** "In Japan, glutaminase (EC 3.5.1.2, L-glutamine amidohydrolase) from *Aspergillus sojae* is important as an enzyme which catalyzes the conversion of glutamine to glutamic acid in the *shoyu* brewing process." Address: Research Section, Kansai Plant, Kikkoman Shoyu Co., Ltd., Takasago, Hyogo, Japan.

5104. Yamamoto, Shusaku; Hirooka, Hitoshi. 1974. Production of glutaminase by *Aspergillus sojae*. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 52(8):564-69. Aug. [11 ref. Eng]

• ***Summary:*** High-quality shoyu contains a high concentration of glutamic acid, which is essential to the good taste of shoyu. Shoyu molds were tested for their ability to produce the enzyme glutaminase, which catalyzes the conversion of glutamine into glutamic acid. Various conditions of mold culture were also tested. A mutant strain of *Aspergillus sojae*, derived from a selected strain, was found to produce high-quality shoyu. Address: Research Section, Kansai Plant, Kikkoman Shoyu Co., Ltd., Takasago, Hyogo, Japan.

5105. Areekul, Suvit; Thearawibul, Rawadee; Matrakul, Duangmam. 1974. Vitamin B-12 contents in fermented fish, fish sauce and soya-bean sauce. *Southeast Asian J. of Tropical Medicine and Public Health* 5(3):461. Sept.

• ***Summary:*** Fermented fish contain a mean of 2.27 micrograms of vitamin B-12 per 100 gm. Fish sauce contains a mean of 1.91 micrograms, and soya-bean sauce contains a mean of 0.14 micrograms–although 13 out of 48 samples contained no B-12 at all.

The average daily consumption of fish sauce or fermented fish in Thailand is 15 ml or 15 gm per person. This could explain the findings (previously reported) that

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megaloblastic anemia is rarely seen in Thailand. Address: Dep. of Radioisotopes, Faculty of Tropical Medicine, Mahidol Univ., Bangkok, Thailand.

5106 *Chicago Defender.* 1974. More TV tips from WLS-TV. Oct. 17, p. 36.
• ***Summary:*** A recipe for Steamed pike (courtesy of The Abacus, 2619 North Clark St., Chicago) calls for "4 oz. minced salted black beans," plus shredded fresh ginger root, chopped garlic, soy sauce, sesame oil, etc.

5107 Ford, Frank. 1974. The simpler life cookbook from Arrowhead Mills. Fort Worth, Texas: Harvest Press. 157 p. Introduction by Fred Rohé. Index. 18 cm. [13* ref]
• ***Summary:*** The copyright page states: "First printing–Oct. 1974. This book [Feb. 1976] is the second edition of a book which was originally released under the title of *Pack to Nature.*" Note: 150,000 copies were in print by Sept. 1976. The introduction (written in Dec. 1975 by Fred Rohe, now of Shiloh Farms, Sulphur Springs, Arkansas) tells how Fred first met Frank Ford in 1968 in Hereford when Arrowhead Mills was supplying organically grown grains and beans for Fred's natural foods store in San Francisco. At that time, Ford's business was already 10 years old. Today Arrowhead Mills has 22 shareholders. "There are more than 30 Arrowhead organic growers farming more than 60,000 acres, 44 natural foods distributors bring more than 350 Arrowhead products to thousands of stores throughout every state of the U.S.

"Even more exciting than Arrowhead's tremendous victory for Frank's business life is the victory that God has won for his spiritual life. Frank made Jesus Christ lord of his life 3 years ago and that's when love and joy began to transform his life by the living power of God's Holy Spirit. God is carrying on a great work in his life, transforming an organic farmer into an organic man, integrating him body, soul and spirit, transforming Arrowhead Mills from a work of man into a work of God. The same miracle of God's grace has transformed my life, enabling me to understand what Frank means when he says, 'Arrowhead Mills belong to God.'"

Soy-related recipes are the same as those in the original edition titled *Pack to Nature* (Oct. 1974). A 2-page directory titled "Some Natural Foods Sources" lists 41 companies with full addresses and Zip codes. Details on these new additions are given in the Sept. 1976 edition of this book. Address: Deaf Smith County, Hereford, Texas.

5108 Ford, Frank. 1974. Pack to nature: Nutrition made easy in the home or in the woods. Fort Worth, Texas: Harvest Press. vii + 157 p. Introduction by Roger Hillyard. Index. Oct. 18 cm. [13* ref]
• ***Summary:*** This book, containing over 250 recipes, describes how to use whole, natural food staples in quick, easy to prepare dishes. By Sept. 1976 this book had become *The Simpler Life Cookbook from Arrowhead Mills.*

In the introduction, Roger Hillyard (writing in Oct. 1974 from Soquel, California) recalls that in late February of 1969, he and his wife and daughter were returning to Boston from California. They stopped in the small Texas town of Hereford to visit Deaf Smith County and the company that was supplying food to a growing number of natural foods followers and devotees–including Erewhon. Four years later they spent a year in Hereford working with Frank Ford and Arrowhead Mills. "During the five years I have worked with, lived with, and been friends with Frank, I have witnessed one of the most dramatic and beautiful personal unfoldings. Frank never wore that robe of self-righteousness, and he helped me to exchange mine for something more embracing."

Soy-related recipes include: Quick soy pancakes (with soy flour, p. 35). Soybean salad (with cooked soy flakes, p. 43). Quick tamari orange salad dressing (with tamari soy sauce, p. 47). Paul's salad dressing (with tamari, p. 47). Soybean chili (with dry soybeans and "tamari soysauce," p. 54). Sprout soup (with 2 cups fresh soybean sprouts, p. 54). Sprouted lentil soup (with soy flour, p. 55). Squash stew (with soy flakes, p. 55). Tamari bouillon (p. 56). Vegetable-soy-sesame soup (with soy flakes, p. 59). Basic soybeans (p. 74). Basic soy flakes (p. 75). Basic bulghur-soy grits (p. 75). Lentil soy loaf (with cooked soybeans or soybean flakes, p. 84). Soy & mushroom loaf (with soy flakes, p. 85). Soy patties (with soy flakes, p. 87). Stuffed peppers (with soy flakes, p. 87). Soyflake & tahini spread (with soy flakes, p. 106).

A 2-page directory titled "Some Natural Foods Sources" (p. 153-54) lists 30 of the natural food industry's pioneers, including Akin Distributors, Inc. (Tulsa, Oklahoma), Arrowhead Mills, Inc. (Hereford, Texas), Basic Needs (Grand Prairie, Texas), Cinagro Distributors, Inc. (Atlanta, Georgia), Cliffrose (Longmont, Colorado), Collegedale Distributors, (Collegedale, Tennessee), The Concord (Snowflake, Arizona), Deer Valley Farms (Guilford, New York), Eden Organic Foods (Ann Arbor, Michigan), Erewhon Trading Company (33 Farnsworth St., Boston, Massachusetts 02210, and 8454 Steller Dr., Culver City, California 90320), Food for Health (Phoenix, Arizona), Food for Life (Elmhurst, Illinois), Good Food People (Austin, Texas), Great Plains Distributors (Kansas City, Missouri), Happy Health Products (Miami, Florida), Janus (Seattle, Washington), Laurelbrook Foods (Bel Air, Maryland), Lifestream Natural Foods (Vancouver, BC, Canada; Ratana and Arran Stephens), Mottel Health Foods (New York, NY), Naturally Good Foods (Hereford, Texas), Nu-Vita Foods Inc. (Portland, Oregon), Organic Foods & Gardens (City of Commerce, California), Shadowfax (Binghamton, New York), Shiloh Farms (Sulphur Springs, Arkansas), Taiyo, Inc. (Honolulu, Hawaii), Tree of Life (St. Augustine, Florida), Vim & Vigor (Honolulu, Hawaii), The Well (San Jose, California), Walnut

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Acres Inc. (Penns Creek, Pennsylvania).

A small photo on the rear cover shows Frank Ford out hiking, wearing a backpack.

Note: This is the earliest published document seen (Feb. 2010) concerning Lifestream Natural Foods (Vancouver, BC, Canada). Address: Deaf Smith County, Texas.

5109. Hashimoto, Hikotaka; Yokotsuka, Tamotsu. 1974. Studies on sediment of shoyu. IX. Role of hydrophobic bonds among protein molecules in sediment formation during heating of raw *shoyu* (soy sauce). ***Hakko Kogaku Zasshi*** (***J. of Fermentation Technology***) 52(10):747-58. Oct. [50 ref. Eng]

Address: Central Research Laboratories, Kikkoman Shoyu Co., Ltd., Noda, Japan.

5110. Katzen, Mollie. 1974. The Moosewood cookbook: Recipes from Moosewood Restaurant, in the Dewitt Mall, Ithaca, New York. Ithaca, New York: Published by the author. 79 p. No index. Oct. 28 cm. *

• ***Summary:*** This is the self-published, hand-lettered, original edition of what became one of the best and most popular American vegetarian cookbooks of the 1970s and 1980s. The book went through three printings and sold about 5,000 copies over a period of about 2 years before Ten Speed Press approached Mollie to buy the rights to a revised and expanded edition–though still hand lettered. Mollie's first printing of the book was sold for $4 only at one bookstore–McBooks. The second run was sold at about 3 local bookstores. The warehouse was in Mollie's home and car. She distributed it to the bookstores. The Ten Speed Press edition was published in Oct. 1977. It contains almost everything that was in the original edition but about 3 times as many recipes.

Soy-related recipes include: Perfect protein salad (with cooked soybeans, p. 32). Move over Joyce Chen Casserole (with tofu, p. 37). Zuccanoes (with cooked soybeans, p. 48). Soy gevult (p. 54). Gado-gado (with tofu, p. 55).

Note: Mollie writes in 1990: "I first learned about tofu in 1970 from a Chinese restaurant in San Francisco. They called it 'bean cake' soup. I was intrigued–and not disappointed."

Talk with Mollie Katzen, 1991, Oct. 31. Mollie got her first job as a cook in 1969 at a tiny macrobiotic restaurant named The Ithaca Seed Company in Ithaca, New York. "In those days to be a vegetarian was either to be macrobiotic or just to eat a lot of dairy products and cheese. There was very little available middle ground." Then she moved to San Francisco and from 1970-72 worked as a cook at the Shandygass, a popular, high-class, international gourmet vegetarian restaurant. The Moosewood restaurant was started in 1973 by 7 people, each of whom was an owner; 5 women and 2 men. Mollie was the only person among these who had restaurant cooking experience. The book originated because Mollie wanted to standardize the cooking and recipes in the restaurant. It was meant mainly for use by the cooks in the restaurant, and prior to its appearance there had been few written recipes. Every recipe that was in this book was served at Moosewood at that time. Quite a few contained dairy products–to try to attract mainstream customers to the 65-seat restaurant, and to please them. Then customers began to ask for the recipes. Originally the restaurant was lacto-ovo-vegetarian except for one meat entree a night, but that was soon dropped because no one wanted to cook it and none of the customers wanted to eat it. The Moosewood restaurant still exists (though they now serve fish) and is bigger than ever. They now publish their own cookbooks and have rights to the name "Moosewood."

Of her three cookbooks, Mollie personally likes her most recent one, ***Still Life with Menu***, the best. It is healthier and lower in fat. A new, extensively revised, 15th anniversary of the Ten Speed Press edition of Moosewood will be published in 1992. Address: Moosewood Restaurant, Dewitt Building, Ithaca, New York.

5111. Spira, Ruth Rodale. 1974. Naturally Chinese. Emmaus, Pennsylvania: Rodale Press, Inc. iii + 346 p. Illust. Index. 25 cm. [8 ref]

• ***Summary:*** Soy-related recipes include: Deep-fried bean curd with sesame sauce (p. 91, with "4 cakes bean curd," each of which is cut into 9 pieces, dried on paper toweling, then deep fried at 375°F). Chicken and bean curd stick soup (p. 109, with "¼ pound bean curd stick" [dried yuba sticks]). Bean curd and greens soup (p. 115, with "1½ pieces fresh bean curd" [tofu]). Stir-fried eggs with soybean sprouts (p. 226). Stir-fried eggs with bean curd (p. 227, with "2 fresh bean curd cakes or 1/3 pound homemade bean curd"). Bean curd sautéed with eggs (p. 258, with "4 cakes fresh bean curd"). Stir-fried bean curd with black mushrooms (p. 259). Stir-fried bean curd with squash (p. 260). Homemade bean curd with soybeans (p. 261-62, curded with vinegar or gypsum / calcium sulfate. The residue [okara], which is called "Soybean pulp, may be added to ground beef up to a 1 to 2 ratio." Step 8: "Remove curd from bag and mix with salt" is a new invention in making tofu–which ends up with a texture like cottage cheese and seasoned with salt). Homemade bean curd with soybean powder (p. 262-63, curded with vinegar or gypsum). Celery cabbage creamed in soy milk (p. 269, with "4 heaping teaspoons soybean powder." "2. Place soybean powder and water in a pint jar. Tighten lid and shake well. Add cornstarch and honey to soybean 'milk'"). Soybean sprouts with celery (p. 273). Spinach in soy sauce (p. 276). Vegetarian dish of the Buddhists (p. 277-78, with "2 ounces dried bean curd" [probably dried yuba sticks] and "3 cakes fresh bean curd").

"A guide to Chinese cooking ingredients" (p. 289-324) and "Glossary" (p. 325-26) describe: Bean curd (dow foo–tofu, incl. pressed curd {firmer}, canned bean curd {somewhat less creamy than the fresh}). Bean curd, dried

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(foo jook [dried yuba sticks]; tiem jook is sweeter than foo jook). Bean curd cheese (fooh yu [fermented tofu]). Bean paste, yellow (wong dow sa). Bean sauce, brown (min see jeung). Beans, black soy (kei tou). Beans, black fermented (dow see; these black soybeans are fermented, dried and salted). Hoisin sauce (hoy sin jeung. "A soybean-based sauce..."). Soybean sprouts (Da dow ngah).

Photos show: (1) Three squares ("pillows") of pressed bean curd. (2) A box of "Dried bean curd" [foo jook] (p. 296). (3) Black soybeans (enlarged) (p. 299). (4) A bag full of "Salted black bean (spiced)" (fermented black beans). Made by Koon Chun Sauce Factory, Hong Kong. (p. 300). Note: As of Nov. 2011 the company (in the New Territories, Hong Kong, with a website) is named "Koon Chun Hing Kee Soy & Sauce Factory Ltd."

5112. Sugimoto, Hiroshi. 1974. Treatment of soybean spent solubles by means of yeast cultivation. *J. of Food Science* 39(5):934-38. Sept/Oct. [31 ref]

• ***Summary:*** "Spent solubles from the preparation of soybean protein isolates and heat-coagulable whey proteins account for about one-fourth of the original dry weight of defatted soybean flakes." These spent solubles usually have been disposed of as sewage. However, because of their high biological oxygen demand (BOD) or chemical oxygen demand (COD), they present a serious waste disposal problem. Some yeast strains, particularly *Candida quilliermondii* or *Debaryomyces kloeckeri* (*D. hansenii*) grow very well on the spent solubles without supplementation. Address: Central Research Lab., Kikkoman Shoyu Co. Ltd., Noda-shi, Chiba-ken, Japan.

5113. Eden Foods. 1974. Fall & winter pricelist. 4601 Platt Rd., Ann Arbor, MI 48104. 2 p. Effective Nov. 1.

• ***Summary:*** Note that the company has moved to a new and much larger warehouse. Soybean Flakes are still organically grown in Deaf Smith, Texas. Tamari Soy Sauce, and 3 misos still bear the Erewhon brand. Eden is selling Honey Vinegar, Apricot Butter, and Apple Sauce under the Pure & Simple brand. Address: Ann Arbor, Michigan. Phone: (313) 973-9400.

5114. Flores, L.B. 1974. Make soy sauce comparable with the imported kind. *NIST News (The) (Manila)*. NIST-142 Nov. 18. 3 p.

• ***Summary:*** NIST stands for National Institute of Science and Technology, in Manila. Address: Philippines.

5115. Aihara, Herman. 1974. Soybean diet. Diet for the better protein. Oroville, California: George Ohsawa Macrobiotic Foundation. xi + 164 p. Nov. Illust. Index. 21 cm.

• ***Summary:*** This book is an expanded version of "Miso and Tamari" (1972). Contents: Preface. Introduction. 1. Theory: Steak vs. gasoline, is animal protein indispensable, protein requirements, essential amino acids–law of all or nothing, minimum daily requirement of essential amino acids.

2. Miso: Introduction, the origin of miso, kinds of miso, ingredients, how to make miso, value of miso, miso in the treatment of tuberculosis, how to make miso at home using mugi koji, recipes using miso for warmer seasons, recipes using miso for colder times.

3. Tamari or traditional soy sauce: History, chemical change of tamari, how to make tamari soy sauce at home, how to use soy sauce, soy sauce cooking for warmer times, soy sauce cooking for colder times.

4. The other soybean and high protein foods: How to make tofu at home, how to make tofu plaster, how to make agé–deep fried tofu at home, how to make seitan at home. 4A. Tofu, seitan, and gluten cooking for warmer times: How to make tofu, nigari, and bulk tofu at home, how to make wheat gluten, seitan and fresh wheat *fu* at home. 4B. Tofu, seitan and gluten cooking for colder times. Appendix. Cutting styles, useful information. Bibliography.

Large photos near front of book show: (1) Herman Aihara. (2) Cornellia Aihara looking very happy at her stove. Address: Oroville, California.

5116. **Product Name:** Wheatmeat (Seitan in the Form of Small Meatball-like Chunks–Sold in Bulk).
Manufacturer's Name: Gimme Some Food Co. Renamed Wheatmeat Co. in 1975, then Vegetable Protein Co. in 1976.
Manufacturer's Address: 17 Dent St., West Roxbury, Massachusetts. Then 51 Oak Ave., West Newton, MA. Then 140 River St., Cambridge, MA.
Date of Introduction: 1974. November.
Ingredients: Incl. water, wheat gluten, tamari, ginger.
Wt/Vol., Packaging, Price: In bulk in a large glass jar, in salty little meatball-like chunks.
How Stored: Refrigerated.
New Product–Documentation: 1988 April 19. United States Patent and Trademark Office. Trademark registration by John Weissman (United States Citizen) for "WheatMeat." Trademark registration number: 1,485,401. Date Registered 19 April 1988. Current address: 140 River St., Cambridge, Massachusetts 02139 [address no longer valid in March 1992]. For: Formed vegetarian protein used as a meat substitute, in Class 29 (U.S. Cl.: 46). Trademark first used: May 1976. Trademark first used in Commerce: May 1976. Ser. No. 667,393, Filed June 19, 1987. M.E. Bodson, examining attorney. Registered for a term of 20 years from April 19, 1988. Note: The above information was initially supplied by Mark Machlis of Ivy Foods in Salt Lake City, Utah, 1992, Feb. 27, then confirmed by ordering a copy of the trademark registration. John Weissman later stated that the Wheatmeat trademark was owned by ITT / Wonder Bread before he owned it. He waited until they let it go by not renewing it.

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Talk with Sandy Chianfoni of Upcountry Seitan. 1991. Nov. 16. She moved to Boston in 1978 and enjoyed Tan-Pops from the time she arrived. They were probably made by the same guy who made "Wheatmeat" (a seitan product) and Wheatmeat Sandwiches, and who lived in Cambridge. She thinks he made Wheatmeat by mixing wheat and vital gluten together rather than by using the traditional process. Michael Cohen of Lightlife Foods might know who made it, since the manufacturer, whose company was named something like the "Vegetable Protein Company" may have offered to sell his company to Michael.

Talk with Joan Donovan, formerly of Upcountry Seitan. 1991. Nov. 17. She thinks this product was made in Jamaica Plain. It was kofu cooked in hot water without tamari. It had no flavor. People would flavor it themselves. She first saw it in about 1979-80 at the Erewhon store in Brookline Village. They sold it in a pan in the store.

Talk with Joel Wollner, a clerk at the Erewhon retail store on Newbury St. in Boston in the mid-1970s. 1991. Nov. 18. Joel recalls that a man named Johnny Weissman made both Wheatmeat and Tan-Pops. He owned the Vegetable Protein Company in Cambridge. Joel is not sure which product was launched first. Johnny still has a trademark on the term. He sold two types (white and brown), one plain unseasoned kofu and one made into seitan. He sold it in little heat-sealed polyethylene bags, 5-6 ounces each, refrigerated. There were several pieces or chunks per bag. They were not slices. There was a little seasoned broth in the bag with the brown seitan type. He brought it in refrigerated or frozen; Erewhon froze it. The product was introduced in about 1976, perhaps as early as 1975. To get details on the product and company, try doing a trademark search.

Talk with Paul Duchesne of Fairfax, California. 1991. Nov. 19. Paul was in Boston from Sept. 1978 for 9 months. Wheatmeat was definitely made by the Vegetable Protein Co. in Cambridge. Johnny Weissman was a partner with some other person in that company. But Paul thinks Johnny made the Tan-Pops on his own. Paul was in the place where Johnny made the Tan-Pops; it was a little deep-frying place in Cambridge, and no Wheatmeat was made there. Wheatmeat Seitan was launched before Tan-Pops. Paul saw Wheatmeat Seitan in natural food stores.

Talk with Lenny Jacobs. 1992. March 11. John Weissman, the first person to make seitan in America, is selling Solar Burgers and stuffed pita sandwiches at Stuff-Its in the Harvard Garage (a collection of little shops) in Harvard Square in Cambridge, Massachusetts. Lenny saw him about a month ago and thinks he can find his address and phone number. Solar Burgers are basically seitan plus some new ingredients. Talk with Lenny Jacobs. 1992. March 30. Johnny's phone number is 617-783-3742. Stuff-Its is 617-497-2220.

Talk with Johnny Weissman of VegPro Co. in Brighton, Massachusetts. 1992. March 31. See this interview for details on this pioneering product and its history.

5117. Im, Yon-t'aek. 1974. Changyu yangjo e issoso ui hyoso chep'um iyong e kwanhan yon'gu [Studies on the utilization of enzyme preparations for the fermented process of soy-sauce]. M.A. thesis, Koryo Taehokkyo. iii + 34 p. Nov. 30. [37 ref. Kor, eng]
Address: South Korea.

5118. **Product Name:** Sunwheel Organic Hatcho Miso, Mugi Miso, Tamari, and Shoyu.
Manufacturer's Name: Sunwheel Foods (Importer-Distributor). Made in Japan. Imported from Muso Shokuhin.
Manufacturer's Address: London, England.
Date of Introduction: 1974, November.
How Stored: Shelf stable.
New Product–Documentation: CSP form filled out by Simon Bailey. 1988, Sept. 28. Gives date of introduction as 1974. In 1984 Sunwheel divided and sold its Sunwheel brand to Northumbrian Fine Foods. Its high quality Japanese products are now imported by Clearspring Natural Grocer. Peter Bradford is the contact person. Japanese agent is Mitoku. Various Japanese manufacturers.

Interview with Bill Tara, founder of Sunwheel. 1991 Aug. 18. By late 1974 Sunwheel Hatcho Miso, Mugi Miso, and Tamari were on the market, imported from Muso (Yuko Okada) in Japan. By 1979 Sunwheel was sold to a larger health food company.

5119. Hughes Markets. 1974. Happy New Year '75 (Ad). *Los Angeles Times*. Dec. 26. p. K20.
• ***Summary:*** The section titled "Foods of the Orient" includes: Kikkoman soy sauce, one gallon can $3.29. "JFC Kinako 7 oz. pkg. Soy bean flour–35¢. Misuzu Koya Dofu 3.5 oz. box. Dried Soybean Cake [Dried frozen tofu]–69¢... Age [Deep fried tofu pouches, sold in the fresh produce dept.] 59¢ package."

Also includes: Tempura batter mix, New crop botan rice, Motohiko Sapporo maki–Rolled Tangle [konbu]. Azuma yokan–Bean jelly [azuki]. JFC or Hime Shitake–Shitake dried mushrooms. Hime kampyo [kanpyo]–Dried gourd strips. Take waribashi–Bamboo chopsticks. Kamaboko. Blue chip stamps.

5120. Predicasts, Inc. 1974. World manufactured soybean foods. Special Study No. 108. Predicasts, Inc., 200 University Circle Research Center, 11001 Cedar Ave., Cleveland, OH 44106. vi + 93 p. Dec. 24. No index. 28 cm. Research Analyst: Frederick M. Ross.
• ***Summary:*** Contents: 1. Introduction. 2. Summary. 3. Economics of Soybean Foods: Soybeans, soy flour, meat extenders (based on extruded textured soy flour), synthetic meat (based on spun isolates). 4. Industry structure. General, $1,000 million food and feed giants (ADM, Cargill,

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Central Soya, General Mills/Takeda Chemical, Nabisco, Ralston Purina/Fuji Oil, and Esmark [Swift]), other major manufactured soy food companies (Unilever, General Host [New York], Miles Laboratories/Worthington & Kyowa Hakko Kogyo, A.E. Staley Mfg. Co., Stange [Chicago, Illinois], Chambers & Fargus [Humberside, England]), food industry structure. 5. Demand for manufactured soybean products: Demand for meat & substitutes, supply of natural meat, demand for meat substitutes, demand for soy flour. 6. North America: United States, Canada. 7. Latin America: General, Argentina, Brazil, Mexico, Other Latin America (Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay). 8. West Europe: General, France, West Germany, Italy, Spain, United Kingdom, Other West Europe. 9. East Europe: General, Hungary, Poland, USSR, Other East Europe. 10. Africa: General, Egypt, Nigeria, South Africa, Other Africa & Mideast. 11. Asia: General, China, India, Indonesia, Japan, Pakistan, Other Asia. 12. Oceania: Australia, New Zealand, Other Oceania.

Most sections contain numerous tables, mostly on meat and meat substitute consumption, and raw protein consumption, by country. Address: 200 University Circle Research Center, 11001 Cedar Ave., Cleveland, Ohio 44106. Phone: 216-795-3000.

5121. Fu, P'ei-mei. 1974-1976. Peimei shu pu [Pei Mei's Chinese cook book. 2 vols.]. Taipei, Taiwan. Illust. (color). No index. 22 cm. [Chi, Eng]*
• ***Summary:*** Volume 1 published April 1976, copyright 1969; vol. 2 published July 1974, copyright 1974. Chinese title also written *P'ei-mei shih p'u*. Address: Cooking teacher, Taipei, Taiwan.

5122. **Product Name:** Amoy Salted Black Bean, Salted Yellow Bean, Yellow Bean Sauce, Crushed Yellow Bean Sauce
Manufacturer's Name: Amoy Canning Corp. (Hong Kong) Ltd.
Manufacturer's Address: Hong Kong.
Date of Introduction: 1974.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Listing in The Vegetarian Health Food Handbook (UK). 1974. p. 173.

5123. Central Bureau of Statistics (CBS), Indonesia. 1974. [Industrial census]. Indonesia. [Ind]*
• ***Summary:*** Contains early statistics on commercial production of tempeh, tofu, Indonesian soy sauce (*kecap*), and Indonesian miso (*tauco*) in Indonesia. Producers are divided into 2 groups by size: Home industry (1-4 workers) and small scale industry (5 or more workers). The amount of soybeans processed in tonnes/year is as follows for home industry/small-scale industry: tempeh (1.8/12.3), tofu (3.8/15.2), soy sauce (0.8/3.7), and miso (4.7/6.3).

Note: This is the 2nd earliest document seen (Sept. 2011) that gives industry or market statistics for tempeh, or for tempeh in Indonesia.

5124. Credit Department, Farmers Bank of China, Taiwan. 1974. Report of the investigation of soy sauce manufacture in Taiwan. Taiwan. *
• ***Summary:*** 25 million U.S. dollars worth of fermented soy sauce is consumed in Taiwan; 70% of this is regular fermented soy sauce and 30% is inyu. Address: Taiwan.

5125. **Product Name:** Nik's Snaks (Tamari-Roasted Seeds, Nuts, Soybeans, and Trail Mixes).
Manufacturer's Name: Erewhon Trading Co., Inc.
Manufacturer's Address: 33 Farnsworth Street, Boston, MA 02210. Phone: (617) 542-1358.
Date of Introduction: 1974.
How Stored: Shelf stable
New Product–Documentation: Talk with Nik Amartseff. 1992. April 3. See long interview.

The 1975 Erewhon catalog, titled Erewhon Harvest '75, lists an entire page of "Nik's Snaks," containing about 30 products. Of these, eleven are tamari-roasted whole-food snacks. The 30 products are sold in 5 sizes: 2.5 oz., 3.5 oz., or 6 oz. pick-up packages, or 25 lb bulk. The soybeans (dry roasted with tamari, no salt) are sold only in 25 lb packs. Other tamari-roasted seeds include: Spanish peanuts, sunflower seeds, roasted almonds (all 2.5 oz or 25 lb), cashews or pumpkin seeds (25 lb). Non tamari-roasted products include: Raisin walnut mix. Roasted mixed nuts. Raw mixed nuts. Raisin nut mix. Peanut raisin mix. Trail mix. Honey almond granola. Chia seeds. Bee pollen. Alfalfa seeds. Date sugar. etc.

5126. Goel, S.K.; Yong, F.M.; Wood, B.J.B. 1974. Soy sauce production. *British Provisional Patent.* *
• ***Summary:*** The authors applied for a patent on a quick method of making soy sauce, but cost prevented them from taking it to finalization–so it was never issued.

5127. **Product Name:** 'Lima' Tamari (Soya Bean Sauce), and Miso (Soya Bean Paste).
Manufacturer's Name: Hofels Pure Foods Ltd.
Manufacturer's Address: England.
Date of Introduction: 1974.
New Product–Documentation: Listing in The Vegetarian Health Food Handbook (UK). 1974. p. 174.

5128. **Product Name:** Maestro Brewed Soy Sauce. Brand changed to Far East in about 1976.
Manufacturer's Name: House of Herbs
Manufacturer's Address: P.O. Box 178, Passaic, NJ 07055-0178. Phone: 201-779-2422.
Date of Introduction: 1974.

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Ingredients: Water, hydrolyzed vegetable protein (Hercules HVP), salt, sugar, monosodium glutamate, caramel, and sodium benzoate (less than 1/10 of one percent as food preservative).
Wt/Vol., Packaging, Price: 375 ml (12.7 fluid ounce) glass bottle.
New Product–Documentation: Talk with Paul Fischer, owner of House of Herbs. 1997. Sept. 11 and 15. This product was introduced in about 1974. It was first sold in a 375 ml (12.7 fluid ounce) glass bottle; later they changed to two smaller glass bottles to be competitive–10 fl oz (295 ml) and 5 fl oz (148 ml). For a history of this company and the product, see this 1997 SoyaScan Notes interview. A color leaflet (8½ by 11 inches, single sided), sent by Paul, shows the 22 products in his Far East Line.

5129. **Product Name:** Maestro Teriyaki Sauce. Brand changed to Far East in about 1976.
Manufacturer's Name: House of Herbs.
Manufacturer's Address: P.O. Box 178, Passaic, NJ 07055-0178. Phone: 201-779-2422.
Date of Introduction: 1974.
Ingredients: Water, hydrolyzed vegetable protein (Hercules HVP), salt, sugar, monosodium glutamate, caramel, wine, garlic, onion, ginger, and sodium benzoate (less than 1/10 of one percent as food preservative).
Wt/Vol., Packaging, Price: 375 ml glass bottle.
How Stored: Shelf stable.
New Product–Documentation: Talk with Paul Fischer, owner of House of Herbs. 1997. Sept. 11 and 15. This product was introduced in about 1974, shortly after the soy sauce. Paul basically got his recipe for the teriyaki sauce from a cookbook. The product was first sold in a 375 (12.7 fluid ounces) ml glass bottle, later they changed to two smaller sizes to be competitive--10 fl oz (295 ml) and 5 fl oz (148 ml). For a history of this company and the product, see this 1997 SoyaScan Notes interview. A color leaflet (8½ by 11 inches, single sided), sent by Paul, shows the 22 products in his Far East Line.

5130. Korea. 1974. Seoul, Korea: International Publicity Corp. 68 p. Illust. (color). 24 cm. [Eng]*
• ***Summary:*** Soybeans can be used to make six different foods: Soy sauce, soybean mash, roasted soy flour, soy sprouts, tofu, and soybean oil. Many Koreans still make their own soy sauce at home, starting in the fall. A detailed description of the process is given.

5131. McGinity, Richard C. 1974. Kikkoman Shoyu Co., Ltd. Unpublished Harvard Business School Report. 18 p.
• ***Summary:*** A Harvard Business School case study, with abundant statistics and insights into the company's internationalization. Address: Research Assoc., Harvard Business School, [Cambridge, Massachusetts].

5132. **Product Name:** Sanitarium Health Foods Tender Bits (Vegetable Protein Bits).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1974.
Ingredients: Wheat gluten, sauce [incl. soy sauce], onion, flour, vegetable oil, water added.
Wt/Vol., Packaging, Price: 430 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1974. "Soy sauce is the first ingredient in the sauce."

5133. **Product Name:** Sanitarium Health Foods Casserole Mince (Minced Vegetable Protein).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1974.
Ingredients: Wheat gluten, flour, soya sauce, hydrolysed vegetable protein, sauce, water added.
How Stored: Shelf stable.
Nutrition: Per 110 gm (¼ can): Protein 16 gm.
New Product–Documentation: Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1974.

5134. **Product Name:** Tamari Nut Mix, and Tamari Roasted Peanuts (Both Dry Roasted).
Manufacturer's Name: Summercorn Foods Inc.
Manufacturer's Address: 401 Watson, Fayetteville, AR 72701. Phone: 501-521-9338164.
Date of Introduction: 1974.
Ingredients: Nut Mix: Peanuts, sunflower seeds, almonds, pecans, cashews, soy sauce; Peanuts: Roasted peanuts, tamari (shoyu).
Wt/Vol., Packaging, Price: 10 lb.
How Stored: Shelf stable.
New Product–Documentation: Label for peanuts. 1974. 4.75 by 4.25 inches. Paper. Black on pink.

5135. **Product Name:** Johsen Shoyu (Natural Soy Sauce).
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan by Sendai Miso-Shoyu.
Manufacturer's Address: 1224 10th St., Berkeley, CA 94710.
Date of Introduction: 1974.
New Product–Documentation: Interview with Bob Gerner. 1987. Aug. 20. He says imports started in 1975. Westbrae Natural Wholesale Food Catalog. 1980. Spring. The three imported products are now called "1. Johsen Shoyu-Tamari–

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Naturally brewed. 2. Johsen Shoyu-Tamari–Naturally brewed shoyu. 3. Traditional (True) Tamari–Wheat free." Container sizes are 4.75 gallons (1&3), 32 oz (2), 16 oz (3), 12.7 oz. (2), and 5 oz. (2&3). Letter from Gordon Bennett. 1987. Oct. He says the introduction date was 1974.

5136. Wood, B.J.B.; Cardenas, O.S.; Yong, F.M.; McNulty, D.W. 1974. Lactobacilli in the production of soy sauce, sour dough, and Parisian barm. In: The Lactic Acid Bacteria. Proceedings of 4th Long Ashton Research Conference, 1973. See p. 325-335. *

5137. Ali-Bab. 1974. The encyclopedia of practical gastronomy. Translated by Elizabeth Benson. New York, NY: McGraw-Hill. vii + 471 p. Illust. 24 cm.
• ***Summary:*** This is a translation of ***Gastronomie pratique.*** In the first section, titled "Gastronomy through the ages," the subsection on "Great Britain" (p. 20) states: "The inferiority of English cooking manifests in its sauces and ragoûts. The English use too many aromatic herbs, condiments, and pickles. Under the pretext of cooking simply they often use, instead of our sauce bases made from broths or our simmered sauces, very strong industrially prepared sauces such as ketchup, soy sauce, Worcestershire sauce, and Harvey sauce. Englishmen use them in such quantities that they end up by completely smothering the taste of the original preparation."

Page 44: "83. The *catjang* is a fermented bean curd." See p. 31.

Soy related recipes: Potage crème veloutée de soja aux perles (Cream of soya bean soup velouté with tapioca, with "2 lbs. soya bean sprouts," p. 103.

A note just below this recipe reads: "*Soja* or *Soya hispida*, which originates in the warm regions of Asia, is still known under the name of *Glycine hispida*, colloquially called Chinese peas. This is a legume of the Phaseolae family. In China and Japan it is used a great deal, especially among the poorer classes. These vegetables are mainly used in the preparation of pasta, sauces, and a type of cheese [tofu]. Only recently introduced into Europe, only the sprouts are in general use")

Soja au jus (Soy bean sprouts with meat broth, with "2 lbs. soya bean sprouts," p. 341).

Inside front dust jacket: The author, whose real name was Henri Babinsky, was of Polish ancestry, born in 1855 in Paris and died in 1931.

Note: The 1st edition was published in 1907 in Paris. The 2nd edition was published in 1912.

5138. Altschul, Aaron M. ed. 1974. New protein foods. Vol. 1A. Technology. New York, NY: Academic Press. xiv + 511 p. [1750* ref]
• ***Summary:*** Contains 10 chapters by various authors. Five of these are cited separately. Address: Dep. of Community Medicine & International Health, Georgetown Univ. School of Medicine, Washington, DC.

5139. Braekman, Agnes de Keijzer. 1974. Art of Indonesian cooking: The ABC's. Singapore: Asia Pacific Press. 127 p. 23 cm. First published in 1970.
• ***Summary:*** This recipe book, with a long introduction to each chapter, contains numerous soy-related recipes: Soya fish (Ikan ketjap, p. 24; Ketjap is "sweet soya sauce" [probably ketjap manis]). Soya fish, large (Ikan ketjap besar, p. 25). Soya chicken (Ajam ketjap, p. 38). Braised soya duck (Bebek smor ketjap, p. 48). Spicy soya sauce (Sambal ketjap, p. 74). Fermented soya beans (Sambal goreng tempe, p. 77; a must for the rijsttafel [rice table]). Peppered bean cakes [with tofu] (Sambal goreng tahoe, p. 82). Indonesian salad [with tofu] (Gado-gado, p. 85). Spiced soya (Sambal ketjap, p. 106).

The back matter notes that the best source of Indonesian ingredients is the Dutch company Commex, in Baarn, Netherlands. There is a page of ideas for ingredient substitutes in the West (for sweet soya sauce substitute "equal amounts of Chinese or Japanese soya sauce and molasses"), and a 3-page Indonesian-English kitchen glossary. Address: Brookfield Center, Connecticut.

5140. Brooks, Karen. 1974. The forget-about-meat cookbook. Emmaus, Pennsylvania: Rodale Press. 215 p. 23 cm.
• ***Summary:*** The glossary (p. 10-11) includes Pero (a coffee substitute made from barley and rye), tamari soy sauce (Contains no chemicals and is made from water, soybeans, wheat, and sea salt), and wheat-soy macaroni (made with whole wheat and soy flours). A "Grain texture chart" (p. 19) gives tips for using soybeans and soy flour. Soy-related recipes include: Soya-raisin griddle cakes (with soy flour, p. 59). String beans with roasted soybeans (p. 134). Soybean-lentil-rice loaf (with cooked soybeans, p. 136). Soyburgers (with cooked soybeans). Notes on cooking beans (incl. soybeans, p. 126). Address: Easley, Missouri.

5141. Crisostomo, L.C.; Corpuz, L.; Celes, F.F. 1974. A comparative study on the utilization of mecan pea for "soy sauce" preparation. Manila: Bureau of Plant Industry, Laboratory Services Div. 8 p.
• ***Summary:*** Mecan pea (*Vigna sinensis*, a variety of cowpea sometimes known as Davao Beans), when used with wheat in place of soybeans, was used to make "soy sauce" which, when submitted to a taste panel, was given higher scores in odor, flavor & taste, and consistency than both commercial or home-made soy sauce. Therefore mecan-pea "soysauce" (which contains no soy) is highly acceptable. Address: Philippines.

5142. Goel, S.K. 1974. Studies on microbiological and biochemical aspects of soy sauce fermentation. PhD thesis,

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Dep. of Applied Microbiology, University of Strathclyde, Glasgow, Scotland *
Address: Univ. of Strathclyde, Glasgow, Scotland.

5143. Hannaford, Kathryn. 1974. Cosmic cookery. Berkeley, California: Starmast Publications. xixd + 264 p. Illust. by Lorena Laforest. 21 cm.
• ***Summary:*** This vegetarian cookbook contains 190 recipes created and tested at the communal One World Family Natural Foods Restaurant. Page 35 lists uses and seasonings of beans, including aduki beans and soy beans. Favorite seasonings for the latter are thyme, oregano, basil, green pepper, tomato, cheese, soy sauce, onion, or garlic. Soy-related recipes include: Soy grits (p. 75). Macroburger mix (with cooked soybeans, p. 83). Soy mayonnaise (with soy milk powder, p. 111). Chunky soy spread (p. 130). Miso tahini spread. Creamy soy spread (p. 131). Miso soup (p. 144). Miso-scallion broth (p. 145). Macro-sausage (with Soy Spread, p. 163). Spaghetti with miso sauce (p. 176). Super soybean casserole (p. 182). Miso sauce (p. 200). Soya carob nut brownies (with soy milk powder, p. 227). Address: Berkeley, California.

5144. Hunter, Beatrice Trum. 1974. Favorite natural foods. Adapted from a series of programs on WGBH, Boston. New York, NY: Simon and Schuster. 219 p. Index. 21 cm. [154 ref.]
• ***Summary:*** Contents: Foreword. 1. Vegetables, vegetables. 2. Perking up the salad bowl. 3. Sprouts (incl. legume seeds {alfalfa, chick pea, lentil, mung bean, peanut, pinto bean, soybean}, grain seeds, vegetable seeds, herb seeds, weed seeds, oil seeds {flax, safflower, sesame, sunflower}). 4. Whole grains. 5. The Cornell mix [for bread: Dr. Clive McCay]. 6. Sourdough. 7. Sauerkraut. 8. Yogurt. 9. Soybeans. 10. Satisfying that sweet tooth: Dried fruit desserts, confections, snacks. 11. Of special concern: Baby foods, brown-bagging, party fare, making good foods even better. Appendix.

Contents of chapter 9, Soybeans: Introduction. Soybean sprouts. Fresh green soybeans as a vegetable: Freezing, canning, drying. Recipes for whole dry soybeans (2). Making soybean pulp (put cooked, drained soybeans through a meat grinder; recipe for green peppers stuffed with soybean pulp). Roasting dry soybeans (soak, drain, and dry roast). Making soybean milk (recipes for spiced soybean milk, brown rice pudding with soybean milk). Making soybean curd (also called "soybean cheese" or "tofu." From soybean milk, from fermented soybean milk, from soybean flour, from soybeans). Using soybean flours (three types: high-fat or full-fat, low-fat or medium-fat, minimum-fat or fat-free). 100% soybean flour cookies (grain-free). Other soybean products you can buy: Soybean grits and soybean flakes (with 1 recipe). Soybean lecithin (with 2 recipes). Tamari, miso. The soybean and you: Meat alternatives, tempeh, textured vegetable protein products (inferior), fabricated soy foods in school lunch programs ("a nutritional crime"). Avoid mock foods.

About the author: She is the author of numerous books and winner of the French Company's Tastemakers Award. She and her husband, John, live in New Hampshire. Nationally known for her lectures and demonstrations on natural foods, she is a member of the Price-Pottenger Nutrition Foundation and twice a speaker for the Martha Jones Lectures in Nutrition at the Ashbury Theological Seminary in Kentucky. She holds a B.A. from Brooklyn College and a Master's degree from Columbia University. She has done graduate work at State Teachers College in Buffalo, New York, and at Harvard University. A small photo of Beatrice Trum Hunter appears on the front dust jacket of the hardcover edition. Address: New Hampshire.

5145. Iwata, Hisayoshi. 1974. Shokuhin kagaku [Food science]. Tokyo: Yokendo. 370 p. Illust. Index. 22 cm. [150+* ref. Jap]
Address: Tokyo, Japan.

5146. Kobayashi, Keizô. 1974. Shôjin ryôri nyûmon [Entry gate to Zen vegetarian cookery]. Tokyo: Shibata Shoten. 230 p. Illust. 22 cm. [Jap]
• ***Summary:*** The author was born in 1930. Address: Formerly asst. head cook at Eiheiji Zen Monastery. Now head priest, Rinsho-ji, Tateoka, Murayama-shi, Yamagata prefecture.

5147. Kozel, Carlos. 1974. Guia de medicina natural. I. Salud y curación [Guide to natural medicine. I. Health and healing]. Viladrau (Gerona prov.), Spain: Ediciones Cedel. xii + 467 p. Illust. 23 cm. Vol. 1 of his Guia de Medicina Natural [Guide to Natural Medicine]. [Spa]
• ***Summary:*** About natural food and vegetarianism. Pages 185-91 discuss soya, which is called "vegetable meat" and from which one can obtain lecithin, soymilk, whole soy flour, miso, tofu, shoyu, etc. The nutritional composition of soybeans is given.

5148. Kôno, Tomomi. 1974. Shôyu fudoki [Shoyu throughout the provinces]. Tokyo: Mainichi Shinbunsha. 205 p. [Jap]*

5149. Lo, Kenneth H.C. 1974. Chinese vegetable and vegetarian cooking. London: Faber & Faber, Ltd. 172 p. Index. 21 cm.
• ***Summary:*** This original edition, published in London, is smaller in height, has no illustrations, and 13 fewer pages than the American edition published the same year. The recipes are the same, but on slightly different pages. For details, see the American edition (1974).

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5150. Lo, Kenneth H.C. 1974. Chinese vegetarian cooking. New York, NY: Pantheon Books (Div. of Random House). 185 p. Illust. by Tom Funk. Index. 22 cm.

• ***Summary:*** Originally published in 1974 in London, England, as "Chinese Vegetable and Vegetarian Cooking" by Faber & Faber, Ltd. However that book is smaller in height, has no illustrations, and 13 fewer pages than this American edition. The entire text has been lightly edited and re-set for American cooks and readers. The recipes are basically the same, but on slightly different pages, and with some titles slightly changed (e.g., from "sesame jam" to "sesame paste," p. 133).

In the Introduction, under "Flavoring," the following soybean products are listed: Soy sauce, black beans (salted), soybean paste (yellow and black), bean-curd cheese (red and yellow). Soy-related recipes include: Steamed bean curd with peanut butter sauce (p. 50). Hot-marinated bean-curd sticks [dried twisted yuba sticks] with quick-fried [mung] bean sprouts (with "yellow bean-curd cheese" [fermented tofu], p. 60-61). The Lo Han dish of the monks' mixed vegetables (with tofu, and "red bean-curd cheese" [fermented tofu], p. 72-73). Hot assembly of shredded bamboo shoots and bean curd... (with tofu and "bean-curd cheese [fermented tofu], p. 74). Hot assembly of chestnuts, sliced lotus root, gingko nuts, peanuts, Chinese mushrooms, and bean curd (with tofu and "white bean-curd cheese" [fermented tofu], p. 75). Hot black bean and tomato sauce (Ratatouille Chinoise, with salted black beans and soybean paste, p. 82-83). Basic bean-curd soup (p. 105). Enriched bean-curd soup (p. 105). Soy eggs (with soy sauce, p. 125).

Note 1. This is the earliest English-language document seen (Oct. 2011) that uses the terms "yellow bean-curd cheese" or "red bean-curd cheese" or "white bean-curd cheese" to refer to fermented tofu.

There is an entire chapter titled "Bean Curd" (p. 135-48), with an introduction and the following recipes: Cold bean curd (with soy sauce and peanut oil). Cold bean curd with sesame paste or peanut butter ("Use 1½ tablespoons sesame paste," p. 136). Hot-and-savory bean-curd pudding (with salted black beans). Hot-and-pungent bean-curd pudding. Red-cooked bean curd with bean-curd sticks [yuba] (with soybean paste and soy sauce; the sticks are about 20 inches long). Stir-fried bean curds. Bean curd stir fried with [mung] bean sprouts or spinach. Bean curd stir fried with green beans. Deep-fried bean curd stir fried with duck eggs and cucumber skins. Deep-fried bean curd stir fried with eggs, mushrooms, and wood ears. Stir-fried shredded bean curd with dried bamboo shoots, dried mushrooms, lily-bud stems, and seaweed. Clear-simmered bean curds. Clear-simmered bean curd with lettuce and cellophane noodles. Clear-simmered bean curd with [mung] bean sprouts, water chestnuts, and sliced cucumbers.

Note 2. This is the earliest English-language document seen (June 2003) that uses the term "sesame paste."

5151. Masuda, Koh, editor in chief. 1974. Kenkyusha's new Japanese-English dictionary. 4th edition. Tokyo: Kenkyusha. xiii + 2111 p. 27 cm. [Eng; jap]

• ***Summary:*** The first edition of this superb dictionary was published in 1918, the second in 1931, and the third in 1954. The words are listed in alphabetical order. Some of the definitions of soy-related terms are quite poor. Examples:

Daitokuji natto: not listed.

edamame: "green soybeans." [Better: Green vegetable soybeans, or Edamamé].

Hamananatto: not listed.

Hamanatto: not listed.

hiryôzu: not listed.

kinugoshi [tofu]: fine-grained *tofu*.

kogori-dôfu = kôya-dôfu.

koikuchi shoyu: not listed.

kôji: "*koji.*" Good.

miso: "*miso.*" Good. Also defines: [ama-miso]: slightly-salted miso.

[miso-koshi]: a miso strainer.

[miso mame]: a soybean; a soya (bean).

[miso-shiru]: miso soup. And many more.

nattô: "fermented soybeans." [Better: Whole soybeans fermented with *Bacillus subtilis*]. Nattô-jiru: "Miso soup with minced fermented soybeans." Good.

nomame: not listed.

okara: bean-curd (*tofu*) refuse; lees of bean curd.

omiotsuke [Jap: Misoshiru] See miso [Miso soup; word used by women only].

otsuke [Jap: Misoshiru] Miso potage (soup).

saishikomi shoyu: not listed.

shitaji: soy. See shôyu.

shôyu: "soy (sauce)." Better: Soy sauce.

tamari: "(a kind of) soy; soy sauce; sauce from refined soy."

tôfu: "bean curd [cheese], *tofu*.

[yaki-dofu]: "roasted bean curd."

[tofu itcho]: a piece (cake) of bean curd.

[tofu-ya]: "a tofu dealer (seller, maker)."

tônyû: "soybean (soya) milk." [Better: Soymilk, soya milk, or soybean milk].

tsurumame: not listed.

usukuchi shoyu: not listed.

yuba: "dried bean curds" [sic. Better: The protein-lipid film formed atop soymilk when it is heated].

5152. Moulton, Le Arta. 1974. The gluten book. The Gluten Co., Inc., Box 482, Provo, Utah 84601. vi + 147 p. Illust. by Jordon Arts. Index. 15 x 23 cm. Spiral bound. Rev. ed. published 1981.

• ***Summary:*** Contents: What is gluten?–Why use it? Nutritional data. Storing wheat. Versatility of wheat. Gluten gives you low-cost meals–comparisons [1 gm of hamburger

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protein costs 4.5 times as much as a gram of gluten protein]. Milling your wheat into flour. Gluten flour. Instructions for making gluten. Saving the bran. Saving the starch water. Cooking the gluten. Main dishes. Seasonings. Broth, gravies, sauces. Desserts & candies. Other wheat specialties: Bread, rolls, crackers, parched wheat, bran recipes, snacks, pancakes, muffins, pizza dough, pie crusts, sprouting, frosted drinks, sandwich spreads, pet food, bottled gluten, hints for baby feeding. The do's and don'ts in cooking with gluten (Characteristics of gluten, helpful hints, terms used, questions and answers).

Contains information on all aspects of gluten, how to make it at home, and its use in cooking. The author, a graduate of Brigham Young Univ. and mother of four, "has been giving demonstrations and lectures for the past 10 years in seminars, workshops, and church functions on the uses of wheat. Those who have tasted her endless variety of wheat dishes, know she is an authority on gluten cooking." Soy is not mentioned, nor is "seitan."

"Gluten is the protein (amino acids) part of the wheat. It is the substance which holds the carbon dioxide the yeast makes and enables bread to rise. Gluten contains two principal proteins–glutenin and gliadin. It is the gliadin in the gluten that allows the gluten to form into an elastic-like quality and eliminate the starch and bran."

Saving the starch water from gluten washing is important since it contains nearly all the vitamins and starch from the wheat. These should not be wasted. Uses for the starch water: Cold and hot drinks, gravies, stew, soup, desserts, baby's bath, liquid in bread, hand lotion, floor wax, water for plants, in place of clear water, thickenings, sauces, water for livestock, for reconstituting powdered milk. To wash 12 cups of wheat flour, requires 1 gallon or more of water. Address: Provo, Utah. Phone: 801-377-2239 (in 1990).

5153. Newman, Marcea. 1974. The sweet life: Marcea Newman's natural-food dessert book. Boston, Massachusetts: Houghton Mifflin Co. 161 p. Illust. by Linda Stine. Index. 29 cm. A 1981 revised edition contained 176 p. [63* ref]
• ***Summary:*** This early and beautifully presented natural foods cookbook contains very innovative and tasty tofu dessert recipes made with limited natural sweeteners and no dairy products. It discusses the harmful effects of refined and denatured foods, with details on white flour, sugar, oil, salt, eggs, milk, and baking powder [which contains alum, a product of aluminum; "it may even be harmful"].

Chapter 1, titled "Natural necessities: Equipment, techniques, and ingredients," gives good definitions of and introductions to amasake (p. 6), miso (p. 10), tamari (p. 12), and tofu (soybean cheese, p. 13). Soy-related recipes include: Basic cake II with tofu sour creame (p. 25). Cheesecake tofu pie (p. 37). Cantaloupe cheesecake (p. 37, with tofu). Upside-down tofu cake (p. 38). Mincemeat filling with miso (p. 50-51). Tofu poppy seed filling (for pastries or phylo, p. 53). Instant tofu creame (p. 59). Tofu creame (p. 59). Tofu creame whip (p. 60). Tofu sour creame I and II (p. 60). Tofu custard (p. 62). Apple tofu delight (p. 82). Creame puffs with amasake filling (p. 82). Cherry tofu strudel (p. 88). Tofu sour creame cherry tart (p. 92). Thanksgiving squash-mincemeat pie (with miso in the filling, p. 98-99).

The inside dust jacket gives a brief biography of the author, who was born and raised in New York. In Berkeley, California, she studied Japanese and natural-food cooking, and helped to start a "noodle bar" where she baked her first dessert. Now she lives in Boston and caters weddings, parties and school fairs with natural and organic foods and desserts.

An Appendix (p. 151-52) lists the name and address of 39 suppliers of natural foods in the USA (divided into five regions) 2 in Canada. This list includes the following companies. Northeast: Erewhon Trading Co. (33 Farnsworth St., Boston, Massachusetts 02210), Good Nature Distributing Co. (Box 447, Export, Pennsylvania 15632), Infinity Co. (173 Duane Ave., New York, NY 10005), Shadowfax (25 N. Depot St., Binghamton, NY 13901), Sundance Organic Food (R.D. #1, Box 146A, Coventry, Connecticut 06238), Walnut Acres (Penns Creek, Pennsylvania 17862, founded by Paul Keene).

Southeast: Collegedale Distributors (Box 492, Collegedale, Tennessee 37315), Laurelbrook Foods (Box 47, Bel Air, Maryland 21014), Tree of Life (Box 1391, St. Augustine, Florida 32084).

Midwest and Mountain States: Ceres, Inc. (2582 Durango Dr., Colorado Springs, Colorado 80910), Cliffrose (129 Coffman St., Longmont, Colorado 80501), Eden Foods (Box 100, Ann Arbor, Michigan 48107), Food for Life (420 Wrightwood St., Elmhurst, Illinois 60126).

Southwest: Akin Distributors (Box 2747, Tulsa, Oklahoma 74101), Arrowhead Mills (Box 866, Hereford, Texas 79045), Shiloh Farms (Box 97, Sulphur Springs, Arizona 72768), Sunrise Distributors (Box 5216, Phoenix, Arizona 83010).

West Coast: Erewhon Trading Co. (8454 Steller Dr., Culver City, California 90230), Janus Natural Foods (1523 Airport Way, South, Seattle, Washington 98134), New Day Distributors (1242 S. Berendo St., Los Angeles, CA 90006), The Well / Pure & Simple (795 West Hedding St., San Jose, CA 95126).

Canada: Lifestream Natural Foods, Ltd. (724-26 W. 6th Ave., Vancouver 9, BC), and Natural Foodstuffs (1 Main St., Box 27, Sutton, Quebec).

Note: This book contains the earliest recipe seen (Dec. 2005) for a tofu cheesecake. It is also the earliest English-language document seen (Dec. 2005) that uses the term "cheesecake tofu pie" to refer to a tofu cheesecake. For the story of how Marcea got interested in tofu and wrote this book see the interview: Marcea Newman. 1994. Oct. Re: Early work with tofu and tofu cheesecakes in America.

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Address: Boston, Massachusetts.

5154. Ohsawa, Lima. 1974. The art of just cooking. With Nahum Stiskin. Hayama, Japan and Brookline, Massachusetts: Autumn Press. 216 p. Illust. by Maurice Owen. Index. 19 x 23 cm. Reissued in 1984 as Macrobiotic Cuisine by Japan Publications, NY. 175 p. [26 ref.]

• ***Summary:*** This work is based on Lima's Japanese-language book titled *Macrobiotic Cookery* (1971). In 1953, at age 54, Lima Ohsawa first ventured beyond the shores of her native Japan. She and her husband, Georges Ohsawa, left on their first world tour. In 1955-56 they spent time with Dr. Albert Schweitzer in Lambarene, Gabon. "Being vegetarian Dr. Schweitzer was always very interested in the nutritional assets of the soybean and asked me to show him different ways to prepare it" (p. 10). During this and many subsequent travels, Lima learned many traditional, natural recipes from around the world.

Contains numerous Japanese macrobiotic style recipes. Page 32 gives good definitions of miso and shoyu. Soy-related recipes include: Brown rice with soybeans (p. 53). Inarizushi (p. 55). Brown rice porridge with vegetables and miso (p. 58). Soya omochi (mochi with soya flour). Burdock with miso and lemon peel (p. 90). Broccoli and radish with miso dip (p. 92). Carrot with green beans and tofu (p. 95). Ninjin shiro-ae (with "½ cake of *tofu*, drained and mashed (p. 173)," p. 95). Cucumber with wakame and walnut miso (p. 96). Cucumbers with miso and sesame (p. 97). Onion nitsuke with miso (p. 100). Onion goma-miso-ae (onion with sesame miso, p. 100). Eggplant nabeshigi-yaki (with miso, p. 101). Scallion and aburage nitsuke (p. 101). Scallion dengaku (with miso, p. 102). Renkon ikada age with kuzu-lemon sauce (p. 103). Kabocha miso ni (p. 106). Kabu miso-ae (turnips with sesame miso, p. 109). Daikon age rolls (with aburage, p. 114). Vegetable skewers with koya-dofu (dried-frozen tofu, p. 114). Kombu with shoyu (p. 117). Renkon miso iri (lotus root tempura with miso, p. 123). Coltsfoot buds with miso (p. 126). Wakame miso soup (p. 137). Mugi-miso soup (p. 137). Sake-no-kasu jiru (miso soup with sake lees, p. 137). Go jiru (soybean potage with aburage, p. 141). Oden with ninjin and gobo kombu maki (with aburage, p. 146).

Condiments and pickles (p. 154-57): Gomashio (sesame-salt). Tekka miso (sauteed vegetables with miso). Shigure miso (moist tekka). Miso sauté. Soybeans with miso and burdock. Soybeans with miso. Miso pickles (fall and winter). Sauces, spreads and salad dressings (p. 161-63): Lemon shoyu. Ginger shoyu. Orange shoyu. Tsuje-jiru dipping sauce (with shoyu). Goma joyu sauce (with shoyu). Scallion miso. Walnut miso. Citron miso. Goma miso (sesame).

Beans (p. 165-78). Black bean ni (the black beans are actually black soybeans. "In Japan this exquisitely sweet dish is a must on New Year's Day. It gets even sweeter after standing for a day or two"). Gomoku-mame (soybean nitsuke).

Tofu ryori (p. 173-78; "Tofu or bean curd is rich in vegetable protein. Although it is rather *yin* in our classification of foods, the recipes I have included here balance its *yin* characteristics with *yang* so don't hesitate to use it occasionally. It's delicious in miso soup, stews and *nabe*, and as a dish by itself. It is available at Oriental food shops and can also be made at home"). Homemade tofu (p. 174; 3 cups soybeans plus nigari make 1 lb. tofu; also describes how to make nigari {sea brine} by dampening 5 lb. sea salt). Variation: Homemade grilled tofu. Unohana pouches (with okara and aburage). Gammodoki: Tofu with kuzu sauce. Tofu roll. Koya-dofu sandwich. Tofu nitsuke. Chinese dow-foo oroshi-ae. Tofu mold (with kuzu). Tofu tempura. Goma dofu (sesame tofu).

Note 1. This is the earliest English-language document seen (May 2012) that contains the term "grilled tofu."

Squid and scallion miso-ae (p. 183). Salmon head soup (with soybeans, p. 183). Surimi shinoda (with aburage, p. 184). Red snapper in miso. Koi koku (with miso, p. 184). Egg tofu (p. 185). Amazake manju (sweet sake dumplings, p. 198). Amazake (homemade, using glutinous "sweet" brown rice, p. 207).

The section titled "*Kofu:* Wheat Gluten" (p. 85-86) includes recipes for Homemade kofu (wheat gluten, including Kofu loaf and Seitan), and Kofu cutlet. "First introduced to Japan from China by Buddhist monks, *kofu* became a very popular food in Zen temples. It is delicious in soups and stews and mixed with sautéed vegetables. *Kofu* cutlet looks, feels, and tastes like meat." Seitan is made by simmering 5 cups cold wheat gluten, separated into small pieces, for 3 hours in shoyu, sesame oil, and minced gingerroot.

Dandelion coffee (made from roasted, ground dandelion root) and Yannoh (prepackaged grain coffee, made from 5 different grains) are described on p. 206-07.

The book, which contains many fish recipes, begins with a nice photo of Lima at age 75–she looks 20 years younger–and ends with a good glossary. Lovely illustrations, a wealth of original information on Japanese foods.

Note 2. This is the earliest document seen (July 2000) that mentions "Tekka miso" (spelled that way).

Note 3. This is the earliest English-language document seen (Feb. 2005) that used the word "kofu" to refer to wheat gluten. Address: Tokyo, Japan.

5155. Okada, Chiyoko; Kataoka, E.; Togano, T.; Tamura, S.; Suzuki, T. 1974. Nyûfu no ippan seibun, amino-san oyobi kihatsu-san ni kansuru kenkyû [Analysis of some components, amino acids and volatile acids of nyufu (fermented soybean curd)]. *Eiyo to Shokuryo* (*J. of Japanese Society of Food and Nutrition*) 27(7):309-15. [10 ref. Jap; eng]

• ***Summary:*** Nyufu is made by partial dehydration of tofu

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followed by inoculation with *Actinomucor repens*. After the mold mycelium covers the surface, it is immersed in soy sauce moromi mash for aging. During ageing, the moisture content decreases, while the contents of salt, reducing sugars, and amino nitrogen increase. Only small amounts of lysine and amino-butyrate are found in nyufu. Formic and acetic acids can be detected at every step, whereas propionic acid and isobutyric acid can be detected only in the moromi mash and nyufu. Isovaleric acid is found in nyufu. Butyric acid is found after inoculation with the mold. Address: 1-3, Dep. of Nutrition, Tokyo Univ. of Agriculture; 4-5, National Food Research Inst., Tokyo.

5156 Rachie, K.O.; Roberts, L.M. 1974. Grain legumes of the lowland tropics. *Advances in Agronomy* 26:1-132. See p. 83-85. [493 ref]

• ***Summary:*** The main plants discussed are peanuts, pigeon peas, cowpeas, and mung beans. However under "Humid Tropics" (p. 83-85) is a rather long discussion of soybeans, which "has been extensively grown for a long time as a basic food crop of the low elevations in southeastern Asia (Indonesia, Philippines, Malaysia). More recently, investigations in India, the West Indies, and both East and West Africa have demonstrated that soybeans can be very successfully grown in the lowland tropics under favorable conditions. At present there is no other species that can so consistently produce on a hectare per day basis both high yields of good quality protein and oil. The main deterrent to increasing production of this species in many tropical regions is lack of markets and understanding of its cultivation and utilization." Discusses: Adaptation and problems. Utilization ("green beans (vegetable)," split, sprouted, soy milk, soy sauce, tofu, tempeh). Recent investigations.

"Perhaps the most successful campaign to introduce soybeans and find solutions to production and utilization problems has been in India with assistance from a USAID-sponsored contract with the University of Illinois. In Africa, French-sponsored research organizations have centered their activities mainly in Madagascar with testing and management experiments in the Cameroons [Cameroon] and Centralafrique [central Africa]." In English-speaking Africa, breeding programs are in place in Tanzania and Nigeria. Address: 1, International Inst. of Tropical Agriculture, Ibadan, Nigeria; 1-2, The Rockefeller Foundation, New York, New York.

5157 Sandler, Sandra Takako. 1974. The American book of Japanese cooking. Harrisburg, Pennsylvania: Stackpole Books. 192 p. Illust. Index. 24 cm.

• ***Summary:*** The author, a third generation Japanese-American, reveals the secrets of successful Japanese-style cooking–specifically for the American cook. The three introductory chapters discuss tofu (p. 16, 23, 29, 36), shoyu (p. 20), and miso (p. 27, 35). Soy-related recipes include: Seafood in miso sauce (p. 54). Shellfish in soy-mirin sauce (p. 55). Miso soups (p. 57-59). Tofu & scallions soup (p. 60-61). Instructions for sprouting beans (incl. mung- and soybeans, p. 72-74). Vegetables with tofu & sesame dressing (with white miso, and "white sesame seeds, toasted and ground," p. 77-78). Eggplant and green peppers with miso dressing (p. 78-79). Fried okara (p. 79-80). Sweet cooked soybeans (p. 82). Inari-zushi (p. 89-90). Fish misoyaki (p. 111). Miso abalone (p. 112-13). Beef misoyaki (119-20). Sukiyaki (with tofu and soy sauce, p. 121-22). Pork and tofu (p. 135-36). Stuffed tofu (p. 138-39). Chicken teriyaki (with soy sauce, p. 145). Fresh tofu (p. 154-55). Homemade tofu (p. 155-57). Deep-fried tofu (p. 157). Batter-fried tofu (p. 158). Yakidofu (p. 158-59). Aburage (p. 23, 159). Fox noodles (p. 167-68). Udon in miso shiru (p. 168). Tempura and udon (p. 168-69). San bai zuke (p. 175).

Also discusses azuki beans (p. 23, 178), sweet azuki bean paste (*koshi-an*), sesame seeds, sesame oil (p. 28), sea vegetables, and mochi.

5158 Totten, George O. 1974. Japanese industrial relations at the crossroads: The Great Noda Strike of 1927-1928. In: Bernard S. Silberman and H.D. Harootunian, eds. 1974. Japan in Crisis–Essays on Taisho Democracy. Princeton, NJ: Princeton University Press. See p. 398-436. Proceedings of the Conference on Taishô Japan held at Quail Roost, North Carolina, in Jan. 1970. [49 ref. Eng]

• ***Summary:*** A detailed analysis of the strike against the Noda Shoyu Co. (today's Kikkoman) which had long-lasting, nationwide significance in Japan. "Up until three years after the First World War, the Noda workers led what could only be described as truly impoverished and wretched lives. They were recruited through four local bosses (*oyakata*) who got a rake-off on the workers' yearly wages which they negotiated with the company. Each worker had to sign a yearly contract, or more correctly a promissory note, to work for a year, stating the name of a guarantor as well as the *oyakata*. Four-fifths of the workers lived in shabby shelters provided by the plant, where they slept in two rows and ate the poor and scanty food provided by the company. This practice grew up because most of the workers were too poor to maintain a household."

The Noda local of the Japan General Federation of Labor (*Nihon Rôdô Sôdômei Noda shibu*) was founded on 15 Dec. 1921 by Koizumi Shichizô. It was comprised initially of about 300 workers at Plant 15 in Noda. The first strike, starting on 16 March 1923, lasted 28 days and ended in a compromise. In 1925 Japan's first Universal Manhood Suffrage Act was passed, enabling males over age 25 to vote, without any tax qualifications, thus politically emancipating much of labor for the first time and opening the door for labor-based political parties.

The great Noda strike began on 16 Sept. 1927, when the Noda Shoyu Co. had to close 16 of its 17 plants because

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1,358 of the 2,092 employees had decided to strike to secure some 7 demands for better pay and working conditions. The main implicit demand was recognition of the union as a body with the right to bargain collectively. "In the following months, the company carried out several large-scale firings, first issuing an ultimatum to return to work, so that by December 20, 1927, all those on strike were officially discharged. Work had gotten back under way in Plant No. 17 10 days after the strike started, and as time went by the other 16 plants were replenished with some 550 temporary workers. By December, 80 per cent of pre-strike production was reached with 1,350 employees at work, 300 of whom had dropped out of the strike, and of these 150 were clerks, not plant workers... The company hired ultra-nationalist bully gangs to come in and rough up the strikers." The strike finally ended on 19 April 1928, more than 7 weary months (218 days) after it started. It was the longest strike in Japan prior to World War II. In effect, it destroyed the union. Only 300 of the 1,047 fired were allowed to return to work.

5159. Watanabe, Tokuji, Ebine, H.; Okada, M. 1974. New protein food technologies in Japan. In: A.M. Altschul, ed. 1974. New Protein Foods. Vol. 1A. Technology. New York: Academic Press. 511 p. See p. 414-53. Chap. 9. [80 ref]

• ***Summary:*** Contents: Introduction. Soy products, fish products, enzyme applications. Tofu: General description, new materials, new type products, large-scale production, trends in cost, kori-tofu and aburaage. Miso: General description, new technologies, new type products, problems of mycotoxin, packaging and preservation, trends in cost and consumption. Kamaboko and fish sausage–fish jelly: General description, new technologies, new materials–frozen surimi, packaging and preservation, trends in consumption. Textured vegetable protein. Soybean protein curd, wheat gluten, soybean protein sponge. Hydrolyzed vegetable protein (HVP). New enzyme applications: Liquefied fish protein concentrate (LFP), collagenase for poultry processing, removal of beany flavor from soybean by enzyme treatment, microbial rennet. The protein food structure of Japan.

Fig. 13 (p. 47) shows 3 pie charts, each giving the percentage of protein intake per capita from various sources at three different time periods. In 1921-25 only 9% of the total protein came from animal sources (6% from fish and 3% from other animal sources), 42% came from rice, 21% from soybeans, and 14% from cereal grains other than rice. In 1951-55, shortly after World War II, some 23% of the total protein came from animal sources (17% from fish and 6% from other animal sources–such as milk, eggs, chicken, pork, and beef), 32% came from rice, 15% from soybeans, and 20% from cereal grains other than rice. In 1969, some 30% of Japan's total protein intake came from animal sources (21% from fish and 19% from other animal sources), 22% came from rice, 12% from soybeans, and 13% from cereal grains other than rice. Thus the main trend seen during this period is the steady increase in the percentage of protein from animal sources and the corresponding decrease from plant sources. Source: Food Balance Sheet 1970, Ministry of Agriculture and Forestry. Fig. 14 shows that these trends are apparently related to increasing per capita income and GNP. Address: 1-2, National Food Research Inst., Ministry of Agriculture and Forestry, Tokyo, Japan; 3, Tokai Regional Fisheries Research Lab., Fishery Agency, Ministry of Agriculture and Forestry, Tokyo, Japan.

5160. Watanabe, Tokuji, Ebine, H.; Okada, M. 1974. New protein food technologies in Japan. Hydrolyzed vegetable protein (Document part). In: A.M. Altschul, ed. 1974. New Protein Foods. Vol. 1A. Technology. New York: Academic Press. 511 p. See p. 441-42. Chap. 9. [7 ref]

• ***Summary:*** "HVP is produced from defatted soybean meals or wheat gluten by hydrolysis with hydrochloric acid followed by neutralization. This method was first employed by Ikeda (1908) in his pioneering work which led to methods for the production of MSG. Thereafter, much effort was given to improve the processing, the quality of the crystals of MSG, and the utilization of the residues containing many amino acids. The production of HVP was also begun in shoyu factories to provide material for mixing with tradition soy mash [moromi] in order to reduce the time required for fermentation, to increase the yield, and to accentuate the flavor. The major demand for HVP in Japan is as an ingredient of shoyu and *tsukudani* (preservable foods made from fish, meat, pulses, or vegetables seasoned with shoyu, HVP, sugar, and other condiments)." The amount of liquid HVP (with a nitrogen content of 2.4%) added to shoyu annually is estimated to be 120,000 tons.

"Defatted soybean meal or wheat gluten is hydrolyzed with approximately 18% of hydrochloric acid and filtered. The filtrate is condensed by vacuum distillation to eliminate residual hydrochloric acid and volatile organic substances, and neutralized with sodium hydroxide or sodium bicarbonate to a pH value of 4.8-6.0. The neutralized liquid is then filtered and condensed again by vacuum distillation, followed by deodorization and decolorization if necessary. Paste HVP is prepared by concentration up to 80-85% of dry matter. Spray-dried powder or its pellet are also available.

"Hydrolysis by enzymes has been investigated, particularly for making shoyu. There are some patents on the hydrolysis by enzyme preparations from several origins for making HVP, although these processes have not yet been industrialized (Yoshida et al. 1959; Saito 1961; Iimura et al. 1962; Otani and Kagoshima 1964; Ikeda 1965a)." Address: National Food Research Inst.

5161. Yong, F.M.; Wood, B.J. 1974. Microbiology and biochemistry of soy sauce fermentation. *Advances in Applied Microbiology* 17:157-94. [259 ref]

• ***Summary:*** The best review of the literature on soy sauce

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available in English. Superb! Contents: Introduction. Fermented soy products. History of soy sauce products. Chemical composition of soy sauce. Raw materials: Soybeans, wheat, ratio of soybeans to wheat, salt, substitute raw materials. Treatment of raw materials. Koji. Culturing the Koji. Mash (Moromi). Preparation (mashing), control of the mash, aging, microbiology of mash. Pressing. Pasteurization. "Chemical" soy sauce. Semichemical soy sauce, or shinshiki shoyu. Future development in the soy sauce industry. Conclusions. References. Address: Dep. of Applied Microbiology, Univ. of Strathclyde, Glasgow, Scotland.

5162. San-Jirushi Jozo K.K. 1974? San-Jirushi, go-annai [Introduction to San-Jirushi]. Kuwana-shi, Central Japan. 6 p. Manufacturer's catalog. Undated. [Jap]
Address: Meisei-dori 1-572-1, Kuwana-shi 511, Mie-ken, Japan.

5163. Canupp-Penrod, R. Lewis. 1975. Soy you want soy sauce [Make yer own]. *Mother Earth News* No. 31. Jan. p. 36-37. [2 ref]
• ***Summary:*** The author is writing a book on soybean products. "Perhaps the best description of the basic chemical process involved [in making soy sauce] was given by a traveler named Bishop, who visited Korea between 1894 and 1897. He wrote, 'Oil of sesamum is largely used in cooking, as well as vinegar, soy and other sauces of pungent and objectionable odors, the basis of most of them being capsicums and fermented rotten beans.' In Bishop's time, Koreans made soy sauce in the fall, after the harvesting of the dried soybeans." He proceeds to describe the ancient Korean process for making mei-ju [meju, soybean koji] and from it soy sauce.

Then he describes briefly how to make Korean miso (*toin-chang* {*doen-jang*}), tofu (*yu-bu*), soybeans boiled in soy sauce (*kong-cha-ban*), dry roasted soynuts, soy sprouts, and pickled soy sprouts.

Illustrations show: (1) A truncated cone of pounded soybeans, 8-10 inches high by 12 inches in diameter, as it begins its period of fermentation on a homemade mat of cattail leaves. (2) The cone is later enclosed in tapered strips of unbleached muslin and hung from a hook–as under the eaves or a rafter.

5164. Pearce, Jean. 1975. Jean Pearce's How to get things done in Japan. Vol. 1. Tokyo: Japan Times Ltd. [iv] + 245 p. Jan. Index. 19 cm. [Eng]
• ***Summary:*** This book is composed of reprints of the popular and informative articles, answering questions from readers on a wide variety of subjects, that Jean Pearce wrote in her column in *The Japan Times* from 1 Jan. 1972 to 27 July 1974; they appear in this book in chronological order.

From 16 Oct. 1973 (p. 76): "Health foods" are now widely available in Japan, but familiar products are not always to be found. You can, however, find many soybean products, including natural soy sauce, and natural miso. "Try Nihon Kenko Shizenshoku in Shinbashi [Tokyo], phone 573-4181, or Shizenshoku Center in Shibuya, 461-7988. Both have restaurants that serve natural foods only."

Note: On pages 77-78 is a good history of Calpis.

From 8 Jan. 1974 (p. 118-19): "Health food remains a subject of interest ... The basic Japanese diet, with a little discretion in the use of salt, is a health faddist's delight. Also on natural foods, a shop (Ishii Shoten, 1-2-7 Nishikata, Bunkyo-ku [Tokyo], phone 811-2457 in Japanese), that still makes by traditional methods roasted soybeans from mid-December through June, far superior, I'm told, to any of the imported varieties ... 'A nice low-cal snack, and a good hors d'oeuvre...' They come with or without salt."

From 5 Feb. 1974 (p. 134): "A woman wants to learn how to make tofu. I have a recipe but I don't think I'll give it again. It is very difficult to do and the end result is more often failure than success. However, anyone can buy instant tofu at most Japanese food stores. It's easy to make, will be better than trying to do it yourself, and is inexpensive, ¥80 the last time I bought it but it has no doubt gone up. It makes two squares. The nigari she asks about is bittern, necessary for thickening [curding, coagulating]. Tofu is now available in many foreign countries. If you don't know where to look, call anyplace listed under Buddhist in the classified directory. Ask where they buy theirs."

From 12 March 1974 (p. 154-55): "Tofu lovers, united! There are lots of them and their sympathy was with the woman who was denied a do-it-yourself recipe in this very column. So kinder hearts provide the following.

"Two collectors [Shurtleff and Aoyagi] are compiling a book of tofu recipes, which includes a number for making tofu, using various solidifiers and soybean products. I'll let you know when it's published.

"A book, *Tofu Recipes*, was published by a tofu enthusiast after a year's visit to Japan. It is her first literary endeavor, a labor of love which will be understood by anyone who is a tofu devotee. Grace Kikuchi tells you how to make it and how to use it, relying on childhood memories and modern innovations. I'll be in the kitchen when I finish this column. You can be equally inspired if you send your order to Grace Kikuchi, 260 Sumac Lane, Ann Arbor, Michigan, U.S.A. Enclose $2.00. Somehow."

From 7 May 1974 (p. 184-85): "There is a new health food [natural food] restaurant in Tokyo, Hakumon ("White Gate"), just across from the Chuo University exit to the Shin Ochanomizu Station on the Chiyoda subway line, phone 291-9762. French owner Jimmy Dejeammes. ... I'd like to go back daily for the tofu that they make. Try the mochi made of brown rice and prepared in a variety of ways... All bread is baked there, high nutritional value ... Among the beverages is Soyalac, made of soybean milk." It is made and distributed

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here by Saniku Shokuhin, the Seventh Day Adventist health food company. Neuroca, a Swiss coffee substitute, is also available at Hakumon. Phone before you go. Hakumon may be moving soon. Address: The Japan Times, Tokyo, Japan.

5165. Rhodes, Richard. 1975. A bean to feed the world? *Atlantic (The)* 235(1):38-43. Jan.
• ***Summary:*** "The soybean could–if we were a world of vegetarians. It is rich enough in protein to replace meat, but now it is fed mostly to animals ... Soybeans, not wheat or corn, are the United States' number one cash crop, and by 1985 they are expected to occupy more acres than any other crop we grow... The annual world crop could satisfy the protein requirements of 800 million people."

"Soybeans are ... too new a crop to evince much nostalgia in farmers. No one loves a soybean except the Chinese and the Japanese who learned to convert it to delectable sauces and palatable curds eons ago"

5166. *New York Times*.1975. A correction. Feb. 6. p. 28.
• ***Summary:*** In the recipe for Chicken ketjap, published in yesterday's edition of the *Times*, "one-half cup of ketjap manis, a sweet Indonesian soy sauce, should have been added to the onion and garlic mixture in step 4. Ketjap manis is available at the Culinary Arts, Aphrodisia, 28 Carmine Street Bloomingdale's and other outlets that sell imported spices."

5167. Rice, William; Burros, Marian. 1975. Of Chinese hares and celebrations. *Washington Post*. Feb. 13. p. G1.
• ***Summary:*** We have just entered the Year of the Hare (or rabbit, according to some translations). A recipe for Shrimp in spicy lobster sauce calls for: "3 cloves garlic, peeled, 1 tablespoon fermented black beans, ... 4 teaspoons light soy sauce." Then: "Crush beans and garlic with side of knife or cleaver, then chop finely."

A recipe for Anise beef calls for "3 tablespoons dark soy sauce."

A recipe for Chinese-style beef with string beans calls for "1 tablespoon hoisin sauce."

5168. Fukushima, D. 1975. Tônyû no kagaku. Tokushu: Tônyû inryô no kaihatsu [The science of soymilk]. *Shokuhin Kaihatsu (Up-to-Date Food Processing)* 10(2):20-26. [34 ref. Jap]
Address: Noda Sangyo Kagaku Kenkyusho.

5169. Laurelbrook Foods. 1975. A little bit about our food. Bel Air, Maryland. 6 p. Feb. 28 cm.
• ***Summary:*** Laurelbrook now distributes about 43 different food products, plus 7 non-food products. Each of these is described, including wheat, brown rice, soy flour (ground from lightly toasted beans by arrowhead mills), granola, tamari ("High quality soy sauce from Japan, made from whole soybeans, wheat and sea salt..."), miso ("A thick soybean paste from Japan." Hacho miso, Mugi miso, and Kome miso are available), Deaf Smith peanut butter, vegetable oils (expeller pressed and unrefined), sea vegetables, kuzu, umeboshi (salt pickled plum with chiso [shiso, aojiso] leaf). Address: P.O. Box 47, Bel Air, Maryland 21014; Raleigh Branch: 330 W. Davie St., Raleigh, North Carolina 27601.

5170. Yong, F.M.; Wood, B.J.B. 1975. Sucrase from soy sauce moulds. *Transactions of the British Mycological Society* 64(1):143-46. Feb. [11 ref.]
Address: Dep. of Applied Microbiology, Univ. of Strathclyde, Glasgow G1 1XW, Scotland.

5171. McCormick, Sally. 1975. Azuma Sukiyaki House: Authentic Japanese cuisine and atmosphere!–5120 N. Broadway, Chicago (Advertorial). *Chicago Tribune*. March 15. p. G10.
• ***Summary:*** Azuma is Chicago's oldest and finest Japanese restaurant. "The Azuma dinner includes Sukiyaki, a generous portion of prime rib slices with fresh mushrooms, bamboo shoots, Tofu (soy bean cakes), Shirataki [Shirataki] (yam noodles) [thin konnyaku noodles] and assorted fresh vegetables." Azuma also serves Cold tofu [Hiya-yakko], Miso shiru [Miso soup], Beef Teriyaki, Chicken Teriyaki and Salmon Teriyaki. Four photos show Azuma Sukiyaki House.

Note: A similar ad appeared in the 9 Oct. 1975 (p. N17) issue of this newspaper.

5172. Japan Food Corporation. 1975. Kikkoman soy sauce: Now available at most supermarkets (If not, please ask them to stock.) (Ad). *Toronto Star (Ontario, Canada)*. March 19. p. E2, E4.
• ***Summary:*** These are two tiny ads on two separate pages of this issue of the newspaper. On the left side of each ad is an illustration of a bottle of Kikkoman soy sauce. The name of the advertiser is not given.

The first ad contains only the text shown above.

The text of the second ad reads: "Kikkoman soy sauce. Low in calories. High in proteins."

Note: This is the earliest document seen (Nov. 2009) that mentions "Kikkoman" in the Toronto Star. Address: Toronto, Canada.

5173. **Product Name:** Cedar Lake Vegeburger (Meatless).
Manufacturer's Name: Cedar Lake Foods.
Manufacturer's Address: Box 116, Cedar Lake, MI 48812. Phone: 517-427-5590.
Date of Introduction: 1975. March.
Ingredients: Wheat gluten, water, soy flour, oatmeal, corn, yeast, salt, hydrolyzed vegetable protein, onion, celery salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.

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New Product–Documentation: Label printed 19 March 1975.

Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 22. Cedar Lakes "Vegeburger" (19 oz)

Cedar Lake Foods wholesale price list. 1976 March 15

5174. **Product Name:** Cedar Lake Vegetarian Mix for Sloppy Joes
Manufacturer's Name: Cedar Lake Foods.
Manufacturer's Address: Box 116, Cedar Lake, MI 48812. Phone 517-427-5590.
Date of Introduction: 1975. March.
Ingredients: Wheat protein, water, tomato paste, textured soy protein, corn meal, oatmeal, rehydrated celery, rehydrated green and red bell peppers, food yeast, soy sauce, salt, hydrolyzed vegetable protein.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Label printed 19 March 1975. Cedar Lake Foods wholesale price list. 1976 March 15

5175. *Food Processing* (*Chicago*).1975. Worcestershire sauces vary in quality, solids content–affect formulation, usage. 36(3):58. March.
• ***Summary:*** Lea & Perrins, maker of a traditional brand, found that the solids content of some "average" Worcestershire sauces was as much as 50% lower than their brand. Lea & Perrins "produces its Worcestershire sauce from fresh vegetables–most sauces are made from dehydrated vegetables–and uses no heat for extraction. No colors, chemicals, or preservatives are added. Anchovies, tamarinds, eschalots, garlic, and onions are received at the plant, cleaned, soaked in vinegar, and aged from one to two years. The flavor-containing liquid is then squeeze-extracted.

"Cold extraction eliminates loss of volatiles by heat and also eliminates bitterness or off-flavor often associated with heat extractions. This is especially true with anchovies, where cold extraction gives a smooth flavor with no fish flavor. After extraction the liquid from the various raw ingredients is blended, and then the complete sauce is further aged in wooden casks for several months. After final aging, the sauce receives a short burst of heat for pasteurization purposes."

It is estimated that there are more than 100 brands and grades of Worcestershire sauce. For more information contact Lea & Perrins Inc., Pollitt Dr., Fair Lawn Industrial Park, Fair Lawn, New Jersey 07410.

5176. Steinkraus, Keith H. 1975. Exotic fermented foods for Americans. *New York's Food and Life Sciences Quarterly* 8(1):8-11. Jan/March.
• ***Summary:*** "Nearly all of us are familiar with soy sauce, the *shoyu* of Japan and China, since this is an exotic food that has become a part of our diet. Few Americans, however, know the flavor and aroma of genuine, fermented soy sauce or are aware of how the product is manufactured. Actually, much of the soy sauce available today is produced by hydrolyzing (digesting) soybeans with hydrochloric acid. This acid splits the proteins and lipids and other soybean components, yielding, when neutralized, a salty, tasty liquid that imparts a meatlike flavor to bland foods."

Describes how fermented shoyu is made. Then gives a brief introduction to miso, nuoc-mam and other fish sauces, fish pastes, tempeh kedele, ontjom (made from peanut presscake), bongkrek (made from coconut presscake), tapé, and idli.

Photos show: (1) A round tray of koji to be used for making soy sauce. (2) A man holding a tray on which are several large pieces of tempeh wrapped in banana leaves. (3) A deep tray filled with fresh, white tempeh, made at the New York State Agricultural Experiment Station. Address: Dep. of Food Science and Technology, New York State Agric. Exp. Station, Geneva, New York.

5177. **Product Name:** Wheatmeat Sandwiches [Cabbage/Carrot & Coleslaw, or Tomato & Lettuce with Natural Russian Dressing].
Manufacturer's Name: Wheatmeat Co. Renamed Vegetable Protein Co. in 1976.
Manufacturer's Address: 17 Dent St., West Roxbury, Massachusetts.
Date of Introduction: 1975. March.
Ingredients: Incl. pita bread, vegetables, seitan (made with washed wholewheat dough, tamari, safflower oil, ginger, garlic). The Cabbage/Carrot Coleslaw was made with grapefruit juice instead of vinegar. The Tomato & Lettuce with Natural Russian Dressing used ketchup and eggless mayo, with other herbs and spices.
Wt/Vol., Packaging, Price: Saran-wrapped.
How Stored: Refrigerated.
New Product–Documentation: Talk with Sandy Chianfoni of Upcountry Seitan. 1991 Nov. 16. She moved to Boston in 1978 and enjoyed Wheatmeat Sandwiches, made by a man who lived in Cambridge. His company was named something like the "Vegetable Protein Company."

Talk with Lenny Jacobs. 1992. March 11. John Weissman, the first person to make seitan in America, is selling Solar Burgers and stuffed pita sandwiches at Stuff-Its in the Harvard Garage (a collection of little shops) in Harvard Square in Cambridge, Massachusetts. Lenny saw him about a month ago.

Talk with John Weissman. 1992. March 31. In about late 1975 or early 1976 he and Sakee, now business partners, began making seitan in their apartment in West Roxbury, and selling it in bulk (5-10 lbs). Their first customer was a macro study house, but 2-4 weeks later they began selling their

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seitan, labeled "Wheatmeat," at Erewhon, refrigerated, in bulk and as "Wheatmeat Sandwiches," stuffed in pita bread in several flavors–one with homemade cole slaw, another with tomatoes and lettuce, each had a sauce and was Saran-wrapped with a little paper label. Their main drawback was a short shelf life–only several days.

Letter from John Weissman. 1992. June 25. "Fern Israel originally showed us the method as sautéing the gluten, then stewing in tamari and water, using about half as much tamari as water. When I thought of putting seitan in a sandwich, I decided to lower the proportion of tamari drastically. Thereafter we only stewed the product in tamari broth, ginger and garlic, leaving out the frying or sautéing in oil. This was while still at 17 Dent Street, West Roxbury."

5178. Spiral Foods Inc. 1975. Wholesale price list. Chico, California. 4 p. April 1. 28 cm.
• ***Summary:*** This two-sheet catalog and price list, consisting of two pages stapled in the upper left corner, is printed front and back with reddish-orange ink on tan paper. The first item is five cookbooks, including *The Art of Just Cooking*, by Lima Ohsawa. The soy-related products are similar to those in the 1974 catalog. Address: 1144 West 1st Street, Chico, California 95926. Phone: 343-2111.

5179. Spiral Foods Inc. 1975. Mail order price list. Chico, California. 4 p. April 1. 28 cm.
• ***Summary:*** This two-sheet catalog and price list, consisting of two pages stapled in the upper left corner, is photocopied front and back with black ink on white paper. Address: 1144 West 1st Street, Chico, California 95926. Phone: 343-2111.

5180. Japan Food Corporation. 1975. Kikkoman sauce: Now available at most supermarkets (If not, please ask them to stock.) (Ad). *Toronto Star* (*Ontario, Canada*). April 2. p. E3.
• ***Summary:*** "Here are six good reasons why. Possibly the most rewarding flavour discovery you will ever make. No hydrolized protein, no corn syrup, no caramel, no artificial flavour or colour. Just brewed naturally for 12 months. Brewed purely of select quality soy beans, wheat, salt & water (nothing else) [except koji starter culture, spores of the mold *Aspergillus oryzae*]. Recommended by Good Housekeeping. Winner of 30 major international awards for quality, taste and excellency. And you'll like it.

"Send one Kikkoman label by scraping off any portion and 25 cents for your Kikkoman 'Ikebana' and recipe ideas (The label is well pasted)."

An illustration shows a bottle of Kikkoman soy sauce.

Note: The title of the ad calls the product "Kikkoman sauce," not "Kikkoman soy sauce." Address: 25-6 Connell Court, Toronto, M8Z 1E8 Canada. Phone: (416) 252-5728.

5181. *Washington Post*. 1975. Meatless meal for Food Day. April 17. p. G3.
• ***Summary:*** On Food Day, April 17, a dinner banquet will be served at the New York Avenue Presbyterian Church. Proceeds (the meal is $2) will go to world hunger relief organizations. A meatless recipe, Mung beans and rice, calls for "2/3 cup tamari (natural soy sauce)."

5182. Kozaki, Michio. 1975. Tônan Ajia no hakkô shokuhin [Southeast Asian fermented foods]. In: Nippon Shokuhin Kogyo Gakkai (Japanese Society for Food Science and Technology). 1975. 22nd Convention: Special Lectures and Symposium. See p. 12-20. [Jap]
Address: Tokyo Nogyo Daigaku, Sakuraoka 1-1-1, Setagaya-ku, Tokyo, Japan.

5183. Shokyo Tsushinsha K.K. [Shoyu Assoc. Communications Co.]. 1975. Zenkoku shôyu gyôsha meibo [Directory of shoyu companies in Japan, by prefecture]. Tokyo. 29 p. April. [Jap]
Address: Tokyo.

5184. **Product Name:** Wheatmeat (Cutlets Made of Seitan). Renamed Wheatmeat: Gluten Cutlet by 1977.
Manufacturer's Name: Wheatmeat Co. Renamed Vegetable Protein Co. in 1976.
Manufacturer's Address: 17 Dent St., West Roxbury, Massachusetts. Then 51 Oak Ave., West Newton, MA. Then 140 River St., Cambridge, MA.
Date of Introduction: 1975. April.
Ingredients: In 1977: Water, wheat gluten, wheat flour, tamari, yeast extract.
Wt/Vol., Packaging, Price: In 8 oz heat-sealed polyethylene bags.
How Stored: Refrigerated.
New Product–Documentation: Label for "Wheatmeat: Gluten Cutlet" designed in late 1976 or 1977 (when the company was located at 140 River St., Cambridge, Massachusetts) sent by John Weissman on 8 May 1992. 4 inches square. Self adhesive. Dark brown on yellow. "100% vegetarian–100% natural. Use in casseroles, soups, stews, sandwiches. Dip in batter and deep fry. Baste with marinade and bar-be-que. Fry strips and serve with noodles or grains, sauce, cheese. Put in omelets. Keep refrigerated or frozen." Ingredients are shown above.

5185. Sprague, G.F. 1975. Agriculture in China. *Science* 188(4188): 549-55. May 9.
• ***Summary:*** Contents: Introduction. Agricultural research in China. Map of eastern and central China showing all provinces and major cities. Organization of communes. Fertilization. Cropping systems. Plant protection. Rice. Wheat. Corn. Sorghum and millets. Soybeans. Vegetables and fruits. Animal production. Outlook for expanding crop production during the next decade.

This article is based on observations made by the U.S

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Plant Studies Delegation on their recent visit to China (26 Aug. to 23 Sept. 1974), and on conversations with the many scientists contacted. A more detailed report will be published by the National Academy of Sciences. Among the delegation members was Richard Bernard, U.S. Regional Soybean Laboratory, Urbana, Illinois.

Concerning soybeans: "In the central and southern areas, soybean culture is largely limited to small fields, gardens, ditch banks, and other waste lands. Only in the northeastern provinces does it become an important field crop. Here it is grown in pure stands or interplanted with other crops, primarily corn or sorghum.

"Soybeans are used for food in the green stage, but the more common use is in the manufacture of soy sauce and the various bean curd products. The vines, pods, and waste grain are also used as livestock feeds.

"Some soybean breeding work is done at the Genetics Institute in Peking, but the major breeding effort is concentrated in the northeastern provinces of Kirin, Heilungkiang, Liaoning, and at the Northwest College of Agriculture in Shensi province." Address: Dep. of Agronomy, College of Agriculture, Univ. of Illinois, Urbana.

5186. Satô, Kyôzô; Shôji, Yukitsugu. 1975. Moromi no netsu nendô-ritsu no sokutei [Measurement of heat transmission in moromi]. *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 53(5) 303-05. May. [8 ref. Jap, eng]
• ***Summary:*** When making shoyu (soy sauce), in order to warm moromi from outside to the desired fermentation, we would like to know how heat is transferred from the heating surface of the fermenter inward. Address: Dep. of Mechanical Engineering, Faculty of Engineering, Tohoku-gakuin Univ., Tagajo, Miyagi prefecture, Japan.

5187. **Product Name:** Tan-Pops (Made with Seitan).
Manufacturer's Name: Wheatmeat Co. Renamed Vegetable Protein Co. in 1976.
Manufacturer's Address: 17 Dent St., West Roxbury, Massachusetts. Then 51 Oak Ave., West Newton, MA. Then 140 River St., Cambridge, MA.
Date of Introduction: 1975, May.
Ingredients: Wheatmeat: Wheat gluten, soy sauce, gingerroot, garlic, and onion. Batter: Corn flour, wheat flour, onion, garlic, herbs, spices, salt.
How Stored: Unrefrigerated and perishable.
New Product–Documentation: R. Leviton. 1983. *Vegetarian Times*. Jan. p. 32-37. "Mochi, amazake and seitan: Introducing three new foods from the Orient." "A product named "Tan-pops" was sold several years ago in Boston. They were large fist-sized chunks of seitan, breaded in cornmeal, deep-fried, and sold unwrapped in wicker baskets by the check-out counters of a few natural foods stores in Boston.

Talk with Lenny Jacobs. 1991. Nov. 14. Corn Dogs are a traditional New England food made by inserting a skewer into the end of a hot dog, dipping it in a thick cornmeal batter, then deep-frying it. The Tan-Pops made from seitan were on a skewer that was as thick as a chopstick; each was dipped in batter, then deep-fried. Starting in the early 1970s, they started to be sold at natural food stores in Boston, and probably on the West Coast. Lenny saw Tan-Pops sold by the cash register at a number of natural food stores in Boston. They were in a big, uncovered serving bowl, lined with oil-stained paper towels. It was a very unsanitary presentation. [John Weissman responds: "Tan-Pops were put, not 'presented.' They usually sold before they could spoil, and people breathing on them didn't contaminate them because the world was clean then"]. Since it was a fresh, perishable product, it was not distributed outside of the local area where it was made. Barry Creighton may have made them [actually, he did not]. He was with Cable Springs Bakery, and he now lives in Alaska. Kathy Bellicchi might know more about this product. The key point is that the person who made the seitan for these Tan-Pops was one of the first, if not the first, person to manufacture seitan commercially in America–even before Grain Dance.

Talk with Sandy Chianfoni of Upcountry Seitan. 1991. Nov. 16. She moved to Boston in 1978 and at that time they sold Tan-Pops at the Erewhon retail store. They were the same shape as a fat hot-dog on a stick, as they were also dipped in a thick cornmeal batter then deep fried. They were not shaped like a fist. The meat-based ones were also called "Corn Dogs." She does not know who made them but her cousin Richard might know. It may have been the guy who made "Wheatmeat" (a seitan product) and Wheatmeat Sandwiches, and who may have lived in Cambridge. She thinks he made Wheatmeat by mixing wheat and vital gluten together rather than by using the traditional process. He sold it vacuum packed by itself. It was in Boston when she arrived in 1978. Michael Cohen of Lightlife Foods might know who made it, since the manufacturer, whose company was named something like "The Protein Company" may have offered to sell his company to Michael.

Talk with Joel Wollner, a clerk at the Erewhon retail store on Newbury St. in Boston in the mid-1970s. 1991. Nov. 18. Joel recalls that a man named Johnny Weissman made both Wheatmeat and Tan-Pops (or were they spelled Tan-Pups?). He owned the Vegetable Protein Company in Cambridge. Joel is not sure which product was launched first. He thinks at least one of them was being sold by 1976, maybe as early as 1975. Andy Levine, a clerk in the Newbury Street store who now runs Yellow Emperor (they make Chinese herbs) in Eugene, Oregon (Phone: 503-465-6664) might well know more about Johnny. Tan-Pops were about the shape and size of a Corn Dog–which is a hot dog on a stick, deep-fried in a blanket. In the name Tan-Pops, "Tan" comes from seitan, and "Pops" comes from Popsicles. A wiener-shaped piece Wheatmeat was made

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into seitan, which must have had a lot of garlic in the broth, was skewered, breaded with a combination of cornmeal, soy grits, and maybe some seasonings or spices, then deep-fried. Johnny delivered them to stores in a basket while they were still hot. "Tan-Pops were an incredibly good product. They sold themselves by their intense aroma. You'd have to be careful not eat too many when they first came in so you'd have some left to sell. They were outrageous. After a while you'd learn not to eat them all. They were crispy and crunchy on the outside, then you'd bite in and they'd be juicy and rich on the inside."

Talk with Paul Duchesne of Fairfax, California. 1991 Nov. 19. Paul was in Boston for 9 months starting in Sept. 1978. Wheatmeat was definitely made by the Vegetable Protein Co. in Cambridge. Johnny Weissman was a partner with some other person in that company. He is sure that the straight Wheatmeat Seitan was developed before the Tan-Pops. He made more money off the Tan-Pops than off the seitan. But Paul thinks Johnny made the Tan-Pops on his own–he had been making them for about 12-18 months. Paul does not know the name of the company that made Tan-Pops, but the business definitely had a name. Paul was in the place where Johnny made the Tan-Pops; it was a little deep-frying place in Cambridge. The Tan-Pops had a wonderful smell and were delicious but quite greasy. While Paul was there, Johnny was moving his Tan-Pops operation out of that deep-frying place into his house. He was converting his basement into a food plant, in part because of his fear of health inspectors. Johnny was very creative in making foods. In 1979 he developed a Tofu Bologna and some other tofu-based meatlike product, but he was so paranoid that other companies would copy him after he launched them that he never did. "I tasted the Tofu Bologna at his home and I flipped out. It was just fantastic–great texture and flavor–I'll never forget it." He was good at product development but poor at marketing. Between late 1978 and 1979, the health department made him stop selling Tan-Pops in a paper-lined basket, asking him to place each one in small, individual, open-top plastic bags in the same basket. Kathy Bellicchi, who ran Cable Springs Bakery, knew Johnny.

Talk with Joan Donovan, co-founder of Upcountry Seitan. 1991. Dec. 7. She remembers that this product was sold at natural food stores in the Brookline/Boston area but she does remember any details about the manufacturer or product.

Talk with Johnny Weissman. 1992 March 31. See this interview for details on the product and its history.

5188. Balsley, Betsy. 1975. 3 ways to picnic. *Los Angeles Times*. June 29. p. R10-R12, R14, R16.
• ***Summary:*** The section titled "The Japanese influence" contains a recipe for Inarisushi (Cone sushi) which calls for "6 aburage ... 1/3 cup soy sauce." A note at the end states "Aburage is deep fried soybean curd available in Oriental food sections." Address: Dr.

5189. Erewhon Trading Co. [Los Angeles, California]. 1975. Wholesale price list. July 1975. Culver City, California. 10 p. Catalog and price list.
• ***Summary:*** On the front cover is a copy of an analysis of carrots performed by Agri-Science Laboratories Inc. of Los Angeles. They contain no Organo-phosphates–None detected as Parathion < 0.010 ppm.

Products include: Whole grains. Cereals. Flours–Freshly milled whole grains (incl. Raw soy flour, organic). Beans (incl. Soybeans, organic, Texas {10 or 16 lb}, Soybean flakes, organic, Texas). Butters (incl. Peanut butter, Sesame butter). Applesauce. Carbonated drinks. Juice. Chips. Goodies. Nik's Snaks. Granola. Soybean products. Tamari soy sauce (4 sizes, 8 oz to 4.7 gal). Hacho miso, soybean paste (1 lb or 44 lb). Mugi miso, Barley-soybean paste (1 lb or 44 lb). Kome miso, Rice-soybean paste (1 lb or 44 lb). Sea vegetables. Specialties (incl. Kuzu arrowroot, umeboshi {Plums pickled in brine}, Sesame salt). Seeds. Nuts. Fresh produce–Organic. Dried fruit–Bulk. Dried fruit–Packaged. Books and flyers (Deaf Smith County Cookbook, Oil Story, Pasta Cooklet). Redwood rennetless natural cheeses (Raw or pasteurized). Pasta (Bulk or packaged, incl. Soya-rice shells). Salt. Oils (incl. Soy oil). Erewhon packaged goods: Grains, cereals, flowers, seeds, beans. Teas. Celestial Seasonings bulk herb teas or tea bags. Cosmetics. Cooking utensils.

Inserted is a letter on Erewhon letterhead from Loren M. Spector, general manager, dated 1 July 1975. It begins: "Dear customers: Please find enclosed our summer price list." On the back are "July specials." Address: 8454 Steller Dr., Culver City, California 90230. Phone: (213) 836-7569.

5190. Ichiyama, Morio. 1975. Noda no rekishi [History of Noda]. Nagareyama, Chiba prefecture, Japan: Ron Shobo. 301 p. First ed. published in 1958 under title: Chiba-ken Noda Kyodoshi. [Jap]
• ***Summary:*** In the section titled "People from Noda who became known worldwide," the first person profiled is Shinzaburo MOGI (p. 263-65). "Mr. Shinzaburo Mogi, 5th son of the 5th Shichirouemon, was born in 1872 Feb. 27 at Noda. He studied at Tokyo Kosho (later Hitotsubashi Univ.), then left school after graduation. In 1892 he went to the USA. Initially, he worked for a milk company in Toronto, Canada. Then he worked at the Chicago [Illinois] branch office of Yamato Shokai. In 1897 he established Yamato Yunyu Co., an import company, and became its president. In 1913 he received Mr. Tsuneo Tanba as a general manager, to manage the soy sauce plant [?]. Under Mr. Tanba were Mr. Kitazawa and Mr. Kunihara.

Yamato Shokai was a company in Yokohama, whose president was Mr. Takeshi Oba. Its capitalization was 1,000,000 yen stock, half of the money put up by Junjiro Ishii and half by Mr. Shichirouemon Mogi. In 1907 in

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Denver [possibly some city other than Denver, Colorado?, says Ken Mogi IV] he managed a soy sauce plant. Later in Toronto, Canada, he had a relationship with a soy sauce plant. But neither of these soy sauce plants was successful. At International Trading he worked with Mr. Ichizaeomn Morimura (see History of Yokohama [which Ken Mogi says he would like to read]).

Mr. Tsuneo Tanba (a collector of ukiyo-e [color woodblock prints of everyday life in old Japan]), who worked under Mr. S. Mogi, said that Mr. S. Mogi, a Unitarian Christian, did not smoke or drink alcoholic beverages. He loved soy sauce, and he never left any soy sauce on his plate after a meal. He said: "I am not willing to go back to Noda. I do not want to manage a soy sauce plant in Noda."

When he was a student, Mr. S. Mogi helped Mr. Tokuzo Fukuda (later a famous scholar) by giving him 2.5 to 3 yen every month. Mr. S. Mogi asked his father to give Mr. Fukuda 6-9 yen per month for 1½ years. The father did not understand the situation so he visited S. Mogi's dormitory and found out the facts and was satisfied. On 1 Dec. 1946 Mr. Shinzaburo Mogi died.

Note 1. Translated by Kenzaburo "Ken" Mogi IV from the edition of 1975 (Showa 50 Aug. 1), for William Shurtleff of Soyfoods Center. Ken Mogi spent a great deal of time trying to find evidence that his ancestor, Shinzaburo Mogi, started a soy sauce plant in Denver, Colorado. He visited Denver in search of evidence. As of 2004 he stated that this was still a theory, NOT a proven fact.

Note 2. As of Feb. 2007, it is unclear whether or not Shinzaburo Mogi ever started a soy sauce plant in Denver, Colorado, or anywhere else in North America. There is no firm evidence that he did, only the memories of two people and some photos of the foundations of an old building. One of them, Tsuneo Tanba, is mentioned above. Yet Mr. Tanba gives no details. Note 3. Mr. Morio Ichiyama was born in 1897. Address: Noda, Japan.

5191. Shuttleworth, John. 1975. Eastern procedures with soybeans are not difficult: Mother Earth news. *Sun (Baltimore, Maryland)*. Aug. 30. p. A8.
• ***Summary:*** First describes, in prose format, how Korean soy sauce is made at home. Then describes, in recipe format, how to make it at home today. Finally describes, in prose format, how to make Korean tubu ("Japanese tofu, or bean curd") at home.

A very similar version of this article, with two small illustrations of Korean meju (soybean koji, in the shape of a truncated cone) appeared in the *Chicago Tribune* on Sept. 28 (p. N_A11).

5192. Dinshah, Freya. 1975. XXIII World Vegetarian Congress cook book. Malaga, New Jersey: North American Vegetarian Society. 40 p. Illust. No index. 27 cm. Spiral bound. Introduction by H. Jay Dinshah.

• ***Summary:*** This is a vegan cookbook. This congress is a milestone of the vegetarian movement both in North America and worldwide. "The International Vegetarian Union, founded in 1908, had held 22 previous Congresses from 1908 to 1973, each in the British Isles, continental Europe, or India." A congress is held every 2 years. The North American Vegetarian Society was created with two goals: (1) To bring about a complete renaissance of the vegetarian movement in the United States and Canada, and (2) To organize the 23rd Congress, which was held 16-28 Aug. 1975 at the University of Maine, Orono, Maine. Daily menus served at the Congress are listed on pages 7-8. Soya milk, and Willow Run Soya Lecithin Spread were available at each breakfast. Willow Run Spread, Soy Mayonnaise, Tamari Soy Sauce, Soya Milk, and Roasted Soya Beans were available at each lunch and dinner. Soy-related recipes include: Soya sprouts (p. 14-15). Soya butter (made with 3/4 cup soya powder, and ½ cup each soy oil and water, p. 16). Soy mayonnaise (with soya powder and Soyagen powder). Soya beans (boiled, then baked, p. 17). Soya peanut savory (with cooked soya beans, p. 20). Soya rounds (with cooked soya beans, baked, p. 20). Several tablespoons to 2/3 cup of Soyagen powder (powdered soymilk) or soya powder are used in many of the dessert recipes (p. 30-36). Soya milk (from soya powder, p. 32). Bread pudding (with soya milk, p. 32). Granola (with soya powder, p. 39). Page 40 lists 34 vegetarian societies affiliated with NAVS in the USA. Address: North American Vegetarian Society, 501 Old Harding Highway, Malaga, New Jersey.

5193. Eden Foods. 1975. Wholesale pricelist. 4601 Platt Rd., Ann Arbor, MI 48104. 19 p. Aug. Catalog.
• ***Summary:*** This catalog is large enough to have a table of contents on page 1, along with an illustration (line drawing) of large windmills. Page 7 lists "Tamari, Miso & Condiments." Tamari Soy Sauce is now sold under 3 labels (Erewhon, Japan, and Luna–Chico San). Miso (Mugi, Hacho, and Kome) is also still sold under the Erewhon label. Mugi miso is described as "barley-soy paste" and Kome miso as "rice-soy paste." Also includes "Kuzu Arrowroot, Umeboshi Salt Plums (Erewhon), and Sea Salt–white French." Address: Ann Arbor, Michigan. Phone: (313) 973-9400.

5194. Soriano, Mercedes R. 1975. Soy sauce manufacture in the Philippines. Paper read at the Third ASEAN Sub-Committee on Protein. Held 29 July–2 Aug. in Manila, Philippines. *
Address: National Inst. of Science and Nutrition, Manila.

5195. Staley (A.E.) Manufacturing Co. 1975. Whatever food plans you're developing–The Protein People can help (Ad). *Food Processing (Chicago)*. Aug. p. 42-43.
• ***Summary:*** This two-page white-on-blue ad discusses how Staley can help with nutrition, texture, flavoring, and

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technology. From soy flours and soy sauces, to Mira-Tex (textured vegetable protein) and Gunther whipping proteins (incl. G-400 and D-100). Address: Decatur, Illinois 62525. Phone: (217) 423-4411.

5196. Erewhon Trading Co. 1975. Erewhon talking food. Miso and tamari (Ad). *East West Journal* 5(10):43. Oct. 15.
• ***Summary:*** A lengthy description of how traditional miso and tamari (shoyu) are made in Japan and some philosophical reflections on the processes and ancient wisdom that created them. Address: Boston, Massachusetts.

5197. Erewhon Trading Co., Inc. 1975. Erewhon harvest '75. Boston, Massachusetts. 48 p. Oct. Catalog and price list.
• ***Summary:*** On the front cover, a brown and white photo shows a rustic farmer, holding a pitchfork, standing by his horse and hay wagon with wife and child. On the rear cover, Erewhon's president, Tyler Smith, writes a poetic passage about the beauty of wheat. Products include: Grains: Lone Pine in Arkansas grows organic short grain and long grain brown rice. Wehah Farms in California grows organic short grain brown rice and non-organic sweet brown rice [glutinous rice]. Baker in Louisiana grows organic medium grain brown rice. Organic hard red winter wheat is grown in Nebraska and in Deaf Smith, Texas. Organic hard red spring wheat is grown by Ted Whitmer in Montana and Ricke in Minnesota. Organic hard amber durum wheat is grown by Whitmer in Montana. Organic soft white pastry wheat is grown by Wild Winds in New York. Other organically grown grains are pearled barley (Idaho), whole unhulled buckwheat for sprouting, hybrid yellow or white corn (Deaf Smith), open-pollinated yellow corn (Minnesota), blue corn, whole oats, and rye. Cereals include organic soy flakes from Deaf Smith (25 lb). Flours include organic soybean flour (25 lb, steelground, full-fat). Pasta (packaged or bulk) includes Japanese soba, Soy Rice Shells.

Snacks from "Erewhon L.A." include Chico-San Yinnies, and Date-Nut Delight. Nik's Snaks (p. 8): This full page lists about 30 products. Of these, eleven are "tamari-roasted" whole-food snacks. The 30 products are sold in 5 sizes: 2.5 oz, 3.5 oz, or 6 oz. pick-up packages, or 25 lb bulk. The soybeans (dry roasted with tamari, no salt) are sold only in 25 lb packs. Other tamari-roasted seeds include: Spanish peanuts, sunflower seeds, roasted almonds (all 2.5 oz or 25 lb), cashews or pumpkin seeds (25 lb). Non tamari-roasted products include: Raisin walnut mix. Roasted mixed nuts. Raw mixed nuts. Raisin nut mix. Peanut raisin mix. Trail mix (Honey almond granola, roasted peanuts, raw sunflower seeds, date pieces, raisins, and sea salt). Honey almond granola. Chia seeds. Bee pollen. Alfalfa seeds. Date sugar. etc. Erewhon Aztec organic corn chips. Baked goods from Cable Springs Bakery in Cambridge, Massachusetts. Fruit juices from Erewhon, Heinke's, Knudsen, Lehr's (natural grape juice from Germany), and Biotta (Swiss Vegetable juices).

Dairy Products: Cheeses from Alta Dena (also kefir and yogurt) in California, Superior Cheese Co. in Massachusetts, Redwood Natural Cheese Co. in California. Also Favorite Foods yogurt.

Dried fruit, including organically grown Monukka and Thompson raisins, prunes, dates, apricots, apples, Bing cherries, black mission figs, and Calimyrna figs. Peanut-, apple-, sunflower-, and sesame butters. Sesame tahini. Pure & Simple "fruit butters sweetened with honey only; terrific old-fashioned jams (apple, apricot, peach, plum, raspberry, strawberry, grape, cherry). Erewhon apple sauce. "Pumpkin Sour" apple sauce and apple butter made in Plainfield, Vermont. Tree of Life fresh fruit preserves from Florida (8 varieties).

Seeds & nuts, incl. Erewhon organic soybeans in 1-lb packs, and Erewhon organic stoneground soybean flour in 24-oz packs. Arrowhead Mills packaged products, incl. Bulghur-soy grits (24 oz). Soy flakes (16 oz, organic). Roasted soy flour (24 oz, organic). Beans, incl. Aduki (25 lb, from Japan or Mainland China), yellow soybeans (50 lb, organic, New York), black soybeans (25 lb, non-organic from Japan, or organic from New York), green soybeans [dry] (25 lb, organic). Erewhon granola (17 products, including various sizes). Arrowhead Mills granola. Back to Nature granola (unsalted).

Oils, incl. Arrowhead Mills soybean oil (pints, quarts, or 5-gallon jug). Honey. Baking, incl. Premose barley malt, and Yinnies grain syrup from Chico-San. Tea, incl. 2 pages from Celestial Seasonings, and Erewhon Mu tea (9 or 16 herbs). Lotus root tea, Kukicha-branch twig tea. Springwater.

Tamari & Miso: 4 pages of descriptions and prices for Hacho miso (all misos are sold in 1 lb or 44 lb keg), Mugi miso, Kome miso, Tamari soy sauce [actually shoyu] (8 oz, pints, quarts, ½ gallons, gallons, or 4.7 gallon tin), Barley koji (1 lb). Specialties, incl. Unrefined sun-dried sea salt with natural trace minerals from the north coast of Brittany in France, Tekka, kuzu, umeboshi, sesame salt, Herbamare salt, nigari, brown rice vinegar, non-alcoholic beer (Birell, Kingsbury), Bambu instant coffee substitute.

Fearn Soya Foods: Soya granules, Soy-O wheat cereal, Soy-O corn bread & muffin mix, Soy-O bran muffin mix, Soy-O pancake mix–buckwheat, Soy-O pancake mix–wholewheat, Sesame burger mix, Natural soya powder.

Sea vegies: Agar-agar, dulse, hiziki, kombu, wakame, nori seaweeds (a description of each is given).

Erewhon certified organic produce, incl. Daikon grown in California. Soaps, incl. Cattier clay products and Dr. Bronner's Peppermint castile soap, Orjene, Nature's Gate, Tom's Natural Soap.

Cookware, mostly imported from Japan, incl. Soy [sauce] dispenser, 4½ inch. Growing [sprouts and sprouters]. Cast iron. Flyers, incl. Talking Food series, Natural recipes (3 by 5 inch tear-off pads. Soy-related recipes include: Soy

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au gratin, Soy casserole, Miso soup, Soyburgers, and Soy loaf).

A map shows Erewhon's delivery region (Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey) and schedule. The company also has an office near New York City at 303 Howe Ave., Passaic, New Jersey 07055. Phone 212-594-6455.

Note 1. This is the earliest document seen that uses the word "vegies" (spelled as such, one of two documents) to refer to vegetables, or "Sea vegies" to refer to sea vegetables (edible seaweeds).

Note 2. This is the earliest document seen (May 2006) that uses the term "trail mix" to refer to a non-perishable mixture of dried fruits, seeds, nuts, roasted soybeans, granola, etc. to be eaten as a snack, as when hiking or walking. Nik Amartseff coined the term "trail mix" and launched the first commercial trail mix product through Erewhon Trading Co. in 1974. At the time, Nik was studying and practicing macrobiotics in Boston, Massachusetts. By the late 1970s several brands of trail mix were on the market in both natural food stores and supermarkets, by the 1980s there were many, as it became a mainstream American snack.

This catalog cover was reprinted with permission from the Michio and Aveline Kushi Macrobiotics Collection, Archives Center, National Museum of American History, Smithsonian Institution, Washington, DC. Address: 33 Farnsworth Street, Boston, Massachusetts 02210. Phone: 617-542-1358.

5198. Erewhon [Los Angeles, California]. 1975. Erewhon November/December 1975. Culver City, California. 22 p. Catalog and price list.

• ***Summary:*** On the front cover is an illustration (line drawing) of Benjamin Franklin, wearing a fur hat and glasses. Below is a quote from his *Poor Richard's Almanac* (1739): "Keep thy shop and thy shop will keep thee." Other quotes are scattered throughout the catalog.

Products include: Pasta (packaged and bulk), incl. Soya-Rice Shells (organic) "Eat to live, Live not to eat." Bulk staples–Grains (including Sweet Rice from California), flours (freshly milled whole grain), cereals, beans (incl. organic soybeans and soybean flakes from Texas), seeds. "Knowledge like a rich Soil, feeds if not a world of Corn, a world of weeds." Erewhon packaged staples–Grains, flours, cereals, beans (incl. organic soybeans), seeds. "A long life may not be good Enough, but a good Life is long Enough."

Granola. More packages–Arrowhead grains, cereals, and beans, Fearn Soya Foods (from Fearn Soya Products, incl. Soy-O-Pancake Mix {Wholewheat or Buckwheat}, Soya Powder {Natural or Low Fat}), Earthwonder meals-in-a-bag. Arrowhead Mills The Simpler Life food storage program (nitrogen packed in #10 metal cans, incl. soybeans and soy flakes). Juice. "They that cannot Obey, cannot Command." Spreads (nut butters {peanut butter, sunflower butter, sesame butter, sesame tahini} and fruit butters {Pure and Simple, sweetened only with honey}). Rocky Hollow Herb Farm's line of organic and natural herbs, spices, and essential oils. "Time is an Herb that cures all Diseases." Goodies: Nik's Snaks, chewies (incl. pemmican), chips (incl. Mother Earth Tamari Chips, Corn Munchies–Pure & Simple). "To lengthen thy Life, lessen thy Meals." Rennetless cheese from Redwood Natural Foods. Dried fruit (bulk or packaged, incl. calymyrna figs, medjool dates, monukka raisins). Tamari & miso (Tamari soy sauce–4 sizes aged 2 years, Hacho miso–3 sizes aged 2 years, Mugi miso–3 sizes aged 18 months, Kome miso–3 sizes age not given). Vegetable oils (incl. Arrowhead Soy Oil in 3 sizes). Garden fresh produce. Sea vegetables. Herb teas (incl. Celestial Seasonings). "Make Haste slowly." Body care (incl. Tom's soap and shampoos, Dr. Bronner's soaps, Cattier products). "When the well's dry, We know the worth of Water." Potpourri. Condiments (incl. "kuzu arrowroot, umeboshi (plums pickled in brine)," cookware (Quaker City grain mill, Corona stone mill, Mac steel utility knife, Soy sauce dispenser), publications). "Hunger is the best Pickle." Important stuff (Ordering information). "Drive thy Business, let it not Drive Thee."

On the last page, John Fountain extends "grateful appreciation to all those whose positive accomplishments have created Erewhon: Lima and George Ohsawa, Aveline and Michio Kushi, Cornellia and Herman Aihara, Michel Abehsera, Yvette & Jacques DeLangre, William Dufty, Frank Ford, Paul Hawken, Carolyn Heidenry, Roger Hillyard, Bob Kennedy, Bruce McDonald, Tommy Nakayama, Shane and Lou Olds [sic, Shayne Oles], Fred Rohe, Dr. Pietro Rotundi, Evan Root, Tyler Smith, Bill Tara, our customers, staff, suppliers, and growers, Susan and Lou Remy and all." Address: 8454 Steller Dr., Culver City, California 90230. Phone: (213) 836-7569.

5199. Singer, Peter. 1975. Animal liberation: A new ethics for our treatment of animals. New York, NY: New York Review: Distributed by Random House. xix + 301 p. Oct. Illust. Index. 18 cm. Paperback edition published Sept. 1977 by Avon Discus. [200* ref]

• ***Summary:*** This book, a milestone in and "bible" of the animal rights movement worldwide, first popularized the concepts of animal rights and speciesism (pronounced SPEE-shees-iz-um, a term first used in 1973) as logical extensions of human rights and racism. It helped to make 1975 a year that saw explosive growth in the animal rights and vegetarian movements. Singer is an Australian academic.

The author, an Australian philosopher, argues for an end to oppression and exploitation of non-human animals, discusses animal experimentation and factory farming, and presents vegetarianism as an opportunity to take a political, economic, and moral stance in our daily lives.

Contents: Preface (It begins: "This book is about the tyranny of human over nonhuman animals. This tyranny

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has caused and today is still causing an amount of pain and suffering that can only be compared with that which resulted from the centuries of tyranny by white humans over black humans. The struggle against this tyranny is a struggle as important as any of the moral and social issues that have been fought over in recent years") Acknowledgments. 1. All animals are equal... or why supporters of liberation for blacks and women should support animal liberation too. 2. Tools for research... or what the public doesn't know it is paying for. 3. Down on the factory farm... or what happened to your dinner when it was still an animal. 4. Becoming a vegetarian... or how to reduce animal suffering and human starvation at the same time. 5. Man's dominion... a short history of speciesism. 6. Speciesism today... defenses, rationalizations, and objections to animal liberation. Appendices: Cooking for liberated people (incl. Seventh-day Adventists, bread, peanut butter, tahini, miso, hummus, and Tartex, Chinese recipes, mung bean sprouts and tofu, Indian recipes, Middle Eastern recipes, flat Arabian bread, chickpeas and felafel, Italian recipes, macrobiotic recipes {incl. soy sauce, soybeans}, meat substitutes {incl. TVP, Granburger, Protoveg, Itona, Vitpro, Loma Linda meatless frankfurters, imitation bacon bits}, and milk substitutes–often made from soybeans), further reading, organizations.

Singer's book was not just a philosophical treatise. It was a call to action. Invoking the concept of speciesism, Singer deplored the historic attitude of humans toward non-humans as a "form of prejudice no less objectionable than racism or sexism," and urged that the liberation of animals become the next great cause after civil rights and the women's movement. Singer's popular book produced two important effects. First, it reintroduced to the anti-vivisectionist cause an intellectual basis, a philosophical orientation, and a moral focus. Second, it attracted to the animal rights cause a host of new activists who started many new organizations. The most active and visible of these has been PETA (People for the Ethical Treatment of Animals, in Washington, DC), which by 1988 was thought to have 200,000 dues paying members in the USA.

Singer maintains that "to treat animals as resources and argue about when use is sustainable, is a classic example of economic rationalism running heedlessly over non-economic values. We should no more hand our wild animals over to the tender mercies of the market than we should hand our children over to the same market forces. Neither children nor wild animals are a 'product' or a 'resource' at all."

Note: This is the earliest document seen (Oct. 2009) that mentions Itona, a British maker of soymilk and meat alternatives. Address: Australia.

5200. Erewhon Trading Co. 1975. News from nowhere (Japanese fermented foods–Miso, tamari, and koji). *East West Journal*. Nov. 15. p. 29.

• ***Summary:*** The subtitle states: "Erewhon news from Nowhere is a regular *East West Journal* column providing information about food. We hope that this will be a valuable educational service, enabling readers to select what they eat knowledgeably. If you require more information about food, we invite you to visit us at our retail stores." Note that though the column is written in the first person, no author is given.

"In my opinion the most fundamental change in the creation of traditional fermented foods occurred with the shift of the Japanese rural-based economy after World War II. The movement of the population to the cities and the emphasis on production and manufacturing by large numbers of city dwellers who consumed increasingly larger amounts of food created a demand for soybeans beyond the capacity of the rural of the rural population's productivity. The Japanese turned to America for their soybeans and began to use varieties that did not lead to the fine product to which the native beans had formerly contributed. The result was an economic necessity for research, carried out by American and Japanese technicians, and the results created several basic changes in the manufacturing process.

"First, the koji mold was investigated, and out of the hundreds of strains of mold bacteria [sic] present in the traditional mold culture, certain strains were isolated and propagated for their effectiveness to create the fermentation under laboratory conditions. Thus, new strains of 'hybrid' cultures were developed that would break down the American beans of inconsistent quality. The technicians failed to see the process as a whole, not realizing that the long-term fermentation and great attention in handling the raw materials at different stages was an art that depended on a great variety of naturally occurring bacteria to produce an environment where natural competition worked to strengthen the culture."

"Except for the small number of true traditional makers in Japan, I would say that Americans in their own backyards will, within the next ten years, be producing finer miso and tamari than the majority of producers currently working in Japan." Address: Massachusetts.

5201. Adams, Catherine F. 1975. Nutritive value of American foods, in common units. *USDA Agriculture Handbook* No. 456. 291 p. Nov. Index. 30 cm.
Address: Washington, DC.

5202. **Product Name:** Cedar Lake Chippetts / Chipettes (Meatless)
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer)
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1975. November.
Ingredients: Wheat protein, water, soy sauce, vegetable seasoning, salt.
Wt/Vol., Packaging, Price: 19 oz can.

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How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 33. Cedar Lakes. "Chippetts" (19 oz).

Label. Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. "Chipettes–Meatless. Cedar Lake foods."

5203. **Product Name:** Cedar Lake Sloppy Joe (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1975. November.
Ingredients: Wheat protein, water, tomato sauce, vegetable seasoning, cornmeal, soy sauce, oatmeal, corn oil, salt, brown sugar.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 22. Cedar Lakes. "Sloppy Joe" (19 oz).

Label.

5204. **Product Name:** Cedar Lake Hostess Cuts (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1975. November.
Ingredients: Wheat protein, whole wheat flour, water, soy sauce, vegetable seasoning, salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 22. Cedar Lakes. "Hostess Cuts" (19 oz). Plus Label sent by Cedar Lake.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. First ingredient is written as "Wheat gluten."

5205. **Product Name:** Cedar Lake Vegetarian Chops.
Manufacturer's Name: Cedar Lake Foods.
Manufacturer's Address: Box 116, Cedar Lake, MI 48812. Phone 517-427-5590.
Date of Introduction: 1975. November.
Ingredients: Wheat gluten, water, soy sauce, salt, hydrolyzed vegetable protein, onion, celery salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 22. Cedar Lakes. "Vege Chops" (19 oz).

Cedar Lake Foods wholesale price list. 1976. March 15. Label printed March 1976.

5206. Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. '75. Ann Arbor, Michigan. [vii] + 93 + 8 p. Index. Illust. 28 cm.
• ***Summary:*** This catalog, largely printed by a computer, contains many ads on unnumbered pages. Contents Hi! Ordering and service information. Bulk: Whole grains, beans, seeds and nuts, dried fruit, nut butters, etc. Refrigerated and frozen ("Frozen meats {beef}–No DES, steroids, female hormones, antibiotics, or stimulants used in feeding. Chickens–No hormones & antibiotics. Ask for turkeys and hens during Thanksgiving." "Frozen soy products: soy milk and tofu soybean curd"). Books. Packaged (by company and product category). Index by product. Index by manufacturer.

"We are happy to announce that Midwest and Mountain High are now one entity... We go into the fall and winter seasons with a fall and winter catalog, delivery schedule, and computer system." For new developments, watch the monthly newsletter and sale sheets. "Your Friends at Midwest."

Includes the following ads (the number is that of the facing page). Wheat Stalk Soya Burger (Cotati, California, p. 17). Arrowhead Mills (p. 27). Dr. Bronner's Magic Soap (p. 32). Chico-San (p. 35). Erewhon (p. 41, incl. "Trail Mix, Niks"). Fearn Soya Foods (p. 42; shows a package of Fearn Soy/o Buckwheat Pancake Mix). Flavor Tree–Pernut soy beans (p. 42). Ham (p. 49, "Cold pressed safflower oil," mayonnaise, and margarine). Health Main (p. 54; soy is not mentioned–only natural potato chips and yogurt dressing & dip). Infinity Herbal Products Ltd. (p. 56). Malt-O-Meal–Soy Town (dry roasted soy beans, p. 60). NF Factors (Lafayette, Calif., p. 67. A photo shows a can of Protesoy). Pure & Simple (p. 72, 795 West Hedding St., San Jose, California 95126; mainly fruits, fruit juices, fruit butters, vinegars). Sovex (p. 83-84. "The fastest selling natural cereal line on the market. Here's the one that started it all, the original Crunchy Granola"). Viobin (wheat germ oil, p. 85F, 89). Tiger's Milk Products (p. 86).

Companies whose products are listed with ads include: Back to Nature (granola, p. 28). Country Natural (granola, p. 36). El Molino (p. 38-39; incl. Cara Coa Crunch Bar, Carob Fruit & Nut Bar, Carob Mint Candy, Chia Seeds, Flaxseed–Whole, Pumpkin seeds, Soybeans–whole, Soya flour, Soya grits, Carob Coated Soybeans). Ener-G-Foods–Jolly Joan (incl. Instant Soy Milk Powder, Wheat & Soy P&W [Pancake & Waffle] Mix {regular and low salt}, p. 39). Flavor Tree (Pernola cereal, Pernut soy beans–salted, cinnamon, salt free, garlic, Pernut toasted soybeans–salted, salt free, garlic, onion). Wok sets in gift box, Quaker City grain grinder, Corona hand mill (p. 58). Lassen Foods

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(granola, p. 60, 60F). Mac Knives (p. 60). Orjene (p. 70-71). Parkelp–Ocean Labs (p. 71, incl. Sea Zun).

The Chico-San Inc. ½-page ad (facing p. 35) features four products, a photo of each is given and each is K-Parve. Rice Cake San-Wich (filled with sesame seeds and Yinnies Rice Syrup). Yinnies Rice Syrup (natural sweetener, made from rice and barley). Yinnies (traditional oriental confection, wrapped like individual candies). Rice Cakes in 4 varieties: Salted or Unsalted, Rice Cakes with Millet–Salted, Rice Cakes with Buckwheat–Salted. "Other Chico-San Products: Organically grown brown rice. Lima soy sauce, miso (soybean puree), rice malt vinegar, sesame butter, sesame oil, nigari, barley koji, tekka, sesame salt, sea salt, salt plums, kuzu, organic rice cream, organic rice flour, black soybeans, azuki beans, sea vegetables, mu tea, lotus root tea, twig tea, toothpowder, seaweed shampoo." Address: Ann Arbor, Michigan 48107. Phone: 313-769-8444 or in Area 313 1-800-552-6297.

5207. **Product Name:** Niblack Tamari Pumpkin Seeds (Pepitas), and Tamari Roasted Sunflower Seeds
Manufacturer's Name: Niblack Foods, Inc.
Manufacturer's Address: 55 Flint St., Rochester, NY 14608.
Date of Introduction: 1975, November.
Wt/Vol., Packaging, Price: Jar.
How Stored: Shelf stable.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 66. Niblack. "Sunflsds w/Tamari" (10 oz). Note: This company makes mostly wheat germ.

Ad in Tom Riker and Richard Roberts. 1979. *The Directory of Natural & Health Foods*, p. 72-73.

5208. Shurtleff, William; Aoyagi, Akiko. 1975. Tofu as a food. *Macrobiotic (The) (Chico, California)* No. 110, p. 14-24. Nov. [2 ref]
• ***Summary:*** Excerpted from the forthcoming Book of Tofu.

The magazine's editor notes: Tofu is also good for external plasters, especially on a head injury or concussion, etc. However it is not advisable to use it on heart area injuries, as tofu is very yin, and could weaken the heart.

Tofu as food should be balanced with Tamari or Miso, or eaten with fish, burdock or any other yang food. This will balance its yin quality. Address: Lafayette, California.

5209. Tovar Galvez, Luis Raul. 1975. Productos derivados del frijol soya tecnologias tradicionales en el Lejano Oriente ['Traditional technology soy products in the Far East]. In: American Soybean Assoc., ed. 1975. Memorias: Primera Conferencia Latinoamericana Sobre la Proteina de Soya. Mexico City. 232 p. See p. 185-93. [14 ref. Spa]
• ***Summary:*** Descriptions of and flow sheets for the production of the following basic soyfoods are given: Miso, shoyu (*salsa de soya*), natto, tempeh, sufu (fermented tofu), and soy yogurt. A table shows the nutritional composition of each of these foods as well as yuba and kori-tôfu (dried-frozen tofu).

Note 1. This is the earliest Spanish-language document seen (Sept. 2011) that mentions tempeh, which it calls "tempeh."

Note 2. This is the earliest Spanish-language document seen (Feb. 2004) that uses the term "kori-tôfu" to refer to dried-frozen tofu. Address: Faculdad de Quimica, UNAM, Mexico.

5210. Eden Foods. 1975. Wholesale pricelist. Winter 75-76. 4601 Platt Rd., Ann Arbor, MI 48104. 26 p. Dec. 15.
• ***Summary:*** On the cover is a man entering the gate of his snow-covered cabin in the moonlight. Tamari Soy Sauce is now sold under 2 labels (Erewhon, and Japan-Marushima). The three types of miso (all under the Erewhon brand) are still spelled Mugi, Hacho, and Kome. Address: Ann Arbor, Michigan. Phone: (313) 973-9400.

5211. Shurtleff, William; Aoyagi, Akiko. 1975. The book of tofu: Food for mankind. Hayama-shi, Kanagawa-ken, Japan: Autumn Press. 336 p. Illust. by Akiko Aoyagi. Index. Dec. 28 cm. Rev. ed. 1977 Autumn Press, Brookline, MA. [53 ref]
• ***Summary:*** This pioneering work started the "tofu revolution" in America. Contents: Preface. Acknowledgements. Part I. Tofu: Food for mankind. 1. Protein East and West. 2. Tofu as a food: Introduction, rich in high quality protein (NPU, biological value, protein score, amino acid content), high protein complementarity (tofu contains an abundance of lysine, an essential amino acid that is deficient in many cereal grains; increase usable protein by combining tofu with wheat, rice, corn, etc.), easy to digest, an ideal diet food, low in saturated fats and free of cholesterol, rich in vitamins and minerals, a health-giving natural food, backbone of the meatless / vegetarian diet, free of chemical toxins, low in cost, easily made at home, quick & easy to use, versatile.

3. Getting started. Introduction, buying and storing tofu, basic ingredients (whole-wheat flour, miso {rice-, barley-, and soybean miso, special Japanese miso, Chinese chiang}, oil, brown rice, salt, shoyu {natural shoyu, shoyu, Chinese soy sauce, synthetic or chemical soy sauce}, sugar, vinegar, monosodium glutamate {MSG}), Japanese kitchen tools (each illustrated), preparatory techniques (salt rubbing, rinsing and pressing leeks and onions, soaking burdock root, reconstituting dried sea vegetables {dried hijiki, wakame, agar}, wheat gluten and kampyo [kanpyo], parboiling, cutting tofu and vegetables, using sesame seeds, toasting nori, preparing a steamer), basic recipes (soup stocks and broths {dashi}, basic shoyu dipping sauces {*tsuke-jiru*}, miso toppings {sweet simmered miso / *nerimiso*, miso sauté / *abura miso*, special miso toppings and dipping sauces, finger

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lickin' miso, and regular miso}, miso salad dressings, nut and seed butter toppings, spreads and dressings, basic sauces, rice, noodles and other basic preparations)

Our favorite tofu recipes (lists about 80 recipe names for each of the different types of tofu, plus soymilk, yuba, whole soybeans, gô, okara, and curds, very favorites that are also quick and easy to prepare are preceded by an asterisk).

Part II. Cooking with tofu. Recipes from East and West (500 recipes). 4. Soybeans: History of soybeans and "soybean foods," cooking with whole dry soybeans, roasted soybeans (*iri-mame*), fresh green soybeans (*edamame*, incl. a recipe for "Sweet emerald bean paste {*Jinda*}," kinako (roasted full-fat soy flour, incl. Japanese health food treats such as *kinako amé, gokabo, kokusen, kankanbo,* and *abekawa mochi*), soybean sprouts (*daizu no moyashi*), natto ("sticky fermented whole soybeans," with "gossamer threads"), tempeh (fermented soybean cakes). Hamanatto and Daitokuji natto (raisin-like natto), modern western soybean foods (natural soy flour [full-fat], soy granules, defatted soy flour and grits, soy protein concentrates, soy protein isolates, spun protein fibers, textured vegetable protein {TVP}, soy oil products). 5. Gô (a thick white puree of well-soaked uncooked soybeans). 6. Okara or Unohana. 7. Curds and whey. 8. Tofu (includes history, and preparatory techniques: Parboiling, draining, pressing {towel and fridge method, slanting press method, sliced tofu method}, squeezing, scrambling, reshaping, crumbling, grinding, homemade tofu, tofu quick and easy {incl. Chilled tofu–Hiya-yakko}, tofu dressings, spreads, dips and hors d'oeuvre {incl. Creamy tofu dressings and dips, Tofu mayonnaise dressing, Tofu tartare sauce, Tofu cream cheese, Tofu sour cream, Tofu cottage cheese, Tofu guacamole}, tofu in salads {Western style and Japanese style salads incl. Shira-ae}, tofu with sandwiches and toast, tofu in soups {Western style and Japanese style soups, incl. miso soup}, tofu in sauces, tofu in breakfast egg dishes, tofu baked, tofu sautéed, stir-fried or topped with sauces {incl. Mabo-dofu [Ma Po doufu]}, deep-fried tofu, tofu with grains, tofu broiled {incl. Tofu dengaku}, tofu simmered in one-pot cookery and seasoned broths, tofu steamed, tofu desserts {incl. Tofu whipped cream or yogurt, Banana tofu milkshake, Tofu icing, Tofu ice cream, Tofu cheesecake, Tofu-peanut butter cookies}).

9. Deep-fried tofu. Thick agé or nama-agé (incl. atsu-agé meaning "thick deep-fried tofu," "three-cornered agé" {*sankaku-agé*} in Kyoto, agé cubes {*kaku-agé*}, "five-color agé" {*gomoku-agé*}), ganmo or ganmodoki (incl. *hiryozu / hirosu*, "Flying Dragon's Heads"), agé or aburagé (incl. *kiji*, "agé pouches," "crisp agé", *kanso aburagé*, "agé puffs," "fried soybean cakes," "hollow agé cubes," "Smoked tofu," p. 189-91, 197).

Note 1. This is the earliest English-language document seen (May 2012) that contains the following terms related to deep-fried tofu (p. 180-90): "Thick agé," *nama-agé, Hiryozu*, "Dragon," "Flying Dragon's Heads," "treasure balls," "Ganmo treasure balls," "fresh or raw deep-fried tofu," "three-cornered agé," *sankaku-agé*, "agé cubes," *kaku-agé, kiji*, "agé pouches," "crisp agé," *kanso aburagé*, "agé puffs," "fried soybean cakes," or "hollow agé cubes."

10. Soymilk. 11. Kinugoshi ("*Kinu* means 'silk', *kosu* means 'to strain'; well named, kinugoshi tofu has a texture so smooth that it seems to have been strained through silk." It is made from concentrated soymilk). 12. Grilled tofu (incl. sukiyaki). 13. Frozen and dried-frozen tofu. 14. Yuba (incl. many meat alternatives such as Yuba mock broiled eels, Buddha's chicken, Buddha's ham, sausage). 15. Tofu and yuba in China, Taiwan, and Korea (incl. Savory tofu {*wu-hsiang kan*}; see p. 258 for illustrations of many meat alternatives, incl. Buddha's fish, chicken, drumsticks, and duck, plus vegetarian liver and tripe, molded pig's head, and molded ham). One type of Korean soybean miso is called *kotsu jang* [sic, *kochu jang*]. When tofu is served with miso [Korean-style, *Tenjang*] as the dominant seasoning, and with rice, "it becomes the popular ***Tenjang Chige Pekpem***" (p. 262). 16. Special tofu.

Note 2. This is the earliest (and only) English-language document seen (March 2009) that uses the word "Tenjang" to refer to Korean-style soybean jang (miso).

Part III–Japanese farmhouse tofu. Making tofu for more and more people. 17. The quest. 18. Making community tofu. 19. The traditional craftsman. 20. Making tofu in the traditional way.

Appendices: A. Tofu restaurants in Japan, many are vegetarian: In Tokyo: Sasa-no-yuki / Sasanoyuki, Goemon, Hisago, Sanko-in, Shinoda-zushi, Dengaku (south of Tokyo in Kamakura). In Kyoto: Nakamura-ro, Okutan, Takocho, Izusen, Junsei, Nishiki, Hakuun-an, Rengetsu, Sagano, Sorin-an. Tea ceremony cuisine (*Kaiseki ryori*), Zen temple cookery or Buddhist vegetarian cookery (*Shojin ryori*), Tea ceremony cookery from China (*Fucha ryori*), Wild gathered cookery (*Sansai ryori*). A directory of these and others, with addresses and phone numbers, is given (p. 312).

B. Tofu shops in the West (Directory of 43 shops in the USA, 3 in Europe, and 3-7 in Latin America {Mexico City, Rio de Janeiro and Sao Paolo, Brazil}). C. People and institutions connected with tofu. D. Table of equivalents. Bibliography. Glossary. Index. About the authors (autobiographical sketches, a photo shows Shurtleff and Aoyagi, and gives their address as New-Age Foods Study Center, 278-28 Higashi Oizumi, Nerima-ku, Tokyo, Japan 177). Sending tofu in the four directions.

Pudding recipes include: Rice pudding with gô and apple (p. 76, incl. 2 cups soymilk). Tofu chawan-mushi (p. 147, Steamed egg-vegetable custard with tofu). Tofu fruit whips (p. 148). Tofu rice pudding (p. 150, incl. 1 cup soymilk). Tofu custard pudding (p. 152). Soymilk custard pudding (p. 208). Brown rice pudding (p. 208, with 2 cups soymilk). Soymilk chawan-mushi (p. 209). Chawan-mushi with yuba (p. 249).

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Dessert recipes include: Tofu whipped cream or yogurt (p. 148, resembles a pudding or parfait). Tofu ice cream (p. 149, with chilled tofu, honey, vanilla extract and salt). Banana-tofu milkshake (p. 149). Tofu cream cheese dessert balls (p. 149). Tofu icing (for cake, p. 149). Tofu cheesecake (p. 150). Tofu-pineapple sherbet (p. 151). Also: Soymilk yogurt (cultured, p. 205). Healthy banana milkshake (p. 206). On p. 160 is a recipe for "Mock tuna salad with deep fried tofu."

Note 3. This is the earliest English-language document seen (March 2007) that uses the term "Tofu ice cream" to refer to soy ice cream or that contains a recipe for "Tofu ice cream."

Note 4. This is the earliest English-language document seen (March 2000) that uses the term "Tofu Cheesecake" and the first to give a recipe for a tofu cheesecake.

Note 5. This is the earliest English-language document seen (May 2000) that uses the term "Tofu Sour Cream" (p. 109) or that contains a recipe for "Tofu Sour Cream."

Note 6. This is the earliest English-language document seen (Dec. 2003) that uses the term "tofu milkshake" or that gives a recipe for a shake made with tofu.

Note 7. This is the earliest English-language document seen (Jan. 2012) that uses the term "sticky fermented" to refer to natto.

Note 8. This is the 2nd earliest English-language document seen (Nov. 2011) that uses the term "dried-frozen tofu."

Note 9. This is the earliest English-language document seen (March 2004) that describes preparatory techniques for tofu (p. 96-98).

Note 10. This is the earliest English-language document seen (March 2004) that contains the term "smoked tofu."

Note 11. This is also the earliest English-language document seen (March 2004) that uses the term "kinugoshi tofu" to refer to silken tofu.

Note 12. As of March 2007, the various English-language editions of this book have sold more than 616,000 copies.

Note 13. This is the earliest English-language document seen (June 2011) that uses the term "tofu lees" to refer to okara (see p. 22, 77).

Note 14. This is the earliest English-language document seen (Aug. 2011) that contains the term "Modern Western soybean foods" (see p. 69), a term that Shurtleff would soon (by 1983) replace by the more accurate "Modern soy protein products."

Note 15. This is the earliest published English-language document seen (Jan. 2012) that contains the term "creamy tofu dressings" (or "dressing"). Address: c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

5212. Shurtleff, William; Aoyagi, Akiko. 1975. Tempeh (fermented soybean cakes) (Document part). In: W. Shurtleff and A. Aoyagi. 1975. The Book of Tofu. Hayama-shi, Kanagawa-ken, Japan: Autumn Press. 336 p. See p. 68-69.

• ***Summary:*** "These cakes of cooked soybeans, bound together by a fragrant, white mycelium of *Rhizopus* mold, have a delectable flavor: fried or deep-fried, they taste remarkably like fried chicken or veal cutlets. Rich in protein (18.3% fresh or 48.7% dried), tempeh is also highly digestible, and *Rhizopus* serves as an effective deactivator of trypsin inhibitor (p. 70). Like other fermented soy products (miso, shoyu, natto) and sea vegetables, tempeh is one of only a few non-meat sources of vitamin B12.

"For centuries prepared daily on a cottage scale throughout Indonesia (where it is a basic food for millions of people and makes use of more than 50 percent of the country's soybean crop), tempeh is also an important staple in New Guinea and Surinam, and is eaten on a small scale in Malaysia and Holland. Its adaptability to household industries and its low cost should make it, like tofu, a food of worldwide commercial interest during the coming decades.

"Tempeh can be prepared without difficulty in any Western kitchen using either whole soybeans, okara (p. 81), or cooked grains (wheat, rice, barley, or rye) fermented alone or mixed with soybeans. In Indonesia, ½ cup portions of partially cooked, inoculated soybeans are wrapped in banana leaves, tied, and fermented. For larger scale preparation, use (stainless steel) trays with 1/8-inch holes every 2 inches throughout the top and bottom, or similarly-perforated, sausage-shaped plastic bags 1½ inches in diameter. Be sure that all containers are well washed since even small amounts of oil or salt hinder mold growth.

"The starter is available from the U.S. Department of Agriculture, Northern Regional Research Lab., 1815 N. University Ave., Peoria, Illinois 61604. The Farm (p. 316) is now making up a brochure on tempeh preparation which will soon be available with the starter.

"To prepare new starter, carefully scrape darkened (sporulated) mycelium from the surface of freshly fermented cakes or from the wrapper or tray in which tempeh was fermented. Mix with 1 teaspoon (sterile) water and use in place of commercial starter.

"Homemade Tempeh: Makes 6 cakes.

"1 cup soybeans, washed and soaked for 18 hours in a mixture of 1 quart water and 1 teaspoon vinegar or lactic acid.

"½ teaspoon tempeh starter (*Rhizopus oligosporus* mold spores).

"Squeeze beans firmly and repeatedly with one hand in soaking water to remove all seed coats, then carefully pour off water and coats. Refill soaking container with water and repeat until all coats are removed. Combine drained beans and 4 cups water in a pot, bring to a boil, and simmer for 60 minutes. Drain beans, rinse 4 to 5 times under water, then drain well. Allow to cool to body temperature, then mix in

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starter. Divide inoculated beans into 6 equal portions, placing each at the center of a 7 by 9 inch piece of aluminum foil.

"Fold over sides, then ends of foil, sealing tightly, to form a 4- by 3- by ½-inch thick 'package.' Place packages in a warm clean place or incubator and allow to stand for 24 hours at 88° (or as long as 30 hours at 78°), or until beans are bound together into a cake by a fragrant white mycelium. For best flavor, serve these fresh tempeh cakes as soon as possible, cooked in any of the following ways:

"Deep-fried or Fried: Deep-fry cakes (or pan-fry on both sides) until crisp and golden brown. Serve topped with shoyu, ketchup, Worcestershire, or any of the following Basic Sauces (pp. 48 to 49): Onion, Mushroom, Sweet & Sour, Ketchup-Worcestershire, or Tomato & Cheese. Also delicious in sandwiches and soups.

"Tempeh Goreng (Savory Cutlets): Score both surfaces of 3 fresh tempeh cakes to a depth of 1/8 inch. Combine 3 tablespoons water, ½ teaspoon salt, ½ clove of crushed garlic, and ¼ teaspoon coriander. Add tempeh, marinate for 5 minutes, and drain well. Deep-fry in (coconut) oil (p. 130). Serve as an accompaniment for rice dishes, topped with red-pepper sauce (*sambal*) if desired.

"Tempeh Kemul (Crisp Chips): Cut 3 tempeh cakes horizontally into paper-thin slices, sun-dry for 5 minutes if desired. Combine 6 tablespoons (rice) flour, 1 clove of crushed garlic, ½ teaspoon salt, and ¼ teaspoon coriander. Mix in enough (coconut) milk to form a fairly thin batter, then add tempeh slices and allow to stand briefly. Deep-fry until crisp, and serve like potato chips. For variety use a well-salted tempura batter.

"Tempeh Bacham [Bachem] (Rich Fillets): Combine in a skillet ¼ grated onion, ½ teaspoon salt, 3 to 4 tablespoons brown sugar, and 1½ cups water. Add 3 tempeh cakes (cut crosswise into fourths), bring to a boil, and simmer until all liquid has evaporated. Deep-fry cakes and serve as for Tempeh Goreng.

"Tempeh Kering (Fiery Sauté): Cut 3 tempeh cakes into paper-thin ½-inch squares; sun-dry for 1 to 2 hours if desired. Deep-fry and drain well. Sauté ½ clove of crushed garlic and ½ minced onion in 3 tablespoons oil for 5 minutes. Add 2 tablespoons each brown sugar and water, 1 to 2 minced red peppers, ½ teaspoon salt, and spices (*salam, laos, asam*) to taste; sauté for 2 minutes more. Add tempeh slices and sauté for 4 more minutes. Scoop out tempeh with a slotted spoon or spatula, drain briefly over wok or skillet, and serve as a topping for cooked rice.

"In Soups: Add diced fresh tempeh to soups and simmer for 30 minutes. Season with salt, miso, or shoyu.

"Baked or Roasted: Bake at 350° for about 20 minutes, or until nicely browned and fragrant. If desired, use as the basis for a pizza-type preparation, or serve topped with any of the sauces mentioned above."

Illustrations show: (1) Small round and square cakes of tempeh. (2) How to fold inoculated, cooked soybeans a small packet when making Indonesian-style homemade tempeh.

Note 1: This is the earliest published document seen (Oct. 2011) that describes how to make tempeh at home. The process was learned from an Indonesian couple, Mr. and Mrs. Mustam, in Tokyo, Japan, in March 1975.

Note 2: On 1 Sept. 1975 Shurtleff (in Tokyo) sent a copy of the section on "Tempeh" (typeset galley proofs) from this book to Cynthia Bates at The Farm (Summertown, Tennessee) and requested her comments. Address: Lafayette, California.

5213. Shurtleff, William, Aoyagi, Akiko. 1975. The book of tofu: Food for mankind (Illustrations- line drawings). Hayama-shi, Kanagawa-ken, Japan: Autumn Press. 336 p. Illust. by Akiko Aoyagi. Index. Dec. 28 cm. Rev. ed. 1977. Autumn Press, Brookline, MA. [53 ref]

• ***Summary:*** Continued: Illustrations (line drawings, both numbered and unnumbered) show: A hearth in a traditional Japanese farmhouse with tofu dengaku roasting around a bed of coals in a sunken open-hearth fireplace. An old Japanese plum tree blossoming in winter. Three pieces of skewered tofu dengaku with a sansho leaf atop each in a special serving box. A sprig of sansho with berries. Stylized top of a soybean plant in a circle. Fig. (4) Tofu products available in the West (tofu, dofu, kinugoshi, thick agé triangles, cubes, and cake, agé and agé puffs, hollow agé cubes, soymilk, tofu pudding, doufu-ru {white and red}, ganmo {patties, small balls, and treasure balls}, grilled tofu, dried-frozen tofu, instant powdered tofu, okara, dried yuba, soymilk curds, pressed tofu, savory tofu). A wooden cutting board and Japanese broad-bladed vegetable knife (nagiri-bôcho) with vegetables and tofu on a woven bamboo tray.

Note: This is the earliest English-language document seen (May 2012) that contains the term "treasure balls." It refers to Chinese-style tofu mixed with various finely-chopped vegetables, rolled into balls, and deep-fried tofu. (8) A wooden keg of red miso and a plastic bag of barley miso. (9) Shoyu in a metal can, wooden keg, glass bottle, and table-top dispenser. Traditional Japanese kitchen tools: *Miso-koshi* (woven bamboo strainer used in making miso soup), cutting board, Japanese vegetable knife, wooden spatula, bamboo rice paddle (*shamoji*) and spoon, woven bamboo colander or tray (*zaru*), suribachi, Japanese grater (*oroshi-gané*), sudaré (bamboo mat), pressing sack for tofu or soymilk, serrated tofu-slicing knife, tawashi scrub-brush (made of natural palm fiber), wok with draining rack and wooden lid, stir-frying ladle and spatula, long cooking-chopsticks, mesh skimmer, deep-frying thermometer, Chinese bamboo steamer (*seiro*), charcoal brazier (*konro, shichirin*), broiling screen. Covered pot steamer. Small lidded pottery pot. More kitchen tools (p. 50-51). (10) A soybean measuring box (*isshô-bako*). (11) The soybean plant. Two views of a soybean seed with seed coat, hilum, and hypocotyl labeled. A bag full of soybeans. Roasted soybeans in a woven bamboo tray (*zaru*). Edamamé

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in the pods. Three shapes of kinako treats. Soybean sprouts. Natto on a bamboo mat (*sudare*). Natto wrapped in rice straw as it ferments. A hand holding chopsticks that lift natto up from a bowl of natto–connected by gossamer threads. Tempeh (round and square pieces). Wrapping a small packet of inoculated soybeans to make tempeh. (15) Two Japanese women in traditional clothing using hand-turned grinding stones (quern) to grind soaked soybeans when making tofu. (16) Push-pull grinding stones. (17) Motor-driven grinding stones. (18) Water-powered millstones. (19) Wind-powered millstones. (20) Unohana. (21) A tofu maker sitting on a traditional lever press that presses soymilk from the okara in a pressing sack on a rack. A heavy iron skillet. (22) Folding okara omelet pouches. Okara doughnuts. (23) A bamboo colander. (24) A tofu maker weighting a colander with a brick so that whey will collect in it. (25) Ladling whey from curds; it foams! (27) A horse drinking whey from a wooden vat. Soymilk curds in a bamboo mat. (28) Ladling curds for Awayuki. (29) Fresh tofu in a plastic tub. (30) A tofu maker placing a weight on pressing lids as tofu is pressed in settling boxes (forming boxes). Transferring tofu-filled settling box to sink. Cutting a block of tofu into cakes under water. Eggplant halves in a yin-yang dance. Preparatory techniques used with tofu (slanting press, sliced tofu, squeezing, scrambling, reshaping, crumbling). (32) Utensils for making tofu at home. (33) Three designs for a homemade settling container. (34) Preparing homemade tofu (a-l). (35) Removing tofu from a farmhouse-style settling container (forming box). (36) Chilled tofu. Iceberg chilled tofu. A hot, moist, white towelette (*o-shibori*) is used to wipe the face and hands before (or occasionally after) a meal. Tofu salads in three Japanese pottery dishes. Japanese soups in three types of containers. (37) Chrysanthemum tofu. (38) Tofu poached egg. Tofu-stuffed green peppers. A wok. (39) Filling a wok with oil. (40) testing oil temperature in a wok. (41) Deep-frying tofu tempura–and (42) Serving it in a shallow bamboo basket. (43) Making *Kaki-agé*. (44) Dengaku Hoshi (from *Tofu Hyaku Chin*). (45) Skewered Tofu dengaku. Preparing Tofu dengaku in old Japan (from Hokusai's sketchbooks). (46) A variety of skewers. (47) Chinese firepots. (48) A Simmering Tofu wooden serving container heated by coals from within. (49) Miso oden. (50) Tofu wrapped in rice straw. (51) Nanzenji wrapped tofu. (52) Gisei-dofu. (53) Serving freshly deep-fried agé. (54) The deep-frying area of a traditional tofu shop. (55) Deep-frying tools. (56) Wooden bamboo tray with raised sides. Chinese cleaver. (57) Nori-wrapped sushi with agé (making and serving; six drawings). Eating noodles from old Japan (from Hokusai's sketchbook). (58) Preparing homemade noodles. (59) The Oden man on a winter's eve. A pottery bowl of Oden. Kombu rolls. (60) Making konnyaku twists. (61) Nishime in a multi-layered lacquerware box. (61) Pressing tofu for thick agé in a tofu shop. (62) Deep-frying tofu for thick agé. (63) A tofu maker with deep-fried thick agé triangles on screen trays.

Note 1. This is the earliest English-language document seen (May 2012) that contains the terms "deep-fried thick agé triangles" (p. 181) or "hollow agé cubes" (p. 23).

(64) Stuffing thick agé. (65) Thick agé stuffed with onions. (66) Pressing tofu for ganmo. (67) Adding seeds and vegetables. (68) Deep-frying ganmo. (69) A farmhouse open-hearth fireplace with nabe kettle. (70) Preparing homemade ganmo. Ganmo balls in a draining tray. Ganmo cheeseburger. (71) Cutting tofu to make agé slices (*kiji*). (72) Deep frying agé. (73) Opening agé into pouches. Agé treasure pouches.

Note. This is the earliest English-language document seen (May 2012) that contains the term "treasure pouches" or the term "Agé treasure pouches." (74) Agé pouches sealed with foodpicks. Inari shrine with Shinto torii. (75) Kampyo-tied pouches [kanpyo]. (76) Making rolled agé hors d'oeuvre. (77) Tofu maker ladling gô (fresh soy puree) into a cauldron. (78) Stirring down the gô. Pressing soymilk from okara with a hand-turned screw press. (79) Serving fresh soymilk in a tofu shop. Six Japanese commercial soymilk products. Little girl at The Farm (Summertown, Tennessee) seated on a small chair drinking a cup of soymilk. Chinese breakfast soymilk soup with deep-fried crullers (*Siento-chiang with yu-chiao tsao pi*). (80) Takigawa-dofu. (81) Tofu maker pouring the soymilk for kinugoshi tofu. (82) Adding solidifier. (83) Trimming kinugoshi from sides of box. (84) Modern lactone kinugoshi (with GDL). (85) Modern kinugoshi factory. (86) Sasa-no-Yuki's Gisei-dofu container. (87) Kinugoshi with ankake sauce. The entrance way to a traditional Japanese restaurant featuring tofu. Traditional metal skewer for making grilled tofu. (88) Traditional tofu maker grilling tofu over a charcoal brazier (*hibachi*). Grilling tofu in a traditional open hearth. (89) An early method of elaborate grilling. Pieces of tofu on different types of skewers. Farmhouse sukiyaki with grilled tofu. (90) Tying frozen tofu with rice straw. (91) Drying farmhouse frozen tofu. (92) Pressing frozen tofu at home. (93) Deep-fried frozen tofu with cheese. (94) Making deep-fried frozen tofu sandwiches (*Hakata-agé*). (95) Frozen tofu wrapped in kombu. (96) Steaming table in a yuba shop. Ten different types / shapes of yuba. (97) Lifting yuba away from soymilk. (98) Yuba sashimi. (99) Yuba envelopes. (100) Deep-fried yuba dengaku. (101) Folding yuba into bundles. Trimming half-dried yuba from a skewer. (102-113) Tofu and yuba in Taiwan, China, and Korea (see separate record). Sesame tofu in pottery bowl. (114) Traditional farmhouse tofu, tied into a package with rice straw rope. (115) Shirakawa-go farmhouses with water-powered rice-dehusker in foreground. (116) Making seawater tofu at Suwanose. Mortar and pestle for pounding mochi. Making community tofu: Western metal hand mill, hand-turned stone mill apparatus, faces of upper and lower stones, colander and cloth, two shapes of cooking pots, Japanese farmhouse earthen cooking stove, cooking pot set on cut-off oil drum, ladle, two wooden

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paddles, pressing rack, pressing okara, lever press, pressing sack, wooden settling [forming] container with cloths. (117) Making nigari with salt in bamboo colander, a traditional "salt boat" for refining salt of nigari. (119) Country farmhouse tofu (5 illust.). (121) Morning shopping at a tofu shop. (122) Diagram of a tofu-shop floor plan. (123) Modern pressure with hydraulic press. (124) Modern centrifuge with 3 soymilk barrels. Thirty-one unnumbered illustrations showing every step in making and selling tofu in a traditional Japanese shop (p. 299-306). (125) Cutting tofu for Dengaku (from *Tofu Hyaku Chin*). (126) Ladies busy making dengaku (from *Tofu Hyaku Chin*). (127) Hearth at Nakamura-ro. (128) The garden at Okutan. Six types of Japanese sea vegetables: Hijiki, aonori, wakame, agar, nori, kombu. (129) Japanese vegetables (27 illustrations). Address: c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

5214. Shurtleff, William; Aoyagi, Akiko. 1975. Sukiyaki (Document part). In: W. Shurtleff and A. Aoyagi. 1975. The Book of Tofu. Hayama-shi, Kanagawa-ken, Japan: Autumn Press. 336 p. See p. 224-25.

• ***Summary:*** "A Japanese cookbook written over 350 years ago contains the following recipe for Sukiyaki: 'Obtain either wild goose, wild duck, or antelope, and soak the meat in *tamari* shoyu. Heat a well-used Chinese plow (*kara-suki*) over an open fire. Place the meat on the plow, garnish with thin rounds of *yuzu*, and broil on both sides until the color changes. Serve and be happy.'

"The word sukiyaki–pronounced skee-ya-kee–means 'broiled on the blade of a plow.' Although the modern preparation generally features beef as the basic ingredient, sukiyaki was traditionally prepared with wild game, fowl, fish, or shellfish. Wild boar was also a favored ingredient, and seafoods such as tuna, yellowtail, whale, wreath shells, and scallops were and, in areas such as Kyoto, still are widely used in the dish.

"Before reaching its present form, sukiyaki passed through a number of unusual historical transformations. The earliest preparation was undoubtedly developed by farmers, hunters, and fishermen who broiled their catch over an open fire using a plow or whatever other utensil was available. Since the earliest plow, the predecessor of the present *nabe*, was nothing but a flat iron plate, it was unable to hold cooking liquids. It was probably for this reason that the meat came to be marinated or basted with tamari shoyu, a technique that is still practiced in some Japanese restaurants. Gradually, sake or *mirin* came to be used in the marinade, various vegetables and grilled tofu were broiled with the meat, and the traditional flat plow or griddle became inadequate to hold the juices of this cornucopia of new ingredients. A new container was needed, and at this point, the ancient tradition of broiling wild meat on a plow merged with the newly-imported tradition of *shippoku*, a type of beef-*nabe* cookery which originated about 300 years ago, just after the first contact with Western traders and missionaries.

"Developed in the international port town of Nagasaki, *shippoku* was said to have its historical culinary roots in Holland, Portugal, China, and Korea. As a result of the merger, the original sukiyaki ingredients eventually came to be cooked in heavy iron or Korean-style stone pots, and the dish was served as a one-pot meal prepared at the table. Consequently 'sukiyaki' became a misnomer, for the new dish was neither broiled nor prepared on a griddle-like plow. But neither was the new sukiyaki a true *nabe* dish, since its ingredients were not simmered in a seasoned broth. Rather, this unique Japanese creation straddled three categories: it was a broiled dish insofar as the meat was first cooked in a sizzling-hot pan; it was a *nabe* dish since it was a one-pot prepared at the dining table; and it was a *nimono*, or simmered dish, insofar as the meat and vegetables were simmered together in a rich mixture of shoyu, sake, and dashi.

"Up until this time, the Japanese had never apparently considered using beef or other livestock in sukiyaki. According to a popular legend, *kamado-gami*, the god of the kitchen hearth, is said to have instructed the Japanese people in ancient times to refrain eating the meat of all four-legged animals, especially of livestock. This admonition was reinforced by the nation's emperors and the vegetarian teachings of Buddhism, so that for about 1200 years–from the 8th century until the 19th century–most Japanese did not eat meat. However with the arrival of Christianity in the 16th century, the eating of beef was also forbidden, and sukiyaki was once again prepared exclusively with seafood, wild game, or poultry. Those who developed a longing for broiled meat, but who were not allowed to prepare it in the family's common pot or in the presence of those who kept the faith, were compelled as a last resort to prepare their sukiyaki the traditional way, substitution using a plow or mattock for the kettle and enjoying the forbidden delicacy alone and in secret in the barn, field, or forest. This tradition of 'underground sukiyaki' is said to have continued until about 1900.

"With the opening of Japan to the West in the mid 19th century and the relaxation of traditional prohibitions, meat eating gradually became fashionable in the cities. Yet most Japanese tasted their first beef with considerable trepidation, having been warned by priests and traditionalists that their action was an affront to their ancestors and that dire consequences would befall them. Little by little, however, beef sukiyaki came to be accepted.

"The first Japanese who worked up the courage to actually eat beef did not prepare it Western-style as steak or roast beef. Rather, they cut the meat into paper-thin slices, employing the same method they had used for centuries to prepare *sashimi*, or raw fish. And they seasoned this meat with shoyu in much the same way they would season

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simmered vegetable or tofu dishes. Many Japanese probably ate their first beef in the form of sukiyaki, and different parts of the country soon developed unique styles of serving it. To this day in the Kyoto area, restaurants place dispensers of shoyu, *mirin*, and sugar on the table and allow each guest to season his food to taste, whereas restaurants in Tokyo have developed their own unique mixtures of these ingredients to form standard cooking liquids.

"Throughout the world people now associate sukiyaki with fine Japanese cookery. In a sense, this is ironic because Japanese cuisine makes relatively little use of meat, and much of sukiyaki's historical influence came from abroad. The ancient delicacy of Japanese hunters and the imported *nabe* preparation have now been totally transformed to become Japan's most famous international dish. And although tofu plays a relatively inconspicuous role in creating the flavor of this dish, sukiyaki has nevertheless been the vehicle whereby thousands of Westerners have had their first taste of 'soybean curd.'

"Although most present-day sukiyaki uses beef as the featured ingredient, our recipe uses ganmodoki–mock goose–in deference to the earliest traditions of using wild fowl. Homemade frozen tofu and frozen thick-agé, the textures of which resemble that of tender beef, make excellent substitutes. Although regular tofu is occasionally used in sukiyaki, grilled tofu is generally preferred for its ability to absorb the flavors in the rich broth, its substantial, almost meaty texture, its ability to keep its form during the frequent stirring, and its barbeque flavor. In Japan, more grilled tofu is used in sukiyaki than in any other type of cuisine." A recipe follows. Address: Lafayette, California.

5215 Shurtleff, William; Aoyagi, Akiko. 1975. The book of tofu: Food for mankind (Recipes and food types with Japanese names). Hayama-shi, Kanagawa-ken, Japan: Autumn Press. 336 p. Illust. by Akiko Aoyagi. Index. Dec. 28 cm. Rev. ed. 1977 Autumn Press, Brookline, MA. [53 ref] • ***Summary:*** Teriyaki sauce (p. 48). Ankake sauce (p. 49). Sushi rice (Rice in vinegar dressing, p. 51). Gomashio (Sesame salt). Gari (Sweet vinegared gingerroot, p. 51). Budomame (Sweet soybeans, p. 62). Kombu mame, kuro mame, gomoku mame (p. 62). Iri-mame (Roasted soybeans, p. 63). Edamame (Fresh green soybeans, p. 63). Jinda (Sweet emerald bean paste [made with edamame], p. 64). Kinako (Roasted full-fat soy flour, p. 64). Abekawa mochi (with kinako, p. 65). Kinako amé or genkotsu amé (Kinako candy, p. 66). Daizu no moyashi (Soybean sprouts, p. 67). Natto (Sticky fermented whole soybeans, p. 67). Hamanatto and Daitokujinatto (also spelled Daitokuji-natto) (Raisin-like natto, p. 69). Gô (Fresh soy purée, p. 70+). Gôjiru (Thick miso soup with gô, p. 74). Bakudan agé (Deep-fried gô patties, p. 76). Okara or unohana (p. 77+).

Unohana-jiru (Chilled okara soup, p. 79). Unohana no iri-ni (Okara & vegetable sauté, p. 81). Unohana-iri (Unsweetened fried okara, p. 82). Unohana dango (fried okara patties, p. 82). Sushi okara chakin (Okara omelet pouches, p. 84). Oboro (curds, p. 87). Oboro-dofu (Warm soymilk curds, p. 90). Awayuki (homemade curd dumplings, p. 90). Karashi-dofu (Curd dumplings with mustard, p. 90). Gomoku-dofu (Five-color tofu, p. 105). Hiya-yakko (Chilled tofu, p. 105). Menoha-dofu, nameko-dofu (p. 106). Ryanban-doufu (Chinese-style chilled tofu, p. 107). Imokake-dofu (Chilled tofu with glutinous yam and egg, p. 107). Tofu no misozuke (Tofu pickled in miso, p. 110). Kanten-dofu (Jelled tofu, p. 114). Aemono and Shira-ae ("White salad," p. 114+, 160). Arare no aemono (Hailstones salad, p. 115). Suimono (Clear soup, p. 119). Kikka-dofu (Clear soup with chrysanthemum tofu, p. 120). Kenchin-jiru (p. 120). Tamago-toji (Japanese-style tofu, eggs & onions). Nanjen-dofu or Iritsuke-dofu (Chinese-style egg tofu, p. 123). Kenchin-yaki (p. 126). Iridofu [Iri-dofu] (Crumbly scrambled tofu, p. 128). Mabo-dofu [Ma po doufu] (Chinese-style tofu with red pepper sauce, p. 128). Hao-yu doufu (Chinese style oyster sauce & tofu, p. 129). Fanchie-dofu (Chinese-style tofu & tomatoes, p. 129). Tofu no kara-agé (Crisp agé slices, p. 131). Unagi-dofu (Tofu mock eels, p. 132). Kaminari agé (Thunderbolt tofu, p. 132). Agédashi-dofu [Agedashi-dofu] (Deep-fried tofu in dipping sauce, p. 133). Tendon (Deep-fried tofu with rice and broth, p. 133). Tofu furai (Breaded tofu cutlets, p. 134). Tempura (and batter and dipping sauce, p. 134). Zosui or Ojiya (Rice gruel, p. 138). Tofu dengaku (p. 139). Tofu teriyaki (p. 141). Yudofu or Tofu no mizutaki (Simmering tofu, p. 142). Nabeyaki-udon, Nabeyaki-soba, Udon-tsuki (p. 144). Yosenabe (p. 144). Miso oden (p. 145). Yukinabe (The snow pot, p. 148). Niyakko (p. 145). Tsuto-dofu or Komo-dofu (Simmered tofu wrapped in rice straw, p. 146). Tofu chawan-mushi (Steamed egg-vegetable custard, p. 147). Nanzen-ji no Tsusmi-dofu (Nanzen-ji wrapped tofu, p. 147). Yuzu-gama (Yuzu treasure pot, p. 147). Naruto-dofu (Tofu spiral in butterbur leaves, p. 147). Gisei-dofu (Tofu cheesecake-like dessert, p. 152). Datémake [Datemaki] (Tofu-egg roll, p. 153). Noppei-jiru (Noppei soup, 163). Kinpira (Agé with carrots and burdock root, p. 167). Yaki-soba (Fried buckwheat noodles with deep-fried tofu, p. 168). Chahan or yaki-meshi (sizzling rice with deep-fried tofu, p. 168). Soboro (p. 169). Norimaki-zushi (Nori-wrapped sushi with agé, p. 170). Kitsune domburi (Fox domburi, p. 172). Kitsune soba or udon (Fox noodles, p. 172). Yamakake soba (Buckwheat noodles with grated glutinous yam and agé, p. 172). Hiyashi-soba (Noodles & deep-fried tofu in chilled broth, p. 172). Nikomi udon (Ganmo simmered with homemade noodles and miso, p. 173). Kabayaki or Yaki-Shinoda (Agé mock broiled eels, p. 174). Oden (p. 175-78). Nishime (p. 178-79). Horoku-yaki (Thick agé stuffed with onions, p. 183). Hiryozu (Ganmo treasure balls, p. 188). Inari-zushi (Vinegared sushi rice in sweetened agé pouches, p. 194). Fuku-bukuro (Agé treasure pouches with crunchy vegetables, p. 195). Takara-zutsumi (Sacks of gold, p.

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195). Shinoda-maki (Matchstick vegetables wrapped in agé pouches, p. 195). Kinchaku and takara-bukuro (Drawstring purses and treasure bags, p. 196)

Note: This is the earliest English-language document seen (May 2012) that contains the term "treasure bags." It refers to a way of preparing deep-fried tofu pouches

Hasami-age (Mashed potatoes deep-fried in agé pouches, p. 196). Shinoda-maki (Agé cabbage rolls, p. 197) Shinoda mushi (Steamed agé with tofu and vegetables) Soymilk chawan-mushi (p. 209). Yose-dofu (Jelled and molded soymilk dishes, p. 209). Takigawa-dofu (Swirling jelled soymilk, p. 210). Shikishi-dofu (Kinugoshi custard, p. 216). Kinugoshi dishes from Sasa-no-yuki (p. 217-19): Hiya-yakko, yuzumiso-dofu, gisei-dofu, ankake-dofu, kijoyu, chiri-meshi, kuya-dofu or kuya-mushi, iridofu. Yaki-dofu (p. 220). Sukiyaki (p. 224-25). Koya-dofu or kori-dofu (Dried-frozen tofu, p. 226+). Tamago-toji (Frozen tofu with eggs and onions, p. 231). Gyoza [Chinese jiaozi] (p. 232). Oranda-ni (Deep-fried frozen tofu in lemon sauce, p. 234). Soboro (Grated frozen tofu rice topping, p. 234). Hakata-agé (Deep-fried frozen tofu sandwich, p. 235). Koya-dofu no kombu maki (Frozen tofu wrapped in kombu, p. 236). Sanshoku gohan (Three-color brown rice, p. 236). Fukuyose-ni (Frozen tofu simmered in sweetened broth, p. 236). Abekawa-dofu (Frozen tofu rolled in sweetened kinako, p. 237). Yuba (p. 238-42). Nama-yuba (Fresh yuba). Nama-gawaki or han-gawaki yuba (Half-dried yuba). Kanso- or hoshi-yuba (Dried yuba). Hira- or taira-yuba (Flat yuba sheets). Maki-yuba (Fresh yuba rolls). Komaki (Long yuba rolls). Kiri-komaki (Small yuba rolls). Musubi-yuba (Tied yuba). Omaki-, futomaki- or Uzumaki-yuba (Large yuba spirals). Oharagi yuba (Slightly flattened yuba roll tied with a thin piece of kombu). Amayuba (Sweet yuba). Kirehashi (Fresh yuba trimmings). Kuzu-yuba or mimi (Yuba flakes). Toyuba (Trough-shaped yuba, p. 242). Kaori yuba (Sweet miso deep-fried in fresh yuba, p. 244). Yawata-maki (Yuba-burdock root roll, p. 245). Toji yuba (deep-fried yuba with ginkgo nuts and lily bulbs, p. 245). Yuba no kabayaki (Yuba mock broiled eels, p. 245). Maze-gohan or Gomoku-zushi (Five-color sushi rice with agé, p. 169). Suhuo-t'ui (Homemade Buddha's ham). Tamago-toji yuba (Raw eggs cooked over hot yuba, p. 247). Tamago yuba (Deep-fried yuba in ankake sauce, p. 248). Kenchin-maki (Large yuba rolls with tofu and vegetables). Yuba shinjo (Yuba steamed with eggs, p. 249). Address: c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

5216. **Product Name:** Teriyaki Sauce, and Sweet-Sour Sauce Mix.
Manufacturer's Name: Eastasian Chef Inc.
Manufacturer's Address: 2295 North King St., Honolulu, Hawaii 96819.
Date of Introduction: 1975.
New Product–Documentation: Hawaii Directory of Manufacturers. 1975. p. 10. Note: This company is located on the same street as Hawaii's early soy sauce manufacturer, Yamakami Shoyu Jozo-sho (founded 1905, renamed Hawaiian Soy Co. Ltd. by 1909).

5217. Fukushima, D.; Horiuchi, T.; Nishio, M. 1975. [Fermented soymilk]. *Open Japanese Patent* 50-35,364. [Jap]*
Address: Kikkoman.

5218. Kim, Z.U.; Cho, S.H. 1975. A study on the manufacture of soysauce by the combined use of *Aspergillus sojae* and *Bacillus subtilis*. *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 19(1):1-9. [Eng, Kor]*

5219. Kozaki, Michio. 1975. Tônan Ajia no hakkô shokuhin [Southeast Asian fermented foods (Abstract)]. *Proceedings of the 22nd Annual Meeting of the Japanese Society of Food Science & Technology*, p. 29. [Jap]
Address: Tokyo Nôgaku Daigaku

5220. Milono, P.; et al. 1975. The improvement of soy sauce manufacturing techniques. Paper presented at the Technical Meeting, ASEAN Sub-Committee on Protein, Manila. *

5221. **Product Name:** Instant Japanese Teriyaki Sauce.
Manufacturer's Name: Noh & Co., Inc.
Manufacturer's Address: 2025 South Beretania, Honolulu, Hawaii 96814.
Date of Introduction: 1975.
New Product–Documentation: Hawaii Directory of Manufacturers. 1973. p. 11.

5222. Staron, T. 1975. Obtention des protéines à partir des graines oléagineuses par des méthodes microbiologiques [Obtaining protein from oilseeds using microbiological methods]. *Revue Francaise des Corps Gras* (*Paris*) 22(11-12):579-89. [40 ref. Fre]*
• ***Summary:*** Discusses some important East Asian fermented foods, including miso, shoyu, and tempeh. Note: This is the earliest record on soyfoods in the IALINE database from CDIUPA. Address: INRA, Stat. Antibiotiques Bioconversions, Chartres, France.

5223. **Product Name:** [Manna Tamari (Soy Sauce)]
Foreign Name: Manna Tamari (Sojasaus).
Manufacturer's Name: Stichting Natuurvoeding Amsterdam. Renamed Manna Natuurvoeding B.V. in 1982 (Repacker, Marketer, Distributor). Imported from Muso in Japan.
Manufacturer's Address: Rozenstraat, Amsterdam, Netherlands.
Date of Introduction: 1975.

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Wt/Vol., Packaging, Price: 500 ml bottle retails for 7.70 guilders, 1 liter bottle for 14.45 guilders (11/83)
How Stored: Shelf stable.
New Product–Documentation: Richard Leviton. 1983. Trip to Europe with American Soybean Assoc. Oct/Nov. Unpublished manuscript. p. 25. Letters from Sjon Welters 1989. July 24 and Aug. 10. This product, which was actually shoyu rather than tamari, has been imported from Muso in Japan since 1975. It is presently being made by Marushima Shoyu Co. In about 1980 Manna started importing Manna Organic Shoyu, and in 1989 they plan to start importing Manna Organic Tamari, which will be real tamari.

Note: This is the earliest record seen (Feb. 2003) concerning Manna in Amsterdam.

5224. **Product Name:** Protose (Meatlike Product Made of Wheat Gluten with Soy Flour).
Manufacturer's Name: Worthington Foods.
Manufacturer's Address: Worthington, Ohio.
Date of Introduction: 1975.
New Product–Documentation: This product, introduced in 1900 by the Sanitas Nut Food Co. of Battle Creek, Michigan, was originally based on peanuts. Worthington Foods acquired this company, which had been renamed Battle Creek Foods, in 1960. By 1975 (as shown below), wheat gluten was the main ingredient, and soy flour had been added to formulation.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Protose (Battle Creek)" are "wheat protein [wheat gluten], peanuts, wheat and soy flour, corn oil, yeast extract, soy sauce, salt, HVP, niacinamide, thiamin, iron, vitamin B-6, riboflavin, vitamin B-12."

5225. Agrix Publishing Corp. 1975. How to make soy sauce, coconut vinegar, tomato catsup, banana catsup, banana flour, cassava flour. Quezon City, Philippines: APC. 7 p. Illust. 23 cm. Agrix How-To Series, No. 18. *

5226. American Women's Association. 1975. The cookbook. Jakarta, Indonesia: American Women's Association. 242 p. 21 cm. *

5227. Barkas, Janet. 1975. Meatless cooking: Celebrity style. New York, NY: Grove Press. Distributed by Random House. vii + 280 p. Illust. by Simms Taback. Index. 24 cm.
• ***Summary:*** A vegetarian cookbook containing the favorite recipes of celebrities. Page 97 gives a recipe for Vegetable Soup with Protein (organically grown, soybeans are an optional ingredient), a favorite of Gerry and Dennis Weaver. Dennis is a TV star and his wife, Gerry, runs a health food store (The Good Life) in Encino, California.

Page 127 gives a recipe for Soybean Casserole, a favorite of Rodney Dangerfield, a comedian. In the "Food Dictionary" page 274 states: "Soy sauce. Known also as tamari, this condiment is made from soybeans."

5228. Bragg, Paul; Bragg, Patricia. 1975. Hi-protein meatless health recipes: With history and reasons. Desert Hot Springs, California: Health Science. 184 p. Illust. No index. 21 cm.
• ***Summary:*** A vegetarian cookbook. Whereas Paul Bragg used to advocate moderate amounts of meat and fish in the diet, he now advocates a meatless / vegetarian diet. These recipes are free of salt and sugar. On the cover the word "Meatless" appears in large bold letters.

Contents: Total health for the total person. Food for thought (sayings). Introduction, by Patricia Bragg (p. 1-9. Strongly advocates a vegetarian diet. Your health food store can substitute for your meat market. Cured meats may cause cancer. Animal fats can be harmful. Vegetarian gourmet cookery). Abundant protein without meat: An arduous journey without meat (Guatemala), health and vitality in Africa's Atlas Mountains [Berbers in Morocco, Algeria, and Tunisia]. Arab vegetarians in the Sahara desert. India produces many strong people on a vegetarian diet (incl. Gandhi, yogis. Paul was Gandhi's friend, and they hiked together over miles of hot, dusty roads in India). 175 years of vegetarianism in England (George Bernard Shaw, Bragg's personal friend, lived into his 90s), great vegetarians of the past, fruitarians–a type of vegetarianism, vegans–another type of vegetarian, lacto-vegetarians–the most popular type, vegetarians excel as athletes, degenerative diseases in an affluent society, animal proteins and fats connected with cancer, our malnourished youth, young people are awakening to the importance of good nutrition, a meatless diet must avoid protein deficiency, human individuality, 300,000 retardants born each year in the U.S., how to solve your nutritional problems, how much protein does the body need, protein-hungry hair, sprouts a tremendous source of vegetable protein (incl. soybean sprouts), you must have all the amino acids, vegetarian foods that are rich in amino acids (incl. peanuts, soy beans), B-12 supplement essential in vegetarian diet (soy beans have traces), raw fresh wheat germ also essential in a vegetarian diet, how I discovered the nutritional value of raw wheat germ, combine good nutrition with exercise, brewer's yeast as a vegetable protein–plus, buckwheat leads all grains in protein, buckwheat also rich in minerals and vitamins, here's how to serve buckwheat, use no salt!–its harmful, herbs and garlic add nutrition plus beautiful flavors, the Chinese Restaurant Syndrome, no nutritional value in MSG, Bragg Liquid Aminos (ad, p. 44; many of the recipes in this book call for Bragg Aminos).

Mushrooms an ancient nutritional delicacy. Mushrooms and mushroom recipes. Sesame seeds and recipes. Tahini and recipes. Hulled millet and recipes. Barley and recipe. Chinese yogurt or tofu (and 4 recipes). Suggestions for using Bragg Liquid Aminos (ad, p. 66).

Note: This is the earliest document seen (Aug. 2011).

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that contains the term "Bragg Liquid Aminos." Mexico gives us delicious meatless protein dishes. History of corn. Soybeans. Appetizers. Salads and dressings. Soups important in vegetarian diet. Vegetables. Casseroles. Entrees (incl. Soybean loaf). Egg and cheese dishes. Health beverages. Pineapple holds the secret of protein-digesting enzymes (smoothie recipes). Breads and grains. Sandwiches and fillings. Spreads. Health desserts (incl. Zesty protein confection {with 2/3 cup soy powder [protein isolate]}). Hi-protein carob brownies (with ½ cup soybean powder).

The Bragg travel diet (he takes along his own meatless food). Sickness is expensive (between 1950 and 1979, medical costs in the USA increased 1,568%). Very little money spent on preventive medicine. "Getting old"–True or false" (False, no part of the human body is more than 7 years old, and our blood is replaced every 90 days). When you are healthy–you are happy! Individuals can extend their lives by natural living (examples of Vilcabamba in Ecuador, the Hunza in West Pakistan, and people in the highlands of the Soviet Caucasus; all eat very little meat). Natural diet ad exercise the secret of agelessness. Exercise improves circulation to all parts of the body. Why should man die? Man is not originally carnivorous (physiology and anatomy of the human body). The meatless way of eating is simple. What is a balanced diet? Easy method to balance your nutrition. Modern nutrition confuses even so-called experts (but is basically simple. Paul was "born and reared on a large farm in Virginia." They grew practically all their own foods and had their own gristmill). Health is easiest and safest way. Your body is your closest companion (Be careful about what you eat. The greatest thing in life is energy). Our personal message to you. Protein research data. Protein and calorie counter (a table showing calories, protein, and usable protein for many basic foods). Life's greatest treasure is radiant health. Your health food store: The specialist that is different (list incl. 3 Bragg products). Let your health food store be your meatless butcher shop. Food for thought (p. 182-84; quotations, most have the author given). From the authors ("This book was written for You... We Professional Nutritionists join hands in one common objective... Scientific Nutrition points the way–Nature's Way–the only lasting way to build a body free of degenerative diseases and premature aging..."). My favorite recipes (mostly blank page).

Advertisements. (1) Send for important free health bulletins. (2) Bragg live longer, live stronger self-improvement library (list of 25 books by Bragg, with prices).

From the authors. Brief biography of Patricia Bragg (on unnumbered page at end of book). Ph.D., Nutritionist, beauty and health consultant. Advisor to world leaders, glamorous Hollywood stars, singers, dancers, athletes. Lecturer and author (She says she is the daughter of Paul C. Bragg. An accomplished musician, dancer, tennis player, swimmer, and mountain climber. The youngest woman to ever have been granted a U.S. patent. Graduate of the University of California. Lists her famous clients).

The section on "Chinese yogurt or tofu" (p. 61-65) notes that many years ago, while Bragg was an associate editor of Bernarr MacFadden's famous *Physical Culture* Magazine, he "made one of the greatest nutritional discoveries" of his life. Macfadden asked Bragg to travel to Manchuria, a long and arduous trip, to study these people well known for their tremendous vitality, energy and health. He was well rewarded, for there he "discovered the magic of the soybean, the most potent of vegetable high-protein foods." He found that Manchurians eat low on the food chain, make soy milk and tofu. Tofu is sold in food stores throughout Hawaii, where he lives. Tofu is related to spun soy protein. He gives recipes for: Chop suey with tofu. Vegetable casseroles using tofu. Tofu casserole supreme. Tofu & scrambled eggs.

The section titled "Soybeans" (p. 73-81) has the following contents. Herbs to savor soybeans (21 herbs). Soybeans (introduction). How to make soybean sprouts. Soybean recipes. Green soybeans. How to cook dried soybeans. Method for cooking beans. Soy milk. Soybean cheese (made by allowing soy milk to curdle in a warm place, without using a coagulant). Soybean casserole. Soybean and vegetable stew. Sauteed soybean sprouts and onions. Boston baked soybeans. Stuffed peppers with soybeans. Soybean sprouts en casserole. Soybean-rice loaf. Baked soybean croquettes. Soybean patties with tomato sauce. Soybean loaf (with soybean pulp [cooked, ground soybeans]). Stuffed soybean peppers.

Photos show: (1) Jack LaLanne, Patricia Bragg, Elaine LaLanne, Paul Bragg, standing together. (2) "Paul C. Bragg, N.D., Ph.D., Life Extension Specialist," in Hawaii, standing and smiling in front of tropical plants (facing p. 1). Note: This is the earliest document seen (April 2010) in which it is claimed that either Paul C. Bragg or Patricia Bragg have Ph.D. degrees. When and from where did they get them?

(3) "Paul C. Bragg and daughter Patricia" (p. 1). (4) Paul Bragg with the members of the "Longer Life, Health and Happiness Club" at Fort DeRussy on Waikiki Beach, Honolulu, Hawaii (p. 89). (5) "Paul Bragg and daughter Patricia" standing by the railing of a ship. They travel the world gathering health recipes (p. 156). (6) Paul Bragg and his daughter, Patricia, dressed in workout suits, running in place, and looking very healthy, happy, and energetic. They "carry out a vigorous morning exercise program every day and keep in peak physical condition" (p. 160). (7) Paul C. Bragg and Duncan McLean, age 83, England's oldest champion sprinter, running together in London's Regent' Park (p. 162). (8) Paul Bragg standing on Waikiki Beach with six female members of the Longer Life, Health and Happiness Club; all have both hands raised high (p. 171). Address: Health Science, Box 477, Desert Hot Springs, California 92240.

5229. Cerne, Vasili; Sintes Pros, Jorge. 1975. La soja:

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Su cultivo, su exceptional valor nutritivo y sus virtudes dieteticas y curativas [The soybean: Its cultivation, its exceptional nutritive value, and its dietetic and curative virtues]. Barcelona, Spain: Editorial Sintes. 224 p. Illust. Series: Biblioteca Naturista. [Spa]

• ***Summary:*** Contents: Introduction. 1. Origin and general information. 2. Botanical characteristics. 3. Species and varieties. 4. The soybean plant's nitrogen-rich nodules. 5. Surroundings and soil. 6. Preparation of the terrain. 7. Selection. 8. Planting and germination. 9. Cultural care. 10. Crop rotations using the soybean. 11. Intercropping with soybeans. 12. Harvesting the pods. 13. Harvesting the soybean as forage. 14. Yields. 15. The red beetle (*el coleóptero rojo*, family *Elateridae*). 16. Soy oil: Lecithin and soy oil extraction using the Hansa-Muehle system. 17. Soya (*la soja*), the exceptional food: Soya in human nutrition, nutritional composition of the seeds, minerals and vitamins in soya, soya in the kitchen, soy sprouts, soymilk, soy casein, curds and soy cheese (*requesón y queso de soja*), soy flour, soy bread, defatted soy flakes? (*copos de soja*), soy meat (*carne de soja*), soy sauce. 18. The dietetic and therapeutic value of soya. Soya–the vegetable meat, soy proteins, soy oil, soy carbohydrates, digestibility, therapeutic uses, summary of properties and indications, soya in the macrobiotic diet. Appendix: A revolutionary food. The bread of Soyuva (3,600 calories, in existence by June 1974).

"In 1917 soybeans started to be cultivated in Spain thanks to the efforts of an architect from Tortosa, don Juan Abril Guanyabens, who was sick with diabetes. His physician, Dr. Maneget, director of the resort Caldes de Malavella (Gerona) had recommended this new food to counteract his diabetes. The magazine *Consejos para Vivir* (Advice for Living) stated in its issue no. 106 of March 1971 that the above-mentioned doctor, in 1918, published an article on the spectacular results of this plant and its healthy nutritional effects in the Barcelona periodical *La Veu de Catalunya.*"

"In about the 1930s a Spanish farmer grew soybeans and found himself with big difficulties in selling the harvest, even though in other countries it was produced and consumed in huge quantities, due to its high nutritional value, its richness of protein, and its ability to enrich the soil with nitrogen. Nonetheless, there is no doubt that the cultivation of this plant can also provide Spain with substantial economic benefits.

"For this reason in 1934 the Ministry of Agriculture, as indicated by the engineer from Montes, don Juaquin Martin Laplaza, in an interesting work, gave 4 kg of seeds to the Division of Hydrology and Forests (*División Hidrológica Forestal*) to that the latter would conduct the appropriate tests concerning the cultivation of this plant. This was done, and care was taken to vary the locality, type of soil and terrain, climate, and irrigation.

"The locations chosen were: (1) a nursery in the mountains of Prades, between the city of Montblanch and the town of Rojals (province of Tarragona), (2) the city of Seo de Urgell, and (3) in la sierra del Cadi. These test plots were set on the outermost edges of the agricultural pastures and near the forest areas of high altitude, the very areas most likely to be unfavorable for growing soybeans." But despite this, the soybean plants gave good yields of both seeds and forage (p. 6-8). Address: Spain.

5230. Circle, S.J.; Smith, A.K. 1975. Soybeans: processing and products. In: N.W. Pirie, ed. 1975. Food Protein Sources. Cambridge, London, New York, Melbourne: Cambridge University Press. xx + 260 p. See p. 47-64. [88 ref]

• ***Summary:*** Contents: Introduction. Agronomy: Varieties, cultivation, yields. Soybean composition. Protein nutritional value. Traditional processing into nonfermented foods: Soybeans as a table vegetable (green soybeans), soy milk, tofu (soybean curd), yuba, kinako, salted soybeans, soybean sprouts. Traditional processing into fermented foods: Miso and shoyu, tempeh. Others include: natto, hamanatto, sufu (soy cheese), tao-tjo, kochu chang, ketjap, ontjom, and yogurt-like products.

Contemporary processing without defatting: 'Debittering' by aqueous treatment, whole bean processing, full-fat flour, soy milk and curd. Contemporary defatting processes: Defatting by aqueous processing, defatting with organic solvents, composite flour, soy flours, protein concentrates, protein isolates and textured soy products (recipes for using soy protein products in foods are available from several publications). Address: Anderson Clayton Foods, W.L. Clayton Research Center, 3333 Central Expressway, Richardson, Texas 75080.

5231. Crocker (H.S.) Co., Inc. 1975. Barbecue basics. 4th ed. San Bruno, California. 16 p. Index of recipes. 18 cm.

• ***Summary:*** The recipes in this booklet promote the products of various companies, including Kikkoman International Inc. (San Francisco, California 94115; soy sauce), Miller Brewing Co. (Milwaukee, Wisconsin; beer), McCormick and Co. (spices), Zee towels, etc. On the color cover are bottles of Kikkoman teriyaki sauce and all-purpose soy sauce. Address: San Bruno, California.

5232. Deer. 1975. The cookbook for people really who love animals. God's Religion, Route 2, Box 98E, Brooksville, FL 33512. 31 p. Illust. No index. 18 x 22 cm.

• ***Summary:*** This typewritten vegan cookbook with no price on it, copyrighted in 1975 by Burton Waldbaum, expresses the group's world view. The cover title is hand written below an illustration (line drawing) of a girl kneeling down with a cow, lamb, pig, and chicken. The book contains a good collection of 62 vegan recipes, which are straightforward, appetizing, and nutritious. Contents: Introduction, by Sun. Thank you page, by Deer. Breakfasts (12 recipes). Main

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dishes: Sauté (5), Vegetable and grains (10), Potatoes (3), Variety dishes (4), Sauces (6), Soups (6), Salads (4) Dressings (3), Healthful treats (8), Glossary, Abbreviations, Memo section, Essential items for cooking.

This spiritual vegan community, founded by Burton Waldbaum (who is also called "Light"), was later renamed "World of God," and after that "Gentle World."

Soy-related recipes include: Granola (uses soy granules, optional, p. 5.). Bran muffins (with soy milk [1 cup water and 7 tablespoons soy flour], p. 7). Oatmeal chewies (with soy powder, p. 7). Banana bread (with soy powder, p. 7). Soy burgers (with soy beans and tamari, p. 10). Chick pea loaf (with soy powder, p. 11). Tahini tamari sauce (p. 19). Tomato soup (with soy powder, p. 21). Carob ice cream (with soy powder, p. 25). Vanilla ice cream (with soy powder, p. 25). Quick buckwheat pancakes (with soy or nut milk, and soy powder, p. 25). Carob cookies (with soy powder, p. 27). Carob cake (with soy or nut milk, and soy powder, p. 27). Frosting for carob cake (with soy powder, p. 28). Soy butter (Mix ¼ cup water, ½ cup soy powder or soy flour, ¼ cup oil, 1 tablespoon of sweetener, 1 tablespoon herba-mare [seasoning salt mixture]. Delicious with muffins, bread, or crackers). The glossary lists two soy products: "Soy powder–made from soy beans. Used instead of milk or eggs. As an egg substitute: 1 egg equals 1 tablespoon soy powder and 1½ tablespoons water. As a milk substitute: 4 tablespoons soy powder to 1 cup water. Blend.

"Tamari–made from aged soybeans, A pure soy sauce. A definite must in all vegetarian kitchens. Used in almost everything that you will be cooking." Indeed, tamari is used to season more than half the recipes in this book, most are not specifically mentioned above. Address: Brooksville, Florida.

5233. Gin, Margaret; Castle, Alfred E. 1975. Regional cooking of China. San Francisco, California: 101 Productions. 192 p. Illust. Index. 21 x 21 cm.

• ***Summary:*** This book is filled with lovely woodcuts from the Horace Carpentier Collection, East Asiatic Library, University of California, Berkeley. Only 11% of China's land area is arable compared to 80% in the USA, yet today its population, mostly squeezed into the eastern third of the country, is four times that of the United States. The best soy sauce in China comes from Fukien [Fujian] and Amoy. The Classic of Mandarin cuisine reached its zenith around 1800, when Yuan Mei wrote volumes about food, these are still considered to be definitive studies of Chinese gourmet cooking in the Mandarin style. There is one entire chapter titled "Bean curd" (p. 57-63).

The book also contains recipes for: Fuzzy melon soup with bean curd (p. 37). Seaweed soup with bean curd (p. 41). Bean curd soup (p. 42). Ma Po bean curd (Szechwan, p. 59). Stir-fried vegetables with black bean sauce (with "2 tablespoons fermented black beans, rinsed and mashed, 1 slice ginger root, minced, 1 garlic clove, minced, ..." p. 90). Stir-fried vegetables with fermented bean cake (fermented tofu, p. 91). Braised soybean sprouts (Shanghai, p. 96). Clams with black bean sauce (with fermented black beans, rinsed and mashed, and slices of ginger root, minced, p. 109). Braised fish with fried bean curd (p. 115).

The glossary (p. 178-84) defines: Bean cake, fermented, and fresh (2-inch squares, 1 inch thick). Bean curd cheese, red (nam gooey). Bean-curd cake, deep fried. Bean-curd sheets or sticks, dried [yuba] ("Creamy beige-colored thin sheets. Used for vegetarian (Buddhist) dishes congee or as substitute for egg roll skins. Stick form is used mainly for soup... Always soak in warm water to make pliable before proceeding with recipe"). Bean curd, sweet ("Comes in dried, flat sheets, about 6 inches by 1½ inches. Mocha in color; no sweet taste"). Bean paste, hot. Black beans, fermented (= Fermented black beans. "Small black beans preserved in salt. Very pungent and moist. Almost always used with garlic and ginger in sauces. Rinse with warm water and mash before using. Purchased in plastic bags by weight in Oriental markets"). Brown bean sauce ("Also known as yellow bean sauce and ground bean sauce"). Fish soy. Hoisin sauce ("Thick, smooth, dark reddish brown sauce made from soybeans, spices, sugar, chili and garlic. Mildly sweet in flavor"). Soy sauce (light vs. dark with caramel added). Address: San Francisco, California.

5234. Goulart, Frances Sheridan. 1975. Bum steers: How and why to make your own delicious high protein mock meats, fake fish & dairyless desserts, and avoid useless calories, cholesterol, sodium nitrate, salmonella, trichinosis & high prices. Old Greenwich, Connecticut: Chatham Press. 205 p. Illust. Recipe index. 21 x 19 cm.

• ***Summary:*** This vegetarian cookbook, interspersed with many well-selected anti-meat quotations, describes how to make meatless meats and milk-free dairylike products at home. Contents: Introduction. On the block. Major mock-meat-making supplies. Vegebutchering. Master mock-meat recipe file. Bogus beef. Pseudo pork. Unreal veal. Sham lamb. Con game. Phony poultry. Fake fish. Un-innards. The vege-deli. Mocking up. General dishes. The mock crock. On the side. Dairyless desserts. Steerage (sources of unfamiliar ingredients).

Chapter 1 begins with an introduction to and nutritional composition of tofu, followed by the soybeans, gluten flour, other legumes, etc. Under "Flavors enhancers" are listed soy lecithin granules or flakes, miso, yeast extract (marmite), soy sauce and tamari, and Worcestershire sauce. Chapter 2 contains recipes for making gluten, tofu, granola (with soy grits), a stock with miso for non-meat dishes (p. 32), mock milk I (made with soy flour), mock milk II (made with raw cashews or almonds), mock (soy) butter (made with soy flour), and mock cream (with soy flour and soy cream), and mock yogurt (with cashew nuts and soy yogurt culture).

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A sampling of the many other soy-related recipes include: Moo-less ragout (with tofu, soy sauce, and soy butter, p. 43) Vegetarian rolladen (with cooked ground soybeans, p. 52) Good red meat (with gluten or tofu, p. 53). Greenbutcher's meatballs (with tofu, p. 57). Mock Mac I (burger with soybeans, p. 64-65). Pineapple pig (with tofu, p. 72). Half-calf (with tofu, p. 79). Surrogate salami (with "bean pulp (residue from making Tofu)" [okara], p. 125). Bumsteads: Two burgers for meat-totalers (with tofu, p. 131). Meatless mincemeat (p. 142). Soybean mustard (with soy sprouts, p. 165). Cow tow. Cowless milk candy (with soy milk powder) Jersey bounce. A moo-juice-less junket (with soy milk, p. 184). Bum bombe. Egg-less, cream free (with soy cream, p. 184). Two 100% vegetarian ice creams: Eggless, milkless (with soy powder, p. 186).

Many recipes also contain wheat gluten. Charisma: Char-broiled bum steers (p. 48). Pig-less pork sausage (p. 70-71). Roast loin of veal (p. 80). Fake steaks: Two sham schnitzels (p. 80-81). Vegetarian cutlets (p. 82). Mocking birds I (p. 83). Fruit stew (p. 86). Sham lamb (p. 89). Sham lamb curry (p. 91). Bum bunny (p. 97). Sweet breads (p. 121).

Aduki beans are used in Moo-less rice pudding (p. 183). Sources of ingredients include: Walnut Acres, Penns Creek, Pennsylvania 17862 (herbs, spices, oils, whole grains, flours, seaweeds, etc.). Erewhon Trading Co., 342 Newbury St., Boston, Massachusetts 02115 (seaweeds and general goods, grains, beans, vegetables, seeds, etc.). Shiloh Farms, Route 59, Box 97, Sulphur Springs, Arkansas 72768. Arrowhead Mills, Box 866, Hereford, Texas 79045. Dynamic Nutritional Products, P.O. Box 528, North Hollywood, California 91603 (Milk-free yogurt culture. Trade names: Soyadophilus and Theradophilus).

Sample quotation: "... traditional American reliance on meat, particularly beef, is perhaps the single largest inefficiency in world dietary patterns..."–*New York Times* Oct. 25, 1974. Address: Wilton, Connecticut

5235. Keys, Ancel; Keys, Margaret. 1975. How to eat well and stay well the Mediterranean way. Garden City, New York: Doubleday & Co. xvi + 488 p. Foreword by Jean Mayer, PhD, ScD., Prof. of Nutrition, Harvard Univ. School of Public Health. Index. 22 cm.
• ***Summary:*** Foreword: Ancel Keys, a very great scientist, revolutionized the science of nutrition. Before his work in the 1940s and 1950s, nutritionists studied nutritional "requirements" and were concerned with deficiency diseases. He refocused attention on diseases of excessive consumption of certain nutrients, especially fats. In his famous laboratory, located under the Stadium of the University of Minnesota, "he demonstrated the crucial role of the fat level of the diet in determining the risk of death from diseases of the heart and blood vessels. He went on to ... show that saturated fats and cholesterol were the villains in this effect..." The concept of risk factor in cardiovascular disease originated with Keys.

Chapter 3, on "Diet and health," contains a wealth of interesting information on many subjects including Linus Pauling and vitamin C, vegetable oils and vitamin E ("a teaspoon of soybean oil provides as much vitamin E as most of the packages sold by the druggist"), Dr. John Ludkin of London and sugar as a cause of coronary heart disease (not true), salt, vegetarians ("recently careful studies on the health of Seventh Day Adventists have produced surprising evidence that there is some truth in the health claim"), autointoxication, aging, yogurt and Elie Metchnikoff ("Louis Pasteur's successor as director of the Pasteur Institute"), the milk-drinking Masai of East Africa (their bodies handle cholesterol quite differently from our own), "natural foods" (grown without chemical fertilizers or pesticides), DDT, lecithin (made commercially from soy beans), fad and "kook" diets unlimited (incl. Dr. Atkins "dietary revolution" and–even worse–"the 'Zen macrobiotic diet,' violently condemned by all who know anything about nutritional science, because it is likely to cause real trouble if actually adhered to").

The Mediterranean diet is found in Greece, Italy, southern France, and Spain. Characteristics include: Use of olive oil, wine in moderation for dinner, fruit for dessert, meats that contain less fat than their U.S. counterparts. Address: 1. Director, International Cooperative Study on Cardiovascular Epidemiology (in 7 countries), Univ. of Minnesota, Minneapolis and St. Paul, Minnesota

5236. La Choy Food Products, Inc. 1975. The wonderful world of Oriental cookery: Recipes and menu ideas for the novice, experienced and gourmet cook. Archbold, Ohio: La Choy Food Products. 23 p. Illust. (some color). 21 cm. *
• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home.

5237. Lea & Perrins. 1975. Appetizer, soup, main dish, vegetable, and salad cookbook. New York, NY: Supermarket Book Company. 128 p. Illust. (color). Index. 22 cm.
• ***Summary:*** A book of recipes that call for Lea & Perrins' Worcestershire Sauce. Contents: Starters and snacks. Savory soups. Meat main dishes. Poultry main dishes. Seafood main dishes. Beans and rice. Eggs and cheese. Vegetable variety. Refreshing salads. This and that. Contains many full-page color photos of prepared dishes. Address: Worcester, England.

5238. Nori kenkô-hô [The way to health through nori]. 1975. Tokyo: Mainichi Newspaper Publishing Co. [Jap]*

5239. Ohta, Teruo. 1975. Nattô kenkô-hô [The natto way to good health]. Tokyo: Futaba Books. 242 p. Illust. No index. 18 cm. [28 ref. Jap, eng+]
• ***Summary:*** This interesting, comprehensive book, by a

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scientist and expert on the subject, discusses all aspects of natto. Contents: Preface (p. 3). 1. History of natto and its mystery (p. 15). When did natto bacteria appear on earth? The mystery of ancient natto. The first meeting of ancient humans and sticky beans (*neba mame*). Natto is preserving food which was nurtured by the climate where people opposed the government. Why was the Japanese palate better? The amazing wisdom of the Japanese race–"Ancient fermented foods." *Tôshikyô* was a salty natto (*kata natto*) of 2,200 years ago. Natto originated during the Heian period [A.D. 794-1185]. Medicinal natto which Japanese monks kept secretly in olden times. The god of childbirth and princess natto (*hime natto*). Reasoning the "Natto Road." Village natto (*mura natto*) of Tanba, Yamaguni (p. 40). Shoyu-flavored natto started during the Muromachi period [1336-1573]. War provisions in field campaigns and natto. The military commanders of the Sengoku period also used Jinchô natto. Vendors calling out "Natto! Natto!" started during the Edo period (1600-1868). People who challenged the secrets of natto. The dark period of natto making. The mystery of the straw wrapper (*wara zuto*) and the Japanese people. The power of natto, which was studied by even the German army. The Japanese Army and navy studied the power of natto thoroughly (p. 60). Strong ally natto in the time of food shortage. The elite of the foods of the future. Mysterious medicinal effects of natto found in folklore.

2. The homeland of natto (p. 71). From *Hime natto* to *Daraku nabe*–Fukushima prefecture. *Teramichi natto* of Yonezawa and Goto natto–Yamagata prefecture. The early, noncommercialized form of Yukiwari-natto was Goto natto, made with natto, koji, and salt, fermented together for 1 month. Since the middle of the Edo period (about 1735) it has been made in Yamagata prefecture, mostly in farmhouses. It is widely served over rice, mixed with a popular type of diced miso pickle. One commercial manufacturer is Maruyome Shokuhin in Yonezawa city, Yamagata prefecture. Yukiwari-natto looks like Finger Lickin' Miso. The legend of kuromame [black soybeans] of Kiyomasa-kô–Kumamoto prefecture. Pounded natto (*tataki natto*), "Ito" and "Oito"–Kyoto. Tôzô and ôzutsu natto–Chiba prefecture. Mito natto which was sold in train stations along the Jôbansen line–Ibaraki prefecture. Straw-wrapped natto (*warazuto natto*) and natto mochi of Omi–Shiga prefecture. Iwadeyama natto which was eaten by Hachiman Taro Yoshiie–Miyagi prefecture. Is hikiwari natto ancient natto?–Aomori prefecture. Fluffy natto (*fukkura natto*) in large cooked rice containers (*hettsui*)–Saitama prefecture. Stood still at Kawanakajima saying "Nantoshô" ("What to do?")–Nagano prefecture. Naisho mame in the pitch dark–Gunma prefecture. The origin of natto culture–Yokote's hikiwari natto–Akita prefecture.

3. The secret of eating natto (p. 95). What are fermented foods. Super abilities of wonderful microorganisms. Comrades of microorganisms. Why cooked soybeans become natto. The natto bacterium is a magician. The useful component of amazing natto. Natto is the last natural food. Stamina food gives endurance to modern people. Natto protein is of high quality. Natto is an excellent maker of amino acids. Natto vitamins which are used by famous people to increase their stamina. The stickiness of natto is a bunch of active strong enzymes. The wondrous abilities of enzymes. Natto has a strong power to prevent sickness. If you take acidic food continuously, the body's resistance will decrease. Natto is a wonderful alkaline food. There are many unsolved mysteries related to natto. To research the secret of very strong multiplication. The Japanese are an advanced country in terms of soybean utilization. It is important that a true health food should have good balance.

4. Medicinal effects of natto (p. 141). Common colds run away when they see natto. Dysentery and typhoid run away too. Skin disease such as favus and scabies–and natto. When the blood pressure rises, eat natto first. A feeling of faintness when you try to stand up is a sure sign of anemia. If you eat natto–no constipation problems. If you get fat during middle age, start a natto diet. The ideal food to prevent heart disease. Arteriosclerosis and natto. Natto strengthens the liver. The big news–natto bacteria control cancer. Natto keeps you from getting very drunk. Eating natto makes beautiful white skin. White rice and natto are ideal a mealtime. Natto–a strong ally of the stomach. Natto bacteria condition the intestines. Natto has the power to remove radioactivity. Challenge the eternal youth and longevity with natto. Natto and mustard pack a double whammy.

5. How to make natto at home (p. 171). How to grow natto bacteria well. Steps in making natto. Various methods of incubation. The method of making natto at home. This is how natto was made in the old days. How to select good natto. How to measure the freshness of natto. The secret of small-bean natto. The difference between domestically grown and imported soybeans.

6. How to eat natto well (p. 199–with many natto recipes). Unique ways of eating natto over rice. Various natto soups. Deep fried natto dishes. Fun one-pot cookery. Snacks. Natto miso and dried natto. Famous preserved natto foods in the various provinces. Other uses and hints.

7. Chronology of natto from 10,000 B.C. to the present (p. 217-39). Key early dates include the following. Heian period: 1051–The legend of Minamoto (Hachimantaro) Yoshiie and natto began (Note: Minamoto Yoshiie was a famous Japanese warrior who lived 1039-1106). The Oshû Kaido [Oshu] became known as the natto road. 1062–Abe Sônin (or Abe Sadamune) started to make "Tôhoku Natto" (a type of sticky natto) in the Hida or Higo region of Kyushu, and was respected by the local people there. 1068–The word "natto" (*usu-shiokara natto;* lightly salted natto) first appeared in the *Shin Sarugakuki* by Fujiwara Akihira.

Kamakura period. Fermented black soybeans became very popular among the samurai and monks. 1129–Zen

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master Dogen of the Soto sect returned from Sung-dynasty China and introduced Buddhist Vegetarian Cookery (*shojin ryôri*) to Japan. 1211- Samurai (*bushi*) during the Kamakura period eat brown rice and fermented black soybeans (*shiokara natto*) for stamina. 1332–Soybeans were cultivated on a fairly large scale on land near Kamakura by the Tokugawa shogunate (*bakufu*). From these were made fermented black soybeans and other soyfoods which were quite widely used. 1334–During the Nanbokuchô period Kôgen Hôô appeared. In the Jôshôkôji in Tanba Yamaguni made Warazuto Natto and taught the process to the villagers. It was also called Yamaguni Natto, and remains there to this day.

Muromachi Period. The popularization of regular natto started as itohiki natto became "O-ito." The *Teikun ôrai* contained recipes using fermented black soybeans (*shiokara nattô*). Fermented black soybeans were eaten by people as *tenshin* or *ochauke* with tea. Natto and tofu were widely served with Buddhist Vegetarian Cookery (*shojin ryôri*). Natto soup (*nattô-jiru*) originated. 1450–In the *Shôjin gyorui monogatari* [A comic tale of the great war between vegetarian foods and animal foods], natto appears as a person named Nattô Tarô Itogasane. 1532–The *Daiso ryôri-sho* (The Daiso cookbook) contains a detailed recipe for how to make natto soup (*nattô-jiru*).

Note: This is the earliest document seen (Jan. 2012) that mentions Yukiwari-natto (with or without a hyphen). Continued. Address: National Food Research Inst., Tokyo, Japan.

5240. Ohta, Teruo. 1975. Nattô kenkô-hô [The natto way to good health (Continued–Document part II]. Tokyo: Futaba Books. 242 p. [28 ref. Jap, eng+]

• ***Summary:*** Continued. Page 218: Doki natto is in an earthenware pot.

Page 220. Kusa-no-ki natto is fermented wrapped in tree leaves, which may also harbor natto bacteria. See illustration.

Page 222: Picture of Tohoku natto.

Page 223: Yamaguni natto and Sandara-bochi natto. Still made in Niigata for use mainly as a gift.

Page 224: Ito, Oito, Natto Taro.

Page 226-27: Hamana natto, Goto natto, Mushiro natto, kombu natto is a type of tera natto [fermented black soybeans]. Hachi natto: Incubate topped with straw in a sunbachi.

Page 228. Momen natto and zaru natto. An illustration shows that a zaru is quite deep.

Page 230: Hishi natto: Made in the middle of winter. Miso natto, shiru natto, kibako natto, jubako natto, oke natto, hachi natto. Illustration with 1 sho measure of beans.

Page 232: Tofuya natto, kaki natto, warazuto natto = tsuto natto = tsutoiri natto.

Page 233: In illustration shows tataki natto, itohiki natto.

Page 234: Korumame, ogi natto (fan shaped), Hanzawa-shiki natto yoki, kyogi natto.

Page 236. Take no kawa natto, kyogi natto (kyo is the warp in weaving), poly natto, sudare natto.

Page 238: Roketto natto, jinko kyogi natto, kappu (cup) natto, PSP (polystyrene paper) yoki, tonobuta PSP natto.

Page 240. Aluminum yoki, monaka natto (like Tai-yaki, eat the whole thing). Note 1. The preceding pages would enable one to write an illustrated history of natto containers. This is the earliest document seen (Jan. 2012) that mentions PSP (polystyrene paper) containers used to package natto.

Note 2. There are many good cartoons about natto in this book. Address: National Food Research Inst., Tokyo, Japan.

5241. Pearson, Janice; Pearson, Alan. 1975. Light & life cookbook. A new age adventure in natural foods. Forty days of menus and recipes for a transition to balanced vegetarian dieting. Los Angeles, California: Astara. 306 p. Illust. Recipe index. 23 cm. Created with Earlyne Chaney. Series: Astara's Library of Mystical Classics. [20 ref.]

• ***Summary:*** Soy-related recipes include: Tamari dressing (p. 119). Soybean barley soup (p. 221). Savory tofu casserole (p. 223). Miso broth (p. 286). Address: Santa Cruz, California.

5242. Rombauer, Irma S.; Becker, Marion Rombauer. 1975. Joy of cooking. Indianapolis/New York: Bobbs-Merrill Co. 915 p. Illust. by Ginnie Hofmann and Ikki Matsumoto. Index. 25 cm.

• ***Summary:*** One of the great American cookbooks. A classic and an all-purpose cookbook, this is the last edition revised by Marion Rombauer Becker. Soy-related recipes and descriptions include: Soy or lima bean casserole (p. 255-56). Soy cakes ("patties" of mashed cooked soybeans, rice, vegetables and eggs, rolled in sesame seeds and sauteed, p. 256). About fresh beans–edible soy beans (p. 284-85, with illustration {line drawing}). Green soybeans (cooked, p. 286; "Use the edible vegetable type, not field varieties of beans"). Low-fat tofu dressing (p. 369). About vegetable and nut milks: These are all nutritionally inferior to animal milks, "as their protein is of lower biologic value and their vitamin content is different." Almond and walnut milks have long been known in Europe. Native Americans used hickory and pecan milk. These milks, and coconut milk, with their delicate, fragile flavors "are a great delicacy in sauces and puddings." Gives recipes for almond milk, soybean milk (p. 534-35). Soybean curd or tofu (homemade, p. 535; "For other suggestions, see *The Book of Tofu*, by William Shurtleff and Akiko Aoyagi). Soybean paste or extender (cooked soybeans pressed through a colander, p. 535). Alternate or engineered foods (p. 535-36; textured vegetable proteins, "TVPs," CSM, WSB). Soy flour (p. 549). Soy meal (p. 549-50; coarser than flour). About seeds, grains, beans and peas–Roasted soybeans (p. 564). About commercial sauces–Soy sauce and shoyu (p. 574). Soy whole wheat bread (with soy flour, p. 608).

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In the long, excellent section titled "Know your ingredients" (p. 519+), under "The capers and caperlike buds and seeds" (p. 580) we read: "Similar in Use are Chinese fermented black beans, or *toushi*, which are available in cans;..."

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "Chinese fermented black beans" or the word "toushi" to refer to fermented black soybeans.

As of April 1996 the book has not been revised since 1975. It is now a Scribner book published by Simon & Schuster. Hardcover price: $24.00. Address: Jennifer Becker, 38537 S.E. Hudson Rd., Sandy, Oregon 97055.

5243. Sato, Yoshiya. 1975. Kikkôman no keiei [History of Kikkoman operations]. Tokyo: Yomiuri Shinbun-sha. [Jap]*
• ***Summary:*** The story of Kikkoman's development told from the company's viewpoint.

5244. Silverstein, Alvin, Silverstein, Virginia B. 1975. Beans: All about them. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 86 p. Illust. by Shirley Chan. Index. 22 cm. Summarized in Soybean Digest, Sept. 1975, p. 43. [7 ref]
• ***Summary:*** This excellent book for children discusses beans in legend and history, how to grow them, and their future as a low-cost protein supplement. Includes experiments, bean recipes, and games.

Contents: Beans. The story of beans. The history of beans. Beans in legend and lore. The life story of the bean. Kinds of beans. Beans in the garden and the marketplace. Beans for the future. Fun with beans. Beans for good eating.

Page 2: "Kuan Yu, a great war god in Chinese folktales, was a bean curd [tofu] seller in his youth."

Pages 12-13, a brief (and partially accurate) history of the soybean, begin: "Soybeans are native to eastern Asia. The oldest written records of them date back to 2838 B.C. [sic], when Emperor Shen Nung of China wrote a description of the plant." Also mentions: The five sacred grains, soybean "milk," tofu, yuba, [soy] sauces, soybean paste, soybean sprouts, soybean oil. Engelbert Kaempfer, first introduced "to the United States around 1800 when a ship brought some to Philadelphia [Pennsylvania]. Commodore Perry (1854), USDA tested about 10,000 different kinds. Now soybeans are the number one U.S. cash crop, accounting for more then 75% of the world's soybean supply. Soybeans are used as foods for humans (in the form of oil, flour, soy sauce, "milk substitutes, and meat substitutes and 'extenders'") and feeds for animals. They are also used in the manufacture of more than 250 industrial products, including paints, soaps, lubricants, adhesives, and fertilizer.

Page 16: "In China, beans were a good luck symbol. A person who wore a string of soybeans hidden around his neck was believed to possess magic powers to do amazing feats. Three dark soybeans soaked in sesame oil for three days were used to foretell the future."

The chapter "The life story of the bean" (p. 18-29) gives (with illustrations) a simple and accurate description of the bean seed and how it grows, discussing the hilum or seed scar, the micropyle or tiny hole at one end of the hilum, the seed coat, the two cotyledons in which food for the young growing plant are stored, the embryo nestled (a plant in miniature) between the cotyledons, with its two tiny leaves (the plumule), a little root (the radicle), and a stemlike part connecting them (the hypocotyl). When the seed is planted, and it germinates or sprouts, the "embryo root pokes its tip out through the micropyle and grows out into the soil. Tiny root hairs form along the growing root. They take in moisture and dissolved minerals from the soil." The hypocotyl grows until it "suddenly pushes up out of the soil–the first part of the seedling to emerge. It is bent over, for the cotyledons are still buried in the soil." The hypocotyl continues to grow. In a day or so the seed coat splits, then the top of the plant pops up out of the soil. "The empty seed coat is left behind, buried beneath the surface." Now the young bean seedling is growing straight up. The two seed leaves at the top unfold and grow quickly. Below them on the stem are the two cotyledons. As sun shines on the growing plant, its leaves, cotyledons, and stem begin to turn green–a turning point in the life of the plant.

For a while, the growing plant takes the food it needs from the reserves stored in the two cotyledons. But as these reserves are used up, they shrivel and finally fall off. Now the young plant must create its own food using chlorophyll and photosynthesis.

Chlorophyll traps energy from the sun. When examined under a magnifying glass, one can see that the surface of a plant leaf contains many tiny openings called stomates, which are usually open during the day and closed at night. "When the stomates are open, gases from the air pass freely in and out." Air is about 80% nitrogen, 20% oxygen, plus smaller amounts of carbon dioxide, water vapors, and others gases. In the leaves, "carbon dioxide and water are combined, using the sunlight energy trapped by chlorophyll, into sugar, starches, and other complicated chemicals. Scientists call this process photosynthesis (photo means light, and synthesis means a putting together)." The by-product, oxygen, passes out into the air through the stomates; it is the gas that humans and other mammals need to breathe.

Describes the underground activities related to plant growth, nodules, bacteria that live symbiotically in the roots and fix ammonia and nitrogen. Also describes the bean flower, its parts, self-pollination, the key role of bees, and how the seeds are formed from the flower.

The chapter "The soybean–Number one" (p. 36-39) describes the current status of the soybean in the USA. The chapter "Beans for the future" discusses modern developments such as CSM, soyfoods such as sufu, tempeh,

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miso, spun soy protein fibers, soybean meat analogs, textured vegetable protein (TVP)

When a bean seed sprouts, how does it know which way is "up"? "Could you ever get a seedling with its roots pointing up in the air and its shoot poking down into the soil?" Supposing you cut off all sunlight? No, plants have a built-in gravity sense which scientists call "geotropism." A plant hormone called an auxin causes the plant to bend upward–and toward the light (heliotropism). In 1888, the symbiotic partnership between legumes and nitrogen fixing bacteria was first discovered by Hellriegel and Wilfarth. There are short-day plants, long-day plants, and day-neutral plants. flowering will not begin until the length of days and nights is just right (p. 54-59). Bean recipes (p. 70-75) Address: 1. Prof. of Biology, Staten Island Community College, New York City. 2. Translator of Russian scientific materials.

5245. Smith, J.E.; Berry, D.R. 1975. The filamentous fungi. Vol. 1. Industrial Mycology. New York, NY: Wiley & Sons. xi + 336 p. Illust. Index. 24 cm.

• ***Summary:*** This book contains 16 chapters by various authors. A number of these are cited separately. Drs. John E. Smith and David R. Berry did pioneering work with fungi at the Dep. of Applied Microbiology, Strathclyde University, in Glasgow, Scotland. Dr. B.J.B. Wood greatly benefited from their work. All filamentous fungi appear to be strictly aerobic.

Although it was the filamentous fungi which provided us with penicillin, the first clinically useful antibiotic, in the subsequent search for other antibiotics, the filamentous fungi have proved a less prolific source than the bacteria, especially the Actinomycetales. Thus by 1967 over 600 antibiotics have been isolated from bacteria and about 150 from fungi.

The penicillins are the most important compounds that have been isolated from fungi. Their discovery marked the beginning of a new era in the treatment of infectious diseases and they have been of enormous commercial importance. The history of the development of penicillin, from Fleming's first observation of the antagonism between Penicillium and Staphylococus, to the large-scale production of penicillin G during World War II, makes fascinating reading. The cephalosporins are an antibacterial agent related to the penicillins. From filamentous fungi we get commercial organic acids, enzymes, antibiotics, edible mushrooms, mycelial biomass, and Oriental foods [such as miso, shoyu, and saké]. The commercial production of organic acids is generally limited to members of the genus *Aspergillus*, which give citric acid (from *A. niger*), D-gluconic acid, and oxalic acid. In terms of tonnage, citric acid is the leading commercial product made by filamentous fungi; in 1975 an estimated 90,000 metric tons were produced worldwide. The main producers of industrial enzymes are *Aspergillus oryzae* and *A. niger*. Gluconic was first reported as a by-product of fungal metabolism by Molliard in 1922, and was first produced by surface culture in 1928. Fungal proteases are now being used increasingly in cheesemaking as a substitute for natural rennet. The enzymic material obtained from the stomach of calves is of limited supply and subject to fluctuating prices.

Concerning mushrooms: The first attempts to cultivate mushrooms in the Western world are known to have taken place in France during the lifetime of Louis XIV (1683-1715) in underground caves in Paris. During the past decade, the art of mushroom cultivation has given way to a sophisticated technology, which has transformed mushrooms from a luxury food to one available at reasonable prices to all. Most of the important edible species are members of the genus *Agaricus* and industrial exploitation is confined almost entirely to the species *A. bisporus*. Address: Dep. of Applied Microbiology, Strathclyde Univ., Glasgow, Scotland.

5246. Wolf, W.J.; Cowan, J.C. 1975. Soybeans as a food source. Revised ed. Cleveland, Ohio: CRC Press. 101 p. Illust. Index. 26 cm. CRC Monotopic Series. [416 ref]

• ***Summary:*** Contents: Introduction. Seed structure and composition. Soybean production. Early history, areas of production, production, importance of varieties. Disposal of the crop: Grading standards, disposition. Processing soybeans into oil and meal: Storage, preparation of beans, extraction, desolventizing, degummed oil and lecithin separation. Conversion to edible oil products: Alkali refining, bleaching, hydrogenation, deodorization. Soybean oil products: Salad and cooking oils, shortening and margarine oils, flavor stability of soybean oil, soybean lecithin–products and use. Food uses of soybean proteins: Physical and chemical properties (solubility as function of pH, molecular size, reactions of the 7S and 11S globulins, solubility of isolates, denaturation, amino acid composition), forms of soy proteins (whole soybeans, processed soybean protein products), selling prices and production estimates, functional properties (emulsification, fat absorption, water absorption, texture, dough formation, adhesion, cohesion, and elasticity, film formation, color control, aeration), nutritional properties (antinutritional properties, protein quality of soybean products), foods containing soy proteins (Oriental foods [tofu, kori-tofu, miso, natto, shoyu, tempeh], domestic foods [baked goods, meat products, simulated meats, breakfast cereals, infant foods, beverages, dietary foods, snack foods, miscellaneous uses]), problem areas. Conclusions.

Addendum. Introduction: Origin of soybeans, soybean situation–future, recent sources of information, soybean organizations. Production: Short-term situation, storage and exports, soybean varieties, yield barrier, varieties and antinutritional factors, aflatoxin in soybeans. Edible oil products: Deodorization, an antioxidant for soybean oil, flavor stability of soybean oil, oil from field-damaged beans,

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flavor components in soybean oil. Conversion to edible protein products: Production and producers, new processes (full-fat products, defatted flakes and related products, concentrates, isolates, textured protein products). Properties of soy proteins: Functional properties (solubility, water absorption and swelling, viscosity, emulsification, film formation, texture), nutritional and physiological properties (trypsin inhibitors, soybean proteins in blended foods, nutritional value of textured soybean proteins, soybean proteins in infant formulas, effect of alkali treatment on soy protein), flavor studies on soy proteins (organoleptic evaluation of commercial protein products, origin of flavor compounds). Food uses of soybean proteins: Baked goods, meat products and analogs, instant breakfast items, snack foods, legal and regulatory aspects. References.

An excellent source of information on soy flour and modern soy protein products, this book contains a surprisingly small amount of information (about 1 page total) about traditional soyfoods such as tofu, miso, natto, shoyu, tempeh, etc. even though a number of the latter foods are much more widely used worldwide. Soy beverage (soymilk) is not even mentioned. The extensive bibliography would be greatly improved by the inclusion of the titles of the articles.

Table 26, titled "Selling prices and production estimates (in 1970) for soybean proteins" (p. 42) states: Defatted flour and grits sell for 7-8 cents/lb ex factory and estimated annual production in 1970 was 232-237 million lb. Soy concentrates (18-26 cents/pound, 20-35 million lb). Soy isolates (35-45 cents/pound, 25-50 million lb). Address: 1. Research Leader, Meal Products, Oilseed Crops Lab., USDA NRRL, Peoria, Illinois. 2. Adjunct Prof. of Chemistry, Bradley Univ., Peoria, Illinois 61606 (Formerly Chief, Oilseed Crops Lab., NRRL, Peoria).

5247. Wood, B.J.B., Yong, Fook Min. 1975. Oriental food fermentations. In: J.E. Smith and D.R. Berry, eds. 1975. The Filamentous Fungi. Vol. 1. Industrial Mycology. New York: Wiley & Sons. xi + 336 p. See p. 265-80. [29 ref]

• ***Summary:*** Contents: Introduction. Koji. Soya sauce (koji). Soy milk, tofu and sufu (Chinese cheese). Miso. Other Oriental food fermentations (tempeh, ontjom, Hamanatto, Ang-kak and Lao-chao). Conclusions.

Most people in the West are now familiar with soya sauce. For most Westerners, the growth of mould on a food is generally associated with the deterioration of that food–with only a few exceptions, such as England's Blue Stilton cheese, or Roquefort, Brie, or Camembert cheeses from France.

Note: "Molds of the genus *Penicillium* play a large part in the ripening of the Camembert-Brie, and the Roquefort-Gorgonzola-Stilton series of cheeses."

"Koji is the central feature in most fungal food preparations." Traditionally, koji was made in baskets made of woven bamboo, which provided very good aeration. How non-toxic molds came to be used for koji in humid sub-tropical or tropical regions remains a mystery. In Japan, the seed-koji (*tané koji*) is "made by growing *Aspergillus soyae* or *A. oryzae* on steamed polished rice, while in China, a mixture of wheat bran and soyabean flour is the preferred substrate" (p. 265, 268).

To make Hamanatto, soyabeans are initially fermented with *Aspergillus oryzae*. "A Malayan dish called Tao-Cho and one from the Philippines called Tao-Si seem to be somewhat similar ." Address: Univ. of Strathclyde, Glasgow, Scotland.

5248. Wright, Louise. 1975. The road from Aston Cross: An industrial history, 1875-1975. Imperial House, Leamington Spa, Warwickshire, England: Smedley–HP Foods Ltd. 84 p. Illust. 25 x 19 cm. No index.

• ***Summary:*** This book was published on the centenary of the HP Foods Co. The story begins in 1875 when Edwin Samson Moore bought land in Tower Road, Aston Manor, and built his vinegar brewery, registered as the Midland Vinegar Company. He is believed to have taken up agencies for Mellors Sauce and Banquet Sauce. In 1886 the wheat sheaf was registered as the company's trade mark. In 1901 The Moores registered the offices of F.G. Garton Sauce Manufactory at Tower Road. In 1903 H.P. Sauce was launched and sold in Canada. Today it contains soy sauce. In 1902 adjacent Vulcan Brewery was acquired by the Moores. In 1904 the name H.P. was re-registered by the Midland Vinegar Co. In 1906 hundreds of donkey carts toured Great Britain to introduce H.P. Sauce. In 1913 H.P. Sauce was sold in the USA, and by 1917 in France and South Africa. In 1924 the Midland Vinegar Co. was sold to the British Shareholders' Trust, then floated as a public company named HP Sauce Ltd.

In 1930 HP Sauce Ltd. acquired Lea & Perrins Ltd. of Worcester by an exchange of shares. Lea & Perrins Inc. of New York remained a separate entity. Three members of the Perrins family (Dyson, Capt. Allan, and Col. Charles) joined the board of HP Sauce Ltd. Captain Alan Perrins visited Australia to arrange for the manufacture of HP Sauce and Lea & Perrins Sauce there. In 1931 manufacture of HP Sauce started in Sydney, Australia.

In 1940 bottling of Lea & Perrins Worcester Sauce was moved to Tower Road. In 1942 because of shipping losses, HP Sauce was manufactured by E.D. Smith and Sons at Winona, Ontario, Canada. In 1945-46 the bottling of Worcester Sauce was transferred back to Worcester.

In 1950 the purchase of market research data from A.C. Nielson started. In 1957 J.E. Lea was appointed managing director of Lea & Perrins. In 1966 first computer was installed.

In 1967 HP Sauce Ltd. was acquired by the Imperial Tobacco Co. In 1969 H.P. Fruity Sauce (which now contains soy sauce) was launched.

In 1972 the company was renamed Smedley-HP Foods

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Ltd. (Smedley-HP for short) and the company offices were moved in phases to Imperial House, Leamington Spa.

Note: In 1916 the Dyson Perrins Laboratory was established at Oxford University. Founded with an endowment from Charles Dyson Perrins, heir to the Lea & Perrins Worcestershire sauce company, it was the main centre for research into organic chemistry at Oxford from 1916 to 2003, when it was retired. "During its 87 year working life, the laboratory had an extremely distinguished career: it can claim a stake in shaping the scientific careers of two Nobel Laureates, namely Lord Todd (1957) and Sir John W. Cornforth (1975) who passed their formative years as young chemists in the laboratories" (Source: Wikipedia). Address: Warwickshire, England.

5249. Wright, Louise. 1975. History of Lea & Perrins Worcestershire Sauce (Document part). In: Louise Wright. 1975. The Road from Aston Cross. An Industrial History, 1875-1975. Imperial House, Leamington Spa, Warwickshire, England: Smedley–HP Foods Ltd. 84 p. See p. 30-37. 25 x 19 cm.

• ***Summary:*** Continued (p. 30): "Another important matter was on the move: A merger between HP Sauce Ltd. and the world famous makers of Worcestershire sauce, Lea & Perrins. Mr. John Wheeley Lea and Mr. William Perrins went into partnership in 1823. Mr. Lea was druggist in Worcestershire, his friend had a chemist's shop in Evesham. Over their Christmas festivities, they decided two heads were better than one and on New Year's Day [1823] pooled their resources to develop the Worcester business as Lea & Perrins. They set up as wholesalers and retailers of pharmaceuticals, toiletries, cosmetics and groceries. Long before the days of ice-cream parlours and Coca-Cola, their shop on Broad Street, Worcester, became the precursor of the modern American drug-store.

"Both men were analytical chemists. Both were aware of the advantages of marketing their own products and their fist catalogue listed more than three hundred items. Although trading from a quiet country town, they kept themselves informed and studied world trade. Aware of the rapid growth of Queen Victoria's empire, they also realised that the industrial revolution was rapidly altering Birmingham and the Black Country. Soon their medicinal products were in great demand throughout the Midlands. Later they opened a chemist's shop in London, patronised by Queen Adelaide.

"Their concentrated Essence of Sarsaparilla was recommended for scorbutic affections (scurvy), cutaneous (skin) diseases and for freeing the system from the ill-effects of taking mercury. They recommended Taraxacum (dandelion coffee) for liver complaints because of its gentle diuretic and diaphoretic effects. Presumably their customers were sufficiently conversant with medical terms to know that a diuretic excites the discharge of urine and a diaphoretic produces perspiration.

"Mr. Lea & Mr. Perrins were perfecting their medicines, hair lotions and marrow pomades when Marcus, Lord Sandys visited the shop in Worcester. Late Governor of Bengal, he had retired to his country estate at nearby Ombersley Court, and would be obliged if they would make up one of his favourite Indian sauces. They obliged. Having already arranged their own supplies of spices and dried fruits, from Asia and the Americas, they had the ingredients to hand. Scrupulously following his lordship's recipe, they made the required quantity, plus some for themselves. One taste was enough. The sauce was ghastly: an unpalatable, red hot, fire water. His lordship was entirely satisfied. The remainder however was consigned to a cellar below the shop and there it stayed until the annual spring cleaning and stocktaking.

"It was on the point of being poured away when Mr. Lea and Mr. Perrins detected its appetising aroma. Tasting it once again they discovered it had matured into a rare and piquant sauce. The sauce was saved, more was made. Customers were persuaded to try the new Worcestershire Sauce, and did not need more persuasion: the sauce was an instant success. Sales rose. In 1842, Lea & Perrins sold 636 bottles. In 1845, a manufactory was set up in Bank Street, Worcester. Ten years later the yearly sales were up to 30,000 bottles of Worcestershire Sauce. Travellers covered Great Britain and there were agencies in Australia and the United States. As well as sauce, they found a steady export market for their medicines. No sensible traveller left England without a Lea & Perrins medicine chest."

"By 1862, the firm's international trading had become an extensive two-way traffic. An American firm in New Jersey was asking them to find an English market for hermetically sealed 3 lb cans of fresh fruits, tomatoes, green corn and oysters.

"When it became necessary to build a new factory in Midland Road, Worcester in 1897, Mr. Lea & Mr. Perrins used the latest steel girder construction. The factory rises over vast cellars, which house hundreds of casks of maturing sauce and maturing raw materials. No anchovy is allowed into the cellars under a year old. It matures for at least another year before being used in the sauce manufacture. The steel girders of the cellar roof, which supported the circular yard and its traffic of one ton drays in 1897, are now having to be re-inforced to take 32 ton freight-liners. A royal warrant was granted to the firm by Edward VII in 1904 and has been proudly held ever since. It helped alleviate trouble with imitations of their sauce. In the High Court of Justice in 1906, Mr. Justice Swinfen Eady decreed that no firm other than Lea & Perrins be allowed to call their Worcestershire Sauce, 'The Original' or 'The Genuine'.

"In 1823, William Perrins' son married Sarah Dyson of Huddersfield. Their grandson christened Charles William Dyson, was known as Dyson Perrins. A benefactor to the City of Worcester, to his home town of Malvern and to his old University of Oxford, where he developed his great

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love for the earliest printed books... He also inaugurated the Dyson Perrins Porcelain Museum at Worcester.

"After the First World War, Lea & Perrins rapidly expanded. When the merger with HP Sauce Ltd. was settled by mutual agreement in 1930, it had been a private limited company for some time. The branch in the United States, Lea & Perrins Inc., was not officially brought into the new company until a year later, but a gentleman's agreement between the two boards had sufficed while the trans-Atlantic marriage was being formally established. The amicable relationship dated back to Mr. Lea and Mr. Perrins.

"The believed in having friendly dealings with their overseas agents. Foremost among them were their New York agents, John Duncan & Sons. Established since 1819 as importers of wines, quality foodstuffs and preserves, they began to handle Worcestershire Sauce in 1840. Soon, they were handling ever-increasing amounts. During the succeeding forty years, close friendship developed between the two family businesses; indeed, the Duncans have adopted Dyson as one of their own family names.

"By 1875, the demand for Worcestershire sauce had spread throughout the United States. It was agreed to import the sauce in casks and bottle in New York. On the personal side the friendship between the families became so strong that the secret formula was divulged and the rights of manufacture granted to the Duncans. After eight years of manufacture in their various New York factories, they acquired in 1910 a nine storey building in West Street. Following their partnership with HP Sauce Ltd., they remained in West Street until expansion forced them to move to the Industrial Park at Fair Lawn, New Jersey." Continued. Address: Warwickshire, England.

5250. Wright, Louise. 1975. History of Lea & Perrins Worcestershire Sauce (Document part–Document part II). In: Louise Wright. 1975. The Road from Aston Cross: An Industrial History, 1875-1975. Imperial House, Leamington Spa, Warwickshire, England: Smedley–HP Foods Ltd. 84 p. See p. 30-37. 25 x 19 cm.

• ***Summary:*** Continued. Fair Lawn, near Route 4 out of New York, is an industrial park. Behind the lawns and dignified facades "Lea & Perrins Inc. alone produce 500 bottles of sauce every minute of every working day. The company is now a member of the Imperial Foods Group, but retains its American identity, with its own board of directors and its own purchasing and marketing procedures. The company has been marketing HP Sauce for some years." It is known as HP Steak Sauce.

An early engraved advertisement titled "The First Introduction" (facing p. 32) shows an innkeeper or restaurateur introducing Lea & Perrins' Sauce to three well-dressed gentlemen at a table. Two photos (facing p. 33) show: 1. A view of the front of the Lea & Perrins factory, built at Midland Road, Worcester, in 1897. 2. "The disastrous fire in 1964, which destroyed much of the building. With fine cooperation by management and employees, the sauce manufacture was held up for a mere 10 days."

In the New Zealand town of Te Wairoa, destroyed by a volcanic eruption in 1886, an undamaged bottle of Lea & Perrins Worcestershire sauce was found preserved by the volcanic dust. It is on display in the museum there (p. 34).

Plate 51 shows three ads published in 1871 by Lea & Perrins in three Australian newspapers (the *Coulburn Herald, Bathurst Free Press,* and the *Manaro Mercury*) to caution people against purchasing fraudulent imitations of their "celebrated Worcestershire Sauce." The two agents in Australia were Montefiore, Joseph & Co. (Sydney), and John Lee & Co. (Maitland). The sauce was exported by Lea & Perrins (Worcester) and by Crosse and Blackwell (London); it was sold by "Grocers and Oilmen universally."

Plate 54 states: "Lea & Perrins have been exhibiting since the historic Chicago Exhibition [in Illinois] in 1876, which celebrated the first hundred years of American Independence. The vase and bottled where were displayed there, are on permanent exhibition in the entrance hall of the offices of Lea & Perrins Inc., New York." Plate 55 shows the products of HP Sauce Ltd. and Lea & Perrins Ltd. on display at the British Industries Fair of 1949. Pages 42-43 discuss problems faced by Lea & Perrins in Worcester during World War II. "An army medical unit had taken over their factory, leaving only a small, sealed section in which to continue the highly secret process of making the sauce. One sniff was enough; there is no mistaking a cask of five-year-old anchovies." Lea & Perrins soon moved its bottling machinery from Worcester to Aston Cross. Plate 59 shows a empty glass bottle of Lea & Perrins sauce from 1880.

Plate 60 shows seven old Lea & Perrins Worcestershire sauce bottles. The oldest two, made of green glass with glass stoppers, were both filled in 1866. Two others are from about 1870. The earliest one with a label is from 1920. Plate 83 shows old bottles (with labels) of Worcestershire Sauce made by other manufacturers in Kobe, Japan; Cardiff, Wales; Hamburg-Altona [Germany; Altona became part of Hamburg in 1937], the United Kingdom, and Portugal. Address: Warwickshire, England.

5251. La Choy Food Prods. 1975? Brief history of La Choy. 2 p. Undated. Unpublished manuscript.

• ***Summary:*** "Archbold, Ohio, with a population of only 2,500 is the home of La Choy Food Products, largest producer of canned Chinese foods in the world–including China!

"The business actually was started in 1920, by Wally Smith and Ilhan New, who became friends while attending the University of Michigan. Smith had a grocery store in Detroit and wanted to sell fresh-grown bean sprouts. New, a Korean, knew how to grow them.

"Sometime later, the pair conceived the idea of canning

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bean sprouts in glass jars. The next logical step was to use metal cans, and this was accomplished in 1922 when the company was incorporated. New left the company shortly after 1930 and Smith was killed by lightning in 1937.

"After several moves, each time to larger quarters, the first La Choy plant was built in 1937 in Detroit. This was sold to the government at the start of World War II and the firm moved to its present 25 acre Archbold site. The La Choy plant today covers approximately 7½ acres under roof.

"'Chinatown, U.S.A.' is more strategically located for the efficient and economical production of Chinese foods than a glance at a map would indicate. Just to the north are the famed celery beds of Michigan. La Choy is the largest single user of Michigan celery in the nation. More than 5,000 tons are used annually in the new process developed by La Choy which produces up to 50 tons a day of extra-fancy fine cut celery for chop suey and chow mein dishes.

"To the east is the famed Pennsylvania mushroom belt, and La Choy is among the largest users of fresh mushrooms in the nation." Note: An attached photocopy of an ad (with no date or source) titled "La Choy operates the world's largest Chinese food plant," contains two photos: (1) Large aerial view of the La Choy plant in Archbold, Ohio. (2) Portrait photo of Gordon E. Swaney, General Manager. He was named General Manager of La Choy Food Products in 1962. He joined La Choy 18 years ago after graduating from Indiana University.

The text below the photo of the plant states: "This multimillion dollar facility was expanded in 1958 and doubled La Choy production. No other Chinese food processing plant anywhere approaches it in output." The plant is situated on 25 acres.

"La Choy became a division of Beatrice Foods Company in 1943, a year after it moved from Archbold, Ohio, from Detroit, Michigan, where the company was started in 1920." Since it became a Beatrice unit, sales have increased more than 700%. Address: La Choy

5252. Federal Supply Service, General Services Administration. 1976. Federal specification. Soy sauce. *Federal Specifications*. EE-S-610F. 14 p. Jan. 20. [1 ref]* Address: Washington, DC.

5253. Erewhon. 1976. Erewhon 76. Boston, Massachusetts. 16 p. Feb. Catalog and price list. 28 cm.
• ***Summary:*** The color cover, periwinkle blue and purple, shows many trees growing in shallow snow against a white sky.

The first page, titled "Piscean Specials. Specials Effective February 18, 1976," states: Special intro offer: 3 cases, 5% off. Erewhon Natural Cheese." Note: Erewhon is now selling dairy products.

It also offers specials on: NikSnacks, Celestial Seasonings tea, OG [Organically Grown] apple juice (Knudsen's, Heinkes), Tom's soaps, Fearn Soya Products (Buckwheat pancake mix, Wholewheat pancake mix, Corn bread muffin mix), Yinnie syrup, Erewhon pastas, Rocky Hollow herbs & spices, Edible essential oils.

On the next page, titled "First Class," a list of "Discontinued items: 10% off regular price" includes: All Nature Born cosmetics, All Sumatra honeys, Tamari ½ gallon size, Bulghur-Soy Grits.

This catalog cover was reprinted with permission from the Michio and Aveline Kushi Macrobiotics Collection, Archives Center, National Museum of American History, Smithsonian Institution, Washington, DC. Address: 33 Farnsworth Street, Boston, Massachusetts 02210; New York City office: 303 Howe Ave., Passaic, New Jersey 07055. Phone: 617-542-1358 and 212-594-6455

5254. Ho, Coy Choke; Koh, Chong Lek. 1976. Microbiology of soybean-based fermented food in South-East Asia. Paper presented at the Third INTSOY Regional Soybean Conference. 7 p. Held 23-27 Feb. 1976 at Chiang Mai, Thailand. Unpublished manuscript. [17 ref]
• ***Summary:*** The relatively well-studied soy-based fermented foods in South-east Asia are tempe, sufu (soy cheese), ontjom tahu [okara tempeh], tau chiow ([tauco, taucho], soybean paste), soy sauce, and thua-nao (natto). These are shown in Table 1, with the microorganisms responsible for fermentation, substrates, uses, and principal references given for each. "It can be noted that only a very limited range of genera of fungi are involved in these fermentations, namely *Rhizopus, Aspergillus, Neurospora, Actinomucor* and *Saccharomyces*. Furthermore, within a genus only a very limited number of species are actually utilized, for example *Aspergillus sojae* in soy sauce fermentation, and *Neurospora intermedia* in ontjom tahu fermentation.

"Regarding ontjom tahu fermentation, the fungus used was formerly erroneously listed as *Neurospora sitophila* (Dwidjoseputro, 1961)."

The authors then use analyses of conidia color and crossing experiments based on meiotic sterility to show that the cultures on okara tempeh (ontjom tahu) belong to a single species, *Neurospora intermedia*.

Note: This is the earliest English-language document seen (March 2009) that uses the word "tau chiow" to refer to Indonesian-style miso. Address: Dep. of Genetics and Cellular Biology, Univ. of Malaya, Kuala Lampur, Malaysia.

5255. Koshiyama, I.; Fukushima, D. 1976. Purification and some properties of gamma-conglycinin in soybean seeds. *Phytochemistry* 15(1):161-64. Feb. [36 ref]
• ***Summary:*** Gamma conglycinin is a 7S globulin and one of the four major antigenic components in soybean globulins. It was purified and found to be homogeneous. Address: Noda Inst. for Scientific Research, 399 Noda, Noda-shi, Chiba-ken 278, Japan.

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5256 Kozaki, Michio. 1976. Fermented foods and related microorganisms in Southeast Asia. *Proceedings of the Japanese Association of Mycotoxicology* No. 2. p. 1-9. March 20. [16 ref]

• ***Summary:*** Table 1, "Main fermented foods using molds, yeasts or bacteria in Southeast Asia," contains four columns: Name of fermented food, raw materials, main related microorganisms, and remarks (incl. names in other countries). Fermented foods listed include amazake (tapé / tapeh in Indonesia, with Rhizopus instead of Aspergillus oryzae), tempeh, sufu, ontjom, natto (soy bean fermented with *Bacillus subtilis* var. *natto;* Teranatto [fermented black soybeans] is same as original miso, Taosi in Philippines).

Table 2, "Main fermented foods using molds plus bacteria, molds plus yeasts, yeasts plus bacteria and molds, or yeasts plus bacteria in Southeast Asia," contains the same four columns. Fermented foods listed include soy sauce (*Aspergillus oryzae, Saccharomyces rouxii, Pediococcus halophilus;* called Jan [kanjang] in Korea and Thua nao [sic] in Thailand), Miso (same 3 microorganisms as in soy sauce) Address: Tokyo Univ. of Agriculture, Dep. of Agricultural Chemistry, 1-1, Suragaoka, Setagaya-ku, Tokyo.

5257 McCormick, Sally. 1976. Azuma Sukiyaki House: Gracious dining in an Oriental setting–5120 N. Broadway, Chicago (Advertorial). *Chicago Tribune.* March 20. p. A19

• ***Summary:*** "The Azuma dinner includes Sukiyaki, a generous portion of prime rib slices with fresh mushrooms, bamboo shoots, Tofu (soy bean cakes), Shirataki [Shirataki] (yam noodles) [thin konnyaku noodles] and assorted fresh vegetables." Azuma also serves Beef Teriyaki, Chicken Teriyaki, Salmon Teriyaki, and "Bata-Yaki (prime beef slices cooked with vegetables and served with lemon-soy sauce)...." Two photos show Azuma Sukiyaki House.

5258 Eden Foods. 1976. Spring catalog. 4601 Platt Rd., Ann Arbor, MI 48104. 30 p.

• ***Summary:*** On the cover is a woman carrying a sheaf of grain and a sickle on her head, with a child following after her. This is the first catalog with explanations of the product categories and individual products. Tamari Soy Sauce is now sold under 2 labels (Erewhon, and Marushima). "All of this soy sauce, bulk and bottled, is naturally and slowly aged for 2 years in wooden kegs. Made from soybeans, wheat, water, and salt." Hacho miso and kome (rice) miso, both still sold under the Erewhon brand, are fermented for 2 years, barley miso for 18 months. A new condiment is Tekka, sold in a 2.8 oz jar. "A salty condiment very rich in iron and minerals. Made from carrot, burdock, ginger, lotus root and miso."

Under packaged meals is Fritini (regular, with herbs, with curry, or with paprika; 8 oz.). Also new is Plum Extract (Bainiku Ikisu [sic, Ekisu]). Address: Ann Arbor, Michigan. Phone: (313) 973-9400.

5259 Ito, Hiroshi. 1976. Hamanattō [Hamanatto]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 71(3):173-76. March. [Jap, eng+]

• ***Summary:*** Contents: Introduction. A brief history of Hamanatto. Methods of production: Yamaya and Horinji methods. Daifukuji method. The microbiology and chemistry of Hamanatto fermentation. Hamanatto's special characteristics. Serving Hamanatto. Conclusion. Acknowledgments.

Two flowcharts show Hamanatto production methods at Horinji and Daifukuji. Tables: 1. Distribution of various microorganisms in Hamanatto (cells per gram) at Yamaya, Horinji, Daifukuji. 2. Nutritional composition of Hamanatto (from Yamaya, Horinji, and Hamana), Daitokuji natto, and regular sticky natto. 3. Composition of free amino acids (mg per 100 gm defatted, and gm per 10 gm protein) in Yamaya Hamanatto, Daitokuji natto, Yamaya Hamanatto, soybean miso (temperature controlled- and natural fermentations), and Hatcho miso. 4. Composition of Hamanatto fats. 5. Volatile acids in Hamanatto. 6. Aromatic compounds in Hamanatto.

In Japan, there are basically two types of natto. Regular natto (*itohiki-natto*) and salty natto (*shiokara-natto*). Generally the word 'natto' refers to the former but in Shizuoka prefecture in and around Hamamatsu city a type of salty natto called *hamanatto* is famous. Totally unrelated to regular natto except in name and the fact that both are fermented soyfoods, it is actually a close relative of soybean miso in terms of its flavor and the way it is produced. However unlike miso, the soybeans retain their original form, uncrushed, and the product has its own unique flavor and aroma. Another type of salty natto is Kyoto's Daitokuji-natto.

A brief history of hamanatto: Hamanatto originated in ancient China and is one of the progenitors of today's miso and shoyu. Many old documents show that its relatives *kokusho* ('grain chiang') and *teranatto* ('temple natto') were brought to Japan from ancient China. A type of fermented, salt-preserved cooked soybeans called *tou-ch'ih kyo* was excavated together with articles buried with one *Mao-tai*, a ruler of the early Han dynasty who lived about 2200 years ago. This was the earliest form of hamanatto. According to the first scholars and envoys from Japan to T'ang dynasty China, *chiang* and *kuki*, both progenitors of miso and shoyu, were introduced to Japan from China. Records show that the great T'ang dynasty Buddhist master Ganjin, who came to Japan by boat in 753, brought with him 1428 gallons of 'sweet kuki,' an early type of salty natto. The first mention of salty natto in Japan appears in Fujiwara Akihara's *Shinsaru Gakki / Shin Sarugakuki*, written in 1286 [Note: Others give the date as 1068]. The first character of the word 'natto' means 'to pay, supply, or dedicate;' the second means 'bean or soybean.' According to the *Honcho Shokkan*, written in

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1697, the first character was derived from the fact that natto were first prepared in Japanese temple kitchens which are known as *na-ssho*, the place which supplied the monk's food. Since the propagation of salty natto throughout Japan was done primarily by temples, they also came to be known as 'temple natto' (*tera-natto*). They served as an important source of protein and savory seasoning in the Buddhist vegetarian diet. Kyoto's Daitokuji-natto, Ichimei Ikkyuji-natto, and Tenryuji-natto, each made in temples, and the Hamanatto made at Daifukuji and Horinji temples in and around Hamamatsu city are popular to this day. Hamanatto first became known when the monks of Daifukuji temple presented some to the seventh Ashikaga shogun, Ashikaga Yoshikatsuko, during the 1400s during the Warring States Period (1467 to 1568) they also presented Hamanatto to lords of the families of Imagawa Toyotomi, and Tokugawa.

Note: This is the earliest document seen (Nov. 2011) that mentions "Ikkyuji" or "Ichimei Ikkyuji" in conjunction with Daitokuji natto.

Because of its unique flavor and aroma and good keeping qualities, hamanatto became known throughout Japan. in some cases the skin of sansho seeds (Japanese pepper; *Zanthoxylum piperitum*) were mixed in and the product called *kara-natto* ('spicy natto'). When Toyotomi Hideyoshi undertook his Korean campaigns, he took lots of hamanatto with him. When he arrived in the ancient province of Hizen in northwest Kyushu, just before his soldiers embarked in boats to Korea, he gave this food the same name, *kara-natto*, but written with characters which mean 'beans for subjugating T'ang dynasty Korea.' This name, he hoped, would bring him luck in his campaign. After returning to the Hamamatsu area in central Japan, he donated land to makers of hamanatto to encourage their craft.

Later, when Tokugawa Ieyasu took over Hamamatsu castle, he used hamanatto as soldiers' provisions. Each year the local monks gave hamanatto as a gift to the shogun, who in turn used it as a New Year's offering. Still later, produced by temple cooks and craftsmen, it was given as a New Year's gift to parishioners; it also had a symbolic meaning since the word for soybeans (*mamé*) has also come to mean healthy and robust. In 1968 Yamaya, a producer of tamari shoyu (soy sauce) under the direction of Suzuki Yasuke, attempted to make an improved version of the product previously prepared at Daifukuji temple and first affixed the name 'hamanatto.' Thus the name of the product developed in the following order: *shiokara-natto* ('salty natto) *kara-natto* (T'ang dynasty natto), *hamana-natto*, and *hama-natto*. To this day, Daifukuji has maintained its own special method of production, but this too has been commercialized.

Methods of production: Today hamanatto is prepared by two methods: the traditional method handed down from generation to generation since ancient times, and the modern industrialized method which made improvements on the traditional method without harming the special flavor and aroma. Yamaya company and Horinji temple use closely related methods, the former is industrialized while the latter is a handmade process using koji starter. Daifukuji uses a different traditional process without koji starter since the ancient incubation room, wooden trays, and rice-straw covering mats are each permeated with starter mold spores. The soybean koji (molded soybeans) is combined with brine and put into vats for the second fermentation in September. Since the room temperature during the koji making (first fermentation) is 20° to 25°C (68-77°F) no special incubation heat source is needed. Yet since the molds propagate naturally, without special inoculation, the koji making takes a long time, up to ten days.

There are numerous points of difference from regular miso production, when making salty natto [fermented black soybeans] the soybeans are not crushed, the koji is incubated with brine in a keg or vat with a heavy pressing lid; and the final product is sun-dried. At the factory, the soybeans are only partially reconstituted [by soaking in water] until they reach 1.5 to 1.6 times their dry weight; this takes 2 hours in winter and 1½ hours in summer. They are then drained and allowed to stand for 4-5 hours so the absorbed water penetrates deeper. If they are drained for too long, the beans become hard. They are then steamed for 4-5 hours [at atmospheric pressure] and allowed to stand overnight in the steamer. At Daifukuji, the unsoaked beans are dropped into boiling water, parboiled for 7-8 minutes, steamed for 7-8 hours in a 2 meter deep steamer, then allowed to stand in the steamer until the next morning. Care is taken that the beans are not crushed or dehulled. Nowadays, since it is known that the process of leaving the beans overnight in the steamer lowers their net protein utilization and makes them more difficult for the enzymes to digest, this step is generally omitted. Traditionally it was always used to darken the beans; there were apparently no problems with bacterial contamination, perhaps because the reaction of sugars and amino acids under heat produces substances which reduce the proliferation of bacteria and yeasts. In fact, the overnight period in the steamer may have been done expressly to encourage this effect. Continued.

5260. Ito, Hiroshi. 1976. Hamanattō [Hamanatto (Continued–Document Part II)] *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 71(3):173-76. March. [Jap, eng+]

• ***Summary:*** Continued. The steamed beans are then spread on a thick rice straw mat (*mushiro*), drained well, sun dried, sprinkled with roasted barley flour, and mixed until each bean is well coated. The straw mat helps to absorb excess water. In factories, the roasted flour is premixed with koji starter (*Aspergillus oryzae* mold spores), they dried the straw mat and used it year after year. Molds such as *A. oryzae*, *A. soyae*, and *Rhizopus* species inoculated the beans during mixing with the flour. The mixture is covered for one night

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with rice straw mats, then the next day transferred to wooden koji trays, which are arranged in the koji incubation room to make koji. Care must be taken that excess heat does not develop during fermentation, lest alien bacteria proliferate and the product's flavor and aroma decline. To prevent this, the koji mycelium is broken up three times by hand in the trays during the incubation.

At factories, the finished koji is sun-dried for 4 to 5 hours in winter (Hamamatsu is famous for its dry fall winds) or for 2 hours in summer so that the moisture content is reduced to below 30 to 35 percent. If this drying is insufficient, after the beans have been put into the vats they easily get crushed. The vat used is a 19-gallon wooden vat or a small wooden tub. The koji is divided among several vats, brine made by combining salt with boiled water is added, a pressing lid equal to twice the weight of the vat contents is set in place, and the mixture is allowed to ferment for 80 to 90 days in summer or 150 days in winter. (In some places (Daifukuji), unpasteurized shoyu is used in place of brine).

The use of a heavy pressing lid is preferable since it causes the fermentation to proceed slowly; a light one helps it to go faster, but the soybeans more easily lose their form. At temples they shiver the middle skin of sansho seeds and place these at the bottom of the vat, then add the finished koji and finally the brine. In factories they add a more concentrated brine and ferment the mixture for at least 2 months. The fermentation room (*kura*) should have good air circulation and ventilation, otherwise the product may develop and unpleasant moldy or musty odor.

After draining off the brine scooping the beans out of the vats, they are spread on rice straw mats (traditionally *mushiro* from the Ryukyu islands, today *tatami* matting), sun-dried, and sifted to remove small pieces, which are discarded. In a separate process, gingerroot is cut thinly, soaked in boiling water, sun dried, and soaked in moromi (shoyu mash) for about 10 days to make pickled gingerroot. Sansho seeds are also added to some types.

The microbiology and chemistry of Hamanatto fermentation: The molds found in fresh hamanatto koji and commercial hamanatto, in addition to *Aspergillus oryzae*, include *Rhizopus* species and *A. niger*. Hamanatto such as that made at Daifukuji using a low incubation temperature (20-25°C) and a long time contains a large proportion of *Rhizopus* on the surface of the soybeans. Moreover the amylase and protease enzymes in these molds are weaker and less active than those from the koji used for commercial shoyu or miso. For this reason the soybeans are not broken down, but rather remain in their whole form. If the koji is made mechanically, the enzyme strength and quality increases. The incubation proceeds more quickly in summer since the temperature is higher; the koji is ready in 3 days.

In general during the koji production, amylase, protease, and pepsidase activity reach a maximum at 50 hours, but in order to dry it, it must be left longer which causes the activity to decrease. In addition to molds, lactic acid bacteria and film yeasts, which are related to *Pediococcus*, are found in all hamanatto; they are mixed in during contact with the straw mats. If air circulation during koji production is poor, lactic acid bacteria proliferate more than usual. Unlike most lactic acid bacteria, they ferment soybean sugars creating undesirable effects, but do not ferment lactose. After the koji-brine mixture is in the vats, film yeasts proliferate among the various flavors; at 45 days they are most abundant, then later decrease. Especially on the surface of vats with poor air circulation, they are found as a white mold. These yeasts produce hamanatto's unique aroma.

Hamanatto's special characteristics: Because the fermentation time is long, the color turns a dark brown. The form of the beans is well preserved. The composition of nutrients is shown in figure 2. Compared with regular natto, hamanatto has less moisture and more salt. Free amino acids are shown in figure 3. Those abundant are glutamic acid, leucine, and proline, while cystine, tryptophan and methionine are the most scarce. Compared with soybean miso, arginine, cystine, and histidine are also relatively scarce. Since soybean miso undergoes an even longer fermentation than hamanatto the difference is the amino acids freed from the soybeans, which is particularly enhanced by protease enzymes from the koji molds. Hamanatto flavor is rich and full-bodied, somewhat like that of soybean miso, but with a special aroma, more tartness, and a unique flavor component that Japanese call *egumi*. The latter, related to oil rancidification, imparts what some describe as a subtle harsh or unpleasant stimulation to the tongue or throat. Kiuchi et al. in 1976, in an analysis of hamanatto lipids, found that this egumi originates from linoleic acid. Hamanatto fats, unlike those of regular natto, are more than 70 percent of free fatty acids. The majority of fats in both natto and soybeans are triglycerides, with other fat components being relatively low. The lipase in hamanatto koji breaks down a large percentage of the fats but the composition of the resulting fatty acids is not different from those found in soybeans; in both cases, linoleic acid comprises more than 50 percent of the total.

Hamanatto's volatile acids and aromatic compounds are shown in figures 5 and 6. The aroma of Yamaya's hamanatto was superior to that of Daifukuji or Hamana. This aroma was very poor just after the koji was made but during the ripening of various flavors, isobutyl aldehyde, isobutyl alcohol, and various amines decrease together with a decrease in the poor aroma. However if the air circulation is bad while making koji or during the vat fermentation, alien microorganisms proliferate, leaving an undesirable aroma.

5261. Ito, Hiroshi. 1976. Hamanattō [Hamanatto (Continued–Document Part III. Continued)] *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 71(3):173-76. March. [Jap; eng+]

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• ***Summary:*** Continued. Serving Hamanatto: Hamanatto is used both as a seasoning and as a protein source. Like Daitokuji-natto it is sprinkled as a seasoning over hot rice in a small bowl, then doused with hot green tea to make the popular Ochazuke. It may also be served as an hors d'oeuvre with sake, used in place of tea cakes with whisked green tea as Chauke, or served as a rice seasoning in box lunches like shoyu-simmered kombu. Since ancient times it has been used in Zen Temple Cookery as a source of subtle flavor, diced and mixed with grated daikon, sprinkled with vinegar, or used in the Chinese tofu dish Mabo-dofu. Its abundance of glutamic acid and nucleic acids enrich the flavor of any food with which it is served.

Conclusion. Hamanatto, a progenitor of today's miso and shoyu, has been made by traditional methods since ancient times. Long lasting, it embodies the fermentation and nutritional wisdom of our forebears. Thus its scientific study reveals new and valuable information. In its traditional processing methods there are points that should be improved, yet today it is a long lasting food with its own distinctive characteristics.

Acknowledgements: I would like to thank the Yamaya and Hamana companies for supplying documents and samples, and allowing me to quote selected portions, Professor Kayo Kon of Shizuoka Women's University, and my colleagues at the National Food Research Institute, Kan Kikuchi, Teruo Ota, and Shinkum Sasachi.

Figures show: (1) Hamanatto production methods. Flow charts of the Yamaya-Horinji method (Horinji is in parentheses), and of the Daifukuji method.

Tables show: (1) Distribution of microorganisms in Hamanatto made by Yamaya, Horinji, and Daifukuji. For each maker, there is one column for surface and another for interior. The types of microorganisms are: General bacteria, micrococcus, streptococcus, pediococcus, halophilic lactic acid bacteria, firm-forming yeasts, and molds (Mostly *Aspergillus oryzae* and *Rhizopus* species).

(2) Nutritional composition of three varieties of Hamanatto (Yamaya, Horinji, Hamana), Daitokuji natto, and regular "stringy" (*itohiki*) natto.

(3) Composition of free amino acids in various fermented foods: (A) Yamaya Hamanatto, Daitokuji Natto (both in mg per 100 gm defatted); (B) Yamaya Hamanatto, Daitokuji Natto, Soybean miso (made at controlled temperature), Soybean miso fermented at natural ambient temperature (all four in gm per 100 gm of protein), (C) Hatcho miso (in mg per gm). In the far left column 18 amino acids are listed.

(4) Composition of Hamanatto lipids. The four vertical columns are: TG = Triglycerides. DG = Diglycerides. ST = Cholesterol. FFA = Free fatty acids. MG = Monoglycerides. The four horizontal rows are: Soybeans, dry. Soybeans, steamed. Natto. Hamanatto.

(5) Hamanatto volatile acids. (6) Hamanatto aromatic compounds.

5262. Norinsho. 1976. Nihon shokuhin hyôjun seibunhyô [Food composition tables for Japan. 2nd ed]. Tokyo: Ishiyaku Shuppan K.K. 180 p. March 25. Index. 15 x 21 cm. [Jap]

• ***Summary:*** The first edition of this book was published on 15 Jan. 1964. The first revised edition (130th printing) was published on 25 Jan. 1969. This is the second revised edition (265th printing), published on 25 March 1976. Also published by Joshi Eiyo Daigaku Shuppan-bu.

For soybeans and soyfoods, see pages 33-35, 69, and 74 (basic nutritional composition), and 111-12 (amino acid composition).

Page 88, No. 812: Amazake. Per 100 gm. Calories 101, moisture 74.0 gm, protein 2.4 gm, fat 0.1 gm, carbohydrates (sugars 22.7 gm, fiber 0.6 gm), ash 0.2 gm, calcium 74 mg, phosphorus 25 mg, iron 0.4 mg, vitamin A 0 mg, vitamin B-1 0.08 mg, vitamin B-2 0.06 mg, nicotinic acid 0.06 mg, vitamin C 0 mg.

A later edition (after 1976), containing at least 298 pages, gives details on the following soy-related foods (p 76-80): Japanese-grown whole soybeans (dry, or boiled). Whole dry USA-grown soybeans. Whole dry Chinese-grown soybeans. Green immature soybeans (edamame, raw, or boiled). Soybean sprouts (raw, or boiled). Defatted soybeans (whole, or dehulled). Kinako (soybeans roasted and ground). Budô-mame (soybeans boiled with shoyu). Momen tofu (regular). Kinugoshi tofu (silken). Soft tofu. Packed tofu. Okinawa tofu. Yaki-tofu (grilled). Nama-age. Abura-age. Ganmodoki. Kôri-dofu. Tofu-chikuwa (steamed type, or roasted type). Natto (fermented soybeans): Itohiki-natto, Goto natto, or tera-natto.

Miso: Rice-koji miso (sweet type, light yellow type, dark yellow type). Barley-koji miso. Soybean-koji miso. Dried miso. Kinzanji miso. Hishio-miso.

Other: Okara. Soymilk (regular, reconstituted, or soft drinks). Yuba (wet, or dried).

Page 254 gives the amino acid composition of soybeans and various soyfoods. Page 298 gives the protein scores, amino acid values, and chemical scores of selected foods. Page 8 gives the energy conversion factor for tofu, agé, and yuba.

5263. Nunomura, N.; Sasaki, M.; Asao, Y.; Yokotsuka, T. 1976. Identification of volatile components in shoyu (soy sauce) by gas chromatography-mass spectrometry. *Agricultural and Biological Chemistry* 40(3):485-90. March. [15 ref]

Address: Central Research Labs., Kikkoman Shoyu Co., Noda, Japan.

5264. Nunomura, N.; Sasaki, M.; Asao, Y.; Yokotsuka, T. 1976. Isolation and identification of 4-hydroxy-2(or 5)-ethyl-5(or 2)-methyl-3(2H)-furanone, as a flavor component in

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shoyu (soy sauce). *Agricultural and Biological Chemistry* 40(3):491-95. March. [8 ref]
Address: Central Research Labs., Kikkoman Shoyu Co., Noda, Japan.

5265. *Times* (*London*). 1976. Dinner at the home of the calypso: Good food guide. April 17. p. 7.
• ***Summary:*** A review of restaurants in Kingston, the capital of Jamaica. At the Korea Restaurant, the mixed vegetables "had the slightly sweet taste characteristic of Korean and Japanese soya sauces. The seaweed, deep fried, would not have been missed."

5266. Dart, Susan. 1976. Mother finds way to beat food additives: Natural foods. *Chicago Tribune*. May 13. p. E30.
• ***Summary:*** Clara Lo was born in Hong Kong, but educated in the USA. She marinates her ground pork with "Chinese bean paste [jiang], which she buys in Chinatown." She points out that "a marinade of soy sauce would have the same effect, but the soy sauce must not contain sodium benzoate or other preservatives and be free of any coloring whatsoever..."

Note: This is the earliest English-language document seen (March 2009) that uses the term "Chinese bean paste" to refer to Chinese-style miso.

She notes that the Chinese have traditionally eaten a balanced diet. Based on rice, or wheat, it always includes "green vegetables, fish, meat or soy bean cake [tofu]..."

5267. Huang, Su-hei (Miss), ed. 1976. Chinese cuisine: Wei-Chuan cooking book. Taipei, Taiwan: Wei-Chuan Publishing Co. 221 p. May. Illust. Index (at front). 27 cm. [Chi, Eng]
• ***Summary:*** This attractive book of Chinese cooking from the Wei-Chuan Cooking School is a bilingual Chinese / English edition. On each page is one recipe and a 1/3-page color photo of the prepared dish. The title of the recipe is written in Chinese in large bold characters and is also given (to the right) in smaller bold letters in English. Above the number of servings is the province or region of China from which the recipe comes (e.g., Szechuan, Cantonese, Peking, Hunan, etc.) Most of the recipes call for ¼ to ½ teaspoon of MSG; many call for soy sauce.

The introduction (p. 2-17) contains: (1) Seasonings for Chinese cooking, incl. soy sauce. (2) Instruments [utensils] for Chinese cooking. (3) Culinary idioms (basic techniques, such as cleaning, cutting, heating the pan, stir frying, etc.). (4) Arrangement of seating order at feast. (5) Arrangement of the dinner sets at a feast. (6) Arrangement of food and menu. (7) Basic principles of arranging the menu. (8) Sample menus for banquets or ordinary meals. (9) Commonly used vegetables (2-page color photo, incl. "9. yellow soybean sprouts").

(10) Commonly used dry materials and canned foods (2-page color photo, incl. "6. fried gluten balls {*'mien jin pau'*}." 13. pickled plums (*'umeboshi'*). 18. agar-agar. 33. nori (purple laver sheet). 35. bean curd skin [yuba, toufu p'i]. 36. bean curd roll. 37. Pressed bean curd cake [*doufugan*]. 39. kau fu. 40. bean curd wrapper (bai yeh; pressed tofu sheets). 41. vegetarian gluten roll (*mien jin*). 42. dried bean curd noodles [*kan-ssu*]. 43. Fermented black beans [fermented black soybeans]. 44. bean curd stick [dried yuba stick] (*'fu dzu'*). 47. Soy sauce. These two pages also show Wei-Chuan Foods Corp. is a manufacturer of many Chinese-style foods.

(11) Description of some other special ingredients. "1. Hot bean paste (pronounced *'la jiao jiang'*). A thick spicy paste made from ground hot red peppers and soy beans." "2. Sweet bean paste (*'t'ien mien jiang'*). Made 'from ground, fermented steamed bread and spices'" [soy is not mentioned]. "3. Soy bean paste (*'do ban jiang'*). A thick black paste similar in taste to sweet bean paste, but made from fermented soybeans." "8. Fermented black beans: Small black [soy] beans which have been marinated in soy sauce and salt and are used to flavor steamed fish and meat or in stir-fried dishes." "10. Pickled bean curd or Chinese cheese [fermented tofu] (*'do fu ru'*). Bean curd cubes which are first dried and then mixed with wine, spices and salt and allowed to ferment. It is used to season braised pork and duckling." "21. You tiau. A deep-fried crispy Chinese cruller..." * "Kau fu: A spongy type of vegetarian ingredient made from wheat gluten" (see p. 151). "Fried gluten ball ('mien jin pau'): A type of light, round, deep-fried ball made from wheat gluten and water." "Su tsang. A type of long thin roll made of wheat gluten and water."

Interesting soy related recipes: Bean curd noodle and celery salad (with "4 oz. bean curd noodles," Szechuan, p. 23). Steamed spareribs with fermented black beans (with "3 T. [tablespoons] fermented black beans," garlic, ginger root, rice wine, and soy sauce, Cantonese, p. 60). Steamed pork in preserved bean sauce (with "2 squares fermented bean curd" ('do fu ru'), Cantonese, p. 74). Steamed carp with fermented black beans, Hunan, p. 88. Braised carp with hot bean paste (with "1½ T. [tablespoons] hot bean paste" ('la do ban jiang'), Szechuan, p. 100). Stir-fried oysters with fermented black beans (Taiwanese, p. 132).

One section of the book titled "Bean curd & eggs" (p. 140-49) contains various tofu and yuba recipes, including: Ma-Po's bean curd (Szechuan, p. 140). Vegetarian chicken loaves (with "16 sheets bean curd skin" [yuba], Shanghai, p. 147). Eggplant rolls with chopped pork (with "1 sheet bean curd skin, Taiwanese, p. 148). Stuffed bean curd rolls (with "8 bean curd sheets (*bai ye*), Shanghai, p. 149). Bean curd is counted in squares. Address: Taiwan.

5268. Saono, S.; Brotonegoro, S.; Abdulkadir, S.; Basuki, T.; Jutono, -; Badjra, I.G.P. 1976. Microbiological studies of tempe, kecap, and taoco. I. Quantitative estimation and isolation of microorganisms from some products from West Java. In: ASEAN Project on Soybean and Protein Rich

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Foods, Progress Report on Research Activities, Jan-May, 1976. Appendix 7. *
• ***Summary:*** Note: This is the earliest English-language document seen (March 2009) that uses the word "taoco" to refer to Indonesian-style miso.

5269. **Product Name:** The "Billy Biggins," and the "Weymouth Whitney" (Wheatmeat Sandwiches)
Manufacturer's Name: Wheatmeat Co. Renamed Vegetable Protein Co. later in 1976.
Manufacturer's Address: Waltham, Massachusetts.
Date of Introduction: 1976, May.
Ingredients: Incl. pita bread, seitan, vegetables.
Wt/Vol., Packaging, Price: Saran-wrapped.
How Stored: Refrigerated.
New Product–Documentation: Talk with Johnny Weissman, 1992, March 31. After introducing larger Wheatmeat sandwiches, John introduced a new line of smaller seitan sandwiches, in hamburger-sized pita pockets. They were named after people he knew.

Letter from John Weissman, 1992, June 25. In the spring of 1976 John moved the kitchen to a location behind a bar in Waltham, Massachusetts. With friend Robert Allen, they introduced a new line of smaller seitan sandwiches, in hamburger-sized pita pockets. They were named after people he knew, like the "Billy Biggins," a Wheatmeat sandwich with grated carrots and tahini sauce, etc. Billy Biggins owned the bar. Then they rented space in a basement "mall" in Central Square, Cambridge, to begin a restaurant featuring Wheatmeat, Tan Pops and waffles. The developers ran away after somehow failing. John named another pee-wee sandwich the "Weymouth Whitney," after the construction manager. It contained Wheatmeat, sauerkraut, caraway seeds, and Russian dressing made with Hain eggless mayo. These little sandwiches didn't sell very well.

5270. Knoblauch, Mary; Leroux, Charles. 1976. Eats–Mandarin restaurants: Rating the Far East feasts in Chicago and suburbs. *Chicago Tribune*, June 4, p. B1.
• ***Summary:*** An excellent restaurant review with a summary of the history of Chinese restaurants in Chicago and the different Chinese regional cuisines. In 1965, there was only in Mandarin restaurant in the Chicago area–the Dragon Inn in Glenwood, about 20 miles south of Chicago; today there are about 40. For decades, Cantonese restaurants were synonymous with Chinese restaurants. Fukien, on the coast of China between Canton and Shanghai is famed for its soy sauces.

While it takes a chef only a few minutes to cook a Chinese dish, someone has usually spent hours beforehand chopping and shredding the ingredients.

The Northern China (5001 N. Clark St.) offers "whole braised fish with garlic, onion, and black bean sauce..."

The Cathay Mandarin Restaurant (3014 N. Lincoln Ave., Skokie) offers a delicious hot and sour soup laced with "generous shreds of chicken, pork, bean curd [tofu], green onion, and dried mushrooms." "Its Ma poo shrimp are redolent with hot bean sauce, fermented black beans, and garlic."

The Mandarin serves a "fried bean curd and pork in chili sauce."

5271. Burros, Marian. 1976. The no-sweat barbecue. *Washington Post*, June 24, p. E23.
• ***Summary:*** The recipe for Chinese barbecued ribs calls for "3/4 cup hoisin sauce, 3 tablespoons yellow bean paste, 1½ tablespoons dark soy sauce."

5272. Bol en Bois. 1976. Fabrication du tofu [Production of tofu (Brochure)]. 35, rue Pascal, 75013, Paris, France. 3 p. 5th printing, May 1979. [8 ref. Fre]
• ***Summary:*** A typed description with illustrations (line drawings) of how to make 900 gm of tofu at home from 300 gm of soybeans and nigari. Cites *The Book of Tofu* by Shurtleff & Aoyagi as a source. The company also publishes leaflets on soyfoods. Number 1: Tofu et okara (Tofu and okara), 1.5 Fr. Number 7: Tamari, shoyu et leurs coleurs (Tamari, shoyu and their colors), 2.0 Fr. Address: Paris, France.

5273. MacDonald, W.C.; Dueck, J.W. 1976. Long term effect of shoyu (Japanese soy sauce) on the gastric mucosa of the rat. *J. of the National Cancer Institute* 56(6):1143-47, June. [13 ref.]
• ***Summary:*** The long term effects of feeding shoyu to rats and its effect on gastric mucosa were studied. The animals fed shoyu were smaller and healthier than the controls. Breast tumors developed in 10 control rats, but none developed in those fed shoyu. It was concluded that shoyu did not appear to be a carcinogen in rats.

Note: This is the earliest document seen (May 2000) concerning soy and prevention of breast cancer–in laboratory animals. Address: 1. Dep. of Medicine, Univ. of British Columbia, Vancouver, BC, Canada.

5274. Shurtleff, William. 1976. Notes on making shoyu from visit to Sendai Miso-Shoyu Co. in Sendai, Japan. Tokyo, Japan. 2 p. Undated. Unpublished typescript.
Address: c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

5275. Shurtleff, William. 1976. Koji starter for miso and shoyu. Nerima-ku, Tokyo, Japan. 2 p. Undated (June?). Catalog.
• ***Summary:*** This typewritten, photocopied, 2-page leaflet describes 9 different types of koji starter for: Red miso, barley miso, soybean miso, mellow barley miso, sweet white miso, light-colored miso, fast white miso, amazake or

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pickling, or shoyu. All 9 types are available from: Mitoku Trading Co., Attn: Mr. Akiyoshi Kazama, C.P.O. Box 780, Tokyo 100-91, Japan. Phone: 03-201-6706. Address: c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

5276. *New York Times.* 1976. From column A to column Z. (Advertorial). July 4. p. ADS12.
• ***Summary:*** This is a full page advertorial describing and promoting China's different regional cuisines, including Taiwanese cuisine. We are not told which organization is paying for the ad. Could it be the government of Taiwan?

"For Chinese cuisine–which is unmatched by any other–is a brilliant blend of contrasting tastes and textures. But then, it's the product of several thousand years of genius." "As all aficionados of Chinese food know, Taipei [capital of Taiwan] is a gourmet's paradise." The island republic of Taiwan is a "vital center of vegetarian cuisine." Most customers at these meatless restaurants are Buddhists, who are vegetarians for religious reasons. Over the past 2,000 years, Buddhists have developed a host of totally vegetarian [vegan] dishes that simulate their Chinese counterparts based on meat, fowl, or fish. For example, monks long ago developed a snack that "tastes surprisingly like ham by blending dry-roasted peanuts with tofu, or bean curds, that had been sauteed in soy sauce."

"In vegetarian restaurants, the menu features such dishes as 'roast duck' or 'pork balls' or 'fried fish.' But in fact the ingredients are such non-meat products as soy bean curds, mushrooms, seaweed, water chestnuts, and wheat gluten. Yet so artfully are they prepared and sauced that most non-vegetarians, unless they are forewarned, believe they are savoring meat dishes." Address: Food editor.

5277. Doorn, Wil van. 1976. Lima, the European Erewhon. *East West Journal.* Aug. p. 21-22, 24-25. [Eng]
• ***Summary:*** This is an interview with Pierre Gevaert, co-owner and manager of Lima natural food factories in St. Martens, Latem, Belgium. Gevaert was working for world peace before George Ohsawa visited in May 1957. In early 1959 Gevaert started to produce large quantities of miso and tamari soy sauce at St. Martens Latem, Belgium, with the help of two Japanese specialists that Ohsawa had sent. The company, named Lima, was officially started in March 1960, though they had been producing food for almost 3 years under the name "Sesame."

In 1962 Lima started to contract with farmers to grow grains organically; they were the first company in Europe to do this, in part because they were so familiar with organic agriculture themselves. "Using the knowledge gained from our own experience, we taught many farmers to grow their produce organically again in the traditional manner." Brown rice was grown in the south of France. In 1967, after operating at a loss for many years, a businessman-consultant named Edouard van der Seelen advised them to halt production of miso and tamari. Sales were good but the products took 3 years to mature.

Pierre is a Catholic who has practiced macrobiotics for 19 years.

Note: This is the earliest document seen (Jan. 2003) concerning the soyfoods movement in Europe.

5278. Ohsawa-Japan. 1976. List of macrobiotic food products & related items. Tokyo, Japan. 2 p. Single sided.
• ***Summary:*** Printed with black ink on white paper. Soy related products: Soya bean sauce (shoyu). Soya bean paste (miso). Mugi miso. Kome (koji) miso. mame miso. Tekka. Black [soy] beans (Kuromame). No prices are given. Address: 11-5 Ohyamacho, Shibuyaku, Tokto, Japan. Phone (03) 465-5021.

5279. *Times* (*Walworth, Wisconsin*). 1976. Kikkoman announce expansion program. Aug.
• ***Summary:*** The addition of 24 new fermentation tanks will increase Kikkoman's capacity from the present 2.5 million gallons/year [approximately 10,000 kiloliters/year] of soy and teriyaki sauces to approximately 3.3 million. The plant is currently operating at 90% of capacity, and employs 65 persons. Production in the expansion will start in about 1 year.

5280. *Chicago Tribune.* 1976. Stocking your Mandarin pantry: A grocery list for Mandarin cooks. Sept. 16. p. D1.
• ***Summary:*** There are four basic categories of supplies: Dried, canned, condiments, and produce. Under "Dried" we find: "Fermented black beans–Also called salted black beans. Sold in plastic bags, slightly moist; store in covered container in refrigerator."

Under "Canned" are Hoisin sauce, and Hot bean paste. The latter is "Essential to Szechwan dishes... (Don't buy sweet bean paste, yellow bean paste, or soy bean paste by mistake)."

Under "Condiments"–"Light soy sauce–The kind you are used to. Buy the ubiquitous brand all Chinese stores and restaurants use, Kikkoman; buy at least a pint." "Dark or black soy sauce–Used as flavoring. Thicker than regular soy, it has a molasses-like quality and is a necessity in many dishes. Measure carefully, though, because it can be overpowering." Also rice vinegar, and sesame oil made in Taiwan or Hong Kong, rather than Japan.

Produce: "Fresh bean curd [tofu]–Sold as produce in plastic containers in a chunk covered with water. Keeps a week in the refrigerator with two or three water changes. (Don't buy dried bean curd, unless your recipe specifies it)."

A photo shows a man walking down South Wentworth Avenue with many Chinese signs and shops in the background.

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5281. Greer, Gery. 1976. A look at traditional Japan. *Chicago Tribune*, Sept. 19. p. C13.

• ***Summary:*** The writer has traveled to Shirakawa-go, a picturesque and traditional village in the Sho River Valley, high in the Japanese "Alps." The huge thatched-roof houses, built 100 to 250 years ago, with their steeply sloping roofs, are built in the style called *Gassho-zukuri* ("fingertips held together as if in prayer"). Traditionally, the smoke and soot from each home's central sunken, open-pit fireplace coated and preserved the straw and wood, so that the thick roofs lasted 70 years. The houses were built without nails or hinges, the wood was fastened together firmly with wooden pegs and handmade ropes.

Each October the quiet village is transformed as throngs arrive for the annual *Doburoku Matsuri* ("moonshine festival"). "Doburoku is unrefined sake (rice wine) and it is thick, milky, and potent."

A visitor can stay at a *minshuku* (a private home turned into a sort of hostel) which is usually less expensive that a *ryokan* (traditional Japanese inn). The *minshuku* typically serves two meals. "Usually dinner will consist of one whole small fish cooked in soy sauce, various mountain vegetables and weeds, *miso* soup... with *tofu* (bean curd), *tsukemono* (Japanese 'pickles,' usually pickled cabbage, cucumber, and ginger), and rice.

Breakfast, which is almost identical, "includes a raw egg in place of the vegetables. Break the egg into the bowl provided, add soy sauce, beat slightly with your chopsticks and pour over the [steaming hot] rice"—which partially cooks the egg.

Note: The historic village of Shirakawa-gô, in Gifu prefecture of central Japan (northwest of Tokyo), is one of Japan's UNESCO World Heritage Sites.

5282. Erewhon, Inc. 1976. Erewhon. Autumn 1976. Boston, Massachusetts. 17 p. Catalog and price list.

• ***Summary:*** On the front cover is a photo of six adults and three children standing atop the Erewhon warehouse building at 33 Farnsworth Street in Boston. In the background are skyscrapers and the Boston skyline. The people are: Front row (left to right): Maureen Trail Young (sister of Rosemary Trail), Richard Young, Holly Young (youngest child), Tansy Young, Lori Young. Back row (left to right): David Simon, Jeanne Bleiweiss, Tom Herzig.

On the first page, Tyler Smith, writes about this catalog and upcoming events. "To help stimulate our customers, in the late Fall, Erewhon will present a lecture and demonstration day in both the New York and Boston areas which will feature as the main teacher, Mr. Bill Shurtleff, author of *The Book of Tofu* and *The Book of Miso*. He will be coming to this area on a lecture tour from Japan."

Contents: Grains. Cereals. Flour. Pasta. Juices. Beverages. Spring water. Natural sodas. Nik's snaks. Barbara's bakery. Bliss pastries (whole-grain, sweetened with unfiltered honey, made at Cable Springs Bakery). Donna's butter cookies, Butterchews, Lind's candy bars. Chico-San candies (Yinnies, Yinnies San-Wich). Crackers & Chips (incl. tamari corn chips or corn tortilla chips). Rice cakes & bread. Cheese. Butter. Yogurt. Kefir. Produce. Dried fruit. Seeds & nuts (incl. alfalfa seeds unsprayed, almonds, Brazils, cashews, peanuts, pecan halves, pistachios, pumpkin seeds, sesame–brown, sunflower seeds, walnuts). Granola. Beans (incl. aduki [azuki], organic black soybeans or yellow soybeans from New York, and black soybeans from Japan). Seed & nut butter (almond butter, cashew butter, peanut butter {Erewhon or Deaf Smith–crunchy, or unsalted}, sesame butter, sesame-peanut butter, sesame tahini, sunflower butter). Fruit butters. Oils: Erewhon oils, Arrowhead oils (incl. Soy oil). Condiments-sauces. Erewhon sauces (incl. 4 sizes of tamari soy sauce). Erewhon miso (kome {rice & soy}, Hacho {soy only}, or mugi {barley & soy}–each in 3 sizes). Erewhon Japanese imports (incl. shiitake mushrooms, barley kogi [sic, koji] to make mugi [miso], kuzu arrowroot powder, tekka seasoning, nigari (to make tofu), umeboshi). salt (incl. Herbamare salt, unrefined sea salt from France), olives, pickles, sauerkraut, brown rice vinegar (from Japan), Pure and Simple vinegar (Honey, red wine, apple cider natural), mulled cider spices. Baking (incl. barley malt syrup). Niblack's. Fearns [sic, Fearn's] (incl. Rich Earth wholewheat & soy pancake mix, Soya powder natural). Honey-syrup. Erewhon packages. Beans, grains & seeds (incl. soybeans yellow organic), hot cereals, flours (incl. soybean full-fat organic), baking. Arrowhead packages. Sea vegetables (agar-agar, hizıkı [hijiki], kombu, nori, flavored nori with tamari, wakame, dulse). Fmali ginseng. Teas: Erewhon, Celestial Seasonings. Body care: Cattier clay, Dr. Bronner's, Natural Living, Nature's Gate, Orjene, Tom's, Iuffas. Cookware (incl. soy dispenser glass). Readables: Magazines, books, posters, flyers-recipes. Apparel. Discontinued–sale. New products (Bob Swanson was the former owner and creator of Llama, Toucan and Crow, a New England distributor; Chico-San's organic rice cakes).

Erewhon's New York / New Jersey office is located at 303 Howe Ave., Passaic, NJ 07055. Address: 33 Farnsworth Street, Boston, Massachusetts 02210. Phone: 617-542-1358.

5283. Ford, Frank. 1976. The simpler life cookbook from Arrowhead Mills. Fort Worth, Texas: Harvest Press. 157 p. Introduction by Fred Rohé. Index. 18 cm. [13* ref]

• ***Summary:*** The copyright page states: "First printing–Oct. 1974–23,000. Second printing–Feb. 1976–17,000. Third printing [this book], 110,000. This book is the second third edition of a book which was originally released under the title of *Pack to Nature.*"

The body of the book is the same as that of earlier printings. However the 2-page directory titled "Some Natural Foods Sources" has been updated and expanded. It

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now lists 41 companies with full addresses and Zip codes. New additions include: Arrowhead Mills Distributing Co. (Denver, Colorado). Ceres Natural Foods (2582 Durango Dr., Colorado Springs, Colorado). Cinagro Distributors (now in Chamblee, Georgia). Earth Bound, Inc. (Woodbury, Connecticut). Earthwonder (Blue Eye, Missouri). Health Foods, Inc. (Des Plaines, Illinois). Houston Health Food Distributors (Houston, Texas). Kahan & Lessin Co. (Compton, California). Kozek Products (Los Angeles, California). Landstrom Co. (San Francisco, California). Laurelbrook Foods No. 2 (Raleigh, North Carolina). Lifestream Natural Foods (now at 1241 Vulcan Way, Richmond, BC, Canada). Manna Foods (Scarborough, Ontario, Canada). Midwest Natural Foods (Ann Arbor, Michigan). Nature's Best (El Segundo, California). Pure & Simple (795 West Hedding, San Jose, California). Shiloh Farms, Inc. Eastern Warehouse (Martindale {near New Holland}, Pennsylvania). The Wide Earth Store (Anchorage, Alaska). Tochi Products (Fargo, North Dakota).

Note: This is the earliest document seen (March 2006) that mentions Health Foods, Inc., a wholesale distributor of health foods and natural foods in Des Plaines (near Chicago). Address: Deaf Smith County, Hereford, Texas.

5284 Kozaki, Michio. 1976. Tônan Ajia no miso to shôyu [Southeast Asia's miso and shoyu]. *Miso no Kagaku to Gijutsu* (*Miso Science and Technology*) No. 271, p. 1-7, Sept. [Jap]

5285 Revelle, Roger. 1976. The resources available for agriculture: The physical resources of earth, air, fire (energy) and water are large but essentially fixed. The biological and social resources, however, are far from being pressed to the limit. *Scientific American* 235(3):164-68, 170, 172-74, 177-78, Sept.

• ***Summary:*** Pages 170 and 172 discuss the importance of microorganisms and fermentation. "The fermentation process not only adds distinctive flavors, which are prized in their own right, but also often augments the content of riboflavin and other vitamins. Sauerkraut and yogurt are familiar fermentation products in American diets; tempeh, ragi, sufu, shoyu, ang-kak, tea fungus and mizo [sic, miso] are among those eaten in Asian countries." Address: Director, Center for Population Studies, Harvard Univ., Massachusetts.

5286 Shurtleff, William; Aoyagi, Akiko. 1976. The book of miso. Hayama-shi, Kanagawa-ken, Japan, Soquel, California, and Brookline, Massachusetts: Autumn Press. 256 p. Sept. Illust. by Akiko Aoyagi. Index. 28 cm. Revised ed. 1981. New York, NY: Ballantine Books, 620 p. [60 ref]

• ***Summary:*** Contents: What is miso? Preface. Acknowledgments. Part I. Miso: Savory, High Protein Seasoning. 1. Soybeans, protein and the world food crisis. 2. Miso as a food. 3. The miracle of fermentation. 4. The varieties of miso: Introduction. An overview: Natural vs. quick miso, salty vs. sweet miso, red vs. white miso, chunky miso and koji miso vs. smooth miso, expensive vs. inexpensive miso, miso from the provinces.

Regular Miso: Rice miso (red / aka, light-yellow / shinshu, mellow red / amakuchi akamiso, mellow beige / amakuchi tanshoku, mellow white / shiro koji, sweet red / edo or edo ama-miso, sweet white / Kyoto shiro miso), barley miso (karakuchi mugi, mellow barley / amakuchi mugi), soybean miso / mamé miso (miso-dama, Hatcho miso, soybean miso / mame miso, tamari miso). Special Miso: Finger lickin' miso / Namemiso (Kinzanji miso, moromi miso, hishio, namémiso, natto miso, goto miso), sweet simmered miso / nerimiso. Modern Miso: Akadashi miso, dehydrated or freeze-dried miso, low-salt / high-protein miso.

Part II. Cooking with Miso (400 recipes). 5. Getting started. 6. Recipes from East and West. Miso toppings, miso in dips & hors d'oeuvres, miso in spreads & sandwiches, miso dressings with salads, miso in soups & stews, miso in sauces, miso with grains, beans & tofu, miso in baked dishes, miso sautéed & simmered with vegetables, miso in grilled dishes, miso in deep-fried dishes, miso & eggs, miso in desserts, miso pickles, koji cookery.

Part III. The Preparation of Miso. 7. Making miso at home and in communities. 8. Japanese farmhouse miso (incl. miso-dama). 9. The traditional miso shop. 10. The modern miso factory. Appendixes: A. A brief history of chiang, miso, and shoyu: Introduction, Chinese chiang, early Japan, the Nara Period (710 A.D. to 784 A.D.), the Heian Period (794 A.D. to 1160 A.D.), the Kamakura Period (1185 A.D. to 1333 A.D.), the Muromachi Period (1336 A.D. to 1568 A.D.), tamari–the forerunner of shoyu (Priest Kakushin returns to Japan from China, where he learned how to make Kinzanji miso, settles at Kokoku-ji temple near town of Yuasa, discovers tamari), miso during the Edo Period (1603 A.D. to 1867 A.D.), the development of shoyu the Meiji and Pre-war Periods (1867 A.D. to 1941 A.D.), modern times, transmission to the West.

B. The varieties of Chinese chiang, Korean jang and Indonesian Tao-tjo. C. The chemistry and microbiology of miso fermentation. Introduction, koji starter molds, making koji starter, making koji–the first fermentation, cooking the soybeans, preparing the miso–the second fermentation, the finished miso. D. People and institutions connected with miso: In Japan–Miso research scholars and institutes, exporters of natural miso and koji to the West, traditional or semi-traditional shops making natural miso, Japan's ten largest miso factories (gives the production in tons/year for several companies), other well-known miso makers. Makers of koji starter and koji. Japanese restaurants specializing in miso cuisine. North America–Miso research scholars and institutes, commercial miso makers, companies importing Japanese miso, koji, or koji starter, individuals interested

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in miso. Europe (Belgium, England, France, Germany, Holland, Italy, Portugal) and Latin America (Brazil, Costa Rica, Mexico, Venezuela). E. Miso additives. F. Miso with seafoods, chicken, and meat. G. Table of equivalents. H. So you want to study miso in Japan? Bibliography. Glossary. About the authors (autobiographical).

Note 1. This is the earliest English-language book seen (July 2000) that has the word "miso" in the title. It is also the first book in the Western world written entirely on the subject of miso.

Note 2. This is the earliest document seen (July 2000) that mentions "Hatcho miso" (spelled that way–which is now the correct romanization). Hatcho is a Japanese place name meaning (approximately) "Eighth Street."

Note 3. This is the earliest document seen (Sept. 2002) that contains industry and market statistics on individual miso companies.

Note 4. This is the earliest document seen (March 2009) that gives illustrated details about commercial miso production.

Note 5. An advertisement on the inside rear cover of the paperback edition of this book announced that the authors were preparing *The Book of Sea Vegetables*. That book was half researched and written but never published because of concern with pollutants in sea vegetables, and increased interest in soyfoods. Address: 790 Los Palos Dr., Lafayette, California 94549.

5287 Shurtleff, William; Aoyagi, Akiko. 1976. Tofu & Miso America Tour: 29 Sept. 1976 to 3 Feb. 1977 [Itinerary with two maps]. Lafayette, California: New-Age Foods Study Center. Unpublished manuscript.

• ***Summary:*** On 13 Sept. 1976 the authors bought a large, white 1975 Dodge Tradesman 300 van (used, with 40,000 miles on it). On one side Akiko painted in large, bold letters "Tofu and Miso America Tour 1976-77." Their *Book of Tofu* had been published in December 1975 and *Book of Miso* on 23 Sept. 1976. On Sept. 29 they packed the van full to the ceiling with their books on tofu and miso, plus Larry Needleman's tofu kits–and departed.

This trip had four main purposes: (1) To introduce tofu and miso to America; (2) To introduce people to the many benefits of a meatless/vegetarian diet, (3) To encourage people to start soyfoods companies, especially tofu shops; and (4) To promote the authors' newly-published *Book of Tofu* and *Book of Miso*.

This itinerary includes the name and address of 64 people and organizations visited. Many of these were pioneers in the soyfoods and natural foods movements: Sept. 29–David and Kathleen Sandler, Robert Dolgin, Don Wilson, Farm Food Co. (San Rafael, California; we observed and recorded in detail how Don Wilson made tempeh and tempeh starter / inoculum at Farm Food Co.). Oct. 1–Petaluma, California. Oct. 2–Josephine County Food Center, Grants Pass, Oregon. Oct. 3. Heliotrope Natural Foods (Salem, OR). Oct. 4–West Bank Cafe (Corvallis, OR). Oct. 5. Visit Linda Shurtleff (McMinville, OR). Visit *Rain Magazine* (Portland, Oregon). They do an interview which is published in their Nov. 1976 issue. Oct. 6. Blake Rankin and Janus Natural Foods (Seattle, Washington). Oct. 7. Janus. Oct. 8–Luke Lukoskie and Sylvia Nogaki of Island Spring (Vashon, Washington). Oct. 10–Jack Grady, a macrobiotic (Spokane, WA). Oct. 13–Univ. of Minnesota. Oct. 14–Georgie Yiannias of Wedge Food Co-op and Ananda Marga (Minneapolis, Minnesota). Our largest class with 300 people. Oct. 15–Barbara ("Bobbie") Reinhardt Shurtleff dies of colon cancer at Alta Bates Hospital, Berkeley, CA. Oct. 15. Famine Food Co-op (Winona, Minnesota). Oct. 16–Bonnie Maroney of The Wisconsin Farm (Ettrick, WI). Oct. 19–Visit George Strayer and Larry Krueger of the American Soybean Assoc. (Hudson, Iowa). Visit David and Ann Tucker (Iowa City, Iowa). Oct. 20. Outpost Natural Foods (Milwaukee, WI). Visit Bountiful Bean Co-op. Oct. 21. Visit Dr. Danji Fukushima and Kikkoman Foods (Walworth, Wisconsin). Oct. 22–Visit Drs. Hesseltine, Wang, Wolf, Mustakas, Cowan at Northern Regional Research Center (Peoria, Illinois). Oct. 23–Morning class on commercial production for Les Karplus and 5 people at Vegetarian Incorporated (Urbana, Illinois). Oct. 23-24. Side trip to visit ADM and Staley (Decatur, IL). Oct. 24–Les and Debbie Karplus of Vegetarian Inc. (Urbana, IL). Oct. 25–Visit Dr. L.S. Wei of the Univ. of Illinois Dept. of Food Science (Urbana, Illinois). Evening program for Karplus in Urbana. Oct. 26. Purdue University (Indiana). Oct. 27–Chris Steele (Lansing, Michigan). Oct. 28–Mike Potter and Louis Howie of Eden Foods (4601 Platt Rd., Ann Arbor, Michigan). Oct. 29–Calico Market (Erie, Pennsylvania). Oct. 30–Visit Greg Weaver and Jay Thompson of Rochester Zen Center (Rochester, New York; Later Northern Soy). Visit Genesee Co-op. Oct. 31–Alternative Health Education Center (Rochester).

Nov. 1–Visit Arnold Karmody at Empty Cloud (Canandaigua, New York). Meet Dr. Keith Steinkraus (Geneva, New York). Nov. 2–Visit with Dr. Steinkraus at New York Agric. Exp. Station (Geneva, NY). Lunch together with his wife, Maxine. Nov. 3–Tom MacDonald at Hannibal, New York. Nov. 4–Ira and Kathy Leviton of Cornercek Bakery (South Deerfield, Massachusetts). Visit Laughing Grasshopper tofu shop just before it begins operation. Nov. 5–Fritz Hewitt of Common Ground Restaurant (Brattleboro, Vermont). Visit Tom Timmins of Llama, Toucan & Crow (Brattleboro). Nov. 6. Shep Erhard (Franklin, Maine). Nov. 7–Ann S. Johnson at Univ. of Maine (Orono, ME). Nov. 8–Visit Marine Colloids (Rockland, Maine). Nov. 10–Drive to Boston, stay with Nahum & Beverly Stiskin (Brookline). Nov. 13–Tofu & Miso program in Boston. Visit Erewhon Natural Foods (33 Farnsworth St., Boston, Massachusetts). Martha Trundy, Jeffrey & Gretchen Broadbent. Nov. 14–Visit to shops in Boston's Chinatown. Michio and Aveline Kushi

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give a big party in our honor at their home at 62 Buckminster Rd., Brookline, then take us out to dinner at the Seventh Inn. Nov. 15–Tofu-making class at a home in Boston. Nov. 17–Visit offices of *East West Journal*. Sherman Goldman conducts long interview, later published in Jan. 1977 issue. Misomaking class at home of Ken Burns. Nov. 18–Visit Joel Wollner in Cape Cod. Nov. 19–Radio show then program for Joel. Nov. 20–Peter Smith at Quaker group in Pennsylvania. Nov. 22–Visit Woods Hole, Massachusetts to study sea vegetables. Evening program at New Bedford, MA. Nov. 23–Stay with Seung Sahn, Sa Nim at Providence, Rhode Island Zen Center. Meditate and show students how to make tofu. Evening at Insight Meditation Center, Barre, MA, a Vipassana center in a former Catholic seminary, co-founded in 1976 by Jack Kornfield, Joseph Goldstein and 3 others. We have dinner, meditate with the sangha, and hear Jack talk about Vipassana. Nov. 24 Sit morning zazen with master and students at Providence zendo. Nov. 25–Thanksgiving. Akiko and I stay alone in a house near Hartford, Connecticut and taste a good tofu pumpkin pie. I read about seaweeds. We take a long walk in the countryside. Nov. 26–Program for Erewhon Natural Foods in Hartford (stay with Maria Orefice, owner of Garden of Eating restaurant in Hartford). Article in *The Hartford Courant* (Dec. 1). Nov. 27–Long River Food Coop in Connecticut. Nov. 28–Stay with Susan and Kirk Gershuny of Snowflower (Tivoli, New York). They plan to make soy ice cream soon. Nov. 29–Drive in Deep snow to the New York Farm in Franklin, New York. Stay in a big house they built. Nov. 30–Carl Bethage of the East West Center in Gardiner, New York. Also did a radio program.

1976 Dec. 1–Visit Frances Moore Lappé at her upstairs office in Hudson-on-Hastings, New York. Then visit her large home on the hillside. Dec. 1-5–We missed a program for Annemarie Colbin in New York City (partly because we feared our van would be burglarized on the street) so we stayed Dec. 1-5 at the luxurious home of Leo S. Nikora (Niki, Bobbie's friend). I work on writing *The Book of Kudzu*. Dec. 6-7. Program for 40 people (Hosts: Nancy N. Bailey and Robert Rodale) at Rodale Press (Emmaus, Pennsylvania). I am surprised they serve white sugar on their dining tables. Dec. 8–Tim Snyder of Ecology Co-op in Philadelphia. Dec. 9–Stay at home of Sylvia Anderson in Pleasantville, New Jersey and do a program upstairs in a modern university. Study magnificent photos of Native Americans by Edward S. Curtis. Dec. 10–Visit Jay and Freya Dinshah of the North American Vegetarian Society (Malaga, New Jersey); their poor vegan child has bowed legs. Dec. 12–Cindy Blouse in Dallastown, Pennsylvania. Dec. 13–Visit Laurelbrook Foods, a natural foods distributor in Forest Hill, Maryland. We meet Rod and Margie Coates. Dec. 14–Big program hosted by Ella May Stoneburner and Seventh-day Adventists near Washington, DC. Dec. 15–Michael Rosoff (who ran the East West Center in Washington, DC) planned to host a class in a DC church. After we witness a robbery, we are afraid to leave our van on the street. So we do a scaled-down program in the home of Murray and Pam Snyder, which was the East West Center in Baltimore, Maryland. Visit Laurelbrook Foods Warehouse #2 in Durham / Chapel Hill. Dec. 16–Roanoke Food Co-op in Copper Hill, Virginia. Dec. 17-18–John Shuttleworth and Jim Morgans of *Mother Earth News* (Hendersonville, North Carolina). They do a long interview and take photos. Program at night. Note: An audio tape of Bill's talk at this program is filed with Soyfoods Center documents for 1976. Dec. 19–Chandler Barrett in Atlanta, Georgia.

Note 1: This is the earliest document seen (April 2001) concerning the work of Ira Leviton or Tom Timmins with soy. One evening, before Shurtleff was scheduled to speak at Leviton's Cornercek Bakery, Leviton drove Shurtleff to see the Laughing Grasshopper Tofu Shop which was under construction on the second story of an old wooden building in the nearby town of Millers Falls, Massachusetts. Much of the equipment was made out of wood–including wooden curding vats and a wooden cider press. The company opened in Jan. 1977.

Note 2: This is the earliest document seen (April 2006) concerning Llama, Toucan & Crow in Brattleboro, Vermont.

Note 3: This is the earliest document seen (May 2006) concerning the forerunners of United Natural Foods, Inc. (INFI)–in the form of Llama, Toucan & Crow. Address: 790 Los Palos Manor, Lafayette, California 94549. Phone: 283-3161.

5288. Shurtleff, William. 1976. New-Age Foods Study Center: Basic purposes and activities (Leaflet). Lafayette, California. 1 p. Single sided. Sept. 28 cm.

• ***Summary:*** "1. To work toward creative, low-cost solutions to the present world food/protein crisis by doing basic research and writing books... Our special interests include soybean products (tofu, miso, tempeh, shoyu, etc.), sea vegetables, whole-grain bread, and kuzu.

"2. To aid in the spread of the ideas found in our writings by regularly responding to invitations from any part of the world to do lecture/demonstrations and cooking classes."

3. To encourage the adoption of meatless and vegetarian diets which help make the best use of the planet's precious food resources, are low in cost, conducive to the development of a healthy body and clear mind, kind to animals, and ecologically sound.

"4. To encourage people in the West to begin commercial or community production of tofu, miso, and tempeh.

"5. To provide centers where people can come to learn more about our work and to begin their own study of basic important foods. In Japan, we assist people in studying with tofu- and miso masters."

"6. To work actively to promote the key concept of

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food self-sufficiency and simpler, low-cost lifestyles that are harmonious with the needs of the planetary ecosystem. Likewise to encourage deeper understanding of selfless service, and of daily life and work as a spiritual practice.

"7. To provide a catalog of publications and materials related to our work. We invite you to contact us and we hope we may be of service to you." Address: New-Age Foods Study Center, 790 Los Palos Dr., Lafayette, California 94549. Phone: (415) 283-3161.

5289. Shurtleff, William; Aoyagi, Akiko. 1976. Tofu & Miso America Tour: 29 Sept. 1976 to 3 Feb. 1977. Continued from Jan. 1977. [Itinerary with two maps]. Lafayette, California: New-Age Foods Study Center. Unpublished manuscript.
• ***Summary:*** Continued. 1976 Dec. 21. Arrive at The Farm in Summertown, Tennessee. Meet Margaret Nofziger and Stephen Gaskin. Stay until 2 Jan. 1977. We stayed most of the time at "Hoot Owl Hollow," a large community owner-built home with many families; our host was Edward Sierra. During the next few weeks we stayed in a parked mobile home (owned by the Sandlers) in a lovely valley about 1 hour drive away. I worked on *The Book of Kudzu* final draft. Heavy confrontation with Farm folks–as I am about to start a program–about how they didn't like my way. Write a 4-page pamphlet titled "What is Tempeh?" jointly with Cynthia Bates. 1976 Dec. 31–This is our first year with significant income ($27,390, mostly from Autumn Press royalties) but no profit. During 1976 thirty articles and book reviews about our work with tofu and miso were published in magazines and newspapers in the USA and Japan.

1977 Jan. 2–Our Tofu & Miso America Tour continues. Jan. 3–Stay in a suburban home with Lynn Delacruz in Meridan, Mississippi. Jan. 4–Program for Atlantis Distributors in New Orleans. That night we stay in a trailer home with John and Katherine Gabriel in Houma, Louisiana. They are from The Farm and make commercial tempeh in their trailer. Jan. 6–Jim Baker (Dallas, Texas). After the program I meet Dr. Ralph Sand who is studying tofu and soy cheeses at Anderson Clayton. We also visit with my cousin, Bob Shurtleff, near Dallas. Jan. 7–Jane Binante in Denton, Texas. Jan. 9–Jim Hemminger of Gregg St. Tofu Co. (started by Thom Leonard) in Fayetteville, Arkansas. His partner is Mary Weingartner. We sleep on the floor of a small house in Fayetteville and the next morning see Jim make tofu in a bathtub. Jan. 10–East Wind in Tecumseh, Missouri. Jan. 12–Stay with Robert Nissenbaum (a fine, humble fellow) in St. Louis, Missouri. I finish typewritten manuscript of "What is Tempeh?" Jan. 13–Program at a restaurant, The Sunshine Inn (St. Louis). Sponsored by The Ethical Society. Stephen Uprichard, Dale Deraps, and Robert Nissenbaum are there.

Jan. 15–Meet David and Danette Briscoe (Kansas City, Missouri; they soon start publishing *Soycraft*, a small periodical on soyfoods), dinner with Thom Leonard at his home in Lawrence, Kansas (we have miso soup with miso that Thom made, then do a big program sponsored by the Mercantile Community Co-op in downtown Lawrence at either the Lawrence Library or Community Center–in a big downstairs room. I tape the lecture. Unbeknownst to me, Ken Bader, CEO-to-be of the American Soybean Assoc., is in attendance). Jan. 16–Visit Bob Amelay of the Omaha Food Co-ops in Omaha, Nebraska. Jan. 17–Drive across Nebraska to Denver. Jan. 18-19–Dave Bolduc and Christie Shurtleff in Boulder, Colorado. The first night we do a big tofu program in the historic Boulder Theater. That afternoon we have an audience with the Karmapa–a high Tibetan spiritual leader, who has diabetes, we give him an inscribed hardcover copy of *The Book of Tofu*. Akiko recalls cooking tofu burgers for him. That evening in a large, packed hall, we witness his Holiness conduct the Black Crown Ceremony. Jan. 20. Jimmy Carter is inaugurated as president. Jan. 24–Program for The Colorado Farm in Hotchkiss, Colorado–way out in the boondocks. Jan. 25–Stay with Andrea Chin in Taos, New Mexico. Visit Lama Foundation high above Taos in the snow (Steve Durkee, teacher). They have many small meditation cubicles around the hillside and have just finished a nice adobe meditation hall. Near Durango, Colorado, we visit Ed Tripp, who looks lonely, sad and desolate, farming a little patch of organically grown wheat and living alone in a bare shack on coffee and cigarettes. Jan. 26. We stay somewhere in New Mexico. Jan. 27–Program at the First Unitarian Church in Albuquerque (7:9 p.m.) hosted by Michele E. Martin of Jemez Bodhi Mandala Zen Center, Jemez Springs, New Mexico. Sit meditation in their cold Rinzai zendo then soak in the hot springs outside in the snow. Their teacher, Sasaki roshi, is not there. Jan. 28–Susan Berry in Silver City is supposed to host a program. We cannot find her house. At one point along in here we do a program in or near Utah in a remote church up on a little bluff. Dinner before at Frosty Hot Dog place. Jan. 29–Long drive across Arizona to San Diego. Jan. 30–Big program in San Diego for 350 people at the Ocean Beach Community School hosted by David and Barbara Salat, publishers of *Well Being* magazine. Afterwards we stayed overnight on their houseboat in San Diego Bay. Magical. Akiko had a bad cough and was very tired.

In Los Angeles we spend a day (in late January or early February 1977) with Lewis Headrick and Jimmy Silver visiting three small tempeh shops: Bali Foods (in Baldwin Park, run by Mr. Henoch Khoe), Country Store Health Foods (in Sun Valley; Joan Harriman), and Toko Baru (in West Covina; Randy Kohler). One evening we had dinner with Mr. Yamauchi and perhaps Al Jacobson. I gave a presentation on tofu. Afterwards, in the parking lot, Mr. Yamauchi gave me an envelope containing several hundred dollars in bills–his way of saying thank you for the work we were doing on behalf of tofu. Feb. 1. Drive to northern California, then have dinner at the home of Herman and Cornelia Aihara (Oroville, CA). Feb. 2. Last program of the tour for

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Harold Lockhard of the Sacramento Natural Foods Co-op (Sacramento, California; Program is in a modern college building).

On 3 Feb. 1977 arrive home in Lafayette, California.

On this 4-month tour the Shurtleffs, trying to do for soyfoods what Johnny Appleseed did for apples, presented 70 public programs attended by about 3,646 people, did many media interviews and appearances, and travelled 15,000 miles. They had a gross income of $18,020 from honoraria and sales of their books (Book of Tofu, Book of Miso), tofu kits, pamphlets, and nigari. Total trip expenses were about $5,361 plus about $7,200 for books from the publisher, leaving a net income of about $5,459. It was a huge, challenging, and exhausting Odyssey that bore abundant fruit in the founding of a new tofu shop almost everywhere they spoke.

1977 Feb. 9–Meeting in Lafayette (790 Los Palos Dr.) with Robert Dolgin and David Sandler (from the Farm and Farm Foods in San Rafael) and Larry Needleman leads to the establishment of Bean Machines, Inc. (BMI). The Farm places a firm order for a Japan tofu system.

1977 Feb. 12–Bill and Akiko leave America and fly to Japan. Air fare paid by Hydrometals. Address: 790 Los Palos Manor, Lafayette, California 94549. Phone: 283-3161.

5290. Shurtleff, William; Aoyagi, Akiko. 1976. Tamari (Document part). In: William Shurtleff and Akiko Aoyagi. 1976. The Book of Miso. Hayama-shi, Kanagawa-ken, Japan, Soquel, California, and Brookline, Massachusetts: Autumn Press. 256 p. See p. 50, 219-21. Sept. Illust. by Akiko Aoyagi. Revised ed. 1981. New York, NY: Ballantine Books. 620 p. [60 ref]

• ***Summary:*** In Chapter 5, "Getting started," in the section on "Basic ingredients," is a subsection titled "Tamari" which states (p. 50): "A close relative of shoyu, tamari is prepared from a koji which contains only soybeans and no wheat, it has a distinctive, slightly strong flavor and aroma, a dark brown color, and a fairly thick consistency. Produced either as a byproduct of tamari miso (p. 44) or as a food in its own right, it is now rarely used in its natural form, being generally made into *sashimi-damari* by mixing it with miso-damari (see below), *mizuamé*, cane sugar, caramel, and often preservatives. Although not widely used in Japan, it remains fairly popular in Kyoto and central Japan, where it is used as a seasoning for *sashimi* (raw fish). In ancient times tamari was widely used in its natural form and highly prized as a fine seasoning, having much the same flavor as a best-grade Chinese soy sauce. Today, an increasing amount is made synthetically.

"*Miso-damari*–also called *uwahiki*–is the tamari-like liquid that accumulates in *any* variety of miso during fermentation. Thicker and richer than tamari, it is gathered only in very small quantities and is not sold commercially. A delicious by-product of most homemade miso (it rises to the surface in summer and settles in winter), it may be used like shoyu and is especially delicious with hors d'oeuvres.

In "Appendix A: A brief history of chiang, miso and shoyu," is a section (p. 219-21) titled "Tamari: The forerunner of shoyu." Address: 790 Los Palos Dr., Lafayette, California 94549.

5291. Shurtleff, William; Aoyagi, Akiko. 1976. Appendix B: Varieties of Chinese chiang, Korean Jang, and Indonesian Tao-tjo [Tauco] (Document part). In: William Shurtleff and Akiko Aoyagi. 1976. The Book of Miso. Hayama-shi, Kanagawa-ken, Japan, Soquel, California, and Brookline, Massachusetts: Autumn Press. 256 p. See p. 277-331. Sept. Illust. by Akiko Aoyagi. Revised ed. 1981. New York, NY: Ballantine Books. 620 p.

• ***Summary:*** Contents: Introduction. Note: Of the romanized Chinese names given in curly brackets below, the first is in the Wade-Giles transliteration, the second is in the more modern pinyin transliteration.

Chinese chiang: Introduction. Red or regular chiang (chunky chiang, hot chunky chiang, Szechwan red-pepper chiang, Hamanatto chiang, Cantonese red chiang, great chiang, yellow-red chiang), black chiang (sweet wheat-flour chiang, black chiang), assorted chiangs (introduction, red-pepper chiang, Canton sweet simmered chiang, dried chiang, other varieties (none of which contain soybeans or grain koji: sesame chiang, peanut chiang, umeboshi chiang, shrimp chiang, corbicula chiang, tangy chiang, semi-fermented chiang)), chiang sauces (bean sauce, hoisin sauce {*hai-hsien chiang, haixiang jiang*}, oyster sauce, barbecue sauce, other chiang sauces, none of which contain soybeans or grain koji: shrimp sauce, Chinese Worcestershire sauce, Chinese ketchup). Note 1: The Chinese (Wade-Giles) names and characters for each of these sauces are given on page 230.

Korean jang: Introduction. Korean soybean jang (*doen jang*), Korean red-pepper jang (*kochu jang*), Mild red-pepper jang (*mat jang*), Chinese sweet black jang (*cha jang* or *chungkuk jang*), Japanese red jang (*wei jang* or *ilbon jang*).

Note 2: This is the earliest English-language document seen (March 2009) that uses the word "kochu jang" (or "kochu-jang") to refer to Korean-style red pepper and soybean paste (miso).

Indonesian tao-tjo: Summary.

Note 3: This is the earliest English-language document seen (Jan. 2012) that uses the term "chungkuk jang" to refer to a fermented Korean soyfood or seasoning. Actually, the term refers to Korean-style natto which, although it is a salted paste, is fermented using bacteria (*Bacillus subtilis*) and therefore does not belong in a book about miso. Address: 790 Los Palos Dr., Lafayette, California 94549.

5292. Shurtleff, William; Aoyagi, Akiko. 1976. The book of miso (Illustrations–line drawings) (Document part). Hayama-shi, Kanagawa-ken, Japan, Soquel, California, and

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Brookline, Massachusetts: Autumn Press. 256 p. Sept. Illust. by Akiko Aoyagi. [60 ref]

• ***Summary:*** Continued: Illustrations (line drawings, both numbered and unnumbered) show: The two Japanese characters for miso. Three men "Putting Hatcho miso to bed" by piling nearly round river stones on top of a huge vat; the pyramid shape makes the pile earthquake proof. A child holding a sheaf of grain. A round *zaru* (woven split bamboo tray) with a circle of salt in the middle. A square wooden measure (*isshô-baku*) filled with soybeans. The top of rice and barley plants showing grains and leaves. A wooden vat of red miso tied with rice-straw ropes. A miso maker standing by large wooden vats of two different sizes, with braided bamboo hoops. A well stocked miso shop in Japan (at Kichijoji train station, Tokyo). A woman standing behind two deep earthenware crocks filled with miso; balls of miso are in a basket. A sunken open-hearth fireplace (*irori*) in a traditional Japanese farmhouse with a pot hanging over the coals on a hook (*jizai kagi*) and tofu dengaku being grilled around the coals, their skewers stuck into the ash.

Nine wooden kegs of different kinds of miso piled up on 3 levels. A field of soybeans planted in rows. A hand holding soybeans pods still attached to the stem. A soybean pod split open to show the beans. (1) Bar chart of protein from different sources vs. protein returned. (2) Diagram of energy flow through two different food chains, one with a steer in the middle, the other with direct consumption of soy and grains. (3) Development aid from affluent nations as a percentage of GNP (1960-1971). Stylized soybean plant growing out of a stylized Planet Earth. Miso gift pack, with poly bags of rice, barley, and Hatcho miso. A Japanese pipe *kiseru*. (6) Graph of intestinal cancer vs. meat consumption among females in selected countries, the more meat consumed, the more cancer. Miso aging (from ***Miso Daigaku***). (7) The varieties of miso and their characteristics (full-page table). (8) The percentage of salt in different miso varieties.

(9a) Map of Japan showing where the different types of miso originate. (9b) Map of Japan showing geographical miso preferences. A head of rice. (10) Famous sub-varieties of salty rice miso. Two heads of barley. Table about two types of barley miso. Two sets of soybean leaves with pods. Table about three types of soybean miso. The Japanese characters for Hatcho Miso. (11) A wooden sign in a Hatcho miso office: "Supplier to the Imperial Household." (12) Two cross-section views of a tamari miso vat. A small pottery crock of sweet simmered miso (*Nerimiso*). Packages of different types of modern miso: Peanut miso, akadashi miso, low-salt, high protein miso. Instant miso soup with dried frozen tofu, leeks, wakame. (14) Different types of miso packaging, both traditional and modern. A sample miso label. (13) Varieties of miso available in the West, plus characteristics of each. Squeezing a bean of miso out of the cut corner of a plastic bag. Three different shoyu containers. Six different types of tofu on a cutting board. (15) Oriental kitchen tools (utensils, full page). A small crock of salt with a wooden spoon in it.

Suribachi and modern sesame seed grinder. Tofu preparatory techniques. Broiling tofu with chopsticks on a broiling screen. Four forms of kombu. Two stylized crossed sheaves of rice. A traditional farmhouse kamado (raised earthenware cooking area). Pottery crock. Black and white sesame seeds and plant. Yuzu. Sprig of kinome. Head of garlic. Two burdock roots. Two leeks (*negi*). Making broiled miso. Hoba miso. Kaiyaki miso. Yubeshi miso. Wakame plant. A bowl of miso soup. A woman drinking hot miso soup next to a vending machine. Vegetables cut for miso soup (*mi* or *gu*). Table of the most popular ingredients in miso soup. How to make miso soup at home (4 views). Miso-koshi (woven bamboo strainer). Mad monks grinding miso. (19) Full-page table of miso soup throughout the four seasons. Shiso / beefsteak leaves. Kabocha. Daikon. Irori and jizai kagi (sunken farmhouse fireplace and overhead hanging hook). Woman serving miso by a sunken / open hearth fireplace. Woman kneeling, grinding miso with a pestle (*suri kogi*) in a *suribachi* (serrated earthenware mortar / mixing bowl).

(20) Rice patties with nori (*o-musubi, o-nigiri*). Bamboo noodle tongs. Homemade noodles in a pot. (21) Broiled mochi wrapped with nori. (22) Steamed tofu. A Chinese cleaver, with its tip stuck into a chopping block. Cultivated shiitake mushrooms growing on a log. Kabocha. Daikon. (23) Miso oden. Doténabé [Dotenabe]. Konnyaku twists. Dengaku Hoshi. Tofu dengaku (2 pieces, skewered, 3 pieces skewered in a box). Japanese eggplant (*nasu*) scored and Shigiyaki. Deep-frying with a wok. Lotus root stuffed with miso. (24) Deep-fried sandwiches. (25) Gashouse eggs. (26) Layered omelets. Japanese bamboo steamer. Kashiwa mochi. Selling miso pickles. Two pickling containers. (27) Salt-pressing. Air-drying daikon and turnips (*kabu*). Miso pickles with tea and chopsticks. Amazaké at the Nakamura-ro restaurant. How to make miso at home: Utensils, ingredients, and process (7 figures). (29) Miso fermentation crocks. Corona hand-mill. Soft mat koji.

(30) Proportions by weight of basic ingredients for various homemade misos, full-page table. (32) Utensils for homemade koji and koji starter. (33) Miso flow chart. (34) Composition of nutrients in 100 gm of basic miso ingredients. (35) Process for homemade rice koji (9 figures). (36) Graph of changes in koji temperatures. Woman leaning over miso vat.

Japanese farmhouse miso: Traditional country farmhouses (2 views). Raised farmhouse kitchen hearth, caldrons and earthenware dais (*kamado*). (38) Farmhouse floor plan. A kura (family treasury and storehouse). Two bamboo colanders. Pounding miso at Suwanose. Making miso in a traditional farmhouse (9 figures). Farmhouse soybean miso made with *miso-dama* (miso balls) (5 figures).

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The traditional miso shop: (39) A 17th century workplace (2 figures). (40) Tsujita shop floor plan. Koji trays. (41) Insulated fermentation box. (42) The small tools (full-page). (43) Shop with 2 cauldrons. (44) Steamer and cauldron. (45) A fermentation vat. (46) Shop floor at vat's rim. Preparing traditional rice miso (31 figures). Making koji using natural mold spores. Stacked koji trays. Making miso in a semi-traditional shop (5 figures). Hatcho miso: company and vats (2 views).

The modern factory (2 figures).

A brief history of chiang, miso, and shoyu (incl. evolution of Chinese characters). Hideyoshi Toyotomi and a robber on the bridge (Hatcho miso history). Making miso-damari. Inside a Kikkoman shoyu factory around 1900. Traditional shoyu seller.

Chinese chiang in earthenware jars in a courtyard. Korean jang, selling it and making at home. (48) The interaction of basic miso components during fermentation. (49) Temperature control curves for four quick misos. Edo period shoyu production. Woman cutting tofu for Dengaku and women busy making dengaku, both from the book *Tofu Hyaku Chin*. Cartoon of a man pouring himself sake, yet thinking of miso soup. Ebisu with fishing rod and big fish under left arm. Tamari shoyu pouring out of spigot at base of miso vat. Traditional Japanese kitchen utensils. Sunken fireplace (*irori*) with huge carved wooden overhead hook hanging from braided rice straw rope. Photo (in Nerima-ku, Tokyo) with brief biography of William Shurtleff and Akiko Aoyagi. Address: 790 Los Palos Dr., Lafayette, California 94549.

5293. Shurtleff, William; Aoyagi, Akiko. 1976. Appendix A: A brief history of chiang [jiang], miso and shoyu (Document part). In: William Shurtleff and Akiko Aoyagi. 1976. The Book of Miso. Hayama-shi, Kanagawa-ken, Japan, Soquel, California, and Brookline, Massachusetts: Autumn Press. 256 p. See p. 214-26. Sept. Illust. by Akiko Aoyagi. [60 ref]
• ***Summary:*** Contents: Introduction. Chinese chiang [jiang]. Early Japan. The Nara period (710-784 AD). The Heian period (794-1160 AD). The Kamakura period (1185-1333 AD). The Muromachi period (1336-1568 AD). Tamari: The forerunner of shoyu. Miso during the Edo Period. The development of shoyu. The Meiji and pre-war periods (1867-1941). Modern times. Transmission to the West.

Illustrations: Evolution of Chinese characters. Hideyoshi Toyotomi and a robber on the bridge (Hatcho miso history, p. 219). Making miso-damari (p. 220). Inside a Kikkoman shoyu factory around 1900 (p. 222-23). Traditional shoyu seller (p. 226).

Page 219: "The origins of modern shoyu can be traced more clearly to the mid 1200s when the Japanese priest Kakushin returned from China, having learned there the technique for preparing Kinzanji miso. Establishing himself at Kokoku-ji temple near the town of Yuasa..." Address: 790 Los Palos Dr., Lafayette, California 94549.

5294. Brentano's. 1976. Brentano's pre-Christmas book sale:... All paperbacks 20% off, limited time only (Ad). *Los Angeles Times*. Oct. 7. p. G16.
• ***Summary:*** The first of 29 books listed is: "1. Secrets of Oriental cooking: The Wok Cookbook, by Barbara Farr with Irena Kirshman. Chinese wok cookery is the art of blending and enhancing flavors with the aid of exotic ingredients such as bok choy and dow see [fermented black soybeans], hoi sin [hoisin] sauce and sauce and five-spice powder."

5295. Koshiyama, I.; Fukushima, D. 1976. A note on carbohydrates in the 11s globulin of soybean seeds. *Cereal Chemistry* 53(5):768-69. Sept/Oct. [12 ref]
Address: Noda Inst. for Scientific Research, 399 Noda, Noda-shi, Chiba-ken, Japan.

5296. Yong, F.M.; Wood, B.J.B. 1976. Microbial succession in experimental soy sauce fermentations. *J. of Food Technology* 11(5) 525-36. Oct. [6 ref]
Address: Dep. of Applied Microbiology, Univ. of Strathclyde, George Street, Glasgow G1 1XW [Scotland].

5297. Hillman, Howard. 1976. 10 of the world's great cuisines–A cook's tour. *New York Times*. Nov. 7. p. XX1, 26, 28, 30.
• ***Summary:*** China, like France and Italy, is a country of regional cuisines. Canton: "Over 95 percent of Chinese-American restaurants serve Cantonese-style food because most Chinese immigrants to the United States have come from Canton [Guangzhou] and its surrounding Kwantung [Guangdong] Province." Most Americanized Cantonese cooking deserves its mediocre reputation, but true Cantonese cuisine is considered China's finest. So be sure to ask your waiter for authentic Cantonese dishes that have not been adapted to American tastes. Cantonese chefs make every effort to bring out the natural flavor of ingredients rather than masking them with heavy seasonings or sauces. "Flavoring agents much employed in Cantonese cooking include oyster sauce, salted fermented black beans [fermented black soybeans], light soy sauce, rice wine, ginger and chicken stock." "Famous Cantonese dishes include Steamed Fish with Black Bean Sauce,... the vegetarian Buddha's Delight...."

Next in popularity in America, after Cantonese cooking, is Northern and "Mandarin" cuisine, which comes from the northern provinces of Hopei (which includes Peking), Shantung, and Honan. "Mandarin Cuisine," an Occidental term, correctly refers to the elaborate and delicate dishes prepared for the elite members of the now-defunct Imperial Court. Famous recipes include Peking Duck, Bird's Nest Soup, Shark's Fin Soup, etc. So we must distinguish this from the unique man-on-the-street Northern cuisine. Among

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its characteristic "flavoring agents are fermented soy bean paste, dark soy sauce, rice wine and members of the onion family [genus *Allium*],, especially garlic, leeks, scallions and chives."

Next in stateside popularity are the cuisines of Szechuan and Hunan, both known for their use of hot chilis and oil. Finally we have Shanghai, the Central Coast, and Fukien.

5298. Abu Kassim, b. Abu Bakar. 1976. Soybeans in Malaysia. *INTSOY Series* No. 10. p. 243-44. R.M. Goodman, ed. Expanding the Use of Soybeans (College of Agric., Univ. of Illinois at Urbana-Champaign).

• ***Summary:*** Contents: Introduction. Current status. Domestic markets and utilization. Prospects for production. Conclusion.

"Because little information on soybeans is available from East Malaysia, this report is confined to West Malaysia. Soybeans appear to have been introduced into peninsular or West Malaysia about 50 years ago [1926]. The crop, which has been grown among young rubber plants or as a sole crop in rotation with other annual crops, is planted primarily on small farms. Last year, however, there was a move by a few enterprising organizations to try large-scale, commercial plantings.

"Soybean products are consumed in various forms by both humans and livestock. The domestic demand greatly exceeds the local supply, which is therefore dependent upon importation ..

"Although soybeans can be grown throughout the country, a large percentage of the crop is raised in the east coast states of Kelantan, Pahang, and Trengganu of peninsular Malaysia... Peninsular Malaysia imports whole soybeans, as well as the flour, oil, and cake of the soybean. Until 1973 about 200,000 gallons of soy sauce were also imported, but in 1974 about 15,000 gallons were exported.. Soybeans are used mainly to make beanmilk, curd, sprouts, and other food products for human consumption .. It has been estimated that the local consumption of soybeans per capita per year averaged 5.3 kg for the years 1971 to 1973." Address: Field Crops Branch, MARDI (Malaysian Agricultural R&D Inst.), Serdang, Selangor, Malaysia.

5299. Ebine, Hideo. 1976. Fermented soybean foods. *INTSOY Series* No. 10. p. 126-29. R.M. Goodman, ed. Expanding the Use of Soybeans (College of Agric., Univ. of Illinois at Urbana-Champaign). [11 ref]

• ***Summary:*** Contents: Introduction. Miso. Shoyu. Natto. Conclusion. Literature cited. Discussion.

Production of fermented soyfoods in Japan in 1974 was as follows: Miso 587,228 tonnes (metric tons, this miso was made from 191,621 tonnes of whole soybeans, 2,200 tonnes of defatted soybean meal, 102,104 tonnes of rice, 22,280 tonnes of barley, 80,265 tonnes of salt)

Shoyu 1,213,350 tonnes (made from 14,278 tonnes of whole soybeans, 176,138 tonnes of defatted soybean meal, 176,319 tonnes of wheat, 209,674 tonnes of salt)

Natto 90,000 tonnes (made from 47,000 tonnes of whole soybeans). "In 1960 the National Food Research Institute initiated a project to develop a new type of soybean food in order to comply with a request from UNICEF to supply a nutritious protein food for children. The product thus developed is processed in the following way: soaked soybeans are first cooked in an autoclave at 121°C for 30 minutes. A starter of *B. natto* is then added to the hot, cooked soybeans and mixed well. The inoculated soybeans are fermented at 42°C for 8 to 10 hours. The fermented soybeans are then passed through a chopper and spread over trays for vacuum dehydration. The dried material is made into a powder for use as an ingredient, mixed with wheat flour, in biscuits. In animal feeding experiments this new food had an absorption rate of 83 percent and a biological value of 63 percent, a notable improvement compared with the absorption rate and biological value of raw soybeans."

"An ancient legend indicates that the technology for making soybean foods with the aid of microorganisms originated in China. These foods and the manufacturing process involved were introduced into Japan between 500 and 600 A.D." Address: Applied Microbiology Div., National Food Research Inst., Ministry of Agriculture and Forestry, Tokyo, Japan.

5300. Lee, Hong Suk; Park, K.Y.; Chung, B.J.; Park, J.S.; Yohe, J.M. 1976. The status of soybean production and research in Korea. *INTSOY Series* No. 10. p. 239-42. R.M. Goodman, ed. Expanding the Use of Soybeans (College of Agric., Univ. of Illinois at Urbana-Champaign).

• ***Summary:*** Contents: Introduction. Major problems related to increased soybean production. Weather, varietal improvement, planting time, soil fertility and pH, cultural practices (cropping systems, planting patterns, seed treatment and inoculation), soybean pathology and entomology. Present and future research problems.

"Good quality soybeans with large grain size have been cultivated for thousands of years in the middle and northern part of the east coast of Korea. Because soybeans have been grown primarily for subsistence, they have not been regarded as a cash crop by Korean farmers... Soybean cultivation in 1974 and 286,188.4 hectares, thus making soybeans the third major crop of Korea in hectarage...

"Soybean production has gradually increased from 231,994 metric tons in 1970 up to 318,576 metric tons in 1974. Although total soybean production has increased, it has not kept up with demand as indicated by the fact that imports have increased from 36,291 metric tons in 1970 up to 66,370 metric tons in 1974...

"Home consumption is the major area for soybean use, about 122,000 metric tons being consumed in 1974. Soybeans are prepared by mix-boiling with rice or

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vegetables, or are eaten in the form of curd, sprouts, sauce, paste, milk, and flour. The government uses soybeans primarily for military needs. Soybean oil is used for industrial purposes." Address: 1. College of Agriculture, Seoul National Univ., 2. Corps Exp. Station, Office of Rural Development; 3-4. Inst. of Agricultural Science, Office of Rural Development; 5. Crop Improvement Research Center, Office of Rural Development. All: Suweon, Korea.

5301. Sanbuichi, Takashi; Watanabe, Iwao. 1976. Soybean production in Japan. *INTSOY Series* No. 10, p. 237-38. R.M. Goodman, ed. Expanding the Use of Soybeans (College of Agric., Univ. of Illinois at Urbana-Champaign).
• ***Summary:*** "Each year Japan produces approximately 120,000 metric tons of soybeans on 90,000 hectares. About 30 percent of this yield is raised on the northern island of Hokkaido, where large-scale farming is practiced. Especially in the northeastern part of Hokkaido, soybeans are a very important crop... Throughout the country the average soybean yield is about 1.4 metric tons per hectare, but during the past four years production in the Tokachi District of Hokkaido has risen to between 1.8 and 2.0 metric tons per hectare...

"In Japan soybeans are used principally as a source of edible oil and protein foods, such as miso (bean paste), shoyu (soy sauce), tofu (soybean curd), and natto (fermented soybeans). The soybeans produced in Japan usually have large seeds, a high protein content, and are of a quality suitable for producing high quality soy products...

"In general, early varieties are cultivated in the high latitudes and late varieties in the low latitudes, but on the southern island of Kyushu early varieties are occasionally used. Known as summer soybeans, they are sown in the spring and harvested in the summer. Late varieties, which are called autumn soybeans, are sown in summer and harvested in the autumn...

"Results show that large-seeded varieties produce high yields. Soybeans grown in the northern parts of Japan usually have larger seeds than those raised in southern areas. It is believed that the marked difference between day and night temperatures and the favorable soil moisture content during the early stages of plant growth account for the large size of soybean seeds grown in the north. The author observed a serious decrease in seed size when Japanese varieties were introduced into Thailand...

"Soybeans are raised in several types of areas in Japan. Traditionally they have been planted beside the footpaths in paddy rice fields. Intercropping with wheat is another old cultural practice, although both practices are seldom used today. Because of the over-production of rice in Japan, the government has recently recommended that soybeans be cultivated in rice fields." Address: 1. Tokachi Agric. Exp. Station, Memuro, Kasai-gun, Hokkaido; 2. National Inst. of Agricultural Science, Nishigahara, Kita-Ku, Tokyo. Both: Japan.

5302. Shurtleff, William. 1976. Report on visit to Kikkoman plant in Walworth, Wisconsin. Lafayette, CA 94549. 2 p. Nov. Unpublished manuscript.
• ***Summary:*** Contains a detailed description of the ingredients and process used to make shoyu at this plant. The moromi (mash) ages for an average of 6 months. The heating / pasteurization process serves four basic purposes. Kikkoman produces about 2.5 million gallons/year of shoyu at Walworth. About 150,000 to 200,000 gallons of so-called tamari are imported from Japan for sale at natural food stores; this is about 6-8% of total shoyu. Kikkoman has 85% of the U.S. Asian-American trade and about 1/3 of the supermarket trade. Address: 790 Los Palos Dr., Lafayette, California 94549.

5303. Somaatmadja, Sadikin; Guhardja, Edi. 1976. Current status of soybean research and utilization in Indonesia. *INTSOY Series* No. 10, p. 232-35. R.M. Goodman, ed. Expanding the Use of Soybeans (College of Agric., Univ. of Illinois at Urbana-Champaign). [1 ref.]
• ***Summary:*** Contents: Introduction. Production: Hectarage and yield. Production techniques. Systems of cultivation, inoculation, harvesting and processing for storage, storage. Factors affecting soybean production in Indonesia. Seed viability and seed supply, pests, diseases, cultural practices, varieties. Consumption and utilization. Marketing. Extension: Training, method used to increase soybean production (expansion of hectarage, intensification, varieties).

"At present soybeans occupy fifth place among the other food crops, after rice, cassava, maize, and sweet potatoes. Research on soybeans is conducted at the Central Research Institute for Agriculture (CRIA) at Bogor and its substations, including Sukamandi and Ujung Padang; at several universities, such as the Institut Pertanian Bogor, Universitas Gadjah Mada, Jogyakarta, and Brawijaya Malang; and at other research institutes, including Badan Tenaga Atom Nasional, Jakarta, and Lembaga Biologi Nasional, Bogor.

"From 1970 to 1973 the annual harvested hectarage of soybeans averaged 703,878 hectares with a production of 517,199 metric tons and an average yield of 7.34 quintals [1 quintal = 100 kg] per hectare. Approximately 80 to 85 percent of the total soybean hectarage in Indonesia is in Java-Madura...

"Per capita consumption of soybeans in Indonesia reflects the distribution of the crop. In Java the per capita consumption each year is about 5.04 kg; in Sumatra, Kalimantan, Sulawesi, and Maluku/Irian Jaya between 0.10 and 1.04 kg; and in Bali about 3.43 kg.

"Soybeans are not consumed directly, but are processed into a large number of products. Tempeh (fermented soybeans), tahu (soybean curd), tauge (soybean sprouts),

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kecap (soy sauce), tauco (fermented mixture [Indonesian miso]), and oncom (made from residues of soymilk and tahu) are consumed as side dishes with rice. Roasted beans, tahu chips, and boiled seeds are eaten as snacks, and boiled young pods are prepared as a green vegetable. Soymilk is consumed as a beverage." Address: 1. Sukamandi Research Station, Central Research Inst. for Agriculture, Sukamandi; 2. Bogor Agricultural Univ., Bogor. Both: Indonesia.

5304. Tongdee, Amnuay. 1976. Soybean production in Thailand. *INTSOY Series* No. 10, p. 253-54. R.M. Goodman, ed. Expanding the Use of Soybeans (College of Agric., Univ. of Illinois at Urbana-Champaign).

• ***Summary:*** Contents: Introduction. Production and production areas. Cultivation. Varieties, fertilizers, and inoculation. Disease and insect pests. Utilization.

"Soybeans, one of Thailand's most important crops, have been grown here traditionally, although there is no evidence of when they were first introduced. After having been brought to this country, probably by migrating Chinese, soybeans became part of the Thai diet. They are processed into a variety of foods, including tou-hu, tou-cheaw, and soy sauce. Freshly cooked pods [green vegetable soybeans], called tou-rae, are prepared for immediate consumption." Address: Mae-Jo Agric. Exp. Station, Chiang Mai, Thailand.

5305. Matsuda, Yutaka. 1976. The etymology of soy. *Kwansei* [*Kansai*] *Gakuin University Annual Studies* 25:3-4. Dec. Nishinomiya, Japan. [3 ref. Eng]

• ***Summary:*** "British and American dictionaries including OED (*Oxford English Dictionary*) consider the Japanese word *shôyu* to be derived from Chinese. Is this theory reliable? No!

"OED states that the word is derived from Chinese *shi-yu, shi-yau* (*shi* salted beans, *yu* oil), and *Universal English Dictionary* (1932), *American College Dictionary* (1960), *Random House Dictionary* (1966), *Oxford Dictionary of English Etymology* (1966), *Chambers Twentieth Century Dictionary* (1972) have followed suit. This Chinese pronunciation *shi* appears to represent a character meaning fermented soybeans with salt [fermented black soybeans]. On the other hand, the character meaning fermented soybeans and wheat with salt is transcribed *chiang* in present-day standard Chinese [according to the *pinyin* system established in China in 1957]. *Webster's Third New International Dictionary* (1961) [Web. III] picks out *chiang-yu* as the origin of the Japanese term, and *Klein's Comprehensive Etymological Dictionary* (1967), *American Heritage Dictionary* (1969) [AHD], *Webster's New World Dictionary, College Edition* (1970) also adopted the *chiang* theory.

"In Japan *shi* had been eaten before the Taiho Rei Statute (701), but *shô* rather than *shi* was to the Japanese taste, and *shôyu* squeezed from chiang was used instead of shi-you squeezed from shi. It follows that the OED theory–the *shi* theory cannot be supported.

"The Web. III theory–the *chiang* theory is also doubtful. Web. III and AHD note that the Japanese term *shôyu* is derived from Pekinese, but it is hardly plausible that the compound should come from Modern Standard Chinese, because *shiyau-yu* appeared already in the latter half of the 15th century and the very word itself was entered in the Japanese dictionary published in 1597. Indeed the Chinese characters chiang and you were introduced from Ancient China but the compound word chiang-you [pronounced shoyu in Japanese] was coined in Japan, as today's Japanese dictionaries such as *Shin Jigen* (1968) and *Shin Kanwa Jiten* (1973) label the term as Japanese-made. As a matter of fact, several other compounds coined in Japan have been reexported to China: *tetsuzuki* (procedure) and *torishimari* (control), which seem to have been exported from Japan in the earlier periods of the 20th century, are now used in China, too, pronounced *shôuoxû* and *qûdi*, respectively [as written in pinyin]. The characters pronounced *haken* in Japanese and *bàqáan* in Chinese, meaning hegemony, which is so crucial a compound related to the Shino-Japanese [sic, Sino-Japanese] peace treaty under negotiation that the treaty conclusion depends on whether or not the compound will be included in it, also was coined in Japan. Along with these, the compound word shoyu/chiang-you has been imported from Japan and is pronounced in the Chinese way.

"Perhaps noticing a marked difference between *chiang-yu* and *shôyu*, *Webster's New Collegiate Dictionary* (1973) has given up the *chiang* theory and has put forward a new one [Jap. *shôyu*, fr. Chinese (Cantonese) *shi-yaû*, lit. soybean oil]. *Shi-yaû* might be Cantonese *chi you*. Anyway the new theory is nothing but a variant of the OED theory.

"In conclusion, we may duly state that *sôyu* or *soyu* which was the dialectical form of *shôyu* in the latter half of the 17th century was borrowed through Nagasaki into Dutch as *soya* and *soja*, and then from Dutch into English as *soya* and *soy*. The theory that Japanese *soi* was directly adopted into English as *soy* is unsupportable because there was no opportunity at all of direct contact between Japanese and English in those days, though there is a possibility that dialect form *sôi* or *soi* might have existed in Nagasaki at that time." Address: Nishinomiya, Japan.

5306. Pearce, Jean. 1976. Jean Pearce's How to get things done in Japan. Vol. 2. Tokyo: Japan Times. [v] + 295 p. Dec. Company and organization index. General index. 19 cm. [Eng]

• ***Summary:*** The preface begins: "Dear friends, Over the past twelve years, I have been answering letters from both Japanese and foreign readers about this always interesting, often baffling, country." This book is a compilation of those answers / columns, with two helpful indexes. Under each title will be found at least one (but sometimes more) of

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Jean's responses–but no date and no initial writer's name.

"Sing a song of soybeans" (p. 35-37, two answers). "An American here is dependent upon a Japanese tofu maker for his supply of soybeans. He would like to find a commercial source. Somehow it doesn't seem right to buy soybeans from a tofu maker to make one's own tofu. By the time he reads this he may have found a 15-kilo bag of soybeans at his door. Yoshida Bungo Shoten, one of the largest wholesale dealers in soybeans, is the most cooperative company I've contacted."

"Another man who appreciates soybeans is Rinshiro Kato. He is marketing a soybean derivative called Togen, a powder made from the most nutritious parts of the soybean mixed with wheat flour with similar food values. A 500-gram can costs ¥3,000 and provides a month's supply" at the rate of 3 spoonfuls a day. "The company also makes a Togen cookie with sesame seeds, konbu and honey."

"Learn a little" (p. 170-71). "Tofu. I've been using it for years in all kinds of ways. Yet I never knew about pressing it. This removes the water. Japanese would have you wrap a square of regular (momengoshi) tofu (it won't work with the finer textured kinugoshi) in a tenugui [thin towel] and gently squeeze out the water. I wrap mine in a towel and put a breadboard on top with a filled teakettle to weight it down. An hour or so later the tofu has an entirely different texture."

Note: This is the earliest document seen (May 2012) that contains the word *momengoshi* (regardless of hyphenation), it refers to regular or "cotton" tofu.

There are three basic types of soy sauce: Koikuchi is by far the most widely used. Usukuchi is light tan–the choice for lighter color foods like tofu and white fish. The taste is about the same as koikuchi. Tamari is slightly thicker, slightly stronger, and frequently used for sashimi. "It is made without wheat and is the favorite in the Nagoya area."

"Tofu" (p. 228-29): "A man asks for an unusual recipe that may appeal to those who don't like tofu." If all the traditional and Western ways leave you cold, try this. "Cut tofu in one-inch cubes. Put in a jar and cover with gin. Let it age for two weeks or so, and then you have tofu cheese."

The residue [okara] left after grinding and straining tofu is high in food value. You can buy a plastic bag full for ¥20 of so early in the morning from your favorite tofuya-san. Use it as a food or "put it in a cloth bag and polish your floors. In the old days that was how the Japanese achieved that lovely soft finish we all admired."

Good tofu restaurants in Tokyo are Sasa-no-Yuki not far from Uguisudani station and Goemon, in Bunkyo-ku, up the hill from the Hakusan subway station.

Good books about tofu are *The Art of Just Cooking*, by Lima Ohsawa. *Tofu Recipes*, by Grace Kikuchi. *The Book of Tofu*, by Shurtleff & Aoyagi. Address: [Tokyo, Japan].

5307. Saono, S.; Brotonegoro, S.; Abdulkadir, S.; Basuki, T.; Jutono, -; Badjra, I.G.P. 1976. Microbiological studies of tempe, kecap, and taoco. I. The microbial content and its amylolytic, proteolytic, and lipolytic activities. Progress Report Subproject III b. ASEAN Project for Soybean and Low-Cost High Protein Foods. Jan-Dec. 1976. Unpublished manuscript. *

5308. **Product Name:** Granose Soyapro Wieners. Later renamed Soya Wieners.
Manufacturer's Name: Granose Foods Ltd. (Distributor) Made in Denmark by Nutana.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England
Date of Introduction: 1976.
Ingredients: 1980: Soya protein, vegetable oil, egg albumin, oats, salt, glucose syrup, vegetable stabilizer
Wt/Vol., Packaging, Price: 385 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Manufacturer's catalog. 1980. April. "Soya sausages. Serve as frankfurters. Can be broiled, grilled or fried."

Form filled out and Labels sent by Granose Foods Ltd. 1990. June 13. States that the product, made in Denmark by Nutana, was introduced in 1976. It is now named Soya Wieners. Can Label. 1990. 9.5 by 4 inches. Photo of the prepared dish, three wieners on a plate with rice and vegetables against a brown background. Vegetarian. Ingredients: Water, soya bean oil, egg white powder, textured soya protein, tomato puree, onions, soya protein isolate, salt dextrose, spices, soya sauce, oatmeal, guar gum (E412), sodium alginate (E401), hydrolized vegetable protein, smoke flavor. Serving suggestion. Heat or roast Soya Wieners and serve with spaghetti or mashed potatoes. Sliced Soya Wieners are delicious in salads. Ideal for lunch and dinner. Dietary analysis available on request.

5309. **Product Name:** Granose Soyapro {Canned Slices} [Beef Like, Chicken Like, or Ham Like]
Manufacturer's Name: Granose Foods Ltd. (Marketer-Distributor). Made in Denmark by Nutana.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England
Date of Introduction: 1976.
Ingredients: 1980: Soya protein, vegetable oil, egg albumen, hydrolised vegetable protein, salt, flavourings.
Wt/Vol., Packaging, Price: 400 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Manufacturer's catalog. 1980. April. "Slices of flavoured soya protein fibre canned in sauce. May be used hot or cold as slices or added in pieces to pies, casseroles, etc. Beef like flavour only contains in addition, wheat protein."

Form filled out and Labels sent by Granose Foods Ltd. 1990. June 13. States that the product was introduced in 1976. Made by Nutana. Subtitle is now, for example,

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"Chicken Like Flavour Soya Fibre in Brown Sauce." Can Label. 1990. 9 5 by 4 inches. Photo of the prepared dish on a plate with rice and vegetables against a brown background. "Ingredients: Water, textured soya protein, soya bean oil, egg white powder, starch, hydrolysed vegetable protein, yeast extract, vegetable stock, wheat flour, celery powder, salt, stabilizer. Serving suggestion: Cut into shreds and place in a stew of carrots and peas, sprinkle with parsley, serve with potatoes and a salad. Ideal for lunch and dinner."

5310. **Product Name:** Kikkoman Instant Miso-Shiru Soy Bean Soup Mix [Shiro (White), or Aka (Red)]
Manufacturer's Name: Kikkoman Corporation.
Manufacturer's Address: Noda 278, Chiba-ken, Japan.
Date of Introduction: 1976.
Ingredients: Incl. miso (soybeans, rice, salt), dried green onions (negi), dried wheat gluten cakes (fu), dried seaweed, bonito extract, and MSG (monosodium glutamate)
Wt/Vol., Packaging, Price: 1.83 oz foil pouch retails for about $1.07 (May 1980).
How Stored: Shelf stable.
New Product–Documentation: *Food Product Development*. 1980. May. p. 26. Label in both Japanese and English. Front panel shows a drawing of a miso soup cup with a happy face on it. Each pouch contains 5 individual serving packets.

5311. **Product Name:** Kikkoman "Green Label" Soy Sauce
Manufacturer's Name: Kikkoman Foods, Inc.
Manufacturer's Address: Walworth, Wisconsin, Japan
Date of Introduction: 1976.
New Product–Documentation: Leaflet. 8½ by 11 inches. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. "Sold only in Qualified Health Food Stores. 100% Pure Kikkoman "Green Label" Soy Sauce. Salt Reduced by 50% [from 16% to 8%] as Compared to All Other Soy and Tamari Sauces."

5312. Kikkoman. 1976. Analysis of 7 brands of soy sauce imported to the USA. San Francisco, California: Kikkoman Foods, Inc. 2 p. Unpublished manuscript. [Eng] Address: Kikkoman.

5313. Lee, C-H. 1976. [The effect of Korean soysauce and soypaste making on soybean protein quality]. *Hanguk Sikp'um Kwahakhoe Chi* (*Korean J. of Food Science and Technology*) 8(1):12-32. [Eng. kor]*

5314. Lim, C.L. 1976. The manufacture of soy sauce in West Malaysia. In: Symposium on soy sauce. Malaysian Inst. of Food Technology, Hotel Jaya Puri, P.J., Selangor, Malaysia. *

5315. Bayramian, Mary. 1976. Around the world vegetarian cookbook. San Francisco, California: Troubador Press. 120 p. Illust. by Patricia Kinley. Recipe index. 21 cm.
• ***Summary:*** Soy-related recipes include: Japanese [mung] bean sprouts and cucumbers with sesame dressing (*Moyashi no goma su ae*) uses 1 teaspoon of soy sauce (p. 74). Korean watercress salad-relish (*Namul*) uses 2 tablespoons of soy sauce (p. 74). Soy is not used in any other recipes. The author was born 1921.

5316. Bernhardt, C.F. 1976. The legume food crops. In: M.A. Rifai, ed. 1976. ASEAN Grain Legumes. Bogor, Indonesia: Central Research Institute of Agriculture. 225 p. See p. 29-85.
• ***Summary:*** "The Chinese did not, nor do not, grind up soybeans to mix with cereals to form a meal or boil them whole like other legumes such as peas or lentils. Prepared in the latter manner they have an unattractive flavour and are not too digestible. In the earliest Chinese writings, there is no mention of the use of soya as a source of oil. Some evidence exists that methods of extracting oil were evolved around the 4th century A.D... To sum it up, soybeans require special treatment to make them an acceptable human food.

"Legumes assume greater importance in countries where starchy roots and fruits (cassava, yam, taro, sweet potatoes and bananas) replace cereals to a large extent as staple foods. The starchy roots and fruits are so poor in protein that they do not meet the protein requirements of even adults when consumed in quantities sufficient to cover the calorie requirements and still less when considering children and mothers."

Concerning the history of legumes: "Legumes are plants belonging to the Leguminosae family, which is the second largest family of seed plants. Altogether there are about 600 genera with 13,000 species. The word legume is derived from the Latin *legumen* which means any leguminous plant. An alternative name for edible seed of leguminous plants is pulse derived from the Latin *puls*, meaning pottage... The English term legume dates back to about the 17th century [1676].

"Legumes are among the earliest crops to be cultivated by man, going back to Neolithic times when man was changing from hunting and food gathering culture to a food producing society. Often in the old world this is termed 'The Food Producing Revolution,' which probably took place between the 9th and 5th millennia B.C. This revolution was centered in what was called the 'Fertile Crescent' in the Near East.

"Remains of peas and lentils have been found at Hacilar (Turkey) in about 5,500 B.C. (dated by carbon)... Findings at Jarmo [sic, Jarmo, which is an archeological site located in today's Iraq, in Iraqi Kurdistan in the foothills of the Zagros Mountains east of Kirkuk city] in Turkistan may antedate the Hacilar find by perhaps a millennium, so it can be safely said that legumes have been eaten by man for some 8,000 years. Legumes also appear early in the development of agriculture

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in the new world. Remains of... kidney beans have been found in the caves near O'Campo (Mexico) which date back to around 4,000 B.C. or perhaps earlier... Remains of cultivated peas have been found in the Neolithic lake village in Switzerland dating back to approximately 4,500 B.C. Remains of lentils have been found in the Egyptian tombs of the 12th dynasty (2,400-2,200 B.C.). Preparation of a lentil soup was depicted in a fresco at the time of Rameses III (1,200 B.C.)... Lentils are the first legume to be mentioned in the Bible in the 25th Chapter of Genesis."

Note: Turkistan or Turkestan is an historical region of Central Asia, usually thought to comprise Turkmenistan, Uzbekistan, Kyrgyzstan, Tajikistan, southern Kazakhstan, western China, and northeast Afghanistan. Address: C.P.C. International (Asia) Ltd., Hongkong.

5317. Boulding, Elise. 1976. From a monastery kitchen. New York, San Francisco, Hagerstown, London: Harper & Row. 127 p. With the assistance of Victor Antonio Avila and Jean-Marie Pearse. Illust. by Daniel Marshall. Index. 23 x 26 cm.

• ***Summary:*** A cookbook, not vegetarian. The monastery (in a farmhouse) is Our Lady of the Resurrection Priory in Cold Spring, on the Hudson River, north of New York City. There the author found a place of quiet retreat and prayer with Brother Victor, and a novice, Brother Patrick.

The recipes are arranged by the four seasons. There are four columns on each page. All or part of the central two columns on each page are occupied by one recipe. To its left and right are many contemplative quotations (with their authors) and old photos or illustrations.

The only recipe that mentions soy is Poor person's sukiyaki (p. 97) which calls for ½ cup soy sauce and "if desired soy bean curd (tofu) cut into squares (if available)." On the same page we read: "Loving-kindness is the better part of goodness"–*W. Somerset Maugham.*

Page 124, "Useful culinary instruction," states: "Soy bean–Use in many forms for high protein: soy sauce, soy beans, soy paste (called miso, obtainable in Oriental and health food stores, used in place of bouillon cubes, supplies proteins, vitamins, and minerals). Also fresh soy bean cakes (*tofu:* Oriental or health food stores) and sprouted soy beans.

"Miso soup (soy) (per serving)–1 tablespoon miso, 1 cup boiling water, 2 chopped scallions (or 1 small onion), pinch of sugar, 1 or 2 tablespoons wheat germ. Drop 1 beaten egg if desired. Cooks in 5 minutes." Address: New York.

5318. Chiang, Jung-feng; Schreeker, Ellen. 1976. Mrs. Chiang's Szechwan cookbook. New York, Hagerstown, San Francisco, London: Harper & Row, Publishers. xxi + 359 p. Illust. Index. 24 cm.

• ***Summary:*** The Preface begins: "I met Chiang Jung-feng in 1969 in Taipei, Taiwan, where my husband, John, and I had gone to pursue John's Chinese language studies and our love of Chinese food. She began as our cook and housekeeper; she soon became a friend and teacher and eventually co-author of this cookbook. Jung-feng was born and raised on a farm on the outskirts of Chengtu, the culinary heart of the province of Szechwan."

The romanization is in pinyin. Chapter 12, titled "Bean curd" (p. 218-32) is exceptional, the introduction is one of the best seen to date. The chapter contains four tofu recipes, including Pock-marked ma's bean curd (*mapo doufu*). The chapter begins: "Every culture has its children's food–things that everybody eats but children dote on. In this country [USA] it might be hot dogs or pizza, in Szechwan it was bean curd. Older people loved rich meat dishes, but children had less developed palates and adored the clear, fresh taste and soft texture of bean curd. Mrs. Chiang's own favorite food when she was a child, the bean curd she ate was particularly delicious because it was homemade..."

"'My mother would grind fresh soybeans very fine, then combine them with water to make a kind of soybean 'milk.' When she added a certain chemical (probably gypsum) to this, it coagulated instantly. Then she hung the mixture to drain in a cloth bag for several days, at the end there was a mild, creamy bean curd with a texture as smooth as silk. We ate it several times a week..."

"There are many types of bean curd. Fresh bean curd is the commonest. It comes in soft, white cakes about 1 inch thick and 3 to 4 inches square. It has the consistency of hard custard, and, though fragile and perishable, it can be kept for a week in the refrigerator if you store it in an uncovered bowl of water and change the water every other day."

"Bean curd comes in many other, less common forms. Dry bean curd, or *doufugan*, isn't dry at all. It is just regular bean curd that has been aged [sic] and pressed until it becomes brown on the outside. It is especially delicious boiled with soy sauce and spices and then sliced and served cold.

"Fried bean curd balls, or *youdoufu* are really dry–light, porous balls that, when soaked, become spongy. Their strange texture and mild taste make them greatly prized in vegetarian *haute cuisine*.

"Bean curd skin [yuba], another form, comes in thin, shiny brittle sheets."

"There is also [in Taiwan] 'stinking bean curd' [stinky tofu], which the process of fermentation has transformed into a substance strikingly similar to some of the stronger cheeses.

"Finally, there is pickled bean curd [fermented tofu], or *doufu lu*. It was popular in Szechwan and was what Mrs. Chiang's family often ate with rice for breakfast. Chinese groceries occasionally carry jars of the highly spiced Szechwanese version of the stuff. Eaten on top of some plain white rice, it is an amazing gastronomic experience, though not one recommended for the weak in palate. Mrs. Chiang claims that the pickled bean curd her mother made was both hotter and more fragrant." One other bean curd recipe is

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given on pages 98-103.

One yuba recipe is: Bean curd skin soup (*fuzhu tang*, with "4 sheets dried bean curd skin," p. 267-68).

One recipe using fermented black soybeans is: Black beans, green peppers, and pork shreds (*heidouchi qingjiao chao rousi*, with "3/4 cup dried salted black beans," p. 108-10. "Dried, salted black beans entered Szechwan from the outside, probably either from Canton or Hunan. Because they were not indigenous, Mrs. Chiang's mother rarely cooked with them, though when she did the results were always delicious. She used them mainly in simple stir-fried dishes, for the black beans have such a strong and complicated flavor that they [can] dominate any dish to which they are added").

Chapter 16, "Pickles, appetizers, and garnishes" contains a recipe titled simply "Soybeans" (*tangcu douz*, with "1½ cups dried soybeans," p. 338-40. "Whenever Mr. Chiang's father invited a group of cronies or relatives over, her mother would make up a large batch of soybeans to serve with the wine. These crunchy, spicy beans are the traditional accompaniment of a Szechwanese drinking session, just as salted peanuts are in America." After being rinsed, the soybeans are dry roasted in a wok for about 10 minutes, or until slightly brown).

Note: The author is given as Chiang Jung-feng, with Ellen Schreeker and John Schreeker. The section on "Ingredients" includes: Bean curd (*doufu*). Chinese red beans (*dousha*).

"Dried, salted black beans (*douchi*): These dried, salted black beans impart such a delightfully pungent, sour, and salty taste to dishes that, even though they are not Szechwanese in origin, Mrs. Chiang likes to cook with them. They are small, about the size of a pea, black, and partially dried. They come in plastic bags or tins and are available at Chinese markets."

Dried seaweed (*zicai*). Hoisin sauce (*haixian jiang*): Very similar to *tianmian jiang*. Monosodium glutamate (*and why we don't use it*). Soy sauce (*jiangyou*). "Soy sauce was such an important condiment in the large and busy peasant household where Mrs. Chiang grew up that the family made it own." It "was aged in huge earthenware vats." "Both light and dark soy sauces were produced, as well as a rather unusual sweet variety." Mrs. Chiang "finds Kikkoman soy sauce particularly good." The difference between light and dark soy sauces is "a question of color," not of taste or texture. "Mrs. Chiang, then, uses Kikkoman soy sauce in all her cooking."

Page 203: John "found that the word 'ketchup' originally came into English from a Chinese word in the Fuktienese dialect, *ke-tsiap*, which could well mean 'tomato paste'"

5319. Claiborne, Craig. 1976. Craig Claiborne's favorites from the New York Times. Vol. 2. New York, NY: Quadrangle / New York Times Book Co. 442 p. See p. 58. Illust. Index. 28 cm.

• ***Summary:*** The Foreword begins: "We are endlessly impressed with the subtle yet seemingly rapid increase in the sophistication of American taste."

After the recipe for "Hunan lamb," we read (p. 58): "Note: There are two kinds of soy sauce used in Chinese cookery. Thin or light soy is the most commonly found in supermarkets. Dark or heavy soy sauce, widely available in Chinese and other Oriental stores, has a greater viscosity."

The section titled "The Japanese grill" (p. 214-18) mentions "dark soy sauce," "light soy sauce," "misoshiru," and "miso (bean paste)." Address: New York.

5320. Cunard, A.C. 1976. Grain legumes in Malaysia. In: M.A. Rifai, ed. 1976. ASEAN Grain Legumes. Bogor, Indonesia: Central Research Institute of Agriculture. v + 225 p. See p. 9-15. [6 ref.]

• ***Summary:*** Soybeans are used for the preparation of soy products such as bean curd, sprouts and sauces. In 1971 Malaysia imported 20,699 tons of soybeans, 3,155 tons of soybean flour, 673 tons of soybean oil, and 21,744 tons of oil cake of soybeans [soybean meal]. The peanut is much more widely grown in Malaysia than the soybean: 83% of the soybeans grown in Malaysia are grown in the state of Pahang. Address: MARDI, Kuala Lumpur, Malaysia.

5321. Dinaburg, Kathy; Akel, D'Ann Ausherman. 1976. Nutrition survival kit: A natural foods recipe and reference guide. San Francisco, California: Panjandrum Press and MidPress Productions. viii + 248 p. Illust. Index. 23 cm. [152 endnotes]

• ***Summary:*** This book advocates a natural-food lacto-ovo vegetarian diet in place of a junk-food meat-centered diet.

Chapter 6, which emphasizes the importance of dietary fiber–found in whole grains and many other natural foods–advises (p. 110) that cooks use 2 tablespoons of soy granules for every cup (dry measure) of grain or grain product cooked. This will not affect the texture or taste, but it will usually raise the NPU to a level comparable to or greater than that of meat. On page 119 in this chapter is a recipe for Grainburgers (with soy grits or granules and "tamari sauce).

The section on "Sprouts" (p. 164-66) includes soy sprouts (good stir fried) and sprouting instructions.

Chapter 8, titled "Meat is Bean Replaced" (p. 168-88) discusses: vegetarianism, federal meat inspection, DES (hormones in animal feeds), antibiotics in animal feeds, beef and cancer, world famine, meat and ecology, lost protein, protein, essential amino acids and Net Protein Utilization, cost of 100 gm of usable protein, nutritional value and cost comparison of meat and non-meat foods, mutual supplementation, the "cost" of meat protein, lingering meat myths, soybeans, Soy recipes, Soybeans (pressure cooked), Soybeans (not pressure cooked), Baked beans, Soy cheese (homemade tofu), Soybean curry, Mexican beans (soybean

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frijoles refritos). Soybean chili (incl. "vege burger"). Bean and/or grain patties.

Note 1. This is the English-language document seen (Jan. 2007) that contains the term "Grainburgers" (or "Grainburger") or the term "vege burger" (or "vege burgers")

Note 2. A paperback edition was published in May 1978 by Jove/HBJ.

5322. Duquette, Susan. 1976. Sunburst Farm family cookbook. Santa Barbara, California: Woodbridge Press Publishing Co. 303 p. Illust. by Donna Wright. Photographs by Mehosh Dziadzio. From the Brotherhood of the Sun. Recipe index. 23 cm.

• ***Summary:*** "The Brotherhood of the Sun is a family of more than 300 people, who have dedicated themselves to living in harmony with all people and all things. Our desire is to follow the simple laws of God and nature. In order to create an environment in which this is possible, we have established four communities upon thousands of acres of farm and ranch land in the coastal mountains around Santa Barbara, California... In order to help support ourselves and to share with other people our way of life, we have established a large organic foods complex in Santa Barbara called Sunburst Organic Foods.

"This organization includes a large wholesale warehouse that ships food to stores across the country, six large retail markets (with future markets projected along the coast), a community store, a restaurant called 'The Farmer and the Fisherman,' a whole-grain bakery and a fresh juice-bottling plant that distributes along the west coast."

Although this natural foods cookbook is not entirely vegetarian (it includes a chapter titled "Fish," p. 100-123, and many fish and shellfish recipes), the rest of the book is vegetarian and one long chapter (p. 64-99) is titled "Vegetarian Main Dishes." The illustrations are beautiful.

Soy-related recipes include: Tofu-vegie soup (p. 17). Miso-onion soup (p. 17). Many recipes topped with "Baco-bits." Bean salad (with soy beans, p. 35). Sprouts (incl. soy sprouts, p. 38-39). Tamari-onion gravy (p. 63). Enchiladas (filled with tofu or soy beans, p. 85). Corn pudding with Baco-Bits (p. 168). Soy flour cakes (pancakes, p. 268).

The chapter titled "Beans and pasta" (p. 124-39) has a section on Soybeans subtitled "Or: How to get protein without really trying." Recipes and descriptions include: How to cook whole soybeans (with or without pressure). Soybean loaf. Soyburgers. Soy milk. Tofu (curded with lemon juice or vinegar). Tamari and miso. Cheese-soybean soup. Soy nuts. Soy grits. Soy flakes. Soybean cheese spread.

The Glossary (p. 295-97) contains descriptions of gluten, lecithin (from the soybean), miso, protein powder, tamari, seaweeds, tofu. Address: Santa Barbara, California.

5323. Farr, Barbara. 1976. Super soy!: Delicious protein without meat. New Canaan, Connecticut: Keats Publishing Co. 151 p. Index of recipes. 21 cm. [9 ref]

• ***Summary:*** Contents: 1. Magic bean. 2. Soybeans and nutrition. 3. A glossary of soy (and other things)–With a table giving nutritional information for each: bran, dried soybeans, green soybeans, lecithin, miso, nutritional yeast, sesame tahini, soy granules or grits (toasted), soybean oil, soybean powder (also called soybean flour; full-fat soy powder, low-fat soy powder, defatted-fat soy powder), soy protein isolate, soy sauce, soybean sprouts, tofu, yogurt (soy or dairy).

4. Basic techniques with soybeans. 5. Appetizers and snacks. 6. Soups and breakfast dishes. 7. Main dishes. 8. Breads, etc. 9. Sweet things. Bibliography. Note: Contains many recipes.

Dedication: "This book is dedicated to the most inspiring health-seeker: Gaylord Hauser."

5324. Friedlander, Barbara. 1976. The Findhorn cookbook: An approach to cooking with consciousness. New York, NY: Grosset & Dunlap. xv + 264 p. Introduction by David Spangler. Index. 23 cm. [20+ ref]

• ***Summary:*** A vegetarian cookbook created by this famous spiritual community at Findhorn, in northeastern Scotland, on a sandy, barren piece of land on a peninsula between the Firth of Moray (part of the North Sea) and Findhorn Bay. In 1962 Peter and Eileen Caddy, their three young sons, and a friend, Dorothy Maclean, came to live there (see photo, p. 76)–following spiritual guidance. Peter and Eileen are British.

Barbara first arrived at the Findhorn Caravan Park in Feb. 1974; she stayed for only 4 days. She returned later that year to live for 6 months, working primarily in the kitchen, to write this book. The first part of the book (to p. 21) is about the spirit and inspiring basic principles of the Findhorn community.

Soyfoods are mentioned occasionally throughout the book. Tamari may be used as a seasoning during sauté-steaming (p. 66). Tofu (bean curd) can be added to a variety of dishes (p. 72). Soy-related recipes: "Soy bread" (made with soy flour plus wheat flour, and miso, p. 151). Baked soybeans (p. 164. "There are never enough recipes for this valuable bean"). Baked soyburgers (with cooked, mashed whole soybeans and miso, p. 164-65). Fried soyburgers (with cooked, mashed whole soybeans, soy oil, tamari, and miso, p. 165). Tamari ginger sauce (p. 220-21). Homemade tofu (makes 10 pints, p. 224-25. Curded with vinegar or lemon juice. Tofu can be added, cubed, to miso soup, used in tofu and scrambled eggs, or made into salad dressing).

5325. Hakim, Rush. 1976. Grain legumes in Indonesia. In: M.A. Rifai, ed. 1976. ASEAN Grain Legumes. Bogor, Indonesia: Central Research Institute of Agriculture. 225 p. See p. 1-7. [3 ref]

• ***Summary:*** Grain legumes have long been grown in

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Indonesia; traditional uses include bean curd [tofu], tempe [tempeh], oncom [onchom], soysauce, soypaste, and roasted nuts.

Tables show: (1) A ten year average of production, acreage, and yield of soybeans in Indonesia, 1961-1971–by province. The provinces with the highest average production are: East Java (Jawa Timur) 249,651. Central Java (Jawa Tengah) 75,775. West Nusa Tenggara (Nusa Tenggara Barat) 26,659. West Java (Jawa Barat) 18,319. Yogyakarta 11,952.

(3) Per capita consumption of soybeans in Indonesia 1970 (kg per capita per year). West Nusa Tenggara (Nusa Tenggara Barat) 14.14. East Java (Jawa Timur) 5.04. Central Java (Jawa Tengah) 5.04. West Java (Jawa Barat) 5.04. Yogyakarta 5.04. Jakarta 5.04. Bali 3.43. Address: Central Research Inst. for Agriculture, Bogor, Indonesia.

5326. Hayashi, Minao. 1976. Kandai no bunbutsu [Han dynasty civilization and objects]. Tokyo: Tokyo Daigaku, Jimbun Kagaku Kenkyujo. 576 p. [Jap]*
• ***Summary:*** Bo (1982): This book contains a simple drawing of soy sauce making equipment. It shows a hole in the bottom of an earthenware chiang crock, from which liquid soy sauce can be drawn off. The Chinese also put a basket into the crock to draw off the liquid. This is the strongest known evidence that soy sauce existed at the time of the Han dynasty. But it is better to think that its production stems as far back as the Ch'in (221-206 B.C.) or Warring States (403-221) periods.

Note: Hayashi, born in 1925, is a famous Japanese archaeologist, and art- and cultural historian.

5327. Hermana, -. 1976. Saving the protein waste from processing of legumes in Indonesia. In: M.A. Rifai, ed. 1976. ASEAN Grain Legumes. Bogor, Indonesia: Central Research Institute of Agriculture. 225 p. See p. 195-200. [11 ref]
• ***Summary:*** Contents: Introduction. The protein waste: Peanut, soybean, mungbean. Utilization of the waste.

Tables show: (1) Food legumes available in Indonesia. The three columns are: Latin name, English name, and Indonesian name. Shows 22 food legumes available in Indonesia, from Ochse (1931) and Aykroyd (1969).

(2) Food legumes usually processed. Discusses hunkwe, made by extracting the starch from the mung bean or kacang ijo (*Vigna radiata*, now *Phaseolus aureus*) with water.

(3) Indonesian fermented foods made from waste products. Include dage (made from oncom), oncom (made from peanut presscake or okara), tempe bongkrek (made from coconut presscake), tempe gembus (okara tempeh), tempe mata kedele (made from the hypocotyl of the soybean).

(4) Nutritive composition of kecap (per cent): Both peanut kecap and soybean kecap. Address: Nutrition Research Inst., Bogor, Indonesia.

5328. Hitomi, Hitsudai; Shimada, Isao. 1976. Honchô shokkan [A mirror of food in this dynasty. 5 vols.]. Tokyo: Heibonsha. 18 cm. Translation from the 1697 Chinese-language edition by Isao Shimada of the *Pen chao shih chien*. [Jap]*
• ***Summary:*** See Hitomi 1695. He died in 1701.

5329. Jordan, Julie. 1976. Wings of life: Vegetarian cookery. Trumansburg, New York: The Crossing Press. 255 p. Illust. by Joanne Leary. Index. 23 cm. A Crossing Cookbook. Excerpted in Mother Earth News, March 1978.
• ***Summary:*** This is the favorite vegetarian cookbook of the Bloodroot Collective. Page 16 recommends soy flour as a fortifier for bread. Pages 83-84 describe whole soybeans. The section titled "Additions to stir-fried vegetables" includes tamari and soy sauce, soybean skins [yuba], and tofu. Soy-related recipes include: Charlotte's master sauce (featuring tamari, p. 216). Homemade tofu (p. 241, curded with Epsom salts). Address: New York.

5330. Kagaku Gijutsu Kyoiku Kyokai. 1976. Shôyu no kagaku [The science of shoyu]. Tokyo?: Zaidan Hôjin Kagaku Gijutsu Kyôiku Kyôkai. 63 p. Series: Seikatsu no Kagaku, No. 8. Saddle stitched. 26 cm. [Jap]
• ***Summary:*** Company name with diacritics is: Kagaku Gijutsu Kyôiku Kyôkai.

5331. Kikkoman K.K. 1976. Dai 58 ki hôkoku-sho. Showa 50 nen 1 gatsu 1 nichi–Showa 50 nen 12 gatsu 31 nichi [58th annual financial report. From 1 Jan. 1975 to 31 Dec. 1975]. Tokyo, Japan. 13 p. 19 cm. [Jap]
• ***Summary:*** Written entirely in Japanese with no photos. Address: Tokyo, Japan.

5332. King, Marilyn; Scott, William. 1976. Food for thought: A fresh food cook book. New York, NY: Universe Books. 153 p. Illust. Index. 23 cm.
• ***Summary:*** A vegetarian cookbook. In a section titled "Some treasures from the Orient" (p. 132), the author praises and briefly describes tamari and miso.

5333. Koshiyama, I.; Fukushima, D. 1976. Physico-chemical studies on the 11S globulin in soybean seeds: size and shape determination of the molecule. ***International J. of Peptide and Protein Research*** 8(3):283-89. [43 ref]
Address: Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

5334. Leung, Mai. 1976. The classic Chinese cook book. New York, NY: Harper's Magazine Press. xv + 363 p. Illust. (line drawings by Claude Martinot). Map. Index. 24 cm.
• ***Summary:*** A remarkable book by a excellent cook and writer with much experience in China (where she was born and raised), Hong Kong (with outstanding chefs), and New

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York (with more fine chefs). An interesting map of China shows the major culinary regions. The illustrations contribute greatly to the book.

Each recipe is accompanied by its Chinese characters but with no romanization / transliteration. MSG is an optional ingredient in many recipes. Soy related recipes: Chicken with walnuts in hot bean sauce (the sauce mixture includes "6 teaspoons ground bean sauce, 4 teaspoons hoisin sauce, 4 teaspoons black soy sauce," p. 56-57). Soy sauce chicken (with "½ cup black soy sauce," p. 66). Chicken in hoisin sauce (the sauce mixture includes "6 tablespoons hoisin sauce, 2 tablespoons black soy sauce," p. 67). Egg yolk fish cakes with soy vinegar dip (p. 87-88).

The chapter titled "Duck" (p. 91-93) describes how Peking ducks are a different breed from other ducks, how they are raised and force-fed in Hong Kong before being killed. The recipe for Peking duck (p. 109-11) describes the origin of Peking duck in about 1855 in Peking. "Pen Yee Inn, a restaurant specializing in chicken and duck dishes, created the method that made Peking duck a star. The dish was purely for the very rich, and the primary interest was the crisp skin." Traditionally it required "three months of training just to learn to kill and dress the duck correctly." This recipe calls for either Hoisin sauce dip or Bean sauce dip. The next recipe is Red-cooked duckling with lettuce in soy sauce (p. 111-12).

The recipe titled "Childbirth ginger" explains: "In Kwantung Province, after a woman gave birth to a child, it was the duty of the mother-in-law to prepare a big pot of this ginger for her daughter-in-law to regain her strength." Rich in calcium, the supply had to last for a month.

More soy related recipes: Beef with baby corn and Chinese mushrooms in black bean sauce (with "2 tablespoons salted black beans: rinse in hot water, drain, and mash into paste," p. 158-59). Fish slices in garlic and black bean sauce (p. 183-84). Fried mock plums ("For this dish, shrimp paste is rolled up in bean curd skin to form a long cylinder." With "2 pieces dried bean curd skin, each 5 by 10 inches," p. 184-85). Soft shell crabs in black bean and chili sauce (p. 202-03).

The chapter titled "Vegetables and bean curd (p. 205-31) begins: "I do not understand why so many Westerners cook their vegetables as if they were cooking potatoes." They are "cooked so much that they all taste the same, like cooked potatoes—dull, mushy, and lifeless." "Fresh bean curd is made of soybeans. . . [sold in] cakes 1 inch thick and 2 to 4 inches square. Smooth, fragile, custardlike, and ivory colored, bean curd itself is bland in taste, but it quickly absorbs flavor from other ingredients with which it is cooked. As it is inexpensive and high in protein, bean curd serves the purpose of meat and milk for many Chinese in addition to being used as a vegetable. Bean curd is a nutritious and well-loved food. My grandmother used to say, 'Eat bean curd every day and your eyes will shine like the autumn moon, your skin will be smooth, and your hair soft and black.' Generally available in Oriental grocery stores, bean curd is carried in relatively few supermarkets. The canned variety is not acceptable as a substitute for fresh bean curd. Store in a jar, cover with water, and change water daily. It will keep for a week or more." In recipes that call for bean sprouts, Chinese prefer mung bean sprouts that are fresh, white, firm, and dry—not brownish, limp and watery. Never, never used canned bean sprouts.

Buddhist delight (vegetarian, with "4 fried bean curd puffs: cut each into 4 pieces," p. 225-26).

Note: This is the earliest English-language document seen (May 2012) that contains the term "fried bean curd puffs." Pockmarked woman's spiced bean curd [Mapo doufu] ("It is said that the wife of a cook named Chan, who lived in Szechwan [Sichuan] more than a century ago, created this bean curd recipe. Mrs. Chan's face was pockmarked." With "1 pound fresh bean curd: rinse in cold water, cut into ½-inch cubes," p. 228-29). Hakka stuffed bean curd ("Hakka cooking is well known for its bean curd dishes. This stuffed bean curd is one of the most popular and well-loved among Chinese." With "3 pieces fresh bean curd, each about 3 inches square: pat dry with paper towels, cut each square into 4 triangles, slice some bean curd out of the middle of one side of triangle to make pocket for stuffing," p. 229-30). Stir-fried bean curd with pork shreds (p. 231).

The chapter titled "Sauces and dips" includes: Bean sauce dip (with "4 tablespoons Szechwan sweet bean sauce or ground bean sauce," p. 305). Fresh chili-soy dip (with "6 tablespoons black soy sauce," p. 308). Hoisin sauce dip (p. 309). Soy-chili dip. Soy-sesame dip. Oil-oyster sauce dip (with "6 tablespoons oyster-flavored sauce," p. 310). Soy-vinegar dip (with "4 tablespoons thin soy sauce," p. 311).

The chapter titled "Chinese cooking ingredients with information on storing" is an expanded glossary. Each entry is accompanied by its Chinese characters but no romanization. It includes: Bean curd (fresh). Bean curd cheese (red) ("Labeled as red bean cheese. 2 inches square and about 1 inch thick"). Bean curd puffs (fried) ("Golden color, fluffy and spongy, cushionlike square cakes"). Bean curd skins [yuba] (plain, dried) ("Shiny, light yellow, approximately 6 by 10 inch paper-thin skin, dried and brittle. It is the rich cream that floats atop the" soybean milk made from yellow soybeans). Bean paste (sweet red) [azuki *an*] ("Made from pureeing Chinese red beans, sugar and shortening").

Bean sauces. (1) Ground bean sauce "Also known as brown bean sauce or brown bean paste. Brown, thick, pureed sauce made from yellow soybeans, flour, salt, and water, salty and pungent. Sold in cans." (2) Szechwan chili bean sauce. (3) Szechwan sweet bean sauce. "Labeled as sweet bean paste sometimes. Not sweet, but salty and pungent."

Black beans (salted) ("Black [soy] beans preserved in ginger, garlic, salt, and spices; used as seasoning"). Hoisin

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sauce ("Means 'seafood sauce' in Chinese. Made from soybeans, water, garlic, chili, flour, and spices"). MSG ("Monosodium glutamate, which the Chinese call 'taste powder.' The Chinese extracted it from soybean protein and have been using it for at least a century. It should be used sparingly. Sold under the brand name Accent"). Oil (Chinese prefer to use peanut oil. "But I find corn oil equally good in the United States"). Oyster-flavored sauce (No mention of soy as an ingredient). Sesame seed oil ("Savory, aromatic, topaz-colored [brown] oil made from roasted white sesame seeds"). Sesame seed paste (Since most imported products have lost their taste, "it is much better to use peanut butter. In China, peanut butter and sesame seed paste are used interchangeably in cooking"). Soy sauces ("The most important seasoning in Chinese cooking. Varieties and grades are many... Knowing their differences and using the right kind is the key to good-tasting dishes." The following two types are most frequently used). (1) Black soy sauce ("Also known as dark soy sauce, extract from fermented soybeans, caramel, flour, salt and water, darker and heavier than thin soy sauce, salty but with a slightly sweet taste. Do not buy one labeled 'double dark soy sauce.' It is to salty"). Thin soy sauce ("Also known as light soy sauce; liquid extract from soybeans, flour, salt, and water after slow fermentation under the sun. The first extraction, which is commonly sold in the States, is the best").

The "Shopping list" chapter (p. 343-48) contains an expanded alphabetical list of the English names of Chinese ingredients followed by the name in Chinese characters. Address: Madison, New Jersey.

5335. Lie, Goan-Hong; Oey, Kam-Nio; Prawiranegara, D.D.; Herlinda, J.; Sihombing, G.; Jus'at, I. 1976. Nutritive value of various legumes used in the Indonesian diet. In: M.A. Rifai, ed. 1976. ASEAN Grain Legumes. Bogor, Indonesia: Central Research Institute of Agriculture. 225 p. See p. 183-93.

• ***Summary:*** This general overview discusses soybeans (*Kacang kedelai*), tempeh, soy milk, "tahu or soycurd" [tofu], kecap, taoco [Indonesian-style miso], soy milk residue of soy milk or tahu [okara] which may be fermented and sold as oncom. The average nutritional composition of the first 6 products is given. Address: Nutrition Research Inst., Jakarta, Indonesia.

5336. Lin, Florence. 1976. Florence Lin's Chinese vegetarian cookbook. New York, NY: Hawthorn Books. xix + 236 p. Illust. by Nai Gi. 24 cm.

• ***Summary:*** Contains a great deal of information on and recipes using soyfoods. Chinese food expert Barbara Tropp says this book has the best glossary available, and has very creative and interesting but drab recipes.

Hoisin sauce is a ground bean sauce to which sugar, garlic, and other flavorings have been added. It is the most popular commercially prepared flavored bean sauce.

Civilized Chinese patterns of eating were established by Confucius. The second great influence was Taoism, which advocated a simple diet, natural foods, and the basic belief that proper eating leads to good health. The third great influence was Buddhism, which was opposed to killing, so advocated a vegetarian diet. The art of vegetarian cookery was initially developed mainly in Buddhist monasteries; later it spread to private homes and restaurants.

To make good meatless broths use soybeans, soy sprouts, tough or wilted vegetables, mushrooms, and / or bamboo shoots. To make soy sprouts, it is best to use new-crop soybeans, which have the highest germination rate. This book contains many recipes that call for sea vegetables. Soy sauce is widely used in Chinese vegetarian recipes.

Chapter 3, titled "Soybeans, soybean products, and other legumes" contains much useful information and recipes. A diagram titled "Chart of soybean products" (p. 53) shows the complex relationships, includes Chinese characters for each product, and shows a few soy products that are not in the Glossary: Fermented soybean curd (*Fu ju*), comes in white (*pai*), red (*hung*) and spiced (*la*). The many interesting recipes, each with a Chinese name (with Chinese characters) and an English name include: *Su huo t'ui and su chi* (Mock ham), *Su ya* (mock pressed duck), and *Wu hsiang tou fu kan* (Seasoned pressed bean curd).

Glossary (soybeans, soybean products, and legumes, p. 208-13. Chinese characters are given): "Fresh young soybeans–*Mao tou:*" Delicious. They are in season in the early fall. "They come in dark fuzzy pods and are sold by weight. Young soybeans are like corn and should be eaten as soon as they are picked from the plant. They may be cooked with or without the pods."

"Dried soybeans–*Huang tou:*" Yellow soybeans.

"Soybean sprouts–*Huang tou ya:*" Sold by weight. Best when made in cooler weather. "When bought fresh, they will keep in the refrigerator for 2-3 days, or longer if kept in a brown paper bag inside a plastic bag."

"Soybean milk–*Tou chiang:*... usually served hot as a beverage with breakfast."

"Soybean milk skin–Called by many names [*Fu yi, fu p'i;* see p. 53]. Each region has a different name for it, as does each food processor, and the thickness shape and wrapping may be different." Four kinds are readily available in Chinese food stores" (1) *Erh chu* is "cut into rectangles 1½ x 4 inches and 1/8 inch thick. The pieces some stacked and wrapped in paper, in half- or one-pound packages." (2) *Yüan chu* comes in sticks [dried yuba sticks]. When reconstituted, its thickness is about the same as *erh chu*. (3) *San pien fu chu* is half-moon shaped. When still soft, it is folded into 6 x 10-inch rectangles then dried. It is thinner than *erh chu*. (4) *Fu yi* "is the thinnest of the bean milk skins. It is paper thin and almost transparent. When dried it is very brittle, and must be handled very gently. It is used mainly to

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wrap fillings. It comes in stacks of 8-10 sheets..."

"Soybean milk residue–*Tou fu cha;*" [okara]. Can be a delicious ingredient in cooking. "What is not used for food is made into a feed for animals or put into the ground as fertilizer."

"Curdled soybean milk–*Tou fu hua:*" *Hua* means "flowers." These very tender curds are "eaten hot with soy sauce or cold with syrup as a snack." It is "sold only in bean curd factories by the pint."

"Bean curd coagulant–*Shou shih kao*" [calcium sulfate]: A "white substance which comes in powdered form. It is use to coagulate soybean milk to make *tou fu* (bean curd)."

"Tender soybean curd–*Nen tou fu:* When some water is removed from the curdled bean milk, it is known as fresh tender bean curd. It is cut into squares 4 x 4 by 1½ inches."

"Firm soybean curd–*Lao tou fu:* When a coagulant is added to the boiled bean milk of a different concentration and some of the water is removed, the milk becomes firm bean curd. It is firmer than the tender bean curd and is cut into 3 x 3 x 3/4-inch squares."

"Pressed bean curd sheet–*Pai yeh:* Fresh bean curd sheet looks almost like a sheet of unbleached muslin. When it is frozen, the color turns darker, to a light brown. It is made into square sheets of various sizes. It is used to wrap fillings and it is also sometimes cut into short strips and cooked in dishes along with seasoning vegetables. Pressed bean curd sheet is best eaten fresh."

"Pressed soybean curd–*Tou fu kan*–plain. When even more water is pressed out of firm bean curd, it becomes pressed bean curd... it is almost like a firm cheese." It may be bought either plain (*Pai tou fu kan*) or seasoned (*Wu hsiang tou fu kan*). "The seasoned curd is cooked in soy sauce and star anise [*pa chiao*], giving it a brown color." "The white pressed bean curd should be soaked in salt water (made of 1 tablespoon salt to 4 cups water) in a covered container. The seasoned pressed bean curd should be soaked in salt water and soy sauce. If stored in the coldest part of the refrigerator, they will keep for several weeks."

"Fried soybean curd–*Yu tou fu:*... The bean curd is cut into 1½ inch cubes and deep fried in oil until a golden crust forms outside, which the inside... remains soft." It "is sold by weight, usually in half- or one-pound bags."

"Wheat gluten–*Mien ching:*" (p. 217). "Deep-fried gluten–*Yu mien ching:*" "Fresh or dried wheat gluten–*K'ao fu:*"

Glossary (condiments and seasonings, p. 219-23). "Soy sauce–*Chiang yu:*" The "most important seasoning liquid in Chinese cooking. Comes in light or dark, thick or thin. Dark or thick is *Lao ch'ou*. Light or thin is *Sheng ch'ou*. Soy sauce also comes in different "flavors, such as mushroom soy sauce and, for nonvegetarians, shrimp roe soy sauce. Flavored soy sauces are used mainly for dips and for special flavors in salads, noodles, and as a final touch to a dish."

Note 2: This is the earliest document seen (April 2012) that uses the term "mushroom soy" or the term "mushroom soy sauce" to refer to a type of dark soy sauce flavored with mushrooms, or that uses the term "Lao ch'ou" to refer to dark or thick Chinese soy sauce.

"Salted black beans–*Tou shih:*" These beans [fermented black soybeans] are "used to flavor bland foods, such as eggplant or bean curd." They are never eaten alone.

"Brown bean sauce–*Yüan shai shih:*" Made from "fermented soybeans and wheat flour mixed with salt and water. The beans in the sauce may be either ground (to make ground brown bean sauce–*Mo yüen shih*), or left whole. To this basic beans sauce, spice and other seasonings are added [in different proportions], creating many varieties" in "different regions of China. In Szechuan, large amounts of hot peppers and crush Szechuan peppercorns are added; in the northern provinces, garlic and scallions are used;..."

"Hoisin sauce–*Hai hsien chiang:*" A "ground bean sauce to which sugar, garlic, and other flavorings have been added. It is the most popular commercially prepared flavored bean sauce. It is used for cooking, or very often as a dip for deep-fried batter-dipped vegetables."

"Sesame paste–*Chih ma chiang:*" "Sesame oil–*Ma yu:*"

5337 Liu, Christine YC. 1976. Nutrition and diet with Chinese cooking. [Ann Arbor, Michigan?]. [ix] + 319 p. Illust. (by Jacqueline Sharp). Recipe index. General index. 23 x 19 cm. Reprinted in 1977. [26 ref]

• ***Summary:*** Contents. Acknowledgment. 1. Introduction. 2. Is Chinese food nutritious?: The protein facts, other advantages. 3. About monosodium glutamate (MSG) (many recipes contain 1/8 teaspoon MSG–optional). 4. Custom, chopsticks and tea. 5. Method of preparation and cooking. 6. Cooking utensils. 7. Menu planning. 8. Recipes: Soup, meat, poultry, seafood, vegetables, bean curd (to fu), rice, noodles and Chinese steamed bread, eggs, desserts and snacks.

9. Chinese ingredients and seasonings. 10. Tables and charts: Measurements and abbreviations; sources of important nutrients, desirable weight for selected heights (for men and women, small, medium or large frame. Source: Metropolitan Life Insurance Co.), minimum daily requirement of calories, certain vitamins and minerals, calories, protein, fat and carbohydrate value of foods used.

11. Recipe index. 12. References. General index. Order forms.

The chapter on "Bean curd "(to fu)" (p. 191-217) contains 22 recipes, each with the English name in bold characters, and the Chinese name both romanized in pinyin and written in Chinese characters. The first of these is a recipe for homemade tofu made from 1 cup soy beans and a choice of five different coagulants. The 2nd recipe in this chapter is "Fried bean curd (to fu), plain fried (*You dou fu*).

Note: This is the earliest English-language document seen (May 2012) that contains the term *You dou fu* (regardless of hyphenation).

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For each recipe, the calories, protein, carbohydrates, and fat are calculated. Most recipes call for either "fresh bean curd" or "dry bean curd" (*dou fu gan*). A typical ingredient listing would be "1 lb bean curd, diced."

Other recipes include: Those calling for soy bean sprouts (p. 40, 73, 185 {home grown}). Steamed fish with black beans (*Dou chi zheng yu*, with "3 T black beans {about one ounce}, p. 141). Lobster Cantonese style (with "1½ T black beans, minced," p. 154). Wheat gluten (vegetable steaks) (*mian jing*, p. 186). Vegetarian's delight (*Su shi jin*, with "2 oz. dried bean curd sticks [dried yuba sticks], soaked and cooked." "Soak the dried bean curd sticks with 1 t [teaspoon] soda in hot water for 1 hour; drain. Add fresh cold water and bring to a boil. Drain and cut into 1 inch long pieces") (p. 189-90). Red bean paste (*dou sha*) (p. 269). Many recipes are seasoned with soy sauce.

The section on "Chinese ingredients and seasonings" [glossary] includes: Bean curd or to fu, bean sprouts (the sprouts of mung beans or soy beans), black beans ("Fermented and highly seasoned black soy beans"), calcium sulfate, ginger root, hoisin sauce, monosodium glutamate, mushroom soy sauce ("A newly imported soy sauce from the People's Republic of China... The flavor is excellent..."), oyster sauce (can be used like soy sauce but oyster sauce is saltier), sea weeds, sesame oil, soy sauce.

"About the author: Born and raised in Shanghai, Mainland China, Mrs. Liu completed her education at the National Taiwan University. It was there she met and married her husband, Stephen Liu, presently professor of Microbiology at Eastern Michigan University.

"After the birth of their eldest son, the Lius lived awhile in the United States, then moved to San Paulo, Brazil, where they remained for some years. The Chinese community in Sao Paulo was sizeable and affluent and their cuisine was quite popular. It was during this time that Mrs. Liu kindled her latent interest in cooking which ultimately led to the writing of this book.

"In 1965 the Lius returned to the United States and settled in the Ypsilanti-Ann Arbor area. Mrs. Liu further developed an interest in and took up the study of nutrition at the University of Michigan. She received her Masters degree of Nutrition in the School of Public Health in 1971.

"For some eight years Christine Liu has contributed her cooking and teaching talent to the Ann Arbor community by teaching Creative Chinese Cooking and Nutrition & Diet at the Continuing Education Department of Ann Arbor Public Schools..." The Lius have four children: Ted, Paul, Becky, and Peter. A photo shows Christine Liu. Address: M.P.H., P.O. Box 1332, Ann Arbor, Michigan 48104.

5338. Mallard, Gwen. 1976. Soy bean magic: Delicious recipes with soy beans, flour & grits. Saanichton, British Columbia, and Seattle, Washington: Hancock House Publishers. 80 p. Index. 18 cm.

• ***Summary:*** Contents: 1. Commercially bought soy products: Soy flour, soy grits, soybean milk, soy flakes (fine, or coarse), soybean oil, soybean lecithin, soy lecithin spread (butter substitute), soy noodles, macaroni and spaghetti, soy sauce, soy coffee, roasted soy nuts, baked and green soybeans (canned). 2. Homemade soy products: Soy milk from dry beans, quick soy milk (from soy flour), soy cream (from soy flour), "soy base" (from soy flour), soy cheese from soy flour [tofu] (curded with lemon juice), oven-roasted soybeans, toasted soy flakes (coarse), toasted soy flour, sprouted soybeans. 3. Soybean recipes: Breads 'n breakfasts, soups 'n salads 'n salad dressings, soy suppers, desserts and delights.

To make soy base (p. 14): Slowly add 2 cups cold water to sifted soy flour to make a smooth paste. Stir in 1 teaspoon salt. Place in a double boiler and "cook for 30 minutes over rapidly boiling water. This mixture will be thick when it is cooked. Soy base is ideal for enriching gravies, stews, puddings, and soups. It will also make an excellent sandwich spread." Note: This is the earliest English-language document seen (April 2006) that uses the term "soy base" as a noun in this way; within 10 years the term had acquired a different meaning.

On the rear cover is a biography of Gwen Mallard by Derrick Mallard, her husband. She was born in 1917 in Fernie, British Columbia; she lived with her parents and three brothers in a log cabin in the beautiful Elk Valley among Canada's majestic Rocky Mountains. In 1971 she helped launch a campaign against plans for shipping oil in Alaskan tankers along the coast of British Columbia with the inherent dangers of disastrous oil spills (Note: On 24 March 1989 the tanker Exxon Valdez ran aground and spilled 11 million gallons of heavy crude oil in Alaska's pristine Prince William Sound–the world's worst oil spill in history). Gwen runs a small health food store and restaurant 14 miles north of Victoria, British Columbia. Address: British Columbia, Canada.

5339. Matsumoto, Nobumasa. 1976. Shôyu monogatari [The tale of shoyu]. Japan: Kikkoman Shoyu Co. Ltd. 172 p. [Jap]*

• ***Summary:*** A superficial pocketbook about Kikkoman only, but containing some interesting historical information.

5340. Nippon Torui Kikin Kyokai. 1976. Daizu ni kansuru bunken mokuroku [List of documents on soybeans and soyfoods]. Tokyo: NTKK. Vol. 2, post 1961. 93 p. [Jap] Address: Tokyo, Japan.

5341. Nix, Janeth Johnson. 1976. Adventures in oriental cooking. San Francisco, California: Ortho Book Division, Chevron Chemical Company. 96 p. Illust. (color). 28 cm. Ortho book series.

• ***Summary:*** By "Oriental" this book means mostly China

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and Japan. Soy related: Crisp chicken teriyaki (with soy sauce made into teriyaki sauce, p. 14). Tofu salad (with 1 pound soybean cake, p. 15). Fu yu spareribs (with ¼ cup *fu yu*, fermented bean cake, p. 19).

The section on "Ingredients and equipment" (p. 22-31) begins with a full-page color photo in which we can clearly see: Azumaya tofu in a white plastic film-sealed tub, a plastic bag of "salted black bean" [fermented black soybeans] (ingredients: Black beans, ginger and salt), small pieces of deep-fried tofu, miso in plastic tubs, Kikkoman soy sauce in a large rectangular can, Aji-no-Moto in a red can, etc. The text discusses: Soy sauce ("The one essential ingredient in Chinese and Japanese cooking"). Japanese sauces, seasonings, and pickles ("For example, besides soy sauce, you can find low-sodium soy sauce {for specialized diets}, sukiyaki sauce, teriyaki sauce, and soup base for noodles," p. 24).

Note: This is the earliest English-language document seen (May 2011) that mentions "low-sodium soy sauce."

Chinese sauces, seasonings, and pickles, incl. the following which contain soy sauce: oyster sauce, brown bean sauce, Szechwan bean sauce, sweet bean sauce, hot bean sauce. Fermented black beans.

Bean cake–fresh and fried ("Soybean cake is almost as much a staple in Oriental cooking as rice." The regular type is called tofu in Japan and dow-foo in Chinese. But there are other varieties: softer, firmer, dried, fried {comes in cubes, squares, and oblongs...}; Fermented bean cake, also called red bean curd, white bean curd, or *fu yu*," is often sold in jars. Miso, used mainly in Japanese cooking, comes in many colors).

Bean sprouts mean mung bean sprouts. Foods from the sea include Japanese kombu and nori.

In this same section is a sub-section (p. 30-31) titled "The language of Oriental cooking," a glossary that includes: Aburage. Age-zushi. Aka-miso. Buta-dofu ("Pork with soybean cake"). Dow foo pok ("Fried soybean cake"). Fu yu ("Fermented soybean cake, used as a seasoning"). Hoisin ("Thick, slightly sweet Chinese sauce made from a soybean base"). Kitsune-zushi: See Age-zushi. Miso ("Red or white soybean paste"). Miso shiru (Japanese miso soup). Miso-yaki (Broiled food that has been marinated in miso). Monosodium glutamate (A white, crystalline flavor-enhancing agent). Nori. Norimaki. Shiro miso ("White soybean paste"). Shoyu ("Japanese soy sauce"). Sukiyaki. Sumiso. Suribachi. Surikogi. Tempura. Teriyaki. Tofu. Umeboshi. Wakame. Wok. Yin and Yang.

Soy related: Miso soup recipes (3, p. 34). Age-zushi (p. 52). Melting spareribs with black bean sauce (with 2 tablespoons fermented black beans, p. 63). Pork roast with miso (p. 64). Stuffed bean cake (with fried bean cake, p. 64). Sukiyaki (with 1 pound square tofu {soybean cake} cut into 1-inch squares, p. 66-67).

In the section on Oriental vegetables is a long sub-section titled "Soybeans" (with a color photo of green soybeans growing on a plant, p. 94-95) which includes how to grow them in a home garden. The soybean plant has its own time clock, which gets its signal for flowering from the sky. "Short nights (long days) delay flowering; long nights (short days) speed up flowering." Soybeans need a special inoculant of nitrogen-fixing bacteria. Describes how to cook and shell the beans in the pods, and to serve them cool, while still in the pod, as is commonly done in Japan.

5342. Oiso, Toshio. 1976. History of food and diet in Japan. *Progress in Food and Nutrition Science* 2(1):35-48.

• ***Summary:*** Contents: 1. Fundamental conditions in the history of the food habits of the Japanese. 2. Age of primitive food (Origin of Japanese culture–2nd century B.C.). 3. Age of stabilized rice-eating habits (2nd century B.C. to first half of 3rd century). 4. Ancient tomb age (Latter half of third century to 6th century). 5. First age of tabooing of meat eating (6th century to 8th century). 6. Age of formalization of food habits.

7. Age of warriors' [samurai] diet (13th century to first half of 15th century). 8. Age of Zen-styled food in vogue (Latter half of 15th century to first half of 16th century. 9. Age of imported food culture (Latter half of 16th century to first half of 17th century). 10. Age of completion of Japanese food (Latter half of 17th century to first half of 19th century). 11. Age of Japanese-Western mixed diet (Latter half of 19th century to the present). 12. Acknowledgements.

Japan has relatively little arable land. Many ancient Japanese rice grains have been found in remains from the Yayoi Era, both round-grain rice (*Oryza sativa*) and elongated rice (*Oryza sativa indica*). Buddhism (and its precept against killing or eating meat) was introduced to Japan in the middle of the 6th century; production of dairy foods gradually faded out. In China the Han culture was flourishing. A centralized nation with an emperor was established at this time.

In the warrior's diet we find unpolished / brown rice, rice cake (mochi), fermented bean past (miso), salted plum (umeboshi), and soy sauce. "Salt was regarded as the most indispensable item" (p. 41). Temples made and sold foods.

In the age of Zen-styled foods the tea ceremony (*Chanoyu*) was in vogue, brought to completion by Sen no Rokyu (1521-1591); it was accompanied by the development of the "Kaiseki-style dinner" (*Kaiseki ryôri*). A labeled diagram of this dinner is given–shown from two angles.

After the Tokugawa regime was founded, the shogunate closed Japan to foreigners and most foreign influence; this continued for 219 years, as Japanese food and menus became standardized.

In 1867, the last Shogun abandoned the rule of the Tokugawa clan, which had lasted for 263 years. Emperor Meiji became Japan's ruler and national isolation was ended.

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Address: National Inst. of Nutrition, 1-Toyamacho, Shinjuku, Tokyo, Japan.

5343. Ortiz, Elisabeth Lambert; Endo, Mitsuko. 1976. The complete book of Japanese cooking. Philadelphia, Pennsylvania: M. Evans and Co., Inc.; Dist. by Lippincott. viii + 250 p. Illust. by Marion Krupp. Index. 24 cm.
• ***Summary:*** A very interesting, well researched, and accurate Japanese cookbook. The illustrations are excellent. Each recipe has its Japanese name in large bold letters and a translation directly below in smaller letters. A hallmark of her writing is that she prefers to use the native language words and terms (e.g., shôyu) rather before giving her translation of them (e.g., soy sauce). This is helpful, since many of her translations have not withstood the test of time. In some cases, however, she fails to catch nuances or chooses to ignore them; e.g., *momen tôfu* should actually be *momen-dôfu*, and *kinugoshi tôfu* should actually be *kinugoshi-dôfu*. Unfortunately, she uses the term "bean paste" to refer to two very different foods: miso and *azuki-an* (see p. 214, 242). A large number of recipes call for various types of *tôfu* ("bean curd") or *miso* ("bean paste)."

Seaweeds (p. 4): "The one single thing that distinguishes Japanese cooking is the use of seaweeds." Kombu is used to make dashi. Nori and wakame are use in many ways.

"The soy bean plays a dominant role in the Japanese kitchen. It comes in the form of *shôyu* (soy sauce), *usukuchi shôyu* (light soy sauce), *momen tôfu* (bean curd), *kinugoshi tôfu* (silky bean curd), *yakidôfu* (broiled bean curd), *koyadôfu* (freeze-dried bean curd), red and white *miso* (bean paste), and so on. Despite their common origin, the products of this versatile bean manage to be very different.

Note: This is the earliest document seen (May 2012) that uses the word "silky" or the term "silky bean curd" to refer to *kinugoshi tôfu*.

Soy-related recipes include: Asparagus with malted bean paste (with "moromi miso" and "usukuchi shoyu," p. 27). Dengaku (Bean curd with bean paste, p. 28). Stuffed lotus root (with white miso and mustard, p. 30). Noppei-jiru (vegetable and fried bean curd soup, with "1 *namaage* {type of fried bean curd}" or "2 pieces *aburaage* {fried bean curd}, p. 35). Kenchin-jiru (vegetable soup, with "1 *momen tôfu* {bean curd} weighing about 8 ounces," and "4 tablespoons *miso* {bean paste}, p. 36). Clear soup (suimono) with okra and bean curd (p. 38). Clear soup with bean curd and wakame (p. 38). Satsuma-jiru (Miso soup with mixed vegetables, incl. red and white miso, p. 45). Miso soup with tofu and shungiku (p. 46). Miso soup with wakame (incl. red and white miso, p. 46). Miso soup with oysters and bean curd (p. 47). Sekihan (pink rice with azuki beans, p. 57). Miso udon (p. 63). Kitsune udon (noodles with aburaage, p. 67). Inari-zushi (fried bean curd stuffed with vinegared rice, p. 79). Sole with bean curd and mushrooms (p. 88). Salmon steamed with bean curd (p. 90-91). Mackerel with red miso (p. 95). Fish marinated in miso (p. 102). Clams in miso, mustard, and vinegar sauce (p. 105). Oysters in vinegared miso sauce (p. 106). Satsuma-age (with mackerel and bean curd cakes, p. 116-17). Oden (with "4 *ganmodoki* {fried bean curd balls}" and "1 *yakidôfu* {broiled bean curd}, about 7 ounces drained weight," p. 120-21). Kaki no dotenabe (oysters with bean paste, p. 124-25). Yudofu (simmered bean curd, p. 130). Sukiyaki (Sautéed beef and vegetables, with "2 *yakidôfu* {broiled bean curd}, 134-35). Grilled beef with bean paste (p. 146). Nikumiso (chicken and vegetables pickled in bean paste, p. 159). Eggplant with bean paste (p. 163). Green beans with bean paste (p. 168). Daikon with fried tofu (p. 171). Turnips with bean paste (p. 173). Cucumber and soy bean sprouts with sesame seeds (p. 183). Spinach salad with tofu (p. 186).

A short section titled "Bean curd dishes" (p. 187) notes that "the soy bean is the youngest of the bean family, going back only to about 3500 B.C." Beans in the Middle East go back to 7000 B.C. and in Mexico they go back to 5000 B.C. But the soy bean "makes up in versatility what it lacks in age."

Recipes: Fried bean curd with hijiki (with "2 pieces *aburaage* {fried bean curd}," p. 187). Sole with bean curd (188-89). Deep-fried bean curd with bonito flakes (p. 190). Dried bean curd with vegetables (with "4 *kôyadôfu* {dried bean curd}" and "2 teaspoons *usukuchi shôyu* {light soy sauce}, p. 191). Kûya-mushi (bean curd, chicken, and vegetable custard, p. 192-93). Simmered bean curd and chicken (p. 193). Takara bukuro (treasure bags with aburaage, p. 194). Tofu no shirô-ae (p. 195). Hiya-yakko (garnished cold bean curd, p. 196; *Kinugoshi tôfu* {silky bean curd} may be used). Chrysanthemum flower bean curd (p. 197). Nabeyaki Denraku [Dengaku"] (bean curd with white and red bean paste, p. 198). Pork with bean curd (p. 198-99). Ni-yakko (bean curd with dried bonito flakes, p. 199). Sokuseki misozuke (instant pickled vegetables with bean paste, p. 210). Koshi-an (red bean paste, with "1½ red *azuki* {adzuki} beans," p. 213-15). New year dishes: Kuromame (black soy beans simmered in soy sauce and sugar, p. 220).

Glossary (excellent, p. 228-36)–Soy-related terms: Aburaage, azuki bean, fu (wheat gluten cake), ganmodoki, kinako, kinugoshi tôfu, kôji, koshi-an (powdered azuki paste), kôyadôfu, kôridôfu, kuzuko, mirin, miso, misozuke, mochi, momen tôfu, moromi miso, namaage, nattô, shôyu, teriyaki ("a technique of glazing foods in a soy sauce and mirin mixture either in a skillet or on a grill"), tôfu ("soy bean curd, usually refers to *momen tôfu*"), umeboshi, usukuchi shôyu, yakidôfu, yuba. Address: Both: New York.

5344. Owen, Sri. 1976. Indonesian food and cookery. London: Prospect Books, and Jakarta: Indira Reprints. 255 p. Rev. ed. 1980. [20 ref.]

5345. Quebral, Florendo C.; Cagampang, I.C.; Herrera,

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W.A.T.; Mendoza, E.R.; Mondragon, R.L.; Payumo, E.M.; Ragus, L.N. 1976. The Philippines recommends for soybean 1976. Los Banos, Laguna, Philippines: PCARR. vi + 68 p. Illust. 24 cm. Reissued in 1978. [50 ref]

• ***Summary:*** Contents: Foreword. Acknowledgment. Introduction. 1. Nutritive value. 2. Utilization. 3. Cost and return analysis of soybean production. 4. Marketing. 5. Cultural management: Selection of varieties, adaptation (soil and climate requirements), land preparation, inoculation, planting, water management, fertilization, crop protection. 6. Post-harvest handling: Threshing, drying, storage. 7. Soybeans in multiple cropping. 8. Seed production. 9. References. Appendices: A. Standardization of soybean. B. Multifarious uses and preparation of soybean and by-products. C. Climate in the Philippines. D. Available inoculants and their distributors. E. Symptoms and first aids for pesticide poisoning. F. Addresses of manufacturers and distributors of pesticides. G. Glossary. Appendix tables. Tables. Figures.

A summary of soybean area, production, and yield in the Philippines, 1959-1975 follows. The number of hectares used for planting soybeans went from 1,690 ha. in 1959 up to 2,200 ha. in 1962, and then decreased annually until it was only 1,240 ha. in 1973. However, a record high of 2,780 ha. was reached in 1974, followed by 2,018 ha. in 1975. Production of soybeans was low in 1959-60, only 571.8 and 981.3 tons, respectively. By 1962, however, production had increased to 2,066.9 tons, but decreased steadily over the years until 1974. In 1974, a maximum of 2,214.0 tons was produced. The corresponding annual yields (tons/ha.) reflect the sharp rise of soybean production in 1961-62 and the ensuing decline of the industry throughout the rest of the 1960s and early 1970s, until 1974, when production soared to new heights. Address: PCARR (Philippine Council for Agriculture and Resources Research), Los Baños, Laguna, Philippines.

5346. Ranill, June. 1976. The El Molino cookbook: Natural wholegrain foods from El Molino & CaraCoa. El Molino Mills, A division of ACG Co., Box 2250, City of Industry, CA 91476. 144 p. Illust. Index. 22 cm. Spiral bound.

• ***Summary:*** Contents: Part I: Description of grains, seeds, legumes & carob (1-2 pages about each with an illustration, barley, buckwheat, corn, millet, oats, brown rice, rye, triticale, wheat, alfalfa seed, chia seed, flaxseed, pumpkin seed, sesame seed, sunflower seed, lentils, mung beans, split peas, soybeans {p. 22-23}, carob, El Molino and CaraCoa products).

Part II: How to use and enjoy whole grains, seeds, legumes. Part III: Recipes (by Alice Walter).

This year El Molino Mills celebrates its 50th anniversary, thus it was founded in 1926. Soya powder is like soya flour, but it is more finely ground for use in beverages. "Soy flour is made from the raw bean, while soya flour is made from soybeans that have been lightly toasted. This 'toasting,' actually a moist heat treatment, enhances the flavor." El Molino soya flour is full-fat flour.

El Molino products (p. 26) include Soybeans (whole cooks best), and Carob coated soynuts. No soy flour or powder is mentioned.

Soybeans, soya flour, grits, and powder are used extensively throughout his book. White bread (with soy flour, p. 46). Honey oatmeal bread (p. 48). Cornell bread (p. 50). Soya bread (p. 51; 4.5 cups wheat flour and 1.5 cups soya flour, so 25% soya flour). Improved quickbreads (p. 68). Crunchy muffins (with soya grits, p. 70). Homemade muffin mix. Soya muffins (p. 72). Gluten sesame thins (p. 74). Homemade Granola (with 1 cup El Molino soya flour, p. 75). Soy nuts. Garlic soy nuts. Roasted soybeans (p. 85). Carob breakfast drink (with 1 tablespoon El Molino soya powder, p. 88). Bean salad (featuring soybeans, p. 92). Meatloaf (with soya grits, p. 97). Soybean loaf. Baked soybeans. Soybean chili (p. 101).

The section titled "Meatless dishes" (p. 102-112) features many soy and many gluten recipes. Soybean medley. Cooked soybeans (Basic). Soy cakes. Soybean paste (ground cooked soybeans). Stuffed peppers. Stuffed tomatoes (both with soybean paste). Baked soybean croquettes. Softened soya grits. Stuffed zucchini (with softened soya grits). Tofu (from soybeans curded with lemon juice). Soy cheese (made from soya powder). Cooked gluten (homemade, p. 110). Gluten cutlets. Gluten patties. Gluten roast. Eggs and soya grits.

Soya milk (from soya powder, p. 115). Pineapple soya cocktail (with soya powder, p. 116). Soya applesauce cake (with soya flour or powder, p. 119). Improved cakes (p. 122). Peanut butter cookies (with soya flour, p. 125). Improved cookies (p. 128). Cookies for your puppy dog (p. 130). Sesame carob balls. Carob nut log (p. 137).

Sesame seed: On page 17 is a full page about sesame seeds and their uses, with an illustration of the sesame plant and its seeds. The Index contains more than 45 entries for "Sesame" including: Sesame butter (p. 17, 87). Sesame granola bars (p. 84). Sesame halvah (p. 17). Sesame milk (p. 17, 115). Sesame in muesli (p. 76). Sesame tahini dressing (p. 93). Address: City of Industry, California.

5347. Shanghai Grain and Oil Industry Co. 1976. [Process for making soy sauce with enzymes]. *Acta Microbiologica Sinica* 16(1):70. [Chi]

5348. Shepard, Sigrid M. 1976. The Thursday night feast and good plain meals cookbook: Natural foods of the Eastern Hemisphere: China, Japan, Indonesia, India, the Middle East. Spokane, Washington: New Age Printing. vii + 442 p. Illust. by Margaret V. Putman. Index. 28 cm.

• ***Summary:*** This is a natural foods cookbook (not vegetarian), with strong influence from East Asia. The

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author's great aunt was a missionary in China. Pages 5-7 describe how to make a "bean curd box" for making tofu, and then how to make tofu at home. Among the many soy-related recipes are about 55 for tofu, 7 for miso, 2 for whole soybeans, and many for soy sauce. Pages 431-34 contain a directory of natural foods provisioners and Oriental foods provisioners.

5349. Smartt, J. 1976. Tropical pulses. London: Longman. 348 p. Index. [275* ref]

• ***Summary:*** In the chapter on "Pulses in human nutrition," soya beans are mentioned (p. 92-95) under: Germinated seed. Fermented products: Soy sauce, soya bean paste, tempé, natto and Hamanatto. Extracted pulse proteins. Soya bean curd ('tofu'), soya bean 'milk'. Address: PhD, Senior lecturer in Biology, Univ. of Southampton.

5350. Solomon, Charmaine. 1976. The complete Asian cookbook. New York, NY: Summit Books. 511 p. Illust. Color plates. Index. 29 cm.

• ***Summary:*** This artistic cookbook is loaded with full-page color plates plus a good glossary. Soy-related recipes include: Bean curd omelettes (Tahu telur, from Indonesia, p. 188). Fried bean curd with peanuts (Tahu goreng kacang, from Indonesia, p. 204). Fried bean curd with soy sauce (Tahu goreng kecap, from Indonesia, p. 204). Fried fish with salted soya beans [miso] (Ikan goreng tauceo, from Malaysia, p. 224). Bean curd in salted soya bean paste [tofu in miso] (Taukwa tauceo, from Malaysia, p. 233). Bean curd and bean sprouts [probably mung bean sprouts] (Taukwa dan taugeh, from Malaysia, p. 233). Stuffed soy bean cake [with fried tofu] (Tauhu sod sai, from Thailand, p. 316). Glutinous rice and soybean sauce (Nuoc leo, from Vietnam, p. 341). Soup with bean curd (Canh dau hu, from Vietnam, p. 342). Misu tomato sauce (with red misu = red miso, from the Philippines, p. 351). Bean curd in barbecue sauce (Chu hau jeung mun dau fu, from China, p. 414). Bean curd with crab sauce (Hai yook par dau fu, from China, p. 414). Ginger soy sauce (See yau ghung jeung). Chilli soy sauce (See yau laht jiu jeung). Black bean sherry sauce (Dau see sheung jing jeung, with canned salted black beans = fermented black soybeans). Black bean garlic sauce (Suen tau dau see, with fermented black soybeans) (from China, p. 431). Sesame seed sauce (Cho kanjang, from Korea, p. 451, with "4 tablespoons light soy sauce"). Dumpling soup (Mandoo, from Korea, p. 453, with "1 square fresh bean curd" and "2 tablespoons light soy sauce"). Soup of soybean sprouts (Kong namul kuk, from Korea, p. 453, with 500 gm soy bean sprouts and 1 tablespoon soy sauce). Rice with fried bean curd (Kitsune domburi, from Japan, p. 460). Steamed egg custard with tofu (Kuya mushi, from Japan, p. 471). Bean paste soup (Miso shiru, from Japan, p. 477). Sushi in fried bean curd (Inari-Zushi, from Japan, p. 480).

Soy-related glossary entries (p. 485-502) include: Aburage. Akamiso. Black beans, salted (Chinese: dow see = salted black beans). Bean curd (Chinese: dow foo, incl. yellow bean curd, dried bean curd, red bean curd). Chinese bean sauce (ground = *mor sze jeung* or chunky = *min sze jeung* similar to Malaysian *taucheo* or *tauceo*). Dow foo pok (Chinese-style fried bean curd). Miso. Mushroom soy (Soy sauce flavored with mushrooms during the last stage of processing). Soy sauce (light or dark, shoyu, kecap manis). Yellow beans, salted (=salted yellow beans). Yellow bean paste.

Note 2. It is also the earliest document seen (April 2012) that uses the term *kecap manis* to refer to sweet Indonesian soy sauce.

Interesting glossary entries (p. 485-502): Aburage, bean curd (fresh, yellow, dried, red), black beans, salted (Chinese *dow see:* made from soy beans, heavily salted and sold in cans and jars), Chinese bean sauce (ground or chunky, like Malaysian taucheo or tauceo), fish sauce (Vietnamese: *nuoc mam*, Burmese: *ngan-pya-ye*, Thai: *nam pla*, Tagalog: *patis*). Miso. Mushroom soy (Soy sauce flavored with mushrooms during the last stage of processing). Red misu (See miso). sesame seed (Hindi: *till*, Sinhalese: *thala*, Malay: *bijan*, Chinese: *chih mah*, Japanese: *goma*, Indonesian: *wijen*). Sesame oil ("The sesame oil used in Chinese cooking is extracted from toasted sesame seeds."). Sesame paste ("Sesame seeds, when ground, yield a thick paste similar to peanut butter. Stores specialising in Middle Eastern foods sell a sesame paste known as *tahini*, but this is made from raw sesame seeds, is white and slightly bitter, and cannot be substituted for the Chinese version–which is made from toasted sesame seeds, and is brown and nutty"). Wakame. Wasabi or wasabe. Yellow beans, salted (Very similar to canned salted black beans, but lighter in color). Yellow bean paste (It is not really yellow, but brown. Sold in cans).

Note 1. This is the earliest English-language document seen (Feb. 2004) that uses the word "dau fu" (or "dau-fu") to refer to Chinese-style tofu.

Note 2. This is the earliest English-language document seen (March 2009) that uses the word "tauceo" to refer to Indonesian-style miso.

5351. Tannenbaum, Steven R. 1976. Production and use of protein concentrates. In: N.S. Scrimshaw and M. Behar, eds. 1976. Nutrition and Agricultural Development: Significance and Potential for the Tropics. New York and London: Plenum Press. xxiv + 500 p. See p. 473-86. Chap. 40. With comments by A.D. Odell. Proceedings of the 14th International Biological Symposium, held 2-6 Dec. 1974 at Guatemala City, Guatemala. Proceedings of the 14th International Biological Symposium, held 2-6 Dec. 1974 at Guatemala City, Guatemala. [12 ref]

• ***Summary:*** Contents: Introduction. Oilseeds. Soybeans. other oilseeds. Marine protein concentrates. Single-cell protein. Use of protein concentrates in food products.

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Conclusions. References. Comment by Arthur D. Odell of Industrial Grain Products, Montreal, Canada: Vegetable proteins. Marine protein concentrates. Single-cell proteins. Address: Dep. of Nutrition & Food Science, MIT, Cambridge, Massachusetts

5352. Wang, H.L.; Mustakas, G.C.; Wolf, W.J.; Wang, L.C.; Hesseltine, C.W.; Bagley, E.B. 1976. An inventory of information on the utilization of unprocessed and simply processed soybeans as human food. Peoria, Illinois: USDA Northern Regional Research Center. Interdepartmental Report. AID AG/TAB-225-12-76. 197 p. AID contract report. Undated. No index. 27 cm. Spiral bound. [65 ref]

• ***Summary:*** Contents: Introduction. Home and village traditional soybean foods by country. 1. Soybean food uses and production in Asia. Soaking dry soybeans. In China: Tou chiang (soybean milk, preparation, ways of serving), tou fu (soybean curd; yen-lu is the Chinese name for nigari), tou fu nao (soft curd), tou fu kan (dry / firm bean curd), chien chang (pressed tofu sheets), yu tou fu (fried tou fu), tung tou fu (frozen tou fu), tou fu pi (protein-lipid film; yuba), huang tou ya (yellow bean sprout or soybean sprout), mao tou (hairy bean, green soybean, or immature soybean), dry soybeans (roasting and frying, stewing and boiling), roasted soybean flour. Fermented soybean foods. Production and consumption of soybeans (China and Taiwan).

Japan: Tofu (soybean curd), kinugoshi tofu, processed tofu products (aburage or age, nama-age and ganmo), kori tofu (dried-frozen tofu), yaki tofu (grill tofu), yuba (protein-lipid film), soybean milk, gō (ground soybean mash), daizu no moyashi (soybean sprouts), edamame (green vegetable soybeans), whole soybeans, kinako. Fermented soybean foods. Production and consumption.

Korea: Tubu (soybean curd), soybean sprouts, whole soybeans (green soybeans, parched or roasted soybeans, boiled soybeans), soybean flour, soysauce, bean paste [Korean soybean miso], natto (no Korean name is given), production and consumption of soybeans.

Indonesia: Tahu or tahoo (soybean curd), bubuk kedele (soybean powder), tempe kedele, tempe gembus [the name in Central and East Java for okara tempeh], oncom tahu [the name in West Java for okara onchom], other soybean products (soybean sprouts, green soybeans, roasted and boiled soybeans, kecap or soysauce, tauco or bean paste [miso]), food mixtures (Saridele, Tempe-fish-rice or TFR, Soy-rice baby food, soybean residue [okara]-fish-rice), production and consumption of soybeans.

Thailand. Philippines: Soybean sprouts, soybean coffee, soybean cake (made from equal amounts of soybean flour and wheat flour), soybean milk, tou fu and processed tou fu products, production and consumption. Burma. India. Malaysia. Nepal. Singapore. Sri Lanka (Ceylon). Vietnam. West Asia [Middle East; Iran and Turkey]. References–Soybean food uses in Asia.

2. Soybean food uses and production in Africa. Ethiopia: Injera, wots and allichas, kitta, dabbo, dabokolo, porridge. Kenya. Morocco. Nigeria: Whole soybeans, soybean paste, corn-soy mixtures (soy-ogi). Tanzania. Uganda. Production. References–Soybean food uses in Africa.

3. Soybean food uses and production in Europe [both Eastern and Western]. 4. Soybean food uses and production in Latin America. Argentina. Bolivia. Brazil. Chile. Colombia. Ecuador. Guyana. Paraguay. Peru. Uruguay. Venezuela (fried arepas with textured soy). Mexico: New village process, commercial developments of soy-based food products, Gilford Harrison, Ruth Orellana, Seguras Social. Honduras. Costa Rica. Panama. Dominican Republic. Jamaica. Haiti. Trinidad. References–Soybean food uses in Latin America.

5. Soybean food uses and production in North America. United States: Oriental populations, vegetarian communes, The Farm in Tennessee. Canada. References–Soybean food uses in North America. 6. Soybean food uses in Oceania. Australia. New Zealand. 7. Summary of soybean food uses. Traditional soybean foods: Soybean milk, soybean curd and processed soybean curd products, protein-lipid film, soybean sprouts, tempe (tempeh), green soybeans, boiled soybeans, roasted soybeans, soybean flour, soysauce, fermented soybean paste, fermented whole soybeans [Toushih, hamanatto], natto, fermented soybean curd. Experimental soybean foods: Whole soybean foods, soybean paste, soy flour, soy beverage. Production and consumption.

8. Recent simple soybean processes, other than traditional. Simple village process for processing whole soybeans. Equipment, process, sanitation requirements, quality of product, evaluation of product in formulas and procedures for family and institutional use in developing countries. NRRC village process. Foods from whole soybeans developed at the University of Illinois (drum dried flakes, canned and homecooked soybeans, soy beverages and beverage products, spreads, snacks).

Ways of cooking and serving soybeans in the American diet. 9. Industrial processes. Industrial production and selling prices of edible soybean protein products. 10. Barriers to acceptability and utilization of soybeans in food and research recommendations: Availability. Cultural and social factors. Texture. Flavor. Nutrition and food safety. Technology development. Technology transfer. Research recommendations [concerning each of the above barriers].

Concerning Morocco: Cereal-soy blends have been used extensively in Morocco, in fiscal year 1974 some 14.7 million lb were shipped to Morocco. Mmbaga (1975) reported that soy flour is being used in making porridge, with 1 part soy flour to 3 parts maize / corn flour.

Tables show: (1) Soybean production and imports in Taiwan, 1962-1975 (tonnes = metric tons, p. 33). Production rose from a 53,000 tonnes in 1962 to a peak of 75,200 tonnes in 1967, then fell to 61,900 tonnes in 1975. Imports

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skyrocketed from 62,400 tonnes in 1962 to a record 827,300 tonnes in 1975. (2) Consumption of soybean foods in Taiwan, 1964-1974 (kg/capita/year, p. 34). Total soybean foods not including tofu rose from 1.08 kg in 1964 to a peak of 2.61 kg in 1972 then fell to 1.99 kg in 1974. Consumption of tofu (80% water) rose from 18.75 kg in 1964 to a peak of 33.89 kg in 1972, then fell to 32.04 kg in 1974. (3) Supply and disposition of soybeans in Japan, 1971-1974 (p. 49). Total supply is beginning stocks, plus domestic production, and imports. Total disposition is crushing, plus traditional foods and feed. In 1974 imports accounted for 87.5% of the supply, and crushing accounted for 71.0% of the disposition. (4) Whole soybeans used in the production of traditional foods in Japan, 1970-74 (tonnes / metric tons, p. 50). Tofu and others rose from 508,000 in 1970 to 539,000 in 1974. Miso rose from 177,000 in 1970 to 192,000 in 1974. Shoyu rose from 13,000 in 1970 to 14,000 in 1974. (5) Defatted soybean meal used in the production of traditional foods in Japan, 1970-74 (tonnes / metric tons, p. 51). Shoyu rose from 163,000 in 1970 to 176,000 in 1974. Tofu and others was constant at 130,000 from 1971 to 1973. Miso decreased from 4,000 in 1970 to 2,000 in 1974. (6) Production of traditional soybean foods in Japan, 1970-74 (tonnes / metric tons, p. 52). Tofu and others rose from 1,867,800 in 1970 to 2,264,900 in 1973. Shoyu rose from 1,334,1000 in 1970 to 1,455,800 in 1974. Miso rose from 552,200 in 1970 to 587,200 in 1974. (7) Production and food use of beans [various types] and consumption of some soybean products in Korea, 1964-1967 (p. 56-57). In 1967 consumption (in tonnes / metric tons) was: Bean curd 290,000. Bean sprouts 270,000. Bean sauce 69,700. Bean paste 27,700. Total 11.6 kg per capita per year. (8) Soybean production in Indonesia, 1960-1974 (p. 65). It rose from 442,862 tons in 1960 to 550,000 tons in 1974. (9) Consumption of soybeans in various parts of Indonesia in 1970 (p. 66). (10) Production of soybean foods in the province of Central Java, 1968-1972 (tons, p. 67). Kecap rose from 914,695 in 1968 to 1,524,000 in 1972. Tahu decreased from 18,570 in 1978 to 17,000 in 1972. Tempe rose from 506 in 1968 to 39,000 in 1972. (11) Area planted to soybeans and total soybean production in Thailand, 1964-1974 (p. 70). Area rose from 213,000 rais (6.25 rais = 1 ha) in 1964 to 1,016,000 rais in 1974. Production (in metric tons) rose from 31,300 in 1964 to 252,400 in 1974. (12) Utilization of soybeans by soybean-consuming countries, 1964-66 (based on FAO 1971 Food Balance Sheets, 1964-66 average, p. 150). The countries leading in per capita consumption (kg/person/year) are: China (PRC) 6.7, Japan 5.1, Korea(s) 5.0, Singapore 4.3, Indonesia 2.8, Malaysia 2.6, Taiwan (ROC) 1.1. (13) Amounts of cereal-soy blends distributed under Title II, Public Law 480 in fiscal year 1974 (p. 152-155). (14) U.S. exports of full-fat soy flour, 1974-75 (p. 156).

Note: This is the earliest English-language document seen (Feb. 2004) that uses the word "tubu" to refer to Korean-style tofu. Address: Northern Regional Research Center, Agricultural Research Service, Department of Agriculture, Peoria, Illinois 61604.

5353. White, Lynn, Jr. 1976. Food and history. In: Dwain N. Walcher, N. Kretchmer, and H.L. Barnett, eds. 1976. Food, Man, and Society. New York and London: Plenum Press. xv + 288 p. See p. 12-30. [24 ref.]

• ***Summary:*** A brilliant overview. Compared with other crops, the soybean was slow to diffuse out of East Asia, perhaps because in its home territory it was consumed largely as tofu and soy sauce; other cultures had no precedents for such processing (p. 28, footnote). Address: Prof. of History Emeritus, Univ. of California, 405 Hilgar Ave., Los Angeles, California 90024.

5354. Winarno, F.G.; Hardjo, S.; Rumawas, F. 1976. The present status of soybean in Indonesia. Bogor, Indonesia: FATEMETA, Bogor Agriculture University. xxiii + 128 p. 29 cm. [7 ref.]

• ***Summary:*** The best and most comprehensive survey up to this time on the subject, it was done as part of the 1974 Industrial Census of the Central Bureau of Statistics. Full of valuable statistics and tables. Contents: Preface. Summary. List of tables. List of figures. I. Introduction. II. Objectives and survey methods: A. Objectives. B. Survey methods. III. Cultivation, product handling and protection: A. Botany of the soybean. B. Varieties. C. Growth requirements. D. Agronomy of soybean. E. Crop Management. F. Harvesting and product handling.

IV. Production: A. Harvested acreage, production and average soybean yield in Indonesia. B. Center production areas. C. Harvested acreage of soybean versus other food crops. D. Factors affecting soybean production. V. Farm management and soybean marketing in Indonesia: A. Farm management. B. Marketing of soybean.

VI. Soybean utilization (p. 52): A. Soybean products: Introduction, yuba, sere (from Bali: cooked whole soybeans, mixed with onions, hot pepper, turmeric, salt, and coconut presscake, molded into patties, sun dried, then deep fried), soybean milk, tofu (coagulated with *biang* or *sioko* {calcium sulphate}), soybean sprouts (*tauge*), soybean powder (soybeans that have been cooked, dried, dehulled, and pounded), soybean mixtures, kecap (Indonesian soy sauce), oncom (fermented soybean product, red or black), tauco (Indonesian-style miso), tempe. B. Soybean utilization: Utilization by farmer (in each of 6 provinces and total), utilization by processor (tempe, tofu, kecap, miscellaneous), census conducted by Central Bureau of Statistics, conversion factor for soybean products. C. Consumption of soybean and its processed products (by province). D. Other components. Appendixes.

Tables in body of text: (1) Brief description of recommended soybean varieties. (2-3). Insecticides used

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against Agromyza and *Phaedonia inclusa*. (4) Soybean harvest seasons in Indonesia (major harvest months, by province). (5-8) Harvested acreage, production, and average soybean yield during 1950-73, 1960-74, and in Java-Madura (1967-71, 1972, 1973, and 1974). (9) Soybean acreage in Java-Madura. (10) Major production areas in Java-Madura, and average 5-year yield, 1965-69. (11) Harvested acreage of soybeans vs. other crops in Java-Madura, 1971-72. (12) Production cost and value per hectare of soybeans. (13) Major trading and harvest months. (14-15) Percentage of farmer's share and marketing cost of the trade price in various provinces. (16) Percentage of farmer's share of the trade price. (17) Soybean utilization by farmers, 1975-76. (18-21) Production/consumption of tempeh, tofu, kecap, tauco, tauge, yuba, and sere.

(22-29) Raw material utilized by small-scale processors and by soybean home industries in Java and Jakarta. (30-31) Value of raw material and end products of small-scale industries over 3- and 12-month periods. (32) Conversion factor of soybean products to raw material. (33-36) Average daily consumption per capita of soybean and its process products at villages in Lampung, Yogyakarta, East and West Java, and in 4 other provinces. Address: FATEMETA, Bogor Agricultural Univ., Indonesia.

5355. Winarno, F.G.; Hardjo, S.; Rumawas, F. 1976. Kecap (Indonesian-style soy sauce) (Document part). Bogor, Indonesia. In: Winarno, F.G.; et al. 1976. The present status of soybean in Indonesia. FATEMETA, Bogor Agriculture University. xxiii + 128 p. 29 cm. [7 ref]

• ***Summary:*** The description of kecap (p. 58-59) states: Boil soybeans until tender. Drain and spread over round, shallow woven bamboo trays. Place these in a kecap fermentation room. Leave for 5-7 days until the soybeans are well covered with and bound together by a mycelium of *Aspergillus* and/or *Rhizopus* molds. Then dry the trays and soybean koji in the sun. Break up the soybean koji, place it is salt brine in deep earthenware jars, and place the jars in the sun to ferment for one week or up to one year.

When the mash is ready, boil it, adding clean water if necessary. Remove the liquid using a sieve; this is the first extraction, which is the best quality. Repeat this process 3 to 5 times, adding a brine solution the same salt concentration as the original mash. Each extraction, which will be lower in quality that the one before it, is kept separate to provide different qualities of end product.

As the final step for each different extraction, bring it to a boil and add some ingredients such as palm sugar [jaggery], caramel, or coconut sugar. Other ingredients such as fish extract or bouillon are also occasionally added. Filter the liquid through a piece of cheese cloth, bottle and store.

Note: This is the earliest English-language document seen (April 2012) that uses the term "first extraction" in connection with soy sauce quality.

Page 67: Most kecap is made in small scale enterprises, employing on average 10-11 laborers and working 23.7 days/month. The average kecap maker uses 13,390 kg of soybeans annually to produce kecap with a value of 6.3 million rupiahs. A table (p. 68) gives details by province.

Page 80: Kecap is a very minor soy product in Indonesia. Only 0.2% of all soybeans used to make foods in Indonesia are used to make kecap. The largest percentage of soybeans are used to make tempeh (66%), tofu (33%), and tauco (0.3%).

Pages 93-94: Ingredients required to make kecap include palm sugar, cane sugar, molasses, salt, wheat flour, cassava flour and spices. Palm sugar is the most important sweetener. "Depending on the concentrations of sugar and salt, there are two types of kecap available in the market, sweet and salty kecap." Wheat flour and cassava flour serve as thickening agents, but they are not used by all kecap makers. No information is given on the types or amounts or of spices and herbs used in making kecap. Address: FATEMETA, Bogor Agricultural Univ., Indonesia.

5356. Yoshimura, Akira. 1976. Sangyô-damashii: Mogi Keizaburô no hito to keiei [The soul of an industrialist: The character and management of Keizaburo Mogi]. Tokyo: Nihon Noritsu Kyokai. 197 p. Interview by A. Yoshimura. Analysis and interpretation by Yoshiya Sato. [Jap]*

5357. Muso Shokuhin. 1976? Distributors of Muso foods in Canada, South America, Europe, and Australia (Leaflet). Osaka, Japan. 1 p. Undated.

• ***Summary:*** The name, address, and phone number of each company is given. Canada: Lifestream Natural Food, Inc. (British Columbia). Manna Foods, Inc. (Ontario).

South America: Zentro Macrobiotico de Venezuela.

Europe: Societe Traplun (France). Unimave S.C.A.R.L. (Portugal). Urtekram (Denmark). V.Z.W. Voedselcollektief (Belgium). Manna (Holland). Centro Dietetico Macrobiotico Italiano (Italy). Centro Macrobiotico Italiano (Italy). Harmony Foods (England). Kameo (France). P.V.B.A. Lima (Belgium). Moder Jord & Söner (Sweden). Reformhaus Rahlstedt (West Germany). Schwarzbrot (West Germany). Dr. Naturopata SER (Spain). Eduardo Galamba De Sa Pires (Portugal).

Australia: True Health Aides Pty. Ltd. (Sydney). Address: 1-43 Otedori, Higashi-ku, Osaka, Japan. Phone: (06) 945-0511.

5358. Seta, M. 1976? [Brief chronology of Yamasa Shoyu Co. Ltd.] (Interview). Conducted by W. Mark Fruin with a director of Yamasa Shoyu Co. in Choshi, Japan. 14 p. transcript. Undated. Unpublished manuscript. [Jap; eng+] Address: Director, Yamasa Shoyu Co., Choshi, Japan.

5359. Shurtleff, William. 1977. Soy foods: Protein source of

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the future–now. Paper presented on 1976-77 Tofu & Miso America Tour. 16 p. transcript. Unpublished manuscript. [5 ref]

• ***Summary:*** This is the transcript of a speech given on 15 Jan. 1977 in Kansas, but a similar speech was given by Shurtleff at 70 public programs throughout the USA. Contents: World hunger and its causes: Population growth, affluence and the feedlot system, land misuses and international food exploitation. Vegetarian diets as a solution to degenerative diseases and food problems. Soybeans in America. Soybeans and soyfoods in East Asia: Tofu, miso, tempeh, shoyu. The future of soybeans on the planet. Address: New-age Foods Study Center, 790 Los Palos Dr., Lafayette, California 94549. Phone: 415-283-3161.

5360. Sunwheel Foods Ltd. 1977. Importers and distributors (Ad). *Spiral* (*London, England*). Winter. p. 24-25. Jan.

• ***Summary:*** Sunwheel Foods Ltd. are importers and distributors of six varieties of Sea Vegetables, Tamari Soya Sauce, and three varieties of Naturally Fermented Miso Soya Bean Paste. This is ad is part of an article titled "Vitamin B-12 and the vegetarian," by John Jenks. Address: 12 Orpheus St., London SE5 8RR, England.

5361. Claiborne, Craig. 1977. Nuts go into great Oriental dishes: Peanuts in the kitchen. *Chicago Tribune*. Feb. 24. p. E28.

• ***Summary:*** Nuts, especially the peanut, do not play nearly as important role in serious American cooking as they do in the cuisines of other countries. By contrast, Indonesian chefs do marvelous things with peanuts–mostly in sauces and soups.

A recipe is given for Indonesian chicken satay, which includes "1 tablespoon ketjap manis (a sweet soy sauce), see note." The dipping sauce for this recipe includes "3 tablespoons ketjap manis."

The note (at end of article) states: "Many of the ingredients for Indonesian dishes are available in Oriental markets." Indonesian foods can be ordered by mail from Mrs. De Wildt, R.R. 3, Box 333, Bangor, Pennsylvania 18013.

5362. Leroux, Charles. 1977. Pouring over the virtues of catsup, the sauce everybody loves to hit. *Chicago Tribune*. Feb. 24. p. A1.

• ***Summary:*** The *Oxford English Dictionary* says that the word *kechap* comes from Malay, the Dutch spelled it ketjap.

Some say that catsup originated in China, where it is called *koe-chiap* or *ke-tsiap*.

Food in History, by Reay Tannahill says the word "ketchup" comes from the Siamese kachiap.

The sauce we know today as ketchup or catsup–made mainly from tomatoes–is very different from the Oriental sauces mentioned above. They were often made from pickled fish, salt, and oil. American colonists in Virginia had a "walnut catsup" that they used on baked sturgeon.

There is a reference in *Barnaby Rudge* [1840-1841], by Charles Dickens, about putting ketchup on lamb chops. Note: Dickens states: "'A bit of fish,' John said to the cook, 'and some lamb chops (breaded, with plenty of ketchup), and a good salad, and a roast spring chicken, with a dish of sausages...'" (1841, p. 44).

5363. *Eubiotica* (*Italy*). 1977. Le tamari [Tamari]. No. 9. Feb. [Ita]*

Address: Italy

5364. Nakadai, Tadanobu, Nasuno, Seiichi. 1977. The action of acid proteinase from *Aspergillus oryzae* on soybean proteins. *Agricultural and Biological Chemistry* 41(2): 409-10. Feb. [14 ref]

• ***Summary:*** Until recently it has long been considered that large amounts of free amino acids are liberated from proteins by the hydrolytic action of acid protease from *Aspergillus oryzae*. However recent reports indicate that the liberation of free amino acids in miso brewing is due to the action of carboxypeptidase of the mold. This investigation clearly indicates that "free amino acids are liberated from soybean protein by the hydrolytic action of both acid proteinase and acid carboxypeptidase of *A. oryzae* in the miso brewing, but not liberated by the hydrolytic action of only acid proteinase." Address: Noda Inst. for Scientific Research, Noda, Chiba, Japan.

5365. Hansen, Barbara. 1977. Cookery of the Spice Islands: Sumatra native instructs. *Los Angeles Times*. March 24. p. J1, J6.

• ***Summary:*** Until now it has been hard to learn Indonesian cookery, unless you have an Indonesian friend, or visit the country itself, or eat extensively in Holland, which has an Indonesian restaurant in almost every town. The Dutch ruled Indonesia for about 365 years, from about 1585 to 1950.

The best way is to learn first-hand. This is now possible in the Los Angeles area since Danny Unger is teaching a series of classes in Pasadena. He was born in Bukit Tinggi on the Island of Sumatra.

The first lesson focused on sate [pronounced sah-TAY] (grilled cubes of meat on skewers), the Indonesian dish that is probably best known outside that country. "The peanut sauce that is traditionally served with sate introduced to the class such specialized ingredients as terasi, a pungent fish condiment; sambal oelek, a paste of hot red chilies and kecap (pronounced 'ketjap'), the sweetened Indonesian soy sauce."

A recipe titled Peanut sauce for gado gado calls for "2 tablespoons kecap (Indonesian soy sauce)."

A note at the end of the article reads: "Terasi, galanga, sambal oelek and kecap are available in Dutch import shops and in Oriental markets that stock foods from Southeast

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Asia."

A large photo shows Danny Unger preparing gado gado with members of his cooking class.

5366. **Product Name:** Eden Tamari Natural Shoyu.
Manufacturer's Name: Eden Foods, Inc. (Imported from Muso Shokuhin). Made in Japan.
Manufacturer's Address: 4601 Platt Rd., Ann Arbor, MI 48104. Phone: (313) 973-9400.
Date of Introduction: 1977, March.
Ingredients: Whole soybeans, whole wheat, water, sea salt.
Wt/Vol., Packaging, Price: 8 oz bottle, 1 pint bottle, 1 quart bottle, 1 gallon can.
How Stored: Shelf stable.
New Product–Documentation: Eden Foods Spring and Summer Catalog 1977. On page 25 is the first record of "Eden Tamari: Natural Shoyu" which is sold in 8 oz. pints, quarts, or 1 gallons cans. "The Muso Shokuhin Company has been supplying the macrobiotic community of the United States with tamari, miso and sea vegetables for the last ten years. All of Eden's Japanese imports are supplied by Muso... Eden tamari is aged naturally (in wooden kegs) for 30 months and is made from whole soybeans, whole wheat, water, and sea salt." A photo shows 1 label and 3 bottles of "Eden Tamari Natural Shoyu." Prior to this, Eden had imported Tamari Shoyu under the Erewhon brand.

Ad in Soycraft. 1979 Summer p. 38. "Traditional Soy Products from Eden Foods." "Eden tamari is a traditional shoyu naturally aged for three years in cedar vats. It is made from whole soybeans, water, and sea salt, giving it the depth and richness only slow, seasonal aging can allow. Available in 8 oz. pint, 1 gallon, and 4.75 gallon sizes. Also in 55 gallon drums."

Eden Foods, Inc. 1991, Feb. "Eden Foods Product Overview." "1972–Trade relationship began with Muso Company, Ltd. of Osaka, Japan."

Talk with Ron Roller of American Soy Products (formerly of Eden Foods) in Saline, Michigan. 1991, Nov. 27. Originally Eden bought tamari and miso from Erewhon. Then Eden started importing them from Mitoku, they were importing from both Mitoku and Muso in the very beginning.

Letter from Bill Bolduc, a founder of Eden Foods. 1991, Dec. 4. Eden started to import a line of foods from Japan in about 1974 or 1975. Imports had definitely not yet started by the fall of 1973.

5367. Eden Foods. 1977. Spring and summer catalog 1977. 4601 Platt Rd., Ann Arbor, MI 48104. 53 p.
• ***Summary:*** On the cover are bags, trays, and scoops filled with natural foods. Page 25 states that Eden now sells Tamari Soy Sauce (Eden, or Marushima), plus Hacho, Mugi, and Kome Miso. This is the first catalog in which Erewhon's name is not listed after any tamari or miso products.

On page 25 is the first record of "Eden Tamari: Natural Shoyu" which is sold in 8 oz. pints, quarts, or 1 gallons cans. A photo shows the quart bottle with label, and the dispenser. It is "made from whole soybeans and naturally fermented in wooden kegs for 30 months... The Muso Shokuhin Company has been supplying the macrobiotic community of the United States with tamari, miso and sea vegetables for the last ten years. All of Eden's Japanese imports are supplied by Muso." Address: Ann Arbor, Michigan. Phone: (313) 973-9400.

5368. **Product Name:** Island Spring Delicious Steamed Tofu in Sauce.
Manufacturer's Name: Island Spring, Inc.
Manufacturer's Address: P.O. Box 747, Vashon, WA 98070.
Date of Introduction: 1977, March.
Ingredients: Tofu, soy sauce, soy oil, sesame seeds, honey, ginger powder, garlic powder, cayenne pepper, black pepper.
Wt/Vol., Packaging, Price: 12 oz.
How Stored: Refrigerated.
Nutrition: Per 3 oz.: Calories 88, protein 10.3 gm, carbohydrate 2.9 gm, fat 7 gm.
New Product–Documentation: Label. 1979. 2 by 1 inch oval. Self adhesive. Black on gold. "Serve Hot Or Cold." Leviton. 1981 Soyfoods. Winter. p. 43. "One thousand pounds of tofu a week are converted into Delicious Steamed Tofu, fresh griddled slabs of tofu packed in soy sauce." Label. 1982. 6 by 5 inches. Plastic film. Brown and yellow on clear. "Delicious steamed tofu is good served hot or cold for snacks, sandwiches, hors d'oeuvres, or as a main course." Talk with Luke Lukoskie. 1987, Oct. 19. "Sum [his wife, and a Korean-American] joined Island Spring in March 1977, and we started our flavored tofu at that time." Form filled out by Yvonne Kuperberg. 1988, Oct. 1. Lists original ingredients. Label. 1986. 5 by 4 inches. Pink, green, blue, and black. Shows moon rising over mountains and water with sprig of plum blossoms in left foreground. "A fitness food from the Pacific Northwest, USA."

5369. Iso, James. 1977. Southeast Asia–emerging growth market for soybeans. *Foreign Agriculture*. April 11. p. 2-4.
• ***Summary:*** With rising incomes and changing eating habits whetting their appetite for meat and quality protein foods, four nations of Southeast Asia–the Philippines, Thailand, Malaysia, and Singapore–are turning to the world market for more livestock feed ingredients. Brazil–by gearing up its export program–has recently gained a substantial foothold in these markets. And soybeans and soybean products also have come from Asian suppliers like the People's Republic of China (PRC), Indonesia, and even Japan, the latter exporting soybean meal crushed from U.S. soybeans. Philippine imports of soybean meal in recent years have varied between 50,000 and 70,000 tons a year. The Philippines also is a viable market for soy proteins for food, thanks to the presence there of three major U.S. meatpackers. Some

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50% of the processed meat produced by these firms has contained soy protein since the product's introduction into the Philippines in 1969. Ground red meat containing 20% soy protein enjoys good consumer acceptance. Owing to the large Chinese population in the Philippines, food soybean consumption already is significant. Although domestic soybeans make up the major supply for traditional foods, such as bean curds [tofu] and soy sauce, some 500-600 tons of these beans must be imported each month.

Thai soybean production has yet to make much headway. Thailand's climatic and soil conditions apparently have not been conducive to expansion, despite attempts by local growers and some Japanese interests to establish a large-scale industry in the highlands. In 1976, the country produced about 155,000 tons of soybeans, of which 20,000 tons were exported and the rest either used domestically for food or crushed. This year, if the Government approves, a multimillion-dollar soy protein plant will be constructed with the possibility of producing 10,000 tons of a soy infant food annually and 2,000 tons of meat analogue. The Institute of Feed Research and Product Development–a private Government-backed research organization affiliated with Kasetsart University–has spearheaded textured soy protein (TSP) and soy flour research. Malaysia is mainly noted for its huge and rapidly growing production of palm oil.

Although its population of 2.25 million is dwarfed by that of the rest of Southeast Asia, Singapore plays a disproportionately large role in the region's trade. This is because it is a major transshipment port for the region–and for Malaysia in particular. Most of the imported soybeans are crushed, although significant volumes of beans also are used in producing traditional soy foods for the large Chinese population. The only major soybean crusher outside of the Philippines is located in Singapore, an operation which the management anticipates will crush 100,000 tons of soybeans in calendar 1977. One firm is using soy proteins in canned foods, soy sauce, soft drinks, combined milk, and other products. Address: Foreign Market Development, Oilseeds and Products, Foreign Agricultural Service.

5370. Shurtleff, William; Aoyagi, Akiko. 1977. Koji & koji starter for miso and shoyu. Lafayette, California: New-age Foods Study Center. 6 panels. April 26. Catalog.
• ***Summary:*** This is a revised, expanded, typeset (by Jan Herhold), and illustrated (by Akiko Aoyagi) version of a similar leaflet first printed in June 1976. Printed with black ink on saffron colored (yellowish orange) paper, it begins by noting: "Now you can easily make your own miso or natural shoyu (soy sauce) at home using either high-quality, reasonably-priced koji or koji starters available in the United States; illustrated instructions are given in *The Book of Miso*."

Part I describes two types of koji: Firm granular koji, and soft mat koji. Part II describes nine different types of koji starter for which are sold in three textures: Spore-powder texture, whole-grain texture, and meal texture. The nine different types of koji starter are for: Red miso, barley miso, soybean miso, mellow barley miso, sweet white miso, light-colored miso, fast white miso, amazake or pickling, or shoyu. All the above are made by the prestigious Japan Brewing Company (*Nihon Jozo Kogyo*), which employs only the very finest traditional, natural methods.

Sources of ready-made koji: Miyako Oriental Foods (Los Angeles, California), Westbrae Natural Foods (Emeryville, California), Chico-San Food Co. (Chico, California), and Janus Natural Foods (Seattle, Washington). Sources of koji starter: Westbrae Natural Foods sells the 5 most widely used koji starters; all are imported from Mitoku Trading Co., Tokyo, Japan. Address: Lafayette, California

5371. Bernardino, Minnie. 1977. Tofu: Oriental food whose American time has come. Puddinglike soy curd adds taste, nutrition. *Los Angeles Times*. April 28. Part VI. p. 1, 10, 11.
• ***Summary:*** Better known by its Japanese name (the Chinese call it dow foo), tofu is fresh bean curd made from soybeans. The curds are formed when a coagulant is added to set the milky liquid [soymilk]. "The subsequent processing methods result in a variety of tofu products that differ only in firmness and texture."

"In Los Angeles the majority of tofu products are locally manufactured by the Matsuda-Hinode Tofu Co. which was started by the Yamauchi family in Hawaii about 30 years ago." The company makes a variety of tofu products "including soft to very soft tofu, medium-firm or Japanese-style tofu, and the hard or Chinese-style tofu that is popular for stir-fry dishes. They also make partially cooked styles such as the broiled block of tofu [grilled tofu], deep-fried tofu puffs (age or aburage in Japanese) and the raw-fried tofu (nama-age)."

Gives recipes (some from *The Book of Tofu*, by Shurtleff & Aoyagi) for: Yosenabe. Stuffed fried tofu. Tuna tofu patties. Tofu-orange almond dessert. Mushroom and onion casserole with tofu. Tofu tartare sauce. Pressed bean curd fry. Four photos show tofu being made at Matsuda-Hinode (overhead view of cutting large sheets into blocks in cooling tank) and in dishes. Address: Staff writer.

5372. Hattori, Terumitsu. 1977. Ordinary analysis of Kikkoman soy sauce (Naturally brewed in the United States). 1581 Webster St., San Francisco, CA 94115. 2 p. Unpublished manuscript.
• ***Summary:*** Solids content: 31.23 gm/100 gm or 37.10 gm/100 ml. Ash (minerals) 15.7 gm/100 g, or 18.7 gm/100 ml. NaCl 14.30 gm/100 gm or 17.00 gm/100 ml. Total nitrogen 1.39 gm/100 gm or 1.65 gm/100 ml. The nitrogenous component is: Amino nitrogen 44%, peptide nitrogen 44%, ammonia nitrogen 12%. Also gives amino acid content, reducing sugar, pH (4.75), titratable acidity (2.40), content of lactic and acetic acids, alcohol (ethanol

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1.7 ml/100 gm or 2.05 ml/100 ml), specific gravity (1.188 gm/ml), color, calories (66 cal/100 gm or 79 cal/100 ml), and sodium benzoate preservative 0.05 to 0.07 gm/100 gm. Address: Kikkoman Foods, Inc., Japan Center, P.O. Box 784, San Francisco, California 94101. Phone: 415-563-8700.

5373. Kolb, H. 1977. Herkoemmliche Verfahren zur Nutzung von Soja im asiatischen Raum [Traditional processes for using soya in Asia]. *Alimenta* 17(2):41-45. March/April. [35 ref. Ger]

• ***Summary:*** Discusses each of the following foods briefly and gives sources of further information: Kinako (roasted soy flour), soymilk, yuba, tofu, kori tofu (dried-frozen tofu), aburaage, namaage, kinugoshi tofu, sufu, soy cheese (Western style), soy yogurt, ganmodoki, natto, Hamanatto, koji, tempeh, miso, tao-tjo [Indonesian-style miso], kochu-jang, shoyu, and ketjap.

Note: This is the earliest German-language document seen (Oct. 2011) that uses the word "sufu" to refer to fermented tofu. Address: Institut fuer Lebensmitteltechnologie, Frucht- und Gemuesetechnologie, Technische Universitaet Berlin, Koenigin-Luise-Strasse 27, D-1000 Berlin 33, West Germany.

5374. **Product Name:** Soy Nuggets (Chunks of Textured Soy Flour Flavored with Soy Sauce).
Manufacturer's Name: Love Natural Foods.
Manufacturer's Address: 3 Masada Dr., Cohutta, GA 30710.
Date of Introduction: 1977. April.
Ingredients: Defatted soy flour, imported naturally fermented shoyu soy sauce.
Wt/Vol., Packaging, Price: 8 oz box.
How Stored: Shelf stable.
Nutrition: Per 2 oz.: Calories 202, protein 17 gm, carbohydrates 30 gm, fat 1.7 gm, calcium 165 mg, iron 5 mg, sodium 678 mg.
New Product–Documentation: Spot in Whole Foods. 1986. Nov. p. 50. "Soy Substitute." And in Vegetarian Times. Nov. p. 58. "Golden Nuggets of Soy." Ideal for making chili, spaghetti sauce, and Sloppy Joes. Label. 1987. 5.5 by 8 by 2 inch box. Red, black, and white on tan. Color photo of spaghetti sauce, sloppy joe, and chili dish. "With natural soy sauce. Very low fat. No cholesterol. Perfect for Connoisseur Chili, Super Spaghetti Sauce, Sumptious Sloppy Joes, and many other great dishes. Reconstitutes to over a pound." Five recipes on back. Several quotes about love and God. Ad for "Love animals, don't eat them T-shirts." Form filled out by David Nazar. 1987. Dec. They now make 1,000 lb/month.

Ad in Vegetarian Times. 1991. Dec. p. 49. "Soy Nuggets. Lean bean protein. A great tasting soy granule made with natural shoyu soy sauce. Perfect for connoisseur chili, super spaghetti sauce, sumptuous Sloppy Joes, and many other great dishes." The company address is still 3 Madada Drive. A color painting shows Jesus as a child walking with animals, illustrating the spiritual beauty of a vegetarian diet.

5375. **Product Name:** Loveburger. The Classic Vegeburger.
Manufacturer's Name: Love Natural Foods.
Manufacturer's Address: 3 Masada Dr., Cohutta, GA 30710. Phone: 404-694-8179.
Date of Introduction: 1977. April.
Ingredients: Sesame seeds, soy flour, oat flour, bran, potato flour, nutritional yeast, naturally fermented soy sauce (from soybeans, wheat, sea salt), onion powder, basil, garlic powder, marjoram.
Wt/Vol., Packaging, Price: 1 lb box.
How Stored: Shelf stable.
Nutrition: Per 2 oz : Calories 245, protein 17 gm, carbohydrates 20 gm, fat 11 gm, crude fiber 2 gm.
New Product–Documentation: Label. 1987. 5.5 by 8 by 2 inch box. Blue, black, and red on tan. Color photo of a child leading a cow, lamb, and lion. "Easy. All Purpose. Vegetarian. Quick and easy preparation. Makes two pounds." Recipe on back. Several quotes about love and God. Ad for "Love animals, don't eat them T-shirts." Form filled out by David Nazar. The product is 1/3 soy. They now make 5,000 lb/month. Color ad in Vegetarian Times. 1988. Nov. p. 63. "Loveburger. The Classic vegeburger." Ad in Vegetarian Times. 1990. March. p. 49. "Loveburger: The delicious way to get the fiber you need. With over 14% fiber, Loveburger has almost as much as oat bran ... Vegetarian Times rated Loveburger the most meat-like of the dry mix vegeburgers... Enjoy Loveburger for life."

5376. Yong, F.M.; Wood, B.J.B. 1977. Biochemical changes in experimental soy sauce koji. *J. of Food Technology* 12(2):163-75. April. [25 ref]
Address: Dep. of Applied Microbiology, Univ. of Strathclyde, Royal College Building, Glasgow [Scotland]

5377. Bernardino, Minnie. 1977. What is this thing called tofu? *Washington Post.* May 26. p. F25.
• ***Summary:*** This article is very similar to her article titled "Tofu: Oriental food whose American time has come. Puddinglike soy curd adds taste, nutrition" in the *Los Angeles Times* on April 28 (p. 11). A description of tofu plus 7 recipes. Address: Los Angeles Times.

5378. **Product Name:** Lima Soy Sauce (Formerly named Lima Tamari Soy Sauce)
Manufacturer's Name: Chico-San, Inc. (Importer). Made in Japan.
Manufacturer's Address: 1144 West 1st St., Chico, CA 95926.
Date of Introduction: 1977. May.
Ingredients: Water, soybeans, wheat, salt.
Wt/Vol., Packaging, Price: Glass bottle.

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How Stored: Shelf stable.
New Product–Documentation: Ad in The Macrobiotic. 1977. May. p. 25, and 1978. June. p. 24. "Lima Soy Sauce." ""There is a beginning, there is an end.' This is true in the case of the name 'Tamari.' 'The word 'Tamari' began 16 years ago when George Ohsawa introduced the macrobiotic movement to this country. He wished to distinguish the macrobiotic soy sauce from the regular commercial soy sauce sold in this country. 'Tamari' is not soy sauce at all, but a word meaning 'liquid drip' which was originally used to describe liquid residue from Miso. Chico-San is now bottling their product, Chico-San Lima Sauce in Japan. This has improved the quality by eliminating a second exposure to air which occurs when soy sauce is bottled here. A problem, though, in importing soy sauce bottled and labeled in Japan is that the Japanese export officials have prohibited the use of the word 'Tamari' on the soy sauce label.

"Our label on the Chico-San Lima 'Tamari' Soy Sauce bottle now will change to simply Chico-San Lima Soy Sauce. We call it 'Lima' soy sauce because it is especially selected for Chico-San by Mrs. Lima Ohsawa who is recognized as the world's leading exponent on Macrobiotic cuisine and diet."

Ad in Tom Riker and Richard Roberts. 1979. *The Directory of Natural & Health Foods*. p. 127. A photo shows the bottle and label.

5379. Leinwand, Rita. 1977. Dutch treat. Trendsetter–A glorious Indonesian rijsttafel party. *Bon Appetit*. May. p. 36-37, 39-42.
• ***Summary:*** Indonesia was a Dutch colony for 350 years. A sambal is a condiment, but sambals may be used as an ingredient in cooking or served at the table. A glossary includes Kecap manis ("A sweet, mellow Indonesian soy sauce"), which is sometimes labeled "Kecap Benteng Manis." A recipe for Kecap manis is given (p. 43).

5380. Mendelson, Anne. 1977. Cook's books. *Bon Appetit*. May. p. 24-25.
• ***Summary:*** This section is for book reviews. A positive review of *The Complete Book of Japanese Cooking*, by Elisabeth Lambert Ortiz begins: "Westerners who like Japanese food often start to think of the subject with a sort of evangelism. How did this small archipelago, faced with the most crippling energy shortages centuries before the term was invented, come to develop the world's most poised, precise and visually exquisite techniques for preparing food? And why aren't more people studying this fresh, unaffected *cuisine minceur* in search of saner ways to cook and dine?"

Later we read (p. 25, col. 2): "The more versatile pork and chicken appear in a variety of surroundings–deep-fried, glazed with *teriyaki* or similar sauces, and simmered or steamed with rice wine."

Note: The *Oxford English Dictionary* (1989) cites this article for its use of the word "teriyaki."

5381. Hayashi, Kazuya; Mizunuma, Takeji; Yokotsuka, Tamotsu. Assignor to Kikkoman Shoyu Company, Ltd. (Japan). 1977. Process for producing koji for fermented food products. *U.S. Patent* 4,028,470. June 7. 7 p. Application filed 8 June 1976. [2 ref]
• ***Summary:*** "Producing koji for fermented food products by modifying an unmodified koji-substrate composed of a vegetable protein material and a vegetable carbohydrate material, inoculating a koji mold in the resulting modified koji-substrate, and cultivating it, wherein said cultivation is carried out in the presence of 0.1 to 1.2% by weight, based on the water content of the modified koji-substrate, of acetic acid added. This process is suitable for use in the manufacture of fermented foods such as soy sauce, miso, or sake." Address: 1. Kashiwa, Japan; 2. Noda, Japan; 3. Nagareyama, Japan.

5382. Kushi, Michio. 1977. The book of macrobiotics: The universal way of health and happiness. San Francisco, California: Japan Publications, Inc. x + 182 p. June. Illust. Index. 26 cm.
• ***Summary:*** Many followers of macrobiotics consider this to be the author's classic work on the subject. The preface tells briefly how Mr. Kushi got involved with macrobiotics and came to America. He began to lecture in New York in 1955. His teachings began to spread, especially after 1963. By Feb. 1977 he has conducted 5,000 lectures and seminars in America and Europe. One Appendix is titled "A Historical Review of the Macrobiotic Movement in North America" (p. 168-71).

Concerning foods made from soybeans, the book discusses miso (p. 51-52), protein (p. 69), tamari (p. 51-52, 131-33), tekka (52, 133), and tofu plaster (130; "more effective than an ice pack to draw out fever"). Concerning smoking, the author believes that it "does not contribute to produce lung cancer" if the smoker eats a proper traditional (macrobiotic) diet (p. 115).

"In 1949, Michio Kushi, during his postgraduate studies at Tokyo University, was inspired by the teaching of George Ohsawa. He came to the United States in connection with the World Federalist movement. Besides him, Aveline Tomoko Yokoyama in 1951, Herman Aihara in 1953, Cornellia Chiko Yokota, Romain Noboru Sato and his brothers Junsei Yamazaki, Shizuko Yamamoto, Noboru Muramoto and others came to the United States during the following years. After experience with various enterprises they respectively began to teach macrobiotics, mainly in New York. George and Lima Ohsawa also visited America from Europe to conduct seminars. Macrobiotic summer camps, restaurants, and food stores began to operate on a small scale with many American people. Educational activity was organized as the Ohsawa Foundation at that time. However, on the occasion

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of the Berlin Crisis in 1961, the major active people related to the macrobiotic movement made an 'exodus' to Chico, California. Robert Kennedy, Lou Oles, Herman Aihara and others began Chico San, Inc., as a food manufacturing and distributing company, and established the Ohsawa Foundation in California. Later, the Foundation moved to Los Angeles, its main activity being publishing George Ohsawa's works. The San Francisco center was established. At a later date, Jacques and Yvette de Langre [DeLangre], Joe and Mimi Arseguel and many others shared educational activities in California and other areas of the West Coast.

"In the meantime, after educational activity in New York, besides several seminars on Martha's Vineyard and various local colleges, Michio and Aveline Kushi moved to Boston in order to concentrate on education for the younger generations. They organized the East West Institute in Cambridge which later moved to Wellesley and then transferred to Boston. To meet the increasing demand for good food, a small basement food store, Erewhon, was opened. Erewhon was managed and developed over the years by the Kushis, Evan Root, William Tara, Roger Hillyard and Paul Hawken. Erewhon was followed by a small restaurant, Sanae, managed at different times by Evan Root, Tyler Smith, and Richard Sandler. Lectures by Michio Kushi continued for five years in Arlington Street Church, Boston, with repeated visits to many major U.S. cities. Erewhon developed into a larger store, on Newbury Street in Boston, and added its wholesale operation from a warehouse on the South Shore, Boston Wharf, distributing constantly to an increasing number of natural food stores. The warehouse facility has been managed by Paul Hawken, William Garrison, Tyler Smith, and currently Jeff Flasher and other associates as well as the Kushis. Erewhon further established a Los Angeles store which also developed into a wholesale operation--managed over the years by the Kushis, William Tara, Bruce Macdonald, and currently by John Fountain and Thomas DeSilva.

"The *East West Journal*, a monthly newspaper, established in 1970--managed over the years by Ronald Dobrin, Jack Garvey, Robert Hargrove, and currently Sherman Goldman, Lenny Jacobs and other associates--is continuing to introduce to the wider society, the new vision for the present and future world. Educational activities directly concerned with teaching and other educational projects have been administered since 1973 by the East West Foundation, a nonprofit educational organization managed by the Kushis, Edward Esko, Stephen Uprichard, and other associates." Address: Boston, Massachusetts.

5383. **Product Name:** [Mandarin Soy Sauce]
Manufacturer's Name: Wan-Jia-Shiang Brewery Co. Ltd.
Manufacturer's Address: 80-1, Hope St., Sanchung, Taipei 241, Taiwan
Date of Introduction: 1977. June
New Product–Documentation: *Soybean Digest Blue Book.* 1977. p. 36.

5384. **Product Name:** [Soy Sauce].
Manufacturer's Name: Wei-Chuan Foods Corp.
Manufacturer's Address: Plant at No. 518, Chung-Hsin Rd., Sec. 5, San-Chung City, Taipei-Hsien, Taiwan.
Date of Introduction: 1977. June.
New Product–Documentation: *Soybean Digest Blue Book.* 1977. p. 36. See also 1976. p. 38.

5385. Yong, F.M.; Wood, B.J.B. 1977. Biochemical changes in experimental soy sauce moromi. *J. of Food Technology* 12(3):263-273. June. [7 ref.]
Address: 1. Presently: 294F Whampoa Dr., Block 83, Singapore 12; 2. Dep. of Applied Microbiology, Univ. of Strathclyde, Royal College Building, George St., Glasgow G1 1XW, Scotland.

5386. Magida, Phylis. 1977. Make your picnic cuisine 'to go' with ethnic flair. Eats. *Chicago Tribune*, July 8. p. A1.
• ***Summary:*** Describes how people picnic in many different countries, and where to buy these ethnic supplies in the Chicago area. In Japan, when people picnic, they take several lacquered boxes filled with movable trays, each filled with a variety of foods designed to keep well without refrigeration. At Tenkatsu's Restaurant (3365 N. Clark St.) buy an order of beef teriyaki, accompanied by at least one of the following: "... *hiya dofu* [chilled tofu] (a rectangle of protein-rich soybean curd that looks like a white molded custard, 85 cents)."

Then walk three doors to Star Market (3349 N. Clark St.) "and buy an eight-piece combination box of *futomaki* (four small seaweed rolls stuffed with rice), and *inari* (four small ovals of deep-fried bean curd)." Eat these at room temperature. Total price at Star: $3.75.

5387. Cost Plus Imports. 1977. Open 7 days a week (Ad). *Los Angeles Times*, July 14. p. CS5.
• ***Summary:*** In the center right column of this large ad: "Gourmet groceries–Marukin soy sauce, from Japan. Zesty sauce for marinade, barbecue and oriental cookery. 1 Qt. [Quart] 2 fl. oz. $1.44."

An illustration shows a bottle of Marukin soy sauce. Address: Los Angeles area (incl. Torrance).

5388. Yokotsuka, Tamotsu. 1977. "Shoyu": Japanese fermented soy sauce. Paper presented at SCOGS (Select Committee on GRAS Substances) Hearing. 17 p. Held 26 July 1977 at the Hilton Hotel, Bethesda, Maryland. Unpublished manuscript.
• ***Summary:*** Reports on the acute and long term effects of feeding shoyu to mice and rats. Concludes that the acute toxicity of shoyu was accounted for by the toxicity of its

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sodium chloride content. Address: Kikkoman Shoyu Co Ltd , 339 Noda-Shi, Chiba-ken, Japan

5389. Neurath, G.B.; Duenger, M.; Pein, F.G.; Ambrosius, D ; Schreiber, O. 1977. Primary and secondary amines in the human environment. *Food and Cosmetics Toxicology* 15(4):275-82. Aug. [17 ref]
• ***Summary:*** Nitrosamines are reaction products from nitrite and amines. Some salt-pickled foods contain considerable amounts of amines, and thus some nitrosamines may form during processing. But very small amounts of amines were found in rice, wheat, and soybeans used as raw materials for making shoyu and miso.

There are primary and secondary amines. The main secondary amines are dimethyl- and diethyl-amine. 80% of all N-nitroso compounds tested in animal species have been found to induce tumors. Nitrosamines can be found only in the presence of secondary and tertiary amines on the one hand, and nitrite or nitrate ions or nitrogen oxides on the other. High levels of both are found in red radishes, spinach, and green salad. Address: Microanalytical Lab , 2000 Hamburg 56, Hexentwiete 32, Federal Republic of Germany.

5390. Lemov, Penelope. 1977. Family out. A weekly guide to family dining. *Washington Post*. Sept. 8. p. C12. Section D (D_C_12).
• ***Summary:*** The Mikado Restaurant (4707 Wisconsin Ave , NW), Japanese and moderately priced, offers "Natto, fermented soy beans." Also fish Teriyaki.

5391. Kushi, Aveline. 1977. Re: Why George Ohsawa coined the term "tamari" about 20 years ago to refer to naturally-fermented shoyu. Letter to William Shurtleff at New-Age Foods Study Center, Sept. 28. 5 p. Handwritten.
• ***Summary:*** Ohsawa coined this term at the request of Lima Foods in Belgium. Address: 62 Buckminster Rd., Brookline, Massachusetts 02146.

5392. East West Foundation. 1977. Food policy recommendations for the United States. Statement of Michio Kushi, September 21, 1977. 359 Boylston St., Boston, MA 02116. 32 p. 28 cm.
• ***Summary:*** On September 21, 1977, Michio Kushi and several associates, including Dr. Robert Mendelsohn, M.D., met in Washington with members of the White House staff. The meeting, which lasted approximately two hours, began with a 45 minute presentation of a series of recommendations by Michio Kushi, a description of the activities and goals of the East West Foundation (founded 1972), and a history of Erewhon (fiscal 1978 sales estimated at $10 million). An outline of the East West Journal's position on various political, social, and economic applications of the national food policy was also included in the meeting's agenda.

Recommendations for seasoning foods and to aid digestion of grains, was traditional foods such as pickled vegetables and naturally fermented soy bean products (such as soy sauce, miso, tempeh, etc.). Note: Dr. Mendelsohn died in about May 1988. Address: Boston, Massachusetts. Phone: 617-536-3360.

5393. Erewhon, Inc. 1977. Erewhon. Harvest 1977. Boston, Massachusetts. 23 p. Catalog and price list.



• ***Summary:*** On the front cover is a photo of a table dispenser of Erewhon Natural Shoyu (but the neck band reads "Erewhon Tamari Soy Sauce"). On the first page, Jack Garvey (apparently the new president) writes about the meaning of the word "Erewhon," which derives from a book of that title written by Samuel Butler. Address: 33 Farnsworth Street, Boston, Massachusetts 02210. Phone: 617-542-1358.

5394. *Los Angeles Times*. 1977. Japan: Top market for U.S. soybeans. Oct. 27. p. H25.
• ***Summary:*** Japan now imports 55,000 tons of soybeans a year from the United States, which makes Japan the leading customer for U.S. soybeans in the world, according to USDA figures.

The Japanese use soybeans in a variety of traditional foods including "tofu (soybean curd of which 10 million

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bricks are sold daily in Japan), miso (fermented soybean paste, the basis for the soup served in most Japanese restaurants [and homes]), aburage (deep-fried tofu) or natto (fermented cooked soybeans), kinako (roasted soybean powder) and shoyu (soy sauce). The use of soy in bread, biscuits and noodles consumes 15,220 tons of soybeans each year."

Exports of soybeans and soy products (such as soybean oil and meal) have played an important positive role in the U.S. balance of trade and the U.S. farm economy.

5395 **Product Name:** [Seitan]
Foreign Name: Seitan.
Manufacturer's Name: Jonathan.
Manufacturer's Address: Holleweg 89, 2070 Ekeren (near Antwerp), Belgium. Phone: 031-64.41.73.
Date of Introduction: 1977, October.
Ingredients: Whole wheat, tamari soy sauce, ginger, kombu.
Wt/Vol., Packaging, Price: 250, 500 and 1000 gm trays with transparent plastic film lid.
How Stored: Refrigerated.
New Product–Documentation: This is the earliest known commercial seitan product in Europe. Jos van de Ponseele (Jos is pronounced like the first syllable in Joseph) was the person responsible for starting seitan production at Jonathan.

Typed letter written in Oct. 1977 on Jonathan letterhead (Jonathan was at Holleweg 89; at the top of the letterhead was an illustration of two seagulls and a round yin-yang (*t'ai chi*) symbol) showing that that company was selling Seitan (a vegetarian steak) and Goulash (made with seitan)–among other things.

Letter from Sjon Welters, 1982, April 16. "Jonathan is a macrobiotic food company. They produce a wide assortment of macrobiotic products, such as... seitan..."

Label sent by Jos van de Ponseele, 1988. 6.25 by 10.5 inches. This card-stock sleeve fits over the product. Color photo of two slices of seitan on a wooden plate with brown rice, onion rings, mushrooms, and lettuce. The product name, Seitan Natural in English, or Seitan Naturell in German, is written in white on a reddish-orange band. Ingredients: water, wheat*, soya flour*, wheat gluten, soya sauce, sea salt, sea-weed, spices * = Organically grown. Nutritional composition. Minerals 1%, vegetable proteins 20%, vegetable fats 0.3%, carbohydrates 3%. 110 calories (Kcal) per 100 gm. The product is sold frozen in a 200-gm tray. "Vegetable product. Use: Open lid with a sharp knife. Spread mustard or sprinkle tamari on the slices and allow them to fry in a pan. Pieces of seitan are delicious in all sorts of stews as in e.g. sauce bolognese with chopped seitan." Code CINAB. Best before 12/89.

Letter from Mark Callebert of Lima Foods in Belgium. Jonathan started to make seitan in 1978 in a plant they built at Holleweg, Ekeren (Hoogboom), Belgium.

Letter (fax) from Jos van de Ponseele and Magda Verfaillie of Mycelia b.v.b.a. in Gent, Belgium, in response to an inquiry. 1992, July 6. Jonathan was the first company in Europe to make seitan for sale commercially. Jos van de Ponseele, the founder of Jonathan, first learned about seitan during a 9-month stay [with his wife and family] at the Kushi Institute in Boston, Massachusetts, from March to December 1976. There he tasted the seitan prepared by Aveline Kushi. He thought it would be a good meat substitute for the growing group of vegetarians in Europe. [Note: Jos was a butcher with a large meat processing operation before he became a macrobiotic vegetarian.] In Boston, he learned how to make seitan on a home scale from Tamara Uprichard. Then, at the very end of his stay in Boston, he started up medium-scale production of seitan with two Americans; he no longer remembers the name of the company or the names of his American partners. They sold seitan to macrobiotic study houses in Boston and to the Erewhon retail store.

Returning to Belgium, he founded Jonathan. The name "Jonathan" came from a famous book titled *Jonathan Livingston Seagull* [by Richard Bach, 1970]. Jos hired a man named Ludo Peeters as his first employee and they set up the business in a garage at Holleweg 53, 2180 Ekeren, near Antwerp, Belgium. The company's first product, made entirely by hand, was plain fresh seitan. It was introduced some time in 1977. The product name on the label was simply Seitan, written in 4 languages (Dutch, French, German, and English). It was packaged in 250, 500, and 1000 gm carton dishes with a transparent plastic film lid. With seitan, the big challenge for Jos was to introduce an entirely new and valuable product to the market. Two months after introducing seitan, Jonathan started making tofu and soymilk. Ludo continued to work at Jonathan for many years, eventually becoming managing director.

In 1979 Jonathan introduced a fresh seitan burger, then in Jan. 1980 the company moved to its present location at Antwerpsesteenweg 336, B-2080 Kapellen, Belgium. At the new location they introduced a number of new seitan products: Seitan Paté (Feb. 1980, sterilized), Seitan Goulash (late 1980, sterilized), and Seitan Schnitzel (1981, fresh). From 1985 on, Jonathan introduced a series of different ready-to-eat meals in which seitan was a major ingredient. Jos sold Jonathan and left on 1 April 1989.

Talk with Tamara Uprichard, 1992, July 7. She lived in the same Boston macrobiotic study house with Jos and his wife and family. She remembers Jos as being a very gentle, hard-working, and well-organized man.

Talk with Ludo Peeters, 1992, July 9. Ludo started working at Jonathan on 28 Aug. 1978. He made seitan with Jos from the very first day; they were Jonathan's only workers at the beginning and they worked in a garage at Holleweg 58 (the address never changed). Jonathan's first product was seitan, followed by tofu and soymilk. Ludo thinks that the seitan was introduced in Nov. 1978. The

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original ingredients were water, wheat, soy sauce, soy flour or meal, salt, kombu, and ginger. The soy flour improved the flavor and nutritional value. He will look for a document to prove the date of introduction.

5396. **Product Name:** [Goulash {Made from Seitan}]
Foreign Name: Goulash–Gemaakt van Seitan.
Manufacturer's Name: Jonathan.
Manufacturer's Address: Holleweg 89, 2070 Ekeren (near Antwerp), Belgium. Phone: 031-64.41.73.
Date of Introduction: 1977, October.
Ingredients: Incl. seitan.
How Stored: Refrigerated.
New Product–Documentation: This is the earliest known commercial second generation seitan product in Europe. Jos van de Ponseele (Jos is pronounced like the first syllable in Joseph) was the person responsible for starting seitan production at Jonathan.

Typed letter written in Oct. 1977 on Jonathan letterhead (Jonathan was at Holleweg 89; at the top of the letterhead was an illustration of two seagulls and a round yin-yang (*t'ai chi*) symbol) showing that that company was selling Seitan (a vegetarian steak) and Goulash (made with seitan)–among other things.

5397. Katzen, Mollie. 1977. The Moosewood cookbook: Recipes from Moosewood Restaurant, Ithaca, New York. Berkeley, California: Ten Speed Press. 222 p. Illust. Index. 28 cm.
• ***Summary:*** One of the best and most popular American vegetarian cookbooks of the 1970s and 1980s, this hand-lettered work contains 7 tofu recipes, and 1 each using miso and whole dry soybeans, as follows: Shopping list (p. xiii) describes tamari and tofu ("Tofu is soybean curd. It resembles very soft cheese and has a mild flavor. It is an excellent protein food and very charming. Buy it by the pound or individual cake at oriental food shops. Also, some supermarkets are beginning to carry tofu now. It's usually in pound packages in the produce department."). Miso soup (p. 9; with chunks of tofu). Perfect protein salad (p. 49; uses whole dry soybeans and wheat). Tofu salad (p. 52). Gado-gado (p. 104; an Indonesian dish with a spicy peanut sauce and tofu chunks, either raw or sauteed in oil with sesame seeds). Ode to Chang Kung (p. 126; with tofu). Szechwan eggplant & tofu (p. 135; an entree). Sauté, Chinese style (p. 149; with tamari-ginger sauce and tofu [though tofu was accidentally omitted from the list of ingredients]).

Note: Molly writes in 1990: "I first learned about tofu in 1970 from a Chinese restaurant in San Francisco. They called it 'bean cake' soup. I was intrigued–and not disappointed. The current edition of this book has a revised index, correcting the error relating to page 221." Address: Moosewood Restaurant, Dewitt Building, Ithaca, New York.

5398. Shurtleff, William; Aoyagi, Akiko. 1977. The book of kudzu. Brookline, Massachusetts: Autumn Press, and Lafayette, California: Soyfoods Center. 102 p. Illust. by Akiko Aoyagi Shurtleff. Index. 28 cm. Reprinted in 1985 by Avery Publishing Group, Inc. (Wayne, New Jersey). [79 ref]
• ***Summary:*** Contents. Aeknowledgments. Kudzu (poem) by James Dickey. 1. The ancient genie. 2. Cooking with kudzu (70 recipes): Basic recipes, sauces, soups, jelled salads, deep-fried preparations, grains with kudzu powder, primary food made from kudzu powder, special tofu with kudzu, jelled desserts, Japanese-style jelled confections, thickened beverages, kudzu noodles, kudzu leaves, shoots, flowers, and roots. 3. Healing with kudzu. 4. Making kudzu powder. 5. Weaving with kudzu. 6. Kudzu and the ecosystem. Appendices. A. Real kudzu powder and its imitations. B. Institutions and people connected with kudzu. Bibliography. Glossary. Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

5399. Herb, C.; Williams, Bev. 1977. Tsumago a step back in time. *Los Angeles Times*, Nov. 13, p. M20.
• ***Summary:*** Tsumago is a historic town, a living museum, relatively untouched by time, in the Japan Alps, southwest of Tokyo. Few Americans visit, or even know it exists–although many Japanese visit. The food is authentic, and is not adjusted for tourists. "Breakfast can include a raw egg mixed with soy sauce at the table and then poured over steaming hot rice. Another breakfast treat is steaming hot soup with various vegetables, seaweed and soy bean curd." A photo shows one of the town's narrow lanes.

5400. Bethece, Merrie. 1977. Pesky kudzu has culinary merits. *Tuscaloosa News* (*Alabama*), Nov. 20, p. 2C, 14C.
• ***Summary:*** This is a review of *The Book of Kudzu*, by Shurtleff and Aoyagi. Most people in the Deep South see kudzu as "a green menace that strangles and destroys the crops and gardens they have worked so hard on.

"But surprisingly to some (maybe most) Americans, kudzu is a useful product that has been an important part of the Chinese culture for over two thousand years, accordingly to a recently published book on kudzu.

"Kudzu has been used for weaving, cooking, and healing in the Chinese and Japanese cultures, according to a book by William Shurtleff and Akiko Aoyagi.

"Today the kudzu root is being made into a powder and used by some Americans mainly for cooking, the author said." It is now being sold in natural food stores throughout the United States–although there is not much demand for it in Tuscaloosa.

Recipes are given for: Kudzu, shoyu and vegetable sauce. Fried eggplants with kudzu and sesame sauce. Mock cheesecake. Egg and onion miso soup. Corn soup with kudzu. Fragrant kudzu-thickened clear soup (with tofu). Fresh fruit jelled salad. Guacamole jelled salad. Deep-fried

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rice balls. And more.

A large photo shows kudzu vines that cover poles, trees, and shacks. Address: Staff writer.

5401. Brooks, Charles D. 1977. Tips for stocking a Chinese kitchen. *Christian Science Monitor.* Nov. 23. p. 32.
• ***Summary:*** This is a list of important ingredients with a description of each and recommendations. Soy sauce: Chinese soy works best for Chinese cooking. Avoid most brands made in the USA and Hong Kong. "Some of the best soy I've ever tasted comes from mainland China." He especially favors a brand that is flavored with either shrimp or mushroom essence."

Sesame oil: This nutty-tasting oriental oil, pressed from toasted sesame seeds, is used sparingly as a condiment. Do not confuse it with the relatively light-colored oil [pressed from untoasted sesame seeds] sold mainly in health food stores. Beware that Japanese sesame oil is often flavored with red pepper. Keep all sesame oil refrigerated.

Ginger. Always use fresh ginger root, never the dry powder. Keep uncovered in a cool place. Freeze surplus ginger.

"Hoisin sauce: This sweet and pungent sauce gives Chinese roast pork its color and flavor." Chee hou and chap kam are simply hoisin sauce with slight variations.

"Oyster sauce: is the Cantonese. It is made by cooking down oysters in soy sauce. Common tofu is made noble when accompanied by this savory sauce."

"Salted and fermented black beans: These zesty little beans are called dow see by the Cantonese who invented them." Black beans used sparingly with steamed fish make an excellent dish. Keep refrigerated in a covered jar.

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "Salted and fermented black beans" to refer to fermented black soybeans.

A recipe for "Fragrant soy sauce chicken" has ingredients that include: "1/3 cup soy sauce."

Note: This is the earliest English-language document seen (April 2012) that contains the term "fragrant soy sauce." It appears to be a kitchen preparation rather than a commercial product. Address: San Francisco.

5402. Chang, C.H.; Lee, S.R.; Lee, K.H.; Mheen, T.I.; Kwon, T.W.; Park, K.I. 1977. Fermented soybean foods. Paper presented at Symposium on Indigenous Fermented Foods, Bangkok, Thailand. Summarized in K.H. Steinkraus, ed. 1983. Handbook of Indigenous Fermented Foods. New York: Marcel Dekker, Inc. ix + 671 p. See p. 465-66, 482-87.
• ***Summary:*** Contents: Korean soy sauce: Kanjang (is made by primitive methods in the home), steps in preparation, microbiology, biochemical changes (p. 465-66). Korean doenjang and kochujang. Description (Soy sauce and miso were introduced to Japan, from Korea, during the Nara period {645-793 AD}), patterns of consumption (Daily per capita consumption of doenjang and kochujang are estimated to be about 15 gm and 10 gm, respectively), steps in preparation (utensils, substrates, essential microorganisms), control of process, biochemical changes, economics of production and distribution.

Note: This is the earliest English-language document seen (March 2009) that uses the word "kochujang" to refer to Korean-style red pepper and soybean paste (miso).

Illustrations show: (17) Flow sheet: Production of Korean doenjang (soybean paste). Soak soybeans, boil, mash, form into balls, wrap in rice straw, and incubate under rafters until covered with mold (*meju*). Crush, mix with salt brine, and ferment for 6 months to obtain doenjang. (18) Flow sheet: Production of Korean kochujang (soybean paste). Soak soybeans, boil, mash, suspend in rice straw sacks until overgrown with mold (*meju*). Crush, sun-dry, and pulverize to obtain 10 liters of crushed meju. Add cooked gelatinous rice flour (2 liters), hot pepper flour (0.5 to 0.7 liters), kanjang (Korean soy sauce), dried beef, jujube flour, honey, and salt brine. Mix. Ferment for 2 months to obtain kochujang.

A table (p. 487) shows the amino acid composition of doenjang. Address: 1. Food & Nutrition Dep., Sacred Heart Women's Univ., Bucheon, Kyungki-do, South Korea.

5403. Chu, F.S. 1977. Mycotoxin problems in indigenous fermented foods and new methods for mycotoxin analysis. Paper presented at Symposium on Indigenous Fermented Foods, Bangkok, Thailand. Reprinted in K.H. Steinkraus, ed. 1983. Handbook of Indigenous Fermented Foods. New York: Marcel Dekker, Inc. ix + 671 p. See p. 637-52. [35+ ref.] Address: Dep. of Food Microbiology and Toxicology, Univ. of Wisconsin, Madison, WI 53076.

5404. Eden Foods. 1977. Fall and winter catalog 1977--1978. 4601 Platt Rd., Ann Arbor, MI 48104. 81 p.
• ***Summary:*** On the cover are bags, trays, and scoops filled with natural foods. Page 23 shows that Eden now sells nigari, a solidifier for making tofu, in 6 oz or 5 lb sizes. Hacho, Mugi, and Kome miso are now sold under the Eden brand. Address: Ann Arbor, Michigan. Phone: (313) 973-9400.

5405. Hsu, E.J.; Tan, E. 1977. Fermented soy catsup and methods of preparation. Presented at Symposium on Indigenous Fermented Foods. Held 20-26 Nov. 1977 in Bangkok, Thailand. *
• ***Summary:*** A soy catsup was made by fermentation of soybeans and then combined with vegetables to bring about a second fermentation under anaerobic conditions with carefully controlled salt concentration. Essential microorganisms are listed.

5406. Ismail, M.S. 1977. Accelerated fermentation of fish-soy paste and fish-soy sauce by using *Aspergillus oryzae*

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NRRL 1989. Paper presented at Symposium on Indigenous Fermented Foods, Bangkok, Thailand. Summarized in K.H. Steinkraus, ed. 1983. Handbook of Indigenous Fermented Foods. New York: Marcel Dekker, Inc. ix + 671 p. See p. 526-30.
Address: Dep. of Food Science, Univ. of Agriculture, P.O. Box 203, Sungai Besi, Selangor, Malaysia.

5407. Jan, C.C.; Lin, K.C.; Hsu, W.H. 1977. Taiwanese inyu (black bean) sauce. Paper presented at Symposium on Indigenous Fermented Foods, Bangkok, Thailand. Summarized in K.H. Steinkraus, ed. 1983. Handbook of Indigenous Fermented Foods. New York: Marcel Dekker, Inc. ix + 671 p. See p. 466-67.
• ***Summary:*** "Description: Taiwanese black bean sauce (*inyu*) is a saline, meat-flavored sauce made by fermentation of black beans (*Glycine soja* Sieb. and Zucc.)." Note: This is the wild annual soybean, which has very tiny, black seeds. Theodore Hymowitz, professor emeritus of plant breeding at the University of Illinois, Urbana-Champaign, and one of the world's leading authorities on wild soybeans and soybean relatives, doubts that soy sauce could be made from the wild soybean. He states (e-mail of 27 Oct. 2008): "Wild annual soybeans are not cultivated. Besides harvesting such beans would be almost impossible as they shatter terribly upon maturity. Nor do the beans mature uniformly. I think the authors are confusing smallish black soybeans with *Glycine soja*. Secondly, the production numbers preclude the growing of Glycine soja. In Taiwan the plant is only found in the wild."

Unlike most traditional soy sauce [which includes cereal grains, especially wheat, in the koji], the flavor of inyu is more stable and becomes more intense following heating or cooking, an advantage in the preparation of Chinese foods. Thus, it is used in place of traditional soy sauce to color and flavor cooked foods, especially fish, poultry, meat, and vegetables.

Inyu is made in Taiwan, China, Hong Kong, and other nations where there are people of Chinese culture. Production in Taiwan alone is estimated at 36,000 metric tons per year, or 1.62 liters of inyu per person in Taiwan each year.

Therapeutic uses: Some Chinese believe that inyu can relieve the pain of burns, heal damaged tissue (after burns), prevent hangover after excess alcohol consumption, "and even to help retain and accentuate the shine of black hair and eyes."

Method of preparation: Wash black soybeans, then soak, drain, steam, and cool them. Inoculate the cooked beans with *Aspergillus oryzae* [the koji mold] or *A. soyae*, then incubate aerobically to produce a koji in which the beans are completely overgrown by the mold mycelium. In contrast to the traditional soy sauce process, in which the koji is next covered with brine, the black bean koji is first washed, preincubated at 40-50°C for 4 hours, covered with 18% brine (weight/volume), and fermented for 40-50 days. During this time "the mash undergoes both a lactic acid and a yeast fermentation. Finally the mash is filtered, pasteurized, and bottled."

Inyu production takes only about 1.5 months versus 5-6 months for traditional Chinese soy sauce—which makes it more economical.

Note: This is the earliest English-language document seen (April 2012) that mentions *inyu*, or with the word "inyu" in the title. Address: President Enterprise Corp., 2-20 Yan Harng, Yeong Kang Shiang, Tainan Hsien, Taiwan.

5408. Liu, S.L. 1977. Taiwanese soy sauce. Paper presented at Symposium on Indigenous Fermented Foods, Bangkok, Thailand. Summarized in K.H. Steinkraus, ed. 1983. Handbook of Indigenous Fermented Foods. New York: Marcel Dekker, Inc. ix + 671 p. See p. 451-56.
Address: Golden Birch Co. Ltd., Lifu Building, 4 Floor No. 12-3 Chi-lin Rd., Taiwan.

5409. Merican, Z. 1977. Malaysian soy sauce (kicap). Paper presented at Symposium on Indigenous Fermented Foods, Bangkok, Thailand. Summarized in K.H. Steinkraus, ed. 1983. Handbook of Indigenous Fermented Foods. New York: Marcel Dekker, Inc. ix + 671 p. See p. 456-61.
Address: Agricultural Products Utilization Div., MARDI, Serang, Selangor, Malaysia.

5410. Ong, K.C. 1977. Malaysian soy sauce: Kicap. Paper presented at Symposium on Indigenous Fermented Foods, Bangkok, Thailand. Summarized in K.H. Steinkraus, ed. 1983. Handbook of Indigenous Fermented Foods. New York: Marcel Dekker, Inc. ix + 671 p. See p. 456-61.
• ***Summary:*** "Description: Malaysian soy sauce is the Chinese or *tamari* type." It can be further classified into two varieties: (1) a "thin" variety named *san-chau* or *pak-yau* (Cantonese). (2) a "thick" variety named *sai-yau* or *lak-yau* (Cantonese).

"The Malaysian soy sauce industry is operated mainly by Malaysians of Chinese descent who inherited the traditional techniques from their forefathers from China."

Note: This is the earliest English-language document seen (April 2012) that uses the word "Kicap" to refer to Malaysian soy sauce. Address: Dep. of Botany, Universiti Malaya, Kuala Lumpur, Malaysia.

5411. Poesponegoro, M.; Tanuwidjaja, L. 1977. Indonesian soy sauce: Kecap. Paper presented at Symposium on Indigenous Fermented Foods, Bangkok, Thailand. Summarized in K.H. Steinkraus, ed. 1983. Handbook of Indigenous Fermented Foods. New York: Marcel Dekker, Inc. ix + 671 p. See p. 456-65.
Address: National Inst. for Chemistry, Jalan Cisitu-

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Sangkuriang, Bandung, Indonesia.

5412 Saono, S.; Brotonegoro, S.; Basuki, T.; Sastraatmadja, D.D.; Badjre, I.G.P.; Jutono, -; Gandjar, I. 1977. Indonesian kecap. Paper presented at Symposium on Indigenous Fermented Foods, Bangkok, Thailand. Summarized in K H Steinkraus, ed. 1983. Handbook of Indigenous Fermented Foods. New York: Marcel Dekker, Inc. ix + 671 p. See p. 461-65.
Address: Treub Lab., National Biological Inst., Bogor, Indonesia.

5413 **Product Name:** Fried Rice & Tofu Sandwich (In a Chapati). Renamed Brown Rice & Tofu Sandwich in late 1978 by Chris Smith.
Manufacturer's Name: Wildwood Natural Foods.
Manufacturer's Address: Sleeping Lady Cafe, 58 Bolinas Rd., Fairfax, CA 94030.
Date of Introduction: 1977, November.
Ingredients: Brown rice, tofu, tamari, alfalfa sprouts, spread (sesame butter, barley miso, scallions), seasonal vegetables (carrot or cucumber), lettuce, whole grain chapati.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Unrefrigerated and perishable.
New Product–Documentation: Talks with Paul Duchesne between 8 Oct. 1988 and 18 Aug. 1989. His Brown Rice & Tofu Sandwich (BRTS) was developed in Fairfax in late October or early November 1977. He made 200 of them at home and sold them to participants at a macrobiotic seminar led by Michio Kushi in Marin County. Donna Gayle helped him make them.

In Jan. 1978 he started making these sandwiches at the Sleeping Lady Cafe in Fairfax (Marin County) and selling them at the Good Earth Natural Food Store in Fairfax. He bought his tofu (made by Quong Hop & Co. in South San Francisco) at Good Earth. In Feb. 1978 he began to distribute them to many natural food stores throughout Marin County. One of America's early second generation tofu products, the sandwich was made as follows: Saute brown rice with onions, sesame oil, and tamari. Boil a cake of tofu in water with a little salt, then slice it into 4 pieces each about 3 inches square and 1/8 inch thick. Onto a whole wheat chapati (not bread) spread a mixture of sesame butter, barley miso, and scallions. Over that spoon on the fried rice, then place on top one slice of tofu, a long strip of parboiled carrot, some alfalfa sprouts, and romaine lettuce leaf. Fold over two edges of the chapati, wrap it in shrink wrap, and sell it fresh (unrefrigerated) in a wicker box with a calligraphy sign (that showed how to eat it like a banana) on the front counter of natural- and health food stores. One key to the flavor was sesame-miso spread, learned from George Ohsawa's 1966 book *Zen Cookery* #203 "Miso Spread."

While in California in 1978 Duchesne and Chris Smith gave their recipe and production techniques to Joe Nixdorff, who made the Samurai Hero in Berkeley, to Roy Steevensz, who made the BRTS in Los Angeles.

In September 1978 Paul went to Boston to study macrobiotics, so he gave his Fairfax sandwich business (which still had no name) to Chris Smith, a local friend interested in macrobiotics. Paul had first offered his business to Ron Harris, but Ron declined since he was getting involved in seitan. The California Department of Health came in, helped Smith's unlicensed food operation to get licensed. A month later, in October 1978, Chris stopped frying the brown rice and renamed the product, coining the now-famous name "Brown Rice & Tofu Sandwich." At the same time he named his business Wildwood Natural Foods.

The product's original Label (sent by Paul Duchesne, 1989 Aug. 11 and printed before Wildwood was incorporated) is 4.5 by 2 inches. The maker is Wildwood Natural Foods at 58 Bolinas Rd. The ingredients, listed above, are the same as those in the original 1977 edition, but cucumber was never used. The color is black on goldenrod yellow (THE counter-culture color of the late 1970s). Paper. The text reads: "Fresh daily. All organically grown ingredients (whenever possible). Seasonally cooked, spring water. Enjoy your meal... Unwrap one end and peel down as you eat." In Boston, Duchesne started Rice House, where he continued to make the sandwich.

In May 1979 Duchesne and Chris Smith traded places and companies. Paul took over the company he had started originally (now named Wildwood) in Fairfax. For more details see Development of the Brown Rice and Tofu Sandwich, and early history of Wildwood Natural Foods (Duchesne 1988).

Leviton. 1981. Soyfoods. Winter. p. 61. "Putting tofu in the lunch boxes of America." "Wildwood produces a line of eight packaged vegetarian sandwiches including *Brown Rice and Tofu Sandwich* (with vegetables in a whole wheat bun)..."

Note 1. This is the earliest record seen (April 2001) concerning Wildwood Natural Foods.

Note 2. This is the earliest commercial soy product seen (April 2001) with the word "Sandwich" in the product name by Wildwood Natural Foods.

5414 Yamada, Koichi. 1977. Recent advances in industrial fermentation in Japan: Bioengineering report. *Biotechnology and Bioengineering* 19(11):1563-1621. Nov. [28 ref.]
• ***Summary:*** Table 1 shows the production of miso, shoyu, and vinegar in Japan from 1968 to 1974. Production of both miso and shoyu have increased only slowly. Miso production increased from 538,156 tonnes (metric tons) in 1968 to a peak of 590,137 tonnes in 1973, then fell slightly to 587,228 tonnes in 1974.

Shoyu production increased from 1,026,643 kl (kiloliters) in 1968 to a peak of 1,274,987 kl in 1973, then fell slightly to 1,199,155 kl in 1974.

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Advances in miso production: Halophilic (salt tolerant) bacteria such as *Pediococcus halophilus* and *Streptococcus faecalis*, and halophylic yeasts such as *Saccharomyces rouxii*, *Torulopsis versatilis*, and *Torulopsis etchellisii* were shown to be the more important strains. Pure cultures of these strains were used as starters for miso fermentation. Since much time, work, and skill are required to make traditional koji, commercial enzyme preparations with high polypeptidase activity and high proteinase activity are used for evoking the full flavors of miso.

Advances in shoyu production: A new type of cooker which can cook soybean meal at high temperatures for short times is now being used, and advances in koji technology have raised the enzymatic activity and lowered the level of contaminating microorganisms. As a result, nitrogen utilization has been raised to 90% from 60% in 1945 and the time required for ripening the moromi mash has decreased to 4-6 months from one year or more in the past.

Table XIX titled "Production of microbial enzymes in Japan" shows 7 major and 8 minor commercial enzyme preparations, the number of makers of each, the output per year (in tonnes and yen), and the main microorganisms used to make each. By far the most important enzyme in terms of tonnage is α-amylase (11,000 tonnes, 10 makers, *Aspergillus oryzae*), followed by protease (1,050 tonnes, 18 makers, *Aspergillus oryzae*), then glucoamylase (400 tonnes, 8 makers, *Aspergillus niger*). Address: Univ. of Tokyo and Sapporo Beverages Ltd., Tokyo 153, Japan.

5415. Yokotsuka, Tamotsu. 1977. Japanese shoyu. Paper presented at Symposium on Indigenous Fermented Foods, Bangkok, Thailand. Summarized in K.H. Steinkraus, ed. 1983. Handbook of Indigenous Fermented Foods. New York: Marcel Dekker, Inc. ix + 671 p. See p. 437-51. [50+ ref.] Address: Kikkoman Corp., 339 Noda, Noda-shi, Chiba-ken, Japan 278.

5416. Cooney, John E. 1977. Selling American: Top soy sauce brewer in Japan shows how to crack U.S. market. Kikkoman studied the ways of the West, advertised on TV, moved in slowly. Some areas still won't buy. *Wall Street Journal*. Dec. 16. p. 1, 29.

• ***Summary:*** The fascinating–well researched and well written–story of how Kikkoman used Western marketing methods and TV advertising to put shoyu (the Japanese word for soy sauce) in millions of Americans kitchens. In one of their popular commercials, a chef, "resplendent in traditional white garb and floppy hat, is cooking hamburgers. 'Ah,' he says, 'you want to know my secret recipe?' Turning a little bottle of Kikkoman to the camera he sprinkles some on the sizzling meat. 'Add Kikkoman to almost anything,' he says."

In this way Kikkoman has been working to convince Americans that soy sauce is as American as hamburgers. To learn how to persuade the mass market takes time, especially for a foreign company that is also a pioneer. Kikkoman has been patient–studying American marketing techniques, working slowly but steadily–according to Shinichi Suzuki, presently head of Kikkoman's subsidiary in San Francisco, California. In 1957, when Kikkoman Corp. founded its U.S. subsidiary, soy sauce was unknown to many Americans. Moreover, many Americans at the time considered Japanese products inferior.

During World War II, Kikkoman has been stripped of its overseas holdings in Asia; now the company was eager to expand again, and it viewed the U.S. as a logical place to begin. It already has a small base here, since it had been exporting Kikkoman shoyu to Japanese Americans since the 19th century. It had also been importing large amounts of American soybeans and wheat to make shoyu in Japan, then shipping some of its shoyu (which contained mostly water) back to America–rather inefficient. Moreover, since the U.S. had defeated Japan in World War II, conquering the American mass market would be an especially sweet triumph.

Caution has long been a cornerstone of Kikkoman's business philosophy. The company traces its origins back to the 17th century when two families, the Mogis and Takanashis, began making shoyu in Noda, Japan. Shoyu is said to have come to Japan in the 6th century, when Buddhism was introduced. The new religion, advocating a vegetarian diet, prohibited the eating of meat and fish, which has long been used to make seasonings and sauces. These traditional products were slowly replaced by plant-based products, such as fermented shoyu and miso, and flavorful konbu (kelp) and shiitake mushrooms.

Gradually Kikkoman grew to become Japan's largest maker of soy sauce. Today shoyu is as widely used in Japan as table salt in America, and annual per capita consumption is Japan is about 2.5 gallons (10 liters) a year. "Japan has captured 35% of the market and its name is as familiar as Coca-Cola is here."

In 1957, the U.S. soy sauce market, then only $1 million a year was dominated by two brands, LaChoy (now owned by Beatrice Foods) and Chun King (now belonging to R.J. Reynolds Industries Inc.). Both companies had lines of Chinese foods and both made their soy sauce without using fermentation by a quick, chemical process. The few Americans who knew about soy sauce thought of it as a seasoning to be used in Oriental cookery.

Kikkoman hired an advertising agency, Grey Advertising, Inc., owned by Richard Guggenheim. He urged Kikkoman to Americanize soy sauce, and to emphasize its versatility as a seasoning. Kikkoman also had to explain that what goes under the name "soy sauce" in America would never be called that in Japan–because it was considered inferior.

Kikkoman chose to educate Americans using the most expensive but effective medium–TV. The ads explained

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how Kikkoman is specially brewed and aged, like beer. The American brands are made chemically. The slogan: "Add quality, add Kikkoman." A key decision was made to price Kikkoman a few cents higher than

Because TV advertising was so expensive, Kikkoman decided to educate one region at a time–starting in San Francisco, where its subsidiary was based. The advertising was effective, and by 1959 Kikkoman was ready to educate Los Angeles. Over the next 10 years, going slowly, one region at a time, Kikkoman expanded across America. As it grew, it used food brokers on the belief that "maintaining its own sales force would be too expensive; it still uses them."

In 1970, because of Kikkoman's cautious growth strategy, their shoyu was first distributed nationwide. In 1973 the company opened its first shoyu plant in the Western world, in Walworth, Wisconsin. By 1976 U.S. sales of Kikkoman products had grown to $11 million. In 1977, for the first time, the parent company in Japan stopped subsidizing its subsidiary's budget for advertising ($1 million) and promotion. By comparison, the parent company, with about $350 million/year in sales spends about $5 million on advertising–or 1.4% of sales.

Has Kikkoman's cautious approach been effective? First, Kikkoman is now the leading soy sauce brand in America. Second, a survey by Grey Advertising "found that two-thirds of all U.S. households had tried soy sauce and 61% of them are 'users,' that is, they buy more soy sauce when they run out."

5417 Hansen, Barbara. 1977. Cooking class proves its prowess Indonesian style. *Los Angeles Times*. Dec 29. p. H1, H14.

• ***Summary:*** A special class and rijsttafel buffet ended the series of Indonesian cooking classes taught by Danny Unger (with help from his wife, Gerdy) in Pasadena. more than 200 guests sampled the dishes, which were of excellent quality, prepared mostly by the students in the class

The many dishes included "sayur lodeh, a vegetable and bean curd stew,..."

Three recipes are given including: Babi kecap (Soy sauce pork, with 2 tablespoons kecap [Indonesian soy sauce]). Dendeng lambok (Simmered beef, with "3 tablespoons kecap (Indonesian soy sauce")). Elsewhere in the article, kecap is twice described as "sweet soy sauce" [probably kecap manis].

A photo shows Daniel Ungerer, wearing a batik scarf, as he presides over the buffet.

5418 Goulart, Frances Sheridan. 1977. Soybeans. *Vegetarian Times* No. 22. Nov/Dec. p. 50-51.

• ***Summary:*** A superficial overview. Discusses "boiled whole beans, toasted whole beans, soybean butter, soymilk, notes on soyflour, soysauce, soy oil, tofu, soy yogurt, mock mocha java (soy coffee)."

5419 **Product Name:** Seitan
Manufacturer's Name: Grain Dance
Manufacturer's Address: 187 Downey St., San Francisco, California
Date of Introduction: 1977 December
Ingredients: Organic hard red winter whole wheat (always freshly ground), spring water, tamari (actually shoyu), ginger, and onions.
Wt/Vol., Packaging, Price: Bulk, then later in 16 oz round plastic deli tubs, then 8 oz tubs
How Stored: Refrigerated
New Product–Documentation: Barbara and Leonard Jacobs. 1985. *East West Journal*. Oct. p. 38-39. "Flour power! Cooking with seitan, the delicious natural food from grain." "Ron Harris of Grain Dance Company in San Francisco has been making seitan for the past 8 years [i.e. since about 1977]. He is currently selling 250 pounds each week in eight-ounce packages. He does everything by hand and has distribution throughout the West Coast.

Talk with Ron Harris and Debbie Brent. 1988 March 6, and 1991. Nov. 17. A history of Grain Dance, one of America's earliest seitan manufacturers. See separate record at March 1988. Tel. 415-347-1378. San Mateo, California

Talk with Shiwa Harris. 1988 March 13. Phone 415-661-6997. She learned how to make seitan in Key West, Florida from a woman named Martha, who was originally from Los Gatos. Then Shiwa taught her husband, Ron Harris, how to make seitan. She thinks that her "Shiwa's No-Cheese Cake" was the first tofu cheesecake in San Francisco. She started making it in late 1977, shortly after Ron Harris went commercial with seitan and before her second daughter Elizabeth was born.

Talk with Yuki Muramoto. 1988 Feb. 29. He worked at Rising Sun from about 1975 to 1979. Ron Harris made seitan for a long time. Michael Pierce made his label. Their company was Grain Dance.

Talk with Jacques DeLangre. 1988. March 16. Ron Harris bought a stone mill for making seitan from Jacques.

Talks with Paul Duchesne (formerly of Wildwood Natural Foods) between 8 Oct. 1988 and 18 Aug. 1989. His Brown Rice & Tofu Sandwich (BRTS) was developed in Fairfax in late October or early November 1977. In September 1978 Paul went to Boston, Massachusetts, to study macrobiotics, so he gave his Fairfax sandwich business (which still had no name) to Chris Smith, a local friend interested in macrobiotics. Paul had first offered his business to Ron Harris, but Ron declined since he was getting involved in seitan.

Talk with Aine Travis. 1988. Feb. 18. She worked at Rising Sun for 3 years. Shiwa and Ron Harris made seitan (some of the first in America), which they sold at Rising Sun.

5420. Saono, S.; Brotonegoro, S.; Abdulkadir, S.; Basuki,

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T.; Jutono, -; Badjra, I.G.P. 1977. Microbiological studies of tempe, kecap, and taoco II. Qualitative amylolytic and proteolytic activities of the isolates from various products from west Java. Progress Report Subproject III.b. ASEAN Project for Soybean and Low-Cost High Protein Foods. Jan-Dec. 1977. 8 p. [5 ref]

• ***Summary:*** An analysis is given of the types of bacteria, yeasts, and molds found in tempe, kecap, and taoco. Scientific names of these microorganisms are not given. For example, in tempeh, molds consistently gave the highest number of viable cultures on any of the test media employed, followed by yeasts and bacteria in that order. Address: 1-4 Treub Lab., the National Biological Inst., Bogor; 5-6. Faculty of Agriculture, Gadjah Mada Univ., Yogyakarta.

5421. Birnbaum, Alfred. 1977. Report on visits to Yamaya, Daifukuji, and Hôrinji–makers of Hamanatto (fermented black soybeans). Japan. 3 p. Unpublished manuscript. Undated.

• ***Summary:*** Yamaya: Process Alfred observed in the plant. Wash soybeans in a trough, soak them in a big wooden vat, pull plug at bottom of vat and drain fast so that beans on bottom are not soaked longer than those on top. Put soybeans in a 6-foot-deep steamer without pressure and blow in steam through many small holes in bottom. After steaming, leave overnight in steamer with lid on. Empty into pushcarts from lower door in steamer. Dump beans into mats (*mushiro*) that have been spread on floor indoors, break up any clumps of beans by hand (to aid koji growth), but do not crush individual beans. Fan bean with an electric fan to cool and dry.

Put roasted wheat flour (*kosen*) in bags. Mix roasted wheat flour and koji starter in winnowing basket (*mi*), then scatter mixture by hand over beans on straw mats. With two men holding opposite ends of straw mat, toss beans on mat to mix beans with flour and starter. Transfer mixture onto a conveyor belt which runs it into a modern koji incubation room (*muro*) where it is spread in a later 6 to 7 inches thick. After incubation for 20-25 days (temperature any stirring schedule are unknown), pipe the koji out onto a south-facing metal roof (at an angle of 15-20° to the horizontal) onto a piece of 3 by 6 foot polyethylene sheeting (which is sanitary, gives long use, and is inexpensive). After drying, drop the soybeans down a hole in front of a fan that blows away spores from the surface of the beans; if these are left on, the beans get bitter (*nigai*) during the second fermentation. Catch beans in small wooden kegs and transfer them to wooden kegs that hold 4.76 gallons (*4-to daru*). Pack soybeans in firmly in each keg without crushing with a wooden implement.

Put pressing lids atop beans on bottom row of vats, then top with heavy pressing weighs or a second row of vats and weights. The heavier the weights, the firmer the beans remain and the less likely to mash. Yamaya's yearly production is about 50 metric tons (tonnes).

Gingerroot. Cut into pieces 3/4 inch square by 1/16 inch thick. Put in a separate keg, just cover with soy sauce (*shoyu*). Pickle for 6 months to 2 years to get pickled gingerroot.

The vibrator: put soybeans into hopper atop vibrator. One man breaks up any clumps of beans by hand, then drops them onto a vibrating screen (1/8 inch mesh); the man at the bottom adds pickled ginger by hand. Alfred is not sure where this step goes in the process.

Mr. Suzuki, the manager, says that, in Japan, only 1 person in 100 likes hamanatto.

Hamana has stopped making hamanatto; Yamaya is now their supplier.

Mr. Suzuki estimates that Horinji makes 3 tonnes a year and that Daifuku makes 2 tonnes a year. Alfred got the facts later.

Daifukuji: A pretty Shingon sect (Buddhist) mountain temple at the end of a long lane of cedars, 1 hour drive northwest of Hamamatsu. After Japan's war with Korea, Toyotomi Hideyoshi (lived 1537-1598, a daimyo warrior and Japan's 2nd great unifier) gave lands to Daifukuji. They say they were the first place to make hamanatto. Today Daifukuji is very small and primitive; they were sold out of their hamanatto product when Alfred arrived. The head says it does not keep well in warm weather; mold grows on the soybeans. In the fall they make Hamanatto at most 4-5 times a week, and are finished in April or May.

Each time Daifukuji makes 1 (*koku*) or 750 kg of hamanatto, and they do this 5 times a year, from July to September. 150 to 200 kg dry soybeans makes 750 kg hamanatto. They do not use koji starter (*tane koji*) since the spores exist naturally in the koji trays and in the incubation room. They steam the soybeans in a wooden steamer that is placed over a caldron in which water is boiling; the steamer has 4 layers and each is square. They let the soy beans steam in the steamer overnight. A key ingredient is the middle hull of *sansho* pepper (*Zanthoxylum piperitum; sanshô no ki no chûkawa*) which is pickled in soy sauce (*shoyu*). This hull is removed, sun-dried, then pickled in 2 vats, 1 *koku* capacity each, with a pressing lid on each. After pickling, they are sun-dried for one day. Albert did not learn anything about the composition of the brining liquor or how long it takes. 50% is consumed locally (in the area of Hamamatsu) and the remaining 50% is consumed elsewhere–sold mostly in Tokyo department stores. It is sold out by the end of March. It is eaten as a side dish with rice, mixed with grated daikon and topped with shoyu. Also eaten atop hot rice, with green tea poured over the top (*ochazuke*). Sugar-coated hamanatto sold is a confection in Kyoto. Hôrinji [Horinji] is a Rinzai Buddhist temple. They make hamanatto in the spring and fall when they are not busy. They sell them at the front gate of the head temple (*honzan*), which is Hokoji in Okuyama, and at Seibu department stores. They are seasoned with

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gingerroot and sansho seeds (*sansho no mi*). The soaked soybeans are steamed in an open-top cooker at 0.1 to 0.2 kg per square centimeter pressure from 8:00 in the morning to 3:30 in the afternoon–about 7-8 hours. Then the steam is stopped and the beans are allowed to stand in the steamer overnight so that they darken–from yellow to brown. Then, in the morning, the beans are put into wooden koji trays which are stagger-stacked and incubated in the koji incubation room (*muro*) at 27-28°C. with the occasional use of a small kerosene heater, (maximum temperature 35°C) for 3 days to make soybean koji. On the second day, the beans in each tray are stirred by hand. When done, the soybean koji is sun-dried for 1 day on straw mats. Then they are pickled, under a pressing lid and weight, in 2/3 parts new salt water and 1/3 part old tamari soy sauce. Each wooden tub (*taru*) holds 45 kg for finished product. When finished, after about 6 months of pickling, the plug at the base of each wooden tub is pulled and the contents allowed to drain. The tamari that drains off is saved for use with a subsequent batch.

The gingerroot is processed separately. It is sliced into thin rounds, pickled in salt water and tamari, under a pressing lid and weight of about 20 kg, for 1-12 months–typically about 1 month. The sansho is also pickled separately, like the gingerroot, for 1-12 months. Only the finished gingerroot is mixed with the final product, the sansho is sold separately with the product in a bag. This year Horinji made 3 tons of hamanatto. The owner guesses that Yamaya made about 50 tons and Daifukuji about 5 tons.

Two small undated leaflets (in Japanese), one titled "Horinji Hamanatto," the other "Daifukuji Natto" each tells about the product and its history. They were given to Alfred during his visit to each place. Address: Tama-sô No. 1, Inokashira 1-28-30, Mitaka-shi, Tokyo 181, Japan. Phone 0422-47-7130.

5422. **Product Name:** Cedar Lake Vegeburger (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1977.
Ingredients: Wheat protein, water, cornmeal, soy flour, soy sauce, oatmeal, corn oil, vegetable seasoning, salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 22. Cedar Lakes. "Vegeburger" (19 oz).

Label.

5423. **Product Name:** Cedar Lake Chops (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1977.
Ingredients: Wheat protein, water, soy sauce, vegetable seasoning, salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Label printed on 12 March 1977.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

5424. **Product Name:** Cedar Lake Vege-Bits (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1977.
Ingredients: Wheat protein, water, soy sauce, vegetable seasoning, salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Label.

5425. **Product Name:** Cedar Lake Grain Burger–Meatless Vegetarian Patties.
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1977.
Ingredients: Wheat gluten, whole wheat flour, rye flour, barley flour, soy sauce, vegetable seasoning, salt.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A 6-27.

5426. **Product Name:** Wanjashan Soy Sauce.
Manufacturer's Name: Mandarin Soy Sauce, Inc. Subsidiary of Wan Jia Shan Brewery Co. Ltd. (Taiwan)
Manufacturer's Address: 419 North St., Middletown, NY 10940.
Date of Introduction: 1977.
New Product–Documentation: *Soybean Digest Blue Book.* 1978. p. 34. Soya Bluebook. 1986. p. 105. Product name is now spelled Wan Ja Shan.

Ad in Food Processing magazine. 1988. Nov. p. 80. "Naturally brewed Wan Ja Shan Soy Sauce. Brewed in U.S.A. by Mandarin Soy sauce Inc. Packaged from 10 oz. to 55 gallon drums. 419 North St., Middletown, New York."

Letter from Wen-Chau Chiu, PhD and President, Mandarin Soy Sauce, Inc. 1983. Nov. 22. His company has been making fermented soy sauce (and related products such as Hoisin sauce) since 1977.

5427. Shikata, Hideo; Tsukiyama, R.; Ishigami, Y.; Nishiyama, T.; Moriguchi, S. 1977. Amazake no seibun

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ni tsuite. I. Tô no teiryô [Components in amazake. I. Determination of sugar composition] *Nihon Shoyu Kenkyujo Zasshi* (*J. of Japan Soy Sauce Research Inst.*) 3(3):105-10. [10 ref. Jap; eng+]

• ***Summary:*** Not long ago, amazake had been declining in popularity as a sweet drink in Japan. However recently its popularity has begun to recover, probably due to the growing interest in natural foods.

In the Ryuno area, light shoyu (*usukuchi shoyu*) has long been made with amazake as an ingredient; it augments the sugar which was consumed during the fermentation, adds its own bouquet, and helps prevent coloration.

The authors found, using paper chromatography (PPC) and other techniques on five types of amazake, that amazake contains about 40% sugar. 50-80% of the total sugar in amazake is glucose, followed by 3.3–9.1% of isomaltose and maltotriose, and 5.5–8.9% of nigerose, maltose, and kojibiose.

Also discusses the changing content of fructose, saccharose, panose, and isomaltotriose. Address: Research Laboratories, Higashimaru Shoyu Co., Ltd., Tatsuno, Japan.

5428. Sintha, -. 1977. Pembuatan kecap decara hidrolisa [Making Indonesian soy sauce using hydrolysis]. Bandung, Indonesia: Departemen Biologi, I.T.B. 21 p. [Ind]*

• ***Summary:*** A report of practical work.

5429. Staron, T. 1977. Obtention des protéines à partir des graines oléagineuses par des méthodes microbiologiques [Obtaining protein from oilseeds using microbiological methods]. In: T. Staron, ed. 1977. Les Nouvelles Sources de Proteines Alimentaires. Recueil de Travaux et de Conferences. Luce: INRA. See p. 137-63. [42 ref. Fre]*

• ***Summary:*** A review of some important East Asian fermented foods, including miso, shoyu, and tempeh. Address: INRA, Stat. Antibiotiques, Bioconversions, Luce.

5430. **Product Name:** Mary's Tofu Rice Salad.
Manufacturer's Name: Swan Food Corp.
Manufacturer's Address: 5758½ Bird Rd., Miami, FL 33155.
Date of Introduction: 1977.
Ingredients: Tofu, organic brown rice, carrots, onions, tamari, natural spices, umeboshi salt plum.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated
New Product–Documentation: Label. 1977. 2 by 1¼ inches. Self adhesive. Black on yellow. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.

5431. **Product Name:** Tofu Chip Dip.
Manufacturer's Name: Swan Foods Corporation.
Manufacturer's Address: 5758½ Bird Rd., Miami, FL 33155.
Date of Introduction: 1977.
Ingredients: Tofu (organic soybeans, pure water and nigari, a natural solidifier), umeboshi plum, safflower oil, onion, garlic, dill, shiso leaves, pure water, tamari, parsley, salt, cayenne.
Wt/Vol., Packaging, Price: 8 oz plastic cup. Wholesales for $0.72 (April 1978).
How Stored: Refrigerated.
New Product–Documentation: Label. 1977. 3 by 3.5 inches. Self adhesive. Yellow, blue, and red on white. "No additives. No preservatives." Illustration of a swan. "Swan Food Corp." order form and price list for distributors. 1978 April.

Ad (full page, black-and-white) in *Alternatives* magazine (Miami, Florida). 1978. July/Aug. p. 49. "Remember the name!" "Tofu Chip Dip." Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.

5432. **Product Name:** Tofu Baked with Tamari (Organic Soybean Curd, Baked Tofu).
Manufacturer's Name: Swan Foods Corporation.
Manufacturer's Address: 5758½ Bird Rd., Miami, FL 33155.
Date of Introduction: 1977.
Ingredients: Organic soybeans, pure water, nigari (a natural solidifier), and tamari.
Wt/Vol., Packaging, Price: 8 oz. wholesales for $1.10 (April 1978). Also 14 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1977. 3 by 3.5 inches. Self adhesive. Yellow, blue, and red on white. "No additives. No preservatives." Illustration of a swan. "Swan Food Corp." order form and price list for distributors. 1978 April.

Ad (full page, black-and-white) in *Alternatives* magazine (Miami, Florida). 1978. July/Aug. p. 49. "Remember the name!" "Baked Tofu." Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.

Note: This is the earliest document seen (Feb. 2002) concerning a seasoned or flavored baked tofu.

5433. **Product Name:** Tofu (Marinated). Organic Soybean Curd.
Manufacturer's Name: Swan Foods Corporation.
Manufacturer's Address: 5758½ Bird Rd., Miami, FL 33155.
Date of Introduction: 1977.
Ingredients: Organic soybeans, pure water, nigari (a natural solidifier), tamari, garlic, onion powder.
Wt/Vol., Packaging, Price: 14 oz. wholesales for $0.85 (April 1978).
How Stored: Refrigerated.
New Product–Documentation: Label. 1977. 3 by 3.5 inches. Self adhesive. Yellow, blue, and red on white. "No

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additives. No preservatives." Illustration of a swan. "Swan Food Corp." order form and price list for distributors. 1978 April.

Ad (full page, black-and-white) in *Alternatives* magazine (Miami, Florida). 1978 July/Aug. p. 49. "Remember the name!" "Marinated Tofu." Recipe given by Shurtleff & Aoyagi. 1979. Tofu & Soymilk Production. p. 166. Firm tofu. Marinade: Shoyu, water, honey, powdered ginger, garlic powder, dark (toasted) sesame oil, prepared (wet) mustard, cayenne.

5434. **Product Name:** Mary's Eggless Egg Salad.
Manufacturer's Name: Swan Foods Corporation.
Manufacturer's Address: 5758½ Bird Rd., Miami, FL 33155.
Date of Introduction: 1977.
Ingredients: Tofu, celery, onions, garlic, dill, paprika, onion powder, shoyu, salt, turmeric.
Wt/Vol., Packaging, Price: 8 oz deli container. Wholesales for $0.73 (April 1978).
How Stored: Refrigerated.
New Product–Documentation: "Swan Food Corp." order form and price list for distributors. 1978. April; Shurtleff & Aoyagi. 1979. Tofu & Soymilk Production. p. 160, 163. Note: This is the world's earliest known product (and the earliest document seen) to bear the name "Eggless Egg Salad," a name that was later widely used by other companies and cookbooks.

5435. Talking Food Company. 1977. Miso & tamari (shoyu). Foods steeped in culture (Leaflet). Charlestown, Massachusetts. 4 panels.
• ***Summary:*** Others in this series (copyrighted 1977) are: "More on sugar and how it got that way" (4 p.). "Fiber. Grandmother was right" (4 p.). Address: Charlestown, Massachusetts 02129.

5436. Tsukiyama, R.; Maeda, T.; Miyashita, K.; Shikata, K.; Ishigami, Y. 1977. [Components in amazake. II. Amino acids, organic acids composition, and other components]. *Nihon Shoyu Kenkyujo Zasshi* (*J. of Japan Soy Sauce Research Inst.*) 3(5):205-09. [46 ref. Jap]
• ***Summary:*** One of the best analyses seen of the nutritional composition of amazake. Note the large bibliography. Address: Research Laboratories, Higashimaru Shoyu Co., Ltd., Tatsuno, Japan.

5437. Albright, Nancy. 1977. Rodale's naturally great foods cookbook: the best foods to use and how to use them in over 400 original recipes. Emmaus, Pennsylvania: Rodale Press. [vi] + 408 p. Illust. 24 cm. Reprinted in 1983 as
• ***Summary:*** This book is based on natural foods but makes widespread use of meat, poultry, fish, and dairy products. Raw, unstrained clover honey is used as a sweetener instead of white sugar which "is dangerous to health.."

"Natural foods restaurants are 'in'" (p. 2). "... the joys of natural foods" (p. 3). "... consumers are making a firm commitment to natural food cooking."

Soy related recipes: Rice and soy crepes (with ½ cup soy flour, p. 53). Whole soybean casserole (p. 74). Bulgur soybean loaf (with 3/4 cup soybeans, p. 81).

The section titled "The soybean" (p. 275-85) begins: "The queen of the legumes is the soybean. And its status is growing. From a relatively unknown commodity [] it has finally come into its own in this country as an important food. The soybean is the vegetable that most nearly provides the complete protein necessary for good health." Discusses varieties suited to the family garden. Recipes. Green soybean and corn succotash (with green vegetable soybeans). Soy flour for added values. Soy pancakes. Soy cheeseburgers (with soy grits). Tofu (soybean curd). Mentions the Learning Tree tofu kit and The Book of Tofu, by Shurtleff and Aoyagi (1975, Autumn Press; no tofu recipes are given). Soy sauce (shoyu). Herbed soybean salad (with 1 cup soybeans). Fresh vegetable and fruit stew with soybeans. Soybean-cabbage casserole. Soybean coffee. Soybean custard pie. Soy milk (homemade). Carrot soy loaf. Liver pate (with 1 cup soy pulp remaining from making soy milk). Mock pumpkin pie (with soy pulp). Scroggin (backpacker's food, with 3 cups soybeans, boiled). Soy potato dumplings (with ½ cup soy flour). Soy salad dressing (with 3/4 cup soy flour or powder).

A photo (facing copyright page) shows Nancy Albright cutting vegetables in Rodale's Fitness House kitchen. Address. Author of *The Rodale Cookbook*.

5438. Anderson, Eugene N., Jr.; Anderson, Marja L. 1977. [Food in] Modern China: South. In: K.C. Chang, ed. 1977. Food in Chinese Culture. New Haven, CT, and London: Yale Univ. Press. 429 p. See p. 317-382.
• ***Summary:*** Page 326 states: Soybeans–the fifth of the classic Five Staples (or Five Grains)–are usually the most important, although other legumes make a surprisingly good showing in south China, no doubt because soybeans grow better in the north. The soybean "produces more protein per acre and per pound than any other common humanly edible crop, plant, or animal. This has caused them to become more important than any animal food as a protein provider in China. The Chinese have long recognized their similarity to animal products and, indeed, have built up a huge cluster of imitation-meat foods (probably developed originally by, and certainly now associated with, vegetarian Buddhists). The Chinese lack of interest in dairy products is almost certainly, in part, a result of the fact that the soybean provides the same sorts of nutrition more economically–though a desire to differentiate themselves from the border nomads and to be independent of them in food economy must also be taken seriously as an explanation. (It is the classic Chinese explanation of the phenomenon but has been dismissed by

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those moderns who believe that all traditional explanations must necessarily be wrong.)

"Further discourse on the soybean belongs properly in the following section on food processing, for the soybean is used neither in its raw state nor, usually, in a simple boiled or roasted form. There are good reasons for this. The soybean, being so nutritious and succulent, has been faced with intense natural selection pressure by seed-eating insects and other animals; surviving soybean strains contain whole galleries of poisons and other unfortunate chemicals, which protect the seeds against destruction but make them dangerous food in the uncooked and unprotected state (Committee on Food Protection 1973). Simply prepared soybeans are not very digestible, since heat bonds some of the nutrients into hard-to-digest form in the intact bean. Thus almost all soybeans consumed in China are fermented, ground into flour, and then processed, sprouted, or otherwise milled."

"The soybean is so famous that one is surprised to discover from Buck that the broad bean outranks it in some parts of south China." However in genetically susceptible individuals, *Vicia faba* produces favism, a condition characterized by acute anemia and other unpleasant symptoms. Other important sources of protein are black soybeans (a variety of soybean mentioned by Buck) and sprouts from mung beans and soybeans (*tou ya*). Bean sprouts bridge the gap between grains and vegetables (*ts'ai*) (p. 326-27).

"A huge bowl of rice, a good mass of bean curd, and a dish of cabbages–fresh in season, otherwise pickled–is the classic fare of the everyday south Chinese world."

"The New World vegetables stand out as a special class because of their common and recent origin in China and their extreme importance. The white and sweet potatoes have become staples, as has corn. In addition to these, the peanut (*Arachis hypogaea*) has become the most important oilseed through much of south China, as well as a much used food" (p. 328). The peanut came from South America. Today, peanuts have become more important in areas where they are grown than rapeseed. Peanut and rapeseed oils are polyunsaturated and contain plenty of linoleic acid, a dietary requirement (p. 333, 343, 348). Mushrooms and their relatives are widely used in vegetarian dishes (p. 332).

The section on food processing (p. 337-41) notes that tragic practice of polishing rice, which removes most of the nutrients including fiber. There are many questions about the origins of pasta. Egg noodles probably originated in China. Italian spaghetti is similar to Chinese *mien* and ravioli to *chiao-tzu*, but they may have existed elsewhere before Marco Polo brought them to Italy from China. The technology of soybean process is too complex to discuss except briefly in this chapter. Most important is the production of bean curd or *tou-fu* (Cantonese *tau-fu*, Hokkien *tau-hu*). Hokkien cooks prefer a drier, firmer bean curd. Bean curd is often sold fried. The skin resulting from boiling soymilk [yuba] is skimmed off, dried, and widely used. "Other closely related processes produce the range of imitation meats developed by vegetarians, specifically Mahayana Buddhists. Credible imitations... are made for chicken, abalone, and other white meats, and even beef and pork. The West has picked up the idea and developed it much further, climaxing in the production of textured vegetable protein (TVP), but has–characteristically!–ignored the problem of making the result taste good. The ideal in the West seems to be to make it tasteless" (p. 339).

Concerning fish farming (p. 334-35): "Some fish, however, a pond-reared. Those that have been effectively domesticated are carps. These have several advantages: they produce vast amounts of protein per acre, they do not have to be specially fed since they eat algae and weedy grass and small animals of the ponds and pond fringes; they can live in foul water, and thus in stagnant ponds and market fish barrels, they are efficient converters, putting a large percentage of their feed into growth; and relative to other fish, they are easy to breed in captivity. The first fish farmed in the world were probably the Chinese carps." However, no mention is made of soybeans being fed to the fish. Address: 1. Assoc. Prof. of Anthropology, Univ. of California at Riverside, 2. Riverside, California.

5439. Chang, K.C. ed. 1977. Food in Chinese culture: Anthropological and historical perspectives. New Haven, Connecticut, and London: Yale University Press. 429 p. Illust. Index. 24 cm. [200+ ref.]

• ***Summary:*** One of the finest scholarly overviews of food in Chinese culture ever written, with each chapter, arranged chronologically by dynasty, written by an expert in the field. Contents: Introduction, by K.C. Chang. 1. Ancient China, by K.C. Chang. 2. Han, by Ying-shih Yu. 3. T'ang, by Edward H. Schafer. 4. Sung, by Michael Friedman. 5. Yuan and Ming, by Frederick W. Mote. 6. Ch'ing, by Jonathan Spence. 7. Modern China: North, by Vera Y.N. Hsu and Francis L.K. Hsu. 8. Modern China: South, by E.N. Anderson, Jr. and Marja L. Anderson. Glossary of Chinese characters. Bibliography. Address: Prof. of Anthropology, Harvard Univ., Cambridge, Massachusetts.

5440. Chang, Kwang-chih. 1977. Ancient China. In: K.C. Chang, ed. 1977. Food in Chinese Culture. New Haven, CT, and London: Yale Univ. Press. 429 p. See p. 23-52.

• ***Summary:*** "Our study of food in ancient China begins with the Yangshao culture, approximately 5000–3200 B.C. and ends with the Chou dynasty, just before 200 B.C. This is the period of Chinese civilization in which much of its later styles, including its style of cooking and eating, were formed and crystallized... Peking Man lived on game meat, mostly that of a deer with thick antlers (*Sinomegaceros pachyosteus*), and wild plants such as hackberry (*Celtis*

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barbouri)...

"In north China we begin with the Yangshao culture, characterized by farming villages and painted pottery, and dated from the fourth to the fifth millennia B.C. In the third and early second millennia B.C., the Lungshan culture, known by its black and gray pottery, filled the northern Chinese area. The Shang civilization followed, beginning around 1850 B.C. From about 1100 to about 200 B.C. was the period of the Chou civilization. For central and south China, the cultural sequence is slightly different."

Grains: The principal grains in the north, throughout the ancient period, were millets of various kinds. These included foxtail millet (*su or liang* = *Setaria italica*) and Panicum millet (*shu* = *Panicum miliaceum*). Other cereals planted in the north during this period included wheat (*mai*), hemp (*ma* = *Cannabis sativa*), barley (*mou*), and rice (*tao*).

"Soybeans, known as *shu* in Chou texts, are generally considered to have been first cultivated somewhere in China (Hymowitz 1970; Leppik 1971). However, their history cannot yet be traced farther back than the western Chou period, on the basis of palaeography (T.C. Hu 1963), and the first known archaeological finds date only from the Spring-Autumn period (S.C. Chang 1960, p. 11)."

"Many other beans are regarded by botanists as having had long cultivation histories in China–the velvet bean (*Stizolobium hasjoo*) and the red bean (*Phaseolus angularis* [azuki]) among them–but as yet they have not been identified in the ancient period. The broad bean (*Vicia faba*), usually regarded as of Mediterranean origin, is represented by an archaeological find at the Lungshanoid site at Ch'ien-shang-yang..."

"Plums were often mentioned with salt (*yen mei*) as the chief seasoning agents. In addition, meat sauce (*hai*) was also so used, and in all likelihood soy sauce was known toward the end of the Chou period (see *Shih shi*, "Huo Ch'ih Lieh Chuan")..."

"Unlike English, there is a word in Chinese (both ancient and modern) for food and drink combined–*yin-shih*. This is, of course, a compound word made up of *yin* (drink) and *shih* (food)... Within shih itself there is a clear and strong dichotomy between *shih* in the narrow sense meaning fan or grain food, and dishes of meat and vegetables (*ts'ai* in modern parlance)." Address: Prof. of Anthropology, Harvard Univ., Massachusetts.

5441 Editorial Committee for the 30-Year History of the Kikkoman Labor Union, ed. 1977. Kikkôman Shôyu rôdô kumiai sanjûnen-shi [Thirty-Year history of the Kikkoman Labor Union]. Noda: Kikkoman Shoyu Rodo Kumiai. 350 p. [Jap]*
Address: Noda, Japan.

5442 Farm Foods. 1977. Fermentation funnies (Leaflet). Summertown, Tennessee. 2 p.

• ***Summary:*** Another very creative publication from Farm Foods and The Farm. Each is a leaflet (8½ by 11 inches) printed on both sides with blue ink on white. Each gives, in cartoon-strip format, an introduction to fermentation, fermented foods, tempeh, etc. (1) "For thousands of years friendly microorganisms–have helped people produce a variety of fermented foods. (2) Literally hundreds of foods have enriched our diet. (3) ... which were made available through the action of molds, yeasts and bacteria." An illustration shows sauerkraut, yogurt, bread, soy sauce, vinegar, cheese, each running forward on two legs, each holding up a hand with the index finger pointing up.

(4) "These helpful miniature plants, by secreting enzymes, that act on the parent food [substrate] create new foods." An illustration shows a small critter, driving a tractor over a cake of tempeh, spraying enzymes on the food (as some farmers might spray agrichemicals). (5) "They are good nutritionally and often have better taste, texture, digestibility and keeping properties.

(6) "Now, from Indonesia, another new fermented food. It's tempeh! (pronounced TEM-py or TEM-pay.) (7) Yes, it's tempeh, a mild white cake of solid soybeans–Those high-protein, low-cost beans that farmers feed to their cows! (8) First, soybeans are cooked lightly, drained and cooled, sprinkled with tempeh starter, wrapped in wax paper or plastic, and left in a warm place for about a day.

(9) "When it forms, the new tempeh is ready to be quick-cooked or frozen for future meals. It can be fried, boiled, baked, stewed or frozen for different flavors. Now you can prepare tempeh at home and have it as an instant main dish any time you want! (10) Order soybeans, starter, and our instruction booklet separately or ask for our complete kit. Free instructions for making tempeh at home." An illustration shows a packet of tempeh starter. The final frame shows the Farm Foods logo. The leaflet is designed to be folded crosswise into thirds and mailed. On the back is an order form (with prices) and a photo of four kids eating and enjoying tempeh.

Note: An earlier version of this same cartoon strip, with the same title, but undated (probably 1976 or early 1977) is not quite as creative. The text is somewhat similar but there is less promotion of products (only starter kits which are $1 each). Farm Foods is not mentioned; the return address is: Tempé, Box 156, Summertown, Tennessee 38483. It is also printed with blue ink on white paper and designed to be folded into thirds.

On the back is: (1) A table giving a detailed composition of soybeans. (2) A bar chart showing "Per acre yields of usable protein from different food sources" showing that soybeans (at 356 pounds) are highest, whereas beef (at 20 pounds) is lowest. This chart is adapted from *The Book of Tofu* (1975, p. 15). Address: 156 Drakes Lane, Summertown, Tennessee 38483. Phone: (615) 964-3574.

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5443. Fuji Seiyu K.K. (Fuji Oil Co.). 1977. Daizu tanpaku kogyo-ka e no michi [Road to industrialization of soy protein. Part I (Document part)]. In: Fuji Seiyu K.K. 1977. Fuji Seiyu 25 Nen-shi: Showa 21 nen 11-gatsu–Showa 51 nen 3-gatsu [Fuji Oil Company Ltd.: 25-year history, Nov. 1946 to March 1976]. Tokyo: Fuji Oil Co. 622 p. See p. 417-30. [Jap]

• ***Summary:*** Outline: As a major Japanese soybean crusher, processing whole soybeans into soybean oil and defatted soybean meal, Fuji Seiyu produced large amounts defatted soybean meal. In 1962-62 Fuji Seiyu began to make *Fuji Takaramame* (a by-product of tofu powder) and *Proplus* using soy protein from defatted soybean meal, even though these were not considered to be good soy protein products.

In 1967 Fuji developed isolated soy protein (containing more than 92% protein) from defatted soybean meal, and started to sell this FujiPro isolated soy protein. Since it was a completely new product and little was known about it, sales were slow in the beginning. But later it started to be sold to makers of second generation meat products (such as sausages or ham).

In 1969 Fuji started to sell Fuji Nikku ("Fuji Meat"), which is a textured protein product (*soshiki tanpaku seihin*) and this expanded their market among hamburger and hamburger ball (meatball) makers. Based on the above experience, Ralston Purina (America's leading soy protein manufacturer) got to know Fuji and invited the company to do a joint venture. Three years later, in Dec. 1973, the two companies contributed 200 million yen and founded a joint company named Fuji Purina Protein K.K. In 1974 they started to make and sell *FujiPur / FujiPua* (for "Fuji Purina"), a spun soy protein fiber. Presently, Fuji Seiyu is trying to expand into new, undeveloped markets for soy protein foods (p. 418).

For 1964 the Food Bureau (*Shokuryo-chô*) of Japan's Ministry of Agriculture, planned the following usage of soybean meal: Food 347,000 metric tons (tonnes). Feed 691,000 tonnes. All but 69,000 tonnes of the food use went for miso, shoyu, and tofu. Of this 69,000 tonnes, 40,000 tonnes went for soy protein foods (such as breads, biscuits, doughnuts, shortcake, ice cream, fish paste products, cheese, soup, etc.) and 30,000 tonnes for glutamic acid / MSG (p. 419).

Fuji decided to industrialize soy protein very early and also to make isolated soy protein their main soy protein product. Other Japanese companies that tried to enter the soy protein market failed because they produced only soy protein concentrate (p. 420).

Fuji Seiyu finished their research on isolated soy protein at the end of 1966, then started test production in their 1-tonne pilot plant. In June 1967, they started to build their full-scale plant, and finished by the end of the year. It had a capacity of 100 tonnes/month. The company named its first product Fuji Pro; this isolated soy protein contained more than 90% protein and about 6% moisture (p. 421).

Then the company found that they could use Fuji Pro in fish paste products, so they tried to sell it to companies making such products. But these manufacturers were very conservative, so after 6 months Fuji gave up and began selling it to secondary meat producers (p. 423).

The meat industry was also very conservative, but after many visits to these companies, Fuji got to understand them better. Some of these companies were already importing soy protein from the USA and using it in their meat products. Fuji's research & development department developed a sausage containing Fuji Pro and presented samples to the meat processors; they made many repeat visits. In 1968 Fuji received an order from a large meat processor, after that they received orders from medium and small processors one after another. In Nov. 1968 Fuji's sales finally reached 100 tonnes/month. Later, after many careful investigations, the Japan Agricultural Standards (JAS) decided to make isolated soy protein a JAS product with a standard of identity for use in ham, sausages, etc. In this way, sales of Fuji Pro expanded. But there was also another reason for expansion: Exports! Actually exports started earlier and were easier than sales to the domestic Japanese market. And it was because of the demand from abroad that Fuji decided to build their first full-scale plant in 1967, even though they didn't have any clear idea about their domestic sales. Fuji's exports went Shoemaker, a Dutch food company; this relationship started in about 1964 (p. 424).

At that time the Dutch company was selling soy protein made by Central Soya in the USA. Being dissatisfied with the product's quality and prices, they looked to Japanese oil makers to produce these products. They contacted several companies, including Fuji Seiyu, which answered their inquiry and told them: "We are still study isolates, but we have a product that contains 50% protein." They sent Shoemaker a sample of Fuji Takaramame. However Shoemaker wanted a soy protein isolate, so no business was transacted. But from that time on, the two companies stayed in close communication and began to exchange information. Shoemaker asked Fuji to develop a soy protein isolate, provided important suggestions concerning the research, and sent Fuji a report of the European market for such a product. Shoemaker's cooperation played an important role in the development of Fuji's isolated soy protein.

Initially, Fuji had placed heavy emphasis on developing soy protein products for second generation fish paste products, but after considering the potential demand in Europe, Fuji started to research soy proteins for meat products such as ham and sausage. Fuji Pro was developed to be highly elastic, emulsifiable, and water soluble–characteristics desired by the European market. Fuji sent some samples. Before they started commercial production, they signed a contract with Shoemaker as a sales agent; it named Fuji as a IPSO (International Protein Sales

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Organization) and exporter. Thus, it was because of the European market that Fuji could start commercial production without a domestic market, and it was this European market that enabled Fuji to sell isolates in Japan. Everything seemed backwards. For example, some Japanese from the meat industry went to Europe to study that industry. There they learned that soy protein (named IPSO) was being used in ham and sausages. Returning to Japan, they discovered to their surprise that the soy protein was made in Japan by Fuji. In 1969 Fuji's contribution to Japanese exports (oil and protein) was honored with an award (p. 425-26).

A knowledge of the overseas market for soy protein was a great help to Fuji as its soy protein products began to serve an international market. This also gave ideas for development of new products–starting with meatlike soy protein products. They received news from Bernard Hawley in England that textured soy protein products had been developed in the USA. Hawley was a nutritionist and a consultant (Hawley & Associates) and Fuji began to use his consulting services in April 1966 (p. 428). Hawley made many trips to Japan and he and Mr. Nishimura (the president of Fuji Seiyu) became great friends. In 1967 Fuji sent Hawley to the USA and asked him to study the market for textured soy proteins and the send Fuji a market report (p. 429). Meanwhile, the company president and a man from the planning department also went to the USA to study the market; they soon decided to start making textured soy protein immediately. They visited Wenger Manufacturing Co. in the USA, signed a contract in April 1968, and received a machine [extrusion cooker] that year. Actually they bought only the main body of the machine from Wenger, the other parts (including the power mill) were invented and designed by Fuji technicians (p. 430). Continued. Address: Tokyo, Japan.

5444. Grueninger, Ursula. 1977. Es muss nicht immer Fleisch sein [We do not always need meat]. Weil der Stadt, Germany: Walter Haedecke Verlag. 139 p. Illust. by Monika Graff. Index. 25 cm. [Ger]

• ***Summary:*** This German vegetarian cookbook includes two soy-related recipes: Delicious salad (with soy sprouts and soy sauce, p. 22). Quick vegetables (with soy sprouts, p. 58).

5445. Hsu, Vera Y.N.; Hsu, Francis L.K. 1977. [Food in] Modern China: North. In: K.C. Chang, ed. 1977. Food in Chinese Culture. New Haven, CT, and London: Yale Univ. Press. 429 p. See p. 295-316. [2 ref]

• ***Summary:*** "Soybean grows easily as a companion crop with kaoliang or corn. It is consumed all over China" in various forms, as bean curd [toufu], soybean milk, *tou fu nao* ("bean brain"–slightly coagulated soymilk, softer than tofu), *tou cha* [okara] ("the finer remains of the soybean from which the bean milk has been extracted is usually fed to pigs, but can be the poor mans ta'si [side] dish").

Young soybeans in pods, freshly picked from the field, are boiled in water or baked on the fire and consumed as snacks. They are served with soy sauce and sesame oil and eaten by using the teeth to scrape the beans into one's mouth.

Other soybean products consumed in north China include: soybean sprouts (eaten after submersion in boiling water for 1-2 minutes), "fermented bean curd (*fu ju*), molded bean curd (*ch'ou tou fu*), dried bean curd [pressed bean curd] (*tou fu kan*) (p. 301).

Note: This is the earliest English-language document seen (Oct. 2011) that uses the term *ch'ou tou fu* or the term "molded bean curd." Address: 1. Evanston, Illinois, 2. Prof. of Anthropology, Northwestern Univ.

5446. Ismail, Mohamad Salleh. 1977. Accelerated fermentation of fish sauce, fish-soy paste and fish-soy sauce. PhD thesis. Cornell University. 242 p. Page 3618 in volume 38/08-B of Dissertation Abstracts International. •
Address: Cornell Univ.

5447. Johns, Yohanni. 1977. Dishes from Indonesia. New metricated edition. Melbourne, Australia: Thomas Nelson (Australia) Ltd. xiv + 151 p. Illust. Index. 26 cm. 1st ed. 1971

• ***Summary:*** The author comes from a town in Indonesia named Padang Pajang, located in the mountains of West Sumatra in an area known as Minangkabu. The society is matrilineal, so ancestral property is passed down the female line and a new husband comes to live in his wife's family's home. She married an Englishman in about 1955 and they lived in Jogjakarta (in Central Java) from 1956-1958, then in Australia since 1958.

This handsome book, packed with color photos, gives a good introduction to Indonesian cookery–though it contains a disproportionate number of recipes using meat. The excellent glossary of ingredients (p. 10-16) includes: Bean curd (incl. fried bean curd), black bean sauce or salted black beans (*tauco*, sic. Note: *tauco* is Indonesian-style miso, whereas *taosi* is salted black beans; which does she mean?), and soya sauce. Note that tempeh is not mentioned. Soy-related recipes include: Eggs in soya sauce (p. 53-54). Fried fish in black bean sauce (Tauco ikan, p. 60). Stir-fried prawns with long beans and black bean sauce (p. 71). Bean curd balls with prawns (p. 72). Braised liver in soya sauce (p. 86). Braised ox tongue in soya sauce (p. 87). Braised chicken in soya sauce (p. 90). Sambal of brown bean sauce (p. 101). Soya sauce sambal (Sambal kecap, p. 102). Fried soya bean curd with sauce (p. 125).

Note: This is the earliest English-language document seen (May 2012) that contains the term "fried soya bean curd." Address: Australia.

5448. Kikkoman Corporation. 1977. Kikkoman today & tomorrow: Savory meals for people all over the world

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(Brochure). Noda City, Japan: Kikkoman Shoyu Co., Ltd. 17 p. [Eng]
• ***Summary:*** An attractive booklet with many color photos. On the cover are many small color photos of people's faces, Manhattan (New York), pyramids, a koala bear, etc. Contents: What is Kikkoman? Dedicated to progress through excellence. Photo of the Kikkoman plant at Noda. A word from our president–Katsumi Mogi. How we began... Where we are (History of shoyu and Kikkoman). Kikkoman soy sauce production method. The secret of Kikkoman's unique flavor. Kikkoman's technology probes into tomorrow's foods. The Central Research Laboratories "Our goal is to make life better through the advanced application of food science." Photo of Kikkoman's family of quality products. International flavor in the global society. A bright future, rich in variety. The Kikkoman family tree (of companies). The Kikkoman Group (directory). Kikkoman sales network in Japan. Address: Kikkoman, Noda, Japan.

5449. Kikkoman Shoyu Co. Ltd. 1977. The Kikkoman cookbook. Your way to better flavor! Kikkoman Shoyu Co Ltd., 1-3 Kayaba-cho, Nihonbashi, Chuo-ku, Tokyo 103, Japan. 80 p. Illust. No index. 26 cm. Distributed by Van Nostrand Reinhold Co., New York. [Eng]
• ***Summary:*** Originally titled *The Kikkoman Way of Fine Eating*. Copyright 1973. Address: Tokyo, Japan. Phone: 03-669-1111.

5450. Korean Society of Food Science and Technology. 1977. Comprehensive review of the literature on Korean foods. II. (1969-76). Seoul, South Korea. 235 p. * Address: Korea.

5451. Laughing Grasshopper Tofu Shop. 1977. Laughing Grasshopper tofu recipes (Brochure). 3 Main St., Millers Falls, Massachusetts 01349. 4 p. Undated. [1 ref]
• ***Summary:*** Though no author is listed, this leaflet (25 by 19 cm, dark-green ink on beige paper) was probably written by Richard Leviton. A later edition had New England Soy Dairy as the publisher, indicating that the latter was selling this brand of tofu for a while. Discusses soybeans, protein, and world hunger, gives a nutritional analysis of Laughing Grasshopper Tofu, then gives 20 tofu recipes: Basic pan-fried tofu. Basic pan-fried tofu with sauce. Raw vegetable dip. Creamy scallion salad dressing. Creamy dill dressing. Bean curd soup. Tofu guacamole. Tofu 'egg' salad. Scrambled tofu sandwich. Tofu kebab. Tofu barbecue. Tofu baked in tomato sauce. Ravioli or manicotti. Sweet & sour tofu. Strawberry-tofu ice (popsicles or ice cream). Raspberry pudding. Creamy carob pie. Creamy carob pudding. Tofu 'cheesecake' deluxe. Peach kuchen.

Note: This is the earliest document seen (June 2004) that contains a recipe for what would soon become one of the first popular tofu products, widely called "Eggless Egg Salad" (1977), "Tofu No-Egg Salad" (1978), and "Missing Egg Salad" (1978). This recipe, which contains no eggs, calls for tofu, celery, carrots, onions, mushrooms, green peppers, scallions, mayonnaise, prepared mustard, tamari soy sauce, turmeric, paprika, celery seeds, etc. Address: Millers Falls, Massachusetts. Phone: 413-659-3883.

5452. Madlener, Judith C. 1977. The sea vegetable book: Foraging and cooking seaweed. New York, NY: Clarkson N Potter, Inc. 288 p. Illust. Index. 21 x 21 cm. [113* ref]
• ***Summary:*** Contents: Foreword. Preface. Acknowledgments. All about sea vegetables. Foraging for sea vegetables. Sea vegetable data pages. Cooking with sea vegetables. Sea vegetable recipes. Additional sea vegetable information. Menus, glossary of ingredients, commercial sea vegetable varieties and products, mail-order sources, bibliography.

Lavishly illustrated with many beautiful line-and-dot drawings. Address: Berkeley, California.

5453. Matsumoto, Kosai, II. 1977. Traditional herbs for natural healing: Japanese plums (*ume*) and shelf mushroom (*reishi*). Settsu City, Osaka, Japan: Kosai Matsumoto Office. 147 p. Illust. No index. 21 cm. [10 ref. Eng]
• ***Summary:*** Contents: Introduction. Letters of support. Part I: History of the Japanese plums (*Ume*)–born in China and raised in Japan. Japanese plums introduced as medicine. The use of Japanese plums as a protection against various diseases. Salted plums (Umeboshi) during the Samurai period. Plantings and location of the valuable plum trees. Plum extract, 160 years old. Plum extract's efficacy was accepted by both the Japanese army and navy. Relationship of Japanese plums for restoring acid-alkaline balance. Japanese plums are known as king of alkaline foods. The value of citric acid of Japanese plums. Chemical composition of Japanese plums. Why is citric acid good for your health. Citric acid also metabolizes sugar. What is the citric acid cycle. Umeboshi conquers the Himalayas. Japanese plums have powerful antibacterial properties. Even radioactivity can be combatted by Japanese plums. Ume can balance your spirit (like a good tranquilizer). The unique properties of the Japanese plums. Ume has immediate effect on hangovers. Pregnant women need Japanese plums. The secret of beautiful skin. Ume as a source of stamina. A Japanese plum a day slows the aging process. The effective prevention of anemia. How to treat food poisoning with Ume. The best way to prevent a cold. Ume goes to work instantly on stomach pains. Ume has a remarkable effect on liver troubles. Good news for people who are suffering from stomach ulcers. The problem of high blood pressure. Plums for Athlete's foot, snake bites, and as a unique contraceptive. Japanese plums as seen through the eyes of oriental medicine... The best is yet to come. How to properly select Japanese salted plums. Japanese traditional health foods

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using plums.

Part II: Reishi–The shelf mushroom or monkey seat mushroom (*Polyporaceae*) of Japan.

The recipe section, titled "Japanese traditional health foods using plums" includes some that call for soy: Soy sauce with plum extract (p. 74, a good dressing for wakame seaweed salad). Crushed bean curd [tofu] with plum sauce (p. 80). Tasty dressings using salted plums (with soy sauce, p. 81). Plum dip (with soy sauce, p. 84).

A section titled "Soy beans" (p. 125) states: "The high level of vegetable fat and protein make soy beans the ideal food for daily health."

A map of Japan inside the front cover and facing page shows the nine major plum growing areas: From north to south they are: Mito Kairakuen Garden (Ibaragi [Ibaraki]) Yoshino plum district (Tokyo). Hyakusoen park (Tokyo) Soga plum district (Kanagawa). Atami plum gardens (Shizuoka) Mizunoo plum forest (Osaka). Kitano shrine (Kyoto). Tsukigase (Nara). Minabe plum forest (Wakayama). The spectacular flowers bloom in Feb. and March, moving from south to north.

A note/ad on page 146 states: "For your information. This book along with the following products are available from Soken Trading, Inc., P.O. Box 1705, Sausalito, California. Meitan Granules, Plum (Ume) Extract, Handpicked Umeboshi (Salted Plums), Plum Candy, and Kobai Reishi." A color photo on the rear cover shows Mr Kosai Matsumoto II. He has three written other books about umeboshi and reishi. Address: 4-14-1 Shojaku, Settsu City, Osaka, Japan. Phone: 06-383-0911.

5454. Mote, Frederick W. 1977. Yuan and Ming. In: K.C. Chang, ed. 1977. Food in Chinese Culture. New Haven, CT, and London: Yale Univ. Press. 429 p. See p. 193-257. [38 ref]

• ***Summary:*** The Yuan (Mongol) dynasty (when China was under alien Mongol rule) lasted from +1271 to 1368. The Ming dynasty (when China was again ruled by Chinese) lasted from +1368 to 1644. In 1644 the Ming fell to the bandit Li Tzu-ch'eng, and Manchu invaders from the north [Manchuria] captured Peking, then soon conquered the rest of China–ushering in the Ch'ing dynasty (1644-1912). Note: The Ming period is one of the great eras of orderly government and social stability in human history. A population averaging around 100 million people lived during 276 years in comparative peace.

Page 212 notes that the growth of the palace eunuch staff is an important feature of early Ming government. The *Huang Ming tsu-hsün-lu* (Ancestral Admonitions), issued first in 1381 during the reign of the Ming founder, stipulated that separate bureaus within the palace eunuch staff be designated. The imperial wine bureau oversaw the production of wines, soybean meal, tofu, etc.

Page 200 notes that during this period "consumption of meat was very low and seems to have remained stable at low levels for many centuries. Because China also used virtually no dairy products, to maintain nutrition they had to supply protein, calcium, fats, and vitamins in many ways quite different from those our society employs. Vegetables, in one way or another, supplied all of those things. The soybean undoubtedly was the most important diet adjunct, being richer in protein than equivalent weights of red meat, richer in digestible calcium than equivalent amounts of milk, and also being an important source of oil and certain vitamins. Excellent cooking oils also were made from sesame seed, rape seed, and other plant materials (*T'ien-kung k'ai wu*, trans. by Sun and Sun, 1966, p. 215-21)."

Pages 240-41 note, under "Special ingredients: The Japanese specialist in the history of Chinese food and eating, Shinoda Osamu," has remarked that "Traditional China's diet was strikingly different from the Japanese in two respects: the consumption of oils and fats was four or five times higher in China, and everyday cooking demanded more basic materials. The things required to keep an ordinary kitchen going day by day in Yüan and Ming times are sometimes enumerated in the entertainment literature, encapsulated in the formula of 'the seven things.' Shinoda refers to 'Yüan drama' for one enumeration of those, probably having in mind the line spoken by a busy housewife: 'From the moment I get up in the morning, I'm busy with the seven things–fuel, rice, oil, salt, soy sauce, vinegar, and tea' (*San-shih chung*, p. 261)."

Also discusses: Peanuts (p. 198). Notes that during the last century and a half of the Ming period, from roughly 1500 to 1650 a number of important new crops entered China: Maize, sweet potatoes, peanuts, and tobacco. Vegetarianism (p. 221-25, 242). At private ceremonial banquets, vegetarian foods resembling forbidden meat dishes were served.

Pages 201 states: "Fish were commonly farmed in the ponds, regularly harvested, and sold live in the markets." However no mention is made of soybeans being fed to the fish. Address: Prof. of East Asian Studies, Princeton Univ., Princeton, New Jersey 08540. Phone: 609-452-4284.

5455. Nakase, Kenji. 1977. Miso shôyu shiso Hotto Enmyô Kokushi [The Zen priest who introduced miso and shoyu to Japan: Hotto Emmyo Kokushi, or Kakushin (1207-1298)]. Kyoto: Zenkoku Jokai Shinbunsha. 292 p. Appendix: Miso and shoyu supply adjustment regulations. [Jap]

• ***Summary:*** A scholarly, carefully researched book on the early history of miso and shoyu in Japan.

5456. Nosan Gyoson Bunka Kyokai. 1977. Nôgyô gijutsu taikei. Sakumotsu-hen. Vol. 6 [Outline of agricultural arts and techniques. Crops. Vol. 6]. Tokyo: Nôsan Gyôson Bunka Kyokai. See p. 3-7. [Jap]

• ***Summary:*** Page 4 shows 2 pie charts with statistics from

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the year 1974. The 3,500,000 tonnes of whole soybeans consumed in Japan are used as follows: Soy oil 78% of the total, tofu and products 10.5% (except frozen tofu), miso 5.5%, natto 1.5%, frozen tofu 1.3%, kinako (roasted soy flour) 0.4%, shoyu 0.2%, and other 2.6%. The 2,20,000 tonnes of defatted soybean meal are used as follows: Livestock feed 84.6%, shoyu 7.5%, tofu 4.1%, miso 0.3%, other food uses 2.0%, other nonfood uses 1.5%.

A graph on page 7 shows soybean production in Japan and soybean imports. Imports were static from about 1895 to 1918 at about 100,000 tonnes, then they rose rapidly to about 1,000,000 in 1944. They dropped to almost zero following Japan's defeat in World War II, then starting in about 1954, skyrocketed, reaching 1 million tonnes in about 1960, 2 million tonnes in about 1968, and 3 million tonnes in about 1970. After about 1954, soybean production in Japan dropped steadily. Address: Japan.

5457. Pearson, Phyllis Strayer. 1977. Contemporary soya recipes. St. Louis, Missouri: American Soybean Assoc. 18 p. 19 cm.

• ***Summary:*** Contents: Introduction, by Elaine Brown. Using this cookbook: Soy cooking oil, soy margarine, soy shortening, soy sauce, whole soybeans, soy flour, soy granules, soy grits, soy milk, soya nuts, special cookbook features. Recipes: Spaghetti sauce. Salmon croquettes. Chili Beans with ham. Chicken pie. Green bean casserole. Soya quiche. Tuna loaf. Asparagus casserole. Date bars. Pie crust. Banana bread. Peach surprise muffins. Caramel rolls. Banana cream pie. Soya doughnuts. Pumpkin bread. Cherry coffee cake. Protein and calorie analysis. Address: Home economist, P.O. Box 27300, St. Louis, Missouri.

5458. Schafer, Edward H. 1977. T'ang. In: K.C. Chang, ed. 1977. Food in Chinese Culture. New Haven, CT, and London: Yale Univ. Press. 429 p. See p. 85-140. [34 endnotes]

• ***Summary:*** The T'ang dynasty lasted from +618 to 907. Contents: Introduction. Foodstuffs. Sweeteners. Condiments and spices (incl. salt). Pickles and preservatives. Cooking. Beverages. Utensils. Visual aspects. Geographical differences. Taboos and prejudices. Food in ceremonies and special occasions (incl. feasts and festivals). Inns and taverns. Footnotes (34).

Legumes (*tou*) were an important part of the Chinese diet in T'ang times. Soybeans (*ta tou* = large beans) had a variety of uses and received considerable attention from the T'ang pharmacologists, who claimed to have discovered that the beans had different effects on the body depending on the way they were prepared. For example, when stir-roasted they were excessively heating, boiled they were too chilling [cooling], made into a relish (*shih* = fermented black soybeans) they were very cool, but pickled to make *chiang* (Chinese-style miso) they were balanced. However when stir-roasted and taken in wine, they were said to be curative of certain kinds of paralysis. The young shoots of a variety of soybean called "white legume" (*po tou*) were much admired for their flavor, either cooked or raw, and were said to be good for the kidneys (p. 90).

Also important in the diet were "true" millet (*chi; Panicum miliaceum*), foxtail millet–also called spiked or Italian millet (*su; Setaria italica*). *shu* was the common word for glutinous millet and *no* was that for glutinous rice, various sea vegetables such as purple-leaved laver, green laver or "sea lettuce," and the sugary sweet tangle (p. 91), Far Eastern eggplant or brinjal (p. 93), and the jujube–which resembled the Western date (p. 95). Sesame seeds were chiefly of interest as a source of oil, but they were also fried and eaten (p. 98).

Concerning animal milk, there is the widespread idea that a line divides East Asia into two cultural groups: One depends on milk products (Indians, Tibetans, and many Central Asian nomads), and the other (which includes the Chinese) rejects them with loathing. "Indeed some evidence for this classification can be found at every period of Chinese history, even though warm milk was regarded as a highly nutritious food from very ancient times (Cooper and Sivin 1973, p. 227). It seems, however, that after Han times, when the intermingling of Chinese and Altaic customs became pronounced to a new degree, the barrier of prejudice broke down, and by T'ang times milk products formed a significant part of the diet of the upper classes." Probable reasons for this change are given. "Milk was modified in many ways. It was curdled to make, for instance, (*ju fu*), analogous to bean curd [tofu]. Indeed, much more popular than unaltered milk were a number of fermented or soured derivatives." Three of these, which formed a hierarchy, were given special attention and spiritual significance corresponding to the development of the Buddha spirit: kumiss (*lo*, the lowest), kaymak or Devonshire cream (*su*), and clarified butter (*t'i-hu*, the highest) (p. 105-06).

Fresh ginger had a cooling property if used with the skin intact, but was warming if the root was peeled (p. 111).

The section titled "Pickles and preservatives" notes that the most characteristic and traditional Chinese methods of preserving involved fermentation processes which reduced "proteins into their component amino acids and amides by the action of enzymes, ferments, and molds. A very special species of pickle was called *chiang*, which has been aptly translated 'bean-pickle.' The word *chiang* appears in altered form as the first syllable of the Americanized Japanese expression for shoyu–soya. However in pre-modern times, chiang was not necessarily a soybean product. Indeed the word was sometimes applied to pickles based on meats and seafoods (Shih 1959, p. 84-85; *Fan Sheng-chih Shu*)... I shall use the term *bean-relish* to represent the Chinese word *shih*, the name of a popular relish of decomposed soybeans that assumes a dark color by interruption of the hydrolytic

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process or by drying at a high temperature (Shih 1959, p. 87). The name was given to a number of similar concoctions, some prepared with wine, some with vinegar, some with brine, and so on. The differences were frequently local. One authority mentions a variety peculiar to a region in Honan that was made from steamed soybeans, with salt and fagara added. It matured in two or three days of warm weather. It was said that this salty pickle could be kept for ten years without spoiling."

"The milky bean curd–also known to Westerners by its Japanese name, tofu (Chinese *tou-fu*)–was a ferment made from many kinds of beans and peas. It was an ancient and familiar product (S.C. Li 1965 ed. of *Pen-ts'ao kang-mu*, 25:5)." Note: The author must be referring to fermented tofu, which was usually made from soybeans.

In the discussion of fish farming (p. 102) no mention is made of soybeans being fed to the fish. Address: Prof. of Oriental Languages, Univ. of California at Berkeley.

5459. Seki, Nobuo, Sakaya, Hiroshi, Onozawa, Tetsuhiko. 1977. [Studies on proteases from Antarctic krill] *Nihon Suisan Gakkai shi* (*Bulletin of the Japanese Society of Scientific Fisheries*) 43(8):955-62. [12 ref. Jap; eng]
• ***Summary:*** Proteases were extracted from Antarctic krill (*Euphausia superba*). Through purification, they were separated into two trypsin-like proteases and a protease of unknown specificity. The trypsin-like proteases inhibited the activity of soy-bean trypsin inhibitor. Also mentions myosin. Address: Lab. of Biochemistry, Faculty of Fisheries, Hokkaido Univ., Hakodate [Japan].

5460. Spence, Jonathan D. 1977. Ch'ing. In: K.C. Chang, ed. 1977. Food in Chinese Culture. New Haven, CT, and London: Yale Univ. Press. 429 p. See p. 259-94. [38 ref]
• ***Summary:*** The Ch'ing dynasty (China's last dynasty) lasted from 1644 to 1911.

Concerning peanuts: Ho Ping-ti (1959, p. 183-95) has shown how maize, sweet potatoes, Irish potatoes, and peanuts all became basic crops in China during the Ch'ing, and how their story is enmeshed with the drama of China's internal colonization (p. 263). During the 1750s, Magistrate Li Hua-nan in Cheekiang reported the popularity of peanuts. Table 4 (p. 269) shows the relative prices of sweet oil, peanut oil, salt, and salt turnip from 1902 to 1912. In 1928 L.K. Tao reported that peanuts were bought by 89.6% of the families in Peking (p. 270). Note: Reischauer and Fairbank in *East Asia: The Great Tradition* (1960, p. 393) agree. There was considerable growth in China's population during the 18th century, before the impact of industrialization. The leading explanation for such growth lies in the increase of the food supply made possible by (1) the opening up of new land to cultivation, often under imperial encouragement, and (2) the consumption of new food crops. Maize (corn), sweet potatoes, peanuts, and tobacco were all introduced into China from the Americas in the 16th or 17th centuries. The sweet potato became the poor-man's food of south China.

Also discusses: Vegetarianism (p. 290). Address: Prof. of History, Yale Univ., New Haven, Connecticut. Phone: 609-452-4284.

5461. White, Beverly. 1977. Bean cuisine: A culinary guide for the ecogourmet. Boston, Massachusetts: Beacon Press. xv + 142 p. Illust. by Julie Maas. Index. 21 cm.
• ***Summary:*** Contents: Introduction. 1. Becoming a bean cook. 2. Bean soups. 3. Bean salads. 4. Bean sandwiches, spreads, and such. 5. Stovetop beanpots. 6. Oven beanpots. 7. Feasts for special occasions. Dried legume glossary.

Contains good information about pressure cookers and pressure cooking beans (p. 6-10, including soybeans). Soy-related recipes include: Soy sprouts (p. 13). Basic tofu (p. 14). Bean on bean soup (p. 18). Tofu mayonnaise (p. 27). Apple bean sprout salad (with tofu dressing, p. 39). Carrot salad with tofu (p. 40). Soy joy salad (p. 48). Amarillo taco (with cooked soybeans, p. 50). Soy sandwiches (p. 57-58). Soyburgers supreme (p. 58-59). USA paté (p. 60). Soybeans creole (p. 85). Hearthside baked soybeans (p. 99). Vegetable medley (with soybeans, p. 110). Miso shiru soup (p. 126). Soy cucumber salad–sunomono (with soy sauce, p. 126). Vegetable sukiyaki (with tofu and soy sauce, p. 127). Basics (p. 136).

Soybean sprouts should be ½ to 1 inch long; they need to be parboiled for 10 minutes before use in salads. Freshen old tofu by parboiling for 2-3 minutes in a pot of boiling water.

5462. Whyte, Karen Cross. 1977. The original diet: Raw vegetarian guide and recipe book. San Francisco, California: Troubador Press. x + 109 p. Illust. by Bill Yenne. Index. 21 cm. [60+ ref]
• ***Summary:*** "The raw food vegetarian can make better use of legumes and grains by sprouting them." Soybean sprouts should be about 50 millimeters long (p. 37). Also contains a recipe for Ginger-soy sauce (p. 71).

5463. Wilkins, Mira, ed. 1977. Foreign investments in the United States: Department of Commerce and Department of Treasury estimates. New York: Arno or Ayer Publishing. See p. 48. Series: European business: Four centuries of foreign expansion. *
• ***Summary:*** The section titled "Oriental Show-You Company" (p. 48) states that the vested minority interest in this company was also sold to a high bidder at a public sale. "At that time none of the bids received were adequate and all were rejected; the reoffering produced an acceptable bid."

5464. Wong, Irene. 1977. Great Asia steambook. Brisbane, California: Taylor & Ng; New York: Distributed by Random House. [viii] + 97 p. Illust. (photos). Index of recipes. 22 x

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22 cm.

• ***Summary:*** Includes recipes (all steamed) and ingredients from throughout Asia, but with emphasis on China.

The "Glossary of ingredients" (p. 80-95, with a large photo of each) includes:

"Bean curd, fresh." Bean curd, red (Nam yue).

Bean sauce: "Sold as 'Yellow bean sauce' and 'Ground bean sauce'; also known as brown bean sauce or *mien see* (Cantonese Chinese).

"Black beans, fermented and salted (*Dow See*): A Chinese spice. Small raisin-size black beans sold in plastic or cellophane packages. May be rinsed and mashed with minced garlic and ginger for steaming, stir-frying, and braising..."

Fu: pressed, dry wheat gluten cakes. Hoisin sauce. Miso. Nam yue. Nori. Oyster sauce: Made from oysters and soy sauce. Red bean curd. Red bean paste [azuki an] (Dow sah). Sweetened to make a filling for steamed bread (bao). Soy sauce. Sweet rice (see glutinous rice). Teriyaki sauce. Tofu: See bean curd, fresh.

About the author: She was born in Fresno, California and grew up in a spacious Victorian frame house in the thriving Chinatown section. Her father and uncle had immigrated from Sun Doh, a village in Kwantung province of mainland China, when the Japanese army invaded the region in 1938. She graduated from the University of California, Berkeley, then taught English as a second language in the Chinatown of nearby Oakland. In 1974 she married Alan Gribben, now an assistant professor at the University of Texas in Austin. Currently Irene is an instructor of Chinese cooking at Taylor & Ng, San Francisco importers and designers. Address: San Francisco Bay Area, California.

5465. Wood, B.J.B. 1977. Oriental food uses of *Aspergillus*. In: J.E. Smith and J.E. Pateman, eds. 1977. Genetics and Physiology of *Aspergillus*. New York: Academic Press. x + 552 p. See p. 481-98. [33 ref]

• ***Summary:*** Contents: Introduction. Koji. Tamari. Miso. Tempeh. Sake. Some minor fermentations. Fermented foods and mycotoxins. Acknowledgments. References. Address: Dep. of Applied Microbioloby, Univ. of Strathclyde, Glasgow [Scotland], U.K.

5466. Yokotsuka, Tamotsu. 1977. Shokuhin Kagaku Daijiten: Shôyu [McGraw-Hill encyclopedia of food, agriculture & nutrition: Soy sauce]. Tokyo: McGraw-Hill Kodansha. See p. 309-310. [Jap]

• ***Summary:*** History: Hishio and Kuki production techniques came to Japan from China and Korea. According to the Taiho Ritsuryo (702 A.D.), various types of Hishio and Kuki and Miso (this is the Misho character–NOT the present Miso one) were made from soybeans in the Hishio Tsukasa of the Kunaisho. It is in later times that they started to use the liquid which was separated from the above three as seasonings. In the Kamakura (1185-1333 A.D.) period in the Wakayama prefecture they collected the liquid accumulated in the bottom of Miso Oke. In the Muromachi period (1338-1573 A.D.) they added water to miso and squeezed it to extract the liquid (called Usudare or Taremiso). Shoyu (which is different from miso) was first mentioned in Ekirinbon Setsuyoshu (1597 A.D.). Address: Kikkoman Corporation, Noda, Japan.

5467. Haddix, Carol. 1978. You'll feel a bit smarter at the Co-op. *Chicago Tribune*. Jan. 12. p. F3.

• ***Summary:*** The Hyde Park Co-op Super Market looks like any other supermarket, but you'll soon discover the many rows of "strange Oriental vegetables." The Japanese produce man will help you decipher the "strange names like bok toi [bok choy, bok choi], hakusai, cilantro, tofu, and wonton wrappers."

Two recipes are given. The one for Japanese beef sukiyaki calls for "½ cup soy sauce" and "½ soy bean cake [tofu], diced."

5468. Clark, Sandra. 1978. Higher education of a decadent cook. *New York Times*. Jan. 25. p. C3.

• ***Summary:*** A "Recent College Graduate" (RCG) arrives home for the holidays. It's 1978. She's hip, interested in new foodways, makes delicious stir fries, and eats with chopsticks. She takes the author (her mother) to Chinatown and introduces her to "the mysteries of sesame oil, bok choy (chinese cabbage) and tofu (soy bean curd). 'You change the tofu water every day, it'll keep.'"

Back in the home kitchen cooking, her mother offers her some "soy." "'Not that watery supermarket brine!' she scolds. She reaches into her backpack, produces a jar of something black, with a lotus blossom and haiku label. 'Tamari,' she informs me.

She teaches her mom how to grow sprouts in a Mason jar using alfalfa seeds and mung bean sprouts, how to rinse them twice a week, to re-oil the wok, and to change the tofu water.

5469. Wells, Patricia. 1978. How to increase nonanimal protein in the daily diet. *New York Times*. Jan. 25. p. C6.

• ***Summary:*** It is no accident that Mexicans eat corn with their beans, that Italians combine pasta with their beans, or that Japanese sprinkle soy sauce on their rice. These are all simple ways of "combining incomplete vegetable proteins to create a balanced protein." The idea of "complimentary protein" is not new, but it has been popularized by the book Diet for a Small Planet, by Frances Moore Lappe.

When baking, experiment with soy products. In recipes calling for 2 cups wheat flour, for example, use ¼ cup soy flour and 1 3/4 cups wheat flour.

Gives 4 recipes, including: Leafy Chinese tofu (with sesame seeds, soy sauce, and brown rice). Vegetable rice

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curry (with soy grits and peanuts). Garbanzo spread.

5470. Abdon, Isabel C. 1978. Soy sauce industry in the Philippines. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. See p. 32-40. [7 ref]

• ***Summary:*** Dietary surveys conducted by FNRI all over the Philippines from 1958 to 1975 showed an average per capita intake of 1.0 gm of soy sauce per day. Consumption was highest in Mindanao (1.05 gm), followed by Luzon (0.997 gm) and Visayas (0.816 gm).

"Very little information is available on the present stats of the soy sauce industry in the Philippines. In 1959 one of the B.S. Food Technology students at the University of the Philippines made a study on the soy sauce industry in Manila and the suburbs for her thesis. No other publication on this subject is available to date except the annual reports published by the National Census and Statistics Office (NCSO)...

"The 1959 survey was conducted by distributing questionnaires to soy sauce manufacturers listed with the Bureau of Commerce... Of ten respondents, 50% were owned by Chinese, 30% by Filipinos, and 20% by both Filipinos and Chinese. Type of ownership was 30% sole proprietorship, 20% partnership, and 50% corporation."

The manufacture of soy sauce in the Philippines is believed to have "started in 1929 by the Chinese. At present most of the large and small establishments are found in the Metro Manila area. Of the 23 factories registered with the Philippine FDA, 18 are operating in Luzon, 4 in the Visayan Islands, and 1 in Davao, Mindanao." Address: Food Research Div., Food and Nutrition Research Inst., National Science Development Board, Manila, Philippines.

5471. American Soybean Assoc. ed. 1978. International Soya Protein Food Conference, Proceedings. Hudson, Iowa: ASA. 136 p. Held 25-27 Jan. 1978, Republic of Singapore. No index. 29 cm. [328 ref]

• ***Summary:*** Contains 34 papers, largely about the use of modern soy protein products. Individual papers are cited separately. The "registration list" (p. 127-35) is a detailed directory of participants and the press. The eight "Exhibitors" (p. 136) were American Soybean Association (Hudson, Iowa), DeKalb County Exports Inc. (Ottawa, Illinois), Intercom News (Kansas), Japan Vegetable Protein Food Association (Tokyo), Kikkoman Shoyu Co. Ltd. (Tokyo), Ralston-Purina (St. Louis, Missouri), United Vegetable Oil Co. (Pte) Ltd. (Singapore), and Wenger International Inc. (Kansas City, Missouri). Address: Hudson, Iowa.

5472. Ang, H.G.; Kwik, W.L.; Tan, S.F.; Theng, C.Y. 1978. Development of traditional and new soy products using defatted meal. In: American Soybean Assoc., ed. 1978. International Soya Protein Food Conference, Proceedings. Hudson, Iowa: ASA. 136 p. See p. 53-58.

• ***Summary:*** Contents: Abstracts. Introduction: Non-fermented products (soymilk, soybean curd, yuba), fermented products (soy sauce, soy cheese, tempeh), others (soybean sprouts, whole bean), soymilk and soymilk powder from defatted soymeal. Results and discussions. Preparation of soymilk powder. Conclusion. Address: Dep. of Scientific Services, Singapore.

5473. ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. Held 22-24 Jan. 1978 at Singapore. No index. 30 cm. [200 ref]

• ***Summary:*** This is the 4th ASEAN Protein Workshop. Near the front is a List of participants (directory). Address: Singapore.

5474. Asunaro Eastern Studies Institute. 1978. Now offering fall classes in traditional fermented foods: Miso, tamari, tofu, nato [sic, natto], sake, tekka, etc. (Ad). *East West Journal.* Jan. p. 82.

• ***Summary:*** Classes "taught by Naboru [sic, Noboru] Muramoto, author of *Healing Ourselves*. Also daily cooking classes. Located on 134 acres in Sonoma, California." For further information, send for brochure. An illustration shows the Asunaro logo. Address: 4600 Cavedale Rd., Glen Ellen, California 95442. Phone: (707) 996-9659 or 938-9846.

5475. Eden Foods. 1978. Catalog 1978. 4601 Platt Rd., Ann Arbor, MI 48104. 57 p.

• ***Summary:*** On the cover is a workman loading sacks from one of many large hoppers. Another man, in front of a truck, moves a pallet. Pages 17 and 18 contain detailed information about and photos of the Eden-brand tamari (natural shoyu) and miso products. Eden now sells a brown rice miso, aged naturally for 1½ years. Hacho miso is now called "Soybean miso." Nigari and Tekka are also listed. No prices are listed in this catalog, it contains descriptions of the products and many nice illustrations. The prices are listed on separate sheets. Address: Ann Arbor, Michigan. Phone: (313) 973-9400.

5476. Fukushima, D. 1978. Soy sauce manufacturing techniques. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. See p. 138-47. Address: Kikkoman, Walworth, Wisconsin.

5477. Fukushima, Danji. 1978. Fermented soybean protein foods in Japan. In: American Soybean Assoc., ed. 1978. International Soya Protein Food Conference, Proceedings. Hudson, Iowa: ASA. 136 p. See p. 39-42.

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• ***Summary:*** There are three major kinds of fermented soybean foods in Japan: Shoyu, miso, and natto. "In Japan, about 439,500 tons of soybeans and defatted soybeans are used as the materials of these fermented soybean foods. Among these, 175,000 tons are used for shoyu, 195,000 tons are used for miso, and 69,000 tons are used for natto."

Table 1 shows the consumption of soybeans and defatted soybeans in Japan in 1976 for foods (1,026,000 tonnes) and feeds (1,980,000), for a total of 3,006,000 tonnes. Foods are divided into fermented (shoyu, miso, natto; 439,500 tonnes) and non-fermented (tofu and aburage, kori-tofu, and others; 586,500 tonnes). For non-fermented soyfoods 466,500 tonnes of soybean are used for tofu and aburage, 29,000 tonnes for kori-tofu, and 91,000 tonnes for other products.

"Recently, a new fermented drink using soybeans appeared on the market. This product is a drink which is made by the fermentation of soy milk by lactic acid bacteria. There are many patents related to these kinds of products, including a yogurt type, in Japan. Therefore many new fermented soybean foods may appear on the market in the future."

Other tables show: (2) Typical composition of different kinds of shoyu. (3) Annual production of purely fermented, semi-fermented, and chemical shoyu in 1976. (4) Annual production of Japanese Agricultural Standard mark shoyu in 1976. (5) Chemical composition of major types of miso.

Figures (flow sheets) show: (1) Shoyu manufacturing process. (2) Rice miso manufacturing process. (3) Natto manufacturing process. (4) Shoyu manufacturing process.
Address: Noda Inst. for Scientific Research, Kikkoman Shoyu Co., Tokyo, Japan

5478. Fukushima, D. 1978. Quality evaluation of soy sauce. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. See p. 148-58. [Eng]
Address: Director of Research, Noda Inst., Tokyo

5479. Hartadi, S.; Kabirun, S. 1978. Mold selection for soy sauce fermentation. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. See p. 117-27. [9 ref. Eng]
Address: Dep. of Microbiology, Univ. of Gadjah Mada, Yogyakarta, Indonesia.

5480. Lotong, N. 1978. Soy sauce production in Thailand. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. See p. 171-89. [2 ref]
Address: Biology Dep., Kasetsart Univ.

5481. Merican, Z. 1978. Status of soy sauce research in Malaysia. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. See p. 159-69. [10 ref]
Address: Agricultural Product Utilization Div., Mardi, Serdang, Selangor

5482. Nga, B.H.; Tang, T.C.; Lim, G. 1978. Genetics of microorganisms in soy sauce fermentation. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. See p. 128-37. [12 ref. Eng]
Address: Dep. of Botany, Univ. of Singapore, Bukit Timah Rd., Singapore.

5483. Poesponegoro, M.; Tanuwidjaja, L.; Roestamsyah, -. 1978. Studies on the fermentation process of soy sauce (in Indonesia). In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. See p. 226-52. [12 ref]
Address: National Inst. for Chemistry, Indonesian Inst. for Sciences, Bandung.

5484. Soriano, Mercedes R.; Pardo, L.V. 1978. Studies on the improvement of soy sauce manufacture in the Philippines. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. See p. 190-225. [17 ref]
Address: Food Technology Research Div., Industrial Research Center, National Inst. of Science and Technology (NIST), Manila, Philippines.

5485. Sundhagul, Malee; Piyapongse, S.; Munsakul, S.; Bhuntumkool, K. 1978. Soy sauce industry in Thailand: Techno-economic consideration. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. See p. 53-68.
Address: Applied Scientific Research Corp. of Thailand, Bangkok, Thailand.

5486. Tang, T.C. 1978. Developments in soya sauce fermentation. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p. See p. 11-32. [46 ref]
Address: Singapore Inst. of Standards and Industrial Research.

5487. Tanuwidjaja, Lindajati; Poesponegoro, M.; Roestamsjah, -; Suharto, -. 1978. Present status of soy sauce manufacturing techniques in Indonesia. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore. 252 p.

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See p. 41-52. [5 ref]
Address: 1. National Inst. for Chemistry, Indonesian Inst. of Sciences, Bandung, Indonesia.

5488. Wang, Jun Ryun; Lee, Yang Hee. 1978. Traditional soybean foods in Korea. In: American Soybean Assoc., ed. 1978. International Soya Protein Food Conference, Proceedings. Hudson, Iowa: ASA. 136 p. See p. 43-47. [13 ref]
• ***Summary:*** "The origin of soy sauce and paste in Korean literature dates back to 683 A.D. (Shinmu King 3rd year of the United Silla period). Since an old Japanese literature [document], *Hwameyruitsuroku* [*Wamyô Ruijusho;* Collections of Japanese Names, by Subject], of Heyan [Heian] records that 'Maljang (Meju) is a Korean soy sauce and paste' and a record on Maljang was also observed in the ruins of Nara, it is evident that soy sauce and paste were introduced from Korea to Japan during the Nara period (645-793 A.D.). Therefore, it is believed that the beginning of their consumption in Korea should be in the third century of Kokuryo period."

"Soybean has been a major protein source in the Korean diet." In 1976 some 442,803 tonnes (metric tons) of soybeans were used in Korea as follows: oil and defatted meal 28.5%, curd (*tubu*, or tofu) 24.5%, paste (*doenjang*) 18.3%, soy sauce (*kanjang*) 10.6%, soy sprouts (*kongnamul*) 9.0%, hot soy paste (*kochujang*, made from meju, hot pepper flour, and cooked glutinous rice) 6.6%, soymilk (*kongkuk*) 0.14%, and other 2.4%. Other includes roasted soy flour (*konggomul*, used for coating rice cakes [mochi]), fried tofu (*yubu*), salted natto paste (*jeonkukjang / cheonkukjang*). *Doebiji* is fresh soybean puree, made by grinding soaked soybeans. When used as a food, it is usually cooked with vegetables, kimchi, and meat. Meju is balls of soybean koji like Japan's miso-dama. All fermented Korean soybean foods except Joenkukjang are prepared from meju. Its characteristic flavor results from *Aspergillus*, *Penicillium*, and *Mucor* species of molds on the surface of the balls and *Bacillus subtilis* on the inside. Damsuejang is a quick fermented soy paste made by crushing meju to a powder, adding a warm brine solution, then allowing it to ferment and ripen.

Note: This is the earliest English-language document seen (March 2009) that uses the word "Damsuejang" to refer to Korean-style soybean paste (miso).

The above usage is the equivalent of 12 kg per capita per year. The daily per capita consumption of soy sauce (kanjang) is 20 ml, of soybean paste (doenjang) is 15 gm, and of hot soybean paste is 10 gm. Most of the soy sauce (64%), doenjang (82%), and kochujang (76%) and all of the salted natto paste (joenkukjang) and quick fermented soy paste (damsuejang) are produced at a household level and consumed directly.

Both soybean production and imports have grown in recent years. In 1970 production was 231,994 tonnes, and imports were 36,291 tonnes for a total of 268,285 tonnes. In 1976 production was 294,949 tonnes (up 27% over 1970), and imports were 147,854 tonnes (4 times as much as in 1970) for a total of 442,803 tonnes (up 65% over 1970).
Address: Korea Food Development Centre, Seoul, South Korea.

5489. Westbrae Natural Foods. 1978. Someday all of this will be as familiar as apple pie (Ad). *Whole Foods* (*Berkeley, California*). Jan. Inside front cover.
• ***Summary:*** This full-page color ad shows Westbrae Red Miso, Barley Miso, Brown Rice Miso, Soybean Miso, Hatcho Miso, and Tamari, plus various sea vegetables (nori, hijiki, wakame, kombu, etc.). The ad also appeared in East West Journal, May 1978, inside front cover. Address: 4240 Hollis St., Emeryville, California 94608. Phone: 415/658-7520.

5490. Yeoh, Q.L.; Merican, S.; Aziz, A.; Mohamed, R. 1978. Survey of some soy sauce factories in peninsular Malaysia. In: ASEAN Soy Sauce Committee, ed. 1978. Report of the ASEAN Workshop on Soy Sauce Manufacturing Techniques. Singapore: 252 p. See p. 69-116. [5 ref]
Address: Agricultural Products Utilisation Div., Mardi, Serdang, Selangor, Malaysia.

5491. Yu, Swee Yean; Ch'ng, Guan Choo. 1978. Soy bean foods in Malaysia. In: American Soybean Assoc., ed. 1978. International Soya Protein Food Conference, Proceedings. Hudson, Iowa: ASA. 136 p. See p. 48-52. [16 ref]
• ***Summary:*** Contents: Introduction. Fermented soya bean products: Soya sauce (manufacture of 'thin' (dilute) soya sauce, manufacture of 'thick' (viscous) soya sauce, microbiology of Malaysian soya sauce, stability of the product), tempeh, tau cheo (thick paste-like sauce), tao si (fermented black soybeans). Non-fermented soya bean products: Soya bean sprouts, tofu (semi-firm curd), tofu fah (soft curd), tow kwa (firm curd), tin chok (dried, flat sheets [yuba]), fu chok (dried, rope-like [dried yuba sticks]), tofu pok (deep-fried curd [tofu cubes]), chak tie (vegetarian [yuba] sausage), soya bean milk (tau cheong), meat analogues (soya flour is shaped into desired forms by hand). Nutritional data. Conclusion. Address: Universiti Pertanian Malaysia, Serdang.

5492. Clough, Jean. 1978. Kitchens that dish up naturally good food. *Chicago Tribune*. Feb. 3. p. A1.
• ***Summary:*** The Plowshare Cafe (6155 N. Broadway) serves macrobiotic food and is also a health foods store. They use foods grown locally, in season. In addition, all meat, dairy products, tropical fruits, most sweeteners, and many spices are not served. The Macro-plate ($2.50) includes brown rice, miso soup and sea vegetables. Miso "is a black creamy paste made of fermented soy beans." The sea vegetables included

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hiziki seaweed in tamari sauce. Also offered was a sandwich with seitan (made of gluten), "tofu, soy mayonnaise, sesame seeds, carrots, and natto miso, a less-aged miso that includes barley and ginger. Its a granular to be sprinkled on rice or sandwiches."

New Earth Cafe and Mama Peaches are also vegetarian restaurants. Address: Dr.

5493. Harder, Vicky Chen. 1978. Up and down Chinatown: A guide to help shoppers, diners, and the curious orient themselves (heh-heh). *Chicago Tribune*. Feb. 5. p. H24-H26.
• ***Summary:*** About 80% Chicago's nonresidential Chinatown is located on both sides of Wentworth Avenue. This is a walking tour, starting at the west end of Wentworth at Cerniak, walking east along the south side of Wentworth, and discussing and giving the address of each shop (1-24) as she comes to it. At the top of the first page of the article is a map of this Chinatown, and each shop is represented by a number on that map–the same number it has in the text. At 24th Pl. she cross Wentworth and walks back along the north side of the street (shops 25-47)–to which she gives much less attention. That is because the shops on the southern side generally cater to local residents rather than to tourists.

During the past five years there has been a major change in Chicago's Chinatown in the form of an influx of foods and merchandise from mainland China–the People's Republic of China. Before the 1970s it was almost impossible to find imports from this country.

Shop 25, at the far northeast end of Wentworth is Wah May (No. 25), which is a huge grocery store "that also carries a large range of goods from Southeast Asia, such as *ketjap manis*, a sweet soy sauce..."

An illustration (line drawing) above the top of the map and down the right side shows a marvelous Chinese / Asian dragon.

5494. Westbrae Natural Foods. 1978. Price list [Catalog]. February 1978. Emeryville, California: Westbrae. 20 p. 26 cm.
• ***Summary:*** On the cover are a black plum blossom logo and a large, bold double "W" in calligraphy near the bottom against a gray background.

Interesting products: Natural fruit butters and unsweetened fruit spreads. Four types of granola and two trail mixes. Panda snacks: Tamari almonds, Tamari cashews, Tamari nut roaster's mix, Tamari sunflower seeds, White water trail mix (tamari roasted). Westbrae roasted nuts (25 lb boxes): Tamari almond, Tamari cashew pieces, Tamari valencia peanuts, Tamari nut roaster's mix, Tamari sunflower seeds, Tamari pepitas (pumpkin seeds), Tamari filberts. Tamari nut butters (12, incl. almond, 6 peanut, and sesame tahini). Whole wheat soy pasta.

Asian foods & sea vegetables: Miso (red miso, brown rice miso, barley miso, Hatcho miso, soybean miso, light yellow miso, natto miso). Miso made in the United States: Light yellow, mellow white, red, mixed case. Sea vegetables: Agar, dulse (whole or flakes / powder), sea palm, nori, arame, hijiki, kombu, wakame. Shoyu and shoyu products: Josen shoyu, Sendai shoyu, White Tiger Tofu Sauce. Nigari. Kudzu. Umeboshi. Toasted sesame oil. Helpful tools: Wok (11 inch), vegetable brush, glass shoyu dispenser, Tofu kit, Tempeh kit, rice koji (Cold Mountain brand made by Miyako Oriental Foods). Beans: Azuki (10 lb or 25 lb bag), soybeans (60 lb or 25 lb), soy grits raw. Publications: Includes four books and 3 pamphlets by Shurtleff and Aoyagi.

Note: The products in this catalog do not require refrigeration; they contain no refined sugar / white sugar, no meat, and no dairy products–just like the catalogs of almost all other natural food distributors during the 1970s and 1980s. Address: 4240 Hollis St., Emeryville, California 94608. Phone: (415) 658-7518 (order) or 7521 (office).

5495. Claiborne, Craig. 1978. The mushroom comes of age. *New York Times*. March 1. p. C1, C6.
• ***Summary:*** On page C6 are various mushroom recipes including "Virginia Lee's black bean and ginger sauce." The ingredients include "2 tablespoons fermented salted black beans (available in Chinese markets)... 1 tablespoon light soy sauce, 3 tablespoons oyster sauce (available in Chinese markets)."

Place the beans and sherry (or water) in a small bowl. "Mash the beans lightly," then saute in a wok or skillet with the remaining ingredients.

Note: This is the earliest document seen (Nov. 2011) that uses the term "black bean and ginger sauce" to refer to a sauce made from fermented black soybeans and ginger. This new term appears six times between 1978 and 2003.

This is also the earliest document seen (Oct. 2008) in all major U.S. newspapers digitized by ProQuest that uses the term "fermented salted black beans" to refer to salted fermented soybeans (fermented black soybeans). This new term appears four times between 1978 and 1986.

5496. Takei, Kaz. 1978. Re: Sending sample of fermented soy sauce in powdered form. Letter to Dr. W.J. Wolf, Northern Utilization & Development Div., 1815 North University St., Peoria, Illinois 61604, March 16. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "The sample of our fermented Soy Sauce in powder form has been forwarded to you so you should receive it within a few days. Enclosed is our specification sheet." Address: Vice President, Industrial Sales, 1581 Webster St., San Francisco, California 94115. Phone: (415) 563-8700.

5497. Rice, William. 1978. The wok and I: Florence Lin stir-fries Chinese cuisine to suit American stomachs and mealtime habits. *Washington Post*. March 30. p. E1, E8, E14.

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• ***Summary:*** Florence Lin's books and cooking classes has made her one of the 3-4 leading interpreters of Chinese cooking in the USA. "There's no need to prepare a banquet every time you make Chinese food," she said recently. She believes that soy sauce is the only essential ingredient for Chinese cooking–enabling many American cooks to heave a sigh of relief. Rice is the most important part of every meal. To "red-cook" a dish is to braise it in soy sauce. In China, "the meat is intended to supplement the vegetables," just the opposite of the Western practice.

The recipe for steamed fish notes at the end "You may add 2 teaspoons coarsely chopped fermented salted black beans to the fish in addition to the basic ingredients. Add about ¼ teaspoon ground red pepper with the black beans to give a spicy flavor."

Two photos show Florence Lin, a friendly woman of human and good will.

5498. Asunaro Eastern Studies Institute. 1978. School of Oriental medicine and traditional fermented foods (Leaflet). Glen Ellen, California. 4 panels. Front and back. Each 22 x 14 cm. Undated.

• ***Summary:*** Classes "taught by Naboru [sic, Noboru] Muramoto. Schedule. (1) Oriental medicine classes. April through September. Monday, Wednesday, Thursday, Friday. 7:30 to 9:30 p.m. (2) Daily cooking classes. (3) Traditional Fermented Food Preparation. Monday, Wednesday, Thursday, Friday, beginning at 9:00 a.m.

"Asunaro Eastern Studies Institute is a newly-established non-profit educational organization..." Located at Top of the World Ranch, it "is 140 acres of forest and open fields with two ponds and four springs and a large 3-level building. The Ranch is located in the Sonoma Mountains (elev. 2,200 feet) overlooking San Pablo Bay."

"Classes in natural food making (miso, tamari, shoyu, sake, natto, tofu & bran pickles) are conducted from 9 a.m. until completed during the cooler months of the year (October through March). This time is ideal for fermentation processes..." Address: 4600 Cavedale Rd., Glen Ellen, California 95442. Phone: (707) 996-9846.

5499. Manabe, Masaru; Tsuruta, Osamu; Tanaka, Kenji; Matsuura, Shinji. 1978. [Distribution of aflatoxin-producing fungi in soil in Japan]. *Shokuhin Sogo Kenkyujo Kenkyu Hokoku* (*Report of the National Food Research Institute*) No. 33. p. 233-41. March. [19 ref. Jap. eng]

• ***Summary:*** The fungi in 722 soil samples collected from throughout Japan were investigated, with special focus on *Aspergillus flavus*. 32 strains of *Aspergillus tamarii* Kita were isolated from all parts of Japan; none of these produced aflatoxin. 34 strains of *Aspergillus flavus* Link were isolated from the southern part of the of the Kinki district in southern Kyushu. These fell into two groups, the aflatoxin-producing group was found only but frequently in southern Kyushu. 6 strains of *Aspergillus parasiticus* Kita were isolated from the southern part of Kyushu, all of these strains produced aflatoxins B1, B2, G1, and G2.

Conclusion: The "northern limit of the natural habitat for aflatoxin-producing fungi exists somewhere in the south" of Kyushu.

Reprinted from *Nippon Kingakkai Kaiho* (*Transactions of the Mycological Society of Japan*) 17:436-44 (1976). Address: National Food Research Inst., MAFF, Tokyo, Japan.

5500. **Product Name:** Dofu-Gan (Firm Tofu Simmered in a Marinade). By 1980 subtitled Savory Baked Tofu.
Manufacturer's Name: Soy Plant (The).
Manufacturer's Address: 211 East Ann St., Ann Arbor, MI 48104. Phone: 313-663-0500.
Date of Introduction: 1978, March.
Ingredients: Water, organic soybeans, nigari, soy sauce, honey, garlic, spices.
How Stored: Refrigerated.
New Product–Documentation: Label. 1980. for Dofu Gan Savory Baked Tofu. 2 by 3 inches. Black on white. "Slice and serve with crackers, sandwiches, or salads." Company name is given as Soyplant Co-op Inc. at 211 East Ann St.

Talk with Steve Fiering. 1988. June 10. This was the company's third commercial product. "There was a Chinese guy who worked with us, whose first name was Lee and who had a recipe for this product. He cooked very firmly pressed tofu in a marinade. It was sold in the deli, which was our company's Ann Street location. The first location was a room in the basement of a restaurant called Eden's." Soyplant. 1984. Produce co-op price list–Delivered. Effective April 30, 1984 and subject to change. Lists Dofu Gan savory baked ($1.92/lb).

5501. Claiborne, Craig. 1978. The saga of a sauce [Worcestershire]. *New York Times*. April 19. p. C1, C8. Living section. Wednesday.

• ***Summary:*** An interesting, supposedly in-depth history of Lea and Perrins and their famous Worcestershire sauce, said to have been on the market by the 1830s. Much of the information in this article first appeared in the Worcester *News and Times* in 1939.

Like Cross and Blackwell, the names Lea and Perrins are inextricably linked in the world of food and beverages. Lea and Perrins are makers of the original Worcestershire sauce, and a label states "the original and genuine, from the recipe of a nobleman in the county." The county is, of course, Worcestershire, England, but to this day the manufacturers will not reveal the name of the nobleman.

The story of this sauce is said to date back to the early 1800s, when the governor general of Bengal returned from his colonial post to his native land, England. He brought with him a formula for a sauce that had been created in India, one

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which he had enjoyed at his home and offered to his guests. John Lea and William Perrins, chemists in the Midlands of England at the time, were partners in a "chain" of chemists shops. Their association had begun in the 1820s and their main office was in the town of Worcestershire in the shire or county of the same name. The governor general is said to have taken the recipe to the two chemists and to have asked them to try to reproduce it as closely as possible. It is said that they did so, but that the resulting product smelled and tasted bad–so they stored it in a cellar and forgot it.

Some months or year later they sampled it again and found the flavor and aroma to be not only acceptable, but haunting. Soon they were bottling the brew and before long it came to be known and coveted in kitchens throughout the world. The governor general's family, not invited to join in the production and marketing, was upset and refused to allow the family's name to be used in connection with the product.

The great haste with which the reputation of Worcestershire sauce spread is often accredited to the fact that the manufacturers had cases of the sauce loaded on most of the ocean liners that came in and out of England's ports. The stewards were "encouraged" with a few pounds and shillings now and then to offer the sauce to the passengers. Passengers were invited to buy samples to take with them when the embarked.

The author traveled to Fair Lawn, New Jersey, where Lea and Perrins' sauce is manufactured and aged. He spoke with Ransom Duncan, age 40, the technical director of the American firm and the great-great grandson of the original American importer of the sauce from England. In the lobby of the building where the sauce is aged and bottled is an antique display case, which had been built for the Exposition of the Industry of All Nations in New York in 1853, and was used again for the Centennial Exposition in Philadelphia [Pennsylvania] in 1876. Displayed in this case were 20-30 of the earliest bottles of Lea & Perrins available in the USA. One label reads: "Butlers in the best families . . . tell you that soups, fish, meats, gravy, game, salads and many other dishes are given an appetizing relish if flavored with Lea & Perrins sauce." Another: "Club men and all good livers appreciate the appetizing relish given to Oyster cocktails, Welsh rarebits, Lobster Newburgh [also spelled Newburg, meaning served with a sauce made of cream, butter, sherry, and egg yolks] and all dishes flavored with this sauce."

The first American importer of the sauce, John Duncan, had a small business in Manhattan, New York, named John Duncan and Sons, which imported liquors and wines from Europe, and preserves, jams, and jellies from England. He learned or Lea & Perrins' sauce in the 1830s and ordered a small shipment. Imports grew rapidly and soon salesmen were peddling the product across America. "Demand became such that he opened a processing plant using the exact English formula and using English imports."

Since his childhood, Ransom Duncan has enjoyed reading the bottles labels. The ingredients (tamarind, anchovies, shallots, garlic, molasses, soy, cloves, peppercorns, etc.) reminded him of exotic things and far-away places. Unpeeled red-skinned onions are one of the few domestic ingredients. The author noted a pleasant smell around the 35 giant wooden curing vats–each holding a total of 6,000 gallons. No one would tell him how long the base for the sauces is aged, but he estimated a minimum of two years.

There follow six recipes that use Worcestershire sauce. Photos show: Ransom Duncan, an executive in his ancestor's company. A man standing among six huge aging vats. Address: New York.

5502. *Erewhon News* (*Newbury Street*). 1978. Erewhon–Happy Birthday!! April 17-23. p. 1.
• ***Summary:*** "This weeks marks the twelfth anniversary of Erewhon Natural Foods. It was right here in Newbury Street twelve years ago that Michio and Aveline Kushi, along with a few young friends, bagged the first Brown Rice and bottled the first Tamari that have since become Erewhon standards and the backbone of the Natural Foods movement in America." Address: 342 Newbury Street [Boston, Massachusetts]. Phone: 262-3420.

5503. Eden Foods. 1978. Spring-summer pricelist 1978. 4601 Platt Rd., Ann Arbor, MI 48104. 37 p.
• ***Summary:*** Products are similar to the catalog published earlier in 1978. Eden now carries many East Asian (mostly Japanese) herbal products from Herb T. Company in San Francisco, incl. Kuzu Root Tea. Salt products include: Mineral Salt (Indianola Oquirrh), and Herba Mare (France). Pure & Simple now makes 3 salad dressings: Romano, Sesame Herbal, and Mayonnaise.

Page 11 lists "Eden Brown Rice Miso (Genmai)" as a new product. It is sold in 4 sizes: 14 oz., 8.8 lb., 22 lb., and 44 lb. Address: Ann Arbor, Michigan. Phone: (313) 973-9400.

5504. Shurtleff, William. 1978. Re: Proposal for establishing a Soycrafters Union or Cooperative in North America. Letter to all "Soycrafters in North America," April. 2 p. Typed, with signature on letterhead.
• ***Summary:*** This open letter, written on NAFSC letterhead and dated April 1978, was submitted to *Soycraft* newsletter, where it was published in June 1978 (which see). It led to the first national meeting of soycrafters in Ann Arbor, Michigan, on 28-30 July 1978 and the founding of the Soycrafters Association of North America at that meeting.

The letter begins: "Dear Soycrafters of North America. There has recently been growing interest in North America in starting a Soycrafters Union or Cooperative, perhaps along the lines of Japanese National Tofu, Miso, Shoyu, Natto, etc. Unions [Associations]. Such a development would seem to represent a great leap forward, of benefit to many

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in the expansion of consciousness and production of quality soyfoods in the Western world."

Note 1. This is the earliest document seen (Jan. 2003) in connection with the Soycrafters Association of North America (SANA).

Note 2. This is the 2nd earliest document seen (Sept. 2011) that contains the word "soyfoods." Address: Director, New-Age Foods Study Center, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

5505. Wells, Patricia. 1978. What is this thing called tofu? *New York Times*. May 3. p. 19-20. Reprinted in the Boston Herald-American. June 15.

• ***Summary:*** "In the early 1970s the Hashizume Bean Cake Corporation came to life as a minor cottage industry tucked away in the basement of a giant red brick factory in Long Island City. Each day it churned out a few hundred pressed soybean cakes, or tofu, and supplied the handful of Japanese restaurants and Oriental specialty stores in business at the time in the New York area.

"Today, thanks to what one company representative called 'the American-natural-organic-people'... seven trucks loaded with tofu leave the steamy Hashizume factory each day."

"A combination of events awakened the West to the wonders of tofu. One was the 1975 publication of *The Book of Tofu*, an Autumn Press cookbook and resource manual that caught on quickly with natural food followers. The other is tofu's nutritional attributes.

"While traditionally Oriental tofu companies as Hashizume and Tanaka & Company, which is on Manhattan's West Side (326 Amsterdam Ave. at 75th St.), have profited from the Westernization of tofu, young, counterculture entrepreneurs throughout the country have taken advantage of the growing demand." These include the "Laughing Grasshopper New England Soy Dairy" (which now makes 5 tons of tofu a week, that's 20,000 cakes). "Other successful American-run tofu factories have mushroomed in Bethlehem, Massachusetts [actually New Hampshire, Crystal Springs], Summertown, Tennessee, and Island Springs, Washington." A description of the process for making tofu at Hashizume is given.

Page 20 is titled "The West wakes up to the wonders of tofu." "Following are recipes using tofu in both Oriental and Westernized versions. The Oriental recipes are included in *The Book of Tofu*. The others were developed by the people at Laughing Grasshopper and the Crystal Hills Tofu Shop in Bethlehem, N.H.: Tofu clam dip, Maple walnut bars, Tofu manicotti, Chilled tofu, Shoyu dipping sauce, Raspberry pudding, and Miso soup with tofu and onions."

5506. Federal Supply Service, General Services Administration. 1978. Federal specification. Soy sauce. *Federal Specifications*. EE-S-610G. 16 p. May 5. Superseding Federal Specification EE-S-610F, 20 Jan. 1976. [1 ref.]

• ***Summary:*** The two main types are classified as Type I–Soy sauce (fermented) and Type II–Soy sauce (non-fermented). Address: Washington, DC.

5507. Freiman, Jane Salzfass. 1978. Sushi: A 'fast-food' fish dish from Japan. *Chicago Tribune*. May 12. p. B1.

• ***Summary:*** Begins with a description of sushi and the different types (such as nigiri sushi and maki sushi), then continues with a review of six sushi restaurants in or near Chicago. "Like other arts practiced in Japan, the preparation of sushi is an effortless performance requiring great skill." Sushi has been prepared in Japan since the mid-1700s. Each bite of sushi (a finger food) is dipped in a tiny sauce of shoyu or soy sauce just before it is eaten.

At Hamachachi the writer enjoyed "two delicious, sweet, stuffed deep-fried bean cakes called *inari sushi*. A complete order of six *inari sushi* is $3." Two photos show a *sushi-ya* (sushi chef, sushi-master) at work in his sushi bar or restaurant.

5508. ASEAN Sub-Committee on Protein, ed. 1978. Report on the First ASEAN Workshop on Solid Substrate Fermentation. Bandung, Indonesia. Held 8-13 May 1978 at Bandung, Indonesia. [100+ ref.]*

• ***Summary:*** This is the 5th ASEAN Protein Workshop. Address: Malaysia.

5509. Bellicchi, Kathy. 1978. Cook it with seaweed! *East West Journal*. May. p. 68-72.

• ***Summary:*** Contents: Introduction. Nori. Hiziki [Hijiki]. Arame. Wakame. Kombu. Dulse. Irish moss. Agar agar kanten. Variations on the basic hiziki recipe call for tofu, whole soybeans, and tamari. Wakame is used in miso soup, and in Ojea stew with miso and aduki [azuki] beans. Kombu is used in a broth with tamari, and in Oden with natto miso and tofu.

5510. Kikkoman Foods, Inc. 1978. Re: Invitation to celebrate five years of operations (Folded card). Walworth, Wisconsin. 4 panels.

• ***Summary:*** On the cover of this printed, folded invitation card (each panel is 4½ by 6 inches) is written "Kikkoman Foods, Inc." On the inside is written: "Kikkoman Foods, Inc. requests the pleasure of your company on June 16, 1978, to celebrate five years of operations at Walworth, Wisconsin.

"Tour of plant at Six Corners Road, 5:00 P.M.

"Cocktails, dinner and entertainment in the Martinique Room, The Abbey, Fontana, from 6:30 P.M.

"Please reply on enclosed card." Address: P.O. Box 69, Walworth, Wisconsin 53184.

5511. Mori, H. 1978. Shôwa 52 nendo ni okeru shôyu, miso

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no kenkyû gyôseki [Review of annual achievements in shoyu and miso research]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 73(5):351-69. May. [532 ref. Jap]
• ***Summary:*** This important Japanese-language article, published each year in the May issue of this periodical, has two parts: (1) A review of the past year's major discoveries and developments in the fields of miso and soy sauce in Japan. (2) A bibliography related to those discoveries and developments. Address: Noda Sangyo Kagaku Kenkyusho.

5512. Nihei, Takao. 1978. Hawai ni okeru Nihon-shu, miso, shôyu no rekishi [A history of Japanese sake, miso, and shoyu in Hawaii]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 73(5):346-50. May. [Jap]
• ***Summary:*** In 1868, the first year of the Meiji Period, the first 153 Japanese immigrants arrived in Hawaii on board the three-masted sailing ship Scioto (Saioto-go). They brought with them miso and shoyu. This article otherwise contains no mention of soyfoods.

Note: This document contains the earliest date seen for soybean products in Hawaii (1868); soybeans as such had not yet been reported by that date. Address: Honolulu Shuzo Seihyo Gaisha.

5513. Whitaker, John R. 1978. Biochemical changes occurring during the fermentation of high-protein foods. *Food Technology* 32(5):175-80. May. [42 ref]
• ***Summary:*** Foods are fermented to improve the flavor, color, aroma, and texture, and to remove toxic constituents. Occidental fermentations generally use bacteria and non-filamentous fungi, whereas Oriental fermentation procedures generally use filamentous fungi. The following foods are discussed: Cheeses (particularly Roquefort and Cheddar), sufu, yoghurt, meat, fish, soy sauce, miso, tempeh, and ang-kak. Flow sheets show the production of sufu and soy sauce.

Contents: Reasons for fermenting foods. Occidental vs oriental fermentations. Major fermented high-protein foods. References. Address: Dep. of Food Science and Technology, Univ. of California, Davis, California.

5514. Shurtleff, William. 1978. Report with color slides on trip to Suzuki Jozo, Daifuku-ji, and Yamaya in central Japan to study method for making savory soy nuggets (*Hamanatto*). Nerima-ku, Tokyo, Japan: New-Age Foods Study Center. 1 p. Unpublished manuscript. June 8.
• ***Summary:*** We have coined the term "soy nuggets" to refer to a family of traditional fermented soyfoods that are known throughout East Asia. In China they are called shih, chi, touch'ih, or douchi. The two most popular varieties in Japan are Hamanatto (savory soy nuggets) and Daitokuji natto (Daitokuji soy nuggets). The Philippines and Malaysia have tausi or tao-si (soy nuggets).

Note: On 21 Nov. 2011 we decided, after 30 years of questioning, to change our name for this category of soyfoods to "fermented black soybeans" instead of "soy nuggets." We did this largely to conform more closely to current usage in English, where they are generally called "fermented black beans."

Soy nuggets are unrelated to regular sticky natto except both are fermented whole soybeans; soy nuggets are inoculated with a mold (*Aspergillus oryzae*) rather than a bacterium, are not sticky, are salted, and originated in China (rather than Japan) more than 2,200 years ago. Here we see savory soy nuggets and Daitokuji soy nuggets. Both look something like dark-brown to grayish raisins and have a savory, slightly salty flavor resembling that of mellow Hatcho miso.

Shurtleff took many color slides of the Hamanatto process on this one-day train trip to Yamaya. The slides / photos are now in a numbered set as follows: 10. Close-up of Hamanatto (savory soy nuggets) and Daitokuji natto on white plates. Sprinkled over rice or rice porridge, served as an hors d'oeuvre with green tea or sake, or used as an ingredient in miso soups or cooked vegetables, they add zest to otherwise bland dishes. Some Westerners sprinkle them over curry or spaghetti sauces, or fried eggs. 11. Six different Hamanatto packages from Japan. 12. A closer view of the six packages. 13. Four more packages of traditional Hamanatto products. 14. One large maker of Hamanatto is Suzuki Jozo. Located near Hamamatsu in Central Japan, they also make shoyu. Their process for Hamanatto goes as follows: Soak soybeans for two hours, steam cook, then leave in the cooker overnight.

15. The next morning remove beans from cooker, crumble to break up any lumps, spread on rice-straw mats, then inoculate by sprinkling on the starter, *Aspergillus oryzae* mold spores. 16. Transfer inoculated beans by conveyor into the koji incubation room. 17. The room is a large shallow stainless steel box perforated with many holes to allow for air circulation. Here the beans are left to ferment at 35°C (95°F) for 4 days. 18. On the fourth day, dry the soybean koji in the sun on mats on the rooftops for 5 hours. 19. Put the koji in 70-liter (18.5 gallon) wooden vats, put on a heavily weighted pressing lid, pour in a 10% salt solution to cover the koji, and allow to ferment at the ambient temperature for 2 to 4 months. 20. After fermentation is complete, drain off the liquid tamari, spread the soy nuggets on mats on the rooftop, and sun-dry for 5 hours to make the finished product.

21. Savory soy nuggets (Hamanatto) are said to have originated in Hamamatsu at this temple, Daifukuji, about 350 years ago, and they are still produced there today. The photo shows the front gate to the temple. 22. Here we see the incubation trays, fermentation vats, and pressing weights that are used. 23. Here is the steamer in which the soaked soybeans are steamed. 23A. After being mixed with one-tenth their weight of roasted wheat or barley flour plus a little koji starter, they are placed in shallow wooden trays

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and incubated at 35°C for 4 days to make a unique type of soybean koji. 23B. After the 2-4 month salt fermentation, the product in a small wooden vat looks like this. 23C. The liquid tamari is drained of and the product is briefly sun-dried. 24. Then it is mixed with a small amount of shivered gingerroot pickled in moromi (shoyu mash) and salt-pickled sansho seeds (shown here) to make the finished product.

Note 1. This is the earliest English-language document seen (Nov. 2011) that uses the term "savory soy nuggets" to refer to Hamanatto. By 1987 Shurtleff preferred to call these "Hamanatto soy nuggets."

Note 2. This is the earliest English-language document seen (Nov. 2011) that contains the term "Daitokuji soy nuggets."

Note 3. This is the earliest English-language document seen (Nov. 2011) that uses the word "douchi" to refer to fermented black soybeans, or the word "Daifukuji" (a temple name) in connection with fermented black soybeans. Address: c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

5515. Sheraton, Mimi. 1978. Restaurants: Stuffed cabbage and sushi on East Side. *New York Times*. June 9. p. C14.
• ***Summary:*** This is a review of Hatsuhana, a Japanese sushi restaurant at 17 East 48th St., New York City. "Advised by a Japanese friend, we ordered natto, a pungent mix of fermented [soy] beans, tuna fish and scallions; nuta, a sensual blend of raw fluke [flounder, a type of flatfish] and scallions in a satiny yellow sauce made of soy bean paste [miso], lemon and sake." Also salmon teriyaki, and "wrappings of spinach-green seaweed." All sushi and sashimi, nuta and natto are recommended.

5516. Claiborne, Craig. 1978. Rijsttafel: The easy feast. *New York Times*. June 21. p. C1, C6.
• ***Summary:*** Rijsttafel, literally "rice table," is a traditional Indonesian buffet. The recipe for "Ketjap manis (Sweet soy sauce ketjap)" calls for: 2½ cups sugar, 22 ounces "dark soy sauce," 3 cloves of garlic–peeled and crushed, 1 teaspoon star anise, 2 salam leaves, 2 slices laos, and ½ cup water.

5517. *New York Times*.1978. Pirate's paste and coconut milk. June 21. p. C6.
• ***Summary:*** Recipes are given for the dishes that comprise one type of "rijsttafel (A small Indonesian dinner for summer)." One of these is "Ketjap manis (Sweet soy sauce ketjap)" which has the following ingredients: 2½ cups sugar, 1 bottle (22 ounces) dark soy sauce, 2 cloves, peeled and crushed, 1 teaspoon star anise (see box), 2 slices laos (see box), and ½ cup water. The directions are giving, starting with caramelizing the sugar. Yields about 3 cups. It will keep for months if properly refrigerated.

5518. Brooks, Charles D. 1978. Cooking with steam the Chinese way: Use wok for delicate flavor, ease of preparation, savings on fuel for cookery. *Christian Science Monitor*. June 29. p. 14.
• ***Summary:*** Contains a recipe for "Chinese steamed fish with black bean sauce," that calls for "1 tablespoon salted black beans,... 1 tablespoon soy sauce, 1 teaspoon ginger root, minced,... Dash of sesame oil.

"The black beans are called dow see and can be found in an oriental grocery store." Address: San Francisco.

5519. Goel, S.K., Wood, B.J.B. 1978. Technical note: Cellulase and exo-amylase in experimental soy sauce fermentations. *J. of Food Technology* 13(3):243-47. June. [13 ref.]
• ***Summary:*** Previous reports have dealt with the production of various enzymes by *Aspergillus oryzae* during the koji stage of soy sauce production. These include sucrase, endo-amylase (α-amylase), proteinase, lipase, and tyrosinase. The research shows that exo-amylase and cellulase can be added to the list of carbohydrate-hydrolyzing enzymes present in soy sauce fermentations conducted under the controlled conditions employed in the authors' work. Cellulase degrades the cell walls of intact soybeans. The levels of both enzymes increase rapidly starting about 24 hour after inoculation of the koji. Address: Dep. of Applied Microbiology, Univ. of Strathclyde, Glasgow G1 1XW Scotland; Goel now in Maharashtra, India.

5520. Jacobs, Leonard. 1978. Menage: Vitamin B-12 in macrobiotic or strictly vegetarian diets. *East West Journal*. June. p. 10-11. [2 ref.]
• ***Summary:*** A reader asks: "Many critics of a macrobiotic or strictly vegetarian diet point out the lack of a source of vitamin B-12. Can this essential vitamin actually be synthesized (or transmuted) by the body if one's diet is composed entirely of whole grains?"

Jacobs discusses vegetarian sources of vitamin B-12 (sea vegetables, microalgae {*Spirulina maxima*}, and fermented soy products including soy sauce and miso), and the results of a B-12 deficiency–pernicious anemia. Dr. Wolfgang Tilling, who administered a diet of only soymilk to undernourished children in Germany, is said to have "discovered the synthesis of vitamin B-12 in the intestines of these children." Address: Publisher, East West Journal.

5521. Shurtleff, Bill. 1978. News from New-Age Foods Study Center. *Soycraft* (*Lawrence, Kansas*) 1(3):3-5. June.
• ***Summary:*** This open letter begins: "Dear Soycrafters of North America: There has recently been growing interest in North America in starting a Soycrafters Union or Cooperative, perhaps along the lines of Japanese National Tofu, Miso, Shoyu, Natto, etc. Unions [Associations]. Such a development would seem to represent a great leap forward, of benefit to many in the expansion of consciousness and

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production of quality soyfoods in the Western world."

The author then summarizes five major functions of Japanese national trade associations related to soy products, and suggests how each of these be adapted to present American conditions and consciousness which are very different from those in Japan: Purchasing soybeans, maintaining a list of member shops, doing "soyfood publicity," publishing a newsletter, and establishing and running a nationwide center, information clearing house, and school for teaching production of low-technology "soyfoods" to people from both developed and developing countries.

"How might this basic model be adapted to the United States? First, since soyfoods are still quite new in the USA, we might want to form one united front cooperative or union for all soycrafters or producers of soyfoods, rather than trying to form individual unions for tofu & soymilk, miso, tempeh, shoyu, etc. Given such a joint union, it would seem that all of the functions performed by the Japanese unions would be of great potential value to producers in North America. The key point, however, is that for the Union to work it must be financially viable and sound. Thus it must be created and supported by individual members who understand clearly that its functions are in their best interest, both in the short and long run."

"Second, we must remember that the number of shops presently producing soyfoods here is still very small. We have the names of 95 tofu shops and/or soy dairies in the United States plus 6 more in Canada, 9 tempeh shops, 8 miso shops, and one shoyu factory (Kikkoman). Of these, about 41 of the tofu shops and soy dairies, 5 of the tempeh shops, and 2 of the miso shops are 'new-age' types, newly started by Caucasian Americans. This latter group would probably form the initial nucleus of the Soycrafters Union, however after the benefits of membership could be clearly demonstrated, the more conservative Japanese producers might be eventually interested in joining."

"At the proposed First North American Soycrafters Convention to be held in Ann Arbor [Michigan] July 28-30 the above suggestions might be discussed one by one..."

At the end of the article is a form which new or existing tofu or soymilk manufacturers in the U.S. are invited to fill out and return to Shurtleff so that he can list them in the next edition of *The Book of Tofu*. Its asks for the name, address, and phone number of the company, the person(s) in charge, the date tofu or soymilk production started, the approximate cost of getting started, the average quantity of soybeans used per week, the soyfoods produced (in order of importance), the main pieces of equipment purchased, and equipment the company plans to purchase in the near future.

Note the early use of the terms "soyfoods" and "soyfood" in this article. The term "soyfoods" was coined by Surata Soyfoods of Eugene, Oregon, in Dec. 1976.

Note 2. This is the earliest document seen (Oct. 2008) that contains the term "low technology" (or "low tech"). Shurtleff coined this term to refer to soyfoods that could be made, and had long been made, using simple, traditional technologies, appropriate to Third World countries or relatively poor areas. Address: Director, New-Age Foods Study Center, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

5522. **Product Name:** Missing Egg Salad
Manufacturer's Name: Soy Plant (The).
Manufacturer's Address: 211 East Ann St., Ann Arbor, MI 48104. Phone: 313-663-0500.
Date of Introduction: 1978, June.
Ingredients: Tofu, tahini, soyamaze [soy mayonnaise] (soymilk, safflower oil, cider vinegar, honey, salt), tamari, celery, onion, nutritional yeast, spices.
Wt/Vol., Packaging, Price: 12 oz. plastic tub.
How Stored: Refrigerated.
New Product–Documentation: Steve Fiering. 1979. Whole Foods. Jan. p. 38, 40. "A Midwestern Interest in Tofu." This is included in a list of products presently produced by the company. It contains eggless soy mayo and turmeric. Talk with Steve Fiering. 1988, June 10. The word "tofu" was not in the title. It was introduced before the Conference, and one of their first two deli items. It was later sold occasionally wholesale outside the deli. The eggless soy mayo was first introduced as a separate product in the deli about a year later.

Rectangular Label in Soy Plant scrapbook from 1979. 3 by 2 inches. Green on orange. 12 oz.

Square Label in Soy Plant scrapbook from about 1980. 3 by 3 inches. Black on white. 12 oz. Ingredients: Tofu, soynaise (soymilk, oil, vinegar, salt, honey), celery, parsley, onion, spices. 12 oz. Zip: 48104.

5523. **Product Name:** Teya's Sprout & Tofu Pie.
Manufacturer's Name: Tumaro's Inc.
Manufacturer's Address: 5300 Santa Monica Blvd., Los Angeles, CA 90029.
Date of Introduction: 1978, June.
Ingredients: Crust: Organically grown whole wheat flour, corn oil, water, sea salt. Filling: Tofu (soy beans, water, nigari), mung bean sprouts, celery, green peppers, onions, tamari (soy beans, water, sea salt), arrowroot starch, ginger, garlic, pepper.
Wt/Vol., Packaging, Price: 9 oz.
How Stored: Frozen.
New Product–Documentation: Label. 1981. 4 by 2.5 inches. Self adhesive. Brown on tan. "No meat or meat derivatives." Letter from Kaye Dunham. 1981, March 30. This was his company's first soy product. He bought the tofu from Hmode. Poster. Back to back, color. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.

Note: This appears to be America's first frozen tofu entree.

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5524. Westbrae Natural Foods. 1978. Price list [Catalog]. June 1978. Emeryville, California: Westbrae. 30 p. 22 by 28 cm.
• ***Summary:*** On the cover are pink, red and light blue Japanese plum blossom crests against a blue background. Address: P.O. Box 8711, Emeryville, California 94662. Phone: 415/658-7518.

5525. Fabricant, Florence. 1978. Food: How the Chinese cook at home. *New York Times*, July 9, p. LI6.
• ***Summary:*** Chinese home cooking is, of course, much simpler, quicker, and less expensive than restaurant cooking. Bick Lee, in order to expand her knowledge of "Chinese vegetable cooking" spent several days in the kitchen of the Ching Kok Lin Buddhist nunnery in Kowloon, Hong Kong. The nuns lead very frugal, spartan lives. Bick Lee's mother is a Buddhist, but the Lees are not vegetarians–although their meals do tend to emphasize vegetables.

A meatless recipe for "Mock duck" is given. The ingredients include: "1 tablespoon light soy sauce (or Kikkoman brand soy sauce), 1/8 teaspoon monosodium glutamate (optional), 1 teaspoon sesame oil, 1 round sheet pressed bean curd (see note)." Then: "Cut sheet of bean curd in half and trim the thick edge with scissors. Lay one of the pieces of bean curd on a cookie sheet. Moisten it with half the sauce, brushing it over the surface or folding the bean curd over itself to pick up the sauce ... 4. Lay the second piece of bean curd over the first and repeat the process with the sauce and mushrooms." Steam then pan fry.

"Note: Dried straw mushrooms and bean curd sheets may be obtained only in Chinese groceries in Chinatown."

Note: These "bean curd sheets" are clearly what we call "pressed tofu sheets" (*pai-yeh* or *chien-chang*).

5526. Birnbaum, Alfred. 1978. Re: Hama-natto [or Hamanatto]. Letter to William Shurtleff at New-Age Foods Study Center, Lafayette, California, July 12. 1 p. Handwritten and signed.
• ***Summary:*** Concerning Hama-natto [from Yamaya / Yama-ya]. It is a special product of Hamamatsu, used as an accompaniment to rice, tea, or fried egg yolks. Two sources give two processes.

Process No. 1: Mix 2 liters of large steamed soybeans with 1 liter of roasted barley- or wheat flour. Add koji and incubate in a koji incubation room (30-35°C) for 3-4 days. Then dry the product in the sun until its moisture content has dropped to 20-25%. Prepare a salt solution by mixing 0.5 liters salt with 2 liters water. Mix this salt solution with the dried molded soybeans in a vat, and place a pressing lid on top, weighted with a stone. Allow to ferment for several months. Remove and sun-dry, or add shoyu and sliced ginger. Note: The source of these instructions is given in Japanese: *Daizu–Sono tokuksei to tabekata* [Soybean: Their special features and ways of using them as food], by Masaaki Kobayashi.

Process No. 2: This is less precise. Cook large soybeans in salty *tsuyu*, composed largely of water seasoned with shoyu. Add koji and roasted barley- or wheat flour. Ferment for several months. Then add [finely shivered or diced] gingerroot (Ryûzô Nakano).

The package: Yamaya-ya Hamanatto. Main office: Shizuoka prefecture, Hamamatsu city, Naruko-machi, 8 banchi. Factory: Shizuoka prefecture, Hamakita city, Komatsu, 4880 banchi.

The nutritional composition of the Yamaya product is given: Protein 25.41%, Fat 10.44%, Non-nitrogenous substances [carbohydrates, *muchitsu-butsu*] 12.62%, Fiber 2.95%, Ash 14.51%, Moisture 34.07%. Per 100 gm: Vitamin B-1 0.21 mg, Vitamin B-2 0.53 mg, Calories 246. Address: Tama-sô No. 1, Inokashira 1-28-30, Mitaka-shi, Tokyo 181, Japan. Phone: 0422-47-7130.

5527. Elias, Stanley. 1978. In Japan, puffing goes continuous. *Food Engineering* 50(7):58-59, July.
• ***Summary:*** For the past several years, Kikkoman Shoyu Co., Ltd. has been using a continuous explosion puffing system, based on superheated steam, for treating granulated soybeans prior to further processing. Developed in-house, this system has also been tested on wheat and polished rice. The residence time is as short as 5 seconds, the pressure up to 15 psi (15 kg per square cm), and the capacity up to 4 tons/hour. After Japanese and U.S. patents are secured, Kikkoman plans to license the manufacturing rights to Kurimoto Iron Works. A schematic diagram shows the process. Photos show: (1) The control panel. (2) The puffing chamber and discharge hopper. (3) The rotary transfer valve, a key component. Address: Technical Editor.

5528. Nihei, Takao. 1978. Hawai ni okeru Nihon-shu, miso, shôyu no rekishi. Miso, shôyu. Fu: Nenpyô oyobi raberu nado [A history of Japanese sake, miso, and shoyu in Hawaii. Miso and shoyu. With a chronology, copies of sake and shoyu labels, and a directory]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 73(7) 542-49, July. [14 ref. Jap]
• ***Summary:*** By far the best history of miso and shoyu in Hawaii, this work is a treasure. Address: Honolulu Shuzo Seihyo Gaisha.

5529. **Product Name:** Vegetarian Soysage (Meatless Okara-based Sausage).
Manufacturer's Name: White Wave.
Manufacturer's Address: 3869 Walnut St., Boulder, CO 80301.
Date of Introduction: 1978, July.
Ingredients: Okara, wheat germ, whole wheat flour, nutritional yeast, oil, soymilk, shoyu, oregano, prepared (wet) mustard, garlic, allspice, salt, fennel, sage, cayenne,

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liquid smoke (hickory).
Wt/Vol., Packaging, Price: 8 oz disks in plastic wrap
How Stored: Refrigerated
New Product–Documentation: Label. 1979. 3.75 inches square (8 oz.). Paper. Brown on tan. Drawing of happy pig face. 3 inch diameter (16 oz.). Paper. Brown on tan. Ingredients on labels are: Okara (soy fiber), nutritional yeast, wheat germ, whole wheat flour, safflower oil, shoyu (soy sauce), herbs and spices. Label and recipe given by Shurtleff & Aoyagi. 1979. Tofu & Soymilk Production. p. 169. Product Price List. 1979, winter. "Spicy vegetarian 'sausage type' soy patty. Slice thin or fry and use on pizza. 8 or 16 oz."

Interview with Steve Demos. 1987. In early 1978 they introduced soymilk. At about the same time they started to use the okara from their tofu to make one of America's earliest brands of soysage–if not *the* earliest! In late July 1978, at the first Soycrafters' Conference in Ann Arbor, Michigan, White Wave gave instructions for tube-processing of soysage.

5530. Shurtleff, William. 1978. Re: Proposal to add new categories and information about soyfoods to *Soybean Digest Blue Book*. Letter to Mr. Lynn Munyer, editor, *Soybean Digest Blue Book*, P.O. Box 158, Hudson, Iowa 50643. Aug. 21. 2 p. Typed, with signature on letterhead.
• ***Summary:*** Contents: Introduction to publications and work of New-age Foods Study Center. Statistics on consumption of traditional soyfoods in East Asia. Tofu. Soymilk. Miso. Shoyu. Tempeh. Natto. Conclusion.

"Worldwide and increasingly in the United States the traditional soyfoods discussed in our books account for an extremely large proportion of world soybean consumption for human diets.

"Therefore we feel it is in the interest of the ASA [American Soybean Association] and American Soybean farmers to do more to introduce these traditional soyfoods to people around the world via your publications." Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

5531. Arrowhead Mills, Inc. 1978. Price list. Hereford, Texas. 6 p. Sept. 15. 28 cm.
• ***Summary:*** Printed with light brown ink on white paper. Contents: Whole grains. Beans, seeds and nuts. Cereals and flakes. Flours. Packaged grains. Packaged beans, seeds and nuts. Packaged cereals and flakes. Packaged flours. Oils. Nut butters (Peanut butter {creamy or crunchy}, sesame butter, sesame tahini). Condiments. Pastas. Beverages. Earthwonder dinners. Miscellaneous. Simpler Life vitamins. "The Simpler Life" Unit A all #10 cans. Unit B all #2½ cans. Unit C all #2½ cans. Star Unit all #2½ cans. Additional Simpler Life foods.

Soy related products–bulk: Soybeans (50 lb). Bulghur-soy grits (50 lb). Seven grain cereal (40 lb). Soybean flakes (25 lb). Soy flour (roasted, 30 lb).

Soy related products–packaged: Soybeans (12 x 1 lb). Bulghur-soy grits (12 x 20 oz). Seven grain cereal (12 x 24 oz). Soybean flakes (12 x 1 lb). Soy flour, whole (12 x 1½ lb). Soy oil (pint, quart, or 5 gallon). Tamari soy sauce (pint, quart, or 4.7 gallon). Protein powder (in Simpler Life Unit-B #2½ cans). Address: Box 866, Hereford, Deaf Smith County, Texas. Phone: (806) 364-0730.

5532. Lekachman, Robert. 1978. Selling our own backyard. Review of the book *American for Sale*, by Kenneth C. Crowe (Doubleday, 213 pp.). *Saturday Review*. Sept. 16. p. 44-46. [1 ref.]
• ***Summary:*** A number of towns in several U.S. states have competed vigorously to attract assembly plants to be built by Volkswagen, Honda, and Datsun in the USA. Congressman Henry Reuss of Wisconsin has nothing but good things to say about Kikkoman's teriyaki and soy sauce plant in his state at Walworth. Today, he says, the company is a great success. It has built a new $9 million plant and created 50 new jobs. This helps America's balance of payments. Japanese families are popular in the area and a delight to the local school system.

5533. Liardon, Rémy; Philippossian, Georges. 1978. Volatile components of fermented soya hydrolysate. 1. Identification of some lactones. *Zeitschrift fuer Lebensmittel-Untersuchung und -Forschung* 167(3):180-85. Sept. 28. [28 ref. Eng; ger]
• ***Summary:*** Vegetable protein hydrolysates are widely used as food seasonings. Soya protein hydrolysate was prepared by fermentation with *Aspergillus oryzae* and *Saccharomyces rouxii*. Address: Research Dep., Nestlé Products Technical Assistance Co. Ltd., P.O. Box 88, CH-1814, Tour-de-Peilz, Switzerland.

5534. **Product Name:** Tamari Soy Sauce
Manufacturer's Name: Arrowhead Mills, Inc. (Marketer).
Manufacturer's Address: Box 866, Hereford, TX 79045. Phone: (806) 364-0730.
Date of Introduction: 1978, September.
New Product–Documentation: Arrowhead Mills. 1978. Sept. "Price list." (pints, quarts, and 4.7 gallons). / Arrowhead Mills. 1987. Catalog. 1.5 and 30 lb.

5535. Lachman, Gaella; Elwell, Christian. 1978. Making miso in America. *East West Journal*. Sept. p. 54-59.
• ***Summary:*** A colorful account of making 1,000 lb of miso in the spring of 1978 with Noboru Muramoto at Asunaro, on Mt. Veeder, at 4600 Cavedale Road, Glen Ellen, California 95442. Phone: (707) 996-5365. Christian writes in the introduction that several years ago, upon returning from India and recovering with a serious bout with jaundice, he came across Naboru [sic] Muramoto's book, *Healing*

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Ourselves (Avon Books, 1973), "one of the few reliable guides to preventive medicine now available." After this he began to use food as medicine for the first time. Within a year he was attending seminars by Michio in Boston, Massachusetts, and learning about macrobiotics. He later learned that Mr. Kushi and Mr. Muramoto had both been students of George Ohsawa. While in Boston, Christian met Gaella, his wife to be. They left Boston to visit California, and from January to April 1978 they studied at Asunaro Eastern Studies Institute (established in the fall of 1976) in Glen Ellen, California, with Mr. Muramoto. By mid-April, in addition to miso, they had also learned to make soy sauce, sake, tofu, seitan, mochi, bran pickles, sauerkraut, tekka [miso], and bread. Natto making is also taught. A large photo shows the two of them cooking soybeans for making miso.

Note: Talk with Christian Elwell, 1996, Sept. 7. While Christian and Gaella were at Asunaro, Thom Leonard visited for a few days. Thom and Christian met and talked, recognized that they had a lot in common, and stayed in touch afterward. Christian eventually purchased Thom's Ohio Miso Co. He was already making miso experimentally, and he had plans to go back to Ohio to make commercial miso.

5536. Mutual Trading Co., Inc. 1978. Price book: Miyako brand. Fancy Oriental Japanese foods–Importer & Distributor. Los Angeles, California. 60 p. Sept. Index. 22 cm. [Eng]

• ***Summary:*** Includes: Miso (p. 3-4). Soy sauce and other sauces (p. 4-5). Dried seaweed (p. 32-33). Vegetable (edamame, natto {Miyako brand}, inari age, konbu natto, p. 37). Salted black bean (Chinese, p. 60). Address: 431 Crocker St., Los Angeles, California 90013. Phone: 213-626-9458.

5537. Hughes Markets. 1978. Final five weeks... (Ad). *Los Angeles Times*. Oct. 12. p. I27.

• ***Summary:*** The section titled "Foods of the Orient" includes:

Yamasa soy sauce, 1 gallon can $4.05.

Seaweed, Yamamotoyama momi nori 0.7 oz. $0.79. Soy bean paste, Yamajirushi shiro miso 32 oz. $1.55.

5538. Minard, L. [L.M.]. 1978. Yes, we have no paternalism. *Forbes* 122.112. Oct. 16.

• ***Summary:*** In 1974 Kikkoman Shoyu, in business since 1661 and now having $800 million a year sales, announced that it would build a soya sauce brewery in Walworth, Wisconsin. "But Walworth's townfolk and farmers refused to rezone a 200-acre Kikkoman plot for industrial use... The county planners intervened and gave Kikkoman the go-ahead on its $10 million, 2.4 million-gallons-a-year plant.

"The plant has been a huge success... Kikkoman's U.S. sales have doubled in the last five years. The firm's market share is now 46%, having surpassed that of its main competition, Beatrice Food's La Choy brand, a year ago.

"With only $20 million in sales and 70-odd workers, Kikkoman-Walworth is too small to import much of the Japanese management style."

A large photo shows Dr. Danji Fukushima.

5539. Daniels, Stevie. 1978. I was a sucker for protein. *East West Journal*. Oct. p. 60-62.

• ***Summary:*** Her introduction to soyfoods came the hard way–by trying a "can of textured soy protein"–the food that could end world hunger. She tried preparing it in many different ways. "Nothing worked. It was terrible. I threw it on the compost pile and watched squirrels, rats, and chipmunks detour around it for weeks... It was easy to see why even starving people gave thumbs down to this orangish, gloppy, spoiled-tasting canned concoction." She learned that the oil companies extract the oil from soybeans with hexane solvent then use the defatted leftovers to feed livestock and make textured soy protein.

Later she became a vegetarian, tried cooking whole soybeans, and then "fresh soybeans" in the pods–which a local organic farmer brought to her co-op. Finally one day she found a brochure stating: "The four main foods made from soybeans are tofu (soybean curd), tempeh (fermented soyburger), shoyu (soy sauce), and miso (fermented bean paste)."

"I was amazed. The Eastern people, one-fourth of the world's population, had known how to use soybeans for centuries. I learned they also sprouted the beans..." She tried these foods and liked them. Bill Shurtleff stopped by the EWJ's office after attending the first national soyfood conference in Ann Arbor, Michigan. She describes their discussion, including the founding of the Soycrafters Association of North America. At the end is a list of resources and a bibliography of EWJ articles on soyfoods: Larry Needleman (Soycrafters Assoc. of North America, P.O. Box 76, Bodega, CA 94922. Phone: (707) 876-3341). Bill Shurtleff, The Farm (Summertown, Tennessee). Asunaro Eastern Studies Institute (Attn: Dina Drago, 4600 Cavedale Rd., Glen Ellen, California 95442. Phone: (707) 996-5365. Miso and shoyu production taught by Naboru [sic, Noboru] Muramoto).

5540. *East West Journal*. 1978. East West mail order (Ad). Oct. p. 68-69.

5541. Jacobs, Leonard. 1978. Menage: Where can I get information about traditional Japanese foods–like miso, soy sauce, umeboshi, sea vegetables–that are sold at my natural food store? L. Paulsen, Chicago, Illinois. *East West Journal*. Oct. p. 12.

• ***Summary:*** Answer: One of the largest exporters of these foods, Muso Co., has recently printed a series of pamphlets

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describing how these products are made and the nutritional value of each. The pamphlets are available from Stephen Earle, Muso Co., Ltd., Nishishinmachi 1-2-18, Wakae, Higashi-Osaka 578, Japan. Address: Publisher, East West Journal

5542. Shurtleff, William. 1978. Protein source for the future. *PHP (Japan)*, Oct. p. 8-18, 79-82. Illust. 18 cm.
• ***Summary:*** Contents: Introduction. Ten reasons why soybeans will be the protein source of the future: 1. Optimum land utilization. 2. Lowest cost source of protein in almost every country of the world. 3. High nutritional value. 4. Time tested for over 2,000 years. 5. Remarkably versatile. 6. Appropriate technology ("Traditional soyfoods can be produced in cottage industries"). 7. New dairylike products. 8. Soybeans are hardy and adaptive. 9. Free nitrogen fertilizer from nodules on soybean plants. 10. Great productivity potential.

Discusses new patterns of soy protein utilization, with specific reference and descriptions of tofu, soymilk, tempeh ("Indonesia's most popular soyfood"), miso, shoyu, whole dry soybeans, roasted soybeans, fresh green soybeans, soy flour, kinako, soy sprouts, and textured soy protein (TVP), yuba, and natto. Concludes with a discussion of new developments in the Western world. Address: New-Age Foods Study Center, P.O. Box 234 (951½ Mountain View Dr.), Lafayette, California 94549. Phone: 415-283-2991.

5543. **Product Name:** Seitan Roast.
Manufacturer's Name: Soy Plant (The).
Manufacturer's Address: 211 East Ann St., Ann Arbor, MI 48104. Phone: 313-663-0500.
Date of Introduction: 1978, October.
Ingredients: Organic whole wheat flour, tamari soy sauce (aged 3 years), mild spices.
New Product–Documentation: Leaflet / Label in Soy Plant Scrapbook, next to article dated 4 Oct. 1978. 5½ by 4¼ inches. Black on light blue, front and back. Logo on front in upper right corners shows a hand holding a flower with the words "Traditional Foods" around the bottom. "We at The Soy Plant pride ourselves on providing tasty as well as nutritious products and our Seitan reflects this tradition. New to us, Seitan was being enjoyed by Tibetan Monks more than 3000 years ago." Gives ingredients, nutritional value, and 13 serving suggestions. "For more information about Seitan and Class on making your own Seitan at home, visit The Soy Plant, 211 E. Ann St., Ann Arbor, Michigan, 48104. [Phone] 663-0500.

Talk with Steve Fiering, a founder of The Soy Plant in Ann Arbor. 2000, Dec. 3. Sue Kalen, who was into macrobiotics, probably had the idea for this product and wrote the text. It was packaged with a liquid in a round plastic tub–like tofu. It never sold very well–maybe 5 lb/week. It was made sporadically, when someone who knew how to make it felt like making it.

5544. Westbrae Natural Foods. 1978. Price list [Catalog]: October 1978. Emeryville, California: Westbrae. 34 p. 22 by 28 cm.
• ***Summary:*** On the cover are orange and yellow Japanese plum blossom crests against a brown background. New products (written in all capital letters): Wholewheat soy spirals (pasta). Address: P.O. Box 8711, Emeryville, California 94662. Phone: (415) 658-7518 (orders).

5545. Lindsay, Anne. 1978. Try Oriental options: Easy-to-prepare Japanese recipes. *Toronto Star (Ontario, Canada)*, Nov. 15. p. C1-C2.
• ***Summary:*** Japanese recipes include: Gomoku gohan (Rice with vegetables, with "2 cakes aburaage {fried bean curd}, cut into matchstick size, julienne strips," and "¼ cup soy sauce"). Sukiyaki (with "2 pieces tofu {fresh bean curd} cut into one-inch pieces"). Sukiyaki sauce (with "½ cup soy sauce").

Note: A very good description of authentic sukiyaki and how to make it.

5546. Nicholson, Tom, Cumming, J.B., Jr.; Sylvester, M. 1978. Bosses with an accent. *Newsweek* 92:80. Nov. 27.
• ***Summary:*** An American working at the Kikkoman Shoyu soy-sauce factory in rural Wisconsin has made a happy discovery; most Japanese make excellent employers. The factory is owned by the Japanese, staffed at the top with talented Japanese managers, and permeated by a Japanese worldview and way of doing business–including loyalty to the company and a consensus style of management. Both American workers and Japanese employers have difficulty adjusting to the new arrangement, but both are trying and–generally–succeeding.

5547. Chen, Philip S.; Chung, Helen D. 1978. Soybeans for health and longer life. New Canaan, Connecticut: Keats Publishing, Inc. xii + 178 p. Index. 18 cm. (A Pivot Health Book)
• ***Summary:*** A revised and condensed pocketbook version of Chen and Chen 1956. Contents: Preface. Foreword. Introduction. Part I: Nutritive value of the soybean. 1. Protein. 2. Fat. 3. Carbohydrates and caloric value. 4. Minerals. 5. Vitamins. 6. Soybeans and world population. 7. Soybeans and disease.

Part II: Soy products. 8. Soybean oil: Phosphatides, margarine. 9. Soybean oil meal: Gelsoy, Multi-Purpose Food. 10. Soy flour. 11. Concentrated soy protein products: Soy protein concentrates (Griffith Laboratories makes Isopro and GL-301), soy protein isolates, and textured or spun soy proteins. 12. Soy milk. 13. Soy cheese (tofu). 14. Soy sauce. 15. Soybean sprouts.

Part III: Soybean culture and preservation. 16. Soybean

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culture. 17. Preservation of soybeans (preserving green soybeans by canning, freezing, and dehydration).

Part IV. Recipes. 18. Soybeans and soybean pulp. 19. Soy flour: Breads, cakes, cookies, pies, soups, other recipes. 20. Soy grits and soy flakes. 21. Soy milk. 22. Soy cheese. 23. Soybean sprouts. Appendix. Soybean utilization (chart). References. Address: 1. PhD; 2. M.S. Both: USA.

5548. **Product Name:** Samurai Hero (Brown Rice & Tofu Sandwich in a Chapati).
Manufacturer's Name: City Samurai.
Manufacturer's Address: San Francisco (actually Berkeley), California.
Date of Introduction: 1978, November.
Ingredients: Brown rice, tofu, carrot or seasonal vegetable, sea salt, lettuce, sprouts, green onion, safflower oil, whole grain chapati, barley miso, sesame butter, spring water, tamari.
Wt/Vol., Packaging, Price: 9 oz (at least).
How Stored: Unrefrigerated and perishable.
New Product–Documentation: Talk with Paul Duchesne, 1989, July 31. Chris Smith, after discussing the matter with Duchesne (who was in Boston), showed Joe Nixdorff (who had been coming to macrobiotic potluck dinners) how to make the BRTS in about Nov. 1978. He made it every other day and sold it at multiple outlets until about March 1982, when competition from Wildwood Natural Foods put him out of business. Though the label shows San Francisco as the business location, this was not true; the business was actually in Berkeley. At one time he was making the sandwiches at Pacific Tempeh run by Travis Burgeson.

Talk with Travis Burgeson, 1989, Aug. 7. Joe Nixdorff introduced this sandwich before 1980. He started making it at Tony Plotkin's mochi plant [Grainaissance], then expanded into Travis' tempeh plant. Travis estimates that Joe made about 750 sandwiches/week. He delivered them himself in a car to natural foods stores, mostly in Berkeley and the San Francisco Bay Area. Joe was squeezed out of business by Wildwood before Travis sold his business in 1983. This sandwich was in no related to the Samurai cart that sells sandwiches in Berkeley. Label sent by Paul Duchesne, 1989, Aug. 11. Black on gold. "A complete meal for today's warrior. Organically grown ingredients used when available."

5549. Fortner, Heather J. 1978. The limu eater: A cookbook of Hawaiian seaweed. University of Hawaii Sea Grant Program, 2540 Maile Way, Spalding Hall 253, Honolulu, HI 96822. ix + 107 p. Illust. Index. Nov. 23 cm. Sea Grant Miscellaneous Report UNIHI-SEAGRANT-MR-79-01. [39 ref]
Address: Honolulu, Hawaii.

5550. Nunomura, N.; Sasaki, M.; Asao, Y.; Yokotsuka, T. 1978. Shoyu (soy sauce) volatile flavor components: Basic fraction. *Agricultural and Biological Chemistry* 42(11):2123-28. Nov. [23 ref]
Address: Central Research Labs, Kikkoman, Noda, Japan.

5551. Fleiss, Paul M.; Douglass, J.M.; Wolfe, L. 1978. Vitamin B-12 deficiency in strict vegetarians. *New England J. of Medicine* 299(23):1319. Dec. 7. [2 ref]
• ***Summary:*** This letter was written in response to a letter by Higginbottom et al. in the Aug. 17 issue of JAMA. "A nutritionally adequate, strict vegetarian diet is, in fact, possible. Natural vitamin B-12 is synthesized by micro-organisms, and, accordingly, vegans may obtain vitamin B-12 from soy sauce (3 micrograms per 5 ml), miso, and tempeh, as well as certain seeds and nuts, or by colonic synthesis when adequate unheated seeds are eaten (U.D. Register, personal communication)..."Our experience with hundreds of healthy, breast-fed infants indicates that omnivores, lacto-ovo-vegetarians, lacto-vegetarians, and strict vegans (some practicing lifetime avoidance of animal products) can nourish their infants adequately for the first few months of life without supplementation." Address: 1. USC School of Medicine; 2-3. Kaiser-Permanente Center, Los Angeles, California 90027.

5552. Hittle, Carl N. 1978. Soybean potential in Nepal: A report. Mimeographed, spiral-bound manuscript. 30 p. 28 cm. [26 ref]
• ***Summary:*** Dr. Hittle served as a soybean consultant in Nepal from Sept. 23 to Oct. 11, 1978. Contents: 1. Introduction. 2. Terms of reference for soybean consultant. 3. Background information: Soybean production, production research, evaluation of germplasm, local varieties and selections, preservation of soybean germplasm, rhizobial microbiology, economics of soybeans, soybean statistics, present uses of soybeans in Nepal, Food Research Services of the Ministry of Food, the dairy industry in Nepal, solvent extraction, CARE, UNICEF. 4. Observations at the research stations: Kakani Hill Station, Pakhribas Agricultural Centre, Lumle Agricultural Centre, Central Research Station–Khumaltar, Bhairawa Agricultural Farm, Rampur Agricultural Experiment Station, National Rice Station–Parwanipur.

Note 1. The first 3 stations are located in the hills, Khumaltar is in the Kathmandu Valley, and the last 3 are located in the plains (Tarai [Terai]).

5. Comments and suggestions. Priority of soybeans, operational work plan, assignment of national staff, assignment of international staff, training, linkages, a national soybean research center. Appendixes. I. Itinerary of C. N. Hittle. II. Persons met by soybean consultant. III. List of background information. IV. Sarbottam Pitho (Super Flour made from 50% soybeans). Uses of soybeans.

The soybean is an ancient crop in Nepal. Generally its

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culture has been restricted to terraces and valleys ranging from 500 to 1,500 meters (1,642 to 4,925 feet) in altitude. Soybeans are usually grown at lower altitudes in single rows on the bunds of rice paddy fields, or at higher altitudes as an intercrop with maize or millet. Hectarage is difficult to estimate; estimates made from 1976 to 1978 range from 10,000 to 70,000 hectares. Yields are low, ranging from 300 to 500 kg/ha. This is because of the two ways soybeans are traditionally grown, because they rarely have been grown in the Tarai [Terai] (Plains area) where higher yields can be expected, and because little emphasis has been given to developing superior varieties and cultural practices.

Soybeans are used mainly for human food in Nepal by "roasting the dried seeds (parching) or as green vegetables (boiling or frying the green pods followed by shelling of the seeds and eating the green soybeans). Parched soybeans are frequently mixed with popped maize (corn) and eaten daily as tiffin. Green soybeans are frequently mixed with other vegetables to make curry. A snack food is prepared by removing the seed coat of parched soybeans, splitting the cotyledons and mixing with garlic, salt, and chilli powder. Sprouted soybeans are mixed with other sprouted pulses and used as vegetable soup. Fermented soya products include soya sauce and kirima [kinema]."

Soybeans are one of the main sources of protein for the majority of the people in the Hill regions. Only small quantities of soybeans reach the market.

Note 2. This is the earliest document seen (Jan. 2012) that uses the alternative spelling "kirima" to refer to kinema, a fermented soyfood from Nepal and a close relative of Nepalese kinema and Japanese natto. Address: Soybean consultant in Nepal.

5553 *Politics Today*. 1978. Soy sauce for the goose. 5:64, Nov/Dec.

• ***Summary:*** This articles focuses on opposition by Japanese *mikan* (mandarin orange) growers to U.S. orange exports to Japan. But it notes: "Half of U.S. exports to Japan are agricultural products. The U.S. market hold is so complete that without the Midwest's soybean production, there might be no soy sauce on the table at Tokyo's famous restaurant, Benihana of New York. Indeed, as much as 80 or 90% of the soybeans, wheat, corn, animal feed, and lumber consumed in Japan comes from America."

5554 Swan Food Corp. 1978. Collected papers (Archival collection). Miami, Florida. 5 file folders, 1½ linear inches.

• ***Summary:*** Swan Foods was the first soyfoods company in the United States to make a wide variety of innovative soyfoods products. The company's papers are located at Soyfoods Center in Lafayette, California. In December 1978, when the company declared bankruptcy after about two intense years in business, Danny Paolucci cleaned out the office, keeping all documents that he believed might be of future importance. He kept them for 19 years, then sent them to Bill Shurtleff at Soyfoods Center at Shurtleff's request. Most of the papers relate to recipes. There are no commercial papers (invoices, ledgers, etc.).

Folder 1: Bulk soyfoods recipes, typed. Each recipe is typed on a sheet of 8½ by 11 inch lined paper. Recipes made in a Hobart mixer are marked with an asterisk (*) after the recipe name. The recipes (listed alphabetically) are: Baked tofu (with tamari sauce for marinade, bake at 350°F for 30-35 minutes). Caraway tofu (add 5 ingredients to curding tofu; stir and let curds form). Carob cream cake* with topping (incl. 2 gallons soymelk). Cashew carob swirl cake* (incl. 3 gallons soymelk). Devils food cream cake* (incl. 2 gallons soymelk and tofu topping). Eggless egg salad* (incl. 10 lb boiled and cooled Swan Tofu). Marinade for tofu (incl. 1 gallon tamari; mix all ingredients in a 5 gallon bucket, add sliced tofu, and seal). Soy burgers* (incl. 2 gallons each cooked rice and fresh okara, and 2½ cups tamari). Tofu chip dip* (large and small; the small incl. 6 lb tofu boiled and cooled, ¼ cup tamari, and ¼ cup umeboshi plum paste, the large incl. 42 lb tofu).

Folder 2: Lists of ingredients for various soyfoods products typed on Swan Foods' blue-on-white letterhead. The products (listed alphabetically) are: Carob swirl marble cake (non-dairy) (incl. soy milk). Okara granola. Roasted cashew tofu pie (incl. tofu and organic soy milk). Soyogurt (non-dairy). Note: These ingredients are handwritten below a sample label design on the back of the bottom half of a Swan Foods order form.

Folder 3: Legal-sized yellow lined note pad with 17 pages of notes written in blue ink–probably by Mary Pung. Subjects: *Nutrition Almanac* (soybeans and soy milk, p. 71; malt, p. 76). One page of 6 bibliographic references for publications related to soy, with a large note: "Sell *Book of Tofu*, etc. in shop." *The Health Food Dictionary* & recipes (mu tea, p. 102, soybean, p. 159; tofu, p. 174). *Diet for a Small Planet* (Lappé, 1975 ed.) (protein table III–Legumes, notes on tofu, p. 102, soy yogurt vs. milk yogurt, p. 128-29, tofu, p. 132). *Recipes for a Small Planet* (Ewald, 1973) (table showing no. of calories you have to consume in order to get one gram of usable protein, p. 16; notes on Net Protein Utilization). *Soybean Diet* (Herman Aihara, 1974) (table of nutrients in various foods, cow's milk, p. 44; soybeans can help with environmental problems, p. 4; soybeans vs. meat, p. 6, 8-9; tofu preparation, p. 115; nigari, p. 116; nutrient value of tofu, p. 125). *The Book of Tofu* (Shurtleff & Aoyagi, 1975) (moral and emotional appeal, health, religion, ecology, economic, p. 19; complementary proteins, p. 24, 26; easy to digest and diet food, p. 26; low in saturated fats and cholesterol, linoleic acid, rich in minerals and vitamins, p. 27; nigari, free of chemical toxins, p. 28; quick and easy to use, p. 29; ecological, nitrogen from the air, p. 55; okara, p. 77-78; uses of agé, deep-fried tofu, p. 154-55; soymilk, p. 200). Six interesting teas.

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Folder 4: Handwritten recipes (some very rough) and notes, in pen and pencil, mostly on individual sheets of paper. Soy-related recipe names (listed alphabetically): Basic tofu cheesecake. Basic tofu pie. Carob marble cake. Carob on blonde with tofu topping (also called Blonde on carob; baked, with soy milk). Carob tofu pie. Dips in tofu containers: Chive tofu dip, pimento tofu dip, sea tofu dip, Italian herb tofu dip, pimento olive dip (ideas only). Dressings: Miso, avocado, green goddess, creamy garlic, red Russian, spinach Russian (ideas only). Eggless egg salad. Eggless tofu salad. Frozen tofu cutlets. Mary's deluxe pizza (with tofu, from "Swan Food Corp."). Milk shake. Nori rolls. Okara products: burgers, burritos, felafels (ideas only). Pumpkin pie. Quiche with tofu. Sweetened carob shake. Tofu lemon pie. Tofu mayonnaise. Tofu pie filling. Tofu pudding, vanilla. Tofu quiche lorraine [Note: According to the *Joy of Cooking* (1975, p. 254-55), early recipes for quiche called for bacon and cream, but later cheese was added. When sautéed onions were included, the dish was called Quiche Alsacienne. Quiche Lorraine now typically contains egg white, bacon, milk or cream, and Swiss cheese] Tofu rice salad. Tofu tarts. Tofu turkey (Barbara's, with stuffing). Yogurt dressing. The names of some people are included: Diane Kellar, Sherry (nori rolls).

Folder 5: Other. Tear-off recipes published by Natural Recipes, 94 Bourne St., Boston, Massachusetts 02130. Carob brownies (copyright 1974). Carob cake (copyright 1975). Note: Neither of these recipes contains any soy. Address: 5758½ Bird Road, Miami, Florida 33155. Phone: (305) 667-7141.

5555. Ajinomoto K.K. 1978. Ajieki [Ajieki, HVP soy sauce (Brochure)]. Tokyo, Japan. 8 p. [Jap]
Address: Tokyo.

5556. **Product Name:** [GranoVita Vegetarian Soy Sausages (Spicy)].
Foreign Name: GranoVita Vegetarisch essen Soja-Wuerstchen (Pikant Gewuerzt).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1978.
Ingredients: Vegetable oils and fats in varying proportions by weight, water, whole soybean puree, egg protein, onions, red cabbage, garlic, wheat gluten, glucose, spices, salt, seasonings, smoke seasoning, yeast flakes, rolled oats, thickeners (carob seed meal and guar seed meal), Graham flour, citric acid as an acidifier. Sauce: Water, salt, soy sauce.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Form filled out and Labels sent by DE-VAU-GE. 1990. June 11.

5557. **Product Name:** Seitan
Manufacturer's Name: East West Center.
Manufacturer's Address: Moctezuma St., Ensenada, Baja California, Mexico. Phone: 52-667-61005
Date of Introduction: 1978.
How Stored: Refrigerated.
New Product–Documentation: Talk with Carlos Richardson of Gold Mine. 1992. July 10. The first seitan sold commercially by Gold Mine (in about 1989) was purchased from Arturo Beamonte at the East West Center in Ensenada, in Baja California, Mexico.

Talk with Ygnacio Beamonte at the East West Center in Ensenada, Baja California, Mexico. 1992. July 13. Ygnacio and his wife, Loretto, began to make and sell seitan commercially in 1978 at East West Center on Moctezuma St., in Ensenada. He learned the seitan process in seminars taught by Jorge Badillo, a naturopathic doctor, who lived in Ensenada and introduced macrobiotics there; he now lives in Seattle, Washington. Jorge Badillo learned how to make seitan from Roy Steevensz at the East West Center and Kushi House in Hollywood. Later they moved to Melrose Ave. There are at least 2 places in Latin America making seitan. For details contact the Great Universal Brotherhood, an international organization which was started in Venezuela by Dr. La Ferriere (a famous French teacher) in the 1950s, and now teaches lacto-ovo vegetarianism, yoga, etc. In Mexico City and other big cities in Mexico people have started making gluten but not seitan. Ygnacio's brother, Arturo, started making seitan at the East West Center in about 1984. Then he moved to Oregon. In about 1986-87 he moved to the East West Center in San Diego, where he took over as seitan maker from David Jackson (who now lives in Arizona). The East West Center in San Diego no longer exists. In about 1989 Arturo returned to Ensenada and has been the seitan maker there from that time until today.

Ygnacio and Arturo taught the East West Center in Los Angeles a new process for making seitan using iridea [*Iridaea cordata*] seaweeds in place of kombu to make the seitan softer and creamier.

5558. Hsu, W.H.; Lin, K.C.; Wang, I.H. 1978. Survey of inyu production in Taiwan. *Food Industry Research and Development Institute (Taiwan), Research Bulletin* *
• ***Summary:*** The production of inyu (fermented soy sauce made from black soybeans), which still relies on traditional methods, has a low efficiency and no adequate control of microorganisms. Only 55% of the protein in the soybeans ends up in the finished inyu. Address: FIRDI, Hsinchu, Taiwan.

5559. Nihei, Takao. 1978. Hawai no Nihonshu, miso, shôyu no rekishi [History of sake, miso, and shoyu in Hawaii] Thesis, Hawaii. 5 + 21 + 18 leaves (some folded). Illust.

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Portraits. 28 cm. [Jap]
• ***Summary:*** Handwritten manuscript, with news clippings, photographic prints, forms, bottle labels, and other miscellanea affixed throughout text. Includes bibliographical references (leaves 104-109) and a biography of the author. Address: Honolulu Shuzo Seihyo Gaisha.

5560. **Product Name:** [Soy Sauce].
Manufacturer's Name: President Enterprises Corp.
Manufacturer's Address: 2-20 Yan Harng, Tainan (Yungkang) 711, Taiwan. Plant at 1-20 Tahying Vill., Hsinshi, Tainan 744, Taiwan.
Date of Introduction: 1978.
New Product–Documentation: *Soybean Digest Blue Book*. 1978. p. 24.

5561. **Product Name:** Flavored Soy Bean Cake.
Manufacturer's Name: Quong Hop & Co.
Manufacturer's Address: 161 Beacon St., South San Francisco, CA 94080. Phone: 415-873-4444.
Date of Introduction: 1978.
Ingredients: Water, soy beans, soy sauce (consisting of water, soy bean, salt, wheat caramel), soy oil, salt & spices, 1/10 of 1% calcium sulfate.
Wt/Vol., Packaging, Price: 6 oz (170 gm).
How Stored: Refrigerated.
New Product–Documentation: Label. 1979, undated. 3 by 2 inches. Black and silver on shiny red. The Chinese characters read: "Wu hsiang doufu kan." Five-spice tofu. Talk with Ben Lee. 1988. Oct. He guesses it was launched in about 1978. In Jan. 1979 a similar product, named Savory Baked Tofu, was introduced; it was also a type of five-spice tofu, but was baked.

Note: This is the earliest known five-spice pressed tofu sold in the Western world.

5562. Slamet, Dewi S.; Gandjar, I.; Suryana, -. 1978. Indonesian soy sauce. In: Collection of Papers in Seminar Microbiologi II. Yogyakarta, Indonesia. See p. 127. *

5563. **Product Name:** Smoky Soy Bits (Bacon-like Bits made of TVP and Gluten).
Manufacturer's Name: Vegetable Protein Co.
Manufacturer's Address: 140 River St., Cambridge, Massachusetts.
Date of Introduction: 1978.
Ingredients: Textured soy flour, gluten, natural flavors, spices, soy oil.
How Stored: Refrigerated.
New Product–Documentation: Letters from John Weissman. 1992. May 29 and June 25. In about 1978-79 John introduced a new product to salad bars around Boston. Named Smoky Soy Bits, it was a combination of TVP and gluten (produced by Ogilvie Ltd. in Montreal, Quebec H3C 3H1, Canada) made into bacon-like bits, but without hydrogenated oils or salt (he used tamari instead). It was an "all natural" product–to the extent that TVP is natural. It was sold to salad bars and to Tom Iglehart's Sunrise Sandwich Company for use in a sandwich. He made a thick spread out of the Smoky Soy Bits. Later versions did not contain gluten.

5564. **Product Name:** Soy Sannies Miso Tahini (Sandwiches with Miso-Tahini Spread).
Manufacturer's Name: White Wave.
Manufacturer's Address: 1738 Pearl St., Boulder, CO 80302.
Date of Introduction: 1978.
Ingredients: Miso (fermented soybean paste), tahini (sesame butter), walnuts, honey on sunflower seed whole wheat bread with alfalfa sprouts, avocado, tomato and missing egg mayonnaise (soycream, safflower oil, vinegar, honey, lemon, soy sauce).
Wt/Vol., Packaging, Price: 7.5 oz.
How Stored: Unrefrigerated and perishable.
New Product–Documentation: Label. 1978, dated. 3.5 by 4 inches. Paper. Black on white, photocopy. Interview with Steve Demos. 1987. Oct. Sold commercially at a few nearby retail outlets.

5565. Abchsera, Michel. 1978. Cooking with care & purpose: menus for strength and peace of mind. Brooklyn, New York: Swan House Publishing Co. 271 p. Index. 21 cm. *
Address: Brooklyn, New York.

5566. Ballero, Mireille. 1978. Les meilleures recettes végétariennes du monde entier [The best vegetarian recipes from around the world]. Paris: Albin Michel. 286 p. Illust. Index. 22 cm. [Fre]

5567. Beuchat, Larry R. 1978. Food and beverage mycology. Westport, Connecticut. AVI Publishing Co. x + 527 p. See p. 224-42. Illust. Index. 23 cm. [300+* ref]
• ***Summary:*** Chapter 9, "Traditional fermented food products" (p. 224-53), by Larry R. Beuchat, is cited separately.

In Chapter 13, "Metabolites of fungi used in food processing" (p. 368-96), by R.J. Bothast and K.L. Smiley, the section on enzymes (p. 378) begins: "Fungal enzymes have been used for hundreds of years, especially in the Orient. However, modern industrial enzyme technology probably started with Takamine (1894) [Note: In Sept. 1894 he was issued two U.S. Patents for "Process of making diastatic enzyme," Nos. 525,820 and 525,823] and his work with *Aspergillus oryzae*. Today many industrial enzymes are of fungal origin." These include α-amylase (from *Aspergillus oryzae* and *A. niger*), glucoamylase, pectic enzymes or pectinases, naringinase, invertase (sucrase), α-galactosidase,

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lactase (Beta-D-galactosidase), protease (from *Aspergillus oryzae*), rennet (called rennin, if pure, from *Mucor pusillus, Mucor miehei,* or *Endothia parasitica;* used in many types of cheeses), and glucose oxidase, cellulase, lipase, catalase.

There are also chapters on 14. "Mycotoxins," by N.D. Davis and U.L. Diener. 15. "Methods for detecting mycotoxins in foods and beverages," by L.B. Bullerman. 16. "Methods for detecting fungi in foods and beverages," by B. Jarvis. Address: Assoc. Prof., Dep. of Food Science, Agric. Exp. Station, Univ. of Georgia, Experiment, GA.

5568. Beuchat, Larry R. 1978. Traditional fermented food products. In: L.R. Beuchat, ed. 1978. Food and Beverage Mycology. Westport, Connecticut. AVI Publishing Co. xi + 527 p. See p. 224-53. Chap. 9. [69* ref]

• ***Summary:*** Contents: Introduction. Koji. Soybeans: Shoyu, miso, natto (incl. itohiki-natto, yukiwari-natto, and hama-natto / hamanatto), sufu, meitauza, tempé. Peanuts. Oncom. Rice: Lao-chao, ang-kak, idli. Maize: Ogi, kaanga-kopuwai, injera. Cassava: Tapé, gari. Taro (*Colocasia esculenta*): Poi. Cacao beans. Cocoa, chocolate, and chocolate liquor are products derived from cacao fruits (*Theobroma cacao*).

Tables show: (1) Some fermented foods of fungal origin. For each food is given: Product name, geography, substrate, microorganisms, nature of product, and product use. Soy-related products include: Chee fan, Chinese yeast, Hamanatto, ketjap, meitauza, meju, miso, shoyu, sufu, tao-si, taotjo, and tempé.

"Yukiwari-natto is made by mixing itohiki natto with rice koji and salt, and aging at 25 to 30°C for about two weeks." Note 1. Yukiwari natto is natto resembling miso, featuring the stickiness (*nebari*) of natto and the sweetness of koji. It is made by a two-step fermentation. Another process: (1) Make the natto and the koji, separately. (2) Mince natto finely and mix it with koji, shoyu, and dashi made from kombu. Ferment at 30-33°C for 30-40 days.

Note 2. This is the earliest English-language document seen (Aug. 2006) that mentions the term yukiwari-natto (or yuki-wari natto). Address: Dep. of Food Science, Agric. Exp. Station, Univ. of Georgia, Experiment, GA.

5569. Calella, John R. 1978. Cooking naturally: An evolutionary gourmet cuisine of natural foods. Berkeley, California. And/Or Press. ix + 112 + 5 p. Illust. by Pedro J. Gonzalez. Index. [81 ref]

• ***Summary:*** The author of this vegetarian cookbook, of Italian ancestry, is popularly known as "Organic John." He likes to use fresh foods, and he has a call-in radio show in San Francisco. In chapter 4, Ingredients (p. 16-), he discusses soya butter [margarine], miso, tamari, instant protein powder (incl. Shaklee's Instant Protein), lecithin granules, Soyamel powder (powdered soymilk made by Worthington Foods), Balanced protein seasoning (powdered HVP made from soybeans).

Chapter 10 (p. 79-83) contains a long section on soya beans, with recipes. Homemade soya bean curd (tofu). Things you can do with tofu. Soya patties (with dry soya beans). Soya bean loaf. Green soya bean mix (with dry green soya beans). Soya beans in a beet stew. Soya bean spread.

In the section on Fruit Sherbets, many of the recipes contain 2 tablespoons Soyamel (powdered soymilk) and lecithin granules. Address: Berkeley, California.

5570. Calkins, Peter H.; Huang, Kuang-Rong. 1978. Soybean production in Taiwan: A farm survey. ***AVRDC Technical Bulletin*** No. 11 (78-89). 27 p. (Shanhua, Taiwan). [15 ref. Eng]

• ***Summary:*** Describes profitability and yield from soybean, the motivations and problems of farmers, and the reaction of farmers in the past to measures such as the extension of improved varieties. Since 1973 scientists at the Asian Vegetable Research and Development Center (AVRDC) have been working to improve soybean's contribution to consumer diets and farmer incomes in Asia. In Taiwan soybean is used as a source of cooking oil, "milk, beancurd, sprouts, fresh seed, dried seed, flour and a green vegetable (the stems and leaves are fried)." It is also used to make textured vegetable protein products such as artificial chicken and fish, when cooked with miso, soysauce, and various spices, these "are practically indistinguishable from the real versions. Entire banquets of rice and little else but soybean are routinely served in the vegetarian restaurants and Buddhist monasteries of Taiwan."

"In 1976, the government of Taiwan started guaranteeing a price of US$277/tonne to encourage farmers to plant more soybeans. The response has been modest, largely because soybeans have not been as profitable as competing winter crops, such as adzuki beans." Table 1 (p. 2) shows that between 1967 and 1976, the area planted to soybeans in Taiwan decreased from 52,000 ha to 36,000 ha, the farm price increased from US$188/tonne to $256/tonne, production decreased from 75,000 tonnes to 53,000 tonnes, but imports increased dramatically from 347,000 to 780,000 tonnes (more than doubling). Thus the total supply/consumption of soybeans in Taiwan (domestic production + imports) increased from 422,000 tonnes to 833,000 tonnes, while domestic production as a percentage of total consumption decreased from 18% to 6%.

"Before 1945 most soybean cultivars in Taiwan were of local origin, with an average yield of only 500-600 kg/ha. However, the government introduced Japanese cultivars such as 'Shih-shih' and Palmetto' in 1952. Since the early 1960s, scientists in Taiwan have also worked to develop improved cultivars by crossing cultivars introduced from abroad (in this report, the former will be termed 'improved' and the latter 'introduced' cultivars). As a result, the percentage of farmers planting introduced and improved cultivars has increased steadily, from about 53% in 1963 to 92%

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in 1976 and yield has risen to 1.5 tonnes/ha." Address: 1. Assoc. Agricultural Economist, 2. Research Assistant. Both: AVRDC, Shanhua, Taiwan.

5571. Destenay, Anne L. ed. 1978. Nagel's encyclopedia-guide: China. 3rd ed. Geneva: Nagel. 1503 p. Plus 29 unnumbered pages. See p. 380. [Eng]*
• ***Summary:*** "The seven sauces used in the stew are replaced by soy sauce, in which the meat is dipped before being cooked."

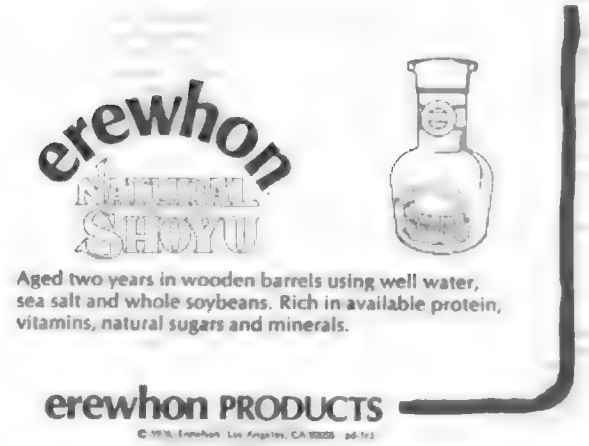
Note: A product of a group of young French sinologists, it was first published in 1967. The English edition was edited by Anne L. Destenay.

5572. Duff, Gail. 1978. Gail Duff's vegetarian cookbook. London: Macmillan. 374 p. Index. 23 cm.
• ***Summary:*** Pages 14-15 note that: "Products made from soya beans are very important in meatless diets..." She uses tamari, miso, whole dry soybeans, and soya flour, but has an intense dislike of TVP (textured vegetable protein). Soy-related recipes include: Soya mayonnaise (made with soya flour, p. 81-82). Barbecued soya bean and tomato spread (p. 246). Crunchy soya bean sandwich spread (p. 247). Miso, onion and parsley sauce (p. 319). Basic soya bechamel (p. 319).

The section titled "Soya beans" (p. 190-97) has a nice introduction followed by recipes for: Salted soya beans. Basic method for soya beans. Soya bean hot pot. Soya bean blanquette. Soya bean goulash. Soya bean and tomato casserole. Spiced lemon soya beans. Barbecued soya beans. Soya beans with cucumber–Chinese style.

5573. **Product Name:** Erewhon Natural Shoyu.
Manufacturer's Name: Erewhon Products [Los Angeles, California]. (Imported). Made in Japan.
Manufacturer's Address: Los Angeles, California. Phone: (213) 836-7569.
Date of Introduction: 1978, January.
New Product–Documentation: Ad (¼ page, black and white) dated 1978. Source unknown. An illustration (line drawing) shows a dispenser of Erewhon Natural Shoyu. The text underneath it reads: "Aged two years in wooden barrels using well water, sea salt, and whole soybeans. Rich in available protein, vitamins, natural sugars and minerals."

5574. Frazier, W.C.; Westhoff, D.C. 1978. Food microbiology. 3d ed. New York, NY: McGraw-Hill Book Co. xvi + 540 p. Index. 24 cm. [400+* ref]
• ***Summary:*** Contents: 1. Food and microorganisms. 2. Principles of food preservation. 3. Contamination, preservation, and spoilage of different kinds of foods. 4. Foods and enzymes produced by microorganisms. 5. Foods in relation to disease. 6. Food sanitation, control, and inspection.



In the section on "Oriental fermented foods" (p. 387-91), the following soy-related foods are mentioned: Koji (*chou* in Chinese), soy sauce, tamari sauce, miso, tempeh, natto, soybean cheese or *tou-fu-ru*. Address: 1. Univ. of Wisconsin 2. Univ. of Maryland.

5575. Haedrich, Ken. 1978. Good food, good folks: A collection of vegetarian recipes from across America. Plainfield, New Jersey: American Impressions. 46 p. Illust. by Diane Haedrich. 21 cm.
• ***Summary:*** This booklet, printed with brown ink on beige paper, was published by the author. Some of the recipes are from other books, with proper acknowledgment. Contents: Dedication (to World Hunger Year, P.O. Box 1975, Garden City, New York 11530). Introduction (He owns a print shop. The book idea was conceived while listening to singer / songwriter Harry Chapin talking about world hunger on the radio). Recipes–Breads & butter. Soups. Main courses & salads. Desserts. Many of the recipes call for "milk or soymilk," and for "tamari or soy sauce."

Soy-related recipes: Tofu sandwich spread (p. 20). A tofu primer (incl. Tofu "mayonnaise" and praise for *The Book of Tofu*, by Shurtleff and Aoyagi). Soyburgers (p. 23). Sweet & sour soybeans (p. 26). The rear cover states that half the proceeds from sale of this book will be "donated to World Hunger Year–an educational, resource organization focusing on food and hunger issues of local and global impact." Address: Plainfield, New Jersey.

5576. Holmes, Charlotte Van Gundy. 1978. Cooking for living. The art of healing. Sulfur Springs, Arkansas: Philadelphia Institute, Inc. 102 p. No index. 20 cm. [11* ref]
• ***Summary:*** The section titled "Soy beans" (p. 31-33) has the following contents: Introduction and list of different food products made from soy beans. Drying, freezing, canning, and tenderizing whole dry soybeans. How to make soybean milk: From beans, from soy flour, how to use the residue [okara] left from making soy milk. Soy cheese (also called

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"vegetable cheese" or "tofu"): How to make soy cheese from soy milk, how to make soy cream, how to make soy mayonnaise.

Also discusses: Homemade soy butter [soynut butter] (p. 57-58). Entrees (p. 58-60). Soy bean loaf, Soy cheese patties, Soy loaf, Soy grits loaf, Peanut butter patties. Soy sauce and Sovex (p. 83).

Note 1. The author's father, Theodore Van Gundy, was a soyfoods pioneer in southern California. The first printing of this book was in 1967, the second in 1970, and the third in 1973. Note 2. On the cover is written (as if it were the title): *Keys to Cooking for Living: Recipes and Menus*. Address: M.D., P.O. Box 308, Sulphur Springs, Arkansas 71768.

5577. Kawamura, Wataru. 1978. Miso shôyu [Miso and shoyu]. Tokyo: Tokyo Shobo-sha. 376 p. 22 cm. Series: Nihon no Aji Meicho Senshû (Selected Great Books on Japanese Taste). Reprinted in 1983 as *Miso shoyu no hyakka* [*Encyclopedia of miso and shoyu*]. [Jap]

• ***Summary:*** Contents: Topography of miso in Japan (*Miso fudoki*, p. 7). Miso in festivals, rituals, customs, and sacred rites (*Miso saijiki*, p. 92). History of miso (p. 120). Classical miso cookery (short recipes, p. 139). Collection of beautiful words about miso in proverbs, poems, and songs (p. 169). A short history of shoyu (p. 187). Documents: History of miso and shoyu (p. 195). Kojiruien–Inshoku-bu (Food & drink section, on shoyu, p. 354). Chronology of miso (p. 366-72). Address: 2-4-7 Kugenuma, Tachibana, Fujisawa-shi, Kanagawa-ken 251, Japan.

5578. Kawamura, Wataru. 1978. Miso shôyu no hyakka [Encyclopedia of miso and shoyu]. Tokyo: Tokyo Shobo-sha. 376 p. 22 cm. Series: Nihon no Shokubunka Taikei (Japanese Food Culture Collections), no. 10. [Jap]

• ***Summary:*** This is a reprint of the author's 1978 book *Miso shôyu* [*Miso and shoyu*]. Address: 2-4-7 Kugenuma, Tachibana, Fujisawa-shi, Kanagawa-ken 251, Japan.

5579. Lai, H.M. 1978. Island of immortals: Chinese immigrants and the Angel Island Immigration Station. *California History* 57(1):88-103. See p. 96, 102. [59 ref]

• ***Summary:*** This issue (spring 1978) is a special issue titled "The Chinese in California."

Fermented bean curd is mentioned in two footnotes on page 102, both refer back to page 96.

Footnote 40: Breakfast may include "dried bean sticks" [dried yuba sticks]. Dinner includes a main dish "plus one small dish. "The small dish could be salt fish, preserved olive, fermented bean curd, sweet pickles or plum sauce."

Note 1. Footnote 40 refers to a menu listed in *Chinese World*, 28 Feb. 1910 for three meals served in one day at Angel Island. Complaints about food were common so the government agreed to have the food provided by private concessionaires–the first one being a firm run by a Chinese man, Fong Wing (Kuang Zhujing) and his white partner. The dinner meal consisted of a main course plus one small dish–as described above.

Footnote 42. "... pork and mustard greens soup, fermented bean curd (Tues.); pork with greens, salt fish (Wed.); pork with dried bean sticks, plum sauce (Thurs.), pork and winter melon soup, bean curd with soy sauce (Fri.). ."

Note 2. Footnote 42 mentions another menu provided by the white concessionaire who won the next bid. A similar menu was offered which also included fermented bean curd, plus dried yuba sticks and tofu. Address: Vice president and past president of the Chinese Historical Society of America in San Francisco and an instructor in Asian American Studies at the University of California, Berkeley.

5580. Miller, Lindsay. 1978. The apartment vegetarian cookbook. Culver City, California: Peace Press. 312 p. Index. 22 cm. [30 ref]

• ***Summary:*** Soy-related recipes include: Soybean bulgar casserole (p. 148). Soybean stuffed eggplant (p. 157). Soybean creole (with brown rice and tomato paste, p. 175). Soybean patties (p. 182). Whole wheat soy bread (with soy flour). Cornmeal-soy grits bread (p. 211). Wheat germ-soy grits bread (p. 212). Quick wheat-soy bread (p. 219).

The glossary contains substantial entries for miso, peanut butter, soy beans, soy flour, soy grits, tamari soy sauce, tisanes or herb teas, and tofu. Address: Culver City, California.

5581. Muljokusumo, E. Sudigdo. 1978. Kecap: Kedelai, bungkil kacang, ikan [Soysauce: Soybean, peanut flakes, fish]. Bandung, Indonesia: Penerbit Tarate. [Ind]*

• ***Summary:*** Describes how to make Indonesian-style soy sauce from soybeans, peanut press-cake, or fish.

5582. Muljokusumo, E. Sudigdo. 1978. Hasil proses fermentasi, kedelai dijadikan lebih bergizi [As a result of the fermentation process, the soybean is made more nutritious]. Bandung: Tarate. 79 p. [Ind]*

5583. Null, Gary; Null, Steve. 1978. The new vegetarian: Building your health through natural eating. New York, NY: William Morrow and Company, Inc. 350 p. Index. 22 cm. [63 ref]

• ***Summary:*** In the chapter titled "Incomplete Protein Foods," soybeans are discussed on pages 183-86. A brief introduction is given to soy protein concentrates, isolates, spun protein fibers, and textured vegetable proteins. Full-fat soy flour, soy granules, soy flakes, and defatted soy flour and grits are available in natural-food stores.

"In striking contrast to these highly refined products of the West are the traditional East Asian products, tamari soy sauce, miso (fermented paste), and tofu... Tofu (soy curd or

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soy cheese) is a truly remarkable food. It is very inexpensive when purchased at Oriental markets or natural food shops and even more so if made at home." A description of how to make tofu and a summary of its nutritional benefits are given.

The soybean is "delicious when served a fresh green summer vegetable, simmered or steamed in the pod." Or as roasted soybeans [soynuts, dry-roasted or oil-roasted], cooked whole dry soybeans, tempeh, or soy sprouts. The same chapter also discusses miso and tamari in detail (p. 197-99), wheat gluten (p. 178-79), and azuki beans (p. 180). Address: Director, Nutrition Inst. of America, New York. Host of the daily radio program "Natural Living.".

5584. Passmore, Jacki. 1978. All Asian cookbook: Japan, China, Korea, India, Malaysia, Singapore, Indonesia, Laos, Thailand, Burma, Cambodia, Vietnam, Philippines, Sri Lanka. Secaucus, New Jersey: Chartwell Books. 224 p. Illust. (color photos). Index. 29 cm.

• ***Summary:*** Soy-related recipes: Vietnam: Soya sauce pork (Thit bho to, p. 71, with light soya sauce). Malaysia and Singapore: Mixed vegetables with salted black beans [fermented black soybeans] (the black beans are crushed, p. 103). Stuffed beancurd, peppers and black mushrooms (with 6 pieces hard beancurd, each 5 cm {2 inches} square, p. 103). Fried beancurd squares (Taukwa goreng, with 6 squares hard beancurd and dark soya sauce, p. 103). Chinese soup with pickled vegetables, beancurd and mixed meat (with 2 squares soft beancurd, p. 106).

Indonesia: Sweet pork (Babi kecap, with sweet soya sauce {kecap manis}, p. 118). Soya sauce sambal (with dark soya sauce, p. 124). Mixed vegetable soup (Sayur campur, with 2 cakes soft beancurd, p. 126).

Philippines: Lumpia (with dark soy sauce in the sauce, p. 136).

China: Fish with hot bean sauce (with hot bean paste or hoisin sauce, p. 146). Lobster with salted black beans and chili (p. 11). Stewed spare ribs with salted black beans (p. 159). Mixed green vegetables with salted black beans (p. 163). Hotpot of vegetables and beancurd (with 8 squares soft beancurd, p. 164). Ma po beancurd (with 6 squares soft beancurd, p. 166). Cold beancurd salad (with 6 squares soft beancurd, p. 166). Fried beancurd (with 8 squares soft beancurd, p. 166). Sharks fin soup (with dark soya sauce, p. 167). Wonton soup (with light soya sauce, p. 168).

Japan: Soya bean paste (miso, homemade from canned chick peas + soya sauce!, p. 178). Tuna glazed with miso (Gyoden, with dark miso paste, p. 180). Sukiyaki (with 3 squares soft bean curd, p. 187). Braised pork and leek rolls (Teriyaki, with light soya sauce, p. 188). Fried eggplant in miso sauce (with white miso paste, 194). Miso soup (miso shiru, with diced bean curd and white miso paste, p. 195).

The Glossary includes: Bean paste, hot (made from chilies and soya beans, La do ban jiang, Chinese). Bean paste, salted (also known as yellow bean paste, made from soya beans, Taucheo, Chinese). Bean paste, sweet (either tien mien jiang or do ban jiang, made from soya beans, Chinese. See also hoisin sauce). Beancurd. Beancurd 'cheese,' fermented (in brine with chilies, wine, and spices, Dofu ru, Chinese). Beancurd skin [yuba] (yellowish, almost transparent sheets). Beans, salted, black: See Salted black beans. Kecap manis (Sweet, slightly thick soya sauce, Indonesian, Malaysian). Miso (Japanese). Soya sauce (light, dark, and sweet). Tahu (Malaysian): See beancurd. Taucheo (Chinese): See Bean Paste, salted. Taukwa (Chinese, hard beancurd). Tien mien jiang (Chinese). See Bean paste, sweet. Tofu (Japanese): See beancurd. Vinegar and soya sauce dip: "A sharp-flavoured Korean accompaniment made by blending 3/4 cup light soya sauce, 3 tablespoons white wine vinegar, 3 tablespoons ground sesame seeds and 2 teaspoons finely chopped spring onions. Serve in individual sauce bowls." Yellow bean paste: See Bean paste, salted.

Note: This is the earliest document seen (Feb. 2011) that contains Vietnamese recipes that use soy as an ingredient. Address: Australian-born food writer.

5585. Perkins, David W. ed. 1978. Hong Kong and China Gas Chinese cookbook. Hong Kong: Published for the Hong Kong & China Gas Co. by Pat Printer Associates Ltd. (Hong Kong). 319 p. Illust. (mainly color). Index to recipes. 31 cm.

• ***Summary:*** A treasure for anyone who admires Chinese cookery, this large, oversized, visually spectacular and beautifully designed book is also rich in culture and history. Comprehensive, with many insights, it contains numerous two-page color spreads. One of the best books seen to date (1978) on Chinese cookery, except for its poor index.

Hong Kong is located on the Pearl River Delta in China, bordering the province of Guangdong to the north and facing the South China Sea to the east, west and south. Its cuisine resembles that of Canton.

A full-page color map of China shows (with different colors) China's four main regional cuisines: Northern (incl. Beijing), Eastern (incl. Shanghai and Nanking), Southern (incl. Canton, Kwantung and Kwangsi), and Western (incl. Hupei, Hunan, Szechwan, Kweichow, and Yunnan).

Peking is only 40 miles away from the nearest point of the Great Wall of China, which started to be built during the Ch'in / Qin Dynasty (225 BC to 207 BC) as protection against invasion by Tartar Hordes. Genghis Khan (1162-1227) is said to have been the first to penetrate it (p. 21).

The last period of Imperial rule in China was the long-lasting Ch'ing / Qing Dynasty (1644-1911) (p. 22).

Since ancient times, when the feet become swollen, the Chinese have eaten peanuts and soya beans (p. 38).

Buddhist vegetarian cookery has existed in China since the 10th century AD (p. 60).

The section titled "Soya beans" (p. 62-63) mentions bean curd or tou fu ("the most versatile of foods in the hands

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of any cook with any degree of imagination"), soy sauce, soya bean 'milk,' dried bean curd, frozen bean curd, and *mao tou* [green vegetable soybeans] (which "make a delicious hors d'oeuvre when prepared Shanghainese-style").

The "mysterious MSG (Monosodium glutamate) is a ubiquitous 'instant flavouring'; but more dishes have been spoiled by the addition of too much MSG rather than by the addition of too little" (p. 76).

A large colored photo and accompanying numbered outlined diagram (p. 77-78) shows many different seasonings, incl. Hoisin sauce, hot bean paste, dark soy sauce, light soy sauce, and Worcestershire sauce. "Soy sauce rules the kitchen as undisputed emperor. Basically a fermented extract of the soya bean with salt added, it is available in three main types: heavy or 'black', dark, containing caramel as colouring and light (both in colour and flavour)." The finest, most expensive, and most concentrated is the first extraction. Specialty soy sauces flavoured with mushrooms or shrimp roe are also available.

"Black bean sauce is a near relative of soy sauce, being made from salted, fermented black soya beans. Again, mention must be made of the three main types of soya bean pastes: hot (with chillies), sweet (with flour, sugar and spices [t'ien mien chiang]) and yellow, which is very salty indeed. *Hai Hsien* [Hoisin] sauce combines garlic, chilli, beans and ginger with other elements."

A color photo shows most recipes. Soy related recipes include: Shredded pork with dry beancurd saute (p. 112). Chopped soya bean sprouts with pork (p. 113). Stewed lamb with dried beancurd (p. 127). Stir fried chicken with [soya] bean paste (p. 135). Roast Peking duck (with 4 tablespoons "sweet bean paste," p. 153). Braised duck with lo han vegetables (and 60 gm "fried beancurd cubes," p. 156). 'Lu Shui' goose (p. 157; the Lu Shui sauce is made with 250 gm sugar, 250 gm salt, 2 five-spice bouquets, 250 ml light soy sauce, 10 slices ginger). Braised fish with beancurd and vegetables (p. 161). Eight treasure beancurd soup (with "4 squares soft beancurd," p. 193). Vermicelli and fried beancurd soup (p. 199). Beancurd with shredded pork in soup (p. 201). Fried beancurd (p. 204-05). Spicy beancurd with ground pork (Ma P'o tou fu, p. 208). Braised beancurd with mushrooms (p. 212).

Note: This is the earliest English-language document seen (May 2012) that contains the term "braised beancurd;" it refers to grilled tofu.

Beancurd stuffed with shrimp paste (p. 215). Steamed fish and beancurd cake (p. 221). Vegetarian goose (Su ngo, with "20 dried beancurd skins [yuba], about 41 cm = 16 inches in diameter," p. 227). A full-page photo shows a quern = hand turned stone mill (p. 243). Sweet bean paste dip (*tien tou chiang*, with "4 tablespoons sweet bean paste," p. 278).

Note 1: This is the earliest document seen (May 2012) that uses the term "Su ngo" in connection with yuba.

Also: Sweet red bean paste (hung tou sha hsien, with small red beans [azuki], p. 278).

Glossary (p. 302-11; all Chinese words are given only in Chinese characters, which we have romanized in pinyin) incl.: Beancurd (*doufu*). Beancurd, dry (*toufu gan*). Bean curd cubes, fried (*zha doufu*). Beancurd cubes, preserved (*la furu*, spicy fermented tofu); also known as preserved beancurd and Chinese cheese. Beancurd skins, dried (*fupi*) [doufu pi, yuba]. Beancurd sticks, dried (*fuzhu;* [dried yuba sticks]) used frequently in vegetarian cooking. Bean pastes (*gan shi jiang*). Sauces produced from soya beans and other ingredients: Hot bean paste (*xiang shi la jiang*), soya bean paste (*mo shi jiang*), "sweet bean paste (*tian shi jiang;* produced from fermented black soya beans, flour, sugar and spices. Substitute: Hoisin sauce." Note 2: This is the earliest document seen (Feb. 2009) that uses the term "sweet bean paste" to refer to a Chinese paste made with soybeans. Yellow bean paste (*dou ban jiang*). Bean sprouts: Shoots of the mung bean or the soya bean (*da dou ya cai*), the latter being much larger and stronger flavoured. "Black beans (*dou shi*): Salted, fermented black soya beans. Lightly salty in flavour. Used as seasoning. Will keep indefinitely in dry conditions. Chinese cheese (see beancurd cubes, preserved). Dry beancurd (see beancurd, dry). Flour–"High gluten flour (*gao jin fen*): A special kind of 'strong' flour, which gives extreme elasticity, making it possible to roll out the dough to very fine layers. Used for wonton wrappers." Fried beancurd cubes (see beancurd cubes, fried). "Hoisin sauce (*hai xian jiang*): A seasoning sauce or condiment made from red beans (*hong dou*) [azuki], soya beans, sugar and spices. Sweet-spicy and tangy in flavour. Sold in cans or jars ... Also known as Seafood Sauce and Barbecue Sauce." Hot bean paste (see bean paste). 'Lu Shui' sauce (*lu shui zhi*, in Cantonese 'Lu Soy'). A 'master sauce' or more accurately, a stock made with soy sauce, sugar, five spices and ginger. Used for simmering foods, particularly poultry. It gives a rich flavour and deep brown colour. For recipe see p. 157. Note: Widely used in Shanghai, and in Jiangsu and Zhejiang provinces). "Mao tou green peas (*mao dou*): Small beans, grown in the north, with dark-green, slightly hairy pods, which should be removed. Substitute: lima beans." Monosodium glutamate. Oyster sauce (*hau you*): A viscous dark-brown sauce made from oysters and soy sauce through a process of fermentation. Used as a flavouring and/or colouring agent ad as a condiment. Sold in bottles." Preserved beancurd (see beancurd cubes, preserved). Red beans (*hong dou*), [azuki]. Soya bean paste (see bean paste). Sweet bean paste (see bean paste). Yellow bean paste (see bean paste).

Talk with Cecilia Chiang, founder of The Mandarin restaurant in San Francisco. 2009 Feb. 16. She has this book. The authors of this book are not well known in China; they are mostly amateurs. The best Chinese cookbooks are written by Fu Peimei, a lady who was a real authority on all the different styles of Chinese cooking; she is no longer living. Many of her cookbooks are in both English and

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Chinese. Concerning "Bean paste," some of these are no longer available in the USA. Cecilia says Sweet bean paste may be something like *t'ien mien chiang*. Hoisin sauce is not used in Beijing, Shanghai, or anywhere in northern China; it is used mainly in Canton and south China. Cecilia thinks "Sweet bean paste" (t'ien shih chiang, p. 303) may be used only in Hong Kong. Most Chinese have never heard of this kind of sweet bean paste. True Cantonese food is quite different from that of Hong Kong. Cecilia knows Cantonese cooking very well; she goes there several times every year. Cantonese make the best soups, the best steamed fish and steamed chicken, and also their famous pork sausage (la chong?). Beijing cookery uses hard tofu, but most soft and silky tofu is imported from Japan.

5586. Rhoads, Sharon Ann; Zunic, Patricia. 1978. Cooking with sea vegetables: 150 natural-style recipes. Autumn Press, 25 Dwight St., Brookline, MA 02146. 136 p. Illust. by the author. Recipe index. 18 x 26 cm. [99* ref]
• ***Summary:*** Contents. Preface. Acknowledgements. I. Sea vegetables: Past and present. The bounty of the sea. Plants of a thousand uses. Preparing sea vegetables. II. Cooking with sea vegetables: Kombu and the kelps. Arame. Wakame. Nori. Hijiki. Agar. Irish moss. Dulse. Appendixes. Sources of sea vegetables. Nutritional value of sea vegetables. Bibliography. Address: New York City.

5587. Shihani, S. 1978. Microbiology of the soy sauce and tempeh fermentations. MSc thesis, Dep. of Applied Microbiology, University of Strathclyde, Glasgow, Scotland.
*
Address: Univ. of Strathclyde, Glasgow, Scotland.

5588. Shindumarta, Rudy Susiawan (Thung). 1978. Hidrolisa parsiil protein kedele [Partial hydrolysis of soy protein]. MSc thesis, Universitas Padjadjaran Bandung, Indonesia. 100 p. [24 ref. Ind, eng]
• ***Summary:*** This work is aimed at developing a semi-chemical soy sauce, midway in price and quality between fermented soy sauce and chemical soy sauce. Partial hydrolysis of defatted soy flour and okara with HCl 6N (hydrochloric acid) was studied at 3 different temperatures (30, 60 and 90°C). Address: Bandung, Indonesia.

5589. Smith, Allan K.; Circle, S.J. eds. 1978. Soybeans: Chemistry and technology. Vol. 1. Proteins. Revised. Westport, Connecticut: AVI Publishing Co. xiii + 470 p. Illust. Index. 24 cm. [500+ ref]
• ***Summary:*** This revised edition contains relatively few, unimportant changes from the original, classic 1972 edition. The following changes have been made: Addition of a 7-line preface to the "revised second printing" dated 4 Oct. 1977, updating of a graph of U.S. soybean production (p. 1). Updating (to 1976) of a table on U.S. and world production of important oilseeds (soybeans, cottonseeds, peanuts, sunflower, rape, sesame) (p. 2). Minor textual changes on pages 18-19. Addition of a table showing distribution of the 3 leading soybean varieties in 14 major states and the percentage of acreage harvested for each variety in 1976 (e.g., in Illinois, Williams accounted for 25.1% of harvested acreage, Amsoy 17.3%, and Wayne 12.8%). And updating of a table on U.S. soybean production by state showing acreage harvested, yield per acre, and production for 1974, 1975, and 1976 (p. 32).

The foreword, chapter titles, and index have not been changed at all. Note: Vol. 2 was never published. Address: 1. Oilseeds protein consultant, Hot Springs, Arkansas; 2. Oilseed protein consultant, Protein Technology, Richardson, Texas.

5590. Steinkraus, K.H. 1978. Contributions of Asian fermented foods to international food science and technology. In: W.R. Stanton and E.J. DaSilva, eds. 1978. GIAM V: Global Impacts of Applied Microbiology: State of the Art. GIAM and its Relevance to Developing Countries. Kuala Lumpur: UNEP/UNESCO/ICRO Panel of Microbiology Secretariat. Universiti Malaya Press. 323 p. See p. 173-79. Conference held 21-26 Nov. 1977 in Bangkok, Thailand. [23 ref]
• ***Summary:*** Contents: Meat analogs: Ontjom, soy sauce, seafood sauces, tempe, tape (tapeh). Microbial protein.

Mass doubling times: Bacteria and yeasts 10-120 minutes, molds and algae 2-6 weeks, grass and some plants 1-2 weeks, chickens (broilers) 2-4 weeks, young pigs 4-6 weeks, young cattle 4-8 weeks, humans 2-6 months.

Yields of protein in kg/ha/year: Elephant grass 2,000 to 8,775 (world's record), alfalfa 3,000, soybeans (four successive crops) 3,200, Miracle Rice (IR-8) 1,600, groundnut 500, mungo bean (2 crops) 500, coconut 190, cow's milk 90, yeast (continuous fermenter charged with 500 kg yeast cells built on 1 hectare of land) 250,000 (dry basis, of *Candida lipolytica*).

Note: UNEP is the United Nations Environment Program. MIRCENs are Microbiological Resources Centres. GIAM 1 was held in 1963 in Stockholm, Sweden. Proceedings edited by M.P. Starr were published in 1964. GIAM 2 was held in 1966 in Addis Ababa, Ethiopia; Proceedings edited by E.L. Garden, Jr. were published in 1969. GIAM 3 was held in 1969 in Bombay, India; Proceedings edited by Y.M. Freitas and F. Fernandes published in 1971. GIAM 4 was held in 1973 in Sao Paulo, Brazil; Proceedings edited by J.S. Furtado were published after 1978. Address: Cornell Univ., Geneva, New York, USA.

5591. Yanwar, Afrida Nazir, Saparsih, Sri Budhi, comps. 1978. Selected abstracts of traditional fermented food. Jakarta, Indonesia: National Scientific Documentation

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Center, Indonesian Institute of Sciences (PDIN–LIPI). iv + 470 p. Author index. 29 cm. [506 soy ref]
• ***Summary:*** These are abstracts of documents published from 1910 to 1976 on traditional fermented food, particularly of food prepared and consumed in Southeast Asia and the Far East. Each chapter is divided into 6 sections. Method of preparation, microorganisms, fermentation studies, nutritive values, other influence in the foodstuff, storage. Within each section, the references are listed alphabetically by author. The source of most of the references is *Chemical Abstracts*, to which an exact citation is usually given.

Contents: Preface. Introduction. 1. Fermented rice (incl. tape ketan [tapeh], sake, awamori). 2. Fermented soy beans: Soysauce (p. 173-294; 350 references), tempe (p. 294-307; 43 refs), natto (p. 307-312; 13 refs), miso (p. 312-343; 100 refs). 3. Fermented coconut press cake (bongkrek; p. 345-47). 4. Sauerkraut. 5. Fermented fish. 6. Vinegar. 7. Fermented cassava (tape / tapeh). Author index (p. 459-70).

Financial assistance was received from the National Institute of Chemistry, the Indonesian Institute of Sciences, the Indonesian Protein Project in the framework of ASEAN–Australian Economic Co-operation. Address: Indonesia.

5592. Zurbel, Runa; Zurbel, Victor. 1978. The vegetarian family: With recipes for a healthier life. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 185 p. Edited by Lester Alexander. Illust. Index. 23 cm. [44 ref]
• ***Summary:*** The section on soybeans (p. 62-67) discusses soybeans and soyfoods, then gives recipes for: Basic soybeans. Mediterranean soybean casserole. Soybean casserole. Soybean salad. Soy milk. Sesame soy milk. Roasted soybeans (baked). Other soy-related recipes include: Soyburgers (p. 80). Ginger tamari sauce (p. 118). Miso yogurt dip (p. 127).

The section titled "Basic Macrobiotic Cooking" discusses shoyu tamari, and miso, and gives recipes for: Miso soup. Miso spread. Nerimiso (Sweet simmered miso).

Chapter 7 (p. 88-101) is titled "Tofu: The food of the future–Discovered over two thousand years ago." A full-page photo opposite the title page shows a wooden forming box, with cakes of tofu and soybeans nearby. *The Book of Tofu*, by Shurtleff and Aoyagi, is praised and credited as the source of much of the information on tofu in this book. Recipes include: Quick tofu. Homemade traditional tofu. Tofu sandwich. Tofu salad. Tofu and peas. Tofu and snow peas. Tofu and Chinese vegetables. Tofu and [mung] bean sprouts. Tofu and sesame. Kinugoshi and how to make custard style kinugoshi. The chapter ends with 2 pages on tempeh, but no recipes.

5593. Birnbaum, Alfred. 1978? Re: Yuki-wari natto. Letter to William Shurtleff at New-Age Foods Study Center, Lafayette, California, July 12. 1 p. Undated. Handwritten in pencil.

• ***Summary:*** "A nattô resembling miso, featuring the nebari [stickiness] of nattô and the sweetness of koji. A two-fermentation product.

"Process: Regular nattô is minced finely with koji, shoyu and (kombu) dashi and fermented at 30° to 33°C for 30-40 days."

Note: This top portion of page 2 of some letter from Alfred has been separated from the body of the letter; hence the lack of date and address.

5594. Nihon Shoyu Kensa Kyokai [Japan Shoyu Inspection Assoc.]. 1978? Kensa jisshi yôryô, an [Points to watch in conducting practical inspections, proposals]. Tokyo. 8 p. Undated. [Jap]
Address: Tokyo.

5595. Claiborne, Craig; Franey, Pierre. 1979. Winging it: Food. *New York Times*, Jan. 21. p. SM16.
• ***Summary:*** Recipes are given for chicken wings. One of these is Chinese Indonesian chicken wings, which calls for "¼ cup ketjap manis (see note)."

The note says: "Ketjap manis [sweet Indonesian soy sauce] is widely available in specialty shops that deal in Far Eastern foods."

5596. **Product Name:** Soysage (Meatless Okara-based Sausage)
Manufacturer's Name: Crystal Hills Tofu Shop
Manufacturer's Address: Bethlehem, New Hampshire.
Date of Introduction: 1979. January.
Ingredients: Okara, whole wheat flour, wheat germ, nutritional yeast, oil, soy sauce, honey, herbs, spices.
New Product–Documentation: Whole Foods. 1979. Jan. p. 40-41. "Soysage from Crystal Hills." The company started tofu production in September 1977. Not clear when Soysage production started, but they now make 1,500 lb of tofu and several hundred pounds of soysage each week. Shurtleff & Aoyagi. 1979. Tofu & Soymilk Production. p. 169.

Note: This is the earliest document seen (Oct. 2001) that gives soy fiber statistics for an individual company.

5597. Fillip, Janice. 1979. The fermentation transformation. *Whole Foods* (*Berkeley, California*) 2(1):31-33. Jan. [2 ref]
• ***Summary:*** Contents: Introduction. Shoyu, tamari and soysauce. Tempeh. Address: California.

5598. *GOMF News* (*Oroville, California*). 1979. Tamari quality. Jan. p. 4.
Address: 1544 Oak St., Oroville, California.

5599. Industrial Services Centre. 1979. Soyabean processing industry in Nepal. Kathmandu, Nepal: Industrial Services Centre. ii + 39 p. + 15 p. Appendix. Jan. Prepared for NIDC. 39 cm. [1+ ref]

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• ***Summary:*** Contents: Introduction. Background. Market: Uses and introduction of soybean products (soybean oil, flour and grits, milk, sauce, curd, lecithin, neutral spray dried soybean protein, soybean protein and flour in ice cream), possible uses of soybean products in Nepal, basic idea of consumption of soybean in Nepal, possibilities of export of soybean oil in India, general conclusion. Raw material. Technical. Financial. Conclusion.

"The purpose of this study is to examine the feasibility of setting up a soybean processing industry in Nepal and the report is prepared by the Centre at the request of the Nepal Industrial Development Corporation (NIDC), Kathmandu."

"Out of the various crops under cultivation in Nepal, soybean is one of them but a very little attention is given to the cultivation of this product. It is usually cultivated during the Monsoon time and harvested during November-December. The Department of Agriculture is carrying out varietal trials in the different stations with a view to introduce high yielding varieties and promote the cultivation of it in the different parts of the country. Although at present, it is cultivated mainly in the hilly regions at different altitudes ranging from 6000 to 4000 feet, the observations made at the plain region reveal that there is a possibility of extending its cultivation in the terai region too."

"Soybean oil: In India, soybean oil is being widely used in the manufacture of vegetable ghee and constitutes the major part of consumption in the Vanaspati industry. The little production of soybean oil in Nepal is being used as a cooking oil."

"Possible uses of soybean products in Nepal. A few of the soybean products that are in use in Nepal are soybean oil for cooking, soy curd and soy sauce in the restaurants and full-fat soy flour product by simple grinding in the different houses. If soybean oil could be made available, it may find its wide use in the future in the Vegetable Ghee Factory the installation and erection of which is nearly complete at Hetuuda, Soap factory, and in Paint Varnish industry to act as a film forming material. The soy sauce requirement of to-day in Nepal is met by the imports... Soy milk would be another product which might come into wide use in the future."
Address: Balaju, Kathmandu, Nepal.

5600. **Product Name:** Kikkoman Japanese Style Steak Sauce, Sweet & Sour Sauce.
Manufacturer's Name: Kikkoman Foods.
Manufacturer's Address: California.
Date of Introduction: 1979. January.
Ingredients: Incl. soy sauce.
Wt/Vol., Packaging, Price: Steak: 12 oz. bottle retails for $0.79. Sweet & Sour: 9½ oz bottle retails for $0.69.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: *Food Product Development*, 1979. "Oriental sauces thrive on ethnic food boom." July. p. 58. A photo shows the two products. It is not clear whether the soy sauce used in the two products is made by Kikkoman in Japan or in Walworth, Wisconsin.

5601. Manabe, Masaru; Matsuura, Shinji. 1979. [Studies on the fluorescent compounds in fermented foods. V. The behavior of fungi during miso and shoyu fermentation and aflatoxin inspection]. *Shokuhin Sogo Kenkyujo Kenkyu Hokoku* (*Report of the National Food Research Institute*) No. 34. p. 79-83. Jan. [9 ref. Jap; eng]
Address: National Food Research Inst., MAFF, Tokyo, Japan.

5602. **Product Name:** Savory Baked Tofu (Vacuum Packed).
Manufacturer's Name: Quong Hop & Co.
Manufacturer's Address: 161 Beacon St., South San Francisco, CA 94080. Phone: 415-873-4444.
Date of Introduction: 1979. January.
Ingredients: Water, organically grown soybeans, soy sauce (water, soybeans, wheat, salt) spices, nigari (magnesium chloride).
Wt/Vol., Packaging, Price: Vacuum packed.
How Stored: Refrigerated.
Nutrition: Per 3.5 oz : Calories 193, protein 23 gm, carbohydrate 5 gm, fat 9.
New Product–Documentation: Label. 1981. 3.5 by 2 inches. Self adhesive. Brown and silver on light green. 7.5 oz. Label. 1979. 2 by 2 inches. Self adhesive. Mustard yellow on white. Back label. 3.75 by 2 inches. Self adhesive. Brown on white. "Savory Baked Tofu has a flavor and consistency remarkably like that of smoked or seasoned ham. Enjoyed for centuries in Northern China, it is prepared by marinating pressed tofu in natural soy sauce and seasonings, then baking it to give a meaty texture and wonderful flavor. The finished savory tofu is 23% protein, more than chicken or steak, and almost three times as much as regular tofu. One 4 oz serving provides you with 27 gm of quality protein, nearly half your daily need with only 219 calories.

"Savory baked tofu is ready to eat. Sliced or diced, it can be used in sandwiches, for hors d'oeuvres or in salads like ham, bacon, or cheese. It is also delicious in soup or with noodles. For outdoors, enjoy it from the package as a quick, high-protein snack. Our unique vacuum packaging allows savory baked tofu to remain fresh in the package over one week without refrigeration.

"For more recipe ideas see *The Book of Tofu* by Shurtleff & Aoyagi (Autumn Press or Ballantine Books)." Ad in Whole Foods. 1979. Jan. p. 40. Poster. Color. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Vacuum packed tofu! Savory baked–Deep-fried cutlets.

5603. Sakaguchi, Kinichiro. 1979. Shôyu no ruutsu o saguru [Searching for the roots of shoyu]. *Sekai* (*The World*) No. 398. p. 252-66. Jan. [Jap; eng+]

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• ***Summary:*** A fascinating enquiry into the early history of fermented soyfoods by one of Japan's most eminent microbiology professors. For details, see *The Book of Miso*, and *History of Soybeans and Soyfoods*, both by Shurtleff and Aoyagi.

Yokotsuka (1986, p. 325) cites this as Sakaguchi. 1981. "Searching for the route of shoyu." *SEKAI* 398:252-266. This magazine is published by Iwanami Shoten in Tokyo.

"The *Chou-li* states that this jiang was made by mixing the meat of animals, birds, and fish with millet koji and salt, then pickling it in wine in a crock for a hundred days. It is quite remarkable that even at this early date the Chinese were consciously using the enzymes produced by the koji molds (whose airborne spores fell on the substrate naturally, rather than by deliberate inoculation), to make fermented foods such as jiang and fermented grain-based alcoholic beverages. It is also clear from the context that jiang was regarded as a highly prestigious food and a delicacy."

"Today's shoyu traces its ancestry back through early shoyu, then through the four fermented soyfoods tamari-shoyu, tamari miso, Hatcho miso, and savory fermented black soybeans (*Hamanatto*), and ultimately back to Chinese fermented black soybeans (*chi*). Miso, he asserts, traces its ancestry back through early Japanese misos and hishio to jiang. In the shoyu lineage, the koji is always made with either soybeans alone or a mixture of soybeans and cracked or ground wheat, whereas in the miso lineage the koji is usually (except for soybean misos) made from grain. Sakaguchi believes that the fundamental biochemical consequences of this difference in koji substrates are of much greater importance than the more superficial differences of consistency or form that have led researchers up until now to group solid or semisolid fermented soyfoods in the miso lineage and liquid products in the shoyu lineage. Thus it is not obvious that liquid shoyu stems from mushy jiang. In shoyu, the *Aspergillus oryzae* molds grow directly on the soybeans (and wheat) during the koji fermentation and their enzymes begin to digest the koji substrates, then continue to digest the soybeans (and wheat) during the subsequent brine fermentation. This *in vivo* and *in vitro* extended hydrolysis leads to the formation of complex metabolic compounds, a higher degree of protein hydrolysis and liquefaction, and the production of a richer and stronger flavor in shoyu than in miso. Sakaguchi argues that miso has a 3,000 year history dating from the development of jiang during the Chou dynasty in China, whereas shoyu has a 2,000-year history dating from the development of fermented black soybeans (*shih*) during the Han dynasty.

"It is important to note here that the ancient Chinese language seems to indicate that soy sauce derives from jiang and not from *shih*, as evidenced by the Chinese word for soy sauce, *jiangyou*, meaning 'the liquid extracted from jiang.' Moreover, most Chinese jiang and fermented black soybeans have both always been made with a soy-based koji. Sakaguchi's analysis is helpful, but lacking on a few points. The jiang has not, as Sakaguchi argues, been made with a grain-based koji. Even in the earliest description of Chinese soybean jiang in the *Ch'i-min yao-shu* (described in detail in the Miso chapter) the koji is made primarily from soybeans. Thus while retaining the essence of Sakaguchi's argument, we would suggest that it be modified slightly to say that *both* shoyu and miso trace their ancestry back to *both* fermented black soybeans (*shih*, which existed prior to 206 BC) and to soybean jiang (which existed prior to AD 500).

"Dr. Sakaguchi considers there to be three main reasons that shoyu and miso were not developed in the West: (1) very few Westerners ever learned how to make koji using molds; (2) they had virtually no soybeans until the 20th century; and (3) the basic flavoring components of shoyu and miso, especially natural L-glutamic acid and inosinic acid, were traditionally unknown in the West."

"In 1944 Kinichiro Sakaguchi and Koichi Yamada discovered a new species of *Aspergillus* mold, which appeared widely in shoyu koji; they named it *Aspergillus sojae*."

Photos show: (1) Three ancient earthenware jars, from about the 1770s (Thunberg's time), in which shoyu was pasteurized and shipped to Europe. Address: Professor of fermentation science, Tokyo Univ.

5604 Shurtleff, William; Aoyagi, Akiko. 1979. The book of tofu: Food for mankind. Condensed and revised. New York, NY: Ballantine Books. A division of Random House, Inc. xii + 433 p. Jan. Illust. by Akiko Aoyagi Shurtleff. Index. 18 cm. [60 ref.]

• ***Summary:*** This book has been extensively revised and updated. Many names of Japanese tofu have been Americanized. Contents: Preface. Acknowledgements. 1. Protein East and West. 2. Tofu as a food. 3. Getting started: Favorite tofu recipes. 4. Soybeans. 5. Fresh soy puree. 6. Okara (Soy pulp). 7. Curds and whey. 8. Tofu & firm tofu. 9. Deep-fried tofu: Deep-fried tofu cutlets, deep-fried tofu burgers & treasure balls (tofu treasure balls, p. 269), and deep-fried tofu pouches. 10. Soymilk. 11. Silken tofu. 12. Grilled tofu. 13. Frozen & dried-frozen tofu. 14. Fermented tofu. 15. Yuba. Appendices: A. Tofu restaurants in Japan. B. Tofu shops and soy dairies in the West. C. Varieties of tofu in East Asia. D. Table of equivalents. Bibliography. Glossary. Contains 250 recipes and 100 illustrations. Price: $2.95.

This new edition features: (1) New recipes: Over fifty new American-style tofu recipes including Creamy Tofu Dressings, Tofu Teriyaki, Tofu Burgers, Tofu Eggless Egg Salad, and the like. The key to the book is an updated list of favorite tofu recipes plus suggestions for incorporating them into a weekly menu (p. 56). (2) New sections: An extensive new introduction to Soy Protein Foods (p. 66), dairylike products made from tofu (p. 150), dairylike products made from soymilk (p. 302) including soymilk yogurt (fermented),

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ice cream, kefir, mayonnaise, whipped cream, popsicles, buttermilk, and soy shakes. (3) New chapters: Fermented Tofu and Varieties of Tofu in East Asia. (4) New basic methodologies: The key recipes for homemade tofu and homemade soymilk have been simplified and improved. (5) Updates: A complete listing of the 120 tofu shops and soy dairies now operating in the West; over 60 Caucasian-run shops have opened in the past two years. (6) New Americanized tofu names: Including deep-fried tofu burgers, deep-fried tofu cutlets, deep-fried tofu pouches, deep-fried tofu puffs, silken tofu, wine fermented tofu, and fresh soy puree. A major goal of this book is to coin English names for tofu products that will catch on and come to be used in labeling commercial products, in cookbooks, etc. (7) No sugar.

Note 1. This is the earliest English-language document seen (May 2012) that contains the following terms related to deep-fried tofu: "fried tofu cutlets" or "deep-fried tofu cutlets" (p. v, to refer to *nama-agé*), "fried tofu burgers" or "deep-fried tofu burgers (to refer to *ganmodoki*), "tofu treasure balls" or "deep-fried tofu treasure balls" (p. v, 269, to refer to *Hiryozu*), "fried tofu pouches" or "deep-fried tofu pouches" (p. v, to refer to *aburagé*).

Page 110: "In Japan, tofu is also called *momen-goshi* ('cotton-filtered') to distinguish it from its popular counterpart *kinu-goshi* ('silken tofu')." Note 4. This is the earliest English-language document seen (March 2004) that uses the term "silken tofu."

Note 5. This is the 2nd earliest English-language document seen (Oct. 2011) that contains the term "Wine-fermented tofu" (p. 361).

In Jan. 1988 a new printing (but not a new edition) of this book (the 13th), slightly revised, appeared. It had a new cover and many new small illustrations. The subtitle was "Protein Source of the Future--Now!" The heading: "The World's Bestselling Book on Tofu." Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

5605. Shurtleff, William. 1979. Protein source for the future. *Cosmos (NSW, Australia)* 6(6):1, 4-5. Jan.

• ***Summary:*** Gives ten reasons why soybeans will be the protein source of the future. 1. Optimum land utilization. 2. Lowest cost protein. 3. High nutritional value. 4. Time tested. 5. Remarkably versatile. 6. Appropriate technology. 7. New dairylike products. 8. Hardy and adaptive. 9. Free nitrogen fertilizer. 10. Energy and resource efficient. "All of these ten factors work together synergistically, reinforcing one another, to give added weight to the prediction that soybeans will be a key protein source for the future on plant earth."

Note: This information was published in July 1979 in *The Book of Tempeh* (p. 21-24). Address: Lafayette, California.

5606. Shurtleff, William; Aoyagi, Akiko. 1979. Soybeans (Document part). In: William Shurtleff and A. Aoyagi. 1979. The Book of Tofu. New York: Ballantine Books. 433 p. See p. 58-75. Chap. 4.

• ***Summary:*** Contents: Introduction. Soy protein foods–Traditional non-fermented soyfoods: Whole dry soybeans, soynuts, roasted soybeans, fresh green soybeans, soy sprouts, natural soy flour and soy grits, roasted soy flour (kinako).

Traditional fermented soyfoods: Tempeh, miso, shoyu (Japanese natural soy sauce), natto (fermented whole soybeans, including Japan's cracked natto {*hikiwari natto*} and finger lickin' natto {*yukiwari natto*, containing rice koji and salt}, and thua-nao from northern Thailand), soy nuggets (inc. Japan's Hamanatto and Daitokuji natto).

Modern western soyfoods (developed using high-level technology): Soy flakes, defatted soy flour and grits, soy protein concentrates, soy protein isolates, spun soy proteins, textured soy proteins (TVP is an ADM brand name), textured soy concentrates, soy oil products. Address: P.O. Box 234, Lafayette, California 94549.

5607. **Product Name:** Soken Tamari Soy Sauce [Regular, or Gentle].
Manufacturer's Name: Soken Trading, Inc. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 1705, Sausalito, CA 94965.
Date of Introduction: 1979, January.
Ingredients: Soybeans, whole wheat, sea salt, water.
Wt/Vol., Packaging, Price: Glass bottles.
How Stored: Shelf stable.
New Product–Documentation: Ad in Whole Foods. 1979, Jan. p. 24. "Soken tamari soy sauces." Gentle tamari is 11% lower in sea salt. Ad in Whole Foods. 1980, March. "Soken tamari natural soy sauce."

Spot in NASFT Showcase (New York, NY). Dec. New packaging for both sizes (150 ml and 500 ml) of Gentle Tamari Soy Sauce. Ad in Natural Foods Merchandiser. 1988, Sept. p. 82. They now have three types of soy sauce: Natural, wheat free, and gentle. "Tamari" is written at the bottom of all three. Product with Label purchased at Open Sesame in Lafayette, California. 1991, Feb. 16. "Soken Gentle Tamari. Low Sodium Wheat Free Soy Sauce." 5 oz (148 ml). Retails for 2.45) or 10 oz bottles. Red, blue, black, white, brown, yellow, green, and white. Woodblock print of a Japanese girl with folded arms in a kimono in front of traditional houses. "It's naturally good. Since 1789. Ingredients: Whole soybeans, well water, sea salt. Contains 81 mg of sodium per ½ teaspoon serving (2.5 gm). Distributed by Sokensha Co. Ltd., P.O. Box 883033, San Francisco, CA 94188. Product of Japan. Refrigerate after opening. Soken Gentle Tamari is produced by the same time honored methods developed in Japan over centuries. It is brewed by the Kimbue Co., makers of fine soy sauce for over 200 years."

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5608. Soken Trading, Inc. 1979. Soken tamari soy sauces (Ad). *Whole Foods* (*Berkeley, California*) 2(1):24. Jan.
• ***Summary:*** This half-page black-and-white ad shows three bottles of tamari soy sauce, including Regular Tamari, Gentle Tamari (which is 11% lower in salt), and tamari from a dispenser. The Soken-sha logo appears. Address: P.O. Box 1705, Sausalito, California 94965. Phone: (415) 332-2313.

5609. Wang, H.L.; Mustakas, G.C.; Wolf, W.J.; Wang, L.C.; Hesseltine, C.W.; Bagley, E.B. 1979. Soybeans as human food. Unprocessed and simply processed. *USDA Utilization Research Report* No. 5. iv + 54 p. Jan. Slightly revised, July 1979. Jan. No index. 28 cm. Compiled for USAID. [50+ ref]
• ***Summary:*** Contents: Introduction. 1. Soybean food uses in Asia. China: Soaking dry soybeans, tou chiang (soybean milk), tou fu (soybean curd), processed tou fu products, tou fu pi (protein-lipid films), huang tou ya (soybean sprouts), whole soybeans, fermented soybean foods, production and consumption. Japan: Tofu (soybean curd), kinugoshi tofu, processed tofu products, yuba (protein-lipid film), soybean milk, gô (ground soybean mash), daizu no moyashi (soybean sprouts), whole soybeans, fermented soybean food, production and consumption. Korea: Tubu (soybean curd), processed tubu product, soybean sprouts, whole soybeans, soybean flour, fermented soybean food, production and consumption. Indonesia: Tahu or tahoo (soybean curd), bubuk kedele (soybean powder), tempe kedele, tempe gembus [the name in Central and East Java for okara tempeh], oncom tahu [the name in West Java for okara onchom], other soybean products (soybean sprouts, green soybeans, roasted and boiled soybeans, kecap {soy sauce}, tauco {soybean paste}), food mixtures, production and consumption. Thailand: Tofu (*tauhu*), soy sauce, green soybeans in the pods (*tourae*). Philippines: Soybean sprouts, soybean coffee, soybean cake, soybean milk, tou fu and processed tou fu products, production and consumption. Burma. India. Malaysia. Nepal. Singapore. Sri Lanka (Ceylon). Vietnam. Middle East. References–Soybean food uses in Asia.

2. Soybean food uses in Africa. Ethiopia: Injera, wots and allichas, kitta, dabbo, dabokolo, porridge. Kenya. Morocco. Nigeria: Whole soybeans, soybean paste, corn-soy mixtures (soy-ogi). Tanzania. Uganda. Production. References–Soybean food uses in Africa.

3. Soybean food uses in Europe and U.S.S.R.

4. Soybean food uses in Latin America: Argentina. Bolivia. Brazil. Chile. Colombia. Ecuador. Guyana. Paraguay. Peru. Uruguay. Venezuela. Mexico: New village process, commercial developments. Honduras. Costa Rica. Panama. Dominican Republic. Jamaica. Haiti. Trinidad. References–Soybean food uses in Latin America.

5. Soybean food uses in North America: United States. Canada. References–Soybean food uses in North America.

6. Soybean food uses in Australia. 7. Summary of soybean food uses: Traditional soybean foods: Soybean milk, soybean curd and processed soybean curd products, protein-lipid film, soybean sprouts, tempe (tempeh), green soybeans, boiled soybeans, roasted soybeans, soybean flour, soy sauce, fermented soybean paste, fermented whole soybeans, natto, fermented soybean curd. Experimental soybean foods: Whole soybean foods, soybean paste, soy flour, soy beverage. Production and consumption.

8. Simple village process for processing whole soybeans: Equipment, process, sanitation requirements, quality of product, evaluation of product in formulas and procedures for family and institutional use in developing countries. NRRC village process. 9. Industrial production and selling prices of edible soybean protein products.

10. Barriers to accepting and using soybeans in food: Availability. Cultural and social factors. Texture. Flavor. Nutrition and food safety. Technology development. Technology transfer. Address: NRRC, Peoria, Illinois.

5610. Westbrae Natural Foods. 1979. We believe if you've seen one health food nut you *haven't* seen them all (Ad). *Whole Foods* (*Berkeley, California*) 2(1):8. Jan.
• ***Summary:*** In this full-page color ad, a large photo with diagram shows ten different types of Westbrae's nuts, seeds, dried fruits and trail mixes, including Tamari cashews, Deluxe tamari nut mix, Tamari almonds, Tamari sunflower seeds, Tamari nutroaster's mix, Chisholm trail mix, and Jubilee trail mix. "For more information write Westbrae, P.O. Box 8611, Emeryville, California 94662. All Tamari roasted nuts and trail mixes are available in bulk and a select few in two or ten ounce Panda packages." Address: P.O. Box 8611, Emeryville, CA 94662.

5611. Sheridan, Margaret. 1979. Mighty bean zaps food bills, packs in protein. *Detroit News*, Feb. 28. p. E-1, E-9.
• ***Summary:*** A weak history of the soybean followed by recipes from the book *Barbara Farr's Super Soy* (Keats Publishing). The article begins: "Fed up with the soaring cost of meat? Dine like the cows. Eat soybeans. These homely beige beans have been nourishing livestock, peasants and dynasties for 5,000 years."

A great half-page illustration (cartoon), by John R. Clarey, shows Super Versatile Soy, a character like Superman with a bean-like body, a cape, and two thunderbolts in one hand. Address: News staff writer.

5612. Westbrae Natural Foods. 1979. Price list [Catalog]: February 1979. Emeryville, California: Westbrae. 35 p. 22 by 28 cm.
• ***Summary:*** On the cover are yellow and light green Japanese plum blossom crests against a green background. New products (written in all capital letters): Kelp (powder and granules). Traditional (true) tamari–wheat free. Mu

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tea. Address: P.O. Box 8711, Emeryville, California 94662. Phone (415) 658-7518 (orders).

5613. Davis, Melissa. 1979. The soy of cooking: Out of the field, into the kitchen. *Washington Post*. March 15. p. E1, E14, E20.

• ***Summary:*** Starts by discussing Henry Ford's interest in and work with soybeans. He wanted to find a way to "grow automobiles out of the soil. In 1940 he discovered that soybeans were his bumper crop."

Last week a milestone in soybean history was made on Capitol Hill [Washington, DC]. "About 500 people including senators, representatives, ambassadors, diplomats and freeloaders turned up at the International Soybean Fair.

While Chai Zemin (of the People's Republic of China) and Bob Bergland (U.S. Secretary of Agriculture) stood shaking hands, people pushed and shoved to get to the bar and to hors d'oeuvres made from every soybean product imaginable–soy flour, bean curd, textured vegetable protein (TVP), soy milk, soy sauce, etc. Also mentions tempeh and miso.

The event was largely sponsored by the Food Protein Council and its member companies. "There were a few interesting hors d'oeuvres including soy nuts and garlic smothered bean curd." Contains recipes.

5614. Fukushima, D. 1979. Fermented vegetable (soybean) protein and related foods of Japan and China. *J. of the American Oil Chemists' Society* 56(3):357-62. March. [10 ref]

• ***Summary:*** Contents: Abstract. Introduction. Soy Sauce: Fermented soy sauce: Japanese and Chinese styles of soy sauce and their characteristics. Manufacturing process. Comparison of fermented soy sauce with chemical soy sauce. Fermented soy paste. Chinese soybean cheese (sufu). Fermented whole soybean (natto). New fermented soybean products.

Tables show: (1) Types of fermented soy sauce (shoyu) in Japan. The five types are koikuchi shoyu [regular shoyu] (85.4% of total, 1,050 million kiloliters a year), usukuchi shoyu [light-colored shoyu] (11.1%), tamari shoyu (2.2%), shiro shoyu [clear shoyu] (0.4%), and saishikomi shoyu [twice-fermented shoyu] (0.3%).

(2) Consumption of whole soybeans and defatted soybeans in Japan, 1976 (one-third is for foods, especially shoyu, and two thirds is for feed).

(3) Typical composition of soy sauces recognized by the Japanese government. The five types are the same as those discussed in Table 1, however their names are spelled out in full.

Note 1. This is the earliest English-language document seen (April 2012) that uses the word "saishikomi" or the term "saishikomi shoyu" to refer to twice-fermented shoyu, which is one of Japan's five basic types of shoyu.

Note 2. This is the earliest English-language document seen (April 2012) that uses the term "shiro shoyu" to refer to light shoyu, which is one of Japan's five basic types of shoyu.

(4) Annual production of soy sauce by grade, as graded by the Japanese Agricultural Standard (JAS) in 1976. The 3 grades are special (53.4% of total), upper (26.0%), standard (12.9%), non-JAS mark (7.7%). Total production is 1,226 million kiloliters.

(5) Chemical composition of major types of miso in Japan. The five types are rice miso (sweet, semisweet, and salty), barley miso (semisweet), and soybean miso (salty). For each is given the color, aging time, chemical composition, and total tonnage produced.

Figures show: (1) Flow sheet for making koikuchi (regular) shoyu. (2) Flow sheet for making tamari (regular) shoyu.

(3) Two chromatograms comparing the organic acids of fermented and chemical (HVP) soy sauce. Fermented soy sauce has an abundance of lactic acid, whereas HVP soy sauce has an abundance of formic acid.

(4) Flow sheet for making rice miso. (5) Flow sheet for making sufu [fermented tofu]. (6) Flow sheet for making natto. (7) Flow sheet for making fermented soy milk drink.

Concerning fermented whole soybean (natto): It is a traditional fermented food that originated in the "northern parts of Japan 1,000 years ago." It is usually served with shoyu and mustard.

A portrait photo shows Danji Fukushima. Address: Kikkoman Foods, Inc., P.O. Box 69, Walworth, Wisconsin.

5615. Fukushima, D. 1979. Additional comments on traditional fermented foods. *J. of the American Oil Chemists' Society* 56(3):379-80. March. [2 ref]

• ***Summary:*** See also p. 357-62. Address: Kikkoman Foods, Inc., P.O. Box 69, Walworth, Wisconsin.

5616. Hesseltine, C.W. 1979. Some important fermented foods of Mid-Asia, the Middle East, and Africa. *J. of the American Oil Chemists' Society* 56(3):367-74. March. [34 ref]

• ***Summary:*** Contents: Abstract ("These fermentations, unlike those of the Orient, use bacteria and yeasts instead of filamentous fungi"). Introduction. Eight reasons for using a fermentation process in the production of acid foods. Idli. Kishk. Ogi (The Yoruba {western Nigerian} name for a fermented sour maize product found throughout Black Africa). Mahewu (Magou). Kaffir beer (Bantu beer, sorghum beer, mqombothi).

"When we think of food fermentations, aside from those we encounter daily such as cheese and bread, we think of those strange and exotic products like soy sauce, soybean paste [miso], and tempeh made in China, Japan, and the East Indies."

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A photo shows Hesseltine. See also p. 380-81 of this March issue. Address: NRRC, Peoria, Illinois.

5617. Hesseltine, C.W. 1979. Other fermented foods. *J. of the American Oil Chemists' Society* 56(3):380-81. March.
• ***Summary:*** Discusses four more examples of traditional fermentations that have been industrialized: Kaffir beer (Bantu beer), the new Kikkoman plant in the USA, mahewu (sour maize from South Africa), and tempeh. Address: NRRC, Peoria, Illinois.

5618. Leon, Sonia V. de. 1979. Tropical foods in the Far East. In: G.E. Inglett and G. Charalambous, eds. 1979. Tropical Foods: Chemistry and Nutrition. Vol. 1. New York: Academic Press. x + 701 p. See p. 351-63. [15 ref]
• ***Summary:*** The section titled "Fermented Cereals and Grains" gives basic information about the following fermented soybean foods: Tempeh, soy sauce, miso, and sufu or Chinese cheese. Address: Dep. of Food Science and Nutrition, Univ. of the Philippines, Diliman, Quezon City, Philippines.

5619. Olsman, H. 1979. Hydrolyzed and autolyzed vegetable proteins as functional food ingredients. *J. of the American Oil Chemists' Society* 56(3):375-76. March.
• ***Summary:*** Contents: Abstract. History. Definitions, raw materials, processes, and economy. Functional properties of HVPs. Legal status of HVP. A photo shows Olsman. Address: Unilever Research Lab., Vlaardingen/Duiven, Helhoek 30, Groessen, Netherlands.

5620. Sakaguchi, Yukio. 1979. Opening remarks–Vegetable proteins in fermented foods and other products. *J. of the American Oil Chemists' Society* 56(3):356. March.
• ***Summary:*** "Miso, or soybean paste, one of the most important fermented soybean foods, was originally made in China. A missionary who was sent [from Japan] to China learned its production and modified it into a product suited to the Japanese taste in the 7th century. About 185,000 tons of soybeans are used for miso production annually.

"Another major fermented soybean food is soy sauce which was originally developed by the Zen Monk Kakushin in 1234. He also visited China and discovered that the liquid portion from Miso was very delicious. This liquid became the base for soy sauce, an essential ingredient in the Japanese diet. Soy sauce required the annual use of nearly 175,000 tons of soybean meal, the equivalent of 222,000 tons of soybeans.

"Natto, the third major fermented soybean product of Japan, originated in our country. In 1087, a ruler in the northern part of Japan discovered natto to be part of local farmers' diets. Today, nearly 60,000 tons of soybeans are consumed in its production.

"As Japan continues to draw from its historic past for a source of soy-based foods, we also are full participants in the new era of sophisticated vegetable protein foods. To promote utilization and production of this product, the Japan Vegetable Protein Food Association was organized in 1975."

A photo shows Dr. Yukio Sakaguchi. Address: Japan Vegetable Protein Food Assoc., 9th Floor, Rainbow Building, 2-15-17 Nishi-Shinbashi, Minato-ku, Tokyo, Japan.

5621. Winarno, F.G. 1979. Fermented vegetable protein and related foods of Southeast Asia with special reference to Indonesia. *J. of the American Oil Chemists' Society* 56(3):363-66. March. [22 ref]
• ***Summary:*** Contents: Abstract. Introduction. Fermented foods and food needs. Tempeh and oncom. Bongkrek (and its toxic-producing bacteria) and tauco. Wholesomeness of fermented foods. Development of food supplement using fermented food as a basic ingredient.

Table I shows the population, population growth rate, and average national income per capita in ten Southeast Asian countries. Indonesia has by far the largest population (136.9 million), followed by Vietnam (47.3). Khmer republic (Cambodia) has the highest population growth rate (2.8%), followed by the Philippines (2.7%); Singapore has the lowest (1.3%). Singapore has by far the highest average national income per capita (US$2,510), followed by Malaysia ($720), then Maungthai (Thailand–$350). Khmer Republic and Laos have the two lowest per capita incomes ($70). Table II shows the nutritional composition of tempeh, oncom, bongkrek, and tauco per 100 gm. Table III shows 7 fermented vegetable protein foods in Southeast Asia: Tempeh, bongkrek, oncom, tauco, kecap (shoyu), ang-kak, and sofu (sufu), for each is given the microorganism used, substrate, nature of product (solid, liquid), and area where article is sold commercially. Table IV shows the composition and nutritional value of TFR (Tempeh-Fish-Rice), as developed at the National Research Institute, Bogor, Indonesia. A photo shows F.G. Winarno. Address: Bogor Agricultural Univ., Fatemeta, IPB, Jalan Gunung Gede, Bogor, Indonesia.

5622. Shurtleff, William. 1979. Notes on visit to Quong Hop & Co. tofu factory in South San Francisco. Lafayette, California: New-Age Foods Study Center. 1 p. Unpublished typescript. April 26.
• ***Summary:*** Quong Hop is the leading (and perhaps the only) manufacturer of fermented tofu in North America. We were allowed to study and photograph the process in detail, and all our questions were answered. The entire process is described, with illustrations, in *Tofu & Soymilk Production*, by Shurtleff & Aoyagi (1979) in the Chapter 16 titled "Fermented tofu" (p. 283-86). Taken that day, photos show: (1) A man standing next to rolling rack of skewered inoculated tofu cubes, which are about to be incubated. (2) Pouring brining liquor over mold-covered tofu cubes packed into empty glass jars. (3) A close-up view of the previous

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view showing labels of the two different types of fermented tofu made by Quong Hop & Co.–Bean Cake (*Fu-Yu*) and Pepper Bean Cake (with hot chili flakes in the brining liquor). (4) A sample of well-molded tofu cubes.

Also describes the process and equipment used by the company to make tofu. The soybeans are ground in a Rietz disintegrator. The whole system is run by a control panel from Japan. "You *must* have an in-house repairman for the control panel says owner Stanley Lee. From the slurry tank, the slurry is pumped into a two-chamber continuous cooker. The slurry fills the chambers and cooked slurry exits by overflowing. It works well. The cooked slurry is then pumped onto a vibrating screen and down into the Brown soymilk extractor. The soymilk from the screen is run directly into a huge steam-jacketed holding tank. The soymilk extracted by the Brown is run back into the slurry tank. Curding is done in barrels. Pneumatic pressers are used to press the curds into tofu. Vacuum packaging with a Multivac vacuum packager. Then pre-weighed labels are applied with a Hobart. But the labels are too small and unattractive; need two labels per package.

Tofu burgers: Run through three-patty former. Arrange on trays. Deep fry on screens in batch oil fryer. Slow. They have an oven for Savory Baked Tofu, which is pre-dipped in hot teriyaki sauce mixture. Address: Lafayette, California 94549. Phone: 283-3161.

5623. S.W. 1979. Japan via Italy . . . tofu casserole. *Sunset* (*Menlo Park, California*). April. p. 214. Central edition.
• ***Summary:*** "Versatile tofu combines with vegetables, mozzarella cheese, and Italian seasonings to make a substantial meatless casserole with a taste rather like lasagna. Glazed with soy sauce and honey, the tofu acquires a pungent meaty flavor when fried." Gives a recipe for Tofu Vegetable Casserole [with tomato sauce]. Address: Makawao, Hawaii.

5624. Watanabe, Tokuji. 1979. Developments in the processing of traditional soybean foods in Japan. In: Hideo Chiba, et al., eds. 1979. Proceedings of the Fifth International Congress of Food Science and Technology (1978-Kyoto). Tokyo: Kodansha Ltd.; Amsterdam and New York: Elsevier Scientific Publishing Co. xi + 436 p. See Chapter 2.1, p. 66-73. Illust. Author index. Subject index. 26 cm. Series: Developments in Food Science, Vol. 2. [9 ref.]
• ***Summary:*** Chapter 2, titled "Efficient utilization of food resources," has three parts, of which this is the first. Contents: Introduction. Tofu (incl. "packed tofu" using GDL as a coagulant). Kori-tofu. Miso. Soy sauce (shoyu). Natto. Conclusion. A figure shows five flow-sheets, one for making each of the different foods mentioned above.

The importance of soybeans as a food ingredient in Japan is evident from the fact that nearly 1 million metric tons of soybeans, including those used after oil extraction, are consumed each year to make tofu, kori-tofu, natto, miso, soy sauce, and other foods. "The development of automated equipment for continuous processing has made mass production of these foods possible, ensuring evenness of quality and lowness of price, to the benefit of consumers." Address: Kyoritsu Women's Univ., 2-2-1 Hitotsubashi, Chiyoda-ku, Tokyo 101, Japan.

5625. Claiborne, Craig. 1979. Q&A. *New York Times*. May 9. p. C4.
• ***Summary:*** A displaced New Yorker, now living in Kansas City, Missouri, asks for a recipe for ketjap manis (the local Oriental grocery store has never heard of it), and for information about it, and a recommendation for a possible substitute.

"A. Ketjap manis is an ingredient widely used in Indonesian cookery. Basically it is a sweet soy sauce. Here is the recipe of Mrs. Melita Soeharjo, a marvelous Indonesian cook who lives in Manhattan."

Note: This recipe is identical in every way to the recipe that appeared in this newspaper on 21 June 1978 (p. C6).

In New York City, a good source of Indonesian specialty ingredients is the Southeast Asia Food and Trading Company, 68A Mott Street.

5626. Flinders, Carol. 1979. Soybean key to world food plight? Notes from Laurel's Kitchen. *Rocky Mountain News* (*Denver, Colorado*). May 16. p. 24A.
• ***Summary:*** Twelve years ago (i.e., in late 1968) Carol spent a memorable week at the Tassajara Zen Mountain Center near Big Sur, California. "Among the many good people I met, one I've always remembered was Bill Shurtleff, who helped run the kitchen out of which was issued the well known Tassajara bread.

"Spare of words, lean and thoughtful, he had a kind of banked fire in his eyes that told you he was a man in search of a vocation. Last week Bill and his wife, Akiko, came to our home to visit and exchange ideas. It's clear that he has found the vocation he's been looking for, and that, in a sense, all of us stand to gain from the passion with which he's answered it.

"The cause Bill has taken up is that of the more than one billion people of the world for whom hunger is *the* central fact of life. To be as continually mindful of their plight as he is would probably be unbearable if he didn't believe he holds a significant key to relieving it. The key? 'Glycine max'–soybeans to you and me.

"Western exploitation of the soybean has been absurdly slight until recent years. Mostly we've fattened our livestock with it. That soy is 'king of beans' we've long recognized." But they have entered the American food supply well disguised in such forms as textured vegetable protein. "The soybean foods Bill is promoting are of a much more sophisticated nature. Their names fall oddly on the Western ear:" tofu, shoyu, tempeh, miso.

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Bill and Akiko met in Japan. She "was a fashion designer in Tokyo before they were married. The image of big city haute couture doesn't attach easily to the simply dressed and unpretentious Akiko, and everything makes a little more sense when you find out the fashions she designed were actually for handicapped children.

"Akiko's skill as a graphic artist and fine cook are the perfect complement to Bill's, as writer and investigator. Her warmth and gentleness are the perfect balance to his single-minded intensity. (Akiko doesn't just invite you for dinner. She seizes your arm as you're walking along together, wraps it close in her own and holds on tight, convincing you life will be pure misery for them until you come to their house).

"Tofu was the soyfood that first captured Bill's interest." Discusses its virtues. "But what really wins him over, I think, is the sheer romance of tofu. What you know of tofu, and what I've told you about Bill, might make that seem unlikely. But read his book and see for yourself–beneath that samurai exterior beats the heart of a Shelley or a Keats. Listen:

"'Like water that flows through the worlds, serving as it moves along, tofu joyfully surrenders itself to the endless play of transformation. Pierced with a skewer, it sizzles and broils above a bed of live coals... deep-fried in crackling oil, it emerges crisp and handsome in robes of golden brown, frozen all night in snow under vast mountain skies, it emerges glistening with frost and utterly changed. All as if it knew there was no death to die, no fixed or separate self to cling to, no other home than here.'"

Contains a favorite Flinders' recipe for tofu patties.

5627. Hoang, Van Chi. 1979. Report to the Bureau of Industrial Guidance, FDA: Vietnamese soysauce. Its particularities and our manufacturing process. Bowie, Maryland: Vietnam Food & Drink Co. 4 p. May 25. Unpublished typescript on letterhead. 28 cm.

• ***Summary:*** Contents: Names of company director, plant manager, and technical board (in left margin). Bibliography. Translation into English of article on Vietnamese soysauce production found in *Khoa Hoc Thuong Thuc*, a scientific magazine published in Hanoi. The translation follows: General process (for making soysauce). Some differences between Chinese and Vietnamese soysauces.

Our manufacturing process. Ingredients to obtain 8 gallons of soysauce (Soybeans 10 lb. Rice 5 lb. Salt 5 lb. Sugar 5 lb. Water 5 gallons). Rice fermentation or "koji" preparation. Soybean fermentation or preparation of the brine. Preparation of soysauce. Packaging. The pH problem. The problem of oxydation [sic, oxidation]. Our request with FDA.

Vietnamese always prefer their own soysauce to the Chinese brand. After fermentation is over, the Chinese filter the product, taking only the filtrate to make their sauce, while discarding all the solid particles that remain. The Vietnamese, on the other hand, grind the whole product to obtain a sauce which is much thicker. The Chinese add *Lactobacillus* to the cooked soybeans to stimulate their fermentation. The Vietnamese roast their soybeans before cooking. Chinese like black soy sauce. To get that black color, they keep their soysauce in an open jar, exposed to the air for as long as three months; auto-oxydation turns the sauce black. Vietnamese prefer brown-colored soysauce. Vietnamese soybeans do not have a great tendency toward oxydation. Roasted soybeans and rice inoculated with *Aspergillus oryzae* are fermented separately. The finished koji has a pH of 4.0 (sample A1). During the soybean fermentation, if the temperature is maintained at 35-38°C, the fermentation is complete in 9 days, with a pH of 5.0 to 5.2 (sample A2). "Fermented rice [koji] and fermented soybeans are mixed together, and salt and sugar are added. The whole mixture is then ground in an industrial blender and reduced to a thick paste" (sample A3). The pH of the final mixture is important since "Vietnamese customers have a traditional for a sweet and only slightly sour sauce." The addition of a few grams of vitamin C to each 8-gallon batch of soysauce helps to fight oxidation and prevent unwanted darkening of the sauce. The finished soysauce is poured into glass bottles (8 oz or 16 oz) and sealed with a cap. The company requests that the FDA consider this soysauce as a fermented food rather than an acidified food, and authorizes the company to keep its pH around 4.8–the same as some Chinese-style sauce made in the USA (sample A4).

Note 1. This is the earliest document seen (March 2001) concerning the work of Vietnamese with soyfoods or soybeans overseas (one of two documents). By June 1979 Hoang Van Chi was making Vietnamese soy sauce in Bowie, Maryland.

Note 2. The address of the company's factory is handwritten in red at the top left of page 1: 3824 Ironwood Place, Landover, Maryland 20785. Phone: (301) 322-7948. The company director, Hoang Phan, is the writer's wife. Address: Technical Director, Vietnam Food & Drink Co., Inc., 12653 Heming Lane, Bowie, Maryland 20716. Phone: (301) 262-3735.

5628. Brown, Marlene. 1979. How to put together a co-op party. *Better Homes and Gardens* 57(5):128, 130, 132, 138-42, 184. May.

• ***Summary:*** The menu for a traditional Japanese dinner includes "Chilled tofu hors d'oeuvres." "Garnished chunks of chilled tofu (also called soybean curd) set the stage for this Far Eastern presentation. Assemble the tofu on a bed of crushed ice at the party site..." Shabu-shabu includes tofu and soy sauce.

5629. **Product Name:** Health Valley Vegetarian Chili [Spicy, Mild, or Unsalted].
Manufacturer's Name: Health Valley Natural Foods
Manufacturer's Address: 700 Union St., Montebello, CA

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90640.
Date of Introduction: 1979. May
Ingredients: Vegetable broth, organic pinto beans, tomatoes, onions, organic carrots, soy granules, olive oil, tomato paste, chili pepper, concentrated organic apple juice, sea salt, bell peppers, unsulfured molasses, garlic powder, cumin, organic potato flakes, paprika, ground bay leaves, organic oregano, organic sage, organic thyme.
Wt/Vol., Packaging, Price: 15 oz (425 gm) can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1979. Catalog 13. Spring, 1979. Ann Arbor, Michigan. iv + 290 p. See p. 86-87. Ad: "New! From Health Valley. Vegetarian Chili. Ingredients include pinto beans, soy grits, and aged tamari soy sauce

Ad in Bestways. 1979. Oct. p. 51.

Label obtained at World Vegetarian Day in San Francisco. 1990. Oct. 6. 9 by 4 inches. Paper can label. Reddish brown, yellow, black, brown, green, and white. Color photo of crock of chili surrounded by uncut vegetables. "Certified organic beans. Made the healthy way. Plenty of zesty robust flavor without any meat." Distributed by Health Valley Foods, Inc., 16100 Foothill Blvd., Irwindale, California 91706-7811.

5630. McDermott, Chris; Klein, Ruth Hodgson. 1979. Tofu: The once and future food? (Leaflet). New York: Cornell University, Cooperative Extension. 2 p. May 7. Focus on the food markets. [1 ref]
• ***Summary:*** "You can do just about anything to a soybean sprout it, ferment it into soy sauce, grind it into flour, isolate the protein for use as a meat extender, or extrude and texture it into imitation meat and fish products. While agribusiness spends $20 million a year on high-technology research into soy foods, consumers are increasingly turning to tofu, the ancient staple of Oriental diets, as an inexpensive source of protein. Tofu, more familiar to some as bean curd, is widely available at health food stores, fruit and vegetable markets, and an occasional supermarket; it usually sells for about 70 cents to $1.09 a pound."

Discusses how to buy and store tofu and the many different type. A table compares the nutritional value of tofu, hamburger, cottage cheese, and cheddar cheese–based on USDA Agriculture Handbook No. 456, *Nutritive Value of American Foods*. Address: 1. Editor, 2. Senior Extension Associate. Both: Consumer Education, Cornell Univ.

5631. Midwest Natural Foods Distributors, Inc. 1979. Catalog 13. Spring, 1979. Ann Arbor, Michigan. iv + 290 p. Index by product category. Index of manufacturers. Index of advertisers. Illust. 28 cm.
• ***Summary:*** One the cover are two kites (colored orange and red) flying in the sky. This catalog, largely printed by a computer, contains many ads on numbered pages. Contents: Policies and terms. Catalog information. Packaged. Books. Refrigerated and frozen. Bulk. Literature and flyers. Indexes (3).

"One stop shopping... We are now a Full Line distributor." List of new lines. List of new products within existing lines. Symbols and abbreviations.

Suppliers are listed alphabetically: Arrowhead Mills, Balanced Brand [Balanced Foods, New Jersey], Bragg's (Liquid Aminos), Dr. Bronner's (with full page ad showing the doctor), Carmé (lecithin), Cedar Lakes, Cellu (Soy bean flour), Chico-San, A.A. Debole (Spaghetti sauce–soy cone), Dragon's Milk (Arica), Elam's (soy flour), El Molino, Ener-G–Jolly Joan, Erewhon (with "Erewhon West" full-page ad), Family Orchards (Tamari mixes, Trail mix), Fantastic Foods, Fantastic Falafel [Felafel], Fearn Soya Foods, Flavor Tree, Hain Pure Foods ("Cold pressed" vegetable oils, mayonnaise, nut butters), Hansen's juices, Health Valley (incl. Vegetarian Chili), Hi-Energy Foods (food bars), Hoffman's (protein powders, snack bars), Lact-Aid (p. 109, ad p. 118), Jack La Lanne, Lange's, R.G. Lecithin, Lifestream (p. 113, 251, ads p. 249-50), Malt-O-Meal, Maya Grainburgers (p. 119, ad p. 126–mix with tofu), Midland Lecithin, Miso Cup, Modern Products (Gaylord Hauser), Mus-L-On (MLO), NF Factors, Niblack ("Tamari toasted sunflower seeds," Tamari pumpkin seeds," raw or toasted wheat germ, unprocessed miller's bran), Old Stone Mill (soy), Orjene, Parkelp, Plus Produces (incl. Tiger's Milk), Richter Bros., Soken, Sovex, Viobin, Waring (blender, juicer), Westbrae.

Books, Talking Foods, Meats (nitrate and nitrite free), Poultry (no hormones or antibiotics), Soy Products (Health Valley soy milk, tofu), Soy Plant Tofu (nigari, and tofu sausage, p. 259-60), Tumaro's, Willow Run (Soybean spread [margarine]). Bulk–Beans, dry roasted soybeans, fruit & nut mixes (trail mix), nut butters, condiments, vegetable oils, pasta (with nomenclature), granola, teas & herbs. Literature & flyers. Indexes. Note: Many companies have a large selection of herbs. Address: 170 Aprill Dr., Ann Arbor, Michigan 48103. Phone: 313-769-8444 or in Area 313 1-800-552-6297.

5632. Tofu Shop (The). 1979. Our favorite tofu recipes (Leaflet). Telluride, Colorado. 1 p. Spring. Single sided. 28 cm.
• ***Summary:*** Typewritten on letterhead. The four recipes are: "Tofu Turkey with Mushroom Gravy (serves 12-16)." Tofuburgers. Spicy tofu and rice burritos. Creamy tofu salad dressing.

The Tofu turkey is especially innovative: Place 8 lb tofu (one large block if possible) in a large, shallow baking pan. Melt ½ lb soy margarine or butter in a small sauce pan, mix in herbs, and use this sauce to baste "turkey." "Bake tofu for 2 hours at medium temperature, or until a golden crust forms all around. Baste regularly. Garnish with sprouts, parsley,

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and thin apple rings, and serve with mushroom gravy. For an extra treat, hollow out blocks of tofu and stuff with vegie and rice mixture prior to baking."

Mushroom gravy" Add 3 tablespoons arrowroot and ½ cup whole wheat flour to 4 cups hot water, and cook 10 minutes. Sauté 2-4 cups sliced mushrooms and one small diced onion. Combine all ingredients and season to taste with shoyu [Japanese-style soy sauce], garlic, lemon, and cayenne (optional).

Letter (e-mail) from Matthew Schmit. 2009. March 28. Concerning the Tofu turkey recipe: "As technically simple as the recipe was, it was how the turkey idea started. Note the sentence at the end of the first paragraph describing 'stuffing' the tofu turkey. This is what I later started doing in Arcata with our tofu turkeys." Matthew thinks this sheet of recipes was printed in the spring of 2009. Address: The Tofu Shop, 116 N. Oak St. (P.O. Box 69), Telluride, Colorado 81435.

5633. Claiborne, Craig. 1979. A word or two about passionfruit: De gustibus. *New York Times*. June 18. p. B12.
• ***Summary:*** Part II of this article begins: "One of the great and essential ingredients for the cooking of Indonesia and other Eastern countries is a liquid called ketchap or ketjap manis. It is a dark, sweet soy sauce that is vital to impart the 'native' flavors of Indonesia."

It is quite readily available, in bottled form, in almost all fine-food specialty shops in Manhattan [New York City] and throughout the United States. A recipe (that came from an excellent Indonesian cook) was recently printed in this newspaper (9 May 1979, p. C4).

Claiborne now has a letter from Rachael Baker of Princeton, New Jersey, which contains three recipes for simplified versions of ketjap manis, which she had found in cookbooks over the years; they do not require the use of any special Indonesian ingredients–such as salam leaves and laos.

The main ingredients is these are soy sauce, dark molasses, and brown sugar. The source of each recipe is given.

5634. Liebman, Bonnie. 1979. Sea salt: No great shakes. *Nutrition Action* 6(6):13, 16. June.
Address: CSPI Nutritionist

5635. Nunomura, N.; Sasaki, M.; Yokotsuka, T. 1979. Isolation of 4-hydroxy-5-methyl-3(2H)-furanone, a flavor component in shoyu (soy sauce). *Agricultural and Biological Chemistry* 43(6):1361-63. June. [13 ref]
Address: Kikkoman, 399-Noda, Noda-shi, Chiba-ken 278, Japan.

5636. Pardo, L.V.; Luis, E.S.; Soriano, M.R.; Bucoy, A.S. 1979. Changes in the free amino acid content of an experimental soy sauce. *Philippine J. of Food Science and Technology* 3(1):31-45. Jan/June. Paper presented at the 13th annual convention of the Philippine Assoc. of Food Technologists, 20-21 Nov. 197a, Manila. [26 ref]
• ***Summary:*** Describes changes in the content of 16 free amino acids (of which 9 were essential amino acids) in a soy sauce mash during a 12-week fermentation. "The maximum formation of amino acids was reached between the 7th and 11th week of fermentation. Glutamic acid was the most abundant and it exhibited a very irregular increase-decrease pattern. The others also showed almost the same pattern." Address: Food Technology Research Div., Industrial Research Center, National Inst. of Science and Technology, NSDB, Manila, Philippines.

5637. **Product Name:** Bodhi Sauce and Tuong Cu-Da (Vietnamese Soy Sauces)
Manufacturer's Name: Vietnam Food and Drink Co.
Manufacturer's Address: 12653 Heming Lane, Bowie, Maryland 20716. Phone: (301) 322-7948, 262-3735.
Date of Introduction: 1979. June.
Ingredients: Soy-beans, rice, salt, water
Wt/Vol., Packaging, Price: 10 oz.
How Stored: Shelf stable.
New Product–Documentation: Hoang, Van Chi. 1979. "Report to the Bureau of Industrial Guidance, FDA: Vietnamese soysauce. Its particularities and our manufacturing process." Bowie, Maryland: Vietnam Food & Drink Co. 4 p. May 25.

Label. 1980. 7.25 by 3 inches. Paper. Black on white. "A wholegrain soybean sauce used for centuries by Buddhist monks in S.E. Asia. Wholegrain soysauce like this one has many virtues among which: It helps the skin remain fresh and young. There probably lies the secret of Oriental women's skin beauty. It eliminates from the body toxic substances produced by tobacco, alcohol and atomic radiation. The yeast that remains alive in the sauce prevents the development of harmful germs. It is a food for good health and longevity. Reference *The Chinese Journal*, New York. Used to dip To-Fu (bean curd), boiled vegetables or just plain rice. Non-vegetarians can use this sauce to dip: chicken, duck, pork, beef boiled or roasted."

Leviton. 1982. Soyfoods. Winter. p. 68-69. "Tuong Cu-Da is identical to Bodhi Sauce but contains added sugar for the extra sweetness the Vietnamese prefer." Both are made with glutinous rice (sweet rice). Soya Bluebook. 1987. p. 92. Address is now 3824 Ironwood Place, Landover, Maryland 20785.

Spot in *Whole Foods* magazine. 1982. Feb. p. 50. A photo shows Hoang Van Chi and many bottles of his Bodhi Sauce.

5638. Westbrae Natural Foods. 1979. Distributor catalog: June 1979. Emeryville, California: Westbrae. 16 p. 22 by 28 cm.

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• ***Summary:*** On the cover, the lettering is in dark blue and dark red on a tan background. Address: 4240 Hollis St., Emeryville, California 94608; 4841 Eastern Ave., City of Bell, CA 90201 (10 miles southeast of Los Angeles). Phone: (415) 658-7518 (orders)

5639. Westbrae Natural Foods. 1979. Wholesale food catalog. June 1979. Emeryville, California: Westbrae. 36 p. 22 by 28 cm

• ***Summary:*** On the cover, the lettering is in dark blue and dark red on a tan background. Address: 4240 Hollis St., Emeryville, California 94608; 4841 Eastern Ave., City of Bell, CA 90201 (10 miles southeast of Los Angeles). Phone: (415) 658-7518 (orders)

5640. Westbrae Natural Foods. 1979. Snack food catalog. June 1979. Emeryville, California: Westbrae. 5 p. incl. 1 p. insert 22 by 28 cm

• ***Summary:*** On the cover, the lettering is in dark blue and dark red on a tan background. Address: 4240 Hollis St., Emeryville, California 94608; 4841 Eastern Ave., City of Bell, CA 90201 (10 miles southeast of Los Angeles). Phone: (415) 658-7518 (orders).

5641. Shurtleff, William; Aoyagi, Akiko. 1979. The book of tempeh: A super soyfood from Indonesia. New York, NY: Harper & Row. 160 p. Illust. by Akiko Aoyagi Shurtleff. Index. July. 28 cm. [24 ref]

• ***Summary:*** Contents: Acknowledgments. What is tempeh? Preface. 1. Soybeans–Protein source of the future. Introduction, the causes of hunger and starvation–two analyses (*The Twenty-Ninth Day*, by Lester Brown–population, affluence; *Food First: Beyond the Myth of Scarcity*, by Lappé and Collins–population, narrow focus on increasing food productivity, international food exploitation, land monopolization and misuse, cash crop system of export agriculture). Ten reasons soy will be the protein source of the future: 1. Optimum land utilization. 2. Lowest cost protein. 3. High nutritional value. 4. Time tested. 5. Remarkably versatile. 6. Appropriate technology. 7. New dairylike products. 8. Hardy and adaptive. 9. Free nitrogen fertilizer. 10. Energy and resource efficient. "All of these ten factors work together synergistically, reinforcing one another, to give added weight to the prediction that soybeans will be a key protein source for the future on plant earth." Present patterns of soy protein utilization. New developments. An idea whose time has come.

2. Tempeh as a food. 3. Getting started (incl. basic preparatory techniques and 18 recipes, incl. a recipe for sweet Indonesian soy sauce {*kechap manis*}). Favorite tempeh recipes (13 Western favorites, 6 non-fried favorites, and 12 Indonesian favorites; also Suggestions for serving tempeh throughout the day). 4. Western-style and Oriental tempeh recipes (68 recipes). 5. Indonesian tempeh recipes (70 recipes). 6. Making tempeh at home or in a community. 7. Making tempeh starter. 8. The Indonesian tempeh shop. Map of Southeast Asia, including Indonesia. Map of Java, Madura, and Bali (p. 144). Appendix A: A brief history of tempeh East and West. Appendix B: Tempeh shops in the West. Weights, Measures, and Equivalents. Glossary. Bibliography. About the authors. About the New-Age Foods Study Center.

The first book in the world devoted entirely to tempeh. It contains the first sizeable collection of American-style and Indonesian tempeh recipes (130 in all), the first illustrated descriptions of making tempeh, tempeh starter, and onchom on various scales in Indonesian tempeh shops, the first history of tempeh, detailed discussion of tempeh in Indonesian culture and of the many varieties of Indonesian tempeh, and the first recommendations for commercial names for the more than 30 types of tempeh that could easily be made in the West. It also contains chapters and reviews of the literature on tempeh nutrition and the microbiology and biochemistry of tempeh fermentation, plus the largest bibliography on tempeh to date (including many new Indonesian references), an annotated listing of 61 people and organizations around the world connected with tempeh, and the first list of tempeh companies in the West.

Page 26 states: "Modern soy-protein products, such as textured soy proteins, are increasingly available at supermarkets, often in forms that simulate the fibrous, chewy texture of meat."

Note 1. This is the earliest known book in any language devoted entirely to tempeh. Note 2. This is the earliest English-language document seen (Aug. 2011) that contains the term "modern soy protein products." Shurtleff would soon start to use it to refer to defatted soy flour or grits, soy protein concentrates, soy protein isolates, and textured soy protein products.

Illustrations (line drawings; unnumbered, not including "spots"): Indonesian dancer in sarong and crown. Balinese lion mask dancer. Two Indonesian women dancing. Cuts of fresh tempeh on a woven bamboo tray. Woman in a traditional Indonesian kitchen cooking tempeh. Terraced rice patties in Java. Woman selling tempeh in Bali market. Masked Indonesian figure. Soybeans in the pod. A hand holding dry soybeans over a sack of such soybeans. Three women selling beans and grains in a Javanese market. Two men selling tempeh in a Javanese market. Balinese mask. Indonesian mortar and pestle. Traditional oil skimmer for deep frying. A wok. Tamarind paste and pods. Soy sprouts. Pieces of tempeh on a bamboo tray. Gado-gado. Laos root & chilies. Palm sugar. Chilies. Indonesian woman carrying fruits in a bowl on her head. Salam leaf. Botok tempeh. Petè beans. Winged and masked Balinese figure. Indonesian spices. Soybean (enlarged). Cartoon of a fuzzy little critter driving his tiny tractor over a cake of tempeh, inoculating it with a secret enzyme (The Farm, Summertown, Tennessee).

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Placing tempeh into a homemade Styrofoam incubator. Cross section of good tempeh and bad. Winged beans. Close-up of outside of a homemade tempeh incubator. Dry soybeans in pods on plant. Woman in the USA making tempeh. A deep woven bamboo basket for treading soaked soybeans. Ten steps in the process for making traditional soy tempeh in a small shop (GIZI, Bogor). Twenty steps in the process for making and delivering traditional soy tempeh in a large shop (Oeben, Bandung). Two views of a modern dehuller and dehuller-separator. Five steps showing making tempeh in plastic bags. Three steps showing making tempeh in banana-leaf wrappers. Fourteen steps in the process for making and delivering Malang tempeh.

Map of Southeast Asia. Map of Java, Madura, and Bali (incl. West, Central and East Java). Indonesian stilt house (house on stilts, famous among the Dayak in Borneo, the Minangkabu and Batak of Sumatra, and the Toraja of Sulawesi). Woman selling leaf-wrapped tempeh in a Balinese market (color, rear cover).

Numbered figures (line drawings unless otherwise stated. The number before the decimal refers to the chapter number). 1.1 Table. The changing pattern of world grain trade (exporters and importers). 1.2 Graph: Projected population densities in various regions of the world. 1.3 Bar chart: Per capita protein consumption in rich and poor countries. 1.4 Bar chart: Per acre yields of usable protein from various food sources (pounds per acre). 1.5 Graph: Word soybean production (1965-1977). 1.6 Bar chart. Protein consumed vs. protein returned from milk, eggs, chicken, pork, beef. 1.7. Where the world's money goes (yearly global and U.S.)

2.1 Table: Percentage of protein in various foods. 2.2 Table. Composition of nutrients in 100 grams of tempeh of different types. 2.3 Table: Protein quality (NPU) of various foods. 2.4 Table: Amino acid composition of tempeh compared with the FAO/WHO reference pattern. 2.5 Bar cart. Limiting amino acids in rice and tempeh. 2.6 Table. Combining foods to increase protein. 2.7 Bar chart: Grams of dietary fiber in 100 grams of various foods. 2.8 Table: Fatty acids in soy tempeh. 2.9 Table. Vitamins and minerals in soy tempeh. 2.0 Table. Price of one day's supply of usable protein from various foods.

3.1 Bar chart. Comparison of nutrients in brown and white rice. 3.2 Shoyu (natural soy sauce) in four wooden keg, can, bottle, and small dispenser. 3.3 Grating a coconut. 3.4 Mortar & pestle (two types). 3.5 Cross section of a coconut in the husk. 3.6 Making coconut milk (7 steps). 3.7 Ladies in a Javanese market selling chilies (in mounds). 4.1 Deep-frying tempeh, with all utensils shown. 4.2 Shallow-frying tempeh. 4.3 Seasoned crisp tempeh with dip. 4.4 Tempeh shish kebab. 4.5 Coriander & garlic crisp tempeh. 4.6 Tempeh fondue. 4.7 Making tempeh-filled pot-stickers or gyoza. 4.8 Tempeh pita bread sandwich. 4.9 Tempeh burger. 4.10 Tortilla with tempeh & guacamole. 4.11 Tempeh guacamole. 4.12 Tomatoes stuffed with tempeh.

5.1 Woman in an Indonesian village kitchen. 5.2 Woman grinding spices with a mortar. 5.3 Table: Indonesia's 7 most popular tempeh recipes, in descending order of popularity: Tempeh goreng, tempeh bachem, kerupik tempeh, sayur lodeh, sambal goreng tempeh, terik tempeh, sambal goreng kering tempeh. Recipes for each are given. 5.4 Selling traditional banana-leaf wrapped tempeh in Yogyakarta, Java. 5.5 Deep-frying tempeh kerupik in batter. 5.6 Deep-frying tempeh kerupik in Javanese market. 5.7 Botok tempeh #1. 5.8 Botok tempeh #2. 5.9 Gadon tempeh. 5.10. Folding leaf wrappers for gadon tempeh. 5.11 Rolling leaf wrappers for pepes tempeh. 5.12. Pepes tempeh on broiler and packets ready to serve. 5.13 Folding leaf wrappers for Balinese pepesan. 5.15. Saté tempeh on broiler. 5.15 Saté vendor in Java. 5.16. Saté manis tempeh. 5.17 Tempeh sambal accompaniment for rice.

6.1 Flowchart for homemade soy tempeh. 6.2 Tempeh incubator (home-made). 6.3 Good soy tempeh (diagonally sliced). 6.4 Four types of homemade tempeh. 6.5 Wooden tempeh incubation tray designs. 6.6 Community tempeh incubator. 6.7 Graph. Tempeh incubation time versus temperature for soy tempeh (shows slow, moderate, and quick combinations)

7.1 Graph. Loss of tempeh starter potency when stored at various temperatures and humidities. 7.2 Sporulated tempeh for starter in bread pan. 7.3 Dry-strainer spore extraction. 7.4 Sporulated rice, pressure cooker, and Mason jar method of making tempeh starter. 7.5 Picking leaves from a hibiscus tree for tempeh starter. 7.6 Arranging inoculated soybeans on hibiscus leaves. 7.7 Covering hibiscus leaf sandwiches in trays. 7.8 Hibiscus leaves for tempeh starter ready to use. 7.9 Hibiscus inoculum leaves on round tray. 7.10 Drying inoculum leaves in sun on roof. 7.11 Tying inoculum leaves under rafters to dry.

8.1 Flowchart for basic Indonesian soy tempeh method. 8.2. A small Indonesian tempeh shop (floor plan). 8.3 Floor plan of the large Oeben tempeh shop in Bandung, Java. 8.4 Flowchart for Malang tempeh.

A color photo shows a high-quality cake of tempeh sliced on a plate. Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

5642. Shurtleff, William; Aoyagi, Akiko. 1979. The book of tempeh. A super soyfood from Indonesia. Professional hardcover edition. New York, NY: Harper & Row. 248 p. Illust. by Akiko Aoyagi Shurtleff. Index. July. 28 cm. [190 ref]

• ***Summary:*** A special cloth-bound professional edition of *The Book of Tempeh* prepared for libraries, commercial tempeh producers, microbiologists, students of Indonesian foods, and those who love fine books. In addition to the full contents of the paperback edition, it contains the following lengthy appendixes: B: Tempeh in Indonesia (an overview

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of the tempeh industry and market, including the number of shops by province, per capita consumption, etc.) C. The Varieties of Tempeh. D. Soybean Production and Traditional Soyfoods in Indonesia. E. The Microbiology & Chemistry of Tempeh Fermentation. H. Onchom or Ontjom. A Glossary of Indonesian Foods (the most extensive one available in English). Bibliography on Tempeh containing over 190 entries. Works on the world food crisis, works on tempeh cookery or Indonesian cuisine, scientific journal articles on tempeh, early Dutch- and German-language works on tempeh, Indonesian-language works about tempeh, key English-language works on microbiology, film and color slides on tempeh. Illustration of an Indonesian dancer. Expanded Index. A great deal of original research is contained in the extra 88 pages and 54 illustrations.

Appendix C, "The varieties of tempeh, states: "The many varieties of tempeh may be grouped into five basic types, according to the primary ingredient used: legumes, grains & soy, grains, presscake residues, and nonlegume seeds. Legume tempehs: Soy tempeh (*témpé kedelé or kedelai*, made from the seeds of *Glycine max*). Velvet-bean tempeh (*tempe benguk or tempe koro benguk*, made from the seeds of *Mucuna pruriens*, which are called *kara benguk* in Indonesian). Winged-bean tempeh (*tempe kecipir*, made from the seeds of *Psophocarpus tetragonolobus*). Leucaena tempeh (*tempe lamtoro or tempe mlandingan*, made from the seeds of *Leucena leucocephala*). Mung bean tempeh (*tempe kacang hijau*, made from the seeds of *Vigna radiata*, which are called *kachang hijau* in Indonesian). Broad-bean or fava-bean tempeh (*tempe kacang babi*, made from the seeds of *Vicia faba*, also called horse beans). Sesban-bean tempeh (*tempe turi*, made from the seeds of *Sesbania grandiflora*). Pigeon-pea tempeh (*tempe kacang iris*, made from the seeds of *Cajanus cajan*). Green-bean tempeh (*tempe kacang merah*, made from the seeds of *Phaseolus vulgaris*, which are called *kacang buncis* in Indonesian). Lima-bean tempeh (*tempe kara or tempe kara kratok*, made from the seeds of *Phaseolus lunatus*). Lablab-bean tempeh (*tempe kara-kara or tempe koro wedus*, made from the seeds of *Lablab purpureus*, which is called hyacinth bean in the USA). Jack-bean tempeh (*tempe kara bedong or tempe kara pedang*, made from the seeds of some strains of *Canavalia ensiformis*). Lupin tempeh (developed in Australia, made from the seeds of the narrow-leafed sweet lupin (*Lupinus angustifolius*) or the Andean lupin (*Lupinus mutabilis*)). Cowpea or black-eyed pea tempeh (developed in West Africa and Thailand, made from the seeds of *Vigna unguiculata*). Note: Chickpeas (garbanzo beans), baby limas, and great northern beans have also been used to make tempeh.

Grain & soy tempehs: Wheat & soy tempeh, barley & soy tempeh, rice & soy tempeh, bulgur & soy tempeh. Grain tempehs: Barley, rice, wheat, oats, and rye have been used with good results.

Presscake tempehs: Okara tempeh (called *tempe gembus* in Central and East Java where it is most popular, and called *oncom hitam* in West Java where it is not widely used). Peanut presscake tempeh (called black onchom (*oncom hitam*) in the Bogor region of West Java where it is most widely consumed, or white onchom (*oncom putih*) in the Tasikmalaya region, or "tempeh from peanut presscake" (*tempe bungkil kacang*) in East Java). Coconut presscake tempeh (*tempe bongkrek, tempe bungkil kelapa, or tempe kapuk*) comes in several varieties and can be can be poisonous if the pathogenic aerobic bacterium *Pseudomonas cocovenenans* grows on it and produces either yellow-colored toxoflavin or the more toxic colorless bongkrek acid. Peanut- & coconut-presscake tempeh (*tempe menjes*). Mung-bean-presscake tempeh (*oncom hitam or oncom ampas kacang hijau*). Soy- & peanut-presscake tempeh. Defatted soy-meal tempeh.

Seed tempehs (nonleguminous): Rubberseed tempeh (*tempe kaloko*) is made from the seeds of the rubber tree (*Hevea brasiliemsis*). Okra tempeh. Sesame & soy tempeh. Tempeh extenders and adulterants: Okara, cassava, mung-bean presscake, soybean hulls, sweet potato, coconut- or peanut presscake, papaya. The stages of tempeh fermentation (underripe to overripe): Premature tempeh (*tempe koro*), mature tempeh, slightly overripe tempeh (*tempe semangit or tempe lanas*), overripe tempeh (*tempe busuk or tempe bosok*), rotten tempeh. Tempeh wrappers.

Appendix D "Soybean production and traditional soyfoods in Indonesia" discusses: Soybean production in Indonesia, traditional Indonesian soyfoods: Kechap (*kecap / ketjap, incl. kecap manis*), taucho (*tauco or taoco*), okara onchom, sereh (*sere*), taokoan or takoa, tofu (*tahu*). Other nonfermented soyfoods: Soy sprouts (*taugé kedele*), yuba (*bungah tahu*), soymilk, roasted soybeans (*dele sangan, kedele sangrai*), roasted soy grits or full-fat flour (*bubuk kedele*), fresh green soybeans (*kedelai rebus*).

Note: This is the earliest English-language document seen (March 2009) uses the word "taucho" (spelled in that way) to refer to Indonesian-style miso.

Appendix E: "The microbiology and chemistry of tempeh fermentation" discusses: What are fungi?, general characteristics of *Rhizopus* molds, *Rhizopus* species used to make tempeh, pure cultures versus mixed cultures, preparing soybeans for fermentation, requirements for mold growth, general changes during tempeh fermentation, changes in nutrients and digestibility, the finished tempeh, the advantages and disadvantages of tempeh fermentation, suggestions for further research.

Appendix H: "Onchom or ontjom" discusses: Introduction. The varieties of onchom (*onchom merah* or *onchom beureum*): Peanut-presscake onchom, okara onchom, soy onchom, coconut-presscake onchom. Making peanut-presscake onchom in a commercial shop. Making okara onchom in a commercial shop. The microbiology of onchom. Laboratory studies of onchom. Aflatoxins. Works

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on onchom and Neurospora. People connected with onchom and Neurospora. Continued. Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

5643. *Food Product Development.* 1979. Oriental sauces thrive on ethnic food boom. 13(7):58. July.
• ***Summary:*** Discusses two new sauces made by Kikkoman Shoyu Co., Ltd. of Noda, Japan: Japanese-Style Steak Sauce (resembling Japanese Tonkatsu Sauce; $0.79 for a 12-oz bottle) and Sweet & Sour Sauce ($0.69 for a 9.5-oz jar). The ingredients of each are given. The addition of soy sauce, an ingredient not found in Kikkoman Tonkatsu Sauce, makes the Steak Sauce better suited to American tastes. Both sauces have been on the market a little more than 6 months, contain soy sauce as an ingredient and flavor enhancer (not as a base), and are made and packaged in California. Kikkoman did taste panel tests using a consulting form that employs about 200 housewives from northern California.

Note: It is not clear whether the soy sauce used in the two products is made by Kikkoman in Japan or in Walworth, Wisconsin.

5644. **Product Name:** Soysage (Meatless Sausage Based on Cooked Soybeans).
Manufacturer's Name: Joy of Soy.
Manufacturer's Address: 510 Kasota Ave., Minneapolis, MN 55414.
Date of Introduction: 1979. July.
Ingredients: Filtered water, organic whole wheat flour, organic rolled barley, organic soybeans, tamari soy sauce (containing water, soybeans, wheat, seasalt), unrefined sesame oil, yeast, spices, granulated garlic, dried onion, vinegar, seasalt.
How Stored: Refrigerated.
New Product–Documentation: Label. 1981. 3 inch diameter. Self adhesive. Green on yellow. "A spicy vegetarian soyfood. Soysage is precooked. To serve, slice in sandwiches, scramble with eggs, or crumble over pizza."

Jamie Stunkard. 1981. Soyfoods. Summer. p. 41. "Making Soysage." The main soy ingredient in this soysage is cooked soybeans; it contains no okara.

5645. **Product Name:** New World Rice & Tofu Sandwich.
Manufacturer's Name: New World Enterprises. Renamed New World Natural Foods in 1985.
Manufacturer's Address: 226 Cypress St., Brookline, MA 02146. Phone: 617-232-5973.
Date of Introduction: 1979. July.
Ingredients: Organic short grain brown rice, tofu, carrot, lettuce, scallions, peanut butter, miso, safflower oil, tamari, ginger root, and sea salt, wrapped in chapati bread.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Talk with Paul Duchesne. 1989. Aug. This company was started in about 1980-81 by a woman in Brookline. He does not know from whom she learned to make the sandwich. The product was called Rice and Tofu Sandwich. Label sent by Paul Duchesne. 1989. Aug. 11. 3 inch diameter. Dark blue lettering on a light blue and orange background illustration of the world. This label is currently in use by Emily Merghart in Brookline. Phone: 617-232-5973.

Talk with Emily Morse Merghart. 1989. Aug. 18. Emily started this company on 5 July 1979 at 226 Cypress St. in Brookline. Before that she was a ballet dancer. Her husband was a dancer. She developed the product herself and did not learn the process from anyone else. She never met Paul Duchesne. This was her first sandwich. She is positive that there were no other rice and tofu sandwiches on the market at the time; she never saw any in the many stores to which she distributed hers. In mid-1988 she moved to her present address, 157 Sutherland Rd., Brookline, Massachusetts 02146. Phone: See above. She now has a line of ten sandwiches, and makes 1,000 a day.

5646. **Product Name:** Nori Rolls (With Tofu Filling).
Manufacturer's Name: Real Food Co.
Manufacturer's Address: Boulder, Colorado. Phone: 449-7790.
Date of Introduction: 1979. July.
Ingredients: Rice, nori, tofu, zucchini, green pepper, carrots, turnips, onions, sesame oil, miso, umeboshi salt plums, shoyu, garlic, spices.
Wt/Vol., Packaging, Price: 8 oz.
New Product–Documentation: Label. 1981. 6.25 by 2.5 inches. Paper. Black on tan. Shurtleff & Aoyagi. 1979. Tofu & Soymilk Production. p. 167.

5647. Shurtleff, William; Aoyagi, Akiko. 1979. Tofu & soymilk production: A craft and technical manual. Lafayette, California: New-Age Foods Study Center (Renamed Soyfoods Center in Sept. 1980). 336 p. Illust. by Akiko Aoyagi Shurtleff. Index. July. 28 cm. First published in Aug. 1977 as a rough photocopied manuscript with a yellow cover. [223 ref]
• ***Summary:*** Contents: Preface. 1. How to start a tofu shop or soy dairy. 2. Setting up shop. The community or village shop; The traditional caldron shop; The steam cooker plant; The pressure cooker plant; The soy dairy. The automatic steam cooker plant. The modern factory. 3. Ingredients. 4. Sanitation and safety. 5. Principles of tofu & soymilk production. 6. Tofu. 7. Firm tofu, pressed tofu & smoked tofu. 8. Foods made from tofu. Introduction, creamy tofu dressing, tofu chip dip, tofu mayonnaise, tofu cream cheese, cottage cheese, sour cream, tartare sauce, tofu eggless egg spread or missing egg salad, tofunafish spread or salad, tofu rice salad, tofu cheesecake (Sprucetree Baking Co. and White Wave), tofu pies, tofu creamies or tofu-coconut cream

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bars, tofu tarts, tofu turnovers, tofu puddings, fruit whips, custards and parfaits, tofu cinnamon rolls, tofu whipped cream, tofu icing and cream cakes, marinated tofu (fried or baked, p. 166), tofu jerkey [sic, jerky] (p. 166), teriyaki tofu, tofu teriyaki, savory baked tofu, savory pressed tofu (with five spice powder, *wu-hsiang toufu-kan*), nori rolls with brown rice & tofu, tofu & brown rice burgers, tofu baby foods, tofu in ready-made sandwiches. 9. Using okara, whey, curds & hulls. Deep-fried tofu (cutlets, cubes, burgers, treasure balls, burger balls, pouches, puffs). 11. Soymilk. 12. Dairylike products made from soymilk. Frozen soymilk desserts (soymilk ice cream, frozen soymilk yogurt, soymilk sherbets, soysicles, frozen soymilk custard, ice soymilk), fermented or cultured soymilks (soymilk yogurt, acidophilus soymilk, soymilk kefir, soymilk puma, soymilk buttermilk and other fermented milks), soymilk cheeses (unripened fresh, unripened soft {quark, queso blanco, panir, etc.}, ripened soymilk cheeses), soymilk mayonnaise, soy shakes and energy drinks, soymilk eggnog (soy nog), soymilk whipped cream, chip dips, puddings, custards. 13. Silken tofu & pressed silken tofu (Silken tofu is made from concentrated soymilk). 14. Lactone silken tofu (GDL). 15 Grilled tofu. 16. Fermented tofu. 17. Dried-frozen tofu. 18. Yuba. Appendix A: Resources: People & institutions connected with tofu & soymilk production. B: Weights, measures & equivalents. Bibliography. About the New-Age Foods Study Center.

See ¼-page ads in *East West Journal*, 1979 Dec. p. 4, 1980 Jan. p. 19.

Note 1. This is the earliest English-language book seen with the term "soymilk," spelled as one word, in the title.

Note 2. This is the earliest document seen (Feb. 2002) that mentions tofu jerky or any kind of soy jerky.

Note 3. This is also the earliest English-language document seen (Feb. 2004) that uses the word "quark," or "queso blanco," or "panir" in connection with soy cheese or tofu.

Note 3. This is also the 2nd earliest English-language document seen (Feb. 2004) that uses the term "smoked tofu," but the first that uses it in its modern sense.

Note 5. This book was first printed on 1 Aug. 1977 in a photocopied and rough-typed edition with a yellow and black cover.

Note 6. Reviews of this book appeared in many publications. (1) Richard Leviton. 1980. *Soycraft* (Massachusetts). 2(1):63-64. Winter. "An indispensable operating manual for soyfoods entrepreneurs ... The illustrations alone make the book a valuable reference tool... a sustained inspiration. The only book of its kind in English." (2) *Food Chain* (Intermediate Technology, England). 1997. No. 20. March. p. 6. Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

5648. Shurtleff, William. 1979. Report on trip to second annual meeting of Soycrafters Association of North America (Amherst College, Massachusetts, July 26-29), and subsequent visit to Rochester, New York. P.O. Box 234, Lafayette, CA 94549. 2 p. Aug. Unpublished manuscript.
• ***Summary:*** July 15–9:45. Akiko and I fly to New York City from Lafayette. The previous day our *Book of Tempeh* had arrived from Harper & Row, and we took it with us to the conference. Stay in a hotel near a park, with fear of being mugged or robbed in this unfriendly city.

We attend and I speak at Buckminster Fuller's World Games (about world hunger and world resources) in New York City. Have a nice talk there with Robert Rodale.

Akiko and I meet Uri Geller at his home / apartment–at his invitation, because he knows and admires our Book of Tofu; he is a very nice, healthy man with world-famous psychic abilities. He bends my house key before my eyes by psychic force, without touching it. I carry that useless house key on my key chain for years and show it to many people. Uri also replicates a drawing I made of a stick figure standing with both hands held high under a rayed sun; he was sitting across the room and could not see what I had drawn.

I do about 3 live radio broadcasts for Gary Null (WBAI Natural Living) and visit his home for taping segments; he is a bachelor. Also do an evening program on soyfoods for Annemarie Colbin at her home. And we have dinner at The Cauldron (that makes tofu–and probably tofu cheesecake–we visit the kitchen) and Souen (which makes tofu cheesecake), both macrobiotic restaurants.

While in New York City, Akiko and I visit our editors at Harper & Row headquarters–many stories up in Manhattan.

July 22–Overnight at Ira and Kathy Leviton's home at Sunrise Farm, 100 Heath Road, Colrain, Massachusetts.

July 24? Visit Michael and Shelley Cohen's Tempeh Works, which is preparing to open in a gas station in Greenfield, Massachusetts (production officially began on Oct. 1). I take 3 pages of handwritten notes and many photos for our forthcoming book *Tempeh Production* (see p. 95-98). I first describe each piece of equipment in the shop and illustrate some, then describe the process (20 lb of dry beans makes 52 lb of tempeh), and finally draw a detailed floor plan of the shop. This was the first batch of tempeh Michael had ever made in this shop. He sold 200 lb of tempeh to the Soycrafters Conference later that week.

July 25. Our book *Tofu & Soymilk Production*, published by our New-Age Foods Study Center, arrives from the printer (Braun Brumfield) in Ann Arbor, Michigan. It is the first book we have self-published properly, and the first to contain an ISBN (our second, 0-933332-01-7) and an LCCN.

July 26-29 (Thurs. to Sun.) Second Annual Soycrafters Association of North America (SANA) conference at Hampshire College in Amherst, Massachusetts, organized and run by Ira / Richard Leviton. 230 people attend. It is Akiko's first SANA conference. A magnificent event. Also first issue of *Soyfoods* magazine out, published by Leviton. One evening there is a square dance. I recall Jon Lee of New

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England Soy Dairy being a superb square dancer. I meet angry Paul Duchesne. Steve Earle from San Jirushi gives a wooden speech on the history of his company and the tamari they make.

July 30-31. After the conference, with Richard Leviton driving and Jeremiah Ridenour on board, we visit The Tofu Shop, a soy deli at 686 Monroe Ave., Rochester, New York, founded by Andy Schecter, Greg Weaver, and Norman Holland. Very interesting. Ira takes lots of photos for an article in *Soyfoods* magazine. One nice one shows Akiko and Jeremiah Ridenour seated in the Deli at a table which is loaded with soyfoods dishes ready to eat.

Will in Rochester, Shurtleff presented a lecture and slide show to 150 people at the Eisenhart Auditorium in the Rochester Museum and Science Center; it was sponsored by The Tofu Shop.

Aug. 2—We arrive back in Lafayette. Address: New-age Foods Study Center, Lafayette, California.

5649. Shurtleff, William; Aoyagi, Akiko. 1979. Kecap (Indonesian soy sauce) (Document part). In: Shurtleff & Aoyagi. 1979. The Book of Tempeh: A Super Soyfood from Indonesia. Professional hardcover edition. New York, NY: Harper & Row. 248 p. See p. 168-69. Illust. by Akiko Aoyagi Shurtleff. [190 ref]

• ***Summary:*** This section contains the most detailed English-language information on Indonesian style soy sauce. "Formerly spelled *ketjap* (and now spelled *kecap* in Indonesia) [pronounced KEH-chup], this Indonesian soy sauce, generally made from black soybeans, has a dark-brown color and pleasant aroma. Unlike Japanese soy sauce, it [usually] contains no wheat or other grain and is fermented for a relatively short time. A popular all-purpose seasoning used with the entire panorama of Indonesian cuisine, it comes in three basic types:

"*Sweet Indonesian soy sauce* (*kecap manis*), which is by far the most popular, accounts for an estimated 90 percent of the nation's total soy sauce production. It has a very thick consistency and a strong, sweet molasses flavor, since it may contain up to 50 percent palm sugar [jaggery, *gula merah*]. Unlike most other Asian soy sauces, it contains numerous spices (such as star anise) which enrich the flavor. Widely used in stews and sambals, it is available in the West at Indonesian specialty shops. A recipe for making a similar product at home starting from Japanese soy sauce (shoyu) is given in the Preparatory Techniques section [p. 48]. The top grade contains 6% protein, 1% fat, 9% carbohydrates, 63% water (moisture), and 18% salt.

"*Mellow Indonesian soy sauce* (*kecap manis*) is a close relative of its sweet counterpart except that it contains only about half as much palm sugar and therefore has a somewhat thinner consistency and less dominant sweetness.

"*Salty Indonesian soy sauce* (*kecap asin*), also called light soya sauce, is of Chinese origin and has a thin consistency, light color, and rather salty flavor, not well suited to most Western tastes.

"The Indonesian word *ketjap* and the American word *ketchup* (tomato paste) are believed to share a common ancestry, having both been derived from the Malay word *kechap*, which refers to a kind of spiced fish sauce..."

"Kechap is traditionally made by a two-part fermentation process: a solid-substrate mold fermentation and a submerged brine fermentation. To make sweet Indonesian soy sauce, whole black soybeans (which give the product a better flavor and aroma than regular yellow soybeans) are soaked for 12 hours in excess water, boiled until tender, drained, and cooled. Spread on round trays of woven bamboo (*tampah*), they are covered with other trays (or in some cases rice straw and gunny sacks), placed in an incubation room on floor-to-ceiling shelves or racks, and allowed to stand for 3 to 5 days. During this time the beans are inoculated naturally by mold spores of *Aspergillus oryzae* and/or *Rhizopus* species (*R. arrhizus* and *R. oligosporus*) that are on the trays or in the air of the incubation room. No special inoculum is added. When the beans are covered with a fragrant mycelium of light yellow mold, they are crumbled by hand, sun-dried for 2 days, then rubbed with a clean cloth to remove excess mold spores, which are sifted off and discarded. The beans are now mixed with an 18 to 20% brine solution (4 to 6 liters of brine for every 1 kg of dry soybean koji) in 2-foot-deep earthenware or wooden crocks, which are put outdoors in the sunlight; they are left open by day [unless it rains] and covered at night. The contents are stirred from time to time and allowed to stand for an average of 1 month (minimum 2 weeks; maximum 1 year)... After fermentation is completed, the mash is brought to a boil (some fresh water being added if necessary), then filtered and lightly pressed to extract the flavorful liquid. The residual solids are mixed with several times their volume of 20% brine, boiled for several hors, and filtered again to yield the second extract. The process of adding brine, boiling, and filtering is repeated one to three more times to yield lower-grade extracts. The final residue cake, which contains very little flavor or nutrients, is used as livestock fodder. The liquid obtained from each extraction is further processed separately to provide different grades of kechap. Nitrogen (or protein) content is one of the criteria used in determining kechap quality. Grade 1, usually made from the first extract, must contain at least 6% protein...

"Next, 40 to 50 parts by weight of palm sugar is caramelized until it is light yellowish brown, then combined with 100 parts by weight of one of the extracts, together with various spices and herbs, the most important of which is star anise (*Illicium verum* or *I. anisatum;* called *pekak* or *bunga lawang* in Indonesian), the licorice-flavored tan seeds of a dry 8-pointed star-shaped fruit of an evergreen tree native to China and widely used in Chinese cookery. Also used are coriander, fennel (*adas pintang*), and sliced garlic, all

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of which are dry roasted. Sprigs of lemongrass, laos, and/or salam leaves may be added fresh. Some makers also add a fish sauce or extract (*sari ikan*) and/or bouillon, plus wheat flour or cassava flour thickeners. The mixture is now brought to a boil and concentrated by simmering for 4 to 5 hours; finally it is filtered through cheesecloth and stored in tanks, from which it is ladled manually via a funnel into small glass bottles bottle and hand capped. Bottles containing first and second grade kechap have a red label, while lower-grade extracts have a black label."

"Most Indonesian kechap is made in small-scale cottage industries. Of the 408 producers, 205 are located in West Java, 131 in Central Java, 68 in East Java, and 4 in Jakarta. The largest and most modern factory is the A.B.C. Kechap Factory, Tangerang, Jakarta." Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

5650. Shurtleff, William; Aoyagi, Akiko. 1979. The book of tempeh: A super soyfood from Indonesia. Professional hardcover edition (Continued). New York, NY: Harper & Row. 248 p. Illust. by Akiko Aoyagi Shurtleff. Index. July 28 cm. [190 ref]

• ***Summary:*** Continued: Numbered figures (line drawings unless otherwise stated. The capital letter before the decimal refers to the appendix number). B.1 Table: Tempeh shops in Indonesia by province: Home-industry scale. B.2 Table: Relative frequency of tempeh consumption in Indonesia (by province). B.3 Carrying tempeh to market in Java using a shoulder pole and trays stacked on two baskets. B.4 Cost of one day's supply of protein in Indonesia.

C.1 Table: Edible grain legumes. C.2 Map: Distribution of legumes in southeast Asia. C.3 Winged bean, showing leaves, pods, flowers and beans. C.4 Leucaena leaves and pods (*peté china*). C.5 Reduction in bongkrek toxicity from bongkrek acid during fermentation (Ko 1977). Okra. Packets of tempeh, ready to sell, wrapped in leaves and tied. A large soybean, with hilum showing.

D.1 Table: Soybean production in Indonesia (1950-1976). D.2 Table: Major Indonesian food crops. D.3 Table: Indonesian soybean production and yields (by province). D.4 Map: Major soybean producing districts in Java (1976, most are in East Java, led by Jemper and Pasuruan). Table: Daily per capita consumption of tempeh (by province, led by Central Java, then West Nusa Tenggara, Yogyakarta, and East Java). Table: Percent of dietary protein supplied by major food categories (led by cereal grains, then fish, nonlegume vegetables, and soy products). Table: Percentage of dietary protein supplied by soy products (by province, led by Central Java, then East Java, Yogyakarta, and West Java). D.5 Table: Statistics on production and consumption of basic Indonesian soyfoods (led by tempeh, then tofu, kechap, taucho). D.6 Star anise. Grinding soybeans for tofu using traditional push-pull stone mills. Pouring soy curds into cloth-lined forming box. Javanese shadow puppet (*wayang kulit*).

Table: Classification of *Rhizopus oligosporus*. E.1 Two stages in the germination of a spore (after 1½ and 10 hours). E.2 Two successive views of hyphal tip growth at half-hour intervals.

E.3 Rhizopus oligosporus (Frazier 1957, showing sporangium, columella, apophysis, sporangiophores, stolon, sporangiospores, node, rhizoid). E.4 *Rhizopus stolonifer*. A. Columella and attached spores. B. Collapsed (invaginated) columella (Webster 1970).

E.5 Life cycle of *Rhizopus* (Raven and Everet 1976). E.6 Graph: Changes in tempeh oil and moisture content during fermentation (Sudarmadji 1977). E.7 Graph: Three phases of tempeh fermentation (rapid, transition, and deterioration; Sudarmadji 1977). E.8 Graph: Changes occurring during tempeh fermentation (temperature, soluble solids, pH, soluble nitrogen, and reducing solids; Steinkraus et al. 1960). E.9 Graph: Yields of tempeh and of solids and different stages of the fermentation process (100 gm of whole dry soybeans yield 173 gm of tempeh on average; Steinkraus 1960; Murata 1967). E.10 Table: Loss of solids and protein during tempeh fermentation. E.11 Table: Percentage changes in composition of key essential amino acids during tempeh fermentation. E.12 Table: PER (protein efficiency ratio, a measure of protein quality for humans) changes during tempeh fermentation. E.13 Graph: Changes in concentration of three carbohydrates during tempeh fermentation (sucrose, stachyose, and raffinose, all decrease; Shallenberger et al. 1976). E.14 Table: Amount of B-complex vitamins in 100 gm of tempeh vs. 100 gm unfermented soybeans (all increase in tempeh except thiamine {vitamin B-1}). Changes in peroxide value and TBA value tempeh and soy flour during storage at 37°C (98.6°F; both rise rapidly in soybeans, but stay near zero and stable for tempeh; Watanabe et al. 1971).

H.1 Table: Foods known in Indonesia as "onchom" (made from peanuts or soybeans). H.2 Selling onchom in a Javanese market. H.3 Graph: Changes in soy onchom during fermentation (temperature, soluble solids, pH, soluble nitrogen, and reducing solids; Steinkraus et al. 1965). H.4 Flowchart for preparation of peanut presscake onchom. Unnumbered illustrations show 12 steps in the process of making onchom in a commercial shop in Indonesia. Neurospora: Budding conidia, conidiophore. H.5 Graph: Reduction in onchom aflatoxin during fermentation with *Neurospora* (Ko 1974). A thermometer, showing both Fahrenheit and Centigrade.

Glossary of Indonesian foods, spices, etc. Agar. Amaranth, Indonesian. Apem. Arak. Aren sugar. Aromatic ginger. Asam. Bananas (pisang). Basil. Bawang merah. Bawang putih. Bayam. Bean sprouts. Belimbing. Blachan. Brem. Bumbu. Candlenuts (kemiri). Carambola (belimbing). Cassava. Chabé. Chayoté. Chilies (red, green, fiery dwarf). Two-page spread (p. 220-21) showing illustrations of Indonesian natural foods. Choko. Citrus leaves. Cloves. Coconut. Coconut, grated. Coconut milk and cream. Coconut

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oil. Coconut water. Coriander. Cumin. Dageh. Daun asam. Daun jeruk purut. Daun salam. Daun seré. Daun-so. Durian. Fermented fish. Fermented fish sauce. Fruits. Galangal, greater. Galangal, lesser. Gingerroot. Indonesian amaranth. Jackfruit. Jaggery. Jinten or jintan. Kangkung leaves. Kecap (kecap) or ketjap. Kemangi leaves. Kemiri. Kenchur root. Ketjap. Ketumbar. Kluwak. Koji. Kolang-kaling. Krupuk. Kunyit. Labu siam. Laos root. Lemongrass. Lime leaves. Lombok. Melinjo leaves. Mochi, Indonesian (*uli*). Mung-bean sprouts. Nutmeg. Okara. Onchom or ontjom. Palm sugar. Pandanus leaf. Pasta. Pepper. Peté beans. Petis. Peuyeum. Prawn paste. Putjung nuts. Ragi. Rempeyek. Rice. Salam leaf. Sambals. Santan. Sayur asin. Seré or serai. Shallots. Shrimp crisps. Shrimp paste. Soursop. Soy sauce, Indonesian. Star fruit. Swamp cabbage. Tahu. Tamarind. Taocho, tauco, taoco, or taotjo. Taogé or taugé. Tape. Tapioca. Taucho or tauco. Terasi. Tofu. Trasi. Tuak or tuwak. Turmeric. Winged bean. Note on monosodium glutamate. A woman holding a tray of leaf-wrapped tempeh in Surinam. Photo of Shurtleff and Aoyagi on inside rear dust jacket. Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

5651. *Soycraft* (*Greenfield, Massachusetts*). 1979. Soyfoods at San Francisco's New Earth Exposition. 1(1): 4. Summer.
• ***Summary:*** "The Soycrafters Association of North America was offered the free use of a booth at the New Earth Exposition in San Francisco from March 15-18. The booth was manned by Bill Shurtleff, Akiko Aoyagi, Larry Needleman, and friends from Quong Hop Tofu Company. Over 50,000 people attended the exposition and an estimated 12,000 visitors stopped by the booth and tasted free samples of Creamy Tofu Dip and slices of Tofu Burgers and Teriyaki Tofu, all prepared by Quong Hop. Over 6,000 "What is Tofu?" pamphlets were given away and Bill Shurtleff gave two one-hour slide presentations about soyfoods, protein, and world hunger on the main Exposition stage to an audience of 400. Down the aisle, the Gilman Street Gourmet had a large booth where over 3,000 tofu burgers were sold while The Farm [Farm Foods] sold delectable soymilk ice cream (Soy Ice Bean), tofu salad [like an eggless egg salad], and tofu cheesecake."

5652. **Product Name:** Tofu Turnover.
Manufacturer's Name: Tumaro's, Inc.
Manufacturer's Address: Los Angeles, California.
Date of Introduction: 1979. July.
Ingredients: Crust: Whole wheat flour (organic), corn oil, water, sea salt. Filling: Tofu, mung bean sprouts, celery, green peppers, onions, shoyu, arrowroot, ginger, garlic, pepper.
How Stored: Refrigerated.
New Product–Documentation: Recipe given by Shurtleff & Aoyagi. 1979. Tofu & Soymilk Production. p. 165.

5653. **Product Name:** Missing Egg Salad.
Manufacturer's Name: White Wave.
Manufacturer's Address: 3869 Walnut St., Boulder, CO 80301.
Date of Introduction: 1979. July.
Ingredients: Tofu (organically raised soybeans, filtered water, nigari salt bitterns), celery, dill pickles, tofu mayonnaise, shoyu, prepared (wet) mustard, honey, granulated onion, granulated garlic, granulated kelp, turmeric, poppy seeds, dill weed, paprika.
Wt/Vol., Packaging, Price: 10 oz deli container. Retails for $1.43.
How Stored: Refrigerated.
New Product–Documentation: Label. 1981. 2 5 by 2.5 inches. Paper. Brown on tan. Wings on chicken legs illustration. Shurtleff & Aoyagi. 1979. Tofu & Soymilk Production. p. 163. "White Wave in Boulder, Colorado, uses the following recipe for their Missing Egg Salad. Parboil 48 pounds of tofu for 7 minutes and drain very well. Add tofu and the following ingredients to a VCM: 2½ bunches celery, chopped; 3 pounds chopped dill pickles, 13 cups Tofu Mayonnaise, 2¼ cups shoyu; 14 ounces prepared (wet) mustard, 3/4 cup honey, 9 tablespoons granulated onion, 5½ tablespoons granulated garlic; 4½ tablespoons granulated kelp; 3 tablespoons turmeric; 1 tablespoon poppy seeds; 9 teaspoons dill weed, and 4 teaspoons paprika. Mix briefly on low speed to preserve chunks. Yields 56 pounds. Sold in 10-ounce containers for $1.43 retail or sold on a tofu salad sandwich for $1.25 retail by Grateful Sandwiches in Denver, their best seller!"

5654. **Product Name:** Tofu Turnover (with Spinach).
Manufacturer's Name: White Wave.
Manufacturer's Address: 3869 Walnut St., Boulder, CO 80301.
Date of Introduction: 1979. July.
Ingredients: Crust: Whole wheat flour, water, salt. Filling: Tofu, spinach, mushrooms, nutritional yeast, chopped onion, oil, shoyu, sesame salt, dill weed.
How Stored: Refrigerated.
New Product–Documentation: Recipe given by Shurtleff & Aoyagi. 1979. Tofu & Soymilk Production. p. 165. This was one of America's earliest refrigerated tofu entrees.

5655. **Product Name:** Marinated Tofu Cutlets.
Manufacturer's Name: White Wave.
Manufacturer's Address: 3869 Walnut St., Boulder, CO 80301.
Date of Introduction: 1979. July.
Ingredients: Firm tofu. Marinade: Shoyu, water, granulated onion, granulated garlic, dark (toasted) sesame oil, powdered ginger, cayenne.
How Stored: Refrigerated.

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New Product–Documentation: Recipe for this non-fried product is given by Shurtleff & Aoyagi. 1979. Tofu & Soymilk Production. p. 166.

5656. Flinders, Carol. 1979. Tofu, a soyfood, captures food writer's interest. Notes from Laurel's Kitchen. *Hartford Courant* (*Connecticut*). Aug. 8. p. 2A.
• ***Summary:*** This article is almost identical to one by the same writer titled "Soybean key to world food plight" Notes from Laurel's Kitchen" published in *Rocky Mountain News* (Denver, Colorado) on May 16 (p. 24A).

5657. Lin, J.Y.; Wang, H-I.; Yeh, Y-C. 1979. The mutagenicity of soy bean sauce. *Food and Cosmetics Toxicology* 17(4):329-31. Aug. [15 ref]
• ***Summary:*** This is the first investigation of mutagens in shoyu. The Ames test was used. Mutagenicity was studied by adding various levels of nitrite to shoyu. Mutagenic material was formed in shoyu when 2000 ppm of nitrite was present at pH 3.0. Addition of ascorbic acid to the shoyu prevented the formation of mutagenic products. Address: Inst. of Biochemistry, College of Medicine, National Taiwan Univ., Taipei.

5658. Simonds, Nina. 1979. Chinese cuisine: Soybeans. *Gourmet* 39:28-29, 74-77. Aug.
• ***Summary:*** After a brief history of soya in China, gives recipes for: Fried soybeans [soynuts]. Sweet soybean milk. Stir-fried soybean sprouts red-in-snow (incl. how to sprout soybeans). Braised soybeans and meatballs. Spareribs and soybean sprout soup. Stuffed wheat gluten balls with soybean sprouts (*Mien Chin Jou Yüan*). Braised bean sticks [*fu tsu;* dried yuba sticks] with black mushrooms. Buddha's delight (*Lo Han Su Ts'ai*). Stuffed bean curd rolls. Sweet-and-sour fish in bean milk skin [yuba]. Bean milk skin (*fu p'i*) and eggplant rolls.

5659. Aishima, T. 1979. Classification of soy sauce on principal components in GC profiles. *Agricultural and Biological Chemistry* 43(9) 1905-10. Sept. [15 ref] Address: Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

5660. Aishima, T. 1979. Objective evaluation of soy sauce by statistical analysis of GC profiles. *Agricultural and Biological Chemistry* 43(9) 1935-43. Sept. [24 ref] Address: Noda Inst. for Scientific Research, Noda-shi, Chiba-ken, Japan.

5661. Esko, Wendy. 1979. Introducing macrobiotic cooking. Tokyo: Japan Publications. 144 p. Foreword by Aveline Kushi. Preface by Edward Esko (both written June 1978). Illust. by Bonnie Harris. Index. 26 cm. Reprinted in 2006 by Square One Publishers (Long Island, NY. 240 p.).
• ***Summary:*** The author was introduced to macrobiotics in upstate New York in about 1971. This is her first book on macrobiotics. It was originally published under the title of *An Introduction to Macrobiotic Cooking* by the East West Foundation, 17 Station Street, Brookline, Massachusetts 02146. Though copyrighted in 1978, the first edition appeared in Sept. 1979. The fourth printing was May 1981.

The chapter titled "Beans including tofu and natto" gives descriptions of and recipes for making. Japanese black beans (black soybeans, p. 54; "These beans are therapeutic for the sexual organs and will relieve an overly yang condition caused by too much animal food or fish.") Soybeans (p. 54. "These beans are the most yin of the bean family... It is recommended that soybeans be eaten only occasionally as a separate side dish. Because they are very yin, they should be cooked with yang vegetables such as lotus root or burdock, for balance. The best way to eat soybeans is in the form of *tofu, okara, natto, tempeh,* and, of course, miso and tamari.") Tofu, and Homemade tofu (curded with nigari, p. 54-55). Okara (p. 55-56). Tofu and corn. Tofu, onions and water cress. Dried tofu (dried-frozen, p. 57). Yuba (dried soy milk, how to make at home). Vegetables and dried soy milk (p. 57). Ganmodoki (Tofu and jinenjo patties, p. 57-58). Natto (description and how to make at home, p. 58-59).

Other soy-related recipes include: Tofu soup (p. 68). Miso soup (p. 69-70, basic, or quick). Watercress miso soup (p. 71). Daikon and sweet rice dumpling soup (with miso). Chinese cabbage and tofu miso soup (p. 71). Aveline Kushi's miso stuffed lotus root (p. 86). Tofu dressing (p. 91). Miso-tahini spread (p. 92). Miso-sesame spread (p. 92). Miso-lemon sauce (p. 93). Tofu dip (p. 93). Miso with scallions (p. 95). Tamari (description, p. 95). Tekka (made with Hatcho miso, p. 96). Miso pickles (p. 100-01). Tamari pickles (p. 101). Tofu plaster (p. 130). Ume-Sho-Kuzu drink (with umeboshi, tamari and kuzu, p. 131). Ume-sho-bancha (with tamari, p. 131). Use of tamari, miso, and tekka (p. 132).

Also includes instructions for making amasake at home (p. 116; it is a natural sweetener made from fermented sweet rice), and a recipe for Amasake bread (p. 107), instructions for making seitan at home (p. 46-47, using 3½ lb of hard spring or hard winter whole wheat flour; spring wheat flour produces a much softer texture of seitan than the winter variety), and recipes for seitan stew, seitan-barley soup, sauteed vegetables and seitan, stuffed cabbage with seitan, and seitan croquettes (p. 47-49), plus recipes for leftover seitan (p. 125). Address: East West Foundation, near Boston/ Cambridge, Massachusetts.

5662. Kohei, Homma. 1979. Kikkôman jûgyôin shimin seikatsu chôsa [Survey on the lifestyle of Kikkoman employees]. Rikkyo Daigaku Shakaigaku Kenkyushitsu. 39 p. [Jap]*

5663. Yang, P.; Chen, Steve. 1979. [Soy sauce production

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manual]. Taipei, Taiwan: American Soybean Assoc. 130 p. Sept. [Chi]*
Address: American Soybean Assoc., Taiwan.

5664. Nathan, Joan. 1979. The venerable soy sauce from Vietnam. *Washington Post.* Oct. 4. p. E1, E3.
• ***Summary:*** After the fall of Saigon in 1975, Vietnam no longer exported goods to the United States. So Vietnamese living in the USA were no longer able to buy their traditional soy sauce, named Tuong, a key ingredient in many Vietnamese recipes. Tuong is quite different from its Japanese or Chinese counterparts. It is "much lighter in color and thicker in consistency, with a slightly sour taste."

Now Tuong is being made in Bowie, Maryland (in the Ardmore Industrial Park), by Hoang Van Chi (a chemist) and his wife Hoang Phan. Many relatives have helped them to start the small business named Vietnam Food and Drink.

Their first shipment, in June 1975, was 4,000 pounds, sent to Paris where the largest community of expatriate Vietnamese live. "The second shipment went to California and the third to Texas."

Tuong is not used in place of salt as is soy sauce in Japanese and Chinese cookery. For that the Vietnamese use Nuoc Mam, made by layering fresh fish and salt, in alternating layers, in barrels.

Describes briefly how Tuong is made and gives three Vietnamese recipes: (1) Dau phu ran cham tuong (Fried tofu dipped in Vietnamese soy sauce). (2) Bo tai tuong gung (Steak with soy sauce and ginger). (3) Banh xeo (Pork, shrimp and vegetable pancake / omelet).

Before becoming a voluntary exile in 1959, Hoang Van Chi wrote his classic book *From Colonialism to Communism.*

A photo shows Hoang and his wife holding bottles and jars of their soy sauce.

5665. Barton, David. 1979. Foods from the Far East. *Whole Foods (Berkeley, California).* Oct. p. 28-34, 54.
• ***Summary:*** Mutual Trading Co. is making 500 tons of miso a year, and this is expected to increase by 10-15% in 1980. Their miso sales are up 300% in 5 years. Erewhon wholesale sales by product for the year ended June 1979 were: Miso $100,000, shoyu $200,000, tofu $110,000. Japanese trade commission figures for 1978 natural food imports are: Miso $625,528, and shoyu $1,466,909.

5666. **Product Name:** Seitan
Manufacturer's Name: Rising Tide Natural Market.
Manufacturer's Address: Long Island, New York.
Date of Introduction: 1979, October.
Ingredients: Incl. wheat gluten, soy sauce.
How Stored: Refrigerated.
New Product–Documentation: Barbara and Leonard Jacobs. 1985. *East West Journal.* Oct. p. 38-39. "Flour power! Cooking with seitan, the delicious natural food from grain." "Michael Vitti of Rising Tide Natural Market in Long Island has been making seitan commercially for six years [i.e. since about Oct. 1979]. He has seen a 400% increase in his sales over this time. He makes several different varieties of seitan, using a number of spices in addition to a plain soy sauce base. About one-third of his production is bought by another company for use in making sandwiches."

Barbara and Leonard Jacobs. 1987. *Cooking with Seitan: Delicious Natural Foods from Whole Grains.* Current U.S. seitan manufacturers include Rising Tide Natural Market in Long Island, New York.

Talk with Lenny Jacobs. 1992. May 19. Michael Vitti is still making a very good seitan product at Rising Tides Natural Foods in Locust Valley, New York, in Long Island.

5667. *League for International Food Education (LIFE) Newsletter.* 1979. Some recent references on fermented foods. Nov. 1. 10 p. [60 ref]
• ***Summary:*** Contents: Books (11 books, incl. 7 on fermented soyfoods by Shurtleff & Aoyagi). Articles: Tempeh (12), peanuts (3), miso (4), miscellaneous products (30). Address: 1126 Sixteenth St., N.W., Room 404, Washington, DC 20036.

5668. Claiborne, Craig. 1979. A Chinese cook's success in the far west. *New York Times.* Nov. 2. p. 51.
• ***Summary:*** Jeri (Kui Yun) Sipe, born in Taiwan, was given to foster parents when only 40 days old because of her natural family's poverty. From age 9, she was forced to cook for these parents (with regular whipping) until she was farmed out at age 12 to aunts who paid her natural parents $2 a day for her services. At age 19 she ran away and hid in her sister's house, until her sister found her work with a master who had two wives and a family of 13 in Hillsboro, Oregon.

Neither wife was happy with her cooking. In the years that followed she learned to cook many kinds of cuisine for her master. "The great turning point in her life came in 1964 when she met her husband, James Sipe, of Bellingham, Washington." She was a waitress in an officers club and he was an electrical engineer. In a story not unlike Pygmalion, he taught her to read, write, and speak good English. They lived in Seattle, Washington, had three children, and entertained regularly on a large scale. She never lost her enthusiasm for cooking.

A recipe for Sesame chicken wing appetizers calls for: "1 tablespoon salted black beans ... 2 cloves garlic, crushed, 2 slices fresh gingerroot cut into very fine shreds, 3 tablespoons dark soy sauce ... ½ teaspoon monosodium glutamate, optional." Then: Crush the beans, add 1 tablespoon of water and let stand.

5669. Nakamura, Hideyuki; Mohri, Yoshiharu; Muraoka, Ichiro; Ito, Katsumi. 1979. [Studies on fermented food

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containing Antarctic krill. I. Production of soy sauce with cryo-ground Antarctic krill (*Euphausia superba*)]. *Nihon Suisan Gakkai shi* (*Bulletin of the Japanese Society of Scientific Fisheries*) 45(11):1389-93. Nov. [Jap]
Address: 1. Kazami Co. Ltd., Sukedo, Ashikaga, Tochigi prefecture 326; 2. Nippon Reizo K.K., Kumegawa-cho, Higashimurayama, Tokyo 189. Both: Japan.

5670. Aishima, T.; Nagasawa, M.; Fukushima, D. 1979. Differentiation of the aroma quality of soy sauce by statistical evaluation of gas chromatographic profiles. *J. of Food Science* 44(6):1723-27, 1731. Nov/Dec. [19 ref]
Address: 1-2. Noda Inst. for Scientific Research, Noda-Shi, Chiba-ken, Japan; 3. Kikkoman Foods Inc., P.O. Box 69, Walworth, Wisconsin 53184.

5671. **Product Name:** Super Tofu (Curried Sandwich Filling or Salad with Cayenne and Herbs)
Manufacturer's Name: Garden of Eatin'.
Manufacturer's Address: 5300 Santa Monica Blvd., Los Angeles, CA 90029.
Date of Introduction: 1979. December.
Ingredients: Tofu (100% certified organically grown soybeans, water, nigari), organically grown sunflower seeds, vegetables, apple cider vinegar, lemon juice, tamari, honey, natural herbs, spices, sea salt.
Wt/Vol., Packaging, Price: 16 oz.
New Product–Documentation: Interview with Al Jacobson. 1981. April 13. His invoices show he was selling this by December 1979. Leaflet and price list. 8 or 16 oz. retails for $1.39 or $2.15. Food Report (Lehmann). 1984 Oct.

5672. Hansen, Sandra; Randall, Chris; Dallam, Bette; Friedman, Ruth. eds. 1979. Sunyata's whole foods cookery for big & little folks: A vegetarian cookbook. Eau Claire, Wisconsin: Sunyata Whole Food Co-op. 332 p. Dec. 3. Illust. Index. 22 cm. [9 ref]
• ***Summary:*** A glossary titled "Odds and Ends" (p. 32-33) contains entries for tamari, miso soybean paste, and tofu. Soy-related recipes include: Rye oatmeal soy bread (p. 69). Soybean casserole (p. 142). Soy flour and grits are discussed under "Complementary protein proportions" (p. 113). Page 117 notes that soybeans should be cooked for 3 hours or more, soy grits for 15 minutes. Address: Eau Claire, Wisconsin.

5673. White Wave Soy and Natural Foods. 1979. Product price list: Winter. 3869 Walnut St., Boulder, CO 80301. 6 panels. Catalog. Dec.
• ***Summary:*** Soyfoods: Nigari tofu (bulk, packaged, doufu [extra firm Chinese style]). Salad dressings (mellow miso salad dressing, hearty miso salad dressing). Tempeh. Soysage. Tofu Mayo. Savory baked tofu. Polar bean (banana-carob soy ice cream).

The company also sells sesame products (raw tahini, roasted tahini, sesame butter, sesame salt), peanut butters (salted or unsalted; crunchy natural, creamy natural, Valencia {crunchy or creamy}), more nut and seed butters (roasted almond butter, raw cashew butter, roasted cashew butter, roasted sunflower butter), and tamaried nuts and seeds (tamaried almonds, tamaried cashews, tamaried Spanish peanuts, tamaried sunflower seeds, and tamaried nut mix [a blend of peanuts, sunflower seeds, cashews, and almonds]). Note: This is the earliest English-language document seen (April 2012) that uses the word "tamaried" to refer to nuts and seeds that have been seasoned with tamari soy sauce and then baked.

"White Wave was founded in 1977 upon the principle of supplying the Rocky Mountain region with high quality protein foods. As these foods are an extension of our own lifestyles, we offer only products we personally feel are wholesome and nutritious. It is our pleasure to guarantee the quality of all our products. All foods carrying a White Wave label are made solely by us. We thank you for supporting our business. The Folks at White Wave." Address: White Wave, 3869 Walnut St., Boulder, Colorado. Phone: 303-443-3470.

5674. **Product Name:** Tamaried Nuts and Seeds [Almonds, Cashews, Spanish Peanuts, Sunflower Seeds, or Nut Mix]
Manufacturer's Name: White Wave.
Manufacturer's Address: 3869 Walnut St., Boulder, CO 80301.
Date of Introduction: 1979. December.
New Product–Documentation: Product Price List. 1979, winter. One category of products made and sold by White Wave is "Tamaried nuts and seeds," including tamaried almonds, tamaried cashews, tamaried Spanish peanuts, tamaried sunflower seeds, and tamaried nut mix (a blend of peanuts, sunflower seeds, cashews, and almonds). 25 lb. "All are made with traditional 2 year Japanese soy sauce."

Note: This is the earliest English-language document seen (March 2012) that uses the word "tamaried" to mean "seasoned with tamari."

5675. **Product Name:** Defatted Soy Flakes [Untoasted, or Heat Treated]
Manufacturer's Name: Archer Daniels Midland Co.
Manufacturer's Address: Box 1470, Decatur, Illinois 62525
Date of Introduction: 1979.
New Product–Documentation: Manufacturer's catalog. 1987. For use in protein extraction (HVP, etc.).

5676. **Product Name:** Captain Organic Vital Burgers (Meatless Burgers).
Manufacturer's Name: Captain Organic
Manufacturer's Address: P.O. Box 606, Hermosa Beach,

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California.
Date of Introduction: 1979.
Ingredients: Incl. tofu, lentils, rice
Wt/Vol., Packaging, Price: Paperboard box.
How Stored: Frozen
New Product–Documentation: Talk with Andrew Harrison, President, Heart & Soul, Common Objective Inc. 1991. Nov 27. This frozen veggie-burger, introduced in 1979, was the first soy product he ever developed. It was on the market until 1983, made with tofu, lentils, and rice. Another similar product of his was made with garbanzos, zucchini, and millet; it contained no tofu. He made the products in his own plant, and bought the tofu from Mr. Yamauchi of Hinode Tofu Co. He mixed the ingredients, put them through a patty machine, and then froze them. They were not fried. On the package was a cartoon of Captain Organic. Andrew's forte is sales and marketing; he has worked with distributors and brokers in the natural foods industry for 12 years. In the early days he worked with a yogurt company named Natural and Kosher, then went to a distribution company named Nature's Food Farms, then spent 4 years at a brokerage named MBA and Associates where he represented a lot of soy lines like Legume and Pizsoy. In 1988 he went to Westpico Foods, which is a kosher poultry and secondary frozen supermarket distributor and he got a lot of perishable natural foods into supermarkets in southern California. From there he started Heart and Soul because he was competing against Cedarlane and Soy Power, who had their brands. One he was a vicious competitor of Cedarlane; now he works very closely with them.

5677. **Product Name:** Soup Bases.
Manufacturer's Name: Custom Food Products, Inc.
Manufacturer's Address: 3127 W. Chicago Ave., Chicago, IL 60622.
Date of Introduction: 1979.
New Product–Documentation: *Soybean Digest Bluebook*. 1979. p. 94.

5678. **Product Name:** Granose Frikaletts. Soya Rissoles in Onion Sauce.
Manufacturer's Name: Granose Foods Ltd. (Marketer). Made in Denmark by Nutana Helsekost.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1979.
Ingredients: Rissoles: Textured soya protein (textured soy flour), oat flakes, onion, egg white powder, hydrolised vegetable protein. Sauce: Onion, soya oil, wheat flour, maize starch, soya sauce, salt, hydrolised vegetable protein, yeast, spices, monosodium glutamate.
Wt/Vol., Packaging, Price: 425 gm (15 oz) can.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. Label: 1980, undated. 9.5 by 4.25 inches. Full color, mainly beige, blue, and white. Photo shows 2 burgers or rissoles with peas and carrots. "Ready to serve. Granose frikaletts need only to be heated in their own sauce. Serve with potatoes and other vegetables for an easily prepared meal." Labels in Danish, Dutch, and Finnish.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Nutana, was introduced in 1979. It has been discontinued.

5679. Ko, Tokubo. 1979. Kankoku no hakkô shokuhin [Korean fermented foods]. *Hakko to Kogyo* (*Fermentation and Industry*) 37(3) 202-11. [75* ref. Jap]
• ***Summary:*** Shoyu and varieties of miso: 1. Historical background. The major foods used in Korea that contain soy are soy sauce (kan jang), soybean miso (doen jang), and red-pepper miso (kochu jang). Also there are jonkutsu jang, tamusu jang (makujang) and jupu jang. The suffix jang is the same as the Chinese chiang and the Japanese hishio, meaning mash. The origins of the varieties of shoyu and miso are not clear. But there was a character, tojang, in "Ronko" which was written by Oju? of the Gokan period. Also, there are some references to jang in the Analects of Confucius (Lun yu; Jap. Rongo). They indicate that jang existed years before Christ. In the "Kaitoyakushi?" there is a quotation from "Shintosho?" (618-907) that "shi" (fermented black soybeans or misodama) was a well known product of Bokkai (north of the Yellow Sea) in those days (Sakueki). It is thought that jang first appeared in Manchuria (Manshu was called Kokuri in those days) where soybeans were originally grown. Soybeans later spread to China and Japan.

In Korea the oldest record of any variety of jang was found in *Sangokushiki* (683) as "shôshi?". This indicates that people were already making shoyu and miso quite early on. In the *Ch'i-min yao-shu* (AD 530-550) a method of shi (or kaki) making was recorded. We guess that shi was the predecessor to today's meju (= misodama). The classic book Kyukosetsuyo?' that was compiled in 1554 (Richo?' period–Meisoo 9) is the oldest book that contains the techniques for making the Korean varieties of jang. About 8 different methods of production were recorded, amongst them the sink gan (chinjangho) and zojangho methods. In those days, meju (= misodama) was called misho. It is written that they steamed the soybeans, roasted and ground the wheat, then mixed the soy and the wheat in a 2:1 ratio. From this they made koji and dried it in the sun. That method was very similar to the koji-making method used in Japan. In Japan it was called kokori, hishio, or misho. Later, shoyu became known as jang? Miso became massho? and then returned to being called misho. Address: Presently: Tokyo Daigaku Biseibutsu Kenkyusho #3 Kenkyubu. Formerly: Seoul, South Korea: Tokoku Daigaku Shokuhin Kogakubu.

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5680 Kohler, Jean Charles; Kohler, Mary Alice. 1979. Healing miracles from macrobiotics: a diet for all diseases. West Nyack, New York: Parker Publishing Co. 290 p. Index. 24 cm. [70* ref]

• ***Summary:*** This book is by and about people who were cured of cancer, apparently by following a macrobiotic diet, lifestyle, and worldview.

Miso soup is mentioned on pages 29, 30, 112, 122, 161, 169, 173. Miso-tahini spread p. 208. Miso, tekka, p. 131. Shoyu, p. 169. Soybeans, p. 122, 169. Soy ice cream, p. 214. Tamari, p. 112, 169. Tofu, p. 179. Seitan is mentioned on pages 202, 216, and 218.

The index also contains many entries for seaweed (edible), sesame oil, sesame seeds, sugar, sunflower seeds, tahini, umeboshi plum, vegetarian diets and nutrition, Zen, etc.

At age 16, while visiting a shrine in Akita (in northeastern Japan), Michio Kushi had a profound spiritual experience, which is described at length (p. 88). "I saw... that everything was being, everything was radiating light. I could then understand that everything is living, everything is breathing, including plants, grasses, trees, birds, and even houses, stones, and soil; everything without exception. Then I understood that life is nothing but light and vibration, or waves, and the universe is full of life, and is one continuity, yet is manifested in everything and every being."

Jean Charles Kohler (husband) was born in 1916 and Mary Alice Kohler (wife) was born in 1917.

5681 **Product Name:** The Original Fried Rice Sandwich (With Tofu).
Manufacturer's Name: Natural Cafe.
Manufacturer's Address: 1494 Cerrillos Rd., Santa Fe, NM 87501.
Date of Introduction: 1979.
Ingredients: Organic brown rice fried with scallions and soy sauce, wrapped in a whole wheat tortilla with steamed organic carrots, alfalfa sprouts, miso tahini sauce, tofu, green leaf lettuce.
Wt/Vol., Packaging, Price: 10 oz. Retails for $2.95 (1988).
New Product–Documentation: Label sent by Paul Duchesne, 1989 Aug. 11. Handwritten "Naturally delicious. Made fresh today. To eat, peel back wrapper from one end." When Paul went to Boston, he taught Barbara and Marty Roth how to make the Brown Rice & Tofu Sandwich. (Barbara's maiden name was Svenning; she married Jack Garvey then lived for years with Marty Roth.) After he left, they made it for a while. Then they began as a restaurant in Santa Fe, New Mexico based on a this sandwich. At one point they were making their own tofu, sprouts, and chapatis. When Barbara separated from Marty (they were never officially married), she moved to Black Mountain (near Asheville), North Carolina, where she continued to make a line of tofu sandwiches.

Talk with Martin Roth. 1989, Aug. 17. He learned how to make The Original Fried Rice Sandwich (With Tofu) from Paul Duchesne at the macrobiotic study house on Boylston St. in Brookline, Massachusetts. In about 1979 Martin (unable to convert his macrobiotic house to a Zen center) moved to the Bodhi Mandala Zen Center in Jimenez, New Mexico. He was the head cook (Tenzo) for a while. Then, forsaking Zen for tofu, he and Barbara Svenning Garvey moved to Santa Fe into the Linda Motel on Cerrillos Rd. They got a room with a stove, and then persuaded the Santa Fe Health Inspector to certify the room as a facility for tofu sandwich production. They fried the rice and made the chapati-wrapped sandwiches early each morning, wrapped them in plastic, and delivered them to the local co-ops and health food stores. The sandwiches soon became very popular (they were selling 30-50 a day, six days a week), so they expanded into an apartment and decided to start a natural foods manufacturing and distribution company named New Mexico Natural. In the apartment they made the sandwiches, and started to make tofu, mochi, sweet white miso, sauerkraut, pickles, amasake, etc. In late 1979 or early 1980, as the sandwich grew even more popular they bought an old Mexican restaurant in Santa Fe named El Charro and converted it into a natural foods and macrobiotic restaurant called the Natural Cafe, based on the brown rice and tofu sandwich which evolved into the Fried Rice Plate (with tofu) and remained their most popular item. They were purists and self sufficient. All ingredients were organically grown and they used only spring water, even in their ice cubes. They made their own tofu from soybeans, their own miso, and their own chapatis from wheat. They grew their own sprouts and ground their own sesame seeds for the sauce. They made seitan and sold seitan burgers. As the restaurant business demanded more and more of their time, they decided to discontinue the distribution company.

At one point Martin considered starting a tofu shop, but a rebuff from a local Japanese restaurant, the fact that they were too busy with other things, and the availability of good tofu from Kathryn Peterson Bennett of Southwest Soyfoods (which she had started by June 1978) led him to drop the idea. But they sold miso out of the restaurant as a commercial product. At the restaurant they also made and sold amasake, amasake shakes (which the Mexican men loved, and called "chakes"), and amasake ice cream. Martin believes this was America's first amasake ice cream.

In 1981 Martin and Barbara sold the restaurant to one of their employees; it still exists under the same name. Then they went to Boulder for several months, then to Miami for several months, then to North Carolina, where they stayed for several years while Martin helped to start Great Eastern Sun. In about 1985 they separated and Barbara moved back to North Carolina.

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5682. Noranizam, H.M.L. 1979. Studies of *Rhizopus* isolated from tempe and soy sauce. BSc Honors Project, University of Malaya. Unpublished manuscript. *

5683. **Product Name:** Seitan, Chili (with Seitan), Tamale Pie (with Seitan), Sandwiches with Seitan, Basmati Rice Salad (Curried with Seitan), and Seitan Pups.
Manufacturer's Name: Proteeno.
Manufacturer's Address: 19805 Valley View Dr., Topanga Canyon, California.
Date of Introduction: 1979.
New Product–Documentation: Talk with Ken Smith now living in Makawao, Maui, Hawaii. 1991. Dec. 8. He learned about seitan in a macrobiotic cooking class taught by Yvette Delangre in about 1971 in Hollywood, California. From 1974 to 1976 he studied macrobiotics in Boston. Then he returned to live in Topanga Canyon, near Los Angeles, where he started making and distributing seitan and seitan products 3 times a week to Mrs. Gooch's, Quinn's, and other places. The business was pretty low key; they were operating out of their home. His first traditional seitan was made with gluten, tamari, ginger, kombu, etc. Then he expanded into the other products shown above. The Seitan Pups, which were dipped in a batter and deep-fried, were based on the Tan Pops he had seen (and loved) in Boston. The business was doing well and customers loved the products. He made about 60 lb/week of seitan by washing high-protein wheat. The business only lasted for 4-5 months, and he was just in the process of getting labels printed. Then they sold their house, in part because a huge flood cut off his direct access to town.

5684. **Product Name:** Powdered Soybean Miso.
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 3236 Boulevard, Colonial Heights, VA 23834. Phone: 804 / 520-1513.
Date of Introduction: 1979.
Ingredients: Soybeans, water, salt (No wheat).
Wt/Vol., Packaging, Price: 44 lb (22 kg) metal cans.
How Stored: Shelf stable.
Nutrition: Moisture 5%, protein 33%, carbohydrates 25%, vegetable fat 14%, salt 20%. 332 calories per 100 gm. 6.08 gm glutamic acid per 100 gm.
New Product–Documentation: Product Data Sheet. 1982. Contents: Description, Ingredients, Composition, Amino acids per 100 gm, Characteristics, Application, Specific suggested uses, Packaging. Shurtleff & Aoyagi. 1983. The Book of Miso. 2nd ed. p. 239.

Letter (fax) from Norio Kushi. 1995. May 1. Steve Zoller says that San-J sells a miso powder, which they import from Japan. It has always been an imported product.

5685. Shurtleff, William. 1979. Names and addresses of makers of soy nuggets [fermented black soybeans] in Japan. Tokyo, Japan. 1 p. Unpublished manuscript. Handwritten, pencil.
• ***Summary:*** Note: Daitokuji natto and Hamanatto are both traditional Japanese types of fermented black soybeans.

At Daitokuji they may start in mid-July or August. Daitokuji natto we call "Savory soy chunks." (1) Moriguchi Kakko Shokuhin. Phone: 076-491-3568 or 492-0682. Mr. Nakano Takazo. Ushiwaka-cho 22, Murasaki-taki, Kita-ku, Kyoto 603. They also make large and small bean natto in Kyoto.

(2) Moriguchi factory in Shiga prefecture. Phone: 07495-2-1165. Nagahama Kojo, Kao-do, Umi-cho, Sakata-gun, Shiga-ken 526. Attention: Mr. Nakano Takazo. They have 40 years experience. Make 1,200 kg/year.

(3) Ikkyu, Daitokuji-nai [inside Daitokuji], Kita-ku, Kyoto. They make traditional Daitokuji natto but may be secret.

(4) Ikkyu-ji. Phone: 07746-2-0193, Aza-maki, Tanabe-cho, Kyoto-fu, 610-03. A second maker of Daitokuji natto. They seem to have taken the Ikkyu-ji name and started to compete with the original maker at Daitoku-ji. They make only 6 kegs a year, each keg holding 25 kg, 150 cm diameter and 75 cm deep. For temple and tourists. Only use the traditional process. Small scale. Makes ichi-mei Ikkyu-ji natto.

(5) Jofukuji natto. Are they in Nara?

(6) Tenryuji natto: Make at Tenryu-ji, Ukyo-ku, Kyoto–in Kyoto's Arashiyama district. Founded in 1339, it is the head temple of the Tenryu branch of Rinzai Zen Buddhism.

Hama-natto–which we call "Savory soy bits." (1) The top scholar is Hiroshi Ito at the National Food Research Institute. Phone: 645-9911.

(2) Factory: K.K. Yamaya shoyu. Phone: 053-587-0621. Komatsu 4880. Hamakita-shi, Shizuoka-ken 434. Attn: Mr. Suzuki Tsumotsu. Mechanized koji. Old vats. Makes miso and shoyu too. 30 minutes from Hamamatsu by Enshu railroad. Office in Hamamatsu city, Naruko-cho 8.

(3) K.K. Hamana. Phone: 053-433-6211. Joko-cho 1356, Hamamatsu-shi 431-32. Attn: Saito Shigeo. Eigo no Okiai. Mr. Suzuki.

(4) Daifuku-ji. Phone: 05352-5-0278. Related to Tokugawa Ieyasu. Mikkabi-cho, Fukunaga, Inasa-gun, Shizuoka-ken 431-14.

(5) Horinji. Phone: 0534-71-0838. Mr. Matsuyama Gizen (very nice). Tomitsuka-cho 1976, Hamamatsu-shi 432.

(6) Yamaya (new, from July 1976). Mr. Suzuki. Zaimoku-cho 30, Hamamatsu-shi 430. Address: c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

5686. So, Enshi. 1979. Taiwan no hakkô shokuhin [Fermented foods of Taiwan]. *Hakko to Kogyo* (*Fermentation and Industry*) 37(2):102-12. [Jap, eng+]
• ***Summary:*** Includes a good map of Taiwan and its prefectures. In 1976 there were 433 soy sauce manufacturers

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in Taiwan. Taiwanese divisions of grading soy sauce plants numbered as follows: A (Ko) class, 39; B (Otsu) class, 12; C (Hei) class, 223; others 159. They produced the equivalent of 1,681,870 dozen bottles/month. Each bottle contains 540 ml of soy sauce, so 12 bottles contain 6,480 ml or 6.48 liters or 1.712 gallons. Thus Taiwan produces 10.89 million liters a month or 130.71 million liters/year of soy sauce. This is equivalent to 2,878 million gallons a month or 34.53 million gallons a year. Taipei prefecture produced 46.8% of this total, followed by Changhwa prefecture with 10.7%.

Soy sauce was initially made by monks. Because they didn't eat meat, it gave them important protein and fat. Gradually, it became more popular and spread to all parts of China. Monks also transmitted the method of soy sauce production to Japan and all over East Asia. It is said that around 1230 A.D., the Zen monk, Kakushin of Kofukuji, Kishu Yura, went abroad to southern Sung in China and brought back to Japan fermentation methods of Miso and Kinzanji Miso.

There are 3 types of soy sauce produced and sold in Taiwan today: (1) Tou-yu, soy sauce (*daizu shoyu*) which originated in China, (2) Inyu, black bean sauce which is the traditional Taiwanese soy sauce, and (3) Chemically prepared soy sauce (*kagaku shoyu*) which was invented in Japan. Processing techniques for making Koji and pressure-straining methods have made great progress in recent years. Address: Kokuritsu Taiwan Daigaku Kyoju, Ken Nogyo Kagaku Kenkyu-jo sho-cho, Nôgaku Hakase.

5687. **Product Name:** Creamy Tofu Dressing [Italian, or Bleu Cheese]
Manufacturer's Name: Traditional Tofu.
Manufacturer's Address: Oakland, California.
Date of Introduction: 1979.
Ingredients: Italian: Tofu, water, vinegar, salt, soy sauce powder, fructose, onion powder, garlic powder, natural flavors, spices, vegetable gum. Blue Cheese: Tofu, water, vinegar, blue cheese powder, salt, soy sauce, onion & garlic powders, parsley, other spices, calcium phosphate, vegetable gum.
Wt/Vol., Packaging, Price: 1 pint jar.
How Stored: Shelf stable.
Nutrition: Italian: Per 14 gm.: Calories less than 1 gm, protein less than 1 gm, carbohydrate less than 1 gm, fat less than 1 gm. Cholesterol 0 mg. Blue Cheese: Per 14 gm.: Calories 10 gm, Proteins less than 1 gm, Carbohydrate less than 1 gm; Fat less than 1 gm; Cholesterol less than 1 mg.
New Product–Documentation: Label. 1981. 3.75 by 6 inches. Paper. Italian: Dark blue and white on yellow. Bleu Cheese: Dark blue and white on light blue. Shurtleff & Aoyagi. 1979. Tofu & Soymilk Production. p. 161.

5688. **Product Name:** Tamari [Traditional Wheat-Free Tamari, or Johsen Shoyu Tamari].
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1979.
Ingredients: Wheat Free: Whole soybeans, water, sea salt. Johsen Shoyu: Water, whole soybeans, whole wheat, salt.
Wt/Vol., Packaging, Price: 5 fluid oz (147 ml), 16 fluid oz (473 ml).
How Stored: Shelf stable.
New Product–Documentation: Label. 1982. 6 by 3.5 inches. Paper. Red, green, black, and white on gold. Label. 1982. Wheat Free: 6.5 by 3.5 inches. Paper. Red, blue, green, grey, tan, black, and white. 5 fl oz. Label. 1982. Johsen Shoyu: 8 by 3.5 inches. Paper. Red, blue, green, tan, black, and white. 16 fl oz. "The words 'Tamari,' 'Shoyu' (sho-yu), and 'Soy Sauce' are often used to describe the same product. The history of soy seasoning explains the product's evolution and name. Tamari–Centuries ago, the Japanese discovered the seasoning and nutritive benefits of the liquid that collected in hollows of soybean miso. Miso-tamari was the forerunner of all soy sauces. The natural food movement began calling premium or naturally brewed soy sauce 'Tamari.'" Explains shoyu and modern soy sauce. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Letter from Gordon Bennett. 1987. Oct. Gives date as 1979. I had 1982.

5689. **Product Name:** White Tiger Tofu Sauce.
Manufacturer's Name: Westbrae Natural Foods.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1979.
Ingredients: Soy sauce (water, soybeans, wheat, seasalt), honey, vinegar, toasted sesame oil, lecithin, gum tragacanth, cayenne.
Wt/Vol., Packaging, Price: 10 fluid oz, 12 fluid oz (355 ml) bottle.
How Stored: Shelf stable.
New Product–Documentation: Two Labels (see next page) 1979. undated. 3.5 by 3.5 inches. Paper. Red, black, and white or green and yellow-orange. Stalking tiger illustration. 5.25 by 3.5 inches. Paper. Brown, blue, black, orange, white. Mt. Fuji logo illustration. Small tiger in title. Ingredients: Soy sauce, malt syrup, cider vinegar, honey, sesame oil, natural gum stabilizers, ginger, cayenne. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Westbrae Natural Wholesale Food Catalog. 1980. Spring. Ingredients are now: Tamari, honey, apple cider vinegar, toasted sesame oil, guar gum, gum tragacanth, cayenne. Letter from Gordon Bennett. 1987. Oct. Gives date as 1979.

5690. Aidoo, K.E. 1979. Studies on the koji process in soy sauce fermentation with mechanised solid state fermentation.

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Thesis, Dep. of Applied Microbiology, University of Strathclyde, Glasgow, Scotland. *
Address: Univ. of Strathclyde, Glasgow, Scotland.

5691. Aihara, Cornellia. 1979. The calendar cookbook. George Ohsawa Macrobiotic Foundation, 1544 Oak St., Oroville, CA 95965. 253 p. [unnumbered]. Illust. by Nan Schleiger. Index. 17 x 24 cm.
• ***Summary:*** This macrobiotic cookbook is designed for cooking with the seasons. Breakfast and dinner menus are given for every day of the year. A glossary gives brief descriptions of the Japanese foods listed in the recipes. For example: "Tamari: traditional soy sauce (*shoyu*) made without chemicals. Tofu: curdled soy milk. Tekka: condiment of miso and vegetables cooked a long time." All recipes are numbered.

Soy-related recipes include: 2d. Baked mochi with kinako. 4. Kombu, age, albi nishime. 5. Black bean nishime [these are almost certainly black soybeans]. 8. Amasake. 8a. Amasake kanten. 13. Natto with pickled daikon leaves. 18. Vegetable miso soup. 20. Mackerel with ginger miso. 28. Wakame miso soup. 32. Kidney beans with miso. 35. Onion miso. 46. Burdock, carrot and lotus root with oily miso. 60. Vegetable oden (with stuffed age). 63. Collard greens with age nitsuke. 64. Home-made age (deep-fried tofu). 73. Home made natto I and II. 75. Northern white beans with miso. 80. Home made tofu and nigari. 80a. Clear soup with tofu and shingiku [sic, *shungiku* = chrysanthemum leaves]. 80b. Tofu-scallion miso soup. 82. Amasake cake with cream cheese frosting (3-layer, using 1 lb of dairy cream cheese). 87. Wheat gluten (made from 10 cups whole wheat flour and 4 cups unbleached white flour). 87a. Seitan (with wheat gluten and tamari soy sauce). 87b. Fresh wheat fu (with wheat gluten). 87c. Boiled fu. 87d. Fried fu (Gluten cutlet). 87e. Cutlet kabobs (with cooked wheat gluten). 97. Scallion miso. 100. Okara nitsuke (okara is "soybeans which are leftover after making tofu"). 132. Amasake cake. 135. Amasake yeasted doughnuts. 138. Vegetable kabobs with lemon miso sauce. 159. Koi-koku (carp soup with barley miso). 161. Amasake cake with fruit and nuts. 177. Buckwheat dumpling miso soup. 183. Cooked vegetable salad miso ai (miso dressing). 191b. Tomato sauce with miso. Amasake cookies. 197. Onion cream miso soup. 199. Soybean soup. 220. Tofu, snow peas and white rice miso soup. 229. Cucumber with miso. 233. Fresh corn tortillas with scallion and oily miso. 236. Toasted rice balls with soy sauce or miso. 244. Barley miso soup. 245. Tekka [miso]. 251. Pan-fried eggplant with lemon-miso sauce. 257. Green pepper with sauteed miso. 259. Tofu with mustard sauce. 261. Goma tofu (made from sesame butter and a little tamari soy sauce). 263a. Parsley miso pickles. 263b. Miso pickles. 266. Amasake wedding cake. 274. Shingiku miso soup. 290. Tofu with kuzu sauce. 294. Soybean nitsuke. 304. Kombu, dried tofu, age nitsuke. 305a. Millet and soybean soup. 329. Amasake crescent cookies. 333. Tofu-egg clear soup with watercress.

The Acknowledgments section begins: "After the French Meadows Summer Camp sponsored by the George Ohsawa Macrobiotic Foundation in 1972, I looked over the menus of the meals I served at camp. In revising them, I had the idea to keep a one-year record of menus. I thought this would be a practical, everyday help for those people beginning to cook.

"Since then, seven years passed." Address: Oroville, California.

5692. Aoki, Hiroshi; Ito, Kiyoe. 1979. Chôri to daizu [Cooking and soybeans]. Gakken Shoin K.K., Tokyo. 173 p. Illust. Index. 22 cm. [151 ref. Jap]
• ***Summary:*** Contents. I. Cooking and soybeans. II. Soybean molecules and soybean protein. III. Cooking and traditional soy protein foods. 1. Cooked whole soybeans (nimame), green vegetable soybeans (yude-mame, edamame), soy sprouts. 2. Roasted soy flour (kinako). 3. Tofu. 4. Deep-fried tofu pouches and tofu burgers (aburaage and ganmodoki). 5. Dried frozen tofu (kori-dofu). 6. Yuba. 7. Natto. 8. Tempeh. 9. Soymilk. 10. Miso (Miso soup, miso-ni, ae-mono). 11. Shoyu. IV. Cooking and new soy protein products. Address: 1. Prof., Otsuma Joshi Daigaku, 2. Prof., Tokyo Gaku Gei Dai.

5693. Barer-Stein, Thelma. 1979. You eat what you are: A study of ethnic food traditions. Canada: McClelland & Stewart, Ltd. xii + 13-624 p. Index. 23 cm. [550+* ref]
• ***Summary:*** This is largely a compilation of information from many other books and articles. On the cover is a color painting of The Gardener (or Vertumnus), from his series, The Four Seasons, c. 1590, by Giuseppe Arcimboldo (or Arcimboldi) of Milano.

In Chapter 12, on China, the section titled "Meats and alternates" (p. 110-13) notes that the soybean is called the "Chinese Cow" [sic, "Cow of China"] because of its versatility. Soybeans are used as whole dry beans and as sprouts, or they can be made into a firm white curd called "Chinese cheese" [sic], which can be used in many different ways. Soybean milk may be used in much the same way

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that westerners use cow's milk. They are fermented to make the favourite condiment, soy sauce. "Bean curd sauce is fermented bean curd that is packed in jars and sold as red bean curd sauce or white bean curd sauce..." Cantonese names for soy products are (p. 111-12): Mien chiang: A syrup-like sweet bean paste. Dow-foo (tofu). Foo yu (fermented tofu). Tiem jook (dried yuba, broken into pieces [sweet dried yuba sticks]). Wow doo [Wu dou]: Black soybeans. Dow see [doushi, fermented black soybeans]: Salted, fermented black bean paste [sic, fermented black soybeans] often garlic flavoured and used in small amounts as a condiment or seasoning.

In Chapter 30, on Japan, the section titled "Meats and alternates" (p. 336-37) notes that products made from soybeans include: (1) "Shoyu, a sweetish soy sauce made from wheat and barley [sic], soybeans, salt, and water." (2) Miso, or "fermented soybean paste," used mostly for flavouring soups [miso soup]. (3) Tofu, or soybean curd, is a staple in Japanese cookery. "Its smooth, custard-like texture and bland flavour make it an ideal ingredient. It is extremely versatile and readily absorbs other flavours. Many "restaurants in Japan take great pride in their tofu dishes."

In Chapter 31, on Korea, the section titled "Fruits and vegetables" (p. 350-51) discusses soybeans and their products at length. Soy sauce is used to season *kim* (nori) and other edible seaweeds. Soy sauce is an ingredient in "hot pepper mash" [*kochu jang*]. Soybeans are used to make "soybean mash" [*doen jang*]. Dry soybeans are roasted in an iron pot, then ground, and the roasted soy flour is used as a garnish over rice cakes [mochi] or plain cooked rice; children enjoy eating the coarser roasted bits that are sifted out of roasted flour or meal. Soybeans sprouts are eaten lightly cooked as a vegetable. Soybeans are also made into tofu (*tu bu*); a brief description of the process is given, in which the drained curds are left in their hemp bag to form a firm cake, which may be cut, dipped into soy sauce, or fried in sesame oil. "Oil can also be made from the soybeans, but it is not commonly used or prepared."

Although commercial soy sauce, made in factories, is now widely available, many Korean households still prepare their own soy sauce each fall. Boiled soybeans are pounded, molded into a cone shape, and set to dry until hard. They are then wrapped with rice straw, hung from eves, rafters or ceilings, and allowed to ferment for several weeks [until they become *meju*]. During the winter, these fermented cones may be stored in huge rice-straw bags kept in a cool place.

In the spring, break the cone into small pieces and place in a large earthenware jar, nearly filled with water. Add salt, spices, red peppers, and a few charcoal lumps. Leave this in the sun for a few days [sic, 30-60 days] until the molded soybean chunks float to the top and the resulting liquid turns black. Ladle out and filter the black liquid, then boil it to make soy sauce. The solids remaining in the jar are used as soybean mash [after the charcoal is removed].

A portrait photo of the author, with a brief biography, appear on the rear cover and in the Introduction. Address: Ph.D. student, Ontario Inst. for Studies in Education, Toronto, Ontario, Canada.

5694. Berry, Mary. 1979. Lea and Perrins Barbecue cookbook. Cambridge, England: Martin Books. 96 p. Foreword by Julian Lea, Marketing, Sales, and Distribution Director, Lea & Perrins Ltd. Illust. (color). 22 cm.
• ***Summary:*** A book about barbecuing (more than you could want to know) and Worcestershire Sauce. Contents: Acknowledgements. Introducing barbecues. What is barbecuing all about, how to build your own barbecue, barbecues to buy, fuel for the barbecue, lighting the fire, cleaning and caring for the barbecue, safety first, barbecue extras, planning a party, how to buy and cook the basic meat and poultry.

Variety recipes: 28 recipes all of which call for meat, fish, or poultry.

Bastes, sauces, dips, marinades, and savoury butters. All recipes call for "Worcestershire sauce."

Good things to go with barbecues. Soups, salads and vegetables, sweets, and drinks. All recipes call for "Worcestershire sauce." Address: TV personality and cookery expert.

5695. Colbin, Annemarie. 1979. The book of whole meals: A seasonal guide to assembling balanced vegetarian breakfasts, lunches and dinners. Brookline, Massachusetts: Autumn Press. Distributed by Random House. 232 p. Illust. Index. 28 cm. Reissued in Feb. 1983 by Ballantine Books, NY. 28 cm. [88 ref]
• ***Summary:*** In this macrobiotic cookbook, note (despite the subtitle) that fish are used in some recipes, so it is not actually a vegetarian cookbook. The term "shoyu (natural soy sauce)" is used throughout. Contents: Part I: Theory: A kitchen philosophy. Where we are now. Choosing our food. Balance. Menu planning. General guidelines, food categories. In the kitchen: Cooking: why and how, setting up the kitchen, buying, storing, and preserving food, cutting vegetables. Special situations. Eating away from home, if you live alone, entertaining, the art of eating.

Part II: The practice. Using this book. Fall meals. Winter meals. Spring meals. Summer meals. Basic beverage recipes. Homemade bread. Appendix. Bibliography (24 cookbooks, 65 reference books and others).

Soy-related recipes include: Miso soup (with tofu, p. 69), Hiziki [Hijiki] with mushrooms and tofu (p. 74), Tofu-ginger dressing (p. 93), Miso-tahini spread I (p. 94), Oden stew (with fried tofu, p. 112), Fried tofu (p. 113), Miso-tahini spread II (p. 118), Tofu-miso spread (p. 127), Daikon with miso (p. 139), Cold tofu with garnish (p. 144), Tofu-sprout spread on toast (with alfalfa sprouts, p. 146), Tofu cream pie (p. 156), Scrambled tofu (p. 158), Noodles with tofu

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and bean sprouts (p. 165; the type of "bean sprouts" is not specified), Miso-dill dressing (p. 172), Tofu mayonnaise (p. 182-83), Lemon-miso soup (p. 185), Peanut-apple-miso spread (p. 190), Tofu pickle spread (p. 191), Miso-dill dressing with tahini (p. 195), Miso-vinegar dressing (p. 204), Baked tomatoes with miso (p. 207), Tofu dip (p. 208), Miso dip (p. 209), Tahini-tofu dressing (p. 209), Tofu-mustard dressing (p. 213). Address: 365 West End Ave., New York City, NY 10024. Phone: 212-580-7121.

5696. Doyle, Rodger Pirnie. 1979. The vegetarian handbook: A guide to vegetarian nutrition and foods. New York, NY: Crown Publishers. x + 182 p. Illust. Index. 24 cm. [20+ ref]
• ***Summary:*** Table 3, "Daily food guide for vegan adults" (p. 30) recommends soy milk, tofu, and fermented soybean curd [fermented tofu].

The section titled "Weaning infants on vegan diets" (p. 40-44) also discusses soy milk and The Farm in Tennessee. Soy milk is also recommended for pregnant and lactating women (p. 54-55).

Chapter 9, titled "A pair of unusual diets," discusses macrobiotic diets and fruitarian diets. The author is quite critical of a number of macrobiotic practices and teachings: Studies have shown nutritional deficiencies. Restricted intake of liquids may lead to kidney stones and kidney failure. "The greatest danger of a macrobiotic diet is not to adults but to newly weaned infants. ... Don't wean infants on Kokoh. ... Wean them instead on either milk or fortified soy milk."

Page 93 states: "Soybeans are among the most valuable of vegetarian foods, not only because of their high-quality protein but because they can be made into soy milk and tofu (soybean curd)... Two other soy products that are widely used in the United States are soy sauce and miso." Pages 96-97 discuss soy milk and textured vegetable protein (TVP).

5697. Fukuo, Takeshirô. 1979. Nihon kodai no 'hishio' no seishitsu ni tsuite–sono shôyu taru koto no teishô [On the nature of hishio in ancient Japan–an essay on the soy sauce of the time]. In: Fukuo Takeshiro, ed. 1979. *Nihon Shi Senshû* [Anthology of Japanese History]. Osaka: Fukuo Takeshirô Sensei Koki Kinenkai. See p. 455-70. [Jap]*
• ***Summary:*** The prototype of soy sauce, a semi-liquid flavoring named *hishio*, was probably in use in Japan as early as the 8th century.

5698. Hsiung, Deh-Ta. 1979. Chinese regional cooking. New York, NY: Mayflower Books; London: Macdonald. 224 p. Illust. (chiefly color). Maps. 28 cm. 1st American ed.
• ***Summary:*** A superb and beautiful book, loaded with beautiful color photos printed on glossy paper. It identifies four regional schools: Peking (Northern school), Shanghai (Eastern School), Sichuan (Western school), Canton (Southern school). The Pearl River delta, with Canton as the capital of Guangdong (W.-G. Kwangtung) province, "is undoubtedly the home of the most famous of all Chinese cooking styles... Because Canton was the first Chinese port opened for trade, foreign influences are particularly strong in its cooking." Note: Likewise, what most Westerners have traditionally thought of a "Chinese cooking" comes from Canton.

Archaeological evidence shows that by 5000 B.C. the people of north China had begun to settle down, to farm, and to make painted pottery and cooking utensils. Written records first appeared in about 3500 B.C. "Later, during the Chou dynasty (11th century to 221 B.C.) soy beans were added to the Chinese diet" (p. 32).

Northern soy-related recipes: Fried bean-curd [tofu] (with 2-3 cakes of bean curd) and a color photo of "A bean-curd factory run by a unit of the People's Liberation Army on the outskirts of Peking" (p. 53). Rinsed lamb in fire-pot (with 2 cakes of bean curd, fresh or frozen, p. 68-71). The Yangtse [Yangtze], China's longest river, is a natural divide between north and south in China. Those in the north eat more wheat and soybeans (p. 94).

Shanghai / eastern soy related recipes: The Yangtse River has already traveled 3,000 miles before it reaches its Lower Plain where many crops, including soy beans are grown (p. 98). A page titled "Buddhist and Taoist dishes," notes that they are vegetarian (actually vegan), since "Chinese vegetarians are not allowed anything remotely connected with animals, including eggs or milk. They get their protein mainly from the soy bean and its by-products, such as bean-curd and imitation meat. Curiously these imitation meats (known as vegetarian meat, chicken, fish, and so on) bear an amazing resemblance to their fleshy counterparts in form, texture and flavor.

"For some unknown reason, the best vegetarian restaurants [in China] are to be found in Shanghai–a thriving commercial center and seaport..." (p. 119). Buddha's fry (with 1 oz. dried bean-curd skin [yuba], p. 120-21). A small color photo shows sheets of dry yuba. Eight treasure bean curd (p. 132). "This recipe used to be called 'Prince's Bean-Curd' and originally appeared in *Sui-yuan Shihtan* (Recipes of Sui-yuan), by the 18th century man of letters and gourmet, Yuan Mei." A small color photo shows fresh bean-curd on a wooden table in a Chinese market stall. Bean curd a la maison (p. 144).

Sichuan / western soy related recipes: Bean curd fish in chili sauce (p. 164). Steamed beef with ground rice (with 1 tablespoon {15 ml} salted black beans, crushed). 'Pock marked woman' bean curd (Mabo doufu, with salted black beans, p. 173). This is another nationally popular dish that originated in Sichuan. The woman was the wife of a well-known chef who worked in Chengdu about 100 years ago; she created the dish. Hot and sour soup (with 1 cake bean curd, p. 174). Fish soup (with bean curd, p. 181). Soy braised duck (with Hoi Sin sauce and soy sauce, p. 182).

Cantonese / southern soy related recipes: Fish and bean-

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curd casserole (p. 194-95). Eight treasure stuffed bean-curd (a well known Hakka dish, p. 198). Squid and peppers with shrimp (prawn) balls (with 1 tablespoon crushed black bean sauce, p. 202-03). Fish head casserole (with 2 cakes bean-curd, p. 203). Steamed bass in salted black beans (p. 209).

Glossary of main ingredients (p. 219-21) has entries for: Bean-curd (toufu, incl. dried bean-curd skin). "Bean sauce. Sometimes called 'Crushed bean sauce,' this thick sauce is made from black or yellow [soy] beans, flour and salt. It is sold in tins... (N.B. Black bean sauce is very salty, while yellow bean sauce is sweeter with sugar added)." Bean sprouts. Of the two kinds, yellow soy bean sprouts are sold only in Chinese provision stores.

A large excellent photo (p. 219) shows: 1. Hoi Sin [hoishin] sauce in white bowl. 2. Salted black beans in can. 3. Light soy sauce in bottle. 4. Dark soy sauce in bottle. 5. Red bean-curd sauce in small brown crock. 6. Crushed yellow bean sauce in bowl. 7. Yellow bean sauce in white bowl.

"Chili paste. Also called 'Chili purée,' is made of chili, soy bean, salt, sugar and flour. Sold in jars, will keep almost indefinitely." "Hoi Sin sauce. Also known as barbecue sauce. Made from soy beans, sugar, flour, vinegar, salt, garlic, chili, and sesame." "Red bean curd sauce. A thick sauce made from fermented bean curd and salt. Sold in cans or jars, will keep indefinitely." "Salted black beans: Whole bean sauce, very salty." Sesame seed oil. Chinese typically use vegetable oils, soy bean oil is very widely used. Soy sauce. "The darker colored sauces are strongest and more often used in cooking, whereas the lighter are used at the table."

5699. Lo, Kenneth H.C. 1979. The encyclopedia of Chinese cooking. New York, NY. A & W Publishers, Inc. viii + 369 p. Plus 10 unnumbered pages of color plates. Illust. Index. 26 cm.

• ***Summary:*** The Introduction notes: "Everybody who has lived through the last couple of decades in the West has noted the tremendous expansion in the desire for increased sensuality; for the freer and fuller use of our senses of sound, sight, taste, and touch" (p. 1).

"Chinese meals are communal meals." Chinese food and cooking "are undoubtedly one of China's unique contributions to the sum total of the world's civilization" (p. 3).

Note: This book calls for the use of monosodium glutamate in many recipes.

Soy related recipes: Peking soy-meat sauce for noodles (with soy sauce, brown bean paste, and hoisin sauce, p. 39). Soy-celery sauce for deep-fried chicken (with soy sauce, p. 42). Soy-stock sauce for deep-fried chicken (with soy sauce, p. 42). Soy-vinegar sauce for deep-fried chicken (with soy sauce, p. 42). Soy and mixed vegetable sauce for deep-fried chicken (with soy sauce, p. 43). Soy-stock sauce for boiled, white-cut, or sliced chicken (with soy sauce, p. 43). Soy-red bean cheese marinade for pork or spare ribs (with "1 tablespoon red bean cheese," p. 48). Basic soy-vinegar dressing (with soy sauce, p. 49). Strengthened soy-vinegar dressing (with soy sauce, p. 49). Hot soy dressing (with soy sauce, p. 50). Soy-sesame dressing (with soy sauce, p. 50). Soy-onion dressing (with soy sauce, p. 50).

Basic condiments: Soy sauce (p. 52). Hoisin sauce (p. 53). Soy sauce comes in three grades: light, dark, and heavy. The heavy type can be used as a tasty dip. "Good quality heavy soy-sauce has a flavor of its own..."

Various dips for chicken (all with soy sauce): Soy-oil dip for chicken (p. 55). Soy-oil-garlic dip (p. 55). Soy-oil-ginger dip (p. 55). Soy-ginger-garlic dip (p. 55). Soy-oil-scallion dip (p. 56). Soy-mustard dip (p. 56). Hot soy-oil dip (p. 56). Soy-sherry dip (p. 56). Hoisin or plum sauce for pork (p. 56). Soy-sesame dip for pork (p. 57). Dip for deep-fried bean curd (with soy sauce, peanut butter, sesame oil, etc., p. 58). Sliced pork and bean curd soup (with "2-3 cakes bean curd," p. 67).

Hot noodles with soy jam and fresh vegetables (with "6¼ tablespoons soy jam or paste," p. 102).

The chapter titled "Vegetable and vegetarian dishes" (p. 106-21) begins: "There are three background factors in Chinese vegetable and vegetarian cooking which give them strength, tradition, and variety.

"The first of these is the widespread use of soy beans and their by-products [soyfoods] which, as we have already seen, add a great deal of flavoring power to Chinese meat cooking, as well as the cooking of other foods. One must also recognize that the use of bean curds is of great importance–for shear versatility–for shear versatility they have few equals in the whole realm of food materials." This type of cooking is derived "principally from Buddhist monastery and temple cooking." "Soy beans and their by-products (soy sauce, soy paste [jiang], soy cheese [fermented tofu], soy bean curd, and fermented salted black beans) [fermented black soybeans] act as a common denominator between meat and vegetable dishes." The "Basic vegetarian stock" has three main ingredients: fresh and dried mushrooms and mushroom stalks, 1½ lb yellow [soy] beans, and ¼ teaspoon MSG. The technique of "Splash frying" is used in the recipe for "Splash-fried bean sprouts" (p. 112). Soy related: Vegetarian toasted 'shrimp' (with 2 cakes bean curd and 1 teaspoon bean curd cheese, p. 119). Vegetarian spring rolls (with 2 cakes bean curd 1 teaspoon bean curd cheese, p. 119).

Spare ribs with black beans (Chinese style) (with "2 tablespoons fermented black beans," p. 142).

Spare ribs with black beans (overseas Chinese style) (with "2 tablespoons fermented black beans," p. 142). Spare ribs with red bean curd cheese (p. 143-44). Sliced roast pork stir-fried with bean curd (p. 150). Diced chicken in soy jam (with "2 tablespoons soy jam or paste," p. 212-13). Soy eggs (made by simmering hard-boiled eggs in soy sauce).

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The Glossary (p. 343-46) includes entries for: Bean curd. Bean curd cheese ("It is used extensively for flavoring, and is often eaten in small quantities with congee {plain, boiled rice porridge} for breakfast in China"). Bean sprouts ("Young sprouts of the mung bean"). Black beans (Fermented) ("Small, black, salted soy beans"). Hoisin sauce ("Literally translated it means 'Sea-Fresh Sauce.' The ingredients are soy sauce, soy paste, ground yellow beans, garlic, sugar and vinegar). Light soy sauce. Monosodium glutamate ("It can be eliminated from the recipes if desired"). Red bean curd cheese [a type of fermented tofu] Soy jam (soy bean paste) (This is almost a solid version of soy sauce; it is somewhat less salty but often tastier than soy sauce).

Note: This book was first published in 1974 by William Collins Sons & Co. in London.

5700. National Academy of Sciences, National Research Council, Board of Science and Technology for International Development, Commission on International Relations, Advisory Committee on Technology Innovation. 1979. Microbial processes: Promising technologies for developing countries. Washington, DC. xii + 198 p. Illust. No index. 23 cm.

• ***Summary:*** Soy-related chapters include: 1. Raw materials for microbial processes. In 1977 an estimated 13,842,000 metric tons of soybeans were grown in developing countries. Soybeans were number 15 on a list of 22 major food crops grown in developing countries, and accounted for 1.59% of the total production. The largest crops produced were paddy/rice (21.36% of total), cassava (11.87%), wheat (10.90%), maize/corn (8.41%), and banana/plantain (6.33%). 2. Food and animal feed. Discusses production of meatlike flavors using miso and shoyu, the koji method of producing enzymes, and Indonesian tempeh.

3. Soil microbes in plant health and nutrition. "Mycorrhizal fungi: Most plants, both wild and cultivated, have roots infected with fungi that increase nutrient and water uptake and may also protect the root from certain diseases. These infected roots are called mycorrhizae. Although the mycorrhizal fungi probably increase uptake of all the essential elements, they are usually most important in improving phosphorus nutrition. Phosphate is generally present in the soil in low concentrations and it is also highly immobile. Strands of fungal hyphae grow out from mycorrhizae and greatly increase the volume of soil from which phosphorus is obtained. So mycorrhizal plants, in general, can grow and thrive in soils much lower in phosphate and other essential nutrients than a comparable nonmycorrhizal plant. Many plants are so dependent on mycorrhizal fungi for nutrient uptake that they may starve if these fungi are absent. There are a number of types of mycorrhizae. The two that occur on the most economically important crops, the endomycorrhizae and the ectomycorrhizae, are discussed."

4. Nitrogen fixation. "Air is four-fifths nitrogen, yet it is the absence of this particular element that most commonly limits food production. Neither man, animals, nor higher plants can use elemental nitrogen; it must first be 'fixed,' that is, combined with other elements such as hydrogen, carbon, or oxygen before it can be assimilated.

"Certain bacteria and algae have the ability to utilize (fix) gaseous nitrogen from the air. Some microorganisms work symbiotically in nodules on the roots of plants, with the plant providing food and energy for the bacteria, which, in turn, fix nitrogen from the air for their host ...

"Bacteria that fix nitrogen in nodules on the roots of leguminous plants are called rhizobia...

"Leguminous plants have been known for centuries to enrich soils, but the reason was not understood until 1886 when two German scientists, Hellriegel and Wilfarth, found that the bacteria in the nodules on the leguminous root brought about nitrogen fixation. Nitrogen-fixing microorganisms fix an estimated 175 million metric tons of nitrogen annually, or about 70% of our total supply. The remainder is produced in chemical fertilizer factories." The nitrogen fixed by the soybean-rhizobium association is about 60-80 kg/ha/year. 5. Microbial insect control agents. Green cloverworm on soybeans can be controlled by *Bacillus thuringiensis*. 10. Pure cultures for microbial processes. Discusses world culture collections. Address: Washington, DC; Peoria, Illinois.

5701. Ng Sock Nye. 1979. Soya bean–Nutritious food for the people. Malaysia: Institut Masyarakat Berhad, 9 Lorong Kucing, Pulau Tikus, Penang. 19 p. Illust. 21 cm. [3 ref]

• ***Summary:*** A very original and informative booklet, containing a photo or illustration (line drawing) of most of the soyfood products discussed.

Contents: Nutritional value of soya bean, soya bean milk (tau chui [soymilk]), soya bean curd (tau fu fah [soymilk curds]), soya bean jelly (tau fu [tofu]), fried bean cake cubes (tau fu pok [deep-fried tofu cubes]), bean cakes (tau kuah [pressed tofu]), dried soya strands (tau ki / fu chok [dried yuba sticks]), soya skin sheets (tau pui; dried yuba), sweet bamboo (t'im chok [sweet dried] yuba), vegetarian duck (chai ak [Buddha's duck made from seasoned and steamed yuba]), vegetarian salted fish (chai kiam hu [Buddha's fish made from tofu spread on yuba]), vegetarian meat (chai tu kar [Buddha's ham made from seasoned yuba; may be steamed]), soya bean sprouts (tau geh [soy sprouts]), soya sauce (tau eu [soy sauce]), salted soya beans (tau chio [Malaysian fermented black soybeans]). Bibliography.

On page 18 is a photo of all the soyfood products discussed on one table, each neatly labeled with its Malaysian name.

5702. Ogawa, Hiroshi. 1979. Noda no taru shokunin [The

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craftsmen who make wooden kegs in Noda]. Nagareyama, Chiba prefecture, Japan: Ron Shobo. 150 p. Series: Furusato Bunko. [20+ ref. Jap]*

5703. Padilla, Jean. 1979. Les recettes végétariennes de l'Auberge "in" [The vegetarian recipes of the Auberge "Inn"]. Paris: Editions Robert Laffont. 142 p. Illust. No index. 22 cm. [Fre]
• ***Summary:*** The Auberge "Inn" is apparently a restaurant in France. In French, the word *Auberge* refers to an inn, public house, hostel, or tavern. Soy-related recipes include: Macao salad (with soy sprouts, p. 113). Tropical salad (with soy sprouts, p. 116). Macrobiotic pâté (with soy flour, sesame butter, etc., p. 125). Miso pâté (with miso [soja fermenté em pâté], chickpea flour, Chinese-style tofu [pâte de soja = fromage de soja], and soy sprouts, p. 126). Shallot sauce (with tamari, p. 127). Clafoutis Auberge "In" (with soy flour, p. 137). Address: Paris, France.

5704. Pederson, Carl Severin. 1979. Microbiology of food fermentations. 2nd ed. Westport, Connecticut: AVI Publishing Co. ix + 384 p. Illust. Index. 24 cm. [38 soy ref]
• ***Summary:*** Chapter 11, on "Nutritious fermented foods of the Orient" contains (p. 310-33): Introduction. Soy sauce. Natto. Koji, ragi, and similar inocula. Miso. Sufu or Chinese cheese. Monosodium glutamate. Aroz fermentado of Ecuador. Tempeh ("The term catsup originated from the Chinese ketsiap, a salty condiment prepared from fish" [p 325-26]). Fish sauces. Taro. Address: Prof. Emeritus Cornell Univ. and New York State Agric. Exp. Station.

5705. Peppler, Henry J.; Perlman, D. eds. 1979. Microbial technology. 2nd ed. Vol. 1: Microbial processes. Vol. 2: Fermentation technology. New York, NY: Academic Press. Vol. 1, 544 p. Vol. 2, 536 p. Subject index.
• ***Summary:*** Contents of Vol. 1: 1. Beer brewing. 2. Cheese. 3. Distilled beverages. 4. Mold modified foods, by Hwa L. Wang and C.W. Hesseltine (p. 95-129, cited separately; incl. soy sauce, miso, hamanatto, sufu, tempeh). 5. Wine. 6. Vinegar. 7. Ketogenic fermentation processes. 8. Mushroom fermentation. 9. Inocula for blue-veined cheese and blue cheese flavor. 10. Microorganisms for waste treatment. 11. Elementary principles of microbial reaction engineering. 12. Microbial culture selection. 13. Methods for laboratory fermentations. 14. Instrumentation of fermentation systems. 15. Computer applications in fermentation technology. 16. General procedures for isolation of fermentation products. 17. Use of immobilized cell systems to prepare fine chemicals. 18. Economics of fermentation processes. 19. Fermentation processes and products: Problems in patenting.

Page 111: "Sufu, a traditional Chinese food, is a soft cream cheese-type product made from cubes of soybean curd (tofu) by the action of a mold. In the Western world, sufu has been referred to either as Chinese cheese or as bean cake. Because of the numerous dialects used in China, the product is also known as fu-ju, tou-fu-ju, and others (Wang and Hesseltine, 1970a)." Address: 1. Universal Foods Corp., Milwaukee, Wisconsin; 2. School of Pharmacy, Univ. of Wisconsin, Madison.

5706. Rattazzi, Ilaria; Rivetti, Franz. 1979. La soia. Semi e germogli: come coltivarli, prepararli e cuocerli. Gli abbinamenti con carne e verdure. Come prepare il go, il latte di soia e il tofu [Soybeans. Seeds and sprouts: how to grow, prepare, and cook them. Combining with meat and vegetables. How to prepare fresh soy puree (gô), soymilk, and tofu]. Milano, Italy: Sonzogno. 127 p. [73 ref. Ita]
• ***Summary:*** Contains many recipes. Address: Italy.

5707. Riker, Tom; Roberts, Richard. 1979. Directory of natural and health foods: A sourcebook for dietary revolution. New York, NY: Putnam (A Paragon Book). 320 p. Index. 37 cm.
• ***Summary:*** The first part of this book (p. 7-49) consists of essays on natural foods and nutrition (some reprinted). Part two is a commercial catalog/directory of natural foods available in 1979; it lists and describes (with may photos and labels) products from most of the major U.S. natural foods manufacturers. An Index (p. 293-308) lists participating companies alphabetically.

Soy-related products include: Hain Super-E Soy Oil and Crude [unrefined] Soy Oil (Los Angeles, California, p. 55). Health Valley Soy Moo (Montebello, California, p. 56). Edward & Sons Miso-Cup (Union, New Jersey, p. 57). Family Orchards Fruit & Nut mixes, incl. Back Packer+*, Hi-Fiber Mix+, Hi-Iron Mix+, Hi-Protein Mix+*, Hiker's Helper, Mixed Nuts*, Mountain Munchies*, Tamari Mixed Nuts* (+ = contains Soy Nuts; * = contains Tamari Peanuts) (Berkeley, California, p. 60-61). Niblack Tamari Pumpkin Seeds (Pepitas), Tamari Roasted Sunflower Seeds, Liquid Lecithin, Granular Lecithin (Rochester, New York, p. 72-73). Arrowhead Mills Unrefined Soybean Oil (Hereford, Texas, p. 75). Good Morning New England Granola incl. Cashew-Raisin Bran-ola (with okara soy fiber), Happy Trails Mix (with roasted soynuts) (Amherst, Massachusetts, p. 79). Elam's Soy Flour (Broadview, Illinois, p. 81).

A long section on Erewhon and its products (p. 84-108) is probably the reproduction of an Erewhon catalog. Erewhon is now located at 3 East Street, Cambridge, MA 02141. Following several pages about the company and its philosophy and standards, each of its major products is discussed in detail, often with nutritional analyses. A label for Soy Flour (organically-grown stone-ground, 24 oz.) is shown; the main recommended use is for making soy milk! A major part of the presentation is titled "Japanese food guide." Products described include: Umeboshi (2 pages): Plums pickled in brine (umeboshi). Umeboshi paste. Plum concentrate (*bainiku ekisu*). Miso (2 pages): Hatcho, waka-

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Hatcho, soybean, barley, brown rice, rice, and natto miso varieties. Tekka (made with Hatcho miso). Sweets made from mizu ame [rice syrup]. Nigari. Gomashio. Koji starters for various types of miso or shoyu. Goma-muso (60% barley miso and 40% whole sesame seed butter). *Gomamiso furikake* (with barley miso, whole roasted sesame seeds, and shredded nori seaweed). Kombu candy. Kokkoh. Dried tofu (*Kohya-dofu*). Brown rice sake. Mirin. Gluten cakes (*Kuruma-fu*). Seitan (Gluten cooked in shoyu). Rice crackers seasoned with tamari soy sauce. Kuzu (3 pages). Tamari and shoyu (4 pages. Johsen Shoyu is made in Sendai and tamari is made by San-jirushi Co.). Seaweeds (4 pages): Kanten, arame, hijiki, kombu, ne-kombu, nori, seasoned nori, kanten, kanten flakes, wakame, and mekabu.

Good Food brand Soy-Millet Bread (Austin, Texas, p 120). Arrowhead Mills Bulgur-Soy Grits (p. 121). Erewhon Morning Cereal, and Infant Cereal (each containing soy beans). Chico-San Black Soybeans (imported), and Azuki Beans (Dainagon imported small red), and Lima Soy Sauce (Chico, California, p. 126-27). Arrowhead Mills 7 Grain Cereal, and Deaf Smith Crunch (granola-type cold cereal) (each contains soybeans, p. 130).

The section on pages 188-197 is titled "Soy." It lists Farm Foods Tempeh Kit, Tempeh Starter, Natural Nigari for Curding Tofu, Soyflour, Whole Cleaned Soybeans, Good for Ya Textured Vegetable Protein (Summertown, Tennessee, p. 189). New England Soy Dairy Tofu (with many tofu recipes, Greenfield, Massachusetts, p. 192-96).

The Redwood Sprouter Co. sprouter containing Soy Sprouts (1976, Austin, Texas, p. 202-04). Worthington Foods (a photo shows their line of 38 products). Millstone Burger-Like (with soy flour and TVP). Wheat Fries (with wheat gluten), Tender Cuts (with wheat protein and soy flour) (Penryn, California, p. 222-23). Sunrise Health Products Lecithin Granules (p. 274-75).

5708. **Product Name:** [Tofu kit].
Foreign Name: Tofu kit.
Manufacturer's Name: Roland A. di Centa.
Manufacturer's Address: Via Maffei, Milan, Italy.
Date of Introduction: 1979. January.
New Product–Documentation: Ad (in French, 2 inches square, black and white) in Le Compas (France). 1981. No 17. Spring. p. 52. "Tofu kit. Contains everything to prepare tofu in your own home, including a 16-page booklet and enough nigari for two batches of tofu. Price 120 francs, postpaid. Send a check to De Centa, 12, rue des Patriarches, 750-05, Paris."

An undated booklet accompanied this tofu kit made in Italy by Roland A. di Centa, Italy's first Caucasian tofu maker. On the yellow cover of the French-language booklet the word "tofu" is also written using Chinese characters. Contents of the booklet: Tofu. What is tofu?, vitality and energy, proteins, easy to digest, saturated fats and cholesterol, easy to prepare in recipes, make tofu at home using the tofu kit. The tofu kit and its contents. Details on the tofu kit and how to use it. How to store and press tofu. How to make tofu at home: Detailed instructions with illustrations. Ingredients used in preparing tofu recipes. Tamari, miso, kuzu, unrefined sea salt, sesame oil, sesame seeds and gomashio, tahini (most sold at macrobiotic food stores). Recipes for using tofu. Recipes for using okara. Soymilk.

Note: This booklet was sent with a letter by Roland A. di Centa. 1993. Aug. 9. For details, see that letter.

5709. **Product Name:** [Tofu kit].
Foreign Name: Tau-fu kit.
Manufacturer's Name: Roland A. di Centa.
Manufacturer's Address: Via Maffei, Milan, Italy.
Date of Introduction: 1979. January.
New Product–Documentation: An undated booklet accompanied this tofu kit made in Italy by Roland A. di Centa, Italy's first Caucasian tofu maker. On the white cover of the Italian-language booklet the word "Tau-Fu Kit" is written in brown outline letters. Contents of the booklet: Tofu. What is tofu?, vitality and energy, proteins, easy to digest, saturated fats and cholesterol, easy to prepare in recipes, make tofu at home using the tofu kit. The tofu kit and its contents. Details on the tofu kit and how to use it. How to store and press tofu. How to make tofu at home: Detailed instructions with illustrations. Ingredients used in preparing tofu recipes. Tamari, miso, kuzu, unrefined sea salt, sesame oil, sesame seeds and gomashio, tahini (most sold at macrobiotic food stores). Recipes for using tofu. Recipes for using okara. Soymilk.

Note: This booklet was sent with a letter by Roland A. di Centa. 1993. Aug. 9. For details, see that letter.

5710. Sato, Yoshiya. 1979. Fûmi o uru otoko-tachi: Yonjû oku nin shijô ni idomu Kikkôman [The men who sell flavor: Kikkoman challenges a world market of 4 billion people]. Tokyo: Nihon Rikuruto Senta. 245 p. No index. 18 cm. [Jap]. Address: Member of newspaper inspectors committee (Shinbun Kansa Iinkai Iin).

5711. Shulman, Martha Rose. 1979. The vegetarian feast. New York, NY: Harper & Row. xii + 319 p. Illust. by Beverly Leathers. Index. 24 cm.
• ***Summary:*** The author, born in Connecticut in 1950, is the daughter of writer Max Shulman. A color photo on the back dust jacket shows Martha Shulman. Address: Austin, Texas.

5712. Voldeng, Harvey D. 1979. Soybeans in Canada–Past, present and future. Based on an article [sic, manuscript] by Dr. H. Voldeng. In: 1979. Fats and Oils in Canada: Annual Review. Ottawa, Ontario, Canada: Grain Marketing Office, Dept. of Industry, Trade and Commerce, Agriculture Canada. [vi] + 95 p. See p. 1-10. Chap. 1. [7 ref]

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• ***Summary:*** Contents: Introduction. Introduction of soybeans to Canada. Importance of the soybean [worldwide] Utilization. Food uses of soybeans: Oriental foods–Soy milk, tofu, sufu, miso, soy sauce, tempeh, Hamanatto, natto. Western ingredients–Full fat flour, defatted flour, soy protein concentrates (70% protein), soy protein isolate (more than 90% protein), textured soybean protein. Soybeans in Ontario. Development of short season varieties. Soybeans in Quebec and the Maritimes. Soybeans in the Prairies (southern Manitoba and Alberta).

A table shows soybean acreage in Ontario's leading counties in 1978. Kent 205,000. Essex 192,000. Lambton 170,000. Elgin 63,000. Middlesex 40,000. Other 7,000. Total (Ontario) 705,000 acres.

Soybeans grown in Ontario can be crushed at three plants: (1) Victory Soya Mills (owned by Procter and Gamble) in Toronto. (2) Canadian Vegetable Oil Processing Limited (owned by Canada Packers) in Hamilton. (3) The recently completed Maple Leaf Monarch plant (affiliated with Unilever Corporation) in Windsor. Total crushing capacity in Ontario is about 35 million bushels per year.

The CSP Foods Plant in Altona, Manitoba, has in some years crushed limited amounts of soybeans imported from the U.S.

"Development of short season varieties. The justification for the effort to develop a large acreage outside of southwestern Ontario has been the magnitude of imports of soybeans, meal and oil. This has been and continues to be sizeable. The situation (in metric tons = tonnes) is outlined below for the 1977/78 crop year. (1) Whole soybeans: Production 527,361. Imports 262,835. exports 64,173. Domestic crushing 728,400.

(2) Soybean oil: Imports 28,100. Exports 1,400. Domestic production 125,600.

(3) Soybean meal: Imports 376,300. Exports 45,600. Domestic production 575,400. Source: ***Fats and Oils in Canada, Annual Review,*** 1978.

Letter (e-mail) from Dr. H. Voldeng of Agriculture and Agri-Foods Canada. 2010. Feb. 16. The original "article" was not an article but a manuscript that was sent to the publishers of this volume; they reduced the length slightly. It was never published separately, no longer exists, and cannot be cited separately. Address: Agriculture Canada, Ottawa, Ontario.

5713. Wang, Hwa L.; Hesseltine, C.W. 1979. Mold-modified foods. In: H.J. Peppler and D. Perlman, eds. 1979. Microbial Technology. 2nd ed. Vol. 2. Fermentation Technology. New York: Academic Press. 544 p. See Vol. 1, p. 95-129. [90 ref]

• ***Summary:*** Volume 1: Microbial processes. Volume 2: Fermentation technology. Contents: 1. Introduction. 2. Soy sauce. 3. Miso. 4. Hamanatto. 5. Sufu [fermented tofu]. 6. Tempeh. 7. Ang-kak (red rice, used as a color agent). 8. Absence of mycotoxins in fermented foods. 9. Conclusions.

For each food is given: General description, method of preparation, composition [chemical / nutritional]. In addition for tempeh is given: Tempeh-like products, biochemistry and physiology of ***Rhizopus oligosporus,*** changes occurring during fermentation, nutritional value.

"Soy sauce" is known as chiang-yu on China, shoyu in Japan, keeap in Indonesia, kanjang in Korea, toyo in the Philippines, and see-iew in Thailand. In the Western World the product is often referred to as soy sauce." Japan is the leader worldwide in sauce production; it has the largest fermentation plant and uses the most advanced technology.

Hamanatto. Products similar to Japan's hamanatto are known as tou-shih in China, tao-si in the Philippines, and tao-tjo [sic] in the East Indies [Indonesia]. A typical process for making hamanatto in Japan, based on information supplied by Dr. T. Kaneko of Nagoya Univ., Japan, is as follows: Wash soybeans, then soak, steam until soft, drain, and cool. Mix with parched wheat flour in the ratio of 2 parts soybeans to 1 part flour. Inoculate the soybeans with a short- or medium-stalked strain of *Aspergillus oryzae.* Incubate for 1-2 days until the beans are covered with a fragrant mycelium and have become soybean koji. Pack the soybeans in a container [wooden keg] with (for example) 2.5 kg soybean koji, 650 gm salt, 3.6 liters water and some freshly sliced gingerroot. Cover the container tightly and age under pressure for 6-12 months. Remove beans from liquid and dry them in the sun to give hamanatto. The composition of the brine may differ among manufacturers ; thus the finished hamanatto differs somewhat in taste and appearance. "Japanese hamanatto is rather soft, having a high moisture content. Chinese tou-shih has a much lower moisture content... and therefore is not so soft. Tao-tjo tends to have a sweet taste because sugar is often added to the brine."

Shoyu in Japan. Although there are more than 4,000 shoyu makers in Japan, the largest 4-5 companies produce about 50% of the total.

Note. A wide variety of dairy cheeses, especially of French origin, are made with surface mold growth. Typical varieties are Camembert, Coulommiers, and Brie. Address: NRRC, Peoria, Illinois.

5714. Yamaguchi, Momoo; Kojima, Setsuko, eds. 1979. Wa-Ei Nihon bunka jiten [A cultural dictionary of Japan]. Tokyo: Japan Times. vii + 408 p. See p. 108. 19 cm. [Eng, jap]

• ***Summary:*** A very useful book with excellent definitions of Japanese words in English. It is divided into nine parts. No. 2 is titled "dietary habits" (p. 79-131). Each definition has four parts: (1) The word is written in romanized English, with diacritical marks and a hyphen in compound words. (2) The word is written in characters. (3) A long definition is given in English. (4) Related words and "see also" words are given (romanized) and key words in the definition are defined in Japanese (Chinese characters).

Words only distantly related to soy are preceded below

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by an asterisk. Soy-related words: abekawa-mochi (with "sweetened yellow soybean powder–kinako"), abura-age (fried soybean curd), aemono, age-dama, age-dashi ("soybean curd fried lightly without a tenpura batter"), Aji-no-moto ("a popular brand of monosodium glutamate"), ama-zake, * an (sweet bean jam = azuki-an, Can be strained {*koshi-an*} or mashed {*tsubushi-an*}), dengaku-tofu, doburoku, eda-mame, fu ("dried, bread-like pieces of wheat gluten"), fucha-ryori ("Chinese-style vegetarian dishes served in some Japanese temples of Chinese origin"), gan-modoki, goma-ae, goma-shio (widely used with sekihan), hiya-yakko, inari-zushi, isobe-maki (with mochi, soy sauce and nori), kara-age, kashiwa-mochi (stuffed with sweet [azuki] bean paste), kina-ko ("yellowish soybean powder"), kishimen (seasoned with soy sauce and topped with a few pieces of fried bean curd), kitsune udon (seasoned with soy sauce and topped with a few pieces of fried bean curd), koji, koya-dofu, * kuzu-manju (a ball of sweet redbean paste {azuki-an} with a covering of kuzu starch), kuzu-mochi (with kinako), masu (a small square measuring box, usually made of Japanese cypress {*hinoki*}. The three sizes measure 0.18, 0.9 and 1.8 liters. It is constructed by dovetailing, without the use of nails or adhesive. It is used for measuring soybeans, cereal grains, or for drinking sake), miso, miso-shiru, miso-zuke, * mochi, nabe-mono (often contain tofu, examples are sukiyaki, yose-nabe, and mizu-taki), nama-gashi (traditional Japanese confections made with beans and/or glutinous rice, cooked but not baked), natto, * nori (a dried sheet of laver, a seaweed), * oboro (related to sushi, not soy), oden, * ohagi (coated with sweet redbean paste {*azuki-an*}), shiru-mono (the two basic types are clear soup and miso soup), * shiruko (sweet beanpaste soup with mochi; see zenzai), shojin-age, shojin-ryori, shoyu, suki-yaki, sukiyaki-nabe, suri-bachi, suriko-gi [suri-kogi], sushi, sushi-ya, teri-yaki, tofu, * ume-boshi (a Japanese pickled plum), wa-gashi (Japanese-style confectionery), wakame, warishita (soy sauce flavored seasoning), washoku = nihon-ryori, yaki-dofu, yaki-mono, yakko-dofu, yu-dofu, * zenzai ("a thick kind of sweet redbean soup").

Page 24 defines hiragana (lit. flat kana) as "The cursive form of *kana* script, one of the two sets of Japanese syllabary writing. *Hira-gana* is more commonly used than the other set called *kata-kana*. It is usually used for writing inflectional endings and function words not represented by Chinese characters (*kanji*)." Address: Tokyo, Japan.

5715. Yueh, Jean. 1979. The great tastes of Chinese cooking contemporary methods and menus. New York, NY: Times Books: A Division of Quadrangle / The New York Times Book Co., Inc. xiv + 302 p. Illust. (line drawings and photos). Index. 24 cm.

• ***Summary:*** "Western food technology is applied to classical Chinese recipes, allowing for the use of the food processor, blender and microwave oven in preparing a variety of Chinese dishes" (from the publisher). The romanization / transliteration is in Pinyin (which means "transcription"). The index contains 8 recipe entries for black beans, salted, 6 for brown bean sauce, 4 each for black bean sauce and for hoisin sauce, 3 each for bean curd and for soy sauce, and 1 for fermented bean curd.

The section titled "Chinese ingredients" (p. 267-80) includes: Bean curd, fresh (2 Cc = 2 Chinese characters are given): Dou-fu. "This ivory-colored, smooth and custard-like product is made from soybean milk..."

"Black beans, salted (2 Cc): Dou-chi–One of the most interesting seasonings, they are salty with a distinct flavor. The beans are available in cans or plastic bags. To store: Will keep indefinitely in a covered jar at room temperature. Tiny white salt crystals may appear after a long period..."

Brown bean sauce (3 Cc): Yuan shai-chi. "Made from fermented soybeans, salt, flour, and water, it is a salty, thick, brownish sauce. When the beans in the sauce are ground up, it is called *ground* brown bean sauce."

Fermented bean curd (red or white) (4 Cc): Fu-ru (Hong. Bai). "Both are pungent and salty in taste, and are used mostly for seasoning or as condiments for Chinese breakfast with rice congee."

Hoisin sauce (3 Cc): Hai-xian-jiang. "Thick, reddish brown sauce made from sugar, vinegar, soybean, salt, flour, fermented rice, chili, and spices."

Soy sauce (2 Cc): Jiang-you. "This is the most important and distinctive seasoning in Chinese coking." Light soy sauce (or thin soy) (2 Cc): Sheng-chou. Use when you wish to retain the natural color of the food. Dark soy sauce (thick or black soy) (2 Cc): Lao-chou. It has a slightly sweet taste from the caramel that is added for coloring. Use when a dark, rich color is desired.

About the author: "Jean Yueh, Chinese cooking authority, native of Shanghai and protégé of noted Hong Kong chefs, runs the Jean Yueh cooking school in Berkeley Heights, New Jersey." A portrait photo shows Jean Yueh (inside rear dust jacket). Address: Berkeley Heights, New Jersey.

5716. *Manna Bulletin.*1979--. Serial/periodical. Meeuwenlaan 70, 1012 JK Amsterdam, Netherlands. Editor: Sjon Welters. Illust. 21 cm. [Dut]

• ***Summary:*** This is a magazine about natural foods, macrobiotics, and alternative lifestyles. Soyfoods Center owns Vol. 3, No. 2 (June 1979), and Vol. 4, No. 3 (autumn 1982). In the former issue, the advisors are Adelbert Nelissen and Willem de Ridder. The editors are Hans den Hoed, Wieke Nelissen, etc. The latter issue contains one article titled "Macrobiotic Economics and the Practice of Manna" (a photo shows Adelbert Nelissen, Manna director), and another titled "Fermented products, an essential supplement to a vegetarian (*plantaardig*) diet." Page 12 shows an ad for Witte Wonder Products (2 Riemerstraat 186, 2513 EZ Den

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Haag), producers of tofu and seitan.

Talk with Sjon Welters. 1994. April 4. He was once the editor of this publication. He thinks it stopped being published in about 1984-1985. Address: Amsterdam, Netherlands.

5717. **Product Name:** Family Orchards Snack Line–Fruit & Nut Mixes with Soynuts [Back Packer, Hi-Fiber Mix, Hi-Iron Mix, Hi-Protein Mix]
Manufacturer's Name: Family Orchards, Inc.
Manufacturer's Address: 2546 Tenth St., Berkeley, California 94710. Phone: 415-849-2222.
Date of Introduction: 1979?
Ingredients: See below.
Wt/Vol., Packaging, Price: Snack packs (1.5 oz), family packs (4 to 12 oz), or bulk (11 or 22 lb).
How Stored: Shelf stable.
New Product–Documentation: Ad in Tom Riker and Richard Roberts. 1979. *The Directory of Natural & Health Foods*. p. 60-61. Products containing soynuts: Back Packer: Date pieces, tamari peanuts, diced prunes, raisins, soy nuts, sunflower seeds, coconut, almonds. Hi-Fiber Mix: Diced pears, black figs, apricots, sunflower seeds, soynuts, coconut. Hi-Iron Mix: Raisins, pumpkin seeds, sunflower seeds, soynuts, diced prunes, cashews, almonds. Hi-Protein Mix: Tamari peanuts, soynuts, pumpkin seeds, raw and tamari sunflower seeds, cashews, almonds, filberts.

For more on this company and its owner Mithra Grossman, see the SoyaScan interview with Bob Gerner conducted on 25 June 1992.

5718. **Product Name:** Family Orchards Snack Line–Fruit & Nut Mixes with Tamari-Roasted Peanuts [Hiker's Helper, Mixed Nuts, Mountain Munchies, Tamari Mixed Nuts]
Manufacturer's Name: Family Orchards, Inc.
Manufacturer's Address: 2546 Tenth St., Berkeley, California 94710. Phone: 415-849-2222.
Date of Introduction: 1979?
Ingredients: See below.
Wt/Vol., Packaging, Price: Snack packs (1.5 oz), family packs (4 to 12 oz), or bulk (11 or 22 lb).
How Stored: Shelf stable.
New Product–Documentation: Ad in Tom Riker and Richard Roberts. 1979. *The Directory of Natural & Health Foods*. p. 60-61. Products containing tamari-roasted peanuts: Hiker's Helper: Cashews, tamari peanuts, raisins, almonds, date pieces, diced prunes, coconut. Mixed nuts: Cashews, almonds, tamari peanuts, filberts, Brazil nuts. Mountain munchies: Cashews, date pieces, raisins, almonds, tamari peanuts, diced prunes. Tamari Mixed Nuts: Peanuts, almonds, cashews, sunflower seeds.

For more on this company and its owner, Mithra Grossman, see the SoyaScan interview with Bob Gerner conducted on 25 June 1992.

5719. Earle, Stephen J. 1980. Re: Starting a new plant to manufacture real tamari in Virginia, and looking for apprentices. Letter to Richard Leviton, editor of Soycraft magazine, 158 Main St. No. 3, Greenfield, MA 01301. Jan. 7. 2 p. Typed, with signature on letterhead.
• ***Summary:*** Sanjirushi is a well reputed manufacturer of genuine tamari soy sauce and soybean miso. "We have a subsidiary company called San-Jirushi International located in Virginia and plan to establish a manufacturing facility for tamari in the U.S. within one or two years time."

The company is looking for American personnel to assist in the eventual operation of the U.S. plant. "We would ask for an apprenticeship of about two years with a commitment of at least two more years to our employ after returning to the U.S. San-Jirushi would provide room, board, and a basic salary, plus return transportation to the U.S. upon completion of the training."

Note: This is the earliest English-language document seen (March 2012) that contains the term "genuine tamari" or "genuine tamari soy sauce." Address: Sanjirushi Jyozou Co. Ltd./1 chome Meiseidouri, Kuwana-city, Mie-pref., Japan. Phone: (0594) 22-3333.

5720. ASEAN Sub-Committee on Protein. 1980. ASEAN Protein Project. Bangkok, Thailand. 24 p. Jan. Illust. 29 cm. [Eng]
• ***Summary:*** Contents: Introduction (incl. history, programs, and budget). Administration (incl. list of workshops held by the ASEAN Sub-Committee on Protein). Research and development. High-protein low-cost foods. Full-fat soy flour (a plant at Chiang Rai, northern Thailand, produces 100 tons/month). Fermented foods (incl. soy sauce). Soy products (incl. tofu). ASEAN network (directory).

"The ASEAN Protein Project was conceived at a joint research project on soybeans and protein-rich foods at the first meeting of the ASEAN Permanent Committee on Science and Technology held in August 1971 in Indonesia. Meetings of food specialists soon followed, one in September 1972 in Malaysia and another in November 1972 in Indonesia. At a further meeting in August 1974, involving Australian technical experts, four areas for research co-operation were identified, namely: (1) Identification, development, and utilisation of low-cost, protein-rich foods for children and other vulnerable groups. (2) Processing and utilisation of full fat soy flour (3) Improvement of fermentation technology; and (4) Microbiological culture collection.

Workshops held by the ASEAN Sub-Committee that concern soya include: 1st Workshop on soy products (1976, Kuala Lumpur, Malaysia). 3rd Workshop on culture collection (1977, Bangkok, Thailand). 4th Workshop on soy sauce manufacturing techniques (1978, Singapore). 5th Workshop on solid substrate fermentation (1978, Bandung,

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Indonesia). 8th Workshop on extruder technology (1980, Bangkok, Thailand).

Photos show: (1-4) Participants, meetings, and tours. (5-6) Full fat soy plant at Chiang Rai, Thailand. (7) Commercial soy sauce factory. Address: Bangkok, Thailand.

5721. Staley (A.E.) Manufacturing Co. Protein Div. 1980. Staley protein products. 2200 E. Eldorado St., Decatur, IL 62525. 115 p. Jan. 29 cm.
Address: Decatur, Illinois.

5722. Aburai, Hiroko. 1980. Chôshi Shôyu Jôzôgyô Koyô Rôdô [Labor employment in the Choshi Shoyu fermentation industry]. *Kinsei* (*Modern History*) 4:24-40. Feb. [Jap]*
Address: Japan.

5723. Bhumiratana, A.; Flegel, T.W.; Glinsukon, T.; Somporan, W. 1980. Isolation and analysis of molds from soy sauce koji in Thailand. *Applied and Environmental Microbiology* 39(2):430-35. Feb. [12 ref]
• ***Summary:*** Studies to modernize the soy sauce fermentation industry in Thailand began in 1978 when a locally isolated Aspergillus strain was recommended for use in soy sauce factories because it was a high protease producer, it was free of aflatoxin and other toxins, and it produced good taste and aroma in the final fermentation product.

This paper was first published in 1979 by the Inst. of Food Research and Product Development, Kasetsart Univ., Bangkok. Address: 1. Dep. of Microbiology, Faculty of Science, Mahidol Univ., Bangkok, Thailand.

5724. Nunomura, N.; Sasaki, M.; Yokotsuka, T. 1980. Shoyu (soy sauce) flavor components: Acidic fractions and the characteristic flavor component. *Agricultural and Biological Chemistry* 44(2):339-51. Feb. [24 ref]
Address: Kikkoman, Noda, Japan.

5725. Daizu Kyokyu Antei Kyokai. 1980. Gaiyo [About the Japan Soybean Supply Stabilization Association]. Tokyo: DKAK. 12 p. March 31. 26 cm. [Jap]
• ***Summary:*** Name of organization with diacritics is: Daizu Kyôkyû Antei Kyôkai. This association was founded on 26 Dec. 1974, following the U.S. soybean embargo in 1973. It has 8 member associations, including the Japanese national tofu, dried-frozen tofu, natto, miso, shoyu, oil, oil importer, and coarse grain associations. The name and address of each is given. Address: #2 Makoto Bldg. 5F, 1-4-4 Toranomon, Minato-ku, Tokyo 105, Japan. Phone: 03-591-3879.

5726. Fenner, Louise. 1980. Salt shakes some of us up. *FDA Consumer*. March. p. 3-7. Reprinted in Sourcebook on Food and Nutrition, 3rd ed. 1982. p. 128-31.

5727. Liardon, Rémy; Ledermann, Simone. 1980. Volatile components of fermented soya hydrolysate. II. Composition of the basic fraction. *Zeitschrift fuer Lebensmittel-Untersuchung und -Forschung* 170(3):208-13. March. [11 ref. Eng; ger]
• ***Summary:*** Fermented soya hydrolysate (FSH) is better known as soy sauce. The authors found pyrazines FSH. Several gas chromatograms are shown. Address: Research Dep., Nestlé Products Technical Assistance Co. Ltd., P.O. Box 88, CH-1814, Tour-de-Peilz, Switzerland.

5728. Schmit, Matthew. 1980. Tofu-Helper. New directions in packaging and marketing for the soy industry, 1980. Bayside, California. 5 p. April 12. Unpublished manuscript. 28 cm.
• ***Summary:*** A proposal for a new product developed by Matthew Schmit. Five pages of black and white photocopies: (1) Title page. Handwritten. A rectangular photo in the center shows 3 prototypes of the product and 3 tubs of tofu atop a wooden barrel, outdoors. (2) Statement of original idea (handwritten): Name: Tofu-Helper portion pouch. Description. Purpose. Adaptation. Sketch (blank). Signed Matthew Schmit, Date: 4/12/80.

(3) Tofu-Helper: Getting off the ground: An example of the steps undertaken by a tofu company beginning to introduce Tofu-Helper sauces into their sales region. "Choose a name for the campaign, such as Tofu Internationale, and sauces such as. . Tofu turkey and dressing.

(4) Letter to Mr. Jeno Paulucci, 535 Lake Avenue South, Duluth, Minnesota 55802. From Matthew Schmit, Bayside, California. 1 page typewritten, no letterhead, with signature. Explains the product to Mr. Paolucci and suggests that he make and package it. New foods, "primarily tofu, tempeh, and soysage, have burst upon the American natural foods market in the last two and a half years. I have worked with these new items since September 1977, and have followed closely the 'new soyfoods' industry."

(5) Reply from Jeno F. Paolucci, chairman. May 29. Typed on letterhead with signature. "I appreciate your writing me in this connection. However, I just don't feel we would have any interest in going into soyfoods at least at the present time."

Note 1. Jeno was founder of Chun King Corp. and Jeno's Pizza. Matthew's father, Justin, was the company's executive vice president for years in Duluth, Minnesota, and later engineer.

Note 2. Matthew never commercialized this product. Address: Rt. 1, Box 484, Bayside, California 95524. Phone: 707-443-9054.

5729. Haddix, Carol. 1980. Ingrid: Master of the cold buffet. *Chicago Tribune*. April 17. p. S_A1, or N_B1.
• ***Summary:*** Ingrid Kostrubala (Swedish), one of Chicago's hottest caterers, has a constantly varying repertoire. Part of it is her unusual tofu appetizer. "Still a relatively unknown

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food for most Americans, tofu has a wonderful texture that contrasts well with crisp greens, Ingrid said. But its bland flavor (it actually is soy bean curd) stops many people cold." So Ingrid serves tofu with a dipping sauce that contains soy sauce laced with the hotness of shredded fresh ginger; it contrasts nicely with the mild tofu flavor. Contains several recipes, including Tofu with ginger sauce. Mix ½ cup each freshly grated ginger root and soy sauce with ¼ to ½ cup cream sherry in a small serving bowl. Cut tofu (use 3 cartons, 15 ounces each, drained) into 1-inch cubes. Dip and enjoy. A photo shows Ingrid standing by her buffet.

5730. **Product Name:** Chinese soy sauce and Wing Nien Soy Sauce Mfg. Co. (Interview).
Date of Introduction: 1980, April.
New Product–Documentation: Shurtleff visited David at the Wing Nien plant. David's light soy sauce is fermented at room temperature for an average of 9 months (range 6-12 months); at this time the color is pale amber. Why is it not the same color as tamari? David says that to Chinese thick and dark soy sauce connotes low quality since makers add brine to the residue remaining after the first drawing off of light soy sauce, and referment once or twice more for 6-9 months each time. The soy sauce gets darker each time. To get dark soy, David just adds molasses to light soy. He sells it for less that light soy sauce even though it costs him more to make.

"Hoisin" is pronounced like it is written. The characters are sea + a kind of fish + jiang. It is sometimes made from the residue remaining after the first drawing off of light soy sauce. This residue is lightly pressed, ground to a smooth paste, then mixed (at Wing Nien) with the following in order of predominance: soybeans, sugar, water, salt, flour, wine vinegar, garlic, chili, spices, artificial color, and 0.1% sodium benzoate. It is jet black, creamy smooth, and very sweet. Sold in a 14-ounce bottle. Hoisin sauce is typically used with Peking Duck, Mu Shu Pork (served in pancakes), Chinese-style spareribs, or barbecued pork. Brush it on the meat while cooking or mix with ½ part soy sauce.

Notes to accompany flow chart of Wing Nien Soy Sauce: The koji is made with 100 lb of whole dry soybeans and 5 lb wheat flour. It is inoculated by mixing a Japanese koji starter (olive green) with the wheat flour and dusting it over the soybeans. Incubate in wooden trays 1½ by 3 feet, each with a copper screen on the bottom–first in one room at 90°F, then in an adjoining room at a lower temperature for 2-3 days. Pre-mix the koji in a small fiberglass tank with brine, then put it into 7,000 gallon fiberglass tanks. Agitate it with air from below for 15 minutes a day. After 9 months of fermentation, run into flour sacks placed in 3½-foot diameter pressing tanks (each perforated inside with ½-inch diameter holes), and press overnight with 300-400 lb of stones atop each. David also mixes chemical [HVP] soy sauce; 70% of his business is fermented and 30% is chemical / HVP.

HVP is a brown liquid, fairly dark in color, sold as a liquid concentrate. It has a pretty good flavor but Akiko got a splitting headache after sipping it. It contains a high percentage of protein. Chemical soy sauce with good flavor is that with a large amount of HVP concentrate. To distinguish HVP soy sauce from fermented, just read the label. Chemical soy sauce will read HVP, caramel, corn syrup, etc. Check at local Monty grocery store; transcribe a La Choy label.

David sells most of his chemical soy sauce cheaply to the institutional market.

Chinese warming their soy sauce in the sun is their equivalent of Japanese pasteurization in terms of aroma and color. In China, light soy sauce is good quality; dark is second rate.

Chinese fermented soy sauce makers in the USA also exist in New York and Palo Alto. Wei Chuan will soon start in Los Angeles.

Light Chinese soy sauce is amber, not brown. The ingredients in Wing Nien's light Chinese soy sauce are water, soybeans, salt, wheat and less than 1/10 of 1% sodium benzoate.

In Chinese soy sauce, wheat is used only as a starter for the fermentation–about 5% of the weight of dry soybeans. After the first soy sauce (light) is drawn off, add brine, referment, and re-draw. Do this up to three times total. The Chinese re-use the residue (lees). An estimated of this residue is used to make the condiment / paste Min See Jiang [Mian Shi Jiang], a bean paste which is served on steamed fish with gingerroot and onion. After the third drawing off of the soy sauce, press the lees / residue with a heavy rock.

Question: How exactly is Chinese soy sauce drawn off? See a description by A.K. Smith in the late 1940s. David is not sure. A woven bamboo basket is pressed into the jiang in an earthenware crock. The liquid soy sauce collects in the basket, then it is siphoned off.

Sona in Los Angeles makes only chemical soy sauce, as does the Chinese company in Seattle [Washington].

David's output of fermented soy sauce is 20% light and 80% dark. In China, the total output of soy sauce is about 70% light and 30% dark.

David thinks the best imported soy sauce is Tung Chung from Hong Kong. The "4 in 1 Co." makes fermented and HVP soy sauce. Chemical / HVP soy sauce usually contains more protein than fermented soy sauce; the specifications dictate that. The GSA (General Services Administration, which takes government bids) now has specifications for both fermented and non-fermented soy sauce.

In the USA, retail sales of soy sauce imported from countries of Chinese heritage [Hong Kong, PRC / China, Taiwan, Singapore] are about even for light and dark. However foodservice institutions buy about three times as much light as dark. They use poor quality meat and add good seasoning.

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Of the soy sauce made in China / PRC, about twice as much light is sold compared to dark. Most imported dark soy sauce does not contain caramel.

To cook with salted black beans (*dow-si*), grind them in a container with water and soy sauce, then add to a wok and use for stir frying.

5731 Kikkoman International Inc. (KII). 1980. Kikkoman: the company and its soy sauce (Interview). *SoyaScan Notes*. April 17. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Shurtleff and Aoyagi visited Kikkoman's office in Japantown, armed with a list of questions.

Why doesn't Kikkoman use alcohol as a preservative in their shoyu in the USA? (1) Some people, such as Seventh-day Adventists, object to its use in foods. (2) There is a high tax on U.S. products containing added alcohol (ethyl alcohol = ethanol); for shoyu it is about $0.15 per gallon of shoyu. (3) Kikkoman believes that sodium benzoate, which has been approved by the FDA, is safe. It is contained in some natural foods such as dry shiitake mushrooms and cranberries.

Kikkoman conducted a chemical analysis of San Jirushi tamari. The regular contains 2.5% ethanol (alcohol) and the low-salt (low-sodium) contains 3.5%. Ordinarily tamari in Japan contains only about 0.1% ethanol. Therefore they must be adding alcohol as a preservative and not listing it on the label. This tamari also contains 6-10% carbohydrates. If it contained no wheat, it have only 5-6% carbohydrates. Therefore they must be adding wheat.

Saccharomyces rouxii and Torula are yeasts, not molds; they can eventually form a white film on the surface of shoyu. They are salt tolerant. Most are killed by heat treatment (*hiire;* also called pasteurization). In the old days, Japanese would just filter off this white film.

To make their shoyu (soy sauce) Kikkoman uses a specially made soybean meal called *kakko daizu*. More of the natural soybean oil is left in it, and the nitrogen solubility index (NSI) is 25-30% instead of the typical 10%. It has a flaky rather than a meal-like, texture. Who makes it for Kikkoman in the USA? At Walworth, Wisconsin, is any soybean oil left over from the process? If yes, what is done with it?

In Japan Kikkoman uses whole soybeans in their Tokusen (Special) grade soy sauce. Why?

Beatrice Foods makes La Choy soy sauce (America's #2 brand) and RJR Foods made Chun King, but Del Monte recently bought RJR Foods, so Del Monte now makes Chun King.

The three JAS (Japanese Agricultural Standard) shoyu grades (in Japan) are Tokkyu (which has 1.50 or more grams of nitrogen per ml volume of shoyu = w/v), Jokyu and 1.35 to 1.49 gm, and Hyojun has 1.2 to 1.35 gm. Higher in nitrogen than all of these is Tokusen, which is not recognized by JAS. Who uses the word Tokusen? Kikkoman does. U.S. shoyu is equivalent to Tokkyu in nitrogen content. Kikkoman makes no Hyojun grade. More than 90% is Tokkyu. Grades lower than Tokkyu are made by Kikkoman only on special request. The specific gravity of shoyu is 1.19.

In Japan, the real name for "tamari" is tamari shoyu. The definition of tamari shoyu from the Ministry of Agriculture (*Norinsho*) is vague. The word *kikaku* means "standard of identity."

Hawaiian-style shoyu is called amakuchi (sweet); it is made in Japan but sold in Hawaii, not in the USA. It does not have an identity in the JAS standards, but it is considered a type of *koikuchi* (regular shoyu). After fermentation, a natural sweetener (typically *kanzo*, an extract of liquorice root) is added. It contains less salt than typical *koikuchi*.

Milder soy sauce (Kikkoman's green label) has the salt removed after fermentation by use of the ion exchange membrane method–the same used to extract salt from sea water. This is done after pressing but before heating.

Lots of HVP / chemical soy sauce is made and consumed in Kyushu–Japan's southernmost main island; lots of it is sweet.

After shoyu is pressed, the oil layer on top and the bottom layer of high molecular weight substances are both discarded. The middle is the choice. The process is called "clarification" (*seicho*).

Kikkoman says the last time they made a product made by blending shoyu of different ages (1, 2, and 3 years old) was in the 1940s. Ask Dr. Yokotsuka or Fukushima. In 1967 Kikkoman was making a Tokusen consisting of a mixture of 1 year and 2 year fermented shoyus. They called it an 18-month shoyu. If they now had to return to "naturally fermented" with temperature control (*tenmen jôzô*) they would ferment the shoyu for 1 year, then mix winter *shikomi* and summer *shikomi*.

The Chinese traditionally did temperature controlled fermentation by placing the large earthenware jars in a courtyard in the sunlight.

Concerning heat treatment or pasteurization (*hiire*), people nowadays like a lighter colored shoyu than formerly. Kikkoman's heat treatment is done using a plate heater at 82°C. There are two methods of heating: (1) Put hot shoyu into a large open top tank and allow it to cool very slowly. During this time, lots of the natural alcohol evaporates off (0.3 percentage points of the total). (2) Run the shoyu through a plate cooler after a plate heater. Get details of times and temperatures from Drs. Yokotsuka or Fukushima.

After heat treatment there are almost no enzymes left in the shoyu. All the molds have been killed but a small number of spore-forming bacteria and yeasts survive–about 10 to 100 per ml.

Semichemical shoyu is called *shinshiki shoyu* ("new-style shoyu") in Japanese. Kikkoman stopped making it about 15 years ago. There are an estimated 4 commercial shoyu makers in Hawaii and 24 in the United States, but

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only 5 of those in the U.S. make fermented shoyu; the rest just mix ingredients to make quick HVP soy sauce. One can do this in a small room. The American Soybean Association might have the addresses of these companies. Why are they not in the Soya Bluebook? One may be in Seattle [Washington]. The shoyu makers in Hawaii are Diamond & Marumasa, Honolulu Sake and Shoyu, Aloha Shoyu, and Island Shoyu. U.S. shoyu makers include Jan-U-Wine and Sona, both in Los Angeles, Chinese Maid, and Reese Finer Food Co.

In making shoyu, something is filtered with a ceramic filter. What? And at what stage?

The emperor of Japan does not use shoyu made by Kikkoman at their Goyo Gura in Noda. It is forbidden for him to use any special products. No one is allowed to supply him specially–even as a gift. The imperial household must pay for everything on the open market.

Dehydrated shoyu is most widely used in dehydrated instant ramen–in the broth packet; it is also used in making beef jerky and salami / sausages.

In making tamari shoyu, salt water is always added (to the presscake?) to get *assaku tamari*, which is usually called niira tamari. Why didn't San Jirushi mention this?

What is *bansui? Ichiban* ("number one") is the shoyu itself. The 2nd extraction (*ni-ban*) is made by washing the presscake with salt water; this is called shokuen-sui. Only makers of low-quality shoyu do this nowadays. *Ensan* means hydrochloric acid; it is used in making HVP.

To make saishikomi shoyu, the koji is mixed with shoyu rather than with salt water. Saishikomi is also called kanro shoyu; it is used to season sashimi and sushi.

HVP/ chemical soy sauce costs 10-15% less than Kikkoman.

Shiro shoyu is made in Nagoya. They roast the soybeans and steam the wheat. See flow chart. The moromi is fermented for 3 months. It is salty, and is used in *nimono* (dishes simmered in broth). It is 1/3 as light as usukuchi = much lighter than usukuchi. Usukuchi does not add rice koji any more. They add mirin instead.

The character for *hishio* first appeared in Japan in about 600 AD. In which document? Hishio Tsukasa? Continued. Address: San Francisco, California.

5732. Kikkoman International Inc. (KII). 1980. Kikkoman: the company and its soy sauce. Part II (Interview). *SoyaScan Notes*. April 17. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Continued: Yamasa, Higeta and Kikkoman do not use any HVP in making shoyu. In the USA, HVP is made with stronger hydrochloric acid (HCL) than is used in Japan, so the former takes less time to make and is lower in quality.

Formic acid and levulinic acid are the main ones that show up on gas chromatograms of chemical soy sauce.

Most Chinese soy sauce made in the USA contains HVP says Kikkoman. See also interview with David Hall on this same date.

In their color film, Kikkoman showed that they were using whole soybeans since at that time all of their exported soy sauce was made with whole soybeans. Note: The use of whole soybeans also looks better and raises less questions. Concerning Kikkoman's reluctance to use the word "mold" in connection with koji, a key ingredient in soy sauce: Dr. Hesseltine used the word "yeast" instead of the correct word "mold" to describe the making of koji. Japanese are comfortable with the world "mold" in connection with food, but most Americans are not–even though many enjoy mold-ripened cheeses.

Sendai shoyu is not really traditional shoyu since: (1) They don't use little wooden koji trays. (2) They use koji starter (moreover, pure culture koji starter) rather than airborne yeasts. (3) Traditionally neither yeasts nor bacteria were added to the moromi. (4) Traditionally, moromi was made only during the cold months; if it were produced during the summer, it was made with chilled water to slow down the fermentation process. How was the water chilled?

Ajinomoto is a major maker of HVP, a tan liquid. How is it shipped? As a liquid or a solid?

Kikkoman says the term *tennen jôzô* ("naturally fermented") refers to the way they make shoyu. We say it means fermented at the natural temperature of the environment without any heat control. Is there any formal definition of *tennen jôzô?* Must it be made with whole soybeans? This creates a lot of environmental pollution during disposal of the salty oil. Ask Haga-san at Sendai.

Fermented shoyu is *hon-jôzô*. Semichemical shoyu is *shinshiki-jôzô*.

Farmer Jones uses shoyu in curing bacon and in making liverwurst ("liver sausage").

Note: Liverwurst is an anglicisation of the German word, "Leberwurst." Liverwurst normally contains pigs' livers, rather than calves' livers and also contains veal. Most liverwurst varieties are spreadable. The sausage is usually made with pork. Only about 10-20% of the sausage is actually made using pork liver, which is enough to give it a distinctive liver-taste. Other ingredients are meat, fat, and spices including ground black pepper, marjoram, allspice, thyme, ground mustard seed, or nutmeg (Source: Wikipedia, at Liverwurst, Sept. 2011). Address: San Francisco, California.

5733. *SoyaScan Notes*.1980. Chinese soy products purchased in San Francisco Chinatown (Overview). April 17. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** Commercial products purchased in San Francisco Chinatown. Shurtleff and Aoyagi purchased these before visiting David Hall, owner of Wing Nien Soy Sauce Mfg. Co., in San Francisco, and discussed some of them with him.

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Soybean condiment. It is brown and moderately salty; it has a little texture. Contains soybean, wheat, salt, water, molasses, caramel coloring, MSG, garlic powder, sesame seed, sodium benzoate.

Koon Chun Thin soy sauce contains water, soybeans, salt, flour. No preservative. Made in Hong Kong.

Pearl River Bridge Soy Superior sauce. Made in mainland China (PRC). 21 fl. oz. Ingredients: Extract of soybeans, wheat flour, salt, sugar. Very dark. Use for dipping, not for cooking.

Pearl River Bridge Superior Soy: 22 fl. oz. Ingredients: Extract of soya beans, wheat flour, salt, water. No sugar, no preservative. Made in China (PRC). Not as dark as "Soy Superior." Use for dipping.

Yuet Heung Yuen–Dark soy. Ingredients: soybeans, flour, salt, water. No preservative. 11 fl. oz. Address: 171-175 Main St., Aplichau, Hong Kong.

"Salted black beans." They look like hamanatto, sold 8 oz. (by weight) in a plastic bag. Flecks of salt can been seen on the surface of each bean. Ingredients: Black beans [soybeans] and salt. Made in Hong Kong. Also called "sa dow-si" = salted black beans.

5734. Will, Joanne. 1980. Saute pan encounters wok in chinois cuisine. *Chicago Tribune*. April 17. p. W_B3, or S_A3, or N_B3.

• ***Summary:*** Ruth Law is an accomplished Chinese cooking instructor. John Snowden is a chef and the proprietor of a French cooking school. Chinois cuisine aims to mate this two great culinary traditions. "Law has had to eliminate soy bean curd, a favored Chinese ingredient but one that Snowden finds offensive. 'We cook things that are compatible, so that the menu is harmonious,' Law explained." Four recipes are given. Flower soup calls for 1 teaspoon light soy sauce and 1½ teaspoons sesame oil. Address: Food editor.

5735. Spencer, Colin. 1980. Food: Black marks. *Guardian (England)*. April 18. p. 10.

• ***Summary:*** Chinese stores stock most of the flavourings [and seasonings] used in restaurants and for home cooking, such as "satay, five spices powder, sesame paste, yellow bean paste, black bean paste," or hoisin sauce.

5736. Dosti, Rose. 1980. Nutrition class: You practice eating what you preach. *Los Angeles Times*. April 24. p. L29.

• ***Summary:*** "Elementary-school teachers who registered for a course called Nutrition Update at Cal State Long Beach last week learned a thing or two about teaching children nutrition and got to eat what they learned, too." The recipe for Basic stir-fried meat and vegetables calls for "1 (7-ounce) package baked soy bean cakes (tofu)."

A recipe for Chicken marinade calls for "1 tablespoon light soy sauce." Address: Staff writer.

5737. Yoneda, Soei. 1980. Shôjin ryôri, osôzai: Take-no-Gosho fû [Zen vegetarian cookery, side dishes: Kyoto Take-no-Gosho style]. *Kurashi no Sekkei* (*Designs for Living*) No. 131. 196 p. April. Illust. 30 cm. (Tokyo: Chuo Koronsha). [Jap]

• ***Summary:*** Filled with hundreds of lovely color photos of prepared dishes, steps in preparation, Zen temples and their art treasures, gardens, and buildings. Many of the recipes include soyfoods, especially tofu, miso, shoyu, and okara. Includes a color portrait of Soei Yoneda (p. 5) and the story of her life and work (p. 165-67). Address: Abbess, Sanko-in Zen temple, Honcho 3-1-36, Koganei-shi, West Tokyo (Musashi Koganei Station).

5738. Earle, Steve. 1980. Re: Tamari and other types of shoyu in Japan. Letter to William Shurtleff at Soyfoods Center, May 7. 5 p. Typed, with signature. [2 ref]

• ***Summary:*** A long, excellent letter containing detailed answers to ten questions from Shurtleff about tamari in Japan. Address: San-Jirushi Corp., 1-chome, Meisei-dori, Kuwana, Mie 511, Japan. Phone: (0594) 22-3333.

5739. **Product Name:** Soysage.
Manufacturer's Name: Bountiful Bean Plant.
Manufacturer's Address: 903 Williamson St., Madison, WI 53703. Phone: 608-251-0595.
Date of Introduction: 1980 May.
Ingredients: Okara (soybean pulp), soybeans, buckwheat flour, oats, nutritional yeast, tamari, oil, malt syrup, garlic powder, allspice, ginger, fennel, oregano, sage, black pepper, cayenne pepper.
Wt/Vol., Packaging, Price: Four 3-lb. blocks per case. $1.28/lb wholesale.
How Stored: Refrigerated or frozen.
New Product–Documentation: Bountiful Bean Plant. 1980. Soysage News! "Soysage is about ready to be produced for distribution to your store. The Bountiful Beaners." Suggests that stores cut each block into 12-oz. pieces.

5740. *Food Product Development*. 1980. Oriental specialty miso expands market horizons. 14(5):26. May.

• ***Summary:*** About Kikkoman Instant Miso-Shiru Soy Bean Soup Mix, available in red (aka) and white (shiro). "Following the lead of its soybean cousin tofu, miso is beginning to break away from its limited market in gourmet, ethnic, and health food stores and filter into select supermarkets." A photo shows the front of the two packages, written in both Japanese and English.

5741. **Product Name:** Marusan's Genuine Tamari Soybean Sauce.
Manufacturer's Name: Marusan, Inc. (Importer). Made in Japan by Marusan.
Manufacturer's Address: 297 Galvan Place, Box 507,

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Bergenfield, NJ 07621. Or 8780 E. Valley Blvd., Rosemead, CA 91770. Phone 201-385-5367.
Date of Introduction: 1980, May.
Ingredients: Soybeans, water, salt (wheat free).
Wt/Vol., Packaging, Price: glass dispenser, pint, or quart bottle.
How Stored: Shelf stable.
New Product–Documentation: Ad in Macroscope, 1980 May, p. 2. "Marusan makes quality a natural." "Genuine Tamari Soybean Sauce–priced like so-called tamari, but made the traditional wheat-free way from the aging process of Mame Miso (Soybean Miso) for the denser, more flavorful richness only Real Tamari provides."

Note: This is the earliest published English-language document seen (March 2012) that contains the term "real tamari" or the term "genuine tamari."

5742 Mori, H. 1980. Shôwa 54 nendo ni okeru shôyu, miso no kenkyû gyôseki [Review of annual achievements in shoyu and miso research]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 75:384-410, May. [625 ref. Jap]
• ***Summary:*** This important Japanese-language article, published each year in the May issue of this periodical, has two parts: (1) A review of the past year's major discoveries and developments in the fields of miso and soy sauce in Japan. (2) A bibliography related to those discoveries and developments. Address: Noda Sangyo Kagaku Kenkyusho.

5743 Shurtleff, William; Aoyagi, Akiko. 1980. Soyfoods America Tour: May 5 to June 10, July 25 to Aug. 3, 1980 (Log and trip report–unpublished, including itinerary with map). Lafayette, California: New-Age Foods Study Center. Unpublished log.
• ***Summary:*** This trip had five purposes: (1) To introduce tempeh to America; (2) To promote the authors' newly published *Book of Tempeh*, Harper & Row, the publisher, paid most of the trip expenses, (3) For William Shurtleff to attend the University of Illinois Short Course in Soybean Processing; (4) To visit and study soyfoods companies in America, (5) To introduce people to the many advantages of a meatless / vegetarian diet.

A photo shows: Shortly before the trip, Akiko (left) and Valerie Robertson (right) (working in the Shurtleff's small home kitchen) "canned" many quart Mason jars of Tempeh Cacciatore to serve at the intermission of each lecture / presentation.

Includes the name and address of 37 people and organizations visited. Many of these were pioneers in the soyfoods and natural foods movement. April 25–Optimum Foods (Napa, California). April 27–David Burns (Sebastopol, CA). May 5–Jeremiah Ridenour of Monterey Bay Soyfoods (Santa Cruz, CA). May 6–Thelma Dalman, Foodservice Director for the Santa Cruz City Schools, *Monterey Peninsula Herald*, Ted & Marie Fehring (Carmel), Paula Welch Terui of Jack and the Beanstalk (Carmel Valley, CA). May 8–Al Jacobson of Garden of Eatin', Mr. Kaye Dunham of Tumaro's, Hugh Roberts of Meals for Millions. May 9–Eddie Okita of Okita Enterprises, and Noritoshi Kanai of Mutual Trading Co. (Los Angeles, CA). May 10–Kay Glass (La Cañada, CA). May 11–Frazier Farms natural foods supermarket (Escondido, CA), Bill Walton vegetarian and basketball star (San Diego, CA; we stay with Craig Wright and Andrew Solony of TriLife, they hope to market Bill Walton's tofu under the TriLife brand). May 12–Clare Quinn of The Farm (Tucson, Arizona; her check bounced so we never got paid). May 13–Kathryn Bennett of Southwest Soyfoods (Santa Fe, New Mexico), Tracy McCallum, Taos. May 14–Leslie Wertz (Alamosa, Colorado). May 16–Stay with Christie and John Baker (Boulder, Colorado). May 17–Steve Demos of White Wave Soyfoods and Good Belly Deli. May 18–Sanford and Rebecca Greenwood of East West Center (Boulder, Colorado). May 19–Judson Harper and the low cost extrusion cooker program at Colorado State Univ., Carol Hargadine of Nupro Foods & Soywaze Tofu (Fort Collins, CO). May 21–Gale Randall of the Indonesian Tempeh Co. (Palmyra, Nebraska). May 22–David Tucker of New Pioneer Co-op Society (Iowa City). May 23–George Strayer of Edible Soy Products (Makers of Pro-Nuts, May 23) and Agricultural Exports (Hudson, and Cedar Falls, Iowa). May 24–Cedar Falls (Iowa) and Minneapolis media. May 25–Pat Aylward and Jamie Stunkard of Joy of Soy Tofu (Minneapolis, Minnesota). May 27–Richard Cihoski (Duluth, MN). May 28–Chris Burant of Bountiful Bean Plant and Jehan Ziegler of Higher Ground Cultured Foods (Madison, Wisconsin). May 29–Danji Fukushima of Kikkoman Foods (Walworth, Wisconsin), Diane Loomans of The Magic Bean Co-op (Milwaukee, Wisconsin). May 30–Susan Dart (Lake Forest, Wisconsin), Research staff of Kraft Foods (Glenview, Illinois), Brian Schaefer of It's Natural (Evanston, Illinois). May 31–Paul Obis of *Vegetarian Times* magazine (with Brother Ron Pickarski) (Oak Park, Illinois). June 2–Lou Richard of Fearn Soya Foods, Leonard and Irene Stuttman of INARI, Ltd. June 3–John Gingrich of The Soy Plant. June 4–Tim and Carol Ann Huang of Yellow Bean Trading Co. (Detroit, Michigan). June 5–Glen Blix and Charles D. Howes of Loma Linda Foods (Mt. Vernon, Ohio; furthest point east on tour). June 6–Warren Hartman of Worthington Foods (Worthington, Ohio). June 7–Mick Vissman and Bill Lutz of Hip Pocket Tofu Deli and Rain Star (Columbus, Ohio), Ed Willwerth of Soya Food Products (Cincinnati, Ohio). June 8–Jay McKinney of Simply Soyfoods (Bloomington, Indiana). June 9–Lynn Adolphson and Bob Thompson of Archer Daniels Midland Co., and Grant Smith of A.E. Staley Mfg. Co. (Decatur, Illinois). June 10-11–Les Karplus of Corn Country Foods and Strawberry Fields. June 11–William Thompson and John Santa of INTSOY (Champaign, Illinois).

During the INTSOY Short Course: July 6–We did a

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program hosted by Patricia Mutch at Andrews University (Berrien Springs, Michigan). July 9-13–Third Annual Soycrafters Association of North America conference was held at the University of Illinois, produced by Richard Leviton. There were 270-285 attendees, and it made good money.

People at the University of Illinois we met during the course: Dr. William Thompson, Frances Van Duyne, Harold Kauffman, John Erdman, L.S. Wei, A.I. Nelson, M.P. Steinberg, Munir Cheryan, Ted Hymowitz, Woody Yeh.

Return trip after course: July 28–Bob Davis of Light Foods (St. Louis, Missouri). July 30–James Lowrie of Iowa State University (Ames, Iowa). Aug. 2–Lake Tahoe. Aug. 4–Home in Lafayette, CA.

At most of the public classes/lectures on this trip, Shurtleff and Aoyagi served their favorite tempeh and tofu dishes. They wanted to find out how Americans liked tempeh, so they asked for a show of hands as to which the attendees liked best. The tempeh dish was usually Tempeh Cacciatore, and the results were, on average, that the tempeh was preferred by a ratio of 2 to 1 over the tofu.

On this trip, Shurtleff and Aoyagi did 27 public programs, had 28 media interviews and appearances, traveled 9,000 miles, earned $13,000 gross income and $8,500 net income. Address: P.O. Box 234, Lafayette, California 94549

5744. Westbrae Natural Foods. 1980. Wholesale food catalog. Spring 1980. Emeryville, California: Westbrae. 23 p. 22 by 28 cm.

• ***Summary:*** On the cover, the lettering is in dark blue and dark red on a tan background. Contents. Westbrae juices. Honey butters. Unsweetened spreads. Preserves. Applesauce. Nut butters (Almond butter roasted, cashew butter roasted, cashew butter raw, cashew-peanut-date butter, raw sesame tahini, toasted sesame tahini, peanut butter crunchy, peanut butter smooth, peanut butter crunchy salted, organically grown Valencia peanut butter crunchy). Cereals (mostly granola, incl. cashew granola, maple almond granola).

Trail mixes. Bay to Breakers trail mix (with sunflower seeds and Valencia peanuts, both roasted and coated with shoyu), Chisholm trail mix (with sunflower seeds, cashew pieces, and almonds, each roasted and coated with shoyu).

Roasted nuts (bulk, 12-25 lb, * = 9 oz package also available): Tamari almonds*, Tamari cashews*, Tamari Chisholm mix*, Tamari Valencia peanuts, Tamari pepitas (pumpkin seeds), Tamari sunflower seeds*, Tamari nutroaster's mix*, Deluxe tamari nut mix, roasted Spanish [peanuts] splits for butter stock, roasted Valencia peanuts. Packaged nuts.

Wholegrain pasta (incl. Soy linguini). Westbrae miso (imported from Japan): Red miso, brown rice miso, barley miso, Hatcho miso, soybean miso, natto miso. Cold Mountain miso (made in Los Angeles). Light yellow, mellow white, red. Sea vegetables: Kombu, hijiki, arame, wakame, nori. Atlantic Mariculture dulse.

Westbrae tamari and other Asian foods: Johsen shoyu-tamari, Traditional (true) tamari–wheat free, White tiger tofu sauce, natural nigari, agar flakes and sticks, umeboshi salt plums, rice wine vinegar, brown rice wine vinegar, ramen with soup stock.

Helpful tools (incl. Learning Tree tofu kit, wok, vegetable steamers, vegetable brush, utility knife). Informational pamphlets. What is miso? What is tofu? Miscellaneous (incl. falafel mix, tabouleh mix, Ak Mak crackers, sea salt, mayonnaise, black spiced olives, kosher dill pickles). Oils. Sweeteners. Bakery products. Dried fruit. Beans (incl. azuki beans, soybeans). Grains. Nuts and seeds. Non edible (drums, jars, and bottles). Glossary of manufactured products showing ingredients. Address: 4240 Hollis St., Emeryville, California 94608; 4841 Eastern Ave., City of Bell, CA 90201 (10 miles southeast of Los Angeles). Phone: (415) 658-7518 (orders).

5745. Bu'Lock, J.D. 1980. Such a tasty dish (Letter to the editor). *Times* (*London*), June 4, p. 19, cols. 5-6.

• ***Summary:*** In reply to a letter about "ergot" by Dr. Alan Long. "The traditional oriental fermentations of soya and the like work reliably in their places of origin because those places are so heavily 'infected' with the correct mould species that other microorganisms–including some real nasties–have no chance to gain a foothold. By the same token, anyone trying to introduce them in the West had better employ some trained microbiologists. The Kikkoman company has manufactured fermented soya products in Japan for over 300 years, but the factory they recently [1973] established in the United States had to conform to the very highest standards of food microbiology. A start along similar lines is already being made in Britain, but I am fearful that amateur enthusiasms will do such ventures more harm than good." Address: Weizman Microbial Chemistry Lab., Dep. of Chemistry, The Univ. of Manchester, Manchester [England].

5746. Gevaert, Pierre. 1980. Re: Early work with tamari and miso in Europe. Letter to William Shurtleff at Soyfoods Center, June 11–in reply to inquiry. 1 p. Typed, with signature on letterhead.

• ***Summary:*** "Your note about the misuse of the term 'tamari' is correct." Lima started producing tamari in 1968. It first appeared on the market in 1961, under the name "tamari." Production continued until 1966. "Our shoyu, called and registered as 'tamari' at George Ohsawa's request, was a dark, rather thick liquid very similar to real tamari even though our product was made from 5% soybeans and 50% wheat. I think this was because we aged the product for at least 3 years, and some of it was even older because we could sell only a small part of the production. In 1967 we had such large stocks of miso and tamari that we stopped their production and cured our weak financial situation by selling

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off these stocks. We still remember the good Lima Tamari, and when we started to import from Japan, we always mixed at least 1/3 of Japanese tamari to approach our own quality.

"This month we will produce a good quality of miso in our French artisanal factory running on water energy." Address: P.V.B.A. Lima, Edgar Gevaertdreef 10, 9830 Sint-Martens-Latem, Belgium. Phone: (09) 82.41.76.

5747. Yokotsuka, Tamotsu. 1980. Re: Brief chronology of shoyu in Japan. Letter to William Shurtleff at Soyfoods Center, June 15. 1 p. [2 ref. Eng]

• ***Summary:*** 1521. The characters used today for the term shoyu were first used in Japan in the *Ekirin Bonsetsu Yoshu*. Prior to this time the characters hishio, mame-bishio, etc. were commonly used.

1532. Today's characters for shoyu were first used in a cooking book, the Daiso Ryôri-sho.

1558. A brewer in Noda sent tamari to Kawanaka-jima. Address: Kikkoman, Noda, Japan.

5748. *Consumer Reports.* 1980. Soybeans–the "meat" that grows on vines. 45(6):360. June.

• ***Summary:*** This sidebar to the article "Vegetarianism: Can you get by without meat?" gives a brief description of the soybean and its food uses. "Roasted soybeans [soynuts] can be a delicious snack food." A small amount of soy flour added to bread or pasta dough appreciably increases those foods' protein content. Sprouted soybeans can be eaten cooked or as a salad vegetable and are a good source of vitamin C.

"Soybeans can be made into a milk that, when fortified, can supply nutrients usually obtained from cow's milk. That's important for total vegetarians or those allergic to milk protein. Soy milk can be made into a cheese: soybean curd, or tofu, familiar to many as the little white cubes floating in the soup at a Chinese restaurant." Also mentions soy sauce, miso, tempeh, and meat extenders or meat analogs.

5749. Darby, William J. 1980. Why salt? How much? *Contemporary Nutrition* (*General Mills, Minneapolis, Minnesota*) 5(6):1-2. June. Reprinted in Sourcebook on Food and Nutrition, 3rd ed. 1982. p. 132-34. [11 ref.]

• ***Summary:*** Contents: Salt and its history. Physiological salt requirements. Appetite for salt. Estimates of salt intake. Acute salt depletion. Toxicity of excessive salt. Dietary salt and hypertension. Controversy on salt intake limitation. Summary. Address: President, The Nutrition Foundation, 489 Fifth Ave., New York, NY 10017.

5750. **Product Name:** Living Tempeh Starter [Kit Size 15 x 60 mm Petri dish, or Professional Size 15 x 100 mm Petri dish], Koji Starter for Miso (40 gm) [Light Rice, Red Rice, Barley, or Soybean Koji], Shoyu Koji Starter (60 gm), Natural Nigari (Tofu Coagulant).
Manufacturer's Name: GEM Cultures.
Manufacturer's Address: 30301 Sherwood Rd., Fort Bragg, CA 95437. Phone: 707-964-2922.
Date of Introduction: 1980 June.
New Product–Documentation: Article and ad in Soyfoods 1980. Summer. p. 4-5. "New Source of Tempeh Starter." "Gordon McBride, PhD, former manager of the Living Culture Department at Ann Arbor Biological Center [Inc. in Michigan], and his wife, Betty Stechmeyer, B.S., announced the formation of GEM Cultures, which will provide high-quality tempeh starter cultures at reasonable prices."

Letter and catalog from GEM Cultures to Tempeh producers. 1980. July. Offers a free sample of professional size Living Tempeh Starter (a pure culture of *Rhizopus oligosporus*).

Shurtleff & Aoyagi. 1985. History of Tempeh. p. 55. This starter, sold live, was grown on agar in petri dishes.

Letter from Betty L. Stechmeyer of GEM Cultures. 1991. Oct. 18. These four basic products were introduced in June 1980. For a while, they tried to import commercial shoyu and miso cultures from Nihon Jozo Kogyo but it never worked, so they ended up ordering via Mitoku.

5751. Hesseltine, C.W.; Wang, H.L. 1980. The importance of traditional fermented foods. *BioScience* 30(6):402-04. June. [12 ref.]

• ***Summary:*** Table 1 gives, for each food, the name, area or country, microorganism used, substrate, nature and uses. The following soy-related foods are included: Soy sauce (chiang-yu, shoyu, toyo, kanjang, kecap, see-ieu), miso (chiang, doenjang, soybean paste, tauco), Hamanatto (toushih, tao-si, tao-tjo [sic, tao-tjo = tauco is Indonesian-style miso]), sufu (fu-ru, fu-ju, tou-fu-ju, bean cake, Chinese cheese), tempeh, bongkrek, ontjom (oncom), natto. Address: NRRC, Peoria, Illinois.

5752. **Product Name:** [Soyacreme Natural].
Foreign Name: Soyacreme Natuur, Naturel, Naturell.
Manufacturer's Name: Jonathan P.V.B.A.
Manufacturer's Address: Antwerpsesteenweg 336, B-2080 Kapellen, Belgium. Phone: 03/664 58 48.
Date of Introduction: 1980 June.
Ingredients: Well-water, soya*, sesame, brown rice*, arrowroot, soya sauce, vegetable extract, sea-salt, sea-vegetables, spices. * = Organically grown.
Wt/Vol., Packaging, Price: 100 gm.
New Product–Documentation: Label. Received 1988. 3 by 2 inches. Self adhesive. Blue, orange, and black on a seaside background with sea gull. "Vegetable." Form filled out by Jos van de Ponseele. 1989. Jan. 11. This product was introduced in June 1980.

5753. **Product Name:** [Soyspread].

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Foreign Name: Sojapaste, Pâté de Soya, Sojapasta.
Manufacturer's Name: Jonathan P.V.B.A.
Manufacturer's Address: Antwerpsesteenweg 336, B-2080 Kapellen, Belgium. Phone: 03/664 58 48.
Date of Introduction: 1980, June.
Ingredients: Well-water, soya*, vegetables*, sesame, brown rice*, arrow-root, soya sauce, vegetable extract, sea-salt, sea vegetables, spices. * = Organically grown.
Wt/Vol., Packaging, Price: 250 gm jar.
New Product–Documentation: Label. Received 1988. 1.25 by 10.5 inches. Glossy paper. Orange and black on a pastoral background with sea gull and duckling. "Pure vegetable." Form filled out by Jos van de Ponseele. 1989. Jan. 11. This product was introduced in June 1980.

5754. **Product Name:** [Soyacreme with Seitan].
Foreign Name: Soyacreme Met Seitan, Avec Seitan, Mit Seitan.
Manufacturer's Name: Jonathan P.V.B.A.
Manufacturer's Address: Antwerpsesteenweg 336, B-2080 Kapellen, Belgium. Phone: 03/664 58 48.
Date of Introduction: 1980, June.
Ingredients: Well-water, seitan (wheat proteins)*, vegetables*, soya*, sesame, arrowroot, soya sauce, brown rice*, vegetable extract, sea-salt, sea vegetables, spices. * = Organically grown.
Wt/Vol., Packaging, Price: 100 gm.
New Product–Documentation: Letter from Sjon Welters. 1982, April 16. "Jonathan is a macrobiotic food company. They produce a wide assortment of macrobiotic products, such as ... seitan... "

Label. Received 1988. 3 by 2 inches. Self adhesive. Orange and black on a seaside background with sea gull. "Vegetable." Form filled out by Jos van de Ponseele. 1989. Jan. 11. This product was introduced in June 1980.

5755. Kikkoman Corporation. 1980. Kikkoman: Management and performance (Brochure). 399 Noda, Noda City, Chiba 278, Japan. 4 p. 18 x 15 cm.
• ***Summary:*** This is a financial statement as of 2 June 1980. U.S. $1.00 = ¥224. Lists the company's directors. Katsumi Mogi is president. Sales increased from about $180 million in 1970 to about $500 million in 1979, or three-fold in ten years, and at an average annual growth rate of 13.3%. Capitalization has grown from about $16 million in 1968 to $33.48 million in 1980. The total annual demand for soy sauce in Japan is about 324 million gallons. Kikkoman's yearly production is about 110 million gallons, or about 34% of the total. Address: Noda, Japan. Phone: (0471) 233-5610.

5756. **Product Name:** Soysage (Meatless Okara-based Sausage)
Manufacturer's Name: Light Foods Inc.
Manufacturer's Address: 6144 Bartmer, St. Louis, MO 63133.
Date of Introduction: 1980, June.
Ingredients: Okara (Soypulp), whole wheat, flour, soymilk, nutritional yeast, wheat germ, safflower oil, bulghur wheat, soy grits, shoyu, honey, barley malt, sesame seeds, herbs & spices.
Wt/Vol., Packaging, Price: 20 oz (1 lb 4 oz), 567 gm.
How Stored: Refrigerated.
Nutrition: Per 2 oz.: Calories 147, protein 6.3 gm, carbohydrate 16.5 gm, fat 6.1 gm, sodium 292 mg.
New Product–Documentation: Label. 1980, June. 3 inches square. Self adhesive. Purple on white. Illustration of a winged unicorn jumping across a stream in front of a rising or setting sun. "No preservatives."

Barbara G. Ostmann. 1980. Post-Dispatch (St. Louis, Missouri). Oct. 29. p. 1E, 4E. "Time for tofu." Bob Davis' company Light Foods Inc. makes Soysage (soy "sausage").

Label. 1981, undated. 3 inches square. Self adhesive. Purple on white. Illustration of a winged unicorn rearing on its hind legs jumping across a stream in front of the rising or setting sun. "No preservatives. Please refrigerate." The size is now 22 oz (567 gm) plastic wrapped.

Leviton. 1981. Soyfoods. Summer. p. 42. "They produce up to 300 pounds weekly." 1983. Winter. p. 48. Gives name now as Light Soysage and ingredients as: Okara, bulghur wheat, whole wheat flour, wheat germ, nutritional yeast, sesame seeds, shoyu, oil, mustard, soymilk, and 10 different seasonings.

5757. Shurtleff, William; Aoyagi, Akiko. 1980. Kicking the meat habit with soyfoods. *Vegetarian Times* No. 38. June. p. 30-31.
• ***Summary:*** Contains recipes for: Tofu steak. Tofu burgers. Teriyaki tofu. Tofu cutlets. Tofu Italian meatballs. Tempeh burger. Sloppy Joe tempeh. Tofu jerky (marinated in teriyaki sauce, then baked). Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

5758. Steinkraus, Keith H. 1980. Introduction: Food from microbes. *BioScience* 30(6):384-86. June. [12 ref.]
• ***Summary:*** Contents: Meat analogs. The role of plants. Microbe production. Fermented foods: Tempeh, miso, soy sauce. Address: New York State Agric. Exp. Station, Geneva, NY 14456.

5759. **Product Name:** Golden Light Baked Tofu
Manufacturer's Name: Sunshine Soy Co. Inc.
Manufacturer's Address: 4015 Laguna St., Suite "H," Coral Gables, FL 33146. Phone: 305-447-1277.
Date of Introduction: 1980, June.
Ingredients: Tofu, organic soybean, pure water, natural nigari, yeast, tamari, spices.
Wt/Vol., Packaging, Price: 8 oz. retails for $1.50.
How Stored: Refrigerated.

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New Product–Documentation: Sunshine Soy Company. 1980. Retail price list–Effective May 1980. 8 oz retails for $1.50. One case of 12 units weighs 6 lb 6 oz and retails for $18.00.

Needleman. 1981. Soyfoods. Summer. p. 29-30. "Tofu plant profiles: Swan Gardens and Sunshine Soy (Miami)." Danny Paolucci started Sunshine Soy in June 1980.

Label. 1983. 3.5 by 3 inches. Self adhesive. Orange, green, blue and yellow on white. Soy fields with sun illustration. "Natural. No preservatives." Label says: "Mfd. by Sunshine Soy Co. Inc., Coral Gables, Florida 33146."

Talk with Danny Paolucci, founder and former owner of Sunshine Soy. He thinks this product was introduced in about Oct. 1980.

5760. American Dietetic Association. 1980. Position paper on the vegetarian approach to eating. *J. of the American Dietetic Association* 77(1) 61-70. July. [54 ref]

• ***Summary:*** This position paper is surprisingly supportive of a lacto-ovo vegetarian diet, although the ADA continues to feel that combining proteins is important. It states that "a growing body of scientific evidence supports a positive relationship between the consumption of a plant-based diet and the prevention of certain diseases," including coronary heart disease, osteoporosis, and gastrointestinal and reproductive cancers.

Contents: Introduction. Definition of terms: Vegetarian, vegetarianism, traditional vegetarians, total vegetarians or vegans, lacto-vegetarians, semi-vegetarians or partial vegetarians, new vegetarians (since 1960, incl. yogic vegetarians, Hare Krishnas or Krishnas, Sufis, Sikhs, Macrobiotics), fruitarians, raw food eaters, individualistic vegetarians, alternative life style diet. Other terms which relate to vegetarianism: Natural foods, organic foods, unrefined foods, unprocessed foods, health foods, meat analogs (look and taste like meat), nutritional or food yeast, milk substitute (alternate) (usually based on soy "Calcium, zinc, vitamins A, B-12, D, and K, and thiamin are all substantially lower (or missing) in these home-made products than in breast milk or other proprietary formulas"), fermented foods (incl. soy sauce, miso, tempeh–may contain some vitamin B-12), seaweeds and algae.

Vegetarianism past and present: Historical perspectives (omnivorous diets), vegetarianism in the U.S. today (it is more popular than at any time in the nation's history). Nutrition issues: Proteins, energy, carbohydrates and fats, vitamins and minerals (vitamins B-12 and D, calcium and riboflavin, iron and phytic acid, zinc and phytates). Groups with special physiologic risks: Pregnant and lactating women, infants and children (lacto-ovo- and lacto-vegetarian diets, vegan diets–the use of properly fortified soy milk is strongly recommended, vitamins and minerals), adults with special health problems (lactose intolerance, diabetes mellitus). Implications of vegetarian diets for health promotion and prevention and treatment of disease: Coronary heart disease, cancer, obesity, dental caries, osteoporosis. Menu planning guidelines for vegetarians. Meat analogs. Summary. The President's page: Esther A. Winterfeldt, PhD, RD, on "Position papers."

"Macrobiotics–persons who consume vegan or vegetarian diets which involve extensive non-animal food avoidances, use of unprocessed, unrefined, 'natural', and 'organic' foods, and also, in some forms, fluid restriction. Tamari, miso, and various seaweeds are used extensively and are believed to be endowed with special properties.

"Vegetarianism–past and present. The American Dietetic Association recognizes that most of mankind for much of human history has subsisted on near-vegetarian diets. The vast majority of the population of the world today continues to eat vegetarian or semi-vegetarian diets for economic, philosophical, religious, cultural, or other reasons. The matter of motivation is crucial, because it affects the diet adopted, adherence to it, and other characteristics of life style."

"Nutrition issues: The American Dietetic Association affirms that a well planned diet, consisting of a variety of largely unrefined plant foods supplemented with some milk and eggs (lacto-ovo vegetarian diet) meets all known nutrient needs. Furthermore, a total plant dietary can be made adequate by careful planning, giving proper attention to specific nutrients which may be in a less available form or in lower concentration or absent in plant foods."

Note: This is the earliest English-language document seen (June 2002) that uses the term "plant-based diet" to refer to one that contains no animal products.

5761. **Product Name:** New World Wheatmeat Sub (on a Wholewheat Sub Roll).
Manufacturer's Name: New World Enterprises. Renamed New World Natural Foods in 1985.
Manufacturer's Address: 226 Cypress St., Brookline, MA 02146. Phone: 617-232-5973.
Date of Introduction: 1980. July.
New Product–Documentation: Talk with Emily Merghart Morse. 1992. July 16. This sandwich was introduced in July 1980. The Wheatmeat (seitan) was supplied to her by John Weissman.

5762. **Product Name:** Marinated Tofu (Tofu in a Marinade).
Manufacturer's Name: Redwood Valley Soyfoods Unlimited.
Manufacturer's Address: P.O. Box 371, (8473 East Rd.), Redwood Valley, CA 94570.
Date of Introduction: 1980. July.
Ingredients: Tofu, shoyu, garlic, onion, cayenne.
Wt/Vol., Packaging, Price: 8 oz cakes.
How Stored: Refrigerated.
New Product–Documentation: Label. 1981. 4 by 3.5

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inches. Self adhesive. Black on yellow. "New! A delicious ready to eat tofu .. naturally!" Spot in Soyfoods 1982 Summer. p. 56. "Prepared Tofu Salads and Desserts." Letter from Richard Rose. 1987. Aug. 29. The company was named Brightsong Tofu from its founding in June 1978 to June 1980. Then it changed to Redwood Valley Soyfoods Unlimited, until June 1982, when it changed to Brightsong Light Foods.

5763. Shurtleff, William; Aoyagi, Akiko. 1980. Das Miso-Buch. Nahrung fuer alle Band 1 [The book of miso: Food for mankind Vol. 1] Soyen, West Germany: Ahorn Verlag. 266 p. July. Illust. by Akiko Aoyagi Shurtleff. Index. 23 cm. A co-production of Ost-West Bund e.V. and Ahorn Verlag. Translated from English by Rainer Bosch and Gudrun Klein. [43 ref. Ger]

• ***Summary:*** Contents: What is miso? Foreword. Acknowledgments. Part I. Miso. Nutritional value and varieties. 1. Soybeans, protein and the world food crisis. 2. Miso as a food. 3. The miracle of fermentation. 4. The varieties of miso.

Part II. Cooking with Miso (400 recipes). 5. Getting started–principles, kitchen utensils, preparation. 6. Recipes from East and West. Part III. The Preparation of Miso.

Part III. The production of miso. 7. Making miso at home and in communities. 8. Japanese farmhouse miso. 9. The traditional miso shop. 10. The modern miso factory. Appendixes. A. The history of chiang, miso, and shoyu, and their historical significance. B. The chemistry and microbiology of miso fermentation. C. Miso additives. D. Miso with seafoods, chicken, and meat. E. When you want to study miso in Japan. F. People and institutions worldwide connected with miso. G. Natural food stores in German-speaking countries. Bibliography. Glossary. About the authors and their work (autobiographical).

Published in both hardcover and paperback editions. Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

5764. Shurtleff, William; Aoyagi, Akiko. 1980. In search of the real tamari. *Soyfoods* 1(3):20-25. Summer.

• ***Summary:*** An in-depth study of tamari soy sauce, based on a trip by W. Shurtleff to the San Jirushi plant that makes tamari in Kuwana, Japan, on 5 July 1977. Contents: What is tamari? History of misuse of the term "tamari" by macrobiotics. Comparison with shoyu (Ingredients. Flavor, consistency, color, and aroma. A regional food. Japan's earliest soy sauce). The five varieties and three grades of tamari. How tamari is made at San Jirushi. How to make tamari at home.

"For each of the five varieties of shoyu [see table 1] the Japanese Agricultural Standards (JAS) recognize three grades. Special Grade (*Tokkyu*, which comprised 53% of all shoyu in 1976 and which can consist of only high quality



fermented shoyu unmixed with any chemical [HVP] shoyu), Upper Grade (*Jokyu*, comprising 26%), and Standard Grade (*Hyojun*, comprising 13%). Each grade is determined by overall quality, total nitrogen content, soluble solids other than sodium chloride, and color. Some producers also make a special grade, higher than the others, called *Tokusen*, or Special Select; it has no legal identity."

Table 1, titled "Varieties, composition, and production of Japanese shoyu," (from Fukushima 1981, p. 347) gives basic statistics concerning the following five varieties: *koikuchi*, *usukuchi*, *tamari*, *shiro*, and *saishikomi*. For each, it gives the English name, Japanese name, Bé [Baumé, specific gravity / relative density], percentage of sodium chloride (weight / volume), percentage of total nitrogen (weight / volume), percentage of reducing sugar (weight / volume), percentage of alcohol (volume / volume), pH, color, and percentage of total annual shoyu production in Japan.

Sanjirushi makes at least four different consistencies of tamari. (1) Sashimi tamari (*roku-sui*) which is delectably rich and thick. (2) Cuisine tamari (*ryotei-damari*) is especially prized as an all-purpose seasoning for cooking. (3) Tabletop tamari shoyu (*kibiki-damari; Kyu-sui*) is meant to be used both in the kitchen and at the table, quite like shoyu. It is made from 85% soybeans and 15% cracked roasted wheat. (4) Regular tamari shoyu (*jusan-sui*) is the most popular type of tamari product in Japan. It is made using the same proportion of ingredients as Tabletop Tamari except that 13 parts of water are used for every 10 parts of soy and wheat.

Color photos (taken by Shurtleff) show: (1) The automated soybean koji chamber. (2) The liquid tamari being pressed from the mature moromi (mash) in strong bags by a hydraulic press. (3) A roomful of tamari vats, in which the moromi is aging. (4) A man standing on a board placed across the rim of a vat ladling liquid tamari into a floating keg. (5) A man stirring a vat filled with liquid tamari. (6) Five bottles of tamari behind tasting dishes. Address: New-Age Foods Study Center, Lafayette, California.

5765. *Soyfoods*. 1980. Soyfoods to the American taste: An interview with Drs. Clifford Hesseltine and Hwa L. Wang.

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1(3):58-62. Summer. [1 ref]
• ***Summary:*** Dr. Hesseltine has just returned from a six-week trip to East Asia. In Taiwan he studied soy sauce fermentation and gave advice on setting up a national collection of microorganisms used in soybean fermentations. In Indonesia he attended an international symposium on various aspects of fermentation as a method a processing foods, with an emphasis on soybeans in Southeast Asia. "These people look to us in the West as far as science is concerned. Suddenly we see scientific institutions in the U.S. and now in Europe being interested in high protein foods made from soybeans. The East Asians follow and say, 'Well, if its very interesting for the West, then we should be interested in it.'" There is increasing interest in traditional, lightly-processed soyfoods.

Way back in 1963 the NRRL did research on making tempeh perforated plastic bags. Today, "on the island of Java, 90 percent of tempeh is now produced using plastic bags, including the tempeh I saw being sold on the street,..."

Dr. Wang, who was born and raised in China, recently returned there to visit family. She noted. "To me, it is a very sad story... Even tofu is rationed now. You can't buy tofu every day, probably once a week." "Soy sauce is not hard to get. Miso never had as much importance as in Japan.. Tofu and soymilk are the two foods that were very common before. We stayed at a hotel and we only had soymilk once a week, in the morning for breakfast. And tofu, I don't even remember having eaten any."

"Dr. Hesseltine: Natto is one of the most rapidly growing fermented soyfoods in Japan, which surprised me, over something like miso. Natto has become more popular because it's supposed to be the great aid for digestion. In the new form, natto is much more acceptable as a food because the old, traditional type is sticky (it's a real mess) and this isn't. This is coated, so what you get is like small peanuts coated with powder, they don't stick to your hands."

Dr. Hesseltine: "What I saw in Taiwan really fascinated me–pressed tofu sheets [*pai-yeh*]. We would like to see the soycrafters making some recommendations [for us] as to practical areas of research for soybeans."

Portrait photos show (1) Dr. Clifford Hesseltine. (2) Dr. H.L. Wang. Two photos of each, seated. Address: NRRC, Peoria, Illinois.

5766. **Product Name:** Miso-Garlic Dressing.
Manufacturer's Name: Soyplant Co-op Inc. (The).
Manufacturer's Address: 711 Airport Blvd., Suite 1, Ann Arbor, MI 48104. Phone: 313-663-8638.
Date of Introduction: 1980, July.
Ingredients: A rich, smooth blend of miso (fermented soybeans and rice), safflower, shoyu sauce, garlic, onion, cider vinegar, water, lemon oil.
Wt/Vol., Packaging, Price: 16 oz.
How Stored: Refrigerated.
New Product–Documentation: Label in Soy Plant scrapbook from about 1980. 2½ by 2½ inches. Black on white. 16 oz. Sold in a plastic tub.

5767. Walker, Martin. 1980. Serendipity on £5 a day: Overland to Asia. *Guardian* (*England*). Aug. 9. p. 11.
• ***Summary:*** In Bali, the writer and his wife rented the rajah's bedroom in the Tintagangga water palace. "Included in the price of the room was a meal of *nasi goreng*, a fried rice dish with peanuts and fish and vegetables, with an egg mixed into it and the whole flavoured with *kecap manis*, a sweet soy sauce."

5768. Fabricant, Florence. 1980. Dining out: Cantonese with surprises. *New York Times*. Aug. 24. p. LI17.
• ***Summary:*** This is a review of the Cantonese Chinese restaurant Diamond's (40-20 Nesconset Highway {Route 347}, East Setauket–a census-designated place (CDP) in Suffolk County, New York on the North Shore of Long Island).

Recommended dishes include "Clams with black bean sauce." "King crab dow see." "Black bean chicken." The menu includes a number of dim-sum style appetizers, chicken or seafood bathed in black beans and ginger or richly seasoned with dark hoisin sauce." A "hot and sour soup, thick with squares of bean curd [tofu]...." "Seamed littleneck clams in a dark sauce spiked with salty black beans [fermented black soybeans] made another rewarding appetizer..."

Note 1. This is the earliest document seen (Nov. 2011) in all major U.S. newspapers digitized by ProQuest that uses the term "salty black beans" to refer to fermented black soybeans. The new term appears in about 18 documents between 1980 and 2003.

Note 2. "Dow see" is the Cantonese term for fermented black soybeans.

5769. Chico-San, Inc. 1980. Good things come naturally from Chico-San (Ad). *Health Foods Retailing* 44(8):139. Aug.
• ***Summary:*** A photo shows Chico-San's products. Next to each is a brief description. New Rice Nuggets. New Carob Rice Cakes. Rice cakes. Yinnies taffy and caramel candies. Yinnies rice syrup. Lima soy sauce (A traditional, natural shoyu, made from whole soy beans and pure well water).

"Chico-San products are all natural. No preservatives. Nothing artificial." Chico-San's spiral logo appears on each product. Address: Chico, California 95927.

5770. Dinshah, Freya. 1980. More vegan recipes. Malaga, New Jersey: American Vegan Society. 27 p. Aug. No index. 22 cm. Spiral bound.
• ***Summary:*** Soy-related recipes include: Soy bean cheese spread (with cooked, ground soybeans, p. 5). Slicing soya

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cheese (with vegetable margarine and soya powder/flour, p. 5). Simple soy cheese (with soya powder and nutritional yeast, p. 5). South Jersey soy patties (with soy granules, p. 7). Corn bread (with soya powder/flour, p. 9). Sesame soy milk (with soya powder/flour, p. 11). Sunflower soy milk (with soya powder/flour, p. 11). Scrambled tofu, Tofu salad dressing, Yeasted tofu, Tofu Cantonese, Tofu, mushrooms and greens, Tofu in savory crumbs, Tofu turino, Tasty tofu strips (baked with soy sauce) (all p. 15). A photo on the title page shows the author. Address: 501 Old Harding Highway, Malaga, New Jersey 08328.

5771. ***Health Foods Retailing***. 1980. Part I. 44(8) 1-98. Aug.
• ***Summary:*** Selected full-page ads and articles: (1) Norganic–Wheat pilaf (Anaheim, CA, p. 7). (2) "Health Valley's great pasta dinners," from Health Valley Natural Foods. Whole wheat pasta, tomato sauce and raw milk (Montebello, CA 90640, p. 11). (3) "Richlife natural protein drink a meal." Each can (11.5 oz) "contains a balanced formula of vitamins and minerals with over 20 grams of protein from nonfat dry milk, peanuts, soy and whole milk (Anaheim, CA, p. 15). (4) Hain specials for September include 15% off Natural Teriyaki Marinade and Tenderizer Mix (p. 17). (5) Solgar Co.–Lecithin granules, Formula VM-75 (Lynbrook, New York, p. 29, 33). (6) Tiger's Milk Nutrition Boosters, come in colorful new packaging and four flavors: Unsweetened Plain, Carob, Vanilla, or Cocoa. In 12, 24, or 36 oz. cans. From Plus Products (Irvine, California 92714, p. 43).

(7) "Federal court issues injunction against FDA protein regulations." "The regulations, which were to go into effect Aug. 4, would require that warning labels be put on certain food products deriving 50% or more of their calorie value from protein; the warning required varies according to the use for which the product in question is promoted, but in the case of protein products promoted for use in weight reduction, the warning includes the statement that "Very low calorie protein diets... may cause serious illness or death" (p. 50).

(8) "Lectures boost business," by Mary Conte. Photos show: (a) A hugely muscled man in a tiny swim suit, with the caption: "Dr. Franco Columbu, a former Mr. Universe, lectures on body building." (b) Jack LaLanne, "a famous TV personality," dressed in a striped suit and lecturing. (c) Dr. Robert C. Atkins on the cover of his book "Dr. Atkins Diet Revolution." (d) Dr. Allan D. Cott (p. 51).

(9) "Europe's Helfex attracts U.S. trade." Helfex is "Europe's International Health Food Exhibition, held from May 18 to 21 in Brighton, England," the historic seaside town (p. 67, 228). (10) Naturade–Elastin (p. 82). (11) Alta-Dena Dairy, which was established in 1945, sells kefirs, youghurts, frozen youghurts, and Golden Honey ice creams, ice milks, and cheeses (City of Industry, CA, p. 83). (12) The Pavo Co., Inc.–Distributor since 1931 (Minneapolis, Minnesota, p. 96). (13) American Dietaids–Papaya enzyme with chlorophyll (p. 97).

5772. Ochi, Hirotomo; Blenford, D.E. 1980. The soy sauce explosion: Worldwide demand for this centuries-old Japanese food ingredient has been stimulated by the development of new drying techniques to produce it in powder form. ***Food Processing Industry (UK)*** 49(585):25, 27, 29. Aug.
• ***Summary:*** Natural flavors are increasingly in demand worldwide. The many different kinds may be divided into three main types: (1) Extracts, as from beef, chicken, bonito, mushroom, or onion. (2) Fermented products, e.g. soy sauce or wine. (3) Hydrolyzed products, such as HVP or yeast.

"Soy sauce (or Shoyo sauce [sic, shoyu]) is a liquid seasoning which was originally developed in Japan [sic] via the fermentation process. There are two main types of soy sauce in Japan, strong and weak [sic] (koigushi [sic, koikuchi] and usugushi [sic, usukuchi]). In 1977 an estimated 1,200 million liters of soy sauce was made in Japan, equivalent to about 10 liters per person per year.

During the 1960s, with the development of new drying techniques, soy sauce and various extracts were introduced in powdered form. The most popular method of drying was spray drying. Using dextrin, gelatin, or gum as carriers, the powders were made using 70-90% soy sauce solids together with 10-30% of the carrier. Table 1 gives the chemical composition of two typical soy sauce powders. HVP powders are inferior to soy sauce powders.

In Japan one of the major applications for soy sauce powder is for instant and cup noodle soups. In 1977 the production of these two products was 2.6 billion meals, requiring the use of 3,000 tons of soy sauce powder. The total amount of soy sauce powder made in Japan in 1977 was 4,000 to 4,500 tons.

Soy sauce powder, which was first produced in the 1960s, can be made using either of 3 processes, each of which has advantages and disadvantages: (1) Spray drying was the most popular drying method. Using dextrin, gelatin, or gum as carriers, the powders contained 70-90% soy sauce solids and 10-30% of carrier. (2) Freeze drying, gives the product with the best flavor but the processing costs are very high and four times as much energy is used as in spray drying. (3) Continuous vacuum drying takes place in a vacuum chamber under conditions of low temperature and short residence time. It was developed by Nikken Food Co. in Japan. Energy consumption is much less than with spray drying and the soy sauce flavor is unchanged. The resulting products, in the form of granules or porous powders, have excellent solubility. Address: 1. President, Nikken Food Co., Komaba 1-37-7, Meguro-ku, Tokyo, Japan.

5773. Westbrae Natural Foods. 1980. Distributor food catalog. Summer 1980. Emeryville, California: Westbrae. 12 p. 22 by 28 cm.

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• ***Summary:*** On the cover, the lettering is in dark blue and dark red on a tan background. Address: 4240 Hollis St., Emeryville, California 94608; 4841 Eastern Ave., City of Bell, CA 90201 (10 miles southeast of Los Angeles). Phone: (415) 658-7518 (orders).

5774. *SoyaScan Notes*. 1980. Is naturally occurring MSG found or formed in tofu or shoyu? (Overview). Sept. 11. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** There are no sodium glutamates in tofu or shoyu. They exist in tofu as glutamic acid residues incorporated into the protein molecules, and in shoyu as ammonium glutamates. Both of these are different from commercial MSG (monosodium glutamate) as sold by Ajinomoto, both in their chemical composition and in their physiological effects.

5775. Kushi, Michio. 1980. Re: Thoughts on phasing out use of the word "tamari" to refer to naturally fermented shoyu. Letter to William Shurtleff at Soyfoods Center, Sept. 13. 1 p. Typed, with signature.
Address: 62 Buckminster Rd., Brookline, Massachusetts 02146.

5776. Arum, Nancy. 1980. A market for gourmet tastes. *New York Times*. Sept. 21. p. WC15.
• ***Summary:*** Twelve years ago, John and Anita Borghese fled their apartment in Manhattan and moved to Westchester [a county in New York state, just north of Long Island]. Together they started a specialty food store named Gourmet Bazaar (3 Purdy Ave., Rye, New York). Since many of the local residents have Dutch ancestry, they carry a good selection of Indonesian ingredients, such as "ketjap manis, ... a sweet soy sauce [which] is one of the basic ingredients in Indonesian cooking."

A recipe for Rempah babi (Sumatra pork balls) calls for 1 teaspoon "ketjap manis."

A photo shows John and Anita Borghese in their Gourmet Bazaar.

5777. Zell, Fran. 1980. Restaurants: Johnny's–With a split personality at your service. *Chicago Tribune*. Sept. 28. p. D12.
• ***Summary:*** Includes a review of the Japanese restaurant Kyori, 316 N. Michigan Ave. "You can make a meal on the appetizers alone, which include such tasty little side dishes as *agedofu*, ($2.25), three cubes of deep-fried *tofu* in a ginger sauce;..." Chicken teriyaki is also served. Address: Restaurant critic.

5778. Aihara, Cornellia. 1980. Corneliasan's corner: Tamari. *GOMF News* (*Oroville, California*). Sept. p. 3-4.
• ***Summary:*** George Ohsawa called his soy sauce 'Ohsawa Soy Sauce,' when he started teaching macrobiotics in Europe around 1957. He made a Frenchman the sole distributing agent for macrobiotic foods imported from Japan. This agent later began to import cheap, poor quality soy sauce from Japan under the name 'Ohsawa Soy Sauce.' As a result, Ohsawa had to import traditional natural soy sauce from Japan once again. He could no longer use the name 'Ohsawa Soy Sauce' because the other importer had copyrighted the name. Ohsawa therefore called the traditional natural soy sauce imported from Japan 'tamari'–even though, in the strict sense of the word, it was not tamari.

"Tamari sauce was a historical precursor to soy sauce and is available today in very limited quantities. It is a by-product of a particular type of miso that is made with only salt and soybeans (with a bit of koji enzyme). Its flavor and taste-enhancing qualities are not as distinctive as natural traditional soy sauce.

"*The Calendar Cookbook* was published last year but was written in 1972 when I was using natural soy sauce, in this as well as in *Macrobiotic Child Care* (1979) I called it 'tamari.' This was a mistake. I meant natural soy sauce, not tamari. Really, tamari means the liquid that comes to the bottom of the barrel under stone pressure when making miso... Making 100 pounds of miso, only one or two cups of tamari come. But I don't like to take this tamari off–I mix it up with the miso. If you remove it, the miso is less sweet... I never used tamari in my cooking.

"Last summer in Japan, Mr. Murata of Ohsawa Japan introduced us to the Yamaki factory. They are using good quality salt, not commercial government salt." Address: GOMF, 1544 Oak St., Oroville, California 95965.

5779. Hesseltine, C.W.; Wang, Hwa L. 1980. Fermented foods. *Food Trade Review* 50(9) 473-79. Sept.; 50(10):543-45. Oct. [4 ref.]
• ***Summary:*** Discusses shoyu, tempeh, wheat soya tempeh, sufu, natto, koji, miso, ragi, and soy yogurt. Address: USDA NRRC, Peoria, Illinois.

5780. Nihon Keizai Shinbun. 1980. San-Jirushi Jozo K.K. "Honmono no tamari-shôyu" o shuryoku ni [San-Jirushi Jozo K.K. Focusing on making real tamari-shoyu]. In: 1980. Chubu [Chihô] no Chuken 170-sha [Directory of 170 Medium-sized Corporations in Central Japan]. Nagoya: Nihon Keizai. See p. 326-227. [Jap]
• ***Summary:*** A brief history of and introduction to San Jirushi. Address: Japan.

5781. Johnstone, Bill. 1980. Scots find source for soy dressing: Microbiology cuts two years' work to four weeks. *Times* (*London*). Oct. 7. p. 15, cols. 3-4.

5782. Hodgson, Moira. 1980. Restaurants: Sushi and more and new Italian. *New York Times*. Oct. 10. p. C22.
• ***Summary:*** A review of Sushiko, a small Japanese

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restaurant in New York City between Broadway and Eighth Avenue, which has a "sushi bar." Inexpensive side orders include: "Natto, mustard-colored fermented soybeans, gooey and unusual, were seasoned with mustard, chopped scallions and soy sauce, and had an extraordinary and subtle flavor, tasting slightly smoky, resembling food that has been cooked over charcoal. Bean curd came in large moist squares in a bowl of water, accompanied by a sauce of dried tuna [sic, bonito] flakes and scallions mixed with soy."

Paper-thin yakinori (toasted nori) could be used as a wrap for natto. Spectacular nasu shigiyaki was an eggplant sliced in half, covered with miso sauce, and grilled. Misoshiru [miso soup] is a rich brown soybean soup. Tofu is added to a tossed American-style salad.

5783. Ellis, Merle. 1980. A reunion with Japanese food: The butcher. *Los Angeles Times*. Oct. 16. p. K10.
• ***Summary:*** "If good food, simple preparation, beautiful presentation and economy are some of the things you look for in a meal, look to the Japanese."

Three recipes are given. Mizutaki means (literally) "water + boiling." "Legend has it that Samurai warriors (and ancient Mongolian warriors in China before them) used their helmets to cook a meal of whatever was at hand in a helmet full of boiling water." That is mizutaki. A "Mongolian hot pot" is a special utensil used for this dish, when available. The mizutaki recipe calls for "1 block tofu (soy bean cake) cut in 1-inch cubes." The Mizutaki sauce recipe calls for ¼ cup soy sauce.

Note: This article, titled "Japanese cuisine: Simple, beautiful and economical" also appeared in the *Hartford Courant* (Connecticut) (Oct. 16, p. E12). Address: Staff writer.

5784. Hauser, Nao. 1980. The joy of eating this Thai's food. *Chicago Tribune*. Oct. 20. p. E1.
• ***Summary:*** Chanpen Ratanadilokchai is the cook at Thai Room Restaurant in Chicago. A recipe for Fried whole red snapper calls for "1 tablespoon each: soy sauce, brown bean sauce."

At the end of the recipe we read: "Note: Chanpen prefers Kikko-man soy sauce because it is the right weight."

When shopping, she buys "thick bean sauce" and "bean cake [probably tofu] to use in fresh egg rolls."

A photo shows Chanpen happily at work in the restaurant kitchen.

5785. Westbrae Natural Foods. 1980. Distributor price list with price corrections: November 1. Emeryville, California: Westbrae. 7 p. 22 by 28 cm.
• ***Summary:*** Black on white (photocopied). Address: 4240 Hollis St., Emeryville, California 94608; 4841 Eastern Ave., City of Bell, CA 90201 (10 miles southeast of Los Angeles). Phone: (415) 658-7518 (orders).

5786. Westbrae Natural Foods. 1980. Overseas distributor price list with price corrections: November 1. Emeryville, California: Westbrae. 7 p. 22 by 28 cm.
• ***Summary:*** Black on white (photocopied). The prices are F.O.B. Emeryville. Address: 4240 Hollis St., Emeryville, California 94608; 4841 Eastern Ave., City of Bell, CA 90201 (10 miles southeast of Los Angeles). Phone: (415) 658-7518 (orders).

5787. Westbrae Natural Foods. 1980. Distributor pricelist delivered to New York City Metro Area; Boston, MA; Springfield, MA; Albany, NY, with price corrections: November 1. Emeryville, California: Westbrae. 7 p. 22 by 28 cm.
• ***Summary:*** Black on white (photocopied). Address: 4240 Hollis St., Emeryville, California 94608; 4841 Eastern Ave., City of Bell, CA 90201 (10 miles southeast of Los Angeles). Phone: (415) 658-7518 (orders).

5788. Institute of Food Technologists' Expert Panel on Food Safety and Nutrition. 1980. Monosodium glutamate (MSG): A scientific status summary. *Food Technology* 34(10):49-53. Oct. Also published in Sourcebook on Food and Nutrition, 3rd ed. 1982. p. 135-39. [38 ref]
• ***Summary:*** Glutamic acid is one of the most common natural amino acids. The various salts of glutamic acid are used to enhance flavor. The sodium salt of glutamic acid, usually called MSG (for monosodium glutamate), is by far the most widely used glutamate, although potassium, ammonium, and calcium glutamates have been used in low-salt formulations as salt substitutes.

In East Asia, cooks have long used the sea vegetable *Laminaria japonica* (called "kombu" in Japanese) to make a tasty soup stock. The link between the seaweed flavor and glutamate (first isolated in 1866) was discovered by Professor Kikunae Ikeda of the University of Tokyo in 1908. He demonstrated that kombu contained generous amounts of glutamate and that it was the seaweed component responsible for food flavor enhancement. The Japanese began production of glutamate almost immediately. Thirty years passed before it was produced in North America from corn and wheat gluten. Today, MSG is produced in the USA from sugar beet molasses in a fermentation process. Or it may be extract directly from sugar beets.

"Glutamate is ubiquitous in nature and is present in both food and the human body, either as one of the amino acid building blocks of protein and peptides, or in its free form. The glutamate bound into a protein structure has no flavor enhancing properties–only the free form has that, and then only the 'L isomer.' Protein-rich foods such as human milk, cow's milk, cheese, and meat have a high content of bound glutamate, while most vegetables contain little, because of their low protein content. However many of these

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vegetables–such as mushrooms, tomatoes, and peas–do have high levels of *free* glutamate. In fact, some investigators have suggested that this explains the effectiveness of mushrooms and tomatoes in enhancing the flavor of other foods, in much the same way as seaweed."

"Glutamate exists as part of the human body in both free and bound form. The human body contains 14 to 17% protein, of which about one-fifth is glutamate. An adult weighing 70 kilograms (156 pounds) contains, on the average, 2 kilograms (4.4 pounds) of glutamate in his protein. The free glutamate concentration of the brain is about 100 times as in the blood." Address: Chicago, Illinois.

5789. *Nutrition News* (*Pomona, California*).1980. Soyfoods from the magic bean. 3(10):1-4.
• ***Summary:*** Discusses the nutritional value of soybeans, meat analogs, tofu, tempeh, miso, soy sauce, and TVP.

5790. Wang, H.L.; Swain, E.W.; Hesseltine, C.W. 1980. Phytase of molds used in Oriental food fermentation. *J. of Food Science* 45(5):1262-66, Sept/Oct. [26 ref]
• ***Summary:*** "Except for *Mucor dispersus* NRRL 3103 and *Actinomucor elegans* NRRL 3104, all the other molds tested produced both extra- and intracellular phytase." Molds were tested that make the following fermented foods: Sufu, tempeh, Lao-chao, soy sauce, and miso. Address: NRRC, Peoria, Illinois.

5791. Goodbrad, John. 1980. History of Sovex Natural Foods, Inc. and other small Adventist food companies (Interview). Conducted by William Shurtleff of Soyfoods Center, Nov. 26. 1 p. transcript.
• ***Summary:*** Sovex is a private company. John and his wife are Seventh-day Adventists, as are many of the company's employees. John worked at the Boulder Sanitarium (also called the "San," in Boulder, Colorado) from 1947 to 1953, the Sanitarium owned 8 health food stores and he was in charge of them. During the time he was in Boulder, the Sanitarium did not manufacture any foods; they had already gotten out of that business.

Then he went to work for Collegedale Distributors (in Collegedale, Tennessee), which was owned by Southern Missionary College. They made, and still make, granola.

Sovex was founded in 1953 by the Hurlingers in Holly, Michigan. The company's original product was Sovex, a flavor concentrate paste, made from a mixture of brewer's yeast and soy sauce. In 1964 John bought the business and moved it to Collegedale, Tennessee, where he worked.

In 1981 Sovex products containing soy include Prothin Snack Chips, Vege-Pat (textured soy flour, in sausage, burger, and chili flavors), and Granola (their main product line, in nine flavors, many of which contain soy grits).

Sovex had no relationship with Madison Foods (of Madison, Tennessee). Madison was one of the pioneers in the meat substitute field. They were purchased by Worthington Foods, which phased out the Madison products. John has eaten Madison products on and off for over 50 years, but has had no direct contact with them for a number of years. John has a copy of *Back to Eden*, autographed by Jethro Kloss.

A Mr. White, who was a grandson of Ellen G. White, had a super soymilk recipe about 20 years ago. He started with soy flour, ran it through an homogenizer, then sweetened it with honey. People loved the flavor; it was fresh, not canned. He called it Nu-Milk and made it on the sly at the Southern Missionary College dairy in Collegedale, Tennessee. It was illegal because there are laws against putting anything but milk in a milk processing plant.

John just talked with Frank Miller (phone: 817-641-8343), who used to work for Madison Foods and who now owns Texas Protein Products, a company that sells TVP in Texas. Another key man was Bruce Stepanske, who made soymilk at Madison until it was discontinued. Address: President, Sovex Natural Foods, Inc., Box 310, Collegedale, Tennessee 37315. Phone: 615-396-3145 (or 2111).

5792. Andoh, Elizabeth. 1980. At home with Japanese cooking. New York, NY: Alfred A. Knopf. 254 p. Illust. by Michiko Fujiwara. Index. 25 x 22 cm.
• ***Summary:*** A beautiful, intimate and very useful book, approachable and suffused with a unique tranquility and charm. The illustrations (line drawings) are exquisite.

Contents: Acknowledgments. Introduction. A note about the romanization of the Japanese language (Hepburn system). In the Japanese kitchen. Techniques and equipment–Grilling, broiling, steaming, braising and simmering, frying, dry roasting, grinding, crushing and mixing, using knives (four types, and how to hold and use them), skewering, straining and mashing, grating, pots and pans, miscellaneous equipment (chopsticks, rice paddle, rice tub, flat fan, bamboo mats, bamboo trays, metal mold, etc.). Meals and menu planning. The recipes. Soups, rice, noodles, braised and simmered foods, grilled and skillet-grilled foods, deep-fried foods, steamed foods, mixed, sauced and tossed foods, pickles, sweet things and beverages. In the Japanese kitchen. Foodstuffs. Suggestions for ordering Japanese foodstuffs. A glossary of Japanese terms.

The very helpful glossary includes (soy related): Abura agé: fried bean curd [tofu]. Aka miso: dark bean paste [miso]. Daizu: dried soybeans. Eda mamé: fresh soybeans. Kikkoman: brand name of soy sauce. Kinako: soy flour [roasted]. Marukomé miso: brand name of medium fermented bean paste. Miso: fermented bean paste. Miso shiru: soup thickened with fermented bean paste. Natto: fermented sticky soy beans. Okara: by-product of fresh tofu-making. Saikyô miso: light bean paste, a brand and regional name. Sendai miso: dark bean paste, a brand and a regional name. Shinshû Ichi miso: medium bean paste, a brand and regional name. Shiro miso: white (or light) bean paste.

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Shôyu: soy sauce. Teri yaki: glaze grilling. Tôfu: bean curd. Usu kuchi shôyu: thin or light soy sauce. Yuba: thin brittle sheets of soy milk (by-product of tôfu-making)

Note: This is the earliest English-language document seen (May 2012) that contains the word *Abura-agé* (hyphenated with diacritics). It refers to deep-fried tofu pouches.

Also includes: Each of the basic sea vegetables / sea greens used for food in Japan (ao nori, hijiki, kombu, nori, wakamé, etc.). Umé-boshi: pickled plums

The book contains excellent recipes and descriptions (see the index) using bean curd [tofu] (7 recipes), eda mamé (1), fried bean curd (*abura agé*) (5), grilled bean curd (*yaki-dôfu*) (3), miso (17), and soybeans, dried (1); natto is not mentioned.

Elizabeth concludes the Introduction by explaining: "What I've tried to write here is the very book I wish I'd had with me when I started out fourteen years ago."

About the author (last page and with portrait photo on inside rear dust jacket): Elizabeth, who was raised in New York and graduated from the University of Michigan, traveled to Japan in 1966 to study Japanese, lived with the Andoh family on the island of Shikoku, and married into that family two years later. Shortly after her marriage, she enrolled in a class at the Yanagihara School of Classical Japanese Cooking, where she studied for six years. She has a daughter, Rena, to whom this book is dedicated.

The copyright page states: "Many of the recipes which appear here were originally printed in slightly different form in *Gourmet* magazine, 1975, as part of a 6-part series entitled 'The Seasonal Japanese Kitchen,' by Elizabeth Andoh." Address: Tokyo, Japan.

5793 ASEAN Sub-Committee on Protein. ed. 1980. Report on the Second ASEAN Workshop on Solid Substrate Fermentation. Kuala Lumpur, Malaysia. 415 p. Held 27-29 Nov. 1980 at Kuala Lumpur, Malaysia. 29 cm. [100+ ref]
• ***Summary:*** This the 10th workshop organized by the ASEAN Sub-Committee on Protein and the second workshop in the series on solid substrate fermentation. The first was held in May 1978 at Bandung, Indonesia. The protein project, which has a newsletter and is directed toward the development of small industries, has been active since 1974. Members of the Main Organising Committee include Prof. Ho Coy Choke (Chairman), Dr. Ahmad Zaharudin Idrus, and Ms. Yeoh Quee Lan. At the back is a directory of participants (p. 411-15). Address: Malaysia.

5794 Esko, Edward; Esko, Wendy. 1980. Macrobiotic cooking for everyone. Tokyo: Japan Publications, Inc. 272 p. Nov. Foreword by William Tara, Director, Community Health Foundation, London, England. 26 cm. [50 ref]
• ***Summary:*** The authors studied in Japan (mostly Kyoto), from Sept. 1978 to May 1979, at which time they returned to Boston. In the summer of 1979 "more than 100 delegates from various regional centers throughout the United States and Canada met in Boston for the first North American Congress of Macrobiotics." Part I of this book discusses the theory of macrobiotics and Part II gives recipes. Unfortunately, the book has no index, and the bibliography gives no years of publication. There are chapters on: Seitan, fu, and noodles (incl. soba), and Sea vegetables.

Soy-related recipes include: Brown rice and soybeans (p. 90). Miso soft rice (p. 96). Somen with deep-fried tofu (p. 118). Kenchin soup (with deep-fried tofu cubes and tamari, p. 130). Okara soup (p. 132). Miso soups (p. 137-143; 12 recipes are given plus a long letter from Jan Belleme, about how she and her husband, John, who arrived in Japan in late October 1979, are now living with the Onozaki family and studying miso-making there–p. 138-39). Sauteed cucumbers and miso (p. 154). Boiled cabbage, sweet corn, and tofu (p. 155). Udon-vegetable bane (with deep-fried tofu, p. 159). Steamed kale and tofu (p. 161). How to make sprouts (incl. soybean sprouts, p. 177).

Chapter 5 is titled "Bean dishes, including tofu and natto." It states (p. 178-79, without citing the source) that "In China and Japan there is a proverb, 'A man who eats too many beans becomes a fool.' ... Lima beans and soybeans are both very yin, and require thorough chewing. They should be eaten only on occasion and in small quantities. ... Kombu can be placed on the bottom of the pot when cooking chickpeas, soybeans, lima beans or kidney, pinto and navy beans. I have found that kombu definitely improves their flavor, and because of its high mineral content, creates a very balanced dish." To pressure cook soybeans so that they do not clog the steam escape valve, first boil them for 30 minutes. Skim the foam off the top as it rises, and when no more foam rises to the surface you may place them in a pressure cooker and continue cooking until done. Recipes include: Japanese black beans (black soybeans). Soybeans with kombu and burdock. Soybeans with lotus root and salmon. Following a long discussion of tofu, Homemade tofu. Tofu with scallions. Tofu with bonito flake broth. Baked tofu with miso/lemon sauce. Broiled tofu. Tofu loaf. Steamed tofu rolls. Deep-fried tofu cakes. Aburage (Age or deep-fried tofu). Stuffed age pouches. Okara. Okara croquettes. Sautéed natto. Natto rice or noodles. Natto tempura. Dried natto.

Note 1: This is the earliest English-language document seen (May 2012) that uses the term "broiled tofu" to refer to grilled tofu.

Hijiki with soybeans (p. 193). Hijiki and deep-fried tofu (p. 194). Tempuraed tofu-nori rolls (p. 198). Koi-koku (Carp miso soup, p. 220). Daikon and tamari. Scallion miso. Green peppers and miso (p. 224). Miso condiments (p. 226). Tamari. Moromi (p. 227). Rutabaga-tamari pickles (p. 233). Quick miso pickles (p. 234). Tofu tamari dressing (p. 236). Tofu-sesame dressing. Shiro-miso-tofu dressing. Miso dressing (p. 237). Tamari-lemon dressing. Tamari-rice

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vinegar dressing. Miso-tahini dressing (p. 238). Miso-rice vinegar dressing. Miso walnut dressing. Miso-tahini spread. Sesame miso spread. Miso-nut spread (p. 239). Lentil-miso spread. Lima bean miso spread (p. 240). Tofu dip (p. 243). Amazake (p. 247-48). Clear broth soup with tofu & scallions (p. 253). The glossary lists many soy products plus azuki beans, sea vegetables (many types), gluten, koji, kuzu, mochi, natto, nigari, okara, seitan, tekka, tempeh, umeboshi, unohana (okara), and yuba.

Macrobiotic periodicals include: *East West Journal* (Brookline, Massachusetts). *Kushi Institute Study Guide and Kushi Inst. Newsletter* (Brookline, MA). *The Order of the Universe* (East West Foundation, Brookline, MA). *The Macrobiotic Review* (East West Foundation, Baltimore, Maryland). *Spiral* (Community Health Foundation, London). *Le Compas* (Paris). Note: The date each periodical began publication is not given.

The lengthy section on seitan (p. 110-13) gives a detailed recipe for making seitan at home using the short method and 3½ lb hard spring wheat flour or hard red winter wheat flour. The broth is made with kombu and tamari. Seitan recipes include: Seitan stew. Seitan fried rice. Stuffed mushrooms (with sauce). Stuffed squash or Hokkaido pumpkin. Address: Boston, Massachusetts.

5795. Flegel, T.W.; Bhumiratana, A. 1980. Studies on *Aspergillus flavus* var. *columnaris* in soy sauce koji. In: ASEAN Sub-Committee on Protein, ed. 1980. Report on the Second ASEAN Workshop on Solid Substrate Fermentation. Kuala Lumpur, Malaysia. 415 p. See p. 106-20. [6 ref]
• ***Summary:*** Reviews attempts to improve the quality of soy sauce and tao chieo [miso] in Thailand by the introduction of *Aspergillus flavus* var. *columnaris* inoculum (found to produce the most protease) for the koji stage of production. Two major proteases were isolated and characterized. A low-cost, easy, and reliable method is described for the production of koji inoculum by factory personnel using plastic bag incubators.

Good quality soy sauce should have a high soluble nitrogen and a high reducing sugar content in the final product. To obtain this, one must optimize production of protease and amylase during the koji stage. Factory owners all prefer green koji (made in cool weather, dominated by *Aspergillus* species) to black koji (resulting from hot weather and dominated by Zygomycetous molds such as *Rhizopus, Syncephal, Mucor, Absidia,* etc.). In the moromi stage, factory owners say that the total salt content of the moromi and final soy sauce should not fall below 18% (w/v = weight to volume) lest the soy sauce spoil, nor exceed 22% (w/v) lest it be too salty. Koji usually takes 5-7 days to make. The optimum growth temperature for the koji mold, determined by radial growth on agar, was found to be 30°C. When tao chieo was made by the new method, white crystals of pure tyrosine appeared since they were not harmful, they were accepted by factory owners. An increase in soluble nitrogen leads to a darkening of color caused by the complexing of glucose with amino acids such as lysine. Address: Microbiology Dep., Faculty of Science, Mahidol Univ., Rama VI Road, Bangkok, Thailand.

5796. Hartadi, Sri. 1980. Inoculum preparation for tempe and soysauce fermentation. In: ASEAN Sub-Committee on Protein, ed. 1980. Report on the Second ASEAN Workshop on Solid Substrate Fermentation. 415 p. See p. 256-62. Held 27-29 Nov. 1980 at Kuala Lumpur, Malaysia. [9 ref]
• ***Summary:*** Usar is the Indonesian name of the inoculum used to make tempeh. It consists of strains of *Rhizopus* molds, plus yeast and bacteria. It is prepared by placing inoculated soybeans on leaves of *Hibiscus* species, *Tectona grandis, Musa paradisiaca,* or *Bambusa* species. There are two ways of making tempeh inoculum. The traditional usar method in which the mold is grown on soybeans on leaves, and the powdered form inoculum, in which it is grown on rice.

Most of the soysauce made in Indonesia does not use special inoculum. However two new methods have been developed: growing a powdered inoculum on rice and rice bran, or a fresh inoculum on soybeans. Address: Dep. of Microbiology, Faculty of Agriculture, Gadjah Mada Univ., Yogykarta, Indonesia.

5797. Impoolsup, Attawut; Flegel, T.W.; Bhumiratana, A. 1980. Isolation and characterization of proteases from *Aspergillus flavus* var. *columnaris*. In: ASEAN Sub-Committee on Protein, ed. 1980. Report on the Second ASEAN Workshop on Solid Substrate Fermentation. Kuala Lumpur, Malaysia. 415 p. See p. 369-400. [21 ref]
• ***Summary:*** *Aspergillus flavus* var. *columnaris* is a mold that was isolated from a soy sauce factory near Bangkok, Thailand. It is recommended for use in preparing soy sauce koji because it does not produce aflatoxins and because it is an exceptionally high producer of protease. This study examines the various types of protease produced by the mold. Address: Dep. of Microbiology, Faculty of Science, Mahidol Univ., Rama VI Road, Bangkok 4, Thailand.

5798. Karim, Mohamad Ismail Adbul. 1980. The role of microorganisms in food fermentation with special reference to Malaysian fermented foods. In: ASEAN Sub-Committee on Protein, ed. 1980. Report on the Second ASEAN Workshop on Solid Substrate Fermentation. Kuala Lumpur, Malaysia. 415 p. See p. 31-64. [27 ref. Eng]
• ***Summary:*** Traditional Malaysian fermented soyfoods include kicap (soy sauce), tempeh, and tauco (Malaysian miso). Fermentation is considered by most small-scale processors to be more of an art than a science. The secrets of the processes have been passed down in the family from one generation to another. Much of the flavor of fermented soy

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products comes from fatty acids (glutamic acid, propionic acid, butyric acid, etc.), ammonia, and amines.

In Malaysia, the manufacture of soy sauce is normally done by small establishments using traditional methods. Boiled soybeans are cooled then mixed with 40-50% by weight of wheat flour. The mixture is spread onto large shallow bamboo trays (90 cm diameter and 5 cm deep) to a depth of 5 cm. The trays, which are used repeatedly, harbor many useful microorganisms. The trays are then stacked in tiers 15-30 cm apart on wooden racks for 7-10 days. The mixture is broken up and turned every 2 days to allow aeration. At the end of the fermentation, the white mycelium-impregnated mass, with its spores turning yellow and greenish yellow, is filled into earthenware jars (190 liters capacity) and covered with brine solution of 15-20% concentration. The jars are exposed to the sun and covered with lids at night or whenever it rains. The brine mixture is allowed to ferment for 2 to 24 months depending on the quality of the sauce needed. At the end of the fermentation period, the resulting dark liquid (soy sauce) is removed by siphoning or straining through a cheese cloth or suitable strainer. The sauce is then bottled. Sometimes sugar or benzoic acid (a preservative) is added to the sauce before bottling. A sauce could also be cooked and thickened with caramel (up to 80%) and bottled as thick sauce for sale. The production of thin sauce requires a short fermentation (1½-6 months) whereas thick sauce requires a longer fermentation (6-24 months). The extraction process could be repeated 4 to 6 times by topping the remaining mash with brine solution (10-14%) after each extraction.

Soybean paste or tauco is made in essentially the same way as soy sauce except that broken soybeans are used and the liquid is not removed. The final product is reddish brown. Most Malaysian tauco is not sun-dried, but is packed into wide-mouth jars in its moist paste form. Address: Jakatan Sains dan Teknologi Makanan, Universiti Pertanian Malaysia, Serdang, Selangor, Malaysia.

5799. Somporn, Wannee. 1980. Review of solid substrate fermented products in Thailand. In: ASEAN Sub-Committee on Protein, ed. 1980. Report on the Second ASEAN Workshop on Solid Substrate Fermentation. Kuala Lumpur, Malaysia. 415 p. See p. 235-49. [3 ref]

• ***Summary:*** Table 3 shows fermented foods prepared in Thailand from legumes and cereals. Fermented foods having soybeans are the main substrate are: See iew (a condiment, made in central and south Thailand using bacteria, molds, and yeasts). Thua nao (main dish, made in north Thailand using bacteria). Tao hoo (tofu, main dish, made in central and south Thailand using bacteria, molds, and yeasts). Tao jiao (flavoring, made in central and south Thailand using bacteria, molds, and yeasts). Tao si ([fermented black soybeans], flavoring agent, made in south Thailand, using molds).

A survey of all soy sauce factories in Thailand was conducted in 1975. Representative samples were analyzed for both pathogenic organisms and aflatoxin, but neither was found (Biological Science Division, 1975-1976).

Note 1. This is the earliest English-language document seen (Feb. 2004) that uses the word "Tao hoo" (or "Tao-hoo") to refer to tofu.

Note 2. This is the earliest English-language document seen (Jan. 2012) that uses the term "Thua nao" (with no hyphen) to refer to Thua-nao. Address: Biological Science Div., Dep. of Science Service, Ministry of Science, Technology and Energy, Thailand.

5800. Soriano, M.R., Navarro, N.S., Parel, S.O. 1980. Solid substrate food fermentation technology in the Philippines. In: ASEAN Sub-Committee on Protein, ed. 1980. Report on the Second ASEAN Workshop on Solid Substrate Fermentation. Kuala Lumpur, Malaysia. 415 p. See p. 198-223. 29 cm. [45 ref]

• ***Summary:*** This paper gives a brief history of the development of food fermentation technology in the Philippines, including fermented soy products such as toyo (soy sauce), tausi (or tao-si [fermented black soybeans], called "taoushih" by the Chinese and "tao tjo" [sic] by the East Indians), tahuri (fermented tofu, sufu, or Chinese cheese. Cubes of tofu are inoculated with an *Actinomucor* mold; angkak is often used to impart a red color), and miso (called chiang in China). A related product is angkak, or "red rice," made by fermenting rice with the red mold *Monascus purpureus* Went for coloring and flavoring. The science of fermentation can be said to have dawned in the mid-1800s when Louis Pasteur discovered that every fermentation process was associated with a corresponding organism. Before World War II the use of microorganisms for the processing of foods was an unexplained field of study in the Philippines. The four pioneering studies from 1934 to 1937 included one by Yenko and Baens in 1940 the use of rice as a source of carbohydrate in the production of soy sauce. The first scientific investigation (1934, with nata) was done in the University of the Philippines, College of Agriculture in Los Baños, Laguna, and the last three studies were pursued in the former Bureau of Science, now the National Institute of Science & Technology (NIST).

There are no local written reports or scientific investigations of tausi, tahuri, or miso. Their manufacture is dominated by Chinese in the Philippines. Much attention, however, has been given to the production of soy sauce (toyo). Reviews of studies conducted in the Philippines have been given by Soriano (1975) and Soriano and Pardo (1977). Work is presently being done at NIST on the replacement of soy beans with local beans, and wheat with rice, cassava or banana flour in the production of soy sauce. Address: National Inst. of Science and Nutrition, Manila.

5801. Tang, Charles Chang Chiu. 1980. Studies of solid

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substrate fermentation in Singapore. In: ASEAN Sub-Committee on Protein, ed. 1980. Report on the Second ASEAN Workshop on Solid Substrate Fermentation. Kuala Lumpur, Malaysia. 415 p. See p. 225-233. [5 ref]
• ***Summary:*** Many of Singapore's fermented foods are traditional indigenous foods. These include: (1) Fermented soya beans used in the koji to make soya sauce. (2) Fermented whole soya beans, which are preserved in brine (fermented black soybeans) or made into a paste (like Chinese soybean jiang). (3) Fermented cubes of tofu.

Of these fermented food products, only the fermentation process for making soya sauce has been studied at length by the National University of Singapore and the Singapore Institute of Standards and Industrial Research. Their findings of improved *Aspergillus* mutants for the production of better quality soya sauce have been reported at a previous ASEAN Workshop on Soya Sauce Manufacturing technique (1978 Singapore). "The Department of Scientific Services has analysed samples of fermented 'Tofu,' soya beans, soya sauce and shrimp paste and found that aflatoxins were absent in these fermented products." Address: PhD, Dep. of Scientific, Outram Road, Singapore 0316.

5802. Ten, Sew Keoh, Ho, Coy Choke. 1980. Characterization of *Aspergillus* from the koji phase of soy sauce fermentation in the ASEAN region. In: ASEAN Sub-Committee on Protein, ed. 1980. Report on the Second ASEAN Workshop on Solid Substrate Fermentation. Kuala Lumpur, Malaysia. 415 p. See p. 326-39. [11 ref]
• ***Summary:*** Some 178 strains of *Aspergillus* were isolated from the koji (solid substrate) phase of soy sauce fermentation from factories in West Malaysia. The authors separated these strains into two distinct morphological groups based on the color and ornamentation of the conidial heads. 90.5% of the isolates were identified as belonging to the *Aspergillus flavus oryzae* group and 9.5% as members of the *Aspergillus wentii* group. This grouping is based on the taxonomic key of Raper and Fennell (1965) and the mycological color chart of Raynor (1970). The characteristics of the two groups are shown in Table 1. Address: Dep. of Genetics and Cellular Biology, Univ. of Malaya, Kuala Lumpur, Malaysia.

5803. Anderson, Eugene N. 1980. Re: Soybeans, tofu, and tempeh. Letter to William Shurtleff at Soyfoods Center, Dec. 12–in reply to inquiry. 2 p. Typed, with signature on letterhead. [4 ref]
• ***Summary:*** A sinophile, he is collaborating with Dr. Paul Buell (an historian at Western Washington University, Bellingham, WA) on various books on Chinese agriculture, including an economic botany. "We are currently working on the soybean article for this and drawing heavily on your books. He is an inveterate tofu maker who lives by your books."

The spices in real curry are fascinating and much different from those in the "nauseating and disgusting 'curry powder' of commerce."

He is aware of some spectacularly fine Chinese books on vegetarian soyfoods cookery, written by Buddhist religious groups. "Most of the Chinese cookbooks in English are obscene and should be banned as pornography."

It is now known that the old Shen Nung Herbal is from ca. 100 A.D.

"Tempe I assume to be an application to soybeans of earlier technology used on coconut. Incidentally the soybean was introduced to the Malay world by people from the Fujian-Guangdong border between Xinmen (Amoy) and Swatow (Shandou), as shown by the distinctive dialect words borrowed into Malay (*bahasa Indonesia, bahasa Malaysia*)–*taohu, taugé, taucho, tausi*, etc. These are also in Indonesian and Filipino–though tausi could be from Cantonese. These are direct borrowings of precisely the dialect forms of the border area, the southern dialects of the Southern Min or Hokkien language. Tauhu, for instance, is their pronunciation of tofu (doufu in standard Chinese). One word I can't explain is *kecap* (formerly spelled ketjap and so pronounced), the Malay word for soy sauce. It seems to have referred earlier to quite a different, local brew. It has nothing whatever to do with ketchup.

"The latest soy news is yet another proof that peasant techniques have their reasons. It now appears that soybeans have a huge amount of phytate, amounting to up to several percent of the bean. Phytate (the distinctive ion of phytic acid) takes up calcium, zinc magnesium, niacin and other chemically active items in food and makes chemical compounds that humans can't digest effectively. Thus the calcium, niacin, etc., of food is lost. This leads to calcium deficiency, zinc deficiency (as with whole-grain wheat bread eaters in the Near East), or worst of all, pellagra (corn is classically associated with pellagra because it's high in phytate and low in niacin). But of course if you add calcium or magnesium or the like to your food, it takes up the phytate and you're OK. Heat also destroys some of it. Micro-organisms such as yeasts and *Aspergillus* can also destroy it, having appropriate enzymes. Thus processing soybeans with gypsum, nigari or fungal fermentation wipes out this danger." Address: Dep. of Anthropology, Univ. of California, Riverside, CA 92521.

5804. Freiman, Jane Salzfass. 1980. Banzai! Two stellar cookbooks from the land of the rising sun. *Chicago Tribune*, Dec. 22. p. C1.
• ***Summary:*** One of the books, *Japanese Cooking: A Simple Art*, by Shizuo Tsuji (Kodansha 1980, 517 pages, $14.95) was sponsored by Kikkoman (the soy sauce people) and Suntory (the Japanese whisky people).

A recipe for Spinach with sesame dressing calls for "2 teaspoons dark soy sauce."

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5805. Bau, H.M.; Debry, G. 1980. L'art de l'utilisation du soja: Habitudes et traditions [The art of soya utilization: Customs and traditions]. *Cahiers de Nutrition et de Dietetique* 15(4):277-84. Oct/Dec. [40 ref. Fre; eng]
• ***Summary:*** "For many centuries, soybeans have meant meat, milk, cheese, bread, and oil to the people of Asia. Because of their great food value, they not only have long had a definite place in the oriental diet but now belong in the diet of America and of the entire world. In Europe, the use of soybean products in the quotidian diet is still limited, however it is sure that they will be an important factor in the balanced diet of the future."

Note 1. Soyfoods Center has a 16-page English-language translation of this article.

Note 2. *Webster's Dictionary* defines quotidian (derived from the French *quot* = as many as + *dies* = day) as "occurring every day." Address: University of Nancy, France.

5806. Chen, Sheng-Lo. 1980. Zhongguo jiangyou xin zhizao fa zhi yanjiu [Studies on the new manufacturing method of Chinese soy sauce]. *Chung-Kuo Nung Yeh Hua Hsueh Hui Chih (J. of the Chinese Agricultural Chemical Society, Taiwan)* 18(34):42-52. Dec. [12 ref. Chi; eng]
• ***Summary:*** The traditional brewing period was reduced from about 8 months to about 1-2 months. About 83% of the soybean protein was utilized and 52.11% of the amino nitrogen was solubilized. "The quality of the sauce in this quick brewing method was excellent." Address: Dep. of Agricultural Chemistry, National Taiwan Univ.

5807. **Product Name:** [Seitan Goulash]
Foreign Name: Seitangoulash
Manufacturer's Name: Jonathan P.V.B.A.
Manufacturer's Address: Antwerpsesteenweg 336, B-2080 Kapellen, Belgium
Date of Introduction: 1980, December
Ingredients: Water, seitan (wheat proteins)*, peppers, onions*, carrots*, leek*, peas*, mushrooms, soya sauce, spices, starch, sea-weed. * = Organically grown.
Wt/Vol., Packaging, Price: Sterilized
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Minerals 1.64%, vegetable proteins 1.26%, vegetable fats 0.73%, carbohydrates 7.37%, 73.1 calories (Kcal) per 100 gm
New Product–Documentation: Letter (fax) from Jos van de Ponseele and Magda Verfaillie of Mycelia b.v.b.a. in Gent, Belgium, in response to an inquiry, 1992, July 6. This product was introduced at the end of 1980 as a sterilized product.

Label sent by Jos van de Ponseele, 1988. 6.25 by 10.5 inches. This card-stock sleeve fits over the product. Color photo of seitan with various vegetables with item name in white on orange. The product is named Seitangoulash in English or Seitangulasch in German. "Vegetable product." Code CINAB.

5808. **Product Name:** Tahini-Tofu Salad
Manufacturer's Name: Tofu Shop (The)
Manufacturer's Address: 768 18th St., Arcata, CA 95521.
Date of Introduction: 1980, December
Ingredients: Fresh organic tofu, celery, green onions, olives, sesame tahini, tamari, mustard, seasonings.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Leaflet 1980, undated. "New deli foods from The Tofu Shop" (768 18th St., Arcata, California 95521). "Your local soyfoods producer." In the upper left corner is a dragon in a round circle. In the lower right is a little man whose body is a paper deli takeout container, he has two arms and two legs, and is wearing a top hat.

Label. Received 1988. Launched Dec. 1980. July. 2.5 inches diameter. Self adhesive. Green on yellow. "Fresh 'N Natural." Net weight: 5 oz. (142 gm). Great hot or cold as a spread, salad, or side dish. Lactose-free and cholesterol free.

5809. **Product Name:** Tofu Veggie Patties. Delicious and Baked.
Manufacturer's Name: Tofu Shop (The)
Manufacturer's Address: 768 18th St., Arcata, CA 95521
Phone: 707-822-7409.
Date of Introduction: 1980, December
Ingredients: Tofu (water, organic soybeans grown according to Cal. Health Code Sect. 26569.11 and nigari). Fresh vegetables (carrots, green onions, parsley). Tamari (natural soy sauce made with water, soybeans, wholewheat and salt). Garlic and ginger.
Wt/Vol., Packaging, Price: 10 oz.
How Stored: Refrigerated.
New Product–Documentation: Label (metallic). Received 1988. 4 by 2.5 inches. Self adhesive. Green, red, gold, and white. "Ready to eat ... or reheat, naturally fresh ... from our deli. A perfect snack fresh from the pack. Great in your favorite burger with all the fixin's or as a main dish. Simple to heat in oven (350°F, 10 minutes) or frying pan. Perishable, keep refrigerated, 34-39°." Matthew Schmit says (March 2009) that the metallic label was first used in 1985.

5810. **Product Name:** Granose Sausfry: Seasoned Soya Protein Sausage Like Mix.
Manufacturer's Name: Granose Foods Ltd. (Marketer-Distributor). Made in the UK by British Arkady.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England
Date of Introduction: 1980
Ingredients: 1980: Vegetable fat, textured soya protein

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[textured soy flour], rusk, glucose, stabiliser, salt, herbs, spices, colouring, added vitamins.
Wt/Vol., Packaging, Price: 500 gm (1.1 lb) bag.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog 1980 April. "Textured soya protein in a beef sausage like flavour which only requires the addition of water to make it usable in any of the ways in which sausage meat can be used."

Form filled out and Label sent by Granose Foods Ltd. 1990 June 13. States that the product, made by British Arkady, was introduced in 1980. Address on bag is now Newport Pagnell. Label. 1990. 3.5 by 8 by 2 inch white coated paper bag. Red, yellow, brown, and black on white. An illustration (line drawing) on front panel shows a woman standing behind a table of baked goods. "Healthier wholesome food." Pack panel: "Make it plain... Add 750 ml (1.33 pints) of cold water to contents and leave the mixture for five minutes. Divide and form into sausage shapes, fry gently until golden brown.

"Make it fancy .. Cook Sausfry shapes in hot batter for a tasty toad-in-the-hole or wrap in pastry to make savoury Sausfry rolls. Add onion, tomato, sage–any of your favourite flavours–and create exciting new ways to serve Sausfry.

"Note: Sausfry contains no animal matter and no Monosodium Glutamate.

"Ingredients: Textured defatted soya flour (defatted soya flour, iron, thiamin, riboflavin, vitamin B-12), hydrogenated vegetable oil, rusk, stabiliser (Methyl Cellulose, of plant origin), sea salt, hydrolysed vegetable protein, herbs, spices, colour (beetroot red)."

Color photo of package in *Linda McCartney's Home Cooking*, 1990. p. 18.

5811. Kikkoman Foods, Inc. 1980. Graham Kerr–the Galloping Gourmet speaks out for Kikkoman. Soy sauce. Teriyaki sauce (TV ad synopsis). Walworth, Wisconsin. 1 p. Color.
• ***Summary:*** Note: Graham's surname Kerr is pronounced like the word "Care." We will give each frame a number: "Kikkoman Soy Sauce. (1) Graham Kerr. (2) This is Kikkoman naturally brewed soy sauce... (3) and these words are terribly important to me as a cook. (4) It's put together only with soy beans, wheat, salt and water. (5)... and brewed and checked until its mild, but magnificent! (6) What it does for your food is incredible .. (7) It sparks it up and gives it life. (8) Just look for the soy sauce called Kikkoman. (9) Hmm.. mm .. I'll say its fantastic."

"Kikkoman Teriyaki Sauce. (1) I've got a wonderful seasoning comparison to show you. (2) There's a link between this beautiful chicken... (3) Made from a base of Kikkoman naturally brewed soy sauce... (4) and a fantastic collection of herbs, spices and wine. (5) That's easy... its basted with Kikkoman teriyaki! (6) You can baste and marinade and splash on this sauce.. (7) on roasts and steaks and hamburgers and fish. (8) One of the world's great tastes .. Kikkoman teriyaki sauce." Address: Walworth, Wisconsin.

5812. **Product Name:** Noble Bean Tempeh Salad.
Manufacturer's Name: North Coast Tempeh Co.
Manufacturer's Address: c/o Cleveland Tofu Co, 8021 Euclid Ave., Cleveland, OH 44121.
Date of Introduction: 1980.
Ingredients: Tempeh (Organic soybeans, water, Rhizopus culture), Hellmann's Mayonnaise (soy oil, partly hydrogenated soy oil, whole eggs, vinegar, water, egg yolks, salt, sugar, lemon, juice, natural flavors, calcium disodium, EDTA added to protect flavor), celery, pickles, onion, parsley, shoyu, mustard, garlic powder.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1987. Oval 4 by 2.75 inches. Green, blue, red, and yellow on white. Jeff Narten. 1987. "History of North Coast Tempeh and its Products." 4 p. Dec. 7.

5813. **Product Name:** Noble Bean Tempeh Salad Sandwich.
Manufacturer's Name: North Coast Tempeh Co.
Manufacturer's Address: c/o Cleveland Tofu Co, 8021 Euclid Ave., Cleveland, OH 44121.
Date of Introduction: 1980.
Ingredients: Whole wheat bread (organic whole wheat, molasses, corn oil, yeast, sea salt, malt), tempeh (Organic soybeans, water, Rhizopus culture), Hellmann's Mayonnaise (soy oil, partly hydrogenated soy oil, whole eggs, vinegar, water, egg yolks, salt, sugar, lemon, juice, natural flavors, calcium disodium, EDTA added to protect flavor), celery, pickles, lettuce, tomato, onion, alfalfa sprouts, parsley, shoyu, mustard, garlic powder.
Wt/Vol., Packaging, Price: 6 oz.
How Stored: Unrefrigerated and perishable.
New Product–Documentation: Label. 1987. Oval 4 by 2.75 inches. Green blue, red, and yellow on white. Jeff Narten. 1987. "History of North Coast Tempeh and its Products." 4 p. Dec. 7.

5814. **Product Name:** Teriyaki Tofu.
Manufacturer's Name: Quong Hop & Co.
Manufacturer's Address: 161 Beacon St., South San Francisco, CA 94080. Phone: 415-873-4444.
Date of Introduction: 1980.
New Product–Documentation: Shurtleff & Aoyagi. 1980. List of soyfoods products.

5815. Slamet, Dewi Sabita, Tarwotjo, Ignatius. 1980. Komposisi zat gizi makanan Indonesia [The nutritional composition of Indonesian foods]. *Penelitian Gizi dan*

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Makanan (*Research on Food and Nutrition*) 4:21-36. [4 ref. Ind]

5816. **Product Name:** Sovex Chili (Meatless Dry Mix).
Manufacturer's Name: Sovex Natural Foods, Inc.
Manufacturer's Address: Collegedale, TN 37315.
Date of Introduction: 1980.
Ingredients: Soy flour, coconut oil, tomato powder, minced onions, tamari soy sauce (made from water, soybeans, wheat, sea salt), chili powder (made from oregano, chili peppers, salt, cumin, garlic).
Wt/Vol., Packaging, Price: 17 oz In a 1 quart Pure-Pak carton.
How Stored: Shelf stable.
New Product–Documentation: Label. 1980. Label reads "Sovex. The Granola People. Contains No Animal Products. No Preservatives. No Artificial Colors or Flavors. No MSG. No Sugar." Two recipes and serving suggestions.

5817. **Product Name:** Sovex Vege-Pat (Vegetable Burger Dry Mix).
Manufacturer's Name: Sovex Natural Foods, Inc.
Manufacturer's Address: Collegedale, TN 37315.
Date of Introduction: 1980.
Ingredients: Rolled oats, soy flour, sesame seeds, oat flour, miller's wheat bran, soy grits, potato flour, sunflower seeds, minced onion, tamari soy sauce, food yeast, sage, garlic, onion.
Wt/Vol., Packaging, Price: 15 oz 1 quart Pure-Pak carton.
How Stored: Shelf stable.
New Product–Documentation: Label. Undated. Label reads: "Sovex. The Granola People. Hamburger Flavor–Without Meat. Makes 16–3.5 inch patties. Contains No Animal Products. No Imitation Ingredients. No Artificial Colors or Flavors. No MSG. No Sugar." Two recipes.

5818. **Product Name:** Sovex Vege-Pat (Vegetable Sausage Dry Mix).
Manufacturer's Name: Sovex Natural Foods, Inc.
Manufacturer's Address: Collegedale, TN 37315.
Date of Introduction: 1980.
Ingredients: Soy flour, unhulled [dehulled] sesame seeds, miller's wheat bran, oat flour, rolled oats, tamari soy sauce, potato flour, food yeast sage, crushed red pepper.
Wt/Vol., Packaging, Price: 15 oz In 1 quart Pure-Pak carton.
How Stored: Shelf stable.
New Product–Documentation: Label. Undated. Label reads: "Sovex. The Granola People. Sausage Flavor–Without Meat. Makes 18–2.5 inch patties. Contains No Animal Products. No Imitation Ingredients. No Artificial Colors or Flavors. No MSG. No Sugar." Two recipes.

5819. **Product Name:** Tofu Onion Dip, and Creamy Tofu Dressing [Thousand Island].
Manufacturer's Name: Summercorn Foods Inc.
Manufacturer's Address: 401 Watson, Fayetteville, AR 72701. Phone: 501-521-9338164.
Date of Introduction: 1980.
Ingredients: Dip: Tofu, safflower oil, vinegar, onion, tamari, garlic.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Label for Dip. 1981. 2.5 inch diameter. Self adhesive. Blue on white. "Low cholesterol. Low calorie." Talk with David Druding. 1988. May 18. They made this while they were still in the Community Cannery.

5820. **Product Name:** [Dried Flavored Tofu].
Foreign Name: Tofu Saveur Sec (Wu Hsiang Doufu Kan).
Manufacturer's Name: Sunrise Market Ltd.
Manufacturer's Address: 729 Powell St., Vancouver, BC, V6A 1H5, Canada. Phone: 604-254-0701.
Date of Introduction: 1980.
Ingredients: Water, extract of soy, water, salt, calcium sulphate, soy sauce, egg color, monosodium glutamate, spices.
Wt/Vol., Packaging, Price: 250 gm (8.8 oz).
How Stored: Refrigerated.
New Product–Documentation: Label. 1987. 5 x 2 inches. Red on white. Form filled out by Peter Joe. 1988. May 20. Gives date. The term "dried" in the product name means that the tofu is pressed until it is very firm. It does not undergo a drying process.

5821. Wang, I.H.; Chen, S.K.; Hsu, W.H. 1980. Studies on inyu (black soybean sauce) fermentation. I. Microbial and biochemical changes during fermentation and processing. *Food Industry Research and Development Institute* (*Taiwan*), *Research Report* No. 2. 14 p. [9 ref. Eng]*
Address: FIRDI, Hsinchu, 300 Taiwan.

5822. Aihara, Herman. 1980. Learning from salmon. Oroville, California: George Ohsawa Macrobiotic Foundation. xiii + 156 p. Illust. No index. 22 cm.
• ***Summary:*** This is a collection of Herman Aihara's writings, over the past 20 years, compiled by Sandy Rothman, editor of GOMF. Each article or essay is dated. Contains a good early history of macrobiotics in the USA, and of Chico-San (p. 26-35).

Herman was born Nobuo Nishiyama on 28 Sept. 1920 in Arita, Kyushu, Japan. George Ohsawa's teaching was about how to understand and acquire infinite freedom, absolute justice, and eternal love. He inspired his students greatly, and told them it was their own fault if they were not happy. The food you eat is one of the most important factors that influences a person's health and happiness.

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Herman landed in San Francisco in 1952 at age 32 to start a new life. His wife was sick, and two of their babies died.

Before March of 1961 Ohsawa visited Europe and saw many beautiful macrobiotic restaurants and clinics in Belgium, France, Italy, Germany, Switzerland, and England. The Lima factory in Belgium produces macrobiotic foods. Macrobiotic restaurants include Au Riz Dore, and Longue Vie.

Like the salmon, Ohsawa took his most adventurous trip late in his life (p. 77). He held his first American macrobiotic lectures in 1960 on Long Island, New York. They lasted for 2 months. At that time Herman was manager of the first macrobiotic food store in the USA, in New York City [Named Ginza, it had been started by Herman in 1960.] In 1960 Herman went to Europe to solve visa problems, then in about late 1960 he returned to New York and started publication of *Macrobiotic News*, a magazine that contained mostly Ohsawa's lectures. In 1961 Ohsawa returned to New York for a summer camp in the Catskill Mountains. After the camp he said that followers of macrobiotics should leave New York because nuclear war was immanent. 36 people, including 15 families, decided to move to Chico, California, which they had calculated was the safest place from nuclear fallout. Arriving in Sept. 1961, they soon founded Chico-San, which was the first macrobiotic food production and distribution company in the USA. The first store was in the basement of a small shop. Herman began to import miso, tamari, and other traditional, natural foods from Japan (p. 31).

Some followers of macrobiotics stayed in New York to keep up the Ohsawa Foundation and food store. One customer got sick and died [Beth Ann Simon died in Nov. 1965]. The FDA came in and closed the store. Bob Kennedy became president of Chico-San and soon began America's first successful production of Rice Cakes.

Herman moved to San Francisco in about 1971 (p. 35). At the end of 1970, John Deming Jr. had given him some land in Mendocino. In Sept. 1972 a fire, started by a rice-cake machine, burned down the Chico-San factory (p. 34) and most of its inventories of food. Chico-San started making money in about 1978.

Western medicine is interested only in treating symptoms. Medical professionals are largely ignorant of the influence of diet on health, and even block the development of the dietary approach to healing.

Page 155: "The author: Herman Aihara was born in Arita, a small town in southern Japan, on September 28, 1920. The town is famous for its production of porcelains called *Imari-ware* or *Kakiemon-ware*. Imari is the name of the port from which Arita porcelains were shipped to Europe. His birth family was too poor to support ten children, and so at the age of nine Herman was adopted into his uncle's home in Tokyo. His family name was changed to Aihara. He grew up without knowing his actual mother. His 'stepfather' owned a factory that produced iron materials for the national railways and telephone companies, and Herman chose metallurgical engineering as a life work. He was accepted by the school of engineering at the reputable Waseda University." Address: Oroville, California.

5823. Bhumiratana, Amaret. 1980. Traditional fermented foods in Thailand. In: 1980 Proceedings of the Oriental Fermented Foods. Food Industry Research and Development Institute, P.O. Box 246, Hsinchu, (300) Taiwan. iv + 229 p. See p. 58-70. [19 ref.]

• ***Summary:*** Tao-jeow is Thai miso. Sufu is fermented tofu. The author uses the terms tao-nou and thuo-nao instead of thua-nao throughout; he even misspells it when citing Sundhagul 1970. It is sold as a paste or chips. Soy sauce (the Chinese type), soy paste and fermented soybean curd are commonly available throughout the country although they are more common in the Chinese community. Tao-nou, however, is the product which is popular in the northern part of the country. Flowcharts show the processes for producing soy sauce and tao jeow, tofu and sufu, and thuo-nao.

Note: This is the earliest (and only) English-language document seen (Jan. 2012) that uses the term "tao-nou" or the term "thuo-nao" to refer to thua-nao. Address: Dep. of Microbiology, Faculty of Science, Mahidol Univ., Rama VI Rd., Bangkok 4, Thailand.

5824. Binding, G.J. 1980. About soya beans: Wonder source of protein and energy. Wellingborough, Northamptonshire, England: Thorsons Publishers Ltd.; and New York: Pyramid Books. 64 p. 18 cm. 1st ed. 1970. About series, no. 35.

• ***Summary:*** Contents: 1. Beans in general. 2. History of the soya bean. 3. Content of soya beans. 4. About lecithin–vital for retaining youth. 5. The soya bean in the Far East. 6. American influence on the soya bean. 7. Industrial uses in America. 8. The soya bean and world food shortage. 9. Soya bean recipes.

A section titled "Wonder food–God's gift to man" (p. 10) states: "For over 5,000 years this tiny seed has been the staple food of certain parts of the East, including North China, Japan, Korea, and some areas of India. The ancient Yogis, who were among the world's first vegetarians, placed great faith in the soya bean as a supplement to their meatless diet." On the cover is a color photo showing TVP, lecithin, soymilk, soy sauce, miso, soya bean oil, soya flour, and soya sprouts.

Note 1: The copyright page states: "First published 1970. Second impression 1971. Third impression 1977. Second Edition, revised and reset 1980." Note 2: This book has no preface by Carlson Wade. Address: F.R.H.S., England.

5825. Brotonegoro, Soetarjo; Sudjana, M.; Saono, S. 1980. Preservation of economically important cultures by freeze

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drying. Paper presented at the Second ASEAN Workshop on Solid Substrate Fermentation. Held 27-29 Nov. 1980 at Kuala Lumpur, Malaysia. *

• ***Summary:*** The author isolated, identified, and preserved the microorganisms in some traditional Indonesian foods such as tempe, tauco (Indonesian miso), and kecap (soya sauce). Address: Malang Research Inst. for Food Crops (MARIF).

5826. Chen, Steve; Wang, E. 1980. Huang-dou shu-pin [Soy foods]. Taipei, Taiwan: American Soybean Assoc. 248 p. Illust. 19 cm. [Chi]

• ***Summary:*** On the cover is written: "In celebration for the 10th anniversary of ASA/Taiwan. American Soybean Association. China Nutrition Society. China Institute of Food Science Technology. China Food Health. Nutrition Research Foundation." Contains many photos and graphs. Address: American Soybean Assoc.

5827. Cheryan, Munir; Deeslie, W. David. 1980. Production of protein hydrolyzates in ultrafiltration-enzyme reactors. In: Anthony R. Cooper, ed. 1980. Ultrafiltration Membranes and Applications. New York: Plenum Press. See p. 591-601. Proceedings of a symposium "Ultrafiltration Membranes and Applications" held 11-13 Sept. 1979 at the 178th National Meeting of the American Chemical Society in Washington, DC. [21 ref]

• ***Summary:*** "From a historical perspective, the development of soy sauce manufacture in the 13th century may be the earliest and most successful batch-enzymatic hydrolysis process known. Recently, there has been a great interest in functionally-modified proteins known collectively as protein hydrolyzates for specific end uses. The shortage of egg albumin during World War II resulted in the first development of an enzymatically hydrolyzed protein food ingredient for purposes of replacing an existing ingredient; its use as a whipping aid is still a major market today. Protein hydrolyzates, whether chemically or enzymatically modified, are also used as flavor enhancers...

"The major advantage of UF-enzyme reactors is that the enzyme is theoretically retained within the system and can be re-used a number of times; also, some control is possible over the molecular size of the product by choosing the appropriate membrane pore size." Address: Dep. of Food Science, Univ. of Illinois, Urbana, IL 61801.

5828. Dahlen, Martha; Phillipps, Karen. 1980. A guide to Chinese market vegetables. Hong Kong: South China Morning Post Ltd., Publications Division. vii + 48 p. Illust. (color). Index. 21 x 28 cm. *

• ***Summary:*** The romanization of names in this book represent the Cantonese pronunciation system of Herklots. Address: Hong Kong.

5829. Dent, Der-Feng. 1980. Mechanism of fermentation of brewing yeast in high salt concentration. In: Proceedings of the Oriental Fermented Foods. Food Industry Research and Development Institute, P.O. Box 246, Hsinchu, (300) Taiwan. iv + 229 p. See p. 112-25. Held 10-14 Dec. 1979 in Taipei, Taiwan. 6 tables. [8 ref]

• ***Summary:*** Discusses the use of salt-tolerant yeasts in making fermented soy sauce and miso or chiang. Address: Dep. of Food Science, Provincial Ping-tung Inst. of Agriculture, Pingtung, Taiwan.

5830. Diamond, Marilyn. 1980. The common sense guide to a new way of eating: The proper foods, combinations and recipes to ensure that you will be a totally healthy person–with love from Marilyn Diamond. Los Angeles (Santa Monica), California: Golden Glow Publishers. ix + 106 p. Illust. Index. 26 cm. 2nd ed. 1982. *

• ***Summary:*** This near-vegetarian cookbook was Marilyn Diamond's first book on food. It was self published (the Diamonds founded Golden Glow Publishers), shortly after Harvey's first book titled "A case for health." Address: Venice, California.

5831. Doi, Tadao; Takeshi, Morita; Chonan, Minoru. 1980. Hôyaku Nippo jisho [Vocabulary of the language of Japan]. Tokyo: Iwanami Shoten. xxxiv + 862 p. 27 cm. [Jap; Por]

• ***Summary:*** This is a Japanese-language translation of the original 1603 edition, *Vocabulario da Lingua de Iapam*, the second earliest dictionary of the Japanese language compiled by Europeans. Soy-related terms in this dictionary, which are translated from the original hard-to-read Portuguese into modern Japanese, are described in detail at the reference for the original 1603 dictionary, which see.

In the Forward, the author notes that this is the entire translation of the Nagasaki edition of the Japanese Portuguese Dictionary. The original title is *Vocabulario da Lingoa de Iapam com a declaraçaõ em Portugues* (Japanese dictionary with explanation in Portuguese), published in 1603 by the Japanese Society of Jesus (Nihon Iezuzu-kai). In 1604 a second dictionary was published, titled *Arte da Lingoa de Iapam Composta Pello Padre Iaao Rodriguez* (1604-1608).

Christian priests traveled by boat to Japan to teach the Japanese Christianity. As a result, they left many historical documents. Francis Xavier first arrived in Japan in 1549 and only 54 years later his group published this remarkable Japanese dictionary. The year 1603 was also the year that Tokugawa Ieyasu became the shogun (Seitaishogun, or highest ranking samurai), founding the Tokugawa Shogunate or Edo period. In Japanese history it was the turning point at which the country changed from the medieval period to the modern one. This dictionary is a very unique mirror which reflects this period and is regarded as an important document that raises many questions in Japanese cultural

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history. The dictionary is indispensable in Japanese linguistic history since it contains many Japanese words of the period with explanations in Portuguese. In those days the Japanese had dictionaries that focused on Chinese characters (kanji) and simple dictionaries for waka and renka poems. This dictionary picked up a wide range of words from daily conversation, organizing and defining them in modern dictionary form. The original edition was stored in a secret place in Europe, inaccessible to Japanese, who therefore had to largely depend on a 19th century French translation by Leon Pajes. A rotogravure edition of the book stored at Oxford University entered Japan during the Taisho period (1912-1926) and was studied. Only recently was a facsimile copy of the original edition published, and it is being used increasingly.

This dictionary was produced by the Japanese Society of Jesus [Jesuits] to further their goal of spreading Christianity. The 1603 dictionary was developed to help the priests understand dialects, lower-class speech, and the confessions of the local common people. The 1604 dictionary focused on the speech of the upper classes and more educated people. Thus the 1603 dictionary collected words the priests needed to understand, while the 1604 dictionary collected those that they wanted to use.

5832 Easterday, Kate Cusick. 1980. The peaceable kitchen cookbook. Recipes for personal and global well-being. New York, NY, Toronto, Canada: Paulist Press. 313 p. Illust. by Ragna Tischler Goddard. 21 cm. [28 ref]

• ***Summary:*** A vegetarian cookbook. Page 45 describes how to sprout various seeds and beans, including soybeans. The section titled "Soybeans Simplified" (p. 66-75) begins by asking "Why are soybeans so highly praised?" then gives recipes for: Basic cook soybeans. Soyburgers (from cooked, mashed soybeans). How to make soy milk (12 cups, using soy flour or soybeans). Soy "coffee." Tofu (soybean curd). Tofu sandwich spread. How to roast soybeans (dry). The last page of the section, titled "Soybean Terminology" gives 1-2 line descriptions of: Soy grits, soy meal, soy granules, soy flour, soy powder (extra fine soy flour, used to make soy milk), soya (implies that the product has been toasted), roasted soybeans, tofu, miso, tamari.

Other soy-related recipes include: Wheat-soy pancakes (with soy flour, p. 169). Soy fritters (with mashed soybeans, p. 222). Simple soy bean loaf (p. 228). Vegetarian sukiyaki (with tofu and soy sauce, p. 231). Soy cheesecake (with tofu, p. 291). Address: Illinois.

5833 Fessler, Stella Lau. 1980. Chinese meatless cooking. New York, NY and Scarborough, Ontario, Canada: New American Library. 298 p. Illust. by Janet Nelson. Index. 20 cm.

• ***Summary:*** This vegetarian cookbook, which contains more than 180 recipes, demonstrates vividly how much Chinese vegetarian cookery depends on soyfoods–especially tofu (bean curd). The glossary includes excellent descriptions of bean curd–fermented red (*nan-ru*), bean curd–fermented white (*tofu-ru*), bean curd–pressed threads or noodles, bean curd sheets (*tofu-pi* [*yuba*]), bean curd sheets (*er-ju*), bean curd sheets–pressed or hundred-leaf (*bai-yeh*), bean curd sticks (folded bean curd sheets), brown bean paste or brown bean sauce, bean paste–Szechuan hot bean or spicy soy, bean sprouts–soy or yellow, fermented or salted black beans, Hoisin sauce, Oyster sauce (with soy), soy sauce, soy sauce–light or thin.

The chapter on soups stocks notes that soybeans or soybean sprouts have a delicate flavor and are most suitable for making stock. Soy sprouts, which are much larger than mung bean sprouts, have a more chewy texture and a very sweet, delicate taste; they are often used to strengthen the flavor of a dish (see recipe p. 90).

Soy-related recipes (each with the name written in Chinese characters) include: Mixed pressed bean curd threads (p. 68). Spinach and deep-fried bean curd puff salad (p. 70). Soybean sprout salad (p. 73). Pressed bean curd salad (p. 76). Monks in a storm of wind and snow (Asparagus and bean curd salad, p. 82). Soybean sprout stock (p. 90). Deep-fried bean curd and mung bean noodle soup (p. 93). Spinach and bean curd soup (p. 98). Seaweed and bean curd soup (p. 99). Soybean soup (p. 100). Soybean with fried gluten soup (p. 101). Asparagus and bean curd soup (p. 106). Goddess of Mercy (Kuan-yin) soup (With bean curd and tiger lily bulbs, p. 112-13).

One long chapter (p. 118-160) is titled "Bean curd dishes, mock meat dishes, and mock fish dishes." It gives good definitions of and home-scale recipes for: Bean curd. Deep-fried bean curd puffs. Plain pressed bean curd cakes. Five-spice pressed bean curd cakes. Braised deep-fried bean curd puffs. Bean curd with oyster sauce (not vegetarian). Braised bean curd. Spicy bean curd. Steamed bean curd with spicy bean paste sauce. Bean curd with tomatoes. Bean curd with fresh mushrooms. Cold bean curd. Stubborn stones' obeisance (Fried bean curd with vegetables). Braised frozen bean curd with chives. Braised Fukien [Fujian] bean curd. Stir-fried Chinese chives with pressed bean curd. Stir-fried pressed bean curd with carrots and bamboo shoots. Mock lion's head (with five-spice pressed bean curd). Stir-fried green peppers with mock meat (pressed bean curd). Mock moo goo gai pan (Stir-fried pressed bean curd with vegetables). Mock roast duck (with dried bean curd sheets and soy sauce). Mock soy sauce chicken (with fresh or frozen hundred-leaf bean curd sheets). Mock velvet chicken (fried bean curd with egg whites). Spicy mock chicken (with mock soy sauce chicken). Mock ham (with dried bean curd sheets). Bock abalone (braised gluten balls). Mock mu-shu pork (with five-spice pressed bean curd, shredded). Fried mock squab (with chopped pressed bean curd). Mock twice-cooked pork (with five spice pressed bean curd). Bean curd

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with thousand-year eggs.

Other interesting recipes include: Wheat gluten (homemade mein jin or vegetable steak, p. 165-66; At Chinese grocery stores, wheat gluten is sold in various forms–fried, dried, steamed, boiled, canned, and frozen). Fried gluten balls. Boiled gluten. Lo Han vegetable dish (with fried wheat gluten balls, p. 169-70). Chinese mustard greens in black bean sauce (p. 173-74). Stir-fried leeks with bean curd (p. 186). Fresh soybeans stir-fried with fresh mushrooms (p. 187). Boiled fresh soybeans in their pods (p. 188). Bean sprouts stir fried with wheat gluten (p. 190). Stir-fried soybean sprouts with bean curd puffs (p. 191). Cauliflower and bean curd sticks (p. 192). Winter melon with red fermented bean curd sauce (p. 195). Stir-fried asparagus with fermented bean curd (p. 197). Stir-fried lettuce with white fermented bean curd sauce (p. 198). Sweet and sour fried gluten and cabbage (p. 208). Two immortals in the apricot garden (fried gluten with vegetables and almonds, p. 209). Braised eggs with bean curd sticks (p. 213-14). Scrambled eggs with fermented bean curd (p. 214). Bean curd with salted eggs (p. 216-17). Wonton soup (with fresh bean curd, p. 233-34). Fried wontons (filled with five-spice pressed bean curd, coarsely chopped). Soybean milk, sweet soybean milk, and salty soybean milk (p. 247-48). Deep-fried crullers (*yu chiao;* sometimes served in hot soymilk, p. 249-50). Noodles with spicy bean paste sauce (and five-spice pressed bean curd, p. 258-59).

Note 1. This is the earliest English-language document seen (Oct. 2011) that uses the term "red fermented bean curd" to refer to red fermented tofu.

Note 2. This is the earliest English-language document seen (Oct. 2011) that uses the term "white fermented bean curd" to refer to regular white fermented tofu. Address: Cornell Univ., Ithaca, New York.

5834. Fukuoka, Toshihiko. 1980. Kikkōman: Aji no waarudo burando [Kikkoman: The world brand for flavor]. Tokyo: K.K. Asahi Sonorama. 187 p. Illust. No index. 18 cm. Series: Za kaisha shirizu no. 52. [8 ref. Jap]

5835. Fukushima, Danji, Hashimoto, Hikotaka. 1980. Oriental soybean foods. In: F.T. Corbin, ed. 1980. World Soybean Research Conference II: Proceedings. Boulder, Colorado: Westview Press. xv + 897 p. See p. 729-743. [7 ref]

• ***Summary:*** Contents: Fermented soybean foods. Non-fermented soybean food. Conclusion. References.

The following statistics show the amount (tons) of whole soybeans / defatted soybean grits / total of whole and grits consumed for various soybean foods and feeds in Japan in 1976.

Fermented soyfoods: Shoyu (soy sauce) 10,000 / 165,000 / 175,000, miso 190,500 / 5,000 / 195,500. Natto 69,000 / 0 / 69,000.

Non-fermented soyfoods: tofu and aburage (fried tofu pouches) 411,500, 55,000 / 466,500. Kori-tofu (dried-frozen tofu) 29,000 / 0 / 29,000. Others 16,000 / 75,000 / 91,000.

Animal feeds: 30,000 / 1,950,000 / 1,980,000. Thus total use for foods and feeds is whole soybeans 756,000. Defatted soybean grits 2,250,000, total of both 3,006,000. By type of use, animal feeds account for 65.9% of total Japanese usage of whole soybeans and defatted grits, non-fermented soyfoods account for 19.5%, and fermented soyfoods account for 14.6%. The top three food users are tofu (466,500 tons, 45.5% of all food uses), miso (195,500), and shoyu (175,000). There are 35,000 tofu plants in Japan.

Fermented soybean foods described are shoyu (soy sauce, 5 types), miso (3 basic types, 6 varieties), sufu (Chinese soybean cheese), tempeh (fermented soybean cake), natto (fermented whole soybeans; itohiki-natto and hama-natto), and fermented soymilk (recently a new fermented soybean product appeared on the market in Japan. It is a soy milk drink fermented by lactic acid bacteria).

Non-fermented soybean foods described are tofu (soy milk curd), aburage (fried tofu pouches), kori-tofu (dried-frozen tofu), yuba (coagulant film of soy milk), kinako (roasted soybean powder), moyashi (soybean sprouts), and soybeans. Production, chemical composition, and use of each of these foods is discussed.

Figures (flow sheets) show: (1) Shoyu manufacturing process. (2) Rice miso manufacturing process. (3) Sufu manufacturing process. (4a) Tempeh manufacturing process. (4b) Natto manufacturing process. (5a) Tofu manufacturing process. (5b) Kori-tofu manufacturing process. Address: Kikkoman Foods Inc., P.O. Box 69, Walworth, Wisconsin 53184.

5836. Gay, Martin, Gay, Kathlyn. 1980. Eating what grows naturally. South Bend, Indiana: And Books. 137 p. Illust. by Brian "Woodie" Byrn. 21 cm. [75 ref]

• ***Summary:*** A book about natural foods, with some vegetarian recipes. Martin was born in 1950. Pages 79-80 give ten menus based on Shelton's food-combining principles, including (5) Stir-fried vegetables and tofu cubes, and (9) Tofu-vegetable casserole with green salad. Page 106 gives definitions of miso, tamari, tempeh, and tofu. Soy-related recipes include: Soy burgers (with ground, cooked soybeans, p. 108), and tofu casserole (p. 109).

5837. Himalayan International Institute. 1980. The Yoga way cookbook: Natural vegetarian recipes. 4th ed. Honesdale, Pennsylvania: Himalayan International Institute of Yoga Science and Philosophy. 249 p. Illust. Index. 22 cm. 1st ed. as 1974.

• ***Summary:*** A vegetarian and natural foods cookbook. Pages 8-9 describe in detail how to make tofu at home. A list of special ingredients includes soybeans, soy granules, grits, and flour, miso, tamari, and tofu. Soy-related recipes

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include: Tofu spinach pie (p. 18). Soybean tacos (p. 32). Soy burgers (p. 36). Tofu burgers (p. 40). Tofu rice with vegetables (p. 47). Soybean rice (p. 49). Soy-potato soup (with soy granules, p. 105). Miso soup (p. 116). Tamari soup (p. 117). Tofu salad dressing (p. 127). Scrambled tofu (p 228). Tofu-avocado supersandwich (p. 233). "Short order" tofu luncheon.

5838. Hua, J.J.; Wang, I.H.; Chen, S.K.; Hsu, W.H. 1980. Studies on inyu (black bean sauce) fermentation. In: Proceedings of the Oriental Fermented Foods. Food Industry Research and Development Institute, P.O. Box 246, Hsinchu, (300) Taiwan. iv + 229 p. See p. 102-11. Held 10-14 Dec. 1979 in Taipei, Taiwan. 8 tables. 3 figs. [12 ref]
• ***Summary:*** Inyu is a fermented soy sauce made with black soy beans (*Glycine soja* Sieb. and Zucc). The annual consumption of regular fermented soy sauce and of inyu in Taiwan was worth over 25 million U.S. dollars in 1974, inyu accounted for 30% of this. Unlike soy sauce, the flavor of inyu is intensified after cooking. This is one of its major characteristics and makes it better than soy sauce for use in cooking. Fig. 1 shows the traditional inyu fermentation process.

"The chemical composition, enzyme activities, and microbial population in the process for Inyu fermentation from black bean were investigated. The results indicate that the major microorganism responsible for the aging of Inyu is the halophilic lactobacilli, while yeast has only a minor role in Inyu fermentation. When the washed-koji was preincubated at 40-45°C for 4 hours, the aging period could be reduced from 90 to 40 days. The conversion of total nitrogen from Inyu-mash to Inyu increased from 60% to 66%.

"To further improve the productivity of Inyu fermentation, the defatted black bean flakes and crushed black bean flakes were used to replace the whole black bean as raw material. The nitrogen utilization of Inyu-mash also increased from 60% to more than 72% after 56 days at 30°C. However, the flavor and aroma of Inyu made from defatted black bean flakes need to be further improved." Address: Food Industry Research and Development Inst., Hsinchu 300, Taiwan.

5839. Ichiyama, Morio. 1980. Noda no Shôyu-shi [History of shoyu in Noda]. Noda, Japan: Ron Shobo. 128 p. [Jap] Address: Noda city.

5840. Iwamoto, H. 1980. General aspects of Japanese fermented foods. In: Proceedings of the Oriental Fermented Foods. Food Industry Research and Development Institute, P.O. Box 246, Hsinchu, (300) Taiwan. iv + 229 p. See p. 31-45. Held 10-14 Dec. 1979 in Taipei, Taiwan. 15 tables. 2 figs.
• ***Summary:*** The fermented foods indigenous to Japan which are made from protein-rich materials can be grouped into two types: the soybean group and the fish group. The former, which includes miso, shoyu, and natto, is the more popular and production is very large. The author presents an early history and genealogy of miso, shoyu, and natto based on the Japanese-language writings of Prof. K. Sakaguchi and Prof. M. Nakano. Shi [fermented black soybeans] were recently found in an ancient Chinese tomb of the 2nd century B.C. "The word *shoyu* or *chiang-yu* never appeared in any old Chinese manuscripts. Nevertheless I wonder if the origin of Japanese shoyu might be the Chinese *chiang* in the Ming dynasty or an earlier period. Anyhow, the question is still: When did the Chinese start making koji from a mixture of soybean and wheat? And when and where was filtration of soybean *chiang* successfully commenced. As for the later, it is quite possible that the filtration was started in Japan."

In 1977 the following amounts of fermented soyfoods were produced in Japan: miso 620,902 tonnes (using 190,000 tonnes of whole soybeans and 1,579 tonnes of defatted soybean meal), shoyu 1,228,244 tonnes (using 11,788 tonnes of whole soybeans and 180,000 tonnes of defatted soybean meal), and natto 120,000 (using 71,000 tonnes of whole soybeans).

Table 2 shows soybean production in Japan and the USA every 5 years from 1930 to 1978. Production in Japan was 388,600 tonnes in 1930, reaching a peak of 507,100 in 1955, falling to a low of 109,500 in 1976, then rising slightly to 187,900 in 1978. The first year for which imports are shown in 1970, when 3,243,790 tonnes were imported, 91% of which from the USA. In 1978 4,260,041 tonnes were imported, 97% from the USA.

Table 6 shows miso production in Japan from 1967 to 1976. Factory production grew from 535,000 tonnes in 1967 to a peak of 650,000 tonnes in 1973, down slightly to 630,000 tonnes in 1976. Farmer (household) production decreased steadily from 207,000 tonnes in 1967 (39% of factory production and 26% of total production) to 67,000 tonnes in 1976 (11% of factory production and 10% of total production). Total production and annual per capita consumption decreased from a peak of 789,000 tonnes in 1967 (7.8 kg/capita) to a low of 697,000 tonnes in 1976 (6.5 kg/capita).

Table 7 shows the number and capacity of miso factories in Japan and their production in 1959, 1968, and 1977. The number of factories decreased dramatically during this 18-year period (to from 2,987 to 1,996), but the total amount of miso produced increased 503,000 tonnes to 621,000 tonnes, and the percentage of all miso made by large factories (those making 3,751 tonnes/year or more) rose from 15% to 52%, while the percentage of all miso made by small factories (those making 1-375 tonnes/year) decreased from 29% to 14%.

Table 8 shows the materials used in making shoyu in Japan from 1968 to 1977. The amount of whole soybeans decreased from 15,000 tonnes to 9,000 tonnes, the amount

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of defatted soybean meal increased from 147,000 tonnes to 176,000 tonnes, the amount of wheat increased from 127,000 to 178,000 tonnes, and the amount of salt from 170,000 tones to 204,000 tonnes. The amount of amino liquor (HVP) decreased from 140,000 tonnes to 89,000 tonnes.

Table 9 shows shoyu production in Japan from 1967 to 1976. Factory production grew from 1,201 kiloliters (kl) in 1967 to a peak of 1,403 kl in 1973, down slightly to 1,349 kl in 1976. Farmer (household) production decreased steadily from 20 kl in 1967 (1.67% of factory production 1.63% of total production) to 9 kl 1976 (0.66% of factory production and 0.66% of total production). Total production and annual per capita consumption increased from 1,221 kl 1967 (12.0 liters/year) to a high of 1,411 kl in 1973 (12.6 liters/year), then down slightly to 1,355 kl in 1976 (11.9 liters/year). Table 10 shows that in 1977 there were 3,135 shoyu factories in Japan. Of these, 2,654 (85% of the total) were in the smallest scale, having 10 or fewer employees, while 5 had 201-300 employees, and 8 had 301 or more employees.

Fig. 2 shows the percentage of shoyu that is distributed through various channels as it moves from the factory to large or small consumers. Address: College of Agriculture, Meiji Univ., Ikuta, Tama-ku, Kawasaki-shi, Japan.

5841. Kan, Johnny; Leong, Charles L. 1980. Eight immortal flavors. Rev. ed. San Francisco, California: California Living Books. xiii + 236 p. Illust. 24 cm. 1st edition 1963.
• ***Summary:*** The title page states: "Including new recipes kitchen-tested by Master Chef Sun Pui Wong, Executive Chef, Kan's Restaurant." This book is almost identical to the original 1963 edition. However Roman numerals have been assigned to the front matter, so the recipes are on different pages. None of the original soy-related recipes or definitions have been changed or deleted.

On the rear cover (undated): "Will probably become a standard reference work ... It is admirable for its scope and authenticity." Address: 1. Chef, Chinatown, 2. Historian of Chinese life in America.

5842. Kikkoman International Inc. 1980. The endless possibilities of Kikkoman (Brochure). [San Francisco, California]. 16 p. 21 x 21 cm.
• ***Summary:*** A color booklet with a large label from Kikkoman soy sauce on the front and rear covers. Opposite each page of recipes is a full-page color photo of one of the preparations. Contents: The family of Kikkoman. Meat. Seafood. Grills. Poultry. Vegetables. Large or small, Kikkoman comes in a package that's right for your business.

5843. Lai, Him Mark.; Lim, Genny; Yung, Judy. 1980. Island: poetry and history of Chinese immigrants on Angel Island, 1910-1940. San Francisco, California: Hoc Doi (History of Chinese Detained on Island), Chinese Culture Foundation. Distributed by San Francisco Study Center. 174 p. Illust. (photos). Portraits. 24 x 20 cm. A project of the Chinese Culture Foundation of San Francisco. [Eng, Chi]
• ***Summary:*** This is a remarkable book, another painful example of American racism and insensitivity. The majority of the approximately 175,000 Chinese immigrants (most from Canton) who came to the United States from 1910 to 1940 passed trough the detention center at Angel Island–the West Coast counterpart of Ellis Island. Here they awaited jurisdiction on the outcomes of medical examinations, interviews, and immigration papers. It was an ordeal that left many scars. Some wrote poems on the walls of the center to express their grief or sadness. The poems, written on facing pages in both Chinese and English, are divided into chapters. There are also many transcriptions of interviews, each accompanied by a Chinese person's name, age, and date, plus some footnotes of explanation.

In the chapter on "The detainment" Mr. Dea, age 26, writes in 1939 (p. 74), "We would get up in the morning and there was no set time for this, and have plain congee with fermented bean curd. Then, after breakfast, we could go out and exercise..."

In the same chapter, Mr. Low, Kitchen helper, 1923-25, wrote (p. 77): "The main dish included soup, and the following served in turn: vermicelli and pork, dried bean curd and pork, potatoes and beef, dried greens and fish. The small dish was usually either salted fish, fermented bean curd, or *hoisin* sauce."

Footnote 20: Soya bean is one ingredient in *hoisin* sauce. Address: California.

5844. McConnaughey, Evelyn. 1980. Sea vegetable recipes from the Oregon coast. Oregon Inst. of Marine Biology, Charleston, OR 97420. 32 p. Illust. by Lynn Rudy. No index. 22 cm. [8 ref]
Address: Oregon.

5845. McConnaughey, Evelyn. 1980. More sea vegetable recipes from the Oregon coast. Plus seaweeds from the Orient. 1653 Fairmount Blvd., Eugene, OR 97403. 41 p. Illust. by Catherine Vignaux. No index. 22 cm. [8 ref]
• ***Summary:*** On page 7 is nutritional information about tofu, tempeh, miso, and tamari (shoyu). Soy-related recipes: Miso (p. 13). Tempeh (p. 26, 27, 37). Tofu (p. 15, 27). Tamari shoyu (p. 27). Line drawings of sea vegetables appear on most pages. Address: Oregon.

5846. Miller, Lani; Rodgers, Diane. 1980. We love your body. Seattle, Washington: Morse Press, Inc. vii + 256 p. Illust. by Joanie Oliver. 25 cm.
• ***Summary:*** A natural foods, vegetarian cookbook. The glossary describes soybeans (incl. soy flour, milk, and tempeh, p. 246), tamari sauce, and tofu (p. 247).

5847. Mogi, Koya. 1980. Recent progress of soy sauce

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manufacturing in Japan. In: Proceedings of the Oriental Fermented Foods. Food Industry Research and Development Institute, P.O. Box 246, Hsinchu, (300) Taiwan. iv + 229 p. See p. 88-101. Held 10-14 Dec. 1979 in Taipei, Taiwan. 13 tables. 6 figs. [2 ref]

• ***Summary:*** Contents: Introduction. Manufacture. Treatment of raw materials, koji making, aging, pressing, refining. High temperature and short time cooking method. The following tables are included: 1. Classification of shoyu (5 kinds, 3 grades, 3 production methods). 2. Some characteristics of different kinds of shoyu (kinds, color, soybean:wheat ratio). 3. Typical composition of 5 different kinds of shoyu. 4. Differences in koikuchi shoyu grades (total nitrogen, soluble solids except NaCl, alcohol). 5. Differences in shoyu production methods (hon-jozo, shinshiki, amino acids liquid mix). 6. Shoyu production of different kinds in 1977 (koikuchi 917,738 kl = 85% of total, usukuchi 124,829 kl = 11.6% of total, tamari 23,437 kl = 2.2% of total, shiro 4,456 kl = 0.4% of total, saishikomi 3,072 = 0.3% of total). 7. Shoyu production in different grades in 1977 (special 59.3% of total, upper 27.5%, standard 13.2%). 8. Shoyu production by different methods in 1977 (hon-jozo 66.9% of total, shinshiki-jozo 28.4%, amino acids liquid mix 4.7%).

The innovation of treating soybeans using the high temperature and short time cooking method increased the yield of shoyu very much and was patented in Japan, the USA, and Canada. The protein in raw soybeans is undenatured and cannot be hydrolyzed (digested) by the enzymes of koji molds. Therefore it is necessary to denature the soybean protein by cooking so that it can be hydrolyzed. "The phenomenon of the so-called 'N-property' (turbidity nature) appears, if portions of soybean protein remain undenatured. 'N-property' is the phenomenon that *shoyu* becomes turbid when it is diluted and heated. This is the appearance of insoluble form of undenatured protein and remarkably diminishes the commercial value of *shoyu*.

"Undenatured protein is soluble in water, especially saline water, and goes into the product. If the product contains undenatured protein, 'N-property' described above appears as a coagulant when *shoyu* is diluted to the concentration fitted to the specified cuisine and/or further heated. However, excess denaturation also makes soybean protein undecomposable by proteolytic enzymes. Thus, over-denaturation results in a decrease of the yield of *shoyu* and an increase of the production cost.

"Steam cooking has been used as a means to increase digestibility of soybean protein. Technical know-how of so-called 'NK-method' developed by Mr. Tateno *et al.* of the author's company in 1952 has been generally used by many soy sauce manufacturers. It was an epoch-making method of soybean treatment in *shoyu* making. Before that time, the utilization rate of nitrogen was about 66 to 70%. A utilization rate of nitrogen is defined as a percentage of soluble nitrogen in *moromi* mash to total nitrogen in the raw materials used. In this method, soybeans are cooled rapidly after cooking to prevent excess denaturation. Soybeans are steamed at 0.9 to 1 kilogram per square centimeter gauge pressure for 30 to 60 minutes (average 45 minutes) and then cooled as soon as possible with the aid of jet condenser to reduce the pressure inside the cooker. Thus, the utilization rate of nitrogen attained by the 'NK-method' is 81 to 82%. After many years, the 'NK-method' was first replaced with 'high temperature and short time cooking method' in about 1970.

"It has long been believed that the treatment of the 'NK-method' is best with steam at 0.9 kilograms per square centimeter for 30 to 60 minutes and that either higher temperature or longer time causes excess denaturation and decrease of the utilization rate of nitrogen. However, the author's results of bench-scale experiments indicate better digestibility of soybeans when the conditions of higher temperature and shorter time are used for denaturation of protein." Address: Kikkoman Shoyu Co., Ltd., Plant No. 7, 339 Noda, Noda-shi, Chiba-ken, Japan.

5848. Nagahori, Takashi; Motai, H.; Okuhara, A. 1980. Shôyu no N-nitoroso amin seisei yokusei busshitsu [On the substances in shoyu to suppress the nitrosation of dimethylamine]. *Eiyo to Shokuryo* (*J. of Japanese Society of Food and Nutrition*) 33(3): 151-60. [39 ref. Jap]

• ***Summary:*** Amino acids in shoyu competitively inhibit formation of nitrosamines from nitrite and amines. Shoyu, miso, and protein hydrolysates suppress nitrosation by 60-70%, by means of Van Slyke reactions between amino acids in the soyfoods and nitrites. Rates of suppression are: regular (*koikuchi*) shoyu 62-65%, tamari shoyu 69-79%, and rice miso 71-77%. Address: Central Research Labs., Kikkoman Shoyu Co. Ltd., Noda, Japan.

5849. Null, Gary. 1980. The new vegetarian cookbook. New York, NY: Macmillan Publishing Co., Inc.; London: Collier Macmillan Publishers. x + 310 p. Recipe index. 24 cm.

• ***Summary:*** One chapter (p. 52-60) titled "Soybeans and Soybean Products" discusses: "Whole, raw soybeans" [green vegetable soybeans], dried soybeans, soybean milk, soy flour, soy grits, soy flakes, tempeh, tamari, miso, and tofu. The long section on tofu begins: "As a high-quality source of complete protein, tofu (soybean curd, usually called bean curd) is hard to beat, not to mention inexpensive, low in calories and versatile." It ends: "As you become more familiar with tofu, you'll come up with many of your own innovations. But no matter how you choose to serve this natural, high-protein food, serve it often and savor its benefits!"

Page 78, under "Bean Sprouts," states that "Soybeans make the most delicious sprouts, but are a little more difficult to grow" than mung bean sprouts. Page 88 notes that tamari and miso are good alternatives to salt.

Soy-related recipes include: Miso tofu soup (p. 132-

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33). The section titled "Tofu Dishes" (p. 199-208) includes: Butternut tofu. Tofu cauliflower casserole. Herby tofu croquettes. Mushroom and tofu sautéed in miso. Tofu Orleans. Red and green peppers with tofu. Soba tofu dinner. Tofu eggplant Parmesan. Yogurt tofu casserole [with cow's milk yogurt]. Tomato tofu and kidney beans. Bulghur, lentil and tofu casserole. Tofu à la king. Sesame tofu (Tofu plus sesame seeds). Hot breakfast for two (tofu with oatmeal, raisins, and walnuts).

Soy-enriched wheat berry bread (p. 242). Page 304 contains a list of food suppliers, including Chico San, East West Journal Mail Order, and Walnut Acres (Penns Creek, Pennsylvania). Address: New York City, NY.

5850. Pennington, Jean A. T.; Church, Helen Nichols, eds. 1980. Bowes and Church's food values of portions commonly used. 13th ed. Philadelphia, Pennsylvania: J.B. Lippincott Co. xvii + 186 p. Index. 28 cm. 1st ed. was 1937. 2nd ed. was 1939. 10th ed. was 1966. [62 ref]
• ***Summary:*** The index contains entries for: Beans (but no soy). Cheese and cheese food (but alternatives). Cheez-its. Chili–vegetarian. Float, Dairy Queen. Flour. French fried potatoes (Arthur Treachers, Burger Chef, Burger King, Dairy Queen, Long John Silver's, McDonald's, Wendy's). Ice cream bars. Infant formulas (Isomil–Ross Labs, L-Soyalac–Loma Linda, Neomullsoy–Syntex, Nursoy, ProSobee–Mead Johnson, Soyalac–Loma Linda). Irishmoss [Irish moss]. Milk (goat, human, Indian buffalo, reindeer, sheep, soybean, whole). Miso. Natto. Oils. Soyamaise dressing (p. 122). Soyamel. Soybeans, fermented. Soybean curd. Soybean flour. Soybean milk. Soybean nuts. Soybean oil. Soybean protein. Soysauce. Teriyaki sauce. Tigers Milk Bar. Tofu. Tom Collins. Veg Skalops. Veja-Links. Vegeburger. Vegetarian products made mostly by Worthington Foods and Loma Linda (p. 22-23): Beef style roll, Chicken style, Chic-Ketts, Chili, Corned beef style, Croquettes, Dinner cuts, Fry Sticks, Gran Burger, Meatloaf mix, Nuteena, Prosage, Proteena, Rediburger, Smoked beef style, Stakelets, Stripples, Tasteecuts, Turkey Style–Smoked, Vega-links, Vegeburger, Veg Skallops, Vegetarian Burger, Vitaburger, Wham, Yogurt.

Aluminum is not among the lists of trace minerals in foods in the back. The book *does* list the following as trace minerals: chromium, cobalt, fluoride, iodine, molybdenum, nickel, selenium, and tin. Address: 1. Formerly Instructor of Nutrition, City College of San Francisco, San Francisco, California [Now with U.S. Food and Drug Administration, Washington, DC]. Phone: 202-245-1064.

5851. Perl, Lila. 1980. Eating the vegetarian way: Good food from the earth. New York, NY: William Morrow and Company. 93 p. Illust. Index. 25 cm. [9 ref]
• ***Summary:*** This children's book discusses the reasons for vegetarianism, the different types of vegetarian diets, and why modern meat-raising techniques are causing many Americans to change their diets. Also offers alternative protein-rich recipes.

Pages 42 mentions soybeans, and page 48 mentions tofu, tempeh, and soy sauce. Address: Beechhurst, New York.

5852. *Quadernos de Natura (Editorial Posada, Mexico)*. 1980. La alimentacion macrobiotica [The macrobiotic diet]. No. 10. 88 p. [10 ref. Spa]
• ***Summary:*** Includes information on miso, natto, tamari, tekka miso, and sea vegetables.

5853. Redfield, Linda. 1980. Vegetarian cooking with tofu. Davis, California: Printed by the author. 9 p. 21 cm.
• ***Summary:*** This typewritten booklet of vegetarian tofu recipes has the Chinese characters for "tofu" written on the brown cover. It was reproduced by photocopying and bound with four staples (saddle stitched). Contents: Nutritional information. A simplified method of preparing tofu from soybeans. Sauces (incl. Miso spread, Dipping sauce with tamari, Tofu marinade with tamari, Teriyaki marinade with tamari). Tofu salads. Chinese recipes. Mexican recipes. Recipes using sliced tofu. Italian recipes. Tofu desserts and fruit whips.

Talk with Linda Redfield. 2002. Sept. 23. She developed this booklet in about 1980 in Davis–before she went to Arcata, where she now lives. Her business is now named Holistic Self Healing. She does nutritional and wellness counseling, whole foods meal service, cooking and nutrition classes, and energy therapies. After her name are the following title abbreviations: D.C. (Diet Counselor), N.E. (Nutrition Educator), W.C. (Wellness Consultant). She is like a wholistic dietitian. Address: Davis, California.

5854. Shandler, Nina; Shandler, Michael. 1980. How to make all the "meat" you eat out of wheat: International gluten wheat "meat" cookbook. New York, NY: Rawson, Wade Publishers, Inc. xiv + 241 p. Index. 24 cm. [10 ref]
• ***Summary:*** How to make and use wheat gluten in a vegetarian diet, with 250 American and international recipes. Contents: Acknowledgements. Author's note. Part I. Introducing wheat "meat": 1. The cost of the meat-centered diet. How meat consumption affects ecology, economy and health, food economy, fuel conservation, water reserves and pollution, heart disease, cancer and meat eating, premature aging, chemical residues in meat, medical costs. 2. Introducing wheat "meat": a low-cost, homemade alternative to meat (gluten meats cost about $0.15 per serving). 3. How to make "meat" from wheat. Preparing raw gluten (from 7 cups whole wheat flour), seven varieties of wheat "meat," cutlets (a veal substitute), steak (a mock beef steak), ground gluten (a hamburger taste-alike), spiced links (an alternative to sausage), roast with a beef flavor, seawheat (a clam alternative), poultry pieces (chicken-flavored wheat

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"meat), using the reserved starch, bran and germ: Gluten-free crackers, and cold crunchy cereal.

Part II. Hundreds of international ways to serve wheat "meat": 4. All-American wheat meat recipes. 5. Mexican wheat "meat" food. 6. Latin American. 7. British. 8. French. 9. Spanish. 10. Italian. 11. Austrian. 12. Greek. 13. African. 14. Indian (from India). 15. Chinese. 16. Japanese wheat "meat" cooking.

Note 1. Tamari soy sauce and miso are used to flavor a number of recipes in this book. Other soy-related recipes include: Spiced bean curd and cutlet (with tofu, p. 212). Spares with black beans (mock spare ribs with "Chinese prepared black beans [fermented black soybeans], p. 216). Family-style bean curd (with tofu, p. 219). Poultry with orange-flavored soy sauce (p. 228-29). Seawheat in soy and ginger sauce (p. 229). Seawheat with bean curd and vegetables in casseroles (p. 230). Seawheat with vinegared miso (p. 231). Note 2. This book does not mention "seitan," but a Japanese recipe titled "Seawheat in Soy and Ginger Sauce" is quite similar. It uses tamari soy sauce and grated gingerroot, and kombu is used in making Seawheat, a clam alternative. A photo on the inside back dust jacket shows Nina and Michael Shandler.

Talk with Michael Shandler in Amherst, Massachusetts. 1992 Jan. 14. He and Nina became vegetarians in 1969. They were first introduced to wheat gluten in about 1970; at that time they were served gluten steaks by a friend, Jayanti Peterson, in Santa Cruz, California. At the time their book was published, they were probably not aware of "seitan." They did not know of any other books on gluten when they were writing their book–which is why no gluten books are listed in their bibliography. The book sold about 2,000 copies in hardcover and 5,000 to 6,000 in quality paperback; it went out of print 6-7 years ago. They have had many requests for the book since it went out of print. He is an organization development consultant and Nina is a child psychologist. Food is their hobby. Their best-selling book is ***The Complete Guide and Cookbook for Raising your Child as a Vegetarian*** which has sold over 50,000 copies (Shocken & Ballantine). Address: Amherst, Massachusetts. Phone: 413-549-1671.

5855. Shufu-no-tomo sha. 1980. Wa-yô-ka no tôfu ryôri [Japanese, Western, and Chinese-style tofu cookery]. Tokyo: Shufu-no-tomo-sha. Shufunotomo Bunka No. 568. 84 p. Illust. No index. 19 cm. [Jap]

• ***Summary:*** Contents: Healthy menu. New discovery of taste. Making tofu recipes more filling by adding some oil. The main character of the diet. Tofu side dish for wines (sake). Contains many recipes.

The entire rear cover contains a color ad for Higashimaru Shoyu (usukuchi), and shows the label in a size that all ingredients are legible. Address: Tokyo, Japan.

5856. Su, Yuan-Chi. 1980. Traditional fermented foods in Taiwan. In: Proceedings of the Oriental Fermented Foods. Food Industry Research and Development Institute, P.O. Box 246, Hsinchu, (300) Taiwan. iv + 229 p. See p. 15-30. Held 10-14 Dec. 1979 in Taipei, Taiwan. 8 tables. 9 figs.

• ***Summary:*** Contents: Introduction. Bean sauce. Soy sauce, black bean sauce (*in-yu* [inyu]), *in-si* or *tou-si* (Taiwanese fermented black soybeans / salted fermented soybeans made from the dried mash of black bean sauce). Fermented jam. Tou-chiang (Taiwanese soybean jiang), tou-pan-chiang (made from sprouted broad beans; soy is not used), tien-mien-chiang (made with wheat flour; no soy). Fermented tou-fu. Tou-fu-ju (also named sufu, soybean cheese, or Chinese cheese), chou-tou-fu (also named "fetid bean curd" [stinky tofu]). Anka (also called ang-kak or red koji, made by growing a Monascus mold on rice). Discussion. Color photos are given of *in-si* (*tou-si*) and the pehtze of fermented tofu overgrown with Mucor mold species.

Flow sheets (without quantities of ingredients) show the basic process used in making each of the following: fermented soy sauce, *in-yu* and *in-si* (*tou-si* [pronounced doushi, fermented black soybeans]), *tou-chiang* (soybean jiang), *tou-pan-chiang*, *tien-mien-chiang*, *tou-fu-ju*, *anka*.

Note 1. This is the earliest English-language document seen (Oct. 2011) that uses the term "Tou-fu-ju" to refer to fermented tofu.

Note 2. This is the earliest English-language document seen (Oct. 2011) that uses the term "fetid bean curd" to refer to stinky tofu.

In 1978 there were 433 soy sauce plants in Taiwan (39 produced a class-A product, and 12 produced class B, most were unclassified) with an annual production capacity of 160,000 kiloliters. This is equivalent to an annual consumption of 9 liters per capita. The 8 largest manufacturers control 45% of the Taiwanese market. 25% of the soy sauce is 100% fermented, 5% is HVP chemical soy sauce, and 70% is a blend of the two. "Originally, whole soybean was used as the protein source. Now it is replaced by defatted soybean [meal], and the whole soybean is used only when high quality soy sauce is desired. The Chinese National Standards (CNS) for soy sauce were established in 1954 and have since been revised several times. On 24 Oct. 1971 the CNS 423 was established. Grade A soy sauce must have the following composition in gm/100 ml. Pure solid matter excluding NaCl > 12, total nitrogen > 1.3, formol nitrogen > 0.56, and pH from 4.5 to 5.3. The corresponding figures for grade B are: Pure solid matter excluding NaCl > 9, total nitrogen > 0.9, formol nitrogen > 0.40, and pH from 4.5 to 5.3.

In-yu or black bean sauce is undoubtedly Taiwan's the oldest prepared condiment. In-yu is different from soy sauce in that it is produced from black [soy] beans and its flavor becomes stronger as it is cooked. Therefore it is used by many families in frying and cooking meat. Currently, in south Taiwan, the market for in-yu is about 30% that

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of soy sauce. Black soybeans are produced in Pingtung, Taiwan. The amount produced is not enough to meet the local demand. Therefore, black soybeans are imported from Thailand for making *in-yu* (fermented black soybean sauce). Table 4 gives the general composition of black soybeans grown in Taiwan.

Figure 2 shows a flow sheet for making *in-yu* or *in-si*. Wash the black beans, soak (for 2-3 hours in summer, 4-5 hours in winter), after soaking, the weight of the black soybeans should have increased by about 80-100%. Then steam the soaked black soybeans at 0.5 to 0.7 kg per square cm for 20 minutes or at atmospheric pressure for 2 hours. When finished, pour them out onto a flat bamboo tray and allow to cool and dry (at 32-33°C in summer, 40-42°C in winter) until they are no longer sticky. Inoculate by mixing in the starter culture [*Aspergillus oryzae* mold spores]. Spread the inoculated soybeans on koji trays to a depth of 1.5 to 2.2 cm and incubate in a koji room at 32-33°C for 5 days to make soybean koji. Optional washing step (see p. 29): Wash the finished koji with water for 2 minutes to remove the spores and mycelium that grew on the surface and thereby to prevent an undesirable moldy odor and bitter taste in the final product; with this step about 3-4% of the total nitrogen is lost but the weight of the koji will have increased by about 50%. Now place the washed soybean koji in bamboo baskets (30 kg capacity) for pre-fermentation (6-8 hours in summer or 16-20 hours in winter). Now mix in salt (adding 30-32 kg of NaCl per 100 kg of black soybeans), then put the salted mixture into a ceramic pot (30 kg capacity for fermentation. Note that no additional water is added). Seal the mouth of the pot using calcium carbonate paste. Allow the fermentation to proceed for 1.5 to 2 months in summer or 2-3 months in winter. The resulting mature *in-yu* mash is ready to be pressed, filtered and pasteurized to make Taiwanese black bean sauce (*in-yu*). Or instead it can be dried to make *in-shi* (*tou-shi;* Taiwanese fermented black soybeans). These dry fermented black soybeans, which are widely used in Taiwanese meals, have the following analytical data: (Table 6): NaCl 12.7%, Acidity 1.2, Formol nitrogen (F.N.) 0.98, Ammoniacal nitrogen (A.N.) 0.36, Total nitrogen (T.N.) 3.22, Ratio of F.N. to T.N. 30.4, Ratio of A.N. to T.N. 11.2. The Chinese national standards define 3 grades of *in-yu* (Table 5).

Production of Taiwanese miso (tou-chiang) is currently 11,000 tons. Per capita consumption is decreasing.

Fermented tofu (Tofu-fu-ju) is produced both commercially and domestically. The annual production is about 10,000 tons while weekly consumption is about 12 gm per capita. Address: Dep. of Agricultural Chemistry, National Taiwan Univ., Taipei, Taiwan.

5857. Sung, Ying-sing. 1980. ***T'ien Kung K'ai Wu:*** Exploitation of the work of nature: Chinese agriculture and technology in the XVII century. Taipei, Taiwan: China Academy. xii + 488 p. Illust. Index. 22 cm. [Eng]

• ***Summary:*** The *T'ien Kung K'ai Wu*, by Sung Ying-hsing (pinyin: *Tiangong Kaiwu*, by Song Yingxing) was published in 1637. This English-language translation of the 17th century work on Chinese technology contains 18 chapters, 166 superb illustrations, and extensive information on soybeans. Each chapter was translated by a person specializing in that subject matter.

5858. Tsai, Wei-Chong; Wong, C.M. 1980. Proceedings of the Oriental fermented foods. Food Industry Research and Development Institute, P.O. Box 246, Hsinchu, (300) Taiwan. iv + 229 p. Held 10-14 Dec. 1979 in Taipei, Taiwan. Illust. No index. 26 cm.

• ***Summary:*** "The symposium was jointly sponsored by ASPAC Food and Fertilizer Technology Center (FFTC), President Enterprises Corporation, and Food Industry Research and Development Institute (FIRDI). The information contained in this book is a blend of theoretical considerations and practical applications on the Oriental food fermentations. In addition to the above, it includes some studies of microbiology and biochemistry relevant to the discipline, which have hardly caught due attention before.

The welcoming address is by Paul C. Ma, director of FIRDI. Opening remarks are given by Carson K.C. Wu (director of the Food and Fertilizer Technology Center), and by Chin-yuan Kao (president of President Enterprises Corporation, who generously paid for the printing of the proceedings, and who notes that Taiwanese consume 9.3 liters of soy sauce per capita). Address: 1. FIRDI, 2. FFTC.

5859. Tsuji, Shizuo; Sutherland, Mary. 1980. Japanese cooking: A simple art. New York and Tokyo: Kodansha International. 518 p. Introduction by M.F.K. Fisher. Illust. (510 line drawings by Yoshito Suzuki. 16 color pages, mostly photos). Index. 27 cm.

• ***Summary:*** This is a beautiful and informative book by a great Japanese chef, though the awkward English terminology often sounds like "Japlish." The illustrations are very nicely done, but the artist's name does not appear in the book. Tsuji is the author of 29 books on gastronomy, travel, and music. His basic thesis is that "like Japanese and poetry, cooking is simply the result of an acute awareness of the seasons. Freshness and naturalness are the *sine qua non* of Japanese cuisine."

This definitive treatise on Japanese cooking, the most complete and well-thought-out to date, is written by the head of the *Ecole Technique Hoteliere Tsuji*, the technical hotel school in Osaka, Japan. This is the "largest school training professional chefs in Japan," according to the publisher.

The excellent "Ingredients" section (p. 53-100) gives detailed descriptions (with Japanese characters) of: Azuki beans (p. 55) including red rice (*sekihan*) and "sweet red-bean paste" (*an*). Bean curd (*tôfu*, p. 56-61) incl. *momen*

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tofu (regular; "The type described here as 'regular' is known in Japan as *momen*–'cotton' tofu. 'Cotton' bean curd is the type most commonly used in Japan"), *kinu-goshi* (silk tofu), *yakidôfu* (lightly broiled or grilled bean curd), atsu-age or nama-age (thick cakes), aburage or usu-age (thin deep-fried tofu), ganmodoki (mixed tofu), *kôya-dôfu* or *kôri-dôfu* ("freeze-dried bean curd"), *yuba* ("soybean milk 'skin'" [soybean milk skin]), *okara* ("bean curd pulp or 'lees'").

Note 1. This is the earliest English-language document seen (May 2012) that contains the term *atsu-age* or the term *usu-age* or the term "thin deep-fried tofu" (all regardless of hyphenation), all of which refer to types of Japanese of deep-fried tofu.

Miso (p. 76-77) incl. shiro-miso, Shinshû-miso, inaka-miso, Hatchô miso, akadashi miso. Soybeans and edamame Soy sauce (shôyu, p. 90-93) incl. Natural Japanese soy sauce, synthetic soy sauce, Kikkoman, light soy sauce (*usukuchi shôyu*), tamari ("In Japanese cooking tamari is generally used as a dipping sauce or a base for basting sauce such as Yakitori Sauce"). "Dutch traders in Nagasaki in the seventeenth century exported soy sauce to Europe, and it was the secret seasoning served at the court banquets of Louis XIV of France" (sic). Kuzu (p. 93-94). Wheat gluten (p. 98, 60).

Soy-related recipes include: Making soups (p. 151-56). Miso soup (*Miso-shiru*, p. 156-57). Ginger soy sauce (*Shôga-jôyu*, p. 172). Ponzu sauce (p. 172, with soy sauce and tamari). Mustard-vinegar miso sauce (*Karashi-su-miso*, p. 172-73). Dengaku, dengaku miso toppings, and bean curd dengaku (*Tôfu dengaku*) (p. 190-93). Teriyaki (p. 199-202, 370; the meaning in the United States is now different from the original meaning in Japan. Definition and history, homemade teriyaki sauce, teriyaki yellowtail, chicken teriyaki, steak teriyaki). Egg "tofu" (*Tamago-dôfu*, p. 216). Dressings for aemono (salads, p. 246, incl. white tofu dressing, white miso dressing, red miso dressing). Rice with miso soup and pickles (p. 270-71). Nori-roll sushi (*Nori-maki*, p. 300, with freeze-dried bean curd). Fox noodles (*Kitsune udon*, p. 312). Pickling vegetables (*Tsukemono*, p. 315, 318, with miso). Pureed corn soup (*Tômorokoshi surinagashi-jiru*, p. 347, with miso). Thunder soup (*Kaminari-jiru*, p. 349, with "1 cake *tôfu* (bean curd)" and "2-3 cakes thin deep-fried *tôfu* {*aburage or usuage*}, cut into julienne strips). Potatoes simmered in miso (*Jaga-imo miso-ni*, p. 393). Radish with white miso sauce (*Furofuki daikon*, p. 394). Chinese cabbage and deep-fried tofu (*Age-dôfu hakusai-ni*, p. 398). Tortoiseshell tofu (*Tôfu bekkô-ni*, p. 398-99). Fried and simmered freeze-dried tofu (*Kôri-dôfu age-ni*, p. 399-400). Gold purses (*Fukuro*, p. 400, with thin deep-fried bean curd). Deep-fried tofu (*Agedashi-dôfu*, p. 412-13). Green beans with sesame-miso dressing (*Sandomame goma-miso ae*, p. 420). Savory okra (cold) (*Okura wasabi-joyu*, p. 420-21). Tangy white salad (*Shirazu-ae*, p. 421-22). "River Bank" oyster stew (*Kaki dote-nabe*, p. 433-34, with miso). Simmering tofu (*yudôfu*, p. 436-37). Mushroom rice (*Shiitake gohan*, with "1 cake thin deep-fried bean curd (*aburage* or *usuage*)," p. 438-39). Soybeans in the pod (*Edamame*, p. 471-72).

Murasaki (p. 287). Japanese love *sushi* so much that they have developed a special aficionado's vocabulary. "At a *sushi* restaurant, you do not ask for soy sauce as *shôyu*, but, rather, as 'purple,' or *murasaki*. Every shop has its own house sauce, made by reducing soy sauce or thicker *tamari* sauce over heat with *saké*, *mirin*, bonito flakes and so on." Since the resulting sauce is darker than regular soy sauce, the name *murasaki* seems appropriate.

Concerning azuki beans (red beans; characters small + bean) (p. 55): "This small, red bean is the legume you will most frequently encounter in Japanese cooking besides soybeans (*daizu*). It is used in the cooking of many countries, so it is stocked in most supermarkets throughout the United States. For some historical reason this bean is commonly spelled *adzuki*. This spelling is a Victorian romanization; phonetically, *azuki* is correct.

"These beans are steamed with glutinous rice on special occasions to make the festive red rice (*sekihan;* p. 280). They are more commonly boiled with sugar to make sweet red-bean paste (*an*), which forms the base of a large percentage of Japanese sweet confections (see p. 327). *An* is made in two textures: smooth puree (*koshi-an*) and 'chunky,' with beans partially crushed (*tsubushi-an*). If there is no time to make *an* from scratch, ready-made *an* is available canned and stocked in most Japanese food stores."

Note 2. This is the earliest English-language document seen (March 2006) that uses the term "sweet red-bean paste" to refer to sweet azuki bean paste [*azuki-an*], or the term "smooth puree" to refer to *koshi-an*, or the term "chunky" to refer to *tsubushi-an*. Address: Tsuji Professional Culinary Inst., Osaka, Japan.

5860 Yu, Ju-Hyun, Pyun, Yu Ryang. 1980. Korean fermented foods. In: Proceedings of the Oriental Fermented Foods. Food Industry Research and Development Institute, P.O. Box 246, Hsinchu, (300) Taiwan. iv + 229 p. See p. 46-57. Held 10-14 Dec. 1979 in Taipei, Taiwan. 7 tables. 4 figs. • ***Summary:*** Fermented foods in Korea can be classified into alcoholic beverages, seasonings, kimchies (fermented vegetables), fermented milk (liquid type), and cakes and bread. Traditional Korean fermented foods made with soybeans are all seasonings. Ganjang is soy sauce, doenjang is soybean paste, and gochoojang is a red pepper paste containing rice and/or barley and soybeans. Sikcho (vinegar) is the only traditional Korean seasoning that contains no soybeans.

In Korea, production of soy sauce (ganjang) has increased from 93,355 kiloliters (kl) in 1975 to 97,830 kl in 1978. Production of soybean paste (doenjang, Korean miso) has decreased from 67,227 tonnes (metric tons) in 1975

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to 51,237 tonnes in 1978. Production of red pepper paste (gochoojang) has increased from 29,000 tonnes in 1975 to 33,525 tonnes in 1978. A detailed description is given of the production process, and nutritional composition of gochoojang. The production of monosodium glutamate by fermentation was begun in 1963 by Miwon Co. and Chiel Sugar Co. Address: Dep. of Food Engineering, Yonsei Univ., Seoul, Korea.

5861. Boykin, Craig; Boykin, Annie. 1980? The drama of the two soyboys. 2 p. Unpublished manuscript. Undated.
• ***Summary:*** "Narrator: The year–1999. The place: The great American west. Gone are the herds of cattle. With the growing popularity of tofu, the range lands have been planted with soy beans. Gone is the cowboy. But a new breed of man has moved into the big sky country... A strong, independent and often lonely kind of man. Yes, the American soyboy.

"Scene: Two grisly looking range hands sitting at a campfire, tearing with their teeth at the food they have been roasting over the fire on a stick. They are wearing yoga pants and cowboy hats.

"1st soyboy: This range tofu sure is tough.

"2nd soyboy: Damn right, pass the tamari..."

5862. **Product Name:** [Soy sauce, and miso].
Manufacturer's Name: Chinese-run company.
Manufacturer's Address: Quevedo, Ecuador.
Date of Introduction: 1980?
How Stored: Shelf stable.
New Product–Documentation: Letters from Richard Jennings in Ecuador. 1981. Feb. 14 and March 8. There is a Chinese-run soy sauce and miso factory in Quevedo, in the lowlands of Ecuador, where there is a constant warm climate for fermentation. They make a kind of miso, but with some sugar and spices.

5863. INTSOY. 1980? Soybean Foods Research Centre (SFRC), Gannoruwa (Brochure). 3 p. Undated. Publisher not given.
• ***Summary:*** Contents: Introduction. Home level. Village level. Commercial level: Full fat soya flour, coconut milk substitute, soya cereal extrusion cooked blends, soya milk (beverage), soya oil and meal, soya and cassava extrusion cooked blends, soya-maize extrusion cooked blends, Oriental soya foods (tofu and tempeh), soya sauce. Future plans.

5864. Lea & Perrins. 1980? Light & elegant: superb recipes for chicken, fish & lighter foods. Fair Lawn, New Jersey: Lea & Perrins. 23 p. Undated. Saddle stitched. Illust. (color). 22 cm.
• ***Summary:*** A booklet of recipes that call for Lea & Perrins' White Wine Worcestershire Sauce. In a cut-out window on the front cover (4½ by 1½ inches) is a color photo of a bottle of Lea & Perrins White Wine Worcestershire Sauce. On the rear cover, near the bottom, we read: "... from the first family of fine quality sauces, Lea & Perrins, Fair Law, NJ 07410."

Contents: Introduction. Great beginnings. Pastas & salads. Poultry. Seafood. Light meals. On the side. Finishing touches.

Note: Most of the recipes in this booklet call for meat, poultry, fish or seafoods.

5865. **Product Name:** Wheat Meat Burger.
Manufacturer's Name: Sheffield Seitan.
Manufacturer's Address: South Wheelock, Vermont.
Date of Introduction: 1980?
Ingredients: Seitan (wheat gluten cooked in a broth of soy sauce, garlic powder, and cayenne).
Wt/Vol., Packaging, Price: 5 oz.
New Product–Documentation: Talk with Leo Denby, owner of Sheffield Seitan. 1998. Feb. 3. The company's second product, this patty was introduced in about 1980.

5866. **Product Name:** Vi-Zate HVP Hydrolyzed Vegetable Protein Powders.
Manufacturer's Name: Staley (A.E.) Manufacturing Co.
Manufacturer's Address: 2200 E. Eldorado St., Decatur, IL 62525.
Date of Introduction: 1980?
New Product–Documentation: Manufacturer's catalog. 1980. Staley Protein Products. Made by hydrolyzing corn and soy proteins.

5867. **Product Name:** Staley Hydrolyzed Vegetable Protein Sauces (Liquid HVP's) [43 Sauce, 15 Sauce, or Soy Sauce].
Manufacturer's Name: Staley (A.E.) Manufacturing Co.
Manufacturer's Address: 2200 E. Eldorado St., Decatur, IL 62525.
Date of Introduction: 1980?
Ingredients: Soy Sauce: Water, salt, hydrolyzed vegetable protein, corn syrup, caramel coloring.
Wt/Vol., Packaging, Price: 10 and 55 gallons steel drums, or in tank car or tank truck quantities.
How Stored: Shelf stable.
Nutrition: 38% solids, 19% flavor solids, 19.0% salt, 6.9% protein.
New Product–Documentation: Manufacturer's catalog. 1980. Staley Protein Products. Made by hydrolyzing corn and soy proteins.

5868. **Product Name:** Vico SSD (Soy Sauce Dried) Seasoning Powder.
Manufacturer's Name: Vico Products Div., A.E. Staley Manufacturing Co.
Manufacturer's Address: 2536 North Elston Ave., Chicago, IL 60647.
Date of Introduction: 1980?

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Ingredients: Dextrin, hydrolyzed vegetable protein, corn syrup solids, salt, caramel coloring
Wt/Vol., Packaging, Price: 100 lb corrugated cartons fitted with polyethylene bags.
How Stored: Shelf stable.
Nutrition: Moisture 2%, salt (NaCl) 36%, protein 14%, fat 1%.
New Product–Documentation: Manufacturer's catalog. 1980. Staley Protein Products. Composed of soy sauce solids (i.e. hydrolyzed vegetable protein, corn syrup solids, salt, and caramel coloring) on a dextrin base. Food Engineering. 1987 May. p. 163. Vico makes acid-hydrolyzed vegetable protein (HVP) flavorings used in table sauces and in processed and pre-cooked foods. The products are an improvement over previous HVPs because of a drying method developed in Switzerland that uses a PLC-controlled continuous vacuum band dryer. They have a natural "meaty" flavor.

5869. **Product Name:** Vico BF Seasonings (Granules or Powder).
Manufacturer's Name: Vico Products Div., A.E. Staley Manufacturing Co.
Manufacturer's Address: 2536 North Elston Ave., Chicago, IL 60647
Date of Introduction: 1980?
New Product–Documentation: Manufacturer's catalog. 1980. Staley Protein Products. "Carefully formulated blends of corn, wheat, soy, and yeast protein that have been hydrolyzed to yield a series of intense meat-like flavorings. Designed to replace or supplement extracts of meat, especially beef."

5870. Hansen, Barbara. 1981. Rice leads the flavorful parade of dishes in this Indonesian feast. 'Colonial cooking' a blending of cultures. *Los Angeles Times*. Jan. 15. p. J1.
• ***Summary:*** The Indonesian *rijsttafel* is a magnificent parade of dishes, featuring rice. When Bob Blansjaar, who was born in Surabaya on the Island of Java, prepares *rijsttafel* for guests, he makes more than 20 dishes–marking it as the real thing.

A standard recipe is *Gado Gado*, a sort of salad topped with peanut sauce. "He also sliced and fried tofu for the salad, using Chinese style hard tofu rather than the softer variety."

Another key dish is Sambal Ketjap (hot sauce), the ingredients include "2½ teaspoons Indonesian sweet soy sauce" [probably ketjap manis]. Ten recipes are given, including Gado Gado and Sambal Ketjap.

Photos show: (1) The *rijsttafel* served in many dishes on a large table. (2) Bob Blansjaar as he chops vegetables in the kitchen. Address: Staff writer.

5871. Root, Waverley. 1981. A cordial bow to the byproducts of the soybean. *Los Angeles Times*. Jan. 15. p. J42.
• ***Summary:*** This article is indebted to: Simonds, Nina. 1979. "Chinese cuisine: Bean curd." *Gourmet*. Sept. p. 28-29, 84-91.

The soybean, which offers extraordinary versatility as a human food, can be transformed into soybean milk, "the soybean milk skin [yuba] derived from the milk, the bean sticks [dried yuba sticks] made from the milk skin, the also edible sediment given off by the milk [okara], untreated bean curd [regular tofu and perhaps silken tofu], pressed bean curd which produces bean curd noodles [pressed tofu noodles], more tightly compressed bean curd cakes, and frozen-and-thawed bean curd [dried frozen tofu]." Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "frozen-and-thawed bean curd" to refer to dried frozen tofu.

In the process of making "pressed bean curd, another soybean food is created–bean curd skin [*pai yeh*, pressed tofu sheets], which should not be confused with soybean milk skin [yuba]. Dried bean curd skin," which needs no refrigeration and is often stuffed, for example with chopped meat, is sold by weight by Chinese specialty shops throughout the world; five or six sheets weigh one ounce.

"There is a whole family of foods made from fermented bean curd" [fermented tofu]. Bean curd can be fermented in various ways. Bean curd loaves, for example, can be stored for the winter in a cool dark place; micro-organisms from the air cause fermentation. "The loaves acquire a fungoid coating, which has to be scraped off, and as far as I know is not used for food,..." Fermented bean curd, which has been called "soybean cheese," is easier to digest than unfermented bean curd. Bean curd can also be marinated in rice wine, flavored with spices, and then allowed to ferment. A most unusual type of fermented tofu is stinky bean curd (*sh'ou tou fu*), a favorite Chinese snack. In Taipei, there are many street vendors who ply the streets with their portable deep fryers. This fermented tofu is usually deep-fried and usually eaten with one's choice of soy sauce, vinegar, mashed garlic, and chili paste.

Other fermented foods include miso, natto, hamanatto (which is of Korean origin), tempeh (of Indonesian origin), and shoyu (Soybean sauce, soy sauce).

"It is said that the best grades of soy sauce can take as much as six to seven years of aging to reach perfection, and that the making of a superb soy sauce requires 'as much art in its preparation as good French wines.'"

Flavorings are added to some Chinese soy sauce "various herbs, especially citronella; spices (ginger); aromatic vegetables (onions); and not only fermented fish, but even fermented chicken meat. To produce three liters (3.1 quarts) of sauce requires on kilogram (2.2 pounds) of beans.

"Fukien has the reputation of producing the best soy bean sauce in China and consequently stews many foods in it, giving them a color which has caused the culinary techniques of this region to be called 'red cooking.'"

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Soybean sauce is "often an important ingredient in many more complicated sauces–for instance Hoisin sauce in China and Worcestershire sauce in England."

5872. Hoang, Van Chi. 1981. Re: Vietnamese soy sauce. Questions answered on Soyfoods Center letterhead (dated 18 Jan. 1981) and returned to SC. 1 p.

• ***Summary:*** His family name is Hoang and his given names are Van Chi (he writes in the three characters).

An early Vietnamese writer about soyfoods was Bui Quang Chieu [1905]. He was a man; his family name was Bui and his given names were Quang Chieu. He was a French educated politician and journalist. He wrote in French because he could not write in Vietnamese. "His writing about Tuong is certainly not interesting, although I do not have his article. He certainly repeated something previously written by some French scientist.

"There are two types of tuong. (1) The Tuong Ban, produced in Ban village, is like the Chinese Chiang (pronounced "jiang") in texture. (2) The Tuong Cu Da, made in Cu Da village, is ground smooth [but not filtered]. That is why I call my product "Tuong Cu Da." Note: Tuong Cu Da is a uniquely Vietnamese product is that it is not filtered, but ground. Chinese jiang is not filtered and not ground, so it has a soft, chunky consistency like applesauce.

Ruou dau nanh is called "soy alcohol." Most liquor in Vietnam is made from sweet [glutinous] rice; it is like Japanese sake. But the Vietnamese Ruou is distilled and, as such, is very strong, up to 100 proof. Some people in Central Vietnam make it from a mixture of soybeans and rice.

The jars or containers used to make Tuong in Vietnam have no fixed capacity, but they are usually are 15 to 20 gallons in capacity. They come in two shapes: One is shaped like a vertical cylinder, and the other bulges at the top with a smaller mouth, as used by the Chinese to make jiang. These jars are kept in the courtyard and covered with a conical woven bamboo cap, to keep out the rain while permitting aeration. Address: Bowie, Maryland.

5873. Poole, Shona Crawford. 1981. The Times cook. *Times (London)*. Jan. 22. p. 10.

• ***Summary:*** A recipe for Stir-fried spring onions calls for "1 tablespoon soy or tamari sauce" and "2 tablespoons peanut oil." Also mentions "bean sprouts" and "beansprouts."

Note: This is the earliest document seen (Dec. 2005) in the *Times* (London) that uses the word "tamari" to refer to a type of soy sauce.

5874. Chico-San, Inc. 1981. Chico-San products. A catalog of unique natural foods. P.O. Box 1004, Chico, CA 95927. 28 p. Revised Jan. 1981.

• ***Summary:*** Contents: A message from the president, J. Robert Kennedy. Chico-San rice products: Rice Cakes (6 varieties; plain, millet, or buckwheat, each salted or unsalted), Carob Crunch (carob-coated rice cakes in plain or mint flavors), Golden Rice Nuggets, Yinnies candies (Taffy made from rice and barley, Caramel made from rice, barley, oat powder, raisins, almonds, sesame oil, coconut, rice bran, lecithin, natural vanilla, and agar agar).

Yinnies brand Rice Syrup ("A pure, natural sweetener made from rice, water, and barley malt..."). "How Yinnies brand Rice Syrup is made: Chico-San's process involves the conversion of the natural starches in the rice into complex sugars. Extended low temperature cooking allows the enzymes from the malted grains to create a fermentation which occurs in a liquid mash. After an optimum period of fermentation, the process is halted and liquid squeezed from the mash. This liquid is then vacuum cooked at low temperature, bringing the syrup to the proper consistency." Yinnies brand rice syrup and refined sugar comparison. This rice syrup is high in maltose.

How Chico-San guarantees Oriental-type organically-grown brown rice (describes in detail how the rice is grown in California). Chico-San whole grains, seeds and beans (Incl. organically-grown brown rice, sweet brown rice, sesame seeds, black soybeans, and azuki beans). Chico-San condiments: Lima soy sauce, soybean puree (miso, in 3 types, mugi, kome, or hacho), barley koji, kuzu, malt vinegar, malt vinegar, salt plums, nigari (for tofu making), sesame oil (light or dark), tekka. Chico-San imported seaweeds: Hijiki, kombu, wakame, nori, sea vegetable gelatin (kanten). Herb teas and other products. Chico-San cookbooks. Chico-San special recipes–including recipes for Sesame miso spread, Black soy beans, Azuki beans, and Wakame miso soup. Address: Chico, California.

5875. Eden Foods. 1981. Catalog 1981. 701 Tecumseh Rd., Clinton, MI 49236. 69 p.

• ***Summary:*** On the cover is a stylized 2-story house (Cliff and Fran Adler's home) in the snow. This is the earliest catalog seen after the major Eden fire in Nov. 1979. The cover design is by Fran Adler. Prices are given in the catalog. Address: Ann Arbor, Michigan.

5876. Fukushima, Danji. 1981. Re: History of tofu in Japan. Letter to William Shurtleff at Soyfoods Center, Jan. 22–in reply to inquiry. 1 p. Typed, with signature on letterhead. [2 ref.]

• ***Summary:*** Tofu was first introduced into Japan in the 8th century; from that time until about the 12th century it was called "okabe." Source: Tomomi Kono. 1970. *Encyclopedia Japonica*. Tokyo: Shogakukan. Vol. 13, p. 227. Please see enclosed photocopy.

Fermented tofu originated in China in the 5th century A.D. Source: T. Watanabe, H. Ebine, and T. Ota. 1971. *Daizu Shokuhin*. Tokyo: Korin Shoin. p. 196. Please see enclosed photocopy.

In Japan today, several factories produce 50,000 to

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100,000 packages of packaged tofu per day.

By separate mail, Dr. Fukushima is sending a copy of a color slide showing Kibun's Soena. Address: Kikkoman Foods, Inc., Walworth, Wisconsin 53184.

5877. **Product Name:** Pacific Tempeh Burger (Vacuum Packed).
Manufacturer's Name: Pacific Tempeh
Manufacturer's Address: 1508 62nd St., Emeryville, CA 94608.
Date of Introduction: 1981, January.
Ingredients: Soy tempeh, water, shoyu, lemon juice, garlic, paprika, thyme, oleic safflower oil.
Wt/Vol., Packaging, Price: 7 oz 2 x 3.5 oz burgers. Vacuum packed
How Stored: Refrigerated.
New Product–Documentation: Label. Undated. 3.25 inch diameter. Brown and white on orange. "A natural hearty meal." Leviton. 1982. Soyfoods. Winter. p. 27. Sales climbed to 5,000 a week by Nov. 1981. Leaflet. 1982. 8½ by 11 inch. Color. "A what burger? A Pacific Tempeh Burger. A hearty and satisfying cultured soyfood with twice the protein of tofu and more vitamin B-12 than tuna or eggs. Take the taste test."

Talk with Travis Burgeson of Pacific Tempeh. 1983, April. Pacific Tempeh now makes 4,000 to 4,500 lb/week of tempeh, 75-80% of it in the form of tempeh burgers.

5878. Wang, H.L.; Hesseltine, C.W. 1981. Use of microbial cultures: Legume and cereal products. *Food Technology* 35(1):79-83, Jan. [38 ref]
• ***Summary:*** Contents: Introduction. Use of nontoxin-producing cultures. Safety of fermented foods. Several factors contribute to their safety. Soaking and cooking, salting, acid formation, antibiotic production, alcohol production, low surface moisture, decrease of aflatoxin by *Rhizopus* and *Neurospora*. Shelf life of fermented foods. Nutritive value of fermented foods: Complementary effect of mixed proteins, protein efficiency ratio and digestibility, vitamins. Future of fermented legume-cereal foods.

The following fermented soy-related foods are described briefly, including names, area of origin, organisms used, substrate, and nature and use. Soy sauce (chiang-yu, shoyu, toyo, kanjang, kecap, see-ieu). Miso (chiang, doenjang, soybean paste, tauco). Fermented bean (hamanatto, tou-shih, tao-si). Sufu (fu-ru, fu-ju, tou-fu-ju, bean cake, Chinese cheese). Tempeh (tempe kedelee). Natto. Ontjom (onchom). Address: NRRC, Peoria, Illinois.

5879. **Product Name:** Tofu Steak Sandwich
Manufacturer's Name: Wildwood Natural Foods
Manufacturer's Address: 135 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919
Date of Introduction: 1981, January.
Ingredients: UFO Tofu by Wildwood, whole grain bread, sprouts, lettuce, brine pickles, mustard, tamari, safflower oil, apple cider vinegar, herbs & spices, sea salt
Wt/Vol., Packaging, Price: 7 oz
How Stored: Refrigerated
New Product–Documentation: Xiques. 1981. Pacific Sun. Jan. 16. "A surprised convert to tofu... Wildwood's latest invention, the Tofu Steak Sandwich, is rising on the charts as well. It looks questionable... but it is quite delicious." Fillip. 1981. May. East West Journal. p. 40. "The Amazing Tofumobile." Cohen. 1981. Nov. 23. San Francisco Business Journal. p. 6. "To make tofu steak for tofu steak sandwich, the end cuts of raw tofu blocks are marinated in tamari and baked.

Label sent by Wildwood on their letterhead. 1983, undated. 3 by 2 inches. Self adhesive. Black and green on orange-yellow. Silhouette of woods with birds. "Fresh Daily. Ready to Eat Foods. Naturally Perishable. Keep Refrigerated."

5880. **Product Name:** Tofunofish Sandwich
Manufacturer's Name: Wildwood Natural Foods.
Manufacturer's Address: 135 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919
Date of Introduction: 1981, January.
Ingredients: UFO Tofu by Wildwood, onions, lettuce, scallions, brine pickles, safflower oil, tamari, apple cider vinegar, garlic, kelp, sea salt, spices, whole grain bread.
Wt/Vol., Packaging, Price: 8 oz
How Stored: Refrigerated.
New Product–Documentation: Xiques. 1981. Pacific Sun. Jan. 16. "A surprised convert to tofu... The Tofunofish Sandwich not only uses tofu for the 'nofish' but features 'tofunoegg' mayonnaise." Fillip. 1981. May. East West Journal. p. 40. "The Amazing Tofumobile." Cohen. 1981. Nov. 23. San Francisco Business Journal. p. 6. "The tofunofish sandwich contains many of the same ingredients as the brown rice and tofu sandwich, minus the brown rice. To give it a tuna fish taste and texture, the sandwich has okara in it.

Label sent by Wildwood on their letterhead. 1983, undated. 3 by 2 inches. Self adhesive. Black and green on white. Silhouette of woods with birds. "Fresh Daily. Ready to eat foods, Naturally. Perishable, keep refrigerated."

Talk with Billy Bramblett, an owner of Wildwood. 1998, Aug. 8. This product definitely contained okara; Billy will ask Paul Orbuch and Doug Porter why okara was not listed on the label. He thinks he has the original recipe in his archive of old Wildwood recipes that are no longer in production. This was an actual sandwich, but Billy thinks that from time to time Wildwood marketed the Tofunofish filling/spread in a plastic tub.

5881. Fabricant, Florence. 1981. A good place to sample

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sushi: Dining out. *New York Times*. Feb. 1. p. LI17.
• ***Summary:*** This is a review of the two-star Japanese restaurant Taiko. Recommended dishes include "fried bean curd appetizer."

"Hot appetizers of deep-fried bean curd, the squares of tofu finished with a crunchy coating and seasoned with a gingery sauce..."

"Rich miso soup with diced bean curd provides a warmly restorative interlude between the main courses, especially on a biter winter evening."

Sukiyaki casserole includes "bean curd in a soy-based broth."

Note that the word "soy" (used by itself, at this late date) refers to soy sauce.

5882. Stop & Shop. 1981. Happy Chinese New Year! (Ad). *Hartford Courant* (*Connecticut*). Feb. 1. p. V5.
• ***Summary:*** "La Choy, 10 ounce bottle–Soy Sauce–69c Soy bean cake–Tofu 1 pound package–89c." Also includes Azumaya egg noodles, egg roll wrappers, wonton wrappers (each in a 1-lb package).

5883. Takeda Chemical Industries, Ltd. 1981. Display ad: Report by Mr. Shinbei Komishi, President. *Times* (*London*). Feb. 4. p. 20, cols. 1-2.
• ***Summary:*** Includes a financial summary and a summary of the activities of each of the company's divisions. In April 1980, the Food Products Division introduced "'Soft Shoyu Takeda,' a low-salt soy sauce." Address: Japan.

5884. Sheraton, Mimi. 1981. Restaurants: Tempura treats, a neighborhood spot. *New York Times*. Feb. 13. p. 58.
• ***Summary:*** This is a review of Inagiku, a Japanese restaurant inside the Waldorf-Astoria at 111 East 49th St. They serve "soba (cold buckwheat noodles enlivened with soy sauce and scallions), ..." and "small dishes such as nimono, a combination of simmered vegetables and bean curd [tofu]..." Also teriyaki fish.

"At one dinner we asked a waiter for natto, a cool side dish of fermented soybeans in a spicy, eggy sauce..."

5885. Sripathomswat, Nongnuch, Thasnakorn, Prayad. 1981. Survey of aflatoxin-producing fungi in certain fermented foods and beverages in Thailand. *Mycopathologia* 73(2):83-88. Feb. 13. [25 ref]
• ***Summary:*** Aflatoxin-producing fungi (four strains of the genus *Aspergillus*) were found in seven Thai foods and beverages, including soybean sauce [sic, miso] (*taotjo*), soy sauce (*shoyu*), peanut butter, and fermented rice (*kaomak*). Large amounts of aflatoxin were found on only the latter two products–both of which contain no soy. Address: Dep. of Microbiology, Faculty of Medicine, Siriraj Hospital, Bangkok 7, Thailand.

5886. Jennings, Richard. 1981. Re: Use of soybeans in Ecuador. Letter to William Shurtleff at Soyfoods Center. Feb. 14. 1 p. Typed, with signature on letterhead. [Eng]
• ***Summary:*** "The most popular use for soya in Ecuador is solvent extracted oil, with the presscake being fed to chickens. As to machica (máchica), this is made with frijol tumbre (black-eyed peas = cowpeas) which are grown in the coastal areas and are somewhat similar in shape and size to soya. Mehica (Méhica) is made in the Sierra, and while the black-eyed peas are used, it is usually made with maize/corn or barley (cebada).

"The other use for soya is at the Chinese-run soy sauce and miso factory in Quevedo, in the lowlands where there is a constant warm climate for fermentation. They make a kind of miso but with some sugar and spices. When I visited the factory, I was not enough in the owner's confidence to ask about specifics, but I saw tangerine peels being dried, and also tasted anise and maybe cinnamon. The recipe on the jar recommends using their product for cooking pig and turkey. The people there also make an edible soy sauce. Ecuadorian soy sauce is for the most part horrible, consisting of a lot of burnt sugar and very little soy. I would with some confidence rank it as the worst in the world. It is used for *chaulafan*, which is the name here for a fried rice dish, and is preferred because it is thick and dark, and turns the rice a brown color. Anyway the Chinese in Quevedo make this petroleum-like glop, but also make an edible normal soy sauce which I am distributing along with the miso until I can get it together to make a better product.

"There are few Chinese and Japanese making tofu at home, and there is one restaurant that claims to sell about 40 lbs daily, so a friend tells me. No soymilk that I know of." Address: Casilla 252A, Quito, Ecuador. Phone: 529-679.

5887. Hesseltine, C.W. 1981. Aflatoxins in soyfoods (Interview). *SoyaScan Notes*. Feb. 18. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Concerning the 1969 *Time* magazine article on aflatoxins in homemade miso and soy sauce in Korea–There is a lot of incorrect information in the literature based on a problem with determining aflatoxins, since not all things that fluoresce are aflatoxins. A test for fluorescence needs to be followed by a chemical test. He found that one-third to one-half of all oats sampled in the USA contained fluorescent material that looked like aflatoxin–but was not. The oats were fed to animals and no problems resulted.

A study in Japan showed that when homemade miso was properly inoculated, it contained no aflatoxins, but when inoculated with natural spores, it did contain some aflatoxins. He has never seen any figures on the aflatoxin content of the latter miso. He has seen no evidence to indicate that there are problems with aflatoxins in naturally inoculated homemade misos. Good studies conducted in Japan have found aflatoxins in homemade miso but they were found only in

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a few samples and the levels were so low that there was no problem. No aflatoxins have ever been found in commercial misos as far as he knows. In short, he feels there is no risk is consuming any type of miso.

Dr. Hesseltine is now on a low-sodium diet and has therefore started eating a lot of tofu. In addition, he and Dr. Wang are conducting an interesting study on microbial spoilage of tofu. Address: NRRC, Peoria, Illinois.

5888. Hewsom, David. 1981. Tucking into the pot snack market. *Times* (*London*). Feb. 24. p. 21, cols. 3-7.
• ***Summary:*** A 'pot snack" seems to refer to a hot snack sold in a small cup [like instant ramen noodles or Cup Noodles]. The article begins: "Most Chinese cookery books would not include the following recipe for chow mein: antioxidants, preservative, yeast extract, inosine monophosphate, fruit acids, spices, colour, emulsifier, flavouring, garlic, sugar, soy sauce, monosodium glutamate, hydrolysed vegetable protein, soya flour, mushroom, salt, mixed peppers, starch, green beans, edible fat, carrot, onion, and noodles.

"The know-how behind the instant snack market is Japanese..." A bar chart shows the growth of Britain's instant hot snacks market from 1978 to 1981 (estimate). For each year is given the number of units sold and their value in British pounds sterling.

5889. Drake, Milan. 1981. Re: HVP soy sauce. Letter to William Shurtleff at Soyfoods Center. Feb. 26–in reply to inquiry letter dated 21 Dec. 1981. 2 p. Handwritten.
• ***Summary:*** Where do Hercules and Stange make their soy sauce? (1) Hercules, 79 East State St., Harbor Beach, Michigan 48441. Contact: Art Cronin. He encloses some information about Hercules. (2) Stange makes their soy sauce at Keratene Co., P.O. Box 560, Winsted, Connecticut 06098. Contact: Rudy Krukar.

A.E. Staley makes both soy sauce and HVPs. So do Hercules and Keratene.

Milan believes that fermented soy sauce was used in early Worcestershire–but he is not positive. Address: Director, Research & Development, La Choy Food Products, 901 Stryker Rd., Archbold, Ohio 43502. Phone: 419-445-8015.

5890. Chu, Yung-shung. 1981. Soybean protein food in China. *J. of the American Oil Chemists' Society* 58(2):96A, 98A, 100A. Feb. Reprinted in APCC Quarterly, 30 June 1981, p. 23-27.
• ***Summary:*** Contents: Abstract. Methods of preparation. Bean curd (tu fu), bean curd derivatives (tough bean curd, smoked tough bean curd, dried soybean sheets, fried bean curd, vegetable chicken), fermented bean curd (fu ru), dried bean milk cream (fu tsu [dried yuba sticks]).

For 4,000 years soybean have been one of the main crops cultivated in China. The history of extracting protein to prepare tofu is about 1,000 years old. The soybean was important not only as a food but also as a seasoning. The earliest fermented soybean products were dou-jiang (soybean ch'iang) and dou-chi [fermented black soybeans].

Note: This is the earliest document seen (Nov. 2011) that uses the term "dou-chi" to refer to fermented black soybeans.

The preparation of these two products was recorded briefly in *On Medical Emergency Treatment* written by Si Yu during the Western Han Dynasty (100 B.C.). [Note: This is the *Chi chiu p'ien* by Shih Yu.] Later, these procedures were described in detail in the *People's Agricultural Calendar* written by Cui-Zi during the Han Dynasty (200 A.D.). Illustrations of techniques appeared in 600 A.D. in special chapters of *The Principal Methodology of Economics*, by Jia Si-Yi.

According to historical literature of the Min [Ming] and Qing [Ch'ing] Dynasties, the preparation of bean curd [tofu] was first recorded in Han Zi, written by Liu An, King of Huai Nan (179-122 B.C.). In the book of Qin-Yi, Tao Gu (907-960 A.D.) said that bean curd was a common food in the market of the south Huai district.

Fu ru is the fermented form of bean curd. The earliest record of this is in the book called *Night Dialogue Under the Shade*, written by Li Ri-huo (1636-1661). He said that fu ru was prepared between summer and autumn in the Qi Men district and briefly described the procedure. In a famous book on Chinese herbal medicine, *Compendium of Materia Medica*, the author, Li Shizen (1518-1593), describes the preparation technique in detail.

Later, these procedures were described in detail in the *People's Agricultural Calendar* written by Cui-Zi during the Han Dynasty (200 A.D.). Illustrations of techniques appeared in 600 A.D. in special chapters of *The Principal Methodology of Economics*, by Jia Si-Yi. Address: Oil and Fat Research Inst., Shaanxi, China.

5891. Fountain, Michael S. 1981. Marketing real tamari [San-J]. *Soyfoods* 1(4):7. Winter.
• ***Summary:*** This real tamari, made in the traditional manner without wheat, is brewed by the San-Jirushi Corp. of Kuwana, Japan, the largest and most famous of only a few remaining Japanese brewers of genuine tamari.

5892. **Product Name:** Tofu Spreads [Teriyaki, or Curry].
Manufacturer's Name: Harvest Wholefoods.
Manufacturer's Address: 403 Richmond Rd., Grey Lynn, Auckland, New Zealand.
Date of Introduction: 1981. February.
Ingredients: Tofu, tamari, garlic vinegar.
Wt/Vol., Packaging, Price: 200 gm plastic tub.
How Stored: Refrigerated.
New Product–Documentation: Chalmers, Elizabeth. 2007. Jan. 16. "Business history of the Chalmers family: Making soyfoods in New Zealand" (Interview). Letter (e-mail) from

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Elizabeth Chalmers. 2007. Jan. 24. Harvest Soyfoods made "Tofu Spread" in two flavors, Teriyaki and Curry. Teriyaki sold best. Ingredients: Tofu, tamari, garlic, vinegar. They were sold in 200 gm small plastic tub, refrigerated. Bean Supreme discontinued them. "We did actually start to make these again when we started the Organic Soy Company, but only for about 6 months, as we could not get a long enough shelf life out of them–only 2 weeks. All our products (except Teriyaki sauce) have always been refrigerated. New Zealand has a population of 4 million in a country the size of the whole United Kingdom. Because of these logistics we are always 'playing to a small audience,'" and need to send our products to all corners of the country. Hence we need to get a shelf life of 6-8 weeks out of all of our products. If we were just to sell locally in Auckland, it would not be enough business to keep us going."

Letter (e-mail) from Elizabeth Chalmers. 2007. Jan. 24. "Now that I really set me mind to it, I think we started making the spreads before we made Tempeh. I would take a guess at early 1981, February, when we were still in the back of Harvest Wholefoods."

5893. **Product Name:** San-J Tamari
Manufacturer's Name: San-J International, Inc. (Importer) Made in Japan by San-Jirushi Corp.
Manufacturer's Address: 3236 Blvd., Colonial Heights, VA 23834.
Date of Introduction: 1981, February
Ingredients: Whole soybeans, water, sea salt.
Wt/Vol., Packaging, Price: 5.07 fluid oz (150 ml) dispenser, 20 fluid oz (592 ml) plastic bottle.
How Stored: Shelf stable.
Nutrition: Per 1 tbs.: Calories 11.34, protein 1.84 gm, carbohydrate 1.06 gm, fat 0 gm.

New Product–Documentation: Ad in Natural Foods Merchandiser. 1981. Feb. "Some Soy Sauces are Called Tamari. But They're Not! San-J is the Real Tamari." The first appearance of this influential ad in a trade publication. Ads also in East West Journal. 1982. April. Rear cover. Soya Bluebook. 1983. p. 75.

Label. 1983. 9 by 2 inches and 6.5 by 3.5 inches (20 fl oz and 5.07 fl oz respectively). Paper. Orange, yellow and white on dark brown. Label. 1983. 6.5 by 3.5 inches. Paper. Red and green on yellow. "San-J Tamari is the ultimate soy sauce! It is an entirely natural product made from the finest quality U.S.-grown soybeans. Slow-brewed in the traditional Japanese manner, San-J Tamari is aged a year or more before it is bottled."

Leaflet. 1985. "Seasoned by Experience." Shows the new Labels for tamari, shoyu, and teriyaki seasoning and marinade in full color. When the Sato family founded San-Jirushi in 1804, the traditional recipe for tamari was already over 500 years old. Today, seven generations later, San-J still faithfully follows the same exacting art of natural brewing. Taste the time-honored flavor of San-J wheat-free Tamari, Shoyu, and Teriyaki Sauce and trust the experience of Japan's finest.

"Every year the All Japan Association of Shoyu Brewers holds exhibitions for soy product manufacturers. And each year San-Jirushi is recognized for its superior quality. Although there are nearly 3,000 shoyu manufacturers in Japan, there are less than 20 companies still producing genuine wheat-free Tamari soy sauce... The proud San-Jirushi logo was inspired by the Sato Family's history in shipping. Three horizontal lines represent the three great rivers of Kiso, Ibi, and Nagara, which flow to the nearby Bay of Ise."

Ad in Vegetarian Times. 1988. April. p. 51. "You don't



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cook ordinary food. Why use ordinary soy sauce." Also in East West. June.

5894. *Telefood.*1981. Sauces: House of Lawrence debuts tempura and tamari lines. Feb. p. 29, 32.

5895. **Product Name:** Tofu-Vegetable Salad.
Manufacturer's Name: Wildwood Natural Foods.
Manufacturer's Address: 135 Bolinas Road, Fairfax, California 94930. Phone: 415-459-3919.
Date of Introduction: 1981. February.
Ingredients: UFO tofu by Wildwood, any of the following seasonal vegetables: celery, carrots, onions, cabbage or daikon radish, safflower oil, tamari, sea salt and spices.
Wt/Vol., Packaging, Price: 12 oz plastic tub.
How Stored: Refrigerated.
New Product–Documentation: Leviton. 1981. Soyfoods. Winter. p. 61. "Putting tofu in the lunch boxes of America." Wildwood produces a line of eight packaged vegetarian sandwiches including. . . *Tofu Vegetable Salad*...

Label sent by Wildwood on their letterhead. 1983. 2.75 by 1.75 inches. Self adhesive. Green and black on white. "Ready to eat Foods, Naturally." Talk with Paul Duchesne. 1989. Oct. 27. Paul opened the account that starting this product being sold through Diet Centers.

5896. Fukushima, D. 1981. Soy proteins for foods centering around soy sauce and tofu. *J. of the American Oil Chemists' Society* 58(3):346-54. March. [41 ref.]
• ***Summary:*** Contents: Abstract. Introduction. Soy sauce varieties: Koikuchi, usukuchi, tamari, saishikomi, and shiro shoyu. Soy sauce manufacturing process (for each of the 5 types). Miso. Other fermented products: Tempeh and natto. Tofu and related products. Regular and silken tofu, dried-frozen tofu, deep-fried tofu. Fermented tofu (Sufu). Other soy products: Soy milk, fermented soy milk beverages, yuba.

This paper discusses traditional Oriental soy protein foods which are growing rapidly in popularity in the USA among non-Asian-Americans.

"Generally speaking, soy sauce is divided into two groups: fermented soy sauce and chemical soy sauce. Fermented soy sauce has a long history as a human food, whereas chemical soy sauce has a history of only several decades. In fermented soy sauce, the proteins and carbohydrates contained in the materials are hydrolyzed very slowly under mild conditions below 30°C for over six months, whereas in chemical soy sauce they are hydrolyzed quickly by hydrochloric acid at 80°C for 8-10 hours. Chemical hydrolysis is a cheap and rapid process, but during the hydrolysis, various secondary reactions occur and produce undesirable compounds, e.g. dark humins, furfurol, dimethyl sulfide, hydrogen sulfide, levulinic acid and formic acid, which are not present in fermented soy sauce. Furfurol, dimethyl sulfide and hydrogen sulfide, which have strong, bad odors in themselves, are derived from pentose, methionine, and sulfur-containing amino acids respectively. Furthermore, tryptophane, one of the nutritionally important amino acids, is destroyed almost completely. As shown in Figure 1 [two chromatograms], the main organic acid of fermented soy sauce is lactic acid, whereas the main organic acid of chemical soy sauce is formic acid. Levulinic acid, present in chemical soy sauce, does not exist naturally.

"To improve the odors of chemical soy sauce, semichemical soy sauce was devised. It is made by hydrolyzing raw soybeans with a lower concentration of hydrochloric acid (7-8%) as the first step, followed by fermenting the hydrolysate with osmophilic yeasts in the presence of wheat koji." In Japan, chemical soy sauce is not used as a soy sauce in itself, but as an extender for fermented soy sauce.

Table 1 gives the typical chemical composition (per 100 ml) of the five varieties of traditional soy sauce in Japan, including Bé [Baumé: a measure of the relative density of liquids], sodium (koikuchi is lowest at 17.6%, usukuchi is highest at 19.2%), total nitrogen (koikuchi has 1.55 gm, tamari has 2.55 gm or 65% more), formol nitrogen, reducing sugar, alcohol (koikuchi is 2.2%, by far the highest), pH (ranges from 4.6 to 4.8), and color.

A brief description of each of the five traditional varieties: (1) Koikuchi: This "dark-colored" shoyu is by far the most popular of the five types of fermented soy sauce in Japan, comprising 85% of the total. It is an all-purpose seasoning with a strong aroma, complex flavor, and deep, reddish-brown color. These characteristics are mainly derived from the use of equal amounts of wheat and soybeans in the koji. (2) Usukuchi [light-colored] shoyu is characterized by a lighter, red-brownish color and a milder flavor and aroma. It is used mainly for cooking when one wishes to preserve the original flavor and color of the food itself. As in koikuchi, equal amounts of soybeans and wheat are used in the koji, but the fermentation is done under conditions which prevent the development of a dark color. (3) Tamari shoyu has a higher amino acid content, but it lacks aroma. The koji is made primarily from soybeans with little or no wheat. (4) Saishikomi (twice-fermented) shoyu is made using equal amounts of wheat and soybeans in the koji, but using raw (unpasteurized) soy sauce instead of salt solution, which is mixed with the harvested koji. Saishikomi is characterized by aroma and full-bodied taste. (5) Shiro (clear, or "white") shoyu is made by using a very high ratio of wheat to soybeans in the koji, and further by fermentation under conditions which prevent dark color development. It is characterized by a very light yellow to tan color, though the amino acid content is very low because of the low soybean content in the koji. Flow sheets show the process for manufacturing koikuchi, usukuchi, and tamari shoyu. Each has three basic parts: Koji making process, brine fermentation process, and refining process.

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Concerning soy sauce production and consumption: The total annual production of soy sauce in Japan in 1979 reported by the Japanese Agricultural Standard (JAS) was 1,252,431 kiloliters (kl). In 1979 in Japan, about 70% of the soy sauce products in Japan were purely fermented, 25% contained some semichemical soy sauce, and the remaining 5% contained chemical (HVP) soy sauce. The most recent estimates of annual consumption of soy sauce in the USA are as follows: Fermented soy sauce 17,850 kl; Chemical (HVP) soy sauce 25,500 kl. Within fermented soy sauce, production of koikuchi soy sauce is estimated to be 16,500 kl/year.

In Japan an "instant tofu powder" is actually a spray-dried soy milk. This product was made and introduced by *Nihon Tanpaku Kogyo* (Japan Protein Industry) about 15 years ago (ca. 1966) and was used mainly as a raw material for making regular or silken tofu in order to save time. "Recently, however [1973], the product was placed on the market as an instant powdered tofu [named *Hausu Hontôfu*] by Hausu [House] Foods Co."

A photo shows D. Fukushima. Address: Kikkoman Foods, Inc., Walworth, Wisconsin 53184.

5897. Haytowitz, David B.; Marsh, Anne C.; Matthews, Ruth H. 1981. Content of selected nutrients in raw, cooked, and processed legumes. *Food Technology* 35(3):73-74. March. [11 ref]

• ***Summary:*** Contents: Introduction. Peanuts and soybean products (soy flours, soy isolates, soy concentrates). Conventionally cooked legumes. Oriental legume products (includes tofu, tempeh, soy sauce, miso, and natto). Address: Consumer Nutrition Center, Human Nutrition, Science and Education Administration, USDA, Hyattsville, Maryland 20782 USA.

5898. **Product Name:** [Soyacreme with Mushrooms].
Foreign Name: Soyacreme Met Paddestoelen, Avec Champignons, Mit Pilze.
Manufacturer's Name: Jonathan P.V.B.A.
Manufacturer's Address: Antwerpsesteenweg 336, B-2080 Kapellen, Belgium. Phone: 03/664 58 48.
Date of Introduction: 1981, March.
Ingredients: Well-water, mushrooms*, vegetables*, soya*, sesame, soya sauce, arrowroot, brown rice*, vegetable extract, sea-salt, sea vegetables, spices. * = Organically grown.
Wt/Vol., Packaging, Price: 100 gm.
New Product–Documentation: Label. Received 1988 3 by 2 inches. Self adhesive. Brown, orange, and black on a seaside background with sea gull. "Vegetable." Form filled out by Jos van de Ponseele 1989 Jan 11. This product was introduced in March 1981.

5899. *Prevention* (*Emmaus, Pennsylvania*).1981. A health food dictionary: Soybeans. March. p. 144-46.

• ***Summary:*** Soybean foods include soybean oil, tofu, tamari, soy milk, tempeh, miso, soybean sprouts, soy flour, soy ice cream, and soy nuts.

The article ends: "Do yourself a favor. Get to know the soybean." Address: Emmaus, Pennsylvania.

5900. Shurtleff, William; Aoyagi, Akiko. 1981. The book of miso: Food for mankind. Revised. New York, NY: Ballantine Books. xx + 618 p. March. Illust. by Akiko Aoyagi Shurtleff. Index. 18 cm. [82 ref]

• ***Summary:*** Contents: What is miso? Preface. Acknowledgments. Part I. Miso: Savory, High Protein Seasoning. 1. Soybeans, protein and the world food crisis. 2. Miso as a food. 3. The miracle of fermentation. 4. The varieties of miso. Regular Miso: Rice miso (red / aka, light-yellow / shinshu, mellow red / amakuchi akamiso, mellow beige / amakuchi tanshoku, mellow white / shiro koji, sweet red / edo or edo ama-miso, sweet white / Kyoto shiro miso), barley miso (karakuchi mugi, mellow barley / amakuchi mugi), soybean miso / mamé miso (miso-dama, Hatcho miso, soybean miso / mame miso, tamari miso). Special Miso: Finger lickin' miso / Namemiso (Kinzanji miso, moromi miso, hishio, namémiso, natto miso, goto miso), sweet simmered miso / nerimiso. Modern Miso: Akadashi miso, dehydrated or freeze-dried miso, low-salt / high-protein miso.

Part II. Cooking with Miso (400 recipes). 5. Getting started. 6. Recipes from East and West. Part III. The Preparation of Miso. 7. Making miso at home and in communities. 8. Japanese farmhouse miso. 9. Traditional and modern miso production.

Appendixes: A. A history of chiang, soy nuggets [fermented black soybeans], miso, tamari, and shoyu. B. Other East Asian misos: Chiang, jang, taucho, and tausi. C. The microbiology and chemistry of miso fermentation. D. People and institutions connected with miso. E. Miso additives. F. Miso with seafoods, chicken, and meat. G. Measures, weights, and equivalents. H. So you want to study miso in Japan? Bibliography. Glossary.

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "soy nuggets" to refer to Fermented black soybeans. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

5901. Soycrafters Assoc. of North America; Soyfoods Center. 1981. Estimated soyfoods industry statistics (News release). Sunrise Farm, Heath Rd., Colrain, MA 01340. 1 p. March. Updated in Aug. 1981.

• ***Summary:*** 1. Number of companies manufacturing tofu, tempeh, miso, soynuts, soy sprouts, soy sauce, secondary soyfoods, soy delis & restaurants, in the USA, Canada, and Latin America. 2. Production statistics for USA and Canada: Raw soybean usage, food production, employees, and retail sales value are given for 4 types of tofu makers (caldron,

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steam kettle, pressure cooker, factory), tempeh, soynuts, and soy delis and restaurants. With totals. Actual gathering of statistics was done largely by Soyfoods Center. Address: 1. Richard Leviton, Colrain, Massachusetts; 2. W. Shurtleff, Lafayette, California.

5902. **Product Name:** Tree of Life Tamari.
Manufacturer's Name: Tree of Life, Inc. (Importer/Distributor). Made in Japan.
Manufacturer's Address: 315 Industrial Dr., P.O. Box 410, St. Augustine, FL 32084. Phone: 904-829-3483.
Date of Introduction: 1981, March.
New Product–Documentation: Talk with Donna Detoro at Tree of Life, 1988, Sept. 23. This product was introduced in 1981. Talk with Greg Leonard of Tree of Life, 1988, Oct. 5. This product was introduced on 17 March 1981.

5903. Hansen, Barbara. 1981. A treasury of Chinese cookery: Culture and history. *Los Angeles Times*, April 9, p. J1.
• ***Summary:*** This is a review of the Hong Kong and China Gas Company's *Chinese Cookbook*, a treasure for anyone who admires Chinese cookery. This large, beautifully designed book is also rich in culture and history.

A recipe for Braised shin of beef with cloud ears and golden noodles calls for "1 tablespoon light soy sauce. 2 teaspoons yellow bean paste."

5904. **Product Name:** Vegie Yaki (Teriyaki Flavored Vegetarian Jerky) [Mild, or Wild]
Manufacturer's Name: Garden of Eatin'
Manufacturer's Address: 5300 Santa Monica Blvd., Los Angeles, CA 90029.
Date of Introduction: 1981, April.
Ingredients: Soy protein, soy oil, water, honey, ginger, garlic, mustard, coriander, sea salt.
Wt/Vol., Packaging, Price: 7/8 oz.
How Stored: Shelf stable.
New Product–Documentation: Labels, 1981, dated. 100% natural. 100% meatless. (And that's no bull!). Article and photo in Soyfoods, 1981, Summer, p. 44-45. "100% Natural 100 Meatless (And that's No Bull!)." 7/8 oz. packets retail for $0.59.

5905. Hoefer, Hans Johannes; Lueras, Leonard; Chung, Nedra. 1981. Korea. Hong Kong: Apa Productions. 377 p. Illust. (some color). 23 cm. Series: Insight Guides.
• ***Summary:*** In the section titled "Korean cuisine" (p. 316-19), soy beans, soy sauce, *twoenjang-guk* (a popular "fermented soybean paste soup"), and soybean curd (*tubu*) are mentioned on p. 317 (right side).

Page 318 (right): "At important celebrations, steamed rice cakes (*tôk*), sometimes embellished with aromatic mugwort leaves or dusted with toasted soy, barley, or millet flour, are presented as tasty ritual food."

Directed by Hans Johannes Hoefer; produced, edited, and designed by Leonard Lueras and Nedra Chung.

Note: The 2nd updated edition (1983) has the same number of pages as the 1st edition (April 1981).

5906. Okada, Y.; Amano, T.; Takeuchi, T.; Yoshii, H. 1981. Jôzô shokuhin no teishokuen-ka ni kansuru kenkyû. IX. Teishokuen tamari no seisaku ni tsuite [Study on the reduction of salt concentration in fermented foods. IX. On the making of low-salt tamari]. *Nippon Shokuhin Kogyo Gakkaishi* (*J. of the Japanese Society for Food Science and Technology*) 28(4) 201-07. [12 ref. Jap; eng]
Address: 1-3. Food Research Inst., Aichi prefecture, 2-1 Shinpukuji-cho, Nishi-ku, Nagoya-shi 451, Japan. 4. Tokyo Nogyo Daigaku Jozo Gakka (Tokyo Univ. of Agriculture, Dep. of Brewing), Sakura-oka 1-1-1, Setagaya-ku 156, Tokyo.

5907. Okada, Y.; Yoshii, H.; Takeuchi, T. 1981. Jôzô shokuhin no teishokuen-ka ni kansuru kenkyû. X. Teishokuen tamari no hinshitsu ni tsuite [Study on the reduction of salt concentration in fermented foods. X. On the quality of low-salt tamari]. *Nippon Shokuhin Kogyo Gakkaishi* (*J. of the Japanese Society for Food Science and Technology*) 28(4) 208-15. [5 ref. Jap; eng]
Address: 1. Food Research Inst., Aichi prefecture, 2-1 Shinpukuji-cho, Nishi-ku, Nagoya-shi 451, Japan. 2. Tokyo Nogyo Daigaku Jozo Gakka (Tokyo Univ. of Agriculture, Dep. of Brewing), Sakura-oka 1-1-1, Setagaya-ku 156, Tokyo.

5908. Soyfoods Center; Soycrafters Assoc. of North America. 1981. Soyfoods Production in America and the West (News release). Lafayette, California: New-Age Foods Study Center. 1 p. April. Updated in Sept. 1981 in a neater format.
• ***Summary:*** A table shows production statistics for 25 types of soyfoods. Number of manufacturers in the USA, Canada, Other West, Total; Tons of raw soybeans/year used by each food. Yield of food from 1 unit weight of soybeans. Wholesale value. Retail value. Number of people employed. Address: P.O. Box 234, Lafayette, California 94549.

5909. **Product Name:** BRT: Brown Rice & Tofu Sandwich (In a Chapati) [Regular, Curry, or Mustard]
Manufacturer's Name: Wildwood Natural Foods
Manufacturer's Address: 135 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919.
Date of Introduction: 1981, April.
Ingredients: Regular 1983: Brown rice, UFO Tofu by Wildwood, alfalfa sprouts, tahini, barley miso, seasonal vegetables (celery, carrots, zucchini, chard, or parsley), whole grain chapati, lettuce, scallions, tamari, sea salt.
Wt/Vol., Packaging, Price: 11.5 oz.

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How Stored: Refrigerated.
New Product–Documentation: Leviton. 1981. Soyfoods. Winter. p. 61. "Putting tofu in the lunch boxes of America."

Leviton 1983. Soyfoods. Summer. p. 42-43. "Wildwood's sandwich power." "Dated for 1 day although they stay fresh for 2. Their Brown Rice & Tofu Sandwich accounts for 30% of sandwich sales." Labels set by Wildwood on their letterhead. 1983, undated. 3 by 2 inches. Self adhesive. Mustard: Black and green on orange-yellow. Curry: Orange and green on white. Regular: Black and green on white. Silhouette of woods with birds. "Fresh Daily. Ready to Eat Foods. Naturally. Perishable. Keep refrigerated."

Labels for all 3 flavors. Sent by Paul Duchesne. 1989. Aug. 11. This set of labels is slightly different from those described above; each has the slogan "Ready to eat foods, naturally." In the ingredients, the tofu is listed as "Wildwood Tofu" rather than "UFO Tofu by Wildwood." Talk with Paul Duchesne. 1989. Aug. 17. The term "BRT" probably started to be used in late 1981 or early 1982, while Paul was still with Wildwood. The term "UFO Tofu" was used for all tofu made by Wildwood. It is a palindrome, which reads the same backward or forward.

5910. Hansen, Barbara. 1981. Indonesia in the heart of L.A.: Let's eat out. *Los Angeles Times*. May 14. p. L33.
• ***Summary:*** This is a review of the small Indonesian restaurant Dewi (Alpine Plaza, 211 Alpine St. No. 4, Los Angeles). It has been open for about four years and is popular with local Indonesians.

Dewi simulates the *rijsttafel* with a combination plate that includes spiced hardcooked egg and "bean curd."

Dewi sometimes serves *nasi gudeg*, a specialty of Yogyakarta in central Java, that includes "bean curd cubes."

"*Tahu ketoprak* is a salad of deep-fried bean curd cubes in a sweet peanut sauce."

If you like the meal, pick up some "sweet Indonesian soy sauce" [probably ketjap manis] and coconut milk at Dewi's grocery.

5911. *Hawaii Herald*. 1981. Honolulu sake: Bending with the winds of change. May 15. p. 6-7.
• ***Summary:*** A history of the Honolulu Sake Brewery and Ice Co., which was started in about 1908 and is still in business. Originally called the Honolulu Japanese Sake Brewing Co. Ltd., it is said to be the first sake brewery in the Western world. Numerous trials (such as Prohibition and Hawaii's warm climate) marked its history, but continual innovation led to survival. When World War II started a law prohibiting the use of rice in making sake was enforced. So the company switched to making shoyu. Under the label of Marumasa Soy sauce and later Diamond Shoyu, the locally made products soon became popular in Hawaii. It was another innovation that kept the company alive. Owners include Tajiro, Daizo, and Shinzaburo Sumida. Photos show the plant in 1912 and the delivery trucks in 1919. Address: Hawaii.

5912. Shurtleff, William. 1981. Analysis of the U.S. and Western world tofu industry. Lafayette, California: Soyfoods Center. 1 p. May 17. Unpublished typescript.
• ***Summary:*** In this 1-page summary, prepared for Kikkoman Corporation, a table gives the following statistics for the years 1979, 1980, and 1981. Number of tofu manufacturers in the USA (120, 145, 159), Canada (7, 14, 19), other non-Asia, total. Raw soybeans used (tons/year) in USA. Percentage of total raw soybeans used for all soyfoods in the USA. Yield (pounds of tofu made from 1 pound of soybeans) (2.5). Tons of tofu produced in USA (16,250, 20,500, 26,000). Wholesale value (million dollars) (12.0, 17.5, 25.0). Retail value (million dollars) (23.2, 33.9, 48.5). Number of production employees (602, 759, 965).

Notes: The largest food uses of soybeans in the USA in 1981 are: Soy flour and grits (defatted) 52.6% (of all soybeans used), textured soy flour (incl. TVP) 19.7%, soy protein isolates 16.9%, soy protein concentrates 7.7%, soy sauce 1.2%, tofu 0.8%, soymilk and dairylike products 0.6%.

Estimates of regional markets for tofu: Largest market–California. Second largest–East Coast from Massachusetts to Maryland. Third largest–Pacific Northwest. Fourth largest–Northern Midwest (Wisconsin, Michigan, Illinois, Minnesota, Indiana).

Addresses of tofu manufacturers is included. Address: The Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

5913. Boynton, Suzanne. 1981. Tofu: It is low cal, low cost, nutritious, and versatile [Larry Needleman, his Tofu Kit and favorite tofu recipes]. *Press Democrat (Santa Rosa, California)*. May 27. p. 1C, 4C. [1 ref]
• ***Summary:*** A nice introduction to tofu, featuring the work of Larry Needleman, president of Bean Machines Inc. After graduating from Cornell University's hotel administration school, Larry worked at the swanky Four Seasons. "A few years later he dropped out of the mainstream rat race to become a long-haired hippie in the Mendocino County [California] woods. Now, a shave and a haircut later, he lives in a fancy barn surrounded by virgin redwoods in rural Sebastopol [California]..."

Large photos show: Larry Needleman standing in a kitchen, wearing a cook's apron, holding a bottle of soy sauce. The Learning Tree Tofu Kit, developed by Needleman, inspired by *The Book of Tofu*.

5914. **Product Name:** Seitan (Wheatmeat).
Manufacturer's Name: Bailey's Traditional Seitan.
Manufacturer's Address: Jamaica Plain, Boston, Massachusetts.
Date of Introduction: 1981. May.

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Wt/Vol., Packaging, Price: Sold in bulk.
New Product–Documentation: Talk with Carlos Richardson of Gold Mine Natural Food Co. 1992. July 10. The first seitan he tasted was made by Chrys and Bruce Bailey in New England.

Talk with Chrys Bailey at Source Point in Paonia, Colorado (Phone: 303-527-6471). 1992. July 10. She and her husband had a company in Jamaica Plain, Boston, Massachusetts named Bailey's Traditional Seitan. Their only product was seitan, sold in bulk at the Erewhon retail store, Bread & Circus, etc. "Wheatmeat" was written on the label in parentheses after the word "Seitan." She thinks the term was not copyrighted at that time. They ran a catering business at the same time; there they made other products using seitan (such as seitan meatballs [meatless], deep-fried seitan strips with kuzu coating, etc.) but they did not sell these commercially except to the guests being catered. She learned how to make seitan from an article in about 1972, probably published in one of the GOMF magazines. It was rather hard to follow, so she developed her own unique process. It requires many more steps than most other recipes. Make the dough and let it sit for 12-14 hours in refrigerated, cold water. This causes the gluten strands to adhere to one another more firmly, resulting in a much firmer finished product. Wash the gluten and let it sit for another 10-20 hours. Boil in plain water in either balls or loaves, then wash it thoroughly in cold water, cool well, then deep-fry. Wash thoroughly to rinse off the excess oil, then simmer in a broth containing tamari, water, shiitake mushrooms, ginger, garlic, and kombu. After selling their seitan in Boston stores for several years, they moved to Western Massachusetts, then to California, then to Colorado where she now lives. In each state she made seitan and sold it out of her home to people in cooking classes, rather than to stores. She still makes seitan today.

She thinks that either Bill Gleason's wife (Hisako) or Charles Kendall's wife (Yoko) made seitan on a small scale, commercially, in Boston for a short time in about 1980.

5915. *Compas* (*Le*) (*France*). 1981. Le soja et ses dérivés: Miso, tamari, tofou [The soybean and its derivatives: Miso, tamari and tofu]. No. 17. p. 37-54. Spring. Illust. 27 cm. [Fre]
• ***Summary:*** An in-depth look at each of these three soyfoods, with illustrations from books by Shurtleff & Aoyagi. The section titled "Tofu and its craftsmen" (p. 42-44) profiles Le Bol en Bois, Les 7 Marches, and Jonathan. Photos show Jos van de Ponseele and his wife, plus Lima tofu and seitan in a retail cooler. The section titled "Make tofu–An occupation for the future" (p. 45-49) contains excerpts from the book *Tofu and Soymilk Production*, by Shurtleff & Aoyagi. The section, titled "Making tofu at home" (p. 50-53) contains the basic method, with many illustrations, from *The Book of Tofu*, by Shurtleff and Aoyagi. The last section, titled "Tofu–Is it yin or yang?" (p. 54) is by Louis Thévenon.

5916. *Compas* (*Le*) (*France*). 1981. Cuisine: Soja d'hier, et d'aujourd'hui [Cookery: The soybean of yesterday and of today]. No. 17. p. 59-63. Spring. [Fre]
• ***Summary:*** Contains recipes for natto, miso, tofu, and tamari. With illustrations from books by Shurtleff & Aoyagi.

5917. Erewhon Mail Order. 1981. Erewhon. Natural foods mail order catalog. Brookline, Massachusetts. 16 p. May. Catalog and price list.
• ***Summary:*** This is a new mail order catalog, whose prices become effective on 1 May 1981. On the front cover is a woodblock print of a man with a sickle cutting sheaves of grain in a field. He is wearing a hat, and behind him on the ground is a wooden barrel. Erewhon is now located at 26 Washington St. in Brookline Village–also the home of Erewhon Mail Order. There are retail stores at 342 Newbury St. in Boston and 1731 Massachusetts Ave. in Cambridge. Address: 236 Washington Street, Brookline, Massachusetts 02146. Phone: 617-738-4516.

5918. Hesseltine, C.W. 1981. Future of fermented foods. *Process Biochemistry*. 16(3):2-6, 13. April/May. [11 ref]
• ***Summary:*** Discusses shoyu, miso, natto, and tempeh in Korea, the USA, and Japan. There are nine factors that favor the increased use of fermented foods. Address: NRRC, Peoria, Illinois.

5919. Kikkoman International Inc. 1981. Introducing the Kikkoman soy ceremony (Ad). *Food Processing* (*Chicago*). 42(5):95. May.
• ***Summary:*** The top half of the ad contains a photo showing two shoyu tasting dishes on a lacquerware tray, each with a bullseye (target) design on the bottom.

The text begins: "Of all the flavoring ingredients bearing the name soy sauce, Kikkoman stands alone. Go ahead. Match us up with any other soy sauce and you'll easily be able to see, smell and taste the difference."

Below the text is the octagonal Kikkoman logo with the words "Since 1630." And below that the tagline: "Kikkoman. Good taste is good business." Address: P.O. Box 784, San Francisco, California 94101. Phone: (415) 956-7750.

5920. Mori, H. 1981. Shôwa 55 nendo ni okeru shôyu, miso no kenkyû gyôseki [Review of annual achievements in shoyu and miso research]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*). 76(5):300-28. May. [683 ref. Jap]
• ***Summary:*** This important Japanese-language article, published each year in the May issue of this periodical, has two parts: (1) A review of the past year's major discoveries and developments in the fields of miso and soy sauce in Japan. (2) A bibliography related to those discoveries and

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developments. Address: Noda Sangyo Kagaku Kenkyusho.

5921. Obis, Clare Barrett. 1981. The versatile soybean. *Vegetarian Times* No. 46. May. p. 66-71. [7 ref] Address: Chicago, Illinois

5922. Ochi, H.; Blenford, D.E. 1981. The soy sauce explosion. *Food Technology in Australia* 35(5) 242, 244 May
• ***Summary:*** This is a reprint of an article with the same title first published in August 1980 in *Food Processing Industry* (UK). Address: Nikken Food Co., Tokyo, Japan

5923. San-Jirushi International, Inc. 1981. This old timer solves some modern processing problems (Ad). *Food Processing* (*Chicago*) 42(5):126. May.
• ***Summary:*** "Who would believe a 1200-year-old natural seasoning could prove effective for: (1) enhancing and retaining natural flavors in frozen and canned foods and snacks, and (2) reducing sodium in processed foods without leaving them dull and bland."

"San-J Tamari is brewed from whole soybeans only, in a traditional process that dates from the 7th century.

"By laboratory analysis, San- Tamari contains 30% more organic protein than any popular soy sauce sold in the U.S. This protein, in the form of 18 amino acids, enables San-J Tamari to effectively replace salt as an all-purpose, reduced-sodium seasoning."

A large vertical photo shows a 61 fl. oz. plastic bottle of SanJ Tamari. Address: 3235 Boulevard, Colonial Heights, Virginia 23834. Phone: (804) 520-1513

5924. **Product Name:** Savory Soysage [Mild, or Spicy Hot].
Manufacturer's Name: Summercorn Foods Inc.
Manufacturer's Address: 401 Watson, Fayetteville, AR 72701. Phone: 501-521-9338164.
Date of Introduction: 1981, May
Ingredients: Okara (water-extracted organic soybeans), organic whole wheat flour, nutritional yeast, cold pressed safflower oil, sesame meal, soy sauce, unsulphured molasses, spices.
Wt/Vol., Packaging, Price: 12 oz.
How Stored: Frozen or refrigerated.
New Product–Documentation: Steve, David and Annee. 1981. Spring. Swallows. Summercorn Soyfoods is now producing tofu, soymilk, and soysage. Label. 1987. 3.25 x 2.75 inches. Self adhesive. Brown and green on beige. "No liquid smoke flavorings or preservatives. New high-protein recipe. Contact us for detailed nutritional information & menu ideas." The company is now named Summercorn Foods.

5925. Wang, Hwa L. 1981. Oriental soybean foods: Simple techniques produce many varieties. *Food Development* 15(5):29-34. May.
• ***Summary:*** Methods of preparation are given for the following soyfoods: Tofu, soy sauce, miso, hamanatto, sufu, tempeh, natto. A table gives local names, descriptions, and uses for traditional East-Asian non-fermented soyfoods: "Fresh green soybeans (mao-tou, edamame)," soybean sprouts (huang-tou-ya, daizu no moyashi), soybean milk (tou-chiang), protein-lipid film (tou-fu-pi, yuba), soybean curd (tofu, tou-fu, tubu, tahoo, touhu, taufoo, dou-fu, dan-fu), and soybean flour (tou-fen, kinako). Local names, organisms used, substrate, and description of the product are given for traditional East-Asian fermented soyfoods: soy sauce, miso, hamanatto, sufu, tempeh, and natto.

Note: This is the earliest English-language document seen (Feb. 2004) that uses the word "taufoo" to refer to Chinese-style tofu. Address: NRRC, Peoria, Illinois.

5926. Hale, William C. 1981. Re: Etymology of the terms soy and soya. Letter to William Shurtleff at Soyfoods Center, June 2. 1 p. Typed, with signature on letterhead (photocopy)
• ***Summary:*** "English borrowed the words *soy* and *soya* from the Dutch around the end of the seventeenth century. The Dutch, as merchants, had direct contact with the Japanese at this time, which is why we borrowed our words from their word *soja*. The Dutch word is probably from Japanese *shôyu*, soy. It is really impossible to tell at this point what is the relationship between Japanese *shôyu* and Chinese (Pekingese, Pinyin transcription) *jiànyóu*. Some of our sources indicate that the compound *shôyu* was formed in Japanese first and that the Chinese formed their own compound (in characters) on the model of the Japanese." Address: Etymologist, G &C. Merriam Co., 47 Federal Street, Springfield, Massachusetts 01101. Phone: 413-734-3134.

5927. Rothert, Yvonne. 1981. Use of soybean well-known, but here comes tempeh. *Oregonian* (*The*) (*Portland, Oregon*), June 24.
• ***Summary:*** About Seth Tibbott (a photo shows him carrying a tray of finished tempeh) and Turtle Island Soy Dairy. Tibbott started make tempeh on a home scale in Tennessee in 1977, and commercially in December 1980 in Oregon, in 50- to 60-lb batches. Compared with tofu, says Tibbott, tempeh has a more meatlike texture and flavor that "you can sink your teeth into and chew on." "Tibbott has also begun marketing an herb-seasoned tempeh, flavored with basil and oregano, which is pressed into sausagelike rolls instead of cakes."

Contains recipes "collected from Oregon tempeh lovers" for: Indonesian-style baked tempeh. Sauteed tempeh. Tempeh spaghetti. Tempeh cutlets. Tempeh Reuben. Tempeh teriyaki. Address: Oregonian staff.

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5928. **Product Name:** Tempeh Brothers Soyfurters (Marinated Tempeh Sticks Resembling Square Hot Dogs).
Manufacturer's Name: Appropriate Foods, Inc.
Manufacturer's Address: 137 New Hyde Park Rd., Franklin Square, Long Island, NY 11010.
Date of Introduction: 1981 June
Ingredients: Organic soy tempeh, shoyu, herbs, spices.
Wt/Vol., Packaging, Price: 5 oz.
How Stored: Refrigerated or frozen
New Product–Documentation: Label. 1982. June 15. 2 by 5 inches. Orange on light grey. Interview with Robert Werz. 1987 Sept. 9. Made by slicing a cake of tempeh lengthwise into 4 sticks and marinating in a soy sauce, seasoned with liquid smoke. Introduced 15 June 1981. Discontinued 30 Dec 1982.

5929. Earle, Steve. 1981. Pillars of sea salt. *East West Journal*. June. p. 52-58
Address: San-Jirushi Corp., Japan.

5930. Eden Foods. 1981. Catalog II. 1981. 701 Tecumseh Rd., Clinton, MI 49236. 71 p.
• ***Summary:*** On the cover is a stylized 2-story house on a farm. Address: Ann Arbor, Michigan.

5931. Sugimoto, Hiroshi; Nishio, M.; Horiuchi, T.; Fukushima, D. 1981. Improvement of organoleptic quality of fermented soybean beverage by additions of propylene glycol alginate and calcium lactate. *J. of Food Processing and Preservation* 5(2) 83-93. June. [10 ref]
Address: Central Research Labs., Kikkoman Corp., 399 Noda, Noda-shi, Chiba-ken 278, Japan.

5932. **Product Name:** Soysage (Meatless Okara-based Sausage).
Manufacturer's Name: Redwood Valley Soyfoods Unlimited
Manufacturer's Address: P.O. Box 371, Redwood Valley, CA 94570.
Date of Introduction: 1981 July
Ingredients: Okara, wheat germ, whole wheat flour, nutritional yeast, unrefined safflower oil, soymilk, shoyu, natural herbs and spices
Wt/Vol., Packaging, Price: 1 lb units.
How Stored: Refrigerated.
New Product–Documentation: Label. 1980. 4 by 3.5 inches. Self adhesive. Navy on white. "100% Vegetarian. To use: Remove lid, bake 350°/40 minutes, or form patties or balls and cook. Pizzas too!" Ingredients: Okara, wheat germ, whole wheat flour, nutritional yeast, unrefined safflower oil, Soy Juice, tamari, natural herbs and spices. Label. 1980. 5.5 by 4.5 inches. Paper. Red, black and blue on white. "New! A 100% vegetarian meat substitute. No preservatives or chemical additives. High protein and fiber, low calorie and fat. No cholesterol." Ingredients on label: Organic okara (soy fiber), toasted wheat germ, Red Star T-6635 nutritional yeast, organic whole wheat flour, safflower oil, well water, tamari, honey, garlic, onion, salt and other natural herbs and spices. Label. 1981. 3 inches square. Self adhesive. Red and blue on white. "New! Just slice, heat and eat!" Ingredients: Organic okara, organic whole wheat flour, toasted wheat germ, nutritional yeast, safflower oil, well water, shoyu tamari, honey, garlic and other natural herbs and spices. Label. 1981. 3.5 by 4 inches. Self adhesive. Red on white. "Pre-baked! Use on pizzas or burgers, fried or baked. Great scrambled with Missing-Egg Salad." Ingredients: Organic soy fines, organic whole wheat flour, peanuts, toasted wheat germ, nutritional yeast, soy oil, filtered water, real tamari, honey, garlic, salt and other natural spices. Leviton 1981. Soyfoods Summer. p. 42. "Weekly sales are 100 pounds." Spot in Whole Foods. 1982. April. p. 60. "Convenience Soyfoods." Spot in Soyfoods. 1982. Summer. p. 56. "Prepared Tofu Salads and Desserts. Use as you would meat." 16 oz. portions. Spot in Whole Foods. 1983. Nov. "Soysage Repackaged."

5933. Shurtleff, William. 1981. William Morse: The father of soybeans in America (Continued–Part II). *Soyfoods* No. 5. p. 56-60. Summer.
• ***Summary:*** Continued: "It is truly remarkable that the authors were able to write such a complete and detailed book when neither of them had been to East Asia. (Morse would later spend two years there; 1929-1931.) Most of the book was actually written by Morse who, nevertheless, kindly listed Piper as the senior author. He gathered his information and photographs by extensive correspondence with researchers throughout East Asia and apparently drew heavily on a large collection of books on Chinese agriculture called the Swingle Collection, named after Walter T. Swingle of the Office of Crop Physiology, who spoke Chinese, had traveled extensively in the Orient collecting plants and the books, and had housed them at the USDA library, where Morse did much of his research. Decades ahead of its time, *The Soybean* soon became the standard work on the subject and was referred to by many as 'the soybean bible.' Dr. Piper died in February 1926 at the age of 69.

"Morse's fine work was already starting to give real substance to Piper's dream. In 1920, Morse helped to found the American Soybean Association (ASA) and thereafter helped to unify and direct an ongoing program of research and experimentation. Morse distributed seed from new introductions to anyone interested in soybeans. Among his closest contacts at the State Agricultural Experiment Stations were W.L. Burlison in Illinois and C.B. Williams in North Carolina. As late as 1927, most soybean agronomy research was still done on plots in Washington, D.C. outside the USDA south building. Morse sent out seeds to the states but farmers had problems; they shattered at maturity, were

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hard to harvest, and were abrasive on the binder canvas in those days before combines. Thus in the early years the tide of interest in soybeans ebbed and flowed. Doubters were always ready to laugh at anyone who talked of the soybean becoming a major U.S. farm crop. But this only served to spur Morse on to greater efforts. He was a very effective extension worker with many contacts, a deep knowledge of his subject, and good intuition. His desk at the USDA soon became the clearing house for information about the soybean. In 1927 he wrote: 'We may keep this work going and place the soybean where it belongs–in the King row with King Corn and King Cotton.'

"The Dorsett-Morse Expedition to East Asia (1929-1931): In the late 1920s it became evident to the USDA that the soybean had definite promise as a crop in America and it was decided to send W.J. Morse and P.H. Dorsett to East Asia for two years on what was officially known as the Oriental Agricultural Exploration Expedition (but which people interested in soy usually call the Morse Expedition) to 'make investigations regarding the utilization of the soybean in Oriental countries and the securing of varieties that might be of value to widespread American conditions' (Morse, 1929). In 1929 when the expedition left, Morse was age 45 and had worked on soybeans with the USDA for 22 years. Dorsett (1862-1943), now age 67, was a plant explorer from the USDA Office of Plant Introduction; he was described by a fellow agricultural explorer, David Fairchild, as one of the most ingenious and indefatigable workers he had ever known. Whereas Morse was a specialist, interested in soybeans, Dorsett was a generalist, interested mainly in persimmons, but also in grasses, forages, and other plants.

"During the expedition, Morse and Dorsett kept detailed daily journal notebooks, which were typewritten after the trip and bound in 17 hardback volumes. These volumes, primarily the work of Dorsett, also contain correspondence plus thousands of black-and-white photographs taken by both men. In the bound volumes there are several references to a 'special report on the soybean and its products' that Morse intended to write. Apparently he never completed it, although he did complete detailed chapters on tofu and soymilk. The only original copy of the documents described above is in the archives of the American Soybean Association in St. Louis, Missouri. [Note: As of 2011, it is in Rare and Special Collections, at the National Agricultural Library, Beltsville, Maryland].

"The group arrived in Tokyo on March 18, 1929, and set up headquarters. In August they traveled to Hokkaido, the northernmost island of Japan and center of soybean production, where they studied both soybean cultivation and food uses. In December 1929 they returned to Tokyo and spent full time until March 1930 collecting soyfoods and studying their production and use. On April 1, 1930, they arrived in Dairen, Manchuria, to study soybean cultivation and oil extraction. Dorsett left Morse in the summer of 1930 and went to Peking. He did not rejoin Morse on the trip, although he wrote regularly. Morse went to Korea on August 22, to Mukden in Manchuria on September 29, back to Dairen, the oil-processing capital of East Asia, and then to Peking on October 20. Morse apparently spent only 20 days in China on the entire trip. In late December they took a ship from Dairen back to Kyoto and then Tokyo. On February 17, after several more months of soyfoods research in Tokyo, they sailed for America, arriving in San Francisco on March 4, 1931. Morse's collection efforts–months of tramping through the fields of East Asia–were a bonanza. He discovered that almost every village in the Orient had its own distinctive soybean varieties, developed during thousands of years of close cultivation and inbreeding. Unlike their Western counterparts, Chinese farmers didn't think of looking for improved varieties in nearby villages and then growing these in their own village. They loyally grew the varieties that had been handed down by their honorable ancestors, and wouldn't dream of growing a variety handed down by someone else's ancestors. Morse's major accomplishments on the expedition were: (1) he collected approximately 4,600 distinct soybean seed samples representing roughly 2,000 soybean varieties and including 150 large-seeded vegetable type varieties collected mostly in Korea and Japan; all of these were introduced into the U.S. germplasm collection; (2) he realized for the first time the superiority and potential of the vegetable-type soybeans for food use and later played the leading role in propagating them and teaching others of their value; (3) he developed a much better understanding of soybean growing methods and technology; and (4) he collected more than [commercial] 250 food products made from soybeans, which he took back to America, and did by far the most extensive studies on soyfood production of any Westerner up to that time.

"In his journals and letters, Morse wrote more than once that he was 'amazed at the extent to which the soybean was used for food in Japan.' He was intrigued by the techniques for making tofu, miso, shoyu, natto, and other soyfoods, spent many days in small shops with producers, and described their processes in great detail, taking hundreds of pages of typed text with hundreds of photographs.

"The two-year trip was a tremendous adventure for both Morse and Dorsett. Morse later remarked that he considered it the highlight of his career. He was finally able to fully grasp the great potential of the soybean, which he had only been able to glimpse through his years of reading and work in America." Continued. Address: Soyfoods Center, P.O. Box 234, Lafayette, California.

5934. Stunkard, Jamie. 1981. Making soysage. *Soyfoods* No. 5, p. 41, Summer.

• ***Summary:*** Contains a detailed description, with a bulk recipe, of how Joy of Soy in Minneapolis, Minnesota, makes soysage in 65-70 pound batches. The soysage recipe

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developed by The Farm in Summertown, Tennessee, was adopted as a starting point. "Our decision not to use okara was tough. We wanted to use our tofu by-product, yet when we compared its taste and texture with soysage that uses the whole soybeans, okara just didn't make it to the finals.

The major ingredients in the recipe are 5 gallons cooked soybeans (okara is not used), 11 lb 14 oz whole wheat flour, 5 lb rolled barley, 2 lb nutritional yeast, 2¼ lb herb & spice mix, 7 cups shoyu, 6 cups sesame oil, 1 cup vinegar, and 27 cups water.

Joy of Soy has been making soysage for two years. It sells for $1.18/lb at the rate of about 150 lb/week. It enjoys steady sales, but is not a big seller. Address: Joy of Soy, Minneapolis, Minnesota.

5935. Yokotsuka, Tamotsu. 1981. Recent advances in shoyu research. In: G. Charalambous and G.E. Inglett, eds. 1981. The Quality of Foods and Beverages: Chemistry and Technology. Vol. 2. New York: Academic Press. See p. 171-96. Proceedings of a Symposium of the Second International Flavor Conference. Held 20-21 July 1981 at Athens, Greece. [140 ref]

• ***Summary:*** Contents: Introduction. Manufacture: Treatment of raw materials, koji making, mash making and aging, pressing, refining. Flavor evaluation of koikuchi shoyu. Flavor components of shoyu. Some recent research and technological progress in shoyu manufacturing: Treatment of raw materials, koji molds and koji making, control of mash (temperature of mash, period of mash fermentation, microbes in mash), refining (pressing of mash, pasteurization, color of shoyu). Safety problems regarding koji molds and shoyu. Address: Kikkoman Corp., Noda-shi, Chiba-ken, Japan 278.

5936. Magida, Phylis. 1981. How to eat well and still kiss salt, sugar, and fat goodbye. *Chicago Tribune*, Aug. 10. p. A11.

• ***Summary:*** Many Chinese, Japanese and Korean dishes consist largely of vegetables. Instead of using meat, many use tofu (soy bean curd) as a protein source, since tofu contains no cholesterol and relatively little fat. When eaten with rice, the protein quality of tofu increases.

To decrease salt intake, use a low-salt soy sauce available from Yamasa soy sauce company. Or you can decrease the amount of salt or soy sauce by increasing the amount of garlic and/or ginger.

5937. Sass, Lorna J. 1981. Soy foods: Versatile, cheap and on the rise. *New York Times*, Aug. 12. p. C1, C6. Widely syndicated.

• ***Summary:*** The article begins: "Soy foods have come west and, apparently, are here to stay. No longer restricted exclusively to the world of woks and cleavers, soybeans in America are now patted into soyburgers, and tofu (soybean curd) is pureed into soy mayonnaise, baked into 'cheesecake' and fried as 'cutlets,' while soy milk emerges from the blender as a frothy carob shake or from the freezer as cantaloupe 'ice cream.'

"Because soy foods are an inexpensive source of protein, low in fat and completely cholesterol-free, they have been attracting more and more attention among the growing number of weight-conscious, health-conscious and dollar-conscious Americans. Until recently, soy sauce was the only soy product familiar to most Americans.

Contains a long discussion of David Mintz (owner of Mintz's Buffet, a kosher delicatessen at 1040 Third Avenue at 62nd Street). He makes a tofu ice cream, and a tofu-spinach quiche. "A large Japanese company wants to buy exclusive rights to distribute Mintz's tofutti 'ice cream' in Japan. 'The more dishes I make with tofu, the better my business is,' said Mr. Mintz." He is frequently called upon to cater "tofu weddings."

Also discusses Light Foods in St. Louis (Missouri), and the Rochester Soy Deli (in New York). "Two of the people most responsible for introducing soy foods to Americans are William Shurtleff and his wife, Akiko Aoyagi, who in 1975 wrote 'The Book of Tofu,' a comprehensive cookbook and introduction to the untapped potential of soy foods as an alternate source of protein."

There follow seven recipes featuring tofu and tempeh: Mintz's tofu herb dip. Breaded tofu cutlets (with frozen tofu. Might also be called "Fillet of tofu," plus a note on how to freeze tofu at home). Tofu tartare sauce. Tempeh salad. Carob-tofu-mint pie. Whole wheat pastry crust (with soy milk and soy oil). Lotus Cafe not-dogs (meatless hot dogs).

Next comes a section titled "Learning more about soy: A listing of useful books." For example: "There is no more thorough book on the history and myriad Oriental forms of tofu than the profusely illustrated "*Book of Tofu*," by William Shurtleff and Akiko Aoyagi (Autumn Press / Random House, 334 pages; $8.95). First published in 1975, it is credited by most tofu cookbooks as the one that 'spread the light.' The hundreds of recipes, mostly Oriental in style, will fascinate adventurous cooks. Beginners may prefer the condensed, somewhat more Americanized version (Ballantine, 433 pages, $2.95)."

The long article ends with a helpful sidebar titled "How to buy and store tofu." "A four-ounce piece of tofu (bean curd) sells for about 30 cents..." One main difference "between the tofu sold in health food stores and the Oriental-style tofu sold by many greengrocers is the type of coagulant used. Tofu from health food stores is almost always made with nigari (primarily magnesium chloride and trace mineral elements derived from evaporated seawater), while Oriental tofu makers generally use calcium sulphate."

A photo shows Katherine Iselin with some of the special sandwiches at the Tofu Shop, a fast-food soy deli in Rochester, New York. She is wearing a Soyboy Tofu T-shirt. On the wall behind her is the restaurant menu.

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Note: A similar article titled "More budget-conscious Americans are hitting the soy–its not just sauce" in the *Chicago Tribune* (29 Oct. 1981, p. W_A21).

5938. Krieger, Verena. 1981. Gestern Steak, Morgen Tofu: Oder was man mit einer Bohne so alles machen kann [Yesterday steak, tomorrow tofu: Or all the things that can be made with one bean]. *Tages Anzeiger Magazin* No. 34, p. 6-12, Aug. 22. Also translated in English, French, and Italian. [4 ref.: Ger; Eng; Ita; Fre]

• ***Summary:*** A lengthy, pioneering account of the virtues of tofu, and its development in the USA and Switzerland by the Sunday supplement to Switzerland's biggest daily newspaper. Contains numerous color photos of soyfoods from around the world. Also defines and discusses soymilk, miso, tamari, shoyu, and soy sauce, tempeh, and soy sprouts. Discusses the work of Edgar W. Schweizer (underway by 1977) in attempting to grow soybean varieties suited to Switzerland.

The Geneva restaurant "La Moisson" has had tofu on the menu for 5 years. In Bern, in the beginning of July, the restaurant "Sesam" was acquired by the first Swiss organic food store (*Bioladen*), the "Lotusbluemli" (Little Lotus Blossom). Since Sesam opened, the people of Bern have been able to get to know a rich treasure of dishes from tofu made at Sesam, as well as many applications of miso and shoyu or tamari. The vegetarian restaurant "Bristol" in Lucerne is launching tofu as its summer hit this year, in the form of Tofu Schnitzels and Burgers ... In organic food shops, Reform Houses and Oriental specialty shops, miso and soy sauce are available. The following places in Switzerland sell fresh tofu, which they make on the spot: (1) Centre macrobiotique de Lausanne, ruelle de Bourg 7, 1003 Lausanne. (2) S. Gänterli, Vonmattstr. 50, 6003 Lucern. (3) Le Grain d'Or, rue Voltair 27, 1201 Geneva. (4) De Lade, Oberaltstadt 8, 6300 Zug. (5) S. Lotusbluemli, Gerechtigkeitsgasse 17, 3011 Bern. (6) Madal Bal, Kreuzplatz 10, 8032 Zurich. On the last page of the article is an ad for Soyana in Zurich.

Note: The Italian-language edition of this article is titled "Ieri bisteeca, domani il tofu." It is the earliest Italian-language document seen (Sept. 2011) that mentions tempeh, which it calls "tempeh." Address: Lucerne, Switzerland.

5939. **Product Name:** Fried Rice Sandwich (With Tofu).
Manufacturer's Name: Community Kitchens
Manufacturer's Address: Maplewood St., Boulder, Colorado.
Date of Introduction: 1981, August.
Ingredients: Organic brown rice fried with scallions and soy sauce, wrapped in a whole wheat tortilla with steamed organic carrots, alfalfa sprouts, miso tahini sauce, tofu, green leaf lettuce.
New Product–Documentation: Talk with Marty Roth, 1989, Aug. 16. Barbara started her own sandwich business in Boulder making a brown rice sandwich with tofu. Talk with Barbara Svenning, 1989, Aug. 21. She went to Boulder by herself in mid-Aug. 1981 and started a business to support herself. Her only product was the Fried Rice Sandwich. She called it Community Kitchens. It was a cover to keep her away from the health inspector. She was pregnant with her son, Ricky, who was born later on 28 April 1982. For the first 3 weeks she made the sandwiches out of Rebecca Woods' kitchen, then she moved right across the street on Maplewood St. She made and distributed 30-40 sandwiches a day to 3-4 natural food stores in Boulder. She continued until the health inspector shut her down. She bought her tofu in the form of fresh scraps from White Wave. She continued until the health inspector shut her down, then she sold the business to Gloria Gilbert.

5940. Kushi, Aveline. 1981. My favorite tempeh recipes: Cooking with a versatile Indonesian staple. *East West Journal*, Aug., p. 62-65.

• ***Summary:*** "Tempeh became popular in this country about two years ago. Bill Shurtleff was largely responsible, and I will always be grateful to him for this. Tempeh is not available in Japan, so I did not eat it while I was growing up.

"Tempeh is a very nice *whole* food. It gives great energy, especially to vegetarians, and it is very appealing to someone who is craving animal foods."

"I'm in my fifties and I stopped menstruating several years ago. The first time I ate tempeh–it was pan-fried with just a brush of oil, and cooked with onions and tamari–my menstruation returned for a time! So I think that tempeh perhaps helps to increase sexual vitality for women and strengthen men's and women's sexual organs." Contains 11 tempeh recipes. Tempeh with arame (a sea vegetable). Kinpura (with burdock and tempeh). Cabbage-roll tempeh. Tempeh with vegetables. Fried rice or noodles and tempeh. Paella without fish. Tempeh in soup. Tempeh macaroni salad. Barley stew with tempeh. Shish-ke-bab. Tempeh with kombu, daikon, and shiitake. A large photo shows Aveline Kushi smiling and cutting carrots. A large ad (p. 65) shows *The Book of Tempeh* by Shurtleff & Aoyagi.

5941. Lenetsky, Mark. 1981. Short course on soyfoods: What they are, how they are used. *Health Foods Business*, Aug., p. 46, 49-50, 52, 53. [2 ref.]

• ***Summary:*** Contents: Introduction. Tofu or "soy cheese." The many uses of tofu. Makings of miso. Tamari–by any name. Tempting tempeh. 'High tech' approach (TVP). Its a joy to cook with soy. Selected recipes from suppliers. Address: Nutritional consultant, Applegate Natural Foods, Tigard, Oregon.

5942. Shurtleff, William; Aoyagi, Akiko. 1981. History of Butler Food Products (Document part). In: William

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Shurtleff and A. Aoyagi. 1981. History of Small Seventh-day Adventist Food Companies and Sanitariums. 8 p. See p. 4-6. Unpublished manuscript. [1 ref]

• ***Summary:*** In operation from 1939 to 1946, this was a private company in Cedar Lake, Michigan. "This creative company was founded in 1939 by Howard O. Butler and run primarily as a family enterprise. Butler got interested in soyfoods from people he knew at Madison Foods in Tennessee. He hired people with prior experience in soyfoods production: Howard Hoover (who made soymilk with Dr. Miller in East Asia) and a Mr. Roose. An initial aim of the business was to offer jobs for Adventist youth to pay their tuition at nearby Cedar Lake Academy, although the business was not formally connected with the Academy. The company's primary product, first produced in 1942, was 'Soya Butter,' actually what we would now call soy margarine; it contained 79% lightly hydrogenated soy oil, soymilk (18% by weight), salt, vitamin A carotene (as a natural coloring), and butter flavor. The melting point was 110°F (43°C). Butler advertised the product as being nonfattening.

"He soon ran into problems with the government concerning his soya butter. In August 1944 the *Soybean Digest* reported that 'H.L. Hoover, manager of the firm, claims that he is the victim of conflicting federal and state regulations, and that he cannot comply with one set of regulations without violating others. Hoover points out that while the Food & Drug Administration prohibits his company from labeling the product oleomargarine without the addition of dairy products to it, the Bureau of Internal Revenue classifies it as oleomargarine for taxing purposes.' Margarine was then defined as vegetable oils churned with dairy milk. Butler used soymilk in place of dairy milk to give a completely vegetarian product. Furthermore, it was claimed by the Bureau of Dairying in Lansing, Michigan, that the product had been illegally colored in imitation of butter, and in several instances had been sold as butter. In August 1944 cases were pending in circuit and U.S. courts, awaiting trial. In May 1945 a federal judge in Cleveland, Ohio ruled that Butler's Soya Butter was not taxable as margarine and should not be labeled as margarine, but shortly thereafter the Ohio Department of Agriculture, in variance with the federal ruling, classified soya butter as colored margarine, which could not be sold legally in Ohio. In June 1945 the American Soybean Association came out in favor of a congressional bill to define soya butter as being distinct from margarine. Finally in December 1945, at which time the company was manufacturing 100,000 units of soya butter a month, a federal judge in Detroit ruled that the product was oleomargarine as defined by the internal revenue code, and therefore subject to back taxes of 10 cents a pound on every pound made to date. The three-year battle and the ruling assessing an estimated $150,000 in back taxes drove the company out of business in 1946. In about 1950, while typing out an appeal to the government to reconsider his case, Butler suffered a fatal heart attack. Shortly after his death, the margarine law was changed and the tax (on other companies) removed.

"During the early 1940s, Butler Foods was a thriving operation. In early 1942 they were making a nice line of nine soyfoods including ready to eat Soy-Fruit & Nut Cereal (with figs, dates, and bran), ViM-eat Soy-Nut-Loaf, ViM Soy-Nut Cheese, Soy-Kawfee, Entire Soybean Flour (i.e. full-fat), Entire Soybean Wheat Flour Mix (70:30), Soybeans with Tomato Sauce, ViM-ilk (soymilk) and Soy-Nuts. An attractive brochure, which described the company's products and gave recipes, noted that some of the soybeans were 'grown on Butler's own mineralized farm.' In mid-1942 Soya Butter was added to the line. The company also made bulk soymilk for use in its Soya Butter. In September 1943 Butler Foods ran a full-page ad in the *Soybean Digest* headlined 'New Foods from the Wonder Bean' showing pictures of cans of Butler's Soynut Cheese, Vegeburger, Soya Nut-Loaf, Soya Butter, and Vegetarian Chops. The chops, his most popular meat analog, were a blend of wheat gluten and soy flour, sliced, pre-cooked, then canned in a broth made of soy sauce and other savory seasonings. A September 1945 ad showed that Butler's Meatlike had been added to the line.

"After the government tax ruling of 1946, Cedar Lake Academy leased Butler's property and tried to operate the food business for 2 years, but the plant was too big and the company had now lost its vital income from sales of soya butter. The Academy food business ceased operation in 1949. The supervisor at that time, Vesper Stas, who had worked at Butler Foods since 1942, then left and started his own company, Cedar Lake, in November 1949." Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

5943. Shurtleff, William; Aoyagi, Akiko. 1981. History of Cedar Lake Foods (Document part). In: William Shurtleff and A. Aoyagi. 1981. History of Small Seventh-day Adventist Food Companies and Sanitariums. 8 p. See p. 6-7. Unpublished manuscript. [1 ref]

• ***Summary:*** In operation from 1949 to the present, this was a private company in Cedar Lake, Michigan. "In 1949 when the Cedar Lake Academy ceased operating the former Butler Foods, Vesper Stas, a former employee of both companies, purchased the name Cedar Lake Foods and the food manufacturing rights from the Academy. He then started a business in rooms in the back of his home, working on a kitchen scale with his wife, making meatless products similar to those developed by Butler Food Products. The line started with Vegetarian Chops (like a veal cutlet with a savory soy sauce), Vegeburger, Soynut Cheese (whole soaked soybeans and nuts milled together, slurried, then cooked down to form a spreadable or sliceable loaf), Soynut Loaf, and Meatlike. They also made tofu. In 1959 the business expanded into a newly constructed plant, and four workers were kept busy

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meeting a growing demand and adding new products such as meatless frankfurters. Sias soon opened a storefront in his plant where all of his products were retailed (*Grand Rapids Press* 1962). In 1968 Cedar Lake bought the production of Sunnydale Foods of Centralia, Missouri. At the same time, Sias purchased the canning division of Lange Foods. The product Turkettes, Hostess Cuts, Vegebits, Lentil Roast, and BreakFast Links were added to the Cedar Lake line. In 1975, after several months of illness, Sias sold Cedar Lake Foods (which employed 26 people and had $500,000 yearly sales) to a corporation of five stockholders, who operated the business as Cedar Lake Foods Inc. of Tennessee. In the spring of 1981 the business, after being closed for 6 months, was sold to Country Life Natural Foods, a non-profit corporation and self-supporting Adventist group that made other vegetarian health food items such as nut butters, pastas, and juices, and ran several natural food restaurants. Many of the new company's foods contained soy products. TSF (textured soy flour) and soy sauce were used in the Vegeburger. Defatted soy flour was used in the Soynut Loaf. And soy sauce was the only soyfood used in the Hostess Cuts, Sloppy Joe, Vege-bits, Chops, and Chipettes. Wheat gluten served as the primary ingredient in most of the products. In March 1981 a typical 19-ounce can retailed for $1.75-$1.95. The plant continued to be located in Cedar Lake, Michigan, near the original Cedar Lake Academy, founded in 1898." Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

5944. Shurtleff, William; Aoyagi, Akiko. 1981. History of Millstone Foods (Document part). In: William Shurtleff and A. Aoyagi. 1981. History of Small Seventh-day Adventist Food Companies and Sanitariums. 8 p. See p. 8. Unpublished manuscript. [1 ref]

• ***Summary:*** In operation from 1977-1985, this was a private company in Penryn, California (near Sacramento). "Founded in 1977 and run by Ken Innocent, who formerly worked in the personnel department at Worthington Foods. Millstone Foods makes canned products that contain soy, including Burger-Like (an imitation ground beef of textured soy flour {TSF} in a rich broth), Dehydrated Vegetarian Stew with TSF, and Tender Cuts (a gluten patty containing a little soy flour). While the products contain no MSG, some contain HVP (hydrolyzed vegetable protein)."

In 1985 the company was sold to Loma Linda Foods in Riverside, California. Basically the same product line continued to be manufactured, with new green and yellow labels. They were still available in July 1990. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

5945. Aiba, Shuichi. 1981. Development of microbial industry in Japan. *Kukem Dergisi* (*J. of KÜKEM, Turkey*) 4(2) 1-6. Special Issue of the Second National Congress of Culture Collections and Industrial Microbiology (KUKEM). [Eng]

• ***Summary:*** Contents: Preface. Brief history of development: Up to 1945, 1946-1960, 1961-1980, 1981. Economic aspects: Vista, antibiotics, amino acids (esp. glutamate), nucleotides, enzymes, miscellaneous (citrate, gluconic acid). Epilog.

The modern fermentation industry, characterized by mechanization and quality control, was motivated and triggered by the appearance of antibiotics. Before 1945, besides the brewing of alcoholic beverages, the Amylo-process and acetone-butanol were the most representative of large-scale fermentations in the pre-war and during the war days. In the former, starchy materials were saccharified aerobically by the use of *Aspergillus oryzae*. The period from 1946 to 1960 was characterized by two major developments: the emergence of the penicillin industry and the production of amino acid (glutamic acid) by fermentation. Bioengineering became sophisticated. During the period 1961-1980 biochemical engineering and computers came to be widely used.

The fermentation industry in Japan is large. In 1974 it produced $8,404,000,000 worth of products. The largest segments were liquor $6,300,000,000 (75.0% of the total), antibiotics $1,183,000,000 (14%), fermented foods $550,000,000 (6.5%), amino acids $250,000,000 (3.0%), and other (nucleotides, yeast, ethanol, enzymes, organic acids) $121,000,000 (1.5%).

The main amino acid is glutamic acid, of which the Ajinomoto Co. has almost 50% of the market. Production peaked at 100,000 tons/year in 1971 and had fallen to 73,000 tons by 1975. The main nucleotides are inosinic acid and guanylic acid. The main enzymes are alpha-amylase (12,000 tons/year), protease (1,500 tons/year), and glucose isomerase (300 tons/year). Miscellaneous includes citrate, lactic acid, and gluconic acid (each organic acids). Genetic manipulation of microorganisms is expected to revolutionize the fermentation industry.

Note: This periodical about microbiology is published twice a year by the Center for Culture Collections of Microorganisms (KUKENS) in Istanbul, Turkey. Address: Prof. Dr. Dep. of Fermentation Technology, Faculty of Engineering, Osaka Univ., Yamada-kami, Suita-shi, Osaka, Japan.

5946. Corn Country Whole Foods, Inc. 1981. Market Street: Natural foods with a difference (Catalog). 132 South Market St., Champaign, IL 61820. 24 p. Index. 28 cm.

• ***Summary:*** This natural foods, vegetarian catalog is printed on beige paper with black ink. Corn Country is now distributing products made by many other companies. Interesting products: (1) Stoneground flours: Soy flour-full fat (OG = Organically Grown). Chickpea (garbanzo) flour. Our "old fashioned granite stone mills keep the flour at the lowest grind temperature ." Soybeans and chick peas are preheated before grinding. (2) Beans: Soybeans

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OG. Azuki beans. Chickpeas (Garbonzos). Lentils (green or red). Mung beans (for sprouting). (3) Peanut butter. Almond butter. Sesame tahini. (4) Sea vegetables (10 types). Westbrae miso (7 types). (5) Light Foods: Tofu. Marinated tofu. "Soyproducts are becoming an increasingly attractive source of protein throughout the world ... We offer a small variety of soy products." (6) Condiments: Nigari (bulk or 5 lb). Umeboshi plums. Shoyu (pints to 4.75 gal tin). Miso (red or white). Tamari (with dispenser to quarts). (7) Market Street meals (vegetarian): Nutburger. Soyburger. Chick 'n sea burger. (8) Nutritional (brewer's) yeast (20 lb to 125 lb): "These yeasts are primary yeasts cultured on molasses for human consumption. They are not a byproduct of petroleum, or paper industries." Sold in powder or flakes. (9) Natural oils: Sesame oil. Safflower oil. (10) Seeds: Alfalfa seed for sprouting. Sesame seeds whole brown. Sesame seeds hulled white. Sunflower seeds. (11) Market Street shoyu almonds, suns (sunflower), cashew pieces. (12) Soy & corn "nuts": Soy nuts salted. Soy nuts plain. (13) Market street mixes (unsulfured fruits and natural nuts): Sweet & shoyu mix. (14) Literature: 26 Talking Foods pads. (15) Dr. Bronner's soap (14 types). (16) Kitchen help: Tofu kit. Sprouter lids. Wok set. Address: Champaign, Illinois. Phone: 217-359-8843.

5947. Inkson, Ms.; Mann, E.J. comp. 1981. Thesaurus: Food Science and Technology Abstracts. 2nd ed. Shinfield, Reading, England: IFIS (International Food Information Service). 238 p. No index. 30 cm. First edition, 1977. [Eng]
• ***Summary:*** The Introduction states: "The original IFIS word list, issued in 1970, did not attempt to give more than the barest outline of the relations between the terms encountered. In 1977, therefore, an FSTA Thesaurus was published, in which the basic structuring of the material found in FSTA was set out. The Thesaurus was designed to give maximum compatibility with the EEC Multilingual (English / French / German / Italian) Food Thesaurus, published in 1979 (and itself based largely on the FSTA system for the English version), and to take into account the needs of on-line users."

The terms are divided into headings (main terms or descriptors), which are printed in capital letters, and lead-in terms (non-descriptors) printed in lower case. Additional information is included in square brackets. The following abbreviations show the types of relationship between terms: BT = broader terms. NT = narrower terms. RT = related terms. UF = used for: lead-in term followed by "see" heading (e.g. bean curd see TOFU).

Soy-related terms: Beverages: UF soy milk. Lecithins: BT Emulsifiers. Phospholipids. UF phosphatidylcholine. Legumes: NT Soybeans. Miso: BT Soy Products. natto: see Soy Products. Sauces: NT Soy Sauces. soy flour: see Soy Products. soy milk: see Beverages; Soy Products.

Soy Products: BT Soybeans, Vegetable Products, Fermented Products. NT Miso, Soy Proteins, Soy Sauces, Soybean Oils. UF natto, nyufu, soy flour, soy milk, sufu, tempeh, tofu, tsukudani, vital.

Soy Proteins: BT Protein Products, Soy Products, Proteins Vegetable. RT Textured Vegetable Proteins. UF okara protein, Promine [Central Soya Co.], Supro 620, yuba.

Soy Sauces: BT Fermented Products, Sauces, Soy Products. UF moromi, shoyu.

Soybean Oils: BT Oils Vegetable, Soy Products.

Soybeans (*Glycine max*): BT Legumes, Oilseeds. NT Soy Products.

Note: This is the earliest document seen (Sept. 2003) that is a thesaurus containing terms related to soybeans and soy products. Address: IFIS (International Food Information Service), Lane End House, Shinfield, Reading RG2 9BB, England.

5948. **Product Name:** Living Lightly Tofu Ravioli.
Manufacturer's Name: Pacific Trading Co.
Manufacturer's Address: San Francisco, CA 94110.
Date of Introduction: 1981, September.
Ingredients: Pasta: Whole wheat flour, soy oil. Filling: Soybeans, spinach, toasted wheat germ, nutritional yeast, whole wheat flour, safflower oil, water, tofu, shoyu soy sauce, honey, garlic, onion, salt, herbs, spices.
Wt/Vol., Packaging, Price: 6 and 14 oz.
How Stored: Frozen.
New Product–Documentation: Price List & Catalog. 1981, Sept. 14 oz. Spot in Soyfoods. 1982, Winter, p. 57. 14 oz. "Tofu with Pastabilities. No preservatives. No additives." Label. 1982. 3 by 4 inches. Self adhesive. Red and green on white. This is the world's earliest known tofu ravioli.

5949. Shurtleff, William; Aoyagi, Akiko. 1981. What is real tamari? *East West Journal*. Sept., p. 16, 18-19.
• ***Summary:*** A guide to natural soy sauces. Explains why George Ohsawa coined the misnomer "tamari" in about 1960 for Lima Foods in Belgium to refer to natural shoyu. Contains a recipe for using 20 lb of soybeans to make real tamari at home. Address: Soyfoods Center, Lafayette, California.

5950. **Product Name:** Tempeh Burgers (Non-fried, Vacuum Packed).
Manufacturer's Name: Soyfoods Unlimited, Inc.
Manufacturer's Address: 14670 Doolittle Dr., San Leandro, CA 94577.
Date of Introduction: 1981, September.
Ingredients: Soy tempeh (made with soybeans organically grown in accordance with section 26569.11 of the California Health and Safety Code), natural soy sauce, herbs, spices.
Wt/Vol., Packaging, Price: 6 oz (170 gm). Vacuum packed in poly pouch.
How Stored: Frozen or refrigerated.
Nutrition: Per 3 oz.: Calories 190, protein 9 gm, carbohydrates 6 gm, fat 3 gm, sodium 466 mg.

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New Product–Documentation: Label. Undated. Blue and red on white, with rainbow border. "No oil. Tasty. To serve: Brown in oiled pan or steam for 5 minutes." Ads in *Vegetarian Times* and *East West Journal*. 1982. Oct. "All the Sizzle... None of the Steak." Also in New Age. 1982. Dec. Inside rear cover; Spot in Soyfoods. 1984. Summer. p. 43. "America's first tempeh burgers were developed by Pacific Tempeh and Soyfoods Unlimited." Shurtleff & Aoyagi. 1985. History of Tempeh. p. 53. America's first non-fried tempeh burger, sold vacuum packaged.

5951. *Sunset* (*Menlo Park, California*). 1981. It's tofu, breaded and fried. 167:160-61. Sept.

• ***Summary:*** "Fried fish? No, it's low-cal tofu, fried crispy, served with a choice of [three] sauces." Teriyaki sauce, cocktail sauce, or caper sauce. The breading is done with Japanese panco. Tofu is described as coming in "blocks." A recipe and photo of it are given.

5952. **Product Name:** Westbrae Natural Johsen Shoyu Tamari
Manufacturer's Name: Westbrae Natural Foods (Importer) Made in Japan.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: 415-658-7518.
Date of Introduction: 1981. September.
Ingredients: Wheat, whole soybeans, salt.
Wt/Vol., Packaging, Price: 12.7 fluid oz glass bottle.
How Stored: Shelf stable.



New Product–Documentation: Ad in East West Journal. 1981. Sept. Inside rear cover. "Soy sauce made complicated. Why it takes 18 months to brew Westbrae tamari."

Ad in Macromuse. 1986. Summer. p. 5. "Westbrae's Johsen Shoyu is the *real* shoyu.

"Recently, some big Japanese companies that have never brewed soy sauce before have begun to sell in the Natural Food Markets. You may be able to buy some soy sauces for less per tin than Westbrae's Johsen shoyu." At Johsen, shoyu is aged for 2 full summers in Japanese cedar kegs.



Photos show: (1) Westbrae tamari and shoyu. (2) Various Westbrae soy sauce products.

5953. *New York Times*. 1981. Kikkoman soy sauce even on catfish? Concern sees many uses. Oct. 10. p. 33.

• ***Summary:*** Kikkoman is now the No. 1 brand of soy sauce in the United States (with about 40-45% of the U.S. market), ahead of its two main domestic rivals, La Choy (a product of Beatrice Foods) and Chun King (made by the Reynolds Tobacco Co.).

Before Kikkoman arrived in the U.S. market in about 1956, soy sauce was sold primarily as a seasoning for Oriental foods. But since that time, Japan's largest and best-known maker of soy sauce "has marketed its tart, sweet and salty sauce as all-purpose and all American."

The result has been truly remarkable. With patience and care, Kikkoman has steadily increased its market share. "Sales in this country have grown an average of 15 to 20 percent a year for the past five years, reaching $27 million of the $100 million market in the fiscal year ended March 1981."

In 1956, when Kikkoman first began to advertise seriously here, the soy sauce market in America amounted to only about $1 million a year. On 21 Jan. 1972 Kikkoman held the groundbreaking ceremony for its new plant in Walworth, Wisconsin; that year "the annual per capita consumption of soy sauce in the United States was one tablespoon or less." In Japan today, annual per capita consumption of soy sauce is 340 ounces a year–compared with 5 ounces in the USA–according to Malcolm W. Pennington, a director of Kikkoman's American production.

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subsidiary.

Kikkoman introduced a type of soy sauce that was new to most Americans; it was naturally fermented from soybeans and wheat. "Many so-called soy sauce products [such as La Choy and Chun King] are chemically manufactured sauces that use an amino acid base and artificial flavorings."

5954. Shurtleff, William; Aoyagi, Akiko. 1981. History of major U.S. soya research centers. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 24 p. Oct. 12. Unpublished typescript.
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction. University of Illinois and INTSOY: Home Economics Department's work (in the 1930's, 1940-1961, and 1974-1981), Food Science Department (1955-1981), International Soybean Program (INTSOY) founded July 1973, large number of talented faculty made the Univ. of Illinois one of the world's top soy research centers. Iowa State University. Cornell University: First work with soy 1883, first soyfoods work in 1927 (soymilk thesis by Y.T. Chiu), one of leading centers of U.S. soyfoods research during World War II (see chapter on Clive and Jeanette McCay), rebirth of interest in soyfoods in late 1950's, 1960 paper on tempeh, soymilk work 1963-1980, other soyfoods studied, arrival of Dr. Van Veen in 1962 (had studied tempeh since 1932, had lived in Indonesia, and had a lifelong interest in tempeh), renewed program of soybean development and production initiated in New York state in 1964. USDA Northern Regional Research Center (NRRC): Originated with 1929 USDA soybean lab in Ohio, 1936 soybean lab in Urbana, IL, transferred to Peoria, IL, 1942, expanded research on food uses of soybeans and soy oil, fermentation division headed by Langlykke, work on soy sauce, life of Dr. A.K. Smith, at NRRC from 1942-1964, arrival of Drs. Watanabe and Shibasaki. Smith one of first American researchers to realize the potential of tofu, work with miso, 1960 arrival of respected Indonesian microbiologist Ko Swan Djien, work on tempeh. NRRC hosted 2 of first major conferences on soy protein foods in 1961 and 1966, sponsorship of overseas contract work, expansion of research in 1960's, soy flour extrusion, Rackis' work with oligosaccharides (flatulence-causing factor in soybeans), life of Dr. C.W. Hesseltine, 1962 arrival of Dr. H.L. Wang at fermentation lab, Mustakas' studies on soymilk, NRRC's interest in soyfoods steadily growing, legitimizes soyfoods to people in U.S. and around the world. INTSOY. Founding, 5 basic objectives, main accomplishments with soybeans, main accomplishments with soyfoods. Address: Lafayette, California. Phone: 415-283-2991.

5955. Hall, Lynn. 1981. Ed Neel: A genius in designing. *Archbold Buckeye (Archbold, Ohio)*. Oct. 21.
• ***Summary:*** Ed Neel has been with La Choy Food Products for 58 years--since 1923. That year he arrived in Detroit, having bummed around the country, been a sailor, and done odd jobs. Seven men had recently purchased a business that produced and sold bean sprouts to produce stores throughout Detroit. The sprouts were grown in typical galvanized washtubs. The new owners rented a building on Schoolcraft Road and opened shop. In 1942 La Choy closed shop in Detroit [Michigan]. World War II was under way and Chinese food was not essential to the war effort. Neel and six others moved the business to Archbold, Ohio and started canning tomatoes. A photo shows Ed Neel at his drawing board. Address: Buckeye Staff Writer.

5956. Sass, Lorna J. 1981. More budget-conscious Americans are hitting the soy--its not just sauce. *Chicago Tribune*. Oct. 29. p. N_B19.
• ***Summary:*** This article first appeared as: Sass, Lorna J. 1981. "Soy foods: Versatile, cheap and on the rise." *New York Times*. Aug. 12. p. C1, C6.

5957. Aidoo, K.E.; Hendry, R.; Wood, B.J.B. 1981. Amyloglucosidase and maltase activities in soy sauce fermentations. *J. of Food Technology* 16(5):543-48. Oct. [22 ref]
• ***Summary:*** "Despite the problems associated with distinguishing between two enzyme activities in a complex mixture, it seems clear that both are present and that maltase increases in concentration throughout the fermentation whereas amyloglucosidase concentrations declined in fermentations conducted for more than 64 hr." Address: 1. Present address: Dep. of Biological Sciences, Univ. of Science & Technology, Kumasi, Ghana. 2. Dep. of Chemical & Process Engineering. 3. Dep. of Applied Microbiology, Univ. of Strathclyde, Royal College Building, George St., Glasgow G1 1XW, Scotland.

5958. Impoolsup, Attawut; Bhumiratana, Amaret; Flegel, Timothy W. 1981. Isolation of alkaline and neutral proteases from *Aspergillus flavus* var. *columnaris*, a soy sauce koji mold. *Applied and Environmental Microbiology* 42(4):619-28. Oct. [27 ref]
• ***Summary:*** This variety of *Aspergillus* mold was found to produce two major proteases, one alkaline and one neutral; both appeared in the late phase of fungal growth. These results lead to a recommendation that koji (soybeans covered with mold growth) be transferred to the salt brine in 2 days rather than the traditional 4 to 7 days. This more than doubles the amount of koji that can be produced per unit of time. Address: Dep. of Microbiology, Faculty of Science, Mahidol Univ., Rama VI Road, Bangkok 4, Thailand.

5959. Lima N.V. 1981. Lima natural foods pricelist. Lima Foods, Edgar Gevaertdreef 10, B-9830 Sint-Martens-Latem, Belgium. 12 p. Catalog. 30 cm. [Eng]
• ***Summary:*** Lima has been making organic, unrefined

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foods, without additives, for 20 years. Organic quality is guaranteed. Contents: Whole cereal grains. Stone-ground whole flours (incl. soya flour, 500 gm). Whole pulses (incl. soya, and azuki, each 500 gm). Coffee substitutes (incl. Yannoh with azuki, Dandelio [dandelion root], roasted barley, and chicory). Lima specialties (incl. Kokoh with azuki flour, Seitanpast [Vegetable spread with seitan]). Oriental specialties: Tamari-shoyu (from soya and wheat), Tamari, Hatcho miso, Barley miso, rice miso, instant miso soup (with dried vegetables), Kozou (kuzu), Mebosi (umeboshi), Tekka (natural seasoning with miso). Seaweeds. Unrefined oils. Sea salt. Vegetable protein products: Seitan (vegetable protein concentrate, 150 gm jar), Seitan goulash (seitan with vegetables), Soya filtrate (soyamilk), Tofu (curdled soya filtrate). Concentrated soups (incl. azuki soup). Books (incl. 2 cookbooks by Anette Gevaert). Address: Lima Foods, Edgar Gevaertdreef 10, Sint-Martens-Latem 9830, Belgium.

5960. Miller, Roger W. 1981. The case for moderating sodium consumption. *FDA Consumer.* Oct. p. 9-13. Reprinted in Sourcebook on Food and Nutrition, 3rd ed. 1982. p. 140-43.

5961. Soy Plant (The). 1981. An all-soy deli: Tofu, miso, soymilk, tamari, tempeh (Ad). *Ann Arbor Calendar* (*Michigan*). Oct. p. 21.
• ***Summary:*** At the top of this small ad (2½ by 1.75 inches) is the collective's logo. At the bottom: "Present this ad for a 10% discount on listed items through 10/31/81. Limit one per customer." Address: 211 East Ann St., Ann Arbor, Michigan 48104. Phone: 663-0500.

5962. Gevaert, Pierre. 1981. Re: Pioneering production of miso and soy sauce in Europe. Letter to William Shurtleff at Soyfoods Center, Nov. 19--in reply to inquiry. 1 p.
• ***Summary:*** Lima Foods first began commercial production of miso and soy sauce in 1959. They stopped in 1966 and began again in early 1981 (3-1-81) at Lima Andiran in France. They also plan to make shoyu there in early 1982. They were the first company in Europe that they know of to make these two products. They now make 1,200 kg/month of barley miso and 800 liters/month of shoyu. All ingredients are organically grown. Address: Lima Foods, Edgar Gevaertdreef 10, Sint-Martens-Latem 9830, Belgium. Phone: 09-52-4176.

5963. Spencer, Colin. 1981. Slip out of the gastronomic strait jacket with a large leek. *Guardian* (*England*). Nov. 20. p. 12.
• ***Summary:*** There are now more brands of naturally fermented soy sauce on the market. "Apart from those called shoyu or tamari, there is a Japanese brand called Kikkoman. All of these make excellent sauces."

A recipe for Cauliflower pie calls for "2 tablespoons natural fermented soy sauce."

5964. Ching, Frank. 1981. Chinese ask help from La Choy to can fruits, vegetables: Another Beatrice Foods unit, Tropicana, will provide orange juice know-how. *Wall Street Journal.* Nov. 23. p. 31.
• ***Summary:*** Beatrice Foods Co. of Chicago, Illinois, has formed a joint venture with the Canton municipal government to produce canned fruits and vegetables, plus citrus juices and soft drinks, for both Chinese and export markets. Beatrice owns La Choy, the largest U.S. processor of Oriental foods.

5965. **Product Name:** Seitan.
Manufacturer's Name: Grain Country.
Manufacturer's Address: 3448 30th St., San Diego, California 92104. Phone: 52-667-61005.
Date of Introduction: 1981 November.
How Stored: Refrigerated.
New Product–Documentation: Talk with Ygnacio Beamonte at the East West Center in Ensenada, Baja California, Mexico. 1992. July 13. Ygnacio's brother, Arturo, started making seitan at the East West Center in Ensenada in about 1984. Then he moved to Oregon, then in about 1986-87 moved to the East West Center in San Diego, where he took over as seitan maker from David Jackson (who now lives in Arizona). The East West Center in San Diego no longer exists. The East West Center in San Diego was born out of Roy Steevensz' East West Center in Los Angeles. Ygnacio thinks that initially David Jackson bought his seitan from Roy Steevensz in Los Angeles, then David started making his own seitan at the East West Center in San Diego. Jim Brefield also made seitan to help David.

Talk with David Jackson of Arizona. 1993. Dec. 8. He learned how to make seitan from Roy Steevensz in Los Angeles in about 1978-79. On 2 Oct. 1981 David opened Grain Country in San Diego. He started making seitan there for Thanksgiving, in either Nov. 1981 or Nov. 1982. Soon up to 100 people were coming for Thanksgiving dinners. Soon it was sold at the Grain Country natural- and macrobiotic foods retail store. David was the first seitan maker, then he trained other people to make it--probably starting with Jim Brefield, who was one of David's assistants, who became the next seitan maker. Ygnacio Beamonte did make some seitan with Jim but he never really stayed in San Diego. In 1989 David sold the Grain Country complex in San Diego to a man named Ira Green. He continued to make seitan until he went bankrupt in 1991.

5966. Suzuki, Tsuguyoshi; Okazaki, M.; Kashiwazaki, H.; Moriyama, M.; Takemoto, T-I. 1981. Changing food consumption of Japanese immigrants in the lowland of Bolivia. *Ecology of Food and Nutrition* 11(2) 103-16. Nov. [13 ref. Eng]

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• ***Summary:*** During a 3-day period in July and August 1975, dietary records of 34 households of Japanese immigrants in the lowlands of Bolivia were analyzed for the amounts and types of food consumed. The colony of Japanese immigrants, *Colonia San Juan de Yapacani*, was established in 1955 on the basis of a governmental agreement between Bolivia and Japan. From 1955 until 1974 a total of 297 households, including 1,649 individuals, immigrated into the colony, the majority came during the first ten years. Among the items consumed were soybean products (not including soy sauce; consumed by 79.4% of the households), *tsukudani* (small fish cooked in soy sauce), wakame, nori, and kombu (3 sea vegetables), *furikake* (a seasoning containing nori), and azuki beans. "Among legumes, soybeans occupied the top position even after excluding the consumption of soybean sauce. The usual preparation was miso (soybean paste fermented and salted) and tofu (soybean curd), raw or fried, which the colonists could buy from a tofu shop in the colony."

Adzuki beans were boiled with glutinous rice and served at celebrations. "Immigrants procured the seed from Japan or Brazil and cultivated the beans." Also served was *kinisuba* (a sweet adzuki bean cake). One of the most widely used seasonings was soybean sauce, used in 85.3% of the households. Address: 1. Dep. of Human Ecology, School of Health Sciences, The Univ. of Tokyo, Tokyo, Japan.

5967. Drake, Milan. 1981. Brief history of La Choy Foods (Interview). Conducted by William Shurtleff of Soyfoods Center, Dec. 2. 1 p. transcript. Followed by a letter.

• ***Summary:*** La Choy now sells two soy sauces: HVP and fermented. They purchased the fermented from Oriental Show-You Co. 15-20 years ago [i.e., about 1961-66]. He will try to get more exact information if Shurtleff will send him a list of questions.

Esta Keirn (phone 219-248-8742, of Columbia City, Indiana) travels a lot. He was with Oriental Show-You. He trained La Choy's present soy sauce man.

Milan does not know when La Choy first began marketing soy sauce. Show him a copy of 1947 bottle. Dale Pape (operations manager) or Ed Neel (who has been with the company for 55 years) would know. Ed, who is about 80, will answer my questions. One of the original namers of the company when they were in Detroit, Michigan, he is now a consultant and builds new equipment.

La Choy (two words) is the correct spelling.

Beatrice bought La Choy in 1943. Charles Smith bought out Ilhan New, the Smith was killed by lightning. Address: Director, Research and Development, La Choy.

5968. Keirn, Esta. 1981. History of Oriental Show-You Company in Columbia City, Indiana (Interview). *SoyaScan Notes*. Dec. 5. Conducted by William Shurtleff of Soyfoods Center. [1 ref]

• ***Summary:*** The Oriental Show-You Company began production of Japanese-style fermented soy sauce (shoyu) in Columbia City, Indiana, in 1924. The company had been started in 1918 in Detroit, Michigan, by Shinzo Ohki, a Japanese man, who began by importing shoyu and tea from Japan. In 1922 Mr. Ohki went to Japan to learn the method for making shoyu, then late that year he moved his business to Columbia City and by 1924 was making shoyu, along with mung bean sprouts, Chow Mein noodles, Chop Suey, and Jigg's Corn Beef and Cabbage. The company was quite small, making about 12,000 gallons of shoyu a year; this was sold mostly in the Midwest, and only east of the Mississippi River. In 1932 Mr. Esta Keirn joined the company and soon became production manager. In 1946 the company published a 15-page booklet titled "Oriental Recipes," showing show to use shoyu. In 1963 [sic, 1943] Beatrice Foods (which had sold La Choy HVP soy sauce since the early 1930s) acquired the company and Mr. Keirn stayed on to supervise production of Beatrice's first fermented shoyu. Beatrice still makes a fermented shoyu.

The only other early maker of shoyu that Keirn knows of was a Japanese man in San Francisco who started in about 1945-46. Keirn talked with him, obtained a sample of his shoyu, and analyzed it. Keirn heard rumors of a little Chinese soy sauce producer in New York City but was never able to talk with him or to get a sample of his product. Keirn has no documents, articles, or price lists. Address: 401 Catherine Ave., Columbia City, Indiana 46725. Phone: 219-248-8742.

5969. Drake, Milan. 1981. Re: La Choy soy sauce. Letter to William Shurtleff at Soyfoods Center, Dec. 8. 1 p. + 2 p. of labels and recipes. Typed, with signature on letterhead. Preceded by an interview on Dec. 2.

• ***Summary:*** 1. Ed Neel says the first soy sauce bottled by La Choy was definitely hydrolyzed. He recalls that they bottled it pretty much as they received it.

2. Ed Neel recalls that Staley and Huron Milling were the original suppliers of HVP to La Choy.

3. La Choy did not manufacture a fermented soy sauce until after they purchased Oriental Show-You Co. in 1963–says Paul Sigo.

4. La Choy now distributes 2 types of soy sauce: La Choy Soy Sauce (made with HVP) and Oriental Soy Sauce (fermented). Of these two, the HVP product accounts for about 85-90% of all soy sauce sales. Labels for both products are enclosed. Ingredients in the HVP sauce are: Water, protein extracts from soy beans, salt, corn syrup, and caramel color. The fermented product also appears to contain some HVP.

Accompanying this typed letter from Milan Drake is a questionnaire from William Shurtleff on Soyfoods Center letterhead dated 2 Dec. 1981. It contains seven questions, with the answers written in by hand.

Milan does not know when La Choy first began making or marketing soy sauce. Ed Neel thinks it was 1922 or

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maybe 1923. A document indicates that by 1922 they were importing a soy sauce from China. In Sept. 1944 La Choy soy sauce was advertised in *Soybean Digest*.

La Choy started as follows: Ilhan New (a Korean man) and Charles Smith attended the University of Michigan together. Both felt there was a market for Oriental foods in the area, so they started the company in 1927 in Detroit, but soon expanded. They hired Ed Neel and expanded more. During World War II they were unable to obtain cans, so they moved the company to Archbold, Ohio, then after the war went back to Oriental Foods. Smith bought out Mr. New, then Smith was killed by lightning. Beatrice bought the company in 1943. Address: Director, Research & Development, La Choy Food Products, 901 Stryker Rd., Archbold, Ohio 43502. Phone: 419-445-8015

5970. Burns, Ken. 1981. Re: George Ohsawa and a brief history of macrobiotics in America. Letter to William Shurtleff at Soyfoods Center, Dec. 9–in reply to inquiry. 7 p. Typed, with signature. [1 ref]

• ***Summary:*** An excellent, in-depth history by a very knowledgeable source, who occasionally teaches a course in Boston on the history of macrobiotics in the USA. With numerous fond personal recollections and character sketch of Ohsawa. 1959 Dec.–Ohsawa first visited the USA. 1960 Jan.–He published, in mimeograph form, his astonishing book *Zen Macrobiotics* in English in New York City. "Although not in great detail, here he introduced miso, tamari, and tofu to the general public. The first two especially quickly become essential ingredients in the diet of almost all macrobiotic people in the US.

"During January, February, and March [1960] he lectured extensively at the Buddhist Academy in New York City. He returned to the US in July and lectured at the First American Summer Camp on Long Island daily for two months.

"The Second American Summer Camp was held in July and August of 1961. I am not sure whether he was present or not. This was in Wortsboro, New York. In that year also, thirteen macrobiotic families left New York and moved to Chico, California on his advice. The next year, 1962, they founded the first American macrobiotic food distribution and processing center in this country.

"In 1963, in the summer he came to the US again and lectured in Boston, NYC, and at the Chico Summer Camp.

"In 1964, he lectured at the Big Sur Summer Camp.

"In 1965, he lectured at Mayoro Lodge near Pulga, California.

"In 1966, on April 24th [or 23rd] he died in Japan.

"All in all, George Ohsawa visited this country either five or six times, each time lecturing, and speaking to the people individually without rest. He was ceaselessly active. I have heard many anecdotes concerning him during that period. As best I can determine, his affect on people was quite simply shattering–they had never seen anything like it.

"According to Madame Ogawa (who spoke in great and loving detail of him at the 1981 French Meadows Summer Camp) he was a very sharp dresser and had quite an eye for beauty in the female of the species. She was so obviously still in love with this 'terrible man.'

"Jacques DeLangre... never tires of telling about the time when they were descending the mountain after a long and intensely yangizing summer camp. Their car rounded a bend and there!, suddenly!, was a huge patch of luscious juicy *blackberries!* The car as though it had a mind of its own, screeched to a halt, all the doors flew open, and all the passengers were catapulted into the middle of that patch. It would be hard to imagine a clearer, cleaner-cut example of the attraction of yang to yin. Their ecstatic reverie was broken, a few moments later, by the sound of another car coming around the bend. 'Oh my God, it's Ohsawa himself, what will he say?' (In those days people were, understandably, a little naive in their application of yin and yang.) Well, that second car did just exactly what the first one had done–the screeching halt, the doors flying open, and of a sudden there was George Ohsawa right in the middle of that patch too, crying out in his basso profundo voice, 'Oh blackberries, they are sooo delicious!'

"That voice–possibly there is the key to understanding Ohsawa's impact in this country; I didn't personally meet him, he died about a month after I began macrobiotics in 1966. But I have heard him on many tapes, poorly-recorded as most of than were. And I have spoken to others who did know him personally, and sooner or later they get around to mentioning his voice. Peter Magnusson here in Boston describes it as the kind of voice that rattled the windows. I have done a course here in Boston I call 'The Healing Power of the Spoken Word;' and for that course I have listened to all the recordings of the great speakers of this era that I can get my hands on–Kennedy, Churchill, Roosevelt, William Jennings Bryan, John L. Lewis, etc. Probably the best orator in the world today (or was anyway, I haven't heard him lately) is Fidel Castro. His is a warm, rich, full voice, capable of a startling range of thoroughly human emotions–from the righteous indignation and anger of an oppressed people through endless shades and nuances to a profoundly warm and compassionate voice that might be that of your very best friend. Take that voice in account and you can understand Castro's success against seemingly insurmountable odds in Cuba. Well, I can tell you of an even better voice–that of Ohsawa. Peter Magnusson goes on to say that when he spoke it seemed as if the very world itself was speaking. As I have said above, his was a profoundly rich, deep voice, ranging from bass to baritone. But at the same time it was very delicate, sensitive, and poised, as ready to go up as down, as ready to go left as right–flexible! But the one quality that his voice had that I have never heard equaled I can sum up with one adjective–Vibrant.

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"Probably this is not the kind of material you can use in your book, but I have taken a lot of time here on it anyway. The reason is that all the discussions I have heard about Ohsawa and his impact on this country have centered on what he said and not how he said it. Otherwise, how are we to explain how he was able to inspire so many people, along than Michio and Aveline Kushi, Herman and Cornellia Aihara to literally give up everything and come to a strange land to struggle against apparently insurmountable odds. Because that's what they did, arriving here penniless, operating on a wing and a prayer so to speak. And it is to them that we must go in the next chapter of this little story."

Note: People were also attracted to the great sense of happiness, vitality, love of life (*joie de vivre*), and purpose that Ohsawa radiated. Continued. Address: Boston, Massachusetts.

5971. Hoang, Van Chi. 1981. Re: Vietnamese soy sauce, xi dau, and nuoc tuong. Questions answered on Soyfoods Center letterhead (dated 9 Dec. 1981) and returned to SC. 1 p. Plus 2 enclosures.

• ***Summary:*** Upon receiving Mr. Hoang's answers by mail, Shurtleff called him on 6 March 6 1982 to ask for clarification on some points. The two sets of answers are merged below.

Xi dau (pronounced "si zao") is the Vietnamese term for *siyu* or black soy sauce served mostly in Chinese restaurants in Vietnam. It is made in Vietnam, but only by Chinese, in both North- and South Vietnam. It is exposed to air for many months to make it dark.

Nuoc Tuong (pronounced "Nuc Tung"–"Nuoc means "liquid") is the water in which soybeans are soaked, typically for about 9 days, but sometimes as long as 30 days. This soak water (also called "soybean self-autolysis water") is removed because otherwise (many believe) it would lower the quality of the finished Tuong. The soak water contains some soluble soybean nutrients and is pale yellow to clear in color. The Japanese discard this water, but some Vietnamese add salt and use it for pickling eggplants, etc.

There is no filtered soy sauce in Vietnam. Of the soy "sauces" made in Vietnam, about 60% is tuong cuda (ground jiang) and 40% is tuong ban (not ground; made in the village of ban). The origin of these two fermented Vietnamese soy products is unknown, but Mr. Hoang suspects they are of ancient origin. Mahayana Buddhists must be vegetarian. Buddhism went to Vietnam (from India) before it went to China, because Vietnam was an international port, trading with India. In about the 3rd century AD Buddhist monks came to Vietnam and spread Buddhism. They ate tofu and soy sauce.

What percent salt (sodium chloride) exists in your finished tuong? 10% in Tuong Cu Da for Vietnamese consumers. 6% in Bodhi Sauce for those who follow a low-salt diet.

In Vietnam are there any traditional soy sauces that have the liquid separated from the solids like Japanese soy sauce? If so, what are they called? Ans: Yes, Tuong Ban; it is usually used for cooking and is made in the Ban village.

One of the enclosures is from the International Register of Profiles. Born on 1 Oct. 1915 in Thanh-hoa province in Vietnam, Hoang Van Chi descended from a long line of Confucian scholars. He attended the best universities in Vietnam (1928-1940) earning a Baccalaureate in mathematics and another degree in physics, chemistry, and biology. He studied Oriental philosophies with a critical and non-dogmatic mind. Like his father and grandfather, he persistently opposed the French colonial rule. In 1940 he married Le Han Phan. In 1945 he joined the resistance and served the Ho Chi Minh government in many high offices, including Director of the National Mint. In 1948 he won an award for his brilliant work from Ho Chi Minh. But in 1955 he fled Saigon when the regime turned towards a full Communist dictatorship. He went into voluntary exile in Europe, settling in Paris from 1960-65 where he wrote his book "From Colonialism to Communism." Address: Bowie, Maryland.

5972. Wood, Brian J.B. 1981. Re: Dr. Yong Fook-Min in Singapore. Soy sauce in Scotland. Letter to William Shurtleff at Soyfoods Center, Dec. 14–in reply to inquiry. 2 p. Typed, with signature on letterhead.
Address: Centre for Industrial Innovation, Univ. of Strathclyde, 100 Montrose St., Glasgow, G4 G4 0LZ, Scotland. Phone: 041-552 4400.

5973. Jootla, Susan Elbaum. 1981. Re: Making miso and tofu at home in India. Letter to William Shurtleff at Soyfoods Center, Dec. 15. 2 p. Typed, with signature.

• ***Summary:*** She and her husband have used up their first batch of homemade white miso and are now consuming a great pot of modified red miso. She thanks William and Akiko Shurtleff for the guidance their Book of Miso and Book of Tofu have given them in making these soybean products over the past few years.

She gives details of their experiments making tofu and miso 7,000 feet up in India's western Himalayas. Her husband had been trying unsuccessfully ever since he worked in Indonesia in the 1950s. Finally a friend who worked in a Florida health food store sent them The Book of Tofu. Using Epsom salts and an electric blender they succeeded in making good tofu. Susan then wrote an article on making tofu in India for an Indian woman's magazine, which was published in the spring of 1979. She is working on another longer article.

Having conquered tofu, she turned to miso. The big problem was getting koji starter, which she eventually obtained from Kikkoman in Tokyo.

Susan is now thinking of making tofu commercially

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on a small scale to cater to the interest evinced by several boarding houses in town. There are already a few soyamilk producers in India. In India, Susan uses tofu as "a substitute for paneer, which is the fresh cheese from milk, drained and pressed briefly to a compact solid texture. Tofu can be used in curries and pakoras (a very common snack, spicy fritters) in almost the same way as paneer is traditionally prepared, thus decreasing the problem of tofu's novel taste.

"We have also found that okara can be incorporated into dough for chapaties [chapatis], in equal proportions to the wholewheat flour. When the dough is seasoned with salt and ground cumin and coriander seeds, and baked as a chapati on a cast iron griddle, the resultant thick bread should be attractive for Indian cooks who begin to make tofu but are reluctant to waste the residue.

"As you can see, we are tofu enthusiasts and are trying to spread an appreciation of soyfoods in this country in a small way. So far, texturized soy protein is the only product that seems to have caught on here." Doubtless, this is because it does not require refrigeration, is not affected by heat or moisture, and is a useful and inexpensive meal stretcher.

Note: As of April 2008, Susan has long practiced Buddhist meditation and is the author of many related books. Google "Susan Elbaum Jootle" and you will see. Address: Jeet Villa, Dalhousie, H.P. [Himchal Pradesh], India.

5974. Earle, Steve. 1981. Re: Origin of the term "tamari" and history of San-Jirushi. Letter to William Shurtleff at Soyfoods Center, Dec. 19. 2 p. Typed, with signature on letterhead. [2 ref]
Address: San-Jirushi Corp., 1 Meisei-dori, Kuwana, Mie 511, Japan. Phone: (0594) 22-3333.

5975. Hughes Markets. 1981. Christmas (Ad). *Los Angeles Times*. Dec. 21. p. H19.
• ***Summary:*** The section titled "Foods of the Orient" includes: Kikkoman soy sauce, gallon can–$4.35. Fresh age, Hinode 1.8 oz.–83¢. Kikkoman 10 oz. Tempura Sauce–95¢. JFC soy bean flour 7 oz. Kinako–69¢. Hime black [soy] beans 6.35 oz., Kuromame amani–99¢. Wheat cake [sic, dried frozen tofu] 3.5 oz. Misuzu Koya Dofu–$1.19.

Also includes: Umeya frozen Mochi. Kokuho rice. Hime rolled kelp–Honporo Maki. Hime dried seaweed–Sushinori [Sushi nori]. Kikkoman sweet cooking sake–Aji Mirin. Ozeki sake. Bamboo tips. Dried gourd strip–Kezuka Kampyo [Kanpyo]. Rice vinegar–Mitsukan Su. Sliced pickled ginger–Miyako Kizami Shoga. Dried mushrooms–Miyako Shiitake. M.S.G.–Asahi Aji.

Note: Hughes now has 21 stores in the greater Los Angeles area–all open 24 hours a day. "We welcome food stamp shoppers."

5976. Yokotsuka, T. 1981. Re: Earliest known use of the word *chiang-yu*. Letter to William Shurtleff at Soyfoods Center, Dec. 22. 1 p. Handwritten on letterhead. [1 ref]



• ***Summary:*** "As far as I know the first or earliest references to *chiang-yu* may be in Japan. It is in the *Ekirinbon-setsuyoshu* publicised in 1597 in Japan." Address: Senior Vice President, Kikkoman Corp., 339 Noda, Noda-shi, Chiba-ken 278, Japan. Phone: 0471 (24) 1111.

5977. Aishima, T. 1981. Glass capillary chromatographic profiles of soy sauce aroma correlated with sensory assessment. *Agricultural and Biological Chemistry* 45(12):2847-53. Dec. [22 ref]
Address: Noda Inst. for Scientific Research, Noda-shi, Chiba 278, Japan.

5978. Hoang, Van Chi. 1981. How to make Tuong (Vietnamese unfiltered, ground soy sauce) (Interview). Conducted by William Shurtleff of Soyfoods Center. Dec. 1 p. transcript.
• ***Summary:*** 1. Prepare soybeans: Dehull 10 lb soybeans with a mill and remove hulls with a seed cleaner. Roast the cotyledons at 450°F (232°C) for 15 minutes in any type of roaster. Pressure cook the roasted cotyledons with adequate water at 5 lb pressure for 30 minutes. Transfer the contents of the cooker (beans and water) into a plastic 40 liter (10.6 gallon) container, place in a warm room (80°F or 26.5°C) for 10 days; this enables the soybeans to undergo auto-hydrolysis. Each day skim off any surface foam.

2. Make glutinous rice koji: On the 3rd day of the soybean fermentation, soak 10 lb of glutinous rice overnight. Drain and steam at atmospheric pressure for 30 minutes, then cool to body temperature. Mix koji starter (*Aspergillus oryzae* mold spores propagated on glutinous rice) with water, sprinkle over rice, then drain on a perforated tray. Transfer inoculated rice into shallow wooden trays (each 10 by 15 by 4 inches deep) and place them in a warm koji room (80°F or 26.5°C) for 6 days. Do not stir during this time. Finally the mold-fermented rice koji (*moc*) will be floating in a glucose syrup. Mix the koji with 7.5 lb salt, grind the mixture in a mill, then transfer ground mixture to a plastic vat and leave for 2 days to stop the fermentation.

3. Combine and ferment: Place the fermented soybeans and their water in a Hobart VCM (Vertical Cutter Mixer) and blend until smooth. Mix in the ground salted koji and allow the mixture to stand at room temperature for 3 days. Bottle and cap without heating. Use as a dipping sauce for fresh or fried tofu, or as a pickling medium. In Vietnam, Tuong is also used as a dipping sauce for roast beef, as a cooking sauce for fish, or as a pickling sauce for pork.

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Hoang adds: There are less than 200,000 Vietnamese in the USA, and about the same number in France. Traditionally, soy sauce was made and used mostly in North Vietnam. But for the last 30 years (i.e., since about 1951) there has been no soy sauce in North Vietnam due to two factors: (1) The shortage of soybeans and rice. (2) The fact that those who formerly made it were classified as "landlords" by the Communist regime. Today in Vietnam people try to make it using peanut- or cottonseed presscake instead of soybeans. Address: Bowie, Maryland. Phone: (415) 253-1065.

5979. **Product Name:** Tofu.
Manufacturer's Name: Purist Foods.
Manufacturer's Address: 4100-A Ed Bluestein St., 105, Austin, TX 78721. Phone: 512-928-0191.
Date of Introduction: 1981, December.
New Product–Documentation: Soyfoods Center Computerized Mailing List. 1981, Dec. 8. Owner: Reed Murray. Talk with Allen Maurer, consultant. 1988, Oct. 12. Purist foods is still in business, run by Reed Murray. Address is now 6014 Techni-Center Dr., Suite 105, Austin, TX 78721. Phone: 512-928-0191. They also make Wheat Roast and Texas-Style Vegetarian Bar-B-Q from Gluten (both with only soy sauce and soy oil), plus White Mountain Premium Bulgarian Yogurt with Live Acidophilus. Purist Foods started as a yogurt company in 1979. They added tofu in 1981, when they bought out a small tofu company in Austin named "Soyfoods Texas."

5980. Soyfoods Center, Soycrafters Assn. of North America. 1981. Per capita use of soyfoods grows to nearly 9 lbs. in U.S. *Vegetarian Times* No. 52, Dec., p. 6.
• ***Summary:*** Based on a Sept. 1981 news release copyrighted by the Soyfoods Center and the Soycrafters Assoc. of North America, this summary of a market study gives for each major soyfood product the number of manufacturers in the USA, Canada, and worldwide. The tons/year of raw soybeans used. And (in the USA only) the tons of food produced, wholesale value, retail value, and number of employees.

In the USA, the number of manufacturers, tons of product produced, and retail value in million dollars are as follows for low technology, traditional: Tofu and tofu products (154, 22,700, $50.4), tempeh (32, 494, $1.78), soymilk and soymilk products (14, 148,000, $118.0), soy sauce, shoyu & tamari (15, 54,837, $203.0), soynuts and soynut butter (12, 2,750, $4.6), miso (10, 2,000, $4.8), soy sprouts (5, 360, $0.25), etc. Subtotals for low-tech (284 manufacturers, 231,305 tons produced, $392.25 retail value).

For high-technology, modern: Soy flour & grits, defatted (12, 400,000, $190.4), textured, extruded soy flour (TSP/TVP) (2, 200,000, $179.2), soy protein concentrates (3, 45,000, $56.7), soy protein isolates (3, 45,000, $126.0), meat analogs (secondary products) (6, 20,000, $55,000). Subtotals for high-tech (26 manufacturers, 710,000 tons produced, $615.6 retail value). Total low and high tech: 310 manufacturers, 941,305 tons produced, and $1,007.85 million dollars.

Also published in New Age (Jan. 1982, p. 17) under the title "Tofu Takes Over."

5981. **Product Name:** Soylami (Ready-to-Eat Sausage-Shaped Meatless Salami Made from Tempeh; Vacuum Packed).
Manufacturer's Name: 21st Century Foods.
Manufacturer's Address: Jamaica Plain, Massachusetts.
Date of Introduction: 1981.
Ingredients: Organic soybeans, whole wheat, sesame seeds, corn oil, tamari, herbs, spices, tempeh starter, vinegar.
Wt/Vol., Packaging, Price: 6 oz cylinder, vacuum packed.
How Stored: Refrigerated.
New Product–Documentation: Labels (two), undated. "Pre-cooked. Ready to Eat Snack or Hors D'Oeuvre." Spot in Soyfoods. 1983, Summer, p. 52. "One Soylami on Rye, Please." Ready to eat. Label. 1987. 3.5 by 6 inches. Red and white on yellow-orange. "Made from Homestyle Tempeh. Ready to Eat Snack or Hors D'Oeuvre. Serving Suggestion: Cut into thin slices. Serve warm or cold. Combine with mustard or sauerkraut if desired." Talk with Rudy Canale. 1988, Sept. 13. One of their earliest products, launched in 1981, this is still a popular item.

5982. Dronne, Yves. 1981. Le problème mondial du soja [The problem of soybean worldwide]. Paris: Institute National de la Recherche Agronomique. [Fre]*
• ***Summary:*** Gives details on Japanese consumption of industrially processed plant proteins (tons/year of defatted soybean meal equivalent): Unfermented: Tofu 84,200, Dried-frozen tofu 22,400, Other products, including texturized soy protein 87,800. Fermented: Soy sauce 173,000, miso 157,400, natto 55,200. Total: 580,000.

Concerning Japanese consumption of new "purified" protein in tons/year. In 1971/1977 total consumption was 27,300/44,000. Of this the amount made from soybeans was 15,900/17,000 and the amount made from wheat gluten was 11,400/27,000. As for the texture, the amount sold in the form of a powder was 17,400/19,600 and the amount sold in textured form was 9,600/24,400.

In 1977, of powdered products, the amount from soybeans was 9,500 (6,000 isolates and 3,500 concentrates) and from gluten 10,100. Of the textured products, the amount from soybeans was 7,500 (6,000 dry extruded, 1,500 moist, and no paste), whereas the amount from gluten was 16,900 (200 dry extruded, 12,000 moist, and 4,700 paste). Address: Paris, France.

5983. **Product Name:** Bible Burger, Tempeh Vegetarian

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Treat.
Manufacturer's Name: Garden of Eatin' (Formulator and Distributor).
Manufacturer's Address: 5300 Santa Monica Blvd., Los Angeles, CA 90029.
Date of Introduction: 1981.
Ingredients: Soy tempeh (organically grown soybeans, water, and tempeh culture), soy sauce, herbs, spices.
Wt/Vol., Packaging, Price: 6 oz (170 gm).
How Stored: Refrigerated or frozen.
New Product–Documentation: Manufacturer's catalog 1981, dated. Label. 1982, dated. "Steamed, not fried! No oil! No fat! No cholesterol! Tempeh at its best!"

5984. Hattori, Terumitsu. 1981. Re: Answers to questions about the history of shoyu. Letter to William Shurtleff at Soyfoods Center. 4 p.
Address: Kikkoman, San Francisco.

5985. Hoang, Van Chi. 1981. The Vietnamese and their favorite sauces. 7 p. Unpublished manuscript.
• ***Summary:*** Fish too small to be sold were made into a sauce called *nuoc mam*. Since the climate is much warmer in South Vietnam, fish were more abundant there than in the North. Also, because the *nuoc mam* manufacturing process is the action of an enzyme that exists in the stomach of the fish and the efficiency of that enzymic action depends on the average night temperature, *nuoc mam* produced in the South was of better quality. Unfortunately, neither *nuoc mam* nor soy sauce is produced in either parts of Vietnam. There is no more *nuoc mam* because there are no more fish.

The Vietnamese brand of soy sauce is called *tuong*. *Tuong* production has always been a cottage industry practiced in a few villages. Making koji, or *moc* in Vietnamese was the most difficult and tedious part of the soy sauce manufacturing process. *Tuong* disappeared from existence in North Vietnam after 1955 and in South Vietnam after 1975 due to 3 factors: 1. Shortage of food. 2. Shortage of rice. Since soybeans are considered a luxury because "they do not fill the stomach," peanut or cottonseed presscakes are suggested instead. 3. Manufacturing was limited to a few villages. The professional tuong-makers were better off than other villagers. Since manufacturing required a large courtyard, scores of porcelain jars and enough capital to store soybeans and sweet rice for many months, they were classified as exploiters and their houses and belongings were confiscated. Address: Bowie, Maryland.

5986. **Product Name:** [House Mabo-dofu Seasoning Sauce Mix]
Foreign Name: Hausu Maaboo-dôfu no Moto.
Manufacturer's Name: House Shokuhin Kogyo.
Manufacturer's Address: Japan.
Date of Introduction: 1981.
Ingredients: Sugar, sesame oil, spices, soy sauce, lard, starch, oyster sauce, salt, monosodium glutamate, soy bean paste, red pepper, beef extract, citric acid.
Wt/Vol., Packaging, Price: 7 oz (200 gm). In foil packet in paperboard box with full-color photo on cover.
How Stored: Shelf stable.
New Product–Documentation: Label in Japanese. Distributed in the USA by Nishimoto Trading Co., Los Angeles, CA 90058. Mix diced tofu with this sauce to make the popular Chinese recipe, Mabo-dofu.

5987. **Product Name:** Java Murni Kecap Manis (Sweet Indonesian Soy Sauce).
Manufacturer's Name: Indocon Div. of Indofoods, Inc.
Manufacturer's Address: Carlsbad, California.
Date of Introduction: 1981.
Ingredients: Fermented soy extract, water, molasses, salt, sesame seed, traditional blend of delicate spices.
Wt/Vol., Packaging, Price: 1 pint (16 fluid oz) bottle.
How Stored: Shelf stable.
New Product–Documentation: Label. 1981, undated. Black on white. "Made for Java Murni Ricetable Ingredients. No preservatives added. Serving suggestions."

5988. **Product Name:** Java Murni Tempeh Schnitzstick (Seasoned and Breaded Fried Tempeh).
Manufacturer's Name: Indocon Div. of Indofoods, Inc.
Manufacturer's Address: Carlsbad, California.
Date of Introduction: 1981.
Ingredients: Organic soybeans, organic unhulled [dehulled] sesame seeds, onions, soy sauce, garlic, vinegar, Rhizopus oligosporus, water, wheat flour, corn flake crumbs, soy oil.
Wt/Vol., Packaging, Price: 6 oz.
How Stored: Refrigerated.
Nutrition: Calories 72, protein 9 gm, carbohydrates 4.6 gm, fat 3.2 gm.
New Product–Documentation: Label. 1981, undated. Black on white.

5989. **Product Name:** Tofu?
Manufacturer's Name: Island Style Soybean Products Inc.
Manufacturer's Address: 94-137a Leoleo St. (WAIP), Honolulu, Oahu, Hawaii.
Date of Introduction: 1981.
New Product–Documentation: Honolulu City Directory. 1981. p. 275. Island Style Soybean Products, Inc. 94-137a Leoleo St. (WAIP), Honolulu. The name of the product is not given. Note: By 1984 a company by this same name is making tofu at a different address in Wahiawa.

5990. Java Murni. 1981. Vegetarian Menu. 4509 Adams St., Carlsbad, California.
• ***Summary:*** Includes many interesting tempeh and tofu dishes. Dec. 1981 ranking of best-sellers: 1. Tempeh treat

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(Tempeh braised in Indonesian soy and safflower oil) 2. Keringan tempeh. 3. Satay tempeh. 4. Tempeh kechap. 5. Tempeh malakka. 6. Sambal goreng tempeh.

Note: *Kechap* is Indonesian soy sauce. Address: Carlsbad, California. Phone: 434-4131.

5991. **Product Name:** [Seitan, and Seitan Goulash].
Foreign Name: Seitan, Seitan Goulash.
Manufacturer's Name: Lima Foods (Marketer-Distributor). Made in Belgium by Jonathan P.V.B.A.
Manufacturer's Address: Edgar Gevaertdreef 10, B-9830 Sint-Martens-Latem, Belgium.
Date of Introduction: 1981.
Ingredients: 11/91. Water, wheat*, soya*, tamari (soyasauce), kombu (seaweed), herbs. * = Organically grown.
Wt/Vol., Packaging, Price: 300 gm (10.5 oz) glass jar. Retails for $7.65 (11/91, California).
How Stored: Shelf stable; refrigerate after opening.
Nutrition: 15.7% vegetable protein.
New Product–Documentation: Lima N.V. 1981. Oct. Lima Natural Foods Pricelist. Vegetable protein products: Seitan (vegetable protein concentrate, 150 gm jar), Seitan goulash (seitan with vegetables).

Product with Label purchased from Berkeley Natural Grocery Co., California. 1991. Nov. 24. Made in Belgium. Imported in USA by Eden Foods. Label: 10 by 2.75 inches. Gummed paper. Red, dark brown, and yellow on tan. Illustration of yellow ears of wheat. "Vegetable protein preparation. Basic price: 34 German marks per kg. Use in soups together with cooked or stewed vegetables, in salads, on wholemeal bread, or simply fried in the pan. Use the cooking water to make a soup or sauce." Nature et Progres organic certification symbol. Note the high price.

Talk with then letter from Mark Callebert from Lima Foods of Belgium. 1992. April 23 and June 19. Jonathan P.V.B.A. started to make seitan in 1978. Not long thereafter, Lima contacted Jonathan in Belgium concerning seitan. In 1981, Lima began buying seitan from Jonathan, and selling it in bottles under the Lima brand. Mark started to work for Lima Foods on 1 Sept. 1975 and was working at Lima when Lima began selling the seitan made by Jonathan.

Lima acquired Jonathan P.V.B.A. on 22 April 1989. Today Jonathan still makes seitan (and tofu) at a plant in Kapellen, a small village near Antwerp in Belgium. The address is Antwerpsesteenweg 336, 2080–Kapellen, Belgium. Phone: 03/664.58.48.

5992. **Product Name:** [Mitsukan Ma-Bo Tofu Seasoning Mix].
Foreign Name: Mitsukan Ma-Bo Tôfu no Moto.
Manufacturer's Name: Nakano Vinegar Co. Ltd.
Manufacturer's Address: Japan.
Date of Introduction: 1981.
Ingredients: Dehydrated soy sauce, powdered miso, sugar, potato starch, salt, powdered chili paste, dehydrated chicken extract, dehydrated garlic, dehydrated ginger, dehydrated oyster extract, monosodium glutamate (to enhance flavor).
Wt/Vol., Packaging, Price: 1.89 oz (54 gm). 2 foil packets in paperboard box with color photo of recipe on front. $1.08.
How Stored: Shelf stable.
New Product–Documentation: Label in Japanese. Mix diced tofu with this sauce to make the popular Chinese recipe, Mabo-dofu. Recipe on back.

5993. **Product Name:** Ginger Soy Sauce.
Manufacturer's Name: New England Soy Dairy Inc. Tomsun Foods Inc. (Marketer).
Manufacturer's Address: 305 Wells St., Greenfield, MA 01301.
Date of Introduction: 1981.
New Product–Documentation: Poster. 1981. Introducing Soydairy. Naturally gourmet; Spot in Soyfoods. 1982. Winter. p. 56. "Oriental-style tofu condiments: Ginger soy sauce, five spice powder." Soya Bluebook. 1984. p. 76. Soya Bluebook. 1987. p. 92. Tomsun Foods International. Tomsun Ginger Soy Sauce.

5994. New England Soy Dairy, Inc. 1981. Introducing.. Soydairy. Naturally gourmet. Easy-to-use foods with a gourmet flair [Won-ton skins, egg roll wrappers, ginger soy sauce, five-spice powder] (Poster). 305 Wells St., Greenfield, MA 01301. 1 p. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.
Address: Greenfield, Massachusetts. Phone: 413-772-0746.

5995. **Product Name:** [Nikko-Mame Defatted Soybean Flakes for Shoyu and Miso, Sakae-Mame Soy Flour for Tofu, ProtFlour Soy Flour for Food and Milk Replacer, Nikoprotein High Protein for Food].
Manufacturer's Name: Nihon Koyu Co. Ltd.
Manufacturer's Address: No. 32 Bungocho, Higashi-ku, Osaka, Japan.
Date of Introduction: 1981.
New Product–Documentation: Soya Bluebook. 1981. p. 63.

5996. **Product Name:** [Nikko-Mame {Defatted Soybean Meal for Shoyu and Miso}, and Sakae-Mame {Soybean Meal for Tofu}].
Manufacturer's Name: Nikko Oil Mills Co. Ltd.
Manufacturer's Address: Kanda Ogawamachi 2-12, Chiyoda-ku, Tokyo, Japan.
Date of Introduction: 1981.
New Product–Documentation: Soya Bluebook. 1981. p. 63; 1982. p. 67, 76.

5997. **Product Name:** Tempeh Burger (with Miso).

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Manufacturer's Name: North Coast Tempeh Co.
Manufacturer's Address: c/o Cleveland Tofu Co, 8021 Euclid Ave., Cleveland, OH 44121.
Date of Introduction: 1981.
Ingredients: Tempeh (organic soybeans, water, Rhizopus culture), tamari, barley miso, spring water, corn oil, rice vinegar, spices.
Wt/Vol., Packaging, Price: 8 oz (3 burgers).
How Stored: Refrigerated or frozen.
New Product–Documentation: Label. 1982. 4.25 inch diameter. Red, green, blue, and yellow on white. Logo of Jack and the Beanstalk. "No cholesterol. All natural. Pan Fry, Bake, Steam, or Grill." Jeff Narten. 1987. "History of North Coast Tempeh and its Products." 4 p. Dec. 7. "Our tempeh burger is our number one product after tempeh. It is unique to my knowledge in that it is a fairly complicated marinade and depends less on tamari than many I've tasted."

5998. **Product Name:** [Soy Sauce].
Manufacturer's Name: Sampyo Foods Co. Ltd.
Manufacturer's Address: 647-2 Chang Dong, Dobong-Ku, Seoul, South Korea.
Date of Introduction: 1981.
New Product–Documentation: Soya Bluebook. 1981. p. 69.

5999. **Product Name:** San-J Tamari (Low Salt).
Manufacturer's Name: San-J International, Inc. (Importer). Made in Japan by San-Jirushi Corp.
Manufacturer's Address: 3236 Blvd., Colonial Heights, VA 23834.
Date of Introduction: 1981.
Ingredients: Whole soybeans, water, sea salt.
Wt/Vol., Packaging, Price: 5.07 fluid oz (150 ml) dispenser, 20 fluid oz (592 ml) plastic bottle.
How Stored: Shelf stable.
New Product–Documentation: San-Jirushi. 1981. "Introducing San-J Tamari" (8-panel leaflet printed with purplish-brown ink on beige paper). A table gives the nutritional composition 100 gm of San-J Tamari–both regular and low-salt. A photo shows the two container sizes.

6000. San-Jirushi International, Inc. 1981. Low salt. High taste. Its a fact. Only San-J tamari lets me reduce salt up to 95% and still serve great tasting meals my family loves (Poster and ad). Colonial Heights, Virginia. 1 p. Back to back, color. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.
• ***Summary:*** "Only San-J is the real tamari. Only San-J Tamari gives you the best of both worlds–low salt and high taste." A large color photo shows a woman, wearing a red bandana and red and black plaid shirt, holding a plate of pasta and vegetables. A small color photo shows 3 different bottles of San-J tamari.

This appeared as a full-page ad (color and black-and-white) in *Natural Foods Merchandiser* from about 1981 to 1984, including in the Jan. 1984 Soyfoods Pavilion special insert (p. 6, unnumbered). Address: Colonial Heights, Virginia.

6001. **Product Name:** Tempeh Salad.
Manufacturer's Name: Soy Plant (The).
Manufacturer's Address: 711 Airport Blvd., Suite #1, Ann Arbor, Michigan 48104. Phone: 313-663-8638.
Date of Introduction: 1981.
Ingredients: Tempeh (organic soybeans, Rhizopus culture, vinegar), simmered in shoyu & water, Soynaise (soymilk, oil, vinegar, spices), carrots, celery, green onions, parsley, basil.
Wt/Vol., Packaging, Price: 12 oz. plastic tub.
How Stored: Refrigerated.
New Product–Documentation: Label in Soy Plant scrapbook. 1980. 2.75 by 2.5 inches. Black on white.

6002. **Product Name:** Tofu Vegie Patties: Seasoned and Baked.
Manufacturer's Name: Tofu Shop (The).
Manufacturer's Address: 768 18th St., Arcata, CA 95521. Phone: 707-822-7409.
Date of Introduction: 1981.
Ingredients: Our own fresh tofu (water, organic soybeans grown according to Cal. Health Code Sect. 26569.11 and nigari), fresh vegetables (carrots, green onions, parsley), tamari (natural soy sauce made with water, soybeans, wholewheat and salt). Garlic and ginger.
Wt/Vol., Packaging, Price: 10 oz. vacuum packed.
How Stored: Refrigerated.
New Product–Documentation: Three Labels sent by Matthew Schmit. 2002. Sept. 9. The product was introduced in 1981. Label #1 of 1981. 4 by 2.5 inches. Self adhesive. Metallic gold, red, white, and silver on green. "Ready to eat ... or reheat, naturally fresh ... from our deli. A perfect snack fresh from the pack. Great in your favorite burger with all the fixins, or as a main dish ... or Simple to heat in oven (350°F, 10 minutes) or frying pan. Perishable, keep refrigerated, 34-39°." Illustration in a vertical parallelogram shows a tofu shop on stilts near the ocean with a tree arching overhead.

Label #2 of 1992. "Tofu Vegie Patties: 2 Baked." 3 inches diameter. Black, yellow, and white on green. "Crafted from whole organic soybeans. Illustration shows a tofu shop on stilts near the ocean with a tree arching overhead.

Label #3 of Oct. 2002. Dark green and orange-yellow on white. 3 inches diameter. No adhesive. A handsome, impressionistic watercolor illustration shows a tofu shop on stilts on a cliff with a tree arching overhead. "Good source of protein. Low in saturated fat. Cholesterol free."

6003. **Product Name:** Teya's Chinese Rice and Tofu.

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Curried Rice & Tofu. Stuffed Golden Soybean Cakes. Pizza (with whole wheat crust)
Manufacturer's Name: Tumaro's Inc
Manufacturer's Address: 5300 Santa Monica Blvd., Los Angeles, CA 90029.
Date of Introduction: 1981.
Ingredients: Chinese Rice & Tofu: Organically grown brown rice, zucchini, baked tofu (soy beans, water, soy bean oil, nigari), water chestnuts, eggplant, peanuts, mushrooms, onion, tamari (soy beans, water, sea salt), sesame oil, garlic, sea salt. Curried Rice & Tofu: above plus curry powder. Stuffed Golden Soy Bean Cakes: Brow rice, deep fried soy bean cakes, sprouted soy beans, zucchini, eggplant, water chestnuts, onion, tamari, sesame oil, garlic, ginger.
Wt/Vol., Packaging, Price: 10 oz.
How Stored: Frozen
New Product–Documentation: Labels. 1981. 3 by 2 inches. Self adhesive. Chinese Rice & Tofu: Tan on brown. Curried Rice & Tofu: Brown on tan. Stuffed Golden Soy Bean Cakes: Black on red. "No Meat or Meat Derivatives." Poster. Back to back, color. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.

6004. **Product Name:** Tabouli Salad
Manufacturer's Name: Wildwood Natural Foods
Manufacturer's Address: 135 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919
Date of Introduction: 1981.
Ingredients: Bulgur, filtered water, onions, olive oil, tamari, lemon juice, parsley, mint, garlic, salt
Wt/Vol., Packaging, Price: 8 oz plastic tub
How Stored: Refrigerated.
New Product–Documentation: Labels sent by Wildwood on their letterhead. 1983, undated. 2.75 by 1.75 inches. Self adhesive. Black and green on ivory. Silhouette of woods with birds. "Ready to eat Foods, Naturally. Perishable. Keep Refrigerated."

Label sent by Billy Bramblett. 1998, July. He says this product was introduced in 1981, and made at Wildwood's plant in Fairfax. On the front label, the text below the product name reads: "A refreshing combo of bulgur wheat, tomatoes, parsley, lemon and mint." The ingredients are now Bulgur wheat, vegetables (tomato, cucumbers, red onion), lemon juice, olive oil, parsley, mint, salt. On the back label, next to the UPC indicia: "Contains no animal products."

6005. Altman, Nathaniel. 1981. Nathaniel Altman's total vegetarian cooking. New Canaan, Connecticut: Keats Publishing, Inc. 229 p. Index. 18 cm. Series: A Pivot Original Health Book. [180 ref]
• ***Summary:*** The author was born in 1948. The first page of the book begins: "It's not just spinach. The vegetarian way of eating is incredibly varied, employing such exotic, appealing foods as calcium-rich hijiki, tempeh from Indonesia, and tofu."

The glossary (p. 139-44) describes: Lecithin, milk (soy), miso, soybeans, soy grits, sprouts (incl. soy), tamari, tempeh, tofu, and textured vegetable protein (TVP).

Chapter 11, titled "A vegetarian diet can save you money" (p. 146-51) mentions soybeans and soyfoods (incl. soy milk powder, dry tofu [probably dried-frozen tofu], soy sprouts, soy flour, soy sauce, tofu) repeatedly as low-cost sources of protein.

The book has several very interesting appendixes: C. The vegetarian bookshelf (p. 208-10). D. Vegetarian contacts–Some vegetarian societies and publications (p. 211-12). Bibliography by chapter (p. 213-20).

6006. Aoki, Hiroshi. 1981. Misoshiru sanbai kenkô-hô [Three bowls of miso soup daily for good health]. Tokyo: Goma Books. 220 p. Illust. 20 cm. [Jap]
• ***Summary:*** Miso soups and health recipes. He worked for food companies, including Ajinomoto, for 30 years on development of new soy protein foods. A popularizing book. Discusses Hirayama.

Contents: Preface. Why are miso soups and soyfoods appreciated again now? 1. The many benefits from eating miso soups and soyfoods every day. 2. The Japanese people have forgotten the goodness of miso soups and soyfoods. 3. Healthy soyfoods: From miso to soymilk (miso, natto, shoyu, tofu, deep-fried tofu pouches, dried-frozen tofu, yuba, okara, roasted whole soy flour or kinako, soymilk, soy oil). 4. Miso soups and soybean cooking make a healthy body. Soybean recipes which are suited to people in the younger generation. Mother's favorite recipes are good for health, too. Appendix. Maps of Japan showing areas of miso soups and natto.

6007. Barber, Linda. 1981. Color slides taken during a visit to a shoyu maker in Japan. Kobe, Japan. 1 p. Based on e-mail of 9 May 2012.
• ***Summary:*** Linda took these color slides in 1981 somewhere in Japan. The factory, whose name she does not remember, was automated and fairly large. They made Daisho-brand shoyu.



(1) Labeled bottles showing the ingredients used in making shoyu. Defatted soybean meal, wheat, salt, and koji starter.

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(2) Salt in a concrete storage area
(3) A large automated koji-making room.



(4-5) Two views (see next page) of a woman working at the plant. She is looking at moromi that has just been run into a pressing sack.

(6) A hydraulic press, slowly pressing out the shoyu, leaving behind residue in the sacks.

(7) Bottles of Daisho shoyu in crates.

Address: Resident Director of Practice House and Oral English Instructor, Kobe College, 4-1 Okadayama, Nishinomiya, Japan.

6008. Bragg, Paul C.; Bragg, Patricia. 1981. Hi protein vegetarian health recipes. With history and reasons. Santa Barbara, California: Health Science. 184 p. Illust. No index. 21 cm.

• ***Summary:*** This book is quite similar to the 1975 edition, however one word in the title has been changed (to vegetarian meatless from meatless), and small changes have been made on several pages following Paul Bragg's death in Dec. 1976. Nevertheless, the book gives the strong impression that Paul Bragg is still alive. Whereas he used to advocate moderate amounts of meat and fish in the diet, he now advocates a vegetarian diet [which is becoming increasingly popular, especially among young people, in the USA]. On the book's cover these words appear in large bold letters: "Vegetarian. Salt free. Sugar free."

We will discuss here only the changes that have been made in the 1980 edition. The copyright page states that this is the fifth printing. The address of Health Science, the publisher, has changed to Box 7, Santa Barbara, California 93102–from Hot Springs, California.

At the bottom of the next page a message has been added, which starts: "Our sincere blessings to you dear friends, who make out lives so worthwhile and fulfilled by reading our teachings on natural living as our Creator laid down for all of us to follow... Our prayers reach out to you for the best in health and happiness..." Signed Paul C. Bragg and Patricia Bragg.

On the page facing page 1, under the large photo of Bragg, is a different caption: "Paul C. Bragg in Hawaii, where he spends much of his time during the latter years of his vigorous, long life (almost a century!)." Describes how he writes, teaches, and exercise each day. Below that is "An old English Prayer," which begins: "Give us, Lord, a bit of sun. / A bit of work and a bit of fun. / "... Our daily whole gram bread and a bit of nut butter."

On page 66, at the bottom of the full-page ad for Bragg Liquid Aminos, readers are directed to order from a new address: Live Food Products, Box 7, Santa Barbara, CA 93102. "For 8 ounces of Bragg New Super Concentrated Liquid Aminos send $3.50 which covers postage and handling." Note: In 1975 the price was $2.99 for 16 ounces of "Bragg Liquid Aminos."

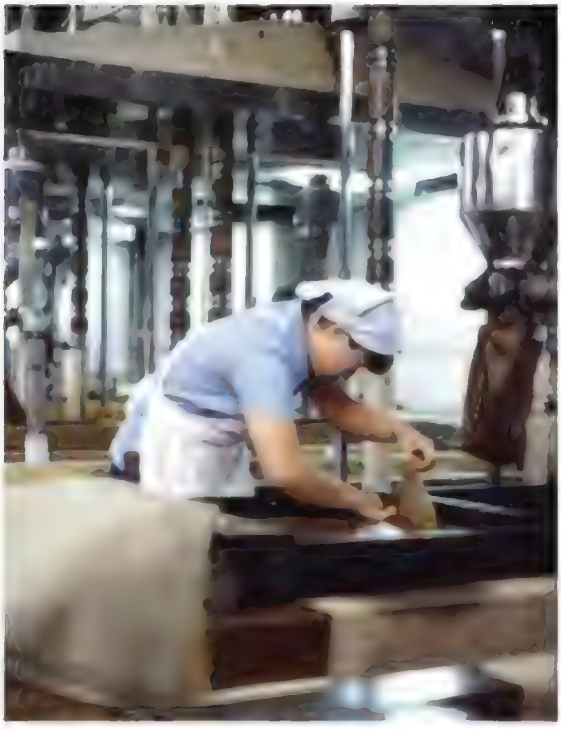
On page 81, an illustration of a pot and vegetables has been replaced by an illustration of Ponce de Leon, with a message about how he searched for the fountain of youth. "If he had only known–it's within us." There is also a new quotation from Patricia Bragg which states: "The more natural food you eat, the more radiant health you will enjoy and you will be better able to promote the higher life of love and brotherhood."

On page 157, the section titled "Sickness is expensive," has been updated (new statistics) and slightly expanded.

On page 160, a new photo, titled "When you are healthy–You are happy!" shows the members of the "Longer Life, Health and Happiness Club" at Fort DeRussy on Waikiki Beach, Honolulu, Hawaii.

The end of the book (after a blank page titled "My favorite recipes") contains: Advertisements: (1) Send for important free health bulletins. (2) Bragg live longer, live stronger self-improvement library (list of 25 books by Bragg, with prices). From the authors: Brief biography of Patricia Bragg, Ph.D., Nutritionist, beauty and health consultant.

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Advisor to world leaders, glamorous Hollywood stars, singers, dancers, athletes. Lecturer and author (She says she is the daughter of Paul C. Bragg. An accomplished musician, dancer, tennis player, swimmer, and mountain climber. The youngest woman to ever have been granted a U.S. patent. Graduate of the University of California. Lists her famous clients). Biography of Paul C. Bragg. Address: 1. N.D., Ph.D., Life Extension Specialist, 2. Beauty and diet expert. Both: Santa Barbara, California, and Honolulu, Hawaii.

6009. Brennan, Jennifer. 1981. The original Thai cookbook. New York, NY: Richard Marek Publishers. [xvi] + 318 p. Map. Index. 23 cm.
• ***Summary:*** Neither soy nor soyfoods are listed in the index or Glossary of this book, except that the Glossary entry for "Fish sauce (*Nam pla*, p. 287) notes that it "is to Thai cooking what soy sauce is to the Chinese and Japanese."

She is the author of ***The Original Thai Cookbook.***" She is "Winner of the IACP [International Association of Culinary Professionals] Award for the Best Literary Food Writing." She lived and cooked for 9 years in Thailand and for 19 years in Southeast Asia. Address: Playa Del Ray, southern California.

6010. Chiao, J.S. 1981. Modernization of traditional Chinese fermented foods and beverages. *Advances in Biotechnology* 2:511-16. [13 ref]
• ***Summary:*** The section titled "Soy sauce brewing with proteinase preparations" notes that in 1976 the Shanghai Institute of Fermentation Science used *Aspergillus oryzae* AS 3.951 to produce the proteinase and succeeded in making soy sauce of medium quality (Shanghai Grain and Oil Industry Co. 1976). The utilization coefficient of proteins reached 75%, but that of amino acid liberation was only 40%, which was 5% less than that of the solid-state process. Furthermore, the color and flavor of the resulting soy sauce were somewhat inferior to those produced by the traditional process. In 1979 the same Institute obtained better results by combining the neutral proteinase of a mutant of AS 3.951, UE 328 (potency 1400), and the acid proteinase of *A. niger* AS 3.50 (potency 300 u/ml) (Shanghai 1979–unpublished "Report on the Study of Soy Sauce Brewing"). The raw materials used (by weight) were soybean flakes 100, wheat 30, bran (probably wheat bran) 20, plus water, salt, and the enzymes UE 328 Proteinase and AS 3.350 proteinase. The fermentation took place at 45°C for 15 days.

The conclusion states that "some of the traditional foods and beverages can be produced in shorter periods with pure cultures, but in most cases, matching the traditional products in flavor requires more fundamental studies." Address: Dep. of Microbiology, Shanghai Inst. of Plant Physiology, Shanghai, China.

6011. Cottrell, Edyth Young. 1981. Mrs. Cottrell's stretching-the-food-dollar cookbook. Santa Barbara, California: Woodbridge Press. 127 p. Recipe index. 22 cm.
• ***Summary:*** A natural foods, vegetarian cookbook. Incorporates *Stretching the Food Dollar* and *Supplement to Stretching the Food Dollar.* A color photo on the cover shows the author.

Page 15 discusses soy milk, soy milk powder, soy flour, and nut milk. Many recipes (especially recipes for breads and other baked goods) call for the use of these products. Soy-related recipes include: Basic wheat-soy bread I & II (with soy flour, p. 21-22). Golden triple-rich bread (with soy flour and soy milk, p. 23). Rice-soy bread (with soy flour p. 27). Soy-nut bread (with soy flour and ground cooked soy beans, p. 30). Soy mayonnaise (with soy milk powder, p. 71). Savory soy loaf or patties (with soy sprouts, p. 80). How to sprout soybeans (p. 89). Soy sauce (p. 90). Address: Formerly, Research Nutritionist, Loma Linda Univ., Loma Linda, California. As of March 1993, living in Spokane, Washington.

6012. Dahlen, Martha; Phillipps, Karen. 1981. A further guide to Chinese market vegetables. Hong Kong: South China Morning Post Ltd., Publications Division. xi + 74 p. Illust. 20 x 28 cm. *
• ***Summary:*** The romanization of names in this book represent the Cantonese pronunciation system of Herklots. Address: Hong Kong.

6013. Gandjar, I. 1981. Soybean fermentation in Indonesia. *Advances in Biotechnology* 2:531-34. [9 ref]
• ***Summary:*** Discusses various kinds of tempeh, taoco (Indonesian miso), kecap (Indonesian soy sauce), tempe gembus (okara tempeh, sold in every market and village in Central and Eastern Java), oncom tahu (okara onchom), and traditional fermentation processes. Address: Dep. of Biology, Faculty of Mathematics and Natural Sciences, Univ. of Indonesia, Jakarta, Indonesia.

6014. Hashiba, H.; Okuhara, A.; Iguchi, N. 1981. Oxygen-dependent browning of soy sauce and some brewed products. *Progress in Food and Nutrition Science* 5:93-113. (Pergamon Press). [18 ref]
Address: Central Research Laboratories, Kikkoman Shoyu Co. Ltd., Noda-Shi, Chiba-ken, Japan.

6015. Hesseltine, Clifford W. 1981. Thom Award Address: A microbe's view of fermentation. *Developments in Industrial Microbiology* 22:xv-xvi, 1-18. [21 ref]
• ***Summary:*** Pages xv to xvi give a brief biography and photo of Dr. Clifford W. Hesseltine, winner of the tenth Charles Thom Award on 14 Aug. 1980, presented by the Society for Industrial Microbiology. Dr. Hesseltine knew Dr. Charles Thom and was strongly influenced by him, even though the two men never worked together.

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"Dr. Hesseltine's studies on the taxonomy of the Mucorales have resulted in a classification now in worldwide use... The research of Dr. Hesseltine on mycotoxins is world famous. He has directed the aflatoxin project of the Fermentation Laboratory, NRRC."

"Dr. Hesseltine's studies on fermented foods are equally well known. Included in this research has been the use of soybeans and cereals in Oriental fermented foods including tempeh, miso, Chinese cheese, and shoyu."

Just 100 years ago the first pure cultures of fungi were made by Brefeld, a German, who published his results in 1881. The development of submerged culture of penicillin production began in 1941 at the NRRL. The USA lost its leading role in industrial fermentation early in the 1960s due to weakness in research in many fields. Address: NRRC, Peoria, Illinois.

6016. Hom, Ken; Steiman, Harvey. 1981. Chinese technique: an illustrated guide to the fundamental techniques of Chinese cooking. New York, NY: Simon & Schuster: Wallaby Books. 345 p. Illust. (photos by Willie Kee). Index. 29 cm.
• ***Summary:*** This "comprehensive, illustrated guide to the art of Chinese cooking provides step-by-step instruction in the basic techniques of Chinese cuisine and more than one hundred traditional recipes." A full-page photo of Ken Hom faces p. 13, and a biography of both authors appears at the end of the book.

The section on "Ingredients" includes descriptions and a photo of: Bean curd (fresh–Chinese style tends to be firmer than Japanese; "red bean curd," also known as "red bean curd cheese and preserved bean curd–red" is red fermented tofu. "Two other types of preserved bean curd are wet bean curd and fermented bean cake"). Beans, fermented black [Fermented black beans]. Bean sauce (Brown bean sauce, Brown bean paste; comes in two forms–whole bean and ground bean. Whole is preferred. "Both are very salty and are made from soybeans, flour, and salt"). Hoisin sauce (Duck sauce, Red seasoning sauce. Made from soybean flour, red beans, chili sugar, salt, garlic, and spices). Soy sauce (The two main types are light and dark. Other variations include mushroom soy and shrimp soy. Japanese soy sauce is not a good substitute).

"Shredding ginger" (p. 66): "If the ginger is fresh, it is not necessary to peel it; simply wipe it clean with a damp cloth."

In the section on "Vegetables" under "Main-ingredient vegetables" we find: Bean curd (p. 89-93). It is an inexpensive source of protein used throughout China. How to deep-fry it. Fried tofu with vegetables and cooked meat. Stuffed bean curd (use "firm Chinese bean curd").

Soy-related recipes: Cantonese roast duck (with bean sauce, p. 171). Peking duck (with hoisin sauce, p. 176-85). Chinese beef stew (with "2 cubes fermented red bean curd," p. 217-19). Steamed fish with black beans (with "2 tablespoons fermented black beans," p. 231-32). Braised Sichuan fish (with dark soy sauce, and "1 tablespoon bean sauce," p. 233-35). Shrimp in lobster sauce (with fermented black beans and thin soy sauce, p. 261-62). Clams with black beans (with "2 tablespoons fermented black beans, coarsely chopped," p. 273-74). Sizzling rice soup (with "4 small cakes Chinese bean curd, cubed, rinsed in cold water," p. 327-28). Address: 1. Chinese cooking school teacher, California. 2. Food and wine writer for *San Francisco Examiner*.

6017. Hua, J.; Wang, I.H.; Chen, S.K.; Hsu, W.H. 1981. Fermented sauce made from black soybean (*inyu*). *Advances in Biotechnology* 2: 517-23. [10 ref.]
• ***Summary:*** Inyu is black soybean sauce fermented with the mold *Aspergillus soyae* or *Aspergillus oryzae* N-2. About 30% of the fermented soy sauce consumed in Taiwan in 1973 was inyu, made from whole black soybean koji with no wheat or other grain. After describing the traditional method for making inyu, modern techniques are applied to its fermentation. A flow sheet (p. 520) shows the traditional process. Black soybeans (the sole substrate) are washed, soaked at room temperature for 4-7 hours (7 hours in the coldest weather) and drained. Then they are steamed at 117°C for 30 minutes, then inoculated with the koji mold. The inoculated beans are spread to a depth of about 3 cm in small, flat trays, each about 100 cm in diameter and 5 cm deep. The trays are stacked atop one another but with a gap of 5-15 cm between trays. This gap is larger between trays at the top than between those at the bottom.

The soybean are incubated at room temperature for about 5 days or until they are entirely covered with a mycelium of white mold. Note that heavy sporulation in the koji may result in an off-flavor in the final product and may interfere with water absorption. Therefore these spores must be partially removed before each stage. After being washed with water, NaCl is added to give a final salt content in the washed koji of 25-30% by weight of the original black soybean used. This mixture is put into an earthen vat, which is sealed tightly for an anaerobic fermentation called aging, which takes about 90 days (compared with 180 days for typical soy sauce fermentation). After complete maturation, the mash is pressed, cooked, pasteurized and bottled. The press-cake is used for animal feed. Address: Food Industry Research and Development Inst., Hsinchu, Taiwan 300.

6018. Jaffrey, Madhur. 1981. Madhur Jaffrey's World-of-the-East vegetarian cookery. New York, NY: Alfred A. Knopf, Inc. 461 p. Illust. by Susan Gaber. Index. 20 x 20 cm. A second edition was published in 1983 in London by J. Cape.
• ***Summary:*** The Indian woman author of this creative book presents 21 recipes for bean curd (tofu), 7 for tempeh, and some for yuba and miso. Green soy beans with sauce (p. 7). Cabbage with miso (p. 15). Eggplant slices with white miso (p. 22-23). Fresh soy beans, steamed (p. 57). Spinach with

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fermented bean curd (p. 59). Stuffed yellow squash (with yuba, p. 62-64). Pecel (Vegetable salad with spicy peanut sauce, plus tofu and tempeh; p. 73-74). Tempura (with tofu; p. 75-77). Soy bean sprouts (how to grow; p. 100). Soy-bean and mung-bean sprouts seasoned with sesame oil (p. 105). Tempeh, Fried tempeh, Fried, preseasoned tempeh, Sambal goreng tempeh kering (Sweet and sour tempeh). Tempeh cooked in coconut milk (p. 108-110). Thai fried rice (with Red Bean Curd or Nam Yee [red fermented tofu], p. 150-51).

One chapter (p. 160-89) is titled "Soy milk, bean curd, and wheat gluten." Making your own soy milk. Making your own bean curd. Udofu (*Yudofu*, simmering bean curd with seasonings). Bean curd with watercress. Korean-style bean curd in a hot water bath. *Hiya-yakko* (Chilled bean curd). Bean curd with Chinese parsley. Bean curd with broccoli. Cabbage cooked with bean curd. Bean curd with a deliciously spicy sauce. Carrots and beans with bean curd dressing. Bean curd, mushrooms, and peanuts in hoisin sauce. Sautéed bean curd. Tofu dengaku (Toasted bean curd with a miso topping). Fried bean curd cubes, soy-bean sprouts sautéed with fried bean curd. Fried bean curd with a sweet-and-sour sauce. Fried bean curd cakes with a mustard surprise. Inari-zushi ("Bags" of fried bean curd stuffed with sushi rice). Pressed bean curd with cabbage. Salad of pressed bean curd, mung-bean sprouts, and agar-agar. How to make fried and baked wheat gluten balls (plus 5 gluten recipes). Buddha's delight (with yuba and fried bean curd).

Chawanmushi (Steamed savory custards, with tofu; p. 192-94). Omelette with bean curd (p. 198-99). Soy sauce eggs (p. 209). Paneer (milk cheese; p. 237-40). Hot or cold noodles with a soy-sauce dressing (p. 248). Noodles with a hot-and-sour bean sauce (p. 250). Vegetarian mee krob (Crisp noodles with pressed bean curd and eggs, from Thailand, p. 255-56). Noodles with quail eggs, mushrooms, spinach, and yuba (Japan; p. 256-57). Hoppers (yeast pancakes from Sri Lanka). Roti (Flat whole-wheat bread). Delicious stock made with soy-bean sprouts. Clear soup with enoki mushrooms, bean curd skins [yuba], and spinach (p. 297). Clear soup with soft bean curd and celery cabbage (p. 298). Miso soup with bean curd (p. 307). Miso soup with carrots and mushrooms (p. 308). Fried, munchable soy beans [soynuts] (p. 321-22). Potato and tempeh patties (p. 339). Dipping sauces (with soy sauce, p. 357-59). Kombu relish (with soy sauce, p. 374). Shoyu daikon (White radish pickled in soy sauce). Ginger quick-pickled soy sauce (p. 375). Aomidaikon (Quick pickled small white radishes, with slightly sweet yellow miso; p. 377-78). Chinese-style jellied bean-curd sweetmeat with a peanut topping (p. 399-400).

General information (p. 418-36; lots on soyfoods, see bean curd [regular, fried, fermented (Nam Yee), pressed, pressed seasoned], kochu chang [jang], miso, soy-, tempeh, yuba). Sources (of ingredients; p. 437-40). Address: New York City, NY.

6019. Kikkoman Corporation. 1981. Photocopies of Kikkoman labels. Kikaku Senden-bu (Planning and Marketing Dept.), Tokyo, Japan. 10 p. Unpublished manuscript. 28 x 44 cm.
• ***Summary:*** These photocopies of Kikkoman soy sauce labels were taken from company scrapbooks. Labels are shown from the following years: 1951, 1953, 1955, 1957, 1958, and 1969. Each label contains text in both English and Japanese. The 1951 label reads: "The 'Kikkoman' Shoyu Brewed by Nodashoyu Co., Ltd. Made in Japan. The 1969 label reads: "The 'Kikkoman' Shoyu. Brewed by Kikkoman Shoyu Co., Ltd. Product of Japan. Address: Tokyo, Japan.

6020. Kikkoman K.K. 1981. Dai 63 ki hôkoku-sho. Showa 55 nen 1 gatsu 1 nichi–Showa 55 nen 12 gatsu 31 nichi [63rd annual financial report. From 1 Jan. 1980 to 31 Dec. 1980]. Tokyo, Japan. 15 p. 19 cm. [Jap]
• ***Summary:*** Written entirely in Japanese with no photos. Address: Tokyo, Japan.

6021. Manley, C.H., McCann, J.S., Swaine, R.L., Jr. 1981. The chemical bases of the taste and flavor enhancing properties of hydrolyzed protein. In: G. Charalambous and G.E. Inglett, eds. 1981. The Quality of Foods and Beverages: Chemistry and Technology. Vol. 1. New York: Academic Press. xvii + 443 p. See p. 61-82. [51 ref]
Address: Knox Ingredients Technology.

6022. Marks, Copeland; Soeharjo, Mintari. 1981. The Indonesian kitchen. New York, NY: Atheneum. 278 p. Illust. Index. 22 cm. [2 ref]
• ***Summary:*** "'This is to my mind, the best and most easily followed of all the books on Indonesian cooking. And I would certainly rank Indonesian cooking among the greatest on earth.' Craig Claiborne, Food Editor, The New York Times" (rear cover).

Soy related Spices–"Sweet soy sauce, which you can make at home (see p. 237-38)" (p. 13). Barbecued chicken in sweet soy sauce (Ayam Panggang kecap, Tuban, Java, p. 86-87. "Sweet soy sauce [kecap manis], reconstituted from a dark Chinese soy sauce with caramelized sugar and various spices added, must be considered the most popular and universally accepted of Indonesian flavorings") Beef stew with sweet soy sauce (Karangmenanci, Java, p. 98-99).

Vegetarian recipes. Stuffed soybean cake (Tahu isi, Jakarta, Java, with "4 Chinese soybean cakes" [tofu], p. 120-21). Eggplant in sweet soy sauce (Semur terong, Java, p. 155). Happy heart (Suki hati, Java, with 3 Chinese-style soybean cakes [tofu], p. 160-61). Bean cake in mixed spice sauce (Bumbu rudjak tahu, Wonosobo, Central Java, with tofu, p. 161-62). Soy bean cake fry (Tahu kering, East Java, with "4 Chinese soybean cakes" [tofu], p. 163-64). Fried soybean cake with peanut dressing (Tahu goreng, Kediri, East Java, with "4 Chinese soybean cakes," p. 164-65). Fresh

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vegetable salad with soybean cake (Asinan, Jakarta, Java, with "2 Chinese soybean cakes [tofu], boiled in water for ten minutes and drained, p. 197-98).

Beef and soybean cake fritters (Perkedel tahu, Java, with "2 Chinese soybean cakes [tofu], mashed, p. 215-16).

Bean cake fritters (Tahu perkedel, Java, with "2 Chinese soybean cakes [tofu], mashed, p. 218-19). Soybean cake omelet (Tahu telor, Java, with "2 Chinese soybean cakes [tofu], cut into 1-inch cubes," p. 235)

Sweet soy sauce (Kecap manis, all Indonesia, p. 237-38. "The homemade sauce based on this recipe is infinitely superior to the store-bought brands found in Chinese and Southeast Asian food shops." Ingredients: 2½ cups sugar, 2.75 cups Chinese dark soy sauce, 3 cloves garlic, ½ teaspoon star anise pods, 2 salam leaves, 2 pieces laos, ½ cup water. Do not strain sauce after cooking since all ingredients continue to provide flavor. Makes about 2.75 cups. Keeps for several months refrigerated). Rijsttafel (with sweet soy sauce, p. 256-59). Address: 1. Textile importer, Brooklyn Heights, New York. 2. Central Java, Indonesia.

6023. Mazel, Judy; Shultz, Susan. 1981. The Beverly Hills diet. New York, NY: Macmillan Publishing Co. xxi + 262 p. Index. 22 cm.
• ***Summary:*** A vegetarian weight-loss book. The authors say beware of Oriental restaurants; they serve MSG and sodium-laden soy sauce (p. 220). Page 237 asks: "Where does flour fit into the Beverly Hills diet? ... White flour is the least acceptable because its nutritionless... Forget about soy-flour products. Remember the legume family; they are a miscombination–half protein, half carb–and by their very nature highly indigestible."

6024. McCallum, Cass. 1981. The real food guide. Vol. 2 Pulses, grains and seeds. Glasgow, Scotland: The Molendinar Press. 196 p. Index. 20 cm.
• ***Summary:*** The section on "Anti-nutritional factors in pulses" discusses those found in many legumes (such as haemagglutinins, trypsin inhibitors, phytic acid, flatulence factors) and those of importance in specific legumes; for soybeans, only heat-resistant trypsin inhibitors are mentioned. The section on "Basic bean cookery" gives general guidelines and tips (never add salt until beans are cooked tender). A table (p. 54) shows that soybeans require the longest cooking time of any bean listed.

The section titled "A-Z pulses" gives details (incl the scientific name) concerning many legumes listed alphabetically. Includes adzuki, kura mame [sic, kuro mame = black soybeans] (p. 65), and winged beans. By far the longest section is on soy beans (p. 71-82). Contents: Introduction. Nutritional values. Dried soy bean products: Soy grits, soy coffee, soy flour (full fat, medium fat, fat free), soy nuts, soy milk, soy yolk (a concentrated form of soy flour), textured vegetable protein, soy splits, tofu powder. Fermented soy bean products: Black beans–fermented, chao, chee-fan, chiang (Chinese miso), Hamanatto, ketjap, koji, meitauza, miso, mame miso, Hatcho miso, kome miso, mugi miso, natto, okara. Soy sauces: Introduction, Chinese soy sauce, ketjap, synthetic sauce, tamari. Sofu [sic, sufu], tahuri, tamari, tao-cho, taokoan or tao koan, taotjo or tao dji [sic, taotjo is Indonesian-style miso; tao dji are Indonesian fermented black soybeans], tempeh, tofu. Tofu from whole beans (homemade recipe). Tofu from powdered [soy] milk.

The part titled "Recipes" (p. 129-92) is divided into three sections. Soy-related recipes in each are listed here. (1) Soups and starters: Iced tofu (p. 134). Miso soup (p. 138). Adzuki bean soup (p. 141). (2) Main dishes. Deep-fried tofu (p. 167). Szechuan bean curd (p. 168). (3) Bread, side dishes, sauces and desserts: Miso lemon sauce (p. 186). Miso ginger sauce (p. 187). Peanut butter (homemade recipe, p. 191).

The rear cover states: "These books fight a war against junk food–and win." The author is a woman.

Note: This is the earliest English-language document seen (Feb. 2004) that uses the word "tao koan" (or "tao-koan") to refer to tofu. Address: United Kingdom.

6025. Mogi, Masatoshi. 1981. Miso to gojûnen [Miso and fifty years]. Noda, Japan. Published by the author. 232 p. [Jap]*
Address: Kikkoman Central Research Lab.

6026. Omae, Kinjiro; Tachibana, Yuzuru. 1981. The book of sushi. Tokyo, New York and San Francisco: Kodansha International Ltd. Distributed through Harper & Row. 127 p. Foreword by Jean-Pierre Rampal. Illust (some color, 40 color plates). Index. 27 cm.
• ***Summary:*** Shôyu (soy sauce) is discussed in depth on pages 99-100. The section titled "Sushi shop vocabulary" (p. 20) states that *murasaki* refers to soy sauce, which is usually called "shoyu."

The section on "Materials" (p. 56) states that soy sauce is absolutely essential to sushi–as essential as rice, rice vinegar, wasabi (nose-tinglingly sharp when freshly grated), pickled ginger, nori, and tea.

Natto and tofu (p. 49) are mentioned as sushi ingredients. Address: 1. Former chairman, Tokyo Sushi Association, then president of the Federation of Japan Sushi Shops.

6027. Photograph of various types of Chinese and Japanese of soy sauce sold in the San Francisco Bay Area. 1981.
• ***Summary:*** Back row (left to right; see next page): Superior Soy, Longevity Brand Soy Sauce, Superior Soy, and Westbrae White Tiger Tofu Sauce. The first three brands are Chinese style.

Front row (L-R): Westbrae tamari, illegible, Kikkoman soy sauce in table-top dispenser, illegible. Longevity Brand Soy Sauce.

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The Chinese brands were purchased in San Francisco Chinatown by William Shurtleff, who also shot the photo at home on Mountain View Dr. in Lafayette, California.

6028 Sakata, Dai. 1981. Furushô Masakichi den [Biography of Masakichi FURUSHO]. Kumamoto, Japan: Aso-sha. 261 p. [Jap]*

• ***Summary:*** Mr. Furusho was a merchant in Kumamoto, Kyushu, Japan. His father started making shoyu in 1906 (Meiji 39) and received a kunsho award for promoting business.

6029 San-Jirushi International, Inc. 1981. Introducing to America San-J Tamari, the natural soybean sauce. A superior all-purpose seasoning and flavor enhancer. Colonial Heights, Virginia: San-Jirushi International. 6 p. Undated. 28 cm.

• ***Summary:*** Cover: Nine bottles of San-J tamari (small glass and larger plastic) standing in a bed of soybeans against a reddish gold background. "Imported by San-Jirushi International, Inc." Exclusive national sales agent: Diamond Crystal Salt Company (Wilmington, Massachusetts).

Pages: (1) San-J Tamari is different: San-J is the only "genuine tamari." It is "made by traditional, natural fermentation of whole soybeans, water and salt. Its long aging process lasts from 12 to 18 months. No wheat is used." The origin of Japanese tamari and shoyu. "Tamari was popular in Japan by about 1260. In the mid-1600's, brewers began to dilute the traditional soybean–water–salt formula by adding wheat. This simplified and hastened the brewing process and was the origin of today's ... shoyu." Natural tamari compared to common soy sauces (6 points). The San-Jirushi Corporation–"is the largest, most famous producers of genuine tamari in the world." The company trademark symbolizes the three large rivers that empty together into the Bay of Ise at Kuwana. The company began to manufacture tamari in 1804.

(2) The ideal meat entree seasoning. San -J Tamari is essential for Japanese cuisine (sukiyaki, sashimi, sushi, tempura) and other Oriental dishes. With color illustrations. (3) San-J Tamari works flavor wonders for seafood, and salads, soups and sauces. Available in regular and low-salt. (4) Introducing San-J Tamari Teriyaki; a list of ingredients is given. Use for Beef teriyaki, Chicken teriyaki, Fish teriyaki, and Barbecue teriyaki. (5) How natural tamari is made: a centuries-old process in a modern, sanitary plant. "Because natural fermentation is best started in cold weather, Tamari production usually begins in late autumn or early winter." The process is described in detail and illustrated. The moromi is aged in 1200-gallon cedar wood vats in unheated buildings for at least 12 months. Address: Colonial Heights, Virginia.

6030. San-Jirushi International, Inc. 1981. Introducing San-J tamari. Colonial Heights, Virginia: San-Jirushi International. 8 p. 26 cm.

• ***Summary:*** This 8-panel fold-out brochure is printed with purplish-brown ink on beige paper. On the front panel is an illustration (line drawing) of a 150 ml bottle of "San-J Tamari–the natural soybean sauce (TM). Brewed by San-Jirushi Corp., Japan. Founded 1804." Contents: The natural soybean sauce. Made from choice whole soybeans, pure well water, and sea salt. Brewed naturally through the four seasons. Tamari is the traditional soy sauce. San-J Tamari is different. San-J Tamari is real tamari, real tamari is made entirely from soybeans, the first ingredient in San-J Tamari is whole soybeans, the flavor of tamari is due to proteins (which are slow to evaporate during cooking). Why tamari? San-J Tamari is not only a superior seasoning–it is a natural flavor enhancer. San-J Tamari extends further. San-J Tamari can replace salt. San-Jirushi of Kuwana. An all-purpose seasoning and flavor enhancer. Color illustrations show recipe ideas. Nutrients per 100 grams of San-J Tamari and Tamari (Low Salt). How San-J Tamari is made (each of the 12 steps is illustrated).

"The cooked beans are mashed and shaped by an extruder into tiny balls about 1 inch in diameter called *'miso dama.'* The *miso-dama* are dusted with spores from a special mold called 'koji' (*Aspergillus oryzae*) and incubated for 48 hours under carefully controlled temperature and humidity in an incubation chamber called the *'muro.'*

"Matured koji is removed from the *'muro'* and mixed with salt water in large wooden vats to make the fermentive mash called *'moromi.'* The 1200 gallon cedar-wood vats containing *'moromi'* stand in unheated buildings for at least 12 months while the *'moromi'* mellows and matures.

"When fermentation is complete, free-running raw tamari–called *'kibiki'*–is drawn off through spouts at the bottom of the vats. The yielded liquids are filtered and cleared of oils and dregs, then carefully mixed and blended. The blended product is allowed to stand for several weeks while more oils and dregs are removed.

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"The remaining mash is then removed from the vats and pressed to yield *'assaku'* tamari.

"Raw tamari is pasteurized at 185° F (85° C) to eliminate all microorganisms and ensure against any further change in the product through fermentation. Pasteurization does not effect valuable enzymes contained in Tamari, and also contributes to its delicate color and flavor. Pasteurized Tamari is transferred to sterilized holding tanks and allowed to stand and clear for two more weeks. Then it is filtered again, bottled, inspected and shipped." Address: Colonial Heights, Virginia.

6031. Schmidgall-Tellings, A. Ed; Stevens, Alan M. 1981. Contemporary Indonesian-English dictionary : a supplement to the standard Indonesian dictionaries with particular concentration on new words, expressions, and meanings. Chicago, Illinois: Ohio University Press. xv + 388 p. 24 cm. [Ind; Eng]

• ***Summary:*** Soy-related words (many are missing):

"Bungkil–peanut residue after the oil has been pressed out.

"Kacang hijau–mung beans. Kacang tojin–roasted peanuts with garlic. Note 1. Soybean is not mentioned here.

"Kècap manis–Indonesian sweet soy sauce." Note 2. Plain Indonesian soy sauce is not mentioned here.

Note 3. Kedelai, kedelé–Not listed.

"Tahu–bean curd. Tahu pong–bean curd cut into small pieces and baked until it pops up. Tahu tempe–a side dish of tahu and tempe."

Note 4. Tauco–Not listed.

"Tempé–a protein-rich cake of fermented soybeans. tempé bangsa–a small and insignificant nation. tempé pemuda–a good-for-nothing kid. tempé gembos–fermented beancake made from peanut residue."

The Preface begins: "The form of Malay used in the Indonesian archipelago was already different from peninsular Malay when, on October 28, 1928, a nationwide youth congress held in Jakarta named Bahasa Indonesia, the Indonesian language, as the national language. Since August 17, 1945, when Indonesia declared its independence, the language has changed rapidly, especially in the area of vocabulary." Address: 1. Freelance translator and author of many books and articles on the Indonesian language, 2. Prof. of Linguistics, Queens College and the Graduate Center, City Univ. of New York.

6032. Shandler, Michael; Shandler, Nina. 1981. The complete guide and cookbook for raising your child as a vegetarian. New York, NY: Schocken Books. xiv + 337 p. Index. 24 cm. [65 ref]

• ***Summary:*** On p. 22 soybeans and rice are used to illustrate protein complementarity. Fats survival plan (p. 70-71): Describes how to make clarified butter (ghee); it is superior to other fats for frying purposes and is not subject to the same polymerization as vegetable oils. "Eggs do not constitute a cholesterol risk," but "soy milk and tofu are excellent high-protein substitutes for eggs if your children are allergic." Good sources of protein during pregnancy include beans, grains, tofu, gluten, dairy products, and soy products. Use complementary proteins together. Tofu can be blended into creamy salad dressings.

"Homemade soy milk is deficient in vitamin B-12, vitamin D, and calcium. Commercial soy drinks for infants [infant formulas] are fortified with these and other nutrients but often contain sugar and other detrimental additives" (p. 110).

"After approximately 1 month of eating solid foods, a second series of foods can be introduced to your infant." These may include puréed tofu or light miso soups (p. 116-17).

Soy-related recipes include: Whole wheat soy flakes (p. 206). Tamari broth with dumplings (and soy flour, p. 216). Nondairy cream of vegetable soup (with tofu, p. 216). Summer cucumber tofu soup (p. 218). Soyburgers (with whole soybeans, p. 222-23). Barbecued tofu sandwiches (p. 226). Tofu cheesie macaroni (p. 232). Tofu noodle casserole. Fried tofu over rice. Tomato tofu lo mien (p. 233-34). Tofu and rice seaweed rolls (p. 236). Pizza (with soy flour and gluten flour, p. 236-37). Creamed spinach with tofu (p. 254). Tamari-glazed "trees" (Broccoli, p. 255). Vegan dips (p. 264-65). Avocado tofu dip. Cucumber tofu dip. Nondairy dressings (p. 271-72). Tofu dressing. Nut and soy milks (p. 311-13): Fortified soy milk. Carob soy milk. Spiced soy milk. Almond milk. Cashew milk. Coconut milk. Tahini milk. Nondairy sandwich fillers (p. 320-21). Soy sandwich "meat" (with whole soybeans and tamari soy sauce). Tofu sandwich spread.

6033. Sing, Phia. 1981. Traditional recipes of Laos: Being the manuscript recipe books of the late Phia Sing, from the Royal Palace at Luang Prabang, reproduced in facsimile and furnished with an English translation, by Phouangphet Vannithone and Boon Song Klausner. London: Prospect Books. Distributed by the University Press of Virginia (Charlottesvile). 318 p. See p. 23. Illust. by Thao Soun Vannithone. Map. Index. 24 cm. [30* ref]

• ***Summary:*** The section titled "Fish sauce and *padek*" states (p. 23): "*Nam pa*, fish sauce, is an ingredient found in almost every recipe [in this cookbook]. Every South-East Asian country has its own fish sauce; *nuoc mam* in Vietnam, *tuk trey* in Cambodia, *nam pla* in Thailand, *ngan-pya-ye* in Burma, and so on. Fish sauce plays the same role in this region as soy sauce in China and Japan. It is prepared by steeping fish in brine for a long time..."

Soy is not mentioned in this book–not even soy sauce (except in the passage quoted above). The illustrations are superb. Phia Sing lived ca. 1898-1967. Address: Laos.

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6034. Stobart, Tom; Owen, Millie. 1981. The cook's encyclopedia. Ingredients and processes. New York, NY: Harper & Row, Publishers, Inc. xii + 547 p. Illust. 25 cm. [20 ref]

• ***Summary:*** Soy related entries include: Bean curd (incl. tofu). Bean-curd cheese [fermented tofu]. Bean paste and bean sauce (incl. Red bean paste) is sweet and made from adzuki beans. Yellow bean paste is made from soybeans and is salty and pungent. "Fermented salted black beans" is made from a black variety of soybeans; these salted black beans can be used to make "black bean sauce" which can be used as a flavoring in fish, lobster, chicken, and pork dishes.

Soybean (incl. soya bean, soja bean, flour {"pork soya links" used in Britain during World War II}, sprouts, soy oil, soy sauce, soymilk, vegetable yogurt [soy yogurt], vegetable cheese [soy cheese], tempeh, bean curd skin [yuba], miso, tamari, soy sauce, soy protein isolate, soy granules or grits, textured plant protein [textured soy protein]). The name in four European languages is given.

Soy sauce or shoyu (It "is said to be one of the ingredients of Worcestershire sauce." Incl. the "very heavy Indonesian *ketjap {ketjap manis or ketjap benteng}*, which is a type of soy sauce,..."). The name in four European languages is given.

Textured plant protein (a high-protein foodstuff manufactured from plants (soybeans, peanuts, wheat, cottonseed, etc.) "Originally it was aimed at the vegetarian market." Also called "textured vegetable protein" in the USA. Incl. textured soy flour, textured soy protein gel and fibers).

Worcestershire sauce. Begins with a history (starting in 1837) based on the fanciful story so widely known. "Thus was born what is probably the world's best-known and most ubiquitous bottled sauce, one which has become a standard ingredient." Note: How about soy sauce? "The exact formula is secret. Although it is much imitated, nobody seems to be able to get quite the taste of the original."

Also contains entries for adzuki, ketchup ("Javanese katjap [ketjap], for example, is a very sweet soy sauce"), peanut (groundut or monkey nut), pulses, seaweed, sesame seed, tahini.

Note: Millie Owen prepared the American edition of this book. Address: 1. Hassocks, Sussex, England. 2. Northfield, Vermont.

6035. Sunset menus & recipes for vegetarian cooking. 1981. Menlo Park, California: Lane Publishing Co. 96 p. Illust. Index. 28 cm.

• ***Summary:*** Written and compiled by the editors of Sunset Books and *Sunset Magazine*, this is a lacto-ovo vegetarian cookbook. In 1986 the title was shortened to simply *Vegetarian Cooking*.

Soy-related: Hot & sour soup (with "4 ounces tofu, diced" and "1 tablespoon soy sauce," p. 29). Soybean soup, bistro style (with "2½ cups cooked soybeans {page 49}," p. 30). Cooking beans, soybeans ("Strong-flavored, near-perfect protein source. Refrigerate while soaking. 3 to 3½ hours," p. 49). Sweet & sour soybeans (with "2½ cups cooked soybeans {page 49}," p. 51). Sesame tofu sticks (with "About 1 pound medium-firm tofu," and "Teriyaki sauce (recipe follows)," p. 59-60). Savory vegetables & tofu, p. 61. Vegetable sauces, Herbed tofu sauce, p. 69. Address: Menlo Park, California. Phone: 415-321-3600.

6036. Wood, B.J.B. 1981. Introduction of new fermented foods into Western culture. *Advances in Biotechnology* 2:467-72. Also in Proceedings of the VIth International Fermentation Symposium; London, Ontario. Academic Press, New York, pp. 467-472. [6 ref]

• ***Summary:*** Discusses soy sauce, shoyu, miso, tempeh, sake, and soy milk. Address: Dep. of Applied Microbiology, Univ. of Strathclyde, George Street, Glasgow G1 1XW, Scotland.

6037. World of God. 1981. The cookbook for people who love animals. Route 2, Box 98E, Brooksville, Florida 33512. 176 p. Edited by Butterflies. Illust. and cover design by Flowers. Recipe index. 26 cm. Spiral bound. The 4th edition was copyright in 1987. [31 ref]

• ***Summary:*** The top of the title page reads: "Over 300 totally vegetarian recipes. From beginner to gourmet. No meat. No eggs. No dairy. No honey." At the bottom of the title page is a field of red and orange flowers, with butterflies around them, and a rayed sun overhead against a light yellow background. This is a good, spiral-bound collection of vegan recipes, which are straightforward, appetizing, and nutritious. Special section includes recipes for cat and dog food. The book is interspersed with nice quotes about vegetarianism, veganism, and animal rights from great thinkers such as Longfellow, Emerson, Schopenhauer, John Gallsworthy, Jeremy Bentham, Cicero, Herbert M. Shelton, John Ruskin, John Stuart Mill, Tagore, Plutarch, Tolstoy, Cardinal Newman, George Bernard Shaw, Thoreau, St. Francis, Leonardo da Vinci, Harriet Beecher Stowe, Romain Rolland, and Friedrich W. Nietzsche.

The glossary of ingredients lists okara, soy powder, tamari, tofu. "Soy powder [whole soy flour]–Made from cooked soybeans, it contains all the natural oil of the soybean. Used in casseroles, sweets, and for making soy milk. It can also be used as an egg substitute. Use 1 heaping tablespoon soy powder and 2 tablespoons water in place of 1 egg."

Recipes with soyfood terms in the title include: Quick instant soy milk (p. 12). Soy milk. Soy yogurt [non-fermented]. Soy margarine (p. 13). Soy tofu. Scrambled tofu. Tofu cottage cheese (p. 14). Tofu cream cheese (p. 15). Bran muffins (with soymilk, p. 22). Most baked goods include soymilk in place of dairy milk. Miso soup (p. 37). Tofu eggless salad. Okara salad (p. 54). Tofu potato salad (p. 56).

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Tomato tofu salad (p. 57). Tofu tahini dressing. Blond miso dressing (p. 67). Orange tamari dressing. Soy mayonnaise (p. 68). Miso spread (p. 69). Hot miso dressing (p. 73). Tahini-tamari sauce (p. 75). Stuffed tomato with soybeans (p. 92). Tofu saute (p. 104). Potatoes with tofu. Noodle tofu (p. 105). Tofu bean-thread saute (p. 106). Matzoh tofu bake (p. 124). Soy burgers (p. 131). Okara cylinders (p. 132). Tofu cheesecake (p. 141). Carob tofu cream pie (p. 143). Recipes for dogs and cats: Okara delight (p. 163). Soybean mash (p. 164). Instant soybean-meal dinner (p. 165).

At the back is a 6-page section titled "The Spirit of Ahimsa" by H. Jay Dinshah, president of the American Vegan Society. It is excerpted from his books "Out of the Jungle" and "Here's Harmlessness." Address: Brooksville, Florida.

6038. Yan, Martin. 1981. The Yan can cook book. Garden City, New York: Doubleday & Company Inc. 355 p. Illust.
• ***Summary:*** This Chinese cookbook, published in both hardcover and paperback, contains at least 15 recipes using bean curd (tofu), especially in the chapter titled "Bean Curd, Eggs, and Other Protein-Rich Foods" (p. 179-99). Tofu is usually referred to as "soybean curd" or "bean curd." Pages 185-87 contain a recipe for making tofu at home, and give a nutritional comparison of firm bean curd, chicken eggs, ground beef, and cottage cheese. In the chapter "Saucy Dips" is a recipe for "Black Bean Sauce" using "salted black beans" [fermented black soybeans].

The glossary (p. 313-) gives good descriptions of the following soyfoods: Black beans salted, brown soy sauce, Hoisin sauce, Hot bean paste, MSG (monosodium glutamate), soy sauce, bean curd, and soybean sheets dried (yuba).

The author is the star of a popular daily Chinese cooking show named "Yan Can," which he has hosted since 1978. Born and raised in Kwongchow, China, he left China in 1963 and began cooking at the age of 13 as an apprentice in a popular Hong Kong Restaurant (owned by his uncle) and at age 18 he had earned a diploma from the Overseas Institute of Cookery. Arriving in the USA in 1969, he earned a masters degree from the University of California at Davis.

6039. Yepsen, Roger B. ed. 1981. Home food systems. Emmaus, Pennsylvania: Rodale Press, Inc. 475 p. Illust. Index. 29 cm. [15 ref]
• ***Summary:*** Extensive, positive information on soyfoods is contained in the chapters on Grains (and bread, see p. 35), Beans (p. 94-95, 99-115; tofu, tempeh), Sprouting (p. 120, 125, 127), Canning (p. 203), and The Home Dairy (p. 298, soymilk, soy yogurt). Reviews and photos of many soyfoods books are given, with a sample recipe from most.

Pages 298 notes: "Soymilk is low in riboflavin (vitamin B-2), totally lacking in vitamin B-12, and has drastically less calcium than dairy milk. On the other hand, soymilk is lower in carbohydrates, has 12% fewer calories, 25% less fat, no cholesterol, and contains 15 times more iron than cow's milk." Address: Emmaus, Pennsylvania.

6040. Yokotsuka, Tamotsu; Sasaki, M. 1981. Risks of mycotoxin in fermented foods. *Advances in Biotechnology* 2:461-66. [37 ref. Eng]
• ***Summary:*** "In the production of Japanese fermented foods such as shoyu, miso, and sake, the major enzyme source is *Aspergillus* molds such as *A. oryzae* and *A. sojae*. Many investigators have failed to find a single aflatoxin producer among the *Aspergillus* molds used for food fermentation. Some cultures produced fluorescent compounds having Rf values resembling those of aflatoxins; further investigations, however, indicated that these compounds were 7 kinds of nontoxic pyrazine compounds including flacacol, isocoumarin compounds, lumichrome, and other compounds than aflatoxins. *Aspergillus* molds were also checked for their production of Aspergillic acid, Beta-nitropropionic acid, kojic acid, and oxalic acid. Results indicated no possible hazard caused by these compounds in Japanese fermented foods." Address: Kikkoman Corp., Noda-shi, Chiba-ken, Japan.

6041. Young, Mala. 1981. Main dishes. Newton Abbot, Devon, England: David & Charles. 48 p. Illust. No index. 21 cm. Series: Health Food Cooking.
• ***Summary:*** Page 8 notes that miso and tamari, both fermented soya products, are useful ingredients–as are aduki beans and seaweeds. Soy-related recipes include: Mixed bean and grain stew (with miso and tamari, p. 20). Soya beans and vegetables in miso sauce (p. 22-23). Aduki pâté and salad (p. 24-25). Winter vegetable and miso pie (p. 38).

6042. **Product Name:** [GranoVita Sandwich Spread].
Foreign Name: GranoVita Soja-pikant.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1981?
Ingredients: Water, vegetable oils and fats, egg protein, soya protein, spices, wheat gluten, glucose, salt, yeast, rolled oats, soya sauce, bread crumbs, onions.
Wt/Vol., Packaging, Price: 80 gm wholesales for DM 2.35 or 200 gm for DM4.55.
New Product–Documentation: Manufacturer's catalog. 1981, May 1. DE-VAU-GE Sortiments-Preisliste. 4 p. Manufacturer's catalog. 1983. GranoVita: Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products.

6043. Kimlan. 1981? Kimlan soy sauce. Taiwan. 15 p. Undated. [Eng; Chi]

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• ***Summary:*** Page 15 notes: "For over 40 years, Kimlan soy sauce has been the favorite of the Chinese people and now it is fast becoming a favorite the world over... Kimlan, established in 1936, is one of the most experienced soy sauce makers in Taiwan. It has grown to become Taiwan's most popular soy sauce. As it has grown, production facilities were expanded in 1957, 1967 and 1970. Yet the expansion did not keep up with the demand. Therefore, in 1977, a totally new plant was built at Tao Yuan, Taiwan." Daily production is now 15,000 kg.

In 1979 Kimlan's Lightly Salted Soy Sauce was awarded a "Praise of Excellent Company's New Product" by the Food Science and Technology Academy of Taiwan (ROC). "Of the more than 400 soy sauce makers in Taiwan, Kimlan is the leading seller by far. It has held this position since it was established in 1936." The company has approximately 300 employees. This company booklet contains many photos. Address: Tao Yuan, Taiwan.

6044. **Product Name:** [Nutana Frikalett/Rissole].
Foreign Name: Nutana Rissole.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Soya protein, egg white powder, spices, water. Gravy: Wheat flour, soya sauce, vegetable bouillon, onions.
Wt/Vol., Packaging, Price: 450 gm can.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "Ready to serve. Just heat in saucepan. To be served with boiled or mashed potatoes and vegetables." Labels in Danish, Dutch, and Finnish.

6045. **Product Name:** [Nutana Soya Sausages]
Foreign Name: Nutana Soja-poelser.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Water, sunflower oil, textured soya protein, gluten, grape sugar, sea salt, egg white powder, oat flakes, soya sauce, vegetable consistency, spices, vegetable flavouring, smoke flavour, colour (caramel, not ammonized). Water: water, vegetable bouillon.
Wt/Vol., Packaging, Price: 385 gm can, of which 230 gm is sausages.
How Stored: Shelf-stable.
Nutrition: Per 100 gm: Calories 200, protein 13 gm, fat 15 gm, carbohydrate 4 gm.
New Product–Documentation: Manufacturer's catalog 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "For dinner or lunch. Ready to serve. Heat or fry. Serve with bread, potato salad, or mashed potatoes." Labels in Danish, Dutch, and Finnish.

6046. **Product Name:** [Nutana Soya Pro (With Beef-Like Flavor, or with Chicken-Like Flavor)].
Foreign Name: Nutana Soya Pro (Soja-Oxlett, or Soja-Kylett).
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Beef-Like: Water, textured soya protein, sunflower oil, wheat flower, egg white powder, yeast extract, soya sauce, grape sugar, sea salt, spices, vegetable aroma.
Wt/Vol., Packaging, Price: 400 gm can, of which 170 gm is Soya Pro. The rest is sauce.
How Stored: Shelf-stable.
Nutrition: Beef-Like: Per 100 gm: Calories 130, protein 12 gm, fat 7 gm, carbohydrate 4 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "For dinner. Ready to serve, just heat in a saucepan. Serve with potatoes and vegetables. The sauce may be varied with fried onions, tomatoes, chopped parsley, and mushrooms. Soya Pro can also be dipped in egg and bread-crumbs and fried. Shurtleff. 1981. Overseas Adventist Food Companies. p. 6. "In 1981 Nutana was doing the most advanced work with soy of any Adventist food company outside the U.S. They started in the early 1960s importing spun protein fibers (SPF) from the U.S. Now they import soy fibers spun by DE-VAU-GE in Germany and use them to make a range of meat analogs. Labels in Danish, Dutch, and Finnish.

Alfa-Laval. 1988, June. Soyfoods: Old traditions with new potentials. p. 9. Shows a color photo of the front of the can. The product is now named Nutana Soja-Kylett. On the label is a photo of several round deep-fried cutlets, one cut in half, on a bed of rice.

6047. Iizuka, Hiroshi. 1982. Re: Early history of shoyu. Letter to William Shurtleff at Soyfoods Center, Jan. 8. 2 p. Typed, with signature on letterhead. [1 ref]
• ***Summary:*** As Dr. Yokotsuka suggested in his letter [of 22 Dec. 1981], the word *chiang-yu* seems most likely to have been used for the first time in Japan. The first reference in Japan [to shoyu or chiang-yu] is generally regarded as the Ekirinhon-setsuyoshu [Ekirinbon]. The best history of shoyu he can think of is the Kikkoman Shoyu-shi (1968). "The best shoyu historian that we know is Mr. Morio Ichiyawa [sic. Ichiyama], the author of the original edition of the above-mentioned book. Mr. Ichiyama used to work for Kikkoman and was long engaged in the compilation of the company's

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history. After having served as the [Noda] City Museum Curator, he leads a retired life in Noda City. He is 85 years old." Address: Senior Asst. Manager, Planning, International Operations Dep., Kikkoman Corp., 25 Kanda Nishiki-cho 1-chome, Chiyoda-ku, Tokyo 101, Japan. Phone: 03-233-5610.

6048. Sass, Lorna J. 1982. Budget-conscious Americans are hitting the soy--its not just sauce. *Chicago Tribune*, Jan. 21, p. S_A151.
• ***Summary:*** This article first appeared as: Sass, Lorna J. 1981. "Soy foods: Versatile, cheap and on the rise." *New York Times*, Aug. 12, p. C1, C6. It first appeared in the *Chicago Tribune* on 29 Oct. 1981 (p. N_B19).

6049. Jaccard, Anne-Marie; Krieger, Verena. 1982. Une graine pour l'an 2000 [A grain for the year 2000]. *Illustre (Lausanne, Switzerland)* No. 4, p. 59-63, Jan. 27. [Fre]
• ***Summary:*** This grain is the soybean, which is imported in huge quantities from the USA to Europe. The article discusses the soybean plant, tofu, miso, tamari and shoyu, tempeh, homemade soy sprouts, and yuba.

A photo shows Paul Simon, a specialist in macrobiotic food at Lausanne. He makes tofu in the traditional way using nigari, and serves it with tamari and ginger. "Fresh tofu, prepared on the spot, is difficult to find in Switzerland. In the French-speaking cantons of Switzerland, there are only two places: (1) The macrobiotic Center of Lausanne, 7 ruelle de Bourg, and (2) Le Grain d'Or, 7 rue Voltaire, Geneva." Recently a factory opened at Zurich, and another will open soon at Nyon. In the two macrobiotic restaurants of French-speaking Switzerland (Romandie), tofu is found regularly à la carte: at "The Bio" in Lausanne, and "La Moisson" in Geneva.

6050. **Product Name:** Tofu Sunny Eggless Salad.
Manufacturer's Name: Ashland Soy Works.
Manufacturer's Address: 280 Helman St., Ashland, OR 97520. Phone: 503/482-1865.
Date of Introduction: 1982, January.
Ingredients: Tofu, oil, tamari, vinegar, lemon juice, mustard, celery, onion, garlic, spices.
Wt/Vol., Packaging, Price: 16 oz.
How Stored: Refrigerated
New Product–Documentation: Label, 1982, 3 by 2.25 inches. Self adhesive. Red on yellow. "No preservatives or additives." Talk with Diana Muhs, 1988, Feb. 10.

6051. Morinaga, Takamasa. 1982. [Re: On saishikomi or double-fermented shoyu] Letter to William Shurtleff at Soyfoods Center, Jan.--in reply to inquiry. 2 p. [Jap; eng+]
• ***Summary:*** Saishikomi shoyu is said to have originated in about 1780 in Yanai city, Yamaguchi prefecture, this is written in the History of Yanai city in Yamaguchi-ken. (Note: Yamaguchi prefecture is the southwestern-most prefecture on Honshu, Japan's main island, located just to the north of Kyushu.) Traditionally saishikomi shoyu was produced in the five prefectures in the Chugoku-Chiho of southwestern Honshu: Yamaguchi, Shimane, Hiroshima, Okayama, and Tottori. Recently, however, its has begun to spread throughout Japan.

In the old days, saishikomi shoyu was another name for *Kanro Shoyu*. The latter was a special item (*tokusan-hin*) of Hiroshima and Yamaguchi prefectures, but there is very little documentation for this early product. Later [after World War II] the two names were unified by the Japanese Agricultural Standards (*Nihon Norin Kikaku*).

Generally saishikomi shoyu is used as a "pouring shoyu" (*kake-shoyu*), especially valued on sashimi and sushi. But recently it is also starting to be used as an all-purpose shoyu in cooking.

According to the Japan Agricultural Standards (JAS) there are two types of saishikomi shoyu: *Honjozo* type (traditionally fermented) and *shinshiki-jozo* type (semi-fermented using HVP = *aminosan-eki*). Yamaguchi prefecture produces the largest amount of *Honjozo*. The three largest manufacturers of this product, in descending order of size, are: Yanai Shoyu Ltd., K.K. Sagawa Shoyu-ten, and K.K. Shimaya. K.K. Shimaya produces a "Soft Type" of Saishikomi (1.8% total nitrogen) which is developing a good reputation.

The above-mentioned *shinshiki-jozo* type of saishikomi shoyu is also made in Chugoku-Chiho, but mostly on the northern side, bordering the Japan Sea in Tottori and Shimane prefectures. In addition, Kinoene Shoyu K.K. of Noda city in Chiba prefecture also started to sell this type of saishikomi. They use up to 20% of an ingredient named "sweetness extract (*Umasa Ekisu*)." Address: K.K. Shimaya, Fukukawa 637, Oaza, Shin-Nanyo-shi, Yamaguchi-ken, Japan.

6052. Murphy, P.A. 1982. Phytoestrogen content of processed soybean products. *Food Technology* 36(1):60, 62-64, Jan. [32 ref]
• ***Summary:*** The phytoestrogens, genistin and daidzin; their agluticones, genistein and daidzein; and coumesterol are the principal isoflavonoid substances found in soybeans. These 5 types of soy phytoestrogens (which are hormones) were separated using HPLC from soybeans, toasted defatted soyflakes, textured soy protein, soy-containing breakfast patties, soy sprouts (germinated for 5 days), tofu, soy isolates (acid precipitated), and fermented soy sauce. There was a general decrease in genistin concentration with additional processing. But there is a significant carryover of soy phytoestrogens into processed soy protein products. Thus soy products have high estrogenic activity. Analysis of phytoestrogens in food mixtures may be a useful technique for estimating soy protein concentration in foods. Address:

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Dep. of Food Technology, Iowa State Univ., Ames, Iowa 50011

6053. **Product Name:** Upcountry Seitan.
Manufacturer's Name: Upcountry.
Manufacturer's Address: Huntington Rd. (P.O. Box 148), Worthington, MA 01098. Phone: 413-238-5341.
Date of Introduction: 1982, January.
Ingredients: Organic whole wheat flour, water, tamari, cooked with kombu (sea vegetable).
Wt/Vol., Packaging, Price: 1 lb packed in water in molded plastic tray with heat-sealed, peel-off plastic film lid.
How Stored: Refrigerated.
Nutrition: Per 4 oz.: Calories 70, protein 15 gm, fat 1 gm. Plus 6% of the RDA for vitamin C, 8% for riboflavin, thiamine, and niacin, and 10% for iron.
New Product–Documentation: Label printed in booklet titled "Cooking with Seitan." 1982. Joan Donovan states that the color was deep red and gold with brown printing. "A high protein natural food. Delicious served as a sandwich or cut for a stew or casserole."

Leaflet (6 panels), about 1982, with a description of seitan and recipes for sandwiches, baked squash with seitan, staple seitan, and seitan with pasta.

R. Leviton. 1983. *Vegetarian Times*, Jan. p. 32-37. Mochi, amazake and seitan: Introducing three new foods from the Orient. "Seitan has found a new home in the U.S. and for Winston and Joan Donovan it has proved to be both a life-sustaining and livelihood providing wholesome food. The Donovans launched their Upcountry Seitan business from their Worthington, Massachusetts, farmhouse in January 1982, largely because Winston had been diagnosed as having an incurable kidney disease which even dialysis couldn't halt. After a consultation at Boston's East/West Center, he adopted a macrobiotic diet featuring seitan and, in the past year, has regained his health and resolved his kidney ailment. For Winston, who drastically changed his diet in his forties, seitan's chief attraction is that it resembles meat enough in taste and texture to satisfy most longings for beef and veal. The entire family is now vegetarian." Describes how the Donovans use high-gluten hard red spring wheat to make 300 lb of seitan strips each 6-day week in their tidy 400 square foot shop. After kneading with water, the elastic gluten is called *kofu*. "The Donovans serve seitan in a variety of ways, deep-fried, fresh in slices, spiced with garlic and fennel, finely chopped and mixed with hummus, or in pita bread accompanied by sauerkraut and mustard." A photo (p. 35) shows Winston and Joan Donovan in their seitan shop with their seitan, both packaged (in the same type of plastic tray or tub used to sell tofu) and on a plate.

Barbara and Leonard Jacobs. 1985. *East West Journal*, Oct. p. 38-39. "Flour power! Cooking with seitan, the delicious natural food from grain." "Upcountry Seitan, begun three and a half years ago [i.e., early 1982] by Win Donovan, is now owned and operated by Sandy Chianfoni. Sales have increased by 200% over the past two years and Chianfoni is currently making 600 pounds of seitan each week. The kneading and rinsing processes are automated, but the remaining steps are done by hand. Chianfoni has been experimenting with several desserts which use the starch water from the washing process. This starch has the same thickening properties as cornstarch and can be used to prepare custards and puddings. Upcountry Seitan in Lenox, Massachusetts, is the largest manufacturer we located in a recent survey of the industry. It makes 600 pounds each week and distributes through six states." Page 39 shows 3 photos of Upcountry's seitan-making operation.

Barbara and Leonard Jacobs. 1987. *Cooking with Seitan: Delicious Natural Foods from Whole Grains*. Current U.S. seitan manufacturers include Upcountry Seitan in Lenox, Massachusetts, the largest known producer in America. The company is now owned and operated by Wendy Rowe and Sandy Chianfoni. They get a yield of 1.33 (i.e. 90 pounds of flour result in 120 pounds of seitan).

Talk with Sandy Chianfoni of Upcountry Seitan. 1991, Nov. 16. She moved to Boston in 1978 and in about Aug. 1983 she bought Upcountry Seitan from Win Donovan. She started production on 23 Oct. 1983. Win wanted to sell the business because it was growing and he did not want to take it to the next level. He was in good health and he did not yet know that he had cancer. He was in the process of selling his home and moving to Becket, with the Kushi Institute in western Massachusetts. He was planning to take over supervision of the property. He liked starting the business but he did not enjoy the ongoing process of running it. Upcountry was very small at the time Win sold it. Mark Betinis, who worked for him, drove the product to Boston (mostly to Bread & Circus) once a week, then Charley Kendall was distributing it with his own products to the major natural food stores in New York City. He may also have sold a little by UPS. They sold about 36 cases a week on average. He had no walk-in cooler or distributor. In June of this year she moved to a larger factory (P.O. Box 76, Lenox Dale, MA 01242), increasing to 4,700 square feet from 1,000. She wants to increase her volume because she knows the demand is there. Since the starch from her gluten process was clogging up local sewage pipes, she now has to settle out the solids and then have them pumped out. She used to make a pudding with her wheat starch. Launched in 1985, it was named "Cup o' Puddin'" in Maple-Walnut and Almond flavors. It was delicious, but she great difficulty bringing it to a mass-production scale. Now she would like to try to make a drink with it. That is one of the main reasons there are not more gluten makers in existence. There are three countries that export a lot of gluten: Australia, Germany, and the USA.

Talk with Joan Donovan, formerly of Upcountry Seitan. 1991, Nov. 17. Their company had only one commercial

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product–the basic seitan. They experimented with a ginger and shiitake mushroom flavor but never really launched it. Upcountry was the first company on the East Coast to package seitan. They got the idea of using tofu tubs from New England Soy Dairy. It was packaged partly immersed in some of the tamari broth to help preserve it and keep it from molding. Initially it was sold as a ½-pound loaf in the package; later it was sold sliced. It was sold refrigerated and a shelf life of about 5 days. Worthington is a very small town. Winston, who was a carpenter, built the home on Huntington Road; they made the seitan in a shop adjoining their home. Charles Kendall now lives in that house. She learned how to make seitan at an informal macrobiotic cooking session, either from Ann Burns or a man named Jim. Her husband had eaten meat and potatoes all his life, so he wanted to tell others that there were alternatives. He died of cancer in 1986. Talk with Joan Donovan. 1991 Dec. 7. She cannot find a copy of the original label.

Label purchased at Berkeley Natural Grocery Co., California 1991. Nov. 5.5 by 4.5 inches. 8 oz molded plastic (high-density polyethylene) tray with heat-sealed, peel-off plastic film lid. Brown, green, and orange on white. Illustration of an orange sun rising over green mountains. See-through area above mountains. "Delicious ready to eat meat substitute. No cholesterol. Higher in protein than tofu. Frozen. Retails for $2.99. Ingredients: Organic stoneground whole wheat flour, water, tamari, kombu (sea vegetable). Upcountry, Lenoxdale, MA 01242." Circle K kosher symbol.

Talk with a person in Massachusetts who is very knowledgeable about seitan. 1992 July 2. In recent years, Upcountry has given seitan a bad image. Their seitan tastes like a wet sponge. They don't develop the gluten well enough.

6054. Westbrae Natural Foods. 1982. Distributor catalog and pricelist: Jan. 1982. Emeryville, California: Westbrae. 16 p. 22 by 28 cm.

• ***Summary:*** On the cover, the lettering is in dark blue on a tan background. Address: 4240 Hollis St., Emeryville, California 94608. Phone: (415) 658-7518 (orders).

6055. Wood, Brian J.B. 1982. Soy sauce and miso. *Economic Microbiology* 7:39-86. Jan. A.H. Rose, ed. Fermented Foods. [50 ref.]

• ***Summary:*** Contents: 1. Introduction. 2. The preparation of soy sauce. Introduction, preparation of raw materials (the beans, wheat), mixing, koji, moromi. 3. Of beans, microbes, and miso: Beans, microbes, miso. 4. Trade in soy sauce: Introduction, statistics. Table 1 (p. 64-66) shows exports of soy sauce in 1978, in tonnes (metric tons) from Hong Kong, Korean Republic, Singapore, Japan, and total, to almost every country in the world (with each country's population in millions), grouped by region as follows:

1. North America: Canada, USA (#1)–Regional total imports: 6,052.3 tonnes.

2. South and Central America [and Caribbean] Argentina (#3 in region), Bolivia, Brazil, Chile, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Mexico (#2), Nicaragua, Panama, Paraguay, Surinam, Venezuela (#1), Granada, Jamaica, Trinidad and Tobago, total. Former Dutch West Indies–Regional total imports: 1,046.4 tonnes.

3. Europe: Austria, Belgium, Czechoslovakia, Denmark, Finland, France (#4 in region), Germany (West #3), Greece, Italy, Netherlands (#2), Norway, Portugal, Spain, Sweden, Switzerland, UK (#1), USSR–Regional total imports: 3,017.7 tonnes.

4. Near and Middle East: Bahrain (#3), Egypt, India, Iran (#2), Iraq, Jordan, Kuwait, Oman, Qatar, Saudi Arabia (#1), United Arab Emirates, Yemen Arab Republic–Regional total imports: 1,193.5 tonnes.

5. Far East and Western Pacific: Brunei, Hong Kong (#3 in region), Indonesia, Japan, Korea (South), Macao, Malaysia (#2), Philippines, Sabah (#1; A state of Malaysia from 1963, Formerly British North Borneo), Sarawak (A state of Malaysia from 1963), Singapore, Taiwan, Thailand–Regional total imports: 3,139.4.

6. Pacific and Australasia: Australia (#1 in region), Cook Islands, Christmas Islands, Fiji, Guam (#2), Nauru, New Caledonia, New Hebrides, New Zealand, Oceania n.e.s. (#3), Papua New Guinea, Portuguese Timor, Samoa and Tonga, Solomon Islands, Tuvalu (Ellis Island), U.S. Oceania–Regional total imports: 1,647.5 tonnes.

Note: This is the earliest document seen (March 2010) concerning soybean products (soy sauce) in Kiribati (Christmas Islands), in Nauru, in Qatar, in Portuguese Timor (later renamed Timor-Leste [East Timor]) or in Tuvalu. This document contains the earliest date seen for soybean products in Kiribati (Christmas Islands), in Nauru, in Qatar, Portuguese Timor, or in Tuvalu (1978); soybeans as such have not yet been reported.

7. Africa: Algeria, Canary Islands, Ethiopia, Gambia, Ghana, Kenya, Libya, Malagasy, Malawi, Mauritius (#2 in region), Nigeria, South Africa (Republic of, #1), Sudan, Reunion Islands (#3), Tanzania, Zaire. Other African countries–Regional total imports: 365.7 tonnes. World total imports: 15,731.5 tonnes, of which 6,192.8 tonnes from Hong Kong, 1,233.5 tonnes from South Korea, 1,713.6 tonnes from Singapore, 6,591.6 tonnes from Japan. The value in pounds sterling and in pounds sterling per tons of soy sauce is given for each exporter.

Other tables show: (2) Soy sauce exports (in tonnes and value) each year from 1976 to 1976 from Hong Kong, South Korea, Singapore, and Japan. A large percentage of Hong Kong's exports are re-exports (probably from China). (3) Total soy sauce exports from Japan, 1976-1978, by container type, with amount and value. (4) Soy sauce and miso production in Japan every 5 years from 1965 to 1978

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(in tonnes). (5) Soy sauce and miso production in Japan for export in 1976, 1977, and 1978. Miso production (in tonnes) averaged about 40% of soy sauce production, and miso exports (in tonnes) averaged about 13% of soy sauce exports. (6) Imports of soy sauce into Hong Kong, Singapore, and the USA from exporting countries in 1978 (with figures for exports from China in 1976 and 1977). (7) Re-exports of soy sauce (made in China) from Hong Kong and Singapore in 1978 to major importing countries worldwide, by region, by country. Small countries that are the destination of this soy sauce include: Honduras, Nicaragua, Panama, Venezuela, Trinidad and Tobago, Former Dutch West Indies [also called Netherlands Antilles, they are part of the Lesser Antilles and consist of two groups of islands in the Caribbean Sea Curaçao and Bonaire, just off the Venezuelan coast, and Sint Eustatius, Saba and Sint Maarten, located southeast of the Virgin Islands. The islands form an autonomous part of the Kingdom of the Netherlands], Pakistan, Saudi Arabia, United Arab Emirates, Brunei, Sabah, Sarawak, Fiji, Nauru, Oceanea (non-U.S.), Oceanea (U.S.), Papua, Samoa and Tonga, Solomon Islands, Ghana, Malagasy Republic, Togo. Total from Hong Kong: 2,945.3 tonnes, and from Singapore 109.5 tonnes.

(8) Exports of miso (in tonnes) from South Korea and Japan in 1978 to major importing countries worldwide, by region, by country. The leading importers are: USA (622), Saudi Arabia (353), Singapore (66), Bahrain (64), Netherlands (38), Iran (29), Iraq (29) France (28), German Federal Republic (23), Smaller importers include: Chile, Guyana, Surinam, Bangladesh, Iran, Iraq, Jordan, Kuwait, Quatar, Saudi Arabia, United Arab Emirates, Yemen Arab Republic, Sabah, Fiji, Guam, New Hebrides, Papua New Guinea, Samoa, Solomon Islands, Algeria, Canary Islands, Ghana, Kenya, Libya, Mozambique, South Africa Republic, Zaire.

Note: This is the earliest document seen (June 2007) concerning soybean products (miso) in Quatar. This document contains the earliest date seen for soybean products in Quatar (1978); soybeans as such have not yet been reported.

(9) Exports of miso from South Korea and Japan in 1976, 1977, and 1978 (quantity and value each year; no importing country names are given).

5. Tour of South East Asia: Technical and scientific aspects, trade aspects. 6. Acknowledgments. References.

The chapter on Trade states: Soy sauce and soy paste (miso) are traded between all countries of South East Asia. The Korean Republic's exports nearly quadrupled in tonnage. The Kikkoman Company's production facility in Wisconsin produced 21,6000 tonnes of soy sauce in 1978. This was equal to 3 times the total exports from Japan in the same year. Japan's total share of the world soy sauce market remains very healthy. Miso exports are still small in comparison with soy sauce. On a rising market Japan's exports still only represent 0.2% of its annual miso production, "clearly there is considerable room for expansion here."

Miso is of greater relative importance to Korea than it is to Japan. Among the European countries, Belgium and Holland import the greatest amount of miso on a per capita basis. Spain imports a fair amount of miso. The U.S.A. and Canada had total miso imports totaling about 10% of their soy sauce imports.

"In Thailand, there are about 50 soy sauce factories, the majority of which are small, producing less than 100 kilolitres per year, although it should be noted that most of them also produce soybean paste and soybean cheese [probably tofu]. The total annual consumption of soy sauce in Thailand is estimated at about 6,000 kilolitres (about 7,200 tonnes).

"In Malaysia, there are about 140 soy sauce factories producing in total an estimated 5 5 million gallons of soy sauce per year according to the proprietor of a leading brewery in Kuala Lumpur. This is about 21,000 tonnes per annum" (p. 84). Address: Dep. of Applied Microbiology, Univ., of Strathclyde, Glasgow [Scotland], U.K.

6056. Aros Sojaprodukter. 1982. Tofu & alger den nya maten! [Tofu & sea vegetables, the new foods (Ad)]. *Haelsa.* Feb. 2. [Swe]

• ***Summary:*** This full-page color ad shows Aros tofu (both in the package and sliced), Morinaga Ever-Fresh Silken Tofu, a tall bottle of "Traditionally Brewed Shoyu Soya Sauce," plus packages of nori, wakame, kombu, and Irish dulse (from Sunwheel). Address: Bergsvagen 1, 190 60 Orsundsbro, Sweden. Phone: 0171/60 456.

6057. Wollner, Joel. 1982. History of Erewhon, macrobiotics, and soyfoods in America (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 2. 2 p. transcript.

• ***Summary:*** Evan Root was the first attendant at the Erewhon retail store, below street level at 303-B Newbury Street. He lacquered the walls with Michio. Evan is a great storyteller, very intelligent. The initial store was just one room, about10 by 20 feet. Very few people came in to buy food, so it was more like a stock room than a store. Some evenings there were lectures there. Redwing Books now occupies that space. Most of the food (a tin of miso, a keg of tamari) was just being sent by the Kushis' friends from Japan as gifts; it didn't go through customs.

The Kushis got nigari and made tofu at home. It was not for sale, but for dinner guests and cooking classes. Joel made some tofu using lemon juice when nigari was not available.

As tofu started to become more popular, Erewhon started to buy it from a tofu maker in Boston's Chinatown. First they just bought and sold that tofu, but before long (in about 1973-74) they convinced him to start making nigari tofu for them. They guaranteed to buy what he made, and

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they sold him the nigari at cost. This might have been the first nigari tofu made in USA. A lot of nigari tofu is still made in Boston's Chinatown. Joel thinks the tofu maker was located on Tyler, Street, perhaps Yah Kee. Nigari came in 66 pound sacks from Japan. Erewhon also sold small quantities of nigari in the retail store. Chinatown was Erewhon's main source of tofu until Laughing Grasshopper appeared.

What was the macrobiotic movement's contribution to the history of soyfoods in the United States? Macrobiotic teachers and students talked and wrote about them, ate them, and sold them. They felt soyfoods were an important part of a good diet. They educated people and developed a market for soyfoods. Few Americans had eaten miso and tofu at home before 1966–the year Erewhon started. Macrobiotics were the first Caucasian Americans to really use soyfoods regularly. Before that, soyfoods (except perhaps soy sauce) were just interesting oddities. Once could say that the macrobiotic movement introduced soyfoods to America.

As for tofu, Joel thinks that Michio Kushi's students misinterpreted his remarks about tofu being yin. Macrobiotics now eat tofu regularly, 3-4 times a week. There are endless ways to prepare it. It's been years since Joel has heard that tofu is "too yin."

What did *The Book of Tofu* (published in Dec. 1975) do for tofu? It expanded its relevance for the Western diet. Before that book, most of the tofu in the United States was consumed by people of East Asian ancestry.

Charles Kendall played a key role in making and introducing natto, mochi, and amazake to Caucasian Americans. He made these foods in his home and sold them locally. Initially, it was not a formal / legal business. But today his business, Kendall Foods, sells $500 a week of these three foods. He has been making natto for 4-5 years. He was America's first Caucasian natto maker. Natto was served in macrobiotic restaurants in Boston.

The latest soyfood to hit Boston has been tempeh. It's been a phenomenal success. Macrobiotics are going crazy over it. Thom Leonard has been giving lots of tempeh classes for the past 1½ years. For more than a year, lots of sandwich makers in Boston have been making and selling tempeh sandwiches. Tempeh is made into cutlets, burgers, tempeh mock-tuna salad. Why is it so popular? Because it is rich and meaty in texture and flavor–the opposite of rice. Most macrobiotics crave rich, meaty foods.

Ron Kotzsch is very close to the Kushis. A very unpretentious person with a wonderful sense of humor, he is now teaching in North Carolina. He is friends with Helen and Scott Nearing. He toured China and Japan with John Denver, the singer and songwriter–who did a benefit for Michio's new college.

How does Joes see the future of Erewhon? He thinks the company will focus on manufacturing only. Now is the critical time. He'd give Erewhon a 30-70% chance of survival. Address: Boston, Massachusetts.

6058 Takase, Katsumaro. 1982. Re: History of Higashimaru Shoyu K.K. and light-colored (usukuchi) shoyu. Letter to William Shurtleff at Soyfoods Center, Feb. 5–in reply to inquiry. 1 p. [Jap, eng]
Address: 100-3 Tominaga, Tatsuno-cho, Tatsuno-shi, Hyogo prefecture 679-41, Japan.

6059 Hillyard, Roger. 1982. History of Erewhon, natural foods, and macrobiotics in America. Part I (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 7. 2 p. transcript.
• ***Summary:*** Roger got involved with macrobiotics in San Francisco in about 1965. He lived in San Francisco, was doing light shows at the Avalon Ballroom, read the book *You are All Sanpaku* [by Sakurazawa Nyoiti (George Ohsawa), English version by William Dufty], and got involved. Also in about 1965, Herman Aihara and Bob Kennedy used to come to town to lecture in a church on Oak Street. Bill Tara and Paul Hawken, who were filmmakers, lived in a warehouse on lower Mission St. described in the *Electric Kool-Aid Acid Test*, by Tom Wolfe (largely about Ken Kesey and the Merry Pranksters). "A little macro scene started. We heard that Boston was macro Mecca."

Roger arrived in Boston in Oct. 1969. Erewhon started when Michio and Aveline Kushi were living in Cambridge, Massachusetts; in their basement they had a little food, which they would sell to people who came to hear Michio lecture. "The food was but a vehicle to the larger teaching. The food is like an asana or yoga posture, but the goal is enlightenment. You can get stuck on the food. That is why Michio had very, very little involvement in Erewhon's food business. His focus was on the philosophy of macrobiotics and spreading it."

The Erewhon store was (at the time) in the basement of today's Redwing Books. Evan Root started the store, but he wanted to get out of it into a restaurant. Paul Hawken took over the sleepy little store. Bill Tara (who was from Santa Cruz) also worked there for a while. The tiny store had few customers, a very limited selection of products, and a little mail order business. Shortly after Roger arrived, the Erewhon store at 342 Newbury Street opened–in Nov. or Dec. 1969. Bruce Macdonald and Jim Docker helped to renovate the new store. The whole thing was called Erewhon Trading Co. In Feb. 1970 Roger started to work in this retail store.

Shortly thereafter, Paul Hawken went to Japan. At that time the only companies importing food from Japan were Chico-San and Infinity Foods in New York, both were macrobiotic. Erewhon bought from them, and then started doing a little wholesaling. After Paul went to Japan, Erewhon started importing directly from Japan. Paul got in touch with Mr. Kazama and helped to get Mitoku into the natural food export business. Kazama was an old friend of

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Obiyashi, who was an old friend of Michio Kushi's from Columbia University. Muso was shipping to Chico-San and Infinity. Erewhon imported from Muso and Kazama. Roger thinks Mitoku started in about 1970-71. Before that they sold soccer shoes and cranes. The fact that Paul was in Japan was instrumental in getting Erewhon's imports started.

The Erewhon retail store would sometimes get huge shipments, such as a 40-foot-long truck of rice that filled up the whole Erewhon storeroom. It was something like Kokuho Rose [a brand of short grain brown rice grown by Koda Bros. in Dos Palos, California]; it was not organically grown. There was really no room for it, and no refrigeration. At about this time the Lundberg Brothers in California started growing brown rice organically. At one time a boxcar of 100,000 lb of Lundberg rice arrived, so Erewhon needed more warehouse space. Also involved were Jean Allison (from California) and Wally Gorell (from the San Francisco Calliope Co). In about mid-1970 Erewhon leased a 10,000 square foot warehouse space on the 5th floor of 33 Farnsworth St. [a big brick warehouse] in Boston. The space had a nice milling room. Then the wholesale business took off. Roger left Boston in April 1971. He had been running both the distributing company and the wholesale company, but there was a store manager. The retail store expanded into its back room. Then the wholesale business grew like mad. Orders came from non-macro natural foods stores, from new macro groups, etc.

How did the natural food movement get started? As Roger recalls, it was not started by macros. In about 1966 or 1967 Sunset Natural Foods became New Age Foods, an early natural foods store run by Fred Rohe. The natural food movement sprung out of the new consciousness–the counterculture–as did macrobiotics. The macrobiotic movement fed the natural foods movement. One Erewhon customer was Mr. Natural in Carbondale, Illinois. Although he was not a macro, he bought miso, tamari, rice, etc. There were lots of other non-macro stores like that too. But there were also lots of macro stores. Bill Tara opened a store and macro center on the 14th floor of a downtown building in Chicago, out of that grew Food for Life. Tom Waxman started Essene in Philadelphia, Pennsylvania. These were two mini-Erewhons. Each started as a small retail store, then became a wholesaler. Erewhon provided the model.

Erewhon set up a branch distributor in Canada, which later became Manna Foods, with Gene Newman, a macro. Westbrae was a Berkeley political organization started by Bob Gerner, making granola. Erewhon West was connected with Bruce Macdonald. Bill Tara, with Aveline Kushi's prodding, started the Erewhon store in Los Angeles; it did a little distributing. Bruce Macdonald went to Los Angeles, then Bill Tara left for England–Roger doesn't know why. Erewhon West started growing. Jimmy Silver ran the Big Sanae, which became the Seventh Inn. Roger then went to Texas and in Jan. 1972 he worked with Deaf Smith for about a year. Later Erewhon West was sold to John Fountain, but really to John Demming–as a separate business from Erewhon.

The Well [a wholesale and distribution company in San Jose, California] was an offshoot of Fred Rohe's New Age Foods, ca. 1969-1970. It was never macrobiotic. Fred sold stock in his business, had 2 stores in San Francisco, then opened a big natural foods store [actually a supermarket] named New Age Natural Foods on California Street in Palo Alto. The whole thing was a fiasco; the Palo Alto store never made money.

Deaf Smith Farms was established as a joint venture between Erewhon and Arrowhead Mills; it never worked out. In April 1971 Bruce Macdonald started a marketing company named Pure & Simple. In March 1972 Roger started working at the Well in San Jose. Bruce went to Green Mountain Grainery in Boulder, Colorado. Gradually The Well became Pure & Simple, and started importing from Mr. Kazama and Muso.

Paul Hawken was the first person to work with farmers to get them to grow grain organically for Erewhon. One of these was Carl Garrich of Lone Pine, Arkansas–after Erewhon moved to 33 Farnsworth Street. Roger did a lot of work with farmers at Arrowhead Mills, but not connected with macrobiotics.

Major macrobiotic wholesale distributors: Erewhon East and West, Laurelbrook (later), Food for Health, Essene, Manna in Canada (later). Llama (later) was not macro.

Macrobiotics played the major, primary role in introducing soyfoods to America. A little was also coming through Japan Foods [San Francisco] and Nishimoto [Trading Co., Los Angeles]. The macros made these foods available, but don't overcredit it; the time was ripe and it just happened. The main contribution of macrobiotics was simply making these foods available and teaching about them. Michio always said that macrobiotics is not just about food and the diet.

"It was frightening when we stopped to think about it. The business was doubling and tripling at a crazy rate." Roger still has his early notes but no accounting books. Continued. Address: California.

6060. Hillyard, Roger. 1982. History of Erewhon, natural foods, and macrobiotics in America. Part II (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 7. 2 p. transcript.

• ***Summary:*** While Roger was in Boston, no tofu was sold at the Erewhon retail store at 342 Newbury St.–since there was no refrigeration and no room. He thinks tofu was introduced after Erewhon got 33 Farnsworth St.

The trickiest question, which has no place in this book, is about work as a disciple / discipline vs. for money / as business. Work can be a spiritual practice (*karma yoga*), and that is how many of the early workers at Erewhon viewed it.

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Roger does not know why so many people left Erewhon. Maybe Michio Kushi planned it that way. He does not know why Erewhon went bankrupt; maybe it was because the company was undercapitalized, there was no worker equity, and Michio did not know American business. "Maybe Michio did not care so much. Distributing foods was always a minor focus for Michio."

Other macrobiotic food distributors outside the U.S. were Lima in Belgium (by far the earliest), Harmony and Sunwheel in England, and some company in Italy. Address: California.

6061. David, Elizabeth. 1982. Re: Early references to soy sauce in British publications. Letter to William Shurtleff at Soyfoods Center, Feb. 8. 2 p. Typed, with signature. [4 ref]
• ***Summary:*** Elizabeth has a large collection of very early British cookbooks. She cites three (published in 1786, 1821, and 1829) that mention soy sauce. She has never made a study of the early uses and/or sale of soy sauce in England. However "soy must have been reasonably popular by the mid-18th century, since I remember seeing a silver soy label for hanging around a bottle, c. 1740, in the Victoria and Albert Museum." She thinks the best places to find very early references "would be diaries, letters, memoires and so on, rather than cookery books... There must also be trade references in the East India Company archives. I believe these are now housed in the India Office Library, Orbis House, 197 Blackfriars Road, London, S.E. 1."

By the "end of the 19th century, soy would appear to have taken the place of the walnut, mushroom, and other ketchups which had formerly been the vital ingredients of both home-made and the earlier commercial bottled sauces. As you well know, there were of course various imitation soys on the English market." Address: 24 Halsey St., London SW3, England.

6062. White, Jim. 1982. Carobs brighten dull winter dishes. *Toronto Star (Ontario, Canada)*. Feb. 10. p. C8.
• ***Summary:*** Frieda Caplan, the queen of exotic and interesting new fruits and vegetables, and a California food wholesaler, is in Toronto to brighten the dull, cold winter with California sunshine. This year her company hopes to ring up $10 million in gross sales.

According to Kaplan, trends in the U.S. are towards fresh herbs and tofu, and away from salt.

Nearly half of the 10,000 letters Caplan receives each year come from consumers who want "to know more about tofu, the Orient's soybean cake, and how to use it.

"Tofu is available in many Toronto supermarkets." A 500-gram package of Victor Food Products' tofu, containing four slices packed in water, retails for $1.19 at A&P.

Karen Kaplan, Frieda's daughter (age 26), who is in charge of developing recipes for the company's line of exotic foods, prefers to treat tofu simply–by broiling it.

Cut slices about 3/4 inch thick, brush with soy or teriyaki sauce, and place beneath the broiler on an oiled pan. Broil until nicely browned and crusty, then turn to brown the other side.

Before broiling the 2nd side, you may want to "top it with a slice of mozzarella cheese (though this works better without the brushed-on sauces). Broil until the cheese is melted."

A photo shows Kaplan tasting a Mexican carob pod. Address: Food editor.

6063. Hayashi, Kazuya. 1982. [Re: Use of enzymes in modern shoyu production in Japan]. Letter to William Shurtleff at Soyfoods Center, Feb. 15. 5 p. Handwritten, without signature. [Jap; eng]
• ***Summary:*** Dr. Hayashi specializes in the use of enzymes (especially protease) in shoyu at Kikkoman's Central Research Laboratory. 1. Use of enzymes with shoyu in Japan: The use of added commercial enzymes was approved by the newly revised Japan Agricultural Standard (JAS, 1980). The use of an enzyme-treated solution in "new-type shoyu" [*Shinshiki*] and amino-acids mixed type shoyu was approved. However only a few commercial products in Japan today are actually made with the use of commercial enzymes because (1) the enzymes are too expensive, (2) the effect of the enzymes is not significant since most manufacturers use the "all-koji" method, and (3) in a salt solution of high concentration, the effect of the enzymes is greatly reduced. Examples of actual current use: The Shono Starch Co. Ltd. uses enzymes form making a product named "Umamigen." Corn is treated with an enzyme solution in making shoyu. Kikkoman has a patent on making shoyu using 100% enzyme solution. It calls for the use of yellow koji enzyme (peptidase) and glutaminase. The quality is fine but the product is too expensive. This method is good when the presence of aflatoxins could be a problem. In the future a low-salt, high-temperature digestion method may allow the use of enzymes (cellulase digestion, peptidase digestion).

2. High temperature fermentation method: This research was started in about the 1920s. The research on low-temperature fermentation began in about the 1930s. In the early period, this was called the *sokujo* or "rapid method" of fermentation, the temperature was raised to 30-35°C. The quality was bad due to elution of some key flavor components, and because the glutamic acid content was lower. Also, the environment was not favorable to microbial growth. Use of the low-temperature method produces better quality shoyu. Use salt water (less than 5°C) for starting. For the first 15-30days, keep at 15°C. After one month, raise the temperature to 25-27°C to complete the fermentation, then maintain at about 20°C. This is suitable for the breakdown of the material by bacteria.

3. Addition of yeasts and lactic acid bacteria to the shoyu fermentation process began around the 1960s.

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Only the yeast *Saccharomyces rouxii* is used in practice. *Torulopsis* is for experimental use only. Lactic acid bacteria are not yet adapted to actual production. Use of epoxy-lined tanks is also important.

4. Bansui (using a second pressing of the shoyu): Only a few shoyu makers use this method since the product quality is bad and it cannot be sold. For details, see Kimura 1914.

5. Chemical shoyu: During the Taisho period (1912-1926) and Showa period (1926+) Dr. K. Kurono/Koruna Kanraku at the Fermentation Research Institute did early work. The use of amino acids spread. In the early Showa period Ajinomoto company was a leader under Dr. Hori Shinichi. During the period 1945-55 Mieki, a glutamic acid solution, was produced in large quantities (180,000 kiloliters). Improvement of amino acid solution purification led to cheap but tasty shoyu. Then came new-type (*Shinshiki*) shoyu. Bunzo Rokusho and the Mantetsu [Manchurian Railway] Research Institute did research in the early Showa period. During the period 1945-55 new-type shoyu making became widespread. Defatted soybean meal was digested with a weak acid and wheat koji was added to make shoyu.

6. History of the use of POBB (Para-oxy Butyl Benzoate): 1924–Sabalitseka discovered this food preservative. 1934–Dr. Kurono tested the effect on shoyu. 1937–Its use was approved for use in shoyu by the Japanese government. 1948–Use was approved as a food additive. The effect is great but the solubility is low.

7. Making koji for miso: The use of koji boxes is more popular, but the rotary drum is also used.

8. The future of the shoyu manufacturing process: Treatment of raw material and koji making will be spontaneous and automatic. Use of outdoor fermentation tanks. Continuous pressing. Improve sanitation by using a closed system. Digestion without salt. Liquid fermentation. Automatic control of microorganisms. Introduction of computerized system. Use of new raw materials and new microorganisms. Introduction of the fixed-enzyme method. Use of membrane filtration method. Address: Central Research Lab., Kikkoman, Noda, Japan.

6064. Tallent, W.H. 1982. Shoyu update. *Northern Regional Research Center. Notes from the Director* No. 1493. p. 2-3. Feb. 26.

• ***Summary:*** "On February 22-23, Drs. H. Hashimoto (manager, quality control) and D. Fukushima (executive vice president and general manager) of Kikkoman Foods, Inc., visited the Center [NRRC]. Their Walworth, Wisconsin, plant, which began producing fermented shoyu in 1973 with a capacity of 2.6 million gallons per year, now has expanded to produce about 5.2 million gallons. Their fermentation is based upon wheat and soybeans. Currently they have about 45% of the soy sauce business in the United States and sales are increasing rapidly.

"Total U.S. sales of soy sauce in 1956 was about 1 million dollars (consumption 15 ml per capita per year); this has now increased to 100 million dollars (148 ml per capita per year). Many years ago we supported yeast genetic work on this fermentation based upon Dr. L.J. Wickerham's (NRRC, retired) demonstration that the shoyu yeast had mating types and that improved strains could be developed in a genetic improvement program.

"Kikkoman now has a whole line of dehydrated products based on shoyu that are used to make instant teriyaki sauce for chicken, beef, and seafood. A relatively new product is a steak sauce that contains applesauce, shoyu, spices, and salt. H.L. Wang and C.W. Hesseltine (FL [Fermentation Lab]) supplied the Kikkoman visitors with information on tempeh and pointed out the similarities of the preparation of this food with their method of producing koji for the shoyu fermentation. Drs. Hashimoto and Fukushima also talked with W.J. Wolf and other Meal Products Research (OC [Oilseed Crops]) members concerning isoflavone analysis, phosphatidyl-choline autoxidation, and nutritional properties of soybean proteins." Address: Center Director.

6065. Leviton, Richard. 1982. Traditional soy sauce ferments in Maryland. *Soyfoods*. Winter. p. 68-69.

• ***Summary:*** About Hoang Van Chi and his company Vietnam Food and Drink, founded in June 1979 in Maryland. They make Bodhi Sauce and Tuong Cu-Da. Photos by Leviton show 6 steps in the process of making this Vietnamese soy sauce, including one of Phan and Van Chi Hoang. Address: 100 Heath Rd., Colrain, Massachusetts 01340. Phone: 413-624-5591.

6066. **Product Name:** Living Lightly Tempehroni Pizza.
Manufacturer's Name: Pacific Trading Co.
Manufacturer's Address: P.O. Box 40429, San Francisco, CA 94110.
Date of Introduction: 1982. February.
Ingredients: Crust: Whole wheat flour, water, yeast, sesame seeds, salt. Sauce: Tomatoes, onions, carrots, parsley, soy oil, garlic, green pepper, spices. Rennetless mozzarella cheese. Tempehroni (Soybeans, brown rice, water, tempeh culture), shoyu soy sauce, herbs, spices.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Frozen
New Product–Documentation: Label. "No Preservatives."

6067. **Product Name:** Living Lightly Sweet & Sour Tempeh (Meatless Chinese Entree).
Manufacturer's Name: Pacific Trading Co.
Manufacturer's Address: San Francisco, California.
Date of Introduction: 1982. February.
Ingredients: Soy & Rice tempeh, water, green pepper, mushrooms, carrots, onions, honey, soy oil, shoyu soy sauce, potato starch, apple cider vinegar, garlic.
Wt/Vol., Packaging, Price: 12 oz.

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How Stored: Frozen.
New Product–Documentation: Label. "Ready to Eat. For delicious tempeh recipes see The Book of Tempeh by Shurtleff & Aoyagi."

6068. **Product Name:** Living Lightly Savory Broiled Tofu (Vacuum Packed).
Manufacturer's Name: Pacific Trading Co.
Manufacturer's Address: P.O. Box 40429, San Francisco, CA 94110.
Date of Introduction: 1982. February.
Ingredients: Tofu (organic), magnesium chloride (nigari), natural soy sauce, herbs and spices.
Wt/Vol., Packaging, Price: 8 oz, vacuum packed.
How Stored: Refrigerated.
Nutrition: Per 4 oz. serving: 180 calories, 17 gm protein, 5 gm carbohydrates, 10 gm fat.
New Product–Documentation: Label. 1982. 2.75 by 4.25 inches (circled top). Plastic. Red and yellow. "Ready to eat. No preservatives."

6069. **Product Name:** Living Lightly Tempeh Patties (Meatless Burgers: Vacuum Packed).
Manufacturer's Name: Pacific Trading Co.
Manufacturer's Address: P.O. Box 40429, San Francisco, CA 94110.
Date of Introduction: 1982. February.
Ingredients: Soy tempeh (made from organic soybeans), natural soy sauce, herbs, spices.
Wt/Vol., Packaging, Price: 6 oz vacuum packed.
How Stored: Frozen or refrigerated.
Nutrition: Per 3 oz.: calories 120, protein 12 gm, sodium 443 mg, carbohydrates 8 gm, fat 4 gm.
New Product–Documentation: Label. Undated. 3.5 inch diameter. Red and blue on white. "Meatless. Ready to eat. Not fried! No cholesterol. Shelf life at 40°F is up to 28 days."

6070. **Product Name:** Living Lightly Chili Con Tempeh (Meatless Chili).
Manufacturer's Name: Pacific Trading Co.
Manufacturer's Address: San Francisco, California.
Date of Introduction: 1982. February.
Ingredients: Pinto beans, soy & rice tempeh, tomato sauce, onions, water, jalapeno peppers, serrano peppers, soy oil, chili powder, spices, sea salt, shoyu soy sauce, garlic powder.
Wt/Vol., Packaging, Price: 12 oz.
How Stored: Frozen.
New Product–Documentation: Label. "Ready to Eat. For delicious tempeh recipes see The Book of Tempeh by Shurtleff & Aoyagi."

6071. Pratt, Dan E.; Di Pietro, C.; Porter, W.L.; Giffee, J.W. 1982. Phenolic antioxidants of soy protein hydrolysates. *J. of Food Science* 47(1):24-25, 35. Jan/Feb. [9 ref]

• ***Summary:*** Many phenolic compounds have been found in soybeans, soy flours, and soy protein concentrates. Soy protein hydrolyzate (SPH) has antioxidant activity. The SPH used in this study was Vi-Zate 115 HVP powder, oil coated, supplied by A.E. Staley Mfg. Co. (Protein Div.), Chicago, Illinois. It was studied to identify the phenolic compounds responsible for this activity. Three isoflavones–genistein, daidzein, and glycitein–were identified in SPH, but no isoflavone glycosides were found. Address: 1. Dep. of Foods & Nutrition, Purdue Univ., West Lafayette, Indiana 47907.

6072. **Product Name:** Missing-Egg Tofu Salad (100% Vegetarian).
Manufacturer's Name: Redwood Valley Soyfoods Unlimited.
Manufacturer's Address: P.O. Box 371, Redwood Valley, CA 94570.
Date of Introduction: 1982. February.
Ingredients: Tofu, celery, pickles, safflower oil, lemon juice, shoyu, mustard, curry, garlic, onion, sea salt, honey, lecithin.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Spot in Whole Foods. 1982. April. p. 60. "Convenience Soyfoods." Spot in Soyfoods. 1982. Summer. p. 56. "Prepared Tofu Salads and Desserts." Label. 4 inches diameter. Plastic. 3 color. Red, yellow and blue on white. "Try our other soy foods–Hummous, tofummus, soysage and creamies." 1 plastic tub top each. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Letter from Richard Rose. 1987. Aug. 29.

6073. Shurtleff, William; Aoyagi, Akiko. 1982. Tofu & soymilk production: A craft and technical manual. Lafayette, California: Soyfoods Center. 336 p. Illust. by Akiko Aoyagi Shurtleff. Index. Feb. 28 cm. [223 ref]
• ***Summary:*** The contents is identical to that of the original Aug. 1979 edition, but the publisher's name has changed to Soyfoods Center from New-Age Foods Study Center. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6074. **Product Name:** Marinated Tofu Cutlets.
Manufacturer's Name: Sooke Soy Foods.
Manufacturer's Address: Sooke, BC, Canada V0S 1N0.
Date of Introduction: 1982. February.
Ingredients: Tofu (organic soybeans, water, nigari [magnesium chloride–an extract of sea water]), soy sauce, garlic, ginger, cayenne, black pepper.
Wt/Vol., Packaging, Price: 10 oz / 284 gm.
How Stored: Refrigerated.
Nutrition: Per 100 gm: Calories 104, protein 12 gm, carbohydrates 3.4 gm, fat 8.2 gm.
New Product–Documentation: Label. 1988. received.

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6 by 4.5 inches. Yellow, green, blue and white on clear plastic film. "Ready to serve–Hot or cold. For snacks, sandwiches, or as a main course. A good source of protein. No preservatives."

6075. *Soyfoods*. 1982. California yuba plant opens. Winter. p 7.
• ***Summary:*** "Soyfoods of America's Ken Lee and Lawrence Wu, of Duarte, California, plan to make yuba far more available, visible, and talked about as they launch America's first semi-mechanized (and only) yuba plant.

"The yuba operation, which precedes tofu production in their daily schedule, begins with a low density, low solids soymilk which is pumped automatically across the plant from the tofu line to a series of shallow heating tubs in a 30 foot long stainless steel yuba forming machine. The soymilk is heated and a worker manually lifts off the skins and hangs them on metal drying tiers. Lawrence Wu reports that as many as 22 skins can be obtained from a 2¼ inch basin of soymilk but that as the oil portion is used up, more carbohydrates comprise the yuba and it darkens slightly. Wu's yuba has 51% protein, 20% oil, and 2% lecithin on a dry weight basis. Ken Lee plans to package his yuba semi-moist with a nitrogen flush to increase shelf life, but he's experimenting with vacuum-packing as well. Yuba in its dry form can last up to 2 years at room temperature... Yuba will be positioned in natural foods and supermarket outlets as a sandwich wrapper, eggroll-style, for entrees, as a dry soup mix powder, or as a steamed bologna-like yuba roll flavored with shoyu."

6076. Funcación Tao-Fu. 1982. Proyecto piloto para la produccion e introduccion de los productos derivados de la soya en Quito, Ecuador [Pilot project for the production and introduction of soyfoods to Quito, Ecuador]. Quito, Ecuador. iii + 21 p. March 1. Unpublished manuscript. [Spa]
• ***Summary:*** Proposal submitted by Richard Jennings and Ismael Janisch. In Feb. 1980 la Fundacion Tao-Fu began its work to introduce soy protein foods to Ecuador. To date, they have developed tofu (seasoned and natural), tempeh, soy yogurt, and soymilk. Address: Casilla 252-A, Quito, Ecuador.

6077. Root, Evan. 1982. Re: History of macrobiotics. Letter to William Shurtleff at Soyfoods Center, March 4–in reply to inquiry. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "Here is my reply to your questionnaire." Discusses Sanae, Erewhon, Paul Hawken, Michio Kushi. The original Erewhon store started in April 1966 at 303-B Newbury St. Prior to that, some food sales were done from the Kushi's home on a very small scale.

In Oct. 1967, Paul Hawken took over the management of Evan Root moved up the street to commence renovations for Sanae Restaurant. Paul was the main force in expanding and developing Erewhon in the early days. Prior to him it was mainly a cracker barrel style store where people came in to talk philosophy and swap recipes, whether or not they bought anything.

Sanae opened its doors to the public in Feb. 1968.

In the early days of Erewhon one of the suppliers not to be overlooked is Japan Food Corporation. From them we bought seaweeds, fish flakes, gourd strips, and most importantly from your point of view, Hatcho miso. Chico-San and Infinity Foods were in operation before Erewhon and we got most of the Japanese items from them except for a couple of kegs of miso that Junsei Yamaguchi put up in the Kushi's basement.

I do not know this for a fact, but I have speculated that the early tamari that was available when I first got into macrobiotics in 1964 may have been, in fact, real tamari as I distinctly remember that it was thicker and richer than what became available a little later. Address. Relationships, 39 Harvard St., Brookline, Massachusetts 02146. Phone: 617-739-3300.

6078. Smith, Grant. 1982. The A.E. Staley Company's work with soy sauce (Interview). *SoyaScan Notes*. March 12. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Staley first put a commercial soy sauce on the market in about 1933-1935. It was not fermented. It was named "Staley Soy Sauce." It was soy sauce, not HVP. The term "fermented" may have occurred in some article because Staley was making lactic acid on the same equipment. In July 1932, they were working on the soy sauce on a lab and plant scale.

This soy sauce was first introduced as a "custom made" product, sold to specific customers, not to the general commercial market. Smith's record of his time are all in the Staley vaults.

Staley got into the separate HVP business when it started making MSG from corn, probably in the 1940s. HVP was a by-product of MSG, left over as mother liquor. Starting in the 1940s (he thinks–check the Staley book) they began to make HVP with the MSG in it, also from other sources besides corn.

Note: Staley launched Zest monosodium glutamate in 1948, made from corn gluten. It was sold in 50- and 100-pound drums to food processors, in 10-pound and 1-pound containers to restaurants and hotels, and in 4-ounce containers to retail customers. The product sold very well initially but was quickly replaced by Accent MSG which was made from a less expensive raw material–beet sugar waste. (Forrestal 1982, p. 195). HVP is not mentioned in the index of Forrestal's book.

Smith has been told not to discuss Staley's relationship with La Choy. He suggests I ask La Choy if they simply rebottled the Staley product or made a completely separate product themselves.

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In the early 1950s Vico was a customer of Staley's. Staley acquired them in 1964.

Staley now makes soy sauce only in bulk as a concentrate; the buyer might add water, or he might add some caramel color, corn syrup, and/or citric acid, etc. to make an industrial (not a commercial) soy sauce. Staley now also makes plain HVP liquid, paste, powder, or granulated forms, in both spray dried and vacuum dried forms.

All the European soy sauces are very sweet.

Vico is heavily involved in extracts an in enzymatic fermentation. The two means of protein hydrolysis are acid and enzymatic. Gunther makes enzymatic soybean hydrolysates, but they are lightly hydrolyzed, so they are not really hydrolysates. Some soy sauce is hydrolyzed so that the amino acids are 85% or more in the free amino acid form. Fermented soy sauce is not full converted; it contains more peptides. At the other extreme are Gunther's modified proteins, which are solubilized at up to 1,000 molecular size to obtain whipping properties. They stop the hydrolysis at just the point where it becomes soluble, and they control the molecular size to get certain functionalities–so it is closer to a protein than to a mixture of amino acids.

The use of enzymes in making shoyu: It gives you a lot more control of the process, but it probably also changes the flavor. Browning reactions lead to purines, carcinogens, etc in minute levels. Smith thinks that the traditional pressing that leads to liquid soy sauce also causes some browning reaction, but he is not sure. Address: A.E. Staley Co, Decatur, Illinois.

6079. Aihara, Herman. 1982. Re: Introducing miso and soy sauce to America. Letter to William Shurtleff at Soyfoods Center, March 15–in reply to inquiry. 1 p. Typed, with signature on letterhead.

• ***Summary:*** "Miso and 'tamari' were imported in America by Ginza, Inc., managed by H. Aihara, in 1961 in New York City. The brand name was not remembered.

"After 16 families moved to Chico and started Chico-San, Chico-San imported Marushin soy sauce and miso. Ohsawa arranged the manufacture and export in Japan. Ohsawa always supervised and examined the products.

"Ohsawa told us to call natural soy sauce 'tamari'. The reason is, he named natural soy sauce 'Ohsawa Soy Sauce' in Europe and gave its sole agency to someone else. This guy started to import bad soy sauce and called it 'Ohsawa Soy Sauce.' Then, Ohsawa began importing a good one by himself, but could not use the name 'Ohsawa Soy Sauce.' Therefore, he called soy sauce 'tamari.' (A mistake, I think.) Chico-San has been importing the best quality of miso and soy sauce (named 'tamari') even though the cost was higher than other, lower grades." Address: President GOMF, P.O. Box 426, Oroville, California 95965.

6080. Hohn, Jane R. 1982. Re: History of HVP. Letter to Mr. Milan Drake, Beatrice Foods, La Choy Food Products Co., 901 Stryker St., Archbold, Ohio 43502, March 16. 1 p. Typed, with signature on letterhead.

• ***Summary:*** "Dear Mr. Drake: It was certainly a pleasure meeting you last week and discussing HVP's. I think we have found suitable answers for your questions about HVP's.

"1. Who made the first HVP and where? Was it Maggi in Switzerland or Ikeda in Japan. Ans: We think China and Japan made the first soy sauce as acid hydrolysates. Fermented soy sauce was made, probably, as far back as 3,000 B.C.

"2. When was HVP commercialized and in what products? Ans: We believe the Chinese and Japanese made acid hydrolyzed HVP prior to 1940. No definite data available on this.

3. When and how was it first used in the U.S.? Ans: Huron Milling Co. made HVP in 1934. Liquid was sold as #6 Sauce for use in soy sauce. Dry powders were sold to the U.S. Government for use in C-Rations during World War II.

"4. When and by whom was it first used in soy sauce? Ans: We think LaChoy used it first in the U.S. #6 liquid was sold for this purpose. The Chinese may have used it prior to this, but again, we don't know for sure." Address: Hercules Incorporated, PFW Div., 33 Sprague Ave., Middletown, New York 10940. Phone: (914) 343-1900.

6081. Rothman, Sandy. 1982. Re: History of work with macrobiotics and soyfoods in America. Focus on Herman and Cornellia Aihara, and Chico-San. Letter to William Shurtleff at Soyfoods Center, March 17. 5 p.

• ***Summary:*** Also discusses Alean Yamaguchi, Zen Teahouse, Paradox, Michio Kushi, Musubi, Irma Paule. Address: GOMF, Oroville, California.

6082. Kushi, Michio; Kushi, Aveline. 1982. Re: History of work with macrobiotics and soyfoods in Boston. Letter to William Shurtleff at Soyfoods Center, March 29. 2 p. Typed, without signature on letterhead.

• ***Summary:*** These are answers (dictated to a typist) to a list of questions sent by William Shurtleff of Soyfoods Center.

1. Why were George Ohsawa's students given Western names? "Right after the second world war, and after the Americans took over Japan, George Ohsawa wanted everyone to speed up their lifestyle. For this reason he gave Western names to his students, taking those names from Western heroes born in the same month. We think that perhaps it was his intention to have them go to America to spread macrobiotics. As a teacher, George Ohsawa adopted the western style of having his students call him by his first name, George. Almost all his students were given new names."

5. Prior to 1959, which macrobiotic teachers were in New York? "Michio Kushi was lecturing and giving seminars in New York at that time, along with other friends."

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9. When was the Ohsawa Foundation in New York City established? By whom? "The Ohsawa Foundation was founded in 1960 or 1961, by Michio, Irma Paule and other friends. Michio was the first President of the 2nd Avenue location. The Musubi Restaurant was by Mr. Sato, Alean Yamaguchi, and Junsei Yamazaki. Irma Paule was later to take over the East West Foundation and set up the 2nd Avenue location.

12. When and where were Michio and Aveline married? They were "married in 1953 in New York. They [first] met in New York but had been corresponding from Japan through George Ohsawa's study house [Maison Ignoramus?] before that time.

13. Cornellia and Herman [Aihara] were married in New York and had also been corresponding from Japan.

14. What was Musubi in New York City? Musubi "was a restaurant and food store but not a gift shop. They sold miso and shoyu from Japan the George Ohsawa had sent."

16. When did Michio Kushi start and stop lecturing at Arlington Street Church in Boston? "He started in 1965 and stopped in 1970.

18. When did Michio organize the first East West Institute? "1965."

19. When did the Kushis move from New York to the Boston area? What prompted this? "In 1963 [sic, March, 1964] Aveline and the children moved to Martha's Vineyard [an island off the south of Cape Cod in Massachusetts] for 6 months because it was a much better environment for natural living. Michio was still working in New York. In September 1963 [sic, 1964] they moved to Cambridge, Massachusetts with Michio, who at that time stopped all business and put all his efforts toward macrobiotic education. The death of Beth Ann Simon and the FDA crackdown came after Erewhon was established.

20. Erewhon started in the Kushi home in 1963 in Cambridge. In 1965 [sic, April 1966] it was established as a company on Newbury St.

25. When did Sendai Miso Shoyu start making natural shoyu. Who set this up? When did they start to sell it? "Mr. Kazama [of Mitoku] set it up" and would know the answers to the other questions. Address: 62 Buckminster Rd., Brookline, Massachusetts 02146.

6083. *Jiba Sanpin Kanren Joho Kensaku Repooto* (*Market Survey on Production of Goods, by Product Type and Location*).1982. Wagakuni shôyu gyôkai to kaigai shijô dôkô [The shoyu industry in Japan and market conditions overseas]. No. 56. 7 p. March. [Jap]

• ***Summary:*** Gives current production figures for each of 5 types of Japanese soy sauce (koikuchi, usukuchi, tamari, saishikomi, shiro), each of 3 fermentation methods, and each of 3 grades, by prefecture. Plus total production and exports by year. Address: Nihon Boeki Shinkokai Kaigai Keizai Joho Center, Tokyo.

6084. **Product Name:** [Shoyu].
Manufacturer's Name: Lima-Andiran
Manufacturer's Address: Moulin d'Andiran, 47170 Mezin, France
Date of Introduction: 1982. March
Wt/Vol., Packaging, Price: 250 ml and 1 liter bottles, and 18 liter can.
How Stored: Shelf stable.
New Product–Documentation: Letter from Pierre Gevaert 1981. Nov. 19. They plan to start making shoyu on 15 March 1982.

Lima catalogue, price list, and color product brochure. 1989. A color photo shows the Lima shoyu bottle. Three sizes are listed in the catalog.

6085. **Product Name:** Fuju Soy Sauce (Koikuchi Shoyu).
Manufacturer's Name: Nepal Soya Industries
Manufacturer's Address: 9/374 Bhedashing, Jamguthi, Kathmandu, Nepal. Phone: 229130.
Date of Introduction: 1982. March.
Ingredients: Soybean, wheat, salt, water, Japanese Sozae [starter culture].
Wt/Vol., Packaging, Price: 1 liter
How Stored: Shelf stable.
New Product–Documentation: Letter from Mr. Achutananda Vaidya of Nepal Soya Industries. 1992. Dec. 26. He started making tofu in Kathmandu in 1974. "In 1979-80 I was invited to Japan for 9 months training at the Akita Prefecture Brewing Laboratory. During that time I also learned in detail the processes for making soy sauce, miso, and soyamilk. During that period I also got a chance to read *The Book of Tofu, The Book of Miso, Miso Production,* and *The Book of Tempeh* all of which helped me very much. I still have all those books. In 1985 I was invited by the Rotarians of Akita-Aomori to return to Japan for 1 month to receive further technical training in making tofu, miso, soy sauce, soyamilk, moyashi (sprouts), koji, fruit fermentations for wine, etc. Today I produce tofu, soy sauce, and miso in my small factory in Kathmandu." His business card notes: "Food Technology in Brewing from Japan. Products & Suppliers: Tofu (Vita), Soyamilk (Vitabean milk), Soya Curd, Soya Sauce, & Miso."

Letter from Mr. Achutananda Vaidya of Nepal Soya Industries. 2002. April 12. He started to make this soy sauce in March 1982. A label sent in April 2002 is for "Fuji Soya Sauce (Natural Fermentation)." Red and white on blue.

6086. Quebral, Florenco C. 1982. [Soybeans in] The Philippines. *INTSOY Series* No. 22. p. 166-71. J.B. Sinclair and J.A. Jackobs, eds. Soybean Seed Quality and Stand Establishment (College of Agric., Univ. of Illinois at Urbana-Champaign).

• ***Summary:*** Contents: Introduction. Cultivar improvement.

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Planting. Inoculation and fertilization. Pests and diseases. Intensive cropping. Utilization. Costs and returns. Marketing. Marketing program. Areas that need attention. Cooperating agencies.

"The domestic supply of soybeans has never been sufficient to meet national demands for food, feed, and industrial uses. Total domestic soybean production in 1978 was reported to be 7,099 metric tons. Approximately 176,000 metric tons of soybeans, costing $30.8 million, were imported.

"To boost domestic production, the government has launched projects like Masaganang Maisan, the white corn and feed grains program, and the National Soybean Development Program...

"Researchers at the University of the Philippines at Los Baños have produced bottled soymilk (Philsoy) using the hot water grind technique... Fermented soybean products, such as soy sauce, soy cheese (tokwa [tofu]), soy paste (miso), soy curds (tahuri [tofu in brine]), and canned salted beans (tausi [fermented black soybeans]) are the most common soybean products used as ingredients in traditional Filipino dishes. A cheese-like product served with sugar syrup (taho) is sold by ambulant peddlers in urban centers." Address: Prof. of Plant Pathology, College of Agriculture, the Univ. of the Philippines at Los Baños.

6087. Shurtleff, William; Aoyagi, Akiko. 1982. History of the soyfoods movement in North America. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 50 p. March. Unpublished typescript.

• ***Summary:*** A comprehensive history of the subject. Contents: New image of soyfoods and causes of interest: Good health, nutrition and fatness, weight loss diets, low-cost protein, meatless and vegetarian diets, world hunger, appropriate technology and right livelihood, voluntary simplicity, ecology and conservation, interest in East Asian cultures, spiritual practices, and cuisines.

Allied movements: Macrobiotics, natural foods, Rodale Press, vegetarianism.

Characteristics of the soyfoods movement. Major foods and types of products, comparison of soy protein industry (high tech) and soyfoods industry (low tech), appropriate technology, relevance to the Third World, conclusion.

The Farm in Tennessee. *The Book of Tofu* and Soyfoods Center. Early soyfoods manufacturers. Soyfoods delis and restaurants. Second-generation soyfoods manufacturers and distributors (e.g. Swan Foods in Florida). Tofu kits and equipment. Soyfoods terminology. Founding of the Soycrafters/Soyfoods Association of North America: Richard Leviton. Growth of the Soyfoods Association: First conference, Soyfoods magazine, subsequent conferences, SANA problems, The New Soyfoods Association–Gary Barat and Michael Austin of New York City.

Soyfoods books and booklets. Media coverage. Growth of the soyfoods industry, including the Soycrafters Apprenticeship Program. Soyfoods Marketer/Distributors: Yellow Bean Trading Co., Garden of Eatin', Jolly Licks. Soyfoods in foodservice institutions. Influence and activities abroad. The future.

Note: This is the earliest document seen (Oct. 2008) that uses the term "Second-generation" in connection with soyfoods to refer to a soyfood product which uses a basic soyfood as its major ingredient. Thus, Tofu Cheesecake, Tempeh Lasagne, and Instant Miso Soup are all commercial "second-generation soyfood products." If made at home for home use, they would be "second-generation soyfoods." For some products, the line between basic and second-generation soyfood products is blurred, since some second-generation products that have a long history have come to be thought of as basic. For example: Deep-fried tofu burgers (*ganmodoki*), teriyaki sauce, etc. Address: Lafayette, California. Phone: 415-283-2991.

6088. **Product Name:** Meatless Frozen Entrees with Soy Pepperoni [Ranch Barbecue, Texas Tamale, Texas Burrito, or Pizza Royale].
Manufacturer's Name: Tumaro's Inc.
Manufacturer's Address: Los Angeles, California.
Date of Introduction: 1982. March.
Ingredients: Textured soy protein. Sauce: Tomato paste, honey, apple cider vinegar, water, tamari, arrowroot starch, spices, natural distilled wood smoke.
New Product–Documentation: Food Report (Lehmann). 1982. March. Spot in Soyfoods. 1982. Summer. p. 56. "Hottest Meal on the Range." Frozen entrees using tender, beeflike textured soy protein strips, smothered in a tangy Texas-style sauce.

6089. Welters, Sjon. 1982. Re: Recent developments with soyfoods in Europe, and ties with macrobiotics. Letter to William Shurtleff at Soyfoods Center, April 16. 6 p. Typed, with signature on letterhead (photocopy).

• ***Summary:*** This letter, whose letterhead reads "Manna Natuurlijke Levensmiddelen," contains names and addresses of many new soyfoods companies, many of them started by people interested in macrobiotics. Names and addresses of the following companies are given: Tofu Denmark (in Valby, run by Per Fruergaard, a macrobiotic), Bernard Storup, Ab & Paulien Schaft (Dutch, setting up a small shop in Baillestavy, France, to make miso, shoyu, natto, and koji), Traditions du Grain (Jean Luc Alonso is setting up a macrobiotic tempeh shop in Ivry France; they will start this summer), Paul Jones (Tofu shop in London), Saskia de Jong (may make miso in Ireland), de Brandnetel (tofu shop in Antwerp, Belgium), Jonathan (makes tofu, ganmo, seitan, mochi in Ekeren, Belgium. Run by J. v. Ponseele), Seven Arrows (Leuven, Belgium, making tofu), Lima Foods (now sell miso made at their plant and farm in France), Witte Wonder (Den Haag,

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Netherlands), De Morgenstond (Bakkeveen, Netherlands), Jakso (Heerewaarden, Netherlands. Run by Peter Dekker. The first and only shop making tempeh from organic soybeans), Firma Lembekker (Amsterdam), Unimave (Lisbon, Portugal), Jose Parracho (Setubal, Portugal), Swame [sic, Swami] Anand Svadesha (Furth im Wald, West Germany), Bittersuess (Cologne, West Germany. Attn: Thomas Kasas/Karas). Three distributors of soyfoods and natural foods in Germany are YinYang (Berlin), Rapunzel (Heimraadshofe), and Mutter Erde (Werbelen). In Finland: Luonnonruokakauppa AUMA (Helsinki). In Switzerland Verena Krieger of Sojalade (Engelberg, tofu shop), Hans Rudolph Opplinger (Cham, tofu shop), Marty Halsley (Nyon, tofu & tempeh), Restaurant Sesam (Bern). P. Ton van Oers is a Dutch priest who works in Kananga, Zaire. The natives have grown soya for 10 years and he is thinking of making tofu and soymilk from them.

"In Great Britain the East West Centre is very active in promoting soyfoods. As a part of the Kushi Institute program they have home-scale processing, in which tofu, tempeh, and miso-making are taught by Jon Sandler [Sandifer?]. He is the tempehmaker of the EWC too at Community Health Foundation, 188 Old St., London EC1. In the Netherlands, a great deal of soyfoods promotion is done by the East West Center and Manna. As you probably know, Manna was the first to introduce miso, tamari, shoyu, tempeh, tofu and koji to the larger public and we are still the main promoters of soyfoods as part of a more natural, vegetarian, and economic diet. Manna has been followed by a lot of other distributors of natural and health foods. We have two competitors in the tofu business: Witte Wonder and De Morgenstond.

"At the moment I'm the only teacher giving lectures on homescale miso-, tofu-, tempeh-, shoyu-, tamari-, natto-, and koji-making in the Netherlands. Mainly at the East West Centre and sometimes at different places in the country. People are starting to get interested."

Note: This is the earliest document seen (Jan. 2003) concerning the work of Swami Anand Svadesha of West Germany, and of Thomas Karas of Bittersuess (Cologne, West Germany). Address: Stichting Natuurvoeding Amsterdam, Meeuwenlaan 70, 1021 JK Amsterdam-N, Netherlands. Phone: 020-323977.

6090. Timmins, Tom. 1982. Re: Recent developments at New England Soy Dairy. Questions answered on Soyfoods Center letterhead (dated April 17) and returned to SC. 3 p. Typed, with signature on letterhead.

• ***Summary:*** The company name was changed to New England Soy Dairy from Laughing Grasshopper in Nov. 1977, at the time of incorporation. The company's Naturally Gourmet program was started in Sept. 1981, when egg roll skins, won ton wrappers, ginger soy sauce, and five-spice powder were launched. In Sept. 1982 bean sprouts, fresh noodles, and new tofu products will be added. In Oct. 1981 the company published a cookbook titled *Soydairy Delights of Tofu*. Sales for 1981 were $1.25 million. Bongrain was interested in buying the company but they were not willing to pay the required price.

Other new developments: Company expansion into primary markets of Philadelphia, Metro New York, and Boston; secondary markets of Hartford and New Haven (Connecticut), Albany and Buffalo (New York), and Portland (Maine). Company sales people in New England and New York are doing many tofu cooking classes in supermarket chains. There are 3 classes a day and 100-200 people attend each. Tofu production (in lb/week) grew as follows: 8,000 in Jan. 1978, 18,500 in 1979, 24,500 in 1980, 30,000 in 1981, and 40,000 in 1982.

"Our success to this point emerges from a combination of extremely talented and hard-working people focused on specific goals. Our team grows personally as it grows professionally."

Attached are: (1) Four pages of edited manuscript about the history of the company, with 1½ pages of handwritten comments. (2) A graph of the company's tofu production from 1977 to 1982, in 1,000 lb. manufactured per week. Address: Greenfield, Massachusetts.

6091. Hawken, Paul. 1982. History of Erewhon and macrobiotics in America. Part I (Interview). Conducted by William Shurtleff of Soyfoods Center, April 18. 3 p. and 5 p. transcripts.

• ***Summary:*** Hawken played an important and very innovative role in establishing the natural foods industry in America and in building Erewhon into a major distributor of macrobiotic and natural foods.

Chico-San imported foods from Tokyo CI (Centre Ignoramus); Muso didn't exist at that time.

The Kushis never made tofu or nigari tofu. They were not big tofu eaters, largely because tofu was considered too yin–ridiculous. Then people started craving it, and buying it from Chinatown. But the tofu they bought was not made with nigari.

By the mid-1960s there were roughly 300 to 2,000 people actively involved with macrobiotics in the USA–including Michio Kushi's students, Herman Aihara's students, and those in New York and Boston.

Beth Ann Simon had started using heroin again before she died [on her No. 7 macrobiotic diet]. The family covered it up, blaming Japanese and tamari. But she was not the only one who died. George and Lima Ohsawa's only child died within a year of being born in Tokyo (according to Lima) from excess salt.

Erewhon was started by Aveline Kushi, not by Evan Root. Paul does not know who gave Erewhon its name [it was Aveline Kushi], of course, it is "Nowhere" scrambled, as in the title of the famous 1872 novel by Samuel Butler about a utopian island divested of machinery. Originally various

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people would drive to Pennsylvania to see the Mennonites and Walnut Acres. It was a buying club for students who lived in the Kushi's house in Cambridge, Massachusetts. Foods such as wheat, [whole-wheat] flour, oatmeal. Nothing imported from Japan. It was started with $500 cash in the basement of the Kushi's house. It backed into being a store since it was cheaper to buy larger quantities. The food was divided up into little bags and a price was written on each. It was sort of a way of buying food for people at the Kushi's house, like Aveline doing her shopping for 10-12 people in the first big macrobiotic study house. It began to outgrow the house and outside students wanted good food. It was never seen as a business or a money-making venture. Good food was so difficult to get in those days.

Another source of good food was Infinity Foods in New York City, started and owned by Howard Rower; they had a warehouse and were wholesaling by mid-1965. Soon Howard was importing miso and tamari (shoyu / soy sauce) from Tokyo CI. "This 'guaranteed' its quasi-medicinal effects. Otherwise it didn't work. It was actually the best food–really." Then Howard started to import directly from the manufacturers of miso and shoyu in Japan. Hatcho miso and Marushima shoyu (whose owner knew Ohsawa intimately). Paul visited Marushima in 1969. Paul thinks Marushima bought their shoyu from other shoyu factories on the island, or maybe they made it in the early days. Paul thinks there is a big difference in taste between shoyu made from whole soybeans and that made from defatted soybean meal (*dasshi daizu*). Paul was suspicious of Marushima shoyu in 1970, he demanded that Muso Shokuhin change to Johsen [Sendai Miso Shoyu] as their source, Johsen has a long history and the owner was also one of Ohsawa's cronies.

Paul left Erewhon in 1973. He went to Japan three times. The first trip was in March 1969, when he set up Mitoku in the natural foods business; before that they were an importer of hockey equipment. Muso was called Osaka CI, neither of those two companies were exporters before that time.

In the early days of the below-ground store in Boston, more of the foods came from Lima Foods in Belgium than from Japan. The miso and shoyu in those day came from Infinity Foods in New York City. They did not carry tofu because there was no refrigeration. None of the food was sent by the Kushis' friends.

In the early days of that store, Evan Root just tended the store, which had sales of about $20–$30 a day. The store was Aveline's idea. Evan was Aveline's lover–and not the only one. The store was originally called simply "Erewhon." Paul later added the words "Trading Co." when he incorporated it in the late fall of 1967. Paul and Aveline each owned 50% of the corporation. During its first year as a corporation, sales went from $1,000/month to $9,000/month–and not because it was macrobiotic. Erewhon was the first natural food store (as opposed to health food store) in America. It sold no pills. Many of the customers were not macros; they wanted whole foods. In mid-1968, as Paul was ready to leave Erewhon, someone came into the store and asked: "How do you know the oil is cold-pressed? And how do you know the grains are organically grown? He couldn't answer. So he wrote letters and found out that most were not what they claimed to be. Then Paul decided to use Erewhon to create a true food supply. He went directly to farmers. He didn't trust anyone. The idea was to know where the food came from and to have no middlemen between Erewhon and the producers.

In Oct. 1968 the little Erewhon retail store moved up and across the street to a new location at 342 Newbury Street. At that time they began to sell wholesale and to import from Japan, by correspondence with Mr. Kazama. The first import order from Japan, dated Aug. 1968, was *aka miso* (red rice miso–superb) from Sendai Miso Shoyu and Marushima shoyu. Soon customers who used to drive 400 miles to buy staples from Erewhon started to open their own stores. The natural foods business mushroomed. Erewhon started selling tofu in 1968 at 342 Newbury; they got it from a Chinese tofu maker in Boston. Nigari came in much later, after 1973. Neither Evan nor anyone else wanted to work at or run Erewhon; they all wanted to teach macrobiotics.

Paul was selling whole dry soybeans at that time, but mostly non-macros were eating those soybeans. Erewhon's first supplier, in mid-1968, was a wheat grower in North Dakota. Carl Garrich in Lone Pine, Arkansas, was much later. Paul got his first soybeans from a guy in a boxcar who was an insurance salesman, but who worked one day a week selling soybeans and wheat. Paul also bought soybeans from Deaf Smith County, Texas. Paul knew Frank Ford of Deaf Smith County in the early days. Paul was vice president of Arrowhead Mills before Roger Hillyard even worked for them. He ground his flour in a boxcar.

Paul wrote a long and detailed article about the early history of Erewhon titled "Erewhon. A biography. The view within," published in the Aug. 1973 issue of *East West Journal*. He was upset at the time. It was critical of the Kushis, and Paul explained why he was about to leave Erewhon. Robert Hargrove, editor of the journal, ran it anyway. Since then, Erewhon's history has been sanitized. Continued. Address: California.

6092. Hawken, Paul. 1982. History of Erewhon and macrobiotics in America. Part II (Interview). Conducted by William Shurtleff of Soyfoods Center, April 18. 3 p.
• ***Summary:*** Continued: Erewhon grew rapidly. One year after moving to the new location they had sales of $35,000 to $40,000 a month, both wholesale and retail. Paul thinks Erewhon had a retail catalog from 1967 to 1970. Paul was president (until 1973, when he left) and half owner. Then he left for Japan. Before leaving he made a great error, by signing over his half of the stock to the corporation in case something happened to him. It was put in escrow, but he

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could never get it back. When Paul left for Japan, Roger Hillyard, Bill Tara, Bruce Macdonald, and Jim Docker were all working for Erewhon. He had hired many or all of them, and everything was in place for takeoff. Erewhon did not get its big brick warehouse until July 1970.

When Paul first went to Japan in the spring of 1969, He traveled with Mr. Kazama of Mitoku, visited many factories, and set up sources. He tried to find out where Tokyo CI and Osaka CI were getting their foods. He was in Japan for about 9 months, from March to December.

When he returned, he opened [sic] Erewhon in Los Angeles, Roger Hillyard was still in charge of Erewhon in Boston. Then he moved to San Francisco and started Organic Merchants with Fred Rohe, and started writing "The Sugar Story," "The Oil Story," and other leaflets. His main interest was now in providing accurate information about foods. In mid-1970 Erewhon stopped its mail order catalog and business when it moved into the brick warehouse.

Originally Erewhon West (Los Angeles) and Erewhon Boston were one; about 4 years later they split in two.

When Paul left in 1973, Erewhon was contracting directly with something like 57 farms in 35 states producing organically grown foods, including lots of produce. This program began in 1968, included the Lundberg Brothers (who grew brown rice organically in Northern California), and led to the wholesale business. Paul and Erewhon helped many other natural food companies to get started.

The Natural Food Distributors Association [Organic Merchants] was not successful because it was Paul's idea and he left. Lack of money and fundraising were secondary. His goal was to see cooperation in the industry.

In conclusion Paul says: "Read the article [in *East West Journal*] and then we should talk again. You'll have a lot more questions." He asks Shurtleff to send him a photocopy of the article as well as the final draft of the chapter on the history of macrobiotics (including Erewhon); he'll be glad to recheck it. Address: California.

6093. Okada, Teizo. 1982. Re: History of Muso Co. Ltd. (Muso Shokuhin) in Japan. Letter to William Shurtleff at Soyfoods Center, April 22. 2 p. [Eng]

• ***Summary:*** Muso was started in 1959 by Mr. Shuzo Okada, president of the World Macrobiotic Association in Osaka. George Ohsawa was not involved in establishing the company, but he was very much involved in the company's direction as an Associate. Muso started exporting soyfoods to the West in 1963. The first foods were shipped to Lima N.V. in Belgium. The first soyfoods were shipped to America in 1966, when mugi (barley) miso was shipped to Chico-San Inc. in Chico, California.

Note: Compare this history with that given by Ronald Kotzsch. 1984. "Made in Japan–naturally: Natural foods from the Muso Company are popular worldwide." *East West Journal*. Dec. p. 14-21. Kotzsch states that Muso was founded in 1966 and began to export macrobiotic foods from Japan to the West in 1969. Address: Export Dep., Otedori 2-5-1, Higashi-ku, Osaka, Japan. Phone: 06-945-0511.

6094. Endo, Y. 1982. [Re: Yamashin shiro shoyu (clear shoyu)]. Letter to William Shurtleff at Soyfoods Center, April 30–in reply to inquiry. 2 p. Handwritten, with signature on letterhead. [Jap, eng+]

• ***Summary:*** Shiro shôyu was invented by the people of Mikawa-koku, Shinkawa-machi (presently Aichi-ken / Aichi prefecture, Hekinan-shi), after getting a hint from the seasoning liquid (*uwajiru*) that rises from Kinzanji-miso. The latter is a type of finger lickin' miso (*namémiso*) which was tasty, light colored and was made about 180 years ago–at the end of the Edo / Tokugawa period, Kansei-Bunka. That area is well known for making tamari (which has a dark color and strong flavor) and red miso (*akamiso*) from the old days. It was probably from necessity that the local people worked to develop a seasoning that brings out the flavor of each food.

Therefore shiro shôyu is a very local product. It is made mainly in Aichi prefecture. At present, the largest manufacturer is Yamashin Shoyu K.K. [the writer's company].

Shiro shôyu is different from regular Japanese [*koikuchi*] shôyu in that it has less fragrance and a lighter color. Therefore it is used in foods that require a subtle flavor, such as *nimono, chawanmushi, suimono* (clear soups), noodle dishes, etc. In early times, it was considered to be the best seasoning for enhancing the flavor in the food itself, and was used only in high class restaurants, noodle shops, etc. More recently, it has become popular among regular householders. For Japanese love subtle tastes and the natural colors of foods; this shôyu doesn't mess up either of these. In Western-style cooking it is good is soups, stews, cabbage rolls, gratin, etc. In Chinese cooking try it in ramen noodles, sweet and sour pork (*subuta*), *happosai*, stir-fried vegetables, etc. In Japanese cooking it is tasty in clear soups, soba (buckwheat noodles), udon noodle broth (*tsuyu*), vegetable cooking, omelets (*tamago yaki*), and *zoni* (meatless soup with mochi and vegetables).

"Although you asked for early documents, we are not aware of any. Nor do we know how shiro shôyu was used in the olden days. In our company we have no old records; they were destroyed by fire. We are very sorry that we cannot help you on that.

"We have heard one interesting story. At the end of the Edo / Tokugawa period, in 1857 (Ansei 4), Townsend Harris, the United States' ambassador, brought a letter from president James Buchanan [president 1857-1861] and visited Edo Castle to meet with the 13th shogun, Tokugawa Iesada (ruled 1853-1858). In the Willow Room (*yanagi no ma*) of Edo Castle they had a meal and shiro shôyu made by our company was used, under the name of Mikawa Shiro Tamari.

"Instead of answering your individual questions, we

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would like to give you this overview. Please excuse us. If you need further details, please let us know." Address: Yamashin Shoyu K.K., 3-36 Nishiyama-cho, Hekinan-shi, Aichi-ken 447, Japan.

6095. Palueci, Jeno. 1982. Brief history of Chun King soy sauce (Interview). *SoyaScan Notes*. April 30. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Jeno founded Chun King in 1945. The company first began selling ready-made soy sauce in about 1947.

Note: A search of the U.S. Patent and Trademark Office database shows that the "Chun King" trademark (more specifically a "Word Mark") was first used and first used in commerce on 1 Jan. 1948 and was first registered (by Chun King Corporation, Duluth, Minnesota) on 16 Sept. 1957. The trademark was to be used for "Various canned unitarily packed foods." A list of these foods is given, and includes "Soya Sauce." Actually Chun King registered two similar "Word Marks. Both have the word "Chun" written in rounded Oriental-looking letters above the word "King." Both words are the same height, the same width, and the same "typeface" or design. In one, the wards are written in outline letters and in the other in solid black letters.

Chun King never made fermented soy sauce. They bought their nonfermented soy sauce by the barrel from a plant in Toledo, Ohio, run by the Donofrio Brothers, then repackaged it under the Chun King label. He does not remember the company's name but their technician was a man (perhaps Lou Minor) who had worked for La Choy. This man first got Jeno interested in soy sauce before he started buying from A.E. Staley. In the late 1940s and 1950s Jeno was not aware of any fermented soy sauce being made in the USA; it was all made from HVP. Kikkoman introduced fermented soy sauce to the USA by importing it from Japan.

Jeno thinks Chun King may initially have bought its soy sauce from A.E. Staley Mfg. Co.–but he is not sure. It was shipped by the barrel. Starting in the late 1950s, Jeno bought HVP from Staley and started blended his own soy sauce; he recalls that Staley sold both HVP and blended soy sauce.

When Jeno started selling soy sauce, La Choy had about 60% of the U.S. market and the remaining 40% was divided up among Chinese-, Japanese-, and Korean-American manufacturers. One Polish fellow in Chicago, Illinois, named Ben Gee, was also in the business. In the 1950s it became a battle between La Choy and Chun King, and in the end, when Jeno sold out, Chun King was definitely the market leader. But now La Choy has again taken the lead. Chun King is trying to re-capture the lead with a big ad campaign and a catchy jingle.

Jeno is quite sure that all Chun King soy sauce is presently made in Cambridge, Maryland. The company's plant used to be in Duluth, Minnesota, but after he sold the company, the Duluth plant was closed, and he bought it back.

Jeno also grew mung bean sprouts; he tried sprouting soybeans but was not successful. Address: Jeno's Inc. (Pizza), 525 Lake Ave. South, Duluth, Minnesota 55802. Phone: 218-723-5555.

6096. Chico-San, Inc. 1982. Choice imported natural foods (Ad). *Bestways*. April. p. 65.
• ***Summary:*** A half-page black-and-white photo shows Lima Ohsawa, wearing a kimono and carrying a tray of Japanese foods, including Lima Soy Sauce. "Top quality natural foods and condiments are imported from Japan under the supervision of Mrs. Lima Ohsawa, Chico-San's specialist in macrobiotic foods."

Chico-San imports from Japan include Lima Soy Sauce, soybean puree (miso), mineral-rich mercury-tested seaweeds, azuki beans, black soybeans, barley koji, kuzu, nigari, and tekka. "Soon, a companion for Lima Soy Sauce–Lima Tamari–Wheat Free–Whole soy beans–Rice & zestful–Naturally brewed in wooden casks for about 2 years." Address: Chico, California 95926.

6097. Jacobs, Leonard. 1982. The Chico-San story: Popularizing rice cakes in America. *East West Journal*. April. p. 58-61.
• ***Summary:*** A history of Chico-San, including Bob Kennedy. "In 1981 Chico-San and Arden, the two companies who manufacture rice cakes on a national scale, sold approximately 9 million bags of rice cakes to natural foods stores."

In 1968 "Chico-San was beginning to work on a project which would change the entire course of natural foods in the U.S." That year, "Bob Kennedy, Chico-San's president, had begun negotiating with the Lundberg brothers of Wehah Farm in Richvale, California for them to grow totally organic brown rice. The vision of Kennedy and his associates encouraged these farmers to invest considerable time and energy in a very risky project. The Lundbergs were successful, and this success has been an inspiration and incentive for many other large-scale farmers to grow grains organically–a development that has had far-reaching consequences on the health of millions of people.

The story of Chico-San and Bob Kennedy is one of a dedication to quality that is continually renewed and strengthened. But the development of Chico-San was not always so clear. Kennedy was a studio trumpet player in the 1950s, working for the Columbia Broadcasting Company in New York City. 'I was feeling good and didn't really have any serious health problems, but around 1960 I heard of a Japanese man who was lecturing on natural health care and Oriental philosophy, and I was interested,' Kennedy recently said. This man was George Ohsawa, the teacher of macrobiotics, whom Kennedy eventually met at a summer camp in upstate New York in July of 1960. 'Ohsawa's message was very inspiring, and a few of us felt compelled to put his ideas into practice immediately,' Kennedy recalled.

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Ohsawa, after a trip to Japan, returned to America near the end of that year and lectured on the possibility of nuclear war as a result of U.S. / Soviet tensions. He warned that New York City could be one of the first cities to be destroyed and advised his students to leave. Several key members of this early group began to search out areas of the country that would be safe from bombs or fallout and that would also be suitable for growing rice.

They finally decided on the town of Chico in the Sacramento Valley in Northern California, an area of fertile farmland, where rice was already being grown. They felt confident that eventually organic brown rice would also grow there. Thus, in October, 1961, thirty-two of these early pioneers left New York City to travel across the country in a caravan of VW buses, vans, and station wagons, to settle in Chico, California. The American pioneering spirit had been reinforced with Ohsawa's spirit of adventure and change–a combination that set them on the path they are still traveling today.

The group was considerably diverse, including five professional trumpeters, a painter, a wood-carver, a Harvard economist, a TV soap opera star, an engineer, and a social worker. Most of these early settlers have since moved on to other things, but not all. Dick Smith, one of the trumpeters, is now vice president of Chico-San and continues to work there, but now with his three children. Kennedy's wife and two of their four children also work with the company. And Herman and Cornellia Aihara, both of whom had been students of Ohsawa in Japan, have remained involved with Chico-San, although their primary interests are in macrobiotic education through lectures and cooking classes.

"But back in 1961 Aihara and Kennedy were the originators of the food company. They decided to call it Chico- San, 'san' being the Japanese word signifying respect. Aihara had contacts in Japan for importing foods such as miso, tamari soy sauce, umeboshi plums, and sea vegetables. They began a small food store in the city of Chico to introduce these products to the local community, which did not, however, buy them. 'Unfortunately, Japanese foods were not what people had in mind when they considered health foods,' Kennedy said. 'The only way we could get any sales was to begin some sort of classes on the value of these foods and macrobiotics in general.' So Kennedy and Aihara began travelling up and down the Coast giving lectures on philosophy and Oriental medicine. However, even with these classes, sales were not justifying the type of products these men were offering.

"The next step was to introduce a small bakery into the back of the store. Keeping true to their macrobiotic ideals, the bread they baked was an unyeasted loaf made from freshly ground whole wheat, and the best quality oil, sea salt, and water available, no sweeteners were added. Again they had put their principles ahead of conventional business practices and bottom line motives, and again they had created a product with limited immediate demands. So when Ohsawa visited Chico in the summer of 1963 for a lecture series, Kennedy confided in him about the difficulties they were experiencing. Ohsawa laughed at the idea of difficulties standing in the way of ideals and mentioned that a new possibility for a popular food product might be rice cakes. Apparently puffed rice cakes were well-liked in Japan and machines were available to mechanically manufacture them." Continued

6098. Jacobs, Leonard. 1982. The Chico-San story: Popularizing rice cakes in America (Continued–Part II). *East West Journal*. April. p. 58-61.

• ***Summary:*** Continued: "By the end of the year, Ohsawa had located an old rice cake machine in Japan and shipped it to Chico. Kennedy had it refurbished and assembled and began the first rice cake manufacturing in America. (Basically, rice cakes are made by soaking rice, adding measured portions into individual molds, heating them under pressure, and then releasing the pressure so they puff uniformly and take on the shape of the mold.) However, this first machine was manually operated and required a strenuous effort to stamp out individual crackers. Since the operation of the machine was sending the employees to the chiropractors more and more frequently, Kennedy redesigned it to operate more automatically. Eventually he created a design which worked fairly easily, and they began selling the rice cakes as quickly as they could manufacture them.

"To ensure the quality of the rice, Kennedy and Aihara started searching for the best rice farmers in the area. Eventually they found a Farmer Koda who was growing a strain of short grain brown rice 200 miles south of Chico [Koda Farms in South Dos Palos]. Although his rice was of excellent quality, he was located in an area of cotton growers who used large quantities of chemicals. Kennedy felt compelled to find another farm which was relatively free of surrounding chemicalized agriculture and which would be willing to experiment with growing completely organic brown rice. In 1968 he signed a contract with the Lundberg's of Wehah Farm [Richvale, California], guaranteeing the purchase of their first organic crop. This was a considerable risk on each side, since at best the farmers felt the yield would be half as much as the conventional crop, and even then the weeds and insects, especially during the paddy stage, would be extremely competitive with the rice. However, the experiment proved successful, and we all have been benefiting ever since. (Other farmers have since begun producing organic brown rice, most notably Farmer Garrich of Lone Pines Farm in Arkansas.)

"Interestingly, with the recession of 1973 and 1974, the price of organic rice increased quite a bit and the demand for organic rice cakes decreased considerably, so Chico-San discontinued the organic rice cakes–selling only organic rice. However, by 1976, they were able to reintroduce the organic

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rice cakes and the demand has again been on the up-swing.

By the late '60s/early '70s the FDA began a close scrutiny of the relationships between food companies and educational programs. They would not allow promotion of foods based on educational or health claims. As a result Kennedy and Aihara established the George Ohsawa Macrobiotic Foundation (GOMF) to continue the educational activities separately from the food company. Kennedy became the director of Chico-San, Aihara the director of GOMF. This relationship has proved very productive for both sides as each continues to promote the other. Aihara is still involved in the selection and quality control of the food products, and he gives weekly classes to approximately thirty-five of the seventy-five staff members of Chico-San. Kennedy began to devote himself completely to the development of the food company.

"In addition to enlarging the ware- house space, Kennedy looked for ways to expand and improve the product line. In 1974 he brought Junsei Yamaguchi into the company to begin manufacturing miso and tamari soy sauce according to Chico-San's standards. Chico-San also began to produce yinnie rice syrup, a traditional sweetener Kennedy had discovered on one of his trips to Japan. Yinnie syrup is a whole grain product made from malted wheat and rice and has a much lower concentration of refined sugars than most other malted grain sweeteners such as barley malt or corn syrup. During this time Chico-San had acquired additional rice cake machines purchased from Japan, but Kennedy felt that these machines could be improved. Eventually he developed a completely hydraulic machine which was capable of increasing the supply of rice cakes up to the market demand. Unfortunately, soon after they got the new machine into production, it shorted out, blew up, and caused a fire which totally destroyed the Chico-San warehouse, all the incubating miso and tamari, and the majority of their other products. The founders of Chico-San had escaped the threat of destruction in New York, but over a decade later they witnessed their almost total devastation in California.

"However, by that time the company had developed a strong reputation in the market. In addition, Kennedy was willing to withstand considerable odds and start from scratch. So within a year of the fire (and a loss of $250,000 beyond the insurance settlement), he began again with a larger warehouse and what he considered to be better rice cake machines. Presently, Chico-San is making rice cakes twenty-four hours a day, seven days a week. It is selling these cakes in the natural foods stores, and has distribution in the supermarkets and (under the label of Landau and Kemach) in the Jewish Kosher foods stores. Kennedy is also attempting to get his rice cakes into the institutional food services, such as hospitals and prisons, but finds this to be very slow. 'The bureaucracies involved are very difficult to work with. But we do have a few public schools in California using rice cakes in the lunch programs,' Kennedy claims.

Although Chico-San never got back into miso and tamari production, it did expand its own product line by increased importing of traditional macro- biotic foods from Japan. These include Lima Soy Sauce (named after George Ohsawa's wife, Lima), miso, barley koji, kuzu, and rice malt vinegar; the sea vegetables hijiki, kombu, wakame, nori, and kanten; nigari (for making tofu); tekka (a condiment rich in iron), umeboshi plums, and the Japanese teas kukicha, mu, and renkon (lotus root). In this country Chico-San makes yinnie syrup, yinnie taffy candies, rice cakes, carob-covered rice cakes, and rice nuggets. Chico-San also publishes the *Chico-San Cookbook*, which was written by Cornellia Aihara. The products sold by Chico-San undergo close scrutiny by Kennedy, Smith, and Herman Aihara. They are very careful about quality control and generally agree about standards. One exception has been the carob-covered rice cakes. It is difficult to solidify the carob without adding some type of refined sweetener. Although they have been experimenting with yinnie syrup, at this point they are using fructose but without consensus within the company as to whether it is a healthful ingredient. Besides the manufacturing company in Chico, Kennedy is planning to reopen the Chico-San retail store. He has also opened up a warehouse and rice cake plant near Trenton, New Jersey and is considering opening up another outside of London [England]. In addition, Kennedy and Aihara went to Japan in early December, 1981, to conclude formal discussions with the Ohsawa C.I. macrobiotic teaching organization in Tokyo, concerning the creation of a distribution company called Ohsawa U.S.A. Lima Ohsawa's sister, Flora, will be in charge of this company which will allow for the increased distribution of many Japanese macrobiotic specialty foods.

6099. **Product Name:** [Ganmo {Tofu Burger}]
Foreign Name: Ganmo.
Manufacturer's Name: Jonathan P.V.B.A.
Manufacturer's Address: Antwerpsesteenweg 336, B-2080 Kapellen, Belgium. Phone: 03/664 58 48.
Date of Introduction: 1982, April.
Ingredients: Crushed tofu, sesame seeds, vegetables, tamari, fresh herbs and spices, wheat flour.
Wt/Vol., Packaging, Price: Vacuum packed.
How Stored: Refrigerated.
New Product–Documentation: Letter from Sjon Welters, 1982, April 16. "Jonathan is a macrobiotic food company. They produce a wide assortment of macrobiotic products, such as tofu (3,000 lb/week), ganmo, etc.

Jonathan catalog, 1988. A full-page color plate shows all these products. These are deep-fried tofu burgers. Ingredients are listed (see above).

6100. Leviton, Richard. 1982. A new soy sauce from an old culture. *East West Journal*, April, p. 42-44.
• ***Summary:*** Hoang Van Chi, a native of Vietnam, makes

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Bodhi Sauce or tuong cu-da in Bowie, Maryland. Photos show: (1) Phan and Hoang Van Chi with bottles of both the sauces they make. (2) Hoang checking glutinous rice that has been steaming overnight. (3) Phan and Hoang involved in four steps in the preparation of sweet rice koji. Address: 100 Heath Rd., Colrain, Massachusetts 01340.

6101. San-J. 1982. Some soy sauces are called tamari. But they're not! San-J is the real tamari (Ad). *East West Journal*. April. Rear cover.
• ***Summary:*** This full-page ad (see next page) is a combination of black-and-white and color. In black-and-white are 5 quarts of so-called tamari under the following brands: Westbrae, Erewhon (2), Llama, and Pure & Simple. In color are 2 bottles of San-J Tamari (wheat free, in 5.7 oz refillable dispenser and 20 oz glass bottle). The text explains that this real tamari is: Made only from soybeans. Mellower, smoother, richer than regular soy sauce. More protein than regular soy sauce. San-J Tamari will enhance any dish. A concentrated, economical product.

6102. Reed, M.H. 1982. Japanese spot bridges East, West. *New York Times*. May 2. p. WC23.
• ***Summary:*** This is a review of the Japanese restaurant Ichi Riki in Nyack, New York. Recommended dishes include agedofu and salmon teriyaki.

"For instance, it would have been a pity to miss the superb example of agedofu–silken bean curd deep fried to 'meatiness' and flavored with daikon and dashi... "

6103. Pautz, Jane Abe Cadwell. 1982. Re: Directory of soyfoods manufacturers in Sao Paulo, Brazil, and comments on the availability of these foods. Letter to William Shurtleff at Soyfoods Center. May 29. 3 p. Typed.
• ***Summary:*** List all known companies in Sao Paulo that make soyfood products. A separate listing is given for each product with the full company name and address. The product categories include: Tofu and tofu products (2 companies). Soymilk (4). Shoyu (3). Sellers of whole dry soybeans (1). Lecithin (1). Soyflour (1; soyflour is available in many stores without a brand name). TSP / TVP (2).

"As you know we have a large Japanese colony here in the country. I am only aware of what is here in Sao Paulo."

"Soynuts are available in health food stores in small unlabeled packages. I have not seen soynut butter. Misso (miso) is plentiful. Soy sprouts are sometimes available in open-air markets along with other Japanese products. They aren't common. Fresh green soybeans [edamamé] are also available at certain times of the year in these markets. Of course there is lots of soyoil. I think that Sanbra is one of the big producers or sales company of the beans [soybeans]. In some of the healthfood stores there is a product available called 'carne de soja' (literally "soy meat [textured soy flour]). There is no brand name and I have not experimented with it."

"I will be working on a book of tofu recipes during this vacation. The publisher wants to publish it yet this year.

"Last year I gave 3 lessons in working with soyfoods at the Nestlé experimental kitchen here in Sao Paulo, and may be working with a new health foods store / restaurant in developing foods. I would like to see them try some typical soy-deli kinds of things. There is a lot of interest here, new stores of 'produtos naturais' [natural food products] and vegetarian restaurants are quite popular." Address: Rua Spinagés 1974 Apto. 61, 01258 Sao Paulo, Brazil.

6104. **Product Name:** Bean Products Japanese-Style Soy Sauce, Bean Products Chinese-Style Soy Sauce.
Manufacturer's Name: Bean Products Ltd.
Manufacturer's Address: 42 Telford Rd., Eastlenziemill Industrial Estate, Cumbernauld, Dunbartonshire G67 2AX, Scotland. Phone: 02367 38310.
Date of Introduction: 1982, May.
New Product–Documentation: Letters from Brian J.B. Wood. 1983. March 16 and 30. "The company was established in April 1982. It is currently producing only soy sauce, but plans to diversify into miso, tofu, etc., as soon as possible. We are trying to produce (a) a Japanese style shoyu to 'wholefood' specifications, (b) a Chinese-style sauce intended mainly for the food manufacturing industry. I say 'trying' because of the difficulty of tying down potential customers to precise specifications."

Letter from Brian J.B. Wood. 1983. April 25. "There is no one person in overall charge... Christopher Corden looks after production; Michael Riddle is finance and office administration; Nigel Patch is sales and also electrical and plant maintenance. We estimate we can produce up to 600 tonnes of soy sauce a year before needing to make substantial changes to the factory.

Display ad by Scottish Development Agency in the *Economist* (London). 1984. June 9. p. 62. "Scotland's answer to Japanese whiskey."

Soya Bluebook. 1986. p. 106; 987. p. 94.

Interview with Brian J.B. Wood. 1994. April 1-2. In May 1984 the company was sold to Nestle (for a relatively low price), and it was renamed Nestle Foods–Cumbernauld.

Note: This is the earliest known commercial soy product made in Scotland.

6105. Kikkoman International. 1982. Market share of U.S. soy sauce market (including teriyaki sauce). Dollar base. San Francisco, California. 3 p. Unpublished manuscript. [1 ref]
• ***Summary:*** The SAMI (Selling Areas Marketing Inc.) report shows that for U.S. supermarkets in Dec. 1981 the market shares based on dollar sales were Kikkoman 49%, La Choy 32%, Chun King 13%, and Other 6%. In May 1982 these figures were 50%, 32%, 11%, and 7%. In 1979 these figures were 44%, 34%, 16%, and 6%. Thus Kikkoman's gains

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SOME SOY SAUCES ARE CALLED TAMARI. BUT THEY'RE NOT!





AKUSAA761***00 001CPY SAM
THE KUSA RESEARCH FND EW
ATTN L A SCHALLER ***
PO BOX 761
OJAI CA 93023

SAN-J IS THE REAL TAMARI

Made Only from Whole Soybeans
Most products that are labeled tamari in the U.S. are what the Japanese call shoyu, which contains wheat, as well as soybeans, water and salt. Real tamari, like SAN-J, contains no wheat, and is naturally brewed from only soybeans, water and sea salt. If you've been buying tamari for years, it probably wasn't tamari.

Mellower, Smoother, Richer than Regular Soy Sauce
SAN-J TAMARI is brewed in wooden casks over four full seasons, a minimum of twelve months. The end result is an all natural, high-protein soy sauce that is exceptionally smooth and subtle to the taste, as well as having a richer and heartier flavor than regular soy sauce or shoyu.
Try this taste test for yourself — compare a little SAN-J TAMARI with your favorite shoyu. You'll be surprised — there's a real difference — the shoyu will be salty compared with SAN-J TAMARI, which gives you real flavor, not just saltiness.

More Protein than Regular Soy Sauce
Because SAN-J contains only soybeans, it retains much more of the nutritional benefits of the soybean than shoyu which also contains as much as 50% wheat. SAN-J TAMARI contains approximately one third more protein than shoyu and has 18 essential amino acids. It is also rich in enzymes which aid the digestive process, and contains valuable minerals. SAN-J TAMARI is not just a seasoning and a condiment — it's a real food as well.

San-J Tamari will Enhance any Dish
SAN-J TAMARI is unique as a seasoning because it acts in two ways — it adds its own distinctive flavor to your meal, as well as subtly bringing out the existing natural flavors of the ingredients in any dish. It's a natural "flavor enhancer" and seasoning in one. Use it to make soups, casseroles, stews, and salad dressings come alive with flavor. And that's not all! — SAN-J TAMARI is also a perfect condiment. It gives a rich, hearty boost of flavor to any meal. Use it wherever you would use salt — SAN-J gives you more flavor-enhancing properties than salt without the harsh bite of raw salt. It's better for you too! Now you can have hearty-tasting meals without a high sodium content.

A Concentrated, Economical Product
Sure, SAN-J costs more than regular soy sauce — and so it should. But a bottle of SAN-J TAMARI will last a lot longer. The rich, concentrated flavor of SAN-J TAMARI means you will need to use much less of it than of other soy sauces — and it can also be diluted with water without losing its distinctive flavor, a flavor you and your family will love.

SAN-J TAMARI is available in both the 5.07 oz. refillable dispenser and a new, economical 20 oz. glass bottle.

Don't settle for anything less —
SAN-J is the REAL TAMARI

san-j

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in market share were made largely at the expense of Chun King. Address: San Francisco, California.

6106. Krieger, Verena. 1982. Die tausend Talente von Tofu [The thousand talents of tofu]. *Natuerlich* 2(5):69-73. May. [Ger]
• ***Summary:*** An excellent overview, with numerous color photos of recipes, products, and plants. "Tofu found its way to Europe not over the steppes of Asia but through the kitchens of North America, starting with *The Book of Tofu* by Shurtleff and Aoyagi."

Contents: What is tofu? Why tofu? Soya–king of the beans (Switzerland imports 100,000 tonnes of soybeans each year to feed to animals). Tofu and its brothers. Is soy an exotic plant? The most important traditional soyfoods of East Asia: Tofu, miso, soymilk, tamari, shoyu and soy sauce (*sojasauce*), tempeh, soy sprouts (*sojakeime*).

6107. Leviton, Richard. 1982. Discovering Japanese soyfoods. *Vegetarian Times* No. 57. May. p. 60-62, 65. [1 ref]
• ***Summary:*** Recently Richard Leviton traveled to Japan with a group of Americans to get a firsthand look at the Japanese soyfoods industry. There he got his first look at the fabled neighborhood corner tofu shop. He discusses tofu (the Japanese consume 10 million cakes a day) and tofu manufacturers (large and small), types of tofu include silken tofu (called kinugoshi), fresh soft tofu called momen. "In the typical supermarket we counted as many as 60 different soyfood items (often several brands or product sizes), ranging from fresh miso and tofu to packaged soymilk and shoyu, natto, dried frozen tofu, yuba rolls and kinako powder."

Also: Takatsuka Marugo (a large tofu maker that churns out 100,000 lb/day of tofu), Yuba Han (a traditional yuba shop in Kyoto), Asahimatsu Kori-dofu Co., natto, Hamanatto, soymilk, cooked soybeans with wakame, soy sprouts, kinako powder, packaged green soybeans in the pods, miso (fresh and freeze-dried). Linda Barber (an American home economist who is teaching at Kobe Girl's College in Nishinomiya, and also teaching American-style tofu recipes to Japanese housewives via television and the print media), and Sasa-no-Yuki, a 279-year old restaurant that specializes in tofu cookery.

Photos show: (1) Eleven different tofu dishes in bowls as served at Sasa-no-Yuki restaurant in Tokyo. (2) A man hanging up fresh yuba at Yuba Han. (3) Members of the group seated on tatami mats on the floor around a huge table enjoying dishes served at Sasa-no-Yuki. Address: 100 Heath Rd., Colrain, Massachusetts 01340. Phone: 413-624-5591.

6108. Mori, H. 1982. Shôwa 56 nendo ni okeru shôyu, miso no kenkyû gyôseki [Review of annual achievements in shoyu and miso research]. *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 77(5):281-312. May. [743 ref. Jap]
• ***Summary:*** This important Japanese-language article, published each year in the May issue of this periodical, has two parts: (1) A review of the past year's major discoveries and developments in the fields of miso and soy sauce in Japan. (2) A bibliography related to those discoveries and developments. Address: Noda Sangyo Kagaku Kenkyusho.

6109. **Product Name:** [Shoyu].
Foreign Name: Shoyu.
Manufacturer's Name: Sakura-Nakaya, Alimentos Ltda.
Manufacturer's Address: 03446-R Ordinaçoes, 1951, 03446 Sao Paulo, Brazil.
Date of Introduction: 1982. May.
New Product–Documentation: Letter from Jane Cadwell Pautz. 1982. May 29. This company makes shoyu.

6110. Shurtleff, William, Aoyagi, Akiko. 1982. Soyfoods directory and databook. 1st ed. Lafayette, California: Soyfoods Center. 21 p. May. 28 cm. 2nd ed. published in June as Soyfoods Industry Directory and Databook. 56 p. [24 ref]
• ***Summary:*** A detailed study of the rapidly emerging soyfoods industry and market. Contains original statistics compiled by the Soyfoods Center through interviews with companies. Contents: 1. Names and addresses of soyfoods manufacturers in the Western world, plus major soymilk, miso, shoyu, and yuba manufacturers in East Asia. 2. Analysis of the soyfoods industry in the U.S. 3. Soyfoods production statistics for America and the West. 4. America's prime soyfoods market regions. 5. The tofu industry in the West: Three-year analysis of the tofu industry in the West. The U.S. Tofu market: overview and outlook. Graph of number of tempeh and tofu manufacturers in the West. North America's twenty largest tofu manufacturers. 6. Analysis of the soymilk industry in the United States. 7. Key institutions working with soyfoods in the West.

Note: This is the first market study published by Shurtleff and Aoyagi. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6111. **Product Name:** [Marutaka Shoyu].
Foreign Name: Marutaka Shoyu.
Manufacturer's Name: Takaki (Masakazu) & Veneslau (R.).
Manufacturer's Address: Bras s/n CP 136, Riberao Pires, Sao Paulo, Brazil.
Date of Introduction: 1982. May.
New Product–Documentation: Letter from Jane Cadwell Pautz. 1982. May 29. This company makes shoyu.

6112. **Product Name:** [Shoyu, and Miso].
Manufacturer's Name: Tozan.
Manufacturer's Address: Bairro Carlos Gomes s/nº,

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Campinas (SP), Brazil. Phone: (011) 278-2495 or 5826.
Date of Introduction: 1982. May
New Product–Documentation: Letter from Jane Cadwell Pautz. 1982. May 29. "The misso is called 'misso.'"
Shurtleff & Aoyagi. 1983. The Book of Miso. 2nd ed. p. 255

Letter from Luiz Simas and Bobbi Joels. 1986. Jan. 7. A large company named Tozan claims to devote part of its production to naturally-fermented miso and shoyu, with no sugar. The same address is given, plus a phone number. Note: A letter to the address above dated 26 May 1989 was returned to Soyfoods Center as undeliverable.

An Internet search (May 2009) shows: Industria Agricola Tozan S/A, Estr. Carlos Gomes, s/n, Campinas, Sao Paulo, Brazil. Phone: (19) 3257-1155.

6113. Arrowhead Mills, Inc. 1982. Price list and order form. Hereford, Texas. 4 p. June 15. 28 cm.
• ***Summary:*** Printed with light brown ink on white paper. Contents: Whole grains. Beans, seeds and nuts. Cereals, flakes and granolas. Flours and mixes. Packaged grains. Packaged beans, seeds and nuts. Packaged cereals, flakes and granolas. Packaged flours and mixes. Oils–natural unrefined. Nut butters (Peanut butter–creamy or crunchy). Condiments. Magnificent Munchies. Nutrition-bars (Carob Chew, Sesame Chew, or Vanilla Chew). Pastas. Protein powders and yeast. Arrowhead Mills bulk module.

Soy related products–bulk. Soybeans (50 lb). Bulghur-soy grits (50 lb). Soybean flakes (25 lb). Soy flour (roasted, 30 lb).

Soy related products–packaged. Soybeans (12 x 1 lb). Bulghur-soy grits (12 x 20 oz). Soybean flakes (12 x 1 lb). Soy flour, whole (12 x 1½ lb). Soy oil (pint, quart, or 5 gallon). Tamari soy sauce (pint, quart, or 4.7 gallon). Protein powder (12 x 10 oz). Address: Box 2059, Hereford, Deaf Smith County, Texas 79045. Phone: (806) 364-0730.

6114. Wells, Patricia. 1982. Fast food on the fast track. On– or near–Japan's railroads, box lunches are first-class fare. *New York Times*. June 20. p. XX37.
• ***Summary:*** "In much of the world, fast food has become a synonym for mediocre, mass-produced fare." But not so in Japan. The *ekiben* (box lunch for train travelers) has a long tradition of high quality, inexpensive, healthful food. A part of almost every box lunch is a tiny container of soy sauce for seasoning.

One excellent part of this box lunch, "a favorite of Japanese children, is inari zushi, seasoned rice wrapped with fried bean curd or tofu that's been boiled in a sweet sauce."

6115. **Product Name:** Tempeh Brothers Tempehburger. Renamed Tempeh Brothers Tempeh Burgers by early 1983.
Manufacturer's Name: Appropriate Foods, Inc.
Manufacturer's Address: 137 New Hyde Park Rd., Franklin Square, Long Island, NY 11010.
Date of Introduction: 1982. June.
Ingredients: Organic soy tempeh, shoyu, herbs & spices.
Wt/Vol., Packaging, Price: 7 oz.
How Stored: Refrigerated or frozen.
New Product–Documentation: Label. 1982. June 15. 3 inch diameter. Yellow, red, blue and white. Spot showing label in Soyfoods. Winter. 1983. p. 50. "The Tempeh Burger Takeover. Nationwide at least 7 brands of prepared tempeh burgers are produced." The label reads "tempeh burgers." Also in Soyfoods. 1984. Summer. p. 43. Interview with Robert Werz. 1987. Sept. 9.

6116. Bo, Thi-an. 1982. Hishio to shôyu no engen to sono seisan gijutsu ni tsuite. I. [On the origins of chiang and shoyu, and their production technology. I.] *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 77(6):365-71. June. [9 ref. Jap, eng]
• ***Summary:*** This is one of the most interesting and carefully researched articles seen up to this time on this subject. The author (Ho Kejan in Japanese), is a Chinese graduate of Iwate University in Japan. He sent this article to the university alumni association on the university's 80th anniversary. Shoyu has become a world-class seasoning. Even in Moscow they have built plants to produce soy sauce and chiang (miso).

The earliest chiang was made with meat, fish, and shellfish; later, as agriculture advanced, beans and grains were used. The two main types of chiang are (I) those made using flesh as a main ingredient and (II) those made solely from plants. The flesh chiangs can be further subdivided: IA. Those made from animal and bird flesh. IA1. Made without bones (mentioned in the Shih Ching [Classic of Food], the Chou Li [Rituals of the Chou Dynasty, 3rd century B.C.], the Li Chi [Book of Rites, 2nd to 3rd century B.C.], and the I Li); IA2. Made with a large amount of liquid (mentioned in the Chou Li and Li Chi); IA3. Made with flesh and bones (mentioned in the Chou Li, I Li, and Ch'i-min Yao-shu [Essential techniques for the peasantry of Ch'i, written by Chia Ssu-hsieh in A.D. 535]); IB. Made with fish or shellfish, including IB1. Fish chiang (mentioned in the Chou Li, Ch'i-min Yao-shu), and IB2. Fish intestine chiang (mentioned in the Ch'i-min Yao-shu). The non-flesh or vegetable chiangs (II) can be divided into: IIA. Those made with beans including IIA1. Chiang (mentioned in the Chou Li (3rd century B.C.), Lun Yu [Analects of Confucius, after 479 B.C.], Shih Chi [The Historical Record by Ssu-ma Ch'ien, ca. 90 B.C.], and Chi Chiu P'ien [48 to 33 B.C.]). IIA2. Bean (Soybean) chiang (tou-chiang, mentioned in the Ch'i-min Yao-shu). IIA3. Small (Red/Azuki) bean chiang (mentioned in the Nung Sang I Shih Chi Yao [+1314]). IIB. Chiang made from other vegetable materials including: IIB1. Wheat chiang (mentioned in the Shih Ching); IIB2. Wheat flour chiang (mentioned in the Pen-ts'ao Kang-mu [Compendium of Materia Medica, by Li Shih-chen, A.D. 1578-97] and

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the Chü Chia Pi Yung Shih Lei Ch'uan Chi [+1301]); IIB3. Coconut chiang (Mentioned in the Ch'i-min Yao-shu); IIB4. Barley chiang (mentioned in the Pen-ts'ao Kang-mu); and IIB5. Mustard chiang (mentioned in the Li Chi and Chih Ching)

It is interesting to note that the earliest meat and fish chiang was made with koji, typically millet koji. Koji is also used today to make some of the fish sauce called Shottsuru in Akita prefecture in Japan. Shottsuru has a 3,000 year history

The use of the terms "hai" (meat chiang) and "chiang" in the Chou Li imply that some chiang was made from ingredients other than meat. An illustration from the Han dynasty shows a hole in the bottom of a chiang pot for drawing off soy sauce. The *Ssu Min Yüeh Ling* by Ts'ui Shih from the Later Han (25-220 A.D.) uses the term "ch'ang chiang" to refer to refined/filtered soy sauce. The *Ch'i-min Yao-shu* also uses two terms for refined chiang that seem to be referring to types of soy sauce. Thus it seems relatively sure that chiang has a history of about 3,000 years from the Chou dynasty (1122-256 B.C.) and soy sauce has a history of over 2,000 years since the Ch'in (221-206 B.C.) or Han (206 B.C.–A.D. 220). In the literature of the T'ang dynasty it is not rare to use soy sauce for medicinal purposes.

Soy sauce came from chiang, which was made from soybeans and wheat flour or wheat. it is still widely produced today. But from shih (fermented black soybeans) came tamari and kuan-tou soy sauce (kuan-tou is a region in Fukien / Fujian in southeast China). Only soybeans were used to make these types of soy sauce. The first tou-shih (fermented black soybeans) was made from soybeans only, with *Aspergillus oryzae* mold. If salt was added, the product was called hsien tou-shih; if none was added, it was called tan tou-shih. Later they started to use *Mucor* (as in Szechuan tou-shih) or *Rhizopus* mold species. Today most tou-shih is made with Aspergillus. This is the ancestor of tamari shoyu and kuan-tou soy sauce. Address: Iwate Daigaku Nôgaku-bu, Sogaku 80 shunen no gosukuji ni kaete, Present address, China

6117. Chico-San, Inc. 1982. Mail order–Price list. P.O. Box 1004, Chico, CA 95927. 4 p. June. 28 cm.

• ***Summary:*** Products include: Rice Cakes (6 varieties, with 4 new ones coming soon), all in 3 different packages. Carob coated rice cakes in plain or mint flavors. Yinnies brand products: Taffy, Caramel, or Rice Syrup. Grains, beans, and seeds: Incl. Sweet brown rice, azuki beans, black [soy] beans (the latter two imported from Japan since 1962). Tea. Natural condiments from Japan (some imported since 1962): Lima soy sauce. Mugi (barley) miso. Kome (rice) miso. Rice malt vinegar. Tekka (soy plus). Nigari (for tofu making). Kuzu (wild arrowroot). Salt plums (umeboshi). Sesame oil (dark). Koji, barley. Seaweeds from the Orient: Wakame (curly dulse). Kombu. Hijiki. Kanten (gel). Nori. Household goods: Incl. The Yinnies Brand Rice Syrup Cookbook.

Introducing a new Chico-San Product: Tamari Soy Sauce. Address: Chico, California. Phone: 916-891-6271

6118. Howe, J.M.; Hoff, J.E. 1982. Plant diversity to support humans in a CELSS ground-based demonstrator. Moffett Field, California: National Aeronautics and Space Administration (NASA). 51 p. June. 28 cm. Report No. NASA CR-166357. [49 ref]

• ***Summary:*** Prepared under NASA Grant NSG-2401. CELSS stands for "controlled ecological life support systems." Contents: Introduction. Human nutritional requirements in CELSS-GD. Nutrient composition of total plant [vegan] diets (energy, protein, vitamins, minerals), interaction of dietary components, stress. Bioavailability studies of minerals. Rationale (calcium, iron, zinc), experimental procedure (planning of diet, experimental animals), results, experiment IV. Summary. Bibliography of CELSS reports.

Appendix A is a 14-day total vegetarian [vegan] cycle menu. Soy products appear as follows (B = Breakfast, L = Lunch, D = Dinner): Day 1–Sandwich of soy pate (L), soy milk (L&D, 1 cup each). Day 2–Tofu (L, ¼ cup), soy milk (L). Day 3–Soy milk (D). Day 4–Soy milk (B&L). Day 5–Soy milk (B&L), soy burgers (L, 2). Days 6 and 7 = none. Day 8–Soybeans (D, 1 cup). Day 9–Soy milk (B&D), soy bean and winter squash (L, ½ cup each), soy sauce with cooked veggies & brown rice. Day 10–Soy milk (B). Day 11–Soy milk (L). Day 12–Soy meat analogue (D, 3 oz). Address: 1. Dep. of Food and Nutrition; 2. Dep. of Horticulture. Both: Purdue Univ., West Lafayette, Indiana 47907

6119. Shurtleff, William; Aoyagi, Akiko. 1982. Soyfoods industry directory and databook. 2nd ed. Lafayette, California: Soyfoods Center. 56 p. June. 28 cm. [24 ref]

• ***Summary:*** A detailed study of the rapidly emerging soyfoods industry and market. Contains original statistics compiled by the Soyfoods Center through interviews with companies. Contents: I. Terminology: The many types of soyfoods. I. Traditional low-technology soyfoods. 1A–Nonfermented soyfoods: Fresh green soybeans, whole dry soybeans, soynuts and soynut butter, soy sprouts, whole soy flour & grits, roasted soy flour [kinako] & soy coffee, soymilk and dairylike soymilk products, tofu (eight types), okara or soy pulp, yuba.

1B–Fermented soyfoods: Tempeh, miso, soy sauce, shoyu & tamari, natto & thua-nao, fermented tofu & soymilk, soy nuggets (Hamanatto & tou-ch'ih).

II. Modern soy protein foods: Defatted soy flour, grits & flakes, soy protein concentrates, textured soy protein products, soy protein isolates.

III. Soy oil products: Soy salad oil & cooking oil, soy oil margarine & shortening, soy lecithin.

2. Soyfoods industry directory: Names and addresses of

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over 850 soyfoods manufacturers in the Western world, plus major soymilk, miso, shoyu, and yuba manufacturers in East Asia. 3. Analysis of the soyfoods industry in the U.S.

4. Trends in U.S. and world soybean production: Graph of world soybean production (1922-1979) including graphs for the world total, USA, Asia total, and Latin America. Graph of U.S. soybean production, yields, and exports (1924-1979).

5. Analysis of the tofu industry in the West: The U.S. tofu market: overview and outlook. Graph of the number of tofu (and tempeh) manufacturers in the West from 1975 to 1982. Four-year analysis of the tofu industry in the West. Listing of North America's largest tofu manufacturers and their weekly tofu output. Japan's largest tofu manufacturers and their daily output. Favorite tofu, soymilk, and tempeh recipes as served at U.S. soyfoods, delis, cafes, and restaurants, or marketed as ready-to-serve products. Books on tofu published in America.

6. Analysis of the tempeh industry in the West: Graph of number of tempeh manufacturers. Recipes. Listing of North America's largest tempeh manufacturers and their weekly output.

7. Analysis of the worldwide soymilk industry: Analysis of the soymilk industry in the United States. Analysis of the soymilk industry in Japan. Major Japanese soymilk companies and their products.

8. Analysis of the soy sauce / shoyu and miso industries worldwide. Statistics on fermented soyfoods in East Asia. The soy sauce market in the United States (1981). U.S. imports of soy sauce. Graph (1947-1981. Source: U.S. General Imports, Schedule A, Commodity by Country, U.S. Dept. of Commerce, Bureau of Census). U.S. imports of soy sauce. Table (1947-1981. Source: U.S. General Imports, etc. See above). The shoyu / soy sauce market in Japan. Graph. (1886-1980. Includes: Number of manufacturers. Per capita consumption. Shoyu production. Kikkoman's market share (%)). The miso market in Japan. Graph. (1930-1980. Includes: Per capita consumption. Total miso production. Factory production. Number of manufacturers. Home production. Amount of soybeans used). Overview of the miso market in the United States. Miso exports from Japan (1981). Japan's ten largest miso manufacturers and their output.

9. Other: Analysis of the soynuts industry in the U.S. North America's larger soyfoods delis, cafes & restaurants. The soybean crushing industry: overview.

10. Soyfoods terminology and standards (Glossary of soyfoods terms). I. Traditional nonfermented soyfoods: Fresh green soybeans, okara, roasted soy flour (soy coffee, soy chocolate), soybeans, soymilk (soymilk ice cream, soymilk soft serve, frozen soymilk yogurt, soymilk mayonnaise, soy shakes, soy nog, soymilk whipped cream), soynuts, soy sprouts, tofu (regular tofu, deep-fried tofu {deep-fried tofu cutlets called nama-age or atsu-age in Japan, deep-fried tofu burgers or burger balls, called ganmodoki or hiryozu in Japan, deep fried tofu pouches (called aburage in Japan; the words "deep-fried" may be dropped from the names after the initial usage, and in recipes or on package labels, if desired}), silken tofu {made without separation of curds and whey, called kinugoshi in Japan; modern types, all made with glucono delta-lactone as coagulant, and all known in Japanese as juten-dofu, are packaged lactone silken tofu, bagged lactone silken tofu (fukuro-dofu), sealed lactone silken tofu (buro-dofu), and Ever-Fresh Lactone Silken Tofu (in Tetra-Pak)}, grilled tofu, frozen and dried-frozen tofu. (Note: It is illegal to describe the latter product as "freeze-dried tofu," since freeze-drying is a completely different process), terms associated with making tofu {fresh soy puree, a coagulant or curding agent, forming box, filter bag or pressing sack, tofu comes in cakes, not blocks}), whole soy flour, flakes and grits, yuba.

II. Traditional fermented soyfoods: Fermented soymilk products (soymilk yogurt {Soy Yogurt, Soyogurt, Soygurt}, acidophilus soymilk, soymilk kefir, viili, piima, buttermilk {Soy Kefir, etc.}), fermented tofu (wine-fermented tofu, brine-fermented tofu), miso (rice miso, barley miso, soybean miso, Chinese soybean chiang), natto (thua-nao from Thailand and kinema from Nepal; all are non-salted), soy nuggets [fermented black soybeans] (Chinese soy nuggets know as shih, tou-ch'ih, tou-shih, or dow-si; savory soy nuggets called Hamanatto in Japan, Daitokuji soy nuggets called Daitokuji natto in Japan, Philippine soy nuggets called tausi or tao-si in the Philippines, Indonesian soy nugget paste called tauco, formerly spelled tao-tjo, Malaysian soy nugget sauce called tao-si), soy sauce (shoyu. The five basic types of Japanese shoyu are: regular shoyu called koikuchi shoyu in Japanese, light-colored shoyu called usukuchi shoyu, tamari shoyu, clear shoyu called shiro shoyu, and rich shoyu called saishikomi shoyu), tempeh, other fermented soyfoods.

III. Soy oil and modern soy protein foods: soy oil, defatted soy flour, flakes and grits, soy protein concentrate, soy protein isolate, textured soy protein products (TSP, TVP is a registered trademark of the Archer Daniels Midland Company and cannot be used as a generic name for this product), meat analogs (foods typically made from spun soy protein fibers to resemble meat, fish, or poultry products).

11. Names of soyfoods around the world: Names of 40 products. Brazilian / Portuguese names. British English names. Chinese names (fermented tofu is Toufu-ju or Sufu). French names. German names. Japanese names. Spanish names.

12. Key institutions working with soyfoods in the West: The Soyfoods Center, Soyfoods Association of North America, INTSOY, American Soybean Association, Bean Machines, Inc., Soycrafters Apprenticeship Program, USDA Northern Regional Research Center, Sojaquelle.

About The Soyfoods Center.

Note: This is the 2nd market study published by

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Shurtleff. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6120. Tamura, Shôzaburo. 1982. Re: History of the Japan National Miso Association. Letter to William Shurtleff at Soyfoods Center, June–in reply to inquiry. 3 p. Handwritten, translation of original letter only. [Jap; eng+]

• ***Summary:*** The Japan National Miso Association (*Zenkoku Miso Kogyô Kyôdô Kumiai Rengôkai*) was founded on 17 Nov. 1960. Japan's first nationwide miso trade association was founded on 11 Jan. 1940. Its name was *Zenkoku Miso Kogyô Kumiai Rengôkai*. In 1944 [during World War II] it became a controlled company (*Tôsei Gaisha*), and in 1948 its name was changed to *Zenkoku Miso Kogyô Kyôkai*. Finally in 1960 it became the present *Zenkoku Miso Kogyô Kyôdô Kumiai Rengôkai*.

According to Dr. Hideo Ebine, the earliest known article on miso published in a scientific journal was: Kellner, O. [Oskar Johann]. Nagaoka, M.; Kurashima, Y. 1889. "Researches on the manufacture and composition of miso." *Bulletin of the College of Agriculture, Tokyo Imperial University* 1(6):1-24. Dec. Dr. Ebine is head of the Central Miso Research Center, which is in the same building as the miso association.

Concerning statistics on the amount of miso produced in Japan over the past century: There are good statistics on shoyu since it has been taxed nationwide since the Meiji period, but there are no such reliable statistics on miso because it was not taxed, and also because a great deal of miso was made in individual homes in the early days. Address: Zenkoku Miso Kogyô Kyôdô Kumiai Rengôkai, Tokyo, Japan.

6121. Tofu Shop (The). 1982. Take-out deli (Menu). 768 18th St., Arcata, CA 95521. 6 panels. Undated. Front and back.

• ***Summary:*** This 6-panel leaflet and menu is mostly hand-written but partly printed. On the front cover is the logo of a dragon in a circle. "9-6 Monday–Saturday. Hot food served 12-6 daily. In a hurry? Call ahead: 822-7409. Your local soyfoods producer." One panel, titled "Welcome to the tofu shop," states that this is "one of only a handful of traditional-style tofu shops in the Western Hemisphere."

Another titled "Inside our sandwiches" lists the ingredients in each sandwich. Soy-related menu items include: Sandwiches: Tofuburger. Dragonburger. Tofuacadoburger. Spinach turnover (with tofu filling). Sesame tofu pocket. Mexican pastry (a mini-burrito filled with spicy tofu). Fuji roll (with rice, [mung] bean sprouts, tofu, and miso). Sushi roll (with nattoh miso filling). Tofu burrito. Salads: Potato-tofu. Tahini-tofu. Desserts. Beverages: Soymilk. Sides: Tamari, olive and lemon. Sesame tofu dressing. Miso onion sauce. Tofu vegie patty. Baked tofu cutlet. Specialty groceries: Tofu, miso, condiments, crackers, recipes, supplies for tofu and miso making. Address: Arcata, California. Phone: 707-822-7409.

6122. Dominguez de Diez Gutiérrez, Blanca. 1982. Re: Names of soyfoods around the world. Spanish. Form filled out and returned to William Shurtleff at Soyfoods Center, July 9. 1 p. Handwritten. [Eng]

• ***Summary:*** Gives the names of all the various soyfoods in Spanish. Note: A typed list of these names is published in *Soyfoods Industry and Market: Directory and Databook*, 1985. 5th ed. p. 164.

"Fresh green soybeans–Frijol de soya tierno o ejote de soya. Whole dry soybeans–La soya, Frijol de soya. Black soybeans–Frijol de soya negro. Fresh soy puree–Pure de frijol de soya. Soy sprouts–Germinados de soya. Soynuts–Soya-nuez (nuez means walnuts or pecans), Soya-huate (means peanuts from cacahuate). Oil roasted soynuts–Soya nuez tostada (meaning nut). Dry roasted soynuts–Soya-huate tostado (meaning peanuts). Soynut butter–Mantequilla de soya. Roasted soy flour–Harina de soya tostada (kinako). Soy coffee–Soyafee. Soy chocolate–Soyalate. Soymilk–Leche de soya. Soymilk ice cream–Helado de leche de soya. Soymilk curds–Cuajada de soya, Jocoque de leche de soya. Tofu–Tofu, Queso de soya, Cuajada de soya. Soft tofu–Tofu blando. (Regular) Tofu–Tofu comun. Firm Tofu–Tofu firme. Extra firm tofu–Tofu extra firme. (Deep fried) Tofu cutlets–chuletas de tofu. (Deep fried) Tofu burgers–Hamburguesas o tortitas de tofu. (Deep fried) Tofu pouches–Saquitos de tofu. Silken tofu–Tofu sedoso. Pressed silken tofu–Tofu sedoso prensado. Grilled tofu–Tofu a la parrilla. Dried frozen tofu–Tofu seco congelado. Okara or soy pulp–Okara, pasta de soya, pulpa de soya. Yuba–Yuba. Fermented black soybeans–Palanquetas de soya. Miso or soybean jian–Miso (el). Soy sauce–Salsa de soya. Shoyu–Shoyu (el). Tamari–Tamari. HVP soy sauce–Have not found it. Tempeh–Tempeh (el). Fermented tofu–tofu fermentado. Fermented / cultured soymilk–Leche de soya fermentada. Natto, thua-nao, kinema–Natto (el). Soy oil–aceite de soya. Soy lecithin–Lecitina de soya. Soy flour–Harina de soya. Whole (full fat) soy flour–Harina de soya entera. Defatted soy flour–Harina de soya degrasada. Soy grits and flakes–Soya martajada y hojuelas de soya. Cereal-soy blends (CSM, WSB, etc.)–Soyavena (with oatmeal). Soy protein concentrate–Concentrado de proteina de soya. Soy protein isolate–Aislado de soya. Textured soy protein products–Productos de soya texturizada. Textured soy flour, TSF, or TSP–Harina de soya texturizada. Textured soy concentrates–Concentrados de soya texturizada. Textured soy isolate–Aislados de soya texturizada. Spun soy protein fibers–Fibra de proteia hilada de soya. Soy casmar, Soya Cocoa, Coco soya–Beverages made with chocolate or cocoa. Pastisoya–Like spaghetti or noodles of different kinds made with soy flour–commercial products. Vegesoya–Commercial products for soups. Soya mex and Chocosoya–for beverages. Soya pac–Textured soya

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like meat, also a commercial product." Address: Apdo. Postal 226, Jalapa, Veracruz, Mexico

6123. *India Today*.1982. Vittal Mallya: Empire builder. July 31 p. 101-02.

6124. Barber, Linda. 1982. Natto: The taste of Japan. *Soyfoods*. Summer p. 70-71.

• ***Summary:*** "Some people say that the taste of Japan is a bowl of miso soup, but I would have to say it is natto. Japan's original soyfood. Unlike miso or tofu, natto was discovered in Japan. The story goes that someone wrapped his meal of cooked soybeans in straw (the 'baggie' of 1000 years ago), and after a couple of days, unwrapped the bundle and found *Itohiki* natto. These fermented soybeans, held together by slippery filaments, were soon to become the traditional topping to a bowl of rice served at breakfast and dinner to millions of Japanese people.

"Today, natto is made by soaking washed soybeans overnight, then draining and pressure cooking them. After another draining, the beans are inoculated with *Bacillus subtilis* (*Bacillus natto*) while still warm, scooped into perforated plastic bags and wrapped in straw (or they often are sometimes run into styrofoam containers that have holes for air circulation), then incubated at 40-45°C (104-113°F) for about 14-18 hours.

"Care is taken in not letting the natto get too hot. In natural fermentation the beans produce some heat on their own and keeping the temperature below 55°C (121°F) is important. After the 14 hours, the natto is put into cold storage, wrapped with a labeling band, boxed and shipped. One of the charms of natto is that it takes very little space or complicated equipment to manufacture.

"Not only is natto easy to produce, but it has high nutrition going for it too! This soyfood is 17% protein, 60% water, 10% fat, 10% carbohydrates, 2% fiber, 2% ash. As for other nutrients, natto has 0.07 mg vitamin B1, 0.50 mg B2, 1.1 mg niacin, 3.3 mg iron and 90 mg calcium. Also, research has shown that when we compare cooked soybeans with natto, the levels of thiamine, riboflavin and B12 are higher in natto thanks to the fermentation process.

"Yet, some experts say that the most beneficial characteristics of natto can't be found on a nutrition chart. The wonder of natto lies in its bacterial medicinal qualities. Do the digestive enzymes present in natto prevent or cure digestive diseases? Or is natto only beneficial because it is a good natural food and an excellent source of protein that the body can easily assimilate because of the fermentation process? Without being caught in the medical discussion crossfire, it can be said for sure that natto is a nutritious food that can give any diet a new flavorful zing.

"Many people, even those with adventurous taste buds, find natto as a food quite a challenge. Actually, only about half of the Japanese care for it. Even so, most bars, sushi shops, and Japanese-style restaurants offer natto as daily fare.

"In Japan, natto is served in many ways. And now, with the rising cost of food, natto has taken on new dimensions. Once served only as a topping for rice or in miso soup, creative Japanese cooks now serve natto sushi, natto spaghetti, natto udon (wide, white wheat noodles), natto omelet, natto gyoza, natto sandwiches, natto tempura, chopped natto with cuttlefish, deep fried natto, natto salad, natto with mochi, and even a liqueur made with natto.

"After getting over my initial 'gag' reaction to eating natto, I was pleasantly surprised to find it tasted very much like a strong, rare cheese. I soon began making natto pizza, natto lasagna, and toasted natto sandwiches. At only 25 calories for 100 grams (3½ oz) my mind was turning spins developing recipes for this marvelous slippery stuff.

"Natto lends itself to western-style dishes quite nicely. How about natto fettucini, natto crepes, natto French onion soup, natto tortillas, natto frittata, nattoburgers, baked potatoes with natto topping, fried eggplant with natto, natto egg salad, or natto moussaka? My latest natto creation is Natto Dip: Mix together 2 cups tofu mayonnaise, ½ cup chopped green onions, 1/8 teaspoon pepper, ½ cup chopped parsley, 10 oz. cooked and chopped spinach, ¼ cup natto, and salt (or shoyu) to taste. Serve with crackers or raw vegetables. Superb!

"Once you purchase a carton of natto you can keep a supply going like you do yogurt, but expect to buy a fresh starter every 3 or 4 batches. For home-style natto, boil soaked soybeans, drain and add a cube of purchased natto Mix, and put into containers. I suggest styrofoam cups, fast food containers, or paper cups. Make sure they are clean and free from any other bacteria. Cover the inoculated beans with clear wrap (make holes with a hot needle for air ventilation). Set the cups, or containers, in a foam ice chest or wrap in a heating pad, or simply use a yogurt maker. Incubate for about 18 hours.

"If at the end of 18 hours your product is grayish in color, and forms a long string (filament) when you touch your finger to the surface, you know you've succeeded. Chill the natto, then enjoy it in one of the ways suggested above. You can always have natto on hand as it freezes well too!

"Before you say 'Naa' to natto, let me give you some hints that will make natto easy for you to swallow:

"1. The most important is to make sure that the natto you buy is *fresh*. It should be grayish in color with a little odor. When you touch natto, a lone string will form–the longer the better. Natto has a shelf life of about 1 week (I prefer to eat mine the day I buy it). If the natto is bad, it will taste bitter, smell very strong, and may even have mouldy spots or crystals on the surface. Junk it!

2. "Eat it as the Japanese do, in small amounts. The most traditional way is to mix the natto with a raw egg yolk, chopped green onion, mustard and a dash of shoyu. Scoop

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a little of this onto your next bowl of rice. I've also had this condiment served in a small dish alongside a cold beer. I'm sure it would make a hit even in Milwaukee!

"3. To get over the natural gooeyness of natto, serve it in foods where you would expect, and want, some 'slip.' Natto acts like melted cheese. How about glueing a taco together with a topping of natto?

"Another type of natto I like is dried natto (*hoshi natto*). Sold as a snack food, this soyfood is very salty in taste, resembles raisins coated with flour, and is unslippery to the touch. Yet, it has a gooey mouthfeel. Enjoy this type with a cup of green tea, or sprinkle a few grains on a bowl of rice. As a break from tradition, chop up a few and use them as a salty seasoning to whatever you cook: soups, stews, casserole baked goods, or even apple pie.

"In reading or talking about natto, one often runs across the kind referred to as *Hamanatto*. Unlike *Itohiki* natto, this 'natto' is made by a different process and uses the bacteria [sic, mold] *Aspergillus oryzae*. Hamanatto originated in China. Nutritionally it is 34% water, 28% protein, 14% fat, 13% carbohydrate, 2% fiber, 10% ash. Calcium is listed as 140 mg, iron 8.3 mg, and sodium as 2,900 mg.

"As you can see from the sodium count, Hamanatto is quite salty and the taste is reminiscent of Hatcho miso. Blackish and chunky, this 'natto' is sometimes referred to as 'Soy Nuggets' [fermented black soybeans], or 'Raisin-like Natto' by some Westerners.

"No matter how you eat it, natto is an intriguing soyfood. This natural, whole food is indeed a taste of Japan, and after 1000 years it's still going strong in a world of fast foods.

"The author, a trained home economist who lived in Japan for many years, has recently returned to her home in Wisconsin."

Photos (taken by Linda Barber in July 1981) show: (1) Natto sold retail, packaged in rice straw. (2) Some natto being lifted, using chopsticks, up from a package of natto. Four photos showing "How natto is made" commercially in Japan. (3) The soybeans are steam cooked. (4) Then inoculated with natto bacteria. (5) Run into containers and incubated 14-18 hours. (6) Then packaged, boxed, and shipped.

Note: This is the earliest document seen (Jan. 2012) that mentions *hoshi natto* ("dried natto"). Address: Japan and Wisconsin.

6125. Bo, Thi-an. 1982. Hishio to shôyu no engen to sono seisan gijutsu ni tsuite. II. [On the origins of chiang and shoyu, and their production technology. II.] *Nippon Jozo Kyokai Zasshi* (*J. of the Society of Brewing, Japan*) 77(7):439-45. July. [9 ref. Jap; eng]
Address: Iwate Daigaku Nôgaku-bu, Sogaku 80 shunen no gosukuji ni kaete; Present address, China.

6126. Fruin, W. Mark. 1982. Three centuries of Kikkoman: Growing pains & organizational change. I. *Soyfoods*. Summer. p. 58-60.
• ***Summary:*** Contents: Introduction. Family specialization as the key to success. Beyond the limits of the family. Becoming a corporation.

"The first family in Noda to specialize in shoyu fermentation was known as the Kashiwa household. It was initiated in 1764 when a son of Takanashi Hyozaemon, descendant and namesake of the first Takanashi to brew shoyu in Noda in 1661, was adopted into the family of Mogi Shichizaemon of the same town. He was adopted for the express purpose of marrying Shichizaemon's daughter." Two years later after the marriage, "this couple established a separate branch household (a formal legal and religious process) to engage exclusively in the manufacture of shoyu, they unknowingly founded a dynasty which would guide the fortunes of the shoyu industry in Noda and in Japan for the next two centuries. Because it was specialized [in] shoyu fermentation, the Kashiwa household quickly became the largest independent brewer in Noda. Even after 1887 when most of the local brewers, including the Kashiwa house, formed a cartel, the head of the Kashiwa family was normally the chief officer of the cartel association, and in 1917 when eight Mogi and Takanashi families formed a company, the first president of the Noda Shoyu Company, Limited (precursor to the Kikkoman Corporation) was Mogi Shichirouemon, the Fifth, head of the Kashiwa line."

Photos show: Three different techniques for pressing the sauce from fermented mash, around 1923, at Noda, Japan. A forklift truck in the warehouse of the Kikkoman plant in Walworth, Wisconsin.

6127. Leviton, Richard. 1982. American Miso makes a big move down south. *Soyfoods*. Summer. p. 18-22.
• ***Summary:*** A feature cover story about John and Jan Belleme and their American Miso Co. in North Carolina. Richard Leviton visited the company in April. "Jan and John Belleme are serious about making miso. After a strenuous 8 months apprenticeship in Japan with master misomaker Takamichi Onozaki and a $300,000 investment in buildings, land, and equipment, the Bellemes began fulltime, large scale miso production at their Rutherfordton, North Carolina, plant in August, 1981."

Situated on 100 acres in the rural southwestern corner of North Carolina, the occupies two buildings, including a 3,400 square foot Butler style metal-frame concrete base structure for miso processing and a smaller 1,000 square foot garage-style building for rice polishing and storage. The Bellemes live in a comfortable farmhouse up the hill, just a 5-minute walk away. Its important to be near the koji room when you are trying to carefully monitor the growth of 1,200 pounds of rice koji in a traditional koji room with no thermostat. The company "has struck a careful balance

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between the traditional approach (as with koji, which requires skill and personal attention) and labor-saving mechanization (as with bean washing, soaking, cooking, mixing," and moving). The company has the capacity to make 500,000 lb/year [226.8 metric tons/year] of miso. They presently make 3,000 to 4,800 lb/week of light and dark misos. A color photo on the cover shows John Belleme making miso with Kaoru Onozaki (Mr. Onozaki's eldest daughter) and Haruo (his adopted son–since he had no sons of his own).

Minnesota-grown Prize soybeans are mechanically washed, then transported by conveyor into a 200-gallon (400 lb capacity) pressure cooker, which is controlled by a push button. When done, the removable steamer basket inside the cooker is moved by overhead crane and the soybeans are discharged through the bottom onto a large cooling table, where they are spread by shovels then allowed to cool–with the aid of at least one electrical fan. A push button then causes the table to tilt, the beans are then run into an extruder, and ground to a paste, which is later mixed with the handmade koji. "Belleme's koji room combines both traditional and automatic features, from manually operated vents to complex humidity and temperature monitors. The koji room is actually two adjoining rooms with a connecting door."

This excellent article concludes: "For the American Miso Company, the immediate future is replete with energetic plans. The Bellemes will convert their present home into a summer residential center for students interested in studying fermented foods and natural living. Meanwhile John and Jan will build another house for themselves elsewhere on the property. A new plant for packaging prepared miso products is envisioned and there is much talk of shoyu production in a few years. With misomakers as serious about their venture as the Bellemes, the American Miso Company will certainly have a major influence on miso awareness in America."

Thirteen black-and-white photos show in detail how miso is made at American Miso Co.

A full-page sidebar (p. 22), titled "Roots of the American Miso Company," tells about the family of Takamichi Onozaki and shows a magnificent half-page black-and-white photo the family–16 members strong.

Talk with Barry Evans, owner of American Miso Co. 2000. July 6. In 1982 the company's capacity was far less than 500,000 lb/year, there were only eight vats, each of which held about 6,000 lb of miso (which took one year to mature), for a total capacity of about 50,000 lb/year–or roughly one-tenth of what the article says. Moreover Bellemes made much less than 3,000-4,800 pounds of miso per week. Nor did the company make any light miso during the first few years. Address: Colrain, Massachusetts.

6128. **Product Name:** Vegi-Patties (Meatless Burgers).
Manufacturer's Name: Lifestream Natural Foods Ltd.
Manufacturer's Address: Richmond, BC, Canada V6V 1J7.
Date of Introduction: 1982. July.
Ingredients: Textured soya flour, wheat gluten, safflower oil, whole wheat bread crumbs, tomato paste, dried vegetables, oat flour, pea flour, tamari, sunflower seeds, sesame seeds, nutritional yeast.
Wt/Vol., Packaging, Price: Four 3-ounce burgers per box.
How Stored: Frozen.
Nutrition: Per 3-oz. pattie: 230 calories, 15 gm protein, 17 gm carbohydrate, 13 gm fat, 485 mg sodium.
New Product–Documentation: Spot in Soyfoods. 1982. Summer. p. 55. "All vegetable meat substitute." Spot in Adweek East. 1987. April 6. All vegetable meat substitute. Label. 1987 (undated). Box 8.5 by 4.5 by 1 inch. Color illustration of burger on lettuce and tomatoes. "All vegetable meat substitute made with textured soy flour. An exciting new way to cook. Look for recipe ideas on back." Cheese and Spinach Casserole. Spaghetti Sauce with Vegi-Balls.

6129. **Product Name:** Light Links (Meatless Tofu Hot Dogs with Egg Whites). Renamed Tofu Light Links by 1987.
Manufacturer's Name: Light Foods Inc.
Manufacturer's Address: 6144 Bartmer, St. Louis, MO 63133. Phone: 314-721-3960.
Date of Introduction: 1982. July.
Ingredients: Tofu, soy oil, okara, dried egg white, textured soy protein, salt, barley flour, honey, shoyu, locust bean gum, natural spices.
Wt/Vol., Packaging, Price: 16 oz vacuum pack. Ten links per pack.
How Stored: Frozen.
Nutrition: Per 1.6-oz. link: 105 calories, 6.36 gm protein, 7.04 gm fat, 0.59 mg cholesterol.
New Product–Documentation: This pioneering and creative product was introduced at the NNFA convention in New Orleans, Louisiana, July 1982. Food Report (Lehmann). 1982. Aug. The product "Has absolutely no meat, no nitrites, no additives, no preservatives, no artificial coloring and no sugar." Spot in Soyfoods. 1983. Winter. p. 49. "Tofu Dogs. Possibly the most maturely conceived, expertly produced, and appropriately packaged prepared convenience soyfood on the market." Label (orange, brown, and yellow on white) reads: "Meatless. A vegetable based product. A food for thought. 99% cholesterol free. Low calories." Spot in Whole Foods. 1983. Jan. p. 39. "New Tofu Line. Light Foods, Inc. presents a new dimension to soyfoods: Light Links, Light Tofulogna and Light Soysage."

Spot in Soyfoods. 1984. Summer. p. 42. Label. 1988, received. Tofu Light Links. 5.5 inches square. Light and dark purple, beige, and white. Logo of smiling sun in upper left. "A meatless vegetable based product. No cholesterol. Low calories." Ingredients are now: Tofu, soy oil, water, dried

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egg white, textured soy protein (made from soy flour), salt, barley flour, honey, tamari (a natural soy sauce), beet juice, spices, natural extractives of paprika, natural spice oils. Now contains only 76 calories and 6.0 gm of fat per 1.2 oz serving.

6130. **Product Name:** California Meatless Chili.
Manufacturer's Name: Meatless Foods, Inc.
Manufacturer's Address: Hollywood, California.
Date of Introduction: 1982, July.
Ingredients: Red kidney beans, textured vegetable protein [soy flour], onions, tomatoes, herbs, shoyu, honey.
Wt/Vol., Packaging, Price: 1.5 lb in plastic tub with preprinted film lid.
How Stored: Frozen.
Nutrition: 8 oz. contains 417 calories and 30% of the protein RDA.
New Product–Documentation: Spot in Soyfoods. 1982, Summer, p. 56. "Vegetarian Chili with TVP."

6131. **Product Name:** Vegetarian Tofu Pizza.
Manufacturer's Name: Pizza Naturally.
Manufacturer's Address: Blenheim, New Jersey.
Date of Introduction: 1982, July.
Ingredients: Stone ground whole wheat flour, tomatoes, SoyDairy tofu, mushrooms, peppers, shoyu, honey, yeast, onion, garlic, oregano, basil, pepper.
Wt/Vol., Packaging, Price: 9-inch pizza weighing 16 oz. Retails for $2.39.
How Stored: Frozen.
New Product–Documentation: Spot in Soyfoods. 1982, Summer, p. 55. "Frozen Tofu Pizza Introduced."

6132. Shurtleff, William. 1982. What the Japanese can learn from the American soyfoods industry. Paper presented at Fifth Annual Soyfoods Association of North America (SANA) Conference, University of Washington, Seattle. July 8. 2 p. Unpublished manuscript–outline.
• ***Summary:*** Presented to a special meeting of Japanese attendees. Contents: Introduction. Americans' basic view of soybeans and soyfoods. Nutrition and attitudes toward animal and vegetable proteins. Tofu innovations. Tempeh. Kikkoman. Conclusion. Accompanied a slide show. Address: Co-founder and director, Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6133. **Product Name:** Baked Tofu.
Manufacturer's Name: Swan Gardens.
Manufacturer's Address: 940 17th St., Miami Beach, FL 33139. Phone: 305-324-8910.
Date of Introduction: 1982, July.
Ingredients: Tofu, soy sauce, spices.
Wt/Vol., Packaging, Price: 8 oz vacuum pack.
How Stored: Refrigerated, 60 day shelf life.
New Product–Documentation: Label, 1984? 2.25 by 3.5 inches. Self adhesive. Black and red on gold. Swan on lotus illustration. "Ready to eat. No Preservatives." Spot in Soyfoods. 1982, Summer, p. 55. "Vacuum Packed Soysage." Soyfoods. 1983, Summer, p. 43.

6134. **Product Name:** New England Tempeh Burgers (By 1984 renamed Lightlife Meatless Tempeh Burgers).
Manufacturer's Name: Tempeh Works (The).
Manufacturer's Address: P.O. Box 870, Greenfield, MA 01302.
Date of Introduction: 1982, July.
Ingredients: Organic soy tempeh, soy sauce, spices.
Wt/Vol., Packaging, Price: 7 oz 2 x 3.5 oz burgers per package.
How Stored: Refrigerated or frozen.
New Product–Documentation: Label, 1983, undated, 3.5 inches square. Brown, yellow and white. Spot in Soyfoods. 1983, Winter, p. 50. "The Tempeh Burger Takeover. Nationwide at least 7 brands of prepared tempeh burgers are produced." Also 1984, Summer, p. 43. Product list. 1984. "Now you can have a tempeh burger made right here in New England." Shurtleff & Aoyagi. 1985. History of Tempeh. p. 52.

6135. Richman, Phyllis C. 1982. Do it yourself sushi: Japanese call the style temaki and most can master it. *Washington Post*. Aug. 15. p. D1.
• ***Summary:*** The section titled "Condiments" notes that those used to make sushi always include ginger, "soy sauce, *wasabi* (Japanese horseradish),..."
"Interesting possibilities: *umeboshi* (salted plums, pitted and mashed);... slices of dark, fleshy *shiitake* mushrooms marinated in sugared soy sauce;... *natto* (fermented soybeans);..."

6136. Hagiwara, Y. Assignor to Japan Natural Food Company Ltd. 1982. Soy sauce from tear grass and process for production thereof. *U.S. Patent* 4,346,114. Aug. 24. 6 p. Application filed 25 Feb. 1981. [3 ref]

6137. Pure Sales. 1982. Some soy sauces are called tamari. But they're not! San-J is the real tamari (Ad and poster). *East West Journal*. Aug. Inside front cover.
• ***Summary:*** This ad is a combination of black-and-white and color. In black-and-white are 5 quarts of so-called tamari under the following brands: Westbrae, Erewhon (2), Llama, and Pure & Simple. In color are 2 bottles of San-J Tamari (wheat free, in 5.7 oz refillable dispenser and 20 oz glass bottle). The text explains that this real tamari is: Made only from soybeans. Mellower, smoother, richer than regular soy sauce. More protein than regular soy sauce. San-J Tamari will enhance any dish. A concentrated, economical product. Address: 250 Newport Center, Newport Beach, California

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92660. Phone: (714) 760-1076.

6138 **Product Name:** Tofu Sausage Patties: Seasoned and Baked.
Manufacturer's Name: Tofu Shop (The)
Manufacturer's Address: 768 18th St., Arcata, CA 95521. Phone: 707-822-7409.
Date of Introduction: 1982 August
Ingredients: Tofu (water, organic soybeans grown according to Cal. Health Code Sect. 26569.11 and nigari). Marinated in a sauce of Tamari (a natural soy sauce made with water, soybeans, wholewheat and salt). Unrefined coldpressed Safflower oil, and a blend of eight herbs and spices.
Wt/Vol., Packaging, Price: 8 oz. vacuum packed
How Stored: Refrigerated
New Product–Documentation: Label. Received 1988. 4 by 2 5 inches. Self adhesive. Metallic red, blue, gold, and white "Ready to eat... or reheat, naturally fresh... from our deli. A perfect snack fresh from the pack. Great for breakfast, in a burger, or in your favorite pizza or spaghetti sauce. Simple to heat in oven (350°F, 10 minutes) or frying pan. Perishable, keep refrigerated, 34-39°." Matthew Schmit says (March 2009) that the metallic label was first used in 1985.

Two Labels sent by Matthew Schmit. 2002. Sept. 9. The product was introduced in 1985. Label #1 of 1992. "Tofu Sausage Patties. 4 Seasoned & Baked. 3 inches square. Self adhesive. Black and yellow on red. Illustration shows a tofu shop on stilts near the ocean with a tree arching overhead. Ingredients similar to above, but more organic. * = Grown according to California Natural Foods Act of 1990. "With whole, organic, GMO-free soybeans." Ready to eat or heat. A Perfect snack fresh from the pack."

Label #2 of Oct. 2002. No adhesive. Red and orange-yellow on white. A handsome, impressionistic watercolor illustration shows a tofu shop on stilts on a cliff with a tree arching overhead. "Good source of protein. Low in saturated fat. Cholesterol free."

Talk with Linda Redfield. 2002. Sept. 23. Linda arrived in Arcata in May 1982 and introduced this recipe to The Tofu Shop; as far as she knows, she developed it. It was probably first sold commercially at The Tofu Shop in about Aug. 1982; there was only one flavor.

6139 Corn Country Whole Foods, Inc. 1982. Fall-winter 1982 New & improved (Catalog). 132 South Market St., Champaign, IL 61820. iv + 26 p. No index. 28 cm.
• ***Summary:*** The cover of this natural foods, vegetarian catalog is printed on orange paper with brown ink. Corn Country has increased the number of products it distributes, both those under its own Market Street brand and those made by many other companies. Corn Country trucks deliver throughout the Midwest. Freight is free with a minimum order of $400. Product categories: Refrigerated products. Bulk foods. Packaged foods. Snacks. Other.

Interesting products: (1) Tofu. Packaged ($0.82/lb) or bulk ($80/lb). (2) Market Street bread: Cinnamon raisin and Whole wheat both contain "whole soy flour." (3) Stoneground flours. Soy flour-full fat (OG = Organically Grown) ($0.42/lb). Corn Country uses old fashioned granite stone mills to keep the temperature low, which "preserves the nutritional value and flavor of the whole grain... Whole soy flour is milled from soybeans which have been heated first to destroy an enzyme which interferes with protein digestion. It is milder tasting compared to the defatted soy flour typically sold commercially." (4) Market Street granolas: Of the 7 varieties, 6 contain small amounts of "soy flour." (5) Beans, peas, and lentils: Soybeans OG ($0.28/lb). Azuki beans. Chickpeas (Garbanzos). Lentils (green or red). Mung beans. (6) Market Street meals (vegetarian). Nutburger (incl. soy flour). Soyburger (soy flour is main ingredient). (7) Sea vegetables (9 types). (8) Westbrae miso (6 types). (9) Market Street nut butters: Peanut butter ("coarsely ground to retard oil separation"). Almond butter. Sesame tahini. (10) Natural oils: Sesame oil. Safflower oil. (11) Condiments. Nigari (bulk or 5 lb). Umeboshi plums. Shoyu (pints to 4.75 gal tin). Tamari (with dispenser to quarts). (12) Seeds. Alfalfa seeds. Sesame seeds whole brown. Sesame seeds hulled white. Sunflower seeds. Pepitas. (13) Market Street snack nuts: Shoyu almonds. Shoyu suns (sunflower). Shoyu cashew pieces. (14) Soy & corn snacks: Soy nuts salted. Soy nuts unsalted. (15) Market street mixes (unsulfured dried fruits, nuts and seeds): Sweet & shoyu mix (ingreds: Raisins, date pieces, dried bananas, shoyu almonds, shoyu cashews, shoyu sunflower seeds). Flatland mix (incl unsalted "soynuts" {soybeans, vegetable oil}, fancy cashew pieces, and pumpkin seeds). (16) Health and beauty aids: Dr. Bronner soap (14 types). (17) Literature: 25 Talking Foods pads. (18) Traditional medicinal herb teas (27 types). (19) Celestial Seasonings teas (38 types); (20) Packaging supplies and kitchen help. Tofu kit ($12.56). Address: Champaign, Illinois. Phone: 217-359-8843.

6140 **Product Name:** [Soya Cubes with Sea Salt, Soy Sauce, or Shoyu].
Foreign Name: Sojawuerfel/Cubes au soja + sel marin 25 St., Sojawuerze/Sauce au soja, Shoyu.
Manufacturer's Name: Morga AG
Manufacturer's Address: CH-9642 Ebnat-Kappel, Switzerland. Phone: 074 3 19 15
Date of Introduction: 1982 September
Wt/Vol., Packaging, Price: The soy sauce and the shoyu each come in 1/8 liter and 7/10 liters (or 70 liters? = 7 dl)
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's Catalog. 1982. In a separate letter dated 16 Sept. 1982 the company notes: "Our company started to manufacture soyfoods in 1930. The soyfoods we sell are manufactured in our factory."

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6141 **Product Name:** Marinated & Broiled Tofu (Tofu Slices).
Manufacturer's Name: Nasoya Foods.
Manufacturer's Address: Mechanic St. Ext. (P.O. Box 841), Leominster, MA 01453.
Date of Introduction: 1982, September.
Ingredients: Tofu, soy sauce, honey, herbs, spices.
Wt/Vol., Packaging, Price: Semirigid 8 oz vacuum package is opaque, with pre-printed film.
How Stored: Refrigerated.
Nutrition: Per 4 oz.: Calories 180, protein 17 gm, carbohydrate 5 gm, fat 10 gm.
New Product–Documentation: Label. 1983. 4 by 4.5 inches. Self adhesive. Orange, green, yellow and black on white. "High in protein. Serve hot or cold as an entree, sandwich, or high protein snack." Spot in Soyfoods. 1983. Winter. p. 49. "A Slice of Tofu." Summer. p. 52. These are vacuum packed.

Letter from John Paino of Nasoya. 1990. Sept. 25. Bob Bergwall says this product was introduced in Sept. 1982.

6142 Shurtleff, William; Aoyagi, Akiko, comps. 1982. Soyfoods labels, posters & other graphics. Lafayette, California: Soyfoods Center. 185 p. Sept. Illust. No index. 28 cm. 2nd ed. 1984. 6 vols. 685 p. total.
• ***Summary:*** Contents: 1. Tofu. 2. Other tofu types. 3. Secondary tofu products. 4. Tempeh. 5. Secondary tempeh products. 6. Soymilk. 7. Soymilk products. 8. Soy sauce, shoyu & tamari. 9. Miso. 10. Soynuts. 11. Other soyfoods. 12. Letterheads & business cards. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6143 Ushijima, S.; Hayashi, K.; Murakami, H. 1982. The current taxonomic status of *Aspergillus sojae* used in shoyu fermentation. *Agricultural and Biological Chemistry* 46(9) 2365-67. Sept. [11 ref.]
Address: 1-2. Central Research Laboratories, Kikkoman Corp., 399 Noda, Noda-shi, Chiba 278, Japan; 3. The Brewing Society of Japan, Takinogawa 2-6, Kita-ku, Tokyo 114, Japan.

6144 Hirabayashi, Satoshi. 1982. Re: Enclosing documents you requested in your letter of July 31. Letter to William Shurtleff at Soyfoods Center, Oct. 1. 3 p. Typed, with signature on letterhead. [1 ref.]
• ***Summary:*** He encloses photocopies of 12 Japanese-language documents that Shurtleff had been unable to find in the USA and requested from Kikkoman. He also cites three documents that were requested but that Kikkoman was unable to find.

Also tells Shurtleff how to obtain a copy of the cookbook *Practical Shoyu Cooking: Delicious Dishes with Japanese Soy Sauce*, by Chu Shinojima and Tamako Ashihara. It is distributed in the USA by Japan Publications Trading Co., which has offices in San Francisco and New York City. Address: Manager, International Operations Dep., Kikkoman Corp., 25 Kanda Nishiki-cho 1-chome, Chiyoda-ku, Tokyo 101, Japan. Phone: 03-233-5610.

6145 Lo, K.S. 1982. Re: Thank you for sending draft chapter on History of Kikkoman from History of Soybeans and Soyfoods book. Letter to William Shurtleff at Soyfoods Center, Oct. 6. 1 p. Typed, with signature on letterhead.
• ***Summary:*** K.S. Lo "found the chapter to be most interesting. My wish for wanting to read this particular chapter arises out of your comparison between my Company and Kikkoman. I must say we are much flattered by the comparison as after reading its history, I have to admit that you are comparing a small boy against a giant."

"I congratulate you for having done so much research on the subject... I hope to see your book in print before long." Address: Chairman [and founder], HKSBP Co., Ltd., 41, Heung Yip Rd., Aberdeen, Hong Kong. Phone: 5-528211. Cable address: "Vitasoy".

6146 Noda, F.; Sakasai, T.; Osaki, K.; Akao, T. 1982. [Quick brewing of soy sauce] *Japanese Patent* 1,120,398. Oct. 28. [Jap]*
• ***Summary:*** Attempts to shorten the time for soy sauce production have included a quick hydrolysis of raw materials with no or low salt content, another was a process divided into anaerobic lactic acid fermentation, aerobic yeast propagation, and anaerobic alcohol fermentation.

6147 Tallent, W.H. 1982. UJNR Toxic Microorganisms Panel. *Northern Regional Research Center, Notes from the Director* No. 1524. p. 3. Oct. 29.
• ***Summary:*** The meeting was held at the Food Research Inst., Univ. of Wisconsin, from Oct. 17-22. United States was represented by Dr. C.W. Hesseltine, NRRC. "In scientific sessions, 2½ days were devoted to mycotoxin and bacterial toxins. After a tour of the Biotron on the University of Wisconsin Campus, the panelists visited the Kikkoman plant at Walworth, Wisconsin. This plant in 10 years has doubled in size; it now uses 30,000 acres of soybeans and at least as many acres of wheat in soy sauce (shoyu) production. The operation is controlled by 6 team leaders, who develop consensus decisions with others in their groups. The terms 'foreman' and 'supervisor' are never used. Turnover of employees is only a tenth that of American companies, and absentee figures are only a fifth of that found in industries in the surrounding area. Last year production of shoyu amounted to 5 million gallons in this plant. Shoyu is sold in various quantities, up to 50-gallon drums; these larger quantities are sold to other [food] companies for flavoring purposes.

Note: Lite shoyu is being discussed. This plant supplies

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the U.S., Canada, and parts of Europe. The fermentation tanks are 17,000 gallons capacity. Address: Center Director.

6148. Asunaro Eastern Studies Institute. 1982. Natural foods preparation with Sensei Noboru Muramoto (Poster). P.O. Box 2546, Escondido, CA 92025. 1 p.
• ***Summary:*** Noboru Muramoto, author of *Healing Ourselves*, will be presenting a series of 2 week classes on natural foods preparation at the Asunaro Institute in rural southern California. Students will participate in the preparation of miso, tamari, koji, amasake, mochi, tofu, and tekka. Address: Escondido, California.

6149. Benson, Taylor. 1982. Foodcrafters' market study: The U.S. soy sauce market. Colorado: Foodcrafters. 8 p. Oct. 28 cm. [6 ref]
• ***Summary:*** Contents: I. Existing domestic markets. Overview of the existing domestic natural foods market. Overview of the existing domestic shoyu and tamari market (sources are cited). II. Market survey results. Background information on the survey. Survey questions and results (1,190 respondents in Oct. 1982 at Pearl Street Market, in Boulder, Colorado, at Rainbow Grocery in Denver, and via a mail-in questionnaire from random natural food consumers around the USA).

1. Have you ever used shoyu? (9.2%), tamari? (70.6%), soy sauce? (12.6%), none of these? (7.6%). 2. How did you first learn of the product? Friend (52.7%). Family (10.9%). 3. What size do you usually purchase? 16 oz (33.6%). 4. Which brand do you purchase? Private label (40.8%). Kikkoman (11.8%). Erewhon (9.1%). 5. If you heard about a new brand that was low in salt and naturally fermented, how likely would you be to try it? Definitely (36.4%). Probably (35.5%). 6. How important are the following items to you when you evaluate your product? Price (#3), company rep., bottle shape, package, label, advertising, aroma (#2), taste (#1). 7. Are you a vegetarian? Yes (33.6%). No (35.3%). Partially (31.3%). What is your age (25-34 = 50.4%). 9. What occupational category describes you best? 10. What is your average annual household income? (Under $5,000 = 18.5%). 11. Sex? Male (53.8%). Female (46.2%). 12. How many people do you shop for? (1 other = 44.3%; Yourself = 29.5%). 13. How many years of school have you attended? (16 years = 41.6%).

Summary of the market survey results. III. Market strategy. Address: Colorado.

6150. **Product Name:** Missing-Egg Salad (Diet Center Formulation)
Manufacturer's Name: Brightsong Light Foods
Manufacturer's Address: 100-A Poultry St. (P.O. Box 2536), Petaluma, CA 94953.
Date of Introduction: 1982. October.
Ingredients: Organic Brightsong tofu, soy oil, soy sauce, mustard, spices, citric acid, salt.
Wt/Vol., Packaging, Price: 8 oz in plastic cup.
How Stored: Refrigerated.
New Product–Documentation: Label. 1982, undated. 3 inch diameter. Orange on white. "Non-dairy Salad or Dip. Contains no eggs." Letter from Richard Rose. 1987. Sept. 19. Diet Center is a chain of 2,000 clinics in the U.S. and Canada, somewhat like Weight Watchers. The ingredients differed from regular Missing-Egg Tofu Salad in that the honey and pickles were removed. Brightsong sold both products, but to different markets.

6151. **Product Name:** Lima Real Tamari (Wheat Free).
Manufacturer's Name: Chico-San, Inc. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 1004, Chico, CA 95927.
Date of Introduction: 1982. October.
New Product–Documentation: Ad in East West Journal. 1982. Oct. p. 27. "Would the real tamari please stand up!?"

6152. Chico-San, Inc. 1982. Would the *real* Tamari please stand up!? (Ad). *New Age Journal* (*Boston, Massachusetts*). Oct. p. 7.
• ***Summary:*** Chico-San thanks San-J for exposing the practice of labeling soy sauce as Tamari. Chico-San's Tamari is real! "It contains no wheat and is brewed naturally from only whole soybeans, water and sea salt." Address: P.O. Box 1004, Chico, California 95927.

6153. **Product Name:** Seitan.
Manufacturer's Name: Price Rice / Creative Kitchens.
Manufacturer's Address: Miami, Florida.
Date of Introduction: 1982. October.
Ingredients: Incl. wheat gluten, soy sauce.
How Stored: Refrigerated.
New Product–Documentation: Barbara and Leonard Jacobs. 1985. *East West Journal*. Oct. p. 38-39. "Flour power! Cooking with seitan, the delicious natural food from grain." "Yaron Yemini of Creative Kitchens in Miami has been making seitan for three years. He has seen a fivefold increase in sales during this time and currently makes 120 pounds each week. Yemini produces approximately seventy pounds of cooked seitan from 100 pounds of whole wheat flour. He sells seitan in bulk, packaged, and in a variety of sandwiches, salads, and sauces. [Note: In Nov. 1984 Mary Lee of Price Rice Foods started to share her kitchen (located in Wilton Manners, a city inside Ft. Lauderdale, Florida) with Yaron Yemini. In about March 1985 he bought the business.]

Barbara and Leonard Jacobs. 1987. *Cooking with Seitan: Delicious Natural Foods from Whole Grains*. Current U.S. seitan manufacturers include Creative Kitchens in Miami, Florida.

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Talk with Stuart Kerrigan (305-532-5427 Home or Macrobiotic Foundation 305-448-6625, 4349 Sheridan Ave #2, Miami Beach, FL 33140). 1988. Jan. 29. Price Rice was started in about 1983 in Price, Maryland by Mary Lee Bergman. She made food products in her home; they were distributed by Organic Farms. Then she moved to Wilton Manners, a city inside Ft. Lauderdale, Florida. There Stuart Kerrigan started to work with her in July 1984. In Nov. 1984 Mary started to share her kitchen with Yaron Yemini and in about March 1985 he bought the business. Mary Lee is now in California, married.

Talk with Yaron Yemini. 1988. Feb. 23. He confirms the above dates. Before he bought the business he had an agreement that Mary would produce amazake with him, teaching him how and sharing profits, for 3 months.

Talk with Lenny Jacobs. 1992. May 19. Lenny talked directly with Yaron Yemini [pronounced yuh-ROAN yuh-MEE-nee]. He was in a wheelchair at the time. He broke has back 10-12 years ago in a construction accident. Lenny thinks he is no longer making seitan, but that someone in Florida is.

Talk with Steve Bern of Sprout Delights, a seitan maker in Miami. 1992. July 11. He is quite sure that Yaron Yemini is still alive and making seitan. His sidekick is named Al. Steve guesses that Creative Kitchens makes no more than 100 lb/week. They have two phone numbers: 305-756-7638 and 305-754-1498. Steve is not surprised that they never return phone calls; that's the way they run their business.

Talk with Al of Creative Kitchens and a disciple of Guru Maraji. 1992. July 15. The company still makes seitan on a small scale. Yaron's office number is 305-531-3256.

6154. **Product Name:** Tree of Life Baked Tofu, and Savory Yeast Baked Tofu.
Manufacturer's Name: Tree of Life, Inc. (Distributor).
Manufacturer's Address: St. Augustine, FL 32084.
Date of Introduction: 1982, October.
Ingredients: Organically grown soybeans, purified water, natural Nigari, soy sauce and spices.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Label, 5 by 4.5 inches. Plastic. Brown, yellow, green and white. Picture of tree (may be logo). "We appreciate your confidence in choosing this Tree of Life product. To ensure your satisfaction we have made certain it contains the freshest, most natural ingredients available." Talk with Donna Detoro at Tree of Life. 1988. Sept. 23. This product was introduced in Oct. 1982.

6155. Nelissen, Tomas. 1982. Re: Jakso and soyfoods in the Netherlands. Letter to William Shurtleff at Soyfoods Center. Nov. 9. 2 p. Typed, with signature on letterhead.
• ***Summary:*** "Maybe you still remember me from the time we were in Japan; once we met at Kichijoji station, next to Mitaka station. You tasted my genmai [brown rice] miso at a coffee-bar (next door).

"At this moment I am living in Holland with my wife Yvonne and two children. We set up a farm called Jakso. The whole idea is about becoming self-sufficient from the 30 hectares of land (including 6 hectares of fruit trees), a sourdough bakery, a soyfoods workshop, a futon workshop and educational activities.

"For the three workshops we "cut" the big barn into two halves and made a third floor. We built a very nice wood-burning bakery which produces all kinds of bread, cookies and savories. The soyfoods workshop makes tempeh and tofu, as well as seitan. Year-round we produce an average of about 1,500 pieces of tempeh a week at 210 grams each, about 50 kg of tofu a day and a little less than 100 kg of seitan.

"We distribute our products all over Holland... in a 100 km circle around the farm. Our future products will be miso, shoyu, amasake and mushrooms. These are the products we studied in Japan for about 4 years...

"There are 12 people working on the farm (plus 7 children)... The meals are on a macrobiotic base." Address: Director, Jakso, St. Natuurlijke Land- en Tuinbouw, Voorne 13, 6624 KL Heerewarden, Netherlands. Phone: 08877-2189.

6156. Aihara, Herman. 1982. History of work with macrobiotics and Chico-San (Interview). Conducted by William Shurtleff of Soyfoods Center. Nov. 29. 5 p. transcript.
• ***Summary:*** Oroville is located about 23 miles southeast of Chico, California. Shurtleff visited Herman Aihara at his home with a tape recorder and about 75 questions.

The first East West Institute in New York City was established in about 1960 by Lao Shastri, a woman disciple of George Ohsawa. She studied Sanskrit at Cambridge, and was a distinguished scholar and an authority on the subject. It was her idea to have such an institute. She met Ohsawa in India and he advised her to stop eating sugar. She was in New York City when Ohsawa was there, he stayed at the Riverside Buddhist Academy, a cultural center. She was a very aggressive woman but very quiet, and she wore a sari. She convinced famous people to be directors of the Institute. She lived at what became Herman's house before Herman came to the USA. She died while relatively young, not long after late 1961.

In 1965, about 4 years later, Michel Abehsera, re-opened and activated the East West Institute.

Lima Ohsawa's maiden name was Sanae Tanaka. Her second marriage was to George Ohsawa.

Ohsawa's first name was Nyoichi, not Joichi. Yukikazu was has original first name, written with the same Japanese characters. He just took "Georges" as his French name. Larry Korn says Joichi became "Georges."

The village was named "Hi no Haru." Ron Kotzsch got

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it wrong. Herman has heard this 100 times.

The correct spelling of Kaibara's given name is Ekiken, not Ekken.

Herman does not know of Lima Ohsawa's daughter, Fumiko. But he heard that her second child, Mari, died of excess salt.

The system of yin-yang (*in-yo*) was first used by Ohsawa in about 1929 in a book of lectures entitled *Shokuyo Kogi Roku* (*Lectures on Macrobiotics / Macrobiotic Studies*); he has a copy at home. He was still working in the Shokuyo-kai. Ask Hashimoto Masanori, who is doing a lot of research on Ohsawa and early macrobiotic history, at Nippon CI in Tokyo.

Before Ohsawa's first visit to the United States there was a little bit of talk about macrobiotics with Michio Kushi at Michio's apartment, with a few people coming in but no real lectures. So Ohsawa's first series of lectures was the first real transmission of macrobiotics to the USA. Michio and Herman did not know much about macrobiotics before Ohsawa's first visit. Herman studied with Ohsawa in Japan for only 1 month, and Michio had met Ohsawa only 3-4 times. Herman came to the USA to study the helicopter aviation industry, not to teach macrobiotics; he studied at a technical institute in Brooklyn. However Herman read a lot of Ohsawa's books in Japan. So when Herman came to the USA he was personally very interested in macrobiotic philosophy (not so much in the diet, but with no thought of teaching).

Aveline Kushi came to the USA a long-time student of Ohsawa. She believed the diet was very important and she influenced Michio.

After Ohsawa's first series of lectures, Herman got interested in teaching macrobiotics. Why did Ohsawa stay with Harman? Most others were afraid of him. It is not correct to say that Herman was Ohsawa's closest student. Michio was also close because of lots of correspondence he had had with Ohsawa. Ohsawa tried to convince Michio of the value of macrobiotics.

When did Michio change careers? He had been at Columbia University for about 1 year. Then, on his own, he got the idea of working for world government ["a one-worlder"], to promote "one peaceful world. Herman has a draft of Michio's paper on this subject, including publications and schools, by about 1952-53. Michio was in Europe in 1952. Ohsawa said that "One Peaceful World" must include diet. At that point Michio started his serious interest in macrobiotics. Michio was initially involved in business.

In 1955 Azuma, a small gift shop selling Japanese handcrafts, was opened at 802 Lexington Ave. at 62nd St. by Cornellia and Herman Aihara, Michio, and Roland Sato. Michio focused his efforts on this business–not on teaching macrobiotics. In 1956 Michio and Herman started Ginza, a similar gift shop down town at 9 West 8th Street; they did not include Roland Sato who was very angry at this time. Both of the gift shops were very successful. They were established to impress Takashimaya–a leading department store chain in Japan [see Emerson 1958]–and to prove that a branch of Takashimaya could be successful in New York City.

Michio was an interpreter in the U.S. Dept. of the Interior to guide foreign visitors; he earned $45 per day. One visitor was the director of Takashimaya. Michio convinced him to start a branch of Takashimaya in New York City. Michio then worked for Takashimaya, and eventually rose to become vice president of the branch.

Musubi was started by Alcan Yamaguchi in the fall of 1960 (not in the late 1950s), near Greenwich Village. Zen Tea House was different, it was also started in 1960, but by an American, after Ohsawa's first lectures. After that, Musubi (another restaurant) was established. Herman did not supply the carpentry (as stated in Shurtleff's draft history of macrobiotics in the USA). Miso and shoyu were served in both restaurants.

At Ginza, starting in 1956, Herman sold a little food; people came to buy food there after Ohsawa's lecture, including miso and shoyu. It was the only place in the USA you could buy macrobiotic foods. It was a back-room operation and the food was imported from Ohsawa Japan. As soon as Ohsawa started lecturing in the U.S. he imported 20 [wooden] kegs of shoyu. It was sold at intermissions and after his lectures.

Junsei Yamazaki first arrived at Chico in 1963, stopped only briefly, then went to New York City that same year. Thus, Yamazaki was not connected with Musubi in 1960, but he did help them starting in 1963, when Michio was managing the shop at a new location. In 1960 Herman sometimes helped Alcan Yamaguchi at Musubi.

The first summer camp on Long Island was about 2 months long, with lectures by Ohsawa only on weekends. Some people stayed during the week. 1,000 to 2,000 people attended.

The Ohsawa Foundation in New York City was founded in 1961 by Michio, Irma Paule, etc. Herman was in Europe at the time. He left for Europe in about Jan/Feb. of 1961 and returned in the fall. Then he was elected president of the Ohsawa Foundation.

Herman's first macrobiotic publication was *Macrobiotic News*, which started in 1960; its maximum circulation was several hundred. It continued until he moved to Chico in 1961, and then was re-continued.

The macrobiotic periodical *Macrobiotic Monthly* was started in Los Angeles in 1965 by Herman and Lou Oles. Its title then changed into the *Macrobiotic*. It ceased publication in 1978. Its maximum circulation was over 1,000.

Publishing at Chico started in 1962. Herman's present periodical is *GOMF News*, which has a circulation of about 650. Concerning books that Herman and Cornellia have written: *Miso and Tamari* has sold about 10,000 copies (lots

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through Nutribooks). *Soybean Diet* has sold about 10,000 copies. *The Dô of Cooking* (1972, four seasonal volumes) has sold about 10,000 copies. *The Calendar Cookbook* (1979) has sold about 5,000 copies. The *Chico-San Cookbook* was first published in 1972. But *Zen Cookery* has sold about 50,000 copies.

Attendance at French Meadows summer camps was about 100 to 200. Address: Oroville, California.

6157. Aihara, Herman. 1982. History of work with macrobiotics and Chico-San. Part II (Interview). Conducted by William Shurtleff of Soyfoods Center, Nov. 29. 5 p. transcript.

• ***Summary:*** Continued. Chico-San imported their first Japanese foods from Herman personally. At that time, there was no Muso and no Nippon CI. Ohsawa Japan (which started in about 1965) was the trading / export company and Nippon CI was devoted to education. Before Muso was "Three Boys," the "Three L" (*San-L*) company. Ohsawa told them to take charge of exports. Then Mr. Okada took over from them. Osaka was PR and education. "Three L" (which started in about 1962 in Osaka) was whom Chico-San was importing from. George Ohsawa kept a careful watch over what was being exported from Japan. Chico-San later imported from both Muso (Osaka) and Ohsawa Japan (Tokyo). Note: Did Ohsawa have two trading companies? If so, why?

The first edition of *The Book of Judgment* was printed in Japan in about 1956, then revised in 1966. There is no publication date in the book. This book came after *Zen Macrobiotics*. It is actually *The Philosophy of Oriental Medicine* (subtitled The Book of Judgment), probably first written in French.

Herman has just started writing a biography of Ohsawa, but he is too busy, so it will not be finished for a long time.

The Ohsawa Foundation in Paris was started by 1956 by George Ohsawa. The Ohsawa Foundation in Tokyo started before 1960. The Ohsawa Foundation in Los Angeles was started in 1965 by Lou Oles, an older Jewish trumpet player. The Ohsawa Foundation of New York was founded in 1961 by Michio Kushi and Irma Paule. The name "GOMF" was coined in 1970.

Herman has a green 8½ by 11 inch edition of *Zen Macrobiotics*. Herman says the date was about 1960. It shows that the Ohsawa Foundation then existed in New York, Paris, Brussels, and Tokyo. It also contains lots of recipes. I copied some pages. Copyright date of the fifth edition was 1966. Ignoramus Press, the Ohsawa Foundation, 1424 N. Curson Ave., Los Angeles.

Michio Kushi was Ohsawa's senior student in the sense that he came to America first. I should omit the concept that Herman was Ohsawa's closest associate. Herman and Michio simply have different styles. Michio has broad appeal, he has started a mass movement, and is more businesslike. Herman appeals to a small group, deeply; he works more with individual students.

Lou and Shayne Oles got involved with macrobiotics during the second summer camp, in 1961. They traveled with the group from New York to Chico. He was a famous trumpet player, worked with Benny Goodman. In California he emphasized publishing more than his trumpet. His first publication was titled *Spiral;* 1-2 issues were published. Then *Macrobiotic Monthly*. After Beth Ann Simon's death, Chico-San was separated from educational work. Lou Oles went to Los Angeles and that year established the Ohsawa Foundation; he did education and publication. He published three books: *Zen Macrobiotics*, *Book of Judgment*, and *Guidebook for Living*. Jacques DeLangre helped him. Lou died in 1967 of cancer. He got depressed when George Ohsawa died, he started drinking coffee, which may have activated his cancer growth. Shayne continued his work. Lima asked Herman to be president, so he traveled to Los Angeles once a month. In those days they sold lots of *Zen Cookery* books. The Ohsawa Foundation in Los Angeles closed in about 1970.

Yes, Ohsawa was age 72 when he died. He died April 24 (Japan date) in Japan.

The spirallic multidimensional scale from yin to yang was Peter Milford's idea, not Herman's. It is generally a linear scale.

Infinity Foods, founded by Howard Rower, is still in existence. Herman thinks they started in about 1962, and they imported foods from Japan.

Chico-San established only one organic grower–the Lundbergs for rice. The controversy was complicated. The Lundbergs and Bob Kennedy of Chico-San made a contract. Eventually there was a lawsuit between Chico-San and Lundberg [but it was resolved before it went to court]. Herman thinks Lundberg sued Bob Kennedy.

In 1963 Herman went on the lecture circuit with Bob Kennedy as they tried to educate people about the macrobiotic foods that Chico-San was selling.

The first summer camp without Ohsawa was 1967 (or perhaps 1968).

Macromuse is published in Washington, DC, by Michael Rosoff. It started in 1981.

Chico-San was founded in Jan. 1962. In Nov. 1962 Chico-San's first location (a retail store) opened, downstairs with hearing aid company. It moved upstairs to a different location and opened on 6 March 1962; they had an open house.

In 1973 the Aiharas established the Vega Institute, a residential program for macrobiotic studies in San Francisco. Then in 1974, they moved the Vega Institute and the George Ohsawa Macrobiotic Foundation to Oroville, a town southeast of Chico, where the Aiharas continued their work, together with their students. Herman and Cornellia Aihara moved to Oroville instead of Chico because it was more rural

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and because Peter Milbury, a high school teacher in Oroville, knew of some good land. The Ohsawa Foundation in San Francisco bought the land, and then they moved. Herman owns the Vega Institute on Oak Street.

Junsei Yamazaki came to the USA in 1963. Ohsawa told him to help Americans grow brown rice. First he tried in New York, but there was not enough sun. He originally graduated with a degree in fermentation from a major Japanese university, but he then became a rice farmer. Then in New York City he went to work with Michio at Musubi near Takashimaya–for little pay. The Chico group invited him to Chico. He worked on the rice cake machine–again poor pay. Like Herman he also worked with orchids.

In 1971 Herman invited Noboru Muramoto to be on his lecture trip. His first guest was Alcan Yamaguchi in 1970. Herman read Muramoto's articles in a Japanese magazine. He had family problems in Japan and was happy to stay here. Herman was his guarantor, and he became a permanent resident.

Chico-San began baking in March 1962 in an upstairs store; Herman was the first baker.

Herman talked with Michio Kushi this summer. They have a friendly relationship but both are very busy.

Junsei Yamazaki's plans with Chico-San are not clear, he may end up working on his own.

A good Japanese-language biography of George Ohsawa is *Kakumei-ji*, by Matsumoto Ichiro. He interviewed Lima Ohsawa.

Herman likes the term "a macrobiotic" better than "a macro" or "a macrobiotic student / follower."

Cornellia arrived in the U.S. in 1955.

The Ohsawa Foundation did not move from Chico to Los Angeles; it never existed in Chico–only in Los Angeles.

Overview of macrobiotic contribution. Typical Americans overemphasize the importance of protein (even though nutritionists may not agree). Most people who stop eating meat start consuming more dairy products. Macrobiotics avoid dairy products and go straight to grains plus legumes–with little mention of protein.

Mari Metz has a good color photo of Herman and Cornellia together.

Erewhon was hurt by high interest rates and inflation.

In 1960 the handbound book Zen Macrobiotics was made in Herman's apartment in New York City. In it Ohsawa used the word "syoyu" [shoyu]. He changed to tamari because when he introduced soy sauce to Europe he initially called it "shoyu." He then gave exclusive distribution rights to a European to distribute Ohsawa's selected shoyu. The man called it "Ohsawa Shoyu," but then in about 1960-61 he started importing low-quality shoyu from Japan and selling it under the same brand name. Ohsawa could do nothing to stop him. That was when Ohsawa started using the word "tamari" to refer to natural shoyu. Herman heard this story directly from George Ohsawa–whose name in Japanese is pronounced OH-sawa.

Herman says a healthy person may eat 12-16 ounces of tofu a week, but it is not recommended for cancer patients who need a diet that is more yang.

Herman came from Kyushu, moved to Tokyo at age 9. He likes natto. Address: Oroville, California.

6158. Ceres Natural Foods. 1982. Ceres (Ad). *Macrobiotic Journal Origins (Armdale, Australia)* No. 1. Autumn. p. 1 (Inside front cover) and p. 6.

• ***Summary:*** "Our spacious store is filled with the biggest range of macrobiotic whole foods in Melbourne." A full-page ad states that the store notes that it carries "soysauce" and macrobiotic staples. Address: 116 Chapel St., Windsor, VIC, Australia. Phone: 529-2206.

6159. Kushi, Michio. 1982. Cancer and heart disease: The macrobiotic approach to degenerative disorders. Tokyo Japan Publications, Inc. 224 p. Nov. Illust. Index. 26 cm. [50* ref]

• ***Summary:*** Contents. Foreword, by Michio Kushi. Foreword by Edward Esko. 1. The macrobiotic approach, by Michio Kushi. 2. Cancer and diet. 3. Diet and heart disease. 4. Macrobiotics, preventive medicine, and society. 5. Case histories. Appendixes: Food policy recommendations for the United States, by Michio Kushi. East West Foundation–Diet and health related activities, 1972-1982. Bibliography.

Many of the subchapters in this book are written by physicians. For example, William P. Castelli, M.D., contributed a 5-page original article titled "Lessons of the Framingham Heart Study." There are also articles by Robert S. Mendelsohn, M.D., Keith Block, M.D., and Christiane Northrup, M.D. Miso, tempeh, natto, tofu, and soy sauce are all discussed as foods that can be used to help in the prevention and cure of these two major diseases. Address: Brookline, Massachusetts.

6160. Leviton, Richard. 1982. Soyfoods come of age. *Vegetarian Times*. Nov. p. 28-29, 31. [1 ref]

• ***Summary:*** "Soybean based foods made with simple technology are gradually replacing meat in America diets. Originally developed in the Far East, foods like miso, tofu, and tempeh are becoming Westernized as manufacturers add convenient packaging, modern marketing and pizzazz to their soyfoods. Discusses: New tofu marketing techniques, the impact of *The Book of Tofu* by Shurtleff & Aoyagi and other tofu cookbooks, secondary soy products (prepared, convenient soyfoods), Legume, Quong Hop, Garden of Eatin', Edward & Sons, the soy deli, interest in tofu by large American food companies (Del Monte and Kraft).

Includes "A Guide to Soyfoods" the briefly defines miso, soy sauce, texturized soy protein, tofu, and tempeh. Address: 100 Heath Rd., Colrain, Massachusetts 01340. Phone: 413-624-5591.

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6161. *Manna Bulletin (Amsterdam, Netherlands)*,1982. Fermentatieprodukten essentiële aanvulling op plantaardige dieet [Fermented products, an essential supplement to a vegetarian diet]. 4(3):9-11. Autumn. [Dut]
• ***Summary:*** Mentions tamari soy sauce (*Tamari-sojasaus*, fermented for 2 years), miso (*Miso-sojapasta*, fermented for 2 years), tempeh, and natto.

6162. Oak Feed. 1982. Catalog and price list. Coconut Grove, Florida. 1 p. Back to back. 36 cm.
• ***Summary:*** At top of page 1: "Your Japanese connection. Importers and wholesale distributors of macrobiotic foods. Lowest wholesale prices available. Abbreviations: E = Erewhon. M = Mitoku. W = Westbrae. * = New product. Contents: Miso and tamari. Sea vegetables. Tea. Noodles. Condiments. Vinegars, pickles & mirin. Beans. Crackers. Miscellaneous foods. Kitchen utensils. Body care products. Medicinal products.

Miso and tamari: Onozaki miso (11 lb or 44 lb). Tamari-filled dispenser (W). Organic shoyu (Lima Ohsawa). Authentic tamari (4.75 gal. or dispenser). Hatcho miso (M). Soybean mame miso (M). Mugi (barley) miso (unpasteurized). Mugi miso (W). Genmai (brown rice) miso (W). Genmai (brown rice) miso (unpasteurized, 44 lb). Organic brown rice miso (unpasteurized, 22 lb). Kome (white rice) miso (W). Instant miso soup (light or red, M). Soba (buckwheat) miso (M). Natto miso (22 lb or 2 2 lb).

Condiments: Goma miso. Goma miso furikake (M). Tekka. Jinenjo tekka (M). Seitan condiment. Umeboshi. Roasted sesame oil. Black sesame salt. Black tahini.

Also: Barley miso pickles. Aduki beans [azuki]. Black soybeans. Kuzu. Address: 3030 Grand Ave., Coconut Grove, Florida 31333. Phone: (305) 448-7595.

6163. **Product Name:** Real Foods Shoyu.
Manufacturer's Name: Real Foods Pty. Ltd. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 136, Edgecliff, NSW 2027, Australia.
Date of Introduction: 1982, November.
New Product–Documentation: Ad in The Macrobiotic Journal Origins. 1982, Autumn. p. 5 and 30. Inside rear cover. "Like a fine wine. Traditional methods produce traditional quality. Real Foods Shoyu (Tamari) is a naturally fermented soy sauce which has been aged in wood for two years." Real Foods is a distributor of traditional, macrobiotic foods with branches in St. Peters, NSW, and in Windson, VIC, Australia.

6164. **Product Name:** Homestyle Natural Tofu "No Eggo" Salad.
Manufacturer's Name: Sonoma Specialty Foods.
Manufacturer's Address: Santa Rosa, CA 95401.
Date of Introduction: 1982, November.
Ingredients: Tofu (organic soybeans, water, nigari), celery, nutritional yeast, soy oil, apple cider vinegar, soy sauce, mustard, natural herbs and spices, sea salt.
Wt/Vol., Packaging, Price: 8 oz plastic deli tub.
How Stored: Refrigerated.
New Product–Documentation: Label. 1983, undated. 3.75 inch diameter. Plastic. Multi-color: Yellow, green, blue, orange, red on white. "Naturally light & delicious. Use on sandwiches, in dips and salads." Spot in Soyfoods. 1983, Summer. p. 55. Interview with Benjamin Hills. 1987, Sept. 7. Presently the company's best seller. Talk with Benjamin Hills. 1988, Feb. 19. Says introduced in Nov. 1982.

6165. Cauwenberghe, Marc van. 1982. Re: George Ohsawa's early work with soyfoods from 1956, especially miso and soy sauce. Letter to William Shurtleff at Soyfoods Center, Dec. 2. 5 p. [12 ref]
• ***Summary:*** The earliest document seen, written by Ohsawa, that mentions miso is the *Guide Pratique de la Medicine Macrobiotique d'Extreme-Orient*, which appeared in 1956. He arranged for miso and soy sauce to be imported to Europe from Japan and he organized the production of miso and soy sauce in France and Belgium in the Lima Foods factory by putting two of his Japanese students, Chin Yoshimi and "Jim" Takanami, to work there. Both are still living in Belgium. Chin's address: c/o Kusa, Sportstraat, 319, 9000 Gent, Belgium. The home-made tofu he sells at his store is known as the best.

Klim wrote a book in Japanese on macrobiotics titled *Shin Shokuryo-ho*, which he translated into English as Macrobiotics–The biological and physiological foundation of Zen. It contains recipes using miso, tamari, soy sauce, and tofu. "In 1972 I attended cooking classes by Aveline Kushi where she was teaching tofu making and tofu recipes. In 1974 Michio Kushi gave a month long seminar on natural agriculture and food processing. This included the preparation of tofu and miso. The seminar was published in the series 'Michio Kushi Seminar Reports.'" Address: East West Foundation, 62 Buckminster Rd., Brookline, Massachusetts 02146. Phone: 617-734-3853.

6166. Claiborne, Craig. 1982. Q&A. *New York Times*, Dec. 15. p. C16.
• ***Summary:*** "Q. I am curious to know the exact origin of the word catchup, which is sometimes spelled ketchup, and sometimes catsup. Which spelling do you prefer, and can you tell me the origin?

A. *The New York Times* prefers to spell it ketchup, but the other two spellings are generally accepted. The name is ascribed to various origins by various authors.

"Theodora FitzGibbon in her book 'The Food of the Western World' (Times Books) states that the word may come from the Chinese koe-chiap or ke-tsiap 'which means

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the brine of pickled fish."

"The Cook's Encyclopedia," by the late Tom Stobart (Harper & Row, 1980) states that the word came into English "from the Orient, perhaps from the Malay or Chinese."

Stobart also wrote "You find ketjap benteng or ketjap manis in Indonesian recipes and that is a form of sweet soy sauce."

"'Cookbooks of the last century abound with recipes–oyster ketchup (oysters with white wine, brandy, sherry, shallots and spices), mussel ketchup (mussels and cider), pontac or pontack ketchup (elderberries), Windermere ketchup (mushrooms and horseradish), wolfram ketchup (beer, anchovies and mushrooms).'"

"There are also ketchups made with walnuts, cucumbers, and many other items that caught some cook's imagination."

Note 1. This is the earliest document seen (April 2012) in which this interesting and important question is asked.

Note 2. The Indonesian word for "soy sauce" is ketjap / kecap–pronounced exactly like the Western word "ketchup." We have much evidence showing that Western word was derived from the Indonesian word, however the Indonesian word may have been derived from a Chinese word–the influence of immigrants to Indonesia from southern China's coastal provinces.

6167. **Product Name:** Skinny Dip, and Spicy Skinny Dip (Tofu-Based Dip with Vitamin B-12)
Manufacturer's Name: Brightsong Light Foods
Manufacturer's Address: 100-A Poultry St. (P.O. Box 2536), Petaluma, CA 94953.
Date of Introduction: 1982 December
Ingredients: Skinny Dip: Brightsong tofu, soy oil, olives, onion, soy sauce, nutritional yeast, garlic, natural spices, citric acid.
Wt/Vol., Packaging, Price: 7, 8 oz.
How Stored: Refrigerated.
Nutrition: Per 3.5 gm. Calories 160, protein 11 gm, carbohydrate 5 gm, fat 11 gm.
New Product–Documentation: Label. 1982. 3 inch diameter. Self adhesive. Green on white. Label. 1983, undated. 3 color. Reprinted in Soyfoods Marketing. Label. 1983. 2.5 inch diameter. Plastic tub. Green and blue on white. "Low in calories, fat and salt, a good source of protein, vitamins and minerals, all natural. Use as a dip, salad, spread or..." Lafayette, CA: Soyfoods Center. Spot in Soyfoods. 1984 Summer. p. 42. Letter from Richard Rose. 1987 Aug. 29.

6168. **Product Name:** Eden Tamari Natural Shoyu.
Manufacturer's Name: Eden Foods, Inc. (Importer) Made in Japan
Manufacturer's Address: Clinton, MI 49236.
Date of Introduction: 1982 December
New Product–Documentation: Ad in Vegetarian Times. 1982. Dec. p. 24. "What was once a flight of fancy... Natural Soy Sauce (Tamari)." Ad in Soyfoods. 1984. Summer. p. 37. "Just the Best." This label is confusing; the product is actually natural shoyu, not tamari.

6169. Eden Foods, Inc. 1982. George Ohsawa first introduced "tamari" to North America. The product he gave us was a traditionally brewed SHOYU. (Ad). *East West Journal*. Dec. p. 11. Also in Vegetarian Times, Jan. 1983, p. 36.
• ***Summary:*** "... made of soybeans, wheat, water & sea salt, fermented for many months and pressed.

"He called it Tamari because he thought that Shoyu was too difficult a word for Westerners to say and because it would differentiate Shoyu from commercial, chemical soy sauces.

"In Japan, Tamari is the by-product of making soybean miso, from soybeans, sea salt, and water. A very small amount of this is made compared to the amount of Shoyu brewed. In Japan, Tamari is most commonly used in food processing while Shoyu is used in cooking and on the table. Both are excellent foods. The original 'Eden Tamari-Shoyu' is macrobiotic soy sauce. This is the product Eden has marketed as Tamari since 1967, because George Ohsawa called it 'Tamari.'

"Recently, real Tamari (Wheat Free) has been imported into the U.S.A. Mr. Ohsawa did not anticipate this. Now there are two products on the market being called Tamari. Shoyu & Tamari"

Note: This is an early macrobiotic effort to distinguish between tamari and shoyu. "Eden offers: Tamari Natural (Shoyu) Soy Sauce and Tamari Wheat Free." Address: Clinton, Michigan 49236.

6170. Eden Foods, Inc.; Muso Shokuhin. 1982. What was once a flight of fancy... (Ad). *Vegetarian Times*. Dec. p. 24.
• ***Summary:*** This full-page color ad shows the colorful Muso crane logo flying at the top. Across the bottom in bold letters is written "Eden." The page is filled with boxes of macrobiotic natural food products imported by Eden from Muso in Japan. These include: Bulk miso, bulk kuzu, ramen, bulk sea vegetables, bancha tea, natural soy sauce (tamari), umeboshi, soba miso, Hacho miso, and vegetable brush. In the background is a landscape of terraced rice paddies. Address: [Clinton, Michigan].

6171. Kim, Kil Hwan. 1982. Kohng, dubu wa kohng nah mul ch kwah hak [The science of soybeans, tofu and soy sprouts]. Seoul, South Korea: Korean Science Foundation. 211 p. Dec. Illust. Index. 21 cm. [200+ ref. Kor]
• ***Summary:*** Contents: I. Soybeans. Introduction. World soybean production. Areas of production, quantities produced, amount produced in Korea, amount imported to Korea, chemical composition of all soybeans. How to

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use soybeans: Foods and processed soybean foods (sauces, tempeh, natto), industrial uses. Nutritional composition of soybeans: Common components, protein and amino acids (protein, essential amino acids, necessary protein intake, necessary amino intake, chemical score, biological value of soybean protein, the need to heat soy protein, the use of soy protein as a protein supplement), soybean oil (components of soybean oil, oil assimilation / absorption), other nutritional components (carbohydrates, vitamins, minerals), references.

II. Tofu. Introduction. Kinds of tofu and production: Soybean curd (production in factories, production at home, instant tofu, kinugoshi tofu, grilled tofu, frozen tofu, how to freeze and dry tofu). Movement of nutritional values during tofu processing: Movement of common nutrients, movement of amino acids. Nutritional components of tofu: Tofu protein, tofu protein as a protein supplement, digestion of tofu, calories in tofu, fat and cholesterol, minerals and vitamins, toxins, *hwe bun* in tofu. Tofu and group meals: School meals in Japan, in America, in Korea. Tofu factories and associations involved with tofu: Member list of food associations in Korea, regular member and extra member list of tofu packaging associations in Japan, directory of tofu shops and factories in North America, in Europe, in other countries, list of companies selling tofu coagulants, list of tofu restaurants in Japan. References.

III. Soy sprouts. Introduction. Production of soy sprouts: Soybean varieties, selecting and washing the soybeans, soaking, watering the sprouts, machines for cultivating soy sprouts, maintenance. Nutritional composition of soy sprouts: Common nutrients, increase of vitamin C during growth, changes in vitamin C during heating, changes in riboflavin during heating. Glossary.

Soybeans arrived in Korea in about 200 B.C. (p. 11). Contains many useful tables. Address: Korea.

6172. **Product Name:** The Bristol Vegetable Burger (Meatless Tofu Burger)
Manufacturer's Name: Cauldron Foods Ltd.
Manufacturer's Address: Sunny Bank, Chapel Lane, Fish Ponds, Bristol 16, England. Phone: (0272) 554780.
Date of Introduction: 1982.
Ingredients: Tofu, brown rice, textured soy flour, tomatoes, shoyu (soybeans, wheat, water, salt), soy, oil, herbs and spices, salt, yeast extract, onion extract, garlic.
Wt/Vol., Packaging, Price: 85 and 100 gm.
How Stored: Refrigerated.
New Product–Documentation: Label. 1983. 5.5 by 7 inches and 5.5 by 8.5 inches. Plastic. Green, brown, tan and white. "Pre-cooked–Eat cold, or warm under grill. Low calorie. 172 calories per 100 gm." Poster. 1983, undated. 6 by 8 inches. Red and blue on white. "The Bristol Burger range of natural convenience foods are now available in 3 varieties. Ready cooked. Can be eaten cold or hot. Low calorie and high protein." Richard Leviton. 1983 Trip to Europe with American Soybean Assoc. Oct/Nov. Unpublished manuscript. p. 26-27. Spot in The Vegan. 1988 Summer. p. 17. "There is a new Vegetable & Tofu Burger from Cauldron Foods."

6173. **Product Name:** The Bristol Chilli Burger (Meatless Tofu Burger).
Manufacturer's Name: Cauldron Foods Ltd.
Manufacturer's Address: Sunny Bank, Chapel Lane, Fish Ponds, Bristol 16, England. Phone: (0272) 554780.
Date of Introduction: 1982.
Ingredients: Tofu, brown rice, textured soy flour, tomatoes, shoyu (soybeans, wheat, salt), soy oil, herbs, chilli spices, salt, yeast extract, onion extract, garlic.
Wt/Vol., Packaging, Price: 85 gm.
How Stored: Refrigerated.
New Product–Documentation: Label. 1983. 5.5 by 8 inches. Plastic. Brown, red, yellow and white. "Low calorie–172 Kcal per 100 gram." Poster. 1983, undated. 6 by 8 inches. Red and blue on white. "The Bristol Burger Range of Natural Convenience Foods are now available in 3 Varieties. Ready Cooked. Can be eaten Cold or Hot. Low Calorie and High Protein." Richard Leviton. 1983. Trip to Europe with American Soybean Assoc. Oct/Nov. Unpublished manuscript. p. 26-27.

6174. **Product Name:** The Bristol Nut Burger (Meatless Tofu Burger).
Manufacturer's Name: Cauldron Foods Ltd.
Manufacturer's Address: Sunny Bank, Chapel Lane, Fish Ponds, Bristol 16, England. Phone: (0272) 554780.
Date of Introduction: 1982.
Ingredients: Tofu, brown rice, textured soy flour, peanuts, shoyu (soybeans, wheat, water, salt), soy oil, salt, hydrolysed vegetable protein, onion extract, citric acid, garlic.
Wt/Vol., Packaging, Price: 85 gm.
How Stored: Refrigerated.
New Product–Documentation: Label. 1983. 5.5 by 7 inches. Plastic. Dark brown, light brown and white. Poster. 1983, undated. 6 by 8 inches. Red and blue on white. "The Bristol Burger Range of Natural Convenience Foods are now available in 3 Varieties. Ready Cooked. Can be eaten Cold or Hot. Low Calorie and High Protein." Richard Leviton. 1983 Trip to Europe with American Soybean Assoc. Oct/Nov. Unpublished manuscript. p. 26-27. This company was built on the burger, which contains TVP (purchased from British Arkady) to add chewiness.

6175. Eden Foods, Inc. 1982. Catalog 1983. 701 Tecumseh Rd., Clinton, MI 49236. 70 p.
• ***Summary:*** "Founded in July 1967, Eden Foods began as a small retail outlet of macrobiotic foods in Ann Arbor, Michigan." Address: Clinton, Michigan.

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6176. Far Pavilions. 1982. Menu. 116 N. Oak Street (Box 69), Telluride, CO 81435.
• ***Summary:*** The front panel of this 8-panel menu (Green on tan paper) states: "International vegetarian cuisine. Welcome hospitality. Located below the opera house." The menu (which gives no prices) begins: "Our recipes are traditional as well as our own creations, all using pure and natural foods." Gives a definition of tofu and how it is made, then notes: "We make tofu in this traditional way regularly at Far Pavilions. In our kitchens, tofu is prepared in a wide variety of ways to show how this new high-protein, non-dairy food can be included in your menu. We also make regular use of the nutritious by-products of tofu-making: the soymilk and the soy fiber (okara)."

Soy-related menu items include: Soup of the day. Salad (dressings include "tamari sauce"): Mixed vegetable and sprouts with guacamole, full (or half) plate salad with tofu and guacamole. Salad specialties: Tofu and vegetable, okara salad, hummus, tabouli. Daily specials from the wok: Stir-fried tofu, rice, and vegetables, tofu and vegetables, stir-fried okara and vegetables. Stuffed pitas: Grilled tofu and vegetables, guacamole and tofu, falafels. Burgers: Soy burger, tofu burger, okara burger. Burritos: Spicy tofu and rice filling with guacamole. Extras: Fresh tofu, grilled tofu. Smoothies: Carob shake (with banana and sesame). Carob-honey soymilk. Nutritional yeast–20 cents extra. Other refreshments: Hot miso broth (cup). Soy milk. Desserts: Ask us! "For reservations, catering, or take out, call 728-4441." Address: Telluride, Colorado. Phone: 728-4441.

6177. Fruin, W. Mark; Tsunehiko, Yui, comp. 1982. The 200 largest industrial firms in Japan for 1918. Unpublished manuscript. Updating of original 1980 document.
• ***Summary:*** This table is published in Mark Fruin's book "The Japanese Enterprise System" (1992, Oxford). Address: 1. Prof. of History, California State Univ., Hayward.

6178. **Product Name:** Kimlan Soy Sauce.
Manufacturer's Name: Golden Orchid Ltd. (Importer-Distributor). Made in Taiwan by Kimlan.
Manufacturer's Address: Commerce, CA 90040.
Date of Introduction: 1982.
Ingredients: 1994: Water, soybeans, wheat, salt, sodium benzoate (less than 1/10 of 1% as food preservative).
New Product–Documentation: Barbara Hansen. 1983. Los Angeles Times. Oct. 6. "Specialty sauce exec is his own best customer. Chung not only sells product, he cooks for firm's business luncheons with it." Herman Chung is president of Golden Orchid Ltd., the U.S. arm of Kimlan Foods Co. Ltd. of Taiwan. Kimlan is a major producer of soy sauce and also has a line of specialty sauces including barbecue, steak, teriyaki and sukiyaki sauces that are aimed at the American market.

Sunset Western Grocery News (Menlo Park, CA). 1986. May. "Kimlan Brings Soy and Teriyaki Sauces to Western U.S." There are more than 300 soy sauce manufacturers in Taiwan and Kimlan is the largest, with 60% of the market. Kimlan Soy Sauce was introduced in Southern California in 1982, and Northern California in 1983. It is a fermented product with up to 30% less salt than most soy sauce.

Quarter ounce foil packet received with an order of takeout food from Uncle Yu's Chinese Restaurant in Lafayette, California. 1994 Jan. 24. In Chinese, Kimlan is pronounced Kinran (Golden Orchid). The product is distributed by Golden Orchid Ltd., Commerce, CA 90040. Made in Taiwan.

6179. **Product Name:** [Kikkoman Instant Shiro Miso Soup (Soybean Paste Soup, White)].
Foreign Name: Shiro Misoshiru.
Manufacturer's Name: Kikkoman Corporation.
Manufacturer's Address: Noda 278, Chiba-ken, Japan.
Date of Introduction: 1982.
Ingredients: Powdered miso, dried seaweed, wheat gluten, bonito powder, monosodium glutamate, dried green onions, disodium inosinate, disodium guanylate.
Wt/Vol., Packaging, Price: 1.4 oz (40 gm). Foil packed containing 4 individual packets. Each makes 2/3 cup.
How Stored: Shelf stable.
New Product–Documentation: Label. 1982. 5.5 by 7 inches. Plastic packet. Orange, red, brown and green on white. Full color picture of wooden bowl of soup on tray. Foil packets inside are 2.75 by 4 inches. Red, brown and black on white. Bowl of soup on front, instructions on back. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. "Distributed by Kikkoman Corporation, Noda 278, Japan." Text on label in both English and Japanese.

6180. **Product Name:** [Kikkoman Instant Aka Miso Soup (Soybean Paste Soup, Red)].
Foreign Name: Aka Misoshiru.
Manufacturer's Name: Kikkoman Corporation.
Manufacturer's Address: Noda 278, Chiba-ken, Japan.
Date of Introduction: 1982.
Ingredients: Powdered miso, dried seaweed, wheat gluten, bonito powder, monosodium glutamate, dried green onions, disodium inosinate, disodium guanylate.
Wt/Vol., Packaging, Price: 1.4 oz (40 gm). Foil packet containing 4 individual foil packets. Each makes 2/3 cup.
How Stored: Shelf stable.
New Product–Documentation: Label. 1983. 5.5 by 7 inches. Plastic packet. Red, purple, black and brown on white. Full color picture of wooden bowl of soup on tray. Individual packets are 2.75 by 4 inch foil. Red, brown and black on white. Picture of bowl of soup on front, instructions on back. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. "Distributed by Kikkoman Corporation, Noda 278, Japan." Text on label in both English and

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Japanese.

6181. **Product Name:** Kikkoman Sauces [Sukiyaki Sauce, Tonkatsu (Pork Cutlets) Sauce, Sweet & Sour Sauce, Menmi Sauce, Teriyaki Marinade and Sauce, or Tempura Sauce]
Manufacturer's Name: Kikkoman Foods, Inc.
Manufacturer's Address: Walworth, Wisconsin. Or Kikkoman International, Inc., San Francisco
Date of Introduction: 1982.
Ingredients: Sukiyaki: Soy sauce (water, wheat, soybeans, salt), sugar, wine, water, monosodium glutamate, lactic acid, disodium inosinate, disodium guanylate, sodium benzoate less than 1/10 of 1% as food preservative. Tonkatsu: Corn syrup, applesauce vinegar, water, soy sauce, salt, onion puree, modified food starch, tomato paste, carrot juice concentrate, spices, MSG, caramel, garlic powder.
Wt/Vol., Packaging, Price: 9. 5 oz (269 gm), 10 fluid oz (296 ml), 12 oz (340 gm)
How Stored: Shelf stable.
New Product–Documentation: Labels. 1982. Sukiyaki: 8 by 3.75 inches. Paper. Tonkatsu: 3.5 by 3.5 inches, circular top. Paper. White, black, green on burgundy. Memmi: 8 by 3.75 inches. Paper. Orange, black, white, green on yellow. Paper. Sweet & Sour: 7.75 by 3.5 inches. Paper. Black, blue, green, white, yellow and brown on orange. Teriyaki: 8 inches by 3.5 inches. Paper. Black, green, pink, white, on orange. Good Housekeeping seal. Tempura: 8 inches by 3.5 inches. Paper. Orange, black, white, green on gold. Color illustration of products on all labels. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.

6182. **Product Name:** Kikkoman Memmi: Soup Base for Noodles.
Foreign Name: Menmi.
Manufacturer's Name: Kikkoman Foods, Inc.
Manufacturer's Address: Walworth, Wisconsin 53184. Or Kikkoman International, Inc., San Francisco
Date of Introduction: 1982.
Ingredients: Soy sauce (water, wheat, soybeans, salt), sugar, salt, water, bonito extract, monosodium glutamate, disodium inocinate [sic, inosinate], disodium guanylate, succinic acid, vinegar, sodium benzoate less than 1/10 of 1% as a food preservative. Sodium content: 165 mg per ½ teaspoon.
Wt/Vol., Packaging, Price: 10 fl. oz (296 ml).
How Stored: Shelf stable.
New Product–Documentation: Labels, reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Red, black, and white on yellow. 3.5 x 8 inches. Small color photo on front panel.

6183. Maki, Toshio. 1982. Shokuhin oyobi kankyô-chû no N-nitoroso kagô-butsu–sono ganryô to bakuro-ryô ni tsuite [N-nitroso compounds in foods and the environment–the occurrence and exposures]. *Eisei Kagaku* (*J. of Hygienic Chemistry*) 28(5) 249-58. [Jap]*
• ***Summary:*** Volatile and non-volatile N-nitrosamines were sampled in foods. The highest volatiles were in broiled dried fish, chewing tobacco, niboshi (dried small sardines), and smoked and flavored fish.

0.1 to 0.8 micrograms per kilogram (parts per billion, ppb) of N-nitroso-dimethylamine (NDMA) was detected in miso and shoyu. Similar amounts were also found in other Japanese foods. The author thinks that there is no danger in consuming these foods because of the very small amounts of NDMA, mostly less than 1 ppb.

6184. Mori, S.; Nunomura, N.; Sasaki, M. 1982. Correlation between sensory preference and compounds of Japanese soy sauce flavor (Abstract). In, Abstracts of Papers Presented at the Annual Meeting of the Agricultural Chemical Society of Japan. See p. 36. *
Address: Central Research Labs., Kikkoman Shoyu Co., Noda, Japan.

6185. **Product Name:** Noble Bean Tempeh Soysage (Using Tempeh in Place of the Typical Okara).
Manufacturer's Name: North Coast Tempeh Co.
Manufacturer's Address: 18320 Euclid Ave., Cleveland, OH 44112.
Date of Introduction: 1982.
Ingredients: Tempeh with wheat flour, soymilk, oil, tamari, garlic, barley malt, mustard, seasonings.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated or frozen.
New Product–Documentation: Label. 1982. 4.25 inch diameter. Blue, green, yellow and red on white. Logo of Jack and the Beanstalk. "No cholesterol." Jeff Narten. 1987. "History of North Coast Tempeh and its Products." 4 p. Dec. 7.

6186. Ogi, Masahiro. 1982. Sekai Nippon-shoku taizen. Hato-tachi no sekai senryaku. Nihon shoku o sekai ni hiromeru otokotachi no mune ni aru mono [Japanese foods worldwide. The doves' world strategy. Things in the hearts of men who introduce Japanese foods to the world]. *Bungei Shunju* (*Literary Arts, Spring and Fall*) No. 1. p. 370-80. New Year's Special Edition. [Jap]
• ***Summary:*** In addition to Kikkoman, shoyu, and Mark Frum, discusses pickles, sushi, sake, and instant ramen (Cup O'Noodles).

6187. **Product Name:** Tamari Shoyu. Natural Soy Sauce.
Manufacturer's Name: Pure & Simple, Inc.
Manufacturer's Address: P.O. Box 1235, Corona, CA 91720. Phone: (714) 371-4210.
Date of Introduction: 1982.
Wt/Vol., Packaging, Price: Bottle.

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New Product–Documentation: Poster. Ad (full-page color) in Natural Foods Merchandiser. 1982. "Bland Aid." Shows 3 sizes of bottles amidst may other bottled products on shelves: 5 fl. oz., 1 pint, and 1 quart. Each has a round red rising sun in the center against a light gold background. "Tamari" is written against a red background and "Shoyu" against a green one.

6188. Pure & Simple, Inc. 1982. Bland aid (Poster and ad). P.O. Box 1235, Corona, CA 91720. 1 p.
• ***Summary:*** This full-page color poster and ad (copyrighted 1982) shows various sizes of many products in the Pure & Simple line. Three different sizes of Tamari Shoyu are shown (5, 16, and 36 oz glass bottles), each with a red, green, and gold label. This ad also appeared in 1983 in *Bestways* (Feb., p. 55) and in 1984 in *Natural Foods Merchandiser* (July, p. 89). Address: Corona, California.

6189. **Product Name:** The Original Tofu Salad.
Manufacturer's Name: Purist Foods.
Manufacturer's Address: 6014 Techni-Center Dr. Suite 105, Austin, TX 78721. Phone: 512-928-0191.
Date of Introduction: 1982.
Ingredients: Tofu, lemon juice, vinegar, vegetable oil, nutritional yeast, soy sauce, salt, herbs, and spices.
Wt/Vol., Packaging, Price: 16 oz.
How Stored: Refrigerated.
New Product–Documentation: Talk with Allen Maurer, consultant. 1988. Oct. 12. Purist foods is still in business, run by Reed Murray. Label. 1988, received. 3 by 2 inches. Green on white. Leaf vine design on sides.

6190. **Product Name:** Tofu Hot Dip.
Manufacturer's Name: Purist Foods.
Manufacturer's Address: 6014 Techni-Center Dr. Suite 105, Austin, TX 78721. Phone: 512-928-0191.
Date of Introduction: 1982.
Ingredients: Tofu, soy oil, picante sauce, vinegar, nutritional yeast, honey, soy sauce, salt, spices.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Talk with Allen Maurer, consultant. 1988. Oct. 12. Purist foods is still in business, run by Reed Murray. Label. 1988, received. 3 by 2 inches. Self adhesive. Green on white. Leaf vine design on sides.

6191. **Product Name:** Tofu Onion Dip.
Manufacturer's Name: Purist Foods.
Manufacturer's Address: 6014 Techni-Center Dr. Suite 105, Austin, TX 78721. Phone: 512-928-0191.
Date of Introduction: 1982.
Ingredients: Tofu, soy oil, vinegar, nutritional yeast, honey, soy sauce, salt, and spices.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Talk with Allen Maurer, consultant. 1988. Oct. 12. Purist foods is still in business, run by Reed Murray. Label. 1988, received. 3 by 2 inches. Green on white. Leaf vine design on sides.

6192. **Product Name:** Soy Sauce.
Manufacturer's Name: S.E. Rykoff & Co.
Manufacturer's Address: 737 Terminal St. (Mfg.) and 761 Terminal St. (Dist.), Los Angeles, CA 90021.
Date of Introduction: 1982.
New Product–Documentation: Soya Bluebook. 1982. p. 75; 1985.

6193. Song, Puju, Wishnok, J.S.; Tannenbaum, S.R. 1982. [Determination of volatile nitrosamines in soy sauce]. *Zhonghua Yufangyixue Zazhi* (*Chung-hua Yu Fang I Hsueh Tsa Chih; Chinese J. of Preventive Medicine*) 16(3): 147-49 (Chem. Abst. 97:108644e). [Chi]*
• ***Summary:*** Nine commercial soy sauces, purchased at U.S. retail stores, and including representative samples from Hong Kong, China, Thailand, Japan, and Korea, were examined for the possible presence of volatile N-nitroso compounds. All samples contained substances which gave positive responses on a nitrosamine-selective detector (Thermal Energy Analyzer, TEA). These signals, in addition, disappeared or were reduced following ultraviolet irradiation, this behavior is characteristic of nitrosamines. Two of the TEA-positive substances had gas chromatogram retention times and gas-chromatogram-mass spectrometer behavior suggestive of *N-nitrosodimethylamine* and *N-nitrosomorpholine*, respectively. Address: Beijing Medical College, Beijing, China.

6194. **Product Name:** Soyettes (Meatless Soy-based Patties / Burgers).
Manufacturer's Name: Soy City Foods.
Manufacturer's Address: 2849 Dundas St. W., Toronto, ONT, M6P 1Y6, Canada.
Date of Introduction: 1982.
Ingredients: Soy mash [okara], oats, rice, cashews, soy oil, sunflower seeds, sesame seeds, tamari, potato starch, herbs, seasoning, spices.
Wt/Vol., Packaging, Price: 350 gm paperboard box containing 4 patties.
How Stored: Frozen.
New Product–Documentation: Interview with Jon Cloud. 1985. Aug. Label sent by Jon Cloud. 1989. May 5. Product was introduced in 1982.

6195. **Product Name:** Soy Vay Chinese Marinade.
Manufacturer's Name: Soy Vay Enterprises, Inc. (Marketer-Distributor).
Manufacturer's Address: Arcata, California 95018.

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Phone: 1-800-600-2077.
Date of Introduction: 1982.
Wt/Vol., Packaging, Price: 22 oz. glass bottle.
How Stored: Shelf stable.
New Product–Documentation: Talk with owner of Soy Vay. 1997 June 3. Chinese Marinade was the company's first product, introduced in 1982. At that time the company was located in Arcata, California. They moved to Felton, California, in 1987.

6196. **Product Name:** Tempeh Cutlet / Burger (A Rectangular Burger. Vacuum Packed. By 1986 renamed Tempeh Cutlet).
Manufacturer's Name: Soyfoods Unlimited, Inc.
Manufacturer's Address: 14670 Doolittle Dr., San Leandro, CA 94577.
Date of Introduction: 1982.
Ingredients: Tempeh (made with soybeans organically grown in accordance with section 26569.11 of the California Health and Safety Code and brown rice), natural soy sauce, herbs, spices.
Wt/Vol., Packaging, Price: 7 oz (189 gm). Vacuum packed in poly pouch.
How Stored: Frozen or refrigerated.
Nutrition: Per 3 oz.: Calories 190, protein 9 gm, carbohydrates 6 gm, fat 3 gm, sodium 466 mg.
New Product–Documentation: Label. 1982, undated. 2.75 by 3.75 inches. Blue and red on white with rainbow border. "Not fried. No oil." Leaflet (on cardstock). 8½ by 11 inches. 2 color. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Tempeh. Tempeh Cutlet/Burger. A cultured soy product. High in protein. No cholesterol. Good meat substitute.

6197. **Product Name:** Baked Marinated Tofu.
Manufacturer's Name: Summercorn Foods Inc.
Manufacturer's Address: 401 Watson, Fayetteville, AR 72701. Phone: 501-521-9338164.
Date of Introduction: 1982.
Ingredients: Certified organic soybeans, purified water, natural calcium sulfate, soy sauce, spices.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1987. 3.25 x 2.75 inches. Self adhesive. Brown and green on tan. "High in protein and calcium. No cholesterol. Contact us for detailed nutritional information & menu ideas."

6198. **Product Name:** Soy Sauce.
Manufacturer's Name: Thai Theparos Factory R.O.P.
Manufacturer's Address: 206 M006, Taiban Rd., Samutpragarn, Thailand.
Date of Introduction: 1982.
New Product–Documentation: Soya Bluebook. 1982. p. 76.

6199. **Product Name:** Tofu Cutlets: Marinated and Baked.
Manufacturer's Name: Tofu Shop (The).
Manufacturer's Address: 768 18th St., Arcata, CA 95521. Phone: 707-822-7409.
Date of Introduction: 1982.
Ingredients: Tofu (water, organic soybeans grown according to Cal. Health Code Sect. 26569.11 and nigari). Marinated in a sauce of Tamari (a natural soy sauce made with water, soybeans, wholewheat and salt). Water, lemon, garlic and kelp.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Label of 1985. Received 1988. 4 by 2.5 inches. Self adhesive. Blue, green, gold, and white. "Ready to eat... or reheat, naturally fresh... from our deli. A perfect snack fresh from the pack. Great in your favorite sandwich, diced and sauteed with rice and vegetables, or as a main dish. Simple to heat in oven (350°F, 10 minutes) or frying pan. Perishable, keep refrigerated, 34-39°."

Two Labels (front and back) sent by Matthew Schmit, 2002 Sept 9. The product was introduced in 1982. Label #1 from Feb 2002. 3¼ by 2.75 inches. Self adhesive. Blue and orange-yellow on white. A handsome, impressionistic watercolor illustration shows a tofu shop on stilts on a cliff with a tree arching overhead. Label #2. Larger watercolor illustration. More white in the background. Will be used when the company is certified organic in Oct. 2002.

6200. **Product Name:** [Wei Wong Soy Sauce].
Manufacturer's Name: Wei Wong Fermentation Industrial Co., Ltd.
Manufacturer's Address: 9th Floor, No. 79, Chungshan N. Rd., Sec. 2, Taipei, 104, Taiwan.
Date of Introduction: 1982.
New Product–Documentation: Soya Bluebook. 1982. p. 76.

6201. **Product Name:** Organic Shoyu.
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan by Sendai Miso-Shoyu Co.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: 415-658-7518.
Date of Introduction: 1982.
New Product–Documentation: Label, color. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Soya Bluebook. 1986. p. 105.

6202. **Product Name:** [Yamashin Shiro Shoyu {Clear Soy Sauce}].
Manufacturer's Name: Yamashin Shoyu Co. Ltd.
Manufacturer's Address: Nishiyama-cho 3-36, Hekinan-

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shi, Aichi-ken 447, Japan.
Date of Introduction: 1982.
New Product–Documentation: Letter from American Soybean Assoc., Tokyo. 1982. March 25. Yamashin is Japan's largest maker of shiro shoyu

Corti Brothers website. 2006. July 22. www.cortibros.biz. A color photo shows a bottle of this soy sauce in a clear bottle against a light wood background. The label has black Japanese characters on a white background. The near-black sauce is in a clear bottle. Price: $6.99 per bottle (360 ml; #6039). Quantity in stock: 0 (zero). "Rarer is the white soy sauce, Shiro Shoyu, made from wheat rather than soy. It is made in central Japan and is used when you do not want to change the color of a dish. It is darkish amber in color. The scent and flavor are lightly smokey, meaty, and very pleasant, but light. This is the soy sauce to use when you want a delicate flavor."

6203. **Product Name:** Yeo's Soy Sauce.
Manufacturer's Name: Yeo Hiap Seng (Malaysia) Berhad. Affiliate of Yeo Hiap Seng, Petaling Jaya
Manufacturer's Address: 7 Jalan Tandang, P.O. Box 229, Petaling Jaya, Selangor, Malaysia.
Date of Introduction: 1982.
New Product–Documentation: Soya Bluebook. 1982. p. 76; 1986. p. 105.

6204. Adachi, Iwao. 1982. Nihon shokumotsu bunka no kigen [Origins of Japanese food culture]. Tokyo: Jiyu Kokuminsha. 470 p. See p. 69-70, 113. [Jap; eng+]
• ***Summary:*** Kinako (Yayoi period). Also called "mametsuki" in Japanese, kinako is written with characters that mean "yellow soy flour." In the *Wamyosho*, it is called "Daizu-iri" or "Mametsuki." From these expressions we can learn that since ancient times, people have pounded soybeans in a mortar (*usu*). Stone mortars came to Japan during the Nara period (A.D. 710-784) and finally became popular among the people in about the middle of the Edo/Tokugawa period. Kinako was brought to Japan from China through Korea. Kinako is probably mentioned in the *Engi Shiki*. At a certain festival the people served at the altar 5 measures each of magarimochiki and mametsuki, and 10 measures of daizumochiki. These may have been the early names for kinako-mochi and/or azuki mochi.

Tamari: The original form of shoyu was tamari. The by-product of tamari was miso. And the original form of miso was *kuki* [fermented black soybeans], which was a seasoning developed in China. More on the history of kuki is given under "miso." The government office (yakusho) for miso was built at the imperial court (kyutei) in A.D. 701 (Taiho 1). Therefore tamari started there at the same time. In the book *Yamato Honso* (Japanese materia medica) by Ekiken Kaibara, tamari (written with the characters for bean + oil) was mentioned. But on the sign board (kanban) of Yuasa Shoyu (which was started in the Tenshô period, 1573-1592), Tamari Shoyu was written (and "tamari" was written with the single character for "tamaru"). In the *Vocabulary of the language of Japan* (1603; Nippo Jisho) tamari was defined in Portuguese: "Tamari, a very delicious liquid taken from miso which can be used as a seasoning when cooking foods." Furthermore, in the *Oshufushi* (1684) it is written that "The liquid from shoyu is tamari." During the Middle Ages (chûsei) in Japan, shoyu was written with the characters for bean + oil, but during the Tenshô period (1573-1592) it came to be written with the single character for "tamaru." Tamari and shoyu were first distinguished during the Kyôhô period (1716-1735). In the Chubu region of central Japan (Chûbu-Chiho, Toyama, Ishikawa, Fukui, Yamanashi, Nagano, Gifu, Shizuoka, and Aichi prefectures) one special kind of miso, which is a by-product of shoyu, is called "tamari-miso."

6205. Aidoo, K.E.; Hendry, R.; Wood, B.J.B. 1982. Solid substrate fermentations. *Advances in Applied Microbiology* 28:201-37. [144 ref]
• ***Summary:*** Contents: Introduction. History of solid-substrate fermentations: Pre-Pasteur period, post-Pasteur period and current developments. Design considerations and types of solid-state fermentors. Characteristics of solid-state fermentations: Physiological aspects of microbial growth on solid substrates. Advantages and disadvantages of solid-state fermentation. Future developments of solid-state fermentation systems. Conclusions. Address: Biotechnology Unit, Univ. of Strathclyde, Glasgow, Scotland

6206. Aihara, Cornellia. 1982. Macrobiotic kitchen: Key to good health. Tokyo: Japan Publications, Inc. 140 p. Illust. Index. 26 cm. A revised edition of The Chico-san Cookbook (1972)
Address: Chico, California.

6207. Alejandro, Reynaldo G. 1982. The Philippine cookbook. New York, NY: Coward, McCann & Geoghegan. 256 p. Illust. Index. 25 cm.
• ***Summary:*** Tausi [fermented black soybeans] is called for in two recipes: Lapu-lapu with tausi: Grouper with black bean sauce (with "1 tablespoon minced ginger, 4 tablespoons tausi {black beans, sold in Oriental food stores}, p. 141). Alimango sa tausi: Crabs in black bean sauce (with "8-ounce can black bean sauce," p. 149).

Bean curd or tokwa is called for in recipes on 7 pages including p. 19, 33, 140, 141, 163, 167, 187. Page 163: "1 cup diced tokwa or bean curd (sold in Oriental food stores)."

Soy sauce is mentioned on 58 pages, including pages 12, 13, 18, 20, 23, 24, etc. "Adobo" is defined as "cooked in vinegar, soy sauce, and garlic."

The "Glossary" (p. 238-41) includes: Misu–soybean paste. Tausi–black soy beans, salted and fermented. Togue–bean sprout. Tokwa–soy bean cake [tofu]. Address:

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Manhattan, New York City, New York.

6208. Aykroyd, Wallace R.; Doughty, Joyce. 1982. Legumes in human nutrition. 2nd ed. Revised by Joyce Doughty and Ann Walker. Rome, Italy: Food and Agriculture Organization of the United Nations (FAO). viii + 152 p. Illust. 28 cm. The original edition was 1964. [293* ref. Eng]

• ***Summary:*** Contents: Preface. Introduction. History of legumes. Production and consumption. Composition and nutritive value. Methods of processing and cooking. Effects of processing on nutritive value. Toxic substances. Legume proteins. Observations on the value of legumes in human feeding. The place of legumes in human diets. Appendixes. References.

On pages 49-51 are sub-sections on: Traditional fermented soybean products (methods of home preparation are detailed in Appendix 5, p. 120-22): Soy sauce (shoyu), soy paste (miso), tempeh, natto, Hammanatto. Protein separation and other extraction techniques. Soy-milk. Soybean curd (tofu). Modern products from soybeans. Soy flour and grits. Soy protein concentrates. Isolated soy protein.

Under tofu (p. 50): "The curd may also be fermented to make soy-cheeses, which resemble the more highly flavoured European cheeses. These are known in China as *chou tofu*, which means stinking bean curd." See also p. 120, where yuba is mentioned.

Note: This 1982 edition was made by revising the original 1964 edition. Ann Walker is from the Dep. of Food Science, University of Reading. Dr. Wallace Aykroyd died in Feb. 1979 just as he was taking the first steps toward this revision. Address: 1. Dep. of Human Nutrition, London School of Hygiene and Tropical Medicine; Former Director, Nutrition Div., FAO, Rome, Italy.

6209. Blair Island. 1982. Menu. Eugene, Oegon. 1 p. both sides. 24 x 11 cm. Black on yellow.

• ***Summary:*** This soy deli serves breakfast and lunch. Soy-related products in the breakfast menu include: Tofu pocket (sauteed tofu in a pita pocket). Tofu scrambles (Blair Island style tofu, sauteed onions and cheddar cheese). Tofu breakfasts. "Blair Island style tofu is pressed, then sauteed with seven herbs, spices, and shoyu. Served with sprouts, fresh-baked toast or muffin and a side of sweet and sour tomato sauce. Regular (tofu, sprouts and sauce), or Special (tofu smothered with mushrooms and onions)." Side orders: Cup of tofu. Cashew milk.

Lunch. Tofu tia (tofu with sprouts and sauce wrapped in a corn tortilla). Tofu pocket sandwich. Tempeh tia. Tia special. Buddah burger (tofu-mushroom burger). Temptation (tempeh burger). Tempeh burrito. Bean burrito with tofu sour cream. Salads with tofu sour cream dressing. Tofu cheesecake desserts with different toppings.

Note: This company was in business in Aug. 1979, located on an island between two branches of the road. Address: 325 Blair Blvd., Eugene, Oregon 97402. Phone 683-5117.

6210. Coyle, L. Patrick, Jr. 1982. The world encyclopedia of food. New York, NY: Facts on File, Inc. xv + 790 p. Illust. Index. 28 cm.

• ***Summary:*** Contains basic information (sometimes interesting, often superficial, with quite a few errors) about some 4,000 foods and beverages, including worldwide staples (potatoes, soybeans, apples), local specialties, delicacies, major brand-name products (Coca-Cola) and oddities (penguin eggs, grasshoppers). With 200 line drawings, 150 black-and-white photos, and 50 color plates.

See entries for: soybean (incl. black soybeans, fermented tofu, miso, soybean flour, soybean milk, soybean oil, soy sauce, tempeh, tofu, "white soybeans"), and Worcestershire sauce (which "is said to contain more than 100 ingredients, including soy sauce, vinegar, molasses, chili, anchovies, garlic, shallots, tamarinds, limes and many spices").

Tofu: "A fermented form of this, called stinking tofu, is a favorite snack of the Chinese. It has a pungent smell and is usually deepfried [deep fried] and seasoned with soy sauce, vinegar, mashed garlic or chili paste. The food value is high..." (p. 643).

Note: This is the earliest English-language document seen (Oct. 2011) that contains the term "stinking tofu."

Also has entries for: Almond, chufa, peanut, peanut butter, peanut oil, seaweed (incl. algae, dulse, laver, rock weed / sea wrack, agar-agar, carrageen, kelp), sesame (with illustration of leaves, flower, and pods). Address: Freelance writer, Oceanside, California.

6211. Diamond, Marilyn. 1982. The common sense guide to a new way of eating: The proper foods, combinations and recipes to ensure that you will be a totally healthy person–with love from Marilyn Diamond. Los Angeles (Santa Monica), California: Golden Glow Publishers. ix + 106 p. Illust. Index. 26 cm.

• ***Summary:*** This near-vegetarian cookbook was Marilyn Diamond's first book on food. The first edition was self published (the Diamonds founded Golden Glow Publishers), shortly after Harvey's first book titled "A case for health." The book is based on the following natural hygiene principles: Drink plenty of fresh fruit and vegetable juices, the key to a cleansing elimination diet. Always drink them, and always eat fruit alone, on an empty stomach. Combine foods properly. Beware of acid-forming foods. Eat high water-content foods. Use only pure, fresh, unrefined ingredients. Raw foods are generally preferred to cooked. Under "The basic salad dressing," page 18 notes that tamari is a "concentrated soy sauce which is quite salty and should be used sparingly." Soy sauce or tamari are used as seasonings in: Tamari salad dressing (p. 39).

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Hearty vegetable soup II (p. 47). Wok fried rice (with 2 Tbs tamari or 4 Tbs. soy sauce, p. 75). Broccoli-pea turnovers (p. 92). The beanless burrito (p. 98). No other soyfoods are mentioned.

This is not quite a vegetarian book. Meat and chicken are used sparingly (p. 21-22). Eggs are also used (p. 41-42). There is a nice hippie-like photo of Marilyn on the back. In 1986, after *Fit for Life* was selling extremely well, Warner Publications asked the Diamonds for another book as soon as possible. Warner knew about this cookbook and loved it and thought it would be a very nice little companion to *Fit for Life*. So they purchased the rights and re-released it, with minor revisions by Marilyn (only 5-6 recipes were changed), a new introduction by Harvey, and a new title–*A New Way of Eating*. Address: Venice, California

6212. Ebine, Hideo. 1982. Fermented soybean foods in Japan. In: S. Saono, F.G. Winarno, and D. Karjadi, eds. 1982. Traditional Food Fermentation as Industrial Resources in ASCA Countries. xvii + 259 p. See p. 41-52. Proceedings of a technical seminar, held 9-11 Feb. 1981 at Medan, Indonesia.

• ***Summary:*** Production statistics for miso and natto from 1970-1979 were presented. Miso increased from 552,207 tonnes in 1970 to a peak of 590,137 tones in 1973, followed by a gradual decrease to 567,776 tons in 1979. Natto production increased from 100,000 tonnes in 1970 to 158,000 tonnes in 1979. Statistics on the production of fermented black soybeans (Tera Natto or Hama Natto) are not available, but are roughly estimated at 10,000 tons.

An outline is then given of the chemical composition of the different types of miso and natto as well as their methods of manufacturing. Of the many beneficial characteristics of miso, the following are worthy of note: it has strong antioxidative activity, a strong buffering activity, and a bactericidal like effect against pathogens.

"Natto is one of the typical and popular soybean foods in the Japanese diet. It is classified into 2 major types; one is called Hama Natto which resembles soybean miso in colour and flavour, the other is called itohiki natto. When referred to simply as natto, it generally means itohiki natto. Natto is a unique soybean food, fermented by *Bacillus natto*. The surface of fermented natto is covered with characteristic viscous and slimy substances consisting of *B. natto* cells and polymers of glutamic acid." Address: Applied Microbiology Div., National Food Research Inst., Ministry of Agriculture, Forestry and Fisheries, Yatabe, Ibaraki-ken, Japan

6213. Editors of Time-Life Books. 1982. Dried beans and grains. Alexandria, Virginia: Time-Life Books, Inc. 176 p. Illust. Index. 28 cm.

• ***Summary:*** Soy-related recipes include: Stewed bean curd (p. 108). Fried bean curd (p. 108). Mrs. Chen's bean curd (Ma-po dou-fu, p. 109). Sizzling bean curd with ginger ankake sauce (p. 109). Bean curd and vegetable tempura (p. 110). Red-cooked pork chops with bean curd (p. 110). Home-style bean curd (p. 110-11). Seafood sizzling rice (San hsien kuo pa) with soy chicken sauce (p. 135). Bean (soy) and chicken stew (p. 159). Split peas with barley (and soy grits, p. 161). Bean curd (p. 165). Address: Alexandria, Virginia.

6214. Eiyo Kaizen Fukyukai. 1982. Gendai shôyu shô-jiten Shôyu no chishiki no arekore [Little encyclopedia of modern shoyu. Various facts about shoyu (Brochure)]. Tokyo: EKF. 19 p. [Jap]
Address: Tokyo.

6215. Gunji, Atsutaka. 1982. Abunai shokuhin senshû [One thousand dangerous foods]. Tokyo: National Shuppan. 188 9. [Jap]*

• ***Summary:*** The section in soy sauce was translated by Jun Makino and published in Crackerbarrel (Chico, California). 1983, April, p. 6. As follows: "Most Japanese soy sauce makers depend on inferior quality defatted soybeans for their main ingredients. The suppliers of these defatted soybeans are fertilizer dealers, who also sell them for livestock feed and fertilizer. In order to make an inexpensive product, many soy sauce makers have adopted the dubious practice of buying the waste water by-product of monosodium glutamate manufacturing. This waste water is used in the processing of acid-hydrolyzed soy sauce to improve its poor flavor.

"Japan's top soy sauce manufacturers produce approximately 380,000 kl [kiloliters] of soy sauce each year, and 170,000 kl of that is chemical soy sauce used in mixture... During 1975 to 1979 some 224 patents on soy sauce manufacturing technology were obtained..." Address: Prof. of Food Technology, Meiwa Women's College, Japan

6216. Henderson, Bruce R. 1982. Oakland organic: A vegan primer. Albany, New York: Caboose Press. 200 p. Illust. 23 cm. [24 ref]

• ***Summary:*** This is a book about veganism which contains a few vegan recipes near the back. It focuses on the San Francisco Bay Area and urban areas, and contains extensive information about soybeans and soyfoods, much of it inspired by *Yay Soybeans*, from The Farm in Summertown, Tennessee. As follows: Miso, and Soya-Mineral Bouillon (Dr. Bronner's) (p. 19). Soy as an alternative protein source (p. 37-43). Soymilk (p. 53-56; Jethro Kloss). More soy (p. 57-61; soy pulp [okara] pudding, soysage, Garden of Eatin' Soy Jerky (illustration of package), Brightsong Missing Egg Tofu Salad (illustration), soy yogurt (fermented), soy tofu–hard, baked, or fried). Sprouting (p. 67-70; incl. soybeans). Fermented foods (p. 71-74; incl. tempeh, raw tofu). Snacks & quick foods (p. 88-96; incl. Ice Bean–soy ice cream, Ice-C-Bean). Miso and soy sauce (p. 120-21). Soy-related recipes: Baked apples with miso (p. 185-86). Tofu

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cheesecake (p. 188-89). Soysage (p. 193). Soy ice bean (p. 195). Note: Bruce Henderson was born in 1946. Address: Oakland, California.

6217. Katzen, Mollie. 1982. The enchanted broccoli forest. Berkeley, California: Ten Speed Press. 307 p. Illust. Index. 27 cm. [1 ref]
Address: Berkeley, California.

6218. Ko Swan Djien. 1982. Indigenous fermented foods. *Economic Microbiology* 7:15-38. A.H. Rose, ed. Fermented Foods. [67 ref]
• ***Summary:*** Contents: 1. Introduction. 2. Foods fermented by moulds: Roles of the moulds. 3. Foods fermented by bacteria: Fermented vegetable products, fermented fish products, fermented seeds (natto, thua-nao, dagé), fermented starch-rich raw materials (fermented maize products, fermented rice products, fermented cassava), fermented plant juice.

4. Foods fermented by a mixture of moulds and yeasts: Ragi, micro-organisms, fermented starch-rich raw materials.

5. Foods firstly fermented by moulds [as in making koji], followed by a fermentation with a mixture of bacteria and yeasts (the salt-tolerant yeasts are species of *Saccharomyces* and *Torulopsis;* the bacteria are species of *Pediococcus* and *Streptococcus*): Tane koji, soy sauce, other fermented soybean products (tauco {porridge or dry consistency}, miso, hamanatto {which is soft and has a high moisture content}, tou-shih {which has a much lower water content than hamanatto and is therefore not so soft}. These "fermented soybean products are also used as flavouring agents in cooking as well as table condiments or as a side dish").

6. Specific aspects of fermented foods: Mould species, lactic-acid bacteria, yeasts, salt. 7. Acknowledgement. References.

Concerning soy sauce (p. 30-31): "Japanese *shoyu* is made from equal amounts of soybeans and wheat." The "raw materials are inoculated with tane koji which contains spores of selected strains of *Aspergillus oryzae* and *A. soyae*. In less sophisticated soysauce factories throughout South East Asia, mould species grow spontaneously on the soybeans by natural contamination from the air and from the bamboo trays on which soybeans of former batches were incubated (Bhumiratana et al., 1980). The moulds involved are species of *Aspergillus, Rhizopus*, or *Mucor*. Some Indonesian *kecap* manufacturers inoculated the cooked soybeans with tempe [tempeh] inoculum which contains spores of *Rhizopus oligosporus*."

Tables: (1) Conferences discussing aspects of indigenous fermented foods (1977-1981, chronological). (a) Symposium / Workshop on Indigenous Fermented Foods, Nov. 21-26, 1977, Bangkok, Thailand. (b) World Conference on Vegetable Food Proteins, Oct. 29–Nov. 3, 1978, Amsterdam, The Netherlands. (c) Symposium on Fermented Foods, Nov. 22, 1978, London, England. (d) International Symposium on Oriental Fermented Foods, Dec. 10-14, 1979, Taipei, Taiwan. (e) United Nations University Workshop on Research and Development Needs in the Field of Fermented Foods, Dec. 14-15, 1979, Bogor, Indonesia. (f) VIth International Fermentation Symposium, July 20-25, 1980, London, Ontario, Canada. (g) Eighth Conference of Association for Science Cooperation in Asia (ASCA), Feb. 9-15, 1981, Medan, Indonesia.

(2) Origins of various fish sauces. (3) Origins of various fish pastes. (4) Names given in various countries to an inoculum used to manufacture food products. (5) Names given in various countries to fermented glutinous rice (*Oryza sativa glutinosa*). (6) Names given in various countries to rice wine. (7) Names given to soy sauce in different countries (*Chiang-yu* in China, *Kan jang* in Korea, *Kecap* in Indonesia, *Shoyu* in Japan).

Note: This is the earliest English-language document seen (April 2012) that uses the term "Kan jang" to refer to Korean soy sauce. (8) Soybean foods produced by a two-stage fermentation (*Hamanatto and miso* in Japan, Soy sauce in the Orient, *Taoco* in Indonesia, *Tao-si* in the Philippines, and *Tou-shih* in China). Address: Dep. of Food Science, Agricultural Univ., Wageningen, Netherlands.

6219. Kushi, Micho; Kushi, Aveline. 1982. Macrobiotic dietary recommendations. East West Foundation, P.O. Box 850, Brookline Village, MA 02147. 48 p. 22 cm. [15 ref]
• ***Summary:*** Contents: Introduction. Standard dietary recommendations. Recommended daily proportions. Foods to reduce or avoid for better health. Way of life suggestions. Daily reflections. Suggestions for patients with cancer or other serious illnesses. Special dishes. Home remedies. Baby food suggestions. Kitchen utensils. Nutritional considerations. East West Foundation information. Glossary. Bibliography.

Compiled with the help of Edward Esko, Murray Snyder, Bill Spear and Bill Tara. Address: Brookline Village, Massachusetts. Phone: -

6220. Lee, Cherl-Ho; Jul. Mogens. 1982. The effect of Korean soysauce fermentation on the protein quality of soybean. In: S. Saono, F.G. Winarno, and D. Karjadi, eds. 1982. Traditional Food Fermentation as Industrial Resources in ASCA Countries. xvii + 259 p. See p. 209-20. Proceedings of a technical seminar, held 9-11 Feb. 1981 at Medan, Indonesia. [11 ref]
• ***Summary:*** Contents: Introduction. Changes in the composition of N-compounds during fermentation. Changes in the protein quality by the fermentation methods. Discussion.

Tables: (1) Per capita daily consumption of fermented foods in Korea in 1970 was as follows: Kimchi (all kinds)

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43.7 gm, soybean sauce 23.3 gm, red pepper soybean sauce 13.9, soybean paste 10.4 gm, fermented marine foods 0.6 gm.

(2) Production of fermented soybean foods in Korea, 1971 (in 1,000 metric tons). Soybean sauce: industrial 107, home-made 116, total 223. Soybean paste: industrial 56, home-made 168, total 224. Red pepper soybean paste: industrial 23, home-made 89, total 112.

(3) Retention of the nutrients in soybean during the traditional meju making (%). (4) Chemical score and essential amino acid index (EAAI) of soybean and meju-brine mixtures ripened for 8 months.

(5) The lysine availability of soybean and meju-brine mixtures ripened for 8 months. (6) Effect of 20% protein supplementation with the fermented soybean products on the protein value of the rice diet in the rat feeding. (7) Comparison of protein conversion rates of soybean fermentation and animal production. Beef 5% (BV {biological value} 74). Milk 23% (BV 85). Egg 24% (BV 99). Home-made meju products 74% (BV 67*). Improved meju products 85% (BV 73*). Asterisk (*) = "Rice protein added with 20% of the product protein.

Figures. (1) Cartoon diagram of the process for making Korean soysauce and miso. (2) Flowsheet of improved method of making meju. (3) Graph of Changes in the content of soluble nitrogen, free amino nitrogen, and amino nitrogen in the total nitrogen of soybean during meju making. (4) Changes in the content (%) of methionine and cystine during cooking, 3-month meju fermentation, and ripening. (5) Changes in the concentration (%) of basic amino acids during cooking, 3-month meju fermentation, and ripening. (6) Changes in the concentration (%) of total amino acid in the crude protein of soybean during the ripening of different types of meju-brine mixture. Address: 1. Dep. of Food Technology, Korea Univ., Seoul, Korea; 2. Dep. of Food Preservation, the Royal Veterinary and Agricultural Univ., Copenhagen, Denmark.

6221. Lie, Goan-Hong. 1982. Nutritional aspects of fermented foods in Indonesia: An overview. In: S. Saono, F.G. Winarno, and D. Karjadi, eds. 1982. Traditional Food Fermentation as Industrial Resources in ASCA Countries. xvii + 259 p. See p. 115-30. Proceedings of a technical seminar, held 9-11 Feb. 1981 at Medan, Indonesia. [23 ref]
• ***Summary:*** Discusses the preparation of tempe, oncom, tauco, kecap, tempe bongkrek (and bongkrek poisoning), tempe gembus (okara tempeh), oncom ampas tahu (okara onchom), soysauce (kecap), and fermented fish products. Tempeh is a good source of vitamin B-12 and of certain antibacterial agents. Certain minor legumes should also be used in preparing these traditional foods.

Table I shows the most important traditional fermented foods in Indonesia, with the name and type of product, organism used, substrate, nature of product (solid, liquid), and area of production and consumption. Address: Nutrition Unit Diponegoro, National Inst. for Health Research and Development, Ministry of Health, Jakarta, Indonesia.

6222. Mehlman, Felice. 1982. Phaidon guide to glass. Oxford, England: Phaidon Press Ltd. 256 p. See p. 146-49. Illust. Index. 23 cm. [60* ref]
• ***Summary:*** The section on "Cruets and castors" states (p. 146-49) that cruets are small bottles, usually having a stopper or lid (and sometimes a handle). They are used "for serving condiments (oil, vinegar, lemon juice, etc.) at the dining table. Cruets were imported into England from Venice during the 1660s and 1670s by the Glass Sellers' Company of London, and soon afterwards George Ravenscroft [lived 1618-1681] produced 'diamond cruets,' so called for their distinctive raised network decoration. By the 1690s, many cruets were silver-mounted and hallmarked (usually at the neck). Those made with stands–generally silver, silver plate or wood–rarely show pontil marks, which were removed to prevent bottles form tilting or falling... Some, inscribed with the name of their contents, were made in sets consisting of four or more bottles including 'castors' for dry condiments with perforated metal tops for sprinkling mustard, pepper, salt, [sugar], etc. Between 1750 and 1785, cruets were commonly cut with facets over the neck and shoulders and new forms appeared: pear-shaped, cylindrical with tapering neck (c. 1775), and urn-shaped on a spreading foot (c. 1780) reflecting neo-classical tastes. Other late 18th- and early 19th-century cruets were of 'Bristol blue,' green or other richly coloured glass, frequently gilded, with the name of their contents and usually consisting of oil and vinegar bottles and three castors, in Sheffield plate or wood stands."

A photo (p. 147) shows a "Condiment set of green-tinted glass consisting of six cruets, each gilded, with contents' labels (incl. 'Soy') and geometric motifs on the pinnacle stoppers. The wooden stand is original. English, late 18th century." Address: [England]

6223. Mheen, T.I.; Kwon, T.W.; Lee, C.H. 1982. Traditional fermented food products in Korea. In: S. Saono, F.G. Winarno, and D. Karjadi, eds. 1982. Traditional Food Fermentation as Industrial Resources in ASCA Countries. xvii + 259 p. See p. 63-81. Proceedings of a technical seminar, held 9-11 Feb. 1981 at Medan, Indonesia. [13 ref]
• ***Summary:*** Discusses and gives a flow sheet and nutritional analysis for the following fermented soybean products: Meju, kochujang (soybean paste with red pepper added), doenjang, kochujang. "According to the available old literatures, the history of soybean cultivation for food uses in the Orient dates back to 4,000–5,000 years ago in China, 2,000 years ago in Korea, and 1,000 years ago in Japan (KIST, 1970, Watanabe et al. 1971)." Address: 1-2. Korea Inst. of Science and Technology, Seoul, Korea; 3. Korea Univ., Seoul, Korea.

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6224. Re: Names of soyfoods around the world: French. 1982. Form filled out by William Shurtleff based on sources given below. 1 p. [Eng, Fre]

• ***Summary:*** Gives the names of the main soyfoods in French. Sources: Bernard Storup; Bau & Debry, of France.

"Soyfoods–Aliments à base de soja.

Fresh green soybeans (edamamé)–Edamamé. Soja frais.

Whole dry soybeans–(haricots de) Soja sec / secs.

Black soybeans -

Fresh soy puree–Purée de soja.

Soy sprouts–Pousses de soja. Soja germe.

Soynuts–Soja grillé. Graines de soja grillées.

Oil roasted soynuts–Graines de soja grillées (à l'huile). Soja grillé, revenu dans l'huile.

Dry roasted soynuts–Soja grillé à sec. Graines de soja grillées à sec (or sans huile). Haricots de soja, grillés à sec.

Soynut butter–Buerre de soja grillé.

Roasted soy flour–Farine de soja grillé.

Soy coffee–Cafe de soja.

Soy chocolate–Chocolat de soja.

Soymilk–As of Feb. 2012 only the terms "boisson au soja" or "jus de soja" or "tonyu" (the Japanese word for "soymilk") can be used legally on commercial soymilk products in France–because of dairy lobby protests. The term "lait de soja" is generally used in cookbooks, books, articles, etc.

Soymilk ice cream -

Soymilk curds -

Tofu (regular)–Tofu or Tofou (le). Note: Many French speakers, who are also soyfoods experts, prefer "Tofou."

Soft tofu–Tofu mou.

Firm Tofu–Tofu ferme. Extra firm tofu–Tofu très ferme.

(Deep fried) Tofu cutlets–Tranches de tofu frites.

(Deep fried) Tofu burgers–Tofuburgers frits. Burgers de tofu (frits).

(Deep fried) Tofu pouches–Poches de tofu (frites).

Silken tofu–Tofu soyeux.

Pressed silken tofu–Tofu soyeux.

Grilled tofu–Tofu grillé.

Dried frozen tofu–Tofu séché. Tofu déshydraté.

Okara or soy pulp–Okara (l').

Yuba–Yuba (le).

Dried yuba sticks -

Sweet dried yuba -

Fermented black soybeans -

Miso or soybean jiang–Miso (le).

Soy sauce–Sauce de soja. Sauce soja. Shoyou (le).

Chinese sauces -

Tamari–Tamari (le).

Tempeh–Tempeh (le).

Fermented tofu–Tofu fermenté (au vin).

Fermented soymilk–Lait de soja fermenté.

Natto, thua-nao, kinema–Natto (le).

Soy oil–Huile de soja.

Soy lecithin–Lecithine de soja.

Soy flour–Farine de soja.

Whole (full fat) soy flour–Farine de soja entière.

Defatted soy flour–Farine de soja dégraissée.

Soy grits and flakes–Flocons et granule de soja.

Cereal-soy blends (CSM, WSB, etc.) -

Soy protein concentrate–Proteine de soja concentrée.

Soy protein isolate / Isolated soy protein–Isolat de proteines de soja. Proteine de soja isolée.

Textured soy protein products–Protéines de soja texturées (Produits à base de proteines de soja texturée).

Textured soy flour, TSF, or TSP–Farine de soja texturé.

Textured soy concentrates–Concentrat de soja texturé.

Textured soy isolate–Isolate de soja texturé.

Spun soy protein fibers–Address: Soyinfo Center, Lafayette, California 94549.

6225. Reddy, N.R.; Pierson, M.D.; Sathe, S.K.; Salunkhe, D.K. 1982. Legume-based fermented foods: Their preparation and nutritional quality. *CRC Critical Reviews in Food Science and Nutrition* 17(4):335-70. [125 ref]

• ***Summary:*** Contents: 1. Introduction. 2. Soy sauce. 3. Tempeh. 4. Meitauza. 5. Miso. 6. Natto. 7. Sufu. 8. Fermented soybean milk and other fermented legume milk products. 9. Kenima [sic, kinema]. 10. Oncom (fermented peanut press cake). 11. Waries. 12. Papadams. 13. Dhokla. 14. Khaman. 15. Idli. 16. Dawadawa. 17. Other legume-fermented foods. 18. Future of legume-based fermented foods. References. Nutritional composition is given.

Concerning Dawadawa: Made from the cotyledons of the seeds of the locust bean (*Parkia biglobosa*) it "is also known as 'kpalugu' by the Kusasis and Dagombas of northern Ghana, 'iru' in Nigeria, 'kinda' in Sierra Leone, and 'netetou' in Gambia." It is a protein-rich, "strong-smelling product" that is used as a supplement in soups, stews, porridges, and dumplings. It can be stored without refrigeration for about a year in the tropics. It is eaten in all northern areas of the coastal nations of West Africa: Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Benin, Nigeria, and Cameroun, and in the tier of countries above these including Bissau, Gambia, Senegal, Mali, Upper Volta, Niger, and Chad.

Note 1. Soybeans are not mentioned in connection with dawadawa.

Note 2. The source of the misinformation about "kenima" is Batra and Millner (1976). Address: 1-2. Virginia Polytechnic Inst. and State Univ., Blacksburg, Virginia; 3. Univ. of Arizona, Tucson; 4. Mahatma Phule Agricultural Univ., Rahuri, Maharashtra State, India.

6226. Reed, Gerald, ed. 1982. Prescott & Dunn's industrial microbiology. 4th ed. Westport, Connecticut: AVI Publishing Co. xii + 884 p. Illust. Index. 23 cm.

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• ***Summary:*** Chapter 12 (p. 492-538; 129 refs.), by H.L. Wang and C.W. Hesseltine, is titled "Oriental Fermented Foods." It discusses: Soy sauce, miso, tempeh, ontjom, Hamanatto (known as tou-shih in China, tao-si in the Philippines, and tao-tjo in the East Indies [No! Tao-tjo is Indonesian-style miso]), sufu (also called Chinese cheese or bean cake), natto, idli, ang-kak, fermented fish products (incl. nuoc-mam), absence of mycotoxin in fermented foods, summary. Address: Vice president, Amber Labs, Milwaukee, Wisconsin.

6227. Rose, Anthony H. ed. 1982. Fermented foods. *Economic Microbiology* 7:1-337. (New York: Academic Press, Inc.).
• ***Summary:*** Includes: 1. History and scientific basic of microbial activity of fermented foods by Anthony H. Rose. 2. Indigenous fermented foods by Ko Swan Djien. 3. Soy sauce and miso by Brian J.B. Wood. Address: School of Biological Sciences, Univ. of Bath, Claverton Down, Bath, BA2 7AY England.

6228. Saono, Jenny K.D.; Baba, T.; Matsuyama, A. 1982. Problems to be assessed for further development of traditional food fermentation in Indonesia. In: S. Saono, F.G. Winarno, and D. Karjadi, eds. 1982. Traditional Food Fermentation as Industrial Resources in ASCA Countries. xvii + 259 p. See p. 189-99. Proceedings of a technical seminar, held 9-11 Feb. 1981 at Medan, Indonesia. [6 ref. Eng.]
• ***Summary:*** Contents: Introduction. Tape. Brem wine. Brem cake. Palm wine and vinegar. Oncom. Tauco and kecap. Tempe bongkrek (which can cause fatal food poisoning). Concluding remarks.

Unconventional substrates for tempe, oncom, and kecap include winged beans, mungbeans, cowpeas, leucaena beans, faba beans, jack beans, sesban beans, and string beans. Address: Agricultural Products Processing Pilot Plant Project, JICA-FATEMETA, IPB, Bogor, Indonesia.

6229. Saono, S.; Winarno, F.G.; Karjadi, D. eds. 1982. Traditional food fermentation as industrial resources in ASCA countries. Jakarta, Indonesia: Indonesian Institute of Sciences (LIPI). xix + 259 p. Proceedings of a technical seminar, held 9-11 Feb. 1981 at Medan, Indonesia. No index. 28 cm.
• ***Summary:*** ASCA, the Association for Scientific Cooperation in Asia, was established in 1970. Each of the many interesting papers from this symposium that relates to soya is cited separately. Address: Indonesia.

6230. Sattilaro, Anthony J.; Monte, Tom. 1982. Recalled by life. Boston, Massachusetts: Houghton Mifflin Co. x + 223 p. No index. 22cm.
• ***Summary:*** "Four years ago, Dr. Sattilaro, President of the Methodist Hospital in Philadelphia, was dying of cancer. Today, after changing his lifestyle [primarily by adopting a macrobiotic diet], prescribed by Michio Kushi, he is totally free of this disease. Before this book was published, his remarkable story appeared in *Life Magazine* and the *Saturday Evening Post*, and he has told his story on television." Address: M.D., Philadelphia.

6231. Sherman, Kay Lynne, comp. 1982. The Findhorn family cookbook: A vegetarian cookbook which celebrates the wholeness of life. Boulder, Colorado: Shambhala. Distributed in the U.S. by Random House. 152 p. Illust. Recipe index. 24 cm.
• ***Summary:*** Originally published in Findhorn, Scotland, by Findhorn Publications. Soy-related recipes include: Tofu whey soup (p. 23; the whey is from homemade tofu). Tofu teriyaki (p. 48). Tofu (marinated and baked, with peanut sauce, p. 65).

There is an entire chapter on tofu (p. 68-76). The method for making tofu is that developed by Jacques Cormier, using rather large equipment to make enough tofu for many people. "If you become intrigued with the art of making tofu, and would like to have more tofu recipes, as well as information about this centuries-old tradition, we highly recommend reading *The Book of Tofu* by William Shurtleff and Akiko Aoyagi (Autumn Press, 1975)." Recipes: Homemade tofu (with 29 photos showing each step in the process at Findhorn's tofu shop). Scrambled tofu (p. 111). On the unnumbered page after p. 75 is an illustration of a tofu forming box for home- or community-scale tofu. Address: Scotland.

6232. Shulman, Martha Rose. 1982. Fast vegetarian feasts. New York, NY: The Dial Press. 312 p. Illust. Index. 24 cm.
• ***Summary:*** This is a book of "delicious healthful meals in under 45 minutes. It is interested in protein complementarity with a low-fat diet. Soyfoods are used extensively. Wherever a heart symbol appears next to a recipe, it is acceptable for low-salt and low-fat dishes. The ingredients section (p. 13-18) discusses and defines soybeans ("the king of beans, as far as nutrients are concerned"), soy flakes, soy grits, miso, and tofu. "Tofu is my mainstay. It is a miracle food." Savorex, Marmite, and Vegex are three different brand names for the same product, a yeast extract that comes in the form of a dark viscous paste." Never cook soybeans in a pressure cooker. They tend to foam and clog the safety valve, which can cause an explosion.

Page 14 states: "Soy flakes. Soybeans that have been cooked, split, and dehydrated. Because they take only 30 minutes to cook and are as high in nutrients as soybeans, they are a perfect high-protein convenience food. Soy flakes can always be substituted in recipes for soybeans.

"Soy grits: Cracked soybeans. These are a nutritious addition to grain dishes (you can cook them along with the

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grains), have a nutty texture and taste, and take only 40 minutes to cook–another good convenience food."

Soy-related recipes include Tofu mayonnaise (p. 57). Tofu cream sauce. Tofu béchamel (p. 58). Morning tofu spread or evening pudding (p. 59). Roasted soybeans [dry roasted soynuts] (p. 60). Tamari-bouillon broth (p. 62). Instant tamari-bouillon broth (p. 63). Simple miso soup (p. 68-69). Miso soup with buckwheat noodles (p. 70).

One chapter is titled "Grains, legumes, tofu, and vegetables" (p. 91). Easy hiziki [hijiki] and squash dinner with soba and soy (flakes and tamari, p. 101). Brown rice "risotto" with soy flakes. Eggplant stuffed with rice and soy "risotto" or risi e bisi (p. 110). Fried rice and soy grits with vegetables (p. 114). Spicy eggplant miso sauté with bulgur. Purple cabbage, tofu, onions, and winter squash with miso (p. 125-26). Cabbage leaves stuffed with kasha, with creamy tofu sauce (p. 130). Tofu cutlets (p. 131). Chilled tofu with dipping sauces (p. 132). Teriyaki sauce (p. 133). Tahini-tamari sauce. Miso toppings for tofu and grains (adapted from The Book of Miso, p. 134-35). Tofu vegetable curry (p. 136). Chinese-style tofu with vegetables and grains (p. 138-39). Tomato sauce with soy grits (p. 205). Tofu tomato sauce. Pasta with tofu cream sauce (p. 209). Pesto with miso (p. 217). Potato, tofu, and tomato tacos (p. 226). Tofu and poblano tacos (p. 228). Green tomato, corn, and tofu tacos (p. 230). Tofu mayonnaise (p. 237). Green tofu dressing (p. 238). Watercress, mushroom, and tofu salad (p. 252). Cottage cheese and tomato salad with miso dressing (p. 256). Tofu noodle kugel (p. 279).

Note: A revised 356-page edition was published in 1986. The author is now living in Paris (May 1985) and there is an added chapter of fish recipes. She has become "a more serious fish cook..." How can a vegetarian book contain a chapter of fish recipes? Address: Paris, France.

6233. Simonds, Nina. 1982. Classic Chinese cuisine. Boston, Massachusetts: Houghton Mifflin. xi + 353 p. Illust. Map. Index. 23 cm.

• ***Summary:*** This is a remarkable book by one who is part "of a new generation of American chefs and food writers." The Pinyin system of romanization, which was of romanization, "which was officially adopted by the People's Republic of China in 1979, has been used for most of the Chinese words in this book" (p. vi).

A map of China (facing page 1) shows the individual provinces and the four main culinary schools: northern, western, eastern, and southern–as explained on pages 1-4. Taiwan is considered part of the eastern school. The southern school is comprised of only two provinces: Guangdong (which includes the city of Guangzhou–formerly named Canton) and Guangxi.

Soyfoods are used and discussed liberally throughout this book. The section titled "Condiments, seasonings, and special ingredients" (p. 5-11) gives detailed discussions of hoisin sauce, oyster sauce, soy sauce (the three grades are light, medium and heavy, with light having a delicate and slightly more subtle flavor than the other varieties), sweet bean sauce (and bean pastes including brown bean paste and yellow bean paste), fermented black beans (and black bean sauce).

The next section, "Selected fresh and pickled vegetables" (p. 11-14) has an entry for bean sprouts (the two main types are sprouted from mung beans {which are green} and soybeans {which are yellow}: soybean sprouts have a stronger flavor and require longer cooking).

Soy related recipes: Beef with noodles in a pot (with "2 cakes bean curd," p. 76). Cold spicy noodles (with "2 cakes bean curd, about 3 inches square and 1 inch thick," p. 80).

One chapter, titled "Soybeans and bean curd" (p. 113-29) begins with a charming introduction to "stinky bean curd" (fermented tofu). As evening fell after dinner, luscious scents and fragrances filled the air. Yet there was "a putrid smell that defied classification. What was that baffling, pungent odor, present in every part of the city." After a bit of research she soon discovered that it came from "stinky bean curd (*chou dou fu*), a favorite snack of the Chinese." Vendors of this unusual "delicacy ran rampant all over the city with their portable deep deep-fryers. My Chinese surrogate sister and brothers, who were great fans of the stuff, used to race outside, armed with empty bowls and chopsticks, at the sound of the stinky bean curd man's call. (The smell usually preceded him by two blocks, giving everyone plenty of notice.)" It is "made by fermenting fresh bean curd squares in a brine with assorted spices and pickled vegetables." The resulting cakes are deep-fried ... until golden and eaten with soy sauce, vinegar, mashed garlic, or chili paste."

The soybean is used to make various Chinese seasonings including soy sauce, hoisin sauce, sweet bean sauce or paste, and hot bean paste. Fresh green soybeans are cooked and served with soy sauce and sesame oil. Whole dry soybeans are fried and eaten as a snack.

"The nutritious properties of the soybean further explain why it is so popular with the health-conscious Chinese."

Heating soybean milk gives "bean milk sheets (*fu pi*)" [yuba]. Also mentions "bean curd sticks (*fu zu*)" [dried yuba sticks], bean curd sheets (*bai ye*)," and "bean curd noodles (*gan si*)." In terms of consistency, the three basic types of bean curd are soft, medium, and hard (*dou fu gan*)." "Bean curd is also fermented in rice wine and spices to make a popular seasoning (*dou fu ru*), which has a "slightly cheeselike flavor."

Nina concludes the introduction: "As most nutritionists will agree, the soybean and its many by-products are the foods of the future." Line drawings show: soybeans, bean curd, bean milk sheets, bean curd sheets, bean curd sticks, and bean curd noodles. Recipes in this soy chapter: Meatball and soybean casserole (with "4 cups dry soybeans, p. 116). Sweet soybean milk (How to make at home; the Chinese

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equivalent of America's cup of coffee for breakfast, with 2 cups dry soybeans and 1 cup sugar. Typically accompanied by a sesame flat bread {*shao bing*} and a fried cruller {*you tiao*}). Stir-fried soybean sprouts with red-in-snow. Stuffed bean curd rolls (with "8 dried bean curd sheets or bean milk sheets"). Sweet-and-sour fish slices (with "10 dried bean milk sheets"). Eggplant rolls (with "6 dried bean milk sheets") Buddha's delight (a well-known vegetarian dish, with "2 ounces bean curd sticks") Cold tossed bean curd and celery shreds (from Sichuan, with "8 cakes bean curd, about 3 inches square and 1 inch thick") Red-cooked bean curd Braised bean curd with black mushrooms in oyster sauce (from Sichuan). Stuffed bean curd (from Canton) Ma po bean curd (from Sichuan). Eight-treasure stir-fried vegetables with meat (with "3 cakes bean curd, about 3 inches square and 1 inch thick"). Northern-style bean curd (p. 129).

More soy related recipes: Steamed fish fillets in black bean sauce (with "1 tablespoon fermented black beans, rinsed, drained, and minced," p. 183). Double-cooked pork slices (with "3 cakes bean curd," p. 230). Steamed spareribs in black bean sauce (with "2 tablespoons fermented black beans, rinsed, drained, and coarsely chopped," p. 234). Stuffed peppers in black bean sauce (with "1 tablespoon fermented black beans, rinsed, drained, and minced," p. 272)

One entire chapter is titled "Vegetarian dishes" (p 279-94). The introduction discusses the Kuantu Temple (a Buddhist-Taoist sanctuary about 1 hour drive from Taipei), and the origin of vegetarian cuisine in China in early Buddhist and Taoist monastery kitchens. Wheat gluten (*mian jin*) and related preparations such as deep-fried wheat gluten balls (*mian jin pao*) steamed wheat gluten chunks (*kao fu*), plus seasonings such as "pickled bean curd (*dou fu ru*)" are often used. Soy related: Broccoli in mock crabmeat sauce (with "1 cake bean curd," p. 285). Vegetarian lion's head (with "4 cakes bean curd," p. 287). Mock goose (with "20 bean milk sheets" [yuba], p. 290-91). Vegetarian eight treasures (with "2 cakes bean curd," p. 291) Wheat gluten (how to make at home from wheat flour, p. 292).

More soy related. Eight-treasure mixed soup pot (with 2 cakes bean curd," p. 310-11). Hot and sour soup (with "2 cakes bean curd," p. 316).

About the author: A photo of Nina Simonds (in Chinese clothing) appears on the inside rear dust jacket. She studied Chinese food and cooking, language and culture, in Taiwan for more than three years (she arrived there at age 19) with Chinese master chefs at the Wei-Chuan school in Taipei, while living with a Chinese family. She subsequently received the Grand Diplôme from La Varenne École de Cuisine in Paris, where she also taught Chinese cooking. "For the past eight years (prior to 1982) she has taught in cooking schools all over the United States and Canada and her articles have appeared in *Gourmet* and *Cuisine* magazines and the *Boston Globe*" (from the inside rear dust jacket). Address: Salem, Massachusetts.

6234. Steinkraus, Keith H. 1982. The indigenous fermented foods. *Nestle Research News* 1980/81. p. 23-28. [19 ref]
• ***Summary:*** Contents: Introduction. Classification of indigenous food fermentations. Modern methods of introducing meat textures into vegetable substrates. Indigenous methods for introducing meat-like textures into vegetable substrates. Fermented foods involving development of meat-like flavor. Fermented foods involving an acid fermentation. Fermented foods involving an alcoholic fermentation. Germination (malting). Production of sweet/sour alcoholic pastes from high starch substrates. Leavened bread without the use of wheat. References. Contains many interesting color photos of indigenous fermented foods, some of them soy-based. Address: Prof. of Microbiology and Food Science, Inst. of Food Science, Cornell Univ., Geneva/Ithaca, New York.

6235. Steinkraus, K H. 1982. Fermented foods and beverages: The role of mixed cultures. In: A.T. Bull and J.H. Slater, eds. 1982. Microbial Interactions and Communities Vol. 1. New York: Academic Press. See p. 407-42. [100+ ref]
• ***Summary:*** Contents: 1. Introduction. 2. Development of meat-like flavors through fermentation. 3. Development of meat-like textures through fermentation. 4. Foods and beverages involving an alcoholic fermentation. 5. Foods involving an acid fermentation. 6. Summary. Address: Cornell Univ., Geneva, New York.

6236. Steinkraus, Keith H. 1982. Traditional food fermentations as industrial resources. In: S. Saono, F.G. Winarno, and D. Karjadi, eds. 1982. Traditional Food Fermentation as Industrial Resources in ASCA Countries. xvii + 259 p. See p. 3-16. Proceedings of a technical seminar, held 9-11 Feb. 1981 at Medan, Indonesia. [30 ref]
• ***Summary:*** Contents: Introduction. Production of meat-like flavours from vegetable proteins. Soysauce (Japanese Shoyu) and miso fermentation. Fish/shrimp sauces and pastes. The koji principle. Meat substitutes (analogues). Indonesian tempe kedele. Traditional tempe fermentation, industrial production of tempe. A process for raising the protein content of high starch substrate. Leavened bread-like foods without the use of wheat or rye. Coconut protein as an industrial resource. Summary. Address: Prof. of Microbiology, Inst. of Food Science, Cornell Univ., Geneva, New York 14456.

6237. Stobart, Tom. 1982. Herbs, spices, and flavorings. Woodstock, New York: The Overlook Press. 320 + 8 p. of plates: Illust. (some color). Index. 24 cm.
• ***Summary:*** This 1982 edition–though about 60 pages longer than the 1970 edition (which see)–is identical to it in all entries related to soy, except that the entries are on different pages.

About the author: "Tom Stobart, O.B.E. [officer of

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the Order of the British Empire], is not only an expert on cookery, but is also a well-known photographer and mountaineer. As a member of the successful Hunt-Hillary expedition in 1953, he filmed *The Conquest of Everest,...* Recently he has directed and photographed the *Master Chefs*, a series of films showing famous dishes being prepared in their local settings." He has traveled widely. Address: England.

6238. Takara Shuzo K.K. 1982. Shirozake no dentôteki seizô-hô [Re: Traditional method of making shirozake]. Letter to William Shurtleff at Soyfoods Center. 3 p. Handwritten. [Jap]

• ***Summary:*** Company name with diacritics is: Takara Shûzo K.K. Address: Japan.

6239. Tropp, Barbara. 1982. The modern art of Chinese cooking. New York, NY: William Morrow and Co. 623 p. Illust. Index. 23 cm.

• ***Summary:*** One of the best and most authoritative books on Chinese food written by a Westerner, who is a Chinese scholar turned Chinese cook, and who lives in San Francisco. Contains an excellent, long "Glossary of Ingredients" (p. 529-81) with extensive information about Chinese foods (plus their names spelled phonetically in Mandarin and Cantonese) including: Hoisin sauce (Mandarin: hai-hsyen-jyang; Cantonese: hoi-seem-jyeung. The characters mean "sea-freshness sauce." She uses a widely distributed brand, Koon Chun, that is jam-like in consistency and on the sweet side). Mock meat (Mandarin: myen-jin; Cantonese: ming-gun; incl. Companion brand Braised Dried Bean Curd, Curried Braised Gluten, Curry Vegetarian Mock Duck, and Longevity brand Curried Mock Abalone). MSG ("Originally made from dried fermented wheat gluten"). Salted black beans (Mandarin: doe-jrr; Cantonese: dao-see; fermented black soybeans. This "popular Chinese seasoning is also known as Chinese black beans, salted beans, fermented black beans, and occasionally ginger black beans." "Shreds of ginger or orange peel or a dash of five-spice powder occasionally added to season the beans in the final soaking stage." Barbara prefers salted black beans that are seasoned with ginger and she avoids the kind seasoned with five-spice powder. She uses Mee Chun brand and does *not* wash salted black beans, as is common; it is a practice she has never understood).

A recipe for Hot and sour Hunan chicken (p. 142-43), in the ingredients section titled "Aromatics," calls for "2 tablespoons Chinese salted black beans (page 561)."

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "Chinese salted black beans" or the term "ginger black beans" to refer to fermented black soybeans. This term former is also used in recipes for Garlic-stewed spareribs nuggets (p. 203) and Hunan eggplant with spicy meat sauce (p. 293).

Soyfoods: Introduction, soy sauce (Kikkoman soy sauce {Barbara's everyday favorite}, thin soy sauce, black soy sauce, mushroom soy sauce, good Chinese brands are Superior and Koon Chun). Tofu (fermented tofu {incl. Pepper Bean Cake with hot chili flakes–{*la jiao doufu-ru*}}, fresh tofu, pressed tofu.

"Mushroom soy sauce is a flavored soy sauce, something between thin soy sauce and black soy sauce in saltiness. The brand I like best is Pearl River Bridge, which is made specifically with straw mushrooms and is classified in Chinese as black soy sauce owing to a touch of sugar that is included in the mixture," p. 569).

Note: This is the earliest document seen (June 2011) that uses the term "ginger black beans" to refer to fermented black soybeans (*douchi*).

Ms. Tropp (see photo on inside rear dust jacket) studied Chinese language, poetry, and art history at Columbia University, Yale, Princeton, and the University of Taiwan. Her two-year sojourn in Taiwan found her living with remarkable Chinese families. On the rear cover is a nice long quotation from James Beard.

6240. Wang, H.L.; Hesseltine, C.W. 1982. Oriental fermented foods. In: G. Reed, ed. 1982. Prescott & Dunn's Industrial Microbiology, 4th ed. Westport, CT: AVI Publishing Co. xii + 883 p. See p. 492-538. Chap. 12. [129 ref]

• ***Summary:*** Contents: Introduction. Soy sauce. Miso. Tempeh. Ontjom. Hamanatto. Sufu. Natto. Idli. Ang-kak. Fermented fish products (esp. nuoc mam). Absence of mycotoxin in fermented foods. Summary. Address: NRRC, Peoria, Illinois.

6241. Wholefood Cookery School. 1982. Homemade tofu and its uses. Wigston, Leicester: WCS. 12 p.

• ***Summary:*** Contents: Introduction. What is tofu? Buying and storing tofu. Making tofu at home. Recipes using tofu: Tofu tamari and ginger. Tofu burgers. Tofu ice-cream. Tofu mayonnaise. Tofu quiche. Tofu dip. Address: 16, 18 Bushloe End, Wigston, Leicester, LE8 2BA England. Phone Leicester (0533) 883701.

6242. Yokotsuka, Tamotsu. 1982. Industrial application of proteinous fermented foods. In: S. Saono, F.G. Winarno, and D. Karjadi, eds. 1982. Traditional Food Fermentation as Industrial Resources in ASCA Countries. xvii + 259 p. See p. 145-80. Proceedings of a technical seminar, held 9-11 Feb. 1981 at Medan, Indonesia. [130 ref]

• ***Summary:*** Contents: Introduction. Japanese shoyu. Koikuchi, usukuchi, tamari, shiro, saishikomi, fish-soy, JAS grades. The soysauce produced in other Oriental countries (Korea, Taiwan, Singapore, southern China, Inyu, tamari-style). Miso. Manufacture: Koikuchi shoyu (treatment of raw materials, koji making, mash making

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and aging, pressing of the mash, refining), tamari shoyu, miso. Some recent research and technological progress in shoyu and miso manufacturing: Whole and defatted soybeans as raw materials, treatment of raw materials, koji molds, koji making, control of mash, refining (pressing of the mash, pasteurization), product (colour, flavour, flavour components).

Tables: (1) Annual production of 5 different kinds of shoyu in Japan, and total, 1979. (2) Typical composition of 6 different kinds of shoyu (analyzed by Kikkoman Shoyu Co., Ltd., 1978). For each gives: Be (Baume), NaCl, total nitrogen, formol nitrogen, reducing sugars, alcohol %, and pH. (3) Composition of 7 types of typical Japanese miso (Ebine, 1980). (4) NK cooking method of soybeans as compared to the conventional method (Tateno and Umeda, 1955). (5) Chemical analyses of shoyu fermented from soybeans denatured by methanol and by conventional cooking (Yamaguchi, 1954). (6) Analysis of liquid part of shoyu mash after 40 days prepared from defatted soybean meal denatured by ethanol, isopropanol, or NK cooking (Fukushima and Mogi, 1955, 1957). (7) Effect of cooking conditions of soybeans on the enzymatic digestibility of protein (Yokotsuka et al., 1966). (8) Cooling speed and digestibility of protein. (9) Fraction of proteases produced by *Aspergillus sojae* through Sephadex G-100 (Nakadai, 1977). (10) Changes of viable counts of yeast in shoyu mash (Mogi Keitaro et al., 1968).

Figures: (1) Flow sheet–Koikuchi shoyu fermentation. (2) Flow sheet–Miso fermentation. (3) Cross-sectional illustration–Continuous soybean cooker: Screw type and net conveyor type. (4) Temperature change of materials during koji cultivation by the conventional method using wooden trays (Shibuya, 1969). (5) Koji cultivation at 25°C (Haga et al., 1967). (6) Preferable temperature change of the materials during 3-day koji cultivation (Haga et al., 1967). (7) Temperature change of the materials during mechanical koji cultivation with a through-flow system of aeration during 3 days (Shibuya, 1969). (8) Temperature change of the materials during mechanical koji cultivation with a through-flow system of aeration during 4 days (Shibuya, 1969). (9) Koji culturing machines with a through-flow system of aeration. Rectangular type, circular type (batch), circular type (continuous). Address: Kikkoman Corp., Noda-shi, Chiba-ken, Japan.

6243. Chico-San, Inc. 1982? From yesterday comes today's tamari... or, shoyu, shoyu, who's got the shoyu. Chico, California. 10 p. Undated.
• ***Summary:*** About San-J tamari. Address: Chico, California 95927.

6244. Crosse, Victor M. 1982? The history of Crosse & Blackwell. Croydon, Surrey: C&B. 3 p. Undated.
• ***Summary:*** This typescript was sent by R.H. Starling on 26 Jan. 1982 with a cover letter responding briefly to five questions from William Shurtleff concerning the history of the company's work with soy products. The first 3 questions were: 1. When did Crosse & Blackwell (C&B) first import soy sauce to England? 2. From which country was that first soy sauce imported? 3. Was C&B the largest importer or was the East India Company?

"Crosse & Blackwell pioneered the importation of products from the Indies and the East, and pickles and spices have long formed an important part of our business. Unfortunately we are unable to answer the questions in your letter as many of our early records were destroyed during World War II."

Crosse & Blackwell traces its origins back to 1706, at No. 11 King Street, Soho, now known as Shaftesbury Avenue. "In that year, on the site of the old Shaftesbury Theatre, a firm by the name of West and Wyatt started trading as 'oilmen' and during the century which followed became renowned for the quality of the pickles, sauces and condiments which they sold mainly to the nobility and gentry of those times."

In 1819 two young boys (who had never met) arrived at the company to serve as apprentices: Edmund Cross and Thomas Blackwell. In 1829 the two boys, who had become great friends, decided (upon the owner's retirement) to take over the business, which they purchased in Jan. 1830. The factory and shop were located at 11 King Street.

The first order from abroad came from India in 1840. Soon the company was making a vast assortment of canned foods. Address: Crosse & Blackwell Ltd., St. George's House, Croydon, Surrey CR9 1NR England. Phone: 01-686-3333.

6245. **Product Name:** Soy Pate.
Manufacturer's Name: Earth Angel Soyfoods.
Manufacturer's Address: 53 Stanley Ave., Mt. Waverley (E. Oakleigh), VIC 3149, Australia. Phone: 544-8020.
Date of Introduction: 1982?
Ingredients: Okara, soymilk, brewer's yeast, tamari, oil, herbs and spices.
Wt/Vol., Packaging, Price: 250 gm.
How Stored: Refrigerated.
New Product–Documentation: Label. 3 5 inches diameter. Paper. Green on white. Illustration of winged pixie between two groups of leaves. "Great on sandwiches, toast, or appetizers. No additives or preservatives. No additives or preservatives. Keep refrigerated."

6246. Fountain, M.S. 1982? Multimarket positioning of natural tamari (Leaflet). Colonial Heights, Virginia. 1 p. Single sided. 28 cm. No. 14. Undated.
Address: San-J International, 3236 Boulevard, Colonial Heights, Virginia 23834.

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6247. **Product Name:** Avo-Seitan Sandwich.
Manufacturer's Name: Grain Dance
Manufacturer's Address: San Francisco, California
Date of Introduction: 1982?
Ingredients: Incl. whole wheat bread, seitan (Organic hard red winter whole wheat, spring water, tamari [actually shoyu], ginger, and onions), avocadoes.
New Product–Documentation: Talk with Paul Duchesne of Fairfax, California. 1991 Nov. 19. Ron Harris of Grain Dance definitely made an avocado and seitan sandwich. While Paul's Cauldron Express (started in Jan. 1982) was distributing Ron's seitan, Ron was distributing his own avo-seitan sandwich. Michael Pierce designed the label. The product was on the market for at least a few months. Paul was a bit annoyed that Ron would not let him distribute the sandwiches. For a while, Ron also made delicious Hammentaschers (filled with poppy seeds) and watermelon juice (in the summer). He made these products in order to try to help pay the rent on his space in the Haight-Ashbury district of San Francisco. Those were the only products of which Paul was aware.

6248. Kennedy, J. Robert. 1983. History of Chico-San and macrobiotics in America (Interview). Conducted by William Shurtleff of Soyfoods Center, Jan. 6. 2 p. transcript.
• ***Summary:*** Rice cake production started in Canada.

The following are not that important: (1) The conflict over Erewhon buying organic brown rice from the Lundbergs. (2) Erewhon taking away Chico-San's New York market (Bob didn't even know this). (3) Lawsuit (that never went to court) between Chico-San and Lundberg.

The initial contract with the Lundbergs to grow brown rice exclusively for Chico-San was risky for Chico-San; they agreed to pay higher prices if the yield was low. Michio and Paul Hawken tried to get the Lundbergs to break the contract. Bob does not know who went to who. Did the Lundbergs go to Erewhon or vice versa? Why did this happen? Problems arose in the third year of the contract. The first year, the Lundbergs grew only 67-70 acres of brown rice, which Chico-San sold by the end of January. The second year, Chico-San also sold all the rice that the Lundbergs grew. The third year was the fire at Chico-San, and Chico-San was unable to sell all the rice they had agreed to sell. Michio came to California with Aveline and they tried to talk the Lundbergs into selling some organic brown rice to Erewhon. But there was no conflict. Michio used to phone Bob Kennedy at nights in those days asking if Erewhon could buy organic brown rice at no profit to Chico-San. Bob said "no." That is not a conflict, and there were no bad feelings.

There was no lawsuit between the Lundbergs and Chico-San–just some litigation prior to what could have been a lawsuit, concerning the third year and the fire. Chico-San was out of business for almost a year because of that fire, and could not sell all the rice they had contracted to sell that year. The litigation led to changes in the original contract: (1) Chico-San could and would pay for the rice over an extended schedule. (2) The Lundbergs could sell the organic brown rice to other customers.

Why is Chico-San a loner in the natural food industry? They are a manufacturer and importer which uses other distributors; they do not generally distribute themselves–unlike Erewhon. However now they have some big trucks, used to distribute their own products in the San Francisco Bay Area.

Erewhon was able to take away Chico-San's New York market because Erewhon was price cutting. Kennedy refused to cut prices. Also, Erewhon sold direct to some markets, delivering their own products in their own trucks–unlike Chico-San which generally used other distributors. Many other companies besides Erewhon did this too. Most of those companies are gone now, but Chico-San remains!

Whenever Paul Hawken would talk to Bob Kennedy he always seemed to have a chip on his shoulder [a sort of grievance].

Initially Chico-San had an exclusive agreement with Ohsawa. Chico-San broke that in deference to Michio when Aveline set up Erewhon. This is a big, important point that should not be forgotten.

Ohsawa's first lectures in the USA, in early 1960, were at the Buddhist Academy in New York City.

There were two main reasons the group that formed Chico-San left New York and traveled to California: Rice (most important) and nuclear safety. Ohsawa strongly supported the group's efforts. Ohsawa tried to set up Japanese companies to supply Chico-San, but it was difficult. Then Muso Shokuhin [Muso Foods], in Osaka, came into the picture, and Chico-San started to order from them. Then they went back to ordering from Tokyo. There were some problems between the export companies in Tokyo and Osaka. Ohsawa Japan was the export company and Nippon CI was the educational arm.

The amount of miso and shoyu that Chico-San sells today is proprietary [confidential] information. Chico-San is now in serious talks with some manufacturers in Japan.

Chico-San started to make rice syrup in 1972. Bob traveled to Japan twice, visited some *amé* [rice syrup] makers, and got information on quantities, temperatures, etc. It's a fermentation process.

Chico-San expects to have a new rice cake plant in New Jersey in operation by December 1981. The plant will make only rice cakes but Chico-San will store

warehouse some of its Japanese foods in the plant. The next plant after that will be in Canada, then one in Europe after that. If these are successful, Chico-San will add distribution of Japanese products. They will sell both organic brown rice (from the Lundbergs and from Arkansas) and non-organic commercial brown rice–each clearly labeled.

What are Chico-Sans plans concerning miso and shoyu?

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In collaboration with Ohsawa Japan, two Japanese makers of miso and shoyu are very interested in coming to the U S and helping Chico-San to set up a plant in the U S. They would provide technical assistance and be part shareholders / investors. Junsei Yamazaki plans to return to the Chico area, possibly this spring. He studied fermentology, so he may be the process overseer.

In 1961 Chico-San received its first imports from Japan, from Tokyo, from George Ohsawa himself. Previously Herman Aihara in New York had ordered these imports from George Ohsawa. He had received 2-3 shipments before Chico-San was incorporated. George Ohsawa encouraged Muso to get started. Three companies tried to get started and folded before Muso took root. Bob will try to find the details (date and products) of Chico-San's first shipment from Muso. Bob also has George Ohsawa's early correspondence.

Bob would like to read the final draft of Shurtleff's History of Macrobiotics. Peter Milbury will look at it too. Address: Chico, California.

6249. Sheraton, Mimi. 1983. Restaurants: Japanese fare for theater nights. *New York Times*, Jan. 14, p. C18.
• ***Summary:*** This is a review of Sushiko, a Japanese restaurant at 231 West 55th St., between Broadway and Eighth Ave. in New York City. They sell "fried half-eggplant mellowed with miso sauce, topped with sesame seeds; soybean cakes [tofu] in seaweed soup with vegetables; oshitashi [o-shitashi, o-hitashi], a salad of marinated spinach with soy sauce and crunchy flakes of dried bonito, and natto, slimy, fermented soybeans in an egg and scallion sauce."

And "zaru soba, cold buckwheat noodles with soy sauce, horseradish and scallions were refreshing." "Broiled fish, meats and poultry, done teriyaki-style are stringy and less interesting ..."

6250. Gevaert, Pierre. 1983. Re: Making miso, tofu, and soy sauce in Europe. Questions answered on Soyfoods Center letterhead (dated 26 Jan. 1983) and returned to SC. 1 p.
• ***Summary:*** Q1. Are you now making soy sauce (shoyu or tamari) in both Belgium and France? Please give the address and phone numbers of each plant where you are making soy sauce. When did you start making soy sauce in France?

Answer 1. We will finally start making shoyu in April 1982, only in France. At Lima-Andiran, 47170 Mezin, France. Tel. 5365 1002. Lima is presently making miso at their plant in Mezin.

Q2. Do you make miso at your plant at Sint-Martens-Latem? Answer 2. No.

Q3. Are you making tofu, yourselves, anywhere in Europe or is it made for you by other companies? Answer 3. Jonathan at Antwerp, Belgium, makes it for us using our organic soybeans.

Q4. Can you tell me (if it is not a secret) roughly how much of the following in metric tons you produced in 1982? Answer 4. Soy sauce 0. Miso 5 tons. Tofu 2/3 tons. Address: Lima Foods, Edgar Gevaertdreef 10, Sint-Martens-Latem 9830, Belgium. Phone: 09-52-4176.

6251. Arasaki, Seibin; Arasaki, Teruko. 1983. Vegetables from the sea: Low calorie, high nutrition, to help you look and feel better. Tokyo: Japan Publications. 196 p. Illust. (color plates and line drawings). Index. Jan. 26 cm. [Eng]
• ***Summary:*** This is probably the best English-language book written about sea vegetables. Contents: Preface. Part I: General information. Introduction. 1. In the human diet, In general, in Japan. 2. Dietary and medical applications. Chemical composition (polysaccharides, proteins, amino acids and peptides, fats and lipids, vitamins, minerals, nutritional value, pigments), flavor and taste (specific Japanese seaweeds as foods), medical applications (antilipemic and blood-cholesterol reducing substances, blood anticoagulants, antitumoral {anti-cancer} effects, antibiotics, toxic compounds, medical uses of alginate), folk medicine, thalassotherapy and algotherapy, longevity. 3. Biology of the algae. Differences, pigment systems, photosynthetic products and storage substances, land and marine vegetation, life-spans and seasonality, generation alterations. 4. Harvesting and farming: General (Monostroma and Enteromorpha), brown algae (Laminariales and Undaria, artificial cultivation), red algae (Porphyra, Eucheuma and Gelidium), freshwater algae. 5. Processing and preserving: General, amanori and aonori, green algae (*Caulerpa*, sea grapes), brown algae (wakame, kombu, arame and hijiki, mozuku), red algae, nostoc freshwater algae, domestic algae. 6. Illustrations of major sea vegetables.

Part II: Cooking with sea vegetables. Kombu (*Laminaria*). Wakame (*Undaria pinnatifida*) and Matsumo (*Analipus japonicus*). Hijiki (*Hizikia fusiforme*). Arame (*Eisenia bicyclis*). Asakusa nori (*Porphyra tenera*). Tosakanori (*Meristotheca papulosa*). Kanten (*Agar*). Green laver (*Enteromorpha*).

Index of scientific names of sea vegetables. Index of Japanese names of sea vegetables. List of recipes. Address: 1. Prof. and lecturer on Fisheries Botany and Marine Ecology, Univ. of Tokyo and Nihon Univ., Japan; 2. Prof. Kobe-Yamate Women's College, Lab. of Biochemistry.

6252. **Product Name:** Yamaki Organic Miso [Hatcho, Mugi, or Genmai], and Yamaki Organic Soy Sauce.
Manufacturer's Name: Chico-San, Inc. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 810, Chico, CA 95927.
Date of Introduction: 1983, January.
New Product–Documentation: Crackerbarrel. 1983, Jan. No. 1, p. 1. "Our new line of organic imports. Long awaited soy sauce and miso from organically grown ingredients introduced. The Yamaki Co. [Yamaki Jôzo], owned by Tomio Kitani, contracts directly with family farmers for his

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organically grown grains. Yamaki miso is unpasteurized. The organic soy sauce has 16.9% salt."

Note: The Yamaki Co. is located in Kamiizumi-mura, about 75 miles from Tokyo, Japan.

6253 Kennedy, Robert. 1983. A message from our president [History of Chico-San]. *Crackerbarrel (Chico, California)* 1(1) 2. Jan

• ***Summary:*** This article, which gives a brief history of Chico-San, Inc., is in the first issue of a new Chico-San newsletter.

"There is a lot of excitement at Chico-San these days. Twenty years have passed since we opened in a little basement room to grind sesame seeds by hand for gomasio [gomashio], and repack bulk shipments of miso and shoyu (then called tamari) from our suppliers in Japan. From that meager beginning, Chico-San has become a leader in many areas of food manufacturing and distribution and has gained annual sales substantially in the millions.

"We are grateful for our achievements and we are proud that the complement of Chico-San employees had the loyalty, talent, tenacity and integrity that it took to bring us to this satisfying twenty-year plateau. I refer to this as a plateau because we are now reorganizing our efforts to put more emphasis on our Japanese imports. These are quality foods, called for in George Ohsawa's macrobiotic dietary precepts, that are not yet manufactured in this country.

"It was in 1959 that George Ohsawa with Lima Ohsawa first introduced his philosophy of the Far-East and his concepts of diet to the U.S. public. It was in New York City where hundreds of people attended his 'dinner lectures.' The food was orchestrated by Lima while George took care of the philosophy and other pertinent subjects.

"It was from these lectures that 32 people collected under the umbrella of Ohsawa's teachings and moved to Chico, California where they could work together to pass along what they were learning.

"Some of the names–Herman & Cornellia Aihara, Alvin & Nina Bauman, Dick & Penny Smith, Bill & Dorothy Salant, Teal Ames, me and my wife, Betty.

"As we camped on the way from New York to Chico, we had nightly campfire meetings during which time we defined and prioritized our purpose for moving. Everyone agreed that first on our list of priorities would be to set up a food company that would provide the best available products necessary to the macrobiotic dietary instructions of Ohsawa. All of us were working on various degrees of health problems and we knew that our physical and mental betterment would parallel the quality of the food we ate. It was our resolve then that Chico-San, Inc., our new company name, would carry only the best foods available. This has been our policy and it is our responsibility to people who seriously relate good health to good food.

"Chico-San was incorporated in March 1962, and after Chico-San had been in business a few months the health food industry began seeing food products with foreign-sounding names on its shelves–names such as Tamari–Miso–Kombu–Hijiki–Kuzu–etc. All products first introduced by Chico-San. Later on Chico-San introduced the first organically grown rice to the health food industry, while our rice cakes became one of the industry's most popular sales items.

"In 1972 Chico-San was consumed by fire of such severe consequences that we were put out of business for almost a year. When we did return it was necessary for us to concentrate on our most popular items. These were items that we manufactured–rice cakes–rice syrup–candies made of rice syrup–these products would give us our best chance to regain solvency because they offered better profit margins.

"We continued to carry the Japanese products because it was our responsibility to those that had come to depend on Chico-San for quality, however by this time there were several companies [including Erewhon] competing for the sale of the Japanese products. Through their price cutting policies a market was created that was not profitable, consequently they had to lower their costs by buying products from dubious sources. Many such companies have since gone bankrupt.

"Twenty years ago when Ohsawa's macrobiotic diet was new to America it was taken with scepticism but now that there have been many dramatic cures accorded to it, its popularity is gaining by great strides. This makes Chico-San's responsibility greater than it has ever been because more and more people are being attracted to the Ohsawa regimen.

"Since Chico-San started it has always been the Ohsawas, both Lima and George, who have given Chico-San its quality control regarding the Japanese imports. We have only carried products recommended to us by them and chosen by them for their own use. Since Mr. Ohsawa's death several years ago Mrs. Ohsawa was given the recognition by people world-wide for being the most knowledgeable person in regard to her husband's work.

"Chico-San uses Ohsawa Japan, Inc. in Tokyo as its only supplier for its imports. This is a company started by George Ohsawa and now run by Lima Ohsawa's sister, Flora Tanaka. The very strict supervision of the company and the uncompromising attitude of its employees comes from years of collective study under Ohsawa.

"Jun Makino, a representative to Chico-San, Inc. from Ohsawa Japan, Inc. in Tokyo, has recently joined us in Chico. He is now busily engaged in translating hordes of material being sent to us from Ohsawa Japan, pertaining to macrobiotic foods and how they have traditionally been used.

"This additional information will appear in our newsletters; it will also be included in our pamphlets and catalog as space and time permit.

"Jun will be in charge of our Japanese imports and will

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also take over our mail order department.

"Peter Milbury is back with us to help with our expanded efforts. Peter is our operations director, a job designed to assist me as president in the performance of executive duties.

"We have added several others to our complement, so that we can increase our effectiveness as a macrobiotic foods supplier. We'll introduce them to you in future issues of the newsletter because we would like you to get to know the people that supply your food.

"Our excitement on our 20th anniversary is genuine as we confirm our dedication of 20 years ago: to bring you the best quality available."

Also includes articles on imports from Japan and winter recipes using miso and soy sauce. Address: Chico-San, Inc., P.O. Box 810, Chico, California 95927.

6254. **Product Name:** Kikkoman Fried Rice Seasoning Mix, Sweet & Sour Sauce Mix, Chow Mein Seasoning Mix, Teriyaki Sauce Mix, or Marinade Mix for Meat.
Manufacturer's Name: Kikkoman Foods, Inc.
Manufacturer's Address: Kikkoman International, Inc. San Francisco, California.
Date of Introduction: 1983, January.
Ingredients: Fried Rice Mix: Powdered soy sauce (wheat, soybeans, salt, dextrin), malto-dextrin, wheat starch, torula yeast, dehydrated onion, sugar, hydrolyzed vegetable protein, monosodium glutamate, dehydrated garlic, salt, spices, caramel color, chicken fat (with BHA and citric acid added to help protect flavor), lactose, malic acid, disodium inosinate, disodium guanylate, acetic acid and citric acid.
Wt/Vol., Packaging, Price: 1- to 2.125 oz foil pouch. Retails for $0.45.
How Stored: Shelf stable.
New Product–Documentation: Products with Labels purchased at Monty's Food Store in Lafayette, California 1984 March 16. 4.25 by 5.75 inches. Paper packet. Black, burgundy, brown, yellow, green. On each mix is a color photo of the prepared dish in a lacquered bowl, on a grass mat with chopsticks. "The Kikkoman Touch" is the slogan for the large display. Most products in this line contain ingredients such as MSG, caramel color, disodium inosinate, disodium guanylate, and sugar.

Talk with Mr. Hattori of Kikkoman. 1984. March 27. An earlier version of this product line was launched about 8 years ago. About 18 months ago the original line sold out and the new line was launched in early 1983. Three of the original products were discontinued and three new ones took their place. The package design is new.

6255. Leviton, Richard. 1983. Mochi, amazake and seitan: Introducing three new foods from the Orient. *Vegetarian Times*. Jan. p. 32, 34-35, 37. [2 ref.]
• ***Summary:*** This article begins with a description of each of these foods, when and where the author was introduced to each, how he enjoyed them and why he thinks they will become part of American vegetarian cuisine.

The first section is titled "Mochi: The pounded rice that puffs." "Since 1979, Grainaissance, a Berkeley, California company, has been working to popularize mochi, manufacturing over 3000 pounds a week in five flavors and shipping it around the country. Grainaissance proprietor Tony Plotkin began experimenting with mochimaking in 1978 when he produced about sixty pounds a week and sold it through the Rising Sun store [in San Francisco] where he worked. Delighted with the product and sensing its commercial appeal, Tony and his partner, Yuki Aihara [sic, Muramoto] enlarged production in November, 1979, and started deliveries to about a dozen Bay Area stores. At that time mugwort mochi was the most popular... but today Tony's best sellers are plain, raisin and sesame garlic. Other flavors marketed have included alfalfa and carob-date, and Indian Spice..." Mochi is often seasoned with shoyu. A recipe recommended by Akiko Shurtleff and developed at Tassajara is given, it uses butter, shoyu, honey, and grated ginger root.

The second section, titled "Amazake: The fermented rice you drink" states: "In America, amazake is now produced by at least four companies that sell to natural foods stores. These include Grainaissance in Berkeley, California, and The Bridge in Middletown, Connecticut. Jordan Stearn, The Bridge's master of grains, who ferments about 70 quarts of amazake weekly, comments, 'Seitan and amazake are our version of meat and sugar.'" The Bridge was the only company in America making all three of these foods: mochi, amazake, and seitan.

The third section is titled "Seitan: The vegetarian meat from wheat." "The early history of seitan is shrouded in vagueness, but it is believed that itinerant Chinese Buddhist monks used seitan... Seitan... is actually not an authentic part of Japanese culinary tradition nor is 'seitan' a Japanese word, according to Bill Shurtleff. Seitan, rather, as modified *fu*, is the invention of the macrobiotic community. Whatever its origins, seitan has found a new home in the U.S. and for Winston and Joan Donovan it has proved to be both a life-sustaining and livelihood providing wholesome food.

"The Donovans launched their Upcountry Seitan business from their Worthington, Massachusetts, farmhouse in January 1982, largely because Winston had been diagnosed as having an incurable kidney disease which even dialysis couldn't halt. After a consultation at Boston's East/West Center, he adopted a macrobiotic diet featuring seitan and, in the past year, has regained his health and resolved his kidney ailment. For Winston, who drastically changed his diet in his forties, seitan's chief attraction is that it resembles meat enough in taste and texture to satisfy most longings for beef and veal. The entire family is now vegetarian." Describes how the Donovans use high-gluten hard red spring

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wheat to make 300 lb of seitan strips each 6-day week in their tidy 400 square foot shop. After kneading with water, the elastic gluten is called *kofu*. A separate product, named "Tan-pops" were sold several years ago in Boston. They were large fist-sized chunks of seitan, breaded in cornmeal, deep-fried, and sold unwrapped in wicker baskets by the check-out counters of a few natural foods stores in Boston. Photo show: (1) Pieces of deep-fried seitan served on a dish (2) Winston and Joan Donovan in their seitan shop with their products. (3) Slices of seitan in a frying pan. Address: 100 Heath Rd., Colrain, Massachusetts 01340. Phone: 413-624-5591.

6256. Mountain Ark Trading Company. 1983. Catalog–Jan 1983 [Mail order]. 109 South East St., Fayetteville, AR 72701. 30 p. 27 cm.

• ***Summary:*** This is a mail order catalog for macrobiotic whole foods, specialty cookware, cookbooks and books on natural healing, futons, furniture, etc. A detailed description of each product is given. The owners of the company are Frank & Phyllis Head, Tom & Toby Monte, Bill & Carol Tims, and Joel & Wendy Wollner.

Concerning seitan and *fu*, we read (p. 34): "Seitan 'Wheat Meat' Condiment–Chewy chunks of wheat gluten simmered in a savory broth of shoyu and ginger. Rich, meaty flavor. A very concentrated food: 100% wheat protein. Ready to eat or add to a favorite recipe. How about Seitan and Tofu Stew! Sweet and Sour Seitan! Seitan in Split Pea Soup! $2.95 per 3.5 oz. jar (not incl. shipping cost). Note: This seitan was made in Japan.

"'Fu' Wheat Gluten–Steamed and dried cakes of nutritious wheat gluten, extremely light, simple to serve and easy to digest. Fu's light chewy texture and subtle wheat flavor adds new life to your cooking–and, with the greatest of ease. Soak briefly and add to your favorite recipe. Goes well with all foods. Soups. Stews. Beans. Vegetables. Sifted wheat fu rings $1.25 per pkg. of 12. Sifted wheat fu sheets $1.85 per pkg. of 5. Whole wheat fu rings $1.75 per pkg. of 12." Address: Fayetteville, Arkansas. Phone: 501-442-7191.

6257. Walnut Acres. 1983. Organic farming–natural foods [Mail order catalog and price list]. Penns Creek, Pennsylvania 17862. 40 p. Jan/Feb. Illust. Index. 28 cm. [37 ref]

• ***Summary:*** A large color photo on the cover shows a red barn in the snow, with the caption "Buy direct from the farm–500 acres of chemical free soil." In 1946 Paul and Betty Keene first fell in love with Walnut Acres. They had just completed four years of study in organic homestead-and-farm schools. Note: It is unclear when they started to do business. They also sell products made by other companies, such as Shiloh Farms, Fearn, and Westbrae. Soy related products: Miso Plus all natural dip mixes. 4-grain cereal (incl. soybeans). Hearty cereal (incl. soya). 12-grain cereal (incl. soy). Soy grits, organic. Rice pancake mix (with soya flour). Triticale pancake mix (with soya flour). 12-grain pancake mix (with soya flour). Unbleached white pancake mix with soya flour. Wheatless pancake mix with soya flour. Whole wheat and soy pancake mix with soya flour. Cornell flour, with organic soy flour. Soy flour, organic. Instant soy milk powder. Sterling special carob blend (soya carob). 12 grain flour (incl. soya flour). Soya-carob bread mix (with soya flour). Corn muffin mix (with soya flour). Apricot nut quick bread mix (with soya flour). Granola maple quick bread mix (with soya flour). Four Fearn cake mixes (with soy powder). Pro-Nuts (soy-nuts). Soybeans, yellow (25 lb, 5 lb, 3 lb, 1 lb). Tempeh starter. Whole wheat and soy spaghetti. Pea and soybean soup. Miso-Cup red vegetarian soup. Green soybeans (whole dry, canned). Tamari soy sauce (with or without wheat). Comtessa coffee substitute (with soy beans). Celestial Seasonings Breakaway Coffee Substitutes (most have roasted malted barley and barley grains, and roasted chicory root as the main ingredients). Lecithin granules (soya phosphatides). Soy bean lecithin (raw, crude, natural pint). Books. Soya-carob bread. Portrait photos show Paul Keene and Betty Keene.

Also discusses: Gluten flour. Amaranth seeds. Psyllium seed. Sesame seed (raw hulled, raw unhulled, toasted hulled). Adzuki beans. Peanut butter, sesame tahini, and other nut butters. Pita bread. Address: Penns Creek, Pennsylvania. Phone: (717) 837-0601.

6258. Hattori, Terumitsu. 1983. The soy sauce / shoyu industry in the United States (Interview). *SoyaScan Notes*. Feb. 4. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** The production of soy sauce in the United States has been growing (on average) at 7-8% a year since about 1970, and Kikkoman production has been growing at 13% a year during that same period.

Kikkoman presently makes 20,000 kl (kiloliters) a year; estimated total U.S. production (fermented + HVP) is 40,000 kl/year. Imports of soy sauce to the USA are 10,000+ kl/year. Thus in 1982 total US consumption was 50,000 kl (58,750 metric tons) per year. Kikkoman produced about 50% of the soy sauce made in the USA; this was 40% of total U.S. consumption.

In Feb. 1983 U.S. per capita consumption was 216.1 ml = 253.9 gm = 14.65 tablespoons of shoyu.

Conversion figures–Relative density: (1) Regular shoyu: 1.17 to 1.18 (so 1 gallon weighs 9.8 lb). (2) Milder shoyu: 1.13 to 1.14. Usukuchi shoyu (20% salt): 1.19 to 1.20. 1 million gallons = 3.785 million liters = 3.785 kiloliters. 1 kiloliter = 264.18 U.S. gallons = 2,200.6 lbs of water.

Note: Comparing this with miso. In Sept. 1981 total U.S. miso consumption (production + imports) was 1,500 metric tons. This is only 2.5% as much as U.S. soy sauce consumption. So per capital U.S. miso consumption = 6.34 gm/year = 1.1 tablespoons per year. 1 level tablespoon of

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miso weighs 17.3 gm. 1 level teaspoon of miso weighs 5.76 gm. 1 tablespoon of regular shoyu weighs 17.33 gm. Address: Kikkoman International Inc., 50 California St #3600, San Francisco, CA 94111. Phone: 415-956-7750.

6259. Piotrowski, Joyce Dodson. 1983. Chinese barbecue no longer requires torching the hut. *Washington Post.* Feb. 9. p. E1, E16.

• ***Summary:*** The tradition of Chinese barbecue has an ancient origin. The Chinese invented charcoal, which burns hotter than wood, probably for use barbecuing, using cast-iron cylindrical ovens, with a grate and openings at the bottom for supplying air to the charcoal fire. Any Chinese dish that is cooked in an oven (including Peking duck) can be considered a barbecued dish.

Describes the details of making good Peking duck with its thin crisp skin, moist and fragrant meat, and golden-brown color.

The secret of making delicious barbecued Chinese spareribs and thin strips of red roast pork lies in the sauce, which "is a blend of hoisin sauce, soy [sauce], honey, garlic, ginger, and five-spice powder. This sauce is used as both a marinade and a basting liquid, and sometimes even as a sauce to pour over the meat.

"In fact, there are recipes in Chinese cookbooks for dishes such as barbecued bean curd that are not really barbecued but are really stir-fried in barbecue sauce." For best results, make the barbecue fresh yourself rather than buying a ready-made product.

Note that the word "soy" (used by itself, at this late date) refers to soy sauce.

6260. Milbury, Peter. 1983. Soy sauce and tamari analysis: Meeting with Tomio Kitani of Yamaki Co. Chico, California. Chico-San Inc. 4 p. Feb. 14. Unpublished manuscript.

• ***Summary:*** Present at this meeting to discuss soy sauce quality were Bob Kennedy, Jun Makino, Peter Milbury (Chico-San), T. Murata (Ohsawa Japan), and Tomio Kitani (Yamaki Co.). There are 2 ways to tell if soy sauce is made by natural fermentation of whole soybeans, or if it is "mixed with acid hydrolyzed defatted soybean meal." (1) Visit the maker and dip into the moromi. (2) Use a combination of sensorial and laboratory testing. Address: Chico-San Inc., P.O. Box 810, 1264 Humboldt Ave., Chico, California 95927. Phone: 916 891-6271.

6261. Milbury, Peter. 1983. Chico-San, miso, and soy sauce (Interview). *SoyaScan Notes.* Feb. 17. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Bob Kennedy thinks that Junsei Yamazaki made a total of 20 barrels of miso from 1965 to 1972. Only 3-4 were in the building that was burned down by the fire at Chico-San. The rest came to maturity and were mixed with imported miso. Mr. Yamazaki also made about 3 barrels of fermented shoyu (soy sauce) at Chico-San in about 1965. Chico-San feels that SANA (Soyfoods Assoc. of North America) should establish soy sauce terminology, standards, and an analysis program. Importers could help set it up to protect themselves.

Mr. Kitani is Chico-San's advisor for fermented soyfoods. He is a manufacturer in Japan. Chico-San now has a four-stage plan to make miso and shoyu in Chico. 1. Import bulk miso from Mr. Kitani and let it age in Chico. Adjust the ambient temperature by opening and closing doors and windows. 2. Make miso in Chico using koji imported from Japan under refrigeration. 3. Make koji in Chico. 4. Make shoyu in Chico. Address: Chico-San, Chico, California.

6262. Milbury, Peter. 1983. Junsei Yamazaki's work with miso and shoyu at Chico-San. Work of Mr. Kitani. (Interview). Conducted by William Shurtleff of Soyfoods Center. Feb. 17. ½ p. transcript.

• ***Summary:*** Bob Kennedy thinks Mr. Yamazaki made a total of 20 barrels of miso from 1965 to 1972. Only 3 to 4 were destroyed by the fire. The rest came to maturity and was mixed with imported miso. Mr. Yamazaki also made about 3 barrels of fermented soy sauce at Chico-San–in about 1965.

Peter believes SANA should develop soy sauce terminology, standards, and analysis techniques. Importers would use these to protect themselves.

Mr. Kitani, as manufacturer, is Chico-San's fermented foods advisor. Chico-San now has a four-stage plan to make miso and shoyu. 1. Import bulk miso from Mr. Kitani and let it age in Chico. Adjust the ambient temperature by opening and closing doors and windows. 2. Make miso in Chico using koji imported from Japan under refrigeration. 3. Make koji in Chico. 4. Make shoyu in Chico. Address: Chico-San Inc., P.O. Box 810, 1264 Humboldt Ave., Chico, California 95927.

6263. Miyashita, Masa. 1983. Re: Soy sauce in Europe. Letter to William Shurtleff at Soyfoods Center. Feb. 21–in reply to inquiry. 2 p. Typed, with signature on letterhead. [Eng]

• ***Summary:*** There are presently no manufacturers of fermented soy sauce in Europe. The following is an estimate of the amounts and types of soy sauce are consumed in Europe: Japanese fermented 1,800,000 liters; Chinese fermented 1,500,000 to 2,000,000 liters. Indonesian style 1,000,000 to 1,500,000. Chemically made (HVP) or mixed 600,000 liters.

Per capita consumption of all types is about 17 ml/year, and about 5 ml/year for Japanese-style soy sauce. Both figures are far below their corresponding U.S. figures. The main markets are the UK and the Netherlands. Kikkoman's share of the Japanese soy sauce market in Europe is about 70%. Kikkoman's sales in terms of volume are growing at about 6% a year. Kikkoman has no immediate plans to build

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a shoyu manufacturing plant in Europe. The main emphasis now is on broadly promoting interest in Japanese culture, and more narrowly on Japanese food culture. Address: Kikkoman Trading Europe GmbH, Duisburger Strasse 3, D-4040 Neuss, West Germany. Phone: (02101) 2 20 89.

6264. Nasuno, Seiichi. 1983. Re: N-nitroso compounds and nitrosamines in Japanese fermented soyfoods. Letter to William Shurtleff at Soyfoods Center, Feb. 23--in reply to inquiry. 2 p. Typed, with signature on letterhead. [5 ref. Eng]
• ***Summary:*** "We have an official certificate from the National Institute of Health (NIH) of Japan to certify that the regular Kikkoman soy sauce is free from volatile nitrosamines on the basis of the examination of volatile N-nitroso compounds in a soy sauce product performed on January 23, 1978, at the NIH of Japan.

"The test was performed by a Shimadzu gas chromatograph equipped with an alkali-flame ionization detector and minimum detection limit for N-nitrosodimethylamine was 0.1 ng (1 ppb in soy sauce)."

"Nitrosamines are reaction products of nitrite and amines. Very small amounts of nitrite and amines were found in cereals such as rice, wheat and soybeans used as raw materials for miso and shoyu making. Moreover, amino acids in shoyu competitively inhibit nitrosamines formation from nitrite and amines."

"In conclusion, we feel that the problem of nitrosamines in miso and shoyu is not serious and that miso and shoyu are quite safe in the viewpoint of cancer risks." Note: Five references are cited in the letter to document each point. Address: Director, Bioscience Lab., Kikkoman Corp., Central Research Laboratories, 399-Noda, Noda-Shi, Chiba-ken, Japan. Phone: 0471-24-1111.

6265. Smith, Grant. 1983. The current soy sauce industry and market in the United States (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 23. 2 2 p. transcript.
• ***Summary:*** Interpreting U.S. soy sauce statistics is difficult. Early production statistics are probably low and later statistics are probably high due to three possible points of confusion: (1) Are the figures only for soy sauce or for soy sauce plus teriyaki sauce? If they include teriyaki sauce, that would be a terrible distortion since teriyaki sauce contains about 20% soy sauce and 80% other ingredients--such as vinegar, water, seasonings, etc. What percentage of Kikkoman's total liquid volume is teriyaki sauce and what percentage of teriyaki sauce is shoyu? Kikkoman likes to include teriyaki sauce in their overall numbers to prove that they are number one. Some non-Kikkoman teriyaki sauce is junk. (2) The problem of gallons and pounds in Kikkoman's output. In the trade journals, the Kikkoman plant was described as having a capacity of 25 million pounds. But 10,000 kiloliters is 2.5 million gallons. The design of their fermenters suggests 2.5 million gallons annual output. Staley only makes concentrates. (3) SAMI data does not include Kikkoman's burgeoning foodservice and restaurant business.

Smith thinks that looking only at soy sauce statistics, Kikkoman is no bigger than LaChoy. In Japan, roughly one-third of all soy sauce is nonfermented.

Grant Smith likes Kikkoman soy sauce and uses it in his own cooking. Austin Co. built the plant in Walworth, Wisconsin, to 2.5 million gallons capacity. Address: A.E. Staley Co., Decatur, Illinois.

6266. Shurtleff, William; Aoyagi, Akiko. 1983. History of Kikkoman. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 24 p. Feb. 26. Unpublished typescript.
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction. Part I: Kikkoman in Japan. 1600's-1887: Mogi family starts shoyu (1754-1800), Kikkoman brand registered 1838, Tokyo Shoyu Co. new distributor 1881. The Noda Shoyu Cartel: How formed, bankruptcy of Tokyo Shoyu Co. in the 1880's, research lab and new technology 1900-09, 1910-1917. Arrival of the railroad in Noda in 1911 revolutionized transportation and provided mass distribution, early switch from water to rail, shoyu factory in Korea, miso sold in Korea and China, damaging competition, final struggle. The Noda Shoyu Co., Ltd., incorporation: Noda Shoyu Company founded 1918, history to 1920, strikes in 1923, reorganization in 1925, the 1930's and 1940's. 1947-1981: anti-monopoly hearings in the 1950's, start of U.S. promotion in 1956, socialism and internationalism in Noda in the 1960's, total figures for 1980-81, future. Part II: Kikkoman in the West. Introduction. Mostly U.S., the early years (1860's-1948). Preparing to establish roots (1949-1972): Advertising on U.S. television 1956, Kikkoman International Inc. established in San Francisco 1957, other branches, Leslie Salt Company (Oakland, California) bottled from bulk shipments from Japan (1968), Japan Foods Corp. acquired 1969. 1973-1981: Reasons for establishing first U.S. plant June 1973, new marketing approach to shoyu, 1973 cookbook (*The Kikkoman way of fine eating*, which uses the term "shoyu" throughout the book except in the recipes), two marketing decisions, change of name from shoyu to soy sauce, use of chemical preservative, sales increase to number one by 1976, types of products, the future. Address: Lafayette, California. Phone: 415-283-2991.

6267. **Product Name:** The First Great Tofuburger Mix.
Manufacturer's Name: Essential Foods, Inc. (Product Developer-Marketer)
Manufacturer's Address: P.O. 8462, Emeryville, California. Phone: 314-832-7575.
Date of Introduction: 1983 February.
Ingredients: Sunflower seed meal, soy flour, sesame seed flour, arrowroot, garbanzo flour, sea salt, soy sauce, garlic,

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onion, torula yeast, natural herbs & spices.
Wt/Vol., Packaging, Price: 5.3 oz (150 gm) foil packet.
How Stored: Shelf stable.
New Product–Documentation: Label (foil packet) Undated. 5.5 by 7.5 inches. Orange, blue, red, tan. Color photo of burger on front. Recipes on back for Tofuburgers, Tofuballs or Appetizers, Tofuloaf. Spot in Soyfoods. 1983. Summer. p. 54. The contents of the packet is mixed with 1 lb of tofu to make 6 tofu burgers.

Leaflet. 1983. The First Great Tofuburger Mix. 2 p. Address is 5565 Fremont St., Oakland, CA 94606. Talk with Craig Ramsell. 1989 March 14. This product was discontinued in late 1983, having been replaced by the Lite Chef California Burger. The product was co-packed by another company.

6268. Frum, W. Mark. 1983. Three centuries of Kikkoman. Growing pains & organizational change. II. *Soyfoods*. Winter. p. 52-55. [1 ref]
Address: Dep. of History, California State Univ., Hayward.

6269. **Product Name:** Light Tofulogna (Cooked Tofu Bologna).
Manufacturer's Name: Light Foods Inc.
Manufacturer's Address: 6144 Bartmer, St. Louis, MO 63133.
Date of Introduction: 1983. February.
Ingredients: Organic tofu, okara, soy oil, water, dried egg white, textured soy protein, salt, barley flour, honey, shoyu, locust bean gum, onion and garlic, natural spices, paprika, natural spice oils.
Wt/Vol., Packaging, Price: 12 oz cylinder, plastic wrapped and vacuum packed.
How Stored: Refrigerated.
Nutrition: Per 1.6 oz. slice: Calories 105, protein 6.4 gm, carbohydrates 5.9 gm, fat 7.0 gm, sodium 510 mg, cholesterol 590 mg.
New Product–Documentation: Spot in Whole Foods. 1983. Jan. p. 39. "New Tofu Line. Light Foods, Inc. presents a new dimension to soyfoods' Light Links, Light Tofulogna and Light Soysage. Spot in Soyfoods. 1983. Winter. p. 48; Manufacturer's leaflet. 1983, undated.

Label. 1988 received. Chub-packed in a sausage-style waxed paper tube. 10 by 3 inches. Orange, yellow, and tan. With label printed directly on tube. "Pre-cooked. Meatless. 100% cholesterol free."

6270. **Product Name:** Light Soysage (Meatless Okara-based Sausage)
Manufacturer's Name: Light Foods Inc.
Manufacturer's Address: 6144 Bartmer, St. Louis, MO 63133. Phone: 314-721-3960.
Date of Introduction: 1983. February.
Ingredients: Okara (soy pulp), whole wheat flour, soymilk, nutritional yeast, wheat germ, soy oil, bulgar wheat, shoyu, honey, sesame seeds, herbs & spices.
Wt/Vol., Packaging, Price: 12 oz sausage-like dark reddish brown paperboard tube.
Nutrition: Per 2 oz.: Calories 147, protein 6.3 gm, carbohydrate 16.5 gm, fat 6.1 gm, sodium 292 mg.
New Product–Documentation: Spot in Whole Foods. 1983. Jan. p. 39. "New Tofu Line. Light Foods, Inc. presents a new dimension to soyfoods. Light Links, Light Tofulogna and Light Soysage.

Label. 1988 received. Chub-packed in a pre-printed sausage-style casing. 10 by 3 inches. Orange, yellow, and reddish brown. With label printed directly on tube. "Pre-cooked. Meatless. 100% cholesterol free."

Talk with Bob Davis, founder of Light Foods. 1994 May 7. This product was similar to his first Soysage except that the packaging was different; the Light Soysage was chub packed. Other products in this line that were chub packed were Light Tofulona and Light Loaf. The latter product was never commercialized.

6271. **Product Name:** [Suzi Wan Oriental Foods (Soy Sauce)].
Foreign Name: Soy.
Manufacturer's Name: Master Foods, Div. of the Mars Group.
Manufacturer's Address: Netherlands and France.
Date of Introduction: 1983. February.
Wt/Vol., Packaging, Price: 125 ml. bottles.
New Product–Documentation: Food Report (Lehmann) 1983. Feb. and April. The company's soy sauce is sold in 125 ml bottles for Hfl 2.75.

6272. Shurtleff, William, Aoyagi, Akiko. 1983. The soyfoods industry and market. Directory and databook. 1983. 3rd ed. Lafayette, California: Soyfoods Center. 112 p. Feb. No 28 cm. [191 ref]
• ***Summary:*** As of May 1982, America's four largest tempeh makers (in lb/week) are Pacific Tempeh (5,000, California, started 1980), Tempeh Works (4,250, Massachusetts, started 1979), Soyfoods Unlimited (3,000, California, started 1981), White Wave (1,900, Colorado, started 1979). About 17,455 lb/week of tempeh are sold by 15 companies in the USA.

Reviewed by Walter J. Wolf in *Cereal Foods World* (Oct. 1983). Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6273. *Soyfoods*. 1983. Soyfoods mini-boom underway in Europe. Winter. p. 8-9.
• ***Summary:*** "'This year we became aware that the kind of developments that took place in the U.S. in 1977-78 are now taking place in Europe with the sudden increase in the number of soyfoods companies,' reports Bill Shurtleff of The Soyfoods Center. 'Historically speaking, this will probably

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be the most important event for the soyfoods industry in 1982. Europe is coming on strong and it's a tradition of soyfoods that goes back 130 years that is now being revived.'

"Most of the impetus for soyfoods in Europe apparently stems from the vigor of the macrobiotic community. Per Fruergaard started Tofu Denmark in Valby and has encountered legal problems regarding the use of nigari. In Paris, France, Bernard Storup purchased a Takai tofu system; Ab and Paulien Schaft are setting up a small plant in Baillestavy to make miso, shoyu, natto, and koji; in Ivry, Jean Luc Alonso's macrobiotic center, Traditions du Grain, prepares for tempeh production.

"In the British Isles, Paul Jones' Tofu Shop in London, England, has been active since 1981 while Community Health Foundation, also in London, promotes homescale tofu, tempeh, and misomaking. In Dublin, Ireland, Jane O'Brien gives tofu cooking classes, has published a tofu cookbook and is considering commercial production.

"The macrobiotic movement is strong in Belgium where de Brandnetel, a large Antwerp-based distributor of natural foods, operates a tofu shop in the rear of their retail store. Jonathan Company in Ekeren makes 3000 pounds of tofu weekly, along with seitan, mochi, soups, canned foods, and soymilk. Seven Arrows in Leuven is another small tofu shop in operation in Belgium.

"In the Netherlands Manna was the first company to introduce soyfoods to the public and is now an important promoter. Manna's John Welters (who provided much of this information) lectures on homescale soy processing and reports interest and sales are rising as are the number of magazine articles on soyfoods. Manna itself markets tofu spreads and distributes a joint equipment price list with Takai Company of Japan. Witte Wonder in The Hague makes tofu, as does De Morgenstond in Bakkeveen, while Peter Dekker's Jakso produces tempeh. In Portugal, Unimave promotes soy as part of the macrobiotic diet and makes small amounts of tofu and soymilk; Jose Parracho in Setubal is starting a self-sufficient center involving tofu and tempeh production.

"In Soyen, West Germany, Wolfgang Furth-Kuby, who published *Das Tofu Buch* (by William Shurtleff) in German, is interested in tofu production at his Sojaquelle. Tofu producers are Swame [sic, Swami] Anand Svadesha in Furth-im-Wald, Thomas Kasas [sic, Karas] who installed a tofu system last summer at his Bittersuess [later Soyastern] in Cologne, and Alexander Nabben in Munich.

"In Sweden Tim Ohlund and Ted Nordquist have been operating Aros Sojaprodukter since early 1981 in Orsundsbro using a Takai pressure cooker system and vacuum packaging. In Rimini, Italy, Gilberto Bianchini makes tofu at Community Foods. And Switzerland is the home of four soy companies including Restaurant Sesam in Bern, an active macrobiotic center with homescale tofu and seitan production; Marty Halsey makes tofu in Nyon; Hans Opplinger produces tofu in Chan; and Verena Krieger operates Sojalade in Luzern (Lucerne).

"Sojalade, whose tofu output at mid-summer 1982 was 1000 pounds weekly, is a company launched mainly on the results of an article Ms. Krieger published ('Yesterday Steak, Tomorrow Tofu') in a Swiss Sunday magazine. Krieger then established her shop to meet the expected tofu demand stirred up by her article. Swiss national television ran a 30 minute feature on soybeans this year in which Krieger made a brief demonstration of 5 tofu dishes. 'Since then tofu has been a favorite child of the media,' she says, adding that tofu appeared in the pages of *Blick*, a mass market newspaper."

Photos show: (1) European representatives at the international Soyfoods Come West conference in Seattle, Washington: Gilberto Bianchini, Marina Casazza (Italy), Joanna White (Switzerland), Kym Olsen (England), Wolfgang Furth-Kuby (W. Germany), Tim Ohlund (Sweden), Roger Kayes (England). (2) Ted Nordquist and Tim Ohlund of Aros Sojaprodukter, Sweden's first tofu company.

6274. *Toyo Shinpo* (*Soyfoods News*).1983. Issetai atari nenkan oyobi ikkagetsu-kan no hinmoku-betsu shishutsu kingan [Amount of money spent and amount of soyfood products consumed per household per year and per month in Japan, 1977-1982]. March 1. [1 ref. Jap]
• ***Summary:*** Gives figures for tofu, ganmodoki, natto, other, shoyu, miso, soy oil, and margarine. Tofu consumption is lowest in February and highest in August, followed by July, May, and June. Natto consumption is highest March then February, and lowest in August. Shoyu consumption is highest in July then May, and lowest in January then February. Miso consumption is highest in April then May, and lowest in January. Soy oil consumption is highest in July and lowest in January. Address: Japan.

6275. Welters, Sjon. 1983. Re: Brief history of Stichting Natuurvoeding Amsterdam and Manna Natuurvoeding B.V. (Manna Natural Foods) in the Netherlands. Letter to William Shurtleff at Soyfoods Center. March 2. 2 p. Typed, with signature on letterhead.
• ***Summary:*** "Manna was started in 1971 by Adelbert and Wieke Nelissen with a few hundred guilders in a small garage where some natural food products were sold. One year later they gave it an official status by founding the Natural Foods Foundation Amsterdam [Stichting Natuurvoeding Amsterdam, this Manna started as a foundation, and Manna was their brand]. Their first store was on Rozenstraat in Amsterdam. Two years later a second store was opened and the first sourdough bakery in Holland opened. The name of the bread became 'Manna.' Soon after this a third and fourth store opened in other parts of Amsterdam while at the end of 1975 the distribution of bread, nutbutters, cereals and miso, tamari, shoyu, and seaweeds began all over the Netherlands. In 1976 it became clear that a warehouse should be rented. Meanwhile

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production grew and more and more stores carried Manna products. Again a new Manna store started. In 1977 the warehouse was moved to a bigger place. Another new store opened its doors. We began making tofu and were the first to do so with organic beans and nigari. Also soymilk and seitan were produced. In 1978 sales went steadily up. In 1979 two new stores were opened.

"Meanwhile the East West Center was founded by Adelbert and Wieke, promoting natural foods as part of a healthy and natural way of living. This was a great help for Manna. Two more stores opened in 1980 and 1981. In the beginning of 1982, Manna suffered from bankruptcy and was started one day later as Manna Natural Foods, a holding company mainly owned by the Foundation 'Manna Natural Foods' [Manna Natuurvoeding B.V., B.V., pronounced Bay Fay, is an abbreviation for Besloten Vennootschap, which means a private company with limited liability]. A reorganization was necessary but the promotion and sales of quality natural foods went on.

"In 1983 Manna is going steady and probably will cooperate with other natural foods distributors to form one strong network of farmers, producers, distributors and retailers. The purpose will be to eliminate competition and put more energy into publications and promoting by cooking classes, radio and television programs and education.

"Soyfoods played quite an important role in the history of Manna because it was the soyfoods Manna promoted that made it different from the other health and natural food businesses. Because Manna is based on the macrobiotic view of life, miso, tamari, tofu and so forth were an essential part of the diet of the Manna people.

"Instead of the cheese, milk, yogurt (of which consumption is one of the highest in the Netherlands) we advise soyfoods as a healthy alternative. We did no business in dairy foods. Soyfoods are the number one product to introduce in Netherlands. A great deal of sickness in the Netherlands is caused by the overconsumption of dairy foods, meet and eggs (and other animal products). From this point of view Manna is a unique company in Holland, even in the alternative natural foods business. This difference is a reason of conflict with them. Only by eating a diet which is based mainly on vegetable products such as grains, legumes, soyfoods, seaweeds, fruits and nuts, etc., can a healthy and peaceful world be created. No animals can be mistreated and no land wasted, or misused or destroyed." Address: Manna, Meeuwenlaan 70, 1021 JK Amsterdam-N, Netherlands.

6276. Wood, Brian J.B. 1983. Re: Sumbo Abiose, Bean Products Ltd. in Scotland, and list of publications. Letter to William Shurtleff at Soyfoods Center. March 16–in reply to inquiry. 1 p. Typed, with signature on letterhead.
• ***Summary:*** Sumbo Henrietta Abiose is a beautiful and charming Nigerian lady who did her PhD at the University of Stratchclyde, with Dr. Wood as her advisor. She is now lecturing at the Department of Food Science and Technology, University of Ife, Ile-Ife, Nigeria. She did her PhD work while her husband qualified for his Fellowship at the Royal College of Dental Surgeons.

The new factory is: Bean Products Ltd., 42 Telford Road, Cumbernauld, Scotland. It is presently producing only soy sauce. Address: PhD, Reader in Applied Microbiology, Dep. of Bioscience and Biotechnology, Applied Microbiology Div., Univ. of Strathclyde, Royal College Building, 204 George St., Glasgow G1 1XW, Scotland. Phone: 041-552 4400.

6277. Outrigger (The). 1983. Display ad: The Polynesians set course under the stars. At the Outrigger. *Times of India* (*The*) (*Bombay*), March 20, p. 5
• ***Summary:*** At this Polynesian restaurant, appetizers include Barbecued baby spare ribs Hawaiian. Choice pork ribs marinated in soya ginger and honey.

Another dish (whose name is hidden by the illustration) includes bamboo shoots and "bean curd."

The main part of the ad is a photo of the menu, superimposed on it is an illustration of a slim Polynesian lady, wearing a lei, riding in a sort of Polynesian canoe–but without outriggers. Address: Hotel Oberoi Towers.

6278. *SoyaScan Notes*. 1983. How to eat natto (Overview). March 22. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** David and Suzanne Greenslade: The only way they ever ate natto in Japan was: Put 1 packet of natto in a bowl. Add 1 raw egg, 1 tablespoon shoyu [Japanese-style soy sauce], and ¼ minced green onion (*negi*). Stir vigorously with chopsticks. Pour over hot rice and eat. OK to mix with the rice. It was served that way all over Japan and in Los Angeles.

Akiko Aoyagi Shurtleff, who was born and raised in Tokyo, never ate natto this way. She added to the natto *katsuobushi* (shaved, dried, fermented and smoked skipjack tuna {*Katsuwonus pelamis*, sometimes referred to as bonito}, minced green onion, shoyu and Japanese-style mustard {*karashi*}).

In the Japan's northeast prefectures (*Tôhoku Chihô*) Akiko has heard that some people use sugar instead of soy sauce.

6279. Feng, De-Yi. 1983. Jiang you shi cu sheng chan ji shu [Soy sauce and vinegar production technology]. Heilongjiang, China: Heilongjiang Kexue Ji Shu Chu Ban She. 3 + 166 p. 19 cm. [Chi]
Address: China

6280. **Product Name:** A Dressing from the Second Kingdom (Tofu Dressing) [Garlic-Dill]
Manufacturer's Name: Light Foods Inc.

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Manufacturer's Address: 6144 Bartmer, St. Louis, MO 63133.
Date of Introduction: 1983, March.
Ingredients: Organic nigari tofu, safflower oil, pure lemon juice, parsley, shoyu, dill, sea salt, garlic.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1983. 3.5 inches diameter. Self adhesive. Green on white. "A Dressing from the Second Kingdom." Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.

6281. **Product Name:** Ray's Seitan "Wheat Meat," and Ray's Seitan Sandwich (in a Pita Pocket).
Manufacturer's Name: Ray's Seitan.
Manufacturer's Address: 1865 East Ontario St., Philadelphia, PA 19134. Phone: 215-634-3361.
Date of Introduction: 1983, March.
Ingredients: Seitan "Wheat Meat" (12/91): Organic whole wheat flour, wheat gluten, filtered water, natural tamari soy sauce, kombu (sea vegetable).
Wt/Vol., Packaging, Price: Seitan: 6 oz and 12 oz round plastic deli tubs, filled 3/4 full with broth.
How Stored: Refrigerated.
New Product–Documentation: Appropriate Foods, Inc. Eat Appropriately! [Catalog and price list] (Brooklyn, New York). 1987, Feb. "Ray's Seitan Wheat Meat." Talk with Ray Reichel of 1865 E. Ontario St., Philadelphia, Pennsylvania 19134. 1991, Dec. 10. He first started making and selling seitan in March 1983. The only other company that he knows of to make seitan before him was Upcountry. The label says Ray's Natural Foods but its real registered and licensed name is "Ray's Seitan." It is not listed in the phone directory. He makes two seitan products, sells some himself locally, and also sells to a distributor in the Delaware Valley, and a small distributor in New York named "Fill the Basket." It keeps him very busy, and his business has been operating at full capacity for quite a while. He is planning to expand next year but he is unwilling to make any changes that would lower the high quality of his product. The broth for his basic seitan is made only from tamari, kombu seaweed, and water. The sandwich is in a pita pocket with tahini dressing, scallions, and lettuce. The gold foil label for the packaged seitan is much nicer than that on the sandwich.

He was introduced to seitan through his vegetarian diet and macrobiotics; there is an East West Foundation in Philadelphia, but he has never studied in Boston. He got interested in seitan, and since he was unemployed, he learned how to make it from cookbooks by Wendy and Edward Esko titled *Introducing Macrobiotic Cooking* (1979) and *Macrobiotic Cooking for Everyone* (1980). Today his average production of seitan is about 350 lb/week, sometimes reaching 400 lb/week.

Label sent by Ray Reichel, 1991, Dec. 20. 3.5 inch diameter. Red, gold, and black on orangish-yellow. Illustration of a bird flying across a rayed gold sun with ears of wheat on both sides. "Delicious meat substitute."

6282. Shurtleff, William; Greenslade, David. 1983. Mahatma Gandhi: Soyfoods pioneer in India. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549 USA. 2 p. Published in part in Vegetarian Times, June 1983, p. 4. Unpublished manuscript [5 ref].

• ***Summary:*** Although it is well known that Mahatma Gandhi revitalized the vegetarian movement in India, it is less well known that he was one of India's first pioneers to introduce soybeans and soyfoods. His work during the 1930s still serves as an inspiration to many Indians, who are today transforming India into one of the world's leading soybean growing and soyfoods using countries.

Gandhi's earliest known mention of soybeans or soyfoods was in the July 1935 issue of *Harijan*, his popular magazine for village uplift. There he referred to a book by Dr. H.V. Tilak called *Balanced Diets*. Dr. Tilak's book was based in an orphanage of over a hundred children, whose diet was made richer in protein and more balanced by the addition of soybeans.

In September 1935, Gandhi reprinted a report on soybeans by the Bombay Health Association. This article listed the nutritional and medicinal values of soybeans and also explained how to make soymilk, soy flour, and soy coffee. The October issue of *Harijan* reported that the kitchens at Gandhi's ashram has introduced experimental rations of soybeans into the communal diet. The same article compared soybeans with eggs, wheat, and ghee. Since the more economical soybeans were rich in protein and oil, Gandhi later ordered reductions in the portions of wheat and ghee and suggested that all beans, other than soy, be omitted altogether.

November's *Harijan* reported that soybeans were being boiled, steamed, and used in soups. The ration of ghee had been stopped and soybean portions increased. Gandhi pointed out that everyone seemed to thrive on the new diet. In the same issue, Gandhi reprinted a leaflet by the Baroda State Food Office describing soybean crop cultivation. By December 1935, *Harijan* reports that soybeans had become a substantial part of the diet at Gandhi's ashram.

The December 1935 and January 1936 issues printed a dozen soyfood recipes, including the techniques for making, "TO-FU," "shoyu-sauce," and "soya bean sprouts." Gandhi said he was particularly fond of the sprouts.

By September 1936 *Harijan* was recommending an exhaustive book on soybeans written by F.S. Kale, an Englishman in charge of the Baroda State Food Service Department. Entitled, *The Soya Bean: Its Value in Dietetics; Cultivation and Uses*, this was the first book on soyfoods published in India. *Harijan* also carried a report on soybean cultivation experiments in the USA and the Soviet Union in

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the same issue.

By 1936, after careful consideration of economic, nutritional and medicinal evidence, Gandhi wholeheartedly favored the cultivation and widespread use of soybean in India and his magazine ran lists of prices and of the places where soybeans could be obtained.

We lose track of Gandhi's interest in soyfoods in late 1936. However in 1949 his ideas were republished in *Diet and Diet Reform*, a book which sold thousands of copies. The fact that Gandhi took such an interest in soybeans and soyfoods is a major source of encouragement to the many Indians working in this burgeoning field today. In 1982 India produced 500,000 metric tons of soybeans, making it the world's ninth largest producer, and soyfoods (such as TVP, soymilk, and soy oil) were catching on rapidly in this country where an estimated 50 percent of the population is vegetarian, and another 30 percent eats only a very small amount of meat. Address: Lafayette, California.

6283. *Soyanews (Sri Lanka)*.1983. Preparing soya sauce. 5(7) 2. March.
• ***Summary:*** "The Bureau of Ceylon Standards is presently engaged in the formulation of a standard specification for Soya Sauce." A flow chart shows how traditional Japanese soya sauce (shoyu) is made. Proportions are given. For more details, see *The Book of Miso*, by Shurtleff and Aoyagi.

6284. Sheraton, Mimi. 1983. Restaurants: Sushi and sashimi, the best in the city. *New York Times*. April 15. p. C1-2.
• ***Summary:*** This is a review of Hatsuhana, a Japanese restaurant at 17 East 48th St., between Fifth and Madison Ave. in New York City. "Natto, a combination of raw fish with an earthy cheeselike paste of aged soy beans, is wonderful whether you have it with a white-flesh fish, tuna, clams, squid or the most subtly flavored toro–fatty tuna. A sunny yellow vinegar sauce made of lemon juice, bean paste [miso] and sake is the basis of nuta, a salad made with plain or fatty tuna, white fish, clams or squid."

"The eye-opening wasabi horseradish should be mixed into soy sauce before sushi and sashimi are dipped in, and lacy slivers of radish [daikon] add a nice contrast."

6285. Hughes Markets. 1983. Foster Farms chicken (Ad). *Los Angeles Times*. April 21. p. M25.
• ***Summary:*** The section titled "Oriental Foods" includes:
Hinode tofu, 19-oz pkg. $0.59.
Morinaga tofu, 10 oz. box [aseptic] $0.49.
Yamasa soy sauce, 1-gal. can $4.45.
Sesame cookies, Tohato Harvest, 7 oz. $0.89.
Ramen, Yee Fu Mein 3 oz. pkg. 5 for $1.00.

6286. Camirand, Wayne; Randall, J.; Popper, K.; Andich, B. 1983. Low-sodium/high potassium fermented sauces. *Food Technology* 37(4):81-83, 85. April. [28 ref.]
• ***Summary:*** Contents: Introduction. Decreasing sodium intake. Increasing potassium intake. Therapeutic benefits, protective benefits, taste and stability. Fermented sauces. Ion-exchange processes (for reducing sodium): Resin-bed, membrane ion exchange (a counter-current flow membrane device or dialyzer). Two products suggested: 1. High-potassium soy sauce with minimal sodium intended for individuals with advanced hypertension, one disadvantage is its bitter taste. 2. A sauce containing equal amounts of sodium chloride and potassium chloride; it would have the protective value of potassium, would taste as salty as regular soy sauce, and would not require refrigeration. Address: 1-2. USDA Western Regional Research Center, Berkeley (Albany), California.

6287. **Product Name:** Kinmei Soy Sauce, and Kinmei Tamari Soy Sauce (Wheat Free).
Manufacturer's Name: Chico-San, Inc. (Importer). Made in Japan by Mizoguchi Soy Sauce Inc.
Manufacturer's Address: P.O. Box 810, Chico, CA 95927.
Date of Introduction: 1983. April.
Ingredients: The tamari is completely wheat free.
Wt/Vol., Packaging, Price: 5 oz dispenser, quart, or gallon.
How Stored: Shelf stable.
New Product–Documentation: Crackerbarrel. 1983. April. Insert. Made by master brewer Hideo Mizoguchi of Mizoguchi Soy Sauce Inc., Honjo, Chiba prefecture, Japan.

6288. **Product Name:** Lima Yamaki-Brand Organic Soy Sauce.
Manufacturer's Name: Chico-San, Inc. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 810, Chico, CA 95927.
Date of Introduction: 1983. April.
Ingredients: Organically grown whole soybeans, whole wheat, sea salt.
Wt/Vol., Packaging, Price: 5 oz dispenser, quart, or gallon.
How Stored: Shelf stable.
New Product–Documentation: Crackerbarrel. 1983. April. Insert. Made by Mr. Tomio Kitani of Yamaki Miso-Shoyu Co., Japan. Spot in Whole Foods. 1983. June. p. 28. A black-and-white photo shows the 5-oz. bottle. Made entirely from organically-grown ingredients, this soy sauce is made by the Yamaki Company in Japan, brewed and aged naturally for 2 years.

6289. *Crackerbarrel (Chico, California)*.1983. Are natural soy sauces really natural? Laboratory analysis shows some are not! 1(2) 1, 6. April.
• ***Summary:*** Recent laboratory analyses... States that three of four brands tested contain 0.91-0.98% glycerin. "A natural soy sauce should have a minimum of 1.0% glycerin. If the sample has less than 0.5% glycerin, then it must have been made from defatted soybeans." Two brands contain levulinic

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acid (12-17%). Alcohol content ranges from 1.26 to 2.52%.

The four brands of soy sauce commonly sold in American natural foods stores showed the presence of artificial additives in two of them. The tests were performed last November, by the Japan Food Research Laboratories, in Tokyo.

Chico-San pioneered the importation of natural soy sauce over 20 years ago. Address: Chico-San, Inc., P.O. Box 810, Chico, California 95927.

6290. Leviton, Richard. 1983. The Westbrae story. *East West Journal*. April. p. 22-26, 28-29.

• ***Summary:*** An excellent history of Westbrae Natural Foods. Westbrae was founded in late 1970 by Robert Gerner, Kristin Brun, and Margaret and Bob Ortiz. The foursome secured an abandoned supermarket at 1336 Gilman Street and opened for business in Feb. 1971. Their main products were granola and dried pears. In 1971 Gordon Bennett, finishing a 2-year stint as a conscientious objector, was driving a Goodwill Industries truck in Berkeley while living at Zen Center. He stopped by one day at Westbrae for lunch, asked for a job, and soon found himself hired part time to sweep and move cases. In 1972 they started distributing foods and in the late fall of 1973 the group purchased their Gilman Street store and relocated the warehousing to a new 2,000 square foot building nearby at 1224 10th St., Berkeley, California 94710.

In Feb/March 1974 Gerner (then president and chairman of the board) went to Japan and traveled the country with guide and interpreter William Shurtleff (who was studying tofu in Japan) to search for quality sources of soy sauce, miso, and other traditional Japanese natural foods. About 9 months thereafter Westbrae began to import natural foods from Japan via Mr. Kazama of Mitoku. By late 1974 annual sales had reached $2 million. Between June and Sept. 1976 the retail store at 1336 Gilman Street was renamed from Westbrae Natural Foods to Gilman Street Gourmet. In September 1977, Westbrae Natural Foods moved its warehouse and offices to Emeryville from Berkeley, into a much larger building. "Today Westbrae is a successful, confidant, and growing $7 million corporation of 25 employees at work in a bustling 50,000 square foot warehouse sandwiched between Oakland and Berkeley in Emeryville, California." Gordon Bennett (whose photo is shown) is president. Over the years the company has had a strong interest in soyfoods. Address: 100 Heath Rd., Colrain, Massachusetts 01340.

6291. Makino, Jun. 1983. Imported from Japan: A visit to the Yamaki Miso-Shoyu Company. *Crackerbarrel* (*Chico, California*) 1(2):1, 6. April.

• ***Summary:*** Mr. Tomio Kitani is the company's owner and a third generation master maker of soy sauce and miso. The factory is relatively small. It uses whole soybeans, organically grown locally, and does not pasteurize the miso. Mr. Kitani's grandfather started the company over 58 years ago. He recommends that miso be aged for more than a year. Chico-San is now importing this miso to America. Address: Chico-San, Inc., P.O. Box 810, Chico, California 95927.

6292. Nakadai, Tadanobu; Aishima, Tetsuo. 1983. [Statistical estimation of key enzymes determining the viscosity and filtration rate of soy [sauce] mash (*moromi*)]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 57(4):307-11. April. [13 ref. Jap, eng] Address: 1. Central Research Labs., Kikkoman Co.; 2. Noda Inst. of Scientific Research. Both: Noda, Japan.

6293. O'Brien, Jane. 1983. The magic of tofu and other soybean products. Wellingborough, England: Thorsons Publishers Ltd. 128 p. April. Illust. by Niall Morris and Clive Birch. Index. 20 cm. [6 ref.]

• ***Summary:*** Written in large letters at the top of the cover: "The Best of Vegetarian Cooking." Contents: Foreword. Introduction (incl. tempeh, soy flour, miso, tamari). 1. Making your own tofu. 2. A word about the recipes. 3. Recipes. 4. Soymilk. 5. Other soybean products (Okara, gô, yuba, soynuts). 6. Soybeans as beans. 7. Food value of soyfoods. 8. History of the soybean. Further reading.

Jane was a soyfoods pioneer in Ireland. In the Introduction (p. 18-21) Jane explains that "I was frequently ill as a child, and on several occasions I was very near to death's door." Yet as she got older, she grew to enjoy gourmet food and gourmet cooking. The man who became her husband gave her the first book she read on natural foods. "As soon as I became aware that food contributed to the maintenance or destruction of health, I began a lifetime of experimentation. I changed from refined foods to whole foods, gave up eating red meat, studied macrobiotics, so much so that over ten years ago I went to Boston [Massachusetts] with two children under the age of four, and pregnant with a third, to study the subject, and I continued from there to develop my own system." Her husband, an actor, is now quite happy with her cooking, after "an austerity programme involving giving up meat, cutting down on and nearly eliminating dairy food, getting rid of sugar."

"I have been working on creating meals that are increasingly more healthful for over seventeen years now [since 1966], and I find it a fascinating study. It is wonderful to witness the vast improvement in my own health..." Her son Quinn is now 15 years old. Her religion is Baha'i. "In furthering my interest in natural foods, I have given cooking classes in Dublin [Ireland] for over ten years [since 1973], not steadily, but from time to time when there were people interested. In the early days of my cooking classes, I also imported the necessary foods: whole grains, beans, miso and natural soy sauce from suppliers in England as they were not available in shops here in Dublin. There was no other way of getting these foods for my family. During the cooking

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classes I sold much of the stock... That led to the beginning of Ireland's first natural food store which I started with my husband's patient assistance, but which we left to someone else for many reasons."

"Several years ago I began to use tofu and soyfoods and to include them in the cooking classes. Because I was so interested in learning more about them, I attended the soyfoods conference held in Illinois in 1980 and the one in Colorado in 1981 ... I think that I became so excited about tofu, soymilk and soyfoods really because I had long been a lover of puddings, custard, and creamy toppings, often made with dairy foods. However, because I needed to cut down on my use of dairy foods, I had nearly eliminated all of those things from my diet. When I discovered that it was possible, not only to make tofu and soymilk successfully in my own kitchen, but to use it for very accurate substitutions of my childhood favorites which were far more healthful than the things I had eaten as a child, I was thrilled."

Note: On 9 November 1979 Mrs. Jane M. O'Brien (7 Woodside Drive, Rathfarnham, Dublin 14, Ireland), ordered books on tofu, tofu & soymilk production, miso, and tempeh from Shurtleff & Aoyagi at Soyfoods Center in California.

Talk with Jane O'Brien. 1980. July 13. She developed the many recipes in this book using soybeans that she imported from England to Ireland, starting in about 1980.

Letter from Jane O'Brien. 1983. May 28. This book was published in April 1983. "It is presently on sale in England but not yet here in Ireland." Address: 7 Woodside Dr., Rathfarnham, Dublin 14, Ireland.

6294. **Product Name:** Baked Tofu in Teriyaki Sauce.
Manufacturer's Name: San Diego Soy Dairy.
Manufacturer's Address: 2965 5th Ave., San Diego, CA 92103.
Date of Introduction: 1983. April.
Ingredients: Tofu–organically grown soy beans, filtered water, natural nigari, tamari, sesame oil, rice vinegar, barley malt, fresh garlic and ginger. Dr. Bonner's Mineral Bouillon, spices, sesame seeds.
Wt/Vol., Packaging, Price: 12 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1983. 3.5 by 2 inches. Self adhesive. Brown on white. "Delicious." Talk with Gary Stein. 1989. Feb. 17. He thinks these products were introduced in about April 1983.

6295. Schick, Rabbi Michael. 1983. How Chico miso and soy sauce are made kosher. *Crackerbarrel* (*Chico, California*) 1(2) 4-5. April.
• ***Summary:*** The author, traveling from San Francisco with Jun Makino (director of imports for Chico-San Inc.), visited Mizoguchi Soy Sauce Inc. in Honjo/Kimitsu, Chiba prefecture, Japan, owned by Mr. Hideo Mizoguchi. The business is over 100 years old. He gives a description of the process for making miso and shoyu at the plant, illustrated by 3 photos. He then visited Meiji Seifun Co. in Fukuyama/Hiroshima and described the miso process. He certified all products kosher, for import by Chico-San. Address: Chico-San, Inc., P.O. Box 810, Chico, California 95927.

6296. *Soyfoods Monthly* (*Colrain, Massachusetts*). 1983. Soyfoods Association rejuvenated at first meeting of new board, new goals. 3(4):1. April.
• ***Summary:*** "Thirty two industry members attended a 2 hour planning session of the new Soyfoods Association in Anaheim, February 7 and appointed board of directors and officers. Michael Austin was selected the new Executive Director following Richard Leviton's resignation. Board members include: Gary Barat, Legume (President), Yvonne Lo, Vitasoy USA (Vice President), Tom Timmins, New England Soy Dairy (Vice President), Dan Burke, Pacific Soybean (Treasurer), Richard Leviton, *Soyfoods Magazine* (Secretary), Travis Burgeson, Pacific Tempeh; Michael Fountain, SanJi [San-J] Int'l.; Jim Miller, Quong Hop; Jack Mizono, Azumaya; Morris Shriftman, Tree of Life; Robert Tepper, Farm Foods; Shoan Yamauchi, Hinode Tofu Co. An initial pledge of $12,000 from 14 companies was received at this organizational meeting."

6297. Balsley, Betsy. 1983. Barbecue season in upon us–Light a fire under the chef. Easy-fix recipes are increasingly popular. *Los Angeles Times*. May 26. p. N1, N20, N32.
• ***Summary:*** A recipe for Indonesian-style sate calls for "3/4 cup ketjap (sweet Indonesian soy sauce [probably ketjap manis])." The accompanying recipe for Peanut sauce (which is spooned over the sates) calls for "4 teaspoons ketjap." Address: Times food editor.

6298. Hesseltine, C.W. 1983. Food fermentation research and development. In: K.T. Achaya, ed. 1983. Proceedings of AHARA 82, First AFST (I) International Conference on Food Science and Technology. See p. 65-67. Held 23-26 May 1982 at Bangalore, India.
• ***Summary:*** Discusses the amounts of miso, shoyu, and natto produced in Japan. In Korea in 1978 an estimated 51,237 metric tons of soybean paste, 97,830 kiloliters of soy sauce, and 33,525 metric tons of gochoojang (hot pepper paste) were produced. Also discusses the amounts of tofu, tempeh, and miso made in the USA. Address: USDA, Peoria, Illinois.

6299. *Manna Bulletin*. 1983. Miso en shoyusnoep [Miso and shoyu sweets]. 5(3):1. May. [Dut]
Address: Meeuwenlaan 70, Amsterdam, Netherlands.

6300. **Product Name:** [Tofu Burgers (Garlic / Herbs, Black & Green Olives, Mushrooms, Provencale with Tomato & Olives, Emmenthal Cheese)]
Foreign Name: Croque Tofou (Ail / Fines Herbes,

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Olives Noires et Vertes, Aux Champignons, Provençale, Emmenthal).
Manufacturer's Name: Société Soy
Manufacturer's Address: Plateau de l'Ardennais, 91590 Cerny, France Phone (6) 457.52 01
Date of Introduction: 1983 May
Ingredients: Garlic/Herbs: French-grown soybeans, rolled oats (organically grown), soy sauce, sunflowerseed oil, aromatic herbs
Wt/Vol., Packaging, Price: 160 gm vacuum pack, 2 croquettes per pack
How Stored: Refrigerated, 30 day shelf life
New Product–Documentation: Richard Leviton. 1983. Oct. 16-17. Visit to Societe Soy in Cerny. The company produces 10,000 Tofu Croques (burgers) a week in 6 flavors. They are vacuum packed for a 3 week shelf life, refrigerated. The Labels. 1983, undated. 2.75 inches diameter. Self adhesive. Red and green, brown, yellow or black on white. Flavors include Olives, and Garlic & Fines Herbes. Ad in Le Compas. 1986. March-April. No. 26. p. 32. Letter from Bernard Storup. 1984. March 22. They now make 1,400 kg/week of tofu burgers. Label for Ail-Fines Herbes from about 1986. 3.5 by 6.5 inches. Red, green, yellow, blue, and white. Self adhesive. Address is still Cerny. Letter from Bernard Storup. 1989. March 3. The first 5 varieties were launched in May 1983. Three more were launched in March 1985, which see.

New Labels (for Ail et Fines Herbes, Provençale, Forestiere, Emmenthal). Introduced in Jan. 1989. 3.25 by 5.25 inches. Self adhesive. Green, gold, and one other color on a white background. Beautiful color combinations and design. But the labels are confusing since each says "Léger" at the top but these are different from Croque Tofou Léger. "Mention Nature et Progres logo."

Letter from Bernard Storup. 1990. Dec. 26. Since Jan. 1989 this product has been the same as Dorés de Soja (Tofu Burgers) but with different packaging.

6301. Steinkraus, Keith H.; Cullen, R.E.; Pederson, C.S.; Nellis, L.F.; Gavitt, B.K. eds. 1983. Handbook of indigenous fermented foods. New York, NY: Marcel Dekker. ix + 671 p. May. Illust. Index. 26 cm. Microbiology Series, Vol. 9. [200+ ref]

• ***Summary:*** Contents: Foreword by E.J. Da Silva. Preface. 1. Indonesian tempeh and related fermentations: Protein-rich vegetarian meat substitutes. 2. Indigenous fermented foods involving an acid fermentation: Preserving and enhancing organoleptic and nutritional qualities of fresh foods.

3. Indigenous fermented foods in which ethanol is a major product: Types and nutritional significance of primitive wines and beers and related alcoholic foods.

4. Indigenous fermented amino acid / peptide sauces and pastes with meatlike flavors (p. 433-571). Introduction.

(A) Soy sauces: Japanese shoyu: Koikuchi, usukuchi, and tamari; Chinese chiang-yu, by Tamotsu Yokotsuka (p. 437-51). Taiwanese soy sauce, by Liu (p. 451-56). Malaysian soy sauce: Kicap, by Ong, Mercian, Poesponegoro and Tanuwidja (p. 456-61). Indonesian soy sauce: Kecap, by Saono, Poesponegoro and Tanuwidja (p. 461-65). Korean soy sauce, by Chang (incl. homemade kanjang and meju, p. 465-66). Taiwanese black bean sauce: Inyu, by Jan et al. (p. 466-67). Philippine taosi [fermented black soybeans], by Steinkraus (p. 467).

(B) Fermented soybean pastes: Japanese miso, by Ebine, Shurtleff and Aoyagi (p. 468-79). Indonesian tauco, by Saono et al. and Winarno (p. 479-82). Korean Doenjang and kochujang, by Chang, Shurtleff and Aoyagi (p. 482-87).

(C) Fermented fish-shrimp sauces and pastes (p. 487-526).

(D) Fish-soy sauce and fish-soy paste, by Ismail (p. 526-30).

(E) Miscellaneous Oriental fermentations. Japanese natto (itohiki natto), by Hayashi and Ota (p. 530-45). Japanese Hama-natto (hamanatto) and related products (incl. yukiwari natto, p. 545-47). Chinese red rice: Anka (Ang-kah [ang-kak, angkak]), by Lin, Su and Wang, Sooksan and Gongsakdi, and Pichyangkura (p. 547-53). Chinese sufu, by Su and L.-P. Lin (incl. nyufu, p. 553-61). Note: Chapter 4 contains about 195 references.

5. Mushrooms: Producing single cell (microbial) protein on ligno-cellulosic or other food and agricultural wastes.

6. General papers related to indigenous fermented foods: Contributions of the western world to knowledge of indigenous fermented foods of the orient, the importance of microbial genetics in indigenous food fermentations, new uses for traditional food fermentations, mycotoxin problems in indigenous fermented foods and new methods for mycotoxin analysis.

Less widely known fermented foods include: Idli, dosa/dosai, dhokla (with soy, 131-35), enjera (162), tef/teff (164), wot (165), hopper (173), kishra (175), lambic (179), ogi (with soy, 189-98), mahewu (203), gari (208), dahi (249-57), srikhand and lassi (256-57), laban rayeb, laban zeer, yogurt (257-59; cultured soy yogurt is mentioned on p. 616), liban, mast, mass, taw (260), tairu (with soy, 260-65), kishk or kushuk (267), Metchnikoff (266), trahanas or tarhanas (271-76), rabdi, jalebi (275), koumiss (276), kefir (277-80).

Alcoholic beverages and foods: Honey wine, mead, metheglin (305), tej (306), sugar cane wines, basi, bubod, binubudan (307), palm wine or toddy (315-28), pulque (328-37), kaffir (344), tesguino (352), bouza (357), pito (358), busaa (365) sake (373-79), yakju and takju (379), tape = tapeh (381-400), ragi (381), tapuy (400), lao-chao (402), madhu (406), brem (408), tropical vinegar (410-14), nata (414-20), tea fungus (421), nuoc-mam (516-21).

Reviewed in Scientific American (Nov. 1983, p. 37), and in Bio/Technology (1984, p. 364). Address: Inst. of Food Science, Cornell Univ., Geneva, New York.

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6302. Wakabayashi, Keiji; Ochiai, M.; Saito, H.; Tsuda, M.; Suwa, Y.; Nagao, M.; Sugimura, T. 1983. Presence of 1-methyl-1, 2,3,4-tetrahydro-β-carboline -3-carboxylic acid, a precursor of a mutagenic nitroso compound, in soy sauce. *Proceedings of the National Academy of Sciences, USA* 80(10):2912-16. May. [33 ref]

• ***Summary:*** Japanese-style fermented soy sauce (shoyu) was found to contain precursors of bacterial mutagens. The authors postulated that these substances may be related to the relatively high incidence of stomach cancer in Japan, which is 8-fold higher than that observed in the united states. The model advanced by these researchers holds that nitrite in the gastrointestinal tract (from consumption of vegetables containing nitrate) might react *in vivo* with the mutagen precursors in soy sauce, resulting in generation of one or more carcinogenic nitroso compounds. Address: National Cancer Research Inst., Tsukiji 5-1-1, Chuo-ku, Tokyo 104, Japan.

6303. Yokotsuka, Tamotsu. 1983. Nihon no shôyu [Japanese shoyu]. Paper presented at spring meeting of Nihon Kagaku Kai at Doshisha University, Kyoto, Japan. 6 large-format pages. Handwritten, unpublished manuscript. [Jap] Address: Kikkoman Corp., Noda-shi, Japan.

6304. Mayer, Jean, Goldberg, Jeanne. 1983. Nutrition. *Washington Post*, June 1, p. E4.

• ***Summary:*** A reader writes to ask about the sodium content of Chinese condiments. Ans: In the April 1983 issue of the *Journal of the American Dietetic Association*, Theresa Chew, a registered dietitian, published statistics (including sodium content) on 14 different condiments commonly used in Chinese cooking. For some condiments, she found considerable variation among brands.

Although Chinese condiments are generally considered to have a very high sodium content, several contained less than 200 milligrams of sodium per teaspoon. They are: sweet bean sauce, hoisin sauce, satay sauce, fermented bean cake [fermented tofu], fermented black beans, and dried shrimp.

6305. Shurtleff, William. 1983. Fly from Beijing to Harbin, capital of Heilongjiang province (June 5) (Document part). In: William Shurtleff. 1983. Log of Soyfoods Research Trip to China and Japan: 29 May to 10 July. Lafayette, California: Soyfoods Center. 117 p. See p. 9-10. Unpublished manuscript.

• ***Summary:*** Harbin is in northeast China, situated on the southern bank of the Songhua River. With a population of about 8 million, it is the tenth largest city in China and the center of China's soybean growing areas.

Harbin is originally a Manchu word meaning "a place for drying fishing nets."

We stay at the International Hotel–the best in town.

From the air we can see that northeast China is a vast, vast expanse of flat, fertile land, excellent for farming except for the cold northern latitude. There are few houses or people. The city is dirty and dusty. Mostly brick and mud houses. Looks poor, despite the wealth of natural resources. The Soybean Research Institute is 30 minutes by car/taxi from the International Hotel, where we stayed.

I walk to the nearby Nan-Gan She Chan Market, but there is no sign of soybeans, tofu, etc. Also, no tofu on the hotel menu.

Zhang Guodong is director of the Soybean Institute in Harbin. Wang Jingling (of soybean fame) is now governor or Heilongjiang Province.

Friendship Store: Soy sauce. The best and most expensive soy sauce is superior soy made in Guangzhou (Canton). Ingredients: soybeans, wheat flour, salt, water. 623 mL retails for ¥1.15 at the Friendship Store. It's all called *Jiang You*. The second best soy sauce is *Xiang Zhi* soy, made in Beijing. Address: P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

6306. Shurtleff, William. 1983. In Harbin (June 6-7) (Document part). In: William Shurtleff. 1983. Log of Soyfoods Research Trip to China and Japan: 29 May to 10 July. Lafayette, California: Soyfoods Center. 117 p. See p. 10-12. Unpublished manuscript.

• ***Summary:*** 6:00 a.m. I walk to the local market. See one stall (a mobile cart) selling gelled tofu curds (*doufu-fa*) over which is poured a sweet brown sauce then topped with some diced red chilies and green herbs. Served with deep-fried breadsticks. One other place serves soymilk hot with deep-fried breadsticks. No tofu at all in the market. Some say it is sold only in winter. No other soyfoods seen.

Soymilk terminology: (1) Dou Nai–it sounds more modern than "Dou Jiang." Implies or connotes no beany flavor, is thicker and has a higher protein content. (2) Dou Ru–(Alfa Laval used this) is harder to pronounce.

[Henan Area grows lots of soybeans]: more than Heilongjiang? The money to build soymilk plants in China is partially foreign capital. People and institutions are falling all over each other to help China develop "China Orient Leasing." 50% are Japanese.

Eaton [Eton]. A consortium from Cleveland, Ohio, is planning to build a $50 million oil extraction and protein refining plant in Jiamusi. Oil = extract, refine, make margarine, shortening, etc. Protein = feed, isolate, concentrate, tofu and soymilk production.

Tuesday June 7, 1983 (Harbin): Min-Lite = the Ministry of Light Industry is interested in a soymilk plant. Also, the State Farm Bureau (Bean processing division) and the Soybean Institute is working in breeding (for both protein and oil), diseases, and physiology.

Soymilk Taste Tests in Harbin: Chocolate was vastly the first choice, second was sweetened, third was plain / dairy-

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like. They dislike added oil in soymilk and would like to try fruit-flavored soymilk (apple, pineapple). Added fat coats the mouth with a greasy / gummy film. Vitasoy has no added fat.

Dou Ru Fen: Niu Nai Mai Jing. 205 gm. This product consists of a white powder containing 10% cow's milk powder, 40% soymilk powder (spray-dried traditional soymilk, not soy flour), and 50% (!!) sugar. 1000 tonnes a year are made, starting in 1978 or 1979. Sold to housewives who use it to make breakfast soymilk. Costs RMB 0.78–0.80 = 70-80 cents. Cow's milk powder is stirred into hot soymilk. The mixture is concentrated and spray dried. Also made in Beijing, but this one is the best quality.

Pure: Soymilk powder is made in Beijing by Beijing Foodstuff Corp. since 1980. Called Doujiang-Fen (Soymilk powder) and also retailed to housewives for breakfast use. It is 50% powdered soymilk and 50% sugar. It is spray dried.

Fresh green soybeans (Maodou = Hairy bean): Mostly eaten by farmers. Also sold in markets. Not packaged or canned. Whole dried soybeans: some canned in China. It is sold in Beijing.

Tofu in Heilongjiang. None is sold during the summer because it spoils easily and people do not like to eat tofu in the summer. A lot is sold in winter.

Soybean use: Of China's 9 million tonnes produced, one man estimates that 80% of soybeans are crushed. The meal is used mainly for feed, but some for tofu, soy sauce, and textured vegetable protein (TVP).

Main uses for foods made with whole soybeans in approximate order: (1) Tofu and kan-dofu. (2) Soymilk. (3) Soy sauce. (4) Miso = Doujiang. (5) Yuba. (6) Fermented tofu.

Main uses for foods made with defatted soybean meal: (1) Tofu. (2) Soy Sauce. (3) Miso. (4) Soymilk.

Soy nuggets [fermented black soybeans] are made only in the south of China. This state farm bureau man estimates that there are 200,000 tofu shops in China, one in every village, but there are no statistics on tofu.

Big tofu factory in Harbin. Ministry of Light Industry people in charge. He does not think as many soybeans will ever be used for soymilk as for tofu.

Many government groups are doing research on soyfoods, such as tofu and soy sauce, but no single group. Address: P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

6307 Tara, Bill. 1983. Re: Comments on William Shurtleff's "History of Macrobiotics" manuscript. Letter to William Shurtleff at Soyfoods Center, June 9. 2 p. Typed, with signature on letterhead. [1 ref.]

• ***Summary:*** "I would check the reference to Paul Hawken *owning* 50% of the stock in Erewhon. My reason for this is as follows: During this period of time there were many discussions which took place between myself, Paul, the Kushi's and others regarding an equitable distribution of stocks in the company to the management. No plan was ever finalized. Paul's desire was 50% for himself. Michio and Aveline were hesitant since that would have meant that future stock participation by management would be severely limited. It was my understanding that the upshot of these discussions was that Aveline would hold the shares in her name in trust until such time that an equitable proposal was put forward by management. In lieu of stock participation, many employees including Paul, myself & Roger Hillyard were given cash bonuses and extensive time off from our work to pursue our own travels and study. (Paul went to Japan under such an arrangement, Roger traveled through the U.S. and I traveled through Europe.)"

"Paul did not 'set-up' Mitoku & Muso. They were already in operation and exporting. Paul did however, cement a good relationship with these companies and make more efficient arrangements for shipping and quality control.

"As per Paul's shock regarding the shares. I can only say as stated above, plus the fact that what you want and what you have are two different things. If the shares had been legally his, they could not have been taken away and Paul could never be accused of having been ignorant of the law in business matters."

"Erewhon in Los Angeles was started by myself and Aveline Kushi. I had moved to Los Angeles to set up a center there immediately after establishing a center in Chicago [Illinois] and getting the shop opened. The shop was opened in 1970 and our original purchase of miso and tamari were made through Chico-San. We later received our first direct shipment from Japan prior to Paul's arrival. I was joined by Bruce Macdonald and we began distribution up the California coast as far north as San Francisco, distributing miso and tamari as well as some Japanese condiments and seaweeds to small co-ops and natural food shops. Our biggest customers were the co-ops in Berkeley and Fred Rohe in San Francisco."

"What can I say regarding Paul's impression of Erewhon in 1970? We were all younger then. My impression was that Erewhon was a very happy place to work at Farnsworth Street. There was a high degree of comradery [camaraderie] and a poor understanding of business. The words arrogant and dogmatic were words often used to describe Paul–rightly or not.

"Bill, I hope these comments are not in any way taken to be disparaging of Paul and his involvement in the natural foods movement. His energy and vitality combined with his sharp business sense was one of the main driving forces behind the wide distribution of Japanese foods. Combined with Michio's educational work, this forged the beginning of the wide acceptance that we are now seeing for many of the traditional food items. It would be sad, I think, to allow Paul's own personal frustrations to overly color what was

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an exciting and adventurous experience for all involved." Address: The Kushi Institute, P.O. Box 1100, Brookline, Massachusetts 02147. Phone: (617) 731-0564

6308 Shurtleff, William. 1983. In Beijing (June 10-11) (Document part). In: William Shurtleff. 1983. Log of Soyfoods Research Trip to China and Japan: 29 May to 10 July. Lafayette, California: Soyfoods Center. 117 p. See p. 20-23. Unpublished manuscript.

• ***Summary:*** Soy sauce, miso, and fermented tofu (*doufu-ru*) are all sold at one type of store, a pickle shop that sells salted foods. I visited one of these named *Tien Yuan Jiang Yuen*. A color photo (above) shows various types of soy sauce sold in Beijing.

In the market, the sign above the soyfoods section reads *Douzhi Shipin*. In this section they sell *fuzhu* (bamboo yuba [dried yuba sticks]), Doufu-fen (a type of soy flour made in Beijing), cubes of fried tofu (1 inch on a side, called *doubao*).

Note: This is the earliest English-language document seen (May 2012) that contains the term *doubao*.

In 1949 the East Asiatic Co. (which is owned by rich Danes) was the leading exporter of soybeans from China. They started exporting soybeans from China in the 1920s. When exporting, they had offices in Dalien (Dairen), Harbin, etc. The company now has about 80,000 employees worldwide. It is the biggest company in Denmark and the biggest foreign trading company in China, except for several Japanese companies such as Marubeni, Nissho Iwai, etc.

June 11, Saturday. Beijing seminar #1 in downstairs room. Talk with Mr. Chen of the Food and Fermentation Research Institute. Mr. Chen says the most popular vegetable oils in China are: 1. Peanut. 2. Soy (not generally refined). 3. Rapeseed.

Two organizations do research on soyfoods in Beijing: (1) His Food and Fermentation Research Institute (under MinLight, the Ministry of Light Industry), three people who work there are Mr. Chen, Mr. Dai Jiakun, and Mrs. Xu Lin. (2) Beijing Municipal Food Research Institute; contact Mr. Dai Xinjun (Dong [East] Zongbu Lane, Beijing).

Four acid tests for the buyer of any soymilk process and equipment: (1) Equipment cost (fixed). (2) Processing cost (including labor, energy, water, etc.). (3) Soymilk flavor. (4) Protein and solids recovery (percentage).

The Chinese name for thin pressed tofu sheets ("1,000 sheets / 1,000 folds) is Qianzhang or Baiyeh.

The best local markets (which have more variety of produce in the winter) are: Chongwen Vegetable Market and Xidan Vegetable Market (Chinese characters are given for both). The Chinese term for "soyfoods" is *dadou shipin* ("soybean products").

There is a new Chinese method (in Shanghai) for continuous pressed tofu sheets.

Commercial soy products made by Mr. Chen's institute: (1) Formulated soymilk for infant food. (2) Soy protein concentrate. (3) Later a modern soymilk plant will use this to make (1). Plain and sweetened soymilk in glass bottles, plus fruit (citrus = orange flavor) and malt. There are some technical problems with using plastics bags as soymilk containers; they leak and are fairly expensive. Later he will

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work on a lactic soymilk drink.

Research on soy sauce. Improved method. Low salt, done in factories in Beijing and Shanghai.

Most soy oil in Beijing is not refined. People like the flavor OK, but they do not know the refined flavor. Rapeseed oil is used mostly in South China. In Beijing, mostly peanut and soy oil; peanut is more expensive and has a higher class image. Rapeseed is the cheapest but people don't like it.

The debate over more meat vs. more protein. Recently Chinese officials have come to understand the problem better. Send him *Diet for a Small Planet*, by Lappé.

In 3-4 months, Mr. Chen will send me an article about soyfoods in China–Tell Ira Leviton.

I visit a bookstore and buy a pinyin dictionary and a book (published last year in Chinese) about tofu. Visit the Forbidden City and a very famous square in central Beijing. Address: P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991

6309. Shurtleff, William. 1983. In Beijing (Monday, June 13) (Document part). In: William Shurtleff. 1983. Log of Soyfoods Research Trip to China and Japan: 29 May to 10 July. Lafayette, California: Soyfoods Center. 117 p. See p. 32-33. Unpublished manuscript.

• ***Summary:*** Some reflections: China has not yet begun to modernize its tofu and miso industries like Japan has.

From Terrence Foley, try to get a list of key people involved with soy in China for our mailing list.

Morning in the Beijing market: A line of 15-20 people. No fresh tofu. Lots of (1) Deep-fried tofu cubes. (2) Tofu noodles/shreds. (3) Scraps of firm tofu that have been simmered in soy sauce (heat and salt extend the shelf life). (4) Deep-fried or simmered tofu "fingers"–1½ by 1½ by 5 inches. (5) Tofu roll made of pressed sheets. Most tofu in the market this morning uses soy sauce simmering or deep-frying to preserve it; there is no refrigeration and no fresh "white" tofu.

Vegetarian delicatessen named Quan Zu Zhai at Ba Mien Tsao near Wang Fujin: At 8:15 a van pulls up and unloads its total contents of buckets and trays of 18 types of meatless meat analogs. They are all. Address: P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

6310. Kazama, Akiyoshi. 1983. Early years of selling macrobiotic foods to the western world (Interview). *SoyaScan Notes*, June 21. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Mr. Kazama worked for a German export company named Ravenna; he ran their Tokyo branch office, exporting machines, cameras, transistors, etc. That company started in 1959.

He first heard of macrobiotics (before Paul Hawken arrived in Japan) from Mr. Shin Obayashi, a friend of his from Waseda University. Obayashi and Michio Kushi (from Tokyo Univ.) had won Japanese government scholarships to study in the United States. Both studied at Columbia University. Obayashi is no longer living. Mr. Kushi asked Obayashi to help him find a company in Japan from which Kushi could import Japanese natural foods. Before that, Kushi had to buy such foods from Chico-San at very high prices, like medicine. Mr. Obayashi contacted Mr. Kazama. Mr. Kushi found out the names of Chico-San's sources by reading the Japanese labels on their products. He sent these names to Mr. Kazama, who in turn bought the foods from Chico-San's sources. Evan Root and Paul Hawken suggested that Kushi and Erewhon should buy directly from Japan.

Mr. Kazama was accustomed from his office machines business to taking a low markup, so he charged Erewhon a commission of only 10%. Thus Erewhon got low prices, which was a key to their success. Mr. Kazama shipped the first order to Erewhon 3–4 months before Hawken arrived in Japan. Hawken's brother-in-law, a lawyer, helped provide the funds for opening the first letter of credit. In about 1969 Mr. Kazama established a new company named Mitoku, which he owned. It was independent of Ravenna.

Originally Mr. Kazama had bought his shoyu from Marushima, but Muso objected, saying it was their exclusive source. Muso asked Marushima to stop selling to Kazama, which Marushima did. Kazama then searched the length of Japan to try to find a company that still made shoyu in the traditional way. He finally located Sendai Miso Shoyu. Sasaki Jube, the 7th generation owner, made both traditional and modern shoyu products. He set aside a warehouse for only his traditional products, and insisted that all his brewmasters should master the traditional process first. Sasaki eats brown rice. Mr. Kazama found Sendai by himself and first went there alone. Sendai first sold its existing traditional product to Kazama in about 1970, then they expanded their production by adding on new fermentation rooms as orders increased.

Sendai has a special process for keeping a large amount of shoyu moromi in a huge vat; they then use half of this in each new batch, so that part of each batch is old and part new. Thus the finished product is not clearly 2 years old but maybe an average of 2 summers old. Thus in each bottle, there may be some shoyu that is 3 or 4 years old. Sendai gets very consistent quality. They still use well water, but the maximum amount they can use is limited by the government.

Today Mitoku's biggest customer is Westbrae, followed by Erewhon. Address: President, Mitoku Co., Tokyo, Japan. Phone: 03-201-6706.

6311. Yokotsuka, Tamotsu. 1983. Re: Answers to questions about shoyu and its history. Letter to William Shurtleff at Soyfoods Center, June 26. 4 p. Handwritten, on letterhead. [Jap, eng+]

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• ***Summary:*** A photo shows: Dr. Kazuya Hayashi (left) and Dr. Tamotsu Yokotsuka (right). Address: Kikkoman, Noda, Japan.

6312. Yokotsuka, Tamotsu. 1983. Thoughts on shoyu Terminology and history (Noda, Japan, June 28-29) (Interview). In: William Shurtleff. 1983. Report on Soyfoods Research Trip to Hong Kong, China, Singapore, and Japan. May 29 to July 10, 1983. Lafayette, California: Soyfoods Center. 117 p. See p. 69-83. Unpublished manuscript. Address: Noda, Japan.

6313. Mayer, Jean; Goldberg, Jeanne. 1983. Nutrition: A good pasta salad need not be hopelessly high in calories. *Washington Post*. June 30. p. L50.
• ***Summary:*** Another reader writes to ask for more detail about the sodium content of Chinese condiments. Ans: The one brand of brown bean sauce analyzed contained 425 mgs of sodium per teaspoon.

Likewise the sodium content of soy sauce depends much more on the brand than on whether it is a light or a dark sauce. Among the three brands of light soy sauce tested, sodium values ranged from a low of 320 mgs to a high of 445 mgs per teaspoon, while among the dark soy sauces, the five brands tested ranged from a low of 310 mgs to a high of 495 mgs per teaspoon.

6314. **Product Name:** Tofu Delight Tempeh Salad [Curry, or Herb].
Manufacturer's Name: Appropriate Foods, Inc.
Manufacturer's Address: 137 New Hyde Park Rd., Franklin Square, Long Island, NY 11010.
Date of Introduction: 1983, June.
Ingredients: Organic tempeh, brown rice, miso, tamari, herbs, spices.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Catalog. 1983, June. In June 1984 changed to New York Soy Deli brand. Label. 1984, June. 1.5 by 3 inches. Black on orange. Distributed from June 1984 to June 1986.

6315. Fogg, John. 1983. Marketing natural tamari in the U.S. *Soyfoods*. Summer. p. 64, 66, 68.
Address: Harris & Fogg, Boston.

6316. Fruin, W. Mark. 1983. From philanthropy to paternalism in the Noda soy sauce industry: Pre-corporate and corporate charity in Japan. *Business History Review*. 61:168-91. Summer. *
Address: Menlo Park, California.

6317. Herrmann, Karl. 1983. Ueber Sojabohnen und Sojaprodukte [On soybeans and soybean products]. *Ernaehrungs-Umschau*. 30(6):175-79. June. [17 ref. Ger]
• ***Summary:*** Contents: Introduction, nutritional composition, amino acids in soy sauce. Unfermented soy products: Soymilk, tofu (*sojaquark*), aburage, kori-tofu, yuba, kinako. Fermented soy products: Soy sauce, miso (*sojapaste*), tempeh, sufu, natto. Address: Institut fuer Lebensmittelchemie, Hannover Univ., Wunstorfer Str. 14, D-3000 Hannover 91 [West Germany].

6318. **Product Name:** Incredible Vegetable Turnover (with Tofu).
Manufacturer's Name: Laughing Moon Food Company.
Manufacturer's Address: 220 Third Ave., Venice, CA 90291.
Date of Introduction: 1983, June.
Ingredients: Filling: Onion, green pepper, tofu, bean sprouts, peas, potatoes, spices, shoyu. Crust: Whole wheat flour, water, vegetable oil, sea salt.
Wt/Vol., Packaging, Price: 4.5 oz in plastic bag.
How Stored: Frozen.
Nutrition: Per 4.5 oz. turnover: 294 calories, 7 gm protein, 23 gm carbohydrates, 14 gm fat, 44 mg sodium.
New Product–Documentation: Spot in Soyfoods. 1983, Summer. p. 54. "Turn Over Tofu."

6319. Milbury, Peter. 1983. Soy sauces: Maybe not so natural. *Soyfoods*. Summer. p. 65, 67, 68.
Address: Operations director, Chico-San Inc., Chico, California.

6320. **Product Name:** Tempeh Burgers.
Manufacturer's Name: Nasoya Foods (Distributor). Made in Greenfield, Mass., by The Tempeh Works.
Manufacturer's Address: Mechanic St. Ext. (P.O. Box 841), Leominster, MA 01453.
Date of Introduction: 1983, June.

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Ingredients: Organic soy tempeh, natural soy sauce, herbs, spices.
Wt/Vol., Packaging, Price: 7 oz.
How Stored: Refrigerated or frozen.
New Product–Documentation: Label. 1983, undated. 4 inches square. Yellow, black, blue, green. "100% natural." Coupons. 1983. Dated.

6321. **Product Name:** Chili Con Tofu.
Manufacturer's Name: San Diego Soy Dairy.
Manufacturer's Address: 2965 5th Ave., San Diego, CA 92103.
Date of Introduction: 1983, June.
Ingredients: Incl. kidney and pinto beans, tofu, a vegetable variety, green chilies, tamari.
Wt/Vol., Packaging, Price: 16 oz deli container.
How Stored: Refrigerated.
New Product–Documentation: Spot in Soyfoods. 1984, Summer. p. 45. "Tofu Ole." Talk with Gary Stein. 1989, Feb. 17. He thinks this product was introduced in about June 1983.

6322. **Product Name:** San-J Brown Rice Crackers (Seasoned with Tamari) [Teriyaki, Sesame Sunflower, Pumpkin, Vegetable, or Szechuan]
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 3236 Boulevard, Colonial Heights, VA 23834.
Date of Introduction: 1983, June.
Ingredients: Whole brown rice, various seeds, teriyaki or tamari soy sauce.
Wt/Vol., Packaging, Price: 2.3 to 3.5 oz cellophane bag.
How Stored: Shelf stable.
Nutrition: Per 100 gm.: 376 calories, 7.9 gm protein, 85.7 gm carbohydrates, 690 mg sodium.
New Product–Documentation: Spot in Soyfoods. 1983, Summer. p. 54. These are the traditional senbei of Japan. On package: "Wheat free, made with whole brown rice, no oils–they're baked. The perfect 100% natural snack." East West. 1987, Sept. Inside rear cover. "Most Honorable Crunch."

6323. *Soyfoods.* 1983. The soyfoods industry on display [at Natural Foods Merchandiser Expo in Anaheim, California and Whole Life Times Expo in San Francisco]. Summer. p. 7.
• ***Summary:*** Sixteen soyfoods companies exhibited at Anaheim to 7,600 paying visitors. "Six soyfoods companies shared an official Soyfoods Association booth, where they retailed their own products and provided liberal tasting samples as well. Participants included Legume Inc. (tofu pizza, tofu lasagna), Farm Foods (Ice Bean, in cones), Quong Hop (tofu burgers, tofu canolli, soymilk), Sonoma Specialty Foods (tofu salads, tofu cheesecakes), Laughing Moon (vegetable tofu turnovers), and San-Jirushi International (samples of San-J Real Tamari). The Association booth, one of 10 food catering booths at the Expo, was 'packed solid through the whole show,' reports Farm Foods' Robert Tepper."

"William Shurtleff gave a one hour speech and slide presentation on soyfoods to an enthusiastic audience."

Other interesting companies include: Pacific Tempeh, Light Foods, Essential Foods, Garden of Eatin', Living Lightly, Kibun, Westbrae Natural Foods, Edward & Sons, Cedarlane Foods, Morinaga, Worthington Foods.

Interesting products: Light Links tofu "hotdogs," Ravioli, Tofumale Tamale, Tempehroni Pizza, Chili Con Tempeh, Tempeh Enchilada.

Photos (without captions) show: (1) Danielle Lin of Laughing Moon. (2) Steve Snyder of Hinode. (3) The Morinaga booth, with Mr. Seishiro Ikegami.

6324. **Product Name:** Oregon Country Soysage (Meatless Okara-based Sausage).
Manufacturer's Name: Surata Soyfoods.
Manufacturer's Address: 302 Blair Blvd., Eugene, OR 97402. Phone: 503-343-8434.
Date of Introduction: 1983, June.
Ingredients: Okara, organic wheat flour, yeast, oil, tamari, honey, mustard, allspice, pepper, cayenne pepper, fennel, garlic powder, sea salt, oregano.
Wt/Vol., Packaging, Price: 8 oz tub.
How Stored: Refrigerated.
New Product–Documentation: Label, undated. Circular. Green, brown, white, and blue. "100% natural. 100% meatless. Ready to eat, or as patties, pizza garnish, in pasta sauce, scrambled with eggs or tofu, in stuffed mushrooms or peppers." This was formerly "Devi's Country Soy Sausage," made by another nearby company. Surata discontinued the product in Aug. 1989.

6325. **Product Name:** Supreme-Bean Tempeh Burger.
Manufacturer's Name: Wildwood Natural Foods.
Manufacturer's Address: 135 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919.
Date of Introduction: 1983, June.
Ingredients: Tempeh, whole grain bread, lettuce, celery, cucumber, green pepper, onion, tofu dressing (UFO Tofu by Wildwood, safflower oil, mustard, apple cider vinegar, garlic, sea salt), tomato sauce, mustard, tamari, lemon juice, spices, sea salt.
How Stored: Refrigerated.
New Product–Documentation: Soyfoods. 1983, Summer. p. 42-43. Label sent by Wildwood on their letterhead. 1983, undated. 3 by 2 inches. Self adhesive. Black and green on white. Silhouette of woods with birds. "Fresh Daily. Ready to eat Foods, Naturally. Perishable. Keep Refrigerated."

6326. Noda, F.; Sakasai, T.; Osaki, K.; Akao, T. 1983.

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[Continuous quick brewing of soy sauce]. *Japanese Patent* 1,159,337. July 25. [Jap]*
• ***Summary:*** Attempts to shorten the time for soy sauce production have included a quick hydrolysis of raw materials with no or low salt content; another was a process divided into anaerobic lactic acid fermentation, aerobic yeast propagation, and anaerobic alcohol fermentation.

6327. Chico-San, Inc. 1983. America's first macrobiotic food company: What do we mean by first? (Ad). *East West Journal*. July. p. 13. Also in Whole Foods, July 1983.
• ***Summary:*** Chico-San describes itself as "A company built on a philosophy." Address: P.O. Box 810, Chico, California 95927.

6328. Fukushima, Danji. 1983. Fermented soy foods in the United States. *INTSOY Series* No. 25. p. 117-19. B.J. Irwin, J.B. Sinclair, and Wang Jin-ling, eds. Soybean Research in China and the United States (College of Agric., Univ. of Illinois at Urbana-Champaign).
• ***Summary:*** Although chemically hydrolyzed soy sauce is widely consumed, fermented soy sauce has an annual growth rate of 15%. La Choy and Chun King, the two largest producers of chemical soy sauce, are assumed to have a combined annual production of 20,000 kiloliters. Most of the fermented soy sauce is produced by Kikkoman Foods, Inc. and annual production has reached 19,000 kiloliters.

Soy sauce manufacturing consists of three main processes: koji making, brine fermentation, and refining. Major improvements in the soy sauce process are (1) high temperature short time cooking of the soybean flakes to increase the yield, (2) use of an artificial mutant of *Aspergillus sojae* which produces twice as much proteolytic enzyme, (3) use of automatic koji making equipment, and (4) use of *Pediococcus halophilus* and *Saccharomyces rouxii*, and proper temperature control during brine fermentation. Address: Kikkoman Foods, Inc., Walworth, Wisconsin.

6329. Guo, Xiang-ao. 1983. Research on heat denaturation of soy protein after solvent extraction, and traditional Chinese soy foods. *INTSOY Series* No. 25. p. 64-66. B.J. Irwin, J.B. Sinclair, and Wang Jin-ling, eds. Soybean Research in China and the United States (College of Agric., Univ. of Illinois at Urbana-Champaign).
• ***Summary:*** Solvent extracted soybean flakes and meals (moisture content 9.6%) were subjected to 80°C, 90°C, and 100-105°C temperatures for 15 or 20 minutes. The critical temperature for protein denaturation was 80°C. At higher temperatures, solvent-extracted soybean meal was denatured more rapidly than soy flakes. Preparation of the following traditional Chinese soyfoods was described briefly: Soy sprouts (*dou ya*), soybean jiang (*dou jiang*), fermented black soybeans (*dou chi*), soy sauce (*jiang you*), soy beverage (*dou jiang*), tofu (regular and soft, *doufu*), firm tofu (*doufu gan*), pressed tofu sheets (*doufu yi*), vegetarian chicken (*su ji*), fried tofu (*you-doufu*), fermented tofu (*doufu-lu*), and yuba (*doufu pi*).

Note: This is the earliest English-language document seen (May 2012) that uses the term *doufu pi* (spelled in pinyin) to refer to yuba, which he describes as follows: "Soy beverage is poured into a shallow pan and heated slowly. A protein film forms on the surface. This film is rolled and dried until it resembles bamboo. The taste and composition are similar to textured soy protein. It is a very nourishing food." Address: Zhengzhou Grain College, China.

6330. **Product Name:** [Kikkoman Instant Tofu Miso Soup (Soybean Paste Soup with Tofu)].
Foreign Name: Tôfu Misoshiru
Manufacturer's Name: Kikkoman Corporation.
Manufacturer's Address: Noda 278, Chiba-ken, Japan.
Date of Introduction: 1983 July
Ingredients: Powdered miso, dehydrated tofu, dried seaweed, monosodium glutamate, powdered yeast extract, powdered dried bonito, dehydrated leek.
Wt/Vol., Packaging, Price: 1.5 oz (30 gm). Foil packet containing 3 individual foil packets. Makes 2/3 cup.
How Stored: Shelf stable
New Product–Documentation: Label. 1983. 5.5 by 7 inches. Plastic packet. Brown, red, green, and yellow on white. Full color picture of wooden bowl of miso soup on tray. Individual foil packets inside are 2.75 by 4 inches. Brown, black and red on white. Picture of bowl of soup on front, instructions on back. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. "Distributed by Kikkoman Corporation, Noda 278, Japan." Text on label in both English and Japanese.

Note: This is the earliest known commercial soy product that uses dried-frozen tofu as an ingredient.

6331. Norin Suisan-sho, Nosan Engei Kyoku, Hatasaku Shinko-ka. 1983. Daizu ni kansuru shiryo [Statistics concerning soybeans]. Tokyo, Japan. 157 p. 26 cm. [Jap]
• ***Summary:*** This yearly report, published by Japan's Ministry of Agriculture, Forestry, and Fisheries (MAFF), is packed with detailed statistics on soybean production, trade, and utilization in Japan. The table on p. 129 gives statistics on miso production, shipments, and use of raw materials by prefecture and for Japan as a whole. In 1981 Japan produced 575,782 tonnes of miso and shipped 578,610 tonnes. Raw materials used were 14,417 tonnes of domestically grown whole soybeans, 167,539 tonnes of imported whole soybeans, 103,611 tonnes of polished rice, 24,667 tonnes of polished barley, 476 tonnes of defatted soybean meal, 71,325 tonnes of salt, and 96 tonnes of cornmeal (used mainly in Nagano and Hyogo prefectures). The top 5 miso producing prefectures were Nagano (164,510 tonnes, 28.6% of Japan's total), Aichi (54,529), Niigata (38,156), Aomori (28,602),

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and Hokkaido (25,908). The source of these statistics is: Shokuryô-cho, Kakô Shokuhin-ka, Kome Mugi Kakô Shokuhin Seisan Dotai, Tokei Chosa.

The table on p. 130 gives similar statistics on shoyu for 1981. In 1981 Japan produced 1,190,618 kiloliters (kl) of shoyu and shipped 1,118,799 kl. Raw materials used were 6,473 tonnes of whole soybeans, 175,205 tonnes of defatted processed soybean meal (*dashi kakô daizu*), 177,407 tonnes of wheat, 204,777 tonnes of salt, and 80,642 kl amino acid liquid (*amino-san*, either purchased or made on site). The top 7 shoyu producing prefectures were Chiba (424,498 kl; 35.7% of Japan's total), Hyogo (203,374) Aichi (59,201 kl), Kagawa (45,430 kl), Fukuoka (36,575 kl), Oita (31,860 kl), Mie (30,354 kl). The source of these statistics is the same as for the miso statistics, above.

The table on p. 132-33 gives statistics on consumption of shoyu (in 100 ml), miso (100 gm), whole soybean foods (yen), tofu (cakes = *cho*), aburagé and ganmodoki (yen), natto (yen), and other soyfoods (yen) from 1963 (Showa 38) to 1981. Under shoyu, miso, and tofu is given the amount of money spent (*kingaku*), the quantity purchased (*sûryô*), and the price. Annual shoyu consumption per household has decreased from 30.5 liters in 1963 to 16.3 liters in 1981. Annual miso consumption per household has decreased from 18.4 kg in 1963 to 12.1 kg in 1981. Tofu consumption per household has remained about constant, with 87.3 cakes in 1963 and 86.9 cakes in 1981. A breakdown is also given for each food by annual household income, with 5 income levels. One grouping is for all households (including those with a retired head of household or on welfare) and the other is only households with at least one working member. In each case, the higher the household income, the greater the consumption. In the case of tofu, for example, households with an annual income of less than 2.65 million yen consumed 76.1 cakes of tofu, while households with an annual income of more than 5.8 million yen consumed 99.3 cakes. Next is a breakdown by age of head of household. Generally, the younger the head of household, the less the consumption. In the case of tofu, households whose head was 24 years or younger consumed 55.5 cakes/year, while households whose head was age 60-64 consumed 95.4 cakes. The source of these statistics is the *Kakei Chosa Nenpo* (*Sôri-fu, Tôkei-kyoku*).

The table on pages 134-35 shows consumption per household by geographical area of the same foods as the previous table. Geographical areas include: all of Japan, all cities, cities with 50,000 or more population (broken down into large, medium, and small), cities with less than 50,000 population, towns and villages (*machi* and *mura*), 14 major regions, and large cities. Note: Statistics by prefecture are not given. In the case of tofu, the highest consumption is cities with less than 50,000 population (92.0 cakes), while the lowest is in medium-sized cities with more than 50,000 population (84.2 cakes). The regions with the highest tofu consumption are Tohoku (the northeast prefectures; 101.9 cakes) and Chugoku (southwest provinces; 98.1 cakes), while the lowest two are Hokkaido (58.3 cakes) and Okinawa (72.3 cakes). The cities with the highest annual tofu consumption per household are Toyama city (118.9 cakes), Morioka city (118.4), Yamaguchi city (107.9), Matsuyama city (102.9), Fukushima city (102.8), Tokushima city (102.0), Fukui city (100.7). The source of these statistics is the same as for the statistics on p. 132-33.

Tables on pages 136-39 give a detailed nutritional analysis of soybeans and each of 23 soyfoods made in Japan. The following minerals are listed: calcium, phosphorus, iron, sodium, and potassium. Vitamins: A (retinol, carotene, international units), B-1 (thiamine), B-2 (riboflavin), niacin, and C. Soybeans grown in Japan contain, on average, 35.3% protein and 19.0% fat, compared with 33.0% protein and 21.7% fat for soybeans grown in the USA, and 32.8% protein and 19.5% fat for soybeans grown in the China. Address: Tokyo, Japan.

6332. **Product Name:** To-Neu Natural Soy Beverage
Manufacturer's Name: San-J International, Inc. (Importer). Made in Japan by Kibun Foods.
Manufacturer's Address: Colonial Heights, Virginia.
Date of Introduction: 1983, July.
Ingredients: Water, soybean, corn oil, honey, lecithin, calcium lactate, carrageenan.
Wt/Vol., Packaging, Price: 6.76 fluid oz (200 ml). Tetra Brik Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 6.76 fl oz: Calories 117, protein 7 gm, carbohydrate 3 gm, fat 9 gm.
New Product–Documentation: Label, 1983, 2.5 by 3.25 inches by 1.5 wide. Paper carton. Orange, yellow, black, and white on green. "A refreshing new beverage made from whole soybeans! In the Orient, 'to-nyu' means 'soymilk.' Kibun TO-NEU is cholesterol free, and contains more protein than ordinary milk. TO-NEU is also rich in vitamin E." Ad in Whole Foods, 1983, July. "To-Neu soy drink is packaged to stay fresh and nutritious for months. The trick is keeping it around that long." Shurtleff & Aoyagi, 1984, Soymilk Industry & Market, p. 46-47. Front label reads: "San-J Kibun TO-NEU Natural Soy Beverage, Non-Dairy." Kibun specified that San-J could only sell the product to the natural and health food trades. Promoted for use as a refreshing drink, as a cereal topping, or in place of milk in sauces, soups, and desserts.

6333. **Product Name:** Soken Gentle Soy Sauce: Tamari with Less Salt.
Manufacturer's Name: Soken Trading, Inc. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 1705, Sausalito, CA 94965.

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Date of Introduction: 1983, July.
Ingredients: Soybeans, whole wheat, sea salt, water
Wt/Vol., Packaging, Price: Glass bottles
How Stored: Shelf stable.
New Product–Documentation: Spot in Whole Foods 1983 July, p. 52. This product contains only 7% salt (58% less than standard tamari soy sauce). It comes in 5-oz. (easy-pour) and 16 oz bottles. Note: This product has a new label and name. The previous name (1979) was "Soken tamari soy sauces" [Gentle].

6334. Ohsawa, Lima. 1983. "Tamari" ni tsuite [Re: Concerning the word "tamari"]. Letter to Bob Kennedy, President of Chico-san, Inc. in California, Aug. 24. 2 p. Typed, translation of original letter only. [Jap]
• ***Summary:*** This letter was written to Bob Kennedy in response to his request for information on the origins of the use (actually misuse) of the term "tamari" by George Ohsawa and the macrobiotic movement. The translation is by Akiko Aoyagi of Soyfoods Center.

"In about 1958 or 1959 George Ohsawa gave a lecture at a university in Hamburg, West Germany. The lecture hall was packed with some 400 to 500 people. Among them was a young man whose name I don't clearly recall (perhaps it was Egel?). He was running an organic school in Germany. After the lecture he came to Mr. Ohsawa and earnestly enquired about various aspects of the Unique Principle.

"At that time there was also some talk about shoyu. As soon as he tasted this shoyu, he registered the word 'shoyu' as his own trademark and brand name, so that only he could sell it under this name. We came to know about this later and thought that it was a terrible thing for him to do. We were troubled by his action, for in Germany the law concerning registered trademarks was very strict. Therefore, in Germany, we were unable to call shoyu by its proper name, 'shoyu.' Out of sheer necessity, we decided to call shoyu by the name 'tamari.' After that, people in Europe started to call shoyu by the name 'tamari.'

"In Japan we call the liquid from soybean miso by the name 'tamari shoyu,' and it has been used in fine restaurants and for high class recipes. It is a type of shoyu.

"After this incident, shoyu came to be called tamari. People overseas started to become familiar with the product and its new name, and they came to be used regularly." Address: Tokyo, Japan.

6335. Claiborne, Craig; Franey, Pierre. 1983. An Indonesian treat [satays]: Food. *New York Times*, Aug. 28. p. SM54, SM64.
• ***Summary:*** Satays are an Indonesian version of shish kebab that does not have alternate layers of vegetables and can be made with almost any meat, poultry, or seafood. Easy to prepare, they are often served with a spicy and sweet peanut sauce.

One ingredient used in preparing satays that can be found relatively easily is "ketjap manis," which "is available in many shops that specialize in Asian foods." It makes a rich addition to the marinades of certain satays.

The recipe given for Beef satay calls for "2 tablespoons soy sauce, preferably ketjap manis (see note)."

"Note: Ketjap manis is a sweet soy sauce widely used in Indonesian cookery." It is available at Oriental and Far Eastern markets, including Southeast Asia Food & Trading Company in Manhattan, New York.

The recipe given for Peanut sauce for satays does not call for the use of any kind of ketjap (soy sauce).

6336. Mountain Ark Trading Company. 1983. Catalog–Summer 1983 [Mail order]. 120 South East St., Fayetteville, AR 72701. 30 p. 27 cm.
• ***Summary:*** This is a mail order catalog for macrobiotic whole foods, specialty cookware, cookbooks and books on natural healing, futons, furniture, etc. The owners of the company are Frank & Phyllis Head, Tom & Toby Monte, Bill & Carol Tims, and Joel & Wendy Wollner.

Concerning seitan and *fu*, we read: "Seitan (wheat gluten)–100% Wheat Protein ("gluten" is the name for wheat protein). (1) Mountain Ark's seitan–savory wheat gluten cutlets, freshly cooked in small batches; made from Deaf Smith's organic whole-wheat flour [Arrowhead Mills] and Ozark mountain water, seasoned with tamari, kombu, and ginger. Shipped frozen, customer assumes risk of spoilage April 1 through November 30. 8 oz or 16 oz tub. Price: $4.75, not including postage. (2) Spicy seitan–as above with cayenne pepper and garlic added for zest, though not overly spicy. 8 oz or 16 oz tub. (3) Seitan condiment–juicy, chewy chunks of very concentrated wheat gluten cooked in Johsen Shoyu; not perishable. 6.35 oz. jar. Price: $2.95, not including shipping.

Dried wheat gluten cakes (*Fu*)–use like pasta. Sifted wheat gluten jumbo rings (*Kuruma Fu*), Sifted wheat gluten sheets (*Shonai Fu*), Sifted wheat gluten rings (*Zeni Fu*), Whole wheat gluten rings (*Zenryu Fu*).

Talk with Joel Wollner, 1992, July 13. The first two types of seitan were made in Fayetteville by Hans Decoz, from the Netherlands.

Soyfoods Center also owns a Mountain Ark catalog dated Autumn 1983. 36 p. The company now has a toll-free number: 1-800-643-8909. Address: Fayetteville, Arkansas. Phone: 501-442-7191.

6337. Shurtleff, William. 1983. Log of soyfoods research trip to Hong Kong, China, Singapore, and Japan: May 29 to July 10, 1983 (Unpublished report). Soyfoods Center, P.O. Box 234, Lafayette, CA 94549 USA. 117 p. Aug. Unpublished manuscript.
• ***Summary:*** Contents: Hong Kong: K.S. Lo and Vitasoy. May 29 (Sunday)–Plane from Hong Kong to Guangzhou.

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City (Canton) in Guangdong (Kwantung) province. China: Guangzhou (May 29-30), Zhengzhou, Beijing, Harbin, Beijing #2 (Seurlock, Chen Xi-Hau, Joe Rakosky, Terrence Foley, local markets, vegetarian deli). Singapore: STS and Anders Lindner, Alan Yeo, American Soybean Association (Don Bushman, Sabrine Lee, Lars Wiederman).

Japan: Seiyu department store, Kibun, ASA Tokyo (Ms. Kojima), Kanji Tsuchiya, Japan Soymilk Assoc., Sano Rinji, Kikori, Prasad and natural foods, Goro Kanasugi and tempeh, Tsuchiya soymilk #1, Kikkoman at Noda (Yokotsuka #1, Mizunuma, Plant #6 modern, Yokotsuka #2, Goyo Gura, Noda Museum, Noda Library, Mr. Ichiyama), Morinaga, Kikkoman Tokyo, Japan Packaged Tofu Assoc., Natto statistics, Asahimatsu, Natto-tempeh meeting, Mr. Katoh, Nakano Masahiro, Mr. Iitsuka of Kikkoman, Daizu Shokuhin Kaihatsu, Tsuchiya #2, Nagayama, soynuts, oil association, kinako, Ishige, Mr. Mori and soy sprouts, Katoh, Arai-san, Kodansha, Nagayama and kinako, Dr. Nakano #2, Arai shoyu, Tsuchiya #3, Tenmi. Address: Lafayette, California.

6338. Shurtleff, William; Aoyagi, Akiko. 1983. History of soyfoods in China. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 19 p. Aug. Unpublished typescript
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction: Soyfoods widely used in all parts of China. Overview of Chinese food and diet. Animal products and soyfoods as protein sources in China. China's great cuisines and soyfoods. General characteristics of Chinese soyfoods industry. Information on soyfoods. Soy trade associations. Attitudes toward technology, modernization, and traditional soyfoods. Private enterprise, bureaucracy, and competing ministries. Availability of soyfoods. Address: Lafayette, California. Phone: 415-283-2991.

6339. Shurtleff, William. 1983. Report on visit to Kikkoman in Noda (Document part). In: William Shurtleff. 1983. Log of Soyfoods Research Trip to China and Japan: 29 May to 10 July. Lafayette, California: Soyfoods Center. 117 p. See p. 67-85. Aug. Unpublished manuscript
• ***Summary:*** Discusses: New (1982) 16-minute color film on shoyu. Visit to plant #7 (the biggest, but old) and description of process. Meeting with Drs. Yokotsuka and Hayashi to ask questions and discuss matters of mutual interest related to shoyu.

Shurtleff offers 5 suggestions/ideas to Kikkoman through Dr. Yokotsuka: 1. Start calling their product Kikkoman Shoyu instead of Kikkoman Soy Sauce, to more clearly distinguish it from HVP soy sauce. 2. Introduce a Kikkoman Shoyu product that contains no preservatives, preferably through aseptic bottling. 3. Explain without embarrassment or attempts to conceal that shoyu koji is made with molds, not primarily with yeasts (as Kikkoman now says in their PR literature). 4. Explain without embarrassment or attempts to conceal why defatted soybean meal is used instead of whole soybeans in making shoyu. 5. Open a traditional shoyu plant, like the *Goyo-Gura*, at Walworth, Wisconsin, use it to make traditional, natural shoyu, sell that shoyu at a profit, and offer tours to visitors. Dr. Yokotsuka says he agrees strongly with all 5 points and has, in fact, been making the same recommendations for 10-20 years.

Before 1960 Dr. Yokotsuka personally thought that shoyu made from whole soybeans was of better quality than that made from defatted soybean meal. A key difference is that whole soybean shoyu has glycerol in it, which improves the flavor. The glycerol test is the key way to distinguish between the two types of shoyu. Later Kikkoman also found that alcohol is a key to shoyu flavor. Kikkoman still uses lots of whole soybeans in making shoyu. Their Tokusen (special) grade uses about 50% shoyu made from whole soybeans. If you compare shoyu aged for 1, 2, or 3 years, the 1-year shoyu has the most volatiles, which are the key to shoyu flavor, and bouquet/aroma (*kaori*). Shoyu made in the traditional way without temperature control shows wide variations in flavor and composition from season to season.

Meeting with T. Mizunuma to ask questions. The head of the Goyo Gura (which is part of plant No. 4) thinks that the shoyu made there is of better quality than that made in most modern plants. The Goyo Gura still provides Japan's imperial household with Kunaicho shoyu, but now the household is required to pay for it. All the ingredients come from Japan. The salt is made by a modern process on the Inland Sea (*Setonai-kai*); it is not from traditional *enden* salt fields. The soybeans are from Hokkaido, the wheat from the Kanto plain. No yeasts are added to the moromi. The result is an excellent, soft and round (*maroyaka*) flavor says Mizunuma. The first JAS standards for shoyu were established in 1950. Factory No. 6 in Noda is more advanced than the Walworth plant since it has a continuous, circular koji plant.

A major problem with using enzymes only for making shoyu is that there is no glutamase in enzymes, so the glutamic acid content of the shoyu is low. It is insoluble in koji hyphae. Using enzymes is very quick and easy, but they are very expensive; now it is much cheaper to make and use koji than to use commercial enzymes. In the future, they may fortify koji with enzymes. Commercially, to get enzymes, they must make koji anyway. With special enzymes, they may use immobilized enzymes (*koteika koso*). Sodium benzoate is the only preservative allowed in shoyu in Japan; in the USA BHA may also be allowed. HVP (amino-san) shoyu is allowed in Japan but very little is made, and that is sold mostly for business use. Not all shoyu contains some fermented shoyu. Address: P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

6340. Hattori, Terumitsu. 1983. The soy sauce market in

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the USA (Interview). Conducted by William Shurtleff of Soyfoods Center, Sept. 19. ½ p. transcript.
• ***Summary:*** His rough estimate of market shares, including imports, is as follows: Kikkoman 40%. LaChoy 30% Chunking 12% Imports from Hong Kong, China, Taiwan, and Korea 9%. Imports from Japan 8%. Other USA HVP soy sauce 1-2%.

The products imported from Taiwan, Korea, and China are about 90% Shinshiki shoyu [a mixture of HVP and fermentation], as judged by levulinic acid assays. He does no know when this started. If levulinic acid is in the shoyu, it contains HVP.

Three types of Pearl River Bridge soy sauce are now being imported to the USA: Light, dark, and mushroom Only one (the light?) has little or no levulinic acid. In a month, he'll have more accurate data. Address: Kikkoman Marketing & Planning Inc., 50 California St., Suite 3600, San Francisco, CA 94111.

6341. **Product Name:** [Tofu Meatless Slices].
Foreign Name: Tofu–Bratschnitte
Manufacturer's Name: Albert Hess Tofuhaus Rittersheim.
Manufacturer's Address: Hauptstrasse, D-6719 Rittersheim, West Germany Phone 06-352-3473
Date of Introduction: 1983, September
Ingredients: Incl. tofu, tamari, sea vegetables, carrots, and herbs
Wt/Vol., Packaging, Price: 200 gm vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Form filled out by Albert Hess. 1988 Jan 25. Leaflet 1988 They make 300 kg/month Form filled out by Albert Hess. 1988 Dec. 1. This product was introduced in Sept. 1983 Label. 1988, received. 2.5 by 4 inches. Black on orange. Self adhesive

Label brought by Albert Hess. 1995. March 11. 2.5 by 4 inches White and purple on yellow. An illustration shows a large personified cake of tofu, with smiling face and arms held out. Ingredients in 1995: Tofu, vegetables, herbs, algae, tamari.

6342. Ito, Kiyoe. 1983. Soy beans as a source of protein in Japan. In: Ajia-Chiku Kokusai Kaseigaku Kaigi Hokoku (Proceedings of the International Asian Conference on Nutrition). See p. 60-61. Held Aug/Sept. 1983. [Eng]
• ***Summary:*** Rice cultivation began in Japan about 2,000 years ago. Buddhism was imported to Japan from China through Korea, and with it the prohibition against eating meat [of four-legged animals]. "Therefore, the diet and cuisine depended exclusively on rice, bean, vegetables, and fish. Especially, soy beans have been widely used as materials for plant protein foods such as miso (fermented soy bean paste), tofu (bean curd), shoyu (soy sauce), yuba (dried soy milk film) and others." Also describes the increasing westernization of the Japanese diet, especially after World War II. Address: Tokyo Gakugei Univ., Tokyo, Japan.

6343. Leviton, Richard. 1983. Report on soyfoods research trip across America, September 1983. Colrain, Massachusetts. 8 p. Unpublished typescript.
• ***Summary:*** Visited or discusses: Grainaissance (makes amazake and mochi), Brightsong (Dik / Richard Rose), Sonoma Specialty Foods (California), Northern Soy (Rochester, New York), Southwest Soyfoods (Richard Jennings), White Wave (Steve Demos, Boulder, Colorado), Quong Hop & Co. (South San Francisco, California), Modern Fare (Loveland, Ohio), Soyfoods Unlimited (Valerie, Gary and John Robertson, San Leandro, California) Soyfoods Center (Lafayette, California), Soyfoods of America (Doug Fiske and Ken Lee, Los Angeles), Real Foods (Polk St., San Francisco), Tumaros (Los Angeles), Unicorn (Terry Dalton, Florida), Japantown and Rainbow Grocery (San Francisco), Berkeley Natural Grocer and Berkeley Co-op (Bob Gerner, California), Hinode Tofu Co., Edensoy, Farm Foods, New England Soy Dairy, and Nasoya (Leominster, Massachusetts). Legume (Gary & Chandri Barat, New York City), Lotos / Lotus Cafe (Greg Weaver, Rochester, New York).

NRRL (Hesseltine and Wang, Peoria, Illinois): Their work is in mixed starter culture fermentation, vitamin B-12 work. Japanese man from Tokyo to work one year on natto at NRRL, paid by Japanese government. B-12 can withstand some heat during cooking and the percentage of B-12 lost depends on the initial percentage present. Natto research: examine all Japanese publications for review article Experiment using U.S. soybeans to make natto since the Japanese buy Chinese beans for their thinner seed coat. See what happens to the oil to protein ratio during fermentation. Natto as such has no possibilities in the U.S. as it is a slimy food with a rotten smell; hard to tolerate. There might be vitamin B-12 in natto produced by *Bacillus subtilis*. Koreans have done lots of B-12 research with kimchee and other pickled vegetables. Earl Swain died this summer of a heart attack at age 36. Natto research will help U.S. soybean exports. USDA bureaucrats are making it difficult for Dr Hesseltine to do natto research. They have 65 objectives, but Dr. Wang's projects don't fit any of them clearly, so they won't mention "food" in their research outlines, just fermentation methods. Secretary of Agriculture John Block [served 1981-86 under President Ronald Regan] says the U.S. needs more ag exports and more basic information about crops uses, so he is in support of this natto research.

Out of business: Michiana Soyfoods, St. Ignatius shop, Sunshine Soy, Heartsong, probably Joy of Soy and a Korean shop in Salt Lake City, Utah.

Concerning soymilk: 10. In Oak Park, Illinois, a natural foods retailer says Edensoy outsells San-J by two to one (Note: San-J imports "To-Neu Natural Soy Beverage" made in Japan by Kibun). Teenagers buy the carob Edensoy along

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with popcorn in the store, and use it as a soft drink. But most retailers say the Eden package [stand-up foil retort pouch] is a disaster, it is impossible to open without scissors, then if you squeeze, it sometimes spills out. San-J [in a Tetra Brik carton] is convenient but the taste is poor and the front graphics are confusing–too many words and images. According to Shurtleff, both are inferior products compared to Japan's best.

22. Concerning Edensoy at the NNFA show in Denver, Colorado. Mike Potter says "it went over great." He sold two container loads right away. People liked the package and the taste. About 4,000 people sampled it and were "generally amazed." The results were as good as they could want; it generated interest and excitement. Now they are setting up the distribution system. Address: 100 Heath Rd., Colrain, Massachusetts 01340. Phone: 413-624-5591.

6344. McDougall, John A.; McDougall, Mary A. 1983. The McDougall plan. New Century Publishers Inc., 220 Old New Brunswick Rd., Piscataway, NJ 08854. 340 p. Foreword by Nathan Pritikin (8/83). General index and recipe index. 24 cm. [804* ref]

• ***Summary:*** This carefully researched and documented book and cookbook argues convincingly in favor of a vegan diet that uses no animal products, that is low in fats, calories, and sodium, and rich in complex carbohydrates. Pages 89-90 give the percentage of calories from fats in various foods under 3 categories: low-fat vegetable foods (incl. oatmeal 16% of calories from fat, apple 9%, broccoli 9%), high-fat vegetable foods (incl. avocadoes 88% of calories from fat, almonds 82%, peanut butter 77%, sunflower seeds 76%, tofu 53%, soybeans 40%, wheat germ 27%, tempeh 25%), and animal foods (bacon 94%, t-bone steak 82%, frankfurters 80%, cheddar cheese 73%, egg 65%, tuna in oil 64%, milk [whole 3.5% fat] 49%, ice cream 49%, milk low-fat 31%, chicken [light-skinned] 18%, tuna in water 6%, buttermilk 3%, skim milk 2%).

Note: The author, however, argues repeatedly against the use of tofu and tempeh based on the "percentage of calories from fat" concept. His figures are correct but we and many nutritionists feel the basic concept, originally popularized by Nathan Pritikin, overlooks two key points: (1) the percentage of water in the food, and (2) the average serving size.

Page 198, in a section on rich [high fat] plant foods, states that tofu, tempeh, soybeans, textured vegetable protein (TVP), and miso contain excessive fat and most are high in calories. "The rich plant foods may account for a small portion of your daily food (less than 10 percent of your calories per day) but only after you have attained the level of health you are striving for. In general, these foods are more harmful than health-supporting. Never eat these foods if you have problems with your health that remain unsolved. If you begin using this group of foods and find that you are also gaining weight or getting back some of your old ailments, then stop eating these foods immediately."

Appendix I, p. 322-28 contains a table listing the percentage of calories from protein, fat, and carbohydrates in many foods. It also gives the caloric concentration (in calories per gram) for each food; foods with a low concentration aid in weight-loss programs. Tofu has only 0.72 calories per gram, and soy sprouts only 0.46; both are low. No soyfoods are used in the many recipes in this book.

Note: According to a colleague, John McDougall suffered a stroke at age 19, which led to much of his current interest in diet and health. He is not a Seventh-day Adventist. Address: 1 M.D. Both: Near Kailua Bay, Oahu, Hawaii.

6345. Shurtleff, William; Aoyagi, Akiko. 1983. The book of miso. 2nd ed. Berkeley, California: Ten Speed Press. 278 p. Illust. by Akiko Aoyagi Shurtleff. Index. Sept. 28 cm. [223 ref]

• ***Summary:*** Contents: What is miso? Preface to the second edition. Preface to the first edition. Acknowledgments. Part I. Miso: Savory, High Protein Seasoning. 1. Soybeans, protein and world hunger. 2. Miso as a food. 3. The miracle of fermentation. 4. The varieties of miso: Regular Miso: Rice miso (red / aka, light-yellow / shinshu, mellow red / amakuchi akamiso, mellow beige / amakuchi tanshoku, mellow white / shiro koji, sweet red / edo or edo ama-miso, sweet white / Kyoto shiro miso), barley miso (karakuchi mugi, mellow barley / amakuchi mugi), soybean miso / mamé miso (Hatcho miso, soybean miso / mame miso, tamari miso). Special Miso: Finger lickin' miso / Namemiso (Kinzanji miso, moromi miso, hishio, namémiso, natto miso, goto miso), sweet simmered miso / nerimiso. Modern Miso: Akadashi miso, dehydrated or freeze-dried miso, low-salt / high-protein miso.

Part II. Cooking with Miso (400 recipes). 5. Getting started. 6. Recipes from East and West. Part III. The Preparation of Miso. 7. Making miso at home and in communities (incl. Homemade natural shoyu, and Homemade namémiso, p. 184). 8. Japanese farmhouse miso (how to make miso at home). 9. The traditional miso shop. 10. The modern miso factory. Appendixes: A. A history of miso and soybean chiang. B. Other East Asian misos: Chinese chiang, Korean jang and Indonesian Taucho. C. The microbiology and biochemistry of miso fermentation. D. Miso manufacturers in the West. E. People and institutions connected with miso. F. Miso with seafoods, chicken, and meat. G. Measures, weights, and equivalents. H. So you want to study miso in Japan? I. Miso additives. Bibliography [223 references]. Glossary. About the authors (autobiographical). The Soyfoods Center.

In May 1993 a new printing of this book appeared, containing many small changes made by the authors. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

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6346. Shurtleff, William. 1983. Notes from a phone talk with Richard Leviton concerning his trip across the USA in Sept. 1983 visiting soyfoods companies and giving talks. Lafayette, California. 3 p. Sept. Unpublished manuscript.
• ***Summary:*** Discusses: Nasoya, New England Soy Dairy (doing radio ads and videos in supers; making 45,000 lb/week of tofu), Hinode tofu, Lotus Cafe, Penguino's (chocolate is their favorite soy ice cream favorite), Northern Soy and Wegman's, Vegetarian Times, Emperor of Japan to give Dr. Clifford Hesseltine a high medal at the end of November, Bob Davis plans to move to Nevada City (California), Kraft bought 15 Okita packaging machines, Richard Jennings, his marriage, Southwest Soyfoods, and chilled water as an alternative to pasteurization; his shop in Ecuador is now closed. Nasoya makes 22,000 lb/week of tofu with no outside money. David Mintz was on Good Morning America talking about Tofutti. The Farm (Summertown, Tennessee) now makes only liquid soymilk, no powder. Tom Leonard and Jim Hemminger are selling tofu to Community Mercantile. Leonard was in Arkansas in 1977, first batch of miso in Dec. 1978. Now makes 500 lb/week. Well Spring is a new miso maker in Colorado. White Wave (Boulder, Colorado) is making 12,000 lb/week of tofu and doing well financially, as new frozen entrees & nut butters, tofu lasagne. Edensoy is outselling SanJ soymilk by 2 to 1. Time magazine Sept. 19 insert. American Dietetic Assoc. will list tofu as a good protein source. Jim Cooley of Lawrence, Kansas. He started making tofu in 1977. Legume Inc.'s new product line out Oct. 5; lists names of each product. Address: P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

6347. Shurtleff, William; Aoyagi, Akiko. 1983. Appendix A: A history of miso and soybean chiang [jiang] (Document part). In: William Shurtleff and Akiko Aoyagi. 1983. The Book of Miso. 2nd ed. Berkeley, California. Ten Speed Press. 278 p. See p. 214-41. Illust. by Akiko Aoyagi. [223 ref]
• ***Summary:*** Contents: Introduction. Etymology. Soybean chiang in China. Early Chinese non-soybean chiang, 600-1899. Soybean chiang in Korea and Southeast Asia: Dissemination of chiang from China, Korea, Indonesia, Vietnam, other Southeast Asia.

History of miso in Japan: Introduction, early non-soybean hishios (before AD 700), the Nara period (AD 710-784), the Heian period (AD 794-1160), the Kamakura period (1185-1333). The Muromachi period (1336-1568), the Edo or Tokugawa period (1603-1867). A brief overview of origins, the Meiji and pre-war periods (1867-1939), World War II and the postwar period. Modern times (1940-1983).

History of miso in Europe: Early European references, 1900-1949, 1950-1982.

History of miso in the United States and Canada: Early developments (1896-1929), 1930-1959, growth of interest in miso (1960-1982; Shibasaki and Hesseltine at the NRRC, Peoria, Illinois, Ichiro Ouchi, the macrobiotic movement, Herman Aihara, George Ohsawa, Miso and Aveline Kushi in Boston, Massachusetts, Noboru Muramoto, George Gearhart, Thom Leonard, Allen Ginsburg and Gary Snyder, Mt Tamalpias, Tassajara Zen Mountain Center, Miyako Oriental Foods, Kanemasa Miso Co., Ohio Miso Co., Shin-Mei-Do, American Miso Inc., South River Miso Co., Joel Dee and Miso-Cup), miso's future in the West.

Miso in other countries: Israel, India, Latin America (Brazil, Mexico), Africa.

Illustrations: Evolution of Chinese characters. Hideyoshi Toyotomi and a robber on the bridge (Hatcho miso history, p. 219). Making miso-damari (p. 220). Graph of the miso market in Japan (1880-1980) (p. 226). Ohio Miso letterhead and logo (p. 238). U.S. miso imports, production and consumption (1970-1983) (p. 240). Page 219: "The origins of modern shoyu can be traced more clearly to the mid 1200s when the Japanese priest Kakushin returned from China, having learned there the technique for preparing Kinzanji miso. Establishing himself at Kokoku-ji temple near the town of Yuasa..." Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

6348. *Whole Foods (Berkeley, California).*1983. What should be the standards for soy sauce and tamari? Sept. p. 12-13.

6349. Noda, Fumio; Hayashi, K.; Mogi, K.; et al. Assignors to Kikkoman Shoyu Company Ltd. (Chiba, Japan). 1983. Method of producing koji products. *U.S. Patent* 4,407,826. Oct. 4. 8 p. Application filed 17 Sept. 1981. Application also filed in Japan on 12 Sept 1978. [6 ref]
Address: 1. Kamagaya, 2. Kashiwa; 3. Noda. All: Japan.

6350. Hansen, Barbara. 1983. Specialty sauce exec is his own best customer. Chung not only sells product, he cooks for firm's business luncheons with it [Herman Chung of Golden Orchid Foods & Kimlan Foods Co. of Taiwan]. *Los Angeles Times.* Oct. 6. p. L37, 46.
• ***Summary:*** Herman Chung is president of Golden Orchid Ltd., the U.S. arm of Kimlan Foods Co. Ltd. of Taiwan. Kimlan is a major producer of soy sauce and also has a line of specialty sauces including barbecue, steak, teriyaki and sukiyaki sauces that are aimed at the American market. Other products such as satay paste and hot bean sauce cater to Chinese tastes. C.K. Chung is president of Kimlan in Taipei.
Address: Times staff writer.

6351. Oda, Lorraine. 1983. The Hawaiian Miso & Soy Co. Ltd. Carrying on a family tradition. *Hawaii Herald.* Oct. 7. p. 1, 8, 17.
• ***Summary:*** William Higa's miso factory now makes 250 tons of Maru-Hi brand Shiro (white) miso and Aka (red)

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miso a year, plus 90 tons a year of miso-marinated butterfish (butterfish kasuzuke, black codfish marinated in sake lees). He took over the family business in 1956. William's father, George Taru Higa, started the business in 1936. It moved from North School Street, to Iwilei Rd., then near Vineyard Blvd., before settling in 1946 in the industrial area of Kalihi.

Photos show: (1) The original Yamajyu Shoyu & Koji Miso Co. factory in 1938, makers of Shiro Koji Miso and Yamaju Shoyu. Standing by wooden kegs of miso are the founders Henry, Shinyei, and George Taru Higa. The company sign appears clearly over the factory door. Long, dark automobiles from the 1930s are parked at the left and right. (2) William Higa standing inside an air-conditioned warehouse, bags of Iowa soybeans are stacked up to the roof behind him. (3) Five hundred pounds of rice are cooked at a time. (4) Soybeans are washed in a rotating steel cylinder, then soaked in steel barrels. (5) A large machine mixes cooked soybeans with cultured rice (koji) and salt. (6) The mixture is ground to a paste. (7) Women pack and weigh containers of miso. (8) Women prepare butterfish misozuke. Address: Honolulu.

6352. Wakayama, Mary. 1983. The oldest sake factory in the West: From 1908 to 1983. *Hawaii Herald*. Oct. 7. p. 1, 4.
• ***Summary:*** A history of the Honolulu Japanese Sake Brewing Co. Ltd., which started in 1980 when Tajiro Sumida began making sake in Honolulu for Japanese laborers in Hawaii. Starting more than 25 years ago, under the direction of an expert brewmaster, Takao Nihei, who received the Japan Brewery Association's award for excellence in 1970, the quality of the sake has improved tremendously. Takara Masamune and Musume are Honolulu Sake's foremost sake products. The company also manufactures shoyu (Diamond shoyu, Marumasa Soy Sauce, Island Shoyu, as well as Diamond Teriyaki Sauce), vinegar (Diamond-Su) and mirin (Takara Masamune). A photo shows that "Honolulu Japanese Sake Brewing Co. Ltd." Address: Hawaii.

6353. Brody, Jane E. 1983. Assessing what is good for you and what is not. *New York Times*. Oct. 12. p. C1, C8.
• ***Summary:*** Those who eat wisely "can expect an improvement in well-being and a decreased risk of developing such diet-related disorders as heart disease, cancer, high blood pressure, and obesity." But "Myths abound in the health food industry and, experts, say, many believers are being hoodwinked."

Discusses: Sweeteners, raw foods, salty seasonings (including miso and soy sauce), granolas, snacks and candies, nuts and seeds (including peanut butter), oils (cold-pressed oils contain more vitamin E but they become rancid more quickly), "health" foods high in fat, yogurt and frozen yogurt, herbal teas, and pastas (including those enriched with soy flour).

"A tablespoon of soy sauce contains about half a teaspoon of salt. Tamari sauce is hardly less salty than ordinary soy, but Kikkoman makes a reduced-salt soy that has 47 percent less salt than regular soy. Miso, another popular health-food flavoring, contains nearly as much salt as soy sauce. Domestic soy sauce is generally much saltier than imported brands."

6354. **Product Name:** Goldfish Brand Soya Bean Sauce.
Manufacturer's Name: Eastern Food Products.
Manufacturer's Address: 209/4 Union Place, Colombo 2, Sri Lanka.
Date of Introduction: 1983, October.
Ingredients: Soya bean, wheat, sugar, salt.
Wt/Vol., Packaging, Price: 325 ml and 750 ml bottles retail for Rs. 17/50 and 33/00.
How Stored: Shelf stable.
New Product–Documentation: Label, 1988, 3.5 by 3.5 inches. Green, red, yellow, black, and white. Illustration of a goldfish in a circle. Form filled out by Jane Gleason. On 25 March 1988 she talked with Mrs. S. Liu, owner and manager. The company sells about 1,000 to 1,500 bottles/month. They make and private label soy sauce for McSoy Lanka. They buy less than 500 kg/month of soybeans at Rs. 400-450 per 50 kg from the local market. They used to buy from farmers (the beans are cheaper and fresher) but this is now difficult due to civil disturbances. Demand is slowly increasing. Their product is purchased because of its good taste.

6355. Hesseltine, C.W. 1983. The future of fermented foods. *Nutrition Reviews* 41(10):293-301, Oct. [20 ref.]
• ***Summary:*** Contents: Advantages of food fermentation, factors having an adverse effect on the use of fermented foods, nutritional and economic data on some fermented foods, future changes in fermented foods, factors that may lead to growth in the use of fermented foods (scientific interest in fermented foods, prevention of food poisoning, fermentation and increased shelf life, improvement of the physical properties of the product, interest in natural products of plant origin, modification of the substrate, interest in more healthy food, necessity of increased consumption of plant materials as population increases, cultural and religious grounds, and migration of people since World War II). Summary: Contains considerable information on fermented soyfoods. Address: NRRC, Peoria, Illinois.

6356. Pure & Simple, Inc. 1983. Chateau So' (Ad). *Vegetarian Times*. Oct. Inside front cover.
• ***Summary:*** This creative full-page color ad (see next page) compares fine shoyu with fine wine. "It's vintage. So' Tamari Soy Sauce. Of course. And it is just like a fine wine. You can hold it up to the light to judge the complexity of the color. Its rich and clear with luminous red amber depth.

"Swirl it around. See its substance and full body as it clings to the glass. Close your eyes and 'nose' the subtle

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CHATEAU SO'

It's vintage. . . So' Tamari Soy Sauce. Of course. And it is just like a fine wine. You can hold it up to the light to judge the complexity of the color. It's rich and clear with luminous red amber depth.



Swirl it around. See its substance and full body as it clings to the glass. Close your eyes and "nose" the subtle mellow bouquet. The distinctive aroma of mature fruit from the family Leguminosae. The nut-like scent of roasted grain and even a distant suggestion of the sea.

Now taste it.

This isn't "jug" soy sauce. Made from cracked, de-fatted beans and chemical enforced, artificial fermentation. This is the good stuff, So' Tamari. Made with selected whole beans, flame roasted wheat, pure water and salt from the sea aged in wooden barrels for two summers. Deep, rich, full-bodied and delicious.

And like fine wine it enhances any meal, chicken, fish, meat and vegetables. So' Tamari makes everything taste better.

Chateau So' Tamari.

Because the soy sauce remembers too.

From Pure & Simple, Inc.
P.O. Box 1235, Corona
CA 91720.

PURE & SIMPLE



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mellow bouquet. The distinctive aroma of mature fruit from the family Leguminosae. The nut-like scent of roasted grain and even a distant suggestion of the sea. Now taste it. This isn't 'jug' soy sauce. Made from cracked, de-fatted beans and chemical enforced, artificial fermentation. This is the good stuff."

A large photo shows a 1-pint jar of "So' Tamari: Shoyu Natural Soy Sauce."

This ad also appeared in *Bestways* (Feb. 1984, p. 45). Address: P.O. Box 1235, Corona, California 91720.

6357 *Sunset* (*Menlo Park, California*). 1983. Tofu pinch-hits for cottage cheese. 170:226. Oct.

• ***Summary:*** Uses silken tofu in a Tofu luncheon salad recipe, and regular tofu in White tofu with dark dressing (incl. soy sauce). Two photos accompany the recipes.

6358 Erewhon Mail Order. 1983. Erewhon Natural foods mail order catalog. Brookline, Massachusetts. 16 p. Nov. 1. Catalog and price list.

• ***Summary:*** This is a new mail order catalog, whose prices are effective from 1 Nov. 1983. On the front cover is a woodblock print of two wooden barrels, a wooden tub, two sacks of corn, a sheaf of wheat, several ears of corn, and a scythe. Erewhon is located at 26 Washington St. in Brookline Village–also the home of Erewhon Mail Order. There are retail stores at 342 Newbury St. in Boston and 1731 Massachusetts Ave. in Cambridge. Products grown organically, without chemicals, are marked with the code "OG."

Contents: Whole grains & cereals (incl. Erewhon granolas). Flours. Pastas. Beans (incl. azuki beans, black soybeans from Japan, yellow soybeans from Minnesota). Seeds, nuts & dried fruit (incl. alfalfa seeds, sesame seeds, and tamari roasted nuts and seeds). Sea vegetables. Misos and tamari soy sauces. Japanese macrobiotic specialty products. Condiments, vinegars & sauces. Sea salts. Erewhon vegetable oils. Baking & home products (incl. koji rice for making amasake and miso, nigari for making tofu, tempeh starter). Sweeteners (Yinni rice syrup, barley malt, maple syrup, clover honey, wildflower honey {unfiltered}). Erewhon nut butters (Almond, cashew, peanut, sesame, sunflower). Fruit spreads. Snack foods. Sweets. Perishables (incl. bread, mochi, produce, amazake, tempeh). Beverages. Supplements. Natural cosmetics & body care. Cookware & appliances. Books & publications. Ordering & shipping information. Zone & shipping charts. Address: 236 Washington Street, Brookline, Massachusetts 02146. Phone: 1-800-222-802 or (617) 738-45168.

6359 Shurtleff, William; Aoyagi, Akiko. 1983. George Ohsawa and the macrobiotic movement: History of work with soyfoods. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 46 p. Nov. 10. 28 cm. Unpublished typescript. [92* ref]

• ***Summary:*** A comprehensive history of the subject. Contents: Introduction: Acknowledgement of Ron Kotzsch. The roots of macrobiotics: *Yellow Emperor's Classic of Internal Medicine*, Shinto classics, Ekiken Kaibara (1630-1714), Nanboku Mizuno (late 1700's–early 1800's), Sagen Ishizuka (1850-1910), Manabu Nishibata. The life of George Ohsawa (1893-1966). To Paris 1929-36, return to Japan and World War II, Internationalism 1946-53, ran school Centre Ignoramus, "world journey" 1953 to India, Africa, then Paris, started Muso Shokuhin (macrobiotic food company) in Osaka, Japan, in 1959, work in Europe 1956-66, earliest reference seen to soy (miso) in 1956, first visit to New York City Dec. 1959, post-visit institutions, second visit 1960, first American macrobiotic summer camp on Long Island, exodus to Chico, California, Aug. 1961 to escape feared nuclear war, establishment of Chico-San, move of Michio and Aveline Kushi to Boston in 1963, *Zen Cookery* 1963, *Zen Macrobiotics* second edition 1965, growth of the movement, Beth Ann Simon's death blamed on macrobiotics in 1965, response of U.S. Food and Drug Administration is to close N.Y. Ohsawa Foundation, Ohsawa's general macrobiotic teaching, view of Western civilization as one in crisis, with fundamental biological change required to improve it, death in 1966 in Tokyo at age 72 of cardiac failure, seen as sage by his followers, seen as inconsistent crackpot by his critics, work carried on by wife Lima and by his students. Development of macrobiotics in Boston: Kushi's lectures and classes from 1965, early food sales from house, Erewhon's start in 1966 and subsequent growth, establishment of organic suppliers in the U.S., first imports from Japan 1968, 1970 natural foods boom, National Food Distributors Association, *East West Journal*, Autumn Press founded in Japan by macrobiotic student from Boston, Boston institutes, centers, and foundations from 1972 on, increasing popularity of soyfoods (tofu, tempeh, and miso) in Boston, Erewhon from 1973 to bankruptcy in 1981 and sale to Ronald Rossetti in 1982. Development of macrobiotics in New York City: Void after departure of Aihara group and Kushis, establishment of Infinity Foods in mid-1960's, Michel Abehsera's restaurants, cookbooks, and tour. Development of macrobiotics in California: Influence of Chico-San on natural foods movement to 1970, Lundberg rice 1968-69, Yamazaki miso and shoyu 1970, 1972 fire in Chico-San warehouse, educational activities and institutions, growth of Chico-San, Noboru Muramoto. Nutritional views of macrobiotic diets: General critical attitude from 1965 to 1977, not countered by macrobiotic leaders, scientific studies pro and con, specific critique of the diet, turnaround in attitude since 1977 (*Dietary Goals* published by U.S. Senate's McGovern Committee), Dr. Mendelsohn, Nathan Pritikin, cancer cures and Anthony Sattilaro (1980). Macrobiotics in Europe and Latin America: First European company Lima N.V., other distributors, centers, publications, tours, active

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in South America since 1954. A major contribution: Type of overall influence on soyfoods, number of followers in 1981. Address: Lafayette, California. Phone: 415-283-2991.

6360. Shurtleff, William; Aoyagi, Akiko. 1983. George Ohsawa and the macrobiotic movement: Noboru Muramoto (Document part). Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 46 p. See p. 39-40. Nov. 10. 28 cm. Unpublished typescript.

• ***Summary:*** "In June 1971 Noboru Muramoto emigrated to America from Japan and lived with the Aiharas in San Francisco at GOMF. In Japan he had studied Chinese literature and philosophy at Tohoku University and Kanazawa University, then began his own study and practice of herbal medicine. He had begun studying Ohsawa's writings in 1942, then studied with Ohsawa after 1964, while running a family business cleaning the cotton from futons. In 1973 he gave a series of lectures in New York which were published that year as the popular book, *Healing Ourselves* (Avon/Swan House). Many uses of miso and natural shoyu were given; soybeans and tofu were not recommended in the book, except that tofu was used in making poultice-like 'plasters' for use in healing. In 1974 Muramoto started Rising Sun, a macrobiotic storefront containing the Herb Tea Co. in San Francisco. Here he gave classes on making miso and shoyu. In November 1976 he acquired Top of the World Ranch on 140 acres of land near Glen Ellen, California, and established Asunaro Institute, a residential program of macrobiotic studies. He also published a newsletter 'Asunaro Notes.' At Asunaro he set up a regular shop for making miso and shoyu, complete with a nice koji incubation room. Many unique and American-style misos were developed, including some made with peanuts, garbanzos (chickpeas), azuki beans, and even natto. A number of Americans apprenticed at the miso-shoyu school. A nice article about the school, 'Making Miso in America,' appeared in the *East West Journal* (Lachman 1978). In March 1979 Muramoto displayed his miso and shoyu equipment and samples of his products at the famous New Earth Exposition in San Francisco. He also sold these products at Rising Sun, and some customers swore that they were the best in America."

Note: On 11 Jan. 1976 William Shurtleff attended a class on how to make miso at Rising Sun (Judah Street, San Francisco), given by Noboru Muramoto. Jimmy Udesky was there, as were about 15 other people.

On 19 Sept. 1977 William Shurtleff and Akiko Aoyagi visited Muramoto sensei at his place, Asunaro, in Glen Ellen, California. He makes miso there and teaches miso making. Shurtleff interviews him about his life and history of interest in macrobiotics and soyfoods. We stay overnight and help him the next morning with royalty problems connected with his book *Healing Ourselves;* he is quite sure he is not being paid the royalties due based on his contract with the publisher. Address: Lafayette, California. Phone: 415-283-2991.

6361. Williams, Dorothy. 1983. The soy saga: a saucy story, some scientific sleuthing. *Illini Week* (*University of Illinois, Urbana-Champaign*) 3(13):1, 4. Nov. 17.

• ***Summary:*** Describes how, starting with an unexpected discovery in 1982, Hymowitz and Harlan did the research leading to the discovery that Samuel Bowen introduced the soybean to America in 1765. One day 1982 Jack Harlan, professor of agronomy at the University of Illinois (Urbana-Champaign) was reading the *Early Proceedings of the American Philosophical Society for the Promotion of Useful Knowledge...* (J.P. Leslie, ed. 1884), an organization founded by Benjamin Franklin. While looking for something else, Harlan chanced to read the entry in the minutes for 16 January 1769 acknowledging receipt of a "Sample of Chinese vetches, six bottles of Soy and six pounds of powdered sago presented with a letter from S. Bowen of Georgia."

Harlan's curiosity was piqued. He knew that the earliest date of the introduction of soybeans from China to North America was generally thought to be 1804. Who was this S. Bowen? Why was his name not better known?

Harlan mentioned his accidental discovery to his colleague and former student, Theodore Hymowitz, also a professor of agronomy at the same university. Hymowitz was also intrigued.

They began to work together to find out more about Bowen and try to piece together the story. It took Harlan and Hymowitz a year to fit the pieces together; they did this on the side in addition to their teaching and research work. No one gave them a grant. They did it as a hobby to satisfy their intellectual curiosity.

6362. Drake, Milan. 1983. Re: La Choy soy sauce. Letter to William Shurtleff at Soyfoods Center, Nov. 18. 1 p. Typed, with signature on letterhead.

• ***Summary:*** "Thank you for your recent compendium of articles on Soy Sauce and for the addition request for membership in the Soy Sauce organization. For your files, however, we are basically a manufacturing plant here in Archbold." Address: Director, Research & Development, La Choy Food Products, 901 Stryker Rd., Archbold, Ohio 43502. Div. of Beatrice Foods Co.

6363. Chiu, Wen-Chau. 1983. Re: Making fermented soy sauce and related products. Letter to William Shurtleff at Soyfoods Center, Nov. 22. 1 p. Typed, with signature on letterhead.

• ***Summary:*** He fills out a form, answering "Ten Key Questions" concerning American terminology and standards for soy sauce. He agrees with all but one–the definition of "shoyu." He believes that shoyu is the general term for "soy sauce" in Japanese and should not be used to refer only to

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fermented soy sauce.

His company (Mandarin Soy Sauce, Inc.) has been making fermented soy sauce (and related products such as Hoisin sauce) since 1977. His company has also imported soy sauce and related products from their parent company, Wan Jia Shan Brewery Co., Ltd., Taiwan. Address: PhD, President, Mandarin Soy Sauce, Inc., 419 North St., Middletown, New York 10940. Phone: 914-343-1505.

6364. ***Beijing Daily***.1983. [Raising the protein recovery rate from soy sauce raw materials has bright prospects: Thoughts of some flavoring industry specialists]. Nov. 26. [Chi, eng+] Address: Beijing.

6365. Baldwin, Marjorie V. 1983. Re: Publications on aflatoxins in miso, soy sauce, and koji. Letter to William Shurtleff at Soyfoods Center, Nov. 27. 2 p. Typed, with signature on letterhead. [4 ref]
• ***Summary:*** Most of these articles are cited in *Chemical Abstracts*. The earliest one was published in 1977. Address: M.D., Journal of Health & Healing, P.O. Box 109, Wildwood, Georgia 30757.

6366. Aoyagi, Kazuko, Aoyagi, Akiko, Shurtleff, William, Bennett, Gordon, trans. and comp. 1983. Japanese standards for soy sauce ("shoyu"): English-language translation. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549 USA. 14 p. Nov. [1 ref. Eng]
• ***Summary:*** Contents: Translators introduction: Brief history of shoyu standards in Japan and the USA. 1. Definition of fermentation methods: Basic fermented method (*honjozo hoshiki*), semifermented HVP method (*shinshiki jozo hoshiki*), semifermented HVP and acid HVP mixed method (*aminosaneki kongo hoshiki*), semifermented HVP and enzyme HVP mixed method (*koso shorieki kongo hoshiki*), semifermented HVP–acid & enzyme HVP mixed method (*aminosaneki koso shorieki kongo hoshiki*), semifermented HVP–enzyme & acid HVP mixed method (*koso shorieki aminosaneki kongo hoshiki*). 2. Definition of varieties of shoyu: Regular shoyu (*koikuchi shoyu*), light-colored shoyu (*usukuchi shoyu*), tamari (*tamari shoyu*), double-fermented shoyu (*saishikomi shoyu*), clear shoyu (*shiro shoyu*).

3. Standards for varieties of shoyu: Regular shoyu, light-colored shoyu, tamari, double-fermented shoyu, clear shoyu. 4. Analytical methods: Degree of color, total nitrogen content, soluble solids, alcohol content, direct reducing sugar. 5. Labeling requirements: Items to be listed, particulars for each item listed, prohibited terms.

Brief history: "In 1963 the Japanese Ministry of Agriculture and Forestry (*Norinsho*), with the support of the Japanese Shoyu Association, set the first JAS (Japanese Agricultural Standards) for shoyu. The 1963 JAS shoyu standards were revised in July 1970 with Norinsho Notification #974. Companies choosing voluntarily to make their shoyu to these standards were allowed to print the prestigious JAS mark on their labels. These standards were revised again in 1980.

"In January 1976 in the United States the Federal Supply Service of the General Services Administration established America's first soy sauce standards for use by all federal agencies. The classified all soy sauce into two types: Type I–Soy Sauce (fermented), and Type II–Soy Sauce (non-fermented). These standards were revised on 5 May 1978 as Fed. Spec. EE-S-610G.

"In late 1983 the Japanese shoyu standards were first translated into English and work began to adapt them to American needs and conditions." Address: 1. Albany, California. 2-3. Soyfoods Center, P.O. Box 234, Lafayette, California 94549. 4. Westbrae Natural Foods, P.O. Box 8711, Emeryville, CA 94662.

6367. Chico-San, Inc. 1983. Why does Chico-San pay premium prices for products and ingredients (Ad). *Vegetarian Times*. Nov. p. 31.
• ***Summary:*** Chico-San describes itself as "A company built on a philosophy"–macrobiotics. "Over the past two decades many macrobiotic food companies have come and gone. We are grateful that we have been able to survive a disastrous fire that wiped out our facilities in 1972, plus a couple of severe recessions. Chico-San is now strong and independent."

"We continue to operate under the belief that it is not enough just to eat brown rice, vegetables and miso soup."

"Some of you may have already seen the first issue of our free newsletter, The Crackerbarrel, which featured articles on subjects ranging from organic miso and soy sauce.... Also included is a message from Lima Ohsawa, and information on processing low-sodium soy sauce (and why it may not be very desirable)...."

The signature of J. Robert Kennedy, President, Chico-San Inc., and the Chico-San logo (a sort of spiral) are shown. Address: P.O. Box 810, Chico, California 95927.

6368. **Product Name:** Tofu Turkee (Meatless Turkey Made with Tofu).
Manufacturer's Name: Garden of Eatin' (Formulator and Distributor).
Manufacturer's Address: 5300 Santa Monica Blvd., Los Angeles, CA 90029.
Date of Introduction: 1983, November.
Ingredients: Tofu (coagulated with calcium-sulfate), soy sauce, soy oil, vinegar, honey, herbs, hickory smoke.
Wt/Vol., Packaging, Price: 9 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1983. 5.5 by 2.75 inches. Paper. Black on tan. "100% Vegetarian." Soyfoods Newsletter. 1984, Jan. p. 1. A firm slab of the tofu is marinated then baked.

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6369. **Product Name:** Homemaker Powdered Koji Spore Kits for Miso [Red Rice, Barley, and Soybean], and for Shoyu.
Manufacturer's Name: GEM Cultures.
Manufacturer's Address: 30301 Sherwood Rd., Fort Bragg, CA 95437. Phone: 707-964-2922.
Date of Introduction: 1983. November.
New Product–Documentation: Letter from Betty Stechmeyer of GEM Cultures. 1991. Oct. 18. These basic products were introduced in Nov. 1983. The concentrated spores were extended with organic rice flour to make the starters easier to measure and use.

6370. Hesseltine, C.W. 1983. The safety of shoyu. Paper presented to the Japan Soysauce Brewers' Assoc. meeting. 36 p. Held 29 Nov. 1983, Tokyo. [33 ref]
• ***Summary:*** Historical background: In 1953, Dr. Hesseltine went from the fermentation industry to the Northern Regional Research Laboratory (Peoria, Illinois) as head of the ARS [Agricultural Research Service] Culture Collection. He had only a faint idea of how shoyu was made and he had never heard of miso, natto, or tofu. Shortly after his arrival, probably in 1953, he received a visit from Prof. Kin-ichiro Sakaguchi of the University of Tokyo, an authority on traditional Japanese fermented foods and one of the founders of the modern fermentation industry in Japan. Records show that in 1953 Dr. Sakaguchi received cultures from the ARS collection. His laboratory trained many students and much of his work was directly related to food fermentations involving soybeans and cereals.

In 1948 Dr. A.K. Smith of the NRRL visited Japan and China and recognized the tremendous amount of soybeans being used as human food. "The Western world had little or no understanding of the importance and use of these foods in the diet of Oriental people. He strongly recommended to anyone who would listen that there should be research on these foods and an exchange of scientists." In 1949 and later in 1958 Dr. Smith published a detailed report of his travels. In late 1958 two eminent Japanese scientists, Dr. Kazuo Shibasaki and Dr. Tokuji Watanabe arrived in Peoria to study traditional soybean foods. Dr. Shibasaki (who later became Professor of Agricultural Chemistry at Tohoku University) worked with Dr. Hesseltine on miso fermentation, and Dr. Watanabe worked with Dr. Smith on tofu.

"Before the year was up I became utterly fascinated with the process of making koji and with the delicious foods that could be made from the lowly soybean. But even broader than these studies on fermented foods was the concept of the solid state fermentation and the enzymes that could be made with this technique. Ever since that year of work with Dr. Shibasaki, I have been interested in fermented foods–not just those used in Japan, but worldwide." Address: NRRC, Peoria, Illinois.

6371. Jackson, Vicki. 1983. Squirrels vegetarian cook book. William Brooks Queensland, 921 Kingsford Smith Drive, Eagle Farm, Brisbane 4007, Queensland, Australia. 143 p. Illust. by Vicki Jackson. Index. Nov. 29 cm. 2nd ed. 1984.
• ***Summary:*** This hand-lettered cookbook was written for Squirrels Vegetarian Restaurant, Corner Melbourne & Edmonstone Streets, South Brisbane. The owners, Bronwyn Moses and Diana Mitchell, plan to open Squirrels on the Park, a second restaurant at 685 South Dowling St., Moore Park, Sydney, by Sept. 1984.

Soy-related recipes include: Chinese tofu soup (p. 12). Broccoli-pasta salad (with Soyaroni pasta, p. 30). Soyaroni marinaria [marinara?] (p. 52). Saucy soy stew (with cooked soybeans, p. 67). Tofu & peppercorn strudel (p. 79). About tofu (p. 86). Tofu satays with peanut sauce (p. 87). Battered tofu in sweet & sour sauce (p. 88). Tofu & peanut sauce (p. 89). Tofu & veggie curry (p. 90). Tofu & mushroom on spinach pasta (p. 91). Tofu & spinach loaf (p. 92). Tofu Chinese style (p. 93).

About tempeh, by Julie & Michael Joyce (p. 94, "Little did we know in early 1982, when we first ate tempeh made by Cyril & Ellie Cain of Eumundi, Sunshine Coast, that we were soon to become tempeh makers." They supply Squirrels with the tempeh they make). Tempeh chips (p. 96). Tempeh & tomato bake (p. 97). Tempeh sweet & sour (p. 98). Tempeh Indonesian style (p. 99). Tempeh Chinese style (p. 100). Tofu dessert (p. 125). Pages 141-42 describe tamari, tempeh, tofu, and miso. Address: Brisbane, Queensland, Australia.

6372. Leonard, Tom; Jacobs, Leonard. 1983. Choosing the best sea salt. Lab reports and production methods should be considered. *East West Journal*, Nov. p. 16, 18-20. Address: Boston, Massachusetts.

6373. Shurtleff, William; Aoyagi, Akiko. 1983. Tofu & soymilk production. 2nd ed. Lafayette, California: Soyfoods Center. 344 p. Illust. by Akiko Aoyagi Shurtleff. Index. Nov. 28 cm. [223 ref]
• ***Summary:*** Some information in Chapter 1, Appendix A, and many advertisements have been changed. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6374. Shurtleff, William; Bennett, Gordon. 1983. Proposal for a Soy Sauce Council of North America. Lafayette, California: Soyfoods Center. 2 p. Unpublished typescript. 28 cm.
• ***Summary:*** Contents: Definition. Purpose. Membership. Funding. Communication, proposals, and voting. Initial activities: Standards, soy sauce press release program. Your participation.

"Definition. The Soy Sauce Council of North America (commonly referred to as the "Soy Sauce Council") is an

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organization within the Soyfoods Association of North America." This idea was proposed by the authors, a cover letter, questionnaire (containing 10 questions, mostly related to terminology), and 4-page list of potential members were drafted, and a mailing was done to all potential members. Eleven companies responded to the questionnaire and their responses were tabulated. The respondents were: Chico-San, Erewhon, Granum, Kikkoman-Wisconsin, Kikkoman-International, Mandarin Soy Sauce, Mountain Ark, Pure Sales, San-Jirushi, Westbrae, and Mark Fruin.

But Michael Austin and at least one other leader of the Soyfoods Association did not like the idea, so it was never implemented. Address: 1. Director, Soyfoods Center, Lafayette, California. President, Westbrae Natural Foods.

6375. **Product Name:** [Soyana Tofu Spreads and Dips (Curry, Carob, Sea Buckthorn/Sour-Cherry [Sanddorn/Argousier], Sesame, and Nutritional Yeast)]
Manufacturer's Name: Soyana.
Manufacturer's Address: Postfach 8039, Zurich, Switzerland.
Date of Introduction: 1983, November.
Ingredients: Curry: Incl. tofu, pears, hazelnuts, raisins, tamari, lemon juice, wheat flour, and salt.
Wt/Vol., Packaging, Price: 136 gm thin-walled aluminum tins with peel off lids, pasteurized.
How Stored: 6-month shelf life.
New Product–Documentation: R. Leviton. 1983. Report on trip to Europe with American Soybean Assoc. Oct-Nov. p. 19, and Part II, p. 16. Soyana also makes several shelf-stable tofu spreads and dips, packaged in tins, pasteurized, with a 6-month shelf life. Done by an outside company. The company has a new sesame-herb spread that tastes like cheese–excellent. The carob with nuts is their best spread. Sanddorn is a small red fruit like a small orange rich in vitamin C.

Talk with Walter Danzer. 1990, May 30. These products are no longer on the market.

6376. **Product Name:** [Soyana Soya Lunch {Firm Tofu Marinated in Soy Sauce & Herbs}].
Foreign Name: Soyana Soya Lunch.
Manufacturer's Name: Soyana.
Manufacturer's Address: Postfach 8039, Zurich, Switzerland.
Date of Introduction: 1983, November.
Ingredients: Incl. tofu, soy sauce, herbs.
Wt/Vol., Packaging, Price: Vacuum packed.
How Stored: Refrigerated, 14 day shelf life.
New Product–Documentation: R. Leviton. 1983. Report on trip to Europe with American Soybean Assoc. Oct-Nov. p. 20.

Talk with Walter Danzer. 1990, May 30. The product called Soyana Soya Lunch in German was introduced in about 1983.

6377. **Product Name:** [Urtekram Soy Sauce, and Hatcho Miso].
Manufacturer's Name: Urtekraemmeren (Importer). Made in Japan.
Manufacturer's Address: Larsbjoernsstraede 20, DK-1454 Copenhagen, Denmark.
Date of Introduction: 1983, November.
New Product–Documentation: R. Leviton. 1983. Report on trip to Europe with American Soybean Assoc. Oct-Nov. p. 23. On a visit to a natural foods store in Aarhus, Denmark, Urtekram brand soy sauce and Hatcho miso were sold. Urtekram is sold by a large food distributor in Denmark.

6378. Wollner, Joel. 1983. Re: Soy sauce terminology. Letter to William Shurtleff at Soyfoods Center, Dec. 5. 3 p. Typed, with signature on letterhead.
• ***Summary:*** He fills out a form, answering "Ten Key Questions" concerning American terminology and standards for soy sauce. He answers yes to all the questions, and provides many perceptive comments. "Thanks for taking positive steps to clean up the soy sauce [terminology] mess. It's a sticky situation with little clarity coming from any sector. . . I have met very few people who know the difference between Shoyu and Tamari, even in general terms. Everyone has a new idea or a new bottle to tip. The Soy Sauce Council will clean this up if its has the support of the industry, or some disinterested benefactor."

Joel closes: "I want to offer my help in creating these standards and to leave you with a bit of advice: keep it simple, consistent, and look at it from the eyes of the consumer, then work backwards." Address: Mountain Ark Trading Co., 109 South East St., Fayetteville, Arkansas 72701. Phone: 501-442-7191.

6379. Hesseltine, C.W. 1983. Awards from the Emperor of Japan and the Japanese Shoyu Association. Nitrosamines and the safety of shoyu (Interview). Conducted by William Shurtleff of Soyfoods Center, Dec. 16. 1 p. transcript. Address: NRRC, Peoria, Illinois.

6380. Hughes Markets. 1983. Merry Christmas! (Ad). *Los Angeles Times*, Dec. 22, p. I30-I131.
• ***Summary:*** Two full pages of ads. The section titled "Happy holidays from Hughes Markets!" (p. I30) includes: "Fresh Himode age [deep-fried tofu pouches] 1.5 oz. pkg.–79c. Kikkoman soy sauce gallon can–$4.39. Kikkoman Aji Mirin, 10 oz. bottle, sweet cooking sauce–$1.59. Hime kuromame amani 6.35 oz. can, Black [soy] beans–95c."

The section titled "Foods of the Orient holiday specials!" (p. I31) includes: "JFC Kinako 7 oz. pkg. Soy bean flour–69c. Misuzu koya tofu, 3.5 oz box Wheat cake [sic, Dried frozen tofu]–$1.15." Also: "Hime sushinori dried

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seaweed, Kikkoman tempura sauce, Su Hiro kombu maki Rolled kelp, Umeya frozen mochi."

6381. *SoyaScan Notes*.1983. Soymilk and dairy milk prices in California, December 1983 (Overview). Dec. 28. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** In Lafayette, California, whole fluid cow's milk retails for $0.39/pint (1 pint = 16 ounces) and nonfat cow's milk retails for about $0.43/quart. Milk is the least expensive popular beverage, less expensive than Coca-Cola, beer, or orange juice. Prices of unflavored fluid soymilks are as follows. Vitasoy, 8.4 oz. Tetra Brik sold to the Asian-American market $0.35 (which is the equivalent of $0.67 per pint), Quong Hop Soy Fresh 10.16 oz. Pure Pak carton $0.59 ($0.89/pint), Wildwood Yosoy pint plastic bottle $1.05, Brightsong Honey-Vanilla pint plastic bottle $1.08, San-J To-Neu 6.76 oz. Tetra Brik $0.74 ($1.75/pint), Edensoy 6.0 oz. retort pouch $0.74 ($1.97/pint). Vitasoy, the least expensive soymilk, is 1.72 times as expensive as cow's milk. The average price of the pint equivalents of all 6 U.S. soymilk products mentioned above is $1.24 a pint (which would be $2.48/quart). Thus the average soymilk in a typical pack is 3.53 times as expensive as dairy milk per unit volume.

6382. Hughes Markets. 1983. Happy New Year! (Ad). *Los Angeles Times*. Dec. 29. p. J24-25.
• ***Summary:*** The section titled "Foods of the Orient holiday specials" includes: Kikkoman soy sauce, gallon can–$4.25. Fresh Hinode age, 1.8 oz.–79¢. Kikkoman 10 oz. JFC soy bean flour 7 oz. Kinako–69¢. Kikkoman Tempura Sauce 10 oz bottle–$1.09. Hime Kuromame amani, Black [soy] beans–95¢. Misuzu Koya Dofu 3.5 oz. box Wheat cake [sic. Dried frozen tofu]–$1.15.

Also includes: Frozen Umeya mochi. Shirakiku bamboo tips. Ozeki sake. New crop Kokuho rice. Hime sushinori [Sushi nori] Dried seaweed. Kikkoman Aji mirin–Sweet cooking sake. Mitsukan Su–Rice vinegar. Miyako kizami shoga–Sliced pickled ginger. Miyako shiitake–Dried mushrooms. Tamandi Sushipoko–Sushi seasoning. Kezuka kampyo [kanpyo]–Dried gourd strip. Suhiro Kumsu Maki–Rolled kelp [konbu].

6383. Chin, K.-D. Henry; Koehler, P.E. 1983. Identification and estimation of histamine, tryptamine, phenethylamine and tyramine in soy sauce by thin-layer chromatography of dansyl derivatives. *J. of Food Science* 48(6):1826-28. Nov/Dec. [26 ref]
Address: Dep. of Food Science, Univ. of Georgia, Athens, GA 30602.

6384. **Product Name:** Erewhon Shoyu Tamari.
Manufacturer's Name: Erewhon, Inc. (Imported). Made in Japan.
Manufacturer's Address: Boston, Massachusetts.
Date of Introduction: 1983, December.
New Product–Documentation: Ad in Whole Foods, 1983, Dec. p. 51. "The look is new but the flavor is still aged." "Our look may be new. But all 150 Erewhon Natural Food products are still made the same quality way."

Leaflet. 8½ by 11 inches, color. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Ad (full-page, color) in Whole Foods. 1989, Feb. p. 27. "Made in Japan 400 years ago." Shows chopsticks on a small bowl or shoyu next to two types of sashimi against a black background.

6385. Hymowitz, T.; Harlan, J.R. 1983. Introduction of soybean to North America by Samuel Bowen in 1765. *Economic Botany* 37(4):371-79. Dec. [48 ref]
• ***Summary:*** The soybean, a domesticate of China, was first introduced to North America in 1765 by Samuel Bowen, a seaman employed by the East India Company, who brought soybeans to Savannah, The Colony of Georgia, from China via London. Bowen claimed that he was a prisoner in China for nearly 4 years (probably between 1759 and 1763) and was carried 2,000 miles from place to place through the interior of the country. In 1764 Bowen arrived in Savannah. On 30 March 1765 he married Miss Jeanie (Jane) Spencer, daughter of William Spencer, the Collector of Customs in Savannah. "This gained Samuel Bowen instant respectability." On 14 May 1765 Bowen purchased a 450-acre tract of land at Thunderbolt, a few miles East of Savannah, from Grey Elliott. His plantation, named "Greenwich," became the center of his farming and manufacturing enterprises. Bowen also purchased an 84-acre tract of land near this Thunderbolt property from John Mulryn; he called it Macas (Macao) Island.

In the spring of 1765 Bowen did not have land available to sow seeds. Therefore, he asked Henry Yonge, the Surveyor-General of Georgia, to plant soybean seed that he had brought from China. These were the earliest known soybeans grown in North America. From 1766 Mr. Bowen planted soybeans on his own plantation, Greenwich. From these soybeans, Bowen made soy sauce and soy-based vermicelli, which he patented in 1767 and was exporting to England by 1770. Table 1 (p. 377) shows exports of sago, soy sauce (in quart bottles), and vermicelli from Savannah, Georgia (1766-1775). He exported 162 quarts of soy sauce in 1770-1771, 60 quarts in 1772-1773, 36 quarts in 1773-1774, and 800 quarts (200 gallons) in 1774-1775. Bowen's soy sauce was probably relished in London. In May 1774 he also exported peanuts, sesame seed, and sassafras blossoms. Samuel Bowen traveled to London in 1766, returning to Savannah in November. "He must have had a triumphant welcome in Savannah and most certainly his status as an entrepreneur among his fellow Georgians increased, for Samuel Bowen was awarded a gold medal from the Society of Arts, Manufactures, and Commerce and received a present of 200 guineas from King George III." It was the opinion

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of Dr. John Fothergill, the famous English physician and botanist, that the Society should award Mr. Bowen the gold medal based on tests conducted by the Society's agricultural committee. "Samuel Bowen was introduced to King George III by Lord Dartmouth, who was the president of the Board of Trade and a Lord of the Privy Council."

Bowen's exports probably ended or were drastically reduced by the Revolutionary War starting in early 1776. He made two more trips to England in 1769 (to Gosport) and 1774 (to Cowas). Bowen died in 1778, probably shortly before his will was probated on Sept. 12 of that year.

When and how did Samuel Bowen travel to China? On 8 Feb. 1758 he signed on as a seaman on the *Pitt*, headed for the East India Trading Company's factory in Canton, China. At 600 tons, the *Pitt* was the largest ship to sail from England to China since the first ship, the *London*, went to Macao in 1635. After a brief stop at Madras, India, the *Pitt* was accompanied by a two-masted tender, the *Success*, which assisted the *Pitt* through uncharted waters, until it arrived in Canton, China, on 16 April 1759. About two months later, on 13 June 1759, Bowen boarded the *Success*, which sailed north to Ningpo, then on to Tientsin. Also on board was James Flint, an employee of the East India company since 1736, and now the Company's Chinese interpreter. Mr. Flint left the *Success* at Tientsin on 29 July 1759 and returned to Canton via an overland route, arriving about 43 days later, on Sept. 10.

The voyage of the *Success* became a major international incident in both China and England, because the Emperor had prohibited foreigners from trading outside of Canton. James Flint was eventually imprisoned by the Chinese at Macao from Dec. 1759 to Nov. 1762, then banished from China forever by the Emperor Ch'ien-lung. The *Success* was never heard of again. Bowen claimed that he was a prisoner in China for nearly four years and that he was carried 2,000 miles in the interior of China. Bowen returned to London in late 1763. On 10 Nov. 1763 he received £28 and 11*d* for his services on board the Pitt. But six days later, on Nov. 16, he petitioned the Court of Directors of the East India Company to redress a grievance concerning his wages and imprisonment in China. The court ordered that he be paid £19 and 10*d* more. In total, from 1748 to 1864, Bowen earned about £80 in wages as a seaman for the East India Company from 1758-1764. By contrast, James Flint earned a minimum of £8,500 from 1760-1766. Of Flint's total, £6,500 was in commissions as a supercargo and £2,000 was for the hardships he underwent (primarily imprisonment for almost 3 years) and future opportunities missed because of banishment.

The second soybean introduction to North America was by Benjamin Franklin. In 1770 he sent seeds from London to the botanist John Bartram in Philadelphia, Pennsylvania. This was 5 years after Samuel Bowen's introduction.

Bowen was interested in making a starch powder to substitute for sago power, which he found so widely used in China. He wrote on 17 Sept. 1766 that in Georgia he had found the vegetable that produced this powder. However Dossie (1768-1771) reveals that Bowen used the root of a vegetable to make a substitute for sago powder, and Bonner (1964) concludes that the sago substitute was made from sweet potatoes [*Ipomoea batatas*].

Note 1. Maps of the area show that Savannah and Thunderbolt are in northwestern Georgia, very near the southern tip of South Carolina and quite near the Atlantic Ocean. Yonge (pronounced Young) probably grew America's first soybeans on Skidaway Island (Hymowitz, pers. comm., 27 May 1989). This island is located about 10 miles southeast of Thunderbolt (which is 8 miles southeast of the center of present-day Savannah), on the coast of the Atlantic Ocean in Georgia, at the confluence of 3 rivers. Both Skidaway Island and Thunderbolt are in Savannah's "coastal low-country area." The Wilmington River runs along the northern side of both Thunderbolt and Skidaway Island. In 1765 and 1766 Skidaway Island and Thunderbolt were both located in Christ Church Parish, Colony of Georgia. The first counties in Georgia were created in 1777; at that time Christ Church Parish became part of Chatham County.

Note 2. This document contains the earliest date seen for soybeans in Georgia, or the thirteen colonies (which later became the United States of America), or the cultivation of soybeans in Georgia, or the USA (spring 1765). Address: Dep. of Agronomy, Univ. of Illinois, Urbana-Champaign, Urbana, Illinois.

6386. Leviton, Richard. 1983. Report on soyfoods research trip across America, Dec. 1983. Colrain, Massachusetts. 2 p. Unpublished typescript.

• ***Summary:*** Visited or discusses: Northern Soy (Rochester, New York), Legume (New York City), Tofu Time (David Mintz, New York City), New England Soy Dairy (Greenfield, Massachusetts), SanJ (San-Jirushi, Virginia), Quong Hop & Co. (South San Francisco, California), Worthington Foods (Worthington, Ohio), Southwest Soyfoods (Richard Jennings, Santa Fe, New Mexico). Address: 100 Heath Rd., Colrain, Massachusetts 01340. Phone: 413-624-5591.

6387. **Product Name:** Homestyle Tempeh Fiesta (Tempeh & Millet & Veggie Spread or Salad).
Manufacturer's Name: 21st Century Foods Inc.
Manufacturer's Address: 30 Germania St., Jamaica Plain, MA 01230.
Date of Introduction: 1983.
Ingredients: Organic soy tempeh, marinated in tamari, herbs, and spices, cooked organic millet, finely cut carrot, celery, bell pepper, onion, parsley; corn oil, vinegar.
Wt/Vol., Packaging, Price: 12 oz plastic tray with lid.
How Stored: Refrigerated.
New Product–Documentation: Leaflet, 1983. "Tempeh

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with a Difference." Spot in Soyfoods. 1984. Summer. p. 44. "A Meal in Itself." Talk with Rudy Canale. 1988. Sept. 13. This is still being made but is now called simply Tempeh Fiesta. It was never renamed "Tempeh Spread."

6388. **Product Name:** [Miso, Shoyu, Koji, and Natto]
Foreign Name: Miso, Shoyu, Koji, Nattô.
Manufacturer's Name: Ab & Paulien Schraft Soyfoods.
Manufacturer's Address: Mas Miquelet, Baillestavy 66320, France.
Date of Introduction: 1983.
New Product–Documentation: Letter from Sjon Welters. 1982. April 16. "Two Dutch people, just back from studying with Thom Leonard and The Farm (Tennessee) in the States, are setting up a small plant to produce miso, shoyu, natto, and koji: Ab & Paulien Schraft."

Shurtleff & Aoyagi. 1983. *The Book of Miso*. 2nd ed. p. 255. Letter from Sjon Welters. 1989. July 24. "As far as I know, this company never got off the ground."

6389. **Product Name:** Taboolie with Tofu.
Manufacturer's Name: Bountiful Bean Plant.
Manufacturer's Address: 903 Williamson St., Madison, WI 53703. Phone: 608-251-0595.
Date of Introduction: 1983.
Ingredients: Bulgar, tofu, celery, carrots, scallions, parsley, vinegar, water, shoyu soy sauce, oil, mint.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: James Lubbe. 1988. March. Abbreviated History of the Bountiful Bean. Label. 1985. 3.5 inch diameter. Self adhesive. Green on white. "Mid-Eastern Salad."

Label sent by Elizabeth Hanson of Bountiful Bean. 1991. Nov. 12. Same label as above, but company is now located in Ridgeway, Wisconsin 53582.

Leaflet sent by Paul Olson, new owner of Bountiful Bean Soyfoods. 1993. Nov. 19. The company makes Taboolie that contains tofu.

6390. **Product Name:** Sunny Tofu Salad (Eggless Egg Salad).
Manufacturer's Name: Bountiful Bean Plant.
Manufacturer's Address: 903 Williamson St., Madison, WI 53703. Phone: 608-251-0595.
Date of Introduction: 1983.
Ingredients: Tofu, celery, scallions, green pepper, pimiento, shoyu soy sauce, lemon juice, mellow white miso, honey, dried parsley turmeric, curry, cumin, cayenne pepper.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: James Lubbe. 1988. March. Abbreviated History of the Bountiful Bean. A product named simply Sunny was first launched in 1983. Later it was renamed Sunny Tofu, then Sunny Tofu Salad. Label. 1985. 3.5 inch diameter. Self adhesive. Maroon on white. "Eggless Egg Salad."

6391. **Product Name:** Tempeh Burger.
Manufacturer's Name: Cricklewood Soyfoods.
Manufacturer's Address: Route 1, Mertztown, PA 19539.
Date of Introduction: 1983.
New Product–Documentation: Ad in CRC Reports. 1987. Fall. p. 15. Talk with Karl Krummenoehl. 1988. Jan. 4. This is soy tempeh with spices marinated in soy sauce. Launched in about 1983.

6392. **Product Name:** Soysage (Meatless Okara-based Sausage) [Regular, or Hot & Spicy]
Manufacturer's Name: Golden Soy Foods Inc.
Manufacturer's Address: P.O. Box 495, Athens, OH 45701.
Date of Introduction: 1983.
Ingredients: Regular: Okara (soy fiber from organic soybeans), whole wheat flour, wheat germ, corn oil, shoyu (water soybeans, wheat, salt), nutritional yeast, garlic powder, molasses, mustard, oregano, fennel seed, sage, salt. Hot & Spicy adds red cayenne as the last ingredient.
Wt/Vol., Packaging, Price: 1 lb plastic wrapped.
How Stored: Refrigerated.
Nutrition: Per 1.5 oz : Calories 120, protein 5 gm, carbohydrates 14 gm, fat 5 gm, sodium 29 mg.
New Product–Documentation: News release. "A great protein alternative." Domitz. 1986. Messenger (Athens, Ohio). June 1. "Soysage offers a healthful alternative." Ellers. 1986. Plain Dealer (Cleveland, OH). Dec. 21. "Vegetarian's work rooted in low-calorie soy products." Label. 1987. Self adhesive. 3.5 by 8.5 inches. Self adhesive. Blue, yellow, and white. Hot & Spicy: Blue, yellow, white and pink. "Vegetarian. All Natural. Very Low Sodium. Ready to Eat. Slice and fry for breakfast and sandwiches. Use in lasagne, spaghetti, chili, tacos, burritos & casseroles."

6393. **Product Name:** Kikkoman Lite Soy Sauce (Moderately Low Sodium).
Manufacturer's Name: Kikkoman Foods, Inc.
Manufacturer's Address: Walworth, Wisconsin 53184.
Date of Introduction: 1983.
Ingredients: Water, wheat, soybeans, salt, lactic acid, sodium benzoate (less than 1/10 of 1% as a preservative).
Wt/Vol., Packaging, Price: 0.3 oz single serving packet, or 5 oz or 10 oz bottles.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Talk with Danji Fukushima of Kikkoman. 1982. June 2. This product is made using Kikkoman's regular shoyu process, then about 40% of the salt is removed by electrodialysis.

Labels. 1983. 8 by 3.5 inches. Paper. Red, black, and

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white on green. "Premium quality. Naturally brewed. Since 1630. 40% less salt. 100% original Kikkoman flavor!" 100 mg of sodium per ½ teaspoon serving. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Food Management. 1986 Dec. Contains 40% less sodium than regular soy sauce. Ad in Cooking Light. 1989. Jan/Feb. p. 92. "How to go lite on the salt... 40% less salt."

6394. **Product Name:** Cold Mountain Hoisin Sauce (Bulk).
Manufacturer's Name: Miyako Oriental Foods, Inc.
Manufacturer's Address: 4287 Puente Ave., Baldwin Park, CA 91706.
Date of Introduction: 1983.
New Product–Documentation: Portfolio sent by Terry Shimizu of Miyako Oriental Foods. 1999. Nov. 22. Talk with Terry Shimizu. 1999. Nov. 29. This product was introduced in late 1982 or 1983. It was made for Mutual Trading Co., packaged under the latter's private label, and sold only in bulk to institutions.

6395. **Product Name:** Tofu Dip (Like Eggless Egg Salad).
Manufacturer's Name: Natural Pacific.
Manufacturer's Address: 153 Makaala St., P.O. Box 11001, Hilo, Island of Hawaii, HI 97520. Phone: 808-935-3220.
Date of Introduction: 1983.
Ingredients: Tofu (water, soybean curd precipitated with filtered seawater and/or natural nigari), sunflower seed oil, soy sauce, rice vinegar, onion powder, dill, garlic powder, turmeric, celery salt.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Not listed in any Hawaiian City Directory prior to 1968. Talk with Ty Katibah. 1988. Feb. 10. Label. 1987. 2.5 by 2.5 inches. Rounded top. Black, yellow and white. "Free from preservatives and artificial additives."

6396. **Product Name:** Teriyaki Tofu.
Manufacturer's Name: Natural Pacific.
Manufacturer's Address: P.O. Box 4352, Hilo, Island of Hawaii, HI 96720. Phone: 808-935-3220.
Date of Introduction: 1983.
Ingredients: Tofu (water, organically grown soybeans, filtered seawater), shoyu, honey, ginger, onion, garlic, spices.
Wt/Vol., Packaging, Price: 3 oz.
How Stored: Refrigerated.
New Product–Documentation: Not listed in any Hawaiian City Directory prior to 1968. Talk with Ty Katibah. 1988. Feb. 10. Labels. Both original and current. Brown and white.

6397. **Product Name:** Baked Tofu Marinated in Shoyu.
Manufacturer's Name: Palomar Mountain Soyfoods.
Manufacturer's Address: 31405 N. Highway 395, Escondido, CA 92025. Phone: 714-749-2476.
Date of Introduction: 1983.
Wt/Vol., Packaging, Price: In a cottage cheese container with a snap-on lid.
How Stored: Refrigerated.
New Product–Documentation: Talk with Alex Press. 1990. Feb. 28. He started selling this product in 1983. He does not recall the exact name.

6398. **Product Name:** So' Tamari Soy Sauce.
Manufacturer's Name: Pure & Simple, Inc.
Manufacturer's Address: P.O. Box 1235, Corona, CA 91720.
Date of Introduction: 1983.

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New Product–Documentation: Poster. Also published in the Feb 1984 Natural Foods Merchandiser. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Chateau So'. It's vintage .. So' Tamari Soy Sauce.

6399. **Product Name:** Gold Lion Soya Sauce, Extra Gold Dragon Soya Bean Sauce.
Manufacturer's Name: R.M.R. Manufacturers.
Manufacturer's Address: 15/3 Edrigodon Mawatha, Nugegoda, Sri Lanka.
Date of Introduction: 1983.
Ingredients: Soya, wheat flour, salt, sugar, preservative.
Wt/Vol., Packaging, Price: Bottled. (1) 725 ml for Rs. 31/50. 325 ml bottle for Rs. 22/50. (2) 325 ml for Rs. 20/-.
How Stored: Shelf stable.
New Product–Documentation: Label. 1987. undated. 3 by 3.5 inches oval. Gummed. White and gold on purple with drawing of dragon and Chinese characters reading "Chinese Soy Sauce." Mr. W.F. Hsu, the owner, says he uses 1,000 kg/month of soybeans but survey person notes that this seems too high unless we recall that the product is also marketed by New Edinburgh products.

6400. **Product Name:** San-J Tamari Teriyaki. Renamed Natural Teriyaki Sauce by 1986.
Manufacturer's Name: San-J International, Inc. (Importer). Made in Japan by San-Jirushi.
Manufacturer's Address: Colonial Heights, VA 23834.
Date of Introduction: 1983.
Ingredients: Tamari, sweet rice wine, water, honey, apple vinegar, rice vinegar, mustard, garlic, ginger, plum juice, xanthan gum, white & black pepper.
Wt/Vol., Packaging, Price: 5, 10, 20 and 61 oz bottles.
How Stored: Shelf stable, refrigerate after opening.
New Product–Documentation: Label. 1983. undated. 2 labels: 7 by 4.5 inches (61 oz). Paper. Brown and green on yellow. "A teriyaki sauce, marinade, glaze and tenderizer .."

Two labels sent by Misako Binford of San-J International. 2012. May 14. The brown label now reads: "Teriyaki Stir-Fry & Marinade. Gluten Free. 10 fl. oz. New mildly sweet flavor." One logo on the front panel. "Certified Gluten Free." She notes: 1987 or before. Imported.

6401. **Product Name:** Seitan Wheat Meat Pounder.
Manufacturer's Name: Sheffield Seitan.
Manufacturer's Address: South Wheelock, Vermont.
Date of Introduction: 1983.
Ingredients: Seitan (wheat gluten cooked in a broth of soy sauce, garlic powder, and cayenne).
Wt/Vol., Packaging, Price: 1 lb+.
How Stored: Frozen.
New Product–Documentation: Talk with Leo Denby, owner of Sheffield Seitan. 1998. Feb. 3. This frozen product was introduced in 1983.

6402. Shindo, E. 1983. [Soy sauce imported from Hong Kong]. *Nihon Shoyu Kenkyujo Zasshi (J. of the Japan Soy Sauce Research Inst.)* 9(2):71-72. [Jap]*
• ***Summary:*** The general composition of five brands of soy sauce imported from Hong Kong, retailing in Japan for 180-350 yen/liter were compared with Kikkoman soy sauce (which retailed in Japan for 500-700 yen/liter). Address: Japan Soy Sauce Research Inst., Tokyo, Japan.

6403. **Product Name:** Tempeh Burger, Hi-Pro Burger (Marinated Tempeh Burger), Tempeh-Tofu Burger.
Manufacturer's Name: Soy Power (Marketer/Distributor). Made in South San Francisco by Quong Hop & Co.
Manufacturer's Address: 2811-A Ocean Park Blvd., Santa Monica, CA 90405.
Date of Introduction: 1983.
Ingredients: Hi-Pro Tempeh Burger: Soy tempeh from organically grown soy beans, shoyu, oleic safflower oil, lemon juice, natural hickory smoke, herbs and spices.
Wt/Vol., Packaging, Price: 7 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1983. 3 inch diameter. Self adhesive. Dark brown and white on lighter brown. "100% Natural. High in Protein. No Cholesterol. Hi-Pro Tempeh Burgers may be eaten fresh from the pack or steam 6 minutes in a covered pan with 5 tablespoons water sprinkled around burger. Serve in pocket bread, garnished with your favorite burger type trimmings (tomato, alfalfa sprouts, onion, etc.)." Talk with Kevin Cross. 1988. Sept. 22. Introduced in about 1983.

6404. **Product Name:** Soy Vay Veri Veri Teriyaki.
Manufacturer's Name: Soy Vay Enterprises, Inc. (Marketer-Distributor).
Manufacturer's Address: Arcata, California 95018. Phone: 1-800-600-2077.
Date of Introduction: 1983.
Ingredients: Soy sauce (water, wheat, soybeans, salt, sodium benzoate–less than 1 tenth of 1 percent as a preservative), sugar, dried onion, fresh garlic, sesame seeds, sesame oil, soy oil, fresh ginger, garlic powder, onion powder, ginger powder.
Wt/Vol., Packaging, Price: 21 oz. glass bottle. Retails for $4.29 at Safeway supermarket (1997/05, Lafayette, California).
How Stored: Shelf stable.
New Product–Documentation: Product with Label purchased at Safeway supermarket in Lafayette, California. 1997. May 25. The typeface, product name, and marketing are Yiddish/Jewish but large Chinese characters appear on both sides of the front panel. "A true and original tasting Teriyaki Marinade and Sauce for beef, chicken, fish, stir-fry, vegetables, or whatever else you may dream up. Since 1982.

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Shake well before using."

One side panel states: "For recipes or information write Soy Vay, P.O. Box 410671, San Francisco, CA 94141-0671. For more unique Soy Vay taste treats, try Island Teriyaki, Chinese Marinade, and Cha-Cha Chinese Chicken Salad Dressing." The back panel states: "About Soy Vay. Our company came to be when a Jewish boy and a Chinese girl met and began talking about a common interest: cooking. We soon realized that by a combining the best of our families' cooking secrets, we could create new and unique tastes. The result–Soy Vay!

"Our first product, the original Soy Vay Chinese Marinade [1982], quickly gained a large following of fans. Next came Soy Vay Veri Veri Teriyaki."

Talk with owner of Soy Vay. 1997. June 3. This product was introduced in 1983 in two sizes–7.5 oz and 21 oz. At that time the company was located in Arcata, California. They moved to Felton, California, in 1987.

6405. **Product Name:** Tempeh-Taco.
Manufacturer's Name: Soyplant Co-op Inc. (The)
Manufacturer's Address: 211 East Ann St., Ann Arbor, MI 48104. Phone: (313) 663-8638.
Date of Introduction: 1983.
Ingredients: Tempeh, tomatoes, tomato sauce, soy sauce, peanut oil, sesame oil, garlic, molasses, spices.
Wt/Vol., Packaging, Price: 12 oz.
New Product–Documentation: Label in Soy Plant scrapbook from about 1983. 3 by 2 inches. Red on white. 12 oz.

6406. **Product Name:** Tempehroni.
Manufacturer's Name: Soyplant Co-op Inc. (The)
Manufacturer's Address: 211 East Ann St., Ann Arbor, MI 48104.
Date of Introduction: 1983.
Ingredients: Tempeh, tomatoes, tomato sauce, soy sauce, peanut oil, olive oil, garlic, molasses, spices.
Wt/Vol., Packaging, Price: 12 oz.
New Product–Documentation: Label in Soy Plant scrapbook from about 1983. 3 by 2 inches. Green on white. 12 oz.

6407. **Product Name:** Westbrae Natural Mild Soy Sauce (Salt Reduced).
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan by Sendai Miso-Shoyu.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: 415-658-7518.
Date of Introduction: 1983.
Ingredients: Water, whole soybeans, whole wheat, sea salt.
Wt/Vol., Packaging, Price: 12.7 fluid oz (375 ml).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Label. 1983, undated.



3.5 by 8 inches. Color. "Half the Sodium of Regular Shoyu. Most 'salt reduced' soy sauces use an ion exchange method to lower their sodium content." Westbrae removes it mechanically, starting by heating the shoyu at lowered atmospheric pressure until the salt precipitates out. It is then removed by a centrifuge. Label. 1986. 5 by 3.5 inches. Paper. Brown, green, blue, yellow and white. Mt. Fuji logo illustration. "Contains 175 mg sodium per 5.9 gm (1 tsp.) serving, vs. 350 mg for regular shoyu." Letter from Gordon Bennett. 1987. Oct. Gives year of introduction as 1983.

6408. **Product Name:** Westbrae Natural Buckwheat Ramen. Instant Asian-Style Buckwheat Noodles & Miso Flavor Broth.
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: 415-658-7518.
Date of Introduction: 1983.
Ingredients: Asian-style noodles: Whole buckwheat flour, sifted wheat flour, water, sea-salt. Vegetable broth: Powdered soy sauce (soybeans, wheat, sea salt), powdered miso (soybeans, seasalt), dried Kombu seaweed, dried Japanese mushrooms, sea salt, dried onion, garlic, white pepper, dried ginger, green onion.
Wt/Vol., Packaging, Price: 3.1 oz (90 gm).
How Stored: Shelf stable.
Nutrition: Per 45 gm.: Calories 158, protein 5 gm, carbohydrate 32 gm, fat 1 gm.
New Product–Documentation: Label. 1986, undated. 10 by 7 inches. Plastic. Orange, brown, white, green, black on yellow. Color picture of bowl of Buckwheat Ramen. Miso Flavor Broth packet. 3 inch square. Foil. Burgundy on silver.

6409. **Product Name:** Westbrae Natural Seaweed Ramen. Instant Asian-Style Whole-Wheat Noodles & Seaweed Flavor Broth.
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA

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94608. Phone: 415-658-7518
Date of Introduction: 1983.
Ingredients: Asian-style noodles: Whole-wheat flour, sifted wheat flour, salt. Soup: Powdered miso (soybeans, white rice, salt). Powdered soy sauce (soybeans, wheat, seasalt), shiitake mushroom powder, onion powder, dried wakame seaweed, garlic salt, ginger powder, black pepper.
Wt/Vol., Packaging, Price: 3.1 oz (90 gm).
How Stored: Shelf stable.
New Product–Documentation: Label. 1986, undated. 10 by 7 inches. Plastic. Orange, white, black, brown, green on blue. Color picture of bowl of Seaweed Ramen

6410. **Product Name:** Westbrae Natural Miso Ramen. Instant Asian-Style Whole-Wheat Noodles & Miso Flavor Broth.
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: 415-658-7518
Date of Introduction: 1983.
Ingredients: Asian-style noodles: whole wheat flour, sea salt. Miso broth: Powdered soy sauce, soybeans, wheat, sea salt, powdered miso, dried kombu seaweed, dried Japanese mushroom, sea salt, dried onion, garlic, white pepper, dried ginger, green onion.
Wt/Vol., Packaging, Price: 3.1 oz.
How Stored: Shelf stable.
New Product–Documentation: Label. 1986, undated. 9.5 by 6.5 inches. Plastic packet. Orange, purple, white, green brown. Full color picture of bowl of Miso Ramen. Directions with pictures of how-to.

6411. Westbrae Natural Foods. 1983. Tamari vs shoyu (from a company that sells both) (Poster). Emeryville, California. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center
Address: Emeryville, California.

6412. **Product Name:** Tempeh Burger
Manufacturer's Name: White Wave.
Manufacturer's Address: 1990 North 57th Court, Boulder, CO 80301
Date of Introduction: 1983.
Ingredients: Soy tempeh (made with cultured soybeans organically grown in accordance with the California Health and Safety Code, section 26569.11), soy sauce, garlic, onion, spices.
New Product–Documentation: Spot in Soyfoods. 1984, Summer, p. 43. Shurtleff & Aoyagi. 1985. History of Tempeh, p. 54. By 1984 this was the company's best-selling tempeh product, followed by frozen soy tempeh, soy & rice tempeh, then 5-grain tempeh. In May 1988 the round Soyfoods Unlimited Meatless Burger was merged into this product, but using the Soyfoods Unlimited Label with the juicy glazed burger and the two onion rings floating above it. The full title of the new label now reads: White Wave Tempeh Burger. Marinated Soy Tempeh. All the Sizzle... None of the Steak. Ready to eat in 1 minute. Pareve

6413. **Product Name:** Wildwood Natural Sushi.
Manufacturer's Name: Wildwood Natural Foods
Manufacturer's Address: 135 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919.
Date of Introduction: 1983.
Ingredients: Organically grown brown rice, carrots, seasonal vegetable (zucchini, cucumber, red or green cabbage, broccoli or scallions), brown rice vinegar, nori sea vegetable, umeboshi plum (salted Japanese plum), ginger, tamari.
How Stored: Refrigerated.
New Product–Documentation: Labels sent by Wildwood on their letterhead. 1983, undated. 2.75 by 1.75 inches. Self adhesive. Black and green on ivory. Silhouette of woods with birds. "Ready to eat Foods, Naturally."

6414. **Product Name:** Hijiki Rice Pie.
Manufacturer's Name: Wildwood Natural Foods
Manufacturer's Address: 135 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919.
Date of Introduction: 1983.
Ingredients: Brown rice, whole wheat pastry flour, hijiki, shiitake and button mushrooms, unrefined or safflower oil, tamari, ginger, garlic, sea salt.
Wt/Vol., Packaging, Price: 5 oz squares.
How Stored: Refrigerated.
New Product–Documentation: Label sent by Wildwood on their letterhead. 1983, undated. 3 by 2 inches. Self adhesive. Black and green on yellow. Silhouette of woods with birds. "Ready to eat Foods, Naturally. Perishable–Keep refrigerated."

Talk with Billy Bramblett, an owner of Wildwood. 1998, Aug. 8. This delicious product had a whole-wheat crust with a filling based on brown rice. They made it on big baking sheets, then they would cut it into 5-oz squares and wrap it. They sold it hot at the Good Earth.

6415. **Product Name:** Hummus.
Manufacturer's Name: Wildwood Natural Foods.
Manufacturer's Address: 135 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919
Date of Introduction: 1983.
Ingredients: Garbanzo beans, tahini, tamari, scallions, parsley, apple cider vinegar, olive oil, sea salt, spices
Wt/Vol., Packaging, Price: 7 oz plastic tub.
How Stored: Refrigerated.
New Product–Documentation: Label sent by Wildwood on their letterhead. 1983, undated. 2.5 by 1.5 inches. Self

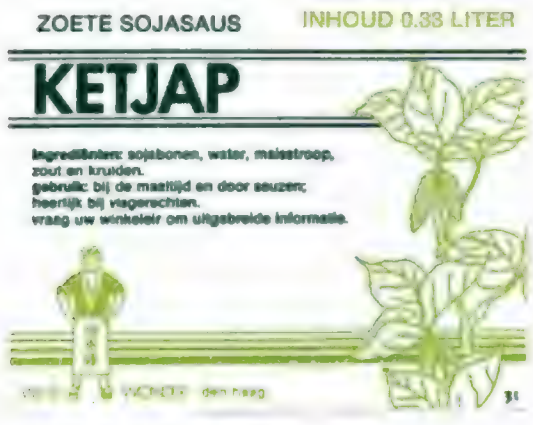
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adhesive. Black and green on white. Silhouette of woods with birds. "Ready to Eat Foods. Naturally Perishable. Keep refrigerated."

6416. **Product Name:** [Tofu in Sauces (Tamari Sauce, Herb Sauce, or Tomato Sauce)].
Foreign Name: Tofu in Tamarisaus, Kruidensaus, or Tomatensaus
Manufacturer's Name: Witte Wonder Natural Products B.V.
Manufacturer's Address: Den Haag, Netherlands
Date of Introduction: 1983.
Wt/Vol., Packaging, Price: Bottles.
New Product–Documentation: Label. 1983. 6 by 1.5 inches. Self adhesive. 2 color: Brown and light green on white. Illustration of product vegetable. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Richard Leviton. 1983. Trip to Europe with American Soybean Assoc. Oct/Nov. Unpublished manuscript. p. 24. The three varieties of marinated tofu were selling very well by Nov. 1983. Tofu in tamari sauce, in spicy sauce, in tomato sauce: very good. Bottled, shelf stable, pasteurized, boiled in the bottles in a giant kettle for 1.5 hours, they keep for 1 year. In all of Holland there are about 500 health food stores. Tofu in tomato sauce: dice sized chunks clumped together in marinade. Not premarinated but flavor soaks in during pasteurization. Not too salty. Weak tomato taste.

6417. **Product Name:** [Ketjap: Sweet Soy Sauce].
Foreign Name: Ketjap. Zoete Sojasaus.
Manufacturer's Name: Witte Wonder Natural Products B.V.
Manufacturer's Address: Piet Heinstraat 80, 2518 CK Den Haag, Netherlands.
Date of Introduction: 1983.
Ingredients: soybeans, water, corn syrup, salt, and herbs.
Wt/Vol., Packaging, Price: 0.33 liter.
How Stored: Shelf stable; refrigerate after opening.



New Product–Documentation: Label. 1983. 3 by 4 inches. Dark green and light green on white. Illustration of a soybean plant and of a tofu maker.

6418. Wood, Brian J.B.; Walker, C.A. 1983. Soy sauce–from research project to factory production. *Process Biochemistry* 18:123-28. In Advances in Fermentation supplement. * Address: Dep. of Bioscience & Biotechnology, Univ. of Strathclyde, Glasgow, Scotland, UK.

6419. **Product Name:** Soya Sauce (in 250 ml Tetra Brik).
Manufacturer's Name: Yeo Hiap Seng Ltd.
Manufacturer's Address: 950 Dunearn Rd., Singapore.
Date of Introduction: 1983.
Wt/Vol., Packaging, Price: Tetra Brik aseptic carton.
How Stored: Shelf stable.
New Product–Documentation: Tetra Pak Corp. 1983. Products brochure. p. 25.

6420. Yokotsuka, Tamotsu. 1983. Scale-up of traditional fermentation technology [for shoyu production] (Review). *Korean J. of Applied Microbiology and Bioengineering* 11(4):353-71. [143 ref. Eng]
Address: Kikkoman Corp., Noda-shi, Japan

6421. Aubert, Emmanuelle. 1983. Les 9 grains d'or dans la cuisine [The nine golden grains in the cuisine. 2nd ed.] Paris: Le Courrier du Livre. 286 p. Illust. by C. Galinet. Index. 22 cm. [Fre]
• ***Summary:*** The subtitle on the cover reads: 400 simple and savory recipes. Menus and advice on good health. Contents: Introduction. 1. The cereals (see p. 28-31 for instructions for making seitan at home from 500 gm wheat flour, plus 8 seitan recipes). 2. Breads. 3. Legumes. Cooking legumes, lentils, haricots, dry peas, chick-peas, azuki beans, soya. 4. Vegetables. 5. Soups. 6. Animal products. 7. Condiments, aromatics, and sauces (incl. tamari and miso). 8. Desserts. 9. Beverages. 10. 80 menu ideas. 11. Pregnancy and the feeding of young infants. 12. Some natural remedies. Where to buy supplies.

Soy-related recipes include: Making tofu at home (p. 87-91; illustrations and method taken without credit or permission from *The Book of Tofu* by Shurtleff & Aoyagi). Yuba. Grilled tofu (p. 91). Tofu with nuts (*noix*) and miso. Skewered tofu. Tofu salad (p. 92). Tofu with vegetables. Onions with tofu. Okara croquettes. Soymilk with fruits (p. 93). Making tempeh at home (p. 94-95). Tempeh goreng. Tempeh bachem (p. 95). Keripik tempeh (tempeh chips; p. 96). Tempeh croutons (p. 96). Pate of vegetables with tofu (p. 126). Jardiniere au tofu (p. 128). Peas with tofu (p. 128). Soy sprouts made from mung beans (p. 129-30).

Pages 191-94 give basic information on the following fermented soya condiments: tamari, miso (Hacho [sic, Hatcho] miso, barley miso, rice miso). Pages 278-79

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list manufacturers and handlers of various foods used in this book, and pages 280-81 give their addresses: Yellow soybeans: Celnat, Les Sept Marches, Le Seuil, Lima. Miso: Celnat, Lima, Les Sept Marches, Le Seuil, le Bol en Bois, Tenryu. Only Lima and Les Sept Marches manufacture miso in France. Tamari: Celnat, Le Seuil, Les Sept Marches, Lima, le Bol en Bois, Tenryu. Nigari: Le Bol en Bois, Tenryu. Tofu: Le Bol en Bois, Tenryu, Soy Tempeh: Traditions du Grain, Le Bol en Bois. Tempeh culture: Semailles. Koji: Les Sept Marches, Tenryu, Le Bol en Bois. Amasaké: Traditions du Grain. Soymilk: Celnat, Lima.

A photo on the rear cover shows Aubert, a woman.

Note: This is the earliest French-language document seen that mentions amazake, which it calls "Amasaké." Address: France

6422. Business Trend Analysts, Inc. 1983. The health and natural food market. Commack, New York: Business Trend Analysts. 199 leaves. 28 cm. [9 ref]

• ***Summary:*** One section of this study (including pages 108-111) concerns the soyfoods market. It consists largely of statistics compiled by the Soyfoods Center and Soyfoods Association of North America. No permission was obtained from Soyfoods Center to use this information. Address: 2171 Jericho Turnpike, Commack, New York 11725.

6423. Chinese menus: Great meals in minutes. 1983. Alexandria, Virginia: Time-Life Books. 104 p. Illust. (some color). Index. 29 cm.

• ***Summary:*** These recipes were contributed by nine chefs; a brief biography and photo is given for each. Barbara Tropp and Nina Simonds are among them (p. 4). Contains detailed instructions on the preparation of Chinese food, recipes, and sample menus.

The section titled "Pantry (for this volume) includes: On the shelf–"Black beans, canned or packaged. Chinese fermented black beans, also known as Chinese salted black beans." Hoisin sauce (sweet, soybean based). Oils: Oriental sesame oil, a highly aromatic oil, is for garnishing, not cooking. Always buy Chinese or Japanese brands. Sesame paste. Soy sauce: Extracted from fermented soybeans, comes in light and dark. In the refrigerator–Bean curd or tofu.

Soy related recipes: Bean curd salad with peanuts (p. 65). Steamed sea bass with black bean sauce (which includes "1 tablespoon Chinese fermented black beans," p. 65). Mushroom soy sauce is good to have on hand (p. 71). Crisp chicken strips with black-bean orange sauce (the sauce ingredients include "2 tablespoons Chinese salted black beans," p. 81).

Diced chicken with fermented black beans (p. 87). Stir-fried spinach with fermented bean curd (with "1 small square fermented bean curd, mashed," p. 90).

6424. Dahlen, Martha; Phillipps, Karen. 1983. A popular guide to Chinese vegetables. New York, NY: Crown Publishers, Inc. x + 113 p. Illust. (color). Index. 29 cm. [2 ref]

• ***Summary:*** This book was written for non-Chinese in the maze of Hong Kong's street markets; it originally appeared in 1980 and 1981 as two volumes, published in Hong Kong. This is the 1st American edition. The romanization of names in this book represent the Cantonese pronunciation system of Herklots.

The section on "Seasoning sundries" has entries (p. 3-4) for: Light soy sauce (2 Cc = Chinese characters are given) See yau [Note: See = fermented black soybeans] or Sang chau. "This is the best grade of sauce. 'Light' means it is not thick or viscous and has a delicate or fine flavor."

Dark soy sauce (2 Cc) Lo chau. "'Dark' here means thick and of stronger flavor." There are various types, each of which has been fermented with different special ingredients such as mushrooms, ginger, etc. Yet they all stain food black.

Fermented black beans (2 Cc). Dau see [fermented black soybeans]. "These are whole soybeans which have been cooked, salted and fermented." "These beans are one of the most versatile, convenient, economical and flavourful Oriental seasonings. The Cantonese usually mash them with garlic and stir-fry or braise them with pork, beef, shellfish, fish or vegetables, particularly with green and red vegetables for colour.

"General directions for making black bean sauce are as follows: Use approximately twice as much, by volume, of black beans as garlic. Crush the garlic cloves by smashing them with a single blow of a heavy object (flat side of a cleaver) on a cutting board. Remove the papery husk, then put both beans and garlic in a small bowl and mash together, either with a spoon or the butt of the cleaver's handle. Approximately 1 tablespoon of mash will season 1-2 cups of food.

"To cook, add the mash to the hot oil before the ingredients. In a mixture, add the mash just before the last batch of ingredients to be fried, return all the rest to the wok, season with a pinch of sugar and light soy sauce,... Vary the sauce from heavy to light."

The section on "Soybean sprouts" (*Daai dau nga choi*, 4 Cc = large bean sprout vegetable) has an unusual structure. First comes information on soybean sprouts: Appearance, quality, general comments, preparation, cooking. Then a nice color illustration, followed by two recipes using these sprouts. Then come subsections on Bean curd (*Dau fu*, 2 Cc).

Water bean curd (*Seui dau fu*, 3 Cc. "This is the most common, and perhaps most versatile, kind of bean curd." Three recipes).

Wrapped bean curd (*Bo baau dau fu*, 4 Cc. This type is sold from tubs of water rather than from a wooden board. "Each square has been wrapped in cloth, so pieces have rounded edges and cost 2-3 times more than common fresh dau foo. This is the finest, most delicate curd, and is usually

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used only for steaming" as in Lo Siu Ping On, a traditional Cantonese dish)

Dry or pressed bean curd (*Dau fu gonn*, 3 Cc [pressed tofu]. This type is firm and therefore "easily sliced or cut into shreds and stir-fried. Two types exist as illustrated, the larger, 3-inch square white one is plain; the smaller, 2-inch square reddish one is lightly coated with 5-spice powder {ng heung fun, 3 Cc}." One recipe is given)

Deep-fried bean curd (*Dau fu pok*, 3 Cc. These are small cubes or squares about 1 inch on a side. Color illustration. One recipe is given).

Page 81. Recipe for Mushrooms & ribs with black bean sauce. In the section on Lotus root is a recipe (p. 87) for Braised pork and lotus which calls for "Fermented red bean curd" (*Naam yue*, 2 Chinese characters are given)

"Because the 'naam yue' tends to preserve the other ingredients, this dish will keep for at least a week in the fridge, and will improve in flavour as it keeps."

Note: "A combination of equal parts dark and light soy sauce may be substituted for the 'naam yue,' but the taste" and texture will be completely different

On page 106 is a short section on Kudzu (*Fun got*, 2 Cc, with no specific recipes but with suggestions for cooking).

6425. Driver, Christopher. 1983. The British at table, 1940-1980. London: Chatto & Windus–The Hogarth Press. xi + 212 p. Illust. Index. 23 cm. [220* + 169 endnotes]
• ***Summary:*** Chapter 2, titled "The seven lean years," discusses the period from 1941 to 1947 when food was rationed during World War II in Britain. An excerpt from the diary of Vere Hodgson for 7 May 1944 (p. 16) states: "I have an order with the Dairy for a pound of sausage... of soya bean flour."

Chapter 6, "Tastes of Britain: the age of choice" includes long discussions (p. 99-107) of the rise of vegetarianism and health / whole foods. Since "the free market in 'flesh food' returned to Britain it has been clear that shortages converted fewer people to vegetarianism than abundance does." "The distinction between vegetarianism and whole food is fine." Almost all health food restaurants are vegetarian, but not all vegetarian restaurants serve health food. "By 1980, the profession of vegetarianism no longer sounded like the equivalent of wearing sackcloth and ashes." Also discusses TVP and Worcestershire sauce (p. 99), "plant milk" and single cell proteins (p. 137-38), "TVP (texturised vegetable protein)," "meat extenders or substitutes of this kind, chiefly derived from the soy-bean," "march up to Soho Chinatown and sit down to a dish of beancurd [tofu] made from the same soybean staple by a cottage industry process ecologically superior to the multi-million pound machinery and vast energy input that western culture tolerates for the sake of making fake steak," "The first tentative flights of artificial protein may seem a long way from the precious mating calls of contemporary British foodies..." (p. 139).

World population continues to grow, and global food production must grow with it. "At some point not very far along that road, the role played in human diet by comparatively inefficient protein conversion machines such as cows, pigs and chickens, however intensively bred and farmed, would have to be diminished or abandoned. Here and there, the animals concerned would be relegated to agricultural zoos, to be gazed at with wild surmises by people who obtained their nourishment chiefly from the protein output of those industrious worms, bugs, and funguses, appropriately flavored."

Contains an interesting bibliography and endnotes. Address: England.

6426. Editors of *China Pictorial*, Beijing. 1983. Chinese cuisine from the master chefs of China. Boston, Massachusetts, and Toronto, Ontario, Canada: Little, Brown and Co. 240 p. Illust. Index. 26 x 24 cm.
• ***Summary:*** An overview with many color illustrations. The section titled "The ingredients" contains color photos of them plus a glossary that includes Chinese names: Dried bean curd stick, dried bean curd sheets, bean curd fresh gluten, fried gluten (p. 42-43). Soybean paste (salted and fermented), fermented bean curd, soy sauce (p. 47). Qingdou (green soybean), huangdouya (soybean sprouts) (p. 51). Doufu (bean curd, tofu), fuzhu (dried soybean milk [dried yuba sticks]), mianjin (gluten), youpi (dried soybean curd sheets [pressed tofu sheets]), kaofu (wheat gluten / vegetable steak) (p. 52). Jiangyou (soy sauce) (p. 54). Huang jiang (soybean paste, salted and fermented), jiangdoufu (fermented bean curd)

White soup (bai tang, with soybean sprouts, p. 56).

Folk nutrition: "All illnesses originate from what is taken into the mouth." On this page is a description of the therapeutic properties of: "Soybeans: their flavor is sweet, raw; their character is warm, and when fried [or cooked] it becomes hot..."

A long section on soybeans (p. 74) begins: "They are the pivot-point of Chinese flavor and nutrition." Includes brief descriptions on how to make soybean milk, bean curd, deep-fried bean curds, "bean curd puffs," and yuba.

Soy-related recipes: Slab bacon with fermented bean curd (Nanru kouru, with "3 cubes fermented bean curd, p. 113). Sweet bean paste sauce (tiendoujiang, for Peking duck; it is made from "fermented black soybeans," p. 140). Braised "shark's fin in white sauce (baipa yuchi, with white soup and soy sauce, p. 199). Mrs. Pockmark's bean curd (mapo doufu, p. 207). Silkworm cocoon bean curd (canjian doufu, p. 208).

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "fermented black soybeans" to refer to fermented black soybeans.

There is a section of seven vegetarian recipes (p. 199-205)

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6427. Feng, Deyi. 1983. Jiangyou shicu shengchan jishu [Soy sauce and vinegar production technology] Harbin, Heilongjiang, China: Heilongjiang Scientific and Technological Publishing Co. See p. 1-84, 157. Preface by Liang Chengyi, Chairman of the Harbin Province Scientific and Technical Committee. [Chi]

• ***Summary:*** This book is part of the Food Production Technology Series by the same publisher. Contents: Part I: Soy sauce (jiangyou). 1. Introduction and brief history. 2. Classification: By production and raw materials, by processing methods, by inoculation techniques, by soy sauce color, by physical characteristics of soy sauce. 3. Raw materials: Protein sources, carbohydrate sources, salt water. 4. Production technology: Soy sauce microbiology, principles of soy sauce brewing, flow charts of soy sauce production, types of koji, making koji, inoculation, mash fermentation, heating, using machinery, and prevention of contamination, and sanitation, common types of soy sauce contamination and their prevention. 5. Handling, packaging, economics & standards: Storage or handling, packaging, transportation, quality standards, standards of economic technology. 6. Applications of new technology: Technological research, new production equipment, new types of enzymes, research on liquid koji, inoculants, application of technology for inoculating with new types of enzymes. Part II: Quality control and inspection methods for soy sauce and vinegar. Address: Harbin, Heilongjiang, China.

6428. Flaws, Bob; Wolfe, Honora Lee. 1983. Prince Wen Hui's cook: Chinese dietary therapy. Brookline, Massachusetts: Paradigm Publications. v + 201 p. Index. 23 cm. [16 + 25 footnotes]

• ***Summary:*** The story of Prince Wen and his cook appears in Chuang-Tzu's *Inner Chapters* (trans. G F. Feng & J. English. New York: Vintage Books, 1974, p. 55). Diet is the third of the Eight Limbs of Classical Chinese Medicine. The other 7 limbs are meditation, exercise, astrology, geomancy, massage, herbology, and acupuncture.

If a man is diagnosed as having a liver imbalance, such as "liver fire blazing upwards," he should consume food and herbs that will sedate, calm, and cool the liver and lower the Yang; foods that raise the Yang, produce internal fire, or aggravate the liver should be avoided.

Page 35 notes that foods that are energetically cool and cold include soy products (such as tofu, tempeh, soymilk). Foods that produce fluid and are damp in nature include soybean and tofu.

In the section titled "Categorization of Foods," a number of individual foods are analyzed in detail, based on characteristics described below: Aduki bean, agar (p. 143), alfalfa, almond, and amasake (fermented glutinous rice) (p. 144), black soybean (p. 148), gluten (seitan, p. 158), kudzu root powder (p. 161), seaweed (p. 179), soybean (p. 181), soybean oil (p. 181), and tofu (p. 185).

Taking tofu, then black soybeans, as examples of the format used: Tofu: Nature: Cool. Flavor: Sweet. Meridian: Lungs, large intestine, stomach. Direction: Descending. Quality: Yin and yang. Elemental quality: Earth. Treatment principles: Tonifies Qi [ch'i] and Blood, clears Heat, sedates Yang, tones Yin, harmonizes the Middle Burner, produces Fluid, lubricates Dryness, counteracts toxins. Commonly used in the treatment of conjunctivitis, chronic amoebic dysentery, diabetes, sulfur poisoning, and alcoholism. Contraindications: spermatorrhea.

Black soybean: Nature: Neutral. Flavor: Sweet. Meridian: spleen and Kidneys. Direction: Ascending. Quality: Yang. Elemental quality: Earth. Treatment principles: Tonifies Qi [ch'i] and Blood, activates the Blood, benefits Water, expels Wind, counteracts toxins. Commonly used in the treatment of edema, Wind Bi (rheumatism), jaundice, beriberi, and spasms.

The remedial recipes are divided into Chinese (p. 96-116) and American (p. 117-35) types. Soy-related recipes include: Lord Buddha's delight casserole (with tofu, p. 88-89). Clams with black bean garlic sauce (with salted black beans [fermented black soybeans], p. 91). Five jewel casserole (with tofu or tempeh, p. 92). Quick braised soybean sprouts (p. 104).

Amasake cheesecake with cherry topping (p. 119). Shepherd's pie with seitan (Gluten meat, p. 122). Ginger seitan beef (p. 122). Seitan veal marsala (p. 129). Aduki bean brownies (p. 133). Dairyless pumpkin pie (with soymilk or cashew milk, p. 135). Many recipes use soy sauce or tamari in their braising liquid. The cookbook also uses meat, poultry, fish, and sugar quite extensively.

6429. Ford, Richard; Andersen, J.; Andersen, S. 1983. Juel Andersen's sea green primer: A beginner's book of sea weed cookery. Creative Arts Book Co., 833 Bancroft Way, Berkeley, CA 94710. 64 p. Illust. Index. 23 cm. [13 ref]

• ***Summary:*** A Glossary (p. 9) includes miso, mochi, tahini, tamari, tempeh, tofu, suribachi. Soy-related recipes: Tempeh (p. 23, 24). Tofu (p. 25, 28, 29, 43).

Sea vegetable chapters: Agar, Arame, Dulse, Hijiki, Kombu, Nori, Wakame. Common sea greens. Address: California.

6430. Fruin, W. Mark. 1983. Kikkoman: Company, clan and community. Cambridge, Massachusetts: Harvard University Press. xiv + 358 p. Illust. Index. 24 cm. [230 ref. Eng]

• ***Summary:*** A superb business history and No. 35 in the series Harvard Studies on Business History. Contains 8 illustrations, 16 figures, and 30 tables. All Japanese names are written, Japanese style, with the family name first, followed by the given name.

Contents: Editor's introduction, by Alfred D. Chandler, Jr. Acknowledgments. Introduction (author's). The company began brewing shoyu in 1661 in the town of Noda, 90

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minutes by modern train northwest of Tokyo. Phase I: 17th century to 1887. Phase II: 1887 to 1917. Phase III: 1918 to 1946. Phase IV: Postwar democracy.

1. Factories in the fields: Rural-centered industrialization, the origins of shoyu, Noda soy sauce (In 1661 Takanashi Hyozaemon XIX began brewing shoyu in Noda), Mogi domination of the market, fermentation technology (preparation of wheat for koji, preparation of brine solution, culturing of the wheat and soybeans, process of fermentation), extraction or pressing (At the end of the Tokugawa period {1867} the standard wooden keg held 9 *shô*, 4.33 gallons, which was said to be the amount of shoyu consumed in one year), production and scheduling, the dual employment system (organization of work, work rules, 1909 wage agreement, hierarchies of work {in front office and factory}), industry and community, farms and factories in 19th century Japan.

2. Clan and cartel in Meiji Japan: Clan and cartel in the Meiji period, government-regulated markets, Noda brewers assert themselves (registration and promotion of the brand-name Kikkoman by Mogi Saheiji, in Japan, Amsterdam, Austria and California), the Noda Shoyu Manufacturers' Association (*Noda Shôyu Jôzô Kumiai;* a cartel formed in 1887 to stabilize price, control supply, and guarantee markets, cartel and costs, the challenge of Suzuki Tôsaburô / Tosaburo), research and development, distribution: the railroad (opened in late April 1911), social change and the cartel (the cost of charity, noneconomic motivation, from philanthropy to paternalism), the transformation of shoyu manufacture in the countryside.

3. From cartel to corporation and beyond ("A corporation requires a nucleus for centralization and coordination"): 1909 to 1918: period of preparation ("in 1914 three shoyu brewers from Choshi in Chiba prefecture had formed the Choshi Shoyu Company." The owners were Hamaguchi Yoshiuemon, Fukai Yoshibei, and Tanaka Genba) (remains of the cartel, the Noda Shoyu Company {began operations on 1 Jan. 1918}), 1918 to 1927: the first decade--process of incorporation (Jinsen Shoyu was a brand brewed in Inchon, Korea) (1918 to 1925: from committees to functional departments {sales committee, research committee}, 1925 to 1927: holding company reorganization), the making of a rural zaibatsu (1925 on).

4. A loyal retainer's farewell (translation of a small, privately published eulogy for Mogi Shichirouemon VI, of the Kashiwa clan, first president of the Noda Shoyu Co, written in 1929): Shinshima's views on Japanese management, the master as seen by the apprentice (preface, introduction, brief biography, the president's principles and policies, the president as businessman, the president's everyday life, an impressive personality, a man of unquestionable character, ancestor worship, a model of love, on being what you are, accepting fate, the president's personality as revealed in a game of go, people rather than things, the president and wine {"A proverb says 'a drinker resembles a cake of tofu: in the beginning it's square and has shape, but it ends up shapeless, formless"}, life as a spiritual exercise, three great men of Kashiwa, is Ito crazy?, called by God, everything is one), editor's postscript.

5. Prelude to turmoil: The murder (of Kimura Junichiro), union activities up to the homicide, traditional wage labor (problems associated with the employment system, "internal contracting"), internal contracting and the Noda Shoyu Company, from homicide to the 1923 strike, reorganization of work design and structure (Jan. 1923).

6. The Noda Strikes: 1923 and 1927-28: Worker discontent rises, the strike of 1923 (negotiation and compromise, memoranda), the 1927-28 dispute (it lasted 218 days, work environment, transportation issues: prelude to the strike, 1927-28: an overview), conclusion: Japanese industrial relations at a crossroad.

7. Corporate maturation: The new paternalism (membership in the new paternalism), paternalism and patriotism, two features of the Japanese employment system, the prewar employment system at the Noda Shoyu Company, the end of an era, the limits of a family firm, a corporate coming of age.

8. Democratization and internationalization (In 1964 Noda Shoyu Co. was renamed Kikkoman Shoyu Co., and in 1980 the name was changed again to Kikkoman Corporation): The course of democratization, democratization of the family (the individual replaced the household / family as the locus of legal responsibility. Zaibatsu were dismembered), unionization--within and without the Noda factories (effect of unionization upon the company), company and community after 1962, antitrust and business strategy, background to marketing development), the growth of internationalization (effect of exogenous factors on Kikkoman, development of a new business strategy), internationalization (in June 1957 Kikkoman International Inc. was established), diversification (Manjo brand, Yomohoharu brand, Del Monte brand, Disney brand, Mann's brand, Higeta brand {marketed but not made by Kikkoman}, Ragu brand, Kikko brand, Monet brand). Conclusion. Appendix A. Ie [stem family lineage] and the shoyu industry. B. Scroll from Mogi Fusagoro with preface by Mogi Keizaburo on the founding of a Noda Shoyu brewery, 1872. C. Rules and Regulations of the Noda Shoyu Brewers' Association. D. Noda Shoyu Brewers' Association Income and Expenses, 1888-1918 (yen). E. Property held by Mogi-Takanashi families joining Noda Shoyu Co. Inventory taken November-December 1917. F. New wage and work proposal, Noda Shoyu Company, 1919. Notes. Glossary.

This book was very favorably reviewed by Masaru Udagawa in *Business History Review*, 1986, Spring, p. 169-70.

Concerning the Kikkoman brand (p. 59): In 1838, Mogi Saheji petitioned for and received registration for the

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brand name Kikkoman by the central government of Japan. Although this Mogi family has produced other shoyu brands, Kikkoman was the pride of the family, its private label. When written longhand in Japanese characters, the brand is composed of three characters: *ki*, for "tortoise," meaning good luck and longevity in Chinese and Japanese folklore; *ko* means "first-rate"; and *man* suggests "ten thousand" or forever. *Kikko* also means octagon, so the brand name is often written as an octagon with the character for "ten thousand" or *man* written inside the octagon.

"In 1872 and 1873, shortly after the Meiji Restoration of 1868, Mogi Saheiji entered Kikkoman in two world's fairs, the first held in Amsterdam and the second in Austria. Kikkoman was awarded a letter of commendation for excellence at the Austrian fair, and following this, Mogi Saheiji redoubled his efforts to promote the brand. In 1877 Kikkoman received a second-place medal at the All-Japan Industry Promotion Fair, and in 1879 it was registered in California as a legally recognized brand name, a move that predated the same legal protection in Japan by six years!"

Prof. Alfred D. Chandler, Jr. of the Harvard Business School worked closely with Fruin as he was researching and writing this book during nearly two years at Harvard. His scholarship, wisdom, friendship, and encouragement contributed greatly. Address: Prof. of History, California State Univ., Hayward.

6431. Fruin, W. Mark. 1983. The origins of shoyu (Document part). In: M. Fruin. 1983. Kikkoman: Company, Clan and Community. Cambridge, MA: Harvard University Press. xiv + 358 p. See p. 14-16. [4 ref]

• ***Summary:*** "The production of shoyu, one of the traditional products manufactured in the countryside [of Japan], grew enormously during the Tokugawa Period (1603-1867) because of a dramatic increase in its market, primarily urban residents. Whereas before the 17th century only 1 or 2 percent of the Japanese population lived in cities, by 1725 roughly 20 percent did so. The increased demand for shoyu was met primarily through an increase in capacity based on the entrance of new producers and the expansion of established brewers...

"The forerunner of modern shoyu appears to have been *miso tamari*, the liquid that forms during the process of fermenting rice or soybeans to make a soft, cheeselike product. The most popular and likely story of shoyu's origins relates how Kakushin, a Japanese Zen priest who had studied at the Kinzanji Temple in China, returned to Japan in the middle of the 13th century and began preparing a type of miso that became a well-known local specialty of Yuasa, the town near Kakushin's temple in the province of Kii (today's Wakayama prefecture). By the end of the 13th century the liquid had come to be called tamari and was sold commercially along with the miso. From such beginnings, a great variety of experimentation with the ingredients and methods of tamari fermentation was launched. Although tamari probably found favor initially in Buddhist monasteries as a condiment for a vegetarian diet, the popularity of tamari-type seasonings was related more to the prevalence of battlefields than of meditation halls during the period of civil wars that raged across Japan from the thirteenth to sixteenth centuries. Soldiers apparently found the versatility and transportability of the seasonings to their liking. Shoyu, which evolved from these tamari seasonings by adding wheat to the fermentation mash, appeared during the 16th century.

"The first soy sauce made in the area of modern Noda was brewed in about 1560 by Iida Ichirobei and respectfully presented as tribute taxes to the local warrior family in the following years. The Iida family, ostensibly fleeing the carnage and confusion of the Onin Wars (1467-1477) in the Home Provinces around Kyoto, arrived in the area of Noda early in the 16th century and by mid-century were engaged, among other pursuits, in the manufacture of tamari, a type of soy sauce that by now was made entirely from soy beans...

"Iida's first brew was closer to tamari than shoyu in consistency, taste, and aroma... In Eastern Japan the manufacture of a shoyu rather than tamari soy sauce like Iida's seems to have originated in or near the town of Choshi at the mouth of the Tone River on the northeastern tip of the Boso Peninsula, which guards the entrance to Tokyo Bay like an extended crab's claw. The Hamaguchi families of Choshi originated as branch households of the main Hamaguchi house of Hiromura village in Kii, not surprisingly the same province where Kinzanji miso and miso-tamari appeared and where the Hamaguchi of Hiromura were among the earliest commercial brewers of shoyu in Japan.

"The Hamaguchi transplants in Choshi, along with Tanaka Genba and his descendants, began the manufacture of shoyu early in the 17th century. Higeta shoyu was first produced here in 1616, Yamajo in 1630, and Yamasa in 1645.

"It was not until the latter half of the 17th century, however, that Noda followed Choshi in the manufacture of a soy sauce that was closer to shoyu than the thick, dark tamari was. In 1661 Takanashi Hyozaemon XIX began brewing shoyu in Noda; using a work force of twenty that included fifteen contract laborers, he produced 3,000 gallons his first year." Address: Prof. of History, California State Univ., Hayward.

6432. Fujimori, Ikuo. 1983. Daizu. Shizen kindaabukku [Soybeans. Natural children's book]. Tokyo: Fureberu-kan K.K. 30 p. Illust. by Akira SETO. 26 cm. [Jap]

• ***Summary:*** A children's book with superb color illustrations. Shows how to make natto, tofu, and soy sprouts at home. A large color photo (p. 10-11; 2-page spread), titled "All made from soybeans," shows kinako, miso, shoyu, soymilk, yuba in a bowl of clear soup, ganmodoki, abura-age, cooked whole soybeans (*nimamé*), okara sauteed with vegetables, dengaku (made with tofu and miso), and atsu-

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agé. Address: Daizu kairyo no dai-ichi ninsha [President, Takeya Miso Co., Nagano, Japan]

6433. Herrmann, Karl. 1983. Exotische Lebensmittel. Inhaltsstoffe und Verwendung [Exotic foods. Ingredients and uses]. Berlin, Heidelberg, & New York: Springer-Verlag. x + 175 p. Illust. 21 cm. See p. 111-19. Sojabohnenprodukte. [18 ref. Ger]

• ***Summary:*** The chapter on legumes contains brief introductions to soybeans, green vegetable soybeans (*unreife Sojabohnen*), soy sprouts (*Sojabohnensprossen, Sojabohnenkeimlinge*), soymilk (*Sojamilch*), tofu (*Tofu, Sojaquark*), soy sauce (*Sojasosse, Shoyu*), miso (*Miso, Sojapaste*), tempeh (*Tempeh*), fermented tofu (*Sufu, chinesischer Sojabohnen-Käse*), and natto (*Natto, fermentierte ganze Sojabohnen*). Tables shows the nutritional composition of tofu, deep-fried tofu pouches (*Aburage*), dried-frozen tofu (*Kori-Tofu*), yuba (*Yuba*), roasted soy flour (*Kinako*), and miso, plus defatted soybean meal (*entfettetes Sojabohnenmehl;* 51% protein), and soybean concentrate (*Sojabohnen Konzentrat;* 64.9% protein). Address: West Germany.

6434. Hesseltine, C.W. 1983. Microbiology of Oriental fermented foods. *Annual Review of Microbiology* 37:575-601. [50 ref]

• ***Summary:*** Contents: Introduction. Historical account. Importance of mixed cultures. Microorganisms used.

"The Japanese Food Agency, Ministry of Agriculture, Forestry, and Fisheries (1979), gave the following figures for 1979: miso, 567,776 tons; shoyu, 1,252,431 kiloliters, and natto, 158,000 tons. In Korea, 35% of the 442,803 metric tons of soybeans produced is fermented. Indonesia uses about 75,600 tons of soybeans in making tempeh.

"There is considerable ancient writing in Chinese publications about foods made by fermentation, but the first scientific reports are only about 100 years old. From 1878 until the beginning of World War I, there was an explosion of papers and reports dealing with fermented foods and drinks. In general, studies between 1881 and 1914 were devoted to the description of the product and the local name and to the isolation and description of the microorganisms associated with the fermentation. A number of organisms new to science were described and illustrated. Additional information was given on the action of the fungus on the substrate, suggested uses of the fungus in processes that could be exploited in European technology, and a description of the substrate preparation, food use, and native methods of food preparation.

"This period of research ended abruptly with the advent of World War I, as the exchange of students and cooperation between Japan and Germany ceased. Food fermentation studies resumed in the 1950s and today considerable interest exists. This renewed interest stems from the concern with nutrition, the great enthusiasm for vegetarian and natural foods, the search for less expensive, high-protein foods, the influence of foreign students studying in the West, the need to expand export markets, the need to add products to convenience foods to add zest and flavor, and the interest in the activities of microorganisms used in fermented foods." Address: NRRC, Peoria, Illinois.

6435. Huebscher-Liechti, Trudy. 1983. Soja Rezepte [Soya recipes]. Ebnat-Kappel, Switzerland: Morga. 36 p. Undated. 15 x 21 cm. [Ger]

• ***Summary:*** This is a recipe booklet describing how to use soy products produced by Morga. The inside front cover shows and/or describes the following Morga products: Sojamalt (candy bar), sojamalt (can), shoyu, Kleine gruene Sojabohnen (zum Selbstkeimen; Small green soybeans for sprouting), Soja Vollkorn (Pasta products), Vollsoja Flocken (Whole soybean flakes), Soja 50 Mehl (Defatted soybean meal, 50% protein), Gelbe Sojabohnen (Yellow soybeans), Soja-Oel (soy oil). Address: Switzerland.

6436. Jaffrey, Madhur. 1983. Eastern vegetarian cookery. London: Jonathan Cape. xii + 531 p. Illust. by Susan Gaber. Index. 24 cm.

• ***Summary:*** This is an expanded version of *Madhur Jaffrey's World-of-the-East vegetarian cookery* (1981, New York). The author of this creative book, a woman, was born in British India on 13 Aug. 1933. She first became known as an actress in India, but later found fame as a food writer. She has lived in America for more than 20 years. She presents 21 recipes for bean curd (tofu), 7 for tempeh, and some for yuba and miso. Soy-related recipes include: Aubergine slices with white miso (Japan, p. 4-5). Green beans with soy sauce (Japan, p. 20). Cabbage with miso (Japan, p. 29). Lotus root with soy-sauce dressing (Korea / Japan / Hong Kong, p. 46-47). Yellow pumpkin cooked with soy sauce (Japan, p. 74-75). Fresh soy beans, steamed (China, p. 76, with "fresh green soy beans in their pods"). Yien Koo's Spinach with fermented bean curd (China, p. 78-79). Pecel (Vegetable salad with spicy peanut sauce, plus tofu and tempeh; Indonesia, p. 87). Tempura (with tofu; Japan, p. 89-92). Soy bean sprouts (how to grow, p. 119). Soy-bean and mung-bean sprouts seasoned with sesame oil (Korea, p. 123-24). Tempeh. Fried tempeh. Fried, pre-seasoned tempeh. Sambal goreng tempeh kering (Sweet and sour tempeh). Tempeh cooked in coconut milk (Indonesia, p. 127-30). Thai fried rice (with red fermented tofu, p. 176).

Chapter 4 (p. 187-221), titled "Soy milk, bean curd, and wheat gluten," contains the following: Introduction to each ingredient. Soy milk (making your own at home). Making your own bean curd. Udofu (Yudofu, simmering bean curd with seasonings, Japan). Bean curd with watercress (Singapore Chinese). Bean curd with fresh coriander (Taiwan). Korean-style bean curd in a hot water bath. *Hiya-*

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yakko (Chilled bean curd, Japan). Bean curd with broccoli (Hong Kong). Cabbage cooked with bean curd (Japan). Bean curd with a deliciously spicy sauce (China). Carrots and beans with a bean-curd dressing (Japan). Bean curd, mushrooms, and peanuts in hoisin sauce (Chinese style). Sautéed bean curd (Korea). Tofu dengaku (Toasted bean curd with a miso topping, Japan). Fried bean-curd cubes (Most of East Asia). Soy-bean sprouts sautéed with fried bean curd (China). Fried bean curd with a sweet-and-sour sauce (China). Fried bean curd cakes with a mustard surprise (Japan). Inari-zushi ("Bags" of fried bean curd stuffed with sushi rice, Japan). Pressed bean curd with cabbage (China). Salad of pressed bean curd, mung-bean sprouts, and agar-agar (China). How to make fried and baked wheat-gluten balls. Stew of baked wheat gluten, potato, turnip, carrot, and cabbage rolls (Japan, p. 215). Fried wheat gluten with broccoli, carrot, and mushrooms (China). Fried wheat gluten and potato stew (Indian style). Shredded wheat gluten and Cabbage with fennel seeds (Indian style). Buddha's delight (A mixed Chinese stew, Hong Kong; with yuba, fried tofu, and fried wheat gluten balls).

Chawanmushi (Steamed savory custards, with tofu; Japan, p. 223-26). Omelette with bean curd (Japan, p. 230-31). Soy-sauce eggs (Thailand / China, p. 245). Paneer (Fresh cheese from cow's milk; India, p. 277-78). Hot or cold noodles with a soy-sauce dressing (China, p. 288). Noodles with a hot-and-sour bean sauce (China, p. 290). Vegetarian mee krob (Crisp noodles with pressed bean curd and eggs; Thailand, p. 296-97). Noodles with quail eggs, mushrooms, spinach, and yuba (Japan, p. 298-99). Hoppers (yeast pancakes; Sri Lanka, p. 315). Roti (Flat whole-wheat bread; India, p. 320). Delicious stock made with soy-bean sprouts (p. 340). Clear soup with mushrooms, bean curd skins [yuba], and spinach (Japan, p. 346). Clear soup with soft bean curd and Chinese leaves (p. 346). Miso soup with bean curd (Japan, p. 357). Miso soup with carrots and mushrooms (Japan, p. 358). Fried, munchable soy beans [soynuts] (China, p. 373). Potato and tempeh patties (Indonesia, p. 394). Dipping sauces (with soy sauce, p. 414-17, incl. kochu chang–Korean soy sauce). Kombu relish (with soy sauce; Japan, p. 435). Shoyu daikon (White radish pickled in soy sauce; Japan, p. 436). Ginger quick-pickled soy sauce (China, p. 436). Aomidaikon (Quick pickled small white radishes, with slightly sweet yellow miso; Japan, p. 438-39). Chinese-style jellied bean-curd sweetmeat with a peanut topping (Singapore, p. 462-63).

General information [like a glossary] (p. 481-506). See: Bean curd (regular, fried, fermented {*fu-ju, nam-ye, tao-hoo-yee*, red bean curd}, pressed {*doufu kan*}, pressed seasoned {*pai doufu kan*}, dried bean-curd skin or yuba). Beans (azuki, soy). Bean sauce (made from fermented soy beans). Chilli paste with soy bean (and garlic). Hoisin sauce. Miso. Nam yee (see Bean curd, fermented). Nigari. Soy beans, fresh. Soy-bean sprouts. Soy milk. Soy sauce (incl. Japanese, Chinese dark and light, Japanese usukuchi, Indonesian ketjap manis). Tao Hoo Yee (see Bean curd, fermented). Tempeh. Yuba. Sources (of ingredients, p. 507-10). Address: New York City, NY.

6437. Khader, Vijaya. 1983. Nutritional studies on fermented, germinated and baked soya bean preparations. *J. of Plant Foods* 5(1) 31-37. [17 ref.]

• ***Summary:*** Discusses fermented soya milk drink, soy sprouts, and a bread made from soy sprouts. "The nutritional quality and protein efficiency ratio (PER) of shoyu, a fermented soya bean product, fermented soya milk drink, germinated soya bean and germinated soya bean bread were studied. Nutritional quality was determined by chemical analysis and PER by animal feeding studies. Ash content was greatest in germinated soya beans. Trypsin inhibitor activity was markedly reduced on germination."

Table 2 shows trypsin units inhibited per mg of sample for various soy products on a dry weight basis: Raw soya bean 107.5, germinated soya bean 59.7, fermented shoyu 40.0, fermented soya milk 30.1, germinated soya bean bread 3.0, and modern bread 0.0.

Table 4 shows the PER of various soya bean preparations compared with casein and modern bread (fortified with amino acids and vitamins): Casein 2.46, germinated soya bean 1.55, modern bread 1.45, fermented soya milk 1.33, fermented soya sauce 1.06, germinated soya bread 0.99, and raw soya bean 0.78. Address: Dep. of Food & Nutrition, Vallabh Vidyanagar, Gujarat, and College of Home Science, Khairatabad, Hyderabad-500004, India.

6438. Konishi, Kiyoko. 1983. Japanese cooking for health and fitness. Tokyo: Gakken Co. Ltd. 120 p. Introduction by Susan F. Stirn (U.S. Embassy, Tokyo). Illust. (color photos). No index. 27 cm. Produced in conjunction with Kikkoman. [Eng]

• ***Summary:*** This attractive book, with many large color photos on glossy paper is crippled by lack of an index. Soy-related recipes include: Miso soups (p. 23, 25). Photos (p. 26) show small packets of Kikkoman's Instant Miso Soup. The photo of sukiyaki includes a bottle of Kikkoman Sukiyaki Sauce (which contains soy sauce); the Sukiyaki recipe includes "1 block tofu." A large photo (p. 39) includes a Kikkoman soy sauce dispenser. Grilled salmon with teriyaki sauce (the sauce contains sugar, sake or dry wine, mirin and soy sauce, p. 60). Tempura (the dipping sauce contains dashi, mirin, and soy sauce, p. 64). Salmon-tofu balls (with "1 block tofu," p. 69). Salad of tuna and wakame with soy sauce dressing (p. 72). Salad of short-necked clams with miso dressing (p. 73). Soybeans cooked with chicken wings (with "10 ounces {300 gm}, or about 2 cups dried soybeans," p. 85).

The section titled "Tofu and other dishes" (p. 89-97) includes Fresh tofu with condiments (*Hiyayakko*, p. 92;

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a photo, p. 90, shows a Kikkoman soy sauce dispenser) Sauteed tofu topped with shrimp and vegetables (p. 92) Tofu sauteed with ground chicken and vegetables (p. 93) Boiled vegetables with tofu dressing (p. 93). A glossary each (hard to use) covers fish and shellfish; vegetables, grains, seaweed varieties, and processed foods, seasonings, spices and seeds. One full-page photo (p. 102) shows processed foods, including Thin, deep-fried tofu (*abura-age*). Thick, deep-fried tofu (*atsu-age*). Bean curd (*tofu*). A second full-page photo (p. 103) shows seasonings, spices and seeds, including: Five forms of Kikkoman regular soy sauce (*shoyu*)–dispenser, 150 ml glass bottle, 250 ml plastic bottle, and low-salt (green label, 500 and 250 ml). Two varieties of soybean paste (*miso*). Bottles of Kikkoman soup base for noodles and tempura (*memmi* [*menmi*]), sukiyaki sauce, teriyaki sauce, extract of bonito (*katsuo-dashi*), and extract of kelp (*konbu-dashi*). Japanese horseradish (fresh *wasabi*). White sesame seeds, black sesame seeds, and sesame oil (*goma-abura*).

A full page (p. 106) titled "Japanese cooking and soy sauce" discusses Kikkoman soy sauce–a long history (it was first made in 1630). How does Kikkoman soy sauce gain its flavor, color, taste and aroma. Why is Kikkoman called the "liquid spice"? How to preserve the fine quality of Kikkoman. Address: Tokyo, Japan.

6439 Koshiyama, Ikunori. 1983. Storage proteins of soybean. In: W. Gottschalk and P. Hermann, eds. 1983. Seed Proteins: Biochemistry, Genetics, Nutritive Value. The Hague, Boston, and London: Martinus Nijhoff / Dr. W. Junk. viii + 531 p. See p. 427-50. [104 ref]
• ***Summary:*** Contents: Introduction. The composition of soybean storage proteins. Isolation and characterization of soybean storage protein components (globulins, ultracentrifugal components or fractions, subunit structure).

"The 11S globulin. Among the ultracentrifugal components, the initial effort of the isolation was done for the 11S component. The partial purification and characterization of the 11S component were first studied by Wolf and coworkers, and the first ultracentrifugal pure isolation was accomplished in 1965 [by Mitsuda, Kusano, and Hasegawa in Japan]... Immediately thereafter, the 7S protein was isolated in ultracentrifugally pure state [by Koshiyama]." Address: Central Research Lab., Kikkoman Shoyu Co., Noda-Shi, Chiba-Ken, Japan.

6440 Kushi, Michio; Jack, Alex. 1983. The cancer prevention diet: Michio Kushi's nutritional blueprint for the relief and prevention of disease. New York, NY: St. Martin's Press. xi + 460 p. Index. 22 cm. [32 ref]
• ***Summary:*** In this book, cancer preventing effects are attributed to miso (p. 50-51, 220-21, 304-06), and to soybeans (p. 51, 154-55, 293, 306). Natto, soymilk, tamari, tempeh, and tofu are also discussed.

Pages 50-51 note: "A ten-year study completed in 1981 by the National Cancer Center of Japan reported that people who ate miso soup daily were 33 percent less likely to contract stomach cancer than those who never ate miso soup. The study also found that miso was effective in preventing heart and liver diseases.

"Soybeans, a major source of protein in the macrobiotic diet, have been singled out as especially effective in reducing tumors. The active ingredient in soybeans is called a protease inhibitor. Laboratory tests show that soybeans and certain other beans and seeds containing this factor added to the diet prevent the development of breast, stomach, and skin tumors. Whole soybeans and soy products, including miso, tamari soy sauce, tofu, tempeh, and natto are staples of the macrobiotic diet... At St. Luke's Hospital in Nagasaki, a group of macrobiotic doctors and patients who had survived the atomic bombing on August 9, 1945 subsequently protected themselves against potentially lethal doses of radiation on a diet of brown rice, miso soup, sea vegetables, and sea salt."

Pages 220-21 contain a long excerpt from the account of Dr. Tatsuichiro Akizuki, director of internal medicine at St. Francis's Hospital in Nagasaki. He survived the world's first atomic bomb attack on 9 Aug. 1945. He believed that the main reason that neither he nor any of his co-workers at the hospital suffered or died from radiation was because of their diet, based on miso, brown rice, and sea vegetables.

Pages 293, and 304-06 summarize a number of publications which seem to show that consumption of soybeans, miso, or soymilk may prevent cancer. Pages 391-99 contain soyfoods recipes. Address: Boston, Massachusetts.

6441 Lewallen, Eleanor; Lewallen, John. 1983. Sea vegetable gourmet cookbook and forager's guide. Mendocino Sea Vegetable Co., P.O. Box 372, Navarro, CA 95463. 32 p. [4 ref]
Address: Navarro, California.

6442 Lin, Ann Chau-Fan. 1983. Chemical and sensory analysis of soy sauce. PhD thesis, University of Georgia. 125 p. Page 1400 in volume 44/05-B of Dissertation Abstracts International. *
Address: Univ. of Georgia.

6443 Migliaccio, Janice Cook. 1983. Follow Your Heart's vegetarian soup cookbook. Santa Barbara, California: Woodbridge Press. 128 p. Illust. 24 cm.
• ***Summary:*** Contains more than 50 delicious vegetarian soups developed by the author and other creative soupmakers at Follow Your Heart's famous natural foods restaurants–and served to more than 1 million customers. Follow Your Heart began in 1970, founded by Michael Besancon, as a small vegetarian lunch counter in the corner of a natural foods

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store in Canoga Park, California. In 1973, Follow Your Heart grew to include the store as well. In 1976 it expanded and moved to a much larger store a few blocks away. In Sept. 1982 it opened a second store (without a restaurant) in Santa Barbara, California. Today Follow Your Heart employs about 100 people, all vegetarians. The head store is at 21825 Sherman Way, Canoga Park, California 91303.

The seasonings tamari and Dr. Bronner's "Balanced Protein Seasoning" (p. 17-18) and the "special food items" Bakon Bits, miso, textured vegetable protein (TVP, p. 24-25) are described and used in a number of recipes. Soy-related recipes include: Miso vegetable soup (with miso and tofu, p. 97). Oriental vegetable soup (with tofu and tamari, p. 103-05). Sweet and Sour Oriental Vegetable (with tofu and tamari, p. 120-21). Address: Southern California.

6444. Otsuka, Shigeru. 1983. Encyclopedia of Japan: Soy sauce. San Francisco and Tokyo: Kodansha International. See vol. 7, p. 239. [Eng]

• ***Summary:*** The prototype of soy sauce was *hishio*, a pasty substance made by adding fish to salt; it is known to have been made in the Yayoi period (ca. 300 BC–ca. AD 330). Shoyu as we know it today was first made in Japan during the Muromachi period (1333-1568).

Koikuchi shoyu, the most widely used type, is fermented for a relatively long time and is relatively thick. Usukuchi shoyu is fermented for a shorter time. "The addition of amazake (a sweet rice wine) gives the latter a delicate color, flavor, and aroma, making it suitable for seasoning vegetables, white-fleshed fish, and clear soups."

There are also local varieties and variations of soy sauce. In Akita prefecture, *shottsuru* is made with fish; it is pale yellow and contains no soybeans. In the Nagoya area, light-colored shiro shoyu is made. Since aroma is most important, it is recommended that shoyu be added just before a dish is ready to be served. Also, once the container is opened the flavor and color of shoyu begin to deteriorate, so it should be used quickly. Address: Japan.

6445. Pearson, A.M. 1983. Soy proteins. *Developments in Food Proteins* 2:67-108. Chap. 2. (B.J.F. Hudson, ed. London and Englewood, New Jersey: Applied Science Publishers). [108 ref]

• ***Summary:*** Contents: Summary. Introduction. Soybean production (worldwide). Structure of the soybean. Chemical composition of the soybean. Soy proteins (solubility, characterization, transformation of the 7S and 11S globulins), biologically active components (enzymes, protease inhibitors, hemagglutinins, goitrogens, estrogens, phytates, oligosaccharides, other substances, allergenic compounds, lysinoalanine). Nutritional value of soy proteins: Protein, vitamins, minerals, energy, soy protein and atherosclerosis. Processing of the soybean. Extraction of oil, processing of soybean meal, edible soy flour and grit production, soy concentrates and isolates, spun soy proteins, textured soy products. Food uses of soy protein products: Cereal grain foods, dairy-type foods, snack foods and soups, meat, poultry and fish products. Oriental soy proteins (soy sauce, tofu). Address: Prof., Dep. of Food Science & Human Nutrition, Michigan State Univ., East Lansing, Michigan 48827.

6446. Rohé, Fred. 1983. The complete book of natural foods. Boulder, Colorado: Shambhala. xvi + 491 p. Illust. Index. 26 cm. [120 ref]

• ***Summary:*** This book is about "The New American Diet," which is an "omnivarian" diet including some fish and meat. Chapter 14, titled "New and future natural foods," contains a section titled "Soy foods" (p. 162-65) including tofu, tempeh, miso, soy sauce, soy milk, and other soy products (yuba and sufu). The work of William Shurtleff and Aoyagi, and their Soyfoods Center, is mentioned 2-3 times. Toward the back of the book are many soyfoods recipes.

The Prologue tells Rohe's life story and pioneering work with natural foods. In 1964, at the ripe old age of 27, he didn't feel good, didn't look good, and didn't like it–the result of years of smoking, drinking, eating bad food and "burning the candle at both ends." "It was time to do something about it. Adelle Davis became my guru and Thom Hamilton–the health foods store owner who sold me [her book] *Let's Eat Right to Keep Fit* became my mentor." Within a few months he was feeling much better. "So in 1965 I bought a small health food store in the Sunset district of San Francisco." It was named Sunset Health Foods." He discarded most of the dietetic foods on the shelves and replaced them with "old-fashioned groceries–basic stuff, traditional, simple, whole food... What was evolving was a modern version of an old-fashioned grocery store." He would provide information instead of hype, bulk retail foods sold out of barrels, crocks, jars, and drawers instead of packaged products, food instead of food supplements. He renamed the store "New Age Natural Foods."

"My career ended in 1973, after eight years. New Age Natural Foods had served as a model for what were called in those days 'hippie food stores.' It is credited as being the prototype natural foods store, as distinct from a health food store." Since 1973 Fred continued to work in the natural foods industry. In 1979, in his capacity as a consultant, he met the people of Sunburst Farms, who are his collaborators on this book. "Sunburst is the realization of a vision experienced in 1951 by its founder Norm Paulsen, while he was living as a student monk studying yoga at the Self-Realization Fellowship in Los Angeles. He moved to the Santa Barbara area, and while operating a construction business in 1968 established Sunburst Farms as a group of people living communally under spiritual principles on 160 acres of land in the mountains above Santa Barbara. The community-owned business, Sunburst Natural Foods, grew foods organically and flourished. In 1970 they opened a

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natural foods retail store in Santa Barbara. The community grew to include a second ranch and a total membership of over 200 people. "The business came to include manufacturing and wholesaling as well as retailing. There are now five Sunburst Farmer's Markets, two of them–in Goleta and Ventura–large, complete, natural foods supermarkets. Sunburst also owns and operates a natural foods restaurant, 'The Farmer and the Fisherman,' 35 miles north of Santa Barbara along the coastal highway." Then Norm envisioned a new direction and everything changed. They traded their 6,000 acre coastal ranch for land in northeastern Nevada totaling over 500,000 acres. "It could hardly have been a more radical change. But the soil is rich in minerals and there is abundant water from artesian wells. They are responding strongly to the challenge of, as they say, 'making the desert bloom as a rose.'"

"Appendix eight: Recommended reading list" (p. 470-78) includes a section titled "Soyfoods."

This book was Re-published in 1986 as *Nature's Kitchen* by Garden Way in Brattleboro, Vermont.

Interview with Fred Rohe. 1988. Nov. 3. Fred bought Sunset Health Foods in 1965 and transformed it into New Age Natural Foods at 1326 Ninth Ave. in San Francisco. Address: 4014 Lincoln Way, San Francisco, California 94122. Phone: 415-564-7024.

6447. Sams, Craig; Sams, Ann. 1983. The brown rice cookbook: A selection of delicious, wholesome recipes. New York and England: Thorsons Publishers Inc. 128 p. Illust. by Clive Birch. Index. 20 cm.
• ***Summary:*** Page 14 gives a description of soya sauce, shoyu, tamari, and miso. Soy-related recipes include: Miso soup with brown rice (p. 30). Miso sauce (p. 54). Tamari sauce (p. 55). Miso rice (p. 125). Craig Sams has also written a book titled *About Macrobiotics*.

"In the early 1960's many people in Europe and the U.S.A. were attracted to the ideas of Georges Ohsawa, a Japanese who had rediscovered the importance of dietary balance in traditional Eastern medicine." He taught macrobiotics, a dietary system in which brown rice plays a major role. "In the world of pop music the expression 'brown rice sandwiches' was used in association with the musicians who adopted wholefood diets." Then in the mid-1970s came the bran boom with an upsurge of interest in sources of dietary fibre, including brown rice.

Why did brown rice ever lose its once pre-eminent position to white rice? "The answer lies partly in the fact that while white rice will keep almost indefinitely, brown rice should be fresh. It attracts insects once it has been husked, so it needs more care in storage and more attention to efficient distribution." White rice also cooks more quickly.

"Pythagoras would not let his students eat beans because he believed they inhibited the higher intellectual processes. However, it is likely that this was because the prevalent bean of classical Greece was the fava bean–harmless in itself but with a hard brown skin which, if regularly eaten, can lead to favism, symptoms of which are deterioration of vision and mental faculties."

6448. Sams, Craig. 1983. Macrobiotica: una forma de alimentarse [About macrobiotics: The way of eating]. Madrid, Spain: EDAF. 123 p. 18 cm. [Spa]*
• ***Summary:*** Translated from the English by Rafael Lassaletta. Also published the same year in Mexico by the same publisher (EDAF Mexicana) with the same number of pages.

6449. Steinkraus, K.H. 1983. Industrial applications of Oriental fungal fermentations. In: J.E. Smith, D.R. Berry, and B. Kristiansen, eds. 1983. The Filamentous Fungi. 4 vols. Fungal Technology. London: Edward Arnold. See p. 171-89. Chap. 7. Illust. Index. 24 cm. [35 ref]
• ***Summary:*** Contents: Introduction. The koji principle. Soy sauce / Japanese shoyu as indigenous fermentations. Japanese miso. Japanese saké. Indonesian tempe / oncom–fungal fermented traditional meat analogues. Indonesian tapé ketan and tapé ketella fermentations. Conclusions. Address: New York State Agric. Exp. Station, Geneva, NY 14456.

6450. Steinkraus, Keith H. 1983. Fermented foods, feeds and beverages. *Biotechnology Advances* 1(1) 31-46. [70* ref]
• ***Summary:*** Contents: Abstract. Indigenous fermented foods / beverages: Indian idli, dawadawa (daddawa), soy sauce (Thailand), Indonesian tape, fish sauces, Japanese koji, Nigerian millet beer (oyokpo), Kenyan uji. Microbial / single cell protein (SCP): Mushrooms.

Note: Dawadawa made from soybeans is not mentioned. Address: New York State Agric. Exp. Station, Geneva, NY 14456.

6451. Steinkraus, K.H. 1983. Traditional food fermentations as industrial resources. *Acta Biotechnologica* 3(1):3-12. First published in 1982 in Saono et al., eds. Traditional Food Fermentations as Industrial Resources in the ASCA Countries. The Indonesian Institute of Sciences (LIPI) Jakarta. p. 3-16. [31 ref. Eng. ger]
• ***Summary:*** Contents: Summary. Introduction. Production of meat-like flavors from vegetable proteins. Soy sauce (Japanese shoyu) and miso fermentations. Fish / shrimp sauces and pastes. The koji principle. Meat substitutes (analogues). Indonesian tempeh kedele. Traditional tempeh fermentation. Industrial production of tempeh. A process for raising the protein content of high starch substrates. Leavened bread-like foods without the use of wheat or rye. Coconut protein as an industrial resource. References. Address: New York State Agric. Exp. Station, P.O. Box 462, Geneva, New York 14456.

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6452 Tims, William; Allanson, Robert. 1983. Macrobiotic dietary suggestions. Mountain Ark Publishing Co., 109 S East Street, Fayetteville, AR 72701. 38 p. 22 cm.
• ***Summary:*** Under "Bean Products," tofu, tempeh, and natto are mentioned. "Fermented foods make wonderful seasonings for soups and strengthen the digestive function. Those used in making soups include: Miso, shoyu, tempeh, sauerkraut." There are recipes for Boston baked soybeans, and Boiled tofu. Address: Fayetteville, Arkansas.

6453 Wang, H.L. 1983. Oriental soybean foods. In: Ivan A. Wolff, ed. 1983. CRC Handbook of Processing and Utilization in Agriculture. Vol. II. Part 2. Plant Products. Boca Raton, FL: CRC Press, Inc. See p. 91-106. Illust. Index. 26 cm. CRC Series in Agriculture. [10 ref]
• ***Summary:*** Contents: Introduction. Traditional nonfermented soybean foods. Fermented soybean foods. Tables. (1) Oriental nonfermented soybean foods. Fresh green soybeans, soybean sprouts, soybean milk, protein-lipid film [yuba], soybean curd [tofu], soybean flour (local names: Tou-fen, kinako). (2A) Composition of some indigenous soybean foods, 100 g, edible portion. (2B) Composition of some indigenous soybean foods, 100 g, edible portion. (3) Essential amino acid content of some indigenous soybean foods. (4) Oriental fermented soybean foods. (5) Characteristics of rice miso in relation to fermentation condition. (6) Average composition of soy sauce made from whole soybeans and defatted soybean meal. (7) Composition of various types of miso.

Figures. (1) Flow sheet for the preparation of soybean milk and its related products. (2) Flow sheet for manufacture of soy sauce. (3) Flow sheet for manufacture of miso. (4) Flow sheet for making hamanatto. (5) Flow sheet for preparation of sufu. (6) Flow sheet for tempeh fermentation. (7) Flow sheet for preparation of natto.

Note: Vol. 1 is "Animal products." Vol. 2 is "Plant products," Part A. Vol. 3 is "Plant products," Part B. Address: NRRC, Peoria, Illinois.

6454 Westbrae Natural Foods. 1983. Traditional sushi, the Westbrae way? (Leaflet). 4240 Hollis St., Emeryville, CA 94608. 1 p. Single sided. 28 cm.
• ***Summary:*** The top half of this glossy color leaflet shows a Japanese-style plate of nori-wrapped sushi (made with brown rice), chopsticks, and a 5-oz jar of Westbrae Natural Wheat-Free Tamari. The text below begins: "Now you can make traditional sushi right at home. Westbrae makes it easy by providing three essential ingredients..." Westbrae Sushi Nori, Westbrae Brown Rice Vinegar, and Westbrae Traditional Tamari. Address: Emeryville, California.

6455 World of God, Inc. 1983. The cookbook for people who love animals. 2nd ed. Umatilla, Florida. 192 p. Edited by Butterflies. Illust. and cover design by Flowers. No index. 26 cm.
• ***Summary:*** This vegan cookbook is only slightly different from the 1981 edition by the same title, but is 16 pages longer. Recipes with soyfood terms in the title are the same and on the same pages as those in the 1981 edition, except the following recipes added at the back of the book: Avocado-tofu dinner (p. 166). Stuffed avocado with tofu (p. 178). Spaghetti and tofu. Baked macaroni and tofu (p. 180). Tofu omelette (p. 181). Tofu cutlets (p. 182).

The book is interspersed with most of the same nice quotes about vegetarianism, veganism, and animal rights from great thinkers found in the 1981 edition. Address: P O Box 1418, Umatilla, Forida 32784.

6456 Yeo Hiap Seng Ltd. 1983. Yeo's quality foods and beverages. Singapore. 25 p. [Eng]
• ***Summary:*** "Yeo Hiap Seng's heritage dates back to 1900 in China. The Company started operations in Singapore in 1935, as a manufacturer of fine soya sauces." A photo shows the store front at one of its early locations. Many color photos show the company's products, which include the following soyfood products: Soy sprouts, salted black beans, salted yellow beans, hoi sin sauce, crushed yellow bean sauce, black bean sauce, salted soya beans, soy sauces (light or dark), and Yeo's soya bean drink (canned). Most product names are given in English, French, and Chinese. The company has offices (whose address and phone are given) in Singapore, Malaysia, Hong Kong, United Kingdom, USA (San Jose, California), and Canada (Richmond, BC).



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Photos from this booklet show: (1) One of the company's early offices–the date and place are not given. (2) Yeo's range of Oriental sauces. (3) Yeo's Eastern condiments.

Photos (by William Shurtleff) show: (4) The company's soy sauce products. (5) Other related soy products. Address: Singapore.

6457 **Product Name:** Pearl River Bridge Superior Soy.
Manufacturer's Name: Guangzhou Canned Food Industrial Corp.
Manufacturer's Address: Siheng Lu, Yuancun 510655, Guangdong, China.
Date of Introduction: 1983?
Wt/Vol., Packaging, Price: 750 ml bottle.
How Stored: Shelf stable.
New Product–Documentation: Ad. 1983? "Soy, Superior Sauce. Superior Soy." A color photo shows the bottle and label. Talk with Chinese Consulate General in San Francisco. 1991 Sept. 5. Two companies make this product. The other is Guangzhou Foodstuffs Corp., 94 Renmin Nan Lu, Guangzhou.

6458 Isobe, Shosaku. 1983? Konpura shôyu [Konpura shoyu (Leaflet)]. In: Shokuhin Zakki, Mukashi to Ima. No. 19. Undated. [1 ref. Jap]

6459 Kikkoman Corporation. 1983? [All-purpose seasoning. Since 1630. Kikkoman naturally brewed soy sauce. Brewed by Kikkoman Foods, Inc. in the U.S.A. (Brochure)]. 23 p. Undated. No place of publication given. [Jap]
• ***Summary:*** This color booklet gives an artistic introduction to Kikkoman's many activities and products (both soy and non soy, such as tomato sauces, wines, etc.) Only the rear cover is in English.

6460 **Product Name:** MacSoy Soya Sauce.
Manufacturer's Name: MacSoy Lanka Pvt. Ltd. (Marketer). Made in Sri Lanka by Mrs. Liu of Eastern Food



Products.
Manufacturer's Address: 51 Layards Rd., Colombo 5, Sri Lanka
Date of Introduction: 1983?
New Product–Documentation: Form filled out by Jane Gleason. On 25 March 1988 she talked with Mr. Davis Philip, the director. "Soy sauce and soya noodles are sold to all income earners." Label: 1983? 3 by 3.75 by 1.5 inch box. Red, brown, orange, and white. "Free of caffeine. A perfect health drink for the whole family. Mac Soy Soya Cafe is a delicious drink. It contains High Protein, Vitamins and Minerals too. Directions for use: Add half a teaspoonful to a cup of boiling water. Add milk and sugar to taste. Ideal as iced cafe. May also be taken as black Cafe. Take regularly for good health. Soya Cafe make a perfect night cap–relieves fatigue and induces sound sleep."

6461 Westbrae Natural Foods. 1984. Distributor catalog No. 1: Jan. 1984. Emeryville, California: Westbrae. 19 p. 22 by 28 cm.
• ***Summary:*** On the cover, the lettering is in black on a tan background. Page 18: Glossary for new Japanese items, incl. Seaweed chips with miso, Tamari veggie chips, Vegetable chips with miso, Shrimp chips with miso, Sesame salt "gomashio," Umeboshi vinegar, Umeboshi paste, Tororo kombu, Miso ramen, 5-spice ramen (with powdered soy sauce and miso), Curry ramen (with powdered soy sauce and miso), Agar bar, Miso drops (candy, sweetened with natural rice malt).

Page 19: Sunburst product glossary, incl. Peanut butter domes with honey (with soybean oil, soy lecithin), Herb & cheese dressing (with soybean oil and whole soybeans), Honey mustard dressing (with refined soybean oil), Cinnamon apple granola (with soy oil), etc.

Note: The Sunburst community, which began as an intentional spiritual community in the late 1960s, founded and led by Norman Paulsen, was in its prime [in the 1980s] one of the largest shippers of organic products in the United States. Founded near Santa Barbara, California, the Sunburst members believed in a holistic lifestyle based on meditation, living from the land, organic farming, and–to some degree–chastity (Source: Wikipedia, Dec. 2008). Address: Office: 4240 Hollis St., Emeryville, California 94608, Mailing: P.O.

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Box 8711, Emeryville, CA 94662. Phone: (415) 658-7518 (orders)

6462. *Rocky Mountain Jiho.*1984. Maboroshi no Kikkôman Denver kôjô [The phantom Kikkoman soy sauce plant in Denver]. Jan. 25. p. 4; Feb. 1. [Jap, eng+]
• ***Summary:*** Some people believe that Shinzaburo Mogi, of Kikkoman, founded an early shoyu plant in Denver. The article guesses that Shinzaburo Mogi wasn't living in Denver all the time. It takes a full year to make naturally fermented shoyu. Therefore he might have delegated the responsibility to another person named Naojiro Tatekawa, who lived in Denver and had a shop named Tatekawa Shoten, which opened in February 1909 (Meiji 42). Tatekawa came from a family of shoyu producers in Hiroshima, Japan. He visited Denver in the summer of 1907 to prepare for opening Tatekawa Shoten. The rumor that Mogi opened a shoyu factory in 1907 (Meiji 40) matches that year. Maybe they knew each other and made a deal. We may never know for sure. In 1897 Shinzaburo Mogi established Yamato Yunyu Kaisha, an import company, in Chicago. He was president. The *Nichibei Nenkan* for 1914 gives the address of Yamato Shokai as 36 S. State St., Chicago. Phone 1863.

Note that there is no listing for Mr. Tatekawa in the Denver (Colorado) City Directories from 1906-1910. Address: P.O. Box 1073, Denver, Colorado 80202. Phone: 295-1848.

6463. Super Center. 1984. Super Center savings (Ad). *Hartford Courant* (*Connecticut*). Jan. 29. p. O12-O13.
• ***Summary:*** The 1st column of the 1st page of this 2-page display ad shows many La Choy canned products, including Chow Mein Noodles, Beef Chow Mein, Chicken Chow Mein, Bamboo Shoots, Bean Sprouts, Fried Rice, Fancy Mixed Chinese Vegetables.

Also shown: La Choy Soy Sauce, and Kikkoman Soy Sauce (10 oz. for 89¢), each in a bottle. Also advertised: La Choy Dinners ($2.29 each for a 42 oz. bi-pack) incl. Chicken Chow Mein, Beef Chow Mein, Shrimp Chow Mein, Beef-Pepper Oriental Chow Mein.

6464. **Product Name:** Homestyle Tempeh Burgers (Sesame Wheat Tempeh Burger)
Manufacturer's Name: 21st Century Foods Inc.
Manufacturer's Address: 30 Germania St., Jamaica Plain, MA 01230.
Date of Introduction: 1984. January.
Ingredients: Organic soy tempeh, San-J tamari, herbs, spices.
Wt/Vol., Packaging, Price: 7 oz. 2 round burger patties, vacuum packed.
How Stored: Refrigerated, 30 day shelf life.
New Product–Documentation: Leaflet from Norbert C. Belanger, General Manager. 1984. Jan. 16. The company now makes and sells six tempeh products, including Tempeh Burger. Label. Undated. 3 inch diameter. Reddish brown on yellow. Leaflet. 1983. "Tempeh with a Difference."

6465. Chico-San, Inc. 1984. Why does Chico-San bother to import soyfoods? (Ad). *Natural Foods Merchandiser.* Jan. p. 9 (unnumbered) of 12-page color advertising insert. Soyfoods Pavilion '84. Marketing soyfoods in America.
• ***Summary:*** A 4½ by 7½ inch black-and-white ad. Because the quality of fermented soyfoods made in Japan is considered better, Chico-San's miso-shoyu master is Mr. Tomio Kitani. He uses Japanese soybeans and sea salt rich in minerals. His Nama Shoyu, which takes 4 years to make, is the only unpasteurized soy sauce available in America. It is also the only shoyu with a salt content lowered by techniques not involving extraction or additives. "Taste is the difference."

This ad also appeared in *Macromuse* (1984, Spring, p. 35). Address: Chico, California 95926.

6466. Erewhon, Inc. 1984. Made in Japan 400 years ago (Ad). *Natural Foods Merchandiser.* Jan. p. 3 (unnumbered) of 12-page color advertising insert. Soyfoods Pavilion '84. Marketing soyfoods in America.
• ***Summary:*** This 8½ by 11 inch ad begins: "To the ancient Japanese shoyu masters, making the finest possible soy sauce was more than just a matter of pride. It was a matter of necessity. Because, in medieval Japan, no one served inferior shoyu to a shogun twice." "Our great taste comes naturally." The full-page color photo shows the tips of two chopsticks on the edge of a small bowl containing shoyu for dipping sauce. Above that are sliced fish and orange fish eggs. In the lower left a bottled labeled (confusingly) "Erewhon Shoyu Tamari." Note: Shoyu and tamari are different types of soy sauce.

6467. *Food Engineering.*1984. American shoyu. Like pizza, tacos, kielbasa and Danish. 56(1):47. Jan.

6468. Hatch Natural Products. 1984. Catalog and price list. 746 Germanna Highway, Culpepper, VA 22701. 76 p. 28 cm.
• ***Summary:*** This company distributes natural foods from 48 manufacturers including Arrowhead Mills, Chico-San Inc., Eden Foods Inc., Edward and Sons Trading Co., Fantastic Foods, Great Eastern Sun, Kingdom Foods, Living Farms, Love Natural Foods, Mitoku (Great Eastern Sun), Virginia Soyworks, and Westbrae Natural. The company was founded by Mildred and Ira Hatch. Its history is given on page 1. The ingredients in each product are listed. They carry soybeans (p. 16-17), dinner mixes with TVP (p. 31-32), imported Japanese miso and soy sauce (p. 37-43), soybean oil (from Arrowhead Mills p. 60-61).

Concerning so-called "cold pressed" oils the catalog states: "The words 'cold pressed' on many oil labels is

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generally thought to mean that they contain natural oils processed by the low temperature and pressure method discussed above. But this is totally mistaken. The words 'cold pressed' are absolutely meaningless when used as an indication of quality. They have no bearing on how the oil was extracted or at what temperature it was removed. They appear only as a marketing aid which just confuses and misleads the consumer and may be found on oils that are chemically extracted, bleached, and deodorized. Reputable suppliers refuse to use the term on their labels.

"Oils are extracted by two methods: pressure and chemical solvents. Pressing is normally done by what is called an expeller press. Temperatures produced seldom fall below the 140° to 160°F range. Still, the oil produced at these temperatures loses little of its flavor and nutrition."

Concerning soybean oil: "Soy oil's flavor is the strongest of all the oils, and many people find the unrefined product unbearable. Its flavor is best described as fishy or paintly and lacks stability." Address: Culpepper, Virginia. Phone: (703) 825-4302.

6469. Ikeda, Kisha. 1984. Neage shoten ni ugoku kotoshi no shôyu gyôkai [Shoyu industry shaken by price increases]. *Sake-rui Shokuhin Tokei Geppo (Monthly Statistics on Alcohol and Foods)*. Jan. p. 17-24. [Jap]

6470. San-J International, Inc. 1984. Some soy sauces are called tamari. But they're not. San-J is the real tamari (Ad). *Natural Foods Merchandiser*. Jan. p. 7 (unnumbered) of 12-page color advertising insert: Soyfoods Pavilion '84: Marketing soyfoods in America.
• ***Summary:*** A full-page color ad. Four photos show bottles of San-J Tamari, and San-J Tamari and Teriyaki Crackers (wheat free and baked; made with whole brown rice). This ad also appeared the summer issue (p. 7) of *Soyfoods* magazine. Address: Colonial Heights, Virginia 23834.

6471. **Product Name:** Tofu Missing Egg Salad.
Manufacturer's Name: Soycraft.
Manufacturer's Address: P.O. Box 420, Woollahra (near Sydney), NSW 2025, Australia. Phone: (02) 32 0716.
Date of Introduction: 1984, January.
Ingredients: Tofu, fresh vegetables, herbs and spices, shoyu, vegetable oil, mustard, apple cider vinegar, honey, sea salt.
Wt/Vol., Packaging, Price: 200 gm.
New Product–Documentation: Letter and Label sent by Ralph and Volli Henderson, founders of Soycraft. 1984, Jan. 17. The letter is on Klinica letterhead. "We have been so busy that nobody has yet staggered to the printer to collect Soycraft letterheads. I think Volli and her small crew sometimes wish it had never happened . .

"We make tofu, and then use all of our tofu to make secondary products. At the present time we don't think there is market support for tofu, which would justify another firm in that line of business, it will be a year or two before Australians may wean away from their meat based diets. The local Chinese community makes and uses a lot of tofu, but it is really only the health food shops (about 230 in Sydney) that sell tofu. About 30% of these health food shops are still vitamin supply people and unaware of what it is all about anyway. Our tofu is made via the cauldron method–laborious, tedious, etc. We will consider buying the Takai W30A system towards the end of this year."

Label. 2.5 by 3 inches. Green on white. "All natural ingredients–No preservatives."

6472. Soyfoods Assoc. of America. 1984. Soyfoods Pavilion '84. Marketing soyfoods in America (Ad). *Natural Foods Merchandiser*. Jan. 12-page color advertising insert.
• ***Summary:*** Contains large color ads by Legume Inc. (6 frozen tofu entrees), Erewhon, Inc. (shoyu tamari), Vitasoy (USA), Inc. (natural and coconut soy drink, sweetened with maple syrup), San-J International, Inc. (tamari, teriyaki sauce, tamari crackers, teriyaki crackers), Tofu-Time, Inc. (Tofutti "nondairy tofu frozen dessert"), Eden Foods, Inc. (Edensoy soy beverage in plain and carob flavors, retort pouch), and Westbrae Natural Foods (natural ramen in 100% whole-wheat, buckwheat, brown rice, mushroom, seaweed, miso, 5-spice, and curry flavors).

Contains black-and-white ads by Westbrae Natural Foods (shoyu, tamari, and soy sauce), Chico-San, Inc. (imported miso and soysauce), Fantastic Foods, Inc. (tofu burger mix), Penguino's, Inc. (dairy-free frozen dessert), Nasoya Foods (Firm Style Tofu, Soft Style Tofu, Marinated & Broiled Tofu, Tofu Burgers, Tempeh, Tempeh Burgers, Tofu Vegi-Dip [Creamy Dill, Soyannaise, Bleu Cheese, Onion, Creamy Garlic], Corn Cakes [Plain with Bran, Blueberry, Cranberry]; Non-soy products in the "Oriental Cuisine" line include Fresh Noodles, Wonton Skins, Egg Roll Wrappers), Hinode Tofu Co. and Azumaya, Inc. ("The #1 and #2 tofu producers in America").

The only article, whose author is not given, is titled "Soyfoods Pavilion debuts at Natural Foods Expo '84." On the front cover of the insert is a list of members of the Soyfoods Association of America (formed in Feb. 1983) that participated in Natural Foods Expo '84. In addition to the advertisers mentioned above, they include: Farm Foods, Laughing Moon Food Co., Paradise Distributors, Inc., Soyfoods Magazine, Tempeh Works, Inc., and White Wave, Inc. Address: 526 East 20th St., New York, NY 10009.

6473. **Product Name:** Furama Tofu Noodles [Spiced, or Plain].
Manufacturer's Name: Soyfoods of America.
Manufacturer's Address: 1091 E. Hamilton Rd., Duarte, CA 91010. Phone: 213-681-5393.
Date of Introduction: 1984, January.

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Ingredients: Spiced: Soybeans, water, soy sauce, spices, calcium sulfate.
Wt/Vol., Packaging, Price: 6 oz poly bag.
How Stored: Refrigerated.
New Product–Documentation: Ad in Soyfoods. 1984. Summer. p. 3. "In 8 oz poly bag with 2-week shelf life refrigerated or 6-month shelf life frozen. Available vacuum packed with 6-week shelf life." Talk with Ken Lee. 1988. Aug. 29. The spiced product was launched in Jan. 1984. But Mrs. Lee recalls the two dates to be Jan. 1985 and July 1985. Labels. 1985. 5.5 by 2.5 inches. Paper.

6474. **Product Name:** Furama Spiced Tofu Loaf.
Manufacturer's Name: Soyfoods of America.
Manufacturer's Address: 1091 E. Hamilton Rd., Duarte, CA 91010. Phone: 213-681-5393.
Date of Introduction: 1984. January.
Ingredients: Soybeans, water, soy sauce, spices, calcium sulfate.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Ad in Soyfoods. 1984. Summer. p. 3. "In 8 oz poly bag with 2 week refrigerated shelf life. Soon available vacuum packed with 6-week shelf life." Talk with Ken Lee. 1988. Aug. 29. This product was launched in Jan. 1984. Mrs. Lee recalls the date to be Jan. 1985. Label. 5.5 by 2 inches. Black on orange paper.

6475. **Product Name:** Leandro's Meatless Lasagna (Tempeh Blended with Four Cheeses in Whole Wheat Pasta).
Manufacturer's Name: Soyfoods Unlimited, Inc.
Manufacturer's Address: 14670 Doolittle Dr., San Leandro, CA 94577.
Date of Introduction: 1984. January.
Ingredients: Sauce: Crushed tomatoes, tempeh, whole wheat lasagna noodles, onion, water, vegetable oil, white wine, honey, garlic soy sauce, black pepper, basil, oregano. Filling: Ricotta cheese, mozzarella cheese, Romano cheese, Parmesan cheese, egg white, parsley flakes, nutmeg.
Wt/Vol., Packaging, Price: 10 oz vacuum pack.
How Stored: Frozen.
New Product–Documentation: Label. 1984, undated. 2.5 by 4.5 inches. Red, green, and white. "Old fashioned goodness. Single serving." Poster. Two color, with ingredients. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Spot in Soyfoods. 1984. Summer. p. 43-44. Spot in Whole Foods. 1984. May. p. 63. Press release. 1984. 2 p. with photo. Shurtleff & Aoyagi. 1985. History of Tempeh. p. 54.

Letter (e-mail) from Valerie Robertson. 2011. Sept. 21. We had Alioto's restaurant in San Francisco make our tempeh lasagna. We took them tempeh that had been ground (in a meat mixer) and seasoned. They put it all together (with whole wheat lasagna noodles) and froze it. It was good.

6476. **Product Name:** Tempeh Burgers [Plain, or Bar-B-Q].
Manufacturer's Name: Turtle Island Soy Dairy.
Manufacturer's Address: 2017 21st Ave., Forest Grove, OR 97116. Phone: 509-493-2004.
Date of Introduction: 1984. January.
Ingredients: Organic soybeans, well water, soy sauce, herbs, spices, apple cider vinegar, rhizopus oligosporus.
Wt/Vol., Packaging, Price: 6 oz package. Retails for $1.79 (Plain), $1.89 (Bar-B-Q).
How Stored: Frozen or refrigerated.
New Product–Documentation: Interview with Seth Tibbott of Turtle Island. 1984. Jan. 17. The burgers are sold vacuum packed.

Soya International. 1990. April/June. p. 24. Contact: Seth Tibbott. Address is now P.O. Box 218, Husum, Washington 98623.

Leaflet. 1992. "Discover Turtle Island." Turtle Island makes 3 types of burgers, with have the registered trademark "Big T Burgers." They are marinated, not fried, and vacuum packed in resealable bags, two patties per pack. "Eat one/save one" and still have a handy "Ziploc" bag when all is done. Sold frozen or refrigerated–delicious, ready to eat. Tempeh Burgers are made from the company's own soy tempeh, simmered to perfection in their own herb soy sauce blend. Great as a quick meal. BarBQ Burgers are cooked through and through with Turtle Island's own special barbecue sauce to make them jut right for your grill or microwave.

6477. Westbrae Natural. 1984. Soy sauce made complicated (Ad). *Natural Foods Merchandiser.* Jan. p. 5 (unnumbered) of 12-page color advertising insert. Soyfoods Pavilion '84. Marketing soyfoods in America.
• ***Summary:*** This 8½ by 11 inch black-and-white ad begins: "Many people call traditional soy sauce 'tamari.' This labeling is illegal in Japan, where this soy sauce can only be called by its correct name, 'shoyu.' Some natural food companies avoid the Japanese law by importing *shoyu* and relabeling it as *tamari* in the U.S., where no soy sauce standards exist as yet." A photo shows 10 Westbrae soy sauce products in various sizes, including: Mild soy sauce. Traditional tamari. Tamari. Traditional shoyu. Organic shoyu. Visit booths 652-656 in the Soyfoods Pavilion.

6478. *Food Chemical News.* 1984. Firm [Kikkoman Foods] objects to casein, protein hydrolysates GRAS exclusion of soy sauce. 25(49):36. Feb. 13. [3 ref.]

6479. Steinkraus, Keith H. 1984. Re: Soy sauce in Southeast Asia. Letter to Richard Leviton at Soyfoods Center. Feb. 14. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "While fish sauces and pastes are predominant in Burma, South Vietnam, Laos, and Cambodia, you will

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still find soy sauces being manufactured and consumed on a small scale in the Chinese communities." Address: New York State Agric. Exp. Station, Dep. of Food Science & Technology, P.O. Box 462, Geneva, NY 14456-0462. Phone: 315-787-2276

6480. Boyle, J.H. 1984. Humble soy sauce and 300 years of business skill. Review of "Kikkoman: Company, Clan and Community" by Mark Fruin. *Asian Wall Street Journal*, Feb 22. [1 ref. Eng]

• ***Summary:*** "'Kikkoman' is a model of business history writing. The Japanese knack for accommodating both tradition and modernity in their institutions is well known. This book is an engaging case study of that talent."

Kikkoman is the first and only traditional Japanese business to succeed internationally–not bad for an enterprise launched 322 years ago in Noda by two farmer-merchants with a few contract laborers. "Kikkoman" has been the corporation's name for only 20 years. Before that it was a brand name for the leading brand of shoyu made by the company–named Noda Shoyu K.K. Interestingly, this brand was first registered in California in 1879, then six years later, in 1885, it was registered in Japan. Mr. Fruin believes that Keizaburo Mogi, president of Kikkoman from 1962 to 1974, deserves much of the credit for "developing the international outlook and product diversification that has put the company in such a strong market position in recent years."

Japanese custom does not require that a family business be passed on to an unqualified eldest son. For centuries adoption has been condoned to substitute a promising heir for a natural son lacking in ability. Sons are usually adopted after they are old enough to have demonstrated their talent. Since 1962, two of Kikkoman's three presidents have been adopted sons. Both had degrees from prestigious universities and were adopted only after completing their academic training. The book shows that just as family and form are intertwined, so are the company and its surrounding community–Noda. Address: Prof. Asian History, California State Univ., Chico, CA.

6481. Kotzsch, Ronald E. 1984. Natural foods pioneer Erewhon: An industry leader's tough fight to survive. *East West Journal*, Feb. p. 24-29

• ***Summary:*** A very well written and accurate history of Erewhon from its founding in 1966, to its declaration of Chapter 11 bankruptcy in the fall of 1981. The company was able to clear its $3 million indebtedness by paying 11 cents for each dollar owed. In early 1982 "the company was sold by the Kushis to Ron Rossetti, owner of the Nature Food Centres retail chain. Later that year [in July] Rossetti accepted as financial partners Charles T. Verde and Cynthia C. Davis, who became respectively president and vice president of marketing. Since then the operation has been totally in their hands. Erewhon has a production facility at Natick, Massachusetts." A photo shows Davis and Verde with 5 Erewhon products.

"The story of Erewhon is a dramatic one. Founded in Boston in 1966 on the thinnest of shoestrings it soon began to grow at a phenomenal rate. By the mid '70s it was the most powerful force in the burgeoning natural foods industry, respected as a leader and innovator, with annual sales of over ten million dollars. Several troubled years culminated, however, in 1981 with a petition for protection under the Chapter Eleven 'bankruptcy' statute. Only a change in ownership and management prevented the disappearance of the company altogether. Phoenix-like, it has continued but is substantially changed. Erewhon's history is instructive as well as dramatic. It reveals something basic about the nature of 'new age' or idealistic, service-oriented business, and the perils of success, as well as failure, for those who practice it.

"In 1965 Michio and Aveline Kushi, a Japanese couple in their forties, moved to Boston. Their purpose was to teach macrobiotics, the philosophy, way of life, and diet formulated by their mentor, Georges Ohsawa. They rented a house on a side street in North Cambridge. Michio began to lecture in the evenings, and Aveline prepared meals for the lecture guests and gave cooking classes.

"The core of their message was simple. Food is a primary factor in physical health, and also in emotional, psychological, and even spiritual well-being. The key to health and happiness is a proper diet, based on whole cereal grains, beans, and indigenous vegetables and fruits. As Ohsawa had written: 'Food is the basis of life. If food is good then all else will be good as well.'

"Those who came and were convinced wished, of course, to follow the recommended diet. Its elements however were difficult or impossible to obtain. One could no more buy organically grown brown rice in Boston in 1965, than one could purchase samples of the British crown jewels. So the Kushis ordered extra sacksful of rice, oats, wheat flour, and kegs of miso and tamari, stashed them in their hall closet, and began to sell to students.

"In April, 1966, with the help of young former actor Evan Root, the Kushis rented a small basement store on Newbury Street in Boston. With shelving and counters made from planking and cinder blocks, they began to sell a modest array of whole foods. These were macrobiotic staples, with an occasional jar of sesame or apple butter thrown in for excitement. Root and the Kushis decided to name the store 'Erewhon' after the utopia in Samuel Butler's novel, an imaginary place where people had to take responsibility for their own health and where it was a crime to get sick.

"Erewhon was a company therefore founded not on the profit motive but out of a desire to serve the public. From the outset it had two primary aims: to make available the highest quality natural whole foods, and to educate the public in the importance and proper use of these foods. The store was a natural and necessary extension of the educational activities

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of the Kushis, and their hope to effect positive healthful change in individual lives and in the society as a whole. At base, it was a kind of missionary enterprise.

"Root managed the tiny business for about a year, then left to start Boston's first macrobiotic restaurant. Shortly thereafter, Paul Hawken and Bill Tara arrived from the never-never land of San Francisco's Haight-Ashbury to study with the Kushis. Bright, energetic, gifted with business sense and intuition and committed to the Kushis and their ideas, the two took over and began to develop Erewhon. They moved the store to a larger, more attractive site, greatly expanded the product offering, and began a mail order department. The business began to take off rapidly--more rapidly perhaps than anyone anticipated or hoped.

"The next decade was a period of headlong and often dizzying growth for Erewhon. It began to manufacture and distribute its own product line. It opened retail outlets in Los Angeles, Hartford, Cambridge, and Brookline. In a short time it had grown into a large, influential and respected corporation. Throughout, it strove to remain true to its ideals of quality and education. Rather than merely responding to consumer demand the company sought to help the public understand the importance of quality food products. It succeeded to a remarkable degree. Erewhon's most impressive accomplishments were that it

"+ originated and developed the term and concept of 'natural foods' (a direct translation of the Japanese *shizenshoku*) to distinguish its products from the pills and elixirs of the older 'health food' industry.

"+ manufactured, or contracted manufacturing, according to strict specifications a product line that set industry standards for purity and quality.

"+ developed new sources of quality commodities. For example, it encouraged a farm in Arkansas to grow organic rice, promising to then buy and market the crop.

"+ established the 'down-home country store' ambiance as a model for natural foods stores. The plain wood floors and panelling, the bulk bins and indirect lighting, influenced scores of new businesses.

"+ showed broad ecological and social concern in its retail outlets it encouraged bulk sales to avoid wasteful packaging; it began to use biodegradable cellophane for its packaged foods; it supported coops and communes through direct wholesale transactions; and it began to distribute to supermarkets in order to reach the general public.

"+ published educational flyers and pamphlets on food and nutrition, and used its packaging to provide information to the consumer." Continued.

6482. **Product Name:** Tofu.
Manufacturer's Name: LEASA Investments.
Manufacturer's Address: 6103 N.W. 6th Ct., Miami, FL 33127. Phone: 305-756-8636
Date of Introduction: 1984, February.
New Product–Documentation: Soyfoods Center Computerized Mailing List. 1984 Feb 7. Owners: George Yap and Bob Heartsong

Talk with Livingston George Yap, founder and owner. 1998 March 11. His official company name is LEASA Industries Company Inc., presently located at 2450 N.W. 76th St., Miami, Florida 33147. Phone: 305-696-0651. LEASA, written with all capital letters, is an acronym formed from the first letter of the first name of each of the people in his family: His first name is Livingston. His wife's is Einez. His sons are Andrew and Sean, and his daughter is Allison. His ancestry is Chinese. Livingston was born in Jamaica (he still speaks with a Jamaican accent), but his father was born in China. The first food made by his company was bean sprouts. He bought tofu from Swan Foods [sic, Swan Gardens owned by Richard & Jocelyn McIntyre] and from Heartsong Tofu and distributed this tofu with his sprouts. Then in early 1984, when Heartsong Tofu (run by Bob and Toni Heartsong in Miami) went out of business, Livingston bought their equipment; he did not buy their company. He hired Bob Heartsong as his tofu maker and–for the first time–began to make tofu in Feb. 1984. He learned how to make tofu from Bob Heartsong and from the book *Tofu & Soymilk Production* by Shurtleff and Aoyagi. In about 1989 he started to make soy sprouts, but his market for soy sprouts was always small, and he no longer makes soy sprouts. Now he also makes lentil, wheat, azuki, etc –about ten different types of sprouts. His company focus on the mainstream American market (grocery store chains, foodservice, cruise lines, etc.) much more than the ethnic Chinese market. However at Chinese New Year each year he does a big promotion in supermarkets; this last year he did the promotion with Kikkoman and Winn Dixie. Now people are aware that tofu is good for them and good for menopause, cancer, etc.

6483. Pehanich, M. 1984. Make way for the new Jeno's. *Prepared Foods*. Feb. p. 56-57, 59, 61-63, 65.
• ***Summary:*** After founding the Chun King Corp. in 1946 on a loan of $20,000 from a friend, Jeno started making mung bean sprouts, then created the prepared Oriental foods category. He built Chun King into the biggest Chinese food company in the USA. 20 years later he sold the company to R.J. Reynolds Tobacco Co. Today he is the frozen pizza baron, with sales approaching $1,000 million. Address: Business editor.

6484. Shim, Chung-shil. 1984. Korean recipes. Seoul, Korea: Seoul International Tourist Publishing Co. 79 p. Feb. Illust. (color photos by Edward B. Adams). Index. 26 cm.
• ***Summary:*** Recipes include: Five grain rice (*-kok pap*, with ½ cup each red [azuki] beans and black [soy] beans). Rice with soy bean sprouts (*Kong namul pap*). Mixed vegetables on rice (*Pibim pap*, with 100 gm soy bean sprouts, soy sauce,

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and red pepper paste). Dumplings (*Mandu kuk*, with 150 gm beancurd [tofu]). Seaweed soup (*Miyok kuk*, with 50 gm brown seaweed {*Miyok*} and 2 tablespoons soy sauce). Soy bean sprout soup (*Kong namul kuk*). Soy bean paste stew (*Toinchang ch'igye* [*doenjang*], with 2 tablespoons soy bean paste and 200 gm beancurd). Beancurd with beef (*Tubu chorim*, plus 3 tablespoons soy sauce). Curd with vegetables (*T'angp'yong Ch'ae*, with 250 gm mung bean curd, 200 gm soy bean sprouts, and 2 tablespoons soy sauce). Bean pancake (*Pindae tok*, with 50 gm soy bean sprouts and 4 tablespoons soy sauce).

Each recipe is accompanied by a large color photo. About the author: She is a publisher, artist, and wife of Edward B. Adams, Headmaster of Seoul International School. She has developed a keen interest in Korean cooking, and has chosen here the simple dishes that are most popular among foreigners. She was educated in California, where she married. A color photo shows Shim Chung-shil. Address: Founder, Seoul International Publishing House.

6485. Shurtleff, William; Aoyagi, Akiko. 1984. Soymilk industry and market: Worldwide and country-by-country analysis. 2 vols. Lafayette, California: Soyfoods Center. Vol. 1, 199 p. Vol. 2, 100 p. Feb. 28 cm. [165 ref]

• ***Summary:*** A comprehensive overview, worldwide, with extensive historical information. The first study of its type, with many statistics, graphs, and tables. Volume 1 is the market study, and Volume 2 is black-and-white copies of soymilk labels and other graphics. Contents: 1. Introduction. 2. Directory of soymilk manufacturers and related companies worldwide. 3. Definitions and varieties of soymilk. 4. Overview of world soymilk industry and market, and future outlook. 5. United States soymilk industry and market. 6. Japan. 7. Korea. 8. China. 9. Taiwan. 10. Hong Kong. 11. Singapore and Malaysia. 12. Southeast and South Asia. (13. Vietnam. 14. Thailand. 15. Philippines. 16. Indonesia. 17. India. 18. Sri Lanka.) 19. Europe (Incl. Plamil Foods in England, Tetra Pak Group in Sweden, Alfa-Laval and John Wilson in Sweden, Danish Turnkey Dairies–DTD and Soya Technology Systems (STS), Alpro/Vandemoortele in Belgium, Nestle, F. de Selliers in Belgium, Dansk Soyakagefabrik in Denmark, Lima Andiran in France, Galactina in Belp, Switzerland, and Semper A.B. in Sweden).

20. Latin America. 21. Africa. 22. History of Vitasoy in Hong Kong. 23. Two modern soymilk manufacturing processes: Marusan and Alfa-Laval. 24. Etymology of the word "soymilk" worldwide. 25. Analysis of ingredients in 49 popular Japanese soymilk products. 26. Bibliography. 27. About the Soyfoods Center. A table on p. 12 gives an overview of world soymilk production in 1983 ranked in descending order of annual per capita consumption. These statistics do not include China (PRC) or soy-based infant formulas, usually made from soy protein isolate. 1. Taiwan, 210 million liters, 11.1 liters/capita, growing at 30% per year. 2. Hong Kong, 39.1 million liters, 7.5 liters/capita, growing at 10% per year. 3. Singapore, 11.2 million liters, 4.7 liters/capita, growing at 15% per year. 4. South Korea, 67.0 million liters, 1.60 liters/capita, growing at 60% per year. 5. Malaysia, 21.4 million liters, 1.53 liters/capita. 6. Japan, 131.8 million liters, 1.10 liters/capita, growing at 101% per year. 7. Thailand, 50.0 million liters, 1.00 liters/capita. 8. USA, 9.6 million liters, 0.04 liters/capita. Total world production: 548.3 million liters.

Page 36 gives an overview of the U.S. market for soy-based infant formulas and adult soymilk. Production of soy-based infant formulas (on a ready to serve basis) in 1983 was as follows: Ross Laboratories made 14,720,000 gallons of Isomil (i). Mead Johnson made 14,080,000 gallons of Prosobee. Loma Linda made 2,240,000 gallons of Soyalac. And Wyeth Labs made 960,000 gallons of Nursoy. Thus 32,000,000 gallons of soy-based infant formula were made in the USA in 1983.

Also in 1983, consumption of soymilk by adults in the USA was as follows: 1,743,000 gallons were made by specialized soymilk manufacturers in the USA (Loma Linda Soyagen 1,000,000 gallons; Worthington Soyamel 670,000 gallons, Miller's Soy (private label) 73,000 gallons). 690,000 gallons were imported (328,000 gallons of Vitasoy by Vitasoy USA, 254,000 gallons of Yeo's by YHS, 50,000 gallons of Edensoy by Eden Foods, 25,000 gallons of President by President, 25,000 gallons of Kibun by Kibun, 8,000 gallons of To-Neu by San-J International). 250,000 gallons were made fresh by tofu companies (45,000 gallons by Mighty Soy, 41,000 gallons by Victor Foods [Scarborough, Ontario, Canada], 39,000 gallons by Quong Hop & Co., 35,000 gallons by Wy Ky, and 90,000 gallons by others).

Yield: 1 ton of raw soybeans yields approximately 4,320 gallons of soymilk. Conversion: 3.785 liters = 1 gallon. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6486. Shurtleff, William; Aoyagi, Akiko. 1984. Brief history of Yeo Hiap Seng Ltd. and the company's work with soymilk worldwide (Document part). In: Shurtleff and Aoyagi. 1984. Soymilk Industry and Market: Worldwide and Country by Country Analysis. Vol. 1. 177 p. See p. 100-02.

• ***Summary:*** "Soymilk entered the modern age in Singapore in 1954, when Yeo Hiap Seng introduced the first commercial bottled soymilk. The company traces its origins to the year 1900 when the patriarch of the Yeo family, Mr. Yang (in the Amoy dialect, his name was pronounced Yeo Keng Lian) purchased a small company named "Hiap Seng" in the city of Chang-chou (Zhang Zhou), Fukien (Fujian) province, China. "Hiap Seng" means "unite to succeed." Yeo Keng Lian changed the company's name to reflect his family's ownership. He worked as a manufacturer and retailer of fermented soybean seasonings: soy sauce (*jiang-*

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you), Chinese-style miso (*dou-jiang*), and fermented tofu (*furu*). All three products were sold from day one under the "Light House" brand.

Note: This is the earliest English-language document seen (Oct. 2011) that uses the word "furu" to refer to fermented tofu.

By working together, the family did succeed. Their soy sauce, fermented in the traditional Chinese way in wooden vats and earthenware jars, was of superior quality and the business prospered. The original plant was located near the center of Chang-chou. In about 1920 a second plant was established in the eastern part of the city, and in the late 1920s a third plant was set up in the southern part of the city. Each of the three fermented soy products were produced in all three plants, the second and third plants also produced some pickled vegetables.

In 1935, during the Japanese invasion of China, when life was difficult and unsettled in Fukien province, Yeo Keng Lian sent his eldest son, Yeo Thian In, to Singapore to investigate possibilities there. The son founded the Yeo Hiap Seng Sauce Factory at 410 Outram Road, Singapore 3. He was joined shortly by the rest of the family. The company continued to make the same three fermented soy products that it had made since 1900 in China. In 1947 the growing business was moved into larger quarters at 950 Dunearn Road, its present location. The move out of China was a wise one, for in 1949 the three Yeo Hiap Seng plants in Fukien were taken over by the Chinese Communists. By the mid-1940s, Yeo's quality soy sauce was a common sight in Singapore.

In 1950 YHS decided to diversify into canned products, such as chicken curry, fish, and meat. Then in 1954 they launched their first soymilk. Called Beanvit, it was subsequently renamed Yeo's Soybean Drink. A rather sweet soymilk sold like a soft drink in sterilized bottles, it was marketed in both Singapore and Malaysia, where it was the first product of its type. (Vitasoy was first sold like a soft drink in sterilized bottles in Hong Kong in 1953.) In 1955 the company changed its structure to that of a "Limited" (Ltd.) company. In 1958-59 YHS expanded its soft drink line by bottling favorite traditional Chinese beverages, such as chrysanthemum teas and herb teas. In 1962 YHS began its first export sales to Hong Kong. In 1967 YHS soymilk and teas were first sold in UHT (Ultra High Temperature) aseptic Tetra Pak cartons (tetrahedral/pyramid shaped; 285 ml).

"YHS was the world's first company to package soymilk in aseptic Tetra Pak cartons, and the first to use Tetra Pak for any beverage in Singapore. (Vitasoy in Hong Kong did not start using Tetra Pak until 1976). Shortly after introducing sweetened soymilk in the tetrahedral pack, YHS launched enriched Vitabean in the same carton. It was fortified with half of the adult Minimum Daily Requirement of most essential vitamins. Sterilization in bottles would have destroyed most of the added vitamins, but the UHT process did not. In 1974 packaging was changed to Tetra Brik (250 ml), but bottling continued. During the late 1970's YHS changed its soymilk brand name to Yeo's. By 1976 Yeo Hiap Seng's soymilk production had climbed to 50 million bottles and cartons a year, and by 1980 to 75 million (250,000 a day), prompting the company to build a new plant to double its capacity. In 1983 YHS had the biggest share of the Singapore soymilk market (Alan Yeo, personal communication, 1982, 1983).

"Yeo Hiap Seng pioneered soymilk throughout Southeast Asia. In 1959 they opened their first soymilk plant at Kuala Lumpur in Malaysia. By 1984 they had four soymilk plants there at Kuala Lumpur, Jahore Baru, Prai, and Kuching. Malaysia, with its 14 million people, was a bigger market than Singapore, with its 2.4 million people. By 1984 YHS had the lion's share of the Malaysian soymilk market. During the 1970's, YHS started exporting soymilk to Hong Kong (where they got a small share of the market). In 1979 they began exporting canned soymilk to the USA, where they had offices and a warehouse in San Jose, California. In early 1983 they introduced a low-sugar soymilk to the US. Sales, however, were slow. YHS was not interested in the China market, since they thought that it would be too difficult to get profits out in hard currency. They were franchising their soymilk process and technology in Indonesia, where the product is being marketed under the YHS name. They plan to share in the promotion, too.

Starting in 1974 Yeo Hiap Seng began a new phase of its expansion and diversification by acquiring the Singapore franchises for Pepsi-Cola and Mirinda. These were followed by franchises for Schweppes in 1985 and 7-Up in 1986. In 1985 the company acquired distribution rights for Budweiser beer and in 1987 they branched out into prawn farming.

"The 1981 Annual Report of Yeo Hiap Seng Ltd. shows that this publicly held company was run by Yeo Thian In (Chairman) and Alan Yeo Chee Yeow (Managing Director). From 1977 to 1981, sales of all products grew from $39.5 to $95.8 million and pre-tax profits from $7.1 to $11.5 million. Their Soft Drinks Division, one of the largest in Singapore, Malaysia, and Hong Kong, provided the main thrust of company growth." Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6487. **Product Name:** [La Vie Claire Tofu Burgers (Garlic & Fines Herbes, or Mushrooms)]
Foreign Name: La Vie Claire Galettes de Tofu (Ail et Fines Herbes, Champignons).
Manufacturer's Name: Société Française d'Alimentation Saine (SFAS) (Marketer). Made in France by Société Soy.
Manufacturer's Address: B.P. 77, 70 Avenue de la Republique, 94703, Maisons-Alfort Cedex, France. Phone: 43.78.11.32.
Date of Introduction: 1984 February.
Ingredients: Burgers with Garlic: Tofu (water, soybeans),

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oat flakes*, tamari (soy sauce), sunflowerseed oil, garlic 3.8%, spices and aromatics. * = Organically grown
Wt/Vol., Packaging, Price: 200 gm.
How Stored: Refrigerated.
New Product–Documentation: Label. Received from Bernard Storup of Société Soy. 1989. March. 2.5 by 5.5 inches. Self adhesive. Green and red (or brown for mushroom) on white. "A food preparation based on soya and cereals. Made without artificial colors or preservatives." Logo of flying bird. Illustration of garlic (or mushrooms) with green herbs against cross-hatch background.

Letter (fax) from Bernard Storup. 1990. March 10. "We made the burgers for 'La Vie Claire' under their brand from Feb. 1984 to Oct. 1987. Since that date, they have sold all their burgers (same varieties) under our 'Soy' brand name." The company name is Société Française d'Alimentation Saine (SFAS). They make no soyfoods. They sell those made by Société Soy and soymilk made by Cacoja. In the mushroom burgers, the ingredients are: Tofu (water, soybeans), oat flakes*, mushrooms from Paris 14%, tamari (soy sauce), sunflowerseed oil, garlic 3.8%, spices and aromatics. * = organically grown.

6488. *Soyanews (Sri Lanka)*. 1984. The Indonesian art of making soyafoods. 6(6):4-5, 9. Feb. [1 ref.]
• ***Summary:*** "Recently the UNDP invited the Soyabean Foods Research Centre in Gannoruwa to send a team of food technicians to study the Indonesian experience. They have now returned to Sri Lanka after a two-month study tour which helped to acquaint them with the home and cottage level processing of soyafoods."

Fermented foods are highly developed and very important in Indonesia. "The only fermented preparation Sri Lankans are perhaps acquainted with is with the making of hoppers, thosai [dosai], and iddli [idli in south India]."

Those who took part in the two-month study course were: Miss Ellen Jayawardene, Miss H.M. Lalitha Padmini, Mrs. J.M.K. Jayaratna, Mrs. K.G.S. Ariyaratna and Mrs. Soma Weerasuriya.

Five large photos show soyfoods being made in Indonesia on a cottage level. The foods are tempeh, tofu, yuba, and soya sauce, one photo shows a shop that makes both tofu and tempeh. At least one person appears in each photo.

6489. Knoblauch, Mark. 1984. Restaurants: Kotobuki's creative Japanese dishes as pretty as a picture. *Chicago Tribune*, March 4. p. K10.
• ***Summary:*** This is a review of the Japanese three-star restaurant in Chicago. The restaurant features sushi and sashimi. "*Inari sushi* ($5.25 for 7 pieces), popular in Japan, doesn't show up often on this side of the Pacific. This type wraps sushi's mounds of vinegared rice in pockets of deep-fried bean curd." It never contains any fish, so some like to order it with raw tuna as a side dish. An unusual version of teriyaki is pork *miso-zukeyaki*, which is pork marinated in miso, then cooked teriyaki style.

6490. Jenkins, Nancy. 1984. From Vietnam, subtle mix of flavors. *New York Times*, March 21. p. C1.
• ***Summary:*** Estimates of the Vietnamese population of New York City range from 10,000 to 20,000; all agree that the number is growing. In the last few years at least six Vietnamese restaurants have opened in Lower Manhattan.

Nuoc mam is the fundamental ingredient in Vietnamese cuisine; it is used as a seasoning in almost every dish, taking the place of salt and soy sauce. The best quality nuoc mam comes from Phu Quoc, an island off the south coast of Vietnam.

Another important seasoning is tuong, a sweet bean sauce [made from soybeans]; it can be purchased at a number of grocery shops in Chinatown, such as Hoa Than (218 Canal St.) and Thuan-Nguyen (82 Mulberry St.). When Vietnamese from all over New York City do their weekly shopping on Sunday morning, one of the foods they buy is "soft little cakes of sticky rice with sweet yellow bean paste inside."

A recipe for Ba-Nam's nem nuong with Nuoc leo sauce calls for "2 tablespoons tuong" as an ingredient.

Chef Huy's chicken with lemon grass calls for "1 tablespoon nuoc mam" and "1 tablespoon thick soy sauce" as ingredients.

6491. Hattori, Terumitsu. 1984. Kikkoman second generation sauce products and powdered soy sauce (Interview). Conducted by William Shurtleff of Soyfoods Center, March 27. 2 p. transcript.
• ***Summary:*** Of Kikkoman's second generation soy sauce products, teriyaki sauce is by far the best seller. It has been made at Walworth, Wisconsin, from the outset. Other products that sell about 50,000 cases/year of each (quite small) are Kikkoman Sukiyaki Sauce, Tempura Sauce, Menmi Sauce (for noodles), Steak Sauce, and Tonkatsu Sauce (for breaded pork cutlets or other deep-fried foods, it is sold only at Japanese food stores, not at supermarkets). Sweet & Sour (a paste) has small sales. All these products except Steak Sauce and Sweet & Sour were on the market in America in 1976 (when the Walworth plant opened), but at that time most are made in Japan. Now all are made in America. Tempura and Menmi started being made in America in about 1978. Sukiyaki started in America in about 1981. Teriyaki was first launched in Japan about 20 years ago (i.e. 1964).

Kikkoman now makes about 20,000,000 liters/year of shoyu and sauces at Walworth, but 20% of this figure is Teriyaki Sauce, which contains a little more than 50% shoyu.

Concerning powdered soy sauce: This started to be made in Japan about 20 years ago for use in Ramen sold in a bag. Initially it was mainly HVP but the flavor was poor. Lots of

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flavor (i.e. ethanol) is lost when shoyu is dried; only 0.3% ethanol is left. Gradually the flavor of powdered shoyu has improved with improvements in the spray drying process and by using a dextrin carrier, which improves flavor. A special type of dextrin is added to the liquid product before spray drying. The new product was first used in Instant Ramen, sold in a separate pack of soup base with other seasonings and spices. Nowadays the product is selling well, but it is still a very small as a percentage of the total, probably less than 0.5% on a solids basis in Japan, and even less in the USA. Total annual production of powdered soy sauce in Japan is 2,000 to 2,500 tonnes and Kikkoman makes about 30% of this. By comparison, 360,000 tonnes of total soy sauce solids are made in Japan each year.

In Japan, the big 3 shoyu makers focus on the consumer retail market. The smaller manufacturers give more attention to industrial food processors. *Shokuryo Shinbun* is a good source of information on this. Address: Kikkoman Marketing & Planning Inc., 50 California St., Suite 3600, San Francisco, CA 94111.

6492. Caty, Thérèse. 1984. Dossier: Le soja [Dossier on soyfoods in France]. *France Dietetique*. Feb/March. p. 24-31. [Fre]

• ***Summary:*** This extremely interesting article gives an introduction to the various soyfoods, then list all known soyfoods products sold in France, complete with the brand, product name, ingredients, nutritional composition, weight or volume, and packaging. The last half of the paper is a French translation of a paper titled "The American boom in traditional soy products," presented by Richard Leviton on 11 Oct. 1983 at a conference in Parma, Italy.

The following products, manufacturers/marketers (and brands) are listed. 1. Whole soybeans and flour: Lima (Organic soybeans, organic whole soy flour). 2. Textured soya: Charusse, Soyavit. 3. Convenience prepared foods for vegetarians: Pural (Frika Vita, Sojafleisch, Pasta Chuta, Sojavite, Soja Mignon, Sojanelles, Sojanelles épicées), Hera (Croq Meal, Herameal, Végémeal, Potage), Fritini (Aux herbes). 4. Liquid soymilk: Celnat (Soyo), Lima, Pural (Sojlactis), Sapov (Sojal), Provamel (Soya Drink, Soya dessert choco [a pudding, made by Alpro in Belgium]), Naturvit (Soyalet, Soyalet sans sucre). 5. Tofu: Le Bol en Bois (Koya-dofu), Soy (Tofu, Croque Tofu [6 types]). 6. Tempeh: Traditions du Grain. 7. Miso: Celnat (Brown rice miso imported from Japan, Barley miso), Lima (Hatcho miso, barley miso). 8. Soy sauce: Celnat (Shoyou), Lima (Tamari, Tamari Shoyu). Address: France.

6493. Fieldman, Anita. 1984. Spotlight on Westbrae Natural Foods. *Whole Foods*. March. p. 22.

• ***Summary:*** The company was started in 1970 by Gordon Bennett, Kristin Brun, and a few friends making and distributing granola and fruit juice for San Francisco Bay Area stores. Today Westbrae is a $7 million corporation with a line of 150 products in a 50,000 square foot facility in Emeryville, California. Most of the Westbrae labels are designed by San Francisco artist David Gauger. The company deals with about 50 distributors and 1-2 brokers. They do not sell directly to retailers. A photo shows Gordon Bennett.

6494. Hong, E.H.; Kim, S.D.; Hwang, Y.H. 1984. Production and use and research on soybeans in Korea. *Tropical Agriculture Research Series* No. 17. p. 81-93. March. International Symposium on Soybean in the Tropics and Subtropics.

• ***Summary:*** Abstract. Trends in soybean production importance of soybeans, area planted, yield, production and import, regional distribution. Trends in supply and consumption, demand and supply, utilization. Methods of cultivation currently applied: cultural practices (planting time, land preparation and planting, fertilizer application, management, harvesting and processing, marketing and procurement, cropping patterns, competitive power), varieties and their distribution, major diseases and pests, problems in farm cultivation. Soybean research and extension service. Government participation in and support for soybean production. Future prospects of soybean production and main constraints. Discussion.

In Korea, soybeans rank third among all food grain crops, in both the area planted and in production, after rice and barley. Soybean "products such as soy paste [doenjang], soy sauce [kanjang], beancurd [tofu] and beansprouts are the primary side dishes in conventional daily Korean meals." The area planted to soybeans has steadily decreased from about 300,000 acres average in 1967-1971 to only 183,000 acres in 1982.

Tables: (1) Area planted and production of major food crops in Korea. (2) Production, yield and import of soybeans by year in Korea. (3) Regional distribution of soybean production in Korea. (4) Demand and supply of soybeans in Korea. (5) Utilization of soybean in Korea. (6) Regional distribution of soybean planting times in Korea. (7) Results of sample investigation for the application of herbicides on soybean in Korea. (8) change of cropping systems in the central part of Korea. (9) Farm income derived from major summer crops in Korea. (10) Characteristics of main soybean varieties currently recommended and their geographical distribution in Korea. (11) Research institutions, location and number researchers related to soybeans in Korea. (12) Amounts, area planted, and production for every class of soybean seeds in Korea in 1982. (11) research institutions, location and number of researchers related to soybeans in Korea. (12) Amounts, area planted, and production for every class of soybean seeds in Korea in 1982. (13) The amount and purchasing prices of soybean by the government and the prices of imported soybeans by year in Korea. Figures: (1)

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Marketing channels for soybean in Korea. (2) Flow chart of soybean research and extension services in Korea. Address: Crop Exp. Station, Office of Rural Development, Suwon 170, South Korea.

6495. Konno, S. 1984. Soybean production in Japan. *Tropical Agriculture Research Series* No. 17. p. 95-102. March. International Symposium on Soybean in the Tropics and Subtropics.

• ***Summary:*** Abstract. Trend in soybean production. Trends in supply and consumption of soybeans. Methods of cultivation currently applied in Japan. Soybean research and extension. Government participation in and support of soybean production. Future prospects of soybean production and main constraints. Discussion. Tables: (1) Production and trade of soybeans in Japan. (2) Soybean consumption in Japan. (3) Varieties registered during the last decade. Figures: (1) Soybean production by region in Japan (1983). (2) Planting and harvesting time of soybean in Japan. (3) Centers for breeding and research on soybean affiliated to the Ministry of Agriculture, Forestry and Fisheries in Japan. Address: Tropical Agriculture Research Center, Yatabe, Tsukuba, Ibaraki 305, Japan.

6496. Mogi, Ken. 1984. The history of shoyu (soy sauce) brewing in the United States. The story of the Oriental Show-You Company. San Francisco, California: Kikkoman. 3 p. March. Unpublished manuscript. Combined with a subsequent interview of Ken Mogi by W. Shurtleff on 20 April 1984.

• ***Summary:*** "Early in this century, Mr. Shinzaburo Mogi, one of the Mogi family's ancestors, tried to make shoyu in America. Mr. Mogi was born in 1872 and later came to America in about 1892. He studied at college in Maryland but had an eye problem so he gave up studying and returned to Japan. In 1904, the year his daughter Katsuko was born, he was in Toronto selling Japanese bicycles, involved in a trading business unconnected to Kikkoman. According to the memory of Mr. Tsuneo Tanba, who worked with Mr. Mogi very closely (and later told his story to Morio Ichiyama, Kikkoman historian), Mr. Mogi managed a shoyu plant in Denver, Colorado, in 1907. It was not successful. Later, he had some contact with a shoyu project in Toronto, Ontario, Canada. Though I traveled to Denver, I could not get any information on this."

Note: On 7 Feb. 2005 Ken Mogi wrote William Shurtleff at Soyfoods Center (in response to some questions about the existence of the Denver soy sauce plant): "I talked with Komiya. Mr. Shinzaburo Mogi had the New Testament reading meeting with 5-6 people during lunch break when Mr. S. Mogi was living in Noda [Japan] during World War II. Mr. Komiya told me that he remembered that Mr. S. Mogi mentioned the Denver story." However Ken Mogi is does not know (1) if S. Mogi ever wrote anything about a soy sauce plant in Denver, (2) when and where S. Mogi told this story to Mr. Tanba, and (3) when and where Mr. Tanba told Mr. Ichiyama about S. Mogi's supposed soy sauce plant in Denver. Ken Mogi encloses a photo of Mr. Shinzaburo Mogi at about age 30.

Mr. Mogi's daughter, Mrs. Katsuko Yoshida, who is living in Tokyo, does not remember anything about Denver or her father starting a soy sauce plant in Denver. However she did tell me the story about "Oriental Shoyu" in Indiana.

Katsuko lived in Chicago with her parents in the 1920's (maybe 1920-1926). Mr. Mogi worked for Yamato Shokai, selling Japanese silks. They found the product "Oriental Shoyu" in the market and were very much impressed. They visited the plant in Indiana and later Mr. Mogi became a stockholder in that company.

Mr. Esta Keirn started employment with the Oriental Show-You Co. on 28 Oct. 1932 as a [mung] bean sprout washer. He continued until 1 Nov. 1961, when the company was sold to Beatrice Foods Inc. and turned over to La Choy Food Products. Mr. Keirn worked for La Choy for 8 years. He never met Mr. Mogi but he heard several things about him from Mr. Ohki.

Shinzo Ohki, the founder of the company and one of 8 children, was born in 1884 in Kamakura, Japan. He immigrated to the USA in 1901, landing in Seattle, Washington. Eventually he ended up in Columbia City, Indiana, where he graduated from high school. He then graduated from college in New York City. Upon graduation he started in business as a tea merchant in Detroit. To expand his line, he imported soy sauce in small wooden kegs from Japan. This he bottled and sold along with his tea. He could not expand his tea business but the soy sauce business kept growing.

Wishing to expand by adding other products to his line, he returned to Columbia City, took in a partner to gain capital, and set up in a vacant canning plant (Vance Canning Co.). This is when he incorporated and took the name of Oriental Show-You Company, Inc. Then, in 1917, Mr. Ohki went to Japan to obtain the formula (and also a wife) and some instruction in making soy sauce so he could manufacture his own. Upon coming back to Columbia City, Indiana, he enlisted the help of someone from the USDA to work out the koji culture. Fermentation was set up in large wooden beer vats. Equal parts soybeans, wheat, and salt were aged for 24 months, then pressed and bottled. According to Mr. Keirn, the company produced as much as 30,000 gallons of shoyu in one year. The plant in Columbia City was vacant for some time and now most of it has been torn down, but the adjacent adobe and brick buildings are still standing.

Note 1. Much of this story was published in the Japanese-language newspaper *Rocky Mountain Jiho* (Denver, Colorado), 25 Jan. 1984. p. 4.

Kenzaburo's great grandfather was the first president of Noda Shoyu K.K. (today's Kikkoman). Shinzaburo Mogi

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was the latter's brother.

Note 2. The story was also written by Marilee Kreps in about 1984 under the title "Shoyu pride: Columbia City's soy sauce factory one of many in the United States." The name of the newspaper, which was published in Columbia City, Indiana, is now known–nor is the date or page. It states: "Until 1962 the company, located on Factory Avenue, was a thriving business in this town, and contrary to what some believe, it was [named] the 'Shoyu Company,' not the 'Show-You Company.'" The Oriental Shoyu Company was established in 1917 by Shinzo Ohki in Columbia City. The factory was closed in 1961.

Note 3. On 7 Feb. 2005 Kenzaburo Mogi IV of Kikkoman, Japan, sent William Shurtleff a hand-drawn map showing the location of the four buildings that were part of the Oriental Show-You Company in Columbia City, Indiana. They were located between the railroad track and Factory Avenue, near Line street. These photos show: (1) The office building. (2) The printing and boiler shop building. (3) The remains of the soy sauce plant, with hand-drawn arrows pointing the areas on the cement floor used for the moromi tank, koji making, and pressing. (4) Close-up of the cement base of the moromi tank. (5) Close-up of the space on the cement floor, between the moromi tank and outside wall, where the heater was. (6) Close-up of the area used for pressing (*assaku*) the soy sauce from the moromi. (7) Mr. Esta Keirn standing in a grassy field in front of the chow mein building, which once shared a wall with the soy sauce plant. (8) Granite tombstone of the founder, Shinzo Ohki (1883-1967) and his wife, Taka (1889-1963). (9) Mr. Esta Keirn. Address: Kikkoman Marketing and Planning Inc., P.O. Box 784, San Francisco, California 94101.

6497. Na Lampang, Arwooth. 1984. Soybean production in Thailand. *Tropical Agriculture Research Series* No. 17. p. 37-43. March. International Symposium on Soybean in the Tropics and Subtropics. [6 ref.]

• ***Summary:*** Abstract. Soybean production in Thailand. Cropping patterns and practices. Varietal adaptation and improvement. Pest management. Harvest and storage. Marketing. Consumption and utilization. Prospects and constraints. Acknowledgement. Discussion. Tables: (1) Soybean acreage, yield and production in Thailand (1971-81). (2) Balance of soybean export and importation during 1976-1930. (3) Soybean prices at different locations (US g/kg) (1977-1981). Address: Field Crop Research Inst., Dep. of Agriculture, Bangkhen, Bangkok 10900, Thailand.

6498. Saio, Kyoko. 1984. Dietary pattern and soybean processing in Japan today. *Tropical Agriculture Research Series* No. 17. p. 153-61. March. International Symposium on Soybean in the Tropics and Subtropics. [1 ref. Eng.]

• ***Summary:*** Abstract. Consumption of soybeans in Japan. Varieties and processing of soybean foods. Traditional technology for modern products and emerging technology applied to traditional foods. Reference. Discussion. Tables: (1) Intake of Kcal/day/person. (2) Intake of protein/day/person. (3) Intake of fat/day/person. (4) Comparison of intake of nutrients among various nations. (5) Supply and demand of whole soybeans in Japan. (6) Detailed use of whole soybeans supplied for food. Figures: (1) Flow sheet of Momen Tofu preparation. (2) Flow sheet of Kori Tofu preparation. (3) Flow sheet of Shoyu (soy sauce) preparation. (4) Flow sheet of Kome Miso preparation. (5) Flow sheet of soy milk preparation. (6) Manufacture of vegetable protein products. Address: National Food Research Inst., Yatabe, Tsukuba, Ibaraki 305, Japan.

6499. Somaatmadja, Sadikin. 1984. Development of soybean culture in Indonesia. *Tropical Agriculture Research Series* No. 17. p. 23-36. March. International Symposium on Soybean in the Tropics and Subtropics. [3 ref.]

• ***Summary:*** Contents: Abstract. Area and production: Share in national food production, national soybean production, producing centers, soybean area. Supply and demand situation: Export and import, future demand and production, utilization. Methods of cultivation: Cropping system, cultivation, pests, diseases and other problems. Research and CRIFC. Research program and activities. Support for soybean production. Further prospects and main constraints. Discussion (questions and answers).

Utilization (p. 28): "1. Side-dish with rice: Tempe (fermented soybean cake), tahu (soybean cake), tauco (soybean paste), tauge (soybean sprout), kecap (soy sauce) and goreng kedelai (fried soybeans). Of these, tempe and tahu are very important in the diet of the people.

"2. Snacks: Roasted soybeans, kerupuk tahu (tahu chips), boiled young soybean pods" [edamame]

Tables: (1) Annual average soybean production during and before PELITA (Five-year development plan, 1964-1981). (2) Soybean production in the last six years, 1977-1982 (East Java, Yogyakarta, Lampung, Central Java, Nusa Tenggara Barat {NTB}, West Java). (3) Soybean production in six [major soybean producing] provinces, 1988-1981. (4) Soybean production in four additional centers, 1977-1981 (D.I. Aceh, N. Sulawesi, Bali, S. Sulawesi). (5) Soybean harvested area, yield and production in sawah (rice fields) and tegalan (dry land), 1979-1981. (6) Export and import of soybean, 1969-1982 (Indonesia was a small exporter until 1977 when exports stopped; imports over 100,000 tonnes began in 1976, and by 1982 had risen to 476,000 tonnes). (7) The estimated demand for soybean and production target, 1983-1988 (Source: Directorate General of Food Crops). (8) The important insects of soybean. (9) Improved soybean varieties. (10) Packages of technology in the intensification and areal [area] expansion programs.

Graphs: (1) Demand, production, and import of soybeans, 1978-1982. (2) Target of soybean area, 1983-1988

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(tegalan field area is expected to rise rapidly; sawah field area will stabilize starting in 1985). A map of Indonesia (p. 31) shows seven research institutes under the Central Research Institute for Food Crops (CRIFC). They are located in Bogor, Sukamandi, and Lembang (W. Java), Sukarami (W. Sumatra), Banjarmasin (S. Kalimantan), Maros (S. Sulawesi), and Malang (E. Java). Address: Central Research Inst. of Food Crops, JL. Merdeka 99, Bogor, Indonesia.

6500. Suzuki, Steven. 1984. Pacific Rim potential for edible soybeans. In: Ontario Soya-Bean Growers' Marketing Board ed. 1984. Ontario Soybean Symposium. Chatham, Ontario, Canada: OSGMB. 319 p. See p. 224-41.

• ***Summary:*** Soybeans were first exported from Canada about 12 years ago when a Japanese house approached the Ontario Soybean Grower's Marketing Board for a trial shipment to Japan. The trial worked out very well and in a short time Ontario's soybean exports became a multi-million dollar business. Ontario soybeans are very clean, the quality is comparable to Japanese and Chinese soybeans, and the supply is consistent. However the price is high in relation to Chinese and U.S. soybeans. As a result, Ontario soybeans are sold in high-priced markets, as for making premium quality miso or soyamilk. The supply of Chinese soybeans is irregular. Address: Manager, Grain Trading Section, Okura & Co. America Ltd., New York, NY.

6501. Wang, Hwa L. 1984. Tofu and tempeh as potential protein sources in the Western diet. *J. of the American Oil Chemists' Society* 61(3):528-34. March. [22 ref.]

• ***Summary:*** Contents: Abstract (uses the word "soybean foods" several times). Introduction. Traditional soybean foods. Trends in market growth for tofu and tempeh (based on statistics gathered by Shurtleff & Aoyagi of The Soyfoods Center in California, 1983). Tofu. Tempeh.

Traditional soybean foods can be classified as either nonfermented or fermented. Tables show: (1) Oriental nonfermented soybean foods (gives food name, local names, description, uses): Fresh green soybeans (local names: mao-tou, edamame). Soybean sprouts (huang-tou-ya, daizu no moyashi). Soybean milk (tou-chiang). Protein-lipid film (tou-fu-pi, yuba). Soybean curd (tofu, tou-fu, tubu, tahoo, touhu, tau-foo, dou-fu, dau-fu). Soybean flour (tou-fen, kinako) (Wang 1983).

(2) Oriental fermented soybean foods (gives food name, local names, microorganisms used, substrate, nature of product): Soy sauce (local names: chiang-yu, shoyu, toyo, kanjang, ketjap, see-iu). Miso (chiang, doenjang, soybean paste). Hamanatto [fermented black soybeans] (tou-shih, tao-si, tao-tjo [sic]). Sufu (fu-ru, fu-ju, tou-fu-ju, bean cake, Chinese cheese). Tempeh (tempe kedelee). Natto.

(3) Tofu industry in the United States (No. of manufacturers and annual production in 1975, 1979, 1981, 1982, and 1983).

(4) Soybean solids and proteins in soybean soak water as affected by soaking conditions (temperature vs. time, Lowry protein / Lowry's protein). (5) Ratio of protein to oil content of tofu and soy milk as affected by protein content of soybeans (for different soybean varieties, the highest ratios come from the varieties Wase-Kogane, Vinton, Toyosuzu, and Coles).

Figures: (1) Flow diagram for the preparation of tofu. (2) Graph: In vitro digestibility of soybean milk as affected by the duration of boiling. Best digestibility is 12-14 minutes. (3) Four graphs: Relationship of concentration and type of coagulant to the yield of tofu. Coagulants are calcium sulfate, calcium chloride, magnesium sulfate, and magnesium chloride. The 4 graphs are: Gross weight of tofu. Moisture content. Total solids recovery. Nitrogen recovery. Calcium sulfate gives the highest values on all four graphs. (4) Four graphs: Relationship of concentration and type of coagulant to the texture characteristics of tofu. Same coagulants. The four graphs are: Hardness, Brittleness, Cohesiveness, Elasticity. (5) Flow diagram for tempeh fermentation. Address: NRRC, ARS, USDA, Peoria, Illinois 61604.

6502. Wernham, Les. 1984. Exports–Problems and opportunities [for Canadian soybeans]. In: Ontario Soya-Bean Growers' Marketing Board, ed. 1984. Ontario Soybean Symposium. Chatham, Ontario, Canada: OSGMB. 319 p. See p. 246-53.

• ***Summary:*** Soybean exports from Ontario have expanded dramatically during the past 10 years; in 1982 they reached a high of 132,000 tonnes worth $44 million. The East Asian market including Japan, Korea, Hong Kong, and Malaysia accounted for 81% of Ontario's export soybean sales in 1983, with an additional 8% going to Europe. The main buyers in 1982 were: Japan 47,414 tonnes, Netherlands 19,545 tonnes, Singapore 18,039 tonnes, Indonesia 16,652 tonnes, Hong Kong 15,234 tonnes.

Most of these soybeans are sold for human consumption. "For example, one of Sweden's foremost pharmaceutical manufacturers has in the past years been that country's largest single importer of Canadian soybeans. Taking about 3,000 tons annually, this company produced a patented intravenous nourishment called Intralipid." Tiny soybeans (5 mm diameter or less) are used to make bean sprouts and natto. For soybean exports, freight constitutes an average 21% of the net delivered cost to the buyer in his country. They are shipped in bagged or bulk (20 or 40 foot) containers. The main focus of breeding should be to develop varieties that do not carry a common bitterness or beany flavor. Address: Grain Manager, King Grain, Chatham, ONT, Canada.

6503. Etter, G. 1984. Soy sauce, the no. 1 seasoning. *Daily News* (*New York*). April 4. Good Living section. p. 7.

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6504. Wood, Brian J.B. 1984. Re: Bean Products Ltd. in Scotland. Letter to Richard Leviton at Soyfoods Magazine, Encinitas, California, April 9. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "Bean Products Ltd. is now wholly owned by British Vinegars Ltd. [a division of Nestlé] and I have no part of it, I am sorry to say... We had one factory at 42 Telford Road, Lenziemill, Cumbernauld. The telephone number is Cumbernauld 0236 738310. Mr. Christopher Corden will be able to tell you if a visit can be arranged. A company called Soyco, based somewhere in London, is also making soy sauce. The authentic and original Worcester Sauce is made by Lea and Perrins Ltd. in Worcester; they belong to the Imperial Tobacco Co. via H.P. Sauce Ltd." Address: Reader in Applied Microbiology, Dep. of Bioscience and Biotechnology, Applied Microbiology Div., Univ. of Strathclyde, Royal College Building, 204 George St., Glasgow G1 1XW, Scotland. Phone: 041-552 4400.

6505. Hesseltine, C.W. 1984. Re: NRRL history and culture collection. Dr. Church, Dr. Raper, and Dr. Thom. Letter to William Shurtleff at Soyfoods Center, April 10. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "In 1984 the NRRL culture collection contained 77,000 strains of molds, yeasts, and bacteria. It was staffed by 6 full-time curators," of which two maintained the mold collection.

According to Dr. Raper, Dr. Church left USDA and went to a small college in Urbana, Ohio. Dr. Raper also provided a number of accounts about Dr. Thom.

"You might be interested to know that we have Dr. Thom's original notebooks and his entries of the Aspergilli and Penicillia. I also rescued a drawerfull of correspondence on soy food going back into the 20's and perhaps earlier about miso, shoyu, and other soy foods. For instance, there is one folder with nothing but Japanese and Chinese labels of soy foods." Address: Chief, Fermentation Lab., USDA/NRRC, Peoria, Illinois.

6506. Leviton, Richard. 1984. Re: Decision not to continue as a partner with Doug Fiske in Soyfoods magazine. Letter to Doug Fiske in Encinitas, California, April 13. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** Leviton has lost interest in the magazine but is still interested in a book he is writing on soy sauce (with William Shurtleff and Mark Fruin), new writing assignments for *East West*, and a consulting-writing project with Soyfoods Unlimited–all of which provide solid income. He apologizes to Fiske for leaving him stranded and offers to give Fiske the magazine if Fiske will assume all past debts. Paul Obis of *Vegetarian Times* has expressed interest in buying the magazine if Fiske wants to sell it. Last fall Leviton took his second trip to England and is thinking of returning to England to write about King Arthur.

6507. Fruin, W. Mark. 1984. Recent developments at Kikkoman (Interview). Conducted by William Shurtleff of Soyfoods Center, April 20. 1 p. transcript.
• ***Summary:*** Up until 1982, sales of Kikkoman shoyu in the USA had been growing at the rate of 10-15% a year. That year it slowed to only 2-3% a year due to two factors: A downturn in the economy and concern over sodium consumption. So the company began to import, then to make their mild (reduced salt) soy sauce, but they have not been promoting it much. Address: Palo Alto, California.

6508. Cusumano, Camille. 1984. Tofu, tempeh, & other soy delights: Enjoying traditional Oriental soyfoods in American-style cuisine. Emmaus, Pennsylvania: Rodale Press. x + 261 p. Illust. Index. April. 23 x 20 cm.
• ***Summary:*** Each chapter on a specific food describes (with illustrations and nutritional information) how to prepare that food at home, followed by many recipes. Contents: 1. The coming age of soyfoods cuisine. 2. Tofu. 3. Tempeh. 4. Soymilk. 5. Japanese soyfoods. 6. Whole dry soybeans. 7. Fresh green soybeans. 8. Soy sprouts. 9. Soy flour and soy grits. 10. Soy sauces. 11. The soyfoods pantry.

Scattered throughout the books are 1-page descriptions of various American soyfoods companies, each accompanied by a black-and-white photo. Photos show: Greg Weaver and two other workers at The Lotus Cafe, Rochester, New York (p. 83). Sharon Rose of Brightsong Light Foods, Petaluma, California (p. 142). Steve and Sara Yurman of The Soy Shop, Atlanta, Georgia (p. 169). A craftsman cutting tofu at Tomsun Foods, Greenfield, Massachusetts (p. 195). Toby Alves of Blair Island Natural Foods Restaurant, Eugene, Oregon. A worker making brown rice and tofu sandwiches at Wildwood Natural Foods, Fairfax, California (p. 235). The company is owned by Bill Bramblett, Paul Orbuch, and Frank Rosenmayer.

Note: As of Sept. 1989 some 25,688 copies of this book had been sold by Rodale Press. It was sold out and will not be reprinted. Address: Rodale Press, Emmaus, Pennsylvania.

6509. Jacobs, Susan. 1984. The Cultured Club: Fantastic fermented foods. *Vegetarian Times*. April. p. 44-45, 47-48.
• ***Summary:*** Includes a brief introduction to tempeh, fermented tofu, miso, natto, and tamari soy sauce.

6510. Rosoff, Peggy. 1984. Tamari and shoyu: Twin foods with a single heritage. *MacroMuse*. Spring. p. 8-9. [4 ref] Address: Rockville, Maryland.

6511. Shurtleff, William; Aoyagi, Akiko. 1984. Soyfoods industry and market: Directory and databook 1984. 4th ed. Lafayette, California: Soyfoods Center. 203 p. April. 28 cm. [325 ref]

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• ***Summary:*** Traditional soyfoods, which include tofu, tempeh, soymilk, miso, soy sprouts, soynuts and soy sauce accounted for $465 million in annual domestic retail sales. High-tech, modern soy protein foods, which include soy flour and grits, soy protein isolates and concentrates, extrusion textured soy flour and meat analogs, totaled $501 million. When the two sectors are tallied together, Americans spent $966 million in 1984 for soyfoods ... not including soy oil or exported products. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6512. **Product Name:** [Marinated Tofu. Pressed soy protein in a seasoned marinade].
Foreign Name: Tofu Marinniert (gepresstes Sojaeiweiss in pikanter Marinade).
Manufacturer's Name: Sojarei Ebner-Prosl.
Manufacturer's Address: Augasse 2, A-2500 Baden bei Wien, Austria. Phone: 02252/85101.
Date of Introduction: 1984, April.
Ingredients: Soybeans (from controlled cultivation), water, tamari (natural soy sauce), herbs, spices.
How Stored: Refrigerated.
New Product–Documentation: Brochure sent by Sojarei Ebner-Prosl, 1989, Oct. 12. "Fresh products." Label, received 1989, Oct. Red, black, green, and white on yellowish orange. 1.75 by 3.75 inches. For frying, baking, or grilling in soups, sauces or sandwiches. Made purely from plants (rein pflanzlich), of high quality. Without chemical preservatives, artificial colorings or flavorings. Logo is a green soybean plant against a white circular background. The term "aus kontrolliertem Anbau" (from controlled cultivation) refers to a loosely defined type of organically grown crop.

In the company's Jan. 1989 catalog this product is called Tofu Marinniert, is precooked, and sells retail in 150 gm. or 1,000 gm. weights. Each piece weighs about 80 gm. It is also sold to food processors in 1 kg, 30 kg, 60 kg, 100 kg, and 200 kg weights.

6513. Fruin, W. Mark. 1984. History of Higeta Shoyu Co. 4060 Amaranta Dr., Palo Alto, CA 94306. 4 p. May 15. Unpublished manuscript.
• ***Summary:*** Higeta shoyu is one of the oldest brands of soy sauce in Eastern Japan, tracing its history back to the Hamaguchi brothers who migrated at the beginning of the 17th century from Hiromura in Wakayama prefecture (across the river from Yuasa, the birthplace of shoyu in Japan) to Choshi on the eastern tip of the Miura Peninsula, which curves around the top of Tokyo Bay. The Black Current, which runs northward from Wakayama to Choshi, carried the Hamaguchi brothers' ships. They had the foresight to transport shoyu from its place of origin in western Japan to the newly opened vistas in the 17th century of Tokyo and the Kanto plain hinterland.

Around 1615 the elder of the two Hamaguchi brothers established Hiroya, a food distribution company in Tokyo (then Edo), while the younger brother ventured into the manufacture of Yamasa shoyu. For the next several centuries, Yamasa was noted as a good but local shoyu, indistinguishable from other local brands except for the access to the Tokyo market, which it enjoyed through Hiroya.

In 1914 the elder Hamaguchi joined with two other Choshi families, Tanaka Genba and Fukui Kichibei, to form the Higeta Shoyu Co. Ltd. Each family continued to produce their own brands of shoyu but around 1925 Higeta, which had been Tanaka Genba's brand, became the sole company brand. An ambitious plan of expansion of expansion was drafted to leapfrog Higeta over Yamasa its local rival. But Higeta became overextended and in 1937 Kikkoman stepped in and purchased 80% of Higeta's outstanding shares.

As Higeta was brought into the fold of Kikkoman companies, the involvement of the original investors changed. Tanaka Genba gradually withdrew. The Fukui family remained active in the company until the 1970s, but then they too withdrew. Only the elder branch of the Hamaguchi has stayed with the firm throughout the postwar era, and they now constitute the firm's top management and own some 30 percent of the company stock; the Mogi-Takanashi families from Kikkoman control another 20 percent (Kikkoman had to divest itself of Higeta during the economic deconcentration programs of the Allied Occupation of Japan); the wider Hamaguchi family claims another 20 percent, with the remaining shares widely scattered.

Higeta differs noticeably from the other major shoyu companies in Japan. Most importantly, since 1966 it has relied entirely on Kikkoman for its marketing, concentrating its energies instead on manufacturing. This has saved Higeta the expense of trying to establish its name as a national brand. It spends less than 3 percent of its sales on advertising, and most of this is directed toward institutional sales, where Higeta is strong. It dominates the market for shoyu in noodle shops in Tokyo, for example, claiming 80 percent of soba and udon shops. Overall, about 65 percent of sales go to such institutional customers and 35 percent of the home market.

Because Higeta has relied on Kikkoman for its marketing since 1966, most of its line of minor products, like miso and sauce, have nearly disappeared through the lack of an independent marketing effort. In fact, 90 percent of its sales come from the sale of shoyu, and 90 percent of the shoyu it makes is koi-kuchi [koikuchi] or Eastern style shoyu. In short, Higeta is a single-product company.

But the single-mindedness of Higeta is its strength. It leads Japan in shoyu production know-how. Higeta, for example, in cooperation with Hitachi Ltd. was the first maker to automate the koji culturing step of production, reducing

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the labor force required for this stage from 250 to 30 people. Indeed, Higeta, because of these strengths, is the third largest maker in Japan with 7 percent of the total production, even though the Higeta brand is only the fourth largest selling shoyu in Japan. This difference is explained by the fact that Higeta's production excellence is so well established than many firms buy filtered but unrefined shoyu from Higeta to brand as their own product.

Higeta's manufacturing superiority comes from the concentration of all of its production and brewing know-how in just one plant in Choshi since 1973. The highly efficient design of this factory means that Higeta has the lowest operation costs of any company in the industry and even Kikkoman is not above buying shoyu from Higeta to sell as its own. Nevertheless, the lack of marketing muscle means that most Japanese only sample Higeta in their favorite noodle shops.

Higeta is known among afficiandos for its quality. This is derived from a combination of color, aroma, and taste which is unique among large mass producers of shoyu. Address: Palo Alto, California. Phone: 415-858-2226 or 327-0857.

6514. **Product Name:** [Smoked Tofu]
Foreign Name: Tofu–Geraeuchert.
Manufacturer's Name: Albert Hess Tofuhaus Rittersheim.
Manufacturer's Address: Hauptstrasse, D-6719 Rittersheim, West Germany. Phone: 06351-43718.
Date of Introduction: 1984, May.
Ingredients: Tofu, soy sauce, sea salt.
Wt/Vol., Packaging, Price: 250 gm vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Form filled out by Albert Hess, 1988, Jan. 25. Production began June 1983. He makes 1,000 kg/month of the smoked tofu. Leaflet, 1988. "Tofu is marinated for about 8 hours in soy sauce ("Shoyusauce") and then cold smoked for 12 hours. For smoking, we use only natural beech wood and herbs." Form filled out by Albert Hess, 1988, Dec. 1. This product was introduced in May 1984. Label, 1988, received: 2.5 by 3.5 inches. Self adhesive. Black on green.

Label brought by Albert Hess of Albert's Tofuhaus. 1995, March 11. 2.5 by 4 inches. White and black on green. An illustration shows a large personified cake of tofu, with smiling face and arms held out.

6515. *Campus News* (*National University of Singapore*). 1984. Soy sauce success on campus. No. 27, p. 1. May.
• ***Summary:*** Dr. Yong Fook Min of the National University of Singapore Department of Biochemistry has developed a new process for making high-quality soy sauce in only 9 days–rather than the typical 90 days. It will soon be tested on a pilot plant production scale.

6516. Fruin, W. Mark. 1984. History of Yamasa Shoyu Co. 4060 Amaranta Dr., Palo Alto, CA 94306. 4 p. Unpublished manuscript.
• ***Summary:*** Yamasa is the second largest shoyu producer in Japan [after Kikkoman] and one of the oldest in Eastern Japan, having been established in 1645 [sic]. It is located in Choshi, the fishing village at the eastern tip of the Miura Peninsula, where Higeta Shoyu is likewise headquartered.

Note: The Hamaguchi family, originally from Kishu (today's Wakayama prefecture), started making Yamasa *brand* shoyu in Choshi in 1845. But not until 1928 was a company established or incorporated as Yamasa Shoyu Inc. (Source: *Shashi: Choshi Shoyu* (1972)).

Along with Higeta and Kikkoman (located in the city of Noda), Yamasa is one of the big three producers of shoyu in Chiba prefecture in Eastern Japan. Indeed, Higeta and Yamasa were founded by brothers who migrated to Choshi from Hiromura in Wakayama prefecture. One brother, the elder Hamaguchi, went into the food distribution business in Tokyo, opening an enterprise which continues today under the name of Hiroya. The younger brother began to make shoyu–among other endeavors, and that was the start of Yamasa Shoyu.

Yamasa's leadership in the shoyu industry was established early. In 1895, it founded a research laboratory for the study of mechanical and chemical improvements to the process of shoyu fermentation. This may have been the first industrial research laboratory in Japan. At the turn of the 20th century, Gihei Hamaguchi, then the eldest son of the principal owner of Yamasa and himself president of the company at a later time, traveled to England to study chemistry and fermentation technology. Address: Palo Alto, California. Phone: 415-858-2226 or 327-0857.

6517. Fruin, W. Mark. 1984. History of Marukin Shoyu Company. 4060 Amaranta Dr., Palo Alto, CA 94306. 5 p. Unpublished manuscript.
• ***Summary:*** Marukin is the smallest of the Big-5 shoyu makers in Japan, with about 3-4% of the market. It is best known for its location on the island of Shodoshima, in the inland sea. In 1809 Takahashi Bunuemon was the first of many to make shoyu on Shodoshima, inaugurating a local industry that boasted 400 producers by 1878. In fact, Takanashi was not the first but only the first for whom records of his shoyu brewing activities survive.

Marukin was the first joint stock company in Japan established for the purpose of making shoyu. This occurred in 1907 when 165 investors put up 300,000 yen in assets. Most of these investors were shoyu makers themselves, so that Marukin has had a strong communal flavor from the start as the largest amalgamated shoyu maker on Shodoshima island.

Although located in Western Japan and not too far from

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the Higashi Maru Shoyu Company. Marukin has always been a koi-kuchi [koikuchi] or dark-colored shoyu maker. The techniques of shoyu manufacture were learned, it is said, directly from Yuasa, the seaport in Wakayama prefecture which was the birthplace of shoyu. In all likelihood, the traffic in men and materials to and from Shodoshima during the late sixteenth century, when Osaka Castle was being built, provided the opportunity for learning shoyu manufacturing. By boat, Shodoshima is only a half-day's sail from Yuasa.

Once the techniques of shoyu production were established on Shodoshima, production and producers increased rapidly. From a relatively late start in the early nineteenth century, shoyu producers jumped to 400 in a hundred years and production climbed to rank Shodoshima as one of the major manufacturing sites in Japan. But with so many small makers in competition with one another, the industry was in disorder. Prices were not fixed, quality was poor, shipping schedules were not reliable, and branding was not dependable.

It was at this juncture that Marukin Shoyu was formed in 1907. With the establishment of a joint stock company, a rationalization and regularization of shoyu manufacturing could occur.

In 1905, a shoyu research laboratory was founded by Kinoshita Chujiro who would become President of the Marukin Shoyu Company when it was established two years later. Kagawa prefecture likewise opened a shoyu research facility in 1910.

In 1916, the two research institutes merged, thereby raising the quality of information concerning shoyu manufacturing to all interested parties. By 1930, Marukin Shoyu was being sold in Tokyo and Eastern Japan heralding its transformation from a local to a national manufacturer. In 1934 and again in 1962, three and then four smaller makers were bought up by Marukin Shoyu which aimed to consolidate its position as the fifth largest shoyu maker in Japan both by internal expansion as well as by the acquisition of other shoyu plants.

Even today, some 80 percent of Marukin Shoyu is carried to market by ship. The company owns and leases a fleet of 11-ton freighters which ply the Inland Sea and the coastal waters of Japan. Address: Palo Alto, California. Phone: 415-858-2226 or 327-0857.

6518. Frum, W. Mark. 1984. History of Higashimaru Shoyu. 4060 Amaranta Dr., Palo Alto, CA 94306. 5 p. Unpublished manuscript.

• ***Summary:*** Higashimaru is known in Japan as the major manufacturer of usukuchi or light-colored shoyu, which is also saltier than regular (koikuchi or dark-colored) shoyu. Light-colored shoyu is associated with Western Japan where it is widely used in the cuisine of Osaka and Kyoto, to season the popular white fish and fresh vegetables. As of 1984 some 80% of light-colored shoyu is sold in Western Japan, yet light-colored shoyu accounts for only about 13% of total shoyu sales in Japan.

Higashimaru is located in Tatsuno City, a castle town situated astride the Ibo River in Hyogo prefecture. Because of the favorable inland climate found near Tatsuno and because of the purity of the Ibo River waters, Tatsuno has long been famous for the manufacture of sake as well as shoyu. Indeed sake seems to have been Tatsuno's principal product during the 16th and 17th centuries, but at Nada City near Kobe on the Inland Sea became the leading center for sake brewing, Tatsuno gradually came to specialize in shoyu production.

Shoyu was first made in Tatsuno in about 1567 and by the late 17th century there were more than 100 shoyu makers in the castle town. Many have disappeared. Three of the most successful from among so many at the start of the 20th century were the Asai, Kataoka, and Nakahara households.

These three families joined in 1942 in a partnership to make shoyu. In 1949 they consolidated their efforts behind one brand, Higashimaru, which was formerly the Asai family's brand. Before the Asai family had taken over Higashimaru Shoyu in the mid-1800s, this shoyu had been made by the Lord of Tatsuno, the Daimyo Wakizaka. He had been transferred to Tatsuno in 1672 and was the only aristocrat known to be the founder of a shoyu company in operation today.

Somewhat after the time when Lord Wakizaka established a shoyu plant in Tatsuno, another local entrepreneur—it is not known who—added a step to the shoyu manufacturing process in Tatsuno that remains today one of the most distinctive steps of Higashimaru Shoyu. Around 1809, a sweet sake called amazake, a nonalcoholic rice wine, began to be added to the fermented shoyu (*kiage shoyu*) just before it passed to the pressing and pasteurization stages of production. Address: Palo Alto, California.

6519. **Product Name:** Live Soy Sauce, Live Miso, Barley (Mugi) Miso, Hacho (Soybean) Miso, Chick Pea Miso, Pea Miso, Peanut Miso, White Miso.
Manufacturer's Name: Great Life Products.
Manufacturer's Address: P.O. Box 2546, Escondido, CA 92025.
Date of Introduction: 1984, May.
Ingredients: Chick peas, rice koji, natural sea salt, soybeans (optional).
Wt/Vol., Packaging, Price: 1 lb plastic bags.
How Stored: Refrigerated preferably.
New Product–Documentation: Great Life Products catalog, 1984, May. * Limited editions (aged six months and over): Chick Pea Miso (chick peas, rice koji), Pea Miso (split peas, barley koji), Peanut miso (whole peanuts, barley koji), white miso (small navy beans, rice koji). • These misos sell out fast–Quantities are limited.

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Talk with Lino Stanchich. 2002. Sept. 11. See interview.

6520. Great Life Products. 1984. Great Life Products (Mail order catalog). P.O. Box 2546, Escondido, CA 92025. 4 p. 28 cm.
• ***Summary:*** Dark blue ink on light gray paper. Describes and gives weights and prices for the following products: Muramoto seasalt (from the unpolluted Pacific Ocean of Baja, California). Umeboshi. Umeboshi juice (umezu, ume-vinegar). Chiso condiment. Live soy sauce. Live miso. Barley (mugi) miso. Hacho (soybean) miso. * Limited editions (aged six months and over). Chick Pea Miso (chick peas, rice koji). Pea Miso (split peas, barley koji). Peanut miso (whole peanuts, barley koji), white miso (small navy beans, rice koji). * These misos sell out fast–Quantities are limited. Energy tea (Genkito). Address: P.O. Box 2546, Escondido, California 92025. Phone: (619) 743-6890.

6521. **Product Name:** Seitan Cutlets [Plain, or With Herbs], Seitan Wheat Balls.
Manufacturer's Name: Maritime Foods.
Manufacturer's Address: Portland, Maine.
Date of Introduction: 1984. May.
Ingredients: Wheat gluten.
Wt/Vol., Packaging, Price: Ziploc plastic bag.
How Stored: Refrigerated.
New Product–Documentation: Barbara and Leonard Jacobs. 1987. *Cooking with Seitan: Delicious Natural Foods from Whole Grains*. Current U.S. seitan manufacturers include Maritime Foods in Portland, Maine. Rosemary Whittaker is currently producing 50 pounds of seitan each week. Practically all of this seitan is sold in the Portland market. She also makes fresh soymilk. She uses local Maine kombu in the seitan and grinds the flour fresh for each batch. "Rosemary has been experimenting with various alternatives to chunk seitan. This company also supplies seitan 'wheat balls' and 'prepared breaded-cutlets.'"

Talk with Rosemary Whittaker. 1991. Nov. 17. She and her husband Dwight started Maritime Foods in the spring of 1984. Their daughter, Emily, was born in November of that year. Their first product was soymilk. She learned how to make seitan at the Kushi Institute. They started making seitan (primarily in a cutlet form) shortly after the soymilk was launched, then they launched the balls or chunks, all during 1984 before Emily was born. The seitan was a great product. The best-selling product was the cutlets, made as follows: Cut off balls of raw wheat gluten. Use a rolling pin to quickly roll them out ¼ inch thick. Simmer these in a either one of two broths: (1) the standard seitan broth containing water, tamari, kombu, and ginger; or (2) this broth plus garlic and herbs. The finished cutlets were packed in plastic Ziploc bags with a self-adhesive label. The company never made any breaded cutlets or deep-fried cutlets. They discontinued the business in about 1987, because they could not find a refrigerated distributor for their soymilk, because Dwight (a food scientist) had a stroke and she had 2 babies.

6522. **Product Name:** Falafels (Spicy Mideastern Patties).
Manufacturer's Name: Soy City Foods.
Manufacturer's Address: 2847 Dundas St. West, Toronto, ONT, M6P 1Y6, Canada. Phone: 416-762-1257.
Date of Introduction: 1984. May.
Ingredients: Soy mash [okara], chick peas, millet, sesame seeds, tamari, soy oil, potato starch, spices, seasonings.
Wt/Vol., Packaging, Price: 350 gm box.
How Stored: Frozen.
Nutrition: Per 100 gm: Protein 7.6 gm, carbohydrates 18.4 gm, fat 15.1 gm, calories 240.
New Product–Documentation: Label. Received 1988, Aug. 8.5 by 4.5 by 2 inches. Printed on stiff paper box. Orange and black on yellow with color illustration of an oasis plus camels, tent, and palms. Text and recipes in English and French. "Ready for the oven. Heat and serve." On side panel: "Health is the most precious thing you have. Sustain it by eating good food." Recipe on back for Traditional Falafel Sandwich. Letter from Jon Cloud. Introduced in the spring of 1984. Later he said it started in 1983.

6523. Claiborne, Craig. 1984. Q&A. *New York Times*. June 6. p. C6.
• ***Summary:*** Q. A reader recently read a novel about Victorian England and a relish or condiment named "Windermere catchup" was mentioned. "Are you familiar with this?"

A. Yes. It was a type of mushroom ketchup made with or flavored with horseradish.

"The Malaysians claim the original [ketchup] was theirs and ketjap manis [sweet Indonesian soy sauce], used throughout Indonesia, is available in specialty food shops all over the world." Today, the "most famous ketchup is, of course, tomato ketchup." Address: Food editor, the Times.

6524. Shurtleff, William; Aoyagi, Akiko. 1984. History of soy sauce, shoyu, and tamari. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 118 p. June 6. Unpublished typescript.
• ***Summary:*** A comprehensive history of the subject. Contents: What is soy sauce? Etymology. World overview. Part I: History of soy sauce in China and Taiwan. Early Chinese soy sauces (shih-you and jiangyou). The 1800's. 1900-1948. 1949-1980's (People's Republic of China). Taiwan. Hong Kong. Part II: History of soy sauce in Southeast Asia and Korea. Dissemination and common characteristics. Association of Southeast Asian Nations (ASEAN)–general. Philippines (1912-). Thailand (1974-). Malaysia (1970-). Singapore. Indonesia. Vietnam. Korea. Part III: History of shoyu in Japan. Hishio (jiang), tamari, and other forerunners of shoyu (700-1600). The development

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of shoyu (1500-1700). Standardization of the shoyu formula (1716-1867). The rise of shoyu in Japan (1750-1867). Overview of origins. Shoyu during the Meiji period (1868-1911). Shoyu from 1912-1945. The postwar period and modern times (1945-1981). Part IV. History of soy sauce in Europe. Part V. History of soy sauce in Australasia and the Pacific. Part VI. History of soy sauce in the United States. Part VII. History of soy sauce in Latin America, Africa, the Indian Subcontinent, and the Middle East.

The period during World War I was one of consolidation for the shoyu industry. In 1914 three of the larger manufacturers at Choshi (Higeta, Jigamisa, and Kagidai) merged to become Choshi Shoyu Co. Ltd. In 1917 eight (later nine) major manufacturers in Noda, all related by descent or marriage, withdrew from the Noda cartel and joined to form a corporation, the Noda Shoyu Company, Ltd., which later became Kikkoman Inc. The company began operations on 1 January 1918, and quickly modernized its entire organization. In 1925 it restructured itself by amalgamating four related companies under the control of a holding company, thus greatly increasing its capital and scope. In 1918 Choshi Shoyu Co. changed from a limited partnership to a stock corporation and adopted a common trademark, Higeta. The Hamaguchi family, originally from Kishu, which ran Yamasa in Choshi, chose not to join the Choshi Shoyu Co. Rather, in 1928 they incorporated as the Yamasa Shoyu Co., Inc. Address: Lafayette, California. Phone: 415-283-2991.

6525. Scottish Development Agency. 1984. Display ad: Scotland's answer to Japanese whiskey (Ad). *Economist (London)*. June 9. p. 62. Issue 7345.
• ***Summary:*** "Tartan soy sauce. A natural product that tastes as god as the finest Japanese equivalent.

"But it takes four weeks to ferment instead of three years ands is very competitively priced.

"It used to be the Scots who came up with the innovation, and the Japanese with the development.

"And the profit. (Look what they've done with our 2-stroke engine, let alone our television.)

"But we've been getting our act together. Invention and development and manufacture.

"Scotland's eight universities and 55 technical colleges now work so closely with industry that almost everything they innovate goes into production."

"Strathclyde University have 50% of the equity."

Across the top of the ad, above the title, we read: "The world's fastest fermenting soy sauce developed by Dr. Brian Wood at the Biosciences Department of Strathclyde University and first produced in 1982 by Bean Products Limited of Cumbernauld."

Note: The brand-name of the soy sauce was apparently not "Tartan soy sauce." Address: 17 Cockspur St., London, SW1Y 5BL. Phone: Freefone Scotland.

6526. **Product Name:** Vegetarian Paté (Made with Tempeh).
Manufacturer's Name: 21st Century Foods Inc.
Manufacturer's Address: 30A Germania St., Jamaica Plain, MA 02130. Phone: 617-522-7595.
Date of Introduction: 1984. June.
Ingredients: Organic soy tempeh, sesame tahini, carrots, parsley, onions, lemon juice, olive oil, garlic, tamari, sea salt.
Wt/Vol., Packaging, Price: 6 oz glass jar.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Label. 1987, undated. 4 by 2 inches. Red and black on white. "Ready to eat. Gourmet Organic." Posner. 1987. 21st Century Whole Foods Cook Book. Inside rear cover. Talk with Rudy Canale. 1988. Sept. 13. The invoice for printing the labels for this product is dated June 1984.

6527. **Product Name:** New York Soy Deli Tofu Spread.
Manufacturer's Name: Appropriate Foods, Inc.
Manufacturer's Address: 137 New Hyde Park Rd., Franklin Square, Long Island, NY 11010.
Date of Introduction: 1984. June.
Ingredients: Organic tofu, onion, umeboshi [salt plum], tahini, tamari, herbs.
Wt/Vol., Packaging, Price: 7 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1984. New York Soy Deli Brand. 1.5 by 3 inches. Black on blue. Interview with Robert Werz. 1987. Sept. 9.

6528. Beuchat, Larry R. 1984. Fermented soybean foods. *Food Technology* 38(6):64-70. June. [31 ref.]
• ***Summary:*** Discusses soy sauce, miso, and tempeh, and gives details of their fermentation processes. Address: Prof., Dep. of Food Science, Univ. of Georgia, Agric. Exp. Station, Experiment, GA 30212, USA.

6529. Dai, Yautian. 1984. [Study of iron fortification of Chinese soy sauce. I. A preliminary study of ferrous sulphate fortified Chinese soy sauce]. *Ying Yang Hsueh Pao (Acta Nutrimenta Sinica)* 6(2):149-53. June. [7 ref. Chi, eng]
• ***Summary:*** Soy sauce, which is a widely consumed condiment in China, could be an ideal vehicle for iron fortification. "Iron, as ferrous sulphate, added to Chinese soy sauce (Seagull brand, produced in Shanghai), in concentration up to 75-100mg/dl, had a good solubility throughout an observation period of 16 weeks. There were no significant changes in pH, iron content and no detectable changes in organoleptic characteristics." Address: Dep. of Nutrition and Food Hygiene, Faculty of Public Health, Beijing Medical College, Beijing, China; Food Detection Research Inst. of Commerce, Beijing, China.

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6530. **Product Name:** Shoyu, and tamari.
Manufacturer's Name: Soy Source (Distributor) Made in America
Manufacturer's Address: P.O. Box 334, Franklin Square, Long Island, NY 11010
Date of Introduction: 1984. June
New Product–Documentation: Labels. 1984. June 15. 3 5 by 8 inches. Shoyu is red and black on yellow. Tamari is red and black on grey. "The finest American made soy sauce." At top of label in Japanese characters: "Daizu no moto." Spot in Cook's magazine. 1985. July/Aug. Soya Bluebook. 1986. p. 105. "The Soy Source Soy Sauce." Gives address as 137 New Hyde Park Rd., Franklin Square, New York.

6531. **Product Name:** BBQ Tofu
Manufacturer's Name: Swan Gardens.
Manufacturer's Address: Miami, Florida 33127
Date of Introduction: 1984. June
Ingredients: Tofu, tomato sauce, honey, onion, mustard, nutritional yeast, molasses, soy oil, soy sauce, herbs and spices
Wt/Vol., Packaging, Price: 10 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1983. 3 by 4 inches. Self adhesive. Red, black, and white on silver. Swan surrounded by flowers and lotus illustration. "No preservatives." Appropriate Foods Catalog. 1984. Summer.

6532. **Product Name:** Yeasted Baked Tofu.
Manufacturer's Name: Swan Gardens.
Manufacturer's Address: Miami, Florida
Date of Introduction: 1984. June
Ingredients: Tofu, nutritional yeast, soy sauce, spices.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1984. 2 5 by 3.75 inches. Self adhesive. Red, green, black, and white on tan. Swan surrounded by flowers and lotus illustration. "No preservatives." Address on label: Swan Gardens, Inc., Decatur, Georgia 30030. Appropriate Foods Catalog. 1984 Summer.

6533. Watanabe, Tokuji, Kishi, Asako. 1984. The book of soybeans. Nature's miracle protein. New York, NY: Japan Publications. 191 p. June. Illust. General index. Recipe index. 26 cm. [21 ref]
• ***Summary:*** Contents: Introduction. Part 1. General information: 1. Characteristic traits: Agronomic and other biological characteristics, physical properties, chemical properties, soybean protein, properties of soybeans as food material. 2. Current ways of using and processing soybeans. Throughout the world, traditional ways of using and processing, new soybean food products. 3. Tofu and other nonfermented soybean food products: Tofu, deep-fried tofu, dried-frozen tofu, soy milk, yuba, roasted soy flour (kinako), soybean sprouts. 4. Miso and other fermented soybean products: Miso, natto, Hama-natto (tera-nattò), soy sauce, sufu, tempeh. 5. Other ways of eating soybeans–Simple traditional Japanese foods: Parched soybeans, boiled soybeans (*budo-mame; hitasahi mame*), beaten and mashed [or ground] soybeans (*go*, or (from edamamé) *zunda or jinda*), molded soybean mash (*jinta-dôfu*), molded mashed soybeans and rice flour (*shitogi*), soybean soybean-mash paste. 6. New soybean protein products.

Note 1. This is the earliest document seen (Nov. 2008) that mentions *zunda*. The text (p. 84) reads: "When fresh green soybeans (edamame) are used in cooking, they are boiled for from ten to twenty minutes, ground, and flavored with salt, sugar, and soy sauce. The resulting dish is called *zunda* or *jinda*."

Note 2. Zunda is a healthy and tasty snack or treat made from mashed edamamé. It is sweet, rich in protein, high in fiber and emerald green. It is said to have originated hundreds of years ago in Japan in Miyagi prefecture. In and around Sendai (capital of Miyagi prefecture) one can find many shops and booths that sell zunda cakes, zunda mochi treats, and zunda shakes, all made from edamamé (green vegetable soybeans). One well-known company in Japan that markets delicious zunda products is Zunda Saryo.

Part 2. Cooking with soybean food products: Tofu, yaki-dofu, kori-dofu, nama-age, abura-age, gammodoki, yuba, natto, miso, soy milk, soybeans, bean sprouts. Afterword. Bibliography.

In the chapter on tofu, pages 43-44 discuss okara or *unohana* (the residue remaining after soy milk production), a photo shows it in a glass bowl. "Though it formerly appeared on many Japanese tables seasoned and cooked with vegetables, today it is most often fed to animals. As the number of animals raised in urban and suburban areas decreases, however, tofu manufacturers are finding it harder to dispose of residue."

Page 99 notes of tofu: "At a certain temple in Kyoto is a plaque bearing the following inscription, which, while comparing this food to religious faith, clearly shows the esteem in which the Japanese people hold tofu. 'Religious faith should be like tofu: it is good under any circumstances. It is good boiled, grilled, or fried. Raw, chilled, served with soy sauce and other seasonings, it is good with steamed rice. Simmered in hot water and flavored, it is good with sake. Because it is soft, old people and sick people welcome it, but children and young people like it too. Men like it, women like it; poor and rich both like it. Though common, it has elegance enough to find a place in the upper class.

"'It cuts clean and well for use in clear broths. It is good in the meatless diets of religious training. It can be crushed for use in miso soup. It is used all the time and in all seasons. It is inexpensive yet numbered among the delicious treats. It is welcomed everywhere, in mountains as well as in big

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cities. It is well received at dinners for dignitaries and guests yet is convenient enough for college students who do their own cooking. Women especially should be like tofu. The mature and cultivated person should be tender, yet firm, like tofu. Though apparently tasteless, it is delicious. Though apparently ordinary, it is extraordinary.'"

Other ways of eating soybeans (p. 83-84): (1) Parched– "Parched gently in unglazed ceramic dishes made for the purpose," then tossed by people at Setsubun in February around their houses as they chant "'Demon out! Good luck in!' Then they pick up the beans and eat them. Parched soybeans are included in some varieties of *mochi* (glutinous rice cake) and in *okoshi* a confection made of puffed rice bound together with sugar syrup. In the past they were eaten with salt, miso, or soy sauce."

Note: In the USA, parched soybeans are called "dry roasted soynuts."

Tables show: (1) World production of soybeans (1977-1982). (2) Price trends in dollars per ton for wheat, soybeans, and corn (1970-1981). (3) Soybean yields in the USA and Japan (1974-1981). (4) Chemical composition of soyfoods Tofu, abura-agé, kôri-dôfu, yuba, kinako, soybean sprouts, nattô, miso (dark yellow), soy sauce (common), soybean (Japanese). (5) Statistics on production of modern soybean products in Japan (1975-1981). (6) Annual production and prices of modern soy protein products in the USA (May 1983).

Japan once produced a million tonnes (metric tons) of soybeans annually. This figure decreased dramatically during World War II. After the war, as soybean imports from the United States steadily increased, Japan's domestic crop gradually fell to the level of no more than 100,000 tonnes. In 1977 it was 111,000 tonnes, yet by 1982 it had jumped to 226,000 tonnes as rice acreage was reduced.

All photos are black and white. Figures show: (2) Line drawing of soybean plant with flowers and leaves. (2) Cross section of soybean seed-coat and cotyledon. (3) Graph of protein solubility (NSI) of defatted soybean meal at different pH values. (4) Graph of protein solubility (NSI) of defatted soybean meal at different concentrations of calcium chloride. (5) Graph of relationship between time and temperature of soaking soybeans in water (colder water temperature requires longer soak time). (6) Flow sheet for making regular tofu. (7) Photo of regular (*momen*) "cotton tofu." (8) Line drawing of grinder (horizontal type) used with soaked soybeans when making tofu. (9) Photo of continuous filter for soy-milk preparation. (10) Photo of small-scale soy-milk processing plant. (11) Line drawing of molding box [forming boxes with lids] for making regular tofu. (12) Photo of yaki-dofu [grilled tofu]. (13) Photo of okara in a glass cup. (14) Line drawing of molding box [forming box] for silken tofu. (15) Photo of silken tofu. (16) Flow sheet for packaged tofu production [GDL]. (17) Photo of packaged tofu in package. (18) Flow diagram of large-scale process for making tofu and abura-agé with 26 pieces of equipment labeled. (20) Flow diagram of continuous process for making packaged tofu [GDL]. (21) Photo of 2 pieces of abura-agé. (22) Photo of deep fryer for making abura-agé. (23) Photo of nama-agé [deep fried tofu cutlet]. (24) Photo of two types of ganmodoki. (25) Line drawing for tofu kneader for ganmodoki production. (26) Photo of kôri-dofu [dried frozen tofu]. (27) Flow sheet for making dried-frozen tofu. (28) Flow diagram of process for making large-scale dried-frozen tofu. (29) Photo of aseptic carton and glass of soy milk. (30) Flow sheet for making aseptically packaged soy milk. (31) Photo of 5 different forms of dried yuba. (32) Photo of kinako in two clear glass bowls. (33) Photo of soybean sprouts in a woven bamboo basket. (34) Flow sheet for making miso. (35) Three different types and colors of miso on 3 bamboo rice paddles (*shamoji*). (36) Line drawing of cut-away view of traditional pressure cooker (*koshiki*) for rice cooking. (37) Diagram of continuous rice cooker with 7 parts labeled. (38) Line drawing of *Aspergillus oryzae* with conidia (spores), sterigmata, and mycelium labeled. (39) Photo of pieces of koji. (40) Diagram of modern fermentation room for making koji. (41) Cut-away view of miso fermenting in a wooden vat with stone weights above vinyl film on top. (42) Line drawing of a mashing machine for miso. (43) Photo of natto in rice straw wrapper and polystyrene tray. (44) Cross sectional view of pressure cooker for soybeans. (45) Line drawing of rotating mixer to combine cooked soybeans with pure-cultured *Bacillus natto*. (46) Photo of soy sauce table dispenser. (47) Flow sheet for making Japanese soy sauce (shoyu). (48) Transparent view of crusher (roller) for roasted wheat in making soy sauce. (49) Photo of modern stainless steel fermentation tanks / vats (indoors). (50) Photo of a jar and a cup of sufu [fermented tofu]. (51) Diagram showing relationships between modern soy protein foods.

Note: Surprisingly, edamamé, one of the most popular soyfoods in Japan, is mentioned only once, in passing (p. 84) in this book.

Photos on the rear cover show Tokuji Watanabe and Asako Kishi. A brief biography of each is given.

Tokuji Watanabe. Born in 1917 in Tokyo, he graduated from the Faculty of Agriculture of Tokyo University in 1941, with Doctor of Agriculture. In 1945 he entered the National Food Research Institute (NFRI), of which he became director in 1971. In 1977 he resigned that position and became a professor at the Kyoritsu Women's University, where he now teaches. Address: 1. D. Agr., Kyoritsu Women's Univ., Tokyo.

6534. Willigen, John van, Stoffle, Richard. 1984. The Americanization of shoyu: American workers and the Japanese employment system. *Anthrpology and International Business. Studies in Third World Societies* No. 28. p. 125-62. Chapter 10. June. (Serrie Hendrick, ed. Dep. of Anthropology, College of William and Mary, Williamsburg,

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Virginia). [21 ref]
• ***Summary:*** Contents: Introduction. The nature of the Japanese employment system. Historical background of Kikkoman Foods, Inc. The Kikkoman-Walworth employment system. The organization of the Walworth plant. Recruitment. The Kikkoman training strategy. Evaluation and promotion. Benefits: Direct and indirect. Japanese perceptions of the American worker and work situation. One manager's view of the American worker and job situation. A note on the Kikkoman ethos. Summary and conclusion. References.

Note: The author is an "applied anthropologist." Address: 1. Dep. of Anthropology, Univ. of Kentucky, Lexington, KY 40506; 2. Div. of Social Sciences, Univ. of Wisconsin, Parkside. Phone: 606-257-6920.

6535. Frum, W. Mark. 1984. History of Yuasa Shoyu and Tezukuri Shoyu Co. 4060 Amaranta Dr., Palo Alto, CA 94306. 3 p. Unpublished manuscript.
• ***Summary:*** Yuasa was the birthplace of shoyu in Japan and the first major center of shoyu production. Today only one company, Tezukuri Shoyu, makes soy sauce in a town where 150 years ago more than 10% of the population were shoyu makers. Tsuneo Kanno, now head of the company, is the fifth generation of Tezukuri Shoyu brewers in Yuasa. He explained the decline of the soy sauce industry in this town in the following way: "Shoyu brewers remained too small too long, and they failed to pay attention to marketing. Even as recently as 1952, there were 23 shoyu makers in Yuasa, but now there is only me." In 1954 he was called back from Waseda University to take over the family business. "With a labor force of 10, 3 family members and 7 paid workers, Kanno produced 149 kiloliters of shoyu in 1983. Most of this, 110 kiloliters, was made from whole soybeans grown in Mimasa, near Okayama City. The wheat was also locally grown in Shiga. Only the salt was imported."

"Today all that is left of the birthplace of shoyu in Japan are Tezukuri Shoyu and a small museum. In 1983, Kanno opened the only museum in Japan devoted exclusively to the history of shoyu. About 100 visitors a month come to the museum to see, among other things, the foot-driven, wooden wheat-cracking machine used 150 years ago and to sample Kanno's Tezukuri Shoyu." Address: Palo Alto, California. Phone: 415-858-2226 or 327-0857.

6536. **Product Name:** Yamaki Organic Shoyu
Manufacturer's Name: Mountain Ark (Importer). Made in Japan.
Manufacturer's Address: 120 South East St., Fayetteville, AR 72701
Date of Introduction: 1984. July.
Wt/Vol., Packaging, Price: Glass bottle
New Product–Documentation: Summer Flyer. 1984. June/July. p. 2. "Aged 2 years, unpasteurized. 16 or 32 oz bottle."

6537. **Product Name:** Yamaki Organic Nama Shoyu. Twice Fermented.
Manufacturer's Name: Mountain Ark (Importer). Made in Japan.
Manufacturer's Address: 120 South East St., Fayetteville, AR 72701.
Date of Introduction: 1984. July.
Wt/Vol., Packaging, Price: Glass bottle
New Product–Documentation: Summer Flyer. 1984. June/July. p. 2. "Aged 4 years, unpasteurized. 16 or 32 oz bottle."

6538. *Natural Foods Merchandiser.* 1984. Macrobiotics: Varied trends boost sales. July. p. 1, 85-86, 88, 90, 93-94.
• ***Summary:*** There is a definite upward trend in sales of macrobiotic foods. Macrobiotics is both a diet and a philosophy. "The basic foods are whole grains, miso, soy sauce, tofu, seaweed, pasta, fresh vegetables, and various types of pickled vegetables. Dairy products, honey, and most animal foods are not used or are used minimally."

6539. Nunomura, N.; Sasaki, M.; Yokotsuka, T. 1984. Shoyu (soy sauce) flavor components: Neutral fraction. *Agricultural and Biological Chemistry* 48(7):1753-62. July. [14 ref]
Address: Soy Sauce Research Lab., Kikkoman Corp., 399 Noda, Noda-shi, Chiba 278, Japan.

6540. *Progressive Grocer.* 1984. New items make sauce sales simmer. July. p. 157-58.
• ***Summary:*** In 1983 supermarket sales of soy and teriyaki sauce were $45.40 million (gross profit $11.76 million), accounting for 2.61% of the sauce category sales (2.81% of category gross profits; the average retail gross profit margin is 25.9%). The best-selling sauce types are spaghetti sauce (27.77% of the category), ketchup (16.23%), meat sauce (14.38%), dry mixes and seasonings (10.68%), and Mexican sauces (7.84%).

6541. **Product Name:** Homestyle Tofu "No Egg" Salad.
Manufacturer's Name: Sonoma Specialty Foods
Manufacturer's Address: 2317 Bluebell Dr., Santa Rosa, CA 95403. Phone: 707-525-8822.
Date of Introduction: 1984. July.
Ingredients: Tofu (organic soybeans*, water, nigari), soy oil, soy milk, celery, relish, tamari, mustard, vinegar, nutritional yeast, natural herbs and spices, sea salt, and honey. * Grown in accordance with CA H&S Code 26569.11.
Wt/Vol., Packaging, Price: 8 oz or 15 oz plastic tub.
How Stored: Refrigerated.
Nutrition: Per 2.66 oz.: Calories 105, protein 8.1 gm, carbohydrates 1 gm, fat 6.5 gm, fiber 1.3 gm, sodium 0.80 gm, cholesterol 0.
New Product–Documentation: Label. 1987. 4.5 inches

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diameter. Black, green and yellow on white plastic lid. 15 oz. "Improved! Non-Dairy. Cholesterol Free. Ready to Eat on Sandwiches, as a Dip & in Salads. Natural. No Preservatives. Nutritious. Delicious. Kosher." Illustration of a cottage in front of a picket fence.

6542. Hansen, Barbara. 1984. Satay's nod to the games: Let's eat out. *Los Angeles Times*. Aug. 2. p. I29.
• ***Summary:*** The spirit of the Olympic Games in Los Angeles has even touched an Indonesian restaurant in Alhambra. "Through Aug. 31 the Indonesia Satay House [208 E. Valley Blvd.] will serve all customers a dish of *cendol* (pronounced chendol) in recognition of the Games."

Under new management, the restaurant's menu has a Sumatran flavor, which means the dishes are less sweet than in Java.

The chicken dishes are memorable. "*ayam panggang kecap* is chicken mildly seasoned with sweet Indonesian soy sauce [perhaps kecap manis?]."

The Javanese *ketoprak* contains "puffy squares of fried tofu and crumbled *krupuk* (Indonesian style chips)."

"*Tahu goreng* (fried tofu) features crisp, fried tofu blocks propped up against a mixture of shredded lettuce and bean sprouts. This arrangement is sprinkled with chopped toasted peanuts and seasoned with a sweet soy sauce dressing."

6543. Chico-San. 1984. Educational / Professional price list. Chico, California. 6 p. 28 cm. Plus cover later dated 15 Aug. 1984 from Peter Milbury and Joel Wollner.
Address: P.O. Box 810, 1264 Humboldt Ave., Chico, California 95927. Phone: 916-891-6271.

6544. *Chicago Tribune*. 1984. Fresh plums plus versatile tofu equals a teriyaki treat. Aug. 16. p. G11A.
• ***Summary:*** "Tofu (soybean curd) is as versatile as a black suit. Its neutral flavor will absorb others, its firm though custardlike texture can be skewered or crumbled." Gives a recipe for Plum teriyaki with tofu or chicken. A large photo shows the prepared dish.

6545. Pollack, A. 1984. Technology: The Japanese challenge. Part 18. Japan's biotechnology effort. *New York Times*. Aug. 28. p. D1, D4.
• ***Summary:*** Reprinted in the San Francisco Chronicle. Sept. 4. p. 54, 58. And in The Straights Times (Singapore), Sept. 1, p. 22. Address: Tokyo.

6546. **Product Name:** Angostura Soy Sauce. Low Sodium.
Manufacturer's Name: Angostura International Ltd. (USA Div.).
Manufacturer's Address: Ramsey, New Jersey.
Date of Introduction: 1984. August.
New Product–Documentation: Spot in Specialty Food Marketing. 1984. Aug. The soy sauce has 62% less sodium than regular soy sauce and the Worcestershire has 72% less sodium than its regular counterpart. The company is 160 years old.

Spot in *NFM's New Product Review*. 1998. Fall. p. 12. Angostura Naturals Soy, Teriyaki, and Worcestershire Sauces. Lower sodium than competing brands and Kosher Certified.

6547. **Product Name:** Angostura Worcestershire Sauce. Very Low Sodium (Vegetarian).
Manufacturer's Name: Angostura International Ltd. (USA Div.).
Manufacturer's Address: Ramsey, New Jersey.
Date of Introduction: 1984. August.
Ingredients: Vinegar, water, molasses, corn syrup, sugar, natural and artificial flavors (not derived from animals), salt.
Wt/Vol., Packaging, Price: Bottle.
How Stored: Shelf stable.
New Product–Documentation: Spot in Specialty Foods Marketing. 1984. Aug. The soy sauce has 62% less sodium than regular soy sauce and the Worcestershire has 72% less sodium than its regular counterpart. The company is 160 years old.

Letter in *Vegetarian Times*. 1991. Dec. p. 10. "Vegetarian Worcestershire." Jane M. Clark of Hollis Center, Maine, states: "After a diligent two-year search I found a commercial vegetarian worcestershire sauce made by Angostura. I wrote to the company, which confirmed that this product is totally free of anchovies and other animal products." It is available in "the major supermarket chain in the Northeast."

Talk with Carol Wiley at *Vegetarian Times*. 1991. Nov. 21. The USA Division has moved to: 1745 Elizabeth Ave., Cranford (Rahway), New Jersey 07065. Phone: 908-272-2200. The label is light brown, and only the "very low sodium" variety is available. The company also makes Angostura Aromatic Bitters. Note that no soy sauce is used as an ingredient.

Talk with Angostura International in Cranford. 1991. Nov. 27. Worldwide, this product was first made in Cranford, New Jersey, in 1984. The company also makes a lime juice, a grenadine syrup, and a bloody mary seasoning in Cranford. The Angostura Aromatic Bitters are made in Trinidad, but bottled in New Jersey. Other divisions are in Canada and Trinidad. The company's main business is distilling/making rum; they are one of the largest manufacturers of rum in the world. The company is 166 years old (founded 1824) and its first product was Angostura Aromatic Bitters, which is a secret combination of herbs and spices, water and alcohol, that is used as a flavor enhancer in alcoholic beverages. For years, a couple of dashes have been added to the Manhattan, Old Fashioned, Champaign Cocktail, etc. The famous bitters were developed from plants in the town

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of Angostura (probably Colombia) by one Dr. Siegert, who was a physician in the army of Simon Bolivar (lived 1783-1830) in the 1820s. They were found to contain medicinal/therapeutic properties: to cure hiccups in 30 seconds, put some biters on a wedge of lemon and suck the lemon. In the mid-1800s the company moved to Trinidad, when the political situation in South America got to "hot." The bitters are "the oldest imported item continuously sold in America," where they have been sold for 110 years (since about 1881). It is also one of the few U.S. products (along with Coca-Cola, Hershey chocolate, Ivory soap) that has lasted more than 100 years. Indeed, the product contains no anchovies or other animal products.

6548. Eden Foods, Inc. 1984. Just the best [Edensoy, Eden tamari, brown-rice miso, barley miso] (Ad). *Soyfoods*. Summer. p. 37.
Address: Clinton, Michigan 49236.

6549. Finley, David; Goldberg, Ray. 1984. Kikkoman Corporation. Unpublished Harvard Business School Report. 33 p. No. 9-585-102. [10 ref]
• ***Summary:*** A ten year update on the original 1974 Harvard Case Study of Kikkoman and one of the best insights available into Kikkoman's history and operations (although some of the data has been disguised for competitive reasons). Kikkoman sales in 1982 were about $547 million.

Contents: Early diversification–The wine industry. Company history. Soy sauce production. The soy sauce industry. Structural change. Kikkoman strategy. Expanding soy sauce sales in Japan. Diversifying into other food products (Kikko Foods was established in 1961). Development of the U.S. market. New businesses (Restaurant, health food, and leisure). Technological innovation. Final considerations.

Exhibits. 1. 30 top Japanese food companies in FY (Fiscal Year) 1982, with sales. (1) Kirin Brewery, (2) Suntory, (5) Yuki-jirishi / Snow Brand Milk Products, (6) Ajinomoto, (8) Meiji Milk Products, (9) Nisshin Flour Milling, (10) Morinaga Milk, (19) Showa Sangyo, (20) Nisshin Oil, (23) House Food, (25) Kikkoman.

3. Quantity of soy sauce produced and market share of major Japanese manufacturers. 1982 soy sauce market share was Kikkoman 30.4%, Yamasa 8.9%, Higashimaru 4.6%, Higeta 3.0%, and Marukin 2.5%. Thus the top 5 had 49.4% of the market. 5. Change in per capita food intake (1975-79). 6. Kikkoman financial data. 8. List of main products. 9. World per capita wine consumption by country. France is tops with 90 liters/person/year. 11. Growth through diversification. In 1964 soy sauce accounted for 87% of Kikkoman's sales, in 1983 for 59%. 12. 1980 Asian population of the U.S. by state. Total: California 1,253,987. Hawaii 583,660. New York 310,531. Illinois 159,551. Texas 120,306. New Jersey 103,842. Washington state 102,503. Oriental immigrants to the USA 1972-81. Total: 1,794,682. From Philippines 375,517. Korea 290,322. Vietnam 233,274. China and Taiwan 213,908. Address: 1. Research Associate; Prof., Harvard Business School, Boston, Massachusetts 02163.

6550. Fiske, Doug. 1984. Soyfoods in the supers [supermarkets]. *Soyfoods*. Summer. p. 18-23.
• ***Summary:*** Gives an in-depth look at the marketing strategies of Legume Inc., Tomsun Foods, Eden Foods, Vitasoy, Tempehworks, Nasoya, Eden Foods, Soyfoods of America (Furama and Naturespring brands), White Wave, Hinode Tofu Co., Tofu Time (Tofutti), and Nasoya.

Eden Foods of Clinton, Michigan, has been involved with natural foods for 15 years, but only within the past year have they been able to establish a beachhead in supermarkets with their miso, soymilk, and soy sauce products. They are presently selling through 5 chains representing about 50 individual stores. Supermarket sales now account for about 10% of their $7.5 million yearly sales.

6551. *Food Engineering*. 1984. Vegetable proteins: Topics from nutrition to cancer prevention to dietary fiber were presented by soy protein suppliers at the IFT [Institute of Food Technologists] show. 56(8): 116, 119. Aug.
• ***Summary:*** A.E. Staley makes Textured Procon, textured soy protein concentrates. Central Soya makes Response, structured soy concentrate. Cargill makes Textratein, textured soy flours in 3 particle sizes used as partial ground meat replacers. "Among the ingredients from Kikkoman International were dehydrated miso and dehydrated tofu from soy, and dehydrated HVP (hydrolyzed vegetable protein) from soybean meal and corn gluten." Hercules highlighted its standard and Luxor lines of HVPs for mild and beef-like flavors, and its capacity to customize HVPs to customer need. A brief summary is given of research indicating that miso may prevent cancer.

6552. House, S.L. 1984. Spotlight: Institutional foodservice. Alive Polarity, Murrieta, California. *Soyfoods*. Summer. p. 6.
• ***Summary:*** "Northeast of San Diego and southeast of Los Angeles lies a peaceful place where people can go for a day, a week, a month to experience spiritual renewal and better health practices. Among other diverse activities, Alive Polarity's Murrieta Hot Springs offers mudbaths, marriage counseling and superb vegetarian cooking."

"The lacto-vegetarian diet offered at Alive Polarity emphasizes purifying, health-building and gourmet dishes. Soyfoods make up a large part of the menu.

"'More than 50 percent of our meals contain soy products,' says Breese English, kitchen manager. Tofu is by far the soyfood used most often because it's so receptive, it adds little flavor of its own yet takes on the flavor of ingredients used with it. 'I'd say we consume at least 70

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pounds a day."

"Alive Polarity's restaurant serves breakfast, lunch and dinner buffet style, totaling about 1000 meals daily."

"While tofu is a primary ingredient in many of the recipes, other soy products are used extensively as well. Bragg's Liquid Aminos and tempeh are two products that have found a place in Alive Polarity's kitchen.

"Bragg's is a liquid mineral soy bouillon often used instead of soy sauce or tamari. Its slightly less salty flavor had made it a popular item for the cooks as Mary Ann Beauchamp attests. 'I use it in almost everything, sauces, salad dressings, soups.' About 25 gallons of Bragg's Liquid Aminos are consumed weekly.

"Tempeh is the third most popular soy product used. Tempeh is a complete protein food with a texture that lends itself to hearty foods and entrees. Used in place of hamburger for summer barbecues, tempeh burgers are very popular. The kitchen staff estimates they use about 400 tempeh patties a week.

"Two soyfoods recently introduced at Alive Polarity include soymilk and Tofutti. Given that almost 20 gallons of soymilk are consumed weekly, it appears it's already gained acceptance among the clientele."

"Mary Ann Beauchamp, whose mother is Japanese explains, 'My mother is amazed with the things we do with tofu. The Japanese use tofu in traditional ways for specific purposes. I don't feel that they experiment or work with it as we do.' For example, Beauchamp explains a favorite recipe, Tofu Tidbits. 'You take cubes of tofu and bread them in a mixture of flour, nutritional yeast, herbs and spices. Then layer the cubes in a pan with a small amount of oil. Bake for an hour at 500°. Serve with tartar sauce and lemon wedges, it's fantastic. People just love it.'"

A photo shows the staff: Jane Buck, Breese English, Mary Ann Beauchanp, and Diane Luzzi. Contains a "favorite recipe" for Tofu french toast.

6553. Inamori, Kazuo; Miyauchi, K.; Uchida, K.; Yoshino, H. 1984. Shôyu moromi no hakkô biseibutsu ni kansuru kenkyû. I. Shôyu nyûsan-kin to kobo no sôgo sayo [Microorganisms involved in shoyu moromi fermentation. I. Interaction between *Pediococcus halophilus* and *Saccharomyces rouxii*]. *Nippon Nogeikagaku Kaishi* (*J. of the Agricultural Chemical Society of Japan*) 58(8) 771-77. Aug. [20 ref. Jap; eng]

• ***Summary:*** The effect of oxygen supply, initial pH, and inoculum quantity on growth and fermentative ability of *Pediococcus halophilus* and *Saccharomyces rouxii* isolated from shoyu moromi (Japanese soy sauce mash) was studied. Also the interaction of the two organisms in static cultures under aerobic and anaerobic conditions was studied. The major medium used was shoyu koji extract. In mixed culture, at an initial pH of 6.0, growth and lactic acid production of P. halophilus was inhibited by S. rouxii under aerobic conditions; growth of S. rouxii and alcoholic fermentation was inhibited by P. halophilus under anaerobic conditions. At an initial pH of 5.6, growth of P. halophilus declined, regardless of aeration conditions. Similar results were obtained using shoyu moromi medium instead of koji extract medium. Results may be directly applied to moromi fermentation during shoyu production. Address: Research Labs., Yamasa Shoyu Co., Choshi, Chiba-ken 288, Japan.

6554. **Product Name:** Tofu Bagel Link (A Tofu Hot Dog in a Whole Wheat Bagel)
Manufacturer's Name: Light Foods Inc.
Manufacturer's Address: St. Louis, MO 63017.
Date of Introduction: 1984, August.
Ingredients: Tofu Light Link: tofu, soy oil, water, dried egg white, textured soy protein, salt, barley flour, honey, tamari, spices, natural extracts of paprika, natural spice oils. Whole wheat bagel: High gluten flour, whole wheat flour, bran, honey, salt, yeast.
Wt/Vol., Packaging, Price: 5 oz.
How Stored: Frozen.
New Product–Documentation: Food Report (Lehmann) 1984, Aug.; Friedman, 1985, Adweek East, Dec. 9; Poster. 5 oz. Frozen. Label: 1988, 6 by 2.5 inches. Blue, beige, and white. "Real tofu."

6555. *Soyanews* (*Sri Lanka*). 1984. Soy sauce–A new home industry [in Sri Lanka]. 6(12):1-2, Aug.

• ***Summary:*** "An experiment on making soya sauce as a home industry has just been concluded at the Soyabean Foods Research Centre in Gannoruwa. The manager of the SFRC, Mr. T.W.D. Siriwardena, said that the trial was a success. The first trial yielded 7,000 litres of soya sauce.

"Though Soya Sauce is a popular item with Sri Lankans it has always been manufactured by the small Chinese community in Sri Lanka with imported beans when soya was not cultivated in Sri Lanka. This is the first time the product has been made outside the Chinese community."

No wheat flour was used in making this soya sauce. The formula used to make this soya sauce was the same as that used in Indonesia, where, too, the starter and expertise were obtained. The fermentation period was three months, at the end of which the soya beans, steeped in brine, were pressed to obtain the liquid sauce.

The main goal of the experiment was to encourage the making of soya sauce as a cottage industry in Sri Lanka. No costly equipment is required and "the technology adopted is appropriate to conditions in Sri Lanka.

"The first batch of soya sauce prepared at Gannoruwa will be made available to the public through a firm in Colombo which has undertaken the retail marketing of the sauce. The know-how and expertise on the making of soya sauce will be made available by the SFRC to those willing to undertake the preparation of sauce as a cottage industry."

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Large photos show (1) A person standing by one of eight large, square concrete tanks in which the 7,000 litres of soya sauce was made. (2) Several people within the enclosed complex where the sauce was made.

6556. *Soyfoods*. 1984. U.S. tamari plant sited [by San-J International in Virginia]. Summer. p. 34.
• ***Summary:*** The Japanese tamari company, founded in 1804, plans to build a $7 million plant on 28 acres in Chesterfield County, near Richmond, Virginia. Construction is slated to begin in late 1985 or early 1986.

6557. Westbrae Natural Foods. 1984. Distributor catalog No. 2: Sept. 1, 1984. Emeryville, California: Westbrae. iv + 11 + [7] p. 22 by 28 cm.
• ***Summary:*** On the cover, the lettering is in black on a tan background. Pages i-iv are general information, 1-11 are a computer-printed price list, and the last 7 are a product glossary. The company now sells Malteds (soymilk shakes in 3 flavors, packed in foil pouches), Organic soymilk (available in August) and two types of Instant miso soup (aka [red] and shiro [white]). Address: Office: 4240 Hollis St., Emeryville, California 94608; Mailing: P.O. Box 8711, Emeryville, CA 94662. Phone: (415) 658-7518 (orders).

6558. *Food Industry Newsletter*. 1984. [Pearl River Chinese Food Mfg. to start plant making soy sauce in Clive, near Des Moines, Iowa]. Sept. 17.
• ***Summary:*** Called the first investment in manufacturing by a Chinese company in a free market economy.

6559. Abe, Masahiro. 1984. Re: Enclosing copy of article you requested. Letter to William Shurtleff at Soyfoods Center, Sept. 26—in reply to inquiry. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "We are enclosing herewith a copy of "The East" Vol. IV No. 4 June-July 1968."

Note: On the letterhead, above the company name, we read: "Established 1645." To the left is the Yamasa logo. To the right is the following contact information: "23-8, Kakigaracho, 1-Chome, Nihonbashi, Chuo-ku, Tokyo, Japan.

"Telephone: Tokyo (668) 3171–9.

"Telex: 252-3131 YamasaJ. Cable Address: Yamasa Shoyu." Address: Foreign Trade Dep., Yamasa Shoyu Co., Ltd., Tokyo Office. Phone: (668) 3171 to 9.

6560. **Product Name:** Smoky Mountain Sizzlin'–"More than a barbecue sauce!"
Manufacturer's Name: American Natural Foods, Inc.
Manufacturer's Address: P.O. Box Box 2321, Chapel Hill, NC 27514.
Date of Introduction: 1984, September.
Ingredients: Tomato paste, apple cider vinegar, pure water, red miso, peanut oil, tamari soy sauce (soybeans, water, sea salt), honey, molasses, garlic juice, onion juice, umesu (Japanese plum vinegar), natural herbs and spices, toasted sesame oil, tamarind, natural hickory smoke, natural seaweed extract.
Wt/Vol., Packaging, Price: 18 fluid oz (540 ml) glass jar.
How Stored: Shelf stable, refrigerate after opening.
New Product–Documentation: Label. 1984, dated. 10.25 by 2.5 inches. Paper. Yellow, green, red and white on black background. "All natural. For bastin', grillin' and table use. Made with miso." Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Ad in Vegetarian Times. 1985, June. "You're gonna' love that Smoky Mountain twang."

6561. **Product Name:** New York Soy Deli Tofu Ricotta.
Manufacturer's Name: Appropriate Foods, Inc.
Manufacturer's Address: 137 New Hyde Park Rd., Franklin Square, Long Island, NY 11010.
Date of Introduction: 1984, September.
Ingredients: Organic tofu, tahini, miso, umeboshi vinegar, tamari, herbs.
Wt/Vol., Packaging, Price: 7 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1984. New York Soy Deli Brand. 1.5 by 3 inches. Brown on yellow. Interview with Robert Werz, 1987, Sept. 9.

6562. **Product Name:** Oregon Baked Tofu, and Curry Baked Tofu.
Manufacturer's Name: Ashland Soy Works.
Manufacturer's Address: 280 Helman St., Ashland, OR 97520. Phone: 503-482-1865.
Date of Introduction: 1984, September.
Ingredients: Oregon Tofu (water, organically grown soybeans, natural magnesium chloride or nigari: a derivative of seawater), soy sauce, oil, garlic, honey, spices. Curry: Tofu, soy sauce, oil, peanut butter, honey, onion powder, spices.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1987. 4 by 3 inches. Self adhesive. Orange or yellow and brown on white. Talk

YAMASA
ESTABLISHED 1645
YAMASA SHOYU CO., LTD.
23-8, Kakigaracho, 1-Chome, Nihonbashi, Chuo-ku, Tokyo, Japan.
Telephone: Tokyo(668) 3171~9
Telex: 252-3131 YAMASAJ
Cable Address: YAMASA SHOYU

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with Diana Muhs. 1988. Feb. 10.

6563. Berry, Linden. 1984. The soy of cooking. *Women's Sports* 6:40-41. Sept.
• ***Summary:*** A brief introduction, without recipes, to tofu, tempeh, miso, and shoyu. "You don't have to be a vegetarian to eat and enjoy soy foods... Look for cookbooks with recipes for using these soy foods at your local bookstore. There are lots of delicious and healthful alternatives to meat that await you."

6564. **Product Name:** [Tempeh Burger–Deep-fried]
Foreign Name: Tempeh-Burger–Frittiert.
Manufacturer's Name: Byodo Naturkost.
Manufacturer's Address: Thalkirchenstr. 57, D-8000 Munich, West Germany. Phone: (089) 16 85 70.
Date of Introduction: 1984, September.
Ingredients: Soybeans, water, vegetables (Carrots, zucchini, soy sprouts) in varying proportions by weight, whole oats, whole wheat, brown rice, sesame seeds, sunflower seeds, spices, soy sauce (shoyu), sea salt, vinegar, beneficial mold culture (Edelpilzkultur) Rhizopus oligosporus. Ingredients predominantly organically grown.
Wt/Vol., Packaging, Price: 130 gm plastic bag.
How Stored: Refrigerated.
New Product–Documentation: Letter from Anthony Marrese. 1990. March 22. Based on a March 21 interview with Bernd Steyer, tempeh production manager and builder of their first tempeh incubator in 1984, when they started to make their own tempeh. Present production is said to be 50 kg/week of tempeh plus 500 burgers/week.

Bernd Drosihn. 1989. Tempeh: Ein traditionelles Nahrungsmittel mit Zukunft [Tempeh: A traditional food with a future]. p. 38. Says the company makes fresh tempeh from whole soybeans, tempeh burgers, and tempeh chips. A source of tempeh starter.

Letter (fax) from Harry Whitford. 1990. May 11. "We started making Tempeh Burgers (Tempehburgers) later that fall (1984) after we realized we couldn't keep the company going only on tempeh."

Label sent by Anthony Marrese. 1990. April 15. 5 by 2.25 inches. Green on yellow, printed on front and back of plastic bag. "A nutritional soya specialty (Eine vollwertige Soja-Spezialität). Store at 4-8°C."

6565. Chan, Fred. 1984. General uses of soybeans in Hong Kong and competition from Chinese soybeans. In: Ontario Ministry of Agriculture and Food, Market Development Branch. 1984. Workshop on Export Markets for Ontario Soybeans: Edited Proceedings. 45 p. See p. 15-17. Held 5 Sept. 1984 at Wheels Motor Inn, Chatham, ONT, Canada. 28 cm.
• ***Summary:*** Tofu: The two major types of tofu in Hong Kong are soft tofu (which is displayed in water to maintain its form) and mild tofu (which is firmer, is displayed on wooden planks, and is the most common type). Chinese soybeans are preferred to Canadian soybeans because after a maximum of 5 hours on display in the open market, water will start to weep from the tofu made from Canadian soybeans. In 1983, about 6,000 tonnes of imported soybeans were used to make tofu in Hong Kong; this was about 33% of the total soybeans imported.

Bean curd sheets and bean curd sticks [yuba] are very common snacks and dishes in Hong Kong. "Canadian soybeans have an advantage in this market because they produce whiter soymilk which in turn will produce whiter colour products. However, the bigger size of the Chinese soybean results in a higher yield... Manufacturers will normally mix 60% of Canadian soybeans with 40% of Chinese soybeans in order to achieve a higher output of whiter sheets... Total utilization was around 4,000 tonnes in 1983, with Canadian soybeans representing 78%.

Soy sauce and bean paste: The market is dominated by Chinese soybeans because bigger beans produce more sauce and paste. In 1983 approximately 6,000 tons of soybeans were used to make soy sauce and bean paste, with Chinese soybeans representing 75%, Vietnamese 14%, and Canadian 11%.

Soymilk: In 1983 about 1,800 tonnes of soybeans were used to make soymilk in Hong Kong, mostly by Vitasoy. Chinese and Canadian soybeans each share about 50% of the market.

Discusses various reasons that Chinese soybeans are very competitive in Hong Kong. The Chinese Oil, Cereal and Foodstuff Company in Hong Kong has an office in Hong Kong. Under this national organization are two agents specializing in Chinese soybeans. Transport time from China to Hong Kong is 7 days versus 32 days from Canada. Address: Director, Chung Hing Co., Hong Kong.

6566. Chen, Steve. 1984. Soyfoods in the Far East and USA: Products, markets, trends. In: American Soybean Assoc., ed. 1984. First European Soyfoods Workshop, Proceedings. Brussels, Belgium: ASA. 36 p. See p. C1-C38. Held Sept. 27-28 at Amsterdam, Netherlands. [11 ref.]
• ***Summary:*** Contents: Summary. 1. Introduction: Ten reasons why soybeans will be a key protein source for the future. 1. Soyfood products. A. Non-fermented soyfoods: Fresh green soybeans, soybean sprouts, soynuts, soymilk, soy flour, yuba or soy protein film, tofu. B. Fermented soyfoods: Soy sauce, miso, tempeh, natto, fermented tofu, fermented black soybeans (tou-shih, hamanatto). 3. Soyfoods markets and trends in the Far East: Taiwan, China, Japan, South Korea, Indonesia, Malaysia, Singapore, Thailand, Philippines. 4. Soyfoods markets and trends in the U.S. 5. References. Plus 15 tables and 8 figures.

"It is our [American Soybean Association's] strong intention that marketing and consumption of soy protein

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should not in any way deter the expansion of the production and sale of as much animal protein as the world can be expected to produce in the years ahead. Soy protein foods are being intentionally brought to the market to complement and not necessarily to replace animal protein products."

"Taiwan imported 1.41 million tonnes (metric tons) of soybeans in 1983 and used about 250,000 tonnes as soyfoods for direct human consumption, which made Taiwan one of the highest in per capita consumption of soyfoods (13.2 kg or 29 lb) in the world. In the past 10 years (1974-1983), the consumption of traditional soyfoods showed an average increase of 3% per year as compared to 12% and 8.1% for poultry and soy oil, respectively. The market for packaged soymilk, soy pudding and tofu has also been expanding rapidly in recent years in Taiwan." Table 7 shows the production of soymilk in Taiwan, which grew from 103,600 tonnes in 1974 to 210,000 tonnes in 1983, for an average growth rate of 8.2% a year.

China produces about 9 million tones of soybeans a year, and about half of these are consumed as soyfoods, giving a per capita consumption of 4.5 kg of soyfoods. "An improvement in the general economy and soyfood technology and equipment will bring a sharp increase in soybean demand and more soyfoods consumption."

In South Korea soymilk consumption has increased more than seven-fold in the last 4 years. Currently about 10,000 tonnes of soybeans are used to make 70,000 tonnes of soymilk. "It is projected that soymilk production in Korea will double in 1984 as compared to the previous year."

Indonesia continues to be Southeast Asia's largest consumer of soybeans as food. In 1982/83 soybean consumption was 6.7 kg per capita. Indonesia consumes about 1 million tonnes of soybeans annually, 60-65% of them in the form of tofu and 35 to 40% as tempeh.

Malaysia consumes only about 30,000 tonnes of soybeans per year as food. In Singapore, more than 75% of the population of 2.5 million are Chinese. Therefore tofu, soysauce, and soymilk are the predominant traditional soyfoods consumed.

Thailand consumes about 40,000 tonnes of soybeans a year as food, mainly in the form of tofu. The Philippines uses only 5,000 tonnes of soybeans annually for food, mainly as tofu.

To summarize (Table 6), annual per capita consumption of soybeans in various East Asian countries, in descending order of the amount consumed, is as follows: Taiwan 13.2 kg (population 19 million); Japan 8.3 kg (population 120 million); South Korea 7.5 kg (population 40 million); Indonesia 6.7 kg (population 150 million); Singapore 6.25 kg (population 2.4 million); China 4.5 kg (population 1,000 million); Malaysia 2.1 kg (population 14 million); Thailand 0.8 kg (population 50 million); Philippines 0.3 kg (population 15 million). Address: Director, American Soybean Assoc., Room 603, Kwang-Wu Building, No. 386, Tun Hua South Road, Taipei, Taiwan.

6567. Dai, Yautian. 1984. [Study of iron fortification of Chinese soy sauce. II. The iron absorption of iron fortified Chinese soy sauce]. *Ying Yang Hsueh Pao* (*Acta Nutrimenta Sinica*) 6(3):231-39. Sept. [27 ref. Chi, eng]

• ***Summary:*** "Iron absorption was studied in 31 healthy adult volunteers using extrinsic tags of Fe-55 and Fe-59. Geometric mean absorption from unfortified Chinese Soy Sauce (Seagull brand, produced in Shanghai) with iron contents 15.8 mg Fe/dl was 6.95%. Absorption from iron fortified soy sauce (121 mg Fe/dl) decreased to 4.36%. Absorption from the fortified product almost doubled (8.35%) with the addition of ascorbic acid (2 moles/1 mole Fe). 7.5 ml of fortified soy sauce (75mg Fe/dl) were added to meal containing potatoes, cabbage, green beans and rice, with a total iron content of 8.9 mg. Iron absorption form this meal was 5.65%, or 0.5 mg. The addition of 100g of pork meat increased nonheme iron absorption to 9.67% (1.08 mg). Green tea drunk after the meal decreased absorption to 3.07% (0.27 mg).

"Iron fortified Chinese Soy Sauce consumed with vegetable meals could favor very significantly to meet the iron requirement of the general population in China. Addition of ascorbic acid to fortified soy sauce would further increase its iron bioavailability. Known enhancer (pork meat) and inhibitor (green tea) of non-heme iron absorption will modify in a predictable way of iron bioavailability from vegetable meals containing iron fortified soy sauce." Address: Dep. of Nutrition and Food Hygiene, Beijing Medical College, Beijing, China; Food Detection Research Inst. of Commerce, Beijing, China.

6568. Kooij, J.A. van, de Boer, E. 1984. Microbiological aspects of soyfoods. In: American Soybean Assoc., ed. 1984. First European Soyfoods Workshop, Proceedings. Brussels, Belgium: ASA. 131 p. See p. 11-115. Held Sept. 27-28 at Amsterdam, Netherlands. [20 ref]

• ***Summary:*** "To learn more about the microbiological quality and safety of tempeh and tofu a survey was carried out by the working party 'Fungi in Foods' in the summer and autumn of 1983. The products were sampled in stores, restaurants and production places throughout the Netherlands and analyzed by using standard microbiological procedures...

In 110 samples of tempeh: "About 10% of the samples contained *Staphylococcus aureus* and *Bacillus cereus* in numbers which may cause food intoxication. However, the *S. aureus* strains isolated in this survey proved to be non-enterotoxigenic. *Yersinia enterocolitica* (non-pathogenic serotypes) was found in 6 samples. *Salmonella* was not isolated from any of the samples tested...

"In 154 samples of tofu: 2.1% had more than 100 counts/gm of *Staphylococcus aureus;* 11.2% had more than 100 counts/gm of *Bacillus cereus*. And 36.3% had more

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than 100 counts/gm of *Escherichia coli*. "About 95% of the samples appeared to have an aerobic count over 1,000,000 colony forming units (cfu) per gram. This means that there is a very great proliferation of bacteria after the production, for immediately after the production the aerobic plate count is usually below 10,000 cfu/g. This indicates that the tofu had been stored improperly or for too long. The average pH of tofu immediately after production was about 6.5, but at the time of sampling it averaged 5.2. But 5% of the samples had a pH of less than 4.5, and 16% has a pH of 4.5 to 4.9. These low pH values indicate sour/acidic products caused by large numbers of lactic acid bacteria. "In 0.7% of the tofu samples *Bacillus cereus* and *Staphylococcus aureus* were present in numbers that may cause food intoxication. The presence of *B. cereus* was probably caused by an outgrowth of the spores which survived the heat treatment. This indicates that the tofu must have been stored at too high a temperature during a long period (12–48 hours).

"The presence of *S. aureus* can be explained by a bad hygienic practice during production, after the heat treatment step. *Salmonella* was not found in any of the tofu samples." Address: Food Inspection Services, Netherlands.

6569. Loh, Michael. 1984. An overview of export markets for edible soybeans. In: Ontario Ministry of Agriculture and Food, Market Development Branch. 1984. Workshop on Export Markets for Ontario Soybeans. Edited Proceedings. 45 p. See p. 1-9. Held 5 Sept. 1984 at Wheels Motor Inn, Chatham, ONT, Canada. 28 cm.

• ***Summary:*** "Ontario first exported edible soybeans in 1972 and over 12 years have built it into a $40 million business. 1981 was our best year when exports totalled $46 million... The bulk of Ontario's soybean exports are sold to the Far East [East Asia]–Japan ($8 million in 1983), Singapore ($6 million), Hong Kong ($3.5 million), Malaysia ($1 million), Indonesia, and Korea." In these countries soybeans are consumed in the daily diet of the people. In Japan, for example, they are made into miso, tofu, natto, soymilk and shoyu. Korea also makes soy sprouts, Indonesia makes tempeh, and Singapore, Malaysia, and Hong Kong make dried yuba. In addition, sales to the Netherlands, United Kingdom, and France are quite significant.

Concerning Ontario's market share of soybean imports for food use: Japan imports 877,300 tonnes, of which 27,000 tonnes or 3.1% is from Ontario. Singapore and Malaysia import 36,000 tonnes, of which 20,000 tonnes or 55.0% is from Ontario. Hong Kong imports 20,000 tonnes, of which 10,000 tonnes or 50.0% is from Ontario.

Japan's sources of its 877,300 tonnes of imported soybeans are as follows: USA 570,000 tonnes (65%), China 280,000 (32%), Canada 27,000, South America 300.

Japan uses its 877,300 tonnes of imported soybeans as follows: tofu 485,000 tonnes (55.3%), miso 180,000, natto 185,000, soymilk 25,000, cooked soybeans 10,000, shoyu 6,500, other 85,800. Within these figures, Ontario's soybeans are used as follows: Miso 20,000 tonnes (11.1% of the total), natto 5,000 tonnes (5.9%), and tofu 2,000 tonnes (0.4%). Address: Export Development Specialist, Ontario Ministry of Agriculture and Food, Toronto, Canada.

6570. *Soyanews (Sri Lanka)*. 1984. Wider sales network for soya. 7(1):1. Sept.

• ***Summary:*** "A regular supply of soya products will be ensured to residents of Colombo and the suburbs beginning from this month. This service will be provided by Forbes Distributors (Pvt) Ltd., a subsidiary of Forbes and Walker, which as been retailing soya products at its shop Lankasoy in Darley Road, Colombo, for some time now.

"The chairman of Forbes Distributors is Mr. R.S. Wijesekara who has been keenly interested in the popularisation of soya foods. Mr. Wijesekara took the initiative to introduce Sri Lankans to soya meat [soyameat] which is now a popular item of food in many homes. He is chairman of the Raja Rata Food Grains Processing Co., makers of Raja Soya, now widely used as a substitute for coconut milk.

"Forbes Distributors have two vans at their disposal and these will serve many retail points in the city and suburbs. Among the items that are available for distribution are Soyabev, a substitute for coffee and the first of the soya products that Mr. Wijesekara introduced to the public, Raja Soya and soya noodles which has been found to be better than ordinary noodles."

Also: Soya sauce, soya flakes, soya devilled nuts, soya oil, soya meat, and "a new product–Mealmaker, which is a spiced and flavoured soya meat." This company will soon be distributing dried tempeh.

"Forbes Distributors have their office at 29 Braybrooke Place and their stores at 40 First Cross Street, Borupana, Ratmalana."

Photos show: (1) A F&W Lankasoy van. (2) Front panel of a package of Mealmaker.

6571. Claiborne, Craig, Franey, Pierre. 1984. Food. Seppi Renggli, the masterful chef of the Four Seasons in New York, celebrates the restaurant's first quarter century... *New York Times*. Oct. 14. p. SM77-78.

• ***Summary:*** When this restaurant opened 25 years ago, it "was said to be the world's costliest restaurant, taking more than $4.5 million to create." It has long been considered one of the very finest restaurants in Manhattan (New York City).

The recipe for Seppi Renggli's fruit salad calls for "2 teaspoons ketjap manis (a sweetened soy sauce, available where fine imported Oriental foods are sold)."

6572. Welters, Sjon. 1984. Early history of tempeh in the Netherlands (Interview). *SoyaScan Notes*. Oct. 25. Conducted by William Shurtleff of Soyfoods Center.

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• ***Summary:*** Cees van Rest, a friend of Sjon's and the owner and president of Wittewonder, visited Mrs Duson, owner of ENTI, and asked her the list of questions Shurtleff had written her twice but she did not answer.

Note: Firma ENTI was founded in about 1946-1948.

A Dutch couple whose last name was Wedding lived in Indonesia and made tempeh there. They took a 100 year old culture to Holland in a wooden box, along with their tempeh recipe. In Holland they started to make tempeh on a home scale for friends and relatives. They kept the culture going and used it to inoculate Indonesian soybeans with the help of blankets and lamps. It gradually grew into a commercial operation.

The business did well and by the early 1970s they were making 2,000 lb/day of tempeh. Mrs. Duson bought the company in about 1974. Apparently (?) the couple was growing old.

ENTI went out of business in January 1984 and the original Indonesian culture was deliberately destroyed. They sold all the equipment to a used equipment dealer, rather than to a person to continue the business.

Firma Lembeker is now the oldest existing tempeh company in Holland–approximately 25 years old.

Prospects for the future of tempeh in Holland look bad. Mrs. Duson felt extremely sad; she didn't think the health food industry would take over sales of the tempeh for lack of tradition and craftsmanship. She is older. Sjon says the Indonesians in Holland are no longer prospering. After World War II they were prospering with tofu and tempeh. But that stopped in the 1970s, in part because of cultural assimilation. Their population in Holland is diminishing, as some went back to independent Indonesia. Ketjap [soy sauce] is still very popular in Holland.

Sjon knows another company that has just started to make tempeh, and is now making 1,500 lb/week. He thinks it is the best quality he has seen. It is sponsored by a multinational–but Sjon cannot say who it is. Address: Netherlands.

6573. *J. of the American Oil Chemists' Society*.1984. China cuts oilseed acreage. 61(10):1521, Oct.

• ***Summary:*** "China is shifting acreage from oilseed crops to grains, which will mean increased Chinese vegetable oil imports during the coming season and declining exports, according to *Oil World*, the German weekly fats and oils trade publication.

"China's ministry of agriculture has released statistics on 1983 production showing soybean production at 9.76 million tonnes, cottonseed at 9.27 million tonnes, rapeseed at 4.29 million tonnes and peanuts 3.9 million tonnes. Forecasts for those same crops for 1984 are 9.5 million tonnes, 8.95 million tonnes, 4.6 million tonnes and 3.96 million tonnes, respectively.

"A USDA report from China reports a Chinese newspaper claimed China has become the world's leading exporter of soy sauce with 1983 sales of 27,500 tonnes valued at $10.5 million shipped to more than 50 nations."

6574. Macrobiotic Wholesale Co. (The). 1984. Catalog and price list [Mail order]. 92 McIntosh Road, Asheville, NC 28806. 63 p. 28 cm.

• ***Summary:*** The catalog, effective 15 Oct. 1984, contains 450 new products from 15 new vendors, plus 73 new books. The president of the company is Don DeBona. Soy-related products include miso, shoyu, tamari, nigari, kinako, natto and koji spores, black soy beans, tekka, Ah Soy soy drink (soymilk), and amasake.

One of the many suppliers is The Mitoku Co. Ltd., which "was founded in Tokyo [Japan] in 1968 by Mr. Kazama at the express behest of Michio and Aveline Kushi. In fact, the company was named after MI-chio and TO-moko (Aveline's real name, Aveline was given her name by George Ohsawa) KU-shi." Address: Asheville, North Carolina. Phone: 800/438-4730 or 704/655-1056.

6575. *J. of the American Oil Chemists' Society*.1984. Soyfoods entering mainstream U.S. diet. 61(12):1800-02, 1804, Dec. [1 ref.]

• ***Summary:*** One relegated mainly to small natural foods outlets, soyfoods are now found in regular supermarket chains throughout the USA. The most widely available are soy sauce and tofu. Contains a discussion of the soyfoods market in the USA. One of the most popular new products is Tofutti, a non-dairy frozen dessert.

6576. Kotzsch, Ronald E. 1984. Made in Japan–naturally: Natural foods from the Muso Company are popular worldwide. *East West Journal*. Dec. p. 14-21.

• ***Summary:*** "Muso was founded in 1966 as a macrobiotic food company, aiming to provide the highest quality traditional Japanese foods. It is now the oldest and largest macrobiotic food concern in Japan. Within the natural foods movement in the country it is one of the top three firms. Also, since 1969, it has been a major exporter of macrobiotic foods. With its Tokyo-based competitors the Mitoku Company and Ohsawa Japan, it dominates the large and growing international trade in Japanese foods."

Shuzo Okada, one of George Ohsawa's earliest and most devoted disciples, was the son of a family of Osaka textile merchants. After Ohsawa's death in 1966, Okada invested $3,000 to establish Muso Shokuhin in Osaka, with his eldest son Teizo as director. Yuko Okada, the second eldest Okada son, was head of the export division; he had spent 6 years living in Boston, mostly working for Erewhon. Initially the company was located in Fukusenji, a dilapidated Buddhist temple.

Today "the company has gross annual sales of over $25 million and employs over 120 people. In addition to the

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Osaka headquarters, built at a cost of over $1 million, it has an 18,000-square-foot production and warehouse facility in Osaka, as well as branch offices in six other cities. It wholesales over 1,800 products in the domestic market.. Muso has accounts with nearly half of Japan's 3,400 natural food outlets. In addition, it has developed a rapidly growing franchise chain of fifty-two stores, mostly in the Kansai area.

"About $5 million a year comes from international sales... Growth in the international sector has been steady despite the blow of the 1981 Erewhon bankruptcy. (Muso had credits of about $200,000 when its chief customer failed, and lost over $150,000 of that.) Muso, which is now owned by more than fifty investors, was able to survive the shock. Muso exports about 270 different products.

"At present a runaway best seller is a soybean drink made of soybeans, pearl barley, kombu sea vegetable, and malt sweetener. Marketed in North America as Edensoy it has proven an excellent dairy substitute."

There follows a description of the Nanki Umeboshi Co., Muso's principal supplier, and then of the Kanemitsu Miso Co. (in Fuchu City, Hiroshima prefecture) which has been in business for 300 years. "While it once made sake and soy sauce as well, it now produces only miso--1,300 tons a year." There are now some 2,000 miso makers in Japan and Kanemitsu is one of only 200 which produce more than 1,000 tons annually. It is one a of a very few which produce miso according to traditional methods. It is aged in natural temperatures for two years, run through a masher, then packed in either 40-pound wooden kegs or 1-pound plastic pouches. "All the miso going into the pouches is pasteurized by 84°C heat. If it were not, gases produced by the continuing fermentation would burst the bags. Kegs may or may not be pasteurized."

Photos show Yuko Okada.

6577 *SoyaScan Notes*.1984. Chronology of events during 1984 concerning *Soyfoods* magazine, Doug Fiske, Richard Leviton, and William Shurtleff (Overview). Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Jan. 30–Fiske, owner of *Soyfoods* magazine in Encinitas, California, writes William Shurtleff of Soyfoods Center. This letter is written on a new *Soyfoods* letterhead with a new matching envelope.

Feb. 15–Fiske mails a letter to "Dear Reader," the many people receiving *Soyfoods* magazine free of charge. "In the face of the economic realities of magazine publishing, *Soyfoods* is converting its circulation from mostly free to mostly paid. On January 1, 1984 a one-year subscription to soyfoods went from $15 to $20." But, by responding now, you can save $5.00 on your subscription. A coupon is enclosed.

April 13–Leviton writes Fiske to explain that he does not want to continue working with *Soyfoods* magazine. He finds his soy sauce book project stimulating.

March–Fisk writes subscribers apologizing for the delay in publishing. Issue No. 10 is scheduled to be published June 29, 1984.

April 17–Gary Barat, president of the Soyfoods Association, writes a letter on his Legume letterhead to all Soyfoods Association members, urging them to take advantage (as he plans to) "of the Ad / Cover Proposal / Editorial proposal which Doug Fiske of *Soyfoods Magazine* outlines in his enclosed letter... Six of our members have already committed to the cover..."

April 19–Fiske sends a letter to soyfoods producers asking for help with the magazine, and a sheet of mechanical specs and advertising rates.

May 7–Fiske sends Shurtleff a check to cover the cost of making 422 ads, changes, and deletes to the magazine's mailing list. Also his edited version of an article on tempeh in Japan.

June 11–Shurtleff writes Leviton in Glastonbury / Avalon, England, asking if he would be willing (as a consultant) to visit a tofu plant near London.

Aug. 17–Fiske writes Shurtleff 2 letters concerning details of publishing *Soyfoods* magazine, and responding to Shurtleff's comments on the last issue (full-color cover published summer 1984).

Sept. 5–Leviton writes Shurtleff from Somerset, England; responds to questions written him by Mark Fruin concerning the seriousness of his commitment to writing the soy sauce book with Shurtleff and Fruin. He will honor his agreement but is disappointed that a publisher for the book has not yet been found.

Oct.–Fiske writes a letter to readers (300-350 domestic producers), encouraging them to advertise and enclosing rates. Sends a personal, handwritten letter to Shurtleff with the form letter.

Oct. 21–Shurtleff writes Fiske concerning the annual Soyfoods Year in Review he has written jointly with Leviton for the past 3 years.

Nov. 4–Fiske writes Shurtleff. A small publishing company nearby has shown interest in *Soyfoods* magazine. They want numbers. Doug is cautiously optimistic.

Nov. 28–Leviton writes Shurtleff from Massachusetts. He is back in the USA for a few months and will be in California to visit in December and January. He has finished his book (not related to soy), 1250 pages. He is pleased with it, and will send the manuscript to a literary agent in New York City next week. He will pick up his boxes of personal belongings in the Shurtleffs' garage when he visits.

6578. **Product Name:** The Works. SuperNatural Condiment.
Manufacturer's Name: American Natural Foods, Inc.
Manufacturer's Address: Box 2321, Chapel Hill, NC 27514.

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Date of Introduction: 1984.
Ingredients: Fresh onions, tomato paste, pure water, red miso, honey, garlic juice, celery juice, umesu (Japanese plum vinegar), tamari (whole soybeans, water, sea salt), natural herbs and spices, mustard, arrowroot powder, natural seaweed extract.
Wt/Vol., Packaging, Price: 12 oz (336 gm) jar.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Label. 1984, dated. 8 by 4 inches. Paper. Red, blue, yellow, white on burgundy. Picture of wizard with staff. "New. Made with miso. Give 'em The Works . . . an all natural wonder. Everything you want on it–is in it! It's all you need to make historic hot dogs, brilliant burgers, spectacular sandwiches, outrageous omelets, terrific tempeh and fantastic fries!" Signed by Wizard Baldour. Label. 1985, dated. 8.25 by 4 inches. Paper. Red, yellow, black, and white on navy blue. Hamburger looking illustration. "New. For hot dogs, burgers, tacos, omelets and lots more! Made with miso." Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.

6579. *AOK Magazin (Germany).*1984. Soja: (2) ein Tausendsassa! [Soya: The bean of a thousand forms!]. 25(4):15. [Ger]
• ***Summary:*** A brief introduction to the many foods made from the soybean, including soy sauce, soymilk, tofu, and miso. Note: This is the major health insurance magazine in Germany, with a huge circulation.

6580. **Product Name:** Tasty Tofu (Herb Tofu–Marinated and Baked).
Manufacturer's Name: Bountiful Bean Plant. Baked at Nature's Bakery.
Manufacturer's Address: 2049 1/2 Atwood Ave., Madison, WI 53704.
Date of Introduction: 1984.
Ingredients: Herb Tofu (water, organic soybeans, calcium sulfate, magnesium chloride, herbs and spices), baked with shoyu soy sauce and oil at Nature's Bakery.
Wt/Vol., Packaging, Price: 4 oz. or 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Interview with Deborah Bachmann. 1987. Dec. 29. This is an herb tofu that is marinated with shoyu, baked, and vacuum packed. It is ready to eat. Ad. 1987. Spring. "Whee! Pop me into your toaster. Ready to eat. Serve Tasty Tofu hot or cold for snacks, hors d'oeuvres, in salads, sandwiches, or cubed in stir fries." Label. 1985. 4 by 3.25 inches. Self adhesive. Maroon and green on white. "Ready to eat. Serve Tasty Tofu hot or cold for snacks, sandwiches, salads, hors d'oeuvres, or as a main course. No preservatives. Pareve."

Labels sent by Elizabeth Hanson of Bountiful Bean. 1991. Nov. 12. 4 oz. and 8 oz. Same labels as above, but company is now located in Ridgeway, Wisconsin 53582.

Leaflet sent by Paul Olson, new owner of Bountiful Bean Soyfoods. 1993. Nov. 19. "Tasty Tofu. This handy snack is simply our Herb Tofu block, pressed, basted with shoyu soy sauce, and baked in a medium oven for two hours."

6581. **Product Name:** Hummus with Tofu.
Manufacturer's Name: Bountiful Bean Plant.
Manufacturer's Address: 2049 1/2 Atwood Ave., Madison, WI 53704.
Date of Introduction: 1984.
Ingredients: Garbanzo beans, tofu, lemon juice, tahini, shoyu soy sauce, parsley, garlic.
Wt/Vol., Packaging, Price: 8 oz. or 12 oz.
How Stored: Refrigerated.
New Product–Documentation: Interview with Deborah Bachmann. 1987. Dec. 29. Ad. 1986-87. 3 by 5 inches. "Our favorite dip! Dip and sandwich spread." Label. 1985. 3.5 inch diameter. Self adhesive. Blue on white. "Chip dip & sandwich spread."

Label sent by Elizabeth Hanson of Bountiful Bean. 1991. Nov. 12. Same label as above, but company is now located in Ridgeway, Wisconsin 53582.

Leaflet sent by Paul Olson, new owner of Bountiful Bean Soyfoods. 1993. Nov. 19. The company's Hummus still contains tofu and soy sauce.

6582. **Product Name:** Tofu Skinny Dip (with Dill).
Manufacturer's Name: Bountiful Bean Plant.
Manufacturer's Address: 2049 1/2 Atwood Ave., Madison, WI 53704.
Date of Introduction: 1984.
Ingredients: Tofu, lemon juice, mellow white miso, shoyu soy sauce, garlic powder, dill weed, onion powder, dry mustard, dried chives, celery seed.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Interview with Deborah Bachmann. 1987. Dec. 29. James Lubbe. 1988. March. Abbreviated History of the Bountiful Bean. Label. 1985. 3.5 inches diameter. Self adhesive. Light blue on white. "Non-dairy dip and dressing."

6583. Branthaver, Beth. 1984. Report on visits to tofu and soy sauce plants in Beijing, China, Jan. 7. Beijing, China: American Soybean Assoc. 4 p. Unpublished typescript. [Eng]
• ***Summary:*** At this medium-sized plant (5,88 square meters, 270 employees) the raw material is 60% defatted soybean meal and 40% wheat starch. The fermentation takes 25 days at 48-49°C. Four grades of soy sauce are produced. Address: Beijing, China.

6584. **Product Name:** Chilli Style Tofu Burgers.
Manufacturer's Name: Cauldron Foods Ltd.

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Manufacturer's Address: 4. Conduit Place, Lower Ashley Rd., St. Paul's, Bristol BS2 9RL, England
Date of Introduction: 1984.
Ingredients: Tofu (Soybean curd), brown rice, textured soy flour, tomato puree, shoyu (soybeans, wheat, water, salt), herbs, chilli [chili] spices, sea salt, soy oil, yeast extract, onion, extract, dried garlic, citric acid.
Wt/Vol., Packaging, Price: 150 gm poly bag, 2 burgers per bag.
How Stored: Refrigerated.
Nutrition: Per 100 gm: Calories 209, protein 15.95 gm, fat 12.05 gm, carbohydrates 6.6 gm.
New Product–Documentation: Label. 1986, code dated. Red, yellow, brown and white. "Pre-Cooked–Eat cold or warm under grill. Contains no meat, dairy products or artificial additives."

Letter (fax) from Philip Marshall. 1990, July 9. This product was introduced in 1984. It is basically the same thing as the original Bristol Chilli Burger launched in 1982.

Label for "2 Chilli Flavour Tofu Burgers" sent by David Greenslade. 1994, Oct.

6585. **Product Name:** Tofu Burgers [Savoury, Peanut, Nut, or Chilli]
Manufacturer's Name: Cauldron Foods Ltd
Manufacturer's Address: 4. Conduit Place, Lower Ashley Rd., St. Paul's, Bristol BS2 9RL, England
Date of Introduction: 1984.
Ingredients: Savoury: Tofu (soya bean curd), brown rice, water, textured soy flour, tomato puree, shoyu (soya beans, wheat, salt, water), herbs, sea salt, soya oil, yeast extract, dried onion, dried garlic, citric acid.
Wt/Vol., Packaging, Price: 150 gm paperboard box, two vacuum packed burgers per box. Retails for 60 pence.
How Stored: Refrigerated or frozen. Do not refreeze.
Nutrition: Per 100 gm.: calories 200, protein 17 gm, fat 11 gm, carbohydrate 7 gm.
New Product–Documentation: Label. 1986, code dated. Paperboard box. Brown, green, red and black on white. "Just heat to eat. Contains no meat, dairy products, or artificial additives. Do not freeze." New label. 1989, sent by Philip Marshall. Address is now 149 South Liberty Lane, Bristol BS3 2TL. Package bears the green "V" symbol "Suitable for vegetarians."

Letter (fax) from Philip Marshall. 1990, July 9. This product was introduced in 1984.

6586. **Product Name:** Clearspring Sakae Organic Shoyu, and Wheat-Free Mansan Tamari
Manufacturer's Name: Clearspring Natural Grocer (Importer). Made in Japan.
Manufacturer's Address: 196 Old St., London EC1V 9BP, England. Phone: 01-250 1708.
Date of Introduction: 1984.
New Product–Documentation: Simon Bailey. 1988, Natural Choice. Aug. 15. "Soya-Based Products." A photo shows the Labels. "Traditional Soya Sauce. The perfect seasoning for savoury dishes." CSP form filled out by Simon Bailey. 1988, Sept. 28. Gives date of introduction as 1984. Formerly sold under the Sunwheel label (1974). Sold to Clearspring in 1984. Peter Bradford is proprietor. The company is an importer, wholesaler and retailer of high-quality Japanese shoyu, tamari, miso, koya-dofu and macrobiotic specialties. Japanese agent is Mitoku. Various Japanese manufacturers. Letter from Simon Bailey. 1988, Oct. 10. In 1984 the old Sunwheel company on Orpheus Street closed. The brand name Sunwheel was sold, along with some higher turnover products, to Granary, which sold it in turn to Northumbrian in 1987. This brand includes shoyu, tamari, and miso that are sold to the mainstream health food trade. Clearspring, Peter Bradford's present business, agreed not to compete with the Sunwheel range, but continued to import high quality tamari, shoyu and miso for their own label, some of which he had formerly imported as the original Sunwheel company. These are available mostly in independent natural food and macrobiotic stores. Note: Mansan tamari is also imported by Great Eastern Sun in the USA.

6587. Fruin, W. Mark. 1984. Kikkoman during the latter half of the twentieth century. 8 p. Unpublished manuscript.
• ***Summary:*** Kikkoman is the world's largest manufacturer of soyfoods, the leading maker of shoyu in Japan, and one of the most diversified and internationally-minded of Japanese food and beverage companies. Kikkoman has assumed its leadership in these areas relatively recently, only since the 1950s. Before World War II, Kikkoman (known then as Noda Shoyu Co.) was not able to garner more than about 10% of the shoyu market in Japan. "The incentive to invest in new production capacity came from the Occupation policy of disbanding producer cooperatives; Kikkoman's growth had been limited by a network of interlocking market sharing agreements among the major shoyu producers, but once Occupation authorities removed these barriers, Kikkoman was free to grow as large as it could." Address: Menlo Park, California.

6588. Hesseltine, C.W. 1984. Fermented foods in the Orient with emphasis on soy sauce. *Nihon Shoyu Kenkyujo Zasshi (J. of Japan Soy Sauce Research Inst.)* 10(3):69-92. [39 ref. Eng; Jap]
Address: NRRC, Peoria, Illinois.

6589. Jones, Russell. 1984. Loan-words in Indonesian. *Nusa (Jakarta, Indonesia)* 19:vi-ix, 1-38. [2 ref]*
• ***Summary:*** Soybean sprouts are known in Indonesian as *taoge* from Hokkien *tâu* 'beans' and *gê* 'sprout.' For soya bean sauce Indonesian uses *taocio* from Hokkien *tâu-chiu*

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'a thick salt sauce made from pulse.' An interesting example is the word for 'bean curd' *tahu;* this is from Hokkien *tâu-hû* 'bean-curd shaped, but not yet pressed,' and we should expect the word to appear in Indonesian (as it does in Malay) as *tauhu;* now the word happens to be one of the earliest of the foreign loans recorded in an Indonesian language, occurring in a list of words served at a banquet mentioned in an Old Javanese inscription of the 10th century (The Watu Kura A [Watukura] inscription, plate 5A, lines 4-5, see Antoinette M. Jones 1976, p. 90-91) indicating the antiquity of its adoption and suggesting that the Indonesian form comes via the old Javanese, which is also *tahu.* Address Dep. of South East Asia and the Islands, School of Oriental and African Studies, Univ. of London, Malet St., London WC1E 7HP, England. Phone: 01-637-2388.

6590. **Product Name:** Local Tofu Salad (With Tahini).
Manufacturer's Name: Local Tofu
Manufacturer's Address: 307 Route 59, West Nyack, NY 10994. Phone: 914-358-2309.
Date of Introduction: 1984.
Ingredients: Local Tofu, tahini, safflower oil, tamari sauce, umeboshi paste, lemon juice, carrot, onion, celery.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Talk with Sam Weinreb. 1987 Dec. 29. Company started in 1979-80. Label 1987. 3 by 1.6 inches. Purple on white. This product was first made in West Nyack, New York 10994.

6591. **Product Name:** Wan Ja Shan Soy Sauce, and Mandarin Chef Soy Sauce.
Manufacturer's Name: Mandarin Soy Sauce, Inc.
Manufacturer's Address: 419 North St., Middletown, NY 10940.
Date of Introduction: 1984.
New Product–Documentation: Soya Bluebook 1984. p. 75. Soya Bluebook Plus. 1997. The company is now named Wan Jia Shian Brewery Company Ltd. They make soy sauce in Taipei, Taiwan, and also export it. There is no listing for a company in the USA.

6592. **Product Name:** [Tempeh Spread with Garlic].
Foreign Name: Tartiner au Tempeh (Ail).
Manufacturer's Name: Noble Bean.
Manufacturer's Address: Toronto, ONT, Canada.
Date of Introduction: 1984.
Ingredients: Organic soy tempeh, tamari, spring water, garlic, chives, soy oil.
Wt/Vol., Packaging, Price: 227 gm.
How Stored: Refrigerated.
New Product–Documentation: Label. 1985, undated. 3.5 inches in diameter. Orange and green on white. "Fresh-Delicious-Nutritious. Great for sandwiches or on crackers. All natural. Ready to eat." Letter from Allan Brown. 1985. Aug. 7. 8 oz for $1.95. Letter (fax) from Allan Brown. 1998 Jan. 21. This Garlic Tempeh Spread was first sold in 1984, and continued being sold until 1986.

6593. **Product Name:** Menu Magic Soy Sauce.
Manufacturer's Name: North American Laboratory Co. Inc.
Manufacturer's Address: 1717 W. 10th St., Indianapolis, IN 46222.
Date of Introduction: 1984.
New Product–Documentation: Soya Bluebook. 1984 p. 76; 1985. p. 99. Company is now: Menu Magic Foods. Division of North American Laboratory Inc.

6594. Nunomura, N.; Sasaki, M. 1984. Comparison in flavor compounds between Japanese shoyu and the sauces in other countries (Abstract). In Abstracts of Papers Presented at the Annual Meeting of the Agricultural Chemical Society of Japan. See p. 129. *
Address: Central Research Labs., Kikkoman Shoyu Co., Noda, Japan.

6595. **Product Name:** Tofu Tamales [Green Chili, or Red Chili].
Manufacturer's Name: Southwest Soy Foods.
Manufacturer's Address: 2889 Trades West Rd., Santa Fe, NM 87501. Phone: 505-471-8979.
Date of Introduction: 1984.
Ingredients: Corn, organic tofu (soybeans, water, calcium sulfate–a natural mineral), green or red chili, wheat berries, safflower oil, tamari (water, soybeans, salt), spices, salt, baking powder, lime.
Wt/Vol., Packaging, Price: 20 oz plastic vacuum pouch contains 6 tamales, 8 inches square. Retails for $2.00 (9/90, New Mexico).
How Stored: Frozen or refrigerated.
New Product–Documentation: Talk with Richard Jennings. 1987. Dec. 28. Gave date of introduction. Labels brought by Richard Jennings. 1990. Sept. 20. 3.5 by 3 inches. Self adhesive. Green or red on yellow. Illustration of corn with leaves. "Real Fast Foods. Steam for 15 minutes. Bake covered for 12 minutes at 350°F. Microwave for 6 minutes." Later version has a UPC indicia.

6596. **Product Name:** Tempeh Burger/Cutlet, Mild Italian Soysage.
Manufacturer's Name: Swan Gardens, Inc.
Manufacturer's Address: 1111 N.W. 22nd., Miami, FL 33127.
Date of Introduction: 1984.
Ingredients: Tempeh (cultured soybeans), purified water, soy sauce, herbs.
Wt/Vol., Packaging, Price: 8 oz. Burger/Cutlet retails for

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$1.11. Soysage retails for $0.79.
How Stored: Refrigerated or frozen
New Product–Documentation: Labels. 1984, undated. 3 by 4 inches. Red, white, blue, yellow, and black. "Fast food. Easily cooked. No preservatives. All natural."

6597. Westbrae Natural Foods. 1984. Westbrae Natural–Traditional foods of Japan (Poster). P.O. Box 8711, Emeryville, CA 94662. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.
• ***Summary:*** This is a color photo of a large beige metal display rack with six shelves holding products including the following: (1) Samurai snacks, soup plum drops. (2) Tamari brown-rice wafers, Tamari brown-rice crackers. (3) Miso ramen, Instant miso soup. (4) Organic shoyu, tamari, mild soy sauce, Johsen tamari shoyu, Tofu sauce. (5) Kukicha (tea), Umeboshi (salt plums), Shiitake mushrooms, Agar flakes, Kuzu, Miso (in plastic bags; brown rice, red, barley, Hatcho). (6) Seaweeds (Wakame, kombu, hijiki, nori, sushi nori). Jinenjo soba, Somen, Brown rice noodles. At the top is the banner featuring the head of a samurai. One accompanying leaflet (printed black on white) is titled "Westbrae Natural product inventory. 4-foot Japanese foods section." A second leaflet titled "'Ichi-Ban' Westbrae Natural–No. 1 supplier of macrobiotic food in the U.S." lists the products by category. In the upper left corner are the Japanese characters for "Ichi-Ban" above a line drawing of Mt. Fuji. Address: Emeryville, California.

6598. Asunaro Eastern Studies Institute. 1984. Natural healing and foods preparation. 1984-85 (Leaflet). Escondido, California. 2 p. Front and back.
• ***Summary:*** Black lettering on orange paper. Classes will be taught by Noboru Muramoto, author of *Healing Ourselves*. "Asunaro is a non-profit educational organization established in 1976. Its purpose is to provide a means by which many people can understand and learn traditional oriental culture." Address: 145 W. El Norte Pkwy, Escondido, California 92026. Phone: (619) 743-6890.

6599. Atlas, Nava. 1984. Vegetariana: A rich harvest of wit, lore and recipes. Garden City, New York: The Dial Press, Doubleday & Company, Inc. 196 p. Illust. by Nava Atlas. 23 cm. [62 ref]
• ***Summary:*** A vegetarian cookbook scattered with quotes on vegetarianism and historical anecdotes. Filled with lovely, creative illustrations.

Soy-related recipes include: Chinese vegetable miso soup (p. 29). White bean dip (with soybeans, p. 50 & 179). Peanut sauce (with soy sauce or tamari, p. 52). Tofu "mayonnaise" (p. 52). Tofu sesame dressing or sauce (p. 53). Eggs and tofu in peanut sauce (p. 62). Peanut rice and tofu (p. 81). Mushrooms and tofu in wine (p. 119). Stir-fried vegetables with tofu (p. 132). Address: New Paltz, New York.

6600. Bhumiratana, Amara. 1984. ASEAN Protein Project, 1974-1984. Bangkok, Thailand: ASEAN Subcommittee on Protein. 111 p. Illust. 29 cm. [Eng]
• ***Summary:*** The ASEAN nations are Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Contents: 1. Malnutrition problems in ASEAN countries (incl. Soy-based products as a solution to malnutrition). 2. Administration of the ASEAN Protein Project. 3. Objectives. 4. Methodology. 5. Results of ASEAN member country research: Soy products developed (high-protein, low-cost foods for infants and children, soy milk and soy milk powder, full-fat soy flour), fermentation products developed (tempe: from shophouse business to modern factory, oncom chips and flour, soy sauce, the ASEAN culture collection), other related projects, exchange of information (incl. details on the 15 ASEAN protein workshops held between July 1975 and Oct. 1984, and the publications resulting from each). 6. New ASEAN projects. 7. Conclusion.

This book, which contains many color photos and focuses on soybeans, describes one of the most successful ASEAN programs, emphasizing cooperation among the ASEAN nations in an attempt to solve the problem of malnutrition common to the region. The project, conceived in Aug. 1971, receives major funding and technical assistance from the Australian government. In May 1978 the ASEAN Full-Fat Soy Flour (FFSF) Factory in Chiang Rai, Thailand, was completely installed and has been producing continuously since then. It has a capacity of 100 tons/month. Numerous photos of the facility are shown. A pilot plant has produced up to 50 tons/month of Kaset Infant Food, which has been well accepted in 573 health centers throughout Thailand and is being evaluated in other ASEAN countries. A photo of the package (plastic bag) is shown. Address: Bangkok, Thailand.

6601. Bloodroot Collective; Beaven, Betsey; Furie, Noel; Miriam, Selma. 1984. The second seasonal political palate: A feminist vegetarian cookbook. Bridgeport, Connecticut: Sanguinara Publishing. xli + 242 p. Illust. Index. 23 cm. [35 ref]
• ***Summary:*** An excellent book and cookbook with a crystal clear explanation of why feminists should also be ethical vegetarians. The "Prefatory material" includes sections on "Feminism in the eighties," "Ethical vegetarianism," "Soyfoods," and "On collectivity and work."

The glossary includes brown rice, hoisin, koji, queso blanco, shiro miso, shoyu (the correct name for tamari), tahini, and tofu.

The index contains 27 entries for tofu, 19 for miso, 10 for tempeh, 4 for soymilk, and 1 each for okara and soysage. Address: 85 Ferris St., Bridgeport, Connecticut 06605. Phone: 203-576-9168.

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6602 Brennan, Jennifer. 1984. The cuisines of Asia: nine great oriental cuisines by technique. New York, NY: St. Martin's Press. ix + 542 p. Illust. (line drawings). Index. 24 cm.

• ***Summary:*** The "Nine great Oriental cuisines" are those of "China, India, Indonesia, Japan, Korea, Malaysia, The Philippines, Thailand, Vietnam" (as stated on the book's cover). The book contains many recipes, yet it is largely organized into chapters by cooking techniques: barbecuing, steaming, stir-frying / using a wok, deep-frying, etc.

The chapter on "Japan" discusses soybeans, miso, tofu, and shoyu on pages 44-45. Soyfoods are said to be the 2nd largest source of protein in the Japanese diet.

The section on "Soybeans" (p. 97-104) includes a discussion of the names of various soyfoods in different Asian languages and countries. For example: "The basic bean curd is called *tau-fu* in Cantonese, *tau-hu* in Hokkien, and *tofu* in Japanese." Or consider this (p. 99): "During the basic process of making bean curd, at the stage where the bean and water mixture is boiled, a skin or residue forms on the top. This skin [yuba] is skimmed off and dried. It is commercially available in sheets... and in the form of sticks that bear the picturesque name of 'second bamboo' [dried yuba sticks] in Chinese, meaning that they are the second residue from the curd."

There follows a 3-page table titled "Soybean products" (p. 101-03) which has four columns: Description, Chinese name [Cantonese], Japanese name, comments.

Note: Before proceeding, we believe that the design of this table is fundamentally flawed. (1) Why are the names of the basic soyfoods not given in the other languages with which this book is concerned, including Mandarin Chinese, Korean, Indonesian, Vietnamese, Filipino, etc.? (3) Why is no English name given for each basic soyfood product? Sometimes the description is the English name, yet that name is rarely the name a person would use if they were selling the product in an English-speaking country. (3) Why are so many common "soybean products" omitted from this table, such as the various basic other types of Japanese miso and of Japanese shoyu (besides koikuchi shoyu), fermented black soybeans (douchi, dow see), soymilk, soy sprouts, roasted soy flour, whole soy flour, soybean oil, textured vegetable protein, etc. These problems are easily solved with alternate table designs. For example, have one table for each language, with the name of each soyfood product given first in English and then in the language of that country. Put the description and comments in a glossary to avoid repetition. Or, have a glossary entry for each soyfood, with the English name, description, comments.

The table is divided into four basic types of soybean products. After each, we will give the Cantonese name and then the Japanese name, and we will indicate disagreements using [sic]. NL = Not listed.

(1) Bean curd: Tau fu fu [sic] = kinugoshi tofu. Tau fu = momen tofu. NL = yaki tofu [sic, yaki-dofu]. NL = koya tofu or kori tofu [sic, koya-dofu or kori-dofu]. Tau fu pok = abura age. Fu chu = yuba [sic, fu chu is dried yuba sticks. Yuba in Mandarin is doufu pi]. fu joke [sic, fu jook] (bean curd sticks) = NL. Tim joke [sic, tiem jook] (sweet bean curd sticks) = NL. tau fu kon [Mandarin: doufu gan; pressed tofu].

(2) Soy sauce: Light = chan ch'an or sang chu = usu kuchi shoyu [sic, not the same]. Dark, medium = see yu chan yan = shoyu [sic, see yu is soy nugget sauce, not made in Japan. Japanese shoyu is not traditionally made in China]. Dark, heavy, sweet = chu yan = NL.

(3) Fermented bean pastes and cheeses. Black bean paste = dau see tau ch'ih = NL. Sweet, white bean paste = NL = shiro miso. White soy cheese [fermented tofu, should be classified under tofu] = pai doufu-ru or foo yee or foo yu = NL. Red soybean paste = NL = aka miso. Red soy cheese or spiced red bean curd = hung doufu-ru or nom yee or nam yu.

(3) Miscellaneous soybean productions. Soy jam = yun shi jeung = NL. Whole fermented soybeans = NL = nato [sic, natto]. Red bean sauce = saang see jeung = NL. Soybeans and malted rice = NL = moromi miso. Hoisin sauce = hoisin = NL.

In the "Basic recipes" section is a recipe for Indonesian dark sweet soy sauce (*ketjap manis*).

The Glossary (p. 499-515) contains the following soy-related entries: "Bean Curd (*tofu*, Japanese; *tao foo*, Chinese; *tahu*, Indonesian and Thai; *tokwa*, Philippines): A curdled, soft, cheeselike preparation made from soybean milk. Used as a source of protein in Asian cooking. Available loose or in packages."

Bean paste, red sweet [from azuki beans]. "Substitute Chinese sweet red bean paste, p. 132."

Bean paste, yellow (Chinese)

"Beans, black salted fermented. (Called dow see in Chinese) These are very salty soybeans, sold in cans in Chinese markets. Used with garlic as a flavoring for fish and pork dishes. substitute: Soybeans, cooked until soft and seasoned with plenty of soy sauce."

Bean sprouts: Usually refers to mung bean sprouts, "although alfalfa and soybean sprouts are also used."

Hoisin sauce: Soybeans are a major ingredient, along with garlic, chili peppers, and various other spices and ingredients.

Miso. Oyster sauce: "A Chinese sauce, made from oysters cooked in soy sauce and brine." Used as a seasoning with cooked foods and as a table sauce. See recipe p. 146.

Red bean sauce: "A strong table sauce made from mashed soybeans." Available in cans from Chinese stores.

Soy sauce

Also contains entries for: Kombu. Monosodium glutamate (MSG; "I do not use it nor do I recommend its use"). Mung beans.

The index contains 28 entries for soybean, 22 for soy

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sauce, 14 for miso, 6 for bean paste, oyster sauce, teriyaki, 4 for bean curd–deep fried, hoisin sauce, vegetarian dishes, 2 for ketjap, and 1 each for beans–black salted fermented, bean curd–fermented, jam–soy, jang (see miso), milk–soybean, ragi, shoyu (see soy sauce), soybean oil, sukiyaki, tahu, tau-fu or tau-hu (see bean curd), tempe [tempeh], textured vegetable protein (TVP), tofu (see bean curd), tou shih [soy nuggets].

About the author (from the rear cover) "Jennifer Brennan grew up in Pakistan and India and has spent many years in Southeast Asia. She is the author of *The Original Thai Cookbook.*" She is "Winner of the IACP [International Association of Culinary Professionals] Award for the Best Literary Food Writing."

6603. Chan, Anita, Madsen, Richard, Unger, Jonathan. 1984. Chen Village: the recent history of a peasant community in Mao's China. Berkeley and Los Angeles, California: University of California Press. viii + 293 p. Illust. Index. 22 cm. [20 ref]

• ***Summary:*** *Chen Village* opens a fascinating window on the two eventful decades (from early 1960s to early 1980s) that transformed the countryside of China–and one village in South China. Based on detailed interviews with 26 villagers now living in Hong Kong.

Page 14: "The monotony of their starch diet was lightened only by bits of tiny salt-dried fish, pickles, fermented bean curd, and fermented black beans, the kind of strong tasting condiments that in small amounts could go a long way on rice or in gruel."

Page 105: The peasants used soy sauce with their rice. Address: 1. Sociologist and Research Fellow, Center for East Asian Studies,.

6604. Clergeaud, Chantal; Clergeaud, Lionel. 1984. Mystères et secrets du soja [Mysteries and secrets of soya]. Paris: Editions La Vie Claire. 134 p. Illust. 21 cm. [Fre]

• ***Summary:*** Contents: 1. A little history, the properties of soya, soybean culture, soya and animal feeding, recipes based on whole soybeans (*fèves de soja*). 2. Soy flour, soy proteins, recipes based on soy flour and soy proteins. 3. Soy sprouts, recipes based on soy sprouts. 4. Soy oil, recipes based on soy oil. 5. Soymilk, recipes based on soymilk. 6. Tofu, recipes based on tofu. 7. Fermented soy products: miso, recipes based on miso, tamari, tamari-shoyu, recipes based on tamari and tamari shoyu, tempeh, recipes based on tempeh. 8. Other [fermented] soy-based products consumed in the world: Chee fan (fermented tofu), Hamanatto, ketjap (Indonesian soy sauce), Meitauza (fermented okara tempeh), Sufu (fermented tofu). Address: Naturopathes–Ostéopathes, France.

6605. **Product Name:** Eden Double Brewed Shoyu: Soy Sauce (Low Salt).
Manufacturer's Name: Eden Foods, Inc. (Marketer-Distributor). Made in Japan.
Manufacturer's Address: 701 Tecumseh Rd., Clinton, MI 49236. Phone: 800-248-0301 or 313-973-9400.
Date of Introduction: 1984 January.
Wt/Vol., Packaging, Price: 10 fluid oz bottle.
How Stored: Shelf stable.
New Product–Documentation: Bottle seen at Open Sesame in Lafayette, California. 1991 Feb. 16.

Talk with Michael Potter, Chairman of Eden Foods. 1993. Oct. 31. This product was made in Japan by Mr. Okada, who was a different person from that family that runs the Muso Co.

6606. GEM Cultures. 1984. Food cultures from around the world / and more [Mail order catalog]. 30301 Sherwood Rd., Fort Bragg, CA 95437. 4 p. [4 ref]

• ***Summary:*** Contents: 1. Powdered cultures for soycrafters. Powdered starter cultures for tempeh, miso, amazake, shoyu, and tamari. In home and commercial sizes. Rice koji. 2. Koji starter kits. 2. Fresh self-renewing cultures. Vith starter, sourdough starter, kefir grains, natto starter, living tempeh starter. 3. Coagulants for tofu making (nigari, Terra Alba calcium sulfate in 1 lb or 5 lb bags).

4. Some helpful books. 5. Sea vegetables from the Mendocino Sea Vegetable Co. Our purpose. How to order. Address: Fort Bragg, California. Phone: 707-964-2922.

6607. Gerras, Charles, ed. 1984. Rodale's basic natural foods cookbook. Emmaus, Pennsylvania: Rodale Press. xi + 899 p. Illust. Index. 24 x 20 cm.

• ***Summary:*** This book, containing over 1,500 recipes, does not use salt or white sugar, but does use meats, poultry, and fish. It was also published by Simon & Schuster as "A Fireside Book." It contains extensive information on and many recipes for soyfoods, including whole dry soybeans, tofu, soy ice cream, soy flour and grits, miso, soymilk, soy oil, okara (soy pulp), soy sauce, tamari, and soy sprouts. Address: Pennsylvania.

6608. Greenwood, Sadja. 1984. Menopause, naturally: Preparing for the second half of life. San Francisco, and Volcano, California: Volcano Press. 201 p. Illust. by Marcia Quackenbush. 23 cm. [36 ref]

• ***Summary:*** This is a pioneering, wonderful book on menopause. Chapter 10, titled "Estrogen replacement therapy: The pros, cons, and unknowns" states (p. 89) that when estrogen was first isolated in the 1920s, it was used for women who had lost their ovaries through surgery and for women with severe problems after natural menopause. "However, its use was not widespread until the 1960s, when a book entitled *Feminine Forever,* by Robert Wilson, popularized estrogen use for all women who wanted to retard aging and retain their feminine allure. The use of estrogen

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replacement therapy,' or ERT, spread widely among middle- and upper-class women treated by private physicians."

Chapter 15, titled "Nutrition: All about eating and drinking" (p. 147-76) advocates a diet low in meat and high in whole grains, beans, vegetables, and fruits. Beans are excellent foods; they are high in protein, low in fat, and a good source of fiber. If gas is a problem, cook the beans well and serve small portions. "Fresh green beans and peas, bean sprouts, and soybean foods like tofu rarely give you gas." An illustration (line drawing) shows sacks and boxes of various types of beans (not including soybeans) and a cake of tofu. People who get much of their protein from beans and grains are also helping to make most efficient use of world food resources–an idea developed in *Diet for a Small Planet*. Sprouts are a delicious food, high in nutrients. Anyone can make bean sprouts in the kitchen from lentils, aduki beans, mung beans, etc. Sea vegetables are excellent, avoid canned veggies.

Concerning meat, fish and poultry: Try to cut back, replacing them with a combination of whole grains and beans–which provides high-quality protein without added fat. "You can eliminate entirely and be healthy! Vegetarians have good health records, with lower rates of heart disease and cancer than meat-eaters." Nonfat or low-fat milk, yogurt, and cheese are good foods for mid-life women because of they are high in calcium. But some adults lack the ability to digest milk sugar (lactose), and experience cramping, gas, and diarrhea after consuming milk products. "Soy 'milk' can be used, especially in cooking, as a milk substitute." A table shows common foods that are high in calcium, including "tofu (soybean curd)" 4 oz. contains 150 mg of calcium. Note: This is the earliest English-language document seen (Oct. 2003) that contains the term "Soy 'milk'."

Cut down on fats, sugar, salt, alcohol, and caffeine. A table titled "Suggestions for healthy breakfast foods" (p. 171) includes "Tofu (bean curd): Eat steamed, scrambled, or grilled with onions, curry, soy sauce, or other flavorings." Tofu is high in calcium. Suggestions for a healthy lunch include mashed tofu as a filling in sandwiches made from whole grain bread. Suggestions for healthy snack foods include slices of raw vegetables with tofu or cottage-cheese dip. Suggestions for a healthy dinner (p. 173) include brown rice with stir-fried vegetables and tofu. On p. 175 are recipe suggestions for Stir-fried vegetable dishes with tofu, meat, or fish.

On the rear cover is a photo of Sadja Greenwood, M.D., M.P.H., and a biographical sketch. She is age 53, "mother of two grown sons, a vegetarian, a slow jogger, looking for the truths about life and the joy in every day." A general practitioner, she has long been associated with women's health programs. "She is Medical Director of Min An Health Center, which utilizes Eastern and Western medical treatments, and is Assistant Clinical Professor at the University of California Medical Center, San Francisco."

Note: In 1984 the phytochemicals in soybeans and their possible benefits for menopause were largely unknown.

Note: This is the earliest document seen (Sept. 1999) in which soy is mentioned in connection with relief of menopausal symptoms. Address: M.D., MPH, San Francisco, California.

6609. Hapgood, Fred. 1984. Log of soyfoods research in Japan, Sri Lanka, and China, Oct/Nov., for *National Geographic* magazine (Log–unpublished). 85 p. Unpublished log.

• ***Summary:*** Fred was researching an article about the soybean for *National Geographic* magazine. This handwritten log is filed in Soyinfo Center file cabinets by country keyword. Thus, the portion concerning Sri Lanka (p. 13-43, 57-64) is filed with the documents concerning South Asia (AsSo) in 1984. The first person he met in Sri Lanka was Mr. S. Pathiravitana, editor, *Soyanews*.

6610. Kagaku Gijutsu-cho, Shigen Chosa-kai (Science & Technology Bureau). 1984. Shitei shokuhin seibun hyô [Standard tables of food composition in Japan. 4th ed.] Tokyo. 370 p. Introduction by R. Kagawa, Joshi Eiyo Daigaku. 28 cm. [Jap; Eng]

• ***Summary:*** Pages 76-80 gives a nutritional analysis of the following Japanese soyfoods: Soybeans: whole domestic (dry, or boiled), USA whole dry, Chinese whole dry. Green immature: raw, or boiled. Soybean sprouts: raw, or boiled. Defatted soybeans: whole, or dehulled. Kinako (roasted, ground soybeans). Budô-mame. Tofu: regular (momen), silken (kinugoshi), soft, packed, Okinawa tofu, grilled (yaki-dofu), nama-agé (deep-fried tofu cutlets), abura-agé (deep-fried tofu pouches), ganmodoki, kori-dofu, Tofu chikuwa (steamed, or roasted). Natto: Itohiki natto, goto-natto, tera-natto (fermented black soybeans). Miso: Rice koji miso (ama miso, light yellow miso, dark yellow miso), barley koji miso, soybean koji miso, dried miso, kinzanji miso, hishio miso. Okara. Soymilk: regular, reconstituted, soft drinks. Yuba: Fresh, or dried.

Page 254 gives the amino acid composition of soybeans, tofu, dried frozen tofu, yuba, okara, natto, and 3 types of miso. Address: Japan.

6611. Kikkoman. 1984. Kikkoman (Singapore) PTE. LTD. (Brochure). Tokyo: Kikkoman Corp. 9 p. [Eng]

• ***Summary:*** Construction of this plant began in Aug. 1983. "The completion of the facility in July 1984 was celebrated with a push-button ceremony to signal the beginning of Kikkoman Soy Sauce production in Singapore." The plant cost $14 million to build. The grand opening of the Kikkoman shoyu plant in Singapore was on 21 Nov. 1984. Located at 7 Senoco Crescent, Singapore 2775, the plant has a production capacity of 3,000,000 liters a year, an area of 18,000 square meters, and 40 employees. Address: Tokyo.

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6612. Ko Swan Djien. 1984. Fermentation of foods by moulds. In: Robert A. Samson, Ellen S. Hoekstra, and C.A.N. van Oorschot, eds. 1984. Introduction to Food-Borne Fungi. 2nd ed. Baarn, Netherlands: Centraalbureau voor Schimmelcultures. 248 p. See p. 236-42. [47 ref.]
• ***Summary:*** Contents: Introduction. Species used for fermentation. Natural inoculation. Traditional starters: Chinese yeast, tane koji, tempe inoculum. Fermented foods and mycotoxins. Roles of the moulds: Synthesis of enzymes, mould growth, synthesis of colouring compounds, protection of the product. Conclusion. Address: Bandung Inst. of Technology, Indonesia, and Agricultural Univ., Wageningen, Netherlands. Present address: Tarthorst 333, 6708 HL Wageningen, The Netherlands.

6613. Kurz, Marey. 1984. Soja in der Vollwertkueche: Rat und Rezept-Ideen zum Kochen und Backen mit allen Soja-Varianten: Bohnen, Mehl, Milch, Sauce, Tofu und Miso. Das erste komplette Soja-Kochbuch [Soya in whole-foods cookery: Advice and recipe ideas for cooking and baking with all the varieties of soya: Beans, flour, milk, sauce, tofu and miso. The first complete soya cookbook]. Munich, West Germany: Graefe und Unzer GmbH. 102 p. Illust. Index. 20 cm. [11 ref. Ger]
Address: West Germany.

6614. Rosengarten, Frederic, Jr. 1984. The book of edible nuts. New York, NY: Walker and Company. xxv + 384 p. See p. 324-27. Illust. Index. 26 cm. [330* ref.]
• ***Summary:*** The chapter titled "Soybeans" (p. 324-27) contains a brief discussion of soybean oil, soybean meal, tofu, miso, tempeh, and soy sauce, plus more detailed information on soynuts, which are attractive nut substitutes. Soynuts are whole soybeans that have been processed to look and taste like nuts, and be used like nuts. With a crunchy texture and no cholesterol, they have more than twice the protein content of most tree nuts and are relatively inexpensive. The author explains that large-seeded vegetable-type soybeans are used for soynuts. He describes how they are processed and the different flavors and brands that are available.

One major reason for the vast increase in soybean production in the USA is the ease with which the crop can be fully mechanized. Address: Associate in Economic Botany, Botanical Museum, Harvard Univ. [Massachusetts]

6615. Saito, Akio. 1984. [Chronology of soybeans in Japan, 1970 to 1984] (Document part). In: Akio Saito. 1985. Daizu Geppo (Soybean Monthly News). Feb. p. 16-18. [Jap]
• ***Summary:*** 1970–Soybean cultivation area in Japan drops to 95,500 ha, falling below 100,000 ha for the first time. Soybean cultivation area in Japan is nearly 10% of total cultivation area for all crops.

1970–Soybean imports rise to 3,243,790 tonnes, passing 3 million tonnes for the first time.

1972–Production of defatted soybean meal reaches 2,035,000 tonnes, topping 2 million tonnes for the first time. Production has risen 2.8 fold during the past decade.

1972–Production of deep-fried tofu pouches (*aburage*) reaches 200,000 tonnes.

1973–Soybean imports reach 3,635,000 tonnes, up 7% over last year despite U.S. export regulations.

1973–Some 2,740,000 tonnes of soybeans, representing about 80% of all soybeans in Japan, are crushed to make soy oil. 1973 Jan. 27–An extraordinary Cabinet meeting is held and the decision is made to import soybeans from the USA urgently. The price of soybeans in late 1972 was 3,000 yen per 60 kg sack but now it has become very difficult to get them even if you pay 15,000 yen per 60 kg. Soybeans are called "yellow diamonds."

1973 June 27–President Richard Nixon sets new regulations for U.S. soybean exports. These give the Japanese tofu, miso, and soy oil industries a big "shock."

1973 July 6–The Japanese government passes a new law that forbids soybean brokers or sellers in Japan from buying up and selling at inflated prices 16 important items–including soybeans.

1973 July 12–The Japanese Department of Commerce announces that it permits the export of soybeans for special food uses, such as tofu and high-quality misos, which were planted under previous contracts.

1973 Sept. 7–The U.S. Department of Agriculture removes all regulations that concern exports of agricultural products.

1973 Oct. 17–OPEC nations decide to regulate the production and supply of crude petroleum. This leads to huge price increases in petroleum products–known in Japan as the "oil shock." Japanese buy up toilet paper and wash detergents causing much confusion.

1974–Good quality miso now retails on average for 251 yen/kg, up 22.4% from last year. The average retail price of shoyu in Tokyo is 434 yen for 3 liters, up 33.5% from last year.

1974 Feb.–The Japanese Ministry of Agriculture and Forestry asks manufacturers of tofu, natto, deep-fried tofu pouches, and dried-frozen tofu to reduce the retail prices of their products to the levels they were at in November 1973.

1974 July 30–In order to get rid of AF2 (a preservative widely used in tofu), the City of Tokyo decides to make a public announcement of all foods which may contain AF2 and announces that food inspections will start immediately, on August 1.

1974 Aug.–The Japanese Ministry of Public Welfare forbids the usage of AF2.

1974 Oct.–The JAS food certification system, formerly applied to widely distributed foods, is applied to tofu, natto, konnyaku, etc., which are foods that are distributed over a

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small area.

1975–The typical price of Tofu in Tokyo is 60-70 yen per 300 gm. Yet in supermarkets it averages 50 yen, and some sell it for as little as 25 yen.

1976–Soybean production in Japan drops to 109,500 tonnes, the lowest level since 1878 when production statistics started to be recorded.

1978–The soybean cultivation area reaches 127,000 ha, topping 100,000 ha for the first time in 9 years.

1978–Soybean imports rise to 4,260,000 tonnes, topping 4 million tonnes for the first time. This is 4.5 times as much soybean imports as 20 years ago.

1978 Aug.–Unbranded generic foods, such as shoyu, miso, and salad oil, start to be sold. They retail for about 30% less than major branded products.

1979–Tofu production continues to rise, reaching 1,114,000 tonnes, an topping 1.1 million tonnes for the first time.

1980–Production of natto reaches 153,000 tonnes, up 33% compared with 10 years ago (when it was 115,000 tonnes).

1981–The area occupied by registered soybean varieties rises to more than 60% of total soybean area.

1981 Per capita consumption of miso drops below 6 kg/year to 5.9 kg/year, down 30% compared with 20 years ago (when it was 8.4 kg). This is a reflection of the health food movement in Japan.

1981 Sept.–Dr. Hirayama of the National Cancer Center announces that miso soup has some effect on lowering the death rate from stomach cancer, stroke, and sclerosis of the liver.

1981 Nov.–The Ministry of Agriculture and Forestry announces JAS (Japanese Agricultural Standards) for soymilk. The soymilk boom starts. The total yen value of the soymilk by all major Japanese manufacturers is 5,000 million yen.

1982–There are now 77 registered varieties of soybeans cultivated in Japan. Two of these (Norin 1-go and Norin 5-go) have a Norin [Ministry of Agriculture] number, and 25 have various place names.

1982–Production of soybeans in Japan this year is 226,300 tonnes, and soybean imports are 4,344,000 tonnes–which is only 5% self sufficiency.

1982–Per capita consumption of soy oil rises to 5.1 kg, topping 5 kg for the first time. It is 3 times higher than it was 3 years ago.

1982–Production of defatted soybean meal reaches 2,800,000 tonnes–up 38% over the last 10 years.

1983–Production of soymilk in Japan rises to 116,724 tonnes, topping 100,000 tonnes for the first time. It has risen 71% during the past year.

1983–Per capita consumption of soybeans in Japan is 5.8 kg, up 3.6% during the past year.

1984–The use of soymilk as a beverage is declining in Japan. The movement to use more soymilk as an ingredient in foods (such as noodles, breads, ice creams, and creamy soups) is becoming more active.

1984–Soybean yields in Japan reach 1,770 kg/ha, an all-time record. The old record was 1,540 kg/ha in 1982. Address: Norin Suisansho, Tokei Johobu, Norin Tokeika Kacho Hosa.

6616. Samson, Robert A.; Hoekstra, E.S.; Oorschot, C.A.N. eds. 1984. Introduction to food-borne fungi. 2nd ed. Baarn, Netherlands: Centraalbureau voor Schimmelcultures. 248 p. Index. 30 cm. [164* ref]

• ***Summary:*** Contents: Introduction. 1. Identification: Zygomycetes, Ascomycetes (Aspergillus), Deuteromycetes (Monascus, Mucor, Rhizopus), Yeasts, References. 2. The detection and quantification of fungi in food, by B.J. Hartog. 3. Fungal growth on foodstuffs related to mycotoxin contamination, by M.D. Northolt & P.S.S. Soentoro. 4. Mycotoxins, sampling and chemical detection, by H.P. Van Egmond. 5. Heat resistance of yeast cells and fungal spores, by W.I. Baggerman. 6. Food preservatives, by E. De Boer. 7. Fermentation of foods by moulds, by Ko Swan Djien. Appendix. Glossary of used mycological terms. Special literature on food mycology. Index of the taxa described in chapter 1. In the Identification chapter, details and good illustrations (line drawings) and photos are given for the genera of molds used with soyfoods mentioned above. Address: Netherlands.

6617. Shurtleff, William; Aoyagi, Akiko. comps. 1984. Soyfoods labels, posters & other graphics: 5. Miso and soy sauce. Lafayette, California: Soyfoods Center. 164 p. 28 cm.

• ***Summary:*** This book is a collection of black-and-white photocopies of materials ranging in date from 1975 to 1984. The books in this series, each a unique collection of graphic materials, are designed for a number of purposes: (1) To serve as a source of ideas, ingredients, inspiration, legal specifications, and basic guidelines for companies in the process of designing graphics for their own soyfoods company. (2) To document the tremendous diversity of soyfoods products and ways of introducing them to the public. (3) To document, through this, the rise and history of the soyfoods industry and market in the Western World.

Contents: Miso. Second generation miso products. Soy sauce, shoyu & tamari. Second generation soy sauce products. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6618. Steinkraus, K.H. 1984. Solid-state (solid-substrate) food/beverage fermentations involving fungi. *Acta Biotechnologica* 4(2):83-88. [13 ref]

• ***Summary:*** Contents: Summary. Introduction. Oriental food fermentation. Tempeh, miso, soy sauce, tape ketan. Address: Inst. of Food Science, Cornell Univ., Geneva, New York.

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14456.

6619. Wood, B.J.B. 1984. Progress in soy sauce and related fermentations. *Progress in Industrial Microbiology* 19:373-409. M.E. Bushell, ed. Modern Applications for Traditional Biotechnologies. [100 ref]

• ***Summary:*** Contents: Introduction. Soy sauce: Introduction, raw materials and koji, the *unami* taste, defatted soybean meal, microbiological considerations, moromi stage of fermentation, refining of and properties of shoyu, patents, work with Japan. Miso. Tempeh. Conclusions.

Tables show: (1) Glossary of terms used in soy sauce and similar fermentations: *Koji, miso (hatcho, mame, mugi, genmai, kome), moromi, shoyu (koikuchi, usukuchi, tamari, shiro, saishikomi), tamari, teriyaki.* (2) Recently published national standards for soy sauce, miso, etc. (cites 8 standards, 5 from Taiwan and 1 each from Thailand, Malaysia and USA). (3) Recent patents relating to shoyu and miso production and processing: Japanese 1980 shoyu (13 patents), Japanese 1981 shoyu (11), USA 1979 (2), USA 1980 (2), Japanese 1979-1981 miso (8), USA tempeh 1979-1980 (3 patents). (4) Japanese journal titles and their English translations (11 journal frequently cited in FSTA–Food Science and Technology Abstracts). Address: Applied Microbiology Div., Dep. of Bioscience and Biotechnol, Univ of Strathclyde, Glasgow, G1 1XW, Scotland.

6620. Wu, Olivia. 1984. Grand wok cookbook. Woodbury, New York, London, Toronto, Sydney: Barron's. vi + 218 p. Plus 36 unnumbered pages of color plates. Illust. (color). Index. 25 cm.

• ***Summary:*** The section titled "Ingredients" (p. 25-37) includes: Soy sauce: "The French translate this term with more success: *essence de soja*. There's nothing about this extract of soy beans that is remotely like a sauce!" "Dark soy is sometimes labeled 'mushroom soy sauce' or 'shrimp soy sauce' because additional flavors are added to it. These flavors are subtle ... Finally there is an extremely thick and dark soy sauce, sold as 'double-dark soy sauce' or 'thick soy sauce'" (p. 28-29).

Note: This is the earliest (and only) document seen (April 2012) that contains the term "shrimp soy sauce" or the French term *essence de soja*.

"Tofu. Also called bean curd, ..." Use only fresh tofu. Bean sauce, which contains naturally fermented soybeans, is known as miso in Japan. Hoisin sauce is also a bean-based sauce. Oyster sauce (which in French is called *essence des huitres*, or "essence of oysters)."

Soy related recipes include: Miso omelette (p. 79). Tofu and bean sprouts with spicy peanut sauce (p. 160). Crabmeat over tofu (p. 171).

Note: Concerning "essence de soja," it is not listed in our *Cassell's French Dictionary* (1978) under "essence" or "soja." A Google search for the term *essence de soja* (15 July 2011) gets about 259 results, some of which are duplicates. Here are some examples: (1) On the menu of the Eiffel Tower restaurant in Las Vegas, under "A La Carte Menu–Fish, Seafood" is "Loin of Ahi Tuna." The French-language description of the dish includes "Essence de Soja et d'Agrumes" [citrus fruit]. (2) A website selling "Soja Coffee" in cartons of 100 states (in French): ***La base de notre 'Soja Coffee' est un grain pur arabica enrichi d'un extrait de soja. Découvrez l'alliance du café occidental et de l'essence de soja, plante traditionnelle en Asie.*** The sense used here does not seem to refer to soy sauce, but to soy coffee (powdered or spray dried). (3) The restaurant "Le Divin Caprice" in Brussels / Bruxelles, Belgium, offers *Essence de Soja & Miel d'Acacia*. (4) The Restaurant "Le Sarment de Vigne" offers one dish which contains an unspecified amount of "essence de Soja." Address: Cooking instructor, born in Shanghai.

6621. **Product Name:** Powdered Shoyu, and Powdered Tamari.
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 3236 Boulevard, Colonial Heights, VA 23834.
Date of Introduction: 1984?
Ingredients: Soybeans, salt, water (No wheat).
Wt/Vol., Packaging, Price: 44 lb (22 kg) metal cans.
How Stored: Shelf stable.
New Product–Documentation: Letter (fax) from Norio Kushi, 1995, May 1. Steve Zoller says that San-J sells a powdered soy sauce which is made for them from their non-organic (soy meal) soy sauce. The product is spray dried and is coated with maltodextrin, which comprises 25% of the finished product.

Talk with Steve Zoller, vice-president and general manager of San-J, 1995, May 1. They make both powdered shoyu and powdered tamari.

6622. **Product Name:** [Tofu Spread].
Foreign Name: Tofu Pastete.
Manufacturer's Name: Svadesha R. Urban.
Manufacturer's Address: Das Werkhaus, Leonrodstr. 19, D-8000 Munich 19, West Germany. Phone: 089 / 93 90 05.
Date of Introduction: 1984?
Ingredients: Tofu*, fresh Egerlinge mushrooms, olive oil*, wheat*, carrots*, shoyu*, arrowroot, balsam vinegar, finely minced vegetables, sea salt. * = Organically grown (aus kontrolliert biologischem Anbau).
Wt/Vol., Packaging, Price: 150 gm.
How Stored: Refrigerated.
New Product–Documentation: Label sent by Anthony Marrese, 1990, March 22. 4 by 1.5 inches. Green on white. Logo of sun behind breaking wave. The company's brochure titled "Svadesha Tofurei" states: "As simple as herb tofu, so varied are the ingredients and so extravagant and lavish is the

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production of these Pastete. A dough is prepared from tofu, fresh carrots and onions, organic olive oil, shoyu, balsam vinegar, and a unique mixture of fine vegetables. Pastry forms are filled with this dough and boiled in water." Talk with Svadesha R. Urban, company founder. 1990 June 13. This product was introduced on Leonrodstr. in Munich. After moving to Ostpreussenstr., he introduced new versions of the product, one with herbs and one with tempeh.

6623. **Product Name:** Tamari Brown Rice Crackers, Tamari Brown Rice Wafers, Tamari-Veg Chips.
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1984?
New Product–Documentation: Catalog. 1984.

6624. Fukushima, Danji. 1985. Fermented vegetable protein and related foods of Japan and China. *Food Reviews International* 1(1) 149-209. [99 ref.]
• ***Summary:*** Introduction. Historical aspects of soy sauce and miso. General description of fermented vegetable protein foods. Soy sauce (varieties, manufacturing, flavor components and quality evaluation), miso, natto, sufu (fermented product of tofu), fermented soy milk. Microbiology, biochemistry and nutrition: Role of koji as enzyme source (unique sources of enzymes, peptidases in koji, role of proteinases and peptidases in koji during protein digestion, role of glutaminase in koji in formation of glutamic acid during protein digestion), effect of heat treatment of soybean proteins on their digestibility and nutritive value (enzyme digestibility and yield of soy sauce, enzyme digestibility and nutritive value of protein), basic mechanisms for protein coagulation, microorganisms during brine fermentation in soy sauce and miso (change of microflora during brine fermentation, properties of *P. halophilus*, properties of *S. rouxii*, properties of *Torulopsis* species), nutritive value, safety and anticarcinogenicity of fermented foods. Future of traditional vegetable protein foods made through fermentation. References. Address: Food Science Research Lab., Kikkoman Corp., Noda-shi, Chiba-ken, Japan.

6625. Judoamidjojo, R. Muljono; Itoh, T.; Tomomatsu, A.; Matsuyama, A. 1985. The analytical study on "kecap" [kechap]–an Indonesian soy sauce. *Nippon Shokuhin Kogyo Gakkaishi* (*J. of the Japanese Society for Food Science and Technology*) 32(1) 67-73. Jan. [8 ref. Eng; jap]
• ***Summary:*** "Kecap is a major seasoning or condiment in Indonesia which is made from fermented soybean. The commercial products are classified as 'common,' 'sweet,' 'salty' and 'viscous.' The composition of kecap varieties was characterized by their high sugar contents (40.51-65.45%) except the salty varieties (3.84-19.36%). The sugar contents were mostly sucrose, glucose and fructose and were derived from the sweetening agent added, i.e. palm sugar, cane sugar or molasses."

"In 1980, the national production of kecap in Indonesia could be estimated about 18,000-20,000 kl." A detailed description is given of the process for making kecap. Address: 1&4. AP4 Project, Faculty of Agricultural Engineering and Technology, Bogor Agricultural Univ., Darmaga, Bogor, Indonesia. 2. Faculty of Agriculture, Tohoku Univ. Tsutsumidori-Amamiyacho, Sendai 980; 3. Japan International Cooperation Agency, Ichigaya Honmuracho 42, Shinjuku-ku, Tokyo 162.

6626. **Product Name:** [Vegetable Terrine with Tofu]
Foreign Name: Terrine Végétale: Tofu.
Manufacturer's Name: La Maison du Tofu.
Manufacturer's Address: Hameau de la Magdeleine, 69770 Montrottier, France. Phone: 74.70.11.38.
Date of Introduction: 1985. January.
Ingredients: Soya*, rolled oats*, sesame puree, onions*, parsley*, soy sauce, salt, nutmeg, carrots. * = Organically grown.
Wt/Vol., Packaging, Price: 160 gm.
How Stored: Refrigerated.
New Product–Documentation: Form filled out by Patrick Wintzer for Anthony Marrese. 1989 Nov. This company began production of two tofu products in Jan. 1985. They now make 120 kg/month of this product.

Label. 1989. Orange on white. The logo is a rayed sun rising behind a house and mountains.

Note: *Webster's Dictionary* defines terrine (a French term first used in about 1706) as "a mixture of chopped meat, fish, or vegetables cooked and served in a terrine."

6627. Saito, Akio. 1985. Daizu bunka-shi nenpyō [Chronology of soybeans, 122 B.C. to 1984]. *Daizu Geppo* (*Soybean Monthly News*). Jan. p. 12-16; Feb. p. 10-18. 28 cm. [Jap; eng+]
• ***Summary:*** This very interesting, well-researched, and detailed chronology, which is full of new information, focuses on the development of soybeans and soyfoods in Japan. We have divided the contents of the chronology into 9 separate records; the date of each corresponds to the last year in that part of the chronology: 1292, 1599, 1699, 1868, 1899, 1926, 1949, 1969, and 1984. Address: Norin Suisansho, Tokei Johobu, Norin Tokeika Kacho Hosa.

6628. Hatsuhana. 1985. Hasuhana (Ad). *New York Times*. Feb. 10. p. 735.
• ***Summary:*** A half-page ad for this Japanese restaurant at 17 East 48th St. Most of the ad is devoted to the menu, which is divided into appetizers and entrees. Appetizers include "Soy bean [miso] soup. Geso yaki, broiled squid feet with butter.

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salt or soy bean paste / miso. Hiya yakko, cold soy bean curd [tofu]. Oshitashi [O-shitashi, O-hitashi], spinach prepared in a delicate sesame and soy sauce. Toro natto, chopped fatty tuna with aged soy beans in a cup.

Many of the entrees are nori-wrapped sushi.

6629. *Asahi Shinbun.* 1985. Nihon no daizu kakôgaku manabu. Nepaaru no Baideya-san. Kuni de gijutsu ikashitai Kyô jôkyô. Hirogaru kaigai kyôryoku no wa [Mr. Vaidya of Nepal is studying soybean processing in Japan. Hoping to use the techniques at home, he arrived today in Tokyo, expanding international cooperation] Feb 14. [Jap]

• ***Summary:*** Mr. Vaidya was invited by the Rotary Club to come to Japan to learn how to make soyfoods. He will be learning about tofu, miso, and shoyu. A photo shows Mr. Vaidya making tofu at Senhachi [Senpachi?] tofu shop at Yajima-cho, Yamadera, Japan. Address: Japan.

6630. **Product Name:** [Natural Tofu, Herb Tofu, Smoked Tofu, Dried-frozen Tofu, Tofu with Toasted Nori, Seitan in Soy Sauce]

Foreign Name: Tofu Natur, Kraeuter-Tofu, Raeucher Tofu, Tofu-gefriergetrocknet, Tofu mit geroesteter Nori-Alge, Seitan in Sojasauce.

Manufacturer's Name: Geestland

Manufacturer's Address: Burgermeisterschmidt Str. 212, D-2850 Bremerhaven, West Germany. Phone: (0471) 2 60 20

Date of Introduction: 1985, February.

Ingredients: Natural Tofu: Water, soybeans*, nigari (MgCl). * = Organically grown

Wt/Vol., Packaging, Price: 250 gm poly bag. Retails for DM 2.60.

How Stored: Refrigerated

New Product–Documentation: Label sent by Anthony Marrese, 1989, Nov. 5 by 2 inches. Dark green, yellow, black, and light green on white. "Natural food and macrobiotic from organic agriculture. 100% vegetarian (*vegetabil*). Other tofu specialties from our house:..." An illustration of a green and yellow framed house is next to a round yin-yang (*t'ai chi*) symbol.

Talk with the founder and present owner of Geestland, Paul E. Bremer, 1990, April 25. The company was founded in Feb. 1985. It started in a natural food shop (*Bioladen*) at Burgermeisterschmidt Strasse 212, D-2850 Bremerhaven. There were four products from the beginning, as shown above. About 2 years ago the company moved to: Friedrichstrasse 19, D-2850 Bremerhaven.

Their smoked tofu is made by a special process. Ordinarily, smoking foods imparts benzopyrene (a chemical carcinogen), but they have developed a special smoking process after which no detectable benzopyrene can be found in the tofu.

6631. **Product Name:** Granose Soya-Franks: Vegetarian Soya-Sausages.

Manufacturer's Name: Granose Foods Ltd. (Distributor). Made in West Germany by DE-VAU-GE.

Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England

Date of Introduction: 1985, February.

Ingredients: Water, vegetable oils, onions, egg protein, wheat protein, soya protein, spices, seasonings, salt, gelling agent (guar gum, carob gum), wheat flour, glucose, apples, smoke flavour, oat-flakes, breadcrumbs, herbs, milk protein, soya sauce.

Wt/Vol., Packaging, Price: 200 gm cellophane wrapped pack. Retails for £1.06.

How Stored: Refrigerated or frozen

Nutrition: Per 100 gm.: Calories 272

New Product–Documentation: Food Report (Lehmann), 1985, Feb. The company says that these are just the first of some 20 new products planned for introduction this year.

Form filled out by Granose Foods Ltd. 1990, June 13. States that the product, made by DE-VAU-GE, was introduced in Feb. 1985.

Label sent by Granose, 1990, July 11. 2 by 5.5 inches. Red, brown, green, yellow, and black on white.

6632. Kikkoman International Inc. 1985. Analysis of Kikkoman Instant Soups. 50 California St., Suite 3600, San Francisco, CA 94111. 1 p. Unpublished manuscript. [1 ref]

• ***Summary:*** Gives a complete nutritional analysis for four packaged miso soups (aka miso, shiro miso, tofu, wakame), and Osuimono. They have a moisture content of 2.1–4.4% Protein is 11.5–23.9%. Typically 10 gm of the dry soup is mixed with 2/3 cup water. Address: San Francisco, California. Phone: 415-956-7750.

6633. Langley-Danysz, Pernette. 1985. L'entrée discrète du soja en Europe [The discreet / cautious entry of soya into Europe]. *Revue Laitiere Francaise* No. 438, p. 16-20, Feb. [Fre]

• ***Summary:*** An illustration on the cover shows an American cowboy-like man, wearing a cowboy hat and cowboy boots, smoking a cigarette, and carrying a briefcase on which is written ASA. He appears to be emerging from a garbage can labeled "soya" and from his briefcase are flying several cartons of soymilk. The article begins: "Two soy products, milk and tofu, were at the center of a conference organized in September 1984 at Amsterdam [Netherlands] by the American Soybean Association (ASA)."

Gives data on the chemical composition and nutritive value of soy beverages, soymilks, and tofu. Discusses the products recently introduced in Europe. Consumption of soy products in the E.E.C., principally as soy protein concentrates or isolates, has never exceeded 40,000 tonnes/year. Consumption of traditional East Asian soyfoods such as

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tempeh, miso, sufu, and soy sauce, is still low in Europe, but consumption of tofu and soymilk is growing significantly. Nutritional composition of cow's milk and soymilk are compared, and various commercial soy products are discussed.

Soy ice creams (including Ice Bean and Tofutti) are discussed in detail on page 19, col. 1. The pioneer of these soy ice creams (*ces ice cream au soja*), named Ice Bean, was developed by Farm Foods in Tennessee. Today there are a dozen other brands of tofu ice cream (*glaces au tofu*). One of these ice creames (*ces crèmes glacées*), Tofutti, made by the company Tofu Time and presented at SIAL in 1984, took the first place last fall on the hit parade of dairy products from the United States." Note: This is the earliest French-language document seen (March 2007) that mentions soy ice cream which it calls *ice cream au soja*, or *glaces au tofu*, or *crèmes glacées*.

Photos show the following products, each in a Tetra Brik carton: Nestle Bonus Soya Bean Milk, Plamil Soya Milk Concentrated, Morinaga Ever-Fresh Silken Tofu, Yeo's Soya Bean Drink, Alpro Soya Drink. Address: France.

6634. **Product Name:** [Smoked Tofu (Lightly Smoked)].
Foreign Name: Tofu Geraeuchert (Zart Geraeuchert)
Manufacturer's Name: Sojarei Ebner-Prosl
Manufacturer's Address: Augasse 2, A-2500 Baden bei Wien, Austria. Phone: 02252/85101.
Date of Introduction: 1985, February
Ingredients: Soybeans (from controlled cultivation), water, tamari (natural soy sauce), herbs, spices.
How Stored: Refrigerated.
New Product–Documentation: Brochure sent by Sojarei Ebner-Prosl, 1989, Oct. 12. "Fresh products." Label, received 1989, Oct. Red, black, green, and white on yellowish orange. 1.75 by 3.75 inches. For frying, baking, or grilling in soups, sauces or sandwiches. Made purely from plants (rein pflanzlich), of high quality. Without chemical preservatives, artificial colorings or flavorings. Logo is a green soybean plant against a white circular background.

In the company's Jan. 1989 catalog this product is called Tofu Gerauchert, is precooked, and sells retail in 150 gm. or 1,000 gm. weights. Each piece weighs about 80 gm. It is also sold to food processors in 1 kg, 30 kg, 60 kg, 100 kg, and 200 kg weights.

6635. Byrne, Maureen. 1985. The future for soyfoods. The first European Soyfoods Workshop was held in Amsterdam by the American Soybean Association, and papers covered subjects from marketing to microbiological standards. *Food Manufacture (London)* 60(3):49, 51, 53, March.
• ***Summary:*** This workshop was held on 27-28 Sept. 1984 at the Krasnapolski Hotel, Amsterdam, the Netherlands–organized by the American Soybean Association. Gives a brief summary of each paper presented.

Contains an interesting full-page table (p. 51) in which Oriental soyfoods are classified into two types: Non-fermented and fermented. For each non-fermented food is given the local names, description, and uses. The non-fermented soyfoods are: Fresh green soybeans, soybean sprouts (huang tou ya, Chinese), soynuts (hueh huang tou, Chinese; iri-mame, Japanese), soymilk (tou chiang or tounai, Chinese; tonyu, Japanese; kongkuk, Korean), soy flour (huang tou fen, Chinese), soy protein-lipid film (yuba, tou-fu-pi), soybean curd (tofu).

For each fermented soyfood is given the local names, organisms used, description, and uses.

The fermented soyfoods are: Soy sauce, miso, tempeh, natto, fermented tofu, and fermented black soybeans.

Soy sauce includes chiang-yu from China, shoyu from Japan, ketjap from Indonesia, kanjang from Korea, toyo and see-ieu from Southeast Asia.

Fermented black soybeans include tau-shih from China, tao-si from the Philippines, tau-cheo from Malaysia, tauco from Indonesia, and Hamanatto from Japan.

6636. **Product Name:** [Tofu Tidbits {Tofu Burger Pieces}].
Foreign Name: Tofu Happen.
Manufacturer's Name: Christian Nagel Tofumanufaktur.
Manufacturer's Address: Oelkersallee 14a, D-2000 Hamburg 50, West Germany. Phone: 040/89 49 37.
Date of Introduction: 1985, March.
Ingredients: Tofu, rice, onions, carrots (Moehren), wheat groats (coarsely ground meal; Weizenschrot), soy sauce* (Sojasauce*), arrowroot flour (Pfeilwurzelmehl), sea salt (Meersalz). * = Not organically grown (aus nicht biolg Anbau.).
Wt/Vol., Packaging, Price: 70 gm.
How Stored: Refrigerated.
New Product–Documentation: Label, 1988, 4 by 3 inches. Black on brown. Handwritten. The company also makes Seitan, for which a label was sent. 250 gm.

6637. **Product Name:** [Seitan].
Foreign Name: Seitan
Manufacturer's Name: Christian Nagel Tofumanufaktur.
Manufacturer's Address: Oelkersallee 14a, D-2000 Hamburg 50, West Germany. Phone: 040/89 49 37.
Date of Introduction: 1985, March.
Ingredients: Organic wheat flour [*kontr. biolog.*], soy sauce, ginger [ingwer], kombu.
Wt/Vol., Packaging, Price: 250 gm.
How Stored: Refrigerated.
New Product–Documentation: Label, 1988, 4 by 3 inches. Black on brown. Handwritten. Illustration of a soybean plant with pods!

6638. Public Sector Consultants, Inc. 1985. The potential for expanding the Michigan soyfoods industry. In: 1985. The

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Potential of Food Processing for Economic Development in Michigan. PCS, Knapp's Centre, 300 S. Washington Square #401, Lansing, MI 48933. See p. III-45 to III-67. 28 cm. [47 ref]

• ***Summary:*** Michigan soyfoods manufacturers include Michigan Soy Products (Royal Oak; Tofu, soymilk; 1,650 lb/week of tofu), Oryana Soy Shop (Traverse City; Cooperative. Tofu, tempeh, soysage; 275 lb/week of tofu), The Soyplant (Ann Arbor; Cooperative. Tofu, tempeh, tempeh burgers, soymilk, dofugan, soysage; 7,500 to 10,000 lb/week of tofu), INARI Ltd. (Mason; Soynuts), Michigan Farm (Bitely; Miso), Hercules, Inc. (Harbor Beach, HVP), Eden Foods (soymilk importer, which hopes to build a soymilk plant in Michigan), and Midwest Natural Foods (Ann Arbor).

"Hercules produces nonfermented soy sauce [HVP] and sells its product to large final producers, such as La Choy and Beatrice Foods, located outside Michigan for sale under their labels." This report was prepared for the Michigan Dept. of Agriculture. March 15. Address: Lansing, Michigan.

6639. Shinshi, Eiichiro; Manabe, Masaru; Goto, Tetsuhisha; Misawa, Yukiko; Tanaka, Kenji; Matsuura, Shinji. 1985. [Studies on the fluorescent compounds in fermented foods. VII. The degradation of added kojic acid during soy sauce fermentation]. *Shokuhin Sogo Kenkyujo Kenkyu Hokoku* (*Report of the National Food Research Institute*) No. 46. p. 342-47. March. [12 ref. Jap; eng]

Address: National Food Research Inst. (Shokuhin Sogo Kenkyujo), Kannon-dai 2-1-2, Yatabe-machi, Tsukuba-gun, Ibaraki-ken 305, Japan.

6640. **Product Name:** [Tofu Burgers (Leek / Ginger, Basque Corn & Pepper, With Sea Vegetables)].
Foreign Name: Croque Tofou (Poireau / Gingembre, Basquaise, Océane).
Manufacturer's Name: Société Soy.
Manufacturer's Address: Plateau de l'Ardennais, 91590 Cerny, France. Phone: (6) 457.52.01.
Date of Introduction: 1985. March.
Ingredients: With Sea Vegetables: French-grown soybeans, rolled oats (organically grown), British sea vegetables, shrimps, soy sauce, sunflowerseed oil, spices.
Wt/Vol., Packaging, Price: 200 gm.
How Stored: Refrigerated.
Nutrition: Per 100 gm: Protein 14.8%, lipids 11.9%, carbohydrates 4.8%, calories 185.
New Product–Documentation: Letter from Bernard Storup. 1989. March 3. These 3 varieties were launched in March 1985 and discontinued in Sept. 1988. Label for Océane. 3.25 by 6.5 inches. Red, yellow, blue, green, and brown. Written in French, German, and Italian. Impressionistic drawing of sea vegetables. Contains 2 croquettes. Address is still Cerny.

6641. Steinkraus, K.H.; Ayres, R.; Olek, A.; Farr, D. 1985. Factors influencing permeability of the cell membrane of the osmotolerant yeast *Saccharomyces rouxii* grown in the presence and absence of 18% NaCl. I. *International J. of Food Microbiology* 1(5) 291-99. March. [31 ref]

• ***Summary:*** *Saccharomyces rouxii* is an essential microorganism in the high salt fermentations Chinese soy sauce, and Japanese shoyu and miso. It can grow and metabolize at high osmotic pressures. "Its ability to produce ethanol, glycerol and concentrate amino acid in high salt contributes to the desirable meat-like flavors of soy sauce and miso." Address: 1-3. Inst. of Food Science, Cornell Univ., Geneva, New York.

6642. Tang, T.C.; Lim, G.; Nga, B.H. 1985. Screening for aflatoxins in *Aspergillus oryzae* strains used in soy sauce fermentation. *ASEAN Food Journal* (*Malaysia*) 1(1):19-21. March. [6 ref]

Address: Singapore.

6643. **Product Name:** Ed & Andy's Original Tofu Teriyaki.
Manufacturer's Name: Walker and Wilks Tofoods.
Manufacturer's Address: P.O. Box 3763, Silver Spring, MD 20901.
Date of Introduction: 1985. March.
Wt/Vol., Packaging, Price: $3.98 in California.
How Stored: Shelf stable.
New Product–Documentation: Ad in Health Foods Business. 1985. Dec. p. 39. "Get something hot in your freezer: Ed & Andy's Original Tofu Teriyaki." Label. 5 by 7 inches. Full color with photo. Przybyla. 1987. Food Engineering. April. p. 74. "First introduced in 1985."

6644. Forman, Gail. 1985. First came the egg: Recipe's to answer Easter's dilemma. *Washington Post.* April 3. p. E1, E14, E16.

• ***Summary:*** In the West, people generally eat eggs for breakfast, using only very few recipes. But in Asia, they are used with great robust diversity and imagination.

"The Javanese omelet is concocted of eggs fried with onions and chilies and seasoned with sweet, thick Javanese soy sauce called *ketjap manis* or *ketjap benteng*."

Chawan-mushi (Japanese savory egg custard) calls for "1 tablespoon, plus 1 teaspoon [i.e., 4 teaspoons] Japanese soy sauce."

6645. Jones, Terril. 1985. The Pacific Rim. *Los Angeles Times.* April 19. p. OC C3.

• ***Summary:*** Although the USA is the world leader in serious biotechnology, Japan is now making a serious effort to become the most serious competitor and eventually take the lead. Biotechnology describes the new techniques, developed in the 1970s, to manipulate genes and proteins. For centuries, Japan has been skilled in fermentation technology, a vital

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process in biotechnology.

"Importance of fermentation: According to the Ministry of International Trade and Industry (MITI), Japan in 1983 had 2,600 breweries [of alcoholic beverages such as sake and beer], 1,187 *miso* bean paste companies, and 2,927 soy sauce manufacturers–more than 7,400 enterprises using fermentation."

The larger companies are in an excellent position to diversify into sophisticated areas of biotechnology. Yamasa Soy Sauce, founded in 1645, "has been able to produce beta interferon by using antibodies–proteins that adhere only to certain substances–that are specific for beta interferon, causing the interferon to precipitate out of solution. Yamasa is the world's first company to make and market these antibodies."

MITI's budget for biotech in fiscal 1985 is $4.23 billion yen ($17 million), up 18% from 1984 and up 40% from fiscal 1983.

6646. Chico-San, Inc. 1985. Why does Chico-San pay premium prices for products and ingredients (Ad). *East West Journal*. April. 4 p. Inserted after p. 50.

• ***Summary:*** A 4-page glossy color advertising supplement, inserted after page 50. Chico-San describes itself as "A company built on a philosophy." Color photos show: (1) Chico-San's new label designs for their Organic Shoyu, Nama Shoyu (organic, unpasteurized), and Natural Shoyu. (2) Chico-San Rice Cakes. A black and white portrait photo shows J. Robert Kennedy, President, Chico-San, Inc. Address: P.O. Box 810, Chico, California 95927.

6647. Estella, Mary. 1985. Natural foods cookbook: Vegetarian dairy-free cuisine. Briarcliff Manor, NY, and Tokyo: Japan Publications. 250 p. April. Color plates. Index. 26 cm. [22 ref]

• ***Summary:*** This macrobiotic cookbook, though free of dairy products, uses fish in many recipes. In the chapter titled "Getting Started" there is a section on "Soy Foods" (p. 26-27) which begins by stating that "Soybeans, the king of beans, are ironically not often eaten as whole beans, but instead are processed into miso, shoyu, tofu, tamari, and tempeh." Each of these foods are discussed briefly. Three types of soy sauce are defined: Shoyu, tamari, and commercial soy sauce (which is said to be artificially colored and processed). Chapter 7, titled "Whole grains, beans, tofu and tempeh" contains 7 tofu and 7 tempeh recipes. There are a large number of soy-related recipes throughout the book, including those using miso, black soybeans, and tamari.

6648. Shurtleff, William; Aoyagi, Akiko. 1985. Soyfoods industry and market: Directory and databook 1985. 5th ed. Lafayette, California: Soyfoods Center. 220 p. Index. April. 28 cm. Updated every 1-3 years with a bibliographic supplement. [360 ref]

• ***Summary:*** Contents: 1. Introduction. 2. Directory of soyfoods manufacturers. 3. Directory of soyfoods support industry: Goods & services. 4. The many types of soyfoods. 5. Historical: Historically most important books and serials, earliest references to individual soyfoods. 6. Year in review. 7. Soyfoods industry and market in the U.S. 8. Tofu industry and market in the U.S. and Canada. 9. Soymilk industry and market: Worldwide and in the U.S. 10. Tempeh industry and market in the U.S. 11. Soy sauce industry and market in the U.S. and Japan. 12. Miso industry and market in the U.S. and Japan. 13. Soynut industry and market in the U.S. 14. Natto industry and market in Japan. 15. Statistics on fermented soyfoods in East Asia. 16. Soyfoods in restaurants, delis & cafeterias. 17. Soybean crushing industry in the U.S. 18. Soy oil industry and market in the U.S. 19. Soy flour and cereal-soy blends industry and market worldwide. 20. Modern soy protein products industry and market in the U.S. 21. Soyfoods terminology and standards. 22. Names of soyfoods in major foreign languages (incl. Chinese / pinyin, Hoisin sauce = haixian jiang). 23. Soybean production worldwide and country-by-country. 24. Key institutions working with soyfoods worldwide. 25. Measures, weights, and equivalents. 26. About the Soyfoods Center & soyfoods consulting services. 27. Bibliography.

In February 1977 a Gallup poll in America showed a remarkable shift in the public's awareness of and attitudes toward soyfoods. The sampling of 1,543 adults across the nation found that: 33% believe that soybeans will be the most important source of protein in the future–ahead of fish at 24% and meat at 21%. 55% believe that "soy products have a nutritional value equal or superior to that of meat." 54% reported that they "had eaten foods containing soy protein as a prime ingredient within the past 12 months." Younger age groups living in large cities and those with college or university educations had the most favorable attitudes toward soy protein, indicating that support for soyfoods is likely to grow in the future. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6649. Tjiptoherijanto, Prijono. 1985. Aspek ekonomi dari usaha tempe tradisional: Pendekatan usaha tani kedelai [Economic aspects of the traditional tempeh producer: An appraisal from the soybean producer]. In: Hermana and Karyadi, eds. 1985. Simposium Pemanfaatan Tempe Dalam Peningkatan Upaya Kesehatan dan Gizi [Symposium on Tempeh Utilization in Efforts for Improving Health and Nutrition]. 148 p. See p. 97-113. Held 15-16 April 1985 in Jakarta. [7 ref. Ind]

• ***Summary:*** This article contains the following graphs: Soybean exports from Indonesia (1977-82); Soybean imports to Indonesia (1978-82); Production and consumption of soybeans and soyfoods in Indonesia (1971-82; soyfoods given for only 1978 and 1980); Per-capita consumption of soybeans, tofu, tempeh, and soy sauce (kecap) by

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province and total, 1978 and 1980. In 1980 the figures for Indonesia as a whole were soybeans 0.16 kg per capita, tofu 4.66 kg, tempeh 4.87 kg, soy sauce 1.61 bottles. The average consumption of tempeh for Indonesia as a whole was 11.6 grams/person/day in 1978 and 13.3 gm in 1980. Source: Central Bureau of Statistics. Address: Dr., Lembaga Demografi–UI.

6650. Mori, H. 1985. Shôwa 57 nendo ni okeru shôyu, miso no kenkyû gyôseki [Review of annual achievements in shoyu and miso research]. *Nippon Jozo Kyokai Zasshi (J. of the Society of Brewing, Japan)* 78(5) 328-59. [766 ref. Jap]
• ***Summary:*** This important Japanese-language article, published each year in the May issue of this periodical, has two parts: (1) A review of the past year's major discoveries and developments in the fields of miso and soy sauce in Japan. (2) A bibliography related to those discoveries and developments. Address: Noda Sangyo Kagaku Kenkyusho.

6651. American Natural Foods. 1985. You're gonna' love that Smoky Mountain twang (Ad). *Vegetarian Times*, June. Inside rear cover.
• ***Summary:*** This is a full-page color ad (copyright 1984) for Smoky Mountain Sizzlin', an all-natural barbecue sauce. The left half shows the large glass bottle and label, with the Great Smoky Mountains in the background. The right half of the ad talks (in colorful Appalachian hillbilly style) about the origins of barbecue, and the product. "Probably the best barbecue in America comes from the Great Smoky Mountains. Ever since the Cherokee ladies were gracious enough to teach the new settlers their cookin' secrets, there's been some all-mighty sweet smoke mixin' down along the hollows with the mist and the mountain laurel. That's what new Smoky Mountain Sizzlin's all about. Mixin' sweet smells, good times and powerful fine eatin.'"

This sauce is "made from real special things–Red ripe tomatoes, virgin peanut oil, molasses, and a secret bunch of natural herbs and spices. And apple cider vinegar and red miso, both made and wood aged right here in the Great Smokies. It's all natural and all mighty delicious." Note: The fourth ingredient is red miso (made in North Carolina) and the sixth is tamari soy sauce. Address: Suite 21 The Courtyard, Chapel Hill, North Carolina 27514. Phone: (919) 929-0113.

6652. Kushi, Aveline, Jack, Alex. 1985. Aveline Kushi's complete guide to macrobiotic cooking: For health, harmony, and peace. New York, NY: Warner Books. xvii + 414 p. June. Illust. Index. 23 cm. [36 ref]
• ***Summary:*** Index entries include: Miso 61, Tofu 50, Tamari 19, Tempeh 17, Whole dry soybeans 6, Natto 3, Soymilk 3, Yuba 1. This book calls ganmodoki "Tofu Croquettes" and further states that "*Gan* means 'crane' and *modoki* means 'looks like.'" Among the 31 chapters are ones titled Beans (incl. basic black soybeans, and brown rice with black soybeans); Tofu, Tempeh, and Natto (including yuba); Sea Vegetables; Condiments and Garnishes (incl. miso), and Fish and Seafood.

Under "Black Soybeans" (p. 257) we read: "These nice shiny beans are also called Japanese black beans. They have a strong, delicious taste. Their juice is said to make the voice clear and beautiful. Throughout Japan, mothers prepare their children for music tests and singing lessons with this dish. Black soybeans are also used medicinally to help discharge animal toxins from the body." Note: This is the earliest macrobiotic cookbook seen that uses the term "Black soybeans" in a recipe title. All previous macrobiotic cookbooks called them "Black beans."

Contains recipes for homemade tofu, tempeh, and natto. Address: Brookline, Massachusetts.

6653. **Product Name:** [Tofu Spreads (With Vegetables, Seitan, Green Rye, or Tunafish)].
Foreign Name: Tofu Aufstrich (Brotaufstrich aus Tofu und Gemuese), Pasetta (Tofu und Seitan), Gruenkern Pastete (Tofu und Gruenkern), Tarree (Tofu und Thunfisch).
Manufacturer's Name: Sojvita Produktions GmbH.
Manufacturer's Address: Hauptplatz 1, 2493 Lichtenwoerth, Austria. Phone: 02622/75494
Date of Introduction: 1985, June.
Ingredients: 1. Tofu, parsley, celery, soy sauce, onions, vegetable oil, spices (Gewuerze), starch, lecithin. 2. Tofu, seitan (wheat gluten), soy sauce, vegetable oil, spices (Gewuerze), starch, lecithin.
Wt/Vol., Packaging, Price: 180 gm.
How Stored: Refrigerated.
New Product–Documentation: Letter from Norbert Brunthaler, 1988 Jan 4. Gives date of introduction as September 1986. Label, 1987, 9.25 by 1.25 inches. Dark green, light green, orange, and black on white.

6654. **Product Name:** Tempeh Burgers, and Tofu Burgers.
Manufacturer's Name: Sooke Soy Foods Ltd.
Manufacturer's Address: 2625 Otter Point Rd., R.R. 2, Sooke, Vancouver Island, BC, V0S 1N0, Canada. Phone: 642-3263.
Date of Introduction: 1985, June.
Ingredients: Tofu (or tempeh), natural soy sauce, herbs and spices.
Wt/Vol., Packaging, Price: Tofu: 8 oz. Tempeh: 6 oz.
How Stored: Refrigerated.
New Product–Documentation: Labels, 1985, 3 inch diameter. Self adhesive. Brown (Tofu) or Green (Tempeh) on beige. "Ready to serve, or steam for 5 minutes. Meatless."

6655. **Product Name:** Westbrae Natural Tofu Ramen Instant Asian-Style Whole-Wheat Noodles & Miso Flavor Broth.

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Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1985, June
Ingredients: Asian style noodles: whole wheat flour, sifted wheat flour, and sea salt. Vegetable broth: powdered shoyu (soybeans, wheat and sea salt), dried tofu (soybeans, nigari bittern), shiitake mushroom powder, kombu seaweed powder, sea salt, dried onion, garlic, white pepper, dried ginger, green onion.
Wt/Vol., Packaging, Price: 3.1 oz (90 gm)
How Stored: Shelf stable.
New Product–Documentation: Label, 1986, undated. 10 by 7 inches. Plastic. Red, green, white, brown on yellow. Color picture of bowl of Tofu Ramen.

6656 Willan, Anne. 1985. The spice is right. Feasting on Indonesian ingenuity. *Washington Post*. July 28, p. G1, G4.
• ***Summary:*** Last year the writer discovered that Indonesia is "a land of extraordinarily good food. She gives the menu of an Indonesian feast for 12. The recipes do not use hard-to-find Indonesian flavorings and spices. However, "Indonesian soy sauce, for which regular dark soy sauce can be substituted, was used"–in part because it is fairly widely available.

The recipe for Coconut with peanuts (Serundeng) calls for "1 teaspoon Indonesian soy sauce." Address: Special to the Post.

6657 **Product Name:** Naturally Delicious Fried Rice Sandwich (With Tofu).
Manufacturer's Name: Naturally Delicious.
Manufacturer's Address: Asheville, North Carolina. Phone: 704-253-7656.
Date of Introduction: 1985, July.
Ingredients: Organic brown rice fried with scallions and soy sauce, wrapped in a whole wheat tortilla with steamed organic carrots, alfalfa sprouts, miso tahini sauce, tofu, green leaf lettuce.
Wt/Vol., Packaging, Price: 12 oz.
How Stored: Unrefrigerated and perishable.
New Product–Documentation: Label sent by Paul Duchesne, 1989, Aug. 11. Handwritten "Naturally delicious. Made fresh today. To eat, peel back wrapper from one end." Talk with Paul Duchesne, 1989, Aug. Barbara Svenning originally learned how to make this sandwich from Paul. She made it at the Natural Cafe in Santa Fe, New Mexico, with her husband Marty Roth. When she separated from Marty, she moved to Asheville, North Carolina, where Jack Garvey (a former husband) and her children were living. She made a line of at least 28 Fried Rice Sandwiches (many of which contain tofu) and whole meals, which she sold at various places.

Talk with Dinner for the Earth, 1989, Aug. 15. This is a natural food store and deli that has been in business for 13 years and has sold Barbara's line of sandwiches for 3-4 years. In April 1989 Barbara Svenning became manager of the Deli at Dinner for the Earth (160 Broadway St. Phone: 704-253-7656). She lives in Black Mountain, North Carolina.

Talk with Barbara Svenning, 1989, Aug. 21 and 23. It was a coincidence that Great Eastern Sun was established in Asheville. Barry Evans was partners with Sandy Pukel and Michio Kushi. They had a miso factory [American Miso Co.] in North Carolina and they wanted to establish GES near it. Marty suggested Asheville, since it was a good location and he could live their near his wife's children (Jack Garvey lived in Asheville). Barbara did not make her brown rice and tofu sandwiches while Marty was working at Great Eastern Sun. After Marty Roth had set up Great Eastern Sun in Asheville, North Carolina, he continued to live in nearby Black Mountain but worked for Chico-San for a while and set up the Ohsawa America mail order program for Bob Kennedy. Then he began working for Westbrae in California, where he and Barbara and her son relocated. After 2 years, in July 1985, when her son was age 3, she left Marty Roth (they had never been married), and returned by herself to Asheville, North Carolina to be with her two other children. In Asheville, she established a new company named Naturally Delicious. She ran it out of some else's kitchen and sold 12-15 sandwiches a day at only one store, Nothing But Natural, which promised to tell any health inspectors that the sandwich was made in their kitchen. During that time another woman, Barbara Hoffman, who now lives in Israel, sort of took over the sandwich business. When Nothing But Natural went out of business, she moved to Black Mountain (where she still lives), got her own kitchen, and sold the sandwich exclusively to Dinner for the Earth, where she now runs the deli. Yet she still owns the brown rice sandwich business. She makes them at home and sells them to Dinner for the Earth. "Its still my little baby, still an underground business. I make about 15 fresh each day and they are different every day. Only the chapati, fried rice, and lettuce are the same. I make a Mexican, and Indonesian, a Chinese, etc. Not all contain tofu. Sometimes its a tofu sauce, or barbecued or baked tofu. I guarantee the sale and take back any not sold that day. There is a profit of about $1 each. I also make another nice wheat-free tofu sandwich called Barbecued Tofu on Millet. It's on square slices of millet bread. It started it about 6 months ago."

6658 *Progressive Grocer*. 1985. How chunky can you get? 64(7): 219-20, July.
• ***Summary:*** In 1984 supermarket sales of soy and teriyaki sauce were $49.15 million (gross profit $12.58 million), accounting for 2.71% of the sauce category sales (2.99% of category gross profits; the average retail gross profit

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margin is 25.6%) and with sales up 8.26% over 1983. The best-selling sauce types are spaghetti sauce (28.36% of the category), catsup (15.49%), meat sauce (14.15%), and dry mixes and seasonings (10.79%).

6659. Westbrae Natural Foods. 1985. Distributor catalog, FOB pricing: Aug. 1, 1985. Emeryville, California: Westbrae. iv + 11 + [7] p. 22 by 28 cm.
• ***Summary:*** On the cover, the lettering is in black on a tan background. Pages i-iv are general information, 1-11 are a computer-printed price list, and the last 7 are a product glossary. Address: Office: 4240 Hollis St., Emeryville, California 94608; Mailing: P.O. Box 8711, Emeryville, CA 94662. Phone: (415) 658-7518 (orders)

6660. Westbrae Natural Foods. 1985. Product listing [glossary]: Aug., 1985. Emeryville, California: Westbrae. [7] p. 22 by 28 cm.
• ***Summary:*** On the cover, the lettering is in black on an orange background. Address: Office: 4240 Hollis St., Emeryville, California 94608; Mailing: P.O. Box 8711, Emeryville, CA 94662. Phone: (800) 621-0851.

6661. Willan, Anne. 1985. The challenge of creating an Indonesian feast to feed an even dozen. *Los Angeles Times*. Aug. 1. p. OC_40 or SD_40 or SE40 or SG40 or WS40.
• ***Summary:*** This article is basically the same as the one by the same author that appeared in the *Washington Post* on July 28 (p. G1).

The recipe for Toasted coconut with peanuts (Serundeng) calls for "1 teaspoon Indonesian soy sauce." Address: Special to the Post.

6662. Barrett, Clare. 1985. A practical guide to soyfoods. *Vegetarian Times*. Aug. p. 33-40. No. 96. [14 ref.]
• ***Summary:*** An overview of fresh green soybeans, whole dry soybeans, soynuts, soy sprouts, soy flour & soy grits, soy oil, soy protein isolates, soymilk, okara, tofu, tempeh, soy sauces, miso, natto. Concludes with a list of 14 recommended books on soyfoods.

6663. Eckett, Alison. 1985. Beating the protein crunch: A growing number of people are discovering the range of soyfoods, both traditional and modern, that can be made from this bean. *Food Processing (UK)* 54(8):25-28. Aug.
• ***Summary:*** "The term 'soyfoods' is a recent generic expression that has been used to describe the complete range of soy products prepared for human consumption. It covers both high technology, modern products such as soy [protein] fibres, concentrates and isolates which are mainly used as ingredients by food manufacturers... and includes the traditional low technology products of soymilk, soy sauce, miso, natto, tofu, tempeh and soy sprouts that have formed part of the staple diet in East Asia for thousands of years."

Soyfoods are divided into non-fermented and fermented. Photos show: (1) Miso Dip (front of two packages). (2) Cubes of tofu under water. (3) Nasoya Tofu Vegi-Dip. (4) Sliced cakes of tempeh. (5) The front of four tempeh packages, made by The Tempeh Works. (5) White Wave tempeh, a tempeh burger, and a promotional piece. (6) A box of Tofu Lasagna, made by Legume, Inc. (7) The front of a package of "6 All Natural Vanilla Ice Bean Sandwiches," made from Ice Bean by Farm Foods.

6664. **Product Name:** Premier Japan Shoyu Marinade.
Manufacturer's Name: Edward & Sons Trading Co. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 3150, Union, NJ 07083.
Date of Introduction: 1985. August.
New Product–Documentation: Spot in Natural Foods Merchandiser. 1985. Aug. "All natural."

6665. **Product Name:** Premier Japan Ponzu (Vinegar & Shoyu Dipping Sauce).
Manufacturer's Name: Edward & Sons Trading Co. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 3150, Union, NJ 07083.
Date of Introduction: 1985. August.
New Product–Documentation: Bowles. 1987. Total Health. Aug. p. 24.

6666. **Product Name:** Premier Japan Mild Shoyu (Reduced-Salt Soy Sauce).
Manufacturer's Name: Edward & Sons Trading Co. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 3150, Union, NJ 07083.
Date of Introduction: 1985. August.
New Product–Documentation: Bowles. 1987. Total Health. Aug. p. 24. Ad in Palate Pleasers. Vol. 6. p. 31.

6667. **Product Name:** Premier Japan Lemon Tamari.
Manufacturer's Name: Edward & Sons Trading Co. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 3150, Union, NJ 07083.
Date of Introduction: 1985. August.
Ingredients: Incl. aged tamari soy sauce, herbs, spices.
New Product–Documentation: Spot in Health Foods Business. 1991. Oct. p. 74.

6668. Gipson, Beckilynn. 1985. Processed proteins: Markets, developments. Business Communications Co., Inc., 9 Viaduct Rd., P.O. Box 2070C, Stamford, CT 06906. 112 p. Aug. Report GA-043R. •

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6669. Hesseltine, C.W. 1985. Fungi, people, and soybeans. *Mycologia* 77(4):505-25. July/Aug. [92 ref]
• ***Summary:*** In this Mycological Society of America Annual Lecture, presented on 7 Aug. 1984 at Colorado State University (Fort Collins, Colorado), Dr. Hesseltine gives a nice history of the research conducted by him and others at the Northern Regional Research Center (NRRC) on Asian soybean fermentations, including fermented tofu (Frank Meyer, early USDA plant explorer, in a letter dated 21 Nov. 1916, states: "Parcel No. 125c contains first quality Chinese soybean cheese; please taste a little on the point of a knife; it is extremely appetizing."), sufu, shoyu, miso, tempeh, Chinese black beans (fermented black soybeans), natto, and "the use of lactic acid bacteria to produce a yogurt product from soybeans." He also studied non-fermented tofu.

Dr. Hesseltine pays a nice tribute to the work of Dr. A.K. Smith of the NRRC (p. 506-07). After his trip to East Asia shortly after World War II, Dr. Smith (a protein chemist) made great efforts to promote cooperation between the USDA, particularly the NRRC, and Japan in conducting research to understand how our exported soybeans were used for food. He had the foresight to recognize the importance of studying soybeans used in such huge quantities for processing into human food. Dr. Smith was instrumental in arranging for two Japanese scientists (Dr. Tokuji Watanabe and Dr. Kazuo Shibasaki) to come to the NRRC to do research on tofu and miso. "This really began a new era of research on use of Oriental methods to produce foods from soybeans" (p. 507).

"My first real involvement in fermentation of soybeans was the arrival [in Oct. 1958] of Professor K. Shibasaki of Tohoku University to study the miso fermentation. He was sponsored by the American Soybean Association and USDA's Foreign Agricultural Service. When he arrived, I was told that since I was curator of the mold collection and since the *Aspergillus oryzae* strains used in the miso process were in my charge, I would be the person he would work with. I had no background and no interest in soybean fermentations, but this was a fortuitous happening because it acquainted me with Oriental food fermentations. All my background was in conventional liquid agitated pure culture fermentation. The miso fermentation introduced me to two new concepts in fermentation: (1) solid state fermentation, and (2) use of mixed pure culture inoculum" (p. 510).

"Probably my interest in fermented foods would have abated had it not been for the acceptance of Mr. Ko Swan Djien of Indonesia, who came to us in 1960 for practical training. In my first discussion with him, we talked about the kind of work he would do. Since I knew that a fermentation was conducted in Indonesia using soybeans and reportedly the fermentation organism was a species of *Rhizopus*, I asked him if he was familiar with the product; his answer was yes, that he often ate it, but he knew nothing about how the fermentation was conducted. It was decided that during his 6 months at Peoria this might be an interesting subject to study, especially since he could obtain samples of the tempeh cake from his wife, who was in Java and could tell good tempeh from bad. Dried samples were quickly obtained; from these cakes, four species of *Rhizopus* were isolated" (p. 514-15). Eventually many strains of *Rhizopus* were isolated and investigations showed that *Rhizopus oligosporus* strain NRRL 2710 produced especially good tempeh.

Photos (see next page) show four famous Japanese scientists who studied fermented foods: (1) Prof. Teizo Takahashi. (2) Ryoji Nakazawa. (3) Kin-ichiro Sakaguchi. (4) Kendo Saito. Address: NRRC, ARS/USDA, Peoria, Illinois.

6670. *Natural Foods Merchandiser.* 1985. New products, changing diets propel soyfood sales. Aug. p. 1, 39-40, 42-44.
• ***Summary:*** "The soyfoods revolution is being fueled by several powerful trends. Many consumers are attracted to soyfoods because they are an excellent no-cholesterol 'replacement' for meat and dairy products. Soyfoods are also growing with the rising tide of macrobiotics, which promotes the use of various soy products. And there are now enough soyfoods on the market to create synergy within the category: consumers buying soymilk try tofu, and go from tofu to tempeh.

"Tofu is by far the best-selling product in the soyfoods category, according to figures provided by the Soyfoods Association [and Soyfoods Center]. An estimated $60 million worth of tofu is produced and sold in the U.S. annually, while frozen tofu desserts, entrees, and prepared products account for approximately $25 million. Soymilk sales have jumped from near zero a few years ago to $10 million today, while tempeh is an emerging growth category at 5 million in yearly sales." All of the retailers interviewed by NFM indicated that the soymilk category is experiencing major growth. Most of the growth has been in six-ounce aseptic individual serving packages supplied by such companies as Westbrae, Ah Soy, Vitasoy and Eden. Health Valley's Soy Moo has recently been repackaged in a 8.45-ounce package.

"Tempehworks produces approximately 7,000 pounds of tempeh a week during peak months, including that used in its processed tempeh products, such as Fakin' Bacon, New York Style Strami and Kansas City Barbecue."

Includes "A directory [sic, glossary] of soyfoods terminology" that defines tofu, tempeh, soybean, miso, soymilk, shoyu/tamari, TVP or TSP, soy protein isolate, defatted soy flour, and "secondary" soyfoods products.

6671. Ofusa, Tsuyoshi. 1985. Shii bejitaburu: Kenko no tame no kaisô dokuhon [Sea vegetables: A book for health]. Tokyo: Kodansha. 194 p. Aug. 20. Illust. No index. 18 cm. [Jap]
Address: Yamamoto Nori Co., Tokyo, Japan.

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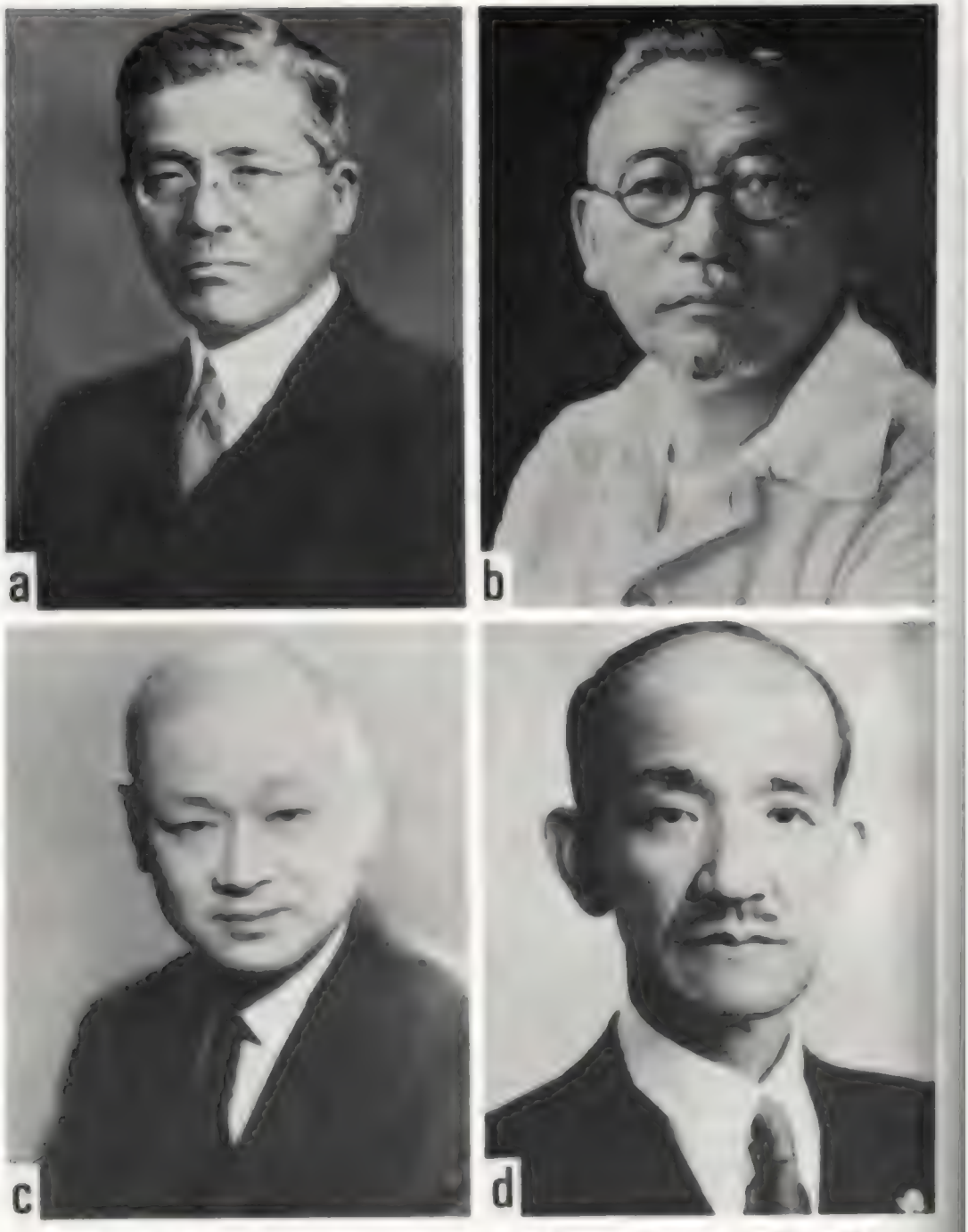


FIG. 1. Four famous Japanese scientists who studied fermented foods: (a) Prof. Teizo Takahashi, (b) R. Nakazawa, (c) Kin-ichiro Sakaguchi, and (d) Kendo Saito.

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6672 Ohsawa-America. 1985. Chico-San sells products line (Ad). *East West Journal* 15(9):33. Aug.
• ***Summary:*** A full-page ad. "Ohsawa-America, a newly formed macrobiotic food company, has recently purchased the Ohsawa-Japan products line from Chico-San, a division of H.J. Heinz, Inc." The ad/letter is signed "... in the spirit of Ohsawa, Herman Aihara, Bob Kennedy, Marty Roth, Joel Wollner."

The mail order catalog and price list, printed in tiny letters on this same page, includes 4 types of soy sauce, 5 types of miso, 3 miso condiments, 3 types of koji, and 6 seaweeds.

This ad also appeared in the Sept. 1985 issue (p. 4) of this magazine. Address: P.O. Box 12717, Northgate Station, San Rafael, California 94913-2717. Phone: 415-492-8110.

6673 **Product Name:** Sunrise Vegetarian Quarterpound Burgers (Made from Tofu or Soya Proteins) [Tandoori, Herbs & Spices, Tofu, or Mexican Chili].
Manufacturer's Name: Soya Health Foods, Ltd.
Manufacturer's Address: Unit 4, Guinness Rd., Trafford Park, Manchester M17 1UA, England.
Date of Introduction: 1985, August.
Ingredients: Herbs & Spices. Okara (soya fibre and protein), textured soya flour, hydrogenated vegetable oil, wholewheat rusk, soya flour, modified starch, stabiliser (of vegetable origin), hydrolysed vegetable protein, mixed vegetables, mixed herbs, mixed spices, tamari.
Wt/Vol., Packaging, Price: 1 lb paperboard box.
How Stored: Frozen.
Nutrition: Per 100 gm: Protein 11 gm, fat 14 gm, carbohydrate 12.6 gm, dietary fibre 5.2 gm.
New Product–Documentation: Natural Food Trader (UK). 1985, Sept. p. 25. The burgers are quarter pounders that come 4 in a pack. Michael Cole is director of this company. Poster: Sunrise–Be good to yourself! A photo shows a burger box.

Label. 1988. Paperboard box, 9 by 4.5 by 1.5 inches. Full color in red, green, and brown. Photo on front of open-face burger. "Free from animal fats. No artificial colours. Low in salt and high in fibre. No animal has suffered in the making of this product." Other products available from Soya Health Foods: Sunrise Soya Milk, Soya Milk Yogurt, Soya Ice Dream in 1 litre tubs.

6674 Staudt, Joe. 1985. La Choy. *Horizons* (*Beatrice Grocery Group*). Summer. p. 1-7.
• ***Summary:*** In 1920 Wally Smith and Ilhan New, two friends from the University of Michigan, founded La Choy Foods in Detroit. Their first product was [mung] bean sprouts. In 1922 the business was incorporated as La Choy Food Products. The first La Choy-owned plant was built in Detroit in 1937. The Archbold, Ohio plant was built on its present site in 1942. The Company's long association with Beatrice started in 1943, when La Choy was bought by the Chicago-based company and became Beatrice's first non-dairy operation. The article does not state when La Choy introduced soy sauce. But in 1945 it came off the bottling line at 30 bottles/minutes; today it is 250 bottles/minutes. La Choy, which translates to "good vegetables," is and has been for some time the world's undisputed leader in Oriental foods. Address: Fullerton, California.

6675. *Whole Foods*. 1985. Source book 1985-86. 8(8):1-136. Aug. Illust. Index. 28 cm.
• ***Summary:*** This is the 5th edition of this directory. Contents: Publisher's page. NewsLinks. Wholesalers / distributors: Alphabetical address directory. Wholesalers / distributors: Geographical directory. Product directories: A list of product manufacturers: Foods (p. 33-48–soy-related categories include: Bean products, beans, coffee substitutes, cultures, ice cream, macrobiotic, milk, miso, sauces, soy products, soy sauce, tamari, tempeh, tofu), vitamins and supplements, cosmetics & personal care, herbs. Trade name index: An alphabetical listing of products by their brand or trade names. Brokers. Publishers. Associations. Alphabetical listing of manufacturers / importers. Advertisers' index.

Note: The listings related to soy products are full of errors. This Source Book contains many interesting ads. Whole Foods claims prominently and repeatedly to have the largest circulation in the natural foods industry. Address: South Plainfield, New Jersey.

6676. Ostman, Eleanor. 1985. Public acquires a taste for tofu. Soybeans give business more than just desserts [Lee L. Lee, Tofulicious, and Eastern Foods Corp.]. *Morning Pioneer News Dispatch* (*St. Paul, Minnesota*). Sept. 15. p. 1G, 3G.
• ***Summary:*** Korean-born Lee L. Lee graduated in physics from Seoul National University and came to the Univ. of Minnesota to study accounting. He stayed to work for 11 years at Control Data Corporation's international accounting division, the last 5 as its manager. "He was clearly ahead of demand in 1978 when he started producing tofu in a tiny rented warehouse in Roseville [Minnesota]." During his years at CDC "he was also making tofu for First Oriental Foods in St. Paul, ultimately buying that company in 1982. His Eastern Foods Corp. began producing tofu part time a year before he left Control Data, with the assistance of venture capital investment from his former employer." CDC owns 30% of Eastern Foods. In 1979 he built his current quarters at 3235 E. Hennepin Ave.

"Though he kept producing tofu over the years while two other local competitors started and folded, Lee says he knew that 'I couldn't live and die with just one product.' His company began manufacturing won ton skins and egg roll wrappers. 'Within 18 months, we dominated the entire Midwest market for the skins,' said Lee.

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"'In tofu, we are the leader in Minnesota, Wisconsin, Iowa, Michigan and Illinois. Our sales were growing 10 to 15 percent annually, but the base was so small to being with. The Minnesota market uses 300 cases of tofu a week, that's under $10,000 a month.' Total production weekly of tofu, skins and related products is up to 36,000 pounds weekly...

"Steve Schellhaass, formerly with Safeway Stores, was hired last year as vice president of manufacturing and product development, with a directive to find 'value-added' uses for tofu and the skins. Tofulicious is one result and Tofruit, resembling yogurt with fruit, is another. Available in health food stores, it soon may be released to regular retail channels under a co-packing arrangement. The company also has tofu salad dressing ready...

"Lee plans to make Eastern Foods a national company in 1986 and perhaps to go public in 1987. To speed national distribution, his company has contracted with JFC International, the distribution arm of Kikkoman soy sauce and the largest Oriental specialty distributor in the country."

A photo shows Lee L. Lee, founder and president of Eastern Foods Corp., holding a pint of Tofulicious. Address: Minnesota.

6677. *Cultivar.*1985. Le soja en alimentation humaine [Soya in human nutrition]. No. 186, p. 77-78, Sept. [Fre]
• ***Summary:*** A brief introduction to tofu, soymilk, soy sauce, tempeh, miso, soy flour, soy protein isolates, and concentrates. Address: France.

6678. Frum, W. Mark. 1985. Soy sauce from A to Z: The beginning and the end of shoyu? *Japan Society Newsletter.* Aug/Sept. p. 5-7.
Address: Prof. of History, California State Univ., Hayward.

6679. Kikkoman International Inc. 1985. Teriyaki anytime. In almost no time. Kikkoman Teriyaki Baste and Glaze (Ad). *New Age Journal* (*Boston, Massachusetts*), Sept. p. 71.
• ***Summary:*** At the bottom of this full-page color ad is a brush next to a bottle of Kikkoman Teriyaki Baste & Glaze. Above it are four horizontal rows of cooked foods: Steak, fish, meat loaf, and chicken legs.

6680. Kotzsch, Ronald E. 1985. Macrobiotics: Yesterday and today. Tokyo and New York: Japan Publications Inc. 292 p. Sept. Illust. Index. 26 cm. [144* ref]
• ***Summary:*** The best and most objective book available to date (April 2011) on the origins and history of macrobiotics, worldwide. Includes detailed information on central ideas and practices of macrobiotics, its leaders, organizations, applications, and aspirations. Carefully researched and well written.

Contents: 1. Ekken Kaibara: The grandfather of macrobiotics. 2. Sagen Ishizuka: The founder of modern macrobiotics. 3. George Ohsawa: The early years (1893-1929; Yukikazu Sakurazawa, later known as George Ohsawa was born on 18 Oct. 1893 in a western suburb of Kyoto, Japan, the family's eldest child). 4. George Ohsawa: The first sojourn in the west (1929-1936). 5. George Ohsawa: Return to Japan in crisis (1936-1939).

Photographic interlude for *Macrobiotics Yesterday*: Illustration (line drawing) of Ekken Kaibara. Photos of Ishizuka, Nishibata, Ohsawa's parents, George Ohsawa (many from 1901-1966). 6. George Ohsawa: The war years (1940-1945). 7. George Ohsawa: Hope for a new Japan and a new world (1945-1953). 8. George Ohsawa: The world journey of the penniless samurai (1953-1966, George and Lima visited India [Nov. 1953-July 1955], Africa [Aug. 1955-Feb. 1956, incl. Kenya, and 3½ months with Albert Schweitzer at Lambarene, Gabon], Paris, France and Brussels, Belgium, New York City, USA [late 1959-Oct. 1961]; France [around 1961 he met Louis Kervran]; Tokyo [most of 1963-64]; Vietnam 1965; Tokyo, where he died on 23 April 1966 [24 April Japan time], probably of filarial parasites contracted in Lambarene, and smoking). 9. George Ohsawa: The man and the legacy. 10. After the master: Part one: America.

Photographic interlude for *Macrobiotics Today*: Photos are given of Toshi Kawaguchi, Michi Ogawa, Hiroshi Maruyama, Kaoru Yoshimi, Francoise Riviere, Cecile Levin, Dr. Kikuo Chishima, Dr. Moriyasu Ushio, Michio and Aveline Kushi, Herman and Cornellia Aihara, the Kushis, Aiharas, and Shizuko Yamamoto, William Dufty, Bill Tara, Aveline Kushi and Wendy Esko, Alex Jack, Dr. Marc van Cauwenberghe, Edward Esko, Murray Snyder, Noboru Muramoto, Jacques and Yvette de Langre [DeLangre], Jerome Carty, Duncan Sim, Lima Ohsawa, Shuzo Okada, Hideo Ohmori, First European Congress of Macrobiotics in London, Nov. 1978, Lenk summer camp, Switzerland, July 1984, Jan Lansloot, Peter Doggen, Rik Vermuyten, Georges Van Wesenbeeck, Roland Keijser, Mayli Lao Shun, Tomio Kikuchi (in Brazil).

11. After the master: Part two: Japan. 12. After the master: Part three: Europe and elsewhere. 13. The gospel according to Kushi. 14. Macrobiotics in western culture. 15. Prospects for the future. Bibliography.

The author, an excellent historian and writer, with a delightful sense of humor and light touch, began his study and practice of macrobiotics under Michio Kushi in Boston in Jan. 1967. A photo of Ronald E. Kotzsch appears on the rear cover. This book is based on his doctoral dissertation titled "Georges Ohsawa and the Japanese Religious Tradition," submitted on 1 April 1981 for a PhD degree in History of Religions from Harvard University. Pages 185-86 discuss briefly the role of the macrobiotic movement in introducing soyfoods (especially miso, shoyu, and tofu) and natural foods to America. Address: PhD, Hanover, New Hampshire, The New North Church, Hingham, Massachusetts (18 Mar 1985).

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6681. **Product Name:** Vegetarian Gourmet Traditional Pot Pie with Tempeh.
Manufacturer's Name: Soy Source (Kenish, Inc.). Appropriate Foods Inc.
Manufacturer's Address: 137 New Hyde Park Rd., Franklin Square, Long Island, NY 11010.
Date of Introduction: 1985, September.
Ingredients: Water, whole wheat flour, durum wheat semolina, unbleached wheat flour, tempeh, mixed vegetables (carrots, peas, potatoes, onions, stringbeans, lima beans, okra), soy oil, tamari, herbs, spices.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Frozen.
New Product–Documentation: Label, 1985, Sept. 3 by 3.5 inches. Self adhesive. Black on orange. Interview with Robert Werz, 1987, Sept. 9.

6682. **Product Name:** Croissant Cuisine. Tofu Mexicana (Whole Wheat Stuffed Croissants).
Manufacturer's Name: Tumaro's Inc.
Manufacturer's Address: 5300 Santa Monica Blvd., Los Angeles, CA 90029.
Date of Introduction: 1985, September.
Ingredients: Tofu, tomatoes, bell peppers, onions, celery, corn, serrano chilies, tamari, corn oil, spices, sea salt.
Wt/Vol., Packaging, Price: 6 x 6.5 oz.
New Product–Documentation: BLRF, 1985, Sept. Leaflet, 1987, undated. 8½ by 11 inches. Blue on beige. "A brand new line. Delicious! Unique! Exciting!"

6683. *Republic* (*Fairfield, California*). 1985. Tofu makes hi protein smoothie. Oct. 9.
• ***Summary:*** A delicious smoothie, containing no eggs or milk, can be made with "smooth and creamy shelf-stable Kikkoman Tofu." The recipe is given. For more recipes "send a stamped, self-addressed envelope to 'The Joy of Tofu,' Kikkoman International Inc., P.O. Box 784, San Francisco, California 94101."

6684. Luong, James V.T. 1985. Re: Soy sauce production in London. Letter to William Shurtleff at Soyfoods Center, Oct. 25. 1 p. Handwritten.
• ***Summary:*** "Since I'm engaged in shoyu (or soy sauce) production, I'd like to find some practical information on this particular aspect of soybean processing." Address: 20 Bentham Court, Essex Road, London, N1 3AA, England.

6685. *China Daily*. 1985. Soy sauce city sees way to earn bucks. Oct. 29. [Eng]
• ***Summary:*** "When people in China think of the best soy sauce they think of Guangdong Province. And Foshan City is the province's top soy sauce producer. Last year the city exported 14,600 tons of sauce, raking in more than $5 million." Of the 9 soy sauce factories in the province, 4 are in Foshan. "The Pearl River Soy Sauce Factory, the largest of its kind in the province, produced more than 12,000 tons of super soy sauce last year..."

6686. Jacobs, Barbara; Jacobs, Leonard. 1985. Flour power! Cooking with seitan, the delicious natural food from grain. *East West Journal*. Oct. p. 38-44. [1 ref]
• ***Summary:*** This excellent, pioneering, in-depth article on wheat gluten and seitan was excerpted from the Jacobs' forthcoming book *Cooking with Seitan*, which was not published until May 1987. The article discusses the history of seitan in East Asia and America, the seitan industry and market in America and major manufacturers, the nutritional value and cost compared with other protein sources, and how to make seitan at home. It also gives four recipes.

In the USA about 2,500 lb of seitan are made commercially each week, or about 125,000 lb/year. The largest manufacturer, Upcountry Seitan (in Lenox, Massachusetts, started 3½ years ago by Win Donovan, and now owned and operated by Sandy Chianfoni) makes 600 lb/week of seitan. Ron Harris of Grain Dance Company in San Francisco has been making seitan for the past 8 years (i.e. since about 1977) and is currently selling 250 lb/week. Michael Vitti of Rising Tide Natural Market in Long Island, New York, has been making seitan commercially for 6 years (i.e. since about 1979). Yaron Yemini of Creative Kitchens in Miami, Florida, has been making seitan for 3 years (i.e. since about 1982). He now makes about 120 lb/week.

Barbara Jacobs first tasted seitan about 16 years ago (i.e. in about 1969). "Seitan was introduced to the U.S. natural foods industry about sixteen years ago when a Japanese variety, shrink-wrapped and quite dry and salty, was first imported. There had been several other varieties available from vegetarian groups, primarily the Seventh Day Adventists and the Mormons. Chinese restaurants [in America] have also been preparing wheat gluten for many years. The Chinese call it *mien ching*, or *yu mien ching*. Chinese restaurants often refer to it as 'Buddha Food,' claiming that it was developed by Buddhist monks as a meat substitute. There is also a dried wheat gluten available in Oriental food markets called *fu* by the Japanese and *k'ao fu* or *kofu* by the Chinese." Address: Massachusetts.

6687. Osaki, K.; Okamoto, Y.; Akao, T.; Nagata, S.; Takamatsu, H. 1985. Fermentation of soy sauce with immobilized whole cells. *J. of Food Science* 50(5):1289-92. Sept/Oct. [9 ref]
• ***Summary:*** Soy sauce was produced continuously for 80 days in 280 liter column-type reactors containing immobilized whole cells of *Pediococcus halophilus*, *Saccharomyces rouxii*, and *Torulopsis versatilis* entrapped in calcium alginate gels. The divided lactic acid and alcohol fermentation by viable cells of three kinds with feed solution

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obtained from enzymatic hydrolyzate of koji and defatted soybean meal proceeded in shorter time than a complex fermentation of moromi (soy sauce mash) in the slurry state. The refined products fermented by this process had good taste and flavor, and were close to the conventional soy sauce with respect to organic acid and aroma components. Address: 1-4, Food Engineering Lab., Kikkoman Corp., 339 Noda, Noda-shi, Chiba 278, Japan; 5 Soy Sauce Research Lab., Kikkoman Corp.

6688 **Product Name:** [Tofu Burgers].
Foreign Name: Tofu–Bratlinge.
Manufacturer's Name: Tofuhaus Tiefenthal.
Manufacturer's Address: Hauptstrasse, D-6719 Tiefenthal, West Germany Phone: 06351-43718.
Date of Introduction: 1985, October.
Ingredients: Tofu, okara, brown rice, whole wheat flour, vegetables, sesame, flaxseeds, soy sauce, sea salt, and spices.
Wt/Vol., Packaging, Price: 2 pieces per 150 gm vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Leaflet, 1988. The ingredients are freshly prepared, fried, and packed after cooling. They make 5,000 to 7,000 pieces/month. Form filled out by Albert Hess, 1988, Dec 1. This product was introduced in July 1986. Label, 1988, received, 5.5 by 4.25 inches. Black on tan.

Label brought by Albert Hess, 1995, March 11, 2.5 by 4 inches. White and green on orange. An illustration shows a large personified cake of tofu, with smiling face and arms held out. The product name is now simply "Tofu Bratlinge."

6689 **Product Name:** [Tofu "Croquettes"].
Foreign Name: Tofu–Kroketten.
Manufacturer's Name: Tofuhaus Tiefenthal.
Manufacturer's Address: Hauptstrasse, D-6719 Tiefenthal, West Germany Phone: 06351-43718.
Date of Introduction: 1985, October.
Ingredients: Tofu, okara, brown rice, whole wheat flour, vegetables, sesame, flaxseeds, soy sauce, sea salt, and spices.
Wt/Vol., Packaging, Price: 2 pieces per 150 gm vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Talk with Albert Hess of Albert's Tofuhaus, 1995, March 12.

6690 Whitman, Joan, comp. 1985. Craig Claiborne's The New York Times food encyclopedia. New York, NY: Times Books (div. of Random House). 496 p. Illust. (line drawings). 25 x 20 cm. [120* ref]
• ***Summary:*** The soy-related entries are as follows: Kecap (ketjap, p. 237). The Indonesian name for soy sauce in its basic form. "Kecap, with its broad uses in Indonesia, became simply 'table sauce' to English-speaking foreigners. By extension, ketchup became the national table sauce in America. See *also* Ketchup."

Ketchup (p. 238). *The New York Times* prefers to spell it ketchup, but catchup and catsup are generally accepted. The late Tom Stobart, in his *The Cook's Encyclopedia*, says that the word came into English 'from the Orient, perhaps from the Malay or Chinese.'

"'You find ketjap benteng or ketjap manis in Indonesian recipes and that is a form of sweet soy sauce,' he wrote. 'Cookbooks of the last century abound with recipes–oyster ketchup (oysters with white wine, brandy, sherry, shallots and spices), mussel ketchup (mussels and cider), pontac or pontack ketchup (elderberries), Windermere ketchup (mushrooms and horseradish), wolfram ketchup (beer, anchovies and mushrooms).'

"There are also ketchups made with walnuts, cucumbers, and many other items that caught some cook's imagination.

"A New Jersey man wrote to me that 'catchup is a Chinese invention and is still called in Cantonese *fan-kei cheop*. *Fan-kei* is the name for tomato, literally "foreign vine-vegetable" and *cheop* is juice as in *chang-cheop* (orange juice). The truncated word *kei-cheop* or catchup is obtained by dropping *fan*.

Soy Sauce (p. 419-20). Among Chinese soy sauces, dark/black soy sauce is thicker than thin/light because the former contains molasses.

Tofu (p. 451-52). There are said to be 7 kinds of tofu in Japan. "The best book on tofu making I know is *The Book of Tofu*, by William Shurtleff and Akiko Aoyagi. Published in paperback, it contains not only detailed instructions but also five hundred recipes." Note: This book is also listed in the bibliography.

Worcestershire Sauce (p. 483-86). Contains an extensive discussion of the history of Worcestershire sauce. "There are certain names in the world of wine and food that are inextricably linked... indelibly inscribed on the gastronomic roster is Lea and Perrins, makers of the original Worcestershire sauce, 'the original and genuine, from the recipe of a nobleman in the county,' as it reads on the label. The county in question, of course, is Worcestershire, England. The label does not reveal the name of the nobleman nor to this day will the producers of the sauce reveal it.

"The saga of the sauce dates back to the first years of the 1800s, when the governor general of Bengal returned from his post to his native England. He had in his possession a formula for a sauce that had been created in India. One that he had relished at his table and offered to his guests.

"At that time there were two chemists in the English Midlands named John Lea and William Perrins, partners in a then novel enterprise, a 'chain' of chemists shops. Their association had begun in the 1820s. Their main office was in the town of Worcester, in the shire, or county, of the same name.

"The governor general took the recipe to Mr. Lea

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and Mr. Perrins with a request that they try to reproduce it as closely as possible. The story goes that the chemists produced a concoction that was to their noses and tastes unpalatable. They stored it in the cellar and forgot it.

"Months, perhaps years, later they sampled it once more and found it not only acceptable but haunting in its flavor. Within a short while they were bottling the stuff, and it is a matter of genuine historical record that, without any kind of advertising as it is known today, in a few short years the Worcestershire sauce of Mr. Lea and Mr. Perrins was known and coveted in kitchens throughout the world..

"The incredible haste with which the fame of Worcestershire sauce spread is generally credited to the fact that the manufacturers loaded cases of the sauce on all the ocean liners that plied in and out of English waters. The stewards of the ocean-going liners were 'encouraged' with a few shillings here, a few pounds there, to offer the sauce to the passengers."

Today Lea & Perrins sauce is made at Fair Lawn, New Jersey.

Note: This is the earliest English-language document seen (Jan. 2006) that contains the term "mussel ketchup."

About the author: A portrait photo on the inside rear dust jacket shows Craig Claiborne, who was born in Sunflower, Mississippi, and now resides in East Hampton–at the eastern end of the south shore of Long Island, Suffolk County, New York. Address: East Hampton, New York.

6691. Jenkins, Nancy Harmon. 1985. In pursuit of the perfect ingredient. Food shops. *New York Times*, Nov. 3, p. SM48.
• ***Summary:*** When exploring New York's ethnic food markets one is bound to find surprises and new, delicious foods and ingredients. The section titled "Chinese" notes that Kam Man Food (200 Canal St., in Chinatown–south central Manhattan, New York City) "offers a choice of Chinese teas, preserved vegetables and bottled condiments including red, black, and yellow bean pastes, fish and shrimp sauce and hoi sin [hoisin] sauce.

Note: Red bean paste is typically made from azuki beans. Black bean paste and yellow bean paste are typically made from soybeans.

6692. Paskalev, Rosen L. 1985. Re: Work with soybeans and soyfoods in Bulgaria. Letter to William Shurtleff at Soyfoods Center, Nov. 8–in reply to inquiry. 4 p. Handwritten. [Eng]
• ***Summary:*** Dr. Paskalev is establishing a medical book review center in the Central Institute for Scientific Information (ZINTI), where he works. He is also a regular reviewer in the ABC weekly newspaper and the medical ZDRAVE. He has received degrees in engineering and medicine, and is interested in learning more about soyfoods. "The work on soyfoods is in its embryonic stage in Bulgaria. Some experiments have been conducted at the Central Institute for Nutrition in Sofia and Plovdiv. Soya flour was used to partially replace chocolate in some candies, but because of some technological mistakes, the commercial products are not yet being produced in this way. Soya flour is being added widely by our sausage industry. But other soya foods, even the soya sauces, tamari, and miso are completely unknown to the general consumer.

"But in 1931-37 our famous biochemist, Prof. Assen Zlatarov had a lot of publications in the field of nutrition, written in German and French. He was an active promoter of soyafoods but after his sudden death there was a long period of inactivity. His scientific publications are mostly in German, but he wrote quite a few popular articles about soya as the protein source of the future. I will be glad to compile a bibliography for you on soya in Bulgaria in exchange for copies of books, which I will send to be reviewed in publications here."

In the Soviet Union, soya beans are grown mostly in the Far Eastern regions [Russian Far East], the Ukraine, Moldavia, and the northern Caucasus. Soya bean oil finds industrial uses in soaps, paints, lacquers, and margarine; the protein from defatted meal is used to make some plastics. In the USSR soybeans are used as a coffee substitute, and the flour is added to some kinds of biscuits and similar baked goods.

Romania was the leader among eastern European countries from 1924-26 in soybean production and average yield. An institute was opened in Bucharest (Fundula) to research and develop soybeans. In the USSR, Czechoslovakia, and Bulgaria there are research centers working to increase soybean yields. In Bulgaria, between 1971 and 1977, the average yield rose from 91.3 kg to 220 kg/10 are, and the maximum yield hit 317 in 1976.

Note: According to *Soya Bluebook*, production in Bulgaria rose from 18,000 tonnes (metric tons) grown on 25,000 ha in 1974/75, to 160,000 tonnes grown on 100,000 ha in 1979/80. In the latter year, Bulgaria was third among eastern European countries in soybean production after the USSR (600,000 tonnes) and Romania (250,000 tonnes). A map of eastern Europe shows that Bulgaria, which borders on Greece in the south and Romania in the north, is the southernmost eastern European country (42-44° north latitude)–except for Albania and several southerly Soviet republics. Its southern border lies at about the same latitude as the southern border of New York, Michigan, and Wisconsin. Southern Yugoslavia (i.e. Macedonia) is at about the same latitude as southern Bulgaria, and thus is also at a favorable latitude for soybean production. Address: Tsar Shishman 23, 1000 Sofia, Bulgaria.

6693. Francese, Peter. 1985. More will give thanks with tofu. *Detroit Free Press*, Nov. 17. [1 ref]
• ***Summary:*** This Thanksgiving, some imaginative vegetarian cooks will mold their tofu in the shape of a turkey. Since 1979, retail sales of tofu and other soy foods (including

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soy sauce) have increased nearly fivefold in the USA, from about $41 million in that year to $104 million in 1981, rising to about $200 million in 1984–according to Business Trends Analysts (Commack, New York).

A graph from American Demographics shows "soy food sales" from 1979 to 1984. Address: Michigan.

6694. Bush, Larry C. 1985. Fermented foods: Tasty toner uppers. *Total Health* (*California*). Nov. p. 40-41.
• ***Summary:*** An overview with a large color photo showing packages of: Miso-Cup, Westbrae Natural Shoyu, Westbrae Natural Johsen Double-Brewed Shoyu, Westbrae Natural Traditional Tamari Soy Sauce, Westbrae Natural Instant Miso Soup, Westbrae Natural Mild Soy Sauce, Erewhon Shoyu Tamari, Erewhon Hatcho Miso, Premier Japan Rice Miso, Premier Japan Mugi Miso, Premier Japan Takuan, Premier Japan Umeboshi, and Premier Japan Pickled Ginger.

6695. **Product Name:** Island Spring Tofu Burgers [Oriental Style, Italian Style, or Mexican Style].
Manufacturer's Name: Island Spring, Inc.
Manufacturer's Address: P.O. Box 747, Vashon, WA 98070.
Date of Introduction: 1985. November.
Ingredients: Oriental Style: Tofu (soybeans grown without chemical pesticides or fertilizers; water; bittern or nigari, an extract of seawater, natural calcium sulfate, traditional Chinese ingredient); highfiber tofu (as stated previously, plus soybean fiber); rolled oats; sesame seed; carrot; onion; green onion; soy sauce; ginger; corn oil.
Wt/Vol., Packaging, Price: Two 3-oz (170 gm) burgers per vacuum pack. 16 units per case.
How Stored: Refrigerated or frozen.
Nutrition: Per 3 oz: Calories 210, protein 11 gm, fat 12 gm, carbohydrates 15 gm, sodium 300 mg.
New Product–Documentation: Product Alert. 1986. March. Beachcomber (Vashon, Washington). 1986. Nov. 26. Talk with Yvonne Kuperberg of Island Spring. 1988. June 2. The product was introduced in November 1985 and vacuum packed. Label: 3 5 inches diameter. Self adhesive. Purple, black, yellow, red and green. Illustration of the moon rising over the hills behind a lake or sound. "A Fitness Food from the Pacific Northwest, USA."

6696. Jackson, Vicki. 1985. Squirrels vegetarian cook book no. 2. Oneness Life Press, Elizabeth St., Brisbane, Queensland, Australia. 156 p. Illust. by Vicki Jackson. Index. Nov. 29 cm.
• ***Summary:*** This hand-lettered cookbook was written for Squirrels Restaurant, 190 Melbourne St., West End (Brisbane) 4141, which has been open for more than 3 years. The first vegetarian cookbook from this restaurant was published in Nov. 1983.

Soy-related recipes include: Miso & green vegetable soup (p. 8). Tempeh & beanshoot (p. 42). Lemongrass and tofu curry (p. 87). Tempeh kebabs (p. 94). Tempeh burgundy (p. 95). Tempeh & coconut sauce (p. 96). About tofu (p. 97-98). Tofu & Spinach pie (p. 98). Tofu teriyaki & fried rice (p. 99). Tofu à la king (p. 100). Tofu stroganoff (p. 101). Tofu chow mein (p. 102). Tofu nuggets in chick pea batter (p. 103). Curried tofu loaf (p. 104). Pages 149-50 describe tamari, tempeh, tofu, and miso. Address: Brisbane, Queensland, Australia.

6697. **Product Name:** Kikkoman Tofu: Soybean Curd.
Manufacturer's Name: Kikkoman International, Inc. (Importer). Made in Japan by Kikkoman Corp.
Manufacturer's Address: San Francisco, CA 94111.
Date of Introduction: 1985. November.
Ingredients: Water, soybeans, glucono delta lactone, emulsifier E471 [monoglycerides?].
Wt/Vol., Packaging, Price: 10.5 oz foil pouch, inside a paperboard box. Pasteurized. Retails for $0.79.
How Stored: Shelf stable.
Nutrition: Per 100 gm: Calories 69, protein 6 gm, carbohydrate 1 gm, fat 5 gm, sodium 2 mg.
New Product–Documentation: Label. 1985. 5.75 by 3 by 1.25 inches wide. Paper. Black, orange, green, tan on cream. "68 Calories per serving. No Preservatives. Keep in Cool Place–Do Not Freeze." Photo of Japanese-Style stir fry dish with chopsticks on front panel. Recipe on back for Tofu With Chicken. An innovative shelf-stable retorted tofu. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Packaging magazine. 1986. Jan. p. 12. "American-style Tofu Pack."

6698. **Product Name:** Kikkoman Tofu: Soft Soybean Curd [Kinugoshi].
Manufacturer's Name: Kikkoman International, Inc. (Importer). Made in Japan by Kikkoman Corp.
Manufacturer's Address: San Francisco, CA 94111.
Date of Introduction: 1985. November.
Ingredients: Water, soybeans, glucono delta lactone, emulsifier–E471 [monoglycerides"].
Wt/Vol., Packaging, Price: 10.5 oz (297 gm) foil retort pouch inside a paperboard box.
How Stored: Shelf stable, refrigerate after opening.
Nutrition: Per 100 gm: Calories 57, protein 5 gm, carbohydrate 1 gm, fat 4 gm, sodium 2 mg.
New Product–Documentation: Label. 1985. "No Preservatives. Keep in Cool Place–Do Not Freeze." Photo of Japanese-Style Chilled Tofu in bowl on front panel. Recipe on back for Chilled Tofu (Hiyayakko).

Package with Label sent by Dr. Walter Wolf of Peoria, Illinois. 2000. Aug. 5. The "use-by" date is 12 Dec. 1994. 6 by 3 by 1¼ inches. Blue, green, black, and orange on white and blue. Photo of Chilled Tofu cut into 8 pieces on a rectangular bowl with fern design, and the tip of a small

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fern frond atop the tofu. "High protein. No cholesterol. No preservatives. Sodium free." On the back are recipes for Creamy corn soup. Tuna-tofu spread. Made by Kikkoman Corp. in Japan. Ingredients: Water, glucono delta lactone, and calcium chloride (coagulating agents)

6699. **Product Name:** Soup 'n Savor. Miso-Brown Rice Soup Mix [Hearty Miso-Vegetable, Miso-Onion, or Pilaf Dinner (Quick Brown Rice with Miso and Vegetables)]
Manufacturer's Name: Lundberg Family Farms.
Manufacturer's Address: P.O. Box 369, Richvale, CA 95974.
Date of Introduction: 1985. November.
Ingredients: Miso-Onion: Steamed, flaked long grain brown rice, dehydrated onions, miso (soybeans, salt, water), soy sauce (soybeans, wheat, salt, water), garlic powder.
Wt/Vol., Packaging, Price: Two foil packets in paperboard box.
How Stored: Shelf stable.
New Product–Documentation: Labels. 1985, undated. 1 box each. 3.5 by 5 inches, color. "Quick! Twin pack! Cooks in 5 minutes. All natural ingredients." Spot in Food Distributors Magazine. 1985. Nov. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Ad in Natural Foods Merchandiser. 1987. Dec. p. 25. "Soup'n Savor (Miso-Onion, and Miso Vegetable)."

6700. Nihei, Takao. 1985. Zoku: Hawai ni okeru Nihon-shu no rekishi. Hawai kanyaku imin hyaku-nen ni yosete [A history of Japanese sake in Hawaii. On the hundredth anniversary of Japanese immigration to Hawaii.] *Nippon Jozo Kyokai Zasshi* (*J. of the Brewing Society of Japan*) 80(11):786-89. Nov.; 80(12):838-842. Dec. [33 ref. Jap]
• ***Summary:*** In 1868, the first year of the Meiji Period, the first 153 Japanese immigrants arrived in Hawaii on board the three-masted sailing ship Scioto (Saioto-go). They brought with them miso and shoyu. During the 1880s, because of the shortage of laborers to harvest sugar cane, the governments of Japan and Hawaii signed a contract allowing Japanese to immigrate to Hawaii. The first boatload of 944 Japanese arrived on 8 Feb. 1885. These two groups and their descendants introduced sake and soyfoods to Hawaiian culture. A photo shows the "Honolulu Japanese Sake Brewing Co." in 1908.

Note: This document contains the earliest date seen for soybean products (miso and shoyu) in Hawaii (1868); soybeans as such had not yet been reported by that date. Address: Honolulu Shuzo Seihyo Gaisha.

6701. Ozora, Colleen. 1985. Of Granum and macrobiotics. A visit with Blake Rankin. *Macrobiotics Today* (*Oroville, California*). Nov. p. 3-7.
• ***Summary:*** In 1969, while a student at UCLA, Blake Rankin came in contact with Erewhon–Los Angeles. After graduation from UCLA he and several friends set up a small health food store in Victoria, BC, Canada. Then he spent 3 months in Boston living in a Kushi study house and working in an Erewhon warehouse. Back in Seattle, he worked at Spiral Foods, an offshoot of Chico-San. Shortly after that he and George Gearhart, the proprietor, closed the store and in 1972 opened a wholesale company, Janus Foods. It was successful. [Note: Miso and shoyu, imported from Japan, were among the company's best-selling products.] After 2 years Rankin left and went to Japan for 6 months, where he traveled with Mitoku and Muso. Mr. Kazama, a friend of Aveline Kushi's brother, had not been in the food business before starting Mitoku. Then he went to Nepal and India on a spiritual search. In late 1973 he returned to Seattle and worked for Janus. Then he returned to Japan where he worked for Mitoku and studied calligraphy. In Japan he met his future wife, Yoko. Returning to Seattle, Rankin started Granum in 1981 as a distributor and importer for Mitoku products from Japan. Now the import company has a small retail store and a 10,000 square foot warehouse. Expected 1985 gross is more than $500,000.

This article contains numerous photos of Blake and Yoko Rankin, and their two children. Address: GOMF, Box 426, Oroville, California 95965.

6702. **Product Name:** Ed & Andy's Original Sweet and Sour Tofu.
Manufacturer's Name: Walker and Wilks Tofoods.
Manufacturer's Address: P.O. Box 3763, Silver Spring, MD 20901.
Date of Introduction: 1985. November.
New Product–Documentation: Label. 1986, undated. 5 by 7 inches. Full color with photo. Przybyla. 1987. Food Engineering. April. p. 74. "First introduced in 1985."

6703. **Product Name:** Ed & Andy's Original Bar-B-Q Tofu.
Manufacturer's Name: Walker and Wilks Tofoods.
Manufacturer's Address: P.O. Box 3763, Silver Spring, MD 20901.
Date of Introduction: 1985. November.
New Product–Documentation: Label. 1986, undated. 5 by 7 inches. Full color with photo. Przybyla. 1987. Food Engineering. April. p. 74. "First introduced in 1985." Talk with Andy Wilks. 1987. Dec. 10. The reformulated version of this was the best seller of their three products, best received in Southern California and Arizona.

6704. Friedman, Martin. 1985. New entries crowd health food market. Even more tofu desserts and frozen entrees. *Adweek East* (*New York*). Dec. 9.
• ***Summary:*** Discusses various new products. As "reports of weakening sales of frozen tofu desserts are filtering in, there were a half-dozen new tofu dessert items that were being confidently introduced to the health food market."

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"Tofu items are becoming so popular that they have a section of their own at health food shows. Legume's success with frozen entrees is spawning such imitators as Walker & Wilks Tofoods (sweet and sour, Bar-B-Q and teriyaki) and Lamp Lite Natural Foods' six Italian tofu entrees. Harvest Earth Foods offers Tempeh Delites, fully cooked cutlets and sticks that are made from cultured organic soybeans; and Light Foods sampled Light Links (tofu hot dogs) and Tofu Bagel Links. In the frozen dessert arena, Tofu Today presented Tofruzen, while Tofreezi was sampled by Melta [sic, Metta] Tofu Products. Other new low-calorie and low-cholesterol desserts promoted were Imagine Foods' Rice Dream and Nouvelle Sorbet."

6705. Gorman, John. 1985. Pillsbury snaps up Jeno's to control frozen pizza market. *Chicago Tribune*. Dec. 10. p. B6.

• ***Summary:*** On Monday, Pillsbury Co. announced that it had acquired substantially all operating assets of Jeno's Inc. (founded in 1967 by Jeno Pauluucci; now based in Casselberry, Florida), the frozen pizza and snack foods company. Jeno's has annual sales of about 175 million.

"This is the second time Pauluucci has built a company and sold it to a conglomerate. He founded Chun King with $2,500 in 1944 and sold it in 1966 to R.J. Reynolds Tobacco Co. for $63 million."

6706. Sokolov, Raymond. 1985. Soy, most useful bean: In disguised forms, its use grows in U.S. *Detroit News*. Dec. 13. p. A-1, A-20.

• ***Summary:*** First came soy-based margarine, then soybean oil–which now surpasses corn oil and peanut oil in sales. Then tofu, a soybean curd, began to show up in supermarkets. The latest soy-based product is Tofutti, a trendy alternative to ice cream.

Business Trends Analysts reports that retail sales of soy foods (including the familiar soy sauce) have jumped nearly fivefold since 1979. They exceeded $200 million last year. A body of "evangelical literature has sprung up to educate a carnivorous populace in the mysteries of tofu." *The Book of Tofu*, by William Shurtleff and Akiko Aoyagi, had sold 340,000 copies when Ten Speed Press in Berkeley published a 2nd edition in 1983.

Photos show two workers at The Soy Plant in Ann Arbor: (1) Mark Ducharme cutting tofu. (2) Geoffrey Beck stirring soy milk. Address: Michigan.

6707. Mogi, Yuzaburo. 1985. The conduct of international business: One company's credo–Kikkoman, soy sauce and the US market. *Columbia J. of World Business* 20(4) 93-94. 20th Anniv. Issue. Winter, 1985.

• ***Summary:*** In Japan, marketing depends more on personal relations than it does in America. Kikkoman tries to be a good neighbor by localizing its operations. It has a firm commitment to employ as many local people as possible, participate in local activities, avoid the so-called "Japanese village" by advising its people from Japan not to live together but to spread out and live among Americans, to do business with American rather than Japanese companies, and to delegate most authority to local management. Address: Managing Director, Kikkoman Corp., Tokyo.

6708. *SoyaScan Notes*. 1985. Chronology of events during 1985 concerning *Soyfoods* magazine, Doug Fiske, Paul Obis, and William Shurtleff (Overview). Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Jan. 8–Richard "Ira" Leviton visits Soyfoods Center and announces that he had decided to discontinue all involvement with soyfoods and the soy sauce book project. He plans to live in England and to write books about King Arthur, geomancy, etc.

Feb. 8–Doug Fiske writes Shurtleff. He had a long conversation with Paul Obis this morning about Paul's interest in buying *Soyfoods* magazine. Fiske writes "I am cautiously optimistic. I hope it works out. Seems good for all parties and for the industry."

March 22–Paul Obis writes Fiske a 5-page letter (typed, single spaced) that begins: "My decision to buy, or not to buy, *Soyfoods* [magazine] has not been an easy one." He discusses each of his concerns.

March 30–Obis writes Fiske a short letter on *Vegetarian Times* letterhead. "Thanks for your letter. My offer was about the best I could make, given my analysis. I do, in all honesty, wish you well in finding another buyer or backer."

April 1–Fiske and Shurtleff talk by phone about what to do next. Doug wants to cash out, to keep $1,500 in the bank and $2,000 in cash.

April 1–Paul Obis writes Shurtleff a 1-page letter on *Vegetarian Times* letterhead explaining that his letter to Fiske was prompted, in part, by the letter (enclosed) which he received from Fred Rogers, who was Paul's backer. He says Fiske turned down Paul's offer to buy *Soyfoods* magazine.

April 9–Paul Obis writes Fiske a 1-page letter on Family Syndications letterhead. He agrees to purchase *Soyfoods* magazine for $1,000 cash and sends a $100 advance.

April 19–Paul Obis and Fred Rogers visit Soyfoods Center. That evening Shurtleff writes Obis a letter of thanks, but raises two issues about articles he wrote for *Vegetarian Times*.

April 21–Fiske writes Shurtleff that Paul and Fred came yesterday for discussions and to pick up materials. Everything went well.

April 24–Obis writes Shurtleff in response to two issues raised by Shurtleff (Gandhi article and Tofutti article for *Vegetarian Times*). Paul always tried to operate as aboveboard and forthrightly as possible. He notes that we will be working together more closely than ever before [on *Soyfoods* magazine] and he'd like our relationship to be as

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harmonious as possible. We have important work to do.

June 14–Shurtleff sends Obis a "Chronology of the Development of U.S. Tofu Standards," which they discussed by phone and which Obis asked to see, "for publication in the next issue of *Soyfoods* magazine." He notes that Obis went to the Soyfoods Association meeting in Las Vegas and requested that they resubscribe to the soyfoods clipping service. Shurtleff asks: "When do you think the first issue of *Soyfoods* will be published?"

July 9–Obis writes Shurtleff (on *Soyfoods* letterhead) that after he purchased *Soyfoods* magazine he was offered the opportunity to purchase *Vegetarian Times* as well. He had not expected this.

July 27–Obis and Shurtleff talk by phone. Obis bought *Soyfoods* magazine on July 26. He has wrestled for a long time with the problems of trying to own and publish two magazines. His first goal is to serve God's will. He hopes to have his first issue of *Soyfoods* magazine published as soon as possible.

Nov. 2–Obis writes Shurtleff a 1-page letter on *Vegetarian Times* letterhead. Apparently Shurtleff disagreed strongly with Obis's decision to buy *Vegetarian Times* but Obis feels his decision was the right one. Publishing two magazines requires less than twice as much work as publishing one, and Obis has always felt that *VT* and *Soyfoods* would make a good combination.

Nov. 4–Obis writes Shurtleff a 1-page letter on *Soyfoods* letterhead. He encloses a check for $95 for the magazine's 50% share of the computerized mailing list's maintenance charges from June 1984 to Dec. 1985.

Dec. 9–Fiske writes Shurtleff on San Diego State University, Dept. of Journalism, letterhead. First to say "Howdy" after being out of touch since sale of *Soyfoods* magazine. He is looking into the possibility of pursuing a doctorate in journalism / mass communication.

Dec. 19–Obis writes Shurtleff on *VT* letterhead. "Just to let you know what's happening on *Soyfoods*, I have yet to make a final decision, however the amount of tangible support I have received so far really makes me question the whole thing." He has been disappointed by Shurtleff, Gary Barat, and a woman who was supposed to write (and get paid for) an article on "Advertising and Marketing." Note: Paul Obis never published any issues of *Soyfoods* magazine.

6709. Staley Continental, Inc. 1985. Annual report. One Continental Towers, 1701 Golf Road, Rolling Meadows, IL 60008. 51 p. 28 cm.

• ***Summary:*** "Staley Continental Inc. is a diversified corn refiner and foodservice distributor. It was established in February 1985 from the reorganization of the A.E. Staley Manufacturing Co." In Nov. 1984 A.E. Staley acquired CFS Continental, Inc., one of the nation's foremost food distributors. On 11 Jan. 1985 A.E. Staley sold off its soybean milling business for approximately $84 million in cash. The working capital employed in the business was not included in the sale and was liquidated through customary business channels. The net book value of the assets sold and the related working capital, reflected in the balance sheet at 30 Sept. 1984 were approximately $81 million and $47 million respectively. In Feb. 1985 Staley Continental, Inc. was created as a holding company for the two organizations.

"In October 1985, the company finalized plans to divest its soy protein concentrate business. The company will retain two other soy protein-based food ingredient lines–the Gunther Products soy protein whipping agents and the Vico Products hydrolyzed vegetable proteins. The Vico line, in particular, has had a positive performance record in recent years. Sales for its flavor enhancer products increased in 1985. Sales of Vico soy sauce also were strong, reflecting the popularity of Oriental cuisine in this country. In November, plans were announced to install new vacuum drying equipment in Decatur for increased production of Vico Products."

In 1985 net sales were $2,707.8 million, more than double the sales of $1,306.7 million in 1984. Earnings from continuing operations in 1985 were $25.7 million, down from $49.1 million in 1984. Address: Rolling Meadows, Illinois. Phone: (312) 981-1696.

6710. **Product Name:** [Soy Sauce, and Vico Meat Analogs].
Manufacturer's Name: F.A.L.I. Frank. Frank Soya.
Manufacturer's Address: Oude Rijksstraatweg 36, P.O. Box 36, 7390 AA Twello, Netherlands.
Date of Introduction: 1985.
New Product–Documentation: Soya Bluebook 1985. p. 82, 99. Note: Vico seasonings are made by A.E. Staley in Illinois.

6711. **Product Name:** [Seasoned Tofu (Gourmet Diced with Soy Sauce & Spices, Provencale with Herbs, and Jardiniere with Vegetables)]
Foreign Name: Tofu Gourmet, Tofu Provençale, Tofu Jardinière.
Manufacturer's Name: Galactina Ltd.
Manufacturer's Address: Birkenwej 1-6, CH-3123 Belp, Switzerland.
Date of Introduction: 1985.
Ingredients: Provencale: Herbs from Provence, soysauce, seasonings, and salt.
Wt/Vol., Packaging, Price: 250 gm (8.8 oz) packed in water in molded plastic tray with heat-seal film top and full-color front panel photo. In 1987, 1 kg package for catering.
How Stored: Refrigerated, 6 week shelf life.
Nutrition: Provencale: Protein 11.5%, 6.5% fat, 2.5% carbohydrate. 114 calories/100 gm.
New Product–Documentation: Soyfoods (ESFA) 1987 Jan. "Galactina ready to eat salads. Tofu Nature, Tofu Gourmet, Tofu Provençale, Tofu Jardinière. All these can

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be eaten hot or cold." Soya Bluebook. 1986. p. 108; 1987. p. 97. Leaflet. 1987. "Es sprach schon immer viel für Tofu. Jetzt gibt es vier gute Gruende mehr, ihn auch zu geniessen." A stunning color brochure of four tofu packages showing some of the best graphics seen up to this time. In German and French. Letter from Peter Speck. 1988. March 11. "We started 1985 with four tofu varieties, natural tofu as well as three flavored tofus. In 1987 we introduced the same products in 1 kg packages for catering, plus a tofu spread."

6712. Hashiba, H. 1985. [Oxidative browning of soy sauce. II.]. *Nihon Shoyu Kenkyujo Zasshi* (*J. of the Japan Soy Sauce Research Inst.*) 11(5):189-99. [32 ref. Jap]*

6713. Hashiba, H. 1985. [Oxidative browning of soy sauce. I.]. *Nihon Shoyu Kenkyujo Zasshi* (*J. of the Japan Soy Sauce Research Inst.*) 11(4):144-48. [22 ref. Jap]*
• ***Summary:*** A review of the literature.

6714. Ishimaru, I. 1985. [Removal and analysis of nutrient salts (nitrogen and phosphorus) in waste water from soy sauce factories]. *Nihon Shoyu Kenkyujo Zasshi* (*J. of the Japan Soy Sauce Research Inst.*) 11(5):177-82. [Jap]*

6715. Kikkoman International Inc. 1985. Kikkoman tofu. Delicious recipes (Leaflet, with 6 recipes). San Francisco, California. 2 p.
Address: P.O. Box 784, San Francisco, California 94101.

6716. Kikkoman International Inc. 1985. The joy of tofu. Great recipes from the Kikkoman kitchens. Hi-Protein Smoothie, Creamy Corn Soup, Tuna-Tofu Sandwich Spread, Spice-Nut Coffeecake, Marco Polo Pasta Salad, Simple Skillet Sukiyaki, Hunan Pork & Tofu Stir-Fry, Raspberry Yogurt Fluff Pie (Leaflet). San Francisco, California. 2 p.
Address: P.O. Box 784, San Francisco, California 94101.

6717. Kim, M.S.; Koh, M.S.; Kwon, T.Y. 1985. [Changes of nitrosamine-related compounds by salt concentration and nitrate contents during fermentation of Korean native soy sauce]. *Journal of the Korean Society of Food and Nutrition* 14(4):329-38. [35 ref. Kor; eng]*
Address: Dep. of Home Economics, Chonnam Univ., Kwangju, Chollanam-Do, South Korea.

6718. Kimira, M.; Iwase, Y.; Akaba, M. 1985. [An investigation of salt intake from soy sauce]. *Nihon Shoyu Kenkyujo Zasshi* (*J. of the Japan Soy Sauce Research Inst.*) 11(6):242-46. [7 ref. Jap]*

6719. **Product Name:** Sweet & Sour Tempeh Lumpia (Vegetarian Spring Roll).
Manufacturer's Name: Light Wave Wholefood.
Manufacturer's Address: 21 Gilbert St., Newton, Adelaide, South Australia.
Date of Introduction: 1985.
Ingredients: Pan-steamed tempeh, onions, lotus root, cabbage, soya and/or mung sprouts, carrot, tamari, miso, tamarind, maple syrup.
New Product–Documentation: Label. 1985, undated. 2 by 5.5 inches. Dark blue on light blue. "No eggs, synthetic additives or any animals and not deep fried."

6720. **Product Name:** Millstone Burger-Like.
Manufacturer's Name: Loma Linda Foods Inc.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1985.
Ingredients: Water, textured soy protein, soy sauce, salt, onion powder, caramel color, garlic powder, cumin, sage, celery powder, thyme.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 4 oz.: Calories 90, protein 13 gm, carbohydrate 8 gm, fat less than 1 gm, cholesterol 0 mg, sodium 440 mg, potassium 430 mg.
New Product–Documentation: Loma Linda took over the Millstone line in 1985. Label sent by Loma Linda Foods. 1988. Oct. 5. 11 by 4.25 inches. Green, yellow, black, and white. A color photo of the ready-to-serve dish is on the front panel.

6721. **Product Name:** Bango Soy Sauce.
Manufacturer's Name: Perusahaan Kecap Cap Bango.
Manufacturer's Address: Jalan KHA Wahid Hasyim 177, Jakarta 10240, Indonesia.
Date of Introduction: 1985.
New Product–Documentation: Soya Bluebook. 1985. p. 99; 1986. p. 105.

6722. **Product Name:** Kecap Maya (Indonesian Style Sweet Soy Sauce).
Manufacturer's Name: P.T. Inkenas Agung.
Manufacturer's Address: Pulo Kambing 11, 20 Kawasan Industrial Estate Pulogadung, Jakarta-Timur, Indonesia.
Date of Introduction: 1985.
New Product–Documentation: Soya Bluebook. 1985. p. 99; 1986. p. 105.

6723. **Product Name:** Wheat Meat Balls.
Manufacturer's Name: Sheffield Seitan.
Manufacturer's Address: South Wheelock, Vermont.
Date of Introduction: 1985.
Ingredients: Seitan (wheat gluten cooked in a broth of soy sauce, garlic powder, and cayenne).
Wt/Vol., Packaging, Price: 1 lb+.
How Stored: Frozen.
New Product–Documentation: Talk with Leo Denby.

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owner of Sheffield Seitan. 1998. Feb. 3. This frozen product was introduced in 1985. The balls were about 1 inch in diameter and weighed about ½ ounce each. But it was too labor intensive to try to roll all the little balls then cook them in broth–so they dropped the idea.

6724. Shinji, E.; Inoue, S. 1985. [Preventing mold in low-salt soy sauce]. *Nihon Shoyu Kenkyujo Zasshi* (*J. of the Japan Soy Sauce Research Inst.*) 11(6):240-41. [3 ref. Jap]*

6725. **Product Name:** Tofu Burrito Filling with Red Chile.
Manufacturer's Name: Southwest Soy Foods.
Manufacturer's Address: 2889 Trades West Rd., Santa Fe, NM 87501. Phone: 505-471-8979.
Date of Introduction: 1985.
Ingredients: Potatoes, tofu, onions, red chile, water, shoyu, safflower oil, spices.
Wt/Vol., Packaging, Price: 2 lb pack. Retails for $2.40 (9/90, New Mexico).
How Stored: Frozen.
New Product–Documentation: Talk with Richard Jennings. 1987. Dec. 28. Gave date of introduction. This product is sold only to foodservice organizations.

6726. **Product Name:** Soya Sauce.
Manufacturer's Name: Soya Foods Research Centre, Sri Lanka Dept. of Agriculture.
Manufacturer's Address: P.O. Box 53, Peradeniya, Sri Lanka.
Date of Introduction: 1985.
Ingredients: Fermented soya beans, rice, salt, sugar.
Wt/Vol., Packaging, Price: 350 ml plastic bottle retails for Rs. 14/50 (Plenty). Or a 325 ml bottle retails for Rs. 12/50 (Soya Foods Research Centre).
How Stored: Shelf stable.
Nutrition: 6% protein.
New Product–Documentation: Label. 1988. 4 by 1 inch. Purple on white paper. "Soya Sauce. Tasty substitute for salt. Add 1-2 tablespoons soya sauce to meat, fish, egg, vegetable dishes. Delicious in fried rice and noodle dishes." Form filled out by Jane Gleason. On 23 March 1988 she met with Mr. H.G. Jayatissa, Project Manager, Plenty Soya Food Centre. On 25 April 1988 she met with Mrs. K.G.S. Ariyaratne, Agriculture Instructor.

6727. **Product Name:** Meatless Burger. Marinated Soy Tempeh.
Manufacturer's Name: Soyfoods Unlimited, Inc.
Manufacturer's Address: 14670 Doolittle Dr., San Leandro, CA 94577.
Date of Introduction: 1985.
Ingredients: Soy tempeh (made with cultured soybeans organically grown in accordance with the California Health and Safety Code, Section 26569.11), soy sauce, garlic, onion, and spices.
Wt/Vol., Packaging, Price: 6 oz vacuum packed.
How Stored: Frozen or refrigerated.
New Product–Documentation: Label. Undated. "All the Sizzle ... None of the steak. Ready to eat in 3 minutes." This product, introduced in September 1981, was originally called "Tempeh Burgers."

6728. **Product Name:** Lankasoy Soya Bean Sauce.
Manufacturer's Name: Spices & Essences (Ceylon) Ltd. Forbes & Walker Group (Marketer).
Manufacturer's Address: 29 Braybrooke St., Colombo 2, Sri Lanka.
Date of Introduction: 1985.
Ingredients: (Not on label).
Wt/Vol., Packaging, Price: 325 ml bottle or 650 ml bottle, retail for Rs. 17/- and Rs. 30/50.
How Stored: Shelf stable.
Nutrition: 7.59% protein.
New Product–Documentation: Form filled out by Jane Gleason. Based on meeting with Mr. Wilfred Kurukulasunya, Executive Director, 27 April 1988. Label. 1987. 3 by 3.75 inch paper glue on. Red, gold, green, and white. "Gold Label."

6729. **Product Name:** Westbrae Natural Johsen Double-Brewed Shoyu.
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan by Sendai Miso-Shoyu.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1985.
Ingredients: Water, whole soybeans, whole wheat, sea salt.
Wt/Vol., Packaging, Price: 5 fluid oz (146 ml).
New Product–Documentation: Bush, Larry C. 1985. "Fermented foods: Tasty toner uppers." *Total Health*, Nov. p. 40. A color photo (see next page) shows the small bottle.

Label. 1986, undated. 6.5 by 3.5 inches. Paper. Orange, brown, blue, green, yellow and white. "Unique '4 year' flavor. Westbrae exclusive 1984 pressing. Brewed once, then brewed again. 30% less salt than regular shoyu."

6730. **Product Name:** Westbrae Natural Teriyaki Sauce.
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1985.
Ingredients: Johsen Shoyu and double-brewed shoyu (water, soybeans, wheat, salt), Sendai red miso (soybeans, rice, water, salt), rice vinegar, apple juice, tomato puree, Mirin (water, rice), rice malt (rice, malted barley), onions, black pepper, garlic, ginger, allspice, red pepper, natural gum stabilizers (tragacanth, xanthan).

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Wt/Vol., Packaging, Price: 12.7 fluid oz (375 ml)
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Label. 1986, undated. 5 by 3.5 inches. Paper. Orange, white, blue, green, black. Mt. Fuji logo. "Westbrae's Teriyaki Sauce is thick, so it can be used American-style like barbecue sauce or catsup."

6731. **Product Name:** [Eden Soja-Fertiggerichte (Meat Analogs, and Soy Sauce)].
Manufacturer's Name: Westdeutsche Nahrungsmittle-Werke GmbH
Manufacturer's Address: Muschenerstrasse 8, Postfach 1150, 4518 Bad Laer 1, West Germany
Date of Introduction: 1985
New Product–Documentation: Soya Bluebook. 1985. p. 82, 99; 1986. p. 92. "Eden meat analogs."

6732. Yasui, T.; Shikata, H.; Ishigami, Y.; Ishikawa, H. 1985. [Controlling the color of light-colored soy sauce. II. Dark coloration of hydrolysate from wheat under shaking conditions] *Nihon Shoyu Kenkyujo Zasshi* (*J. of the Japan Soy Sauce Research Inst.*) 11(3):104-08. [7 ref. Jap]* Address: Higashimaru Shoyu K.K., Japan

6733. Andoh, Elizabeth. 1985. An American taste of Japan. New York, NY: William Morrow and Co. 334 p. + [8] pages of color plates. Illust. by Susan Blubaugh. Color photos by Aaron Rezny. Index. 25 cm.
• ***Summary:*** This is a beautiful, remarkable book by a perfectionist with an intensely curious mind, a woman who really understands (is indeed an authority on) Japanese foods, cookery, language and culture. The illustrations and photos are likewise exquisite.

Contents: A note on the romanization and pronunciation of Japanese. Acknowledgments. An introduction to cross-cultural cooking (including a brief autobiography). At the market, in the kitchen ("A guide to buying and storing



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Japanese foodstuffs and equipment, plus an explanation of certain Japanese cooking terms and techniques"). The recipes: Soups, appetizers, sushi (in the lingo of the sushi bar, rice is known as *shari* and soy sauce as *murasaki*–literally "purple"), main dishes, side dishes, desserts. Setting the cross-cultural table. Photography credits. Mail-order and shopping guide.

Soyfoods [and sea vegetables] are so abundantly represented that we will only refer the reader to the glossary plus ("At the market, in the kitchen," p. 19-44) and index. In the glossary: Abura agé (fried bean curd). Ao nori (sea herb flakes). Kanten (agar). Kombu (kelp). Miso (fermented bean paste). Miso shiru (also called *omi-otsuke* [a woman's word]). Neri miso (glossy bean-paste sauce). Nori (laver). Soy sauce (The subtle, full-bodied aroma of soy sauce "does fade after several months. Keep opened bottles tightly capped on a dark shelf in your kitchen"). Tofu (bean curd; kinugoshi, momen, yaki-dofu). Usukuchi shoyu. Yaki-zushi nori.

An American who traveled to Japan in 1966 to study Japanese, Andoh married (in 1969) into the Japanese family she visited there. She enrolled in a class at the Yanagihara School of Classical Japanese Cooking, where she studied for six years.

Each recipe has two titles: (1) A long, descriptive title in English with large, bold typeface and title-style capitalization. (2) Under a hairline, the actual Japanese title, in regular capital letters. The modern Hepburn system of romanization is used throughout the book, so that diacritical marks are used consistently with the appropriate words. Page 52: "Light Bean Soup with Slender White Mushrooms and Bean Curd: Enokidaké no Miso Shiru." Page 183: "Bean Curd Tempura with Spicy Scallion Sauce: Agé Dashi-Dôfu."

Note: Use of the terms "bean curd" and "bean sauce" (instead of the now more widely used "tofu" and "miso") in recipe titles, text, and index makes these parts of the book seem slightly imperfect. Address: Japan.

6734. Aubert, Claude. 1985. Les aliments fermentés traditionnels: Une richesse méconnue [Traditional fermented foods: An unrecognized richness]. Paris: Terre Vivante. 261 p. Index. 21 cm. Series: Collection les Vrais Aliments d'Aujourd'hui et de Demain. [173* ref. Fre]
• ***Summary:*** The author gives good, brief introductions to the fermented soyfoods tempeh, miso, miso pickles, shoyu, tamari, sufu, natto, soy idli, and hamanatto. Related foods that are also discussed include koji, amazake (amasaké), and ontjom. See especially chapter VII: The fermentation of legumes (p. 73-78). Part IV (p. 153-216) is a dictionary of fermented foods and beverages, in which they are listed alphabetically; basic information and references for each are given. Instructions are given for preparing many of these foods on a home scale, and for some foods (such as tempeh) even recipes are given (fried tempeh, tempeh goreng). The book contains many beautiful illustrations and an excellent bibliography. The author acknowledges his extensive use of the material in *Handbook of Indigenous Fermented Foods* (1983) edited by K.H. Steinkraus. Address: Ingénieur agronome de formation, France.

6735. Bennett, Joan W. 1985. Taxonomy of fungi and biology of the aspergilli. In: Arnold D. Demain and Nadine A. Solomon, eds. 1985. Biology of Industrial Microorganisms. Menlo Park, California: Benjamin / Cummings Pub. Co., Advanced Book Program. xviii + 573 p. See p. 359-406. Chap. 12. 25 cm. [232* ref.]
• ***Summary:*** This article is so clearly written that even a beginner can understand it. Contents: Introduction. Some systematics for the nonmycologist. What is systematics? (classification, nomenclature, identification), what is a fungus? (general overview). The genus *Aspergillus:* Morphology, sexual stages (teleomorphs). Genetics. Introduction to *A. nidulans*, the parasexual cycle. Economic aspects: Secondary metabolites. *Aspergillus* metabolites used in food processing. Oriental food fermentations (soy sauce, sake, miso, koji). Conclusion.

Table 12.1 (p. 360) lists "Historical landmarks in mycology and biotechnology involving the genus *Aspergillus*." 1729–P.A. Micheli: Publication of *Nova plantarum genera*, name *Aspergillus* given to group of molds with characteristic spore head. 1827–J. Schilling: First continuous observation of the growth of a fungus from spore to spore, *A. glaucus*. 1854–A. deBary: First association of a perfect state (*Eurotium herbariorum*) and an imperfect state (*A. glaucus*). 1867–P. Van Tieghem: First to establish importance of Aspergilli in biochemical field with identification of *A. niger* in gallic acid fermentation. 1869–J. Raulin: First defined medium for a microorganism *A. niger*. 1894–J. Takamine: First patent for a commercial enzyme form fungus, "Takadiastase" from *A. flavus-oryzae*. 1917–J.N. Currie: Commercial citric acid production from *A. niger* demonstrated as feasible. 1952–J.A. Roper: Parasexual cycle discovered in *A. nidulans*. 1961–Sergeant et al.: Identification of *A. flavus* as mold association with Turkey-X disease; "mycotoxin revolution" begins. The name "aflatoxin" was given in 1962. 1983–Ballance et al.: Transformation system described in *A. nidulans*, the second transformation system elucidated for a mold. Table 12.3 (p. 378-79) is a "Glossary of morphological terms encountered in descriptions of the Aspergilli."

Table 12.6 (p. 392) lists "*Aspergillus*-derived metabolites used in food processing" (after Beuchat 1978, *Food & Beverage Mycology*, see p. 368-96). These fall into three broad categories: Acids, enzymes, and miscellaneous. Acids: Citric acid, from *A. niger*, is used in soft drinks, dairy products, jams, jellies, candies, frozen foods, fats and canned goods. Gluconic acid, from *A. niger*, is used in baking powder, bread mixes, desserts, bottle-washing formulations.

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Itaconic acid, from *A. itaconicus* or *A. terreus* is used in shortenings, or resin coatings in contact with food. Malic acid, from various *Aspergillus* species is used in beverages, jam, jellies, syrups, candy, and sour dough. Oxalic, from *A. niger*, is used in hydrolysis of starch to glucose. Tartaric acid, from *A. niger* or *A. griseus* is used in carbonated beverages, desserts, jellies.

Enzymes: α-amylase, from *A. oryzae* or *A. niger* is used in corn syrup, dextrose, baking, food dextrins, chocolate syrups. Glucoamylase, from *A. awamori* or *A. niger* is used in dextrose, dextrose syrup, baking. Glucose oxidase or catalase, from *A. niger* is used in powdered egg products, brewing, wines, mayonnaise. Lactase, from *A. niger* is used in dairy products. Naringinase, from *A. niger* is used in debittering grapefruit juice. Pectinase, from *A. niger* is used in clarifying fruit juice and wine. Protease, from *A. oryzae* is used in tenderizing meat, soy sauce, brewing, baking.

Miscellaneous: Mannitol, from *A. candidus* is used as a bulking agent, or humectant.

Illustrations show: (1) "Schematic representation of an *Aspergillus* conidial apparatus" showing metula (primary sterigmata), conidia, vesicule, phialide (secondary sterigmata), conidiophore, and foot cell (p. 377). Address: Prof., Dep. of Biology, Biology, Tulane Univ., New Orleans, Louisiana 70118.

6736. Botton, B.; Breton, A.; Fevre, M.; Guy, P.; Larpent, J.P.; Veau, P. 1985. Moisissures utiles et nuisibles: Importance industrielle [Industrial importance of useful and harmful molds]. Paris and New York: Masson. 364 p. Illust. 24 cm. [150 ref. Fre]*

• ***Summary:*** Contains a discussion of popular fermented soyfoods, including soy sauce, tempeh, and miso.

6737. Bradford, Peter; Bradford, Montse. 1985. Cooking with sea vegetables: A collection of naturally delicious dishes using to the full the bountiful harvest of the oceans. Wellingborough & New York: Thorsons Publishing Group. 144 p. Illust. by Sue Reid. Index. 22 cm. [8 ref.]

• ***Summary:*** The Bradfords have spent considerable time studying food in Japan and are especially well qualified to present this vegan, macrobiotic cookbook. It contains definitions of and/or recipes for using tofu, tempeh, miso, natto ("The taste of these sticky fermented soya beans is either loved or hated. It is somewhat like a very ripe cheese"), shoyu (soy sauce), and seitan. Address: UK.

6738. Brown, Edward Espe. 1985. The Tassajara recipe book: Favorites of the guest season. Boston & London: Shambhala. xviii + 225 p. Foreword by Alice Waters of Chez Panice restaurant in Berkeley. Index. 23 cm.

• ***Summary:*** In the tradition of the bestselling *Tassajara Bread Book* and *Tassajara Cooking*, Ed Brown has compiled a new collection of gourmet vegetarian recipes from the kitchens of the well-known Tassajara Zen Mountain Center near Carmel, California. This cookbook contains 12 tofu recipes (mostly entrees; all use firm rather than soft tofu, which has been drained and pressed), 2 soybean recipes, and 1 one miso recipe. Eggs, scrambled tofu, and our latest granola (p. 23). Scrambled tofu (p. 30). Soups & stocks (p. 49). Soy vegetable soup (p. 65). Oriental stock (p. 67; includes tamari. May include soybean sprouts). Tartar sauce with fresh basil (p. 96; for Tofu cutlets). Sesame soybeans (p. 111). Tofu cabbage grill (p. 112). Tofu entrees (p. 139; introduction to tofu and its preparation). Tofu marinade (p. 141). Grilled marinated tofu (p. 142-43). Tofu cutlets (p. 144-45). Tofu teriyaki (p. 146-47). Eleanor's tofu gumbo (p. 148-49). Tofu miso stew (p. 150-52). Alaskan tofu (p. 153-54). Mushroom tofu stroganoff (p. 155-56).

6739. Bull, S.M.; Yong, F.M.; Wong, H.A. 1985. The production of aroma by *Aspergillus oryzae* during the preparation of soy sauce koji. ***Food Chemistry*** 17(4):251-64. [14 ref.]

Address: Dep. of Biochemistry, National Univ. of Singapore, Lower Kent Ridge, Singapore 0511.

6740. Diamond, Harvey; Diamond, Marilyn. 1985. Fit for life. New York, NY: Warner Books. xiv + 341 p. Index. 24 cm. Paperback edition published Feb. 1987. 316 p. [204* ref.]

• ***Summary:*** Contents: Part I–The principles. Introduction. 1. Diets don't work. 2. Natural hygiene. 3. The natural body cycles. 4. The theory of metabolic imbalance. 5. The principle of high-water-content food. 6. The principle of proper food combining. 7. The principle of correct fruit consumption. 8. The theory of detoxification. 9. Protein. 10. Dairy products. 11. Exercise. 12. You are what you think you are. 13. The most frequently asked questions. Part II–The program. Introduction. 1. Breakfast. 2. Fresh juices. 3. The energy ladder. 4. The *Fit for Life* shopping list. 5. The main-course salad. 6. Life-style guidelines. A four-week example of the fitness life-style. In conclusion. Bibliography.

The only references to soy or soyfoods in the index are: Miso (p. 175, Cold Mountain, Eden, Westbrae), Soy sauce and Tamari sauce (p. 176; low-sodium–Eden, Soken, Westbrae). The text mentions Tofu Sauce (Westbrae). The authors (who live in semi-tropical Los Angeles) advocate high consumption of fruit, and are apparently unaware of tofu and tempeh. The book is near vegetarian but includes the use of fish, seafood, chicken, and turkey (p. 173-74, 237). It advises against the use of dairy products.

The paperback edition announces: "America's all-time #1 health and diet book! Over 3 million copies in print!" Address: Pasadena, California.

6741. Duke, James A.; Ayensu, Edward E. 1985. Medicinal plants of China. 2 vols. Algonac, Michigan: Reference Publications, Inc. 705 p. Introduction by Edward S. Ayensu.

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24 cm. Medicinal index (by disease). Common names index. Index to species. No. 4 in the series "Medicinal Plants of the World." [234* ref]

• ***Summary:*** The plants are grouped by family. Two families are tied for containing the largest number of medicinal species: Leguminosae (Fabaceae) and Compositae (Asteraceae) each have 354 species. The soybean (*Glycine max*) is discussed on p. 326-27. "Uses: Leaf: Bruised leaves applied to snakebite. Flower: Used in blindness and opacity of the cornea. Stem: Ashes of stalks applied to granular hemorrhoids or fungus growths on the anus. Fruit: Green hulls chewed to a pulp and applied to corneal and smallpox ulcers. Seed: Chinese herbals suggest that soybean is specific for proper functioning of bowels, heart, kidney, liver and stomach, antidote to *Aconitum* and *Croton*. Root: Decoction astringent. Plant: Bean sprouts ('Ta tou huang chuen') are considered constructive, laxative, resolvent, to help in alopecia [hair loss, baldness], ascites, and rheumatism.

"A salty relish 'Hsien-shih' [salted fermented black soybeans] is made by soaking the beans in water for three days, spreading them to ferment, with salt, ginger, peppers, orange peel, thyme, fennel, and apricot kernels, sealed in an earthen jar, and placed in the sun for one month. This relish is said to be used for ague, bone diseases, chills, colds, cold feet, colic, dogbite, difficulty in breathing, dysentery, fever, headache, marasmus, melancholy, nausea, poisons, and ulcer. Bean ferment (tou huang) is used for rheumatism, especially of the knees. It is chewed to a paste and applied to eczema. Bean curd (tou fu) is prescribed in drunkenness, dysentery, ophthalmia, or swellings. Soy sauce ('Chiang,' 'Chiang yu,' 'Shih yu') is applied to burns, eczema, leprosy, scalds, and sores, and is considered useful in preventing abortion and the hematuria of pregnancy.

"Chemistry: Sitosterol, an anticancer active, replaces diosgenin in some hypotensive drugs. Stigmasterol used to be employed for stiffness. Lecithin derived from soybean may function as a vasodepressor and a lipotropic agent. Soybean oil, with unsaturated fatty acid, is recommended for hypercholesteremia."

The adzuki bean (*Phaseolus vulgaris*) is discussed on p. 336-37, and kudzu (*Pueraria lobata*) on p. 339-40. Address: 1. USDA Germplasm Services Lab., ARS B-001 R-133, Beltsville, Maryland 20705.

6742. Hirano, Masaaki. 1985. Shôyu miso no bunkashi [A cultural history of shoyu and miso]. Tokyo: Tokyo Shobosha. 346 p. Illust. 22 cm. Series: Shoku no fuzoku minzoku meicho shusei, No. 7. [20+ ref. Jap]*

• ***Summary:*** A history of miso, miso cookery, shoyu, and shoyu cookery. "Tsuketari shoyu miso bunken shiryo shusei" (p. 297-346). Masaaki Hirano was born in 1931. Address: Japan.

6743. Hsiung, Deh-Ta. 1985. Chinese vegetarian cooking. London: The Apple Press; Secaucus, New Jersey: Chartwell Books. 128 p. Illust. (color). 29 cm.

• ***Summary:*** Every page of this excellent book is in full color on glossy paper, loaded with color photos. Contains over 70 recipes. Contents: Introduction. History of Chinese vegetarian cooking, essential tools and utensils, basic techniques and cooking methods, regional cooking styles (northern, eastern, western, and southern groups), special ingredients and seasonings (with a photo of each), how to plan your menu. Cold dishes. Soups. Quick stir-fried dishes. Braised & steamed dishes. Rice, noodles & sweets.

History (p. 8): "Vegetarian cooking has a long history in China," and Chinese have traditionally been highly aware of it because of their deep interest in the connection "between food and health, whether physical or spiritual." Chinese Buddhists are vegetarians because they abhor the killing of all living creatures.

"Until quite recently, many people believed that vegetarian cooking in China originated in the Buddhist temples, and that it was first introduced into China with Buddhism from India during the reign of the Han emperor Ming (AD 58-75)." However scholars in China have now found that the earliest known mention of vegetarianism on record was during the Zhou Dynasty (beginning ca. 1028 B.C.). Other "references also exist in ancient texts all predating the introduction of Buddhism into China by several hundred years."

"It is generally agreed that the development of vegetarianism in China owed more to the introduction of many foreign fruits and vegetables during the Han Dynasty (206 BC–AD 222) than to Buddhism. Many Chinese vegetarians were influenced by the indigenous philosophy of Taoism, which developed the hygienic and nutritional science of food closely related to the basic yin-yang principles. The appearance of bean curd (tofu)–also during the Han dynasty–and many other soy bean products, together with the discovery of making gluten from dough, helped to enrich and further diversify the vegetarian diet."

It is interesting and important to note "that despite their continual introduction, milk and dairy products are, to date, not prominent in Chinese cuisine. Therefore, unlike their counterparts in the West, Chinese vegetarians will not use butter, cheese, or milk in their cooking, and a true Buddhist will eat neither eggs nor fish." However this book uses eggs (p. 33, 40, 64, 78 etc.).

"One of the best known poets of the Southern Song period, Lu You (1125-1210; W.-G. Lu Yu) was a noted vegetarian. He lived to the ripe old age of 86."

The section on ingredients (p. 13-14) includes concise descriptions of: Bean curd (tofu). Gluten. Red bean paste (also called "sweetened red bean paste," p. 124) [azuki, sweet]. Salted black beans [fermented black soybeans]. Sesame seed oil. Soy sauce ("Use Light Soy Sauce which has more flavour and does not discolour the food as much

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as the Dark or Rich Soy Sauce"). Sweet bean paste or Hoi Sin sauce (Made from soy bean sauce...). Yellow bean sauce ("This thick sauce is made from crushed yellow [soy] beans, flour and salt"). Photos here show (p. 15, 19): (1) Dried bean curd skins [yuba]. (2) Six squares of tofu on a rectangular wooden cutting board, and many cubes of deep-fried tofu on a sieve [for deep frying]. A can of "Black beans with ginger" under the label Yang Jiang Preserved Beans with Ginger." With very few exceptions, the Chinese drink neither water nor tea during the meal; they drink soup instead. A surprisingly large percentage of the recipes in this book call for "bean curd (tofu)."

Soy related recipes: Five spice bean curd (tofu) (with "4 cakes bean curd," p. 34). Hot and sour coup (p. 42). Spinach and bean curd (tofu) soup (p. 43). Deep fried bean curd (tofu) and wood (tree) ear soup (with 50 gm / 2 oz deep-fried bean curd or 1 cake fresh bean curd (tofu), p. 48-49). Dried bean curd (tofu) skin and vermicelli soup (with 15 gm / ½ oz dried bean curd skin [yuba], p. 50-51). Bean curd (tofu) with mushrooms (quick stir fried, p. 68). Stir-fried spinach and bean curd (tofu) (p. 70). Vegetarian chop suey (with tofu, p. 81). Chinese cabbage casserole (with deep-fried or fresh tofu, p. 82, 84). "Buddha's delight–Eight treasures of Chinese vegetables (with 15 gm / ½ oz dried bean curd (tofu) skin sticks [dried yuba sticks], p. 92-93). Fried gluten (Mianjin, homemade, starting with 2 lb flour, p. 95). Kao fu–Sewed gluten in sweet bean sauce (with 1 tablespoon sweet bean paste or hoi sin sauce, p. 96). Casserole of vegetables (with 1 cake bean curd (tofu), p. 97). Fu-yung bean curd (tofu) (with 1 cake bean curd (tofu), 4 egg whites, and 50 ml / 2 fl oz milk, p. 98-99; Fu yang usually means omelette, but literally means scrambled eggs). Sichuan bean curd (tofu) (with 3 cakes bean curd and 1 teaspoon salted black beans, p. 100-01). San shian–"The tree delicacies" (with 275 gm / 10 oz fried gluten or deep-fried bean curd, p. 104-05). Braised 'three precious jewels' (with 2 cakes bean curd (tofu), p. 106-07). Vegetarian 'lion's head' casserole (with 4 cakes bean curd and 100 gm / 4 oz fried gluten, p. 108-09). Shanghai vegetable casserole (with 2 cakes bean curd (tofu) or 50 gm / 2 oz deep-fried bean curd, p. 110-11. "For some reason, the best vegetarian restaurants in China are found in Shanghai...").

"Rice and noodles provide the bulk of the Chinese meal. The best plain boiled rice is obtained by using only the long grain [white] rice known as patna." Photos show that many dishes are served with a small bowl of white rice. Chow mein–Fried noodles (with 25 gm / 1 oz dried bean curd skin sticks, p. 119). Vegetarian spring rolls (handmade using 1 pack of 20 frozen spring roll skins, p. 122-23).

Note: Many, if not most, recipes call for soy sauce–either light, dark, or both.

About the author (inside rear dust jacket): "Deh-ta Hsiung is a native Chinese who gained his knowledge of Chinese cooking directly from some of the great Chinese chefs. He has made several television and radio appearances in connection with his expertise on Chinese foods and now writes widely on the subject and teaches at Kenneth Lo's Chinese Cookery School [in London].

From Gareth Jones' Food blog (posted 9 Feb. 2011) titled "'Kung Hay Fat Choy' Deh-Ta Hsiung." "Cooking Chinese food at home–complete with wok, steamer and all–took off in the early 1980s. Deh-Ta was at the spearhead of the movement, along with Ken Lo and Chef But from the Ken Lo Cook School. His Chinese Regional Cooking was published in 1979 and was out of print before it got to take off." "Eating Chinese home cooking, for me, is far superior to most restaurant food–dim-sum excluded."

6744 Hume, D J ; Shanmugasundaram, S ; Beversdorf, W.D. 1985. Soyabean (*Glycine max* (L.) Merrill). In: R.J. Summerfield and E.H. Roberts, eds. 1985. Grain Legume Crops. London: Collins. xvi + 859 p. See p. 391–432. Illust. Index. 24 cm. [192 ref]

• ***Summary:*** Contents: Introduction. History, current status and future projections. Principal economic yield and uses of crop products. Principal farming systems. Botanical and agronomic features. Symbiotic nitrogen fixation potential. Principal limitations to production and yield. Developing countries, developed countries. Fertiliser requirements. Quality of seed constituents. Germplasm resources. Principal breeding strategies. Adaptation to new geographic areas, breeding methodology, breeding objectives, seed quality, pest and disease tolerances, current trends in soyabean breeding. Avenues of communication among researchers (INTSOY, AVDRC, IITA, FAO). Prospects for larger and more stable yields.

Tables. (1) Area (1000 ha), yield (kg per ha), and production (1000 tonnes) of soyabeans from 1969-71 to 1982. (2) Maturity durations and productivity potentials of soyabeans in selected countries. (3) *Glycine* species collections around the world. (4) Sources of resistance among soyabeans to selected insect pests. (5) Sources of resistance among soyabeans to selected diseases.

Table 9 shows that there are soybean germplasm collections in 15 countries. This table has 4 columns: Country, location (city), curator, and number of accessions. AVRDC in Taiwan has the largest germplasm collection in one location (10,400 accessions, Tainan), followed by USA (9,648, Illinois and Mississippi), India (4,000, Pantnagar, 1,800 Amravati), Japan (3,541, Tsukuba; 200, Morioka), USSR (3,000, Leningrad), China (3,000 Jilin; 3,000 Hubei; 2,930 Shadong [sic, Shandong {W.-G. Shantung}]; 2,500 Beijing; 960 Heilungjiang [Heilongjiang]). Also: Australia 400, France 500, Nigeria 1,300, Indonesia 600, South Korea 2,833, North Korea 300, South Africa 600, Sweden 1,200, and Thailand 1,686. Address: 1&3 Univ. of Guelph, Dep. of Crop Science, Guelph, Ontario N1G 2W1, Canada; 2. Asian Vegetable Research and Development Centre (AVRDC), PO

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Box 42, Shanhua, Tainan 741, Taiwan, Republic of China.

6745 Kushi, Aveline; Esko, Wendy. 1985. The changing seasons macrobiotic cookbook. Wayne, New Jersey: Avery Publishing Group, Inc. xii + 265 p. Illust. Index. 28 cm. [43 ref]

• ***Summary:*** The recipes are arranged by the four seasons. The index contains 43 entries for miso, 39 for tofu, 35 for tamari, 18 each for seitan and tempeh, 3 for natto, and 1 each for Japanese black [soy] beans, and for soybeans (dry).

Also contains entries for amazake, amazake pudding, azuki beans, brown rice, hiziki [hijiki], kuzu, mochi, and sea vegetables. Address: Brookline, Massachusetts.

6746 Lo, Kenneth H C. 1985. New Chinese cooking school Tucson, Arizona: HP Books. 288 p. Illust. Index. 28 cm.

• ***Summary:*** On the cover, below the title we read: "An illustrated course in contemporary Chinese cuisine." A gorgeous book, packed with superb color photos on glossy paper. One chapter (p. 98-115), titled "Bean curd and eggs," contains many tofu recipes. Other tofu recipes are scattered throughout the book.

The section titled "Soy beans and bean-based products" (p. 26) gives brief definitions of: Bean curd [tofu], bean curd cheese [fermented tofu], bean curd skin [yuba], salted black beans [fermented black soybeans] ("Cooked, salted and fermented whole soy beans. Mash them with other ingredients or mix into dishes for color" and rich, earthy, piquant flavor), Sichuan chili paste (yellow soy bean paste mixed with dried chilies and their seeds, sugar, and garlic), soy bean paste (crushed soy beans mixed with sugar, salt, and chili), sweet bean paste (made from cooked, puréed, sweetened red beans [azuki]), and yellow bean paste (made of fermented, salted puréed yellow [soy] beans with salt, flour and water). Also contains recipes for: Bean-curd cheese [fermented tofu], p. 88, 89. Bean curd skin [yuba] (p. 200, with color photo of "dried bean curd skin" on p. 18).

Recipes and photos for "salted black beans" [fermented black soybeans] or black bean sauce are: Steamed scallops with black bean sauce (p. 132, 138). Quick-fried crab in black bean sauce (p. 144). Cantonese steamed spareribs with black beans (p. 186, 188). Sliced beef in black bean and chili sauce (p. 201). Ho-fen noodles with beef in black bean sauce (p. 270, 273). Soy sauce is used in recipes throughout the book.

A color photo on the rear dust jacket cover shows Kenneth Lo. His biography, on the inside rear dust jacket, states that he is acknowledged the world over as an authority on Chinese food, and is a graduate of both Peking and Cambridge universities. He is also the founder of one of London's best-known Chinese restaurants.

6747 Lotong, Napha. 1985. Koji. In: B.J.B. Wood, ed. 1985. Microbiology of Fermented Foods. Vol. 1. Essex, England: Elsevier Science Publishing Co. xx + 371 + 14 p. See p. 237-70. [180 ref]

• ***Summary:*** Definition and scope. Soybean koji: Raw materials, koji preparation, koji enzymes, application of soybean koji. Rice and similar products: Mould enzymes used in the fermentation of alcohol containing foods and beverages, miso rice koji. Seed inocula: Tane koji, production of seed inocula for soybean koji in South-east Asia, dry starter cakes, spore mass produced on rice adhering to inside surfaces of flasks. Conclusion. Address: Dep. of Microbiology, Kasetsart Univ., Bangkok, Thailand.

6748. McConnaughey, Evelyn. 1985. Sea vegetables: Harvesting guide & cookbook. Naturegraph Publishers, Inc., P.O. Box 1075, Happy Camp, California 96039. xi + 240 p. Illust. Index. 22 cm. [53* ref]

• ***Summary:*** An excellent book by an expert on the subject, with years of experience. Sea vegetables: *Alaria* (wakame). *Analipus japonicus* (fir needle, matsumo in Japan). *Cystoseira* (chain bladder). *Desmarestia* (color changer). *Egregia menziesii* (feather boa). *Gracilaria* (ogo). *Halosaccion* (sea sac; add to soup and stir fries). *Laminaria* (kelp, kombu in Japan). *Macrocystis* (giant kelp). *Nereocystis* (bull kelp or bullwhip kelp). *Pelvetiopsis* (stir fry seaweed) and *Fucus*. *Pleurofucus* (sea spatula). *Polyneura* (use in soups and as a garnish). *Porphyra* (nori). *Postelsia* (sea palm). *Sargassum* (add to soups). Other sea vegetables. Commercial and imported sea vegetables. Note: Some recipe titles contain the word "vegetarian," but some also use meat.

Soy-related recipes: Frozen tofu (p. 85). Miso (p. 93). Soybeans (p. 205). Tempeh (p. 71, 72, 81, 82, 92, 94, 96, 155, 179, 205). Tofu (p. 72, 78, 93, 147, 151, 155, 171, 206, 207, 208).

Contains many excellent illustrations (line drawings by Wendy Lou Manley) and photos. Address: Oregon.

6749. McDougall, Mary A. 1985. The McDougall health-supporting cookbook. Vol. 1. Piscataway, New Jersey: New Century Publishers. v + 122 p. Index. 23 cm.

• ***Summary:*** This is a vegan cookbook whose 250 original recipes are designed to support The McDougall Plan, which is a diet low in fat and sodium, high in complex carbohydrates. Since soyfoods are relatively high in fat, they are used sparingly and the recipes are marked by a symbol of a crown. Soy-related recipes include: No gluten bread (with 2 cups defatted soy flour, p. 7). Rice-soy bread (gluten-free) (p. 7). Easy corn bread or muffins (gluten-free) (p. 7-8). Puffs (gluten-free) (p. 8). Carrot corn bread (gluten-free) (p. 8). Plain & simple corn bread (gluten free, p. 9). Tofu-garlic dressing (p. 12). Tofu chili dip (p. 16). Curried tofu dip (p. 16). Best tofu mayonnaise (p. 16-17). Tofu mayonnaise (p. 17). Tofu "TVP" (using frozen tofu, p. 17). Tamari sauce (p. 37). Azuki rice (p. 62). Tofu and vegetables with rice (p. 67). Mu shui tofu (p. 78). TVP sloppy joes (p. 89). Smoothies

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(non-soy, p. 27; using regular or frozen bananas, apple juice or water, and other frozen or fresh fruits). Tofu cheesecake (p. 108). Apricot tofu pie (p. 108-09). A portrait photo on the rear cover shows Mary McDougall.

Note 1. Not long after this book was published, New Century Publishers changed its name to New Win Publishing, Inc. and moved to Clinton, New Jersey. As of 2000 this book is published by Putnam/Penguin.

Note 2. This is the earliest English-language document seen (Feb. 2005) that contains the term "gluten-free" (or "gluten free"). Address: P.O. 14039, Santa Rosa, California 95402.

6750. Nabben, Alexander. 1985. Soja-Kueche: Vielseitig und gesund [Soya cookery: Versatile and healthful]. Schaafheim, West Germany: Pala Verlag. 144 p. Illust. Index. 21 cm. [Ger]

• ***Summary:*** Contents: Soya, the wonderbean (*die Wunderbohne*). A cultural history of the soybean. A little soybean botany. Soya is versatile. The world market and world hunger. Health through proper nutrition and diet. Product types and buying tips. Recipes. About the author (autobiographical, with photo; he was born in 1953 in Viersen. Since 1978 he has worked in a whole-grain bakery, a soya kitchen, and in a vegetarian restaurant in Munich).

This vegan cookbook contains a large number of tofu and tempeh recipes, as well as recipes for most of the other types of soyfoods. Note the following German terms: *Ganze Sojabohnen* (*getrocknete gelbe Sojabohnen*) = whole dry soybeans. *Vollsojamehl* = Whole soy flour. *Sojasauce* = soy sauce. *Miso* (*Sojapaste*) = miso. *Okara* (*Sojakleie*) = okara. *Tofu* (*Sojaquark oder -käese*) = tofu. *Tempeh* (*Soja-"Brie"*) = Tempeh.

On the last page of the book (p. 144) is an advertisement for Morgenland Naturkost, located at: Auf dem Anger 2, 3410 Northeim 19, West Germany. Phone: 05551-64592. They offer tofu and tofu dishes, seitan and seitan products, and utensils for the production of tofu and tempeh.

Apparently a second edition or printing appeared in 1988 (ISBN 3-923176-35-x). Address: Morgenland Naturkost, Auf dem Anger 2, 3440 Northeim 19, West Germany.

6751. Noh, Chin-hwa. 1985. Traditional Korean cooking: Snacks & basic side dishes. Elizabeth, New Jersey: Seoul Korea Hollym Corporation. 78 p. Illust. (color). Index (general). Index of Korean recipe titles. 27 cm. [Eng; kor]

• ***Summary:*** This is an excellent cookbook of authentic Korean recipes, each with its Korean name (romanized and in Korean characters). Each recipe is accompanied by numerous useful color photos. The front matter contains an Introduction, Preparation tips, and 2 pages about the healthy Korean diet. Soy related recipes include: Soft bean curd soup (*Sundubutchigae*, p. 10). Seasoned fermented soybean soup (*Ch'onggukchangtchigae*, with 1 cake bean curd and 6-8 tablespoons seasoned fermented soybeans, p. 11 [ch'onggukchang is Korean style natto]). Royal soybean paste soup (*Kungjungdoenjangtchigae*, with 2 tablespoons soybean paste [Korean miso], p. 12). Bean curd casserole (*Tubu Chon-gol*, p. 13). Wrapped bean curd (*Tubussamtchim*, p. 15). Stuffed bean curd (*Tubusobagi*, p. 16). Steamed bean curd (*Tubuson*, p. 16-17). Bean curd in soy sauce (*Tubut'wigimjorim*, p. 18). Salted bean curd and beef (*Tubu Soemgogijorim*, p. 18). Salted beans (*K'ongjorim*, with 1 cup black beans plus soy sauce, sugar, sesame seeds, and sesame oil, p. 19). Cold cooked bean curd (*Tubu Naengch'ae*, p. 22). Bean sprout rice (*K'ongnamulpap*, with 2/3 lb. [soy] bean sprouts, p. 24). Dried radish strips in soy sauce (*Muumallaengijangatchi*, p. 54). Cucumbers in soy sauce (*Oijangatchi*, p. 55). Sesame leaves in soy sauce (*Kkaennipchangatchi*, p. 56). Todok in red sauce (*Todokchangatchi*, with 1 cup soy sauce, p. 56). Fermented soybean lumps (*Meju*, with 18 lb. dried yellow soybeans, p. 62-63). Soy sauce (*Kanjang*, homemade, p. 62-63). Soybean paste (*Toenjang*, homemade, p. 63). Red pepper paste (*Koch'ujang*, homemade, with 2 lb. fermented soybean powder, 6 lb glutinous rice powder, p. 64).

Note 1: This is the earliest English-language document seen (Jan. 2012) that uses the word "ch'onggukchang" to refer to Korean-style natto.

Note 2: This is the earliest English-language document seen (March 2009) that uses the word "Toenjang" to refer to Korean-style soybean paste (miso), or the word "Koch'ujang" to refer to Korean-style fermented red pepper and soybean paste (miso).

The useful Glossary (p. 73-75) contains definitions of: Bean curd (*tubu*). Beans, incl. yellow soybeans (*huink'ong*) which are used to make [soybean] sprouts (*k'ongnamul*), bean curd (*tubu*), soft bean curd (*sundubu*), bean paste (*toenjang*), fermented soybeans for making soy sauce (*meju*), seasoned fermented soybeans (*ch'onggukchang* [*Korean natto*]), soybean flour (*k'ongkaru*), soy sauce (*kanjang*).

Brown soybeans (*pamk'ong*–literally "chestnut beans") are a chestnut brown color and have a smooth chestnut-like texture when cooked.

Black soybeans (*komunk'ong*) are served as a side dish.

Mung beans (*noktu*), used to make mung bean sprouts (*sukchu namul*), etc. Red kidney beans [azuki] (*kangnamk'ong*).

Bean sprouts (*k'ongnamul*) may be grown at home or purchased in the vegetable section of most grocery stores. The large sprouts are from the yellow soybean; the smaller, more delicate sprouts are from the green mung bean.

"Soybean paste (*toenjang*) is a thick brown paste made from a mixture of mashed fermented soybean lumps [soybean koji] (left from making the soy sauce), powdered red pepper seeds and salt. It is used as a thickener for soups and stews and will keep well in the refrigerator.

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"Soy sauce (*kanjang*) is a brownish-black salty liquid made by cooking fermented soybean cakes with water and salt. Each household in Korea used to make their own soy sauce in the spring; some still do. These are mild and add good flavor to most any food." Soy sauce is used in cooking and at the table. Japanese "soy sauce is less salty but sweeter than Korean soy sauce."

"Sweet red beans (*p'at*) are small and round and used widely in Korean confections. When cooked and mashed they are sweet and soft textured. This sweet bean puree [Japanese *an*] is used as filling in rice cakes [mochi] and also now in donuts and rolls."

The Glossary also mentions laver (*kim*), a sea vegetable called "nori" in Japan, that is widely used in recipes in this book. No other sea vegetables are mentioned. Address: Munhwa Cooking School.

6752. Noh, Chin-hwa. 1985. Practical Korean cooking. Elizabeth, New Jersey; Seoul Korea: Hollym International Corporation. 214 p. Illust. (color). Index. 27 cm.
• ***Summary:*** Although this cookbook of authentic Korean recipes contains more than twice as many pages as the author's *Traditional Korean Cooking* (214 vs. 78), many of the recipes and photos are identical, as is the front matter: Introduction, Preparation tips, and The Korean Diet. This book contains many more meat dishes.

Most of the soy-related recipes are the same, except there are many new recipes in which "soy sauce" is included in the title; many also contain meat. A complete list of these is given in the Index under "soy sauce." For example: Beef and bamboo shoot in soy sauce (p. 42). Chicken in soy sauce (p. 45). Deep-fried chicken in soy sauce (p. 46). Abalones in soy sauce (p. 104).

The following are recipes for basic soyfoods with many color photos–Page 196: Fermented soybean lumps (*meju;* soybean koji). Pages 196-97: Soy sauce (*kanjang*). Page 197: Soybean paste (*toenjang*). Page 198: Red pepper paste (*koch'ujang*). Address: Munhwa Cooking School.

6753. Odo, Franklin; Sinoto, Kazuko. 1985. Zusetsu Hawai Nihonjin-shi 1885-1924 [A pictorial history of the Japanese in Hawai'i, 1885-1924]. Hawaii Immigrant Heritage Preservation Center, Dept. of Anthropology, Bernice Pauahi Bishop Museum, 1525 Bernice St., P.O. Box 19000A, Honolulu, Hawaii 96817-0916. See p. 166. [Jap; Eng]
• ***Summary:*** Commemorating the centennial of the first arrival of government contracted Japanese laborers in Hawaii. Note that both English-language and Japanese-language editions of this book were published. Throughout the English-language edition, the word Hawaii is spelled "Hawai'i."

A photo (p. 166) shows the inside of the Hawaii Shoyu Co. (Hawaii Shoyu Kaisha) on King Street in Palama, Honolulu, taken in about 1914. The caption reads: "The Japanese in Hawaii depended upon shoyu imported from Japan until Nobuyuki Yamashiro started making shoyu in 1904. His company was established as Hawaii Shoyu Co. in 1906. American Shoyu Co. was established in Honolulu in 1912."

The same page shows a 1906 advertisement for Takakuwa Store, Nu'uanu, Honolulu, reprinted from *Hawaii Shinpo,* 1906. The store sells shoyu. Address: Hawaii.

6754. Richie, Donald. 1985. A taste of Japan: food fact and fable. What the people eat. Customs and etiquette. Tokyo, New York, San Francisco: Kodansha International. 112 p. Illust. (some color photos). Index. 27 cm.
• ***Summary:*** This book contains a nice chapter titled "Tofu" (p. 34-41) in which the different types are described including *momengoshi-dofu* ("cotton" tofu) and *kinugoshi-dofu* ("silk" tofu). It also discusses okara, noting: "Now mainly used as livestock feed, it once also nourished one of Japan's greatest scholars. Arai Hakuseki, who lived during the Edo period (1615-1868), proudly related that in his impoverished student days he lived almost entirely on *okara* and that in gratitude he later, rich and famous, gave large sums of money to his charitable tofu maker."

On pages 38-39 are color photos of: "(1) Atsu-age. (2) Koya-dofu. (3) Ganmodoki. (4) Unohana or okara. In Kyoto, this humble food is rounded into balls and sold. (5) *Yudofu* course in a Kyoto restaurant. The course includes yuba tempura, simmered *hiryozu* (known as ganmodoki in the Kanto [Tokyo] area) and *goma* (sesame) tofu. (6) Aburage (two sizes)."

Even today, Chinese and Japanese view tofu in very different ways: "... Chinese cooking tends to regard tofu as an additive, as something which enhances something else. The Japanese, on the other hand, relish the taste of tofu itself..." for example as *Hiyayakko* [chilled tofu; summer] or *Yudôfu* [simmering tofu, winter]. Each is seasoned with soy sauce or a soy-based dipping sauce. The names of various popular Japanese tofu recipes are given (p. 40).

"Freeze-dried tofu" is said to have originated one cold night in a temple at the summit of Mount Koya [*Kôya-san*] when a forgetful acolyte left the tofu offering of the day on the altar. The next morning it was found frozen. It was also found that this tofu had a completely different texture from ordinary tofu and it could be kept for a long dried since it contained very little water. This tofu has at least four different names: (1) Koya-dofu. (2) Misuzu-dofu. (3) Shimi-dofu. (4) Kori-dofu.

Note 1. This is the earliest English-language document seen (May 2012) that contains the term *shimi-dofu* (written as two words, regardless of hyphenation, without diacritics).

A large illustration (p. 40-41) shows tofu being made from the *Kinsei Shokuhin Zukushi Ekotoba* (1805). The basic process has not changed to this day.

The copyright page notes: "The text of this book is

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based on a series of articles that appeared in *Winds* magazine, 1981-83." "In this book, all twentieth-century Japanese names appear in Western order, and all earlier names appear in traditional order, surname first."

Note 2. There are also chapters on sushi, sukiyaki, tempura, menrui (noodles), onigiri, mochi, tsukemono (pickles), okashi (Japanese sweets, confections), Saké, Ocha (tea). Address: Japan

6755. Richter, Dr. Joachim; Torre, Ursula della; Richter, Nora, eds. 1985. Tofu Kochbuch [Tofu cookbook]. Verlag Dr. Richter GmbH, D-8000 Munich 82, West Germany. 72 p. Illust. No index. 20 cm. [Ger]

• ***Summary:*** Contains numerous full-page color photos and over 100 tofu recipes and preparation tips. Nora Richter developed and tested the recipes in cooperation with DE-VAU-GE Gesundkostwerk / granoVita. The tofu was made by Tofu Kost-Werk TKW GmbH in 4724 Wadersloh 3, Germany (which now also sells the book).

Contents: Tofu, a delicacy for 2000 years. What one should know about tofu. Varieties of tofu. Buying tips. Cooking tips. The ABCs of tofu preparation. Little recipes for getting to know tofu. Fried tofu (Gebratener tofu). Tofuletten. Salads. Salad dressings. Tofu sauces and dips. Soups and hot-pots. Tofu for stuffing/filling. Tofu dumplings and meat balls (*Nocken, Klopse und Klösse*). Souffles and gratins. Classical tofu recipes from East Asia. Desserts, baked goods, cakes, pastries, and tarts. Address: Munich, West Germany.

6756. Salunkhe, D.K.; Kadam, S.S.; Chavan, J.K. 1985. Postharvest biotechnology of food legumes. Boca Raton, Florida: CRC Press. 160 p. Illust. Index. 26 cm. [25 soy ref]

• ***Summary:*** Contents: 1. Introduction. 2. Seed structure, production, and distribution (Soybean, p. 8-10, 17-18). 3. Chemical composition. 4. Nature and causes of losses. 5. Harvesting, threshing, and drying (Soybean, p. 69-70). 6. Storage. 7. Processing and utilization (Soyfoods, p. 121-36). 8. Food legumes in protein crisis.

Chapter 7, "Processing and utilization," discusses tofu, tempeh, soy flour, soymilk, miso, shoyu, natto, Hamanatto, and cereal-soy blends. Address: 1. Vice-Chancellor, 2. Prof. of Food Science & Technology, 3. Asst. Food Science & Technol. All: Mahatma Phule Agricultural Univ., Rahuri, Maharashtra State, India.

6757. Scott, David. 1985. Protein-balanced vegetarian cookery. London: Rider Books, Century Hutchinson Ltd. 183 p. Illust. (by Steve Hardstaff). Index. 24 cm. [31* ref]

• ***Summary:*** This book was originally published in 1980, and the latest reference in the bibliography is 1978. A second edition was published in 1985, then a 1987 edition was published in the USA by CRCS Publications, P.O. Box 20850, Reno, Nevada 89515. The author has a poor knowledge of soyfoods, and makes little mention or use of them in this book. He refers to tofu as "beancurd," has a recipe for "Beancurd Burgers," mentions miso and a Miso-Tahini Spread, soy sauce, plus an Sunflower Seed, Soya Bean and Almond Casserole. Pages 160-61, information about soya beans, contains many errors.

6758. Shurtleff, William; Aoyagi, Akiko, comps. 1985. Computerized bibliography on soy sauce, shoyu and tamari. Lafayette, California: Soyfoods Center. 67 + 12 p. Unpublished. No index. 28 cm. [749 ref]

• ***Summary:*** The body of this book consists of bibliographic records sorted alphabetically by author, printed on a dot-matrix printer. None of the records has a summary or abstract. The last 12 pages consist of 130 early records (770 B.C. to 1903) sorted chronologically. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991

6759. *SoyaScan Notes*. 1985. Chronology of Lea & Perrins Worcestershire Sauce. 13 May 1994. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** This chronology is a revised and expanded version of one published in an unknown UK airline magazine, found in one of the Lea & Perrins historical scrapbooks (Fair Lawn, New Jersey). We offer no guarantee of its accuracy.

1823 Jan. 1–Mr. William Perrins and Mr. John Wheeley Lea form a partnership to carry on the chemists and druggists business at 68 Broad Street, Worcester, England (located about 25 miles southwest of Birmingham). 1835–Lord Sandys, the former governor general of Bengal, gives recipe to Mr. Lea and Mr. Perrins in Worcester, England.

1837–Lea & Perrins sauce first sold commercially.

1842–636 bottles sold.

1845–Factory set up in Bank Street, Worcester.

1849–Arrangements made for exports to New York. The exclusive U.S. agent was John Duncan & Sons, a small firm which imported liquors and wines from Europe, and preserves, jams, and jellies from England.

1852–Annual sales reach 30,000 bottles.

1853–Lea & Perrins Worcestershire Sauce is awarded a medal at the New York Exhibition of the Industry of All Nations.

1897–New (present) factory built in the Midland Road, Worcester.

1902–Bottling begins in New York.

1906–The High Court of Justice in Britain decrees that no firm other Lea & Perrins be allowed to call their Worcestershire Sauce "the Original" or "the Genuine." This helps deals with upstarts and imitations.

1910–U.S. Bottlers (Duncans) move to West Street. Lea & Perrins (Inc.) of America.

1930–Lea & Perrins U.K. merge with H.P. Sauce.

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Limited. John Duncan's Sons becomes Lea & Perrins Inc.

1931–Worcestershire Sauce manufacture begins in Australia.

1931–Lea & Perrins Inc. is incorporated into H.P. Sauce Ltd

1940–Bottling of Lea & Perrins moves to Tower Road, Birmingham, during World War II.

1946. manufacture begins again in Worcester

1967–H.P. Sauce / Lea & Perrins acquired by Imperial Tobacco Co.

1985–Imperial Tobacco increases its control to 100% Lea & Perrins International formed representing Lea & Perrins, H.P. Foods and Golden Wonder abroad.

1986 April–Hanson Trust assumes control of Imperial Foods / Lea & Perrins

1988–Lea & Perrins is acquired by BSN Groupe of Paris, France.

Note 1994 July–BSN Groupe changed that name to Groupe Danone.

Today, in addition to its Original Worcestershire, Lea & Perrins produces Lea & Perrins Steak Sauce, Lea & Perrins White Wine Sauce (for chicken, fish, or lighter foods), and Lea & Perrins Barbecue Sauce.

6760. The first macrobiotic cookbook. Formerly *Zen Cookery*. Revised edition. 1985. Oroville, California: George Ohsawa Macrobiotic Foundation. 134 p. Topical index. General index. 22 cm. Copyright 1984, 1985 [11 ref]
• ***Summary:*** Edited by Cornellia and Herman Aihara, this is a revised and expanded edition of *Zen Cookery*, which was first published in 1964 by the Ohsawa Foundation of Chico, California. "Includes 296 recipes updated for the 1980's." Each recipe is numbered and the numbers are almost the same as in the original edition though some of the names have been changed slightly, and ingredients have been adjusted. Much less salt has been used.

There is an interesting preface followed by 4 pages of photos titled "Recollections of the early 1960s"–related to Chico-San, Inc. and followers of macrobiotics.

Contents: Preface. Photo recollections. 1. Grains. 2. Noodles. 3. Vegetables. 4. Beans and sea vegetables. 5. Soups. 6. Sauces. 7. Salads and pickles. 8. Special dishes. 9. Miso and soy sauce dishes. 10. Breads and snacks. 11. Desserts. 12. Beverages. Seasonings. Cutting styles. Glossary.

"Soon after George Ohsawa came to the United States as a missionary of macrobiotics in 1959, he published *Zen Macrobiotics* in 1960. This book in its original form included recipes for macrobiotic cooking. Although the number of macrobiotic students increased rapidly because of his interesting lectures and charisma, the much needed editing of the recipes for clearer instructions and measurements was not realized until later.

"In 1961, on Ohsawa's advice, thirteen macrobiotic families, numbering thirty-six [sic, 34] people, left New York City and moved to a small town in Northern California named Chico. The following year, all the adult members of the group started the first macrobiotic food distributing company, Chico-San, Inc.

"Since nobody on the West Coast had heard of macrobiotic foods, one of the first jobs for the Chico-San founders was educating people in the macrobiotic philosophy, diet and cooking. A committee for the teaching of macrobiotic cooking was formed by the women of the group who began by separating the cooking section from *Zen Macrobiotics* and gathering recipes among themselves. Thus, Chico-San, under the name of the Ohsawa Foundation of Chico, published the first macrobiotic cookbook, *Zen Cookery*, in 1964.

"The book sold very well for eleven years. It was out of print from 1975 until 1984, when the George Ohsawa Macrobiotic Foundation published the book under its new title, *The First Macrobiotic Cookbook*. The 1985 edition has been completely revised and corrected, however, the original outline and numbering system have been retained."

The photos have these captions: "(1) Bill Salant, Al Bauman [both standing by a car], and Herman Aihara (not in picture) stop for refreshment on their exploration of the Sacramento Valley area prior to the cross country move. (2) On the road, Cornellia Aihara preparing breakfast for 36 hungry people at a scenic spot near Lincoln, Nebraska, on the way to California. (3) CBS News is on hand to greet the travelers upon their arrival in Chico. Later a 'Welcome to Chico' dinner was sponsored by the town. (4) Joanne Hirsch (left) with Teal Nichols (center), editor of the first edition of *Zen Cookery* [both are seated at a formal dining table with several other people]. (5) Shayne Oles, editor of *The New Zen Cookery*, with husband Lou (left) and Junsei Yamazaki.

"(6) Jacques deLangre, Tommy Nakayama, Lou Oles, and Bob Kennedy relaxing in front of Herman and Cornellia Aihara's home [in Chico]. (7) Herman Aihara rings up a sale at the first 'Chico-San'–the tailgate of his car. (8) Irv Hirsh getting a workout on the first rice cake machine (modified) in the United States. (9) Construction underway on a koji room at the Chico-San facility in Chico. (10) Bob Kennedy (right), president of Chico-San at its sale in 1985, standing in front of a new shipment of organic rice. (11) Meal time at the premier Chico picnic, still held annually at Hooker Oak Park. (12) Herman and Cornellia Aihara, hosting the 1964 New Year's Day celebration." Address: George Ohsawa Macrobiotic Foundation, 1511 Robinson St., Oroville, California 95965.

6761. Weber, Marlis. 1985. Vollwertkueche fuer 1 Person [Wholefoods cooking for one person]. Weil der Stadt, Germany: Walter Haedecke. 192 p. Illust. 21 cm. [Ger]*
• ***Summary:*** Published in 1987 by Thorsons in England as *The Single Vegetarian*.

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6762. Wood, Brian J.B. ed. 1985. Microbiology of fermented foods. 2 vols. Essex, England: Elsevier Science Publishers Ltd. Vol. 1, 371 p. Vol. 2, 304 p. [300+ ref]
• ***Summary:*** Soybeans are discussed extensively. In Vol. 1, in chapter 5, titled "Fermented protein foods in the Orient, with emphasis on shoyu and miso in Japan," by Yokotsuka and Sasaki (p. 197-247) are detailed and historical discussions of chu (koji), chiang, and shi (fermented black soybeans), chiang-yu (soy sauce), miso, shoyu, etc. Address: Dep. of Bioscience and Biotechnology, Univ. of Strathclyde, Glasgow, Scotland, UK.

6763. Wood, Brian J.B. 1985. Miscellaneous food-related fermentations. In: B.J.B. Wood, ed. 1985. Microbiology of Fermented Foods. Vol. 1. Essex, England: Elsevier Science Publishing Co. xx + 371 + 14 p. See p. 213-35. [27 ref]
• ***Summary:*** Contains a good overview of tempeh, ontjom, and "New substrates for old technologies," as chickpeas for miso and tempeh, or soybeans for idli. Address: Dep. of Bioscience & Biotechnology, Univ. of Strathclyde, Glasgow, Scotland, UK.

6764. Yan, Martin. 1985. Martin Yan. The Chinese chef. Garden City, New York: Doubleday & Company Inc. 179 p.
• ***Summary:*** "From the National Public Television Series "Yan Can Cook," now in its sixth season, with 560 shows he has hosted since 1978. One of the show's sponsors is Kikkoman. The recipes in this book are divided by geographical region. "The best way to grasp the diversity of China's cuisine is to consider the land as divided into four major culinary regions [north, south, east, and west], each boasting its own cultural identity. Contents: Introduction. Canton. Szechuan and Hunan. Peking. Shanghai. Nouvelle cuisine.

On pages 8-9 is a gorgeous color photo (2-page spread) showing all the foods and seasonings described in the "Glossary" that follows (p. 11-15). On page 10 is the numbered "key" to the names of items shown on pages 8-9. These include:

Bean curd ("Also known as 'tofu.' Types include: dried [yuba] {in sheets or sticks}; fermented {either red or white and fermented in rice wine}; fresh {in cakes or blocks}; and fried {in small pouches or cubes}. See also p. 79)." Bean paste, sweet ("Sweetened fermented soy bean paste used as a seasoning in many Szechuan and Hunan dishes"). Bean sauce, brown ("Also referred to as yellow bean sauce. Thick sauce made from fermented soy beans"). Bean sprouts ("Tender sprouts from mung beans or soy beans"). Black beans, fermented ("Small, fermented black [soy] beans with pungent aroma and salty taste. Used in Cantonese-style dishes. Sold canned or bulk in plastic bags... Rinse before using"). Hoisin sauce ("Dark brown, thick sauce with a sweet, spicy flavor; made from fermented soy beans, flour, vinegar, sugar, garlic, and spices"). MSG ("... not called for in this book"). Soy sauce. Tofu ("See Bean curd")

A recipe for "Black bean sauce" (p. 32) calls for "¼ cup fermented black beans," 2 tablespoons vegetable oil, 3 cloves minced garlic, 3 tablespoons dry sherry, 2 tablespoons dark soy sauce, 1 tablespoon brown sugar, and 2 teaspoons sesame oil. It is made in a wok.

Contains 9 recipes for tofu (the term now preferred by the author to "bean curd," though he uses both). These include: Crabmeat & bean curd soup (with "1 package {about 1 pound} soft tofu {bean curd}, drained and cut into ½-inch cubes," p. 47). Szechwan preserved vegetables with tomato (with "1 package {about 1 pound} firm tofu {bean curd}, drained," p. 77). Vegetarian tofu casserole (with "2 tablespoons fermented bean curd, mashed" and "8 ounces pressed bean curd, cut into thin slices," p. 80). Pressed bean curd with beef (with "1 package {7 ounces} pressed soy bean cake, cut into thin slices," p. 89). Peking pork & mushroom soup (with ½ package firm tofu, p. 108). Tofu & green bean salad (with "1 package {about 1 pound} firm tofu {bean curd}, drained," p. 136, photo p. 151). Shanghai fish soup (with ½ package firm tofu, p. 137). Bean curd family style (with 1 package firm tofu, p. 141). Vegetarian bean curd roll (with "6 dried bean curd [yuba] sheets," p. 155). "Red fermented bean curd" is mentioned on page 10 (no. 48 in list) and as an optional ingredient ("for more exotic flavor") in a recipe for Chinese BBQ pork (p. 38).

On page 79 is a description of the many uses of the soybean, including dark/thick and light/thin soy sauce, tofu (fresh bean curd), deep-fried bean curd, dried bean curd sheets or sticks (yuba), and fermented bean curd [fermented tofu] in red and white versions.

"Dark soy sauce has a heavier consistency and is somewhat sweeter. Its dark color imparts a reddish-brown hue to the foods cooked in it, so it is used in 'red-cooked' dishes. Light soy is an all-purpose soy sauce often used in marinades and in stir-fry dishes." Address: Yan Can & Company, Inc., P.O. Box 4755, Foster City, California 94404.

6765. Yang, P.; Chen, Steve. 1985. Huang dou zhi pin pin guan shou ce [Quality control manual for soybean and products]. Taipei, Taiwan: American Soybean Assoc. 110 + 125 p. Illust. 26 cm. [40+ ref. Chi]
Address: American Soybean Assoc., Taiwan.

6766. Yokotsuka, Tamotsu. 1985. Fermented protein foods in the Orient, with emphasis on shoyu and miso in Japan. In: B.J.B. Wood, ed. 1985. Microbiology of Fermented Foods. Vol. 1. Essex, England: Elsevier Science Publishing Co. xx + 371 + 14 p. See p. 197-247. [146 ref]
• ***Summary:*** This book chapter is very similar to Yokotsuka (1982), "Industrial application of proteinous fermented foods." However it contains some new, additional, and

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very interesting information, especially concerning history, on pages 198-209 as follows: Introductory definitions of enzymatic hydrolysis, *Aspergillus* molds, miso (whose per capita consumption in Japan is about half that of shoyu by weight), saké, mirin, amasaké. Table 1 shows "Per capita annual consumption of fermented foods prepared from *Aspergillus* moulds in Japan (1981)." Shoyu 10.1 litres, Miso 4.9 kg, sake 12.3 litres, mirin 0.6 litres, shochu 2.2 litres, rice vinegar 0.25 litres, (vinegar) 2.5 litres. Note: Beer 39.5 litres, Whiskey and other foreign alcoholic beverages 3.7 litres. Japanese population 117.85 million on 1 Oct. 1981.

Introduction (p. 197): There is a basic difference between the saccharification process used in Western countries and that of East Asia. In the West, the amylolytic enzymes that break down / hydrolyze starches into sugars are derived from malt, whereas in East Asia *Aspergillus* and *Rhizopus* molds have long been used as the source of these enzymes.

History: History of fermented proteinous foods in China: Chu (koji), chiang, shi or tou-shi [fermented black soybeans], chiang-yu (soysauce), shi-tche (the extracted juice of fermented black soybeans). History of shoyu and miso in Japan: Hishio, sho, soya or soy, miso or misho, tamari, miso-damari, tare-miso and usudare, shoyu, miso of today.

Shu [Qu; koji] was first mentioned in the *Shu-Ching* [pinyin: *Shujing*] written 3,000 years ago during the Chou [Zhou] dynasty (1121-256 BC), which stated that chu is essential for making alcoholic beverages. Two different colors of chu were described: yellow and white. "The most popular one, which had a yellow colour indicating perhaps *Aspergillus oryzae*, was called yellow robe. The white one is presumed to be *Rhizopus* or *Mucor* and was called white robe." Originally, chu was made in granular form and called *san-chu*. But by about AD 947-79 chu was developed in cake form called *ping-chu*.

Page 205: The difference between tamari, miso-damari, tare-miso, and usudare was not always clear, however in early documents they generally refer to the liquid obtained during the fermentation of miso or *sho* [*hishio*]. "Literally, Tamari or Miso-damari, or Tare-miso" means the liquid separated from the top of miso, "or drained off from the bottom of the kegs in which the miso or sho was stored, or filtered into a bamboo cage which is put into miso or sho. But according to such books as the *Honcho-bunsho* (AD 1487), *Shijoryu-hochosho* (AD 1489) and others (AD 1504, 1537), Taremiso or Usudare seems to have been the name for the liquid drained off or press-filtered from the boiled mixture of miso or *sho* [*hishio*] and salt water." But the word *shoyu* (written with the same characters as *chiang-yu* [*jiangyou*] in Chinese) did not appear in any of these books.

Shoyu: The word "shoyu," written with the same Chinese characters with which it is written today [these characters are pronounced chiang-yu / jiangyou, and mean "soy sauce"] in Chinese, first appeared in the *Ekirinbon Setsuyoshu* (AD 1598). The word shoyu literally meant the liquid obtained from *sho / hishio*. However, to confuse matters, the liquid obtained from miso or tamari (soybean koji fermented in salt water) was also called "shoyu" in these early days. Moreover, in the book *Yoshu-fushi* (AD 1686) shoyu was defined as *shi-ju* (*shi-tche* in Chinese), the liquid obtained from salted, fermented black soybeans. In yet another book, shoyu was defined as wheat sho. All these descriptions suggest that the word "shoyu" had a broad meaning in the beginning, and only later acquired the more specific meaning it has today–the liquid obtained from the mash [moromi] in which a moulded mixture of soybeans and wheat or barley was fermented in water in the presence of salt water with a high salt concentration. This gradually became clearly differentiated from tamari or a shi-tche like product made almost entirely from soybeans [plus salt and water].

During Japan's Edo period (1603-1867), great progress was made in the technology of making shoyu, and the scale of its production was enlarged. Many books from this period describe the manufacture of shoyu: *Ryori monogatari yorozu kikigaku* (1643), *Yoshufushi* (1686), *Honcho shokukan* (1692), *Wakan sansaizue* (1715), *Mankin sangyo bukuri* (1731), *Zoshu seiho* (1716), *Sake shoyu denjuki* (1785), and *Koeki Kokusanko* (1844).

The following is a summary of what these books say about how typical Japanese shoyu (*koikuchi shoyu*) was made at that time–about 300 years ago. As basic raw materials use 1 part soybeans and one part wheat kernels or dehulled barley. Gradually it was recognized that wheat gave better quality shoyu than barley. Soak the soybeans, then boil them. Roast the wheat kernels or barley, then crack into pieces. Mix the two main ingredients well, then place them between straw mats or in wooden trays where they will be naturally inoculated and, after 2-3 days, cultured with molds. The mold cultured materials were called *koji*, a word written with the same character as its Chinese counterpart, *chu / qu*. Judge the quality of the finished koji by its color: white, yellow or brown are good, while blue or black are bad. This suggests that *Aspergillus oryzae* or *Aspergillus sojae* were already recognized as the best molds for making shoyu. Set aside a small portion of good koji to use as a starter culture for making the next batch of koji.

To make the moromi mash: Mix the koji made from a mixture of 1 part whole dry soybeans and 1 part wheat kernels with 2.2 parts of water and 1.1 parts of salt. Store this mash for about 70 days in summer or 100 days in winter. Summer was thought to be the best season for making koji and moromi. Amazake was sometimes added to the shoyu mash to add natural sweetness to the salty taste.

The total population of Japan at that time was about 30 million, of these about 1.2 million lived in Edo (today's Tokyo) and these Edo dwellers consumed much more shoyu per person per year than is the case today. One typical

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wooden keg of shoyu at that time contained 14.4 liters [3.80 gallons or 15.22 quarts] which was said to be enough to last one person one year (*Chohoroku* 1856, from *Shoyu-monogatari*, p. 5, written by N. Matsumoto, published by Kikkoman Shoyu Co. Ltd., 1976).

The two main centers of shoyu production in Japan were in Noda city and Choshi city, both of which were not far from Edo / Tokyo. Shoyu manufacture began in Noda and Choshi in 1561 and 1616, respectively. About 1.6 million kegs of shoyu were consumed in Edo, of which 1.5 million kegs were transported from the above two cities and the 0.1 million from places in Japan southwest of Tokyo, mainly Kishu [Wakayama prefecture], Tatsuno [a city in Hyogo prefecture, where light-colored shoyu {usukuchi shoyu} was invented in 1666], and Shodo-shima [an island in Kagawa prefecture in the Inland Sea of Japan]. Address: Kikkoman Corporation, Noda-shi, Chiba-ken, Japan.

6767. **Product Name:** Hime Brand Inarizushi-no-Moto: Prepared Fried Bean Curd.
Manufacturer's Name: JFC International Inc. (Importer) Made in Japan.
Manufacturer's Address: S. San Francisco, CA 94080.
Date of Introduction: 1985?
Ingredients: Bean-curd (Soy beans, water, calcium sulphate), soybean oil, soy sauce (water, soybeans, wheat, salt), sugar, monosodium glutamate.
Wt/Vol., Packaging, Price: 10 oz (284 gm)
New Product–Documentation: Label (Can). 3 inches high, 3 inches diameter. Color photo of Inari-zushi (Tofu pouches stuffed with vinegared rice) on front. Includes directions for making 15-17 pouches.

6768. Lea & Perrins. 1985? A recipe collection from Lea & Perrins. Fair Lawn, New Jersey: Lea & Perrins. 36 p. Undated. Illust. (color). No index. 22 cm.
• ***Summary:*** A booklet of recipes that call for Lea & Perrins' Worcestershire Sauce. Printed in color on glossy paper. Contents: Happy hour snacks. Brunch. After work dinners. Weekend. Seasonal specialties. Address: 15-01 Pollitt Drive, Fair Lawn, New Jersey 07410.

6769. **Product Name:** Che Lun Soy Sauce.
Manufacturer's Name: United Breweries International (UK) Ltd.
Manufacturer's Address: 17-21 Sunbeam Road, Royal Park, London NW10 6JP, England.
Date of Introduction: 1985?
Ingredients: Soya bean extract, wheat flour, salt, sugar, caramel.
Wt/Vol., Packaging, Price: 7 gm foil pouch sample, 5.28 fluid oz (150 ml)
How Stored: Shelf stable.
New Product–Documentation: Label, 1982, 5.75 by 3 inches. Red and green on gold. Chinese lion illustration. Foil pouches 2 by 3.5 inches. White and green on gold. Chinese lion illustration. Label, 1986, undated. "Rich, superior. Naturally brewed."

6770. Simas, Luiz; Joels, Bobbi. 1986. Re: Miso, tempeh, shoyu, and macrobiotics in Brazil. Letter to William Shurtleff at Soyfoods Center, Jan. 7. 2 p. Typed, with signature on letterhead. [Eng]
• ***Summary:*** "When we returned to Brazil from the USA in Nov. 1981, we decided to hold a series of classes on natural foods processing, including a class on making tempeh at home. (Tempeh was completely unknown around here at that time.) We also began to make tempeh for our own consumption, but ended up setting up a small shop in our apartment. Because of the limited space, our tempeh production never went beyond 50 pounds per month, in spite of the large demand. So after a year or so, as we had originally planned, we handed the business over to a couple of friends who, unfortunately, for many reasons, were not able to continue tempeh production.

"However there is now another group of people making and selling tempeh here in Rio: Jurema and Mariá Paulinho, Rua Raimundo Correia, 27, apt. 504, 22 040 Rio de Janeiro (RJ), Brazil. Phone: (021) 237-7897. We will always be available for providing any kind of information about or classes on tempeh. One of our dreams is to see tempeh introduced in Brazil's tropical northeast, where an incubator would not be necessary.

"At present we are involved in setting up miso and koji production in our house in the mountains of Minas Gerais for the coming year (1986). It's an old dream, but it looks like it will finally come true. At first it will be a small-scale farm-house style production.

"Miso and shoyu, as well as tofu, are soy products with a long history in Brazil, mainly due to the large number of Japanese immigrants in Sao Paulo. There are many shops there and some here in Rio which sell Oriental products, including miso, shoyu, tofu and natto. Nevertheless, they are usually semi-industrialized and include sugar, preservatives, etc. among the ingredients.

"Production and consumption of quality miso, shoyu, tofu and natto only began with the arrival of Tomio Kikuchi, a student of George Ohsawa's and one of the first people to introduce macrobiotics to Brazil. Until today the best known good quality miso and shoyu are the miso and shoyu distributed by Kikuchi's Instituto Principio Unico. There are, however, other good misos as well.

"Instituto Principio Unico, Sao Paulo (SP); Arma-Zen Produtos Naturais Ltda., Rio de Janeiro (RJ); Terrazul, Nova Friburgo (RJ).

"We're sure there are many, many small producers of quality miso and shoyu all over Brazil, but we don't know their addresses. There is also a large company which claims

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to devote part of its production to naturally-fermented miso and shoyu, with no sugar. The company's name is Tozan. Their factory address is: Bairro Carlos Gomes s/nº, Campinas (SP); phones: (011) 278-2495 or (011) 278-5826.

"There are also two individuals who have a lot of experience in making miso and koji at home. They are available to provide information as well. They are: Dr. Sakae Maki, Praia de Botafogo, 428, s/304, Rio de Janeiro (RJ), phone (021) 266-0503; Edson Hiroshi Seó, Fazenda Escola, 45.260 Poçoes (BA), phone (073) 431-1108.

"We will continue to give classes on making homemade miso here in Rio, and we plan on eventually turning our small miso shop in the mountains into a school. We will always be available for any type of assistance or information concerning soy products.

"Several years ago the Brazilian Government tried to introduce soybeans in the public's diet. It was a complete fiasco, mainly because of the lack of information on the part of the authorities. They simply tried to introduce soybeans as a substitute for the traditional black (turtle) beans, and soy milk as a substitute for cow's milk. It didn't work." Address: Rio de Janeiro, Brazil.

6771. La Choy. 1986. La Choy Kung Food Theatre. Transcript of 30-second anti-Kikkoman TV spot. First aired on Jan. 20. Unpublished manuscript.

6772. **Product Name:** Tofu Loaf.
Manufacturer's Name: Ashland Soy Works.
Manufacturer's Address: 280 Helman St., Ashland, OR 97520.
Date of Introduction: 1986. January.
Ingredients: Tofu, okara (soyfiber), oats, soymilk, onion, carrot, tamari, soy oil, nutritional yeast, spice.
Wt/Vol., Packaging, Price: 14 oz.
New Product–Documentation: Label. 1986. 4 by 2.5 inches. Red on white. "Slice & eat or fry or heat. Sprinkle in soups & salads. Makes great sandwiches too."Talk with Diana Muhs. 1988. Feb. 10.

6773. **Product Name:** [Tempeh Vegetarian Pâté (Natural, or with Olives)].
Foreign Name: Pâté végétale à tartiner au Tempé, Pâté végétale à tartiner aux olives et Tempé.
Manufacturer's Name: Athanor.
Manufacturer's Address: 4, rue Touras, 34000 Montpellier, France. Phone: 67.87.0608.
Date of Introduction: 1986. January.
Ingredients: With Olives: Tempeh, brown rice, onions, green olives, soy sauce, soy oil (4%), natural aromas and binders, sea salt.
Wt/Vol., Packaging, Price: 120 gm glass jar with Crown-type cap (removable with bottle opener). FOB price 7.05 FF.
How Stored: Shelf stable for 3 years; refrigerate after opening.
Nutrition: With Olives: Moisture 73.3%, lipids [oils/fats] 8.7%, protein 8.6%, carbohydrates 6.0%, total Nitrogen 1.3%, iron 2 mg/100 gm, magnesium 50 mg/100 gm, calcium 131 mg/100 gm, energy 202 calories/100 gm.
New Product–Documentation: Labels. Received 1988. May. 5 by 1 inch. Green or brown on beige. "Rich in protein. No cholesterol. Best if consumed within 3 years of date printed on lid." Soyfoods Center product evaluation. 1988. May. Nothing special. This lid is very difficult to remove without a bottle opener, a device no longer widely available in America.

6774. **Product Name:** [Tofu Burger–Deep-fried].
Foreign Name: Tofu-Burger–Frittiert.
Manufacturer's Name: Byodo Naturkost GmbH.
Manufacturer's Address: Hirschbergstr. 9, D-8000 Munich 19, West Germany. Phone: (089) 16 85 70.
Date of Introduction: 1986. January.
Ingredients: Soybeans, water, vegetables (Carrots, zucchini, soy sprouts) in varying proportions by weight, whole oats, whole wheat, brown rice, sesame seeds, sunflower seeds, spices, soy sauce (shoyu), sea salt, nigari coagulant (traditional Japanese). Ingredients predominantly organically grown.
Wt/Vol., Packaging, Price: 130 gm plastic bag.
How Stored: Refrigerated.
New Product–Documentation: Letter from Anthony Marrese. 1990. March 22. Based on a March 21 interview with Bernd Steyer. The company started in 1984, when they started to make their own tempeh. Letter (fax) from Harry Whitford. 1990. May 11. "In the fall of 1985 we started making our own tofu after a scandal. We had been buying tofu from Sapia to make our burgers for the Munich market. But he bought conventionally grown beans and sold the tofu as bio [organic]!"

Label sent by Anthony Marrese. 1990. April 15. 5 by 2.25 inches. Green on yellow, printed on front and back of plastic bag. "A nutritional soya specialty (Eine vollwertige Soja-Spezialität). Store at 4-8°C."

6775. **Product Name:** Tofu Biscuit Delight (Sandwich Filled with Seasoned Broiled Tofu).
Manufacturer's Name: Green World, Inc.
Manufacturer's Address: 7825 Federal Way, Boise, ID 83706. Phone: 208-344-4743 (or 343-3967).
Date of Introduction: 1986. January.
New Product–Documentation: Interview with James Herrington. 1987. Dec. 30. Tofu is brushed with or marinated in soy sauce, then broiled, and placed in a sliced tofu biscuit. The building has a new address but its location has not changed. James is still in his late teens.

6776. Kotzsch, Ronald E. 1986. Japan's natural foods

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pioneer: Mitoku's success is due to its network of quality suppliers. *East West Journal*. Jan. p. 18, 20-25
• ***Summary:*** Mitoku "has been and (at present) remains the larger of the two main exporters of natural foods from Japan. With its chief competitor, Muso Shokuhin (see Sept. 1984 EWJ), it shares the bulk of a $14-million-a-year market for superior Japanese food products.

"The central office of Mitoku is located in the prestigious Marunouchi building, in front of Tokyo Central Station... There is a staff of six Japanese and two foreigners (Christopher Dawson, a new Zealander, and Robbie Swinnerton, an Englishman).

"The founder, sole owner, and guiding spirit of Mitoku is Akiyoshi Kazama, now fifty-five years old... A graduate of Waseda University in Tokyo, Kazama was selected in 1956 to study business in the United States... He became the first Japanese national to serve in the American Army following World War II. After two years as an American G.I. in Korea and Japan, Kazama returned to Japan and settled in Tokyo. He became an import-export agent for a German company dealing in opticals and electronics. Then in 1967 he got involved in the emerging natural foods business...

"At the time the newly formed Erewhon Trading Company of Boston was trying to import foods directly from Japan. Its owner, macrobiotic teacher Michio Kushi, was introduced to Kazama by letter through a mutual friend. Kazama agreed to use his trade expertise to ship $3,000 worth of high-quality Japanese foods, selected by Kushi, to Boston...

"In 1969 Kazama formed a separate company to handle steadily increasing shipments, and called it Mitoku. Through the 1970s Mitoku continued to grow. It remained the principal supplier of Erewhon, which had become a leader of America's natural foods industry. Also, it played an important role in the development of other companies such as Janus, Laurelbrook, and Oak Feed... The company moved into the European market as well, becoming a major supplier of Lima of Belgium, Sunwheel of England, and other major distributors...

"When in the fall of 1981 Erewhon finally collapsed, Mitoku was its largest creditor and took a $300,000 loss. Erewhon's demise nearly destroyed Mitoku... Mitoku has become a major supplier to Westbrae, Great Eastern Sun, Tree of Life, and the reborn Erewhon, all vigorous American firms...

"Over the last five years, Mitoku's annual sales have grown at about 20 percent a year. During the 1984-85 fiscal year gross sales were about $7.5 million. During that period Mitoku bought some 300 food products from eighty-three producers... It sold to fifty-six customers around the world, including ten in North America and about thirty in Europe...

"Just this past month, Mitoku has introduced a line of especially high quality products under its own label."

The author and Mr. Kazama visited a number of Mitoku's suppliers. Descriptions are given of Mansan Company Ltd. (making tamari and soybean miso since 1895), Sendai Miso Shoyu Co. Ltd. (the Sasaki family which runs the company started making miso in 1853), Fukaya Honten Shoyu (a small maker of organic shoyu).

6777. Nagahara, A.; Ohshita, K.; Nasuno, S. 1986. Relation of nitrite concentration to mutagen formation in soy sauce. *Food and Chemical Toxicology* 24(1) 13-15. Jan. [14 ref]
Address: Bioscience Research Lab., Kikkoman Corp., 399 Noda, Noda-shi, Chiba-ken 278, Japan

6778. *Packaging*.1986. American-style tofu pack [from Kikkoman]. Jan. p. 12.
Address: Des Moines, Illinois.

6779. Sig, Marie. 1986. Soja: la protéine du futur [Soya: The protein of the future]. *Physic*. Jan. p. 32, 34-35, 110. [Fre]
• ***Summary:*** A brief introduction to tempeh, miso, tamari, tofu, soymilk, and soy flour from a macrobiotic viewpoint. One recipe is given, from the forthcoming French-language book, *Mysteries and Secrets of Soya*, by C. and L. Clergeaud.
Address: France.

6780. **Product Name:** [Deep-Fried Tofu with Nuts].
Foreign Name: Nuss-Tofu, frittiert.
Manufacturer's Name: Sojatopf. Renamed Soto in April 1989.
Manufacturer's Address: Friedrich-Ebert-Str. 40, D-8323 Trostberg, West Germany. Phone: 08621-62538.
Date of Introduction: 1986 January.
Ingredients: Incl. tofu, hazelnuts, tamari.
Wt/Vol., Packaging, Price: 200 gm vacuum pack.
New Product–Documentation: Letter (fax) from Harry Whitford. 1990. May 30. Gives full details on product based on interview with Gerhard (Oskar) Schramm. Tofu with hazelnut pieces pressed into it is marinated in tamari, then deep-fried. On 1 Jan. 1990 the company moved to Wolfbergerstr. 47, D-8211 Breitbrunn am Chiemsee, West Germany.

6781. Taylor, Mark. 1986. A saucy proposition [John Ma and Guangdong Foodstuffs to make soy sauce in Rochester, Minnesota]. *Minnesota Business Journal*. Jan. p. 61.

6782. *Australian Dairy Foods*.1986. "Tofutti" takes off in Australia. Feb. p. 84.
• ***Summary:*** Distributor with sole Australian franchise for Tofutti is David Grossbaum of Shoyu Natural Foods in Melbourne. Photos show: (1) Dale Code and David Grossbaum making soft serve Tofutti. (2) "Some of the soy foods now being marketed in capital city health food shops." Earth Angel Soyoghurt (tub), Pureharvest Soy Drink (two sizes, Vanilla, Tetra Brik), Soypreme natural soymilk in a

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Pure-Pak carton made near Melbourne, and Bonsoy soymilk (Barley Malt flavor in a Tetra Brik carton) imported from Japan. Address: Australia.

6783. Rocheman, Marc. 1986. Les aliments fermentés derivés du soja [Fermented foods derived from soya]. *Biofutur* No. 43, p. 34-42, Feb. [8 ref. Fre]
• ***Summary:*** Gives the composition and nutritive value of various soy products: tofu, fermented tofu (sufu), miso, natto, shoyu, and tempeh. Describes the possibilities for use of koji, as a source of proteases and peptidases, in the production of these fermented foods.

6784. San-J International, Inc. 1986. Seasoned by experience. Traditionally brewed shoyu soy sauce, tamari wheat-free soy sauce, all-purpose teriyaki seasoning & marinade (Ad). *East West Journal*, Feb. Inside rear cover.
• ***Summary:*** Ad copyright 1985 (see next page). Shows the new labels for tamari, shoyu, and teriyaki seasoning and marinade in full color. "When the Sato family founded San-Jirushi in 1804, the traditional recipe for tamari was already over 500 years old. Today, seven generations later, San-J still faithfully follows the same exacting art of natural brewing. Leaflet. 1985. "Seasoned by Experience." "Although there are nearly 3,000 shoyu manufacturers in Japan, there are less than 20 companies still producing genuine wheat-free Tamari soy sauce."

"The proud San-Jirushi logo was inspired by the Sato Family's history in shipping. Three horizontal lines represent the three great rivers of Kiso, Ibi, and Nagara, which flow to the nearby Bay of Ise.

"Every year the All Japan Association of Shoyu Brewers holds exhibitions for soy product manufacturers. And each year San-Jirushi is recognized for its superior quality." Address: Colonial Heights, Virginia.

6785. **Product Name:** Laufer's Gourmet Tofu Red Chili
Manufacturer's Name: Tumaro's Inc.
Manufacturer's Address: 5300 Santa Monica Blvd., Los Angeles, CA 90029.
Date of Introduction: 1986, February.
Ingredients: Tomatoes, water, tofu, red beans, corn, onions, bell pepper, carrots, mushrooms, chili powder, celery, garlic, cumin, tamari, corn oil.
Wt/Vol., Packaging, Price: 11 oz.
Nutrition: Per 11 oz : Calories 260, protein 18 gm, carbohydrates 24 gm, fat 11 gm, sodium 421 gm.
New Product–Documentation: Leaflet. 1986, undated. 8½ by 11 inches. Black on beige. "The complete line of homemade chili entrees. No meat. No preservatives. Nothing artificial." Food Report (Lehmann). 1986, Feb.

6786. Wood, Marcia. 1986. Low-salt soy sauce tastes just as good. *Agricultural Research* 34(2):5, Feb. Summarized in Journal of the American Dietetic Assoc., May, 1986.
• ***Summary:*** A new process for removing 50% of the sodium content of soy sauce and other "high-salt fermented liquids, ... including oriental fish sauce and tamari sauce" according to USDA's Agricultural Research Service in Albany, California. In the process, potassium is increased as much as five times. The recommended ratio of the minerals potassium and sodium is about 2:1, but many people consume too much sodium in relation to potassium. High salt intake has been linked to high blood pressure (hypertension), a condition that affects one out of every 5 Americans over age 25. Imbalances in the body's potassium to sodium ratio may contribute further to this condition. Address: Albany, California.

6787. Norman, Bill. 1986. Chinese to begin building Joliet plant. *Journal* (*Kankakee, Illinois*), March 26.
• ***Summary:*** "The People's Republic of China will begin building its first manufacturing facility in the United States next month when construction begins on 'Cathay Foods, Inc.' at Joliet, Illinois." The new firm will make soy sauce and tofu.

6788. USDA Office of Information. 1986. Salt reduced in soy sauce (News release). USDA News Division, Room 404-A, Washington, DC 20250. 2 p. March 31.
• ***Summary:*** Salt can be reduced by 50% in soy sauce without changing its flavor, using a new process developed by USDA scientists. According to Wayne Camirand, a chemist with USDA's Agricultural Research Service (ARS) in Albany, California, the patented process, using a cation exchange membrane or Donnan dialysis, takes sodium from the sauce and replaces it with potassium. People should generally consume about twice as much potassium as sodium. Address: Camirand: Western Research Center, Albany, California. Phone: 415-486-3665.

6789. Ariyaratana, K.G.S. (Mrs.). 1986. How to make soy sauce. *Soyanews* (*Sri Lanka*) 8(1):5-6, Jan/March.
• ***Summary:*** A general description, probably based on the Indonesian process, without any scale or ingredient quantities given. The mixed culture (*Rhizopus oligosporus* and *Aspergillus oryzae*) is mixed (on bamboo trays) with 10% roasted rice flour or wheat flour. A cottage industry is probably intended. Address: Agricultural Instructress.

6790. **Product Name:** The Soy Deli Pacific Tempeh Burger [Original, or Marinated].
Manufacturer's Name: Quong Hop & Co.
Manufacturer's Address: 161 Beacon St., South San Francisco, CA 94080. Phone: 415-873-4444.
Date of Introduction: 1986, March.
Ingredients: Marinated: Organic soy tempeh, water, shoyu (natural soy sauce), lemon juice, natural herbs and spices,

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safflower oil.
Wt/Vol., Packaging, Price: 7 oz (199 gm) vacuum pack
How Stored: Refrigerated
Nutrition: Marinated. Per 3.5 oz. Calories 247, protein 18 gm, carbohydrates 12.1 gm, fats 13.75 gm, sodium 13 gm, vitamin B-12 2.2 mg
New Product–Documentation: Labels for both. 1987. 3.5 inches diameter. Front and back. Front is full color, with orange, yellow and red lettering. Photo of a round burger with onions rings on top, on mushrooms, lettuce and tomato. "Pop 'n Serve. Meatless. Delicious. High Protein. No Cholesterol. Good food in minutes."

6791. Tomlinson, Patte; Tomlinson, Peter. 1986. Cruets. *Hobstar (The) (American Cut Glass Association)* 8(5):9-10. March.
• ***Summary:*** Gives good definitions and descriptions related to cruets. Soy is not mentioned. The authors state that Cruet or Cruet Bottle is derived from the Dutch "Kruicke," and is sometimes spelled "crewet. However *Merriam-Webster's Collegiate Dictionary* (1998) says that cruet (a word first used in the 14th century) is derived from Middle English, from Anglo-French, the diminutive of Old French *crue*, of Germanic origin, akin to Old English *crûce*.

Cruets usually have a lip or spout, a handle, and a stopper or lid. Most were used for serving liquid condiments, such as oil and vinegar (also lemon juice, garlic juice, etc.) at the table, or to hold wine or water at altar service.

Caster bottles were cruets made to be set in stands or frame; they did not have handles and were much narrower overall. Cruets with a pierced cover were used for dry ingredients such as salt, pepper, dry mustard, sugar, etc. and were called "casters" or "castors."

"Bottle labels were either painted or engraved with the name of the intended contents on the surface of the bottle or decanter."

"Bottle tickets were small plaques suspended by a chain around the neck of a bottle or decanter." Bottle labels became less common as bottle tickets became popular. Address: Cleveland [Ohio]

6792. Lee, Karen; Branyon, Alaxandra. 1986. Food: The sauce is the thing. *New York Times*. April 6. p. 318-19.
• ***Summary:*** This article about Chinese sauces states: "The staples that require no refrigeration are fermented (salted) black beans, vinegar, and dark soy sauce."

"The pungency of black bean sauce" offers many savory possibilities when stir frying meat, poultry, fish or seafood (such as shrimp, scallops, lobster and crab).

The recipe for "Steamed whole fish with black bean sauce" calls for "1 recipe for black bean sauce (see below)." This detailed recipe for "Fermented black bean sauce" calls for "2 tablespoons fermented black beans, minced" plus 1 teaspoon each minced fresh ginger and minced garlic. All ingredients are stir-fried in a wok, yielding enough sauce to season one pound of meat, fish, or poultry.

6793. Forman, Gail. 1986. The foreign exchange: A recipe for learning English from the world's worth of cuisines. *Washington Post*. April 27. p. K1, K4-K5.
• ***Summary:*** The writer is a professor in the English as a Second Language program at Montgomery College, Rockville, Maryland. For their first essay in English, she asks her students: "'Suppose I were visiting your native land–what dish would you tell me to be sure not to miss?'" She is looking for a description or story, not a recipe.

However recipes are given at the end of the article. The recipe for Indonesian nasi goreng [fried rice] calls for "4 tablespoons Javanese soy sauce (or Chinese soy sauce) combined with ¼ teaspoon brown sugar." Address: Special to the Post.

6794. Belleme, John; Belleme, Jan. 1986. Japanese foods. *Vegetarian Times*. April. p. 40-42, 49, 59.
• ***Summary:*** Adapted with permission from the book *Cooking with Japanese foods: A guide to the traditional natural foods of Japan*. Contains long sections on miso, shoyu, tamari, umeboshi, shiitake, and sea vegetables. Address: Rutherfordton, North Carolina.

6795. **Product Name:** [Shoyu, Tamari, and Miso (Barley, or Rice)]
Manufacturer's Name: Celnat (Importer). Made in Japan.
Manufacturer's Address: Z.I. de Blavozy-Saint-Germain, 43700 Blavozy, France. Phone: 71.03.04.14.
Date of Introduction: 1986. April.
New Product–Documentation: Ad in Le Compas. 1986 March-April. p. 36.

6796. Celnat. 1986. Une large gamme d'aliments de base [A large line of basic foods]. *Compas (Le) (France)* No. 26. p. 36. March/April. [Fre]
• ***Summary:*** A choice of proteins. A line of legumes. Shoyu, tamari, and miso made from soya. Soyo brand soymilk, 100% non dairy (végétal) without added sugar. Wheat gluten flour for making seitan. Whole grains. A large line of macrobiotic specialties. Futons.

Most of Celnat's cereal and legume products bear the CINAB logo meaning organically grown as certified by the Comité Interprofessionel National de l'Agriculture Biologique. Address: Z.I. Blavozy–St. Germain, 43700 Brives-Charensac, France. Phone: 71.03.04.14.

6797. **Product Name:** [Marusan Tempeh & Shrimp Crackers]
Foreign Name: Marusan Tenpe Ebi Senbei
Manufacturer's Name: Marusan-Ai Co., Ltd.
Manufacturer's Address: Aza-Arashita, 1 Jungi-cho,

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Okazaki city, Aichi prefecture 444-21, Japan.
Date of Introduction: 1986. April.
Ingredients: Potato powder, sweet potato powder, tempeh, shrimp, kombu (seaweed), shoyu (soy sauce).
Wt/Vol., Packaging, Price: Poly bag, with window.
How Stored: Shelf stable.
Nutrition: Per 100 gm: Moisture 4.4%, protein 6.5%, fat 0.9%, carbohydrates 83.5%, ash 4.7%, calories 368, calcium 193 mg, iron 2.9 mg.
New Product–Documentation: Label. 1986, undated. 4.5 by 9.5 inches. Red, dark brown, and orange on white. Contains 10 crackers.

6798. **Product Name:** Meridian Shoyu, and Tamari.
Manufacturer's Name: Meridian Foods Ltd. (Importer) Made in Japan.
Manufacturer's Address: Corwen, Clywd, LL21 9RR, Wales, UK. Phone: 0490 3151.
Date of Introduction: 1986. April.
Wt/Vol., Packaging, Price: 500 ml plastic bottles with twist-off lid.
How Stored: Shelf stable.
New Product–Documentation: Simon Bailey. 1988. Natural Choice. Aug. 15. "Soya-Based Products." A photo shows the Labels. Each has an illustration on the front panel. The tamari shows Mt. Fuji and the ocean, the teriyaki a soybean plant, and the shoyu some Japanese-style trees. CSP form filled out by Simon Bailey. 1988. Sept. 28. Shoyu & tamari were formerly sold under the Jedwells' brand.

6799. *Prepared Foods*.1986. Less salt without sacrificing flavor. April. p. 110.

6800. **Product Name:** [Light Tofu Burgers {Low-fat, Cooked without Oil} (Italian-Style, Chinese-Style, and Breaded)]
Foreign Name: Croque Tofu Léger. Galettes Fraiches de Soja (Italienne, Chinoise, Gratinée).
Manufacturer's Name: Société Soy.
Manufacturer's Address: Plateau de l'Ardennais, 91590 Cerny, France. Phone: (6) 457.52.01.
Date of Introduction: 1986. April.
Ingredients: Garlic and Fines Herbs: Tofu (water and soybeans*), rolled oats*, soy sauce, garlic and fines herbs (3.4%), sunflowerseed oil, spices. * = Organically grown (issus d'agriculture biologique).
Wt/Vol., Packaging, Price: 2 x 100 gm patties.
How Stored: Refrigerated.
Nutrition: Per 100 gm: Protein 15.4 gm, lipids 9.6 gm, carbohydrates 7.8 gm, calories 179.
New Product–Documentation: Labels sent by Bernard. April 1989. Croque Tofu Léger. 4 by 7.75 inches. Red, brown, and green on white. Printed on poly bag. Nature et Progres logo. Text in French and Dutch. Two burgers are vacuum packed side by side behind the one label. "Reheat at low heat without oil in an oven or frying pan." A simple illustration (line drawing) on front the panel shows vegetables.

Letter from Bernard Storup of Société Soy. 1990. June 6. Tof'in was introduced first (in 1986) and Croque Tofu Léger came second (Feb. 1987). They are the same product but the packaging for each was different.

6801. **Product Name:** [Tof'in Tofu Burgers {Precooked without Oil} (Garlic and Fines Herbes, Provençale with Tomato & Onions, or Forest Mushrooms)]
Foreign Name: Tof'in (Ail/Fines Herbes, Provençale, Forestière).
Manufacturer's Name: Société Soy.
Manufacturer's Address: 1 rue du Crêt de la Perdrix, 42400 Saint-Chamond, France. Phone: 77.31.24.42.
Date of Introduction: 1986. April.
Wt/Vol., Packaging, Price: 2 x 100 gm cakes in vacuum pack.
How Stored: Refrigerated, 28 day shelf life at 4°C.
Nutrition: Per 100 gm: Protein 11.6 gm, fat 8.8 gm, carbohydrates 8.1 gm, calories 158.
New Product–Documentation: Soyfoods (ESFA), 1987 Jan. "Launched at SIAL (Oct. 1986). Tofu cakes, precooked without oil, containing different vegetables, spices, and seasonings. Must be heated before serving, and can be included in snacks or the main meal instead of animal proteins. The three flavors are Garlic & Herbs, Provençale, and with Mushrooms.

Letter from Bernard Storup. 1989. March 3. Tof'in (low fat tofu burgers, cooked without fat) in 3 flavors (Garlic & Fines Herbes, Provençale, and Forestiere) were introduced in April 1986 and discontinued in March 1988. Three other flavors (Italienne, Chinoise, and Gratinée) were introduced in Sept. 1988, which see.

Letter from Bernard Storup of Société Soy. 1990. June 6. Tof'in was introduced first (in 1986) and Croque Tofu (deep-fried burgers) came second (Feb. 1987). They are the same product but the packaging for each was different.

Talk with Bernard Storup. 1990. June 13. Tof'in (pronounced toe-FEEN) was packaged for supermarkets. It was the same as Croque Tofou, but not the same as Croque Tofou Léger, which came in Italienne, Chinoise, and Gratinée flavors. Tof'in was discontinued about 2 years ago. Then 18 months later the company launched, for supermarkets, a product named Dorés de Soja, which is the same as Tof'in (i.e. deep-fried).

Letter from Bernard Storup. 1990. Dec. 26. This product was not deep-fried. It was prepared without fat.

6802. Soppe, Fennie. 1986. Jonathan, Histoire d'un boucher reconverti. Interview de Jos Van De Ponseele [Jonathan History of a reconverted butcher. Interview with Jos Van De

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Ponseele]. *Compas (Le) (France)* No. 26. p. 14-16. March/April [Fre]

• ***Summary:*** It all began in 1974, when Jos's wife had serious health problems. There were suspicions of lung cancer. She went to Switzerland for care, and had a fever of 38-40°C for 6 months without improvement. One day someone gave them a small book about natural foods. She then began to eat macrobiotically and her fever disappeared after 3 months.

At the beginning, this diet was not at all attractive. The food was very poor, and Jos began to ask himself questions and to read books on the subject. He learned that it wasn't a bad diet at all. Not wanting to have to prepare two types of food, he started to eat the same diet as his wife. His health did not improve much, but he found he had the capacity to work much more, and a need for less sleep. His days started at 6:00 A.M. and ended between 11:00 P.M. and midnight.

Upon seeing the results, he began to think and live differently. In the long run, the work at the butcher shop worried him. He no longer ate meat, but he was still selling it. That wasn't logical. He then decided to sell organic meat products at the butcher shop, and they sold very well. However that was a form of hypocrisy.

You must understand that at that time, macrobiotic people in the area were very fanatical. Meat was considered bad, in fact a poison. A more moderate viewpoint was needed; a bit of meat in itself is not bad, but its consumption in large quantities can present problems.

Jos opened two natural food shops in succession, and they were a success in part because he had experience in running a business. He tried to sell his butcher shop, which was very large. Through his new shops he met people who wanted to stop eating animal proteins, but they knew of no replacement. Neither tofu nor seitan nor hardly any other beans were available at that time. This made it hard for a person to change his or her diet.

Jos attended a seminar conducted by Michio Kushi at Drogen. They talked about these problems. Michio spoke to Jos about miso and tamari, and advised him to come to Boston, Massachusetts, where he could learn and see everything. He did. Indeed miso and tamari were available, but they were made overseas. He was somewhat deceived in the early days. Most of the products came from Japan. During the same period he worked at the famous restaurant The Seventh Inn. He became friends with Japanese and they worked together making seitan. Finally, he started commercial production with two Americans.

Tofu was very well known, but it was made in [Boston's] Chinatown. The Chinese did not want to show others how to make it, but they were allowed to look. This interested him very much.

Upon returning to Belgium, after his studies in Boston, Jos began commercial production of seitan. At the beginning people were very closed. They thought that one should consume only beans. Their fanaticism seemed very natural to them, but that made it very difficult for Jos to survive economically by making only seitan. He started by producing 500 gm a week of seitan for Souen, a macrobiotic restaurant in Gent [Gand]. He urged the restaurant to serve seitan to each customer in a familiar form. That was successful. After several months, the natural food stores began to order seitan from him; that was his goal. Finally he began the production of fresh organic tofu. He encountered new opposition when he suggesting sterilizing the tofu, which would cause loss of vitamin C, etc.

People got to know seitan but grew tired of it, so now he has the seitan burger between two buns, with onion and lettuce. They are also thinking about introducing seitan brochettes and seitan in sauces. The starch left over from making large quantities is used in making soups, spreads for bread, goulash, etc.

How did his customers react initially to all this? They thought he was crazy—in 3 ways. (1) They thought macrobiotics was folly. (2) Who but a fool would sell a butcher shop that was doing so well, employed 16 persons, and was the first to sell organic meat with great success. They thought that America had made him lose his head. (3) They thought artificial meat was absurd and would not sell. But these people have changed their opinions as things have developed.

His best invention is seitan sold sterilized in jars; it is now a very successful product. He is also very proud of his tofu burgers (*les beignets, les gammos;* made from tofu, sesame seeds, onions, mushrooms, and arrowroot), his sauces, and his mushroom tarts. Neither his soy croquettes not his carob products sell well. His basic products are seitan, tofu, and mochi (made according to a traditional Japanese recipe). The company will soon focus more on exporting it products, especially to Germany, followed by France (starting in 1987) and Austria. He has created a company in France named Jonathan France (La Comba 24620, Les Eyzies. Phone 53 06 94 68), directed by Frenchmen, because it is very difficult to export to France; he has been trying for 2 years.

Black-and-white photos show: (1) A portrait shows Jonathan, with a large beard, rimless glasses, and thinning hair. (2) Twenty-three of his sterilized products in jars, which have a shelf-life of 2 years. Among these are Sojapastei, Sojaboont Jes, Azukiboont [Azuki bean] Jes, Brown Rice Casserole with Seitan, and Tofu Salade. The company is studying a tempeh spread for bread. The company now has 16 employees, including 3 in stores an a representative. Most of the employees like this food. Not all are macrobiotic but most have changed their diet, usually without fanaticism.

The company's name Jonathan comes from the name of the book *Jonathan Livingston Seagull* (Jonathan Le Goëland), about a seagull who wants to live differently. Jos believes that vegetable proteins can play an important role in world hunger. His dream, which he hopes to realize, is to

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establish small food companies in Zaire, Rwanda, and all of southern Africa. "For example, a small tofu machine can produce 800 to 1,000 cakes of tofu/day. I would like these people in poor countries to be able to make tofu themselves."

Jos is not a vegetarian. He still likes meat and eats it in small quantities, often fish or organic meat. He has 3 children. Address: Pays-Bas (Netherlands).

6803. Farrington, Sharon. 1986. Grilling with an Asian accent: Exotic flavors go beyond barbecue. *Washington Post*. May 25. p. K1.
• ***Summary:*** Many Americans now prefer the word "grill" to the word "barbecue." Teriyaki and Yakitori from Japan are both grilled favorites among many Americans; in Japan they are grilled on the small, efficient hibachi.

A recipe for "Dow see pai quat (Twice-cooked Cantonese spareribs in black bean sauce)" has ingredients that include: "¼ cup soy sauce, . . 2 tablespoons fermented black beans, 1 tablespoon ginger root, grated, 1 tablespoon garlic, minced,..." Grill over hot coals.

6804. **Product Name:** Sushi Chef Sesame Soy Salad Dressing.
Manufacturer's Name: Baycliff Company, Inc.
Manufacturer's Address: 242 East 72nd St., New York, NY 10021. Phone: 212-772-6078.
Date of Introduction: 1986, May.
Wt/Vol., Packaging, Price: 10 oz glass bottles.
How Stored: Shelf stable.
New Product–Documentation: Spot and photo in Food Industry Advisor (Harrisburg, Pennsylvania). 1986, May. Label reads: "100% natural, Japanese Style." Also serves as a dipping sauce, base for sauces, and a marinade.

6805. **Product Name:** [Tofu Stew].
Foreign Name: Tofu-Blanquette.
Manufacturer's Name: Jonathan P.V.B.A.
Manufacturer's Address: Antwerpsesteenweg 336, B-2080 Kapellen, Belgium. Phone: 03/664 58 48.
Date of Introduction: 1986, May.
Ingredients: Tofu (soya-proteins)*, peas*, onions*, carrots*, mushrooms, celery*, seaweed. Sauce: Soya milk*, water, wheat meal*, vegetable fats, soya sauce, seasoning spices. * = biological crop.
Wt/Vol., Packaging, Price: 300 gm.
Nutrition: Minerals 1.4%, vegetable proteins 6.3%, vegetable fats 3.52%, carbohydrates 5%. 76.9 calories (Kcal) per 100 gm.
New Product–Documentation: Label. Received 1988. 6.25 by 5.25 inches. Card stock. Color photo of tofu cubes stewing with various vegetables with item name in white on orange. "Vegetable product." Form filled out by Jos van de Ponseele. 1989, Jan. 11. This product was introduced in May 1986.

6806. Perez, Oswaldo. 1986. La soya en la alimentacion humana [Soya in human nutrition]. *La Era Agricola* (*Merida, Venezuela*) No. 0, May, p. 14-15. [1 ref. Spa]
• ***Summary:*** Shows how soya makes most efficient use of the earth's ability to produce protein. Address: Granja Tierra Nueva, Aldea San Luis, La Azulita, C.P. 5102, Estado Merida, Venezuela.

6807. *Sunset Western Grocery News* (*Menlo Park, California*).1986. Kimlan brings soy and teriyaki sauces to Western U.S. May.
• ***Summary:*** On the island of Taiwan, there are more than 300 makers of soy sauce and Kimlan is No. 1, with about a 60% market share. Kimlan distributes its soy and teriyaki sauces into parts of the Western United States. In 1982, Kimlan soy sauce was introduced into Southern California, then into Northern California in 1983. In the USA, Kimlan's name is Golden Orchid.

6808. Belleme, Jan, Belleme, John. 1986. Cooking with Japanese foods: A guide to the traditional natural foods of Japan. East West Health Books, 17 Station St., Brookline, MA 02146. xi + 220 p. Illust. Index. 25 cm. [45 ref]
• ***Summary:*** A good study from a macrobiotic viewpoint, with more than 200 macrobiotic recipes. The authors studied in Japan and speak Japanese. Contents: Foreword. Acknowledgements. Introduction. Fermented Foods: miso, shoyu, tamari, brown rice vinegar, sake, mirin, koji, amazake, pickles, umeboshi, ume su, medicinal teas, ume extract, bonito flakes, natto. Noodles: cooking noodles, udon, soba, somen, clear noodles. Grains, incl. rice, mochi, seitan, fu gluten cakes, hato mugi [*hatomugi*] (Job's tears), rice syrup, rice bran. Vegetables: shiitake, daikon, Hokkaido pumpkin, Chinese cabbage, burdock, jinenjo, lotus root. Sea vegetables: kombu, nori, wakame, hijiki and arame, kanten (agar). Beans: azuki beans, black soybeans, tofu. Condiments: kuzu, dark (toasted) sesame oil, goma (sesame seeds), tekka, shiso momiji (shiso leaf condiment), wasabi. Teas. Cooking utensils. Appendix. Composing meals, pronunciation guide, suppliers. Bibliography.

Amazake (p. 39-45). Contains a ½ page description plus good instructions for making basic amazake (thick "pudding" and thinner beverage), both from glutinous ("sweet") rice. Also recipes for Vanilla Amazake Pudding, Amazake Cream Puffs, Neapolitan Parfait, Carob Amazake Brownies, Bob's Coconut Amazake Macaroons, Amazake Bread (yeasted), and Unyeasted Amazake Bread. Perhaps the most lengthy information on amazake available in English up to this time.

Hato mugi ("Job's tears," p. 93) "resembles barley, but it is actually a member of the rice family. An easily digestible whole grain with only the tough outer husk removed, hato mugi contains less vitamin B-1 than brown rice but approximately twice as much protein, iron, vitamin

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B-2, fat, and slightly more calcium." It has long been used in China and Japan as a medicinal food, "for strengthening the stomach, purifying the blood, and restoring health. Since it is so effective in helping the body to discharge toxins, people who are sick and weak, and women who are pregnant, nursing a baby, or menstruating should eat it sparingly." Address: Rutherfordton, North Carolina

6809. Kim, Hyung-Soo; Kim, Ze-Uook. 1986. [A study on the manufacturing of soysauce by the use of milled barley.] *Han'guk Nonghwa Hakhoe Chi* (*J. of the Korean Agricultural Chemical Society*) 29(2) 107-15. June. [31 ref. Kor, eng]
• ***Summary:*** Investigated changes in and quality of soy sauce made by a new method, using a vinyl tent instead of a koji room and replacing the wheat in the koji with milled barley. Address: Dep. of Food Science & Technology, College of Agriculture, Seoul National Univ., Suwon, South Korea

6810. **Product Name:** Light Tofu Browners, Sausage Style (Meatless Sausage)
Manufacturer's Name: Light Foods Inc.
Manufacturer's Address: St. Louis, MO 63017.
Date of Introduction: 1986, June
Ingredients: Water, tofu, TVP (textured vegetable protein), soyoil, egg whites, salt, natural herbs and spices, honey, tamari, wheat gluten, malt powder.
New Product–Documentation: Poster. 1986. "No cholesterol, no MSG, no sugar, no meat." Spot in Natural Foods Merchandiser. 1987, March, p. 99. Adweek East. 1987, April 6. Soya Newsletter. 1988, Sept/Dec. A new smaller size, (8 links in a 12-oz. package) was introduced in late 1988. Address is now 613e Broadmoor, St. Louis, Missouri 63107. Ingredients include water, tofu, TVP, soy oil, salt, honey, soy isolate, malt powder, and natural herbs and spices.

6811. Owen, Sri. 1986. Indonesian food and cookery. 2nd edition, revised and enlarged. Prospect Books, 45 Lamont Rd., London SW10 0HU. 268 p. First edition was 1976. Illust. by Thao Soun. Index. 23 cm. [20 ref]
• ***Summary:*** In the chapter titled "Essential ingredients" are sections on "Kecap or soya sauce" (p. 42-43) and tauco (p. 44). Also contains a chapter titled "Tahu and tempeh" (p. 216-28) with good information and recipes on tofu and tempeh. Address: Mustika Rasa, 96 High St., Wimbledon Village, London SW19 5EG. Phone: 01-946-7649.

6812. **Product Name:** [Okara Burger]
Foreign Name: Okaraburger
Manufacturer's Name: Sojatopf. Renamed Soto in April 1989.
Manufacturer's Address: Friedrich-Ebert-Str. 40, D-8323 Trostberg, West Germany. Phone: 08621-62538.
Date of Introduction: 1986, June.
Ingredients: Incl. okara, tofu, hazelnuts, tamari.
Wt/Vol., Packaging, Price: 80 gm vacuum pack.
New Product–Documentation: Letter (fax) from Harry Whitford. 1990, May 30. Gives full details on product based on interview with Gerhard (Oskar) Schramm. On 1 Jan. 1990 the company moved to Wolfbergerstr. 47, D-8211 Breitbrunn am Chiemsee, West Germany.

6813. Westbrae Natural Foods. 1986. If all you want to do is save a few pennies on your soy sauce, don't bother reading this [about Johsen Shoyu] (Poster). P.O. Box 8711, Emeryville, CA 94662. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.
• ***Summary:*** Johsen is made with whole soybeans and aged for two full brewing years. Address: Emeryville, California.

6814. Troy, John. 1986. Update on work with American Natural Foods and miso (Interview). *SoyaScan Notes*, July 28. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** John is now $150,000 in debt. The natural foods market was much smaller than he had thought and than market studies indicated. There are only 200 good and fairly big natural foods stores in the USA. The biggest ones are Bread and Circus, Alfalfa's, Mrs. Gooch's, Whole Foods in Texas, and Blue Bonnets in Texas.

John's products are now in 1,700 Kroger's stores. His three best-sellers are: (1) Miso Mustard, (2) Hot Stuff, and (3) Miso Sauce (a new product for chicken, with tahini and tamari). Address: North Carolina.

6815. American Soybean Association. 1986. Soya Bluebook '86. St. Louis, Missouri: American Soybean Assoc. 278 p. July. Index (bold face type indicates advertiser). 22 cm.
• ***Summary:*** Contents: Index of advertisers (p. 4). Soybeans: Your profit opportunity, by Dr. Kenneth L. Bader, CEO, ASA (p. 5). Organizations (by country, within each country alphabetically): For each gives the name, address, contact person, year founded, number of members, objectives and activities, publications. Countries are: USA, Australia, Austria, Bangladesh, Belgium, Brazil, Canada, England, Germany (Federal Republic of), Finland, France, Hungary, India, Indonesia, Italy, Ivory Coast, Japan, Malaysia, Mexico, Netherlands, Norway, Philippines, Portugal, Senegal, Spain, Sweden, Taiwan, Turkey, Yugoslavia, Zaire, Zimbabwe. U.S. agricultural education, research & extension (by state, mainly state agricultural / land-grant colleges), ASA international offices and world regions (colored world map and photo of each country director), government trading agencies.

Soy directory: Oil extraction plants / refineries (alphabetically by state in USA, then by country), soyfoods / edible soy products manufacturers (lecithin, soy flour, soy grits, soy protein concentrates & isolates, textured soy

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protein, binders, extenders, simulated meat products, soy oil products {margarine, shortening, cooking / salad oil, salad dressings}, soyfoods–beverages [soymilk], frozen desserts, soy sauce, tempeh, tofu, whole soybean snacks {soynuts}, other soy-based foods), within each product by country, producers of soy products for industrial manufacturers (by products, etc.): Industrial lecithin, industrial soy flour / soy protein, industrial soy oil, soy sterols and tocopherols, soybean fatty acids

Soybean manufacturing support industries: Manufacturing equipment & supplies, soybean processing equipment & supplies, manufacturing services. Marketing and auxiliary services: Brokers, financial services, forwarding agents, marketing consultants, trading companies, transportation, warehousing–export / import

Soy statistics (tables & graphs): Soya conversions [weights & measures], metric conversions, temperature conversions. U.S. soybean planting and harvesting dates (by state). U.S. soybean acreage, yield and production, 1925–1985 (by year). U.S. soybean planted acreage by state (1970–1985). U.S. soybean harvested acreage by state (1970–1985). U.S. soybean yield by state (1970–1985). U.S. soybean production by state (1970–1985). U.S. soybean production major crops (1920–1985). One graph each for soybeans, corn, wheat, and cotton. U.S. harvested acreage of major crops (1920–1985): One graph each for the big 4. U.S. yield per acre of major crops (1920–1985): One graph each for the big 4. Argentine soybean area, yield and production by province (1975-1986). Brazilian soybean area, yield and production by province (1975-1986). Canadian soybean production: Acreage, yield, production, farm price and value (1950-51–1984-85). Canadian soybean production and utilization (1950-1984, year beginning Aug. 1): Production, imports, supplies, exports of beans, processed for oil and meal, soy oil produced, soybean oilcake produced. World soybean production: Area and production in specified countries and the world total (1980/81–1985/86). Soybean production by major countries (one graph, 1925-1985): U.S., Brazil, PRC [China], Argentina. Share of world soybean production [percentage] by major countries (one graph, 1925-1985): Big 4. Soybean acreage by major countries (one graph, 1925-1985): Big 4. Share of world soybean acreage [percentage] by major countries (one graph, 1925-1985): Big 4. U.S. soybeans: Supply, disposition, acreage, yield and price (1970–1986). Soybean usage in the U.S. for crush and exports (one graph, 1925-1985, million bushels). U.S. soybean exports: Percent of total usage (one graph, 1925-1985). Argentine soybeans and products (oil and meal): Supply and disposition (1975/76–1986/87). Brazilian soybeans and products (oil and meal): Supply and disposition (1975/76–1986/87). Prices of U.S. soybeans, No. 1 yellow: Average price per bushel, Illinois country shipping points (by year and month, 1950–1984, dollars). Prices of U.S. soybeans received by farmers: Average price per bushel (by year and month, 1950–1984, dollars). U.S. soybean price support operations (1945-1985, incl. CCC). U.S. soybean crop value: U.S. and major producing states (1925-1985): Illinois, Iowa, Indiana, Ohio, Missouri, Minnesota, Arkansas. Fold-out color map of U.S. soybean acreage by county. U.S. farm marketings of soybeans: Percent of open market farm sales by month (1975/76–1984/85). Map of U.S. soybean processing plants. Value of U.S. soybean products per bushel and crush margin (1950-1984). Soy oil, soybean meal, soybean price (received by farmers, No. 1 yellow Illinois), margin (ditto). U.S. soybean meal: Prices paid by farmers–44% protein, dollars per 100 lbs, by year and month (1950-1984). U.S. soybean meal: Average wholesale price–44% protein, dollars per ton, bulk Decatur, Illinois, by year and month (1950–1984). U.S. soybean meal: Beginning stocks, production, exports and domestic disappearance, by year and month, thousand short tons (1978/79–1984/85). U.S. soybean cake and meals: Supply, disposition and price (1977-1985): Soybean, cottonseed, linseed, peanut. Major world protein meals: Supply and utilization (1981/82–1985/86; Production, exports, imports, consumption, ending stocks): Soybean, cottonseed, rapeseed, sunflowerseed, fish, peanut, copra, linseed, palm kernel. World major oilseeds: Supply and utilization (1981/82–1985/86). World major vegetable and marine oils: Supply and utilization (1981/82–1985/86). Prices of U.S. soybean oil: Soy oil, domestic crude, average cents per pound in tank cars at Midwestern mills, by year and month (1950/51–1984/85). U.S. soybean utilization, by year (1960-1984): Food–Shortening, margarine, cooking and salad oils, other edible, total. Nonfood–Paint and varnish, resins and plastics, fatty acids, other inedible (incl. soap), total. Total domestic utilization. U.S. soybean oil value as percent of total soybean value (1930–1985). Note: Peaked at about 55% in 1930, fell to about 32% in 1980-81. U.S. soybean oil: Supply, disposition and price (1960-1985). U.S. edible fats and oils: Supply and disappearance (1978-1985): Coconut, corn, cottonseed, lard, palm, peanut, soybean, sunflower, tallow (edible). U.S. exports of soybeans, by year and month (1953–1984). U.S. soybean exports by port and country of destination (Sept. 1984–Aug. 1985). Ports are–St. Lawrence Seaway, Lakes, Atlantic, Gulf (by far the largest), Pacific, Interior. U.S. exports: Soybeans–Volume of exports by country of destination (in metric tons) and total value (1981–1985). U.S. exports: Soybean oil–Volume of exports by country of destination (in metric tons) and total value (1981–1985). U.S. exports: Soybean oilseed cake and meal–Volume of exports by country of destination (in metric tons) and total value (1981–1985). Map of U.S. soybean exports by port areas: Sept. 1984–Aug. 1985 (1,000 bushels). U.S. exports of soybean, cottonseed and sunflowerseed oils: U.S. commercial and P.L. 480 exports–Volume of exports by region and country of destination (in metric tons) and total value (1979/80–1984/85; year beginning in

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October). U.S. exports: Soybean oil–P.L. 480, Title I and III, volume (in metric tons) and value (in $1,000) by country of destination (FY 1981–1985). U.S. exports of soybean and cottonseed oils: U.S. commercial and P.L. 480 exports (1950–1984, million lbs, incl. P.L. 480 as a percentage of the whole). Brazilian exports of soybeans and products to major countries (1,000 metric tons; 1976-1984). Graph of soybean & product exports by major countries (U.S., Brazil, Argentina) (soybean equivalent; 1970-1985). Graph of world share of soybean & product exports by major countries (U.S., Brazil, Argentina) (1970-1985). Note: U.S. share has fallen from 95% in 1970 to about 50% in 1984.

Glossary: General terms, soy protein terms. Standards & specifications: NSPA, Association of American Feed Control Officials (AAFCO), USDA (definitions and grades). Index. Address: P.O. Box 27300, St. Louis, Missouri 63141.

6816. **Product Name:** [Tofu Croquettes]
Foreign Name: Tofu-Kroketten.
Manufacturer's Name: Christian Nagel Tofumanufaktur.
Manufacturer's Address: Oelkersallee 14a, D-2000 Hamburg 50, West Germany. Phone: 040/89 49 37.
Date of Introduction: 1986, July.
Ingredients: Tofu*, millet (Hirse)*, onions*, nori, soy sauce (Sojasauce), rolled oats (Haferflocken)*. * = Organically grown (aus kontrol. biolg. Anbau).
How Stored: Refrigerated.
New Product–Documentation: Form filled out by Christian Nagel, 1988. Product introduced July 1986. They now make 120-160 kg/month. Label, 1988, 4 by 3 inches. Black on beige. Handwritten.

6817. Cox, Peter. 1986. Why you don't need meat. Wellingborough, England: Thorson's Publishing Group. 240 p. July. Illust. 20 cm. *
• ***Summary:*** A convincing, health oriented popularization of the case against meat. Tofu, tempeh, and tamari are mentioned in the nutritional tables. Cox, who was the first chief executive of the Vegetarian Society of the United Kingdom, is very familiar with both the scientific and popular literature on the subject.

Thorsons states in an ad: "There is mounting scientific proof that the meat we eat today actually *causes* heart disease, cancer, obesity and other degenerative diseases. The author exposes the black market in animal growth hormones, looks at the unregulated use of antibiotics in animal feed, and shows why a meat-oriented diet can actually be nutritionally deficient."

Note: According to Vegetarian Times (Sept. 1987, p. 35), this book "has become a best seller in the U.K. and was selected by the Booksellers' Association of Great Britain as 'best paperback non-fiction campaign'" See this issue of VT for more on Cox, Chrissie Hynde, and Reprieve! Address: England.

6818. Donegan, Priscilla. 1986. Spaghetti sauce pours it on: The sauce pot overflowed last year with hot sales in the spaghetti and Mexican categories. *Progressive Grocer* 65(7):144-45. July.
• ***Summary:*** In 1985 supermarket sales of soy and teriyaki sauce were $51.60 million (gross profit: $14.19 million), accounting for 2.60% of the sauce category sales (3.12% of category gross profits; the average retail gross profit margin is 27.5%) and with sales up 4.98% over 1984. The best-selling sauce types are spaghetti sauce (28.70% of the category), ketchup (14.90%), meat sauce (13.48%), and dry mixes and seasonings (10.88%).

6819. *Japanscan: Food Industry Bulletin.* 1986. Solid state fermentations: Three companies in Japan have jointly developed a bioreactor to produce soy sauce. 4(7):3-4. July. *

6820. *Natural Foods Merchandiser.* 1986. 7th Annual Natural Foods Merchandiser merchandising awards. July, p. 42-43, 45.
• ***Summary:*** Soyfoods won the following awards: Gold: San-J Tamari (wheat-free soy sauce) and Shoyu; Silver: Fantastic Foods' Tofu Scrambler & Tofu Burger, Westbrae Natural miso soups. Honorable mention: Walker & Wilks Tofoods frozen entrees, White Wave boxed tofu. Color photos show each.

6821. **Product Name:** San-J Traditionally Brewed Shoyu.
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: Colonial Heights, VA 23834.
Date of Introduction: 1986, July.
New Product–Documentation: Natural Foods Merchandiser. 1986. July, p. 42. Gold medalist in 7th Annual Natural Foods Merchandiser merchandising awards.

6822. Spencer, Colin. 1986. Tofu is like a blank sheet of paper on which you write. *Guardian* (*England*). Aug. 8, p. 14.
• ***Summary:*** The article begins: "Tofu is soy bean curd. There are now many brands on sale...." Morinaga makes a silken tofu from Japan; it can be stored outside the refrigerator. Another fairly soft tofu from Japan is made by Kikkoman. "The definitive book on the subject has long been *The Book of Tofu* by William Shurtleff and Akiko Aoyagi."

6823. *Economist* (*London*). 1986. The Yong recipe. Food flavors. Aug. 16, p. 58.
• ***Summary:*** Dr. Leslie Yong is a biochemist at the National University of Singapore. Having invented a speedier way to make soy sauce, he is trying to make fungi turn out food flavors. He was able to cut the soy sauce fermentation time for 90 days to 9 days by altering the enzymes and yeasts, temperature and pH in the moromi. He has sold his technique

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to Chuen Cheong Industries, a soy sauce manufacturer in Singapore. Address: Biochemist, National Univ., Singapore.

6824. Boon-Long, Narudom. 1986. Traditional technologies of Thailand: Traditional fermented food products. In: V.H. Potty, et al. eds. 1986. Traditional Foods: Some Products and Technologies. 292 p. See p. 114-33. Aug. Presented at the UN University Workshop on "Traditional Food Technologies: Their Development and Integrated Utilisation with Emerging Technologies." Held June 1983 at CFTRI, Mysore, India. [23 ref]

• ***Summary:*** "Products such as soy sauce, soy paste (*Tao-Jeow*), fermented soybean curd [Sufu] and *Thua-nao* constitute the major traditional fermented foods [of Thailand]. The first three are common throughout the country. Thua-nao is popular in northern Thailand." Flowcharts and details are given concerning the production of each of these products. Address: Dep. of Food Science & Technology, Kasetsart Univ., Bangkok, Thailand.

6825. *Food Engineering*. 1986. Reduction of cholesterol achieved in tofu meats. 58(7):61-62. Aug.

• ***Summary:*** Walker and Wilks of Tofoods Co. are making Bar-B-Q Tofu, Sweet and Sour Tofu, and Tofu Teriyaki, frozen entrees having a shelf life of 9-12 months. These meat replacers are discussed with respect to the growing popularity of tofu entrees, in part for health reasons. To overcome the problems of the binding capabilities of tofu, basic mixtures of 35-50% tofu and 20% meat are recommended.

Other popular uses of tofu include salad dressings (see *Food Engineering*, Nov. 1985, p. 58) and as an egg substitute. Last fall, Fantastic Foods (Novato, California) introduced Tofu Scrambler Mix. The cook adds the mixture to fresh tofu, then cooks it for a few minutes. The result resembles scrambled eggs.

A photo (courtesy of Advanced Food Systems) shows products made by combining meat and tofu with other ingredients.

6826. Ho, C.C.; Ten, S.K.; Chuah, B.H.; Lee, G.S.; Kok, C.H.; Chen, Y.F. 1986. Microbiology of traditional fermented food in Malaysia and surrounding countries. In: V.H. Potty, et al. eds. 1986. Traditional Foods: Some Products and Technologies. 292 p. See p. 134-35. Aug. Presented at the UN University Workshop on "Traditional Food Technologies: Their Development and Integrated Utilisation with Emerging Technologies." Held June 1983 at CFTRI, Mysore, India.

• ***Summary:*** "Soy sauce, tempeh, ontjom, tapai and ubi are the fermented foods on which laboratory studies and extensive field work have been carried out in Malaysia. Tempeh and tapai are traditional fermented foods of Malaya and also the Indonesians. Soy sauce manufacture is the largest fermentation industry in Malaysia, technology for which was introduced by the Chinese.

"Offensive odour development in the fermentation process results in spoilage of tempeh and tapai. *Bacillus subtilis* causes this problem. A strain of *B. subtilis* (H4052) has been isolated. It has been found that it inhibits the growth of *Rhizopus oligosporus* and *R. oryzae* through the likely production of antimycotic antibiotics." Address: Univ. of Malaya, Kuala Lumpur, Malaysia.

6827. Lee, Cherl-Ho. 1986. Traditional food technologies and their recent developments in Korea. In: V.H. Potty, et al. eds. 1986. Traditional Foods: Some Products and Technologies. 292 p. See p. 178-90. Aug. Presented at the UN University Workshop on "Traditional Food Technologies: Their Development and Integrated Utilisation with Emerging Technologies." Held June 1983 at CFTRI, Mysore, India. [14 ref]

• ***Summary:*** The traditional Korean soybean fermentation technique is unique. Soybean is the only ingredient used, and sauce and paste are made simultaneously. In the first step of the fermentation, meju is made from cooked and mashed soybean balls, which contain no salt. Molds, mainly *Aspergillus oryzae*, grow on the surface of a meju ball, and bacteria, mainly *B.* [*sic*, *Bacillus*] *subtilis*, inhabit the inside of the ball. One part of meju, one part of salt, and 4 parts of water are mixed in earthen jars, and ripened for several months. The supernatant dark brown liquid of meju-brine mixture is soybean sauce and the brownish solid residue is soybean paste.

Kochujang, a mixture of fermented soybean paste and ground red pepper, is a unique food product available only in Korea; it reflects the hot spice preference of its people. It is prepared by mixing ground meju powder with steamed cereal flour, red pepper, salt and water and allowing further fermentation and ripening of the mixture in earthen jars for several months. Flowcharts are given for soy sauce, soy paste, and kochujang.

Under "Recent developments" (p. 187), the development of improved meju and meju-brine are discussed. Address: Dep. of Food Technology, Korea Univ., Seoul, Korea.

6828. Nielsen Marketing Research. 1986. Nielsen warehouse shipment service market snapshot: Total soya sauce (52 weeks to Aug. 30, 1986). 1 p. Unpublished manuscript.

• ***Summary:*** In the year prior to 30 Aug. 1986 shipments of soy sauce in Canada (excluding Yukon and Northwest Territories) were 493,100 imperial gallons, worth $8,916,000 at the retail level. Of this total, 64.6% by volume was sold in eastern Canada (Maritimes, Quebec, and Ontario), and 35.4% was sold in western Canada (Manitoba, Saskatchewan, Alberta, and British Columbia). Address: Canada.

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6829. **Product Name:** Tempeh Burger.
Manufacturer's Name: Nutrisoy Pty. Ltd.
Manufacturer's Address: 255 Forest Road, Arncliffe 2205, NSW, Australia.
Date of Introduction: 1986, August.
Ingredients: Organic soybeans, water, soy sauce, sunflower oil, cider vinegar, spices, herbs, and culture (*Rhizopus oligosporus*). "Black spots are normal sporulation and do not indicate spoilage."
Wt/Vol., Packaging, Price: 200 gm in plastic bag.
How Stored: Refrigerated
New Product–Documentation: Label with date sent by Tony Wondal of Nutrisoy. 2005, April 26. He started making and selling this product in Aug. 1986. Orange, green, yellow, black and white on red. "Sandwich filling. Ready to serve, hot or cold."

6830. Shurtleff, William. 1986. Safety of fermented foods (Letter to the editor). *Vegetarian Times*. Aug. p. 4.
• ***Summary:*** "I am concerned about the safety of eating tempeh and other fermented products. Rumor has it that these molds are potential carcinogens, but no one I know can cite the source of the data claiming it's dangerous. Please address this issue.–Nancy Lampka Simpson, Amherst, New York 14226.

"Editors Note: Bill Shurtleff, director of The Soyfoods Center and author of *The Book of Tempeh* writes this response.

"'The Soyfoods Center has the world's largest computerized database of information about soyfoods, listing more then 13,700 publications. Of these, 590 are about tempeh. Not one of these publications even suggests a possible link between soy tempeh or the tempeh molds (*Rhizopus* species) and cancer.

"'It has been well known since the early 1960s that several of the *Aspergillus* molds (especially *Aspergillus flavus*) produce aflatoxins, which are potent carcinogens. There are numerous reports in the literature of aflatoxins being produced on poorly handled peanuts, especially in tropical countries. A fermented peanut product from Indonesia called *onchom* has been shown, in some cases, to contain aflatoxins.

"'Because the molds used to produce soy sauce and miso (*Aspergillus oryzae* and *A. soyae*) are of the same genus as *Aspergillus flavus*, a tremendous amount of research has been conducted worldwide over the past 20 years to see if aflatoxins are produced in soy sauce or miso. A vast body of literature shows that not in a single instance have aflatoxins been found in any commercial product.

"'In conclusion, thousands of years of daily use and many decades of testing by microbiologists have shown fermented soyfoods to be completely safe.'" Address: Director, The Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

6831. Steinkraus, Keith H. 1986. Industrialization of indigenous fermented food fermentations. In: V.H. Potty, et al. eds. 1986. Traditional Foods: Some Products and Technologies. 292 p. See p. 232-45. Aug. Presented at the UN University Workshop on "Traditional Food Technologies: Their Development and Integrated Utilisation with Emerging Technologies." Held June 1983 at CFTRI, Mysore, India. [52* ref]
• ***Summary:*** Includes discussions of shoyu, miso, tempeh, koji, and meat analogs. Address: Inst. of Food Science, Cornell Univ., Geneva/Ithaca, New York.

6832. Tahira, T.; Fujita, Y.; Ochiai, M.; et al. 1986. Mutagenicity of soy sauce treated with a physiologically feasible concentration of nitrite. *Mutation Research* 174(4):255-58. Aug. *

6833. Watanabe, Tokuji. 1986. Traditional foods: Their values, problems and research and development. In: V.H. Potty, et al. eds. 1986. Traditional Foods: Some Products and Technologies. 292 p. See p. 201-08. Aug. Presented at the UN University Workshop on "Traditional Food Technologies: Their Development and Integrated Utilisation with Emerging Technologies." Held June 1983 at CFTRI, Mysore, India. [7 ref]
• ***Summary:*** Contents: Introduction (ways of classifying traditional foods). Structural characteristics of traditional food industries in Japan. Traditional food processing technologies. Problems and reevaluation of traditional foods. New food processing technologies applied to traditional foods. Technologies applicable to traditional foods. Assessment in modernization of traditional food production. Some activities related to traditional foods. Conclusion.

Traditional foods can be classified as staple or non-staple, fresh or processed (processing technologies include fermentation [e.g. miso, soy sauce, natto], salting, acidifying, drying after freezing [kori-tofu], sun-drying, fractionation [tofu], fabrication [ganmodoki], simulation of animal foods [soy milk, ganmodoki, su-ho-tai made from yuba in China]), animal or vegetable origin, and region or national production.

In Japan, rice consumption is decreasing year after year. It is thus not surprising that consumption of traditional foods closely associated with rice production are also decreasing. The reevaluation of traditional foods and their advantages and disadvantages are discussed. New food processing and packaging technologies are being applied to traditional foods, including tofu, miso, natto, and koji. Recently a method has been found to extend the shelf life of natto beyond the traditional 1-2 day period. Miso has been freeze-dried.

"Another application of a new process for the traditional foods is the emulsion curd which is a semi-solid mixture

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with definite proportion of soybean protein, oil and water. It keeps its form without flow. Even the dried or frozen product recovers its original texture by hydration or thawing. Therefore, it is used as a substitute in dried or frozen *Tofu*. Regular *Tofu* cannot recover its texture once it is frozen or dried...

Miso can be enriched with vitamin B-2 and calcium, and its salt content lowered. Since 1980 the Laboratory of Food Science at Kyoritsu Women's University has been conducting a research survey on traditional foods and dishes in Japan in cooperation with the Cooking Research Laboratory. "This project consists of three components: (a) survey of the present status of traditional foods on local basis at respective regions by visiting prefectural research organisations–universities and colleges; (b) sending questionnaires to students for seeking information on the position of the traditional foods in the dietary patterns of individual homes and also to obtain their comments on the future prospects of the local traditional foods; (c) and documentation regarding local traditional foods, followed by classification according to preparation or cooking method for analysis. On the basis of the collected data, the relationship between each local traditional food and its natural, cultural and historical background has been studied and published in the university's journals. More efforts are being made to identify the reasons as to why and how some traditional foods have survived in certain regions, while the others have disappeared or reached the verge of extinction.

"Another related activity is the one carried out by Ajinomoto Company, a major food manufacturer in Japan, which has got the modern audio-visual media, video-tapes and 36 mm-films. Their team has been documenting the processing of some selected traditional foods like *Tofu, Yuba, Fu* and such other foods as demonstrated by professionals by using the old traditional methods and facilities. This would help in the documentation of traditional technologies before they disappear in the event of modernisation of such foods. Such tapes and films have been made available by the company...

"Traditional foods, especially those of plant origin, are prepared by such complex multi-step processes as to be called 'products of human wisdom.' Therefore there is so much to learn from such products if serious attention be paid. Indeed they have great potential for developing new food industries." Address: Kyoritsu Women's Univ., Tokyo, Japan.

6834. Winarno, F.G. 1986. Traditional technologies of Indonesia with special attention to fermented foods. In: V.H. Potty, et al. eds. 1986. Traditional Foods: Some Products and Technologies. 292 p. See p. 136-47. Aug. Presented at the UN University Workshop on "Traditional Food Technologies: Their Development and Integrated Utilisation with Emerging Technologies." Held June 1983 at CFTRI, Mysore, India. [24 ref]

• ***Summary:*** Contents: Introduction. Tempe. Oncom. Tauco and soy sauce. Tape (tapeh) and its products. Brem wine. Brem cake. Terasi. Salted eggs and pindang. Pindang (made from salted fish). Address: Food Technology Development Centre, Bogor Agricultural Univ., Indonesia.

6835. Yin, Zong Lun. 1986. Development and industrialization of traditional food production in China. In: V.H. Potty, et al. eds. 1986. Traditional Foods: Some Products and Technologies. 292 p. See p. 191-200. Aug. Presented at the UN University Workshop on "Traditional Food Technologies: Their Development and Integrated Utilisation with Emerging Technologies." Held June 1983 at CFTRI, Mysore, India.

• ***Summary:*** Under "Oilseeds, Soy products," the author discusses soymilk, soybean curds (tofu; soft tofu is popular in south China and hard tofu in North China), fried bean curd, smoked bean curd, "stink" flavoured bean curd, soymilk skin sheet [yuba], dried soymilk skin sticks [dried yuba sticks], fermented bean curd or soy cheese, and soybean powder.

Under "Condiments," soy sauce is discussed. Note: This is the earliest English-language document seen (Oct. 2008) that uses the term "soymilk skin" or "soymilk skin sheet" to refer to yuba, or that uses the term "dried soymilk skin sticks" to refer to dried yuba sticks. "These products form an important part in a vegetarian's diet and are used in conjunction with other ingredients to prepare imitation meat and fish like products for vegetarian dishes" (p. 194).

"Soymilk is a very popular breakfast beverage. In order to supplement milk supplies and also meet the special needs of those who, for some reason cannot drink milk, processing factories have been set up with relatively large-scale production capacities for soymilk. With the same distribution pattern as milk, soymilk is supplied to various catering departments, schools, kindergartens, nurseries and families. The process employed for soymilk ensures destruction of trypsin inhibitor and effective deodorization to reduce the unpleasant bean-taste...

"Fermented bean curd or soy cheese can be produced by the fermentation of bean curd. The fermented bean curd may differ in shape (square bits, cubes), colour (white, red), flavor and smell, the products can also be steeped in seasoned rice wine or preserved with drags of rice wine. Sometimes they contain added pepper, rose leaves or shrimp spawn. The traditional production procedure is very subtle. The aging process requires high levels of skill and experience. The product is liable to break down and careful handling is needed. Presently, a new type of fermented bean curd in the form of paste which is more amenable to handling and packaging, and consuming has appeared on the market. However, this product does not conform to Chinese traditional eating habit and is, therefore, now [not?] widely accepted, either for nutritional value or flavour. Soy cheese

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has a great potential for development...

"In several baby food recipes, soybean constitutes an important source of protein. The well known milk substitute 5410 formulated during the 1950s contained soybean powder as the main ingredient. Formula 5410 has proved to be a success in terms of its nutritional value. It has become the basic recipe for many milk substitutes. Some factories use spray drying process to produce instant blended milk powder consisting of soymilk, milk and other ingredients; they have gained some technological and financial benefits. In recent years, there has been a continuous flow of such products into the market.

"Based on previous research efforts, and in conformity with China's present situation, work is being done to develop an oil-containing concentrated soy protein. The techniques involved have certain positive characteristics. The end product can be a liquid for direct use as a food ingredient or a spray-dried powder for the formulation of dry-mixes." Address: Research Inst. of Light Industry, Beijing, People's Republic of China.

6836. Westbrae Natural Foods. 1986. Distributor catalog, Northeast delivered pricing. Sept. 1, 1986. Emeryville, California: Westbrae. iv + 17 + [13] p.; 22 by 28 cm.
• ***Summary:*** On the cover, the lettering is in black on a light blue background. Pages i-iv are general information, 1-9 are a computer-printed price list, and 11-17 are a product glossary. There are also 1-page, single-sided inserts (sell sheets, many in full color) including the following Westbrae products: (1) Malted's (2 new flavors–Java and Almond. No caffeine (c) 1984). (2) Malted's: "The Cadillac of soydrinks" (Q&A). June 1986. (3) The uncommon ramen–whole wheat, 12 flavors in all. (4) Instant vegetable miso soup. Address: Office: 4240 Hollis St., Emeryville, California 94608; Mailing: P.O. Box 8711, Emeryville, CA 94662. Phone: (415) 658-7518 (orders).

6837. Johnstone, Bob. 1986. Japan turns soy sauce into biotechnology. Manufacturers of soy sauce are among Japan's oldest, most established firms. But a long tradition has not made them slow to exploit the latest science and technology. *New Scientist* 111(1524):38-40. Sept. 4. [1 ref.]
• ***Summary:*** With soy sauce (shoyu) sales sluggish in Japan, its manufacturers have been quick to use their traditional skills to diversify into new fields; they now make monoclonal antibodies and even contraceptives. The 120 million inhabitants of Japan consume, on average, 10 liters/year of shoyu.

Although there are more than 2,500 makers of shoyu in Japan, most of them are small family businesses. Half of the country's output comes from just 5 companies, of which the largest are Kikkoman Corp., which has 30% of the market, and Yamasa Shoyu, which has 10%.

Kikkoman has a strong focus on research, employing 350 researchers or about 10% of its total workforce; one-third of these are involved in basic research. Whereas the Japanese food industry spends 0.5% of sales on R&D, Kikkoman spends 2%–or 4 times as much. Yamasa, which employs 70 researchers, gets 10% of its income from selling biochemicals for research. Until about 30 years ago, shoyu took a year or more to ferment and only 60% of the protein in the soybeans ended up in the final product. Researchers using modern microbiology and protein chemistry have reduced the time to as little as 6 months and the conversion rate 90%.

Major innovations have been year-round temperature control to reduce the time, continuous even cooking using a screw process, and breeding better strains of *Aspergillus* mold using "cell fusion"–a process (in the late 1970s) by which researchers "peel off the cell walls of the organism and then induce the naked 'protoplasts' to fuse." During this research, Kikkoman scientists discovered an enzyme, pectorinase, useful in cell fusion. Kikkoman now sells this enzyme worldwide, and "claims to be the first to have succeeded in producing a higher plant [a hybrid citrus tree] by cell fusion." "Now companies are thinking of genetically engineering microorganisms to enhance yields."

Sidebar 1, titled "Mouldy origins of Japan's favorite condiment," notes that 800 years ago a Japanese monk named Kakushin, who studied Buddhism in China, brought shoyu back to Japan–where the humid climate encourages the growth of the molds to make koji and thus the fermentation process. Yamasa's shoyu plant at Choshi, a seaside town at the tip of a part of Japan that juts out into the Pacific Ocean east of Tokyo, is especially good for fermentation. Off its coast the warm Kuroshio current from the south meets cold currents coming down from the north, "creating a moist atmosphere all year round." Kikkoman and Yamasa each grow their own *Aspergillus oryzae* molds for making koji, and the differences between them are apparent under a microscope. Kikkoman's spores appear short and fat, while Yamasa's are long and lean. "Originally shoyu was made from soya beans alone. Later wheat was added to make the seasoning sweetener"–when the wheat starch is converted to sugar. A description of the 8-month fermentation process follows. The resulting shoyu contains about 3% ethanol, in Great Britain it is classified as a type of alcohol and taxed accordingly!

Sidebar 2, titled "Bioreactors cannot yet fool the human palate," begins with a Chinese proverb: "It takes a long time to make something taste good." Kikkoman began experiments with bioreactors in 1981. In 1984 it succeeded in running one for 80 days. Along with 40 other companies, Kikkoman is participating in the bioreactor project, founded 2 years ago by the Ministry of Agriculture. Kikkoman built a bioreactor that could make shoyu in just 2 weeks. Its design and function are described. Yet the end product was not as tasty as regular shoyu that is fermented slowly. However

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work on this new process continues; it lends itself well to simpler applications, such as making alcohol or sugar.

A long section tells the remarkable story of how Yamasa, Japan's second largest of shoyu, became involved in biotechnology. "It began in 1953, when Akira Kuninaka joined the company." He isolated inosinic acid, the main flavor compound in dried bonito flakes (*katsuobushi*), which are one of the three main sources of flavor in Japanese cooking (along with dried shiitake mushrooms and kombu). He then discovered that a tiny quantity of inosinic acid multiplies the flavor intensity of monosodium glutamate (MSG) by a factor of five or more. Today Yamasa is a major supplier, worldwide, of nucleotides, enzymes, reagents for the synthesis of DNA, and monoclonal antibodies. Kuninaka believes that Yamasa's success in the field of pharmaceuticals derives directly from the company's long experience of making shoyu with *Aspergillus* molds. "As his old professor at Tokyo University used to tell him, 'Microorganisms will produce anything for you–if you know how to ask them."

Photos show: (1) A Japanese woman working behind a line bottling Yamasa Shoyu in 1-liter plastic bottles. (2) Moromi being pressed with hydraulic presses. (3) A circular bottling line. (4) A scientist in a laboratory.

6838. Arocena, Javier. 1986. Re: Brief history of the soyfoods company Zuaitzo in Spain. Letter to William Shurtleff at Soyfoods Center, Sept. 10. 2 p. Typed, without signature on letterhead. [Eng]

• ***Summary:*** "I've been working for the last 4 years making tofu, seitan, and tempeh, in a craftsman way, in the North of Spain, in the Basque country. Unfortunately in all of Spain we are only two people making those kind of products, even if slowly, slowly, people are asking us more and more for them every day. I have graduated in biology, and so have a background in what I am doing. I've really found myself useful for the rest of the world, and enjoy my life and work... I'd like to ask if there is any possibility of working for a short time (a summer or a month) in a place where I could learn how to make miso, tamari, natto, sufu, and soynuts." Address: Zuaitzo, Correria, 39–01001 Vitoria-Gasteiz, Spain. Phone: 945/28 86 30.

6839. *Chicago Tribune*. 1986. Joliet's China-U.S. venture may be just a beginning [Cathay Foods Inc.]. Sept. 15. Business section, p. 4.

• ***Summary:*** Note: A check on 27 Aug. 1988 in the phone directories for Joliet (Area Code 805) and Darien (312) shows no listing.

6840. Abdul Rahman, Hussein. 1986. An update in the manufacturing of traditional fermented and non fermented soyfoods in Malaysia. In: F.G. Winarno, ed. 1986. International Soyfoods Symposium. xiv + 403 p. See p. 59-73. Held 16-18 Sept. 1986 in Jogyakarta, Indonesia. [38 ref]

• ***Summary:*** Contents: Abstracts. Introduction. Present status of soybean utilization in Malaysia. Manufacture of traditional fermented soyfood in Malaysia. Manufacture of traditional non-fermented soyfood in Malaysia. Research and development of soyfood in Malaysia. Conclusion. Address: Extension Services, Food Technology Div., Malaysian Agricultural R&D Inst., P.O. Box 202, Serdang, Selangor, Malaysia.

6841. Ando, Seiichi. 1986. Kinsei toshi-shi no kenkyû [A study of city history in the Edo Period]. Tokyo: Seibun-do. [Jap]*

• ***Summary:*** Ando's most detailed publication on shoyu is given in the chapter titled "Kishu Yuasa shoyu no seisan to ryutsu [Production and distribution of Yuasa shoyu from Kishu]" (p. 301-12). Address: Osaka Sangyo Daigaku, Osaka, Japan.

6842. Benk, Erich. 1986. Ueber die Sojabohne und aus ihr hergestellte Lebensmittel [Soybeans and soybean products]. *Industrielle Obst- und Gemueseverwertung* 71(9): 390-91. Sept. [9 ref. Ger]

• ***Summary:*** Soybeans and their products are discussed briefly, including their composition, manufacture, and uses. Products mentioned are green vegetable soybeans (unreife Sojabohnen), whole dry soybeans, soy protein, soy oil, lecithin, defatted soy flour, soy protein concentrate, soy nuts, soy sprouts, soymilk (Sojamilch), tofu (Sojaquark), soy sauce (Sojasosse), and fermented tofu (Sojabohnen-Käse, sufu). The application of German dairy product laws to soyfoods is discussed. Address: Chemiedirektor a. D., Beratender Lebensmittelchemiker, Robert-Steiger-Str. 110, 8909 Krumbach, Germany.

6843. Fukushima, Danji. 1986. New development in the process of traditional soyfoods in Japan. In: F.G. Winarno, ed. 1986. International Soyfoods Symposium. xiv + 403 p. See p. 21-57. Held 16-18 Sept. 1986 in Jogyakarta, Indonesia. [22 ref]

• ***Summary:*** Contents: Abstract. Soy milk. Tofu. Soy sauce. Miso. Natto.

Table 1 (p. 28) shows changes in the size of the soymilk market in Japan from 1979 to 1985. For each year there are statistics for the amount of soymilk sold (in kiloliters), the ratio of that amount to the amount sold during the previous year, the total retail value in yen, the ratio of the retail value that year to the value the previous year, and the ratio of the retail value that year to the value in 1979. The amount of soymilk sold in million liters is as follows: 1979–6.5 million liters. 1980–12.0. 1981–25.2. 1982–54.3. 1983–111.5. 1984–84.013. 1986–55.354.

Also contains a detailed analyses of the off-flavors in soymilk. These off flavors are brought about through the hydrolysis of the glycosides by the Beta-glycosidase

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contained in soybeans. Contains 46 figures, including many photos, flowcharts, and equipment designs. Address: Food Research Inst., Kikkoman Co. Ltd., 339 Noda, Noda City, Chiba prefecture, Japan.

6844. Fukushima, Danji. 1986. Preservation of traditional soy products. In: F.G. Winarno, ed. 1986. International Soyfoods Symposium. xiv + 403 p. See p. 267-93. Held 16-18 Sept. 1986 in Jogyakarta, Indonesia. [25 ref]
• ***Summary:*** Contents: Abstracts. Soy sauce and miso. Soy milk, tofu, and their related products. References. Address: Food Research Inst., Kikkoman Co. Ltd., 339 Noda, Noda City, Chiba prefecture, Japan.

6845. Robertson, Laurel, Flinders, Carol, Ruppenthal, Brian. 1986. The new Laurel's kitchen: A handbook for vegetarian nutrition and cookery. Berkeley, California: Ten Speed Press. 512 p. Foreword by Sheldon Margen, M.D. Professor of Public Health Nutrition, University of California, Berkeley. Illust. Index. 23 cm. Original ed. published Sept. 1976. [234* ref]
• ***Summary:*** Contents: Preface (by Laurel). Introduction. The work at hand (Carol Flinders). Recipes and menus (includes 500 recipes). Bread, breakfast, lunch, dinner, salads, soups, vegetables, sauces & such, heartier dishes, grains & beans, desserts, menus. A handbook of nutrition. Introduction: The search for an optimal diet (Brian Ruppenthal). The New Laurel's Kitchen food guide. Special concerns: Pregnancy, infancy & early childhood, controlling your weight, nutrition in later years, sports (athletic activities), the vegan diet, diet against disease. The nutrients. The energy-yielding nutrients, vitamins & minerals, food processing, conserving nutrients in the kitchen, suggestions for further reading, recommended dietary allowances, nutrient composition of foods. Address: Blue Mountain Center of Meditation, Petaluma, California.

6846. Winarno, F.G. 1986. Traditional fermented soyfoods. In: F.G. Winarno, ed. 1986. International Soyfoods Symposium. xiv + 403 p. See p. 3-19. Held 16-18 Sept. 1986 in Jogyakarta, Indonesia. [36 ref]
• ***Summary:*** Contents: Introduction. Tempe. Some tempe products. Flavor and color of tempe. Tempe and wholesomeness. Tauco. Kecap (soy sauce).

"Tempe was formerly considered an inferior food in part because of its costs, compared to other protein foods such as meats, fish and eggs. Over the last 15 years the attitude towards tempe has changed. Today, more attention has been given to tempe because it is an inexpensive source of proteins, vitamins and calories. The total annual production of Indonesian tempe is about 500,000 tons. However, tempe production is still a household art. Most of the 41,000 small cottage industries that make fresh tempe daily are family run and employ about 128,000 workers. Each small cottage industry employs about 3 workers, and uses approximately 11 pounds (5 kg) of dry soybeans per day to produce 21 pounds (10 kg) of fresh tempe. The larger cottage industries employ 10 to 20 workers and use 600 to 1,000 pounds (500 kg) of dry soybeans per day to produce tempe. The average retail price of tempe is about US $0.25 per kg in 1985."

Figures: 1. Usar made using traditional Hibiscus leaves. 2. Flow sheet: Indonesian tempe process. 3. Material balances in pilot plant process for production of tempe. 4. Flow sheet of tauco processing. 5. Flow sheet of kecap processing. Address: Food Technology Development Center, Bogor Agricultural Univ., P.O. Box 61, Bogor, Indonesia.

6847. Wood, Brian J.B. 1986. List of publications: 1961-1985. 3 p. Unpublished manuscript. [24 ref]
• ***Summary:*** Dr. Wood is probably Scotland's leading authority on fermented soyfoods. He has published many papers (especially on lactobacilli and industrial fermentations, but also on tyrosinase) and edited several books on these foods, guided many PhD students, and in May 1982 started Scotland's first company that makes fermented soy sauce (in Cumbernauld). Address: Dep. of Applied Microbiology, Univ. of Strathclyde, Glasgow, Scotland, UK.

6848. *Toyo Shinpo* (*Soyfoods News*). 1986. Amerika ni dai-2 kôjô. Kikkôman kokusai-ka ni hakusha [A second soy sauce plant in the USA. Kikkoman spurs on internationalization]. Oct. 1. p. 1. [Jap; eng+]
• ***Summary:*** Note: Talk with Kikkoman. 1988. Aug. 29. Construction on the plant has not yet started.

6849. Fangauf, K.W. 1986. Bedeutung der Sojabohne und Sojaprodukte fuer die Welternaehrung [Significance of the soybean and soya products for world nutrition]. *Schriftenreihe aus de Fachgebiet Getreidetechnologie* No. 8. p. 9-23. Sojaprodukte. Herstellung und Verwendung. [15 ref. Ger]
• ***Summary:*** Discusses history of the soybean, cultivation and composition, the world industry for soybean production, consumption, and products, world production of soy oil and competing oils, trends in the use of soy products (incl. soymilk and soymilk products, soy sauce, tofu, miso, and tempeh; table based on Shurtleff & Aoyagi 1983), results of Hamburg poll (American Soybean Assoc. 1982) on attitudes of German consumers toward qualities and use of soya (e.g., price, nutritional value, good protein source, versatile, healthful, recommended by a doctor, good for young people), conclusion. Address: American Soybean Assoc., Hamburg, West Germany.

6850. **Product Name:** Spicy Tempeh Chili.
Manufacturer's Name: Hain Pure Foods.
Manufacturer's Address: Los Angeles, Calif.
Date of Introduction: 1986. October.

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Ingredients: Incl. Tempeh, soy sauce.
Wt/Vol., Packaging, Price: 15 oz can $1.69.
How Stored: Shelf stable.
New Product–Documentation: Interview with Lonnie Stromnes 1987 Sept 3 He helped Hain develop the product. Hain was owned by Ogden for 4-5 years. Now it is owned by Pet of St. Louis, Missouri, a huge conglomerate.

6851. Kotzsch, R.E. 1986. The pioneering spirit of Ohsawa-Japan: Japan's first macrobiotic company puts principles before profits. *East West*. Oct. p. 72, 74-75.
• ***Summary:*** In 1953 George Ohsawa "left Japan to teach the principles of macrobiotics in other lands. Several years later, after sojourns in India, Africa, Europe, and America, he returned to his homeland for a visit. When he saw that it had become almost impossible to procure traditional-quality foods in his own country, he urged some of his followers to become involved in farming and in food processing. He encouraged others to set up a company that would seek out existing producers of high-quality items and market their products in Japan and abroad. Thus was born Ohsawa-Japan, staffed by loyal disciples of Ohsawa and headed by his sister-in-law Flora Tanaka.

"From its inception Ohsawa-Japan was a company rich in ideals and slim in capital. As Yoshi Nanabayashi, its export manager, told me, 'We have always been, above all, a macrobiotic company. So our first concern has been to distribute only the highest-quality food, made according to strict standards. Considerations of cost and profit have always been secondary. Mr. Ohsawa taught that proper food is the key to the health and happiness of humanity. Our main aim has been to promote the health of individuals and of society, not to make a lot of money. And,' he added with a laugh, 'we have been fairly successful.'"

What the Tokyo-based company lacks in professionalism it makes up for in dedication to its ideals. From several score of traditional Japanese food producers (mostly small and family-run) around Japan, it gathers more than 100 products (including miso from Yamaki Miso Co., shoyu, and tamari), packages them, and distributes them to the small but strong network of macrobiotic stores and centers throughout Japan.

For years Ohsawa-Japan's "exclusive North American distributor was Chico-San, the natural foods company located in Chico, California. In 1984 Chico-San, which had thrived on its rice cake business, was sold to the H.J. Heinz Corporation. Six months later the import rights to the Ohsawa-Japan products were sold back to Chico-San's original owners, Herman Aihara and Bob Kennedy. At that point a new company, Ohsawa America, was set up to import and distribute the products of Ohsawa-Japan. Today that company, based in Chico, handles about seventy basic Japanese macrobiotic items.

"The main difficulty facing Ohsawa America is the high prices it must ask for its products. The cost of living in Japan is one of the steepest in the world.... In addition, the value of the yen has increased dramatically." Lane Seiger is operations manager of Ohsawa America. As Joel Wollner notes, "Like Ohsawa-Japan, Ohsawa America is a philosophy-driven company." Address: Staff.

6852. Mori, Shôzô; Sasaki, M.; Nonomura, N. 1986. Amerika shijo shôyu no kannô hyôka-taki hinshitsu no tokuchô [Organoleptic quality of soy sauce on the American market]. *Nippon Jozo Kyokai Zasshi* (*J. of the Brewing Society of Japan*) 81(10) 701-06. Oct. [14 ref. Jap] Address: Kikkoman Jôzô Kagaku Kenkyû-jo.

6853. **Product Name:** Shree Akita Miso, Akadashi Miso. Renamed Akita Miso.
Manufacturer's Name: Nepal Soya Industries.
Manufacturer's Address: 9/374 Bhedashing, Jamguthi, Kathmandu, Nepal. Phone 229130.
Date of Introduction: 1986, October.
Ingredients: Akita miso: Soybean, rice, koji starter, water, salt.
Wt/Vol., Packaging, Price: 1 kg plastic bag.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Letter from Mr. Achutananda Vaidya of Nepal Soya Industries. 1992 Dec. 26. He started making tofu in Kathmandu in 1974. "In 1979-80 I was invited to Japan for 9 months training at the Akita Prefecture Brewing Laboratory. During that time I also learned in detail the processes for making soy sauce, miso, and soyamilk. During that period I also got a chance to read *The Book of Tofu, The Book of Miso, Miso Production,* and *The Book of Tempeh* all of which helped me very much. I still have all those books. In 1985 I was invited by the Rotarians of Akita-Aomori to return to Japan for 1 month to receive further technical training in making tofu, miso, soy sauce, soyamilk, moyashi (sprouts), koji, fruit fermentations for wine, etc. Today I produce tofu, soy sauce, and miso in my small factory in Kathmandu." His business card notes: "Food Technology in Brewing from Japan. Products & Suppliers. Tofu (Vita), Soyamilk (Vitabean milk), Soya Curd, Soya Sauce, & Miso."

Letter from Mr. Achutananda Vaidya of Nepal Soya Industries. 2002 April 12. He started to make this make this miso and to sell it in Japanese hotels and restaurants. It is now named Akita Miso. A label sent in April 2002 is for "Akita-Miso: Naturally fermented."

6854. **Product Name:** Lemon Broil Tempeh.
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: 1990 North 57th Court, Boulder, CO 80301.
Date of Introduction: 1986 October.
Ingredients: Soy rice tempeh (cultured soybeans, water, brown rice), olive oil, soy oil, soy sauce, concentrated lemon

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juice, granulated garlic, onion powder
Wt/Vol., Packaging, Price: 6 oz. Plastic wrapped.
How Stored: Refrigerated or frozen
New Product–Documentation: Label. 1986. 3 inches square. Yellow and white on blue background. "Great on Sandwiches or Add to Stir Fry or Grill on Barbecue. Heat and serve. Pareve." Soyfoods Center product evaluation. Delicious! Interview with Lonnie Stromnes. 1987. Aug. 31. New Label. 1989. April. Ingredients: Soy Rice Tempeh, olive oil, soy oil, soy sauce, concentrated lemon juice, granulated garlic, onion powder.

6855. Seminar on Traditional Foods and Their Processing in Japan. 1986. Tokyo: NODAI Research Institute, Tokyo Univ. of Agriculture. 4 p. Held on 13-25 Nov. 1986 at Tokyo University of Agriculture, Tokyo, Japan. [Ger]
• ***Summary:*** This document, which is an announcement of the seminar, contains two parts: (1) The 1-page introductory letter (28 cm), and (2) The 3-page Agenda (26 cm). The proceedings were published in 1987, edited by Fujiharu Yanagida.

The Agenda gives the opening session (Room A): Chairman I. Uritani. 11:00–11:30. Opening address by the chairman of organizing committee, Dr. Izuru Yamamoto, Director, Nodai Research Inst. Welcoming address by Dr. Takao Suzuki, President, Tokyo University of Agriculture. Address by representative of Japan Society for the Promotion of Science (JSPS). Address by the president of the Society for Agricultural Education–Research Development Abroad (SAEDA), Dr. Jiro Sugi, Emeritus Professor, Tokyo Univ. of Agriculture.

11:30–11:45. Keynote address, Dr. Hiroyasu Fukuba, Professor, Ochanomizu University.

The following soy-related papers, which were published in the 1987 proceedings, are cited separately: Onchom, by Dedi Fardiaz. Miso, by Hisao Yoshii. Tofu, by Tokuji Watanabe. Indigenous fermented foods in Nepal, by Tika Karki. Improvement in traditional soy sauce fermentation, by Sri Hartadi. Address: Tokyo, Japan.

6856. Barrett, Mariclare. 1986. The cook's glossary of soyfoods. *Vegetarian Times*. Nov. p. 28-35. [10 ref]
• ***Summary:*** Gives good definitions, with a full-page color illustration by Emily Soltanoff, of: Soybeans, soynuts, soy flour and grits, soy oil, textured vegetable protein, soymilk, okara ("the pulp that remains after the soymilk has been strained"), soy yogurt and soy cheese, tofu, fermented soyfoods, tempeh, miso, natto, soy sauce.

The article begins: "For 60 seconds on a national television commercial, a small, round soybean rolls past a lineup of infant formula, bread, pizza, chili, salad dressing, ice cream [Tofutti], soymilk and cubes of tofu, meanwhile the narrator intones, 'The newest development in nutrition is actually one of the oldest foods known to man.' Through advertising, the concept of soyfoods is brought home to millions of Americans by the soy giant, Archer-Daniels-Midland Company." Address: Staff.

6857. Dawson, Barbara M. 1986. Vegetarian spa resorts to innovative purchasing. Murrieta Hot Spring's typical weekly grocery order might include 1,000 pounds of tofu. *Restaurants & Institutions* (*Des Plaines, Illinois*). Nov. p. 172.
• ***Summary:*** In a 6-month period, Murrieta purchased 23,400 pounds of tofu, or 130 lb/day. The San Diego Soy Dairy sells 4,500 lb of tofu a week, 25% of it to Murrieta. Popular dishes include tofu links (hot dogs) marinated in almond oil, liquid aminos, ketchup and mustard, and grilled on the barbecue. Breakfast features a scrambled tofu dish blend in with almond oil.

Note: As of Aug. 1991 Murrieta Hot Springs is closed and a mess, with broken windows, no owner, and facing receivership.

6858. **Product Name:** [Kikkoman Instant Wakame Soup (Seaweed Soup with Miso)].
Manufacturer's Name: Kikkoman Corporation.
Manufacturer's Address: Noda 278, Chiba-ken, Japan.
Date of Introduction: 1986. November.
New Product–Documentation: Spot in Food & Beverage Marketing. 1986. Nov. p. 12, 60.

6859. McMath, Bob. 1986. Hot products: Japanese foods 'stir' up interest. *Food & Beverage Marketing*. Nov. p. 12, 60.
• ***Summary:*** Soyfoods included in the Kikkoman instant soup mix line are Osuimono (Japanese Clear Broth), Aka Miso Soup (Soybean Paste Soup–red), Shiro Miso Soup (Soybean Paste Soup–white), Tofu Miso Soup, and Wakame Soup (Seaweed Soup, a color photo of which is shown). Each packet contains 3-4 individual servings and retails for $1.19 to $1.39.

6860. **Product Name:** Tofu-Turkey, Traditional Stuffing, Pumpkin-Tofu Pie.
Manufacturer's Name: Tofu Shop Delicatessen (The).
Manufacturer's Address: Arcata, California. Phone: 822-7490.
Date of Introduction: 1986. November.
Ingredients: Tofu (soybeans, water, nigari). Stuffing: Wholewheat seasoned croutons, parsley, celery, onions, mushrooms, carrots, tofu, miso, okara, soy margarine, tamari, sage, paprika, basil. Basting: Tamari, soy margarine, garlic, onions, sage.
New Product–Documentation: Leaflet (28 cm, single sided) sent by Matthew Schmit. 1986. Handwritten, with an illustration of The Tofu Shop, on pillars and with a tree growing overhead, at the edge of the ocean. "Tofu-Turkey:

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Deli 5 lb. 'birds' made from the freshest tofu, fully stuffed, basted, and baked. Tastes like the real thing and the leftovers are delicious. No animal products. Price–$12.95, with $5.00 non-refundable deposit. Pre-order.

"Traditional stuffing. All natural with whole-wheat croutons, mushrooms, tofu trimmings and select vegies and spices. Price–$1.75 / qt. Pre-order.

"Pumpkin tofu pie. Large 9" pie serves eight. A delicious dessert with whole wheat crust, free of dairy and eggs. Price–$5.75. Pre-order.

Ordering & pick-ups: Order deadline: Mon. Nov. 19. All pick-ups: Wed. Nov. 21.

"This year, Save the bird & eat it, too!"

See similar, but more professional, leaflets from 1987, 1988, 1989, and 1990.

6861. **Product Name:** Seitan.
Manufacturer's Name: Traditional Foods Cooperative
Manufacturer's Address: Route 1, Gays Mills, WI 54631. Phone: 608-735-4711.
Date of Introduction: 1986, November.
Ingredients: High-protein wheat flour, water, tamari soy sauce, and ginger.
Wt/Vol., Packaging, Price: 5 lb bulk bag in a box, or 10 oz round plastic deli tub.
How Stored: Refrigerated.
New Product–Documentation: Talk with Crick Haltom 1991 Nov. 23. In about Feb. 1991 he lost 20-25% of his seitan sales to a company [Traditional Foods] in Wisconsin that started out making tempeh, then started making seitan. The tempeh company, a cooperative, had a close, strong connection with North Farm, a cooperatively owned distributor in Madison; North Farm distributed Crick's seitan in the area. The people who made the tempeh and seitan were members of the cooperative, so North Farm dropped Crick's seitan and took on the seitan made in Madison. Most of Crick's seitan in that area was sold to one account, Blind Faith, a large vegetarian restaurant in north Chicago. Crick never saw any of the seitan or tempeh made in Wisconsin. Phone number of North Farm Cooperative: 608-241-2667.

Talk with Liz Coleman of Traditional Foods, 1991, Nov. 25. This company was started as a home business by Bob Mandel and Cindy Wiar. Bob Ribbens has been with the cooperative since it started. They now seitan and miso. Mary Ruth is the seitan production manager and a member of the cooperative. The company is now located in a bakery at P.O. Box 92 (Corner of Grove and North Railroad Streets), Gays Mills, WI 54631. Phone: 608-735-4711.

Talk with Mary Ruth, seitan maker at Traditional Foods, 1991, Nov. 25. The people who started the business named Traditional Foods, Bob and Cindy, started making and selling tempeh and tofu out of their home (located just outside of Gays Mills) in about 1984. They only sold the foods through their local co-op, The Kickapoo Exchange, in the little rural town of Gays Mills. In April 1989 Traditional Foods was formally incorporated into a cooperative (a legal form of corporation in Wisconsin) with the same name. Bob and Cindy put up a sign at the local co-op (where Cindy was manager) inviting interested people to a meeting; a group of co-op members formed and began to have meetings. New people joined the group and new money was raised. Bob and Cindy became members of the cooperative (they did not sell any of their assets to the cooperative). Then, in Sept. 1989, the group found and bought a local commercial bakery named Wheat Heart Bakery, and moved the business out of Bob and Cindy's home into the bakery. The bakery contained some machinery that could be used for making seitan. Before this time, tempeh and tofu had been discontinued. Bob continued to work at the co-op one day a week making koji. They now make just one seitan product, frozen in a 10-ounce plastic container. Production is now about 240 lb/month (full capacity for their present equipment), but they have just gotten a grant for new equipment and hope to expand to 300 lb/month.

It is a struggle to make the business succeed. North Farm Cooperative is the major distributor for their little co-op in Gays Mills, which is located several hours from Madison, Wisconsin, the headquarters of North Farm. All members of Traditional Foods are members of the local co-op, which is a member of North Farm cooperative system. Traditional Foods also buys some its raw materials from North Farm. The company is now located in a bakery at P.O. Box 92 (Corner of Grove and North Railroad Streets), Gays Mills, WI 54631. Phone: 608-735-4711.

Talk with Cindy Wiar, 1991 Nov. 25 and 28, then 1992, Jan. 12. She and Bob started in about April 1984 making tofu at their home located on Route 1 outside of Gays Mills. They didn't have a phone, and they had no business name until the fall of 1986, when they started making tempeh and seitan. At that time they started calling their business "Traditional Foods" but it was not official or incorporated. Bob learned how to make seitan from cooking classes given by Cornellia Aihara, and Cindy learned from macrobiotic cookbooks. They started to make seitan for themselves and friends starting in about 1984 but they did not start to sell it until the fall of 1986, shortly after they started to sell tempeh. They produced only a small amount of seitan and sold it intermittently at one co-op in Madison, Wisconsin. Since they were already delivering their tempeh to this co-op, they figured they might as well also take in seitan. Seitan chunks were sold (without liquid) in a small heat-sealed plastic bag, inside another heat sealed plastic bag. They phased out tofu and tempeh in the summer of 1989, after the new cooperative had been formed, because of their very low profit margins and time pressures to make the more profitable seitan and miso–which were being sold to warehouses and larger places.

Cindy is no longer associated with Traditional Foods.

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Bob works there 1 day a week making koji. After Bob passes on his knowledge of making koji, he plans to leave too. He now works the rest of the time on other people's farms. It was their dream to form a cooperative making these foods, but it didn't work out. The quality of the foods declined and the other members of the cooperative often just wanted a job, rather wanting to be owners of the business. There were endless problems and meetings. Cindy and Bob were put in a position of being the bosses, which they didn't want to be. By the summer of 1991 they realized they wanted to get out–but it still hurts.

Talk with Cheryl Coleman, one of the seitan makers at Traditional Foods, who lives in Gays Mills. 1992 Jan. 10. The company makes four 20-lb batches of seitan a day, 3 days a week, or 240 lb/week of seitan. The seitan is made entirely by hand and is the money maker for the business. They sell it in a 5-lb bulk bag inside a box, or in a 10 oz deli tub. The seitan is formed into small balls or buns by hand, pressed pretty tightly to expel the air, then cooked in a tamari and ginger broth.

Talk with Bob Mandel. 1992 Jan. 11. In the fall of 1986 he and Cindy started to make and sell seitan and tempeh from their home in Gays Mills. They also sold a little tempeh and seitan in Madison, which is a college town with a lot of health food stores. In Dec. 1988 there was meeting called to establish a co-op. In April 1989 they incorporated as a co-operative. In Aug. 1989 they purchased a commercial bakery. The original plan was to start making tempeh (to get initial cash flow) in the new building, and to develop a line of miso products. The first misos that were later sold started to be made in the fall of 1989. But the person who was supposed to make the tempeh was never able to–so they found themselves in a bind. Therefore in about Feb 1990 they started to make seitan again. Real sales of the mellow miso and natto began in early 1990. To get things started, Traditional Foods sold their products to the co-ops in Madison. The co-ops asked North Farm Co-op (a natural foods wholesaler and distributor) to starting distributing Traditional Foods products. North Farm became Traditional Foods' first distributor in Feb. 1990–distributing to co-ops, other retail stores, and buying clubs. Soon Blooming Prairie was also distributing Traditional Foods' products, especially west of the Mississippi to buying clubs in Feb. 1990. Today the company makes seitan (packaged and in bulk) and 3 types of miso.

Crick Haltom and Great Lakes Grainfoods went out of business because of Blind Faith, a big restaurant in Chicago, not because of North Farm Co-op. Blind Faith features seitan on their menu and they use a lot of it. Blind Faith bought Crick's seitan through Rainbow, a non-co-op distributor is Chicago. But Blind Faith wanted to use Traditional Foods' seitan so Rainbow decided to distribute both brands. At that point Crick decided to stop making seitan.

Talk with Bob Ribbens, owner of Earth Fire Products Co. (formerly Traditional Foods Cooperative). 1995 Nov. 1. Bob thinks that the date of Nov. 1986 is too early for seitan, he thinks the introduction date should be 1989. He never saw tempeh on sale in the community before 1989. In 1989 they decided to stop making tofu and tempeh commercially, and to switch to making seitan and miso.

6862. Hughes Markets. 1986. Merry Christmas! (Ad). *Los Angeles Times*. Dec. 21. p. I20-21.
• ***Summary:*** The section titled "Foods of the Orient holiday specials" includes: Kikkoman soy sauce, gallon can–$4.99. Hinoichi age 1.5 oz pg. 79¢. Misuzu Koya Dofu 3.5 oz. box Wheat cake [sic, Dried frozen tofu]–$1.55. Shirakiku kuro mame, Black [soy] beans–85¢.

Also includes: Frozen Umeya mochi. Fresh gobo. Shirakiku bamboo tips. Ozeki sake. Kokuho rice. Miyako kizami shoga–Sliced pickled ginger. Miyako shiitake–Dried mushrooms Kezuka kampyo [kanpyo]–Dried gourd strip Shehiro kombu maki–Rolled kelp [konbu].

6863. Belleme, Jan. 1986. The three flavors of Japanese cuisine: Dashi, shoyu, and mirin are the keys to this ancient culinary tradition. *East West*. Dec. p. 14, 16-21.
• ***Summary:*** With recipes.

6864. Gauger & Silva, Inc. 1986. San-J International (News release). 129 Hyde St., San Francisco, CA 94102. 2 p. Dec.
• ***Summary:*** San-J, the world's largest brewer of tamari, is implementing a comprehensive new marketing plan under the direction of John Perelman, Marketing Director and National Sales Manager. The products have a new image and look. Natural Foods Merchandiser awarded San-J a gold medal this year for their design. The new packaging is being supported by print advertising, shelf talkers, carton cards, and hangtags. The company will also be making shoyu in America, and introducing Szechuan Sauce. Address: San Francisco, California.

6865. Haytowitz, David B.; Matthews, Ruth H. 1986. Composition of foods: Legumes and legume products: Raw, processed, prepared. *USDA Human Nutrition Information Service, Agriculture Handbook* No. 8-16. 156 p. Dec. See p. 126-152. By Nutrition Monitoring Division. [29 ref]
• ***Summary:*** Data are presented for 133 legumes and legume products. Of these, only 53 were included in *USDA Agriculture Handbook* No. 8, published in 1963. The following soy-based foods are included: Simulated meat products (bacon, meat extender, and sausage), raw soybeans, cooked boiled soybeans, roasted soybeans, dry-roasted soybeans, soybean products: miso, natto, tempeh, full-fat soy flour (raw, and roasted), defatted soy flour, low-fat soy flour, defatted raw soy meal, fluid soy milk, soy protein concentrate, soy protein isolate, soy sauce (shoyu, tamari, and HVP), raw tofu (firm {p. 147}, regular, dried-frozen/

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koyadofu, and fried) [Note 1. Tofu is called "tofu" and at "Soybean curd" it says, see "tofu." Note 2. Footnote 2 states that the calcium content of tofu curded with calcium sulfate is 683 mg/100 gm, compared with 205 mg/100 gm for tofu curded with nigari. As of May 1997 Soyfoods Center believes that both these values are far too high, the two figures should be about 159 mg/100 gm (range 128-168) and 45 mg/100 gm respectively], okara, salted and fermented tofu (fuyu).

For each food the following information and number of values are given. Vertically: Proximate (7 values), Minerals (9), Vitamins (9), Lipids (Fatty Acids [Saturated (9), Monounsaturated (5), Polyunsaturated (7)], Cholesterol, Phytosterols), Amino acids (18). Horizontally: Amount in 100 gm edible portion (mean, standard error, number of samples), amount in edible portion of common measures of food (e.g. ½ cup or 1 cup), amount in edible portion of 1 lb of food as purchased.

Minerals include calcium, iron, magnesium, phosphorous, potassium, sodium, zinc, copper, and manganese (not aluminum).

Vitamins include ascorbic acid, thiamin, riboflavin, niacin, pantothenic acid, vitamin B-6, folacin, vitamin B-12, vitamin A.

Amino acids include tryptophan, threonine, isoleucine, leucine, lysine, methionine, cystine, phenylalanine, tyrosine, valine, arginine, histidine, alanine, aspartic acid, glutamic acid, glycine, proline, and serine.

For Adzuki beans (raw, cooked boiled, canned sweetened, and Yokan {yôkan–sugar-sweetened confection}) see p. 24-27.

For peanuts (all types raw, cooked boiled, oil-roasted, dry-roasted, Spanish raw, Spanish oil-roasted, Valencia raw, Valencia oil-roasted, Virginia raw, Valencia oil-roasted) see p. 109-18. For peanut butter (chunk style, smooth style), defatted peanut, and low-fat peanut flour, see p. 119-22. Address: USDA Human Nutrition Information Service.

6866. Kozaki, Michio. 1986. Monsuun Ajia no hakkô shokuhin [The fermented foods of monsoon Asia]. In: Kô Aida, et al., eds. 1986. Proceedings of the Asian Symposium on Non-Salted Soybean Fermentation. Japan: Takeshima Shigeru. 319 p. See p. 5-8. Held July 1985 at Tsukuba, Japan. [Jap]

• ***Summary:*** A general review, including many fermented foods not containing soy. Address: Dep. of Agriculture, Tokyo Univ. of Agriculture.

6867. Yoshida, Shuji. 1986. Minzokugaku kara mita muen hakkô daizu to sono shûhen [The origin of non-salted fermented soybeans from the viewpoint of ethnology]. In: Kô Aida, et al., eds. 1986. Proceedings of the Asian Symposium on Non-Salted Soybean Fermentation. Japan: Takeshima Shigeru. 319 p. See p. 166-78. Held July 1985 at Tsukuba, Japan. English-language summary in Symposium Abstracts, p. 62-62. [20 ref. Jap]

• ***Summary:*** "Two of the earliest kinds of fermented soybeans were *shì* and *dòu-jiàng*. The former antedates the latter, because *shì* can be traced to the Han Dynasty (206 BC-A.D. 200), whereas *dòu-jiàng* does not emerge until the description in *Qimin Yaoshu* (A.D. 536-550). Good descriptions of *shì* and *dòu-jiàng* are given in *Qimin Yaoshu*. *Shì* is made as follows: A yellow mold is permitted to grow on boiled beans, which are then washed and wetted, after which they are fermented in a cellar for 10-12 days. *Shì* was eaten as a condiment.

"However, *shì* as a food would have appeared prior to *shì* as a condiment. *Sake* which was made from grain through mold fermentation, was originally not for drinking, but rather for eating. Such a primitive *Sake* is still used in Yünnán. I suppose that a primitive *shì* also was eaten, and that the place of origin of *shì* was South China, according to the description in *Bencao Gangmu* (*shì* was commonly made in South China), and *Bówùzhì* (*shì* was exotic).

"*Dòu-jiàng*, which may have been first mentioned in *Bencao Gangmu* (1596), was a simple mold bean and was technologically more primitive than *shì*, although the existence of *dòu-jiàng* or a similar substance cannot be traced in the literature before *Qimin Yaoshu*. It seems that the first product of fermented beans would be *dòu-jiàng*, or a similar substance, and that its making would have been influenced by *sake* production. Later, *shì* as a food would have appeared and then *shì* as a condiment was produced, as we see from the *Qimin Yaoshu*.

"On the other hand, *dòu-jiàng* was developed from *ròu-jiàng*, preserved meat... *Natto*, *kinema* and *tempeh* would be identified as a substance similar to *dòu-jiàng*, which was a primitive fermented soybean product. Boiled beans became *dòu-jiàng* if they were covered by *Imperata cylindrica* grass, *kinema* if covered by certain leaves, *tempeh* if covered by leaves of *Hibiscus tiliaceus* or banana leaves, and *natto* if covered by ricestraw.

"We know that various kinds of plants are used for making *sake* or mold bran. The species used varies by place. Fermented soybeans occur within the *sake*-making area and only at the margin of the distribution. That means several new fermented soybean products like *shì* and *dòu-jiàng* were made in the center of the fermented soybean distribution, and the area gradually expanded toward the margins. They were accepted in areas close to the center, but the most primitive forms would have remained only in the marginal places, where new ones were not accepted."

A large chart (p. 169) shows the relatives and development of fermented black soybeans (*shi*); it includes the names of various unsalted fermented soyfoods and soy condiments (with their geographical area in parentheses). Relatives (fermented soyfoods made from yellow soybeans) Akuni (Sema Naga, in the Himalayas in northeast India),

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kinema (Limbu, in eastern Nepal), pe-bout (Shan, in eastern Burma), itohiki natto (Japan), and tempeh (Indonesia). Stage 1. Itohiki natto became Chon Kujjiang [perhaps *chungkuk jang*, Korean-style natto] of the Zhanguo Warring States period (475-221 BC) in China. Stage 2A. Unsalted fermented black soybeans were originally used as a food, rather than as a seasoning. To these unsalted fermented black soybeans, koji was added to create homemade unsalted fermented black soybeans (*doushi*, of China). Stage 2B. Salt was added to the unsalted fermented black soybeans to make various salted foods (each with a firm texture like raisins): Daitokuji natto (Japan, with wheat flour added), *pe-ngapi* (upper Burma), and *seang* (Cambodia). Stage 3. Unsalted fermented black soybeans (*doushi*) developed into closely related danshi. Koji was added to danshi to make *rul-kre* (of Bhutan). Cooked soybeans were shaped into balls and fermented naturally to make miso-dama ("unsalted miso balls" [meju], Korea and Japan). Then salt was added to the miso-dama to make various seasonings (each with a consistency like applesauce or paste / miso): Korean soybean jang (*doen jang*), Korean soy sauce (*kan jang*), or soybean miso (*mamé miso*, Hatcho miso, Japan). Stage 4. Salt was added to unsalted fermented black soybeans (*shi*) to make salted fermented black soybeans, from which developed inyu (a fermented soy sauce made with black soy beans, in Taiwan), *inshi* (meaning unclear, of Taiwan), and taucho (*tauco*, of Indonesia). Stage 5. Koji was added to salted fermented black soybeans to make *shi* for food use, and *doushi* (of Sichuan, China). Stage 6. Flour was added to salted fermented black soybeans to make red pepper jang (*kochu jang*, Korea) and spicy fermented black soybeans (*doubanshi*, China).

Note: This chart may be easier to understand when viewed in chart form, however the logic and some of the products seem a bit unclear. It is also unclear which products are fermented with bacteria (like natto). Soyfoods Center has an English-language translation of this chart. Address: National Museum of Ethnology, Osaka (Kokuritsu Minzokugaku Hakubutsukan).

6868. Antarlina, Sri Satya, Kusbiantoro, Bram. 1986. Kajian teknologi pembuatan kecap dari kacang gude (Cajanus cajan L.) [Study on soysauce (kecap) technology from the pigeon pea (Cajanus cajan L.)]. *Penelitian Palawija* 1(1):37-42. [Ind]*
Address: Indonesia.

6869. **Product Name:** [Hydrolyzed Vegetable Protein {HVP}].
Manufacturer's Name: Champlain Industries Ltd.
Manufacturer's Address: 176 Principal Rd., Stanbridge Station, QUE, Canada. Main office: Mississauga, ONT, Canada.
Date of Introduction: 1986.
New Product–Documentation: Soya Bluebook. 1986. p. 89.

6870. **Product Name:** Full of Beans Soy Sauce.
Manufacturer's Name: Full of Beans Soyfoods.
Manufacturer's Address: 96-97 High St., Lewes, East Sussex, BN7 1XH, England.
Date of Introduction: 1986.
New Product–Documentation: Soya Bluebook. 1986. p. 105; 1987. p. 94. Another address: Castle Precincts, Castle Ditch Lane, Lewes.

6871. **Product Name:** Tofu Dill Salad Dressing.
Manufacturer's Name: Golden Soy Foods Inc.
Manufacturer's Address: P.O. Box 495, Athens, OH 45701.
Date of Introduction: 1986.
Ingredients: Tofu, soy oil, vinegar, shoyu, water, honey, dill, onion powder, black pepper, garlic powder.
Wt/Vol., Packaging, Price: 1 pint glass jar.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per tablespoon (17 gm): Calories 40, protein 1 gm, carbohydrates < 1 gm, fat 4 gm, sodium 135 mg.
New Product–Documentation: Label. 1987. 10 by 2.5 inches. Blue, green, yellow, and white. "Dairy and Cholesterol Free. Delicious Dip for Vegetables or Chips. All Natural. Low Sodium." News release. This was apparently the company's first product.

6872. **Product Name:** HVP, and Luxor (Hydrolyzed Vegetable Proteins).
Manufacturer's Name: Hercules Inc., PFW Div.
Manufacturer's Address: 33 Sprague Ave., Middletown, NY 10940. Other location: Harbor Beach, Michigan.
Date of Introduction: 1986.
New Product–Documentation: Soya Bluebook. 1986. p. 89. Note that this company is in the same town as Mandarin Soy Sauce Inc.

6873. Hosotani, K.; Mori, M. 1986. [Propionic acid contents in foods]. *Nippon Eiyo Shokuryo Gakkaishi* (*J. of the Japanese Society of Nutrition and Food Science*) 39(3):231-33. [6 ref. Jap; eng]*
• ***Summary:*** *Webster's Dictionary* defines propionic acid (a term first used in 1850) as "a liquid sharp-odored fatty acid $C_3H_6O_2$ found in milk and distillates of wood, coal, and petroleum." It is also produced as a metabolite of microorganisms. The propionic acid content of miso was 2-5 mg/kg and of soy sauce was 2.7-6.0 mg/kg. This compared with 5-9 mg/kg for dairy milk. Address: Dep. of Home Economics, Wakayama Univ., Wakayama 640, Japan.

6874. **Product Name:** [Tofu Burger, Tofu Felafel, and Tofu Schnitzel].
Manufacturer's Name: Jerusalem Tofu.

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Manufacturer's Address: Moshav Orah, Jerusalem 90880, Israel. Phone: 02-413-809
Date of Introduction: 1986.
New Product–Documentation: Talk with Susan Ergas. 1989 May 1. The products were introduced in the order shown above. The Tofu Schnitzel was made from frozen tofu, but it was discontinued because she couldn't get kosher soy sauce that satisfied the rabbi.

6875. **Product Name:** [Lima Tempeh in Shoyu].
Foreign Name: Lima Tempeh Shoyu.
Manufacturer's Name: Lima Foods (Marketer). Made from Tempeh made in Belgium by Jonathan.
Manufacturer's Address: Edgar Gevaertdreef 10, B-9830 Sint-Martens-Latem, Belgium.
Date of Introduction: 1986.
Ingredients: Tempeh-Shoyu: Organically grown soybeans, water, and tempeh culture-starter. Packed in water with shoyu and herbs.
Wt/Vol., Packaging, Price: 200 gm of product in a 340 gm glass jar.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Leaflet. 1986. Lima Natural Gourmet Recipes from Europe. Contains a color photo of all products. Label reads: "Tempeh in soy sauce with . . ." Eden Foods catalog. 1987. Nov. p. 18. "Lima tempeh is a Flemish country version of the traditional Indonesian delicacy."

Lima catalogue, price list, and color product brochure. 1989. Shows a color photo of a 200 gm jar labeled Tempeh.

Label sent by Anthony Marrese. 1990 March 22. 7.75 by 2.25 inches. Light green, orange brown, and dark brown on beige. CINAB organic certification symbol. Nature et Progres organic certification symbol. "Fermentation of organically grown soybeans. Use: Baked or fried, with vegetables, whole rice, spaghetti, in soup or on pizza. The black spots are due to the natural fermentation."

6876. **Product Name:** [Lima Tempeh].
Foreign Name: Lima Tempeh Nature.
Manufacturer's Name: Lima Foods (Marketer). Made in Belgium by Jonathan.
Manufacturer's Address: Edgar Gevaertdreef 10, B-9830 Sint-Martens-Latem, Belgium.
Date of Introduction: 1986.
Ingredients: Organically grown soybeans, and tempeh culture-starter.
Wt/Vol., Packaging, Price: 200 gm / 7 oz. glass jar.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Leaflet. 1986. Lima Natural Gourmet Recipes from Europe. Contains a color photo of all products. Label reads: "Tempeh in soy sauce with ..." Eden Foods catalog. 1987. Nov. p. 18. "Lima tempeh is a Flemish country version of the traditional Indonesian delicacy."

Lima catalogue, price list, and color product brochure. 1989. Shows a color photo of a 200 gm jar labeled Tempeh.

6877. **Product Name:** Soysage. A Spicy Vegetarian Soy Pate.
Manufacturer's Name: Local Tofu.
Manufacturer's Address: 307 Route 59, West Nyack, NY 10994. Phone: 914-358-2309.
Date of Introduction: 1986.
Ingredients: Soy pulp and soymilk from farm verified organically grown soybeans, whole cornmeal, whole wheat flour, nutritional yeast, wheat germ, safflower oil, tamari sauce, herbs and spices.
Wt/Vol., Packaging, Price: 16 oz.
How Stored: Refrigerated.
New Product–Documentation: Talk with Sam Weinreb 1987 Dec. 29. Label. 1987. 3.25 inch diameter. Orange or red and blue. "Mold into non-meat balls, scramble with eggs, slice-heat-eat, pre-cooked, refrigerate or freeze, spread on bread, use in lasagna, sprinkle on pizza." Sam learned this from a Scotch tofu maker, Sian McLean, in Nova Scotia, Canada.

6878. *Marches Exterieurs de Divers Produits Alimentaires.* 1986. Grande Bretagne: Le marché des sauces en bocaux en 1985 [Great Britain: The market for bottled sauces in 1985]. No. 8-9. p. 23-27. [Fre]*
• ***Summary:*** A study of the rate of consumption of various table sauces (including ketchup, brown sauce, and soy sauce), condiment sauces (mustard), salad dressings, and sweetened sauces.

6879. **Product Name:** Soy Sauce.
Manufacturer's Name: Mata Food Industries Ltd. Subsidiary of Koor Foods Ltd.
Manufacturer's Address: P.O. Box 160, Hadera, Israel.
Date of Introduction: 1986.
New Product–Documentation: Soya Bluebook. 1986. p. 105.

6880. **Product Name:** [Marinated Tempeh Cutlets].
Foreign Name: Tempeh Bratling Mariniert.
Manufacturer's Name: Natuerliche Lebensmittel. Paul Stuart Zacharowicz.
Manufacturer's Address: Staudgasse 70, A-1180 Vienna, Austria. Phone: 0222/48 50 03.
Date of Introduction: 1986.
Ingredients: Fried (gebratenes) tempeh marinated in soy sauce, spices/seasonings.
How Stored: Refrigerated.
New Product–Documentation: Label. 1987. 5.5 x 4 inches. Black, gold, and red on white card stock. "Keep refrigerated. Can also be frozen. Tempeh cutlets are ready to serve (tellerfertig), cold as a snack or warm as a main course. Contains no chemical colorings or preservatives."

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6881 **Product Name:** [Marinated Soy Tempeh]
Foreign Name: Soja Tempeh Mariniert
Manufacturer's Name: Natuerliche Lebensmittel. Paul Stuart Zacharowicz
Manufacturer's Address: Staudgasse 70, A-1180 Vienna, Austria. Phone: 0222/48 50 03.
Date of Introduction: 1986.
Ingredients: Tempeh marinated in soy sauce
How Stored: Refrigerated.
New Product–Documentation: Label. 1987. 5.5 x 4 inches. Black, gold, and red on white card stock. "Keep refrigerated. Can also be frozen. Marinated tempeh is well suited for frying, baking, steaming, smoking, or grilling. Tastes excellent with vegetable and grains, or cold on bread. Contains no chemical colorings or preservatives."

6882 **Product Name:** Noble Bean Tempeh Chili
Manufacturer's Name: North Coast Tempeh Co.
Manufacturer's Address: 18320 Euclid Ave., Cleveland, OH 44112
Date of Introduction: 1986.
Ingredients: Tempeh, tomato sauce, kidney beans, water, tomatoes, whole wheat flour, onion, green pepper, tamari, sesame oil, parsley, garlic, spices
Wt/Vol., Packaging, Price: 16 oz.
How Stored: Refrigerated
New Product–Documentation: Label. 1987. 4.25 inches diameter, self adhesive. Blue, green, yellow, and red on white, with logo of Jack and the Beanstalk. "No Cholesterol." Jeff Narten. 1987. "History of North Coast Tempeh and its Products." 4 p. Dec. 7.

6883 **Product Name:** Noble Bean Swedish Tempeh Balls
Manufacturer's Name: North Coast Tempeh Co.
Manufacturer's Address: 18320 Euclid Ave., Cleveland, OH 44112
Date of Introduction: 1986.
Ingredients: Tempeh, whole wheat flour, vegetable soup stock, soymilk, corn oil, onion, tamari, parsley, spices
Wt/Vol., Packaging, Price: 16 oz.
New Product–Documentation: Label. 1987. Ink stamp. Jeff Narten. 1987. "History of North Coast Tempeh and its Products." 4 p. Dec. 7.

6884 **Product Name:** Soy Sauces: Yamaki Organic Nama Shoyu (aged 4 years and unpasteurized), Yamaki Organic Two Year Shoyu, Lima Natural Shoyu and Tamari, Suyamo Sweet Shoyu and Tamari, Koji (Brown Rice, White Rice, or Barley)
Manufacturer's Name: Ohsawa America (Importer). Made in Japan
Manufacturer's Address: P.O. Box 3608, Chico, CA 95927.
Date of Introduction: 1986.
New Product–Documentation: Ohsawa America Macrobiotic Foods Catalog. 1986. Ad in East West. 1987. April. p. 27. "Ohsawa-Japan & Ohsawa America–Guided by a Philosophy for Life. Ohsawa America imported products are provided by our companion company, Ohsawa-Japan. Founded more than 35 years ago by George and Lima Ohsawa..." East West. 1988. Oct. Nama Shoyu is called "The best soy sauce." Full page ad in East West. 1988. Nov. p. 64, and Dec. p. 1. "Nama Shoyu Organic Soy Sauce. Fresh. Unpasteurized. Organic. Aged an extraordinary four years by our unique double brewing process. 17% less sodium than common soy sauces. Nama Shoyu is preferred over "Low Sodium" soy sauces which contain preservatives, or use ion-exchange to remove salt."

6885. **Product Name:** Yamaki Organic Tamari Pickles.
Manufacturer's Name: Ohsawa America (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 3608, Chico, CA 95927
Date of Introduction: 1986.
New Product–Documentation: Ohsawa America Macrobiotic Foods Catalog. 1986. Ad in East West. 1987. April. p. 27. "Ohsawa-Japan & Ohsawa America–Guided by a Philosophy for Life. Ohsawa America imported products are provided by our companion company, Ohsawa-Japan. Founded more than 35 years ago by George and Lima Ohsawa..."

6886. **Product Name:** The Soy Deli Baked Savory Tofu. Renamed Savory Baked Tofu by 1999.
Manufacturer's Name: Quong Hop & Co.
Manufacturer's Address: 161 Beacon St., South San Francisco, CA 94080. Phone: 415-873-4444.
Date of Introduction: 1986.
Ingredients: Water, organic soybeans (grown in accordance with California Health and Safety Code 26569-11), tamari soy sauce (water, soybeans, wheat, salt), spices, magnesium chloride (nigari, a natural mineral).
Wt/Vol., Packaging, Price: 7 oz vacuum packed.
How Stored: Refrigerated.
Nutrition: Per 3.5 oz : Calories 193, protein 23 gm, carbohydrate 5 gm, fat 9 gm.
New Product–Documentation: Leaflet. 1986. 8½ by 11 inches, color. "There is Quality & Variety after 80!" Shows all products. Label. 1986? 5 by 3 inches. Self adhesive. Brown and orange on beige. The Soy Deli brand. "High in complete protein. No cholesterol."

Product (Savory Baked Tofu) with Label purchased at Safeway supermarket in Lafayette, California. 2000. April 16. The 6 oz vacuum pack retails for $3.49. Label (copyright 1999) is orange, green, and black on white. Front panel: "Hand crafted by tofumasters since 1906. All

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natural. Risk of Heart Disease may be reduced with a daily diet low in saturated fat and cholesterol, containing 25 gm of soy protein. This product contains 25 gm of soy protein per serving. Made with organic soybeans." Top of back panel: "50 mg of isoflavones per serving." Main ingredients: Nigari tofu (Water, whole organic soybeans*, magnesium chloride**), tamari (water, soybeans, salt, alcohol, wheat), spices, granulated garlic, granulated onion. * = Grown and processed in accordance with the California Organic Foods Act of 1990. ** Nigari, a natural component of sea water, primarily magnesium chloride.

6887. **Product Name:** The Soy Deli Baked Five-Spice Tofu.
Manufacturer's Name: Quong Hop & Co.
Manufacturer's Address: 161 Beacon St., South San Francisco, CA 94080. Phone: 415-873-4444.
Date of Introduction: 1986.
Ingredients: Water, organic soybeans, tamari soy sauce (water, soybeans, wheat, salt), spices, magnesium chloride (nigari, a natural mineral).
Wt/Vol., Packaging, Price: 7 oz, vacuum packed.
How Stored: Refrigerated.
Nutrition: Per 3.5 oz.: Calories 193, protein 23 gm, carbohydrate 5 gm, fat 9 gm.
New Product–Documentation: Leaflet. 1986. 8½ by 11 inches, color. "There is Quality & Variety after 80!" Shows all products. Label. 1986? 5 by 3 inches. Self adhesive. Brown and dark blue on beige. The Soy Deli brand. "High in complete protein. No cholesterol."

Product with Label purchased at Open Sesame in Lafayette, California. 1995. March 11. Now 6 oz. "Low fat. Cholesterol free. High in complete protein."

6888. Sasahara, H.; Ando, T. 1986. [Studies on lactic acid bacteria in soy sauce. I. Screening of lactic acid bacteria in soy sauce mash]. *Kagawa Prefectural Fermentation and Food Experiment Station, Annual Report* No. 79, p. 1-6. [18 ref. Jap]*
• ***Summary:*** Pediococci were among the lactic acid bacteria screened. Address: Kagawa Prefectural Fermentation and Food Experiment Station, Kagawa, Japan.

6889. **Product Name:** Seitan Wheat Meat Pieces.
Manufacturer's Name: Sheffield Seitan.
Manufacturer's Address: South Wheelock, Vermont.
Date of Introduction: 1986.
Ingredients: Seitan (wheat gluten cooked in a broth of soy sauce, garlic powder, and cayenne).
Wt/Vol., Packaging, Price: 1 lb+.
How Stored: Frozen.
New Product–Documentation: Talk with Leo Denby, owner of Sheffield Seitan. 1998. Feb. 3. These are 3-ounce patties which have been cut into finger strips. Also includes scraps.

6890. **Product Name:** Bar-B-Q Tempeh Burgers.
Manufacturer's Name: Southwest Soy Foods.
Manufacturer's Address: 2889 Trades West Rd., Santa Fe, NM 87501. Phone: 505-471-8979.
Date of Introduction: 1986.
Ingredients: Tempeh (pulp [okara] from organically grown soybeans, rolled oats, bulghur, sunflower seeds, vinegar, Rhizopus oligosporus culture), water, tomato paste, molasses, tamari (water, soybeans, salt), vinegar, safflower oil, herbs, spices, natural smoke flavor.
Wt/Vol., Packaging, Price: 10 oz.
How Stored: Frozen or refrigerated.
New Product–Documentation: Talk with Richard Jennings of Southwest Soyfoods. 1990. Aug. 2. This was an unfried, square tempeh burger, launched in about 1986, and marinated in a barbecue sauce. The tempeh was fermented in trays. Richard made a roll with many spikes protruding (sort of like a lawn aerator), which he would roll across the tempeh to perforate it in many places to facilitate absorption of the thick marinade. After being marinated, it was baked, cut, packaged, and frozen. It was introduced at the same time as Sloppy Mo; the broken pieces and scrap tempeh from the burgers were used in the Sloppy Mo/Joe.

6891. Sung, S.K.; Lee, C.M.; Young, J.D.; Chen, C.N. 1986. High levels of tyramine in some Chinese foodstuffs. *Human Psychopharmacology* 1(2):103-07. [17 ref]*
• ***Summary:*** Tyramine was assayed by high pressure liquid chromatography (HPLC) in 9 common Chinese foods including soy sauce, fermented soybean, fermented bean curd, red fermented bean curd, chili soybean paste, soybean paste, and preserved vegetables. Contents were highest in fermented soybean and fermented bean curd. Results are discussed in terms of hypertensive risk for patients taking monoamine oxidase inhibitors.

Note: *Webster's Dictionary* defines tyramine (derived from tyrosine + amine) as "a phenolic amine $C_8H_{11}NO$ that has a sympathomimetic action and is derived from tyrosine." It defines sympathomimetic as "simulating sympathetic nervous action in physiological effect." Address: Dep. of Psychiatry, Chinese Univ. of Hong Kong, Shatin, N.T., Hong Kong.

6892. Takahashi, T.; Ikawa, F.; Shiga, I. 1986. [Studies on preservation of low salt pickles. III. Reduction of severity of heat sterilization as affecting shoyu pickles]. *Aichi-ken Shokuhin Kogyo Shikenjo Nenpo* (*Annual Reports of the Food Research Institute, Aichi Prefecture*) No. 27, p. 74-77. [Jap]*
Address: Food Research Inst. of Aichi Prefecture Government, Aichi, Japan.

6893. **Product Name:** [Tofu Curry Pâté, Tamari Pâté, and

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Walnut/Prune Pâté, Smoked Tofu].
Foreign Name: Karry Paté, Tamari Paté, Valnoed/Sveske Paté.
Manufacturer's Name: Thomas Tempeh.
Manufacturer's Address: Soendergade 2, DK-4340 Toelloese, Denmark.
Date of Introduction: 1986.
New Product–Documentation: Talk with Thomas Andersen, founder of Thomas Tempeh. 1990 May 24. On 1 Jan. 1986 he moved the business to Soendergade 2 in the city of Toelloese, Denmark. The business was still named Thomas Tempeh. He quickly added Tofu Pâtés and Smoked Tofu to his product line.

6894. **Product Name:** Westbrae Natural Shoyu Traditional Soy Sauce.
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan by Sendai Miso-Shoyu.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1986.
Ingredients: Water, whole soybeans, whole wheat, salt.
Wt/Vol., Packaging, Price: 16 fluid oz (437 ml), 32 fluid oz (.95 L).
How Stored: Store in a cool, dark place.
New Product–Documentation: Label. 1986, undated. 8 by 3.5 inches. 10 by 4.5 inches (32 fl oz). Paper. Orange, blue, brown, yellow, green, white. "Formerly Known as 'Tamari.' The words 'tamari,' 'shoyu' (sho-yu), and 'soy sauce' are often used to describe the same product." Gives a brief history of tamari, shoyu, and modern soy sauce.

6895. **Product Name:** Westbrae Natural Organic Shoyu Naturally Brewed Soy Sauce.
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan by Sendai Miso-Shoyu.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1986.
Ingredients: Well water, organically grown whole soybeans, organically grown whole-wheat, sea salt.
Wt/Vol., Packaging, Price: 16 fluid oz (1 pint), 473 ml.
How Stored: Shelf stable.
New Product–Documentation: Label. 1986, undated. 8 by 3.5 inches. Paper. Black, gold, orange, green, yellow, white. Japanese village, Mt. Fuji in background. "Westbrae Natural Organic Shoyu is produced exclusively by a religious community in Japan, who apply the strictest standards of quality to every aspect of its manufacture. Aged for 2 summers in cedar wood barrels, it literally is hand-made in very limited quantities, according to the most traditional methods, using pure well water and sun-evaporated sea salt.."

6896. **Product Name:** Westbrae Natural Tofu Sauce.
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1986.
Ingredients: Johsen Shoyu (water, soybeans, wheat, salt), malt syrup (corn, sprouted barley, water), cider vinegar, honey, sesame oil, natural gum stabilizers (tragacanth, xanthan), ginger, cayenne.
Wt/Vol., Packaging, Price: 12.7 fluid oz (375 ml).
How Stored: Shelf stable.
New Product–Documentation: Label. 1986, undated. 5 by 3.5 inches. Paper. Brown, tan, blue, green, black and white. Mt. Fuji logo illustration. Meant to be used as a seasoning for tofu.

6897. **Product Name:** Westbrae Natural Traditional Tamari



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Soy Sauce.
Manufacturer's Name: Westbrae Natural Foods (Importer) Made in Japan
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1986.
Ingredients: Whole soybeans (57%), water (28%), sea salt (12%), mirin (2%), koji (cultured barley flour) less than one percent.
Wt/Vol., Packaging, Price: 5 fluid oz (147 ml), 16 fluid oz (1 pint, 437 ml), or 32 fluid oz (1 quart, 946 ml). Glass bottles.
How Stored: Shelf stable.
Nutrition: Per 1 tbs.: Calories 18, protein 2 gm, carbohydrate 2 gm, fat 0 gm.
New Product–Documentation: Label. 1986, undated. 6.75 by 3.75 inches (5 fl oz), 8 by 3.5 inches (16 fl oz), 10 by 4.5 inches (32 fl oz). Paper. Blue, green, red, tan, white. Mt. Fuji logo illustration. "Wheat Free. Deep, Rich Flavor." Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.

6898. **Product Name:** Westbrae Natural Organic Tamari (Wheat Free Soy Sauce with Mirin).
Manufacturer's Name: Westbrae Natural Foods (Importer) Made in Japan.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1986.
Ingredients: Organic tamari (organically grown whole soybeans, water, sea salt), mirin (cultured rice, water).
Wt/Vol., Packaging, Price: 5 fluid oz (147 ml).
How Stored: Shelf stable.
New Product–Documentation: Label. 1986, undated. 6.5 by 3.5 inches. Paper. Gold, yellow, blue, green, orange, white. Mt. Fuji logo illustration. "For Sushi. Deeper, darker... richer taste than regular soy sauce. Perfect for dipping sushi... bring it to your favorite sushi bar. Wheat free... aged in cedar kegs for over 1 year."

6899. **Product Name:** Teriyaki Baked Tofu (Organic).
Manufacturer's Name: Wildwood Natural Foods.
Manufacturer's Address: 31 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919.
Date of Introduction: 1986.
Ingredients: 1998: Wildwood Tofu (filtered water, organic soybeans grown in accordance with the California Organic Foods Act of 1990, nigari {magnesium chloride, a natural firming agent}), soy sauce, rice vinegar, tomato paste, rice wine, fruitrim (fruit juice, natural grain dextrins), brown rice syrup, garlic ginger, garlic powder, safflower oil, ginger powder, arrowroot.
Wt/Vol., Packaging, Price: 6.0 oz. Retails for $1.99.
How Stored: Refrigerated.
New Product–Documentation: Wildwood Natural Foods price list. 1995 Jan. 9.

Original Label sent by Billy Bramblett. 1998, July. He says this product was introduced in 1989.

6900. Bickerton, Leonard Marshall. 1986. Eighteenth century English drinking glasses: An illustrated guide. 2nd rev. ed. Woodbridge, Suffolk, England: Antique Collectors' Club. 431 p. Illust. [883* ref]
• ***Summary:*** Contains hundreds of beautiful photographs, and excellent history of drinking glasses, plus a superb bibliography and index. The antique collectors club was founded in 1966 and quickly grew to a 5 figure membership



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worldwide. It publishes *Antique Collecting* magazine. Website: www.antiquecc.com. Address: [England]

6901. Bray, Francesca. 1986. The rice economies: technology and development in Asian societies. Oxford, UK; New York, NY: Blackwell. xvii + 254 p. Illust. Maps. Index. 24 cm. Reissued in 1994 by University of California Press. [372* ref]

• ***Summary:*** The methodology of European history has been profoundly influenced by the growth of capitalism, but it is doubtful if this same methodology can be applied to other parts of the world.

Rice is the staple food of almost half the world's population, second only to wheat in importance.

Traditionally the poor of Asia garnished their rice with soy products, fish sauce and vegetables, to make a healthy but inexpensive diet (p. 13).

Rice fields generally planted with a second crop (such as soybeans) generally give higher yields each season that those which are merely single-cropped–thanks to the additional added nitrogen or additional plowing. In Northern Thailand, for example, landowners will often lend their rice fields in the dry season to landless peasants to grow soybeans of groundnuts (p. 16).

"The cultivation of two crops of rice followed by third crop of maize, potatoes, soy, tobacco or vegetables is now widespread in Taiwan."

In 1977 in the People's Republic of China, 45% of the total food grain production was rice and 14% was wheat. "The total figure also includes coarse grains such as millets, sorghum and barley, soybeans, tubers and maize, some of which would be used as animal feed rather than directly for human consumption" (p. 218).

6902. Chang, Wonona W.; Chang, Irving B.; Kutscher, Austin H.; Kutscher, Lillian G. 1986. Chinese dessert, dim sum & snack cookbook. New York, NY: Sterling Publishing Co., Inc. 160 p. Illust. (color photos). Index. 26 cm.

• ***Summary:*** "Many of the dessert recipes in this book have been prized as family treasures for generations and are authentic; others have been adapted to the Chinese cuisine by the addition of oriental ingredients..." (p. 7).

The "Guide to ingredients" has interesting entries for "Bean curd or tofu (*dow foo*)" and "Bean filling, sweet (*Cantonese: dow sa*) (*Mandarin: do sa*)" ("Color: red {kidney beans [azuki]}, green {mung beans}. Available form: canned. When available: most commonly at Chinese New Year. Where purchased: Chinese bakery or grocery." p. 13), and for "Hoisin sauce (Red seasoning sauce) (*hoy sin joing*) (*hai hsien jiang*)" (p. 16).

Desserts: Doughnut slices with Chinese flavors (with "sweet bean paste" [probably *an*], made with azuki beans, p. 33). Glutinous (sweet) rice cake (with "1 lb. black bean paste (dow sa)," p. 33). Fried bean paste pancake (with "4 oz. bean paste," p. 40). Lychee peach tofu cooler (with "8 oz. tofu," p. 56). Soybean milk (homemade recipe with "1 cup soybeans," p. 58). Red bean paste ice cream (with "1 cup sweetened red bean paste" [azuki], p. 64). Lychee tofu custard (with "8 oz. tofu," p. 91). Strawberry tofu pudding (with "6 oz. chilled tofu," p. 91). Peach tofu custard (with "8 oz. tofu," p. 93). Mandarin oranges with tofu (with "6 oz. Chinese-style tofu," p. 93). Ginger sweet red bean dessert / spread (with "½ cup sweet bean paste" [azuki], p. 106). Orange tofu icing (with "12 oz. tofu," p. 107). Sweet red bean dessert sauce (with "½ cup sweetened red bean paste" [azuki], p. 110).

Dim sum and snacks: New Year dumplings with sweet black bean paste (with "½ cup sweet black bean paste (*dow sa*)," p. 113). Bean paste sesame balls (with "sweet black bean paste," p. 118). Dow sa won ton ("Prepare the same as Fried Won Tons {p. 139} except use *dow sa* (black bean paste) as a filling... Dow sa is available at Chinese bakery shops, p. 140).

About the authors (p. 146). Address: 1-2: Morristown, New Jersey; 3-4: Scarsdale, New York.

6903. Chiao, J.S. 1986. Modernization of traditional Chinese fermented foods and beverages. *Mycologia Memoir* No. 11, p. 37-53. Chap. 3. (C.W. Hesseltine and Hwa L. Wang, eds. Indigenous Fermented Food of Non-Western Origin. Berlin & Stuttgart: J. Cramer). [22 ref]

• ***Summary:*** Published in 1981 in *Advances in Biotechnology* 2:511-16. Contents: Introduction. Varieties of traditional Chinese fermented foods and beverages: Soy products include: Soy sauce (4-6 month fermentation), soy sauce by Gun-tou method (no wheat is used, 1 year fermentation, new batch concentrated for 1-2 months under the sun), soy paste, sufu, red sufu (with qu = chu = Chinese-style koji added), tou-si (made from black soybeans and salt, fermented with *Aspergillus oryzae* for 10-12 days). There are also many white spirit fermentations. "Wine was made in China as far back as 4,000 years, and white spirits made their appearance in the 13th century. Li-shi-zheng of the Ming Dynasty gave a description of the distillation process in detail in his famous Ben-Chao-Gong-Mu. Nowadays the alcohol content ranges from 40-65%.

In 1970 the San-jia Starch Factory in I-Chang, Hupeh, used liquid proteinase for a new soy sauce process using the waste water from starch processing, thus simplifying the ordinary soy sauce process. But this product was inferior in color, taste, and flavor to regular soy sauce made by a solid substrate fermentation. In 1976 and 1979 the Experimental Plant of the Shanghai Grain and Oil Industry Co., by selecting mutant strains of *Aspergillus oryzae* having high proteinase potency, was able to get an improved soy sauce (though still not as flavorful as regular soy sauce) using the liquid proteinase process. A flowchart of this soy sauce is shown. Address: Dep. of Microbiology, Shanghai Inst. of Plant Physiology, Academia Sinica, Shanghai, China.

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6904. Colbin, Annemarie. 1986. Food and healing. New York, NY: Ballantine Books. 351 p. Foreword by Robert S. Mendelsohn, M.D. Index. 23 cm. [207* ref]
• ***Summary:*** A very interesting, wholistic look at food trips and philosophies–with a preference for macrobiotics. Discusses miso, natto, tempeh, and tofu. Pages 169-72 discuss beans, including soybeans. Beans are said to be contractive, acid-forming, warming, and a buildup food. "Folklore has it that appreciable quantities of soybeans and their products, especially tofu, can lower, or cool, sexual energy. Research done at the universities of Illinois and Kansas has shown that soybeans may interfere with the absorption of zinc. As zinc is one of the minerals most strongly associated with the healthy functioning of the sex glands, this bit of folk wisdom appears realistic."

Chapter 12, titled "Food as Medicine," discusses healing foods and tells how to prepare them, including miso soup (p. 253; contractive, alkalinizing, warming, breakdown). Miso soup is considered a good food to help cure the common cold, to neutralize the negative effects of excess sugar consumption, and to combat problems of inflammation of the digestive tract (ulcers, colitis, spastic colon, etc.); ulcers are problems of excess acidity.

Chapter 14, titled "The Effects of Food on Sex," notes that "Scientific studies have found that individual foodstuffs have an effect on sexuality via their chemical constituents... soybeans (including tofu) contain traces of antithyroid factors; as the thyroid regulates sexual desire, activity, and fertility, when consumed in large enough quantities these foods could possibly inhibit sexuality by lowering thyroid energy. Oriental folk rumor, which I've been unable to verify, has it that tofu 'cools the sex organs' and is used by monks for the specific purpose of aiding them in maintaining celibacy. In this light, it's interesting to note that the traditional Japanese diet, high in thyroid-depressing soybean products, also contains appreciable amounts of seaweeds, rich in thyroid-stimulating iodine."

In the Foreword, Dr. Mendelsohn writes: "Coming from a background of modern medicine, I, as well as hundreds of thousands of other M.D.s, was carefully educated in nutritional ignorance–indeed in disdain for food. The hospital 'dietician' was not–and is not even today–a teacher of physicians. The dietician's traditional purpose in life has always been to serve as a 'referral' for a patient who bothered the physician with too many questions about food. The very title of this book *Food and Healing* represents a joining of two concepts that most doctors regard as unrelated."

A photo (p. 351) shows Annemarie, who was born in Holland and brought up in Argentina on a European vegetarian diet. After her arrival in the United States in 1961, she was introduced to macrobiotics. She lives in New York City with her two daughters, and directs the Natural Gourmet Cookery School there. Address: 365 West End Ave., New York City, NY 10024. Phone: 212-580-7121.

6905. Committee for Soybean (The). 1986. The Philippines recommends for soybeans. Los Baños, Laguna, Philippines: Philippine Council for Agriculture and Resources Research and Development. 111 p. Technical Bulletin Series No. 14A. Revision of 1976 edition. [51 ref. Eng]
• ***Summary:*** Written by The Soybean Committee (Dr. Florendo C. Quebral, a plant pathologist at UPLB, chairman), this work focuses on recent technologies for soybean production. A foreword by Ramon V. Valmayor, Executive Director of PCARRD, notes: "The importance of soybean has been stressed continuously. To encourage its widespread production, the Ministry of Agriculture and Food (MAF) launched the Soybean Production Program in Mindanao. Likewise, PCARRD initiated and coordinated the implementation of Soybean Pilot Production Project in 1983 to demonstrate the feasibility of growing soybean profitably in Luzon."

Contents: Foreword. Acknowledgments. The Soybean Committee. Introduction. Production management. Marketing. Soybean cropping system. Crop protection. Seed production. Processing and utilization: Raw materials for industry, soybean as food. References. Appendixes. List of tables. Lists of figures.

Table 1 shows soybean production in the Philippines from 1974 to 1985. Area in hectares grew from 2,780 ha in 1974 to a peak of 11,250 ha in 1976 and was 8,479 ha in 1985. Production grew from 2,214 tonnes in 1974 to a peak of 11,466 tonnes in 1982 and was 8,430 tonnes in 1985. Yield grew from 0.80 tonnes/ha in 1974 to a peak of 1.05 in 1982 and was 0.99 in 1985. Local production does not begin to supply local demand. In 1984 380,691 tonnes of soybeans and products were imported. Most of the imports were soybean meal.

Table 2 shows imports and exports of tausi (salted, fermented soybeans), oil cake (huge imports), soy sauce (large exports), soy oil (refined, large imports), soybean paste, taho (soymilk curds, often sold topped with a little brown sugar), bean cheese (tokwa [tofu]), hypoallergenic soy food, crude soy oil. Page 50 shows all current uses of soybeans in the Philippines, and p. 51 gives the nutritional composition of Philippine soyfoods. Note the terms Geerligs cheese (Tahu; 92.7% moisture and 2.9% protein), Soybean curd (Tahuri, 61.3% moisture and 11.4% protein), Fermented soybean cheese (Tausi; 51.5% moisture and 13.8% protein), and Soybean cheese (Tokwa; 77.0% moisture and 12.9% protein).

Recipes are given for preparing soy sauce, miso, tahu (soymilk curds), tokwa (soybean cheese, or firm tofu), tao-si (salted, fermented soybeans [fermented black soybeans]), soybean milk, and soybean coffee. Descriptions are given for sufu, tempeh, soy flour and grits, soy protein concentrates

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and isolates.

Note: In the section on nutritional composition, two words are incorrectly defined. The term "Tahuri" actually refers to tofu in brine, and "tausi" refers to salted, fermented soybeans. Address: PCARR

6906. Frost, G.M. 1986. Commercial production of enzymes. *Developments in Food Proteins* 4:57-134. Chap. 3. (B.J.F Hudson, ed. London and Englewood, New Jersey: Applied Science Publishers). [197* ref]

• ***Summary:*** The production of isolated enzymes on an industrial scale began less than 100 years ago. However the action of enzymes (fermentation) for changing and preserving foods has been exploited for thousands of years. Many traditional fermentations involve digestion by extracellular enzymes prior to fermentation by whole organisms. Enzymes are sold mainly to the food, beverage, and detergent industries. The present world market is valued at approximately £200 million. Most applications now involve hydrolytic enzymes, but future growth of other types seems probable. Most commercial enzymes are made by submerged cultivation of highly developed strains of microorganisms using specially optimized processes. Industrial enzymes, though rarely highly purified, are manufactured to exacting microbiological specifications. Enzymes for diagnostic and pharmaceutical use require more sophisticated purification methods.

The first artificial use of an enzyme was probably the addition of calf stomach extract to milk to cause coagulation when making cheese. In the West, the main use of fermentation is in making alcoholic beverages–wine, beer, etc. In East Asia, traditional fermentations are more concerned with improving the nutritional value, flavor, and texture of various foods–such as tempeh.

During the past century Asian and Western applications have been merged. For example, in 1894 Takamine in Japan used *Aspergillus oryzae*, the main organism in the soy sauce fermentation, to make Takadiastase, "an amylolytic enzyme which was first used for human consumption as a digestive aid." Takamine also established a business in the USA and new applications for his enzymes were found. His company still exists (though under a different name) and is still marketing essentially the same enzyme preparations.

Includes a long section on "Enzymes used in food." Address: John & E. Sturge Ltd., Selby, North Yorkshire, UK.

6907. Furuta, Kenji. 1986. Shoyu making in Japan. *Farming Japan* 20(2):58-61. Special issue: Processed foods of soybeans. [Eng]

• ***Summary:*** "From April 1980 to April 1982, I stayed in Nepal as a member of the Japan Overseas Cooperation Volunteers (JOCV). In these months, I was engaged in the study, trial production and diffusion of processed foods at the country's Central Food Research Laboratory, Food Research Section.

"Soon after I arrived at my post, I began studies on shoyu production. In my office at the Laboratory, there was a staffer named Baidya [sic, Achutananda Vaidya]. Mr. Baidya had just returned from Japan, where he received training, chiefly on the production of miso (soybean paste) and shoyu (soy), at the Prefectural Experiment Station of Shoyu and Miso in Akita for about nine months. He was much interested in the processing of soybeans; he had learned the technique of making tofu (bean curd) from my predecessor and operated a business for making and selling tofu. He was very eager to adapt the technique he learned in Japan to the situation in Nepal and to introduce it to his country. I felt sympathy with his enthusiasm and decided to cooperated with him.

"There were three types of soybeans, whose appearance differed from one another, found in Nepali markets: white, brown and black and small-grained ones. These soybeans are planted on footpaths between rice and dry fields or on fields alternately with corn. Nepalis eat several kinds of beans, but as to soybeans, they take them roasted with corn only between meals."

In July 1980 the author and Mr. Vaidya began experimental production of soy sauce in Nepal using 4 different methods. The best results were obtained using hand-made koji and whole soybeans. The resulting shoyu was very favorably received. Soon they increased the scale of their experiment so that they could make about 100 liters of shoyu per batch.

They also conducted a survey to try to estimated the demand for shoyu in Nepal. Some of the Japanese and Chinese restaurants in Kathmandu used soy sauce imported from Japan or India. Indian soy sauce tastes entirely different from Japanese shoyu; it is probably unfermented HVP soy sauce. When asked to try Japanese-made shoyu, restaurant owners always preferred it to Indian-made soy sauce. From their survey they estimated that there was a demand for at least 20,000 liters of shoyu per year in Nepal–the actual demand, they felt, might be several times or even many times this amount.

"A Nepali, who heard of our shoyu making experiment, visited us to see the work. This man later wrote a letter to me and said that he began a shoyu making business on a small scale. I helped my Nepali friend making shoyu in Pokra. He owns a hotel there, a tourist resort about 110 kilometers west of Kathmandu. And after one year since then (I had returned home already) Mr. Baidya helped him with the final process of shoyu making in my place." In March 1985 Mr. Vaidya came to Japan, invited by the Rotary Club in Akita and Aomori, to receive further training in soybean processing. The author an Mr. Baidya met in Japan and renewed their friendship. Address: Ex-member of the Japan Overseas Cooperation Volunteers (JOCV).

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6908. Gandjar, Indrawati. 1986. Soybean fermentation and other tempe products in Indonesia. *Mycologia Memoir* No 11, p. 55-66. Chap. 4. (C.W. Hesseltine and Hwa L. Wang, eds. Indigenous Fermented Food of Non-Western Origin. Berlin & Stuttgart: J. Cramer.) Previously published in 1981 in USDA Miscellaneous Publication FL-MS-333. [14 ref]
• ***Summary:*** Contents: Introduction. Kecap (Indonesian soy sauce). Taoco (Indonesian chiang, a yellowish-brown porridge that is very popular in Western Java). Soybean tempe (*tempe kedelai*). Tempe gembus (okara tempe). Non-soybean tempe–made from velvet beans (*tempe benguk*), jack beans (*tempe koro pedang*), winged bean (*tempe kecipir*), pigeon pea (*tempe gude*), wild tamarind (*tempe lamtoro*), peanut presscake (*tempe bungkil kacang*), and coconut presscake (*tempe bongkrek*).

"Tempe is an important source of protein in the Indonesian diet. At present the intake of soybean tempe per person per day is within the range of 40 to 50 g while the recommendation is 100 g per person per day... The awareness of the people that soybean tempe is nutritious results in a higher demand of this product. In the city of Jakarta, about 6000 tonnes of soybeans are processed monthly; 2500 tonnes for soybean tempe [tempeh], and 3500 tonnes for tahu [tofu]."

Table VI shows the nutritional composition of some leguminous seeds and tempe products. Table VII shows the amino acid content of the seeds and the tempeh of 4 non-soybean legumes. Address: Dep. of Biology, Faculty of Mathematics and Natural Sciences, Univ. of Indonesia, Jakarta, Indonesia

6909. Goddard, Susan. 1986. Focus on soya. Hove, E. Sussex, England: Wayland (Publishers) Ltd. 48 p. Illust. Index. 21 x 22 cm. Series: Focus on Resources. [3 ref]
• ***Summary:*** This is a brief introduction to the subject with many color photos. Contents: 1. The importance of soya. 2. The beginnings of soya. 3. Where soya beans are grown. 4. The beginnings of soya processing. 5. The soya plant. 6. Planting. 7. Harvesting. 8. Threshing and storage. 9. At the processing plant. 10. Extracting and refining the oil. 11. Making margarine. 12. Animal feed. 13. Soya protein products. 14. Textured vegetable protein. 15. Other soya products. 16. The nutritional importance of soya. 18. Soya as a world commodity. 19. The future. Facts and figures. Glossary. Books to read. Sources of further information.

Numerous large color photos show commercial soya products. Page 23: Granny Ann High Fibre Cooked Soya-Bran, Bilsons Fibrefit, Nature's Way Soya Flour. Page 24: Waitrose Soya Soft Margarine, Prewetts Pure Soya Bean Oil. Page 27: Life All Natural Salad Cream Style Dressing (egg free) [with soya oil].

Page 30: Mapletons Body Bulk (Malt flavoured milk & soya protein drink mix. Make with milk), Healthcrafts Soya Protein Powder (84% protein). Page 31: Cauldron Foods Vegetable Pâté (mushroom flavour), Cauldron Foods Tofu Burgers (nut style, chilli, or vegetable), Direct Foods Protoveg Menu 5 Grain Burgamix, Direct Foods Protoveg Menu Minced Soya & ___ Mix, Direct Foods Bean __ st (Oriental Style), Direct Foods Protoveg Menu Sizzles, Direct Foods Protoveg Menu Sausmix, Direct Foods Protoveg Menu Burgamix, Sunrise 4 Vegetarian Quarterpound Burgers.

Page 33: Direct Foods Mr. Fritzi Fry's Soy Sausage Mix, Granose Vegetarian Goulash, Direct Foods Protoveg (textured soya protein food) Beef Flavour Chunks. Page 34: Duchesse All-Natural Tofu Dressing & Dip, Amoy Light Soya Sauce, Witte Wonder Organic Tofu Spread (with paprika), Morinaga Ever-Fresh Silken Tofu. Page 35: Plamil Soya Milk Rice Pudding, Provamel Soya Dessert (vanilla [made by Alpro in Belgium]), Sunrise Soya Milk (500 ml, sugar-free, or sweetened with raw cane sugar).

6910. Hesseltine, C.W., Wang, H.L. 1986. Indigenous fermented foods of non-Western origin. *Mycologia Memoir* No. 11. 351 p. Berlin and Stuttgart: J. Cramer. Published for the New York Botanical Garden in Collaboration with The Mycological Society of America. Illust. Index. 24 cm.
• ***Summary:*** Contains 18 chapters by various authors. Each chapter that mentions soy is cited separately. Address: NRRC, Peoria, Illinois.

6911. Hesseltine, C.W. 1986. Microorganisms involved in food fermentations in tropical Asia. In: Susono Saono and F.G. Winarno, eds. 1986. Proceedings of International Symposium on Microbiological Aspects of Food Storage, Processing and Fermentation in Tropical Asia. x + 344 p. See p. 189-204. Held 10-13 Dec. 1979 at Cisaru, Bogor, Indonesia. Illust. 24 cm. [18 ref]
• ***Summary:*** Three pioneers of the taxonomy of molds used in fermented foods were Drs. R. Nakazawa, K. Saito, and C. Thom. Fermentations can be classified as Homofermentations (only one species of microorganism is necessary to produce the product, e.g. natto, onchom, tempeh, fermented tofu), Heterofermentations (more than one is required; e.g. Chinese yeast, or ragi), Homomultifermentations (two or more strains of the same species are used together, e.g. miso, shoyu, soy yogurt).

Tables show: (1) Representative strains of cultures in Oriental food fermentations: Miso–*Aspergillus oryzae, A. sojae, Saccharomyces rouxii, Pediococcus halophilus.* Tempeh–*Rhizopus oligosporus.* Sufu–*Actinomucor elegans, Mucor dispersus.* Address: NRRC, Peoria, Illinois.

6912. Hesseltine, C.W.; Wang, Hwa L. 1986. Food fermentation research and development. *Mycologia Memoir* No. 11. p. 9-22. Chap. 1. (C.W. Hesseltine and Hwa L. Wang, eds. Indigenous Fermented Food of Non-Western Origin. Berlin & Stuttgart: J. Cramer). [13 ref]

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• ***Summary:*** The following fermented soyfoods are discussed: Miso, shoyu, natto, hamanatto, sufu, tamari, ontjom, tempeh. Address: USDA/NRRC, 1815 N. University St., Peoria, Illinois 61604.

6913. Hesseltine, C.W. 1986. Future of fermented foods. *Mycologia Memoir* No. 11. p. 303-16. Chap. 17. (C.W. Hesseltine and Hwa L. Wang, eds. Indigenous Fermented Food of Non-Western Origin. Berlin & Stuttgart: J. Cramer.) Previously published in 1981 in USDA Miscellaneous Publication FL-MS-333. [11 ref]

• ***Summary:*** Contents: Introduction. Positive factors for increased use of fermented foods. Trends in production of fermented foods. Factors that may effect the wider use of fermented foods in the West. Literature cited. Address: USDA/NRRC, 1815 N. University St., Peoria, Illinois 61604.

6914. Hunt, Janet. 1986. The compassionate gourmet. The best of international vegan cuisine. Wellingborough, Northamptonshire, England: Thorsons Publishers Ltd. 160 p. Illust. Index. 22 cm.

• ***Summary:*** An excellent vegan cookbook, written for animal lovers. Soy-related recipes include: Avocado tofu pâté (p. 31). Celery miso pâté (p. 36). French bean salad with tofu dressing (p. 66). Tofu curry (Thailand; p. 74). Tofu and vegetable pakora (p. 86). Tofu layered casserole (p. 96). Tomato flan with tofu (p. 104). Tofu Lemon flan (p. 137). Yogurt dessert (made with cultured soya milk, p. 140). Rhubarb fool (dessert in soya milk, p. 141). Maple pancakes (with soya flour, p. 149). Walnut tofu balls (p. 156).

At least one recipe uses Holbrook's Worcester Sauce–a Worcestershire-type sauce without animal products. Many recipes call for soy sauce or soya milk, and some for canned soy or nut "sausage." Page 9 lists a number of special ingredients including Direct Foods Protoveg (soya "meat"), Infinity Foods (distributors [in Brighton, at Sussex University]) Soya mayonnaise, Lotus Foods TVP (soya "meats" in a varieties of forms and flavors), Plamil concentrated soya milk (use diluted as a milk, undiluted as a cream), and Tomor Margarine (the author's favorite of the many vegan margarines now available in the UK). In all recipes, each ingredient is listed twice in side-by-side columns: once in its Imperial (metric) form and once in its American form, e.g. 385 ml soya milk, 1 1/3 cup soya milk. A number of recipes call for the use of alcohol (whiskey, brandy, etc.). The author has written at least 14 other books on vegetarian or wholefood cookery. Address: England.

6915. Kikkoman K.K. 1986. Dai 68 ki hôkoku-sho: Showa 60 nen 1 gatsu 1 nichi–Showa 60 nen 12 gatsu 31 nichi [68th annual financial report: From 1 Jan. 1985 to 31 Dec. 1985]. Tokyo, Japan. 15 p. 19 cm. [Jap]

• ***Summary:*** Written entirely in Japanese with no photos. Address: Tokyo, Japan.

6916. Kondo, Sonoko; Stoumen, Lou. 1986. The poetical pursuit of food: Japanese recipes for American cooks. New York, NY: Clarkson N. Potter. 296 p. Illust. by Etienne Delessert. Index. 25 cm.

• ***Summary:*** A very artistic, attractive, and authentic book with superb (imaginative and lyrical) illustrations. The section titled "Staple foods you will need" (p. 17-20) discusses soy sauce, konbu and nori seaweeds, sesame seed paste (*atari-goma;* "Most Americans may be more familiar with the Middle Eastern version called tahini paste.. Used in making salad dressings and dips"), miso, and sesame seeds. Soy-related recipes include: Grilled tofu with miso (Dengaku, p. 37). Sesame tofu (p. 38, no soy). Tuna sashimi and green onions with miso (p. 40). Daikon radish with lemon miso (p. 42). Cauliflower florets with miso (p. 42). Basic miso soup (p. 51). Clam miso soup (p. 51). Daikon radish miso soup (p. 52). Vegetable and chicken miso soup (p. 52). Tofu and wakame seaweed suimono (p. 53). Fried rice with tofu and vegetables (p. 89).

Chapter 7, titled "Tofu & egg dishes" includes (p. 103-17): Tofu in Kamakura. Description of different types of tofu: Silken, firm, grilled, pouches, deep-fried, fritters (*ganmodoki*), freeze-dried (*koya-dofu*), how to press tofu. Chilled tofu with ginger sauce. Braised koya-dofu with pea pods. Cold-day tofu. Vegetarian "chicken" tofu (with frozen tofu). Dragon's head (*hiryozu*). Tofu from the sea (*Kenchin-mushi*). Tofu gratinée. Stuffed tofu. Scrambled tofu. Tofu treasure bags. Vegetarian "burger." Egg tofu delight (*tamago-dofu;* no soy).

Beans for breakfast (*natto;* p. 125). Braised konbu seaweed, soybeans, and konnyaku (p. 128). Hijiki seaweed with tofu (p. 129). Stuffed tofu sushi (*Inari-zushi;* p. 157). Snapper tempura with asparagus and miso (p. 174). Marinated cod in miso sauce (p. 179). Seaweed, chicken, and vegetables with creamy miso (p. 185). Steak miso (p. 190). Sukiyaki (p. 206). Shabu shabu (p. 208). Vegetarian nabe (with tofu, p. 211). Sea and mountain (with miso sauce, p. 212-23). Winter nabe (with tofu, p. 214). Udon-suki (with tofu, p. 216). Tofu apple cake (p. 244). Chapter 15 (p. 260-71) is menu plans, by season and time of day.

The glossary (p. 272-82) includes: Agar-agar, azuki beans, konbu seaweed, kuzu, miso paste, nori seaweed, rice cakes (*mochi*), sesame seed oil, sesame seeds, soybeans–fermented (*natto*), soy sauce, tofu, tonkatsu sauce (with dark soy sauce), wakame seaweed. Address: Los Angeles, California.

6917. Lu, Henry C. 1986. Chinese system of food cures: Prevention & remedies. New York, NY: Sterling Publishing Co., Inc. 192 p. Index. 23 cm. [11 ref]

• ***Summary:*** Chapter 7, titled "Legumes, grains, oils and seeds," discusses the following: Small red bean (adzuki

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bean): Edema, beriberi, jaundice, diarrhea, discharge of blood from anus, carbuncle swelling, mumps, cirrhotic ascites (p. 107). Bean curd (tofu): Pink eyes, diabetes, periodic diarrhea, sulfur poisoning (p. 111). Yellow soybean: Malnutrition in children, diarrhea, abdominal swelling, underweight, getosis (p. 111). Black soybean: Edema, beriberi, jaundice, rheumatism, muscular cramps, lockjaw, drug poisoning. Soybean oil: Gastric ulcer, duodenal ulcer, intestinal obstruction. Soy sauce: Promotes digestion (p. 112).

Note: Although he was born in Taiwan, Dr. Lu was quite skeptical of traditional Chinese medicine. But during this twenties he developed an ailment that resisted every form of Western medical treatment. In desperation, he traveled to Taiwan and Hong Kong to consult with Chinese specialists. The results changed his life. A traditional Chinese doctor cured him in a few months. Dr. Liu already held a PhD in education and philosophy from the University of Alberta. But at age 32 he decided to change his field. He began by translating the *Nei Jing* (*Yellow Emperor's Classic of Internal Medicine*) into English. He went on to translate 25 other Chinese medical books into English, including 7 books on acupuncture that are now listed as required texts by the Board of Acupuncture examiners. In 1972 he began practicing traditional Chinese medicine and acupuncture. In 1986 he founded the Academy of Oriental Heritage (in Vancouver, British Columbia), which now (1999) has 15 full-time teachers and more than 100 students. Address: Academy of Oriental Heritage, P.O. Box 35057, Station E, Vancouver, BC V6M 4G1, Canada.

6918. McCarty, Meredith. 1986. American macrobiotic cuisine. Turning Point Publications, 1122 M Street, Eureka, CA 95501-2442. 110 p. Illust. Index. 28 cm. [6 ref]
• ***Summary:*** Page 7 and Chapter 7, titled "Beans and Soyfoods," give basic descriptions of tempeh, miso, soy sauce, soymilk, and tofu. Recipes include Summer's Mixed Vegetable Quiche (with tofu), Tofu Egg Foo Young, and Baked Tempeh with Lemon-Mustard Sauce. Tofu recipes elsewhere in the book include Green Goddess Dressing, Nutty Noodle Bake, Pasta Patricio, and Sour Cream. Also contains information on sea vegetables. Address: Eureka, California. Phone: 707-445-2290.

6919. McDougall, Mary A. 1986. The McDougall health-supporting cookbook. Vol. 2. Piscataway, New Jersey: New Century Publishers. iii + 157 p. Index. 23 cm.
• ***Summary:*** This is a vegan cookbook whose 250 original recipes are designed to support The McDougall Plan, which is a diet low in fat and sodium, high in complex carbohydrates. Since soyfoods are relatively high in fat, they are used sparingly and the recipes are marked by a symbol of a crown. Low sodium soy sauce is used in many recipes. Soy-related recipes include: Scrambled tofu (p. 2-3). Tofu salad dressing (p. 7-8). Dijon tofu dip (p. 9). Onion soup dip (with tofu, p. 9). Dilly tofu dip (p. 9-10). Miso soup (p. 39). Creamed tofu soup (p. 41). Tempeh Creole (p. 62-63). Rice-tofu stuffing mix (p. 88). Tempeh and grain casserole (p. 91). Tofu loaf (p. 96-97). Baked tofu cubes (p. 97-98). Spinach-tofu burgers (p. 99-100). Where's the meat loaf? (with tofu, p. 101-02). Oat burgers (with tofu, p. 102-03). TVP stuffing mix (p. 109). Okara cookies (p. 126). Tofu banana pudding (p. 132). The section titled "Update on ingredients" (p. 133-35) includes a description of: Worcestershire sauce (Sharwood's–natural and without anchovies), umeboshi plum sauce, tamari or soy sauce, okara, tempeh, kombu, and tahini. A portrait photo on the rear cover shows Mary McDougall.

Note: Not long after this book was published, New Century Publishers changed its name to New Win Publishing, Inc. and moved to Clinton, New Jersey. As of 2000 this book is published by Putnam/Penguin. Address: P.O. 14039, Santa Rosa, California 95402.

6920. Miyashiro, R. 1986. [Bacterial spoilage of foods soaked in condiments]. *Kagawa Prefectural Fermentation and Food Experiment Station, Annual Report* No. 79, p. 39-46. [4 ref. Jap]*
• ***Summary:*** For example, shellfish were soaked in soy sauce. Address: Kagawa Prefectural Fermentation and Food Experiment Station, Kagawa, Japan.

6921. Nagao, Minako, Wakabayashi, K.; Fujita, Y., et al. 1986. Nitrosatable precursors of mutagens in vegetables and soy sauce. In: Yuzo Hayashi, et al., eds. 1986. Diet, Nutrition and Cancer: Proceedings of the 16th International Symposium of the Princess Takamatsu Cancer Research Fund, Tokyo, 1985. Tokyo: Japan Scientific Societies Press; Utrecht, Netherlands: VNU Science Press. xvi + 345 p. See p. 77-86. [44 ref]
• ***Summary:*** "Nitrosatable precursors of mutagens that show mutagenicity to *Salmonella typhimurium* TA100 without S9 mix after treatment with nitrite at pH 3 were found in various foods... The mutagenicity of soy sauce towards *Escherichia coli* WP2 *uvr*A/pKM101 is partly explained by 1-methyl-1,2,3,4-tetrahydro-Beta-carboline-3-carboxylic acid (MTCA) and tyramine reported previously. Oral administration of soy sauce and nitrite to male Fischer 344 rats for 2 years induced basal cell proliferation of the forestomach and intestinal metaplasia of the glandular stomach, but did not induce cancers in any organ." Address: Carcinogenesis Div., National Cancer Center Research Inst., Tokyo 104, Japan.

6922. Nagao, M.; Wakabayashi, K.; Fujita, Y.; Tahira, T.; Ochiai, M.; Sugimura, T. 1986. Mutagenic compounds in soy sauce, Chinese cabbage, coffee, and herbal teas. *Progress in Clinical and Biological Research* 206:55-62. [13 ref]
Address: Section of Prevention of Carcinogenesis, National Cancer Research Inst., Tsukiji 5-1-1, Chuo-ku, Tokyo 104,

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Japan.

6923. Nix, Janeth Johnson, ed. 1986. Sunset vegetarian cooking. Menlo Park, California: Lane Publishing Co. 96 p. Illust. Index. 28 cm

• ***Summary:*** Written and compiled by the editors of Sunset Books and Sunset Magazine, this attractive and inviting lacto-ovo vegetarian cookbook was first published in 1981 under the titled *Menus and Recipes for Vegetarian Cooking*, edited by David E. Clark. It contains over 185 tempting recipes plus many superb full-page color photos, and illustrations (line drawings) by Kathy Parkinson of various vegetables. The subtitle on the cover only reads: "Nutritious recipes with flavor and imagination."

Chapter 1, titled "Going Vegetarian," gives a good introduction to the subject. It begins: "We've heard many reasons for going vegetarian. Some people are just looking for a change of pace from meat and potatoes. Some want to save money. Some want the health advantages of a low-cholesterol, high-fiber diet. Other have religious or philosophical reasons for not eating meat. And there are also those who want to do something about the global food problem.

"But whether you want to save money, save your heart, save animals, or save the world from food shortage, you'll need good recipes that sustain your interest in going vegetarian. And good recipes are the heart of this vegetarian cook book."

In answer to the question "Don't I need meat for protein?" it responds: "No. By weight, soybeans and cheese are better sources of protein than meat and fish. In terms of protein quality, eggs and milk rank above meat. By combining grains and legumes, you can create a protein of higher quality than meat or fish." The theme of combining proteins from complementary sources to increase protein quality is emphasized. Soybeans are said to have the best quality protein of any food from the plant kingdom, providing "virtually complete protein" with "no limiting amino acid"–a "near-perfect protein source." (p. 9-10, 49).

In a table titled "Nutrition-packed Foods" the following soy-related foods are listed as good sources: Soybeans for thiamin (vitamin B-1), niacin, vitamin B-6, folacin, calcium, and iron. Tofu for niacin and calcium.

Soy-related recipes include: Soybean soup, bistro style (p. 30). Vegetarian Joe (Like sloppy Joe, with tofu, p. 44). Cooking beans (incl. soybeans, p. 49; "Refrigerate while soaking, boil for 3 to 3½ hours." Adding salt to the soak water is said to help beans absorb water evenly). Sweet & sour soybeans (p. 51). Sesame tofu sticks (in teriyaki sauce, p. 59). Savory vegetables and tofu (p. 61). Herbed tofu sauce (p. 69). Address: Menlo Park, California. Phone: 415-321-3600.

6924. Nunomura, N.; Sasaki, M. 1986. Soy sauce. In: N.R. Reddy, M.D. Pierson, and D.K. Salunkhe, eds. 1986. Legume-Based Fermented Foods. Boca Raton, FL: CRC Press. [viii] + 254 p. See p. 5-46. Chap. 2. [111 ref]

• ***Summary:*** Contents: Introduction. Types of soy sauce. Preparation of shoyu: Raw materials, preparation (treatment of raw materials, koji making, mash [moromi] production and aging, pressing, refining and pasteurization), production of chemical and semichemical shoyu. Composition: Chemical composition, flavor compounds (Japanese shoyu flavor components, oxidative products of HEMF, flavor components of koji, matured mash, and shoyu oil, quantitative analysis of flavor compounds, change in flavor components during pasteurization, flavor components of various soy sauces in the world), organoleptic quality. Safety: Mycotoxins, long term effects of shoyu consumption, mutagens. Conclusions.

HEMF is 4-hydroxy-2 (or 5)-ethyl-5 (or 2)-methyl-3(2H)-furanone. First isolated in 1976, it possesses a shoyu-like and a strong caramel-like flavor. The addition of 0.1 ppm of HEMF to shoyu makes the taste milder.

Table 5 lists the 271 flavor components that have been found in Japanese shoyu to date. They include 37 hydrocarbons, 30 alcohols, 41 esters, 15 aldehydes, 5 acetals, 17 ketones, 24 acids, 16 furans, 4 lactones, 4 furanones, 5 pyrones, 25 pyrazines, 7 pyridines, 6 miscellaneous nitrogen compounds, 11 sulfur compounds, 3 thiazoles, 3 terpenes, and 2 miscellaneous compounds. Address: Soy Sauce Science Research Lab., Kikkoman Corp., Noda, Chiba, Japan.

6925. Pierson, M.D., Reddy, N.R.; Odunfa, S.A. 1986. Other legume-based fermented foods. In: N.R. Reddy, M.D. Pierson, and D.K. Salunkhe, eds. 1986. Legume-Based Fermented Foods. Boca Raton, FL: CRC Press. [viii] + 254 p. See p. 219-31. Chap. 13. [43 ref]

• ***Summary:*** Contents: Introduction. Ugba. Inyu and Kecap. Waries. Kenima. Meitauza. Philippine Tao-si. Fermented cowpeas and chickpeas.

Inyu (p. 225-26) is a fermented black soybean sauce made in Taiwan, mainland China, Hongkong, and other places with large Chinese populations. Inyu differs from soy sauce in that the flavor become more intense after cooking. A flow diagram for the preparation of Inyu shows that no wheat is used in making it.

Kecap (p. 226-27) is Indonesian soy sauce. The two types are *kecap manis* (which has a sweet flavor) and *kecap asin* (which has a salty flavor). The preparation of kecap and kecap manis are described. Kecap is classified into three grades by quality: (1) Contains more than 6% protein. (2) Contains 4-6% protein. (3) Contains 2-4% protein.

Tao-si is a fermented food made from soybeans in the Philippines. To make tao-si, soybeans are first soaked overnight at room temperature. The beans are then boiled for 1 hour, drained, and cooled. At room temperature, the

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soybeans are coated with either raw or roasted wheat flour and inoculated with *Aspergillus oryzae*, a mold. The beans are then spread on bamboo trays, covered with banana leaves, and incubated for 2-3 days in a warm place until the soybeans are overgrown with a mycelium of white mold. The mold-covered soybeans are immersed in a brine solution (18% w/v = 18 gm of salt per 100 cc of water) and heated to boiling to prevent further mold growth and to inactivate enzymes.

Note: Unlike most fermented black soybeans, tao-si does not undergo two sequential fermentations. Address: 1-2 Dep. of Food Science and Technology, Virginia Polytechnic Inst. and State Univ., Blacksburg, VA; 3. Dep. of Botany, Univ. of Ibadan, Ibadan, Nigeria.

6926. Rachim, Abdul. 1986. Indonesia: Notes on the soybean food industry under producers' co-operatives in Indonesia. *CGPRT* No. 4. p. 244-54. Includes 7 tables and figures.
• ***Summary:*** Contents: Background. Indonesian soybean foods. Fermented products: Tempe, oncom, tauco, kecap. Non-fermented products: Tofu, soymilk. Function and role of Kopti (and BUUOG). Traditional processing industry: Current situation of small-scale home industry, further studies on the food industry / marketing system.

The Food Balance Sheets of the Central Bureau of Statistics show that 90% of Indonesia's soybeans are used for food. Most of the human consumption is in the form of a variety of popular processed foods: tempe, tahu (tofu), tauco, and a number of other less popular foods: soybean sprouts (tauge), sere in Bali, yuba, soybean milk, fried soybeans (eaten as a snack), beans boiled in the pod (also a snack), and the beans cooked as a vegetable or as an ingredient in soups. Only one factory (Sari Hasuda, in Yogyakarta) produces soybean milk. It is enriched with nonfat dried milk, vitamins, and minerals.

To coordinate and improve the economic viability of the small tofu and tempeh producers, a cooperative system, called Kopti (*Koperasi Produsen Tempe dan Tahu Indonesia;* Indonesian Tempe / Tofu Processors' Co-operative) was founded in 1979. The main function of Kopti is to procure and distribute soybeans to its members, the number of which has increased from 25 in 1980 to 286 in May 1985. It handles about 407,160 tons/year. The purchase price of soybeans is as follows (Rupiah/kg): From USA 415, from China 425, from Indonesian farmers 475-80. Certificate [certified] seeds cost 550-75.

Tofu, tempe, kecap, tauco and oncom processing is primarily done in small factories. 3 studies have been made on the size of these factories and the quantities they process: as part of the 1974 Industrial Census of the Central Bureau of Statistics (CBS); by Winarno, et al., in 1976; and by the study team on Soybean Commodity System (SCS) in the Garut area of West Java in 1984. The findings of these 3 studies are presented in Table 2.

"We should be cautious in comparing their results, however, because of biases in the collection of the information. The CBS study, for instance, was part of an industrial census, which divided processors into two categories: small-scale industries (5-19 labourers), and home factories (1-4 labourers, some of whom may be family members). However, there may also be wide variations in the industry in different parts of the country.

"Despite these limitations, it seems that the volume of soybean processed by each unit has increased appreciably, probably reflecting a favorable growth of the industry. Yet the number of labourers per unit has remained small, and is probably diminishing. This may be because of the use of mechanical crushers or dehullers for both tempe and tofu productions." Address: Research Asst., ESCAP CGPRT Centre, Bogor, Indonesia.

6927. Reddy, N.R.; Pierson, Merle D.; Salunkhe, D.K. eds. 1986. Legume-based fermented foods. Boca Raton, Florida: CRC Press. viii + 254 p. Illust. Index. 26 cm. [585 ref.]
• ***Summary:*** An overview with information on nutrition and processing of fermented soyfoods. Contents: 1. Introduction. 2. Soy sauce. 3. Miso. 4. Sufu. 5. Natto. 6. Tempe. 7. Fermented soybean milk and other fermented legume milk products. 8. Oncom (fermented peanut press cake). 9. Idli. 10. Dhokla and Khaman. 11. Dawadawa. 12. Papads. 13. Other legume-based fermented foods (Inyu, kecap, kenima, meitauza, Philippine tao-si). 14. Future of legume-based fermented foods. Address: 1-2. Dep. of Food Science & Technol., Virginia Polytechnic Inst. and State Univ., Blacksburg, VA; 3. Vice-Chancellor, Mahatma Phule Agricultural Univ., Rahuri, Maharashtra State, India.

6928. Reddy, N.R.; Pierson, M.D.; Salunkhe, D.K. 1986. Introduction. In: N.R. Reddy, M.D. Pierson, and D.K. Salunkhe, eds. 1986. Legume-Based Fermented Foods. Boca Raton, FL: CRC Press. [viii] + 254 p. See p. 1-3. Chap. 1. [5 ref.]
• ***Summary:*** Contents: A two-page table titled "Legume-based fermented foods," which summarizes all foods discussed in this book, has 5 columns: Name of food, substrate, microorganisms involved, use of food, and areas (where made and used). For example: Natto. Soybeans. *Bacillus natto.* Cake as a meat substitute [sic, it is neither in cake form nor serves as a meat substitute]. Japan (northern part).

Note: Kenima should be spelled "Kinema." "Kecap" is not a different seasoning from "ketjap." Both refer to Indonesian soy sauce; the latter is simply the old spelling. Address: 1-2. Dep. of Food Science and Technology, Virginia Polytechnic Inst. and State Univ., Blacksburg, VA.

6929. Sathe, S.K.; Reddy, N.R.; Pierson, M.D. 1986. Future of legume-based fermented foods. In: N.R. Reddy, M.D.

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Pierson, and D.K. Salunkhe, eds. 1986. Legume-Based Fermented Foods. Boca Raton, FL: CRC Press. [viii] + 254 p. See p. 233-235. Chap. 14. [6 ref]

• ***Summary:*** Fermentation is one of the oldest known processes for preserving foods. Most of the legume-based fermented foods used in the Western world (such as soy sauce, miso, and tempeh) have been introduced by immigrants from Asia. These foods are now becoming popular in the Western hemisphere. Generally the future of legume based fermented foods looks bright. Address: 1. Dep. of Foods and Nutrition, Purdue Univ., West Lafayette, Indiana, 2-3. Dep. of Food Science and Technology, Virginia Polytechnic Inst. and State Univ., Blacksburg, VA.

6930. Stidham, Martin. 1986. The fragrant vegetable: Simple vegetarian delicacies from the Chinese. Los Angeles, California: Jeremy P. Tarcher, Inc. x + 224 p. Illust. Index. 24 cm.

• ***Summary:*** Chapter 3 (p. 57-84), titled "'Meat without bones'–Tofu," contains 3 preparatory techniques and 16 recipes. Chapter 4 (p. 85-98), titled "More 'meat without bones'–Pressed tofu," contains two basic recipes for pressed and spiced pressed tofu plus 9 additional recipes. "The highly odiferous 'stinking' tofu (*chou doufu*) is made by fermenting tofu or pressed tofu, or allowing it to grow moldly, then deep-frying it. Usually eaten with a hot sauce, this is available at movable carts .." (p. 58)

"The dense cakes are fermented to become tofu 'cheese' (see Chapter 1) as well as 'stinking' tofu..."

Chapter 5 (p. 99-126) titled "'Duck,' 'chicken,' and other specialties," first discusses the basic ingredients in making these traditional meatlike products (Bean curd sheet [pressed tofu sheets], bean curd skin [yuba], and bean curd sheet noodles), then gives numerous recipes, many containing soy. Chapters on fried gluten, soups, and fruit and nut desserts follow. Soy sauce, "green soybeans" [green vegetable soybeans], soymilk, soy sprouts, and soy-pickled cucumbers are also mentioned.

The author, a graduate of Northwestern University, lived in East Asia for over 10 years, first as a student at National Taiwan Univ. in the Graduate Inst. of Chinese Literature, and later as a translator of short stories, poetry, and novels. "A long-standing interest in the cuisines of the region, especially vegetarian, has taken him into home, restaurant, and temple kitchens. He has studied privately with instructors from the area's well-known cooking schools, including Wei-Chuan and Pei Mei's, besides being tutored in special techniques by tofu makers and manufacturers of other Chinese specialty food items."

6931. Takahashi, Kuwako. 1986. The joy of Japanese cooking. Tokyo: Shufunotomo Company, Ltd. 311 p. Illust. (some color photos). Index. 27 cm.

• ***Summary:*** An excellent book with especially good descriptions of Japanese ingredients. Contents: Dedication. Foreword. Introduction. Part I. Japanese ingredients. Seasonings in Japanese cooking. Utensils and equipment. Tableware. Measurements and equivalents. Basic techniques: Making soup stock (*dashi*), cooking rice, preparing fish, boning chicken, cutting vegetables, broiling, poaching, steaming.

Part II. Seafood. Chicken. Eggs. Beef. Pork. *Tofu* (bean curd). Vegetables, dried and manufactured foods.

Part III. Appetizers (*zensai*). Soups. Salads (*aemono*). Casseroles (*nabemono*). Rice. Pickles. Desserts and Japanese sweets.

Part IV. Menu planning. Sample menus with preparation schedules. Part V. Making tea. Serving sake.

A color photo (p. 15) shows six different soyfoods made from soymilk: 1. Deep-fried soybean puffs (*age* or *aburage*). 2. Fried tofu cutlet (*atsu-age* or *nama-age*). 3. Tofu patties (*ganmodoki*). 4. Soymilk film, dried (*yuba*). 5. Bean curd cake (*tofu*). 6. Freeze-dried tofu (*Kôya dofu*).

The section titled "Japanese ingredients" (a superb glossary, with many entries accompanied by an illustration {line drawing}, p. 17-32) includes: Bean curd cake (*tofu*), incl. regular tofu (*momen dofu*), soft tofu (*kinugoshi dofu*), Ever-Fresh Silken Tofu (aseptically packaged), instant tofu, firm tofu (Chinese style). Tofu products: Deep-fried soybean puffs (*agé* or *aburage*), fried tofu cutlet (*atsu agé* or *name agé*), freeze-dried tofu (*Kôya dofu*), grilled tofu (*yaki dofu*), tofu patties (*ganmodoki*). Beans: Red beans, dried (*azuki*), soybeans, dried (*daizu*), soybeans, fresh (*eda mamé*). Bean pastes: Bean paste, fermented (*miso*), sweet bean paste (*azuki an*). Soymilk film, dried (*yuba*). Soy sauce (*shoyu*).

The glossary also discusses: Horseradish, Japanese (*wasabi*), konnyaku, kombu, umeboshi, kabocha, daikon (4 forms), glutinous rice (*mochi gome*), red bean rice (*sekihan*), pounded rice cake (*mochi*), rice wine lees (*sakekasu*), rice wine lees pickles (*narazuke*), perilla (*shiso*), seaweeds (*hijiki, nori, yakinori, small sized nori, wakame, ao nori*), sesame seeds (*goma*), sweet rice wine for cooking (*mirin*), wheat gluten cake (*fu*, incl. *nama fu, yaki fu, and matsutake fu*).

The section titled "Seasonings in Japanese cooking (another superb glossary, p. 33-37) discusses: Soy sauce, incl. Regular soy sauce (*koikuchi shôyu*), light soy sauce (*usukuchi shôyu*), tamari soy sauce (darker and thicker, made from fermented soybean and brine in the Nagoya area. "It is not saltier than regular soy sauce but has a richer flavor, thicker taste, and some people prefer tamari as the dipping sauce for sashimi... Note: In the USA the name 'tamari' is mistakenly used for natural soy sauce which is not tamari"), white soy sauce (*shiro shôyu*), milder soy sauce (contains less salt). A table showing the nutritional composition of five different types of Japanese soy sauce is given. Combinations of soy sauce and mirin. Teriyaki. Miso (incl. *kome miso, mugi miso, mame miso*, mixing of miso types).

Use the good index to see how each of the ingredients

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mentioned above are used in recipes.

A good biography of the author is appears in the Foreword and on the inside rear dust jacket (with portrait photo). The author was also very active in introducing ikebana (Japanese flower arranging) to the Bay Area and the USA. Address: Japan and Berkeley, California.

6932 Tsuji, Shizuo, Hata, Koichiro. 1986. Practical Japanese cooking: Easy and elegant. Tokyo, New York & San Francisco: Kodansha International. 151 p. Illust. (color photos by Yoshikatsu Saeki). Index. 31 cm.
• ***Summary:*** A beautiful, elegant book. M.F.K. Fisher says of this book (rear dust jacket): "The recipes are clear and easy to follow, and the illustrations are especially delightful, truly top high-style Japanese simplicity. Messrs. Tsuji and Hata have given us the best of the old and the new."

The Preface, by Shizuo Tsuji (born in 1948) notes that the many-faceted Japanese "cooking tradition relies heavily on two primary ingredients–delicate bonito stock (*dashi*) and, not unexpectedly, soy sauce. Most, if not all, dishes call for one or both." The recipes generally call for either "dark soy sauce" [koikuchi] or "light soy sauce" [usukuchi].

Soy related: Squid and asparagus with mustard miso sauce (*... karashi su miso ae*, with "5 Tbsps nonsweet white miso paste," p. 19). Tofu, pork, and vegetable soup (*Kenchin jiru*, with "1 block regular {'cotton'} tofu, about 10 oz {300 gm}, p. 24). Pureed corn soup (with "2 Tbsps nonsweet white miso paste," p. 24). Miso soup with pork and vegetables (*Buta jiru*, p. 25). Yellowtail teriyaki (*Buri teriyaki*, p. 35). Simmered mackerel in miso (*Saba miso-ni*, p. 37). Tofu as a possible ingredient (p. 38). Deep-fried trout in vegetable sauce (Tofu can be added to the sauce to give the dish more volume, or tofu can easily be substituted for the trout, p. 39). Stuffed spiny lobster ("In place of egg, softened miso can be used in the filling," p. 40-41). Squid teriyaki (*Ika teriyaki;* the teriyaki sauce includes mirin, sake, dark soy sauce, and tamari soy sauce, p. 44). Shrimp and leeks with mustard-miso sauce (*... karashi-su-miso kake*, p. 48). Grilled beef (with tamari soy sauce in Lemon-soy dipping sauce {Ponzu}, and dark soy sauce in sesame dipping sauce, p. 50-51). Grilled beef with miso (*Gyuniku miso-yaki*, with "4 Tbsps Red Miso Sauce {p. 85}," p. 54). Nagasaki-style braised pork (*Buta kaku-ni*, with "1 cup {250 gm} unpacked okara {tofu pulp} or milk, optional," p. 58).

The section titled "Tofu" includes: Simmered tofu (*Yudofu*, with "2 blocks tofu, about 20 oz {600 gm} total," p. 71). Night-dried tofu with chicken sauce (*Ichiya-dofu tori soboro ankake;* regular tofu is allowed to freeze overnight to give it a different texture, p. 72). Simmered tofu dumplings (*Ganmodoki uma-ni*, p. 73-74). Deep-fried tofu (*Agedashi-dofu*, p. 75). Scrambled tofu (*Iri-dofu*, p. 76). White salad (*Shira-ae*, p. 77). Tofu sandwiches (*Tofu hakata-ni*, p. 78-79). Tofu hamburger steak (with miso, p. 80). Freeze-dried tofu with egg (*Koya-dofu tama-jime*, p. 81).

Grilled eggplant (*Taki-nasu*, with Soy-ginger sauce, p. 84). Deep-fried eggplant with miso sauce (*Nasu dengaku*, with Red Miso Sauce, p. 85). Turnip with ginger-miso sauce (*Furo-fuki kabura*, with 1 cup Red Miso Sauce, p. 88). Chinese cabbage and deep-fried tofu (*Hakusai usuage uma-ni*, with "4 pieces thin deep-fried tofu {*usuage*}, about 3 oz (80 gm) total," p. 90). Deep-fried and simmered acorn squash (*Eikon sukasshu no age-ni*, with "2 blocks thick deep-fried tofu {*atsuage*}, about 5 oz {150 gm} total," p. 93). Simmered soybeans (*Nimame*, with "1 cup {120 gm} dried soybeans." "The real secret ... is to allow the beans a long pre-soak before beginning to cook," p. 94). Vegetables with white sesame dressing (*Goshiki yasai gomashirasu-ae*, with 1 block regular tofu, p. 96). Mixed rice (*Kayaku gohan*, has "thin deep-fried tofu" as an alternative ingredient, p. 100). Scattered sushi (*Bara sushi*, with "1 cake freeze-dried tofu {*Koya-dofu*}, about ½ oz {15 gm}," and "2 Tbsp dark soy sauce," p. 106-07). Thick roll sushi (*Futo-maki-zushi*, with "2 cakes freeze-dried tofu {Koya-dofu}, about 1 oz {30 gm} total," p. 113). Inari sushi (*Inari-zushi*, with "10 pieces thin deep-fried tofu {*usuage*}, each about 3 inches {8 cm} square, p. 114-15). Udon noodles with deep-fried tofu (*Kitsune udon*, with 4 pieces thin deep-fried tofu, p. 120). Sukiyaki ("... actually only appeared on the horizon of Japanese cuisine some one hundred years ago," with "½ block regular {'cotton'} tofu," p. 122-23). Oden stew (*Oden nabe*, with "4 blocks thick deep-fried tofu," p. 124-25). Seafood pot (*Yose nabe*, with 1 block regular tofu," p. 126-27). Deep-fried mixed kebabs (*Kushi-katsu*, with 1/3 cup Worcestershire sauce in the Dipping sauce, p. 132-33).

The section titled "Ingredients" (p. 144-49) has a photo and excellent description for each entry, including: Ginger (fresh). Ginger (red vinegared). Ginger (sweet vinegared). Green seaweed flakes (*ao-nori*). Hot yellow mustard (*karashi*). Kelp (*konbu*). Kelp (salted) (*shio-konbu*). Mirin. Miso paste (Sweet white miso, nonsweet white miso, red miso). Nori seaweed. Pickled plums (*umeboshi*). Rice cakes (*mochi*). Rice vinegar. Saké. Sesame seeds (white, black, or brown). Seven-spice pepper. Shiitake mushrooms. Shiso leaves. Soba noodles. Somen noodles. Soybeans (fresh young) (*edamame*). Soy sauce (dark, light, tamari). Tofu (freeze-dried) (*Koya-dofu, kori-dofu, or shimi-dofu*). Tofu (fresh). Tofu (thick deep-fried). Tofu (thin deep-fried). Udon noodles. Wakame seaweed. Wasabi horseradish ("has a tingling hotness that goes straight to the nose").

About the authors (inside rear dust jacket, with small color portrait photos of each): "Shizuo Tsuji is president of the Ecole Technique Hôtelière Tsuji, the largest culinary school in Japan. It comprises three divisions, whose total enrollment currently exceeds three thousand. At the main school, which offers intensive courses in Japanese, French, Italian, and Chinese cooking, aspiring chefs receive the training necessary to become professionals. At the Ecole Supérieure de Pâtisserie Tsuji students may perfect their

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confectionery techniques. The Centre de Perfectionnement in Liergues, France, accepts those desirous of completing their education with firsthand experience in Europe." All classes are conducted in Japanese. He is author of the classic book *Japanese Cooking: A Simple Art* (1980, in English). Address: Tsuji Professional Culinary Inst., Osaka, Japan.

6933 Wang, H.L.; Fang, S.F. 1986. History of Chinese fermented foods. *Mycologia Memoir* No. 11, p. 23-35. Chap. 2. (C.W. Hesseltine and Hwa L. Wang, eds. Indigenous Fermented Food of Non-Western Origin. Berlin & Stuttgart: J. Cramer.) Not previously published in 1981 in USDA Miscellaneous Publication FL-MS-333. [6 ref]

• ***Summary:*** Discusses the early history of numerous types of chu [ch'ü, qu] (similar to koji, with a substrate of wheat, barley, millet, and/or rice), chiang [jiang] (salted sauce), shi or tou-shi (fermented beans) [fermented black soybeans], chiang-you, tou-yu and shi-tche (the liquid from shi [fermented black soybean sauce]; "It is a very dark but clear liquid and was the most popular seasoning in the sixth century"), tou-fu-ru (fermented tofu or sufu), La-pa-tou (Mucor fermented beans), Mei-tou-tcha (Meitauza, fermented okara), tsu (vinegar), yan-tsai (salted vegetables).

The three main sources of early information on fermented soyfoods are: (1) *Shih chi* [pinyin: *Shiji* by Sima Qian] (90 B.C., historical record). (2) *Ch'i-min yao-shu* [pinyin: *Qimin yaoshu*, by Jia Sixie, AD 544, "Important arts for the people's welfare"] (+6th century agricultural encyclopedia). (3) *Pen-ts'ao kang-mu* [pinyin: Bencao gangmu, by Li Shizhen, AD 1596, "The great pharmacopoeia"] (16th century botanical encyclopedia).

Concerning shi or tou-shi [fermented black soybeans]: The first written record "appeared in the *Shi-chi* (the historical records) written by Szuma Chien in the second century B.C., which stated that shi was sold next to salt, indicating shi was already a popular food seasoning." In the *Qimin yaoshu* (6th century AD) the method of preparing shi is described in detail. Temperature is said to be the most important factor in making shi, and June was found to be the best month for preparing this fermented seasoning. A detailed description of the process is given.

The *Bencao gangmu* (16th century AD) described many types of shi made at different localities, and gave the medicinal use of each.

"In more recent times, shi can be classified into three general types." (1) *Aspergillus oryzae* mold type, which is the traditional type, also known as tou-shi [douchi], and is the most common type, prepared as described above, but using pure cultures of *Aspergillus oryzae*. Today the fermentation is carried out at 25°C in wooden barrels. "In some areas, the washed, molded beans are mixed with 16-18% salt and fermented at 35°C for 30 days." (2) *Mucor* mold type, which is usually made in Szechuan in wooden trays. The process is described. The mold is *Mucor racemosus* Fresenius. (3) *Bacillus* bacteria type, called shui-tou-shi [pinyin: shui-dou-chi], is probably the same product as natto in Japan [except that it is salted]. To make shui-tou-shi: Clean, soak, and boil soybeans until soft. Place in a cloth bag and cover with straw [an excellent natural source of *B. subtilis*]. After incubation for 1-2 days at 25-30°C the soybeans will be covered with viscous substances. The quality of the product is ascertained by the stickiness of the beans. Mix the sticky soybeans with minced ginger and salt, then pack tightly into jars, and age for one week. They are now ready to consume. "The organism responsible for this fermentation has been identified as *Bacillus* species."

Note 1. Is the third type salted? Salt is apparently added after the 1st fermentation and before the 2nd. Thus, it would seem to be an intermediate form between douchi / tou-shi (fermented black soybeans, salted) and natto (unsalted). If it is not salted, it would seem to be Chinese natto.

Note 2. This is the only document seen (Jan. 2012) that mentions either shui-tou-shi or shui-dou-chi. Address: 1. USDA/NRRC, 1815 N. University St., Peoria, Illinois 61604, 2. Inst. of Microbiology, Academia Sinica, Beijing, China.

6934 Wang, H.L.; Hesseltine, C.W. 1986. Glossary of indigenous fermented foods. *Mycologia Memoir* No. 11, p. 317-44. Chap. 18. (C.W. Hesseltine and Hwa L. Wang, eds. Indigenous Fermented Food of Non-Western Origin. Berlin & Stuttgart: J. Cramer). [29 ref]

• ***Summary:*** The section titled "Fermented Legume Products" defines chao (Vietnamese fermented tofu), chiang-chu (Chinese koji), ch'ou-toufu and ch'ou-toufu-ru (fermented tofu), Damsuejang and doenjang (Korean miso), furu, sufu, hon-fan or red sufu (fermented tofu), in-shi ("Fermented black soybeans from China"), in-yu (Type of Chinese soy sauce made from black soybeans), kanjang (Korean soy sauce), kenima [sic, kinema], ketjap or kecap (Indonesian soy sauce from black soybeans), meitauza or mei-tou-cha (fermented okara), meju (maiju or maeju; Korean soybean koji), natto, oncom (onchom or oncom), see-iu (see-iew; Thai soy sauce made from whole soybeans), soy sauce, soybean paste, tahuri (tahuli; Filipino fermented tofu. See sufu), tao-chieo (tao-jiao; Thai miso), taohu-yi (Fermented tofu from Thailand. See sufu), taokoan, tempe (many types), thua-kab (dry thua-nao), thua-merk (wet and cooked thua-nao), thua-nao (Thai natto), tosufu (see sufu), toufu-ru (fermented tofu), tsue-fan (tsui-fan, chee fan; fermented tofu).

Note 1. This is the earliest English-language document seen (Nov. 2011) that contains the term "Fermented black soybeans from China," or that uses these terms to refer to *in-shi*.

Under "Fermented Cereal-Legume Products" we find chiang, chiang-yu (chau-yu, Chinese soy sauce), fermented soybeans (fermented black soybeans), hamanatto, kochujang

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(kochu chang), miso, shoyu, tamari, taotjo (tao-tjo, tao dji; Fermented soybeans from Indonesia or Thailand [sic, No! *Tao-tjo* is Indonesian-style miso and *tao dji* are Indonesian fermented black soybeans]), tao-tjung or tou-chiang (chiang), tao-yu (tou-yu, Chinese soy sauce), tauco (taocho, taoco, taucho, Indonesian miso), tou-pan-chiang (Chinese fava bean miso), tou-shi (toushih; Chinese fermented black soybeans), toyo (Filipino soy sauce) Note 2. This is the earliest English-language document seen (March 2009) that uses the word "taocho" to refer to Indonesian-style miso.

Fermented Vegetable Products include: Chiang-tsai (chiang-tsay; Vegetables in China pickled in chiang or soy sauce or tien-mien-chiang), miso-zuke. Address: USDA/NRRC, 1815 N. University St., Peoria, Illinois 61604.

6935. Weir, G.S.D. 1986. Protein hydrolysates as flavourings. *Developments in Food Proteins* 4:175-217. Chap. 5. (B.J.F. Hudson, ed. London and Englewood, New Jersey: Applied Science Publishers). [133* ref]
Address: Brooke Bond Oxo Ltd., Croydon, UK.

6936. Wood, B.J.B. 1986. Introduction of new fermented foods into Western culture. In: C.W. Hesseltine and H.L. Wang, eds. 1986. Indigenous Fermented Food of Non-Western Origin. Berlin: J. Cramer. 351 p. See p. 251-58. Chap. 14. [6 ref]
Address: Dep. of Applied Microbiology, Univ. of Strathclyde, Glasgow, Scotland

6937. Yokotsuka, Tamotsu. 1986. Soy sauce biochemistry. *Advances in Food Research* 30:195-329. No index. 28 cm. (Edited by C.O. Chichester, E.M. Mrak, and B.S. Schweigert. Academic Press Inc.). [400+ ref]
• ***Summary:*** This extensive review of the subject by one of the world's foremost authorities focuses on the Japanese product, shoyu. Contents: Introduction: Japanese shoyu, the soy sauce produced in other Oriental countries. Manufacture (of the five types of Japanese shoyu): Koikuchi, usukuchi, tamari, shiro, and saishikomi shoyu. Recent research and technological advances in shoyu manufacturing. Comparison between whole and defatted soybeans as raw materials, treatment of raw materials, koji molds, koji making, control of mash (moromi), refining. Color of shoyu. Color compounds of shoyu, measurement of shoyu color, browning mechanism of shoyu. Flavor evaluation of koikuchi shoyu. Volatile flavor ingredients of koikuchi shoyu: Organic acids, alcohols, esters, carbonyls and related compounds, phenolic compounds (incl. 4-Ethylguaiacol (4EG) and *p*-ethylphenol, vanillin, ferulic acid, vanillic acid), lactones (incl. aliphatic lactones, 4-8 kinds of gamma lactones identified in Japanese fermented shoyu), pyrazines, sulfur-containing compounds, terpenes, flavor constituents of the topnote aroma of pasteurized shoyu, methods of quantitative analysis of the volatile flavor constituents of shoyu, contribution of volatile flavor constituents to overall flavor evaluation. Safety problems of shoyu: Nonproductivity of mycotoxins by Japanese industrial molds, fluorescent compounds produced by *Aspergillus* molds with R_f values resembling those of aflatoxins, mycotoxins other than aflatoxins, mutagenic substances in shoyu, bactericidal action of shoyu, biological tests of shoyu. Research needs: Raw materials, koji molds, reduction of fermentation period of mash, application of enzyme preparations, refining and pasteurization, flavor, color. References. Address: Kikkoman Corp., Noda-shi, Chiba-ken 278, Japan.

6938. **Product Name:** [Higeta Soy Sauce].
Foreign Name: Higeta Shôyu
Manufacturer's Name: Higeta Shoyu Co. Ltd.
Manufacturer's Address: Komai-cho 2-3, Nihonbashi, Chuo-ku, Tokyo 103, Japan.
Date of Introduction: 1986?
New Product–Documentation: Fruin. 1984. History of Five Japanese Shoyu Companies. Soya Bluebook. 1987. p. 94.

6939. Kadocho Mingu-kan. 1986? Shôyu no furusato: Kadochô mingu-kan shokunin-gura [The homeland of shoyu: Kadocho folk tool museum. Craftman's storehouse (Leaflet)]. Wakayama-ken, Japan. 6 panels. Undated. 26 x 12 cm. [Jap; eng]
• ***Summary:*** Company name with diacrities is: Kadochô Mingu-kan. This company and museum was founded by Mr. Chôbei Kanô. Photos in the leaflet show the ancient shoyu equipment including a lever press (*shime-ki*) used to press shoyu from the moromi mash during the Edo period (1600-1868), up until the Meiji period, a wooden ladle (*shoyu kasuri*), a wooden shoyu vat with bamboo hoops, cloth money collecting bags, and a pedal-powered wooden cog-wheel device for cracking wheat. A re-drawn line (the original was from early Meiji period) drawing shows the exterior of a row of shoyu plants along the street in downtown Yuasa. And a photo shows the inside and exterior of the present K.K. Kadocho, where shoyu is still made by traditional methods.

"The history of Yuasa shoyu: Shoyu, the world famous seasoning, was originally produced in Yuasa from Kinzanji-miso or soy bean paste, which was brought from China in the early 13th century by Hotokokushi of Kokokuji Temple of Yura. In those days, Shoyu was only for use at home and not for sale because of poor traffic facilities. But about 400 years ago, in Azuchi-Momoyama era, Shoyu was first shipped to other parts of Japan as a commodity here in Yuasa.

"Since then, Shoyu industry developed a great deal, thanks to the protection of the Lord of Kishu, and it is said that in the Bunka-Bunsei [Bunka (1804)–Bunsei (1818)?] era, there were 92 Shoyu-ya or Shoyu-makers in about one thousand houses of Yuasa.

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"In the meantime, people in Yuasa showed how to make Shoyu to the people in some parts of Japan, such as Choshi near Tokyo. Today the Shoyu industry in Yuasa is dwindling, chiefly owing to the promotion of some major Shoyu companies. But we still have the traditional method of making that Yuasa Shoyu once called Yuasa Tamari in Kamakura era."

"The origin of shokunin-gura or shoyu workshop. In Yuasa, the birthplace of Soy Sauce, there still remain some old workshops with very thick and crumbling walls here and there. Some workshops are now converted to the residences. With the disappearance of Shoyu makers, we can no longer see craftsmen who used to toil and moil here, and traditional Shoyu things, the fruits of their wisdom and efforts. (Today we have several museums of folk craft throughout Japan. But I feel responsible, as one of the Shoyu craftsmen, for collecting and preserving these old Shoyu things as well as 'the taste of old days.')

"Kadocho Shokunin-gura, with the size of 80 square meters, was one of the fermenting houses built in Keio era [in Keio 2, 1866]. All these Shoyu things kept here are the tools used for making Shoyu and each of them has sweat and pains in it of the craftsmen of those days. I welcome you to my Shoyu workshops of about 100 years old." Address: K K Kadocho, Kitamachi 7, Yuasa-cho, Arita-gun, Wakayama-ken, Japan. Phone: 0737-62-2035.

6940. **Product Name:** [Marukin Shoyu].
Manufacturer's Name: Marukin Shoyu Co. Ltd.
Manufacturer's Address: Shinkawa 1-2-5, Chuo-ku, Tokyo 104, Japan.
Date of Introduction: 1986?
New Product–Documentation: Frum. 1984. History of five Japanese shoyu companies. Soya Bluebook. 1987. p. 94.

6941. **Product Name:** [Tamari Shoyu].
Manufacturer's Name: Marusan-Ai Co., Ltd.
Manufacturer's Address: 1 Arashita, Niki-cho (P.O. Box 444-21), Okazaki city, Aichi prefecture 444-21, Japan.
Date of Introduction: 1986?
New Product–Documentation: Soya Bluebook. 1987. p. 94.

6942. **Product Name:** [Fried Tofu].
Foreign Name: Tofu-Bratschnitten.
Manufacturer's Name: Morgenland Pflanzenkost.
Manufacturer's Address: Kurze Strasse 1, D-3406 Lenglern, West Germany.
Date of Introduction: 1986?
New Product–Documentation: Manufacturer's catalog. 1987. Kleine Warenkunde. Yellow. 4 pages. Describes each of the 13 soyfood products. "These ready to eat tofu slices are dipped in shoyu, fried, then lightly de-fatted."

6943. **Product Name:** [Soynuts (Plain or with Sunflower Seeds and Shoyu)]
Foreign Name: Soja-"Nusse" Mit Sonnenblumenkernen und Shoyu.
Manufacturer's Name: Morgenland Pflanzenkost.
Manufacturer's Address: Kurze Strasse 1, D-3406 Lenglern, West Germany.
Date of Introduction: 1986?
New Product–Documentation: Manufacturer's catalog. 1987. Kleine Warenkunde. Yellow. 4 pages. Describes each of the 13 soyfood products. "Munch on soynuts straight out of the bag or roast them for 2-3 minutes in a hot, dry pan and season with honey, or soy sauce, with paprika, curry, etc."

6944. **Product Name:** [Tofu Burgers]
Foreign Name: Tofuburgers.
Manufacturer's Name: Svadesha R. Urban.
Manufacturer's Address: Ostpreussenstr. 22, D-8000 Munich 81, West Germany. Phone: 089 / 93 90 05.
Date of Introduction: 1986?
How Stored: Refrigerated.
New Product–Documentation: Talk with Svadesha R. Urban. 1990. June 13. This product was introduced after he moved to Ostpreussenstr. 22.

6945. **Product Name:** [Tofu Slices {Marinated in Shoyu then Fried}]
Foreign Name: Tofu Schnitten.
Manufacturer's Name: Svadesha R. Urban.
Manufacturer's Address: Ostpreussenstr. 22, D-8000 Munich 81, West Germany. Phone: 089 / 93 90 05.
Date of Introduction: 1986?
How Stored: Refrigerated.
New Product–Documentation: Talk with Svadesha R. Urban. 1990. June 13. This product was introduced after the company moved to Ostpreussenstr. 22. It is now the company's fourth best-selling product. Sliced tofu is laid and marinated in shoyu for 1-2 days, then deep-fried. No bread crumbs are used as a coating.

6946. **Product Name:** [Tofu Spread with Tempeh].
Foreign Name: Tofu Pastete mit Tempeh?.
Manufacturer's Name: Svadesha R. Urban.
Manufacturer's Address: Ostpreussenstr. 22, D-8000 Munich 81, West Germany. Phone: 089 / 93 90 05.
Date of Introduction: 1986?
How Stored: Refrigerated.
New Product–Documentation: Talk with Svadesha R. Urban, company founder. 1990. June 13. After moving to Ostpreussenstr., he introduced new versions of the product, one with herbs and one with tempeh. He also started selling tempeh, which was made by Byodo Naturkost.

6947. **Product Name:** [Tamari Shoyu Brand Soy Sauce

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{Sold in the USA}]
Manufacturer's Name: Yagi Shoyu K K
Manufacturer's Address: Tatsuno-shi, Hyogo-ken, Japan.
Date of Introduction: 1986?

6948. Westbrae Natural Foods. 1987. Distributor catalog, FOB pricing: Jan. 1, 1987. Emeryville, California: Westbrae. iv + 19 + [12] p. 22 by 28 cm.
• ***Summary:*** On the cover, the lettering is in black on a tan background. Pages i-iv are general information, 1-10 are a computer-printed price list, and 11-19 are a product glossary. There are also 1-page, single-sided inserts (sell sheets, many in full color) of various Westbrae products. Address: Office: 4240 Hollis St., Emeryville, California 94608; Mailing: P.O. Box 8711, Emeryville, CA 94662. Phone: (415) 658-7518 (orders).

6949. Matsuura, Masaru. Assignor to Kikkoman Corp. 1987. Process for production of sterilized packed tofu. *U.S. Patent* 4,636,398. Jan. 13. 4 p. Application filed 2 Jan. 1985. Application also filed in Japan on 13 Jan. 1984. [5 ref.]
• ***Summary:*** Process for production of sterilized packaged tofu. Soymilk is mixed with coagulant, filled into the container, sealed, and heated to simultaneously effect sterilization and coagulation. Address: Noda, Japan.

6950. Frick, Elaine E. 1987. The soybean has its American roots in the South. *Record* (*Columbia, South Carolina*). Jan. 14. [2 ref.]
• ***Summary:*** Soy sauce, made in Georgia by Samuel Bowen, was sold by Z. Kingsley at his store in Bedon's Alley. Also about Benjamin Franklin and Samuel Bowen.

6951. Probber, Jonathan. 1987. Food and fitness: Soy sauce and diet. *New York Times*. Jan. 21. p. C2.
• ***Summary:*** The Chinese invented soy sauce. The Japanese use a great deal of soy sauce, but theirs is "lighter than Chinese soy sauce." Many households in Korea still prepare their own soy sauce each fall.

There has been a proliferation of soy sauce brands in the USA. Old favorites such as Kikkoman and Ka-me [Kame], which are sold in supermarkets, are now also sold in lower-sodium versions. There is also a brand named Sushi Chef for those who like to make sushi at home.

Regardless of brand, soy sauces contain large amounts of sodium–even the "lite" versions. Kikkoman's "lite," for example, contains 160 milligrams per half teaspoon, which (multiplied by 6) translates into 960 milligrams per tablespoon.

For those on a low-sodium diet–which allows about 1,600 mg of sodium per day–the writer recommends a spray bottle dispenser, with the nozzle adjusted for a fine, misty spray.

6952. Waldbaum's. 1987. Terrific 1/2 (Ad). *New York Times*. Jan. 21. p. C2.
• ***Summary:*** In the middle of this full-page ad, in between the Vlasic Gherkins and Jolly Time popcorn, in small letters is written: "Yamasa Teriyaki sauce. Reg. 99¢. 10 oz. btl [bottle] 45¢."

Note: This is the earliest Yamasa ad seen on the East Coast.

6953. **Product Name:** Barbecue Baked Tofu.
Manufacturer's Name: Ashland Soy Works.
Manufacturer's Address: 280 Helman St., Ashland, OR 97520. Phone: 503-482-1865.
Date of Introduction: 1987. January.
Ingredients: Tofu (water, organically grown soybeans, natural magnesium chloride or nigari: a derivative of seawater), tomatoes, molasses, honey, apple cider vinegar, chili powder, prepared mustard (vinegar, water, mustard, salt, turmeric, spices), soy oil, tamari (soy sauce), onion, garlic, parsley, liquid smoke.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1987. 4 by 3 inches. Red and brown on white. Talk with Diana Muhs. 1988. Feb. 10.

6954. **Product Name:** Eastern Flavor Dim Sum or Pot Sticker (Stuffed Dumpling in Wonton Skin) [Vegetable, Shrimp, or Mushroom]
Manufacturer's Name: Eastern Foods Corp. (Distributor).
Manufacturer's Address: 3235 E. Hennepin Ave., Minneapolis, MN 55413.
Date of Introduction: 1987. January.
Ingredients: Vegetable: Wheat flour, soy bean protein [isolate], soy bean oil, soy bean curd (soy beans, water, calcium sulfate), green onion, onion, spinach, water, soy sauce, sesame oil, ginger, salt, black pepper. Note: Shrimp is same ingredients except shrimp is listed first.
Wt/Vol., Packaging, Price: 7.94 oz (225 gm). Package of 15 retails for $1.89 to $2.49.
How Stored: Frozen.
New Product–Documentation: Label. 1987. 6 by 9 inches. Gold, red, and blue on clear film. "Microwave Oriental Snack. Fully Cooked. Keep Frozen. Microwaves in 3 minutes. Vegetable Recipe." Talk with Mr. Lee. 1987. Nov. 11. Product was introduced in January 1987. It contains no okara and is now the company's main focus of energy.

6955. **Product Name:** Eastern Flavor Dim Sum or Powza (Stuffed Dumpling in Raised Round Dough) [Vegetable, Shrimp, or Mushroom]
Manufacturer's Name: Eastern Foods Corp. (Distributor).
Manufacturer's Address: 3235 E. Hennepin Ave., Minneapolis, MN 55413.

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Date of Introduction: 1987. January.
Ingredients: Vegetable. Wheat flour, soy bean protein [isolate], soy bean oil, soy bean curd (soy beans, water, calcium sulfate), green onion, onion, spinach, water, soy sauce, sesame oil, ginger, garlic, salt, black pepper, yeast. Note: Shrimp is same ingredients but shrimp listed first.
Wt/Vol., Packaging, Price: 7.94 oz (225 gm). Package of 15 retails for $1.89 to $2.49.
How Stored: Frozen.
New Product–Documentation: Label. 1987. 6.5 inches square. Gold, red, and blue on clear film. "Microwave Oriental Snack. Fully Cooked. Keep Frozen. Microwaves in 3 minutes. Vegetable Recipe." Talk with Mr. Lee. 1987. Nov. 11. Product was introduced in January 1987. It contains no okara and is now the company's main focus of energy. Brochure. 1987. Percentage of households owning Microwaves: 1982 28%, 1987 65%, 1990 79% (Source: Amana study 1986). Dim Sum is grazing food.

6956. Kanematsu, Y. 1987. Hiire shôyu no maku roka ni tsuite [Membrane filtration of pasteurized soy sauce]. *Nippon Jozo Kyokai Zasshi* (*J. of the Brewing Society of Japan*) 82(1):11-19. Jan. [5 ref. Jap]
Address: Shôda Shôyu KK, Japan.

6957. **Product Name:** Vegetarian Nature's Patties Burger with Tofu [Original, or BBQ]
Manufacturer's Name: Nature's Path.
Manufacturer's Address: 9451 Van Horne Way, Richmond, BC, V6X 1W2 Canada. Phone: 604-278-4584.
Date of Introduction: 1987. January.
Ingredients: Tofu (organic soybeans, nigari, water), soya protein, sunflower seeds, brown rice, potato, rolled oats, sesame seeds, walnuts, gluten, tomato, onion, pimento, carrots, peppers, celery, sunflower oil, Engevita nutritional yeast, herbs and spices, tamari soy sauce, psyllium seed, molasses, dijon mustard.
Wt/Vol., Packaging, Price: Family size 10 x 3.3 oz patties, or 4 x 3 oz patties. Each is a plastic bag.
How Stored: Frozen.
Nutrition: Per 100 gm: Calories 236, protein 17.4 gm, carbohydrate 22.9 gm, fat 12.0 gm, sodium 185 mg, potassium 185 mg, fiber 1.5 gm.
New Product–Documentation: Leaflet. 1987, undated. 8½ by 11 inches, color. "Nature's Path Vegetarian Nature's Patties with Tofu. Contains no animal fats, eggs, dairy products, nitrates, or cholesterol. Succulent non-meat patties. 17% protein." Spot in Soya Newsletter. 1987. 1(4):6. "Made with tofu (17%) and a wide selection of grains and vegetables. Contains no egg or dairy products." Label. 1988. 10 by 5.5 inches. Plastic bag. Red, black, and blue on white with color photo of burger and vegetables. Letter from Rick Furdal, manager. 1988. April 4. They have moved to #170-2540 Simpson Rd., Richmond, BC V6X 2P9. Their restaurant, Woodlands Natural Foods, 2582 West Broadway, Vancouver, BC V6K 2G1 (Phone: 604-733-5411) makes over 100 fresh soyfoods recipes on a rotational basis.

6958. *Soyfoods* (*ESFA*). 1987. ESFA objectives. 1(1):31. Jan.
• ***Summary:*** 1. To prevent consumer deception, ESFA encourages soyfoods producers to establish voluntary standards for the various soyfoods. 2. To work with regulatory agencies in laying out the basis of requirements for the soyfoods on labeling, marketing, and health issues. 3. To provide reliable information to dietitians, press people (the media), and generally speaking to all people looking for information on soyfoods. 4. To promote utilization of soyfoods for their food value. "By soyfoods, we refer among others to the oriental traditional products directly derived from the soybeans, such as soybean milk, tofu, tempeh, soya sauce, and soybean sprouts."

Those interested in joining the European Soy Foods Association should contact Guy Coudert, ESFA, 12 Avenue George V, 75008, Paris, France. Subscriptions to *Soyfoods* magazine (published by ESFA), 4 issues per year, are 300 French francs. Address: Paris.

6959. Vandemoortele, Philippe. 1987. Editorial. *Soyfoods* (*ESFA*) 1(1):2. Jan.
• ***Summary:*** Contents: What are soyfoods? Why was the Association founded? What will the Association do to achieve its goals. What can a member expect from the Association?

"Soyfoods cover all products deriving from the whole soybean produced according to a traditional process and manufactured into soya milk, tofu, tempeh, miso, soya sauce, soya sprouts and other products. Why was the European Soyfoods Assoc. founded? Until only a few years ago, only industrial soya protein such as defatted and fullfat flour, concentrates, isolates, and textured protein were used in the food industry. They are mainly used for their functional properties rather than for their nutritional characteristics." Now there is a growing interest in soyfoods. The ESFA will organize a Soyfoods Conference every 2 years. Address: President of the ESFA (European Soyfoods Assoc.).

6960. Wilson, Geoff. 1987. Special report from Australia [on soyfoods]. *Soyfoods* (*ESFA*) 1(1):25-29. Jan.
• ***Summary:*** Much of this material appeared in the National Farmer (1984), Australia. John Wilson, in charge of soymilk for Alfa-Laval and Owen Price, managing director of the Dairy Farm group of companies in Hong Kong (he has made a soy ice cream) are both expatriate Australians. Contents: New markets beckon soybeans (especially soymilk in Australia and Southeast Asia). Expatriate Australians boosting soy (John Wilson of Alfa-Laval in Sweden, and Owen Price, managing Director of the Dairy Farm group of companies in Hong Kong). Soybeans poised for big

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growth (in Australia, especially as soymilk). Tofutti takes off in Australia (David Grossbaum of Shoyu Natural Products in Melbourne has the sole Australian franchise for this popular soy-based product). Tofutti is tantalising U.S. tastebuds. Sustagen Gold uses dairy and soy foods (The increasingly popular Combibloc carton is now being used by Bristol Meters to package this product). Soy-dairy blends to overcome disadvantages. Six new soy drinks expected (following Golden Life, the first Australian soy drink launch late last year by Martin Pharmaceuticals). Soy products will enter the market (in Australia, believes Anders Lindner of STS–Soya Technology Systems). Flavored Soy Drinks selling well (according to Don Lazzaro of Ceres Natural Foods Pty Ltd. in East Bentleigh, Victoria). Address: Freelance journalist, Australia

6961. *Toyo Shinpo* (*Soyfoods News*).1987. Kikkôman Chitose kôjô kadô [Kikkoman's plant in Chitose, Hokkaido, begins operation]. Feb. 21. p. 2. [Jap, eng+]
• ***Summary:*** The Kikkoman Corporation has built a 4-story, 273,000 square meter plant at Chitose, in Hokkaido. In August 1986, they started fermentation processes there, and on January 30, 1987, the first shoyu produced at the plant was shipped to market. Capital expenditure for the plant was about 700 million yen. The production capacity is 20,000 kl/year, enough to supply the shoyu demand in the Hokkaido region. The plant mainly produces "Kikkoman Shoyu," "Kikkoman Amakuchi Shoyu," and "Kikkoman Menmi." This is the corporation's third plant in Japan; it uses the latest technology and has the highest capacity of production of any of their plants.

6962. *Changing Times* (*Washington, DC*).1987. Sauces: Oh–It's soy. Feb.
• ***Summary:*** For raw fish and sushi dishes, choose tamari. Along with a richer, darker flavor it will be slightly lower in alcohol and salt content. If you want even less salt and alcohol and your dish can withstand an even darker color and richer flavor, then choose saishikomi. A final choice, yellow-tan, is called shiro. Use if for dishes where preservation of food flavor is especially important, as in delicate noodle soups.

6963. Diamond, Marilyn. 1987. A new way of eating: The proper foods, combinations, and recipes to start you on the road to health. New York, NY: Warner Publications. 158 p. Feb. Introduction by Harvey Diamond. Index of recipes by type. 21 cm.
• ***Summary:*** This is a slightly revised re-release of Marilyn Diamond's first book "The common sense guide to a new way of eating" (1980, Golden Glow Publishers). "Marilyn Diamond, co-author with her husband, Harvey Diamond, of *Fit for Life*, the diet and life-style program that has swept America from coast to coast, has been a student and teacher of international cuisine for over 20 years. She is a Phi Beta Kappa, magna cum laude graduate of New York University, with certification in nutritional counseling from the American College of Health Science. She is director of the Institute for Nutritious Home Cooking in Santa Monica, California, and specializes in counseling for children and pregnant women. Much of her time is spent coordinating numerous projects, such as a *Fit for Life* food product line, *Fit for Life* restaurants, and a national *Fit for Life* club and newsletter." She lived one summer as an exchange student in Avignon, France.

This book is based on several dietary principles: 1. Consumption of a sufficient quantity of water-content foods, such as raw fruits and vegetables. One should eat lots of salads. 2. Proper food combining. 3. Correct consumption of fruit to cleanse your body. A fruit-only breakfast is recommended. 4. Avoid acid-causing foods such as meat, coffee, alcohol, dairy products, cooked nuts or fruits, and chemically processed foods such white sugar and white flour. Fresh fruit and vegetable juices neutralize acid. Note that small amounts of meat, chicken, and dairy products are included in some recipes (see p. 28-29, 48-49, 127, 129, 131, 134, 136, 138) since the author advises people to move away from their addictions and habits slowly and to enjoy feasts on special occasions.

Soy-related recipes include: Chinese vegetable salad and dressing (with soy sauce, p. 43, 55). Tamari salad dressing (p. 57). Easy minestrone (with white or red miso, p. 69). Easy chow mein (light soy sauce, tamari, and miso, p. 148). Note that tofu is not mentioned. Address: Fit for Life, 2210 Wilshire Blvd., Suite #118, Santa Monica, California 90403

6964. **Product Name:** [Japanese Style Shoyu].
Manufacturer's Name: Granja Tierra Nueva.
Manufacturer's Address: Aldea San Luis, La Azulita, C.P. 5102, Estado Merida, Venezuela.
Date of Introduction: 1987 February.
New Product–Documentation: Letter from Ing. Oswaldo Perez. 1987. July. He made 400 liters.

6965. Ismunadji, M.; Zulkarnaini, I.; Somaatmadja, S. 1987. Nutritional disorders of soybean in Indonesia. *CGPRT* No. 10. p. 167-74. Feb. J.W.T. Bottema, F. Dauphin, and G. Gijsbers, eds. Soybean Research and Development in Indonesia. [11 ref.]
• ***Summary:*** Nutritional disorders of soybean are common in Indonesia. Visual symptoms, such as leaf chlorosis (potassium deficiency), stunted growth, and malformation of leaves are often observed in the field. Molybdenum and phosphorus deficiencies, aluminum toxicity, and acid mineral soils (corrected by careful liming) are common problems on specific soil types.

Soybean is the most important grain legume crop grown in Indonesia. It is used for food and feed and plays an

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important role in the Indonesian diet as a source of protein. Soybean protein is much cheaper than protein from animal sources. Soybean-based food such as tempe, tahu, soy sauce and taucho are very popular. Indonesia is not yet self-sufficient in soybean and imports are close to a half million tons/year. The Government is promoting soybean production by acreage expansion and intensification. Address: Bogor Research Inst. of Food Crops (BORIF).

6966. Nakadai, Tadanobu. 1987. Shôyu no saishin gijutsu ni tsuite. I. [Current techniques for soy sauce production. I.] *Nippon Jozo Kyokai Zasshi* (*J. of the Brewing Society of Japan*) 82(2):95-98. Feb. [9 ref. Jap]
• ***Summary:*** Techniques include electrodialysis, ultrafiltration, reverse osmosis, and extrusion. Address: Kikkoman, Jôzô Kagaku Kenkyû-jo, Japan.

6967. **Product Name:** [Tofu Spread]
Foreign Name: Lang Tzu.
Manufacturer's Name: Sojatopf. Renamed Soto in April 1989.
Manufacturer's Address: Friedrich-Ebert-Str. 40, D-8323 Trostberg, West Germany. Phone: 08621-62538.
Date of Introduction: 1987, February.
Wt/Vol., Packaging, Price: 200 gm glass jar.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Letter (fax) from Harry Whitford, 1990, May 30. Gives full details on product based on interview with Gerhard (Oskar) Schramm. "The German name sounds like Lao Tzu (The Chinese sage) but means 'grab it.' A very delicious spread with a hearty yeastflake [nutritional yeast]-tamari type taste reminiscent of liverwurst." On 1 Jan. 1990 the company moved to Wolfbergerstr. 47, D-8211 Breitbrunn am Chiemsee, West Germany.

6968. Tabor, Steven R.; Gijsbers, G. 1987. Soybean supply/demand prospects for Indonesia. *CGPRT* No. 10, p. 51-61. Feb. J.W.T. Bottema, F. Dauphin, and G. Gijsbers, eds. Soybean Research and Development in Indonesia. [2 ref]
• ***Summary:*** Soybean production is concentrated on Java. In 1986, Java accounted for 61% of total production of soybeans. The Province of East Java alone accounted for 37% of national production. Among other provinces, Sumatra accounts for 22% of total production; Sulawesi for 6.4%, and Bali and Nusa Tenggara for 8.7%. Java also accounts for the bulk of soybean consumption. More than 90% of total consumption of soybean products takes place in Java, according to the 1984 National Socio-Economic Survey (SUSENAS).

In 1986, soybean imports increased by 14% to a total of 343,000 tonnes. The total soybean import bill for 1986 was US$70.3 million. In 1986, soybean meal imports were 285,000 tonnes at a total cost of US$ 59 million. A total of US$ 2 million worth of soybean oil and modified soybean oil were imported in 1985. Small amounts of soybean sauces are also imported. The total value of sauce imports in 1985 was US$ 95,000. In 1986 the total cost of all soybean imports, including beans, meal, oil and sauces, was approximately US$ 131.5 million.

"Per capita consumption of soybeans has increased rapidly from 3.2 kg in 1970 to 5.3 kg in 1980. In 1985, per capita consumption was estimated as 5.9 kg. Based on the large increase in both production and imports in 1986, the 1986 domestic consumption is estimated at 7.9 kg/capita." Aggregate growth in soybean demand will increase at an average of 2.7% per annum in the period 1987-2000. Table is given showing soybean area harvested, yield, production and growth rates from 1969 to 1986 with forecasts from 1987 to 2000. Address: 1. Economist, U.S. Agency for International Development (USAID) Secondary Crops Development Project, 2. Economist, CGPRT Centre.

6969. Eden Foods, Inc. 1987. Traditional Japanese foods. 701 Tecumseh Rd., Clinton, MI 49236. Manufacturer's catalog.
• ***Summary:*** Contains information on the production and use of tamari, shoyu, and miso. The company still uses the terms Hacho [sic, Hatcho] miso, kome miso and mugi miso, and still confuse consumers by calling their shoyu "Tamari-Natural Shoyu." Address: Clinton, Michigan.

6970. Le Seuil. 1987. Catalogue [Catalog]. Zone Industrielle, 34190 Ganges, France. 34 p. 21 x 10 cm. [Fre]
• ***Summary:*** In French "Seuil" means "Threshold, sill, or shelf (of the ocean bed)." Contents: Oriental specialties (tamari, shoyu, and miso imported from Japan, p. 6-8). Soya pasta (spaghetti & macaroni, p. 15). Yellow soybean (p. 17). Virgin soy oil (p. 20).

Letter from Maurice Marchand, 1989, June 1. The company, which was founded in 1979, moved to this new address on 1 Jan. 1986. They are very interested in soyfoods, both imported (they import from Mitoku and Yamato), and made in France (they work with Athanor and Sojadoc). Address: Ganges, France. Phone: 67.73.99.80.

6971. Lee, Min-Hsiung, Kwok, Kam-Fu. 1987. [Studies on the flavor components of soy sauce]. *Chung-Kuo Nung Yeh Hua Hsueh Hui Chih* (*J. of the Chinese Agricultural Chemical Society, Taiwan*) 25(1):101-11. March. [29 ref. Chi; eng]
• ***Summary:*** One-year fermented soy sauce was prepared, and content and composition of its flavor components investigated. Contents of sugars and 5'-nucleotides were small, and thus may contribute only little to flavor. Free amino acids (51.44 mg/ml) were the main contributors to taste. L-Glutamic acid was the major component, 12.73% of total free amino acids. Content of organic acids was 3.52 mg/

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ml; acetic acid was the major component (69.03% of total) and because it is very volatile and has a strong taste it was considered an important factor in soy sauce flavor. Of the volatile flavor components, furfuryl alcohol was the major one (based on GC [gas chromatogram] peak area), followed in order by 4-hydroxy-2(or 5)-ethyl-5(or 2)-methyl-3(2H)-furanone (HEMF), 2,3-butanedione, meso-2,3-butanediol, 2-phenyl ethanol, ethyl palmitate, isoamyl alcohol and ethyl linoleate. HEMF is considered to be the most important aroma contributor. Address: Graduate Inst. of Agricultural Chemistry, National Taiwan Univ., Taipei, Taiwan.

6972. Manuel, Paciencia C.; Huelgas, Romeo R.; Espanto, Leina H. 1987. Adoption of soybean in Lupao, Nueva Ecija, The Philippines. *CGPRT* No. 7. xvi + 57 p. March. Contains 50 tables. (Regional Co-ordination Centre for Research and Development of Coarse Grains, Pulses, Roots and Tuber Crops in the Humid Tropics of Asia and the Pacific, Bogor, Indonesia). Summarized in Palawija News. 1987. 4(1):10-11. March. [9 ref]

• ***Summary:*** This report describes and analyzes the performance of farmers participating in a package of technology program. Constraints to better yields were lack of water during vegetative growth, the occurrence of pests and diseases, and seed supply.

Some 70-90% of the Philippines' domestic production and imports of soybeans is used for animal feeds. Imports have risen sharply from 136,000 tonnes (metric tons) of soybean meal in 1979 to 291,000 tonnes in 1983. Imports of whole soybeans are small: 30,000 tonnes in 1983. Domestic soybean production in 1983 was a mere 8,000 tonnes.

In human foods, soybeans are most widely used as a coffee substitute. Only small amounts are used to make tofu, soy sprouts, and soy sauces. In 1983 the Philippine Government launched a program to develop soybean production to offset rising soybean meal imports. "The target was to be 130,000 hectares planted to soybean in 1986-1987 with a projected yield increase from 1.2 tonnes to 1.8 tonnes by 1986-1987. The programme aims at approximately 50% self-sufficiency in soybean in 1986-1987."

In Lupai it was found that 34% of the sample farmers participating in the soybean program achieved yields lower than 500 kg/ha of dry grain. Yields conforming to the national average of 1.2 tonnes/ha were reached by 20% of the participants. "The case study in Lupao permits the conclusion that the present recommended package of technology needs further adaption [adaptation] to farm-level practices; in particular, careful assessment of the place of soybean in the cropping calendar is necessary."

Contents: 1. Introduction; 2. The Farmer and His Environment; 3. Farmer Evaluation of the Pot (Package of Technologies); 4. Economic Evaluation of the Pot Trials; 5. Constraints to Soybean Production; 6. Conclusions and Recommendations. Address: 1. Agricultural Economist, Asst. Prof. & Project Leader, Dep. of Agroc. Economics, UPLB-CDEM, College, Laguna 3720, Philippines.

6973. **Product Name:** Nasoya Teriyaki Tofu.
Manufacturer's Name: Nasoya Foods, Inc.
Manufacturer's Address: 23 Jytek Park (P.O. Box 841), Leominster, MA 01453.
Date of Introduction: 1987 March.
Ingredients: Tofu, expeller pressed sunflower oil, sauce sauce; well water, apple and pear juice, soysauce, apple cider vinegar, lemon juice, natural herbs, spices and flavorings, natural vegetable gum.
Wt/Vol., Packaging, Price: 16 oz.
How Stored: Refrigerated.
New Product–Documentation: Leaflet. 1987. 8½ by 11 inches, color. "Make Meatless Meals in Minutes. Tofu in Oriental Sauce." Label reads: "Heat and serve. Tofu in teriyaki sauce." Soya Newsletter. 1987. 1(3):8. Spot in Natural Foods Merchandiser. 1987. June. p. 56. Retails for under $2.50 per 16 oz package. Has a 5 week shelf life.

6974. **Product Name:** Hot & Spicy Szechuan All Purpose Sauce.
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231.
Date of Introduction: 1987 March.
Ingredients: San-J tamari soy sauce, water, wine, honey, rice vinegar, apple vinegar, mustard, red pepper, garlic, ginger, kuzu, black & white pepper, ground sesame seeds, Japanese [ume] plum concentrate, xanthan gum, Chinese peppercorn.
Wt/Vol., Packaging, Price: 5 and 10 oz bottles.
How Stored: Shelf stable.
New Product–Documentation: Ad in Vegetarian Times. Sept. p. 11. "Simply Szechuan. The exotic tastes of Szechuan cuisine have been deliciously married in this versatile easy-to-use sauce. Awaken your palate with San-J. Since some like it hot!" Spot in Vegetarian Times. 1987. Oct. p. 63. It is wheat free. Leaflet. 1987. Front and back. "Szechuan cuisine is hot!"

Two labels sent by Misako Binford of San-J International. 2012. May 14. The red label now reads: Szechuan: Hot & Spicy Marinade & Stir-Fry. Gluten Free Soy Sauce. 10 fl. oz. A logo on the front panel: Certified Gluten Free. She notes: 1987 or before. Imported.

6975. **Product Name:** [Tofumé Smoked Tofu].
Foreign Name: Tofumé.
Manufacturer's Name: Société Soy.
Manufacturer's Address: 1 rue du Crêt de la Perdrix, 42400 Saint-Chamond, France. Phone: 77.31.24.42.
Date of Introduction: 1987 March.
Ingredients: Water, soybeans (23.4%), soy sauce, spices,

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and aromatics.
Wt/Vol., Packaging, Price: 200 gm poly bag, two per bag.
How Stored: Refrigerated
Nutrition: Per 100 gm.: Calories 129, protein 13.1 gm, fats 8.2 gm, carbohydrates 0.6 gm.
New Product–Documentation: Full-color English-language leaflet. 1988, undated. Smoked tofu with spices. Letter from Bernard Storup. 1989 March 3. This product was launched in March 1987 and is still on the market. Label. 1989, received. 8 by 4 by 1.5 inch paperboard box. Red, yellow, green, and brown on light yellowish beige. "Recipes for two inside. Preparation based on soya. Smoked on a wood fire. Easy to cook. The green protein (La proteine verte). Store at +4°C. Order our recipe book by sending 20 French francs in postage stamps." Color illustration on cover of diced smoked tofu with vegetables, cheese, and shrimp. Color recipe on the back.

Label. 1989. 4 by 7.5 inches. Brown, green, red, and yellow on white. Printed on poly bag. "Fresh tofu smoked on a wood fire. Tofu, a food balanced in protein 16.1%, lipids 9.2%, and carbohydrates 1.6%, is prepared by SOY from the best organically grown soybeans." Shows the Nature et Progres logo indicating organically grown ingredients.

6976. **Product Name:** Szechuan Baked Tofu.
Manufacturer's Name: Surata Soyfoods.
Manufacturer's Address: 302 Blair Blvd., Eugene, OR 97402.
Date of Introduction: 1987, March.
Ingredients: Tofu (organically grown soybeans, water, nigari), E.V.K. Szechuan Sauce (soy sauce, vinegar, water, salt, toasted sesame oil, cooking sherry, arrowroot, herbs, spices).
Wt/Vol., Packaging, Price: 8 oz in poly bag.
How Stored: Refrigerated.
New Product–Documentation: Label, undated. 2.5 by 3.25 inches. Red, silver, and black on white. "An Oregon Cooperative. Hot & Spicy." A second label, same size and color, received June 1988 and said to be introduced in March 1987, has the following ingredients: "Surata Tofu (organically grown soybeans, water, nigari). Szechuan Sauce (water, soy sauce, vinegar, toasted sesame oil, cooking sherry, herbs and spices, carob bean gum, carrageenan)."

Form filled out by Shevah Lambert. 1990 July 2. Surata now makes 300 lb/month of this product. He says production started in July 1988, but in Jan. 1991 says that the product was actually introduced in March 1987.

6977. **Product Name:** Croissant Cuisine Vegetarian Barbecue (Whole Wheat Croissants Stuffed with Textured Soy Protein in Sauce).
Manufacturer's Name: Tumaro's Inc.
Manufacturer's Address: 5300 Santa Monica Blvd., Los Angeles, CA 90029.
Date of Introduction: 1987, March.
Ingredients: Beef-like strips (soy flour, soy oil, water, lemon juice, tamari, spices). Sauce: tomato paste, honey, apple cider vinegar, water, tamari, arrowroot starch, natural distilled wood smoke.
Wt/Vol., Packaging, Price: 6 x 6.5 oz.
New Product–Documentation: Leaflet. 1987, undated. 8½ by 11 inches. Blue on beige. "A brand new line. Delicious! Unique! Exciting!"

6978. **Product Name:** Tempeh Temptations Marinated Tempeh Filets.
Manufacturer's Name: Western Soy Complements, Inc.
Manufacturer's Address: Santa Cruz, CA 95062.
Date of Introduction: 1987, March.
Ingredients: Soybean tempeh (made with organic soybeans and brown rice according to CA Health and Safety Code Section 26569.11), shoyu (a natural soy sauce), fresh ginger, garlic, spices, peanut or safflower oil.
Wt/Vol., Packaging, Price: 7 oz vacuum packed. Retails for $1.69 (8/88 Berkeley, CA).
How Stored: Frozen.
New Product–Documentation: Label. 1988. 2.5 by 3.25 inches. Orange, black, and white. "A cutlet. A burger. For salad. Stir fries. Heat 'n' eat. Complete protein. Delicious cold, too! Perfect for toaster or microwave." Talk with Jeremiah Ridenour. 1988 Aug. 31. This is a fried and marinated product that was launched in March 1987.

Product with Label purchased at Safeway supermarket in Lafayette, California. 1990 Dec. 3. The ingredients have changed. Soy-rice tempeh is used instead of soy tempeh, and canola oil instead of peanut or safflower oil. It is now a 6 oz. vacuum pack that retails for $1.79.

6979. **Product Name:** Sesame Peanut Tempeh.
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: 1990 North 57th Court , Boulder, CO 80301. Phone: 303-443-3470.
Date of Introduction: 1987, March.
Ingredients: Tempeh (made with soybeans organically grown in accordance with section 26569.11 of the California Health and Safety Code and brown rice), natural soy sauce, garlic, onion, spices.
Wt/Vol., Packaging, Price: 6 oz (170 gm). Vacuum packed in poly pouch.
How Stored: Frozen or refrigerated.
Nutrition: Per 3 oz : Calories 190, protein 9 gm, carbohydrates 6 gm, fat 3 gm, sodium 466 mg.
New Product–Documentation: White Wave Order Form. 1988, April. Talk with Steve Demos. This product, whose main ingredient is soybeans, was introduced at the same time as Sea Veggie Tempeh. He chose the colors for the artwork in the airport in New York on his way to India.

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6980. Yanagida, Fujiharu. 1987. Traditional foods and their processing in Asia. Tokyo: NODAI Research Institute, Tokyo Univ. of Agriculture (Tokyo Nogyo Daigaku, Sogo Kenkyugo). vii + 235 p. Illust. No index. 26 cm. [50+ ref]
• ***Summary:*** "This volume was compiled from manuscripts presented at the seminar entitled "Seminar on Traditional Foods and Their Processing in Asia," which was held on November 13-15, 1986 at the Tokyo University of Agriculture, Japan." About 100 scientists from Japan, Indonesia, the Philippines, Thailand, Burma, Korea, Malaysia, Nepal, and Taiwan attended. The seminar was organized by NODAI Research Institute of Tokyo University of Agriculture. Address: Faculty of Agriculture, Gadjah Mada Univ., Indonesia.

6981. **Product Name:** Pasties (With Tofu Filling) [Regular, or Curry].
Manufacturer's Name: Bean Machine.
Manufacturer's Address: Grymych, Wales, UK.
Date of Introduction: 1987. April.
Ingredients: Dough: Incl. wholemeal flour. Filling: Incl. tofu, vegetables, soy sauce, spices.
How Stored: Frozen or refrigerated.
New Product–Documentation: Carolyn Rees. 1987. April. Soyfoods (ESFA). "The Bean Machine story." Pasties can be sold in different forms such as cooked and then frozen, raw and frozen, or fresh baked. They are ready to eat, and are mainly bought by cafes.

6982. **Product Name:** Somozas (Whole Meal Pastry Pouch With Tofu Filling).
Manufacturer's Name: Bean Machine.
Manufacturer's Address: Grymych, Wales, UK.
Date of Introduction: 1987. April.
Ingredients: Dough: Incl. wholemeal flour. Filling: Incl. tofu, vegetables, soy sauce, curry, and raisins.
How Stored: Frozen.
New Product–Documentation: Carolyn Rees. 1987. April. Soyfoods (ESFA). "The Bean Machine story." "A samoza is a whole meal pastry pouch or Indian origin. The name somoza comes from the name samoza, but we thought soyamoza is definitely a more appropriate name. The product has been discontinued due to lack of people and problems of distribution."

6983. **Product Name:** Tofu Bites (Marinated Deep-Fried Tofu Cubes).
Manufacturer's Name: Bean Machine.
Manufacturer's Address: Grymych, Wales, UK.
Date of Introduction: 1987. April.
Ingredients: Incl. tofu, tamari, flour, spices, oil.
New Product–Documentation: Carolyn Rees. 1987. April. Soyfoods (ESFA). "The Bean Machine story." "The Tofu bites are a cube of tofu marinated in tamari and tossed in a flour and spices mixture. They are cooked by deep frying and are delicious with salad."

6984. Business Communications Co., Inc. 1987. Mass merchandised "healthy" foods. 25 Van Zant St., Norwalk, CT 06855-1781. 162 p. April. Price: $1,500.
• ***Summary:*** In this expensive ($1,500) market study, there is a chapter titled "The Soyfoods Market," which has the following segments: Summary of market segment. The tofu market. Soy-based frozen desserts. Soy-based beverages. Soy-based yogurt-like products. Other soy-based prepared foods. Fermented soy products. "A move toward the consumption of convenient, good-tasting foods with a healthful image is the food trend of the eighties. There is a strong relationship between healthful foods and the consumer's need for convenience. In the future, food manufacturers can expect the growth of 'healthy' foods to outpace that of the total food market, as more consumers pursue a healthful lifestyle...

"BCC defines the 'healthy' food market as those segments of food categories that are generally accepted by the consumer as having a healthful image. Total retail sales of all product segments included in this analysis were estimated to have reached $88 billion in 1986." Address: Norwalk, Connecticut. Phone: 203-853-4266.

6985. **Product Name:** Fred Marken's Hawaiian Teriyaki (100% Natural Marinade and Sauce).
Manufacturer's Name: Fred Marken Inc.
Manufacturer's Address: 1428 Yosemite Ave., San Francisco, CA 94124. Phone: 415-822-4675.
Date of Introduction: 1987. April.
Ingredients: Incl. soy sauce, pineapple juice, brown sugar, fresh garlic, fresh ginger, sodium benzoate.
How Stored: Shelf stable.
New Product–Documentation: Interview with Fred Marken. 1987. Sept. This product was first on the shelves in April 1987. The product is rich in pineapple juice and contains less soy sauce than most brands, giving it a lower salt content and milder flavor. Label and sell-sheet sent by Fred Marken. 1987. Sept. New label sent by Fred Marken. 1990. Nov. 5.

6986. Nakadai, Tadanobu. 1987. Shôyu no saishin gijutsu ni tsuite. II. [Latest techniques for soy sauce production. II.]. *Nippon Jozo Kyokai Zasshi* (*J. of the Brewing Society of Japan*) 82(4):236-39. April. [15 ref. Jap]
Address: Kikkoman, Jôzô Kagaku Kenkyû-jo, Japan.

6987. Sekine, Kazuo, Motai, H.; Okuhara, A. 1987. Kôsoku geru roka ni ni yoru shôyu jôzô kôkei-chû no "N sei busshitsu" teiryô-hô [A new assay method for 'N-material' during soysauce manufacturing process using high-speed gel filtration]. *Nippon Shokuhin Kogyo Gakkaishi* (*J. of*

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the Japanese Society for Food Science and Technology) 34(4):216-22. April. [9 ref. Jap; eng]
• ***Summary:*** Proposes a new assay method for determination of "N-Material" (a turbid proteinaceous substance appearing when soy sauce is diluted and subsequently heated) during soy sauce manufacture. Address: Soysauce Research Lab., Kikkoman Corp., 399 Noda, Noda City, Chiba prefecture 278, Japan

6988. Ushijima, Shigeomi; Nakadai, Tadanobu. 1987. Breeding by protoplast fusion of *koji* mold, *Aspergillus sojae*. *Agricultural and Biological Chemistry* 51(4):1051-57 April. [35 ref]
• ***Summary:*** This breeding system was studied to develop more desirable koji molds for the production of shoyu, with special attention to their enzyme producing activities. Address: Soy Sauce Research Lab., Kikkoman Corp., Noda 278, Japan

6989. **Product Name:** [Bio Mets Athanor Vegetable Curry {With Tempeh}]
Foreign Name: Bio Mets Athanor Curry Végétal
Manufacturer's Name: Athanor SARL.
Manufacturer's Address: ZAE La Biste "Atelier 9," 34670 Baillargues, France. Phone: 67 87 0608.
Date of Introduction: 1987, May.
Ingredients: Tempeh, onions or leeks, carrots, white turnips, cauliflower, raisins, soy sauce, pure sunflowerseed oil, spices and aromas, unrefined seasalt.
Wt/Vol., Packaging, Price: 250 gm plastic tray in a paperboard box. FOB Price 12.35 FF.
How Stored: Refrigerated.
Nutrition: Per 100 gm: Calories 111, lipids 7.9 gm, protein 6.0 gm, carbohydrates 3.9 gm.
New Product–Documentation: Label. Received 1988, May. Paper box, 5.5 by 4 by 1 inches. Multi-colored illustration of curry on front panel with sun logo. "100% Plant Protein. Preparation based on tempeh and vegetables. Ready in several minutes."

6990. **Product Name:** [Bio Mets Athanor Vegetable Ragout {With Tempeh}]
Foreign Name: Bio Mets Athanor Ragoût Végétal.
Manufacturer's Name: Athanor SARL.
Manufacturer's Address: ZAE La Biste "Atelier 9," 34670 Baillargues, France. Phone: 67 87 0608.
Date of Introduction: 1987, May.
Ingredients: Tempeh, haricot beans, carrots, onions or leeks, tomato paste, aromas, soy sauce, sunflowerseed oil, unrefined seasalt.
Wt/Vol., Packaging, Price: 250 gm plastic tray in a paperboard box. FOB price 12.15 FF.
How Stored: Refrigerated.
Nutrition: Per 100 gm: Calories 92, lipids 6.3 gm, protein 6.1 gm, carbohydrates 2.6 gm.
New Product–Documentation: Note: *Webster's Dictionary* defines ragout (derived from the French *ragoût*, and first used in about 1664) as "Well-seasoned meat and vegetables cooked in a thick sauce."

Label. Received 1988, May. Paper box, 5.5 by 4 by 1 inches. Multi-colored illustration of ragout on front panel with sun logo. "100% Plant Protein. Preparation based on tempeh and vegetables. Ready in several minutes."

6991. **Product Name:** [Bio Mets Athanor Vegetable Bolognaise {With Tempeh}]
Foreign Name: Bio Mets Athanor Bolognaise Végétal.
Manufacturer's Name: Athanor SARL.
Manufacturer's Address: ZAE La Biste "Atelier 9," 34670 Baillargues, France. Phone: 67 87 0608.
Date of Introduction: 1987, May.
Ingredients: Tempeh, onions or leeks, carrots, tomato paste, soy sauce, sunflowerseed oil, aromas, unrefined seasalt.
Wt/Vol., Packaging, Price: 250 gm plastic tray in a paperboard box. FOB price 11.85 FF.
How Stored: Refrigerated.
Nutrition: Per 100 gm: Calories 54, lipids 2.5 gm, protein 5.6 gm, carbohydrates 2.3 gm.
New Product–Documentation: Label. Received 1988, May. Paper box, 5.5 by 4 by 1 inches. Multi-colored illustration of Bolognaise on front panel with sun logo. "100% Plant Protein. Preparation based on tempeh and vegetables. Ready in several minutes."

6992. Duxbury, Dean D. 1987. Soy sauce: Distinctive fermented ingredient combines sweet, salty, tart flavors. *Food Processing* (*Chicago*) 48(5):70-72. May.
• ***Summary:*** Since the 17th century Kikkoman has continuously been the world's major supplier of soy sauce. The process is still as much an art as a science. Kikkoman's plant at Walworth, Wisconsin, produces 7 million gallons a year in 300,000 square feet with 94 operating employees. The shoyu making process is described, the slow aging of the moromi mash takes 5-6 months, during which time some 20 amino acids and lactic acid, alcohol, and a variety of other flavoring compounds result. Different fermentation cultures are added at various stages in the fermentation process.

Food processors using liquid soy sauce in their formulations can choose from 3 forms of soy sauce or teriyaki sauce: (1) Regular (Traditional) Soy Sauce, which contains sodium benzoate as a preservative and 13.5% sodium chloride (w/w). (2) Lite Soy Sauce, which also contains the preservative but only about one-half the sodium content. (3) Less Salt Soy Sauce, which contains no preservatives. Salt reduction is accomplished using dialysis. Soy sauce is also available in dehydrated form. Regular and reduced salt forms are spray dried onto a dextrin carrier.

Color photos show: (1) A typical Oriental-style stir-fried

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dish in a wok; the flavor and aroma comes from added soy sauce or teriyaki sauce. (2) A large, rectangular automated koji room. (3) Kikkoman's newly introduced consumer line of high viscosity sauces includes Teriyaki Baste & Glaze, Stir Fry Sauce, Steak Sauce, Sweet & Sour Sauce, and Tonkatsu Sauce. (4) An aerial view of the Kikkoman plant in Walworth. Address: Associate Editor.

6993 **Product Name:** Light & Zesty Onion Dip (Originally Called Golden Soy Onion Dip).
Manufacturer's Name: Golden Soy Foods Inc
Manufacturer's Address: P.O. Box 495, Athens, OH 45701.
Date of Introduction: 1987, May.
Ingredients: Organic tofu (water, organic soybeans, calcium sulfate coagulants), water, dried onion, soy oil, apple cider vinegar, shoyu (water, soybeans, wheat salt), raw honey, whole wheat flour, nutritional yeast, dried parsley, salt, vegetable gum, spices.
Wt/Vol., Packaging, Price: 16 fluid oz (1 pint) glass jar retails for about $3.40.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 1 tablespoon (19 gm): Calories 45, protein 1 gm, carbohydrates 2 gm, fat 3 gm, sodium 170 mg.
New Product–Documentation: Product Alert. 1987, April 27. "Golden Soy Onion Dip." News release. 1987, April 20. The product will be released in May. News release. 1987, Aug. 12. "Cholesterol free, low calorie, low fat." Ads in Natural Foods Merchandiser. 1987, Oct. p. 35. Label. 1987. 10 by 2.5 inches. Blue, gray-green, yellow, and white. "Dairy free and no cholesterol. Delicious dip for vegetables & chips. All natural. No preservatives."

6994 Jacobs, Barbara, Jacobs, Leonard. 1987. Cooking with seitan: Delicious natural foods from whole grains. New York, NY: Japan Publications. 256 p. Foreword by Aveline Kushi. Index. 26 cm. [16 ref]
• ***Summary:*** "Seitan is cooked and flavored gluten that has been extracted from [high-gluten] wheat flour. It is very rich in protein, while being extremely low in fat and calories... The traditional Japanese way of seasoning seitan is to cook it in a broth using kombu sea vegetable, natural soy sauce, and fresh ginger root. This ... is the one taken for granted as the 'standard seitan flavor' by commercial seitan makers and most people who are familiar with seitan. Many other mixtures of seasonings can be added to the basic seitan broth. Several earlier books on wheat gluten have been written, generally by Mormons.

This book offers you the history, nutritional information, a variety of preparation techniques, and hundreds of recipes that will allow you to convert wheat into a delicious and nutritious food. Especially suited for vegetarians who are interested in high-protein substitutes for animal foods.

Contents: Acknowledgments. Introduction: About wheat gluten, gluten, commonly asked questions about seitan. Getting started. Creating seitan from wheat flour (at home in 30-40 minutes). Using the seasonings. Additional methods of cooking. Appetizers. Soups. Main dishes and casseroles. Side dishes. Salads. Sauces, dressings and marinades. Condiments. Sandwiches. Desserts. From the pantry. Sample lunch and dinner menus. Appendix: 1. All about saving and using wheat starch. 2. Storing uncooked seitan. Storing cooked seitan. 4. Commonly encountered problems and some solutions. Nutritional information. Questionnaire for readers. About our ingredients (discusses natural soy sauce, and soymilk). Glossary (includes fu [dried gluten], miso, natural soy sauce or shoyu, soymilk, tamari, tofu). Bibliography.

Recipes containing soyfoods include: Miso soup with fu and wakame (p. 79). Miso-lemon dressing (p. 171). Tangy miso-tahini sauce (p. 180). Tofu spread with variations (p. 181). Seitan-tofu paté (p. 181-82). Tofu "feta cheese" (p. 192-93). Miso-tahini sauce or spread (p. 209).

When Michio and Aveline Kushi started the Seventh Inn Restaurant in Boston in 1971, they introduced seitan, a food that George Ohsawa had popularized in Japan, especially among macrobiotic people. Yumie Kono taught the chefs, one of whom was Lenny Jacobs, how to make seitan (p. 5).

The Introduction (p. 17-18) states: "Seitan is a food with a long history. Although not widely known in the West, it was traditionally eaten in China, Korea, Japan, Russia, the Middle East, and probably many other countries that grew wheat. In America, the Mormons and the Seventh Day Adventists made gluten and used it on a regular basis ... The name *seitan* comes to us from the Japanese, who have prepared cooked wheat gluten for hundreds of years ... Some natural foods industry insiders think seitan will become the 'tofu of the '80s.'

"Seitan was introduced to the U.S. natural foods industry about sixteen years ago [1970] when a Japanese variety, shrink-wrapped and quite dry and salty, was first imported. There had been several other varieties available from vegetarian groups, primarily the Seventh Day Adventists and the Mormons. Chinese restaurants have also been preparing wheat gluten for many years. The Chinese call it *mien ching*, or *yu mien ching*. Chinese restaurants often refer to it as 'Buddha Food,' claiming that it was developed by Buddhist monks as a meat substitute. There is also a dried wheat gluten available in Oriental food markets called *fu* by the Japanese and *k'ao fu* or *kofu* by the Chinese."

In the USA, about 130,000 pounds of seitan are made each year. The market is growing rapidly. Current U.S. seitan manufacturers are: 1. Upcountry Seitan in Lenox, Massachusetts, the largest known producer in America, which makes about 600 lb/week and distributes it in 6 states. The company, started about 3½ years ago (counting from Jan. 1987, i.e. founded in about mid-1983) by Win Donovan, is now owned and operated by Wendy Rowe and Sandy Chianfoni. They get a yield of 1.33 (i.e. 90 pounds of

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flour result in 120 pounds of seitan). 2. Rising Tide Natural Market in Long Island, New York. Michael Vitti has been making seitan for 6 years. About 1/3 of his production is bought by another company for use in making sandwiches 3. Grain Dance in San Francisco, California. Ron Harris has been making seitan for 8 years and is currently selling 250 lb/week in 8 oz. packages. 4. Creative Kitchens in Miami, Florida. Yaron Yemini has been making seitan for 3 years, and has seen a 5-fold increase during this time. He now makes 120 lb/week. His yield is 0.7. 5. The Bridge in Middletown, Massachusetts. The company was founded in March 1981 by Roberto Marrocchesi and Bill Spear. They were making seitan by Oct. 1982. Steve Lepenta now makes 400 lb of cooked seitan each week and claims that sales have doubled in the past two years. 6. Maritime Foods in Portland, Maine. Rosemary Whittaker makes 50 lb/week of seitan. 7. Real Foods of Towson, Maryland. Sharon Warren has been making seitan for 6 years and now makes 150 lb/week.

Reviewed by Linda Elliot in East West, June 1987, p. 94. Note: Talk with Lenny Jacobs, 1990, Sept. 10. There has been little growth in the U.S. seitan industry since the book was published in May 1987. Problems with price and quality. If seitan is frozen, after defrosting it can become spongy and soggy. Address: Massachusetts. Phone: 617-232-1000.

6995. Lee, Young Soon; Homma, S.; Aida, K. 1987. Characterization of melanoidin in soy sauce and fish sauce by electrofocusing and high performance gel permeation chromatography. *Nippon Shokuhin Kogyo Gakkaishi* (*J. of the Japanese Society of Food Science and Technology*) 34(5):313-19. May. [9 ref. Eng; jap]

• ***Summary:*** Sixteen soy sauce samples and 6 fish sauce samples produced in Asian countries were characterized for melanoidin by electrofocusing on polyacrylamide gels and high performance gel permeation chromatography (HPGPC).

Note: *Webster's Third New International Dictionary* (1963) defines melanoidin as "any of various colored substances formed from proteins or amino acids (as in the presence of glucose)." Address: Dep. of Nutrition & Food Science, Ochanomizu Univ. Ohtsuka 2-1-1, Bunkyo-ku, Tokyo 112, Japan.

6996. Lumen Food Corp. 1987. Lumen. The 'meatless' solution for the 21st century. Today (Leaflet). Lake Charles, Louisiana. 8 panels. [1 ref]

• ***Summary:*** "Lumen is the term we use to describe a whole range of products that have the 'look, taste, and texture of real meat products.'" It is sold in poly bags. Flavors currently in stock include beef, Mexican beef, pepperoni, chicken, unflavored, ground beef, teriyaki beef, smoked ham, and Italian sausage. Address: 409 Scott St., Lake Charles, Louisiana 70602.

6997. Madison, Deborah; Brown, Edward Espe. 1987. The Greens cookbook: Extraordinary vegetarian cuisine from the celebrated restaurant. Toronto and New York: Bantam Books. xx + 396 p. Index. 26 cm. [37 ref]

• ***Summary:*** Contents: Foreword, by Marion Cunningham. Introduction by Deborah Madison. Preface to the recipes by Edward Espe Brown. Salads. Soups and stocks. Sandwiches and breads. Pizzas. Pasta. Gratins, stews, and casseroles. Tarts and timbales. Filo pastries, frittattas, crepes, and roulades. Companion dishes. Sauces, relishes, and butters. Desserts. Appendix: Seasonal menus, wines and vegetarian food, glossary of ingredients (incl. nutritional yeast, miso {red miso, white miso}, tamari and soy sauce), useful kitchen tools, bibliography.

Soy-related recipes include: Miso soup (p. 63). Grilled tofu sandwich (p. 121). Tofu salad sandwich (p. 122). Vegetable brochettes with marinated tofu (p. 302). Marinated tofu (with "1 or 2 packages firm tofu, 14 to 18 ounces each" and "½ cup tamari soy sauce," p. 304).

6998. Mori, Haruhiko. 1987. Shôwa 61 nendo ni okeru shôyu, miso no kenkyû gyôseki [Review of research reports on soy sauce and miso in 1986]. *Nippon Jozo Kyokai Zasshi* (*J. of the Brewing Society of Japan*) 82(5):329-51. May. [534 ref. Jap]

Address: Noda Inst. for Scientific Research, Noda, Japan.

6999. Westbrae Natural Foods. 1987. Distributor catalog, FOB pricing. June 1, 1987. Spring / summer. Emeryville, California: Westbrae. iv + 19 + [12] p. 22 by 28 cm.

• ***Summary:*** On the cover, the lettering is in black on a tan background. Pages i-iv are general information, 1-10 are a computer-printed price list, and 11-19 are a product glossary. There are also 1-page, single-sided inserts (sell sheets, many in full color) of various Westbrae products. Address: Office: 4240 Hollis St., Emeryville, California 94608. Mailing: P.O. Box 8711, Emeryville, CA 94662. Phone: (415) 658-7518 (orders).

7000. Millon, Marc. 1987. They spend their weekends in search of bellflower, dropwort, sow's thistle and wild mushrooms. *Guardian* (*England*). June 12. p. 21.

• ***Summary:*** Many Koreans spend their weekends (especially in the spring) searching for these wild foods. A recipe for Bulgogi calls for "1/3 pint light soy sauce (such as Kikkoman)" in the marinade.

7001. *Business Japan*. 1987. Japan's oldest biotechnology lays foundation for 21st century. June. p. 116-17.

• ***Summary:*** Yamasa Shoyu Co. was established in 1645 and has over 340 years of tradition in brewing soy sauce. Michio Hamaguchi is the president. Building on its background in the traditional biotechnology used to make shoyu, Yamasa has invented a technique to manufacture two flavor enhancers, Inosine 5'-monophosphate (IMP) and Guanosine

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5'-monophosphate (GMP), by breaking down the ribonucleic acid (RNA) with a special microbial enzyme (nuclease P1).

Yamasa also discovered a synergistic action between L-glutamate and the flavor nucleotides (IMP and GMP), which established the new nucleotide industry. Mixing equal amounts of IMP and GMP made by Yamasa, a product registered as Yamasa IG is provided to the rest of the world. It is used as a flavor base for food processing, as an alternative to meat extract.

Yamasa is also working on DNA synthesis, in vitro diagnosis, and immunology. In the latter area, Yamasa began to work seriously on cell fusion technology in 1978. Fusing a mouse spleen cell and myeloma in 1981, Yamasa successfully developed a monoclonal antibody for the first time in Japan.

Photos show: (1) Michio Hamaguchi, President, Yamasa Shoyu Co., Ltd. (2) An aerial view of Yamasa's main shoyu plant in Choshi, Chiba prefecture, Japan. (3) Two views of working on new biotechnology R&D at Yamasa research laboratories. (4) Bottling Yamasa shoyu at the main plant. (5) Computer monitoring of RNA degradation. (6) Part of the central control room at the Choshi plant. (7) Yamasa cyclic AMP and GMP assay kits. (8) Bottles of commercial Yamasa monoclonal antibodies.

7002. Diamond, Harvey; Diamond, Marilyn. 1987. Living health. New York, NY: Warner Publications. xviii + 446 p. Index. 24 cm. [423* ref]

• ***Summary:*** This extensively documented, hardcover book, published by Warner after *Fit for Life*, became *Fit for Life II*. It is a book based on the philosophies of Natural Hygiene and a vegan diet, free of all animal products, and rich in fresh fruits and fruit juices. In the process, the author's negative attitude toward tofu (expressed in *Living Health*) changed into a positive one. They found that tofu was a very alkaline food.

At Acknowledgments: "Special mention must also be made of the great health reformers, our mentors and predecessors, who under extreme pressure and persecution fought the battle for freedom of choice in health care: Isaac Jennings, Russell Trall, John H. Tilden, Sylvester Graham, Florence Nightingale, Herbert M. Shelton, and all those others far too numerous to mention."

Concerning tofu, in the chapter titled "Questions frequently asked," Harvey Diamond writes: "What about tofu? There is good news and bad news. You know why tofu has no smell and no flavor unless you add garlic, onions, tamari, etc.? Because it is processed at a heat so intense that nothing alive could possibly survive and the process is repeated *three times!* Tofu is absolutely devoid of any nutrients whatsoever. The contention that tofu is a good source of protein is as truthful as the contention that the moon is made of green cheese. Now the good news. People generally eat tofu because they are trying to move away from flesh foods and tofu helps them do that. *Great!* Tofu is so much less harmful than flesh foods that I would wholeheartedly support you in doing so. But do so with the idea in mind that you will eventually give up tofu as well, or at least cut back on it. It is merely a filler food. Just as with meat, tofu should not be eaten more than once a day, and should be properly combined."

The book also contains a recipe for Miso and vegetables soup (p. 376-77). In the index, there is no listing for soy- (including soymilk or soy sauce), tamari, or tempeh.

Chapters 2 and 3 tell about the authors (autobiographical). Harvey was born in 1945. He had severe stomachaches and frequent colds starting when he was a child. He was extremely thin. From age 18-22 he served in the U.S. Air Force and his last year of duty was spent in Vietnam. His weight ballooned up to 202 pounds but his piercing stomachaches did not go away. His father died of stomach cancer at age 57. At this turning point, Harvey decided to devote all his time to learning about how to become healthy. After long searching, he discovered Natural Hygiene in 1970 in Santa Barbara, California. In one day, after learning the one simple principle of proper food combining, his stomachaches went away (they have never returned) and he soon lost 50 pounds. "So I studied Natural Hygiene on my own, reading every book I could get my hands on pertaining to the subject and involving myself with people in Santa Barbara who had incorporated its principles into their life-styles. Three years later I established myself in Los Angeles, continuing my studies while I counseled people informally on Natural Hygiene. After eight years of independent study much to my excitement and delight, a complete course on Natural Hygiene principles finally became available in 1978" from the American College of Health Science. In Feb. 1983 Harvey received his PhD in nutritional science from this unaccredited college.

Marilyn was born in about 1944. Starting in the 1950s she began to suffer severely from a spastic digestive tract. At age 20 she underwent knee surgery in New York, a turning point in her search for health. By the time she was in her mid-twenties, she was married with two children, but the pain from her stomach spread to her back, so she began to take the painkiller Valium regularly. In 1971 she moved from New York to Los Angeles and began to change her lifestyle and diet. "I used whole grains, cut down on alcohol, and became very uncomfortable with my dependency on Valium." So she stopped taking the drug. In 1975 she met Harvey in Venice, California, where he was working at a produce store. She was ill and desperate, having suffered for over two decades with her digestive tract pain. Two months later they were married, and later they had a child. After going through a painful process of detoxification and withdrawal from Valium, Marilyn became the picture of health.

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7003. **Product Name:** Fresh Miso Dressing (Creamy White)
Manufacturer's Name: Good Foods Inc
Manufacturer's Address: P.O. Box 8542, Santa Cruz, CA 95061.
Date of Introduction: 1987, June
Ingredients: Shiro [white] miso, safflower oil, pure water, rice vinegar, rice wine, tamari, barley malt, spices, vegetable gum
Wt/Vol., Packaging, Price: 12 oz glass jar.
How Stored: Refrigerated
New Product–Documentation: Label. 1987. 1.5 by 3.5 inches. Self adhesive. Red and brown on greenish gold. "The Conscious Kitchen. Delicious on fish, salads, burgers, raw or steamed vegetables." Soyfoods Center product evaluation 1987. June 13. Too salty! Miso is the first ingredient.

7004. *Harvard Medical School Health Letter.* 1987. Nitrates and cancer. June. p. 2. [1 ref]
• ***Summary:*** "Since the mid-1970s, nitrate–a relatively common substance in food and water–has been under suspicion as a cause of cancer, especially cancer of the stomach. When nitrate enters the body, or even when it is present in foods left at room temperature, bacteria may convert the compound to nitrite. Nitrite, in turn, can become attached to common organic substances to produce *nitrosamines*, which are carcinogenic.

"The main source of nitrate in contemporary diets is vegetables, which pick it up from fertilizer in the soil. Drinking water may also contain a fair amount of nitrate (much of it, again, originating in fertilizer applied to soil in the run-off-region)...

"In regions of the world where food preservation is inadequate, bacteria contaminating the food supply may generate high levels of nitrosamine, and this may account for the high rates of stomach cancer in less developed parts of the world. Also, certain relatively uncommon foods contain substances favoring formation of nitrosamines. Among them are some types of preserved fish, certain varieties of Japanese soy sauce."

British Medical Journal, February 28, 1987.

7005. Lindner, Anders. 1987. An introduction to soybean uses. *North European Food and Dairy Journal* No. 6/87. p. 210-15. June. [Eng; Ger; Dan]
• ***Summary:*** Of the 95 million tons of soybeans produced worldwide in 1986, an estimated 75 million tons were crushed, 15 million tons were stock, and 5 million tons were processed without crushing to make human foods. Of the soybeans crushed, 54 million tons became meal and flour, while 13 million tons became oil. Oriental soyfoods can be divided into those originating from traditional soymilk (tofu, yuba, soybean drinks, okara) and fermented products (soysauce, tempeh, miso). Modern soymilk can be formulated to make dairylike products or concentrated by ultrafiltration to make a host of new products. Lists German and Danish names for all basic soyfoods. Each is described briefly. Advantages of using soybeans as a basis for products are discussed with emphasis on biotechnological advances. Address: Soya Technology Systems (STS), Ltd., Singapore.

7006. **Product Name:** Cajun Jerky (Meatless. Based on Textured Soy Protein) [Beef Style, Spicy Italian Style, Hot Pepperoni Style, or Smoked Ham Style].
Manufacturer's Name: Lumen Food Corporation.
Manufacturer's Address: 409 Scott Street, Lake Charles, LA 70601.
Date of Introduction: 1987, June.
Ingredients: 1995 Smoked Ham Style: Soy protein, water, soybean oil, yeast extract, cayenne, salt, potassium sorbate.
Wt/Vol., Packaging, Price: 1.5 oz poly bag. Retails for $0.89 (1987)
How Stored: Shelf stable.
Nutrition: Per ½ oz.: Calories 50, protein 6 gm, carbohydrates 1 gm, fat 3 gm, sodium 185 mg, fiber 1 gm.
New Product–Documentation: Distributor Price List 1987, Aug. 1. Label. 1987. "A Vegetable Protein Product. Made with Pride in the Heart of Cajun Country." Brochure 1987. "Cajun Jerky! The Jerky Snack That's Good for You." Spot in Natural Foods Merchandiser. 1987, June. p. 56. Spot in Soya Newsletter. 1987. 1(4):4. Letter from Greg Caton, CEO. 1987, Nov. 3. "Our product is double extruded using a Wenger and starting with defatted soy flour. We use no concentrates or isolates. We pride ourselves as the world's foremost authorities on industrial applications if extruded soy flour products in the non-refrigerated IM (Intermediate Moisture) mode. All of our products use these technologies." M. Friedman. 1987. Adweek East. Nov. 16. "The most interesting new [soy-based] food is Lumen... a surprisingly close analog to meat."

Product with Label purchased by mail order from Lumen Foods. 1995, Dec. 22. Smoked Ham Style. 4 by 5 inches. Plastic bag. Red and green on yellow. Illustration of an alligator in a vest standing upright. "A vegetable protein product. No cholesterol. Low in calories. Low in fat. High in protein. Eats good!"

7007. Torii, Yasuko. 1987. New developments with tempeh in Japan (Interview). Conducted by William Shurtleff of Soyfoods Center, July 1. 2 p. transcript
• ***Summary:*** Torigoe-Seifun stopped making tempeh in mid-1987. They had a hard time popularizing it. Marusan's tempeh is not selling well. They, too, are thinking of stopping. Mr. Kanasugi and the Natto Assoc. are trying to cooperate with Marusan. They suggest selling "tempeh miso," made as follows: Mix 10 kg tempeh, 10 kg barley koji or rice koji, and 1 kg salt. Grind in a meat grinder and let stand at room temperature in the summer for 1 month.

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The result is a sort of Finger Lickin' Miso. Barley koji works best, and the resulting tamari is delicious. Mr. Kanasugu hopes some miso maker will make this. Only Mr. Kanasugi is doing tempeh research. He makes this miso in his restaurant daily. He also makes a spread like peanut butter. Mr. Ose is still making tempeh but his business, Udai, is not doing well. No one is left at the Ministry of Agriculture with an interest in tempeh. Mr. Katoh went to work with FAO in Rome and Ohta went to Showa Seiyu.

Why did tempeh fail to catch on in Japan? 1. It was poorly marketed. 2. The ads and Torigoe aimed at the older generation who still know how to deep fry foods. 3. It is not clear whether the attempted tie-in with natto was helpful or harmful. Natto is a convenient fast food. Now tempeh is not even sold at Natural House, the natural foods supermarket. Organic soybeans from Living Farms are now widely used in Japanese miso and natto. Address: Kamitsuchidana 324, Ayase-shi, Kanagawa-ken 252, Japan. Phone: 0467-76-0811.

7008. *Corporate Report Wisconsin* (*Milwaukee, Wisconsin*). 1987. Kikkoman brews up super soy sauce. July.
• ***Summary:*** The plant on the Big Foot Prairie, 3 miles northwest of Walworth, is operated by Kikkoman Foods Inc., a unit of Kikkoman Shoyu Co. Ltd. of Japan. Production is now about 8 million gallons a year compared to about 1.7 million gallons in the plant's first year of operation. In 1977 Kikkoman became the leader in the U.S. soy sauce market. Presently U.S. retail market shares are Kikkoman 47%, La Choy 37%, and Chun King a distant third. "Kikkoman is one of the few Japanese companies to succeed in the U.S. with a traditional Japanese product. It has done so in part by promoting its sweet and salty sauce as an all-purpose and all-American product."

7009. Gauger & Silva, Inc. 1987. Season with protein instead of salt [San-J Tamari] (News release). 129 Hyde St., San Francisco, CA 94102. 2 p. July.
• ***Summary:*** San-J tamari, fermented over 4 seasons, is the best-selling tamari in Japan and the United States. "One teaspoon of tamari, which contains just a pinch of salt, is the seasoning equivalent of a full tablespoon of salt. The San Jirushi Corporation, founded in 1804 in Kuwana, Japan, is the largest manufacturer of tamari in the world and the only company exporting tamari in any significant quantity. San-J tamari is now sold in supermarkets, and has a major share of the industrial foods market. "Tamari is the original Japanese soy sauce... San-J Tamari has 30% more organic protein than shoyu and its flavor does not burn off in cooking." The new brewery in Richmond, Virginia, will have a capacity of one million gallons a year." Address: San Francisco, California.

7010. Hapgood, Fred. 1987. The prodigious soybean. *National Geographic* 172(1):66-91. July.
• ***Summary:*** Superb photos and an interesting original color painting done by artist James Gurney, in the style of Norman Rockwell, shows more than 60 products containing soybean ingredients (both food and industrial). But, except for the first 2 pages, the text of this far-ranging article is mediocre to embarrassingly erroneous; even the *National Geographic* editors didn't like it, but Hapgood refused to correct his many errors. For example, large bold print at the top of the first page reads: "For centuries Chinese have called the Soybean 'Yellow Jewel' or 'Great Treasure.' Now this prodigious bean is seen by some as a weapon against world hunger." Note: This is the earliest English-language document seen (July 2007) that uses the term "Yellow Jewel" or "Great Treasure" to refer to the soybean.

Superb photos show: Selling tofu in China. Harvesting soybeans with combines. A tractor high over the hold of a cargo ship loaded with soybeans. Making koji at Kikkoman. 42 different colors and shapes of soybean seeds. Henry Ford on 2 Nov. 1940 wielding an ax against a car trunk lid made from a highly resilient soybean-derived plastic. Yuba drying over pans of soymilk. A Japanese woman with her dried-frozen tofu drying under the farmhouse eaves. Favorite Japanese soyfoods dishes: Dengaku, Simmering tofu, yuba, and miso dumplings. Hatcho miso in vats with stones piled high on each in an earthquake-proof pyramid shape. *Mame-maki* (bean-throwing ceremony) at Setsubun, held each February in Japan; the beans are thrown from small wooden measuring boxes (*masu*). The *hari-kuyo* ceremony for broken needles in Tokyo. A martial arts master and former Shaolin temple monk in China testing his strength by plunging his arm elbow-deep into a soybean-packed barrel. Address: Boston.

7011. **Product Name:** [Taifun Smoked Tofu].
Foreign Name: Taifun Geraeuchertes Tofu / Raeuchertofu.
Manufacturer's Name: Life Food.
Manufacturer's Address: Stuehlinger Strasse 9, D-7800 Freiburg, West Germany. Phone: 0761/50 61 55.
Date of Introduction: 1987. July.
Ingredients: Tofu (organic), natural soy sauce, smoke (from birch and juniper), herbs, wine vinegar.
Wt/Vol., Packaging, Price: 200 gm vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Label sent by Anthony Marrese. 1990. March 22. 3 by 2.25 inches. Green, black, yellow, and orange red on beige. Logo of yellow circle. Refrigerate at 2-7°C. They now make 60 kg/week.

7012. **Product Name:** Heartline Meatless Meats [Plain Unflavored, Beef Fillet Style, Ground Beef Style, Mexican Beef Style, Teriyaki Beef Style, Pepperoni Style, Chicken Fillet Style, Canadian Bacon Style, or Italian Sausage Style].
Manufacturer's Name: Lumen Food Corporation.
Manufacturer's Address: 409 Scott Street, Lake Charles, LA 70601. Phone: 318-436-6748.

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Date of Introduction: 1987. July.
Ingredients: 1995–Teriyaki Beef Style. Defatted soy flour, purified water, soybean and/or sunflower oil, autolyzed yeast, natural flavorings [soy sauce (soybeans, water, salt), and/or garlic powder, onion powder, pepper cream, and/or cayenne], potassium sorbate (*a polyunsaturated fat used to preserve freshness*), citric acid.
Wt/Vol., Packaging, Price: 8 oz bag. Retails for $2.79 (10/87).
How Stored: Shelf stable.
New Product–Documentation: Distributor Price List. 1987. Oct. 1. Heartline Meatless Meats. Spot in Soya Newsletter. 1987. Sept/Oct. p. 6. "Has the look, taste, and texture of real meat... Reconstitutes in less than 5 minutes. 100% natural." Ad in Vegetarian Times. 1989. Jan. p. 49.

Ad in Whole Foods. 1989. Feb. p. 24. "Meat has met its match!" Five new full-color package designs are shown: Teriyaki Beef Style, Beef Fillet Style, Italian Sausage Style, Chicken Fillet Style, and Ground Beef Style. Spot in Health Foods Business. Jan. p. 61. "Meatless meats." Lumen Food Corp. has repackaged and reformulated its line of Heartline meat replacers. The new box is printed in 4 colors with recipes on the back. The products are now made without simple sugars to give the consumer an alternative to meat without soy aftertaste, intestinal indigestion, toxic by-products, or animal drugs. Contact P.O. Box 350, Lake Charles, Louisiana 70602-0350.

Heartline products with labels purchased by mail order from Lumen Foods. 1995. Dec. 22. Chicken Fillet Style, Teriyaki Beef Style, Canadian Bacon Style, Ground Beef Style. The label (bag) is the same for each product, a sticker identifies individual flavors. 5½ by 8½ inches. Plastic bag. Red, brown, black, and white on yellow. A large illustration (line drawing) shows a woman in a leotard running. "A vegetable protein product. Makes 1 lb. Cooks in minutes. No cholesterol. Low in saturated fat. Only 83 calories/serving. High in protein. High in iron and calcium. 100% vegetable in origin. Unbelievably delicious! Surprisingly economical. Look, taste & texture of real meat. Eat as a delicious between-meal snack, or use in your favorite meat dishes." Back of bag: What is heartline? Cooking instructions: Eat as is, microwave, or boil. Soyfoods Center taste test. 1996. Jan. 28. Extremely good flavor and texture. Package design is weak.

7013. Otsuka, Shigeru. 1987. Shôyu sekai e no tabi [A journey into the world of shoyu]. Tokyo: Toyo Keizai Shinpo-sha. 230 p. Illust. No index. 20 cm. [22 ref. Jap]
• ***Summary:*** Contents. A pedigree of shoyu (p. 11). The road to shoyu (p. 35). Shoyu and the world (p. 67). A friend of meat cookery (p. 103). Shoyu... make in the USA (p. 115). Shoyu as a forerunner of Japanese culture (p. 129). A visit to the real centers of the Japanese food boom (p. 159). Shoyu recipe contest (p. 209). Mini-science on shoyu (p. 213). Conclusion (p. 219). Postscript (p. 225).

In the section on "Shoyu and the World," subsection "Exports during the Edo Period" (p. 67-79) it is noted that: "In a book-keeping book under the date Man-en 1 (1860), Aug. 16 it is stated that 4 ceramic bottles of Japanese shoyu were shipped to Jakarta (Java), Indonesia. The shoyu that was exported to Europe was sent via Jakarta, Indonesia, to Holland. It was shipped in ceramic bottles each containing a volume of 3 gô (540 ml, or about 1 pint). On each bottle, in roman letters, was written the fact that the bottle contained Japanese shoyu. Terms such as "Japansch Zoya" or "JapanschZoya" or "Jap. Soya" appeared on the bottles.



One photo (p. 76) shows four (another shows three) of these bottles. Below this name, near the base of many bottles was written the brand "CPD" which is thought to have stood for stood for "Comprador." During the Kan-ei period (1624-1630) some rich merchants in Nagasaki established a company named *Konpura-sha*. The merchants who ran it were called Comprador. [Note: They are now (Oct. 2007) generally known in English as the "Comprador Merchant Guild." Japanese: *Konpura Nakama*].

It is recorded in the *Kôka Nisshi*, the diary of a voyage by Tôsei? Yanakawa in 1860 (Ansei 7) from Japan to the USA by boat, that "after we landed in Washington state, we didn't have any miso or shoyu, so we had nothing but salt with which to season our meals."

In 1765 the French enclycopedist Denis Diderot (lived 1713-1784) wrote a section in his Encyclopedie titled "soui ou soi" about Japanese soy sauce. Note that the first term, pronounced soy, is today's French word for soy sauce. The second term, pronounced "swa" apparently no longer exists.

Two black-and-white photos (p. 47) show the outside and inside of the Goyo-Gura in Noda. Page 93 shows a typical shoyu section in a Japanese supermarket. Address: Toyonaka-shi, Osaka-fu, Japan.

7014. *Progressive Grocer*. 1987. They're ragin' for Cajun. July. p. 114-15.
• ***Summary:*** In 1986 supermarket sales of soy and teriyaki sauce were $60.78 million (gross profit: $16.38 million).

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accounting for 2.92% of the sauce category sales (3.29% of category gross profits; the average retail gross profit margin is 27.0%) and with sales up 17.79% over 1985. The best-selling sauce types are spaghetti sauce (28.86% of the category), ketchup (14.40%), meat sauce (13.63%), and dry mixes and seasonings (10.71%).

7015. **Product Name:** Tofu-Sausage 'n Pasta (Also called Sausage 'n Pasta Combo)
Manufacturer's Name: Tofu Shop (The).
Manufacturer's Address: 768 18th St., Arcata, CA 95521. Phone: 707-822-7409.
Date of Introduction: 1987, July.
Ingredients: Baked sausage made with tofu, tamari, spices and sunflower oil; pasta salad made with corn macaroni, fresh vegetables, olive oil, red wine vinegar, tamari, spices, and salt.
Wt/Vol., Packaging, Price: 8 oz (226.8 gm).
How Stored: Refrigerated.
New Product–Documentation: Label, 1987, 3.5 x 1.5 inches. Self adhesive. Red on yellow. "A simple meal from the Tofu Shop. Ready to eat or reheat." Illustration of the shop on stilts on a cliff over the ocean.

7016. **Product Name:** Tofu-Cutlets 'n Rice (Also called Cutlet 'n Rice Combo).
Manufacturer's Name: Tofu Shop (The).
Manufacturer's Address: 768 18th St., Arcata, CA 95521. Phone: 707-822-7409.
Date of Introduction: 1987, July.
Ingredients: Baked tofu marinated in tamari, garlic, kelp and lemon; organic brown rice salad with fresh vegetables, almonds, vinegar, olive oil, tamari and spices.
Wt/Vol., Packaging, Price: 8 oz (226.8 gm).
How Stored: Refrigerated.
New Product–Documentation: Label, 1987, 3.5 x 1.5 inches. Self adhesive. Green on yellow. "A simple meal from the Tofu Shop. Ready to eat or reheat." Illustration of the shop on stilts on a cliff near the ocean.

7017. Yamazaki, Junsei. 1987. The Junsei Yamazaki miso and umeboshi story (Brochure). Route 1, Box 1333, Orland, CA 95963. 6 p.
• ***Summary:*** Junsei arrived at Chico-San in May 1963. His wife, Kazuko, came in 1968. Later that year he went to New York to help Michio Kushi with his restaurant. He returned to Chico-San the following spring (1963?) where he started to make traditional miso and soy sauce. He had learned how while growing up on his family's farm in Chiba prefecture. He had attended Tokyo Agricultural University and majored in organic chemistry. Also at Chico-San he made rice syrup, called Yinmies. Now he and Kazuko live on their 5-acre farm in Orland, California. He makes organic miso (brown rice, rice, and barley) and she umeboshi salt plums with shiso. Both farm. Address: Orland, California. Phone: 916-865-5979.

7018. Motai, Hiroshi; Fukushima, Yaichi; Ishiyama, Takashi. Assignors to Kikkoman Corp. 1987. Process for producing seasoning. *U.S. Patent* 4,684,527. Aug. 4. 4 p. Application filed 1 April 1986. [6 ref.]
• ***Summary:*** A process is described for producing a seasoning by contacting a hydrolysate of soy sauce koji with an immobilized glutaminase or peptidase in the presence of sodium chloride. Address: 1-2, Noda, Japan. 3. Saitama, Japan.

7019. Currim, Mumtaz. 1987. The sweet 'n' sour palate. The big bite. *Times of India (The)* (*Bombay*). Aug. 9. p. SM2.
• ***Summary:*** It's easy to prepare Chinese vegetarian food; just use tofu (soyabean curd) in place of meat.

It's the all-important sauces and seasonings that give Chinese cookery its unique taste–like light and dark soya sauces, black bean paste. These are now available at delicatessens. So also is tofu, although tofu is also make locally and sold fresh.

Contains a recipe for Braised mushrooms with bean curd, which calls for "4 squares bean curd." "Soya sauce" is called for in most of these recipes.

An illustration (line drawing) shows a Chinese dragon standing upright.

7020. Miller, Bryan. 1987. Restaurants: Midtown Greek and Chinatown. *New York Times*. Aug. 14. p. C22.
• ***Summary:*** This is a review of the Cantonese Chinese restaurant Oriental Town Seafood Restaurant (14 Elizabeth St., south of Canal St., New York City). Recommended dishes include "Deep-fried bean curd."

A good way to start "is with the golden bean curd cubes holding morsels of shrimp in the middle. They are delicious with some coriander-flecked soy sauce. Every Chinese family in the house seems to be eating a special, giant steamed oysters smothered in black-bean-and-ginger sauce." Also served was "Squid in black bean sauce."

7021. Ayres, Rosalie; Steinkraus, K.H.; Olek, A.; Farr, D. 1987. Characterization of the semi-purified membrane bound ATPases of *Zygosaccharomyces rouxii* adapted to 18% NaCl. *International J. of Food Microbiology* 4(4):331-39. Aug. [17 ref.]
• ***Summary:*** "*Zygosaccharomyces rouxii* is a yeast with spoilage capabilities in high sugar foods such as maple syrups, liquid sugars and chocolate syrups. Its ability, however, to ferment under high salt (18% NaCl) conditions makes it an essential organism in soy sauce and miso fermentations." Address: 1-3, Inst. of Food Science, Cornell Univ., Geneva, New York 14456; 4. Nestle Products Technical Assistance Co. Ltd., Nestle Ave. 55, CH-1800

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Vevey, Switzerland.

7022 **Product Name:** Homestyle Tempeh "No-Chicken" Salad.
Manufacturer's Name: Homestyle Foods (Formerly Sonoma Specialty Foods).
Manufacturer's Address: 2317 Bluebell Dr., Santa Rosa, CA 95403.
Date of Introduction: 1987, August.
Ingredients: Tempeh (organic soybeans, culture), celery, soy oil, soy milk, relish, soy sauce, mustard, vinegar, garlic, parsley, spices, and honey; Improved recipe (1988) Tempeh (organic soybeans*, culture), celery, soy oil, soy milk, mustard, tamari, vinegar, sesame, relish, garlic, parsley, natural spices and honey * Grown in accordance with CA H&S Code 26569.11.
Wt/Vol., Packaging, Price: 8 oz plastic tub.
How Stored: Refrigerated.
Nutrition: Per 2.66 oz.: Calories 155, protein 7.5 gm, carbohydrates 7.4 gm, fat 10.7 gm, fiber 2.0 gm, sodium 0.25 gm, cholesterol 0.
New Product–Documentation: Label. 1987. 4.5 inches diameter. Red and blue on white plastic lid. "Natural. Non-Dairy. Cholesterol Free. No Preservatives. Use on sandwiches, in Dips and Salads." Interview with Benjamin Hills. 1987. Sept. 7. In 8 oz plastic tubs. Label. 1988. In both 8 and 15 oz tubs. Red, black, and yellow on white. "New! Non-Dairy. Cholesterol-Free. Ready to Eat. Natural. No Preservatives. Nutritious." Spot in Health Foods Business. 1988. April.

7023. Kalayanamitr, Anisa; Bhumiratana, A.; Flegel, T.W.; Glinsukon, T.; Shinmyo, A. 1987. Occurrence of toxicity among protease, amylase, and color mutants of a nontoxic soy sauce koji mold. *Applied and Environmental Microbiology* 53(8):1980-82. Aug. [23 ref]
Address: 1-4 Dep. of Microbiology and Physiology, Mahidol of Science, Bangkok 10400, Thailand.

7024 **Product Name:** Kikkoman Tofu. Soybean Curd (In Retort Pouch) [Firm, or Soft].
Manufacturer's Name: Kikkoman International, Inc. (Importer). Made in Japan by Kikkoman Corp.
Manufacturer's Address: 50 California St., Suite 3600, San Francisco, CA 94111. Phone: 415-956-7750.
Date of Introduction: 1987, August.
Ingredients: Water, soybeans, glucono delta lactone and calcium chloride (coagulating agents).
Wt/Vol., Packaging, Price: 10.5 oz (297 gm) foil retort pouch inside a paperboard box.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 5.25 oz. firm: Calories 100, protein 9 gm, carbohydrates 1 gm, fat 7 gm, sodium 0 mg. Soft: Calories 90, protein 7 gm, carbohydrates 1 gm, fat 6 gm.
New Product–Documentation: Spot in *Food Processing*. 1987. June. p. 87. "Tofu shelf-stable in retort pouches." A large color photo shows the package.

Temptingly Easy Recipes for Kikkoman Tofu. 1987. May. Six panels, 8½ by 11 inches. Full color. Contains recipes for Hunan Pork & Tofu Stir Fry, Simple Skillet Sukiyaki, Salad Nicoise with Tofu, Deluxe Chicken & Fruit Slaw, Glazed Meatloaf Special, Hot & Sour Soup with Tofu, Chocolate-Banana Pie, and Orange Smoothie.

Brochure. 1987. May. "Tofu." 8½ by 11 inches, 2 sided. The front shows a stylish black plate of tofu cubes, meat, and vegetable stir fry. In the background is a cake of Kikkoman tofu partly cut into cubes. All is set in a black table. The back states: "Kikkoman firm tofu fits today's healthy lifestyle. It means healthy profits, too. A color photo shows a package of Kikkoman Firm Tofu. "One serving of Kikkoman Firm Tofu has: 50% fewer calories and 40% less fat than a quarter pound cooked hamburger; 50% fewer calories than 1 cup of cottage cheese; 35% more protein than 1 large egg...

"Kikkoman Firm Tofu is packed in a special foil pouch and pasteurized to protect its fresh flavor and delicate texture.

"Special Features: High protein, low caloric; NO cholesterol & NO sodium; NO preservatives; creamy, firm consistency; helpful recipe information on the package; competitively priced; made with Kikkoman's uncompromising standard of quality."

Labels. 1988. 5.75 by 3 by 1.25 inch paper box. Firm is red, black, orange, and green on white. Front panel has a photo of tofu in a Chinese-style stir-fried dish. "High Protein. No Cholesterol. No Preservatives. Sodium Free. For stir-frys, salads, desserts... Keep in a cool place. Do not freeze." Back panel contains a stir-fry recipe for Chicken & Vegetables with Tofu. Soft is blue, green, orange, and black on white. Front panel has a photo of cubes of chilled tofu on a square dish. Recipes on back for Creamy Corn Soup and Tuna-Tofu Spread.

Talk with Art Mio of Morinaga. 1987. Dec. 7. Kikkoman is selling their new tofu, which is much better quality than their original product, to Azumaya for distribution. It is sold in the produce section, where most of America's tofu is still sold. But the nutritional composition statement is curious. The fat content is much higher and the carbohydrate content much lower than would be expected from a product made from whole soybeans. Soyfoods Center product evaluation. 1988 May 1. Comparing Azumaya, Mori-Nu, and Kikkoman tofu, we preferred them in that order. Kikkoman's tofu is much better than its original product launched in 1985, which we found inedible. Talk with Terumitsu Hattori, VP of R&D, of Kikkoman, San Francisco. 1988. May 25. This tofu was relaunched in August 1987. Recipe booklet. 1988. June. "Kikkoman firm tofu presents recipes for today's healthy lifestyle." Contains 5 recipes: Savory vegetable dip. Extra creamy beef stroganoff (with 3/4 lb steak). No meat stuffed

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shells. Chile corn bread. Molded pink lady.

Poster displayed at Yaohan department store in Los Angeles. 1988. Oct. 23. 11½ by 21½ inches. "Kikkoman Firm Tofu." Full color. Shows the package, product on a dish, and a veggie-meat stir fry.

Talk with Morinaga Nutritional Foods. 1994. March 18. Morinaga in Tokyo is now packaging this product for Kikkoman. The first batch arrived in the USA in Nov. 1993.

7025. Pollard, Jean Ann. 1987. The new Maine cooking. Lance Tapley, Publisher, P.O. Box 2439, Augusta, ME 04330. 288 p. See p. 22-24, 94, 202-15, 221. Illust. Index. 28 cm.

• ***Summary:*** Mostly recipes, arranged by season, including tofu (13), tempeh (6), miso (1), plus how to make tofu at home. Address: Winslow, Maine.

7026. San-J International, Inc. 1987. Tamari [Tamari (Poster)]. 2880 Sprouse Dr., Richmond, VA 23231. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. [Jap, Eng]

• ***Summary:*** "On Thursday, September 24th, 1987, San-J International of Richmond, Virginia will become the United States' first brewer of genuine tamari. You are invited to join us for the brewery dedication... Tamari–a premium wheat-free soy sauce had its beginnings in 7th century Japan. The Sato family founded San Jirushi in 1806 and began brewing genuine tamari." A 12-step illustrated description of the tamari-making process says (incorrectly), "The cooked beans are molded into one-inch nuggets. The nuggets, called "koji nuggets," are dusted with a microbiological culture called "koji" (aspergillus oryzae)." Note: This is incorrect. The cooked soybean nuggets are dusted with spores of the mold *Aspergillus oryzae* the resulting fermented product is called "koji." Address: Richmond, Virginia. Phone: 800-446-5500.

7027. Shurtleff, William, Aoyagi, Akiko. comps. 1987. Bibliography of soy sauce, shoyu and tamari: 535 A.D. to the 1980s. 1775 references in chronological order, partially annotated with index. Lafayette, California: Soyfoods Center. 155 p. Aug. Index. 28 cm. [1775 ref]

• ***Summary:*** The most comprehensive bibliography on this subject. Note: This is the earliest bibliography seen (May 2001) published by Soyfoods Center. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

7028. **Product Name:** [Soyastern Shoyu]
Foreign Name: Soyastern Shoyu
Manufacturer's Name: Soyastern Naturkost GmbH (Importer/Distributor). Made in Japan
Manufacturer's Address: Osteratherstr. 26, 5000 Koeln 60, West Germany
Date of Introduction: 1987. August.
Ingredients: Pure spring water (Reines Brunnenwasser), soybeans (Soyabohnen), wheat, sea salt (Meersalz)
Wt/Vol., Packaging, Price: 700 ml glass bottle
How Stored: Shelf stable.
New Product–Documentation: Label. 1987, undated. Black, grey, and yellow on beige. "Traditional Soyasauce, aged 2 years in oak vats. The universal seasoning. In daily cooking and at the table, it rounds off the aroma of your foods and enhances their indwelling flavors–making salt superfluous." Letter from Thomas Karas. 1989. April 21. "Soyastern Shoyu is a Japanese product. We import it from Muso in bulk and fill it in bottles at our company. We started with it in August 1987."

7029. Roller, Ron. 1987. Job's tears, San-J plant, Edensoy (Interview). *SoyaScan Notes*. Sept. 1. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Edensoy contains Job's tears, the hard, pearly-white to tan seeds of an Asian grass (*Coix lacryma-jobi*), also known as "pearl barley" (easily confused with pearled barley), and called *hatomugi* in Japanese. Note: The large Kenkyusha dictionary (1954) translates *hatomugi* as "pearl barley." A Muso Shokuhin soymilk label gives the scientific name of hatomugi as *Semen coicis*. The grains are about the size of a mung bean but slightly oblong, and with a very prominent sunken tan line running from end to end, as with barley. Eden Foods has tested the growing of Job's tears in the southern USA, and now sells the grain in a 1-lb bag. San-J will be the first company to make natural shoyu in the USA. Eden has been negotiating with them for 4-5 years. Startup costs were $10-15 million. They will make both tamari and shoyu from both defatted soybean meal and whole soybeans. It is an institutional factory, no wooden vats, all stainless steel. Offices will move to the plant site. Edensoy sales are on target. Estimates are that 25-30% of people who go into health food stores have never tasted soymilk. Address: Eden Foods, Clinton, Michigan.

7030. Shurtleff, William. 1987. History of Appropriate Foods Inc. and The Soy Source. Lafayette, California: Soyfoods Center. 3 p. Unpublished manuscript, based on a interviews with Robert Werz, Sept. 9.

• ***Summary:*** "Appropriate Foods was founded by Robert Werz in the fall of 1980 as a tempeh manufacturer. Born on 29 Dec. 1952, he had been a vegetarian since about 1970. Quite early he developed an affinity for soyfoods. He had been enjoying tofu since the early 1970s, when it was only available from Chinatown. He first heard about tempeh in 1975 from a friend in California, then first tasted it in about 1977. In 1979 he began to make tempeh part time at home in Sea Cliff, New York, for himself and a few friends while working as a carpenter and a boat builder. He also sold some of this tempeh to one store, Rising Tide, as a test market.

"In 1980 Werz decided to try making tempeh as a part

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time business. So in October 1980 he founded Appropriate Foods, Inc. He rented a small kitchen (down 2 long flights of stairs in the Bayside Jewish Center) from a friend who was a kosher caterer in Bayside, New York. Commercial production of Tempeh Brothers Tempeh started there in Nov. 1980. When Werz first made tempeh at home and at the temple, he had a partner, David Sibek; friends called them "tempeh brothers." Hence the product name. The only other tempeh sold in the area was that made by The Tempeh Works in Greenfield, Massachusetts.

"In the spring of 1981 Werz and Sibek decided to make tempeh a full-time business. They were distributing their products to about 10 health food stores and making about 20 pounds of tempeh each batch, 200 pounds a week. So they rented an old meal packing plant, complete with tile walls and floor drains, at 137 New Hyde Park Rd., Franklin Square, Long Island, New York.

In Feb. 1982 tempeh production started at the new location, and soon the company had two small distributors in New York. But now there were 12 tempeh brands on the market. In about June the distributors dropped 'Appropriate Foods' products. So they built an insulated box in the back of a pickup truck and began to deliver their own products. From this painful experience Werz learned a key lesson. "In the food business, distribution is everything." If a company does not have control over the distribution of its products, it is extremely vulnerable.

Werz and Sibek quickly realized that they had to expand their product line, so in June 1982 they started making three new products: (1) Tempeh Brothers brand Soyfurters, a cake of tempeh sliced lengthwise into 4 sticks, marinated, and seasoned with liquid smoke, to sort of resemble hot dogs; (2) No Cow brand Soymilk (the soybeans were ground in a motor-driven Corona mill) in plain, cinnamon-honey, and carob-honey flavors; and (3) Tempeh Brothers brand Tempehburgers.

In the summer of 1982 the company added Tempeh Brothers brand Super Tempeh and Soy-Rice-Sesame Tempeh, and dropped the Soyfurters. Dave Sibek left in early 1983."

"In Feb. 1984 Werz and a partner, Shelley Martin, started a second business, The Soy Source, to allow Appropriate Foods to start selling their products, under The Soy Source Brand, to supermarkets. Their first products were shoyu (Japanese-style soy sauce) and tamari (wheat-free soy sauce). The first new tofu product in the new line (launched in Feb. 1985) was Perfect Pasta brand Tofu Tortellini (frozen). The tofu was purchased from Nasoya and the product made by the pasta maker. In Sept. 1985 Vegetarian Gourmet Traditional Pot Pie with Tempeh and Tofu Quiche, both frozen, were added to the new line."

"On 1 Dec. 1986 Appropriate Foods completed its move to a larger building in the East Brooklyn Industrial Park at 292 Liberty Ave., Brooklyn, New York. Production began there in March 1987. In mid-March four new tempehs were launched as gourmet items, with silver and gold labels, under the Emperor's Best Brand: Garbanzo Tempeh (with no soy), Soy & Amaranth Tempeh, Rye-Caraway-Soy Tempeh, and Brown Rice Tempeh (with no soy). A nice article in the *New York Times* (24 June 1987) noted: "Today, with six employees, the company produces about 10,000 pounds of tempeh a month. About half is sold to health food distributors and the rest is delivered to about a hundred stores and restaurants in the metropolitan area.

"As of September 1987 products made under the Appropriate Foods brand include Soy Tempeh, Super Tempeh, Soy-Rice-Sesame Tempeh, Tempeh Burgers, Soymilk, and Tofu Salads. Garbanzo Tempeh and Amaranth Tempeh are sold under the Soy Source gourmet brand. Soy Source is still an independent company with its own books. The distribution arm of the company, called Appropriate Foods Distributing, is trying to broaden its line. The future seems to lie in 'crossover products,' sold in supermarkets."

The company is now one of America's largest tempeh manufacturers. They have developed many innovative tempeh and tofu second generation products. Address: Lafayette, California.

7031. Johnson, Robert. 1987. Costly creation: General Mills risks millions starting chain of Italian restaurants. The cuisine isn't authentic, but people like the food, extensive research shows. Teriyaki in an olive garden. *Wall Street Journal*. Sept. 21.

• ***Summary:*** About the Olive Garden restaurants–which serve (among other things) chicken simmered in teriyaki sauce. Address: Staff Reporter, Wall Street Journal.

7032. Gauger & Silva, Inc. 1987. Ancient Japanese technology comes to the U.S. (News release). 129 Hyde St., San Francisco, CA 94102. 2 p. Sept.

• ***Summary:*** "After 4 years of research and planning, a technology known in Japan since the 8th century has created a new industry for this country. On September 24th, the first tamari brewery ever built outside Japan will be dedicated by San-J International of Richmond, Virginia ... San-J Tamari is the most widely used fermented soy sauce in the U.S. food processing industry. Major food companies, including Campbell's, Hunt Wesson, Stouffer's and General Mills, have discovered the same advantages as consumers–tamari tastes better, extends further, is heat stable, reduces sodium, and is a natural product."

Photos show: (1) A front outside view of the new San-J plant in Richmond, Virginia. (2) The presses inside the plant where the tamari (liquid) is pressed from the moromi (mash). Address: San-J: 2880 Sprouse Dr., Richmond, Virginia 23231. Phone: 800-446-5500 or in VA 804-226-8333.

7033. Hymowitz, Theodore. 1987. The soybean comes to

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Illinois. *Illinois Research* 29(2/3):5. Summer/Fall.
• ***Summary:*** Domestication is a process of trial and error and not an event. In the case of the soybean, this process probably took place during the Shang dynasty (ca. 1700-1100 B.C.) or perhaps earlier. Samuel Bowen brought soybeans from China to Greenwich, his residence in Savannah, the Colony of Georgia. The 450 acres of Greenwich became the center of his farming and manufacturing enterprises. On July 1, 1767, Bowen received patent number 878 for his invention of methods to prepare and make sago powder, vermicelli, and soy sauce from plants grown in America. The soy sauce that he made in Georgia was exported to London.

"In 1851, the soybean was introduced to Illinois by Benjamin Franklin Edwards, the youngest brother of the first territorial governor of Illinois, Ninian Edwards. He obtained the seeds from Japanese fishermen who were rescued at sea by the *Aukland*, which was bringing sugar from Hong Kong to San Francisco, California. Edwards gave the seeds to John H. Lea, of Alton [Illinois], who planted them in his garden in the summer of 1851." Address: Prof. of plant genetics, Dep. of Agronomy, Univ. of Illinois, Urbana, IL 61801.

7034. **Product Name:** San-J Tamari-Lite (Low Sodium).
Manufacturer's Name: San-J International, Inc. (Importer). Made in Japan by San-Jirushi Corp.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 800-446-5500.
Date of Introduction: 1987. September.
Ingredients: Soybean meal, water, salt, alcohol.
Wt/Vol., Packaging, Price: 5 oz dispenser, 10 oz bottle, and 20 oz bottle.
How Stored: Shelf stable.
New Product–Documentation: Interview with John Perelman. 1987. Sept. 15. He notes that Erewhon (made by Kagisa), Arrowhead Mills, and Eden Foods still misuse the term "tamari." Now Westbrae does too. Ad in East West. 1988. June. p. 23. "Pretty amazing stuff. 25% less sodium. Rich taste. Wheat free." Also run as a full-page color ad in Vegetarian Times. 1988. Sept. Inside front cover. And Oct. p. 30. Interview with John Perelman. 1990. Jan. 25. This product is still imported from Japan in drums and bottled in Richmond; the company has not yet installed its desalinization equipment in America, and probably won't until at least 1991.

Two labels sent by Misako Binford of San-J International. 2012. May 14. The white label now reads: "Tamari: Gluten Free Soy Sauce. Reduced sodium. 10 fl. oz. Made with 100% soy." Two logos on the front panel: (1) Non GMO Project verified. (2) Certified Gluten Free. "Contains 28% less sodium than regular tamari." She notes: Product introduced 1987 or before. Imported.

7035. **Product Name:** Sharon's Finest Curry Salad.
Manufacturer's Name: Sharon's Finest. Div. of Rose International (Product Developer-Marketer).
Manufacturer's Address: P.O. Box 2687, Petaluma, CA 94953-2687.
Date of Introduction: 1987. September.
Ingredients: Tofu, soy oil, soy sauce, mustard, spices, citric acid, garlic, onion, sorbic acid, salt.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Talk with Richard Rose. 1987. Nov. 13. Ascorbic acid is used to reduce spoilage (molding). Label. 1987. "A delicious nondairy treat. This Curry Salad conforms to the Diet Center maintenance diet, and provides 1 protein allowance and 1 oil allowance per container. Available only at Diet Centers and selected fine natural food stores. Kosher Pareve."

7036. Snyder, Harry E.; Kwon, T.W. 1987. Soybean utilization. New York, NY: Van Nostrand Reinhold Co. xii + 346 p. Illust. Index. 23 cm. An AVI Book. [381 ref]
• ***Summary:*** Contents. Preface. 1. Production, marketing, and sources of information: Introduction, agricultural production, marketing, sources of information. 2. Morphology and composition: Morphology, chemical composition. 3. Processing of soybeans: Preparation, flaking, expellers, solvent extraction, oil refining, protein products. 4. Quality criteria for soy products: Protein and oil products. 5. Functional properties of soy proteins: Interactions of soy proteins with water, interactions of soy proteins with lipid, foaming, commentary on functionality. 6. Nutritional attributes of soybeans and soybean products: Inherent attributes of soybeans, changes due to processing.

7. Oriental soy food products: Traditional nonfermented soybean food products, traditional fermented soybean food products. 8. Soybean-supplemented cereal grain mixtures: Protein-rich food mixtures containing soy flours, composite flours containing soy flour, cereal blends containing soybeans. 9. Soy protein food products: Baked goods, meat products, dairy products, other foods containing soy protein. 10. Soybean oil food products: Salad and cooking oils, mayonnaise, and prepared salad dressings, shortenings, margarines and related products, soybean lecithin products. 11. Grades, standards, and specifications for soybeans and their primary products: Grades of soybeans, specifications for soybean meals and flours, trading specifications for soybean oils, specifications for lecithins, standards for the use of soy protein products in other foods. References in each chapter. Glossary.

This book is well written (though largely a repetition of previous works) in the area of modern soy protein products. It is weak and poorly researched in the area of "Oriental Soy Food Products," which comprises only 1 chapter (22 pages) of the total, making the book unbalanced. The author of this chapter seems to be almost completely unaware of the many major developments in the Western world during the past 10

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years.

Note the following Korean soyfood terms: Fresh soybean = Put Kong. Toasted soy powder = Kong Ka Ru. Soy sprouts = Kong Na Moal. Soymilk = Kong Kook or Doo Yoo. Yuba (Soymilk film) = no name. Tofu (Soy curd) = Doo Bu. Tempeh (Fermented Whole Soybeans) = no name. Natto = Chung Kook Jang. Soy sauce = Kan Jang. Miso (Soy Paste) = Doen Jang. Fermented tofu (Fermented Soy Curd) = no name. Fermented okara (fermented soy pulp) = no name.

Note: This is the earliest English-language document seen (Dec. 2005) that uses the term "Toasted soy powder" to refer to roasted soy flour. Address: 1. Prof., Food Science Dep., Univ. of Arkansas, Fayetteville, AR; 2. Principal Research Scientist, Div. of Biological Science & Engineering, Korea Advanced Inst. of Science and Technology, Seoul, South Korea.

7037. **Product Name:** Vegetarian Wheat Cutlets (Seitan) [Garlic, Ginger, or Plain]. Renamed Wheatlets.
Manufacturer's Name: Sooke Soy Foods Ltd.
Manufacturer's Address: 2625 Otter Pt. Rd., R.R. 2, Sooke, BC, Canada V0S 1N0. Phone: 604-642-3263.
Date of Introduction: 1987, September.
Ingredients: Ginger. Gluten from organic wheat, water, shoyu (soybeans, wheat, salt), herbs and spices, kombu sea vegetables.
Wt/Vol., Packaging, Price: 225 gm (7.9 oz).
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Calories 124, protein 15 gm, carbohydrates 6 gm, fat 1 gm.
New Product–Documentation: Leviton. 1982. In a Small Bright Building. Talk with and letter from Wayne Fatt. 1988, Sept. 28-29. The business was started in 1980 in a small building in Sooke, a community on the outskirts of Victoria. It has since relocated twice. In May 1988 Wayne Fatt purchased the company from Wayne Jolley, and in July 1988 moved from 2625 Otter Point Rd., R.R. 2, Sooke, BC, V0S 1N0 to a much larger facility at 4247 Dieppe, in Victoria. The company name is unchanged. They now make Wheatlets (seitan, formerly called Vegetarian Wheat Cutlets, launched in Sept. 1987), available in garlic, ginger, or plain flavors.

Label for Wheat Cutlets sent by Wayne Fatt, 1988, Sept. 6 by 4 inches. Self adhesive. Dark brown and white on orange-yellow. The product is now named "Grainwave Vegetarian Wheat Cutlets," made by Grainwave, Sooke, B.C. V0S 1N0.

7038. **Product Name:** [Tofu Ravioli, Tofu Tortellini].
Foreign Name: Tofu–Ravioli, Tofu–Tortellini.
Manufacturer's Name: Tofuhaus Tiefenthal.
Manufacturer's Address: Hauptstrasse 13, D-6719 Lautersheim, West Germany. Phone: 06351-43718.
Date of Introduction: 1987, September.
Ingredients: Tortellini: Dough: Whole wheat grits, water, sea salt. Filling: Smoked tofu, tofu, bread crumbs, walnuts, roasted onions, shoyu, sea salt, and aromatic herbs (basil, Tapenade, parsley, etc.).
Wt/Vol., Packaging, Price: 250 gm vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Leaflet. 1988. "These two products are made using our tofu by the firm G. D'Angelo GmbH in Saarlouis." Form filled out by Albert Hess. 1988, Dec. 1. This product was introduced in Sept. 1987.

7039. Gatins, Joseph. 1987. Varina brewing plant typifies foreign firm sought by Baliles [San-J tamari]. *Times-Dispatch* (*Richmond, Virginia*), Oct. 5, p. 1, 13.
• ***Summary:*** The 40,000 square foot soy sauce brewing plant, located on a 9 acre property in the Eastgate Industrial Park in Varina, is run by San-J International, the U.S. subsidiary of 183-year-old San-Jirushi Corp. located near Nagoya, Japan. When the company was founded in 1804, the Shogun still governed Japan and Thomas Jefferson was President of the United States. Nobuyoshi Sato, Chairman of the Board, and Takayoshi Sato, Senior Vice President, are 7th generation heirs of the founding family.

The sauce is fermented in 10,000 gallon tanks for 6-12 months under strict temperature and humidity controls. The company uses Virginia soybeans and meal from the Midwest. The current strength of the yen against the dollar played a big role in the decision to invest in a U.S. plant according to John D. McLaughlin, the retired Army general who is president of San-J, and Takayoshi Sato, the company's senior vice president. The plant will run at peak capacity with only 20 employees. Top management will be American. A photo shows John McLaughlin and Takayoshi Sato with product.

7040. East West Journal, comp. 1987. Shopper's guide to natural foods. Garden City Park, New York: Avery Publishing Group. x + 204 p. Illust. Index. 28 cm. [66* ref.]
• ***Summary:*** The book from the editors of the *East West Journal* is mainly a series of articles published in *East West Journal* or special articles by individual authors. Contents: 1. Introduction to natural foods. 2. Grains. 3. Breads, pastas & seitan. 4. Vegetables. 5. Sea vegetables. 6. Labeling and standards. 7. Fruits. 8. Seeds & nuts. 9. Beans (incl. tofu, tempeh, miso, azuki). 10. Beverages. 11. Condiments (incl. tamari, shoyu, vinegar, salt, umeboshi). 12. Cooking ingredients. 13. Pressure cookers. Address: New York; Massachusetts.

7041. *East West*. 1987. Natural Foods: The best and worst. 2nd annual awards. Oct. p. 32-36
• ***Summary:*** Only packaged natural foods with nationwide distribution are judged. Best soymilk: Edensoy, but the Tetra Brik package doesn't biodegrade, burn, or recycle. Best sandwich spread: Nasoyanaise by Nasoya Foods. Worst shoyu: Natural shoyu from Erewhon. So heavy it is best

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dispensed with an eye dropper. Best Tamari: San-J. Worst line of fake meat products: Worthington Foods. Worst beans: Honey Baked Style Vegetarian Beans with Miso from Health Valley. Best Miso: Miso Master Mellow White Miso by American Miso Co. for Great Eastern Sun.

7042. **Product Name:** Fred Marken's Private Reserve Soy Sauce
Manufacturer's Name: Fred Marken Inc. (Importer-Bottler). Made in China.
Manufacturer's Address: 1428 Yosemite Ave., San Francisco, CA 94124. Phone: 415-822-4675
Date of Introduction: 1987. October.
Ingredients: Water, wheat, soybeans, salt, 1/10 of 1% sodium benzoate, 1/10 of 1% xanthan gum, 1/10 of 1% potassium sorbate.
Wt/Vol., Packaging, Price: 12 fluid oz bottle with tamper-proof screw-on cap
How Stored: Shelf stable.
Nutrition: Sodium: 90 mg per ½ teaspoon."
New Product–Documentation: Talk with Fred Marken. 1990. Oct. 29. This product was introduced in about Oct. 1987. He now buys soy sauce in bulk from China (PRC) and bottles it himself. He is thinking of building a "soy" plant in America. He recently hired a marketing man from Del Monte and sales are growing rapidly. Label sent by Fred Marken. 1990. Nov. 5. 5 by 4 inches. Self adhesive. Black, red, green, and blue on speckled gray. A color illustration of Mr. Marken is at the top center of the bottle, above which is written "He's not as good looking as Paul but his sauce is great!" "Naturally aged. Reduced sodium." Recipe for Fred's Minestrone Soup. Drawing of an American flag on one side. As of Nov. 1990, this sauce comes with three other Marken sauces in a gift box titled "Fred Marken Sauce and Marinades. Turns plain food into fancy fare. No M.S.G. Low salt." Each bottle has a tamper-evident shrink neck band over the cap/closure

7043. **Product Name:** Fred Marken's Sweet & Sour Sauce.
Manufacturer's Name: Fred Marken Inc.
Manufacturer's Address: 1428 Yosemite Ave., San Francisco, CA 94124. Phone: 415-822-4675.
Date of Introduction: 1987. October.
Ingredients: Pineapple, unsulphured molasses, vinegar, soy (water, wheat, soybeans, salt), tomato paste, high fructose corn syrup, fresh garlic and ginger, sodium benzoate 1/10 of 1% (found naturally in cranberries), 1/10 of 1% potassium sorbate, xanthan gum.
Wt/Vol., Packaging, Price: Bottle
How Stored: Shelf stable.
New Product–Documentation: Talk with Fred Marken. 1990. Oct. 29. This product was introduced in about Oct. 1987. Label sent by Fred Marken. 1990. Nov. 5. 5 by 4 inches. Self adhesive. Green, yellow, black, and blue on speckled tan. A color illustration of Mr. Marken is at the top center of the bottle, above which is written "He's not as good looking as Paul but his sauce is great!" "Original recipe. All natural." Recipe for Fred's Sweet 'n' Sour Meat Balls. Drawing of an American flag on one side and an aerial map-like view of the Hawaiian Islands across the bottom.

7044. Golbitz, Peter. 1987. Soya interview: Gordon Bennett, Westbrae Natural Foods: Soyfoods past, present and future. *Soya Newsletter* (*Bar Harbor, Maine*). Sept/Oct. p. 3, 10-11.
• ***Summary:*** Founded in 1970, Westbrae was built on the premise that healthy food makes a healthy planet. Bennett has been president since 1975. The company now has over 200 products. Soyfoods account for about 35% of sales, down from 50% 1-2 years ago. The company is reducing imports, focusing on American-made foods, and importing Westsoy soymilk from Southeast Asia [actually Vitasoy in Hong Kong] rather than Japan, including a new liter size. Address: Bar Harbor, Maine.

7045. Kingma, Sharyn. 1987. San-J International opens first U.S. tamari brewery. *Soya Newsletter* (*Bar Harbor, Maine*). Sept/Oct. p. 9. See also Natural Foods Merchandiser. 1988. Jan. p. 3.
• ***Summary:*** On September 24 San-J opened the doors to its new $10 million tamari brewery in Richmond, Virginia. The 40,000 square foot plant, which has a capacity of 1 million gallons a year, is the first to produce tamari outside of Japan. The plant will produce San-J Tamari, Tamari Lite, Shoyu, and Teriyaki and Szechuan Sauces. San-J tamari was first imported and introduced to the U.S. market in 1979. The plant will employ 20 people. Perelman notes that the U.S. soy sauce market is the second largest in the world (after Japan) having expanded at 24% a year between 1974 and 1984. Manufacturer sales are estimated at $85 million in 1984 and $91 million in 1985, estimated to grow to $220 million by 1994. With current sales of nearly $100 million, soy sauce is the largest category of soyfoods in the U.S. While Kikkoman has 44% of the U.S. soy sauce market, San-J maintains 75% of the industrial market.

7046. **Product Name:** New Tofu Link Specials (Meatless Hot Dogs with Soy Cheese)
Manufacturer's Name: Light Foods Inc.
Manufacturer's Address: St. Louis, MO 63303.
Date of Introduction: 1987. October.
Ingredients: Water, real Tofu, isolated soy protein, non-hydrogenated vegetable oil, cheddar style soy cheese (fresh soy milk, soy oil, calcium caseinate, fresh tofu, natural flavor, salt, lecithin, citric acid, guar gum, annatto (natural color)), rice syrup, natural spices, salt, beet powder, tamari (natural soy sauce), barley flour, locust bean gum, natural flavors, onion powder, garlic powder, natural spice oils
New Product–Documentation: Poster. 1986. Sept. "Tofu

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'n Cheese Links. Made with Real Tofu and cholesterol free soy cheese. No cholesterol, no MSG, no sugar, no meat." Poster. 1987, undated. "Higher Still .. With natural imitation soy cheddar cheese." Talk with Bob Davis. 1988 March 26. These feature soy cheese, sort of like Oscar Meyer's meat counterpart. Talk with Lauraine Davis. 1988 Aug. 28. These are made with Richard Rose's soy cheese. Leaflet. 1988 April. 8½ by 11 inches. Black on light blue. "On the rise... Now you want a link with no animal ingredients, non-hydrogenated oil, less fat, maybe a rice syrup sweetener instead of honey, and an even better flavor. Introducing the New Tofu Light Links, and New Tofu Light Link Specials, with natural imitation soy cheddar cheese." Leaflet. 1988. April. 8½ by 11 inches. Blue and red on beige. "Higher still..." Gives ingredients for New Tofu Light Links, and New Tofu Light Link Specials.

7047. Murrieta Foundation. 1987. Murrieta Hot Springs vegetarian cookbook. Revised and expanded including Spa Cuisine. Summertown, Tennessee: The Book Publishing Co. 232 p. Color plates. Index. 23 cm.

• ***Summary:*** This is a vegetarian (but not a vegan) cookbook. The index contains listings for 26 tofu recipes, 5 miso recipes, and 2 tamari recipes. There are definitions of "liquid aminos" (HVP), miso, tamari, tempeh, and tofu. Many of the recipes are favorites from the Oasis Restaurant at the Hot Springs, where the three basic lacto-ovo vegetarian diets (as taught by Dr. Randolph Stone, 1890-1982, founder of Polarity Therapy) are The Purifying Diet, The Health Building Diet, and the Gourmet Vegetarian Diet. Address: Murrieta Hot Springs, California.

7048. *Prevention* (*Emmaus, Pennsylvania*). 1987. Amaranth: The color of soy sauce. 39(10): 53-54. Oct.

• ***Summary:*** "Scientists in China have come up with a new use for amaranth: as a natural coloring in soy sauce. Amaranth is a high-nutrition originally grown by the Aztecs. It requires less moisture than corn and wheat." Chinese scientists mixed dark-seeded amaranth with soybeans to produce a naturally dark-colored soy sauce. For more information about amaranth, contact the Rodale Research Center, R.D. 1, Box 3232, Kutztown, Pennsylvania 19530.

7049. Shenoy, N.R.; Choughuley, A.S.U. 1987. Nitrosamines in some Indian brands of soya sauce samples treated with nitrite. *J. of Food Science and Technology* (*Mysore, India*). 24(5):214-16. Sept/Oct. [11 ref.]

• ***Summary:*** Nitrite treatment of soy sauce led to the formation of at least 3 known carcinogenic nitrosamines, namely nitrosodimethylamine (NDMA), nitrosodiethylamine (NDEA) and nitrosopyrrolidine (NPY). However certain antioxidants contained in soy sauce containing meal may offer protection against nitrosamines in the diet containing soy sauce. Address: Bio-organic Div., Bhabha Atomic Research Centre, Trombay, Bombay-400 085, India.

7050. Shurtleff, William. 1987. History of White Wave, Inc. Lafayette, California: Soyfoods Center. 11 p. Oct. Unpublished manuscript, based on interviews with Steve Demos from June 3 to Oct.

• ***Summary:*** A detailed history of this pioneering, very creative, and rapidly growing company. Contains production and sales statistics at each major phase of growth. Early days: White Wave was founded and started making tofu in September 1977 by Steve Demos in Boulder, Colorado.

Born on 24 April 1949 in Philadelphia, Pennsylvania, Demos attended Bowling Green State University in Bowling Green, Ohio, majoring in political science and philosophy and graduating in the fall of 1970. He was introduced to tofu in the summer of 1970, when he was traveling in a van in northern California with a friend, who bought some at an Oriental food store. Demos found it to be a good source of protein, and liked the flavor.

Right after graduation Demos took two trips to India. During the first in 1971, with Pat Calhoun, he became a vegetarian after witnessing the meat bazaar in Afghanistan. In early 1972 he took a longer trip to India, again with Pat Calhoun. It included 10-day Buddhist meditation course with a teacher from Burma, Goenka, who became his spiritual teacher. He also lived for 1-3 months in a cave near Rishikesh (in the foothills of the Himalayas in northern India), doing Hatha Yoga and meditation. There were monkeys in the forest trees, tame peacocks, a stream 10 yards in front of the cave that dropped into a bathing pool, and many sadhus (Indian holy men) practicing in other caves nearby. Then in 1974 he started a health food store [named Touch the Earth] in La Haska, Pennsylvania, where he grew acquainted with many new foods such as miso, sea vegetables, and *gomashio* (sesame salt). After 9 months he sold the store and returned to India again. He was now actively involved in meditation.

After that trip, Demos started living on the East Coast in New Hampshire. By 1974 he began buying tofu in Boston, Massachusetts, then made it a few times in the kitchen and used it in cooking for a yoga studies group, which had purchased a farm. He was in charge of food and he had learned how to make tofu from the *Ten Talents* cookbook. In March 1976, after a trip to India, he was in Santa Barbara, California, at a 76-day meditation retreat with teacher Robert Hover. He made tofu, starting at 4:00 each morning in a commercial kitchen, for 100-150 people, using *The Book of Tofu*. During this retreat Demos conceived of and developed the idea of starting a tofu company, including the name and logo. Three months later he found himself, a hippie with long hair, in Boulder, Colorado. He had an idea but no capital, and was living on food stamps. By good fortune he met a man named Anton Rogers (a talented architect and builder), who loaned him $2,000 startup capital, after having known

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him less than a month. So in the summer of 1977 Steve began buying equipment for making tofu. His new company was not yet officially established or registered–though he probably opened a checking account at a local bank.

Demos started making tofu at White Wave on 27 September 1977. "At 11:30 a.m. I sold my first block. I'm staring at the astrological chart which sits next to my desk. That was when I translated the effort to a dollar." The company began as a sole proprietorship, located in very small (300 square foot) rented quarters at 1738 Pearl Street in Boulder, Colorado. The front one-third of the shop was used for a retail deli and the back two-thirds for food production. From day one, the tofu was made from organically-grown soybeans. Each 14-ounce block of tofu was sold, floating in water, in Chinese food take-out cartons. For details on White Wave's early use of organically grown soybeans, see SoyaScan interview with Steve Demos (Aug. 1998). The first batch of tofu was used to feed the participants in a ten-day meditation retreat in Boulder.

One direct competitor was the Spinning Kitchen, which had started 9 months earlier, in about January 1977. They had the Boulder market locked up when White Wave started.

White Wave had three products from the opening day: Nigari Tofu, Black Walnut Mushroom tofu, and Lemon Herb tofu. The latter two innovative flavored tofus were made by mixing the natural flavorings into curds at a specific point before pressing. Shortly White Wave expanded into making sandwiches, which led to salads, drinks, pies, cakes, and muffins. One of the first stores in Boulder to sell Steve's tofu was Green Mountain Granery, owned and run by Bruce Macdonald. Pat Calhoun (formerly Demo's wife), arrived in December from the Pacific Coast Bakery in California, bringing all their recipes. Recipes for baked goods (such as cinnamon rolls and cookies) were adapted.

By early 1978 soymilk (plain, honey-sweetened, or carob-maple) was introduced, sold out of a jet spray juice cooler or in quarts, and also used to make Coconut Cream Pie and Tofu-Agar Pies filled with various fruits (apples or whole strawberries, peaches, or blueberries). At about the same time the okara from the tofu started to be used to make one of America's earliest brands of Soysage. This spicy Vegetarian Soysage (shaped like a sausage) was distributed with the tofu. Before long White Wave was making a host of delicious and innovative tofu deli products which were sold only at the Pearl Street deli. These included Macro Pizza with Tofu, Mexican Entrees, Okara Granola, and Tofu Dogs and Sauerkraut (very firm tofu cut into long rectangles and marinated broth). Soy Sannies (Miso-tahini Sandwiches) were also sold at nearby health food stores.

To help attract customers, the deli also sold an assortment of then largely unknown food products: 10-15 varieties of Japanese and American miso, many sea vegetables, shoyu, kudzu, umeboshi plums, and the like, many of the same products Demos had sold 4 years earlier at his health food store in Pennsylvania. Most of these were of great interest to macrobiotic devotees, though Steve had little personal interest in that subject.

Tofu was quickly recognized as a tremendously versatile, all-American ingredient. Now new people started coming into the company. Some were cooks and they helped to develop new products. In 1978 White Wave began to distribute a number of its most popular deli-type products to other retailers. These were among America's earliest commercial second generation tofu products: Missing Egg Salad (America's first, named by Trudy Stuart), Tofuna Salad (Vegetarian Tuna Salad), and Tofu Turnovers (with spinach and feta cheese filling). Other innovative second generation products sold or used only at the Pearl Street deli included Tofu Treats or Creamies (in banana-coconut, peanut-carob, or carob mint flavors), Miso Salad Dressings (hearty or mellow), and Tofu Mayo (eggless mayonnaise used in the Missing Egg Salad). Address: Lafayette, California

7051. Shurtleff, William. 1987. History of White Wave, Inc. (Continued–Document part II). Lafayette, California: Soyfoods Center. 11 p. Oct. Unpublished manuscript, based on interviews with Steve Demos from June 3 to Oct.
• ***Summary:*** Continued. At the same time White Wave started making nut and seed products in the same little shop, starting with gomashio (sesame salt), tamari-coated sunflower seeds and almonds, and nut butters.

Just a year after opening, White Wave was forced to expand out of the tiny Pearl Street shop by the demand for its deli products from outside retailers, such as Arati and other natural food stores in Boulder. Demos recalls:

"We acted with very little foresight. It was more like 'What do you want to do today? Let's make something new.' Finally we couldn't get out the front door. We had to step over the top of buckets of tofu, presses, and boxes used to deliver our little Chinese fish cartons of tofu, stacked up so high we couldn't see out the window. It was chaotic. We were making money and business was booming, but we were only paying ourselves $1.42 and hour."

On 28-30 July 1978 a meeting of tofu manufacturers from across the USA was held in Ann Arbor, Michigan. The meeting was organized by Steve Fiering, Jerry MacKinnon (plus coworkers at The Soy Plant) and Bill Shurtleff, and hosted by The Soy Plant. Steve attended this historic meeting, and ended up rooming with Tom Timmins, head of the New England Soy Dairy. "I thought I was rooming with one of the idols of the industry. Just by virtue of association, I was going to do well." At this meeting the Soycrafters Association of North America (SANA) was established, with Larry Needleman as executive director of the new trade association. Steve was elected to be one of six members of SANA's steering committee. Various photos of the meeting show Steve, with long hair and mustache, leading and participating in the discussions. A yellow lined sheet titled

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"Tofu Sales" was circulated to all attendees. Steve wrote that White Wave was making medium-firm bulk and packaged tofu, which wholesaled for $0.65 and $0.74 per pound, f.o.b. plant. Several days after the Ann Arbor meeting, William Shurtleff and Wataru Takai visited Demos, and saw how he made tofu at his tiny shop on Pearl St. in Boulder. They sampled and enjoyed the various creative offerings in the deli, and Shurtleff took home a label from each product.

At Walnut Street. In September 1978, after just a year at Pearl Street, the tofu company had long since outgrown its minuscule 'back room' space. So manufacturing operations were moved to a 3,000 square feet converted warehouse at 3869 Walnut Street. It felt like they had moved into a castle, with ten times as much space. Now there was great pressure to expand the business to use up the extra space. The company began to make new products (such as tempeh, ice cream, and new deli foods) and look for new markets.

The deli remained at Pearl Street, and was given a new name, The Cow of China (a term from *The Book of Tofu*). The name "White Wave" was reserved for the tofu manufacturing company. But there was only one set of books, under White Wave. The company now changed to a partnership, with seven equal partners, all active. Demos was president and Pat Calhoun did the bookkeeping, and only these two were interested in meditation.

Right after the move, to announce The Cow of China as a retail outlet and its vegetarian deli products, Demos did his first real advertising, using three charming posters. The first read: "White Wave Through the Cow of China Offers Food from The Kingdom of Plants. We make it all here in Boulder. 100% Dairyless." It then listed 14 soyfoods plus some non-soy desserts, almond-, cashew-, and peanut butters, and tahini. A second poster showed a soybean, with head, tail, and legs like a cow and dotted lines to delineate the choice butcher cuts. But instead of rump roasts and flank steaks were Soysage, Miso Dressings and the like. A third showed Jack, standing under a giant beanstalk, about to trade in his cow for the magical beans at which he is gazing in wonder. The caption: "We've got an alternative. White Wave Soy Dairy." The latter two posters were used as catalog advertisements with a growing number of natural food distributors.

The tofu plant now consisted of an open kettle, VCM grinder, and hand press for the curds on the end of a swinging levered bar. White Wave started to deliver product to some Denver health food stores and in late 1978, not long after the move to Walnut Street, they landed their first supermarket chain, King Soopers supermarket chains, which began to order 100 cases. As business expanded, so did the need to improve packaging and marketing, and to control costs.

New packaging. White Wave couldn't get its tofu into supermarkets unless it was sold in water-packed film-sealed plastic tubs (trays); the Chinese carry-out food/fish cartons were not acceptable. So Demos bought a little hand-packing machine that allowed one person to pack one block of tofu at a time in water in a plastic tray, then seal the tray with a film lid. Steve remembers first using this machine at the Walnut St. plant. Initially, he would seal the tofu tray with clear, unprinted film, then run one of their oval labels (the one with a hint of green color in it, used previously on the Chinese cartons) through a gluing machine (which was less expensive than buying pre-glued labels), and slap the label on the clear plastic film. This was White Wave's "first true commercial mass market package." The new marketable package led to many new accounts. After King Soopers the company got into the City Markets chain, then about a year later into Safeway, followed by a host of other chains in outlying areas. As business expanded, White Wave could afford pre-printed film labels for its tofu in plastic trays. The label design, though rectangular, was basically the same as the old oval. The ingredients new read: "High protein soybean cake contains: Soybeans grown without the use of herbicides or pesticides, filtered water, and nigari (salt bitterns). No more no less!" Soon a variety of textures were available: Extra firm press, firm organic, extra firm, and sift.

New sources of soybeans: White Wave had made its tofu from organic soybeans from day one. When the company first moved into Walnut Street, they were still buying these soybeans from Green Mountain Grainery in Boulder. But in the fall of 1978 Steve drove to a meeting of the Organic Growers Association in Iowa. He spoke about the demand for organic soybeans and met Marvin Kurpkeweight, who was already growing soybeans organically in eastern Nebraska. Steve visited Marvin's farm and contracted with him to buy organic soybeans direct from the farmer. Address: Lafayette, California

7052. Shurtleff, William. 1987. History of White Wave, Inc. (Continued–Document part III). Lafayette, California: Soyfoods Center. 11 p. Oct. Unpublished manuscript, based on interviews with Steve Demos from June 3 to Oct.

• ***Summary:*** Continued: White Wave's tofu production was growing nicely. It rose from 120,000 lb. in 1978 (2,308 lb/week), to 179,000 lb. in 1979 (3,442 lb/week, up 49%), to 279,000 lb. in 1980 (5,365 lb/week, up 56% over 1979).

In February 1979 a major new product line was started: tempeh. Chip McIntosh was the first tempeh maker, followed by Chris O'Riley. An old kitchen refrigerator, warmed by light bulbs, was used as the incubator. The first two products were Soy Tempeh and Soya Rice Tempeh, the latter being America's first multi-ingredient, soy-and-grain tempeh.

At about the same time, a third new product was launched: Polar Bean. It was a soymilk based non-dairy frozen dessert, made in a soft serve machine but sold in hard-pack pints. The first flavor was Banana-carob. Later strawberry, chocolate, carob mint, and orange flavors were added. In about 1984 a soft serve version called Polar Softie

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was introduced but did not prove successful.

Also in 1979 Richard Leviton visited White wave and the Cow of China, and did an in-depth study of their operations and products, published in the 1979 issue of *Soycraft* magazine. Soyfoods sold both at "The Cow" and for wholesale distribution to other retailers included: Organic Nigari Tofu, Soymilk (Honey-Vanilla or Carob-Maple), Soysage, Tempeh, Missing Egg Salad, Tofu Mayo, Baked Savory Tofu Cutlets, Sweet Bean Tofu Pie, Miso Salad Dressings (Mellow or Hearty), and Tofu Treats or Creamies (Banana-Coconut, Peanut Carob, or Carob-Mint: squares of creamy baked tofu blend on a healthful oats-coconut-flour crust).

Other ready-to-eat items sold only at "The Cow" included Soysage Pate, "Macro" Pizza (with tofu), Tofu Spinach Dill Turnovers, Tofu Cinnamon Rolls, Hot Tofu Meatballs and Meatball Sandwiches, Sloppy Joe Sandwich (made with TVP), Tofu Cream Cheese & Black Olive Sandwich, Tofuna Sandwich (like tunafish), Strawberry Tofu Pie, Soy Sesame Bars, and Tofu Butternut Squash Pie. In mid-1979 bulk recipes for about ten of these products were published, with permission, in *Tofu & Soymilk Production* by Shurtleff and Aoyagi.

Leviton noted: "The Cow of China is surely one of the nation's most ambitious and energetic soyfoods companies." It was just about breaking even with weekly gross retail sales of $1,000, three-fourths of which came from soyfoods. Concerning the growth of the still totally unmechanized little company Demos, now the self-styled "beneficent dictator," always frank and candid, added:

"It was a hell of a struggle, especially for an undercapitalized small business. But I certainly wouldn't discourage anybody because we started with nothing, and we've been going since then, and we've been able to make it all meet. We've just rigged, we've improvised, we've done everything imaginable, as I'm sure many other people in this industry have. We cut our salaries back, we did without a lot, but its own momentum kicked in. I suppose we consider ourselves alchemists in turning sweat into money. So, let me express my gratitude to everybody and everything, seen and unseen, who have helped us pull this together."

In August 1979 Gary and Chandri Barat arrived in Boulder and spent several days studying the Cow of China. They had met Demos at the Second Annual Soyfoods Conference in Amherst, Massachusetts (July 26-29, 1979). They were driving around the country, studying tofu and developing a business plan in preparation for starting a soyfoods company, which later became Nature's Inn, then Legume. As they studied The Cow of China and Demos invited them for dinner several times. He and his wife, Ginny, served a tofu spinach feta pie and mushroom caps stuffed with tofu. Later Barat told Demos more than once how much this visit has influenced him in starting a company based on tofu entrees. The lineage of Legume's early products (Tofu Cream Pies, Tofu Spinach Pies) can be traced back to The Cow of China.

Barat encouraged White Wave to do a feasibility study on converting The Cow of China into a fast food restaurant named The Family Diner and moving into a vacated A & W root beer stand three blocks from The Cow in a very attractive location. The study was done, a potential menu was developed, bu financial backing did not come through.

A White Wave catalog published in December 1979 included several new products: Doufu (extra firm Chinese style tofu), Savory Baked Tofu, and Tamaried Nuts and Seeds (Almonds, Cashews, Spanish Peanuts, Sunflower Seeds, Nut Mix).

The Cow of China deli was doing well. By February 1980 sales were $1,700 to $2,000 a week and there were often lines out the door. By the summer of 1980, according to *Soyfoods* magazine, the Cow of China had been renamed the Good Belly Deli, with the slogan "Real Food, Real Fast" and White Wave was producing 7,500 pounds of tofu and tofu products a week. The new deli, an expanded and Americanized version of "The Cow," continued to serve as an excellent showcase for the White Wave's innovative ready-to-eat soyfood products. Working with a friend who was an advertising agent, Demos had dropped the line of assorted health foods (miso, sea vegetables, etc.), expanded the deli items, and installed a stand-up counter bar to eat at and a few tables and chairs. Formerly it had been all takeout. Hot and cold fast food was served. The deli attracted lots of business (there was still usually a line out the door), the products were very innovative and they were praised by the natural foods community in Boulder. Address: Lafayette, California.

7053. Shurtleff, William. 1987. History of White Wave, Inc. (Continued--Document part V). Lafayette, California: Soyfoods Center. 11 p. Oct. Unpublished manuscript, based on interviews with Steve Demos from June 3 to Oct.
• ***Summary:*** Continued: First, he laid off all managers (who were not producing day-to-day results). Future plans were put on hold.

In October 1984 Jason Bois, who had been around the health food business for many years, approached White Wave to discuss having White Wave make him a soft serve soy ice cream. Demos advised against soft serve, but when Bois persisted, Demos developed a new soft serve formula for him, containing tofu and spray dried soymilk. Launched in January 1985 and marketed under the name Tofruzen, they failed within four months, for lack of a market. Bois quickly returned to Demos and beseeched him to develop Tofruzen in hard pack pints so that Bois could use these products to raise equity capital in a public stock offering. Demos had all the hard-pack formulas for Tofruzen developed in 30 days, using an improved version of his Polar Bean as the base mix but with totally new flavors (chocolate, strawberry,

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vanilla-almond). After Tofruzen launched the new products mid-1985, they realized that they didn't really own anything. So Demos, with some unexpected luck and seeing a way to bring in new cash quickly, proposed Tofruzen buy the title to the formulas for $25,000 cash, plus $25,000 in 6 months, plus interest. And White Wave would have an extensive supply contract. Tofruzen agreed.

In December 1985 Tofruzen, Inc. raised $1.6 million net in a public stock offering, and at that time paid White Wave its first cash. Tofruzen Bars followed in May 1987 and low-calorie Tofruzen Light in August. Once Demos saw that Tofruzen would be a successful product, he downplayed marketing of his Polar Bean. Tofruzen sales rose from $91,000 in fiscal 1986 to $158,000 in 1987.

Shortly after Karplus left, White Wave started selling its tofu in a colorful box. Karplus served as an agent to negotiate with advertisers and designers. The new package helped sales.

In mid-1985, to consolidate its business focus and bring in more cash, Demos sold White Wave's nut butter business to an employee for $35,000. White Wave retained 5% interest in the company, which is now called Naturally Nuts.

To turn the tide of loosing money and get some badly needed breathing space, Pat Calhoun came up with a plan where she and Demos would call all the creditors and say, "Either we file bankruptcy or you allow us to pay off our debts to you over a one year period." All creditors agreed to this plan.

In July 1985, the moment of truth, the turning point, arrived. The company was $100,000 overextended (60 days behind in payments) and could not borrow money. Everyone was disheartened. Demos and Calhoun started regular sitting meditation again, recommitting himself to spiritual practice as central and profitability as essential. He recalls, "Once I got my priorities straight, things started to go well." Within 90 days White Wave had started to generate a positive cash flow. By mid-1986 the $100,000 debt had been paid off, and White Wave was once again accumulating cash and savings.

Heady with the feeling that he could save a struggling small company, transforming it into a winner, Demos decided to try his approach on another company, Soyfoods Unlimited, a major tempeh manufacturer, which he had been offered an opportunity to buy. Having started tempeh production in February 1981 in San Leandro, California, and grown to be America's third largest tempeh manufacturer by 1984, Soyfoods Unlimited was now heavily in debt. White Wave didn't have any extra money, but the offer made sense as a way to get distribution for White Wave products in California and the West Coast, and to increase production volume. So on 1 December 1986 White Wave made its first acquisition. The buyout took place over a period of time, with some cash down. By mid-1987 Soyfoods Unlimited had been turned around and was a profitable, wholly owned subsidiary. White Wave owned all the stock and had signed a supply agreement with Soyfoods Unlimited to supply them with everything. This acquisition, with all tempeh production for both brands done at White Wave in Boulder, helped boost weekly output to 17,000 lbs. a week by the fall of 1987, making White Wave the biggest tempeh manufacturer in the USA. Growth of tempeh was strong and its future looked very promising.

White Wave has long been one of America's most innovative tempeh companies, in part because of its faith in the potential and future of tempeh. Tempeh continued to be the company's most profitable product. During 1985-88 the tempeh line was expanded with a number of original and delicious varieties: Quinoa (6/85), Lemon Broil (10/86), Amaranth and Sea Veggie (both 3/87), Peanut Sesame (3/88), and Teriyaki Burger (8/88). These also gave his product line more shelf space, a key consideration.

At King Soopers and Safeway, White Wave now had three shelves with tofu and tempeh right in the middle of the dairy section.

Tofu production was also strong, averaging 15,000 lbs. a week in mid-1987. A future high priority was the plan to pasteurize their tofu to give longer shelf life. After several years of selling tofu vacuum packed in a box, White Wave introduced a water pack without the box for the Asian-American market and some Caucasians since they are not used to the vacuum pack, and they prefer softer tofu, which cannot be vacuum packed.

By mid-1987 White Wave was back into high gear and growing nicely. Their space grew from 6,000 to 20,000 square feet. White Wave was one of the few Caucasian-run soyfoods companies that has been able to grow without selling most of the company. Demos' family has supported him to a large degree. He had borrowed roughly $25,000 from friends and family. The company still owed one-third on its SBA and Mountain High loans, and some to family. Assets were now about $300,000 and liabilities are $200,000. Since May 1987 White Wave had money in the bank and a growth rate above 30%. The 1987 sales projection was $2 million, of which 8-14% was expected to be profit.

In December, projected revenues for 1988 were $3 million. The company was in the midst of a private placement offering for $500,000 and the banks had approved equipment loans for $600,000. They have put in a bid to purchase an old (built in 1978) meat processing house on 2.4 acres in Boulder.

The Future. New products to be launched in 1989 include several meat analogs (tofu hot dogs/franks, due in March, aimed at the mainstream market concerned with cholesterol) and a soy yogurt.

Demos has set a number of goals for White Wave. First, to become the major primary soyfoods ingredient manufacturer in the region, and to maintain a profit margin of at least 10%.

Second, to make the concept of a clearly delineated and

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identified "Soyfoods Section" in the dairy case, succeed at King Soopers and Safeway. Set off with plastic dividers between yogurt and milk products, the section would be filled out with second generation soy products. This new concept would allow him to compete with larger tofu manufacturers (such as Azumaya and Hinode) who are lower priced but sold in the produce section. Address: Lafayette, California.

7054. Tsuji, R.F.; Hamano, M.; Koshiyama, I.; Fukushima, D. 1987. Conditioning of meat with raw soy sauce and its proteinases. Their effects on the quality of beef. *J. of Food Science* 52(5):1177-79, 1185. Sept/Oct. [22 ref. Eng]
• ***Summary:*** Raw soy sauce added to beef during tenderization improved its sensory quality. A serine proteinase was most involved in the degradation of both myofibrils and collagen. Address: Food Science Research Lab., Kikkoman Corp., 399 Noda City, Chiba 278, Japan.

7055. Ushijima, Shigeomi; Nakadai, T.; Uchida, K. 1987. Improvement of enzyme productivities through mutation or haploidization of heterozygous diploids obtained by protoplast-fusion of *Aspergillus sojae*. *Agricultural and Biological Chemistry* 51(10):2781-86. Oct. [31 ref. Eng]
• ***Summary:*** A new breeding process for *Aspergillus sojae* involving protoplast fusion was undertaken to obtain desirable koji moulds with better enzyme productivity for soy sauce production. A pair of double marker mutants derived from genealogically unrelated *A. sojae* cultures were fused. Ultraviolet treated and stable heterozygous diploids were obtained. Address: Soy Sauce Research Lab., Kikkoman Corp., Noda 278, Japan.

7056. **Product Name:** [Sour Marinated Deep-Fried Tofu]
Foreign Name: Essig Age.
Manufacturer's Name: Yamato Tofuhaus Sojaprodukte GmbH
Manufacturer's Address: Rittweg 11/1, D-7400 Tuebingen–Hirschau, West Germany. Phone: 7071-71094.
Date of Introduction: 1987, October.
Ingredients: Incl. deep-fried tofu pouch, vinegar, soy sauce, spices.
New Product–Documentation: Talk with Klaus Gaiser, President of Yamato, 1990, March 12 and May 8. This product was introduced in about 1987. "Age" is written Japanese style with no acute accent over the e. It was marinated in vinegar, soy sauce, and spices. This product was one of the first 2 products introduced after the move to Hirschau, along with Hirschauer Laible.

7057. **Product Name:** [Fried Tofu Marinated in Soy Sauce and Spices].
Foreign Name: Hirschauer Laible
Manufacturer's Name: Yamato Tofuhaus Sojaprodukte GmbH.
Manufacturer's Address: Rittweg 11/1, D-7400 Tuebingen–Hirschau, West Germany. Phone: 7071-71094.
Date of Introduction: 1987, October.
New Product–Documentation: Talk with Klaus Gaiser, President of Yamato, 1990, March 12 and May 8. This product was introduced in about autumn 1987. The tofu was first marinated in soy sauce and spices, and then deep-fried.

7058. *Toyo Shinpo* (*Soyfoods News*).1987. Shôyu no teien-ka junchô. Kadai wa fûmi no sonshitsu kaizen [The change over to lower salt shoyu is going smoothly. The task is to keep it from losing its flavor]. Nov. 11. p. 13. [Jap; eng+]
• ***Summary:*** In 1984, 1,200,000 kl (kiloliters) of shoyu were produced (0.5% more than in 1983). But in the past 5 years, shoyu production has averaged between 1,180,000 kl and 1,200,000 kl, meaning that production has stabilized. Low salt shoyu (called variously usujio, amajio, or asajio) has 5-8% lower salt content than regular shoyu (about 17%). The production of low salt shoyu in Japan over the last 5 years was as follows: 1980, 4,000 kl; 1981, 11,000 kl, 1982, 14,000 kl; 1983, 15,000 kl; 1984, 17,000 kl. Comparing the 1984 amount per capita with the 1980 one, one finds that shoyu consumption has decreased by 8% (although in 1984, the figure increased 2.4% from 1983). Also, the percentage of the family expenses for seasonings (chomiryo) spent on shoyu decreased from 11.1% in 1980 to 9.5% in 1984.

A comparison study revealed that in 1975 the average salt content of shoyu in Japan was 17.6%. This decreased to 17.1% in 1979 and to 16.6% in 1984. The same study showed that shoyu containing 16% salt held 10% of the market in 1975, increasing its hold to 23% in 1979, and rose to 31% in 1984. Shoyu with 17% salt had 28% of the market in 1975, 35% in 1979, and 34% in 1984. High-salt shoyu (18%) had 41% of the market in 1975 but fell to 26% in 1979, and to 14% in 1984. The reasons for this trend include health concerns and the fact that the Japanese people are eating a lot of instant or prepared foods, meaning that they are eating less home cooked foods and therefore are using less shoyu.

Sales have changed from regular shoyu used in home cooking to the second generation shoyu products like tsuyu & tare. It is a a difficult task to make low-salt shoyu without having the shoyu lose its flavor. If the flavor is lost, people will use shoyu even less than the present rate. The 2 techniques used to remove some salt from the shoyu both have the problem of causing the loss of flavor or balance of flavor.

7059. Hymowitz, Ted. 1987. Present research on soybeans (Interview). *SoyaScan Notes*. Nov. 13. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1. Plate tectonics. The distribution of the genus follows the plates. The wild Glycine is not found east of the

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Andesite line. This research aims to show the ancient place of origin of the soybean before domestication. Lots of field research is involved, collecting in Oceania and Southeast Asia, plus study of botanical literature. Plans to collect in Taiwan and the Ryukyus. 2. Dissemination of the soybean in Illinois after its introduction by Dr. Benjamin Franklin Edwards. 3. Trading between Sweden and China in early days. Address: Dep. of Agronomy, Univ. of Illinois.

7060. Westbrae Natural Foods. 1987. Distributor catalog, FOB pricing. Nov. 15, 1987. Fall. Emeryville, California: Westbrae. iv + 19 + [12] p. 22 by 28 cm.
• ***Summary:*** On the cover, the lettering is in black on a tan background. Pages i-iv are general information, 1-10 are a computer-printed price list, and 11-19 are a product glossary. There are also 1-page, single-sided inserts (sell sheets, many in full color) of various Westbrae products. Address: Office: 4240 Hollis St., Emeryville, California 94608; Mailing: P.O. Box 8711, Emeryville, CA 94662. Phone: (415) 658-7518 (orders).

7061. Barrett, Mariclare. 1987. Soyfoods almanac. *Vegetarian Times*. Nov. p. 35-38, 40. [3 ref.]
• ***Summary:*** An overview and introduction to tofu, tempeh, miso, soy sauce, etc., with summary of some new developments. Photos show Betsey Shipley & Gunter Pfaff, Jan Belleme, Henry Ford wielding axe against trunk of car made of soybeans.

7062. **Product Name:** Shoyu Soy Sauce.
Manufacturer's Name: Community Foods Ltd. (Importer). Made in Japan.
Manufacturer's Address: Micross, Brent Terrace, London NW2 1LT, England. Phone: 01-450-9411.
Date of Introduction: 1987, November.
New Product–Documentation: Simon Bailey. 1988. Natural Choice. Aug. 15. "Soya-Based Products." A photo shows the Label.

7063. Eden Foods, Inc. 1987. Product description. Eden Foods quality natural foods. 701 Tecumseh Rd., Clinton, MI 49236. 21 p. Plus 6 pages of inserts. Catalog.
• ***Summary:*** The catalog lists the following soyfoods: Edensoy (Original, Vanilla, Carob; shown on page 1: "Edensoy is the best tasting, best selling, best made natural soymilk on the market"), black soybeans (they "have a hearty yet sweet taste. In Japan, black soybeans are always prepared for the New Year's celebration as they are a symbol of health."), organically grown soybeans (usually Corsoy or Amsoy), Eden tekka ("a hearty, nutritious condiment made from hacho miso, carrots, burdock, ginger root, and unrefined sesame oil; 2 8 oz), dried tofu (actually dried-frozen, 5.8 oz), barley (mugi) miso, brown rice (genmai) miso, buckwheat (soba) miso, light (shiro) miso, rice (kome) miso, hacho (100% soybean) miso, natto miso "Kinzanji," shoyu, organic shoyu, low-sodium shoyu, wheat-free tamari, tamari-roasted nuts and seeds wheat free (pumpkin seeds, sunnies [sunflower seeds], almonds, cashews, mixed nuts), and Lima Tempeh.

Some interesting non-soy foods listed in the catalog include quinoa (16.2% protein), kudzu-kiri, kudzu root starch, adzuki beans, mochi (100% brown rice, with mugwort, or with millet), sea vegetables, organic amazake, barley malt syrup, and Lima seitan.

In the spring of 1986, Eden Foods became General Agent for North America for the Lima Company of Belgium. Lima soyfood products include Lima Tempeh. Note: This catalog was still in use in Jan. 1989. Address: Clinton, Michigan. Phone: 517/456-7424 or 800/248-0301.

7064. **Product Name:** Tofu Classics: Mandarin Chow Mein, Creamy Stroganoff, or Shells 'n Curry (Pasta and Sauce Mixes).
Manufacturer's Name: Fantastic Foods.
Manufacturer's Address: 106 Galli Dr., Novato, CA 94949. Phone: 415-883-7718.
Date of Introduction: 1987, November.
Ingredients: Mandarin Chow Mein: Whole wheat Oriental noodles, dehydrated vegetables (onions, carrots, peas, red pepper, green onions, garlic, parsley), corn oil, powdered yellow miso (soybeans, rice, salt), hydrolyzed vegetable protein, whole wheat flour, dried yeast (molasses grown), toasted sesame oil, powdered soy sauce (soybeans, wheat, salt), spices, rice syrup powder, vinegar powder.
Wt/Vol., Packaging, Price: 4 oz (113 gm) paperboard box. Retails for $1.65 (5/90, California).
How Stored: Shelf stable.
New Product–Documentation: Note: This product does not contain any tofu, it must be added. Ad in Natural Foods Merchandiser. 1987. Nov. p. 50. "Introducing... Tofu Classics. One pot cooking. Ready in less than 20 minutes." Dec. p. 16. "New Tofu Classics Take You Out of the Kitchen and Around the World." Also run in 1988. Jan. p. 40. Ad in Vegetarian Times. 1988. May. p. 11.

Label sent by Claire Wickens. 1990. May 30. 4.5 by 6.5 by 1.25 paperboard box. Tan, green, orange and red on beige. On the front panel is a photo of a a white plate containing the finished tofu and pasta, plus a small insert photo of a package of water-packed tofu. "Add ½ pound firm tofu. All vegetarian. All natural." On the back is a pastel drawing of a Chinese person carrying two baskets on a shoulder pole by a lake. "One pot cooking. Ready in 7 minutes. Fantastic Foods' *Tofu Classics* are adaptations of favorite dishes from around the world, designed to enhance tofu cookery. We provide wholegrain pasta and a delicious sauce–you add tofu." Inside is a poly bag with short lengths of pasta and dried peas, diced carrots, etc.

Tofu Classics product with Label purchased at Open

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Sesame in Lafayette, California. 1998. Jan. 10. Mandarin Chow Mein, design copyright 1994. Price $1.89. Shells 'n Curry, design copyright 1994. Price: $1.89.

7065. Goldbeck, Nikki; Goldbeck, David. 1987. The Goldbeck's guide to good food. New York, NY: New American Library. xi + 563 p. Illust. Index. 24 cm.
• ***Summary:*** The all-new version of their *Supermarket Handbook*, which originally sold 850,000 copies. Chapter 12 (p. 143-51), titled "Soyfoods: World Class Protein," discusses tofu, frozen tofu, tempeh, soy flour and grits, high-tech soy (soy concentrates and isolates), textured soy protein products. There is also considerable information on soyfoods in other chapters throughout the book: Soy flour (p. 79). Soy nuts (p. 159, 163). Soy milk (p. 184-85). Soy yogurt (p. 190-91, 195). Soy cheese (212, 217-18). Soy protein concentrates or isolates (p. 233, 451, 483, 527). Soy oil (p. 144, 264, 288, 292-93). Meatless burgers and soy sausages (p. 394). Soy ice cream (p. 452-53, 455). Soy sauce (510-11, 515). Miso (p. 511-12, 515). Worcestershire sauce (p. 512).

The section titled "Soy Yogurt" gives a nutritional analysis of cultured Soygurt, made by Cream of the Bean; per 8 oz. it contains 255 calories, 6.7 gm protein, 45.2 gm carbohydrates, 5.3 gm fat, no cholesterol, 20 mg sodium, and 7% of the US RDA for calcium. The text reads: "Those who must avoid milk will be interested in nondairy soy yogurt. A new arrival in natural food stores, this yogurt is made from soymilk and bacterial cultures. Gelatin is added to some brands to maintain the typical yogurt consistency. There is no need, however, for the quality to be compromised by the addition of high fructose corn syrup, isolated soy protein, salt, and several thickening agents, as has been done in at least one brand we have encountered."

The section titled "Soy Cheese" states: "Cheese based on soy milk has recently added a new category of cheese products to the market. In terms of calories, protein, and overall fat content soy cheese competes quite favorably with animal cheeses .. It is both lactose- and cholesterol-free and the sodium content is about average for cheese. Note, however, that soy cheese is held together with vegetable gums and will contain either the milk derivative calcium caseinate (in which case it is not dairy free) or isolated soy protein." Page 218 gives a nutritional analysis of Soya Kaas (soy cheese). Per 1 oz. it contains 78 calories, 6.7 gm protein, 5.6 gm fat, no cholesterol, and 168 mg sodium. Address: R.D. 1, Box 495, Woodstock, New York 12498 914-679-8561.

7066. Sumiyoshi, Yasuo. 1987. Miso, shoyu seizô gyôkai no genjô ni tsuite [Present status of the miso and shoyu industries in Japan]. *Daizu Geppo* (*Soybean Monthly News*). Oct/Nov. p. 19-28. [Jap]
• ***Summary:*** For the year 1983, 1,701 miso manufacturers produced 574,000 tonnes of miso, and 2,692 shoyu manufacturers produced 1,194,000 kiloliters of shoyu. Miso production for recent years was: 1980 579,000 tonnes, 1981 576,000 tonnes, 1982 572,000 tonnes, 1983 574,000 tonnes, 1984 581,000 tonnes, 1985 573,000 tonnes, 1986 581,000 tonnes. Most of Japan's miso plants are still small: 1,513 plants (88.5% of all plants) produced 375 tonnes or less a year, but this accounted for only about 12% of all production. Yet eight plants produced 11,251 tonnes or more a year, and this accounted for 26.7% of all production.

Shoyu production for recent years was: 1980 1,189,000 kl, 1981 1,191,000 kl, 1982 1,187,000 kl, 1983, 1,194,000 kl, 1984, 1,200,000 kl, 1985, 1,186,000 kl, and 1986 1,201,000 kl. Address: Shokuryô-chô Kakô Shokuhin-ka, Miso Shôyu Kakari-chô


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7067. *Taste* (*Kikkoman, Japan*).1987. Goyogura: A tale of two families. 1(1):8. Nov.
• ***Summary:*** In these buildings across the scarlet bridge over the moat, Kikkoman makes soy sauce for the imperial family. "Soy sauce for the emperor (which is also available at select stores) is made entirely from wheat and soybeans grown in Japan, and the fermentation process takes place completely naturally, without any temperature control, so that the soy sauce takes almost twice as long to mature. The huge vat room, painted in scarlet from floor to ceiling, contains ten vats, some bubbling softly, others still dormant." Near the entrance is a small museum room filled with artifacts: old sales records, large soy sauce jars shaped like vases, and sepia photographs.

KIKKOMAN CLOSE-UP

Goyogura: A Tale of Two Families



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The Goyogura was completed in 1939 to mark the 20th anniversary of the modern company's founding or merging. For it was in 1917 that the soy sauce concerns of the eight branches of two families–Mogi and Takanishi–were united to form Noda Shoyu Company, renamed Kikkoman Corporation in 1980. Noda is 20 miles northeast of Tokyo and the center of Japanese soy sauce production since the mid-seventeenth century.

Photos show: (1) The bridge leading to the Goyo Gura. (2) Moromi fermenting in vats; the orange floor is just below the lip of the vats.

7068 *Taste (Kikkoman, Japan).*1987-- Serial/periodical. Tokyo: Kikkoman Corp. Vol. 1, No. 1. Nov. 1987. Quarterly. Full color.

• ***Summary:*** Subtitled "A quarterly intercultural forum for the exchange of ideas on food." It will highlight traditional Japanese cuisine and present the many innovative dishes that have successfully combined Oriental and Western cooking concepts. For further information, contact Kenzaburo Mogi of the Foreign Operations Dept. Kaichiro Someya is General Mgr. of the Foreign Operations Dept. Address: 1-25 Kanda Nishiki-cho, Chiyoda-ku, Tokyo 101, Japan. Phone: 03-233-5610.

7069 *Whole Foods.*1987. Great Eastern Sun, Westbrae trade lines. Nov: p. 18.

• ***Summary:*** Effective immediately Great Eastern Sun of Enka, North Carolina, is the exclusive distributor of Westbrae label seaweeds (sea vegetables) and Asian condiments, while Westbrae is exclusive distributor of Soba Shop ramen and noodles. Bruce Sturgeon is sales and marketing director for GES.

7070 *Whole Foods.*1987. Sensational soyfoods. Nov: p. 62. [5 ref]

• ***Summary:*** This basic introduction is designed to be photocopied by natural food retailers for distribution to their customers.

7071 Mesmer, R.E. 1987. Don't mix miso with MAOIs (Letter). *J. of the American Medical Association* 258(24):3515. Dec. 25. [1 ref]

• ***Summary:*** MAOIs (Monoamine oxidase inhibitors) such as Parnate and Nardil are widely used to treat anergic depression and some anxiety and phobic disorders. One side effect of taking these drugs is hypertension. Patients are advised to follow a low-tyramine diet. But miso and soy sauce may contain enough tyramine to raise the blood pressure of persons taking MAOIs, causing hypertensive crises. Address: M.D., Warren (Pennsylvania) State Hospital.

7072 Weinreb, Sam, Martin, Shelly. 1987. Tofu in New York City (Interview). *SoyaScan Notes.* Dec. 29. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Sam: Tofu has become a lost leader in New York City health food stores, sold at a small markup. He makes 1,800 lb/week of tofu including round tofu. He is supported by the co-ops, and is surviving out of sheer stubbornness and because he thinks what he is doing is important.

Shelly: The New York City health food industry is being taken over by the Koreans. They keep their stores open 24 hours a day and pay low or no wages (as to family). They are hard for a manufacturer to do business with. Soy Source has its soy sauce specially made by Wajashan. Address: 1. Local Tofu, West Nyack, New York 10994; 2. Appropriate Foods / Soy Source.

7073 Dun & Bradstreet. 1987. Report on Kikkoman Foods Inc. 5 p. Dec. 31.

• ***Summary:*** Chief executive: Shinichi Sugiyama, born 1928. Plant: 300,000 square feet in 1 story concrete block building. Location: Walworth, Wisconsin. SIC Number 20 35. Worth: $31.49 million. Employs: 95. Trend: Up. Total assets: $41.7 million.

History: Incorporated in Wisconsin 10 March 1972. 100% of capital stock is owned by parent company. The parent company has 21 subsidiaries in Japan and the USA including: 1. Kikkoman International Inc., San Francisco. Started in 1957, it wholesales food sauces. 2. JFC International Inc., South San Francisco. Started in 1969, it imports food products, mostly from Japan. 3. Pacific Trading (Inc.), Los Angeles. Started in 1980, it imports food products. The parent company, Kikkoman Corporation, Noda, Chiba, Japan, started in 1917. It is a manufacturer of soy sauce, plum wine, rice wine, worcestershire sauce, etc.

Yuzaburo Mogi, born 1926, married, active in Japan. Graduated from Columbia College, New York, NY.

7074 Nihei, Takao. 1987. [Barbeque shoyu, a Hawaii creation (Food series, part VI)] *Kokiku (Honolulu, Hawaii).* Dec. p. 29. [Jap; Eng]

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• ***Summary:*** Hawaii's barbeque shoyu consists of shoyu, sugar, garlic, ginger, and round onions in which the meat is marinated and broiled over charcoal. The term barbeque shoyu was already known and being sold commercially before World War II. Barbeque shoyu has changed to teriyaki sauce. Teriyaki is now an international term and enjoyed the world over, a sauce which is Hawaii's own creation.

7075. **Product Name:** Sesame Wheat Tempeh Burgers.
Manufacturer's Name: 21st Century Foods Inc.
Manufacturer's Address: 30A Germania St., Jamaica Plain, MA 02130.
Date of Introduction: 1987.
Ingredients: Organic soy tempeh, bulghur wheat, roasted sesame seeds, tamari, natural hickory smoke, lemon juice, herbs, spices.
Wt/Vol., Packaging, Price: 5.5 oz.
How Stored: Refrigerated or frozen.
New Product–Documentation: Label. 1987. 3 inch diameter. Black and red on yellow. "New! All natural. Gourmet."

7076. **Product Name:** Duck Brand Soy Sauce.
Manufacturer's Name: Chong (F.H.)
Manufacturer's Address: #35 Union Lane, Colombo 2, Sri Lanka.
Date of Introduction: 1987.
How Stored: Shelf stable.
New Product–Documentation: Jane Gleason. 1988. June.

7077. **Product Name:** Seitan
Manufacturer's Name: Gold Mine Natural Food Co.
Manufacturer's Address: 1947 30th St., San Diego, CA 92102. Phone: 619-234-9711.
Date of Introduction: 1987.
Ingredients: Whole wheat*, soy sauce*, onions*, ginger*, kombu seaweed, garlic*, filtered water, sea salt. * = Organically grown.
Wt/Vol., Packaging, Price: 12 oz ball in broth in a 16 oz deli tub.
How Stored: Refrigerated.
New Product–Documentation: Talk with Jean Richardson, co-owner of Gold Mine Natural Foods. 1992. July 8. This product, made by Gold Mine, was introduced in the spring of 1989. It is made entirely by hand by Alice Peckham, who learned the process from Carlos Richardson (her husband), who probably learned it from Hannah Bond, who now lives in Vermont. Most of the product is sold to local wholesale accounts. Production averages 150 lb/week.

Talk with Carlos Richardson of Gold Mine. 1992. July 10. He first saw seitan in about 1980 in Vermont, in a natural food store refrigerator. It was made by Chrys and Bruce Bailey of Bailey's Traditional Seitan, in northwestern Massachusetts. He first learned how to make seitan in 1983 either in Hawaii from Marijke Steevensz, or in Los Angeles at the East West Center, perhaps from Loretto Beamonte, who had come up from Mexico. Gold Mine started business in 1985. The first seitan sold commercially by Gold Mine (in about 1989) was purchased from Arturo Beamonte at the East West Center in Ensenada, in Baja California, Mexico (current phone: 667-61005), and then from a Canadian fellow who made it at the East West Center in San Diego. After that, Carlos made the seitan sold by Gold Mine starting in about 1989. He learned on a commercial scale by practice and by talking about the process on the phone with Chrys Bailey.

7078. **Product Name:** Far East Hoisin Sauce.
Manufacturer's Name: House of Herbs
Manufacturer's Address: P.O. Box 178, Passaic, NJ 07055-0178. Phone: 201-779-2422.
Date of Introduction: 1987
Ingredients: Fermented soy beans (fomerly made by Wan Ja Shan), sugar, modified food starch, prunes, vinegar, water, salt, garlic, and 1/10 of 1% sodium benzoate as preservative.
Wt/Vol., Packaging, Price: 9 oz glass jar.
How Stored: Shelf stable.
New Product–Documentation: Talk with Paul Fischer, owner of House of Herbs. 1997. Sept. 11 and 15. This product was introduced in about 1974. It was first sold in a 375 (12.7 fluid ounces) ml glass bottle, later they changed to two smaller glass bottles to be competitive–10 fl oz (295 ml) and 5 fl oz (148 ml). For a history of this company and the product, see this 1997 SoyaScan Notes interview. Paul's product has been off the market for 4-5 years, since he has been unable to buy fermented soybean from Wan Ja Shan. So now Paul is looking for a way to make his own Hoisin Sauce from scratch–because nobody makes a good product. Products made by Japan Foods, by Kamé brands (which comes from Singapore), and by Mandarin–are all too salty. Paul realizes that Hoisin Sauce is traditionally made in China with the soybeans left over after making soy sauce. It should be inexpensive, but Paul had to pay a great deal for it to Mr. Wu because he didn't know where else to get it. The fermented soybeans he got from Mr. Wu they had not yet been made into soy sauce. He never tasted it so he does not know whether or not it was salty. It came in a big drum, and was a thick whitish liquid. You could see the shape of the individual soybeans–they were not altogether broken down, but were bloated with a light white mold on top–which they kind of scraped off.

A color leaflet (8½ by 11 inches, single sided), sent by Paul, shows the 22 products in his Far East Line. A label sent by Paul shows the ingredients, plus one suggested use on barbecued spare ribs.

7079. Inoue, F.; Awao, T. 1987. [Control of microorganisms in food (miso and soy sauce) factories]. *Miso no Kagaku to*

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Gijutsu (*Miso Science and Technology*) 35(11):370-86. [14 ref. Jap]*

7080. **Product Name:** Kame Soy Sauce.
Manufacturer's Name: Intersales, Inc. or Shaffer, Clarke and Co, Inc. (Importer). Made in Japan
Manufacturer's Address: 1445 E. Putman Ave., Old Greenwich, CT 06870. Phone 914-358-8882.
Date of Introduction: 1987.

7081. **Product Name:** [Jimmi Soy Sauce–Shoyu].
Foreign Name: Jimmi Molho de Soja
Manufacturer's Name: Jimmi. Div. of McCormick do Brasil S/A.
Manufacturer's Address: Avenida Olavo Bilac, 402, Osasco–SP, Brazil.
Date of Introduction: 1987.
Ingredients: Soybeans, wheat, molasses, MSG, alcohol vinegar.
Wt/Vol., Packaging, Price: 150 ml bottle retails for 114.00 crusados.
How Stored: Shelf stable.
New Product–Documentation: Label on bottle. 1988. 3.25 by 3.25 inches. Brown, red, green, and black on white. "Made in Brazil. Ideal for soups, poultry, vegetables, meats, fish." McCormick is moving to take over all the spice and related companies worldwide.

7082. **Product Name:** Shoyu (Naturally Brewed Soy Sauce), Organic Shoyu, Traditionally Brewed Tamari (Wheat Free Soy Sauce), Organic Tamari, and Tamari Teriyaki.
Manufacturer's Name: Kaiora Natural Ltd. (Importer). Made in Japan.
Manufacturer's Address: CPO Box 3007 (180 Victoria St. West), Auckland 1, New Zealand. Phone: 09-370 454.
Date of Introduction: 1987.
New Product–Documentation: 1. Shoyu (naturally brewed soy sauce): Made by Sendai Miso Shoyu Co. in Japan. The moromi mash is left to mature in huge cedar wood casks at ambient temperatures for up to 2 years. 300 ml and 750 ml. Labels are light and dark purple. 2. Organic shoyu. "Produced exclusively by a religious community in Japan... The community farms its own organically grown soybeans and wheat in Hokkaido." 150 ml and 750 ml. Labels are light and dark red. 3. Traditionally brewed tamari. Brewed by the San Jirushi Company of Japan. Matures for over one year in cedar kegs. 150 ml, 300 ml, and 750 ml. Labels are light and dark green. Salt content: 14.2%. 4. Organic tamari: Brewed by the Mansan Company of Japan. It is made in the traditional manner, maturing for over 1 year in cedar kegs. Labels are light and dark tan. 150 ml and 750 ml. Contains natural mirin. Salt content: 14.2%. 5. Tamari teriyaki. Made by San Jirushi. 300 ml. Label is brown and gold. Contains tamari, rice vinegar, mirin, honey, miso, ginger, garlic, spices. No preservatives or additives. Labels sent 1988, Dec. by Austin Holden.

7083. Kayahara, H.; Yasuhira, H. 1987. [Characteristics of the halophile *Pediococcus halophilus* isolated from miso and shoyu-moromi]. *Miso no Kagaku to Gijutsu* (*Miso Science and Technology*) 35(3):117-21. [28 ref. Jap]*
• ***Summary:*** These bacteria are members of the Lactobacillaceae. Address: Japan.

7084. **Product Name:** Kikkoman Teriyaki Baste & Glaze, Teriyaki Barbecue Marinade & Sauce, Stir-Fry Sauce, Steak Sauce, Sweet & Sour Sauce, Tonkatsu Sauce.
Manufacturer's Name: Kikkoman Foods.
Manufacturer's Address: Walworth, Wisconsin
Date of Introduction: 1987.
New Product–Documentation: Duxbury. 1987. Food Processing. May. p. 70-71. Kikkoman Oriental Cooking. 1989. p. 5. Shows a color photo of the Kikkoman Teriyaki Marinade and Sauce, Teriyaki Baste & Glaze, Stir-Fry Sauce, and Sweet & Sour Sauce.

7085. **Product Name:** La Choy Thick and Rich Teriyaki Sauce.
Manufacturer's Name: La Choy Food Products.
Manufacturer's Address: 901 Stryker St., Archbold, OH 43502
Date of Introduction: 1987.
New Product–Documentation: Talk with Milan Drake. 1988. Jan. 4.

7086. **Product Name:** Noble Bean Eggless Tempeh Salad.
Manufacturer's Name: North Coast Tempeh Co.
Manufacturer's Address: 1088 Ivanhoe Rd., Cleveland, OH 44110.
Date of Introduction: 1987.
Ingredients: Tempeh (Organic soybeans, water, Rhizopus culture), imitation mayonnaise (soy oil, water, honey, cider vinegar, lemon juice, natural spices, kelp, onion powder), celery, pickles, onion, parsley, shoyu, mustard, garlic powder.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Label. 1987. Oval 4 by 2.75 inches. Blue, red, green, and yellow on white. Jeff Narten. 1987. "History of North Coast Tempeh and its Products." 4 p. Dec. 7.

7087. Oppenheimer, A.; Glas, M.; Cherukuri, S.R. Assignors to Warner-Lambert Company. 1987. Chewing gum and confectionery compositions containing a soy flavor enhancer. *European Patent Application* EP 0,239,540 A2. [Eng]*
• ***Summary:*** The flavor of chewing gum and confectionery compositions is improved by incorporating a natural soy

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flavor enhancer selected from natural soy extract, soy sauce, soy powder or mixtures thereof in amounts which reduce the bitter or harsh flavor notes perceived after substantial chewing, without imparting the salty taste associated with soy derivatives. Address: Warner-Lambert, Morris Plains, New Jersey 07950, USA

7088. **Product Name:** The Soy Deli Gourmet Fresh Tofu Salads/Dips/Spreads [No Tuna Salad, Curry Salad, Dilly Salad, Garlic Salad/Dip, Mild Jalapeno Sesame Spread/Dip, Salada Sin Carne, Curry Savory Salad].
Manufacturer's Name: Quong Hop & Co
Manufacturer's Address: 161 Beacon St., South San Francisco, CA 94080. Phone: 415-873-4444
Date of Introduction: 1987.
Ingredients: No Tuna Salad: Organic tofu (water, organic* soybeans, nigari), safflower oil, sunflower seeds, shoyu (water, whole soybeans, whole wheat, sea salt), water chestnuts and/or jicama, cider vinegar, scallions, sesame oil, spices. * Grown in accordance with Calif. Health & Safety Code 26569.11.
New Product–Documentation: Talk with Ben Lee. 1988. Sept. 30. Introduced in 1987, this was a local line of fresh products. Not a lot is happening with this line, just a small local market. He is revamping a lot of the labels. Labels. 1987. 3.5 inch diameter. One color plus black on white. "Master Tofu-Makers Since 1906."

7089. **Product Name:** The Soy Deli Gourmet Fresh No Tuna Salad San. (Tofu Sandwich)
Manufacturer's Name: Quong Hop & Co
Manufacturer's Address: 161 Beacon St., South San Francisco, CA 94080. Phone: 415-873-4444
Date of Introduction: 1987.
Ingredients: Organic tofu (water, organic* soybeans, nigari), safflower oil, sunflower seeds, shoyu (water, whole soybeans, whole wheat, sea salt), water chestnuts and/or jicama and/or celery, cider vinegar, scallions, sesame oil, spices, whole wheat bread, (and/or lettuce, sprouts, bell peppers) * Grown in accordance with Calif. Health & Safety Code 26569.11.
New Product–Documentation: Talk with Ben Lee. 1988. Sept. 30. Introduced in 1987, this was a local line of fresh products. Label. 1987. 3.5 inch diameter. Black and blue on white. "The original."

7090. **Product Name:** Honest to Goodness Soup. Make-in-the cup (Dry Mix) [Tomato, Onion, or Mulligatawny].
Manufacturer's Name: Realeat Company Ltd.
Manufacturer's Address: 2 Trevelyan Gardens, London NW10 3JY, England. Phone: 01-459-3401.
Date of Introduction: 1987.
Ingredients: Brown rice, miso and soy sauce powder, vegetable bouillon powder, and spices. Varietal ingredients include tomato, onion, curry, garlic, and celery salt.
Wt/Vol., Packaging, Price: 16 gm in nitrogen-flushed foil sachet.
How Stored: Shelf stable.
Nutrition: Per 15 gm dry: Protein 10%, carbohydrate 68%, vegetable fat 4%, calories 50.
New Product–Documentation: Letter from Gregory Sams. 1988. March 30. Leaflet, undated. "A Recipe for success." Gives detailed product information. "A truly unique range of additive-free Instant Soups with Real Flavor. They are made only with natural ingredients and thickened with nourishing brown rice."

7091. **Product Name:** Teriyaki Sauce (with Wood Smoke Flavor).
Manufacturer's Name: S&W Fine Foods.
Manufacturer's Address: -
Date of Introduction: 1987
New Product–Documentation: Fred Marken's brochure.

7092. **Product Name:** Soy Devine Cajun Barbeque Style (Frozen Tofu Entree) [As is, or on a Nine Grain Bun].
Manufacturer's Name: Soy Devine.
Manufacturer's Address: Box 668, Miranda, CA 95553.
Date of Introduction: 1987.
Ingredients: Processed organic tofu [frozen], tomato sauce, onions, honey, mustard, cider vinegar, safflower oil, tamari (Westbrae), peanut butter, garlic, miso, spices (incl. paprika, cayenne, allspice).
Wt/Vol., Packaging, Price: In a tub.
New Product–Documentation: Talk with Mara Devine. 1988. April 7. She used to make the Village Soyburger. This may be America's first second-generation product made with frozen tofu. She buys the tofu from Quong Hop. It is not shaped like a burger. She freezes the tofu, slices it, marinates it in a sauce, then bakes it, pours on the sauce and bakes it a little more. It is akin to Sloppy Joes. She also sells it in a bun. Its very chewy. She has a whole book on frozen tofu. Label. 1988. As is, 4.5 inches diameter. Black, red and green on a white lid. Logo of an angel with a soybean plant in both hands. "No additives or preservatives. Tasty hot or cold. Made with organic tofu and homemade barbecue sauce. All vegetable protein. Excellent texture. On tub: Serving suggestions. Great as a burger, in sloppy joes, in spaghetti sauce, as burrito or enchilada filling, over rice, pasta, or baked potato." Label for burger. 1988. 3 inch diameter. Black and yellow, with same logo.

Talk with Mara Devine. 1995. June 1. In 1995 Cajun Barbecue Style was renamed and divided into two products: Vegan Cajun Burger, and Cajun Tofu Sloppy Joe. She moved from Miranda to Arcata, California, in June 1993.

7093. **Product Name:** Soya Nova Okara Spread (sold in bulk).

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Manufacturer's Name: Soya Nova Tofu Shop
Manufacturer's Address: R.R. #2 Rourke Road, C-28, Ganges, Saltspring Island, BC, V0S 1E0, Canada. Phone: 604-537-9651.
Date of Introduction: 1987.
Ingredients: Organically grown soybeans, brown rice, tamari, unrefined oils, fresh onions, garlic, carrots, herbs, spices.
How Stored: Refrigerated.
New Product–Documentation: Letter from Greg Lundh of Silverking Soya Foods in Nelson, BC, Canada, 1990 Dec. 14. Soya Nova Tofu Shop introduced Okara Spread in 1987.
Leaflet sent by Deborah Lauzon. 1991 Feb 6. "Soya Nova Tofu Shop." Describes the product.

7094. Taiwan, National Bureau of Standards. 1987. [Soy sauce]. *Chinese National Standard* CNS-N5006. [Chi]*
Address: Taiwan.

7095. Tomita, M.; Okubo, K.; Yamauchi, F. 1987. [Factors influencing formation of sediment in heated raw soy sauce] *Hakko Kogaku Zasshi* (*J. of Fermentation Technology*) 65(3):185-89. [11 ref. Jap, eng]*
• ***Summary:*** Raw soy sauce (a filtrate of aged mash) is heated at 70-85°C at the final stage of fermentation to inhibit microbial and enzymic reactions. During heating, sediment is gradually formed, comprising 10% of the volume. The sediment decreases the yield and commercial value of soy sauce. More sediment is formed and it forms faster at 60°C than at 85°C, suggesting that raw soy sauce contains a factor or factor that accelerates sediment formation at the lower temperature and/or inhibits it at the higher. Address: Dep. of Food Chemistry, Tohoku Univ., Amamiya-machi, Tsutsumi-dori, Sendai-shi, Miyagi-ken 980, Japan.

7096. **Product Name:** Westico Soya Sausage.
Manufacturer's Name: Westico Foods
Manufacturer's Address: West Indies College, Mandeville, Jamaica
Date of Introduction: 1987.
Ingredients: Gluten, soya pulp (okara), soya flour, vegetable oil, salt, onion powder, garlic powder, sausage flavoring, soya sauce.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Form filled out and label sent by Westico. 1990 June 28.

7097. **Product Name:** Traditional Nama Agé. Renamed Pineapple Teriyaki Tofu Cutlets.
Manufacturer's Name: Wildwood Natural Foods of Santa Cruz, Inc.
Manufacturer's Address: 1560 Mansfield Ave., Suite D, Santa Cruz, CA 95062. Phone: 408-476-4448
Date of Introduction: 1987.
Ingredients: 1998 Wildwood Tofu (filtered water, organic soybeans grown in accordance with the California Organic Foods Act of 1990, nigari {magnesium chloride, a natural firming agent}), hi oleic acid safflower oil, unsweetened pineapple juice, soy sauce, pineapple concentrate, ginger, garlic powder, ginger powder, onion powder.
Wt/Vol., Packaging, Price: 6.5 oz vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Label sent by Billy Bramblett. 1998 July. He says this product was introduced in 1987, originally called Traditional Nama Agé, and made at Wildwood's plant in Santa Cruz.

7098. Yamamoto, A.; Matsunaga, A.; Makino, M.; Mizukami, E. 1987. [Analysis of formic and levulinic acids in soy sauce by photometric ion chromatography]. *Annual Report of Toyama Institute of Health* No. 10, p. 144-47. [8 ref. Jap]*

7099. Yoneyama, T.; Ohike, T.; Itoh, T.; Shinha, Y.; Fukuzawa, M.; Shimizu, K.; Nishizawa, N.; Iida, T. 1987. [Quality studies of commercial soy sauce. XIV.]. *Research Report of the Nagano State Laboratory of Food and Technology* No. 15, p. 51-56. [3 ref. Jap]*
Address: Nagano State Lab. of Food Technology, Kurita, Nagano-shi, Japan.

7100. Albert, Rachel. 1987. Gourmet wholefoods: Vegetarian and macrobiotic cuisine. Grain of Salt Publishing, 2211 N.E. 50th, Suite #12, Seattle, WA 98105. xi + 176 p. Illust. by Rebecca Rickabaugh. Index. Introduction by Karl Mincin. 21cm.
• ***Summary:*** This vegan cookbook contains no recipes calling for eggs or dairy products. At last, a macrobiotic cookbook without fish. This book has a brief, unstuffy introduction to macrobiotics and tasty, creative recipes. Includes 11 recipes featuring tofu, 4 with tempeh, 1 using black soybeans, and many using miso and shoyu. Note the correct use of the term "shoyu" throughout. Also has recipes for "amasake" and "amasake frosting." Address: Washington.

7101. Beuchat, Larry R. 1987. Food and beverage mycology. 2nd ed. New York, NY: Van Nostrand Reinhold. xiii + 661 p. Illust. Index. 23 cm. [20+ soy ref]
• ***Summary:*** Contents. Contributors. Foreword. Preface. Classification of food and beverage fungi, by E.S. Beneke and K.E. Stevenson. Relationships of water activity to fungal growth, by Janet E.L. Corry. Fruits and fruit products, by D.F. Splittstoesser. Vegetables and related products, by R.E. Brackett. Meats, poultry, and seafoods, by James M. Jay. Dairy products, by Elmer H. Marth. Field and storage fungi, by C.M. Christensen. Bakery products, by J.G. Ponte, Jr. and C.C. Tsen. Traditional fermented food products,

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by L.R. Beuchat. Alcoholic beverages, by G.G. Stewart. Edible mushrooms, by W.A. Hayes. Poisonous mushrooms, by Donald M. Simons. Fungi as a source of protein, by A.J. Sinskey and C.A. Batt. Fungal enzymes and primary metabolites used in food processing, by R. Bigelis and L.L. Lasure. Mycotoxins, by N.D. Davis and U.L. Diener. Methods for detecting mycotoxins in food and beverages, by L.B. Bullerman. Methods for detecting fungi in foods and beverages, by B. Jarvis and A.P. Williams. Appendix. Regulatory action levels for mold defects in foods.

Chapter 9, "Traditional fermented food products, has a section on koji and a long section on fermented soybean foods that discusses: Shoyu, miso, natto (incl. itohiki-natto, yukiwari-natto, and hama-natto / hamanatto, called tu su by the Chinese and tao-si by the Filipinos), sufu, meitauza, and tempé [tempeh]

Tables show: (9.1) Some fermented foods of fungal origin. For each food is given: Product name, geography, substrate, microorganisms, nature of product, and product use. Soy-related products include: Chee fan, Chinese yeast, Hamanatto, kecap, kinema, ketjap, meitauza, meju, miso (incl. chiang, jang, doenjang, tauco, tao chieo), natto, soybean milk, soy sauce (incl. chiang-yu, shoyu, toyo, kanjang, kecap, see-ieu), sufu (tahuri, tao-kaoan, tao-ju-yi), tao-si, taotjo, tauco and témpéh. Address: Dep. of Food Science, Agric. Exp. Station, Univ. of Georgia, Experiment, GA 30212

7102. Campbell-Platt, Geoffrey. 1987. Fermented foods of the world: A dictionary and guide. London and Boston: Butterworths. xxiii + 291 p. 26 cm. [25 soy ref]
• ***Summary:*** The author classifies fermented foods into 9 groups: Beverages, Cereal products, dairy products, fish products, fruit and vegetable products, legumes, meat products, starch crop products, and miscellaneous products. Fermented legume products are particularly important in the diets of East Asia, Southeast Asia, and the Indian subcontinent. He has sections on many fermented soyfoods: Dawadawa, hama-natto, kenima [sic, kinema], miso, natto, tempe (incl. tempeh, tempe bengook, tempe bongkrek, tempe gembus [okara tempeh], tempe lamtoro, tempe mata kedele), and sufu (incl. teou-fu-ru). He lists major areas consumed, related terms, how consumed, types, how produced, microbiology and biochemistry, and a few key references. His research began in Ghana with dawadawa made from the African locust bean. Address: National College Prof. of Food Technology, Dep. of Food Science & Technology, Univ. of Reading, Reading, Berkshire, UK.

7103. Downes, John. 1987. Soy source: A practical guide to cooking with soy foods. Chatswood, NSW, Australia: Nature and Health Books. Co-published in 1987 by Prism Press, 2 South Street, Bridport, Dorset DT6 3NQ, England. Distributed in the USA by Avery Publishing Group. 127 p. No index. 22 cm. [21 ref]
• ***Summary:*** Contents: Introduction, Nutrition & Soyfoods, Ingredients & Techniques, Glossary, Appetizers & Dips, Marinades & Accompaniments, Soups, Soup Noodles, Main Courses, Salads & Dressings, Desserts, Bibliography. A cookbook containing very little information about soyfoods in Australia. The author was born in 1949. Address: Australia

7104. Harrison, Marilyn. 1987. Lea and Perrins everyday cookbook. Cambridge, England: Martin Books, an imprint of Woodhead-Faulkner Ltd. 96 p. Illust. (color). Index. 20 cm
• ***Summary:*** A booklet of recipes that call for Lea & Perrins' Worcestershire Sauce. Contents: Introduction. Conversion tables. Sauces, marinades and dressings. Dips and savoury butters. Fish. Mat and poultry. Vegetable dishes. Snacks, savouries and quick meals. Microwave hints and tips. Address: [England]

7105. Hartadi, Sri; Kabirun, Siti. 1987. Improvement of traditional soy sauce fermentation (mold selection and its application). In: Fujiharu Yanagida, ed. 1987. Traditional Foods and Their Processing in Asia. Tokyo: NODAI Research Institute, Tokyo Univ. of Agriculture. vii + 235 p. See p. 219-33. [15 ref]
• ***Summary:*** Contents: Abstract. Introduction. Materials and methods. Mold selection, soy sauce inoculum preparation (laboratory scale, then commercial scale). Results and discussion. Conclusions.

From a survey of soy sauce manufacturers in Java and laboratory studies the authors conclude that practically none of the soy sauce manufacturers in Java, except for one modern manufacturer in Jakarta, use special inoculum in the soy sauce fermentation process. The source of active microorganisms is mainly the previously used fermentation containers. Most of the soy sauce processing is not carried out in aseptic conditions, so many kinds of molds, yeast, and bacteria can be isolated from the fermented materials. The authors isolated a suitable mold for soy sauce fermentation, and found that the use of 1% of fresh inoculum is adequate for the fermentation of soy sauce. Address: Faculty of Agriculture, Gadjah Mada Univ., Indonesia

7106. Karim, Mohamed Ismail Abdul; Hassan, Zaiton. 1987. Traditional fermented foods of Malaysia. In: Fujiharu Yanagida, ed. 1987. Traditional Foods and Their Processing in Asia. Tokyo: NODAI Research Institute, Tokyo Univ. of Agriculture. vii + 235 p. See p. 210-18. [12 ref]
• ***Summary:*** The authors discuss the preparation of a number of Malaysian fermented soyfoods, including tempeh, kicap kacang soya (soy sauce), and tauco (soybean paste).

Note: This is the earliest document seen (April 2012) that uses the term "kicap kacang soya" to refer to Malaysian soy sauce.

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They also discuss other Malaysian fermented foods: budu or kicap ikan (fish sauce), cincaluk (fermented shrimp), belacan (fish/shrimp paste), pekasam (fermented freshwater fish), tapai (fermented rice or cassava), tempoyak (fermented durian), tairu/taire/taina (fresh cow's milk fermented by bacteria equivalent to sour milk or yogurt), dadeh (made from fermented buffalo milk), arak beras (rice wine), toddy (palm wine), idli (steamed pudding), dosai (pancake), dadeh (fermented sweetened milk), and jeruk buahbuahan & sayur sayuran (pickled fruits and vegetables). Address: Faculty of Food Science and Biotechnology, Universiti Pertanian Malaysia, Malaysia.

7107. Kawamura, Yojiro; Kare, Morley R. eds. 1987. Umami–a basic taste: physiology, biochemistry, nutrition, food science. New York, NY: Marcel Dekker. xiv + 649 p. Proceedings of the First International Symposium on Umami, held Oct. 7-10, 1985, Lihue, Kauai, Hawaii. Illust. Illust. Index. 24 cm. [1400* ref]
• ***Summary:*** Contains 28 papers by 48 different authors, quite a few of them from the Ajinomoto Company, Inc. (Kawasaki, Kanagawa prefecture, Japan). The basic message of this book is the same as its title: Umami is a basic taste, just like the traditional four–sweet, sour, salty, and bitter, which were advanced before modern taste physiology had developed. The term "monosodium glutamate (MSG)" appears many times in the index, but the word "Ajinomoto" ("a tradename for a mixture of MSG and ribonucleotides") does not. At the end of each paper are many references.

The taste of MSG is unique. In Japanese it is called "umami" (p. 83). "Glutamic acid (Glu) elicits a unique taste (*umami*) in human sensations..." (p. 3). "Umami" is also found in basic traditional, natural foods widely used in Japanese cookery: *kombu / konbu* (*Laminaria japonica*, a sea vegetable), *katsuobushi* (dried bonito flakes), and *shiitake* mushrooms (p. 86). However MSG is derived naturally from konbu whereas GMP (guanosine 5'-monophosphate) is derived from shiitake. These substances were previously thought to "enhance taste intensity" (p. 35, 256). The "Chinese restaurant syndrome" is discussed on pages 309-14. Although "soy" is not mentioned in the index, it does appear several times in the book: soy sauce (p. 257), soy (p. 265, 267, 268).

Contents (in 8 parts): I: General concepts (3 papers. "Recent progress in the taste receptor mechanism." "Fundamental properties of umami in human taste sensation." "The umami taste concept: Implications for the dogma of the four basic tastes" (sweet, sour, salty, bitter)). II: Developmental aspects (3). III: Receptor mechanisms (5). IV: Psychometric analysis (7). V: Physiology and behavior (3). VI: Brain mechanisms (3). VII: Nutrition and behavior (3). VIII: Overview. Address: 1: Faculty of Nutrition, Koshien Univ., Takarazuko, Japan; 2: Director, Monell Chemical Senses Center and Dep. of Physiology, Univ. of Pennsylvania, Philadelphia, PA.

7108. Nichterlein, Karin. 1987. Huelsenfruechte [Legumes]. Bonn, Germany: AID (Auswertungs- und Informationsdienst fuer Ernaehrung, Landwirtschaft und Forsten). 20 p. Illust. 21 cm. [10 ref. Ger]
• ***Summary:*** The section on soybeans (p. 14-16) discusses soya oil, lecithin, soybean meal, soy protein concentrates, soya bread, low-fat soy flour, Sojamark (Soya meat), TVP, soya milk, tofu, soy sauce (shoyu, tamari), miso, tempeh, sufu (fermented tofu), natto, and soy sprouts. Address: Institut fuer Pflanzenbau und Pflanzenzuechtung I, Giessen, Germany.

7109. NODAI Research Institute. 1987. Traditional foods and their processing in Asia. Tokyo: NODAI Research Inst. vii + 235 p. Seminar held Nov. 13-15, 1986 at the Tokyo Univ. of Agriculture, Tokyo, Japan.
• ***Summary:*** Contents include: Oncom: Fermented peanut pressed cake, by Dedi Fardiaz. Mochi: Rice Cake, by Akiko Kawabata. Miso: Bean paste, by Hisao Yoshii. Chemistry and technology of tofu and its derived products, by Tokuji Watanabe. Indigenous fermented foods in Nepal, by Tika Karki. Improvement of traditional soy sauce fermentation mold, by Sri Hartadi and Siti Kabirun. Address: Tokyo Univ. of Agriculture, 1-1-1 Sakuragaoka, Setagaya-ku, Tokyo 156, Japan.

7110. Panati, Charles. 1987. Extraordinary origins of everyday things. New York, NY: Harper & Row. xi + 463 p. Illust. Index. 24 cm. [150+* ref]
• ***Summary:*** Includes discussions of: Blender (electric kitchen appliance) (1922, Racine, Wisconsin, initially known as a "vibrator"). Plastic (1900, USA, incl. Celluloid, Bakelite, Cellophane, Acetate, Vinyl, Plexiglas, Acrylics, Melmac, Styrene, Formica, Polyester, Nylon, Tupperware {made of polyethylene}). Peanuts (1800s, USA, incl. P.T. Barnum, peanut butter, Planters Peanuts). Cracker Jack (1893, Chicago, Illinois {"Candied Popcorn and Peanuts"}). Hot dog (1500 B.C., Babylonia [today's Iraq], incl. frankfurter, American hot dogs, Nathan's franks). Hamburger (Middle Ages, Asia). Sandwich (1760, England). Melba Toast (1892, London). Worcestershire Sauce (mid-1800s, Britain). Graham Crackers (1830s, New England).

Note: This book is very well written, but some or all of the information in some of the entries (such as the blender, peanut butter and Worcestershire sauce) comes from secondary sources and is incorrect. The book would be much better (but much longer) if the sources for each statement or entry were cited.

7111. Passmore, Jacki. 1987. Asia: The beautiful cookbook. Los Angeles, California: Knapp Press. 256 p. Illust. (color). Index. 37 cm.

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• ***Summary:*** This is a stunningly beautiful, oversized book–a feast for the eyes, filled with elegant color photos (many full page), authentic recipes and many insights about Asian cookery. Each recipe is accompanied by one or more photos. Contents: Japan: Simplicity and elegance. Korea: Warm and sustaining. China: From the beginning of time. Philippines: East meets West. Thailand: Titillating, tantalizing. Laos and Kampuchea: Unforgettable foods. Vietnam: Herbaceous overtones. Singapore and Malaysia: A blending of cultures. India: Southern fire, northern serenity. Burma: Exotic offerings. Indonesia: Symphony of flavors. Sri Lanka: Gems from an enchanted isle. Glossary. Acknowledgments.

Japan: Yudofu (Simmered bean curd, with 3 cakes tofu {bean curd}, p. 31). Tofu dengaku (Grilled bean curd on skewers, with 2 lb {1 kg} momen tofu and white miso, p. 31). Ton-negu no teriyaki (Teriyaki pork rolls, p. 38). Miso-shiru (Miso-flavored soup with bean curd).

Singapore and Malaysia: Popiah (with ¼ cup (about 2 oz / 60 gm) compressed bean curd cake, shredded, p. 155, 148-49). Tempe lemak (Tempe in coconut milk, p. 166). Hokkien mie (Hokkien style noodles, with 2 cakes compressed bean curd, p. 168). Laksa ayam (Chicken with laksa noodles in coconut sauce, with 2 squares / cakes compressed bean curd, p. 169).

Indonesia: Kecap manis is a sweetish soy and chili sauce (p. 218). Babi kecap (Pork in sweet soy sauce, p. 227).

Glossary (p. 252-54) includes short definitions of: Azuki beans. Bean curd. Bean pastes and sauces. Kecap manis ("based on dark soy sauce, sugar and spices"). Kombu. Nori. Paneer (India). Sesam. Wakame.

7112. Popham, Peter. 1987. The insider's guide to [south] Korea. Edison, New Jersey: Hunter Publishing. 199 p. See p. 60. Illust. (color photos by Alain Evrard). Maps. Index. 23 cm. [9* ref]

• ***Summary:*** The 1988 Summer Olympics in Seoul introduced Korea to the modern world in a big, new way. This book was written for that event.

The chapter titled "Korean cuisine" (p. 58+) explains that it is the least known of the culinary traditions of Asia, and offers strong evidence of the nation's distinctiveness, which shows clear Mongol influence. Like the Chinese and Japanese, the Koreans also eat "soy beans and bean curd" [tofu], and bean sprouts [soy sprouts are more popular than mung bean sprouts]. The undisputed mark of Korean cuisine is kimch'i [kimchi], most of which is still made by fermentation at home of a vegetable (such as cabbage), always with chili and garlic; there are many different types of kimch'i, the most popular of which are cabbage stuffed with oysters, sliced cucumbers with radish and ginger, diced daikon radish with scallions, and white radish sticks floating in brine. Other favorite Korean seasonings, besides garlic and chili, are scallions, ginger, sesame oil, sesame seeds, and soy sauce.

Pages 60-62: "There is also a whole range of fermented pastes and sauces for dipping, called *chang*. Every home and restaurant has its own recipe for *chang*, and each batch comes out differently. Based on a fermented mash of soybeans, the three most common varieties are *"kan chang*, a dark liquid, like soy sauce, *daen chang*, a thick, pungent paste, and *kochu chang*, a fiery version laced with chilies."

Note: This is the earliest English-language document seen (April 2012) that uses the term *kan jang* to refer to Korean soy sauce.

Side dishes, known as *panch'an*, accompany the main dish, rice, and add variety to the basic Korean meal. They include: ***Tubu:*** Soybean curd, tofu. ***Manul changah-chee:*** Green garlic pickled in soy sauce. ***Don chun:*** Beef and bean curd patties spiced with ginger.

Koreas love to make rich, thick stews, especially in winter. "***Chigae*** is a special thick stew simmered in heavy clay crocks." Favorite Korean soups (*tang*) and stews include: ***Maeun tang:*** Rich soup of meat, fish, bean curd, zucchini and scallions. ***Ten chang chigae:*** Thick stew of meat, fish, bean curd, squash and chilies.

Simple "one-bowl" meals, especially popular as summer lunches, include: ***Kong kookso:*** Wheat noodles in fresh soy milk. ***Udong*** [Jap. udon]. Broad wheat noodles with onions, bean curd, egg and chili. ***Kongnamul pap:*** [Soy] bean sprouts, beef and cabbage served over rice.

A photo (p. 63) shows a man grinding food using a hand-turned stone mill (quern).

7113. Rizzi, George P. 1987. The biogenesis of food-related pyrazines. ***Food Reviews International*** 4(3): 375-400. [102* ref]

• ***Summary:*** Flavorous pyrazines have been found in many fermented foods; the most extensive studies are those on soybeans, cocoa, and cheeses. At least three studies (which are summarized) have shown that natto contains various pyrazines. Table 2 (p. 379) shows pyrazines in foods produced by specific microorganisms; they are found in natto (produced by *Bacillus natto*), soysauce (*Aspergillus sojae*), miso (*Aspergillus oryzae*), and soybeans (*Aspergillus oryzae*). Address: The Procter & Gamble Company, Cincinnati, Ohio.

7114. Sayers, Robert, Rinzler, Ralph. 1987. The Korean onggi potter. Washington, DC: Smithsonian Institution Press. 288 p. See p. 58-60, 71, 75, 77. Illust. 23 cm. Series: Smithsonian Folklife Studies, No. 5. [166* endnotes]

• ***Summary:*** Onggi are traditional Korean earthenware vessels, used for the storage of pickled vegetables, bean pastes and soy sauces. Fieldwork for this project was initiated by Ralph Rinzler in 1971.

The section titled "Storage containers" (p. 58-59) contains a list of the names of ceramic food jars, with their appropriate uses, as given by people in Korea's capital.

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Seoul. "Soy sauce, for example, is stored in quantity throughout the year in large and medium size outdoor receptacles (*kannjang tok* and *kanjang hangari*); as needed, the liquid is transferred to a small spouted kitchen form (*kanjang tanji*)." The large outdoor jar used to store soy paste *toenjang* is called a *toenjang tok* and the small kitchen form a *toenjang tanji*. The corresponding jars for red-pepper paste (*koch'ujang*) are called *koch'ujang hangari* and *koch'ujang tanji*.

To understand better how these storage jars are used, it is useful to describe the preparation of four Korean dietary staples: soy sauce, soybean paste, red pepper paste, and kimch'i. "The first of these, reddish black soy sauce (*kanjang*), is made from yellow soy beans boiled four or five hours, then mashed into a paste called *meju*. Today yeast is added to the meju; formerly it was molded into large rectangles or truncated cones, which were dried outdoors on rice straw mats, then hung from the house rafters to leaven [sic, mold] naturally over several months. In the springtime, the mold-covered *meju* is broken up into smaller chunks and submerged in a brine-filled *tok* positioned on an architectural feature of the outdoor living space called a *changdoktae* ("place for sauce jars"). This might be a stone or concrete terrace built up in a sunny part of the dwelling's inner courtyard or, in the city, an apartment balcony or rooftop (Figures 8 and 9, p. 60-61).

Over a period of two or three months, the mistress of the house checks her jars, taking care to see that their contents receive only the proper amount of sunlight. Then, in May or June, she boils the clear, dark liquid in a cauldron and replaces it in still other jars along with red peppers and chunks of wood charcoal, which absorb dirt and inhibit strong odors. The solid moldy matter that floats to the top is skimmed off, then crushed, salted, and kneaded into a paste (*toenjang*), which constitutes a second major soy by-product. For most Koreans the making of soy sauce and soy paste is a yearly activity." An affluent family might prepare an even larger supply. The sauce is believed to stay fresh up to three years, and is even said to improve with age.

"A second staple is the hot seasoning *koch'ujang*. In autumn, red chili peppers are harvested and sun-dried for a week or more. Then the peppers are split open and left in the sun a few days longer, after which the seeds are dislodged with a pole. What remains is pulverized in a mortar, then sifted through a pine-root sieve. Simultaneously (or during the making of soy sauce), a *meju* ring is prepared and secreted away in a dark corner of the house to ripen. In the springtime, the red pepper powder and pulverized *meju* are combined with rice paste *ch'apssalchuk*, salt, and sugar. The *koch'ujang* is not cooked, but is left to ferment in a storage jar for three or four months."

Most cauldrons are made of iron, although some, made of carved soapstone, are used for preparing medicinal foods. "Ceramic cauldrons are perhaps the least common; however a stew of fermented soybean paste [*toenjang*] is sometimes cooked in a small example (*toenjang sot*) manufactured from a low-firing refractory clay called *koryôngt'o*, which is more resistant to shattering than dense, homogeneous stoneware bodies (*chômt'o*) (Fig. 17), p. 71.

Photos show: (1) Korean onggi peddlers, ca. 1900, with long wooden racks that hold a heavy load of many containers on their backs (frontispiece). (2) Rooftop terrace (*changdoktae*) for sauce jars. Photo by Ralph Rinzler, 1971 (p. 60). (3) Rural version of *changdoktae* at Kaya village, Kyonggi Province (p. 61). (4) A small ceramic cauldron (*toenjang sot*) for preparing soy paste, Kyongju, N. Kyongsang Province (p. 71). (5) A small pouring vessel (*kanjang tanji*) for soy sauce (p. 77). Address: 1. Dep. of Anthropology, California Academy of Sciences, San Francisco, CA 94118.

7115. Shurtleff, William, Aoyagi, Akiko. 1987. Soymilk industry and market: Updates from 1984 to 1987. Lafayette, California: Soyfoods Center. 17 + 59 p. Index. 28 cm. [165 ref]

• ***Summary:*** This 1987 update to the Soyfood Center's two-volume 1984 *Soymilk Industry and Market* has two parts: (1) Year in Reviewing, describing key events and trends each year from 1984 to 1986. (2) A bibliography of soymilk from January 1987 to late 1987, based on records in the SoyaScan database; at the end is a 10-page index. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

7116. Singleton, Paul, Sainsbury, Diana. 1987. Dictionary of microbiology and molecular biology. 2nd ed. Chichester, New York, Brisbane, Toronto & Singapore: John Wiley & Sons, Ltd. xii + 1019 p. Illust. 25 cm. A Wiley-Interscience Publication.

• ***Summary:*** Contains entries for: fermentation, fermented foods, fermenter (fermentor), miso, natto, nitrogen fixation (dinitrogen fixation), ogi, oncom, shoyu (see Soy sauce), soy paste (see Miso), soy sauce (shoyu), sufu, tempeh, tofu (an intermediate in Sufu production).

7117. Terajima, Ryôan, comp. 1987. Wakan sansai zue 7 [Collection of Japanese and Chinese diagrams and drawings of all things]. Tokyo: Heibonsha. 442 p. 18 cm. Series: Toyo bunko, no. 471. Toyo Pocket Library series. [Jap]*

• ***Summary:*** See Terajima 1711 (or 1713). This is a translation into modern Japanese, with a title slightly different from that of the original. There have been at least 3 different editions over the centuries, most recently in 1907, 1929, and 1980 on. The set published by Heibonsha was published in 16 volumes from 1980 (vol. 1) to 1990 (vol. 16). This Vol. 7 was chosen at random as one example. We do not know which volume (or volumes) contains the information on soy. Address: Physician

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7118. Weber, Marlis. 1987. The single vegetarian: Healthy recipes for one. Translated from the German by Linda Sonntag. Hammersmith, London, England: Thorsons–An imprint of HarperCollins Publishers. 144 p. Illust. by Juliet Breese. Index. 21 cm.

• ***Summary:*** This attractively illustrated and designed lacto-ovo-vegetarian wholefoods cookbook (first published in Germany in 1985 as *Vollwertkueche für 1 Person*) opens with a nice section on soya beans and tofu (p. 17). Contains more than 50 line drawings, used mostly to fill spaces that would otherwise be empty. Soy-related recipes include: Chicory and beansprouts in curried cream (with soya bean sprouts, p. 56). Soya bean hotpot (with cooked soya beans, p. 76). In the chapter titled "Milk, Quark and Tofu" (p. 121-24) we find recipes for: Tofu dessert, Savoury Tofu, and Tofu Burgers.

7119. Yu, Youtai. 1987. Agricultural history over seven thousand years [in China]. In: Sylvan Wittwer, Yu Youtai, Sun Han, and Wang Lianzheng, eds. 1987. Feeding a Billion: Frontiers of Chinese Agriculture. East Lansing, Michigan: Michigan State University Press. 462 p. See p. 19-33. Chap. 2. [9 ref]

• ***Summary:*** Chinese agriculture originated in the primitive society of the early and middle New Stone Age (5000-2100 B.C.). Farming villages established in the Wei and Yellow River valleys of northeast China cultivated millet, wheat, beans, rice, hemp, cabbage, and melon. The Slave Society period went from 2100-476 B.C. The description of the "five grains" (millet, glutinous millet, soybeans, wheat, and rice) first occurred during the Spring and Autumn period (770-476 B.C.). Feudal Society went from 475 B.C. to A.D. 1840.

The earliest Chinese characters, inscribed on bones and tortoise (land-loving turtle) shells date from around the 14th century B.C. These were first excavated in Anyang County of Henan Province at the end of the 19th century. The earliest book which systematically recorded Chinese agricultural activities was *Xia Xiao Zheng*. It was the calendar of the Zia Dynasty, estimated to have been written around the 16th century B.C. and comprising about 400 words. The main crops were broom millet, gram millet, wheat, rice, bean, hemp, vegetables and melons. Nearly 400 books on ancient Chinese agriculture were published prior to the middle of the 19th century and before the end of the Chinese Feudal Society. The 11th Century B.C. saw the progressive expansion of Chinese agriculture.

In Western Europe, land was inherited by only one son of the noble landlord and was not allowed to be sold. This permitted centralized planning and utilization of land resources. By contrast, during the Feudal Society of China, land was inherited by many sons.

Discusses intensive cultivation which began in Chinese agriculture as far back as the 3rd century B.C.

The first priority in Chinese agriculture has been the production of the food crops known as the "Five Grains." Second is the production of livestock known as "Six Animals." The "six animals" are horses, cattle, sheep, chickens, dogs and pigs. The expression of "five grains" first appeared in the Chinese literature of the eight-fifth centuries B.C. The grains were millet, glutinous millet, soybean, wheat and rice. They were first defined as the 5 basic food crops cultivated in the reaches of the Yellow River.

"Shu" is broomcorn millet (*Panicum miliaceum*); "Ji" is a variety of "Shu." The main difference is that "Ji" is not as glutinous when cooked as is "Shu." In the most ancient Chinese characters inscribed on bones and tortoise shells, these 2 words appeared most frequently of all the gram crops.

In ancient times, farmers would grow some soybeans as a part of their food production program each year. Equal importance was given to millet and the soybean as substitutes for "Shu" and "Ji." Food processing technologies were developed after China entered the Feudal Society. Then fermented and salted soybeans [fermented black soybeans], thick soybean sauce, bean curd, bean sprouts and many other products became commonplace. The soybean then moved from a main food crop to the category of a nonstaple food and an oil crop. Wheat increased, as the soybean declined as a major food crop.

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "fermented and salted soybeans" (or "fermented and salted soybean") to refer to fermented black soybeans.

7120. Amoy Industries (International) Ltd. 1987? Amoy. We bring the tastes of China to the world. Hong Kong. 16 p. Undated. 28 cm. Catalog. [Eng]

• ***Summary:*** This attractive color brochure, with a globe and carved ivory dragon ball on the cover, presents Amoy and its products. The company began as one small factory in the southern Chinese port of Amoy, making only soya sauce. An old photo shows that factory, with many earthenware crocks of soy sauce fermenting outdoors. "Amoy is now one of the largest manufacturers of exportable oriental food in Hong Kong." Amoy has an affiliation with Pillsbury including Burger King and Haagen-Dazs.

Color photos (p. 6-7) show four of Amoy's soy sauce products (Gold label lo chau, Silver label lo chau, Gold label sang chau, and Silver label sang chau), and of many traditional Chinese earthenware soy sauce fermentation crocks. Photos also show Amoy black bean sauce, Yellow bean sauce, fermented tofu. Plus non-soy Royal Dragon wonton, spring roll, shaomai, and dimsum combination. Address: 11-15 Dai Fu Street, Tai Po Industrial Estate, Tai Po, Hong Kong. Phone: 651-6633.

7121. **Product Name:** [Tofu Slices]
Foreign Name: Die Tofu-Scheiben
Manufacturer's Name: Sojalpe.

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Manufacturer's Address: Saint Quentin sur Isère, 38210 Tullins, France. Phone: 76.93.60.21
Date of Introduction: 1987?
Ingredients: Tofu, carrots, onions, rolled oats, salt, soy sauce
Wt/Vol., Packaging, Price: 200 gm, precooked
How Stored: Refrigerated at 4-6°C (39-43°F).
New Product–Documentation: Manufacturer's brochure 1987? In German. "Tofu Slices. Dishes of the fine kitchen The joy of eating... without putting on weight." Tofu: Holding high a tradition. Sojalpe tofu is handmade in Dauphiné, following the traditional slow way of cooking, which was commonly used in Asia. It is made from organically grown soybeans, and without preservatives or colorings. Nigari is the coagulant. The slices can be either pan fried or baked. Serve with a sauce, or as an accompaniment to salads, grains, or vegetables.

The company logo is a steepled building with 5 soy-shaped leaves growing out of the steeple, set in front of towering mountains. A photo on the front shows a tofu slice (about 1/8 inch thick by 4 inches wide by 6 5 inches long) on a plate, topped with a sauce. At the top is an illustration (line drawing) of a laughing male chef in a white top hat.

7122. Simonds, Nina. 1988. A scholar guides China's food policy. *New York Times*, Jan. 13, p. 15-16.
• ***Summary:*** Wang Qing is the 37-year old director of the Beijing Food Research Institute, China's principal food-policy organization. In 1967, after her family was arrested during the Cultural Revolution, she was sent to a farm in Shandong Province. Just a high school graduate, she was given the job of making soy sauce and tofu. She was taught a method of making soy sauce that originated at the time of the building of the Great Wall [220 B.C.?] All the utensils were made of wood and the process was ancient, but it was very sophisticated. After 6 years she returned to her family in Beijing, worked briefly assisting writers at the Beijing Food Research Inst., then went to Hunter College in New York City, where she completed undergraduate and master's degrees in 3½ years. Then she went to Columbia University for a doctorate in nutrition education, she expects to receive her PhD this year. At age 37 she returned to Beijing to become director of the institute, which publishes China's first food magazine, China Food. It has a paid circulation of over 400,000 and claims a readership of millions.

"Miss Wang has already begun to influence China's food policy. Last year she successfully redirected the Chinese from developing their dairy industry and toward the rebuilding of the soybean-milk industry." In 1984 the United Nations had given money to China to develop cow's milk. But 90% of the Chinese population is lactose intolerant and "it is simply too costly for us to raise cattle. They would have to compete with humans for the land." As part of her work on her dissertation, Miss Wang found that there had been a huge decline in China in soybean culture and the manufacture of its by-products. She is now working to recover what was lost. Accordingly, her Institute has developed liquid soymilk in plastic pouches to be test marketed for mass consumption starting next month. 160,000 pouches/day are to be distributed in Beijing.

7123. Miyazawa, Mitsuo. 1988. [Re: History of Sendai Miso Shoyu Co. Ltd.]. Letter to William Shurtleff at Soyfoods Center, Jan. 14. 2 p. Handwritten. [Jap; eng+]
• ***Summary:*** Although this company was founded in 1919, its roots go back to the late 1500s. In March 1593 (Bunroku 2) 3,000 soldiers of Idate Han (the former feudal domain in northeast Japan where Sendai is now located) went to Korea, led by Daté Masamuné (DAH-tay Mah-sah-MU-nay) in the army of Toyotomi Hideyoshi. It was found during the summer battles that the miso brought by the soldiers from most other Hans started to spoil, only that from Idate Han (Sendai) remained tasty, and it was shared with the other soldiers. From this time the fame of Sendai Miso began to spread throughout Japan.

During the Genroku Period (1688-1703) the miso makers in the Sendai area formed a trade group named Miso Nakama. "Nakama" means "colleague, fellow worker, comrade, or associate." They established rules and made miso under the motto "Examine the quality first." During the Kyoho Period (1716-1735) they started selling shoyu and the group changed its name to Miso Shoyu Nakama." Sasa Ju (Sasaki Jubei) joined this group in the year 1834 (Tempo 5) and worked to protect its quality and tradition. During the Taisho Period (1912-1916) the Japanese economy was strong and demand for miso and shoyu from the Sendai area increased. So in 1919 the members of the Miso Shoyu Nakama formed Sendai Miso Shoyu K.K., headed by a descendant of Sasaki Jubei with the same name. The current president of Sendai Miso Shoyu K.K. is the 8th generation named Sasaki Jubei.

Since the mid-1970s the company has exported quite a bit of its naturally fermented miso and shoyu to macrobiotic and natural foods companies in the USA and Europe. Address: Sendai Miso Shoyu Co. Ltd., Furujiro 1-5-1, Sendai 982, Japan.

7124. Van den Berg, H.; Dagnelie, P.C.; Staveren, W.A. van. 1988. Vitamin B-12 and seaweed. *Lancet* i(8579):242-43. Jan. 30. [6 ref]
• ***Summary:*** "Neither in fermented soya products (tempeh, shoyu, tamari, rice miso, barley miso, tofu), nor in other fermented products (amasake rice, umeboshi prunes) did we find measurable B-12 (all below 0.02 micrograms per 100 g)." Tests done using both radioassay and *Lactobacillus leichmanii* showed that Spirulina and Nori (*Porphyra tenera*) were the two best vegetarian sources tested. But the B-12 in the nori does not appear to be available to the body. Its

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presence may be due to corrinoid-like B-12 analogues.

This study showed a tendency toward vitamin B-12 related anemia (not iron-related) in macrobiotic children who are generally vegan. A deficiency of vitamin B-12 in children can result in serious neurological damage. Address: 1. TNO-CIVO Toxicology and Nutrition Inst., 3700AJ Zeist, Netherlands. 2-3. Dep. of Human Nutrition, Agricultural Univ., Wageningen, Netherlands.

7125. **Product Name:** Tofu Teriyaki (Flavored Tofu).
Manufacturer's Name: Bud, Inc.
Manufacturer's Address: 1100 Wicomico St., Baltimore, MD 21230.
Date of Introduction: 1988, January.
Ingredients: Organic nigari tofu, soy sauce, honey & malt, spices.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated
New Product–Documentation: Label. 1988, Jan. (dated). 3.5 by 3 inches. Card stock. Brown and tan on white. Under English product name is the Chinese name Wu hsiang doufu gan. "Keep refrigerated. Serving suggestions: Serve as is, cube or slice, mix with salad, stir-dry with vegetable."

7126. Kagiyama, Shogo; Aiba, T.; Kadowaki, K.; Mogi, K. 1988. New killer toxins of halophilic *Hansenula anomala*. *Agricultural and Biological Chemistry* 52(1) 1-7. Jan. [23 ref]
• ***Summary:*** Two strains of killer yeasts, both identified as *Hansenula anomala*, were isolated from shoyu moromi. Both killer yeasts showed killer activity toward *Zygosaccharomyces rouxii* EA under high NaCl concentration conditions. Both toxins were glycoproteins. The killer activities of both toxins increased with increasing NaCl concentration. The killer activities of these strains were not abolished by cycloheximide treatment or by cultivation at 37°C. No plasmid was detected in either killer yeast. Address: Research Lab., Higeta Shoyu Co. Ltd., Choshi-shi, Chiba 288, Japan.

7127. Shurtleff, William; Aoyagi, Akiko, comps. 1988. Marketing soyfoods–Labels, ads, posters, and other graphics: Miso and soy sauce. Lafayette, California: Soyfoods Center. 148 leaves. Illust. No index. 28 cm. Series: Marketing soyfoods.
• ***Summary:*** This book is a collection of black-and-white photocopies of materials ranging in date from 1975 to 1986. The books in this series, each a unique collection of graphic materials, are designed for a number of purposes: (1) To serve as a source of ideas, ingredients, inspiration, legal specifications, and basic guidelines for companies in the process of developing their own products, designing their own graphic materials, and conceiving their own marketing strategies. (2) To document the tremendous diversity of soyfoods products and the way that each is presented and marketed. (3) By arranging the materials in chronological sequence, to help document the development and history of new product categories and soyfood types, and with them the rise of the soyfoods industry and market in the Western World. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

7128. Abe, Keietsu; Hashiba, Hironaga; Uchida, Kinji. Assignors to Kikkoman Corp. (Noda, Japan). 1988. Novel variant and process for producing light colored soy sauce using such variant. *U.S. Patent* 4,722,846. Feb. 2. 7 p. Application filed 5 April 1985. [5 ref]
• ***Summary:*** The process uses a novel variant, *Pediococcus halophilus* 13-2, obtained by mutating *P. halophilus* X-160. It is capable of utilizing pentose sugars (which cause brown colors in soy sauce), but does not cause fermentation of D-glucose. The variant is added at the koji preparation stage, or in the early stage of brewing of soy sauce moromi. Address: 1-2. Noda, Japan; 3. Nagareyama, Japan.

7129. Belleme, John. 1988. San-J's natural tamari-shoyu (Interview). *SoyaScan Notes*. Feb. 2. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** San-J uses the same ingredients to make tamari and tamari-shoyu (15% wheat) here and in Japan, but here they use temperature controlled fermentation. They do not make a regular shoyu with equal parts wheat and soybeans. The closest thing to it is their "tamari-shoyu" containing 15% wheat. This product is made like tamari, using koji-dama (koji balls). Their tamari sells for $6/gallon versus $3/gallon for Kikkoman shoyu. Yet many big food processors prefer tamari. [Probably because the higher amino acid content gives a higher flavor profile. Less flavor is lost from evaporation of alcohol during heating. And the salt content is lower]. Eden will be selling all of San-J's U.S.-made tamari-shoyu under their label. Off the subject. The first crop of U.S.-grown nori is now ready in Washington state. Joel Dee of Edward & Sons Trading just moved to California. Address: P.O. Box 457, Saluda, North Carolina 28773. Phone: 704-749-9537.

7130. Kainuma, Teisuke. 1988. Honolulu Sake Brewery Co. Ltd. (Interview). *SoyaScan Notes*. Feb. 8. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Honolulu Sake Brewery Co. Ltd., 2150 Booth Rd., Honolulu, HI 96813. Phone: 808-537-9069. It was founded about 80 years ago by Mr. Sumida, who is no longer living. His grandson, Mr. Sumida, is retired and lives in Honolulu. The company used to be called Honolulu Sake and Ice Co. It was recently purchased by Takara Sake Co. (Nihon Takara Shuzo Kaisha). They presently make soy sauce, sake, nigori (thick white sake) and mirin. Good contacts are Ron Sumida and Mr. Kimura, an engineer. Mr. Takao Nihei,

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who is retired in Honolulu, is the best man on the history. Phone 808-537-1369. He wrote a history of the company and of sake in America, which was published in *Nippon Jozo Kyokai Zasshi* (1978, 1985). He might know if there was any amazake produced commercially in Hawaii. Mr. Kamuma has Mr. Nihei's articles on the history of sake, miso, and shoyu in Hawaii, which he will send. Takara makes sake in America. It contains 16% alcohol, by volume. In 1983 Takara purchased Numano Sake Co., which was founded in 1978 by Mr. Numano at 708 Addison St. in Berkeley, California. Address: V.P., Director of Production, Takara Sake USA Inc., 708 Addison St., Berkeley, California 94710. Phone: 415-540-8250.

7131. Nihei, Takao. 1988. History of amazake, sake, shoyu, and miso in Hawaii (Interview). *SoyaScan Notes*. Feb. 8. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Phone interview followed by a letter dated Feb. 18. He has written a history of sake, miso, and shoyu in Hawaii and America (5 installments), which he will send. Sake was first made in Hawaii in 1908 by Honolulu Shuzo Seizo Gaisha; the brand was Takara Masamune. Mr. Nihei did research on shoyu and miso at the National Fermentation Lab (Jozo Shikenjo) in Japan with Dr. Nakano and knows our work. From there he got into sake. He doesn't know much about amazake but thinks that there are no publications on it and there was never a commercial amazake company in Hawaii. The reason for that is that since long ago everybody there has made amazake from sake lees, perhaps since 1908, and not from koji, though koji was sold before World War II. He moved to Hawaii in 1950 and many people were making amazake from sake lees at that time. They mix the sake lees with hot water, plus sugar and a little grated ginger. His wife's method is his favorite.

Recipe #1, Hawaiian Style Amazake from Glutinous Rice and Sake Lees: Cook 1 cup glutinous rice (incorrectly called "sweet rice" or "mochi rice") with 3 cups water to make a porridge or gruel (*okayu*). Turn off heat and leave in covered pan for 10 minutes. When it is still fairly hot (50-55°C, 122-131°F), mix in 1 lb sake lees (sake kasu, which still contain some enzymes). Wrap the pot with towels or a blanket to keep the heat at about 130-140°F (this is important) and allow to incubate in a warm place for about 2-3 hours. When the mixture becomes soft, add 1 cup sugar and 3 cups hot water, then bring to a boil over low heat. To serve, mix 1 part of this base with 2 parts water. Enjoy hot or cold. Refrigerate leftovers in a sealed glass jar.

Recipe #2, Quick and Easy Hawaiian Style Amazake from Sake Lees (without Glutinous Rice): Mix 3 cups hot water with ¼ pound (about 3/4 cup) sake lees. Let it stand for a while until the lees become soft. Heat on low heat, stirring gently until lumps dissolve. Stir in ½ to 3/4 cup sugar and ¼ teaspoon salt. When it comes to a boil, add a little grated ginger juice immediately, and serve. Address: 422 Uhini Place, Honolulu, HI 96813. Phone: 808-537-1369.

7132. Belleme, John. 1988. Update on miso in America. How about amazake as a soymilk sweetener? (Interview). *SoyaScan Notes*. Feb. 23. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Mitoku (Mr. Kazama and Chris Dawson) is considering a joint venture with Sendai Miso Shoyu of a miso plant on the West Coast of the USA. This is still very tentative. They are also considering making amazake. But about 2 years ago Miyako Oriental Foods increased their miso production capacity. They can probably make over 1 million pounds a year now. It was about 600,000 lb/year. Fujiwara Brewing Co. in Okayama, which makes equipment for miso and soy sauce companies, supplied the equipment to Miyako. The company San-J finally used to build their tamari plant and supply the equipment was Fujiwara's competitor, Nagata. Steve Earle said this was the same company that had just helped expand the Miyako plant. According to the people at Ohsawa-America, Mr. Kitani, the Japanese man who makes Yamaki Shoyu, and Bob Kennedy, formerly of Chico-San are planning a miso plant in the USA, probably with automatic koji equipment.

John feels that sales of miso in America have slowed down and that if new companies enter the market, it will be oversupplied. At American Miso Co. his maximum capacity was about 400,000 lb/year. The volume hasn't changed much in the past few years. Christian Elwell at South River Miso Co. has a capacity for about 60,000 lb/year, which he hasn't reached. Both these are more expensive than Miyako ($4.49 for American Miso white miso, Christian's is more, and Miyako's is about $2.85/lb, or only 63% as much). He suggests: How about amazake as a sweetener for soymilk? It would replace barley malt and give the soymilk more body, kind of like a shake. Then you can put rice on the label. Great idea! Address: Route 5, Box 258, Rutherfordton, North Carolina 28139. Phone: 704-749-9537.

7133. Roller, Ron. 1988. Eden Foods, San-J, and tamari shoyu (Interview). *SoyaScan Notes*. Feb. 23. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Eden has negotiated with San-J for San-J to make a private label soy sauce with less wheat than regular shoyu. This is an exclusive agreement, but the details have not been completely finalized. They make their koji from balls rather than loose koji. Now they are making soybean meal tamari for their industrial customers. Eden's product will be made from whole soybeans, not meal. Everything they bottle is made from whole soybeans. They want to get their tamari production going before they think about making shoyu. Tamari will be the primary product. But to cover their overhead, they will have to cut into the shoyu market. They have managed to capture a large percentage of the bulk soy sauce market with their tamari. Japan Foods

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(which is owned by Kikkoman) is going to distribute their tamari. Apparently the more wheat a soy sauce has, the longer it takes to ferment. They use temperature control with all their soy sauce. They say its the most modern fermented soy sauce factory in the world. He has visited the plant. Eden still imports a real shoyu from Marushima, and plans to continue it. But down the road they may ask San-J to make it for them. Now is much too early. A big question is what to call the new product that contains about 20% wheat. San-J plans to call it "shoyu," not "tamari shoyu." Its kind of an in-between product. They get their wheat and soybeans from Virginia. Address: Director of Purchasing, Eden Foods, Clinton, Michigan.

7134. **Product Name:** Premier Japan Natural Teriyaki Barbecue Sauce & Marinade.
Manufacturer's Name: Edward & Sons Trading Co. (Importer). Made in Japan.
Manufacturer's Address: 1115 Lousons Rd., P.O. Box 3150, Union, NJ 07083. Phone: 201-964-8176.
Date of Introduction: 1988. February.
Ingredients: Shoyu soy sauce, apple cider vinegar, rice cooking wine (sake), water, apple juice concentrate, onion juice, ginger puree, natural herbs & spices, sea salt, mushroom & seaweed extract.
Wt/Vol., Packaging, Price: 8 oz jar.
How Stored: Shelf stable.
New Product–Documentation: Label. 1988. 6.5 by 3.5 inches. Glossy paper. Red, gold, orange, and black. Oval silhouette of Kyoto pagoda against the sunset. "Gourmet International Cuisine. Nothing artificial. No MSG. Fruit Juice Sweetened." The Story of Premier Japan. Designed to introduce traditional Japanese cuisine to the world. "Oriental barbecue sauce. Perfect for basting, grilling & tabletop use. Bakes & broils fish, chicken & tofu to perfection. A marvelous marinade too." Spot in Whole Foods. 1988. Feb. p. 58. Soya Newsletter. 1988. March/April. p. 8. These four new shoyu-based products are marinating- and dipping sauces, and dressings, part of the Premier Japan line of Gourmet Natural Products.

7135. **Product Name:** The Wizard's Sizzle. Spicy Barbecue Sauce.
Manufacturer's Name: Edward & Sons Trading Co. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 3150, Union, NJ 07083. Phone: 201-964-8176.
Date of Introduction: 1988. February.
Ingredients: Tomatoes, cider vinegar, fruit juice concentrate, Barbados molasses, water, canola oil, cayenne pepper mash, shoyu soy sauce, miso, onion juice, garlic juice, The Wizard's magical blend of natural herbs and spices, sesame oil, sea salt, hickory smoke, seaweed extract.
Wt/Vol., Packaging, Price: 12 fluid oz (354 ml).
How Stored: Shelf stable.
New Product–Documentation: This was formerly Smoky Mountain Sizzlin', made by American Natural Foods and introduced in Sept. 1984. Label. 1988. 6 by 3 inches. Gummed glossy paper. Yellow, red purple, brown, black, and white. Illustration of a bearded wizard with hat, wand, and purple robe. Plus a a dragon with fiery breath. "Makes any meal sizzle with sure-fire magic. Use your imagination and watch the magic make foods disappear. Contains nothing the least bit artificial or phony. Shake well and wake the dragon up. Wizard Baldour."

7136. **Product Name:** The Wizard's Catch Up. Spicy Catsup.
Manufacturer's Name: Edward & Sons Trading Co. (Importer). Made in Japan.
Manufacturer's Address: P.O. Box 3150, Union, NJ 07083. Phone: 201-964-8176.
Date of Introduction: 1988. February.
Ingredients: Tomatoes, cider vinegar, fruit juice concentrate, water, shoyu soy sauce, The Wizard's magical blend of natural herbs and spices, sea salt, seaweed extract.
Wt/Vol., Packaging, Price: 12 fluid oz (354 ml).
How Stored: Shelf stable.
New Product–Documentation: Label. 1988. 6 by 3 inches. Gummed glossy paper. Yellow, red purple, brown, black, and white. Illustration of a bearded wizard with hat, wand, and purple robe. Plus a a dragon with fiery breath. "Catch up with today's new natural cuisine. Everything you really want on it–is in it. Use your imagination and watch the magic make foods disappear. Contains nothing the least bit artificial or phony. Shake well and wake the dragon up. Wizard Baldour."

7137. **Product Name:** Premier Japan Natural Sukiyaki. Exotic Sweet Cooking Sauce.
Manufacturer's Name: Edward & Sons Trading Co. (Importer). Made in Japan.
Manufacturer's Address: 1115 Lousons Rd., P.O. Box 3150, Union, NJ 07083. Phone: 201-964-8176.
Date of Introduction: 1988. February.
Ingredients: Shoyu soy sauce, apple cider vinegar, rice cooking wine (sake), fruit juice concentrate, water, onion juice, garlic juice, toasted sesame oil, mushroom & seaweed extract.
Wt/Vol., Packaging, Price: 8 oz jar.
How Stored: Shelf stable.
New Product–Documentation: Label. 1988. 6.5 by 3.5 inches. Glossy paper. Red, gold, orange, and black. Oval silhouette of Kyoto pagoda against the sunset. "Gourmet International Cuisine. Nothing artificial. No MSG. Fruit Juice Sweetened." The Story of Premier Japan. Designed to introduce traditional Japanese cuisine to the world. "The exotic sweet character of this oriental cooking sauce is

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perfect for wok cooking and all stir fries. Sukiyaki balances strong tastes while enhancing subtle flavors. An elegant sauce." Spot in Whole Foods. 1988. Feb. p. 58. Soya Newsletter. 1988. March/April. p. 8. These four new shoyu-based products are marinating- and dipping sauces, and dressings, part of the Premier Japan line of Gourmet Natural Products.

7138. **Product Name:** Premier Japan Natural Ginger Tamari. Classic Sauce & Marinade.
Manufacturer's Name: Edward & Sons Trading Co (Importer). Made in Japan.
Manufacturer's Address: 1115 Lousons Rd., P.O. Box 3150, Union, NJ 07083. Phone 201-964-8176.
Date of Introduction: 1988. February.
Ingredients: Apple cider vinegar, shoyu soy sauce, rice cooking wine (sake), water, ginger puree, fruit juice concentrate, onion juice, sea salt, mushroom & seaweed extract.
Wt/Vol., Packaging, Price: 8 oz jar.
How Stored: Shelf stable.
New Product–Documentation: Label. 1988. 6.5 by 3.5 inches. Glossy paper. Red, gold, orange, and black. Oval silhouette of Kyoto pagoda against the sunset. "Gourmet International Cuisine. Nothing artificial. No MSG. Fruit Juice Sweetened. The Story of Premier Japan. Designed to introduce traditional Japanese cuisine to the world ... A classic dipping sauce for tempura. Use full strength as a dressing for steamed vegetables or as a marinade for broiling seafood, chicken or tofu."

Spot in Whole Foods. 1988. Feb. p. 58. Soya Newsletter. 1988. March/April. p. 8. These four new shoyu-based products are marinating- and dipping sauces, and dressings, part of the Premier Japan line of Gourmet Natural Products.

7139. **Product Name:** Premier Japan Natural Sesame Sauce. Gourmet Dip & Dressing.
Manufacturer's Name: Edward & Sons Trading Co. (Importer). Made in Japan.
Manufacturer's Address: 1115 Lousons Rd., P.O. Box 3150, Union, NJ 07083. Phone 201-964-8176.
Date of Introduction: 1988. February.
Ingredients: Water, shoyu soy sauce, rice cooking wine (sake), sesame tahini, fruit juice concentrate, soy oil, rice vinegar, onion juice, toasted sesame oil, miso, arrowroot, sea salt, guar gum, mushroom & seaweed extract.
Wt/Vol., Packaging, Price: 8 oz jar.
How Stored: Shelf stable.
New Product–Documentation: Label. 1988. 6.5 by 3.5 inches. Glossy paper. Red, gold, orange, and black. Oval silhouette of Kyoto pagoda against the sunset. "Gourmet International Cuisine. Nothing artificial. No MSG. Fruit Juice Sweetened. The Story of Premier Japan. Designed to introduce traditional Japanese cuisine to the world. "Japan's gourmet secret for bakes and broils. Use as a dressing for rice, vegetables and salads. Also great as a dip for chips and hors d'oeuvres." Chicken & tofu to perfection. A marvelous marinade too." Spot in Whole Foods. 1988. Feb. p. 58. Soya Newsletter. 1988. March/April. p. 8. These four new shoyu-based products are marinating- and dipping sauces, and dressings, part of the Premier Japan line of Gourmet Natural Products.

7140. Elliott, James G. 1988. Consumer attitudes regarding soy products. In: L. McCann, ed. 1988. Soybean Utilization Alternatives. St. Paul, MN: Univ. of Minnesota Center for Alternative Crops and Products. vi + 429 p. See p. 381-91. [3 ref]
• ***Summary:*** Discusses: Consumer awareness of soy foods. Consumers' awareness of manufacturers' use of soy protein. Consumer willingness to purchase meat products containing soy protein. People were asked, when you think of foods which are made from soybeans, what products come to mind? Unaided awareness of soyfoods among consumers was low, only 4 in 10 were able to name a specific soyfood on a top-of-the-mind basis. However, aided awareness was significantly higher. Soy sauce and soybean oil had the highest levels of aided awareness among consumers at 94% and 77% respectively. Tofu, soymilk, margarine, and soy nuts registered moderate levels of aided awareness at 45%, 38%, 38%, and 31% respectively. Tofutti came in next at 21% and miso came in last at 10%.

When asked if they had "ever tried" these products, of the eight soyfoods mentioned, soy sauce demonstrated the highest trial level at 75%. All other products "ever tried" were 20% or less. Respondents who had not tried a particular food product made from soybeans were asked if they would be willing to do so. Expressed willingness to try was in the 60% to 70% range. It was the highest for soybean oil, soy nuts, margarine, tofu and Tofutti.

65% of those surveyed responded positively when asked, "have you heard of soy protein being included in certain food products?" 35% were unaware. Among consumers who were aware that manufacturers use soy protein, 60% said that they were definitely using foods that contain soy protein, or believed that they were; 29% said they were not using them; and 11% didn't know. When asked, "Does the fact that a food manufacturer uses soy protein in its products change your feeling about the company?," 80% stated no difference; 8% stated that they felt better; and 12% said that they felt worse. Address: Manager of scientific communications, Protein Technologies International, St. Louis, Missouri.

7141. Golbitz, Peter. 1988. Whole bean soy products. In: L. McCann, ed. 1988. Soybean Utilization Alternatives. St. Paul, MN: Univ. of Minnesota Center for Alternative Crops and Products. vi + 429 p. See p. 325-31.

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• ***Summary:*** Discusses: Tofu. Soymilk. Yuba or soymilk film. Fresh green soybeans. Whole dry soybeans. Soynuts. Soy sprouts. Tempeh. Soy sauce. Miso. Address: Soyatech, Bar Harbor, Maine.

7142. *Harvard Medical School Health Letter.*1988. Follow-up and feedback: Soy sauce and fish (Substances favoring nitrosamine formation). 13:8. Feb. [1 ref]

• ***Summary:*** "Our article on nitrates and cancer (June 1987) mentioned that 'some types of preserved fish and certain varieties of Japanese soy sauce' are among the foodstuffs containing substances that favor formation of nitrosamines. Nitrosamines have been implicated in carcinogenesis, and it has been suggested that a high dietary exposure to them might promote cancer of the stomach (which is increasingly rare in the United States, but very common in Japan). It has also been suggested that their formation from nitrites can be inhibited by the actions of vitamin C and vitamin E.

"Several readers, understandably, wrote to ask *which* soy sauces and fish have this characteristic. In the case of soy sauces, we don't know. The Japanese researchers who reported the finding identified the products they studied only by country and state of origin. Several soy sauces produced in the state of Chiba, Japan, and one from the state of Mie, converted nitrite to nitrosamine at a high rate, and the resulting material had a high score on a laboratory test of bacterial mutation (a version of the Ames test), which is believed to correlate with carcinogenic potential. Soy sauces produced in other Japanese states and Hawaii, and most produced in the United States, yielded less nitrosamine and had much lower scores. One exception, from Wisconsin, was very high on both counts. But it was only identified as 'soy sauce M.'"

7143. Henry Ford Estate. 1988. Menu of dinner served at Ford Exhibit, Century of Progress. August 17, 1934. Dearborn, Michigan. 1 p.

• ***Summary:*** This meal was served again by chef Jan Willemse on 29 Feb. 1988.–Tomato Juice Seasoned with Soy Bean Sauce–Salted Soy Beans–Celery Stuffed with Soy Bean Cheese–Puree of Soy Bean–Soy Bean Cracker–Soy Bean Croquettes with Tomato Sauce–Buttered Green Soy Beans–Pineapple Ring with Soy Bean Cheese and Soy Bean Dressing–Soy Bean Bread with Soy Bean Relish–Soy Bean Macaroons–Apple Pie (Soy Bean Crust)–Cocoa with Soy Bean Milk–Soy Bean Coffee–Assorted Soy Bean Cookies–Soy Bean Cakes–Assorted Soy Bean Candy–Chef Jan Willemse, food items and preparation, courtesy of the Miesel/Sysco Food Service Company of Canton, Michigan.

Note: This menu seems to differ slightly from the original 1934 menu in that it omits one dish (Soy Bean Biscuit with Soy Bean Butter) and replaces it with another (Soy Bean Macaroons). Address: Dearborn, Michigan.

7144. Kikkoman International Inc. 1988. Kikkoman stands on ceremony (Ad). *Prepared Foods* 157(2):3. Feb.

• ***Summary:*** This full-page color ad shows two shallow shoyu tasting cups on a tray. "We would consider it an honor to perform Soy Ceremony for you personally. To see, smell and taste the Kikkoman difference contact Kaz Takei, Kikkoman International, Inc.," San Francisco.

"Choose from: Regular Brewed Soy, Reduced Salt Soy, Preservative Free, and dehydrated Soy Sauces. Kikkoman provides technical advice and prompt service from over 20 U.S. distribution centers."

Across bottom of ad: "Since 1630. Kikkoman. Good taste is our business."

7145. Lee, Byeong-Ho; Ryu, B.H.; Choi, S.H.; Kim, K.H.; Kim, H.S.; Chae, Y.Z. 1988. [Protoplast fusion between *Zygosaccharomyces rouxii* and *Saccharomyces cerevisiae* isolated from soy sauce mash]. *Hanguk Sikp'um Kwahakhoe Chi* (*Korean J. of Food Science and Technology*) 20(2):164-69. [33 ref. Kor, eng]

• ***Summary:*** The protoplast fusion was undertaken in order to breed a new and improved yeast for use in soy sauce fermentation. Address: Dep. of Food and Nutrition, Dongeui Univ., 24 Gaya-dong, Pusanjin-gu, Pusan 614-010, South Korea.

7146. *Natural Foods Merchandiser.*1988. Soyfoods import costs rise as dollar declines. Feb. p. 32.

• ***Summary:*** Discusses techniques used by Westbrae, Edward and Sons Trading Co., Eden Foods, and San-J International to try to deal with the falling value of the dollar against the yen. The dollar began its fall in September 1985. In the past 18 months, the dollar has been devalued almost 40% against the yen, making Japanese imports about 40% more expensive. To try to keep consumer prices as low as possible, some companies try to absorb the cost increases themselves, some ask Japanese manufacturers to help, and some (such as Eden Foods, Westbrae, and San-J) start to make products in the USA.

7147. *Southern Supermarketing* (*Birmingham, Alabama*).1988. Kikkoman International–After more than 300 years, the success continues. Feb. p. 6-7.

• ***Summary:*** In the last two years, the South has shown the strongest growth record for Kikkoman products as compared to all other regions of the country. The Kikkoman method of production is a six-month process as compared to about a week required for the blended mixture (HVP). Kikkoman is not only the world's oldest brand of naturally-brewed soy sauce–it is also the world's largest selling soy sauce. In Japan, the average person consumes approximately 2.6 gallons of soy sauce a year. Kikkoman's share of this huge market, where there are about 3,000 soy manufacturers, is approximately 30%. In 1957, Tom Yoshinaga pioneered

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Kikkoman International Inc. in the U.S. and began opening regional offices like stepping stones.

Today, Kikkoman International has five regional offices in San Francisco, Los Angeles, New York, Chicago, and Atlanta. When Kikkoman first entered the U.S. market in the 1950s, the product was very unique in terms of its positioning because it had "All Purpose" printed on the label. Those two words were an important factor contributing to the success of the brand. In 1961, Kikkoman pioneered the bottled teriyaki sauce market in the U.S. Kikkoman introduced Teriyaki Baste & Glaze in 1984. Baste & Glaze is a thick and richly flavored teriyaki sauce. In 1982 Kikkoman developed Lite Soy Sauce with 40% less salt. This product represents about 20+% of Kikkoman's total soy sauce volume. Similarly, in 1986 Kikkoman introduced Stir-Fry Sauce.

7148. Earle, Steve. 1988. Re: Answers to questions about history of San Jirushi. Letter to William Shurtleff at Soyfoods Center, March 7. 3 p. Typed, without signature on letterhead.

• ***Summary:*** No history per se of San-Jirushi has ever been written, however the Sato family has many records of historical interest. The original company, named Minato-ya ("Harbor Company"), was a trading house that traded up and down the rivers that empty into the Bay of Ise at Kuwana. Among the wares traded were salt, miso, and tamari. The miso and tamari were brewed in one of their warehouses (kura). Later this became Minato-ya's principal business as the shipping trade moved north to Nagoya.

"There are indications that Minato-ya was already in operation at the beginning of the Edo period (1601), however it is not clear when it began producing miso and tamari as the earliest records were lost when the Minato-ya kuras were burned due to fire bombings in the Second World War...

"The company name was changed in 1909 from 'Minato-ya' to 'Sato Shinnosuke Shoten' and finally to 'San-Jirushi Brewing Corporation' in 1963.

"The original address was Ise-no-kuni, Kuwana-gun, Kuwana-cho Ooaza Senba.

"The original brand/trade name was Yamasan. The name and mark [three horizontal lines with a roof-like mountain over the top] symbolized Mount Tado (upriver just northwest of Kuwana) and the three rivers, Kiso, Ibi and Nagara...

"The mountain was dropped from the mark and the name changed to San-Jirushi in 1909. This name was officially registered in 1912.

"The original products were called 'miso' and 'tamari' (not 'tamari-shoyu'). The original ingredients of Minato-ya's miso and tamari were soybeans, water and salt. No wheat was used. There was also originally no *kosen* (roasted barley flour) used with the seed koji. This koji was called 'tomo-koji' and was made by obtaining koji-dama (half-fist sized balls of compressed, cooked soybeans) which were then hung in straw sacks over the rafters in the kura loft to incubate. In these days there were apparently tradesmen, much like the 'toujishi' in sake brewing, who made a circuit of miso and tamari brewers, bringing with them tomo-koji. There is still one employee of San-Jirushi who can recall making koji by this method in the old San-Jirushi kura.

"San-Jirushi began using seed koji [koji starter] in 1933. Koji-ya Sanzaemon, the koji house that still supplies San Jirushi today, has been in operation continuously since the Muromachi period supplying seed koji for sake manufacture, however this technology was not applied to miso and shoyu manufacture until quite late (Kikkoman and the four major shoyu brand makers began using seed koji at about this same time)." Address: UN Park Building, 7th Floor, Ebisu-Nishi 1-19-6, Shibuya-ku, Tokyo 150, Japan. Phone: 03-780-5933.

7149. Cooperman, Alan. 1988. Yum Buns graduate to larger quarters. ***Berkshire Eagle*** (***Pittsfield, Massachusetts***). March 27.

• ***Summary:*** Pittsfield "Special T's Bakery, home of the Yum Bun, has moved from 194 Fenn St. to larger quarters in the Oasis Plaza at 95 West Housatonic St."

"The bakery's most unusual and best-known produce is still the Yum Bun, a vegetable sandwich described by the Theriault sisters (Louise Theriault Blake and Linda A. Theriault) as 'tamari-seasoned vegetables stuffed into a whole wheat crust with almonds and tofu.'"

7150. ***Essen und Trinken*** (***Hamburg, W. Germany***). 1988. Tofu-Diaet [Tofu diet]. 3: 112-14, 116, 118, 120, 122, 124, 126, 128-30, 132. March. [Ger]

• ***Summary:*** A spectacular article preceded by a 1-page praiseful editorial on tofu titled "The Frog Becomes a Prince: Tofu Reveals Charm," by Angelika Jahr, the head editor of "Eating and Drinking." The first two-thirds of the article is in color, consisting mostly for large color photos of tofu dishes, with calorie counts, the last third is the recipes. There are also brief descriptions of miso, shoyu, and gomasio [gomashio] as typical Asian seasonings. Address: Postfach 30 20 40, 2000 Hamburg 36. Phone: 040 41 18(1).

7151. Hondo, Satoshi; Yasuhira, Hitomi. 1988. Taipu no kotonaru tane kôji-kin ni yoru miso no shijô. III. Tane kôji-kin to miso hinshitsu no kankei [Fermentation of miso using various koji molds. III. Effect of koji mold on the quality of miso]. ***Shinshu Miso Kenkyusho Kenkyu Hokoku*** (***Report of the Shinshu-Miso Research Inst.***) No. 29. p. 14-19. [14 ref. Jap; eng]

• ***Summary:*** Koji variants used to produce rice miso, barley miso, soybean miso, sake, shochu, soy sauce, etc. (***Aspergillus oryzae*** and ***A. Sojae***) were evaluated, as regards such attributes as growth rate, fermentation products, enzymic activity and sensory quality.

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7152. Jangtoh Soontofu Restaurant. 1988. March. New soyfoods restaurant or deli. 4451 Beverly Blvd., Los Angeles, California (in the Beverly Hobart Plaza).
• ***Summary:*** This restaurant, which opened in March 1988, is geared for Koreans. Signs outside are written in Hangul, the Korean alphabet. "The restaurant serves only two dishes–*soontofu* and *kongbiji*, both of them soups. *Soontofu* is made with tofu, *kongbiji* with ground soybeans. That may sound like an extremely limited menu, but there are variations."

"Jangtoh makes its own tofu, producing several batches a day. If you've never tasked warm, soft, fresh tofu, don't miss the opportunity to try it here. A small bowl of this cloud-like substance comes with each meal. The kitchen garnishes it with a bit of chopped green onion, dried seaweed and sesame seeds. Then you spoon on a wonderful sesame-soy sauce-garlic condiment from a jar on the table."

Jangtoh, owned by Bu-A and Brian Chung, opened in March 1988.

Jangtoh Soontofu Restaurant, 4451 Beverly Blvd., Los Angeles; (213) 665-8664. Address: Los Angeles, California. Phone: 213-665-8664.

7153. *SoyaScan Notes.*1988. New Trend: "Big Food" enters the U.S. tofu market, but in an unexpected way–Via Japan (Overview). March. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** For the past 5 years or so, U.S. tofu companies and industry watchers have been speculating as to when "Big Food" would jump into the U.S. tofu market. They had in mind big U.S. food companies such as General Foods, Kraft, etc. But at the start of this year, 1988, Morinaga, Japan's third largest manufacturer of dairy products (FY 1982 sales were $1,171 million dollars) began the largest promotional campaign for tofu ever conducted in America, with attractive, full-page color adds for at least 3 months in a row in major natural foods magazines. The product is now showing up in many natural food stores and sales are skyrocketing. And Kikkoman, the world's largest maker of soy sauce and one of Japan's biggest food companies, is now also aggressively selling tofu. Both companies make their tofu in Japan. The big question now is when they will establish U.S. plants.

7154. *Taste* (*Kikkoman, Japan*).1988. New frontiers in Hokkaido [Kikkoman's new shoyu plant in Chitose]. 2(1):8. March.
• ***Summary:*** The Kikkoman's third, and newest, domestic soy sauce factory is in Hokkaido. The new plant was finished in early 1987, over half a century after the construction of the second Takasago plant near Osaka. Just as Kikkoman's first plant near Noda City was located amid wheat and soybean fields, the choice of this plant near Chitose was partly influenced by the ready supplies of wheat nearby. (The soybeans are imported from the U.S.) The factory is 27,300-square meters with four stories. Only fifty employees are on hand to man two large control rooms. They have also applied high technology to microorganisms used in the fermentation. The Chitose plant was singled out for a national award by the Nihon Keizai Shinbun last October. Kikkoman, one of Japan's leaders in biotechnology, demonstrated the results of its latest research on bioreactors, designed to reduce the time needed to produce soy sauce. Other companies promoted the versatility of their soybean-related food products, such as cheese-flavored tofu and tofu ice cream.

7155. *Taste* (*Kikkoman, Japan*).1988. Secrets of sukiyaki. 2(1):6-7. March.
• ***Summary:*** Historically, meat eating in Japan tended to fluctuate with the religious climate of the times. Before the introduction of Buddhism into the country (in A.D. 676) mountain-dwellers hunted for their food just as fishermen relied on fish for their meals. However, the arrival of the new faith soon banished meat from the daily diet. (The nobility, however, continued to consume meat under the guise of medicine.) Today, sukiyaki is prepared in two distinct regional styles: in Kanto (Toko-Yokohama) and in Kansai (Osaka-Kyoto). In Kansai, the ritualistic order of the meal is emphasized.

7156. Tochikura, Tatsurokuro, comp. and ed. 1988. Shōyu no kagaku to gijutsu [The food science and technology of shoyu]. Brewing Society of Japan, Takinogawa 2-6-30, Kita-ku, Tokyo, Japan. 571 p. Illust. Index. 21 cm. [1067 ref. Jap]
• ***Summary:*** The best book of its kind seen up to this time. Contents: 1. Raw materials and their processing. 2. Making koji. 3. Brewing. 4. Microorganisms. 5. Making products and processing. 6. Components. 7. Browning reaction. 8. Preventing infestation and mold. 9. Product quality control. 10. Nutrition and food sanitation. 11. Various types of shoyu. 12. HVP (Amino acid liquid). 13. Seasoning processes. 14. Bottling and packaging. 15. New technology. 16. Waste water treatment and environment preservation. 17. JAS and other laws and regulations. 18. Shoyu around the world. Address: Prof. of Food Science, Kyoto Univ., Japan.

7157. **Product Name:** Mt. Fuji Mustard with Tamari & Wasabi.
Manufacturer's Name: Westbrae Natural Foods (Product Developer/Distributor).
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1988. March.
Ingredients: Mustard seeds, vinegar, tamari (soybeans, water, salt), wasabi (horseradish), cinnamon, allspice.
Wt/Vol., Packaging, Price: 8 oz jar.
How Stored: Shelf stable.
New Product–Documentation: Westbrae Newsletter. 1988.

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Talk with Megan Eoyang. Released in March. A hot mustard. Label. 1988. Front and back panels. 2.5 by 2.5 inches, with bottom slightly wider than top and rounded corners. Glossy paper. Blue, green, and yellow on white with illustration of Mt. Fuji above a landscape. "A traditional 'hot' mustard with a hint of the Orient. Appropriate for every dish!" Talk with Gordon Bennett. 1988. Aug. 26. This product is made (mixed) in America, but the real Japanese wasabi powder (expensive!) and soy sauce used in it are imported from Japan. It also contains horseradish.

7158. *Daily Camera* (*Boulder, Colorado*). 1988. Soy sensation: White Wave introduces new products for 1988. April 5.
• ***Summary:*** Coming this year from White Wave are sesame-peanut tempeh, teriyaki tempeh burger, sloppy joe tempeh, and a soy-based hot dog. Last year, White Wave reached $2 million in revenue.

7159. Mori, Haruhiko. 1988. Re: Noda Industrial Scientific Laboratories / Noda Institute for Scientific Research. Letter to William Shurtleff at Soyfoods Center, April 30. 1 p. Typed, with signature on letterhead.
• ***Summary:*** Noda Industrial Scientific Laboratories (also known as Noda Industrial and Scientific Laboratory, Noda Sangyo Kagaku Kenkyusho) is now generally known as Noda Institute for Scientific Research. It is referred to as NISL in the culture collection list of the Institute of Fermentation, Osaka (IFO).

The institute, which is still active, was founded in 1942 by Kikkoman Corporation, and exists to do basic investigation in the fields of food science and the life sciences, especially microbiology, enzymology, biochemistry, genetic engineering, etc. Address: Noda Inst. for Scientific Research, 399 Noda, Noda-Shi, Chiba-ken 278, Japan. Phone: 0471-23-5568.

7160. **Product Name:** Pacific Gardens Original Tempeh Pasta Sauce with Chunky Vegetables, and Garlic & Mushroom Pasta Sauce with Marinated Tempeh
Manufacturer's Name: Associated Cooperatives, dba Twin Pines Distributing (Marketer-Distributor).
Manufacturer's Address: 322 Harbour Way, Suite 25, Richmond, CA 94801. Phone: 415-232-1111.
Date of Introduction: 1988, April.
Ingredients: Original Tempeh: Italian plum tomatoes, tomato paste, water, tempeh, fresh onions, fresh celery, fresh bell peppers, fresh carrots, fresh zucchini, apple cider vinegar, natural herbs and spices.
Wt/Vol., Packaging, Price: 32 oz jar, 12 per case.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Soya Newsletter. 1988, March/April. p. 8. Garlic & Mushroom contains the above ingredients plus marinated tempeh, soy sauce, garlic, and mushrooms. Talk with Terry Baird of Assoc. Co-ops. 1988, July 15. The products will be introduced July 1. Pacific Gardens is the brand and Twin Pines is the distributor. Tempeh is made by White Wave. It emphasizes organic. The products are made by a co-packer. Labels. 1988, Sept. Sent by Lonnie Stromnes. 13 by 3 inches. Red, yellow, green, tan, black, and white. "100% Natural. Better for you. Garden Style Recipe. No added salt, No oil, No sugar, No animal products. Nutritious tempeh in every bite!"

Talk with Knute Loken of Surata. 1990, March 6. Surata makes the tempeh for this product. Associated Co-ops has moved to Las Vegas.

7161. Business Trend Analysts, Inc. 1988. The market for salad dressings, sauces and condiments. 2171 Jericho Turnpike, Commack, NY 11725. 260 p. Price: $750.
• ***Summary:*** Sauces include the following table sauces: Ketchup, meat (incl. steak, worcestershire, vegetable, and seafood sauces), barbecue, Mexican (incl. chili, taco, enchilada, etc.), prepared mustard, and soy and teriyaki. Gravies, dips, and dry sauce mixes are not included. Ketchup is the largest segment, about 40% of the total. It has grown at 4.6% annually from 1982-87, but growing faster during the same time are soy and teriyaki sauce (10.3%), barbecue sauce (11.4%), and Mexican sauce (9.2%). In 1977 soy and teriyaki revenues represented 3.1% of total sauce sales, compared to 6.7% in 1987. BTA expects the market to grow at 8.9% annually reaching $280 million in 1997. Kikkoman, the leading producer of soy sauce in the U.S. sells most of its product is the western portion of the country. In 1987 it launched a national ad campaign to expand to the rest of the country.

According to U.S. Dept. of Commerce statistics, sales of soy and teriyaki sauce (in million dollars) and market percentage have grown from $7.7 and 1.8% in 1972, to $25.0 and 3.1% in 1977, to $50.1 and 4.9% in 1980, to $98.1 and 6.0% in 1985, and to an estimated $132.0 and 7.0% in 1988. Other estimated market shares in 1988 were ketchup 39.2%, meat 19.6%, barbecue 14.4%, Mexican 12.1%, and prepared mustard 7.8%. Thus soy and teriyaki have the smallest share.

But the growth rate for soy and teriyaki sales have been slowing, in part due to lower inflation rates. The rate was 26.6% in 1972-77, 24.2% in 1977-82, 10.3% in 1982-87, and a projected 8.9% in 1987-97. In this latter period the growth rate is higher than for any other sauce category.

In 1987 for leading U.S. soy sauce producers, sales and market share were: Kikkoman Foods Inc. $49 million and 41% market share; La Choy Food Products (Subsidiary Beatrice/Hunt-Wesson) $43 million and 36%; Nabisco Brands Inc. (Subsidiary RJR Nabisco), maker of Chun King, $12 million and 10%. All others, $16 million and 13%. Note: Chun King Frozen Foods line was sold to ConAgra, Inc. (Omaha, Nebraska) in 1987. Nabisco still owns the soy sauce and other packaged goods; the U.S. soy and teriyaki market,

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an estimated 41%., with 1987 sales of $49 million.

According to Department of commerce statistics, U.S. imports of "thin" soy sauce have grown steadily from 13.3 million lb in 1978, to 15.9 in 1980, to 29.6 in 1985, and an estimated 40.0 in 1987. In 1986 roughly 38.9% of this came from Japan, followed by 26.9% from Hong Kong, 12.8% from China, 12.0% from Taiwan, and 9.3% from Others (incl. South Korea, Canada, and Philippines). These imports of 32.5 million lb in 1986 were worth $13.9 million. Between 1980 and 1986 roughly 2,500 lb/year of soy sauce have been exported, a negligible amount. The main destinations were West Germany, Canada, and Mexico. Address: Commack, New York.

7162. Golbitz, Peter. 1988. Long life tofu: Wave of the future? *Soya Newsletter* (*Bar Harbor, Maine*). March/April. p. 7, 12.

• ***Summary:*** Morinaga Nutritional Foods, Inc., Los Angeles, California, and Kikkoman International Inc. of San Francisco, California, are both marketing long-life tofu, produced in Japan exclusively for export to the U.S. and other countries. (A Japanese governmental agency has forbidden the companies to market these products in Japan for fear that they threaten the existence of the fresh tofu industry, which consists of at least 30,000, small and localized, tofu shops.)

Kikkoman's product, Kikkoman Tofu, is also produced using a patented, though different process, packed in a foil retort pack. The product is produced by Kikkoman Corporation, at their Noda, Japan plant. The principle behind both products is really very simple. Cooled liquid soymilk is mixed with a heat reactive coagulant, packaged in a container, heated to activate the coagulant and then cooled. The major difference between Kikkoman's and Morinaga's product is when and where the sterilization of the package and product occurs.

Morinaga's process consists of: sterilizing the soymilk with UHT processing, cooling, adding coagulants glucono delta-lactone (GDL) and calcium chloride, filling into a sterile Tetra Pak, sealing, heating the package with water just hot enough to activate the GDL, and then cooling.

With the Kikkoman Tofu, the sterilization of the product is achieved after packaging. Coagulants GDL and calcium chloride are added. It is then filled into a retort pack, sealed, and heated at temperatures high enough to activate the coagulant and sterilize the finished product. Both the Kikkoman and the Morinaga tofus tend to be slightly more expensive than regular tofu. Silken (unpressed) tofu is unfamiliar in the U.S., and no company has yet come out with a pressed tofu that doesn't require any refrigeration.

Sales of Mori-Nu are up between 40 and 50% over last year, and unit sales of the product put Morinaga among the top five tofu companies in the U.S. Kikkoman's product has been on the market for more than a year and is also reportedly making healthy sales gains. Morinaga's product is currently being shipped to 36 countries world-wide, with the U.S. being the largest consumer by far. Kikkoman also reports that they are shipping their product to Europe, Australia and Canada, but again, the biggest volume is in the U.S. Address: Soyatech, Bar Harbor, Maine.

7163. Kikkoman International Inc. 1988. Kikkoman: Ahead of its time for 358 years (Ad). *Prepared Foods* 157(4):119. April.

• ***Summary:*** This 8.5 by 11-inch, color photo ad shows a large (20 fl oz) bottle of Kikkoman naturally brewed soy sauce against a black and purple background. Green, computer-graphics circles are superimposed on the bottle. "Since 1630, Kikkoman has produced premium, naturally brewed soy sauce that has yet to be equaled." Available from over 20 distribution centers in the U.S. and Canada.

This ad also appeared in the March 1989 issue (p. 5) of this magazine. Address: P.O. Box 784, San Francisco, California 94101. Phone: 415-956-7750.

7164. **Product Name:** New Tofu Light Links (Meatless Hot Dogs). Renamed in 1988 Vegan Tofu Light Links.
Manufacturer's Name: Light Foods Inc.
Manufacturer's Address: 613 C Broadmoor, St. Louis, MO 63017. Phone: 314-878-8915.
Date of Introduction: 1988 April.
Ingredients: Water, Real Tofu, isolated soy protein, non-hydrogenated vegetable oil, rice syrup, natural spices, salt, beet powder, tamari (natural soy sauce), barley flour, locust bean gum, natural flavors, onion powder, garlic powder, natural spice oils.
New Product–Documentation: Poster. 1987. March. "Tofu Light Links. Now with absolutely no animal products. Made with Real Tofu and non hydrogenated vegetable oil." Note: This name was later changed to New Tofu Light Links than Vegan Tofu Light Links. Leaflet. 1987. Contains no animal ingredients. Uses non-hydrogenated vegetable oil. Sweetened with rice syrup. Talk with Bob Davis, president of Light Foods. 1988. March 26. These tofu hot dogs are not yet out. Unlike the original Light Links, they will contain no egg whites. Talk with Lauraine Davis. 1988. Aug. 28. This new product was launched in April 1988. They still have the original Light Links containing egg whites. These will eventually be labeled Vegan Tofu Light Links. Leaflet. 1988. April. 8½ by 11 inches. Black on light blue. "On the rise... Now you want a link with no animal ingredients, non-hydrogenated oil, less fat, maybe a rice syrup sweetener instead of honey, and an even better flavor. Introducing the New Tofu Light Links, and New Tofu Light Link Specials, with natural imitation soy cheddar cheese." Leaflet. 1988. April. 8½ by 11 inches. Blue and red on beige. "Higher still..." Gives ingredients for New Tofu Light Links, and New Tofu Light Link Specials.

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7165 Lingle, Rick. 1988. Kikkoman: Painstaking process marks unique operation. *Prepared Foods* 157(4):62-64. April.

• ***Summary:*** Describes the preparation of shoyu by Kikkoman at Walworth, Wisconsin. The koji is now made in both 100-foot-long koji beds and in a new circular koji room (installed in Feb. 1987), which has the output of 1.5 of the 100-foot units. The 6-month fermentation process is claimed to bring out flavors and aromas involving about 20 amino acids, lactic and acetic acid, and various other flavor compounds. The Kikkoman plant in Walworth, Wisconsin presently produces 7,000,000 gallons of soy sauce a year.

7166 Pecjak, Marinka. 1988. Soja v kulinariki [Soybeans in the kitchen]. Ljubljana, Yugoslavia: Feniks. 138 p. Illust. Plus 16 pages of color plates showing recipes. 21 x 30 cm. [Slv]

• ***Summary:*** Features 300 recipes that use soybeans and soyfoods. Contents: Introduction. In the beginning there was the soybean, almost anything can be made from soya (a diagram shows many food and non-food products), soya is concentrated, soybeans in cuisine, how to use these recipes. Whole soybeans (p. 17). Recipes for coffee, different kinds of spreads, salads, soups, green soybeans with rice, dips with whole soybeans, soybeans with mushrooms, patties, soybean roast, sausages made of whole soybeans, stuffed duck, stuffed trout.

Soybean flakes and textured proteins (p. 40): Spread, party balls, filled bread, soups, pancakes, Australian pie, Buckwheat with flakes, flakes in mushroomy sauce, baked potatoes, stuffed cabbage leaves, chilled stuffed tomatoes, stuffed roasted peppers, stuffed eggplant.

Soymilk and dairylike products (p. 74): Various spreads, soups and salads with herbs, pancakes, baked potatoes, baked noodles, soy pudding, soymilk ice cream, avocado milk. Soy flour and semolina (p. 111). Soy noodles, pasta, pancakes, fish balls, soy bread.

Soy sprouts (p. 122): Soups, salads, sprouts with potatoes, chicken with sprouts and wine, pork with sprouts. Soy sauce and other forms of fermented soybeans (p. 128): Chart showing fermented soy products (incl. miso, tempeh, sufu, natto), salads, soups, chicken with sprouts and soy sauce, meat with fermented black soybeans, roast cutlets, Hoisin dip.

7167 San-J International, Inc. 1988. You don't cook ordinary food. Why use ordinary soy sauce? (Ad). *Vegetarian Times*. April. p. 51.

• ***Summary:*** "More cooks are discovering the extraordinary benefits of tamari–the gourmet's soy sauce. Natural fermentation of whole soybeans gives tamari a rich, full-bodied taste that is smoother and more complex than that of ordinary soy sauce. Tamari is a natural flavor enhancer. It brings out the true flavors of food without overpowering them with the harsh, salty taste often associated with common soy sauce. By using tamari instead of salt you can reduce sodium in your cooking. One teaspoon contains just a pinch of salt, yet has the seasoning strength of a full teaspoon of salt. And unlike ordinary soy sauce, tamari won't burn off in cooking... Write San-J for free recipes." 2/3 page, color.

Talk with John Perelman. 1988. April 4. San-J calls this their "upscale yuppie ad," one of 7 they chose from. The company is divided into retail and industrial sales. John is in charge of retail, which in Jan-Feb. 1988 sold more tamari than in all of 1984. Address: 2880 Sprouse Drive, Richmond, Virginia 23231.

7168 Miller, John, Ledur Brito, Luiz A. 1988. Soyfoods, Soymilk, and the Mechanical Cow in Brazil (Interview). *SoyaScan Notes*. May 13. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** In the early 1980s soy came to be seen as a solution to some of Brazil's food, nutrition, and protein problems. The government tried to encourage production and consumption of soyfoods using various organizations such as ITAL and state and local governments. It was almost social and political mission. Soymilk was one of the major products to be introduced, starting in about 1984. But the quality was poor (beany flavor) so people rejected it and it is no longer available, except for Yakult.

Vanguarda Mecanica is making about 50 of their Mechanical Cows each month. They are selling like hotcakes. "I think they are going to many of the small towns in northeast Brazil (the most impoverished part of the country, where the basic staple is cassava/manioc flour) and the municipalities are into these giveaway programs, either to get votes or to help the nutrition of the people in the dry periods. So they are buying the Mechanical Cow and using it to make soymilk locally. The soymilk made by the Mechanical Cow does not taste very good. Yet it is widely used by many small towns in giveaway programs and school lunch programs. A major function of schools in Brazil is to feed the children.

ITAL's soymilk was sold in a can but is not seen much any more. Also, the government tried to get the people to use soybeans in place of black beans, but that didn't work because the soybeans take much more time and fuel to cook, and the people didn't like the flavor as well. Today, soyfood products have a negative image in Brazil, with the exception of soy sauce, which is widely available and well accepted. Unlike in the USA and Europe, you cannot sell soyfoods on their health benefits. Cholesterol is not of much concern.

There are now 300 health and vegetarian restaurants in Sao Paulo.

The Plano Crusado, which started in 1986, was a major event in modern Brazilian history. This unorthodox economic plan by the new democratic and socialist government was

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intended to curb inflation. It didn't work. Today Brazil's parallel economy -comprised of people who do not pay a tax on sales and whose economic activity is not recorded–is estimated to be 50% of the total economy, and thriving. The statistics (which omit the parallel economy) indicate that the economy is declining, but actually it is booming. Address: SANBRA, Centro Empresario de Sao Paulo, Av. Maria Coelho Aguiar, 215 Bloco D, 5* Andar, Sao Paulo–CEP 05804–CP60 541. Phone: 545-5459.

7169. Hattori, Terumitsu. 1988. Status and future plans for Kikkoman's new tofu (Interview). *SoyaScan Notes*. May 25. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Kikkoman's aseptic tofu was relaunched in a new package, in firm and soft textures, in August 1987. It is made in and imported from Japan, and is being distributed in America by Azumaya. It is selling so fast that Kikkoman can't import enough to keep up with demand. The person in charge of the product is in Japan; there is no such person in America. If and when sales reach a certain level, Kikkoman will begin to study the possibility of a new plant in the USA. Address: Kikkoman Marketing & Planning Inc., 50 California St., Suite 3600, San Francisco, CA 94111. Phone: 415-956-7750.

7170. Menie, Tom. 1988. Eastern Foods Corp. and Mr. Lee R. Lee's resignation in April (Interview). *SoyaScan Notes*. May 27. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Mr. Lee resigned as the head of the company at the end of April and is now probably involved in his new venture of importing natural foods from Korea. He still owns stock in the company and is still on the board. The company was in bad financial shape at the time. The corporation is owned by its stockholders. He and his brother in law owned a controlling interest, but with some options on the company's last stock offering, some other people ended up controlling the company. Now, Tom is handling the sales and marketing duties and Warren Thunstrom is handling production. The company is planning a stock offering in the near future and has many innovative food ideas on the drawing boards.

Tom says he heard from someone and read in some publication a figure of $50 million projected for retail sales of Kikkoman's tofu in 1988. William Shurtleff believes that this figure at least 5 times too high. Address: Sales and Marketing Manager, Eastern Foods Corp , 3225 Hennepin Ave., Minneapolis, Minnesota 55413. Phone: 612-331-3353.

7171. Belleme, John. 1988. The great Japanese foods face-off. Are natural brands a better buy? *East West*. May. p. 26, 28-35.

• ***Summary:*** Contents: Introduction. Shiitake mushrooms. Wakame (sea vegetable). Udon. Toasted sesame oil. Complex fermented foods: Rice miso, rice vinegar. Sea salt. The Oriental foods industry in the USA dwarfs the Japanese natural foods industry. Annual sales of JFC International Inc. [affiliate of Kikkoman] alone, about $180 million, is about ten times that of the entire Japanese natural foods industry in the United States. Oriental foods sell for about half the price of natural foods. Mitoku's special quality miso is made by Takamichi Onozaki of Yaita, Japan. Eden Foods' miso is made by Toshi Shiroozu of Fukuoka, Japan. Also discusses rice vinegar quality.

Note: This article is a thinly disguised advertorial for Mitoku products.

7172. Bruce, Gene. 1988. The myth of vegetarian vitamin B-12. *East West*. May. p. 44-55. Summarized by Judy Brown in Soya Newsletter. 1988. May/June. p. 7. [4 ref]

• ***Summary:*** Although the requirement for B-12 is the lowest of all vitamins and the body can store a supply to last many years, alarming deficiencies of vitamin B-12 have been found in vegetarian children leading to serious physical and mental retardation, and neurological damage. The effects begin with numbness and tingling of the hands and feet. Although numerous studies have shown fermented foods made in traditional societies to have significant B-12, when these foods are made under sanitary conditions in industrialized countries, the B-12 is generally lost. Recent studies suggest the presence of a false B-12 or B-12 analogue that some laboratory tests (such as the microbiological assay using *Lactobacillus leichmanii*) have mistaken for the real thing. Bonny Specker, PhD at the Univ. of Cincinnati, Ohio, and J. Gorstin at Vanderbilt Univ. in Nashville, Tennessee have studied B-12 levels in tempeh, miso, and tamari. Only negligible to trace amounts were found. Significant amounts were found in sea vegetables and spirulina. Specker analyzed blood serum and urine samples of 169 macrobiotic adults and children. Very low levels of B-12 were found. At the Agricultural Univ. of Wageningen in the Netherlands, Peter Dagnelie was undertaking a similar project, checking the blood of 50 macrobiotic children. He found deficiencies of vitamins B-12, D, and B-2, plus protein, calcium, iron and calories.

U.S. tempeh makers, when asked to recheck their tempeh, found that it presently contained no B-12. Most are taking claims about vitamin B-12 off their labels after conducting their own tests and obtaining similar results. According to Dr. Keith Steinkraus, the most probable explanation for the loss of B-12 in U.S. tempeh is improved sanitation and the fact that the B-12 producing bacterium cannot compete with the abundant mold in properly inoculated tempeh.

Good non-flesh sources of B-12 are milk (whole or nonfat, 0.9 micrograms/8 oz), cheese (0.9 micrograms/3 oz), and egg (0.6 micrograms/large egg). In conclusion, lacto-ovo vegetarians are probably getting enough B-12. Strict

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vegetarians (vegans) are advised to take a B-12 supplement. Without further research concerning B-12-analogues in sea vegetables and microalgae, there are no reliable vegetable sources of B-12. Address: Boston, Massachusetts.

7173 Ontario Soya-bean Growers' Marketing Board. 1988 Report on export market development mission of the Ontario soybean industry, March 19th–April 3rd, 1988. Chatham, Ontario, Canada. 23 p. May. 28 cm. Spiral bound. [Eng]
• ***Summary:*** This report was prepared by Owen Dobbyn, John Cunningham, Maurice Waddick, and Fred Brandenburg of OSGMB. Contents: Japan. The Japanese soybean market. Visits: Japan Miso Co-operative Industrial Assoc. (M. Iida, chairman), Japan Packaged Tofu Assoc. (H. Kijima, Exec. Secy.), Federation of Japan Natto Manufacturers Cooperative Society (Mr. Ohse), Takano Foods Co. Ltd. (E. Takano, president, uses 7,000 to 8,000 tonnes of soybeans annually to make natto), Home Foods Co. Ltd (Home Shokuhin, Y. Murai, managing director, has 160 employees and 3 tofu factories that use 300 tonnes of soybeans/month, owned by Wako Shokuryo, the #1 wholesaler of soybeans in Japan), Japan Oilseed Processors Assoc. (JOPA; H. Higashimori, managing director), Japan Oil and Fat Importers & Exporters Assoc. (JOFIEA; I. Shimizu, exec. director), Canadian Embassy, Tokyo.

Hong Kong. Soybean imports. Visits: The Hong Kong Soya-Bean Products Co. Ltd. (makers of Vitasoy soymilk), Amoy Industries (International) Ltd.

Malaysia. Soybean imports 1984, 1985, 1986. Visits: Ace Canning (owned by Lam Soon), Yeo Hiap Seng (Malaysia) Berhad (soymilk), Cheong Chuan (Hup Kee) Sdn. Bhd. (traditional fermented soysauce), Sin Yong Huat Enterprises Sdn. Bhd. (soybean importers), Syarikat Perniagaan Cheon Fatt (tofu manufacturer).

Singapore. Soybean imports (1983-1986). Visits: Sin Seng Lee Trading Co. (Pte.) Ltd. (claims to import 60% of soybeans to Singapore). Conclusions for each country. Recommendations for future action. Future export development missions. Accomplishments. Competition.

In Japan, 842,000 tonnes soybeans are used to make foods, as follows (in tonnes, p. 1): Tofu 456,000, miso 180,000, natto 90,000, dried-frozen tofu 30,000, boiled soybeans 23,000, soybean powder [probably kinako] 10,000, soymilk, 7,000, soysauce 5,000, other 41,000. The suppliers of these edible soybeans are (in tonnes): USA 400,000, China 280,000, Japanese domestic 280,000, Canada 24,000. Total Japanese soybean imports: 5,000,000 tonnes. Of this 4,036,000 tonnes (81%) are used for crushing, 842,000 tonnes for food, and 70,000 tonnes for feed (not crushed). The Japanese market for soybeans is very large for both crushing and food use, but is not growing. The beans for crushing come mostly from the USA and South America.

Preferred characteristics of soybeans for each type of soyfood are given. For example, for miso: Low oil, high protein, high sugar, white hilum. For tofu: High sugars (glucose, sucrose), moisture content 10-12.5%, new crop preferred to old, protein 40%, oil 19-20%, hilum color is not very important but white is preferred, varietal consistency; preferred varieties are Beeson, Amsoy, Corsoy. Natto: Most important is small size, 5.5 mm or less, clean beans free of foreign material, high sugar content (saccharose, stachyose, which bacillus needs to work), less oil, must absorb water well. Soymilk: Good flavor, low moisture (10%), low percentage of splits (too high can cause rancidity), low oil, high protein.

In Japan, vegetable oil consumption has increased 2.5 times in the past 20 years to 45.17 gm/capita/day in 1986. Soyoil and canola oil together account for 85% of production. Canola is replacing soybean oil. If the oil market is strong, the 30 Japanese crushers crush more canola, but if protein is strong they crush more soybeans. U.S. soybeans have too much foreign material, new contracts have a penalty for > 2% FM.

In Hong Kong, 6,000,000 cases of Vitasoy brand soymilk are produced annually. The company uses 2,500 tonnes/year of soybeans, 80% of which are grown in Canada. It uses 100 to 200 tonnes of organic soybeans for Vitasoy exported to U.S. health food stores. Using 15 Tetra Pak machines, production takes place 24 hours/day (3 shifts), 6 days a week. Contacts: Patrick Cheung (marketing manager), and Raymond Yuen (commercial manager).

Amoy Industries, the largest maker of soy sauce in this part of the world, produces 6,000 tonnes/year. The company was established 80 years ago in Amoy, eastern China, moved to Hong Kong in 1949, 50% was purchased by Pillsbury in 1983. Uses 2 containers of soybeans/week, 100% from Ontario for the past 5 years.

Malaysia soybean imports rose from 174,400 tonnes in 1984 to 255,200 tonnes in 1986. The main suppliers in 1986 were China (56.2% of total), Vietnam (15.8%), and Argentina (14.3%). Ace Canning uses ton tonnes/month of soybeans (presently all from China) to make soymilk. They have 7 Tetra Pak machines. Yeo Hiap Seng (Malaysia) is the largest soymilk producer in Malaysia, making 25,000 liters/year using 9 Tetra Pak machines. They use 1,250 tonnes of soybeans (80 containers) per year, all Canadian.

In Singapore, soybean imports rose from 28,287 tonnes in 1983 to 41,571 tonnes in 1986. In 1986, some 66% came from Canada, 16.6% from China, and the rest from others.

The major competition for food quality soybeans in these four countries at present comes from China. The Chinese have improved their soybean quality and appear to be actively seeking to increase their market share. In the long run, however, China may choose to reduce its soybean exports in order to increase meat consumption in China. This could lead to new market opportunities for Canada in these four countries. Address: P.O. Box 1199, Chatham, ONT N7M 5L8, Canada. Phone: 519-352-7730.

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7174. Shimoda, Keiki. 1988. Naijeria de no nattô shishoku-kai–Osegere-mura, Zonkuwa-mura no rei [Natto tasting meeting in Nigeria. Examples of Osegere village and Zonkuwa village]. *Daizu Geppo* (*Soybean Monthly News*), April/May. p. 32-35. [Jap]

• ***Summary:*** The first natto taste test in Nigeria was in Lagos. 7 women, ages 30-40, at the Department of Agriculture tried plain, unheated natto. They disliked the sticky/slimy texture, saying that it reminded them of rotten food. But the strong smell of natto was not foreign to them, since they knew dawa-dawa.

The next taste test was in the village of Zonkwa, located 50 km southeast of Kaduna. It had 200 inhabitants of which 10 tasted natto, but the village head tasted first and his response may have influenced that of the other villagers. These people know and consume dawa dawa soup, so the natto was used in a similar soup in place of dawa dawa. The result looked like a thick porridge. In this form, the natto was liked very much. A table compares natto and dawa dawa for appearance, smell, texture, and taste–on 5 levels of like and dislike. In each characteristic dawa dawa scored only slightly higher than natto. Natto received the highest score for its taste (very tasty: 8 vs. 9 for dawa dawa) and the lowest for its mouthfeel (4 vs. 9). All tasters said that natto soup was more "sticky" or mucilaginous (*nebatte-iru*) than dawa dawa soup, and that it reminds them of okra soup with corn.

Then at Zonkwa natto was served Japanese-style on white rice (probably seasoned with shoyu and thinly sliced leeks (*negi*)). The "brave young people who ate it said it as very tasty."

The last taste test was in the village of Osegere, located about 20 km east of Ibadan. A tempeh experiment had been conducted there by the Denmark Ministry of Development starting in 1981. This time the local people (who did not speak much English) were asked to make natto soup using freeze-dried natto, plus the usual palm oil, pepe, etc. About 10-12 people tasted it and 90% said they liked it very much. 40% said they found it "sticky." Address: Tsukuba Univ., Shushi Katei Kankyo Kagaku Kenkyu-ka

7175. Shurtleff, William; Aoyagi, Akiko, comps. 1988. Bibliography of soy sauce, from A.D. 535 to 1988. With 2150+ references. Lafayette, California: Soyfoods Center. 181 p. Subject and country index. Partially annotated. Printed May 30. 28 cm. [2153 ref]

• ***Summary:*** The most comprehensive bibliography on this subject. Includes all known commercial soy sauce products. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

7176. **Product Name:** Virginia Soyworks Tofu, and Tofu Spread.
Manufacturer's Name: Virginia Soyworks.
Manufacturer's Address: Route 1, Box 193, Faber, VA 22938. Phone: 804-293-9244.
Date of Introduction: 1988 May.
Ingredients: Spread: Tofu (water, soybeans, magnesium chloride), soybean pomace [okara], mustard (vinegar, mustard seed, salt, turmeric, spices), celery, soysauce (water, soybeans, wheat, salt), green peppers, onion, garlic, spices.
Wt/Vol., Packaging, Price: Tofu: 16 oz. Spread: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Note: This company, founded in about May 1978, was originally named Redbud Creek Tofu Co., at Route 2, Box 505, Crozet (pronounced kro-ZAY), VA 22932. On 2 April 1987, owner Shag Kiefer sold the company to Robert Graham. In the spring of 1988, with Shag's help, Graham moved the company to its present location, Route 1, Faber, Virginia.

Talk with Ken Scotton, owner of Virginia Soyworks. 1990. Sept. 2. He bought this tofu company in March 1989 from Robert Graham. He still makes only two soy products, Tofu and Tofu Spread (plus very little soymilk sold unlabeled directly from the shop), but he also makes two non-soy bean dips and a burrito with a black bean filling. He lives at the shop and is burned out from working 60 hours/week. He hopes to sell the shop to the Twin Oaks Community (Route 4, Box 169, Louisa, VA 23093), located 70 miles away, where he lived before he bought the shop. If the community buys the shop, they will move it onto the community land. Ken's biggest market is Charlottesville, where the University of Virginia is located.

Ken Scotton. 1990. Virginia Soyworks. 3 p. unpublished manuscript.

Labels sent by Ken Scotton. 1990. Sept. 3 by 2 inches. Tofu: Blue on white. Spread: Green on white. Tofu ingredients: Certified organic soybeans, pure well water, & bitterns from seawater.

Letter from Jon Kessler. 1990. Oct. 20. He and friends have decided to buy Virginia Soyworks. They are planning to build a shop at Twin Oaks Community (Route 4, Box 169, Louisa, VA) and hope to move the business in by 1 Jan. 1991.

7177. **Product Name:** Westbrae Soy Sauce, Tamari Shoyu.
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan by Sendai Miso-Shoyu.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1988 May.
Ingredients: Water, whole soybeans, whole wheat, sea salt (including natural nigari).
Wt/Vol., Packaging, Price: 32 fluid oz (1 quart) 950 ml bottle retails for $4.99.
How Stored: Shelf stable.
Nutrition: Contains 170 mg sodium per 3 gm (½ teaspoon) serving.

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New Product–Documentation: Label. 1988. May. 10 by 4.5 inches. White, blue, and yellow on red, with oval full color illustration of a Japanese landscape featuring Mt. Fuji. Westbrae Shoyu is manufactured by the Sasaki family, "Gold-Medal" winners of Japan's Soy Sauce Contest. The Sasaki family attains this quality by carefully sorting their soybeans so that only beans of higher than #1 quality are used. Broken beans are removed because they contribute to off-flavors. No other shoyu brewer takes this care in sorting their soybeans.

The Sasaki family ages their shoyu for 2 years in Japanese cedar kegs. Cedar kegs contribute historic culture strains into each batch–culture developed by generations of use in brewing "whole-bean shoyu." As it does with fine wine, aging in wood enriches, mellows, and provides a distinctive character to the shoyu.

Other soy sauces are quick-brewed for one to four "seasons" (less than half the time of Westbrae Shoyu). This shortened aging time saves extra expense but loses all the complex flavor heritage that is brewed into the Sasaki's shoyu. The Sasaki family has been brewing soy sauce for 9 generations in an unbroken tradition of fine craftsmanship. We invite you to compare the darker color and richer taste of our shoyu with any other!

Note: We are surprised to see term "tamari shoyu" on this product which is actually shoyu, especially since Westbrae has been a leader for many years in the effort to stop misuse of the term "tamari." Talk with Gordon Bennett 1988 Aug. 26. All of their former shoyu bottles have had the term "tamari" somewhere on the label, as in the statement "Formerly known as tamari," or "Tamari style." They wanted to move to a new label that would portray more of a high-class, gourmet image. After much discussion with all sales people, they decided that the word tamari must be kept on the label, but not in the "Formerly known as..." format, lest many consumers not be aware of what kind of soy sauce they were really selling. So they decided to focus on the American name soy sauce in big letters and put tamari in small letters at the bottom. "It was a reluctant capitulation to the realities of the marketplace. But that term tamari has a certain amount of magic to it. You can minimize it, but you can't get away from it. The word has to appear some place on the bottle, otherwise people don't know what's really in it."

7178. **Product Name:** Tempeh Cutlet.
Manufacturer's Name: White Wave.
Manufacturer's Address: 1990 North 57th Court., Boulder, CO 80301. Phone: 303-443-3470.
Date of Introduction: 1988. May.
Ingredients: Tempeh (made with soybeans organically grown in accordance with section 26569.11 of the California Health and Safety Code and brown rice), natural soy sauce, garlic, onion, spices.
Wt/Vol., Packaging, Price: 6 oz (170 gm). Vacuum packed in poly pouch.
How Stored: Frozen or refrigerated.
Nutrition: Per 3 oz.: Calories 190, protein 9 gm, carbohydrates 6 gm, fat 3 gm, sodium 466 mg.
New Product–Documentation: Label. 1988. May. 2.75 by 3.75 inches. Blue on beige with rainbow border. "Perishable. Keep frozen or refrigerated." Formerly under the Soyfoods Unlimited brand and weighing 7 oz. All White Wave products are certified Kosher-Pareve by Rabbi Mordecai Twerski of the Talmudic Research Institute in Denver. The symbol looks like an M with the central leg bent to the left.

7179. Fruin, W. Mark. 1988. Kikkoman archives and history (Interview). *SoyaScan Notes*, June 9. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Kikkoman has many documents written before 1900 in the Kikkoman Archives, which are located in a kura on the grounds of the administrative office building at Noda. Before 1980 they used to be in a sales office upstairs in the main building. Many early documents, often in shoji brush script, are very hard to read. There are also said to be many early documents in the personal homes of the families who owned the family businesses that became Noda Shoyu in 1917. They are mostly sales and accounting records. The Takanashi family is said to have many old documents in their mansion near the center of Noda. In Noda Shoyu Keizai Shiryo, Ichiyama Morio has taken some of the older documents and written them in a more easily readable form.

Concerning the relationship between Choshi Shoyu, Kikkoman, and Yamasa. The Choshi and Yamasa founders were two brothers who both came from Wakayama. They split apart during the Tokugawa period. In 1914 the Choshi Shoyu Co. Ltd. was formed from 3 previously independent shoyu brewers from Chōshi in Chiba prefecture. The three were Yoshiuemon Hamaguchi, Yoshibei Fukai, and Genba Tanaka. From the 1860s until this time, the main figure in Choshi Shoyu was Tanaka Genba, owner of the largest brewery there. During Meiji and Taisho periods the Choshi side got into financial trouble and asked Yamasa for help. Yamasa declined so Noda Shoyu (later Kikkoman) Kikkoman stepped in and bought 80% of the Higeta Shoyu Company's stock in 1937. But during the occupation after World War II, Kikkoman was forced to divest Choshi/Higeta Shoyu. However Choshi still does most of its marketing through Kikkoman even though the ownership is separate. Choshi/Higeta uses the Kikkoman fermentation recipe and until recently the Kikkoman sold in Hokkaido was made by Choshi/Higeta Shoyu.

Choshi/Higeta Shoyu and Yamasa have many more early documents than Kikkoman does. Reiko Hayashi is a female professor of economic history (formerly at Tokyo Univ., now retired) who has done extensive research on those records and compiled bibliographies. One of her students, Hiroko Aburai, has also done a lot.

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Kikkoman International is a private company in charge of soy sauce in North America. Kikkoman Corporation, the parent company, is publicly owned, but is only traded on the Tokyo stock exchange. It has annual reports. Address: Palo Alto, California.

7180. Belleme, John. 1988. Tamari: Reborn in the U.S.A. [San-J International begins production in America] *East West*, June, p. 14, 16-18

• ***Summary:*** In 1804, almost half a century before Commodore Perry's ships forced open Japan's ports to American trade, the Sato family's fleet of small boats began ferrying their homemade tamari and other goods up the Kiso, Ibi, and Nagara Rivers. From the port city of Kuwana in the Bay of Ise on the Pacific Coast, the Satos received goods from larger ships and delivered them to communities upriver. Takayoshi Sato is currently the president of San-J International, the remnant company, almost eighty years since the Satos closed their maritime business. Faced with the loss of livelihood, the Satos turned to making tamari and soybean miso on a large scale in 1909.

With the dollar at an all-time low against the Japanese yen, and 100% of all natural shoyu and tamari sold in the U.S. being imported from Japan, the opening of the San-J International tamari plant could not be more timely. American importers of Japanese foods have seen a 50% increase in the price of shoyu and tamari in the past eighteen months. There are just a few companies in Japan still making genuine tamari. San-Jirushi at Kuwana is the largest, producing roughly half of the country's annual production of 6,000 kiloliters (1,500,000 gallons).

William Shurtleff first proposed exporting San-J tamari to the U.S. in 1977. Shurtleff gave a sample of San-J tamari to the president of Mitoku, which supplied Erewhon with Japanese foods. Shortly thereafter, Erewhon began importing San-J tamari in five gallon tins. Next John McLaughlin, a Richmond businessman, tasted San-J tamari and was impressed enough to go to Japan and talk to the Sato brothers. The meeting led to the founding of San-J International in December 1978, a Japanese-American joint venture to market San-J tamari and eventually build the Richmond plant.

Today, industrial giants such as Stouffer's and Campbell's use San-J tamari exclusively in all their frozen food lines. San-J makes the point in their ads: "One teaspoon of tamari–which contains just a pinch of salt–is the seasoning equivalent of a full tablespoon of salt. Tamari seasons with protein, not sodium." In the manufacture of tamari, the mixture of koji and brine, called moromi, is left to ferment for about six months. Tamari is pasteurized (2% ethyl alcohol is added to prevent the growth of yeasts and molds). The Richmond plant can make about 1 million gallons of tamari and tamari shoyu (tamari with 20% wheat added) a year, about two times the current annual sales of the imported product.

The Richmond process will differ from that used to make tamari in Kuwana. First, in Japan, San-J tamari is aged for at least 12 months at room temperature. In Richmond, fermentation is accelerated to approximately 6 months by heating the fermentation vats with electric coils. Second, the San-J tamari from Japan is aged in old cedar vats while the Richmond plant is using fiberglass vats lined with epoxy resin. Every major importer of natural Japanese foods has expressed interest in bottling San-J tamari in their private label. However, only Eden Foods Clinton, Michigan, has negotiated a contract with San-J.

7181. Cooper, Jack. 1988. Miso. The mother's touch. *Palate Pleasers of Japan (Los Angeles, Calif.)* 6:31-37, June.

• ***Summary:*** The "mountain made" miso commercial turned a small, local miso manufacturer in the Japan Alps, Miyasaka Jozo Co., Ltd., into the second largest miso producer in all of Japan. To Japanese everywhere, the "chop, chop, chop" sounds of mom dicing tofu and scallions in the kitchen, mixed with the savory, pungent fragrance of hot miso broth and the clean, sweet smell of steaming rice are as much a symbol of the dawning of the day as the aroma of fresh coffee and the sizzling sounds of bacon and eggs are to Americans. William Shurtleff and Akiko Aoyagi explain [the bewildering 'vintages' of miso] in their massive volume, *The Book of Miso*. All traditional miso contains salt and soybeans to which a mold culture, or "friendly agent," usually *Aspergillus oryzae*, has been added.

A 1965 study conducted by Dr. Takeshi Hirayama at Japan's prestigious National Cancer Center, people who eat miso soup daily are 32% less likely to develop cancer than those who never eat miso soup. Undiluted, miso contains on average about 12% salt, six times the salt content of cheddar cheese. Most miso sold in America is imported and sold under Japanese brand names like Maruman, Marukome, Shinshu-ichi, Yamabuki, Hanamaruki, etc. One reason for this may be Japan's stringent new laws requiring producers to list all ingredients and additives (mainly MSG, artificial coloring and preservatives), making the natural products more attractive to America's health-conscious consumers.

The Japanese National Miso Association estimates that there are over 2500 miso manufacturers in Japan, many of which are small, family-owned operations. Color photos show: (1) Miko-chan, the little kneeling girl who is the Miyazaka Jozo logo. (2) Three types and colors of miso in white bowls, next to an iris. (3) The historic old Shinshu Ichi miso and shoyu plant. (4) A bowl of white miso soup with crab and tofu. (5) An assortment of traditional miso dishes. (6) The ultra-modern computerized control panel, motorized conveyors, and the modern packaging facility at the Miyazaka Jozo factory. (3 small photos). (7) A shop in Japan retailing Japanese miso in traditional small wooden kegs. (8) Five views of the South River Miso Co., Conway,

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Massachusetts (including an exterior view of the home and miso shop, Christian Elwell at work in the temperature-controlled koji room).

Note: According to *The Book of Miso*, by Shurtleff & Aoyagi (1976, p. 257; based on 1974 statistics) *Mayasaka Jozo* (*Shinshu Ichi*) is Japan's largest miso factory. The company's Tokyo factory produces about 15,000 tons/year; the Nagano and Yamanashi plants produce 9,300 tons and 3,300 tons respectively. All make Shinshu-type light-yellow miso. As of 1983, the Tokyo factory also made freeze-dried miso. Address: Editor, Palate Pleasers.

7182. Fujinuma, Kenji; Saito, K.; Nakazato, M.; Kikuchi, Y.; Ibe, A.; Nishima, T. 1988. Shokuhin-chû no gurichirurichin-san no bunseki-hô [Determination of glycyrrhizic acid in foods]. *Shokuhin Eiseigaku Zasshi* (*J. of the Food Hygienic Society of Japan*) 29(3):210-15. June. [9 ref. Jap, eng]
• ***Summary:*** High performance liquid chromatography was used to determine the glycyrrhizic acid (GA) content of Japanese soy sauce and miso. In a survey of commercial foods, GA was detected at levels of 2 to 224 micrograms/gm in 16 out of 56 samples.

Glycyrrhizin is $C_{42}H_{62}O_{16}$. Glucoside contained in *Glycyrrhiza glabra* L. at the level of 6-14%, with strong sweetness, which is hydrolyzed with acid into glucuronic acid and glycyrrhetinic acid ($C_{30}H_{46}O_4$). Address: Tokyo Metropolitan Research Lab. of Public Health, 3-24-1 Hyakunin-cho, Shinjuku-ku, Osaka, Japan.

7183. **Product Name:** [Tofu with Toasted Nori, Tofu with Toasted Sesame, Tofu Bars {With Millet}, Seitan in Soy Sauce].
Foreign Name: Tofu mit geroesteter Nori-Alge, Tofu mit geroesteter Sesam, Tofu Stange (mit Hirse), Seitan in Sojasauce.
Manufacturer's Name: Geestland.
Manufacturer's Address: Friedrichstrasse 19, D-2850 Bremerhaven, West Germany. Phone: (0471) 2 60 20.
Date of Introduction: 1988, June.
How Stored: Refrigerated.
New Product–Documentation: Talk with founder and present owner of Geestland, Paul E. Bremer, 1990, April 25. About 2 years ago the company moved to: Friedrichstrasse 19, D-2850 Bremerhaven and in June 1988 Tofu with roasted nori, and with roasted sesame were introduced.

7184. **Product Name:** [Fast Food Program: Deep-fried tofu Treasure Balls, Tofu Mixed with Rice & Herbs, Tofu Slices Cooked with Soy Sauce, Ginger & Konbu].
Foreign Name: Tofu Baellchen, Tofu Willi, Tofu Schnitte.
Manufacturer's Name: Geestland.
Manufacturer's Address: Friedrichstrasse 19, D-2850 Bremerhaven, West Germany.
Date of Introduction: 1988, June.
How Stored: Refrigerated.
New Product–Documentation: Talk with founder and present owner of Geestland, Paul E. Bremer, 1990, April 25. These products were introduced in mid-1988. The little balls are "frittiert." Frittiert means deep-fried in lots of oil. Gebraten means fried in a pan with only a little oil.

7185. **Product Name:** Ebara Teriyaki Marinade & Sauce; Tari Sauce [Original, Spicy, Ginger, Mild]
Manufacturer's Name: JFC International, Inc. (Importer/Distributor). Made in Japan.
Manufacturer's Address: 4353 Exchange Ave., Los Angeles, CA 90058.
Date of Introduction: 1988, June.
Wt/Vol., Packaging, Price: Wide-mouth jar.
How Stored: Shelf stable.
New Product–Documentation: Ad in Palate Pleasers, 1988, Vol 6, June, p. 32. "Tangy, spicy, and delicious. Ebara–The pioneer of gourmet sauces in Japan."

7186. Kingma, Sharyn. 1988. New study released on consumer attitudes about soy proteins. *Soya Newsletter* (*Bar Harbor, Maine*). May/June, p. 3, 14-15.
• ***Summary:*** Protein Technologies International, a subsidiary of Ralston Purina, St. Louis, Missouri, has recently released the results of a new study which evaluates current consumer attitudes related to soy protein, nutrition, dietary habits, and knowledge of dietary fiber. The 1988 Consumer Attitudes Monitor was undertaken to determine if there had been any significant changes in consumer attitudes since their first study was done in 1985.

One of the major differences between the earlier study (see Ralston Purina 1985 and Elliott 1988) and the current one is that the 1985 study contained specific questions related to soyfoods. But the 1988 survey also probed some interesting areas. For details, see the study itself.

Copies of the 1988 Consumer Attitudes Monitor are available through Jean Kuster, Protein Technologies International, Checkerboard Square, St. Louis, Missouri, 63164 or call 800-325-7108.

7187. **Product Name:** Meridian Teriyaki (Soya Sauce).
Manufacturer's Name: Meridian Foods Ltd. (Importer). Made in Japan.
Manufacturer's Address: Corwen, Clwyd, LL21 9RR, Wales, UK. Phone: 0490 3151.
Date of Introduction: 1988, June.
New Product–Documentation: Simon Bailey, 1988, Natural Choice, Aug. 15. "Soya-Based Products." A photo shows the Labels. Each has an illustration on the front panel. The tamari shows Mt. Fuji and the ocean, the teriyaki a soybean plant, and the shoyu some Japanese-style trees. CSP form filled out by Simon Bailey, 1988, Sept. 28.

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7188. Nihei, Takao. 1988. [The history of shoyu in Hawaii. (Food series, part XII)] *Kokiku (Honolulu, Hawaii)*. June. p 32. [Jap; Eng]

• ***Summary:*** "Yo o sutete yama ni iru tomo miso, shoyu, sake no kayoji nakute kanawaji." "Forsaking all worldly things, still, one can't do without these: Miso, shoyu, and sake." As in the ancient waka poem written by Shokusanjin (during the Edo period), no matter where the Japanese went, miso and shoyu were necessities of life. Hawaii's first miso and shoyu were recorded in Meiji Gannen (1868), the year of the first Japanese immigrants' arrival. Ikuma Yonekichi, who came on the ship "Scioto" (Saioto-go), noted in his diary, "Yokohama departure. Provisions of rice, miso, shoyu."

In 1887, as the Japanese immigrant population increased, Japanese goods began to be imported, but there were many instances where miso and shoyu were insufficient. In Hawaii, shoyu was manufactured earlier than sake by Shimada Jihachi in 1891, but he gave it up due to financial difficulties. Later, Yamagami Nobuyuki, who came from San Francisco, California, started a shoyu factory which prospered. With the advent of World War II, imported goods from Japan were cut off, which gave rise to the start of miso and shoyu companies here. Barbeque shoyu is Hawaii's own discovery. The locally made miso and shoyu are less salty than the Japanese products.

7189. Peluso, Michael R. 1988. The nutritional value of soy. *Health World (Burlingame, California)* 2(4):26-28. May/June.

• ***Summary:*** This introductory article discusses whole soybeans, soy flour, soy protein products (isolates, spun fibers, TVP), soy milk, soy cheese (tofu), tempeh, miso, and soy sauce. Table I shows the composition of most of these is given. The author is especially interested in soy oil as a good source of vitamin E and of the essential fatty acids, linoleic and alpha linolenic acids. He is critical of the hydrogenation process. Table II gives a nutritive comparison of soy oil and selected food fats. Table III gives a nutritive comparison of soy foods and selected animal foods. Address: P.O. Box 606, Occidental, California 95465.

7190. Udesky, James. 1988. The book of soba. Tokyo and New York: Kodansha International. 166 p. Foreword by William Shurtleff. Illust. Index. 27 cm. [50* ref]

• ***Summary:*** Contents: Foreword. Introduction. I. Making soba. Homemade soba noodles. Broth. Noodle dishes. Country cooking. Groat cooking. Variations and desserts. Ingredients. II. About soba. Nutrition. Buckwheat: From seed to table. History. III. Appendices. The soba dining experience. Selected soba restaurants in Japan. Oriental, natural, and specialty food stores in the United States and Canada. Bibliography.

Soy-related recipes include: Cold soba noodles with natto and sesame (with "2/3 oz natto," p. 59). "Fox Soba" (*Kitsune soba*, with "4 pieces thin deep-fried tofu {*abura-age* or *usu-age*}, p. 63). Soba noodles in miso stew (*Kenchin soba*, Ibaragi prefecture, with "4-5 tablespoons miso," p. 70). Soy-Soba noodles (with "4 oz soybeans" [whole dry soybeans], p. 71). Broiled soba dumpling with miso sauce (with "3-4 tablespoons sweet white miso," p. 81-82). Soba pasty (with "1½ oz natto, p. 85). Soy sauce is used in many recipes.

The excellent "Ingredients" section (p. 91-98), gives definitions of several soyfoods, including miso, natto, okara, soy sauce, tofu, and tofu–thin deep-fried (abura-age, usu-age).

The definition of "natto" is especially good: "Natto: This rich soybean product with a cheeselike flavor is still underestimated, unappreciated, and misunderstood, mainly because the sticky 'threads' resulting from its special fermentation process are strong and stubborn, making it pretty tricky for beginners to eat. Natto can be made easily at home with soy beans, 'natto spore' (now available at major health-food dealers on both coasts), a pot, and a box... If allowed to sit too long on store shelves, the beans become overripe. Although you cannot check the quality until you open up the package at home, the best natto should have a light, tannish color and still be moist and a little puffy. Too dark a color indicates overripening and a correspondingly bitter taste. To remedy this situation somewhat, stir the beans together with chopsticks or a spoon and combine with chopped onions, wasabi horseradish, and soy sauce. Since this food is the result of bacterial action, no preservative can be used. Thus, natto should be eaten as soon as possible."

Mr. Udesky had a chance to prepare homemade soy sauce while living with Mr. Noboru Muramoto (author of *Healing Ourselves*) from 1971 to 1975. In the Appendix titled "Oriental, natural, and specialty food stores" is an entry (p. 153, col. 3.8) for: "Foods for Life, 504 E. Broadway, Glendale, California, 91025." Note: This pioneering natural and organic food store is still in business in 1988.

For a complementary review, see Jean Pearce. 1991. Nov. 10. *Japan Times*.

Letter from James Udesky. 1997. April 21. The hardcover edition of *The Book of Soba* has now sold 12,000 copies in Japan and abroad, and 3,000 copies of a new soft-cover pocketbook edition (246 p.; 18.2 cm) were published by Kodansha International in Dec. 1995. An article on soba titled "The Art of Noodles," by Udesky appeared in *Japan Quarterly* (April-June 1997, p. 32-42, it contains a large color photo of him rolling out soba dough). Udesky is living in Tokyo, has lived in Japan (except for a 3-month break in 1988) since 1988, married a Japanese woman in 1990, for the last 2 years has worked for a medical equipment importer and taught English part-time at Dentsu Inc. to survive financially, has established a company named Udesky Communications, and continues his practice of making traditional Japanese soba. He has plans for a new book

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titled "Basic Techniques of Udon Making." Address: Heim R1 #103, Meguro Honcho 6-18-3, Meguro-ku, Tokyo 152, Japan. Or The Soba Center, P.O. Box 72, Winnetka, Illinois 60093-0072.

7191 Bubny, Paul. 1988. Venerable soybean sprouts new uses. *Health Foods Business* 34(7):72, 74, 76, 108. July.
• ***Summary:*** Lonnie Stromnes, national sales manager of White Wave Soyfoods in Boulder, Colorado, reports that White Wave recently "upscaled" the packaging on its tempeh products, the new graphics depict tempeh in use, so that customers do not have to bring a thorough knowledge of the food into the store with them. Mitoku-USA, based in Albany, New York, imports some 20 varieties of miso. At least one manufacturer, the Asheville, North Carolina-based Great Eastern Sun, saw its miso sales increase by 20% last year. Bruce Sturgeon, the company's vice president, said Great Eastern Sun's volume on miso alone was $400,000 in 1987. Shoyu and tamari are frequently aimed at the gourmet market as well as the natural foods / specialty foods market. Owner Dale Kamibayshi of Alfalfa's Market in Boulder, Colorado said, "I think many people are still intimidated by (soyfood's) preparation." To help overcome the intimidation factor, Alfalfa's has scheduled a soyfood tasting fair for July 16, the first such fair which the store has devoted to soy.

Gary Barat, chairman of Legume, Inc. said, "I see the natural foods and gourmet markets coming together," said Barat. "And the smart marketers are realizing that." People who shop specialty stores have both eyes turned toward quality. Soy companies are increasingly making use of organically grown soybeans. There is also a trend toward using specific soybeans for specific products, a sign of a maturing industry. The trend is more prevalent in the U.S. than in Far East Asia. Westbrae, for example, uses Vinton beans for its Westsoy soy beverage. As the currency in Japan remains strong against the dollar, you're going to see more and more (soy) products produced in America. Also there will be greater growth in so-called "second-generation" soy products–dairy analogs with soymilk, soy cheese, soy ice cream and soy yogurt. Address: Associate Editor.

7192 Donegan, Priscilla. 1988. The incredible shrinking section. Sauces & dressings. *Progressive Grocer* 67(7):143, 146, 148, 150-52, 154-56, 158, 161-63. July. See p. 156, 158.
• ***Summary:*** In 1987 supermarket sales of soy and teriyaki sauce were $74.93 million (gross profit $19.90 million), accounting for 2.03% of the sauces & dressings category sales [Note: New expanded category!] (2.37% of category gross profits, the average retail gross profit margin is 26.56%) and with sales up 23.28% over 1986. The best-selling types of sauces and dressings are bottled dressings (17.22%), spaghetti sauce (17.09% of the category), mayonnaise (12.98%), ketchup (8.20%), meat sauce (18.40%), dry mixes and seasonings (6.401%), and Mexican sauce (6.04%).

"All the action in supermarkets today is against the walls in the perimeter departments."

7193 Fertilia. 1988. Prijlist. 1 Juli 1988. Milieu vriendelijke levensmiddelen [Price list. 1 July 1988. Environmentally friendly foods]. Koolhaaspark, 3864 PW Nijkerkerveen, Netherlands. 49 p. 30 cm. [Dut]
• ***Summary:*** Contains products from: Dr. Vogel (p. 20). Huegli (mostly bouillon, p. 20). Japanese soy products (shoyu, tamari, may types of miso, nigari, kuzu, wheat gluten, mochi, p. 30-33). Fertilia soy products (p. 34). Yakso (tofu, tempeh, soy sauce, p. 34). Witte Wonder (tofu, seitan, p. 35). Orido (amesake, p. 35). Liza (rice drink, p. 36). Living Foods (soya drink, p. 36). Provamel (9 soy drinks and 6 soy desserts [puddings], p. 36). Jonathan (1 bottled soy drink, p. 36). Lima (shoyu, tamari, soymilk). Eden (no soy, p. 37). Address: Nijkerkerveen, Netherlands. Phone: 03495-72844.

7194. **Product Name:** Emperor's Kitchen brand Johsen Shoyu, and Sakae Organic Shoyu.
Manufacturer's Name: Great Eastern Sun (Importer). Made in Japan.
Manufacturer's Address: 92 Macintosh Rd., Asheville, NC 28806. Phone: 704-252-3090.
Date of Introduction: 1988. July.
Ingredients: Sakae: Well water, organic* whole soybeans, organic* whole wheat, seasalt, koji (natural culture). * Organically grown and processed in accordance with Section 26569.11 of the California Health and Safety Code.
Wt/Vol., Packaging, Price: Both in 5 and 10 oz bottles. Johsen Shoyu also in 32 oz bottles.
How Stored: Shelf stable.
New Product–Documentation: Ad in Macromuse. 1988. June/July. p. 3. "The finest Japanese liquid seasonings. Identical to Mitoku & Mitoku Macrobiotic." No address or specific products are given. Talk with Barbara Holiday of Great Eastern Sun. 1989. Feb. 28. These products are imported in drums from Japan via Mitoku. GES started bottling the drums in North Carolina in Oct. 1987 and the products were in the stores by late 1987 or Jan. 1988. The Johsen Shoyu and Wheat Free Mansan Tamari are not organic. There are also non-soy products in the line. Sakae Shoyu is made by Mr. Kiyoji Fukaya, Ogasawara-Gun, Shizuoka-ken, Japan. Mansan Shoten is run by Enichiro Oguri (President). Handa-shi, Aichi-ken, Japan.

Labels. 1989. 5.5 by 3 inches, and 6.25 by 3.5 inches. Pink and black on silver. Illustration of a symbolic tree with leaves. "In the Emperor's Kitchen you find only the finest seasonings. Johsen Shoyu is one of the world's best soy sauces. Traditionally brewed in cedar kegs for early 2 years, Johsen Shoyu is made using only whole soybeans and whole grain wheat. Split or defatted beans or wheat flour are never

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used... Use it for all your wok cooking or as a dipping sauce for sushi or sashimi."

7195. **Product Name:** Emperor's Kitchen brand Mansan Tamari [Organic, or Wheat Free].
Manufacturer's Name: Great Eastern Sun (Importer). Made in Japan.
Manufacturer's Address: 92 Macintosh Rd., Asheville, NC 28806. Phone: 704-252-3090.
Date of Introduction: 1988, July.
Ingredients: Wheat free: Water, whole soybeans, Mikawa mirin (water, sweet rice, koji), seasalt, koji (natural culture).
Wt/Vol., Packaging, Price: 5 and 10 oz bottles. Mansan Wheat Free Tamari also in 32 oz bottles.
How Stored: Shelf stable.
New Product–Documentation: Ad in Macromuse. 1988, June/July. p. 3. "The finest Japanese liquid seasonings. Identical to Mitoku & Mitoku Macrobiotic." No address or specific products are given. Talk with Barbara Holiday of Great Eastern Sun. 1989, Feb. 28. These products are imported in drums from Japan via Mitoku. GES started bottling the drums in North Carolina in Oct. 1987 and the products were in the stores by late 1987 or Jan. 1988. The Johsen Shoyu and Wheat Free Mansan Tamari are not organic. There are also non-soy products in the line. Sakae Shoyu is made by Mr. Kiyoji Fukaya, Ogasawara-Gun, Shizuoka-ken, Japan. Mansan Shoten is run by Enichiro Oguri (President), Handa-shi, Aichi-ken, Japan. Labels 1989. 5.5 by 3 inches, and 6.25 by 3.5 inches. Pink and black on silver. "Mansan Tamari is an authentic tamari soy sauce that is traditionally brewed in cedar kegs for over a year. Real tamari was originally the liquid drawn from soybean miso... Mansan tamari is blended with 40% Mikawa Mirin which gives it a unique and subtly sweet savoriness. Use it as a glaze for baked foods, a basting sauce for broiled fish, or a dipping sauce for sushi."

7196. Meyer, Amy. 1988. Soy and teriyaki sauce products: Found in Boston supermarkets and Chinatown groceries, July 1988. Boston, Massachusetts: A. Meyer Research. 6 p. Unpublished typescript. 28 cm.
• ***Summary:*** For each sauce is given: Product / brand name, Size in oz, Price in one or both of two supermarket chain stores, Price in one or both of two independent Chinatown grocery stores. The product names are: Kikkoman soy sauce (5, 10, and 20 oz). Kikkoman Lite soy sauce ("40% less salt") (10 oz). Kikkoman soy sauce dispenser. Kikkoman teriyaki sauce (10 and 20 oz). Kikkoman teriyaki baste and glaze (12 oz). LaChoy soy sauce (10 oz, 16 oz). LaChoy teriyaki sauce (10 oz). Angostura low-sodium soy sauce ("62% less") (10 oz). Mee Tu soy sauce (16 oz; Allied Old English, Inc., Port Reading, New Jersey).

China Bowl (Hong Kong) light soy sauce ("100% natural"). (5 oz). China Bowl (Hong Kong) dark soy sauce ("100% natural"). (5 oz). Yamasa Low-sodium soy sauce (10 oz; Distributed by Mitsubishi Foods, Inc., San Diego). Lee Kum Kee soy sauce (Hong Kong, 14 oz). Pearl River Bridge superior soy sauce (China; 22 oz). Koon Chun thin soy sauce (11 oz; Hong Kong). Koon Chun double black soy sauce (11 oz). Koon Chun black soy (21 oz). Wan Ja Shan soy sauce (16 oz; Mandarin Soy Sauce, Inc., Middletown, NY). Silver Swan soy sauce (21 oz; Manila, Philippines). Golden label superior soy sauce (21 oz; China).

Note: This is the earliest English-language document seen (April 2012) that uses the term "double black soy sauce" to refer to soy sauce. Address: 21 Beacon St. #10A, Boston, Massachusetts 02108. Phone: 617-523-3780.

7197. Mitoku. 1988. Spotlight on Johsen Shoyu: The world's leading natural soy sauce (Ad). *East West*, July, p. 1-3.
• ***Summary:*** Johsen Shoyu is certified to meet the uncompromising standards of Macrobiotic Quality by Michio and Aveline Kushi. It is bottled under the labels of more than a dozen leading natural food companies on four continents. In February of this year, premium quality Johsen Shoyu was awarded the Japan Ministry of Agriculture's prestigious first place award. "The highest quality soy sauce in Japan." It was selected from over 200 entries by a panel of the world's foremost soy sauce experts. Johsen Shoyu is kept in large cedar aging casks. Johsen Shoyu is aged slowly for more than one and one-half years, protected only from the outside weather by the wood frame building. Over five seasons, including two full summers, the fermentation continues. Johsen is aged over 5 seasons, including 2 summers, for a total of 18-24 months at natural seasonal temperatures. It is aged in well-seasoned cedar casks, and it is packed without additives or preservatives. Address: Tokyo, Japan.

7198. Nihei, Takao. 1988. [The history of Japanese sake in Hawaii (Food series, part XIII)]. *Kokiku (Honolulu, Hawaii)*, July, p. 32. [Jap; Eng]
• ***Summary:*** The first Japanese immigrants who made a mark in Hawaii were the "Gannenmono" who crossed the ocean on the ship "Scioto" (Saioto-go) in 1868. Miso and shoyu had been loaded on that boat, but there is no record of any sake. Later on, due to a shortage of labor in the sugarcane fields, Hawaii's largest industry, immigrants from Japan were brought in as a result of a contract between the Hawaiian Kingdom and the Japanese Government. On Feb. 8, 1885, the Japanese immigrants arrived in Hawaii on the ship "City of Tokio." On this trip, Japanese sake had been put on board. Ten barrels of sake were offered as a gift to King Kalakaua. Sake began to be imported from 1888 on, increasing in volume each year.

7199. **Product Name:** [Indonesian-Style Sweet & Thick Soy Sauce].

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Foreign Name: Ketjap Manis
Manufacturer's Name: Yakso (Distributor)
Manufacturer's Address: Zoutstraat 17, Groningen, Netherlands
Date of Introduction: 1988, July
Wt/Vol., Packaging, Price: 220 ml jar
New Product–Documentation: Fertilia price list 1988, July, p. 34.

7200. Hymowitz, Ted. 1988. Early Swedish work with soy sauce in Canton, China (Interview). *SoyaScan Notes*, Aug. 1. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Ted learned that there was a Swedish colony in Canton in the period 1750 to 1760. Perhaps they knew something about the Bowen-Flint [Samuel Bowen and James Flint] affair, so he examined early Swedish literature, though he can't read Swedish. He found a document on methods of preparing Chinese soy by M. de Groupens. Berkeley or Harvard might have this document. The earliest Europeans to refer to the soybean were Carletti (1597), Saris (1613), and Fernández Navarrete (1665); Ted discovered all of these early references. There must be many other early references in travel logs, but it takes so much time to read them. He will cite this in a forthcoming article on new crops.

Ted will send me an article from *The Philosophical Magazine* (1804) by M. de Grubbens titled "Method of preparing Chinese soy." He also has on one of his note cards the story of a man visiting Peking in 1655; the man mentions miso and tofu. Address: Dep. of Agronomy, Univ. of Illinois, Urbana, IL.

7201. Bailey, Simon. 1988. Soya-based products. *Natural Choice*, Aug. 15.
• ***Summary:*** "The food of the future. The soya bean is a protein-packed food which is increasingly used as a dairy or food substitute in today's search for a healthier diet." Discusses soya milk, dairy free desserts, tofu, tofu-based foods, soya flour, soya sprouts, tempeh, soya sauce, miso, and high-tech soya foods including TVP and soya protein isolates. Address: 138 Randolph Ave., London W9 1PG, England. Phone: 01-289-7364.

7202. Thiel, Elizabeth. 1988. Soy sauce. Tamari comes to the capital. *Virginian Pilot* (*Norfolk, Virginia*), Aug. 21, p. H1, H4.
• ***Summary:*** Mark Givens, London native and chief officer of a Japanese factory in Richmond, was drawn to American because of tamari, an upscale soy sauce produced by the year-old Virginia company. The young company already produces 40% of the world's tamari, exported to 25 foreign countries and sold to major food processors such as Campbell's Soup Co. The tamari sauce has 30% more protein than soy made under such labels as Kikkoman and La Choy, which add wheat to the mixture to speed up fermentation. Tamari Lite has about 25% less sodium. The catch is the price. A bottle of tamari costs about a dollar more than a bottle of Kikkoman soy sauce. Fermentation takes as long as six months.

In 1979 San-Jirushi incorporated in California to take advantage of the booming Oriental food market in America. The American venture included a warehouse and 4-5 full-time employees. San-J employs 25 in the Richmond plant, and there are three workers at the warehouse in California, compared to 200 in Japan. San-J bottles tamari in 55 and 5 gallon containers for use by restaurants and food processors. "Sales are up 30% this year," Givens says.

Photos show: (1) Yuji Yamamoto, vice president of production at San-J's new tamari plant in Richmond, Virginia. (2) Stephen Earle, vice president of San-J, wearing a hard-hat and protective glasses, with machinery in the background.

Also contains a sidebar with recipes by Regina Schrambling titled "Upscale Oriental sidekick is vegetarian Worcestershire." Tamari is Mollie Katzen's "vegetarian variation on Worcestershire." Address: Staff writer.

7203. Drake, Milan. 1988. La Choy and other teriyaki sauces (Interview). *SoyaScan Notes*, Aug. 24. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** La Choy now makes and sells 2 teriyaki sauces, the regular and the new (1987) Thick and Rich, which is more of a basting sauce, similar to the Armour basting sauces. The regular was launched at least 20 years ago. He has been with the company for 16 years, now in charge of technical services. In about 1984 La Choy was acquired by Hunt-Wesson, and now much of La Choy's information is located in Fullerton, California. He is not aware of the S&W company. La Choy's big competitor for teriyaki sauce is Kikkoman. Chun King (Gino Pallouci), may have had an early teriyaki sauce, but no longer sells it, after Reynolds took them over.

Chun King started a lot of things then dropped them. Armour was in Chicago, probably now in Phoenix. La Choy no longer makes any fermented soy sauce, its now all hydrolyzed (HVP), and that is what goes into their teriyaki. They also add soy sauce to quite of few of their own products, such as egg rolls. Este Kiem of the Oriental Show-You Company, Columbia City, Indiana, is a super man, now in his 80s but looks like he's 50, and the best living source on the early U.S. soy sauce industry. Address: La Choy Food Products, Archbold, Ohio 43502.

7204. *Good Housekeeping–British Edition* (*London*). 1988. How it's made. Soy sauce. Aug., p. 165.
• ***Summary:*** Although soy sauce did not become popular in the UK until the takeaway invasion of the 1970s, the first imports reached this country back in the 17th century. Its advantages were that it withstood long sea voyages well and

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helped to relieve the monotony of the seafarers' daily diet. To make HVP soy sauce, roasted soya beans are mixed with hydrochloric acid and left to react for 8 to 10 hours before sodium carbonate is added to help reduce the acidity. The following brands are made in this traditional way: Amoy, Kikkoman, Lotus, Sharwoods, and Sunwheel. Address: England.

7205. McSweeney, Daniel. 1988. Consumer survey 1988. *Whole Foods*. Aug. p. 27-28, 30, 32, 34.
• ***Summary:*** Natural/organic food purchases. Percentage of respondents who purchased a type of product during the past year: 1988 all/1987 all (1988 women / 1988 men). NA means "Not Available." The following are ranked in descending order of the percentage of consumers buying the product in 1988: Tofu: 63.5/83.4% (55.6/63.5%); Tamari 55.6% / NA (57.8/50.0%); Soy sauce 47.6%/NA (46.7%/50%); Miso 41.8/69.7% (42.2/38.9%); Tempeh 30.2/NA (35.6/16.7%); Soymilk 28.6%/54.5% (31.1/22.2%). Note the sharp declines between 1987 and 1988 for soymilk -47.6%, miso -40%, tofu -24%. All soyfood products for which there are statistics for both years declined, a serious trend.

Note: The "1986 and 1987 surveys statistics were generated through a reader questionnaire in East West magazine. The 1988 Consumer Survey was handed out to shoppers at 13 different retail stores throughout the country. Due to this variance in the survey base, some statistical discrepancies may have resulted."

7206. **Product Name:** Nikken Fermented Soy Sauce Powders [#5300 standard type, #5301 standard without MSG, #5302 standard without caramel color, #5303 fine mesh type, #5304 roast type].
Manufacturer's Name: Nikken Foods Company Ltd.
Manufacturer's Address: 37-7, 1-chome, Komaba, Meguro-ku, Tokyo 153, Japan.
Date of Introduction: 1988, August.
Wt/Vol., Packaging, Price: 22 lb or 110 lb boxes.
How Stored: Shelf stable.
New Product–Documentation: Soya Newsletter. 1988. July/Aug. p. 8. Imported to the USA by The J.F. Kelly Co., 150 River Road, A-3, Montville, New Jersey 07045. Phone: 201-299-9100. Contact: Mike Kelly. Spot in Food Technology. 1989. Jan. Nikken is now imported and represented by Zonner, Inc. The U.S. distribution center is in St. Louis, Missouri. Talk with Zonner. 1990. Jan. 23. The importer is now G.S. Suppliger in Missouri. Phone: 314-436-5050.

7207. *Nutrition News* (*Riverside, California*).1988. Soy King of the mountain. 11(8):1-4. Aug. [1 ref]
• ***Summary:*** An overview and introduction to soyfoods nutrition, tofu, tempeh, miso, shoyu and tamari, and soymilk. Note: This magazine was formerly located in Pomona, California.

7208. Schnell, Hannelore. 1988. Kleine Bohne, ganz gross [Small bean, very big]. *Natur* (*Munich, West Germany*). Aug. p. 75-83. [3 ref. Ger]
• ***Summary:*** Discusses soymilk, tofu, soy sauce, miso, tempeh, Soyastern, Svadesha Tofurei, Alpro, and DE-VAU-GE. Concludes with a detailed discussion of newly recognized potential dangers with HVP products. Vegetable seasonings made by companies such as Maggi may contain carcinogenic chloropropanols, such as dichloro propanol. Maximum limits on these are now being established.

7209. *Soya Newsletter* (*Bar Harbor, Maine*).1988. U.S. soyfoods production to use 62 million pounds of soybeans in 1988. July/Aug. p. 10.
• ***Summary:*** This figure was the result of a recently soyfoods industry survey conducted by Soyatech, Inc. The soyfoods included in this projection are tofu, soymilk, tempeh, soy sauce, miso, and soynuts. When asked how they expected their demand for soybeans to grow over the next 5 years, 4.8% of soyfoods manufacturers surveyed expected it to remain the same, 52.4% expected it to grow slowly, 42.9% expected it to grow considerably, and none expected it to decrease.

7210. **Product Name:** Teriyaki Burger (Made with Tempeh).
Manufacturer's Name: White Wave.
Manufacturer's Address: 1990 North 57th Court., Boulder, CO 80301. Phone: 303-443-3470.
Date of Introduction: 1988, August.
Ingredients: Tempeh (made with soybeans organically grown in accordance with section 26569.11 of the California Health and Safety Code and brown rice), natural soy sauce, garlic, onion, spices.
Wt/Vol., Packaging, Price: 6 oz (170 gm). Vacuum packed in poly pouch.
How Stored: Frozen or refrigerated.
Nutrition: Per 3 oz.: Calories 190, protein 9 gm, carbohydrates 6 gm, fat 3 gm, sodium 466 mg.
New Product–Documentation: Talk with Steve Demos. 1988. Dec. 20. The product was introduced in Aug. 1988. Label. 1989. April. 4 by 4.5 inches. Yellow, white, and black on red. Large photo of a tempeh, lettuce & tomato sandwich, with a slice of tomato and 2 slices of dill pickles on top, cheese slices and lettuce below. "All the sizzle... none of the steak. Ready to eat in 1 minute. Makes a delicious sandwich or entree–just brown in a lightly oiled pan or microwave 1 minute high power." Leaflet. 1989. April. "Make your sales sizzle with White Wave."

7211. Mahoney, Louis. 1988. In the best East-Meets-West style, Japan's oldest soy sauce is about to become

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Richmond's newest flavor booster. *News-Leader* (*Richmond, Virginia*). Sept. 7. p. 29, 37.
• ***Summary:*** "From a cook's standpoint, the exciting thing about tamari is the versatility, depending on where you're using it," says Judie Cohen. She and chefs at the Butlery Ltd., where she is vice president and director of the catering division, have developed recipes to show home cooks the versatility of this Japanese staple. The first bottles rolled off the production line in eastern Henrico County in August. Tamari is brewed for 6 to 8 months. Since it doesn't have the alcohol that other soy sauces do, the flavor doesn't burn off during cooking. Address: New Leader food editor.

7212. *Washington Post*. 1988. First, define terms, then start cooking. Sept. 14. p. E4.
• ***Summary:*** "*Ong chai* (water spinach, empty heart): Distinguished by its crunchy hollow stems and soft pointy leaves, it tastes like mild spinach and is often served Cantonese-style stir-fried with garlic (and sometimes fermented bean curd)."

Recipes include: Madhur Jaffrey's bean curd with Chinese parsley (which calls for "½ pound medium-firm bean curd, cut into 3/4-inch cubes" and "1 tablespoon Chinese thin soy sauce").

7213. Fass, Bill. 1988. Brief history of Macrobiotic Wholesale Co. of Asheville, North Carolina (Interview). *SoyaScan Notes*. Sept. 15. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** This company was originally founded by Great Eastern Sun. In 1986 GES sold it to Kurt Schmitz [or Schmidt]; it was then located at 503 Haywood Rd. in Asheville. Schmitz in turn sold it to Bill Fass in August 1986. The company does not import. They distribute only macrobiotic products. Some 90% of the products they sell are imported from Japan, and 90% of these they buy from Great Eastern Sun, the importer. They also buy a few imported products from Eden Foods. Soyfood products they distribute include miso, shoyu, tamari, and koji. Address: 799 Old Leicester Hwy., Asheville, North Carolina 28806. Phone: 800-438-4730 or 704-252-1221.

7214. Cook, Anne. 1988. Visiting journalists say Italians shunning pasta for soy products. *News-Gazette* (*Champaign, Illinois*). Sept. 28.
• ***Summary:*** Italian consumers are shunning pasta and olive oil and eating salads with soybean sprouts and dressing made from low cholesterol soybean oil, say some touring Italian journalists. "It used to be people only knew soy as soy sauce on Chinese food," said Ghigo Roggero, spokesman for the group visiting the United States to learn more about the product. "Now we cook with soy oil and eat soy sprouts and tofu," Rogerro said. Roger Leysen who works with the American Soybean Association in Brussels, Belgium, said the trip was planned to familiarize participants "with the U.S. Soybean world from the farmer to the ship at New Orleans. About half the oil sold in Italy is made from olives grown there, and it sells primarily in gourmet 'extra virgin' form," Leysen said. Soybean oil has captured about half of the remaining blended and pure oil market. Address: Staff.

7215. **Product Name:** Earth Dance Vegetarian Jerki (Made with Tofu) [Original, or Hot-n-Spicy]
Manufacturer's Name: Earth Dance Vegetarian Foods.
Manufacturer's Address: 209 Commerce Drive #2 (or 305 West Magnolia #133), Fort Collins, CO 80524. Phone: 303-482-9213.
Date of Introduction: 1988. September.
Ingredients: Both: Organic soybeans, soy sauce (water, wheat, soybeans, salt), vinegar, liquid smoke, nigari (magnesium chloride from seawater) and spices.
Wt/Vol., Packaging, Price: 4 oz Ziploc plastic bag. Retails for about $4.35 (7/89, Colorado). Bulk: $0.27 per 0.38-oz piece.
How Stored: Shelf stable.
New Product–Documentation: Letter and leaflet (copyright 1988) from Jerry Manning, Sales/Marketing Director. 1989. June 20. Letter, Labels, articles, and samples from Jerry Manning. 1989. July 7. Label is 5 by 4.5 inches. Blue-green and orange on beige. Stylized illustration, based on an Australian rock painting, of 3 dancers in front of the sun on the horizon. "All vegetable. Made in Colorado. Created in the spirit of a love for life and respect for all of nature's creatures, Vegetarian Jerki is a spicy, chewy and nutritious all vegetable snack which contains no residual drugs or chemicals. Preserved naturally, Vegetarian Jerki has no cholesterol. Convenient food for conscientious people." Articles (with no year, date, or page) about the product from *The Coloradoan* (by Sally Norman), *Denver Post*, and *Rocky Mountain News*. It was created by Fran Rikhoff, age 31, a part-time housecleaner and full-time vegetarian. Soyfoods Center product evaluation. 1989. July 15. Delicious! Chewy texture and smoke-cured taste.

7216. Ohsawa America. 1988. Macrobiotic foods catalog [Mail order]. P.O. Box 3608, Chico, CA 95927. 36 p. Sept.
• ***Summary:*** Includes imported (from Japan) soy sauce, miso, miso condiments, koji, and nigari [a tofu coagulant]. Address: Chico, California. Phone: 800-647-2929.

7217. **Product Name:** [Tof'in Tofu Burgers {Not Fried} (Italian-Style, Chinese-Style, au Gratin, Provençale with Tomato & Onions, or Forest Mushrooms)]
Foreign Name: Tof'in (Italienne, Chinoise, Gratinée).
Manufacturer's Name: Société Soy.
Manufacturer's Address: 1 rue du Crêt de la Perdrix, 42400 Saint-Chamond, France. Phone: 77.31.24.42.
Date of Introduction: 1988. September.

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Wt/Vol., Packaging, Price: 2 x 100 gm in vacuum pack.
How Stored: Refrigerated
Nutrition: Per 100 gm.: Protein 11.6 gm, fat 8.8 gm, carbohydrates 8.1 gm, calories 158.
New Product–Documentation: Letter from Bernard Storup 1989. March 3. Tof'in (low fat tofu burgers, cooked without fat) in 3 flavors (Garlic & Fines Herbes, Provençale, and Forestiere) were introduced in April 1986 and discontinued in March 1988. Three other flavors (Italienne, Chinoise, and Gratinée) were introduced in Sept. 1988.

Letter from Bernard Storup of Société Soy. 1990. June 6. Tof'in was introduced first (in 1986) and Croque Tofu (deep-fried burgers) came second (Feb. 1987). They are the same product but the packaging for each was different.

Talk with Bernard Storup. 1990. June 13. Tof'in (pronounced toe-FEEN) was packaged for supermarkets. It was the same as Croque Tofou (both were deep-fried), but not the same as Croque Tofou Léger (which was not deep-fried, and which came in Italienne, Chinoise, and Gratinée flavors). Tof'in was discontinued about 2 years ago. Then 18 months later the company launched, for supermarkets, a product named Doré de Soja, which is the same as Tof'in (i.e. deep-fried).

7218. Sokensha Co., Ltd. 1988. Soken. Its naturally good (Ad). *Natural Foods Merchandiser.* Sept. p. 81.
• ***Summary:*** "The pioneer of Oriental foods. Soken, the most respected brand from Japan since 1975." Products shown on an island in a stream include soy sauce (no longer labeled tamari), and Vege-Soy Chips. Address: 724 Katakura-cho, Kanagawa-ku, Yokohama 221, Japan. Phone: 45-491-1441.

7219. **Product Name:** [Sra. Soya Soyriza (Like a Mildly Spicy Chorizo Sausage but Made with Okara)]
Foreign Name: Sra. Soya Soyriza.
Manufacturer's Name: Sra. Soya.
Manufacturer's Address: Huertas 17, San Miguel de Allende, Guanajuato 37700, Mexico. Phone: 465-20255.
Date of Introduction: 1988, September.
Ingredients: Okara, whole wheat flour, vinegar, soy sauce, eggs, mustard, garlic, chili & other spices.
Wt/Vol., Packaging, Price: 300 gm and 450 gm vacuum packed.
How Stored: Shelf stable, 3 week shelf life.
New Product–Documentation: Letter from Nicole Black, owner. 1988. Sept. 18. "Fried in oil this tastes like a good Mexican sausage, or mashed with a little mayonnaise it makes a wonderful paté that is very meaty in flavor. Everybody loves it. I think it should sell as well as or better than the tofu. Thus, what is ordinarily waste, ironically enough, will help to save my business."

7220. San-J International, Inc. 1988. Ancient Japanese seasoning now brewed in the U.S. (News release). 2880 Sprouse Drive, Richmond, VA 23231. 3 p. Oct. 6.
• ***Summary:*** San-J International announced October 6, 1988 that tamari has been successfully brewed for the first time outside of Japan. The domestic tamari was bottled at the company's new Richmond, Virginia brewery after months of careful aging. "Major food producers, including Campbell, Hunt-Wesson, Stouffer and Heinz, use San-J tamari in their packaged foods because of its purity, stability and superior flavor enhancing properties." San-J sent The Soyfoods Center an individually numbered commemorative bottle of their tamari.

Tamari compared to soy sauce "has 30% more organic protein than conventional soy sauce... The most prevalent amino acid in tamari is glutamic acid, which is the natural counterpart of monosodium glutamate (MSG)." San-J tamari is available in 5, 10 and 20 ounce bottles. Seven recipes are given including: Tamari Coconut Freeze, Tamari Mustard Sauce, Tamari Ginger Vinaigrette, Tamari Brown Sugar Bourbon Glaze, Tamari Hollandaise, Szechuan Sausage Cornbread, and Tamari Macadamia Nut Ice Cream. Address: Richmond, Virginia.

7221. San-J International, Inc. 1988. Facts about San-J's Richmond facility (News release). 2880 Sprouse Drive, Richmond, VA 23231. 1 p. Oct. 6.
• ***Summary:*** (1) San-J's facility in Richmond, Virginia is the only tamari brewery outside of Japan, breaking a 1,200 year old tradition. (2) San-J has the capacity to produce one million gallons/year of tamari. (3) 900,000 pounds of soybeans and 500,000 pounds of soybean meal are purchased per year. (4) Projected sales for 1988 are $3.5 million. Projected sales for 1989 are $5 million. (5) Twenty-five people are employed, four of which are Japanese. (6) The annual payroll is $500,000. (7) Montague Farms is the sole Virginia supplier of soybeans to San-J (William Taliffero). Contact: Mark Givens, Chief Operating Officer; Steve Earle, Senior Vice President. Address: Richmond, Virginia.

7222. Meyer, Amy. 1988. U.S. soy sauce imports (Interview). *SoyaScan Notes.* Oct. 18. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The basic source of information is U.S. General Imports, Schedule A, Commodity by Country, U.S. Dept. of Commerce, Bureau of Census. Monthly statistics are published and totals for each year are given in the December issue. The term "Thin Soy Sauce" refers to typical soy sauce, such as Japanese shoyu. The other thicker Chinese types (black soy sauce, etc.) do not have separate figures kept for them. The SIC code for Edible Foods is #098, and thin soy sauce is 098-0420.

After World War II, U.S. soy sauce imports began in about 1947-50. In 1972 they reached a peak of 23,098 million lb., worth US$3.1 million. They dropped sharply for the next to years after Kikkoman opened its U.S. plant, but

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by 1981 were back up to 19.613 million lb., worth US$7.444 million. One gallon of soy sauce weighs 9.8 lb, 1,000 lb of soy sauce is 102 gallons.

Talk with Amy Meyer. 1989 Dec. 3. She had wanted to publish her extensive research on the soy sauce market in a scholarly journal, such as the *Journal of International Marketing*. She submitted several proposals but they all found the subject too narrow and boring. So nothing was ever published and probably never will be. All the documents are now filed in a large box. Address: 21 Beacon St. #10A, Boston, Massachusetts 02108. Phone: 617-523-3780.

7223. Sugarman, Carole; Hitchcock, Tyler. 1988. A sense of direction: Finding a place for novel products in the Old Dominion. *Washington Post*. Oct. 19. p. E1.
• ***Summary:*** The section titled "Soy sauce savvy" notes that Takayoshi Sato, the president of San-Jirushi Corp. (the world's largest brewer of tamari soy sauce) has invested $10 million to build the company's first factory outside Japan in Richmond, Virginia; it opened last year. Tamari is made entirely from fermented soybeans. Most Japanese sauces (such as Kikkoman) are made by fermenting both soybeans and wheat. It takes seven months to make tamari, using modern, sanitary equipment and computers. A detailed description of the process is given.

He chose Richmond for several reasons: (1) The cold Virginia winters and humid summers approximate those of Kuwano where Sato and his ancestors have been making tamari for the past 184 years. (2) The supply of pure water from the Appalachian mountains is quite similar to that from the Suzuka Mountains, a range of seven mountains in running through Mie Prefecture in central Japan. (3) A reliable supply of soybeans is available in the USA; they must be imported to Japan. (4) The Virginia location gives San-J better access to the growing American and European markets for tamari.

The San-J plant is will be located in an Industrial park off I-64; it will be clean and scentless. Sato's office shows a blend of American and Japanese cultures. Once a week, American staffers are offered Japanese language classes, Japanese employees takes English classes.

The first batches of tamari are now ready, and have been sold to industrial users only–food makers such as Campbell, Heinz, and Stouffers. Tamari "is more heat stable and has a richer flavor than other soy sauces, so not as much has to be used per portion.

San-J hopes to supply their bottled tamari to retailers by Jan. 1989. Yet many Americans don't know what tamari is. So a program of education will be needed if San-J wants to hit the big time.

7224. Ando, Seiichi. 1988. Kishu han no dentô sangyô [The traditional industries of the Kishu han]. In: S. Ando, ed. 1988. Zusetsu: Wakayama-ken no Rekishi [History of Wakayama Prefecture]. Tokyo: Kawade Shobo Shinsha. See p. 171-. [Jap]*
• ***Summary:*** The present Wakayama prefecture is one part of the earlier Kishu Han. The latter place name was used during the Edo period until the start of the Meiji period. In this "Illustrated History of Wakayama Prefecture," in the chapter cited above, there is one section titled "Yuasa–The home of shoyu" (*Shoyu no furusato–Yuasa*). The entire book is 333 p. Address: Osaka Sangyo Daigaku, Osaka, Japan.

7225. Bernard, Richard L.; Juvik, Gail A.; Hartwig, Edgar E.; Edwards, Calton J., Jr. 1988. Origins and pedigrees of public soybean varieties in the United States and Canada. *USDA Technical Bulletin* No. 1746. 68 p. Oct. [20 ref.]
• ***Summary:*** Contents: Old domestic varieties. Modern domestic varieties from public institutions. Germplasm resources information network. Tables: 1. Number of U.S. and Canadian soybean varieties by maturity group. 2. Number of U.S. and Canadian soybean varieties by country of origin. 3. Origins and pedigrees of old domestic soybean varieties. 4. Lost old domestic soybean varieties. 5. Literature on old domestic soybean varieties in chronological order. 6. Origins and pedigrees of modern domestic soybean varieties from public institutions. 7. Genetic information on backcross-derived public soybean varieties. 8. Genetic information on backcross-derived soybean parental lines. 9. Public soybean variety registrations and licenses. 10. Corrections to published pedigree information.

Abstract: "In this report are described the origins of the 440 U.S. and Canadian soybean varieties that are maintained in the USDA Germplasm Collection at Urbana, Illinois, and Stoneville, Mississippi. Varieties in commercial use before the mid-1940's were mostly introductions, and this report includes for each the geographic place of origin, the person or institution that provided the seeds, the foreign variety name (if any), as well as information about when it was released and who released it in the United States or Canada. Modern varieties have been developed by hybridization and selection. In this bulletin, the pedigree is specified and where and when each variety was developed and released. This information allows researchers and breeders to trace modern soybean varieties back to their introduced ancestors and facilitates breeding plans and evaluation of the germplasm base of the current commercial soybean crop."

Table 4, titled "Lost old domestic varieties," lists the source of each. Acme–PI 14.954 from Shanghai, China, in 1905. Akasoya–From Japan via Indiana. Allison Black–D.T. Allison, Tennessee. Amherst–PI 4.913 (PI 17.275) from Japan in 1900. Arikara–O. Will Company, North Dakota. Arkan–PI 87.050 from Niummen, Keisho Nando, Korea, in 1930. Arksoy 2913–Arkansas Experiment Station, Marianna (similar to 'Arksoy'). Auburn–PI 21.079A from Tieling, Manchuria, China, in 1907. Baird–PI 6.414 (PI 22.333) from Pyongyang [P'yongyang], Korea, in 1901. Biltan–Selection

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from 'Ototan', South Africa.

Brindle–PI 20.407 from Merkoechofka, Siberia, in 1906. Brooks–PI 16.789 from Hangchow, China, in 1905. Brownie–PI 6.414 (PI 17.256) from Pyongyang, Korea, in 1901. Buckshot–PI 6.334 (PI 17.251) from Tokyo, Japan, in 1901. Burnette–From Farmville, North Carolina. Butterball–PI 8.433 (PI 17.273) from Japan in 1902, via Rhode Island AES [Agricultural Experiment Station] in 1903. Chame–PI 80.473 from Tokyo, Japan, in 1929. Chang–PI 54.610-2 from Changchun, Kirin, China, in 1921. Chernie–PI 18.227 from Khabarovsk, Siberia, in 1906. Chinaton Echo–From Harrow, Ontario, Canada.

Chiquita–PI 27.707 from Hankow, China, in 1910. Chuku–La Choy Company, Ohio. Cibao–From El Salvador. Delnoshat–Delta Station selection 6679, Mississippi. Delredo–From Mississippi. DeSoto–Ohio farmer. Dortchsoy No. 2–Dortch Seed Company, Arkansas (selected from 'Ogden', similar to 'Ogden'). Dortchsoy No. 6–Dortch Seed Company, Arkansas. Dortchsoy No. 7–Dortch See Company, Arkansas. Doxie–Georgia Experiment Station.

Duggar–PI 17.268C, a selection from 'Ito San.' Early Brown–PI 25.130 and PI 25.161 from Tennessee AES and Indiana AES in 1909. Eda–PI 17.257 from Japan in 1890. Edgecombe–R P. Cocke, Williamsburg, Virginia. Edna–PI 6.312 (PI 17.252C) from Tokyo, Japan, in 1901. Edward–PI 14.953 from Shanghai, China, in 1905. Fairchild–PI 19.184 from Newchwang, Manchuria, China, in 1906. Farnham–PI 22.312 from Shanghai, China, in 1908. Feed All–A.M. Johnson, North Carolina. Flat King–PI 6.312 (PI 17.252) from Tokyo, Japan, in 1901.

Flava–PI 16.789A from Hangchow, China, in 1905. Gala–Georgia Experiment Station. Gem–P.B. Hutchins, Missouri. George Washington–From Virginia. Giant Yellow–PI 22.415 from Naples, Italy, in 1908. Golden–Harrow Experiment Station, Ontario, Canada. Goshen Prolific–Farmer selection, North Carolina. Hamilton–From USDA number 23 by Ohio Experiment Station in 1909. Hankow–PI 6.559 from beyond Chiu Niu, China, in 1901. Hansen–PI 20.409 from Merkoechofka, Siberia, in 1906.

Hay Boy–Farmer selection, North Carolina. Herman–From North Carolina. Hiro–PI 86.038 from Obihiro, Hokkaido, Japan, in 1930. Hope–PI 6.335 (PI 17.267) from Tokyo, Japan, in 1901. Ignotum–E.E. Evans, Michigan. Italian–Canada Experiment Station. Ito San–PI 17.268 from Japan in 1890. Jet–PI 17.861 from Sachon, China, in 1906. Johnsoy–A.E. Johnson, North Carolina. Kentucky A–Kentucky Experiment Station selection.

Kia–Illinois Experiment Station selection. Kungchuling–From Manchuria, China. Looney No. 2–Farmer selection, Tennessee. Lowrie–PI 22.898A from Paotingfu, Chihli, China, in 1908. Loxitan–Delta Experiment Station selection, Mississippi. Ludeke–Farmer selection, North Carolina. LZ–Louisiana Experiment Station selection. Mammoth Brown–Unknown. Manhattan–PI 6.333 (PI 17.277) from Tokyo, Japan, in 1901. Matthews–Farmer selection, Georgia.

Merko–PI 20.412 from Merkoechofka, Siberia, in 1906. Meyer–PI 17.852 from Peking, China, in 1906. Midunk–Funk Brothers Seed Company, Illinois. Mikado–Farmer selection, Indiana. Misstucky–Farmer selection, Kentucky. Morgan–PI 22.633 from Sheklung, Kwongtung [Kwangtung / Guangdong], China, in 1908. Mount Carmel–PI 70.218-2 from Wuchiatzu, Manchuria, China, in 1926. Mukden No. 4–Wisconsin Experiment Station selection. Nanking–PI 71.597 from Nanking, China, in 1927 (see CNS, p. 6). Nanksoy–PI 104.881 from Nanking, China, in 1934.

Nansemond Early–Farmer selection, Virginia. Natsu–PI 19.984 from Yokohama, Japan, in 1907. Nemo–PI 19.985 from Yokohama, Japan, in 1907. Nielsen–PI 22.644B from Hangchow, Chekiang, China, in 1908. Nigra–PI 22.407 from Hong Kong, China, in 1908. Nuttall–PI 6.416 (PI 17.253) from Pyongyang, Korea, in 1901. Okute–PI 19.986 from Yokohama, Japan, in 1907. Oloxi–Coker's Seed Company, South Carolina. Otoxi–From South Africa. Ozark–PI 37.272 from Kogen Province, Korea, in 1914.

Pee Dee–Coker's Seed Company, South Carolina. Pingsu–PI 18.259 from Tschang-ping-tsu, China, in 1906. Preston–Virginia Experiment Station selection. Quillian–Farmer selection, Oklahoma. Rattlesnake–Kentucky Experiment Station selection. Riceland–PI 20.797 from Shanghai, China, in 1907. Rila–Marsh Foundation, Ohio. Sainte Anne–Canada Experiment Station selection. Samarow–PI 17.260 from J.M. Thorburn and Company in 1902. Saskatoon–Farmer selection, Canada.

Sedo–PI 23.229 from Tientsin, Chihli, China, in 1908. Sherwood–PI 17.862 from Tientsin, China, in 1906. Southern Green–PI 62.839 from Nanking, China, in 1925. Southern Prolific–PI 37.250 from Ketki Province, Korea, in 1914. Stuart–PI 22.644 from Hangchow, Chekiang, China, in 1908. Summerland–Canada Experiment Station selection [British Columbia]. Suru–PI 89.128 from Kyojo, Korea, in 1930. Swan–PI 22.379 from Canton, Kwangtung, China, in 1908. Taha–PI 21.999 from Boshan, Shantung, China, in 1907. Tanloxi–Delta Station selection 483, Mississippi.

Tashing–PI 20.854 from Harbin, Manchuria, China, in 1907. Tensas–PI 104.881 from Nanking, China, in 1934 (same as Nanksoy). Texoil–Farmer selection, Texas. Tinzan–From Australia. Trenton–PI 24.610, a selection from 'Mammoth (Yellow)' in Kentucky in 1904. Trinitaria–From El Salvador. U.S.-5–PI 54.563-5 from Jungchiangko, Shengking [Liaoning], China, in 1921. Vilnensis–From Poland. Vireo–PI 22.874 from Tokyo, Japan, in 1908. White Eyebrow–PI 30.745 from Wulukai, Kirin, China, in 1911.

Yellow Biloxi–North Carolina Experiment Station selection. Yokotenn–PI 19.981 from Yokohama, Japan, in 1907. Yosho–PI 6.314 (PI 17.262) from Tokyo, Japan, in 1901.

Talk with Dr. Richard Bernard, 1998, July 12. He considers this to be his best publication on this subject, but

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it is quite similar to *INTSOY Series* No. 30 titled "USDA soybean germplasm collection inventory. Vol. 1," published in August 1987. Address: 1-2. Urbana, Illinois; 3-4. Stoneville, Mississippi.

7226. **Product Name:** Paul's New and Original Brown Rice Tofu Sandwich [Basic, Raw Onion & Radish, or Half Size with Arame].
Manufacturer's Name: Bert's Place. Renamed Paul's Place. Renamed Paul's Organic Food Works in March 1989.
Manufacturer's Address: P.O. Box 431, Fairfax, CA 94930. Phone 415-453-2360.
Date of Introduction: 1988. October.
Ingredients: Basic. Short grain brown rice*, spring water, nigari tofu*, sprouted wheat tortilla*, toasted tahini, barley miso*, green onions* or leeks*, carrots*, seasonal green*, lettuce*, clover sprouts*, shoyu*, sesame oil*, garlic*, ginger*, apple cider vinegar, unrefined sea salt, spices. * = Organically grown per Cal. Health Code Sec. 26569.11.
Wt/Vol., Packaging, Price: 12 oz. The basic and onion retail for $3.75, the half size retails for $2.10 (8/89, northern California).
How Stored: Refrigerated.
New Product–Documentation: Label sent by Paul Duchesne. 1989 Aug. 11. 5.5 by 2 inches. Black on pink, red, or blue paper. "12 happy ounces (6 ounces for arame). For the best taste, remove from refrigeration one hour before eating. To eat: Open bag–Tilt sandwich in bag–fold bag down." Illustration of animated product, with smiling face on tortilla, arms, and legs. On the back of each is a statement, which is changed every 2 weeks. For example: "Smile. Its great exercise for both of us." "The means are the ends Sonia Johnson." "Mind is body is mind is body. Blumlein." Talk with Paul Duchesne. 1989. Aug. 16. The basic was his first new product introduced in Oct. 1988, the Raw Onion & Radish (the radish used to be daikon) in November, and the half size in Dec. 1988. They were developed with the help of Barbara Svenning Garvey. The new and original is now different. The tofu is marinated and a seasonal green (usually kale or collards) is added. The rice is cooked in spring water. These changes are voluntary. Paul is now making and selling about 360 brown rice and tofu sandwiches a week.

7227. *East West.* 1988. East West presents: Best & worst awards. 3rd annual. 100% natural. Oct. p. 65-72.
• ***Summary:*** Best Natural Soy Sauce: Luna Nama Shoyu from Ohsawa-Japan, imported by Ohsawa America of Chico, California. Twice brewed, lower in salt, and aged four years. "It is unique among shoyus, with exceptional smoothness and flavor."

Better Than It Sounds Award:" Tofu chocolate? Yes. Barat Bars by Legume Inc. of Montville, New Jersey, use tofu instead of dairy and no hydrogenated or fractionated palm kernel oil. Carob candies move over!"

Best Tasting Flavored Soy Drinks: "The Westbrae Malteds won this contest going away. Creamy, thick, and delicious, they are more of a dessert than a drink. Some devotees eat them frozen."

Least Healthful Line of Soy Drinks: "The Westbrae Malteds. The flip side of their great taste is their almost 400 calories and 15 grams of fat per 8 ounces."

Most Healthful Line of Soy Drinks: Edensoy. They are the only producers making a totally oil-free drink.

Worst Tasting Flavored Soy Drinks: "Vitasoys from San Francisco, Calif., seem to have few fans and finished last in our blind taste test."

Most Questionable Beverage Label Claim: "3 grams of fat per 6 ounces of Carob and Chocolate Ah Soy, by Great Eastern Sun of Enka, North Carolina. These soymilks are rich and creamy, yet 3 grams is a lower fat content than even Edensoys, made without oil. How is that possible guys?"

That's Progress" Award: "Mori-Nu Tofu by Morinaga Nutritional Foods of Los Angeles. Aseptic Tetrapacked tofu that has indefinite shelf life and can be shipped anywhere. Good for backpackers maybe but can't compare to fresh and local."

Best Fake Hot Dog: SoyBoy Tofu Not Dogs by Northern Soy of Rochester, N.Y. "Nice smoky flavor and smooth texture, almost as good as the real thing."

Worst Fake Hot Dog: Tofu Pups of Lightlife Foods of Greenfield, Massachusetts. "Dry and crumbly on the inside, with a lack of distinctive flavor. Won't fool anybody at the neighborhood cookout."

Best Tamari: San-J Traditionally Brewed Tamari from San-J International of Colonial Heights, Virginia. "No one else even came close. Question: Will they be able to retain their appeal when the first U.S.-brewed batch hits the shelves?"

7228. **Product Name:** Rice & Vegetable Sandwich (In a Chapati with Tofu)
Manufacturer's Name: Essential Foods.
Manufacturer's Address: 6411 Latona Ave., N.E., Seattle, WA 98115
Date of Introduction: 1988. October.
Ingredients: Organically grown brown rice, tofu, scallion, cabbage, carrot, corn oil, shoyu, salt, whole wheat chapati.
Wt/Vol., Packaging, Price: 7.5 oz.
New Product–Documentation: Talk with Paul Duchesne. 1989. July 31. Marty Roth learned how to make this sandwich from Paul. Marty told or taught Jeff Fairhall how to make these sandwiches. Jeff started making them in about the fall of 1988. He now makes 1,000 sandwiches a week and sells them fresh at multiple outlets, including 7-11 type stores. Jeff has 5 employees and is serving 45 products. Label sent by Paul Duchesne. 1989. Aug. 11. Black on tan. "Best served at room temperature or slightly warmed." Illustration of a rice plant.

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7229. Karta, Susani K. 1988. Market trends in the development of traditional soyfood. Paper presented at the ASEAN Food Conference '88: Food Science and Technology in Industrial Development. 18 p. Held 24-26 Oct. 1988 at Bangkok, Thailand.

• ***Summary:*** Contents: Introduction. Traditional soyfood. Market situation and trends. Indonesia. Singapore. Malaysia. Thailand. Constraints in the market development of soyfood (in each of the above 4 nations). Major trends in the development of traditional soyfoods. Marketing strategy of soyfood. Tables: 1. Traditional non-fermented soyfood products. 2. Nutritional composition of traditional non-fermented soyfoods. 3. Description and uses of traditional fermented soyfood products. 4. Nutritional composition of traditional fermented soyfoods.

5. 1987 estimated consumption of soybeans as foods in the Far East [total and per capita in East Asia]. China, 1,062 million population, 7,325,000 tonnes, 6.9 kg/capita. Japan, 122 million population, 1,141,000 tonnes, 9.3 kg/capita. South Korea, 42.1 million population, 330,000 tonnes, 7.8 kg/capita. Taiwan, 19.6 million population, 260,000 tonnes, 13.3 kg/capita.

6. Southeast Asia soybean consumption for food. From 1983 to 1989 the increase in 1,000 metric tons was: Indonesia 927 to 1,600. Singapore 14 to 26. Malaysia 32 to 70. Thailand 40 to 150. Philippines 9 to 24. Total 1,022 to 1,870 (increase of 82.9% in 7 years).

7. Per capita soybean consumption for food in Southeast Asia. From 1983 to 1989 the increase in kg/person was: Indonesia 6.0 to 8.8. Singapore 5.6 to 10.5. Malaysia 2.1 to 3.7. Thailand 0.8 to 2.6. Philippines 0.2 to 0.5. Average total: 3.8 to 5.9 (increase of 55.3% in 7 years).

8. 1987 estimated consumption of soybeans as foods in Southeast Asia [total and per capita]. Indonesia, 175 million population, 1,575,000 tonnes, 9.0 kg/capita. Thailand, 53.6 million population, 118,000 tonnes, 2.2 kg/capita. Malaysia, 16.1 million population, 55,000 tonnes, 3.4 kg/capita. Singapore, 2.6 million population, 20,000 tonnes, 7.7 kg/capita. Philippines, 61.5 million population, 18,000 tonnes, 0.3 kg/capita.

9. Indonesian soybean production, imports, and consumption as food (in tonnes). From 1983 to 1989, production rose from 536,000 to 1,250,000, imports decreased from 391,000 to 350,000, and the amount consumed as food increased from 927,000 to 1,600,000. About 50% of the soybeans used for foods in Indonesia go to make tempeh, and 40% are used to make tofu.

10. Singapore soybean consumption as food. From 1983 to 1989 the amount increased from 14,000 tonnes to 26,000 tonnes. Most of these soybeans are used to make tofu and soymilk. 11. Malaysia soybean imports and consumption as food (in tonnes). From 1983 to 1989, production rose from 182,000 to 440,000, and the amount consumed as food increased from 32,000 to 70,000. 12. Thailand soybean production, and consumption as food (in tonnes). From 1983 to 1989, production rose from 113,000 to 490,000, and the amount consumed as food increased from 40,000 to 150,000. Only in 1988 were soybeans imported--40,000 tonnes. This growth of soyfood consumption is due partially to the Government of Thailand's interest in promoting the awareness and utilization of soyfood products. The Thailand Agricultural Extension Service program and other institutions have been actively advocating of soyfoods into the food industry and the human diet, especially in rural areas. The government controls soybean imports by issuing licenses.

In summary. The soybeans with the highest per capita soybean consumption for soyfoods are: Taiwan 13.3 kg, Japan 9.3 kg, Indonesia 9.0 kg, Singapore 7.7 kg, South Korea 7.3 kg, and China 6.9 kg. The greatest potential for growth lies in China, where it is very common to find markets running out of soyfoods early in the morning. There is also great potential for growth in Malaysia, Thailand, and the Philippines. Address: American Soybean Assoc., 541 Orchard Rd., #11-03 Liat Towers, Singapore 0923, Republic of Singapore.

7230. Shurtleff, William; Aoyagi, Akiko. 1988. Das Miso-Buch: Herstellung, Sorten, Kochen mit Miso. Rezepte [The book of miso: Production, varieties, cooking with miso, recipes]. Munich, West Germany: Goldmann Verlag GmbH. 414 p. Oct. Illust. by Akiko Aoyagi Shurtleff. Index. 23 cm. Pocket book edition. [Ger]

• ***Summary:*** A pocket book edition of the original 1980 German edition of *The Book of Miso*. Contains 350 recipes.

Contents: Foreword. What is miso? Part I. Varieties, preparation, and production of miso. Part II. Cooking with miso (recipes). Glossary. Acknowledgments. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 415-283-2991.

7231. **Product Name:** [Wheat & Soy Patties, Rice & Soy Patties, Green Rye & Soy Patties]
Foreign Name: Dinkel-Laibchen, Reis-Laibchen, Gruenkern-Laibchen.
Manufacturer's Name: Sojarei Ebner-Prosl.
Manufacturer's Address: Augasse 2, A-2500 Baden bei Wien, Austria. Phone: 02252/85101.
Date of Introduction: 1988, October.
Ingredients: Wheat & Soy: German wheat (spelt, Dinkel), soybeans [okara], sunflower seeds (all organically grown), wheat protein, tamari, onions, yeast flakes, salt, herbs, and spices.
Wt/Vol., Packaging, Price: 2 patties, 200 gm.
How Stored: Refrigerated.
New Product–Documentation: Label, received 1989 Oct. Red, black, green, and white on yellowish orange. 3.5 by 3

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inches. Self adhesive. Logo is a green soybean plant against a white circular background. "Just warm and serve. Free of cholesterol. No flesh. Pure and from plants."

Ingredients for the Rice & Soy Patties are: Brown rice, soybeans, and whole wheat flour (all organically grown), rolled oats, barley miso, tamari, yeast flakes, salt, herbs, spices.

Ingredients for the Green Rye & Soy Patties are: Green rye and soybeans (both organically grown), tamari, onions, yeast flakes, salt, herbs, spices (curry).

Talk with Guenter Ebner of Sojarei Ebner-Prosl. 1990 May 28. The soy ingredient in these is okara.

7232. *SoyaScan Notes.* 1988. Products containing little or no soya or seitan made by Jonathan in Belgium for which Soyfoods Center has labels (Overview). Oct. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** These labels were sent by Jonathan in 1988, along with many labels for soyfood products. Most labels have the product name given in English, German, French, and Dutch. Only the English is given below. Many of the products contain organically grown ingredients, with the Cinab logo.

Spiced biscuits [with fructose], Bran biscuits [soy flour is the 7th ingredient], Fruit biscuits (without addition of sugar), Almond biscuits (without addition of sugar), Sesame biscuits (without addition of sugar), Fructose biscuits, Four-cereal biscuits (with cane sugar), Spiced butter biscuits (with cane sugar).

Mochi, Lasagna (vegetarian, with soy sauce), Pilav rice (Pilaf), Risotto and lentils (with soy sauce). This line of products (each 300 gm) has elegant labels with a color photo on the front panel.

Wheat wafers (with soy flour), Muesli wafers without sugar, Coconut cake with fructose, Wheat biscuits, Hasselt spices biscuits (with soy flour; Speculoos, Spekulatius), Baby-food. All self-adhesive labels, 4.5 by 2.25 inches.

Mushrooms in tomato sauce (vegetarian), Lentils (with soy sauce), Lasagna, Whole wheat pasta.

Vegetarian entrees, each 500 gm. Brown rice casserole with lentils + vegetables, Brown rice casserole with lentils + seitan, Pumpkin creme, Pumpkin soup with brown rice, Mushroom soup, Millet-onion soup, Azuki bean soup, Lentil soup, Seitan–Ratatouille (Wheat protein and vegetables), Seitan-Goulash, Seitan, Nutmix spread, Hazelnut spread with almonds.

Each 250 gm: Prepared azuki beans, Prepared lentils, Seitan Bolognaise, Lentil spread, Seitan spread, Mushroom spread, Mushrooms in tomato sauce, Apricot spread, Carob spread, Fig spread, Date spread, Raisin spread, Peanut butter, nutmix spread, hazelnut spread with almonds.

7233. *Taste* (*Kikkoman, Japan*). 1988. Anniversary celebration: June 3, 1988 [Kikkoman Foods, Inc. in Walworth, Wisconsin]. 2(3):8. Oct.

• ***Summary:*** The guest list was impressive. Five past and present governors of the state of Wisconsin were among the 500 guests who gathered to celebrate the 15th anniversary of Kikkoman Foods, Inc. Also present were Dr. Keizaburo Mogi (honorary chairman of Kikkoman Corp.) and Yuzaburo Mogi. In 1973 Kikkoman Foods began production in Walworth, Wisconsin to meet the growing demand for soy sauce in the United States. In the original small plant, 50 employees produced 1.5 million gallons a year of soy sauce and teriyaki sauce. Today the work force is more than double, while production has increased fivefold [to 7.5 million gallons a year].

7234. Meyer, Amy. 1988. The soy sauce market in America (Interview). *SoyaScan Notes.* Nov. 1. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Total soy sauce sales in the U.S. are about $125 million for 1987. The major market segments are consumer retail, restaurants and institutions, and industrial/food processors. The latter is estimated at about $4 million. The figures compiled annually by Progressive Grocer only cover grocery stores.

La Choy is the leader is retail sales, followed by Kikkoman, then Chun King. Kikkoman is the leader in sales to restaurants, followed by Yamasa, then Chinese imports.

Last year San-J sold about $5 million worth of soy sauce in the U.S. Of this, $3 million went to industry (food processors) and $2 million to retail (mostly health food). Amy is gathering this information for publication in a professional journal, probably the *Journal of International Marketing*. Address: 21 Beacon St. #10, Boston, Massachusetts 02108. Phone: 617-523-3780.

7235. Bolduc, Bill. 1988. Re: Early history of Eden Foods, Inc. to 1973. Part I. Letter to William Shurtleff at Soyfoods Center, Nov. 5. 2 p. Typed, with signature on letterhead (photocopy).

• ***Summary:*** The following account is based on hours of discussion between Bill Bolduc, the Redmonds, and the Silvers between 1988 and 1991. Bill is not familiar with the details of the history of the food co-op in Ann Arbor prior to 1969. But Ronnie Teeguarden says that in about July 1967 he and Gloria Dunn started a loosely-organized food buying co-op–which had no name–in Ann Arbor, Michigan. Within a few weeks, a number of their friends and acquaintances (a group of eclectic pathfinders, students, graduates, macrobiotics, dropouts, musicians) informally joined the group. These included Tim Redmond, Mark and Nancy Retzloff, Linda Succop, Iona Teeguarden, and Bob Thorson. From time to time, they collectively ordered macrobiotic staples from Erewhon in Boston using the Erewhon catalog. When the foods arrived, the food co-op members got together and divided them up at the Teeguarden-Leabu

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General Store, located a half flight below street level at 209 South State Street, below the Herb David Guitar Studio in Ann Arbor. Run by Ronnie Teeguarden, with help from Gloria, this store's main business was selling local art, second hand clothes and records, etc

Bill Bolduc and Judy Succop [Linda Succop's sister], were married in June 1969 in Ann Arbor. They were not yet members of the co-op at that time. A few days later, they went to Berkeley for the summer. When they returned to Ann Arbor at the end of that summer, they lived in Saline, Michigan, 12 miles outside of town with Mark & Nancy Retzloff, Linda Succop, and Tim Redmond. Bill, who wasn't working or going to college, was trying to figure out what to do next. By September 1969, Bill and Judy Bolduc joined the food co-op. They also joined the Zen Macrobiotic Supper Club; all of its members were also members of the food co-op.

In the fall of 1969 the Teeguarden-Leabu second-hand store looked like it was about to close, which would leave the food co-op without a home. The group (especially Ronnie) convinced Bill Bolduc to take charge of the food co-op and find it a permanent home, which he did.

On 4 Nov. 1969 Bill Bolduc incorporated Eden Organic Foods, Inc. as a non-profit corporation in the state of Michigan. The name "Eden," which stood for Environmental Defense Energy Network, was coined at this time by Bob Thorson during a discussion between, Bill Bolduc, and Gloria Dunn at a coffee shop. Thus, the term "Eden" was first used in connection with this co-op or business in Nov. 1969.

Eden was born under a good star. The date Nov. 4 was carefully chosen to be astrologically propitious. At the time, Bill was an intense student of astrology with Michael Erlewine–who is now world famous in the field, and the owner of Circle Books, an astrological publishing company. In 1970 Michael also designed the Eden logo of the 4 sprouts in a circle. Eventually Michael became one of Bill Bolduc's students in macrobiotics.

Bill was president of Eden Organic Foods and his wife Judy (who was working as a secretary at the University of Michigan School of Music) was secretary. Bolduc used $200 of his own money to rent a converted apartment above the bicycle store at 514 East William St. in Ann Arbor, near campus. People from the community loaned $1,500 to help stock the co-op store and buy an 8-inch Meadows stone mill to grind flour.

The question arises: When was Eden Foods established? Bill Bolduc and Tim Redmond believe that the founding should be dated from Nov. 1969, when the company was first named; before Nov. 1969 the food co-op was not even a business. It was dead and had disappeared for about a month until Bill resurrected it by placing an order to Erewhon using his own money.

Eden Organic Foods first began selling soyfoods commercially in November 1969, starting with their first order from Erewhon in Boston. They would buy "tamari" (actually shoyu) and miso (kome = rice, mugi = barley, and Hacho varieties) in bulk from Erewhon (which imported them from Japan). At their store, Linda Succop (Bill's wife's sister) would repackage the products, putting the shoyu into bottles and the miso into plastic bags. They were labeled using plain white pressure-sensitive gummed labels with a rubber stamp. One stamp contained the name and ingredients for each product, and another, that was stamped below it, gave the company name and address. They wrote in the weight or volume by hand. Also at William St. a tiny Meadows Mill was used to grind grains and seeds into flour. Continued. Address: ELI Research Corp., 660 Northland Blvd., Suite 28, Cincinnati, Ohio 45240. Phone: 513-851-0330 or 513-751-9090.

7236. Bolduc, Bill. 1988. Re: Early history of Eden Foods, Inc. to 1973. Part II. Letter to William Shurtleff at Soyfoods Center, Nov. 5. 2 p. Revised 4 Dec. 1991 by Bill Bolduc, Ron Teeguarden, and James Silver.

• ***Summary:*** In Sept. 1970 the fledgling company had an offer to move into a newly-redecorated mini-mall [at 211 South State St.] on the main street of campus. New personnel and financing would be needed. Bolduc called Tim Redmond, who had been studying and working at the Sanae macrobiotic restaurant in Boston, to ask for help. Tim returned to Ann Arbor and joined Bolduc in the expansion effort. To raise money for the move, the two approached Tim Redmond's father, who said he would help finance the expansion only if the business was reorganized as a for-profit corporation with Tim having equal ownership. They agreed and in about Oct. 1970 Eden was reorganized as a for-profit corporation with Bolduc and Redmond each owning 50%. At that time the partners shortened the company name to Eden Foods Inc. Bolduc and Redmond then borrowed a 4-figure sum from Tim's dad, had the new store remodeled, and entered the big time. After the new store was opened and running, Redmond returned to Boston and the Sanae restaurant, where he completed his studies. But with this move they fell from the graces of the political co-opers. In November 1970 they did a "Brown rice, seaweed, and dirty hot dog" Bob Dylan commercial on a local radio station; it was a big hit. They bought a 15-inch Meadows Mill and a rotary-drum roaster, then milled flour and baked granola in the back of the store.

In 1970 Bill had located Tom Vreeland, an organic farmer in Ypsilanti, Michigan. An Eden Foods Wholesale Pricelist dated 26 July 1971 shows that the Eden store at 211 South State St. was wholesaling soybeans, soft wheat, corn, and rye, all grown organically in Michigan. Eden was also selling organic flours that they ground from these grains.

In the spring of 1971, after realizing they were the only "natural food" store in the area, and having some other

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"health food" store owners in Detroit express an interest in carrying more food, they decided to wholesale foods out of the back of their retail store at 211 South State Street. Bill flew to Boston to meet Tim Redmond. They visited Erewhon (they wanted to convince Erewhon to let Eden be their distributor at lower prices), then Bill flew to Arrowhead Mills in Deaf Smith County, Texas, to make arrangements buying in bulk at wholesale prices. In the summer of 1971 they ordered their first 20-foot trailer load of organic foods from Arrowhead Mills, and ran an ad in *East West Journal*. Soon they started to distribute their foods to 4-5 accounts in Detroit. They bought a 1964 16-foot green Dodge van and a dry weight weigher/dumper machine. Their two main brands were Arrowhead Mills and Erewhon, but soon they developed the Eden brand with printed labels, onto which they would rubber-stamp the product name (such as bottled tamari and packaged miso). Soon they added other brands: Celestial Seasonings, After the Fall, Timbercrest, etc.

The wholesale operation quickly outgrew the back of the retail store, so they borrowed more money and rented a 5,000 square foot Quonset hut (resembling an airplane hanger) down on Main Street by the Huron River. Tim Redmond, Mark Retzloff, and Bill Bolduc ran the wholesale operation. Retzloff later co-founded Alfalfa's, a natural foods supermarket chain based in Boulder, Colorado.

In October 1971 Bolduc hired Michael Potter, who was living in Detroit, to run the store. Just before this, Potter had managed a natural foods store named Joyous Revival in nearby Birmingham, Michigan. Prior to this time, the company had been owned by Bill and Judy Bolduc (50%) and by Timothy Redmond (50%). Potter was given 13.5% of the stock and the other principals' share reduced proportionally.

In the late summer or fall of 1973 the Bolducs sold their shares back to the corporation, which then gave a portion of these to Tim Redmond and Michael Potter so that these two men now owned 51% and 49% respectively.

The Bolducs then left Ann Arbor, moving to Cincinnati, then to Illinois, then back to Ann Arbor. Bill is certain that when he left Eden Foods, the company was not importing any products from Japan. He would guess that it was not until about 1975 that Eden started to import a line of foods from Japan. Their first supplier in Japan was Muso Shokuhin, a leading macrobiotic and natural foods exporter in Osaka. Initially, all of their imported products were required to bear the Erewhon brand. Imported soyfoods included miso and shoyu. Sales hit $175,000 in 1973.

Note: Eden was the first of the many macrobiotic distributors based on the Erewhon model to open in America. Others that soon followed included Food for Life in Chicago (1970), Janus in Seattle, Washington (1972 Jan.), Essene in Philadelphia (by 1971 Feb.), Laurelbrook in Maryland (1971 Aug. 23), Ceres in Colorado Springs (by 1973), and The Well in San Jose, California (1973). Address: ELI Research Corp., 660 Northland Blvd., Suite 28, Cincinnati, Ohio 45240. Phone: 513-851-0330 or 513-751-9090.

7237. Sheraton, Mimi. 1988. Cookbooks to give thanks for: An autumn harvest of American standards, Asian flavors and universal inspiration. *Time*, Nov. 28.
• ***Summary:*** *An Ocean of Flavor* (Morrow, $20.95) is by Elizabeth Andoh, an American who married a Japanese and has spent many years in Japan studying the country's food and culture. This fine guide shows how to enhance the flavor of seafood without destroying it. "Fried soft-shell crabs in a spicy sauce, cold poached tilefish with mustard-miso sauce and fiddlehead ferns, and a careful, simple tempura recipe are among the enticements."

Another new Asian food book is *Asian Ingredients* (Morrow; $22.95) by Bruce Cost. It includes a discussion of the "soy sauces that so many chefs are now using to accent European dishes."

7238. Belleme, Jan. 1988. Fabulous finger foods. *East West*, Nov. p. 32, 34, 36-39.
• ***Summary:*** Includes recipes for: Tempeh Salad Tea Sandwiches, Walnut-Miso Dip, Deep-Fried Tempeh with Tofu-Mustard Topping. Address: Rutherfordton, North Carolina.

7239. **Product Name:** [Marinated Tofu]
Foreign Name: Tofu Mariniert.
Manufacturer's Name: Das Tofuhaus.
Manufacturer's Address: Hauptstrasse 13, D-6719 Lautersheim, West Germany. Phone: 06351-43718.
Date of Introduction: 1988, November.
Ingredients: Tofu, soy sauce, garlic, ginger.
Wt/Vol., Packaging, Price: 250 gm.
How Stored: Refrigerated.
New Product–Documentation: Form filled out by Albert Hess, 1988 Dec. 1. This product was introduced in Nov. 1988. Label, 1988, 2.5 by 3.5 inches, Black on yellow.

7240. Duxbury, Dean D. 1988. Japanese-style tamari furnishes more protein, less sodium, heat stability. *Food Processing (Chicago)* 49(11):90, 92, Nov.
• ***Summary:*** About San-J tamari, which contains 30% more fermented vegetable protein than conventional soy sauce. Address: Associate editor.

7241. **Product Name:** Eden Naturally Brewed Shoyu, and Eden Wheat Free Tamari.
Manufacturer's Name: Eden Foods, Inc. (Marketer-Distributor). Made in Virginia by San-J International, Inc.
Manufacturer's Address: 701 Tecumseh Rd., Clinton, MI 49236. Phone: 800-248-0301 or 313-973-9400\
Date of Introduction: 1988, November.
Wt/Vol., Packaging, Price: 5, 10 and 20 oz bottles, 5 gallon

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cubes, and 55 gallon drums.
How Stored: Shelf stable.
New Product–Documentation: Press Release. 1988. Nov. These two new products are "the first soy sauces made in America using traditional Japanese processing techniques and all-natural ingredients. Whole, Virginia-grown ingredients are fermented in temperature controlled vats which accelerate the brewing process while simulating the fluctuating temperatures of the seasons."

7242. **Product Name:** Grand Life Seitan "Wheat-Meat."
Manufacturer's Name: Grand Life Natural Foods
Manufacturer's Address: P.O. Box 403, Pacific Grove, CA 93950 [c/o Sweet Earth, 207 16th St.]. Phone: 408-375-8673
Date of Introduction: 1988. November.
Ingredients: Whole wheat flour, filtered water, natural tamari (soybeans, wheat, seasalt), kombu, ginger, garlic.
Wt/Vol., Packaging, Price: 8 oz (226 gm) vacuum pack. Retails for $2.98 (11/91).
How Stored: Refrigerated.
New Product–Documentation: Talk with Paul Duchesne of Fairfax, California. 1991. Nov. 19. Two women from Austria (to whom Paul talked–they were returning to Austria) just sold their seitan company to two guys who still are making seitan. It was located in Pacific Grove, or near there, down the California coast. This seitan is sold in health food stores. It is sold sliced thin, in flat plastic bags, more like a cutlet than like Ron Harris' old seitan chunks.

Product with Label purchased from Berkeley Natural Grocery Co., California. 1991. Nov. 24. 3 by 4.5 inches on a 6.5 by 9-inch plastic vacuum-pack bag. Black, white, and yellow on brownish-gold. "100% vegetable protein. Seasoned wheat gluten. Ready to eat. No cholesterol. Low in fat. Seitan was first developed by Zen Buddhist cooks in China and Japan, and used in place of meat. Grand Life seitan has a full-bodied, rich taste and a juicy, tender texture. It's nutritional value and hearty, yet light taste and texture is pleasing to vegetarians and people attempting to reduce or eliminate from their diet. Grand Life seitan is superb in sandwiches, soups, salads, stews, and casseroles. Please try it deep-fried, sauteed, broiled, and even barbecued in your favorite recipes."

Talk with Russel Hicks, owner of Sweet Earth Natural Foods in Pacific Grove. 1991. Nov. 26. Grand Life was started in late 1988 by Edmund and Angela Reminger (he was a trained chef and knowledgeable macrobiotic; they were married), and by a woman named Terry Navaille (whose brother is Russel's brother-in-law). From the outset they rented space at Sweet Earth (soon they were trading product for rent), where they made seitan 1 day a week for about 2 years. Edmund developed this sliced form of the product. Then in about April 1989 Edmund and Russel developed the Grand Life Sandwich (based on breaded seitan). In early 1991 Edmund and Angela felt guided to return to Austria, also their visas were running out and they were having trouble getting work permits. Terry was having a baby, so she went her own way in Pacific Grove. So in May 1981 the 3 founders sold their recipe and the name to Sweet Earth. Current seitan production is 250-300 lb/week. It is made from vital wheat gluten, not from whole wheat. Product sales are now growing nicely and are about to grow a lot more. Now it is sold vacuum packed and refrigerated, with a very limiting 2-week shelf life. Soon Sweet Life will be installing big freezers and it will be sold frozen and promoted much more. Many distributors want to carry it as soon as it is available frozen.

Soyfoods Center product evaluation. 1991. Nov. 26. Excellent texture, good flavor, poor label design. We feel product has expanded potential sold in a meatless gravy, or as breaded deep-fried cutlets.

7243. **Product Name:** [Tofu Burgers {Deep-Fried} (Garlic and Fines Herbes, Provencale with Tomato & Onions, or Forest Mushrooms)]
Foreign Name: Doré de Soja (Ail/Fines Herbes, Provençale, Forestière).
Manufacturer's Name: Société Soy.
Manufacturer's Address: 1 rue du Crêt de la Perdrix, 42400 Saint-Chamond, France. Phone: 77.31.24.42.
Date of Introduction: 1988. November.
Wt/Vol., Packaging, Price: 2 x 100 gm in vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Talk with Bernard Storup. 1990. June 13. Tof'in is the same as Croque Tofou, but not the same as Croque Tofou Léger. Tof'in was discontinued about 2 years ago. Then 18 months later the company launched, for supermarkets, a product named Doré de Soja, which are the same as Tof'in. The packaging is very nice.

Letter from Bernard Storup. 1990. Dec. 26. "All the confusion between deep-fried and not deep-fried Croque Tofou comes from the fact that our first labels all said "Léger," even for the deep-fried products. Croque Tofou Leger (not deep-fried) was the continuation of our former Tof'in (not deep-fried). Since Jan. 1990 we have stopped using the term "Léger" on our deep-fried products. Our Croque Tofou Leger have new labels since Jan. 1990. They are now called Doré de Soja, with 2 in each package."

7244. Matsuura, Masaru, Obata, A.; Fujii, N.; Nobuhara, A.; Fukushima, D. Assignors to Kikkoman Corp. (Noda, Japan). 1988. Method for grinding soybeans and method for producing tofu. *U.S. Patent* 4,791,001. Dec. 13. 6 p. Application filed 12 Jan. 1987. 1 drawing. Application also filed in Japan on 14 Jan. 1986. [23 ref.]
Address: 1-3, Noda, 4, Kasukabe, 5, Omiya, All Japan.

7245. *Loveland Reporter-Herald* (*Colorado*). 1988. Miso

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works as flavoring substitute. Dec. 28.
• ***Summary:*** "Miso, a fermented seasoning made from a legume or grain plus salt, water and a bacterial culture. Is a good flavoring substitute for meat and meat broth, says Karen Wilken, Colorado State University Cooperative Extension food science and human nutrition specialist.. Miso can be used as a substitute for bouillon or meat stock in soups, gravies or stews. It also can be used like soy sauce or Worcestershire sauce in sauces, dips and dressings.

"Because it is relatively low in sodium it can serve as a seasoning in moderate salt level diets."

7246. Brown, Judy. 1988. The joy of soy: Nutrition for the '80s. *Body, Mind & Spirit*. Nov/Dec. p. 30-32.
• ***Summary:*** Contents (Soyfoods, nutrition, and a healthy diet). Tofu. Tempeh. Miso. Natto. Okara. Soy cheese & soy yogurt. Soy flour & grits. Soymilk. Soy sauce. Resources: Eden Foods, Fantastic Foods, Inc., Lumen Foods Corp., San-J International. Vitasoy (U.S.A.) Inc., Westbrae Natural Foods (Downey, California). Address: President, In Good Taste, 5923 John Adams Dr., Camp Springs, Maryland 20748.

7247. **Product Name:** Smoked Tofu, Teriyaki Tofu, Homestyle Tofu Balls, Gourmet [Nigari] Firm Tofu, Fiber Tofu, BBQ Tofu.
Manufacturer's Name: Dae Han, Inc.
Manufacturer's Address: 737 S.E. Alder St., Portland, OR 97214. Phone: 503-233-8638.
Date of Introduction: 1988. December.
Ingredients: No ingredients given on labels.
How Stored: Refrigerated.
New Product–Documentation: Talk with Paul Moss, who has worked with Dae Han for 7 years. The company name is now Dae Han, Inc., 737 S.E. Alder St., Portland, Oregon 97214. Phone 503-233-8638. They now make tofu, smoked (& baked) tofu (7.5 oz), regular and cajun-style tofu burgers, homestyle tofu balls (5.25 oz), soymilk, teriyaki tofu (7.5 oz), fiber tofu (10 oz), BBQ (barbecue) tofu (7.5 oz), and kimchi. All the products listed above were introduced in Dec 1988. Paul plans to use their plant to make tempeh.

Labels for each of these products sent by Paul Moss. 1990 May 10. 4 by 2.5 inches. Self adhesive. Colorful. On each label is written "High protein. Low calorie. Cholesterol free. No preservatives. (Keep Refrigerated)." The Gourmet firm tofu is certified kosher by Rabbi Yonah H. Geller.

Leaflet from Dae Han, Inc. 1991. July. Quality and unique. A photo shows all of the products, and their names are listed.

7248. Dagnelie, Pieter C. 1988. Nutritional status and growth of children on macrobiotic diets: a population-based study. PhD dissertation, Dep. of Human Nutrition, Wageningen Agricultural University, the Netherlands. 144 p. [Eng]* Address: Dep. of Human Nutrition, P.O. Box 8129, Wageningen Agricultural Univ., 6700 EV Wageningen, the Netherlands.

7249. Golbitz, Peter. 1988. Soyfoods sales projected to reach $750 million by 1990. *Soya Newsletter (Bar Harbor, Maine)*. Sept/Dec. p. 1, 6.
• ***Summary:*** The estimated retail value of soyfoods in the USA in 1988 was $682 million. The various soyfoods had the following market shares: soy sauce 67.3% (est. $460 million retail store valuation), tofu 11.3% (est. $77 million), second generation products 9.5%, soymilk 5.3%, miso 4.1%, soynuts 1.7%, tempeh 0.8%.

All of the 1980 figures used in this study for comparisons and growth rates were taken, without permission, from *Soyfoods Industry & Market: Directory and Databook* by Shurtleff & Aoyagi. Address: Soyatech, Bar Harbor, Maine.

7250. **Product Name:** New York "Doggie" (Tofu Hot Dog & Brown Rice Rolled in a Tortilla).
Manufacturer's Name: Paul's Organic Food Works.
Manufacturer's Address: P.O. Box 431, Fairfax, CA 94930. Phone: 415-453-2360.
Date of Introduction: 1988. December.
Ingredients: Short grain brown rice*, spring water, sprouted wheat tortilla*, tofu hot dog*, sauerkraut*, mustard, onions*, tomatoes*, hot peppers*, sesame oil*, shoyu*, leeks* or scallions*, mizuni* or arugula*, lettuce*. * = Organically grown per Cal. Health Code Sec. 26569.11.
Wt/Vol., Packaging, Price: 12 oz. Retails for $4.25 (8/89, northern California).
How Stored: Refrigerated.
New Product–Documentation: Label sent by Paul Duchesne. 1989 Aug. 11. 5.5 by 2 inches. Black on yellow paper. "Brown rice sandwich. Sauerkraut–Mustard–Hot Pepper. 12 happy ounces. For the best taste, remove from refrigeration one hour before eating. To eat: Open bag–Tilt sandwich in bag–fold bag down." Illustration of animated product, with smiling face on tortilla, arms, and legs. On the back is the statement, "Resistance is the most subtle form of cooperation." The statement is changed weekly. The tofu hot dog is made by Light Foods.

Note: Arugula or arrugula (pronounced uh-RUE-guh-luh, an Italian term), an ingredient in this product, is a plant of the mustard family resembling a fancy, slightly bitter lettuce grown in Salinas, California. It is expensive and can be replaced with parsley. It is also called "rocket" or "garden rocket" after the French word *roquette*. Mizuni (pronounced mi-ZU-ni) is a mustard green, which is grown in California. It is not listed in any Webster's Dictionary.

7251. **Product Name:** B-L-T Brown Rice Sandwich (With Tempeh, Tofu Mayo & Tomatoes).

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Manufacturer's Name: Paul's Organic Food Works.
Manufacturer's Address: P.O. Box 431, Fairfax, CA 94930. Phone: 415-453-2360.
Date of Introduction: 1988. December.
Ingredients: Short grain brown rice*, spring water, sprouted wheat tortilla*, Fakin' Bacon (smoked tempeh), Tofu Mayonnaise, tomatoes*, sunflower sprouts*, arugula* or mizuni*, sesame oil*, shoyu*, leeks* or scallions*, lettuce*. * = Organically grown per Cal. Health Code Sec. 26569.11.
Wt/Vol., Packaging, Price: 12 oz. Retails for $4.25 (8/89, northern California).
How Stored: Refrigerated
New Product–Documentation: Label sent by Paul Duchesne. 1989 Aug. 11. 5.5 by 2 inches. Black on purple paper. "12 happy ounces. For the best taste, remove from refrigeration one hour before eating. To eat: Open bag–Tilt sandwich in bag–fold bag down." Illustration of animated product, with smiling face on tortilla, arms, and legs. On the back is the statement, "What is mind? No matter. What is matter? Never mind." The statement is changed weekly. Note: Arugula or arrugula, (pronounced uh-RUE-guh-luh, an Italian term), an ingredient in this product, is a plant of the mustard family resembling a fancy, slightly bitter lettuce grown in Salinas, California. It is expensive and can be replaced with parsley. It is also called "rocket" or "garden rocket" after the French word *roquette*. Mizuni (pronounced mi-ZU-ni) is a mustard green, which is grown in California. It is not listed in any Webster's Dictionary.

7252. **Product Name:** Garden Gourmet Meatless Entrees [Vege-Puffs in Pastry, Vege-Links in Pastry, Vege-Patties, or Vege-Cutlets].
Manufacturer's Name: Tivall.
Manufacturer's Address: 24 Spielman Rd., Fairfield, NJ 07006. Phone: 201-277-7060.
Date of Introduction: 1988. December.
Ingredients: Filling: Rehydrated soy protein concentrate, wheat gluten, soy oil, egg whites, spices, and tamari. Pastry shell for first 2 products: Wheat flour, soybean oil, salt.
How Stored: Frozen
New Product–Documentation: Soya Newsletter. 1988. Nov/Dec. p. 10.

7253. *U.S. Imports for Consumption, Schedule A: Report IM146*.1988. U.S. imports of soy sauce during 1988. p. 872-74.
• ***Summary:*** Total U.S. imports of soy sauce (called "soy sauce, thin" by the report) during 1988 were 37,971,804 lb. This is almost double the figure of 19,613,000 lb in 1981. The value of this FOB at foreign ports of export was $15,095,348. The duty collected by the U.S. was $315,115. Countries from which more than 1 million lb were imported, ranked in descending order of amount, were: Japan 12,709,008 lb (33.5% of the total), Hong Kong 9,220,737 lb, China 7,760,972 lb, Taiwan 4,806,452 lb, and Thailand 1,423,150 lb. Address: U.S. International Trade Commission, Washington, DC.

7254. Beddows, C.G. 1988. The old fashioned way with soya. *Food Science & Technology Today* 2(1):12-15. [6 ref.]*
• ***Summary:*** The following soybean products are described briefly: soymilk, bean curd, tofu, tempeh, natto, sufu, miso, shoyu, and yuba. Protein yields are given for a range of plant crops versus milk and beef, e.g. soybeans 3500 kg/ha/annum versus 75 kg/ha/annum for beef. Recipes are included for miso cream cheese dip and deep fried tofu and miso soup. The marked rise in consumption of soybean products in the USA in recent years is noted. Address: Dep. of Applied Sciences, Leeds Polytechnic, Leeds LS1 3HE, England.

7255. **Product Name:** Marinated Tofu: Soya Bean Curd Marinated in Soy Sauce and Ginger.
Manufacturer's Name: Cauldron Foods Ltd.
Manufacturer's Address: 149 South Liberty Lane, Ashton Vale Trading Estate, Bedminster, Bristol, Avon, BS3 2TL, England. Phone: 0272 632835.
Date of Introduction: 1988.
Ingredients: Tofu (soybeans, calcium sulphate–natural coagulant). Marinade (soy sauce, fructose, citric acid, spices).
Wt/Vol., Packaging, Price: 180 gm vacuum packed in outside box. Retails for 79p (1/89).
How Stored: Refrigerated.
Nutrition: Per 100 gm: Protein 11.5 gm, fat 5.25 gm, carbohydrate 2.10 gm, calories 102 kCal.
New Product–Documentation: Label. 1989, received. 5 by 4 by 1 inch paper box. Brown, orange, green, black, and red on white. Color drawing of tofu on a cutting board with a Chinese spoon, bowl, and chopsticks. Has a handwritten list of 20 recipes (mostly Chinese style) in which it can be used. Front panel also bears the green V Vegetarian logo in a box "Suitable for Vegetarians." On the back are three recipes: Hot & Sour Soup, Chinese Salad, and Marinated Tofu Stir Fry. "The versatile food ingredient. A complete vegetable protein. Keep chilled at 4°C."

7256. **Product Name:** Vegetable Burgers with Tofu.
Manufacturer's Name: Cauldron Foods Ltd.
Manufacturer's Address: 149 South Liberty Lane, Ashton Vale Trading Estate, Bedminster, Bristol, Avon, BS3 2TL, England. Phone: (0272) 632835.
Date of Introduction: 1988.
Ingredients: Reconstituted mixed vegetables (peas, carrots, onion, potato, leek, green and red peppers), tofu (water, soya beans, calcium sulphate), ground soya beans, oats, textured soya flour, soy sauce (water, soya beans, wheat, salt), yeast, hydrolised vegetable protein, salt, yeast extract.
Wt/Vol., Packaging, Price: 300 gm paperboard box.

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How Stored: Refrigerated.
Nutrition: Per 100 gm.: calories 187, protein 12.92 gm, fat 10.45 gm, carbohydrate 11.15 gm.
New Product–Documentation: Label. 1989, sent by Philip Marshall. Paperboard box. Green, red and black on white. Color photo of oval burger-like product on front. Contains 4 burgers. "Just heat to eat. Contains no artificial flavourings or colourings. Keep chilled at 4°C." Package bears the green "V" symbol. "Suitable for vegetarians."

Letter (fax) from Philip Marshall. 1990. July 9. This product was introduced in 1988.

7257. **Product Name:** [GranoVita Organic Tofu Vegetable Patties {Meatless}].
Foreign Name: GranoVita Bio-Tofu Gemuese Bratling.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1988.
Ingredients: Organic tofu (water, organically grown soybeans, calcium chloride), whole soybean product, vegetable oils and fats in changing amounts, fine bread crumbs (Paniermehl), mushrooms, paprika, carrots, leeks, wheat protein [gluten], sunflowerseeds, wheat grits, oat flakes, soy sauce, onions, egg protein, herbs, seasonings (Wuerzmittel), spices (Gewuerze).
Wt/Vol., Packaging, Price: 125 gm vacuum pack poly bag. 3 pieces per bag. Retails for DM 2.98.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 13.1 gm, fat 10.2 gm, usable carbohydrates 19.5 gm, calories 222. 1 BE (Broteinheit, or diabetic exchange) = 61.5 gm.
New Product–Documentation: Label sent by Anthony Marrese. 2.75 by 5 inches. Red, green, white, and black on yellow. "Contains no flesh. Simply fry on both sides in a pan." A photo shows three ready-to-eat patties on a plate with green peas, potatoes, a tomato, and parsley. Exklusiv Neuform certification symbol.

Label sent by DE-VAU-GE. 1990. June 11. Date for GranoVita Tofu-Gemuesebratling given as 1988.

7258. **Product Name:** [GranoVita Green Rye & Cheese Patties].
Foreign Name: GranoVita Gruenkern Kaese-Bratling.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1988.
Ingredients: Water, vegetable oils and fats in changing proportions by weight, green rye, cheese, fine bread crumbs, onions, egg protein, seasonings (Wuerzmittel), soy sauce, sea salt, spices (Gewuerze).
Wt/Vol., Packaging, Price: 3 patties weigh 125 gm.
Nutrition: Per 100 gm. Protein 10.9 gm, fat 11.6 gm, usable carbohydrates 29.3 gm, calories 265. 1 BE (Broteinheit, or diabetic exchange) = 41 gm.
New Product–Documentation: Form filled out and Label sent by DE-VAU-GE. 1990. June 11. This product was introduced in 1988. Label: 2.75 by 5 inches. Red, blue, green, white, black and yellow-beige. "Contains no flesh. Simply fry on both sides in a pan." A photo shows three ready-to-eat patties on a plate with Brussels sprouts, potatoes, and parsley. Exklusiv Neuform certification symbol. A new version of this, probably introduced in 1990, is named GranoVita Gruenkern Kasebratling in Champignonsauce mit Gemuese-Reis. the patties come in a mushroom sauce with vegetables and rice.

7259. **Product Name:** [Chopburger (With Organic Soy Sprouts)]
Foreign Name: Chopburger.
Manufacturer's Name: Jonathan P.V.B.A.
Manufacturer's Address: Antwerpsesteenweg 336, B-2080 Kapellen, Belgium. Phone: 03/664 58 48.
Date of Introduction: 1988.
Ingredients: Soy sprouts, onions, carrots, celery, leeks, mushrooms, wheat flour 85%, vegetable fat, tamari, spices.
Wt/Vol., Packaging, Price: Vacuum packed.
How Stored: Refrigerated.
New Product–Documentation: Jonathan catalog. 1988. A full-page color plate shows all these products.

7260. **Product Name:** [2 Seitan Burgers in Tomato Sauce]
Foreign Name: 2 Seitanburgers in Tomatensosse.
Manufacturer's Name: Jonathan P.V.B.A.
Manufacturer's Address: Antwerpsesteenweg 336, B-2080 Kapellen, Belgium.
Date of Introduction: 1988.
Ingredients: Seitanburgers: seitan (wheat proteins)*, onions*, mushrooms, spices. Sauce: Water, mashed tomatoes*, onions*, celery*, carrots*, mushrooms, vegetable extract, maize flour, soya sauce, sea-weed, spices. * = Organically grown.
Wt/Vol., Packaging, Price: 300 gm.
How Stored: Frozen.
Nutrition: Minerals 1.38%, vegetable proteins 5.28%, vegetable fats 1.77%, carbohydrates 12%. 80 calories (Kcal) per 100 gm.
New Product–Documentation: Label sent by Jos van de Ponseele. 1988. 6.25 by 10.5 inches. This card-stock sleeve fits over the product. Color photo of two seitan burgers on a white dish partly covered by a tomato sauce containing carrots, onions, etc. The product name is written in English and German, in white on a reddish-orange band. "Vegetable product." Code CINAB.

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7261. **Product Name:** La Choy Lite Soy Sauce.
Manufacturer's Name: La Choy Food Products, Div. of Beatrice/Hunt-Wesson, Inc.
Manufacturer's Address: 901 Stryker St., Archbold, OH 43502.
Date of Introduction: 1988.
Wt/Vol., Packaging, Price: 10 oz bottle retails for $1.39 (3/89).
How Stored: Shelf stable.
New Product–Documentation: Ad in Cooking Light. 1989 Jan/Feb. p. 103. "Revolutionary China. New La Choy Lite Soy Sauce. It's based on the idea that less sodium doesn't have to mean less taste. So it has 47% less sodium than regular soy sauce. And the great taste that beat Kikkoman Lite 2 to 1."

Sun-Tattler (Hollywood, Florida). 1989. March 16. This product contains 110 mg of sodium per ½ teaspoon. It also contains preservatives.

7262. **Product Name:** Ta Brook Dried Beancurd.
Manufacturer's Name: SFC International (Importer) Made in Taiwan.
Manufacturer's Address: 2206 Lee Ave. #A, South El Monte, CA 91733.
Date of Introduction: 1988.
Ingredients: Beans, seasoning, sugar, refined salt, black soy sauce.
Wt/Vol., Packaging, Price: 3.5 oz plastic pouch. Retails for $0.75 (10/88 in Los Angeles).
How Stored: Shelf stable, 120 day shelf life.
New Product–Documentation: Label. 1987. 5.5 by 9 inches clear plastic pouch. Light and dark reddish brown black, and white. "Beef Lu Tao." Product looks like strips of moist beef jerky.

7263. Sojarei Ebner-Prosl. 1988. Tofu aus der Sojarei [Tofu from the Sojarei (Leaflet)]. Baden bei Wien, Austria. 6 panels. [Ger]
• ***Summary:*** This full-color orange and red leaflet explains that the company makes and sells many fresh soy products, mostly tofu and tofu products, but also tempeh and soy sprouts. They sell tamari, shoyu, miso, gomashio (sesame salt), many types of vegetables, flakes, and legumes. They also have a soya recipe brochure and a tofu cookbook.

This young family-run business, founded in 1984, focuses on fresh soyfoods of the best quality–pure and natural. Sojarei tofu is described as the culinary wonder child in unpretentious clothes, but with many talents. Tofu is sold in slices, diced, or in strips. It can be pressed or pureed. There are color photos of the two owners and their wives, of tofu, and of 5 tofu dishes. Address: Augasse 2, A-2500 Baden bei Wien (near Vienna), Austria. Phone: 02252/85101.

7264. **Product Name:** [Tofu Teriyaki].
Foreign Name: Tofu Teriyaki.
Manufacturer's Name: Sunrise Market Ltd.
Manufacturer's Address: 729 Powell St., Vancouver, BC, V6A 1H5, Canada. Phone: 604-254-0701.
Date of Introduction: 1988.
Ingredients: Tofu (water, soybeans, calcium sulphate, magnesium chloride, vegetable oil). Sauce: Water, soy sauce, sugar, cornstarch, ginger, garlic, sesame oil, spices.
Wt/Vol., Packaging, Price: 10 oz (300 gm).
How Stored: Refrigerated.
New Product–Documentation: Label. 5.5 by 3.5 inches. With color photo in middle of tofu teriyaki on pasta. "Pasteurized. No preservative." Product name also written in Chinese. Form filled out by Peter Joe. 1988. May 20. Gives date.

7265. **Product Name:** [Tofu Sweet N' Sour].
Foreign Name: Tofu Aigre-Doux.
Manufacturer's Name: Sunrise Market Ltd.
Manufacturer's Address: 729 Powell St., Vancouver, BC, V6A 1H5, Canada. Phone: 604-254-0701.
Date of Introduction: 1988.
Ingredients: Tofu (water, soybeans, calcium sulphate, magnesium chloride, vegetable oil). Sauce: Water, sugar, vinegar, tomato paste, soy sauce, cornstarch (modified), salt, citric acid.
Wt/Vol., Packaging, Price: 10 oz (300 gm).
How Stored: Refrigerated.
New Product–Documentation: Label. 5.5 by 3.5 inches. With color photo in middle. "Pasteurized. No preservative." Product name also written in Chinese. Form filled out by Peter Joe. 1988. May 20. Gives date.

7266. Yoneyama, T.; Itoh, T.; Shinha, Y.; Fukuzawa, M.; Shimizu, K.; Nishizawa, N.; Baba, S. 1988. [Quality studies of commercial soy sauce. XV.]. *Research Report of the Nagano State Laboratory of Food and Technology* No. 16. p. 20-24. [1 ref. Jap]*
Address: Nagano State Lab. of Food Technology, Kurita, Nagano-shi, Japan.

7267. Anderson, Eugene N. 1988. The food of China. New Haven, Connecticut: Yale University Press. xvi + 313 p. Index. 24 cm. [380 ref]
• ***Summary:*** Contents: Preface. Acknowledgments. Chronology of food and agriculture in China. 1. The natural environment. 2. Prehistory and the dawn of civilization. 3. The crucial millennium: Chou through Han. 4. Food from the West. Medieval China. 5. Definitive shaping of the food system: Sung and the conquest dynasties. 6. Involution: Late imperial China. 7. The climax of traditional agriculture. 8. Chinese foodstuffs today. 9. Some basic cooking strategies. 10. Regions and locales. 11. Traditional medicinal values of food. 12. Food in Society. Appendix: Dinner at the Ngs.

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Soybeans and soyfoods are mentioned as follows: North China is the native home of the soybean (p. 3). Soybeans seem to have been introduced to China in about 1000 B.C., but they were not popularized until the early Eastern Chou period (Ho 1975). Called, *shu*, they "seem to have come from the Jung people, northern and northeastern neighbors of the Chinese, who may have been Tungusic or Altaic, and were perhaps related to or descended from the Hungshan." Domesticated soybeans are descended from wild soybeans (p. 29).

Fan Sheng-chih wrote an agricultural manual in the first century B.C.; it survives in extensive fragments quoted in later agricultural works. This manual mentions the "Nine Staples": wheat, barley, millet, glutinous millet, spiked millet, soybeans, rice, hemp, and small beans (*Vigna* spp.) (p. 50).

The art of fermenting soybeans was perfected sometime in the late Chou period, or perhaps even as late as the very early Han. Thereafter, Han texts devote much space to salt-preserved soybeans [fermented black soybeans], called *tou shih* (*or shih*), the *tausi* of modern Cantonese cooking. *Chiang*, fermented sauce, was made from beans, but also from meat and elm products (p. 51).

During the late Southern Sung, Wu Tzu-mu coined the famous phrase: "the things that people cannot do without every day are firewood, rice, oil, salt, soybean sauce, vinegar, and tea" (Freeman 1977, p. 151). By the Sung, *chiang* had come to refer unequivocally to soy sauce, as late as the T'ang, it would probably have been understood, at least in literary contexts, to refer to a variety of fermented foods (p. 82).

Bean curd or *tou fu* (Japanese tofu) was first mentioned in the early Sung; its invention was attributed to Liu An of the Han Dynasty, "but this is preposterous." In fact, tofu "was invented in the late T'ang or early Sung–possibly by Taoists and/or people from the Huainan region, who then ascribed it, out of a sort of respect, to Liu An, the Taoist prince of Huainan (B.W.-C. Young, pers. comm.). Buddhists quickly took over the food as a good substitute for meat and for dairy foods."

Soybean curd is also fermented; the firm tofu cubes are packed in brine and sold. "They constitute the Chinese equivalent of a cheese and are apt to be overpowering, reminiscent of strong German hand cheese [*Handkäse*, a German regional sour milk cheese]. They are graphically known as *ch'ou tou fu* (stinking bean curd). Only the very stoutest of heart eat them and then only in small quantities."

Also discusses: Vegetarian cooking (p. 66, 86, 118, 150, 196, 204, 249). Vegetarianism came to China with Buddhism during the T'ang dynasty. Fish farming (p. 103, 129). Note: Eugene Newton Anderson was born in 1941. Address: Dep. of Anthropology, Univ. of California, Riverside, CA 92521.

7268. Boxer, Charles R. 1988. Dutch merchants and mariners in Asia, 1602-1795. London: Variorum Reprints. 350 p. in various pagings. Illust. Maps. 1 portrait. Index. 23 cm. *

• ***Summary:*** Hymowitz (2007/06) wrote: "Boxer points out that the Dutch East India Company exported soy sauce [from Japan] as early as 1673-1674. In 1673, the ship *In Laeren* (p. 333) carried 12 tubs of soy sauce as cargo and in 1674 the ship *In Hasenburg* (p. 334) had an unlisted amount of soy."

Note 1. These two ships loaded their soy sauce at Deshima, Nagasaki, Japan. The ship In Laeren sailed to Batavia. There is no record that either of the ships transported this soy sauce to Holland; they were used in the intra-Asiatic shipping route. Note 2. Charles Ralph Boxer was born in 1904.

7269. Carpenter, Hugh. 1988. Pacific flavors: Oriental recipes for a contemporary kitchen. New York, NY: Stewart, Tabori & Chang; Distributed by Workman Pub. 270 p. Illust. (color, by Teri Sandison). Index. 29 cm.

• ***Summary:*** Appendix 2, titled "Oriental ingredients" (p. 256-65) includes: Bean sauce (sometimes called "brown bean sauce"). Bean sprouts are 3-day old mung bean sprouts.

"Black bean sauce: Made from chilies, salted black beans [fermented black soybeans], soy sauce, garlic and orange rind, this ingredient adds a spicy, complex, rich taste when added to sauces..." Use only ½ teaspoon at a time. "Storage: Sold in glass jars. Keeps indefinitely when refrigerated." "Substitute: You can improvise a 'house blend' by combining rinsed and chopped black beans, garlic, grated orange peel, Chinese chili sauce, and peanut oil. Best brand: Mai Ling China, Inc."

Black beans, salted: Also called "fermented black beans." "They are always rinsed, coarsely chopped, and then combined with ginger and garlic for stir-fried dishes or rubbed across the surface of fish fillets." "Best brand: Purchase salted black beans sold in a yellow cardboard canister... far superior to the salted black beans sold in plastic bags. Ask for Yang Jiang Preserved Beans with Ginger, Pearl River Bridge brand."

Chili sauce, Chinese: The spicy Chinese condiment made from soybeans is called "hot bean sauce."

"Fish Sauce... is used in Thai and Vietnamese cooking the way the Chinese use soy sauce."

Hoisin sauce: Made with soy bean flour, chilies, garlic, ginger, and sugar. Buy only Koon Chun Hoisin Sauce.

"Monosodium glutamate (MSG):... MSG is used by chefs of little skill to rejuvenate food of poor quality... Chinese cooks who take pride in their cuisine agree that MSG is a crutch. It is neither recommended nor used in this book."

Soy sauce, dark: Also called "heavy" or "black" soy, it is light soy to which molasses or caramel has been added. Best brands: Mushroom Soy Sauce.

Soy sauce, light: Also called "thin" soy sauce. Best brands: Superior Soy Sauce, Pearl River Bridge, Kikkoman.

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Another product called "Soy Superior" is a dark soy sauce.

The index contains many recipes for Black beans, and several for Black bean sauce, including: Steamed shark with spicy black bean sauce (with 1 tablespoon salted black beans {Pearl River Bridge Brand}, p. 93, 134). Black bean scallops on julienned vegetables (p. 109). Game hens in black-bean tomato sauce (with "2 teaspoons black bean hot sauce {see Appendix}," p. 140). Artichokes in black-bean tomato sauce (p. 217). Asparagus in black-bean butter sauce (p. 220). Address: Head, cooking school, Santa Barbara, California

7270. Cost, Bruce. 1988. Asian ingredients: Buying and cooking the staple foods of China, Japan and Southwest Asia. New York, NY: William Morrow & Co. 333 p. Illust. Index. 27 cm. [39 ref]

• ***Summary:*** Soy related: Soybean sprouts and recipe (p. 86). Beans, incl. soybeans (p. 146-50). Asian "dairy" (p. 186-87). The soybean and the coconut (incl. bean curd, doufu-nao, fermented bean curd / fu-ru, molded bean curd / chou dou-fu, dried bean curd / dou-fu gan, and bean curd skin [yuba]. Soybean milk.

Soybean sauces, condiments and pastes (p. 195-211): Salted and fermented black beans with recipes for "Roast chicken with black beans stuffed under the skin," and "Soft-shell crabs with ginger, lemon, and black beans" ("Fermented black beans, often flavored with bits of ginger and sometimes orange peel, are usually sold in 8-ounce plastic bags." Acceptable brands: Mee Chun or Koon Chun Sauce Factory. "Earthier and probably more classic are the Yang Jiang Preserved Beans (with ginger) from Kwangtung, China), bean sauce (other names: Yellow bean sauce, brown beans sauce, bean paste, jiang; two types are with the beans whole or ground), hot bean sauce / paste with recipe, hoisin sauce, sweet bean sauce (made with soybeans [probably tian mian jiang, p. 202], Taiwan), soy sauce (Chinese, Japanese, tamari; Highly recommended light soy sauce: Pearl River Bridge. Highly recommended dark: Pearl River Bridge Mushroom Soy, flavored with straw mushrooms), Java's ketjap and other soy sauces miso with recipe, yellow miso (*Shinshu miso*), white miso (*shiro miso, Kyoto shiro miso,* sweet white miso), red miso (*aka miso*), Hatcho miso [soybean miso], barley miso (*mugi miso*), fermented bean curd (white or red, also called preserved bean curd, wet bean curd, bean cheese, dou-fu ru or fu-ru {Mandarin}, fu yu {Cantonese}) with two recipes).

"Red fermented bean curd" is described on pages 210 (also called "red bean cheese"), 211, and 283 (together with "red rice").

Concerning ketjap (p. 206): Tomato ketchup, although it may seem to be of Asian origin, may or may not come from a family of Asian pickled products. But the word "ketchup" is clearly of Asian origin. [Note: The modern Indonesian word for soy sauce is *kecap / ketjap / kechap.*] "It comes from the Malay *kechap,* which apparently derives from the *kôe-chiap* of a southern Chinese dialect (Amoy); both of these refer to the kind of briny liquid preserves that include fish and soy sauces." Throughout most of Southeast Asia, fish sauces are the standard condiment; in Indonesia (incl. Java) soy sauce is more widely used. Sweet Indonesian soy sauce (*ketjap manis*), which is very widely used, is traditionally sweetened with palm syrup and seasoned with garlic, star anise, salam leaves, and galangal.

Also discusses: Seaweed (p. 165-70): Kelp (Laminaria), laver (Porphyra), wakame, dashi, hair vegetable / black moss / hairlike vegetable (China: Gracilaria verrucosa), agar-agar. Monosodium glutamate (p. 247).

Bruce Cost was born in 1945. A photo and brief biography appears on the inside rear dust jacket. Address: [San Francisco, California]

7271. Goetz, Rolf; Queissert, Peter. 1988. Einfach anders essen: Unser Naturkost-Kochbuch [Simply eat differently: Our natural-foods cookbook]. Schaafheim, West Germany: Pala-Verlag. 156 p. Index. [10 ref. Ger]

• ***Summary:*** Contains recipes using miso, seitan, tamari, tempeh, and tofu. Address: Germany.

7272. Hesseltine, C.W. 1988. Transfer of food fermentation technology. In: M.F. Moyal, ed. 1988. Diet and Life Style: New Technology. John Libbey Eurotext Ltd. See p. 159-65. [10 ref]

• ***Summary:*** Describes examples of successful transfer of new technology, especially with Oriental fermented foods, such as tempeh, miso, and sufu. Address: 5407 Isabell, Peoria, Illinois 61614

7273. Kikkoman Trading, Europe. 1988. Kochen mit Soja-Sauce... gesund, schmackhaft & raffiniert [Cooking with soy sauce... Healthy, delicious, and artful]. West Germany. 119 p. [Ger]*

Address: West Germany.

7274. Kurz, Marey. 1988. Soja in der Vollwertkueche: Rat und Rezept-Ideen zum Kochen und Backen mit allen Soja-Varianten: Bohnen, Mehl, Milch, Sauce, Tofu und Miso. Das erste komplette Soja-Kochbuch [Soya in whole-foods cookery: Advice and recipe ideas for cooking and baking with all the varieties of soya: Beans, flour, milk, sauce, tofu and miso. The first complete soya cookbook]. Munich, West Germany: Graefe und Unzer GmbH. 102 p. Illust. Index. 20 cm. [11 ref. Ger]

• ***Summary:*** The copyright (but not the title page) page says that this is a 3rd edition, however the ISBN is unchanged from the 1984 edition. Address: West Germany.

7275. Lautensach, Hermann; Dege, Katherine; Dege, Eckhart. 1988. Korea: A geography based on the author's travels and literature. Translated from the German.

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Supplemented with a thoroughly revised and expanded index. And edited by Katherine and Eckhart Dege. Berlin, Heidelberg, New York, London, Paris, Tokyo: Springer-Verlag. xvii + 598 p. See p. 20, 160, 174, 180-81, 201, 203, 229, 420-21, 452, 476, 482, 488. Illust. Maps (some color) 26 cm. [936* ref]

• ***Summary:*** "With 42 photographs, 95 diagrams, 46 tables and a [larger color] map." This classic was first published 40 years ago (a few months before the end of World War II) and the field work was done 50 years ago, when Japan still ruled Korea and all place names were Japanese; these names have all been updated.

Vavilov classes soybeans among the plants that originated in the East Asian grain gene pool, and he includes Korea in the gene pool. Thus it is "quite possible" that soybeans were domesticated in Korea itself. Hulbert (1902) includes among the non-Chinese crops black soybeans, two of the three kinds of kaoliang, wild sesame (Perilla), and buckwheat (p. 20).

On page 21 is a very interesting "Chronological table of Korean history. Comparison with Chinese and Japanese history. A major change took place in 680 AD when the Three Hans [Three kingdoms] (Tribal Leagues: Koguryo [Gouryeo, in the north], Paekche [Baekje, in the southwest], and Shilla [Silla, in the central and south east]) merged into one, named Silla. In 918-925 it became Koryô [Kingdom of Goryeo, Wang Dynasty], which in July 1392 became Chosôn [Joseon Dynasty; Yi Dynasty], that lasted until August 1910 when the Japan-Korea Annexation Treaty was enforced by the Empire of Japan.

Chapter 6, titled "The anthropogeographical character of ancient Korea" (p. 149+) contains extensive information about agriculture and food. Page 160: In wealthier sites, the farm buildings enclose a courtyard, to which an entrance gate gives access (Fig. 37c, p. 158). Some enclosures are so complete that a square courtyard results. "In some corner or other of the courtyard stand the huge brown earthenware jars, in which soy sauce (Jap. *shoyu*, Kor. *kanjang*) is prepared and stored."

Nature and traditional culture. Plants found between the subtropical zone and the temperate zone include soybeans, foxtail millet, maize, and hemp. Since ancient times, rice has been Korea's most important cereal crop. The great majority of it is grown in irrigated paddies. Paddy rice (an aquatic plant) has a different name in Korea from upland rice. Hubert (1902, p. 108) mentioned eight varieties of rice grown in traditional Korea, including glutinous rice, whose flour is made into rice cakes by mixing it with water and spicy herbs, then beating the cold mass for a long time with wooden hammers (p. 174).

Page 180: In East Asia, after cereal grains, pulses / legumes are the next most important crop. In Korea, by far the most important is the soybean (Kor. *k'ong*), which makes few demands on the soil. Korea's climate is ideal for soybeans (Tanaka 1931, p. 18); it is even better than Manchuria's climate, because of the large amount of precipitation during the summer. Today, soybeans are an indispensable part of the various dry-field crop rotations. After planting of the paddies has finished, soybeans are planted on the ridges too, there they grow extremely well without being fertilized. Soybeans are grown throughout Korea, but least in the Kaema upland because of the warmth they require. In northern Korea, on dry fields, they are planted between the end of March and beginning of May. Toward the south, planting is delayed until the end of June. They are generally harvested in October, except in Chejudo, where they are not harvested until early November. Soybeans are the crop that is left standing the longest, and they are not harvested until their leaves have turned brown and started to fall.

Soybeans are used as a very nutritious food for both humans and horses. Also, cooked soybeans are used as a fertilizer for the rice paddies. "Above all, though, the hot brown soy sauce, which is never lacking on any Korean or Japanese table, is made of them, using salt and pepper and a process of fermentation. Bean curd (Kor. *tubu*, Jap. *tofu*) and soybean paste (Kor. *toenjang*, Jap. *miso*) are also made of them."

Adzuki beans, cotton and hemp are discussed on p. 181.

The Korean regions: On the forest slopes, which were deforested but the Japanese are energetically reforesting, one can find various lianas [climbing vines] such as *Pueraria hirsuta* [Jap. kudzu]. In the northern part of the coastal fringe, soybeans are grown on the ridges between paddies (p. 200-01).

Namyang is a link in the shortest connection between Tokyo and Harbin, which includes the ship passage between Tsuruga or Niigata and Ch'ongjin. "For this reason, this section has been operated by the South Manchurian Railway since 1 October 1933." The northernmost bays and harbors, especially Unggi, Najin, and Ch'ongjin, and their cities, are developing at an usually rapid rate. "They have become the export harbors for central Manchuria, particularly for soybeans" (p. 203).

In the Kaema upland we find "fire-field farming" and soybean fields in the valley bottoms or basins. "The most important fire-field crops at lower elevations are foxtail and barnyard millet, barley, soybeans, kidney beans, hemp and sesame." "The Japanese forestry commission has taken over management of the remaining forests. In the natural forests, wood is cut selectively and only as much as grows back" (p. 229).

Korea as a Japanese possession [colony]: "In southern Korea, barley has replaced rice as the principal staple food under the influence of Japanese economic policy." A large portion of the rice is sold to Japan.

Table 37 (p. 420), titled "Cultivated area, harvested amounts and yields per acre of the most important crops,

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1935," includes: Soybeans: 785,000 ha. 7.9 hectoliters of weight. Worth 60.2 million yen. Yield: 10.1 hectoliters per ha. Adzuki beans: 235,000 ha. 1.7 hectoliters of weight. Worth: 14.3 million yen. Yield: 7.3 hectoliters per ha. The table also includes paddy rice, upland rice, barley, naked barley, wheat, foxtail millet, barnyard millet, broomcorn millet, kaoliang, maize, oats, buckwheat, potatoes, sweet potatoes, mung beans, etc.

"The soybean vies with foxtail for the third place in the order of crops, by cultivated area. Its is a very profitable, undemanding crop that does not fail even in meteorologically abnormal years. Therefore its harvest curve does not have the ups and downs that are characteristic of many other crops, particularly paddy rice (Fig. 84). Acreage and yield per hectare have not increased nearly as much during the Japanese period, however, as for many other crops. Nevertheless, soybeans are the third most important item of agricultural export today, and the quality is supervised by the state. Approximately one-fourth of the harvest is exported. The most important export markets are Unggi, Ch'ongjin, Songjin, Wonsan, Shinuju, P'yong-yang, Kumch'on and Ch'olsan (T. Tanaka 1931). They are located without exception in the northern half of the country" (p. 421). Note: Since 1948, the northern half of Korea has been a separate nation, North Korea.

"The Korean adzuki bean, particularly that from the northeastern coast, is highly priced in the Japanese market because of its high quality." By acreage it is the sixth most important crop in Korea (p. 421).

The soybean mills that process Manchurian soybeans in to oil and meal lie on the Japan Sea coast of Hamgyongbuk-do (p. 452).

Table 43 (p. 476), titled "Korea's most important import and export goods, 1939," shows that "Beans" were the No. 7 export item to Japan, worth 23 million yen. The leading export was rice (149 million yen) followed by fertilizer (53), copper (52), fish etc. (32). "Of the beans exported to Japan... soybean take first place. Soybean exports to Japan had a weight of 1.3 to 1.9 million q" [1 quintal = 100 kg] in the ears 1934-1938. "In contrast, from the northeastern ports Manchurian beans were shipped to Germany and England." In addition, large amounts of soybeans were imported by Korea itself from Manchuria (0.29 to 1.02 million q). Large amounts of soybean products made in Korea were also shipped to Japan (incl. soybean oil as much as 11,500 q, bean curd [tofu] up to 1.2 million q). Moreover soybean oil (up to 3,210 q) and bean curd (as much as 1.3 million q) were imported from Manchuria (p. 476).

Considerable amounts of dried seaweed and laver [nori] were also exported to Japan (p. 477).

Pages 482-83 try to characterize Korea's significance in 1938 for the economy of Greater Japan (pan-Japan) in general and Japan proper in particular. Pan-Japanese production included that of Korea, Manchuria, and Formosa. "The Korean rice crop in 1938 (44.8 million q) amounted to 23.4% of the pan-Japanese crop and 36.6% of that of Japan proper. 63.2% of Japan's rice imports came from Korea. The soybean crop in 1938 amounted to 6.4% of the pan-Japanese crop, 68.7% of the crop of Japan proper. 17.8% of the soybean imports of Japan proper came from Korea. The relationship was that of a master country to a dominated colony. For example, the Japanese forced the Koreans to eat barley so that the Japanese could import and enjoy the rice grown in Korea.

Soybean production on steep slopes and at high altitudes is mentioned (p. 488).

Hermann Lautensach lived 1886-1971. This book was first published in 1945 in German. Address: Prof., Dr.

7276. Lea and Perrins. H.P. Foods Ltd. A wholly owned subsidiary of B.S.N. Limited. 1988. The history of Lea & Perrins (Leaflet). Worcester, England. 2 p. 30 x 21 cm. Black on green.

• ***Summary:*** Lea & Perrins "Original and Genuine" Worcestershire Sauce has been at the factory on Midland Road in Worcestershire since the factory was built in 1897. Still today the unmistakable aromas rise from oak casks stored below the ground. The recipe is understood to have been brought to England in 1835 by Marcus, Lord Sandys, who had held many offices in the east [i.e. in Asia] including that of the Governor of Bengal.

"On his return from India to his native Worcestershire, Lord Sandys took the recipe to John Lea and William Perrins, chemists who owned a pharmacy in Broad Street, Worcester. At Lord Sandys' request, the chemists made up the sauce and, probably to satisfy their own curiosity and to assess the sauce's viability as a commercial proposition, prepared a quantity for themselves which they put into stone jars. When they tasted the sauce, however, they found it so unpalatable that they consigned the jars to the cellar. Some time later they re-discovered the jars and, before throwing them out, tasted the sauce again. It tasted superb! The sauce had matured.

"The reputation of the sauce originally made for Lord Sandys quickly spread and Messrs Lea & Perrins decided to obtain the recipe permanently from Lord Sandys to manufacture and sell under the now familiar Lea & Perrins name.

"To this day the recipe remains a closely-guarded secret and only a handful of people know the exact ingredients, proportions and maturing processes involved in the manufacture of Lea & Perrins Worcestershire Sauce. With Lord Sandys' permission, the sauce was first sold commercially in 1837 and in 1849 arrangements were made for its export to New York.

"By 1849 Lea & Perrins Worcestershire Sauce had rounded Cape Horn. The crew of a ship sailing up the Pacific coast to the United States deserted to join the 1849 Gold

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Rush, leaving only the captain and the 'supercargo', the man directly responsible for the cargo, to sell off the goods they were carrying. Itemised on the cargo list was the famous sauce, along with a selection of medicines and Lea & Perrins trusses!

"An undamaged bottle was unearthed by archaeologists investigating the town of Te Wairoa in New Zealand. The town had been destroyed by a volcano in 1886–so the sauce must have reached New Zealand before that date!..

"Lea & Perrins Limited was acquired by HP Sauce Limited in 1930. In 1967 Imperial Tobacco (now Imperial Group) acquired HP Sauce and the Lea & Perrins brands with it... The product is used in over 130 countries."

Photos show: (1) Seven old Lea & Perrins bottles, two of them with labels. The earliest, which has no label, dates from 1866. (2) Three present sizes of bottles, 20, 10, and 5 fl. oz. The first 3 ingredients are vinegar, molasses, and vinegar–in that order. Address: Midland Road, Worcester, WR5 1DT, England.

7277. McEachern, B. 1988. Sushi–In this most celebrated of Japanese foods, the skill of the chef is as important as the freshness of the fish. *Taste* 2(2):6-7.
• ***Summary:*** When nigiri-zushi, or hand-shaped sushi, first appeared around the 1810s, the fish and shellfish were preserved in vinegar, with the exception of tuna, which was preserved in soy sauce. Soy sauce is the basic seasoning for sushi. Two other soy sauce-based seasonings are nitsume, a thick, sweetish sauce brushed over conger eel, mantis shrimp, and cooked octopus, and nikiri, found today only in the best establishments. Wasabi is the grated root of Japanese horseradish, a native plant that grows in the beds of mountain streams. The biting, yet cleansing taste of wasabi 'unlocks' the subtle flavors of uncooked fish. Pickled ginger (*gari*), which refreshes the palate between mouthfuls, is made by preserving sliced ginger in salt, vinegar, and sugar for about a week. The ginger naturally turns pink during the process.

7278. Philippine Council for Agriculture, Forestry and Natural Resources Research and Development. 1988. Mga Gamit ng UTAW Bilang Pagkain [The uses of soybeans as food]. Diliman, Quezon City, Philippines. 46 p. Illust. DA/ATI-PCARRD Farm Primer No. 3. Series of 1988. AC-R4-P-S-V-2-88. [3 ref. Tag]
• ***Summary:*** Part 1 (p. 1-20) of this Tagalog-language booklet, which contains many illustrations (line drawings), is titled "Soybean Products." It describes how to make basic soyfoods, such as soybean ketchup (*Ketsup na utaw*), soy coffee (*Kapeng utaw*), pastillas, soymilk curds (taho), tokwa (tofu), polboron (a confection usually made with powdered milk, but in this case using soybean powder), soymilk, soy flour (harinang utaw; note that utaw is word for soybean in Tagalog), tao-si (fermented black soybeans), soy sauce (toyo), and miso.

Part 2 (p. 25-45) titled "Soybean Recipes," includes chicken with miso, tofu with miso, tofu with mushroom soup, soymilk custard, fried meat (pork; Baboy), fried meat with miso, bamboo shoots with miso, baguio beans with miso, fried tofu with sweet & sour soy sauce, miso with noodle soup, chicken soup with tofu, and fried tofu with vegetable sauce. Address: Philippines.

7279. Quigley, Delia; Pitchford, Polly. 1988. Starting over: Learning to cook with natural foods. Summertown, Tennessee: The Book Publishing Co. 144 p. Illust. Index. 23 x 15 cm.
• ***Summary:*** The index to this natural foods, vegetarian (but not vegan) cookbook contains listings for 15 tofu recipes, 7 miso recipes, and 6 tempeh recipes, plus an incorrect definition of "tamari." The book uses a round yin-yang (*t'ai chi*) symbol to mark recipes that "qualify as macrobiotic." The authors have a Florida television show named "The Granary Gourmet." Address: Florida.

7280. Sabban, Françoise. 1988. Insights into the problem of preservation by fermentation in 6th century China. In: Astri Riddervold and Andreas Ropeid, eds. 1988. Food Conservation: Ethnological Studies. London: Prospect Books. 224 p. See p. 45-55. Presented at the Seventh International Conference on Ethnological Food Research held at Sogndal, Norway on June 10-14, 1987. [28 endnotes]
• ***Summary:*** "From a study of a 6th century agricultural text, the *Qimin Yaoshu* [W.-G. Ch'i-min yao-shu], it is clear that for the Chinese, fermentation was a vital process. The rules and precision employed in its execution were indicative of its status... The basic and most common condiment used throughout China is soya sauce, itself a product that results from the fermentation of soya beans and wheat. It is difficult to imagine Chinese cooking without soya sauce, and yet the record shows that it is a relatively modern adjunct to the list of Chinese condiments."

An Appendix (p. 55) contains a handwritten index of Chinese characters. Address: Chef de Travaux, l'Ecole des Hautes Etudes, en Sciences Sociales, Paris, France.

7281. Shinbo, Hiroshi; Hasegawa, Akira. 1988. Shohin seisan ryutsu no dainamikusu [Dynamics of commodity production and distribution]. In: Akira Hayami and Matao Minamoto, eds. 1988. *Keizai Shakai no Seiritsu: 17-18 Seiki* [Establishment of Economic Society: 17-18th Century]. Tokyo: Iwanami Shoten. 324 p. See p. 218-70. [Jap]*

7282. Spangler, Drew. 1988. West Coast pioneer [Elaine Beatson & Kikkoman]. *Taste* (*Kikkoman, Japan*) 2(2):8.
• ***Summary:*** The first serious attempt to introduce soy sauce to the American public took the form of a television ad campaign in 1956. The commercial was timed for Nov. 6, the day the American presidential elections were held.

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(Eisenhower was reelected), with the result that many Americans came to remember Kikkoman as a "candidate" for the presidency.

The following year, 1957, Kikkoman International, Inc., was established in San Francisco, California, and in 1970, its test kitchen and cooking school came into existence. At that time, Hawaiian-born home economist Elaine Beatson was hired to develop new recipes incorporating soy sauce as an ingredient. Beatson started out by publicizing soy sauce through creating recipes to go on the labels and neck hangers of bottled Kikkoman products. Today, however, publicity on all five products (Soy Sauce, Lite Soy Sauce, Teriyaki Marinade & Sauce, Teriyaki Baste & Glaze, and Stir-Fry Sauce) is supplemented by a monthly distribution of recipes and articles to food editors of metropolitan newspapers, as well as regular mailings to suburban and rural papers.

7283. Wingate, Colby. 1988. Seitan ethnic recipes. Kalamazoo, Michigan: Published by the author. 55 p. No index. 22 cm.
• ***Summary:*** Contents: Introduction. About seitan. Recipes: French, Indian, Japanese (tempura, croquettes, sukiyaki), American (sloppy joes, stew, pot pie), Italian (cacciatore, spaghetti, parmigiana), Mexican (tacos, tortillas, tamale pie), East European, Greek, Chinese, Salads, Soup/Beans. Note: Tamari is used as a seasoning in seitan and in many of the recipes.

The introduction (written Sept. 1987) notes: "After making seitan at home for a few years we [Colby and her husband Crick Haltom] decided to go into business. In May 1986 we started Great Lakes Grainfoods. Our products are seitan, (seitan) pate, (seitan) chili, and mochi!... These recipes evolved from any hours in our kitchen at home cooking for family and friends, visitors, foreigners, vegetarians, macrobiotics, non-vegetarians, young and old.

Talk with Mark Mayell of East West Journal. 1991 Nov. 14. Colby and her husband owned a seitan company in Kalamazoo, Michigan, for about 3-4 years up until about 1990. They wrote this book and sold it to suppliers, customers, etc. It was not widely circulated. Colby and Crick now live at 1200 Hillcrest Ave., Kalamazoo, Michigan 49008. Address: Kalamazoo, Michigan.

7284. Wood, Rebecca T. 1988. The whole foods encyclopedia: A shopper's guide. New York, NY: Prentice Hall Press (Simon & Schuster). xv + 218 p. Foreword by Michio Kushi. Illust. 28 cm. [200* ref]
• ***Summary:*** This book is mistitled. It should be titled "Rebecca Wood's Macrobiotic Views on Natural Foods." The parts on quinoa, teff, amaranth, and many "macrobiotic foods" provide good information. There is extensive information on soyfoods, all from a macrobiotic viewpoint, but with many errors or undocumented controversial assertions never seen before in the literature, such as the following: "Cold Tofu. Foods that are cooling, like tofu, tend to reduce the fire in the lower organs. This explains why tofu was eaten by Buddhist monks to abate their sexual desires. This is not a prescription against tofu. Well-cooked tofu is less cooling. For optimum health, we need a balance of warming as well as cooling foods. However, if you are feeling cold, or if it is a cold day, or if you have strenuous activities planned, then you may opt for salmon over tofu."

Foods discussed are: Cheese (imitation soy), ice cream and frozen desserts (soy or tofu ice cream), miso, natto, nigari, soybeans (black, yellow, and "just harvested green soy"), soy flour, soy protein isolate, soy milk, soy nut ("Those oversalted, beggarly little crunches found in everything from trail mix to salads are soynuts, ..."), soy oil, soy sauce ("Also known as *Shoyu* and *Tamari*"), and soy yogurt, tempeh, tofu, and TVP (texturized vegetable protein {textured soy flour}).

Note: This is the earliest English-language document seen (Feb. 2005) that contains the term "cooling food." Address: P.O. Box 30, Crestone, Colorado 81131. Phone: 303 (or 719) -256-4939.

7285. Young, Erika. 1988. A touch of Lebanon in Japan. *Taste* (*Kikkoman, Japan*) 2(2): 1-3.
• ***Summary:*** Madeline Umekawa, born in Beirut, Lebanon, 30 years ago, married a Japanese man in 1982 and now lives in Osaka, Japan. She has discovered that shoyu works nicely as a seasoning in Lebanese cuisine. A bento is a Japanese boxed lunch. Kikkoman's Recipe Contest for Foreigners is an annual event in Tokyo that was begun in 1982 to encourage new innovative, and creative ways of incorporating soy sauce in the cuisines of other nations. The contest will be held in September. Address: Editor, Taste newletter, Kikkoman Corp., International Operations Div., 1-25 Kanda Nishiki-cho, Chiyoda-ku, Tokyo 101, Japan.

7286. **Product Name:** Wild Baked Tofu (Teriyaki, and Veggie?).
Manufacturer's Name: Wildwood Natural Foods.
Manufacturer's Address: 135 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919.
Date of Introduction: 1988?
New Product–Documentation: On sale in Berkeley, 1988 Aug. 30.

7287. Theses on soybeans and soyfoods. Dissertation Abstracts (Database search report). 1989. 234 p. Jan. 20. 28 cm. Unpublished manuscript. [1106 ref]
• ***Summary:*** The Dissertation Abstracts database contains virtually every American PhD dissertation accepted at an accredited institution since 1861. A search yielded 1,106 theses on soybeans and soyfoods not including records with the terms pathogen*, Disease*, weeds, or insect* in the title or abstract. * = truncated term.

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It contained the following number of theses on soyfoods: Soymilk 9-14, tofu 6, tempeh 6, miso 4, soy sauce 3, and natto 2.

The most valuable records for us are in the subject categories Food Science & Technology; Health Sciences, Nutrition; and Economics, Agricultural. Other subject categories include Agriculture (Agronomy, Animal Culture & Nutrition, General, Plant Culture, Plant Physiology); Biochemistry; Botany; Chemistry (Agricultural and Biological, Analytical); Engineering, Chemical; Entomology.

A count of the records in which we were interested by state where the thesis was written shows the following: Illinois 128, Iowa 68, Indiana 37, New York 30, Missouri 28, Michigan 26, Minnesota 25, and Ohio 17.

7288. Belleme, John. 1989. The imperial sauce. Rich, dark, and subtle, Japan's traditionally made shoyu is an outstanding and versatile seasoning. *East West*. Jan. p. 72-77. [2 ref]

• ***Summary:*** Westerners indiscriminately sprinkle soy sauce on everything from beef to popcorn. Almost half of the 60 million dollars spent annually by Americans on soy sauce goes for a product that is not even fermented. Kame, La Choy, and Chun King brands for example, are the result of a 1-day chemical process. The ingredients are soy extract, alcohol, sugar, salt, food coloring, and preservatives. Nearly all other soy sauce sold in the U.S.–such as Kikkoman, Yamasa, Marukin, Higashi-Maru, and Maruten–is made from chemically processed soy meal by a high-tech, accelerated method and temperature-controlled fermentation, and it usually contains sodium benzoate as a preservative.

Traditional shoyu products reach U.S. consumers in a roundabout way. For example, Muso buys traditional shoyu from the Marushima Brewing Co. of Shoda Shima, Japan, and exports it to Eden Foods, which sells it to American consumers under the Eden label. Ohsawa Japan buys from the Yamaki Brewing Co. of Tokyo, and sells to Ohsawa America, which bottles and sells it under the Lima label. The largest producer of traditional shoyu is the Sendai Shoyu and Miso Co. of Sendai, Japan. Sendai makes Johsen Shoyu, which is exported by Mitoku and is bottled in the U.S. under different brand names, including Westbrae, Tree of Life, Emperor's Kitchen, Mitoku-Johsen, and Mitoku Macrobiotic.

The author notes that, "My 8 years of miso-making in Japan and at American Miso Co. have taught me that miso aged in wood is superior to that aged in plastic... although Sendai shoyu and Miso Company started making high tech shoyu in 1950, Sasaki insisted that his company also continue to make traditional shoyu." Although at times Sasaki's pet project seemed a financial disaster, in 1970 he received a phone call from a Tokyo businessman, Akiyoshi Kazama. Kazama, a friend of macrobiotic teacher Michio Kushi, was looking for a supply of traditional shoyu for Kushi's students. When Sasaki showed Kazama his 12 2,000 gallon cedar casks of naturally aging whole soybean shoyu a few days later, Kazama knew his search was over. Kazama shipped Johsen Shoyu to the U.S. in 5 gallon wooden buckets at first.

Jubei Sasaki has passed away, but his 12 casks of traditional shoyu have grown to 100 and his son continues the whole soybean shoyu tradition.

4 recipes are given. Address: P.O. Box 457, Saluda, North Carolina 28773. Phone: 704-749-9537.

7289. *Dairy Foods*. 1989. Savory flavor enhancer saves on sodium: Soy-based tamari builds body into dairy foods naturally. Jan. p. 82.

• ***Summary:*** Tamari can be used to reduce the sodium content of products as much as 30%. Applications include frozen cream beverages (Tamari Coconut Freeze), custards, and ice creams. "Regular tamari has a sodium level of 5,500 mg/100 gm. Tamari Lite has a sodium level of only 4,000 mg/100 gm, reduced by vacuum evaporation at 175°C. Salt precipitates out under those conditions. Ultrafiltration is also used to filter out insoluble proteins (and microorganisms) while preserving essential flavor elements." Ultrafiltration is used after pasteurization.

7290. *Food & Beverage Marketing*. 1989. Tamari comes to the states. Jan. p. 38.

• ***Summary:*** The company is already selling a bulk product, mainly to food processors. The consumer product should hit supermarkets in February. New filtering technologies have given the product a brighter appearance. The U.S. plant will produce tamari from both whole soybeans and defatted soybean meal, whereas the Japan plant uses only whole soybeans. The tamari made from whole soybeans will retail for about $2.39 for a 10 oz bottle bearing a gold label. The tamari made from defatted soybean meal will retail for about $1.99 for the same size bottle and will bear a black label. The latter product is expected to be sold more in supermarkets and the former in natural food stores. The company is focusing on magazine advertising, as in *Bon Appetit* and *Cooking Light*, among others. Address: New York, NY.

7291. *Food Engineering*. 1989. Naturally brewed soybeans yield tamari: With 30% more protein than conventional soy sauces, tamari retains its full flavor when used in processed foods. 61(1):55-56. Jan.

• ***Summary:*** The San-J plant in Richmond, Virginia, which uses 900,000 lb of soybeans and 500,000 lb of defatted soybean meal a year, has the capacity to produce 1,000,000 gallons of tamari a year. The production process is described. In the last step, blended tamari is pasteurized then filtered using ultrafiltration. A color photo shows San-J's brewmaster, Mr. Yamamoto, and tamari vats.

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7292. San-J International, Inc. 1989. Information on San-J's new U.S. produced tamari (Leaflet). Richmond, Virginia. Jan.

• ***Summary:*** A detailed, step by step description of exactly how San-J makes its new tamari in America. Contents: Raw materials: The soybeans are grown in Virginia. The solar dried sea salt comes from Baja, California [Mexico]. Note: No mention is made of defatted soybean meal. Muro and koji making: Incubation of the nuggets in the climate controlled chamber takes 2 days. Moromi: That made in America uses a higher proportion of brine to koji so that the resulting moromi can be pressed mechanically. Fermentation: The moromi is fermented for 6-7 months in temperature, fiber reinforced plastic tanks, which are more sanitary, less aerobic, and can be made larger than the traditional open wooden vats used in Japan. "One of the reasons that San-J chose Virginia as the site for its U.S. factory is that its climate is probably the most similar of anywhere in the U.S. to that of Virginia."

Press: Here the solids are removed. The resulting liquid is raw tamari. Blending: "The raw tamari is analyzed and blended to yield a consistent protein and salt content. Alcohol is added at this point. Alcohol: San-J adds natural, food grade grain alcohol (made from corn and certified Kosher) to bring the alcohol level up to 2% to inhibit the growth of aerobic yeasts. Pasteurization and filtration: Pasteurization arrests the fermentation and kills bacteria. Filtration removes fine, non-soluble solids. The filtration system used at San-J is a first. Commonly both tamari and shoyu are filtered through cellite (made from diatomaceous earth). The filter we use is a microfilter. This is both more efficient and more effective." Gold Label / Black Label: The Gold Label product is made from soybeans and is wheat free. The Black Label is made with soy grits, which "are made by removing the oil from whole soybeans by a process called hexane extraction. Hexane is a volatile liquid not unlike alcohol [actually it is a petroleum fraction], and is used to facilitate this mechanical [actually chemical] separation." No traces of hexane left in the grits. Address: 2880 Sprouse Dr., Richmond, Virginia 23231. Phone: 804-226-8333. Fax: 804-226-8383.

7293. San-J International, Inc. 1989. Family planning (Ad). *Food Distributors Magazine*. Jan. And Feb. p. 80.

• ***Summary:*** This ½-page color ad shows three bottles of San-J soy sauce: Black-label tamari, Tamari Lite (low-sodium), and Szechuan Sauce. It also appeared in Fancy Food (Chicago). March. p. 78. Address: Richmond, Virginia.

7294. **Product Name:** Shoyu (Made from 70-80 parts whole soybeans and 20-30 parts wheat).
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 800-595-9545 or 415-821-4040 (Perelman).
Date of Introduction: 1989. January.
New Product–Documentation: Interview with John Perelman, VP Sales and Marketing, San-J. 1990. Jan. 25. The shoyu made in America by San-J first became available in Jan. 1990. It is not organic. It is sold exclusively by Eden Foods.

7295. Sojarei Ebner-Prosl. 1989. Preisliste [Price list]. Augasse 2, A-2500 Baden bei Wien, Austria. 10 p. Manufacturer's catalog. [Ger]

• ***Summary:*** The company has two catalog/price lists: one (green) for food processors and one (yellow) for retail stores. Products made by the company have been marked by the author with an "S." In the front of each catalog is an organic certificate. The retail catalog contains 20 fresh products, 3 books, and 30 non-fresh products. Fresh products made by the company include Tofu Natur, Tofu Mariniert, Tofu Geraeuchert, Tofu Pastete Siddhartha, Tofu Pastete Toscana, Tofu-Burger, Soja-Getreide-Laibchen, Gruenkern Laibchen, Dinkel Laibchen, Reis-Laibchen, Weizengluten Laibchen, Weizengluten, Badener Bratwuerstchen, Badener Grillwuerstchen, Brotaufstrich "Rusticana", Brotaufstrich "Holzknecht." Fresh products sold but not made by the company include soy tempeh, marinated tempeh, and soy sprouts. The company sells 3 recipe books: (1) Their own recipe book *Wichtig für Ernährungsbewusste* (Important for understanding of nutrition); (2) *Tofu: Essen mit Zukunft* (Tofu: Eating with the future) by Brigitte Vogenreiter and Clemens Kuby, and (3) *Schlank mit Tofu* (Slim with tofu; 117 recipes) by A.W. Danzer.

The company also sells many non-fresh products including yellow soybeans (organically grown), soya flakes (*Sojaflocken*, not defatted), whole soy flour, tamari, shoyu, barley miso, Hatcho miso, brown rice miso, soba (buckwheat) miso, nigari, Bonsoy soyadrink (natural and cacao), Pinoccio Soybean coffee, and soynuts.

In the catalog for food processors, for example, the regular tofu, marinated tofu, and smoked tofu are each sold in 1 kg, 30 kg, 60 kg, 100 kg, and 200 kg amounts. Address: Baden (near Vienna), Austria.

7296. Hodgson, Moira. 1989. Spicy cooking adds heat to a cold day. *New York Times*. Feb. 5. p. CN20.

• ***Summary:*** Includes a recipe for "Shrimp in black bean sauce with Oriental noodles." The ingredients include "4 tablespoons Chinese preserved black beans,... 2 tablespoons hoisin sauce,... 1 tablespoon soy sauce." Then: "Rinse the black beans thoroughly under cold running water and chop them fine." Stir-fry the scallions, garlic and ginger for 1-2 minutes. Add the black beans and chili and stir-fry for one minute.

Note: This is the earliest document seen (Nov. 2011) that uses the term "Chinese preserved black beans" to refer to fermented black soybeans. This new term appears in only 2

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documents, in 1989 and 1999.

7297. Boeddeker, Ralph. 1989. Mit Tofu 100 Millionen Mark Umsatz: Das Reinheitsgebot fuer Deutsche Wurst ist gefallen–Naturkost-Hersteller rechnen mit Zuwachs [With tofu, sales of 100 million German marks. The standard of purity for German sausage has fallen–Natural-foods producers count on growth]. *Welt am Sontag* No. 7. p. 33. Feb. 12. Sunday. [Ger]

• ***Summary:*** Describes the very successful soymilk plant sold by Soya Technology Systems (DTD) to DE-VAU-GE in Lueneburg, West Germany. Michael Makowski, healthy looking, in his 50s, and managing director of the company, introduces a meatless banquet and explains that he has been a vegetarian for 30 years. The future for this producer of vegetarian foods looks very bright. Meatless sausages or those extended with soy are seen as becoming increasingly popular. The company is now approaching the 100 million mark sales level and employs 350 men and women. It is in the top 10 of the 70 manufacturers of natural foods in Germany, with a market share of about 10%. Each year it ships about 15,000 tons of natural foods from Lueneburg to the country's roughly 2,700 Reformhaeuser (natural/health food retail stores). The company makes an assortment of 300 vegetarian food products, mostly from cereal grains and soybeans. The latter, grown in the USA, Brazil, and China, offer many possibilities. They can be fashioned into spread for bread, milk, or tofu.

Makowski sees the market for tofu, which resembles Quark, as especially promising. It can be nicely seasoned with spices such as paprika, curry, soy sauce, and/or herbs, and made into meatless sausages. The Reformhaeuser pioneered in introducing non-dairy margarine, whole-grain bread, and Muesli to Europe. Makowski sees the next wave as being tofu boom products. A photo shows the company's 3-level soymilk plant that produces 20 million liters a year in 500 ml and 1 liter containers.

Note added by Anders Lindner, head of STS: Up to now the plant has produced soymilk and desserts. Soon they will also start to produce tofu sausages, yogurt, and pâtés.

Mr. Makowski, eyeing the big potential market for tofu products, is a bit worried that the big food heavyweights such as Unilever, Nestlé, Kraft, etc. might enter this market. When the sale of tofu products begins, DVG's sales are expected to exceed DM 100 million. Address: Lueneburg, West Germany.

7298. Inoue, Kojiro; Sugarman, Carole. 1989. I made at least 1,000 pieces of sushi a day. Now I have sushi elbow. *Washington Post*. Feb. 26. p. I22.

• ***Summary:*** The moving and humorous story of Mr. Inoue, age 45, (as skillfully told by Carole Sugarman), who survived the ten-year process of becoming a sushi chef in Japan, then came to America determined to introduce Americans to sushi and raw fish.

After working in sushi restaurants in Japan for 8 years (and getting married) he heard that Japanese restaurants were getting popular in the United States. In 1971 he came to the USA to run a small (5-stool) sushi bar at Sakura Palace in Silver Spring, Maryland. Sushi wasn't yet popular in America and the customers were surprised that anyone would eat raw fish, squid, octopus, eel, etc. They were also scared to try it themselves. Yet ten months later Mr. Inoue asked his wife and young child to join him. He had a hard time finding good quality, fresh fish. Americans told him, "A fish is a fish." Sometimes he brought frozen fish from Japan or California. After 5 years the owner of his restaurant retired and he now wanted to start and own a restaurant for himself. He started as a sandwich shop, then remodeled. It was hard. He had to explain what sushi was and how to eat to potential customers. Many customers asked for a knife and fork; some still do. He also explained about wasabi and soy sauce.

In 1977, the McGovern Report was released. It said that 500,00 Americans died of heart attacks and that Japanese food was low in cholesterol. Because of that, all Japanese restaurants became popular.

Today sushi has become part of American food culture. His customers are now 80% Americans and 20% Japanese. Fresh fish is easy to buy. Mr. Inoue, who was now making 1,000 pieces of sushi day, developed sushi elbow–just like tennis elbow. He had a cast on his elbow for one year.

"Tokyo people love *natto* (fermented soybeans) or miso soup. I eat bread. American bread. Sometimes cereal." Today Americanized sushi is all over Japan. He is still married, but his wife lives in Japan with his three kids. His kids eat American hamburgers, Kentucky Fried Chicken and pizzas in Japan. He operates a sushi restaurant in Washington, DC.

7299. Clarke, Betty. 1989. Re: List of Pacific distributors and brokers. Letter to William Shurtleff at Soyfoods Center. Feb. 28. 4 p. Typed, with signature on letterhead.

• ***Summary:*** These distributors and brokers are for the states of Washington, Oregon, California, Alaska, and Hawaii. In this region, the company has 24 distributors and four brokers.

The letter begins. "Thank you for your inquiry. We are sending some additional information regarding our Premier Japan sauces which we hope you will find useful."

It concludes with a handwritten note by Betty: "Joel Dee sends his Best Wishes."

The logo at the top center of the letterhead shows a three-masted sailing ship in full sail, in an oval, with three seagulls. Address: 1115 Lousons Rd., P.O. Box 3150, Union, New Jersey 07083. Phone: (201) 964-8176.

7300. Ando, Seiichi. 1989. Wakayama no shoku to sono haikei [The foods of Wakayama prefecture and their background]. In: S. Ando, ed. 1989. Kikigaki Wakayama no Shokuji. Tokyo: Nosan Gyosan Bunka Kyokai. See p. 344-

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53. For shoyu, see p. 345-46. [Jap]*
• ***Summary:*** Discusses the foods of Wakayama prefecture, how they are made and interesting highlights, during the time from the end of the Taisho period to the beginning of the Showa period, thus from about 1920-1930. Address: Osaka, Japan.

7301. Collins, R. 1989. Re: Request for information on traditionally brewed low-salt varieties of shoyu. *East West.* Feb. p. 24. Letter.
• ***Summary:*** Most shoyu contains 16-18% salt. "Since salt is a natural preservative, however, any reduction must be compensated for by the addition of preservatives such as sodium benzoate or ethyl alcohol, as in high-tech varieties, or special handling, as in traditionally-made varieties.

"Traditionally-made lower salt shoyus, such as Ohsawa America Lima Nama Shoyu and Mitoku Macrobiotic Johsen Double Brew Dipping Sauce, are made by a complex process involving two fermentation periods, each lasting eighteen months to two years! First, the usual whole soybean moromi is prepared by mixing koji and a brine solution. After the traditional aging period, the moromi is pressed and the raw shoyu extracted. Next, additional koji and, in some cases, additional brine, is added to the mature raw shoyu and fermented again. The thick, double-brewed moromi is then pressed and the shoyu extracted. The addition of extra koji dilutes the final salt content to 13-14%.

"A few double-brewed shoyu varieties, such as Eden Low Sodium Shoyu and Westbrae Mild Shoyu, have been further diluted with water, reducing the salt content to 8-9% (80-90 mg sodium per half-teaspoon). These lowest salt varieties must be pasteurized, since they have no added preservatives. All low-salt shoyus should be refrigerated after opening."

7302. Dillon, Patricia. 1989. Ethnic ingredients: Mexican and Italian dominate. *Food Engineering* 61(1) 73-76, 81. Feb.
• ***Summary:*** According to Business Trends Analysts, the retail Oriental foods segment of the ethnic foods market grew at 13.5% in 1977-82, at 9.6% in 1982-87, and at 8.7% in 1987-96 (estimated). In each time period it grew faster than the industry average. In 1987 Oriental foods accounted for 8.5% of the total retail ethnic foods market, compared with 40.9% for Italian foods, 24.6% for Hispanic foods, 14% for Pizza, and 12% for Italian sauces. "Retail sales of oriental foods for 1988 totaled $255.5 million, an increase of 3.7%. As Americans continue to develop their tastes in oriental foods, many are passing up soy sauce for teriyaki sauces. Traditionally, it is made from equal parts of soy sauce, sake and sweet sake. Teriyaki and other sauces showed the most dramatic increase within the oriental food category, growing 15% from 1987 with sales totaling $38 million for the first ten months of 1988, says SAMI (Selling Areas Marketing Inc.). Soy sauce demonstrated a more modest growth of 4.2% with sales of $48.6 million for the same period.

"Oriental cooking incorporates much of U.S. current concerns for nutritious food that can be quickly and conveniently prepared. As John Gill of McCormick notes, fresh is the key word. The produce department has proven to be the most exciting area in the supermarket today. A few years ago, it was thought that frozen foods were going to decimate fresh produce, but that hasn't occurred.'"

7303. Eden Foods, Inc. 1989. A soy sauce for all seasoning... (Ad). *Natural Foods Merchandiser.* Feb. p. 14; April. p. 34.
• ***Summary:*** This 5 inch square ad with a color photo shows 5 bottled Eden soy sauces. Four bottles bear the Japanese character for "Hon" or genuine. These four are labeled shoyu soy sauce (including low sodium, and organic) and one is labeled tamari soy sauce (wheat free). "Our Low Sodium Shoyu is double-brewed, requiring three years to mature. Eden certified organically grown crops, aged to perfection, create our Organic Shoyu. Each soy sauce is a masterpiece."

An explanation on page 14 notes that two of these sauces are domestically made [by San-J in Virginia] (naturally brewed shoyu and wheat free tamari). Eden's popular soy sauce line has also been introduced. Traditional Japanese, low-sodium, and organic. "All five items are available in new, convenient sizes–5, 10- and 20 oz glass jars and bulk 4.75- and 55-gallon containers."

Also published in Let's Live. 1989. March. p. 45. And in East West. 1989. April. p. 9. Address: Clinton, Michigan.

7304. *Florida Grocer* (*Miami*). 1989. Kikkoman says–Start the (Chinese) New Year off right! Feb. [1 ref]
• ***Summary:*** Kikkoman has just published a new 96-page cookbook [titled *Kikkoman Oriental Cooking*]. The article outlines Kikkoman's extensive TV and print ad campaign including (1) inserts in leading women's magazines to reach 35 million households, (2) sponsorship of 26 shows in the Yan Can Cook Show series on PBSTV broadcast in 150 markets, (3) sponsorship of Yue Sai-Kan's cable TV series 'Looking East' in Feb.-April, 875 30-second spots featured in a Chinese New Year flight and a fall flight, (4) 72 insertions in 22 magazines to reach 528 million readers, 6 times a year.

Kikkoman soy sauce "has always been made naturally, without any artificial ingredients" [How about preservatives?]. Kikkoman Soy Sauce is the market leader, with over 50% of the market share. With a 25% annual growth rate, Soy Lite is the fastest growing product in the Kikkoman family. Teriyaki Baste & Glaze dominates the category with a 75% market share; Stir-Fry Sauce has over 80% market share. Sweet & Sour Sauce is also doing well.

7305. *Natural Foods Merchandiser.* 1989. Soy inspirations. With plenty of new products on the horizon, retailers should

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begin to plan now for a sizzling Soyfoods Month in April. Feb. p. 12-13.

• ***Summary:*** Sales of soyfoods (tofu, soymilk, soy sauce, miso, other such as entrees, cheese, ice creams, meat analogs, etc.) are estimated to be $638 million for 1987 and $682 million for 1988, and projected at $754 million for 1990. Discusses Corporate Culinary Carnival soyfoods promotions by Judy Brown, and a soyfoods cooking contest by Mike Shields of Food For Thought in Long Island, New York. Winners received their weight in tofu. The unique idea made it into the pages of *USA Today*. Among the 30 entrants, winners were selected in 3 categories: entree, dessert, and beverage.

7306. Ogundipe, H.O.; Osho, Sidi M. 1989. Soybean in Nigerian diets–Past, present and future. Paper presented at the Soybean Production and Utilization Workshop. 3 p. Held 13-15 Feb. 1989 at Lagos, Nigeria. [3 ref]

• ***Summary:*** "Soybean is reported to have been introduced into Nigeria in about 1908. It was mainly restricted to that part of Nigeria now referred to as Benue State and the Zonkwa-Abuja ecological zones." The earliest known use of soybean in the Nigerian diet was in the form of dawadawa, a fermented soup condiment traditionally made from the locust bean. Presently most of the dawadawa produced in Nigeria uses soybean as its raw material. Production has spread to various parts of the country and there has been a marked improvement in processing techniques. Soy ogi and soymilk have also been used as foods in Nigeria. Since 1984 the Kersey Children's Home in Ogbomosho has run a clinic to treat malnourished children. About 24,000 out patients were teated in 1984 while at any given time about 40 severely malnourished children are admitted and placed on a diet consisting mainly of soymilk and traditional foods fortified with soybeans.

In Nigeria, the lack of recognition of the potential of the soybean is now a problem of the past. The greatest potential is expected to lie in the preparation of Nigerian foods. A book titled "Soybean Recipes" has been published. People in rural households in Nigeria are now learning to use soybeans. "The extension work with soybean utilization commenced at 3 project sites in Oyo State, i.e. Igangan, Ikoyi, Ijaye. Training and demonstrations take place at these sites, in which the villagers participate. The program has since expanded to 27 other villages.

"As a result of these training programs over 25,000 people have been trained and now soybean is found in local markets. The demand for utilization is increasing.

"Also, within the past few years, there are in the markets several soy fortified products like Nutrend, Golden morn, Nutrimax, etc. There are also whole soy products like soy nuts, soybean oil and liquid soy maggi [HVP soy sauce]. It is expected that several others will still enter the market this year.

"The future: While emphasis is presently being placed on the preparation and utilization of soybean at home, there is likely going to be a shift to commercial control processing of soybean... With the reduction in the availability of groundnut coupled with its soaring prices, soybean will play a more vigorous role in the formulation of livestock feed, with the possibility of reduction in feed cost and consequently of livestock produce." Address: 1. International Inst. of Tropical Agriculture (IITA), PMB 5320, Oyo Rd., Ibadan, Nigeria; 2. Inst. for Agricultural Research and Training (IAR&T), Ibadan, Nigeria.

7307. Packaged Facts. Subsidiary of FIND/SVP. 1989. The Oriental foods market. 625 Avenue of the Americas, New York, NY 10011. 225 p. Feb. [1 ref]

• ***Summary:*** Contents (main divisions): I. Introduction. II. The overall market, including a brief history in America. The market leaders, in descending order, are La Choy, Stouffer, Chun King, Nissin, Kikkoman, Budget Gourmet, JFC. III. The frozen segment. IV. The canned/packaged segment: Sauce sales now over $100 million and soy sauce nearly 3/4 of all sauce sales. V. The tofu segment (detailed below). VI. The dry soup segment: Nissin number one. Appendix: Company profiles: BCI Holdings Corp., Nestlé S.A., Nissin Foods Co., Kikkoman International (in American since 1956), ConAgra, Sanwa Foods, Others (Kraft, Benihana, JFC International).

Section V is "The Tofu Segment" (p. 153-178). Contents: I. The products: Brief history. A protein staple in the Orient. The Miracle food. Tofu high in protein. Calcium content can be high. How it is made. Raw tofu the most common form. Other forms found in specialty stores. How tofu is used.

II. The market. Tofu sales reach $71 million in 1988 (Gives dollar volume in millions from 1984 [$57] to 1988 [$71]. Source: Packaged Facts). III. Factors in future growth: Popularity of Oriental cuisine. Tofu adopted by dieters and health conscious. Consumers attracted by low price. Dinners and entrees being introduced. Tofu helpers (Betty Crocker's Oriental Classics Dinners [General Mills] call for the addition of tofu, chicken, or meat). Tofu substitutes are proliferating (value-added tofu based ice creams, puddings, burgers, cheese, hot dogs, salad dressings, etc.). Interest by corporate giants (Pillsbury and Carnation). Tofu used in U.S. National School Lunch Program (it is estimated that 50 million lb of soy proteins are used each year in school lunches). IV. Projected sales: $119 million market by 1995 (7-8% dollar increase annually). V. Market composition: Raw tofu over half of sales. Supermarkets account for 60% of sales. V. The Marketers: Field narrowed to 150 or fewer marketers. Four major marketers (Hinoichi, Azumaya, Morinaga, Nasoya; produce 100,000+ weekly). The second echelon (Northern Soy, Quong Hop, White Wave, Island Spring; produce 15,000–30,000 lb/week). VI. The

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competitive situation: Precise market shares unavailable. Hinoichi, Azumaya, Nasoya, and Morinaga lead Tomsun, failing with Jofu [tofu yogurt], files for Chapter 11. Watch out for Kikkoman. VII. Advertising and promotion: No measurable expenditures (except by Tofutti). VIII. Packaging: Plastic and foil. IX. Distribution and retail Distribution. 60% of raw tofu sold in supermarkets. Pricing includes higher margins. Assortment. Most tofu shelved with produce. Pricing data at the retail level. In its *Key Price Book*, Marketing Services Corporation publishes detailed information on tofu products sold in California supermarkets. This includes data on package sizes, case sizes, competitive pricing, margins, and promotional discounts. Figures for Kikkoman Kinugoshi, and two textures of Morinaga were compiled on 1 Feb. 1989. X. The consumer. Size of user base unknown. Roper poll reveals a dislike of tofu. Those most likely to use. Address: New York. Phone: 212-645-4500

7308. **Product Name:** Paul's New and Original Brown Rice Tofu Sandwich [Less Spread, More Veg]
Manufacturer's Name: Paul's Organic Food Works
Manufacturer's Address: P.O. Box 431, Fairfax, CA 94930. Phone: 415-453-2360
Date of Introduction: 1989, February
Ingredients: Short grain brown rice*, spring water, nigari tofu*, sprouted wheat tortilla*, toasted tahini, barley miso*, green onions* or leeks*, carrots*, seasonal green*, cabbage, lettuce*, clover sprouts*, shoyu*, sesame oil*, garlic*, ginger*, apple cider vinegar, unrefined sea salt, spices. * = Organically grown per Cal. Health Code Sec. 26569.11
Wt/Vol., Packaging, Price: 12 oz.
How Stored: Refrigerated.
New Product–Documentation: Label sent by Paul Duchesne. 1989 Aug. 11. 5.5 by 2 inches. Black on green paper. "12 happy ounces. For the best taste, remove from refrigeration one hour before eating. To eat: Open bag–Tilt sandwich in bag–fold bag down." Illustration of animated product, with smiling face on tortilla, arms, and legs. On the back of each is a statement: "Concentrate on the issues, not the individuals.." The statement is changed weekly. Talk with Paul Duchesne. 1989. Aug. 16. Introduced in Feb. 1989

7309. **Product Name:** San-J Gold Label Tamari (Traditionally Brewed Gourmet Soy Sauce, Made from Whole Soybeans and Wheat Free), Black Label Tamari (Made from Defatted Soybean Grits), Teriyaki Sauce, and Szechuan Sauce
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 800-595-9545 or 415-821-4040 (Perelman)
Date of Introduction: 1989, February.
Ingredients: Gold label: Whole soybeans, water, sea salt [and alcohol].
Wt/Vol., Packaging, Price: 5.07 fluid oz. (150 ml) dispenser, 10 fluid oz bottle, 20 fluid oz (592 ml). The 10 oz Gold Label retails for about $2.29, and the Black Label for about $1.99 (13% less)
How Stored: Shelf stable.
Nutrition: Gold label: Per 1 tbs.: Calories 11.34, protein 1.84 gm, carbohydrate 1.06 gm, fat 0 gm.
New Product–Documentation: These products, formerly imported from Japan, are now all made in America at the new San-J plant in Richmond, Virginia. The basic San-J tamari started to be made in America in Oct. 1988 and is expected to be available by Feb. 1989. Specialty Food



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Merchandising. 1988. Oct. "Japanese seasoning now brewed in U.S. San-J Tamari is already being used as an ingredient in the foods of such major U.S. packers as Campbell, Hunt-Wesson, Stauffer, and H.J. Heinz."

Ad (½ page color) in Food Distributors Magazine. 1989 Jan. And Feb. p. 80 "Family Planning." Shows black-label tamari, low-sodium tamari lite, and Szechuan sauce.

Article in Food & Beverage Marketing. 1989 Jan. p. 38 "Tamari comes to the states."

Ad (2.4 by 11 inches, color photo) in Cooking Light. 1989. Jan/Feb. p. 24. "Ancient remedy for tired recipes... The most contemporary cooks are using San-J Tamari in everything from stir-fry to nouvelle cuisine. Tamari, the original soy sauce of Japan, enhances flavors naturally and reduces sodium by up to 30% when used in place of salt." Shows a bottle of gold label tamari against a purple background. Also in Bon Appetit. Jan. 1990.

Ad in Natural Foods Merchandiser. 1989. March. p. 54. "The gold standard." This is the new product, made in America, with a gold label. Also run in Vegetarian Times. 1989. April. p. 3.

Interview with John Perelman, VP Sales and Marketing, San-J. 1990. Jan. 25. The Gold Label and Black Label tamari, made in America, first became available in Feb. 1990. The reformulated Teriyaki Sauce and Szechuan Sauce, made with American-brewed tamari, were introduced to the market in April 1989. See also separate record for this interview.

Ad in Vegetarian Times. 1990. March. p. 17. "Ancient remedy for tired recipes." (Different from that cited above). "More cooks are discovering the extraordinary benefits of traditional tamari soy sauce."

Two labels each sent by Misako Binford of San-J International. 2012. May 14. The black label now reads "Tamari. Gluten Free Soy Sauce. 10 fl. oz. Made with 100% soy." Two logos on the front panel: (1) Non GMO Project verified. (2) Certified Gluten Free. "Contains 28% less sodium than regular tamari." She notes: Product introduced 1987 or before. Imported.

7310. Leblang, Bonny Tandy; Wyman, Carolyn. 1989. Jolly Time popcorn lacks cheesy taste: Supermarket sampler. *Sun-Tattler* (*Hollywood, Florida*). March 16.

• ***Summary:*** This "Special" to the *Sun-Tattler* mentions "La Choy Lite Soy Sauce. $1.39 per 10 oz. bottle." Bonnie writes: "Everyone from the Surgeon General to the American Heart Association suggests Americans lower their sodium intake." This new soy sauce contains 47% less sodium than La Choy's regular version, or only 110 mg of sodium per ½ teaspoon. It also contains preservatives.

7311. Akwarius Almere. 1989. Akwarius prijs en bestelboek: Natuurvoedingsprodukten, Januari-Februari-Maart [Catalog and price list. Natural food products, January-March]. P.O. Box 50070, 1305 AL Almere, The Netherlands. 77 p. [Dut]

• ***Summary:*** For details, see entry for the April-June 1989 catalog. Address: Almere, Netherlands. Phone: 03240-20800.

7312. **Product Name:** Baccio Tofino Gourmet Ravioli (Tofu Ravioli)
Manufacturer's Name: Baccio Ravioli and Pasta Company.
Manufacturer's Address: 179 E. 19th St., Chico, CA 95928. Phone: 916-893-8324
Date of Introduction: 1989. March.
Ingredients: Pasta: Organic whole wheat flour*, semolina, tomato powder, purified filtered water. Filling: Tofu (made from organic soybeans*, water, nigari), potatoes, onions, carrots, bread crumbs, tomato paste, tamari, vinegar, garlic, herbs & spices, olive oil, sea salt. * = Organically grown and processed in accordance with Section 26569.11 of the California Health and Safety Code.
Wt/Vol., Packaging, Price: 16 oz poly bag.
How Stored: Frozen.
New Product–Documentation: Talk with (call from) Amanda Leveroni. 1990. March 5. The product was introduced in about March 1989.

Label sent by Amanda. 1990. March 13. 4.75 by 8.5 inches. Thick paper; its slips into the bag. Red, green, and black on white. Illustration of a red lipstick print, all against a background grid of fine green lines in 3/8 inch squares. "Egg free. Dairy free. Cholesterol free! Introducing the all new Tofino! We've taken out the eggs and cheese to bring you a robust tasting ravioli with zero cholesterol! Our zesty blend of ingredients includes organic tofu and organic whole wheat flour! Enjoy this unique delicious ravioli plain or with Baccio's new pesto sauce! Baccio Ravioli. The ultimate meal in minutes [Boil for 4-5 minutes]. Let a Baccio kiss your tastebuds tonight." UPC indicia.

7313. Colbin, Annemarie. 1989. The natural gourmet: Delicious recipes for healthy, balanced eating. New York, NY: Ballantine Books. x + 325 p. March. Illust. by Laura Hartman Maestro. Index. 24 cm. [16 ref]

• ***Summary:*** Pat McNees of *The Washington Post* has called Annemarie "The Julia Child of natural foods cooking." Her photo, in color, graces the cover. The book incorporates "The Five Phases of Food" theory from China, based on a book by John W. (Jack) Garvey (1983), as an aid to meal balancing. Below each recipe name is given the major phase and minor phase that it represents. Soybeans, tofu, tempeh (as well as brown or white rice and mochi) are metal (declining state), while black soybeans are water (maximum rest before growth).

Page 27 notes: "You will not find any recipes in this book with whole soybeans; I find their taste too unpleasant, and tend to believe some research that indicates they may contain oxalates and other elements that prevent nutrient absorption. Soybean products such as miso, shoyu (the

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natural soy sauce made with wheat), tamari (a wheat-free natural soy sauce), tofu, and tempeh, on the other hand, are delicious; tofu and tempeh are good protein sources when combined with the grains. You will also find the condiments miso and shoyu or tamari used in many of the recipes."

Soy-related recipes include: Black and white aioli dip (with tofu, p. 49; Note: "Aioli" is derived from the French words for "garlic" + "oil." Aioli sauce is made from crushed garlic, egg yolks, olive oil, and lemon juice). Tofu and spinach turnovers (Spanakopitas, p. 66-67). Bean-of-the Orient miso soup (p. 74-75). Shoyu consommé with enoki mushrooms (p. 77). Collard miso soup (p. 78-79). Carrot-beet soup with tofu sour cream (p. 83-84). Tofu sour cream (p. 84-85). Baked [kidney] beans with miso and apple butter (p. 136). Vegetable-tofu sauté (p. 154-55). Tofu mushroom stroganoff with bulgur (p. 155). Tofu sour cream (p. 156). Broccoli-tofu quiche with wild mushrooms (p. 157-58). Open herbed tofu sandwiches (p. 158-59). Tempeh with shallots and white wine (p. 160-61). Tempeh in sweet and sour sauce (p. 161-62). Tempeh with creamy horseradish sauce (p. 163). Stir-fried bak choy with marinated tofu (p. 169-71). Green peppers with miso (p. 182-83). Spinach-nori rolls with tofu and wild mushrooms (p. 186-87). Green salad with miso-coriander dressing (p. 203). Red and white cabbage salad with miso-onion dressing (p. 208). Radish-watercress salad with soy-sesame dressing (p. 209; with ½ tablespoon black sesame seeds and ¼ cup toasted sesame oil). Salad of wilted collard greens with yellow peppers and white miso dressing (p. 210). Spiced glazed pears with tofu cream (p. 271-72). White miso and orange dressing (p. 285).

Note: This is not a vegetarian cookbook. There is a chapter of fish recipes, and other recipes for the use of alcoholic beverages/seasonings (wine, mirin). Address: Founder and director, Natural Gourmet Cookery School / Inst. for Food and Health, 365 West End Ave., New York City, NY 10024.

7314. GEM Cultures. 1989. Catalog [Mail order]. 30301 Sherwood Rd., Fort Bragg, CA 95437. 4 p. March. [4 ref]
• ***Summary:*** Contents: 1. Powdered cultures for soycrafters: Powdered starter cultures for tempeh, miso, amazake, shoyu, and tamari. In home and commercial sizes. Rice koji. 2. Cookbooks with culture (lists 4 books). 3. Coagulants for curding tofu: Natural nigari or Terra Alba calcium sulfate in 1 lb or 5 lb bags. 3. Self renewing cultures: Vili, sourdough, kefir, miso. 4. Sea vegetables from the Mendocino Sea Vegetable Co. 5. Recyclables: Cheesecloth, super sealers (lids).

"We at GEM Cultures are a husband and wife team, Gordon & Betty, with between us 37 years of professional experience in culturing microorganisms and teaching people about them. In 1980 we set up GEM cultures with the goal of providing dependable, low cost cultures and related items for the growing number of people who wish to have a hand in creating a healthier diet through cultured foods." Address: Fort Bragg, California. Phone: 707-964-2922.

7315. **Product Name:** Barbeque Chili with Tempeh.
Manufacturer's Name: Homestyle Foods (Formerly Sonoma Specialty Foods).
Manufacturer's Address: 2317 Bluebell Dr., Santa Rosa, CA 95401. Phone: 707-525-8822.
Date of Introduction: 1989 March.
Ingredients: Tempeh (organic soybeans*, culture), tomatoes, onions, soy oil, mustard, lemon juice, molasses, tamari, apple cider vinegar, natural herbs and spices. * Made in accordance with California H&S Code 26569.11.
Wt/Vol., Packaging, Price: 8 oz plastic tub.
How Stored: Refrigerated.
New Product–Documentation: Label. 1989. 4.5 inches diameter. Plastic lid. Red and black on white. Illustration of a cottage. "Microwaveable. New! Non-dairy. Cholesterol free. Heat or ready to eat in sandwiches & salads as an entree. Natural. No preservatives. Nutritious. Delicious. Kosher."

Talk with Benjamin Hills. 1989 June 6. The product was launched in March. He is now working on a Tropical Pudding. The company seems to be going downhill.

Product served at World Vegetarian Day in San Francisco. 1990. Oct. 6. Note that Homestyle's products are now made by White Wave in their plant at 1990 N. 57th Ct., Boulder, Colorado.

7316. San-J International, Inc. 1989. The gold standard (Ad). *Natural Foods Merchandiser.* March p. 54; April. p. 89.
• ***Summary:*** This full-page color ad refers to "San-J Whole Soybean Tamari: Wheat Free Soy Sauce," and specifically to the new product, which bears a gold label, that is made in America. A large 10-oz. bottle of the tamari is shown against a background of whole soybeans. A small inset of Black Label Tamari and Tamari Lite are also shown. "This extraordinary seasoning establishes a new standard for the other varieties of San-J Tamari. Try our new Black Label soymeal tamari–brewed here for the first time–and Tamari Lite, which offers a 25% sodium reduction. San-J Tamari. Pure soybean. Pure gold."

Also published in Vegetarian Times. 1989. April. p. 3, and May p. 2. And in East West. April. p. 47. Address: Virginia.

7317. *Whole Foods.*1989. Bios: U.S. Mills. March. p. 110.
• ***Summary:*** U.S. Mills, established in 1908, specializes in 100% natural products. Our Erewhon cereals, granolas and nut butters are produced in our facility in Omaha, Nebraska. We also import a complete line of macrobiotic products from Japan, including shoyu tamari. In addition, we are the exclusive importer of Kentaur cereals from Switzerland. When the name Erewhon or U.S. Mills appears on the package, be assured your customers are getting the very

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best. U.S. Mills Inc., 395 Elliot St., Newton Upper Falls, Massachusetts 02164, (617) 969-5400.

7318. Spitzler, Andrew C. 1989. Tasty tofu tailored to tempt trier's tongues. Silver Spring pair test market new dishes for national campaign. *Washington Business Journal* (*McLean, Virginia*). April 3. p. 1, 33.
• ***Summary:*** Edward H. Walker and Andrew J. Wilks (shown in a photo) of Tofoods hope to make tofu into a household and institutional dietary staple. "Tofu is often ridiculed as being rubbery, tasteless and just plain unappetizing...

"Tofoods is seeking about $2 million in venture capital to market its products to retailers and institutions such as hospitals and elderly service organizations. So far, the two partners have commitments for $500,000... The idea for Tofoods came to Walker and Wilks while they were co-managing a restaurant at a health resort in the Catskills...

"The pair raised $300,000 from friends, family and themselves, relocated to Silver Spring and formed Tofoods in 1986. During 1986 and 1987 they test-marketed the frozen dinners they had developed. People responded well to such frozen entrees as sweet and sour tofu, tofu teriyaki and barbecued tofu. Tofoods sold $100,000 of their products in 44 states, mostly in kosher and natural food markets." One company watching Tofoods progress is 50-year old Worthington Foods Inc. of Worthington, Ohio, the largest manufacturer and distributor of soyfoods in the USA, with $50 million is sales last year.

7319. Brown, Judy; Bates, Dorothy R. 1989. Judy Brown's guide to natural foods cooking. Summertown, Tennessee: The Book Publishing Co. 160 p. Index. With 8 pages of color photos. 23 cm.
• ***Summary:*** This natural foods, vegan cookbook, which does not require the use of dairy products or eggs, includes more than 200 recipes, many of which contain soyfoods. In the chapter titled "The Natural Foods Pantry" is a sub-chapter titled "Soy Foods," which gives brief introductions to tofu, tempeh, miso, soy milk, soy cheeses, soy yogurt, soy flour, and soy pulp or okara. There are also sub-chapters on sea vegetables, sprouts (including soy sprouts), organic foods, macrobiotics (which is "heavily emphasized in this book"), more natural foods ingredients (which, under soy sauce, discusses the differences between shoyu and tamari).

The number of recipes featuring various soyfoods are: Tofu (15), tempeh (5), miso (4), soymilk (1), shoyu (1), and okara (1: soysage).

The author, a specialist in consumer education, presently organizes culinary carnivals and natural foods tasting fairs. She has written extensively on natural foods and holds a Master's degree in Consumer Economics from the Univ. of Maryland. She is president of Judy Brown Enterprises, a public relations company for natural foods products. Address: 9 Dovetree Court, Indian Head, Maryland 20640. Phone: 301-753-6548.

7320. Golbitz, Peter. 1989. Soyfood releases down 37% from 1987; 1988 new product count. *Soya Newsletter* (*Bar Harbor, Maine*). Jan/April. p. 3.
• ***Summary:*** According to Soya Newsletter's figures, only 137 new soyfood products were released in the USA in 1988, compared with 217 in 1987. 70 new products (51%) contained tofu as the main soyfood ingredient. Soy sauce was the next most popular ingredient, used in 24 new items or 18% of the total. A bar chart is shown comparing 9 product categories in 1988 and 1987.

According to similar figures gathered by the Soyfoods Center, 220 new products were released in the USA in 1988, compared with 418 in 1987, a 47% drop. Address: Soyatech, Bar Harbor, Maine.

7321. **Product Name:** Grand Life Sandwich (With Seitan).
Manufacturer's Name: Grand Life Natural Foods.
Manufacturer's Address: P.O. Box 403, Pacific Grove, CA 93950 [c/o Sweet Earth, 207 16th St.]. Phone: 408-375-8673.
Date of Introduction: 1989, April.
Ingredients: Incl. whole wheat bread, seitan (Whole wheat flour, filtered water, natural tamari (soybeans, wheat, seasalt), kombu, ginger, garlic), sauce (pickles, Nasoyanaise, etc.).
How Stored: Refrigerated.
New Product–Documentation: Talk with Russel Hicks, owner of Sweet Earth Natural Foods in Pacific Grove. 1991, Nov. 26. This product was developed by Edmund Reininger and Russel, and introduced in the spring of 1989. The seitan is breaded in a felafel mix and pan-fried, then put between two slices of wholegrain bread with a special macrobiotic sauce containing pickles, Nasoyanaise, etc. It is distributed refrigerated in central and northern California by Sweet Earth.

7322. Kikkoman Foods. 1989. How to go lite on the salt (Ad). *New Choices for the Best Years* (*New York, NY*). April.
• ***Summary:*** This 2½ by 9½-inch, color photo ad shows a lady's index finger holding up a bottle of Kikkoman Lite Soy Sauce, which contains 40% less salt. "100% Kikkoman taste. But very light in salt. Far lighter than other brands. So now you can add the Kikkoman touch and still go Lite on the salt. Kikkoman Lite. In the oriental section of your favorite market."

7323. Mitoku Co. Ltd. 1989. Food is medicine: Mitoku macrobiotic (Ad). *East West*. April. p. 33.
• ***Summary:*** The top half of this full-page ad contains a large square red seal with four Chinese characters, read *"Ishoku Dogen*, which literally means 'medicine and food (have the) same source.' It is an old traditional saying in Japan, and its not only Oriental philosophy. In the 4th and 5th centuries

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BC, a Greek physician spoke of letting food be our medicine. Hippocrates taught that the effects of occupation, climate and food, were where much of the cause of illness lay. Today, modern science and medicine have begun to agree with this ancient wisdom."

"Mitoku Macrobiotic products are a selection of some of the highest quality foods in the world; Miso, Tamari and Shoyu, premium seaweeds, ... mochi."

USA wholesale distribution: Granum, Seattle, Washington 98105 (206) 525-0051. Spiral Foods Inc., Asheville, North Carolina 28814 (800) 633-2156. Address: CPO Box 780, Tokyo, Japan 100-91.

7324. **Product Name:** [Thai Spring Rolls {With Tofu}]
Foreign Name: Thailande Soynem
Manufacturer's Name: Société Soy.
Manufacturer's Address: 1 rue du Crêt de la Perdrix, 42400 Saint-Chamond, France. Phone: 77.31.24.42.
Date of Introduction: 1989, April.
Ingredients: Rice cakes, sunflowerseed oil. Filling: Tofu (water, soya* 20%), carrot, onion, black Chinese mushrooms, rice vermicelli, soy sauce. * = Organically grown.
Wt/Vol., Packaging, Price: 160 gm.
How Stored: Refrigerated.
New Product–Documentation: Form filled out for Anthony Marrese by Bernard Storup, 1989, Nov. The product was launched in April 1989.

Label: 1989. 3 by 5.35 inches. Red, green, black, orange, yellow, and blue on white. Illustration of a Thai-like wooden sailing vessel in front of a large sun and palm trees. "The soya epicure/gourmand." *Nem* is the Vietnamese word for "Spring Roll."

7325. **Product Name:** Garden Gourmet Vege-Patties.
Manufacturer's Name: Tivall.
Manufacturer's Address: Kibbutz Lochamei Hagetaot, Mobile Post, Ashrat (Oshrat), 25220 Israel.
Date of Introduction: 1989, April.
Ingredients: Rehydrated soy protein concentrate and wheat gluten, vegetable oil (soybean, cottonseed), egg whites, spices, salt, onion, garlic, tamari sauce, hydrolyzed vegetable protein, caramel color, guar gum (natural vegetable gum), natural flavoring, lecithin, vitamin A, thiamine (vitamin B-1), riboflavin (vitamin B-2), pyridoxine hydrochloride (vitamin B-6), vitamin B-12, nicotinamide, vitamin C, calcium pantothenate.
Wt/Vol., Packaging, Price: Retail: 10.6 oz package. Foodservice: 2.65 oz.
How Stored: Frozen.
Nutrition: Per 1 patty (75 gm): Calories 170, protein 12 gm, fat 11 gm, carbohydrate 6 gm, cholesterol 0 mg, sodium 353 mg.
New Product–Documentation: Leaflet (6 by 8.25 inches, color photos). 1989, April. Obtained at Natural Foods Expo, Anaheim. "Congratulations. You have just completed the first exercise to a healthier you. Food this good for you never tasted this good." Shows 4 packages and 4 entrees served on plates. Soy is not mentioned. "We'd like you to try Garden Gourmet entrees, the tasty and healthy alternative to red meat. Each delicious dish is made from a unique blending of farm-fresh legumes, whole grains and a dash of natural herbs and spices." Note: Vege-Cutlets, Vege-Links in Pastry, and Vege-Puffs are presently based on wheat flour and contain no soy.

Garden Gourmet brochure sent by Tivall, Israel. 1990, Sept. 4. Glossy insert. "Garden Gourmet Vege-Patties is an entrée that combines a rich, savory taste with the versatility of a hamburger. Marvelous alone or topped with sauce and/or cheese for international flavor."

7326. Tortano, Peter. 1989. Japanese food firms cook up new strategies for U.S. consumers. *Economic World*. April. p. 22-26.
• ***Summary:*** "Riding the success of tasty, low-priced food products, the Japanese eye a bigger helping of the U.S. grocery mart." Two of the most popular Japanese food products have been soy sauce, ramen noodles, and tofu. "Nissin sold more Cup O'Noodles in the United States last year than McDonald's sold hamburgers nationally... Japanese food companies and food products are slipping under America's door unnoticed... The Japanese start selling their food products in the U.S. to a small, very concentrated ethnic market... While Kikkoman can trace exports of soy sauce to the U.S. as far back as 1869, most Japanese food companies did not export to or manufacture products in the United States in significant quantities until the 1970s.

"American food product companies focus on their competitors, whereas the Japanese tend to focus on what the customer wants...

"Kikkoman, one of Japan's largest food-related companies, is involved with wines and liquors, pharmaceuticals, health foods and a chain of restaurants. In addition to its other products, Kikkoman has introduced a shelf-stable tofu, instant miso soup and a rice wine for use in cooking.

"Kenzaburo Mogi, planning manager of Kikkoman's foreign operations department, says tofu could become as big a market as soy sauce for Kikkoman in the U.S. in the years to come. In the U.S., Kikkoman also owns 80% share of JFC (Japan Food Corp.), a major distributor of oriental food products... Consumption of Kikkoman's soy sauce has increased fivefold since 1972... On average, each Japanese consumes about 2.5 gallons of soy sauce every year; the average American consumes less than 10 oz...

"Almost a quarter of Kikkoman's total business now is outside Japan: two-thirds in the U.S. and most of the rest in Southeast Asia. The company also is targeting production in

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Europe, Australia and China...

"Ajinomoto Co, Japan's largest food processor, has been selling abroad since 1909, when its first overseas office opened in New York... Until the 1960s, Ajinomoto's main product was MSG (monosodium glutamate). Today, it has a more diversified line-up, with about 41% of sales coming from processed foods, and 26% from seasonings... The predominant products the firm manufactures in the U.S. are amino acids for pharmaceutical use...

"Kibun Products International Inc., a subsidiary of Kibun Company Ltd. Japan, is a major manufacturer of surimi in the U.S... Kibun is a multi-billion-dollar, 50-year-old food products company with worldwide operations totalling $2,000 million annually...

"Morinaga Nutritional Foods Inc., a subsidiary of Morinaga Milk Industry Co. Ltd., the Borden of Japan, is selling its tofu in air-tight containers that prolong freshness, eliminate water changes and is bacteria-free.

"'This could be the food of the future, replacing dairy and meat as major sources of nutrition,' says Kent Cooper, spokesman for Hakuhodo Advertising America Inc. in Los Angeles, which handles Morinaga's account...

"Faith Popcorn, chairman of BrainReserve Inc., a marketing consulting company to Fortune 500 companies says America is eating healthier and is more and more concerned with where food products originate and what that does to the Earth, known as the graining/greening of America. 'Vegetarianism is growing like crazy. Americans are changing from flesh food to health food.'"

7327. **Product Name:** Sloppy Joe Tempeh, and Tempeh Chili. Renamed Vegetarian Sloppy Joe, and Vegetarian Chili in about June 1990 (Both still made with Tempeh).
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: 1990 North 57th Court, Boulder, CO 80301.
Date of Introduction: 1989, April.
Ingredients: Soy rice tempeh (cultured soybeans, water, brown rice), tomato paste, textured vegetable protein (soy flour), green pepper, soy oil, dehydrated onion, soy sauce, water, honey, apple cider vinegar, molasses, spices, garlic powder, salt.
Wt/Vol., Packaging, Price: 15 oz cup. Changed to 10 oz cup. Retail for $2.89 to $3.19 each.
New Product–Documentation: Talk with Steve Demos. 1989. May 13. Sloppy Joe Tempeh, and Tempeh Chili were introduced in April 1989 in 15 oz. tubs. Talk with Lon Stromnes. 1989. May 15. Clarifies names. The White Wave booth, with all its new products and T-shirts, was the hit of the NFM show at Anaheim last April. Soya Newsletter. 1989. May/June. p. 8.

White Wave News. 1991. Vol. 4, No. 1. June. "White Wave debuts new Size Vegetarian Sloppy Joe and Vegetarian Chili." The new size is a 10 oz. reclosable plastic tub. The products are made with diced White Wave Soy Rice Tempeh. Recommended retail price: $1.69 to $2.19.

Letter from Lon Stromnes. 1991. July 30. The new 10 oz package was launched in June 1991. White Wave color postcard. 1992. Aug. "Think fast. For no-meat heat & eat, we serve the All-American favorites. Vegetarian Sloppy Joe. Vegetarian Chili. All the sizzle... None of the steak." The product appears to be sold in a red plastic tub, like tofu.

7328. **Product Name:** Tempeh Barbecue.
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: 1990 North 57th Court, Boulder, CO 80301. Phone: 303-443-3470.
Date of Introduction: 1989, April.
Ingredients: Soy tempeh (cultured soybeans, water), tomato paste, soy oil, honey, soy sauce, water, molasses, concentrated lemon juice, onion powder, granulated garlic, spices, salt. Our soybeans are organically grown in accordance with Section 26569.11 of the California Health and Safety Code.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated or frozen.
New Product–Documentation: Talk with Steve Demos. 1989. May 13. These tempeh products were introduced in April 1989. Talk with Lon Stromnes. 1989. May 15. Clarifies names. The White Wave booth, with all its new products and T-shirts, was the hit of the NFM show at Anaheim last April. Label. 1989. April. Black, white, and yellow on red. "All the sizzle... None of the steak."

Soya Newsletter. 1989. May/June. p. 8.

7329. Wood, Rebecca. 1989. Quinoa the supergrain: Ancient food for today. New York, NY: Japan Publications Inc. Distributed by Kodansha International USA/Ltd. 202 p. April. Illust. Index. 26 cm. [51 ref.]
• ***Summary:*** Quinoa (pronounced KEEN-wa; scientific name *Chenopodium quinoa* Willd.) originated in the *altiplano*, the high plains of the Andes in Peru and Bolivia. It was called the "mother grain" by the ancient Incas. The protein content of quinoa seeds ranges from 7.5% to 22.1%. The two men most responsible for creating a quinoa market in the USA are Stephen Gorad and Don McKinley of the Quinoa Corporation in Boulder, Colorado.

Note: *Webster's Dictionary* defines quinoa (derived from Spanish, via the Quechua *quinua;* the term was first used in 1625) as "a pigweed (*Chenopodium quinoa*) of the high Andes whose seeds are ground and widely used as food in Peru."

Chapter 8, "All about cooking quinoa," contains many recipes. A number of these use soyfoods, including natural soy sauce or tamari (p. 65); Star canapés with tofu-caper topping (p. 88-89). Noodle salad with fresh soy mayonnaise (with soymilk, p. 110). Tofu, quinoa, and dulse salad (p. 114-15). Sweet and sour quinoa tempeh (p. 129-30). Address:

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7330 Library of Congress, Subject Cataloging Div., Processing Services. 1989. Library of Congress subject headings. 12th edition. Washington, DC: Cataloging Distribution Service, Library of Congress. 3 volumes.
• ***Summary:*** This 12th edition (LCSH 12) contains approximately 173,000 headings established by the Library through Sept. 1988. The book was available on 3 May 1989. Approximately 10,000 headings were added since the 11th edition in 1988. Among these headings are 139,000 topical subject headings, 22,000 geographic subject headings, 10,000 personal names (incl. 9,000 family names), 2,600 corporate headings. This book should be used with the Subject Cataloging Manual (1989, 3rd ed.).

These subject headings have been accumulated by LC since 1898 and the first edition of LCSH was printed between 1909 and 1914. Subject headings are listed in boldface type. Approximately 40% of headings are followed by LC class numbers, which are added only when there is a close correspondence between the subject heading and the provisions of the LC classification schedules.

References show the relationship between terms: (1) The equivalence relationship: Use or UF (Use for) references. (2) The hierarchical relationship: Broader terms (BT) and narrower terms (NT). BT and NT function as reciprocals. A term appearing as a BT must be matched by the reversed relationship as an NT (e.g., Motor Vehicles: BT Vehicles; NT Trucks). (3) The associative relationship: Related terms (RT: Ornithology: RT Birds). May Subd Geog (MSG) = May subdivide geographically. Soy related subject headings, listed alphabetically, are:

Fermented soyfoods (MSG). BT Food, Fermented. Soyfoods. NT Fermented soymilk. Miso. Natto. Soy sauce. Tempeh.

Fermented soyfoods industry (MSG). BT Soyfoods industry. NT Miso industry. Nattô industry. Soy sauce industry. Fermented soymilk (MSG). BT Fermented soyfoods. Soymilk.

Hydrogenation [QD281.H8].

Information storage and retrieval systems–Soyfoods.

Lecithin [QP752.L4 (Physiology), or RM666.L4 (Therapeutics)]. UF Phosphatidylcholine. BT Phospholipids. NT Lysolecithin. Also: Lecithinase.

Margarine (MSG) [TP684.M3 (Manufacture)]. UF Butter, artificial. Margarin. Oleomargarine. BT Oils and fats, edible. NT Vanaspati. Margarine industry (MSG) [HD9330.M37-374] BT Oil industries. NT Vanaspati industry.

Meat substitutes [TX838]. BT Food substitutes. Vegetarianism.

Miso (MSG) [TP438.S6 (Manufacture)]. UF Paste, Soybean. Soybean paste. BT Fermented soyfoods. NT Cookery (Miso).

Miso industry (MSG). BT Fermented soyfoods industry.

Nattô (MSG) [TP438.S36 (Manufacture)] [TX558.S6 (Nutrition)]. BT Fermented soyfoods.

Nattô industry (MSG). BT Fermented soyfoods industry.

Natural food restaurants (MSG). UF Restaurants, Natural food. BT Restaurants, lunch rooms, etc. RT Food, Natural.

Natural foods industry (MSG) [HD9000-HD9019]. UF Health foods industry. BT Food, Natural. Note: Natural food (Use Food, Natural). Natural food cookery (Use Cookery (Natural foods)).

Nonfermented soyfoods.

Nonfermented soyfoods industry.

Shortenings–Use Oils and fats, edible.

Soy ice cream (MSG). Here are entered works on no-dairy frozen desserts in which soy protein largely or completely replaces the dairy proteins. UF Ice cream, Soy. Soymilk ice cream. Tofu ice cream. BT Non-dairy frozen desserts. Nonfermented soyfoods.

Soy ice cream industry (MSG) [HD9330.S63-HD9330.S633]. BT Nonfermented soyfoods industry.

Soy sauce (MSG) [TP438.S6 (Manufacture)]. [TX407.S69 (Nutrition)]. UF Sauce, Soy. Soy. Soya Sauce. BT Fermented soyfoods. NT Cookery (Soy sauce).

Soy sauce industry (MSG) [HD9330.S65-HD9330.S653]. BT Fermented soyfoods industry. NT Strikes and lockouts–Soy sauce industry.

SOYA (Information retrieval system [SoyaScan from Soyfoods Center]) [Z695.1.S68]. BT Information storage and retrieval systems–Soyfoods.

Soybean (MSG) [QK495.L52 (Botany)]. [SB205.S7 (Culture)]. UF Glycine max. Soja bean. Soja max. Soy-bean. Soya. Soya bean. BT Beans. Forage plants. Oilseed plants.

Soybean–Diseases and pests (MSG). NT Diaporthe phaseolorum. Heterodera glycines [Nematodes]. Soybean mosaic disease. Soybean rust disease.

Soybean as feed [SF99.S]. NT Soybean meal as feed.

Soybean flour. UF soya flour. BT Flour. Soybean products.

Soybean glue. BT Glue. Soybean products.

Soybean industry (MSG) [HD9235.S6-HD9235.S62]. BT Vegetable trade. NT Soybean oil industry.

Soybean meal (MSG). UF Soybean oil meal. Soybean oilmeal. BT Meal. Soybean products.

Soybean meal as feed [SF99.S]. BT Soybean as feed.

Soybean mosaic disease (MSG) [SB608.S7]. UF Soybean chlorosis. Soybean leaf curl. BT Soybean–Diseases and pests. RT Soybean mosaic virus.

Soybean mosaic virus. BT Plant viruses. RT Soybean mosaic disease.

Soybean oil (MSG) [TP684.S]. UF Bean oil. Chinese bean oil. Soy oil. BT Drying oils. Soybean products.

Soybean oil industry (MSG) [HD9490]. BT Soybean industry.

Soybean oil mills (MSG). BT Oil mills. Soybean

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processing plants.

Soybean processing plants (MSG). BT Factories. Food processing plants. NT Soybean oil mills.

Soybean products (MSG). NT Soybean flour. Soybean glue. Soybean meal. Soybean oil. Soyfoods.

Soybean rust disease (MSG) [SB608.S7]. UF Rust disease of soybean. BT Fungal diseases of plants. Soybean–Diseases and pests. RT Phakopsora pachyrhizi.

Soyfoods (MSG). [TX401.2.S69 (Nutrition)]. [TX558.S7 (Composition)]. UF Soybean as food. BT Food. Soybean products. RT Cookery (Soybeans). NT Fermented soyfoods. Nonfermented soyfoods.

Soyfoods industry (MSG) [HD9235.S6-HD9235.S62]. BT Food industry and trade. NT Fermented soyfoods industry. Nonfermented soyfoods industry. Soymilk industry.

Soymilk. UF Beverages, Soy. Milk, Soy. Milk, Soybean. Soy beverages. Soy milk. Soybean milk. BT Nonfermented soyfoods. NT Fermented soymilk.

Soymilk industry (MSG) [HD9235.S6-HD9235.S62]. UF Soy milk industry. Soybean milk industry. BT Soyfoods industry.

Tempeh (MSG) [TX558.T39]. UF Bongkrek. Tempe. BT Fermented Soyfoods. RT Cookery (Tempeh).

Tofu (MSG).

Note: Changes in this edition from the 11th edition. Changed: Soybean as food to Soyfoods. Changed: Soybean milk to Soymilk. Changed: Soybean milk industry to Soymilk industry. Added: Soyfoods industry. Added: Fermented soyfoods. Added: Fermented soyfoods industry. Added: Nonfermented soyfoods. Added: Nonfermented soyfoods industry. Added: Fermented soymilk. Address: Washington, DC.

7331. Westbrae Natural Foods. 1989. Distributor catalog. FOB West pricing. Spring 1989. P.O. Box 91-1181, Commerce, CA 90091. [6] + 19 p. 22 x 28 cm.
• ***Summary:*** Has a black on yellow cover. Address: Commerce, California. Phone: (213) 722-1692.

7332. Sugiyama, Shin-ichi. 1989. Re: Good-bye to friends Returning to Japan. Letter to Dr. W.J. Wolf, Northern Utilization & Development Div., 1815 North University St., Peoria, Illinois 61604, June 14. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "It is with deep regret that I must say good-bye to the many friends and business associates I have come to know in Wisconsin. I will be returning to Japan to assume a new assignment at the end of June.

"These past six years in Wisconsin have been truly an interesting and invaluable experience, and I will carry many happy memories back to Japan." A business card is attached.

Dr. Michitaro Nagasawa will be Dr. Sugiyama's successor. From 1972 to 1974 he was at the University of Wisconsin, Madison. Since 1987 he has been Director, Div. of Research, Kikkoman Corporation, Japan. Address: PhD, Executive Vice President & General Manager, Kikkoman Foods, Inc., P.O. Box 69, Walworth, Wisconsin 53184. Phone: (414) 275-6181.

7333. McCarthy, Michael J. 1989. RJR Nabisco to see Chun King brand in $52 million pact: Venture in Singapore to buy maker of Oriental food in deteriorating market. *Wall Street Journal*, June 22. p. B6.
• ***Summary:*** Kohlberg Kravis Roberts & Co. (KKR) acquired RJR Nabisco Inc. acquired earlier this year. The new owners wanted to reduce RJR's overall debt by $5.5 billion within the next year, and they were under government orders to do so, so as not to reduce competition in the product area.

It is not surprising that KKR decided to keep La Coy which is the leader in the canned Oriental-food market, with an estimated 54% share–according to a memorandum prepared by KKR for its lenders last December–compared with only 19% for Chun King. Address: Staff Reporter.

7334. Akwarius Almere. 1989. Akwarius prijs en bestelboek Natuurvoedingsprodukten [Catalog and price list. April-June]. P.O. Box 50070, 1305 AL Almere, The Netherlands. 77 p. [Dut]
• ***Summary:*** Akwarius is a larger importer and distributor of natural food products. They have worked in this field since 1971, and have a strong interest in macrobiotic and anthroposophical foods. Contents (p. 2). Philosophy and function (p. 3). Beverages (p. 7): Sojamelk naturel and Bonsoy, Provamel Sojadrink (4 flavors in 500 ml and 4 flavors in 1 liter sizes), Provamel Soja dessert (puddings; 5 flavors in 125 gm and 1 flavor in 1050 gm).

Manna sweeteners (p. 12). Amasake drink in 350 and 700 gm sizes, and rice koji. Note that Akwarius imports and distributes large line of Manna-brand macrobiotic products from Muso in Japan. Manna vegetable protein products (p. 21). Dried tofu (non-organic). Bonsoy soymilk, Seitan, and three types of dried wheat gluten (fu). Manna Soy Sauces (Sojasausen, p. 21): shoyu (B = biological or organically grown, and NB = not biological, i.e. non-organic), and tamari (non-organic).

Witte Wonder (p. 22): Seitan, Tofu Spread (in paprika, garlic, celery, dill, mushroom, and pepper flavors, 220 gm sizes, all organic), Tofu in Sauces (peanut, curry-pineapple, and tomato flavors, 340 gm, organic), Tofunaise (plain and lemon flavors), Tofu Dressing (Italian, garden herbs, Mexican, and plain flavors).

Yakso (p. 23): Seitan, Tempeh Spreads (in Indonesian poesta and doeloe flavors), Temmo (round tempeh burger, deep fried then marinated, ¼ inch thick, sold 5 in a glass jar), Soyaroma (tempeh spread like butter), Sweet Indonesian-style soy sauce (Ketjap manis), Tofu Spreads (cream cheese consistency, in salsa, dill, green, shallot, and pommodore [apple?] flavors), Tofu Mayonnaise (Sojanaise), Smoked

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tofu (paprika, mushroom, and celery flavors in 170 gm wide mouth glass jars)

Akwarius soybeans and soybean meal/flour (p. 27-28, 35, organic). Manna Pasta (p. 28). Soya macaroni. Manna black soybeans from Hokkaido (p. 35, 350 gm, non-organic). Manna Tekka Condiment (p. 44), Manna soynuts (*Sojanootjes*, p. 45, 3 flavors). Luna soyadrink (p. 47).

Manna Miso (Sojapasta, p. 48): Brown rice miso (organic and non-organic), young rice miso (non-organic), barley miso (organic and non-organic), natto miso (non-organic), soybean miso (non-organic), instant miso soup (with and without fish, non-organic), instant miso soup with tofu. Manna sea vegetables (p. 49).

Note: This is the earliest Dutch-language document seen that mentions soynuts, which it calls *Sojanootjes*. Address: Almere, Netherlands. Phone: 03240-20800.

7335. Matsuura, M.; Obata, A., Fukushima, D. 1989. Objectionable flavor of soy milk developed during the soaking of soybeans and its control. *J. of Food Science* 54(3):602-05. May/June. [23 ref]

• ***Summary:*** Beta-glucosidases, enzymes in soybeans, were found to be responsible for the production of daidzein and genistein from the isoflavone glucosides, daidzine and genistin, respectively, during the process of making soymilk. Address: Research & Development Div. of Kikkoman Corp., 399 Noda, Noda City, Chiba prefecture 278, Japan

7336. Welters, Sjon. 1989. Soyfoods in Europe: Influenced by a colonial past. *Soya Newsletter (Bar Harbor, Maine)*. May/June. p. 1, 12-15. [1 ref]

• ***Summary:*** This is a historical overview of the introduction of soyfoods to Europe since 1945. The Indonesians who immigrated to the Netherlands after World War II played a major role in introducing soyfoods (especially tofu, tempeh, and a sweet soy sauce called ketjap) to that country and to Europe. Ketjap was the most popular soyfood in Indonesia. Asian immigrants started small manufacturing companies, restaurants, and importing companies (such as Commex and Heuschen Schrouff). The macrobiotic movement also played a key role in introducing soyfoods, especially soy sauce, miso, and tofu. In Belgium, the Gevaert family founded Luna and began to make miso on a large scale, but a fire and other financial problems soon forced them to close the plant. Only recently have they started to make miso again.

During the 1970s, especially in Belgium and the Netherlands, inspired by the macrobiotic movement and with information from books by Shurtleff and Aoyagi, a new generation of non-Asian tofu makers emerged. "The first tofu shop in Europe owned and operated by non-Orientals was Manna Natuurvoeding. Opened in Amsterdam in 1977, Manna was a macrobiotic manufacturer, distributor, and retailer run by a non-profit foundation. Soon after opening, Manna was visited by entrepreneurs from Germany, England, Portugal, Denmark, France, Sweden, Austria, and Italy, hoping to learn about making tofu."

During the early 1980s, tempeh was rediscovered. "Yakso Farms in the Netherlands was one of the first non-Oriental companies to produce tempeh, made from organic soybeans, and to process it into spreads, paté, sauces, and marinated products."

In the mid-1980s the focus shifted from production to marketing and to second-generation soyfoods. Most European soyfoods are made with organic soybeans. Address: President, Craft International Consultants, 21 Wetherbee St., Acton, Massachusetts 01720. Phone: 617-264-9511.

7337. **Product Name:** Meatless Healthy Franks (Tofu Hot Dogs)
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: 1990 North 57th Court, Boulder, CO 80301. Phone: 303-443-3470.
Date of Introduction: 1989, June.
Ingredients: Organic tofu (water, organic soybeans, calcium sulfate and nigari [magnesium chloride]), soy oil, wheat gluten, egg white, tapioca starch, wheat germ, soy sauce (water, soybeans, whole wheat, salt), dried yeast, natural liquid hickory smoke, garlic powder, spices, natural flavor, beet powder, oleoresin paprika for color.
Wt/Vol., Packaging, Price: 12 oz package, 12 per case, retails for about $3.09 (7/89).
How Stored: Refrigerated, 60 day shelf life.
New Product–Documentation: Talk with Steve Demos 1989, May 13. This product will be officially launched in June, but they have been in interstate sales to protect their trademark. The use of the word "franks" was approved in writing by the FDA. They have enormous advanced sales, and they have done a lot of test marketing and sold a little to health food stores. Leaflet. 1989, April. "Introducing Meatless Healthy Franks." Shows label. Both retail and food-service packs are available. Shelf life is 60 days at 38-40°F.

White Wave News. 1990. 3(3):1. June. "Healthy Frank meets nefarious Mr. Puppette." A humorous portrayal of the product and its competition. Healthy Franks are packaged in state-of-the-art six color packaging. "Special Note: White Wave will not use Carmine, a coloring agent used to achieve a heat-stable red hot dog. Carmine appears on labels as 'Natural Color' and is made from cochineal (a small red insect similar to a mealybug). Don't be misled by the red. Challenge any suppliers of heat- stable-red hot dogs about their coloring."

Talk with Lon Stromnes. 1993, April 14. This product is coming out in an improved formulation with much better texture.

7338. Perez Baez, Oswaldo. 1989. Re: New developments with soyfoods in Venezuela. Letter to William Shurtleff at

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Soyfoods Center, July 10. 3 p. Typed, with signature on letterhead. [Eng]

• ***Summary:*** "In my last visit to Caracas I contacted: Prof Makie Kodaira and Prof. Amaury Martinez of the 'Instituto de Ciencia y Tecnologia de Alimentos, Facultad de Ciencias, U.C.V.' (Universidad Central de Venezuela) who are very interested in offering a theoretical and practical course about soyfoods, using their pilot plant (the second of importance in Venezuela). Prof. Kodaira studied in Hiroshima, Japan in 1977 and she is a specialist on seafoods. They would like the 'Centro de Alimentos de soya de Venezuela' to organize this course.

"I think this is the time to offer in Venezuela a complete course about soyfoods and I have thought to invite you to come to Venezuela. I am thinking about 2 courses.

"(a) One oriented to Institutional level (Instituto Nacional de Nutrición, Fundación Polar, CIEPE, Universidades, Industry, etc.) for professional people. This course could be in Caracas, Instituto de Ciencia y Tecnología de Alimentos, U.C.V.

"(b) Another one oriented to the general public (not necessarily professional level). This course could be here in La Azulita which is a rural and beautiful place, epicenter of the Venezuelan movement for alternative lifestyles.

"I have thought of the following content for these courses: (1) Soymilk. (2) Tofu. (3) Tofu and soy milk ice cream. (4) Miso. (5) Tempeh. (6) Shoyu.

"I am working on a book about soyfoods, and am enclosing an outline of the contents: I. Introduction. II. Agronomic aspects. III. Soya and food security. IV. The most important soyfoods. V. Industrial potential of the soybean. VI. Bibliography. VII. Index." Address: Ing., Centro de Alimentos de Soya de Venezuela, Granja Tierra Nueva, Aldea San Luis, La Azulita, Estado Merida, C.P. 5102, Venezuela.

7339. Hymowitz, Ted. 1989. Discovery of a 1771 reference to soybeans from Philadelphia (Interview). *SoyaScan Notes*. July 17. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Ted has just found a 1771 citation by Charles Thomson, one of the secretaries of the American Philosophical Society in Philadelphia. It reads: "Such of the plants of *China* as have been introduced here, seem to agree with our soil and climate, and to thrive in a degree equal to our warmest expectations; witness the Rice, the Whisk [broomcorn = sorghum] and the *Chinese* Vetch."

In 1804 Mease wrote almost the same thing: "[The Soy-bean bears the climate of Pennsylvania very well. The bean ought therefore to be cultivated.]." But later historians have again and again mistakenly taken the term "soy," which actually referred to soy sauce, to mean soybeans, and have also confused Chinese vetches and soybeans. A 1937 article by Conklin states, "Other samples of useful knowledge were promoted by the Society before 1800 were the surveys for the Delaware Chesapeake Canal and the Susquehanna River, the promotion of the culture of silkworms and the production of silk, the propagation of Chinese vetches and soy beans." Another states: "The American Philosophical Society promoted the growth of rice, whisk [broomcorn = sorghum], Chinese vetches, and soybeans." A book titled *Philadelphia and the China Trade* (1978), which is based on the 1937 article, states, "By 1800 the American Philosophical Society was involved in the propagation of Chinese vetches and soybeans."

Samuel Bowen calls soybeans Chinese vetches, but Benjamin Franklin never calls them vetches, he calls them peas or caravances. Note that the 1771 article calls them "the Chinese vetch," showing the link to Samuel Bowen. Mease was born in 1771, and in 1804, at age 23 year, he was the secretary of the society. Bowen sent soybeans to the Society in 1769 (see Hymowitz, T., Harlan, J.R. 1983. "Introduction of soybean to North America by Samuel Bowen in 1765." *Economic Botany*, Dec. p. 371-79).

Then the soybeans from Bowen were given to 8 local farmers. Ted has done extensive research on each of these farmers in APS records for years afterward, but he can find no evidence that any of them ever grew those soybeans—although at least one of them probably did. He still wonders: Who grew them out? What were the results?

Ted hopes to publish the article in the *Georgia Historical Quarterly*, rather than in *Economic Botany*. The earlier article in *Economic Botany* (Dec. 1983) just gave the skeleton of the story; this one will give the full details. A tentative title is "The arrival of Samuel Bowen in Georgia in 1764 and his Chinese vetches." The Georgia publication will allow more of a detailed, historical treatment, with more references. But they require footnotes, which are difficult to deal with. Address: Prof. of Plant Genetics, Urbana, Illinois.

7340. Welters, Sjon. 1989. Re: Brief history of Manna Natural Foods. Letter to William Shurtleff at Soyfoods Center, July 24. 1 p. With follow-up talk on 2 Dec. 1989.

• ***Summary:*** This company was founded in about 1973 by Adelbert Nelissen and his wife Wieke Nelissen, plus Hugo van Seenus, among others. Adelbert is Sjon's brother in law (his wife's brother). Manna got started in the Rozenstraat in Amsterdam, in an abandoned house that was taken over by so-called "krakers" (counter-culture or hippie squatters). The store called "de Rozemaryn" (Rosemarin) was the first of a chain of stores which, at its peak, contained ten stores total. Hugo now owns and operates Hugo's Market in Washington, DC.

Manna was originally a foundation named Stichting Natuurvoeding Amsterdam. It kept this name until 1982. Manna started the first tofu shop in Europe that was owned and operated by non-Orientals. Opened in Amsterdam in 1977, Manna was a macrobiotic manufacturer, distributor, and retailer run by a non-profit foundation. Soon after

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opening. Manna was visited by entrepreneurs from Germany, England, Portugal, Denmark, France, Sweden, Austria, and Italy, hoping to learn about making tofu.

In 1975 Manna started importing miso and shoyu from Japan, initially via Muso Foods, and later also via Mitoku. But Muso was always their main supplier.

Manna filed for Chapter 11 bankruptcy or reorganization 2 or 3 times. The first time was a bankruptcy in March 1982. All their property was sold at an auction, but was bought back by a new foundation owned by basically the same people and the same foundation at one-third the value. It was probably at this time that Manna's name was changed from Stichting Natuurvoeding Amsterdam to Manna Natuurvoeding B.V. The company was back on its feet by 1983 but then things didn't work out again. At the last moment before declaring bankruptcy, they got financing. But this time the bank took the Foundation out of the picture, so that the foundation was not giving the collateral for loans. The person behind the foundation, Adelbert Nelissen, became the director/president of the holding company. He probably did not have majority ownership. But at this time (May 1983) Sjon and most of the management left.

In about late 1983 or early 1984 Manna moved all operations from Meeuwenlaan in Amsterdam to Zwanenburg. The former section of Amsterdam was torn down by the city. The third time was in 1987, when the company was disbanded. At that time Adelbert became inactive. The government-appointed curator tried to get as much as possible for the assets. The macrobiotic Manna brand name and the inventory of imported Japanese foods was purchased by Akwarius, which was located in Almere in a building constructed along anthroposophic guidelines (before about 1986 they had been located in the province of Utrecht). The production facility at Zwanenburg and its equipment was purchased (mainly for the bakery) by a conglomerate of 3 natural food companies, including Akwarius and Loverendale (the largest baker of natural yeasted breads in the Netherlands). They made Manna tofu for a year or two, then facing stiff competition, sold off the tofu equipment piecemeal. They ran the Manna sourdough bakery there until 1988, then moved it to Loverendale headquarters, and closed down the Zwanenburg production facility.

Akwarius is a company based on the anthroposophical philosophy of Rudolf Steiner. They were founded in about 1974. In Holland there were 4 types or philosophies of natural foods distributors: (1) Anthroposophical (Akwarius); (2) Macrobiotic and natural foods (Manna); (3) Ecological (Kleine Aarde [Small Earth; inspired by E.F. Schumacher's book *Small is Beautiful*] and De Nieuwe Lelie [The New Lily]); and (4) Reform movement/vegetarian (VNR: Vereniging van Nederlandse Reformhuizen = Union of Dutch Reform Houses, and Scholten [which was also the exclusive importer of Lima products from Belgium]).

Talk with Sjon Welters. 1994. April 4. Manna and Lima sold only vegetarian foods, they did not sell any fish, poultry, or meat. All these early Dutch natural foods companies were this way because no natural food store would sell fish or other flesh products; they were just not acceptable. Some years after they started they used eggs in a few products but they were always vegetarian. The only people who ever got involved in flesh foods in the early stages were the Anthroposophic / Biodynamic people because its part of their philosophy, but even in the beginning they didn't sell meat to the stores because customers didn't want it. Address: Craft International Consultants, 21 Wetherbee St., Acton, Massachusetts 01720. Phone: 508-264-4011.

7341. Business Trend Analysts, Inc. 1989. The health and natural food market: A product-by-product marketing analysis and competitor profile. 2171 Jericho Turnpike #342, Commack, NY 11725. 280 p. Price $950.00. *

• ***Summary:*** Section 6 of this report is titled "The Market for Soyfoods" (24 pages). It projects 6.2% growth for the soyfoods industry, and contains the following (much of it provided by Soyatech, Inc. and Soyfoods Center): Analysis and summary/Manufacturers' sales of soyfoods. Manufacturers' sales of soyfoods to major outlets. Manufacturers' sales of soyfoods, by type of outlet. The top six soymilk producers in the U.S. U.S. per capita consumption of soymilk. Retail sales of soyfoods. Retail sales of soyfoods at major outlets. Retail sales of soyfoods, by type of outlet. Graph: Product mix of U.S. soyfood sales. Estimated mix of distribution channels used to market various soyfoods. U.S. soybean production. Characteristics of women's use of soy sauce. Quick Tamari tips. Selected 1988/89 new product introductions. Soyfoods.

Under "Report Highlights and Special Features" we read: "Soyfoods continue to gain popularity with mainstream consumers, as sales are expected to top the $380 million mark, at the wholesale level, by year-end. At the retail level, sales of tofu alone are currently pegged at $77 million, with supermarkets capturing close to 60% of dollar volume."

Overall report Contents: 1. Executive summary. 2. The overall market for health and natural foods (including Soyfoods 1979-1988, with forecast to 1998). 3. The market for health and natural dairy foods. 4. The market for health and natural grocery products. 5. The market for health and natural snack food products. 6. The market for soyfoods. 7. The market for health and natural grains and cereals. 8. The market for health and natural frozen foods. 9. The market for herbal products. 10. Distribution channels. 11. Factors affecting demand. 12. Trends in organic farming. 13. Competitor profiles: Alta-Dena Certified Dairy, Arrowhead Mills, Barbara's Bakery, Celestial Seasonings, Golden Temple, San-J International, Thompson Kitchens, Tivall U.S.A./Garden Gourmet, U.S. Mills (partial list). 14. Directory of more than 200 health and natural food

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producers. Address: Commack, New York. Phone: 516-462-2410.

7342. **Product Name:** Wizard's Stir Krazy Vegetarian Worcestershire Sauce
Manufacturer's Name: Edward & Sons Trading Co., Inc. (Distributor).
Manufacturer's Address: 1115 Lousons Rd., P.O. Box 3150, Union, NJ 07083. Made in Hillsborough, North Carolina. Phone: 201-964-8176.
Date of Introduction: 1989. July.
Ingredients: Incl. Apple cider vinegar, tamari soy sauce, deep well water, Barbados molasses, miso, honey, fresh ginger puree, salt, tamarind, cayenne pepper mash, garlic juice, honey, herbs and spices, sea salt, hickory smoke, natural seaweed extract.
Wt/Vol., Packaging, Price: 5 oz shaker bottle. Retails for $2.29 (12/89).
How Stored: Shelf stable.
New Product–Documentation: Spot in *Vegetarian Times*. 1989. "The VT shopper. We asked for it..." July. p. 69. "...and we got it. When 'The Wizard' (a.k.a. John Troy) read in *VT* that there is no such thing as vegetarian worcestershire sauce (all commercial brands now contain anchovies), he fired up his cauldron and–voila!–he invented one. The Wizard's Stir Krazy sauce is full of spicy, authentic, worcestershire flavor. Thanks, Wiz. Distributed by Edward & Sons Trading Co. In natural food stores." A small photo shows a bottle of the new sauce.

Note 1. This is the 2nd earliest known vegetarian worcestershire sauce made in the USA, see Bonneau 1972.

Note 2. Wizard Baldour makes this sauce in Hillsborough, North Carolina.

Soya Newsletter. 1989. Sept/Dec. p. 11.

News release from Edward & Sons Trading Co. 1989. Nov. "Stir-Krazy named 'Best New Sauce of 1989.'" *Vegetarian Times* likes this sauce "so much that they have featured it in their 'Best of 1989' awards. This is the first time the magazine has recognized new products in this way." The 5 oz shaker bottle, which "retails for $2.29, is the perfect 'fixin' for tofu, teriyaki, and wok dishes..."

Talk with John Troy of North Carolina. 2012. March 7. The basic ingredients in John's sauce worcestershire (probably not in the exact order) were vinegar, tamari soy sauce, lemon juice concentrate (purchased frozen), filtered water, miso, honey, garlic, and ginger, spices, xanthan gum, citrus extracts (orange oil, lemon oil), spice extract (rosemary extract, used as a stabilizer–not for its flavor). It was not organic. Lea & Perrins' Worcestershire Sauce is quite similar to Japanese Ponzu sauce, which is made by simmering rice vinegar, mirin, katsuobushi flakes, and konbu seaweed. The liquid is then cooled, strained to remove the katsuobushi flakes, and finally the juice of one or more of the following citrus fruits is added: yuzu, sudachi, daidai, kabosu, or lemon. *Ponzu-joyu* is based on equal parts soy sauce (shoyu) and lemon, lime, or yuzu juice. The Japanese use bonito flakes (*katsuobushi*) instead of anchovies, and sometimes *yuzu* (a citrus fruit) instead of lemon juice.

7343. **Product Name:** [Tofu Burger with Sea Vegetables]
Foreign Name: Galette de Tofou aux Algues Marines.
Manufacturer's Name: Ferme de Jas.
Manufacturer's Address: Eourres, 26560 Séderon, France. Phone: 92.65.10.95.
Date of Introduction: 1989. July.
Ingredients: Tofu, rice, sea vegetables, shoyu, sunflowerseed oil, spices, salt, flour.
Wt/Vol., Packaging, Price: 90 gm vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Letter and Labels from Anthony Marrese. 1989. June 7. This product was introduced in July 1989. Label 2.75 inches diameter. Paper. Black on blue. Illustration of a sun rising over a farm, and 3 soybean leaves. "Préparation alimentaire à base de soja. Nature et Progres logo. 50% tofu and 40% rice." Organically grown (Produits de culture biologique).

7344. **Product Name:** Grilled Tofu in Peanut Sauce, or Grilled Tofu in Black Bean Sauce.
Manufacturer's Name: Jaclyn's Food Products, Inc.
Manufacturer's Address: P.O. Box 1314, Cherry Hill, NJ. Phone: 609-983-2560.
Date of Introduction: 1989. July.
Ingredients: Peanut Sauce: Organically grown brown rice, tofu (organically grown soybeans, purified water, nigari, calcium sulfate), peanuts, green beans, carrots, corn, onions, peanut oil (non-hydrogenated), tamari, garlic, rice syrup, sea salt, sesame seed oil (lightly roasted), natural herbs and spices. Ingredients for the second recipe are identical except that Black Beans are used in place of peanuts.
Wt/Vol., Packaging, Price: 10.75 oz box, 6 per case. Retails for about $3.09–$3.66 each.
How Stored: Frozen.
Nutrition: Per 10.75 oz. serving: Calories 270, protein 19 gm, carbohydrate 44 gm, fat 9 gm, cholesterol 0 mg, sodium 145 mg.
New Product–Documentation: Leaflet. 1989. April. "Jaclyn's microwaveable frozen dinners." Shows both packages and lists all ingredients. "Jaclyn's Food Products, Inc. was begun about one year ago [4/88?] to develop and market natural foods products for health and natural foods stores. They are sold exclusively through health food distributors.

Soya Newsletter. 1989. May/June. p. 8. Contact Robert Savar. Microwaveable. Tardosky. 1989. Whole Foods. Nov. p. 50. They are natural TV dinners. Both come with a side order of organic brown rice and a vegetable medley. The dinners were developed by a five star chef says company

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president Robert Savar.

Label 1989 7.5 by 6 by 1.25 inch deep paperboard box. Brown, black, light blue and dark blue on pinkish tan. Front panel has a color photo of the meal. "All natural. Cholesterol free. Dairy free. High fiber. Reduced calories. Reduced sodium. Heat and serve in your oven or microwave." Soyfoods Center product evaluation. 1990. Feb. 12-13. Both entrees contain frozen tofu with a chewy texture. The black bean sauce is nice. The peanut sauce could be much better.

7345. Karta, Susani K. 1989. Traditional Chinese soyfood. In: T.H. Applewhite, ed. 1989. Proceedings of the World Congress on Vegetable Protein Utilization in Human Foods and Animal Feedstuffs. Champaign, IL: American Oil Chemists' Society. xii + 575 p. See p. 382-87. [18 ref.]
• ***Summary:*** Contents: Abstract. Introduction. Variables in manufacturing tofu: Soybean variable, processing variable, maceration and extraction (soaking and grinding) stages, filtration and heating stages, coagulation stages, types and concentration of coagulants used in tofu manufacturing. Tofu products.

Tables: (1) Chinese nonfermented soy food products. Five columns show: Food items, Chinese names, organisms used, description, uses. The soy foods are: Fresh green soybeans (*mao-tou*). Toasted soy powder (*tou-fen*). Soy sprouts (*huang-tou-ya*). Soy milk (*tou-chiang*). Soy milk film / yuba (*tou-fu-pi*). Soybean curd (*tou-fu*).

(2) Chinese fermented soy food products. Five columns (same as table 1) The soy foods are: Fermented whole soybeans (*tou-shih*). Soy sauce (*chiang-yu*). Soy paste (*chiang*). Fermented tofu (*so-fu* [*sic*]). Actinomucor or Mucor molds are used. Description: Creamy cheese, mild flavor, salty. Uses: Relish, also cooked with meat or vegetable.

(3) 1987 consumption of soybeans as foods in Asian countries. The results are presented here in descending order of per capita consumption. Per capita soybean consumption, country (population), total soybean consumption in 1,000 tonnes. 13.3 kg/capita, Taiwan (19.6 million), 260,000 tonnes. 9.3 kg/capita, Japan (122.2 million), 1,141,000 tonnes. 9.0 kg/capita, Indonesia (175 million), 1,575,000 tonnes. 7.8 kg/capita, South Korea (42.1 million), 330,000 tonnes. 7.7 kg/capita, Singapore (2.6 million), 20,000 tonnes. 6.9 kg/capita, China (1,062 million), 7,325,000 tonnes. 3.4 kg/capita, Malaysia (55 million), 55,000 tonnes. 2.2 kg/capita, Thailand (53.6 million), 118,000 tonnes. 0.3 kg/capita, Philippines (61.5 million), 18,000 tonnes. (4) Nutritional composition of traditional nonfermented foods: Fresh green soybeans, toasted soy powder, soy sprouts–raw, soy milk, soy milk film / yuba, tofu (Source: *Food Composition Table for Use in East Asia*, 1978). (5) Nutritional composition of traditional fermented foods: Fermented soybeans [tou-shih], soy sauce, soy paste [doujiang], fermented tofu (Source *Food Composition Table for Use in East Asia*, 1978).

In China, fried tofu is called Tou-Pok. Address: American Soybean Assoc., 541 Orchard Rd., #11-03 Liat Towers, Singapore 0923, Republic of Singapore.

7346. Kim, Seung Ho; Kwon, Tai-Wan. 1989. Vegetable protein foods in Korea. In: T.H. Applewhite, ed. 1989. Proceedings of the World Congress on Vegetable Protein Utilization in Human Foods and Animal Feedstuffs. Champaign, IL: American Oil Chemists' Society. xii + 575 p. See p. 439-42.
• ***Summary:*** Contents: Abstract. Introduction. Situation of traditional protein foods. Situation of vegetable proteins. Traditional protein foods in Korea: Soy sauce (*kan jang*), hot soy paste (*ko chu jang*), *chung kuk jang* (a kind of soy paste made by mixing natto [*naap doo*] with seasonings [salt, red pepper, and garlic], and grinding then aging the mixture), soybean sprouts (*kong na mool*).

Note: This is the earliest English-language document seen (March 2009) that uses the term "ko chu jang" to refer to Korean-style red pepper and soybean paste (miso).

Note 2: This is the earliest English-language document seen (Jan. 2012) that uses the term "chung kuk jang" to refer to Korean-style natto.

Tables: (1) Domestic Korean production and import of soybeans from 1982 to 1987. Domestic production rose to 250,000 tonnes from 233,000 tonnes. Imports for food uses rose to 144,000 tonnes from 104,000 tonnes. Imports for feed uses rose to 936,000 tonnes from 479,000 tonnes. Total supply rose to 1,330 tonnes from 816 tonnes, up 63% in 5 years.

(2) Consumption of soybeans in traditional Korean foods, in 1,000 metric tons, from 1982 to 1987 (1982/1987). Figures in parentheses are for home production. Soy sauce (*kan jang*) 69(50)/70(51). Soy paste (*doen jang* [Korean soybean miso]) 51(41)/50(40). Hot soy paste (*ko chu jang*) 5(4)/5(4). Soybean curd (*doo bu*) 60/114. Soy milk (*doo yoo*) 7/14. Others: Homemade soybean curd and soy milk, *chung kuk jang*, *choon jang* (kinds of soy paste), soybean sprouts (*kong na mool*), and whole soybeans 145/141. Total 337/394, or an increase of 19.9% in 5 years.

Note: This is the earliest English-language document seen (March 2009) that uses the term "choon jang" to refer to Korean-style soybean paste (miso).

(3) Domestic production and import of soybeans in Korea (Estimated for 1987, in metric tons). Soy protein–Textured vegetable protein (domestically made) 4,500. Soy protein isolate (import) 1,800. Soy protein concentrate (import) 150. Wheat protein–Textured vegetable protein (domestic) 900. Vital gluten (domestic) 150. Gluten (wet & dry) (import) 409. Total 7,909.

(4) Nutritional composition of soybeans and soybeans sprouts (per 100 gm).

Figures show: (1) Manufacturing method for rice hot soy

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paste (*ko chu jang*) (flow sheet). Numbers represent typical ratio of ingredients in volume. (2) Manufacturing method for chunk kuk jang (a type of soy paste) (flow sheet). Numbers represent typical ratio of ingredients in volume.

A photo shows one of the authors. Address: Korea Food Research Inst., P.O. Box 131, Chongryang, Seoul, South Korea.

7347. **Product Name:** [Taifun Hijiki Tofu]
Foreign Name: Taifun Hijiki-Tofu.
Manufacturer's Name: Life Food.
Manufacturer's Address: Robert-Bunsen-Strasse 6, D-7800 Freiburg, West Germany. Phone: 0761/50 61 55.
Date of Introduction: 1989. July.
Ingredients: Tofu (organic), hijiki sea vegetable. Marinade: Natural soy sauce, shiitake mushrooms, kombu, ginger, coriander, and smoke (from birch and juniper).
Wt/Vol., Packaging, Price: 200 gm vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Label sent by Anthony Marrese, 1990, March 22. 3 by 2.25 inches. Green, black, yellow, and red on white. Refrigerate at 2-7°C. The now make 10 kg/week.

7348. Natufood B.V. 1989. Prijs-bestelboek [Natufood price list and catalog, July-Sept. 1989]. Fahrenheitstraat 18, 3840 BN Harderwijk, Netherlands. 73+ p. [Dut]
• ***Summary:*** This catalog of a Dutch natural foods distributor lists the farming method (organic or not), wholesale and retail prices for each product: Page 8. Witte Wonder tofu spreads (mushroom, chili, green peppercorn, garlic, paprika, celery). Lima Limapast contains sunflower seeds, miso, and soy flour. Page 30. Joannusmolen roasted soy flour. Page 31. Natufood defatted soy flour (sifted). Ad for the Vetara line of ready-to-eat foods, many of which contain TVP. Page 33. Avita soybeans (Avita Natufood's organic food line). Natufood soybeans. Ad from Nutricia for canned powdered infant foods. Nutri-Soja complete infant food based on soy. Nutri-Soja Plus based on soy for infants that have been weaned. Page 34. Nutricia infant formulas. Nutrisoja in 400 gm or 1000 gm and Nutrisoja-Plus in 900 gm. Page 35. Avita little soybeans (regular and large, organic).

Page 36. Witte Wonder soybeans in tomato sauce. Ad for Vetara organic tofu, which is produced by Heuschen-Schrouff B.V. in a completely new facility under extremely sanitary conditions. It is made with organic soybeans with a natural coagulant (Serempi) in the traditional way. "Best quality, lowest price." The product label (250 gm) is shown. Page 37. Refrigerated miso products made in Europe. Lima barley miso and rice miso, both unpasteurized. Page 38. Meat replacers. Seitan is sold by Vetara, Witte Wonder, Yakso, and Manna. Vetara herb tofu, Napolitan tofu, rice tofu, bali tofu, rames tofu, rames tempeh, Tjap Tjoy. Witte Wonder tofu in curry/pineapple sauce, and in peanut sauce. Ad for Vetara vegetarian burgers, frankfurters, and schnitzels.

Page 39. Soya meat replacers and vegetarian mixes: Lists 11 Vetara products based on or containing TVP (textured soy flour) or HVP (hydrolyzed vegetable protein). Nutana meat replacers (9 products). Jonathan natural tofu. Cenovis and Huegli bouillon tablets (14 types, probably contain miso). [Sjon Welters adds that Huegli, a multi-million dollar Swiss food company, owns a major part of Natufood B.V.]. Western bouillons (Miso): Lima barley and rice misos. Heiwa Hatcho miso and instant miso soup. Huegli ad.

Page 42. Vegetarian refrigerated products: Vetara smoked tofu, natural tofu (EKO mark), saté tofu, vetaburgers with pineapple, with cheese & onion, natuburgers. Soyadrinks and desserts. Provamel (8 drinks and 6 desserts [puddings]). Lima (3 drinks).

Page 43. Seasonings. Vetara sweet soy sauce (Ketjap zoet). Yakso sweet soy sauce (Ketjap manis). Soy sauce. Lima shoyu (orange label) and tamari (blue label). Heiwa shoyu and tamari. Vetara shoyu. Page 44. Witte Wonder organic tofu dressings (Italian, Mexican, Garden herbs, or Natural). Mayonnaise and Tofunaise: Witte Wonder organic tofunaise (regular or with lemon).

Page 52. A. Vogel products: Vogel Sojaforce. Page 67. Natufood non-organic soynuts (natural, paprika, curry, or onion). A photo of the soynuts is given at the bottom of the page. Page 69. Non-organic soynuts in bulk (same 4 flavors as page 67). Page 73. Bulk defatted soy four, and soybeans (organic or non-organic). Ad for Vetara Vegetable Bouillon, which probably contains soy. Address: Harderwijk, Netherlands. Phone: 03410-23240.

7349. **Product Name:** [Vetara Sweet Soy Sauce]
Foreign Name: Vetara Ketjap Zoet.
Manufacturer's Name: Natufood B.V.
Manufacturer's Address: Fahrenheitstraat 18, 3840 BN Harderwijk, Netherlands.
Date of Introduction: 1989. July.
Ingredients: Organic.
Wt/Vol., Packaging, Price: 330 ml bottle.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Natufood Catalog. 1989 July/Sept. p. 43.

7350. **Product Name:** Tofu Life Naturally Smoked Tofu. Renamed Original in about 1994.
Manufacturer's Name: North Coast Finest Inc. Renamed North Coast Distributors in July 1993.
Manufacturer's Address: Soquel, California.
Date of Introduction: 1989. July.
Ingredients: Organic tofu, shoyu (a soy sauce), fresh ginger, garlic, herbs and spices.
Wt/Vol., Packaging, Price: Vacuum packed. Retails for

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$1.66 for 0.30 lb (5/92 Lafayette, California).
How Stored: Refrigerated
New Product–Documentation: Product with Label purchased at Open Sesame in Lafayette, California. 1992. May 1. 2.5 by 1.5 inches. Blue letters on white. Self adhesive. "Naturally smoked. No artificial ingredients, no colorings, no liquid smoke flavoring." Packed on April 30. Sell by June 9. Tried to phone company on 4 May 1992 but two phones numbers were no longer in service: 408-462-1634, and 408-763-1441.

Talk with Hanan Onn. 1992. Dec. 10. His company started making smoked tofu in Soquel in about July 1989. He purchased his tofu from Buddy Hamel of Clearway. In Oct. 1991 he moved the company to 381-P Pine St. in Watsonville, California. Then in June 1992 he moved to his present location at 2655 Cloverdale, Concord, California. Phone: 510-798-4393 or 510-944-0599. His name is Israeli and he belongs to a Kibbutz in Israel. The Kibbutz, which now makes fruit juices, is looking to diversify into new food products and may consider soyfoods.

Call from Onn. 1993. April 13. He is planning to relocate his business making smoked tofu in Benicia.

Call from Onn. 1994. July 14. About a year ago he changed the company name to North Coast Distributors. He is now located at 1717 Solano Way, Concord, CA 94520. Phone: 510-798-4393. He is disappointed that Buddy Hamel of Clearway started making smoked tofu like his last year. He started making his own tofu 1 month ago. He hopes to introduce a new Tofu Pâté soon.

Product with Label purchased at Diablo Foods in Lafayette, California. 1997. May 28. New label: 3.5 x 5 inches. Red, brown, green, and black on white. One illustration on the front panel shows a cornucopia at the base of a vertical sheaf of grain. Another shows three soybean leaves and two pods. The border is bamboo. "No artificial ingredients. The gourmet alternative for meat and cheese. Firm." 6 oz vacuum pack retails for $2.99. Label copyright by NCD 1995. Chof-K kosher pending. Note: The company is now located in Benicia but the label says Concord.

Product with new label, leaflet, and sandwich brought to Soyfoods Center by Hanan Onn. 2006. Feb. 14. Ingredients: Organically grown soybeans, water, natural calcium sulfate (natural hardening agent), shoyu (water, wheat, soybeans, salt), fresh ginger, garlic, lemon juice, herbs and spices. Contains 15-18 gm of protein per 100 gm of tofu. 50-55 days shelf life unopened and refrigerated. Soyfoods Center taste test: Flavor, texture, aroma: All 10. Among the smoked tofu types, the best sellers are: (1) Original. (2) Lemon-Garlic. (3) Hot Teriyaki. All are now priced at $2.99 at Whole Foods.

7351. **Product Name:** Soy Deli Tofu Burgers [Barbecue Style, Cajun Spice, Curry Spice, Garden Style, Italian Spice, Original, Taco Spice, Tofu-Tempeh, or Teriyaki].
Manufacturer's Name: Quong Hop & Co.
Manufacturer's Address: 161 Beacon St., South San Francisco, CA 94080. Phone: 415-873-4444.
Date of Introduction: 1989. July.
Wt/Vol., Packaging, Price: 6.1 oz.
How Stored: Refrigerated.
New Product–Documentation: Ad, quarter page black-and-white, in Whole Foods. 1989. Sept. p. 132. "Make a healthy choice. New! From Soy Deli. The original organic tofu burger. Nine organic meals in a minute. Strengthen your health food line with the nine new international flavors of Soy Deli organic tofu burgers. All natural ingredients, no preservatives, made from the finest nigari tofu. Pre-cooked with a delicious blend of natural spices. Simply heat and serve, or add to your favorite recipes in place of meat. Good shelf life. High protein, low sodium, no cholesterol, meat or dairy products. Refrigerated or frozen." A photo shows the label. Note: Quong Hop & Co. first introduced a tofu burger in Jan. 1979.

Talk with Ben Lee of Quong Hop. 1989. Sept. 1. These products were launched in July 1979. The full-color label is printed using a 6-color process. The company hopes the new product will make the transition to the typical deli case in delis; they are not shooting for the deli case in supermarkets. Soyfoods Center product evaluation. 1989. Sept. 9. So-so. Quite dry and crumbly, not juicy. Poor cohesiveness. No instructions for cooking in microwave oven. Flavors are okay, but what is the need for so many? It is not clear whether or not the product is fried.

Spot in Whole Foods. 1989. Nov. p. 83. Available in 9 international flavors. "The burgers are pre-cooked in high-oleic safflower [oil] .. contain no meat or dairy products." Ad (5 by 7 inches, black and white) in Whole Foods. 1990. Feb. p. 36. "Make a healthy choice. New! From Soy Deli. Nine organic meals in a minute." Lists the 9 flavors.

7352. **Product Name:** Sa Bean Prepared Soybeans (Fully Cooked) [Chocolate, Strawberry, Coconut, Praline, or Plain]
Manufacturer's Name: Sa Bean (Inventor & Marketer).
Manufacturer's Address: 2211 Ala Wai Blvd. #2410, Honolulu, Oahu, HI 96815. Phone: 808-923-9663
Date of Introduction: 1989. July.
Ingredients: Soybeans, water, pineapple juice, guava nectar, citric acid, spices.
Wt/Vol., Packaging, Price: 10 lb.
How Stored: Refrigerated.
New Product–Documentation: Label. 1989. 6.25 by 5.25 inches. Blue on white. Self adhesive. "Use. Add to soups, salads, vegetables, entrees, desserts, sauteed mushrooms. Not recommended for use in candies. Caution: To prevent dehydration in further cooking, avoid hot dry air! Cover completely in paté, casserole or meatloaf to retain vital moisture content." Talk with and letter from Jerry Saub. 1989. Aug. 21. The patented process (U.S. Patent 4,601,910) by which these soybeans are prepared "drastically reduces

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cooking time and simplifies processing to allow very rapid production of an extraordinarily wide variety of flavors in uncrushed soybeans. 'Prepared Soybeans' are used by chefs at Hawaii's finest hotels and restaurants." Larry Higashi, chef at Nicholas, Nickolas (808-955-4466), helped to develop an improved process without any noticeable pineapple smell.

2 page leaflet (1989) describing composition and features of the product. "Fully cooked. Ready for instant use. No salt. No cholesterol. Contains the health producing *Lactobacillus*. For superb nutrition in entrees, serve chicken, beef, or fish with soybeans and a teriyaki or other light sauce. These versatile soybeans are wonderful in salads, soups, desserts, or with vegetables.

"Sa Bean–Prepared soybeans. The most fragrant of the many processes suggested in this patent is the fast process using guava in the initial stage and pineapple in the final stage. I recommend placing soybeans prepared in this manner in a large brandy snifter. Before tasting, swirl the aroma. Sniff gently. Play with this awhile. Breathe deeply. For tasting, I suggest a large container of these soybeans in a salad bar."

"First taste the soybeans alone. Savor the rich nutty flavor. Then add a single salad dressing. Consider. Proceed slowly. Try more and more complex mixtures. You will discover that these are truly gourmet soybeans. Add enough cayenne pepper and jalapeno cheese and you'll have a salad that will surprise and delight you."

Soyfoods Center product evaluation. 1989. Aug. 23. We found little or no beany flavor from the new process, but we felt all flavors were undercooked and too crunchy; we feel properly cooked soybeans should be soft enough to crush easily between the thumb and ring finger. All flavors were quite sweet. We liked the coconut flavor best (try atop pineapple ice cream for a do it yourself piña colada). The chocolate was reddish-purple with a weak chocolate flavor. Information about the effect of the process on flatulence-causing oligosaccharides would be useful.

Spot in Food Engineering. 1989. Oct. p. 50. "Soybeans from new process developed." R.M. Sperber. 1989. Food Processing. Dec. p. 58. "Soybean process yields new product applications: Taste and odor neutralized."

7353. Uchida, Kinji. 1989. Trends in preparation and uses of fermented and acid-hydrolyzed soy sauce. In: T.H. Applewhite, ed. 1989. Proceedings of the World Congress on Vegetable Protein Utilization in Human Foods and Animal Feedstuffs. Champaign, IL: American Oil Chemists' Society. xii + 575 p. See p. 78-83. Contains 8 figures (diagrams and graphs) and 5 tables. [18 ref]

• ***Summary:*** Contents: Abstract. Introduction. Production and consumption of soy sauce in Japan: Processes of manufacturing soy sauce, treatment of raw materials, koji-making, moromi-mash fermentation and aging, pressing, refining. Microbiology of soy sauce manufacture: Breeding of hybrid koji-molds by the use of cell-fusion technique, isolation and application of metabolically diverse soy pediococci in the fermentation. A photo shows K. Uchida. Address: Kikkoman Corp., 399, Noda, Noda-shi, Chiba-ken 278, Japan.

7354. Reeder, John. 1989. U.S. import/export statistics on soy products (Interview). *SoyaScan Notes*. Aug. 3. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** John's specialty is tracking statistics on fats, oils, and oilseeds, plus natural gums and resins. The main publication carrying soy-related import statistics is titled "U.S. Imports for Consumption: U.S. Census Bureau Publication IM146." It is published by the Foreign Trade Div. of the U.S. Census Bureau and is available in a monthly published paper version, or on microfiche, or in electronic database form. With soy, it covers soybeans (Heading/subheading 1201.00), soy flour (1208.10), and soy sauce (2103.10). Miso and tofu statistics are lumped in with hundreds of other minor products in the catch-all basket category "Edible Preparations."

In the tariff part of the report, for each item there is an article description, units of quantity (e.g. kg), and rates of duty (general, special, or 2). For example, soy sauce has a general duty rate of 3%, which is granted to all "most favored nations." The "Special" column shows that it is imported duty free from countries with the codes A (Generalized System of Preferences, applied to many developing countries), E (CBERA or Caribbean Basin Economic Recovery Act), or IL (Israel). CA = Canada gets a reduced rate of 2.7%, which will be reduced to zero over the next 5-10 years under the recent Canadian Free Trade Agreement. Column 2, indicates that a 35% import duty applies to most Communist countries, except those (such as China) with "Most Favored Nation" status, when get the General rate.

In the imports part of the report, under each product (e.g. soy sauce, thin = soy sauce) there is a listing of countries, sorted by region from which the USA imports. After each country there may be the codes GSP (the amount of product imported under the lower General System of Preferences rate, because it has been shown to be as domestic product of that country), and OGN (the amount of product imported under the General rate because it has not been proved to be a domestic product), plus a total for the two. Then statistics for the current month and cumulative from January to date, of the quantity imported (which may be reported in two sets of units, Qty-1 and Qty-2, such as pounds and gallons), the customs value (the Free on Board or FOB value declared by the importer at the foreign port of export), and the calculated duty received by the U.S. based on the customs value.

The report is also available at federal depository libraries, such as Univ. of California at Berkeley. On 1 Jan. 1989 the way of reporting data was changed to the

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"Harmonized Tariff Schedule of the United States" from the old "Tariff Schedule of the United States" (TSUS) system. This changes some nomenclature and makes the U.S. reporting more similar to that of may other countries, which facilitates determining tariffs and quotas on given items.

Corresponding export statistics are given in another report titled "Schedule B: U.S. Exports of Domestic Merchandise, FT410" published monthly by the U.S. Census Bureau. Each product has the same product code (e.g., soy sauce is 2103.10).

Another publication is the Directory of International Trade Analysts' Commodity Agreements.

Good databases for searching soy-related data are Disclosure, and Nexus (business news). Address: U.S. International Trade Commission, Agricultural Div., Washington, DC 20436. Phone: 202-252-1319.

7355. Welters, Sjon. 1989. Early involvement with soyfoods and Manna in the Netherlands (Interview). *SoyaScan Notes*. Aug. 15. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Sjon was born in 1955. He completed high school plus one year at the National Academy of Fine Arts. Then he dropped out to pursue his interest in the natural foods movement. He got involved with soyfoods when he became a vegetarian in 1973. In Sept. 1975 he started to work for Manna. During 1975-76 he did a lot of experimentation with soyfoods production while working at Manna, and he was involved in selling the shoyu and miso that Manna had been importing from Muso in Japan since 1975. In Sept. 1977 Sjon left Manna and started his non-profit natural foods foundation (Stichting Natuurvoeding Alkmaar) and his own natural foods store, both at Alkmaar (pronounced AL-ek-mayr), the Netherlands, based on the model established by Manna. During 1980-81 Sjon's foundation merged with Manna's foundation and Sjon started to work as director of operations at Manna, and he first became involved with the production of tofu and seitan. During the early 1980s Sjon was an editor of the *Manna Bulletin*. Address: Craft International Consultants, 21 Wetherbee St., Acton, Massachusetts 01720. Phone: 508-264-4011.

7356. Roth, Martin. 1989. Early history of Great Eastern Sun and subsequent work with soyfoods (Interview). *SoyaScan Notes*. Aug. 17. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Other records describe in detail Martin's pioneering work with commercial production of Brown Rice & Tofu Sandwiches, Sweet White Miso, Amasake, Amasake Shakes, and America's first Amasake Ice Cream. In 1982 he and his very close friend Barbara Svenning Garvey (they were never officially married) moved from Boulder, Colorado, to Miami, Florida, then to North Carolina. Martin met Barry Evens in Florida and Barry commissioned Martin to go to North Carolina and set up a macrobiotic distribution and import company near the American Miso Co., of which Barry was then the principal owner. "The beginning of that company was a wonderful experience. Everybody was thrilled. We were the first ones to actually take a full line of Japanese foods and present it to the health food stores in a big way. At that time Erewhon still had a much more limited selection of Japanese imports, such as miso, tamari, soba, etc. We had only imports, 200 to 300 esoteric items that many people never heard. We put together a nationwide sales force and went store to store, introducing the concept of a macrobiotic section. We put that on the map. We had great success, opening hundreds of accounts. I left in about 1984 because I got an opportunity to work for Westbrae as sales and marketing manager, and North Carolina was not my favorite place to live." Martin developed the concept, the name, and the graphics for the Westbrae Malteds and for Mitoku's Supersoy. Address: Berkeley, California. Phone: 415-527-7066.

7357. Belleme, John. 1989. Natural soy sauce: A brewing controversy. *Solstice* No. 37. Summer. p. 10-12. [1 ref]

• ***Summary:*** "A San-J placard [shelf talker] sent to thousands of retail stores [about 6 months before this article] says: 'You will notice that all San-J soy sauce has alcohol as an ingredient. As a result of fermentation, there is a small amount of naturally occurring alcohol in all soy sauces. We add a little more alcohol in order to inhibit the growth of naturally occurring aerobic yeast. While the addition of alcohol as a natural preservative is common practice for traditional soy sauce, often it is not listed on the label.'" The author contacted the three major suppliers of traditional imported soy sauce, they were unanimous is denying San-J's accusations. Likewise, the brewmasters of these products denied that any alcohol was added. (Note: Johsen shoyu is bottled under the Tree of Life, Koyo, Mitoku Macrobiotic, Emperor's Kitchen, and Westbrae labels. Marushima Shoyu supplies Eden Traditional Shoyu and Organic Shoyu). However Mansan Brewing Co. of Handa, Japan, adds 4% Mikawa Mirin (rice brandy) to its Mansan Tamari, which is marketed under the Mitoku Macrobiotic label. When Belleme asked San-J vice president Steve Zoller which brands of soy sauce have unlisted alcohol, Zoller could not give any specifics. "The soy sauce San-J imported until their domestic product became available last fall was labeled 'no artificial additives or preservatives.' When we asked Steve Zoller if this shoyu and tamari contained added alcohol and tamari, he replied, 'No comment.'"

Belleme was also concerned that San-J tamari made with hexane-extracted soybean meal using a modern temperature-controlled process would be called "traditionally brewed." Note: Belleme later admitted that the statement in this article about benzene being used by ADM to make food grade

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ethanol was incorrect. Address: P.O. Box 457, Saluda, North Carolina 28773 Phone: 704-749-9537

7358. **Product Name:** Lightlife Lemon Grill (Tempeh Burger)
Manufacturer's Name: Lightlife Foods, Inc
Manufacturer's Address: 74 Fairview St., Greenfield, MA 01301. Phone: 413-774-6001
Date of Introduction: 1989, August
Ingredients: Organic soy-rice tempeh (organically grown soybeans, brown rice, water, tempeh culture), fresh lemon juice, soy sauce, canola oil, olive oil, granulated garlic, onion powder.
Wt/Vol., Packaging, Price: 5.5 oz (155 gm) vacuum pack.
How Stored: Refrigerated or frozen
New Product–Documentation: Talk with Richard McKelvey, sales manager of Lightlife Foods. 1990, June 20. This round tempeh burger was launched in Nov. 1989. It is marinated in pure lemon juice as a opposed to lemon concentrate. The product is doing very well and growing. "If you try the Lemon Grill, you'll love it. So the company is working to get people to try it."

Label sent by Richard McKelvey. 1990, July 20. 4.25 by 5 inches. Green, yellow, and white on black. "Meatless. All natural. Two tempeh cutlets. Delicious as an entree or in a sandwich. Just grill in a lightly oiled pan, under the broiler or on a grill. Microwavable. 1-2 minutes."

7359. **Product Name:** [Viana Deep-fried Tempeh]
Foreign Name: Viana Frittierter Tempeh
Manufacturer's Name: Viana Naturkost GmbH
Manufacturer's Address: Neusserstr. 199, D-5000 Cologne 60, West Germany. Phone: (02233) 41323.
Date of Introduction: 1989, August
Ingredients: Soybeans*, water, shoyu*, Rhizopus culture, vegetable oil, sea salt. * = Organically grown
Wt/Vol., Packaging, Price: 200 gm
How Stored: Refrigerated
New Product–Documentation: Bernd Drosihn. 1989. Tempeh. Ein traditionelles Nahrungsmittel mit Zukunft [Tempeh: A traditional food with a future]. p. 38. Says the company makes deep-fried (frittierter) Tempeh.

Label sent by Bernd Drosihn. 1990, April 8. The company address is now Schmittenstr. 106, D-5030 Huerth 6, West Germany. 4.75 by 1.5 inches. Self adhesive. Reddish-purple, brown, and yellow. Dot-matrix printed.

7360. **Product Name:** [Viana Seitan, Seitan Meatballs {Meatless}, Skewered Seitan Kabobs].
Foreign Name: Viana Seitan, Seitan-Klopse, Seitan Spiesse
Manufacturer's Name: Viana Naturkost GmbH.
Manufacturer's Address: Neusserstr. 199, D-5000 Cologne 60, West Germany. Phone: (02233) 41323
Date of Introduction: 1989, August.
Ingredients: Seitan: Wheat*, wheat flour*, shoyu*, wheat gluten, ginger*, kombu sea vegetable. * = Organically grown.
Wt/Vol., Packaging, Price: 250 gm in a 350 gm jar.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Talk with Bernd Drosihn, founder of Viana. 1990, April 7. He makes seitan; started in Aug. 1989.

Label sent by Bernd Drosihn. 1990, April 8. 4.75 by 2.75 inches. Reddish purple, black, tan, and gold. The company address is now 5030 Huerth 6, West Germany.

Brochure. 8.5 by 11 inches. 6 panels. Black and brown on white. The front panel reads: "Sometimes when all is quiet, someone says 'Seitan.'" A shadowy cartoon figure with turned up collar and mobster-type hat with the brim turned down is shown. Gives an explanation of seitan and 5 recipes.

Brochure. 1990. "Pasteten und Brotaufstriche im Pfandglas" The back panel states that Viana now makes Seitan, Seitan-Klopse, and Seitan Spiesse.

Letter with new Labels from Bernd Drosihn. 1992, July 16. The company address is now: Viana Naturkost GmbH, Willi Graf Str. 88, 5350 Euskirchen-Kuchenheim, Germany. They still make these 3 seitan products, however the Seitan Klopse is now called Seitan Burger. Klopse is an old East German word for meatballs. Spiess is a skewered product like a kabob. All three products were first sold in Aug. 1989.

7361. *SoyaScan Notes*.1989. Update on Tomsun Foods International, Inc. (Interview). Sept. 18. Conducted by William Shurtleff of Soyfoods Center
• ***Summary:*** The company was in Chapter 11 bankruptcy and William Holmes, the new president, purchased it on 9 Feb. 1989. Holmes now owns 80% of the outstanding stock. The corporation moved to this new address from Greenfield, Massachusetts, 3 weeks ago. It is now basically just a marketing company. Tom Timmins is no longer associated with the company and no longer owns any stock in it. Jofu is now being made in Boston by a dairy. It is in honey and sugar flavored lines. The product is doing well. Tomsun also still sells tofu burgers and soy sauce. They no longer sell regular Tomsun Tofu, but they are looking for another company to make it for them. They were not happy with the company in New York that made it for them. They do not have a catalog of products. Address: 44 South Bayles Ave. Suite #200, Port Washington, New York 11050. Phone: 516-883-4900.

7362. Mizono, Bill. 1989. Selling pasteurized tofu in the produce case versus the dairy case (Interview). *SoyaScan Notes*, Sept. 21. Conducted by William Shurtleff of Soyfoods Center
• ***Summary:*** Bill strongly prefers to have Azumaya tofu sold in the produce case as long as the temperature is okay, which

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it usually is (42-48°F). Even dairy cases sometimes rise above 45°F, as on their defrost cycle. Sales are much better in produce. Tofu is an impulse item and there is more impulse buying in the produce section than in the dairy section. It gets lost among the dairy products. Also there is more space and space flexibility of produce, as caused by seasonal vegetables. Produce is a commodity area. A lot of Safeway stores are switching tofu back to the produce case from dairy, since it sells better in produce. But in stores that moved tofu to dairy, it took a year for sales to rebound to their pre-move level. During that time, many customers started going to Lucky supermarkets for their tofu. Lucky sells tofu only in the produce case. Some divisions of Safeway have never moved tofu out of produce. Each store decides its own location. Most produce departments at Safeway sell the Azumaya tofu in a vertical "juice case" which is cooler. They buy it directly from the Richmond produce warehouse.

The FDA is incorrect in saying that tofu is a "hazardous product." That is not true for pasteurized tofu. Azumaya had tests done in 1983 after *Yersinia* was found in tofu in Illinois and the state clamped down on tofu. Azumaya had a laboratory inoculate tofu with the four potentially toxic microorganisms (*Yersinia, Staphylococcus, Salmonella,* and *Clostridium Botulinum*) then pasteurize it like Azumaya does. They found that these organisms start growing only after 6 weeks at 69°F, and by that time the tofu was too sour and smelled too bad to eat, and the water was very cloudy. These tests showed that *pasteurized* tofu is not potentially hazardous. But the FDA does not distinguish between pasteurized and non-pasteurized tofu.

If health inspectors required all tofu to be moved out of the produce case, the produce buying division of each chain would decide where to relocate it. There are many considerations, and the main one to the produce division accounting department is that they get tofu sales credited to them no matter where it is sold. They have spent more than a decade to build the sales of this product and they are not about to give that up to the dairy department. They will put tofu into a refrigerated case where the temperature is at 45°F or below. Even when tofu is sold in the dairy case at Safeway, it still has a produce department label on it! Other than the produce case, Bill would like to see the tofu sold right next to the produce case, in a metal juice case. The produce department likes tofu with the vegetables because they feel that when people buy tofu they also tend to buy vegetables, so tofu sells vegetables. So the produce department does not like tofu to be sold in the dairy case. Another problem with an isolated glass case is that the tofu does not get as much attention as it should, and may be allowed to go out of date. But Bill feels it doesn't matter that much where the tofu case is located, as long as the consumer knows where it is. Moreover, Azumaya sells Kikkoman tofu, which can be sold in the produce case.

Azumaya dates their tofu for a 30-day shelf life, but that is very conservative to allow for mishandling. Under typical good conditions it will stay fresh for up to 50 days. But he feels it would be a mistake to date the tofu for 50 days and to use that as a selling tool, as Nasoya does. Azumaya has almost no problems with spoilage, puffing or souring. If there is a problem, the company investigates it. It is generally caused by a refrigeration problem, or letting the product stand for a long time in the back room, unrefrigerated, because people are too busy to get to it. Safeway now sells Azumaya tofu in Hawaii, at far below Hawaii tofu prices. On the East Coast Azumaya undersells Nasoya. Bill is too busy with Stir Fruity (tofu yogurt) to start a tofu plant on the East Coast.

The new Mori-Nu ad about water disaster and life preserver is incorrect in saying that water-pack tofu has a shelf life of "mere days."

Azumaya distributes Kikkoman aseptically packed tofu. He strongly prefers the flavor of his own product. Conclusion: FDA should have different temperature standards and "potentially hazardous" definitions for pasteurized and unpasteurized tofu. Azumaya and the Soyfoods Association should take the lead in educating FDA on these points. Address: President, Azumaya Inc., 1575 Burke Ave., San Francisco, California 94124. Phone: 415-285-8500.

7363. *Guardian* (*England*). 1989. Nabisco sells off Del Monte to ease its debt burden. Sept. 26. p. 11.
• ***Summary:*** American food giant RJR Nabisco has just sold its worldwide Del Monte processed food operations for $1.5 billion. "Kikkoman will take over some of Del Monte's businesses in the Far East" [East Asia].

Note: RJR Nabisco, Inc., was an American conglomerate formed in 1985 by the merger of Nabisco Brands and R.J. Reynolds Tobacco Company. RJR Nabisco was purchased in 1988 by Kohlberg Kravis Roberts & Co. in the second largest leveraged buyout in history, adjusted for inflation (Source: Wikipedia, Sept. 2008).

7364. Bates, Dorothy R. 1989. The tempeh cookbook. Summertown, Tennessee: The Book Publishing Co. 96 p. Contains 11 color photos and some line drawings. Index. Sept. 26 cm.
• ***Summary:*** This is a vegetarian (but not a vegan) cookbook. Contents: Introduction to tempeh: Nutritive values, how tempeh is made, storing tempeh, cooking tempeh. Ingredients and suggestions: Discusses soymilk, soy oil, and tamari. Making tempeh at home. Appetizers. Salads. Soups. Sandwiches. Main dishes: Oriental, Italian, Mexican, American, International. Dessert. Contains 100+ recipes. Address: Summertown, Tennessee.

7365. Johnson, Dale W. 1989. General uses of whole soybeans. In: E.W. Lusas, D.R. Erickson, and Wai-Kit Nip,

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eds. 1989. Food Uses of Whole Oil and Protein Seeds. Champaign-Urbana, IL. American Oil Chemists' Society. vii + 401 p. See p. 12-29. Chap. 2. Proceedings of the Short Course on Food Uses of Whole Oil and Protein Seeds held at Makaha, Hawaii, May 11-14, 1986. [35 ref]
• ***Summary:*** Contents: Introduction. Introduction. Oriental nonfermented products: Yuba, kinako. Thai desserts (tofu guan, med khanoon). Thai foods (protein crisp, cooked baby food, canned evaporated soybean milk, taow-huey, kanom ping kaset). Fermented foods: Natto, hama-natto, tao tjo (a miso-type product made in Indonesia and Thailand), ontjom (made from peanuts, coconut press cake, or okara), kochu chang, ketjap, sufu, yogurt-type products, tauco, soy sauce, miso, tempeh. Western world type products. Full fat soy flour (enzyme active, heat treated). Soybean hulls. Whole soybeans in animal feed. Chapatty [chapati]. Full fat soy grits. Heat treatment of soybeans. Heat treatment and texturizing. Low-fat products. Snacks (soynuts–dry roasted or oil roasted, plain or seasoned). Soybean sprouts. Soy butter [soynut butter]. Combinations of soybeans and cereals. Soybeans as vegetables (mao-tou, edamame, or fresh green soybean). Defatted products. Nutrition. Soybean handling and equipment considerations. Solvent plant considerations. Address: Food Ingredients (Minnesota) Inc., 2121 Toledo Ave. North, Golden Valley, Minnesota 55422.

7366. **Product Name:** [Taifun Shoyu: Natural Soy Sauce]
Foreign Name: Taifun Shoyu: Natuerliche Sojasauce
Manufacturer's Name: Life Food (Importer-Marketer). Made in Japan.
Manufacturer's Address: Stuehlingerstrasse 9, D-7800 Freiburg, West Germany. Phone: 0761/27 22 72.
Date of Introduction: 1989. September.
Ingredients: Soybeans, whole wheat, sea salt, water.
New Product–Documentation: Label sent by Anthony Marrese. 1990. March 22. 4 by 2.75 inches. Black, green, and orange on pink. Self adhesive.

Letter from Klaus Kempff of Life Food GmbH. 1990. June. This product was introduced in Sept. 1989.

7367. Lusas, Edmund W.; Erickson, D.R.; Nip, Wai-Kit. eds. 1989. Food uses of whole oil and protein seeds. Champaign-Urbana, Illinois. American Oil Chemists' Society. v + 401 p. Proceedings of the Short Course on Food Uses of Whole Oil and Protein Seeds held at Makaha, Hawaii, May 11-14, 1986. No index. 24 cm. [300+ ref]
• ***Summary:*** Of the 24 chapters, the first 10 are entirely about soybeans and soyfoods, and 5 of the remaining 14 chapters are partly about soya. Many individual chapters are cited separately. Address: 1. Protein R&D Center, Texas Engineering Experiment Station, The Texas A&M.

7368. Sugiyama, Shin-ichi. 1989. Production and uses of soybean sauces. In: E.W. Lusas, D.R. Erickson, and Wai-Kit Nip, eds. 1989. Food Uses of Whole Oil and Protein Seeds. Champaign-Urbana, IL. American Oil Chemists' Society. vii + 401 p. See p. 118-30. Chap. 8. Proceedings of the Short Course on Food Uses of Whole Oil and Protein Seeds held at Makaha, Hawaii, May 11-14, 1986. [8 ref]
Address: Kikkoman Foods Inc., P.O. Box 69, Walworth, Wisconsin 53184.

7369. **Product Name:** Tofu (Soft, Hard, and Fried).
Manufacturer's Name: Wa Heng Dou-Fu.
Manufacturer's Address: 5063 24th St., Sacramento, CA 95822. Phone: 916-737-0545.
Date of Introduction: 1989. September.
Ingredients: Fried tofu: Soy bean, water, natural calcium sulfate, vegetable oil.
Wt/Vol., Packaging, Price: 8 oz.
How Stored: Refrigerated.
New Product–Documentation: Talk with Mr. Peng-Xiang (Martin) Lin, Owner. 1990. Jan. 19. He started this company in Sept. 1989. Before that, he made soyfoods out of his home.

Label sent by Martin Lin. 1991. Nov. 20. 6 by 7.5 inches. "Keep Fit. Fried Tofu. No preservatives added." Most of the label text is written in Chinese. Talk with Martin Lin. 1997. Aug. 6. His company name is "Wa Heng Dou-Fu Soy Sauce." He bought the company from his parents in 1996. Three years ago he started to make soy sauce and sold it to several restaurants because Kikkoman is too expensive. He no longer makes soy sauce but plans to make it again after doing more research.

7370. Belleme, John. 1989. Natural soy sauce: A brewing controversy. Part II. *Solstice* No. 37. p. 25-26, 28-30. Sept/Oct. [1 ref]
• ***Summary:*** Discusses the differences between HVP unfermented soy sauce (such as La Choy, Chun King, and Kame) and fermented soy sauce, then between modern high-tech fermented soy sauce (such as that made by Kikkoman from hexane defatted soybean meal and fermented for less than 7 months in fiber glass or stainless steel temperature controlled tanks) and "traditionally brewed" soy sauce (such as the macrobiotic brands "made from whole soybeans and aged in wood for at least 4 seasons at the natural temperature of the region"). Manufacturers of modern-high tech soy sauce often refer to their product as naturally brewed to distinguish it from "synthetic" HVP sauces. Now Kikkoman and San-J have succeeded in placing their high-tech products in some natural foods stores. Belleme discusses the objections that can be raised against these products: (1) Substitution of hexane defatted soy meal for whole soybeans. "The FDA and solvent extraction industry have set acceptable limits for hexane in soy meal at 25 parts per million (ppm)." San-J and Kikkoman assert that their products test negative for hexane residues. "San-J

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brewmaster Yuji Yamamoto said that using soy meal rather than whole soy beans is more efficient because fermentation is faster, nitrogen yields are higher, and there is no crude soy oil to dispense with, as in whole soy bean soy sauce." Belleme thinks that this oil can be used for soap. Because of the greater efficiency, soy meal soy sauce can be produced and sold less expensively than whole bean soy sauce.

(2) Heated non-wood vats. "San-J brewmaster Yamamoto says that their closed heated system is easier to clean, more efficient, and produces a clearer, milder, and better balanced soy sauce than the traditional method." Jubei Sasaki of Sendai Shoyu Co. disagrees, arguing that the effect of seasonal changes and the wooden vats improve the shoyu flavor. Wooden vats may also give a product with more vitamin B-12.

"Although whole soybeans are always proudly listed as such, soy meal is usually referred to as 'soybeans.' Ironically, San-J's black label soy meal tamari says 'traditionally brewed,' and makes no mention of defatted soybeans, thus making it difficult for the consumer to make an informed choice." Address: P.O. Box 457, Saluda, North Carolina 28773. Phone: 704-749-9537.

7371. Kenyon, Michael. 1989. Worcestershire Sauce. *Gourmet* 49(10):122, 234-41. Oct.

• ***Summary:*** Discusses (without documentation) the origin and history of Lea & Perrins' Worcestershire and the factory in Worcester where the sauce has been made since 1897. Says that in 1835 the first concoction was mixed up from Lord Sandys' recipe. Two years later, John Wheeley Lea and William Perrins, discovered the forgotten brew in their cellar, took a second sniff and taste, and found it was quite nice. Apart from minor changes and the crucial aging, the "recipe for today's Worcestershire sauce is the one brought back from India by Lord Sandys [Note: Not true; the main ingredient, naturally fermented soy sauce, has been replaced by HVP]. A 1928 rhyming advertisement went, "And waiter, when you bring my cheese, bring Lea & Perrins sauce back, please."

Today, world consumption is about 25 million liters/year. The city of Worcestershire is located about 100 miles northwest of London, and 25 miles west of Stratford-on-Avon. The factory in Worcestershire makes 12 million bottles/year and more than half of all households in Britain are said to have a bottle in the pantry. It has been supplied to royalty since 1904. The factory at Worcestershire has an archives and museum. In 1988 BSN, a French-based food conglomerate, bought Lea & Perrins in both England and the USA (Fair Lawn, New Jersey).

C.W. Dyson Perrins (1964-1958), the millionaire grandson of William, the chemist, focused his energies on business–incl. the sauce business. In 1946 he founded the museum. Every summer he hunted at his castle in the Scottish Highlands, killing hundreds of birds (2,000 brace of grouse, etc.) and wild animals.

The writer's genealogical research indicates that the Lord Sandys whose name is tied by legend to Worcestershire sauce was Arthur Marcus Cecil, the third Lord Sandys (1798-1886). His grandfather's family seat was in the county of Worcestershire. The writer also believes that Lord Sandys invented the Bloody Mary–a cocktail consisting essentially of vodka and usually spiced tomato juice. The term was first used in 1947 and Worcestershire sauce is often used as an ingredient. Address: Long Island, New York.

7372. **Product Name:** Kikkoman Naturally Brewed Tamari Soy Sauce.
Manufacturer's Name: Kikkoman Corporation.
Manufacturer's Address: Noda 278, Chiba-ken, Japan
Date of Introduction: 1989. October.
Ingredients: Water, soybeans, salt, wheat, alcohol to preserve freshness
Wt/Vol., Packaging, Price: 8.5 fl oz (250 ml) glass bottle with "one-touch" plastic dispenser cap. Retails for $2.29 (12/91, California)
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Product with Label purchased at Safeway supermarket in Lafayette, California. 1991. Dec. 30. 5 by 3.25 inches. Gold, red, and white on black. "Although shoyu is normally made with nearly equal parts of soybeans and wheat, tamari is normally made with soybeans and a small amount of wheat. Tamari soy sauce is a full-bodied seasoning with a deep-rich color and unique fine flavor. Kikkoman tamari soy sauce is naturally brewed in Japan . . . The touch of wheat in this tamari gives it a smoother taste, more complex flavor, and appealing color... Refrigerate after opening."

Talk with Kikkoman sales dept. in San Francisco. 1991. Dec. 31. This imported product was first sold in America in Oct. 1989. The unique red cap can be closed after each use. In Japan a small amount is sold to restaurants for use with sashimi. Kikkoman used to sell tamari in the USA in 55-gallon drums but has discontinued this due to lack of demand.

7373. **Product Name:** Tofu Burgers, Teriyaki Burgers, Miso Burgers, Tofu Nuggets [Plain, or Barbeque].
Manufacturer's Name: La Soyarie.
Manufacturer's Address: 25 rue St. Etienee, Hull, QUE, J8X 1H5, Canada. Phone: 613-235-5356
Date of Introduction: 1989. October.
Ingredients: Incl. tofu, soy sauce.
How Stored: Refrigerated.
New Product–Documentation: Soya Bluebook. 1989. p. 102-03. Contact: Koichi Watanabe, President.

SoyaCow Newsletter. 1994. July/Sept. Mr. Koichi Watanabe is president of La Soyarie in Hull, Quebec.

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7374. Lima N.V. 1989. Lima: Tarif détaillant [Lima Foods catalog and price list]. Edgar Gevaertdreef 10, B-9830 Sint-Martens-Latem, Belgium. 9 p. [Fre]

• ***Summary:*** This macrobiotic food catalog was bound into the back of the Bonneterre catalog at a 1989 food expo in Paris. Lima sells the following soyfoods, each proceeded by its product category: Fresh products: Skewered seitan/tofu. Presto natural tofu. Presto tofu legumes/vegetables. Presto tofu cheese. Legumes: Yellow soybeans. Sprouts: Green soy/mung (500 gm or 5 kg). Flours: Roasted soy flour. Vegetarian preparations: Lima soy sauce (500 ml or 1 liter), tofu, natural tempeh, tempeh with shoyu. Dressings: Salad dressing with soy and tomato. Salad dressing with soya herb. Specialties: Organic miso (1 month), Hatcho miso, Barley miso (organic or regular), Rice miso (organic or regular), Heiwa brand Instant miso soup (regular or red, From Japan), Tamari (250 ml, 1 liter, 18 liters), Mansan Tamari from Japan, Shoyu (250 ml, 1 liter, 18 liters), Sakai shoyu from Japan. They also carry one book titled "Tofu dans le Cuisine Macrobiotique" (Eddie Hara, 1982).

Accompanying the catalog is a packet of individual full-color sheets with of photos of products in a folder titled Lima: Quality is our passion." There are sheets titled "Vegetable products rich in protein," "Tamari and shoyu," "Japanese specialties (incl. Heiwa brand shoyu and tamari), and a brochure titled "Lima: 30 years as a producer of organically grown (biological) foods." It describes the life and work of Edgar Gevaert (poet, artist-painter, ecologist, and a leader of the European peace movement). Address: Sint-Martens-Latem, Belgium.

7375. Mogi, Yuzaburo. 1989. The new yippies. *Look Japan* (*Tokyo*). Oct. p. 14-16.

• ***Summary:*** In this section on "Economy: Overseas investment," Prof. Shôichi Rôyama interviews Yûzaburo Mogi, Executive Managing Director of Kikkoman Corp. Born in 1935, he graduated from Keio University, then rejoined Kikkoman. In 1961 he earned his MBA from Columbia University in New York City. His publications include *How to Make an Overseas Plant* and *Introduction to International Business*. Mogi is an excellent example of a Japanese business leader who thinks big, who sees the big picture, and realizes that the actions of each Japanese company or person overseas can affect all the others. Thus, the need to develop standards of good behavior on various levels.

Mogi is now chairman of the Association of Overseas Organizations of Japan's Committee on the Development of Internationally-Oriented Personnel, and a key figure in the development of the recently released "Frictionless International Strategy." Mogi believes the Japanese corporations with overseas operations need to become internationalized and globally oriented. Employees sent overseas need to learn the local language, become friends and work well with their local colleagues, and make contributions to the local community. Returnees and their children should be treated better when they return to Japan–in an effort to minimize international friction.

Corporations should try to localize management and to see themselves "as an integral part of and dependent on the local community. The most important part of localization is having dealings with local corporations. Assuming all other factors are equal, local corporations should be favored over Japanese corporations. And among local corporations, emphasis should be placed on those closest to your plant and the community you are in"–to minimize investment friction. All Japanese companies should work together to minimize international friction trade friction. A photo shows Yûzaburo Mogi.

7376. NHK of Japan. 1989. [Japanese researchers discover that cancer patients have high levels of nitrosamines in their genes]. Television broadcast. Oct. 23. Evening news. [Jap]

• ***Summary:*** Medical researchers from Tokyo University announced experimental results showing that cancer patients have 5 to 10 times as much nitrosamines in their genes as healthy patients. Nitrosamines, known as carcinogens for some time, are thought to cause mutations, which can cause cancer. This may be a key discovery in cancer research.

Note: Four records in the SoyaScan database list nitrosamines, all in connection with soy sauce, and all as known carcinogens.

7377. U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division. 1989. U.S. imports of merchandise for the year through July. Washington, DC: USDC. 4 p. Oct. 28 cm.

• ***Summary:*** This information, based on a search request, is printed from a statistical database: U.S. Imports of Merchandise. International Harmonized System Commodity Classification (HT SUSA) by country by Customs District. The information, which is used to calculate customs and record imports, is also available on a compact disk. This data is up to statistical month July 1989.

Soy sauce. Unit of quantity: kg. General imports: 11,901,248 kg.

Soybeans, whether broken or not broken, seeds for sowing. General imports: 333,533. Address: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division, Data User Services, Washington, DC 20233. Phone: (301) 763-4100.

7378. Levey, Robert. 1989. Japanese restaurant better than ever. *Boston Globe*. Nov. 2. p. 4.

• ***Summary:*** A review of the Japanese restaurant Roka on Massachusetts Ave. near Harvard Square. "You may meander around on the appetizer menu with some satisfying results. Under the 'offbeat category,' consider the edamame, a bowl

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of Japanese green soy beans blanched in salted water and served cool. You pick up the whole pod, squeeze out the round soy beans and munch them like a party snack."

A salmon entree with teriyaki sauce was also served, as was grilled eel seasoned with a "traditional slightly sweet, thickened soy sauce.." Address: Globe staff.

7379. Goldbeck, Nikki. 1989. American Wholefoods Cuisine. Bird lives: Seitan instead of turkey. *True Food* (*Woodstock, New York*) 2(3):4-5.

• ***Summary:*** Seitan is made from gluten, the same elastic-like protein that allows bread to rise. "Its meat-like appearance and texture make it suitable for cutlets, roasts, casseroles, stews, and similar preparations. Our first exposure to seitan was during the early 1980s while in Hong Kong. There, numerous vegetarian restaurants, based on the former traditions of the Chinese Buddhist monks, serve mock beef, pork, chicken and duck, all based on gluten. Often these items are indistinguishable from meat."

The Goldbecks next encountered seitan in early 1989 (see *True Food*, Vol. 2, No. 2) when they dined on delectable California Seitan at the Unicorn Restaurant in Miami, Florida. Though seitan is high in protein (10%) and relatively low in fat, and in calories (118/100 gm), the quality of that protein is lower than that of may other vegetarian sources such as tofu, tempeh, and legumes. Soymilk or cashews can be used to make an excellent gravy.

Describes how to make kofu (raw gluten dough from 10 cups whole wheat flour) and seitan at home. The broth contains 6 cups water, ¼ to 1/3 cup soy sauce, 4-inch strip kombu seaweed, 4 thin slices of fresh gingerroot (optional), 2 cloves garlic (optional), pepper, thyme, sage, oregano, or other herbs and spices (optional). Gives recipes for: California Seitan (adapted from the Unicorn Restaurant). Brown sauce (with soy sauce). Seitan sauté. Mushroom gravy. Cashew gravy.

7380. Kikkoman Oriental cooking. 1989. Publications International Ltd., 7373 North Cicero Ave., Lincolnwood, IL 60646. 96 p. Illust. Index. 28 cm.

• ***Summary:*** This full-color cookbook features 125 recipes using Kikkoman's full line of Oriental sauces. The book was published in two formats. The first was a small magazine format published in Jan. 1989, for sale at supermarkets during Chinese New Year. The second, published in Nov. 1989, was a larger size (28 cm tall), spiral bound on glossy paper with many color photos, for sale at bookstores. Both were 96 pages. Kikkoman supplied all the recipes.

Contents: Kikkoman brings the Orient home. Appetizers. Beef. Pork. Poultry. Seafood. Side dishes.

A color photo shows the following products, and they are used with their brand names in the recipes: Kikkoman Soy Sauce, Lite Soy Sauce, Teriyaki Sauce, Teriyaki Baste & Glaze, Stir-Fry Sauce, and Sweet & Sour Sauce. Tofu is used in one recipe (p. 46).

7381. McCarty, Meredith. 1989. Fresh from a vegetarian kitchen. Turning Point Publications, 1122 M Street, Eureka, CA 95501-2442. ii + 263 p. Illust. by Bernice Kagan. Index. 28 cm.

• ***Summary:*** A macrobiotic cookbook containing over 450 recipes, many using tofu (at least 20, including many innovative sauces and dressings), tempeh, miso, amazake, soy sauce, soymilk, and amazake. A section titled "Soyfoods: Tofu and tempeh" (p. 151-55) contains 6 recipes and several variations. On page 202 is a recipe titled "Amazake-Soymilk" in which 3/4 cup soymilk is mixes with ¼ cup plain amazake. The author has co-directed this natural health center in northern California since 1977. Address: Eureka, California.

7382. **Product Name:** [Tempeh with Tomato].
Foreign Name: Tempé à la Tomate.
Manufacturer's Name: Société Soy.
Manufacturer's Address: 1 rue du Crêt de la Perdrix, 42400 Saint-Chamond, France. Phone: 77.31.24.42.
Date of Introduction: 1989, November.
Ingredients: Tempeh 90% (water, soybeans*), selected cultures (ferments), sunflowerseed oil, tomato sauce (5%: tomatoes*, onions*, carrots*, soy sauce, spices and aromatics). * = Organically grown.
Wt/Vol., Packaging, Price: 180 gm.
How Stored: Refrigerated.
Nutrition: Per 100 gm: Protein 18.1 gm, fats (lipids) 10.7 gm, carbohydrates (glucides) 6.4 gm, calories (Kcal) 194 (812 kJoules).
New Product–Documentation: Form filled out for Anthony Marrese by Bernard Storup, 1989, Nov. The product will be launched in Nov. 1989.

Label sent by Bernard Storup, 1990, Dec. 26. 3 by 5.5 inches. Red, green, yellow, purple, and brown or white. Illustration of palm trees in front of purple mountains. "A world of equilibrium. Biona certification symbol. Nature et Progres organic certification symbol. Dehulled soya is cooked and inoculated with a mold (champignon: Rhizopus oligosporus). From this fermentation is born tempeh, with such a savory flavor. Reheat in a saucepan (casserole) over low heat, stirring (remuant) from time to time."

7383. *SoyaScan Notes*.1989. Influence of Japanese and Japan on soyfoods in America (Overview). Dec. 7. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** The Soyfood Center's SoyaScan database presently contains 30,790 publications and commercial products related to soya. Of these, 876 (2.9%) concern the influence of Asian-Americans (Japanese, Chinese, Koreans, or Indonesians) or their home countries on soyfoods. Of these 876 records, 638 (73%) concern Japanese influence.

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compared with 178 (20%) that concern Chinese influence–including Chinese from Taiwan, Hong Kong, Singapore, etc. Thus Japanese influence on soyfoods in America is much greater than that of any other Asian cultural group. We can identify at least seven major areas of influence:

1. Soyfoods Terminology. It is interesting to note that many of the most popular soyfoods in America are most widely known by their Japanese names. We say tofu (not doufu or bean curd), miso (not jiang or soybean paste), natto, okara (not soy pulp), yuba (not doufu-p'i or soybean skin). Even "soy" (as in soy sauce) is derived from the Japanese word "shoyu." Increasingly Americans interested in natural foods also use the terms shoyu and tamari to distinguish them from HVP soy sauce.

2. Kikkoman. By far the most influential Japanese soyfoods company in America today is Kikkoman, just as soy sauce is by far the most important soyfood product. Kikkoman was also the first Japanese company to introduce soyfoods to America. In 1868 the first Japanese immigrants to Hawaii took kegs of Kikkoman brand shoyu with them. In 1879 Kikkoman brand shoyu was registered in California, where it was exported to Japanese immigrants. Exports rose steadily, until between 1949 and 1954 exports of Kikkoman shoyu to the U.S. ranged from 213,000 to 305,000 gallons a year. Kikkoman's first real attempt to reach any foreign market dates from 1956 when, during the U.S. presidential elections, Kikkoman ran television ads to promote its product to mainstream American audiences as a seasoning for meat, fish, and poultry. In 1957 Kikkoman International Inc., a new sales company was established in San Francisco. Sales skyrocketed. In 1973 Kikkoman opened a huge modern shoyu plant at Walworth, Wisconsin. In 1976 Kikkoman passed La Choy to become America's best-selling soy sauce.

3. Introducing Soyfoods to Hawaii. The first Japanese who arrived in Hawaii in 1868 brought shoyu and miso with them. The earliest known soyfoods company there was a shoyu brewery started in 1891 in Honolulu by Jihachi Shimada. This was also the earliest known soyfoods company started by a Japanese anywhere in the Western world. Hawaii became part of the USA in 1898 by annexation. Hawaii and California were the first two areas in the U.S. where soyfoods became widely available. During the 20th century, Japanese started roughly 183 companies in Hawaii making shoyu, miso, and tofu–far more than Chinese (6) or Koreans (2). They developed innovative new products–such as sweet Hawaiian-style shoyu and miso. These products profoundly influenced the food life of Hawaii.

4. Soyfood Manufacturers in the USA. The earliest known soyfoods manufacturer in the Continental USA was a company (the name is unknown) run by the wife of Chieko Hirata that started making tofu in Sacramento in about 1895. The second earliest was Yamamori Jozo-sho, which started making shoyu in San Jose, California, in 1897. Many of the earliest soyfoods companies in America were run by Japanese Americans. By 1942 at least 158 soyfoods manufacturing companies had been started in America by Asian Americans; of these, 143 (91%) were run by Japanese Americans. When *The Book of Tofu* was published in 1975, it listed 55 tofu companies in America, all run by Asian-Americans; 39 were Japanese- and 16 were Chinese-run. Today America's two largest tofu companies are both run by Japanese Americans: Azumaya Co. in San Francisco, and House Foods & Yamauchi Inc. in Los Angeles. Hawaii's three largest tofu companies are also run by Japanese Americans: Aloha Tofu Co., Kanai Tofu Factory, and Hawaii Tofu. Morinaga Nutritional Foods in Los Angeles and Kikkoman Foods in San Francisco both import large amounts of aseptically packaged long-life silken tofu from Japan.

Another major manufacturer is San-Jirushi Corp. of Kuwana, Mie-ken. In the late 1970s San Jirushi started exporting tamari and soybean miso to America. They set up an office in the early 1980s and began to promote their product as "real" tamari to industrial food processors and the natural foods market. In Sept. 1987 the company opened a state-of-the art tamari plant in Richmond, Virginia, with a capacity of 1 million gallons a year. The company now has 75% of the industrial soy sauce market in America.

In Oct. 1986 a major new joint stock company named American Soy Products began producing Edensoy soymilk in Clinton, Michigan. It was a joint venture between Eden Foods and 4 Japanese companies: Marusan Ai, Kawatetsu Shoji, Muso Shokuhin, and Seikensha. Edensoy has since become America's best-selling soymilk. Prior to 1986 much of the soymilk sold in America was made in Japan.

Finally, three of America's 4 largest miso manufacturers are run by Japanese-Americans. The largest is Miyako Oriental Foods in Los Angeles. The other two are located in Hawaii.

5. Soyfoods Imports from Japan. The first importers of shoyu and miso were Japanese distributors such as Japan Foods Corp., Mutual Trading Co. and Nishimoto. But starting in 1962 American macrobiotic and natural foods companies started to import large amounts of shoyu and miso. Pioneers were Chico-San, Erewhon, Eden Foods, Westbrae, Edward & Sons, Tree of Life, and Great Eastern Sun. U.S. imports of soy sauce from Japan jumped from 1.7 million lb (174,400 gallons, worth $317,000) in 1949, to 18.6 million lb (1,897,000 gallons, worth $3,116,000) in 1972, an 11-fold increase in quantity during only 23 years.

6. Teachers and Information. Many Americans first learned about soyfoods from Japanese teachers, especially macrobiotic teachers, such as George and Lima Ohsawa, Michio and Aveline Kushi, Herman and Cornellia Aihara, and Noboru Muramoto. All have written many influential books and lectured and taught extensively since the 1960s. In addition, many young Americans learned how to *make*

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soyfoods from these macrobiotic teachers. Moreover, Japan is Asia's best source of information about soyfoods. For example, the Soyfoods Center's SoyaScan database contains 5,095 publications and products about soya and Japan, compared with 1,867 on soya and China or Taiwan.

7. Tofu Equipment Manufacturers. Hundreds of tofu companies have started in America since the mid-1970s. The majority of these are run by Caucasian Americans and most use specialized tofu equipment made in Japan by Takai Tofu & Soymilk Equipment Co., or by Sato Shoji.

7384. Guedemann, Ursula. 1989. Sojabohnen in Garten und Kueche [Soybeans in the garden and kitchen]. *Zum Beispiel (Switzerland)* No. 12. p. 21-22. Dec. 21. [2 ref. Ger]
• ***Summary:*** Soybeans are not hard to grow in one's own garden. The seeds can be ordered from Andreas Ellenberger of Ekkarthof, 8574 Lengwil. They can be cooked as whole dry soybeans, or made into sprouts, flour, or tofu. Contains 1 recipe using soy flour and 4 recipes using tofu.

A test of soy sauces conducted by and published in *AGE (Aktion gesuender Essen)* in June 1989 showed that Tamari-Bio and Tamari-Lima were the best value (*Bewertung*). In second place came Tamari-Tofu and Kikkoman-Soja-Sauce. Address: Switzerland

7385. Krieger, Verena. 1989. Soja als Nahrungsmittel: genutzt oder missbraucht? [Soya as a food: Used or misused?]. *Zum Beispiel (Switzerland)* No. 12. p. 15-17. Dec. 21. [Ger]
• ***Summary:*** Soybeans can be fermented to make miso, soy sauce, tempeh, or natto. Or the protein can be extracted in traditional ways to make soymilk, tofu, or yuba. One can also make soy sprouts. In the Western world, soybeans are mostly misused to make high-protein meal for livestock fodder, and vegetable oil. Address: Lucerne, Switzerland.

7386. Kuntjoro, Sri Utami, Kusnadi, N.; Sayogyo, -. 1989. Demand for corn, cassava and soybean in human consumption: A case study in Java, Indonesia. *CGPRT Working Paper* No. 2. xvii + 116 p. Dec. 25 cm. [19 ref]
• ***Summary:*** Contains much original, detailed information and statistics on consumption, demand, and demand elasticity for secondary food crops (*palawija*) in Indonesia. The main secondary food crops are soybeans (including the soybean products *tahu* {tofu}, *tempe* {tempeh}, *kecap* {soysauce}, and *tauco* {Indonesian-style miso}), corn, cassava, and peanuts. "Pulses, soybean in particular, represent (after cereals) the most important source of vegetable protein for the people of Indonesia. On the whole, soybeans are consumed in the form of tahu (bean curd), tempe (fermented soybean) and kecap (soysauce). Among low-income households, tahu and tempe, which are relatively cheap in price, are (after cereals) a major source of vegetable protein. According to Sayogyo (1985), tempe is also popular among people in the high income groups.

The National Socio-Economic Survey (Susenas), conducted by the Central Bureau of Statistics, collects socio-economic data from a large number of households throughout Indonesia. The use of chemical fertilizer on soybeans has increased from 5.19 kg/ha in 1973 to 80.39 kg/ha in 1982. Per capita consumption of soybeans has risen from 3.28 kg/year in 1968 to 4.45 kg/year in 1983. In the peak year, 1979, it was 5.33 kg/year.

Table 4.2 shows protein consumption from secondary food crops in 5 Javanese provinces in 1981. The amount of protein contributed daily per capita to the Indonesian diet by soyfoods (in the forms of tempeh, tofu, soybeans, soy sauce [kecap], and miso [tauco]) is greatest in Yogyakarta (22.57 gm, 61.1% of total protein consumption), followed by Central Java (14.57 gm; 37.4% of total), Greater Jakarta (13.78 gm; 33.3% of total), East Java (12.96 gm; 32.8% of total), and West Java (6.44 gm; 14.9% of total). As people's income rises, they tend to consume more soyfoods. Soyfoods provide Tempeh makes the greatest contribution to protein intake in every province, followed by tofu, soybeans, soy sauce (kecap), and tauco (Indonesian miso). Tempeh makes the greatest contribution in Yogyakarta, where it provides 17.86 gm/capita/day of protein, or 60% of the protein supplied by secondary crops, and more than any other single source. The amount of daily protein per capita contributed by tempeh is next most important in Central Java (11.48 gm/day), followed by East Java (9.28), Greater Jakarta (8.98), and West Java (4.16). Tofu makes its greatest protein contribution in Greater Jakarta (4.54 gm/day), followed by Yogyakarta (3.57), East Java (3.49), Central Java (2.80), and West Java (1.99). Address: Agricultural economists, Bogor Univ. of Agriculture.

7387. Berthier, A.M. 1989. Soja, quelle place dans l'alimentation? [Soya: What is its place in the diet?]. *Revue Laitiere Francaise* No. 483. p. 35. [Fre]*
• ***Summary:*** A brief study of the composition and nutritive value of the soybean and products derived from it, such as soy sprouts, tofu, soy sauce, and miso.

7388. **Product Name:** Col. Sanchez Taco Filling.
Manufacturer's Name: Col. Sanchez Traditional Foods Inc.
Manufacturer's Address: P.O. Box 5015, Santa Monica, CA 90405. Phone: 213-204-1137.
Date of Introduction: 1989.
Ingredients: Vital wheat gluten, beetroot, soybeans, soy oil, paprika, a unique blend of non-irradiated chilies, herbs and spices, sea salt, soy sauce.
Wt/Vol., Packaging, Price: 12 oz (340 gm) plastic bag.
How Stored: Frozen.
New Product–Documentation: Label sent by Kathryn Bennett of Col. Sanchez, 1990 Oct. 17. Front panel: 3 inches

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square. Back panel: 5 by 3 inches. Both: Self adhesive. Black on red. "No cholesterol. High in fiber. Vegetarian. No cholesterol. All natural ingredients. No preservatives. High in fiber. Low in sodium. A percentage of our profits is donated to environmental causes."

7389. **Product Name:** Soya Nova Marinated Tofu Slices [Spicy, Curry, or Barbecue].
Manufacturer's Name: Soya Nova Tofu Shop.
Manufacturer's Address: R.R. #2 Rourke Road, C-28, Ganges, Saltspring Island, BC, V0S 1E0, Canada. Phone: 604-537-9651.
Date of Introduction: 1989.
Ingredients: Tofu: Organically grown soybeans, nigari, well water. Marinade: Water, tamari soy sauce, unrefined oil (safflower and toasted sesame oil), herbs, spices, fresh onion, garlic.
How Stored: Refrigerated.
New Product–Documentation: Letter from Greg Lundh of Silverking Soya Foods in Nelson, BC, Canada. 1990. Dec. 14. Soya Nova Tofu Shop introduced this product in 1989.

7390. **Product Name:** Tamari Joe's Traditional Tamari Shoyu Soy Sauce.
Manufacturer's Name: Trader Joe's (Distributor).
Manufacturer's Address: 538 Mission St., South Pasadena, CA 91030. Phone: 818-441-1177.
Date of Introduction: 1989.
Ingredients: Water, whole soy beans, whole wheat, sea salt, grain alcohol (a natural preservative).
Wt/Vol., Packaging, Price: 16 fluid oz (1 pint) bottle. Retails for $1.59 (8/89, Concord, California).
How Stored: Shelf stable.
New Product–Documentation: Label. 1989. 5 by 3 inches. Black, blue, and red on white. Self adhesive. "No artificial preservatives. Keep cool or white spots may appear. These are harmless. Skim them off. Naturally brewed in America in wood vats for about 2 years." Illustration of an Edo-period Japanese man and woman sitting at a low table at a meal.

7391. **Product Name:** [Viana Tempeh Spreads (Regular, or Chutney)].
Foreign Name: Viana Tempeh Pastete, Tempeh Chutney.
Manufacturer's Name: Viana Naturkost GmbH.
Manufacturer's Address: Neusserstr. 199, D-5000 Cologne 60, West Germany. Phone: (02233) 41323.
Date of Introduction: 1989.
Ingredients: Chutney: Tempeh*, apple-pear puree*, rolled oats*, shoyu*, spices, sea salt. * = Organically grown.
Wt/Vol., Packaging, Price: 200 gm.
New Product–Documentation: Bernd Drosihn. 1989. Tempeh: Ein traditionelles Nahrungsmittel mit Zukunft [Tempeh: A traditional food with a future]. p. 38. Says the company makes Tempehaufstriche (Tempeh Spreads).

Talk with Bernd Drosihn, founder of Viana. 1990. April 7. He started to make tempeh in about Aug. 1989 after leaving Soyastern. He makes 3 types of tempeh, 2 tempeh burgers, and 2 tempeh spreads (introduced in 1990). The burgers and spreads are selling well.

Label sent by Bernd Drosihn. 1990. April 8. The company address is now Schmittenstr. 106, D-5030 Huerth 6, West Germany. "4.75 by 1.5 inches. Self adhesive. Reddish-purple, black, gold or orange, and light purple. A fruity, sharp spread for bread." Ingredients for the pastete are: Organic tempeh, onions, shoyu, herbs, spices, and sea salt. "A spicy spread for bread."

7392. **Product Name:** Mexican Braised Tofu.
Manufacturer's Name: Wildwood Natural Foods.
Manufacturer's Address: 31 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919.
Date of Introduction: 1989.
Ingredients: As of 1998: Wildwood tofu (filtered water, soybeans organically grown in accordance with the California Organic Foods Act of 1990, nigari/magnesium chloride, a natural firming agent), marinade (soy sauce, water, brown rice syrup, rice wine, honey, ginger powder), water, green bell peppers, soy sauce, corn, onions, honey, tomato paste, lemon juice, sesame oil, cilantro, cider vinegar, garlic, jalapeño peppers, herbs, and spices.
How Stored: Refrigerated.
New Product–Documentation: Label sent by Billy Bramblett. 1998. July. He says this product was introduced in 1989, and made at Wildwood's plant in Fairfax.

7393. **Product Name:** Savory Baked Tofu (Organic).
Manufacturer's Name: Wildwood Natural Foods.
Manufacturer's Address: 31 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919.
Date of Introduction: 1989.
Ingredients: 1998: Wildwood Tofu (filtered water, organic soybeans grown in accordance with the California Organic Foods Act of 1990, nigari {magnesium chloride, a natural firming agent}), soy sauce, unsweetened apple juice, apple cider vinegar, mustard, onion powder, sesame oil, garlic powder.
How Stored: Refrigerated.
New Product–Documentation: Original Label sent by Billy Bramblett. 1998. July. He says this product was introduced in 1989 at Fairfax.

7394. Yoneyama, T.; Itoh, T.; Shinha, Y.; Fukuzawa, M.; Shimizu, K.; Nishizawa, N.; Baba, S. 1989. [Investigations into the quality of commercial soy sauce. XVI.]. *Research Report of the Nagano State Laboratory of Food and Technology* No. 17. p. 16-20. [1 ref. Jap]*
Address: Nagano State Lab. of Food Technology, Kurita, Nagano-shi, Japan.

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7395. Acuff, Steve, Acuff, Karen. 1989. Das makrobiotische Gesundheitsbuch [The macrobiotic health book. 1st ed.]. Munich, West Germany: Goldmann Verlag. 256 p. Recipes by Karen Acuff. 22 cm. [Ger]
• ***Summary:*** This book of macrobiotic philosophy and cookery contains 5 tempeh recipes, and also mentions miso, tofu and tamari. Flora Yap (4/92) notes that the author travels from town to town, lecturing and selling his book. Certain groups are inviting him to speak, renting a place for him to lecture and doing the publicity (paid admission). Address: Idaho, USA.

7396. Beatrice/Hunt Wesson, Inc. 1989. Quick & easy cooking with La Choy. [Fullerton, California?] Beatrice/Hunt Wesson, Inc. [6] p. Illust. 19 cm. *
• ***Summary:*** This is basically a color recipe booklet which enables the reader to prepare tasty Chinese recipes at home.

7397. Cituk, Kathy, Finnegan, John. 1989. Natural foods and good cooking. Elysian Arts, 20 Sunnyside Ave. Suite A161, Mill Valley, CA 94941. 122 p. No index. 22 cm. [64 ref]
• ***Summary:*** This non-vegetarian cookbook contains considerable introductory information about and recipes using amazake (p. 16, 41, 56, 91, 98-99, 103), miso (p. 43), soymilk (p. 43), mochi (p. 44, 54), tamari soy sauce (p. 46), tofu (p. 46, 51, 80, 88, 96), tempeh (p. 46). Numerous references are made to a book by John Finnegan (1989) titled "Amazake Rice Nectar." Address: Mill Valley, California.

7398. Conil, Christopher, Conil, Jean. 1989. A taste of the world: Cuisine sans Frontières. Dishes from great chefs around the world. Martin Books, Simon & Schuster International Group, Fitzwilliam House, 32 Trumpington St., Cambridge CB2 1QY, England. 208 p. Illust. Index. 25 cm.
• ***Summary:*** This non-vegetarian cookbook was produced in association with the American Soybean Assoc., Belgium. They distributed it widely free of charge as part of the Soyasign Campaign (based in London). Contents: Acknowledgements. Introduction. From clover to cream: Milk, cream, and cheese. The gifts of Ceres: Grains, pasta, and pulses. Seafood. Birds of many feathers: Poultry and game. Meat dishes. Salads. Ethnic and modern sauces. Sweet and sour desserts. Contributing chefs.

Soya oil or soya margarine are called for in many recipes. There is an unusual recipe for Fermented Soya Sauce, with malt syrup or honey, and brewer's yeast, requiring a 10-day fermentation (p. 170-71). On p. 180 is a recipe for Tamari sauce. Address: England.

7399. Ebine, Hideo. 1989. Miso shôyu nyûmon [Introduction to miso and shoyu]. Tokyo: Nihon Shokuryo Shinbunsha. Hatsubaimoto Nihon Serufu Saisu Kyokai. 282 p. Illust. 18 cm. Series: Shokuhin Chishiki Mini Bukkusu Shirizu (Knowledge of Foods–Mini-Books Series). [Jap]*
Address: Director, Central Miso Research Inst., Shinkawa 1-26-19, Chuo-ku, Tokyo, Japan 104.

7400. Echols, John M., Shadily, Hassan. 1989. An Indonesian-English dictionary. Third ed. Ithaca, New York, and London: Cornell University Press. xix + 618 p. 24 cm. [Ind, Eng]
• ***Summary:*** Soy-related words include: (1) bijan (sesame, also wijen or bijen). (2) bungkil kedelai (soybean meal). (3) kacang (pea, bean, peanut), including kacang asin (salted peanuts), kacang atom or kacang ganefo (peanuts fried in batter), kacang goreng (peanuts fried crisp), kacang hijau or kacang ijo (mung bean), kacang kedelai (soybean), kacang tanah (peanut). (4) kecap (soy sauce; kecap ayam {chicken prepared with soy sauce}). Note: kecap manis is not mentioned here or at "manis." (5) kecipir (four-sided bean eaten as a vegetable [winged bean, *Psophocarpus tetragonolobus*]). (6) kedelai, kedelé (soybean). (7) oncom (fermented cake made from soybean sediment). (8) ragi (yeast, fermentation agent). (9) tahu (tofu, soybean curd), including tahu goreng (fried tofu), tahu isi (tofu filled with meat), tahu kuning (firm yellow tofu), tahu pong (deep-fried puffy tofu), tahu tempé (tofu and tempeh).

Note: This is the earliest English-language document seen (May 2012) that contains the term "deep-fried puffy tofu."

(10) tahua (a by-product of tofu similar to yogurt in consistency). (11) takoa, takoah (see takua). (12) takua (firm spiced tofu). (13) taosi (see taoci [fermented black soybeans]). (14) tapai, tapé (sweet cake made of slightly fermented rice or tubers). (15) taoci, tauco, taucyo (fermented bean paste [like miso] used as a condiment).

Note: This is the earliest (and only) English-language document seen (Feb. 2009) that uses the word "taucyo" to refer to Indonesian-style miso. "Taoci" probably refers to fermented black soybeans, not to miso.

(16) taugé (bean sprouts). (17) témpé (fermented soybean cake, tempeh, something trivial and unimportant or low grade in quality; *Dlm jaman penjajahan org Indo témpé pribumi* = "During the colonial times the Eurasians considered the natives to be no better than tempeh"). Address: 1. Ithaca, New York; 2. Jakarta, Indonesia.

7401. Food & Agriculture Organization (FAO). 1989. Utilization of tropical foods: Tropical oil-seeds. Rome, Italy: Food & Agriculture Organization of the United Nations (FAO). xiv + 82 p. 21 cm. Series: FAO Food and Nutrition Paper 47/5. *
• ***Summary:*** The 1st chapter, titled "Leguminous oil-seed crops, has these contents: Soybean (p. 1-35): The golden bean from China, varieties and production, soybeans in the tropics. Hydrolysis of soybeans using microbial enzymes. Nutritional and acceptability aspects of soybeans: Cooking

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characteristics, soybean flavour, digestibility of soybeans. Soybean processing in eastern Asia: Fermentation of soybeans. Fermentation inoculants: Koji and ragi, angkak and masam [a green fermentation starter from Nepal, made from wheat and selected moulds], preparation of koji. Preparation of soy sauce: Traditional Japanese shoyu, other types of soy sauce. Fermented soybean pastes: Types of miso, preparation of miso koji, preparation of mame miso, preparation of hamanatto. Other fermented soybean products: Natto and thua nao. Indonesian tempe: Preparation of tempe ragi, production of tempe kedele, other types of tempe, domestic use and nutritional content of tempe. Foods fermented by molds: Role of moulds in food processing, food safety aspects. Non-fermented soybean products: Production of soy milk, improving soymilk flavour. Soybean protein products: Preparation of tofu, preparation of yuba. Soybean cheese products: Preparation of sufu ("The Chinese prepare a fermented soy curd called *sufu*, which resembles a moulded, soft-texture cheese." Red sufu is made using "red rice koji" (angkak)). Use of soy milk and tofu residues: Preparation of oncom tahu, preparation of mettauza. Use of soybean sprouts. Soybeans as a cash crop. Soybean as an oilseed: Problems of small-scale extraction. Solvent extraction of soybean oil. Economic aspects, extraction process, refining operations. Nutritional and organoleptic aspects of soybean oil. Commercial production of vegetable fats and oils. Solid shortenings, effects of hydrogenation, hardness of fats. Margarine production: Composition of margarine, manufacture of margarine. Production of soybean grits and flour. Commercial production of soybean protein products. Protein concentrates, protein isolates, economic aspects. Introduction of soyfoods at the village level: Snack foods, vegetable relish, pastes and flour. Preparation of soybeans at the village level: Reducing bitter flavours, preparation of soybean flour. Prospects for soybean products in the tropics.

Concerning the preparation of sufu (p. 21): "... the cubes [of tofu] are drained and heated for about 15 minutes at 100°C to sterilize them. The sterilized cubes are cooled, placed on trays, and inoculated with one of the following fungi: *Actinomucor elegans*, *Mucor lienialis*, or *Rhizopus chinensis* var. *chungyen*, depending on the type of 'cheese' to be produced. They are then incubated at 12-20°C for three to seven days. At that stage, the cubes become covered with a white mycelium and are known as *pehtzu* [*pehtze*].

"In the final stages, the cubes of *pehtzu* are transferred to ageing tanks, where they are immersed in a mixture of rice wine and salt, 2-5% sodium chloride, for forty to sixty days. The alcohol content of this 'dip' (approximately 10 percent) is much higher than that normally obtained by anaerobic fermentation using osmophyllic [osmophilic] yeasts. The final product, after completing the ageing period, is soft and pale yellow, with a pleasant taste and aroma. It is often served with sesame oil. More pungent cheeses are prepared by related processes, by adding other components to the final brine solution. These may include red rice koji, fermented rice mash, anise or pepper. An outline of a preparation from Thailand, using red rice koji to give a red sufu is shown in Figure 3" (a flow sheet, p. 22; Source: Narudom Boon-Long, 1983. "Traditional fermented food products." United Nations University (UNU) Workshop Paper, CFTRI, Mysore, India).

The peanut from Peru (p. 36+).

7402. Fukushima, Danji. 1989. Industrialization of fermented soy sauce production centering around Japanese shoyu. In: K. Steinkraus, ed. 1989. Industrialization of Indigenous Fermented Foods. New York and Basel: Marcel Dekker, Inc. xii + 439 p. See p. 1-88. [160 ref]

• ***Summary:*** Contents: Introduction. History. Present soy sauce situation. Change of soy sauce manufacturing methods from indigenous to modern processing. Microbiology and biochemistry. Application of new biotechnology for soy sauce manufacture. Forecast. References. Address: Kikkoman Corp., Chiyoda-ku, Tokyo, Japan.

7403. Fukushima, Danji. 1989. Historical development of soy sauce and fermented black soybeans in China (Document part). In: K. Steinkraus, ed. 1989. Industrialization of Indigenous Fermented Foods. New York and Basel: Marcel Dekker, Inc. xii + 439 p. See p. 2-8.

• ***Summary:*** "I. Chiang. In 1979, Kinichiro Sakaguchi proposed a unique hypothesis regarding the origin of soy sauce and miso as a result of historical biochemical investigations, and this hypothesis was later introduced by this author in English (Fukushima, 1985a, 1986b). However, new literature on the origin of soy sauce and miso appeared based on more detailed historical evidence (Pao 1982a, 1982b, 1984a, 1984b). According to these papers, soy sauce was derived from a Chinese food called 'chiang' ('hishio' in Japanese).

"Chiang is a tasty mash product and does not come in a liquid form. Therefore chiang belongs in the category of 'miso' in Japan. The first record of chiang can be found in the book entitled *Chou-li* (*Shurai* in Japanese) by Chou-kung (*Shuko* in Japanese), which was published around 1,000 B.C. in the Chou (*Shu* in Japanese) dynasty (1,222 BC to 249 BC). This book covers the matters on the early years of the Chou dynasty in ancient China (about 3,000 years ago). According to this document, chiang was made by the following procedure. First, yellow aspergilli were grown on millet. (Such mold-grown cereals are called 'koji' in Japanese.) Then the millet koji and the meat of fish, flesh, or fowl and salt were mixed with a good liquor in a bottle and kept for 100 days. Soybeans were not used in this chiang. The first literature in which soybeans appeared as a substitute for meat in chiang was the *Ch'i-min Yao-shu* (*Saimin-Yojutsu* in Japanese) by Chia Ssu-hsieh (Ka Shikyo in Japanese), the world's oldest encyclopedia of agriculture, published in 535 AD in China. This indicates that the

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chiang in which soybeans was used originated sometime between the Chou and Han dynasties, when the cultivation of soybeans prevailed. The meats in the chiang described in *Chou-li* were gradually replaced by soybeans in the course of time and further cereals such as wheat, barley, and rice came to be used instead of millet, resulting in the production of many types of chiang. In the process of making chiang during these periods, soybeans were not used as a raw material in koji; rather they were added to the harvested koji prepared from the other cereals. The soybeans were digested by the enzymes of the koji. This digestion mixture was the final product, which was in the form of a mash. The liquid products which belong to the category of soy sauce did not appear in the literature before the later Han dynasty (about 25-220 A.D.).

"There is a description of the liquid product which was made by separating the liquid portion from the chiang in *Ssu-ming Yueh-ling* (*Shimin-Getsurei* in Japanese), published by Ts'ui Shih (Sai Shoku in Japanese) in the later Han dynasty. This liquid was called chiang ch'ing which means 'clear chiang.' The manufacturing processes of chiang and chiang ch'ing are shown in Figs. 1 and 2. Chiang ch'ing is a prototype of soy sauce but it differs from 'chiang-yu' which means literally shoyu or soy sauce in the Chinese characters. The first appearance of the name of chiang-yu was in *Shan-chia Ch'ing-kung* (*Sanya-Seikyo* in Japanese) by Lin Hung (Rin Ko in Japanese) in the Sung dynasty (960-1127 AD).

"The first record indicating use of all the raw materials to prepare koji for soybean chiang appeared in the *Nung-sung I-shin Ts'o-yao* (*Noso-Ishoku-Satsuyo* in Japanese) by Lu Ming-Shan (Ro Meizen in Japanese), published in the Yuan (Gen in Japanese) dynasty (1271-1368 AD). The flow sheet of this soybean chiang is shown in Fig. 3." (In this process, soybeans are roasted, dehulled, cooked, then mixed with wheat flour and spontaneously molded to form koji. The koji is dried in the shade, winnowed, and pounded, then mixed with spices and salt water to form a mash which is insulated and aged to make the soybean chiang.) The chiang-yu described in *Pen-ts'ao Kang-mu* (*Honso-Komoku* in Japanese), published in 1590 by Li Shih-chen (Ri Jichin in Japanese) in the Ming (Min in Japanese) dynasty, was also made with koji manufactured by using soybeans and cereals (Fig. 4). (In this process soybeans were cooked in water, mixed with wheat, and spontaneously molded to form koji. Salt water was mixed in with a paddle, then the mash was insulated and aged. Finally it was filtered to make chiang-yu). The ratio of soybeans to wheat in the koji making was 3:2. This ratio is very close to that used in making regular Japanese shoyu, which is made by using equal amounts of soybeans and wheat, as will be described later. The general manufacturing methods of soy sauce in the Ch'ing (Shin in Japanese) dynasty are recorded in *Ch'ing-yuan Lu* (*Seienroku* in Japanese), written by Li Hua-nan (Ri Kanan in Japanese). Cooked soybeans and uncooked wheat were the raw materials used in koji making. The resultant koji was mixed with brine. After aging, the soy sauce was collected by pressing a deep bamboo colander into the aged mash and ladling out the liquid which had accumulated.

"The original chiang was a mash-type product made with a koji that had been prepared from wheat, barley, rice, etc., and not from soybeans. Therefore, the soybean constituents were only changed through the in vitro biochemical reaction by the enzymes from the mold grown on the cereals. Accordingly, the degree of change of the soybean constituents was not very great and most of the soybean proteins were partially hydrolyzed into polypeptides through the in vitro enzyme action. The degree of liquefaction was not very large and the flavor was not as strong. In the case of chiang-yu, however, mold is grown on both the soybeans and cereals and, as a result, the soybean constituents are changed largely through the biochemical reaction both in vivo and in vitro by the mold throughout the entire process of manufacturing. Accordingly, much of the soybean constituents can be liquefied. The soybean proteins are hydrolyzed to single amino acids and, therefore, the flavor is sharp and strong in chiang-yu. Thus, it can be concluded that (a) the progenitor of miso is chiang, originated in China about 3,000 years ago; (b) the progenitor of soy sauce is chiang ch'ing, originated in China about 2,000 years ago; (c) chiang ch'ing had developed into chiang-yu in China and the regular type of shoyu called koikuchi in Japan at least 1,000 years ago.

"It is an amazing fact that the Chinese had utilized the enzyme action of mold in food manufacturing as early as 3,000 years ago. They deliberately selected yellow aspergilli from many types of aspergilli because they best facilitated the manufacture of chiang. If the definition of 'biotechnology' is to make the products necessary for the welfare of humans by using life phenomena, it can be said that people in ancient China had already produced foods by biotechnology as early as several thousand years ago. In this sense, it is not an exaggeration to say that soy sauce was a pioneer of the actual application of biotechnology.

"2. Shih. Shih is a fermentation product of soybeans, the form of which is a tasty nugget with or without salt. Shih is classified into five types by the kind of microorganism used in its manufacture. Those are *Aspergillus* type (called shih in the areas of Pei-ching, Hu-nan sheng, and Taiwan; and called hamanatto in Japan), *Mucor* type (shih in the area of Shan-tung sheng and natto in Japan), *Rhizopus* type (tempeh in Indonesia), *Bacillus* type (shih in the area of Shan-tung sheng and natto in Japan), and *Neurospora* type (oncom in Indonesia). The shih described here is the shih of *Aspergillus* type, which relates to soy sauce.

"The earliest literature in which shih appeared is *Shih-chi* (*Shiki* in Japanese) by Ssu-ma Ch'ien (Shiba Sen in Japanese), which was published in 85 BC. Shih is also described along with chiang in *Shuo-wen Chie-tzu*

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(*Setsubun-kaiji* in Japanese) by Hsu Shen (Kyoshin in Japanese), the oldest dictionary in China published in 121 AD in the later Han dynasty. The raw material of the shih is soybeans as shown in Fig. 5. (In the process described in the *Shi-ching* by Hsie Feng (which survives only in the *Ch'i-min yao shu*), soybeans are washed, soaked, drained, and steamed. The cooked soybeans are cooled, then spread, furrowed, and piled. The last 3 steps are repeated 3 times a day for 3 days until the beans have become spontaneously molded. The resulting soybean koji is mixed with soybean cooking liquid, barley koji, and salt, put into an earthen pot, sealed, and insulated. It is then dried in the shade, mixed with a mulberry leaf extract, and steamed. The last 3 steps are repeated 3 times, resulting in salted soybean shih. In the second process described in the *Ch'i-min yao-shu*, soybeans are winnowed, cooked, drained, and cooled. They are piled, the temperature is measured, and then they are stirred. The last 3 steps are repeated 3 times until they are spontaneously molded. They are then spread and furrowed to make soybean koji. This is winnowed, washed, drained, dried, moistened, piled, fermented, and dried to give unsalted soybean shih.) Therefore the resultant shih (soybean nugget) contains a high amount of protein. In shih, much of the soybean constituents are present in a liquid state. The soybean proteins are hydrolyzed to single amino acids and, therefore, the flavor is sharp and strong. The flavor constituents of shih can be extracted easily by a salt solution. The original shih was served as nuggets, the brine extract came to be used as a seasoning gradually. In *Chi-min Yao-shu* (535 AD), there is a description of about 70 kinds of cookeries using shih extracts. It should be mentioned that shih and its brine extract developed into today's tamari shoyu in Japan." Address: Managing Director, Kikkoman Corp., Chiyoda-ku, Tokyo, Japan.

7404. Fukushima, Danji. 1989. Introduction of soy sauce to Japan (Document part). In: K. Steinkraus, ed. 1989. Industrialization of Indigenous Fermented Foods. New York and Basel: Marcel Dekker, Inc. xii + 439 p. See p. 9-10.
• ***Summary:*** "There is no literature on the exact time chiang and shih (fermented black soybeans) were introduced into Japan. In 702 AD, however, the Hishiotsukasa, the Bureau for the Regulation of Production, Trade and Taxation of Hishio, was established by the Taiho-Ritsuryo, one of Japan's earliest constitutions. This bureau was located at the imperial palace and produced various kinds of hishio (chiang) which was consumed by the imperial household. Among these products, the word 'misho' is found with the words 'chiang' and 'shih.' It should be noted that the word 'misho,' which is very close to the present word 'miso,' is found as one of the products in the bureau. Misho is also found in *Engishiki*, the enforcement regulation of the statutes, which was completed in 927 AD and became effective in 967 Japan. The first appearance of the present word 'miso,' was in *Nihon-Sandai-Jitsuroku*, a Japanese dictionary published in 1597 during the Muromachi period. In the Edo period (1603-1867), several pieces of literature describing miso and shoyu were written, such as *Wakan Sansai Zue* (Narushima, 1712), *Honcho Shokkan* (Hitomi, 1695), *Mankin Sangyotai* (Miake, 1732), *Yoshu Fushi* (Kurokawa, 1682), and the like. The manufacturing processes described in these works are close to the present methods for producing miso and koikuchi-shoyu, thus it is presumed that the basic manufacturing processes of today's Japanese soy sauce had been formed by the early 17th century.

"In the second half of the 17th century, large-scale, industrial production of soy sauce began for consumption in large cities such as Edo (now Tokyo). Surprisingly enough, there are written records that soy sauce had been exported to India, southeast Asia, and Europe as early as the middle of the Edo period [the Edo Period was from 1600 to 1868] (Noda Shoyu Co. 1953). According to documents of the Dutch East India Company stored in the Archives in the Hague, Holland, soy sauce was exported [by Dutch merchants] from Nagasaki in the Kyushu district of Japan to several parts of India: Coromandel in 1668 and 1716, Ceylon in 1670 and 1699, Surat in 1717, Bengal in 1699, and Nagappattinam [Nagapattinam] in 1699. Carl Thunberg, a ship's doctor for the Dutch East India Company who stayed in Japan for a year and a half from 1775 to 1776, published a book of travels in 1796 (Thunberg, 1796). According to his book, a large quantity of soy sauce was shipped to Batavia (the former name for Djakarta [and Dutch capital of the East Indies]), India, and European countries." Address: Managing Director, Kikkoman Corp., Chiyoda-ku, Tokyo, Japan.

7405. Hesseltine, C.W. 1989. Fermented products. In: Ruth H. Matthews, ed. 1989. Legumes: Chemistry, Technology, and Human Nutrition. New York and Basel: Marcel Dekker, Inc. x + 389 p. See p. 161-85. [29 ref]
• ***Summary:*** Contents: Introduction. Fermented legume products. A table lists about 85 products with the vernacular name, legume from which it is made, country, and microorganism(s) used. Products made from soybeans include: Miso (bean paste), Shoyu (soy sauce), Sufu (Chinese cheese), Ontjom (Oncom), Hamanatto, Idli (with and without soy), Natto, and Tempeh. Address: Human Nutrition Information Service, USDA, Hyattsville, Maryland (and NRRC, Peoria, Illinois).

7406. Hesseltine, Clifford W. 1989. Fermented products. In: Ruth H. Matthews, ed. 1989. Legumes: Chemistry, Technology, and Human Nutrition. New York, NY: Marcel Dekker. x + 389 p. See p. 161-85. [29 ref]
• ***Summary:*** Contents: Introduction. Miso (bean paste). Shoyu (soy sauce). Sufu (Chinese cheese). Ontjom (oncom). Hamanatto (black beans [fermented black soybeans]). Idli. Natto. Tempeh (tempe).

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Contains 3 tables and 9 figures (all flow sheets). Address: Retired, Agricultural Research Service, USDA, Peoria, Illinois.

7407. ISCAH (Instituto Superior de Ciencias Agropecuarias de la Havana) Video. 1989. La soya–Mito o realidad en la agricultura Cubana [The soybean–Myth or reality in Cuban agriculture (Color videotape)]. Agricultural College of Havana, Cuba: ISCAH. 17 minutes. [Spa]*

• ***Summary:*** This film was shown at agricultural cooperatives, schools, and ministries; it was not shown on television. Some 200,000 tons of soybeans are now being imported to Cuba. The rhizobium bacteria on soybean roots fix nitrogen in the soil, thus creating biofertilizer and reducing imports of commercial fertilizer. This biofertilizer works for both crop rotation and intercropping. Research on soybeans is being conducted at INCA (*Instituto de Ciencia Agricola*), the research center for agriculture in Havana, under the Ministry of Higher Education.

In 1986 some 138 co-operatives planted soybeans. These were mainly vegetable, dairy, or citrus enterprises located in 34 principalities in 6 provinces. Some of the soybeans were mixed with bagasse from sugar cane for use as animal feeds. In Cuba, one *quintale* (pronounced keen-TAL-ay) = 100 pounds weight. Sacharina is a type of bagasse which may include soya. Soya is called "green gold," because it requires low agricultural inputs, brings much profit, and is the world's least expensive source of protein. Photos show commercial soy products: (1) Taoro, a type of soy sauce (*salsa de soya*) presently made in Cuba. (2) Three flavors of bottled soymilk, which is good for infants allergic to cow's milk. (3) Soy yogurt in 1 liter bottles.

Some very interesting archival film footage shows Fidel Castro speaking on 3 April 1959 at the opening of a vegetable oil plant in Cuba. This was the first industrial enterprise in Cuba built after the Revolution. After cutting the ribbon, Fidel says: "We are going to start preparing the way for the planting of soybeans, so that we don't have to import any more from abroad." The video narrator then adds: "After 30 years of this, we think that there are no technical limitations to the development of this crop which can today prevent us from turning Fidel's words into reality." Address: Havana, Cuba.

7408. Leneman, Leah. 1989. Slimming the vegetarian way. Revised and reset ed. Wellingborough, Northamptonshire, England: Thorsons Publishers Ltd. 144 p. Index. 20 cm. 1st ed. 1980.

• ***Summary:*** The menus in this natural-foods, vegan cookbook are designed for 1 person and the daily calories intake is kept at about 1,000 calories. The book takes a positive attitude toward dieting by focusing on those foods you can eat, rather than those you should avoid. Each "menu" consists of breakfast, lunch, and dinner for 1 day. For each meal there is one column for Imperial (Metric) measurements, one for American measurements, and one for calories, with a calories for each meal and for the day. There are menus for each of the four seasons plus chapters on crash diets, desserts, and a vegetarian wholefood calorie chart.

The preface to the new edition notes: "The greatest change which has occurred since the first edition of this book appeared has been the phenomenal proliferation of soya foods (soyfoods in American parlance). Tofu is arguably the best friend a slimmer ever had, for no other food so low in calories and high in protein is as versatile as tofu. Tempeh is another fine soya food for slimmers, though as it is not as readily available as tofu, I have confined its use to only one recipe. Since soya milk and yogurt are now so easy to obtain, I have given them as alternatives to the dairy versions, so that vegans, and others trying to cut down on dairy produce, will be able to use the book in the same way as lacto-vegetarians."

Soy-related recipes include: Pineapple tofu salad (p. 36). Tofu celery loaf (p. 39). Tofu-stuffed aubergine (eggplant, p. 66). Scrambled egg or tofu, sausalata and tomato (p. 89, 118). Tofu slices on toast with creamy gravy (p. 98). Miso soup with tofu (p. 102). Spaghetti with tempeh and mushroom sauce (p. 127). Vegetable charlotte with smoked tofu (p. 129). Soya milk and soya yogurt are always listed as alternatives to skim milk or yogurt from cows. TVP is used as an ingredient in many recipes, and "Tamari (soy sauce)" is widely used as a seasoning. Address: 19 Leamington Terrace, Edinburgh EH10 4JP, Scotland.

7409. Matthews, Ruth H. ed. 1989. Legumes: Chemistry, technology, and human nutrition. New York, NY: Marcel Dekker. x + 389 p. Illust. Index. 24 cm. Series: Food science and technology, No. 32. [150+ ref]

• ***Summary:*** Contains 10 chapters by various authors. Chapters 4 and 6 are cited separately. 1. Culture and genetics of grain legumes, by Edgar E. Hartwig (for soybeans, see p. 1-5). 2. Harvesting and storage of legumes, by S.S. Kadam, D.H. Salunkhe, and C.Y. Kuo. 3. Refined oils, by Clyde E. Stauffer. 4. Isolated soy proteins, by D.H. Waggle, Fred H. Steinke, and Jerome L. Shen. 5. Legume protein flour and concentrates, by Joseph G. Endres (for soybean protein flour, see p. 140-45, for soybean protein concentrate, see p. 151-53). 6. Fermented products, by Clifford W. Hesseltine. 7. Nutrient composition of raw, cooked, canned, and sprouted legumes, by Jörg Augustin and Barbara P. Klein (for soybeans, see p. 198-203, 208-11). 8. Nutrient content of other legume products, by David B. Haytowitz and Ruth H. Matthews (for soybeans, see p. 219-25, 229-38). 9. Animal feed uses of legumes, by Park W. Waldroup and Keith J. Smith (for soybean meal and whole soybeans, see p. 247-64). 10. Antinutritional factors, by Irvin E. Liener. Dr. Liener notes that plants did not evolve to serve humans or animals. Their main concern is their own survival. Thus,

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nature has given them the genetic capacity to synthesize toxic substances to help ensure their own survival against predators of all kinds such as insects, fungi, or animals including humans. His Table 1 titled "Distribution of protease inhibitors present in legumes" (p. 341) shows that they are present in most legumes.

Other legumes discussed include peanuts, dry beans, dry peas, lentils, chickpeas, and winged beans. Address: Human Nutrition Information Service, USDA, Hyattsville, Maryland.

7410. Reddy, N.R.; Salunkhe, D.K. 1989. Fermentation. In D.K. Salunkhe and S.S. Kadam, eds. 1989. CRC Handbook of World Food Legumes: Nutritional Chemistry, Processing Technology, and Utilization. Vol. III. Boca Raton, Florida: CRC Press, Inc. 323 p. See p. 177-217. [233* ref]

• ***Summary:*** Contents: Introduction. Soy sauce. Types of soy sauce, preparation of *Shoyu* composition, safety. Miso: Preparation, composition, nutritional quality, miso-like products. Sufu: Preparation, microorganisms, biochemical changes and composition, toxicology, method of preparation, chemical composition, physical properties, nutritional quality. Tempeh: Preparation, nutrient composition, nutritional quality, antinutritional and/or toxic factors, *tempeh* and *tempeh*-like foods from other legumes. Address: 1. Community Research Service, Atwood Research Facilities, Kentucky State Univ., Frankfort, Kentucky; 2 Dep. of Nutrition and Food Sciences, Utah State Univ., Logan, Utah.

7411. Routhier, Nicole. 1989. The foods of Vietnam. New York, NY: Stewart, Tabori & Chang. 239 p. Foreword by Craig Claiborne. Illust. (Photos by Martin Jacobs, mostly color). Index. 29 cm.

• ***Summary:*** An excellent and graphically beautiful book, with more than 150 authentic, traditional Vietnamese recipes. The book is dedicated to the fond memory of her mother, Tran-Thi-Cuc. Vietnam's cooking has been influenced by the various nations that have occupied or conquered the country over the Centuries–and especially the Chinese and French. Yet the Vietnamese have been able to assimilate each of these imports to create their own unique cuisine.

Introduction (by the author). Vietnam "is shaped like an elongated letter *S*, with two wide river deltas, the Red River delta in the north and the Mekong River delta in the south, separated from each other by a long, narrow stretch of mountainous coastal land." The deltas are the country's most fertile, agriculturally productive, and populous regions. The Monsoons (seasonal winds) produce a dry winter season and a wet summer. The north has a temperate climate and a cold winter, whereas the south is tropical.

Vietnam's land area is slightly smaller than that of Japan, and about three fourth's the size of California.

Vietnamese food and cookery owes much to the French colonialists, who ruled the country for almost a century (1859-1954). "In the old trading port of Cholon, the French built a new city as the central market for all of Indochina, and Saigon (now Ho Chi Minh City) was dubbed 'the Paris of the Orient'" (p. 8-9).

"The Vietnamese are quick to point out that their cuisine, like their country, is divided into three regions, each with a distinct culinary tradition." Yet these regional differences are not an important as they are in China. "In the north, the influence of China is most evident." One popular northern dish is stuffed bean curd (Dau Hu Nhoi). The main city in Central Vietnam is Hue, where cookery has been brought to a high level of sophistication. The cookery of the tropical south is simpler than that of the north and center, but also spicier, and the food consists of a wealth of tropical fruits, vegetables, herbs and spices. The French influence is best seen here.

Soy related recipes. Color photo of crisp fried bean curd in tomato sauce (p. 15). Color photo of Bean curd and Chinese chive buds soup (Canh dau phu he, with 6 ounces soft bean curd {tofu}, p. 50; recipe p. 55).

The chapter titled "Vegetarian recipes" (p. 167-89) contains many tofu recipes. Vegetarian stir fry (La han chay, with 2 squares {8 ounces} semisoft bean curd {tofu}, p. 168). Crisp-fried bean curd in tomato sauce (Dau phu soy ca chua, with 1 pound firm bean curd {tofu}, p. 171). Braised bean curd (Dau phu kho, with 1 pound firm bean curd {tofu}, p. 172). Stir-fried bean curd with lemon grass on crisp cellophane noodles (Dau phu xao xa ot chay, with 2 pounds firm bean curd, p. 179). Stuffed bean curd (Dau phu nhoi, with 2 pounds firm bean curd {tofu}, p. 185. Note: "This centuries-old recipe is a Vietnamese adaptation of a well-known Hakka dish, there was a mass migration to northern Vietnam by both Cantonese and Hakkas [from southern China] in the 17th century).

Desserts: Jellied bean curd with ginger syrup (Dau hu nuoc duong, with ½ cup dried soybeans, ¼ cup rice flour, and 1 teaspoon gypsum {see p. 232, this calcined calcium sulfate is sold at Chinese pharmacies} dissolved in 1 teaspoon cold water in a small water to curd / coagulate the hot soymilk, p. 201).

Sauces: Sweet and sour dipping sauce (Soy chua ngot, with 2 tablespoons soy sauce and 2 tablespoons nuoc mam {Vietnamese fish sauce}, p. 214). Soybean and ginger sauce (Nuoc *tuong*, with ¼ cup *tuong* {fermented soy bean sauce, see p. 234} and 1 tablespoons nuoc mam {Vietnamese fish sauce}, p. 215).

Appendix (p. 228-36) includes a glossary of basic Vietnamese foods. Items marked with an asterisk are essential ingredients. Bean curd / tofu (dau hu: "You can do absolutely anything with bean curd,..." The three types are pressed, firm, and semi-soft). Chile paste (*tuong ot tuoi*: "A fiery hot mixture of mashed fresh red chilies, garlic, salt and soybean oil. Do not confuse this product with the Chinese

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hot bean paste). Fish sauce (nuoc mam. It is like Thai nam pla but stronger). Gypsum (*thach-cao*): "Chemically known as calcined calcium sulfate. . ." Hoisin sauce (A "sweet, piquant brown paste made from soybeans, red beans, sugar, garlic, vinegar, chile, sesame oil and flour").

Oyster sauce (Made from oyster extract, soy sauce, sugar and vinegar). Soybeans, dried (Dau nanh. Sold in oriental groceries). Soybean sauce (*tuong*. This traditional fermented Vietnamese sauce is made from ground soybeans, water, roasted rice flour, and salt. "It is sold, bottled, only in Vietnamese groceries." Do not confuse *tuong* "with the saltier, thicker Chinese ground bean paste." Vietnamese vegetarians commonly use *tuong* in place of fish or shrimp sauces). Soy sauce (*si dau*. Where soy sauce is called for in this cookbook, use Japanese Kikkoman or "light" soy sauce. Regular Chinese soy sauce "is dark and stains food black").

Concerning "red beans," Andrea Nguyen, food writer from Vietnam says (March 2012) Red beans are "more like Chinese *xiao dou* [than Japanese azuki beans]–and are called *dau do*. Typically seen in sweet soups. They're not as important as mung beans (*dau xanh* / green beans)."

About the author: Nicole "was born in Saigon to a Vietnamese mother and French father. At a very early age she developed a great interest in cooking from her mother, who owned a [small, French-Vietnamese] restaurant in Laos. As a teenager, Ms. Routhier lived in France and Belgium, where she became versed in European styles of food preparation" (with portrait photo, inside rear dust jacket). Although she had a formal French education, she spoke only Vietnamese with her mother and nanny at home. She learned about cooking from her nanny, a native of Hue, and her mother, from Haiphong, both home cooks of the first order. In Laos, when the chef let her help in the kitchen of her mother's restaurant, she knew what her true calling would be. She grew up during the Vietnam war, and experienced hard times, especially after her father left home. "During the war, food was scarce and we ate what we could. Sometimes we had to hide in the village bomb shelter for days if not weeks on end, and rice was often the only food available... I was hungry and terrified at the idea of lacking food. That childhood fear never abandoned me." Later she knew better times, traveling with her family in Europe and Asia, and learning about food. "In Vietnamese tradition (as in most of Southeast Asia), recipes are never written but simply taught to the children by letting them help in the family kitchen" (from the Preface, p. 5). In the mid-1980s she had the good fortune to meet Craig Claiborne. When they first met, she was a student at the Culinary Institute of America in Hyde Park. She subsequently became a professional chef and cooking teacher (from the Foreword, by Craig Claiborne, written May 1989, p. 4) She is married to Anthony Laudin, and now teaches cooking in Manhattan, New York City. Address: Professional Chef and Culinary Teacher in New York City.

7412. Simpson, J.A.; Weiner, E.S.C. 1989. The Oxford English dictionary. 2nd ed. 20 vols. Revised by J.A. Simpson and E.S.C. Weiner. Oxford, England: Clarendon Press. [30 ref]

• ***Summary:*** Integrates the original OED and its 4-volume supplement (publ. 1972-86). Includes 5,000 new words and meanings. Completely redesigned and reset. Following each "headword," it now uses the International Phonetic Alphabet to represent pronunciation. Over 500,000 words are defined with 2,400,000 illustrative quotations and superb etymologies. This work is more than five times the size of any other English dictionary. The full set sells for $2,500. The English language grows by an estimated 450 words a year. Amazingly, the name James A.H. Murray does not appear on the title page of the various volumes.

Soy-related terms (soya, soya, soya bean, soybean) are in vol. XVI, p. 86.

Note: As of Nov. 1998, the CD-ROM version of the OED costs $395.00. To order call 1-800-451-7556. Address: England.

7413. Simpson, J.A.; Weiner, E.S.C. 1989. The Oxford English dictionary. 2nd ed.: Ketchup. Oxford, England: Clarendon Press.

• ***Summary:*** Under the word "ketchup," the etymology is traced back to Chinese (Amoy dialect) *kôechiap* or *kê-tsiap* brine of pickled fish or shellfish (Douglas *Chinese Dictionary* 46/1, 242/1). Malay *kêchap* (Dutch spelling *ketjap*), which has been claimed as the original source (Scott *Malayan Words in English*, p. 64-67), may be from Chinese.

First entry: 1711. Lockyer.

Note: This is the earliest English-language document seen (Jan. 2006) that contains the term "kêchap." Address: England.

7414. Simpson, J.A.; Weiner, E.S.C. 1989. The Oxford English dictionary. 2nd ed.: Worcestershire. Oxford, England: Clarendon Press.

• ***Summary:*** The earliest entry for Worcestershire sauce is: 1843 *Naval & Military Gazette* [England]. 1 April, p. 208, col. 2. Advertisement for "Lea and Perrin's 'Worcestershire Sauce', prepared from a recipe of a nobleman in the country." There are also entries for 1870 (in *Study Wind*, Lowell 1886) and 1889 (*Falling in Love*, by G. Allen). Address: England.

7415. *SoyaScan Notes*.1989. Terms related to soyfoods, soybeans, and the soybean industry: Library of Congress subject headings and call numbers (Overview). Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Two different types of call numbers are used by American libraries for cataloging their books. Most larger libraries use the Library of Congress call numbers (LC numbers, which start with two letters) and many smaller

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libraries use the Dewey Decimal System (Dewey numbers, which contain only numbers).

The following are from the Library of Congress Subject Headings (12th ed. 1989) and the Library of Congress Classification Schedules. The first edition of Class S (Agriculture), for example, was published in 1911, and the 4th edition in 1982. BT = Broader terms. NT = Narrower terms. UF = Use for. May Subd Geog = May subdivide geographically, e.g., Soy sauce industry-Japan.

Class H is Social sciences and economics. Class Q is science. Class S is agriculture (SB is plant culture. SB205 is field crops, legumes). Class T is technology (TX includes nutrition). Class Z is bibliography and library science.

HD9000-HD9019 Natural foods industry
Shortenings–Use oils and fats, edible
HD9235.S6- .S62 Soybean industry
HD9235.S6- .S62 Soyfoods industry
HD9235 S6- S62 Soymilk industry
HD9330.S63- .S633 Soy ice cream industry
HD9330.S65- .S653 Soy sauce industry
HD9330 T68- T683 Tofu industry
HD9490 Soybean oil industry
QK495.L52 Soybean botany
SB205 S7 Soybean culture (Incl. *Soybean Digest* and Soya Bluebook)
SB608 S7 Soybean–Diseases and pests
SF99 S Soybean as feed
SF99 S Soybean meal as feed
TP438.S36 Nattô manufacture
TP438.S6 Soy sauce manufacture
TP438.S6 Miso manufacture. BT Soybean as food. NT Cookery (Soy sauce or miso)
TP684.S Soybean oil
TX401.2.S69 Soyfoods nutrition
TX558.S6 Nattô nutrition. BT Fermentation, Soybean as food, Soybean products.
TX558.S7 Soyfoods composition. UF Soybean as food. NT Miso, Natto, Tempeh
TX558.T39 Tempeh
TX558.T57 Tofu
Z5074.S73S5 Bibliographies related to soybeans, or all soya in various countries
Z5776.S63S5 Bibliographies on soyfoods
Z696.1.S68 SOYA (Information retrieval system)

The following soy-related terms have a subject heading but no LC call number. Miso industry, Natto industry, Soy sauce, Soybean flour, Soybean glue, Soybean meal, Soybean milk, Soybean products.

7416. Steinkraus, Keith H. ed. 1989. Industrialization of indigenous fermented foods. New York, NY: Marcel Dekker. xii + 439 p. 24 cm.

• ***Summary:*** This book contains the following chapters on soyfoods: 1. Industrialization of fermented soy sauce production centering around Japanese shoyu, by Danji Fukushima. 2. Industrialization of Japanese miso fermentation, by Hideo Ebine. It also contains chapters on the industrialization of the production of sake, tapai, African beers, mageho, ogi, and gari. The final chapter is titled "Industrialization of indigenous fermented food processes: Biotechnological aspects."

The book is dedicated "To the memory of Prof. Andre G. van Veen, a pioneer in the study of indigenous fermented foods." Address: Inst. of Food Science, Cornell Univ., Geneva, New York.

7417. **Product Name:** [Marinated Tofu].
Foreign Name: Marinierter Tofu.
Manufacturer's Name: Byodo Naturkost GmbH.
Manufacturer's Address: Hirschbergstr. 9, D-8000 Munich 19, West Germany. Phone: (089) 16 85 70.
Date of Introduction: 1989?
Ingredients: Water, organically grown soybeans, tamari and spices, apple vinegar, beet sugar syrup, nigari (Traditional Japanese).
Wt/Vol., Packaging, Price: 200 gm plastic bag.
How Stored: Refrigerated.
New Product–Documentation: Label sent by Anthony Marrese, 1990, April 15. 4 by 3 inches. Blue on white, printed on a 7 inch square plastic bag. "Sweet & sour. Serve cold in salads or enrobed with flour like Bratschnitte. A fresh soy specialty product. Store at 4-8°C. Member of the Natural Food Assoc. (Bundesverband Naturkost e.V.)."

7418. **Product Name:** [GranoVita Soya Mignon].
Foreign Name: GranoVita Soja-Mignon.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Ingredients: Soy protein, water, onions, rolled oats, corn germ oil, egg whites, modified starches, seasonings, yeast, salt, spices, sesame, sugar, fines herbs, smoked spices, carob flour (thickener), caramel. Sauce: Water, modified starches, seasonings, wheat flour, soy sauce, salt, sugar, flavor intensifier (MSG?), onions.
Wt/Vol., Packaging, Price: 375 gm can. Retails for DM 6.65.
How Stored: Shelf stable, refrigerate after opening.
Nutrition: Per 100 gm: Calories 169, protein 11 gm, usable carbohydrates 11 gm, fat 9 gm.
New Product–Documentation: Label sent by Anthony Marrese, 1989, 9 by 4 inches. Green, red, white and black on yellow-green. Color photo on front panel shows the hamburger-like patties on a plate with vegetables. Neuform certification symbol. "Vegetarian. Contains no flesh. Four vegetarian ground steaks in a piquant sauce."

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7419. **Product Name:** [GranoVita Soya Sausage for Frying and Grilling {Meatless}]
Foreign Name: GranoVita Sojawurst zum Braten und Grillen
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany
Date of Introduction: 1989?
Ingredients: Water, vegetable oils and fats in changing amounts, onions, egg protein, wheat protein, soy protein, spices, seasonings, salt, vegetable thickeners (carob bean meal and guar seed meal), wheat flour, glucose, apples, smoke seasoning, whole soybean product (Vollsoja-Erzeugnis), rolled oats, fine Graham bread crumbs, herbs, milk protein, soy sauce, caramel.
Wt/Vol., Packaging, Price: 200 gm cellophane bag. Retails for DM 3.48.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 10 gm, fat 24 gm, usable carbohydrates 4 gm, calories 272. 1 BE (Broteinheit, or diabetic exchange) = 300 gm.
New Product–Documentation: Label sent by Anthony Marrese. 2 by 5 inches. Brown, red, green, and black on white. "Contains no flesh. Prepare in the frying pan or on the grill." An illustration shows 2 sausages in a pan. Neuform certification symbol.

7420. **Product Name:** [Kolett's Soy Sauces (Italian, Mexican, Argentinian)].
Foreign Name: Kolett's Salasa de Soja (Italiana, Mejicana, Argentina)
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany
Date of Introduction: 1989?
Wt/Vol., Packaging, Price: Glass jar
How Stored: Shelf stable, refrigerate after opening.
New Product–Documentation: Manufacturer's leaflet. 1989? GranoVita. Sin conservantes. No colorantes. Alimentos Naturales. A color photo shows the three jars and labels. An illustration (line drawing) on the front panels shows a smiling, rotund Italian-looking chef. "100% vegetarian." These products are probably for export to Italy.

7421. **Product Name:** [Unicorn Tofulini {Tofu Tortellini}, and Ravioli]
Foreign Name: Unicorn Tofulini, und Ravioli
Manufacturer's Name: Firma Unicorn (Marketer)
Manufacturer's Address: Pavillonstrasse 45, D-6630 Saarlouis, West Germany. Phone: 0 68 31 / 28 55
Date of Introduction: 1989?
Ingredients: Dough: Whole wheat semolina*, water. Filling: Smoked tofu*, tofu* (a soybean product), bread crumbs, roasted onions*, shoyu (soy sauce), sea salt, spice mixture*. * = Organically grown.
Wt/Vol., Packaging, Price: 250 gm vacuum pack. Retails for DM 4.95
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 9.2 gm, fat 2.8 gm, usable carbohydrates 45.8 gm, calories 245
New Product–Documentation: Label sent by Anthony Marrese. 1989? 4 by 5.75 inches. Self adhesive with a hole/window in the middle. Red and green on white. "Without meat or eggs. Whole grain dough. Boil in salted water or vegetable bouillon for 15 minutes. Serve with your favorite margarine, herbs, or sauces. No preservatives." Logo is a unicorn head with an ear of wheat for a mane.

Letter from Bernd Drosihn, 1990, May 10. This company just markets tofu products, they do not make any.

7422. **Product Name:** [Hensel Soyfoods. Tofu Ready to be Cooked and Fried (With Herbs in Spicy Marinade)]
Foreign Name: Hensel Soja-Kost: Tofu koch- und bratfertig (Kraeuter–pikant mariniert).
Manufacturer's Name: Henselwerk GmbH. Div. of Walther Schoenenberger.
Manufacturer's Address: Muehlstrasse 5-7, Postfach 1120, D-7037 Magstadt, West Germany. Phone: 07159/4906
Date of Introduction: 1989?
Ingredients: Tofu (water, soybeans, calcium sulfate and calcium chloride coagulants), marinated with yeast extract, soy sauce, and herbs.
Wt/Vol., Packaging, Price: 250 gm poly package. Retails for DM 3.70
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 12 gm, fat 6 gm, carbohydrates 1 gm, minerals 1 gm, calories 106.
New Product–Documentation: Label sent by Anthony Marrese. 1989. 3.5 by 5 inches. Printed on a white poly bag. Dark brown, yellow, and white on orange. "Fry or broil and use in soups or salads." Neuform certification symbol.

7423. **Product Name:** [2 Spring Rolls or Lumpia].
Foreign Name: 2 Fruehlingsrollen
Manufacturer's Name: Horst Heirler.
Manufacturer's Address: Grubmuehlerfeldstr. 52, D-8035 Gauting bei Munich, West Germany.
Date of Introduction: 1989?
Ingredients: Wrapper/Egg Roll: Whole wheat flour, eggs, spices, salt, unhydrogenated vegetable oil. Filling: Soy sprouts, cabbage, carrots, green beans, onions, coconut, peanut sauce, potato flakes, soy sauce, spices, lemon juice.
Wt/Vol., Packaging, Price: 250 gm paperboard box. Retails for DM 5.0
How Stored: Frozen.

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New Product–Documentation: Label sent by Anthony Marrese. 1990. Feb. 5.5 by 5 by 1.5 inches. Paperboard box. Brown, orange, red, blue, and black on yellow. Text is in German, Dutch, and French. "Filled with fine vegetables. Heat and serve. Frozen. Whole-grain dough with fine vegetable filling. 2 vegetarian lumpia. Exklusiv Neuform certification symbol." A color photo on the front panel shows two golden-brown spring rolls served on a plate surrounded by vegetables.

7424. **Product Name:** [Lima Tamari, and Lima Heiwa Mansan Tamari].
Foreign Name: Lima Tamari, Lima Heiwa Mansan Tamari.
Manufacturer's Name: Lima Foods.
Manufacturer's Address: Edgar Gevaertdreef 10, B-9830 Sint-Martens-Latem, Belgium.
Date of Introduction: 1989?
Wt/Vol., Packaging, Price: 250 ml dispenser, 1 liter bottle, and 18 liters.
How Stored: Shelf stable.
New Product–Documentation: Lima catalogue, price list, and color product brochure. 1989. A photo shows two sizes of Lima tamari bottles. The Mansan comes in a 250 ml bottle.

7425. **Product Name:** [Neuco Mushroom Soy Sauce].
Foreign Name: Neuco Pilz-Soja Sauce
Manufacturer's Name: Neukoellner Reformwaren GmbH (Subsidiary of Huegli) (Importer) Made in China (PRC).
Manufacturer's Address: 7660 Radolfzell, West Germany
Date of Introduction: 1989?
Ingredients: Water, soybeans, wheat, salt, edible mushrooms, yeast.
Wt/Vol., Packaging, Price: 140 ml jar. Retails for DM 3.10
How Stored: Shelf stable.
New Product–Documentation: Label sent by Anthony Marrese. 1989. 5.75 by 3.25 inches. Black, red, yellow, purple, and brown on white. Color illustration shows a large mushroom, hairy yellow soybean pods, and purple soybeans. "With the valuable plant protein of the soybean. Eat right! A highly aromatic seasoning sauce. Made from naturally fermented soybeans and mushrooms." Neuform certification symbol.

Letter from Bernd Drosihn. 1990. May 10. This company just markets tofu products, they do not make any. Their mother company is Huegli.

7426. Perelman, John. 1990. San Jirushi shoyu and tamari (Interview). *SoyaScan Notes*, Jan. 25. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The shoyu made at the Richmond, Virginia, plant (which contains only 20-30% wheat) became available for sale in Jan. 1990. San-J does not promote this product; the company sees its identity as a tamari brewer, where they are the world's biggest company. The gold label and the black label first became available during the 4th week of February 1990. The Szechuan Sauce and Teriyaki Sauce, reformulated using American-made tamari, became available in April 1989. Tamari Lite is still imported from Japan in drums and bottled in Richmond; the company has not yet installed its desalinization equipment in America, and probably won't until at least 1991.

The tamari now brewed in America is much different in character and taste than the one particular tamari that they imported previously from Japan. They make numerous varieties of tamari in Japan, and the one imported to America had a very high solids content and is thus thicker and darker (closer to back than red), and has a much stronger flavor. After the moromi has finished aging, it has to be shoveled out of the vats; it is too thick to be sucked out. When the milder U.S.-made tamari was introduced, some of the many consumers who had been using the thicker imported product were upset. Therefore San-J is re-introducing the imported product under the name "Imported Whole Soybean Tamari: Wheat-free Soy Sauce." It will only be sold in a 20-ounce bottle. It will be a really strange looking bottle and label. The big red dot is not on the label. It will available the third week of March 1990.

San-J is vigilant about keeping their Gold Label out of supermarkets. A little of the Black Label (made with hexane defatted soybean meal) is sold in natural food stores to any store that wants to carry it. Concerning the waste oil from making tamari from whole soybeans, San-J needs a special license to dispose of it.

San-J has gotten three types of feedback on their U.S. made products, though much less feedback than they had expected (maybe one letter every 2 weeks). (1) Some people liked the imported, thicker better than the Gold Label. (2) Some were upset that San-J would make tamari with hexane-defatted soybean meal. (3) Tree of Life now sells a real wheat-free tamari that they are probably buying from Mansan or Marusan. They are promoting it as the "real" thing, rather than a new American-made product. (4) Some are upset that grain alcohol (from corn) is being added to all San-J products as a preservative. Tamari Lite has the most since it contains less salt. The brewmaster, Mr. Yamamoto, has worked in shoyu breweries as well.

The major brands of imported traditional shoyu are Tree of Life, then Westbrae or Eden (Marushima). Address: San Francisco, California. Phone: 415-821-4040.

7427. Belleme, John. 1990. Starting a new miso company in North Carolina (Interview). *SoyaScan Notes*, Jan. 26. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** John is in the process of starting a new miso manufacturing company named Smoky Mountain Miso Shop. It will be owned by a company named Traditional Foods Inc., which he and a partner started in about June

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1989. Over the shop will be a non-profit organization named Institute of Traditional Foods, where people can come to live and study food preparation (tofu, tempeh, miso, seitan, tamari) both on a home and commercial scale, for short or long seminars. He will break ground for the plant in about 3 weeks. It will be attached to his home, 2,000 square feet, Japanese style and very compact, with a capacity of about 50,000 lb/year of miso. He hopes to find 2 distributors, one on each coast: Maybe Blake Rankin of Granum on the West Coast and Macrobiotic Wholesale Co. on the East Coast. Great Eastern Sun will be a competitor. His non-compete agreements with them have expired.

John's wife, Jan Belleme, (who works for Mitoku) is doing a story for *East West* about amazake. The new editor of *Solstice*, John Mann, has decided to focus on macrobiotics, and away from the environmental focus. He would like a story on amazake ($200). Solstice reaches 60,000 people. John spent the summer at an organic winery.

Note: As of June 1993, this company was never started. Instead, John started a company making traditional seitan. Address: P.O. Box 457, Saluda, North Carolina 28773. Phone: 704-749-9537.

7428. Belleme, John. 1990. Controversy concerning San-J tamari (Interview). *SoyaScan Notes*. Jan. 26. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** John recently wrote 2 articles about San-J tamari in *Solstice* magazine. After San-J was in operation he visited the plant and wrote a nice story about them. Then San-J came out with a shelf talker accusing most other soy sauce manufacturers of having alcohol in their products. They instigated this debate. They also sent literature to distributors in which they called their product "traditionally fermented," the same term they used on their imported product from Japan. They erased the line about "not made with chemically processed soybean meal." John started to get calls from retailers, so he contacted the other importers and asked them if they added alcohol to their soy sauce; all said they did not. So John published the results of his survey. He feels San-J was not clear about starting to sell tamari made with defatted soybean meal to companies that specialize in macrobiotic products. The ingredient listing on the label says simply "soybeans," which is deceptive. Moreover, when San-J used to import tamari from Japan, it contained added alcohol which was not listed on the label. This is illegal. John respects San-J and their products. Address: P.O. Box 457, Saluda, North Carolina 28773. Phone: 704-749-9537.

7429. Miller, Bryan. 1990. Restaurants. *New York Times*. Jan. 26. p. C20.

• ***Summary:*** This is a restaurant review of Shun Lee Palace, 155 East 55th St., New York City. The atmosphere is luxurious and spacious. Mock duck is a light, nonspicy and intriguing dish: "essentially layers of fried tofu skin [yuba] that resemble the texture of duck skin (but not necessarily the flavor), served with hoisin sauce and scallions, like Peking duck." The flavor and texture, which are unusual, are loved by some people (such as the writer) and loathed by others.

7430. Hicks, Russel. 1990. History of Sweet Earth Natural Foods (Interview). *SoyaScan Notes*. Jan. 31. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** This company was founded by Russel Hicks and Valerie Dallas. They started making and selling foods in 1978 in Pacific Grove. Their first product was named "Vegeburger by Sweet Earth," a soybean based burger introduced in 1978. In the early days, they also had a bakery named Sweet Earth Bakery (P.O. Box 22543 in Carmel). They did all kinds of things. After a year Russel and his wife left for 3 years, then they returned. The company's second product, launched in about 1983, was called "Tofu Rice Burger by Sweet Earth." Both products had round labels, so the product name was arched across the top and "Sweet Earth" was arched across the bottom.

In about 1983-84 Sweet Earth started to get serious about selling foods. In 1985 they introduced their fresh "Deli Line," consisting of perishable, healthy fast and natural foods–especially sandwiches, salads, and soups (The burgers were vacuum packed with a 3-month shelf life.) Included in this line were various foods in which soy was a major ingredient: Lunch Rush Burrito (with tofu and rice, 1985), Tofummus Sandwich (1985, tofu + hummus), Miso-Vegetable-Barley Soup (1985), Oriental Rice Burrito (1987), Oriental Rice & Tofu Salad (made sporadically, 1987) TMT Spread (with tofu, miso, and tahini, 1989, no longer on the market due to short shelf life), and Tofetti Sandwich (1990). They distribute these perishable foods themselves in the Monterey area, then they have independent distributors that carry their deli line to Santa Cruz, the Bay Area, etc. Veggie Paté Sandwich (with Miso; 1990). They also use a lot of soy sauce and tamari as a seasoning. They buy their tofu from Jack in the Beanstalk in Salinas. They are Wildwood's biggest competitor in the Monterey area. "Tofu is definitely the food of the future. It's probably going to take a couple of more years. We've been watching this slow change. Ten years from now tofu will be everywhere and in everything. All kinds of foods will be made from it. We raise our children on tofu and they eat it right out of the carton. To them its second nature. I really like the whole soy end of life. It really feels good. I like developing foods with tofu. The biggest problem with tofu is trying to get a long shelf life in products that use it." Address: 597 Lighthouse Ave., Pacific Grove, California 93950. Phone: 408-375-8673.

7431. **Product Name:** [Shoyu].
Foreign Name: Shoyu.
Manufacturer's Name: Miso Produçoes.
Manufacturer's Address: Rua do Douro, No. 92 r/c,

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Rebelva, 2775 Parede, Portugal. Phone: (1) 247 50 68.
Date of Introduction: 1990, January.
How Stored: Shelf stable.
New Product–Documentation: Letter from Miguel Azguime, owner 1989 Oct 31. The shoyu is aged for 10 months. On 30 Nov. 1989 he writes that it will be available in Jan. 1990 in 500 ml and 1 liter containers. On his business card, below the company name is written: "Alternative cultures and foods (Alternativas Culturais e Alimentares)."

7432. **Product Name:** [Jean de Preneuf Tofu Burgers {Not Fried} (Garlic and Fines Herbes, Tomato and Basil, or With Three Cheeses)].
Foreign Name: Jean de Preneuf Dorés de Soja (Ail et Fines Herbes, Tomate et Basilic, Aux Trois Fromages)
Manufacturer's Name: Société Soy.
Manufacturer's Address: 1 rue du Crêt de la Perdrix, 42400 Saint-Chamond, France. Phone: 77.31 24 42.
Date of Introduction: 1990, January.
Ingredients: With Three Cheeses: Tofu (water, soybeans* 51%), Emmenthaler (Swiss) cheese (8%), Comté cheese (2%), Cheddar cheese (2%), soy sauce*, rolled oats*, sea salt, spices and aromatics. * = Organically grown (issu de l'agriculture biologique)
Wt/Vol., Packaging, Price: 2 x 100 gm round patties vacuum packed in a paperboard box.
How Stored: Refrigerated
Nutrition: Per 100 gm.: Protein 12.4 gm, fats (lipids) 13.0 gm, total carbohydrates (glucides totaux) 9.6 gm, calories (Kcal) 205 (857 kJoules).
New Product–Documentation: Labels sent by Bernard Storup. 1990, Dec. 26. 3.25 by 4 by 2 inches from front to back. Paperboard box. With three cheeses. Blue, green, orange-brown, and yellow on white. Color photo of 2/3 of a patty on front panel. "Light and balanced. Keep your vitality with Tofu Burgers. For additional information write: Jean de Preneuf, 42 L'Orangerie, 42580 Letrat, France. Store at +4°C. To use: Remove the protective film with the peel-off tab. Re-heat, either: In a skillet over low heat for 5 minutes. In an oven for 7-10 min. In a microwave oven for 2 minutes. Or steam."

"Soya, with exceptional natural qualities, rich in protein and free of cholesterol, is finally cultivated in France. We transform tofu, a traditional food that originated in China, so that all of the vitality of soya is protected. Ground with water, cooked, then filtered, the soya is transformed into 'milk.' Its coagulation gives us tofu. Easy and quick to prepare, tofu burgers are delicious culinary preparations for serving as a main dish, rich in vegetable proteins (riches en protéines végétales)."

Spot in SoyaFoods. 1991. Spring. p. 5. "Dorés de Soja." The company name is given as "Jean de Preneuf."

7433. **Product Name:** [Viana Soya Noodles with Shoyu].
Foreign Name: Viana Shoyu Soja-Nudeln.
Manufacturer's Name: Viana Naturkost GmbH (Marketer).
Manufacturer's Address: Schmittenstr. 106, D-5030 Huerth 6, West Germany. Phone: (02233) 41323.
Date of Introduction: 1990, January.
Ingredients: Hard wheat*, wheat*, soybeans*, shoyu*, herbs*, sea salt. * = Organically grown
Wt/Vol., Packaging, Price: 250 gm cellophane bag.
How Stored: Shelf stable.
New Product–Documentation: Label sent by Bernd Drosihn 1990 May 10. 3.25 by 3.5 inches. Self adhesive. Reddish-purple, black, brownish gold, and beige. "Spiced with herbs and soy sauce. Noodles made without eggs." Introduced Jan. 1990.

7434. Wang, Guangjian; Kuan, S.S.; Francis, O.J.; Ware, G.M.; Carman, A.S. 1990. A simplified HPLC method for the determination of phytoestrogens in soybean and its processed products. *J. of Agricultural and Food Chemistry* 38(1):185-90, Jan. [14 ref.]
• ***Summary:*** Discusses the phytoestrogen content of soybeans, defatted soy meal, hard tofu, soft tofu, dry spiced tofu, soy milk skin (p. 189) / soy milk film (p. 188) [yuba], soy milk, soy sauce, hot soy paste, sweet soy paste [miso?], fermented tofu, soy sprouts (homemade), soy sprouts (grocery), daidzein, genistein, formononetin, coumestrol. Address: Natural Toxins Research Center, Food and Drug Administration, 4298 Elysian Fields Ave., New Orleans, Louisiana 70122.

7435. Davis, Cynthia. 1990. U.S. Mills and Erewhon (Interview). *SoyaScan Notes*. Feb. 6. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Cynthia arrived at Erewhon in 1983. In April 1986 Erewhon acquired U.S. Mills, which had been founded in 1908 under the same name, U.S. Mills. They were and are a cereal manufacturing company. Their two main cereal brands were Uncle Sam's Cereal (the product that the company was founded on), and Skinner's Raisin Bran (America's first raisin bran, introduced in 1926). In effect U.S. Mills and Erewhon were merged, and U.S. Mills was chosen as the corporate name, largely since it had been around longer. Ronald L. Rossetti had acquired Erewhon after it filed for Chapter 11 bankruptcy. He was and still is head of Nature Food Centres, a chain of health food stores. Erewhon was purchased by Rossetti as an individual, not by Nature Food Centres. Contrary to what the media often said, Erewhon was never, in any way, owned by, or part of, or a subsidiary of Nature Food Centres. The misconception (created by the media) that Nature Food Centres owned Erewhon caused real problems for Erewhon at one point. Then in Nov. 1986 Erewhon Inc. bought U.S. Mills. Ron Rossetti is presently no longer involved with U.S. Mills or

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Erewhon. In May 1988 Chuck Verde (who was the president of Erewhon) and Cynthia Davis acquired the U.S. Mills/ Erewhon business. They are now the main joint shareholders. At that time they brought in another company as an investor. Erewhon is their brand name for the natural food industry; the product charter has not changed and they are selling to the same market. Surprisingly U.S. Mills has nothing written about their long, interesting, pioneering, and complex history. However Cynthia feels that the history of Erewhon written in Ron Kotzsch in East West in Feb. 1984 was an good, accurate history up to that time. Address: U.S. Mills Inc., 395 Eliot St., Newton, Upper Falls, Massachusetts 02164-1131. Phone: 617-969-5400.

7436. Klaper, Michael. 1990. Personal history, present work, and views (Interview). *VegeScan Notes*. Feb. 12. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Born on 19 July 1947, Dr. Klaper grew up on a dairy farm in Wisconsin. He graduated from the University of Illinois College of Medicine in 1972, was married, then did a 1 year internship followed by 5 years of general practice in British Columbia, Canada. After 3 years of residency retraining in Vancouver he worked for 3 years on an Indian Reservation in Humboldt County, California. Then did 1 year of anaesthesia residency at the Univ. of British Columbia Cardiovascular Service. He worked with surgeons who would ream cholesterol out of patients' arteries. It was basically plumbing problems. How long can you continue to pour bacon grease down the kitchen sink until it clogs the pipes? One day in 1981 an incident changed his life. A Mr. Phillips came in for open heart surgery. The serum in a blood sample Dr. Klaper drew was cloudy like glue–the man had just eaten a hamburger and a milk shake. During the operation, the surgeon pulled long tubes of cholesterol out of the man's arteries, then sewed him up. Michael realized that he was eating the same diet as Mr. Phillips. After the operation the overweight surgeon and staff went to the cafeteria and had that same diet. While Mr. Phillips was in the hospital, no one talked to him about changing his diet. They just asked him to come back for a checkup. Michael felt like he was in a Fellini movie. He decided that instead of putting people to sleep, it was time for him to start waking them up. So in June 1981 he resigned his lucrative position as an anesthesiologist, bought a vegan cookbook (from Gentle World) and followed a vegan diet. His blood pressure fell and he lost a 15-pound inner tube of fat around his waist that he had worn for years. He felt much better. In Oct. 1981, he moved to Gentle World in Florida, opened a clinic in nearby Orlando, and practiced "nutritional medicine" for the next 6 years. He was married a second time. At the clinic he especially liked to see fat patients. A change to a vegan diet worked miracles. Now they were putting "the right fuel in the tank." But he also noticed that in many arthritics, the inflammations in their joints got better, and that the asthma in many asthmatics decreased or disappeared. In the late 1980s he moved to Felton near Santa Cruz, California, and worked with Earthsave Foundation and John Robbins. In early 1990 he moved to Los Angeles to continue this work. He also wrote several books on vegan nutrition.

Today his main work is lecturing about diet and the environment, how America's meat-centered diet is destroying both the earth's ecosystems and our bodies. He advocates changing to a vegan diet and wants people to understand "the true cost of a meat-centered diet." Most of his income now comes from speaking honoraria and sales of his book, none from medicine. He is living with friends in Los Angeles. His favorite periodicals on diet are: McDougall Newsletter, Vegetarian Times, Vegedine, and The Vegan. On ecology: E, and Buzzworm.

Concerning his personal diet: he gets about 600 mg/day of calcium which he thinks is sufficient because his protein intake is also low. For breakfast he has sliced fruit and raisins with apple or orange juice poured over the top. Whole wheat bread with almond butter (and sometimes a fruit puree). Sometimes a scrambled tofu omelet. For lunch: Green salad with yellow or red veggies and tahini dressing (with water and nutritional yeast), vegetable soup, and a sandwich with nut butter or tofu spread (with tahini and shoyu) and/or sprouts. For dinner: Potato or pasta or cooked whole grains (like brown rice), yellow steamed veggies, miso broth often with diced tofu. For snacks he likes almonds and/or raisins. His favorite sweet is Rice Dream [frozen dessert] or fruit. He admires the work of Dr. John McDougall but strongly disagrees with the way he strictly applies the concept of "percentage of calories from fat" in foods, using it to criticize foods such as tofu which actually have very little fat per typical serving.

As of Feb. 1990 Gentle World, a community of 20 people, is selling their land in Florida and moving to Maui. Contact them at Gentle World, P.O. Box U, Paia, Maui, Hawaii 96779. Phone: 808-579-9144. Mr. Waldbaum (Light) is a distant cousin of the Waldbaum family of supermarket fame. They have opened a restaurant named "The Vegan" on Maui and are using lots of soyfoods.

Update: In April 1992 Dr. Klaper announced the foundation of a newly accredited program called the Institute for the Advancement of Nutrition Education and Research, which aims to further physicians' knowledge about nutrition and health. He made the announcement at Natural Products Expo West, during his seminar called Soyfoods and Vegetarianism. As of Jan. 1993 the Institute has conducted two 4-day seminars, mostly for physicians who received Continuing Medical Education (CME) credits. Address: 8843 Pennfield Ave., Northridge, California 91324. Phone: 818-341-0652.

7437. Fabricant, Florence. 1990. Food notes: Quick, Hot Sichuan. *New York Times*. Feb. 14. p. C7.

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• ***Summary:*** San-J International (the American division of San-Jirushi) has just launched a Sichuan Sauce, which is hot and spicy. San-J specializes in tamari, which it has been making in Virginia for a year. In 1804 the company was founded in Japan

7438. Hom, Ken. 1990. Homecoming: Culinary fireworks go off when the author visits his ancestral village. *New York Times*. Feb. 25. p. SM45

• ***Summary:*** When he was a small boy in Chicago, Illinois, the writer's mother began what became a repeated chant: we must return one day to the village of our ancestors (*gu xiang*).

In 1978 he set off with his mother to the village of Kaiping in the Foshan region of Guangdong Province. When they arrived, they were greeted by a large crowd of villagers and a banquet of 11 courses. "Most of the food was home-grown, and all of the relatives–20 members of the extended family–had helped in the preparation. Chinese water spinach, freshly plucked from the garden was cooked with fermented bean curd."

Recipes include: Hongshao doufu (Red-cooked bean curd family style; with "1 pound firm bean curd," 2 tablespoons hoisin sauce, 1 tablespoon light soy sauce, and 1 tablespoon dark soy sauce")

Chaodoya (Stir-fried soybean sprouts with pork; with "1½ pounds soybean sprouts or mungbean sprouts")

7439. Achter-Theiss, Elke. 1990. Speise statt Futter [Food instead fodder] *Oeko-Test Magazin* (*Frankfurt, West Germany*). Feb. p. 57-59. [Ger]

• ***Summary:*** Discusses whole dry soybeans, soybean meal, soy sauce, soymilk, tofu and silken tofu, tempeh, and miso.

7440. All-One-God-Faith, Rabbi Dr. E.H. Bronner Associates, SMMC. 1990. [Catalog and price list]. P.O. Box 28, Escondido, CA 92025. 2 p.

• ***Summary:*** Lists Balanced mineral bouillon (4 sizes), Balanced mineral seasoning (4 sizes), Balanced protein seasoning (5 sizes), barley malt sweetener, instant soup, kelp sea lettuce, lecithin protein granules, red grape vinegar, four pure oils (jojoba, lavender, peppermint, rose), and eight soaps (incl. the famous peppermint oil pure castile soap liquid). Address: Escondido, California.

7441. Hesseltine, C.W. 1990. Margaret B. Church, 1889-1976. *Mycologia* 82(1):144-47. Jan/Feb. [20 ref]

• ***Summary:*** "Dr. Margaret Brooks Church was a distinguished mycologist and a charter member of the Mycological Society who has been neglected in the history of mycology. She made several noteworthy contributions to systematic and applied mycology. She, along with Dr. Charles Thom, wrote the first manual on the genus *Aspergillus*. The first authoritative treatment of oriental fermented foods in the West was written by her. It remains an accurate account of these fermentation processes. Dr. Church also conducted laboratory experiments on soy fermentations and collaborated with Japanese workers, especially Professor K. Oshima, Hokkaido Imperial University, Sapporo, Japan. .

"Dr. Church was born in Providence, Rhode Island, on March 13, 1899. She received an A.B. in 1912, an A.M. in 1914, and a Ph.D. in 1918, all from Brown University.

"One of her most important contributions was the USDA Department Bulletin 1152 entitled, 'Soy and Related Fermentations,' published in 1923. At that time there was interest in establishing soybean production in the United States because soybeans were being imported into the U.S. from the Orient. This publication had many photographs of the industrial processes of making koji and soy sauce in Japan. Research in soy sauce production began in 1918 and continued for several years. Soy sauce, miso, molded [fermented] tofu, and natto were also described.

"Dr. Church's research dealt extensively with koji, and it is surprising that she knew even then that tane koji (koji inoculum) consisted of several selected mold strains of *Aspergillus oryzae*. The fact that yellow-green *Aspergillus* strains were employed in these fermentations undoubtedly led both Thom and Church to publish the taxonomic relationships of this group of molds in 1921. Her research on koji was a likely catalyst for her study of industrial enzymes...

"In 1938-1939, Dr. Church served as an indexer and abstractor for Biological Abstracts. Upon her retirement, presumably in 1939, she moved to Lyndon, Vermont." A large photo shows Dr. Church. Address: 5407 Isabell, Peoria, Illinois 61614.

7442. Karta, Susani K. 1990. The market prospective for tempe in the year 2000. In: Hermana, Mien K.M.S. Mahmud, and Darwin Karyadi, eds. 1990. Second Asian Symposium on Non-Salted Soybean Fermentation. Bogor, Indonesia: Nutrition Research and Development Centre. vii + 116 p. See p. 94-104. Held 13-15 Feb. 1990 in Jakarta, Indonesia. 23 cm. [11 ref. Eng]

• ***Summary:*** A very interesting paper. Contents: Introduction. Market situation for tempe in Indonesia. Health and nutritional significance of tempe. Tempe for weaning food. Constraints and trends in the market development of tempe. Recommended guidelines and strategies. Ideas for the diversification of tempe utilization (Tempe as a food ingredient, new tempe food opportunities).

Tempe "is a key protein source in the rice-diet of the people of Indonesia. It is consumed by millions of people of various ages and socio-economic status. It has gained popularity in the Netherlands, Japan, Malaysia, Singapore and other areas where Indonesians have settled. It has also slowly been making its way into the American diet, particularly, in the vegetarian, cholesterol-free and low-fat

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food product markets."

"Indonesia with a population of 177 million people (in 1988) and an annual population growth rate of 2%, is the largest tempe producer in the world and has the largest soyfood market in the region. In 1983, Indonesians consumed about 0.9 million MT [metric tons] of soybeans as food, which increased to about 1.5 million MT in 1988 (Table 1). About 50 percent of the total soybeans consumed was in the form of tempe, 40% as tofu and the remaining 10% was used for making soy sauce and tauco (a fermented whole soybean condiment). In 1988, the estimated soybean consumption for tempe was around 764,000 MT which amounted to an average per capita consumption of 6.45 kg of tempe (equivalent to 4.3 kg soybeans). In the past five years the consumption of soyfood has increased by an average of 10% annually."

"Acute diarrheal disease is one of the leading causes of childhood mortality and morbidity in developing countries and is a major contributor of malnutrition. Approximately 25% of the growth differential between children in selected developing countries can be explained by diarrhea. The mortality and morbidity data from a total of 193 surveys carried out in 49 countries since 1981 by WHO (1986) indicate that, on average, a child under 5 years of age suffer 3.5 episodes of diarrhea per year and that about one-third of deaths in this age group are diarrhea associated.

"Investigations worldwide have found diarrhea incidence peaking between the ages of 6 months to 3 years."

Tables: (1) Indonesian soybean production, imports, and consumption as food, 1983-1988. Soybean production increased from 536,000 tonnes (metric tons) in 1983 to 1,179,000 tonnes in 1988--more than double. Soybean imports, which were 391,000 tonnes in 1983, rose to a peak of 400,000 tonnes in 1984, then decreased to 350,000 tonnes in 1988. Consumption of soybeans as food increased from 927,000 tonnes in 1983 to 1,528,000 tonnes in 1988. Per-capita consumption figures are not given. Source: ASA estimates and BUI.OG statistics. (2) Nutritional composition of tempe (100 gm edible portion). (3) The essential amino-acid composition of tempe compared with the FAO/WHO reference pattern (expressed in milligrams per gram of nitrogen). (4) Fatty acids in soy tempe. (5) Global and regional population in 1980 and estimated number (millions) and distribution of diarrheal diseases. (6) Household Health Survey illness data by different age groups in Indonesia. (7) Potential demand for tempe flour in weaning food in the year 2000, Indonesia. (8) Demographic estimates for Asian developing countries. (9) Estimated number (millions) of children under age 5 in Asian developing countries. (10) Projected potential use of tempe flour in weaning food in Asian developing countries in the year 2010. Address: American Soybean Assoc., Singapore

7443. Soejono, Irlan; Kagatsume, Masaru. 1990. Shifts and development in trade of various food crops in East Asia, 1960-1984. *CGPRT Working Paper* No. 5. xvm + 168 p. Feb. 28 cm.

• ***Summary:*** For each country discussed, this book gives information on: Production and supply of coarse grains, pulses, and root and tuber crops. Consumption and demand. Trade and trade elasticities. Forecast and policy implications: Prediction on import demand, indication of policy implications. Countries: Japan (p. 1-28). People's Republic of China (p. 29-42). Republic of Korea (p. 43-62). Taiwan (p. 63-79). The Territory of Hong Kong (p. 81-92). Appendixes (p. 95-165). References (p. 167-68).

Summary: As people in the East Asia subregion become more affluent and westernized, they consume less food grains directly and more livestock products.

Japan: Japanese rice production peaked in 1963 at 13.42 million tons, but surpluses have continued to grow. The government has tried various schemes to induce farmers to switch from rice other crops, including soybeans. A graph (p. 6) shows that soybean production in Japan dropped from 418,000 tonnes in 1960 to 100,000 tonnes in 1976. Because of the Rice Farming Diversification Policy, soybean production since 1976 has increased, rising to 238,000 tonnes in 1984. The graph also shows harvested area and yield during this period. A graph (p. 13) shows the total demand for soybeans in Japan and its components, 1960-1984. The total demand has increased steadily from 1.517 million tonnes in 1960 to 4.814 million tonnes in 1984. About 80% of this demand (3.952 million tonnes in 1984) was for soybeans to be processed. About 90% of these (3.765 million tons in 1984) were crushed into oil and meal. Small and relatively static amounts were processed to make miso (182,000 tonnes) and soy sauce (5,000 tonnes) in 1984. Address: 1. Senior Agricultural Economist, CGPRT Centre, Jl. Merdeka 145, Bogor 16111, Indonesia; 2. National Research Inst. of Agricultural Economics and the Ministry of Agriculture, Forestry and Fisheries of Japan

7444. **Product Name:** Seitan "Au Jus," Veggie Seitan, or Frozen Seitan (Sold in 10-lb Bulk Box).
Manufacturer's Name: Sprout Delights.
Manufacturer's Address: 13090 N.W. 7th Ave., North Miami, FL 33168. Phone: 305-687-5880.
Date of Introduction: 1990. February.
Wt/Vol., Packaging, Price: 10 oz round plastic tubs with label on the snap-on lid.
How Stored: Frozen.
New Product–Documentation: Talk with John and Jan Belleme. 1992. July 11. Steve Bern of Sprout Delights in Miami has been making seitan for about 18 months. He has a bulk frozen product in a box, plus some refrigerated consumer products in small tubs. He is doing very well and may have even caused Creative Kitchens to go out of business. John estimates that Steve makes 300 to 500 lb/

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week of seitan and distributes it with his own trucks only to the greater Miami area. People call him "Sprout Steve" because he was one of the first people in that part of the country who made unleavened, sprouted grain bread–which is his main product.

Talk with Steve Bern. 1992. July 11. Since 1982 he has run this bakery, which specializes in breads made of sprouts, like the early Essene breads made by Lifestream, but also makes a host of other innovative natural-food products. He introduced these seitan products on 1 Feb. 1990, then introduced large-scale seitan equipment in Aug. 1990. The Seitan "Au Jus" comes in a broth made from tamari, onion, garlic, kombu, and ginger. The frozen bulk seitan is sold in blocks only to other food manufacturers and to restaurants. They typically slice it, sometimes marinate in their own marinade, then use it in soups, or serve it like roast beef or a steak in entrees, frozen TV dinners, sandwiches, etc. He got involved with seitan because food manufacturers began to ask if he could make it for them. He now sells substantially more bulk seitan to the trade (other food manufacturers that make finished products from it) than packaged seitan to consumers via retail stores. Steve learned how to make seitan, first from the book *Cooking with Seitan* by Barbara and Leonard Jacobs, and then by hiring local people (such as Ricky Brandino, who knew how to make seitan) for several days to learn more about the process on a commercial scale. After that, Steve developed his own methods to guarantee standardized quality. Unlike most manufacturers, he adds fiber (rice bran) to the gluten to make it a little more digestible and improve the nutritional profile. Okara is too coarse and has a short shelf life.

Last year Steve made almost 60,000 lb of seitan, which works out to about 1,200 lb/week on average for a 50-week year. Now he is making only about 500 lb/week. He feels the drop has been caused by competition from the many other products entering the natural foods market. He is now developing new products such as a meatless seitan meat pie.

7445. Zoller, Stephen; Belleme, John. 1990. Soy sauce: A brewing controversy. *Solstice* No. 39, p. 4-5, Feb. [1 ref]
• ***Summary:*** First Zoller responds to Belleme's two articles about San-J tamari in recent issues of Solstice. Then Belleme responds to Zoller.

Zoller contents that (1) San-J adds food grain alcohol (manufactured by Grain Processing Corp. and certified as kosher) to bring the level up to 2% to inhibit the growth of aerobic yeasts. No benzene is used in the production of this alcohol. (2) San-J's shoyu is made with approximately 80% whole soybeans and 20% whole wheat. No wheat flour is used. (3) Soy grits are of two types: Food grade (which San-J uses) and ordinary (which is used for animal feed). San-J's soy grits are certified as Kosher. (4) Traditionally brewed. The essential parts have not changed.

Belleme responds to each point, then concludes: "San-J cannot have it both ways. When they were marketing only whole soybean tamari in the U.S., their promotional literature referred to soy sauce made with soy grits as 'modern' and 'conventional.' San-J Tamari (black label) and Shoyu (blue label) proudly said, 'traditionally brewed,' 'aged in four seasons,' and 'made with whole soybeans, not chemically treated soy grits.' When San-J began marketing their soy meal product in the U.S., the 'modern' process suddenly became traditional and hexane-extracted soy grits became Kosher. San-J's soy grits may be Kosher, but the confusion they have caused in the natural foods market is not.

"Judging food based on flavor is a matter of personal preference, but natural food shoppers need more accurate labelling to make an educated choice." Address: 1. Vice President and General Manager, San-J International, Richmond, Virginia; 2. Saluda, North Carolina.

7446. Life Food. 1990. Taifun Produkte. Preisliste fuer Wiederverkaeufer [Taifun Products: Price list for retail food stores]. Robert Bunsen-Strasse 6, D-7800 Freiburg, West Germany. 1 p., 30 cm. [Ger]
• ***Summary:*** This new price list takes effect on 1 March 1990. Products are: Tofu (400 gm or 250 gm vacuum pack). Tofu (1 kg pack for those buying fresh). Smoked tofu (200 gm). Sprouted tofu (250 gm vacuum pack). Hijiki tofu (200 gm vacuum pack). Tofu sausages (Grill-Knacker; Tofu Wuerstchen, 250 gm vacuum pack of four). Soya Patty (Soja Bratling, 6 or 12 pack). Tofu Cheese Patty (6 or 12 pack). Black Forest Patty (Schwartzwaelder Bratling; 6 or 12 pack). Tempeh Patty (Tempeh-Taler; 125 gm vacuum packed). Tofu Terrine (Graffiti or Rainbow, 200 gm, 500 gm, or 1 kg vacuum pack). Tofu Balls (Tofu-Kloesse; 4 in a 250 gm vacuum pack). Vegetable pouches (Gemuesetaschen, open, fresh). Spread for bread (Brotaufstrich, Tempeh 200 gm, Chickpeas 200 gm).

By request, we deliver various sprouts, tempeh, seitan, salad specialties, soy sauce [but no weights or prices for these "by request" items]. For feasts and celebrations, we recommend Taifun's vegetarian party service.

Prices are given for each product. 1 DM equals about $0.50.

The company now presents itself as Life Food–Freiburg's Tofu Shop. Natural Foods (*Life Food–Freiburgs Tofurei, natuerliche Lebensmittel*). Address: Freiburg, West Germany. Phone: 0761/50 61 55.

7447. *SoyaScan Notes*.1990. The isolation of Japan, trade with Holland, and shoyu (Overview). March 5. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** Oda Nobunaga (1534-1582) was the first of the great unifiers of Japan. He eliminated the military power of the Buddhist church, destroying monasteries and killing monks. His bitter opposition to the Buddhists inclined him to favor the Christians, who thrived during his reign. Nobunaga

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was followed by Hideyoshi (1536-1598), his best general, who completed his work of unifying Japan after 250 years of political disunity. In 1587 Hideyoshi suddenly ordered all Christian missionaries banished from Japan, and he subsequently confiscated their "sub-fief" in Nagasaki. He began persecuting Christians in 1597.

In 1603 Tokugawa Ieyasu (1542-1616) founded the Tokugawa shogunate. He was intensely interested in seeing that his heirs continued his rule–a feat that had eluded Nobunaga and Hideyoshi. He regarded Christianity as a menace, and he stamped it out, though it survived longest in Nagasaki. But he was eager for foreign trade apart from religion. In the second half of the 1500s, trade with Portugal and Holland had thrived. But in 1639 the Portuguese were expelled from Japan for suspected complicity in the Shimabara Revolt. In 1641 the Dutch were moved from Hirado to Nagasaki, where they were kept almost like prisoners on Dejima (also spelled Deshima), a small artificial island in the harbor. All Japanese were prohibited on pain of death from traveling abroad. By these steps Japan succeeded in blocking off most of the channels of foreign contact.

During Japan's 215-year-long period of national isolation (1639-1854), the island of Dejima in Nagasaki Bay was the country's only port open to foreign trade.

But Japan's self-imposed isolation was by no means complete. In fact trade increased, though the Japanese were more selective about what they imported. The Dutch had a monopoly on trade between Japan and Europe. One of the items exported by Japan to Europe via Dutch traders was shoyu, in grey pottery jars with blue writing on them. On the jars was written "Jap. Soya" or "Japansch Zoya."

7448. Yu, Stephen. 1990. New developments with tofu in Toronto (Interview). *SoyaScan Notes*. March 5. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Stephen is again working with soyfoods after the bankruptcy of Victor Food Products in about June 1988. He is now working as a consultant, and his main project is to "consolidate all of the tofu makers in the area and help them to go into the market as one team." He is also trying to act as a communicator between the Soybean Marketing Board/ Agricultural Canada and the tofu makers. He also has a family, with children aged 3 and 6, to support. In the last few days he has visited 6-7 tofu companies in Toronto; they all welcomed him with open arms and gave him the information he requested–although he does not know how true it is. He would like to work as a researcher for Soyfoods Center in Canada ($50/hour), and to trade information. He will send a list of what he wants to know. He is interested in knowing the amounts of various soyfoods (such as Vitasoy soymilk, Kikkoman soy sauce and tofu, etc.) imported to Canada.

He started to make soyfoods in Canada in Feb. 1978. His first three products were tofu, tofu pudding (daufu-fa), and soymilk.

He knows a man in Canada who is doing a market study of the low-tech soyfoods industry in that country. He is an independent person who is working for the Soybean Marketing Board. The study concerns the overall picture of soybean use in Canada. The most interest is in tofu, and Stephen is doing the tofu and soymilk section of the report. Stephen can put us in touch. Stephen personally lost $750,000 when Victor Food Products went Bankrupt.

Update: Talk with Stephen Yu on 8 July 1990. The report cost about $70,000 to produce. He is not sure if it will be published. He is not busy nowadays, but does not feel like working on a history of his company. Address: 525 Highland Road West, Kitchener, ONT, N2M 5K1, Canada. Phone: 519-741-0922.

7449. Gaiser, Klaus. 1990. Huegli acquires majority ownership in Yamato Tofuhaus GmbH and in Heirler (Interview). *SoyaScan Notes*. March 12. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Huegli Nachrmittel A.G. is a Swiss company, but they have a German branch. The head of the German branch approached Gaiser and asked him if Yamato would like to work together with Huegli. Until the spring of 1989 Klaus had a business partner (Wolfgang Haberger, who had joined the company in early 1984) but he was not very happy with him, so he bought him out. At the time of the buyout, Huegli approached Gaiser, who was now suffering from undercapitalization. Gaiser found Huegli to be fair, trustworthy, and competent. Huegli bought more than 50% of Yamato in April 1989. Before that, Thomas Karas had tried to sell his company to Huegli.

In Jan. or Feb. 1990, Huegli purchased Horst Heirler, the biggest distributor of fresh health foods in West Germany. Heirler's packaging is very attractive. To the best of Klaus' knowledge, there is definitely no relationship between Huegli and Nestlé. Yamato has not yet announced its relationship with Huegli to the general public, so nothing has been published. Tofu production has not yet expanded enough to fill the needs of potential Huegli customers. Yamato is now selling tofu on one of Huegli's tracks–to hospitals and factories (institutions: Grossverpflegung); other tracks are (2) Reform Houses, and (3) industry and supermarket chains. Presently Klaus is working most on track 1. To reach tracks 2 and 3 Yamato would have to develop new packaging and products suited to their very special needs. "At the moment Yamato and Huegli are not yet working so closely or effectively. Their new capital comes one step at a time for specific goals/projects.

Yamato presently makes 8 tofu products: Tofu (250 gm and 400 gm), Tofu Enriched with Mung Bean Sprouts, Smoked Tofu, (the best in Germany), three types of deep-fried tofu (Sour Marinated Tofu, *Hirschauer Laible* [Hirschau is a small village near Tuebingen], *Laible* = little loaf or loaflet; the tofu is first marinated in soy sauce and

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spices, then deep fried), and Tofu Burgers with Sprouts (*Sprossen Tofuletten;* made with mung bean, sunflower, radish, alfalfa, and mustard seed sprouts {no soy sprouts}, these burgers were deep fried), 2 tofu pâtés in glasses (a little like sausages), and soymilk sterilized in bottles. He presently developing some new products.

Note: Huegli Naehrmittel A.G. (P.O. Box, CH-9323 Steinach-Arbon, Switzerland. Phone 71 46 92 92) was founded in 1935. They currently have about 600 employees and capital of 100,000 Swiss francs. They are a well-known company in Switzerland. Address: President, Yamato Tofuhaus GmbH, Rittweg 11/1, D-7400 Tuebingen–Hirschau, West Germany. Phone: 7071-71094 or 95.

7450. Kempff, Klaus. 1990. Brief history of Life Food GmbH–Taifun Tofurei (Interview). *SoyaScan Notes*, March 14. Conducted by Anthony Marrese in Germany.
• ***Summary:*** Klaus, known as Dhanya, lived in Miami, Florida, for 5 years and has an American wife, although they are separated. His interest in soyfoods began in America. After returning to Germany, in 1985, Klaus bought a little sprout business in a basement / cellar at Wallstrasse 3 in Freiburg. When he bought it, it had no name and was run by a commune of Bhagwan Rajneesh devotees as a Sannyas business.

Since April 1985 the commune had been making various sprouts (not including soy sprouts). Klaus named the business Life Food, and in July 1985 he and several others started producing tofu. In the spring of 1986, in Germany, he got a copy of *The Book of Tofu* by Shurtleff and Aoyagi which helped his work. He sold the tofu along with various sprouts (mung, alfalfa, radish, chick peas, wheat) at the market place. Looking for a way to use his okara, Klaus developed a Soy Burger and started selling it in about Nov. 1985.

Then health officials told them to move out of the basement or be shut down. While struggling with the decision, a new place (a little grocery store at Stuehlinger Strasse 9, D-7800 Freiburg) became available and an order for one hundred 400 gm packs/week of tofu came along, so in Dec. 1985 they decided to go for it and start making tofu on a larger scale. The business grew steadily and in May 1989 they moved into their present location, a larger, new and modern facility that was previously occupied by a catering service. They purchased a new pressure cooker for making the soymilk for their tofu.

Klaus had a friend named Wolfgang Heck (not a follower of Rajneesh), who was an organizer (*Veranstalter*) of international events. The two began to work together in late 1986. In May 1987 Wolfgang started a business named Taifun that cooked Life Food's tofu for the people in the nearby Market Hall for gourmet foods. Taifun had a small walk-up tofu lunch bar at an indoor market. Here they sold their products and tried out new second generation products.

Klaus and Wolfgang decided to merge their two companies. So on 1 Jan. 1990 Life Food GmbH was formed, with 5 shareholders, including Klaus and Wolfgang. Life Food GmbH bought Taifun (the brand name and equipment) and discontinued operation of the Taifun in the market hall. Taifun became the brand name for many of Life Food's products. But some confusion between Life Food and Taifun still remains. For example, today outside the tofu plant there is a big sign that says "Taifun Tofurei" in big letters and under it in small letters the name of the company, Life Food GmbH.

Life Food GmbH now employs 15 people. Present products they make are tofu burgers (3 types, each 90 gm, 1,250/week), tofu (500 kg/week, started Dec. 1985), tempeh (10-20 kg/week, started July 1987), Tofu Terrine Sausage (just starting; they are terrific). They made samples of white miso is March 1989 and are in the process of bringing it into production. Although most of their okara goes to farmers, some is used in their tofu burgers and the Hop Sing Bratlinge (burger dough for restaurants). Life Food is the only tofu producer in Freiburg, where they control the whole market. They have a 60 kg/hour Takai pressure cooker, a Takai hand okara press, and a meat-type grinder for the soybeans. They make tofu in 10-12 kg batches. They also import and sell a little miso and shoyu.

Follow-up interview by William Shurtleff. 1990. May 9. The company presently makes 800-1,000 kg/week of tofu and 10-15 kg/week of tempeh. They are hoping for a big standing order of 500 kg/week from the student dining hall at Freiburg Univ. The dining hall has already been buying tofu and tofu products for a long time. Their best selling product is tofu, followed by Smoked Tofu, then the Tofu Terrine (made by pressing tofu, mixing it with vegetables, and baking it in a baking pan; it resembles a goose liver pâté).

Update. 1990. May. Bernd Drosihn says Klaus Kempff is no longer in charge: Guenter Klein and Wolfgang Heck have taken over. Address: Founder, owner and manager, Life Food GmbH, Robert-Bunsen Strasse 6, D-7800 Freiburg, West Germany. Phone: (0761) 50 61 55.

7451. *SoyaScan Notes*.1990. Origin and early exports of Kikkoman brand shoyu (Overview). March 19. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** The Kikkoman brand was first used for shoyu (soy sauce) in the year 1784 (*Tenmei* 2) by the Saheiji MOGI family in Noda, Japan. In 1838 (*Tenpo* 9), Saheiji Mogi petitioned for and received registration for the brand name Kikkoman by the central government of Japan (*Bakufu Goryomaru*).

In 1872 and 1873, Mogi Saheiji entered Kikkoman in two world's fairs, the first held in Amsterdam and the second in Austria. Kikkoman was awarded a letter of commendation for excellence at the Austrian fair, and following this, Mogi Saheiji redoubled his efforts to promote the brand. But there

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are no records showing that Kikkoman was exported to Europe following its recognition at these prestigious shows.

The earliest known export of Kikkoman brand shoyu was apparently in 1879. That year it was registered in California as a legally recognized brand name (a move that predated the same legal protection in Japan by six years!) and the same year a Mr. Demoto started to sell Kikkoman brand shoyu in California.

7452. Westra, Marianne. 1990. Early history and current work of Vanka-Kawat B.V. (Interview). *SoyaScan Notes*. March 29. Conducted by William Shurtleff of Soyfoods Center. Followed by letters on 1 June and 2 July 1990.
• ***Summary:*** This company was founded in 1958, and has been in business for 33 years. They began as both an importer and a manufacturer. The original products they made were tofu (tahoe) and soy sauce (both sweet and salty varieties). In 1958 they began to make the following types of soy sauce: Ketchap Kaki Tiga, Ketjap A, Ketjap Benteng Manis, Ketjap Benteng Asin, Yellow Label Soy, and Tiger Brand Soy. They were still making all of these varieties in 1990.

At the time they started the business, they think there were other manufacturers of soy products in the Netherlands, but they don't remember the names of any companies or individuals. There were small, local Chinese companies that made tofu before they did, and at least one company that made soy sauce before they did. Their mailing address and head office address have not changed since 1958. The mailing address is: Dr. Augustijnlaan 40, 2283 CH Rijswijk, Netherlands (near The Hague). In 1984 Vanka-Kawat was thought to be the second largest tofu maker in Europe and in the Netherlands (after Heuschen-Schrouff), producing 10,500 kg/week. They discontinued tofu production in March 1985 after coming to an agreement with Heuschen-Schrouff, because it was more economical for Vanka-Kawat to let Heuschen-Schrouff (which had all the equipment and knowledge) produce the tofu which Vanka-Kawat sold. They now buy their tofu from Heuschen-Schrouff. They also make sambals, and other foods. They have never made taotjo or miso, but they do import it. And they have never made tempe/tempeh, but they do buy it from the "first Dutch Tempeh factory" and then sell it.

They are not related to Linn Oriental Products (also called Soy-Lin or Lin Tahoe) in Westbrook, but they think that company started in about 1970. The company still exists; the owner is Chinese, but they do not know if it is Mr. Lin. Mr. G.L. Van Kasteren is the best man to talk to about soyfoods. He speaks good English.

This company, which is run by Indonesian-Dutch, imports foods from throughout Asia, though they started with Indonesia, and exports to West Germany, Belgium, France, England, and the USA.

Note: Anneke de Weerd says (April 1991) that the two most popular types of soy sauce in the Netherlands are ketjap manis and ketjap benteng; ketjap asin is not well known. Address: Head Office: 3e van de Kunstraat 18, 2521 BB Den Haag (The Hague), Netherlands. Phone: 70-388-8804.

7453. Carantino, Sabine. 1990. Le soja perd son amertume [Soya loses his bitterness]. *Management et Technologies Alimentaires* No. 2. March. p. 65-66. [Fre]
• ***Summary:*** Last Oct. 7 companies that process soybeans joined to create AFISA (Association Francaise des Industriel du Soja), the French soyfoods association (5 Blvd. de la Mediterranée, 31400, Toulouse, France). This article uses the term "soyfoods" and discusses soymilk, tofu, tofu products (desserts, prepared foods). ONIDOL is involved, as is GEPV (*Groupement d'Études sur les Protéines Végétales*, 10-A rue de la Paix, 75002, Paris, France; founded in 1975). It has been decided to finance a market study (which will be completed this year) of 4 European countries: Belgium, France, Great Britain, and West Germany. They may develop a "French Soya" logo. At the same time, ONIDOL is organizing an Interprofessional Committee for Soy Proteins Destined for Human Consumption. It will coordinate scientific studies, communication, and information on vegetable proteins and "soyfoods."

In Europe, the degree of advancement of use of soy protein in human foods differs considerably from one country to the next. The UK and Germany started earlier than France. In Germany, soyfoods are positioned on the "battlements of the dietetic market" whereas in France they are more oriented toward the mass market. In France, the high consumption of dairy products has not favored soymilk. 3-5 million liters of soymilk were produced in 1988, and the amount had roughly doubled by 1989. The new technologies allow production of soymilk with almost no bitter (beany) flavor, and it can be used to make good yogurts and desserts.

The first soy beverages and flavored desserts were launched only 5 years ago by Alpro (a division of Vandemoortele). The movement was then expanded with the creation of new brands, Celia (Laiterie Saint-Hubert-de-l'Hôtel) and Cacoja (Coopérative agricole de Colmar). Triballat created Soja Sun, a line of soy desserts. In 1988 the cooperative of Valence launched the Innoval line. Others include [Société] Soy, Sojadoc (Richemont) and Sojal. Many of the leaders are dairy companies, but they position their products very differently from dairy milk. Also in the French market are Lima from Belgium (with tempeh and tamari). Tonidoc makes soynuts sold as an aperitif. The French company Bunge, a third party, and Sofiproteol (Sofiprotéol) have created Sogip, which produces soy protein concentrates for use as both calf milk replacers and in human foods.

Concerning regulations, the definitions and uses of soy protein are set forth in a circular of 27 Aug. 1975, which related to another document of 12 Oct. 1972 for terminology. Finally a new circular of 1986 replaced the earlier ones. The

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Codex Alimentarius will finish its work on these areas in 1991.

A sidebar describes Innoval and its goals. Address: France.

7454. Diamond, Marilyn. 1990. The American vegetarian cookbook: From the Fit for Life kitchen. New York, NY: Warner Books. xx + 422 p. Index. 29 x 22 cm. [74* ref.]
• ***Summary:*** This is a beautifully presented vegan cookbook, with many creative and delicious recipes. Soy-related recipes and entries include: Description of unpasteurized misos (p. 42). Soy products (p. 43, see also How to replace animal products, p. 93). Red miso tea (p. 71).

Chapter 6, titled "How to replace animal products" (p. 93-119), is devoted largely to soyfoods, especially tofu. At one time the Diamonds were not fans of tofu, but now Marilyn hails it as an "extraordinarily healthful" food. She uses it in what she calls "'stedda" foods–such as tofu salad "instead of" chicken salad. In this chapter you will find: Nondairy milk and cream. Soymilk (p. 94-95; the author finds nut and seed milks, almond and sesame, to be more flavorful). Enriched almonnaise (non-dairy mayonnaise with almonds and soymilk, p. 98). Instead of meat (p. 100): Exactly what is tofu? Culinary utopia. A dream come true. Buying and storing tofu. Wrapping tofu. Freezing tofu. Marinating tofu. Mixing tofu with other foods. How to proceed. "Stedda" sour cream. "Stedda" sour cream and onion dip. Cottage tofu or "stedda" feta. "Stedda" ricotta. Tofu "cheese" and olive spread. "Stedda" eggs: Rancheros (with tofu, p. 107). Scramblers (with tofu). Scrambled tofu (another way). Scramblers with fresh shiitake mushrooms. "Stedda Matzo brie (with soymilk and tofu). Burgers and other sandwiches (p. 110): "Stedda" egg salad (with tofu). Happy "chicken" burgers (with tofu). "Stedda" fish fillets (with tofu). "Stedda" meat marinades (* = with low-sodium soy sauce): All-purpose marinade I*. "Chicken" flavoring*. "Beefy" marinade*. Sweet and sour*. "Stedda" chicken fillets (with tofu). Mixed grill platter (with tofu). Kebobs! (with tofu). Tofu meunière. Lemon "stedda" chicken (with tofu). "Stedda" Chinese chicken salad.

"Sour cream" garlic dressing (with tofu, p. 128). "Cheesy" dijon dressing (with tofu, p. 130). French green salad with cottage tofu (p. 141). "Stedda" beef salad (with tofu, p. 155). "Stedda" mozzarella salad (with tofu, p. 159). Tofu salad (p. 169). "I used to love a fried egg" sandwich (with tofu, p. 181). Spicy tofu tacos (p. 186). Seasonings for soups (miso, p. 189). Basic cream soup (with light miso, p. 191). Miso soup with ginger and green vegetables (p. 193). Easy miso soup with vegetables and tofu (p. 194). Asparagus with tofu (p. 222-23). Vegetable lasagna with tofu ricotta (p. 278). Meatless bolognese spaghetti sauce (with frozen tofu, p. 280). Dairy-free "cheese" sauce for any pasta (with soymilk and light miso, p. 282). Tamale pie (with tofu, p. 311). Mushroom-leek crepes (with miso, p. 316). Winter squash blintzes (with tofu, p. 317). Spinach quiche (with tofu and light miso, p. 317). Asparagus quiche (with tofu and light miso, p. 318). Country pot pie (with tofu). Spanokopita with "stedda" ricotta (with tofu, p. 320). Superb vegetable sushi (with tofu, p. 322). Baking ingredients (soy flour, p. 331, and soymilk, p. 333-34). Carrot-cake cookies (with soy flour, p. 346). "Cheesecake" bars (with tofu, p. 346). Easy banana bread (with tofu, p. 348). "Cheese" strudel (with tofu, p. 349). Mocha parfait (with tofu, p. 350). Baked Indian pudding (with soymilk, p. 350). Applesauce cake (with tofu, p. 352). "Chocolate" carrot cake (with tofu, p. 353). Holiday pumpkin pie (with tofu, p. 355).

Talk with Marilyn Diamond. 1991, Sept. 18. The book is in its 9th printing now and the publisher just allowed her to do a revision, correcting typos and improving recipes. The publisher is not even planning the paperback edition yet because the hardcover edition is selling so well. They now have a 10-year contract with Doubleday (with a 10-year option to renew), and she and Harvey are working on a book together titled "How to Save Your Husband's Life While Saving Your Own." It stresses the need to re-affirm the female energies, which are the earth energies. The Diamonds have established a foundation to support the environment and ecological projects. This last year they contributed funds from it to support tree planting through the National Arbor Day Foundation. Address: Bradenton, Florida 34209.

7455. Ontario Soybean Growers' Marketing Board. 1990. A profile of the Canadian soyfoods market–Characteristics and potential. Box 1199, Chatham, ONT N7M 5L8, Canada. vi + 40 p. March. 28 cm. Spiral bound.
• ***Summary:*** Contents: 1. Introduction: Background, study objectives. 2. Research procedures: Data limitations, data collection (data sources). 3. The soyfood market. Soyfood production and utilization, domestic production, imports and exports (introduction, whole soybeans, soy flours and meals, soy oil, soy sauce, protein substances, cream and other substances, bran & soy hulls, soy meal oil cake), balance, conclusions regarding opportunities.

4. Soybeans for food purposes: Natto beans (background, market characteristics, market potential), whole bean soyfoods (introduction, soynuts, full fatted soy flours, soymilk, tofu, soy sprouts, tempeh, miso, natto, soy sauce), foods from soy ingredients (introduction, defatted soy flakes, soy protein concentrate, soy protein isolates, textured soy protein, consumption and imports). 5. Organic soyfoods: Introduction, organizations (major players, labelling requirements, certification), organic soybeans, organic soyfoods, market opportunities, recommendations.

6. Market estimates: Introduction, conversion rates, market characteristics (introduction, ethnic characteristics, immigration trends, implications), soyfood consumption (production). 7. Soyfood products: Introduction, new products (whole bean products, products from soy

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components), existing products (products with potential for growth) 8. Marketing strategy: Introduction, respondent requests (background), market opportunities (traditional soyfoods, new products), systems development (system information needs, human resources, production research), institutional needs.

This study was commissioned by the Ontario Soybean Growers' Marketing Board to provide a description of the Ontario soyfood industry. "Production and utilization: In the 1988 crop year, approximately 1.12 million tonnes of soybeans were produced on 1.28 million acres in Ontario. Approximately 86% of the soybeans were sold through the Board, with the remainder being fed or retained on the farms where they were grown. In 1988, 860 thousand tonnes of soybeans were crushed in Canada to produce soybean meal and soy oil, and 272 thousand tonnes were exported.

"Imports and Exports: Canada had a negative balance, a deficit, of almost $190 million in the value of soybeans and soy products traded. This is just over half a million dollars per day. Our largest single area of exports is whole soybeans for human foods. The percentage of these beans going to the major markets in 1988 were: USA, 37%; Pacific Rim Countries, 34%; and Europe and other 29%. Our greatest imbalance in exports and imports is in soybean meal or oil cake. Canadian crushers are unable to maximize their sales of oil cake because of difficulties in selling surplus soybean oil in the US. Soy oil being sold into the US presently faces a tariff of 18% which is decreasing at the rate of 2.25% per year as per the Canada United States Trade Agreement...

"Institutional development: We suggest the Board initiate the establishment of a Soyfood Development Association similar in structure and function to the Canola Council of Canada... There is a need to begin to bring all industry stakeholders together to systematically identify problems, information and research needs; develop data bases; and cooperatively promote the soyfood industry."

Soybeans for food purposes: The total volume of soybeans consumed as soyfoods in Vancouver (BC), Toronto (Ontario), and Montreal (Quebec) was estimated at about 6,000 tonnes, and imports were estimated to be equivalent to 8,000 tonnes of soyfoods.

Miso: One large Vancouver producer and one Toronto producer estimated that the volume of soybeans used to make miso in Canada is only about 35 tonnes/year.

Modern Soy Protein Products: Soy flour, concentrates, isolates, and textured soy protein products. Roughly 2,400 tonnes of soybeans are used in Canada for the production of these products, and 5,600 tonnes of soybeans are used to make the imported products (only bakery flour and extruded flour are made in Canada). Almost 1,000 tonnes of soy protein concentrates and isolates, and 400 texture soy proteins were imported, 83% from the USA. Total exports were 800 tonnes, of which 578 tonnes went to the USA. Soy flour (full-fat): The term "flour" generally signifies that the material has been ground finely enough to pass through a 100-mesh screen. Only relatively small volumes of full-fat soy flours are used directly as human foods. Some are used in bread, crackers, and pastry products. 5 companies in Canada make 1,538 tonnes of soy flour worth $495,000.

Natto: Canadians sell roughly 8 to 10 thousand tonnes of natto beans in Japan each year. Natto-type beans are "created by screening out the small beans from among regular food grade soybeans which have white hilums" (p. 15). In Japan about 100,000 tons/year of soybeans are used to make natto. Recently, Canada (via 3 companies–First Line Seeds, W.G. Thompson, and King Grain) has supplied about 10% of this market. Ontario produces about 8,000 to 10,000 tonnes of natto beans. Competition is expected to increase from U.S. seed breeders.

Soymilk: There are presently no large Canadian soymilk manufacturers. A plant is being built by an international trading company near Vancouver (YHS Pacific Fruit Concentrates Ltd., owned by Yeo Hiap Seng). It will supply both the local market and the Western U.S. market when it goes on stream later this year. A high proportion of imported soymilk is organic. Two brands account for 3/4 of all imports: Edensoy and Vitasoy. A high proportion of all soymilk imports are certified organic. This emphasis makes it difficult for Canadian producers to compete because of the shortage of organic soybeans in Canada. Consumption of soymilk is increasing at about 10% a year. Prices range from $1.50 to $2.75 per liter, with the organic product commanding the higher prices. Just under 100 tonnes of soybeans are used to produce soymilk in Canada: Vancouver 42 tonnes, Toronto 30 tonnes, Montreal 25 tonnes, plus imports 240 tonnes. 1 kg of soybeans produces 16.5 kg of soymilk.

Soynuts: The volume of soynuts made in Canada is quite small. One Toronto company [Grove Country Foods Canada, Inc., they were in business 1-2 years, but were out of business by Jan. 1991], which began operation in Nov 1988, sells a line of roasted nuts, which are roasted in the USA and chocolate-dipped in Ontario. Production was only a few tonnes in 1989 and is estimated to be about 10 tonnes in 1990.

Soy sauce: In 1986, according to Statistics Canada data, 2,503 tonnes of soy sauce were produced by 6 firms. The value was $2,161 per tonne for a total of $5,411,000. In 1988 Canada imported 5,680 tonnes of soy sauce valued at $4 million, primarily from China, the United States, Hong Kong, and Japan. Exports were 58 tonnes valued at $65,000. The major Canadian producers are China Lily and Sun Fresh in Toronto, Wong Wing and VH in Montreal, and Golden Dragon in Vancouver. The value of Toronto production is currently estimated to be about $5 million.

Soy sprouts: One Toronto manufacturer uses 20-25 tonnes of soybeans per year.

Tofu: About 3,300 tonnes of soybeans are used to

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produce tofu in Canada, more than any other soyfood. The volume of soybeans used is estimated at 1,400 tonnes in Toronto, 1,200 tonnes in Quebec (when a relatively large operation in Hull [La Soyarie, Inc.], near Ottawa, which exports to Ontario is included), 625-700 tonnes in Vancouver, and 125 tonnes for imported tofu. 1 kg of soybeans produces 2.4 kg of tofu.

Tempeh: Only about 33 tonnes of soybeans are used to make tempeh in Canada, and an estimated 15-20 tonnes in Ontario. Imports are relatively small. 1 kg of soybeans produces 1.6 kg of tempeh. Very few firms produce tempeh in Canada. One producer claims to have over half the Ontario market. A major distributor suggested they sold 4-5 times as much tofu as tempeh.

Soybean crushing: Since 1986 the number of firms crushing soybeans and producing soy oil has decreased from 3 to 2 [Central Soya owns two plants; in 1990 they bought the Canadian Vegetable Oil Processing (CVOP) plant in Hamilton, Ontario, formerly owned by Canada Packers Inc. They purchased Victory Soya Mills in Toronto in early 1985. So now 2 firms own 3 plants]. In 1986 the three plants made 95,108 tonnes of crude soy oil worth $57,271,000. Two firms made deodorized soy oil, but the volume and value were confidential. Less than $2 million of any type of soy oil is imported.

Consumption of soyfoods in Canada is strongly linked to Asian-Canadians. A table (p. 32) shows that according to the 1986 census, there were about 444,000 people of East- and Southeast Asian origin living in three major Canadian cities: Vancouver (155,105 people comprised 11.2% of the city's population), Toronto (234,325 people comprised 6.8%), and Montreal (55,585 people comprised 2.4%). Thus Toronto was by far the largest market, but Vancouver had the highest density of Asian-Canadians. A similar table (p. 33) updates the previous table to 1988. Immigration has increased sharply since then.

Note: This is the earliest document seen (Feb. 2002) that uses the term "food grade" (or "food-grade") in connection with Canadian soybeans (see p. 15). Address: Chatham, ONT, Canada.

7456. Krohn, Joni. 1990. Standard Industrial Classification (SIC) Codes: SIC classification ended in about 1984; SITC (Standard International Trade Classification) is now in use (Interview). *SoyaScan Notes*, April 5. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** *The Standard Industrial Classification Manual* is published by the Office of Management and Budget (OMB), which also publishes the SIC codes. Another related publication is *The Numerical List of Manufactured and Mineral Products*, and its *Alphabetic Index*, both published by the Census Bureau (within the Department of Commerce); these documents expand the basic 4-digit SIC codes to 7-digits to give more detail: Our industry is most aptly characterized by 2075A = Soybean products.

0116 = Soybean farms. Any industry that starts with zero is agricultural.

2024-071 = Mellorine and similar frozen desserts, incl. those made with tofu.

2026-717 = Products which substitute for fluid milk products [probably includes soymilk].

2026-718 = Other perishable dairy product substitutes [probably includes soy yogurts & cheeses].

2035 = Pickled fruits and vegetables.

2035-234 = Other finished pickles and pickled products [incl. mixes, relishes, peppers, onions, and mushrooms; probably includes miso].

2035-351 = Other sauces, incl. Worcestershire, soy sauce, horseradish, meat, vegetable, etc.

2075 = Soybean flour, grits, meal, cake, and soy oil (unrefined).

2079 = Soybean cooking and salad oil.

2084 = Soybean fibers.

2099-955 = Tofu (Bean curd).

2099-998 = Other perishable prepared foods, sold in bulk or packages, not frozen [probably includes tempeh].

Note: in May 1984 the "Primary SIC" code assigned to tofu manufacturers by Dun & Bradstreet was either 2075 (Soybean Oil Mills), or 2099 (Food Preparation Nec.).

Examples of SITC numbers: Soya bean flour and other protein substances, textured 098.09. Soya bean flour, defatted (excl. protein concentrates) 081.31. Soya bean flour, non-defatted 223.9. Bean curd 098.09... Soya sauce 098.04. Soybean--see soya bean 098.04. Address: Dep. of Commerce, Bureau of the Census, Economic Surveys Div., Industry & Commodity Classification Branch, FOB-3, Room 2744, Washington, DC 20233;. Phone: 301-763-1935.

7457. Dorow, Detlef. 1990. A brief history of Berliner Tofurei (Interview). *SoyaScan Notes*, April 17. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** The company started making tofu products in Aug. 1988. They started making 4 products: Natural tofu, herb tofu, spice tofu, and tofu with shoyu sauce. They now also make 4 other tofu products, and sell tofu snacks. They produce 1,000 kg/week of tofu, but they have the capacity to produce 7,000 kg/week if they worked 3 shifts. The company has 3 owners and 4-5 employees. Detlef started the company with two. He was the official owner. Now the other owners are his friend, Ralf Hoffmann, and a Taiwanese man [probably Shi-Jong Chen]. Address: Luebennerstr. 4, D-1000 Berlin 36, West Germany. Phone: 030/612-7931.

7458. **Product Name:** Fred Marken's California Pasta Peanut Sauce.
Manufacturer's Name: Fred Marken and Daughters Inc.
Manufacturer's Address: 1428 Yosemite Ave., San Francisco, CA 94124. Phone: 415-822-4675.

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Date of Introduction: 1990. April.
Ingredients: Soy [sauce], ground peanuts, sugar, pressed sesame oil, fresh ginger, fresh garlic, 1/10 of 1% potassium sorbate, sodium benzoate.
Wt/Vol., Packaging, Price: 12 fluid oz bottle with tamper-proof screw-on cap.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: "Only 80 calories per 1 oz serving. Sodium 40 mg per ½ teaspoon."
New Product–Documentation: Talk with Fred Marken. 1990. Oct. 29. This product was introduced in about April 1990. Label sent by Fred Marken. 1990. Nov. 5. 5 by 4 inches. Self adhesive. Blue, green, white, and brown. Water color impressionist illustration of sailboats under the Golden Gate Bridge. "Very low salt. No M.S.G. Adventure. Great over pasta, tofu, fish, vegetables, chicken, or as a dip. Excellent with tostada."

7459. **Product Name:** Fred Marken's Ginger Marinade.
Manufacturer's Name: Fred Marken and Daughters Inc.
Manufacturer's Address: 1428 Yosemite Ave., San Francisco, CA 94124. Phone: 415-822-4675.
Date of Introduction: 1990. April.
Ingredients: Soy [sauce] (water, wheat, soybean, salt), high fructose corn sweetener, corn starch, unrefined sesame oil, soy oil, fresh ginger, fresh garlic, xanthan gum (a natural thickener), 1/10 of 1% sodium benzoate, 1/10 of 1% potassium sorbate, 1/10 of 1% corn starch [actually xanthan gum].
Wt/Vol., Packaging, Price: 12 fluid oz bottle with tamper-proof screw-on cap.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: "Only 60 calories per 1 oz serving. Sodium 60 mg per ½ teaspoon."
New Product–Documentation: Talk with Fred Marken. 1990. Oct. 29. This product was introduced in about April 1990. Label sent by Fred Marken. 1990. Nov. 5. 5 by 4 inches. Self adhesive. Pink, white, green, and brown. Water color impressionist illustration of plum blossoms on a branch. "Very low salt. No M.S.G. Exciting. Pour marinade over meat, fish, tofu or chicken, cover and refrigerate for at least 30 minutes. Barbecue, broil, bake, or microwave–brush on remaining marinade for extra flavor. Great in stir-fry."

7460. **Product Name:** Fred Marken's Old World Spinach Salad Dressing.
Manufacturer's Name: Fred Marken and Daughters, Inc.
Manufacturer's Address: 1428 Yosemite Ave., San Francisco, CA 94124. Phone: 415-822-4675.
Date of Introduction: 1990. April.
Ingredients: Soy [sauce] (water, wheat, soy bean, salt), high fructose corn syrup, pineapple concentrate, unsulphured molasses, fresh ginger, fresh garlic, soybean oil, partially hydrogenated soybean oil, whole eggs, vinegar, water, egg yolks, salt, sugar, lemon juice and natural flavors, calcium disodium EDTA to protect flavors, sodium benzoate less than 1/10 of 1%, potassium sorbate less than 1/10 of 1%, xanthan gum.
Wt/Vol., Packaging, Price: 12 fluid oz bottle with tamper-proof screw-on cap.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Talk with Fred Marken. 1990. Oct. 29. This product was introduced in about April 1990. Label sent by Fred Marken. 1990. Nov. 5. 5 by 4 inches. Self adhesive. Blue, green, white, black, and brown. Water color impressionist illustration of a person bending over working in a garden. "Very low salt. No M.S.G. Impress your friends with this spinach salad." Recipe is given.

7461. **Product Name:** Fred Marken's Orange Sauce.
Manufacturer's Name: Fred Marken Inc.
Manufacturer's Address: 1428 Yosemite Ave., San Francisco, CA 94124. Phone: 415-822-4675.
Date of Introduction: 1990. April.
Ingredients: Orange juice from concentrate, soy [sauce] (water, wheat, soybean, salt), dijon mustard, high fructose corn syrup, corn starch, fresh garlic, xanthan gum (a natural thickener), 1/10 of 1% sodium benzoate, 1/10 of 1% potassium sorbate.
Wt/Vol., Packaging, Price: 12 fluid oz bottle with tamper-proof screw-on cap.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Talk with Fred Marken. 1990. Oct. 29. This product was introduced in about April 1990. Label sent by Fred Marken. 1990. Nov. 5. 5 by 4 inches. Self adhesive. Orange, blue, green, white, and black. Water color impressionist illustration of oranges on a blue table cloth on a table. "Very low salt. No M.S.G. Pour marinade over meat, fish, tofu, chicken, or duck, cover and refrigerate at least 30 minutes or overnight–barbecue, broil, bake or microwave. Brush-on remaining marinade for extra flavor. Great on duck."

7462. Leigh, Roberta. 1990. Soyfoods: Why their popularity is growing. Special advertising section. *New Age Journal (Boston, Massachusetts)* 7(2):100-. March/April.
• ***Summary:*** Since the 1920s, Americans have been taught that they need at least two servings of meat and two glasses of milk each day to get enough protein. Many people switching to vegetarian diets or reducing their meat consumption feel most comfortable if they continue to plan at least some of their meals around a high-protein food.

"Consequently, the popularity of soyfoods has boomed during the past two decades... They can also be prepared in a number of ways, such as tofu and tempeh, that mimic 'meatiness' in terms of eating satisfaction.

"Shoyu and tamari, both fermented soy sauces, and miso, a fermented soy paste, are often used as bases for

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soups, gravies, and sauces; many people feel they impart a rich flavor to meat stock. Soy milk and soy cheese are popular with people who want to minimize or eliminate dairy products from their diets. There are even smokey-flavored imitation bacon products made from soy.

"Tofu is a cheese-like product containing the protein, oil, and soluble carbohydrates from whole soybeans that have been crushed and cooked. –Roberta Leigh."

7463. **Product Name:** Lightlife Lean Links (Breakfast Sausages) [Mild, or Spicy]
Manufacturer's Name: Lightlife Foods, Inc
Manufacturer's Address: 74 Fairview St., Greenfield, MA 01301. Phone: 413-774-6001
Date of Introduction: 1990. April
Ingredients: Textured vegetable protein (water, textured soy protein concentrate, soy protein isolate, vital wheat gluten), soy oil, soy sauce, spices, toasted sesame oil, salt, natural vegetable flavors, natural smoke flavor, carrageenan (from seaweed).
Wt/Vol., Packaging, Price: 10 oz (238 gm) vacuum pack. Retails for $2.79 (6/90, California).
How Stored: Refrigerated.
Nutrition: Per 2 oz.: Calories 82, protein 13 gm, carbohydrate 4.9 gm, fat 1.1 gm, cholesterol 0 mg, sodium 482 mg.
New Product–Documentation: Product with Label purchased at Lafayette, California, Safeway supermarket 1990. June 13. 5 by 4 inches. Self adhesive. Red, black, and yellow on white. "100% vegetarian. Meatless. All natural breakfast links. Zero cholesterol. Microwaveable. A delicious vegetable protein sausage alternative." Back panel: "Delicious sausage flavor with only 1 gram of fat per serving and no cholesterol." Soyfoods Center product evaluation. 1990. June 17. Score: 7.0. Pan fried or microwaved, a little dry (better if juicier) and the skin is a little tough.

Talk with Richard McKelvey, sales manager of Lightlife Foods. 1990. June 19. They make these products in house. The category seems to have great potential but they are working on the flavor. They have already made a lot of changes to the product, not ingredient changes but the way they are processed. He sent 2 Labels July 20.

Soya International. 1990. April/June. p. 23. Contact: Rick McKelvey. A new address is listed at P.O. Box 870, Greenfield, Massachusetts.

Talk with Michael Cohen. 1991. Sept. 17. There were some problems with this breakfast sausage with wheat gluten, so it was taken off the market, reformulated, and re-introduced about 8 months ago.

7464. **Product Name:** Stir-Fry Sauce, Stir Fry Spicy Sauce for Seafood, Chinese BBQ Sauce, and Steak Sauce.
Manufacturer's Name: Merrychef Foods SDN BHD.
Manufacturer's Address: 118A Jalan Burhanuddin Helmi, Taman Tun Dr., Ismail, 6000 Kuala Lumpur, Malaysia. Phone: 03 719-7540.
Date of Introduction: 1990. April.
Wt/Vol., Packaging, Price: 250 gm glass bottles.
How Stored: Shelf stable.
New Product–Documentation: Spot in SoyaFoods. 1991. Spring. p. 4. "Stir fry sauces from Merrychef." "Merrychef Foods produces a whole range of sauces for Western and Oriental cooking, most of which are exported. Their 'Chinese' range of 'stir fry,' 'BBQ,' and steak sauces are mainly based on soya and have been available in the UK for about a year and in Australia, Japan and Germany for a few months. Merrychef hopes to export to the U.S. this year as well as to supply the home market... Varieties include stir fry for meat, vegetables, sea food, Chinese BBQ and steak sauce."

7465. Muso Co. Ltd. 1990. Muso product manual. Foods from Japan. Tanimachi 2-5-5, Chuo-ku, Osaka 540, Japan. 62 p. Catalog. April. 30 cm. [Eng]
• ***Summary:*** This English-language catalog describes Muso's natural-food macrobiotic products that are exported to the West. There are 8 pages of color photos at the front, and many flowcharts and recipes in the body of the catalog. Interesting color photos include: Shoyu fermentation room. Spreading moromi before pressing to make shoyu. Hatcho miso aging room. Drying kombu and cultivating nori on nets. Umeboshi and brown-rice vinegar. Shiitake mushrooms growing on logs and huge kudzu roots.

Contents: Shoyu (organic, low salt), tamari (wheat-free soy sauce), miso (Hatcho, barley, rice, white miso, brown-rice miso, awase miso [mixed miso], buckwheat miso, unpasteurized miso [nama miso]), seaweeds, Japanese pasta, wheat free pasta (incl. kudzu noodles), Japanese tea, other beverages, soymilk, amazake, ume/plum products (incl. umeboshi), Japanese pickles, dried foods (incl. kudzu root starch, shiitake mushrooms, koya tofu, fu [gluten cake]), condiments (incl. tekka miso, *nori no tsukudani*, natto miso [miso condiment]), seasonings, instant foods (incl. brown rice mochi, yomogi mochi, kibi mochi, yaki mochi, abekawa mochi with kinako, cooked brown rice, ramen [Chinese style noodles], instant miso soup), crackers and chips, barley malt syrup and rice malt syrup, food supplements (plum balls, kombu balls), adzuki beans, black soybeans, nigari. Address: Osaka, Japan. Phone: 06-942-0343.

7466. **Product Name:** [Parma Soia Soy Drink (Chocolate, Strawberry, and 1 Other Flavor)].
Foreign Name: Parma Soia Soidrink (Al Cioccolata, Alla Fragola).
Manufacturer's Name: Parma Soia (Marketer-Distributor). Made in England by Unisoy.
Manufacturer's Address: Strada Logheretto 2, 43010 Coreagnano (Parma), Italy. Phone: 0521-639-148.

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Date of Introduction: 1990. April.
Ingredients: Water, soya, cane sugar, strawberry puree.
Wt/Vol., Packaging, Price: 500 ml plastic bottles with foil lid.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Talk with Xavier Karis in Italy. 1990. June 13. About 2 months ago this company, located in Parma, started a line of soya products, including soya milk (Soilat) in plain and chocolate flavors (which they probably do not make themselves). Because this is a small company, nobody has made any trouble yet over the Italian name of their soymilk, but if they get bigger, they are bound to get in trouble because Italian law forbids use of the terms "soia" and "latte" together. Their phone is 0521-639-148.

Parma Soia brochure. 1990. Photo shows aseptic package.

Letter from Xavier Karis. 1990. June 15. On the plastic Soidrink bottle is written "Produced in England." Talk with Neil Rabheru of Unisoy. 1990. July 2. Unisoy makes this soymilk.

Label (for strawberry) sent by Xavier Karis. 1990. June 27. 9 by 2.5 inches. Red, gold, green, black, and orange on white. The semicircular logo on the front panel shows a large field with long rows of soybeans. Across the top in large letters is written: "Campi di Soia" (Fields of Soya), while across the bottom, in the same letters is written Parma Soia. There are three groups of soybean leaves at the bottom two corners and the bottom middle of the logo. And below that, an illustration of many ripe strawberries. "An energy beverage ideal for those who like sports, who study, and who live an active life. A Natural product, without preservatives or colorings. Shelf stable; Refrigerate after opening and consume within 3-6 days."

7467. **Product Name:** [Parma Soia Soy Sauce (Regular, or Sweet)].
Foreign Name: Parma Soia Salsa di Soia (Regular, Dolce).
Manufacturer's Name: Parma Soia (Marketer-Distributor).
Manufacturer's Address: Strada Logheretto 2, 43010 Coreagnano (Parma), Italy. Phone: 0521-639-148.
Date of Introduction: 1990. April.
Wt/Vol., Packaging, Price: Dispenser bottle.
How Stored: Shelf stable.
New Product–Documentation: Talk with Xavier Karis in Italy. 1990. June 13. About 2 months ago this company, located in Parma, started a line of soya products, including soy sauce.

Parma Soia brochure. 1990. Photo shows product and label. The large, semicircular logo on the package shows a large field with long rows of soybeans. Across the top in large letters is written: "Campi di Soia" (Fields of Soya), while across the bottom, in the same letters is written Parma Soia. There are three groups of soybean leaves at the bottom two corners and the bottom middle of the logo.

7468. **Product Name:** Tofu Burgers (Tandoori, Tikka, and Teriyaki).
Manufacturer's Name: Regular Tofu Co. Div. of Haldane Foods Group.
Manufacturer's Address: 25 Hayhill, Sileby Road, Barrow upon Soar, Leicestershire LE12 8LD, England. Phone: 050981-6611.
Date of Introduction: 1990. April.
Wt/Vol., Packaging, Price: Two x 3 oz burgers per unit. 12 units per case. Wholesales for £6.75. Retails for £0.75 per unit.
How Stored: Refrigerated or frozen.
New Product–Documentation: SoyaFoods (ASA, Europe). 1990. 1(1): 3.

Haldane Foods Group. 1990. "Twenty-one Today. Twenty-new and exciting products launched at Helfex alone." At least 12 of these are soyfood products.

7469. Wolff, David. 1990. The Manchurian soya bean and the development of Northeast Asia, 1899-1922. *Asiatic Society of Japan, Bulletin (Tokyo)* No. 4. p. 2-4. April.
• ***Summary:*** The soybean was introduced into Manchuria at the end of the 1800s and by 1899 constituted 79% of the region's total exports. The resulting prosperity made the area a theater of conflict between China, Russia and Japan. "By 1922, almost all bean shipments had been diverted from Vladivostok to Japanese-controlled Dairen, making such 'typically Japanese' foodstuffs as tofu and shoyu generally affordable for the first time... Thus the soya bean played an integral part in the history of Manchuria, bringing first wealth, then strife, and ultimately subjugation." Address: PhD candidate in Russian and Chinese history at the Univ. of California at Berkeley.

7470. *SoyaScan Notes*.1990. New Trend: Large European food companies, and agricultural- and dairy cooperatives now launching and actively promoting innovative new tofu and soymilk products: Mostly dairylike and meatlike products (Overview). May 8. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** In Jan. 1980 Vandemoortele N.V., one of Europe's largest oilseed crushers, located at Izegem, Belgium, began to make its first commercial soymilk product (GranoVita Soja Drink in plain and carob flavors, packed in 500 ml Tetra Brik cartons) which was private labeled (co-packed) for DE-VAU-GE, a large Seventh-day Adventist health food manufacturer in West Germany. This was Alpro's first customer. In June 1980 Vandemoortele created Alpro N.V. to take over this production. The company quickly became Europe's leading soymilk producer and by 1990 had about 70% of the European soymilk market. Their new soymilk plant, costing about US$15 million and having a capacity of 45 million liters a year, opened in Wevelgem in

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June 1990.

In June 1984 Migros, Switzerland's leading retail food chain, launched 5 tofu products: Natural Tofu, Tofu Snack with Spices, Spicy Tofu Spread, Diced Tofu with Cream, and Tofu Bolognaise. In 1985 they introduced Tofu with Mushrooms and Gravy, followed in 1986 by Canned Tofu Kashmir (with Curry and Fruits), Tofu Spread with Cheese (in a Tube), Tofu Chocolate Crème, and Tofunaise (in a Tube), then in 1987 by Seasoned Tofu. In 1986 Migros, a 61 year old cooperative with 1.4 million members, had net sales of 3,166 million Swiss francs. The tofu was made by a Migros company named Conserves Estavayer in Estavayer-le-Lac, near Zurich.

Galactina is a well established Swiss company (located in Belp) that has made a soymilk named Naga Sonda for enteral tube feeding since 1980. In 1981 they launched the product in liquid Tetra Pack. They entered the tofu market in 1984 with Galactina Tofu, then in 1985 added three types of Seasoned Tofu (Gourmet Diced with Soy Sauce & Spices, Provencale with Herbs, and Jardiniere with Vegetables), followed in 1987 with Tofu Spread and 1988 with Tofu Burger and Tofu Salads. All were marketed very attractively.

In Aug. 1985 DE-VAU-GE, one of Europe's oldest and largest producers of vegetarian health foods, began operation of its new soymilk plant (purchased from STS/DTD) in Lueneburg, West Germany. By 1990 they were Europe's second largest soymilk manufacturer, with 15-20% of the market. They also sold many tofu products and were planning to produce tofu in the near future.

In 1985 Laiteries Triballat, a large French dairy products company (mostly cheese, located at Noyal-sur-Vilaine, Brittany) introduced Sojasun, an innovative cultured soymilk yogurt in 4 flavors, two with bits of fruit and two with fruit puree. In Oct. 1988 and early 1989 they promoted the product extensively on French television and in German print media. Sales in several western European countries were said to be good.

In 1986 Parmalat, the Italian dairy giant, introduced a soymilk named Soialat. By 1989 they had created a subsidiary named Parma Soia, which sold three lines of more than 20 soy products. The Campi di Soia line (containing soymilk, soy pasta, sauce, and sprouts) was sold at supermarkets. The Nature Soy line was imported, and the Erboristeria line was for the health food market.

In Jan. 1987 Cacoja, a newly-formed affiliate of the Coopérative Agricole de Colmar (CAC), began production of soymilk and soy desserts at its new, fully-automated plant (with an ultrafiltration system) at Issenheim, France. Purchased from Alfa-Laval, the plant cost 11 million French francs and had a capacity of 1,500 liters/hour of soymilk containing 4% protein. By 1990 Cacoja was Europe's third largest soymilk producer.

In Sept. 1987 Rayner Burgess Ltd., a large British Food company that specializes in an array of unique condiments, purchased Cauldron Foods Ltd., Britain's second largest tofu manufacturer, and the largest marketing its products to the Caucasian and health-food trades.

In Jan. 1988 British Arkady, a large British food conglomerate owned by Archer Daniels Midland Co. (Decatur, Illinois) acquired the Haldane Foods Group, and made it part of British Arkady's Health Foods Div. The Haldane Foods Group was put together by acquisition of Direct Foods Ltd. (founded 1980, acquired by the Group in 1985), Vegetarian Feasts Ltd. (founded 1984, acquired 1986), Haldane Foods Ltd. (founded 1983, acquired Aug. 1987), Vegetarian Cuisine Ltd. (founded 1985, acquired 1987), Regular Tofu Co. Ltd. (founded 1983, acquired Aug. 1987), Realeat Foods Ltd. (founded 1984, acquired Sept. 1988), Saucemasters Ltd. (founded 1988, acquired Feb. 1989), and Genice Foods Ltd. (founded 1988, acquired March 1989). Self-proclaimed as "Europe's leading healthier food group, most of these companies make tofu or soyfood products.

In April 1989 Huegli AG, a leading Swiss food company, purchased 75% ownership in Yamato Tofuhaus GmbH, one of West Germany's leading tofu manufacturers. At about the same time, Huegli purchased Horst Heirler, the country's leading distributor of fresh products.

Also in April 1989 Lima N.V. of Belgium, one of Europe's earliest natural foods companies, purchased Jonathan PVBA, Belgium's leading tofu manufacturer.

In Sept. 1989 Innoval (formerly Sojalpe), an acquired affiliate of Les Silos de Valence (a large 5,000-member cereal cooperative in Rhone Alpes, France), began to produce tofu, soymilk, and liquid soy concentrate (with an ultrafiltration unit) at a modern new plant, with a capacity of 2,000 liters/hour, purchased from Alfa-Laval at a cost of 20-21 million French francs.

In Feb. 1990 Euro-Nature, a French investment fund, purchased 97% Lima N.V. of Belgium.

In early 1990 Avo Feinkost GmbH, a large West German spice from Osnabrueck, launched the Sofit line of soy products, including various meatlike products, dressings, and salads.

7471. Nishikawa, Russ K. 1990. Possible carcinogens in HVP and HVP soy sauce (Interview). *SoyaScan Notes*. May 25. Conducted by William Shurtleff of Soyfoods Center. • ***Summary:*** In the high-acid, high-heat environment in which HVP (hydrolyzed vegetable protein) is made, several cancer causing substances can form: dichloropropanol, polychloropripionol (polychloropropanol?) and bichloropropionol (bichloropropanol). Address: The Ingredient Connection, P.O. Box 827, Martinez, California 94533. Phone: 415-370-7520.

7472. *SoyaScan Notes*.1990. What are celiac disease, celiac sprue, and Duhring's disease / dermatitis herpetiformis (Overview). May 29. Compiled by William Shurtleff of

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• ***Summary:*** People with these diseases must avoid consumption of gluten, even in minute amounts. This gluten can be found in wheat, oats, barley, or rye, and thus these people cannot enjoy any soy sauce except wheat-free tamari. *Webster's Dictionary* defines celiac disease (pronounced SEE-lee-ak; the term was first used in 1936 and is also spelled coeliac in the UK) as "a chronic nutritional disturbance in young children characterized by defective digestion and utilization of fats and by abdominal distention, diarrhea, and fatty stools." Wikipedia (Aug. 2011) defines it as "an autoimmune disease of the small intestine that occurs genetically predisposed people of all ages from middle infancy onward." The term celiac by itself (first used in 1662) is defined as "of or relating to the abdominal cavity."

But celiac sprue refers to a tremendous intolerance (much stronger than an allergy) to wheat or gluten in any food. Many people suffering from celiac sprue are also intolerant to milk and milk products. Thus they often consume soymilk instead of milk and wheat-free tamari instead of shoyu.

Duhring's disease, named after U.S. dermatologist Louis A. Duhring (1845-1913), is much less common and therefore less well known that celiac or celiac sprue diseases. Also known as dermatitis herpetiformis or dermatitis multiformis, it is caused by an inability of the small intestine to digest gluten. When a person who has Duhring's disease consumes even a minute amount of gluten, they will experience severe, extensive itching, and their skin will generally break out with a terrible rash and eruption of blisters (vesicules and papules, which occur in groups), often over much of the body, that last for weeks. But if they are scratched, they burn, causing intense pain. Spontaneous healing rarely occurs, except in children, and relapses are common. Many people with Duhring's disease are also dairy intolerant and 70% of them have some form of thyroid disease. Most people with Duhring's disease are Caucasian, few are African- or Asian-American. The disease is often misdiagnosed by dermatologists. A society has been formed at a university in Ohio to help those who suffer from Duhring's disease.

7473. Vanka-Kawat B.V. 1990. Topmerken in de Aziatische levensmiddelen. Prijslist [The top brands in Asiatic foods. Price list]. 3e v.d. Kunstraat 18, 2521 BB Den Haag, Netherlands. 22 p. [Dut]

• ***Summary:*** The subtitle is "Import-Export Asian Food Specialties." Imported items are listed by country of origin. Non-imported are listed by product type: China: Pearl River mushroom soy, soy superior, and superior soy. Philippines: Silver Swan soy sauce. Hong Kong: Best black soy, Best light soy, Best soy light, Best soy sauce, Black soy, Black soy yellow label, Hoi sin sauce Meechung, Taotjo bean sauce. Japan: Akamiso, Kikkoman menmi, Kikkoman shoyu, Kikkoman steak sauce, Kikkoman teriyaki sauce, Marukin soy sauce, Morinaga silken tofu, Nagatani-en aka-miso, shiro-miso, Teriyaki sauce. Ketjap: Ketjap kaki tiga, Ketjap A, Ketjap 'A' manis, Ketjap benteng asin, Ketjap benteng manis, Ketjap vital, Superior soy, Tiger brand soy, Yellow label. Singapore: Salted soy beans sin sin, Taotjo bean sauce, Taotjo flower brand, Taotjo taksan. Taiwan: Black beans fermented [fermented black soybeans], Soy sauce ve wong, Tahoe amigo, Tauge [sprouts]. Fresh products: Vacuum packet fresh tofu. Fresh tempeh. Address: The Hague, Netherlands. Phone: 070-388- 88 04.

7474. Oka, Seizo. 1990. Early Japanese immigrants to Hawaii (Interview). *SoyaScan Notes*, June 7. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** The first contracted labor immigrants from Japan arrived in Hawaii in 1868 aboard the ship Scioto. They took with them miso and shoyu. Before that time, some Japanese drifted ashore or were shipwrecked on Hawaii. A number of groups were supposed to follow the first group, but there was a dispute in the contract so the program was terminated with the first group.

The ship Scioto (pronounced sai-OH-tuh) was apparently named after a river in Ohio that flows 237 miles southward through Columbus and empties into the Ohio River in Scioto County. It belonged to the Pacific Mail Steamship Co. of the USA. In Japanese the ship's name is usually romanized in katakana as *Saioto-go* (or less commonly as *Shiotto-go*), where "go" (the Japanese character for "number") is a suffix widely used with the names of ships, trains, and other vehicles. "Go" is not a counter for ships–the counter is "seki," such as isseki, niseki.

Robert W. Irwin, an American who became an agent in Yokohama for the Pacific Mail Steamship Co., played a key role in both the 1868 and 1885 contracts. The first group consisted of 148 Japanese. They were under a contract made between the Japanese government and the Hawaiian kingdom. But because of a dispute in the contract, 40 members of the group returned to Japan without fulfilling the contract; 108 remained in Hawaii and fulfilled the contract. Since they left in 1868, the first year of Meiji, they are often referred to as "Gannen mono" which means "Fellows of the first." In 1885 the contracted labor was resumed, and continued on for several years. The second group of contracted labor immigrants was carried from Japan to Hawaii on the ship named City of Tokio. Address: Founder and former Head, History Room, Japanese Cultural and Community Center, 1840 Sutter St. #206, San Francisco, California 94115. Phone: 415-751-5951.

7475. Stachura, Irena. 1990. About the ship Scioto (Interview). *SoyaScan Notes*, June 9. Conducted by William Shurtleff of Soyfoods Center. [1 ref]

• ***Summary:*** In the book titled *Merchant Sail* by William Armstrong Fairburn two vessels named Scioto are listed.

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The first was built in 1831. Tonnage: 141 tons. Length: 81 feet. Beam/width: 23 feet. Depth: 9 feet. Rigging: Schooner (with triangular sails, pointed at the top). It was probably not built on the West Coast since there is very little information about it in the files of the National Maritime Museum. It was probably built on the East Coast. It is not listed as a Gold Rush vessel.

The second vessel named Scioto was built in the Skolfield yard. It was a ship, with 3 masts or more. For more information contact the Mystic Seaport in Mystic, Connecticut. Address: Research Librarian, National Maritime Museum Library, Bldg. e, Third Floor, Fort Mason Center, San Francisco, California 94123. Phone: 415-556-9870.

7476. Bailey, Jeff. 1990. Plains giant: What makes ConAgra, once on brink of ruin, a Wall Street favorite? Ten years of profit increases, shrewd food acquisitions led up to Beatrice deal. Tornado spares the directors. *Wall Street Journal*, June 13, p. A1, A4.

• ***Summary:*** ConAgra, a company which is not glamorous or well known, mills flour, corn and oats, sells fertilizer and frozen foods, and raises beef, chicken and catfish. However, last week it agreed to buy Beatrice Inc. for $1.34 billion, making it the 2nd largest U.S. food processor after Philip Morris' Kraft General Foods. Charles M. Harper, ConAgra's aggressive chairman, will soon own the Chun King brand.

The company began in 1919 as Nebraska Consolidated Mills Co., with 4 small mills. In the early 1970s, ConAgra suffered big losses on the futures market when it tried to hedge its soybean meal inventories, used to feed its chickens. In 1974, when Mr. Harper became CEO, many analysts didn't think the company would last long. But since that time he has "built ConAgra into a food industry giant with $15 billion in revenues and 19 straight years of earnings increases. A share of ConAgra bought for $3 in 1974 when Mr. Harper took over would now be worth–following stock splits–$430." ConAgra recently passed Cargill to become America's 2nd largest meat packer.

A portrait illustration shows Charles M. Harper. A pie chart shows ConAgra's business segments. Graphs show: (1) Annual revenue in billions of dollars from 1985 to 1990. (2) Annual return on common stockholders equity, 1985-1989 (avg. 23%). (3) The value of ConAgra's stock compared with the Dow Jones Food Index. Address: Staff reporter.

7477. Sakaguchi, Noboru. 1990. Early history of making tofu at Le Bol en Bois (Interview). *SoyaScan Notes*, June 14. Conducted by David de Korsak in France.

• ***Summary:*** In 1969 Mr. Sakaguchi made his first trip to Paris from his homeland, Japan. He returned to Paris in March 1974, and became aware of the possibility of buying a macrobiotic restaurant from a friend who at the time was a cook in that restaurant. From April-Aug. 1974 he returned to Japan to finalize a deal with Japanese investors and to study tofu making. While he was in Paris touring vegetarian restaurants, Mr. Sakaguchi had been struck by the lack of protein in the foods he saw. Tofu naturally came to his mind as the food that would ideally supplement (and complement) that vegetarian cuisine. "Tofu was missing ... I thought of this as my mission."

On 2 Sept. 1974 Mr. Sakaguchi opened Le Bol en Bois. He had expanded it to include a natural foods retail store located directly across the street. In the last quarter of 1975 he began trials making tofu using calcium sulfate as a coagulant. In about Nov. or Dec. 1975 he began commercial production of tofu, using real nigari as a coagulant. He sold this tofu only at Le Bol en Bois natural foods store and served it in his restaurant. An invoice dated 26 Dec. 1975 from Mitoku Company Ltd. in Japan shows that he imported 40 kg of nigari ($17.34), 50 x 150 gm packets of nigari ($33.27), a grinder for making tofu ($562), other pieces of tofu making equipment ($450.35), as well as 1,800 liters of Sakae Tamari-Shoyu, 900 liters of Johsen Tamari-Shoyu, and 200 kg of brown rice miso. Production remained limited (two days a week, 40 cakes per day) until the end of 1976. Mr. Sakaguchi made the tofu himself, helped by some Japanese students. One evening in the winter of 1976 an unusually large number of people came to the store to buy tofu. This corresponded to the end of a conference held by Michio Kushi in Paris. The store became the focus of a lot of interest and activity. Production jumped to roughly 240 cakes per day, two days a week. By the end of 1976 Mr. Sakaguchi had hired his first employee to help him make tofu.

In 1985 the tofu production activity was set up as a separate company named Daizou, located outside of Paris at Champigny sur Marne. At that time production was about 300 cakes per day, two days a week. Mr. Sakaguchi now began to make tofu more than twice a week and to sell this tofu at other retail outlets in addition to his own. Address: 883 Rue de Bernau–Z.I., 94500 Champigny Sur Marne, France. Phone: 48.82.39.90 or 47.06.33.71.

7478. Baynes, R.D.; Macfarlane, B.J.; Bothwell, T.H.; Siegenbert, D.; Bezwoda, W.R.; Schmidt, U.; Lamparelli, R.D.; Mayet, F.; MacPhail, A.P. 1990. The promotive effect of soy sauce on iron absorption in human subjects. ***European J. of Clinical Nutrition*** 44(6) 419-24, June. [23 ref.]

• ***Summary:*** The poor bioavailability of iron from soy alone, and the inhibitory effect of soy upon iron absorption from a mixed diet have been documented in many studies. Although the inhibitory component of soy has not yet been identified, there is evidence that it may relate to the intact, or partially intact, soy protein complex.

The addition of soy sauce to a meal of soy flour could not overcome the strong inhibition of iron absorption. However, when soy sauce was added to a meal of rice (instead of soy flour), the geometric mean of iron absorption increased significantly (13.9% with soy sauce vs. 5.2%

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with soy flour). "The promotory effect of soy sauce on iron absorption appears to be due not only to its lack of soy protein content but may also be due to the presence of fermentation products other than organic acids." Address: MRC Iron and Red Cell Metabolism Research Unit, Dep of Medicine, Univ. of the Witwatersrand, Johannesburg and Dep. of Medicine, Univ. of Natal, Durban, South Africa.

7479. Cardenas, Danilo C. 1990. Status of the Philippine soyfood industry. Paper presented at the International Conference on Soybean Processing and Utilization. Held 25-29 June 1990 at the Jilin Academy of Agricultural Sciences, Gongzhuling, China. *
Address: Supervising Science Research Specialist, Philippine Council for Agriculture, Forestry, and Natural Resources Research and Development (PCARRD), Los Baños, Laguna 3720, Philippines.

7480. **Product Name:** Soypreme Tofu Dinners [Tofu Marinara, Tofu Luau, or Tofu Stroganoff].
Manufacturer's Name: Cedarlane Foods
Manufacturer's Address: 1864 E. 22nd Street, Los Angeles, CA 90058. Phone: 213-745-4255.
Date of Introduction: 1990, June
Ingredients: Organic whole wheat (Kamut) pasta, tofu (organic soybeans, filtered water, nigari), green beans, carrots, corn, tomato puree, tomato juice, soy sauce, corn oil, garlic, olive oil, honey, sea salt, herbs, spices
Wt/Vol., Packaging, Price: 11 oz package.
New Product–Documentation: Soya International. 1990. April/June. p. 23. Contact: Terry Mayo. Ingredients for the Stroganoff are: Organic whole wheat (Kamut) pasta, tofu, green beans, carrots, corn, water, soy sauce, corn oil, mushrooms, onions, organic whole wheat pastry flour, cooking wine, arrowroot powder, garlic, pepper, hydrolyzed soy protein, sea salt, parsley, kelp, dulse, papaya enzyme.

Ad in Whole Foods. 1991. July. p. 76. "Soypreme Substituting without sacrificing."

7481. **Product Name:** Egg Rolls [Vegetarian, Pizza Tofu, or Spinach Tofu].
Manufacturer's Name: Health Is Wealth, Inc.
Manufacturer's Address: Sykes Lane, Williamstown, NJ 08094. Phone: 609-228-1150.
Date of Introduction: 1990, June.
Ingredients: Tofu Pizza: Stone-ground whole wheat flour, tomatoes, mozzarella cheese alternative (organic tofu, canola oil, casein, sea salt, citric acid, soy lecithin, guar gum), olive oil, soybean oil, natural spices
Wt/Vol., Packaging, Price: 3 egg rolls per 9 oz package. Retails for $2.49 (7/90).
How Stored: Frozen.
New Product–Documentation: Soya International. 1990. April/June. p. 22. The only soy ingredient in the Vegetarian Egg Rolls is soy sauce. Spinach Tofu ingredients are the same as Pizza Tofu but with spinach instead of tomatoes. Contact: Robert Giacoboni.

Ad (color) in Natural Foods Merchandiser. 1990. Nov. p. 22. "The great taste of cheese without the cheese." Shows 3 types of Egg Rolls, 2 of which bear the word "tofu" prominently atop the front panel. "Health is Wealth has replaced the cheese in our ever popular egg rolls with tofu mozzarella."

Product (Egg Rolls [Pizza Tofu]) with Label purchased at Open Sesame in Lafayette, California. 1992. Feb. 13. 5 by 4.75 by 1.75 inches. Paperboard box. Red, white, and blue on black. Color photo of the prepared sticks. "The great taste of tomatoes & cheese without the cheese! Handrolled with Tofu Mozzarella, tomatoes, & stone-ground whole wheat. All natural. Cholesterol free. No MSG. No preservatives. Lactose free. Made with the cheese NûTofû alternative." 3 egg rolls (9 oz.) retail for $3.99. The phone number is now 609-728-1998.

Soyfoods Center Product Evaluation. 1992. Feb. 13. Package design. Excellent, however the text on the front panel of the Spinach Tofu Egg Rolls that states "The great taste of spinach and cheese without the cheese!" seems deceptive, since the cheese in this product is made from cow's milk. The ingredients listing is likewise deceptive since it lists "casein (protein)" rather than "casein (milk protein)." Flavor: We liked the Spinach Tofu Eggs Rolls best–by far.

7482. **Product Name:** Lea & Perrins Flavored Soy Sauces: Soy & Garlic, Soy & Chilli, Soy & 5 Spice, Soy & Ginger
Manufacturer's Name: Lea and Perrins Ltd. Subsidiary of H.P. Foods.
Manufacturer's Address: P.O. Box 31 Registered Office, Midland Road, Worcester WR5 1DT, England.
Date of Introduction: 1990, June.
Ingredients: Garlic: Soy sauce (water, soybean extract, salt, sugar, wheatflour), spirit vinegar, sake, garlic extract, colour: caramel, modified starch, emulsifier: lecithin, lemon juice.
Wt/Vol., Packaging, Price: 142 ml (5 fluid oz) bottle
How Stored: Shelf stable.
New Product–Documentation: New Product News. 1990. Aug. 5. p. 46. "Lea & Perrins [in Great Britain] aims to lift soy sauce out of the commodity product area with the launch of a new line which will sell at almost twice the price of rival brands." Soya International. 1990. July/Sept. p. 4.

Talk with Sarah Stanley, executive secretary to the president at Lea & Perrins. 1991. Jan. 15. The company has no such product. At one time they distributed Secret of the Orient, which was a line of some packaged dry spice mixes, but they have turned those over to another individual, who is distributing them. They were not involved with this line for very long. Lea & Perrins in the USA is located at 15-01 Pollitt Dr., Fair Lawn, New Jersey 07410-2728. Phone: 201-

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791-1600. Try Great Britain. H.P. Foods. 45 Northampton Rd., Market Harborough, Leicestershire, England LE16 9BQ. The company's world headquarters are in France: BSN Group, 7 rue de Tehran, 75831 Paris Cedex 8, France.

Four Labels and letter sent by J.W. Garnett, Factory General Manager, Lea & Perrins Ltd., P.O. Box 31 Registered Office, Midland Road, Worcester WR5 1DT, England. 1991 Jan. 29. 6.5 by 3.25 inches. Paper. Garlic Green, black, red, and white. With the green "V" vegetarian logo; "Suitable for Vegetarians." UPC indicia. "A rich soy sauce combined with the fresh taste of garlic and carefully blended with Sake–an oriental rice wine. Use in place of soy sauce to liven-up stir-frys, round-off casseroles and give marinades extra flavour. No messy handling of raw garlic, simply add this blended Soy Sauce to your favourite recipes or sprinkle on your meals." Letter notes that this new line of soy products was launched in the UK on 25 June 1990. "We make no other products at this time that contain soy sauce under the Lea & Perrins Brand but there are some products under the HP sauce brand (namely HP Sauce, HP Fruity Sauce)."

7483. **Product Name:** Tofu Spicy, Tofu Teriyaki.
Manufacturer's Name: Nutrisoy Pty. Ltd
Manufacturer's Address: 255 Forest Road, Arncliffe 2205, NSW, Australia.
Date of Introduction: 1990, June
Ingredients: Spicy: Organic soybeans, water, soy sauce, sunflower oil, spices, herbs, natural nigari (magnesium chloride)
Wt/Vol., Packaging, Price: 200 gm
How Stored: Refrigerated.
New Product–Documentation: Labels with dates sent by Tony Wondal of Nutrisoy 2005 April 26. He started making and selling these products in June 1990. Spicy: Yellow, red, black and white on green. On the front are four small Chinese characters

7484. **Product Name:** Yves Veggie Tofu Wieners.
Manufacturer's Name: Yves Fine Foods Inc
Manufacturer's Address: 1138 East Georgia Street, Vancouver V6A 2A8, B.C., Canada. Phone: 604-251-1345.
Date of Introduction: 1990, June
Ingredients: Tofu (water, organic soybeans, magnesium chloride), soy protein, canola oil, wheat gluten, unmodified wheat starch, natural smoke flavors, beet powder (coloring), paprika (coloring), tamari sauce, spices, guar gum.
Wt/Vol., Packaging, Price: 10 oz package. Retails for $2.19 (7/90). 12 oz vacuum pack retails for $3.29 (6/92, California)
New Product–Documentation: Soya International. 1990. April/June. p. 22. Contact: Yves Potvin. Spot in Health Foods Business. 1991 Jan. p. 76. Shows a small black-and-white photo of the package.

Ad (color, 2/3 page) in *Natural Foods Merchandiser.* 1992. April. p. 94. "Yves Veggie Cuisine." Shows packages of Veggie Wieners and Burger Burgers.

Product with Label purchased at Open Sesame in Lafayette, California. 1992 June. 3.5 by 10 inches. Vacuum pack. Red, yellow, blue-green, and black on white. Color photo of a wiener with trimmings in a bun. "Contains no meat. Cholesterol free. Made with 100% organic soybeans. No preservatives. Low in saturated fat. Since 1985 we have been committed to providing you with the highest quality in healthy, easy to prepare entrées. Always cholesterol and preservative free." The company name is now Yves Veggie Cuisine Inc. The president is Yves Potvin.

7485. Muso Shokuhin. 1990. [Pure heart. Muso general catalogue]. Otedori 2-2-7, Chuo-ku, Osaka 540, Japan. 88 p. Printed 1 July 1990. 30 cm. [Jap]
• ***Summary:*** This strikingly beautiful, full-color catalog, pictures and describes Muso's natural-food macrobiotic products in Japanese for the Japanese market–although the title is written only in English. Includes many kinds of miso, shoyu (incl. Marushima Shoyu), black soybeans, yellow soybeans, kinako [roasted soy flour], seitan (in a jar from Marushima, p. 41; the product name is written as "Seitan" in large roman letters, then in smaller letters in katakana), San-Iku Foods canned products (Gluten Burger, Gluten Meat, Linketts, Soyees, Snack Joe, p. 41), yuba, gomoku nimame (cooked whole soybeans), many kinds of sea vegetables and related products. San-Iku Soyalac (8 different products). Marusan soymilk (5 different products; 3 are named mineral tou-jyan; the latter is the Chinese term for soymilk), macrobiotic books. Address: Osaka, Japan. Phone: 06-942-0343.

7486. Miller, Bryan. 1990. Restaurants:... Sushisay, basic and raw. *New York Times.* July 6. p. C18.
• ***Summary:*** This is a review of the Japanese restaurant Sushisay (38 East 51st St.), the only American outlet of a 26-restaurant chain in Japan. It specializes in raw and marinated seafood. One of the few cooked items, an appetizer, "is grilled squid legs. Bite-size pieces of crispy squid dipped in soy sauce are as addictive as popcorn." Another of its starters is "maguro natto, tuna in fermented soy beans, which had a texture and highly fermented flavor that was off-putting to some tastes." A soup the reviewer liked was "asari wan, a light miso broth with little-neck clams in the shell..."

7487. Marshall, Philip. 1990. Early work with soyfoods in the UK: Direct Foods, Whole Earth, Harmony Foods Ltd., and Haldane (Interview). *SoyaScan Notes.* July 9. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Brian Welsby founded Haldane Foods in 1983. But he was active with health foods long before 1980. He

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used to do the product mixing for a company named Direct Foods Ltd. (in Petersfield, Hampshire), which was owned by Peter and Anna Roberts, a very nice, committed pair of vegans. They were among the first people to market dried soya products, particularly TVP, in the UK. And they were certainly the first people to develop the market for composite dry soya products–like burger mixes. Philip has no idea when Direct Foods started, but it may have been in the late 1960s. [Note: It started in Aug. 1969.] They were one of the pioneers of vegetarianism and veganism in England.

Greg and Craig Sams are brothers, both American. Both are very talented guys, excellent at marketing. Greg is in a wheelchair. In the early days, both were the key figures/principals at Whole Earth with the early events at Portobello Road. Whole Earth, which started as a bakery, became Harmony Foods, a large health food wholesaling company. [Note: In 1980 Harmony Foods Ltd. was at 12 Orpheus St., Camberwell, London S.E., England.] Harmony had some of its own Harmony Foods brands and was one of the first companies in the UK to import Japanese miso, shoyu, etc. At some point, Whole Earth was sold off as a health food wholesaler, and its still going with such popular brands as Whole Earth jams, sauce, etc.

Peter Fitch was responsible for putting together the Haldane Foods Group, which incorporates Direct Foods, Haldane Foods, and Realeat. Address: Owner, Cauldron Foods Ltd., 149 South Liberty Lane, Ashton Vale Trading Estate, Bedminster, Bristol BS3 2TL, England. Phone: (0272) 632835.

7488. Oka, Seizo. 1990. Finding Shinzaburo Mogi and his soy sauce company in Denver (Interview). *SoyaScan Notes*. July 26. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Mr. Oka has made great efforts to collect copies of the early *Directory of Japanese in the USA* (*Zaibei Nippon-jin Kan*). These are vastly better sources of information on Japanese people and businesses in America than early American City Directories published by Caucasians. The first such directory was published in 1905, and Mr. Oka has it. It contains no reference to Shinzaburo Mogi, Kikkoman, or soy sauce in Denver. However Mr. Oka cautions that these directories were published in San Francisco, and information on Japanese outside of California was quite incomplete. The next directory Mr. Oka owns, and the 6th one published, was for 1910. Most, if not all of the directories for the years 1906-1909 were lost in the great San Francisco earthquake of 1909, and later in the internment of West Coast Japanese during World War II. The earthquake shut down the *Nichibei Times* newspaper and caused it to relocate to Oakland, where it was short staffed. Thus, even if Mr. Mogi did start a short-lived shoyu company in Denver in 1907, we will probably never be able to find it in a *Directory of Japanese in the USA*. Better give up looking. Address: Head and Founder, History Room, Japanese Cultural and Community Center, 1840 Sutter St. #206, San Francisco, California 94115. Phone: 415-921-1485.

7489. Gerner, Bob. 1990. Best-selling soyfoods at Berkeley Natural Grocery Co. in Berkeley, California (Interview). *SoyaScan Notes*. July 28. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** By far the best selling soyfood product type at Bob's store is soymilk, accounting for 50-65% of total soyfoods sales. The best selling brands, in descending order of sales volume, are Vitasoy (about 40% of soymilk sales, and rising, his store promotes it more in part because he sees sales reps longer and in part because the Vanilla Vitasoy is his favorite soymilk product), Edensoy (30-35% and falling; it used to be the best seller), Westsoy and Westbrae Malteds (20% and rising), Pacific Soy (from Tree of Life), and Other (Wildwood Yosoy, Quong Hop, Soy Moo, AhSoy, 5%).

The next best selling soyfood type is tofu (accounting for about 20% of total soyfoods sales, and rising), followed by soy sauce & tamari (10%, stable), soy cheeses (4%, rising), tempeh (2%, falling), soy ice cream (1%, stable or falling), and miso (1%, falling).

Total per capita purchases of soyfoods have risen steadily since the mid-1970s. There have been no plateaus or declines.

Bob dislikes (but understands) the way soymilk manufacturers discount their products, basically forcing him to buy very large quantities–typically 60 cases at a time. This policy favors large retailers, ties up a lot of his capital up-front, and takes up a lot of space in his warehouse. So 95% of the time he buys Vitasoy and Edensoy soymilk when they are on sale at discount prices, then he sells these at discount/sale prices–a practice that he does not like since it seems to contradict the idea of a "sale." Customers won't buy soymilk any more at "regular" prices. Bob would rather buy what he needs from week to week, then sell all products at a regular price most of the time, then have promotions once in a while. Vitasoy has played a lot of games with distributors to try to get them to buy more at one time, and Bob has heard that this is hurting the distributors and that they don't like it. They can't make money selling at an 8% margin, which they often must do. Edensoy's discount is constant whereas Vitasoy has on and off discounts–which makes buying harder for Bob. Westbrae/Vestro has a more typical discount policy and Bob sells Westbrae products at a regular price most of the time. Address: Owner, Berkeley Natural Grocery Co., 1336 Gilman St., Berkeley, California 94706. Phone: 415-526-2456.

7490. **Product Name:** Cauldron Foods Tofu Kitchen {Frozen Ready Meals} (Indonesian: Vegetables & tofu in spicy satay sauce, Cantonese: Stir fry vegetables with tofu in black bean sauce, Shanghai: Sweet & sour vegetables with tofu, or Punjabi: Vegetable briani with tofu).

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Manufacturer's Name: Cauldron Foods Ltd.
Manufacturer's Address: 149 South Liberty Lane, Ashton Vale Trading Estate, Bedminster, Bristol, Avon, BS3 2TL, England. Phone: (0272) 632835.
Date of Introduction: 1990, July.
Ingredients: Indonesian: Spicy satay sauce (water, stewed tomatoes, onions, peanut butter, creamed coconut, soy sauce, tomato puree, spices and seasonings, modified starch, vegetable oil, salt), Marinated Tofu (tofu–water soya beans, calcium sulphate, marinade–water, shoyu sauce, sugar, salt, garlic, ginger, citric acid), baby sweetcorn, sugar, snap peas, red peppers, vegetable oil. Fried rice: Cooked white and brown rices, sweet-corn, vegetable oil, onions, chives.
Wt/Vol., Packaging, Price: 400 gm box.
How Stored: Frozen.
Nutrition: Per 100 gm.: Protein 5.9 gm, fat 5.9 gm, carbohydrates 13.9 gm, calories 147.
New Product–Documentation: Letter (fax) from Philip Marshall, 1990, July 9. This product, in 4 varieties, was introduced in 1990. Labels (4) sent by Philip Marshall of Cauldron Foods, 1990, July 9. 9 by 7 by 1.25 inches. Multi-color. A large color photo of the ready-to-serve dish (accompanied by chopsticks or fork) is in the upper left hand corner of the front panel; behind it is a pastel blue, green, yellow, and black map of that part the world from which the dish originates. Below the product name is a brief description of the dish: "Microwave or oven cook. A complete vegetable meal." Suitable for vegetarians. Circled green V certification symbol. Serves 1. The back panel gives information about tofu and detailed cooking instructions.

7491. Fleming, Diana J. ed. 1990. Country Life vegetarian cookbook: Delicious recipes from the kitchen of the Country Life vegetarian restaurants. Family Health Publications, 13062 Musgrove Highway, Sunfield, MI 48890. 190 p. Index. 23 cm.
• ***Summary:*** This book contains the most popular vegan recipes from Country Life vegetarian restaurants. In 1966 the first Country Life Restaurant opened its doors in Grand Rapids, Michigan. Today the 15 Country Life Restaurants, though all independently owned and staffed by Seventh-day Adventists, "share a common commitment to serve delicious, wholesome, 100 percent vegetarian food. They are also dedicated to furnishing educational programs, to ministering to the needs of the community, and to providing a relaxed, Christian atmosphere as a refuge for customers from the stresses of the work-a-day world." A list of the addresses and phone numbers of the 15 County Life restaurants (10 in the USA, 3 in Europe, and 2 in East Asia) is given on page 4.

"Soy or nut milk" is called for in many recipes throughout this book. Soy-related recipes include: Soy-oat waffles or pancakes (p. 20). Carob-banana tofu topping (p. 25). Tofu-pineapple "cottage cheese" (p. 28). Soy raisin puffs (with cooked whole soybeans, p. 35). Fluffy soy-corn muffins (p. 36). Scrambled tofu (p. 38). Chipped tofu (p. 39). Tofu cheese rarebit (p. 40). Tofu potato latkes (p. 41). Soy whipped cream (#1-#3, p. 60-61). Tofu whipped cream (p. 61). Tofu orange whipped cream. Tofu cheesecake (p. 66). Carob tofu cheesecake. Tofu loaf (p. 73). Kidney bean and tofu pie (p. 83). Pasty (filled with frozen tofu, p. 84). Soybean creole (p. 88). Tofu balls (p. 93). Lasagne (with crumbled tofu, p. 94). Stuffed shells (with tofu, and soy mayonnaise or soy sour cream). Eggplant Parmesan (with tofu). Tofu cacciatore (p. 96).

Stir fry vegetables (with tofu, p. 103). Tofu foo young (p. 105). Oriental medley (with tofu, p. 106). Walnut cheese spread (with tofu, p. 108). Gluten and broth. Teriyaki sauce (with soy sauce, p. 111). BBQ sauce (p. 112). Tofu "egg" salad (p. 118). Thousand island dressing (with soy mayonnaise, p. 120). Olive dressing (with soy base, or Soyagen, p. 121). Soy mayonnaise (#1 with soy milk, #2 with soy base, #3 with Soyagen, p. 123-24). Tofu mayonnaise (p. 125). Aioli or garlic mayonnaise #1 (with soy milk). Soy sour cream (p. 126). Soy margarine (#1 and #2). Tofu cottage cheese. Tofu tomato stars (p. 135). Sour cream potatoes (with soy sour cream or mayonnaise, p. 139). Tofu gumbo soup (p. 146).

Soy milk (#1 from soy beans, #2 from soy base, p. 149). Soy base (from soy flour, p. 150). Basic nut milk (with cashews, walnuts, filberts, or Brazil nuts, and honey or dates, p. 151). Cashew-pear milk (p. 152). Half and half (with cashews and almonds). Almond milk supreme ... plus many other nut and fruit milks.

One innovative ingredient in many recipes is "Lecithin-oil slicker. This is a replacement for products such as Pam, a food release spray. Pour 6 parts oil, not olive, peanut or sunflower, into a jar with 1 part liquid lecithin. Cover tightly and shake well. Keep at room temperature. Do not use lecithin granules. Measure oil first then use the same utensil to measure lecithin to help prevent sticking of lecithin on utensil."

At the end of the book are several very interesting chapters. "The protein myth: When too much of a good thing is a bad thing," by M.G. Hardinge and W.C. Andress. One very interesting table (taken largely from G. Bunge 1902) shows that the longer it takes for a baby animal to double its birth weight, the lower the protein content of the mother's milk. Humans, with 1.4% protein in the milk, take 180 days (the longest). Cats, with 9.5% protein in the milk, take only 7 days (the shortest). A second chapter is titled "Dietary fat–good or bad?," by Bernell E. Baldwin. Address: Michigan.

7492. Karta, Susani K. 1990. The market prospective for tempeh in the year 2000. In: Ontario Ministry of Agriculture and Food, ed. 1990. Soybean Buyers Mission from New Markets, July 1-7, 1990. Tokyo, Japan: Ontario Ministry of Agriculture and Food. 61 p. July. See p. 19-33.
• ***Summary:*** Contents: Introduction. Market situation for

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tempeh in Indonesia. Health and nutritional significance of tempeh. Tempeh for weaning food. Constraints and trends in the market development of tempeh. Recommended guidelines and strategies. Ideas for the diversification of tempeh utilization. Tempeh as a food ingredient, new tempeh food opportunities.

Tempeh flour (dried, ground tempeh) used in weaning foods could dramatically reduce the diarrheal diseases among children in Indonesia and other countries. The author estimates the potential demand for tempeh flour in weaning foods used for this purpose in the year 2000 to be 27,720 tonnes in Indonesia and 470,880 tonnes in all Asian developing countries. This assumes average tempeh flour consumption of 10 gm/day per child or 3.6 kg/year per child.

In 1983 Indonesians consumed about 927,000 tonnes of soybean as food, increasing to 1,528,000 tonnes in 1958. About 50% of these soybeans were used to make tempeh, and 40% to make tofu; the remaining 10% were used to make soy sauce and "tauco" (a fermented whole soybean condiment [Indonesian miso]). In 1988 the average Indonesian consumed 6.45 kg/year of tempeh (equivalent to 4.3 kg of soybeans). In the past 5 years, consumption of soyfoods in Indonesia has increased by an average of 10% annually.

According to a 1988 report from the Indonesian Ministry of Agriculture, the average daily per capita consumption of calories is still below the recommended Indonesian guidelines. In 1988, calorie consumption was only 1,794 calories/capita/day, or about 28% below the recommended 2,500 calories. Protein intake was about 43.3 grams/capita/day, or about 21% below the recommended 55 gm. "Consumption levels of traditional soyfood such as tempeh will continue to grow as the population attempts to meet its protein needs. Moreover, in view of the purchasing power of the average Indonesian consumer, we can expect a continuing increase in the demand for tempeh as it is widely available at a much more affordable price than animal protein... For tempeh manufacturing, imported soybeans are preferred because they are larger and cleaner." Address: MSc, RD, Manager, PT. Indofood Interna Corp., Jl. Ancol No. 4-5, Ancol Barat Jakarta Utara 14430 Indonesia. Phone: 690-1365.

7493. Ushijima, Shigeomi, Nakadai, T.; Uchida, K. 1990. Breeding of new *koji*-molds interspecific hybridization between *Aspergillus oryzae* and *Aspergillus sojae* by protoplast fusion. *Agricultural and Biological Chemistry* 54(7):1667-76. July. 6 fig. [34 ref. Eng]

• ***Summary:*** A description of the technique of protoplast fusion between a mutant of each of these two species of molds. The fused mold is stabilized by successive cultures. Address: Soy Sauce Research Lab., Kikkoman Corp., Noda 278, Japan.

7494. **Product Name:** Choplets.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: Worthington, Ohio.
Date of Introduction: 1990. July.
Ingredients: Textured vegetable protein (wheat gluten, soy protein concentrate), caramel color. Broth: Water, flavorings (hydrolyzed vegetable protein, spice extractives), yeast extracts, dextrose, salt, soybean oil, caramel color, monosodium glutamate.
Wt/Vol., Packaging, Price: 8 oz, 17 oz, and 30 oz can. 20 oz can retails for $2.75 (7/90, California).
How Stored: Shelf stable, refrigerate after opening.
New Product–Documentation: Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. 20 oz (567 gm) can. The ingredients are now: Textured vegetable protein (wheat gluten, soy protein concentrate), caramel color. Broth: Water, flavorings (hydrolyzed vegetable protein, spice extractives), yeast extracts, dextrose, salt, soybean oil, caramel color, monosodium glutamate.

Note: This product was first introduced in Oct. 1941, but did not contain textured soy protein at that time.

7495. **Product Name:** Cutlets.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 800-628-3003.
Date of Introduction: 1990. July.
Ingredients: 1990: Textured vegetable protein (wheat gluten, soy protein concentrate), caramel color. Broth: Water, flavorings (hydrolyzed vegetable protein, spice extractives), yeast extract, dextrose, salt, soybean oil, caramel, monosodium glutamate.
Wt/Vol., Packaging, Price: 50 oz (1417 gm) can. Retails for $6.25 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. Red and blue on white. The ingredients are now: Textured vegetable protein (wheat gluten, soy protein concentrate), caramel color. Broth: Water, flavorings (hydrolyzed vegetable protein, spice extractives), yeast extract, dextrose, salt, soybean oil, caramel, monosodium glutamate.

Note: This product was first introduced in 1960, but did not contain textured soy protein at that time.

7496. GEM Cultures. 1990. Catalog [Mail order]. 30301 Sherwood Rd., Fort Bragg, CA 95437. 9 p. Aug. [4 ref]

• ***Summary:*** This catalog celebrates the company's tenth anniversary. Contents: 1. Powdered cultures for soycrafters: Powdered tempeh starter, PTS (11 gm [$2.25, makes 5+ lb of tempeh], 35 gm, 500 gm, 1000 gm). Starter cultures for miso, amazake, shoyu, and tamari. Introductory koji kits.

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Commercial spore packets for miso or shoyu. Powdered natto starter. Rice koji (cultured rice) for light misos, amazake, pickles. Most in home or commercial sizes. 2. Cookbooks with culture (lists 4 books). 3. Natural salts for curding tofu. Natural nigari or Terra Alba calcium sulfate in 1 lb or 5 lb bags. 3. Self renewing cultures. Fresh yuli culture, fresh kefir curds, fresh sourdough culture, seed miso. 4. Sea vegetables from the Mendocino Sea Vegetable Co. 5. Handy reusable items: Super sealers (lids for canning), cheesecloth (grade 60), gauze drawstring bags (for spices in mulled cider, whole herbs, etc.). Address: Fort Bragg, California. Phone: 707-964-2922.

7497. **Product Name:** Health Valley Tofu Fast Menu: Honey Baked Organic Beans with Tofu Wieners, Organic Black Beans with Tofu Wieners, or Organic Lentils with Tofu Wieners.
Manufacturer's Name: Health Valley Foods, Inc. (Product Developer-Distributor).
Manufacturer's Address: 16100 Foothill Blvd., Irwindale, CA 91706-7811
Date of Introduction: 1990. August.
Ingredients: Organic small white beans, water, tofu wieners (tofu [organic soybeans, nigari, water], canola oil, wheat gluten, wheat germ, nutritional yeast, natural spices, tamari soy sauce [water, soybeans, wheat salt], natural hickory smoked flavor, paprika, beet powder, sea salt, guar gum), honey, tomatoes, onions, tomato paste, organic potato flakes, unsulfured molasses, concentrated organic apple juice, carrot powder, olive oil, apple cider vinegar, sea salt, paprika, natural herbs and spices, onion powder, garlic powder, organic oregano, organic sage, organic thyme.
Wt/Vol., Packaging, Price: 15 oz (425 gm) can. Retails for $1.89 (1/91, California)
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 7½ oz.: Calories 140, protein 11 gm, carbohydrate 15 gm, fat 3 gm, cholesterol 0 mg, sodium 14 mg, potassium 260 mg.
New Product–Documentation: Label (Honey Baked) obtained at World Vegetarian Day in San Francisco 1990 Oct. 6. 9 by 4 inches. Paper can label. Reddish brown, yellow, black, brown, green, and white on yellow. Full color photo of crock of beans with tofu wieners and a spoon dipping in. "3-minute main dish." Date of 8/90 written encoded on label.

Products with Labels (all 3) purchased at Open Sesame in Lafayette, California 1991 Jan. 31. $1.89 each. "Lead free can from Health Valley. This can is enamel coated for your protection."

7498. **Product Name:** Garden Gourmet Vege-Dogs in Pastry.
Manufacturer's Name: Tivall.
Manufacturer's Address: Imported by Tivall, USA, Inc., 9633 E. Bexhill Dr., Kensington, MD 20895. Phone: 301-946-8855
Date of Introduction: 1990. August.
Ingredients: Rehydrated soy protein concentrate and wheat gluten, soybean oil, egg whites, spices, salt, onion, garlic, tamari sauce, hydrolyzed vegetable protein, paprika, natural flavoring, guar gum (natural vegetable gum), lecithin, vitamin A, thiamine (Vitamin B-1), riboflavin (vitamin B-2), pyridoxine hydrochloride (vitamin B-6), vitamin B-12, nicotinamide, vitamin C, calcium pantothenate. Pastry: Wheat flour, soybean oil, partially hydrogenated soybean oil, water, sesame seeds, salt, mono and diglycerides.
Wt/Vol., Packaging, Price: 12 oz package.
How Stored: Frozen.
New Product–Documentation: Garden Gourmet brochure sent by Tivall, Israel. 1990. Sept. 4. Glossy insert. "The 'pig in a blanket' has left the pig behind. It its place is a lightly seasoned, wholesome entrée in a light puff pastry."

7499. **Product Name:** Garden Gourmet Vege-Puffs.
Manufacturer's Name: Tivall
Manufacturer's Address: Imported by Tivall, USA, Inc., 9633 E. Bexhill Dr., Kensington, MD 20895. Phone: 301-946-8855
Date of Introduction: 1990. August.
Ingredients: Rehydrated soy protein concentrate and wheat gluten, soybean oil, egg whites, spices, salt, onion, garlic, tamari sauce, hydrolyzed vegetable protein, natural flavoring, caramel color, lecithin, vitamin A, thiamine (vitamin B-1), riboflavin (vitamin B-2), pyridoxine hydrochloride (vitamin B-6), vitamin B-12, nicotinamide, vitamin C, calcium pantothenate. Pastry: Wheat flour, soybean oil, partially hydrogenated soybean oil, water, salt, mono and diglycerides.
Wt/Vol., Packaging, Price: 7 oz package.
How Stored: Frozen.
New Product–Documentation: Garden Gourmet brochure sent by Tivall, Israel. 1990. Sept. 4. Glossy insert. "This is a delightful entrée with fresh, wholesome ingredients and delicate seasoning in a superb puff pastry. Its a great solution to those center-of-the-plate menu-planning blahs!"

7500. **Product Name:** Heart & Soul Trim Slice Meatless Cold Cuts [Turkey Style, Roast Beef Style, Ham Style].
Manufacturer's Name: Gourmet Naturally (Manufacturer). Common Objective Co. (Marketer-Distributor)
Manufacturer's Address: 1. 5890 Black Welder St., Culver City, CA 90232. 2. P.O. Box 261, Hermosa Beach, CA 90254. Phone: 213-373-5826
Date of Introduction: 1990. September.
Ingredients: Turkey Style: Water, vital wheat gluten, tofu, natural flavor, canola oil, natural smoke flavor, salt, herbs and spices, soy oil
Wt/Vol., Packaging, Price: 4 oz (112 gm) paperboard box.

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Recommended retail: $1.79 (9/90).
How Stored: Refrigerated
New Product–Documentation: Label sent by Andrew Harrison of Common Objective Co. 1990. Sept. 19. The Roast Beef Style and the Ham Style products contain most of the same ingredients, but no tofu.

Press release. Sept. 1990. "Try a slice of life."

Products with Labels (Turkey, Ham, Roast Beef styles) purchased ($1.75 each) from Berkeley Natural Grocery Co., California. 1991. Nov. 24. 4.5 by 5 by 5/8-inch paperboard box. Turkey: Red, yellow, green, tan, black, and pink on white, with little pink hearts scattered on the white background. Illustration of two slices of bread, with lettuce, and the words "Trim Slice" between them. "All natural 97% fat free. No cholesterol. Trim Slice is completely free of cholesterol content, very low in fat and it tastes terrific in your favorite sandwich combination. Best of all, Trim Slice is a cruelty-free product containing no animal products or animal by-products." A logo of a turkey in a red circle with a red line diagonally across the cow reads: "No meat. Just wheat."

Soyfoods Center Product Evaluation. 1991. Nov. 26. Package design: Very good. Flavor and texture: One person rates excellent (9), another rates dislike slightly (4).

Talk with Andrew Harrison, President, Heart & Soul, Common Objective Inc. 1991. Nov. 27. Only three products in this line are currently on the market; they were introduced in Sept. 1990. Two others (Corned Beef Style, and Pastrami Style) are under development and will be introduced soon–even though they are listed on the labels of other products in the line as if they were available now. He owns a company, Gourmet Naturally, which manufactures only Heart & Soul Products, including this product. Legally this company is separate from Heart & Soul, but the two will soon be merging. Andrew's forte is sales and marketing; he has worked with distributors and brokers in the natural foods industry for 12 years.

7501. **Product Name:** Heart & Soul Tofu Lasagna, and Tofu Enchilada [California, or Mexicali]
Manufacturer's Name: Gourmet Naturally (Manufacturer). Common Objective Co. (Marketer-Distributor).
Manufacturer's Address: 1. 5890 Black Welder St., Culver City, CA 90232; 2. P.O. Box 261, Hermosa Beach, CA 90254. Phone: 213-373-5826.
Date of Introduction: 1990. September.
New Product–Documentation: Talk with Andrew Harrison, President, Heart & Soul, Common Objective Inc. 1991. Nov. 27. These were Heart & Soul's first soy products, introduced in March 1989. The first two products contained tofu, and the Mexicali Enchilada contained soy cheese. None of these are on the market any longer.

7502. **Product Name:** Munchees (With Soy Cheese) [Spinach Tofu, Pizza Tofu, or Veggie].
Manufacturer's Name: Health Is Wealth, Inc.
Manufacturer's Address: Sykes Lane, Williamstown, NJ 08094. Phone: 609-728-1998.
Date of Introduction: 1990. September.
Ingredients: Spinach Tofu (1/92): Stone-ground whole wheat flour, spinach, organic tofu, canola oil, casein (protein), sea salt, citric acid, soy lecithin, guar gum, olive oil, soybean oil, natural spices.
Wt/Vol., Packaging, Price: 6 oz paperboard box contains 11-13 Spinach Tofu Munchees. Retails for $2.39 (1/92, Lafayette, California).
How Stored: Frozen.
New Product–Documentation: Ad (color) in Natural Foods Merchandiser. 1990. Nov. p. 22. "The great taste of cheese without the cheese." Shows 3 labels of Munchees, 2 of which bear the word "tofu" prominently atop the front panel. "Health is Wealth has replaced the cheese in our ever popular egg rolls with tofu mozzarella. Also new are our exciting pizza, veggie, and spinach munchees. Munchees contain the same egg roll fillings but in an individual, bite size, stone ground whole wheat pocket."

Product with Label (Spinach Tofu Munchees) purchased at Open Sesame in Lafayette, California. 1992. Feb. 13. 5 by 4.75 by 1.75 inches. Paperboard box. White, green, and blue on black. Color photo of the prepared munchees which look like 1½-inch square deep-fried pillows stuffed with spinach and cheese. "The great taste of spinach & cheese without the cheese. 11-13 Egg Rolls wrapped in a stone-ground whole wheat pocket. Cholesterol free. No preservatives. Lactose free. Made with the cheese NûTofû alternative." The phone number is now 609-728-1998.

Soyfoods Center Product Evaluation. 1992. Feb. 13. Package design: Excellent, however the text on the front panel of the Spinach Tofu Munchees that states "The great taste of spinach & cheese without the cheese." seems deceptive, since the cheese in this product is made from cow's milk. The ingredients listing is likewise deceptive since it lists "casein (protein)" rather than "casein (milk protein)." A previous ingredient listing which broke out the "soy cheese" and listed its ingredients seemed clearer and more standard. Flavor: We liked the Spinach Tofu Munchees best–by far.

7503. Ornish, Dean. 1990. Dr. Dean Ornish's program for reversing heart disease: The only system scientifically proven to reverse heart disease without drugs or surgery. New York, NY: Random House. xxxi + 638 p. Sept. Index and recipe index. 17 cm. [288* ref]
• ***Summary:*** This is a landmark, pioneering book–indeed a classic. In addition to carefully documented information on how to reverse heart disease, it offers 100 pages of vegan recipes, including a 21-day menu. It focuses on a low-fat, low-cholesterol diet, regular moderate exercise, stopping

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smoking, stress management through meditation and yoga, and (ideally) a support group.

Contents: Author's note. Foreword. Introduction–Heart and soul. Part one: Opening your heart. Part two: The opening your heart program. Part three: Opening your heart recipes. Introduction to the recipes by Shirley Elizabeth Brown, M.D., and Martha Rose Shulman. Twenty-one days of menus. The recipes. Epilogue. Appendix: Nutrient analysis of common foods. Selected references.

In the chapter titled "Introduction to the recipes" a long section on "Soybean products" gives basic information about the following: Whole soybeans, soy flour, soy milk ("It is much higher in fat, lower in vitamin B-12, and lower in calcium than nonfat cow's milk."), soy sauce, tamari, miso, soy cheeses, tempeh, textured vegetable protein (TVP), isolated soy protein, and tofu ("Tofu is a miracle food; it is very easy to digest, very high in protein, low in calories and fat, economical, and extremely versatile")

In the chapter titled "Recipes" is a long section on "Tofu Dishes," which begins with a good introduction: "Tofu is one of the most versatile foods." "Tofu is very high in protein and the perfect substitute for cheese and eggs." Eleven recipes follow: Tofu cheese with fresh herbs. Marinated tofu. Scrambled tofu and vegetables. Lydia's Mexican casserole. Tofu stew with miso. Sweet and sour wok-cooked vegetables with tofu. Chinese eggplant and tofu. Steamed fresh vegetables and tofu with soba noodles (and Misoyaki sauce). Stuffed manicotti (with Marinara sauce).

At the start of each chapter are great quotations. The 288 selected references, listed chapter by chapter at the back, are a valuable addition. As early as 1972 Dr. Ornish was learning meditation and yoga techniques from Swami Satchidananda; these evolved into the stress management program described in chapters 7-9. In 1975 he first became interested in conducting research on heart disease, when he was a medical student at Baylor College of Medicine in Houston, Texas. In 1977 he had the privilege of studying with Dr. Michael DeBakey, assisting in the operating room when he performed bypass surgery. Though his surgical skill was amazing, Ornish began to see the "limitations of technological approaches that literally and figuratively *bypassed* the underlying causes of the problem. It was the difference between temporizing and healing." Most bypass patients "would go home and continue to do the same things that led to the problem in the first place. They would smoke, eat a high-fat, high-cholesterol diet, manage stress poorly, and lead sedentary lives."

For details on this book and its significance, see MacNeil/Lehrer Newshour. 1990 Dec. Address: M.D., Preventive Medicine Research Inst., Sausalito, California 33658. Phone: 415-332-2525.

7504. **Product Name:** Meatless Healthy Bologna (Made with Tofu).
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: 1990 North 57th Court, Boulder, CO 80301.
Date of Introduction: 1990, September.
Ingredients: Organic tofu [water, soybeans, gypsum, nigari (magnesium chloride)], soy oil, wheat gluten, egg white, tapioca starch, wheat germ, soy sauce (water, soybeans, whole wheat, salt), dried yeast, natural liquid hickory smoke, garlic powder, spices, natural flavor, beet powder and oleoresin paprika for color. "No more, no less."
Wt/Vol., Packaging, Price: 5.5 oz (156 gm) vacuum pack. Retails for $2.10 (10/90, California).
How Stored: Refrigerated.
Nutrition: Per 1.5 oz : Calories 120, protein 7 gm, carbohydrates 5 gm, fat 8 gm (polyunsaturated 7 gm, saturated 1 gm), cholesterol 0 mg, sodium 340 mg.
New Product–Documentation: Talk with Steve Demos. 1989 May 13. This product will be officially launched in Sept. Talk with Steve Demos. 1989. Nov. 1. The term Links need not be approved by the FDA. Anyone can use the term. The product is not yet out, nor has it been in any interstate sales yet. It is made in Denver. It should be out soon, probably by mid-December.

Label obtained at White Wave booth at World Vegetarian Day in San Francisco. 1990 Oct. 6. 5 by 7 inches. Flat vacuum pack with see-through front. Red, black, and yellow on white. "Cholesterol-free! Great for kids! Hearty luncheon slices." Talk with Lon Stromnes. 1990. Oct. 6. The product was introduced in Sept. 1990. Recommended retail is about $2.10.

7505. Ford, Ashley. 1990. Milking the soybean: Asian firm opens drink plant. *Province* (*The*) (*or The Vancouver Sun*) (*Canada*). Oct. 3.
• ***Summary:*** "Yeo Hiap Seng Ltd. of Singapore has been turning Ontario's soybeans into high-protein drinks for over two decades... This week, the company will open a $13-million soybean-juice plant adjoining its juice-concentrate plant in Chilliwack... Chalk the investment up to a victory for the U.S.-Canadian free-trade agreement. Yeo says the agreement, plus the availability of high-quality soybeans, persuaded it to put in a plant at Chilliwack...

"In 1988, the company purchased the adjoining Pacific Fruit & Concentrates Ltd. from the East Chilliwack Co-operative for about $3 million. It is now known as YHS Pacific Fruit Concentrates Ltd. Last year, it also purchased Chun King, the oriental food division of RJR Nabisco, based in Windsor [Ontario, Canada]. The new plant will produce 300 cans a minute of a variety of soybean drinks for the Canadian and U.S. markets. The state-of-the art-factory will create 32 new jobs...

"At the beginning of the century [in 1900], family patriarch Yeo Keng Lian began fermenting and selling soya sauce in Fujian province... Initially, soya sauce provided

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Yeo's business success. In 1955, the company started producing soybean drinks, and has since gone on to produce other foods."

A photo shows Bill Chia showing off the canning line at Yeo's new soymilk plant. Note: This factory is a major Canadian consumer of soybeans for food/beverage use, but about 90% of the finished soymilk is exported to Asia–especially Singapore. Address: Business Reporter, Canada.

7506. Azumaya, Inc.; et al. 1990. Tofu: Made in the USA... The tradition continues (Ad). *Produce Business*. Oct
• ***Summary:*** With this anti-Mori-Nu ad, run by "the largest tofu manufacturers and distributors in America," the U.S. tofu wars escalate. The four manufacturers are Azumaya, Hinoichi, Nasoya, and Kikkoman. All make pasteurized tofu. The three distributors are Hanmi Inc. in Seattle, Frieda's Finest in Los Angeles, and Fuji Natural Foods in Ontario, California. "It has come to the attention of produce procurement officers throughout the United States that a foreign (Japan) producer of an aseptically packed tofu has chosen to confuse the trade and general public with claims that their product is superior to traditional water pack tofu. The following addresses the various issues as we see them." These issues are: 1. Water packed tofu has superior taste. Sales of aseptic tofu are virtually nonexistent in Japan. 2. Consumers prefer fresh produce. 3. The assurance of our pasteurization. "An independent study revealed bacterium was unable to grow in pasteurized tofu held at 59 degrees Fahrenheit and below for six weeks." 4. A clear environmental choice. The aseptic package is ecologically unsound, whereas "water packed tofu is packaged in 100% recyclable plastic."

7507. Business Trend Analysts, Inc. 1990. The market for salad dressings, sauces and condiments. 2171 Jericho Turnpike, Commack, NY 11725. 275 p. Price: $895.
• ***Summary:*** This is an update of the 1988 edition. Sauces include the following table sauces: Ketchup, meat (incl. steak, worcestershire, vegetable, and seafood sauces), barbecue, Mexican (incl. chili, taco, enchilada, etc.), prepared mustard, and soy and teriyaki. Gravies, dips, and dry sauce mixes are not included. Ketchup is the largest segment. Address: Commack, New York.

7508. YHS Pacific Fruit Concentrates. 1990. YHS Pacific Fruit Concentrates in Chilliwack descendant of 90-year-old family company headquartered in Singapore (News release). Chilliwack, BC, Canada. 2 p. Oct.
• ***Summary:*** Contains a good history of the company. The history up to 1962 is basically the same as that given by Shurtleff & Aoyagi in Feb. 1984. Then it continues: "Throughout the next two decades, Yeo's continued to expand and innovate: this was the first company in the world to pack soya bean drinks in paper tetra-paks using the ultra high temperature process. In addition, the company acquired the franchises for international brands such as Pepsi and 7-Up, Mirinda and Schweppes.

"In 1989, Yeo's purchased Chun King, the oriental division of RJR Nabisco based in Windsor, Ontario, and bought Pacific Fruit & Concentrates Limited located in Chilliwack, B.C.

"Today with associated companies, plants and 4,000 staff members around the globe, and with its products exported to 35 countries, Yeo Hiap Seng Ltd. is still guided by the Yeo family and still adheres to the original formula for success: provide quality products and unite to succeed."

Note: The company's offices and headquarters are in Richmond, B.C. The soymilk plant is located in Chilliwack (population 9,000) about 55 miles to the east, on the south bank of the Fraser River, only about 10 miles north of the U.S.-Canada Border. Address: Chilliwack, BC, Canada. Phone: 604-277-7707.

7509. Kudou, Shigemitsu; Tsuizaki, I.; Shimoyamada, M.; Uchida, T.; Okubo, K. 1990. Screening for microorganisms producing soybean saponin hydrolase. *Agricultural and Biological Chemistry* 54(11):3035-37. Nov. [16 ref]
• ***Summary:*** Soybean saponins in miso and soy sauce are decomposed during fermentation by various species of *Aspergillus* mold. Address: 1&4. Kanesa Miso Co., Ltd., 202 Hamada, Tamagawa, Aomori 030; 2,3&5. Faculty of Agriculture, Tohoku Univ., 1-1 Tsutsumitori, Amamiya-machi, Aoba-ku, Sendai 981. All: Japan.

7510. **Product Name:** Legume Vegetarian Franks & Beans.
Manufacturer's Name: Legume, Inc.
Manufacturer's Address: 116 Fairfield Rd., Fairfield, NJ 07006. Phone: 201-263-1013.
Date of Introduction: 1990. November.
Ingredients: Navy beans, water, tomato paste, organic tofu* [organically grown soybeans*, water, calcium sulfate (a naturally mined earth mineral)], sweet potato puree, apple cider vinegar, canola oil, molasses, honey, tamari soy sauce (water, soybeans, sea salt), onion, soy oil, isolated soy protein, mustard powder, garlic, spices, natural flavors, sea salt, beet powder, paprika oil, guar gum. * = Grown in accordance with California Health & Safety Code 26569.11.
Wt/Vol., Packaging, Price: 9 oz plastic bag (boil-in-the bag).
How Stored: Frozen.
New Product–Documentation: Talk with Gary Barat. 1990. Oct. 31. Legume is now introducing 7 new boil-in-the-bag products. All are non-dairy, cholesterol-free. The word "tofu" does not appear on the front panel of any of the products because a huge segment of the American population does not have a positive image of tofu. These products will sell for about $1 less each than the old Legume products. They will sell the products where they do not need to pay slotting

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allowing allowances, as in Southern California where 15-20% of the company's total business now is. Business is way up in the kosher market. All will be introduced at the Natural Foods Merchandiser show in Philadelphia this weekend.

Label sent by Gary Barat. 1990. Oct. 31. by 5.5 by 1.5 inches. Paperboard box. Green, white, and black. Full-color photo of the product in a white dish. "Low fat. No cholesterol. Microwaveable. All natural. Legume main courses."

7511. **Product Name:** Legume Vegetarian Chili.
Manufacturer's Name: Legume, Inc.
Manufacturer's Address: 116 Fairfield Rd., Fairfield, NJ 07006. Phone: 201-263-1013.
Date of Introduction: 1990. November.
Ingredients: Tomatoes, water, black beans, red chile beans, onion, corn, organic* tofu [water, organically grown* soybeans, magnesium chloride (nigari)], tomato puree, canola oil, sweet potato puree, tamari soy sauce (water, soybeans, sea salt), chile powder, garlic, natural flavors, spices, sea salt. * = Grown in accordance with California Health & Safety Code 26569.11.
Wt/Vol., Packaging, Price: 10 oz plastic bag (boil-in-the bag).
How Stored: Frozen.
New Product–Documentation: Talk with Gary Barat. 1990. Oct. 31. This weekend at the Natural Foods Merchandiser show in Philadelphia, Legume will introducing 7 new boil-in-the-bag products.

Label sent by Gary Barat. 1990. Oct. 31. by 5.5 by 1.5 inches. Paperboard box. Green, white, and black. Full-color photo of the product in a white dish. "Low fat. No cholesterol. Microwaveable. All natural. Legume main courses."

7512. **Product Name:** Legume Hearty Vegetarian Stew (Made with Wheat Gluten)
Manufacturer's Name: Legume, Inc.
Manufacturer's Address: 116 Fairfield Rd., Fairfield, NJ 07006. Phone: 201-263-1013.
Date of Introduction: 1990. November.
Ingredients: Potatoes, wheat gluten [whole wheat flour, water, tamari soy sauce (water, soybeans, sea salt)], carrots, tomato paste, peas, water, sweet potato puree, canola oil, celery, parsley, onions, garlic, molasses, miso (soybeans, water, sea salt), tamari soy sauce (water, soybeans, sea salt), natural flavors, vinegar, oregano, spices, sea salt.
Wt/Vol., Packaging, Price: 10 oz plastic bag (boil-in-the bag).
How Stored: Frozen.
New Product–Documentation: Talk with Gary Barat. 1990. Oct. 31. This weekend at the Natural Foods Merchandiser show in Philadelphia, Legume will introducing 7 new boil-in-the-bag products. The Hearty Vegetarian Stew (made with wheat gluten) is delicious. The gluten manufacturer is Tabachnik in New Jersey.

Label sent by Gary Barat. 1990. Oct. 31. by 5.5 by 1.5 inches. Paperboard box. Green, white, and black. Full-color photo of the product in a white dish. "Low fat. No cholesterol. Microwaveable. All natural. Legume main courses."

7513. **Product Name:** Legume Vegetable Bean Ragout
Manufacturer's Name: Legume, Inc.
Manufacturer's Address: 116 Fairfield Rd., Fairfield, NJ 07006. Phone: 201-263-1013.
Date of Introduction: 1990. November.
Ingredients: Tomatoes, black beans, red chile beans, water, onions, celery, tomato paste, corn, peas, green beans, sweet potato puree, canola oil, basil, parsley, green pepper, garlic, tamari soy sauce (water, soybeans, sea salt), honey, vinegar, spices, sea salt.
Wt/Vol., Packaging, Price: 9 oz plastic bag (boil-in-the bag).
How Stored: Frozen.
New Product–Documentation: Talk with Gary Barat. 1990. Oct. 31. This weekend at the Natural Foods Merchandiser show in Philadelphia, Legume will introducing 7 new boil-in-the-bag products.

Label sent by Gary Barat. 1990. Oct. 31. by 5.5 by 1.5 inches. Paperboard box. Green, white, and black. Full-color photo of the product in a white dish. "Low fat. No cholesterol. Microwaveable. All natural. Legume main courses."

7514. [Japanese in South America: Nishii Super Shoyu in Peru]. 1990. Television broadcast. Channel 26, California. Nov. 24. 7:00–7:30 P.M. 3 minutes. From Fuji TV channel 8, "Naruhodo da World," in Japan. [Jap]
• ***Summary:*** Nishii Shoyu, located in the Victoria district of Lima, Peru, is owned by Mr. Shinji Kawakami, age 75, the second-generation owner. The outside and inside of his shop, and the process by which he makes 5 tonnes/week of shoyu in the traditional hand-made way, are shown. He also makes miso. A close-up shows the 750 ml bottle and its colorful label, orange, blue, and green on yellow. One bottle costs the equivalent of about 300 yen. Address: Japan.

7515. Cederquist, Natalie; Levin, James. 1990. A vegetarians ecstasy: A healthy gourmet celebration of over 250 no cholesterol, no dairy, lowfat recipes devoted to long life and good taste. Glo, Inc., 2406 Fifth Ave., San Diego, CA 92101. 332 p. Dec. Illust. by Natalie Cederquist. Index. 28 cm. [13 ref]
• ***Summary:*** In this is innovative vegan cookbook, each recipe occupies 1 page and is accompanied by an illustration (line drawing). The glossary of ingredients mentions liquid aminos, miso, seitan, seaweeds, tamari, tempeh, and tofu.

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Page 28 is devoted to singing the praises of soy products. "Dairyless and eggless. With optimum health in mind, I have chosen to use soy products and egg replacer rather than dairy and eggs. Dairy is mucus forming, it contains cholesterol, fat and hormones, in addition to the pesticides and antibiotics used in the farming and dairy industry.

"Soy and seed cheeses, soy yogurts, soy cream cheese, soy sour cream, soy and rice based ice creams are delicious non-dairy products in the natural markets for you to try which are cholesterol free and low in fat."

The book contains 28 recipes for tofu, and 12 for tempeh. Other interesting recipes are: Sprouted soy salad (with 3 cups soy sprouts steamed for 3 minutes, p. 76). Orange miso dressing (p. 99). Miso soup (p. 162). Miso sesame rice (p. 206). Aduki bean and brown rice pot (p. 212). Fejoada (with soy sausages, p. 213). Mushroom seitan in wine sauce with wild rice (p. 241). Seitan sauté (p. 267). Amazake carob pudding (p. 290). Address: 2. M.D., San Diego, California. Phone: 1-800-854-2587.

7516. **Product Name:** Easy Barbecue Sauces: Chinese Flavor (Soy Sauce with Wine), Crushed Garlic & Horseradish (in Soy Sauce), Clam Flavored Sauce (Seasoned with Horseradish and Parsley), or Ground Horseradish & Apple (in Soy Sauce with Vinegar).
Manufacturer's Name: Kagome.
Manufacturer's Address: Japan.
Date of Introduction: 1990. December.
Wt/Vol., Packaging, Price: 220 gm bottle. Retails for $1.70.
How Stored: Shelf stable.
New Product–Documentation: Soya International. 1990. July/Sept. p. 5.

7517. Shurtleff, William; Aoyagi, Akiko. 1990. Tofu & soymilk production. 2nd ed. Lafayette, California: Soyfoods Center. 336 p. Illust. by Akiko Aoyagi Shurtleff. Index. Dec. 11. 28 cm. [223 ref.]
• ***Summary:*** Contains many new advertisements, plus changes on the copyright page, on page 14 (Soyfoods Association is now located at Bar Harbor, Maine), and rear cover of both paperback and hardcover editions (new ISBN for each). Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

7518. **Product Name:** Summerfield's Tofu and Salsa Enchilada Dinner, and Tofu and Salsa Burrito Dinner.
Manufacturer's Name: Summerfield Foods, Inc.
Manufacturer's Address: P.O. Box 3235, Santa Rosa, CA 95402. Phone: 707-579-3938.
Date of Introduction: 1990. December.
Ingredients: Enchilada: Water, corn, tofu, brown rice, corn flour, textured soy flour, tomato paste, diced red bell pepper, dried garlic, dried tomatoes, chili powder, jalapenos, green chilies, paprika, natural mochi [glutinous] rice starch, cilantro, garlic puree, vinegar, natural herbs and spices, tamari soy sauce, white pepper, dried tomatoes, mustard seed, dried red bell pepper, pimientos, dried onions, sea salt, liquid smoke.
Wt/Vol., Packaging, Price: 12 oz (340 gm) paperboard box. Retails for $3.79 (1/91, California).
How Stored: Frozen.
Nutrition: Per 12 oz.: Calories 246, protein 12 gm, carbohydrate 46 gm, fat 32 gm (calories from fat 32, saturated fat 0.043 gm), cholesterol 0 mg, sodium 158 mg, potassium 448 mg, * dietary fiber 3.4 gm. * Fiber may reduce the risk of colon cancer and heart disease.
New Product–Documentation: Product with Label purchased from Berkeley Natural Grocery Co., California 1991. Jan. 13. 9 by 7.25 by 1 inch paperboard box. Red, blue, and gold on white. Color photo of the dinner on a plate on front panel. "100% natural. Summerfield's, the fresh approach. Microwaveable. No preservatives. Keep frozen. Cholesterol free. Low fat. Low sodium. With herbs and spices." Right side panel lists percentage of U.S. recommended daily allowance, and diet exchange per serving (for diabetics): vegetable 0.6, bread 3.3, protein 0.2, fat 1.6. The back panel states: "Summerfield's naturally delicious foods are made from 100% pure and natural blends of the finest ingredients... Summerfield's recommends the nutrient guidelines established by the National Cholesterol Education Program (NCEP, Daily Average) for those adults with high blood cholesterol. These are: Total fat, less than 30% of calories. Saturated fat, less than 10% of calories. Polyunsaturated fat, less than 10% of calories. Cholesterol, less than 300 mg." The National Academy of Sciences recommends that daily sodium consumption for adults should be in the 1,100 to 3,300 mg/day range. "What comes around, goes around... Recycle!" Recycle logo. UPC indicia.

Soyfoods Center product evaluation. Box package is good except for a weak color photo on front panel. The dinners are rather tasteless and dry, with no character. Flavor score = 6. Film is hard to peel off container.

Talk with Bob Gerner of Berkeley Natural Grocery Co. 1991. Jan. 13. He started selling this product only 3-4 days ago.

Talk with Richard Rose. 1991. Jan. 13. This company introduced itself and displayed package mock-ups of products at the Philadelphia Natural Foods Expo in Nov. 1990. They said they planned to have 40 products, but Richard saw no products that contained soy. Roland Au, one of the principals, has worked with many natural foods companies. The two others have quite a bit of mainstream food company experience–perhaps a food brokers. The company started only a few months ago. The feeling of whole marketing program was too slick and faceless, no character or soul–like a graduate student project.

Talk with Roland Au. 1991. Jan. 15. The company

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was incorporated in June 1990 by three active partner stockholders Roland Au, Jack Stanghellini, and David Ryan. Their first products (all their canned items and some frozen dinners) were at the Natural Products Expo in Philadelphia and were shipped in Nov. 1990, and were in the stores by Dec. 1990. Their focus is strictly on the natural foods market, not on supermarkets, using natural foods distributors. They have distributors in many parts of the USA plus central and eastern Canada. They have 60 products. The 3-compartment tray, called a "composite fiber tray," is made of wood fiber with a lacquer coating. It is recyclable. The film that covers the tray is made of Mylar, it not the typical film, which may give off toxic gases during microwaving. All of the company's products are and will be frozen or canned. The products exist for dietary reasons–to replace meat and cheese. The products we tasted are now being reformulated.

7519. Taira, Harue. 1990. Quality of soybeans for processed foods in Japan. *JARQ* (*Japan Agricultural Research Quarterly*) 24(3):224-30. Dec. [7 ref. Eng]

• ***Summary:*** Contents. Abstract. Introduction. Quality for food processing. Tofu, miso, natto. Variation of bean quality and suitability for processing. Factors inducing variations in the chemical composition and suitabilities for processing.

Figures show: (1) Consumption of soybeans in Japan in 1988 (1,000 tonnes): Total: 4,663 tonnes. Oil and meal 77%. Food 19%. Other 4%. Food products: 886 tonnes. Tofu and abura-age 57%. Kori-tofu 3%. Miso 20%. Natto: 11%. Other 9%. Individual food products (* An additional 69,000 tonnes are consumed in the form of cooked whole soybeans, yuba, kinako, moyashi {sprouts}, and others). Tofu and abura-age 505 tonnes. IOM and other USA 83%. Japan 11%. China 6%. Kori-tofu 29 tonnes. IOM and other USA 72%. China 28%. Natto 100 tonnes. China 50%. USA and Canada 30%. Japan 20%. Miso 179 tonnes. China 86%. Japan 11%. IOM 3%. Soy sauce. Defatted soybean flakes 183 tonnes (97%) and whole soybeans 5 tonnes (3%).

(2) Frequency distribution of solid matter extractability in soybean milk (105 samples; 60 cultivars and 7 lines)–for varieties Enrei, Fukuyutaka, Akishirome, Akiyoshi, Tamahomare, Fujimijiro, Hyuuga, Shirosenari. Average value of U.S. soybeans. Mode: 79%. Range 70-82%.

(3) Correlation between protein and sucrose content in soybeans. Inversely correlated. The more protein, the less sucrose. (4) Correlation between hardness of steamed seeds and ammonia nitrogen content in natto. Directly correlated. The harder the steamed seeds, the more ammonia nitrogen in the finished natto.

(5) Variation in chemical composition and suitabilities of soybeans for processing. Raw soybeans for processing, soybean milk for tofu, steamed seeds for miso, natto, cooked soybeans.

Tables. (1) Relationship between soybeans and processed foods in raw soybeans, soybean milk, and steamed seeds. (2) Chemical composition and suitability of soybeans from USA, China, and Japan for processing into tofu, miso, natto, cooked soybeans. Varieties: Enrei, Fukuyutaka, IOM (USA; low protein, high oil), Tamahomare, Kitamusume, Miyagishirome (large seeded), Nattoshoryu (small seeded), Chinese (low protein, high carbohydrate). Address: Dep. of Utilization, National Food Research Inst., Ministry of Agriculture & Forestry, Koto-ku, Tokyo.

7520. **Product Name:** [GranoVita Heideland Organic Tofu & Grain Dumplings]
Foreign Name: GranoVita Heideland Bio-Tofu Getreide Kloesschen.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1990
Ingredients: Organic tofu (Water, organically grown soybeans, calcium chloride), onions, rye flakes, fine Graham bread crumbs (Graham-Pantermehl), egg protein, rolled oats, soy sauce, herbs, seasonings (Wuerzmittel), sea salt, spices (Gewuerze), garlic.
Wt/Vol., Packaging, Price: 6 dumplings weigh 250 gm
Nutrition: Per 100 gm: Protein 10.4 gm, fat 3.6 gm, usable carbohydrates 14.3 gm, calories 132. 1 BE (Broteinheit, or diabetic exchange) = 84 gm.
New Product–Documentation: Form filled out and Label sent by DE-VAU-GE 1990, June 11. This product was introduced in 1990. Label: 2.5 by 4.5 inches. Self adhesive. Green, red, yellow, and black on white. Illustration of two red-roofed traditional houses among trees and bushes. "Contains no flesh. To prepare: Simply drop into lightly salted, boiling water and allow to simmer for about 10 minutes. Recommended in the context of a natural whole foods diet (*Im Rahmen einer Vollwerternährung zu empfehlen*)." Exklusiv Neuform certification symbol.

Note: In German, *Heide* means "heath, moorland, or moor." Thus Heideland refers to the moorland around Lueneburg where DE-VAU-GE is located.

7521. **Product Name:** [GranoVita Organic Tofu Grain Dumplings in Mushroom & Cream Sauce with Green Rye & Vegetables]
Foreign Name: GranoVita Bio-Tofu Getreidekloesse in Champignon-Rahmsauce mit Gruenkern-Gemuese
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1990
Ingredients: Dumplings: Organic tofu (water, organically grown soybeans, calcium chloride), onions, rye flakes, fine

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bread crumbs (Paniermehl), egg protein, rolled oats, soy sauce, herbs, seasonings (Wuerzmittel), sea salt, spices (Gewuerze), garlic. Mushroom & Cream Sauce: Water, cream, milk, onions, butter organically grown rice flour, wheat flour, lemon juice, lecithin (vegetable emulsifier), carob flour (vegetable thickener), spices (Gewuerze). Green Rye & Vegetables: Water, corn, green rye, carrots, paprika, onions, wild rice, vegetable oil, spices (Gewuerze).
Wt/Vol., Packaging, Price: 350 gm.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 13.5 gm, fat 21.1 gm, carbohydrates 47.8 gm, calories 435. 1 BE (Broteinheit, or diabetic exchange) = 88 gm.
New Product–Documentation: Form filled out and new Labels sent by DE-VAU-GE 1990 June 11. The product was introduced in 1990. Label: 5 by 8.5 by 1.5 inch paperboard box. Black, gold, red, green, and orange on white. A stylish color photo on the front panel shows the dish ready to serve on a black plate with a green sprig, red tomato, knife and fork nearby. At the top of the front panel: "The whole foods kitchen for the gourmet" (Die Vollwertkueche à la Gourmet) "A ready-to-heat menu for 1 person. Enjoy without flesh." The box contains two pouches: one with the tofu dumplings and sauce, the other with the grain and vegetables. The back panel shows how these can be heated in either a water bath, a cooking pot, or a microwave oven. Exklusiv Neuform certification symbol. There are three other similar products in this line.

7522. **Product Name:** [GranoVita Greek Vegetable Stew with Organic Tofu, Brown Rice, and Wild Rice].
Foreign Name: GranoVita Griechischer Gemuesetopf mit Bio-Tofu, Naturreis- und Wildreis-Beilage.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1990.
Ingredients: Stew: Paprika, water, mushrooms, onions, organic tofu (water, organically grown soybeans, calcium chloride), vegetable oils, egg protein, tomato pulp, organically grown rice flour, olives, seasonings (Wuerzmittel), soy sauce, sea salt, guar flour (plant thickener), spices (Gewuerze), herbs, garlic. Rice: Water, brown rice, wild rice, vegetable oil, sea salt.
Wt/Vol., Packaging, Price: 350 gm.
Nutrition: Per 100 gm.: Protein 13.6 gm, fat 16.0 gm, carbohydrates 61.7 gm, fiber (Ballaststoffe) 4.0 gm, calories 445. 1 BE (Broteinheit, or diabetic exchange) = 68 gm.
New Product–Documentation: Form filled out and new Labels sent by DE-VAU-GE 1990 June 11. The product was introduced in 1990. Label: 5 by 8.5 by 1.5 inch paperboard box. Black, gold, red, green, and blue on white. A stylish color photo on the front panel shows the dish ready to serve on a black plate with a green sprig, mushroom, knife and fork nearby. At the top of the front panel: "The whole foods kitchen for the gourmet (Die Vollwertkueche à la Gourmet). A ready-to-heat menu for 1 person. Enjoy without flesh." The box contains two pouches: one with the vegetable & tofu stew; the other with the grain and vegetables. The back panel shows how these can be heated in either a water bath, a cooking pot, or a microwave oven. Exklusiv Neuform certification symbol. There are three other similar products in this line. One of these, GranoVita Gruenkern Kasebratling (Green Rye Cheese Patties in Mushroom sauce with Vegetables & Rice) contains soy sauce as its only soy-based ingredient.

7523. **Product Name:** House of Tsang Hoisin Sauce.
Manufacturer's Name: House of Tsang (Distributor).
Manufacturer's Address: San Francisco, California.
Date of Introduction: 1990.
Wt/Vol., Packaging, Price: 8 oz jar.
How Stored: Shelf stable.
New Product–Documentation: Seen at Open Sesame in Lafayette, California, 1991 Feb. 16.

7524. Kudou, Shigemitsu; et al. 1990. Enzymatic hydrolysis of soybean saponins by *Aspergillus oryzae* KO-2. *Agricultural and Biological Chemistry* 54(5):134 [16 ref]*
Address: Kanesa Miso Co., Ltd., 202 Hamada, Tamagawa, Aomori 030; 2,3&5. Faculty of Agriculture, Tohoku Univ., 1-1 Tsutsumitori, Amamiya-machi, Aoba-ku, Sendai 981. All: Japan.

7525. **Product Name:** Mandarin Soyfoods Garden Patties [Bar-B-Que, Cajun, and Teriyaki].
Manufacturer's Name: Mandarin Enterprises Ltd.
Manufacturer's Address: 11031 Bridgeport Rd. #107, Richmond, BC, V6X 3A2, Canada.
Date of Introduction: 1990.
Ingredients: Bar-B-Que: Tofu (organically grown soybeans, water, magnesium chloride [purified nigari]), brown rice, soybean fibre [probably okara], soy grits, brown rice flour, fresh onions, fresh carrots, fresh celery, fresh green peppers, crushed tomatoes, sesame seeds, rice syrup solids, sea salt, spices, tomato powder, powdered fruit solids, sunflower oil, smoke and spice extracts, natural flavor, spinach powder.
Wt/Vol., Packaging, Price: 2 patties 170 gm (6 oz). Pinched ends box.
How Stored: Refrigerated or frozen.
Nutrition: Per 100 gm. Calories 255, protein 10.3 gm, carbohydrates 27 gm, fat 6.0 gm (polyunsaturates 3.7 gm, monounsaturates 1.1 gm, saturates 0.6 gm, cholesterol 0 mg), dietary fiber 2.2 gm, sodium 1050 mg, potassium 425 mg.
New Product–Documentation: This is the line extension of 3 products launched in 1989. Talk with Gerry Blanchard

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of Natural Promotions, Vancouver, BC, Canada. 1992. Jan 22. His company developed the packages/labels for these products. Mandarin now has 10-11 distributors in the USA. Six flavors are now available.

Label for Bar-B-Que sent by Gerry Blanchard. 1992 Jan. 22. 7 by 5 5 inches. Paperboard sleeve. Red, brown, and dark green on tan and light green. Illustration of a tofu burger with trimmings between buns, surrounded by a tomato, green pepper, celery stalk, and sliced onion. Silhouette of a cowboy riding a horse and swinging a lasso. "Ready in 3 minutes. Prepared with tofu, savoury herbs & vegetables. Cholesterol free. Microwaveable. Heat and serve." Called "Pâtés Jardinières" in French.

Two leaflets for all 6 Mandarin patties also sent. One shows a huge illustration of a burger with the 6 packages below it. The other shows the six packages lined up in a typical produce case. On the back is a list of ingredients and nutritional composition for each flavor.

Ad in Vegetarian Times. 1992. April. "Mandarin Soy Foods. Since 1976 we have been committed to producing the finest in great tasting soyfoods. For a free copy of our newsletter "Soy News," just circle our number below."

7526. Parma Soia. 1990. La Soia dà sempre ottimi fruitti [The soybean always gives the best fruits (Catalog)]. Strada Logheretto 2, 43010 Corcagnano (Parma), Italy. 8 p. 29 x 84 cm. Color. [Ita]

• ***Summary:*** This handsome color catalog has 4 connected panels on each side. One side displays the company's new line of 21 soy products. Most of the products are in the line titled "Campi di Soia" (Fields of Soya), but several imported products (including tofu) are in the Nature Soy line. The other gives information about the company (a subsidiary of the Italian dairy giant, Parmalat) and its plans to promote the line. The Campi di Soya line is thought to be sold through supermarkets. This brochure was distributed at CIBUS, the biggest food fair in Italy, held annually in Parma, on 6-9 May 1990. Address: Corcagnano (Parma), Italy. Phone: 0521 639148.

7527. **Product Name:** San-J Organic Shoyu: Naturally Brewed Soy Sauce (Bronze Label).
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: Colonial Heights, VA 23834.
Date of Introduction: 1990.
Ingredients: Water, organic soybeans, salt, organic wheat, organic alcohol (to preserve freshness).
Wt/Vol., Packaging, Price: 20 oz (592 ml) glass bottle. Retails for $4.99 at Whole Foods in Lafayette (April 2012).
How Stored: Shelf stable; refrigerate after opening.
Nutrition: 1 tablespoon (18 gm) contains 960 mg of salt (40% of daily allowance).
New Product–Documentation: Bottle with label purchased at Whole Foods Market in Lafayette, California. E-mail from Misako Binford of San-J. 2012. April 21. In reply to questions sent 30 April 2012. The product was introduced in 1990. San-J makes this product at their plant in Richmond, Virginia. The product was originally available in 5, 10, and 20 oz bottles for retail stores and in 5, 30, and 55 gallon containers for industrial customers. The product was now available in 10 and 20 oz bottles for retail and in 5 and 55 gallon containers for industrial customers.

7528. **Product Name:** [Tofu, Tofu Marinated in Shoyu, Tofu Pâtés]
Manufacturer's Name: Urten's Tofu.
Manufacturer's Address: Hoeje Gladsaxe 2, DK-2860 Soeborg, Denmark. Phone: +45 31-67 41-90.
Date of Introduction: 1990.
New Product–Documentation: Talk with Thomas Andersen of Urten's Tofu. 1990. May 22. He founded the company.

7529. **Product Name:** [Viana Smoked Tempeh].
Foreign Name: Viana Raeucher-Tempeh.
Manufacturer's Name: Viana Naturkost GmbH.
Manufacturer's Address: Schmittenstr. 106, D-5030 Huerth 6, West Germany. Phone: (02233) 41323.
Date of Introduction: 1990.
Ingredients: Tempeh*, shoyu*, smoke, sea salt. * = Organically grown.
Wt/Vol., Packaging, Price: 200 gm.
New Product–Documentation: Label sent by Bernd Drosihn. 1990. April 8. 3.5 by 3 inches. Self adhesive. Reddish-purple, gold, and pea green. "Tasteful, well seasoned, and nourishing (herzhaft deftig). Ready to eat immediately."

7530. **Product Name:** Westbrae Natural Ramen Express (Instant Steamed Ramen Noodles in a Cup) [Oriental Vegetable, Golden Chinese Style, Savory Szechuan Style].
Manufacturer's Name: Westbrae Natural Foods (Product Developer-Distributor).
Manufacturer's Address: 5701 South Eastern Ave. Suite 330, Commerce, CA 90040. Phone: 213-722-9817.
Date of Introduction: 1990.
Ingredients: Oriental Vegetable: Noodle pasta: Whole wheat flour, sifted wheat flour (sufficient for processing), sea salt. Seasoning packet: Natural flavors, miso* (soybeans, rice, salt), soy sauce powder (soybeans, wheat, salt), corn*, green beans*, peas*, onions*, carrots*, garlic*, spices, xanthan gum (vegetable gum), parsley*. * = Dried.
Wt/Vol., Packaging, Price: 1.1 oz (31 gm) paper cup with peel-off paper lid. Retails for $1.29 at Open Sesame (2/91, Lafayette, California).
How Stored: Shelf stable.
Nutrition: 1.1 oz (10 fl. oz as prepared): Calories 120, protein 4 gm, carbohydrate 22 gm, fat 1 gm, % calories from

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fat 7, cholesterol 0 mg, sodium 745 mg, potassium 165 mg, dietary fiber 1 5 gm
New Product–Documentation: Product with Label purchased at Open Sesame in Lafayette, California. 1991. Feb. 16. 3 5 inch diameter at mouth by 3 inches high. Paper cup. Red, black, green, and gold on white. On lid "Westbrae Natural meals in minutes." On side: "Low fat. No cholesterol. Recyclable. No hydrolyzed vegetable protein Directions: 1. Fold lid back halfway. Empty seasoning packet into cup. 2. Add boiling water to ½ inch from top, stir well and re-cover with lid. Let stand 3-5 minutes. 3. Remove lid, stir and enjoy! Microwave: Boil water in separate container, then follow directions above. Savory broth with real ramen noodles, gently steamed, not fried, so there's only 1 gram of fat. Enjoy a delicious satisfying meal in minutes!" Soyfoods Center product evaluation. Taste: very nice. The miso enriches the flavor of the broth. We like the environmentally friendly paper cup much better than the typical Styrofoam cup, and the paper seasoning packet better than its common foil counterpart. The package design is so-so. A counterpart product sold in supermarkets retails for about $0.89 for 2.5 oz (with $0.25 discount coupon) or $0.356/oz. The Westbrae product sells for $1.17/oz. or 3.3 times as much.

7531 **Product Name:** Westbrae Natural Fresh Miso (Instant Soup) [Mushroom, Snow Pea & Ginger, Green Bean & Sesame]
Manufacturer's Name: Westbrae Natural Foods (Product Developer-Distributor).
Manufacturer's Address: 5701 South Eastern Ave. Suite 330, Commerce, CA 90040. Phone 213-722-9817.
Date of Introduction: 1990.
Ingredients: Mushroom: Noodle pasta: Whole wheat flour. Miso packet: Miso (soybeans, brown rice, water, sea salt), mushroom soup stock (shoyu, mirin, shiitake mushrooms, kombu), barley malt, spices, onion*, xanthan gum (vegetable gum). Spice packet: Honey powder, soy sauce powder (soybeans, wheat, salt), garlic*, natural flavor, onion*, mushrooms*, green onion*, spice. * = Dried.
Wt/Vol., Packaging, Price: 0.9 oz (25 gm) paper cup with peel-off paper lid. Retails for $2.39 at Open Sesame (2/91, Lafayette, California).
How Stored: Shelf stable.
Nutrition: 0.9 oz (10 fl. oz as prepared): Calories 80, protein 3 gm, carbohydrate 14 gm, fat 1 gm, % calories from fat 11, cholesterol 0 mg, sodium 730 mg, potassium 125 mg, dietary fiber 2 gm
New Product–Documentation: Product with Label purchased at Open Sesame in Lafayette, California. 1991. Feb. 16. 3 5 inch diameter at mouth by 3 inches high. Paper cup. Mushroom: Reddish brown, orange, blue, and yellow on white. On lid: "Westbrae Natural meals in minutes." On side: "Low fat. No cholesterol. Recyclable. Directions: 1. Fold lid back halfway. Empty fresh miso packet and spice packet into cup. 2. Add boiling water to ½ inch from top, stir well and re-cover with lid. Let stand 3-5 minutes. 3. Remove lid, stir and enjoy! Microwave: Boil water in separate container, then follow directions above. Delicious fresh miso soup, ready in minutes. Made with brown rice miso, fresh not dehydrated, for a deep, rich flavor. Delicately seasoned, with a sprinkling of tender noodles. A light, nutritious on-the-go soup."

7532. **Product Name:** Peanut Braised Tofu
Manufacturer's Name: Wildwood Natural Foods.
Manufacturer's Address: 31 Bolinas Rd., Fairfax, CA 94930. Phone: 415-459-3919.
Date of Introduction: 1990.
Ingredients: As of 1998: Wildwood tofu (filtered water, soybeans organically grown in accordance with the California Organic Foods Act of 1990, nigari/magnesium chloride, a natural firming agent), marinade (soy sauce, water, brown rice syrup, rice wine, ginger powder), peanuts, onions, celery, red bell peppers, water, soy sauce, apple juice, vinegar, tomato paste, honey, toasted sesame oil, ginger powder, mustard, garlic, salt, and spices
How Stored: Refrigerated.
New Product–Documentation: Label sent by Billy Bramblett. 1998 July. He says this product was introduced in 1990, and made at Wildwood's plant in Fairfax.

7533. Yue Xu (Yiao Hsu). 1990. [Advances in the soy sauce industry in China]. ***Hakko Kogaku Zasshi*** (***J. of Fermentation and Biotechnology***) 70(6):434-39. [10 ref. Jap; eng]*
Address: Shanghai Brewing Science Research Inst., Shanghai, China.

7534. Asakura, Haruhiko, ed. 1990. Jinrin kinmô zui [Illustrated encyclopedia of life in the Edo period]. Tokyo: Heibonsha. v + 344 p. Illust. Index. 18 cm. Series: Toyo bunko No. 519. [Jap]
• ***Summary:*** This book first appeared in 1690 in Japan. Details are given at the original 1690 edition. Address: Japan.

7535. Atlas, Nava. 1990. Vegetarian celebrations: Menus for holidays and other festive occasions. Boston, Massachusetts: Little, Brown and Co. [xii] + 276 p. Illust. (by Atlas). Index. 24 x 19 cm.
• ***Summary:*** The recipes are organized by holiday, and the main holidays are arranged chronologically: 1. The New Year. 2. Valentine's day. 3. Easter and St. Patrick's Day, etc.

Soy related: Silken tofu pudding (p. 15). Chinese cabbage with bean curd soup and mushrooms (with "½ pound tofu (bean curd), cut into ½-inch dice," p. 78). Tofu and potato kebabs (with "2 pounds firm tofu," p. 98). The vegetarian barbecue–Tofu, tempeh and seitan (with a description and discussion of each, p. 106-08). Sweet and savory grilled tofu. Grilled tofu teriyaki. Grilled tempeh teriyaki. Sweet and savory grilled tempeh. Curried grilled

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tempeh. Grilled seitan teriyaki. Seitan and grilled vegetables teriyaki. Sweet and savory grilled seitan. Teriyaki marinade (with "natural soy sauce," p. 113). Tofu in black bean sauce (with "1/3 cup fermented black beans, rinsed and chopped," p. 212-13. Note: They are made from soy beans). Soy and honey nuts (with natural soy sauce and 4 cups shelled nuts–a mixture of peanuts, cashews, and almonds is very good, p. 237-38). Tofu mayonnaise (p. 257).

7536. Dyer, Davis, Sicilia, David B. 1990. Labors of a modern Hercules: Evolution of a chemical company. Boston, Massachusetts: Harvard Business School Press. xxiii + 529 p. See p. 12, 312-13, 329, 383. Illust. Index. 26 cm. [300+* footnotes]

• ***Summary:*** Hercules was conceived in 1911, when the U.S. Circuit Court for the District of Delaware ordered the dismemberment of the Du Pont explosives business. The U.S. Supreme Court upheld the dissolution of John D. Rockefeller's Standard Oil Corporation and James B. Duke's American Tobacco Co. at about the same time. Explosives played a major role in America's growing industrial strength. For the steel industry they blasted free iron ore. For the coal and petroleum industries they opened access to these key energy sources. And railroads could not have crossed the continent without explosives to clear the way.

Hercules Powder Co. began operations on 1 Jan. 1913 as an explosives manufacturer. The outbreak of World War I caused a vast expansion of the business.

Between 1955 and 1961 Hercules undertook a program of diversification, which led to a 68% increase in sales during the period. The first large acquisition of the period was the Huron Milling Company, a wheat flour processor based in Harbor Beach, Michigan. Huron appeared to be a close fit in terms of technology, manufacturing, and markets.

"Huron Milling had started as a flour mill in 1876. Two decades later it set a new course when it hired a graduate in chemistry from Michigan State named William L. Rossman and established a small research lab. In the next half-century, the company became a leader in the art and science of separating wheat into its major components–gluten and starch–and from these formulating a variety of edible and nonedible additives useful in several industries.

"By 1956 Huron Milling employed 500 people and had annual sales of $12 million... On the gluten side, Huron Milling marketed [manufactured] food flavorings and enhancers such as monosodium glutamate (MSG) and hydrolyzed vegetable protein (HVP), medicinal glutamic acid, and enriched baking proteins."

On 3 Dec. 1956 Hercules exchanged shares (then valued at approximately $3.8 million) for Huron Milling's assets. In 1958 Hercules began selling a new vital wheat gluten product for bakeries, Vicrum, which proved popular in the marketplace and partly offset the slump in MSG sales. "On the whole, during Huron's first four years under Hercules, the proteins proved more profitable than the higher bulk starches; in 1961, the proteins earned slightly more than $250,000, and starches lost more than $600,000."

On 1 July 1961 Hercules revamped its departmental structure for the first time since 1928. Cellulose and Protein Products (Virginia Cellulose and Huron Milling) comprised one department. Between 1962 and 1973 grew only moderately. Address: 1. Managing Director, Winthrop Group, Cambridge, Massachusetts; 2. Post-doctorate fellow in business history, Ohio State Univ.

7537. Facciola, Stephen. 1990. Cornucopia: A source book of edible plants. Vista, California: Kampong Publications. ix + 678 p. Indexes (six!). 28 cm. [522* ref]

• ***Summary:*** "In your hands is one of the most remarkable efforts to come out of the struggle to preserve the genetic diversity of our planet... Steve Facciola has put together an easy-to-understand, easy-to-use compendium of the diversity of food plants available to consumer, gardener and scientist" (from the Preface). The largest and most comprehensive work of its kind, this book gives details on 3,000 edible plant species and 7,000 varieties.

Contents: Preface, by Noel Vietmeyer. Introduction. Acknowledgements. Botanical listings. Alphabetical listings of plant families (*Glycine max* and *Glycine tabacina* are listed in the family Fabaceae, pronounced fuh-BAY-see), fungi families, algae families, bacteria families. Cultivar listings (by common name for the most important and popular crops, e.g., shiitake, soybean, spinach, sprouting seeds). Sources (names, addresses and phone numbers of firms that sell seeds, plants, etc.: Domestic commercial, domestic non-commercial, overseas commercial, overseas non-commercial). Bibliography. Indices and appendixes: Index of principal vernacular names. Index of vernacular and other names occurring elsewhere in the text. Index of usage and edible parts. Index of species native to or naturalized in North America. Index of species not listed in Kunkel [Gunther Kunkel. 1984. Plants for human consumption. Koeltz Scientific Books, Germany]. Index of families and genera. Appendix A: Abbreviations used–For type of product offered, for annotated bibliographical citations, in descriptions for sources. Appendix B: Endnotes used in the cultivar listings.

As of Aug. 1994 an electronic version of this book is now available. It runs on Microsoft Windows and uses more than 25,000 hypertext links to cross reference information.

The main information on soybeans is found on pages 91 (Botanical listings for *Glycine max* and *Glycine tabacina*), p. 219 (*Aspergillus oryzae* culture), p. 221 (*Actinomucor elegans* culture for fermented tofu or sufu, and *Rhizopus* cultures for tempeh), p. 224 (*Bacillus subtilis* culture for natto), p. 482-83 (for "field soybeans," lists 5 black-skinned cultivars, and 7 yellow-skinned cultivars; plus 11 "vegetable soybeans"–Agate, Butterbeans, Envy, Extra Early, Fiskeby

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V, Hahto, Hakucho Early, Kanrich, Okuhara Early Green, Prize, and White Lion), p. 485-87 (sprouting seeds including soybean sprouts with directions for sprouting), and p. 500 (Soyfood cultures).

Additional information on food uses of soybeans is found throughout the book. Tofu: p. 9 (In Indonesia, a salt derived from the fruit of *Rhus javanica* (*Nurude, Muyen*) is used to coagulate tofu), p. 61 (In Japan the seeds of *Cannabis sativa*, called *asanomi*, are used in deep-fried tofu burgers (*ganmodoki*)), p. 76 (A vegetable curd similar to soybean tofu can be made from the seeds of the bottle gourd or calabash (*Lagenaria siceraria*)), p. 92 (The seeds of the Bonavista bean or hyacinth bean (*Lablab purpureus*) can be prepared as tofu), p. 127 (The seeds of okra, gumbo, or lady's finger (*Abelmoschus esculentus*) can be made into tofu or tempeh). Kecap (Indonesian soy sauce): p. 9 (In Indonesia, the plant tuberose (*Polianthes tuberosa*) is added to the substrate in making kecap), p. 191 (In Indonesia, fresh leaves of kaffir lime, also called ichang lime, makrut, or djeruk purut (*Citrus hystrix*) are used to flavor kecap). Miso: The following can be used as a substrate for miso–p. 88 (Peanuts), p. 94 (seeds of the velvet bean, also called cowitch, cowhage, benguk (*Mucuna pruriens*)), p. 155 (barley (*Hordeum vulgare*)), p. 156 (proso millet (*Panicum miliaceum*)). Address: 1870 Sunrise Dr., Vista, California 92084. Phone: (619) 726-0990.

7538. Gazel, Neil R. 1990. Beatrice: from buildup through breakup. Urbana, Illinois: Published for the University of Illinois, Bureau of Economic and Business Research by the University of Illinois Press. xxii + 235 p. Plus 3 unnumbered pages of plates. See p. 46-63. Illust. Index. 24 cm.
• ***Summary:*** This is a history of Beatrice Foods Co.

Chapter 6, "LaChoy and the bean sprout," is the most detailed history of LaChoy Food Products seen to date. Much of the history concerns the period after it was acquired by Beatrice in Sept. 1943. LaChoy is also mentioned on pages 9, 15, 35, 36, 39, 40, 43, 44, 64, 110, 112, 135, 146, 176, 193, and 209.

Beatrice was basically ruined by the purchase of Esmark in 1984 for $2.7 billion. By 1985 the key philosophies of decentralized management and conservative financial policies had been abandoned, and employee morale was completely lost.

On 17 April 1986 Beatrice was acquired by KKR (Kohlberg, Kravis Roberts & Co.) for $8.7 billion using a leveraged buyout (LBO)–at that time the largest leveraged buyout in history. Over the next four years, KKR sold off Beatrice, division by division.

Note 1. Neil R. Gazel was born in 1921. The term "Local girl makes good" (once Beatrice's slogan) is not mentioned.

Note 2. In 1990, ConAgra purchased the "La Choy" brand from Beatrice Foods.

Note 3. The Introduction to this book is excellent, with two tables and two remarkable graphs. It concludes (p. xxii) "The Beatrice story is considered a classroom case history of the building and breaking up of a major company. All of the events from the beginning in 1894 to the reckoning of 1986 and subsequent actions are detailed herein in an attempt to explain what happened and why." Address: Writer, Formerly Beatrice Foods' first public relations director.

7539. Heiser, Charles B., Jr. 1990. Seed to civilization: The story of food. New ed. Cambridge, Massachusetts: Harvard University Press. vi + 228 p. Illust. Index. 24 cm. [83* ref]
• ***Summary:*** An outstanding work, written for the general reader. "This is a classic book about the origins of agriculture and the influence of its discovery on the development of civilization"–Ghillean T. Prance, Director of the Royal Botanic Gardens [England, on rear cover].

The Preface notes that this is a book about the plants (and animals) that stand between humans and starvation. The main subjects are ethnobiology, the study of plants and animals in relation to humans, and ecology, the study of organisms in relation to their environment. We humans "get all of our carbohydrates and nearly three-fourths of our protein from plant sources. Moreover, nearly all of the food we get from animals is in turn derived from plants. After all, life depends on photosynthesis; chlorophyll has been referred to as the green blood of the earth."

Table 5-1, "Estimated production of world's 32 major food crops" (p. 63) lists the top ten as (* = member of grass family; units in million metric tons): Sugar cane* 932. Wheat* 536. Corn* 481. Rice* 476. Potato 309. Sugar beet 286. Barley* 180. Manioc 137. Sweet potato 110. Soybean 95. Source: *FAO Production Yearbook*, 1986.

Chapter 7, "Legumes: The meat of the poor," contains a section on "Soybeans" (p. 129-33). It notes that there are no archaeological records of the soybean to help us determine when it was first cultivated, but it was mentioned in Chinese literature before 1000 B.C. Unlike most legumes, the beans are seldom eaten directly, but are used to make many different foods including bean sprouts, miso, tofu, soymilk (such as Vitasoy), tempeh, and soy sauce.

"The widespread cultivation and utilization of soybeans in the United States in the space of a few decades must be one of the most spectacular success stories in the recent history of agriculture."

Photos show: (1) A field of soybeans in the USA planted in rows, free of weeds. (2) Soybean plants ready for harvesting. (3) Soybean seeds. (4) A John Deere combine harvesting soybeans.

Note: Previous editions of this book were copyrighted in 1973 and 1981. Also discusses: Peanuts (p. 126-29). Potatoes and their remarkable history (p. 134-39). Tomatoes and their unusual history (p. 181, 206). Address: Distinguished Prof. Emeritus of Botany, Indiana Univ.

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7540. Hesseltine, C.W. 1990. UJNR panel on toxic microorganisms. In: Albert E. Pohland, V.R. Dowell, Jr., and J.L. Richard, eds. 1990. Microbial Toxins in Foods and Feeds: Cellular and Molecular Modes of Action. New York: Plenum Press. xvii + 617 p. See p. 1-15. From a Symposium on Cellular and Molecular Mode of Action of Selected Microbial Toxins in Foods and Foods. Held 1988. Illust. 26 cm.

• ***Summary:*** The UJNR (United States–Japan Cooperative Program on Natural Resources) was established in May 1964. There were 7 original panels, one of which was Toxic Microorganisms. The initial emphasis was on botulism, soon followed by aflatoxins. The Panel consisted of 7 Japanese and 7 Americans, they comprised a mix a people who were experts on fungal mycotoxins and bacterial toxins. The Panel conducted many activities including joint panel meetings and study tours, exchange of mutual interest items, publication of 6 books, symposia, development of regulations, and interaction with other societies.

The 1966 study tours in Japan were longer than usual because of the review of 4 projects supported by the USA involving the use of soybeans in foods. These 1966 tours included visits to the following Japanese organizations working with soybeans: (1) Universities: Nagoya Univ. (Mycotoxins and soybean fermentations), Tohoku Univ., Faculty of Agriculture (Miso fermentation), Kyoto Univ. (Fermented soybean foods), and Tokyo Univ. of Education (Soybean cheese). (2) Japanese government laboratories: Noda Institute of Research, Chiba (Shoyu fermentation), Institute for fermentation, Osaka (Culture collection and fermentation in General).

(3) Trade association laboratories (each in Tokyo): Japanese Tofu Assoc., Japanese Shoyu Institute, Central Miso Institute. (4) Companies: Sendai Miso Shoyu Co., Sendai (Miso production), Koji Sanzaemon Roho, Kyoto (Koji starter production), Takeda Chemical Industry, Osaka (Antibiotic & flavor fermentations), Kikkoman Shoyu Co., Chiba (Shoyu production).

Talk with Dr. Walter Wolf of Peoria, Illinois. 2000 Aug. 14. He was on the UJNR Protein Panel, which met for about 10-12 years, on alternating years in Japan and the USA. Thus he went to Japan 5-6 times–the last time being in about 1988. The purpose of the panel was exchange of information about protein. They met with their counterparts at the NFRI (National Food Research Institute, Tsukuba). At a typical meeting there would be formal presentations by members of both teams, followed by a field trip to numerous facilities. Address: NRRC, Peoria, Illinois.

7541. Moosewood Collective (The). 1990. Sundays at Moosewood Restaurant: Ethnic and regional recipes from the cooks at the legendary restaurant. New York, NY: Simon & Schuster. 734 p. Illust. Index. 24 cm. A Fireside Book. [55* ref]

• ***Summary:*** Since it opened in 1973 in Ithaca, New York, Moosewood Restaurant has become famous for its creative semi-vegetarian cuisine (fish are included on the menu and in this book) with a healthful emphasis. The restaurant is run by a group of 18 women and men, most of whom have worked together for nearly 10 years. Major decisions are made collectively. This is the Collective's second vegetarian cookbook. Each section, corresponding to the cuisine of 17 different geographical regions (e.g. Eastern Europe, Japan) and one ethnic group (Jewish) is written by a different member of the collective. The book contains many soy-related recipes: Tofu (20 recipes), tempeh (1), miso (1), soybeans (1), tamari roasted nuts (1), etc. The extensive "Guide to ingredients, techniques, and equipment" (p. 649-87) describes: Beans (incl. soy), chick pea flour (besan flour), dashi, Hoisin sauce, miso, seitan, soy sauce (see tamari soy sauce), light soy sauce, tempeh, tofu, vegetable oil (incl. soy oil), Worcestershire sauce ("The formula remains a well-guarded secret, but we do know that the Lea and Perrins product contains molasses, anchovies or sardines, sugar, garlic, tamarind, soy sauce, vinegar and spices"). Address: Ithaca, New York.

7542. Morningstar, Amadea, Desai, Urmila. 1990. The ayurvedic cookbook: A personalized guide to good nutrition and health. Santa Fe, New Mexico: Lotus Press. 351 p. Foreword by Yogi Amrit Desai. Introduction by Dr. David Frawley. Illust. by Amadea Morningstar. Index. 23 cm. [40 ref]

• ***Summary:*** This is a lacto-ovo vegetarian cookbook based on Ayurvedic principles. Contents: Part I: General Information. History of Ayurveda. Nutrition from an Ayurvedic perspective. Discovering your constitution. Attributes and nutritional needs of each constitution. How to imbalance your constitution. Understanding Ayurvedic nutrition: Taste. Digestion. Food combining and preparation. Balancing *Agni*. The digestive organs. The *chakras* and dietary change. Eating with the seasons. Getting ready to cook. Planning balanced meals easily. Menus: *Tridoshic*, *Vata*, *Pitta*, *Kapha*. Part II: Recipes. Part III: Appendices. 1. Most frequently asked questions and answers. 2. Enlarged food guidelines for basic constitutional types (many soyfoods are included). 3. Some basic information about nutrients. 4. Glossary of English and Sanskrit terms. 5. Food name equivalents in Latin, Sanskrit, Hindi. 6. Bibliography. About the authors (autobiographical).

The three Vatas (tridosha, three doshas, constitutional or body types) are Vata (pure air, head/wisdom), Pitta (pure fire, action), and Kapha (pure water, love/heart). Tridoshic foods or herbs are suited to all 3 constitutions; these include ghee, basmati rice, and asparagus. Concerning soya: "Many *Vatas* handle certain well-spiced soy products well, like tofu or liquid soy milk. Some do not. Let your gut be your guide.

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Dairy is very calming to Vata, especially when it is warm" (p. 14).

"*Pittas* are often attracted to high-protein foods, and do seem to need a little more protein than other constitutions. Goat milk, cow milk, egg white souffles, tofu, tempeh, and the aforementioned cottage cheese are all effective in balancing Pitta. Most beans–with the exception of heating lentils–are excellent" (p. 16).

Anything which stimulates elimination tends to relieve *Kapha* (barley and beans being classic examples). Aduki beans are especially good, as are black turtle beans, though the latter are more difficult to digest. Soy beans and soy products are recommended less frequently. Over half of tofu's calories come from fat, surprisingly, while only 4% of black beans' do. Still, soy products like soy milk tend to be less Kapha-enhancing than dairy products" (p. 19).

"Examples of oily food include ghee, vegetable oils, animal fats, soybeans, many vegetables and citrus. Dry foods include corn, buckwheat, rye, millet, most beans and dark leafy greens, to list a few. These latter foods will need moistening of some sort to be more easily digested by most people" (p. 28).

In the menu section, under each constitutional type (dosha, such as Vata), recommended menus are given by season for each meal. For example, soy-related foods included in Vata menus are: Summer: None. Fall: Dinner–Miso tofu, Amasake. Winter: None. Quick day: Breakfast–soymilk. Beverage–Amasake. Weekend day: Nothing. On the road (when travelling): Dinner' Chinese vegetables and rice (with tofu, if well tolerated).

Each recipe in the recipe section tells which constitution type it suits, how long it takes to prepare, in what seasons it is most healing, and how many it serves. For example,–Vata means that it calms Vata, + Vata means that it aggravates or increases Vata, and 0 Vata means that it is neutral for Vata. For brevity, we will give only Vata examples in the following. Soy-related recipes: About tofu (p. 102): Tofu and liquid soy milk tend to be cool and heavy, yet oilier than most other bean products. This oily lubricating quality helps their digestion, as does the pre-processing they have undergone as legumes. : Eaten in excess, they will increase *Kapha*. Warming preparation, in the form of heat or warming spices such as ginger, tamari, cumin, turmeric, cinnamon or mustard seeds, aid their healthy breakdown in the system. Beans can be idiosyncratic in effect though; if your experience doesn't match the descriptions given here, trust your direct experience first. Some people have a hard time digesting tofu in almost any form; an allergy to soy may be present. It was popular in the sixties and seventies to serve tofu cold, cubed and plain at health food-type salad bars. This is about the most difficult way to try to consume an already chilling food. Try tofu marinated, spiced and cooked, then make up your mind about its digestibility for you."

Miso tofu (p. 102,–Vata). Tofu mushrooms (p. 104,–Vata). Tofu pesto (p. 104,–Vata). Sauteed tofu and vegetables (p. 105,–Vata, but mildly + Vata with frozen tofu). East Indian lima beans (with tofu, p. 114). Spicy rice and yogurt (with soy milk, p. 131,–Vata: "Made with soy milk, which is lighter and cooler than yogurt, it is suitable for Pitta and Kapha as well"). Vegetable barley soup (with tofu, p. 188, 0 Vata).

About oils (p. 202-03): "Ghee is the highly preferred fat in Ayurveda, being light, easy to digest and potentiating to many of the foods with which it is served." Sunflower oil is the next best choice, being agreeable to all doshas. "Sesame oil is specifically recommended when a warming effect is needed. It grounds Vata... The vast majority of oils are warming and heavy in quality, including..." soy oil. "Margarine is cold and difficult to digest and not often recommended by Ayurvedic physicians."

About condiments: Salt, tamari, miso, and pickled ginger all heat up a meal and stimulate agni (fire). A detailed discussion is given of the medicinal function of sea vegetables in Ayurveda (p. 216-17).

About soy milk: Liquid soy milk can be a good alternative to cow's milk, if you are sensitive to the latter. It is also less *Kaphagenic* (imbalancing to *Kapha*) than cow's milk, when properly prepared. Lighter than cow's milk in its effect on the body, it cooks up easily in recipes. Like most high protein foods it promotes building, not cleansing. It is best used in restorative and maintenance programs. It can be warmed with cinnamon, cardamom, nutmeg or ginger and black pepper. Some *Vatas* do not tolerate it well. Dried soy milk powder and soy protein powder are much more difficult to digest than the whole liquid soy milks. Only the most stalwart *Pitta* is likely to be able to consume them without gas, as they are cold, heavy and dry. Whole soybeans and tempeh are often gas-producing as well. For adequate digestion they require much cooking and spicing, good *agni*, and a *Pitta* constitution. Hot soy milk (p. 264).

Scrambled tofu (p. 281,–Vata).

In appendix II (p. 293). The following legumes, in moderation, calm Vata: Aduki beans, soy cheese, soy milk (liquid), tofu, black lentils, mung beans, red lentils, and tepery beans. But these aggravate Vata: Soy beans, soy flour, soy powder, tempeh, garbanzos and most other beans. Among beverages, icy cold drinks and many others aggravate Vata. Beverages that calm Vata are soy milk (well spiced and hot), miso broth, many herb teas. Tofu is calming to Pitta and mildly aggravating to Kapha. Cool in action, some Vatas tolerate it well, others do not.

Aduki beans are mentioned on p. 19, 106, 109, 116, 124, 293, 306. Address: 1. Faculty member, The Ayurvedic Inst., Albuquerque, New Mexico; 2. Wife of Yogi Amrit Desai, member of Kirpalu Center for Yoga and Health, Lenox, Massachusetts.

7543. Nene, Y.L.; Hall, Susan D.; Sheila, V.K. eds. 1990.

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The pigeonpea. Oxon, England: CAB International for: Patancheru, AP, India: International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). x + 490 p. Illust. Index. 25 x 20 cm. [500+* ref]

• ***Summary:*** Contents (18 chapters, including) Foreword. Contributors. Acknowledgements. 1. Geography and importance. 2. Origin, history, evolution and taxonomy. 16. Nutrition and products. 17. Markets and outlook.

Pigeonpea (*Cajanus cajan* (L.) Millspaugh), a major grain legume, is widely grown as a backyard subsistence crop by small farmers in the semi-arid tropics. Worldwide, it ranks sixth in area and production compared with other grain legumes. All evidence indicates that the pigeonpea originated in Peninsular India. Today India produces more pigeonpeas than all other countries combined. The word "pigeonpea" probably originated in the Americas, where it arrived in the 15th century, because pigeons were fond of the seeds.

Chapter 16, "Pigeonpea: Nutrition and products," by D.G. Faris and U. Singh (both of ICRISAT; 126 refs = many tables and photos) includes the following contents: Introduction. Nutrition. Supplementation value of pigeonpea in cereal-based diets. Nutritional quality of vegetable pigeonpea. Cooking quality. Human food: Whole dry seed (the tough seed coat results in a long cooking time "but is free from the lipoxidase that causes off-flavours in soybean..."), dhal, other products from dry seed (freshly sprouted seed {sprouts}, tempeh {made with a combination of pigeonpea and soybean, see photo}, pigeonpea sauce (ketchup) is a replacement for soysauce in Indonesia, canned whole dried seed, pigeonpea flour, extruded food, clear noodles). Vegetable (green seed {used as a green vegetable, often in place of green garden peas}, green pods). Animal feed. Medicinal uses ("There is a considerable folk medicine and ayurvedic listing of the curative effects of various parts of the pigeonpea plant"). Future. Address: 1. Deputy Director General, ICRIAT, Hyderabad, India.

7544. Perché la soia [Why soya?]. 1990. Strada Logheretto 2, 43010 Corcagnano (Parma), Italy. 6 panels. Catalog. 29 x 21 cm. [Ita]

• ***Summary:*** In this brochure, a color photo shows the entire *Campi di Soia* and *Erboristeria* lines. The two are almost identical in terms of product names and packaging except that the word "Erboristeria" replaces the word "Campi di Soia" for products sold to the health food trade. The Erboristeria line has a bottled cooked soybeans (*Semi di Soia*), and a different shaped soy fortified pasta (*Soipast*). Both lines now have a soy lecithin (*Lecitina di Soia*). In both lines, the bottled soymilk is named Soidrink (3 flavors) and the soymilk in a Tetra Brik Aseptic carton is named Soilat (1 flavor). Address: Corcagnano (Parma), Italy. Phone: 0521 639148.

7545. San-J International, Inc. 1990. In 1804 Napoleon became emperor, Jefferson was reelected, and the Sato family brewed its first tamari (Ad).

• ***Summary:*** The wording of this ad was revised in early 1990. Address: Richmond, Virginia. Phone: 804-226-8333. Fax 804-226-8383.

7546. Titsingh, Isaac. 1990. The private correspondence of Isaac Titsingh, Vol. 1 (1785-1811). Introduced and edited by Frank Lequin. Amsterdam, Netherlands: J.C. Giebon. Index. 24 cm. Series: Japonica Neerlandica vol. 4. [3 soy ref. Dut]

• ***Summary:*** Text chiefly in Dutch, with some correspondence in English. Isaac Titsingh was born on 10 Jan. 1745 in Amsterdam, and died on 2 Feb. 1812 in Paris. He was buried in Père-Lachaise cemetery. The inscription on his gravestone, written in French, states: Here lies Isaac Titsingh, formerly a councillor of the Dutch East India Company, Ambassador to China and to Japan. Died at Paris the 2nd of February 1812, aged 68 years.

This book, dedicated warmly to Prof. C.R. Boxer, begins with a 17-page "General introduction," by the author, in English. It discusses: Titsingh's life and work, the nature and content of his correspondence, the manuscripts, and notes on the text. This introduction shows Titsingh as a truly remarkable man, 50-100 years ahead of his time, and a pioneer at the dawn of understanding between Japan and Europe. Titsingh loved Japan, and that love opened doors to him that were closed to mere merchants.

Brief biography (p. xv-xxii). Titsingh was born in 1745 into an affluent, "well-educated patrician family in Amsterdam which counted a number of well-known surgeons among its members. Isaac Titsingh first qualified as a surgeon in Amsterdam, then obtained a doctorate in law at Leiden. In 1765, at age 20, he set sail for Asia as an *Onderkoopman* (Junior Merchant) with the Dutch East India Company (*Verenigde Oostindische Compagnie*, VOC). In Asia, he first worked as an administrator in Batavia (today's Jakarta, head of VOC's Asian operations), then he spent a total of 3½ years in Japan, divided over three separate stays from Aug. 1779 to Nov. 1784, as *Opperhoofd* or *Kapitan*, Director of the VOC trade there. At this time, Holland was the only Western nation allowed to enter or trade with Japan; the VOC was confined to the tiny man-made island of Deshima in the Bay of Nagasaki on the southern Japanese island of Kyushu–where they could be constantly watched and their actions tightly controlled by Japanese authorities. While in Japan, Titsingh paid two official visits to the Shogun's Court at far-away Edo (today's Tokyo). He also visited the Emperor's Court at Kyoto. From 1775 to 1792 he was Director of VOC's trade in Bengal; he resided at Chinsurah, near Calcutta. "In that period he [learned to speak English] and made many good English friends, who later proved a great asset to him." From 1792 to 1793 he returned to Batavia, this time as *Raad-Extraordinaris* (Councillor Extraordinary) of the Indies. From 1794 to 1795 he served

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as ambassador to the Imperial Court at Peking; he attended the 60th anniversary of the reign of the Qianlong Emperor. In 1796, Titsingh finally returned to Europe after a brilliant stay of 31½ years in Asia. After a brief stay in London, he spent the last years of his life as a largely unknown recluse in Paris.

"Titsingh had a brilliant career, but he was not a typical careerist. He was one of the top VOC officials in the Orient, but he was not a typical VOC employee. He was deeply interested European-Japanese academic and cultural relations. "Titsingh's position was unique." The Enlightenment (ca. 1650-1750) was now well established in Europe and he helped to foster the interests of a number of Japanese pioneers who were interested in learning more about Holland (*Rangakusha*) and about European culture, and in opening up Japan to the outside world. Titsingh took an equally deep interest in learning more about Japan–but in a systematic and objective way, trying to eliminate the many Western prejudices about Japan. "Titsingh taught a number of Japanese to read and write Dutch, and he himself learned Japanese"–he was a prodigy at learning languages. He helped supply Dutch books in the fields of medicine, science, the arts, etc. to the *Rangagusha* and with some of them he became lifelong friends and correspondents. He developed a large collection of Japanese objects; he was granted the rare permission to take these (and a map of Japan) back to Europe. Charles Boxer described Titsingh as "the most learned of all the Hollanders who visited that country [Japan] during the two centuries and a half in which" the VOC was active there. George Sansom, the great Japanologist, described Titsingh as "a man of all-around accomplishment." For much more about Titsingh, read this General Introduction.

Volume I of book contains 215 letters relating to the period 1785-1811. Of these, three mention soy [sauce], but only in passing. (1) Letter no. 5 of 24 Nov. 1785 (p. 9) ("... *een provisie van sacky, soya en andere Japansche producted toetezended,...*).

(2) Letter no. 16 of 21 June 1786 (p. 27) ("*295 kruyken Zooija, 100 kruyken Zackij...*").

(3) Letter no. 55 of 19 June 1789 (p. 124) ("...*en kon gen balij zakij or zooija na boord krijgen*").

Note: Engelbert Kaempfer (1651-1716) traveled and worked in Japan for two years from Sept. 1690 to Nov. 1692 as chief surgeon to the Dutch East India Co. (VOC). While in Japan, he twice visited Edo and the Shogun Tokugawa Tsunayoshi there. His tact, diplomacy and medical skill overcame the cultural reserve of the Japanese, and enabled him to elicit much valuable information.

7547. Wagner, Lindsay; Spade, Ariane. 1990. The high road to health: A vegetarian cookbook. New York, NY: Simon & Schuster / Prentice Hall Press. xv + 288 p. Foreword by E. Lee Rice. Index. 24 cm. [54 ref]

• ***Summary:*** Lindsay Wagner, whose lovely color photo appears on the cover, first achieved widespread television in the early 1970s as "The Bionic Woman." Recently she starred in the Academy-Award winning film *The Paper Chase*. This vegan cookbook uses no meat, dairy products, or eggs. A section titled "Raising the Dairy Question" (p. 13) discusses problems with milk and concludes: "A terrific substitute for milk products comes from that little marvel, the soy bean. Soy milk has the look and consistency of milk, and some brands even taste like it. Try some on your breakfast cereal, top your pies with our creamless Whipped Cream, spread your sandwiches with eggless Mayo Spread and enjoy Huevos-less Rancheros for brunch. You'll never look at another carton of milk."

Chapter 4, "About the ingredients," includes discussions of Braggs Aminos, cold-pressed oil, kuzu, lecithin, miso, mochi, nori, soy milk, soy sauce, tempeh, tofu. Soy-related recipes include: Huevo-less rancheros (with tofu and soy milk, p. 65). Vegetarian "salami" (with firm tofu, p. 82-83). Mayo spread II (with soy milk, p. 88). Ginger tamari dressing (p. 131). Creamy oil substitute (with soy milk, p. 134). Tofu sour cream (p. 134). Eden cheesy sauce (with soy milk, p. 136).

Chapter 10 (p. 141-59) is titled "Entrées for the meat lover", most of the recipes are based on soyfoods. Marinated tempeh (p. 141). Marinated tofu. Barbecued tofu or tempeh. Tempeh marinade. Teriyaki tofu. Polynesian tofu. Tofu piquant. Tofu ribs. Grilled tofu with summer vegetables. Japanese eggplant and tofu Romano. Pecan herb loaf (with tofu and soy flour). Easy tofu burgers. Easy easy burgers (with Marinated tempeh or tofu). New Age Italian sausage I (with Marinated tempeh and Marinated tofu). New Age Italian sausage II (with Marinated tofu). Spicy tempeh stir fry. Tofu cacciatore.

Lasagna with zucchini and mushrooms (in Light sauce with soy milk, p. 166). Manicotti stuffed with zucchini and tofu cheese (p. 175). Tacos (with Marinated tofu and tempeh, p. 187). Eggplant al forno (with tofu, p. 213). Banana-strawberry tofu pudding (p. 231). Italian cheesecake (with tofu, p. 243). Coconut-mocha cream frosting (with soy milk, p. 260). Tofu fruit sauce (p. 261). Mock whipped cream (with soy milk, p. 262).

An interesting last chapter titled "Afterword: Meat–We can live without it! Here's why" discusses the role of an "animal-based diet" on destruction of the environment. Address: 1: California; 2: Woodland Hills, California.

7548. Zeffertt, Wendy. 1990. Cultured foods. Gentian Services, P.O. Box 2140, Olympic Valley, CA 95730. 151 p. Illust. by Nanet Zeffertt. Index and recipe index. 28 cm. Spiral bound. [32 ref]

• ***Summary:*** This book is a good introduction to the many kinds and benefits of cultured or fermented foods. Many chapters (and all soyfoods chapters) contain recipes.

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Chapters related to soyfoods are 1. Why cultured foods? 2. Cultured dairy products. 3. Miso. 4. Tamari and shoyu (soy sauce). 5. Amazake, sake and mirin. 6. Tempeh. Where to order starter cultures. Glossary.

Note: This is not a vegetarian book; poultry and fish are used in some of the recipes. Address: Olympic Valley, California.

7549. Stanley, Sarah. 1991. Documents owned by Lea & Perrins concerning their company's early history (Interview). *SoyaScan Notes*. Jan. 16. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** The company does not have a written company history, though it does have a brief brochure "Worcestershire Chronicle." More important, it does has many very old documents going back to the 1830s. These old ledgers (recently rebound), books, and 6-10 old scrapbooks are kept in two locked glass display cases at Fair Lawn, New Jersey. None have been published. There are also some old bottles in the showcases. No one at the company really knows the history of the company. A researcher might be able to use these documents on site if he/she were qualified and very careful. "We are about to embark on a project to put all of the written materials we have in books, cataloging and organizing them. We expect it to be finished in 6-8 months. We feel that our history is very valuable. We have a young lady named Reggie Aber who has recently retired, and who has the time and the interest to work on this project. We will buy new scrapbooks, and she will organize our existing documents by product, and within each product chronologically from earliest times to the present. The result will a number of well-organized scrapbooks. Our major product is Original Worcestershire, but we also have other products. We are a big name but a small company, with only 110 employees, including office staff. The president is Mr. Dennis Newnham, an American. The company has never been located in Ridgely, Maryland, but they did have a fulfillment and coupon house there. The company was originally located in New York, but moved to Fair Lawn quite some time ago."

Update: Talk with Sarah Stanley. 1994. Jan. 6. The project was completed by Reggie Aber, but Sarah's assistant, who was handling the archives, has recently left the company and she has not yet been replaced. So there is nobody who knows the material and can answer questions concerning them. She hopes to be hiring a new person for this job in the next few weeks (the person will not be a trained archivist), and within about 3 months that person should know the material. The purpose of the project was simply to organize the company's early important documents in an archives, not to summarize them or write a company history. The company has two scrapbooks and documents organized in files by subject matter. So there would probably be a file on Worcestershire sauce, with early records. If a researcher wanted to use these archives, he or she should write the company president, Mr. Dennis Newnham, giving details and requesting permission.

Update: Talk with Sarah Stanley. 1994. May 5. Contact Jackie Fallon for help on this project. Address: Executive Secretary to the President, Lea & Perrins Inc., 15-01 Pollitt Dr., Fair Lawn, New Jersey 07410-2728. Phone: 201-791-1600.

7550. Fantastic Foods, Inc. 1991. Add some character to a quick lunch (Ad). *Health Foods Business*. Jan. p. 40 (A-B).

• ***Summary:*** The front side of the glossy full-page ad shows a girl smiling behind 7 different "Fantastic Meals in a Cup." The text begins: "Who says a healthy vegetarian lunch can't have a smile in it?" On the back, the ingredients in each of 6 products are listed. Cha-Ca Chili contains textured vegetable protein. All-O-Round Spaghetti contains "soy sauce powder (soybeans, wheat, salt)." Splittin' Peas contains "miso and soy sauce powder (soybeans, rice, wheat, salt)." Leapin Lentils over Couscous contains "miso powder (soybeans, salt)." And Rockin' A B C's contains "miso powder (soybeans, rice, salt)." Address: California.

7551. **Product Name:** Fantastic Cha-Cha Chili, All-O-Round Spaghetti, Splittin' Peas, Leapin' Lentils Over Couscous, Rockin' ABC's.
Manufacturer's Name: Fantastic Foods.
Manufacturer's Address: 106 Galli Dr., Novato, CA 94949. Phone: 415-883-7718.
Date of Introduction: 1991 January.
Ingredients: See below.
Wt/Vol., Packaging, Price: 2 oz (56 gm) paper cup.
How Stored: Shelf stable.
New Product–Documentation: Ad (full page color) in Health Foods Business. 1991. Jan. p. 40A-B, and in Whole Foods. 1991. Feb. p. 27. "Add some character to a quick lunch." The label of each cup is clearly visible. Ingredients: Fantastic Cha-Cha Chili uses textured vegetable protein as the second ingredient. Fantastic All-O-Round Spaghetti is seasoned with soy sauce powder. Fantastic Splittin' Peas is seasoned with miso and soy sauce powder. Fantastic Leapin' Lentils Over Couscous is seasoned with miso powder. Fantastic Rockin' ABC's is seasoned with miso powder. All the products are low in fat. Just add hot water and serve. Same ad in Natural Foods Merchandiser. 1991. Jan. p. 25 (insert).

7552. Fowler Brothers. 1991. Catalog: January 1991. P.O. Box 2324, San Rafael, CA 94912. 79 p. 28 cm.

• ***Summary:*** The company is a "distributor of natural foods." The following makers, distributors, and brands of soyfood products are listed. I. Bulk Products: Miso (American Miso, 8 products), Soy foods (Turtle Island tempeh and Soy Deli tofu burger). Soy Sauce & tamari (San-J domestic shoyu

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and tamari, Westbrae Johsen shoyu), Tofu (Quong Hop, 6 products).

II. Packaged products: Ah Soy (Westbrae, 7 soy drinks), Eden Foods (Edensoy, 6 soy drinks), Pacific Soyfoods (6 types of soysage), Pacific Tempeh (4 products), Quong Hop (11 soymilk and 4 tofu products), San-J (tamari crackers, 14 soy sauce & tamari products), Soy Deli (Quong Hop, 5 soy foods, 8 vacuum pack tofu), Sweet Earth (3 vegeburgers), Turtle Island (10 tempeh products), Vitasoy (7 soy drinks), Westbrae (2 instant miso soups, 14 soy drinks, 14 types of soy sauce and tamari). Address: San Rafael, California. Phone: 415-459-3406.

7553. Horitsu, Hiroyuki; Wang, M.Y., Kawai, K. 1991. A modified process for soy sauce fermentation by immobilized yeasts. *Agricultural and Biological Chemistry* 55(1):269-71. Jan. 3 figs. 2 tables. [4 ref]

• ***Summary:*** Ceramic beads were used in a bioreactor to make fermented soy sauce by a continuous process in a short time. Address: Dep. of Bioresources Utilization, Faculty of Agriculture, Gifu Univ., Yanagido 1-1, Gifu 501-11, Japan.

7554. **Product Name:** Thai Peanut [Sauce]: Mildly Spicy Marinade & Dipping. Gluten Free.
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 800-595-9545 or 415-821-4040 (Perelman)
Date of Introduction: 1991, January.
Ingredients: Tamari soy sauce (water, soybeans, salt, alcohol), peanuts, organic sugar, water, apple cider, vinegar, sake (water, rice, salt), honey, rice vinegar, garlic powder, salt, spices, lemon concentrate, canola oil, cilantro, xanthan gum.
Wt/Vol., Packaging, Price: 5.07 fluid oz (150 ml) dispenser, 10 fluid oz bottle, 20 fluid oz (592 ml). The 10 oz Gold Label retails for about $2.29, and the Black Label for about $1.99 (13% less).
How Stored: Shelf stable.
Nutrition: Per 2 Tbsp (35 gm): Calories 80, Calories from fat 30.
New Product–Documentation: Talk with Stephen Zoller, 1992 July 6. This product was introduced in Sept/Oct. 1991 at the Natural Foods Expo, but was not available in stores until Dec. 1991.

Two labels sent by Misako Binford of San-J International, 2012, May 14. The brown label now reads as shown above. "New. More peanut flavor. 10 fl. oz." A logo on the front panel: "Certified Gluten Free."

7555. Lesser, Peter; Elkin, Ed. 1991. History of Pacific Soyfoods in Olympia, Washington (Interview). *SoyaScan Notes*, Feb. 8. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Pacific Soyfoods was started by Peter Lesser in 1981. Initially it was run out of the kitchen a collective restaurant named Café a la Mode, located on 4th Avenue in Olympia, Washington. They made tofu from scratch, and used the okara from the tofu to make soysage, using a version of the recipe published in *The Farm Vegetarian Cookbook*. Initially these products were served in the restaurant (the okara was used in sandwiches), but by about June 1981, they had started delivering the Soysage to the local food co-op and to 1 or 2 local grocery stores in Olympia. When the restaurant was closed after a year of operation, the wholesale accounts still wanted Soysage, so Peter decided to keep the soy operation going and at that time, in Feb. 1982, he coined the term "Pacific Soyfoods."

Peter stopped making tofu and bought his okara from a Korean-American tofu manufacturer named Boo Han in Lakewood, Washington. In the spring of 1982, Pacific Soyfoods' landed its first wholesale account, Pacific Rim (formerly known as something like C C Grain), a collective wholesaler in Seattle, that delivered to the Puget Consumers Co-op (PCC) in Seattle. Soon thereafter he started selling to natural foods wholesalers, the first one based in Seattle and the second one based in Portland, Oregon. Then in 1983 he expanded his product line by adding to the Original Soysage, Italian and Mexican flavor, and changed from a fresh Saran wrap packaging to vacuum packaging. He expanded his distribution into the San Francisco Bay Area, first through Pacific Trading Co. (Mark Brawerman), then after he folded, Ben Lee at Quong Hop & Co. took over the distribution. At one point, Quong Hop offered to set up at plant in the state of Washington with Peter overseeing it, in order to reduce freight to Washington. Island Spring also distributed Peter's products, and he would sometimes get okara from them.

In about Nov. 1985 he introduced his first tofu burger, the Earthling Tofu Vegetable Burger. He bought the tofu for this burger from Boo Han.

On 1 April 1988 Peter sold Pacific Soyfoods to Ed Elin. At that time the company made four soyfood products: three flavors of Soysage, and Earthling Tofu Vegetable Burgers. Peter left and started Northwest Natural Foods, which makes Medallions, salmon or halibut patties/burgers with wild rice. He tried many times to make a salmon & tofu burger but was unable to get the right texture. (His phone number is now 206-866-9681.) Elin purchased his tofu and okara from Boo Han's, just up the road in Tacoma, Washington. About 12-15 months ago Boo Han changed hands; it is now named Hang Yang, owned by Mr. Choy, a Korean-American, who does not speak English–although his brother does. Hang Yang is very aggressive and doing well; he just upgraded to a new system.

Ed continued to make the same four products, and will be getting new labels (with some color changes) next week for two new flavors of burgers. To the Original Earthling, they will add a Barbecued Earthling and a Teriyaki Earthling. The Barbecued flavor should be on the market in late Feb.

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and the Teriyaki in March. His business is "growing so fast I can't believe it." His bestselling product is the tofu burger. He has also become distributor for other companies outside the region; he brings up and distributes Quong Hop's entire Soy Deli line. He plans to take on some tofu wieners and the JSL line of egg roll wraps and won-ton skins. By mid-summer he plans to have three of his own styles of tofu (soft, medium, and firm) private labeled by Han Yang.

He fully services his own products in about 175 supermarkets on a weekly or bi-weekly basis. His big accounts are Q.F.C. [Quality Food Centers, the big market in Seattle], and Safeway. He sells only in supers, no natural/health food stores. But he does sell his products to companies that distribute to natural/health food stores, such as NutriSource and the Mountain People's Warehouse down south. The business in natural food stores is too small. Address: 2948 29th Ave. S.W., Building 2C, Olympia, WA 98502. Phone: 206-943-6234.

7556. Miyazawa, Mitsuo. 1991. [Re: Early shipments of miso and shoyu from Sendai Miso Shoyu Co. Ltd. to Mitoku]. Letter to Chris Dawson of Mitoku, Feb. 22. Based on a request from William Shurtleff at Soyfoods Center. 1 p. Handwritten, with signature. [Jap]

• ***Summary:*** "In Oct. 1970 Jôsen Shôyu was shipped in 18 liter cans, and red (rice) miso was shipped in 20 kg cans.

"In March 1976 brown rice miso was shipped in 20 kg cans. According to our research, these were the earliest dates that each of these products was shipped."

Chris Dawson adds: "I understand that Johsen was the first with brown rice miso, so this must be the first shipment ever of brown rice miso... I am trying to pull together information about the first shipments of miso and shoyu by Mitoku. It is a little difficult since we do not have the records on hand and some of our early customers are no longer in operation." Address: Sendai Miso Shoyu Co. Ltd., Furujiro 1-5-1, Sendai 982, Miyagi prefecture, Japan.

7557. Eden Foods, Inc. 1991. Eden Foods product overview (Leaflet). Clinton, Michigan. 12 panels. Feb. 23 x 10 cm.

• ***Summary:*** Two panels of this leaflet contain a brief history of Eden Foods, plus a chronology of key events in the history of Eden Foods. 1967–The first checking account was opened for Eden Foods, a source of macrobiotic and organic foods in Ann Arbor, Michigan. 1968–Eden Foods, Incorporated became a registered business, with food service, retailing and food processing operations. 1970–Eden Organic Certification Standards were implemented. Eden products were distributed in Michigan and Ohio. 1972–Trade relationship began with Muso Company, Ltd. of Osaka, Japan. 1979–Fire at warehouse reduced records, equipment and inventory to rubble. Two weeks later Eden Foods reopened. 1982–Schmidt Noodle Company, maker of Eden organic pasta since 1976, was acquired by Eden Foods. 1983–Edensoy soy beverage introduced; historic new item in natural foods market. 1985–San Francisco, California sales office and warehouse opened to service the West Coast. 1986–American Soy Products opened to produce Edensoy in Michigan; first aseptic soy beverage plant in the United States. 1988–Eden Foods joined OCIA, Organic Crop Improvement Association, for independent certification of crops. 1989–Eden and OCIA established standards for food processing as well as growing crops.

Six panels inside the leaflet describe the company's main product lines and give color photos of leading products from each line. Edensoy soy beverage. Organic durum pasta. Organic tomatoes. Organic grain sweetener (100% barley malt). Oils & vinegars. Beans & grains. Fruit products. Seasonings (Sesame Shake = gomashio). Traditional Japanese pasta. Traditional Japanese miso. Japanese soy sauces. Japanese sea vegetables. Japanese oils & vinegars. Japanese chips & crackers. Japanese pickles. Japanese concentrated foods (plum, garlic, kombu). Japanese teas. Japanese specialty foods (macrobiotic).

The company's trademark is now "Making a tradition of good health." Address: 701 Tecumseh Rd., Clinton, Michigan 49236.

7558. **Product Name:** Meatless Healthy Bacon (Made with Tempeh).
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: 6123 E. Arapahoe Rd., Boulder, CO 80303. Phone: 303-443-3470.
Date of Introduction: 1991 February.
Ingredients: Soy tempeh (cultured organic soybeans, water), soy sauce (water, soybeans, whole wheat, salt), miso (soybeans, water, salt), dried yeast, beet powder for color, dehydrated onion, granulated garlic, natural liquid hickory smoke and spices.
Wt/Vol., Packaging, Price: 6.5 oz (184 gm) plastic pouch.
Nutrition: Per 1 oz: Calories 27, protein 4 gm, carbohydrate 4 gm (incl. 3.3 g, dietary fiber), fat 1 gm, cholesterol 0 mg, sodium 310 mg.
New Product–Documentation: White Wave News. 1991. Vol. 4, No. 1. June. A photo shows the label. Like all White Wave products, Meatless Healthy Bacon is made with soybeans grown in accordance with Section 26569.11 of the California Healthy and Safety Code [i.e. organic soybeans]. A comparison of 1 oz. broiled/fried bacon (pork) with Meatless healthy Bacon shows: Fat: 14 gm vs. 1 gm. Saturated fat: 4.95 gm vs. 0.15 gm. Cholesterol: 24 mg vs. 0 mg.

Label sent by Lon Strommes. 1991 July 30. 4.5 by 10.25 inches. Plastic pouch. Red, black, and yellow on white. "Cholesterol-free! Vegetarian breakfast strips. A great-tasting choice."

7559. Dawson, Chris. 1991. Re: Chronology of early

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shipments of shoyu and miso from Mitoku to Europe and the USA. Letter (fax) to William Shurtleff at Soyfoods Center, March 8. 1 p.

• ***Summary:*** 1969–First shipment of organic shoyu (Sakae Shoyu brand) from Fukaya Shoten in Shizuoka prefecture, Japan, to Mr. Sakaguchi of Le Bol en Bois in Paris, in 16 liter tins. This shoyu was made with MOA* ingredients.

1970, Oct.–First shipment of Jôhsen Shoyu and red rice miso from Sendai Miso Shoyu Co. Ltd. in Sendai, Miyagi prefecture.

1971–First shipment of Hatcho miso from Hatcho Miso Ltd. in Aichi prefecture to USA.

1976, March–First shipment of brown rice miso from Sendai Miso Shoyu Co. Ltd. in Sendai, Miyagi prefecture. In 20 kg tins.

1980, May–First shipment of Onozaki rice miso from Onozaki Koji-ten in Tochigi prefecture to Oak Feed in Miami, Florida. 84 cartons and 4 kegs.

1980–First shipment of buckwheat miso from Kamegen Jyozo in Nagano prefecture, to Europe. 100 packs of 500 gm each.

1984, Sept.–First shipment of organic tamari from Mansan Shoten in Aichi prefecture to Blake Rankin of Granum in Seattle, Washington. Four x 18 liters.

1984–First shipment of organic soybean miso from Mansan Shoten in Aichi prefecture to Jon Judson of Soy Source, Christchurch, New Zealand.

1987–First shipment of organic young (*waka*) Hatcho miso from Hatcho Miso Ltd. in Aichi prefecture to USA.

1989–First shipment of organic Hatcho miso from Hatcho Miso Ltd. in Aichi prefecture.

* Note: MOA refers to Mokichi Okada International Association, which is a commercial association related to the Japanese religion *Sekai Kyusei Kyo* which means "helping the world religion." Its basic tenet is to "Make heaven on earth," to bring peace on earth and health to all people. There are approximately 700,000 members in Japan. Mokichi Okada lived 1882-1955. The commercial company was formed in 1920 and is now known as MOA Trading Company. Its purpose is to promote natural and organic farming and provide natural products for people. Address: International Sales Manager, Mitoku Co. Ltd., C.P.O. Box 780, Tokyo 100, Japan. Phone: 3-3201-6701.

7560. **Product Name:** Earthling Tofu Vegetable Burger [Barbecued, or Teriyaki].
Manufacturer's Name: Pacific Soyfoods.
Manufacturer's Address: 2948 29th Ave. S.W., Building 2C, Olympia, WA 98502. Phone: 206-943-6234.
Date of Introduction: 1991, March.
Wt/Vol., Packaging, Price: 8 oz. or 16 oz.
New Product–Documentation: Talk with Peter Lesser of Northwest Natural, 1991, Feb. 8. He plans to introduce these two new products in Feb. and March (respectively) 1991.

7561. Cox, J. 1991. Let's hear it for the soy. ***Men's Health*** 6:42-43, April. *

7562. **Product Name:** [Céréal Natura Soja: Soyabased Sauces (Bolognese, Lemon, Garlic, or Paprika)]
Foreign Name: Céréal Natura Soja.
Manufacturer's Name: Céréal Wander Nutrition SA.
Manufacturer's Address: Z.I. La Lombardiere, 07100 Annonay, France. Phone: 75 33 22 31.
Date of Introduction: 1991, April.
New Product–Documentation: Spot in SoyaFoods 1991 Spring, p. 4. "Natura Soja." Products include a range of soyabased sauces with no cholesterol. Bolognese (190 ml), lemon (250 ml), garlic (220 ml), and paprika (220 ml) sauces.

7563. Paine, Heather. 1991. Soya and SIAL '90: Editorial. *SoyaFoods (ASA, Europe)* 2(1):1, Spring.

• ***Summary:*** "Last year's SIAL (Salon International de L'Alimentaire) was certainly impressive and all the more so because soyafoods and products containing soya had a remarkably good presence... French soyafoods companies were well represented with many new products... In the 'new products' section a soya-oil based margarine from Denmark (Margarines AMA-Dragsback Margarine Fabrik S.A.) won a SIAL D'Or award and a soyamilk from Argentina (AdeS) was highly commended." Address: editor, SoyaFoods, 27a Santos Rd., London SW18 1NT, UK. Phone: 081-874-5059.

7564. Tatsumi, Yoshiko. 1991. Kotokoto fukkura–Mame ryôri [Simmer slowly and they expand: Bean cookery]. Tokyo: Zaidan Hôjin Nôsan Gyôson Bunka Kyôkai. 214 p. April 30. [Jap]

• ***Summary:*** The word *kotokoto* in the Japanese title describes the sound of bubbles coming up during simmering, it is sometimes translated as "pit pat." This book contains a section of edamame recipes (p. 52-58). After that comes a section on tofu, miso, and shoyu (p. 59+). Address: Cooking teacher, Japan.

7565. Carper, Jean. 1991. The food pharmacy guide to good eating: More than 200 totally healthy recipes. New York, NY: Bantam Books. xxiv + 422 p. Index. 24 cm.

• ***Summary:*** This is a book about the medicinal and therapeutic properties of food. Part I has a long section (p. 9-13) titled "The vegetarian advantage," extolling the many health benefits of a vegetarian diet–based on many different scientific studies. However the book also contains an even longer section (p. 265-326) titled "Seafood, poultry, and meat main dishes"–with sidebars about how eating fish is good for your health.

The index contains 9 entries for tofu, 6 for soy sauce and for whole soybeans, 5 for miso, 2 for soy oil and its omega-3

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fatty acids, and 1 for soy milk.

7566. **Product Name:** Chief Brand Soya Sauce.
Manufacturer's Name: Chief Brand Products.
Manufacturer's Address: Uriah Butler Highway, Charlieville, Trinidad and Tobago, West Indies. Phone: 809 665 4144
Date of Introduction: 1991 May.
Wt/Vol., Packaging, Price: 200 ml bottle.
How Stored: Shelf stable.
New Product–Documentation: Spot in SoyaFoods (ASA, Europe) 1991 2(2):8. "Soya sauce from Trinidad." Chief Brand Products, the largest manufacturer of spices, curry powder, and condiments in Trinidad and Tobago, exhibited this product at the International Food and Drink Exhibition in London in April/May. The company exports to the Caribbean and North America.

7567. *Giornale della Soia (Il)* (*Italy*).1991. Fabbricazione della salsa di soia nel Kwantung, China [Soy-sauce manufacturing in Kwangtung, China]. 7(3):19. May. [1 ref. Ita]
• ***Summary:*** This is a reprint of a paper by Elizabeth H. Grof published in 1919 in the *Philippine Journal of Science* 15(3):307-16. Sept. A map shows that Kwangtung is the province in southeastern China surrounding the city of Canton.

Note: This is the earliest Italian-language document seen (April 2012) that uses the term *salsa di soia* to refer to soy sauce.

7568. *Japan Company Handbook* (*Tokyo: Toyo Keizai, Inc. Quarterly*).1991. Foods. Spring. Second section. [Eng]
• ***Summary:*** In the section on Foods, 1 page of statistics is given on each of the following soy-related companies: Torigoe Flour Milling, Marukin Shoyu (Japan's 5th ranked shoyu maker, based in Shozu island), Yutaka Shoyu (based in Tokai area, also makes miso), Sanbishi (shoyu maker based in Tokai area), Kibun. Address: Tokyo, Japan.

7569. Benjamin, Hania; Storkson, J.; Nagahara, A.; Pariza, M.W. 1991. Inhibition of benzo (*a*)pyrene-induced mouse forestomach neoplasia by dietary soy sauce. *Cancer Research* 51(11):2940-42. June 1. [12 ref]
• ***Summary:*** Japanese-style fermented soy sauce (shoyu) was shown to have anticarcinogenic activity in mice fed diets designed to induce cancer. Cancer inhibition was found to be greatest in the mice receiving the most shoyu. Shoyu was also found to contain antioxidant activity which may be related to the observed anticarcinogenic effect. Address: Dep of Food Microbiology and Toxicology, Univ. of Wisconsin, Madison, WI 53706.

7570. Raloff, J. 1991. A soy sauce surprise. *Science News* 139(23):357. June 8. [1 ref]
• ***Summary:*** Japanese have an eight-fold higher risk of stomach cancer than Americans. Some Japanese scientists suspect that the difference may be caused by soy sauce, which contains precursors of chemicals that cause mutations in bacteria. But a U.S. research team (Michael W. Pariza and co-workers at the University of Wisconsin–Madison) have observed just the opposite, that Japanese-style fermented soy sauce "exhibited a profound anticarcinogenic effect." They discovered that soy sauce contains compounds with substantial antioxidant activity; many antioxidants are known to inhibit the development of cancer. Their results appeared in the June 1 issue of *Cancer Research*.

7571. Brummer, Alex. ed. 1991. Notebook: Glow germs. *Guardian* (*England*). June 21. p. 15.
• ***Summary:*** Kikkoman, the Japanese soy sauce maker, "has developed a process that will cause germs in food, in anything from lager to the best sirloin, to glow like fireflies in the night." That could be a problem for restaurants!

7572. Rossant, Colette. 1991. Food: The sound of soba. No chewing please. The correct way to eat soba is to "froosh," or slurp, the noodles up with a sustained intake of breath. *New York Times*. June 23. p. SM39-SM40.
• ***Summary:*** Colette first tasted "soba, a nutty-tasting buckwheat noodle, in Tokyo." It was freshly made, and served hot or cold. There was cold soba "in baskets with a dipping sauce [made with soy sauce], soba topped with natto (fermented soy beans) and sprinkled with sesame seeds..."

There is now a soba restaurant in New York City named Honmura An. Contains four soba recipes plus recipes for dashi (basic stock) and tempura. All of the soba recipes call for soy sauce, as does the tempura dipping sauce.

7573. Miso, shôyu no rûtsu wa doko ka? O-shôyu suki tanken-tai [Where are the roots of miso and shoyu? Two shoyu-lovers go exploring in China]. 1991. Television broadcast. Channel 26. California. June 9. Sat. 8-9 P.M. [Jap]
• ***Summary:*** This program is part of the series "Shin Sekai Kikô" (New World Homeward Voyage). In Japan, the two explorers first visit two historic places in Wakayama prefecture. In one shop, Kinzanji miso is still made. The Buddhist monk Kakushin from Shinshu in Japan learned to make this miso from a temple named Kinzanji in southern China. They also visit Kadocho, a shop where shoyu is still made in the ancient way. They then travel to China, arriving in Shanghai, and go directly to Hangchow (also spelled Hangchou, Pinyin: Hangzhou; Japanese: Kôshu), the capital of Chekiang province, located a little to the southwest. In the market there they find a relative of Kinzanji miso, named *tien tou-shih* (sweet fermented black soybeans) sold at a soy sauce shop.

The shop owners suggest that they go to Chungking

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(pinyin: Chongching; Japanese: Jûkei), a major city in Szechuan province, to learn more. There they find *tou-shih*, which resembles Japan's Hamanatto or Daitokuji Natto. Then they visit the ruins of Kinzanji temple where Kakushin learned to make miso. After walking up a long, steep rock path they discover that only a historic bell tower is left.

Now they travel to Yunnan province, in central southern China, wedged between Vietnam and Burma. They arrive at Kunming (pinyin: Kungming; Japanese: Konme). In this area the weather is semi-tropical and many types of fermented foods are made. Now they travel 800 miles by car to the southern tip of Yunnan to a mountain village named Shisan Panna. There lives the primitive Aini tribe, in thatched houses with barefoot children. An elderly woman shows them how she makes miso. Roast the soybeans in a wok, then add water and cook. Pour into a bamboo basket (1 foot diameter, 10 inches deep) lined with a banana leaf, fold the ends of the leaf over the top, and place then basket on a rack over the open-hearth fireplace sunk in the middle of the room's floor (Jap: *irori*) for 2-3 days so that the warmth aids the fermentation. Transfer the fermented soybeans to a wooden mortar, add salt and hot chilies (no grain), then pound to a paste. Shape this into 3-4 inch diameter patties, put these on a shallow 2.5 foot diameter bamboo tray, and place on the rooftop in the sun for 3 days. Broil the patties directly over the fire, put in a mortar, add more salt and chilies, and pound to a paste. Now add boiling water and serve. The result is a spicy miso soup with a bit of a natto flavor (Japanese: natto-jiru). Thus, the Japanese apparently did not invent miso soup! Address: Japan.

7574. **Product Name:** Traditional Foods Hickory Smoked Seitan, Seitan Curry, Seitan with Ginger, Seitan with Garlic & Herbs.
Manufacturer's Name: Santa Fe Organics.
Manufacturer's Address: 906 Locust St., Columbus, NC 28722. Phone: (704) 894-3132.
Date of Introduction: 1991? June.
Ingredients: Hickory smoked: Organic wheat flour* & vegetable broth seasoned with whole bean soy sauce, onion, garlic, and natural hickory smoke. * = Organically grown and processed in accordance with Section 26569.11 of the California Health and Safety Code.
Wt/Vol., Packaging, Price: Retorted in a 1 pint (16 oz) glass jar with a 2-piece canning lid. Retails for $3.99 on the East Coast.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Talk with Lenny Jacobs. 1991 Nov. 15. The Bellemes' new seitan products are now on the market. They are expensive but good. The Bellemes were going to spell seitan as "saytan" but they got a lot of flack from the idea and decided to drop it.

Talk with Jan Belleme. 1991 Nov. 14. Santa Fe Organics (run by John Belleme) started making four seitan products in June 1991. They are made from high-protein wheat flour. The plant is located near Rutherfordton, but not on their property. The principal owner of the business, who lives in Santa Fe, New Mexico, chose the business name. Starting the business took much longer and was much more complicated than expected. They do not yet have a brochure describing the products, but every distributor who has seen them immediately wants to carry them.

Talk with John Belleme. 1992. March 7. He makes his seitan using a seitan machine that he ordered from Muso in Japan.

Talk with a reporter. 1992 March 12. John Belleme believes that it is not good to make seitan starting from vital wheat gluten, since the latter is made from white flour and the finished raw gluten does not absorb flavors nearly as well as raw gluten made from whole wheat. This reporter found that the Bellemes' products had a flavor and texture that was remarkably similar to that of meat.

Labels for all 4 products sent by Santa Fe Organics. 1992. April. 8 by 2.5 inches. Two pastel colors plus white. Illustration of ears of wheat. Hang tag (neckhanger 2.5 x 2-inch, 6-panel leaflet) attached to neck of jar with a rubber band. "Seasoned Wheatmeat. All natural vegetarian entree. Please recycle this container. Printed on recycled paper. Copyright 1991 Santa Fe Organics."

7575. Folkers, Doerte. 1991. Verbraucherwissen ueber Soja als Naehrstoffquelle und Lebensmittel [Consumer knowledge of soya as a source of nutrients and a food]. In: F. Meuser and P. Suckow, eds. 1991. Soja in Lebensmitteln. Vortraege 2. Hamburger Soja-Tagung. Berlin: Technische Universitaet Berlin, Institut fuer Lebensmitteltechnologie und Gaerungstechnologie–Getreidetechnologie. 171 p. See p. 9-21. [10 ref. Ger.]
• ***Summary:*** Discusses German consumer attitudes toward soya and plant proteins based on surveys using 8 questions with 2,000 people in 1989. When asked which of 9 foods on a list were important sources of protein, those foods receiving the highest percentage of responses were fish (85.3%), meat (72.4%), soybeans (50.3%, up from 39.0% in 1978), and butter (41.0; even though it is mostly fat and contains almost no protein). When asked if people need more or less protein, 39.3% said "about the same as before," 33.6% said "more," and 25.5% said "less."

When asked if people should consumer more plant protein or animal protein, 61.3% said more plant protein and therefore less animal protein, 19.5% said "same as before," 12.9% said that it makes no difference since "protein is protein," and 5.4% said more animal protein and therefore less plant protein.

"One source of plant protein is the soybean. Do you know if the soybean is used as a food or in foods?" 48.3% said they did not know. 37.2% said yes, as a food. 28.0% said yes, in foods.

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"Which foods are you aware of in which soya is used?" Soya oil 34.1%, in breads and baking 26.3%, soy sprouts 17.8%, soy sauce 14.6%, in convenience prepared foods (*Fertiggerichten*) 9.7%, in sausages and cold cuts 8.9%, in meat substitutes 7.7%, as soybeans 7.6%, in noodles and pasta 7.0%, tofu and tofu products 6.9%, soybean flour 5.9%, vegetables 5.8%, salads and raw foods 5.4%, soyburgers or patties (Soja-Bratlinge) 4.1%, soymilk 4.0%, other 15.0%.

"I will read you a list of foods in which soya is used. Please tell me if you have heard of it, tried it, or purchased it." (percentage responses): Soy oil 70.5%/24.2%/17.7%. Raw soy sprouts 55.5/24.0/14.4. Soy sauce 54.5/28.1/17.6. In bread 39.5/19.6/14.2. In convenience prepared foods 28.5/10.0/6.5. Soyburgers or patties 21.3/7.3/3.5. Soymilk 19.4/4.0/1.8. Tofu and tofu products 18.6/7.6/4.6. In noodles or pasta 17.6/5.9/3.4. Address: Inst. fuer Ernaehrungsoekonomie und -soziologie der Bundesforschungsanstalt fuer Ernaehrung, Stuttgart, Germany.

7576. Kandler, O. 1991. Bedeutung der Milchsauren Gaerung fuer die Herstellung von Sojaprodukten [Significance of the lactic acid fermentation for the production of soy products]. In: F. Meuser and P. Suckow, eds. 1991. Soja in Lebensmitteln: Vortraege 2. Hamburger Soja-Tagung, Berlin: Technische Universitaet Berlin, Institut fuer Lebensmitteltechnologie und Gaerungstechnologie–Getreidetechnologie. 171 p. See p. 45-62. [32 ref. Ger]
• ***Summary:*** Contents: Introduction. Overview of lactic acid bacteria and lactic acid. Occurrence of lactic acid in soy products. Lactic acid fermentation in the production of soy sauces and pastes. Fermented lactic acid soy beverages. Conditions for growth and acidification. Acidification and carbohydrate content. Selection of bacteria. Future developments. Summary. Address: Botanisches Institut der Ludwig-Maximilians-Universitaet, Munich, Germany.

7577. Messina, Mark, Messina, Virginia. 1991. Increasing use of soyfoods and their potential role in cancer prevention. *J. of the American Dietetic Association* 91(7):836-40. July. [56 ref]
• ***Summary:*** Contents: Abstract. Introduction. Historical perspective. Soybeans and the US food supply. Soy protein products, retail soyfoods sales. Nutrient contribution of soyfoods. Soybeans and cancer risk: Experimental studies (isoflavones, protease inhibitors, epidemiology, breast cancer, colorectal cancer). Conclusions. Implications.

"Soybeans contain, in relatively high concentrations, several compounds with demonstrated anticarcinogenic activity. Two of these compounds–protease inhibitors and phytic acid–have traditionally been viewed as antinutrients... It may not be appropriate to evaluate soybeans on nutrient content alone; dietitians need to know about the nonnutritive dietary compounds, called phytochemicals, which may have anticarcinogenic effects... Overall, the epidemiologic data suggest that soy consumption may lower colorectal cancer risk, whereas there is only moderate support for the role of soy in reducing breast cancer..."

Table 1 (p. 838) gives the "Proximate composition and selected nutrient content of various soyfoods in common serving sizes and in 100-gm edible portions" (based on Haytowitz 1986). The soyfoods are: Miso, natto, okara, roasted soybeans (dry- or oil roasted), soy sauce (tamari), tempeh, firm tofu (raw), regular tofu (raw). Address: 1. Diet and Cancer Branch, Div. of Cancer Prevention and Control, National Cancer Inst., Bethesda, Maryland 20892, 2. Registered Dietitian, private practitioner, Washington, DC.

7578. **Product Name:** Shamah's Savory Seitan
Manufacturer's Name: Shamah's Savory Seitan.
Manufacturer's Address: HC-2 Box 39, Route 212, Mt. Tremper, NY 12457. Phone: 914-688-7945.
Date of Introduction: 1991, July.
Ingredients: Organic whole wheat flour, organic unbleached white flour (with wheat germ), water, tamari, garlic flakes, ground ginger, sea salt.
Wt/Vol., Packaging, Price: Bulk, or 1 lb in a 32 oz round plastic tubs with a snap-on lid.
How Stored: Refrigerated, 10-14 day shelf life.
New Product–Documentation: Talk with David Goldbeck of Woodstock, New York. 1991, Nov. 18. A new company has started making seitan in Woodstock. It is now sold at Sunflower Natural Foods in Woodstock. Shirley, the manager at Sunflower, would have the name and address (which she did). Talk with Winifred Shamah Hament, founder and owner of Shamah's Savory Seitan. She launched her seitan in July 1991. The address shown above is her home address; she makes the seitan in St. Gregory's Church, Route 212, Box 66, Woodstock, New York 12498. She makes about 100 lb/day. She simmers a 15-20 lb loaf of kofu in a broth for 1 hour, lets it cool overnight, then cuts it into small pieces. She sells seitan both in bulk (5 lb in a large plastic bucket to health food stores or restaurants) or 1 lb of seitan immersed broth in a 32-oz container. The sauce has a shorter shelf life than the seitan. Seitan freezes wonderfully (in the sauce), without any change in texture or loss of quality.

She has been a vegan for 20 years, and a single mother of 4. She has been a teacher but she wanted to do her own thing, something new in her life. Making seitan with a machine is hard work, but making it by hand is just too hard. "The response to my product has been incredible. I'm in five-star restaurants with no vegetarian dishes except seitan." One restaurant makes it into a mock Peking duck (that's how they use it in Chinatown, New York); they wrap the seitan with yuba. Rudy's, a five-star restaurant, broil it then serve it with a Dijon & wine sauce or in Mexican dishes. She learned how to make seitan at home from a friend about 2 years ago. She lived in Long Island for a while and a friend owned

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Rising Tide natural foods (in Glen Cove, L.I.), which made their own seitan and sold it only at their store. They have been making it for more than 2 years. From Rising Tide she learned how to make seitan on a commercial scale.

She buys ground wheat (100 lb at a time) and uses a kneading machine. The yield of seitan from 100 lb wheat flour is 85-90 lb. The future growth looks to be in bulk sales to institutions (schools, hospitals, Grand Union, restaurants). Seitan is a good product and people love it. When demonstrating seitan to those who are unfamiliar with it, she cuts the seitan into thin slices, breads them in cornmeal seasoned with garlic and sea salt, then deep fries it and serves it fresh and hot. The market is where the tofu market was 10 years ago. In New York Chinatown she has seen a product like seitan sold in cans, as well as a white loaf that looks like a liverwurst–very tight in texture.

7579. **Product Name:** Snack'n Savory Tofu.
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: 6123 E. Arapahoe Rd., Boulder, CO 80303. Phone: 303-443-3470.
Date of Introduction: 1991, July.
Ingredients: Organic tofu (water, soybeans, nigari (magnesium chloride)), soy sauce, honey, soy oil, spices, granulated onion, granulated garlic.
Wt/Vol., Packaging, Price: 4 oz (114 gm) plastic pouch.
How Stored: Refrigerated.
New Product–Documentation: Label sent by Lon Stromnes, 1991, July 30. 3 by 5 inches. Plastic pouch. Red, white, yellow, green, and blue on reddish-brown. "Ready to eat! Delicious hot or cold! Great in salads."

Note: This is a new version of a White Wave product named Savory Baked Tofu, launched in Dec. 1979.

Ad in Natural Foods Merchandiser, 1992, December. Soyfoods 2000 (Special supplement insert, p. 6). Mentions Snack'n Savory Tofu.

7580. *Toyo Shinpo* (*Soyfoods News*).1991. Kenkô shokuhin to shite no nattô. Nattô no "tare" no genjô [Natto as a health food. The present status of natto's *tare* sauce]. Aug. 1, p. 6. [Jap]

• ***Summary:*** In Japanese, the word *tare* refers to seasoning sauce based on soy sauce.

7581. Tara, Bill. 1991. Pioneering macrobiotics and soyfoods in London (Interview). *SoyaScan Notes*. Aug. 18. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Starting in the late 1960s, the pioneering work with soyfoods in London was done by Craig and Greg Sams. They and their parents were Americans, and they had gone to college in America. Their father was employed by the U.S. armed forces as an historian; they spent a lot of their time growing up between America and England. Greg fell out of a tree while going to college in Berkeley in the late 1960s and was paralyzed from the waist down, so he was confined to a wheelchair, but was still very active and innovative. In the late 1960s they set up a macrobiotic natural foods cafe / restaurant on Portobello Road in London, then changed it into Ceres Grain Shop, a natural foods retail store. As volume increased, they began to distribute their products out of the back of their shop, and in about 1971 founded Harmony Foods Ltd. as a distribution company located in a warehouse on Ladbroke [sic, Latimer] Road. The model and evolution was similar to that of Erewhon in Boston. Harmony Foods was the first natural foods distributor in England, and probably the second in Europe after Lima Foods of Belgium. Soon they were importing macrobiotic foods from Japan, and distributing organically grown grains from England and from The Camargue (a marshy island in the delta of the Rhone River in the south of France), etc.

Among their early Japanese imports were bulk miso and "tamari" (actually shoyu), imported from Muso in wooden kegs. They repackaged the miso and shoyu in glass bottles under the Harmony Foods label in London. This was the first Japanese miso and shoyu sold in England. In about 1972, as soon as Erewhon started having miso and shoyu packed in Japan, the Sams had the same thing done with theirs, then they applied their own labels in London. But they continued to import in bulk as well. A Chinese company in London made tofu and [mung] bean sprouts, then sold the tofu to the Sams brothers; they sold it unpackaged in open trays in water. At that time, tofu was not emphasized much in macrobiotic circles so not much was sold; it was considered too yin. The Sams also sold deep-fried Rissoles filled with TVP instead of meat; as early as 1970 the Rissoles were being made by an Israeli guy (name?) who owned a shop (name?) by the Hempstead Heath. Marigold Foods also used TVP in the mid-1970s.

In 1970 Bill Tara, then a vice president at Erewhon in Boston, passed through London on his way to India. One purpose of his trip was to scout out the possibility of Erewhon setting up a distribution point or center in England. Paul Hawken was president of Erewhon at the time, and Erewhon was importing miso and tamari from both Muso and Mitoku in Japan. Bill and Paul had been roommates in a warehouse in San Francisco, then they took over the Erewhon food store from Evan Root, Paul starting 2-3 months before Bill. In London, the Sams brothers were just opening a new natural foods restaurant in the Notting Hill area so Bill and Paul Petrofsky spent 2 weeks fixing it up. Paul later started Baldwin Hill Bakery with Hy Lerner. Bill stayed in London 2-3 months during this first visit.

In about 1972 Bill returned to London with Russel Demerais, on the Erewhon payroll, again to start an Erewhon distribution center. But Erewhon went through a cash crisis and Harmony foods had grown dramatically. So Bill and Peter Bradford (an Englishman who had come to American in about 1970 and worked for Erewhon doing organic

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agriculture at Erewhon Farms near Keene, New Hampshire) began to work for the Sams brothers both at Ceres Grain Shop (the retail store) and Harmony Foods (in the warehouse). Bradford, who now has a very successful natural food store in England named Clearwater Natural Grocer, has been one of the most important promoters of soyfoods in the UK. At this time, Craig Sams set up a bakery. By now, miso and tamari sales had increased. Harmony was still affixing its own label to unlabeled packs.

In 1974 Bill and Peter established Sunwheel as a natural food/macrobiotic distributor. They picked up exotic Japanese imports that Harmony found unprofitable and wanted to drop–so there was little or no competitive feeling with the Sams. By late 1974 Sunwheel Hatcho Miso, Mugi Miso, and Tamari were on the market, imported from Muso (Yuko Okada) in Japan. Sunwheel also made granola and peanut butter. Sunwheel never sold any other soyfood products, they had very limited warehouse space and no refrigeration.

Note. On 17 Aug. 1975 Renée Tara wrote William Shurtleff in California. She was living at 30 B Market St., Bradford-on-Avon, Wilts., England. She is writing a European Macrobiotic Cookbook. She requests information on miso and invites Shurtleff to visit.

In about 1977 Sunwheel acquired a retail store that had been started in and by the Community Health Foundation. By 1979 Sunwheel was very successful, but it needed to be recapitalized or sold. So the partners decided to sell it to a larger health food company; Peter kept the retail store.

In Nov. 1975 Bill established the Self Health Center which by 1976 grew into the Community Health Foundation (CHF). By 1976 CHF was offering classes in soyfoods. Paul Jones was the key man with tofu; he taught classes and started making tofu out of his home in the Highgate area. Paul Jones was definitely the first Caucasian to pioneer tofu in England. Simon Bailey, a baker who was originally with one of the first natural foods stores in England, located in Bath, taught about tempeh. These people were experimenting in the kitchen with soyfoods and taught in a sort of an apprenticeship program. Jon Sandifer, who is still with CHF, learned tempeh from Simon Bailey. CHF sold some tofu and tempeh through its own sit-down restaurant named The Seven Sheaves, then renamed The Natural Snack and changed to a cafeteria. A few people did experiments with miso but it never got to a commercial scale in part because of persistent rumors that Lima Foods was going to start making it.

By the late 1970s soyfoods were growing in popularity in the UK. Two separate groups promoted them: the vegetarians and animal rights people (who liked TVP), and the natural foods and macrobiotic people. Marigold Foods also used TVP in the mid-1970s.

Much of important pioneering commercial work with soyfoods in Europe was done by macrobiotic groups in the Netherlands and Belgium. Bill often went there to teach in 1974-79. Tofu, and later tempeh, were emphasized by groups such as Manna in Amsterdam and De Brandnetel in Antwerp. Macrobiotics was much more active in the Lowlands than in England.

The Sams brothers later started Whole Earth as a marketing company for their jams. They sold it fairly soon. Greg Sams (disabled) is no longer in the food business; he runs The Chaos Shop in London which sells photographic reproductions of computer-generated chaos patterns. Craig started Realeat Co. and now may be with the Haldane Foods Group. Address: Director, Nova Inst., P.O. Box 4648, Estes Park, Colorado 80517. Phone: 303-586-6265.

7582. Sams, Craig. 1991. Pioneering macrobiotics and soyfoods in England, 1967-1979 (Interview). *SoyaScan Notes*. Aug. 24. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Craig and Greg Sams were both born in America. Their mother is from Nebraska and their father from Pittsburgh, Pennsylvania. Greg is 4 years younger than Craig. During the 1950s and 1960s the family went to England periodically, largely because Craig's father worked in England as a historian for the U.S. Air Force. In 1965 Craig took a year off from college, traveled around the Indian subcontinent, and got hepatitis. Upon returning to the Univ. of Pennsylvania in Philadelphia for his final year, he fell in with 3 followers of macrobiotics and got interested in macrobiotics. In about Feb. or March of 1966 he went to the Paradox, a macrobiotic restaurant in New York and decided that he wanted to start a similar restaurant in London. In late 1966 Craig's brother, Greg, fell out of a tree in Berkeley, was paralyzed from the waist down and was confined to a wheel chair–as he still is.

In Feb. 1967 Craig started a restaurant named the Macro at 10-A Airlie Gardens, Holland Park, London. Yoko Ono, John Lennon's wife, was one of the first regulars. She was the first person Craig met in London who was aware of macrobiotics; she had learned about it in Japan. But Craig had to close Macro after 2 months because of zoning problems. In mid-1967 Greg joined Craig in London and in Dec. 1967 they opened a new macrobiotic / natural foods restaurant named Seed at 136a Westbourne Terrace, W 2, London–a few minutes walk from Paddington Station. Soyfoods were a part of the menu. They got Kikkoman shoyu, shiro-miso, and Hatcho miso from a Japanese import company named Mikado-ya, which was run by Japanese in southeast London out of the basement of a house and supplied Japanese embassies in Europe and Africa. At that time Craig thinks there were no Japanese restaurants or retail stores in London. Seed soon started to import Hatcho and barley (mugi) miso from Muso in Japan. Seed never used any of Lima's soyfood products. Seed also used fermented tofu, they mixed it with tahini, spread it on bread, and called it a Rarebit–an alternative Welsh Rarebit, which is cheese

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on toast. Seed purchased fresh tofu and [mung] bean sprouts from a Chinese company named Lung Kee on Fermoy Road, Paddington, London, right on the banks of the canal. It was run by one Chinese man who employed about 15 West Indian / Jamaican women who made the foods. Bean sprouts accounted for most of Lung Kee's business. Craig has no idea when Lung Kee started making tofu. In addition to its mainstay, brown rice, Seed served the tofu diced in miso soups, or sauteed with vegetables such as nitsuke carrots, etc., or as a dessert with tofu and apple concentrate whipped with fruit to a thick creamy consistency and chilled. The restaurant did well. It was soon famous for its "groovy vibes" and its free meal of brown rice, veggies, and green tea for those who could not afford to pay. Although the Sams brothers were not "proponents of the brown rice and marijuana regimen" (as Kotzsch had implied in 1985, p. 221), Seed was a favorite hangout for a host of '60s counterculture celebrities such as The Beatles, The Rolling Stones, Yoko Ono, and others. Americans such as Bill Tara, Peggy Taylor, Eric Utne, and Paul Petrofsky also worked there. Then people began to ask the Sams if they could buy staple foods from the restaurant. So food was soon packaged and sold over the restaurant counter.

In about March 1969, to meet the growing consumer demand, the Sams brothers opened Ceres, a natural foods / macrobiotic retail store, at 8-A All Saints Road, 2 bocks from and parallel to Portobello Road. Ceres also did extremely well, with Greg and various managers having the main responsibility while Craig focused on the restaurant. Soyfoods retailed by Ceres included Hatcho and mugi miso, tamari, fermented tofu, and fresh tofu sold in trays immersed in water. Eventually Bill Tara and Peter Bradford took over management of Ceres. Soon other people began to open restaurants and natural foods / macrobiotic stores like Ceres in college towns in England: Infinity Foods in Brighton (at Sussex University; Peter Deadman, Robin Bines, Simon Bailey were involved), Arjuna in Cambridge, Harvest in Bath, and On the Eighth Day in Manchester. In 1970 the Sams developed a large mobile tent macrobiotic restaurant and made a lot of money by taking it to various big rock festivals.

In Aug. 1970 Harmony Foods was established as a natural foods / macrobiotic import, product development, and distribution company. The money from the mobile restaurant was used to rent a building at No. 10 St. Luke's Road in London (only about 300 yards from the Ceres shop), and to import enough products to start a line / range of products under the Harmony Brand (the logo was a yin / yang sign). They stored and packed these in basement at Harmony Foods. Starting in 1969, the first imports for the restaurant and for Ceres had came from Muso in Japan, and from a macrobiotic society in Vietnam came red rice and green tea. In 1970 they started to import 4-5 tons of organically-grown brown rice from The Camargue in the south of France. Grown by the same man who grew brown rice for Lima Foods, it became the company's main product. Harmony Foods started out with about 20 customers–16 conventional health food shops and 4 of the new wave of natural foods stores (which the natural foods stores called "grain shops"). Wholefood of Baker Street was the pioneer "organic shop" that started in the 1950s. They were part of the Soil Association, so organic growers used it as an outlet for the first organically grown produce retailed in England. They soon became an important outlet for Harmony Foods as well. In addition a man named Ivan Seruya would collect food (mostly produce) from the organic growers and deliver it to restaurants like Seed and Manna in London. One other product that was grown organically was Pimhill Flour. Harmony Foods was a pioneer in developing new organic growers (such as Stewart Patterson who farmed wheat with horses) and in putting organically grown foods into retail outlets.

By Aug. 1970 Harmony Foods was distributing soyfoods, including Hatcho miso, mugi (barley) miso, and tamari from Muso in Japan–imported in wooden kegs and packed in glass jars. These were the first miso and shoyu products available at retail outlets in England.

In Jan. 1971 Harmony Foods outgrew its building on St. Luke's Rd. and moved into a larger warehouse at 191 Latimer Road (Maidenhead), a former cosmetics factory. Just before the move, Bill Tara informed the Sams that he was in London to set up Erewhon Europe to compete with Harmony. The restaurant, Seed, was sold in the spring of 1971 and reopened as The Magic Carpet. In 1971 Ceres was renamed Ceres Grain Shop and relocated at 269 A Portobello Rd.

In mid-1972 the shop next to Ceres closed. The Sams took it over and made it into Ceres Bakery. It transformed large amounts of wheat, organically grown in England, into unique and delicious naturally leavened breads. The enzymes in the freshly-milled flour helped to leaven the bread.

When they closed down Seed, the restaurant on All Saints Road, there was still a demand for simple macrobiotic food, so in about Feb/March 1971 they opened Green Genes, a sort of macrobiotic workingman's café on a much smaller scale. Each person picked up her or her food from a counter, there was no table service. It was open for lunch only whereas Seed had been open only in the evenings.

In 1972 they began to publish a magazine titled *Seed: The Journal of Organic Living*. Bill Tara and Peter Bradford helped with it occasionally. It continued for 6 years. That same year, above Ceres Bakery, started Ceres Bookstore, which only last for 1½ years.

Meanwhile Bill Tara and Peter Bradford had expanded and transformed Ceres Grain Shop, but in a way that led to extensive shoplifting, so it was scaled back to near its original size and finally sold in 1979 to Jack Weller. By that year all efforts and resources were focused on Harmony

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Foods, the wholesale business. Peanut butter (non-organic), the first product manufactured by Harmony, was now in two of the leading supermarket chains, Safeway and Waitrose Address: 269 Portobello Road, Notting Hill, London W11 1LR, England. Phone: 071-229 7545

7583. McSweeney, Daniel. 1991. Consumer survey 1991. *Whole Foods*. Aug. p. 34-36, 39, 41
• ***Summary:*** This survey was conducted at 18 natural foods stores throughout the USA. Product purchases. Percentage of respondents who purchased a type of product at a natural foods during the past 12 months. Cheese substitute 28%, meat 34%, miso 34%, sea vegetables 33%, soy milk 51%, soy sauce 36%, tamari 52%, tempeh 33%, tofu 57%, yogurt (dairy) 64%

7584. Oshita, Ichiko; Kanamori, H.; Mizuta, M.; Sakamoto, I. 1991. Shôyu-chû no hen'i gen kassei o yûsuru beta-karuborin yûdôtai [A mutagenic β-carboline derivative in soy sauce]. *Shokuhin Eiseigaku Zasshi* (*J. of the Food Hygienic Society of Japan*) 32(4):272-77. Aug. [17 ref. Jap, eng]
• ***Summary:*** "A yellow substance (YS) isolated for the first time from soy sauce by HPLC showed weak mutagenicity in *Salmonella* TA 100 without S9 mix. The mutagenicity of the YS increased 7.5 times (His+ revertants /μg/plate) after treatment with sodium nitrite.

"The YS was identified as 1-(5-hydroxymethyl-2-furyl)-9H-pyrido [3, 4-b] indole (1-hydroxymethyl -furyl-Beta-carboline) by MS, ^{1}H-NMR and ^{13}C-NMR. The survey showed that the concentration of YS in Koikuchi soy sauce (regular fermented) was 2.0 μg/ml. The semi-fermented Koikuchi soy sauce and the soy sauce supplemented with amino acid had 0.79 μg/ml and 0.38 μg/ml, respectively. The amount of YS in three kinds of soy sauce increased two fold by heating (120°C, 20 min). The concentration of YS in soy sauce might serve as a good quality indicator for soy sauce." Address: 1. Hiroshima Chuo Women's Junior College, 3-1-15, Gion, Asaminami-ku; 2-4. Hiroshima Prefectural Inst. of Public Health, 1-5-70 Ujinkanda, Minami-ku. Both: Hiroshima, Japan

7585. Pickarski, Ron. 1991. Friendly foods: Gourmet vegetarian cuisine. Berkeley, California: Ten Speed Press. 277 p. Illust. Index. 23 cm. [23 ref]
• ***Summary:*** This is a stylish vegan cookbook, with a wealth of sophisticated and delectable soyfoods recipes. The author recommends only high-quality ingredients. Brother Ron grew up in Michigan and during high school spent time in the restaurant business flipping hamburgers. Later he became a Franciscan monk (OFM). A look at his own health revealed the need to change his diet. So Brother Ron changed to a natural vegetarian diet and experienced weight loss and renewed energy. Now he considers himself a food missionary–helping people transform their lives through food. Friendly foods are "foods that are friendly to our bodies, our pocket books, our busy schedules, and our environment."

In the section on dairy-like products, the author recommends soy milk and some "tofu ice creams." He recommends use of soy cheeses sparingly since they are high in fats (especially the softer types). He considers nondairy creamers to be a less healthful than their dairy counterparts, since they are high in saturated fats and artificial additives. "Typically, nondairy creamers contain corn syrup solids, partially hydrogenated vegetable oil (including coconut oil, cottonseed oil, palm oil, or palm kernel oil), sodium caseinate, sodium phosphates, mono- and diglycerides, sodium silico aluminate, and artificial color. I do not consider this type of product to be an example of a high-quality food."

Soy-related recipes include: Marinated vegetables with marinated tofu (p. 41). Shish kebabs (with marinated tofu, p. 42). Marinated tofu with scallions (p. 43). Gefilte tofu with horseradish and charoset sauce (p. 49-50). Zucchini bisque (with tofu, p. 66). Tofu wakame salad (p. 82). Tofu cottage cheese (p. 89). Vegan sour cream (with soy milk, p. 90). Soy mayonnaise (with tofu, p. 90). Silken tofu mayonnaise (p. 91). Lemon cream dressing (with tofu, p. 92). Oil-less miso dressing (with soy milk and white miso, p. 96).

In the chapter on entrees, there are detailed descriptions of tofu, tempeh, and seitan. Soysage (with cooked soybeans and soymilk, p. 105). "Meatballs" (with cooked soybeans, p. 107). American loaf (with silken tofu, p. 112-13). Tofu spinach pie (p. 120). Auberge Hanfield pie (with silken tofu, p. 121). Russian vegetable pie (with silken tofu and tofu cottage or ricotta cheese, p. 122). Greek moussaka (with tofu topping, p. 128-9). Sweet and sour tempeh (p. 133). Southern fried tofu (p. 134). Tofu Swiss steak (p. 135). Tempeh stew (p. 136). Thanksgiving day tofu (p. 137). Tofu Jamaican run down stew (p. 138). Tofu paneer (p. 139). Seitan (p. 140-43). Seitan à la Normandie (p. 144). New England boiled dinner (with tofu or seitan, p. 145). Seitan Parmesan (with vegan cheese made with tofu, p. 147-48). San Francisco stir-fry (with seitan or tofu, p. 151). Berner platte (with protein accompaniments made with tofu and Soysage, p. 155-56). Vegan Béarnaise sauce (with silken tofu, p. 161). Miso sauce (p. 164-65). Tahini lemon sauce (with silken tofu, p. 165). Steamed kale with lemon miso sauce (p. 176).

In the dessert section, there is mention to tofu chocolate as an alternative to chocolate. Carob cake (with tofu chocolate, p. 217). Chocolate cream couscous cake (with filling made with silken tofu, p. 220). Silken tofu chocolate "cheesecake" (p. 221). Key lime shamrock torte (with silken tofu, p. 222). Raspberry sabayon sauce (with silken tofu, p. 232). Tofu chocolate "buttercream" icing (p. 234). Tofu chocolate ganache (p. 234-35). Mocha grain coffee (with any grain coffee substitute, cocoa, brown rice syrup, and soy milk, p. 238). Christmas soy nog (with soy milk and lecithin granules, p. 238).

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The last section of the book, titled "The Culinary Olympics," gives recipes that Brother Ron prepared while competing in these Olympics, starting in 1978. These Olympics are held every four years at Frankfurt, Germany, by the International Cooks Society. The American Culinary Federation is the U.S. organization that promotes the competition. "In 1978 I won a gold medal in the national competition, which qualified me to compete in the 1980 Culinary Olympics. In 1980 I founded the American natural foods team and, with this team, international competition to gain widespread competition for vegetarian cuisine. In that year, I became the first professional vegetarian chef to compete in the Olympics and win a medal for totally vegetarian foods. I also competed in 1984 and 1988... My team won bronze and silver medals in all three years that we entered the competition." Soy-related recipes dominate this section, and include: Baked tofu pâtés (spinach, tarragon, or carrot, p. 241-42, won a bronze medal in 1984). Tofu and sea vegetable quenelles (beet, spinach, or carrot, p. 243-45; won a silver medal in 1988). New York cima roll (with tofu, p. 248-49; won a silver medal in 1988). Tofu seitan Wellington (p. 250-51; won a bronze medal in 1984). Vegan London broil (with seitan, miso, and tamari, p. 251-52, won a bronze medal in 1984). Southern blackened tempeh with tomato-apricot-ginger coulis (p. 253-54; won a silver medal in 1988). Carrot cream in squash shell (with soy milk and tofu, p. 255-56; won a silver medal in 1988). Chocolate squash confection (with Tofu Chocolate Ganache, p. 259-60; won a silver medal in 1988). Address: O.F.M., St. Anthony's Shrine.

7586. Yamamoto, Yasusi; Kakegawa, R.; Takahashi, T.; Higashi, K.; Yoshii, H. 1991. Shiro shôyu seizo e no nyûsan-kin no riyô [Studies in the manufacture of shiro-shoyu. I. Utilization of soya lactic bacteria for shiro-shoyu making]. *Nippon Shokuhin Kogyo Gakkaishi* (*J. of the Japanese Society of Food Science and Technology*) 38(8) 663-67. Aug. [4 ref. Jap; eng]
Address: 1-2.4-5. Dep. of Brewing & Fermentation, Tokyo Univ. of Agriculture, Setagaya-ku, Tokyo, Japan. 3 Yamashin Co., Ltd.; 3-36 Nishiyama-cho, Hekinan-shi, Aichi 447.

7587. *SoyaScan Notes.* 1991. The concepts of alkaline (*arukari-sei*) and acidic (*sansei*) foods in Japan (Overview). Sept. 20. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** It is common knowledge among most typical Japanese that foods can generally be classified along a continuum that ranges from alkaline at one end to neutral (*chusei*) in the middle, to acidic at the other end. Alkaline foods (those with an alkaline ash) are generally considered to promote and protect health. It is widely believed that one should try to keep one's blood a little on the alkaline side of neutral. According to E.C. Grey's *The Food of Japan* (League of Nations, 1928) and *Inshoku Jiten* (*Encyclopedia of food and drink;* Motoyama 1958, see arukari) and to discussions with numerous Japanese, well-known alkaline foods are as follows. Each food is followed by an "alkaline value" in parentheses taken from Grey (1928, p. 56-111; the "alkalinity is due to lime and magnesia"): sea vegetables including kombu (88.9), wakame (55.8), nori (35.3); black soybeans (40.2), yellow soybeans (38.1), soyfoods (and Soyfoods Center) including yuba (25.6), kinako roasted soy flour (25.2), Hamana natto (Hamanatto 24.8), natto (19.3), green soybeans (ao-daizu, dry; 17.8), Misozuke (vegetables preserved in miso, 16.3), shoyu (14.3); red miso (11.5), okara (9.0), white miso (8.1), edamamé (green vegetable soybeans, 5.8), aburage deep-fried tofu pouched (6.7), soymilk (3.8), tofu (1.1), shiitake mushrooms (41.0), azuki beans (27.0), umeboshi salt plums (3.1), dried fruits including dried fig (46.8), dried persimmon (21.3), raisins (15.3), cheese (18.0), most fresh fruits including yuzu (citron, 11.7), buckwheat (7.0), fig (6.3), lemon (5.9), banana (4.6), mikan (mandarin orange, 4.0); root vegetables including potatoes (13.9), tororo imo (11.5), daikon radish (5.0); most green vegetables such as komatsuna cabbage (11.3), or daikon leaves (10.9), pickled vegetables such as takuan (14.6). Alkaline beverages or liquids include tea, coffee, dairy milk (2.6), condensed milk (8.0), powdered milk (26.6), grape wines, and vinegar.

Acidic foods, which the Japanese believe should be used in moderation, include: white sugar (0), mizuame [rice syrup] (0), chocolate (3.0) and other sweet foods, eggs (2.8), flesh foods including chicken (5.2), pork (5.2), beef (5.1), fresh fish (avg. 5.3), alcoholic beverages including amazake (0), beer (0), sake (0), animal fats including butter (1.6), margarine (0.9).

Many Japanese find that acidic foods, when consumed in excess, give them acid indigestion. Neutral foods include rice (0.5-2.9), wheat (3.5-6.6), barley (2.7-4.6), and wheat gluten (1.0).

Note that this classification system is unrelated to the yin-yang continuum used by macrobiotics; most Japanese are unaware of macrobiotics. The latter, for example, considers meat to be yang (alkaline), whereas wines, fruits, and milk are yin (acidic).

7588. Lydon, Sandy. 1991. How to do research on Japanese and Chinese agriculture in California (Interview). *SoyaScan Notes.* Sept. 25. Conducted by William Shurtleff of Soyfoods Center. [5 ref.]
• ***Summary:*** Sandy has done extensive research on the Chinese and Japanese in 3 counties in and around Monterey County. He has read every newspaper on the subject since the earliest times and keyed the important information into his bibliographic database. Most Asian immigrants began, in about the 1870s, as field laborers, then became contract workers, then lease holders. In the typical 5-year reclamation lease, they would find a landowner would had land that

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needed to be cleared, take 4 years to clear it, then farm it the 5th year. The owners never renewed the leases.

The best researcher on Chinese agriculture in California is Sucheng Chan, who is now chair of the Asian-American Studies Dept at the University of Santa Barbara. She traveled all over California, living out of her car, visiting county seats and examining documents, such as assessors records, lease books, poll taxes, etc. to try to reconstruct a more accurate picture of the early Chinese in California. All is container in her 1986 book *This Bittersweet Soil*.

Another good researcher is Peter C.Y. Leung at the Univ. of California at Davis, Asian-American Studies Dept. His field is the Chinese in the Sacramento Valley. He has written about Locke, near Walnut Grove.

Another group are the archaeologists at the University of Idaho at Moscow, probably in the Archaeology or Anthropology Dept. Most are white and have relatively little knowledge of Asian-American culture. They do digs and produce lots of printed reports, detailing discoveries of things such as shoyu containers. They try to reconstruct the early history in this way. They have an archaeological clearinghouse and museum.

Paul Chace at the Univ. of California at Riverside is interested in this Asian-American archaeology viewpoint, and he knows the researchers well. He is at 1823 Kenora Dr., Escondido, California 92027. Phone: 619-743-8609.

Very important, influential, and wealthy is the Japanese-American National Museum in Japan Town, Los Angeles. They have a scholarly advisory committee and have raised about $10 million during the last year. Akemi Kikumura, curator of their whole collection, is a great lady and very knowledgeable. The museum has a great collection of interviews with early Japanese-Americans.

Nearby is the UCLA Japanese-American Collection, which is vast but not well organized. In about the 1970s, they sent people all over California to do interviews with first-generation Japanese immigrants. They have a newsletter and many exhibits. Address: History Dep., Cabrillo College, Aptos, California 95003. Phone: 408-479-6223.

7589. Gerner, Bob. 1991. The origins and early history of Westbrae Natural Foods in California, through December 1971 (Interview). *SoyaScan Notes*. Sept. 29 and Oct. 1. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Westbrae started as a natural foods distribution company in July 1970 before it opened a retail store. Bob Gerner worked as the manager of the coffee house at the University of California at Davis. They had their own baker (a woman), and they baked everything from scratch. She was interested in natural foods, and Bob was starting to get interested. Occasionally he would visit the Sacramento Real Food Company (1500 Q St., Sacramento). Bob's girlfriend, Kristin Brun, who lived in the Santa Cruz mountains, taught Bob how to make granola and bread. So the people at the coffee house at Davis started make and serve granola there. At one point, Bob got so interested in natural foods that he decided he wanted to go into the new field. The baker was also interested, so they decided to open a store, even though they had no money. Bob quit his job as manager of the coffee house but stayed on as a cook. He met four other couples who planned to open natural foods retail stores, so they joined together.

In May 1970 the ten partners (none of whom had any money) opened the Natural Food Works on Olive Drive in Sacramento. (It still exists, though on G Street.) The store opened during final exams of Bob's senior year, so he skipped his last 3 finals and never graduated. Bob was chosen to be manager, since he was the only partner with any business experience. One of the store's main products was granola, which Bob made at night on the stove in the coffee house at Cal Davis (on the sly, from midnight until 6 o'clock in the morning).

Buying the ingredients for granola in bulk and merchandise for the store from suppliers involved a lengthy truck route. Since Bob was manager of the store and no one else wanted to do the route, Bob was elected. He drove a truck weekly to the San Francisco area and bought rolled oats from The Food Mill in Oakland, cashew nuts from Hirschfelder in San Francisco, 2 barrels of honey from Les Garabaldi (a bee-keeper in Canyon), miso and soy sauce from Chico-San in Chico, apple juice from Heinke's in Paradise. Then he stored all the ingredients in his room that he rented in a farmhouse in Dixon, a farm community near Davis. He weighed and bagged the ingredients in his room.

One of the partners suggested that they start a small farm or garden. So on a ½-1-acre plot behind a church he planted an organic garden and grew vegetables for the store. But the store couldn't sell them all, so Bob decided to try to distribute them and granola to other young natural food stores in Berkeley.

In late June 1970 Bob attended the founding meeting of Organic Merchants (OM), held outdoors on the side of Mt. Shasta. OM was the first trade association for natural food retailers on the West Coast and the first organic trade association.

In July 1970 Bob started distributing granola, fresh vegetables, and Heinke's apple juice in the company truck. He delivered these foods to various natural food retail stores in Berkeley: Wholly Foods (2999 Shattuck Ave. at Ashby), Good Natured Foods (on Solano), the Granary (and a macrobiotic retail food store on Shattuck near Vine), and Ma Revolution (on Telegraph).

Soon his granola ingredients and other items were added to his line (these were his sole worldly possessions): 2,000 lb dried organic pears (dried on a farmer's lot while camping out in the Santa Cruz mountains), fresh apples, fresh tomatoes, etc. Later, when Bob got too busy, Heinke's delivered their juice to his sister Margaret's house in El

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Sobrante, and he used her house as a juice warehouse.

Originally the distribution company had no name, it was Bob Gerner doing business as Bob Gerner with no business license. It was strictly cash and carry.

Some of the training in how to run the store was provided by Fred Rohe of New Age Natural Foods in San Francisco in early 1970. One of the partners went to work at Rohe's store, where he learned many of the basics, such as how to stock shelves, mark-up prices, etc. Fred ran this free training program, which took several days, for anyone who wanted to open a natural food store

After a few hectic weeks as manager of this unwieldy, undercapitalized 10-person partnership, Bob decided to quit. He could see it wouldn't work. But he still kept working for them until someone else volunteered to do the truck run free of charge.

Being out of a job, Bob decided to start a new natural foods company with a smaller number of closer friends--though he still had no money. Bob's sister (Margaret), and his brother-in-law (Bob Ortiz) got together and founded the new company. Kristin was not interested in becoming a partner at that time. Bob found a truck. Ortiz, who was a teacher and a mechanic, retired as a teacher getting $500 from his pension fund, bought the truck for $100, and became the truck driver. Originally the company was run out of Margaret and Bob Ortiz's home. While looking for a warehouse and granola factory, the 3 partners found a vacant market (originally a small Safeway supermarket, more recently a market with a Chinese tenant, but it had had no tenant for 18 months) at 1336 Gilman St. in Berkeley. They signed the lease on 10 Aug. 1970. But the building was zoned for a retail store, so they opened a retail store in the first 12 feet of the building, and used the other 80% for a kitchen and warehouse for their wholesale business. The company still had no name, and in fact it did not have enough money to take down the sign on the building that said "Westbrae." So, what the heck, they decided to call the company "Westbrae Natural Foods." On 2 Feb. 1971 the store opened for business and got a business license.

Companies that began distributing natural foods in northern California before or at about the same time as Bob Gerner were Landstrom and K&L (Kahan & Lessin; both big, old-line distributors of health foods and supplements, from Los Angeles, started in the 1930s), The Food Mill in Oakland (1930s), Chico-San in Chico (about 1965; Bob bought their Spiral Foods soy sauce and miso in bulk wooden tubs from the Osoba Noodle Nook Restaurant [2505 Hearst in Berkeley] and from a garage in San Francisco), and New-Age Natural Foods in San Francisco (Fred Rohé; he started retailing in 1965-67, then began distributing in the early 1970s). Bob recalls that he would go to New-Age Natural Foods, buy many bulk staples such as 50-pound sacks of whole grains (wheat or rye berries) and beans from Arrowhead Mills. Rohé sold these to Bob and others like him from his retail store at wholesale prices. Westbrae had a flour mill to grind its own fresh flour. By about early 1971 Fred opened a separate natural foods wholesale facility (named New Age Distributing) in San Jose. At first they wholesaled only produce. Then they branched out into dry goods, working with Dennis Morgan. The company changed its name to The Well in about 1972-73, then later it was renamed Pure and Simple. Address: Owner, Berkeley Natural Grocery Co., 1336 Gilman St., Berkeley, California 94706 Phone: 415-526-2456.

7590. Gerner, Bob. 1991. More early history of Westbrae Natural Foods in California, 1972 to 1980 (Interview). *SoyaScan Notes*, Sept. 29 and Oct. 1. And 11 May 1992. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Gordon Bennett arrived in 1972. He started as a customer, then began work as a janitor, then became a partner. At that time Bob Ortiz was asked to leave. The first year in business, Westbrae made only $7,000 profit before any wages were paid to the three partners. Profits were plowed back into the business. Bob lived in the store to save money.

In 1972-73 Westbrae rented a small separate warehouse several blocks away at 1340 San Pablo Ave. They also rented a rat-infested bakery on East 14th St. in Oakland. There they baked granola and bread; Ganesh (Ganesha) was their bread baker and delivery man. In the late fall of 1973, after less than a year on San Pablo Ave., they moved into a much larger warehouse nearby at 1224 10th Street and incorporated the company. At that time Westbrae began importing traditional, natural foods from Japan. They imported soy sauce in bulk and bottled it at their 10th street facility. Also at that time, Bob transferred all his past company records to the corporation. Bob Gerner owned 28% of the stock, Margaret and Kristin (who had now joined) owned 24% each. Three employees owned stock: Gordon Bennett owned 18%, and Jerry Heverly and Rick Lewis each owned 3% each. The company formed an AESOP (accelerated employee stock ownership plan); the goal was for everyone who had worked for the company for a given time to own shares. As soon as Westbrae formed the corporation and the AESOP, there was constant fighting. They spent more time fighting about ownership than running the business. Prior to incorporation, Bob had made most of the decisions himself; afterwards, though president, he ran the company by committee, and felt that the board should make all the major decisions. This was crazy and rendered Bob ineffective, but he felt he no longer owned the company. Also, he didn't realize that Gordon's main goal was to become the head of the company.

From Feb. 28 to March 2, 1974, Bob traveled throughout Japan, with William Shurtleff as his guide, looking at potential suppliers.

At that time Westbrae had financial problems. They hired Stewart Emery to conduct a self-realization seminar

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for all the employees in the mountains to give more focus. Before the seminar, the owners had a meeting in which they shared frank feelings about one another–who was effective and who wasn't, how the company was going, etc. Rick Lewis got voted off the board of directors and Gordon Bennett became general manager, replacing Bob Gerner, who was demoted to chairman and president. Stewart Emery later said that the seminar was his only failure. Rick Lewis was asked to work in the retail store as a clerk; he used that as a base to organize a union. On 22 Dec. 1975 the production employees formed a union, named the Alternative Food Workers Alliance. Westbrae was stuck with a union until Gordon Bennett sold the company to Vestro. At one point they may have joined the teamsters union.

Bob and Gordon had an ongoing struggle. In July 1976 Bob left Westbrae (although he was still president) and bought the retail store (Westbrae Natural Foods) back from the company at a very good price. It had been losing money, the company couldn't sell it (in part because it was unionized), and Gordon wanted to just shut it down. Bob closed it for 3 months, remodeled it, then opened it again in late November as Gilman Street Gourmet: Natural Foods & Delicatessen. Shortly thereafter, Westbrae moved its warehouse from 10th Street in Berkeley to Emeryville because the company needed more space and the rent was much better. Bob was disappointed with the move because the 10th Street warehouse had been just a few blocks from his Gilman Street Gourmet.

In about 1977 Bob, Gordon, Margaret Ortiz and Kristin Brun got together for two sessions at Kristin's house, to discuss and have recorded the early history of Westbrae; a woman whom Kristin found apparently wrote down that history. Kristin now lives in Richmond Annex with Marty Roth, and probably has lots of early Westbrae documents and photos. In July 1977 the Oakland Tribune, then the San Francisco Chronicle each did nice articles about Westbrae. In September 1977, Westbrae Natural Foods moved its warehouse and offices from Berkeley into a much larger building at 4240 Hollis St., Emeryville, California 94608.

Gordon was a good manager, but in 1976, at the time Bob Gerner left, he and Bob were each earning only $800/month. Gordon began to push for higher salaries, so he called in Lloyd Dubroff and Bruce Handler who ran a seminar called POEM (Plan, Organize, Execute, and Manage). Bob hired them as consultants at the retail store, then they served as mediators on a conflict between Gordon and Bob over pay levels. They tripled Gordon's salary to $52,000 a year and he liked them instantly. Gordon hired them as consultants on a continuing basis, then he decided they should be on the board. Kristin Brun got voted off the board and they got voted on. In March or April 1979 Gordon announced at a board meeting that he was going to take a sabbatical starting in 6 months and that he didn't want to run the company any more. The board members said "We think you should leave now," so they voted him off the board–much to Gordon's surprise. The board made Lloyd Dubroff the general manager and chief operating officer, and Bruce Handler became CEO. At that point Bob ceased to be president of Westbrae, but he still owned the controlling share of stock–which he continued to own until 1985.

Dubroff and Handler's first move was to draft a budget and get the financial statements up to date. The financials showed that the company was doing very well. Westbrae had just opened a warehouse in the City of Bell (4841 Eastern Ave.) near Los Angeles (named Westbrae South), so Dubroff and Handler bought Celestial Natural Foods, a wholesale company run by Carter Allen on the docks in Oahu, Hawaii that Gordon had been pursuing and that had been a major customer of Westbrae's. Soon they began to increase inventories to 98% in stock, but they suddenly found that they were unable to pay the bills. The comptroller had made serious errors in the financial records, and Westbrae was almost bankrupt. The companies in Hawaii and Los Angeles were both losing large amounts of money. Bob Gerner returned to the company and began fending off angry suppliers and getting permission to string put payments. It was a very stressful time for Bob as he struggled to keep the company he had founded out of bankruptcy.

In Dec. 1979 or 1 Jan. 1980 the board invited Gordon Bennett back in as general manager. Gordon saved Westbrae. He transformed the company from an importer-distributor to an importer-manufacturer. He closed down the operations in Hawaii and Los Angeles, and sold off Westbrae's distribution rights in northern California–at a pretty good price. He also reduced the number of employees. Westbrae's top money-making products were now imported soy sauce (they imported it in drums and bottled it in Berkeley), and tamari-roasted nuts. Address: Owner, Berkeley Natural Grocery Co., 1336 Gilman St., Berkeley, California 94706. Phone: 415-526-2456.

7591. Gray, Sylvia Ruth. 1991. Re: Vitamin B-12. Letter to William Shurtleff at Soyfoods Center, Sept. 29. 2 p. typed. Typed, with signature.

• ***Summary:*** Sylvia initiated the vitamin B-12 project in 1988 after reading various scientific studies showing low levels of B-12 in common macrobiotic and vegetarian foods. "At present, more than fifty vitamin B-12 food assays have been completed on 12 vegetarian cobalamin sources and 12 animal product sources. Seven cobalt assays have also been completed. A very recent assay on the brain of range fed/finished beef showed vitamin B-12 content of 1/46th of previously norms for this organ." Assays cost $85 each.

"In my estimate, the concentration of toxic and/or antinutritive factors in all beans and bean products (with the exception of very aged products such as miso and shoyu) renders them 'iffy+' for daily use." A color photo of Sylvia, her youngest daughter, and two granddaughters is enclosed.

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Address: Strictly Macrobiotics and The Vitamin B-12 Project, 315 First Ave., Salt Lake City, Utah 84103. Phone: 801-521-7936.

7592. Bates, Dorothy R. 1991. The TVP cookbook: Using the quick-cooking meat substitute. Summertown, Tennessee: The Book Publishing Co. 96 p. Illust. Index. Sept. 22 cm.
• ***Summary:*** Contents: Introduction. Nutritional information. Ingredients. Breakfast. Appetizers. Soups. Sandwiches. Main dishes. Desert.

This vegan cookbook is devoted exclusively to TVP, which is quick and easy to prepare, and has all the healthful qualities of other soyfoods–but without the fat. TVP (which stands for "textured vegetable protein") is a registered trademark of the Archer Daniels Midland Company, Decatur, Illinois. TVP comes in two textures: small granules and larger chunks. Note: The publisher got ADM's permission to use the TVP trademark, and ADM is now very excited with the book. Address: Summertown, Tennessee.

7593. Nishimoto, Miyoko. 1991. The now and Zen epicure: Gourmet cuisine for the enlightened palate. Summertown, Tennessee: The Book Publishing Co. 250 p. Color photos. Index. 24 x 21 cm.
• ***Summary:*** This is a gorgeous, delightful vegan cookbook (though it uses honey), loaded with color photos. Most recipes, designed for entertaining, embody an atmosphere of elegance with a sense of fun, capturing the best of traditional European cuisine, offering gourmet recipes with an element of Japanese style, simplicity, and flavor. Each recipe is accompanied by a nutritional analysis, and most are remarkably low in fat.

The author is founder and owner of the Now & Zen Bakery (1838 Golden Gate Ave., San Francisco, CA 94115) which is well known for its tofu cheesecakes and other delights, and which sells dried okara. She is also a jazz vocalist and vegetarian chef. Born in Japan to a Japanese mother and an American father, she moved to Mill Valley, California, with her parents when she was age 7 and became a vegetarian at age 12. A photo on the rear cover shows Miyoko Nishimoto. She shows great virtuosity in the use of soyfoods–and wheat gluten. The section on ingredients contains excellent, detailed information on miso, nut milks and creams (almond milk and cashew milk, which the author prefers for some uses to soymilk), agar, okara, soy milk and soy cream, soy sauce, soy sour cream, soy yogurt, tamari, tempeh, tofu, frozen tofu, and pressed tofu.

Soy-related recipes include: Tofu "cheese" (p. 32). Tofu "boursin" or herb-garlic cheese ball (p. 33). Tofu "feta" cheese (p. 35). Tofu cream cheese spread with herbs (p. 36). Eggplant and tofu pâté (p. 51). Smoked tofu, mushroom, and garlic canapés (p. 53). Tofu "mornay" sauce (p. 65). Tofu aioli (p. 82). An introduction to quick and tasty tofu cream soups is given on p. 108. Each of the following cream soups contain tofu: Cream of pumpkin soup (p. 109). Cream of corn soup (p. 110). Cream of green pea soup (p. 111).

Mediterranean eggplant and tofu gratin (p. 115). Tofu burgers suprême (p. 118). Creamy tempeh curry (p. 119). Tempeh mexicali (p. 121). Sweet and sour tofu (p. 122-23). Whole cabbage with hearty tempeh stuffing (p. 124-25). Herbed soybean casserole or stew (p. 132). Savory tempeh and vegetable stew (p. 134-35). Tofu bourguignon (p. 138-39). Homemade tofu pasta (p. 142-43). Ginger tempeh with green peppers (p. 145). Homemade gluten. Tempeh and gluten burgers, and the Great gluten turkey with dressing (p. 150-160). Tempura tofu (p. 163). Marinated tofu (p. 164). Smoky marinated tofu (p. 165). Believable bacon (with tofu, p. 166). Beans and "bacon" casserole (with tofu, p. 167). Orange-soy dressing (p. 177). Tofu sour cream (p. 179). Tofu mayonnaise (p. 180). Tofu thousand island dressing (p. 182). Tropical coconut banana ice cream or sauce (with tofu, p. 212). A different pumpkin ice cream (with tofu, p. 213). Italian cheese-less cake (with tofu, p. 216). Cashew cheesecake (with tofu, p. 217). Tofu crème (p. 218).

For a lengthy and very positive review of this book by Carol Flinders, see *Vegetarian Times* Nov. 1991, p. 86-87. Address: San Francisco, California.

7594. Kennedy, J. Robert. 1991. History of Chico-San's distribution and import operations (Interview). *SoyaScan Notes*, Oct. 3. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Chico-San never really developed its own distribution company. It used other established distributors, such as Balanced Foods in New Jersey, K&L (Kahan & Lessin) in Los Angeles, Landstrom in San Francisco, and Health Foods Incorporated in Chicago. "We had a tough time getting started in selling macrobiotic foods. Chico-San also sold a lot of macrobiotic foods through its mail-order service because most of the large distributors only wanted the best-selling items such as rice cakes, soy sauce, and sesame salt, they wouldn't take the complete macrobiotic line." In late 1962, shortly after the company was established, Chico-San got a few vans and began a few small routes down to the San Francisco Bay Area and as far north as Redding, distributing 2 types of whole-grain bread (a rice loaf and an unleavened whole-wheat bread) and gluten-nut crackers to the Berkeley Co-op and established (old-line) health food stores. The Berkeley Co-op was one of the first to carry the full line of macrobiotic products. These routes continued until about 1964-65.

Chico-San's first really successful product was rice cakes. They were introduced in 1963 but initially the big distributors showed no interest. That changed starting in about 1964 when a new generation of rice cake machines began to make a better product and a few of the big distributors started to carry them. By 1965 Chico-San's rice cakes and other popular products were being sold at more

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than 150 California outlets. It was the national popularity of the rice cakes that kept Chico-San from developing its own distribution company, and relying instead on large established distributors–and later brokers.

By about 1966-1967 rice cakes and rice chips (*senbei*) were beginning to cut a wedge into the mass market nationwide, so Chico-San created the Spiral Foods brand for these mainstream products, keeping the Chico-San brand for the health food market.

Concerning imports of miso and soy sauce from Japan, Chico-San first imported directly from George Ohsawa, he located the manufacturer, put the order together, and shipped it himself. Then came Nippon C.I., which was started by George and some of his disciples in Tokyo, but it didn't last very long. In 1966 Chico-San started importing from Muso Shokuhin in Osaka. But after Muso started selling a lot to Erewhon (which became a major competitor for Chico-San), Bob felt that product quality began to decline, so he began to do all his importing from Ohsawa Japan, a company that was developed by George's sister-in-law (Lima Ohsawa's sister), Flora Tanaka, at George's request. Bob felt the quality of products from Ohsawa Japan was better than from Muso, but the prices were higher and the company was not quite as professional in its business dealings.

Concerning the sale of Chico-San to Heinz, Bob is overall not very happy with the outcome. Granted, rice cakes are now much more widely known and sold in supermarkets, but the loss of Chico-San "put a big hole in the process of selling macrobiotic foods." Bob and Herman Aihara bought back the macrobiotic line from Heinz and created Ohsawa America in Chico to try to sell it. Early general managers were Marty Roth, then Lane Seiger (who had previously worked for Bob at Chico-San). But the volume was not there on relatively few products to sustain a company profitably and eventually the company ran up debts of $300,000. At that point Bob basically gave the company to Sierra Natural Foods in Brisbane, California. Sierra had several thousand products; they only paid for the inventory. Bob is now working to develop new products from rice–such as a rice-crust pizza and crackers. Address: Chico, California. Phone 916-891-0970.

7595. Gilbert, Linda C.; Starr, Sara M. 1991. Natural foods companies broaden their horizons: Organic, vegetarian, convenience dominate industry. *Food Business* 4(20):44. Oct. 21.

• ***Summary:*** Discusses these three industry trends, plus San-J International, White Wave, and Lightlife Foods.

San-J will be introducing its OCIA organic certified tamari gold label in November. The 10-ounce product will sell for the same price as its non-organic counterpart. "While the majority of White Wave's $3 million sales still come from tofu, tempeh products reportedly are not far behind. The company says it is growing at about 30 percent annually, and its first and second generation tempeh products are achieving more than 100 percent growth. White Wave's latest offering is a soy yogurt product called Dairyless that is made with live active yogurt cultures, including acidophilus and bifidus. Lightlife Foods, another major soy foods company, has redesigned its logo and added two new products, a vegetarian chili and a sloppy joe mix, both made with tempeh." Address: 1. President, 2. Vice president. Both HealthFocus Inc., Emmaus, Pennsylvania. Phone: (215) 967-2233.

7596. Fukushima, Danji; Motai, Hiroshi. 1991. Antimicrobial activities of soy sauce and manufacturing of preservative-free low-salt soy sauce including productions through bioreactor systems. In: K. Okubo, ed. 1991. Japan part of Proceedings of the International Conference on Soybean Processing and Utilization. 130 p. See p. 113-20. [17 ref.]

• ***Summary:*** Soy sauce is generally very resistant to the growth of microorganisms because of its high salt content (16.9% w/v for regular koikuchi shoyu). Nevertheless, a special microorganism such as *Zygosaccharomyces rouxii*, can grow atop soy sauce even under these circumstances. Therefore preservatives such as sodium benzoate or n-butyl-p-hydroxybenzoate have been used. However consumers now want soy sauce without preservatives and with reduced salt. Soy sauce containing either 9% or 13% salt is now available.

As the salt content of shoyu increases, the water activity decreases. Most microorganisms cannot grow when the water activity is below 0.9 which corresponds to a 14% salt solution. Soy sauce naturally contains two microbicidal (antimicrobial) substances: Alcohol (typically 2.5%) and organic acids (such as lactic, acetic, and citric acids).

"There are two basic methods for preparing preservative-free low-salt fermented soy which are quite different. One is prepared by removing some quantities of salt from ordinarily made soy sauce (method A). The other is produced by adjusting the salt content by the addition of water to specially made low-salt high-nitrogen soy sauce (method B)."

"Most of the genen-shoyu on the Japanese market are prepared by electrodialysis through ion exchange membranes by the method A described above. The consumption of genen-shoyu is grown steadily on the today's Japanese market and the production is estimated to be about 1% of total soy sauce consumption (Hirose, 1989). Usujio-shoyu is mainly produced by the method B and the total production marked by JAS was 15,345 kl in 1988." Address: Kikkoman Corp., 1-25 Kanda Nishiki-cho, Chiyoda-ku, Tokyo 101, Japan.

7597. Matsuura, M.; Obata, A.; Fukushima, D. 1991. Long-life packed tofu in the United States. In: K. Okubo, ed. 1991. Japan part of Proceedings of the International Conference on

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Soybean Processing and Utilization. 130 p. See p. 37-40. [12 ref]
Address: Food Research Lab., Kikkoman Corp., Noda City, Japan.

7598 **Product Name:** [Tofu, Tofu Mayonnaise, Hot Squash Pies with Miso-Tofu Topping, Tofu Tart (with Cocoa or Carob), Tofu Salad with Tahini, Vegetarian Spring Rolls (Filled with Rice, Tofu & Soy Sprouts), Seitan].
Foreign Name: Tofou, Tourte au Giraumon (Nappage Miso, Tofou et Umé), Tarte au Tofou (cacao-pays, ou fruits de saison), Salade de Tofou (Tofou, crème de Sésame, tamari, aromates), Nems, Seitan.
Manufacturer's Name: Pascal Pinault.
Manufacturer's Address: "Caplet," 97226 Morne Vert, Martinique, French West Indies 0033. Phone: +59 6 55 56 57.
Date of Introduction: 1991, October.
New Product–Documentation: Talk with Pascal's sister, Marie, who calls from Orange County, California, to enquire about a source of tempeh starter for Pascal. 1993 March 17. Pascal has been very involved with soyfoods for many years. He has been making tofu and tofu products out of his home in Martinique for several years; he sells these mostly to restaurants. He would like to start making tempeh.

Letter, price list, and resume sent by Pascal Pinault at the above address. 1993, April 2. In Martinique he has been making an average of 12 to 20 pounds of tofu every week since Oct. 1991. His business has no formal name. He uses most of the tofu he makes to produce second generation products such as tofu mayonnaise, hot squash pies with miso-tofu topping, tofu & cocoa (or carob) sweet pie, tofu salad, spring rolls (*Nems*). For details see entry for the letter.

Note: This is the earliest known commercial soy product made in Martinique or any French Overseas Department.

7599 **Product Name:** [Seitan]
Foreign Name: Seitan.
Manufacturer's Name: Pascal Pinault.
Manufacturer's Address: "Caplet," 97226 Morne Vert, Martinique, French West Indies 0033. Phone: +59 6 55 56 57.
Date of Introduction: 1991, October.
New Product–Documentation: Letter from Pascal Pinault, 1993 April 27. "I first started to make seitan in Martinique under the same circumstances as tofu–lack of vegetable proteins other than beans. Not having ready-made gluten, I first made it by washing white-flour wheat dough. That was a very long and messy process but was well worth it. Then I found wheat gluten in the Tama catalogue–the company I mentioned that specializes in imported Japanese food products. That's when I started to [make and] sell seitan–though there is not much demand for it. My product was of good quality, cooked with ginger, Sakae-Johsen shoyu, and Hokkaido kombu-dashi! I learned to make seitan while living in the Catskill mountains of New York from a macrobiotic British girl friend who also taught me how to make amazake." For background details see letter from Pinault, April 1993.

Letter from Pascal Pinault, 1993, July 7. "I first made seitan, in Martinique, in 1989, from regular white flour. I started selling it in October 1991, but I was, by then, making it from dry wheat gluten. Because I am making it only on order (usually phone call), I am packaging it in a regular medium size plastic freezer bag. Customers know they have to eat it within a few days. From Tama, I ordered what I believe is dry wheat gluten (except when I was making it from flour), not even knowing of fresh gluten, or what 'dry vital' wheat gluten is. Tama has discontinued gluten (I now get it from CELNAT)."

7600 Sato, Kyoko, Watanabe, Tokuji. 1991. Food use of soybeans in Japan. In: K. Okubo, ed. 1991. Japan part of Proceedings of the International Conference on Soybean Processing and Utilization. 130 p. See p. 35.
• ***Summary:*** In 1988 some 47,000,000 tons of soybeans were consumed in Japan; 79% of this amount was used to make edible and 19% (8,900,000 tons) was used for foods. In the process of making edible soy oil, more than 3,000,000 tons of defatted soybean meal were produced; 89% of this was used as livestock and poultry feeds, and 12% was used in foods (mostly for soy sauce, but with some for soy protein products and others). There has been a rapid increase in consumption of edible oil and defatted meal in Japan, accompanied by an increase in animal protein in the diet.

In 1988 Japan produced only 290,000 tons of soybeans domestically, and most of this amount was used for foods, especially tofu (60%), miso (24%), natto (9%), and other foods (dried-frozen tofu, yuba, kinako, etc.). The consumption of these foods has risen proportionally to the increase in Japan's population, which means that over all per capita consumption is static.

A recent survey conducted in Japan showed that 82% of Japanese ate soyfoods more than 3 times/week, and that Japanese people had a rather good image of these foods, describing them as healthy, natural, tasty, good for daily use, inexpensive, and delicious.

Japanese enjoy both traditional and modern soyfoods. The technologies for making "Vegetable Protein Products" from soybean meal have been introduced from the USA since 1970, but these have been modified and adapted to suit Japan's tastes and needs. "The importance of soybean foods in Japanese dietary life cannot be too much emphasized. We love them as traditional but also new foods." Address: 1. Research Council Secretariat, MAFF; 2. Tokyo Metropolitan Food Technological Research Center. K. Sato is presently at National Food Research Inst., MAFF, 2-1-2, Kannondai, Tsukuba 305, Japan.

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7601 Smoky Mountain Natural Foods. 1991 Fall/Winter 1991 Natural foods price list [Mail order catalog]. 15 Aspen Court, Asheville, North Carolina 28806. 23 p. 28 cm.
• ***Summary:*** This is a "Catalogue of natural foods, body care and home products for a healthier, more natural way of life." This mail-order company, which began operation in Jan. 1991, sells products made by other companies; it does not do any manufacturing and does not have its own brand on any products. Their specialty is macrobiotics products, and they buy their Japanese imports from Macrobiotic Wholesale Co. They sell miso (Miso Master American Miso, Mitoku Japanese miso, Traditional Foods domestic miso, and instant miso soups from Edward & Sons), black soybeans and azuki beans (organic are grown in the USA, non-organic from Hokkaido), sea vegetables, soy sauce (San-J shoyu and tamari, Mansan tamari, Sakae shoyu, Johsen shoyu), San-J teriyaki sauce and Szechuan sauce, Nasoya dressings and Nayonaise, Natto miso chutney, Sesame miso sprinkle, Tekka condiment (jar or bag), jinenjo tekka, MMB [Mitoku Macrobiotic, a premium brand] organic farmhouse tekka, seitan, MMB traditional dried tofu, Tofu burger, scrambler, and stroganoff, Sweet Cloud sesame miso munchie, Sweet life miso candy.

John Troy is not connected to this company, nor is John Belleme; John is the wizard, and now he makes sauces from the Wizard's Cauldron. He also works with John Belleme at Traditional Foods making seitan. Address: North Carolina. Phone: 1-800-926-0974.

7602 Wong, Anson. 1991. Global Protein Foods in Valley Cottage, New York (Interview). *SoyaScan Notes*. Nov. 12. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Global Protein Foods hopes to be ready to start tofu production in about 2 months or less. Mr. Yasuo Hachijin is presently at the plant in Valley Cottage, and some Takai workers (Mr. Tsunoda) are installing a Takai tofu production system. Valley Cottage is in Westchester County, about 45 miles or a little less than 1 hour drive north of Manhattan, across the river from White Plains to the west. They plan to start with a 6-product line: silken tofu, firm tofu, extra firm tofu, fried tofu (thick or thin), and a dessert tofu. They are experimenting with fruit flavored tofu, a yogurt-like product, etc. They will be targeting their products to two markets: the American market and the Japanese market. The brand for the Japanese market will be something like Kyozen-nen (which is established in Japan), and for the American market G.P. Initially, the company will be focusing its marketing efforts on the tri-state area, which consists of New York City, Connecticut, New Jersey, and possibly maybe a little bit of Pennsylvania. This is equivalent to a 50-mile radius from the plant. Their main competitor in the American market is Nasoya, whose tofu is also the most expensive but the taste and quality are very good. There are many competitors in the Japanese market: Mori-Nu, Kikkoman, and Kyoto-Foods (from Terre Haute, Indiana–their tofu is "very good"). Mr. Hachijin is also involved with Kyoto Foods, but he sees them as a competitor.

Anson's background is in the plastics industry; the food industry is new to him. He went to the recent Natural Products Expo in Baltimore, Maryland. Address: Sales Manager, Global Protein Foods, 707 Executive Blvd., Building E., Valley Cottage, New York 10989. Phone: 914-268-8100.

7603 **Product Name:** Meat of Wheat Sun Burgers, Grilled Burgers, Chicken Style, Sausage Style, Hearty Original (Seitan Loaf), or Chicken Style Chili.
Manufacturer's Name: Ivy Foods
Manufacturer's Address: Office: 7613 S. Prospector Dr., Salt Lake City, UT 84121. Phone: 801-943-7664. Fax: 801-943-7311
Date of Introduction: 1991, November.
Ingredients: Sun Burger: Wheat gluten, brown rice, tamari, miso, onion, garlic, lemon juice, bean flour [white bean, black bean, garbanzo], yeast, flour, walnuts, vegetable oil [canola oil], xanthan gum, spices and natural seasonings.
Wt/Vol., Packaging, Price: 16 oz plastic bag inside a paperboard box.
How Stored: Refrigerated.
Nutrition: Per 98 gm: Calories 221, protein 26 gm, carbohydrate 28 gm, fat 2 gm, cholesterol 0 mg, sodium 277 mg.
New Product–Documentation: Talk with Goldie Caughlan of Puget Consumers Co-op in Seattle. 1992. Feb. 7. The company is selling gluten-based products under two trademarks: Wheat Meat and Meat of Wheat. Ivy Foods, the maker, is a member of Ivy International. Some of the products are of excellent quality. The company, a new company, will be showing the products shortly in Tacoma, and then at Anaheim. They were at the Anaheim show in early 1991 scoping out the market. She is not sure whether or not they have any products for sale yet. They also seem to be selling some Worthington products (Morningstar Farms line).

Talk with Mira Blue Machlis (pronounced MAK-liss) of Ivy Foods. 1992. Feb. 7. She and her husband, Mark, own this company. Mark has been in the restaurant business all his life, and his father originally owned all the Farrel's Ice Cream parlors in the northwest. Their company introduced their products in 1991 at Anaheim as Wheat Meat. The government was 9 months late in letting them know that they couldn't use that Trademark, because it was already registered. Their attorney did a trademark search and they got a copy of the trademark application and found out the person who owns the trademark. The trademark was registered in about 1982 although it states that the owner first started making the product in 1977. The owner of the trademark no longer lives where the Trademark was registered, but

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they have his phone number. Their company is now test marketing 5 gluten-based products in Salt Lake City and the surrounding area. And these products are available by mail order. They plan to make a gluten-based chili, which Sysco, a restaurant supply company, is now carrying. Ivy Foods, a regular business, is a member (not a division) of Ivy International, a contemplative group. "We are considering opening the company up to be a cooperative after a while. We're not in this to make money. We're in this more to set up a model business. We make all of our decisions through contemplation. We try to do things a little more consciously, and to recognize that food really is a vehicle for nurturing. This country has kind of forgotten that. When we moved to Salt Lake City we opened up a little vegetarian restaurant, the Sun Bun Café, with 2 partners. Mark started developing the Sunburger for them. It became so popular that we decided to take it to the natural foods show at Anaheim to see what the response was. The response was overwhelming. Now we are ready." Originally they considered food service operators their main potential customers, but now they hope to establish their base among natural food consumers. The little natural food store in town sells about 100 lb/week. After that base is stabilized, they plan to focus more on mainstreaming.

They have applied for a trademark on Meat of Wheat. They manufacture the products and their temporary plant will soon be moving to a new location.

Talk with Mark Machlis of Ivy Foods. 1992. Feb. 27. Most of their products (Chicken, Sausage, and 2 burgers) were first available for sale in Nov. 1991 at several stores in Salt Lake City. They now have a mail order program which allows them to ship their products in bulk as cheaply as they can put them in a store. This is good for people in outlying areas.

Products (Sun Burger, Chicken Style) with Labels sent by Mark Machlis. 1992. March. 4.25 by 6.5 by 2.75 inches. Paperboard box. Chocolate brown, red, white, green, gold, and tan. Sun Burger: Color photo of two patties on a wooden cutting board surrounded by grains and vegetables. "Vegetarian. Gourmet grain protein." Contains three preparation hints. At the top of one side panel is a symbol of one green circle inside another. Between the two is written "Animal Free" in bold green letters. In the central circle is an illustration of a lion and a lamb." The text reads: "As citizens of the world seek ecological balance, consciously made food choices open new options for Animals and Mankind... 'The frog does not drink up the pond in which he lives' (Buddhist Proverb)."

"Ivy International seeks to assist more conscious shoppers with an easily recognizable symbol which will clearly identify a vegan food product from lacto-ovo vegetarian products. For the free brochure, 'More Conscious Nourishment,' write to: Ivy International, Brighton Star Route, Brighton, Utah 84121.

Soyfoods Center Product Evaluation: Sun Burger. Package design: Generally excellent, but the term "Wheat Meat" is a registered trademark owned by another person, and a refrigeration statement should appear more prominently. The ingredients terms "bean flour" and "vegetable oil" are ambiguous. Sensory evaluation: All liked the product (score of 8); good texture and flavor. Chicken Style: Sensory evaluation: Some liked the product (score of 8), but one person did not (2), saying it reminded her of bread. The pieces are like torn pieces of chicken.

Leaflet. "Meat of Wheat Gourmet Grain Protein." A black and white photo shows each of 4 products. "All natural ingredients. Low fat. No cholesterol. High protein. Animal free." Ingredients in other products. Chicken Style: Wheat gluten, bean flour, vegetable oil, spices and natural seasonings. Sausage Style: Same as Chicken Style. Hearty Original: Wheat gluten, tamari, onion, garlic, lemon juice, bean flour, yeast, walnuts, vegetable oil, spices and natural seasonings. In a chart titled "Nutritional Comparisons," each of 4 products is compared with its meat counterpart and a Worthington counterpart. In each case the Ivy Foods product has a lower percentage of calories from fat (9-17%).

Wheat of Meat recipes: Contains 8 recipes on the front and back of one sheet. The Chicken-Style Chili is available only for institutional and restaurant use.

Spot in Natural Foods Merchandiser. 1993. Sept. p. 76. Receive up to 20% off on Meat of Wheat Sausage Style.

Ad in Vegetarian Times. 1993. Sept. p. 50. "Meat of Wheat." Available in: Grilled Burgers, Sun Burgers, Chicken Style, Sausage Style, Hearty Original. Order from your health food store or call Ivy Foods direct at 1-800-280-1313. Gives a recipe for Meat of Wheat Magnificence.

Ad in Vegetarian Times. 1993. Oct. p. 32. "Meat of Wheat." "Sausage Style ideas: Pizza topping, manicotti & lasagne, tacos & burritos, tossed with pasta.

Ad in Vegetarian Times. 1993. Nov. p. 20. "Giving Thanks." Make a vegetarian "no Tom" turkey using Wheat of Meat Chicken Style.

7604 **Product Name:** Jaclyn's Salsa Chicken Style in Mild Salsa with Mexican-Style Organic Brown Rice, Green Beans, Corn and Organic Kidney Beans (Vegetarian).
Manufacturer's Name: Jaclyn's Food Products, Inc.
Manufacturer's Address: P.O. Box 1314, Cherry Hill, NJ 08034. Phone: 609-983-2560.
Date of Introduction: 1991. November.
Ingredients: *Organic brown rice, vital wheat gluten, tomatoes, tomato puree, green beans, corn, *organic red kidney beans, green peppers, red peppers, canola oil, garlic, onions, brown rice syrup, apple cider vinegar, sesame oil, sea salt, rice bran, almond butter, kombu (sea vegetable), chili powder, spices. * = Organically grown and processed in accordance with Section 26569.11 of the California Health and Safety Code.

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Wt/Vol., Packaging, Price: 11.5 oz (325 gm) paperboard box. Retails for $4.45 (11/91, California).
How Stored: Frozen.
Nutrition: Per 11.5 oz.: Calories 325, protein 28 gm, carbohydrates 35 gm, dietary fiber 12 gm, fat 9 gm (polyunsaturated fat 2 gm, saturated fat less than 1 gm), cholesterol 0 mg, sodium 290 mg, potassium 410 mg.
New Product–Documentation: Product with Label purchased at Berkeley Natural Grocery Co. in California 1991 Nov. 24. 7.5 by 6 by 1.25 inch paperboard box. Red, blue, green, pink, and black on tan. Color photo of the meal served on a white plate. "Vegetarian Dinner Classics. 100% natural. Low calorie. No cholesterol. Low fat. High fiber. Dairy free. Heat and serve in your oven or microwave. Do not refreeze." The main ingredient in this "wheat protein which is derived from 100% whole grain wheat. The wheat protein is blended with rice bran and almond butter to make it tasty and easy to digest. Then it is cooked in a special tamari broth flavored with poultry seasonings and cut into bite-size pieces so that its taste and texture resembles chicken."

Soyfoods Center Product Evaluation. 1991. Dec. 2 Package design: Very good. Flavor: Good, but a little too spicy. A bit too expensive.

7605. **Product Name:** Jaclyn's Sesame Chicken Style in Sesame Sauce with Seasoned Organic Brown Rice, Broccoli, Carrots and Water Chestnuts (Vegetarian)
Manufacturer's Name: Jaclyn's Food Products, Inc.
Manufacturer's Address: P.O. Box 1314, Cherry Hill, NJ 08034. Phone: 609-983-2560)
Date of Introduction: 1991. November.
Ingredients: *Organic brown rice, vital wheat gluten, broccoli, carrots, water chestnuts, tamari soy sauce (water, soy beans, sea salt), unsweetened pineapple juice, sesame oil, sesame seeds, brown rice syrup, apple cider vinegar, rice bran, almond butter, kombu (sea vegetable), ginger, sea salt, chives, spices. * = Organically grown and processed in accordance with Section 26569.11 of the California Health and Safety Code
Wt/Vol., Packaging, Price: 11.5 oz (325 gm) paperboard box. Retails for $4.45 (11/91, California).
How Stored: Frozen.
Nutrition: Per 11.5 oz.: Calories 325, protein 31 gm, carbohydrates 40 gm, dietary fiber 15gm, fat 8 gm (polyunsaturated fat 2 gm, saturated fat less than 1 gm), cholesterol 0 mg, sodium 635 mg, potassium 390 mg.
New Product–Documentation: Product with Label purchased at Berkeley Natural Grocery Co. in California 1991 Nov. 24. 7.5 by 6 by 1.25 inch paperboard box. Brown, blue, green, pink, and black on tan. Color photo of the meal served on a white plate. "Vegetarian Dinner Classics. 100% natural. Low calorie. No cholesterol. Low fat. High fiber. Dairy free. Heat and serve in your oven or microwave. Do not refreeze." The main ingredient in this "wheat protein which is derived from 100% whole grain wheat. The wheat protein is blended with rice bran and almond butter to make it tasty and easy to digest. Then it is cooked in a special tamari broth flavored with poultry seasonings and sliced into strips so that its taste and texture resembles chicken."

7606. **Product Name:** Jaclyn's Sirloin Strips Style in Tamari-Ginger Sauce with Organic Brown Rice and Oriental Vegetables (Vegetarian).
Manufacturer's Name: Jaclyn's Food Products, Inc.
Manufacturer's Address: P.O. Box 1314, Cherry Hill, NJ 08034. Phone: 609-983-2560.
Date of Introduction: 1991. November.
Ingredients: Organically grown brown rice, vital wheat gluten, broccoli, carrots, red pepper strips, water chestnuts, bamboo shoots, tamari (water, soy beans, sea salt), brown rice syrup, onion, garlic, canola oil (non-hydrogenated), rice bran, almond butter, apple cider vinegar, kombu (sea vegetable), ginger, natural spices. * = Organically grown in accordance with Section 26569.11 of the California Health and Safety Code.
Wt/Vol., Packaging, Price: 11.5 oz (325 gm) paperboard box. Retails for $4.45 (11/91, California).
How Stored: Frozen.
Nutrition: Per 11.5 oz.: Calories 290, protein 27 gm, carbohydrate 29 gm, fat 8 gm (percent of calories from fat 25%, saturated fat less than 1 gm), cholesterol 0 mg, sodium 390 mg, potassium 640 mg
New Product–Documentation: Product with Label purchased at Berkeley Natural Grocery Co. in California. 1991. Nov. 24. 7.5 by 6 by 1.25 inch paperboard box. Brown, blue, green, pink, and black on tan. Color photo of the meal served on a white plate. "Vegetarian Dinner Classics. 100% natural. Low calorie. No cholesterol. Low fat. High fiber. Heat and serve in your oven or microwave. Do not refreeze." The main ingredient in this "wheat protein which is derived from 100% whole grain wheat. The wheat protein is blended with fiber and seasonings to make it tasty and easy to digest. Then it is cooked in a special tamari broth and cut into sirloin-style strips so that its taste and texture resembles meat."

7607. Packaged Facts. Subsidiary of FIND/SVP. 1991. The Oriental foods market. 581 6th Ave., New York, NY 10011. Nov. *
• ***Summary:*** Talk with David Weiss, president of Packaged Facts. 1991. Nov. 26. This is an update of the Feb. 1989 edition of this company's market study of the same title. It was "completely rewritten by a different author, Linda Linton." They have added new statistics and even went back and changed some sales figures from the previous report. He does not know how the author gathered statistics on U.S. tofu production and sales, but he knows that she did not contact

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individual companies, one by one. "That is a very difficult way to get the information because (1) you don't know if you're getting the right information and (2) there may be something you are missing. We don't use SIC codes. Our figures are undoubtedly guesstimates. A little of it came from the Public Relations Dept. of Nielsen Marketing Research; they don't cover it all but they are good on packaged goods. A little also came from SAMI. There is nobody measuring the tofu market. This study only covers tofu sold as tofu, not including second-generation products. Some figures may have come from a tofu association, if there is one. Most of our reports are written from secondary published data. We just compile the figures. We are planning to do a report on the whole soy market–not just tofu." Address: New York. Phone: 212-627-3228.

7608. Silver, Jimmy. 1991. History of work with natural foods, Erewhon, Pure & Simple, and Pure Sales. Part I (Interview). *SoyaScan Notes*. Dec. 9 and 15. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Jimmy was born on 21 March 1942 in Philadelphia, Pennsylvania. His father was an officer in the Army Medical Corps. After a brief stay in Baltimore, when Jimmy was in 4th grade, the family moved to Manhasset, Long Island, New York. He grew up there and graduated from high school. He graduated from Oberlin College in Ohio, then did graduate work at the University of Illinois in the Inst. of Labor and Industrial Relations. He finished his course work after 18 months, but did not write his thesis, then went to New York as a labor organizer. After receiving a draft notice during the Vietnam War, he enrolled in the University of Michigan at Ann Arbor studying Medical Care Organization. Again he completed his course work for the doctoral program, but facing the doctoral thesis, he dropped out in 1967 or 1968.

He was briefly introduced to natural foods and macrobiotics in 1967 in Ann Arbor by a friend named Earl Rosner. One day, in the midst of the psychedelic counterculture he had a deep inner realization that Americans were destroying their ecosystem, both within and without. He quit using psychedelics and began to eat only natural foods. He read *You are All Sanpaku* and *The Book of Judgment*, early macrobiotic works. He bought the books and "health foods" at an old-line health food store named Zerbo's, run by Harry Zerbo in nearby Livonia, Michigan. At the Kuwahara trading post in downtown Detroit he bought real Japanese food–such as various sea vegetables, soba, and noodles–and Koda Brothers Kokuho Rose brown rice.

At about this time (1967-68) Jimmy got into the music business, and was sort of in business with a poet named John Sinclair, who was a great bear of a man, who the media regarded as the Pharaoh of the Hippies, and who managed a band named the MC-5. Jimmy and John were partners in a production company named Trans-Love Productions–Gets You There on Time. Jimmy managed a rock group named Iggy Pop and the Stooges. After a few months John introduced Jimmy and Susan (his girlfriend of several years and wife to be) to Jim Semark, another poet who was into macrobiotics, Baha'i, and meditation. In mid-1968 Semark invited Jimmy and Susan to a macrobiotic cooking class taught by Michio Kushi at Semark's home in Detroit; then they soon met Michel Abehsera–who they thought was wonderful and very down to earth.

Jimmy and his wife, Susan, were married on 23 Oct. 1968 in Ann Arbor. He and Susan were in Ann Arbor at the time the food co-op changed into Eden Foods but they were never members of the co-op or the Zen Macrobiotic Supper Club–for reasons that he cannot now recall. He and Susan were loners and membership in such groups wasn't their style. Jimmy's parents still lived on Long Island in New York so when he and Susan visited them, they used to go into the city and buy foods from Arnie Greenberg (who owned Greenberg's, a Jewish deli-grocery store at 125 1st Ave., near Ratner's vegetarian delicatessen, in New York City). Arnie carried foods in bulk and packaged natural foods from suppliers such as Infinity. Infinity Foods was a small food warehouse on the 2nd or 3rd floor run by a bunch of Scientologists (including Howard Rower and Jason Hammond [son of John Hammond Sr. of Columbia Records and brother of the white blues guitarist John Hammond Jr. of John Hammond and the Nighthawks]) who were into macrobiotics and natural foods. Jimmy had their catalog and visited their warehouse. Located in downtown New York at 171 Duane St. on the west side near the commercial produce and meat area, Infinity started in the mid-1960s and was the first company to import macrobiotic foods from Japan–before Erewhon. The Erewhon retail store used to carry Infinity's products. Then Infinity fell on hard times and disappeared. Arnie would also ship him macrobiotic staples by Greyhound bus. He recalls Gloria Dunn, who looked like a gypsy, and he recalls Eden Organic Foods which was on the second floor of a building near downtown Ann Arbor. Shortly after Bill Bolduc started Eden, Jimmy and his wife left for Los Angeles with Iggy Pop.

Their first daughter, Rachel was born on 23 Jan. 1969 in Ann Arbor. He went to Los Angeles with his band in the spring of 1970. He played music at night then during the day would hang out at the Erewhon retail store on Beverly Blvd. in Los Angeles with Bruce Macdonald and Paul Hawken. He thinks that Michio Kushi had sent either Bill Tara, Bruce Macdonald, or Paul Hawken from Boston to open a branch of Erewhon in Los Angeles in about the summer of 1969. Years later when the store became a wholesale company, it was given the name Erewhon West, since it had different ownership from Erewhon in Boston. At the end of the summer of 1970, he and his wife moved to Los Angeles to live with Aveline Kushi, who had a house on Franklin Ave. in Hollywood. He wanted to work with Erewhon, not in

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the retail store on Beverly Blvd., but in the little warehouse that they were just acquiring kitty-corner to across the street from the retail store. In about 1970 it began wholesaling and distribution business. But when Jimmy returned in the fall, Hawken was gone; he had moved to San Francisco and gone to work with Fred Rohe. Hawken had apparently had a falling out with Michio and Aveline Kushi. So Jimmy worked with Bruce Macdonald ("a wild man then, as ever")

Jimmy and his family then moved to Boston, where they lived and worked from Dec. 1970 to 1976. Jimmy had been asked by Michio Kushi to take over the failing restaurants (Sanae and The Seventh Inn) in Boston. Both were owned by Sanae Corporation. Richard Sandler and Warren Durbin had grandiose plans to expand Sanae, so they opened The Seventh Inn on Boylston St. in Boston. It was an immediate failure and they struggled with it for years afterwards–then they just up and left. Paul Hawken at Erewhon had promised to help Jimmy with Sanae.

Then Jimmy worked in Los Angeles with Erewhon West (owned by John Fountain–John Deming was the financial backer) from 1976 to 1980. John Deming's family controls the Murphy Oil Co. in Louisiana and they are extremely wealthy. Erewhon West had financial troubles trying to compete with Nature's Best and K&L–big, established distributors. In 1980 Deming fired Fountain and was going to liquidate the company–just shut it down. So Jimmy and Jeff Hilgert bought the assets from Deming and in June 1980 they transformed Erewhon West into Pure Sales. The company has done various things over the years. Initially it sold natural food consumer products. John Fogg developed the excellent marketing concept for So Tamari in about 1981. When Erewhon went bankrupt in 1981, they voided their contract with Pure Sales to permit the use of their name for a royalty–so within 90 days Pure Sales eliminated the Erewhon name from all of their products; all of the Japanese products became "So'" products (So' Tamari, So' Ramen, etc.), a name Jimmy coined, which meant nothing but sounded Japanese. Continued. Address: President, Pure Sales, P.O. Box 5116, Irvine, California 92716-5116. Phone: 714-540-5455

7609. Silver, Jimmy. 1991. History of work with natural foods, Erewhon, Pure & Simple, and Pure Sales. Part II (Interview). *SoyaScan Notes*. Dec. 9 and 15. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** In 1982 Jimmy and Jeff Hilgert sold their business (which was growing very fast), except for the name (Pure Sales), to Fillmore Foods, a supplement company that wanted to expand into natural foods. Fillmore Foods named the new company Pure & Simple–its rebirth. Bruce Macdonald, always one to see an opportunity, started Pure & Simple making natural tortilla chips in San Diego. The chips were reasonably successful. "It's not clear to me whether Bruce coined the name Pure & Simple or whether he found it on the back of a Corn Nuts package."

When Phil Parente / Parenti got involved in raising money to take over New-Age Natural Foods (Fred Rohe's company), somehow Pure & Simple became part of the package. Bruce Macdonald took the name Pure & Simple, which he controlled, to Parente, offered to trade the name for shares in the company if Parente would continue producing his chips. He also suggested many other product ideas to expand the line. Parente agreed. Then in the early 1970s Parente was sued by the company that makes Corn Nuts because they wanted to use the Pure & Simple name. The two companies fought a legal battle over this name for several years. Parente won. Then Parente began to expand Pure & Simple. An ex-disc jockey named A.J. Celeri got Parente involved in some carrot packing operation that his family had been involved in. Then they got into organic chickens and eggs, and finally opened a big New Age natural foods supermarket in Palo Alto. A good idea that had arrived too early, it was not successful. Soon the whole thing was completely out of hand. In the end, Phil Parente ran the original Pure & Simple into the ground. He had the mafioso from the produce market chasing him, and all the people who had invested money in the company were also after him. Pure & Simple never filed formal bankruptcy papers, it just went down the drain. During this period Pure & Simple and The Well were both located in the same warehouse [at 795 West Hedding St.] in San Jose. Jimmy thinks that Pure & Simple was the name of the whole company, which owned the line of Pure & Simple branded grocery products, such as jams and juices. The Well was simply the fresh produce distribution arm of Pure & Simple.

The Lundberg brothers, producers of organically grown rice in Richvale, California, had a brother-in-law or a cousin named Dick who worked as a salesman for Shade Foods, a maker of yogurt toppings in Belmont, California. Dick went to Bill Shade and recommended that Shade acquire the Pure & Simple name and run the company. So Shade Foods bought Pure & Simple, which at that time was only producing a line of jams and a few other minor products. They were grossing about $4,000 a month and they had about $9,000 a month in expenses. Shade Foods ran Pure & Simple for about a year–into the ground. Roger Hillyard knows this whole story. Roger had a brokerage named Omega and he took Jeffrey Hilgert (who was employed by John Deming at Erewhon–Los Angeles) to Shade Foods in hopes that Jeffrey would take over the marketing of the Pure & Simple products. Jeffrey convinced Shade Foods to sell the company to Deming. Shade agreed to sell. Jimmy later bought Pure & Simple (along with Erewhon–Los Angeles) from Deming. When Jimmy sold his business (Pure Sales) to Fillmore, most of his 100 products or SKUs [SKU = stock keeping unit] were under the Pure & Simple brand. These products went off the market in about 1985-86 when the whole thing, with $5 million in sales, fell apart. Pure Sales is

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now primarily a supplier of organically grown ingredients to natural food manufacturers.

Of all the original natural food companies based on the Erewhon format, Eden Foods is the only one that has survived and thrived in its original format. But Eden might not be in existence if it hadn't been for soymilk.

Note: Jimmy Silver and his wife and family have long lived in Irvine, California. The physical office of Pure Sales has been in Costa Mesa since 1985. Address: President, Pure Sales, P.O. Box 5116, Irvine, California 92716-5116. Phone: 714-540-5455.

7610. **Product Name:** The Eco Burger (3.2 oz. or 4.0 oz), The Eco Mex Burger, Eco Spheres (non-meatballs), Eco Pizza Topping, Eco Taco Filling, Eco Crumble, and Eco Breakfast Patty.
Manufacturer's Name: Ecotrition Foods.
Manufacturer's Address: Box 655, Langley, WA 98260-0655. Phone: (206) 221-0655.
Date of Introduction: 1991, December.
Ingredients: Eco Burger: Texturized soy protein, water, isolated soy protein, soy sauce, vital wheat gluten, modified vegetable gum, grape juice concentrate, natural flavors, organic vegetable powders (onion, spinach, carrot, garlic, celery), dry yeast, beet juice concentrate, salt, malt powder, rice bran, pea fiber, vegetable tocopherols (natural antioxidant and vitamin E source), vitamins and minerals (calcium phosphate, beta carotene, vitamin C, vitamin A, niacinamide, vitamin E, zinc oxide, iron, copper gluconate, calcium pantothenate, vitamin D-3, vitamin B-6, vitamin B-1, vitamin B-2, vitamin B-12, folic acid, biotin, potassium iodide).
Wt/Vol., Packaging, Price: Eco Burger: 3.2 oz or 4.0 oz.
How Stored: Frozen.
Nutrition: Eco Burger: Per 4.0 oz: Calories 138, protein 25 gm, carbohydrate 10 gm (dietary fiber 5 gm), fat 0 gm, cholesterol 0 mg, sodium 488 mg, potassium 500 mg.
New Product–Documentation: Kathie J. Anderson. 1991. Food Business. Dec. 9. "Burgers without the beef: Ecotrition Foods unveils premium meatless line." The company, co-founded by Robert Davis in 1990, will unveil its complete line of Eco-brand meatless products this month in Chicago.

Talk with Bob Davis. 1992. Nov. 2. His company, Ecotrition Foods, has a line of 7 fat-free meatless products including 3 soy burgers (which are beyond Harvest Burger), meatless meatballs, pizza topping, taco filling, and Eco Crumble (like stroganoff). He also has a fat-free hot dog on the same formulation that is much better than Lightlife Foods' Smart Dog. This is the first fat-free line of meat alternatives–its the next step after Lite. The vegetarian products contain extra beta-carotene, an entire anti-oxidant system, mixed tocopherol system, 4 grams of fiber and rice bran, 5 organic vegetables. They are based on textured soy protein isolate bound with methyl cellulose.

He now sells his products at the University of Michigan, as well as in 35-40 restaurants. In Washington, he sells 200 burgers a day to a sit-down restaurant in a nice district. CBS-TV did a special on the company because of the good reception given the products. All the products are pre-cooked, so the chefs love them. He has a total substitution program for restaurants; you can have it with meat or with Eco-meat. Sysco now distributes the products. He started selling the products 2 years ago. He has invested about $800,000 in the products and company, including $20,000 on brochures, videos and labels. He has been trying to sell the company for about 2 months. He is interesting in incorporating seitan into his product line. His strong point is product development R&D, and product concept.

Labels for each product sent by Bob Davis. 1992. Nov. 3. 7 by 4 inches. Self adhesive. Black on white. Illustration of Planet Earth. "Healthy foods for a healthy planet."

Company portfolio sent by Bob Davis. 1992. Nov. 3. Dr. Gary J. Post is the company CEO and Robert C. Davis is president. "All Ecotrition Foods products are: 100% fat free, 100% cholesterol free, low in calories, high in fiber, enriched with 5 organic vegetables, fortified with beta carotene, 100% vegetarian... Ecotrition Foods is founded on the concept of Ecology + Nutrition. All of our products meet the internally developed concept of Ecotrition which is: (1) maximizing nutrition, (2) optimizing taste, and (3) minimizing environmental impact."

Article by David L. Lewis. 1993. *Cars & Parts*. Jan. p. 147. "Ford Country: Soyburger." "Henry Ford, were he alive, would be pleased by a recent *USA Today* report that a 'meat alternative' patty made of soy protein and rice bran, will soon find its way into supermarkets. The compound, advertised as 95 percent fat free, will be produced by Believe, Inc., which also makes a tofu hot dog."

Talk with Robert Davis. 1993. Feb. 19. All of the above Eco products are built on a matrix/base of spun soy protein fiber, named 200E Fiber, made by Ralston Purina, and sold frozen in filaments 6-7 inches long. Robert did a lot of product development work at the Ralston Purina laboratory in St. Louis, Missouri, and he feels that the company is making a lot of 200E fiber. He imagines that it is used mostly as a meat extender. Robert is no longer working with Ecotrition Foods; Gary Post, a fairly wealthy chiropractor, is trying to keep the company alive. Ecotrition has applied for a patent on the process for making the Eco line of products, based on spun soy protein fiber.

7611. **Product Name:** Redwood Vegetarian Rashers (Tempeh Bacon).
Manufacturer's Name: Redwood Company (The). Div. of JRJ Trading (Importer-Marketer-Distributor). Made in America.
Manufacturer's Address: 243 The Broadway, Muswell Hill, London, N10, England.

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Date of Introduction: 1991. December.
Ingredients: Tempeh, shoyu, malt syrup, sea salt, yeast extract, mixed spices, fermented red rice
Wt/Vol., Packaging, Price: Retails for £1.99.
How Stored: Refrigerated or frozen
New Product–Documentation: Health Food Business (London). 1992 Jan. p. 12. "Vegetarian breakfast treats with JRJ's organic bacon." This bacon-like product made with organic tempeh retails for £1.99. The tempeh is made from organic soybeans with red rice added to give an authentic color; red rice gives much better color retention than the usual beetroot color. Salt is also added.

Talk with Jeremy Duncan, owner of The Redwood Co. 1992. June 16. This product was introduced in late 1991. About 6 months ago the company moved to its present address: Unit 4, West Burrowfield, Welwyn Garden City, Hertfordshire, AL7 4TW, England. He owns both The Redwood Co. and JRJ Trading, which is an import company. Nowadays he no longer thinks of Redwood as a division of JRJ Trading.

Spot in SoyaFoods. 1992. Autumn. p. 5. "Tempeh alternative to bacon." This may be England's first vegetarian alternative to bacon.

7612. Rondot, Pierre, Sudaryanto, T.; Djauhari, A.; Anwarhan, H. 1991. Soybean utilization, processing, and production policy in Indonesia. *Palawija News (Bogor, Indonesia)* 8(4):1-6. Dec.
• ***Summary:*** "More than 80% of the households in Java consume soybean. The next highest consumption rate is in North Sumatra where 55% of the households eat soybean regularly. In Java, annual soybean consumption per capita varies from 11 to 16 kilograms compared with one to six kilograms in other areas of Indonesia. Java, which produces 47% of Indonesia's soybean, is also its greatest consumer.

"Average soybean consumption for the whole of Indonesia increased from 3.42 kg/cap/year in 1969 to 5.78 kg/cap/year in 1985. Consumption per capita of processed soybean is higher in urban areas than in rural areas."

"The Indonesian 'poultry revolution' has given rise to the modern animal feed-mill industry. . . As Indonesia did not have a crushing industry until 1988, the meal had to be imported to regulate the national demand and to sustain the development of the 'poultry revolution'".

In 1987, according to SYGAP survey data, Indonesians consumed 749,600 tonnes of tempeh (86 gm/week), 714,700 tonnes of tofu (82 gm/week), and 48,200,000 liters of kecap (ketjap; Indonesian soy sauce). Per capita consumption of onchom was 4 gm/week. Address: 1. Agricultural Economist, ESCAP/CGPRT Centre, SYGAP Project, Bogor, Indonesia

7613. **Product Name:** San-J Organic Whole Soybean Tamari. Wheat Free Soy Sauce (Gold Label, Traditionally Brewed Gourmet Soy Sauce; OCIA Certified Organic)
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 800-595-9545 or 415-821-4040 (Perelman)
Date of Introduction: 1991. December.
Ingredients: Water, whole soybeans (OCIA certified), sea salt, alcohol (to preserve freshness).
Wt/Vol., Packaging, Price: 5.07 fluid oz (150 ml) dispenser, 10 fluid oz bottle, 20 fluid oz (592 ml). The 10 oz Gold Label retails for about $2.29, and the Black Label for about $1.99 (13% less).

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How Stored: Shelf stable.
Nutrition: Gold label: Per 1 tbs. Calories 11.34, protein 1.84 gm, carbohydrate 1.06 gm, fat 0 gm.
New Product–Documentation: Talk with Stephen Zoller of San-J. 1992. July 6. This Gold Label product, certified organic by the Organic Crop Improvement Association (OCIA) was introduced in Dec. 1991. This wheat-free, whole-soybean product itself is certified, not just the beans going in. The company's previous Gold Label Tamari was made with Virginia-grown soybeans that were not claimed to be organic. The company now uses ultrafiltration to do its filtration. San-Jirushi in Japan liked this idea so much that they decided to install it in Japan, i.e. reverse technology transfer. Each year in the spring at San Jirushi, Japan, some 2-6 managers are promoted. After promotion, they typically come to visit the U.S. plant.

Label sent by Steve Zoller. 1992. July 7.

Two labels sent by Misako Binford of San-J International. 2012. May 14. The gold label now reads: "Organic Tamari: Gluten Free Soy Sauce. 10 fl. oz. Made with 100% soy." Two logos on the front panel: (1) Non GMO Project verified. (2) Certified Gluten Free. She notes: Gold. Created 1988. Made organic around 1990 or 1991.

7614. **Product Name:** [Sunflowerseed Snacks]
Foreign Name: Snack Girasole.
Manufacturer's Name: Soy & Rice.
Manufacturer's Address: Via A. Canale 8/c, 10078 Venaria Reale (TO), Italy. Phone: 011-402-0380.
Date of Introduction: 1991. December.
Ingredients: Sunflowerseeds, shoyu [spelled Shoyou].
How Stored: Shelf stable.
New Product–Documentation: Letter and Label sent by Bosco Franca and Garafola Carmelo of Soy & Rice. 1992. Feb. 4 by 2.75 inches. Black on white. Self adhesive. The logo is that developed by Mitoku which states in Japanese characters *"I Shoku Dô Gen"* (Medicine and food come from the same source, or Your food is your best medicine). Store at 4°C [39.2°F].

Note: The company also makes Gomashio (sesame salt).

7615. *Whole Foods*.1991. Tofu making gains: Oriental foods near $1 billion level. Dec. p. 1, 20. Cover story.
• ***Summary:*** A new study by the market research company Packaged Facts [a subsidiary of FIND/SVP] projects that retail sales of tofu will be $95 million in 1991, up 9.2% over 1990. Sales have grown steadily from $61 million in 1986, to $66 million in 1987, to $71 million in 1988, to $78 million in 1989, to $87 million in 1990.

Tofu is viewed as part of the Oriental foods market, which is projected to have retail sales of $992 million in 1991, up 5.5% over 1990. The major components of the Oriental foods market, ranked by projected retail sales in million dollars in 1991 are: Frozen foods ($296), dry soups ($287), Sauces ($160, including soy sauce), canned goods ($154), and tofu ($95). Note that tofu comprises the smallest segment.

Reasons for tofu's steady growth include its connection with two individual rising trends: ethnic foods and healthy eating. Michael [sic, David] Weiss, president of Packaged Facts, explains that Oriental sauces are also benefitting from the proliferation of Oriental restaurants "because increased familiarity with oriental food has stimulated consumers to begin preparing the dishes at home."

Note: All of the data on tofu in this report are derived from previously published sources.

7616. **Product Name:** [Toform Tofu Patties (With Mushrooms)]
Foreign Name: Toform Tofu Bratlinge (Champignon).
Manufacturer's Name: Amai.
Manufacturer's Address: Sandweg 41, 7070 Schwaebisch Gmuend, Germany.
Date of Introduction: 1991.
Ingredients: Tofu (water, soybeans*, calcium sulfate) 78%, mushrooms 10.6%, rolled oats*, soy sauce, sunflowerseed oil, parsley and spices, sea salt. * = Organically grown.
Wt/Vol., Packaging, Price: 2 x 100 gm vacuum pack. Retails for DM 4.50 (1/92, Germany).
How Stored: Refrigerated.
Nutrition: Per 100 gm. Protein 11.7 gm, fat 10.8 gm, carbohydrates 8.1 gm, calories (kcal) 176 (737 kJoules).
New Product–Documentation: Label sent by Anthony Marrese. 1992. Jan. 13. 4 by 7.5 inches. Self adhesive. Blue, white, green, and orange on tan. "Organically grown." Exklusiv Neuform certification symbol.

7617. **Product Name:** Tempeh Pâté
Manufacturer's Name: Big Carrot Natural Foods Store (The).
Manufacturer's Address: Toronto, Canada
Date of Introduction: 1991.
Ingredients: Incl. tempeh, carrots, tamari.
New Product–Documentation: Talk with (call from) RoseAnn Lawrence of Santa Rosa, California (Phone: 707-573-0596). This is the best natural foods store and deli she has ever seen. They even have their own cookbook–but it doesn't contain the recipe for this product. The pâté is made and sold in the store's deli. The recipe is a secret but the ingredients are on the label. It is sold in the form of a big loaf, like meatloaf, and the tempeh adds a chunky consistency. It is delicious spread on pita bread.

7618. **Product Name:** Alpamare
Manufacturer's Name: Bioforce of America Ltd. (Importer). Made in Switzerland
Manufacturer's Address: Importer: P.O. Box 507, Kinderhook, NY 12106. Made by Bioforce AG, CH-9325

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Roggwil/TG, Switzerland. Phone: 800-645-9135.
Date of Introduction: 1991.
New Product–Documentation: Catalog from Bioforce of America Ltd., P.O. Box 507, Kinderhook, New York 12106. 1991 Feb 17. Alpamare is a seasoning sauce with herbs, concentrated kelp, and soy.

7619. **Product Name:** Mitoku Macrobiotic Mansan Organic Tamari Traditional Wheat Free Soy Sauce
Manufacturer's Name: Mitoku USA (Importer). Made in Japan.
Manufacturer's Address: Tokyo, Japan.
Date of Introduction: 1991.
Wt/Vol., Packaging, Price: 10 fluid oz bottle.
How Stored: Shelf stable
New Product–Documentation: Label seen at Open Sesame in Lafayette, California. 1991. Feb. 16.

Mitoku Company Ltd. 1992. "Mansan Organic Tamari Incomparable Quality and Flavor." *Natural Health*. Feb. p. 126. This ½-page ad has an illustration by Akiko Aoyagi Shurtleff of a man standing on the rim of a huge vat ladling liquid tamari into floating keg. A bold symbol of the character for "tamari" appears in a box to the upper right. "Mansan Organic Tamari is available in North America under the Mitoku Macrobiotic and Emperor's Kitchen label. Exported exclusively by Mitoku Co., Ltd., Tokyo, Japan."

7620. **Product Name:** Harbor Lites Sea Sauce [Ginger Soy, Garlic Grille, Lemon Chablis, Tomato Tarragon].
Manufacturer's Name: Simply Delicious, Inc. [Div. of The Wizard's Cauldron, Ltd.]
Manufacturer's Address: 8411 Hwy. NC 86 North, Cedar Grove, NC 27231. Phone: 919-732-5294.
Date of Introduction: 1991.
Ingredients: Ginger Soy: Tamari soy sauce, water, white wine vinegar, ginger puree, rice syrup, white wine, lemon juice, garlic juice, pepper mash, sea salt, natural herbs & flavours, toasted sesame seed oil, shiitake mushrooms, natural vegetable gum, natural hickory smoke.
Wt/Vol., Packaging, Price: 10 fl. oz glass bottle with white plastic twist-off cap.
How Stored: Shelf stable.
New Product–Documentation: All four products, with Labels, sent by John Troy. 1991. Labels are turquoise blue and reddish brown on tan. Each sauce is meant to be served on seafood. The Garlic Grille has tamari soy sauce as the first ingredient. Lemon Chablis has "clear shoyu" as the sixth ingredient. Tomato Tarragon has "clear shoyu" as the seventh ingredient.

7621. **Product Name:** "Beefy" Burrito (Renamed Mexican Tofu Burrito), and Mexican Tofu Sloppy Joe
Manufacturer's Name: Soy Devine
Manufacturer's Address: Box 668, Miranda, CA 95553.
Date of Introduction: 1991.
New Product–Documentation: Talk with Mara Devine 1995. June 1. In 1995 Cajun Barbecue Style was renamed and divided into two products: Vegan Cajun Burger, and Cajun Tofu Sloppy Joe. She moved from Miranda to Arcata, California, in June 1993.

7622. **Product Name:** Seitan [Syrian Spice, Hungarian Peppercorn, Pepperoni Style, and Lemon Teriyaki flavors].
Manufacturer's Name: Vegan Epicure.
Manufacturer's Address: 210 Park Place, Ithaca, NY 14850. Phone: (607) 272-0432.
Date of Introduction: 1991.
Ingredients: Pepperoni: Wheat gluten, shoyu (water, soybeans), apple cider vinegar, fennel seed, spices
Wt/Vol., Packaging, Price: Vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Spot in Vegetarian Journal 1994. March/April. p. 27. Talk with Susie Gutierrez, founder and owner of Vegan Epicure. 1994. March 11. She introduced these flavors in 1991.

Product and Label for Pepperoni Style sent by Susie Gutierrez. 1994. March 14. 3.75 by 2.25 inches. Black on red. 16 oz. This is a dark brown log of seitan, 2½ inches in diameter and 7½ inches long. Also sent product and same size Label for Hungarian Peppercorn Seitan. Black on orange-yellow. 8 oz. Ingredients: Water, wheat gluten, shoyu (water, soybeans), spices, apple cider vinegar, red wine vinegar, lemon juice, black peppercorns. Each little cylinder is 1 inch in diameter and 3 inches long. Also sent product and same size label for Lemon Teriyaki Seitan. Black on blue. 8 oz. Ingredients: Water, wheat gluten, shoyu (water, soybeans), apple cider vinegar, red wine vinegar, lemon juice, spices. Each slice is 3 by 8 by 1/8 inch thick.

7623. Arora, Dilip K.; Mukerji, K. G.; Marth, E.H. eds. 1991. Handbook of applied mycology. Vol. 3: Foods and feeds. New York, NY: Marcel Dekker, Inc. x + 621 p. Illust. Index. 26 cm.
• ***Summary:*** Contains 17 chapters by various authors. Two chapters, of special interest, are cited separately: 10. Nonproteinaceous fermented foods and beverages produced with koji molds, by Tamotsu Yokotsuka (of Kikkoman). 11. Proteinaceous fermented foods and beverages prepared with koji molds, by Tamotsu Yokotsuka. Address: 1. Banaras Hindu Univ., Varanasi, India; 2. Dep. of Botany, Univ. of Delhi, Delhi, India; 3. Univ. of Wisconsin–Madison, Madsion, Wisconsin.

7624. Chelf, Vicki Rae. 1991. Cooking with the right side of the brain: Creative vegetarian cooking. Garden City Park, NY: Avery Publishing Group Inc. viii + 283 p. Illust. incl. many color plates. Index. 28 cm.
• ***Summary:*** This vegetarian cookbook, which contains

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over 500 healthful recipes, shows a strong macrobiotic influence. The extensive glossary of ingredients includes good descriptions of adzuki beans, many sea vegetables, amaranth, amasake, gluten, gluten flour, koji, kudzu, miso, mochi, natto, natto miso, okara, quinoa, seitan, shoyu, silken tofu, soybeans, tamari, tempeh, tofu, and T.V.P. (Textured Vegetable Protein). All of these ingredients are used in recipes. There are at least 26 tofu recipes, 6 seitan recipes, and 4 tempeh recipes.

The author, who also illustrated this book, has been a vegetarian for 16 years. While living in Quebec, Canada, she wrote several French-language vegetarian cookbooks. The right side of the brain controls thoughts and actions that are creative, intuitive, spontaneous, and artistic, whereas the left side controls more logical, concise, analytical, and scientific thinking. Conventional education encourages development of the left side of the brain. This book encourages creative experimentation and improvisation with the recipes given

7625. Ching, Emily; Ching, Ko-Shee; Austin, Theresa; eds. 1991. Monk's beef stew. Yue's tofu store. Cerritos, California: Wonder Kids Publications. 28 p. Illust. 21 x 21 cm. Series: Chinese Children's Stories: Tales about Food, No. 35. [Eng; Chi]

• ***Summary:*** This book contains two separate children's stories. There are different color illustrations of China on almost every page. The English text is generally on one page and the Chinese text on the other, but sometimes the English text is on the top of a page and the Chinese text at the bottom, with a full-page illustration on the facing page. The first story is about how monks followed the great Su Dong-Puo's instructions to make beef stew, seasoned with soy sauce. The "Pork Song" is the most popular poem that Su Dongpo wrote about food. Note: Su Dongpo [pinyin] (1036-1101) was a famous Song/Sung dynasty poet.

The second story begins by saying that "during the Warring States period [475-221 BC] the earliest Chinese tofu store was owned by the great general Yue Yi," general of the Yen state. He was also an obedient son. When he was young, his parents were quite old. They could not chew food very well since most of their teeth were missing. Yue Yi had always wanted to invent something tasty, which his parents could eat easily. Since many soybeans were planted around the family home, he soaked the beans, ground them to a paste, then cooked them." But his parents disliked this food, because it was full of grounds (okara). So they next day, after grinding the soaked soybeans with water, he strained them through a cotton cloth, then cooked the milk in a pot. This time his parents enjoyed his soybean soup.

One day Mrs. Yue's gums started to bleed. The doctor took her pulse, then said to Yue Yi that his mother had probably eaten too many soy beans, a heating food that increases the body's internal temperature. He gave her a medicine to lower her body's temperature. Yue Yi learned that the medicine contained gypsum [calcium sulfate], which has cooling effects. The medicine worked and her gums stopped bleeding. Then Yue Yi thought of putting gypsum in the soybean soup, so no one would need to worry about eating too much. The next day he bought some gypsum, ground it to a powder, then stirred it into the hot soybean milk. Surprisingly it turned into a gel. He and his parents found that it tasted delicious, refreshing, and tender.

Soon the neighbors came to his house to taste it. They too were pleasantly surprised "It is as tasty as meat." They called it the "mansion bean meat"–a name which caught on.

So Yue Yi opened a tofu shop to make and sell his new "mansion bean meat." His parents ate it, and lived long, healthy lives. Yue Yi traveled far and wide, teaching people how to make "mansion bean meat." Soon many elderly Chinese were enjoying this new food.

Many people in China decided to start their own business making "mansion bean meat" but they thought this three-character name was too long. So they combined the characters for "mansion" and "meat" to make the word "tofu"–in which *to* indicates "bean" and *fu* has the pronunciation of "mansion." Soon a new industry was born in China. "As a token of Yue Yi's kindness to the elderly and his spirit of unselfishness, the people recognized him as the grandfather of the tofu business and often offered incense in Yue Yi's name!" Illustrations show: (1) A hand-turned stone mill. The front of a tofu shop, with people carrying cakes of tofu. Photos show: (1) Large, flat blocks of tofu on wooden boards, uncut and cut into cakes. Note: The source, date, or authenticity of the story of Yue Yi in unknown. Yue Yi is not mentioned in Huang (2000) *Science and Civilization in China*. Address: Cerritos, California.

7626. Clearspring Ltd. 1991. Traditional Japanese soya sauces. London: Clearspring. 1 p. 1 folded sheet (2 p.). Illust. 21 cm. *

7627. Clearspring Ltd. 1991. Macrobiotic quality wholefoods. London: Clearspring. 1 p. 1 sheet. 21 cm. *

• ***Summary:*** This leaflet advertises Clearspring's line of largely Japanese malt syrups, Japanese teas, sea vegetables, miso, soya sauces, amazake, umeboshi, pasta, sauces and crackers.

7628. Dieudonne, Marie-Paul; Dieudonne, Pascal; Saulnier, Alain; Ferrenbach, J.P. 1991. Les nouveaux aliments: Soja–algues [The new foods: Soya and sea vegetables]. Editions S.A.E.P., Ingersheim 68000, Colmar, France. 95 p. Color photos. Index of recipes. 22 cm. Series: Delta 2000. [Fre]

• ***Summary:*** Contents: Part I of the book (p. 4-53) is about sea vegetables, by Marie-Paul and Pascal Dieudonne; Part II (p. 54-91) is about soya, by Alain Saulnier and J.P. Ferrenbach. Introduction. Economic aspects: Soybean production (worldwide, USA, France), world production of

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protein from various sources in million tonnes (FAO 1976: wheat 51, soya 24.9, rice 23.5, corn 23.4, meat 21.9, fish 11.8, cow's milk 6.7), protein yield, nutritional composition of various protein sources. Main nutritional characteristics of soya. Products made from soybeans: Tofu, tempeh, soymilk (*le jus de soja*), soy sprouts, shoyu or soy sauce. The causes of this explosion [of interest in soya]. Recipes: Of the 35 recipes, 33 feature tofu, 1 features tofu and soymilk, and 1 features soy sprouts. A number of the recipes include fish.

At the end is a glossary (p. 92-93) and a recipe index (p. 94-95). This book, which contains many beautiful color photos, is probably published by or in cooperation with Sojinal (formerly Cacoja) of Colmar and Issenheim. Address: Colmar, France.

7629. Duong, Binh, Kiesel, Marcia. 1991. The simple art of Vietnamese cooking. New York, NY: Prentice Hall Press. xvii + 326 p. Foreword by Jacques Pépin. Illust. (color photos by Becky Luigar-Stayner). Index. 24 cm.
• ***Summary:*** About the authors: Binh Duong was born in Vietnam in Nha Trang, on a beautiful bay on the country's south central coast. He was raised in Da-Lat in the mountains; his father was an engineer. In 1975, near the end of the Vietnam war, he fled to the USA, where he became a well-known chef. He and Marcia Kiesel met in 1998 in the test kitchens of *Food & Wine* magazine.

"There is a certain finesse, a certain quality to Vietnamese cooking that sets it apart from other types of oriental food: Clean, clear sauces; a minimum of fat; an abundance of vegetables; and very distinctive flavors" (p. xi, from the Foreword, by Jacques Pépin).

The best place to eat for most people in Vietnam, especially if one does not have much extra money, is at "the food stalls in the open-air market. The atmosphere is convivial; the food as pure and fresh as it can be made."

"There are only a few basic ingredients in Vietnamese cooking, but they are vital ones: *nuoc mam*, or fish sauce, lemongrass, a handful of unusual herbs, rice paper, and rice flour" (p. xvi-vii).

The chapter on "Key ingredients" (p. 10-29) includes: (1) Bean curd, dried (tau hu ky [yuba]): it comes in thin sheets or rolled "bean sticks" [dried yuba sticks]. Sold in plastic packets or colorful paper packages. Can be fried until crisp or softened in water then simmered or sauteed.

Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "tau hu ky" to refer to yuba. (2) Bean curd, fresh (dau khuon): Japanese name: Tofu. (3) Bean curd, fried (dau khoun chien): Cubes of fried tofu, especially delicious filled then simmered in a flavorful stew. Sold 10 cubes in a 2-oz pack. (4) Bean curd, red (chao): "A spicy wine-fermented tofu that imparts a reddish-brown luster and rich flavor to marinades." Better quality products are sold in glass jars or small crocks. (5) Hoisin sauce (Tuong ngot): From China, hoisin is made from soybeans, garlic, sugar, and spices. (6) Vietnamese bean sauce (Tuong cu da): Made from soybeans, cooked rice, and water. (7) Soy sauce (xi dau): Used quite a bit in Vietnam, especially by Vegetarian Buddhists who do not eat fish sauce. "Japanese soy sauces are light, pleasant and well suited to Vietnamese cooking."

Dipping sauces and condiments: Soy vinaigrette (Nuox xi dau giam, with "3 tablespoons soy sauce," p. 51). Rich bean sauce (Nuoc tuong ngot, with "1 heaping tablespoon pure Vietnamese bean sauce or Chinese bean paste," p. 54).

Soy related recipes: Garlic chive and tofu soup (Canh dau knuon, with three 3-ounce tofu cakes, cut into 2-inch pieces, p. 91. "Tofu, highly prized even by nonvegetarians because it is so nutritious, picks up the flavors it is cooked with and takes on a smooth and unusual texture that is quite pleasant"). Fried tofu stuffed with pork and mushrooms (Dau khuon don thit, with two "2-ounce packages fried bean curd, p. 242-43).

"Vegetarian cooking of the Vietnamese Buddhists" (p. 269-96). Begins with a page about how Buddhism came to Vietnam and its place in modern Vietnamese life and food. Vegetarian tofu soup (Canh chua chay). Vegetarian summer rolls (Goi cuon chay, with tofu). Vegetarian spring rolls (Cha gio chay, with firm tofu cakes and Soy dipping sauce). Fried tofu salad (Goi dau khuon). Carrot, jicama, and tofu salad (Goi chay, incl. three 3-ounce tofu cakes and "1 large sheet dried bean curd [yuba], broken in half crosswise"). Fried tofu with green beans (Dau khuon xao dau). Grilled tofu and vegetables (Dau khuon va la ghiem nuong vi). Curried tofu sauté (Dau khuon xao la lan, with firm tofu cakes). Lemongrass-scented vegetable sauté (with tofu). Fried vegetables with noodles (with tofu and 1 large sheet of yuba). Squash and sweet potato stew with coconut and peanuts (Kiem, with yuba and tofu). Fried tofu with tomato and vegetables (Dau khuon xao thap cam). Hoisin dipping sauce (Nuoc cham tuon). Soy dipping sauce (Xi dau cham, with soy sauce). Address: 1. Chef and owner of the True Orient Express, Hartford, Connecticut; 2. Assoc. director of the test kitchen and a food writer at *Food & Wine* magazine.

7630. Fukushima, Danji. 1991. Recent progress of soybean protein foods: Chemistry, technology, and nutrition. *Food Reviews International* 7(3):323-51. [29 ref.]
• ***Summary:*** Contents: Abstract. Introduction. Chemistry: Chemical composition of soybeans (Soybean globulins composed of four major components–2S, 7S, 11S, 15S), importance of three-dimensional structures of soybean protein molecules in food processing, influence of biologically active substances in soybeans on food processing. Technology: Traditional soybean protein foods and recent progress in their technology (soy milk {remove the hypocotyl and hull to remove off flavors; Soyasaponin A as the strongest off flavor}, tofu, kori-tofu, yuba), fermented soybean protein foods: Application of bioreactor for soy

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sauce production, nontraditional soybean protein foods and recent progress on their technology, recent progress on new soybean protein foods in which soybean proteins are the key material (modified abura-age, modified ganmodoki, deep fried texturized soy protein nuggets) Nutrition Recent progress on nutritive values of soybean proteins (Soybean proteins have an amino acid score of 100 for persons more than 2 years old), physiological function of soybean proteins (they lower cholesterol levels when used to replace animal proteins). Future of soybean protein foods (Kikkoman fermented soy sauce is well on its way to becoming a universal seasoning. Tofu and tempeh also seem to have a bright future)

"The most important chemical reactions during the process of soybean protein foods are the intermolecular reactions among the residues exposed on the surface of the protein molecules through the denaturation process. In native soybean protein molecules, most amino acid residues responsible for the reactions-such as cysteine (-SH), cystine (S-S), and hydrophobic amino acid residues-are buried in the inside region of the molecule, inaccessible to water. These residues become reactable with each other through the exposure from the inside by heat denaturation during processing. The unique textures of soybean protein foods, such as tofu, kori-tofu, yuba, and texturized products produced by extruder, etc., are the results of both the intermolecular interchange reaction between the exposed -SH and S-S groups and the intermolecular hydrophobic reaction among the exposed hydrophobic amino acid residues. The exposure of amino acid residues is also important for the hydrolysis of soybean proteins by enzymes, through which soy sauce is produced, because the cleavage of the peptide bonds is carried out after binding between the active sites of the enzymes and the enzyme-specific amino acid residues exposed through denaturation." Address: Kikkoman Corporation, 1-25 Kanda Nishiki-cho, Chiyoda-ku, Tokyo 101, Japan.

7631. Hesseltine, C.W. 1991. Peoria, an international center of fermentation excellence. *Transactions of the Illinois State Academy of Science* 84(1-2): 1-11. [11 ref]

• ***Summary:*** This paper was presented on 28 Sept. 1989 as the after-dinner address for the 50th Anniversary Celebration of the Peoria (Illinois) Branch of the American Chemical Society. Contents: First fermentations. Hiram Walker Co. (1816-1899, for many years they operated the world's largest bourbon whiskey plant in Peoria). Takamine. Northern Regional Research Center. Penicillin & Dr. Andrew Moyer. Penicillin–others (incl. Dr. Kenneth Raper). USDA's Agricultural Research Service (ARS) culture collection (which dates back to 1904). Polysaccharides. Mycotoxins. Fermented foods (especially soyfoods such as miso, shoyu, and tempeh). Fermentation in Peoria today (ADM uses the old Hiram Walker distillery to make fuel alcohol from corn). Honors and awards. References.

"Dr. Jokichi Takamine was the father of commercial enzymology and one of the pioneers of biotechnology. He was born in 1854 in Japan and received his Doctor of Pharmacology and Ph.D. in Engineering. He became very interested in Western concepts that would be useful to the Japanese but he also was interested in Japanese contributions to the West in science, industry and culture. In 1884 he married an American girl whose father helped him financially start the Takamine Ferment Company in Peoria in 1890. This company's business was to produce 'diastase,' a mixture of glucoamylase and α-amylase. This mixture of amylases was produced by the koji molds (*Aspergillus oryzae* and *A. soyae*) and it was here in Peoria that fungal amylase was first introduced to the West. In the production of alcohol from grain it is necessary to break down the starch to sugar, which is then fermented to alcohol. Up to this time the starch conversion step of grain was brought about by the use of malt produced by the germination of grains.

"In the Takamine process the malt was replaced by fungal α-amylase and, therefore, was a process in direct competition with malt utilization. Apparently this new innovation was greeted with apprehension by the malt manufacturers. There was labor agitation and a propaganda campaign against Takamine. In 1894 the distillery where he worked was burned to the ground. Arson was suspected but never proven. The distillery which used fungal amylase was rebuilt, but the company dissolved the Takamine corporation and Takamine left Peoria in 1894. In 1894 Takamine obtained a U.S. patent on his enzyme diastase preparation called Taka-diastase.

"Later Takamine founded the Takamine Laboratories in the East [Clifton, New Jersey] and the Sankyo Pharmaceutical Company of Tokyo. He also isolated crystallized adrenaline at the same time that this was done by J. Abel at John Hopkins. Takamine obtained patents on adrenaline. He is also known for arranging for three thousand cherry trees for planting at the Tidal Basin in Washington. Recently a book on Dr. Takamine was prepared and printed by the Miles Company, which some years ago bought the Takamine Laboratories. The book contains his writings translated into English along side the original Japanese."

"The ARS Culture Collection is one of only two large culture collections in the USA, and its primary function is to find and maintain useful or potentially useful microbial and genetic taxonomic material. This collection dates back to 1904 when Charles Thom was hired by the USDA to investigate the mold cheeses. In making these studies, Thom secured several hundred strains of *Penicillium* and *Aspergillus* which became the nucleus of the ARS Culture Collection. At first Thom was at the Connecticut Agricultural Experiment Station, but in 1913 he moved to Washington, DC, taking his cultures with him. The oldest mold culture in the Collection is a strain of *Actinomucor*

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elegans isolated in 1892. Thom's collection had no formal recognition, and the story is told how Thom worked in the Laboratory on weekends to transfer his collection. In 1940 when the Fermentation Laboratory was established at NRRC, the Thom Collection was moved from Washington, DC, to Peoria and was formally recognized as one of the fermentation groups with Dr. K. Raper in charge. Dr. J. Wickerham joined the group to be curator of the Yeast Collection, and W.C. Haynes was selected to maintain a Bacterial Collection. Since then the number of curators has increased from 3 to 6. Some famous private collections were added in 1940, including the Harvard Collection which had strains isolated before 1900." Address: 5407 Isabell, Peoria, Illinois 61614.

7632. Homma, Gaku. 1991. The folk art of Japanese country cooking: A traditional diet for today's world. Translated by Emily Busch. Berkeley, California: North Atlantic Books. xii + 270 p. Illust. Glossary and index of Japanese words. Recipe index. 26 x 20 cm.

• ***Summary:*** This is a remarkable book by a remarkable man, with many deep insights into both traditional and modern cultures in Japan and the USA; it gives a unique, authentic view of Japanese culture, and makes liberal use of the Japanese names for things, such as foods, utensils, techniques, houses, etc. He uses the Japanese words first, then explains what they mean (in parentheses) in English. Thus the book makes it easy and enjoyable to learn Japanese food-related words.

Moreover, the book is brimming with interesting information about traditional soyfoods in Japan.

The author was born in 1950 in Akita, capital of Akita prefecture, in northeastern Japan. Starting as a young boy, he studied Aikido with the founder, Morihei Ueshiba (1883-1969), as a live-in student in the small town of Iwama, in Ibaragi [Ibaraki] prefecture. He was curator of the Lake Ogawara Folk Art Museum, in Aomori prefecture, northeastern Japan, where he worked for about 4 years and learned much of the most interesting tradition, history and other information in this book. Since 1977 he has been living in Denver, Colorado.

Contents: Preface. Foreword. 1. Introduction. 2. The background of country cooking–Folk art and custom. 3. The background of Japanese staple foods. 4. The background of country cooking–Basic preparation. 5. Country meals. Closing. Lake Ogawara Folk Art Museum (*Ogawara Minzoku Hakubutsukan*), located in Furumagi, Misawa City, Aomori prefecture. Founded by Mr. Yukio Sugimoto. Officially opened 29 Aug. 1961. Displays over 15,000 pieces of folk arts and crafts.

Edamame (green soybeans, p. 49-50). In and around his home town, Aug. 15 was too early for harvesting fruits, so they celebrated *mame meigetsu* on Sept. 15. The main food offered at this festival was *eda mame* (green soybeans) along with boiled chestnuts, other fruits, and sweet potatoes. The name of the festival is derived from the word *mame*, which means "bean." In other areas the festival might be called *kuri meigetsu* ("chestnut full-moon") or *imo meigetsu* ("sweet potato full-moon")–depending on the main crop produced. All of the various crops harvested were offered to the moon.

Concerning soybean oil (p. 73): The section titled "Abura–Oils" states: In the Lake Ogawara Folk Art Museum an antique wooden tool (*abura shibori*, see photo) used for extracting oil is on display. The seed or food "to be pressed was placed between two pieces of wood and wedges were hammered into place with a big wooden mallet, driving the pieces together.

"In the Lake Ogawara area this method was used to make rapeseed oil, a popular cooking ingredient." Clearly, the oil was produced in small quantities. "The traditional Japanese farmer was never able to produce enough oil for deep-frying foods."

"There are many sources for natural oils in Japan. From sesame seeds we obtain *goma abura*, from Japanese nutmeg we obtain *kaya abura*, from corn we obtain *kimi abura*, from peanuts we obtain *rakkasei abura*, and from soybeans we obtain *daizu abura*."

Concerning yuba: Although very healthful, yuba (dried soymilk film) is not as popular as most other Japanese soy products. "Tofu is made by bringing soybean 'milk' to a boil. As it boils, a thick film forms on the surface. This film is picked up on a cloth and laid out to dry. The resulting food is yuba.

Note 1. This is the earliest English-language document seen (May 2012) that uses the term "dried soymilk film" to refer to yuba.

"I have served yuba to people visiting from Japan and had them ask me what it was." Yuba is popular in China and parts of southern Asia. It can be eaten fresh or dried. "Yuba is available in Oriental markets in the United States, but chemicals have usually been added during production." A photo shows various dried yuba sheets and dried yuba sticks on a shallow, round, woven Japanese tray (p. 92).

Tofu ("soybean cake"), yuba ("soybean film") and natto ("fermented soybeans") are all examples of soybean products (*daizu seihin*) (p. 139).

In the section on *Nimono*–"Poached dishes" is a recipe for yuba and kikurage ("Soak 2 oz. yuba and cut into 1-inch pieces," p. 186).

Concerning *tonyu* (soymilk): It is mentioned only in the recipe for homemade tofu–using "2 cups *daizu* (soybeans) and ½ teaspoon nigari (coagulant)" (p. 142-43).

Note 2. Koji, miso, miso soup, miso-dama, natto, shoyu, tamari, and tofu are each discussed in detail in separate records. Address: Former owner and head chef, Domo restaurant, Denver, Colorado. Founder and chief instructor Nippon Kan Aikido and Cultural Center, Denver, Colorado.

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7633. Homma, Gaku. 1991. Miso, miso soup, miso-dama, and tamari (Document part I). In: Gaku Homma. 1991. The Folk Art of Japanese Country Cooking: A Traditional Diet for Today's World. Translated by Emily Busch. Berkeley, California: North Atlantic Books. xii + 270 p.

• ***Summary:*** This is a remarkable book by a remarkable man, with many deep insights into both traditional and modern cultures in Japan and the USA; it gives a unique, authentic view of Japanese culture, and makes liberal use of the Japanese names for things, such as food, utensils, techniques, homes, etc.

Here we will discuss only those parts of the book relating to miso, miso soup, miso-dama, and tamari. The author arrived in Denver, Colorado, in 1977. One day an Aikido student of his took him to a local health food store. In the Japanese section he found hijiki, wakame, nori, miso, and soba. To his surprise, he found that although the foods were expensively priced, each was of "third-rate quality" (p. 5).

He started a Japanese restaurant in Denver, but never advertised it as a health food restaurant. Would anyone serve unhealthy food in a restaurant? Occasionally there would be customers with questions such as, "What kind of miso or shoyu do you use?" He realized that many customers were worried about their diets, rather than being grateful that they had enough food and that they could had the freedom to choose to eat whatever they wanted (p. 11).

He was born in Akita, in northeastern Japan, where the winters are harsh, and traditional people stored foods for winter survival. Some vegetables were buried in miso (soybean paste). Some soybeans were also preserved by making them into miso, which was a *hozonshoku* (preserved food) (p. 16, 18).

During the Kamakura period [1185-1333] Zen Buddhism became very popular with the samurai. Since Zen forbade the consumption of any warm-blooded animals, the diet was strongly affected. One popular food was "*kanbutsu* (lightly salted, dried fish) flavored with a mixture of soy sauce and miso called hishio" (p. 26). A photo shows Zen priests, heads shaved, eating in a monastery. Note: Hishio was similar to Chinese soybean jiang, a mash with the consistency of thin congee [rice porridge] or apple sauce; it could be separated by straining or filtering into liquid soy sauce [like tamari], with the solid residue being somewhat like miso, although with less flavor.

During the Muromachi period [1336-1573], Zen Buddhism continued to influence the Japanese diet, which consisted mainly of rice, cooked vegetables, and an early form of miso named *namé miso* ("lick miso" [finger lickin' miso]) (p. 27).

In traditional Japanese farmhouses, fish or fowl were sometimes marinated with salt and miso or tamari (juice from making [soybean] miso), "flash-seared on both sides to seal in juices and flavor, then stuck into the *venkei* (bamboo basket stuffed with rice straw used to store foods above the sunken open-hearth fireplace {*irori*}) to be smoked" (p. 32).

In traditional farmhouses, if there was more meat than could be eaten during lunch and dinner, "the rest was marinated in miso and tamari. The miso would keep the meat from spoiling during the night. The next morning the meats were rinsed lightly, seared, and put in the *venkei*" for the rest the working day. When the family returned for a meal, the meat was ready to eat" (p. 38).

Fishermen would mix their cooked rice with *umezu* (the juice left over after pickling umeboshi salt plums). And they would eat fresh fish with their *umezu* rice balls. First they would split the fish in half from the inside out–without using a knife. Then they would dip the fish in tamari or miso, and eat it uncooked, on the spot. Sometimes the tamari was mixed with wasabi (Japanese green horseradish) as a dip. Wasabi is a sterilizing agent, served with sushi to this day (p. 39).

A dish found in Homma's home town of Akita is called *kayaki* or *kai yaki*, which means "shell bake." "A large scallop shell is placed over the fire and filled with fish, tofu, and seasoned vegetables. Miso, soy sauce, or *shottsuru* (juice from pickling fish) as added for taste" (p. 40).

In the Owu mountain range of northeastern Japan, men whose livelihood depends primarily on hunting are called *Matagi*. "These people also farmed, but they were takers of life." So their lives, like those of the fishermen, were restricted and controlled by religious customs. On long hunting trips, the only food or "flavoring they carried was a dried ball made out of soybean paste called *miso dama*. All they had to do was to add water to make miso or miso soup (p. 42).

After the Tokyo Olympics in 1964, "Japan became a country inspired by consumerism." Japanese wanted to be like Americans. In "modern" families, the husband and wife both began to work outside the home. In the evening, just as the husband walked through the door, the wife would tear open a pouch of instant *misoshiru* (miso soup) and add hot water–"looks so real and tastes so good"–as they chased the American dream (p. 46).

Table manners: "When you are being served a meal, your chopsticks should lay horizontally in front of you at the close edge of the table. Your rice bowl is on your left and your miso soup is on the right ..." In Japanese restaurants in the USA, when serving dinner, they usually serve a salad and then *misoshiru* or *osumashi* (clear soup) before the meal (p. 56-57).

When you are a guest in a Japanese home, you "can only ask for *misoshiru* a second time. This is very formal; if it is a casual situation the rules are not as strict, yet manners are important in all situations" (p. 58).

Slightly sour Chinese cabbage mixed with tofu and chopped *negi* (Japanese onion [or leek]), "simmered with water, miso, and *sakekasu* (rice wine lees), makes a delightfully sour dish ..." "The first bulbs to appear after the

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winter snow melted belonged to the *fuki* (butterbur) plant. "These bulbs were seasoned with miso and roasted, or made into *sunomono*" (seasoned with rice vinegar) (p. 66).

"Miso and tamari–soybean by-products: Making miso was traditionally a community effort that began May 21st or 22nd (*haru higan* or the spring equinox)." Soybeans are soaked overnight, boiled, drained, and poured into a large tub. Men wearing rice-straw shoes to protect their feet crush the beans. The women then shape the crushed beans, while they are still warm, into pyramids, squares, or balls, depending on the locality [just like with *meju* in Korea] After the shapes have cooled, they are tied with rice-straw rope and hung under the eaves of the house (see 2 photos, p. 68). When the naturally occurring fungus [mold] begins to grow on the soybean shapes, it is said that "the flower has opened." When the shapes are covered with a fragrant bloom of mold, they are transferred to the *misodaru* (large cedar miso tub). Just before miso making time this tub is filled with water or weighted with rocks and soaked in a river so that the wooden staves would swell tight. It is then tested for leaks. Salt and water are added and the tub is covered. From time to time the cover is removed and the miso is stirred to enhance the fermentation process. This farmhouse method of making soybean miso is simpler than that which requires the use of koji, and the miso has a saltier taste.

While soybean miso is fermenting, a dark, rich, delicious liquid gathers at both the top and bottom. This is collected and called tamari (or miso-damari), and is used in traditional farm houses like soy sauce. In the countryside, shoyu (soy sauce) was traditionally made "as a cash crop to be sold in the cities. The mountain people and country farmers couldn't afford shoyu, so they used tamari or taremiso instead.

As a child, it was Homma's job to crush the boiled soybeans. His family used koji. The traditional farmer keeps a storage shed for the tubs of miso and pickles near his house–but not too near. "City people sometimes use the phrase 'you smell like miso' to mean that you come from" the countryside.

"Sometimes on larger farms, miso was stored for up to eight years. To have old miso in your house meant that you had a large, prosperous family" (p. 67-69). Continued. Address: Former owner and head chef, Domo restaurant, Denver, Colorado. Founder and chief instructor Nippon Kan Aikido ad Cultural Center, Denver, Colorado.

7634 Homma, Gaku. 1991. Miso, miso soup, miso-dama, and tamari (Document part II). In: Gaku Homma. 1991. The Folk Art of Japanese Country Cooking: A Traditional Diet for Today's World. Translated by Emily Busch. Berkeley, California: North Atlantic Books. xii + 270 p.

• ***Summary:*** Continued (p. 72): *Kojikabi* is the koji mold [*Aspergiluus oryzae*]. Koji (made from either steamed rice or barley) and its mold serve as a source of enzymes, which break down [hydrolyze] starches into sugars and proteins into amino acids, in the process of making both miso and shoyu. Koji is also used to make sake, and in farmhouses it was used to make *nigorizake* (unrefined sake, also called *doburoku* or *ohho*) in parts of the northeast prefectures. Nigorizake has been made from *genmai* (brown rice) since the Edo period (1600-1868). (p. 72)

Japan's traditional "seasonings are still undergoing change to suit current tastes [and lifestyles]: witness 'lite' soy sauce and reduced-salt miso!" (p. 74).

A photo shows *miso dama* [which could be called miso koji] and konnyaku dama hanging from the eaves of a traditional farmhouse (p. 83, 85).

There are many ways to preserve fish, one way is to marinate them with miso or tamari (which also add a subtle flavor) and then to dry them. Fish and shellfish (*gyokai-rui*) which have been dried are called *himono* (p. 90).

Homma has childhood memories of morning kitchen sounds: Rice being washed, snapping of kindling to start a fire under the *kama* (rice pot), "the sounds of chopping, as the tofu and scallions were cut for the miso soup" (p. 104).

A whole fish can be used by a single person with no waste. "One section can be eaten fresh that day. The second can be marinated in shoyu or miso for six to seven hours and frozen; this way it is ready to bake and eat at any time" (p. 112).

Breakfast–Setting the table. The simplest breakfast includes *ichihan, ichiju,* and *issai,* which means one bowl of rice, one bowl of soup, and one side dish. This simple breakfast is served during religious training, eaten for four or five days consecutively before a fast, or eaten to change one's diet or to lose weight." "The *ichiju* is either a kombu- or shiitake-based miso soup or a clear soup. The *misoshiru* contains a god balance of tofu and vegetables." The many *issai* include *tsukemono* (a variety of vegetables pickled with miso, salt, shoyu, or *nuka* {rice bran}), and *yakimono* (fish grilled either plain or marinated in shoyu, miso, *sakekasu* {rice wine lees} or nuka) (p. 122).

Okayu is rice porridge. "If you take plain okayu and mix in vegetables, fish, and miso or shoyu, you have *zosui* (p. 125).

"Morning side dishes: Tsukemono–pickles. Originally tsukemono were vegetables pickled in miso. Miso was called 'ko' in earlier times. *Ko no mono* [literally "fragrant things". *ko* is the Japanese character for "fragrance"] is the old name for pickles." Today miso pickles are still made in Japan, but salted pickles are more popular (p. 126).

Recipe for *miso zuke*–Pickles made with miso (p. 132).

Yakimono–Grilled and broiled dishes (for breakfast): One way to prepare fish for breakfast is to marinate them for 1-3 days in miso, shoyu, or *sakekasu* (saké lees). A recipe for *Kasu zuke yaki*–Fish marinated in rice wine lees is given (p. 144, 146).

Recipes for *Nasu no miso ni*–Japanese eggplant sauteed with miso, Tekkamiso–Soybeans and burdock sauteed with

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miso (p. 151).

Misoshiru–Miso soup. *Misoshiru* is an integral part of the traditional Japanese breakfast. Japanese farmers started their workday very early. Traditionally they began their day with a large pot (*nabe*) of grains, cereals, vegetables, and miso mixed together to make a porridge like *zosui*. In the last 50 to 60 years the *misoshiru* and rice have been served separately in the traditional Japanese breakfast. There follows a detailed, very interesting 7-page discussion of the art of making and consuming miso soup. Homma has found nothing that evokes as much gratitude and delight from Japanese traveling in the USA as to be served real miso soup. "For myself, if I think of my mother's *misoshiru* I become the most homesick!" "The most important point to consider when making *misoshiru* is timing." The best time to add the miso (which has been mixed with a small amount of dashi to dissolve it) to the soup is just as everyone is sitting down to the table to eat. "As soon as it starts to boil, remove it from the heat and serve." Three recipes are given for making *misoshiru dashijiru:* (1) With kombu and shiitake. (2) With kombu and katsuobushi. (3) With niboshi or yakiboshi (dried sardines or anchovies). Thirteen miso soup recipes are given: (1) Tofu and wakame. (2) Wakame and potato (*jagaimo*). (3) Wakame and shiitake. (4) Sliced tofu and negi leeks. (5) Bits of tofu (*kuzushi tofu*) with spinach. (6) Cabbage with agé (deep-fried tofu puff). (7) Soybean sprouts (*daizu no moyashi*) with agé. (8) Snow peas with agé. (9) Daikon (Japanese white radish) and carrots. (10) Onion and potato. (11) Kabocha (Japanese pumpkin). (12) Sweet potato (*satsuma imo*). (13). Asari or hamaguri (short-neck clam or regular clam). Diagrams (p. 158) show 3 ways (from 3 dishes to 6) of setting the breakfast tray (*ozen*).

Aemono recipes. *Shiraae*–Vegetables and tofu flavored with miso. *Kaiso no ume shiraae*–Sea vegetables and tofu flavored with miso and pickled plum. *Burokkori no shiraae*–Broccoli and tofu flavored with miso and pickled plum. *Nanohana no ume shiraae*–Rapeseed leaves and tofu flavored with miso and pickled plum. *Sayaingen no goma misoae*–Green beans flavored with miso and sesame seeds (p. 178-80).

Nabemono (one pot) recipes: *Tsumire nabe*–Fish ball and vegetable casserole flavored with soy sauce [and miso]. Nabemono with miso flavor base. *Butaniku or toriniku nabe*–Pork or chicken and vegetable casserole flavored with miso. *Gyuniku nabe*–Beef and vegetable casserole flavored with miso. *Kaisen nabe*–Seafood casserole flavored with miso (p. 226-28). Address: Former owner and head chef, Domo restaurant, Denver, Colorado. Founder and chief instructor Nippon Kan Aikido ad Cultural Center, Denver, Colorado.

7635. Homma, Gaku. 1991. Natto (Document part I). In: Gaku Homma. 1991. The Folk Art of Japanese Country Cooking: A Traditional Diet for Today's World. Translated by Emily Busch. Berkeley, California: North Atlantic Books. xii + 270 p.

• ***Summary:*** This is a remarkable book by a remarkable man, with many deep insights into both traditional and modern cultures in Japan and the USA; it gives a unique, authentic view of Japanese culture, and makes liberal use of the Japanese names for things, such as food, utensils, techniques, houses, etc. He uses the Japanese words first, then explains what they mean (in parentheses) in English. Thus the book makes it easy and enjoyable to learn Japanese food-related words. Moreover, the book is brimming with interesting information about traditional soyfoods in Japan.

This record will focus on natto, which originated in Japan in the northeastern provinces (*Tohoku Chiho*) where the author lived.

In the index (p. 276), under "Soybean products (*daizu seihin*)," he defines three different types of natto: (1) Fermented soybeans (natto). (2) Slightly crushed natto (*hikiwari natto*). (3) Whole bean natto (*tsubu natto*). He notes that natto is discussed mainly on page 139.

In Chapter 3, "The background of Japanese staple foods," in the section titled "Products used daily" (p. 94-100) is a subsection on "Natto–Fermented soybeans" (p. 97): "*Natto* is a very popular item on the Japanese breakfast table, but either you love it or you hate it, there is no middle ground. *Natto* is boiled soybeans that have been fermented by introducing the natto fungus [sic, natto bacterium, *Bacillus subtilis*]. Open a package of natto and the first thing to hit you is a very strange aroma. If you stir it, it becomes sticky. Someone watching this might say 'yech.' The translator of this book, Emily, is one of these people. Although she has lived in Japan and traveled extensively in Southeast Asia, she says 'Natto is not for me.'

"Like the tofu peddler, the natto peddler came every morning. Now natto is available throughout Japan, but in the past, because of the growing conditions needed to produce it, many people had not eaten natto in southern Japan. Some of the visitors I have had at Nippon Kan, especially the young [Japanese] visitors who lived south of Osaka, had never tasted natto.

"The weather in northern Japan is favorable for the natto fungus [sic]. Traditionally it was common for the farmers to make their own natto at home. I have tasted homemade natto from many different parts of Japan. Like most traditional foods, the taste and texture varies depending on the location and the family recipe.

"The first natto was discovered, it is thought, when soybeans stored for safekeeping became contaminated with water and created the appropriate environment for the natto fungus [sic]. Historically, many Japanese foods were discovered accidentally, such as in the course of storing or preserving foods.

"Since its initial discovery, the process has been isolated and developed in a controlled procedure.

"To eat natto, pour it from its container into a bowl and

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stir vigorously with chopsticks until it turns sticky. Then add miso or tamari and shoyu or umeboshi (pickled plums) to suit your taste. Spoon it over rice and eat. Although some people may not agree, I find it tasty.

"I met a very old woman in Denver [Colorado, USA] who was a wonderful traditional Japanese cook. She knew all of the techniques for making homemade sake, natto, tofu, umeboshi and tsukemono–everything in her kitchen was homemade. Sometimes this old woman would make natto and bring it to my home. It did not taste like the natto available in grocery stores. She fermented the soybeans in a styrofoam cup using plastic bread wrappers for a cover. She then wrapped the cups in layers of crumpled newspaper as insulation to keep them warm. So you see, traditional Japanese methods can have a place in modern America."

In Chapter 5, "Country meals," the section titled "Breakfast (*Choshoku*)" (p. 120-58) notes (p. 121-22): "The most simple breakfast includes *ichihan, ichiju,* and *issai,* which means one bowl of rice, one bowl of soup, and one side dish. This simple breakfast is served during religious training, eaten for four or five days consecutively before a fast, or eaten to change one's diet or to lose weight.

"Prior to a fast, this meal is served in less and less quantity until the first day of the fast when *okayu* [rice porridge] is served. . Traditionally, the *ichihan* or *meshi* (cooking rice) used for the breakfast meal is brown rice or barley or 60% white rice mixed with 40% barley. The *ichiju* is either *kombu*- or *shiitake*-based miso soup or a clear soup. The *misoshiru* (miso soup) contains a good balance of *tofu* and vegetables. There are many *issai* (called *okazu*) but they can be divided into the following basic categories: *tsukemono* (a variety of vegetables pickled with *miso,* salt, *shoyu,* or *nuka* (rice bran)), *ohitashi* (a variety of vegetables boiled quickly and flavored with *shoyu*); *daizu seihin* (*tofu,* fried *tofu* cutlets, grilled *tofu, natto* and other soybean products); *yakimono* (fish grilled either plain or marinated in *shoyu, miso, sakekasu* {rice wine lees}, or *nuka*); and *jobina* (a variety of dishes prepared and stored in the refrigerator to be eaten anytime).

"One or more side dishes are selected from these categories; you don't eat them all in one meal! Every morning you can arrange a new combination. Interestingly, as you increase the number of side dishes the portions of each decrease, so that you are always serving the same amount of food...

"Long ago Japanese people did not eat sitting around large tables. When sitting around the *irori* [sunken fireplace], a small tray was placed on the right side of each person. On each tray was a small side dish plate . After the meal, warm water was poured into their rice bowl and they used their chopsticks to clean it. After a sip of the water was taken, it was poured into the soup bowl, swirled around, sipped again, poured into the side dish plate, swirled and drunk ... No washing required! We can conclude from this that the foods being eaten at the time were not oily, as the dishes could be easily cleaned with hot water." Note: This may well be the origin of the Zen *oryoki* (nested eating bowls and chopsticks wrapped in white cloth) and its ritual.

Also in Chapter 5, under "Breakfast," is a section on "*Daizu seihin*–Soybean products," which includes a subsection on "Natto–Fermented soybeans" (p. 139): *Natto* is a very popular breakfast food made by stuffing boiled white [yellow] soybeans into a *tsuto* (casing made from rice straw) and leaving them to sit in a warm, darkened room. Before they are stored, a natural natto fungus [sic, bacterium] is introduced to start the fermentation process. The result is *natto,* which has a sticky 'gooey' texture and a pungent odor. Most Americans in my experience turn their noses up at the sight (and smell) of *natto.* Continued. Address: Former owner and head chef, Domo restaurant, Denver, Colorado. Founder and chief instructor Nippon Kan Aikido and Cultural Center, Denver, Colorado.

7636. Homma, Gaku. 1991. Natto (Document part II). In: Gaku Homma. 1991. The Folk Art of Japanese Country Cooking: A Traditional Diet for Today's World. Translated by Emily Busch. Berkeley, California: North Atlantic Books. xii + 270 p.

• ***Summary:*** Continued (p. 139). "When making *natto,* the mixing bowl needs to be completely clean and free from any traces of salt. The natto fungus [sic, bacterium] is easily destroyed by salt. Salt is used to preserve most Japanese foods but *natto* is completely opposite.

"There are two kinds of *natto.* The first is called *tsubu* and is made from whole soybeans. The second is called *hikiwari* and is made from slightly crushed soybeans.

"Commercially made *natto* can be found in the frozen section of your local Oriental market for about one dollar. There are many different brands to choose from. Defrost the *natto* to room temperature before eating. Making *natto* from scratch involves a fairly complicated procedure. This book will concentrate on how to enjoy commercially produced *natto.*

A sidebar across the bottom of page 139 is titled "How to eat natto:" "1 package natto (*tsubu* or *hikiwari*).

"Suggested garnishes include chopped scallion, cilantro, parsley, trefoil, seaweed, Japanese hot mustard, seven-taste pepper [*shichimi togarashi*], and ginger.

"A. If frozen, defrost natto at room temperature. Remove from package and put in a bowl. Stir vigorously with chopsticks until sticky. Fold in one or two types of garnishes, 1 teaspoon each, and stir vigorously.

"B. Choose from 1 teaspoon shoyu, 2 or 3 pinches of salt, or 1 teaspoon miso. Add and stir again.

C. If you like it spicy, add Japanese hot mustard, seven-taste pepper, or thin matchstick slivers of ginger to taste. Other garnishes include soaked *sukikombu* [sliced dried Laminaria kelp soaked and dried in thin sheets] and *funori*

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(floating seaweed; [*Gloiopeltis furcata*]).

"Follow steps A, B, and C just before meal time.

"D. Serve with a bowl or warm white rice. Place about 1 teaspoon of *natto* onto your rice and eat them together. The chopsticks used for serving natto are separate from your own chopsticks because the natto is so sticky. Try not to touch your own chopsticks to the natto; touch the rice only. If your chopsticks do touch the natto they will become slippery and other foods will tend to slip. Another method is to use the *nori* (dried strips of [paper-thin] seaweed) to pick up the natto and rice. Place a 2-inch square of *nori* on top of the natto and with your chopsticks scoop up a bite of natto and rice wrapped in nori. This method is the least sticky."

On page 170 is a recipe for Natto soba, in which 3 oz. of natto, stirred until sticky, is used in place of grated Chinese yam in Tororo soba. *Soba* is the Japanese word for "buckwheat noodles." Address: Former owner and head chef, Domo restaurant, Denver, Colorado. Founder and chief instructor Nippon Kan Aikido and Cultural Center, Denver, Colorado.

7637. Homma, Gaku. 1991. Koji (Document part). In: Gaku Homma. 1991. The Folk Art of Japanese Country Cooking: A Traditional Diet for Today's World. Translated by Emily Busch. Berkeley, California: North Atlantic Books. xii + 270 p.

• ***Summary:*** This is a remarkable book by a remarkable man, with many deep insights into both traditional and modern cultures in Japan and the USA; it gives a unique, authentic view of Japanese culture, and makes liberal use of the Japanese names for things, such as food, utensils, techniques, houses, etc. He uses the Japanese words first, then explains what they mean (in parentheses) in English. Thus the book makes it easy and enjoyable to learn Japanese food-related words. Moreover, the book is brimming with interesting information about traditional soyfoods in Japan.

This record will focus on koji (p. 72, 73) which originated in China, where it is called qu or ch'u.

Koji is mentioned in the section on making miso and tamari: "To make modern commercial miso, koji is added as a catalyst to start the fermentation process. Koji is malted rice or sometimes barley, although rice koji is the most popular. *Shiro miso* or white miso has a high percentage of koji. *Aka miso* (red miso) has a lower percentage... It was my job as a child to crush the boiled soybeans used to make miso. The crushed beans were then poured into a wooden tub, mixed with koji, covered and left to ferment for an average of six months to a year" (p. 67-68).

In the section on *Shottsuru:* "The end of November and December in my home town of Akita was the season for *hata hata* or sand fish. Thousands and thousands were caught at sea or were washed up on shore in what looked like an invasion." "For many years, *hata hata* was the source of winter protein in Akita and the surrounding areas... A favorite delicacy was *sushizuke*, which was *hata hata* mixed with koji and white rice in large quantities (sometimes 60 gallons). The mixture was left in a large press to pickle. As the koji and white rice fermented, the vinegar produced preserved the fish. The press kept poisons [toxins] from forming by limiting the access to oxygen" (p. 69).

In the section on *Kanmi* (sweets): "Rice or barley (rice being the more popular of the two) is steamed and mixed with *kojikabe* [also called *tané koji*] (a mold that changes starches to dextrose) to make koji. Koji you remember is used as a catalyst to make miso and shoyu.

"Because of the high starch content in rice, if this koji is brewed and distilled, it becomes quite sweet. This unique sweet taste from fermenting koji is the basis for making saké (drinking rice wine) and *mirin* (cooking rice wine).

Today sake is drunk all over the world. In the old days, sake was to expensive for farmers and common people. The farmers drank *nigorizake* [*nigori-zake*], which was homemade sake. This *nigorizake* did not go through the final filtering separation process, so it was not clear like the sake we see today.

"About 60 or 70 years ago, a new government liquor law was instigated to control the production of homemade sake. It became illegal to brew sake. Of course, unlawful brewing continued. In my hometown area the local word for *nigorizake* is *doburoku* or *ohho*. This *doburoku*, brewed in secret under penalty of law, was most delicious. Today it is no longer illegal to produce *nigorizake* to be sold in liquor stores so long as the producers pay an alcohol tax." "*Nigorizake* has been made from *genmai* (brown rice) since the Edo period (p. 72).

"To make *mirin*, *nigorizake* is filtered to separate the clear sake from the dregs or lees (the later is called *sakekasu*). Distilling this *sakekasu* results in *shochu* (distilled spirits). Mirin is the result of fermenting and straining *shochu*, adding it to steamed sticky rice and koji, and fermenting the lot together. Mirin is the most popular sweetener used in Japanese cooking" (p. 73). Address: Former owner and head chef, Domo restaurant, Denver, Colorado. Founder and chief instructor Nippon Kan Aikido and Cultural Center, Denver, Colorado.

7638. Homma, Gaku. 1991. Shoyu (Document part). In Gaku Homma. 1991. The Folk Art of Japanese Country Cooking: A Traditional Diet for Today's World. Translated by Emily Busch. Berkeley, California: North Atlantic Books. xii + 270 p.

• ***Summary:*** This is a remarkable book by a remarkable man, with many deep insights into both traditional and modern cultures in Japan and the USA; it gives a unique, authentic view of Japanese culture, and makes liberal use of the Japanese names for things, such as food, utensils, techniques, houses, etc. He uses the Japanese words first, then explains what they mean (in parentheses) in English. Thus the book

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makes it easy and enjoyable to learn Japanese food-related words. Moreover, the book is brimming with interesting information about traditional soyfoods in Japan.

This record will focus on shoyu (soy sauce). Pages 68-69: While farmhouse miso is fermenting in a tub, juices leak from the bottom and are collected underneath. This flavorful liquid is called *tamari* or *taremiso;* it is much different from the commercial tamari sold in the United States.

Page 122: Japanese pickles (*tsukemono*) are vegetables pickled with miso, salt, shoyu, or rice bran (*nuka*).

Page 129: A recipe for Pickled Japanese white radish and carrots (*Daikon to ninjin zuke*) calls for 1 tablespoon shoyu as an ingredient.

Pages 136-40: Various recipes, including Ohitashi, Tororo imo, Grated daikon, and steamed Japanese eggplant call for shoyu as an ingredient. Shoyu is also a required seasoning for natto and Chilled tofu.

Pages 146-50: Shoyu is used to season various grilled fish dishes, and pre-prepared side dishes (*Jobina*).

Page 172-74: Shoyu is a standard seasoning for wheat-flour noodles (*udon*), for various *aemono* recipes (p. 180-82), for simmered land and sea vegetables (*nimono*) (p. 186-88), other for tofu dishes as well as chicken, beef, pork, and fish dishes (p. 190-98, 203-06, 208, 218, 222, 226). Address: Former owner and head chef, Domo restaurant, Denver, Colorado. Founder and chief instructor Nippon Kan Aikido and Cultural Center, Denver, Colorado.

7639. Kikkoman K.K. 1991. Dai 73 ki jigyô hôkoku-sho. Heisei 2 nen 1 gatsu 1 nichi–Heisei 2 nen 12 gatsu 31 nichi [73rd annual financial report. From 1 Jan. 1990 to 31 Dec. 1990]. Tokyo, Japan. 13 p. 20 cm. [Jap]
• ***Summary:*** Color photos show most of Kikkoman's main products. Address: Tokyo, Japan.

7640. Landwehr, John, Krogt, P.C.J. van der. 1991. VOC: A bibliography of publications relating to the Dutch East India Company, 1602-1800. Utrecht, Netherlands: HES Publishers. xlii + 840 p. + xvi p. of plates. Illust. Facsims. 28 cm. *
• ***Summary:*** In Dutch, VOC is an abbreviation of Vereenigde Ost-Indische Compagnie.

7641. Mallalieu, Huon L. 1991. The illustrated history of antiques: the essential reference for all antique lovers and collectors. London: Quarto Publishing. 640 p. Illust. Maps. Index. 29 cm. [soy ref]
• ***Summary:*** In chapter 10 titled "Glass," by Perran Wood, under "The 18th Century" (p. 488) is a caption to a "Soy Cruet Bottle." English c. 1780. Sets of deep blue, green and, more rarely, amethyst decanters, rinsers and cruet bottles (such as this one) became popular in England towards the end of the 18th century. They were placed in stands and marked in gilt with the contents."

A color photo shows this beautiful bottle, with gold lettering and designs on a purple background." Address: Authority on antiques, London.

7642. Passmore, Jacki. 1991. The encyclopedia of Asian food and cooking. New York, NY: William Morrow. 320 p. Illust. by Jan Smith. Index. 24 cm. [44 ref]
• ***Summary:*** The most complete book of its type seen to date (May 2010), with many helpful cross references (sometimes flawed). Soyfoods are mentioned throughout. Unfortunately, for Chinese foods, the author does not distinguish between Mandarin and Cantonese, or between pinyin (newer) and Wade-Giles (older) styles of romanization. For some of the "Also known as" it is not clear to which of several previous entries this refers (see "Soybean").

Ame (ah meh, Japan): A sweet jelly made from millet.

Azuki bean (*Phaseolus angularis*). Native to China, used in China since the Han Dynasty (206 BC–AD 220): An [or anko] (Japan): A sweetened paste of ground azuki beans available in smooth (koshi-an) and crunchy [chunky] (tsubu-an or tsubushi-an). Sarashi-an: A flour of ground azuki beans. Also known as hong dow (China), dried red beans, red beans [adzuki beans, aduki beans]. See also: Red bean paste, sweet.

Bean curd: Also known as dou-fu, dow foo (China); tahu (Indonesia), momen tofu, tofu (Japan), ta hu, tu hua (Malaysia); tahure ([fermented tofu] Philippines); tauhu kau (Thailand); dau hu, dau hu chung (Vietnam); bean custard, soybean cake. Illustrations of: Fried bean curd, pressed bean curd. Almond bean curd (non-soy). Bean curd "brains": Also known as doufu nao (China); taho (Philippines). "Cotton" bean curd: Also known as momen tofu (Japan). Freeze-dried bean curd: Also known as char doufu, doufu pok (China); agedofu, atsu-age, nama-age (Japan); tauhu tod (Thailand); dau hu chien (Vietnam). Fried bean curd pouches: Also known as aburage, usuage (Japan). Gan modoki: Grilled bean curd: Also known as doufu kan [sic], gone (China); yakidofu (Japan). Instant bean curd. Okara. Pressed bean curd: Also known as doufu kan (China), taukwa, tauhu kuning (pressed yellow bean curd) (Indonesia, Malaysia); tokwa (Philippines); tauhu leong (Thailand); dau hu ki (Vietnam). Silk bean curd: Also know as kinugoshi tofu (Japan), shui doufu (China), taho (Philippines).

Note: The author seems to be confused about "Silk bean curd." Japanese kinugoshi is made from relatively thick soymilk, which is "set" using a coagulant but without any separation of curds and whey. Yet on page 26 we read: "In China the name [for silk bean curd] translates as 'water bean curd.' It has a very smooth, delicate texture achieved by straining the coagulated liquid through fine mesh, then allowing the strained curds to settle without pressing." This is not a description of silken tofu, but rather of Japanese regular tofu (*momen-goshi*) made without any pressing weights.

Contains a recipe for homemade "Bean Curd" plus 3 bean curd recipes.

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Bean curd by-products: Bean curd skin [yuba], bean curd sticks. Also known as fu jook pin, gee jook (China), yuba (Japan), forng ta ohu [tauhu] (Thailand), rolled bean curd, second bamboo.

Fermented bean curd. Also known as foo yu, fu-ru, nam yu (China), tahoe, tahu (Indonesia, Malaysia), tausi (Philippines), bean curd cheese, Chinese cheese, pickled bean curd, red bean curd, soybean cheese.

Moldy bean curd. Bean curd cheese. See bean curd by-products (fermented).

Bean pastes and sauces: Shih and jiang from China. (1) Bean sauce (jiang) also known as taucheo or tau sa (Malaysia, Nonya and Singapore cooking), mien see [mian shi] (China), taoco [Pron. = tao-cho] (Indonesia), tuong ot (Vietnam), bean paste, brown bean sauce, yellow bean sauce. (2) Black bean sauce (a recent addition to the family of Chinese sauces. A major ingredient is puréed fermented black beans with a hint of garlic and star anise. It tastes best when freshly made). (3) Chili bean paste (in addition to chopped dried chilies, it sometimes contains fermented black beans). Also known as lat chu jeung, as lat chu jeung yau (Garlic) (China); kochujang (Korea); bean paste with chili; hot bean paste; Sichuan hot bean paste. (4) Dhwen-Jang (Korea). See also miso. (5) Hoisin sauce (China): A sweet, thick, reddish brown sauce. One ingredient is fermented soybean paste. Not to be confused with the Chinese barbecue sauce called sha cha jang. Also known as hoi sin cheung (China); barbecue sauce. (5) Soybean paste. Also known as mean see jiang (China). (6) Sweet bean paste. In this context it is not the sweet bean paste made from azuki beans, but rather a sweet, thick, dark brown sauce made of ground fermented soybeans and sugar. Its salty-sweet flavor is used in marinades and roast meats. Also known as tim mean jiang (China).

Bean sprout: Mung bean sprouts, silver sprouts (mung bean sprouts with the roots and seed pods removed), soybean sprouts. Also known as: Daai dau nga choy (soybean sprout), ngunn nga choy (silver sprouts), nga choy, sai dau nga choy (mung bean sprout) (China); tauge (Indonesia); moyashi (Japan); kacang ijo, kacang djong, kacang padi (Malaysia), togue (Philippines); taun gawk (Thailand); gia (Vietnam); bean shoots.

Beijing duck sauce (recipe with ½ cup sweet bean paste). Vietnamese-style Beijing duck sauce (with ½ cup sweet soy sauce–kecap manis).

Black bean. See Fermented black bean. Black bean sauce. See Bean pastes and sauces. Fermented black bean sauce. Black soybean: See soybean.

Broad bean paste. Broad bean sauce: "The best is made in Pixian, a city in Sichuan province, where it is used instead of soybean-based seasoning sauces."

Brown bean sauce: See Bean pastes and sauces.

Che hau sauce (Che how, China). See Bean pastes and sauces (Hoisin). Chick-pea.

China: Has the "oldest and most well-documented cuisine in the world." Chinese cheese. See Bean curd by-products (fermented). Chinese hot bean paste. See Bean pastes and sauces.

Dau hu (Dow hoo, Vietnam). See bean curd. Dau hu chien (Dow hoo chee-ian, Vietnam). See Bean curd, fried. Dau hu chung (Dow hoo chee-ung, Vietnam): See Bean curd. Dau hu ki (Dow hoo kee, Vietnam). See Bean curd, pressed.

Dengaku (plus recipe).

Dhwen-jang (Dwen-jang, Korea). Similar to Chinese soybean paste or Japanese akadashi miso. Also known as Korean bean paste. Doufou Kan [doufu gan], China. Bean curd (grilled, pressed). Dou-fu (Dau-fu, China). See Bean curd. Doufu nao (Daufu-nou, China): See Bean curd "brains." Doufu pok (daufu pork, China). See bean curd, fried. Dow foo (dau fu, China): See Bean curd.

Edamame (e dah ma meh, Japan): See soy bean.

Fermented bean curd. See Bean curd by-products. Fermented bean curd cake. See Bean curd by-products; tempe.

Fermented black beans (Shih, China). With recipe for "Fermented black bean sauce" (p. 106). Also known as dau see (China), black beans, dried black beans, preserved back beans.

Fermented red rice. Flours and thickeners. Kuzu (Japan). Mung bean flour. Soy flour (incl. kinako). Foo yu (Fu you, China). See Bean curd by-products (fermented). Forng Tao Hu (Fong tao huu, Thailand). See Bean curd by-products, bean curd sticks. Fu jook pin (Fu juk pin, China): See bean-curd by-products, bean curd skin. Fu-ru (Fu yue). Gee Jook (Ji Juk, China). Bean curd sticks.

Gluten: Kau fu, kohana fu, matsutake fu, mein jin pau, nama fu, su tang, yaki fu. Also known as: Kau fu, mianjin, mein jin pau, su tang (China), kohana fu, yaki fu (Japan).

Gochujang (Korea). See also: Chili paste, chili sauce, Korean barbecue sauce.

Grilled bean curd. See Bean curd, grilled.

Hatcho miso: See miso, Hatcho. Hot bean paste. Hot black bean sauce. Inaka miso: See miso.

Japan: "Japanese cooks revel in the artistry of their craft. The Japanese love of nature is a challenge to present each ingredient as reminder of its origins: to bring nature to the table . . ." Regional cuisines are not of great importance in Japan; cooking methods (incl. Dengaku), salting (incl. Teriyaki), cutting and slicing techniques.

Kecap asin (Ket-chup a-seen, Indonesia). See Soy sauce, sweet and salty. Kecap cair (cha-ear, Malaysia): See soy sauce, light. Kecap hitam (Indonesia). See soy sauce, sweet and salty. Kecap ikan (Indonesia). See Fish sauce. Kecap manis (mah-niece, Indonesia). See Soy sauce, sweet and salty. Kecap petis (pet-is, Indonesia): See fish sauce. Kinugoshi tofu (Japan). See Bean curd, silk.

Kochujang (go-choo jang, Korea): See Bean pastes and sauces; chili pastes.

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Koikuchi shoyu (Japan): See soy sauce. Continued. Address. Author of several books on Asian cuisine.

7643. Passmore, Jacki. 1991. The encyclopedia of East Asian food and cooking (Document part II). New York, NY: William Morrow. 320 p. [44 ref]

• ***Summary:*** Continued from p. 153: Korean bean paste: See Dhwen jang. Koshi-an (Japan): See Azuki beans (an). Koya tofu (Japan): See Bean curd, freeze-dried [sic]

Kuzu (Japan): See Flours and thickeners. Lentil (*Lens esculenta*): Red lentil. Red mung beans.

Light soy sauce: See Soy sauce.

Lu soy (lo shui, China): See soy sauce.

Maltose. Made by fermenting germinated grains of barley. When used to glaze foods, may have soy sauce and red food coloring added. Also known as: Malt sugar, [barley malt syrup].

"Ma-po" dofu [Mabo-dofu]: See beef.

Mean see jiang [mian shi jiang] (min see jiang, China): See Bean pastes and sauces.

Mem jin pau [mien jin pau] (China): See Gluten.

Mianjin (China): Gluten.

Mien see (mien-si [mian shi], China): See Bean pastes and sauces.

Miso (Japan): (1) Hatcho-miso. (2) Inaka miso or Sendai miso. Also known as Red miso. (3) Shinshu miso. (4) Shiro miso.

Mochi. Monosodium glutamate. Also known as: Mei jing (China); aji-no-moto (Japan); servuk perasa (Malaysia); ve tsin (Vietnam); M.S.G., taste essence, taste powder.

Moyashi (Japan): See Bean sprout.

Mung bean. Also known as moong ke dal (India); kacang djong, kacang eedjo [hijau, katjang idjo] (Indonesia); kacang hiau (Malaysia); tau ngok (Thailand); dau xanh (Vietnam); green gram.

Nama-age (nah-mah ah-geh, Japan): See Bean curd, deep fried.

Nama fu (Japan): Raw / uncooked wheat gluten.

Natto (Japan): See soybean.

Noodles: (1) Bean curd noodles (China). Also known as Soy noodles, soy vermicelli.

Oils and fats: Soybean oil. (2) Bean curd skin noodles (China) [yuba noodles]

Peanut (with many foreign names and recipes).

Preserved black beans: See Fermented black beans.

Pressed bean curd: See Bean curd (pressed).

Red bean paste, sweet: "An important ingredient in Chinese and Japanese cooking, sweet red bean paste is made by boiling the red azuki bean and mashing it to a paste with lard or oil, then cooking it until it is fairly dry or thick. In Japan, red bean paste is made in two textures: the smooth purée is koshi-an and the chunky version, with the beans only partly crushed, is tsubushi-an. It is a filling for cakes and sweet buns, and is used in several desserts." Also known as hong dow sar (China), an (Japan). Contains a recipe for Sweet red bean paste.

Red rice: See Fermented red rice.

Rice: Many type of glutinous and non-glutinous.

Rolled bean curd: See Bean curd sticks [dried yuba].

Seaweed: Many different types. Seaweed gelatin or Seaweed jelly: See agar agar.

Sendai miso (Japan): See miso.

Sesame seed: Black sesame seed, sesame oil, sesame paste, white sesame seed.

Shinshu miso (Japan): Shui doufu (China): See bean curd (silk). Silk bean curd: See Bean curd (silk).

Soybean (*Glycine max*): (1) Black soybeans. (2) Fresh soybeans [edamame]. (3) Yellow soybeans. Soybean cheese: See Bean curd, fermented [fermented tofu]. Soybean condiment: See Bean pastes and sauces. Soybean milk. Also known as tau cheing, tau ni (China). With homemade soymilk recipe. Soybean noodle: See Noodles, bean curd. Soybean oil: See fats and oils. Soybean paste: See Bean pastes and sauces. Soybean sprout: See bean sprout. Soy flour: See Flours and thickeners.

Soy sauce: "An ancient seasoning, first used in China more than 3,000 years ago. Known in its original form as *shih*, it was a thin salty liquid in which floated fragments of fermented soybeans." "Soy sauce is to Chinese and Japanese cooking what the pungent, salty fish sauce known as nam pla or nuoc mam is to Thailand and Vietnam respectively." (1) Dark soy sauce. Also known as jang yau, see yau (China), koikuchi shoyu, tamari (Japan), kecap pekat (Malaysia); mushroom soy. (2) Light soy sauce: Thinner, saltier, and lighter in color and flavor. It is used in cooking where its light color will not spoil the color of the ingredients. Also known as sang chau, see yau (China), shoyu, usukuchi shoyu (Japan), kecap cair (Malaysia), toyo (Philippines), nam siew (Thailand), xi dau (Vietnam), thin soy sauce. (3) "Lu soy (China) is a 'master sauce' based on soy sauce with sugar, ginger, and five-spice. It is used for simmering poultry and other meats to give a rich flavor and to color the food a deep brown. Also known as lu shui (China)."

Soy sauce, sweet and salty: (1) "Kecap asin (Indonesia) is a thick, salty, dark soy-based sauce used to impart a strong color and flavor. Its sweet counterpart is *kecap manis*. It is similar to, but thicker than, several dark soy sauces used in Chinese cooking." (2) Kecap hitam (Malaysia) is a sweet dark soy sauce. Slightly less spicy than kecap manis. (3) Kecap manis (Indonesia) is a sweet, dark, thick, aromatic soy sauce, especially widely used with satay. "It is similar to, though finer in flavor than, Chinese sweet soy sauce" [tian mian jiang]. Also known as kecap bentang manis (Indonesia), sweet soy sauce. (4) "Sweet soy sauce (China) is a dark, sweet sauce combining soy sauce, sugar, and malt sugar. Its distinctive malt-like taste goes well as a dip for fried snacks, poultry, and seafood." It appears frequently on the table in homes and restaurants in Fukien province.

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opposite Taiwan on the coast of south-eastern China. For a recipe, see Sweet soy sauce pork (p. 230). Note: This is not generally a commercial product. (5) Tim cheong (Malaysia) is a thick, sweet, black soy sauce, similar to that used in China. In Malaysia it is served with poh pia. Its flavor is closer to that of kecap hitam than to kecap manis.

Sprouts, soybean. See Bean sprout, soybean. Sushi (describes many types, with recipes). Sweet bean paste or Sweet bean sauce. See Bean pastes and sauces.

Taho (Philippine bean curd brains). Tahoe (Indonesia or Malaysia, fermented bean curd). Tahu (Malaysia bean curd). Ta hua (Malaysia bean curd). Tahure (Philippine bean curd).

Tamari (Japan): See soy sauce. Taucheo (Malaysia or Singapore, bean pastes and sauces). Tauge (Indonesia bean sprout). Tauhu kao (Thailand bean curd). Tauhu kuning (Indonesia and Malaysia bean curd pressed). Tauhu leong (Thailand bean curd, pressed). Tauhu tod (Thailand bean curd, fried). Taukwa (Indonesia and Malaysia bean curd pressed). Tau sa (Malaysia bean paste and sauces). Tausi (Philippines, bean curd products [sic, fermented black soybeans], fermented).

Tempe (Indonesia, Malaysia): Fermented soybean cake [tempeh]. Oncom [Ontjom]. Tokwa (Philippine bean curd pressed).

Tosa soy sauce (Japan): The classic sashimi accompaniment. Recipe given.

Tsukemono: Takuan, umeboshi.

Usu-age (Japan): See Bean curd (fried) purses.

Winged bean. Yuba (Japan).

Brief biography: "For more than twenty years she has been professionally involved with Asian food as a writer, teacher, publicist, researcher, consultant, and, of course, cook. She has traveled extensively in Asia and lived in Hong Kong for more than ten years, working as a food writer on a number of newspapers and magazines, which led to a career as a food consultant. Her most recent book, *Asia the Beautiful Cookbook* was listed by *Publishers Weekly* as one of the best books of 1987." Address: Author of several books on Asian cuisine.

7644. Shufu-no tomo. 1991. Anzen shokuhin no hon: Munôyaku, mutenka no honmono shokuhin otoriyose gaido [The book of safe foods: A guide for getting real foods without agricultural chemical or additives]. Tokyo: Shufu-no-tomo-sha. 144 p. Illust. 26 cm. Tokubetsu henshû (Special edition). Shufu-no-tomo Seikatsu Series. 26 cm. [Jap]

• ***Summary:*** This beautiful book is about Japanese natural foods, organically grown without agricultural chemicals and processed without chemical additives. It is packed with color photos and descriptions of the products, the people and companies that make them, and the places where they are made. The name, address, and phone number of each company is included. Miso (p. 16-20). Shoyu (p. 21-27). Natto and tofu (p. 76-78).

Amazake (p. 16-17): Koji-ya Saburouemon, Nakamura 2-29-8, Nerima-ku, Tokyo, Japan. Phone: 03-3999-2276. 100 years old, 6th generation.

Miso & Shoyu (p. 18): Sendai Miso Shoyu, Kojo 1-5-1, Wakabayashi-ku, Sendai-shi, Miyagi-ken 982, Japan. Phone 022-286-3151.

Miso & tamari (p. 19): Nakamura Jozo, Tatsuno-cho 1536, Yokkaichi-shi, Mie-ken 510, Japan. Phone: 0593-26-0456. Started 70 years ago. 3rd generation. About 15 years ago started to make naturally fermented soy products.

Miso (incl. barley miso; p. 20): Shirouza Shoten, Meihama 3-3-27, Nishi-ku, Fukuoka-shi, Fukuoka-ken 819, Japan. Phone: 092-881-0413.

Shoyu made with whole soybeans (p. 21). Kikkogo Shoyu Kondo Shoyu Moto, Yamada 733, Itsukaichi-machi, Nishitama-gun, Tokyo 190-01, Japan. Phone: 0425-95-1212.

Shoyu (p. 22-23): Kadocho, Kita-machi 7, Yuasa-machi, Arita-gun, Wakayama-ken 643, Japan. Phone: 0737-62-2035. 5th generation.

Shoyu (p. 24): Yamaki Shoyu, Kotobuki 3-3-16, Honsho-shi, Saitama-ken 367, Japan. Phone: 0495-24-6161.

Unpasteurized miso, and shoyu (p. 25): Shoku Seikatsu Kenkyu-kai, Miroku-ji 83, Fujisawa-shi, Kanagawa-ken 251, Japan. Phone: 0466-22-0635. Started in about 1970.

Shoyu, amazake base, koji, miso (p. 26): Inoue Shoten (Igeta Shoyu brand), Owari-machi 57, Kitakyo, Nara-shi 630, Japan. Phone: 092-741-5360. 4th generation. Started during the Genji era (1864-65).

Shoyu (p. 27): Jokyu, Daimyo 1-12-15, Chuo-ku, Fukuoka-shi 810, Japan. Phone: 092-741-5360. Started 135 years ago.

Natto (p. 76): Kuroishi Natto, Fukuroi 1-74, Kuroishi-shi, Aomori-ken 036-03, Japan. Phone: 0172-52-3958. Started 60 years ago.

Natto (p. 77): Shojiki Mura, Nishitakao 5-237, Kitamoto-shi, Saitama-ken 364, Japan. Phone: 0120-421351. A relatively new company.

Tofu (p. 78): Kurihara Shoten, Endo 2022, Fujisawa-shi, Kanagawa-ken 252, Japan. Started in about 1977. Address: Tokyo.

7645. Vakirtzoglou, Euphrosini. 1991. Nea mayriki-sintayes me soya [Recipes for soya]. Thessaloniki, Greece: Published by the author. 127 p. Illust. Index. 29 cm. [Gre]

• ***Summary:*** This attractive book, the first of its kind ever published in Greek, contains large color photos of its soy-based dishes on almost every page. It features recipes using soy oil, soy sauce, soy margarine, textured soy flour (mince and chunks), soya-based pasta, soymilk, and tofu–but no tempeh. The last 2 pages of the book are full-page color photos of various soya products that are imported to Greece, largely by Mr. George Tselepidis (Andreou Dimitriou 47, Sikies 56625, Thessalonika, Greece. Phone: 625741) who is very interested in new soya products (and perhaps making

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them), and is the exclusive agent for the soya products used by the author. These products include Provamel Soya Milk, Sunwheel soya sauce and tamari, Meridian soya margarine, soy oil, and ten shelf-stable soy products with Greek labels. Published with technical and material support from Biotrek S.A., Greece's primary dealer in soya products.

The book contains many recipes and ideas for using soyfoods in place of meat and milk during Lent and other religious holidays of the Greek Orthodox Church. The attractive 4-page brochure promoting the book contains colorful photos of many soy-based preparations on a table in front of Greek Orthodox icon paintings.

The author notes in a letter that she hopes to translate the book into English and is now preparing another book on Soya Sweets, Pastry, and Confectionery. Unfortunately, there are presently no companies in Greece making tofu, soymilk, or tempeh, nor are these products available in Greece.

In addition to writing, the author has owned a private kindergarten for the last 3 years, and for more than 1 year she has given cooking and housekeeping lessons in an organization named "Faros Tiflon Elathos," which educates the blind. Address: Lahana 35, GR-546 38 Thessaloniki, Greece. Phone: 031 824 311.

7646. Yokotsuka, Tamotsu. 1991. Nonproteinaceous fermented foods and beverages produced with koji molds. In: Dilip K. Arora, K.G. Mukerji, E.H. Marth, eds. 1991. Handbook of Applied Mycology. Vol. 3: Foods and Feeds. New York, NY: Marcel Dekker, Inc. x + 621 p. See p. 293-328. Chap. 10. [135 ref]

• ***Summary:*** Contents: 1. Introduction (Eight types of traditional fermented foods and beverages, early history of fermented foods, three types of microorganisms used for or found in food fermentations, distribution of fermented foods worldwide, koji in Japan and China, different meanings of the term "koji molds"). 2. Nonproteinaceous, nonalcoholic lactic-acid fermented foods. 3. Alcoholic fermented beverages: A. Made from sugar-containing raw materials. B. Saccharification processes in alcoholic beverage manufacture (malt and koji). C. Mixed culture dough inocula for food and beverage fermentation in Southeast Asia. D. Alcoholic beverages in China and Taiwan (chu / qu is Chinese koji). E. Yakju and Takju in Korea. F. Rhizopus vs. Aspergillus as enzyme producers in alcoholic beverage fermentations. ... H. Mirin, amasake [amazake], and lao-chao. 4. Vinegar.

Figures show: (1) The course of tropical storms (shown on a map of the world). (2) Classification of microbes (filamentous fungi, yeasts, bacteria) used to make fermented foods or beverages (based on sexual characteristics). Phycomycetes (septate mycelia, sexual spore formation) -> Mucor and Rhizopus (asexual spores are formed on top of sporangiophore which is covered with sporangium). Mycomycetes (nonseptate mycelia, asexual and sexual spore formation) -> Ascomycetes (sporeforming in special sacs or asci) -> Monascus, Saccharomyces and Zygosaccharomyces (spore is formed by budding or conjugation of two cells). Penicillium (no foot cells, no vesicle; penicillium means a brush). Aspergillus (asexual conidiophore are formed by splitting from sterigmata attached to top of conidiophore (vesicle)). Fungi imperfecti (spore nonforming) -> Torulopsis. Schizomycetes -> Eubactriales (bacteria) -> Acetobacter, Micrococcus, Pediococcus, Bacterium, Clostridium. (3) Famous Chinese wine-producing areas. They make Shandong yellow wine, Shaoxing (W.-G. shaohsing) wine, Fujian yellow wine. Note: Kaoliang liquor is a typical distilled wine in China. (4) Flow chart of process for making Shaoxing jiu (from glutinous rice). Address: Research Div., Kikkoman Corp., Noda City, Chiba prefecture, Japan.

7647. Yokotsuka, Tamotsu. 1991. Proteinaceous fermented foods and condiments prepared with koji molds. In: Dilip K. Arora, K.G. Mukerji, and E.H. Marth, eds. 1991. Handbook of Applied Mycology. Vol. 3: Foods and Feeds. New York, NY: Marcel Dekker, Inc. x + 621 p. See p. 329-73. Chap. 11. [118 ref]

• ***Summary:*** Contains a great deal of very interesting information. Contents: 1. Introduction. 2. Fermented soybean foods in East and Southeast Asia: A. Douchi (China), Hamanatto (Japan), and in-yu (Taiwan). B. Shuidouchi (Shandong province, China), thua-nao (Thailand), kinema (Nepal), and natto (itohiki natto) (Japan). C. Tempe [Tempeh] and Oncom [Onchom] (Indonesia) (Making soybean tempe, volatile flavor of tempe, chemical composition and nutritional value of tempe, tempe bongkrek). D. Fermented tou-fu (soybean curd) products: Sufu (China and Taiwan), Tofuyo (Okinawa, Japan).

3. Fermented salty condiments in a slurry or paste made from soybeans and cereals: A. Doujiang (touchiang) (China) and Tauco [taucho] (Southeast Asia). B. Doubanjiang (Toupanchiang). C. Tianmianjiang (Tienmienchiang). D. Gochujiang and Doenjang (Korea). E. Hishio (Japan). F. Miso (Japan) (Production and consumption of miso, making rice miso and barley miso).

4. Fermented salty liquid condiments made from soybeans and cereals. A. Japanese shoyu (Manufacture of koikuchi and usukuchi shoyu, manufacture of tamari shoyu). B. Soy sauce produced in east and southeast Asian countries other than Japan (Korea, Taiwan, Hong Kong, Singapore, Malaysia, Indonesia, Thailand, People's Republic of China {the process, acid hydrolysis, was illegal until recently}, chijhi or whole soybean soy sauce still made in the basins of the Zhujiang {Pearl} River and the Huanghe {Yellow} River).

5. Biochemistry involved in shoyu and miso manufacture. A. Selection of raw materials. B. Contribution of improved cooking methods of raw materials to increase the enzymatic protein digestibility. C. Selection and

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improvement of koji molds. D. Improvement in koji making. E. Microbial and chemical control of salty mash fermentation. F. Flavor evaluation of koikuchi shoyu. G. Stability of color of pasteurized shoyu. H. Nutritional concern about shoyu and miso (salt content). Safety of koji molds and shoyu (aflatoxins).

6. Conclusion.

Tables show: (1) Chemical composition of kinema, thua-nao, and douchi. (2) Changes in nitrogenous compounds during natto fermentation. (3) Changes of nitrogen compounds in sufu making. (4) Constituents of some types of miso. (5) Chemical composition of various kinds of genuine fermented shoyu in Japan. (6) Effect of cooking conditions of thoroughly moistened defatted soybean grits on the enzymatic digestibility of protein. (7) Differences between *A. oryzae* and *A. sojae* used for shoyu fermentation. (8) Proteinases produced by *Aspergillus sojae*. (9) Enzyme composition of koji as influenced by the difference of material. (10) Various metabolic patterns by lactobacilli in shoyu mash. (11) Digestibilities of protein in shoyu, miso, natto, and tempe fermentations. (12) Results of quantitative analysis of flavor constituents in koikuchi shoyu.

Figures show: (1) Flow sheet of tempe making. (2) Flow diagram of sufu making from 1 kg soybeans (with all quantities of ingredients, temperatures, and times). (3) Flow diagram of rice-miso fermentation from 1,000 kg soybeans and 600 kg milled rice. (4) Flow diagram of koikuchi shoyu fermentation from 330 kg defatted soybean meal (or 400 kg whole soybeans) and 340 kg wheat kernels. (5) Flow diagram of tamari-shoyu fermentation from 800 kg defatted soybeans, 346 kg wheat, 20 kg roasted barley flour, and 439 kg NaCl. (6) Microflora changes in shoyu mash fermentation. (7) Classification of Aspergilli. (8) Fermented foods and condiments made from soybeans mixed with or without cereal grains or flour.

Hama-natto in Japan (p. 332): The Taiho Laws, which took effect in 701, mention an office in Japan's imperial court that dealt with several fermented soyfoods including "*douchi* [2 Chinese characters given] or *kuki* (1 Cc); in Japanese, miso and jiang (1 Cc) or hishio (1 Cc)." "The method of preparing salted and unsalted *douchi* [fermented black soybeans] is described in the book *Yoshufushi* (1686) and elsewhere. According to the oldest record about douchi in Korea, in 683, the product apparently was not an important food commodity in that country.

Salted douchi [fermented black soybeans, which originated in China] appeared in Central Japan with names such as "Hama-natto, Daitokuji-natto, and others, and in Taiwan as *In-si*."

Concerning *shuidouchi* (*Chinese salted natto with minced ginger, p. 332-35*): This unusual product can be considered an intermediate form between *douchi* (salted fermented soybeans / fermented black soybeans) and the itohiki-natto family of foods; unlike *douchi* it is fermented with a *Bacillus* bacterium rather than with an *Aspergillus* mold, but unlike natto it is a salted product and has ginger added. To make *shuidouchi:* Boiled soybeans are naturally inoculated with *Bacillus subtilis* and incubated at high humidity and at 30-40°C. This preference for a high temperature may be why the *Chi-min yao-shu* (6th century China) recommended that, when making douchi [fermented black soybeans], the temperature during incubation be kept rather low. In Shandong, China, *shuidouchi* are made as follows: Clean, soak, and boil soybeans until soft. Place in a cloth bag and cover with straw, which is the best natural source of *B. subtilis*. After incubation for 1-2 days at 25-30°C the soybeans will be covered with viscous substances. Mix the sticky soybeans with minced ginger and salt, then pack tightly into jars, and age for one week. They are now ready to consume (See references 5 and 6). Address: Research Div., Kikkoman Corp., Noda City, Chiba prefecture, Japan.

7648. Dinh, Daniel. 1992. Present status of soyfoods in Vietnam (Interview). *SoyaScan Notes*. Jan. 24. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Tofu and soymilk are the only two soyfoods that are widely known and used in Vietnam. Daniel's relatives made fish sauce (*nuoc-mam*) in Vietnam. Before 1975 there was a trade association of fish sauce manufacturers in Vietnam and their company was one of only 12 major manufacturers in the association. Then in 1975 when the Communists took over, he had to flee the country, and his family decided to destroy their fish sauce factory, lest they face death or prison as capitalists. Now the situation is ripe for his return to Vietnam, and he is interested in learning to make miso and soy sauce, and perhaps starting production in Vietnam. Address: 22821 Sherman Way, West Hills, California 91307. Phone: 818-704-6432.

7649. **Product Name:** Ginger Tamari Sauce.
Manufacturer's Name: California Olive Oil.
Manufacturer's Address: 134 Canal St., Salem, MA 01970.
Date of Introduction: 1992 January.
Ingredients: Soy sauce, gingerroot, natural spices, cane juice, natural lemon.
Wt/Vol., Packaging, Price: 10 oz bottle and 55 gallon drum.
How Stored: Shelf stable.
New Product–Documentation: Spot in Whole Foods. 1992. p. 69. The product is designed for those "looking to reduce sodium in their diet."

7650. **Product Name:** [Marinated Tofu, and Smoked Tofu].
Foreign Name: Tofu Marinato, and Tofu Affumicato–Alimento Derivato dalla Soja.
Manufacturer's Name: Biolab.
Manufacturer's Address: Via dei Grabizio 11, 34170

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Gorizia, Italy. Phone: +39 481 533522
Date of Introduction: 1992, February
Ingredients: Soybeans (*fagioli di soja*), nigari–*cloruro di magnesio*, water, tamari soy sauce, smoke from beechwood firewood (*fumo di legna*).
Wt/Vol., Packaging, Price: 300 gm (2 servings of 150 gm each) vacuum packed separately, side by side.
How Stored: Refrigerated.
New Product–Documentation: Label and letter sent by Maura Ghiraldini and owner Massimo Santinelli, 1998, Dec. 5. This new (Dec. 1998) label (3½ by 5 inches) has the same pastel background for all tofu products–a stylized view of the sea and sky, with mountains on both sides and rolling hills in the foreground. At the top left is a smiling sun. Text: "Organically grown (*prodotti dalla agricoltura biologica*)." "Ready in 5 minutes (*Pronto in 5 minuti*)." Refrigerate at 4°C. A small symbol shows a person recycling the container. An earlier label shows four black birds flying above some orange clouds in a gray sky past a pale yellow sun. Letter from Massimo and Maura, 1999, Jan. 5. "To make Pickled Tofu, we leave tofu immersed for one night in a mixture of tamari and water. The next day, the tofu is deliciously flavored. We then either pack it as is (it becomes Pickled Tofu) or we smoke it (all smoked tofu must be pickled before smoking)." Follow-up letter (fax) from Massimo and Maura, 1999, Jan. 22. Marinated tofu is "Tofu Marinato." They still produce a very small amount of it (about 5-6 kg/week) for a distributor who sells many of their products under his own label. This is a carry-over from the early days of Biolab.

7651 Kushi, Michio. 1992. Introduction to *Culinary Treasures of Japan*, by John and Jan Belleme. 16 p. Jan. Unpublished manuscript.
• ***Summary:*** This manuscript, which was published in a condensed form in the actual book, tells the story of Mitoku and their work to export traditional Japanese natural foods to the Western world. Michio Kushi was instrumental in getting Mr. Akiyoshi Kazama involved in this work. Mr. Kushi, who became a World Federalist after World War II, came to the U.S. in Nov. 1949 to study at Columbia University. He continuously sought ways of establishing world peace, and increasingly came to believe that a proper diet is the basis for health, happiness, and peace.

In April 1966 the author's wife, Aveline, opened a small store named Erewhon in Boston. Michio began to search for a Japanese source for foods that Erewhon would sell. He was introduced to Mr. Kazama (who lived in Tokyo) through a Japanese friend, Mr. Obayashi, who resided at that time in New York City. Michio felt that Mr. Kazama understood his desire for foods of high quality. So Mr. Kazama "began his search for food producers and manufacturers who were sincere and willing to supply the kind of quality we requested. I know that for him, at that time, it was a great gamble. It was also a painstaking and slow step-by-step process."

Mr. Kazama was born on 1 Feb. 1930 in Yamanashi prefecture. He graduated from Waseda University in Tokyo, then was selected to study business in the United States. After arriving in Chicago, Illinois, he was drafted by the U.S. government to serve in the American Army in Korea and in Japan from 1956 to 1958. Upon his return to Japan, he settled in Tokyo where he became an import agent for a German company dealing in optics and electronics. After the Kushis contacted him, he became involved in the emerging natural food business. [He founded a company named Mitoku. Mi = Michio. To = Tomoko (Aveline's given name in Japanese). Ku = Kushi].

In 1968 Mr. Kazama made his first shipment of Japanese natural foods to Erewhon, the order was worth $3,000. The Kushis first met Mr. Kazama in Boston in 1970. Over the years, the volume of Mitoku's exports steadily grew, and expanded to Europe, Australia, and the Middle East. Today Mitoku ships its products to about 35 countries. Approximately 40% of Mitoku's exports go to America, 40% to Europe, and 20% to Australia and other regions. Annual sales are about $10 million. Among the major suppliers are Sendai Miso Shoyu Co. Ltd., Hatcho Miso Co. Ltd., Hagoromo Miso, Ltd., Hanamaruki Miso Co. Ltd, San Iku Foods Co. Ltd.

Distributors of Mitoku's products include the following: In the USA: Westbrae Natural Foods Inc., Great Eastern Sun Inc., U.S. Mills Inc., Tree of Life Inc., and Shojin Natural Foods (Hawaii). In Canada: Koyo Foods Inc., Flora Distributors Ltd., and Timbuktu. In Costa Rica: Distribuidora de Productos Macrobioticos S.A. In England: Sunwheel Foods Ltd, Clearspring Natural Grocer, Meridian Foods Ltd. In France: Celnat, Tama. In Belgium: Lima N.V. In the United Arab Emirates: Emirates Trading & Marketing Est. In South Africa: Key Health. In Austria: Naturkostladen, Lebenszeichen. In Switzerland: S'lotusbluemli, Terrasana, Futonhaus. In Sweden: Kung Markatta. In Norway: Alternative Import. In Finland: Makro Bios. In Portugal: Armazens Da Matinha. In Spain: Kunga. In Italy: La Finestra Sul Cielo, Probios S.R.L., Dalla Terra al Cielo, Solo Natura. In Israel: Tivoli Ltd. In Australia: Pureharvest. In New Zealand: Enso. In Singapore: Nature's Best. In Yugoslavia: General Export. In Japan: Seibu Department Stores Ltd., Tokyu Department Stores Ltd. Among the countries reached indirectly through trans-shipment are Hungary, reached through Austria, various South American countries reached through the United States, and other countries such as Poland, Czechoslovakia, Iceland, Andorra, Ireland and the Caribbean Islands.

As Mitoku developed its international operations, Mr. Kazama hired many students from Western countries, including Blake Rankin (USA), Ferro Ledvinka (Italy), Christopher Geoffrey Dawson (New Zealand, starting 1979), Robbie Swinnerton (England), Terrie Adams (USA), and

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Michelle Harbroun (France).

"For the past 10 years, Mitoku has echoed and supported the macrobiotic perspective with its motto 'Isshoku-Dogen.' These words, though they have been forgotten in the last few centuries by the very people in the health care field who should remember them well, mean literally 'medicine and food have the same source,' and can be translated as 'food *is* medicine.' This saying has been used and known as part of the ancestral heritage of wisdom transmitted from generation to generation for several thousand years in Oriental countries such as China, Korea and Japan.

"In an attempt to preserve Japanese traditions, Japan has instituted a 'Living Treasures' program granting official recognition and support to [living masters in] various cultural areas such as theater, music, dance, sculpture, carpentry, weaving... and arts and crafts. Ironically, though, Japan has not granted the same official recognition to its traditional methods of food processing and production in spite of the fact that increasingly large numbers of people throughout the world are now appreciating traditionally processed Japanese food products and have become aware of their important health benefits. The Japanese traditional arts of producing miso, soysauce, tofu, natto, amazake, rice vinegar, sake, mirin, condiments and pickles as well as cooking methods and preparation are unique among the culinary practices of the world... These foods are also works of art... It is my hope and recommendation that official recognition and support be granted by the 'Living Treasures of Japan' to those who have dedicated their life to the traditional art of food production and processing in spite of the hardships and commercial disadvantages they are compelled to face in business competition and present-day economical conditions." Address: 62 Buckminster Rd., Brookline, Massachusetts 02146.

7652. **Product Name:** Traditional Japanese Soup (in a Cup) [Mild Miso, or Dark Miso]
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 800-545-9545 or 415-821-4040 (Perelman)
Date of Introduction: 1992. February.
Ingredients: 1995. Liquid broth in foil pouch: San-J rice miso (water, whole soybeans, rice, salt), kombu extract (seaweed, barley malt), water, alcohol, salt, shiitake mushroom powder. Dried vegetables in foil pouch: Fu ([baked] wheat gluten), tofu (soybean curd), scallions.
Wt/Vol., Packaging, Price: 0.930 oz (23.6 gm) net paper cup. By March 1995 1.1 oz. Retails for $1.49 (3/95, California)
How Stored: Shelf stable.
New Product–Documentation: Spot in Natural Foods Merchandiser. 1992. July. p. 72. Shows a black-and-white photo of the side of both cups. Both products are prepared with real miso paste (not dried) for authentic Japanese flavor and texture. "Just add boiling water to create instant soup for lunch-on-the-go or a low-fat first course."

Talk with Steve Zoller of San-J. 1992. July 6. This product was introduced in Feb. 1992. Product with Labels sent by Steve Zoller. 1992. July 7. Illustration: On the dark miso a Japanese man drinking a cup of miso soup; on the mild miso, a Japanese woman doing the same. "Directions: Squeeze contents of miso packet into [paper] cup. Empty contents of vegetable packet into cup. Add boiling water to ½ inch from top of cup. Cover for 1 minute. Stir well before eating."

Ad (8 by 11 inches, color) in Natural Foods Merchandiser. 1992. Sept. p. 35. "188 years and one minute later, its soup." Shows a Japanese man and woman, kneeling on opposite sides of a low table in a tatami mat room, each drinking a paper cup of San-J miso soup. "Seven generations after San-J's founding fathers began making miso near Nagoya, Instant Miso Soup-In-A-Cup comes to America." San-J: Established 1804.

Product with Label purchased at Open Sesame in Lafayette, California. 1995. March 11.

7653. *SoyaFoods* (*ASA, Europe*).1992. Nestlé invests in Asia. 3(1) 2. Winter.
• ***Summary:*** "Nestlé, the world's biggest food group, is investing $100 million in new factories in five countries belonging to the South-East Asian Nations (ASEAN). The Swiss-based company will own 60% of the companies and will manage them."

Two of the 5 factories will be making soya products. "The Indonesian factory will be soya-based and soya sauce powder will be produced in Singapore."

7654. Macdonald, Bruce. 1992. How Erewhon got involved in wholesaling and distributing natural foods (Interview). *SoyaScan Notes*. March 16. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Erewhon went through three phases of selling: (1) Retail. (2) Wholesale, direct to natural food retail stores and restaurants. (3) Wholesale, to natural food distributors (such as Eden Foods). Bruce started phase 2, selling direct to natural food stores and restaurants, primarily in New York.

In the spring of 1969, during Bruce's tenure as general manager, Erewhon got into the wholesale business, running it initially out of their retail store at 342 Newbury Street. Paul Hawken was not involved in the wholesaling to other companies before he left for Japan. Their store was divided into 4 parts: The front half was the retail store, the back half contained the mill (a little 5-inch Meadows Mill later used for grinding whole-grain flours), a walk-in refrigerator, and packing tables (where Bruce recalls working with Jim Docker, packing little 1-5 lb paper bags of grains), an office, and the basement (connected to the ground floor by a dumb waiter), which was the warehouse for storage of

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commodities.

The wholesale business began in the basement. It started because Erewhon got a good deal on some sesame oil. A company named Sesame Products in Texas had developed the Egyptian salt method of naturally removing the hulls / husks of the sesame seeds. The company apparently went bankrupt, but actually they were a front for some illicit import dealings, such as electronic parts from Mexico. They got caught, and had to sell their high-quality oil. Bruce got the opportunity to buy (for Erewhon) all of their existing sesame oil for 10 cents on the dollar (90% discount). So he bought all the oil, most of which was in amber pint bottles, but the rest of which was in about 5-8 large drums. He trucked it to Erewhon's retail store at 342 Newbury St., and helped to unload it. He and co-workers put Erewhon labels on the amber bottles (Bruce does not remember who designed these labels, Paul Hawken had them designed), bottled the bulk oil manually, labeled that as well, and moved it all to the basement. Erewhon was now ready to jump into the wholesale business, and natural sesame oil was their first wholesale product. Somehow Bruce / Erewhon had to sell 250-300 cases of natural sesame oil. But since he had bought it at a 90% discount, he was able to sell it at a profit below the price of other sesame oils on the market. In the spring of 1969, Bruce put the oil on a truck and drove it to Greenberg's (125 First Ave.) in New York City, Paradox Restaurant, Georgie Abehsera's restaurant, etc. He also took Erewhon's whole line of products, including their new imports from Japan. "Greenberg's took on the entire line of Erewhon products. Suddenly, it just took off. A month or two later Erewhon was sending a van down to New York City ever week."

Next Erewhon expanded its line of mechanically pressed, unrefined oils. Bruce had seen some expeller-pressed corn oil at Paul Keene's Walnut Acres, so he ordered it from Shawnee Milling Co. in Shawnee, Oklahoma. Erewhon considered hexane solvent extraction to be the "big bad method" of removing oils, expeller pressing to be so-so (because the temperature in the worm-screw reached 140-160°F), and hydraulic pressing to be the best since it kept the product coolest. This golden corn oil foamed upon being heated and tasted like butter in baked goods. Erewhon's third natural oil was a safflower oil. (In 1970 Paul Hawken wrote a pamphlet titled "The New Oil Story").

Next Erewhon added a line of grains. They got non-organic brown rice from Koda Brothers in Dos Palos, California. The company was owned by Japanese-Americans, who were the first to break out of the cooperative marketing scheme, in which all growers mixed their rice together. They had rubber rollers, which did not scratch the grain during dehulling. Their Kokuho-Rose white rice has been the rice of choice for 30 years among Japanese-Americans. Bruce thinks they may have first sold brown rice (in 100 lb peat bags) to Infinity in New York, then to Erewhon.

Then Erewhon added a line of products imported from Japan. These first arrived in about Nov. 1968, just as the Erewhon retail store at 342 Newbury St. was opening. All the Japanese imports came in bulk from Muso Shokuhin in Osaka, rather than individually packaged. Tamari (from Marushima) and miso (including bulk mugi [barley] and Hatcho miso), moromi, etc. came in wooden kegs, loose, rather than in containers, so there was lots of breakage. Most of these imported products were stored in the basement. Erewhon bought some noodles (soba and udon in 5 kg boxes) from Japan Foods, then from Nishimoto Trading Co. and also from Muso. The product line was very simple, consisting of no more than 400 different items. The best-selling wholesale items were the oils, tamari, miso, rice, and imported kuzu, umeboshi (salt plums) and azuki beans. In the retail store there was no produce case or freezer, no vitamins or supplements, no potatoes or dairy products.

Initially, Erewhon's largest customer was the combined 4-5 macrobiotic study houses in Boston, Massachusetts, accounting for roughly 50% of sales. Erewhon had an old van that delivered the food to the study houses, initially at retail prices; this business kept the retail store afloat. By the late spring of 1969 the wholesale business began to take off, and the macrobiotic study houses were now allowed to buy at wholesale prices. Some additional delivery trucks were acquired.

The macrobiotic products, other than what Erewhon imported, were only available in health food stores, through Chico-San. Because of the high mark-ups at several stages in the process, these products were tremendously expensive for consumers. So Erewhon decided to sell direct to East Coast stores, cutting out the distributors, to keep prices down. Now things started to move very fast, and Erewhon soon achieved national distribution. "It was like introducing products into a vacuum. The whole natural foods industry was starting up, all these little places like Eden Foods in Ann Arbor [Michigan], Tom Swan in Chicago [Illinois], etc.

Bruce traveled to New York and lined up new wholesale customers among macrobiotic restaurants and food stores. Samsara, a macro restaurant in the lower east side run by George ("Georgie") Abehsera, was Erewhon's first customer and its biggest restaurant customer. (Michel Abehsera's younger brother, George later became the baron of the clay and soap business, Three Sheaves, Pierre Cattier, then Nature de France). Right around the corner was Arnie Greenberg, who had a deli on the lower east side, and was one of the first to merchandise macrobiotic foods; he rapidly became Erewhon's best customer. He was very busy selling a mish-mash of foods though he had no particular personal commitment to macrobiotics. Before him, Irma Paule in New York City had run "The Little Cupboard" but had gotten in trouble and was no longer in business at this time. Other good restaurant customers were the Paradox, and the Caldron

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(Gloria Bremmer at 308 E. 6th St.). The Good Earth, a retail store run by Townley, soon began to order, he was one of the original honest organic produce retailers. The restaurants and the food stores accounted for about equal sales volume for Erewhon. Erewhon shipped all its goods to New York (its sole market) via common carrier; Erewhon owned no delivery trucks of its own. There were no other natural food stores in Boston. One other unique customer was Jimmy Silver, who was macrobiotic, the manager of a rock band named Iggy Pop and the Stooges, and had hair down to his waist. He would drive down from New York with his cute little wife, Susie, and buy $300.00 of food at a time for the whole band. It was the biggest single order that Erewhon ever got in those days. Not long after that, Jimmy dropped out of the music scene and came to Boston.

Then Roger took over from Bruce as general manager in about Oct. 1969, right after Bruce married Maureen, his first wife, and left for Los Angeles to help start the branch of Erewhon there. The Erewhon store in Boston (at 342 Newbury St.) started with sales of about $400 a day. The day of Bruce's wedding, on a Saturday in about Oct. 1969 was the first day that the Erewhon store's sales topped $1,000 a day. It was a milestone day and in those days it seemed like big money. But two years later, Erewhon's sales were $20,000 a day.

In Los Angeles, Bill Tara had opened the doors, and put the bricks and boards up for a new Erewhon store. But Bill was never comfortable doing business; he preferred to teach macrobiotics. So Aveline Kushi encouraged Bruce to come to Los Angeles (where she was living at the time) and to get the West Coast branch of Erewhon started. So Bruce and Maureen moved to Los Angeles.

How did Erewhon finance this growth? At the beginning Erewhon, the trailblazer, was extremely profitable, since they had essentially no competition, and had thriving retail stores in Boston and Los Angeles. The dollar was very strong (from 1967 to 1971 one dollar was worth 355 yen), so Erewhon could buy an item for $1, sell it for $3.50 and still be $2 under any competition (mainly Chico-San). Erewhon invented the concept of a natural food store. Fred Rohe in San Francisco had developed a related idea, perhaps a little before and in parallel with Erewhon. His Sunset Health Foods, later named New Age Foods, was a modified health-food store that sold vitamins, whereas Erewhon was a pure natural foods store, that didn't sell vitamins. In addition, Erewhon had quality standards and a philosophy of foods that no one in the industry had.

After Bruce left, Erewhon moved into its first real warehouse on Farnsworth St. This represented the first real commitment to the wholesale business. A fleet of trucks was acquired. Eventually semis [semitrailers] were delivering all over New England. Address: P.O. Box 100, Cambridgeport, Vermont 05141. Phone: 802-869-2010.

7655. Macdonald, Bruce. 1992. The origin and development of Erewhon's operations in Los Angeles. Part 1. 1969 to 1971 (Interview). *SoyaScan Notes*. March 16. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Erewhon started a retail store in Los Angeles because Aveline's youngest son, Hisao, had some form of leg disorder, congenital or from infancy, probably in his knee. Aveline found a Japanese doctor in Los Angeles who she believed (and it turned out that she was right) could cure it. But the doctor had to see Hisao almost daily. So in about August 1969 Aveline moved to California. Bill Tara went with her, while Michio stayed in Boston, Massachusetts. Aveline got a very nice house at 7511 Franklin Ave. in Hollywood. Later she moved into the former Japanese embassy, which was a mansion in a very nice neighborhood, several blocks away on [7357] Franklin Ave. Bruce also lived in this mansion. In Los Angeles, Bill Tara started Erewhon's second retail store, called Erewhon West, in large part because Aveline needed good macrobiotic food. Tara rented a very small space at 8003 Beverly Blvd. and called the new store "Erewhon West." Later the name changed several times, but it ended up being just "Erewhon." He got some cinder blocks and boards, ordered a shipment of food worth about $500 from Erewhon-Boston, then he opened the door for business.

Bruce was married on 13 Sept. 1969 to Maureen Traill in Boston. The marriage ceremony took place in the Old South Church, and some 200 people (including Michio Kushi) attended. It was the biggest wedding in the Boston macrobiotic community to date. Maureen had lived in a macrobiotic study house run by Susan Hillyard, and had studied cooking with Aveline Kushi and Susan Hillyard.

About 2 weeks after the wedding, in early October 1969, Bruce and his new wife left Boston. At that time, Roger Hillyard took over as general manager of Erewhon-Boston from Bruce. They drove to Los Angeles, arriving in late Oct. 1969. The first thing Bruce did was to build a walk-in cooler. Bill Tara, who was always more interested in the teaching, philosophical, and scholarly side of macrobiotics, left shortly after Bruce arrived. Bruce was more oriented toward the business side. Bruce became the head of the store, and Jimmy Silver soon came out from Boston to work with him at the store. Initially, sales were very slow. During the first two weeks that Bruce was there, there were *no* sales on eight of the days. Natural food stores were just beginning to open in the U.S. "That was Aveline's store. Wherever Aveline went, she had to have a store–to feed the study house. And it was unbearably hot. But eventually it did work."

Soon shipments of foods began to arrive directly from Japan, sent by Paul Hawken with whom Bruce talked frequently by phone. So in the summer of 1970 Bruce put out a wholesale price list and rented a warehouse (about 2,000 square feet) catty-corner across the street (something like 7990 Beverly Blvd.). One of their first wholesale

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accounts was Fred Rohe in San Francisco. Soon the first Erewhon products packaged in Japan began to arrive, and because of these retail packs the wholesale business took off. The first seitan came in shrink packs; it later came in jars. Tamari was the best-selling import, followed by miso, then umeboshi. The foods still arrived in small boxes or single kegs; containers did not begin until later. At about this same time Tom DeSilva, a lawyer who became a yoga instructor, applied for a job as a janitor; he just wanted to be around.

Erewhon West soon outgrew its first warehouse, in part due to a deal made with the Lundberg Brothers. Bob Kennedy of Chico-San was the pioneer in contracting with the Lundbergs to grow short-grain brown rice in California. The Lundbergs allotted a certain amount of acreage to organic brown rice and Chico-San agreed (in a contract) to buy all of the organic brown sold on that acreage. Chico-San had exclusive rights to all the organic brown rice produced by the Lundbergs. But Chico-San sold this rice for a high price (much of it in rice cakes or 1-lb bags), which prevented Kennedy from selling the amount he had contracted to buy. Chico-San was always in danger of breaking the agreement and losing his exclusivity. So [in early 1970] a side deal (contract) was made, between Erewhon and the Lundbergs, in which the Lundbergs packaged the unsold rice exclusively for Erewhon and labeled it "unsprayed." Chico-San would not allow it to be labeled "organic." Erewhon never talked with Kennedy or Chico-San about this side deal. "He hated our guts! But we did him a real favor; we sold the rice and we didn't really hurt him, since we were selling into an entirely new market–on the East Coast and in bulk and in boxcars."

With this arrangement, Erewhon got into the rice business in a big way, selling their rice for $11.00 a bag versus about $30.00 for the same product from Chico-San labeled "organic." Brown rice soon became Erewhon's biggest product; they sold it to Eden Foods, Laurelbrook, Tom Swan in Chicago [Illinois, he didn't last long], Tree of Life in Florida, Food for Health in Tucson (Arizona), some distributors in Northern California, Green Mountain Granery in Boulder (Colorado), etc. It was rice that gave Erewhon nationwide distribution, putting their products in every natural food store in the USA. Bob Kennedy was furious but he was stuck with his 5-year contract. Note: The fire in early Aug. 1972 that burned Chico-San to the ground essentially rendered the contract null and void.

Now Erewhon-West began to catch up with Erewhon-Boston in sales because of two factors: They could get a shipment from Japan 3 weeks faster than Boston, and they were near the source of brown rice.

When Paul Hawken returned from Japan in Dec. 1969 he went direct to Los Angeles, but stayed only several weeks. He then went to San Francisco and worked for several months with Fred Rohe (they had become close friends) on writing educational pamphlets and trying to organize Organic Merchants. After returning briefly to Erewhon West in Los Angeles, he returned to Boston. Paul's direct contribution to starting Erewhon West was insignificant; he wasn't there long enough to do much. Bruce turned it into a real business. "Paul's real contribution was finding new suppliers and products in Japan (he toured Japan with Yuko Okada's father), getting the products labeled in Japan, then arranging for them to be shipped to Los Angeles in containers. Mr. Kazama and Mitoku came later. Erewhon had tried to order Hatcho miso from Muso, but Muso couldn't get it. But Mr. Kazama got it; he is a supreme negotiator! I've never met anyone quite like him.

"One of the secrets to Erewhon's success was always having, as a base, a successful retail store, that had a big mark-up and was generating cash. That was our "calling card." Then the warehouse could grow off of that. The store was also a wonderful place to test and develop new products. "A store is a cash business. With distribution, sooner or later, you have to give terms–such as net 30 days. Thus the adage: 'If you're going to grow a business, you need $2 in capital for ever dollar that you grow.'"

In late 1970, to keep up with the explosive growth, Erewhon rented a second warehouse at 8454 Steller Drive (10,000 square feet). In his "spare time," entrepreneurial Bruce founded two other businesses of his own: Pure & Simple, and The Natural Living Company. Pure & Simple, located in the Steller Drive warehouse, was the first of America's new wave of natural food snack companies. Bruce had talked over the idea with Paul Hawken, who felt that snack foods were not appropriate for Erewhon at that time. The company's first product was Corn Munchies, which was the first natural corn chip. They would make corn tortillas, cut them into wedges, fry them in sesame oil, and season them with tamari. The Corn Munchies soon became very successful. The Natural Living Co. made bodycare products and cosmetics, starting with Sesame Shampoo and Sesame Lotion. Bruce had met a brilliant chemist named Carlos de Villalvilla, a Cuban aristocrat who was head of research for Max Factor. He was a concert pianist with 2-3 PhDs. Bruce asked him to develop a line of cosmetics without preservatives or mineral oil (a vegetable oil should be used instead of a petroleum derivative). Carlos used sesame oil (which is very stable) as the vegetable oil in these first two products.

By early 1971 Erewhon had outgrown the 10,000 foot warehouse and another 20,000 square feet in an old bakery, from which they did all transshipments to distributors. The store expanded twice, taking over the corner fish store (live fish in aquariums), to 8001 Beverly Blvd. Jim Gronemeyer did the remodeling. Tommy DeSilva worked there, and ended up owning the business. Continued. Address: P.O. Box 100, Cambridgeport, Vermont 05141. Phone: 802-869-2010.

7656. Macdonald, Bruce. 1992. The origin and development

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of Erewhon's operations in Los Angeles. Part II. 1971 to 1991 (Interview). *SoyaScan Notes*. March 16. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** In one of its first issues (the very first was published in Jan. 1971), *East West Journal* published an interview with Bruce while Erewhon–Los Angeles was at the peak of its activity. They arranged for imports of natural foods from Japan to come into Los Angeles. They developed labels for the products with nice stories about each product. Burton Block did the graphics and helped with the text. He later became famous with the Nutragena designs.

In early 1971 Bruce found out that Paul Hawken had somehow obtained some stock and thus ownership in Erewhon and had not mentioned it to Bruce.

So Bruce went back to Boston and discussed the matter with Paul. Paul said, essentially, "That's the way it is." Ultimately Bruce felt that Michio was to blame for the problem, but "when I found out that Paul had some stock, I felt he had broken a blood bond with me and had deliberately deceived me. I felt more disgust than anger towards Paul because I had considered him a very close friend.

"I was not upset at Michio. Basically I have always felt that he was just stupid. He had the greatest opportunity–like the founding of the computer industry and he was Bill Gates–and he couldn't comprehend the American entrepreneurial spirit. Michio's approach was the traditional Japanese one. You come to work for a company, we pat you on top of the head, you have lifetime employment, but don't ever ask to own any of it. But he was in a country that was entrepreneurial to its core. Hey, we don't mind working for nothing–at the beginning. He should have offered the people who conceived and built Erewhon partial ownership in the company to motivate them and to keep them around. Failing to do that was Michio's biggest mistake."

On 21 Jan. 1971 *The Wall Street Journal* ran a front-page feature story on the emerging new natural foods industry. A person from Merrill-Lynch came in and said, "We could package this business and raise millions for you."

Bruce had always thought that Aveline had always owned all the Erewhon stock–from day one to the bitter end. The Kushi's attorney, Morris Kirsner, had put it in her name because they were worried about something happening like had happened to Irma Paule who ran the Ohsawa Foundation in New York. After Beth Ann Simon (a former heroin addict) died in Nov. 1965, the FDA raided the Ohsawa Foundation late one night and found its Nature's Cupboard to be selling food, as well as books, recommending the food as a cure for illness. Charged with "false advertising," the center was closed down, and the focus of macrobiotic teaching shifted to Boston. Michio was always concerned about teaching and being a purveyor of the foods about which he was teaching.

Seeing no future for himself in Erewhon, Bruce left Erewhon forever in May 1971 to attend to his two other thriving businesses. Bruce, who had been president of Erewhon on the West Coast, had been willing to work hard to build the company for a small salary ($150/week), reinvesting all earnings, on the understanding that he would become a part owner later–the entrepreneurial way. That had been his basic approach, and he assumed Paul and Michio were thinking the same way. But it never happened.

Erewhon had more than 99% of the market share on all of the Japanese imports. Bob Kennedy was buying from Tokyo C.I., which was very tiny. They had excellent sources for oils and grains, had built "Erewhon" into the top brand name, and had developed an aura of almost invincibility and quality. In short, they owned the market they had created.

Who got Muso (in Osaka) exporting Japanese natural foods? Probably Michio talking to Mr. Okada. Lima Ohsawa was more closely associated with Tokyo C.I. than with either Muso or Mitoku. Bob Kennedy had a certain allegiance to Lima Ohsawa. Herman and Cornellia Athara had a little conflict with Michio and Aveline Kushi; "it was never on the surface but it sure was underneath." The split began in 1961 when Herman and Cornellia, following Ohsawa's advice, moved to Chico, California, with the group (including Bob Kennedy) that started Chico-San, Inc. in early 1972; Michio and Aveline decided to stay on the East Coast. All four (Michio and Herman, Aveline and Cornellia) were best buddies up until 1961. After than, there was a certain coolness. Bruce remembers, for examples, that when he and others were out in California, they never invited Herman (a sensei) down to lectures or other events. That was unusual. Bruce thinks (but is not sure) that Bob Kennedy (Chico-San) never bought (or never bought much) from Muso.

What happened to Erewhon–Los Angeles? One of the people who financed the early growth of Erewhon was John Deming, whose family were wealthy rice [sic, oil] barons. He married Judy Coates, lived on a trust fund, and invested something like $150,000 to $200,000 in Erewhon. Paul Hawken was close friends with him, in part because Paul gone out with Judy Coates, then later married Judy's sister, Dora. Then (according to hearsay) something happened and John asked for his money back. Erewhon said they couldn't pay him, but offered him Erewhon–Los Angeles instead. "So Deming ended up owning the West Coast" [Erewhon–L.A.]. [Note: For John Deming's version of this, see Dec. 1994 interview with him.]

When Bruce was in Los Angeles, Tom DeSilva had been his "right hand man." In a major policy goof, they put Jim Gronemeyer in charge of the warehouse–which was sort of running the company. That blew up rather quickly. Bruce was long gone, so he does not know the details. Then Tom DeSilva took over, before Deming came in (in 1973-74) and took over Erewhon L.A. Deming owned the company and John Fountain was the manager who ran it. He bought much more than he needed. Someone stole a lot of money, it was a sick scene. They moved the warehouse from Steller Driver down to Vernon; it just declined, although the retail store,

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run by Tom, did well. Then Tom bought the retail store from John Deming in 1980. It was named Erewhon Natural Foods, and it quickly expanded into neighboring storefronts as they became available, adding a vitamin section, a deli, and then a restaurant named Nowhere Cafe. In 1990 Tom heard a rumor that their landlord would not renew their lease and would, in fact, use the space to open similar businesses. Acting quickly on this news, Tom located a 12,000 square foot space at 7660 Beverly Blvd. next to CBS Television Studios in the street level of a five-story apartment building. The new Erewhon store had to be designed, built, and permitted from an empty shell; this was accomplished within a year. The new store opened in 1991 with annual sales exceeding $9 million.

During much of the early history of Erewhon, Paul Hawken was in Japan. Paul's main reason for going to Japan was so that Erewhon could develop consumer packages and have the products (tamari, miso, noodles, seaweeds, kuzu) packaged in Japan. Hawken didn't return from Japan until the Erewhon store and 2 warehouses in Los Angeles (8554 Steller Drive, plus part of an old gigantic bakery) were up and running at full speed. They could get imports from Japan 2-3 weeks sooner in Long Beach than in Boston. From the West Coast, they shipped the goods as far east as Chicago, Illinois.

Warren Clough of Shiloh Farms was involved with organic farming before Erewhon; Warren was a very early pioneer.

Very little documentation remains on the early history of Erewhon. In about mid-1971 *East West Journal* published an interview with Bruce about Erewhon, conducted by his first wife, Maureen. It contained a photo of Bruce, and a good chronology of developments at Erewhon–Los Angeles. That was the real active time for the West Coast. In Aug. 1973 Paul Hawken wrote a self-serving article in *East West Journal* titled "Erewhon: A biography. The view within," which is full of inaccuracies. Bruce thinks that Patricia Smith (Patti, in Monrovia, California) might have early Erewhon catalogues. She was working for Trader Joe's until several months ago. She now has a new job elsewhere. Address: P.O. Box 100, Cambridgeport, Vermont 05141. Phone: 802-869-2010.

7657. Macdonald, Bruce. 1992. The origins and early history of Pure & Simple, The Well, and New Age Distributing (Interview). *SoyaScan Notes*, March 16. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** In late 1970, Bruce was managing the Erewhon store and distribution company in Los Angeles. To keep up with Erewhon's explosive growth, he rented a second warehouse at 8454 Steller Drive (10,000 square feet). In his "spare time," entrepreneurial Bruce founded two other businesses of his own: Pure & Simple, and The Natural Living Company. Pure & Simple, located in the Steller Drive warehouse, was the first of America's new wave of natural food snack companies. Bruce had talked over the idea with Paul Hawken, who felt that snack foods were not appropriate for Erewhon at that time. Pure & Simple's first product was Corn Munchies, which was the first natural corn chip. They would make corn tortillas, cut them into wedges, fry them in sesame oil, and season them with tamari. The Corn Munchies soon became very successful.

Bruce left Erewhon in May 1971 over an ownership dispute. His first move was to merge Pure & Simple with The Well, a natural food distributor in San Jose. Originally the Well had been named New Age Distributing, but Fred Rohe had started to get into financial troubles, so he had split off the distributing company as a separate business, which Phil Parenti / Parente was running.

Note: A letterhead shows that in Sept. 1979 Pure & Simple Natural Foods Inc. was located at 1045 Pepitone St., San Jose, California 95110. Phone: 408 / 295-7479. Jon Hoeffler ordered books on miso and tempeh. Address: P.O. Box 100, Cambridgeport, Vermont 05141. Phone: 802-869-2010.

7658. Young, Rich. 1992. Early history of macrobiotics and natural foods in America (Interview). *SoyaScan Notes*, March 28. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** First the names of some good sources: For Infinity Foods and Shadowfax: David Simon, 201-209-1646 (now doing business as Wholesome Brokers, still into scientology, formerly with Erewhon and a macrobiotic). For early Erewhon: Evan Root, 617-566-4783, in Brookline, he is very down to earth and sensible, like Jimmy Silver. For Erewhon–Los Angeles: Tom DeSilva, 213-655-3537. For Essene: Howard and Denny Waxman (brothers who founded Essene, which is still in business in Philadelphia, Pennsylvania). For Laurelbrook: Margy Coates, 301-877-1695, is one of the angels on this planet.

Rich worked for the Kushis for over 13 years. He studied with them at Arlington Street Church before Erewhon existed. Evan and Peggy Taylor, Ronnie Coates and Marty Russell started Sanae; Rich worked there for 18 months, washing dishes and buying. Then he worked at *East West Journal* for 18 months when Robert Hargrove was editor, in advertising and sales. Then for the Seventh Inn for 18 months, shortly after it started and the two guys who founded it quit. It never got off the ground. Evan Root was followed by Ty Smith who was followed by Richard Sandler. Then in 1972 Rich went to work for Tom Chappel of Tom's of Maine (natural toothpaste).

Bruce Macdonald married Maureen Traill, his first wife, in the first "official" macrobiotic wedding in Boston, Massachusetts, at the Old South Church on Copley Square. Then Bruce and Maureen moved to Los Angeles where Bruce played a major role starting Erewhon-Los Angeles. Bruce has had 6 children by four women. Now Bruce runs

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home-based Right Hand Press which publishes the teachings of Linda Green, an Avatar, dowser, and pendulum-using spiritual teacher from Oklahoma.

Rich thinks that one of the first people to develop a process for putting soy sauce on nuts was Nik Amartseff, who created Nik's Snacks that were sold by Erewhon. Nik started out working with Fred Rohe's New Age Foods in San Francisco. Ask Rich about Erewhon's Hopi Seeds and Nik's Snacks.

Rich began to work at Erewhon in 1974 when Bill Garrison was the president; he continued until the company went bankrupt. When Paul Hawken left Erewhon, Bill Garrison took over. In 1975, under Bill, the company was losing money. Michio brought in Ty Smith on the condition that if Ty could make the company profitable, Michio would give Ty shares in the company. At 33 Farnsworth St., as president Ty (who Rich has great respect for) made the company profitable, but Michio reneged on the deal. So Ty left–he is now in Hawaii running a combination convenience store, deli and gas station. Tom DeSilva knows how to reach him. Then Michio brought in as president Jeff Flasher, who was very close to Ty and thus knew that Michio could not be trusted. One day Jeff went to Michio and said that Erewhon could stay at 33 Farnsworth Street and probably stay profitable, but it wouldn't grow as fast due to the limited space. Or Erewhon could move into a much larger warehouse and potentially sell a lot more food, but they would incur significant debt in the process. Jeff left the decision up to Michio and Michio decided to go for the larger warehouse, with the promise that he (Michio) would come through with a certain amount of money by a specified date. Michio was not able to do this.

Jeff Flasher is a wonderful person and his wife, Linda, at the time was extremely intelligent and helpful to Erewhon. Another reason for the downfall was the pressure of the full-line distributors, which led Erewhon to greatly expand its product line and to include many products of marginal quality. It was a choice between being a manufacturer (they made nut butters and granolas) and a brand name (from imports), versus competing with the full-line distributors. Michio chose the latter approach. That was a major reason for Erewhon's downfall. Address: Right Hand Press, Cambridgeport, Vermont.

7659. Weissman, John. 1992. Pioneering work with seitan, Wheatmeat, and Tan Pops in America, mid-1976 to 1992 (Interview). *SoyaScan Notes*, March 31. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Continued. In the fall of 1976 John formally founded the Vegetable Protein Company, registered with the city of Cambridge, and moved his operation out of his home into a commercial shop in Central Square at 140 River St. in Cambridge. Robert Allen left the company to begin a new career in the field of men's clothing. In 1976-77 John tried to get a trademark for Wheatmeat but was unable to because I.T.T. (Wonderbread) owned the trademark for a bread product. With Tan Pops as the main cash product from 1976-1978, the business became a real commercial business and began to grow. Selling as many as 85 Tan Pops a day at Erewhon alone, he began to earn a modest living. For the first time, John began to use machines to help him in making his products. In 1977 he developed a portion-control method for the Tan Pops, running the seitan through a meat grinder, and forming them into cylinders, like a fat sausage, rather than the former slabs. John also began to experiment with new ingredients in the Wheatmeat and Tan Pops–such as vital wheat gluten, which he purchased from Ogilvie Ltd. in Montreal, Quebec, Canada. Other ingredients used included oat bran and oat flour mixed with wheat, whole toasted soy flour. The formula was constantly changing. At one point the main ingredients in the Tan Pop were vital wheat gluten and whole wheat flour. Neither Wheatmeat or Tan Pops were ever made entirely from vital wheat gluten.

In addition to the Wheatmeat Tan Pop, John developed and made a Tofu Pop, introducing it in the spring of 1977. He bought squares of plain pressed tofu (3 inches on a side and 3/4 inch thick) from a Chinese retail food store in Boston's Chinatown–he does not recall the company's name and he is not sure if they made the tofu or bought it from elsewhere. Later he bought tofu from Yah Kee, a Chinese tofu maker. He skewered the pressed tofu squares, coated them with his dry flour mix and corn batter, and deep-fried them. He first sold these at the very first Bread & Circus natural food store purchased by Anthony Harnett in Brookline. The product was introduced just after Anthony bought the store–but it was discontinued after a month or so, because it sold slowly; the unflavored tofu was too bland.

One day in the spring of 1979 he realized that deep-frying was unhealthy, and that day he and an employee moved his Pitco deep-fryer down to the basement, thus starting the "Vegetable Protein Museum of Natural History"–and stopped making Tan Pops. At that point he reformulated the Solar Burgers by adding TVP (they were made from a mixture of seitan and soy in various forms, incl. soynuts and TVP). He also made a TVP chili, which he thinks was called Vegetarian Chili.

In about 1978-79 John introduced another new product to salad bars around Boston. Named Smoky Soy Bits, it was a combination of TVP and gluten (produced by Ogilvie Ltd. in Canada) made into bacon-like bits, but without hydrogenated oils or salt (he used tamari instead). It was an "all natural" product–to the extent that TVP is natural.

In Nov. 1980 John introduced Weissman's Original Tofu Sausage, which tasted like bologna. A 6-ounce mixture of spices and tofu in a cellulose casing, it was cooked in a smokehouse. His company made it for the first 4 years and it eventually became his best-selling item. As its popularity increased, he phased out retail sales of Wheatmeat and Solar

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Burgers, and sold these Tofu Sausages to restaurants in bulk. After this period he invented only tofu products.

In 1983 John invented Pasta Pals, a tofu-gluten meatball. He discontinued it when Lipton Tea Inc. brought the trademark from him in late 1984. Lipton still owns the registered trademark.

In May 1984 John had to leave his food plant at 140 River Street in Cambridge. So he arranged with Michael Cohen to make the Tofu Sausage at his plant in Greenfield, Massachusetts. This was disastrous for John, since the product's new poor quality almost ended any reputation it had left in the marketplace. But it was quite an education for John. In January 1985 he took back the product and began making it for himself again.

In the fall of 1984 John arranged with Ademar Reis, owner of Season's Harvest (a sandwich maker who was John's first customer for bulk-packed Solar Burgers in 1976) to have the Solar Burger made at Ademar's shop. John also wanted him to make Smoky Soy Bits and showed him how. Reis made the products for John briefly in late 1984, however this situation did not work out for John either. But it did for Ademar, who to this day makes soy "bacon" after the manner John showed him, using textured soy flour or concentrate, and flavorings similar to or the same as those from raw material sources which John supplied to him. Reis now also makes a tofu meatball.

In 1985 John changed the company name to VegPro. He continued to make Solar Burgers and Wheatmeat, but from then on he only invented and worked on tofu products. In about 1986, based on the success of his Weissman's Original Tofu Sausage (6 oz), he introduced a new Tofu Savvy line of products (starting with a 3-lb Boloney), each in a 2-3 lb loaf shape like a meatloaf, and sold to delis. He buys his tofu from a tofu maker in Massachusetts. With names like Tofu Salsa Savvy (bulgur and tofu), Curry (with brown rice and veggies), Spice-Seed, and Boloney, these are offshoots of the tofu sausage, but they involve a highly proprietary process that John has developed. Delis sell the sliced loaves for use in sandwiches.

In 1990 he began to test market (in one Bread & Circus store) two new types of tofu franks: Good Dogs, and Bad Good Dogs (hot & spicy), each with a registered trademark. They were only on the market for 1-2 months because they didn't keep well--but he still feels they are excellent products. He made them himself because he doesn't like to have them made on meat processing machines.

Today John works as a very creative solo craftsman and a chef, still making a line of food products himself, including the Weissman's Original Tofu Sausage (6 oz), and the Tofu Savvy line. His products are sold at about 10 outlets, including five Bread & Circus stores, plus some co-ops, restaurants, and health-food stores.

He no longer makes Solar Burgers, but someone from California is making another product with that name.

On 19 April 1988 John received federal trademark #1,485,401 for Wheatmeat. He knows of people in Utah and Pennsylvania who are using his registered trademark, Wheatmeat, illegally.

John, now age 43, is a musician, selling foods he has developed, and writing a novel. He is almost a vegetarian, but he eats some fish. Address: VegPro Co., 133 Nottinghill Rd., Brighton, Massachusetts 02135.

7660. Bounds, Sarah. 1992. The subject of soya. ***BBC Vegetarian Good Food (England)***. Spring. p. 28-29, 31-32.
• ***Summary:*** An introduction, with many color photos, to soyfoods, including TVP, tofu, soya milk, soya flour, soya oil, soy sauce, miso, tempeh, fresh soya [green vegetable soybeans, "soya beans can be eaten fresh straight from the pod, served green and tender .."], and whole dry soybeans. Contains considerable incorrect information.

7661. GEM Cultures. 1992. Catalog [Mail order]. 30301 Sherwood Rd., Fort Bragg, CA 95437. 9 p. March. [4 ref]
• ***Summary:*** A new addition to the catalog is "Tofu form boxes" named "Total Tofu!" Each is made by a local woodworker in Mendocino County using American beech wood. The 8 by 5 by 3½-inch size is large enough to press 2 pounds of tofu. Included also is a 3 oz packet of natural nigari, 3 ounces of Terra Alba calcium sulfate, a double square of Grade 60 cheesecloth to line the box, and directions on how to make tofu and soymilk. Price of a Total Tofu kit, postpaid, is $32.00. Address: Fort Bragg, California. Phone: 707-964-2922.

7662. Johnson, Lawrence A.; Myers, D.J.; Burden, D.J. 1992. Early uses of soy protein in the Far East, U.S. ***INFORM (AOCS)*** 3(3):282-88, 290. March. [54 ref]
• ***Summary:*** A nice history of the subject based on a review of the literature. Contents: Early history in East Asia (industrial uses, chiang and miso, natto, tempeh, soymilk, tofu, shoyu). Emergence of U.S. soybeans (early soybean mills, ADM, Glidden). Chemical understanding of soybean protein (major components/fractions). First industrial applications (oil and meal). Soy protein-based plastics (Henry Ford). Chemurgic movement (U.S. Regional Soybean Industrial Products Laboratory, Northern Regional Research Center, Glidden). Soy protein adhesives (I.F. Laucks). Paper coatings and sizings (Glidden). Soy fiber spinning (Ford, Azlon, Drackett). Other industrial uses. Address: Center for Crops Utilization Research, Iowa State Univ., Ames, Iowa 50111.

7663. Kikkoman. 1992. Natural to the last drop (Ad). ***BBC Vegetarian Good Food (England)***. Spring. p. 33.
• ***Summary:*** "Kikkoman Soy Sauce takes a full 6 months to naturally ferment, just like a fine wine. We use only the finest soy beans, wheat and a specially developed yeast [sic,

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mold] to produce the world's finest soy sauce... So to bring out the best in your cooking make sure you use the purest soy sauce, Kikkoman Soy Sauce. Because Kikkoman is undoubtedly a drop more natural."

7664 Yamawaki, Teijirô. 1992. Edo jidai shôyu no kaigai yushutsu [Exports of shoyu from Japan during the Edo Period]. In: 1992. Noda Shishi Kenkyu (Studies of Noda History), Vol. 3. Noda, Japan: Shishi Hensan (Noda City History Editorial Committee). See p. 63-93. March. 30 cm. [50 ref. Jap]

• ***Summary:*** This is one of the best sources known on the subject, which includes much information on the export of shoyu from Japan to other parts of Asia and to the Netherlands by the Dutch East India Company (VOC).

Chronology and basic concepts: Almost all shoyu (soy sauce) exported from Japan during the 1600s and 1700s (and all soy sauce exported officially or legally) was exported from a tiny man-made island named Dejima in Nagasaki Harbor. Most of it was exported by the Dutch East India Company (VOC), which was the only European company allowed to trade with Japan during this period of isolation from 1600 to 1854. The Japanese government classified all soy sauce exported from Deshima into two basic types: (1) Official trade freight (*motokata nimotsu*, also called *compania nimotsu*), and (2) Private trade freight (*waki nimotsu*, also called *yakusha / sojya* {staff / sailor} *nimotsu*). Official trade freight was the kind engaged in by the Dutch East India Co.; this freight was recorded in the Nagasaki Trading Firm Journal. Private trade freight referred to the goods traded privately by Dutch sailors and by the chief and staff working at the Nagasaki Trading Firm.

Note: In about 1600 the Chinese obtained an official trade permit and settled in Nagasaki. At the peak of Chinese activity there, about a century later, as many as 190 Chinese ships a year were visiting Nagasaki, and one-sixth of the town's population hailed from the East Asian mainland.

1609-1641–The Dutch East India Co. (VOC) maintains a trading post at Hirado, a small island off the northwest coast of Kyushu.

1634–Dejima (literally "protruding island," also spelled Deshima), a small artificial island in Nagasaki Harbor is constructed as ordered by shogun Iemitsu; it originally accommodated Portuguese merchants.

1638-1639–The Portuguese (and other Catholic nations) are expelled from Japan for suspected complicity in the Shimabara Revolt of 1637.

1641 May–The Dutch East India Co. is moved from to Hirado to Dejima, where they were kept almost like prisoners on the tiny island. For 200 years, Dutch merchants were generally not allowed to cross the little bridge from Dejima to Nagasaki, and Japanese were likewise banned from entering Dejima. From 1641 to 1853 the Dutch are the only Western nation allowed to trade with or to enter Japan, but solely on Dejima. Chinese and Korean traders are still welcome, but their movements are restricted.

Dutch ship arrivals: From 1641 to 1671 an average of 7 ships per year. From 1671 to 1715 about 5 per year. From 1715, only 2 ships were permitted each year; this was reduced to 1 ship in 1790 and again increased to 2 ships in 1799.

1647–Exporting of shoyu (soy sauce) to Asia from Japan (as official trade freight) began. The first shipment was 10 kegs (*taru / balien*) sent to Amping, on today's Taiwan, by the VOC's Taiwan Trading Firm. From 1647 to 1720, this shoyu was exported from the Nagasaki Trading Firm to each regional trading firm in Asia, including today's Hanoi, Vietnam (1652); Ayuthaya, Thailand (1657), Jakarta, Indonesia (1659), Malaca, Malaysia (about 1660), 250 km northwest of Phnom Penh, Cambodia (1665), Paliacatta, 40 km north of Madras, India (1666), Bengal region, India (1666), Colombo, Sri Lanka (1670), Surat, northwest coast of India (1672), Amboina, Banda, and Ternate, in the Moluccas, Indonesia (1693), Sulawesi Island (Celebes), Indonesia (1693).

Note: This document contains the earliest date seen (May 2010) for soybean products (shoyu) in Cambodia (1665); soybeans as such had not yet been reported by that date.

1685–The Shogunate at Edo limits the amount of "private trade freight" to 400 *kan* (1 kan = about 3.75 kg), or about 1,500 kg or 3,300 lb.

1669 March 31–20 kegs of shoyu are shipped from Japan to Batavia on a Chinese ship (Source: Diary of Casteel Batavia). This is the earliest document seen showing a Chinese ship exporting shoyu from Japan.

1687–20 kegs of shoyu made in Kyoto (1 keg = about 29.104 liters) is shipped to the Ceylon (today's Sri Lanka) trading headquarters. It is believed to have been made by a sake brewer in Kyoto. At that time, Sakai city, a southern suburb of Osaka city, was located on the edge of Osaka Bay at the mouth of the Yamato River. It is one of the largest and most important seaports in Japan during the Medieval era, and is also famous in the Kyoto/Osaka area (along with Kyoto) for its soy sauce production. During the period 1764-1780 shoyu was made in Sakai by 4 manufacturers, including Shobei Hosoya. Soy sauce made in Sakai was transported by ships along the Inland Sea (north of Shikoku), through the narrow straight between northern Kyushu and Shimonoseki, around the north and west sides of Kyushu, to Nagasaki. These ships from Sakai were called the "Sakai Raw Silk Carrier Boat" or *Sakai Bune*. They had been authorized to ship imported silk from Nagasaki since the Keichô period (1596-1611) of Edo era. The ship was empty going back from Sakai to Nagasaki and the space was used for soy sauce exports. Much of the shoyu exported from Japan to the Netherlands is thought to have been made in the Kyoto / Osaka area. It was probably made mainly in Sakai, while that

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made in Kyoto was exported in small amounts for special occasions. Extremely low priced shoyu is thought to have been made in Kyushu, and exported to China. None of the shoyu exported during the Edo / Tokugawa period (1600-1867) was made in the Edo / Tokyo (*Kanto*) area.

1711–In the Chinese and Western Freight Log it is recorded that 61 kegs of shoyu (56 large kegs and small kegs) as well as 40 kegs of miso were exported as "official trade freight," whereas 867 kegs were exported as "private trade freight." Thus, the private freight (in this rare year where records exist) was about 8 times as much as the official freight.

1712–Some 999 kegs of shoyu and miso are exported as "private trade freight." Unfortunately we are not told how many of these contained shoyu and how many contained miso.

1721-1792–The VOC exports Japanese shoyu only to its trading headquarters at Batavia (today's Jakarta, Indonesia), from there it is transferred to each regional trading firm.

1737–The VOC first exports Japanese shoyu to the Netherlands, from its Batavia headquarters. Thus, Japanese soy sauce first arrived in the Netherlands (and in Europe) in 1737. All this shoyu was exported as "official trade freight." This export route was used until 1760. During the 24 years from 1737 to 1760, approximately 46,000 liters of soy sauce were exported from Dejima to the Batavia headquarters, and 15,600 liters (about 1/3 of the total) were then shipped from Batavia to the Netherlands. In 1742 and 1743, no shoyu was transshipped from Batavia to the Netherlands. Thus, during the 22 years that shoyu was transshipped from Batavia to the Netherlands as "official trade freight" was about 707 liters/year. The amount exported was calculated based on the capacity of the "large keg" (29.104 liters); the small keg held exactly half this capacity (14.552 liters). In addition, a substantial amount of shoyu was presumably exported from Batavia to the Netherlands as "private trade freight."

Also in 1737 the limit of 400 *kan* on "private trade freight" is abolished, so that any amount can be exported in this way.

1790–Shoyu is first exported from Japan in comprador bottles; these bottles, made of grey / white porcelain, were recorded as "sterilized soy sauce" and 550 of them were used this year to export shoyu.

1795–The book titled *Travels in Europe, Africa, and Asia, Made between the Years 1770 and 1779...*, by Charles Peter Thunberg (a Swede) is published in English. An entry from about the year 1776 (Vol. 4, p. 107), in the chapter on Commerce, reads: The traffic in *Soy* [sauce]... is more considerable [than that of tea. Japanese] soy is much better than that which is brewed in China. For this reason, soy is not only exported to Batavia [Jakarta], in the wooden kegs in which it is made, but likewise sold from thence to Europe and to every part of the East Indies. In some places in Japan too the soy is reckoned still better than in others; but, in order to preserve the very best sort, and prevent its undergoing a fermentation, in consequence of the heat of the climate, and thus being totally spoiled, the Dutch at the Factory [at Desima / Dezima / Dejima] boil it up in iron kettles, and afterwards draw it off into bottles, which are then well corked and sealed [by applying bitumen / coal tar to the stopper]. This mode of treatment renders it stronger and preserves it better, and makes it serviceable for all kinds of sauce.

Note: This early discovery of pasteurization and sealing in porcelain bottles explains how the Dutch were able to keep this soy sauce from spoiling becoming overfermented while it was being shipped from tropical Japan, to Batavia [Jakarta], across the Equator, around the Cape of Good Hope (south of Africa), then all the way to the Netherlands.

1799–The Dutch East India Co. (VOC) is dissolved.

1804-1829–A total of 2,672 kegs of shoyu is exported in Chinese ships during most of these 26 years from Japan. About 153 kegs/year are exported (range: 12 to 322 kegs, but with no exports in 1805, 1816-18, 1824-28).

1854–Japan's policy of self-imposed national isolation is abolished / ended. Shoyu can be exported freely, without limits.

Some 670 liters a year went to Holland. The soy sauce to be sent to Holland was put in a special container with special outside packaging. The shoyu that was exported was made mostly in Kyoto. In 1765 the famous French-language *Encyclopedia*, by Denis Diderot, had a section on soy sauce.

Brief biography of Teijirô Yamawaki: 1914–Born in Japan. 1950–Graduated from Tokyo University, Dep. of Literature, Faculty of Japanese History. 1954–Awarded his doctorate (PhD) in history from Tokyo Univ. Between 1960 and 2002 he was the author of at least 8 books in Japanese including: (1) *Smuggling* (*Nukeni*) (1965, Nikkei Shinsho). (2) *Trading with Chinese Merchants in Nagasaki* (1964, Yoshikawa-kobunkan). (3) *Nagasaki Trading Firm of Dutch Merchants* (1980, Chiokoron). (4) *Encyclopedia of Silk and Cotton during the Edo Period* (*Jiten Kinu to Momen no Edo Jidai*) (2002, Yoshikawa-kobunkan, Tokyo, 230 p.).

Note: See also the excellent 16-page English-language summary of this report prepared and published by Kikkoman Institute for International Food Culture (KIIFC) in Noda, Japan. Address: Japan.

7665. Yamawaki, Teijirô. 1992. Soy sauce export in the Edo Period–according to the Nagasaki Trading Firm Journal. A translation of *Edo jidai shôyu no kaigai yushutsu*. Noda, Japan: Kikkoman Institute for International Food Culture (KIIFC). 16 panels, 15 x 10.5 cm each. Front and back. Available at http:// kiifc.kikkoman.co.jp/ english/exhibit/ index.html [18 ref. Eng]

• ***Summary:*** This is the best known English-language source on the subject. It is volume 3 of the 14-volume set. Contents: 1. Introduction. 2. Soy sauce export in the Edo

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Period–according to the Nagasaki Trading Firm Journal. Note: This Firm in Nagasaki was part of the Dutch East India Co, or VOC. 2. Profile of Dr. Teijiro Yamawaki. 3. Official trade freight and private trade freight. Routes of soy sauce exports. 5. Soy sauce export to Asian countries. 6. Soy sauce export to Batavia headquarters. 7. Soy sauce export to the Netherlands. 8. Comprador soy sauce bottle (1). 9 Comprador soy sauce bottle (2). 10. Soy sauce exported as *waki nimotsu* (private trade freight). 11. Soy sauce exported by Chinese ships. 12. Production sites of exported soy sauce. 13. Transportation of Comprador soy sauce bottles. 14. Comprador merchant guild (1) [*Konpura / Kompura Nakama*]. 15. Comprador merchant guild (2). 16. References.

A careful analysis of the records shows that there were two sizes of wooden (cedar) kegs used for exporting soy sauce from Japan. The "large taru" had a capacity of 29.1 liters, whereas the "small taru" had about half that capacity. Note: However during the 20th century, the typical wooden taru used for packaging soy sauce, had a capacity of either 9 *shô* (16.2 liters) or (later) 10 *shô* (18 liters = 4.75 gallons U.S.). Each cedar keg had a wooden lid, was held together with braided bamboo hoops, and tied with packing rope. Address: Lecturer, Tokyo Metropolitan Daisan High School of Business Studies; Dep. of Literature and Graduate School of Hosei Univ., Tokyo, Japan

7666. Yamawaki, Teijirô. 1992. The Comprador Merchant Guild [*Konpura Nakama*] (1-2). In: Yamawaki, Teijirô. 1992. "Soy Sauce Export in the Edo Period–According to the Nagasaki Trading Firm Journal." A Translation of *Edo jidai shôyu no kaigai yushutsu*. Noda, Japan: Kikkoman Institute for International Food Culture (KIIFC). 16 panels. See panels 14 and 15. [1 ref. Eng]

• ***Summary:*** The "Comprador Merchant Guild" refers to the group of merchants who were authorized to coordinate the trading of commodity goods, exported products and freight between the Dutch staff at the Nagasaki Trading Firm [Dutch East India Company, or VOC] or the Dutch sailors and Japanese merchants.

Comprador is the Portuguese word for "buyer." The Comprador Merchant Guild, an abbreviation of the "Merchant Guild for the Sales of Various Goods at Dejima," was established in 1666 by 16 merchants under the authorization of Michisada Kono, the governor of Nagasaki. (The number of members increased to 17 at one stage.) They were the privileged group of merchants whose marketing rights were assured by the governor of Nagasaki.

The Comprador Merchant Guild was generally thought to have sold goods to Dutch merchants, but actually they worked for the Dutch merchants as their buyer in order to gain margin profits. The name, "Merchant Guild for the Sales of Various Goods at Dejima" refers exactly to this kind of activity.

In Nagasaki, in addition to the Comprador Merchant Guild, there was the Interpreter Guild, a group of interpreters who assisted the transaction of trading private freights. They gained commissions by interpreting and coordinating the trading of *waki nimotsu* ("private trade freight") under the license granted by the governor of Nagasaki in 1670. In the *Nagasaki Public Service Yearbook* written in 1701, 16 comprador guild merchants were counted as part of the 90 guild interpreters. Hence the comprador guild merchants and guild interpreters were treated as having the same social status.

History of the Comprador Merchant Guild. As mentioned in Panel 14, the guild was established in 1666 under the authorization of Michisada Kono, governor of Nagasaki. We now are going to take a closer look at the history of the Guild. (Excerpt from Episodes associated with Comprador Bottles, Masao Ichikawa).

In 1642, when the Hirado Dutch Trading Firm [part of the Dutch East India Co., or VOC] was relocated to Deshima / Dejima, a tiny artificial island in Nagasaki harbor, Heizaemon Koyanagi and Bunzaemon Kujiraya, two merchants engaged in the marketing of Dutch merchant goods in Hirado, accompanied the Dutch merchants and were given permission to continue business operations in Nagasaki. Later, in 1653, when the business became more prosperous, they recruited Rihei Hirayama and three other merchants from Hirado. Hence the merchant guild by this time was organized by six merchants. In 1666, Hikozaemon Murata and another nine merchants joined and the 16-member guild was established. Since then the number of the guild merchants has remained the same, except for a certain period when it consisted of 17 merchants.

The number of guild shares was fixed at 16. There were no restrictions concerning exchange of shares, and they were transferred to member's descendents, friends or relatives. In 1858, when a trading treaty with the Netherlands, England, France and Russia became effective, the guild ceased to enjoy its commercial privileges, and the original purpose of the guild disappeared. So in June 1868 the merchant guild branched out into new businesses including the manufacturing and/or distribution of bread. In 1874, however, because of a slump in business, the Comprador Merchant Guild dissolved; the shares and sales office were sold, and the assets divided between the guild merchants.

Besides their regular business operations, the Comprador Guild Merchants were ordered by the Edo Shogunate to accompany the Dutch to Edo in 1844, 1850 and 1855, and to supervise them in the purchase of prohibited goods or to assist them as transaction agents. Address: Lecturer, Tokyo Metropolitan Daisan High School of Business Studies; Dep. of Literature and Graduate School of Hosei Univ., Tokyo, Japan.

7667. Yamawaki, Teijirô. 1992. The Comprador soy sauce bottle (1-2). In: Yamawaki, Teijirô. 1992. "Soy Sauce Export

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in the Edo Period–According to the Nagasaki Trading Firm Journal." A Translation of *Edo jidai shôyu no kaigai yushutsu*. Noda, Japan: Kikkoman Institute for International Food Culture (KIIFC). 16 panels. See panels 8, 9, and 13. [Eng]

• ***Summary:*** The amount of soy sauce exported from Japan was recorded by the barrel in the Nagasaki Trading Firm Journal. But not all of this soy sauce was actually exported in barrels, some of it was exported in sterilized glass bottles (called "kerder bottles"), which were soon replaced by sterilized grayish white pottery bottles (called "comprador bottles")

The records show that two sizes of barrels were used to export soy sauce. The capacity of the small barrel was about 14.5 liters (3.8 gallons), roughly half of that of the large barrel (approximately 29.104 litres, or 7.78 gallons)



The pottery bottles [many of which still exist and are even sold or displayed on the Web] were made in Imari or Hasami near Nagasaki to cover the shortage of glass kerder bottles. They were then replaced with the pottery bottle similar to the baked bottle currently used as sake bottles (*tokkuri*). [Note: Both types of bottles were ordered, examined, paid for, and supplied by the Comprador Merchant Guild]

The full name of the comprador bottle shaped like a sake bottle is "comprador soy sauce bottle," in order to distinguish it from the comprador sake bottle.

According to Mr. Yamawaki, a comprador bottle contained about 552 millilitres [a little more than 1 pint or half a quart] and 550 of them were used for the first time in 1790 for soy sauce export. These bottles of soy sauce are recorded in the Journal as "sterilized soy sauce." Soy sauce exported as official trade freight (*motokata nimotsu*) was discontinued in 1793. Eventually in 1799, the Dutch East India Company was dissolved. The Nagasaki Trading Firm



subsequently came under the supervision of the East Indian Governor-General in Batavia, and soy sauce exports were resumed. At this time, the bottles were modeled after the ones used in 1790.

It was suggested by the late local historian, Mr. Masao Ichikawa, also a former notary in Amakusa, Nagasaki, that the comprador bottles came in two different styles.

They have the letters (all caps) "JAPANSCHZOYA" or "JAPANSCHSOYA" written on the shoulder. The early comprador bottles have handwritten letters on them and are grey/white porcelain. Two of the three bottles exhibited are the early comprador bottles. One of them, which is of yellowish earth-color, is considered to have been used even earlier than the white porcelain bottle.



Late comprador bottles have "JAPANSCHZOYA" and "CPD" stamped. "CPD" is the monogram that came from "comprador". On the opposite side of the bottle, a circular or oval stamp in Western characters or in Chinese characters, referring to the Nagasaki Comprador Trading Company or the Nagasaki Comprador Store, is seen. According to Mr. Yamawaki, the term, "trading company" came to be used during the Meiji period. This means that the late comprador bottle with the Chinese character stamp was also used during the Meiji period.

The capacity of comprador bottles differs from bottle to bottle. The capacity of one bottle exhibited in the Noda City Local Museum is 575 millilitres while that of another bottle is 460 millilitres (See: *Comprador soy sauce and soy sauce produced in Tokatsu region*, by Norio Tanaka). Based on the amount of soy sauce and the number of the bottles exported, Mr. Yamawaki assumes that a bottle contained approximately 522 millilitres.

As mentioned in Panel 8, "JAPANSCHZAKY" is seen on the shoulder of the bottles of the same shape used for sake

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export.

Transportation of Comprador soy sauce bottles. It must have been very difficult for the Dutch to maintain the quality of the soy sauce they shipped all the way to the Netherlands by way of Batavia, right on the equator and around the Cape of Good Hope. How did Dutch merchants prevent the products from spoiling without any of the refrigeration or vacuum packaging technology we have today?

The following is an excerpt from the 1795 book *Travels in Europe, Asia, and Africa, Made between the Years 1770 and 1779*, by C.P. Thunberg, a Swedish doctor and botanist who worked for the Nagasaki Trading Firm as a medical doctor.

"Japanese people produce extremely high-quality soy sauce, much better than the Chinese equivalent. A large amount of soy sauce is shipped to Batavia, India and Europe. The Dutch discovered a reliable method for preventing soy sauce from being degraded or fermented at a high temperature. They boil soy sauce in an iron pot and pack it into bottles applying bitumen (coal tar) to the stopper." (Translated by Tamaki Yamada. Thunberg's 1795 book is in English).

Note: All this took place long before Appert's invention of canning in 1809 and Pasteur's invention of pasteurization in 1862. In fact pasteurization had been practiced in Japan for 200 to 300 years before this time.

In 1790, 550 comprador bottles were used for the first time to export "sterilized soy sauce". This seems to refer to the soy sauce that was boiled and packed into bottles with coal tar-applied stopper, as described by Thunberg.

A photo shows a page that mentions soy sauce from the trading records of the Dutch East India Company (National Central Archive, Hague, the Netherlands). Address: Lecturer, Tokyo Metropolitan Daisan High School of Business Studies; Dep. of Literature and Graduate School of Hosei Univ., Tokyo, Japan.

7668 Amartseff, Nik. 1992. The invention and commercialization of roasting soybeans, seeds, and nuts with shoyu or tamari. Hopi Seeds and Nik's Snaks at Erewhon (Interview). *SoyaScan Notes*. April 3. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** In about 1969-1970, Nik met Paul Hawken at New Age Natural Foods in Palo Alto, California, where Nik had been hired by Fred Rohe to create the natural deli department. Nik knew David Mastrandrea. Paul offered Nik a job at Erewhon. When Nik saw the coming demise of New Age, he accepted Paul's offer, and arrived in Boston in about May of 1971.

At about the same time, Paul met a guy named Jerry (his last name started with "S," perhaps "Sh," and sounded like a German Jewish name). Jerry was roasting very small batches of sunflower and pumpkin seeds in iron skillets in his home kitchen in Berkeley, California; while they were still hot, in the skillet with the fire off, he would season them by rapidly mixing in undiluted tamari and continuing stirring until the liquid was evaporated and the flavor absorbed by the seeds. He bagged them and peddled them on the streets. Nik thinks that Jerry launched the first such commercial product, probably in about 1968. He had become reasonably successful when Paul met him in about 1969-1970, so Paul invited him to come to Boston, where Paul set him up in a corner of the recently acquired warehouse at 33 Farnsworth St. Jerry started production using his former simple skillets, then Paul helped him to buy a used cast-metal tumbler-style coffee roaster, converted to a peanut roaster, that could process 50 lb at a time. After being roasted, the seeds were poured into a large rectangular sieve, custom fabricated for this purpose. Jerry was making and packaging this line of Hopi Seeds as a one-man operation. Each seed was roasted and seasoned separately. They were on the market sometime between late 1969 and early 1970. His production soon exceeded his ability to handle it; he was selling through Erewhon wholesale. When Nik arrived in May 1971, Hawken asked Nik to assist Jerry. But after 1 month, Jerry suddenly disappeared--it was apparently related to his selling marijuana on the streets. Soon thereafter, by the summer of 1971, Nik increased the line from 2 products (sunflower, and pumpkin seeds) to 5 (almonds, cashews, and soybeans). They were sold in 1 oz polyethylene-cellophane bags. Erewhon had received a shipment of specially processed, split soybeans, and a new easy-to-clean, easy-to-empty roaster made of sheet steel was developed (it's construction resembled a cement mixer). While the roasted seeds were still inside, Nik would spray in the tamari using a sprayer with a long nozzle, then finish cooking them on low heat.

When Nik arrived in May 1971, the main soy products that Erewhon sold were traditional tamari and miso, imported from Japan, plus soybeans and soy flour (toasted from Arrowhead).

By the fall of 1971 Nik was no longer directly involved with manufacturing the tamari-roasted seeds and nuts; he had been promoted to installing Erewhon's first semi-automatic equipment to make the Hopi Seeds, granolas, etc. The main management people at Erewhon in those days were Paul Hawken (the alleged head), Bill Tara, Hy Lerner, and Yuko Okada (of Muso Shokuhin). Wally Gorell (who was designing packages for a while). Erewhon was setting up its West Coast operations at this time and there seemed to be an ongoing power struggle between Hawken versus Tom DeSilva and Roger Hillyard. At one point, Roger went to Arrowhead Mills. Nik continued to work for Erewhon until about May 1972. Later he returned in Sept. 1973 and stayed until about 1977.

At one point, Wally left Erewhon and Paul Hawken got a small graphic design firm to design a more sophisticated label for the Hopi Seeds and to change the name. The name they came up with was Sol Seeds, with a stylized logo of the

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sun. But the name had not been researched and the owner of that registered trademark threatened to sue. By now Paul Hawken was gone and Ty Smith was president. When Nik returned to Erewhon in Sept. 1973, he renewed his involvement in this line, which still contained only 5 items. By about 1974 he had built the line into one that contained up to 12 products, including trail mixes and mixed nuts and seeds. So at that time Ty honored Nik by renaming the line "Nik's Snaks." The name "Sol Seeds" never appeared on a commercial Erewhon product. By the time Nik left Erewhon in about 1977, there were about 18 items in the Nik's Snack line, a total of about 30 products including the various sizes of one product. Nik had taken a home operation, that never got sophisticated but was based on a good idea, and made it sophisticated in terms of the manufacturing process, product development, the package design, and the marketing. Nik's Snaks were a good-selling product for Erewhon for as long as the company existed. Many other natural foods companies developed their own competing lines of "tamari-roasted seeds and nuts." Address: Right Hand Press, P.O. Box 100, Camridgeport, Vermont 05141. Phone: 802-869-2010.

7669. Macdonald, Bruce. 1992. Introduction to macrobiotics and early work at Erewhon (Interview). *SoyaScan Notes*, April 5. Conducted by William Shurtleff of Soyfoods Center. • ***Summary:*** Bruce was born on 5 Feb. 1946 in New London, Connecticut. In 1964 he entered the University of Connecticut, and essentially majored in LSD. He was an early buyer (for personal use only) of LSD from the Boohoo Church in Florida. This "Church" was the original importer of LSD from Sandoz Labs in Switzerland. Arthur Klets was head; Timothy Leary and Richard Alpert were involved.

At Christmas, 1965, Bruce dropped out of the university because he had a kidney disease that just wouldn't go away. He went to a doctor who gave him, sequentially, 4-6 varieties of antibiotics. Each one worked for several weeks until the microorganisms became resistant. Seeing that he was on a dead-end road at age 18, he freaked. He took a bus to New York and, to his surprise, sitting next to him was Kathy Bellicchi (who is now living in Brookline, Massachusetts). She was from Bruce's home town and he had known her in passing when they were younger, but he hadn't seen her in a while. She said to him, "Just eat brown rice and salt and it will go away. I know somebody that I'd like to introduce you to. He's got a little teeny restaurant in New York City called L'Epicerie [at Second Ave. and 57th St.]. He is Michel Abehsera." Bruce recalls: "Michel is a rather spell-binding personality; also really smart and well-spoken. In 15 minutes he had me absolutely convinced that this was what I needed to do. And he was right. So I rented this apartment for $69 a month on Stanton, down on the Lower East Side" [of Manhattan, New York City]. For the next year, Bruce worked at a boring job for Bennett Brothers (an old, established mail order company in Manhattan selling trinkets–not natural foods) to pay the bills, and he began to study macrobiotics, and yin/yang. Finding a chart which showed buckwheat to be the most yang grain, he decided to start eating buckwheat as his main food. After receiving a call from an old friend, Bort Carleton, in Vershire, Vermont (a good, clean, quiet place for healing) he moved there and began living in a cabin with Bort (a shoe and boot tycoon in Boston), who was also involved with macrobiotics. Later, Bort also sponsored a macrobiotic study house. Soon Bruce was cured–permanently–of his kidney disease. He became a true believer in macrobiotics. He and Bort would drive to Boston to listen to Michio Kushi's lectures in the old church.

In June 1967 Bruce moved to Boston, and began to live in the University Road study house. After four quick affairs with lovely young women ("I was really yang"), Michio called him over to 216 Gardner Road and asked him to "chill out" (calm down) with these girls, since Michio was "involved" with the same young ladies. Michio and Aveline had initially gotten together in a marriage arranged by George Ohsawa, who sent Aveline to America to marry his best student. Michio and Aveline had an "open marriage," and both of them had affairs with younger people of the opposite sex the whole time that Bruce was in Boston. This was well known in the upper echelons of the still small macrobiotic community.

By late 1967 Bruce was working as a carpenter for Michio's landlord (Mr. Fogelman), redoing his house at 216 Gardner Rd. Paul Hawken hired Bruce to be the contractor and carpenter to remodel the new Erewhon retail store at 342 Newbury St. Bruce did most of the design and contract work, then he assisted Jim Docker (a master carpenter) in the remodeling, getting thick planks from Boston piers for the floors, and constructing the shelves with dowels rather than nails. Erewhon had a little store below street level at 303-B Newbury Street, that later became Tao Books. While the business was at 303-B Newbury, in Aug. 1968 the first imports from Japan started to arrive from Muso Shokuhin. These included tamari (soy sauce) and miso. But Erewhon was unable to get Hatcho miso ("the Emperor's miso") in foil packs, and that was Erewhon's first contact with Mr. Kazama; he was able to get that product for Erewhon in less than boat-load quantities. From then on, Erewhon started to import from both Muso and Kazama / Mitoku. The Erewhon store at 342 Newbury St. opened in November 1968, on Thanksgiving day, and several months later, in March 1969, Paul Hawken went to Japan. Paul asked Bruce to take over as general manager of Erewhon. Roger Hillyard ran the retail store in the front of the building.

What finally happened to Erewhon? Michio always said that Erewhon was a school; he should have said it was a business. Address: Right Hand Press, P.O. Box 100, Cambridgeport, Vermont 05141. Phone: 802-869-2010.

7670. Macdonald, Bruce. 1992. The development of

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Erewhon: Early financing and suppliers (Interview). *SoyaScan Notes*. April 5. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** How did Erewhon finance its rapid early growth? Initially there was a deal with the State Street Bank in Boston to borrow about $25,000. Bruce was on the West Coast so he didn't really know the details. But State Street said "no," so they switched to New England Merchants bank. Bruce believes that Paul Hawken flew back from Japan to negotiate that loan–in about 1970 or early 1971. They got a slug from New England Merchants–probably in the neighborhood of $100,000. Also, the Japanese companies were giving Erewhon some time to pay; it was Mitoku at the beginning, then Muso later on. Bruce saw some of Erewhon's filings for the bankruptcy. As he recalls, Erewhon owed Muso about $200,000 and Mitoku (Mr. Kazama) about $200,000 to $250,000. That was quite surprising to Bruce. Apparently, right up to the end, Erewhon had been buying in roughly equal quantities from Muso and Mitoku. "Money was always extremely tight. Let's say you double your sales. As you increase your inventory, you also increase your accounts receivable–the money that people owe you. Bruce used to buy commodities from Cornucopia. "I used to order about $8,000 worth a week and he gave me three weeks to pay. So essentially he invested $24,000 in commodities–money that he never saw again. When the 4th week came I paid the 1st week, on the 5th week I paid the 2nd week–but I always owed him $24,000. We did that with all our suppliers, but at the same time we were extending credit to all the people we were selling to. There is a rule of thumb: as your sales explode, you need $3 in capital for every dollar increase in sales. You need a dollar for the extra inventory, a dollar for the extra receivables, and you need a dollar for the extra equipment you need to buy to service it. That could be moving into a new warehouse, buying a new flour mill or new trucks or pallet jacks. Be we didn't have those three dollars. So we had to squeeze 'em and it was always very tight."

Who were the early, important organic farmers who grew crops organically for Erewhon. Arrowhead Mills (from Hereford, Deaf Smith County, Texas) was a major supplier of winter wheat, rye, corn, soybeans, pinto beans, etc. for about the first 3 years, before Erewhon had developed any of its own sources; that came later, after Paul Hawken returned from Japan. Paul probably visited Arrowhead Mills in Texas about 50 times. Bruce visited maybe 3 times, but he remembers the long windrows of composted cow manure that were eventually put on the fields. Frank Ford was a real farmer, who believed in working with nature. There was an older fellow, whose name now escapes Bruce, who was the brains behind Arrowhead's farming. He had studied Ehrenfried Pfeiffer's biodynamic method and had developed this method of keeping the soil fertile. "It was the most amazing thing. They were able to grow such good quality wheat and other crops in part because they were enriching their soil like nobody else in that area."

Ted Whitmer, the spring wheat farmer in Montana, was another early supplier. He did not have a contract with Erewhon; he just grew the wheat and sold it (in his bags) to anyone who would buy it. Spring wheat is a high-gluten wheat that is used for bread. Winter wheat, which grew in Texas, is higher in minerals because it is in the ground longer (you plant it in the fall), but it doesn't have much gluten. Lewis B. Cox, an organic farmer from Washington state, grew gorgeous pastry wheat, sold in his bags. Paul Keene at Walnut Acres was a retail mail order operation, Erewhon didn't buy much from him. Shiloh Farms, in those days, was Arrowhead Mills' big distributor. Erewhon didn't buy much from them because they bought from Arrowhead direct.

The contract farming came later. There was a 5-year contract between Bob Kennedy and the Lundbergs. The Lundbergs had been growing rice for decades. When they contracted to grow brown rice for Chico-San, they decided to leave the local rice co-operative (which mingled together all the rice grown by its members), they had to keep their organic rice separate. Leaving the co-op was a big risk for them, in part because they now had to sell all their non-organic rice by themselves–with no help from the co-op. Paul Hawken did all the rice negotiations with the Lundbergs. Even after Erewhon sold all this "unsprayed" rice, they could not buy rice labeled "organic" from Lundberg for a number of years. That was when Paul Hawken went out to contract for organic rice farmers in the South–Carl Garrich in Lone Pine, Arkansas, and Willow Farms in Louisiana. That rice was sold in Erewhon's bags and those were some of the first contract farming deals. At that point, Erewhon really began to have an impact on the expansion of organic farming in the United States.

But the person who should be given the credit for contracting organically grown crops, from farmers who had not previously grown organically, is Bob Kennedy of Chico-San. He was the innovator! Paul Keene was another innovator–a decade before Arrowhead Mills [1946-47 vs. 1960]. As far as someone from outside, specifying an organic product and agreeing to buy and market it–that was Bob Kennedy. The Lundbergs had a big family farm when Kennedy first approached them. They were concerned about all the chemicals they were using. But they had to make a rather major investment; they had to install a rubber roller rice mill which they bought from Japan. They also had to break away from the rice co-operative for their organic rice. So for them, it was a huge commitment, and they deserve plenty of credit as well.

Bruce knows nothing about Erewhon's early operations in Canada; that was strictly from the East Coast and must have come later. "The Erewhon branches in Toronto and Milliken, Canada, were related to a guy named something like Fredericks, who was extremely wealthy. He had had

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been a vegetarian for many years and one day woke up paralyzed. Someone involved with macrobiotics got him on a macrobiotic diet and he had a remission. He set up something but it never amounted to a hill of beans."

Bruce was not involved in Erewhon's exports to places like Sunwheel in the UK. Erewhon never exported much of anything, except to Canada. The Japanese foods were sent directly to Europe. Eden Foods was by far the leader in exporting macrobiotic and natural food products to Europe.

The first soy sauce that Erewhon *sold* was probably purchased from Infinity, a small company in New York. "A $1,000 order would be the largest that they ever got." Infinity was importing soy sauce from Japan before Erewhon. For a short time, Erewhon was by far Infinity's largest customer–before Erewhon began importing from Japan. When Erewhon stopped importing from Infinity, that was one of two reasons for Infinity's decline; the other was that Howard Rower began moving up in the Scientology hierarchy. The first soy sauce that Erewhon *distributed* was probably imported from Japan through Muso and made by Marushima. Address: P.O. Box 100, Cambridgeport, Vermont 05141. Phone: 802-869-2010.

7671 Macdonald, Bruce. 1992. Ceres, Shadowfax, and Erewhon (Interview). *SoyaScan Notes*. April 5. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Frank Calpeno, who was heavily into macrobiotics, started Ceres as a natural food distributor in Colorado Springs, Colorado. "He was a sweetheart of a guy." He was going to be a Green Mountain Granary retail store in Colorado Springs. George Slavin made a deal with him. Whatever the deal was, that ruined the basic idea of the retail store. By the time Bruce arrived (ca. 1972) Frank ran his own natural foods retail store in Colorado Springs, not until years later did he become a distributor. He may have been doing a little distributing before 1980, which is when Bruce left Colorado, but not much. He was not a major player.

Shadowfax was a little natural foods distributor that was established in about 1970-71 by Charlie Small in Binghamton, in upstate New York. Bruce thinks they were not macrobiotic, but they were strictly natural foods. They started at about the same time as Laurelbrook. They were going great guns for a while and then they petered out. Bruce was on the West Coast so he does not know what happened to them.

Mottell was another small natural foods distributor in New York; he was also going great guns for a while (roughly 1970-1980), but didn't last for long. New York was a tough market for distributors; they came and went.

Essene started as a strict macrobiotic retail store that was one of the original distributors of Erewhon products. "When we first set up all of these distributors down-line from Erewhon, they were one of the first–along with Food for Life in Chicago (Illinois), Eden Foods in Michigan, Green Mountain Granary in Colorado, Westbrae in Emeryville, etc. Most of these people had natural foods stores and Erewhon helped them to expand into being distributors–based on the model of Erewhon. They modeled themselves after Erewhon and bought a large percentage of the products they distributed from Erewhon." Their catalogs were often identical or almost identical to that of Erewhon. This all happened shortly after Bruce left for the West Coast, so in about 1970-71. Essene was run by Denny and Howard Waxman; they still exist. Within the last year or so they moved out of the tiny store they had into a larger, nicer space. The only one Bruce can think of that did not start as a retail store was Laurelbrook.

What does Bruce think was responsible, above all, for creating that Erewhon model? "Paul Hawken and myself. We established the quality standards, the retail store look and environment, the packaging design, the price list and catalog content and design, etc."

Was Bruce ever aware of a power struggle within Erewhon in Boston? No. The chain of authority was always clearly established and respected. In later years things got a little weird with Bill Garrison (who ran the company into the ground), Ty Smith (who rebuilt it). Erewhon made a comeback under Ty, who was the last real live wire to run the place, before it went into its long, slow erosion and decline.

A decisive even was the lawsuit, which had to do with Erewhon's refusal to sell to co-ops. The co-ops sued Erewhon. That was the straw that broke the camel's back. Even though Erewhon won the lawsuit, but they lost because the legal fees cost them something like $250,000. There was not enough money to pay these fees and Erewhon never recovered. And Erewhon made other mistakes after that. Trying to become a full-line super-distributor. Doubling the number of items in the catalog. Moving into a huge and expensive warehouse. The labor union strike, etc.

Bruce hired Jeff Flasher out of jail in Los Angeles–where he first worked for Erewhon, L.A. In about 1970 Bruce got a letter from a guy named John Beverage, who was in jail. He said that he could get out if he could prove he had a job. Bruce wrote him back, "You've got a job." John Beverage came to Erewhon West Coast, worked for 3-4 months and was a wonderful, sweet guy. He developed a very successful company making alfalfa sprouts in Boulder, Colorado throughout the 1970s and into the 1980s. Unfortunately he died of a liver disease several years ago.

Anyway his roommate and best friend in jail was Jeff Flasher–who had been caught dealing pot [marijuana]. When John Beverage was working at Erewhon he told Bruce that he had a friend, Jeff Flasher, who was coming up for parole, and he asked Bruce if he would do the same thing for Jeff. Bruce said, "sure." Jeff Flasher became the miller for Erewhon West Coast. Several years later Bruce heard that Jeff was president of the company. "I was astonished."

Bruce believes that by focusing more on one product,

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Erewhon could have become a dominant force. San-J has built up and now owns the real tamari market, which means the market for natural soy sauce. They have nearly 70% or the market. While Bruce was at Green Mountain Commodities, San-J became the dominant player. They do all the bottling for Eden now. It happened when the dollar collapsed relative to the yen. Remember, in 1987 a dollar would buy 255 yen; it now buys about 130 yen. So, basically, all Japanese imports doubled in price, which enabled San-J–an American manufacturer of tamari and shoyu–to take such a large share of the market; they were $2 a bottle less expensive. Eden Food was a major importer of tamari [natural shoyu] from Japan, as was Westbrae with their Johsen. Tree of Life was a major importer and Arrowhead Mills used to sell quite a bit.

Some big questions: Why didn't Erewhon West Coast move to San Francisco, since 95% their wholesale business was in northern California? It made no sense for Erewhon West Coast to be in Los Angeles–which had a tropical climate. Erewhon West Coast was a major factor in Erewhon's early growth, largely because they could bring containers imported from Japan into the USA through the West Coast. "We began to rival the East Coast in sales for a while." One month, the East Coast did $390,000 a month in sales while the West Coast did $330,000 a month. Why did Michio Kushi fail to grasp America's entrepreneurial spirit? Why was he not honest and straightforward in his offers of stock ownership in Erewhon with Paul Hawken, Ty Smith, and Bruce Hawken? Address: P.O. Box 100, Cambridgeport, Vermont 05141. Phone: 802-869-2010.

7672. Kushi, Aveline. 1992. The origin of seitan and how it came to America (Interview). *SoyaScan Notes*. April 9. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Aveline thinks George Ohsawa coined the term "seitan," but Aveline is not sure when he coined it. Since he died on 23 April 1966, he probably coined it in the early- to mid-1960s. She first heard the term from George Ohsawa, she thinks in the early 1960s while she and Michio were still living in New York; they moved to Massachusetts in 1963. Shortly after hearing about seitan, she bought some canned gluten-based meatlike products made by Seventh-day Adventist food companies, probably in New York. She does not remember how, where, or when she first learned to make seitan. Beginning shortly after her last son was born in 1964 in Boston, she taught many of her macrobiotic students how to make seitan starting with high-protein wheat flour. She taught seitan-making in almost all of her cooking classes, and she taught how to use the starch like kuzu as a thickener to make creamy soups. Starting in about 1984-85 she started to use the starch, together with rice syrup, to make sweet dumplings for desserts.

The first seitan imported to America was made by Marushima Shoyu Co. on Shodoshima in Japan. George Ohsawa went to visit the company, talked with Mr. Mokutani (who is still the chairman, and a close friend of the Kushis, and a great admirer of Ohsawa), and showed him how to make it. Marushima began to make seitan commercially in the late 1960s. It was imported to America by Muso Shokuhin at about the same time the first miso and shoyu were imported. She thinks it came in small jars, and was so salty that she used it as a seasoning in place of soy sauce in stews (such as soybean stews) or cooked it with vegetables; this cooking made it softer. She is not sure which Japanese company (Muso or Mitoku) exported this seitan to America, or which American company imported it, but it probably started to be imported in about 1969.

Concerning wheat gluten, about 15 years ago, the Kushis, through Mr. Kazama, convinced a Japanese manufacturer of dried wheat gluten (*fu*) to make the product from whole wheat flour. Since that time it has been imported to America by various importers of macrobiotic foods.

Follow-up talk with Aveline, 1992. July 8. She has just talked with Lima Ohsawa (age 93) by phone in Japan. Lima has no recollection of ever making seitan in a cooking class in America, or of ever teaching anyone in America how to make it. Initially Aveline thought she might have learned to make seitan from Lima, but after talking with Lima she thinks she may have learned to make it herself by trial and error, after she moved to Boston. Address: 62 Buckminster Rd., Brookline, Massachusetts 02146. Phone: 617-232-6869.

7673. Kushi, Michio. 1992. The main reasons for Erewhon's decline and bankruptcy, and current work with macrobiotics worldwide (Interview). *SoyaScan Notes*. April 9. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Michio has thousands of files in his basement, and some of them probably contain early catalogs and other information about Erewhon. Erewhon definitely started to import from Mitoku first, and then Muso–but they were about the same time. Michio set up all these connections before Paul Hawken went to Japan. Mr. Kazama came to America and they talked about the items Michio wanted to import. Then Muso was approached. Michio thinks Erewhon started importing foods from Japan 1-2 months before Hawken went to Japan. Hawken and Evan Root went to Japan at the same time. The main purpose of Hawken's trip was to study Japanese language and culture, and to set up more good connections for Erewhon and to arrange for products to be packaged individually; previously all were shipped in bulk. Paul didn't find out any new sources, Mr Kazama did that.

Michio believes that there were two main reasons for Erewhon's decline and bankruptcy: (1) The company tried to expand too much too fast. At the end it was selling 4,000 products. (2) This rapid expansion led to Erewhon having many poor quality products. The company should have concentrated on high quality macrobiotic foods. Management

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wanted to have a wider selection of products, in part because competitors were offering a wide selection. Also, Erewhon gave up its virtual monopoly on macrobiotic-quality products imported from Japan and revealed many secrets about the Japanese manufacturers and suppliers of those foods and how those foods were made. If he had to do it over again, Michio would concentrate on only the best quality foods, and let the company grow slowly and naturally. For example, the quality of tamari soy sauce began to decline at a very early date. Likewise with the umeboshi plum and sea vegetables. "The quality of every product was declining because of too rapid growth in the company's sales. Moreover the educational activities didn't keep up with the company's growth. Muso and Mitoku have been keeping good quality as best they can but the so-called other natural food buyers, who were not concerned with macrobiotics, also started to go to Japan and buy those products, not only from Muso and Mitoku, but from other suppliers too–especially suppliers of soy sauce and miso with lower quality. These inferior quality products were retailed for a cheaper price at stores in America. The public did not know about the difference in quality, so Erewhon began to face big competition.

Even though Aveline owned Erewhon, neither she nor Michio ever received any salaries or money from the company. They wanted to let the management of Erewhon have a free hand, so they didn't tell them how to run it–to slow growth and concentrate on keeping quality high. "Erewhon was more like an educational place." There were debates over whether or not Erewhon should carry organic cheese and vitamins. Michio and Aveline opposed carrying these products, but let management do as it wished.

At the time Erewhon was growing most rapidly, the company needed money to finance the expansion, but bank interest rates were extremely high–about 15-18%. Inventory control for 4,000 items is very difficult and expensive; it requires a large warehouse and shallow inventories. During the last few years, Erewhon was able to fill only 40-50% of its orders because so many items were out of stock. Also as the company grew, many non-macrobiotic employees had to be hired to drive the delivery trucks, and they created a labor union. Erewhon had to battle with this union for 1½ to 2 years, and that cost a great deal of money. Truck drivers cut prices to stores in order to try to meet the prices of competitors. Financial difficulties piled up starting at the time when interest rates jumped and the union was formed.

Bill asks why Aveline and Michio didn't give talented managers a share of the ownership in Erewhon to motivate them to stay with the company. Michio says that Paul Hawken owned one-third of the Erewhon shares. Evan Root owned shares in Sanae. The Kushis paid all or part of Evan and Paul's travel and living expenses in Japan. Paul got his one-third shares after he returned from Japan and became president. When he resigned, he was definitely paid for the value of his shares. Paul wrote from California that he needed the money and offered to sell back his shares. So Michio and Aveline sent him the money and Paul sent his shares back to them. Only later did Michio learn that Paul needed the money because of his divorce from Dora Coates. Other people (whose names Michio also remembers) also owned some shares. Michio does not feel that giving managers ownership would have helped Erewhon. Michio thinks that the people who managed Erewhon during its last 5 years had the necessary business skills necessary to manage a company of that size that was growing rapidly.

Another reason for Erewhon's fall was that Michio did not pay serious enough attention to what was happening at Erewhon. He was too involved in teaching in America and Europe. At the time he noticed what was happening and stepped in, the situation had already become too serious. There was much sloppiness allowed by management, even though their intentions were good. He should have noticed a year before. It was a very sad situation. "Yet Erewhon had meaning as a pioneer company. That spirit still remains. My purpose at present is to continue education all over the world. Macrobiotics is now spreading all over the world, even to the Soviet Union, Thailand, and Japan. In Leningrad some 300 medical doctors are now studying macrobiotics as a group to help find a solution to the health problems of their country. His books are being translated into many Eastern European languages. Also it is very important to reach the scientific, medical, and nutrition professions–as well as governments. Their attitudes are now rapidly changing. Macrobiotics is now growing tremendously. My main concern with natural foods is that the quality be kept very good. My current effort is to elevate the quality of each product. For example, miso should definitely be fermented for 2-3 years. Soybeans and grains should all be organically grown, and only very good sea salt should be used–such as that made by S.I. Salt, an American company in New Mexico, and Lima salt in Europe [from Lima Foods in Belgium]. Michio now goes to Japan twice a year, and there he gives many lectures all over the country, helps to set up chapters of One Peaceful World, and works with food makers on product quality. He also formed the Japan Organic Natural Food Association (*Yûki Nosui Sanbutsu Kyôkai*) in Japan, of which he is president. About 200 companies are members.

On the one hand, Michio is happy with the way his work is going now. "But of course, I am always dissatisfied too. My time and my ability are limited. I can't help as many people as I would like. The demand is so great. So I always feel sad on that point. Whenever you talk with people from Erewhon, please extend my best wishes. And say always that Michio is thinking of them and their happiness. I hope sometime in the future we can get together. Then we can talk more about how to build one peaceful world–and not only food, but more about health, families, government, economics, and spiritual matters, and how to make the many countries more united and harmonious in one world. Let's

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work together." Address: 62 Buckminster Rd., Brookline, Massachusetts 02146. Phone 617-232-6869.

7674. Root, Evan. 1992. Recollections of early work with Erewhon and Sanae. Trip to Japan with Paul Hawken (Interview). *SoyaScan Notes*. April 11. Conducted by William Shurtleff of Soyfoods Center. Followed by a letter of April 29.

• ***Summary:*** Evan (his first name rhymes with "heaven") does not have any early Erewhon catalogs, but he thinks Marc van Cauwenberghe might have some in his library on macrobiotics. He does have a letter to the general public announcing the opening of the first Erewhon retail store on 9 April 1966. It was at 303-B Newbury St., below street level. Initially Evan owned (titularly) 100% of the stock in Erewhon, but soon he passed it to Aveline Kushi after legal documents were drawn up. While he was at Erewhon the little retail store sold the following soy products: whole soybeans and probably soy flour (probably from Walnut Acres or a Mennonite community, both in Pennsylvania), soy sauce and miso (probably both obtained from Infinity Foods in New York; Infinity imported these products from Japan). Hamanatto was also sold. No tofu was sold at the store, but firm tofu was available from nearby Chinatown.

The Kushis imported miso, shoyu, condiments, etc. from Japan about twice while Evan was managing the Erewhon retail store. This direct importing was infrequent and the quantities were small due to the lack of cash. It was much easier to buy from Infinity or Chico-San and not tie up the money. In fact it was the norm to stretch out those friendly distributors as long as possible for payment.

Before he left Erewhon, in Oct. 1967, Evan personally hired Paul Hawken, with Aveline's permission, to take his place. Then Evan opened the first macrobiotic restaurant in Boston, named Sanae (meaning "young rice plant" in Japanese); it opened in early 1968 on Newbury St. In late March 1969, Evan and Paul Hawken left Boston and traveled to Japan together. Several months before they left, Evan had been given 50% of the shares of stock in Sanae by the Kushis for the work he had done at Sanae. The Kushi's lawyer, Morris Kirsner, had drafted the agreement to read that if Evan did not return to management of the company within 18 months, he would agree to sell this stock back to the Kushis at an agreed-upon price. Evan thinks that Paul had a similar type of stock arrangement in Erewhon, but he is not sure what it was (Note: See interview with Aveline Kushi, March 1993). Evan went to Japan mainly to study the language and culture. He ended up staying there 3 years and 7 months, largely in Tokyo (Setagaya-ku, Shoin-jinja-mae). He studied Japanese at the Tokyo School of Japanese Language. After 18 months, there was a lad name Hiro Fujieda living with the Kushis in Boston. Rather than Hiro pay rent to the Kushis, Hiro's family would pay Evan monthly in Japan on a monthly basis–until the value of the stock was paid off. Evan used this money to support his studies.

After about a year, in late 1971 or early 1972, Evan went to work for Muso Shokuhin in Osaka. He translated letters that arrived from Europe and America into spoken Japanese, and then answered the correspondence. By the end of his stay in Japan, Muso was exporting quite a volume of natural foods and exports were a big part of the company focus. Evan thinks that Ty Smith took his place when Evan left.

Returning to Boston in early Oct. 1972 (along with Mr. Masuda and Michelle Matsuda), Evan became an employee of Sanae after several months, working as maitre d'. In 1971, while Evan was in Japan, Sanae had expanded to open another larger branch restaurant in Boston, originally called "Sanae" but informally called "Big Sanae," then later formally named The Seventh Inn (at 269 Boylston St.). When Evan was in Japan, he heard that the restaurants were not doing well, so Yuko Okada (originally of Muso Shokuhin, who was working at Erewhon) took over management of Sanae. Hiroshi Hayashi, a top cook in a lineage, traveled to Boston from Japan, bringing with him his disciple, Chika Abe, to take charge of cooking at Sanae. His disciple, Mr. Yozo Masuda, later joined them. Hayashi is now at a restaurant named Latacarta in Peterborough, New Hampshire (Phone 603-924-6878).

Evan's recollection is that Paul Hawken's trip to Japan was more to study the language and culture, but he did work on Erewhon business while he was there. Moreover, he returned from Japan after about 9 months to work at Erewhon. Evan feels that few of the people involved in early macrobiotic businesses saw themselves strictly or even mainly as businessmen. "None of us were in it, as I saw it, for the money. For us, the whole thing was a Cultural Revolution with respect to Japan." Evan also identified strongly with the phrase "Biological Revolution."

When Paul Hawken returned from Japan, he built Erewhon into a big natural foods company. Address: 541 Washington St., Brookline, Massachusetts 02146. Phone 617-566-4783.

7675. DeBona, Don; Callebert, Mark. 1992. Update on Lima Foods and Euronature (Interview). *SoyaScan Notes*. April 19 and 23. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** The following is based on a talk that Don had in North Carolina with Mark Callebert, general manager of Lima Foods in Belgium, then a direct interview with Mark in Belgium on April 23, followed by a letter from Mark on June 16 with exact dates. Mark has worked with Lima for about 16 years (since 1 Sept. 1975).

The Gevaert family sold Lima in May 1988 to a company named Vibec in Quebec, Canada. Vibec was a construction company (they were not involved with foods) and the owners spoke French. The contact with Vibec was made via Henry Lucy, a Frenchman who was on the Lima

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board of directors (and also a shareholder), who was a friend of Michio Kushi (Michio had healed Henry's wife), who had quite a lot of money, and who also had a construction company in Africa. Michio was also on the Lima board for a while. Vibec purchased Lima as a way of getting involved in the new European market without borders which will begin at the end of 1993. However Pierre Gevaert and his son, Daniel (who was production manager at Lima, France), kept their property and mill in the south of France where Lima used to make miso. At that time Lima had a lot of financial problems. Pierre Gevaert owned the majority of the stock in Lima, and his relatives (mostly his brothers and sisters) owned the rest. Mark and Frank Stevens (Pierre Gevaert's son-in-law) played key roles in negotiating the deal, then stayed on to run the company. On 22 April 1989 Lima purchased Jonathan P.V.B.A., which is still a fully owned subsidiary (daughter company) of Lima. But the marriage of Lima (a Belgian natural foods company) and Vibec (a Canadian construction company) was a strange one, and for that reason it didn't last long.

Then in September 1989 Lima was purchased from Vibec by Euronature (pronounced as in French, YU-ro na-TYUR), a large international food company headquartered in Paris, France. Euronature is a holding company that was founded in June 1989; the president of Euronature was able to raise a lot of money from banks and insurance companies to create the holding company. Frank Stevens was killed in an automobile accident in Nov. 1989.

Lima is presently doing well, is financially very solid, and the future looks bright. Lima has sales of about $15 million a year, but the company is not yet profitable. Mark feels that they will become profitable when sales reach about $17 million/year. Their traditional high standards of food quality are completely supported by Euronature. Pierre Gevaert (born 21 July 1928 now in his mid-60s) no longer owns any part of Lima and neither he nor his son have been active with the company since it was purchased by Euronature. Pierre lives in the south of France and works on his organic farm there. Lima is still headquartered at Sint-Martens-Latem in Belgium.

Euronature has 4 major divisions: (1) Natural foods division, including Lima Foods, Lima's bakery and muesli factory, and several natural foods distribution companies; (2) Gourmet division; (3) Seafoods division (Euronature's largest), with branches scattered throughout Europe; (4) French specialty foods division.

Lima's largest product lines are their muesli products (which they make at their own plant), their bakery (located 6 km from Sint-Martens-Latem in Belgium), their sesame division (they make tahini and gomashio, and were one of the first to grow sesame seeds organically), and their tomato canning division (located in the south of France, it makes tomato sauces and ratatouille). Lima's leading soyfood products are tamari, shoyu, organic miso, their soymilk products (including regular and Mocha-Soy soymilk, and Soy Desserts, all made by Alpro in Belgium), fresh tofu salads, and tofu in cans and jars. Imports from Japan are now quite small, representing only about 10% of Lima's total sales. Although Lima no longer makes its own miso, it still sells quite a lot of miso--much of it from past batches made by Jan Kerremans in the south of France. Lima is now looking for other sources, including American Miso Co. in North Carolina. Jan now works part time as a consultant for Alpro in Belgium.

Jonathan's main products are now seitan and tofu (both fresh [pasteurized] and in jars), plus many second-generation products made from seitan and tofu, such as fresh tofu spreads, tofu pates, seitan brochettes, etc. Jonathan makes all of the seitan, tofu, and related products sold by Lima. Address: General Manager, American Miso Co., Route 3, Box 541, Rutherfordton, North Carolina 28139. Phone: 704-287-2940.

7676. **Product Name:** KISS (Keep It Simple Stirfry) [Lemon Teriyaki, Garlic Italian, or Spicy Szechuan]
Manufacturer's Name: Turtle Island Foods, Inc.
Manufacturer's Address: P.O. Box 176, Hood River, OR 97031. Phone: (503) 386-7766.
Date of Introduction: 1992 April.
Wt/Vol., Packaging, Price: 15 oz package. Each retails for $2.79.
How Stored: Frozen.
New Product–Documentation: Leaflets from Natural Products Expo West at Anaheim, California: 1992 April 10-13. "KISS" and "Discover Turtle Island"–since 1980. To make Lemon Teriyaki KISS, soy-brown rice tempeh is marinated in a zesty teriyaki sauce with lemon. Sold refrigerated or frozen in reusable/recyclable tubs, it is ready to stir-fry when you are! It is great for stir-fries, soups, pasta salads, and hors d'oeuvres. For Garlic Italian KISS, soy tempeh spiced with Italian herbs is marinated in an oil and vinegar based garlic sauce. Perfect for spaghetti, lasagne, pizza, or pasta dishes. For Spicy Szechuan KISS, soy tempeh with cashews is marinated in a spicy red sauce from Northern China. Ideal for stir-fries, sweet & sour, and other Oriental dishes.

7677. Wilson, Lester A.; Murphy, Patricia A.; Gallagher, Paul. 1992. Soyfood product markets in Japan: U.S. Export opportunities. Ames, Iowa: MATRIC (Midwest Agribusiness Trade Research and Information Center). x + 64 p. April.
• ***Summary:*** Contents: Figures. Tables. Acknowledgments. Introduction. I. Soybean processing (by Wilson and Murphy). Food from soybeans. Soybean chemical composition, environmental influences on soybean composition. Soyfood manufacture: Soymilk, tofu, momen tofu, kinugoshi tofu, packed tofu, aseptically-packaged tofu, deep-fried tofu, kori tofu. Tofu-related research: Recent

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studies at Iowa State University, summary, future research. Other nonfermented soyfoods: Yuba, kinako, texturized soy protein foods. Fermented soyfoods: Miso, shoyu, natto, tempeh. Japanese Agricultural Standards (JAS). Identity preservation and transportation. U.S. soybean quality and the Japanese market: Grain quality, judging quality, potential new markets.

II. Japanese soyfood markets (by Gallagher). Demand and growth prospects: Consumption patterns, demand analysis, forecasts. The U.S. share of the food soybean market: Sources and uses, market share analysis, determinants of relative prices, prospects. Trade and trade barriers: Soybeans, processed products. Summary and recommendations.

Appendixes: A. Excerpts from specifications and standards of food additives, etc.–Manufacturing and storage of tofu. B. Excerpts from standards and certification systems in Japan. C. Additional agricultural standards for soybeans. References.

Table 2.1 shows soybean use for soyfood production in Japan; actual (1986) and projected (2000). Soybeans for tofu are expected to increase from 524,000 to 609,700 tonnes. Soybeans for miso are expected to decrease from 156,000 to 101,600 tonnes. Soybeans for natto are expected to increase from 92,000 to 118,600 tonnes. Figures 2.1 to 2.4 show Japanese per capita consumption of tofu, natto, miso, and soy sauce from 1965 to 1988. Tofu: Japanese annual per capita consumption of tofu has risen since 1965, except that it fell during 1973-1977. In 1965 about 3.6 kg/capita of soybeans were used to make tofu, increasing to 4.4 kg/capita in 1988. If 1 kg of soybeans yields 2.8 kg of tofu, then per capita tofu consumption in 1988 was 12.32 kg or 27.1 lb.

Natto: Japanese annual per capita consumption of natto has risen steadily, from a little less than 0.4 kg in 1965 to 0.6 kg in about 1968, to 0.8 kg in 1988.

Miso: Japanese annual per capita consumption of miso fell from 8 kg in 1965 to about 5.4 kg in 1985, then it began to rise to about 5.7 kg in 1986.

Soy sauce: Japanese annual per capita consumption was about 12 liters in 1965. It fell to 11 liters in 1967, rose to 13 liters in 1973, then fell to 9.8 liters in 1985, after which it rose for 1 year. Address: 1-2: Prof. of Food Science and Human Nutrition, 3: Assoc. Prof. of Economics. All: Iowa State Univ. Phone: 515-294-0160.

7678. **Product Name:** Yves Veggie Cuisine Burger Burgers (Fat Free–Contains No Meat)
Manufacturer's Name: Yves Veggie Cuisine.
Manufacturer's Address: 1138 East Georgia Street, Vancouver V6A 2A8, B.C., Canada. Phone: 604-251-1345
Date of Introduction: 1992, April.
Ingredients: Water, onions, textured soy protein, wheat gluten, soy protein isolate, brown rice syrup solids, pea fiber, onion powder, malt extract, yeast extract, salt, tomato paste, Dijon mustard, rice flour, natural flavor, vegetable gums.
Wt/Vol., Packaging, Price: 2 patties in 6 oz (170 gm) paperboard box.
How Stored: Refrigerated or frozen.
Nutrition: Per patty (85 gm): Calories 83, calories from fat 0, total fat 0 gm (0% daily value; saturated fat 0.0 gm), cholesterol 0 mg, sodium 380 mg (16%), total carbohydrate 9 gm (dietary fiber 4 gm [15%], sugars 6 gm), protein 11 gm. Calcium 6%, iron 9%, vitamin C 2%. Percent daily values are based on a 2,000 calorie diet.
New Product–Documentation: Ad (color, 2/3 page) in *Natural Foods Merchandiser*, 1992, April, p. 94: "Yves Veggie Cuisine." Shows packages of Veggie Wieners and Burger Burgers.

Product with Label purchased at Safeway in Lafayette, California, 1996, June. 5 by 3½ by 1 inch paperboard sleeve. Red, yellow, and black on white. Photo on front panel of a burger with grill marks atop lettuce and tomatoes below a sesame bun. "Contains no meat. Fat free."

7679. Creighton, Barry. 1992. Cable Springs Bakery and recollections of Tan Pups in Boston (Interview). *SoyaScan Notes*, May 9. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Barry started baking while he was living in Los Angeles, California, at a macrobiotic study house run by Carolyn Heidenry. Then he moved to Boston and continued selling (out of his apartment) the baked goods he had developed in Los Angeles. He and Cathy were married about a year later on 7 Jan. 1974 then in August 1974 they started Cable Springs Bakery as an incorporated official business.

At that time (Aug. 1974) he is quite sure that a product named Tan Pups (skewered seitan deep-fried in a breaded batter) were on the market. Barry thinks that Tan Pups were probably introduced 6-12 months before his bakery opened, i.e. in early 1974 or late 1973. The Tan Pups may have been made by the Queensberry Bakery [actually they were not], which was run by two brothers (whose names Barry does not remember); it was a natural foods- rather than a macrobiotic bakery. Both his Cable Springs Bakery and Queensberry Bakery sold their products at the Erewhon retail store on Newbury Street in Boston. They were sort of competitors, and Barry first saw Tan Pups in that Erewhon store. Barry also recalls that Tan Pups were on the market when his son, David, was born on 3 March 1975. But not long after that, Queensberry Bakery went out of business, and their Tan Pups were therefore no longer available. Barry almost bought Queensberry Bakery, but after a series of negotiations decided not to. Cable Springs Bakery was sold to Bruce Berman in August 1975; Barry had owned the business for a year. Then he and Cathy went to Vermont. Cathy learned about seitan from Michio Kushi during a consultation concerning her daughter, Eliza's, broken leg. She learned how to make seitan from Kathy Bellicchi at the Beacon

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Hill Study House in Boston, and she learned how to make kofu (raw wheat gluten) from Lima Ohsawa's book *The Art of Just Cooking*. Cathy developed a recipe for Tan Pops in 1975 in Vermont. The best Tan Pops are made by the longer double deep-fry process that Cathy developed for seitan burger parties in Cambridge.

Today at their community in Alaska, they still make Tan Pops on their full-moon night feasts. His daughter makes most of the Tan Pops, she learned from him and Cathy. To made double-fried Tan Pups: Make raw wheat gluten dough and cut it into large chunks (4 by 1½ by 1½ inches). Get 3 pots going on the stove: (1) A pot of oil for deep-frying, (2) A pot of boiling water; (3) A pot of broth containing 12 cups water, 1½ cups tamari, 30 thin slices of ginger, and lots of kombu. Deep-fry the chunks, dip them in the boiling water, then simmer in the broth for 1 hour. Drain and cool. Skewer chunks on chopsticks. Prepare a tempura batter containing 4 cups each corn flour, pastry flour, and unbleached white flour, 2 tablespoons sea salt; add water to mud consistency. Dip skewered chunks in tempura batter and deep-fry again. Address: Foundations Inc., HC2, Box 564-B, Kasilof, Alaska 99610. Phone: 907-262-2824.

7680. Bellicchi, Kathy. 1992. Recollections of seitan in Boston from 1970 (Interview). *SoyaScan Notes*. May 10. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** In Aug. 1969 Aveline Kushi had moved to Los Angeles where her youngest son, Ilisao, had undergone traditional Japanese bone massage therapy. Kathy arrived in Boston in early 1970 when Aveline had just returned briefly from Los Angeles. At that time Aveline gave some cooking classes in Boston which Kathy attended, and Kathy remembers that Aveline taught how to make seitan in these classes. That was the first time Kathy had ever heard of seitan. Before that time, Kathy had lived in New York, had been macrobiotic since 1965, and had cooked with Michel Abehsera and many other macrobiotics in New York, she never heard of seitan while in New York prior to early 1970. But the Ratners chain of restaurants in New York did serve Protose Steak made of wheat gluten.

Kathy recalls that in the early 1970s seitan was considered by macrobiotics to have medicinal properties. For example, when Cathy Creighton arrived in Boston and Eliza had a broken leg, many people suggested that Eliza be fed seitan to help the leg to heal.

To make seitan back in the early days, Kathy would grind a special type of hard Minnesota wheat into flour, knead flour and water together thoroughly to make a dough, then let that dough stand under water–often for several hours. She would then further wash the raw wheat gluten, strain the starch water to separate the bran (which settled to the bottom), dry the bran on cookie sheets in an oven, and use it to make bran pickles. The starch water would be used to thicken a seitan stew–so everything was used. Most people made seitan by first deep-frying the wheat gluten, then cooking it in a tamari-ginger broth to make seitan, everyone said it had to be deep-fried first, and Tan Pups probably came from that concept. Kathy thinks that this method may have come from George Ohsawa to Herman Aihara to Aveline Kushi. To make seitan stew, chunks of seitan were simmered with chunks of onions, carrots, and other vegetables, just before it was served, some of the starch water was added to give the stew a nice sheen and little thickness. It turned clear when added.

She remembers that Tan Pups were made by the Queensberry Bakery in Boston. Kathy does not recall the names of the two brothers who ran the Queensberry Bakery. Matthew Chait, an actor who had a cart named the Recycle at Boston University, worked out of the Queensberry Bakery, he or Vern Verona might know more about Tan Pups. Address: 55 Meadowbrook Rd., Brookline, Massachusetts 02167. Phone: 617-734-1380.

7681. Sinclair, Valerie. 1992. Japanese cuisine is several settings. *New York Times*. May 10. p. NJ 13.
• ***Summary:*** This is a review of the Japanese restaurant Sukeroku (68 Route 23, corner of Pompton Ave., Little Falls, in upstate New York–near Utica, between Albany and Rochester). About four years ago a new owner added a karaoke bar to the sushi bar and tatami rooms. Some dishes illustrate well the contrast in textures so prized in Japan. For example "raw squid rings with chopped fermented [soy] beans (ika natto)."

7682. Wollner, Joel. 1992. Re: Ode to Tan Pops. Letter (fax) to William Shurtleff at Soyfoods Center, May 19. 2 p.
• ***Summary:*** "Did you ever eat a 'Tan Pup?' [sic, Tan Pop]. Hot? If not, you can't imagine the ecstasy (and agony) you missed. A Tan Pop's crusty exterior belied a succulent interior, redolent of soy sauce, garlic, and herbs. The vegetarian's version of the famous 'Corn Dog,' from which their name was played, the Tan Pop was a crispy-crusted, batter-fried chunk of Wheatmeat, ¼ pound, stuck on a skewer. More exotic than any blanketed hot dog, freshly cooked, steamy hot Tan Pops were so incredibly irresistible, they made many a glutton of gluten. No one, outside their maker, Johnny Weissman, of the Vegetable Protein Company, Cambridge, MA, knew the exact recipe. In the years I worked at Erewhon's Newbury Street store, from 1977 to 1980, Tan Pops were a big hit, with a loyal following. Two mornings each week, 'Johnny Wheatmeat,' as we called him, brought in a batch of 50 or more steamy hot, freshly made Pops. I can still smell them today, mouth watering. We displayed them still hot in a large wood bowl at the checkout counter. I believe the store paid around 50¢ to 60¢ each, and they retailed for 75¢ or 85¢. As soon as they arrived, the store staff started in eating them, and eating too much of them. One Tan Pop was great, but rich as they

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were, two or more was courting belly aches. Still, there were never enough to go around, but Johnny would only complain about how difficult they were to make. I don't know how long Tan Pops were sold at Erewhon before I started working there, nor do I know what became of Tan Pops or Johnny Wheatmeat in recent years. I remember learning that Johnny held a federal registration of the name 'Wheatmeat.' He also marketed Wheatmeat cutlets of several ounces each, refrigerated or frozen, plain (unseasoned) or cooked in soy sauce broth, which he sold to Erewhon and other Boston area natural food stores. As I recall, the Wheatmeat ingredients included wheat gluten and soy protein. Johnny Wheatmeat was something of a vegetable protein visionary, who experimented with many wheat and soy protein products, such as sausages. I also remember that Andrew Levine, formerly a clerk at Erewhon Newbury, used to spend a fair amount of time chatting with Johnny Weissman. You can reach Andy at Yellow Emperor in Eugene, Oregon (503) 485-6664."

Note: To find out who developed the forerunner of Tan Pops, Joel suggests contacting Matt and Helen Sandler in Aspen, Colorado, or Hannah Bond (also known as Anne Harris) in Athens, Vermont. Both, in fact knew, that the forerunner was Tan Pups, developed by Nik Amartseff of Brookline, Massachusetts, in about March 1972. Address: Joel Wollner Associates, P.O. Box 1343, Clifton Park, New York 12065. Phone: 518-371-7014. Fax: 518-373-8337.

7683. Okada, Yuko. 1992. Re: Muso's soymilk factory in the USA. Importing organic soybeans to Japan. Letter (fax) to William Shurtleff at Soyfoods Center, May 21. 1 p. [Eng]

• ***Summary:*** "Did you know that I have a soymilk factory in the U.S.? It has been operating for almost 7 years. It was the first soymilk company in the United States and is growing every year. The company is located in Michigan, where most of the organic soybeans are grown." Note: The author is probably referring to Muso's 15% ownership in American Soy Products, Inc., whose plant at Saline, Michigan, began commercial operation in Nov. 1986.

Muso is also importing organic soybeans into Japan, and has already imported about 300 metric tons this year. The use of organic soybeans in Japan is growing on the part of companies making shoyu, miso, tamari, tofu, etc. for Muso. Address: Muso Co., Ltd., Kosei Bldg. 2nd Floor, Tanimachi 2-5-5, Chuo-ku, Osaka 540, Japan. Phone: 06-942-0341.

7684. *New York* [*magazine*]. 1992. Hot tips. 25(21):52-54, 56, 58. May 25. See p. 54. [1 ref]

• ***Summary:*** "Key West. Dinner for 4. Edward Brown Tropica." The recipe for "Spicy conch chowder" calls for "3 tablespoons kecap manis (Indonesian thick sweet soy sauce), available at Adriana's Bazaar and Dean & DeLuca."

On the same page, the recipe for "Marinated bluefish fillets" calls for "¼ cup kecap manis (available at Adriana's Bazaar and Dean & DeLuca)."

Also on page 36: "3 tablespoons kecap manis (Indonesian thick sweet soy sauce),..."

Note: This is the earliest English-language document seen (April 2012) that uses the term "thick sweet soy sauce" to refer to *kecap manis*.

7685. *SoyaFoods* (*ASA, Europe*). 1992. BSN goes saucy [by purchasing Amoy]. 3(2):2. Spring

• ***Summary:*** "French agrifood group, BSN (1990/91 turnover 80 billion French francs) have purchased the Hong Kong firm Amoy Industries International Ltd. (1990/91 turnover 146 million French francs), an important force in the Asian sauce market. The Hong Kong leader of the soya sauce sector was previously owned by the Pillsbury Group (GrandMet) and Hang Lung." BSN is already a major force in the sauce market with brands such as Lea & Perrins, and HP.

7686. *Whole Foods*. 1992. Source book 1992. 15(5):33-294. May. Illust. Index. 28 cm

• ***Summary:*** Contents: How to use this book (p. 8). Wholesalers/distributors alphabetical listing. Wholesalers/distributors geographical listing. Brokers. Publishers. Associations. Consultants/service companies.

Product directories. A listing of manufacturers/importers/growers by products. Foods (p. 77-111–soy-related categories include: Beans/bean products, cheese substitutes, coffee substitutes, cultures, miso, soy products, soy sauce, soymilk, tamari, tempeh, tofu, tofu entrees), vitamins and supplements, herbs, cosmetics/personal care, miscellaneous products. Brand names. Product index. Manufacturers/importers/growers alphabetical listing.

Note: The listings related to soy products are full of errors. Address: South Plainfield, New Jersey.

7687. Gerner, Bob. 1992. Recollections of Mithra Grossman, Intermountain Trading, and Family Orchards (Interview). *SoyaScan Notes*. June 25. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** This company, started in about 1975 by Mithra Grossman, began as Intermountain Trading Co. at 2546 Tenth St., Berkeley, California 94710. Located very near Westbrae. Mithra was a consolidator–and had a beautiful blond Swedish wife. He would collect a variety of natural foods made on the West Coast of the U.S. by companies such as Heinke, Westbrae, etc., then put them on rail cars and ship them to the East Coast. Also starting in about 1975 he began buying miso from Westbrae that the latter was importing from Japan. At one point Westbrae was selling 25-50% of their imported miso to Mithra Grossman, who shipped it all over the USA to other wholesalers. Westbrae did not have enough business to import that much. Gradually he became a distributor, then he started developing and marketing a

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line of mixed packaged nuts, etc. to which he gave the name Family Orchards. The fruit and nut mixes in the Family Orchards snack line contained two types of soyfoods: Soynuts, and tamari-roasted peanuts. (For details see the company's Ad in Tom Riker and Richard Roberts. 1979. *The Directory of Natural & Health Foods*, p. 60-61). Grossman bought most of the raw materials for his Family Orchards line from Westbrae. In about 1979-1980 his company went out of business; he blamed Westbrae for its failure and bore strong resentment toward them. The price structure under which Westbrae had sold its products to Grossman was no longer profitable for Westbrae, who decided to raise prices. Address: Owner, Berkeley Natural Grocery Co., 1336 Gilman St., Berkeley, California 94706. Phone: 415-526-2456.

7688. McGlasson, Linda. 1992. Soyfoods in the next century: Feeding the world one bean at a time. *Health Foods Business* 38(6):30-34, 36. June. [1 ref]

• ***Summary:*** A table gives estimated retail sales of soyfoods in the USA in 1990, in descending order of sales (million dollars): soy sauce $395.5, tofu $94.1, second generation products (such as dips, dressings, entrees, non-dairy desserts, cheeses, yogurts, and imitation meat products) $81.6, soymilk (not including infant formulas made with isolated soy proteins) $60.0, miso $44.5, soynuts $9.7, tempeh $7.5. Total $657 million. Source: Soyatech in Bar Harbor, Maine. The two fastest growing segments are soymilk (increasing at 20% a year) and second generation products (15-20% a year). "Soyfood sales are expected to grow steadily through the next decade as health and environmental concerns become increasingly important factors in food purchasing decisions... an estimated 33 to 50% of all adults are reducing their intake of meat, yet they still have the craving."

Protein Technologies International of St. Louis, Missouri, is developing a line of structured proteins, which are look-alike meat components. There are versions that look and feel like ground beef, crab meat, and chicken.

Angelo Morini, founder of Galaxy Foods, began trying substitutes for the real cheese he was using in his pizza business. He left the pizza business in 1968 and began making soy cheese full-time. The company began slowly by selling to food service customers, then they started marketing the cheese nationally in 1984. In 1985 Galaxy started in the health food industry with a new line, Soyco. Following a fire, the company has relocated in a new 55,000 square foot state-of-the-art manufacturing facility in Orlando, Florida. They are now producing soy cheese products and are scheduled to launch 30 new items this year.

One sidebar, titled "Quickie Dictionary of Soyfoods," defines tofu, miso, tempeh, soymilk, and shoyu. Another says "Soyfoods Take Spotlight in New Infomercial." The infomercial is based on Dr. Michael Klaper's education seminars for doctors and other health professionals titled "Let Food Be Your Medicine." Klaper (a noted physician, author, environmentalist and nutritionist [and vegan]) is co-founder and director of the Institute for the Advancement of Nutrition Education and Research. The tentative title for the new infomercial is "The Nutrition for the 90s, a Transition to Health." It will begin airing in July on cable TV. Radio's Top 40's Countdown host Casey Kasem will emcee the show with Dr. Klaper. The show will feature top scientists and doctors, plus testimonial interviews with many celebrities and famous athletes. Address: Managing editor.

7689. **Product Name:** Traditional Foods Original Traditional Seitan.
Manufacturer's Name: Santa Fe Organics.
Manufacturer's Address: 906 Locust St.[Columbus, NC 28722. Phone: (704) 894-3132.
Date of Introduction: 1992, June.
Ingredients: Organic wheat flour, vegetable broth seasoned with whole bean soy sauce, onion, and kombu.
Wt/Vol., Packaging, Price: Retorted in a 1 pint (16 oz) glass jar with a 2-piece canning lid.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Letter from John Belleme of Santa Fe Organics. 1992, March 9. "In a few weeks we will be adding an 'original' flavor, which will be seasoned with soy sauce, onion, and kombu. We now have eight distributors." Talk with John Belleme. 1992, July 1. Their most recent product is a traditional original seitan, sold in canning jars just like the company's first line of products, launched in early June, 1992. "It was made to satisfy the needs of all the macro [macrobiotic] people who were not satisfied with all these flavors we had. They wanted something they could do their own thing with."

7690. *SoyaScan Notes*.1992. Fresh Fields, a new natural foods supermarket chain on the East Coast (Overview). Sept. 1. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Fresh Fields, a relatively new chain of natural foods supermarkets with headquarters in Rockville, Maryland, appears to be very successful in appealing to the upscale consumer. The president is Mark Ordan. Unlike most traditional natural foods stores, they carry a large selection of natural meats and poultry from "animals raised without hormones, antibiotic feed additives, or other growth-promoting drugs." They also sell freshly baked breads plus hundreds of soyfood products. They publish a 6-panel leaflet titled "Soy Foods: Soy good for you," which introduces consumers to tofu, tempeh, soy 'milk,' shoyu/tamari, and miso. A 12-page color brochure describes the chain, its philosophy and its products. Fresh Fields' prices are high but their service is excellent and their stores quite attractive and well managed. On the side of each shopping bag is printed: "Fresh Fields. Land of the Free. Free of artificial colors and flavors. Free of artificial preservatives. Free of steroids. Free

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of nitrates. Free of hormones. Free of growth stimulants. Free of antibiotics. Free of irradiation. Free of tropical oils. Free of refined sugars. Free of beached flours. Free of hydrogenated oils. Free of worry. Free of confusion. Free of hassle. Free of guilt.

"Fresh Fields. Good for you foods."

7691. Okada, Yuko. 1992. Re: History of Muso Co. Ltd. (Muso Shokuhin) in Japan. Letter (fax) to William Shurtleff at Soyfoods Center, July 2. 2 p. [Eng]

• ***Summary:*** Muso was formed as an establishment in February 1966, and Yuko has worked for the company since that time. His current title is president of Muso Co., Ltd. for Export and Import division, a position he has held for the last 6 years. Yuko first went to the USA in April 1970. First he worked at the Erewhon retail store and at the Erewhon warehouse as production manager and import manager. After 2 years he began to manage a macrobiotic restaurant [the Seventh Inn] for 2½ years as executive vice president. After the restaurant had paid off all its debts, he returned to Erewhon as import manager, and was also in charge of determining the cost of all production.

Yuko thinks that Muso began to ship foods to Erewhon in 1968. [Note: Kotzsch, 1984, Dec. *East West Journal* p. 14-21 states that Muso began to export foods in 1969.] The main food items shipped during the first year were shoyu (made by Marushima Shoyu Co.), several types of miso (made by Kanemitsu Miso Co. and Ohta Hatcho Miso Co.), black soybeans, azuki beans, many types of sea vegetables and teas, buckwheat noodles, umeboshi pickles, and takuan (daikon pickles).

The following Westerners have worked for Muso over the years: Paul Hawken (March-Oct. 1969), James Docker (several months), Jim Ledbetter (several months), Evan Root (several months), Tyler Smith (6 months), Steve Earle (4 years). Only Americans have worked at Muso.

Muso moved to their present address in the Kosei Building on 1 Dec. 1986. The company still maintains a domestic distribution company at its former address at Otedori 2-5-1, Higashi-ku, Osaka. Address: Muso Co., Ltd., Kosei Bldg., 2nd Floor, Tanimachi 2-5-5, Chuo-ku, Osaka 540, Japan. Phone: 06-942-0343.

7692. Richardson, Jean. 1992. Sierra Natural Foods is out of business. Ohsawa Japan has stopped exporting (Interview). *SoyaScan Notes*, July 8. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** When Ohsawa America was having problems surviving, Lane Seiger offered their mail order business to Gold Mine Natural Food Co., then offered their import business to Sierra Natural Foods. Gold Mine purchased their Japanese imports from Sierra.

In July 1991, Sierra Natural Foods declared bankruptcy and went out of business. At the time they owed Ohsawa Japan a lot of money, which they never paid. Following this unfortunate experience, Ohsawa Japan stopped exporting products to America. Prior to this, Nama Shoyu (Unpasteurized Shoyu, made by Yamaki Co., run by Mr. Kitani) was the best seller of all the products Sierra imported from Ohsawa Japan. After Sierra's bankruptcy, in March 1992, Gold Mine began importing macrobiotic foods from Muso in Japan. Address: Co-owner, Gold Mine Natural Food Co., 1947 30th St., San Diego, California 92102. Phone: 619-234-9711.

7693. Aihara, Cornellia. 1992. Early recollections of seitan (Interview). *SoyaScan Notes*, July 9. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Cornellia first learned how to make *kofu* (raw wheat gluten) from a Japanese book about *Shojin Ryori* (Buddhist Vegetarian Cookery) that Lima Ohsawa sent her. The book used only white flour to make kofu, but Cornellia substituted whole wheat flour. She does not remember when she first heard the word seitan or from whom she learned the process for making kofu into seitan. Nor does she know who coined the term "seitan." She never saw George or Lima Ohsawa make seitan in America. Cornellia thinks that in earlier times in Japan, seitan was called "shigure."

Cornellia first made seitan in about 1970 in San Francisco. In her *Chico-San Cookbook* (1972), Cornellia first wrote about seitan, giving a recipe for making "Seitan" at home (#516). The ingredients listing called for 10 cups wholewheat flour, 4 cups unbleached white four, 5 cups water, and 2 teaspoons salt. After making the basic plain gluten, pull it into 1-inch pieces and drop these into boiling water. Boil until the pieces rise to the surface of the water. Then: "Sauté 1 tablespoon of fresh minced ginger in 1 tablespoon sesame oil. Add 1 cup of soy sauce and bring to a boil. If you wish to store the Seitan for any length of time use more soy sauce, up to 2 cups, depending on how long it will be kept. Add the cold gluten pieces and simmer, covered, for 3 hours, stirring frequently. Remove the cover and continue cooking until all the liquid is gone. Stored in the refrigerator, it will keep a long time. Cook it with vegetables or use it to season soups and stews."

In her book *The Dô of Cooking* (*Ryorido*), *Vol. 1* (1972, March) Cornellia gave a similar recipe for seitan (p. 71-72). Part 1 described how to make wheat gluten and part 2 described how to use that wheat gluten to make seitan. After 1970 Cornellia taught many macrobiotic students how to make seitan in her cooking classes. In later years she used only whole wheat flour, omitting the unbleached white flour.

Herman Aihara does not remember when he first heard the world seitan. He is not interested in food from this viewpoint; his interest is in philosophy. Address: Vega Study Center, 1511 Robinson St., Oroville, California 95965. Phone: 916-533-7702.

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7694. Yamazaki, Kazuko. 1992. Early recollections of seitan (Interview). *SoyaScan Notes*, July 9. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Kazuko (the wife of Junsei Yamazaki) is sure that George Ohsawa coined the term "seitan" quite a while before he died in April 1966. She first became interested in macrobiotics in Japan in about 1962-63 (Showa 37-38). In about 1965 she may have seen seitan sold at macrobiotic food stores in Japan. Ohsawa Japan also sold seitan, probably by 1962-65; Marushima Shoyu K.K. may have made that seitan. She probably first heard the term "seitan" from Lima Ohsawa, who frequently taught how to make and use kofu (raw wheat gluten) and perhaps seitan in her cooking classes. The first seitan she saw or tasted was sold in little cubes or pieces that were very dark, hard, and salty. In Japan, Chinese people at one store in Aoyama, Minato-ku, Tokyo, made kofu (raw wheat gluten), and she once went there to buy some. She and Lima also tasted a delicious sausage-like product made from soybeans by the Chinese; she does not remember what it was called, but it was not called seitan. Lima Ohsawa often used that kofu in her cooking classes.

After George Ohsawa died, Lima Ohsawa traveled to Taiwan with a group of Japanese and there she met an interesting group of Taoist vegetarians. Some people in that group were very skilled at using wheat gluten in cookery. After returning to Japan, Lima invited that group of Taoist vegetarians to Tokyo. Kazuko met them in Tokyo. At that time they made a product closely resembling seitan. Later they started a business making it in Japan and began selling some to Ohsawa Japan.

One person in Japan who might well know the early history of seitan is Aiko TANAKA. She is now about 65 years year old but she began studying macrobiotics with Lima Ohsawa when she was about 18 years old. She went to Taiwan and had a lot of contact with the group of Taoist vegetarians. Address: Route 1, Box 1333, Orland, California 95963. Phone: 916-865-5979.

7695. Troy, John. 1992. Update on Wizard's Cauldron and work with miso (Interview). *SoyaScan Notes*, July 11. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** John makes many lines of products that contain miso. "The Wizard" line, sold through Joel Dee of Edwards & Sons, contains three products: Hot Stuff, Stir Crazy (a stir-fry sauce), and Sweet & Sour Sauce. The Premier Japan line is also exclusive to Edwards and Sons. The Simply Delicious line consists of many salad dressings, such as Lemon Tahini, Ginger Plum (with umeboshi plums), Tofu Poppyseed, and Miso Sesame (the only miso product in this line). His favorite salad dressing (which is also his best-seller) is the Miso Sesame; it is sweetened with rice syrup, and contains both clear shoyu and white miso. "It's really nice."

A fourth line, called "Troy's" is a line of sauces, such as a steak sauce and a poultry sauce. Three of these products contain miso: Miso Magic (a sauce for grains and vegetables), and Cracked Peppercorn Steak Sauce, and Honey Mesquite Barbecue Sauce. John's favorite sauce is his Thai Peanut Sauce. A fifth, called Harbor Lites, is a line of six seafood sauces–all of which contain either soy sauce or miso. The Garlic Grill contains miso. There is also a Ginger Soy in this line.

American Natural Foods (ANF), started in 1984, attracted many local investors who finally got control of the board of directors and encouraged John to do things that went against his beliefs; the company eventually lost about a million dollars, and John lost everything he had. It didn't go bankrupt; it's still alive but John "walked away from it." It's sole product is Miso Mustard, which is made by Morehouse Foods.

At the end of 1985 John was penniless, and had to draw unemployment to buy groceries. "But it was a real blessing in disguise." John started doing some consulting work. In 1986 he started a new company named "Wizard's Caldron," which was initially just a consulting company. John was able to buy the trademark for Hot Stuff away from ANF, then cut a deal with Joel Dee. In Oct. 1987 Edwards and Sons became the exclusive distributor of his Premier Japan line and his Wizard Baldour condiments and sauces, including Hot Stuff. He saved enough money to buy a little plant, then started real small, making food products again. The new company's first product line, the Simply Delicious salad dressings, was launched in 1989. The company has been growing and growing, until now it is a very healthy little company with one million dollars of annual sales. This is the first time John has owned his own plant, previously he always had to use co-packers. "I'm just having a wonderful time with it, but it was a hard lesson to learn." John buys his miso from Don DeBona of American Miso Co. He also uses a lot of clear shoyu, which he buys from San-J; they make it in Japan. He consulted for San-J, and when he visited their plant in 1986 he noticed some stuff dripping from a vat. They said it was clear shoyu which they said they used in sauces, dashi, etc. He brought back a 5-gallon pail to the USA, and eventually made it a featured ingredient in his line of salad dressings. Address: The Wizard's Cauldron, 8411 Hwy. NC 86 N, Cedar Grove, North Carolina 27231. Phone: 919-732-5294.

7696. Mokutani, Kiyoshi. 1992. The invention and development of seitan in Japan (Interview). *SoyaScan Notes*, July 12. Conducted by William Shurtleff of Soyfoods Center. Followed by a letter of July 1992.

• ***Summary:*** In 1959 Mr. Mokutani met Sakurazawa Nyoichi (George Ohsawa) and his wife Lima, and started to study macrobiotics with them, and to eat a macrobiotic diet–after he had undergone two surgical operations for a gastric ulcer and a duodenal ulcer in 1959 and 1960.

In the spring or summer of 1961 he first developed a sample of what is now called *seitan* using only wheat gluten

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and shoyu as ingredients (no ginger or kombu). He extracted the gluten from wheat flour in his own company. His first goal was to develop a wheat gluten product made from organically grown wheat. He also wanted to make a type of low-fat *tsukudani* made without animal products. Note *Tsukudani* is a dark and salty Japanese condiment typically prepared from small cubes of shellfish, fish, beef, kombu, or vegetables (gobo [burdock], fuki [butterbur, coltsfoot]) that have been simmered for a long time in soy sauce.

In the fall of 1961 he took a sample of the new product he had invented to George Ohsawa. He took great interest in it and at that point Ohsawa coined the term "seitan" to refer to this product. The term "seitan" had never existed previously in Japan. Ohsawa usually wrote the term "seitan" using the katakana syllabary and characters, however when he occasionally wrote it in Chinese characters, he used the character *sei* (also pronounced "nama" in Japanese) meaning "fresh" or "raw" (since it is made from fresh wheat gluten), plus the character *tan* which is the first character in the Japanese word *tanpaku*, meaning "protein." Ohsawa also gave him instructions for improving the product by mincing the wheat gluten and simmering it in soy sauce. Today on the front of each bottle of seitan is written *"Sakurazawa Nyoichi shido"* (Made with guidance from George Ohsawa).

Initially, in 1961 and early 1962, he had no intention to sell seitan; he sent samples free of charge to macrobiotic people throughout Japan.

In 1962 Mr. Mokutani started to manufacture seitan for commercial production. Marushima Shoyu K.K. (Marushima Shoyu Co., Inc.), of which he was director and head of the technical department, was the first to make seitan in Japan. After production began, most of the seitan made by Marushima Shoyu K.K. was sold (in small glass jars) to the macrobiotic food wholesalers in Japan (such as Muso Shokuhin, Ohsawa Japan, and Tsurushima [located in Yamaguchi-ken]) and to the macrobiotic community. The first company to export Marushima's seitan was Ohsawa Japan, Inc. (where Lima Ohsawa's sister was president). It was imported to the USA by Bob Kennedy of Chico-San, located in Chico, California.

A friend of Mr. Mokutani's named Mr. Tsurushima owned a company in Yamaguchi prefecture; it made soba and noodles, and sold many macrobiotic foods. Mr. Mokutani asked Mr. Tsurushima to sell his seitan, which Mr. Tsurushima did.

Mr. Mokutani is currently president of two companies: Marushima Shoyu Co., Inc., and Junsei Shokuhin Marushima Co., Inc. (located at Higashi Onomichi 9-2, Onomichi cit, Hiroshima prefecture). The latter company sells soy sauce as well as more than 800 kinds of natural foods. They also sell freeze-dried gluten product which can be marinated in seasoning then grilled as a fat-free meat substitute, or mixed with meat as a seasoning to reduce the meat's total fat content. Address: Chairman, Junsei Shokuhin Marushima Co., Inc., Higashi-Onomichi 9-2, Onomichi-shi, Hiroshima-ken 722, Japan. Home address: Nihama 1-3-57, Onomichi city, Hiroshima prefecture. Phone: 848-20-2506.

7697. Shurtleff, Akiko Aoyagi; Sandler, Matthew; Okada, Yuko. 1992. Memories of the delectable gluten cutlets served at Tenmi, near Shibuya station in Tokyo, Japan (Interview). *SoyaScan Notes*. July 15. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Yuko Okada thinks that Tenmi first started in about 1968. By the early 1970s, a 10-minute walk from Shibuya station, it was a combination macrobiotic restaurant and food store. The restaurant was named *Tenmi* (Heaven + Flavor) and the store was named *Shizen Shokuhin Senta* (Natural Foods Center). Both were located at Sakuragaoka 4-3, Shibuya-ku 150, Tokyo. Phone: 03-496-7100. Both were still there in 1983.

The head of the restaurant (and a longtime friend of George Ohsawa), Mrs. Michi Ogawa, made one of the most delicious meatless entrees that we have ever tasted–called *Kôfu Katsu* (Gluten Cutlets). *Kofu* (raw wheat gluten) was simmered in a seasoned broth, then dipped in batter, dusted with Japanese-style bread crumbs (*panko*), and deep-fried. Crisp on the outside, succulent and juicy on the inside, it had a flavor and texture remarkably like that of a pork cutlet. It was served on a bed for thinly-sliced strands of cabbage and topped with one's choice of a natural *tonkatsu* (pork cutlet) sauce (based on soy sauce), or a wedge of lemon.

Such a tasty cholesterol-free menu item could be a hit at almost any restaurant in the Western world–served with either of the above sauces, or with tartar sauce.

From an historical point of view, these Gluten Cutlets, made with seitan, were completely different from the typical Japanese macrobiotic seitan, which was a dark brown salty seasoning or hors d'oeuvre to eat while a person was drinking, as a yang balance for the yin of the alcohol. Address: 1. Soyfoods Center, Lafayette, California 94549; 2. P.O. Box 10277, Aspen, Colorado 81612; 3. Muso Co., Ltd., Kosei Bldg., 2nd Floor, Tanimachi 2-5-5, Chuo-ku, Osaka 540, Japan. Phone: 1. 510-283-2991.

7698. GEM Cultures. 1992. Catalog [Mail order]. 30301 Sherwood Rd., Fort Bragg, CA 95437. 9 p. Aug. [4 ref.]

• ***Summary:*** This catalog celebrates the company's 12th anniversary. The first section is titled "Powdered cultures for soycrafters." On page 1: "Powdered Tempeh Starter, PTS. Tempeh is a delicious Indonesian, cultured soyfood with a chewy texture. Whether your interest is in exotic foods, eating lower on the food chain for health, social or economic reasons, or cutting back on meat, cholesterol, or calorie consumption, tempeh fills the bill. A vegetarian source of Vitamin B-12, this versatile food can be fried in the traditional manner or baked, broiled, steamed, or barbequed. Easily cultured without special equipment, homemade

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tempeh tastes and smells wonderful, slices better, and costs far less than commercial tempeh.

"The tempeh mold, *Rhizopus oligosporus*, that binds the cooked soybeans together into a sliceable cake, is grown on an entirely vegetable medium. Mature spores are harvested and combined with sterile organic rice flour for easy and accurate measuring on every batch. Complete culture directions and recipes are included. One pound of dry soybeans prepared as directed will make 1 3/4 pounds of tempeh. Preparation time–less than 2 hours. Incubation time–about 24 hours at 85 F (32 C). Kept cool and dry, PTS has at least a 6-month shelf life at full potency.

"Kit PTS, 11gm, three 1-pound batches (makes 5+ pounds). $2.50 each.

"Big PTS, 35 gm, ten 1-pound batches (makes 18 pounds). $4.00 each.

"Half Kilo PTS, 500 gm, packaged in bulk. $35.00 each.

"Full Kilo PTS, 1000 gm, packaged in bulk. $65.00 each.

"Powdered Natto Starter. Called *Natto* in Japan and *Thau-nao* in Thailand this cultured soyfood has a strong, somewhat persistent, unique flavor. The bacteria, *Bacillus subtilis* var *natto*, that culture the cooked soybeans make a sticky, viscous polymer during the 6-12 hours of incubation which creates whispy threads evident when the cultured soybeans are pulled apart. A good source of protein, this robust soyfood adds zest to any grain or noodle dish, soup or sandwich. A little goes a long way, so what is not intended for use in a day or two may be easily frozen.

"Natto Starter Kit: This packet contains complete culture directions, recipes, and enough spore to start 3 recipes of natto, each making 5 cups or 1½ pounds.

"Bulk Natto Starter: A concentrated spore preparation, this vial has sufficient spore to start 48 pounds of dry soybeans. Prepared according to the included directions it will therefore make about 86 pounds of natto.

"Natto Starter Kit. Makes 4½ pounds. $2.50.

"Commercial Natto Starter: Makes 86 pounds. $10.00."

Also: Amazake, miso, shoyu, and tamari starters from Japan. Five types of *tane koji* (koji starter) imported from Japan. Commercial miso and shoyu koji spore packets. Organic light rice koji. Natural salts for curding tofu. Natural nigari, Terra Alba calcium sulfate. Self-renewing cultures: Kombucha tea fungus. Fresh sourdough. Seed miso. Fresh fil mjolk, fresh viili, fresh kefir curds. Cookbooks with culture. Sea vegetables from the Mendocino Sea Vegetable Co. Kitchen culture items. Address: Fort Bragg, California. Phone: 707-964-2922.

7699. McSweeney, Daniel. 1992. 10th Annual Whole Foods Consumer Survey: Getting to know your customers. A profile of an aging and affluent consumer emerges from the survey. *Whole Foods*. Aug. p. 32-34, 36, 38, 43-44.
• ***Summary:*** A table titled "Food purchases" (p. 43) shows the percentage of respondents who purchased a type of product at a natural foods during the past 12 months, in descending order of popularity (also shows percentages for 1991 and 1990): Tofu 52%, Soy milk 42%, Tamari 38%, Soy sauce 29%, Miso 28%, Tempeh 25%, Cheese substitute 19%, Sea vegetables 17%. Note: The sample size is not given.

7700. *Nestle Company Newsletter*.1992. About Bean Products Ltd. in Cumbernauld, Scotland. Summer. *

7701. **Product Name:** Tofu Tempeh Burger, Tofu Vegies Burger.
Manufacturer's Name: Nutrisoy Pty. Ltd.
Manufacturer's Address: 255 Forest Road, Arncliffe 2205, NSW, Australia
Date of Introduction: 1992, August.
Ingredients: Organic soybean (non genetically modified), water, soy sauce, sunflower oil, spices, natural nigari (magnesium chloride), culture (*Rhizopus oligosporus*).
Wt/Vol., Packaging, Price: 200 gm.
How Stored: Refrigerated.
New Product–Documentation: Label and letter (e-mail) from Tony Wondal of Nutrisoy, 2005, April 26. He started making and selling these two products in Aug. 1992. Note: He invented this interesting Tofu Tempeh Burger.

7702. **Product Name:** Meatless Tofu Steaks
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: 6123 E. Arapahoe Rd., Boulder, CO 80303. Phone: 303-443-3470.
Date of Introduction: 1992, August.
Ingredients: Ingredients: Tofu (water, organically grown soybeans, nigari (magnesium chloride)), soy sauce (water, soybeans, wheat, salt), granulated garlic, granulated onion, and spices. Soybeans grown and processed in accordance with the California Organic Foods Act of 1990.
Wt/Vol., Packaging, Price: 6 oz (170 gm) vacuum pack.
How Stored: Refrigerated.
Nutrition: Per 3 oz.: Calories 170, protein 20 gm, carbohydrates 4 gm, fat 9 gm (saturated fat 1 gm, polyunsaturated fat 8 gm), cholesterol 0 mg, sodium 350 mg. Percentage U.S. Recommended Daily Allowance (U.S. RDA): Protein 30%, vitamin A 35%, calcium 25%, iron 25%.
New Product–Documentation: Vegetarian Times. 1992, Aug. p. 83. 'Meats' to meet. White Wave makes marinated Meatless Tofu Steaks. Label sent by Lon Stromnes of White Wave. 1993, Feb. 26. 4 by 4.75 inches. Self adhesive. Full color: Black, red, pink, and white. Photo shows a tofu steak between buns on a plate with trimmings of onions, green peppers, cheese, and lettuce. "Contains no meat."

7703. Waxman, Howard. 1992. History of Essene, natural foods retailer and distributor (Interview). *SoyaScan Notes*.

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Sept. 21. Conducted by William Shurtleff of Soyfoods Center

• ***Summary:*** Essene began in March 1969 as a macrobiotic natural foods retail store named Essene Macrobiotic Supply at 2031 Samson St. in Philadelphia, Pennsylvania. Primarily a juice and snack bar, it was founded by Denny Waxman, Charles Smith (Smitty), and Stanley Petrowski; Stanley left after several months. Howard was not involved with the company at that time. After about a year, the growing retail store moved to 320 South St. (at 3rd) in Philadelphia and changed its name to Essene Traditional Foods.

By Feb. 1971 a distribution company, also named Essene Traditional Foods, was started in the retail store--following the Erewhon model. An ad in *East West Journal* (Feb. 1971, p. 10) shows that "Essene," at 320 South St., was a distributor and wholesaler of natural and traditional foods, including miso, tamari, sea vegetables, and organic grains, vegetables, and beans. They made stone-ground wheat flour on the premises. The distribution company soon outgrew the store and by May 1972 had moved into a small warehouse at 58th & Grays Ave., Philadelphia PA 19143. Then it moved to a larger warehouse in Boyertown, about 1 hour drive outside Philadelphia. The distribution company went out of business in about 1976-78, it had been in business for about 5 years.

In 1981, when Bill Tara returned to the United States to become director of the Kushi Institute of Boston, Massachusetts, Denny Waxman, head of the Philadelphia East West Center, went to London to run the Community Health Foundation and the Kushi Institute. He stayed two years. Denny now lives in Portugal.

The retail store is still in business, owned by Howard. He moved to his present address about 3½ years ago, from 320 South Street, Philadelphia, PA 19147. Address: Owner, Essene Natural Foods, 719 S. 4th St., Philadelphia, Pennsylvania 19147. Phone: 215-922-1146.

7704. **Product Name:** La Soya: Authentic and Natural Soy Sauce of China.
Manufacturer's Name: Amasi International Inc. (Importer). Made in China.
Manufacturer's Address: 378, Isabey, Montreal, QUE H4T 1W1, Canada. Phone: 514-738-3000.
Date of Introduction: 1992, September.
Ingredients: Water, whole soybeans, whole wheat, sea salt.
Wt/Vol., Packaging, Price: 15 fl oz (450 ml) glass bottle or 2.64 U.S. gallons (10 liters) tin.
How Stored: Shelf stable.
New Product–Documentation: Leaflet from Natural Products Expo East, 1992, Sept. 11-13, Baltimore, Maryland. "The taste of a thousand seasons... La sauce aux mille saisons." This is an authentic Chinese soy sauce.

7705. *Toyo Shinpo* (*Soyfoods News*). 1992. Nattô no itohikisei teikazai oyobi kore o mochiiru itohikisei no nai nattô no seizôhô: Tokkyo shutsugan shôroku. Kikkôman (K.K.) ga shutsugan [Making the agent that reduces the sticky properties of natto and making natto that is less sticky: Details of the patent application. Kikkoman was the applicant]. Oct. 1, p. 12. [Jap]

7706. Belleme, John; Belleme, Jan. 1992. Culinary Treasures of Japan: The art of making and using traditional Japanese foods. Garden City Park, New York: Avery Publishing Group Inc. xiv + 232 p. Illust. by Akiko Aoyagi. Index. 25 cm.
• ***Summary:*** Contents: Acknowledgments. Foreword. Preface. Map of Japan showing where 21 traditional foods sold by Mitoku are made. 1. Kuzu: The wonder root. 2. Mirin: Sweet rice wine. 3. Miso: A health secret to savor. 4. Mochi: The sweet rice treat. 5. Noodles: Traditional Japanese fare. 6. Rice malt: Heavenly sweet water. 7. Toasted sesame oil: Cooking oil supreme. 8. Shiitake: Miracle mushrooms. 9. Soy sauce: King of condiments. 10. Tea: A national institution. 11. Snow-dried tofu: Protein powerhouse. 12. Umeboshi: Venerable pickled plums. 13. Vegetables of the sea: Underwater harvest. 14. Brown rice vinegar: Japan's liquid treasure. 15. Traditional vessels: Vats, crocks, and barrels. Glossary. Worldwide importers.

Concerning soy sauce, this book discusses Sendai Shoyu and Miso Co., Johsen, tamari, Mansan Brewing Co. founded by Oguri family in 1875, almost destroyed in Sept. 1959 by the fierce Ise-wan typhoon, "discovered" in 1982 by Akiyoshi Kazama of Mitoku. Now a macrobiotic staple.

For details on the uncondensed introduction to this book see Kushi (1992) "Introduction to *Culinary Treasures of Japan.*" Though very interesting, it contains a number of factual errors and statements that leave the wrong impression. Address: Saluda, North Carolina.

7707. Diaz Carrasco, Humberto; Busto Garcia, I.; Velazquez Diaz, O.; Fernandez Diaz-Silveira, M.; Gonzalez Mauri, J.; Ortega Herrera, J. 1992. El cultivo de la soya para granos y forrajes [The cultivation of the soybean for its seeds and as a forage]. Havana, Cuba: Ministerio de la Agricultura, Instituto de Investigaciones Fundamentales en Agricultura Tropical [INIFAT]. 16 p. Nov. [37 ref. Spa]
• ***Summary:*** Contents: Origin and distribution of the soybean. Importance worldwide. Soya in Cuba. Morphology. Physiological aspects. Favorable attributes of the soybean. Main issues to consider in planting, management, harvest, and benefitting/profiting from the soybean. Rotations with soya.

The section titled "Soya in Cuba" (p. 4-7) states: "The first annual report of the Agricultural Experiment Station at Santiago de las Vegas (*Estación Experimental Agronómica de Santiago de las Vegas*), mentioned the acclimatization of 50 varieties of soya. Today this station is INIFAT (*Instituto de Investigaciones Fundamentales en Agricultura Tropical*) of the Cuban Ministry of Agriculture (MINAG). Note 1.

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Santiago de las Vegas is a town located 10 miles south of Havana in Habana Province. Note 2. This report, published in June 1906, covers work done during the period 1 April 1904 to 30 June 1905. It contains the earliest date seen for soybeans in Cuba, or the cultivation of soybeans in Cuba (1905; one of three documents).

"During the period 1917 to 1920 Calvino issued information on the study of soybeans in Cuba; he indicated that the variety Biloxi did well in Cuba. At the end of the 1920s, Francisco B. Cruz studied 8 varieties of soybeans. In 1937 the forage characteristics of the variety Otootan were evaluated. In 1952 Calzadilla Cabrales delivered seeds of the variety Improved Pelican to the Agricultural Experiment Station at Santiago de las Vegas; this unique commercial variety was used in Cuba until 1978. In 1955 a pamphlet titled *The cultivation of soybeans* (*El cultivo del frijol soya*) was published by this same station (Muller 1955).

"In 1958 the Cuban Bank for Agricultural and Industrial Promotion (*Banco de Fomento Agrícola e Industrial de Cuba–BANFAIC*), in cooperation with the Agricultural Experiment Station at Santiago de las Vegas, published a bulletin titled *The cultivation of soybeans* (*El cultivo del frijol soya*) (Gonzalez et al. 1958). This bulletin described the areas of soybean extension located in the savannah areas of Santo Domingo (province of Villa Clara), in the estate 'Pablo' (*Ciego de Avila*), and in the rice-growing area of southern Pinar del Rio. Other key documents published from 1968 to 1989 are cited and summarized.

"In 1978 at San Nicolás de Bari, in Havana province, the first Cuban soy sauce (*salsa soya*) factory was started at an investment cost of more than 4 million pesos and with an annual production capacity of 2,000 tonnes/year.

"At the Food Research Institute of the Ministry of Food Industry (*Instituto de investigaciones para la Industria Alimentaria del Ministerio de la Industria Alimenticia* (*MINAL*)), situated in El Guatao, there was installed [in 1984] the so-called "Mechanical Cow" (*vaca mecánica*). This piece of equipment was acquired in Brazil for extracting soymilk; it had a capacity of 200 liters/hour. The Food Research Institute made soymilk (*leche de soya*) in vanilla, chocolate, and strawberry flavors.

"As part of a continuation of previous investigations, during the period 1981-1991, at INIFAT and at the "El Tomeguín" Seed Station (*Estación de Granos*), both part of the Cuban Ministry of Agriculture (MINAG), work was undertaken on genetic improvement and introduction, with the objective of obtaining soybean varieties that could be planted at different seasons of the year to produce seed, forage, or both, that were easy to harvest mechanically, and were less susceptible to the principal diseases and pests which attack this crop.

"As a result of this work, the following varieties are now available for spring planting: Cubasoy-23, 42, Williams, and Duocrop. The varieties IGH-24, R-315, INIFAT-112, INIFAT-V9, Cubasoy-120, and 96 can be planted during the months of July and August, and the varieties INIFAT-382, INIFAT-V9, and Cubasoy-120 can be planted during the months of December and January.

"In parallel to the work described above, within the "Principal State Problem of Beans and Soybeans" (*Problema Principal Estatal de Frijol y Soya*), in various Cuban institutions (National Institute of Agricultural Science {*Instituto Nacional de Ciencia Agrícola, INCA*}, Institute of Animal Science {*Instituto de Ciencia Animal, ICA*}, INIFAT, and others), investigations were conducted that made it possible to maximize the utilization of the new crops. Among these were rotation and intercropping with sugar cane, citrus crops, tobacco, potatoes, and rice, rhizobium biology, mineral nutrition, irrigation, mechanization, incidence and control of pests, diseases, and weeds, uses and storage of the seed, production of elite seed varieties, etc. which permit integral crop management of the soybean under Cuban conditions." Address: Havana, Cuba.

7708. Griffis, Gil, Wiedermann, Lars. 1992. Marketing food-quality soybeans in Japan: A manual on how to profit from the niche market in Japan for value-added soybeans. 5th ed. St. Louis, Missouri: United Soybean Board. 25 p. Nov. 28 cm.

• ***Summary:*** Contents: Introduction. Japan: Desired soybean characteristics, tofu (procedure for making tofu, desired soybean characteristics, color of hilum, seed size {the larger the better, preferably more than 20 grams/100 beans}, color of cotyledons, hull, composition, special notes, American interpretation), miso (same categories of information as tofu), natto (ditto: seed size: The smaller the better, with a maximum of 5.5 mm diameter. Round shape is preferred to oval in order to limit swelling during the soaking and boiling processes), food quality soybean varieties (name or code-name of 42 varieties, maturity zone, release year, used to make what soyfoods), distribution channels, marketing channels, protocol, pricing, organically-grown soybeans.

Taiwan: Introduction, list of 4 major buyers, users, and trade associations. Korea. Southeast Asia. United States.

Appendix I. Distribution systems for soybeans used for food in Japan: Tofu (23,000 tofu shops of which 13,000 are members of the Tofu Association), natto, miso.

Appendix II. Food soybean imports by country of origin, 1984-1991. USA is the largest supplier (845,000 tonnes in 1991), followed by China (279,000), then Canada (28,000). Total imports, which have stayed about constant during this period, were 1,152,000 tonnes in 1991.

Appendix III. Distribution by usage of soybeans used for food–1991, direct use only in tonnes (metric tons). Tofu 607,000 tonnes total, of which 562,000 come from the USA and Canada, 25,000 from China, and 40,000 from Japan. Up 2% from 1989.

Miso: 171,000 tonnes total, of which 38,000 come from

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the USA and Canada, 121,000 from China, and 12,000 from Japan. Up 0.5% from 1989.

Natto: 147,000 tonnes total, of which 87,000 come from the USA and Canada, 50,000 from China, and 10,000 from Japan. Up 9% from 1989.

Other: 39,000 tonnes total, of which 20,000 come from the USA and Canada, none from China, and 19,000 from Japan. Total food use of 964,000 tons is up 2% from 1989. Source: Japanese trade newspapers and trade associations. These figures do not include a estimated 492,000 tonnes of soybeans used indirectly (in the form of defatted soybean meal) for soy sauce, 222,000 tonnes used for soy protein, and 20,000 tonnes for other indirect uses.

Appendix IV. Directory of direct importers of food-quality soybeans for each is given. Home office in Japan. Representative office in the U.S.

Appendix V. Traders of food-quality soybeans (3 companies).

Appendix VI. Soy food organizations in Japan (tofu, miso, soymilk, packaged tofu, natto). Appendix VII. Helpful contacts.

Food quality soybean varieties (with maturity group / zone, and year released; table, p. 5): Chico (00, 1983), Grande (0, 1976), Proto (0, 1989), Minnatto (0, 1989), NattoKing [Nattoking] (I, 1988), Disoy (I, 1967), Vinton (I, 1978), Vinton 81 (I, 1981), King Natto (I, 1985), Kato (I, 1989), Magna (II, 1967), Prize (II, 1967), Marion (II, 1976), LS201 (II, 1989), Provar (II, 1969), Beeson (II, 1969), Kanrich (III, 1956), Kim (III, 1956), LS301 (III, 1989), Verde (III, 1967), IL2 (III, 1989, from Illinois), Hawk (III, ?), Emerald (IV, 1975), Vance (V, 1986), Camp (V, 1989), Hartz 936X (VI, 1981), Hartz 914 (VI, 1989), Hartz 922 (VI 1989), Merrimax (?, 1986).

Note: This report was originally published in Sept. 1989, mainly for use by the American Soybean Association office in Tokyo. Address: 1. Division Director for Asia; 2. Country Director for Japan. Both: American Soybean Assoc.

7709. *Toyo Shinpo* (*Soyfoods News*).1992. Nattô no seizôhô. Kikkôman (KK) ga shutsugan. Tokkyo shutsugan shôroku [How to make natto: Kikkoman applied for a patent. Details of the patent application]. Dec. 1. p. 12. [Jap]
• ***Summary:*** A long and detailed article.

7710. McCloud, Tina. 1992. Natto: A breakfast dish that's an acquired taste. *Press* (*Newport News, Virginia*). Dec. 7.
• ***Summary:*** "It's the color and consistency of pork and beans, but sticks together like stretched chewing gum." The owner of two Japanese restaurants in Newport News, Mr. K. Nishikawa, notes that "nibbling natto seems a pretty disagreeable way to start the day. Unembellished natto has 'no flavor and smells funny.'" He imports the fermented soybean product frozen from Japan. The key lies in the seasoning. In northern Japan, natto is widely eaten as a breakfast food, served over steamed rice and mixed with mustard and soy sauce. Some people mix in onions and raw egg. The sushi chef at one of Mr. Nishikawa's restaurants serves natto in sushi.

7711. Arocena, Javier. 1992. [Re: Recent developments at Zuaitzo]. Letter to William Shurtleff at Soyfoods Center. Dec. 14. 2 p. Typed, with signature on letterhead. [Spa, eng+]
• ***Summary:*** In June 1988 he moved his company to Plaza Santa Maria, 01001 Vitoria-Gasteiz. He knows of three other soyfoods manufacturers in Spain: Natur-Soy, Vegetalia, and La Sojeria, all near Barcelona.

"I was a pioneer in the production of tofu and seitan in Spain but for the last 12 years I have kept on doing the same thing, working only at the family level, making little but doing it well.

"Now we are living in the country at Villanueva Tobera, 09214 Condado de Treviño (Burgos), Spain... about 25 km from Vitoria-Gasteiz.

"As of today, our plans are not to increase our work with tofu and tempeh derivatives, but rather to develop new products, above all the full gamut of fermented soy products ... such as miso, tamari, natto, and amazake." But since he has difficulty understanding English, he would like to get Spanish-language publications. Address: Zuaitzo, Villanueva Tobera, 09214 Condado de Treviño (Burgos), Spain. Phone: 945/28 86 30.

7712. Soyfoods Assoc. of America. 1992. Soyfoods 2000: Merchandising soy products into the next century (Ad). *Natural Foods Merchandiser*. Dec. 16-page color special supplement, 8½ by 11 inches, inserted after p. 28.
• ***Summary:*** Contains full color ads by: Morinaga Nutritional Foods, Inc. (Mori-Nu Tofu, Firm and Extra Firm), Lightlife Foods, Inc. (5 types of tempeh, Tempeh Burgers [Lemon Grill, American Grill, Barbecue Grill], Tofu Pups, Vegetarian Chili, Sloppy J, Foney Baloney, Fakin Bacon, Lean Links), Worthington Foods, Inc. (Natural Touch Okara Pattie, Garden Pattie, Dinner Entrée, Lentil Rice Loaf), Sovex Natural Foods, Inc. (Better Than Milk, Tofu Ice Cream [Vanilla or Strawberry], Good Shepherd Spelt, Millet-Rice Flakes, For Goodness Flakes!), Vitasoy (U.S.A.) Inc. (Light Vanilla, Original, and Cocoa soy drinks).

Contains black-and-white ads by: White Wave, Inc. (Five Grain Tempeh, Meatless Tofu Steaks, Soya A Melt Soy Cheeses [Regular or Fat Free] and Singles, Lemon Broil Tempeh, Amaranth Tempeh, Teriyaki Burgers, Organic Tofu, Dairyless Non-Dairy Yogurts, Tempeh Burgers, Sea Veggie Tempeh, Meatless Healthy Franks, Snack'n Savory Tofu), Cemac Foods Corp. (Unbelievable brand Cheesecake: based on nonfat baker's cheese; contains no soy, no fat, no cholesterol), Solait International Ltd. (Solait Powdered Soy Beverage), Tofutti Brands, Inc. (Lite Lite Tofutti, Tofutti

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Cuties, Land of the Free [Non-dairy frozen desserts, free of fat and sugar, sweetened with fruit juice], Tofutti Egg Watchers, Better than Cream Cheese, Sour Supreme [Non-dairy sour cream], Premium Tofutti, Tofutti Soft Serve Mix), Sharon's Finest (TofuRella), American Natural Snacks (Soya Kaas), Great Eastern Sun (Miso Master brand misos), The Macrobiotic Wholesale Company, Turtle Island Foods, Inc. (Keep It Simple Stirfry–Diced Marinated Tempeh), Betsy's Tempeh (Tempeh), Quong Hop & Co. (The Soy Deli–9 Tofu Burgers, 3 Savory Baked Tofu, Pacific Tempeh, 3 Tempeh Burgers, 7 fresh water packed and vacuum packed tofu), MYCAL Group (natural dehulled soybean flakes)

Articles and sidebars include "Welcome to the future. Soyfoods 2000." "Soyfoods Association names new executive director" (Virginia Messina, whose photo is shown). "Soyfoods Association mission statement." "The modern evolution of soyfoods," by Michael Whiteman-Jones and William Shurtleff (Shurtleff's photo is shown) "Unraveling the soyfoods merchandising mystery," by Michael Whiteman-Jones. "Research shows soyfoods may help prevent cancer," by Mark Messina, PhD (whose photo is shown). "Key reasons to buy soy: Environmental, nutritional, economic."

This attractive insert was coordinated by Franke Lampe and edited by Lisa Turner, both of NFM.

7713. Vaidya, Achutananda. 1992. Re: Pioneering and making tofu and other soyfoods in Nepal. Letter to William Shurtleff at Soyfoods Center, Dec. 26. 9 p

• ***Summary:*** "I started making tofu in 1974. I did not have any connection with my uncle in starting my tofu company, however I did have a chance to see him make tofu at his residence in Kathmandu, and from that time I got the idea in my mind to make tofu myself. I learned the details of the process in Nepal from Mr. Akifumi Nakamura of Kobe, Japan, a member of the Japan Overseas Cooperation Volunteers (JOCV), who worked at the Central Food Research Laboratory in Kathmandu, which was also my office in 1974. I worked together with him as a counterpart for two years learning how to make tofu. During his stay there I learned wholeheartedly the process of making tofu. I learned from him that this food product called "Bhatmas-ko-paneer" in Nepali is known as "tofu" in Japan. Vita-Tofu is the brand-name of my tofu. This tofu is not packaged. It is sold in the form of rectangular cakes out of water-filled cans or bowls because most of the local vegetable shops do not have refrigerators. Even to this day sale of tofu is difficult during the hot summer months because of lack of refrigeration in food retail stores. At the start, for the first 4-5 years, I delivered my tofu from door to door because even at that time the people of Kathmandu did not know about tofu. They did not want to buy it because they did not know how to cook it.

"From July 1979 to March 1980 I was invited to Japan for 9 months training at the Akita Prefecture Brewing Laboratory. During that time I also learned in detail the processes for making soy sauce, miso, and soyamilk. During that period I also got a chance to read *The Book of Tofu*, *The Book of Miso*, *Miso Production*, and *The Book of Tempeh* all of which helped me very much. I still have all those books. In 1985 I was invited by the Rotarians of Akita-Aomori to return to Japan for 1 month (Jan/Feb. 1985) to receive further technical training in making tofu, miso, soy sauce, soyamilk, moyashi (sprouts), koji, fruit fermentations for wine, etc. Today I produce tofu, soy sauce, and miso in my small factory in Kathmandu. I currently have an electric wet grinder imported from Kyoto, Japan, in 1976. My other equipment (a basket pressing machine and tofu presses) were all made in Nepal by Nepalese mechanics."

Accompanying this letter are 27 color photos showing the following: Vita Tofu in Nepal. Making koji with his wife in Nepal. Studying and making tofu, miso, and shoyu in Japan in 1980 and 1985. His business card notes: "Food Technology in Brewing from Japan. Products & Suppliers: Tofu (Vita), Soyamilk (Vitabean milk), Soya Curd, Soya Sauce, & Miso."

His Curriculum Vitae notes that he was born on 28 Dec. 1947, resides at 9/374 Bhedasingh, Kathmandu, and is married. Address: Founder and owner, Nepal Soya Industries, 9/374 Bhedashing, Jamaguthi, Kathmandu, Nepal.

7714. Gold Mine Natural Food Co. 1992. Macrobiotic, organic and Earthwise products for you and your home (Mail order catalog and price list). San Diego, California. 48 p. Address: 1947 30th St., San Diego, California 92102-1105. Phone: 1-800-475-3663.

7715. Whiteman-Jones, Michael, Shurtleff, William. 1992. The modern evolution of soyfoods. *Natural Foods Merchandiser*. Dec. Soyfoods 2000 special supplement insert. p. 4-6

• ***Summary:*** A colorful overview of the history of soybeans and soyfoods from 1100 B.C. to the present, worldwide. Discusses the history of tofu, Samuel Bowen, Benjamin Franklin, T.A. Van Gundy, Madison College, Henry Ford, Seventh-day Adventists, Erewhon, Asian Americans, Kikkoman, the $1,000 million soyfoods market in America, countries with the highest per-capita consumption of soyfoods, the future of soyfoods. Address: 1. NFM; 2. Soyfoods Center, P.O. Box 234, Lafayette, California 94549

7716. **Product Name:** Dressings: Creamy Miso (Vegan), or Tamari Vinaigrette
Manufacturer's Name: Martin Brothers Fresh Dressings
Manufacturer's Address: P.O. Box 1686, Austin, Texas 78764. Phone: (512) 478-4434.
Date of Introduction: 1992-1994?
Ingredients: Incl. miso

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Wt/Vol., Packaging, Price: 12 oz bottle.
How Stored: Refrigerated
New Product–Documentation: Spot in Vegetarian Times 1998. March. p. 12. "Mixed dressings." A 12-oz bottle retails for $4.29. A color photo shows the labels. Talk with Brett Davis of Martin Brothers. 1998. March 10. These products were first introduced locally in about 1992-94. The company makes only salad dressings. For details, talk with Carl Martin, owner.

7717. **Product Name:** [Seitan, and Smoked Seitan]
Foreign Name: Seitan, Seitan Affumicato–Alimento Derivato dalla Farina di Frumento.
Manufacturer's Name: Biolab.
Manufacturer's Address: Via dei Grabizio 11, 34170 Gorizia, Italy. Phone: +39 481 533522.
Date of Introduction: 1992.
Ingredients: Wheat gluten (washed by hand), tamari soy sauce, vegetable extract based on: sea salt, yeast extract, vegetable oil (non-hydrogenated), leeks, carrots, sweet peppers (also called bell peppers; *peperoni*), celery, parsley, spices, sea salt, water, traces of wheat starch, traces of smoke [in the smoked seitan only].
Wt/Vol., Packaging, Price: 300 gm (2 servings of 150 gm each) vacuum packed separately, side by side.
How Stored: Refrigerated.
New Product–Documentation: Label and letter sent by Maura Ghiraldini and owner Massimo Santinelli. 1998. Dec 5. This new (Dec. 1998) label (3½ by 5 inches) has the same pastel background for all seitan products–a stylized view of the sea and sky, with mountains on both sides and rolling hills in the foreground. At the top right is a smiling sun. At the lower left are two sunflowers; at the lower right ears of wheat. Text: "Organically grown (*prodotti dalla agricoltura biologica*)." "Ready in 5 minutes (*Pronto in 5 minuti*)." Refrigerate at 4°C. A small symbol shows a person recycling the container.

7718. Atlas, Nava. 1992. Soups for all seasons: Bountiful vegetarian soups. New Paltz, NY: Adam Enterprises. 128 p. Illust. by Nava Atlas. Index. 21 x 18 cm.
• ***Summary:*** The witty literary aphorisms, quotations (with sources), and marvelous whimsical drawings that have become the author's trademark appear throughout this vegetarian cookbook. The recipes are arranged by season. The last chapter, accompaniments (p. 107-24) includes bread, muffins, biscuits, scones, croutons, and dumplings.

Soy related: Soymilk is given as an alternative in every recipe that calls for milk or low-fat milk (see p. 20, 28, 31, 34, 92, 123). Likewise, soy cheese is given as an alternative that calls for dairy cheese (see p. 16, 32, 114). "Natural soy sauce" is used to season many recipes (see p. 14, 80, 82, 119). Simple miso broth (with kombu and diced tofu {bean curd}, p. 13). Dashi with miso and vegetables (p. 13). Miso soup with winter vegetables (with wakame {Japanese sea vegetable}, shiitake mushrooms, etc., p. 62). Chinese cabbage and bean curd soup (with "½ pound tofu {bean curd}, cut into ½-inch dice," p. 80). Miso spinach soup with baby corn (with "¼ pound block tofu, cut into ½-inch dice," p. 81). Address: Author and illustrator, New Paltz, New York.

7719. Berk, Zeki. 1992. Technology of production of edible flours and protein products from soybeans. *FAO Agricultural Services Bulletin* No. 97. 178 p. [173 ref]
• ***Summary:*** Contents: Foreword. 1. The soybean. Background, production, marketing, agricultural characteristics, physical characteristics and morphology of the soybean, chemical composition (moisture, proteins, lipids, carbohydrates, minerals). 2. Utilization of soybeans. Utilization options for soybeans, whole bean utilization, the oil mill route (utilization of the oil fraction, utilization of the meal fraction). 3. Oil-mill operations. The expeller (operation principles, advantages and disadvantages of the expeller process, equipment), the solvent extraction process (operation principles, receiving and storage of soybeans, preparation for extraction, solvent extraction, post-extraction operations). 4. Edible soybean flours and grits: Introduction, definitions, composition and quality parameters (definition and classification of edible soy flours and grits, composition, quality standards), full fat soy flour and grits (production processes, utilization), defatted soy flours and grits (production processes, utilization). 5. Soybean protein concentrates (SPC): Introduction, definition, composition, types, production processes (the aqueous alcohol wash process, the acid-wash process, heat denaturation/water extraction process), utilization (basic considerations, use in bakery products, meat products, other uses). 6. Isolated soybean protein (ISP). Introduction, definition, composition, types, production processes (conventional process, problems in conventional processing, alternative processes), utilization (meat products, seafood products, cereal products, dairy-type products, infant formulas, other uses). 7. Textured soy protein products. Introduction, spun-fibre based texturization, extrusion texturization, steam texturization, utilization (meat extenders, meat analogs, other applications). 8. Soymilk and related products: Introduction, composition and classification, production processes (the traditional process, the Soya Technology System (STS) Process, the INTSOY (Illinois) process, the Buhler Process for soy micro-powder), soymilk related products. 9. Tofu, tempeh, soysauce and miso: Introduction, soy sauce, miso, tempeh, tofu (Introduction, regular and silken tofu, kori-tofu, deep-fried tofu, fermented tofu). Appendixes I. Standards and specifications. II. Organizations and government agencies. III. Manufacturers and suppliers of soybean processing plants and equipment. IV. Sample budget quotations for complete soy processing or soybean related food manufacturing plants. Address: Technion–Israel Inst. of

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Technology, Haifa, Israel.

7720. Buswell, Robert E., Jr. 1992. The Zen monastic experience: Buddhist practice in contemporary Korea. Princeton, New Jersey: Princeton University Press. xiii + 264 p. + [8] p. of plates. See p. 120-21. Illust. Index. 25 cm. [190+* ref]

• ***Summary:*** The section titled "Meals" (p. 120-25) notes that there are many similarities between the diet in the monasteries and that in the homes of the local agricultural peasants. "The major difference is that all meals served in the monasteries are vegetarian [actually vegan]. The bodhisattva precepts of the Mahayana branch of Buddhism forbid monks from eating the flesh of any sentient being." Cereal grains provide 70-80% of the caloric intake. "In addition to steamed rice, meals always include some kind of soup (*kuk*)... The soup is generally based on toenjang, a fermented bean paste like Japanese miso and flavored with soy sauce (*kanjang*) and sesame salt."

"Bean products constitute one of the largest components of the monastic diet during all seasons. The basis of many bean products is *meju*, a fermented bean paste somewhat like the Japanese *nattô* [more like the Japanese *miso-dama*, or soybean koji]. *Meju* is used as a major ingredient in producing soy sauce, red-pepper paste, and *toenjang*. Cooked black [soy] beans, seasoned with soy sauce, sugar, and white sesame, are served at least once a day. Tofu (*tubu*), or bean curd, frequently appears on this menu, but this is always purchased from a professional maker, who delivers it to the monastery on the back of his motorcycle. When the tofu is especially fresh, it is served steamed in whole blocks, to be dipped into a sauce made of soya, sesame oil, and red-pepper sauce."

Because of Mahayana Buddhism's dietary restrictions, monks don't eat garlic or onions, so widespread in the diets of regular Koreans. Those foods are considered "to be mild aphrodisiacs, something celibates can do without. To compensate for the blandness of the food, the kitchen staff replaces the garlic and onions with lots of red pepper (*koch'u*), along with red-pepper paste (*koch'ujang*)," brown sesame and white sesame. At the ceremonial dinner on festive days, white rice is replaced by glutinous rice and special dishes such as fried tofu and nori (*kim*) are served.

Note: The author was privileged to spend five years as a Buddhist monk in Korean monasteries between 1974 and 1979, primarily at Songgwang-sa. He made two additional trips to Songgwang-sa in Nov. 1987 and July 1988. The monastery is in Suncheon near the southern coast of Korea.

7721. Cardenas, Danilo C.; Legaspi, Benjamin M. 1992. The status of soybean production and utilization in the Philippines. In: Increasing Soybean Production in Asia: Proceedings of a Workshop. 1992. Bogor, Indonesia: CGPRT Centre. 187 p. See p. 119-35. Held 21-24 Aug. 1990 at Phitsanulok, Thailand. [8 ref]

• ***Summary:*** Contents: Introduction. Production situation. Production trends, economics of soybean production, price trends, marketing of soybean. Philippine foreign trade situation: Soybean imports, soybean exports. Soybean utilization. Government policies/programs affecting the industry: Policies, programs. Major problems besetting the local soybean industry. Conclusions.

The soybean, also know locally as "utao," has become an increasingly important economic crop in the Philippines. Yet in 1987 (the latest year for which figures are given) only 5,698 tonnes (metric tons) were harvested from 6,490 hectares, having a value of 45,169,000 pesos. This represented only 0.02% of the total Philippine quantity of agricultural production, and only 0.05% of total farm area and value. Philippine soybean production peaked at 11,466 tonnes in 1982. Most of the country's soybeans are grown in the southern Mindanao region (72.1%), followed by northern Mindanao (10.0%) and central Mindanao (9.4%). Imports of soybeans and products have steadily increased since Philippine farmers do not produce enough soybeans to meet local demands; the value (FOB US$) rising from $61,989,000 in 1980 to $127,981,000 in 1988. The main imports are soybean meal (accounting for 86.87% of total import value), refined soybean oil (5.19%), soybeans (4.18%), and crude soybean oil (223%). Before March 1986 the National Food Authority (NFA) had the sole authority to import soybeans, but with the introduction of the trade liberalization program, importation has reverted to private firms. In 1989 the country's major sources of imported soybeans were China (which supplied 42% of total imports), Brazil (34%), and the USA (15%). Exports, which are negligible, have grown from $136,000 to 1,123,000 during the same period. The main exports are soy sauce (accounting for 91.03% of total value), salted and fermented soybeans [fermented black soybeans] (tausi, 3.34%), and soybeans (2.65%).

Table 7 lists and describes "Soybean-based food products popularly used in the Philippines." Fermented products include soy sauce, salted and fermented soybean (*tausi*), tempe (tempeh), soybean paste (miso), and soybean curd (fermented tofu cubes; a soft cheese-type product with a salty but mild flavor, eaten as a relish or cooked with meat and vegetables). Non-fermented products include soybean sprouts (*toge*), soybean cheese (*tokwa* [tofu]), Geerlings cheese (taho, soymilk curds; a sweet dessert or snack food for children), soybean milk, and roasted soybean (soy coffee).

"In terms of food usage, Filipinos, unlike other Asians, have not developed a taste for soya-based products... Most of the soy products available in the market are either made at home or in family-operated shops.

"It is interesting to note from the report of Co (1987) that small scale food processors engaged in manufacture of

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taho and tokwa preferred locally grown beans to imported ones. They claimed that local soybeans have a distinctive 'fresh' quality which imparts a finer and smoother texture to their finished products providing a longer shelf life than that produced from imported beans.

"Recently, several developments in the local economy have signaled a revival of interest in the use of soybean as food. In 1980 Nestle Philippines Incorporated began commercial production of powdered soymilk products and later a baby soya-cereal food formulation and a soya-based meat extender which is produced primarily for export to other Asian countries. Today Nestle Philippines, in co-operation with the Land Bank of the Philippines, the Regional Offices of the Department of Agriculture and PCARRD is encouraging local production of soybean and had adopted a no importation policy.

"Some years ago, the use of TVP also gained a permanent foothold in the local processing industry. It is used in the manufacture of ground meat products and as a meat extender. Almost all TVP used in the country is imported except for the locally manufactured full-fat TVP which is being produced by the Vitarich Corporation, one of the biggest feed millers in the country. The company has built a full-fat soya processing plant capable of utilizing 900 MT [metric tons] of soybean per month. Unfortunately, all its raw soybean requirements are imported from the U.S. and China.

"Soybean flour, protein concentrate and protein isolates are the newest soya-based products and are now used extensively in the country for the formulation of meat emulsion products. All raw materials are imported and there is no local manufacturing capability at present."

"Programmes: As early as the 1970s, the government tried to involve itself to some degree in boosting national soybean output, despite the low priority it accorded to soybean in general. It was an involvement borne out of an urgent need to meet the growing requirements of the local feed milling and livestock industry, rather than of a need to address the high incidence of malnutrition among Filipinos. Accordingly, the government launched a number of programmes to improve soybean production, most of which failed to achieve their goals. At present, only the PCARRD-coordinated Soybean Pilot Production Programme continues to function. This programme was initiated in late 1983." Address: 1. Supervising Science Research Specialist, Philippine Council for Agriculture, Forestry, and Natural Resources Research and Development (PCARRD); 2. Dep. of Agriculture Bureau of Plant Industry, Los Baños National Crop Research and Development Centre. Both: The Philippines.

7722 Chamuvati, Chavalvut. 1992. Soybean production and utilization in Thailand. In: Increasing Soybean Production in Asia: Proceedings of a Workshop. 1992. Bogor, Indonesia: CGPRT Centre. 187 p. See p. 1-15. Held 21-24 Aug. 1990 at Phitsanulok, Thailand. [6 ref.]

• ***Summary:*** Contents: Introduction: Importance of agriculture, establishment of the Department of Agricultural Extension, DOAE's functions & responsibilities, soybean production, soybean production area, crop seasons, cultivation practices, harvesting, vegetable soybean. Soybean production and consumption campaign: Previous activities, 1990 activities, new creative work. Conclusion.

Thailand produces about 650,000 tons of soybeans each year. Of this, the first-grade seed is used for either home food industries (150,000 tons) or for next season's seed and other grain use. The remaining 500,000 tons are second grade seed, which are crushed to yield soy oil and soybean meal. The 20% of production used for food is used as follows: Fresh soybeans (*toa rae*) sold in open markets. Home industries: Soymilk, curd (tofu), soy sauce, fermented soybeans (*tao chiew*), soybean sprouts, starch or protein isolate for hot dogs or other sausages, and crisps (*Tao Nao*). Soy milk industries: Instant powdered milk mixed with dairy milk, fresh soymilk in packages, fresh soymilk in open market restaurants. "No soy grain [soybean seeds] is exported, except for a small amount of first-grade soybean to Singapore and Malaysia for making the above mentioned food."

"Vegetable soybean: Vegetable soybean is becoming more popular in agri-business, as many frozen-product companies are showing interest in this new crop. Seed is imported from Japan and Taiwan. Production yield has been impressive in several regions of the country such as Chiangmai, Chachoengsao, Petchburi, etc. Two companies which are close to the extension offices, are Chiangmai Frozen Food Co. and Okada Corporation Ltd.

"The Department of Agricultural Extension plays the role of middleman between private companies and the farmer. Extension officers also transfer new information to the local farmers. Additionally, a national plan on vegetable soybean has been submitted to the policymakers and a future plan includes the promotion of domestic consumption."

"Previous activities: In 1972 the idea of a soybean campaign was first thought of by scientists in the Institute of Food Research and Product Development, Kasetsart University and the Department of Agricultural Extension. The major sponsor and co-creator, was the American Soybean Association. The co-institutes organized a grand dinner to open the campaign. Afterwards, the Department of Agricultural Extension encouraged Bangkok and provincial headquarters to organize exhibitions, field days and local broadcasting or publications on soybean production and processing. The home-economists from various provinces and organizations met for training and a seminar. The Food Institutes of Kasetsart University played a major role through publications, technology transfer, demonstrations and seminars."

"Since the opening of the soybean campaign, we assume

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that about 50 percent of the total population has received information about soybean. At least 10 percent of the population has started or increased soybean consumption, both industrial and home made products. This evaluation was carried out by the working group using stratified random sampling with a well-designed questionnaire.

"From general observation, soybean has become more popular than in the past. Urban people are now aware of soybean products and do not object to consuming soybean in their regular diet. Rural people, however, have very definite ideas about food and it is difficult to change their traditional food habits. The main target of our campaign was therefore to introduce soybean products into the daily food pattern of rural villagers." Address: Div. of Crops Promotion, Dep. of Agriculture Extension, Bangkok, Thailand

7723. Fruin, W. Mark. 1992. The Japanese enterprise system. Competitive strategies and cooperative structures. Oxford, England: Oxford University Press (At the Clarendon Press). viii + 397 p. Illust. Index. 25 cm. [5 soy ref]

• ***Summary:*** The appendix of this book contains tables (p. 329+) showing the 200 largest industrial firms in Japan in the years 1918 (Kikkoman was 80th, p. 331), 1930 (47th, p. 337), 1954 (126th, p. 346), 1973, and 1987. Kikkoman does not appear in the last two.

Letter (e-mail) from Mark Fruin. 2011. Dec. 20. "Kikkoman falls out of the largest 200 industrial firms in 1973 and 1987. It's not so much that Kikkoman didn't do well in those years as other industries and firms grew a lot faster by comparison. Its revenue base stayed relatively small–soy sauce, other soy foods, and various other endeavors that were not that large relative to the Toshibas, Hitachis, Hondas and Toyotas of the world."

Among the 200 "largest industrial firms in Japan in 1918 and 1930, Noda Shoyu Company represents the only major Japanese corporation that became large on the basis of an indigenous technology [shoyu manufacture] and represents organizational and managerial continuity from the Tokugawa era" (p. 86).

A separate section (p. 108) titled "Noda Shoyu (Kikkoman)" notes that this company was one of the few successful rural enterprises; its manufactured products were packaged and branded at Noda, in rural Chiba prefecture, in the countryside. Although located a day's sail from Tokyo in the late 1800s, Kikkoman evolved rapidly into a dynamic and thriving enterprise as its management created a cluster of related businesses to support its manufacturing activities. In 1900 Kikkoman established its own bank, in 1904 its own research and development laboratory; and in 1911 it helped to build a railroad line from the nearby town of Kashiwa [situated between Noda and Tokyo] through the town of Noda. "As soon as practical, during the 1910s and 1920s, hydraulic presses, steam boilers, conveyor belts, and transfer lines for bottling and canning were installed (p. 108).

Noda Shoyu / Kikkoman is also mentioned or discussed on pages 87 (Kikkoman was subjected to the longest labor strike in pre-World War II Japan {1927-28}; Fruin "posits its outbreak as a clash between traditional methods of labor organization and management and modern requirements for high-volume production and an attendant need for direct management of the production function"), 129, 154-55, 309 (local governments–such as that at Noda–were often unable to "muster adequate resources for social welfare and community benefits." So Kikkoman "financed railroads, grammar schools, cultural centers, water works, fire departments and town halls in Noda for exactly these reasons"), 320, and 324. Address: Palo Alto, California.

7724. Iwata, Masakazu. 1992. Planted in good soil. A history of the Issei in United States agriculture. 2 vols. New York, NY: Peter Lang Publishing. American University Studies. Series IX, History. Vol. 58. [500* ref]

• ***Summary:*** Soybean production in the USA is not mentioned in this book, but in Vol. 1: Page 124. Saburôji Yoshimura of Ogden, Utah, recalls that for the $6.00 a month that he and others of his work gang paid for food, they received only a limited amount of rice "along with *miso shiru* or soy bean paste soup and *kyabeji no tsukemono* or pickled cabbage."

Page 205. In Vacaville, California, in the early 1900s, "the Issei obtained Japanese products from their fellow countrymen whose shops carried supplies such as rice, soy sauce, and other Oriental items."

Page 297 notes that in California, as in the other Pacific Coast states, "Japanese farmers purchased American clothes almost exclusively, but their food was largely of foreign origin. Soy sauce, *sake* (rice wine) and other delicacies were imported from Japan. In later years many of these items were manufactured here and in Hawaii, but in 1910 it was reported that from 50 to 70 percent of the food consumed by the Japanese farmer was imported."

Volume 1 of this book discusses in detail the Wakamatsu Tea and Silk Farm Colony, which was established in 1865 in Coloma in the Gold Country near Sacramento. They came with the intent of growing bamboo, tea plants, raising fish, etc. The colony lasted for only 12-18 months, then failed. In Vol. 1, the famous pioneering Wakamatsu Colony is mentioned on at least 12 pages including p. 36-43, 60-62, and 64.

In Vol. 2, miso is mentioned on p. 554 (In Washington state "*miso shiru*, or soy bean paste soup," was enjoyed by Issei farmers for breakfast).

In Vol. 2, Chapter 17, titled "The Southwest–Violence in Arizona" includes a discussion of the Tadano family. In 1913, "an unforgettable year," Arizona passed an Alien Land Law which prevented Japanese who were not born in the USA from owning land in Arizona (p. 676). However they could lease land or real property in the state for a

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period of up to five years. In 1916, Issei Tadeshi Tadano, arrived in Arizona from California's Imperial Valley and grew cantaloupes under paper covers, which hastened their maturation (p. 677). The new method was soon used by other Issei farmers. In 1921 a revised Alien Land Law prevented Issei from both owning and leasing land in Arizona. A crisis took place in 1934 when White farmers took the law into their own hands and tried to drive all Japanese from the lands of the Salt River Valley. "In the early morning hours of September 13, six masked riders armed with machine guns and rifles raided a lettuce ranch operated by Magoichi Inouye, Truma Yamamoto, and Takeshi Tadano. In the Tadano situation, the raiders fired in the direction of Tadashi Tadano, the son of the rancher [Takeshi], who had been asleep in the field guarding an irrigation watergate to prevent the repetition of the flooding of the newly planted lettuce field by vandals [on Sept. 9, footnote 68]. At the first shot the son fell to the ground and feigned death. The gang excitedly started for their cars but did not leave the scene until they had pushed the youth's pickup truck into the Grand canal [footnote 69, refers to photo]

"After their departure, the son dashed back to his home and reported the details to his father who placed calls to the sheriff's department and the Japanese community leaders." A week after the Tadano shooting incident, Arizona night riders struck again at another farm in a yet another act of intimidation (p. 696-97). Not much was ever done by the Arizona authorities for the Japanese. Note: Eventually the Tadano family went into the business of making soy sauce.

In Vol. 2, a Glossary (p. 891-95) defines *Miso shiru* (p. 893) as "Soy bean paste soup."

At the end of Vol. 2 (p. 957-60) are three maps (with legend) of Japanese American farming settlements in the United States: (1) Western United States. (2) Central United States. (3) Eastern United States. For example, in Washington state there were communities in Seattle, Yakima, Moses Lake, and Spokane.

Note: This is the earliest English-language document seen (Aug. 2011) that uses the term "soy bean paste soup" to refer to miso soup. Address: 879 N. Vail Ave., Montebello, California 90640. Phone: 213-723-4389.

7725. Leneman, Leah. 1992. The tofu cookbook. Hammersmith, London, England: Thorsons–An imprint of HarperCollins Publishers. 127 p. Illust. Index. 24 cm.

• ***Summary:*** "These no-meat, no-dairy, cruelty-free recipes foster health and a healthy environment by replacing meat and dairy products in traditional recipes with tofu... and soy milk. From bouillabaisse and guacamole to lasagna, curries, and ice cream, here are delicious new takes on your favorite international recipes." The copyright page notes: "Many of these recipes previously appeared in *The International Tofu Cookery Book* and *Soya Foods Cookery*.

Contents: Introduction. Types of tofu. Other soya (soy) foods: Soya milk, soya yogurt, soya mayonnaise, bean curd sticks or sheets, tempeh, soy sauce, miso, soya cheese (such as Veeze). Notes on recipes. Making tofu at home. 1. Soups and dips. Note: Ingredients for every recipe are given in both Imperial/Metric and American units. 2. Salads. 3. British- and American-style dishes. 4. Mexican-style dishes. 5. Mediterranean-style dishes. 6. Indian-style dishes. 7. Chinese- and other Far Eastern-style dishes. 8. Desserts. Recipe reference chart (for quick and easy recipes, recipes suitable for a single portion, and recipes for a dinner party).

Note: *Webster's Dictionary* defines bouillabaisse (pronounced bu-yuh-BAYZ, a term derived from the French and first used in 1855) as a highly seasoned fish stew made with at least two kinds of fish. See also: Potpourri. Address: 19 Leamington Terrace, Edinburgh EH10 4JP, Scotland.

7726. Sass, Lorna J. 1992. An ecological kitchen: Healthy meals for you and the planet. New York, NY: William Morrow and Company, Inc. xv + 492 p. Index. 26 cm. [35+* ref]

• ***Summary:*** This excellent vegetarian (actually vegan), ecological cookbook, proves that the most environmentally sound diet is also the healthiest and, for many, the most delicious and economical. It emphasizes whole grains, fruits and vegetables, focuses on unprocessed and minimally packaged foods, use of regional and seasonal foods, efficient menu planning, and creative recycling of leftovers. Delightful quotations relevant to the book's subject are scattered throughout.

The author's guiding principles for cooking ecologically are: "Eat a plant-based [vegan] diet, buy organic, regional, seasonal produce whenever possible; and use nontoxic products to keep your kitchen clean."

The chapter titled "Tofu and tempeh" (p. 217-31) contains basic information and many recipes. Other soy-related recipes include: Thai vegetable soup (with tofu, p. 39). Ten-ingredient lo mien (with tofu, p. 165-66). Triple bean maybe it's chili (p. 186-87). Black soybeans (p. 191-92; keep the skins on by adding salt). Curried mustard greens with tofu (p. 255). Chinese-style stir-fry of kale, onions, and marinated tofu (p. 258). Tahini-miso spread (p. 315). Sun-dried tomato dip (with tofu, p. 318). Brilliant beet dip (with tofu, p. 319). Onion upside-down cornbread (with tofu, p. 323-24). Tofu whip (like whipped cream or whip topping, p. 398).

The very fine chapter / glossary "Ingredients A to Z" (p. 399-468) includes: Aduki / azuki beans, agar, almond butter, almonds, amaranth, amasake (incl. koji), arame, barley malt syrup.

Black beans–fermented (salty black beans): "Black beans, fermented (Salty black beans): A little of this Chinese specialty–small black soybeans preserved in salt–goes a long way. About 1 tablespoon adds a deliciously complex flavor to stir-fries. Chop the beans finely to disperse their flavor. If

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you like the taste but want to reduce the salt, soak the beans briefly in water before using. Fermented black beans last for about a year in a well-sealed jar under refrigeration.

"Bragg Liquid Aminos: This is a *very tasty* soy-sauce-like condiment made by extracting amino acids from organic soybeans. Its flavor is more winelike and complex than most soy sauces. It is salty, so sprinkle sparingly. (There is no added salt, but 125 milligrams of sodium per ½ teaspoon come from the natural sodium in the soybeans.)

"Unlike soy sauce, Bragg Liquid Aminos is not fermented, making it an ideal seasoning for those who suffer from yeast sensitivities. Delicious added to stir-fries or plain-cooked grains. It is readily available in health food stores." Also in natural food stores.

Daikon, dulse, gomashio, hijicki / hizicki [sic, hijiki], job's tears, kombu, kuzu (kudzu), kuzu kiri, lupins, miso, mochi, natto, nigari, nori, peanut butter, peanuts, quinoa, rice–brown, rice cakes, rice syrup, sea vegetables, tamari-roasted seeds, seitan (wheat gluten), sesame butter (tahini), sesame oil, sesame seeds, shoyu, soybeans, soybeans–black, soy cheese, soy flakes, soy flour, soyfoods, soy grits, soy ice cream, soy milk, soynuts, soy oil, soy powder (powdered soy milk), soysage, soy sauce, soy yogurt (fermented), tahini, tamari soy sauce, tempeh, tofu, umeboshi plums, wakame, wasabi, winged beans. Note: Also contains recipes for many of these glossary items.

A color portrait photo on the inside rear dust jacket shows Lorna Sass–with a brief biography; she is a culinary historian, cookbook author, and food writer. Address: Box 704, New York City, NY 10024.

7727. Titsingh, Isaac. 1992. The private correspondence of Isaac Titsingh, Vol. 2 (1779-1812). Introduced and edited by Frank Lequin. Amsterdam, Netherlands: J.C. Giebon. Index. 24 cm. Series: Japonica Neerlandica vol. 4. [1 soy ref. Dut]
• ***Summary:*** Text chiefly in Dutch, with some correspondence in English. Soy [sauce] is mentioned only once in this book, in letter no. 221 of June 1785 (p. 544) (*"Een kast afgekookte soya op kannetjes"*).

7728. Toomay, Mindy; Hadler, Susan Geiskopf. 1992. The best 125 meatless pasta dishes. Rocklin, California: Prima Publishing. xvi + 318 p. Illust. Index. 22 cm.
• ***Summary:*** This vegetarian pasta cookbook contains information about tofu, tempeh, and miso, plus 7 tofu recipes, 2 tempeh recipes, and 2 miso recipes. Agé (puffy deep-fried tofu) is used in: Soba in broth with fried vegetables and agé. Soy sauce is used in various broth recipes.

7729. Toussaint-Samat, Maguelonne. 1992. A history of food. Translated from the French by Anthea Bell. Malden, Massachusetts, and Oxford, England: Blackwell Publishers Inc. xix + 801 p. Illust. Index. 23 cm. [200* ref]
• ***Summary:*** A fascinating book of vast scope. The author's principal interest is in the medieval and Renaissance culture of Europe, in particular the domestic economy, food, and clothing. Thus the focus of the book is on Europe (especially France) and the Middle East. It also emphasizes the symbolism of foods.

Chapter 2, "The history of gathering," contains a section titled "Soya: the most widely eaten plant in the world" (p. 51-56), which is long on myth and symbol, and short on historical accuracy. It briefly discusses the following: Soya milk, soya flour, miso, jiang, soya sauce, soya oil and meal, bean-sprouts, tofu, dried soya beans.

Interesting chapters include: The history of meat (p. 93+). The history of cereals (p. 125+). The history of oil (p. 205+). The history of bread and cakes (p. 223+). An essential food: The history of salt (p. 457+). Spice at any price (p. 480+, including The great trading companies). The lure of sugar (p. 552). The potato revolution (p. 711+). The assurance of dietetics (p. 755, including an excellent "Chronology of dietary progress" from 2 million B.C. to the present, with detailed information on food developments during the paleolithic, mesolithic, and neolithic periods of the Stone Age). Address: Historian, journalist, writer, France.

7730. Tropp, Barbara; Schreil, Arminda Asprer. 1992. China Moon cookbook. New York, NY: Workman Publishing. x + 518 p. Illust. (by Sandra Bruce). Index. 24 cm.
• ***Summary:*** China Moon Cafe is a small restaurant that Barbara opened in 1986 in downtown San Francisco in a 1930s art deco coffee shop on Post St. Barbara says she is primarily a cooking teacher but she is also one of the best writers in the world of food, and a superb interpreter of real Chinese food and ingredients to Westerners. Each recipe is made from scratch, in the traditional way, and comes with interesting (often lengthy) headnotes or sidebars.

Barbara prefers not to peel gingerroot but all of her chefs and sous-chefs insist that it be peeled–so it is (p. 8-9).

Ingredients for infusion: "Chinese fermented black beans should be moist and pliable to the touch. They should taste good, with a nice range of flavor in the aftertaste. My favorite brand is Pearl River Bridge, in a round yellow box. Don't use beans that are hard and shriveled" (p. 14).

The index contains 17 entries for hoisin sauce, 7 for black bean(s) (Chinese fermented), 5 for black bean sauce, 4 for bean sauce (all soy-based), 1 for mushroom soy sauce, and none for tofu (although it is described on p. 508).

"Mushroom soy sauce–infused with dried black (shiitake) mushrooms is the flavorful star of the black soy sauce family" (p. 148).

Black beans: "Don't wash 'em! Black bean sauces are usually flat and murky affairs. A practice followed religiously by most all Chinese cooks is to wash off the salt and mash the beans." Barbara does neither (p. 245).

Bean pastes: "All in the family: Hot bean paste, sweet

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bean paste, and hoisin sauce are close culinary cousins. Soy bean- and wheat-based condiments all, they might easily have been one in ancient times. Regional distinctions and the march of modernity have given us three separate products with flavors that work beautifully in combination." Barbara likes Koon Chun hoisin sauce and Szechwan brand hot and sweet bean pastes. They are made in Taiwan and are widely available (p. 308).

The "Glossary of special ingredients" (p. 501-08) includes descriptions of: Bean pastes (hot bean paste, sweet bean paste) Black soy sauce (Concentrated, made with molasses, her favorite is Pearl River Bridge. The English label reads "Soy, Superior Sauce." "The Chinese name for black soy sauce is 'old head soy,' referring to the extra aging process that gives this soy its savor") "Hoisin sauce This brown, salty-sweet sauce has a fascinating history in China, it changes its name and style from region to region, being wheat-based in some areas and soybean-based in others." She prefers Koon Chun brand. Salted black beans: They are fermented black soybeans. She prefers Pearl River Bridge brand packed in a cardboard box. Soy sauce Her favorite brand is Pearl River Bridge, its label reads "Superior Soy." "Tofu: This protein-rich white substance made from soybeans delights the Chinese and baffles Westerners."

On the rear cover: "Barbara Tropp is the Julia Child of the Chinese Kitchen"–San Francisco Chronicle. Two color photos show Barbara Tropp, one on a motor scooter. And there is a brief biography Address: San Francisco

7731 Velde, Paul van der, Bachofner, Rudolf, eds. 1992. The Deshima diaries marginalia, 1700-1740. Tokyo: Japan-Netherlands Institute. xxiii + 595 p. Illust. (some color). 27 cm. Series: Nichi-Ran Gakai gakujutsu sosho, No. 12.
• ***Summary:*** Translation of marginal notes from official diaries kept at the Dutch factory in Nagasaki. Dutch resident merchants lived from 1641 to 1860 on the artificial isle of Deshima in Nagasaki Bay, during this time they were the only European or Western country allowed to trade with Japan. After Japan opened its doors to Western trade in the 1850s, the Dutch lost their trade monopoly

Soy [sauce] is mentioned only once, but not as an item of export from Japan, in an entry for 29 April 1724 (p. 287).

In the index there are many entries for saké (p. 586, 591) and seaweed (p. 586)–mostly as presents for Dutch officials.

None of the following are mentioned in the index: Beans, mebos, miso, catchup, kecap, ketchup, ketjap, sauce, umeboshi Address: Netherlands.

7732 Bell, Marvellen. 1993. Spring Farm will bring people from China to make soy sauce in Houston, Texas (Interview) *SoyaScan Notes*. Jan. 26. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** AmCal is the parent company of Spring Farm and Calco in Houston. Spring Farm is an Oriental company that is starting a series of farms to grow Oriental vegetables in Houston Spring Farm is in the process of bringing several soy sauce makers from China (PRC) to set up a company in Houston to make Chinese-style soy sauce. They plan to use defatted soybean meal. Address: Spring Farm, 10103 Fondren Rd #555, Houston, Texas 77-96-4552.

7733. Yates, Ronald E. 1993. Wisconsin's other brew–The joy of soy: How a Japanese sauce company found a happy home in Walworth, Wisconsin. *Chicago Tribune Magazine*. Jan. 31. p. 12-17. Sunday. Cover story.
• ***Summary:*** Gives a history of Kikkoman and tells how this major Japanese company ended up building a soy sauce plant in Walworth, Wisconsin (population 1,164). Back in 1615, in the Kansai plain region of Japan, the troops of Tokugawa Ieyasu, founder of Japan's last great feudal shogunate or dynasty, have stormed the Osaka castle of rival warlord Toyotomi Hideyori and have put him–as well as his family and retainers–to the sword. Among those killed was the warrior husband of a woman named Maki Shige; she was also marked for death by the shogun. Using her wits and resources, she managed to evade her pursuers. Along with her children, she slipped out of Osaka, journeyed some 300 miles across the Kansai plane to the Kanto plain, and settled in the village of Noda, northeast of Japan's capital at Edo (now Tokyo). Then Maki changed her name to Mogi and began a new life as a rice farmer. By 1630 she had learned the art of brewing shoyu, or Japanese-style soy sauce. "The widow Mogi's soy sauce is especially coveted because of its quality." It is to this widow that the Mogi family, which founded Kikkoman, traces its origins.

An important part of the story is how Yuzaburo Mogi, who graduated from Columbia University in 1961 with a degree in business administration, spearheaded Kikkoman's efforts to build a factory in America; the plant was finished in June 1973, and by the end of its first year of operation it had produced 1.6 million gallons of soy sauce Today, as Kikkoman prepares to celebrate its 20th anniversary in Walworth, the plant's production has grown eightfold to 13 million gallons a year and Kikkoman now controls about 50% of the U.S. soy sauce market–ahead of its major rivals La Choy and Chun King.

Kikkoman is the world's largest manufacturer of soy sauce. In Japan, Kikkoman has about 30% of the domestic soy sauce market–but here it must compete with some 2,500 other manufacturers

Note: Before to joining the Chicago Tribune's financial department, Ron Yates spent 6 years as the newspaper's chief Asia correspondent, based in Tokyo

7734. Potter, Michael. 1993. Re: A brief chronology of Eden Foods. Letter to William Shurtleff at Soyfoods Center, Feb 14–in reply to inquiry. 2 p.
• ***Summary:*** William Shurtleff sent Michael Potter a

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chronology of Eden Foods that he (Shurtleff) had compiled from various sources, and asked for Potter's comments, which follow. This letter is a follow-up to a letter written by Potter to Shurtleff on 1 March 1992.

"Eden Foods, Inc. was first incorporated as a non-profit corporation in the winter of 1967/1968, I believe. It was later (Bill Bolduc told me, in a manner that was not consistent with state law) reincorporated (after Ron Teeguarden pulled out) as a regular corporation under the name Eden Organic Foods, Inc. This WAS done by Bill Bolduc in November of 1969.

"Mr. William Shurtleff, traditionally corporations do not define the date they were *founded* as the date they became 'officially' or legally 'incorporated.' Commonly, decades separate these two occurrences, sometimes centuries.

"These thoughts will loosely follow your 2-page 'chronology of key events.' Eden was buying and selling soyfoods, tamari and miso, for more than 2 years prior to Nov. 4, 1969.

"During the spring of 1970 I became a partner of Joyous Revival natural foods in Birmingham, Michigan. I developed a relationship with Bill Bolduc... [the Eden's store's manager], as we were both attempting the same things and respected the quality of the work each other was doing. Frequently Bill B. asked me to move to Ann Arbor.

"After a falling our with my partners in December 1970, I visited Bill and Judy [his wife] in January 1971 and was hired by Bill on the spot, at his home, in his kitchen. My first job was to help a failing new Eden retail outlet in downtown Detroit on the campus of Wayne State University. (I never lived in Detroit at the time. I lived in Walnut Lake 30 minutes north.) By late spring or early summer 1971, after closing this Eden store, my pregnant wife Carol and I moved to Ann Arbor where I assumed responsibility for the Eden Foods store at 211 South State St. It is of interest that Eden Foods' name had already been legally changed back to just Eden Foods, Inc., when I moved to Ann Arbor.

"During the winter of 1971/1972 I was given what amounted to 13.5% of the common stock of Eden Foods, Inc. The share holdings then broke down: Bill Bolduc and Tim Redmond owned the same number of shares, but Judy Bolduc owned a small number of shares so the Bolducs owned the largest block.

Mid-Summer, July 1973, Bill thought the company was going out of business and after I stepped into a near fist fight between Bill and Tim outside the warehouse we were sharing with Mid West Natural Foods; I told them 'that if they'd just quit fighting and leave things alone, all would be well.' Bill immediately offered to sell me all of his stock. I asked Bill how much he wanted for it. After a very brief pause he said "$2,500." I told him that I'd try to get the money. We parted. Bill left and Tim and I went back to work. The next day I visited a friend named Ray Suber and asked him to help me purchase the stock. He said he would and to come back the next day. I did and was given $2,500 cash as a 'contribution to the natural foods movement.' With the $2,500 I purchased all of Bill and Judy's Eden Foods, Inc. stock. Neither Bill nor Judy 'sold their stock back to the company.' They sold it to me for cash. They were glad to get out because they were convinced the company couldn't make it."

From a talk on 31 Oct. 1993: There was a 51% Tim Redmond / 49% Michael Potter share holding configuration in Eden Foods, but it lasted for less than a year. When Michael bought all of the Bolduc's stock, he owned the majority of Eden Foods' stock. But he realized that Tim Redmond's father might withdraw his $10,000 if he knew Michael had majority ownership, and if that happened Eden would not be able to survive. So Michael immediately (as part of the transaction with the Bolducs) gave Tim enough of his stock so that Tim owned 51% and Michael owned 49%.

About 3 months later, Michael loaned about $44,000 in cash to Eden Foods. This was money that Michael's father had entrusted to him. But Michael became uncomfortable having no control over something for which he was responsible–both the company and his relationship with his father. Michael discussed his feeling with Tim, and Tim agreed to give Michael equal ownership in exchange for Michael converting his $44,000 loan into an investment in Eden Foods. Now neither partner could make a major decision without the other's agreement–a good situation for Eden Foods.

"In September 1973, at Royce Seeger's home, I received the unanimous recommendation of an employee steering committee and became Bill Bolduc's successor as president of the company. My first goal was to get us away from MidWest Natural Foods for moral and ethical reasons. I located a new facility in the process of being constructed and developed a relationship with the owner/builder, John Sheer. In the spring of 1974 we relocated to that 4601 Platt Road, Ann Arbor warehouse.

"During this period I was building and moving Eden's retail store to 330 Maynard St. in Ann Arbor. The move actually took place in the summer of 1973. It included a large store, a large fast food (chapati sandwiches, etc.) deli, and a natural foods bakery named Sun Bakery, that relocated itself from Kalamazoo, Michigan. These three operations were under one roof in a 6,000 square foot old printing plant at the University of Michigan's campus, leased by Eden Foods, Inc. This operation paid off all Eden's debt and paid for the new warehouse, computer, offices, trucks and equipment. The wholesale operation was carried by the retail until late 1974 after trucks were put out on regular routs throughout the Mid-west.

In October 1974 I made my first of eleven trips to the People's Republic of China (Eden made a total of 13 trips between Oct. 1974 and Nov. 1979) and stopped in Japan on the way back to visit Yuko Okada at the Muso Company. Prior to 1974 Eden Foods imported shipments from Mr.

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Kazama of the Mitoku Co. in Japan. After my visit to Muso, seeing their educational activities, their macrobiotic center activities, etc., I decided to import Japanese foods exclusively from Muso. Tim Redmond had cultivated the Mitoku connection and initiated our first Japanese imports.

"Spring 1979 Cliff Adler is hired by myself to do sales work for Eden in Chicago. During that summer he lends Eden Foods $100,000, for which he is paid bank interest rates.

"After the Nov. 27, 1979 warehouse fire Cliff converted his $100,000 to stock in February 1980 as Tim Redmond left, certain that Eden was finished. Tim's stock was redeemed with Eden giving him title to our operations at 330 Maynard St. In one transaction Tim was bought out by the company, Cliff and I became 34% shareholders, 10% was sold to Frank Dietrich of Natural Foods, Inc. (Toledo, Ohio) for $100,000 and the following percentages of Eden Foods' common stock were given to Eden managers shortly after we laid off 35 people: Ronnie Roller 5%, Michael Gordon 4%, Mark Cook 4%, Kathy Knor 3%, Bill Swaney 3%, and Bob Duha 3%. This free stock was limited to book value and had to be sold to Eden Foods whenever the person left the company regardless of the reason for leaving. It could not be sold another way.

"In early 1984 when Mike Gordon left Eden his stock was awarded to Michael Potter as a bonus by the Board of Directors ... to be continued." Address: Chairman, Eden Foods, Inc., 701 Tecumseh Rd., Clinton, Michigan 49236. Phone: 517-456-7424.

7735. Badani, Bernard. 1993. Edible soybean mission report, Korea, Indonesia, Taiwan, February 1993. Ottawa, Ontario, Canada: Agriculture and Agri-Food Canada. iii + 14 + 17 p. 28 cm. Spiral bound.

• ***Summary:*** Contents: Foreword. Acknowledgements. Mission members: Tino Breuer, Ron MacDougall, Dr. Gary Ablett, Jim Lowe, Bernard Badani. 1. Visit to Korea: Executive summary, report, conclusions, recommended follow-up. 2. Visit to Indonesia: Executive summary, report, background, price structure, quality requirements, conclusions, recommended follow-up. 3. Visit to Taiwan: Executive summary, report, background, price structures, conclusions, recommended follow-up. Appendix A. List of contacts (photocopies of business cards of people met on the trip). List of 26 invitees for Canadian soybean seminar in Seoul (15 Feb. 1993), including academic researchers, government, soybean crushers, soysauce association, tofu association, food-related media, soybean milk manufacturers (Kwangja General Foods Co., Namyang Dairy Co., Lotte-Chilsung Beverage Co., Samyuk Foods Co., Dong-A/Otzka Co., Dr. Chung's Foods, See Joo Industry Co.). List of participants for Indonesia and business cards from Indonesia (incl. Primkopti, Sarpindo, Ikapti, Yeo's-P.T. Salim Graha). Business cards from Taiwan. Address: Oilseeds Div., Grain Marketing Bureau, Grains and Oilseeds Branch, Agriculture Canada, Ottawa.

7736. Matsuura, Masaru; Obata, Akio. 1993. β-Glucosidases from soybeans hydrolyze daidzin and genistin. *J. of Food Science* 58(1):144-47. Jan/Feb. [23 ref.]

• ***Summary:*** Beta-glucosidases are enzymes in soybeans. Address: Research & Development Div. of Kikkoman Corp., 399 Noda, Noda City, Chiba prefecture 278, Japan.

7737. Bates, Dorothy R.; Wingate, Colby. 1993. Cooking with gluten and seitan. Summertown, Tennessee: The Book Publishing Co. 128 p. March. Illust. by Barbara McNew and Thomas Johns. Index. 22 cm.

• ***Summary:*** This is vegan cookbook. Seitan is gluten cooked in a soy sauce broth. This book calls vital wheat gluten "instant gluten flour." It has already had the starch and bran removed and needs only to be mixed with seasoning and liquid. Miso is used as a seasoning in several recipes, and "tamari" in many seitan seasoning sauces.

Contents: Introduction. A word on nutrition. Making gluten. Making seitan. Ingredients. Recipes (a nutritional analysis is given for each recipe): Appetizers, soups, salads, American, Asian, Continental, Mexican, Italian. Sources for ingredients. Address: Summertown, Tennessee.

7738. **Product Name:** Smoked Tofu [Sweet Amilla, or Hot Obsession]. Renamed Sweet and Hot Teriyaki, respectively, in 2002.
Manufacturer's Name: North Coast Distributors.
Manufacturer's Address: 2655 Cloverdale, Concord, California. Phone: 510-798-4393 or 510-944-0599.
Date of Introduction: 1993. March.
Wt/Vol., Packaging, Price: 6 oz or 16 oz plastic tub. Wholesales for $1.80 or $4.75 respectively (3/95, California).
How Stored: Refrigerated.
New Product–Documentation: Price list from Natural Products Expo West at Anaheim, California. 1995. March. Printed black orange. Talk with Hanan Onn. 1995. March 22. These two products were launched in about March 1993.

7739. Pinault, Pascal. 1993. Re: Tama–France's best importer of Japanese natural foods. Letter to William Shurtleff at Soyfoods Center, April 27. 5 p.

• ***Summary:*** Tama is located at 883, rue de Bernau, 94500 Champigny / Marne, France. Phone: (1) 49-83-79-94. Fax: (1) 47-06-37-85. Tama traces its origins to the 1960s when it was part of a restaurant, Le Bol en Bois, the first vegetarian place in Paris. This restaurant (at 35, 40 Rue Pascal, 75013, Paris) now specializes in macrobiotic cooking. They added a health food store and a "new age" book shop.

"Tama distributes Mitoku products and excellent miso, soy sauces, amasaké, kuzu, Japanese seaweeds, mochi, etc.

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They have an excellent list of books concerning natural foods and cooking. They print their own brochures about tofu, seaweeds, and others. Tama has a subsidiary branch named Tofu-Daizou which makes the best tofu in France, as far as I know." Address: "Caplet," 97226 Morne Vert, Martinique, French West Indies 0033. Phone: 596 55-56-57.

7740. Herian, Anne M.; Taylor, S.L.; Bush, R.K. 1993. Allergenic reactivity of various soybean products as determined by RAST inhibition. *J. of Food Science* 58(2):385-88. March/April. [16 ref.]
• ***Summary:*** RAST stands for "radioallergosorbent test." Soybean allergy is a common childhood food allergy, although it is less common than allergies to cow's milk, eggs and peanuts. Food allergies are generally more common in children than in adults. In this study of atopic adult patients, using RAST inhibition as a measure, the allergenicity of a variety of soy products was compared to that of whole soybeans. Results indicated that, when expressed on a per protein basis, although extracts of tofu, miso, tempeh, and fermented soy sauce were allergenic, they were as little as one tenth as allergenic as extracts of whole soybeans. Address: 1. Dep. of Food and Research Inst., Dep. of Food Microbiology and Toxicology, Univ. of Wisconsin, Madison, Wisconsin 53706; 2. Dep. of Food Science and Technology and Food Processing Center, Univ. of Nebraska, Lincoln, Nebraska 68583-0919; address inquiries to second author.

7741. *SoyaScan Notes*.1993. New Trend: Specialized manufacturers of tofu and tempeh become manufacturers of many types of soyfoods (Overview). May 22. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** The first soyfoods manufacturer in America to make a wide variety of different types of soyfoods was White Wave of Boulder, Colorado. They began as a tofu manufacturer in Sept. 1977, but by 1978 had introduced Soy Sannies (sandwiches with miso-tahini spread) and Soymilk (in 3 flavors). In 1979 they launched Soy Tempeh, Polar Bean (a soymilk-based soy ice cream, which they also made from Tofu Today / Tofruzen starting in 1985), Soya Rice Tempeh, Vegetarian Soysage, Tamaried Nuts, and a host of deli-type ready-to-serve tofu products such as Missing Egg Salad, Tofu Cheesecake, Tofu Cinnamon Rolls, etc. In Jan. 1989 White Wave began its move into dairylike products in a big way with Soy A Melt (a soy cheese with casein) followed in May 1991 with White Wave Dairyless (a soy yogurt in 5 flavors and the company's most successful product ever). New flavors of soy yogurt were introduced in 1992 and 1993. Note: White Wave was also the first post-1975 soyfoods company in America to grow by acquiring other companies–Soyfoods Unlimited (a tempeh manufacturer) in Dec. 1986, and Laudisio Veggie Life, a maker of veggie burgers, in March 1993.

Lightlife Foods in Greenfield, Massachusetts (named The Tempeh Works before April 1987) started as a tempeh manufacturer in Sept. 1979. In May 1984 they started to make Weissman's Original Tofu Sausage for John Weissman of the Vegetable Protein Co. In Sept. 1985 they launched Lightlife Meatless Tofu Pups (meatless hot dogs), and in Oct. 1987 they launched Lightlife Party Pups (meatless frankfurters–cocktail size Tofu Pups; Renamed Tofu Party Pups by Feb. 1988). Today Lightlife makes a wide range of tempeh and tofu products.

Sharon's Finest in Santa Rosa, California (named Brightsong Tofu from June 1978 to June 1980; Redwood Valley Soyfoods Unlimited until June 1982; Brightsong Light Foods until June 1987; Rose International until 1990) started as a tofu manufacturer in June 1978. By Aug. 1980 they were making and selling soymilk. Their diversification began in 1984 with Mix Plus+ (a liquid mix to make tofu frozen desserts) and LeTofu (non-dairy soy ice cream in hard pack and soft serve). Related ice cream products followed. In early 1986 Richard Rose reformulated Soy-O, a soymilk yogurt for Brown Cow West. In May 1986 the company launched Fruit D'Lite (a fruit-sweetened sorbet/mousse liquid soft serve mix) in 4 flavors using isolated soy protein as the soy ingredient. The move into soy cheese began in June 1986 with Mozzarella Style Tofu-Rella (an organic tofu-based cheese analog with casein). In July 1987 the company launched Le Yogurt (a dairy-based soft-serve frozen yogurt dry mix). In Jan. 1992 they launched Heart's D'Lite (a fat-free cheese alternative in various flavors) with organic tofu and casein and tofu as the main ingredients. By 1992 Sharon's Finest was primarily a marketer of soy cheeses; they sold their cheese to many other food companies and even exported them to the UK.

7742. Library of Congress, Subject Cataloging Div., Processing Services. 1993. Library of Congress subject headings. 16th edition. Washington, DC: Cataloging Distribution Service, Library of Congress. 4 volumes.
• ***Summary:*** For the basic idea, words and LC call numbers see the 12th edition (1989). Address: Washington, DC.

7743. **Product Name:** Seitan: Traditionally Seasoned Wheat Gluten.
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: 6123 E. Arapahoe Rd., Boulder, CO 80303. Phone: 303-443-3470.
Date of Introduction: 1993, May.
Wt/Vol., Packaging, Price: 8 oz packed in water in molded plastic tray with heat-sealed, peel-off plastic film lid.
How Stored: Refrigerated.
New Product–Documentation: Talk with Lon Stromnes, 1993, Feb. 9. This product will be launched at the Natural Products West Expo in Anaheim this month. The name has not yet been determined. White Wave aims to be a major nationwide player in the seitan industry. The product will

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be introduced packaged in a tofu tub, with a broth and a beautiful label. White Wave will make the seitan itself in Boulder. They will start with one flavor, then expand the line into meatless seitan pork chops, burgers, etc.

Talk with Lon Stromnes. 1993. April 14. A mock-up of this product appeared at the Anaheim show, but the product will probably not be on the market until about mid-May. Label brought by Steve Demos of White Wave. 1993. July 31. 4½ by 5¼ inches. Green, dark blue, brown, and white on turquoise. Illustration of an open-sided Japanese hut in front of a green mountain, with a moon in the upper left corner. "Sauté with ginger and tamari."

Ad (1/8 page, black-and-white) in Natural Foods Merchandiser. 1993. Oct. p. 22. "Devilishly good." At the bottom of the ad is a line that reads: "Traditionally seasoned Wheat Meat.'" In the lower right hand corner is a Vegan certification symbol and a Star K kosher sign.

7744. **Product Name:** Veggie Life Burger.
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: 6123 E. Arapahoe Rd., Boulder, CO 80303. Phone: 303-443-3470.
Date of Introduction: 1993, May.
Ingredients: Cooked rice (brown rice, water), tofu (water, soybeans, gypsum, nigari (magnesium chloride)), wheat gluten, soy sauce (water, soybeans*, whole wheat, salt), green peppers, mushrooms, onions, carrots, sunflower seeds, oat flour, sesame seeds, granulated garlic. * = Soybeans grown and processed in accordance with the California Organic Foods Act of 1990.
Wt/Vol., Packaging, Price: 5 oz. (142 gm) vacuum pack.
How Stored: Refrigerated or frozen.
Nutrition: Per 71 gm. patty: Calories 110, protein 5 gm, carbohydrate 16 gm, fat 3 gm, cholesterol 0 mg, sodium 210 mg.
New Product–Documentation: Talk with Steve Demos, president of White Wave. 1993. May 22. On 15 May 1993 the burger hit the market with a new White Wave label that reads: "White Wave Veggie Life Burger." The retail product consists of 2 patties vacuum packed (2.5 oz each), and the 3.5 ounce for foodservice.

Label sent by Leonardo Laudisio. 1993. June 15. 4 by 4.5 inches. Self adhesive. Red, black, orange, yellow, blue and white. "No meat. No eggs. No dairy."

White Wave news release. 1996. Feb. "White Wave beefs up its vegetarian burger line. Vegetarian cuisine company launches new Prime Burger, Chick'n Burger, and the new Veggie Life Burger."

Label sent by Paul Chasnoff of White Wave. 1996. May 2. 5.5 by 4 by 3/4 inch. Paperboard sleeve. Dark green, green, brown, tan, and beige. Color photo of the burger on a little lettuce, topped with a sliced pickles, relish, and a bun. The product name is now "VeggieLife Seasoned Grain & Vegetable Patty." The ingredients in this product are very similar to those in the original May 1993 product, except that the tofu is organic. The weight is now 6 ounces instead of 5. "Cholesterol free."

7745. Rekers, Ellen. 1993. Re: Gist-brocades n.v., soy sauce manufacturer in The Netherlands. Letter (fax) to William Shurtleff at Soyfoods Center. June 10. 1 p.
• ***Summary:*** Gist-brocades is one of the largest producers of soy sauce in Holland. "This company is trying to orient itself on the world market of soy sauce."

Note: Several days earlier, Soyfoods Center received a letter (fax) from Annemarie Dill of the Market Intelligence Group, Gist-brocades n.v., Delft, Netherlands, asking about information on the world market for soy protein isolates. Address: Royal Netherlands Embassy, Office of the Agricultural Counselor, 4200 Linnean Ave., N.W., Washington, DC, 20008. Phone: 202-244-5300.

7746. Weiner, Michael. 1993. New developments with Amano and Yamashita (Interview). *SoyaScan Notes*. June 18. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Michael works as a consultant for Peter Joe of Sunrise Market Ltd. and with Amano Foods. He used to consult with Mandarin Enterprises in British Columbia. Now his main work is as a broker, representing various U.S. companies such as Vitasoy, Knudsen, Santa Cruz, etc. Amano still makes all of Westbrae's organic miso. Amano is trying to construct a 60,000 square foot plant. They had a joint venture with Yamashita but it fell apart. Now Yamashita is constructing their own 60,000 square foot soy sauce plant in Oregon. The ground breaking will take place in a couple of weeks. Michael does not feel that this will be much of a threat to Amano, which plans to sell a lot of Amano products in supermarkets. The market is big and growing rapidly. Soyfoods now are given large amounts of shelf space (8-16 linear feet) in the produce section of all supermarkets in western Canada (British Columbia, Alberta, and Manitoba). A major reason for this is that Mandarin and Sunrise have an excellent relationship with the people in charge of the produce section in western Canadian supermarkets. Initially Michael helped to establish some of these relationships. these companies got a few facings for their tofu. Then Mandarin added their tofu burgers. Then Sunrise added Yves Wieners and soy cheese. The products sold, which is proof that exposure will work. Michael was involved in trying to make the same thing happen in Ontario with the Loblaws chain, and in Quebec, but they were never allowed to give the program a try–not even in 1-2 stores.

Safeway supermarkets are so sold on soyfoods that they have developed special open-front, vertical, refrigerated "Tofu Products" cases that are placed adjacent to the produce case, but have a lower temperature. They are quite large and contain everything from soy drinks to tofu, soy cheese to meatless hot dogs. Soyfoods are very widely available on

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Vancouver Island.

Sunrise and Michael jointly import Mori-Nu tofu into Canada from Japan. Also Sunrise distributes some juice products for which Michael is the broker. Mori-Nu does not sell well in supermarkets because it's retail price is too high. Address: President, New Age Marketing, P.O. Box 39590, White Rock, BC, V4A 9P3, Canada. Phone: 604-538-0127.

7747. Nagayama, Hisao; Tokue, Akihiko. 1993. The naked kitchen: Shôyu. *Look Japan* (*Tokyo*) 39(447):24-25, June.
• ***Summary:*** Color photographs of 4 types of shoyu in shallow plates, each with a pattern on the bottom, show that shiro shoyu is the lightest in color, followed by usukuchi shoyu, koikuchi shoyu, and finally tamari (the darkest). Usukuchi, popular in the Kyoto area, is salty as well as light. "Among the more celebrated local varieties is Nagoya's shiroshôyu, a nearly transparent liquid whose slightly sweet taste sets it apart." No sashimi is complete without shoyu.

7748. **Product Name:** Blue Mountain Country Farm Tempeh, and Tempeh Burgers.
Manufacturer's Name: Naturama.
Manufacturer's Address: 84 Kloof St., Gardens, Cape Town 8000, South Africa.
Date of Introduction: 1993, June.
Ingredients: Tempeh: soybeans, tempeh starter. Burgers: Soybeans, tempeh starter, tamari, 100% pure apple juice, virgin olive oil.
Wt/Vol., Packaging, Price: Tempeh: 300 gm. Tempeh Burgers: 200 gm.
How Stored: Frozen.
New Product–Documentation: Letter from Michael Tidd, founder and owner of Naturama, 1993, July 25. "I have just begun a small-scale tempeh shop here in South Africa and I am just about to start some Amazake experiments." By using your "Book of Tempeh" "I have been able to start selling tempeh and tempeh burgers on the local market with increasing success." Letter and Labels sent by Michael Tidd, 1993, Aug. 12. He began producing tempeh and tempeh burgers on 28 June 1993. Concerning soyfoods companies in South Africa, "there are only a couple of home kitchen size tofu makers in so far as I can see whom I shall try to locate so as to send you their particulars. I think due to various reasons the wholefood movement has definitely been slow off the mark here compared to the U.S. and Europe, but nonetheless its only a matter of time before it spirals upwards."

Both tempeh Labels, 3.75 by 5.5 inches. Black ink on white paper (photocopied). Tempeh serving suggestion: "Indonesian Fried Tempeh. Thaw tempeh, soak pieces of fresh tempeh in brine (4 tsp. salt in 4 cups water) for 20 minutes. Pan fry in oil or margarine or deep fry till golden brown. Try it topped with sauce, baked on pizza or in sandwiches."

Tempeh burgers serving suggestion: "Thaw burgers then either pan fry for 3-4 minutes each side or grill for 2 minutes each side. Serve in a wheat-free roll with lettuce, tomato, and pickle."

Letter from Michael Tidd, 1994, Nov. 11. He "lived for a couple of years in South Africa until April 1994." He sold his business, Country Farm Foods, which was making tempeh and amazake in South Africa, to Bobby McLean, and he is now living in Reading, England. "I am about to have a go here in England."

Talk with Michael Tidd, who calls from Reading, England. He will soon start making and selling tempeh as Tidd's Tempeh.

7749. **Product Name:** Tofu Jerky [Spicy, or Mild].
Manufacturer's Name: Cedar Springs Naturals.
Manufacturer's Address: Health Zone of Temecula, 27468 Ynez Rd., Suite B-7, Temecula, CA 92590. Phone: 909-694-5488.
Date of Introduction: 1993, July.
Ingredients: Tofu (made from whole soybeans), 100% natural soy sauce (made from sea salt), organic honey, and nature's finest herbs and spices.
How Stored: Shelf stable.
New Product–Documentation: Talk with (call from) Donna Cochran, 1993, July 8. She is looking for a source of tofu. She wants to make tofu jerky. Talk with (call from) Donna Cochran, 1993, July 17. This product was launched commercially on 1 July 1993. She would like to send Soyfoods Center a free sample in exchange for free evaluation and consultation. Product with Label (2 flavors) sent by Michael Molver and Donna. Home address: P.O. Box 128, Winchester, California 92596. Phone: 909-926-9716. 4.25 by 5.25 folded in half over top of plastic bag. Black on beige or pink. A large illustration (line drawing) shows cedar trees growing in front of mountains and clouds. Front panel: "No beef. All natural. High protein. Low fat. No animal products. No preservatives. No cholesterol. No wheat. A vegetarian snack."

7750. Executive Committee Secretariat, 1993. The Roots of Biotechnology in Monsoon Asia: The Third Asian Symposium on Non-Salted Soybean Fermentation and International Soybean Food Fair. Akita Cultural Center, Akita City, Japan: 4-6 June 1994 (Leaflet). Akita, Japan. 2 p. July.
• ***Summary:*** The executive committee for this event is: Chair: Prof. Tadao Watanabe. Vice-Chair: Prof. Fumio Yamauchi. Indonesia Advisor: Dr. Darwin Karyadi. United Nations University (UNU) Food and Nutrition Programme Advisor: Dr. Abraham Besrat.

The symposium hopes to focus on South-South cooperation for technical transfer of soybean technologies (koji, tempe, natto) to Africa in order to alleviate an

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impending protein crisis beyond the year 2000.

Program outline: Part I: International Soybean Food Fair–Industrial/commercial exhibition and cooking demonstration of ethnic cuisine using soybean products. Part II: Public Symposium–World soybean overview with perspectives for international technical cooperation in Africa. Part III: The Third Asian Symposium on Non-Salted Soybean Fermentation. Session 1: Koji for fermented soybean (Kikkoman, Nagano Miso Institute, China, Korea, Akita). Session 2: Natto in Asia–Microbiology, enzymology, health-medical studies. Kinema of Nepal, Tuanao [Thua-nao] of northern Nepal, Bhutan. Session 3: Tempe (Overview by Dr. Darwin Karyadi, contributions from Indonesia, Germany, USA, Japan and others–on microbiology, biochemistry, nutrition, physiology, medical studies, cooking, and industrial development). Part IV: The Role of Soybeans in Africa–The Perspective beyond 2000 (organized in cooperation with UNU Food and Nutrition Program). Sessions: Agriculture of Sub-Saharan Africa and soybean development (World Bank, IITA, JICA). Tofu technology adapted to West Africa (Dr. Nakayama, IITA). Indigenous fermented legumes in West Africa. Introduction of soy into Sub-Saharan African diet. Achievements of UNU Tempe Training Program (Indonesia/UNU; with Poster presentation of UNU funded research). Proposal on South-South cooperation.

Technical tours will be organized from three participating countries: Indonesia, USA, Germany. Address: c/o Akita International Assoc., Aidex Building 8th floor, 2-1-60 Sanno, Akita City, Japan 010. Phone: 0188-64-1181.

7751. **Product Name:** [Seitan].
Foreign Name: Seitan.
Manufacturer's Name: Izvor. Then Biolosk Kmetija Trampus (Trampus Organic Farm) from July 1994.
Manufacturer's Address: Mestni trg 22/1, 68330 Metlika, Republic of Slovenia. Phone: (386) 068 59 481
Date of Introduction: 1993, August.
Ingredients: Incl. wheat.
Wt/Vol., Packaging, Price: 250 gm plastic pouches
New Product–Documentation: Ad (full-page color) on rear cover of *Bio Novice* (Bio News, Ljubljana, Slovenia). 1994, Oct., No. 14. This attractive ad for seitan shows an inset photo of a field of wheat below a blue sky with billowing clouds. The background is a photo of dark brown of seitan. "Ingredients: Wheat gluten from organically grown wheat, tamari, and kombu (a sea vegetable). Contains no cholesterol. Weight: 250 gm. Shelf life: 15 days refrigerated at 1-5°C. Manufacturer: Trampus Organic Farm, Mestni trg 22/1, 68330 Metlika, Republic of Slovenia. Phone: 068 59 481. Distributor: Izvor d.o.o., Dolenjska cesta 13/1, 61108 Ljubljana. Phone and fax: 061 1272 649.

Letter (fax) from Jan Krizstan, 1995, April 28. "I made this ad using an enlarged photo and the text from our original seitan label (which was 10 by 7 cm) and a color scan of seitan as the background photo."

Talk with, then letter from Jan. Krizstan. 1995, March 1 (which see). "Now (at the end of February 1995) we are making about 50 kg of seitan per week by hand. We sell it in some 20 healthy food shops all over Slovenia. It's packed in polyethylene (PE) plastic pouches. We put ¼ kg (4 pieces, dimensions 8 by 12 cm) of seitan into each bag."

Letter (fax) from Jan Krizstan and Mirko Trampus. 1995, April 28.

Jan first made seitan in August 1993 on a very small scale and by hand at his home kitchen. "It was sold 'wild' on the market–only in healthy food shops in Ljubljana, whose owners dared to sell it without legal permission. 'Wild' because Mirko and I didn't have a kitchen for its legal production at that time yet. It was made of Mirko's high quality organic wheat and had a label with very brief information on the PE [polyethylene] package, but no address of the manufacturer. Customers liked it very much because it was soft and had a mild flavor. It was cooked in shoyu/kombu broth. Then we stopped production for some time because it became too dangerous to play games with sanitary inspection. We started making it again in March 1994. From March to June 1994 we sold seitan under my small private enterprise Izvor d.o.o. (The Source Ltd.). My company still existed but from the very beginning of July 1994 we started to sell seitan under Biolosk Kmetija Trampus (Trampus Organic Farm)–this time legally, because Mirko had obtained permission to produce seitan as a side-activity to his farming."

7752. Obis, Mariclaire Barrett. 1993. Take another look at soyfoods. *Vegetarian Times*, Aug., p. 54-56, 58, 60, 62, 64, 66. [8 ref]
• ***Summary:*** A good introduction to soyfoods including whole dry soybeans, fresh green soybeans, soy flour and grits, soy sauce, soy oil, textured vegetable protein, soymilk, okara, soy yogurt and cheese, tofu, tempeh, and miso. Address: Contributing editor, Vegetarian Times.

7753. Hachmeister, Kathleen A.; Fung, Daniel Yee-Chak. 1993. Tempeh: A mold-modified indigenous fermented food made from soybeans and/or cereal grains. *Critical Reviews in Microbiology* 19(3):137-88. [185 ref]
• ***Summary:*** An excellent review of the literature. Contents: Introduction. Mold-modified indigenous fermented foods: Miso, shoyu (soy sauce), hamanatto, sufu, fermented rice (sierra rice), tapé (lao-chao), ang-kak, ogi, tempeh, ontjom (oncom, lontjom), bongkrek (tempeh bongkrek), kenima. Processing developments in legume tempeh manufacture: Traditional tempeh fermentation, industrial production of tempeh, methods of preparation (cleaning, dehulling, hydration and acid fermentation, partial cooking, draining, cooling, and surface drying, inoculation,

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fermentation containers, incubation, harvesting, storage, and preservation, uses and preparation of tempeh). Organoleptic properties of tempeh. Microbiological aspects of legume tempeh: Microbial ecology, traditional and modern soaking methods, effect of soaking, acidification, and initial bean pH, effect of boiling prior to inoculation, effect of *Klebsiella* and *Enterobacter*, effect of lactic acid bacteria and yeasts, microbiological safety and quality, heating prior to consumption. Nutritional quality of legume tempeh. Chemical and biochemical changes in legume tempeh: Changes in protein and amino acids, changes in carbohydrates, changes in lipids, antioxidant potential, changes in minerals, changes in vitamins. Antinutritional factors associated with legumes. Flatulence-producing factors, protease inhibitors, tannins, phytic acid, hemagglutinins, other antinutritional factors. Cereal grain tempeh–practical applications: Background information, materials and methods, results and discussion, conclusions and future developments. Summary. References. Address: Dep. of Animal Sciences and Industry, Kansas State Univ., Manhattan, KS 66506.

7754. Shurtleff, William; Aoyagi, Akiko, comps. 1993. Bibliography of koji–grains and/or soybeans cultured with *Aspergillus oryzae:* 535 references from 700 B.C. to 1993, extensively annotated. Lafayette, California: Soyfoods Center. 151 p. Subject/geographical index. Author/company index. Language index. Printed Sept. 5. 28 cm. [535 ref]

• ***Summary:*** This is the most comprehensive bibliography ever published about koji. It has been compiled one record at a time over a period of 18 years, in an attempt to document the history of this subject. It is also the single most current and useful source of information on this subject available today, since 59% of all records contain a summary/abstract averaging 185 words in length.

This is one of more than 40 bibliographies on soybeans and soyfoods being compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyfoods Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features: 25 different document types, both published and unpublished; every known publication on the subject in every language–including 242 in Japanese, 226 in English (plus 75 with an English summary), 33 in German, 11 in Chinese, etc.; 16 original Soyfoods Center interviews and overviews never before published. Thus, it is a powerful tool for understanding the development of koji and related products from their earliest beginnings to the present.

The bibliographic records in this book include 478 published documents and 28 unpublished archival documents. Each contains (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English publications together with an English translation of the title, month and issue of publication, and the first author's first name (if given).

The book also includes details on 33 commercial koji products, including the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to make best use of this book, a complete subject and geographical index, an author/company index, a language index, and a bibliometric analysis of the composition of the book (by decade, document type, language, leading periodicals or patents, leading countries, states, and related subjects, plus a histogram by year) are also included. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

7755. White Wave, Inc. 1993. White Wave soyfoods food service product list (Leaflet). Boulder, Colorado. 1 p. Single sided. 28 cm.

• ***Summary:*** Lists six categories of products: (1) Tofu: Vacuum pack organic hard style tofu (2/5# pouches). Meatless tofu steaks (2/4# pouches).

(2) Dairyless Soy Yogurt: Lemon kiwi (6/2# tubs). Organic plain quarts (6/2# tubs).

(3) Soy A Melt Soy Cheese: Cheddar style (4/7.25# loaves). Mozzarella style (4/7.25# loaves). Monterey jack style (4/7.25# loaves). Garlic herb style (4/7.25# loaves).

(4) Meat Substitutes: Meatless healthy franks (10# cases). Meatless healthy bologna (10# cases). Vegetarian sloppy joe (19# buckets). Traditionally seasoned seitan (2/6# pouches). Diced traditionally seasoned seitan (2/6# pouches).

(5) Veggie burgers: Tempeh burger (60/3 oz. cases). Teriyaki tempeh burger (60/3 oz. cases). Veggie life burger (48/3.5 oz. cases). Lemon broil tempeh (90/2 oz. cases). Tempeh cutlet (60/3 oz. cases).

(6) Tempeh. Original soy tempeh (20/8 oz. packs). Address: 1990 North 57th Court, Boulder, Colorado 80301. Phone: 303-443-3470.

7756. White Wave, Inc. 1993. White Wave soyfoods retail product list (Leaflet). Boulder, Colorado. 1 p. Single sided. 28 cm.

• ***Summary:*** Lists six categories of products. * = Also available in food service pack: (1) Tofu: Reduced fat organic tofu. Organic tofu*. Snack'n savory tofu. Meatless tofu steaks*. Spicy szechuan stir fry. Tofu in garlic sauce stir fry.

(2) Dairyless Soy Yogurt: Raspberry. Strawberry. Blueberry. Peach. Apricot mango. Lemon kiwi*. Vanilla. Organic plain quarts*.

(3) Soy A Melt Soy Cheese: Cheddar style*. Mozzarella style*. Monterey jack style*. Garlic herb style*. Mixed

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variety case. Fat free cheddar style. Fat free Mozzarella style. American soy singles. Mozzarella soy singles. (4) Meat Substitutes: Meatless healthy franks*. Jumbo meatless healthy franks*. Meatless healthy links. Meatless healthy bologna*. Meatless healthy bacon. Vegetarian sloppy joe* Vegetarian chili. Tempeh barbecue. Traditionally seasoned seitan*.

(5) Veggie burgers: Tempeh burger*. Teriyaki tempeh burger * Veggie life burger*. Lemon broil tempeh*. Tempeh cutlet*.

(6) Tempeh: Original soy tempeh*. Soy rice tempeh. 5-grain tempeh. Wild rice tempeh. Address: 1990 North 57th Court, Boulder, Colorado 80301. Phone: 303-443-3470.

7757. Austin, Ruth, Miller, Carolyn. 1993. Hercules Incorporated and HVP (Interview). *SoyaScan Notes*. Oct. 5. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Hercules Incorporated acquired the plant at 79 E. State St., Harbor Beach, Michigan 48441, and they manufactured HVP there for many years. They sold their HVP operations in Aug. 1990 to Champlain Industries Inc. (31 Styertowne Rd., Clifton, New Jersey 07012. Contact Joe Hresko. Phone: 201-778-4900). The plant is still in Harbor Beach and most of the HVP are still manufactured there, but orders should be placed with Clifton, New Jersey. The company also makes autolyzed yeast products in Clifton, New Jersey. Champlain Industries is a Canadian-owned company. The parent company is Champlain Industries Ltd. with headquarters at Cornwall, Mississauga, Ontario, Canada.

Carolyn Miller, who works for Hercules, coordinated the writing of a history of the company, which began on 1 Jan. 1913 as a manufacturer of explosives. It was created as a result of a divestiture by the Du Pont Co. The book was actually written by business historians. Address: Hercules Incorporated, Hercules Plaza, Wilmington, Delaware 19894. Phone: 302-594-5000.

7758. Tenbusch, Jim. 1993. Huron Milling Company's work with HVP (hydrolyzed vegetable proteins) and wheat gluten (Interview). *SoyaScan Notes*. Oct. 12. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Jim has worked at Huron for about 20 years and is now plant manager. As far as he knows, no history of the company has ever been written. For early company history, talk with Robert Brobst, who was plant manager for about 40 years; he retired about 15 years ago. He is retired (Phone: 517-479-6054).

Back in the early days there was a big market for wheat starch, but no market for wheat gluten. Then they started using wheat gluten to make HVP and monosodium glutamate (MSG). The plant stopped making wheat gluten in 1973, due to competition and the high freight required to bring in the starches by rail. Their main product is now HVP. About 90% of the raw material for their HVP is soybean meal, although they also use small amounts of wheat gluten, corn gluten, wheat bran, cottonseed meal, and whey protein. When he arrived about 20 years, the main ingredient for making HVP was already soybeans, but he has no idea when Huron started using soybeans. Each protein source gives a different flavor profile to the finished HVP. Wheat gluten, for example, improves the mouthfeel of an HVP and the glutamic acid it contains serves as a flavor enhancer.

The largest manufacturer of HVP is America is probably the A.E. Staley Manufacturing Co. in Decatur, Illinois. Staley uses a lot of corn gluten in their HVP. Huron is a close second to Staley, followed closely by Fidco, then by Basic Foods and Griffith Laboratories. Jim knows that Huron used to sell a lot of HVP to Stange, but he does not know if Stange was ever a manufacturer or a competitor.

Huron's catalog lists about 90 different HVP products, these vary according to color (light to dark), pH, salt content, and form (liquid or powder). They no longer make HVP in paste form. To make light colored HVP, you start with a dark product and lighten it by using a carbon slurry to absorb the dark colors. The main applications of HVP are in sauces, flavorings (they sell a lot of product to flavor houses, who make blends for TV dinners, hamburger helpers, noodle packages, etc.), and soups. Address: Plant Manager, Huron Milling Co., 79 E. State St., Harbor Beach, Michigan 48411. Phone: 517-479-3211.

7759. Redmond, Tim. 1993. New developments at the Soyfoods Association of America (SAA) (Interview). *SoyaScan Notes*. Oct. 29. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Tim has been very active in shepherding SAA during the past year. He is the vice president, on the executive committee, and a director. The original $30,000 grant to SAA from the American Soybean Association increased to about $40,000. SAA will soon be sending 3,000 packets to the media and 5,000 packets to health professionals. Each packet contains fact sheets, a soyfoods brochure, and a brochure announcing the "First International Symposium on the Role of Soy in Preventing and Treating Chronic Disease," which is scheduled to be held on 20-23 Feb. 1994 in Mesa, Arizona. In addition, Tim is now drafting a letter to new and prospective members, including San-J (which has never joined), Worthington Foods, Kikkoman, Ralston Purina, etc. SAA needs more money to promote soyfoods on a broad basis.

Michelle Edwards, Dan Burke's long-time secretary, is now the Executive Director of SAA.

Tetra Pak Inc. has donated $50,000 to SAA over a period of 3 years, primarily to aid in the development of soymilk standards. Note: This is the largest single grant ever received by the Soyfoods Association. As of Jan. 1995, according to Dan Burke (Treasurer of SAA) the funds are being used

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mainly to pay for legal advice (from Hyman, Phelps & McNamara in Washington, DC) on the standards and to promote soyfoods. Peter Golbitz, who has spent a great deal of time in compiling the standards, has not received any payment for his time. Address: Vice President of Marketing and Sales, American Soy Products, Inc., 1474 N. Woodland Dr., Saline, Michigan 48176. Phone: 313-429-2310.

7760. Seeger, Royce. 1993. Recollections of work with Eden Foods (Interview). *SoyaScan Notes*. Oct. 31. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** At age 18 Royce was introduced to macrobiotics by Jimmy Silver. He was never involved with the food buying co-op before Eden Foods started. He started working for Eden Foods in about the fall of 1970 at the store on State Street. He was married with a child, he needed a job, and he was interested in macrobiotics, so the job was a natural. At the time he started work, Bill Bolduc, Mark Retzloff, and Tim Redmond were working at that store. After he had worked there about a year, Michael Potter arrived. Initially he ran the cash register, stocked the shelves, and ran the 8-inch stone flour mill grinding wheat, corn, rye, rice, etc. into flour. Shortly after he started work, he also began to mill soy flour. Tom Vreeland grew the soybeans organically. Royce toasted the soybeans lightly, about half way, so that the flour could be milled more easily and was still yellow. The roasting got rid of the heavy raw taste, but some raw soy flour taste still remained. Initially the soy flour was sold in paper bags, but the bags became very oily, so they switched to packing it in 3 sizes of cello bags which we heat sealed. The bags were considered biodegradable. Eden couldn't buy too large a supply since they became brittle after a while. A printed label was affixed by hand to each cello bag. The flour was also sold in big 25 lb paper flour bags, which were stamped with a rubber stamp to indicate the contents.

Eden also made Kokoh, a macrobiotic baby cereal, which contained roasted soy flour and was also packed in the small cello bags. All the ingredients were roasted together and then ground; soy was one of the ingredients. The soy was roasted longer than it was for the flour.

Eden was also importing miso in kegs from Japan. Employees would pack the miso into 1- and 2-lb bags. Eden still imports its miso in bulk kegs.

In those days the store wasn't making much money; it had just come from being a co-op, so often the only pay employees got was to have their bills paid–such as rent, so they didn't get evicted. They didn't really get a pay check. In about 1973 Royce quit work at Eden to do some construction work for a friend, and then moved to Arizona to be with his wife's parents. After about 10 months he returned to Ann Arbor and went back to work for Eden Foods. This time he stayed until 1978, running the mill and doing packaging. Then he left for a second time; he needed to make more money.

In 1982 Royce returned to work for Eden for a third time. He started working in production at a small bottling line where Eden bottled soy sauces (imported in 55 gallon drums from Japan), vegetable oils, and vinegar. Eden still bottles its soy sauce this way. One person runs the filler, which fills 6 bottles at a time; he slides in 6 bottles, pulls down the lever which fills them, then he puts them on a conveyorized line. The next person on the line puts on caps. Finally, at a labeling machine, one person labels one bottle at a time. Then he went back into running the mill, grinding flours. Royce has been working at Eden, more or less, since 1982. However in 1987 he developed testicular cancer, which had spread throughout his lymph system. His weight dropped to 155 lb and parts of his spine had to be removed. The cancer is now in remission and he feels like he is getting stronger. Royce now serves as Michael Potter's driver, since Michael is not allowed to drive at all by himself. Royce likes working at Eden Foods, even though he is not an official employee, since he is receiving disability payments. Address: 133 S. Clinton, Manchester, Michigan 48158. Phone: 313-428-0973.

7761. **Product Name:** Lightlife Savory Seitan [Barbecue Sauce, Teriyaki Sauce, or Traditional Bulk].
Manufacturer's Name: Lightlife Foods, Inc.
Manufacturer's Address: P.O. Box 870, Greenfield, MA 01302. Phone: (413) 774-6001.
Date of Introduction: 1993 October.
Ingredients: Barbecue: Organic stone-ground wheat flour, water, soy sauce, honey, spices, spice extracts, natural flavors, salt, potato starch, dried onion, guar gum, liquid smoke, kombu.
Wt/Vol., Packaging, Price: 8 oz paperboard box.
How Stored: Refrigerated or frozen.
New Product–Documentation: Leaflet distributed at Natural Products Expo East in Baltimore, Maryland. 1993 Oct. "New! Lightlife Savory Seitan."

Spot in NFM's New Product Review. 1994. Spring (May). p. 12. A photo shows two 8 oz packages of the product (Teriyaki Sauce and Barbecue Sauce).

7762. Hillyard, Roger. 1993. Work with Erewhon, Arrowhead Mills, and The Well (Interview). *SoyaScan Notes*. Nov. 10. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Fred Rohe started out working for Thom's Natural Foods, a retail store in San Francisco. Then Fred bought Sunset Health Foods (a health foods retail store at 1319 Ninth St. in the Haight-Ashbury district of San Francisco) and renamed it New Age Natural Foods–at the same address. Roger thinks it was in about 1965 or 1966, because he was living in San Francisco at that time and had just gotten involved in macrobiotics–in Jan. 1966. He started buying his foods from Marina Health Foods (on Chestnut)

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but when Fred opened his store, Roger started buying his foods there.

At some point Fred bought a chicken farm, transformed it into a natural chicken farm, and created New Age Resources as the company that owned it.

Then Fred teamed up with Phil Parenti / Parente and they did two big things at about the same time: (1) They opened a second store on California Street in Palo Alto, which was a natural foods supermarket (perhaps the first of its type in the USA). David Mastandrea was the manager and Nik Amartseff may have run the deli. At the time the store opened in Palo Alto, Roger was on the East Coast in Boston with Erewhon. (2) Fred and Phil started a distribution company named New Age Distributing.

Then they got into financial difficulties, they had tried to do too much too fast. The stores reverted to Fred and the distribution company and chicken ranch went to Phil. That's when Phil renamed the distribution company The Well. But legally and corporately, it was still New Age Natural Foods–which was the parent company of The Well. Phil was active from day to day at The Well. Then The Well purchased Pure & Simple from Bruce Macdonald; the products at that time were apple juice, corn chips, and fruit butters. By the time of the natural distributors conference at Pajaro Dunes, California, the line had expanded to other fruit juices and Japanese imports, which were coming from Mr. Kazama of Mitoku–all sold under the Pure & Simple brand and distributed by The Well, which was now a master distributor. Some of these products were sold to other distributors, and all were sold to retail stores.

Irwin Carasso, the founder of Tree of Life, sponsored the natural food distributors conference in St. Augustine, Florida. Roger thinks Irwin was the 2nd or the 3rd person who began importing natural foods directly from Mr. Kazama in Japan–First Erewhon, then Pure & Simple, then Tree of Life. Eden Foods started importing after Tree of Life, and after that St. Augustine conference, but they imported from Muso. Initially Erewhon had insisted that everyone import the Japanese products under the Erewhon brand; they maintained that monopoly for quite a while.

At the time the *Deaf Smith Country Cookbook* was published (1973), Roger and his ex-wife Susan (and 2 kids) were living and working in Hereford, Texas. They spent a year there. While Susan was working on the cookbook, Roger was contracting with local farmers for everything from grains to maple syrup, helping to establish Arrowhead's line of consumer packaged products (graphics, copy, etc.) and (most important) he got Arrowhead's distribution system and network going, selling to other distributors. Roger was employed by Arrowhead. Irwin Carasso was one of the first to be named a wholesaler of Arrowhead Mills' products. Next came Shadowfax. The NNFA convention that year was in Washington, DC.

When they left Texas, after a year, they hopped back in the school bus, drove to Los Angeles and hung out there for a couple of weeks (staying with Bobby Orgo, who worked for Erewhon in Los Angeles), then they drove to Atascadero, but they had no destination. They went to visit Bruce Macdonald (who at that time was living in Santa Cruz, California, and working each day for The Well–Pure & Simple). He sold the Pure & Simple brand than went along with it from Southern to Northern California.

Roger, Susan and their family ended up living in Soquel, California (near the Pacific Ocean and Santa Cruz), in about mid-March 1973; his youngest son was born on March 29, right after they got settled. Jean Allison (from Boston) came out and helped Susan for a while.

The Well went out of business in about 1979. It continued to grow and expand. In very few years, it grew from $3 million to $10 million in sales. The peak year was in about 1978, then it went rapidly downhill. It had the wholesale distribution entity, a small production facility in San Jose where it manufactured fruit butters and bottled tamari and some oils, and also raised alfalfa sprouts. Then (in about 1976-77) it bought out Max Kozek, the organic wholesale supplier from Los Angeles. It also had a project to produce 40 acres of organic carrots in the San Joaquin Delta, and about 10 acres in Borrego Springs (east of San Diego). It also had some acreage of organic apples and peaches (small, real old, so there was not production and it was not of high quality), and substantial crop investments in organic produce via contracts with individual growers, as with John Mason who was a hothouse tomato grower in California. Then it bought a wholesale distribution company [Essene Traditional Foods] in Boyertown, Pennsylvania. With all those ventures, scattered near and far, The Well was (1) undercapitalized, and (2) it lost an incredible amount of money on some of its individual ventures, such as the organic carrots (nematode problems). Phil Parenti owned most of the stock at this time, but he did not have a controlling percentage. The other main stockholder was not a regular participant in the company; Roger does not remember his name. Roger had only stock options. The Well just folded up shop and disappeared; it was not sold to anyone. But the Pure & Sample brand name was sold to Jimmy Silver and John Fountain. Phil Parenti went to Monterey, California, and worked with his father in property development. Roger does not know where he is now. Address: Farley's Coffee Shop, #1315 18th St., Potrero Hill, San Francisco, California 94107. Phone: 415-648-1545.

7763. *SoyaScan Notes*.1993. Manufacture and sale of soyfoods in Poland (Overview). Nov. 11. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** The following information about soyfoods companies in Poland was provided by the Polish consulate, the American Soybean Assoc., and a Westerner traveling in Europe.

Polsoja was started in early 1993 by Piotr Poninski and

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three partners. It is probably the first tofu shop in Warsaw, Poland, and the only tofu shop in Poland that makes and sells tofu on a regular basis. Five people work at the company. Address: ul. Hetmanska 61, 05-120 Legionowo (near Warsaw), Poland. Phone/fax: (48 22) 18 21 11.

Solida Sp. z o. o. is a Chinese-owned company founded in 1992 by two Chinese partners: Mr. Lu Shihua (president) and Mr. Liu Zhonghua. The sales manager is Mr. Bugoslaw Zwadzki. They make and sell soy sprouts. They plan to sell tofu. Address: ul. Kmicica 1/212, 02-728 Warszawa (Warsaw), Poland. Phone/fax: (48 22) 47 23 09.

Okregowa Spoldzielnia Mleczarska is a dairy co-operative that supposedly makes or used to make tofu. They were taught how by Prof. Stanislaw Gwiazda. Polsoja has never seen or eaten their tofu. They probably started in 1992. Probably nobody speaks English there. Address: ul. Chopina 2, 12-100 Szczytno, Poland. Phone: (48 889 89) 22 11.

Prof. Stanislaw Gwiazda is said to have traveled in East Asia and claims to know tofu technology. He works in the faculty of food technology at the main School of Agriculture in Warsaw, where he specializes in proteins and fats. He helped the Szczytno start or try to start making tofu. Address: Szkola Glowna Gospodarstwa Wiejskiego, Katedra Produktow Bialkowych i Tluszczowych, ul. Grochowska 272, 03-849 Warszawa, Poland. Phone: (48-22) 10 18 42.

Polgrunt Sp z o. o. makes soy pâtés and soy flour. They also sell soybeans, TVP (imported from Serbia via Hungary), soy sauce, and maybe other soy products. They may start making tofu in the future. They probably started in 1991 or 1992. Address: ul. Pabianicka 17/19, 97-400 Beichatow, Poland. Phone: (48 841 83) 255 64.

There is also an unknown Vietnamese man who is making tofu for the Vietnamese community in Warsaw. He probably does everything in his kitchen for just a few people.

7764. Wilson, Don. 1993. The pioneering work of Aqua Agra in Florida with sprouts and soyfoods. Part II (Interview). *SoyaScan Notes*. Nov. 24. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** "When we started talking about making tofu, it became very evident to me that we would need a bigger space, so in about March or April of 1977 we moved over to 100 Highline Dr., Longwood, Florida 32750. We went from 4,000 square feet of floor space to 50,000 square feet. We outgrew our plant on Seminola Blvd. in about 4-5 months." In June 1977 Don's first child, a son, was born. On Highline Drive, Don built rooms to grow the various sprouts and also diversified the company into chopping and packing huge amounts of fresh vegetables; there was a separate packet of sauce (such as teriyaki) in each bag for making stir-fries. All that was needed was some tofu to complete the stir-fry. Don bought his tofu equipment used from Robert and Mary Brooks, whose company Swan Foods in Miami had gone out of business. The purchase became a mess because Robert had failed to inform Don about the liens that were against his equipment due to Robert's unpaid bills. So Don started to make tofu in 1978. He sold it chiefly to the chain stores–first to Albertson's (the smallest group), then to Publix, and then to Winn Dixie (the biggest chain). He did not deal with restaurants or health food stores. At the height of production, Aqua Agra was making at least 25,000 to 30,000 lb/week of tofu. He was the first person to introduce tofu to supermarkets in Florida.

In the summer of 1979 Don attended the second annual Soycrafters Conference at Amherst College in Massachusetts. "I will never forget that as long as I live. Some of the major U.S. food companies, such as General Mills and a few others, sent representatives in 3-piece suits. I was standing in the back of the auditorium where these guys were and I'll never forget listening to their comments as they talked about what a bunch of dingdongs they had been sent to observe, and how this had absolutely no place in the American food chain whatsoever. I can remember walking away from that conference thinking to myself, 'I sure am glad these big guys think this way because all it would take is one big corporation to get involved in this and a lot of small businesses would soon go down the drain.'"

Aqua Agra grew rapidly. Many of his employees were Asian-Americans and they were wonderful workers; the copycats that tried to compete with him couldn't. About 2 years after Aqua Agra started making tofu, the *Sentinel Star* newspaper did a rather nice story on the company in 1980.

In early 1981 Don started making soymilk, which he sold in bulk to the nearby Seventh-day Adventist Florida Hospital–but not to any of the chain stores. He sold about 300 gallons a week.

At about the same time he started making soy yogurt in individual unprinted cups with a pressure sensitive label. Most of his sales were of plain yogurt, but he also sold strawberry, peach, and blueberry flavors. The yogurt was sold to local health food stores, to Del Champs in Alabama, and to a broker in New York named Marty Grossman, who sold a lot.

In late 1981 Aqua Agra began to make soy tempeh. They sold less than 100 lb/week, and only to a few health food stores in Orlando who had asked for it.

Don and his wife had to close the company in about mid-1982, after 6 years in business. At that time they were making about 75 products. He and his wife were each working 100 hours a week. "The doctor gave me a choice. He said, 'You can either get rid of that business and live, or you can keep it and die! But you're gonna do one of the two.'" Don was so sick and tired of everything at that time that he decided not to even sell the company–just to shut it down and walk away.

Don feels that he was a little bit before his time. "People found it amusing that a sergeant in the United States Marine Corps. was involved in making hippie food." Address: 2321

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Virginia Dr., Altamonte Springs, Florida 32714.

7765. Coward, Lori; Barnes, N C ; Setchell, K D R ; Barnes, S. 1993. Genistein, daidzein and their beta-glycoside conjugates: Antitumor isoflavones in soybean foods from American and Asian diets. *J. of Agricultural and Food Chemistry* 41(11):1961-67. Nov. [31 ref]

• ***Summary:*** This is a very important article. Isoflavones were first extracted with alcohol (80% aqueous methanol) and then the fat was removed from the extract with hexane solvent. Details of the isolation process are given. The results showed that most Asian and American soy products, with the exception of soy sauce, alcohol-extracted soy protein concentrate, and soy protein isolate, have total isoflavone concentrations similar to those in whole soybeans. Asian fermented soyfoods contain mainly isoflavone aglucones, whereas in nonfermented soyfoods of both Asian and American origin isoflavones are present mainly as beta-glycoside conjugates. The estimated daily intake of these isoflavones by Asians is similar on a body weight basis to the isoflavones in soy-containing diets which inhibit mammary tumorigenesis in animal models of breast cancer. Therefore, it is possible that dietary isoflavones are an important factor accounting for the lower incidence and mortality from breast cancer in Asian women.

"The concept of reducing cancer risk by chemoprevention has become an important aspect of current cancer research. It has been suggested that two so-called phytoestrogens, lignans and isoflavones, may play a role in the prevention of estrogen-dependent breast cancer and colon cancer.

Three tables show the isoflavone concentrations in various types of soyfoods. For each food, the content of the following is given: Conjugated genistin, conjugated daidzin, genistein aglucone, daidzein aglucone, total isoflavones, D/G ratio, percentage of genistein aglucones, and percentage of daidzein aglucones. After each food listed below we will show the total concentration "as is" and then (if given) on a dry weight basis.

Table 1 shows isoflavone concentrations (in mg per gram) in basic nonfermented Asian soyfoods: Soymilk (0.252 / 3.256), Tree of Life tofu (0.417 / 2.031), Mori-Nu tofu (0.494 / 3.827), soy flour (1.338), soy powder (1.748), and soy nuts (2.363).

Table 2 shows isoflavone concentrations (in mg per gram) in fermented Asian soyfoods: Tempeh (0.430 / 1.130), miso (0.920 / 1.379), rice miso (0.404 / 0.721), barley miso (0.721 / 1.195), Shiromiso soup mix (0.708), Akamiso soup mix (0.882).

Table 3 shows isoflavone concentrations (in mg per gram) in other soyfoods: Soy sauce (0.023 / 0.090), soy cheese (0.050 / 0.105), Tofutti soy ice cream (0.032 / 0.092), Ice Bean soy ice cream (0.117 / 0.360).

Although flavonoids are found in many plants, vegetables, and flowers, isoflavones such as genistein and daidzein are found in just a few botanical families. This is because of the limited distribution of the enzyme chalcone isomerase largely to tropical legumes. Partly for this reason, isoflavones are a very minor part of American or British diets. Address: Depts. of Pharmacology and Biochemistry and Comprehensive Cancer Center, Univ. of Alabama at Birmingham, Birmingham, Alabama 35294; Mass Spectrometry Lab., Children's Hospital Medical Center, Cincinnati, Ohio 45229.

7766. **Product Name:** Tofu Turkey, and Cashew Gravy.
Manufacturer's Name: Daybreak Foods.
Manufacturer's Address: 768 18th St., Arcata, California 95521. Phone (707) 825-7480.
Date of Introduction: 1993, November.
Ingredients: (1) Tofu Turkey: herbs, tofu, garlic, turmeric, tamari, rice flour, vegetarian nutritional yeast, salt, white pepper. Bread Stuffing: onions, celery, bread crumbs, herbs, canola oil, salt, white pepper, miso, water, bayleaf. (2) Cashew Gravy: Cashews, water, sea salt, tamari, white pepper, flour.
How Stored: Refrigerated.
New Product–Documentation: These are two separate products: Labels (Tofu Turkey, Cashew Gravy) sent by Matthew Schmit. 2002, Sept. 24. Both are pressure sensitive, green on white, 3.5 x 2.5 inches.

Talk with Matthew Schmit. 2009, March 6. Daybreak Foods is no longer in business. He sold his restaurant and company to a couple in about 2004. The new owners (Paul, and his wife, Hahnelea Boehm–an ex-employee of Matthew's) continued to make the Tofu Turkey and the Gravy for the Thanksgiving and Christmas season only until 2007, and they were quite as aggressive as Bob Meeks was. They closed in the fall of 2008; they were splitting up and the restaurant got caught up in the legal battle.

7767. Kelley, Hubert W. 1993. Always something new: A cavalcade of scientific discovery. *USDA Agricultural Research Service, Publication* No. 1507. 150 p. Nov.

• ***Summary:*** This book is filled with photos and commemorative stories about the research discoveries and breakthroughs in the field of crop utilization at the four regional USDA's Agricultural Research Service (ARS) labs during the 50 years since they were established.

Chapters include: Introduction. Gambling on science. Penicillin and the war years [World War II]. Midstream changes and corrections. Frozen foods. Soybean oil (p. 85-88). Vegetable oils in Industry (p. 89-91). Food safety (p. 97-104; Aflatoxin, other mycotoxins). Food for Peace (p. 116-18). Fuels from agriculture (p. 118-19). Proteins in milk, grains, and oilseeds (p. 125-20). Peanuts (p. 131). U.S. crops in Asian foods (p. 132-33, Tofu, tempeh, soy sauce, sufu). Microorganisms (p. 134-36; Incl. the ARS culture

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collection). Focus on the future (p. 147-50; soy oil printing inks)

The most important work of the Northern regional laboratory in Peoria was the development of penicillin starting in June 1941. A brief chronology: 1941 Dec – Andrew J. Moyer, a chemist at the Northern lab, developed the basis for the industrial process–deep vat fermentation. 1942 March–Only enough penicillin is available to treat a single case. 1942 Dec. 31–Seventeen U.S. pharmaceutical companies are working on penicillin. 1944 June 6–Thanks to the combined efforts of many people, enough penicillin is available in quantity by D-Day (invasion of Normandy, France) to treat wounded allied soldiers. Penicillin was the world's first commercial antibiotic. By the 1950s, hundreds of antibiotics were on the market. Address: Director (retired), Information Staff, USDA Agricultural Research Service (ARS).

7768. **Product Name:** Kikkoman Tofu: Soybean Curd (Aseptically Packaged) [Firm, or Soft].
Manufacturer's Name: Kikkoman International, Inc. (Importer). Made in Japan by Morinaga.
Manufacturer's Address: 50 California St., Suite 3600, San Francisco, CA 94111. Phone: 415-956-7750.
Date of Introduction: 1993, November.
Ingredients: Water, soybeans, glucono delta lactone and calcium chloride (coagulating agents).
Wt/Vol., Packaging, Price: 10.5 oz Tetra Brik Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Talk with Morinaga Nutritional Foods, 1994, March 18. Morinaga in Tokyo is now making and packaging this product for Kikkoman. The first batch arrived in the USA in Nov. 1993. The product was formerly packed in a foil retort pouch in a paperboard box.

7769. Kashama, Johnny. 1993. Re. Projet Miso in Kigali, Rwanda. Questions answered on Soyfoods Center questionnaire and returned to SC on 21 Dec. 1993. 3 p. Handwritten, with signature. [Eng]
• ***Summary:*** The following is based on a interview with Mr. François Munyankindi of Projet Miso (B.P. 2018, Kigali, Rwanda). Projet Miso (Project Miso), was founded on 1 Oct. 1990 to manufacture miso and to contribute to the improvement of the diet of the people of Rwanda. It was founded by Mrs. Suzanne Dionne of the *Fonds de Contrepartie Rwanda-Canada*, which is the owner. It is a cooperative venture between Canada and the government of Rwanda. The company began to ferment red miso in 1992 and to sell it in April 1993; it now makes red miso (340 kg/week), tamari (14 liters/week), and shoyu (it is still in the fermentation and has not yet started to be sold). Miso is the best-selling product of the three, with sales of 102,000 Rwandese francs per week (1 U.S. dollar = 145 francs). They learned the process by studying *The Book of Miso* and *Miso Production* by Shurtleff and Aoyagi. The company employs 11 people: 1 manager, 6 production workers, and 4 office workers and others. The company has 290 square meters of production space and 27 square meters of office space.

Mr. Munyankindi thinks [and he is correct!] that this is the first company in Africa to make and sell miso, tamari, or shoyu. The miso is accepted by the local people. "As you know, miso is a medicinal food and it is recommended by many physicians." Address: c/o Tofu–Rwanda, P.O. Box 1906, Kigali, Rwanda. Phone: (250) 76730.

7770. Viana Naturkost GmbH. 1993. Sound im Glas [Sound in Glass]. Euskirchen-Kuchenheim, Germany. 6 panels, 21 cm. Company catalog. [Ger]
• ***Summary:*** This stylish, 6-panel company catalog is black, red, and white on pea green. The company sells Brown-Rice Miso (*Genmai* Miso) and Barley Miso (*Mugi* Miso). Spreads for breads include Chickpea Spread (*Kichererbsen Pastete*, with shoyu and soybeans), Vegetable Garden (*Gemuesegarten*, with organic tofu), Inka (with organic tofu), Toto (with organic tofu), and Miso Squash Paste.

Note: During 1993-94 Viana purchased modern tofu production equipment from Takai in Japan. Address: Willi Graf Str. 88, 33881 Euskirchen-Kuchenheim, Germany. Phone: 02251/56076.

7771. **Product Name:** [Skewered Tofu and Seitan].
Foreign Name: Spiedini di Tofu e Seitan.
Manufacturer's Name: Biolab.
Manufacturer's Address: Via dei Grabizio 11, 34170 Gorizia, Italy. Phone: +39 481 533522.
Date of Introduction: 1993.
Ingredients: Tofu (soy & water), seitan (washed by hand, containing wheat gluten, corn starch, soy sauce, spices), carrots.
Wt/Vol., Packaging, Price: 200 gm vacuum packed.
How Stored: Refrigerated.
New Product–Documentation: Label and letter sent by Maura Ghiraldini and owner Massimo Santinelli. 1998, Dec. 5. This label (5.5 by 4.75 inches) has dark red text on a wavy blue, red, and yellow pastel background. A small blue and white oval logo states "AgriEco Bio–Organically grown and certified (*Prodotti Biologici–Controllati e Garantiti*)." Refrigerate at 4°C. A small symbol shows a person recycling the container. This product has been discontinued. It was delicious but too labor-intensive.

7772. Harcan Kingsoya Co. Ltd. 1993. Veg-A-King (Brochure). Ontario, Canada. 4 p.
• ***Summary:*** This is a portfolio-style leaflet with one insert describing Veg-A-King soy sauce. "Harcan Kingsoya Co. Ltd. is a Chinese/Canadian joint venture company set up to bring you authentic soyfoods and exotic sauces. Our Chinese

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partner is a leading food manufacturer and exporter in Heilongjiang Province, China." The company has established a manufacturing plant in Scarborough, Ontario, Canada. The brand name is Veg-A-King.

"Veg-A-King soy sauce is our flagship product. We use a traditional recipe which has a long history in China. Brewed naturally from premium soybeans, wheat and bran, it contains no artificial colours or added flavourings."

The company also makes an impressive line of 17 meatlike soyfoods products such as Vege-Beef, Vege-Chicken, and Vege-Shrimp. Pressed tofu is the basic ingredient of these foods. "Through further processing it can be shredded, formed, steamed, deep-fried or smoked to make different delicious foods" for vegetarians. Premium quality Canadian soybeans are used in manufacturing soymilk, tofu, and dried bean curd.

Two photos show foods being made in the factory. Address: 33 Casebridge Court, Units 5&6, Scarborough, ONT M1B 3J5, Canada. Phone: (416) 283-8328.

7773. **Product Name:** Diet Chow Mein with Pasta Noodles
Manufacturer's Name: Major Marketing Ltd. (Marketer-Distributor).
Manufacturer's Address: 22 Mark Rd., Hemel Hempstead, Herts, England
Date of Introduction: 1993.
Ingredients: Pasta noodles, chow mein flavours (Flavourings), textured vegetable protein, modified starch, maltodextrin, sea salt, vegetable fibre, dried vegetables (peas, red peppers, mushrooms, chives), vegetable oil, carob flour, soy sauce sachet
Wt/Vol., Packaging, Price: 70 gm plastic cup. Retails for 0.75 p. in London
How Stored: Shelf stable
Nutrition: Per 100 gm.: Energy 1193 Kjoules / 281 Kcal (calories), protein 12.0 gm, carbohydrate 56.0 gm, fat 2.5 gm.
New Product–Documentation: Label (plastic cup) sent by Heather Paine of SoyaFoods in London, 1993. Nov. 3 inches deep by 3.75 inches across hexagonal mouth. Black, blue, green, brown, and white on tab. Illustration of the Great Wall of China. "Directions. Open pot and remove [soy] sauce sachet. Add boiling water up to mark. Allow to stand for 2 minutes, stir thoroughly. Stand for 2 further minutes. Add more water if required. Stir in sauce to taste. Your diet meal is now ready to enjoy."

7774. **Product Name:** Tamari.
Manufacturer's Name: Projet Miso (owned by Fonds de Contrepartie Rwanda-Canada)
Manufacturer's Address: Projet Miso, B.P. 2018, Kigali, Rwanda. Phone: (250) 76730
Date of Introduction: 1993.
How Stored: Shelf stable.
New Product–Documentation: Letter from, form filled out, and label sent by Johnny Kashama based on an interview with François Munyankindi of Projet Miso, Rwanda, 1993 Dec. 21 (which see). This company began to ferment tamari in 1992 and to sell it in 1993. This is the first company in Africa to make and sell miso, tamari, or shoyu.

Label, 3.25 by 2.25 inches. Red, black, and white "Projet Miso–Tamari."

7775. **Product Name:** San-J Organic Tamari: Organic, Gluten Free Soy Sauce, Reduced Sodium (Platinum Label).
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 804-226-8333.
Date of Introduction: 1993.
Ingredients: Incl. tamari soy sauce.
How Stored: Shelf stable.
New Product–Documentation: E-mail from Misako Binford of San-J, 2012, May 8. An attached Excel spreadsheet gives that date each San-J product was first sold commercially, starting in 1987. This product was first sold in 1993. Most products launched in 1987 or before were imported from San-Jirushi in Kuwana, Japan. Platinum label is Organic wheat free (now it says gluten free with the same formula) reduced sodium Tamari Soy Sauce.

Two labels sent by Misako Binford of San-J International, 2012, May 14. The platinum label now reads: "Organic Tamari. Gluten Free Soy Sauce. Reduced Sodium. 10 fl. oz. Made with whole 100% soy." Two logos on the front panel: (1) Non GMO Project verified. (2) Certified Gluten Free. She notes: 1993. Platinum.

7776. **Product Name:** Seitan [Hot & Spicy Szechuan, BBQ Style, Mexican Chili]
Manufacturer's Name: Vegan Epicure.
Manufacturer's Address: 210 Park Place, Ithaca, NY 14850. Phone: (607) 272-0432.
Date of Introduction: 1993.
Ingredients: Hot & Spicy Szechuan: Wheat gluten, shoyu (water, soybeans), apple cider vinegar, Chinese peppercorns, spices, honey.
Wt/Vol., Packaging, Price: 8 oz. vacuum pack.
How Stored: Refrigerated.
New Product–Documentation: Spot in Vegetarian Journal, 1994, March/April, p. 27. Talk with Susie Gutierrez, founder and owner of Vegan Epicure, 1994, March 11. She introduced this flavor in 1992.

Label for Hot & Spicy Szechuan sent by Susie Gutierrez, 1994, March 14. 3.75 by 2.25 inches. Black on purple. 8 oz. These dark brown slices are 3 by 5½ by 1/8 inch thick.

7777. **Product Name:** [Viana Organic Tamari].
Foreign Name: Viana Bio Tamari: Kraeftige Sojasauce.

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Manufacturer's Name: Viana Naturkost GmbH.
Manufacturer's Address: Willi Graf Strasse 88, 53881 Euskirchen-Kuchenheim, Germany. Phone 02251/56076. Fax: 02251/75638.
Date of Introduction: 1993.
Ingredients: Spring water, soybeans*, sea salt. * = Organically grown.
Wt/Vol., Packaging, Price: 500 ml bottle.
How Stored: Shelf stable.
New Product–Documentation: Label sent by Bernd Drosihn, founder and owner of Viana. 1994. Feb. 14. 5.5 by 1.5 inches. Red and yellowish gold on dark green. "Viana Bio Tamari is a traditional soy sauce, which can lend a powerful note to your foods. Dip tip. Tamari, water, a little vinegar, peanut butter, garlic, pear concentrate or honey."

7778. Boots, Gypsy; Arthur, Mike; Hopkins, Jerry. 1993. The Gypsy in me! How to look younger and have more energy as you grow older. Camarillo, California: Golden Boots Co. vi + 102 p. Illust. No index. 22 cm.
• ***Summary:*** Contents: Dedication and thanks. Introduction, by Charlie Fox. 1. Natural beginnings. 2. Living in nature. 3. Love and marriage. 4. Hollywood meets health nut. 5. Semi-stardom with Steve Allen. 6. Never too late to rejuvenate. 7. Exercise is a way to live. 8. Vital foods. 9. Eat and drink to your health. 10. Recipes for a healthier you. 11. Traveling through life.

In Chapter 8, titled "Vital foods," the section on legumes includes soy milk, tofu, tempeh, and texturized vegetable protein. Here Gypsy notes that he has always been a vegetarian. Eggs and dairy products once formed a major part of his diet, but now he rarely eats those foods.

Chapter 10, titled "Recipes for a healthier you," contains the following soy-related recipes: Scrambled tofu. Baked soy bean casserole. Tofu mushroom loaf. Tofu burgers. Soy burgers. Soya-rice flour coffee cake (with soy flour). Shakes (with seed, nut, rice, or soy milk). Many other recipes are seasoned with soy sauce. The Gypsy Boots smoothie (p. 93) calls for: 1 cup fresh apple or orange juice, 1 ripe banana, 1 tablespoon Kyo-Green, 1 date or a few raisins.

Contains many photos, both in black-and-white and color of Gypsy Boots, alone, or with family (p. iii, 19), friends, and celebrities. On the cover is a color photo of Gypsy in short pants standing barefoot on rocks in a stream. Eight unnumbered pages of color photos of Gypsy and friends on glossy paper follow page 70. This book has an unusually commercial tone. Throughout the book, Gypsy discusses the benefits of garlic supplements, wears Wakunaga's Kyolic T-shirts in photos, and plugs Kyolic garlic quite a bit. Address: Camarillo, California.

7779. Chaplin, Joyce E. 1993. An anxious pursuit: Agricultural innovation and modernity in the lower South, 1730-1815. Chapel Hill, North Carolina: Univ. of North Carolina Press. xiv + 411 p. Illust. Maps. 25 cm. [725* ref]
• ***Summary:*** This book, about agricultural innovation in the Lower South during the American colonial era, contains some early references to the soybean and peanut in America.

Page 138. "The Royal Society of Arts awarded a gold medal to Samuel Bowen in 1766 (10 June 1766, Minutes of Committee, p. 21, reel 1) for 'making sago powder out of dried sweet potatoes and vermicelli noodles from soy beans grown in Georgia.' (The first product thickened foodstuffs and starched textiles; the latter testified to a surprisingly sophisticated English palate.)"

Pages 146-47 describe the work of Samuel Bowen, based on the Hymowitz and Harlan 1983. "The most successful experiments with Asian agriculture, and astonishing examples of agricultural creativity, were the handiwork of Samuel Bowen ... who claimed to have been a prisoner of war in China for four years; he viewed many parts of the country, observing Chinese methods of agriculture. After his release and return to England, Bowen arranged with James Flint, an officer of the East India Company, to emigrate to Georgia and experiment with Asian crops there." Flint was the first Englishman legally permitted by Chinese authorities to learn Chinese. Bowen arrived in Georgia in 1764 and bought land along the coast, possibly using funds from Flint. He began in 1765 to grow soybeans–from which he made soy sauce and soy vermicelli noodles. He conjectured that there was a market for these Asian foods and that soybean sprouts (or the water in which they are soaked) could help prevent scurvy in the Royal Navy (for soybean sprouts, see Ellis Manuscripts, Linnean Society of London).

Page 156 discusses peanuts: "Through the Atlantic slave trade, blacks gradually transferred plants that originated in the Americas (such as peanuts and capsicum peppers) to lands where they were enslaved. 'Whites discovered uses for slaves' products only when they learned of external markets for them.' This was clearly the case with peanuts. Blacks had often grown and marketed peanuts, but whites paid little heed until European chocolate manufacturers wanted the product for its bland oil." In 1807, George Izard wrote to his brother, Henry Izard, the unexpected news that a British merchant was offering $2 a bushel for 1,000 bushels of peanuts. In 1808 David Ramsay, in his *History of South Carolina*, claimed that planters could make up to 20 pounds sterling from peanuts; planters paid the slaves to grow the peanuts on their own time, then purchased them for cash.

Pages 156-57 discuss the early introduction of sesame seed, which blacks called benne or binny, from Africa to South Carolina starting in 1747. "Cultivation of things like peanuts and sesame helped reinforce a base of surprisingly autonomous slave labor in the lowcountry" of South Carolina.

During the War of 1812 there was a slump in U.S. agricultural exports such as cotton. "In the lowcountry,

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planters experimented with sugar and sheep and paid slaves to produce secondary crops like sesame or peanuts."

Note: The War of 1812 was fought between the United States and Britain from 1812 to 1815. Called the second American war for independence, it began over alleged British violations of American shipping rights. American soldiers attacked Canada unsuccessfully, and the British retaliated by burning the White House and other buildings in Washington, DC. American warships frequently prevailed over British vessels. The greatest American victory came in the Battle of New Orleans–a battle fought, ironically, two weeks after the peace treaty had been signed. Address: Prof. of History, Vanderbilt Univ., Nashville, Tennessee.

7780. Escano, Crisanto R.; Gaddi, Virgilio Q. 1993. Country report 11–Philippines. In: N. Chomchalow & P. Narong, eds. 1993. Soybean in Asia: Proceedings of the Planning Workshop for the Establishment of the Asian Component of a Global Network on Tropical and Subtropical Soybeans. Bangkok, Thailand. FAO Regional Office for Asia and the Pacific. viii + 218 p. See p. 92-108. RAPA Publication (FAO), No. 1993/6. [12 ref]

• ***Summary:*** Contents: (1) Introduction. (2) Production: Status, major growing seasons and cropping systems, constraints, resolving constraints. (3) Processing, utilization and marketing: Status, supply and demand, exportation of soybean products, constraints, resolving constraints.

Figures: (1) Trend in soybean production, Philippines, 1980-90. (2) Soybean area harvested, Philippines, 1980-90. (3) Trend in the soybean yield, Philippines, 1980-90. (4) Regional shares of total production, Philippines, 1990. (5) Soybean and soybean product shares in importation, Philippines, 1990. (6) Country of origin, soybean meal import, Philippines, 1990. (7) Country of destination, soysauce export, Philippines, 1990.

Tables: (1) List of soybean-based food products popularly used in the Philippines. (2) Volume and value of soybean imports, 1980-90.

Soybean production increased from about 9,800 tonnes (metric tons) in 1980 to a peak of 11,466 tonnes in 1982, then decreased to 5,614 tonnes in 1990. Area planted to soybeans increased from about 10,000 ha in 1980 to a peak of about 11,00 ha in 1982, then decreased to about 7,000 ha in 1990. The average yield for the period 1980-1990 was 920 kg/ha, but has generally been falling since 1983. Southern Mindanao has been the single most important soybean producing region in the Philippines for more than a decade, accounting for about 67% of total Philippine soybean production in 1990; Central Mindanao comes next with about 23%.

A brief history of soybean production in the Philippines from 1983 to 1990 appears on pages 99-10. Popular soyfoods products in the Philippines include: A. Fermented products: Soy sauce (toyo), fermented soybean curd (tausi [sic, fermented black soybeans]), tempeh (tempe), soybean paste (miso), soft fermented soybean curd (tahuri). B. Non-fermented products: Soybean sprouts (toge, tauge), soybean cheese [curds] (tokwa), Geerlings cheese (taho [tofu]), soybean milk (soymilk), and roasted soybean powder (soy coffee).

Philippine imports of soybeans and soybean products have increased rapidly since 1980, yet 93% of these imports in 1990 were soybean meal, of which 38% comes from India, 33% comes from the USA, 22% from China, and 7% from others.

In April 1991 the General Milling Corporation's soybean solvent extraction plant began operation in Tabango, Batangas. It is expected to reduce the country's imports of soybean meal but increase the imports of raw soybeans. Address: 1. Scientist III; 2. Subject Matter Specialist. All: PCARRD, Los Baños, Laguna, Philippines.

7781. Fujita, Frank. 1993. Foo, a Japanese-American prisoner of the Rising Sun: the secret prison diary of Frank "Foo" Fujita. Denton, Texas. University of North Texas Press. xviii + 371 p. Foreword and notes by Stanley L. Faulk. Introduction by Robert Wear. Illust. Index. 25 cm. Series: War and the Southwest, No. 1.

• ***Summary:*** Page 148: "As the war progressed and supplies diminished, the carpenters were not permitted to build coffins anymore. Instead *miso* barrels were used. *Miso* is a reddish brown paste made from soy beans and has a very good flavor. The barrels were about thirty inches in diameter and twenty-four inches tall. A dead body would not fit into a barrel that size, so the bones of the corpse were broken in order to cram the body into the barrel... the dead were taken away and cremated."

Page 149-50: The mosquitoes were even worse than the fleas and bed bugs because their bites would itch for a much longer time. "Everyone complained so much that the Japanese decided to let us cover the large cracks between the planks of the walls and the ceiling. They gave us stacks of old Japanese newspapers to be torn into strips... The galley made up a lot of rice or wheat paste, and each room was issued two soy sauce buckets full of paste to stick the newspaper strips up with."

Page 163: He liked to catch little smeltlike fish, from 3-6 inches in length, "then he would have me cook them for him. He liked them cooked whole by dipping them in a soy sauce and sugar mixture and then broiling them over the coals in the hibachi."

Page 293: "Our noon chow was one bread bun per man and nothing else. They were mildewed and almost inedible. There was a very small amount of *miso*, a fermented soybean paste, mixed with some parched soybeans, and we drew lots to see who would share this ... Cigarettes were now back down to one per day."

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7782. Kitamura, Keisuke. 1993. Country Report 6–Japan. In: N. Chomchalow & P. Narong, eds. 1993. Soybean in Asia Proceedings of the Planning Workshop for the Establishment of the Asian Component of a Global Network on Tropical and Subtropical Soybeans. Bangkok, Thailand: FAO Regional Office for Asia and the Pacific. viii + 218 p. See p. 64-69. RAPA Publication (FAO), No. 1993/6.

• ***Summary:*** Contents: (1) Production and uses. (2) Research activities. (3) Germplasm

Germplasm: "Soybeans were introduced from abroad since the old days. Genetic resources of landraces were continuously collected and surveyed since the beginning of this century. In recent years, a number of soybean varieties were introduced from many foreign countries and international institutions, including Korea, China, Nepal, Thailand, USA, AVRDC, etc. Today the total soybean accessions are about 6,000 including wild soybeans. They are conserved and managed in the National Center of Genetic Resources within the National Institute of Agrobiological Resources."

Figures: (1) Scheme of domestic soybean price in Japan (2) Geographical distribution of soybean varieties according to their ecotypes and location of soybean breeding stations in Japan.

Tables: (1) Planted area, production and yield of soybean in Japan. Total planted area has decreased from 306,000 ha in 1960 to 146,000 ha in 1990. Production has decreased from 418,000 tonnes (metric tons) in 1960 to 220,000 tonnes in 1990. Yield has increased from 1,360 kg/ha in 1960 to a peak of 1,790 kg/ha in 1990. (2) Trends of soybean supply and demand. Japan's imports have increased from 3,244,000 tonnes in 1970 to 4,330,000 tonnes in 1991, when 97.3% of the soybeans used in Japan were imported. Uses of soybeans in 1990: Oil 3,630,000 tonnes–up from 2,505,000 tonnes in 1970. Food 725,00 tonnes–up from 522,000 tonnes in 1970. Fermented products (miso, shoyu, natto) 196,000 tonnes–down from a peak of 208,000 tonnes in 1980. Animal feed 95,000 tonnes–up from 10,000 tonnes in 1970. (3) Trends of soybean price. (4) Trends of seed production. (5) Soybean research activities in Japan. (6) Objectives of the respective breeding stations for soybean. (7) Characteristics of the leading and some unique soybean varieties in Japan. For each of 15 varieties gives: Name, year registered (1928-1991), breeding method (crossing, pure line, mutation, back-crossing), ecotype, weight of 100 seeds, seed color, hilum color, characteristics. Address: National Agricultural Research Centre, Tsukuba City, Japan.

7783. Kushi, Michio, Kushi, Aveline, Jack, Alex. 1993. Macrobiotic diet. Revised and enlarged edition. Tokyo and New York: Japan Publications. 400 p. Illust. Index. 21 cm. [67 ref]

• ***Summary:*** Edited by Alex Jack, this is the revision of a book first printed in 1985.

The chapter on "Beans and bean products" has the following contents: Daily use. History. Quality. Varieties: Azuki beans, black-eyed peas (sometimes known as yard-long beans), black turtle beans, broad beans, chick-peas, great northern beans, kidney beans, lima beans, lentils, mung beans, navy beans, peas, pinto beans, soybeans (p. 195-99) (introduction, miso, natto, okara, soy flour, soy grits, soy milk, soy oil, shoyu, tempeh, tofu {incl. nigari, fresh tofu, soft tofu, firm tofu, deep-fried tofu, pickled tofu, fermented tofu, frozen tofu, dried tofu}), vilia, soy yogurt, yuba.

For information on cooking soy, see p. 204-07. Note: Natto is not usually made with koji (p. 207). For "Health benefits" and for "Soy foods and cancer research" (p. 208-09).

Black soybeans (also known as "Japanese black beans") are mentioned on pages 60, 121, 189, 200, and 204.

"Natto is a fermented soybean product that resembles baked beans connected by long sticky strands. Its strong odor takes some adjusting to but once appreciated natto is enjoyed regularly as a small side dish or condiment" (p. 196). Address: 1-2. Brookline and Becket, Massachusetts.

7784. Levenstein, Harvey A. 1993. Paradox of plenty: A social history of eating in modern America. New York, NY: Oxford University Press. ix + 337 p., [8] p. of plates. Illust. (8 p. of plates). Index. 25 cm. [1473* endnotes]

• ***Summary:*** Contents: Prologue: Depression paradoxes. 1. Depression dieting and the vitamin gold rush (The New Nutrition, Victor Lindlahr, Gayelord Hauser, the willingness to eat for health more than for pleasure, Alfred W. McCann, Prof. Elmer McCollum and acidosis). 2. The great regression: The new woman goes home. 3. From Burgoo to Howard Johnson's: Eating out in Depression America. 4. One-third of a nation ill nourished? 5. Oh what a healthy war: Nutrition for national defense [World War II].

6. Food shortages for the people of plenty. 7. The golden age of food processing: Miracle Whip *über Alles*. 8. The best-fed people the world has ever seen? (Insta-Burger-King chain of early 1950s, Ray Kroc visits San Bernardino, the McDonald brothers, Clementine Paddleford). 9. Cracks in the façade: 1958-1965 (kitchen appliances do not reduce time women spend on food preparation, growing suspicion of the food industries, food additives, refined and processed foods, Gayelord Hauser). 10. The politics of hunger.

11. Nutritional terrorism (DDT and pesticides, Rachael Carson and *Silent Spring*, USDA, mercury in fish from the Great Lakes, Jerome Irving Rodale {ex-auditor for the IRS "was quite unlike most of the others in the huckster-filled health food business." Circulation of his *Organic Gardening and Farming* magazine soared from 60,000 in 1958 to 650,000 in 1970}. "Soon the doors were open to the usual horde of health food advocates and fad diet promoters impatiently waiting for the moments when they could again hold center stage." Gayelord Hauser, his women and his

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Five Wonder Foods, Adelle Davis, Organic foods, natural foods, health food stores, the government had sided with the medical establishment to keep the public from turning to vitamins–rather than to doctors–to solve health problems, the FDA and Food Faddism, vitamin advocates, Ralph Nader, agribusiness, cholesterol awareness, the AMA's council on foods, National Heart Association, Linus Pauling bankrolled by Hoffmann-La Riche, the largest wholesaler of vitamin C, in 1971 Michael Jacobson helped found the Center for Science in the Public Interest, middle class was rapidly losing faith in the food industry and government).

12. The politics of food (The New Left vs. Ralph Nader, radicals, *Ramparts* magazine, Francis Moore Lappe, vegetarianism, Berkeley radical Alice Waters opens Chez Panisse, aphorism *Man ist was er isst* {Man is what he eats, by Ludwig Feuerbach, 1804-1872, German philosopher}, avoidance of meat and white foods, natural foods, Zen macrobiotic diet, Georges Ohsawa, Yin and Yang, Warren Belasco, brown rice, soy sauce, granola, Fred Rohe, Charles Reich, *Mother Earth News*, *Berkeley Barb*, "back to Nature," organic foods, the women's movement, LSD, Theodore Roszak, Frederick Stare sets up American Council for Health and Nutrition, Jean Mayer, reviling white sugar, John Yudkin, America's puritanical streak, Robert Choate destroys sugar and sugar-laden breakfast cereals, the public grows to despise sugar).

13. Natural foods and negative nutrition (You are what you eat {1969}, *Fortune magazine* predicts convenience will win out over natural foods, Delaney Amendment, cholesterol and heat disease, loss of faith in the core of America's postwar national credo: the ideal of the balanced meal and faith in the Basic Four, Senator McGovern and his committee's special report *Dietary Goals for the United States* {1977-1978}, which called for a complete about-face in government nutrition policy. "All previous government efforts had centered on getting people to eat more of what was thought to be good for them. *Dietary Goals* emphasized eating less of what was thought to be bad for them"–what Levenstein calls "Negative Nutrition." A great outcry came from the beef, dairy, and egg producers).

14. Darling, where did you put the cardamom? (The rise of gourmet, high ethnic, and upscale cuisines, French food, Julia Child, Craig Claiborne, snobbery, ethnic food boom, Oriental foods). 15. Fast food and quick bucks (Pizza, McDonald's, Kentucky Fried Chicken, franchises). 16. Paradoxes of plenty. Abbreviations used in frequently cited periodicals.

Born in 1938, Levenstein's first book was titled *Revolution at the Table: The Transformation of the American Diet*. This is a carefully researched, generally well written and very interesting cultural history of food and eating in the USA from 1930 to 1993–and of America's ongoing food wars. However by trying to take a fair and balanced centrist position, and by trying to prevent value judgments from creeping in (e.g., a healthy, balanced diet is better than an unhealthy one), Levenstein no doubt disappoints, and perhaps even infuriates, all sides. His sources on natural and organic foods and vegetarianism are scant and often very negative. Address: Prof. of History, McMaster Univ., Univ. of Hamilton, Ontario, Canada.

7785. Mallaheu, Huon L. 1993. The illustrated history of antiques: the essential reference for all antique lovers and collectors. London: Aurum Press; Philadelphia, Pennsylvania: Courage Books. An imprint of Running Press. 640 p. Illust. Maps. Index. 29 cm. 1st ed. 1991. [soy ref]
• ***Summary:*** The contents of this 2nd printing are identical to those of the 1991 first printing; however the publishers are different. Address: Authority on antiques, London.

7786. Marks, Copeland, Kim, Manjo. 1993. The Korean kitchen: Classic recipes from the land of the morning calm. San Francisco, California: Chronicle Books. 236 p. Illust. Index. 23 cm. [8 ref]
• ***Summary:*** Korea is a peninsula surrounded by water (including the Yalu River that marks the border between China and Korea). There an estimated 200 varieties of kimchi such as cabbage, cucumber, eggplant, white radish, turnip, etc. The glossary (p. 7-13) includes: Denjang paste (a fermented soybean paste and flavor enhancer). Gochu Jang (hot fermented chili paste, Gochu means chili). Seaweed. Kelp (*Ulva conglobata*, laver (*Porphyra umbilicalis*, sold in very thin sheets [nori]), *miyuk* (*Undaria pinnatifida* [wakame]). Soy sauce (with directions for making it at home). Soybean curd (Two types: Chinese is a firm square about 4 inches on a side and 1 inch thick; Japanese is soft and creamy, about 2 inches thick).

Concerning Gochu Jang: This is the main seasoning in Korean cooking. It has been prepared at home for centuries and stored in the many black pottery pots so conspicuous on Korean rooftops or gardens. Each year on March 3, an auspicious date, the householder starts to prepare enough gochu jang to last all year. Ingredients: Glutinous rice (cooked to a pudding consistency), fermented soybean cake (*meju*), hot red chilis, salt, and barley malt syrup mixed with water. These are mixed and allowed to ferment [outdoors] in a pottery jar for at least 3 months. In early May, as the weather warms, the [woven conical bamboo] cover of the storage jar is removed early each day "so that the sun can strike and warm the contents to accelerate fermentation. At night the cover is replaced." The fermentation process eventually reduces gochu jang to a smooth, jamlike consistency with a many-dimensional flavor. It adds a lively sting and rich red color to any food with which it is used. "Korean cooking without this indispensable condiment is unthinkable."

Recipes include: Beef shreds in soy sauce (p. 48). Fried spiced bean curd (p. 57, *Tubu choerim*). Stuffed bean curd

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(p. 58, *Tubu gui*). Crushed bean curd salad (p. 70, *Tubu sang she*). Bean curd and pork patties (p. 96). Assorted stuffed fritters (p. 100-01, *Jon*). Seasoned dipping sauce (p 109, *Yang yeum kanjang*). Simple bean curd soup p. 117, *Tubu kook*). Bean curd soup with clams (p. 125, *Sundubu*). Vegetable soup with soybean curd (p. 135, *Tubu jigae*). Soybean sprout soup (p. 136, *Kongnamul kook*). Address: 1. Food historian; 2. Dr. (Mrs.), expert on history, science, and preparation of kimchi.

7787. Matsumoto, Valerie J. 1993. Farming the home place: A Japanese American community in California, 1919-1982. Ithaca, New York: Cornell University Press. ix + 262 p. Illust. (photos). Index. 24 cm. [100+* ref]

• ***Summary:*** A very interesting look, spanning three generations, at the Cortez Colony, in Cortez, Merced Co., San Joaquin Valley, central California, the last Japanese Christian farming community formed by Kyutaro Abiko in 1919. It is written from a feminist perspective.

In the lean early years at Cortez, "the settlers' diet was limited, meals often consisted of *miso* soup and rice.. " (p. 47).

New Year's was the major holiday of the year. Everyone would partake of carefully prepared traditional Japanese dishes such as chicken *teriyaki, ozoni* (a soup containing mochi, symbolizing prosperity), *mame* ([soy] beans, symbolic of good health), and sushi (vinegared rice "rolled in sheets of toasted seaweed or stuffed into soybean wrappers [deep-fried tofu pouches]) (p. 78).

A glossary of terms (p. 231) includes: an (sweetened red bean paste), azuki (red beans), kinako (soybean flour), mame (beans), miso (fermented soybean paste), nori, shoyu (soy sauce), sushi, teriyaki (broiled meat cooked with soy sauce, wine, and ginger).

Photos show: Abiko family portrait, 1925 (p. 27). Address: UCLA.

7788. Nahm, Andrew C. 1993. Introduction to Korean history and culture = Sin Han'guksa immun. Elizabeth, New Jersey: Hollym. xii + 391 p. See p. 359: The Yalu Flows: A Korean Childhood. 1956, by Ilhan New. Illust. (some color). Maps. 23 cm. *

7789. Pitchford, Paul. 1993. Healing with whole foods: Oriental traditions and modern nutrition. Berkeley, California: North Atlantic Books. xxii + 656 p. Illust. Index. 26 cm. [536 ref]

• ***Summary:*** Contents: 1. Origins. Part I: The roots of diagnosis and treatment. 2. Yin-yang and beyond. 3. Qi: vitality. The six divisions of yin and yang. 4. Heat/cold–The thermal nature of food and people. 5. Exterior/interior: Building immunity. 6. Excess and deficiency.

Part II: Essentials of nutrition. 7. Dietary transition. 8. Water. 9. Protein and vitamin B-12. 10. Oils and fats. 11. Sweeteners. 12. Salt. 23. Condiments, caffeine, and spices. 14. Vitamins and supplements. 15. Calcium. 16. Green food products. 17. Survival simplified. 18. Enjoyment of food. 19. Food combinations. 20. Fasting and purification. 21. Food and children.

Part III: The five element and organ system. 22. Five elements: Seasonal attunement and the organs in harmony and disease. 23. Therapeutic use of the five flavors. 24. Wood element. 25. Fire element. 26. Earth element. 27. Metal element. 28. Water element.

Part IV: Diseases and their dietary treatment. 29. Blood sugar imbalance [diabetes]. 30. The stomach and intestines. 31. Blood disorders. 32. Cancer and regeneration diets. 33. Other degenerative disorders.

Part V: Recipes and properties of vegetal foods. 34. Vibrational cooking. 35. Grains. 36. Breads. 37. Legumes–Peas, beans, and lentils: Healing properties of legumes, improving the digestibility of legumes, techniques for cooking legumes, miso, tempeh, tofu. 38. Nuts and seeds. 39. Vegetables. 40. Sprouts. 41. Salads. 42. Seaweeds: Agar-agar, dulse, hijiki and arame, kombu and kelp, nori, wakame, Irish moss and Corsican (*Alsidium helminthocorton;* it is sold as a tea and discharges worms. 43. Soups. 44. Sauces. 45. Condiments: Chutneys and relishes. 46. Spreads and patés. 47. Pickles. 48. Grain and seed milks (incl. sesame seed milk, almond milk, almond milk shake, sprouted grain milk {oats, rice, millet, barley}, cooked grain milk). 49. Rejuvelac and yogurt. 50. Fruit. 51. Desserts. Appendixes: Recipe locator. Bibliography (180 references, mostly alternative: Oriental philosophy, Chinese medicine: Theory and foundations, Chinese dietary therapy, Ayurvedic and Tibetan medicine, Western approach to nutrition, Healing the spirit and mind, Chinese herbology, Western herbology, Healing with food, Green foods, Amaranth, Seaweeds, Vegetarian, macrobiotic, vegan, Children, Ecology, politics, and ethics of food, Degenerative diseases and immunity, Toxins and radiation, Cookbooks, Food catalogs, guides, and references, Sources of data for tables, charts, and nutritional statistics). References and notes (356 refs, mostly scientific). Resources index (Incl. Soyfoods Center).

The following are listed in the index (f = most important pages): Acid-forming foods (p. 235f, 240). Aduki [azuki] beans (p. 26, 34, 50, 60, 68, 77, 178, 273, 305, 307, 319, 362, 467f). Amaranth (lots, 419-20f). Amasake (p. 98, 152-53, 155, 160, 163, 275, 287, 592f). Animal products (lots). Aspergillus oryzae (p. 592). Ayurveda (lots). Black sesame seed (lots, 492f). Black soybean (60, 68, 288, 317, 324, 327, 468). Bran (p. 332) and its role in relieving constipation (345-46). Buckwheat (lots, 422f). Buddha. Calcium (lots). Cancer. Cheese (lots). Cholesterol. Cigarette smoking. Coldness, bodily. Dampness, bodily. Deficiency. Five elements system. Free radicals. Gerson, max and cancer therapy (p. 41, 126, 162, 365-66, 381). Goiter. Gomasio (sic, gomashio; sesame salt, p. 272, 566f). Heart / Heart/

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mind. Heat (lots). Hijiki. Ice cream (p. 291, 305). Job's tears (p. 381, 383). Kasha (buckwheat, p. 422). Kelp. Kloss. Jethro (p. 366, 381). Koji (p. 479). Kudzu (p. 22, 25, 29, 60, 289, 299, 309, 317, 414f). Lecithin (lots, p. 127, 470, 414f). Legumes (lots, p. 466-471f). Macrobiotics (p. 3-4). Marijuana (lots). Menopause. Microwave cooking (p. 20). Milk). Mind, Chinese Zen concept of. Miso (p. 33-34, 60, 72-74, 78, 81, 90, 92, 98, 101, 105-06, 150, 159, 164, 195, 221-22, 272, 275, 315, 376, 479-82f; natto miso p. 482). Mochi (p. 436-37f). Mother's milk–to increase. Mucus. Nails, dry and brittle (p. 285). Oils (incl. soy oil, p. 138-41). Omega-3 fatty acids. Nori. Protein (lots). Qi [chi, p. 16-17]. Quinoa. Rice syrup. Schweitzer, Albert (365). Sea palm (p. 541). Seaweed (lots, p. 540-55f–see also Agar, alaria, arame, bladderwrack, Corsican, dulse, hijiki, Irish moss, kelp, kombu, nori, ocean ribbon, sea lettuce, sea palm, wakame). Seitan (p. 446-47). Sesame butter (p. 81, 492). Sesame seed (lots, 492f). Soybean (p. 52, 56, 60, 105, 124, 161, 178, 232, 235n, 250, 300, 466, 470f; children and soy products 253-54, soy sprouts p. 22, 34, 122, 470f; see also miso, soy sauce, tempeh, tofu). Soy sauce (p. 34, 78, 81, 98, 105-06, 150, 159, 164, 195, 222, 272, 277, 315, 414f, 480). Spirulina. Sprouting (p. 232-33). Sprouts (lots, p. 528-30f). Steiner, Rudolf (p. 19-20, 504). Stomach (beneficial foods, stomach/duodenal heat and, strengthening food). Stress. Sugar (lots). Superoxide dismutase (SOD). Sweating–night sweats (p. 24, 117, 441). Sweeteners. Sweet rice (p. 433f). Tahini (sesame, p. 106, 225, 493). Tempeh (p. 22, 34, 56, 60, 96, 99, 105, 124, 216, 221, 242, 250, 290, 307, 310, 482-86f; vitamin B-12 and p. 98). Thirst. Tobacco. Tofu (p. 22, 25, 34, 55-56, 60, 68, 81, 105, 124, 242, 250, 290, 300, 303, 307, 310, 317, 327, 486-89f). Tomato. Tongue coating and digestion (p. 399). Umeboshi plums (p. 78, 159, 222, 272, 307, 414, 583f). Umeboshi vinegar (p. 414). Urinary incontinence and deficiency of kidney qi (p. 318-19). Urination, frequent, from kidney qi and yang deficiencies (p. 318). Valerian root. Vegan (p. 5, 95, 137, 261, 389, 502). Vegetarianism (p. 81-82, 95). Vitamin B-12. Vitamin E. Vitamin K. Wakame. Warming foods (p. 18-20, 26-27). Warts. Watermelon. Wind, bodily (foods which quell, 286-89, incl. black soybean, p. 468). Yang. Yin.

Talk with Heartwood Institute. 1997. Nov. 12. This is basically a massage school that also offers retreats. Paul's background is in the martial arts and massage. He graduated from a college after 4 years but the name of the college is not available. He also did 2 years of graduate work at an institution whose name is not available. The Institute sent their catalog/brochure. Address: Director, Heartwood Inst. Wellness Clinic and Oriental Healing Arts Program, 220 Harmony Lane, Garberville, California 95542. Phone: 707-923-5000.

7790. Ramli, M.N.; Jainudin, A.; Tg. Mahmud, T.Y. 1993. Country Report 7–Malaysia. In: N. Chomchalow & P. Narong, eds. 1993. Soybean in Asia: Proceedings of the Planning Workshop for the Establishment of the Asian Component of a Global Network on Tropical and Subtropical Soybeans. Bangkok, Thailand: FAO Regional Office for Asia and the Pacific. viii + 218 p. See p. 70-74. RAPA Publication (FAO), No. 1993/6.

• ***Summary:*** Contents: (1) Introduction. (2) Production Status (Soybean is not presently grown commercially in Malaysia), major growing seasons and cropping systems, constraints, resolving constraints. (3) Processing, utilization and marketing: Status, supply and demand, constraints, resolving constraints. (4) Resources: Personnel, seeds. (5) On-going research projects. (6) Information required.

Tables. (1) Import of soybean and soybean products in Malaysia. Amount and value in 1988, 1989, and 1990 of soybean, soybean flour (non-defatted), soybean oil, soybean cake & other residues, soysauce. Address: 1. Deputy Director. All: MARDI, Serdang, Selangor, Malaysia.

7791. Shimizu, Kay. 1993. Tsukemono: Japanese pickled vegetables. Tokyo: Shufunotomo / Japan Publications. 112 p. Illust. (color). Index. 27 cm. [Eng]

• ***Summary:*** Tsukemomo are Japanese pickled foods, primarily vegetables. Drying and pickling were two of the earliest ways of preserving food. If you've never tried Japanese tsukemono, get ready for a delicious surprise. This excellent book is a good place to start. We would start with takuan and umeboshi (p. 22).

Soy related recipes: Basic *miso-zuke* (p. 36-37). Spicy pickled celery (Celery *miso-garame*) (p. 37). *Koji / miso / kasu* tsukemono base (p. 39). Amazake (p. 40-41). Daikon radish pickled in koji (*Bettara-zuke*) (p. 41). Scallions in shoyu (*Rakkyo shoyu-zuke*) (p. 43). Garlic with soy sauce (p. 64). Garlic with bean paste [miso] (p. 64). Okra and onion pickles (*Okra shoyu-zuke*) (p. 70). Soy-flavored daikon pickle (*Daikon shoyu-zuke*) (p. 82, 84). Asparagus with bean paste (Asparagus *miso-zuke*) (p. 87). Spicy cabbage tsukemono (Cabbage *shoyu-zuke*) (p. 88). Cooked and pickled kelp (*Nori tsukudani*) (p. 97). Soy sauce pickled vegetables (*San-bai-zuke*) (p. 98).

A 2-page glossary includes: "Age (abura-age)–deep-fried soybean cake (*tofu*). An–sweetened red *azuki* beans prepared as a paste for confections. Amazake–non-alcoholic creamy-thick hot drink prepared from rice fermentation with the addition of rice koji.

"Drop lid. A necessary item for Japanese pickling. A wooden cover which is smaller in diameter than the pot opening, so lid will lay flat on top of food, and weight can be placed on top of lid."

Dou-ban-jiang–spicy Chinese brown bean paste, contains chili. Koji–a yeast-like rice mold that works primarily to convert starches into sugars during a fermentation process.

Mirin–a thick sweet wine made from glutinous rice,

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used primarily for cooking. Miso–fermented soybean paste. Mochiko–glutinous rice flour. Mochi–glutinous rice that has been pounded until soft and sticky, then formed into cakes. Mochi-gashi–a confection made from glutinous rice.

Natto–fermented soybeans with sticky texture and strong aroma. Nori–edible seaweed, laver. Shoyu–Japanese soy sauce, considerably lighter than Chinese soy sauce, which should not be substituted for shoyu.

Suribachi–Japanese pestle and mortar (earthenware bowl with ridged edges). Tsukudani–food simmered with shoyu, sugar, mirin and water until almost all liquid evaporates.

Ume–Japanese plum, technically a species of apricot, but usually translated as plum. Umeboshi–pickled plum. Wakame–an edible seaweed, thinner and softer than konbu kelp. Wasabi–Japanese green horseradish, most familiar in the west as a mound of pungent green paste served with sushi or sashimi.

Note: Real wasabi is very expensive, and is a completely different plant from horseradish, from a different genus and species. Real wasabi is rarely found outside Japan and is much more potent than its imitation, "western wasabi"–a mixture of horseradish, mustard, and green food coloring. Address: Saratoga, California.

7792 So, Yan-kit. 1993. Yan-kit's classic Chinese cookbook. London: Dorling Lindersley Ltd., London. 239 p. Illust. (color photos). Index. 24 cm. [1 ref]

• ***Summary:*** This is a remarkable Chinese cookbook. Although the text of this book was copyrighted in 1984, the photographs, layout and design have been updated to 1993. The first 192 pages of the book are printed in full color on glossy paper. The author is a woman–lovely, cultured, and centered.

In the section on "Ingredients" is a two-page spread titled "Beans and bean products" (p. 12-13) of 12 fine color photos, each with a caption and Chinese characters. They are: (1) Bean curd, fresh [fresh tofu]. (2) Bean curd, puffed [deep-fried tofu puffs], used to absorb tastes and juices. (3) Bean curd sheet [thin dried yuba sheet]; must be moistened before use. (4) Black beans, fermented [fermented black soybeans]. "Whole soybeans preserved with salt and ginger." (5) Red beans (azuki). (6) Red bean paste: a thick paste made from puréed, sweetened azuki beans, often used a filling for sweets.

(7) Bean curd "cheese," red fermented [Fermented tofu with ang-kak], with salt and rice wine. (8) Bean curd "cheese," white fermented [Fermented tofu], with or without chili. (9) "Crushed yellow bean sauce: purée of fermented yellow soybeans, wheat flour, salt and water" [with fermented black soybeans]. (10) "Szechwan [Sichuan] chili paste: spicy hot paste of dried chili and crushed yellow bean sauce." (11) "Soybean paste: paste of crushed soybeans combined with chili, sugar and salt." (12) "Yellow beans in salted sauce: Whole yellow soybeans fermented with salt, wheat flour and sugar" [with fermented black soybeans].

Also in the section on "Ingredients" is another two-page spread titled "Sauces, oils, fats, wines and vinegars" (p. 26-27) which states: "Soy sauce is the most basic but also the most important seasoning. Used with salt, it helps to turn simple ingredients into Chinese cuisine." Shallow, round "viewing" dishes contain: (1) Thin soy sauce. (2) Thick soy sauce. (5) "Hoisin sauce: soybeans, wheat flour, salt sugar, vinegar, garlic, chili, and sesame oil. (6) "Sweet bean sauce: Made from crushed yellow bean sauce combined with sugar. Note: The four vegetable oils shown are corn oil, sesame oil, peanut oil, and hot chili oil.

Soy related recipes (the page with recipe appears before the page with the photo): Bean curd soup (p. 58, 57). Steamed prawns in mixed bean sauce (with "1 tablespoon fermented black beans," p. 78, 77). Bean curd soup with fish stock (with "2 cakes bean curd, drained," p. 81, 83). Stir-fried clams in black bean sauce (with "1½ tablespoons fermented black beans, rinsed, mashed with 1½ teaspoons sugar," p. 88, 87). Steamed trout with black beans and garlic (with "2 tablespoons fermented black beans, rinsed and partially mashed with ½ teaspoon sugar," p. 95, 93). Willow chicken in black bean sauce (with "3 tablespoons fermented black beans, rinsed and mashed," p. 106, 109). Soy sauce chicken (with "½ pint thick soy sauce," p. 116, 115).

Green pepper beef in black bean sauce (with "2½ tablespoons fermented black beans, rinsed and mashed with ¼ teaspoon sugar and 1 teaspoon oil," p. 142, 141). Bean curd puffs (deep-fried tofu, p. 152). Eight-treasure vegetarian assemblage (with "1 tablespoon fermented red bean curd cheese, mashed with 1 teaspoon own juice or water" and "8 bean curd puffs, halved," p. 153, 151). Wheat gluten (homemade, p. 156-57). Red-braised gluten (p. 157, 155). Pi pa bean curd (The "pi pa" is a celebrated Chinese musical instrument, p. 158-59). Pock-ma bean curd ("This internationally famous Szechwan dish was the creation of the wife of chef Ch'en Shen-fu, who worked in the [provincial] capital, Ch'eng-tu [Chengdu] during the 2nd half of the 19th century. If pockmarks on her face earned her this rather derogatory nickname, 'Pock-ma' or 'Pock-woman,' they also immortalized her bean curd dish" [Mapo doufu]. Ma stands for "mazi" which means a person disfigured by pockmarks. Po translates as "old woman," p. 159, 161).

Deep-fried bean curd in earthen pot (with "4 cakes bean curd, drained," p. 162, 161). A vegetarian menu (of the six dishes shown, 2 contain tofu, p., 168-69). Deep-fried bean paste sauce with noodles (with "1½ pounds ground yellow bean sauce," p. 185, 181).

Deep-fried five-spice rolls (from Fukien, with "1 package dried bean curd sheets [yuba] {usually 8 ounces, containing 8 sheets, each 13 by 6 inches}," p. 195). Eight-treasure bean curd ("The 18th-century poet and official Yüan Mei, wrote a cookery book called Sui-yüan Recipes, a unique legacy of his times from a Chinese man of letters.

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In the recipe called "Prefect Wang's Eight-Treasure Bean Curd," Yüan Mei briefly outlined how the dish traced its origin to the Imperial kitchen." Includes "2 cakes bean curd, drained," p. 215, 149). Bean curd in simple sauce (p. 219). Stir-fried spinach in bean curd "cheese" sauce (with "2½ to 3 cakes white bean curd 'cheese' with chili," p. 220)

A Glossary (p. 227+), which starts with a page of definitions of "Beans and bean products," defines the same items whose photos appear on pages 12-13. Likewise for the glossary page on sauces (p. 231). Address: England.

7793. Tamura, Linda. 1993. The Hood River Issei: An oral history of Japanese settlers in Oregon's Hood River Valley. Urbana and Chicago, Illinois: University of Illinois Press. xli + 337 p. Foreword by Roger Daniels. Illust. Index. 23 cm. [605* endnotes]

• ***Summary:*** A superb book, carefully researched and well. By telling, in depth, the story of one small community of Issei in Hood River, Oregon, from their youth in Japan until their return home after the brutal internment camps, she captures the exquisitely the story of the ordeals faced by the first generation of Japanese (such honest, hard-working people) in racist America. Through her many interviews, the Issei are able to speak for themselves, in their own words, throughout this book.

Soy-related passages: funyu = fermented bean cake = 59! miso = p. 65, 67, 77. Soy sauce = 25, 26, 66, 75, 138. soybean = p. 26.

Page 58: Sekihan (steamed rice mixed with red beans [azuki]). Page 134: O-hagi (sweetened bean jam filled with mashed rice).

Linda Tamura is a native of Hood River and a third-generation Japanese American. Address: Prof. of education and chair of the Education Dep., Pacific Univ., Forest Grove, Oregon.

7794. Tran, Van Lai. 1993. Country report 15–Vietnam. In N. Chomchalow & P. Narong, eds. 1993. Soybean in Asia: Proceedings of the Planning Workshop for the Establishment of the Asian Component of a Global Network on Tropical and Subtropical Soybeans. Bangkok, Thailand: FAO Regional Office for Asia and the Pacific. viii + 218 p. See p. 143-150. RAPA Publication (FAO), No. 1993/6.

• ***Summary:*** Contents: (1) Introduction. (2) Production: trend, major growing seasons and cropping systems, constraints, resolving the constraints, future research. (3) Processing, utilization and marketing: Consumption, processing, marketing, constraints, resolving the constraints. (4) Resources: Personnel, seeds. (5) On-going research projects. (6) Information required. (7) Conclusion.

Tables: (1) Area, yield, and production of soybean in Vietnam, 1970-90. (2) Soybean production constraints in Vietnam. (3) Several research findings on soybean breeding and farming patterns. (4) Identified constraints for soybean production in Vietnam. (5) National requirement for food and production of soybean. (6) Methods of soybean processing of Vietnam. (7) Constraints to soybean processing, utilization, and marketing. (8) Future research priority for soybean in Vietnam. (9) Number of scientists working on soybean research. (10) Training needs on a priority basis. (11) Soybean varieties of high yield potential.

Introduction: "Soybean has been cultivated in Vietnam for a long time. Le Quy Don, in his book "Van Dai Loai Ngu", written in 1773, mentioned about soybean cultivation. It is the second most important legume in Vietnam. All soybean products are used as human foods and animal feed because of its high food value (40-50% of protein and 20-25% of oil).

"The Government of Vietnam, which is conscious of the importance of soybean and its role of human food and animal feed, and the possibility to increase its production, has listed soybean as the number two most important crop after groundnut in her agricultural development policy."

Table 1: Area planted to soybeans in Vietnam grew from 17,078 ha in 1970 to 149,000 ha in 1990, projected to grow to 300,000 ha in the year 2000.

Production of soybeans in Vietnam increased from 5,277 tonnes (metric tons) in 1970 to 146,020 tonnes in 1990, projected to grow to 420,000 tonnes in the year 2000.

Yield of soybeans in Vietnam grew from 309 kg/ha in 1970 to 980 kg/ha in 1990, projected to grow to 1,400 kg ha in the year 2000.

"Most of the soybean produced in Vietnam is consumed as human food prepared by traditional methods, which include fermented products such as soysauce, soypaste (miso), soycurd (fermented tofu), and soycheese, and non-fermented products such as soymilk, soycurd (tofu) and soybean oil.

Note: This is the earliest English-language document seen (March 2009) that uses the term "soypaste" to refer to miso.

Concerning the Vietnamese names of these foods, Huong Quan Nguyen (Zomore Quan) writes, in reply to a question from Soyinfo Center, 2008 Aug. 17. Soy sauce = "xi dau" (the Vietnamese "d" written without the bar across the vertical stroke is pronounced "Z").

Soy paste = "tuong dau nanh" or "tuong Cu Da." "Tuong" is a generic term meaning "sauce." As you know, Cu Da is the name of the village famous for its soy paste. "Tuong Cu Da" literally means "sauce made in Cu Da Village." Soy paste is made in many villages in North Vietnam, not just in Cu Da. I have heard that Tuong Ban and Tuong Pho Thot are just as good as Tuong Cu Da.

Soy curd = "dau hu" (which is unfermented. Once the soy curd is fermented, it is referred to as "chao").

Soy cheese = "chao" (this word has no diacritical mark).

Note: Zomore asked six Vietnamese people who are knowledgeable about soyfoods and all are aware of only one

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kind of fermented tofu in Vietnam; therefore they cannot imagine what fermented "soycheese" is. Address: Legumes Research and Development Centre, INSA, Dong Da, Hanoi, Vietnam.

7795. Verreault, Georges. 1993. Journal d'un prisonnier de guerre au Japon, 1941-1945 [Diary of a prisoner of war in Japan, 1941-1945]. Sillery, Quebec, Canada: Septentrion. 313 p. See p. 161. Illust. Portraits. 23 cm. [Fre]
• ***Summary:*** On this day of fish, we had fish prepared in what the Japanese call "sweet Soya sauce."

Note: No French name for this sauce is given. Address: Canada.

7796. Champlain Industries Inc. 1993? Standard HVP Hydrolyzed Vegetable Protein. Luxor premium products. Specialty products. Clifton, New Jersey. 9 p. Manufacturer's catalog and/or price list. Undated.
Address: P.O. Box 3055, 25 Styertowne Rd., Clifton, New Jersey 07012. Phone: 1-800-222-4904.

7797. **Product Name:** Veg-A-King Soya Sauce.
Manufacturer's Name: Harean Kingsoya Co. Ltd. (Importer-Bottler). Made in China.
Manufacturer's Address: 33 Casebridge Court, Units 5&6, Scarborough, ONT M1B 3J5, Canada. Phone: (416) 283-8328.
Date of Introduction: 1993?
Ingredients: Water, soya beans, wheat, salt, sugar, sodium benzoate.
Wt/Vol., Packaging, Price: 17 fl. oz. bottle, and 2 litre or 4 litre plastic jugs.
How Stored: Shelf stable.
New Product–Documentation: Leaflet (in English and Chinese) describing product, with color photos of jugs and label, obtained in Ontario, Canada, 1994, Oct. "Harean Kingsoya Co. Ltd. is a Chinese/Canadian joint venture company set up to bring you authentic soyfoods and exotic sauces. Our Chinese partner is a leading food manufacturer and exporter in Heilongjiang Province, China. Veg-A-King soy sauce is our flagship product. We use a traditional recipe which has a long history in China. Brewed naturally from premium soybeans, wheat and bran, it contains no artificial colours or added flavourings."

Talk with Mark O'Neill of Chatham, Ontario, Canada, 1994, Dec. 5. Harean does no fermentation in Canada. They import a condensed soy sauce (which is almost in solid form) from China, dilute it with water, bottle and sell it.

Talk with Duff MacKinnon of the Ontario Ministry of Agriculture and Food in Guelph, 1995, March 6. Harean exports soy sauce to Europe.

7798. *SoyaScan Notes*. 1994. Keywords used with more than 1,000 documents in the SoyaScan database, as of 1 January 1994 (Overview). Jan. 1. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1. USA 24,636. 2. Commercial soy products 6,565. 3. Japan 5,948. 4. Tofu 5,122. 5. Soymilk 3,884. 6. Illinois 3,642. 7. Soy sauce 3,387. 8. California 3,129. 9. Historical (documents published from 1900 to 1923) 3,013. 10. Soy flour 2,822. 11. History 2,730. 12. Soy oil 2,648. 13. Germany 2,447. 14. Miso 2,324. 15. Vegetarianism 2,319. 16. United Kingdom (England, Scotland, Wales, N. Ireland) 2,134. 17. China 1,554. 18. Soybean meal 2,019. 19. Cookery 2,017. 20. Soybean production: Cultural practices and agronomy 1,996. 21. France 1847. 22. Tempeh 1,844. 23. Soybean production (General): 1,825. 24. U.S. Department of Agriculture 1,744. 25. New York 1,665. 24. Nutrition (General) 1,471. 25. Historical (documents published before 1900) 1,460. 26. India 1,397. 27. International trade in soybeans, soy oil, and/or soybean meal 1,225. 28. Canada 1,204. 29. Soy protein isolates 1,204. 30. Michigan 1,146. 31. Meatlike commercial products 1,145. 32. USDA state agricultural experiment stations in the USA 1,120. 33. Soybean production: Marketing 1,098. 34. Ohio 1,095. 35. Soybean production: Variety development 1,083. 36. Indonesia 1,063. 37. Tofu used as an ingredient in second generation commercial food products 1,062. 38. Bibliographies and literature reviews 1,049. 39. Massachusetts 1,029. 40. Macrobiotics 1,022. 41. Soy ice cream 1,014.

7799. Gervais, Marc; Theriault, Sylvana; Bernard, Eric. 1994. Oilseed sector profile [Canada]. Ottawa, Ontario, Canada: [iv] + 23 + 1 + 12 p. Jan. 28 cm. Spiral bound.
• ***Summary:*** Contents (each accompanied by tables and charts; each section covers the years 1991-1994): Imports of soya beans for sowing (almost all come from the USA, followed by Chile and Japan). Imports of soya beans for oil extraction (almost all come from the USA). Imports of soya beans, nes [meaning unclear] (almost all come from USA, followed by Taiwan, China, and Japan).

Imports of soya-bean oil crude, whether or not degummed (almost all comes from the USA, followed by France). Imports of soya-bean oil and its fractions, refined but not chemically modified (almost all comes from the USA, followed by Singapore). Imports of veg fats & oils & fractions hydrogenated, inter or re-esterified, refined or not (almost all comes from the USA followed by UK and Netherlands). Imports of animal or veg fats & oils .

Imports of soya bean flour and meals. Imports of soya sauce (main suppliers are: USA, China, Japan, Hong Kong, Taiwan, Philippines, South Korea). Imports of protein concentrates and textured protein substances (almost all comes from USA). Imports of Soya-bean oil-cake and other solid residues, whether or not ground or pellet (almost all comes from USA). Imports of bran, sharps and other residues of leguminous plants, pelleted or not (almost all comes from

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USA).

Exports of soya beans for sowing (most goes to USA, followed by France, Germany and Austria). Exports of soya beans, for oil extraction (most goes to Netherlands, followed by France, Portugal and Spain). Exports of soya beans, nes (most goes to USA, followed by Hong Kong and Singapore). Exports of soya bean flour and meals (almost all goes to USA). Exports of soya-bean oil crude, whether or not degummed (almost all goes to the USA). Exports of soya-bean oil and its fractions, refined but not chemically modified (almost all goes to Pakistan, followed by USA). Exports of veg fats & oils & fractions hydrogenated, inter or re-esterified, refined or not (almost all goes to the USA). Imports of animal or veg fats & oils... (almost all goes to USA).

Exports of soya sauce (main buyers are UK, Japan, United States, Finland, Cuba).

Exports of protein concentrates and textured protein substances (almost all goes to USA). Exports of Soya-bean oil-cake and other solid residues, whether or not ground or pellet (almost all goes to USA). Exports of bran, sharps and other residues of leguminous plants, pelleted or not (almost all goes to USA). Address: Trade Evaluation and Analysis Division, International Markets Bureau, Markets and Industry Services Branch, Agriculture Canada, Ottawa, Ontario, Canada.

7800. Shurtleff, William; Aoyagi, Akiko. comps. 1994 Soyfoods industry and market–Bibliography and sourcebook, 1985 to 1993. Lafayette, California: Soyfoods Center. 361 p. Subject/geographical index. Author/company index. Language index. Printed 11 Jan. 1994. Published Jan. 1995. 28 cm. [985 ref]

• ***Summary:*** This is the second of the two most comprehensive books ever published on the soyfoods industry and market worldwide.

In May 1982 the first study of the burgeoning soyfoods industry in the Western world was compiled by Shurtleff and Aoyagi, and published by Soyfoods Center. In April 1985 the fifth edition of that book, titled *Soyfoods Industry and Market: Directory and Databook* (220 pages), was published. It contained statistics through 1984, the market size and growth rate for each soyfood type, rankings of leading soyfoods manufacturers of each soyfood type and the amount each produced, analyses, trends, and projections. This book is published to update the 1985 market study.

In the decade since 1984 the soyfoods market has continued to grow at a very healthy rate, with some soyfood types (such as soymilk) growing at a truly astonishing sustained rate–in both the USA and western Europe–as the statistics in this book show so vividly. In 1975 only 75 new commercial soyfood products were introduced in the USA, yet that number skyrocketed to 217 in 1979, reaching an amazing 422 new products in 1987.

During the decade from 1984 to 1994, Soyfoods Center has invested most of its time and resources in the production of SoyaScan, the world's largest computerized database on soyfoods, which contains more than 44,500 records as of Jan. 1994. This database also includes a wealth of carefully researched statistics and analyses of the soyfoods market, those from the start of 1985 to the end of 1993 are contained in this book. Its scope includes all known information on this subject, worldwide. Its focus, however, is statistics, analyses, and trends concerning the soyfoods industry and market in the United States and Europe.

In May 1990 Soyfoods Center conducted an in-depth study of the tofu market in Europe (137 pages), and in July 1990 of the soymilk market in Europe (261 pages). All original interviews and published records from both of these market studies, plus a summary of each study, are included in the present book.

The SoyaScan database is composed of individual records. One record might be an original interview with the head of the largest soymilk company in Europe, on the size and growth of the soymilk market in Europe, and new trends in that market, conducted by William Shurtleff of Soyfoods Center. Another might be a published article or an unpublished document concerning the growth of the market for soy yogurts or soy sauce in America.

This book documents the growth of each product category in every country worldwide. The book contains three extensive and easy-to-use indexes: A subject/geographical index, an author/company index, and a language index. These allow you to find the exact information you need on the soyfoods industry and market quickly and easily. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

7801. United Soybean Board; Nebraska Soybean Program. 1994. Designed for life: A closer look at the versatile soybean's contribution to human health (Brochure). Lincoln, Nebraska. 12 panels. 23 x 10 cm each. [1 ref]

• ***Summary:*** Contents: Soybean fiber. Soybean protein (in soy flour, isolates, concentrates). Soybeans: The newest and oldest of designer foods. Finding and using soybeans: Miso, tofu, natto, tempeh, full fat flour, soymilk, soynuts, soy sauce. Soybean oil: 85% unsaturated fat, no cholesterol, high in polyunsaturates, hydrogenation and *trans* fatty acids. Once upon a time ("circa 1500 BC, Yu Xi-ong and Gong Gang-shi, who were either bandits or warlords depending on your perspective..." discovered the soybean. Note: This story has no basis in historical fact). The soybean: Health insurance in a pod.

Photos show: Two hands holding up a large Chinese bowl of miso soup containing squares of tofu. A table set with dishes of various East Asian soyfoods. Charts: Bar charts showing percentage of saturated, monounsaturated, and polyunsaturated fatty acids in soybean oil and other oils

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and fats. Nutritional analysis of 1 cup of cooked soybeans.

Note: This brochure was developed for the United Soybean Board (USB) by the Evans Group in Seattle, Washington. It was mailed mostly to food manufacturers. Address: Lincoln, Nebraska

7802. United Soybean Board. 1994. Soybeans: Unlocking the secret to good nutrition. Healthcare guide. St. Louis, Missouri. 8 p. 28 cm. [5 ref]

• ***Summary:*** Contents: A critical food source from the dawn of history. The only vegetable that contains complete protein. World soybean production (1992/93, bar chart). The most versatile food on earth. Health benefits of soy foods (discusses only soybean oil!). Nutritional analysis of soybeans, kidney beans, and peanuts. Bar chart showing the fatty acid composition of soybean oil and other oils and fats (soybean oil is "the balanced oil"). Hydrogenation and health. Cis and *trans* fatty acids. Soybean oil's place in the diet. Whole soybean foods: Tofu, tempeh, miso, natto, soy sauce, full fat soy flour, soy "nuts" and soymilk. Soybean fiber (the outer hull). Soy protein products. Defatted soy flours, soy isolates, soy concentrates. Isoflavones (incl. Genistein). Soybeans, the "All American" legume. For more information call 1-800-Talk-Soy.

Note: This brochure was developed for USB by the Evans Group in Seattle, Washington. It was mailed mostly to dietitians, nutritionists, and members of the food industry. It focused more on soy oil than on soy protein. Address: St. Louis, Missouri.

7803. Clifton, Claire. 1994. Flavor of the month: Soy sauce. *Guardian* (*England*). Feb. 26. p. A39.

• ***Summary:*** The writer and Yan-Kit So, the Chinese cookery writer (a woman) tasted more than a dozen soy sauces. They were astonished to find how much the quality varied. Fo Shan Superfine, made in Guangdong, China, was considered the best. The other two brands they liked were Kikkoman (Japanese) and the Kim Ve Wong brand from Taiwan.

Yan-Kit So's latest cookbook is the magnificent *Classic Food of China* (Macmillan).

7804. Asbridge, David D. 1994. Agricultural importance of soybeans. In: Mark Messina, ed. 1994. First International Symposium on the Role of Soy in Preventing and Treating Chronic Disease: Abstracts. Chesterfield, Missouri: United Soybean Board. 27 p. See p. 6. Held 20-23 Feb. 1994 at Mesa, Arizona.

• ***Summary:*** "Soybeans are omnipresent in American life. Last year, the average American consumed only four pounds of soyfoods in the form of soy protein products, tofu, soymilk, tempeh, miso, soy sauce, and soynuts. They consumed over 40 pounds of soybean oil in the form of margarine, salad dressings, cooking oils, and shortening. They consumed 204 pounds of meat, poultry, and eggs. Soybean meal, the most widely used processed feed ingredient in the U.S., is the leading source of protein for meat and poultry animals. To meet this huge demand for soybeans, vast resources are needed. In 1992, 440,000 U.S. farmers planted 59 million acres of soybeans. That's enough to nearly cover the entire state of Arizona. The farm value of the 2.2 billion bushel crop was more that $12 billion dollars. Once farmers sold the 1992 crop, the majority of the soybeans were either crushed into meal and oil, or exported. The meal and oil were valued at $6 billion and $3 billion, respectively. Exports, which historically make up one-third of the U.S. soybean crop, directly reduced the U.S. trade deficit by almost $4.5 billion dollars and indirectly employed 126,600 people. It has been estimated that since 1975, the value of the soybean crop has been about $275 billion in nominal terms. The multiplier affect brings the total impact to the US economy of soybean production to $800 billion." Address: American Soybean Assoc., 540 Maryville Centre Drive, Suite 390, P.O. Box 27300, St. Louis, Missouri 63141-1700.

7805. Andoh, Elizabeth. 1994. Tokyo's rich array of regional dining. *New York Times*. March 6. p. XX6, XX19 (Sunday)

• ***Summary:*** Contains excellent reviews of the following Tokyo restaurants: Konomi, Kakiden, Itosho, and Shigeyoshi. The latter served "warabi ferns wrapped in fresh yuba (broad ribbons of bean curd [tofu])" and a "soup, which contained cubes of tofu and strips of fried bean curd. . . well seasoned with a burnished brown miso."

Note: This brief description of yuba is inaccurate, yuba is made from soymilk, not tofu. Address: Japan.

7806. *Toyo Shinpo* (*Soyfoods News*).1994. Miso no shukka juncho. Shôyu wa tomomi genshô. 93 nen no seisan shukka [Miso and shoyu production and shipment in Japan for 1993: Miso is increasing but shoyu is decreasing]. March 21. p. 5 [Jap]

• ***Summary:*** In 1993 in Japan 559,238 tonnes (metric tons) of miso were produced and 578,024 tons were shipped. Also in 1993 some 1,163,843 kiloliters of shoyu were produced and 1,189,896 kiloliters were shipped.

7807. Wood, Brian J.B. 1994. Bean Products Ltd.: The earliest known company to make fermented soy sauce in the United Kingdom (Interview). *SoyaScan Notes*. March 30. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Brian Wood was born in Birmingham, England. He earned his BSc and PhD degrees at Birmingham University in the Malting, Brewing, and Applied Biochemistry Department, where he studied lactic acid bacteria for his PhD. In 1959 he came to the USA on a fellowship from the National Cancer Institute for post-doctoral research at the Dept. of Biochemistry and Biophysics, University of California at Davis. With Lloyd

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Ingraham, he studied the mode of action and kinetics of the enzyme tyrosinase. One day in 1960 Prof. Herman Pfaff, who taught food science and microbiology at Cal-Davis and is still one of the world's leading authorities on yeasts, took a group of students (including Brian) taking a course of his to visit Lucky Lager (a beer brewery) in or near San Francisco. During the trip they also visited a small Japanese shoyu factory in San Francisco (probably in Chinatown) that made fermented soy sauce. There Brian first became interested in the soy sauce fermentation process. He wondered what involvement lactic acid bacteria might have in the process.

Then he studied with Prof. Goldman in the Department of Zoology, and in 1961-62 traveled to the Antarctic, where he studied microalgae. In 1962 he returned to Britain, spent 6 years with Unilever, then in 1968 took up his present appointment teaching and doing research at the University of Strathclyde (in Glasgow, Scotland), in the Department of Applied Microbiology (which in 1982 was incorporated into the Dept. of Bioscience and Biotechnology).

Professor Morris, the head of the department, had served in East Asia during World War II and had considerable appreciation of the importance of Oriental foods. He was trying to build a link with Singapore, and assigned Yong Fook-Min of Singapore to work with Brian for his MSc. There he and Brian began to investigate the role of lactic acid bacteria in East Asian soybean fermentations, starting with soy sauce. Yong was an exceptionally hard worker and his 1971 MSc thesis produced the four key papers on which all later work was founded. In 1974 Yong and Wood wrote "The Microbiology and Biochemistry of Soy Sauce Fermentation," a definitive 38-page study containing 270 references. After that, Brian had three students (including Sumbo H. Abiose, a Nigerian woman) complete PhD's and write doctoral dissertations on aspects of fermented soyfoods.

In 1974 Goel, Yong, and Wood applied for a British Patent on a quick method for making soy sauce; it was issued in 1976. In about 1978 Brian became interested in starting a commercial soy sauce factory in Scotland. So that year he initiated discussions with Edward North, head of the university's Center for Industrial Innovation. North referred Brian to Dr. Colin Walker and together in late 1979 they got a grant of £84,000 from the Wolfson Foundation, to study the feasibility of starting such a factory and what problems would be involved in scaling up from laboratory to commercial scale. By 1980-81 it became clear that the project was feasible. The University of Strathclyde provided some of the start-up capital, additional money came from remaining Wolfson Foundation funds, and Brian's group obtained overdraft facilities from the university's bank (The Bank of Scotland), which meant they could borrow a specified amount of money and the university would guarantee the loans. Since no individual researchers put up any money, the university owned the soy sauce company. In April 1982 the group established a company named "Bean Products Ltd." in Cumbernauld, which is about 11 miles northeast of Glasgow. They selected Cumbernauld for various reasons, one of which was that advantageous rental terms were available there. They moved into a new rental structure, in a space with 8,000 square feet. They had a rent holiday for 1-2 years. Employees of the company consisted of a salaried factory manager (Christopher Corden), a salaried accountant/office and business manager (Michael Riddle), a PhD graduate of Brian's department served as company microbiologist, biochemist, chemist etc. (Dr. Jennifer Mackie), and they had about 4 workers who made soy sauce. Brian was employed by the university, not by the company. Some weeks he spent a great deal of time at the factory and other weeks he spent little or no time there–in part because of the demands of his extensive teaching schedule. Dr. Colin Walker spent more time at the plant than Dr. Wood. There they made one Southeast Asian-style fermented soy sauce for the UK wholefoods market. The main ingredients were whole soybeans and koji that was made in small plastic trays–ordinarily used for carrying bread. Roughly equal parts of soybeans and roasted cracked wheat were used. The soy sauce was fermented for about 3 months at 38-40°C using a temperature controlled fermentation. The "salt mash" (moromi) was inoculated with yeasts and bacteria. A dark sugar preparation was added to the finished sauce to sweeten the flavor, darken the color, and thicken the consistency. The company bottled a small amount of the finished soy sauce and sold it mostly to health food shops under two labels: "Bean Products Japanese-Style Soy Sauce" and "Bean Products Chinese-Style Soy Sauce." But most of their product was blended with other ingredients after the fermentation to the specifications of other companies. It was shipped to these companies in bulk plastic containers, some bottled it under their own labels, but most used it as an ingredient in foods. Cauldron Foods used it as an ingredient in their tofu burgers.

After a while the university, which owned Bean Products, became uneasy as money flowed out during the startup process. So in May 1984 they sold the company to Nestle (for a relatively low price), and it was renamed Nestle Foods–Cumbernauld. After Nestle bought the plant, Dr. Wood became inactive in the company. Jennifer Mackie, Chris Corden, and Michael Riddle stayed with the company. Nestle sold their soy sauce under the Sarsen's brand–the same brand they used for their vinegar, pickles, and other related products. Nestle continues to operate the plant at its original site (though they have expanded into an additional 4,000 square feet) using the same basic process. Dr. Wood estimates that they make about 1,500 metric tons a year of the Chinese-style fermented soy sauce. Most of it is either sold to other food processors, or to other companies who package it under their own label for resale to consumers.

Concerning other early soy sauce manufacturers in the UK, Brian vaguely remembers hearing that an Indian

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entrepreneur was making soy sauce in the area of London at about the same time as Bean Products Ltd. He owned a number of food-related companies which sold mostly to the local Indian market. When Colin Walker was in London in about 1980 or 1981 he tried to visit the plant, but failed. Note: This company may have been either United Breweries International (UK) Ltd., or Soyco, both located in London. Address: Dep. of Bioscience and Biotechnology, Univ. of Strathclyde, Glasgow, Scotland.

7808. Hymowitz, Ted. 1994. New developments related to the introduction of soybeans to Peru (Interview). *SoyaScan Notes*. March 31. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Recently Ted was in Peru, where he met a native Peruvian at the University of San Marcos who has a PhD in archaeology. He is an expert on the emigration of the Chinese to Peru and their culture in Peru, and he has written a major article about the food of the Chinese in Peru. Although he did not have any information at hand about the introduction of soybeans to Peru by the Chinese, he seemed very interested in the question and he is now searching for information related to the early arrival of soybeans in both Peru and Brazil. Ted speaks Portuguese. The Peruvian man told Ted that the first Chinese arrived in Brazil in 1813, and the first soy sauce factory arrived in Peru in the 1930s or 1940s. Ted is quite sure the soybean arrived in South America before the earliest date that is now known (1882). He thinks it may have arrived in Peru before Brazil since many more Chinese emigrated to Peru than to Brazil in the early days. Some 100,000 Chinese went to Peru but only a few went to Brazil. Not many soybeans are grown today in Peru, and not many soy products are made there.

Update–1996 Jan. 15. Ted's contact in Peru has been through all the early Chinese records in Brazil and he can find no mention of the soybean. Address: Prof. of Plant Genetics, Urbana, Illinois.

7809. Van Rysdam, Casey. 1994. New developments with Soya Kaas and cheese alternatives (Interview). *SoyaScan Notes*. April 26. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Soya Kaas, Inc., which was owned by Richard McIntyre and his wife, no longer exists. Previously it only existed on a piece of paper from the viewpoint of trademark registration. Soya Kaas, the cheese alternative, is now manufactured by a company named Swan Gardens in Atlanta, Georgia. "In February 1992, when the McIntyres decided to sell their business, American Natural Snacks (ANS) worked with them to structure an agreement that met the needs of both parties. We were both pleased with the result and it was a true 'win-win.'" Richard is no longer affiliated with Swan Gardens, but he continues to have a very good relationship with the company. ANS had been the exclusive national marketing and distributing company for the brand. So when Richard decided he wanted to leave the company, ANS was the logical choice to buy it (though they did not buy the building, which they still rent from Richard). From the standpoint of the trade and of consumers nothing really changed after the sale. The invoicing, the shipping, etc. remained the same. Swan Gardens is now an operating division and wholly owned subsidiary of ANS, and ANS is a wholly owned subsidiary of Tree of Life. Tree of Life is a publicly owned company because its parent company [Royal Wessanen, NV, The Netherlands] is publicly owned.

"Richard is an incredibly bright and innovative person. He is one of those rare people who can see a new idea, grab it, identify it, and make it a commercial reality. He had already visualized and developed his own soy cheese, Soya Kaas, and taken it past the laboratory stage when Soyarella was introduced. He did not get the idea from Soyarella. He is both an excellent entrepreneur and a good manager and businessman. He built Swan Gardens into a strong, well-managed business."

ANS has two basic activities: Food manufacturing and contract packaging of bulk foods for sister companies that are distribution divisions (everything from rebottling of oils and Japanese shoyu and tamari to bulk trail mixes). They are a national manufacturer and marketer of confections, with lines like Carafection, Cocofection, Chocofection, Chatfields, products like carob and chocolate chips that are malt-sweetened and dairy free, alkaline-free cocoa powder. They sell these products nationally to both Tree of Life and to Tree's competitors. They have 5-6 national brands and about 50 products (SKUs), and Soya Kaas is one of the major brands.

Within the Soya Kaas family are the core items (12), bulk in 7-lb loaves, 2 shredded items, 3 cream cheeses, 2 Veggie Kaas spreads (without casein, but they have never promoted it as "dairy free"). A new item will be Soya Kaas slices, most sliced cheeses are extruded, not sliced, and they are made on equipment that is extremely expensive–whether or not the slices are individually wrapped.

One of the challenges Casey's business has been marketing Soya Kaas fairly and honestly with respect to the milk protein issue, without detracting from its potential. The current labels always state clearly that the product contains casein which is a milk protein, and it does not say "Dairy Free" (which would be legal). Yet neither does it say "Warning! A cow died for this product" [which is, of course, not true]. His company has consumer flyers that tell the story of caseinate, explaining what it is, where it comes from, and why it is used in Soya Kaas products. Casey agrees that many people who consume cheese alternatives that contain casein think (mistakenly) that they are truly non-dairy products.

Casey wonders whether the soy oil used in many cheese alternatives is hydrogenated or unhydrogenated. He works

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very hard and it costs him more money to be sure that the oil in Soya Kaas is not hydrogenated. Consumers want unhydrogenated oil since they believe it is safer.

Follow-up letter (fax) of 6 May 1994 in response to enquiry. Over the last two years, as packaging ran out and they reordered or redesigned labels, they stated in the ingredients listing that casein is a milk protein. In July 1989 the Soya Kaas plant moved to its present location at 6029 Lagrange Blvd. in Atlanta. It had previously been at 218 Laredo Dr., Decatur, Georgia 30330. Address: President, American Natural Snacks, P.O. Box 1067, St. Augustine, Florida 32085-0410. Phone: 904-825-2057.

7810. Kath. Gemeinden St. Johann und St. Joseph. 1994. Soja fuer Ghana [Soya for Ghana]. Duisburg-Hamborn, Germany. 24 p. Illust. 21 cm. [Ger]

• ***Summary:*** Each year this group of German Catholics has one development-help project in Ghana. In 1991 and 1992 it was trees for Ghana. In 1993 it was soya for Ghana. Contents: Development help? by Gottfried O. Praem. Africa's need (incl. population growth, demographics, per capita GNP, and infant mortality). Our new project: Soya for Ghana. Why soya? Yields a variety of foods, healthy, ethical (in relation to eating animals and protecting the environment), good for agriculture. History of the soybean plant. Food products from the soybean: Soymilk, tofu, soy protein, soy sauce, miso, tempeh, soy oil, soy sprouts. Cultivation of soybeans in northern Ghana. Planting and harvest. Ghana–the land and its agricultural products. Teaching hygiene in Ghanaian. Dear money: Where does it come from and how is it spent? Past projects in Ghana and the 1993 Soya for Ghana project. The Bole mission station in northern Ghana (90,000 inhabitants of which 4,000 are Christian). Recipes. A talk with Brother Rudolf, age 62, during his visit to Hamburg in Sept. 1993. Address: Duisburg-Hamborn, Germany.

7811. *SoyaScan Notes.*1994. Foods of East Asian origin that the macrobiotic movement/community has played a leading role in introducing to America, starting in about 1960 (Overview). May 10. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** These include brown rice, rice cakes, miso (many types), shoyu (traditional Japanese-style soy sauce), tamari (Japanese soy sauce containing little or no wheat; prior to about 1980 many practitioners of macrobiotics referred to natural shoyu as "tamari," thus inadvertently popularizing real tamari, which now may be better known in the USA than it is in Japan), natto (fermented soybeans), seitan (wheat gluten seasoned with a soy sauce broth, this word was coined by George Ohsawa), amazake (thick rice beverage), umeboshi salt plums, sea vegetables (kombu, wakame, hijiki, nori, etc), tofu, soymilk, alternatives to dairy products (macrobiotics do not consume dairy products), buckwheat noodles (*soba*), kuzu, rice syrup, barley malt syrup, azuki beans, sesame seeds, sesame salt (*gomashio*), daikon (white radish) and daikon pickles, kabocha (Hokkaido pumpkin), shiitake mushrooms (also known as Chinese black mushrooms; they have a firm "meaty" texture), burdock, jinenjo (glutinous yam).

They have done this by starting and running many natural food companies to import, distribute, manufacture or grow these foods; by writing cookbooks and other books about these foods; by teaching classes (including many cooking classes in which these foods are used); by influencing other people to do all of the above.

The Japanese names of many of these foods have become anglicized and are now the standard English-language names.

The macrobiotic movement also played a major role in introducing "tahini" or sesame butter (a Middle-Eastern food) to America, starting with George Ohsawa's book *Zen Macrobiotics* in 1960. Of the first 20 records in the SoyaScan database that mention "tahini," 14 are associated with macrobiotics. Likewise, 22 of the first 50 records are associated with macrobiotics.

7812. Daley, Rosie. 1994. In the kitchen with Rosie: Oprah's favorite recipes. New York, NY: Alfred A. Knopf. xii + 130 p. Illust. Index. 20 x 19 cm.

• ***Summary:*** Note: Oprah is Oprah Winfrey, one of America's best known TV celebrities, famous–in part–for her lifelong struggle to control her weight, and for her Oprah Winfrey Show.

Contains 50 recipes that are low in fat, sugar, and salt. On pages 114-15 is Rosie's recipe for Chocolate Tofu Cake. The author says: "My version of chocolate cheesecake provides all of the treat with none of the guilt. I replace the typical bulk ration of cream cheese with tofu..." Other soy-related recipes: Cauliflower puree with peas (and brown rice miso, p. 20). Several recipes contain reduced-sodium soy sauce (p. 25, 33, 54, 88, 92, 102). Address: Chicago, Illinois.

7813. Kikkoman great grilled recipes and more. 1994. Lincolnwood, Illinois: Publications International. 95 p. May 17. 21 cm. Series: Favorite Brand Name Recipes, Vol. 5, No. 68.

• ***Summary:*** This color book is saddle stitched, so it looks like a magazine. Contents: Summertime and the grillings is easy with Kikkoman. From the butcher shop: Burgers, ribs & kabobs. Pleasing poultry. From the sea. Magnificent mealtime salads. Savory side dishes.

7814. Melina, Vesanto; Davis, Brenda; Harrison, Victoria. 1994. Becoming vegetarian: A complete guide to adopting a healthy vegetarian diet. Toronto, Canada: Macmillan Canada. x + 262 p. Foreword by Louise Lambert-Lagacé. Index. 26 cm. [20 ref]

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• ***Summary:*** An excellent vegan sourcebook and cookbook by three registered dietitians. For the Contents and details, see the 1995 revised American edition.

Talk with Vesanto Melina. 1996. July 22. This book has presently sold about 25,000 copies in Canada alone. A revised U.S. edition was published in Nov. 1995 by The Book Publishing Co. in Summertown, Tennessee. Address: Canada.

7815. *Health Foods Business.* 1994. San-J brewery expansion. June. p. 55.
• ***Summary:*** San-J International's tamari soy sauce brewery, the world's first outside Japan, has expanded and added fermentation tanks to the facility. This has enabled the company to increase production by 75% as of April.

7816. **Product Name:** Mushroom Pâté, and Chestnut and Red Wine Pâté.
Manufacturer's Name: Cauldron Foods Ltd.
Manufacturer's Address: Units 1-2, Portishead Business Park, Portishead, Bristol, BS20 9BF, England. Phone (275) 818448.
Date of Introduction: 1994. July.
Wt/Vol., Packaging, Price: 113 gm tray. Retails for £0.90 (7/94, England).
How Stored: Refrigerated.
New Product–Documentation: Spot in Soyafoods (ASA, Europe) 1994. Summer, p. 5. "Cauldron Foods introduces new patés." As part of their new line of vegetable patés, Cauldron has launched two varieties containing soya as an ingredient. Mushroom Pâté contains ground soybeans, and Chestnut and Red Wine Pâté contains soy sauce. The products are sold in major UK supermarkets and health food shops. A photo shows four packaged products.

7817. Dwyer, Johanna; Goldin, B.R.; Saul, N.; Gaultieri, L.; Barakat, S.; Adlercreutz, H. 1994. Tofu and soy drinks contain phytoestrogens. *J. of the American Dietetic Association* 94(7):739-43. July. [45 ref.]
• ***Summary:*** Phytoestrogens, compounds with weak estrogenic activity such as isoflavones, coumestans, and resorcyclic acid lactones (lignans), are found in several dozen plants eaten by humans, including some soy products. As the intake of soyfoods rises in the American diet, the activity of phytoestrogens may reach biologically effective levels. Phytoestrogens appear to have both estrogenic and antiestrogenic activity. They may also help prevent cancer. "Anticancer activity has been demonstrated by inhibition of tumor cell growth. Also, they appear to act in other ways that may inhibit tumor formation and growth, including inhibition of tyrosine kinase; inhibition of cell growth stimulated by epidermal growth factor; inhibition of steroid aromatase kinase and of DNA topo-isomerase; elevation of sex-hormone-binding globulin; and possibly lowering of endogenous estrogen levels."

Of the various products tested, tofu contained the highest level of isoflavones. Different brands of tofu contain from 73.0 to 97.5 micrograms per gram (wet weight) of the phytoestrogen daidzein and 187.4 to 215.9 micrograms of genistein per gram. By comparison, the soy drink First Alternative (made by Protein Technologies International of St. Louis, Missouri) contains only 7.0 micrograms of daidzein per gram of weight and 21.0 micrograms of genistein. The two soy-based specialty formulas tested were nearly devoid of these two isoflavones.

The tofu products tested were: Kikkoman firm, Nasoya soft, Azumaya soft, and Vitasoy silken. The soy-based specialty formulas were Jevity Isotonic, Enrich, and Glucerna–each made by Ross laboratories, Columbus, Ohio.

Note: What is the isoflavone content of a typical 130 gm serving of tofu? 9.5 to 12.7 mg of daidzein and 24.3 to 28.1 mg of genistein.

A sidebar (p. 741) features an interview with Johanna Dwyer and Nora Saul (both women); their hospital happens to be located in Boston's Chinese community. "Journal: What are phytoestrogens? How do they function? Dwyer: Phytoestrogens such as isoflavonoids and lignans, are compounds found in certain plants that are inherently active or are converted by human intestinal microflora into biologically active, hormone-like substances. Phytoestrogens exert weak estrogenic activity, most likely attributable to their ability to activate estrogen receptors in cells such as those in the vagina, uterus, and mammary glands. Depending on the biological environment and their chemical structures, phytoestrogens can function as either estrogens or antiestrogens.

"For example, in premenopausal women, who have high levels of circulating estrogens, phytoestrogens may function as antiestrogens. This is because phytoestrogens that bind weakly at estrogen receptor sites may compete for a place on the estrogen receptors with endogenous estrogens, which have much stronger affinity for the receptor sites. On the other hand, in postmenopausal women, who have low levels of endogenous estrogens, phytoestrogens may function as estrogens. Although phytoestrogens only bind weakly at estrogen receptor sites, there is little other estrogen in circulation, so phytoestrogens do bind to estrogen receptors. At present, however, this explanation is based on hypotheses and must be tested."

"Journal: Why are these substances important biologically? Dwyer: A growing body of research suggests that phytoestrogens may reduce risks of certain cancers, especially hormone dependent diseases such as breast and prostate cancers." Address: 1. Prof. of Nutrition at the Tufts Univ. Schools of Medicine and Nutrition and director of the Frances Stern Nutrition Center, New England Medical Center, Boston, Massachusetts.

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7818. Kevin, Kitty. 1994. Three centuries of quality: It's natural for Japan-based Yamasa Corporation. *Food Processing* (*Chicago*) 55(7):24-28, 30-31, July.
• ***Summary:*** This is the first of a series of two articles in this issue about Yamasa, the world's second-largest shoyu manufacturer. It focuses on Yamasa's history, its production facilities in Japan, and its decision to build a shoyu manufacturing plant at Salem, Oregon, in the USA. The company was founded in 1645 by Gihei Hamaguchi, of Kishuu, who moved to Choshi to start shoyu production. Yamasa has been manufacturing soy sauce at a single location (200,000 square meters or about 50 acres in size) in Choshi for 350 years. Michio Hamaguchi, the current and 12th president of Yamasa, is the founder's direct descendant. Choshi, located about 2 hours by train north of Tokyo, is on the coast at the end of a small peninsula that juts into the Pacific Ocean. The meeting at Choshi of warm ocean currents from the south and cold currents coming down from the north creates an ideal climate for making shoyu. Gihei Hamaguchi chose Choshi, above, all for its climate.

Today there are at least 2,600 shoyu makers in Japan. As of 1993, Yamasa had $3.3 million in capital, $320 million annual sales, 1,100 employees, and plants in Choshi, Japan, and Salem, Oregon. A detailed description of the shoyu-making process is given, accompanied by color photos. The finished shoyu is run into plastic bottles at the rate of 300 per minute.

"When Yamasa set up the first soy sauce lab in 1901 and started physico-chemical testing of soy sauce to preserve quality, it was the beginning of quality control for soy sauce."

Economics seems to be at the heart of the decision to establish a shoyu plant in the USA. The Japanese yen has risen steadily in value against the dollar for the last 20 years, making Japanese exports very expensive. There is a growing demand for soy sauce outside of Japan and the U.S. market is now large enough to justify a production facility. Soybeans and wheat and inexpensive in America. Salem, Oregon, seems ideal for Yamasa, not only for its climate, but also because of its proximity to Japan, water quality, location near the booming West Coast market [and far from Kikkoman in Wisconsin], and excellent offers from the state of Oregon and the city of Salem. It is Yamasa's desire to have the plant run by an entirely American work force. A color photo shows Yamasa's range of soy sauce products, including blends of soy sauce and citron or orange which are used for preparing sukiyaki or tempura. Address: Assoc. Editor.

7819. Ritchie, H. Russell. 1994. Coming to America: Japanese processor, Kentucky construction company forge global friendship. *Food Processing* (*Chicago*) 55(7):33-34, 36, July.
• ***Summary:*** This is the second of a series of two articles in this issue about Yamasa, the world's second-largest soy sauce manufacturer. Yamasa's new 65,000 square foot plant in Salem, Oregon, will be finished this month (June) at a cost of $24 million. It is being built by James N. Gray Construction Co. of Louisville, Kentucky. Yamasa decided to build its first plant in Oregon because there is a very big demand for their soy sauce in the USA, especially on the West Coast, and because Salem has a temperate climate and high quality water very similar to those of Choshi.

In 1992 Yamasa sold 1.3 million gallons of soy sauce in the USA, all of it imported. When the new plant is in full operation, it will be able to produce at least 1.7 million gallons a year. Sales of the product are already handled through an established office in Los Angeles, California. Color photos show: The front of Yamasa's new plant in Salem. An outdoor tank farm consisting of thirty-two 15,000 gallon tanks for brewing and thirteen 10,000 gallon tanks for storing raw soy sauce (two photos). The wheat processing room inside the factory. Address: Editor.

7820. *Soyafoods* (*ASA, Europe*).1994. U.S. soyfoods consumption predicted to grow. 5(2):3. Summer.
• ***Summary:*** A U.S. study titled *An economic analysis of the use of soybeans as human food* predicts that domestic increases in consumption of soyfoods could use an additional 100 to 240 million bushels of soybeans each year. The study was conducted for the North Central Soybean Research Program by researchers at Agricultural Education and Consulting in Savoy, Illinois (Phone: 217-352-1190).

The study found that the following food categories which have the greatest potential to use soya as an ingredient (listed in descending order of projected use levels): (1) Flour products–bread, bakery products, pasta, and pizza dough. 2. Meat products–ground beef and processed meats. 3. Dairy products–liquid milk replacements, processed cheeses and yogurt. 4. Snack foods–crisps, extruded snacks, snack nuts and meat snacks. 5. Soyfoods–tofu, soymilk, tempeh, soy sauce, and miso. 6. Fresh vegetables–green vegetable soybeans.

However there will be tradeoffs. For example, increased use of soya to make meatlike products will ultimately lead to less need for soybean meal to feed livestock animals. But overall, the researchers believe that net crop income, at least for the North Central Region of the United States, will rise from nearly 8% to over 30%.

7821. Shurtleff, William, Aoyagi, Akiko. comps. 1994. Kikkoman and other major Japanese soy sauce manufacturers–Bibliography and sourcebook, 1645 to 1994: Detailed information on 484 published documents (extensively annotated bibliography), 46 commercial soy products, 45 original interviews (many full text) and overviews, 43 unpublished archival documents. Lafayette, California: Soyfoods Center. 169 p. Subject/geographical index. Author/company index. Printed Aug. 8. 28 cm. [604

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ref]

• ***Summary:*** Shoyu or Japanese-style soy sauce is one of the oldest and most important sauces or condiments in Japan. Japanese speak of the "Big Five" manufacturers: Kikkoman Corporation, Yamasa Shoyu Co., Ltd., Higashimaru Shoyu, Higeta Shoyu, and Marukin Shoyu. In recent years other smaller companies have established a significant presence in the Western world–especially San-Jirushi and Sendai Miso-Shoyu.

The origins of Kikkoman can be reasonably traced back to the year 1661, when Takanashi Hyozaemon XIX, whose descendants manage Kikkoman today, began to brew shoyu in the town of Noda, in today's Chiba prefecture, about 30 miles northeast of Tokyo. Over the years and centuries, Kikkoman has steadily expanded its share of the soy sauce market, in Japan and around the world, until today it dominates most markets in which it is sold, and makes–in our opinion–one of the world's truly great soy sauces.

This book is about those companies, their history, development, and commercial products, and their rise to power in Japan and internationally.

This is one of the most comprehensive books (and the most comprehensive bibliography) ever published about Kikkoman and other major Japanese soy sauce manufacturers. It has been compiled, one record at a time, over a period of 19 years, in an attempt to document the history of this subject. Its scope includes all known information about these companies, worldwide, from 1645 to the present.

This book is also the single most current and useful source of information on this subject, since 64% of all records contain a summary/abstract averaging 114 words in length.

This is one of more than 45 books on soybeans and soyfoods being compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyfoods Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features: 30 different document types, both published and unpublished; every known publication on the subject in every language–including 364 in English, 241 in Japanese (many with an English-language summary), 10 in German, etc.; 45 original Soyfoods Center interviews and overviews never before published. Thus, it is a powerful tool for understanding the development of these Japanese companies and soy sauce from their earliest beginnings to the present.

The bibliographic records in this book include 485 published documents and 43 unpublished archival documents. Each contains (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English publications together with an English translation of the title, month and issue of publication, and the first author's first name (if given).

The book also includes details on 46 commercial soy products (mostly soy sauce), including the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to make best use of this book, a complete subject and geographical index, an author/company index, a language index, and a bibliometric analysis of the composition of the book (by decade, document type, language, leading periodicals or patents, leading countries, states, and related subjects, plus a histogram by year) are also included. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

7822. Business Trend Analysts, Inc. 1994. The health and natural food market: Past performance, current trends, and opportunities for growth. 2171 Jericho Turnpike #342, Commack, NY 11725. 325 p. Sept. Price $995.00. *

• ***Summary:*** Chapter 3 of this report, the first of seven chapters that discuss individual product categories, is titled "The Market for Soy Foods. An in-depth analysis of historical, current, and projected sales. Trends in the U.S. market for soy foods. Manufacturers' total sales of soy foods. Manufacturers' sales of soy foods, by distribution channel. Total retail sales of soy foods. Retail sales of soy foods, by distribution channel. Retail sales of soy foods, by type: Soy sauce, tofu, second generation, soymilk, miso, soynuts, tempeh. Worldwide soybean production, total and per capita. U.S. production of soybean oil. New product introductions in the market for soy and vegetarian foods, including names of manufacturers, brand names, and product descriptions.

Under "Report Highlights and Special Features" we read that after the 3-year recession, most product categories posted strong gains, but "several segments failed to cash in on the growth bonanza. Manufacturers' sales of soyfoods were up a meager 2½%, while the market for frozen health foods declined slightly... One-third of consumers under the age of 35 feel it is extremely important that the food products they purchase are natural, the percentage is even higher among older consumers. Over 40% of adults believe they will contract heart disease or cancer." Today 68% of adults are overweight, up from only 58% a decade ago.

Overall report Contents: 1. Executive summary. 2. Overall market dynamics (including Soyfoods). 3. The market for soy foods. 4. The market for herbal teas. 5. The market for dairy foods. 6. The market for grains and cereals. 7. The market for frozen foods. 8. The market for snack foods. 9. The market for groceries. 10. The health food consumer. 11. The health/natural food store industry. 12. Competitor profiles. 13. Industry directory. Address:

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Commack, New York. Phone: 516-462-2410.

7823. *Newsletter of the Soyfoods Association of America (San Francisco, California)*.1994. Yamasa builds in America. Sept. p. 1.
• ***Summary:*** "Yamasa Corporation, the world's second largest manufacturer of soy sauce, has constructed a 65,000-square-foot plant in Salem, Oregon, USA. Yamasa has been manufacturing soy sauce in Choshi, Japan, for 350 years. The company decided to build their plant in Oregon because of very high demand for their soy sauce in the U.S., especially on the West Coast." Salem's temperate climate and water quality are also similar to those of Choshi.

In 1992, Yamasa sold 1.3 million gallons of soy sauce in the United States, all of it imported. When fully operational, the new plant will be able to produce 1.7 million gallons per year.

7824. Vlahandreas, Dawn. 1994. Brewing a soy-sauce plant in Salem is a patient process. *Statesman Journal (Oregon)*. Oct. 19. p. 8B.
• ***Summary:*** A photo shows Koji Okamoto, senior vice president, administration, for Yamasa Corp. USA, as he overlooks the outdoor fermentation tanks at Yamasa's new plant in Salem, Oregon. "Yamasa has just finished the first stage of its initial batch of soy sauce brewed in the United States. It's a test run for 65,000-square-foot, $30 million Salem processing plant, which opened in late July. Last month the company began processing with 20 tons of Illinois soybeans, 20 tons of Oregon wheat and 15 tons of California salt." It takes 6 months until a batch of soy sauce to be ready. In April, 1995, Yamasa's first batch of soy sauce will be ready for shipping.

7825. Biolosk Kmetija Trampus (Trampus Organic Farm). Distributed by Izvor d.o.o. 1994. Seitan [Seitan (Ad)]. *Bio Novice (Bio News, Ljubljana, Slovenia)* No. 14. Oct. Rear cover. [Slv]
• ***Summary:*** In this attractive full-page color ad for seitan, an inset photo shows a field of wheat below a blue sky with billowing clouds. The background is a photo of dark brown of seitan. "Ingredients: Wheat gluten from organically grown wheat, tamari, and kombu (a sea vegetable). Contains no cholesterol. Weight: 250 gm. Shelf life: 15 days refrigerated at 1-5°C. Manufacturer: Trampus Organic Farm, Mestni trg 22/1, 68330 Metlika, Republic of Slovenia. Phone: 068 59 481. Distributor: Izvor d.o.o., Dolenjska cesta 13/1, 61108 Ljubljana. Phone and fax: 061 1272 649.

Letter (fax) from Jan Krizstan. 1995. April 28. "I made this ad using an enlarged photo and the text from our original seitan label (which was 10 by 7 cm) and a color scan of seitan as the background photo."

7826. Okamoto, Koji. 1994. Re: New developments at Yamasa Corp. USA in Salem, Oregon. Letter to William Shurtleff at Soyfoods Center, Nov. 8--in reply to inquiry. 1 p. Typed, with signature.
• ***Summary:*** Fermentation of shoyu at Yamasa's new plant in Salem began at the end of August 1994. The first commercial product will be ready for sale in early April 1995. The average fermentation time of each batch will be 6 months. The name of the product on the label will be Yamasa Soy Sauce.

An article that appeared recently in the *Nikkan Kogyo Shinbun* (7 Oct. 1994) describes how the 7th Gihei Hamaguchi protected nearby villagers from a tidal wave by setting fire to harvested rice straw. After the tidal wave, realizing that in order to protect the villagers from future tidal waves, he would have to construct a strong embankment, he did so at his own expense. After the project was completed, the villagers proposed building a shrine from him. He, of course, turned down their request. The embankment still remains solid and protects the villagers at Arita-gun, Wakayama-ken, Japan. Gihei wanted to conceal his act of setting fire. His kind act was discovered not by a Japanese but by the famous British author Lafcadio Hearn (lived 1850-1904; Japanese name: Koizumi Yagumo), who wrote *Kaidan*, a well-known Japanese-language book of ghost stories. Gihei's name became famous in London earlier than in Japan. Note: Mr. Okamoto does not know when the 7th Gihei Hamaguchi lived or what his relationship with Yamasa was. Address: Senior Vice President, Administration, Yamasa Corp. USA, 3500 Fairview Industrial Drive, Salem, Oregon 97302. Phone: 503-363-8550.

7827. Kennedy, J. Robert. 1994. How rice syrup and grain syrup came to America from Japan (Interview). *SoyaScan Notes*, Nov. 14. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Chico-San was launched on 6 March 1962 in Chico, California, as a retail store and a wholesale business, capitalized with $10,000. The first Yinnies grain syrup (rice and barley) and Yinnies (rice syrup candies) that Chico-San sold in America were made in Chico-San's food plant at 1262 Humboldt Avenue, in Chico, California, and sold in about 1971. The Yinnies syrup was on the market about 2-3 months before the candy. The candy was made by boiling down the syrup a little more, then pulling it like taffy using a regular taffy-pulling machine (Bob's idea, never conceived of in Japan). So already Bob and developed two American innovations: Growing koji on brown rice, and pulling Japanese-style rice candy to give it a texture like taffy. Bob recalls that the demand for the Yinnies syrup (which was used as an all-purpose natural sweetener, especially by macrobiotics) was greater than the demand for the Yinnies confection. These macrobiotic products were made using the traditional Japanese koji process, except that the koji was made from organically-grown brown rice, grown by the

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Lundberg Brothers at Wehah Farms in Northern California.

Bob used to visit Japan 2-4 times a year in the early 1970s, because Chico-San was importing a large number of Japanese food products and Bob went to visit the farmers and suppliers. During these visits, Lima Ohsawa took him to visit several traditional Japanese shops that made rice syrup (*amé* or *mizuamé*) from koji. Bob observed carefully and took a few notes, which may still be in his diaries (which are in storage). He may have ordered a few samples from Japan, but they were not sold in America.

Bob dabbled and experimented with making rice syrup for at least two years before the product was launched commercially. During this time he learned how to make koji and rice syrup mostly from Mr. Junsei Yamazaki who had emigrated to Chico from Japan in 1963 (sponsored by Bob Kennedy) to make miso and natural shoyu for Chico-San. After graduating from Tokyo Agricultural University, Yamazaki had been a rice farmer in Japan for 17 years. In 1964 he began his first experimental production of miso and shoyu in Chico. His first large batches were made in mid-1970. Since he had to make koji for both miso and shoyu, it was an easy step to make rice koji for amazake. The amazake was cooked, filtered (to removed the fiber), then simmered slowly to yield rice syrup–a slow but relatively simple process. By the late 1960s or early 1970s Yamazaki was making small batches of rice syrup on an experimental basis in the back room at the Humboldt Ave. plant. By 1971 production of rice syrup was in full swing, it was sold in a 12 oz. glass jar and labeled "Yinnies Grain Syrup."

On 14 Sept. 1972 disaster struck. A fire at the Chico-San plant and warehouse at 1262 Humboldt Ave. destroyed 90% of the company's natural food inventory worth approximately $350,000. The company moved to 2244 West First Street in Chico and struggled to get back on its feet. For several months, they continued to make Yinnies syrup from koji in the traditional way in a newly-built koji room. But the demand for this syrup was much greater than the amount that could be made using the traditional koji process. Bob had a friend named Carl Abbott, who worked at a nearby nut plant (Continental Nut Co.) and was also a very bright food chemist. So right after the fire Bob asked Carl if he could do some research to find a way to expand output of rice syrup using natural enzymes with organically grow brown rice to maintain the natural quality and without addition of chemicals–such as caustic chemicals. Carl met with experts at Miles Laboratories (who had never worked with brown rice before), determined the best commercial enzymes, then made adjustments in cooking times and temperatures to fit the needs of the enzymes. Bob is not sure, but he recalls, two enzymes were purchased from Miles: Alpha-amylase to liquefy the rice, and gluco-amylase to break down the rice carbohydrates into sugars (mostly maltose). When Chico-San switched over to using commercial enzymes with brown rice to make rice syrup, they discontinued the use of koji.

In 1971 and 1972 sales of Chico-San's rice cakes began to increase dramatically. After the 1972 fire, it took the company about a year to get back to manufacturing any significant volume of rice cakes. By 1973 the demand for rice cakes was growing like mad. Bob had to build new and better machines that could keep up with the demand. Sales of Yinnies syrup were also growing nicely. Then the company ran out of space at the location on West First Street. So on 1 Jan. 1979 the company moved its Rice Cake machines back to the original address at 1262-1266 Humboldt Ave.–which had been renovated after the fire, and on which Chico-San how had a 10-year lease. Chico-San retained 6,000 square feet of its location on West First Street for the manufacture of Rice Syrup. At about that time Bob met Pat and Cheryl Mitchell, owners of California Natural Products (CNP) in Manteca, California. They were making various syrups, but definitely not from rice.

Note: Robert Nissenbaum of Imagine Foods (23 Nov. 1994) strongly disagrees with this 1979 date. He is certain that in the summer of 1984 he visited the Chico-San plant that was making rice syrup. It was located in Chico, in a sort of garage at the end of an alley. He was buying rice syrup from Chico-San at the time for use as a sweetener in amazake he was making in Missouri, and he wanted to find out why the quality was so inconsistent. He thinks that CNP first began making rice syrup under contract for Chico-San after August 1984.

Bob Kennedy decided to contract with CNP for production of all his Rice Syrup. Bob sold all Chico-San's Yinnies syrup equipment to Pat and Cheryl, this equipment was compatible to whatever they were doing. He also told them all his secrets for making brown rice syrup and had them sign a non-disclosure agreement and a contract which stated that CNP would make rice syrup only for Chico-San. Chico-San guaranteed in writing to buy a specified amount of rice syrup. "Everything went fine until I sold the business to Heinz."

When Heinz bought Chico-San on 16 Nov. 1984, they wanted it all or nothing. If they decided after six months that there were parts of the business they did not want, Bob could buy those parts back. Chico-San carried $100,000 to $150,000 inventory of Japanese food imports. Bob expected to be able to buy back the Yinnies syrup business if Heinz decided not to pursue it, but the contract wording, unfortunately for Bob, allowed Heinz to essentially trade the rice syrup business to CNP. Bob lost track of what was happening between Heinz and CNP. He was supposed to work for Heinz as a consultant for about a year, but he didn't like it so he asked to be released from that obligation–which they did after about 3 months. "If I had had a crystal ball at the time, I would have kept the rice syrup business, but at the time I did not think much about it. I was really a little burned out with Chico-San. I was doing 10-12 hours a day for years. It was quite a relief to be free of it."

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Bob Kennedy knew about Robert Nissenbaum, who was developing Rice Dream non-dairy ice cream before Chico-San was sold to Heinz. Chico-San was shipping hydrolyzed rice (made by CNP) to Robert Nissenbaum before Nissenbaum was aware of CNP. [Note: Robert Nissenbaum–see interview of Nov. 1994–says he bought only rice syrup from Chico-San, and he became aware of CNP at about the same time as Chico-San, before CNP was processing rice] Then Chico-San was sold to Heinz in Nov. 1984 and Rice Dream (made with rice beverage from CNP) started to be manufactured in Palo Alto, California, in Jan. 1985. Address: Chico, California. Phone: 916-891-0970.

7828. *Soyafoods* (*ASA, Europe*). 1994. In depth: Food Ingredients Europe. 5(3):6-7. Autumn.

• ***Summary:*** Food Ingredients Europe, the international exhibition of food ingredients, was held this year on Oct. 4-6 in London, England, at Earl's Court. This was the biggest FIE in its 9-year history, with more than 500 exhibitors. The American Soybean Association (ASA) had a very successful booth at the U.S. Pavilion. One of the most interesting new products was Befine, from a company named VPS Europe. This unique, patented soya-based granule, sold fresh or frozen, mimics the texture of ground meat but it is not TVP or textured soy protein concentrate. Made from organic whole soybeans, it contains 18% protein. ADM Protein Specialties Division introduced their new WMR4, a dry soymilk based on soy protein isolate. Protein Technologies International exhibited Supro brand Isolated Soy Protein and Fibrim brand soy fiber. A line of texturized Danprotex (H-29, B-39, and F) and functional Danpro (DS) soy protein concentrates were launched by Central Soya Aarhus A/S, a member of the Eridania/Beghin-Say agro-industrial group. Kikkoman Trading Europe exhibited their naturally fermented soy sauces in liquid and dehydrated forms. Other soy sauce exhibitors included Henry Lamotte GmbH and Mandarin Soy Sauce Inc. Loders Croklaan exhibited a new soya concentrate line. Alsace-based Sojinal, which supplies soy products to the food industry, exhibited along with their new sister company, Sevenday. SFI Netherlands BV (SFI = Special Food Ingredients, formerly Solnuts Inc.) exhibited their line of dry roasted soynuts. Also present were Stern Lecithin and Soja GmbH & Co. KG, Sapa and Dafa Associés (makers of Dafasoy for the food, dietetic, and pharmaceutical industries), Soya Mainz & Co. KG and Solbar Hatzor (soy protein concentrates), Dalgety Food Ingredients International (with the former Spillers Premier Products), Lucas Meyer GmbH (with a phosphatidyl choline lecithin powder and a de-oiled lecithin for frozen doughs), Edelsoja GmbH, Celia SA, Freeze-Dry Foods GmbH, and GMB Proteins (a division of Bush Boake Allen Ltd.). The address and fax number of each company is given.

7829. Gold Mine Natural Food Co. 1994. Macrobiotic, organic and Earthwise products for you and your home (Mail order catalog and price list). San Diego, California. 64 p. 28 cm.

• ***Summary:*** Soy-related products include organic black soybeans, organic yellow vegetable soybeans, organic aduki beans, Ohsawa soy sauce, Ohsawa tamari, South River miso, Junsei Yamazaki miso, Ohsawa yuba, Ohsawa organic dried tofu, and kuzu. Address: 3419 Hancock St., San Diego, California 92110-4307. Phone: 1-800-475-3663.

7830. Hills, Benjamin. 1994. Re: New developments at Lean Green Foods on the Big Island of Hawaii. Letter to William Shurtleff at Soyfoods Center. Dec. 1 p.

• ***Summary:*** "Holiday Greetings! What a year! It has seen the birth and infancy of a soyfood company determined to make a difference in the protein supply of the Pacific Rim. So far it is quite local, with color pictures of ginger teriyaki tempeh burger popping up all over restaurant tables of the Big Island to sold out accounts on Kauai. Soon I will be consulting to soy operations in the Philippines, Siberia, Italy, and India, and traveling to those places. Also exploring export possibilities to Australia and New Zealand.

"It has been a tremendous amount of work, but with daily rewards from the enthusiasm of satisfied customers. Mine are truly products to believe in ..

"I have been blessed further by the presence of a soy angel, the original in my life, Susan Wallace, from Oregon ... Her ever-resent enthusiasm and support for Lean Green Foods has helped immensely in the development of my life in soy."

Update: 1997. Dec. 8. Talk with Rosie Siscon, who (with a friend) recently visited Benjamin at his shop in Hilo. 1998. Dec. 8. His location is beautiful, right next to the ocean, with lagoons and waterfalls nearby. He made them some delicious tempeh dishes from his freshly-made tempeh. Address: Lean Green Foods, P.O. Box 534, Volcano, Hawaii 96785. Phone: 808-985-8563.

7831. **Product Name:** Ginger Teriyaki Tempeh Burger.
Manufacturer's Name: Lean Green Foods.
Manufacturer's Address: P.O. Box 534, Volcano, Island of Hawaii, HI 96785. Phone: (808) 985-8563.
Date of Introduction: 1994 December.
Ingredients: 1998/12: Certified organic soybeans (grown in accordance with sec. 26569.11 of the California Health and Safety Code), ginger juice, soy sauce (water, wheat gluten, soybeans), mustard, lemon juice, vinegar, fructose, sesame oil, guar gum, tempeh culture.
Wt/Vol., Packaging, Price: 6 oz. (170 gm) vacuum pack.
How Stored: Frozen.
New Product–Documentation: Christmas letter sent by Benjamin Hills. 1994. Dec. Lean Green Foods is now making a ginger teriyaki tempeh burger. Color pictures of it are "popping up all over restaurant tables of the Big Island to

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sold out accounts on Kauai." One secret to the flavor is the 24-hour soak in cold marinade–not hot!

Label brought by Benjamin Hills. 1998 Dec. 21. 3.5 inches diameter. Self adhesive. Green on white. Logo says "Made in Hawaii." "100% vegetarian 2 patties–Keep frozen. Try our tempeh chili. To cook. This precooked burger may be grilled, fried or microwaved." Address is now: P.O. Box 10562, Hilo, Hawaii 96721.

7832. **Product Name:** Soy Sauce.
Manufacturer's Name: Projet Miso (owned by Fonds de Contrepartie Rwanda-Canada)
Manufacturer's Address: Projet Miso, B.P. 2018, Kigali, Rwanda. Phone: (250) 76730.
Date of Introduction: 1994.
How Stored: Shelf stable.
New Product–Documentation: Letter from, form filled out, and label sent by Johnny Kashama based on an interview with François Munyankindi of Projet Miso, Rwanda. 1993. Dec. 21 (which see). This company's shoyu is still being fermented, and will be ready to sell in 1994. This is the first company in Africa to make and sell miso, tamari, or shoyu.

Label. 3.25 by 2.25 inches. Red, black, and white. "Projet Miso–Soy Sauce."

7833. **Product Name:** Soy Sauce.
Manufacturer's Name: Wa Heng Dou-Fu Soy Sauce.
Manufacturer's Address: 5063 24th St., Sacramento, CA 95822. Phone: 916-737-0545.
Date of Introduction: 1994.
How Stored: Shelf stable.
New Product–Documentation: Talk with Martin Lin. 1997. Aug. 6. His company name is "Wa Heng Dou-Fu Soy Sauce." He bought the company from his parents in 1996. Three years ago he started to make soy sauce and sold it to several restaurants because Kikkoman is too expensive. He no longer makes soy sauce but plans to make it again after doing more research. He believes that Kikkoman adds HVP to its soy sauce prior to fermentation.

7834. **Product Name:** Smoked Tofu [Garlic Teriyaki, or Mild Szechuan]
Manufacturer's Name: Wildwood Natural Foods
Manufacturer's Address: 1560 Mansfield Ave., Suite D, Santa Cruz, CA 95062. Phone: 408-476-4448.
Date of Introduction: 1994.
Ingredients: 1998–Garlic Teriyaki: Wildwood tofu [filtered water, organic soybeans (grown and processed in accordance with the California organic foods act of 1990), nigari (magnesium chloride, a natural firming agent)], soy sauce, Fruitrim (fruit juice, natural grain dextrins), rice vinegar, garlic powder, molasses, onion powder, spices
Wt/Vol., Packaging, Price: 6.5 oz. Retails for $3.29.
How Stored: Refrigerated.
New Product–Documentation: Wildwood Natural Foods price list. 1995. Jan. 9. Talk with Billy Bramblett of Wildwood. 1998. June 23. Wildwood's two smoked tofu products were introduced in early 1994. They cut the tofu, make a marinade, then send both to a smoke house in San Jose–which cleans out their plant for each Wildwood run. They marinate the tofu in tubs, then smoke it on racks in a real smokehouse with real smoke made from cedar chips. The smoking and baking chamber (about 8 feet tall and 4 feet wide) is next to the chamber where the fire is. The tofu is kept in this chamber at a relatively low temperature (about 240°F) for 24-36 hours. Of this time, it is being smoked for about 6-8 houses using smoke that is ducted into the chamber; the rest of the time it is just being baked. When ready, it is vacuum packed.

7835. Fryer, Anne-Marie. Fryer, Wil. 1994. Das kleine Buch ueber Salz, Miso und Shoyu [The little book about salt, miso, and shoyu]. Voelklingen, Germany: Ost-West-Bund Verlag. 79 p. Illust. No index. 15 x 10 cm. Series: Ost-West Naturkostführer, Band 7 (No. 7). [11 ref. Ger]
• ***Summary:*** Contents: The dependence of life on salt (Life on Earth began in the sea). Production of miso and shoyu. Nutritional aspects. Table of nutritional values. Healing value. Quality. About cooking. Cooking with salt. Cooking with miso. Cooking with shoyu. Glossary. Bibliography (all are by macrobiotic authors).

7836. Jacobs, Barbara; Jacobs, Leonard. 1994. Cooking with seitan. The complete vegetarian "wheat-meat" cookbook. 2nd ed. Garden City Park, New York: Avery Publishing Group. xi + 185 p. Foreword by Nikki and David Goldbeck. Illust. Index. 26 cm. [20 ref]
• ***Summary:*** Contents: Acknowledgments. Foreword. Preface. Introduction. 1. A Newly discovered ancient food. 2. Making your own seitan. 3. Appetizers and snacks. 4. Sauces and marinades. 5. Soups and stews. 6. Salads and salad dressings. 7. Side dishes. 8. Elegant entrees and hearty casseroles. 9. Desserts. Manufacturers of seitan and seitan products. Mail-order distributors. Bibliography.

In the Introduction, Barbara Jacobs writes (p. 2-3): "In 1970, when we first tasted seitan, it was a tasty but exotic snack food, owing its extremely salty flavor to the fact that it was an imported Japanese specialty food, flavored for the Japanese taste. In addition to being heavily salted, this seitan was hard, chewy, and quite expensive. It was really just a snack food to be eaten while drinking beer. Unfortunately, no one involved in the natural foods movement in this country was familiar with the methods used to make this food.

"In 1971, Leonard became the head chef at the Seventh Inn, one of Boston's first natural foods restaurants. During that time, he and I began our search for different traditional food-preparation techniques and studied with experts in all areas of cooking and baking. In March 1971 a young

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Japanese woman named Yumie Kono came to work at the Seventh Inn. It was Yumie who taught us how to make seitan. Even macrobiotics leaders Michio and Aveline Kushi–experts in the preparation of healthy Japanese foods–had never actually made seitan."

In 1975 Jonathan's Seitan Shop in Antwerp, Belgium, began to make seitan. In the mid-1970s, a seitan product named Tan Pups had become a very popular snack food. "Created in Boston, tan pups were similar to the country fair specialty of dough-covered hot dogs on a stick. Tan pups were pieces of seitan that had been dipped in flavored batter and deep fried. Boston area natural foods stores carried these healthy snacks as staple items."

The basic recipe for seitan (p. 20-21) involves simmering 2-2½ cups of freshly homemade wheat gluten in a "basic broth" of 4 cups water, ¼ to ½ cup natural soy sauce, a 3-inch piece of kombu (a sea vegetable), 4-6 slices (1/8 inch) of fresh gingerroot (optional), and 1 tablespoon sesame oil (optional). Address: Medfield, Massachusetts.

7837. Manley, Charles H. 1994. Process flavors and precursor systems: Commercial preparation and use. In: Thomas H. Parliament, M.J. Morello, and R.J. McGorrin, eds. 1994. Thermally Generated Flavors: Maillard, Microwave, and Extrusion Processes. Washington, DC: American Chemical Society. x + 492 p. See p. 16-25. Chap. 3. Index. 24 cm. ACS Symposium series No. 543. Held 23-28 Aug. 1992 in Washington, DC. [14 ref]

• ***Summary:*** Hydrolyzed vegetable proteins (HVP's) "have been used for more than 100 years to add meat-like flavor to prepared foods. They represent one of the earliest forms of process flavors, and they are composed of amino acids generated by the hydrolysis of vegetable protein with HCl [hydrochloric acid]. The heat used to hydrolyze the protein also produces a roast-like flavor character."

"Recently certain chlorinated glycerides have been found" in HVP's. "Some European countries have set 50 ppm as a safe level." Address: Takasago International Corp. (USA), 100 Green St., Teterboro, New Jersey 07608.

7838. Okamoto, Koji. 1994. Syllabus for MBA course at Willamette University (Salem, Oregon). Salem, Oregon. 11 p. Unpublished manuscript.

• ***Summary:*** Mr. Okamoto teaches an MBA course at Willamette University in Salem Oregon. In the syllabus, page 3 is titled "History of Soy Sauce Brewing and Yamasa. This chronology contains some interesting dates: 1647–Soy sauce was first exported from Japan by the Dutch. 1715–Heating of soy sauce started. 1885–Yamasa invented a western-style sauce named Mikado Sauce. 1899–Yamasa's 10th generation president, Gihei Hamaguchi, established the Soy Sauce Research Institute in Choshi after he studied fermentation in Great Britain. 1943–Yamasa started manufacturing pharmaceutical ingredients.

Page 4 discusses the Japanese soy sauce market. Total production in Japan is 317.5 million gallons per year. The market is saturated and the price has been stable for 20 years. There are 2,500 shoyu makers in Japan. The five largest (Kikkoman, Yamasa, Higashimaru, Higeta, and Marukin) have 50% of the market. In Japan, 38% of shoyu is used in homes, and 62% is used in companies. In Japan, Yamasa produces 33 million gallons of soy sauce per year, worth $400 million. It is the second largest soy sauce manufacturer after Kikkoman. The company has 1,100 employees, with branches in 10 major cities including Tokyo, and $3,750,000 capital. Net income before taxes is $20 million per year.

Why has Yamasa expanded to the United States? There is a strong market in the USA. The yen is worth more and more against the dollar, which makes imports from Japan expensive. Salem has inexpensive soft water (1 cubic meter costs more than 15 times as much in Choshi as in Salem), inexpensive energy (less than half the price of a kilowatt-hour in Japan), and inexpensive labor. Land in Salem is extremely inexpensive compared with that in Japan. There are no regulations on wheat in America. There are no transportation charges on materials and finished products to and from Japan, and no import duty on finished products at U.S. ports (typically 3% FOB)–for shoyu sold in America.

Why Yamasa chose to build in Salem, Oregon: Water that is of good quality and inexpensive. An enterprise zone with a 3-year property tax exemption. Local government & Sedcor were very enthusiastic and cooperative. Receptive food processing industries. Good plant location. Salem is located far away from Kikkoman, a strong competitor in Walworth, Wisconsin. Kikkoman's U.S. production rose from 1.59 million gallons in 1973 to 23.81 million gallons in 1993. Easy access to freeway north and south. Seaport and airport available nearby.

The U.S. investment. In June 1992 Yamasa Corp. USA was formed as a subsidiary of Yamasa, Japan. Investment: $30 million. Number of employees: 40. Sales and marketing office. In Los Angeles, California. Breakdown of investment: Land, 25 acres, $650,000; Building, 65,000 square feet, $6.5 million. Machinery $15.0 million. Furniture and fixtures $500,000. The keys to survival (11 points). What Japanese management expects from U.S. management (11 points, incl. "Learn foreign languages," and "Don't forget to say 'sorry'"). Address: Senior Vice President, Administration, Yamasa Corp. USA, 3500 Fairview Industrial Drive, Salem, Oregon 97302. Phone: 503-363-8550.

7839. Pan, Lynn. 1994. Sons of the Yellow Emperor: A history of the Chinese diaspora. New York: Kodansha International. xx + 418 p. Illust. (16 pages of plates). Index. 22 cm. [174* ref]

• ***Summary:*** On page xiv is a very interesting map of southern China, with a blowup of southern Kwangtung [Guangdong] province, the area around Canton the Pearl

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River, the South China Sea, Macao, and Hong Kong. For this area was at the heart of the Chinese diaspora–especially in the 19th and 20th centuries and especially from two small areas southeast of Canton: (1) Sam Yap (Three Districts) of Punyu, Shuntak, and Namhoi–the more affluent counties. (2) Sze Yap (Four Districts) of Hoiping, Sunwui, Toishan, and Yanping–the poorer and ruder area southwest of Sam Yap. Although the people from both areas speak Cantonese, they have difficulty understanding each other's speech. Other important languages of the diaspora were Hakka and its numerous variants (spoken in Guangdong, Fujian, etc.) and Hokkien (spoken in southern Fujian, Taiwan, and by many overseas Chinese throughout Southeast Asia). It is closely related to Teochew / Teochiu, though mutual comprehension is difficult.

In Part Four: 1960s to 1980s, Chapter 16, titled "Food" contains a history (p. 320-23) of Amoy Food Limited, now an international firm, with its headquarters in Hong Kong, owned largely by overseas Chinese. For many overseas Chinese, "perhaps no label has quite the resonance of Amoy." In 1908, T'ao-hua Ta-t'ung, the predecessor of the company, was founded in Xiamen for producing bottled soy sauce and dairy milk. Its founder was Yang Ko-fei, who soon brought in other shareholders. In 1911 clashes between the founder and other shareholders lead to a break-up of the company, with one party going it alone as T'ai-hua (Tao Hua), and the other as Ta-T'ung. Yang Ko-fei went with the latter company, who chief shareholder was Tan Kah Kee, the rubber and pineapple magnate.

It became increasingly apparent, however, that the two companies would do much better of they operated as a single unit. So in 1928, when a new rival appeared, they merged, with the smaller of the two now located in Hong Kong. Thereafter the company experienced steady growth. Eventually the branch in Hong Kong came to eclipse the parent company in Amoy. In 1937, when the Japanese invaded China and war broke out, almost the entire canning plant was moved to Hong Kong from Amoy. In 1951, when the company went public, the ownership passed mainly into the hands of overseas Chinese.

Today Amoy Foods' products are on the shelves of supermarkets and Asian markets in 37 countries. Half of Amoy Foods' shares are owned by the American food giant Pillsbury (owner of Haagen-Dazs and the Burger King hamburger chain) and the other half by Hang Lung (a Hong Kong real estate company). Amoy's line of 34 sauces include dark soy sauce (lau-ch'ou), light soy sauce (*sheng-ch'ou*), black bean sauce [made of fermented black soybeans], sweet and sour sauce, etc.

On the roof of the Amoy factory's main building a visitor can see a demonstration of the old-fashioned process: "here, an old man with sleeves rolled up goes from earthen vat to earthen at plunging his arm into the thick brew of black and yellow soy beans to give it a gentle, almost loving stir. He works rhythmically, with deep concentration. A Soy Master with thirty or forty years behind him, he stands in a line which goes back to the fifth century, from when dates the earliest surviving soy sauce recipe."

Companies like Amoy have helped to make Chinese foods more widely available in the West. Not so long ago, Chinese cookbooks published in England said that Worcestershire sauce was an acceptable substitute for soy sauce, because the latter was available only at delicatessens and specialty shops [Asian grocery stores] in London. Even during the last five years, the range of Chinese foods available in London's Chinatown has grown remarkably. In Chinatowns in the United States [and especially those in San Francisco {California} and New York] the selection of Chinese foods has long [perhaps always] been greater than at those in London or other places in Europe.

Page 324. The first person to make tofu in Europe was Li Shih-tseng [Li Yü-ying, Li Shizeng], a Chinese intellectual and educator. As a young student of biochemistry in France in 1900, Li was to be greatly influenced by the writings of Nietzsche and Bergson. A Francophile, Li was one of the founders of the Work and Study Program, which sent Chinese students abroad for part-time work and part-time study. One of these students, who would later become famous, was Deng Xiaoping. While establishing his tofu [beancurd] factory in France, Li drew on his knowledge of biochemistry; the factory provided jobs for many students in the Work-Study Program.

Li, a vegetarian, was a firm believer in the nutritional value of tofu and other soybean foods. His factory also made and sold soybean flour, fermented tofu, soy-bean milk, and soy-bean jam, and these foods nourished not just Chinese, but also Westerners, including American soldiers who fought in France during World War I (Lin Hai-yin 1971, p. 125). "All this was before the faddish demand for tofu by health food enthusiasts, and before it became widely known as an unbeatable source of protein. The company closed after the war, but among certain Chinese *émigrés* [emigrants from China] France was never to lose its reputation for beancurd. In Europe up to the 1980s *tofu kan*, a particular variety of fermented beancurd [sic, pressed tofu] much demanded by eastern Chinese palates, could only be had in Paris, and the handful of *émigrés* in London had to send over for it."

Li was also a founder of the Université Franco-Chinoise at Lyons, a sort of accommodation and placement agency.

About the author (facing p. 418): Lynn Pan was born in Shanghai; she left as a child. She "has lived as an immigrant in North Borneo and England, and worked as a social scientist, journalist and writer in London, Geneva, Helsinki, and Hong Kong." In 1981 she returned to Shanghai for the first time, and was gripped by deep, haunting sensations of nostalgia. She had found the place where she belonged, her inheritance, and she began to write this book. She is the author of at least five other books–all listed facing the title

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page. Her Epilogue and Afterword at the end of this book are both very interesting.

7840. Parliament, Thomas H.; Morello, M.J.; McGorrin, R.J. eds. 1994. Thermally generated flavors: Maillard, microwave, and extrusion processes. Washington, DC: American Chemical Society. x + 492 p. Index. 24 cm. ACS Symposium series No. 543. [600+ ref]
• ***Summary:*** "Developed from a symposium sponsored by the Division of Agricultural and Food Chemistry at the 204th National Meeting of the American Chemical Society, Washington, DC, August 23-28, 1992." Address: 1&3: Kraft General Foods; 2: The Quaker Oats Co.

7841. Soedewo, Mang Eri. 1994. A freedom fighter: my life with Eri-san. [Jakarta?]: Airlangga University Press. xvi + 607 p. See p. 246. Illust. Maps. 21 cm. *
• ***Summary:*** Page 246: "The prospect of having one egg for himself every day made his eyes shine. I also gave him a bottle of the sweet soya sauce he was so very fond of."

Since the early days of our marriage, we had to endure being apart from time to time, sometimes for long periods of time.

7842. Stepaniak, Joanne. 1994. The uncheese cookbook: Creating amazing dairy-free cheese substitutes and classic "uncheese" dishes. Summertown, Tennessee: The Book Publishing Co. 192 p. Index. 21 x 18 cm. [16 ref]
• ***Summary:*** This is an excellent, very creative cookbook with a poor index, developed especially for people who, due to choice or chance, have eliminated cheese from their diet. The recipes are well designed to satisfy any compelling cheese fantasies you may have.

Contents: Introduction. Cheezes, spreads & dips. Soups and chowders. Fondues & rarebits. Sauces, pestos & dressings. Pizzas, polentas & breads. Quiches, casseroles & entrées. Sweets. Glossary. Mail order suppliers of natural foods.

Tofu is used as a major ingredient throughout this cookbook. For example: Muenster cheese (p. 23). Chunky Roquefort dip & dressing (p. 24). Tofu cottage cheese (p. 27). Tofu ricotta (p. 27). Betta feta (p. 28). Brie (p. 31). Liptauer käse (p. 32). Boursin cheese (p. 33). Tofu cream cheeze–rich or light (p. 34-35). Kefir cheeze (p. 36). Garbanatto (p. 39). Hot Parmesan artichoke dip (p. 41). Pecan cheese (p. 42). Egg-free (vegan) mayonnaise (p. 89). Tofu sour cream (p. 90). Calzones (p. 100-10). Tofu tetrazzini (p. 122). Tofu devonshires (p. 140). Mattar paneer (p. 146). Tofu cheezecakes & cream pies (ten varieties, p. 164-74). Tofu whipped topping (p. 172).

Many other recipes also call for "low-fat, dairy-free (vegan) milk" which is defined (p. 183) as "a generic term which refers to any creamy beverage such as soymilk, nut milk, or rice milk that is produced from non-animal products."

Interesting products in the glossary (p. 180-184) include: Agar, barley malt syrup, brown rice syrup, liquid aminos, mirin, miso, seitan, tahini, tamari, tempeh, toasted sesame oil, tofu, umeboshi plum paste, vegan milk, yeast–nutritional (*Saccharomyces cerevisiae*).

7843. Yamasa Corporation U.S.A. 1994. Yamasa Corporation U.S.A. (Brochure). Choshi, Japan. 4 p. 21 x 21 cm. [Eng]
• ***Summary:*** This glossy color brochure gives basic information about Yamasa in the USA and Japan. In Salem, Oregon, Yamasa Corporation U.S.A. is located on a 25-acre site. Floor area of plant: 65,000 square feet. Initial production capacity: 1.7 million gallons per year of soy sauce. Production began: Summer 1994. Distribution will begin: Spring 1995. A color photo shows the front of the plant.

In Choshi, Japan, Yamasa Corporation is located at 2-10-1 Araoicho, Choshi, Chiba prefecture 288, Japan. President: Michio Hamaguchi. Founded: 1645. Items produced: Soy sauce, flavor enhancers, liquid seasonings, pharmaceuticals, diagnostics, fine chemicals. Yamasa in Japan will celebrate its 350th anniversary in 1995. In 1957 Yamasa invented a 5'IMP/5'GMP (IG) production method for a new type of flavor enhancer through enzymatic degradation of ribonucleic acid (RNA). Yamasa IG is now exported to food manufacturers around the world. The RNA degradation technology is also recognized as new biotechnology. A color aerial photo shows the Yamasa complex at Choshi.

Page 3 shows a flowchart of the process for manufacturing soy sauce. The terms koji and moromi are used. Address: Choshi, Japan.

7844. **Product Name:** Tofu, Soymilk, Dried Tofu Curds, and Veggie Burgers.
Manufacturer's Name: Harcan Kingsoya Co. Ltd.
Manufacturer's Address: 33 Casebridge Court, Units 5&6, Scarborough, ONT M1B 3J5, Canada. Phone: (416) 283-8328.
Date of Introduction: 1994?
New Product–Documentation: Talk with Duff MacKinnon of the Ontario Ministry of Agriculture and Food in Guelph. 1995, March 6. Harcan makes tofu, soymilk, dried tofu curds, and veggie burgers. They have a very small plant. One partner, from mainland China, speaks excellent English. The other two partners are Canadian.

7845. Rosas, Juan Carlos; Young, Roberto A. 1994? El cultivo de la soya. Quinta edición [The cultivation of soya. 5th ed.]. *Departamento de Agronomía* (*Zamorano, Honduras*), *Publication* No. AG-9603. 68 p. Undated. [Spa]
• ***Summary:*** Contents: 1. Overview: Economic importance, chemical composition, history, taxonomy. 2. Morphology of the soybean plant. 3. Physiology of the growth and development of the soybean plant: Stages of development.

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4. Environmental factors that affect the cultivation of soya: Soil, water, irrigation, light / photoperiod, temperature, period of growth. 5. Practical cultivation: Preparation of the soil, time of planting, density of planting, quantity of seeds, systems of cultivation, control of weeds (methods of weed control, chemical control). 6. Mineral nutrition of soybeans (and inoculation). 7. Diseases that affect the cultivation of soybeans and their management: Bacterial, fungal, viral, other, seed treatment. 7. Insects that attack soybeans. 8. Harvest and storing. 10. Improvement of soybeans. 11. Processing and utilization: Industrial processing (extraction of oil, soy flours, soy protein concentrates {*concentrados proteícos de soya*}, soybean cake). Direct consumption: In the Far East, the soybean is consumed in the form of fermented and non-fermented foods. Fermented foods include shoyu, miso, mato [sic, natto], and tempeh, while non-fermented foods include soymilk (*la leche de soya*), tofu, yuba (*juba*), and kinako. 12. The cultivation of soya in Honduras (history).

In 1972, the Ministry of Natural Resources (*Ministerio de Recursos Naturales*) reported the initiation of commercial soybean production on a small scale in various departments of the country (Olancho, El Paraiso and Comayagua). Three varieties were used at that time: Biloxi, Hardee and Jupiter. However, before these reports were made, at the Panamerican Agricultural School (*la Escuela Agrícola Panamerican* (*EAP*)), some hectares had already been planted with the varieties Jupiter and Pelican. Discusses additional developments in 1974, 1982, 1986, 1987, and 1988. Address: 1. PhD, 2. PhD

7846. **Product Name:** Marinated Tofu Cutlets.
Manufacturer's Name: Wildwood Natural Foods of Santa Cruz, Inc.
Manufacturer's Address: 1560 Mansfield Ave., Suite D, Santa Cruz, CA 95062. Phone: 408-476-4448.
Date of Introduction: 1994?
Ingredients: Tofu (organic soybeans grown accordance with the California Organic Foods Act of 1990, filtered water, nigari/magnesium chloride, a natural firming agent), hi oleic safflower oil, marinade (unsweetened pineapple juice, soy sauce, fresh ginger, garlic powder, ginger powder, onion powder).
Wt/Vol., Packaging, Price: 6.0 oz. (175 gm) vacuum pack. Retails for $2.89.
How Stored: Refrigerated
New Product–Documentation: Product with Label purchased at Open Sesame in Lafayette, California. 1995. March 11. Label: 2 by 4 inches. Red and black on gold. Silhouette of a forest. "Wonderful, hearty texture. Marinated in our pineapple teriyaki. Try it in stir fry, sandwiches, and all vegetarian entrees. Made with organic tofu." The plastic pouch is about 4½ by 5 inches.

7847. Rower, Howard. 1995. History of The Infinity Company and Infinity Foods. Part I (Interview). *SoyaScan Notes*, Jan. 22. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Howard grew up in a Jewish family in Boston, Massachusetts. In about 1964 or 1965 he got interested in macrobiotics. John Hammond, his next door neighbor and a blues singer, was involved in macrobiotics and he told Howard about it one day. So Howard went to the Ohsawa Foundation in New York City, which was run by Irma Paule in those days. He bought some groceries from her and began practicing macrobiotics. George Ohsawa came to New York in 1965 for a summer camp (See Kotzsch 1985, p. 137) and Howard met him. "Ohsawa said he was looking for a guy like me and he wanted me to grow rice in New York state. I found out that was a pretty impossible task so I asked him to pick something easier. He said 'Okay, grow kuzu.' I said, 'Okay, when you get back to Japan, send me some kuzu plants.' And he said, 'Oh no. That's not the Zen way. The Zen way is for you to do it yourself, now.' I spent about 6 months finding out what a kuzu plant was. Finally I got some old agricultural bulletins that described how good kuzu was, then later described how bad it was. I finally managed to find somebody in the South who dug up some kuzu in the winter and sent it to me. I grew it in my garden in New York. The next year when Ohsawa came, I sat him down under this huge kuzu vine, like an arbor, at the back of my house. I said 'There's the kuzu you wanted.' I took some of the kuzu roots and actually extracted kuzu from them and put it in a test tube. I showed it to Ohsawa, told him it was the first kuzu ever extracted in New York, and gave him the test tube. He was astonished and delighted. He said, 'Now we have to begin to work. I knew I was right. You *are* the man I'm looking for. You must begin to import macrobiotic food products from Japan at once. I will ship them to you.' So we started this relationship and in 1965 I began importing foods from Ohsawa in 1965. He used to send me tamari [soy sauce] and miso in beautiful little 18-liter wooden kegs, tied with rope." Howard sold these products to health food stores and to Michio Kushi.

Also during 1965 Howard read a book about grain and he got very interested in freshly-ground flour. A grain of wheat is alive, but as soon as you mill it, it dies. After 5 days the taste and nutritional value have both declined. So people should mill flour, then keep it refrigerated, and use it as soon as possible. So Howard bought a little home flour mill, and set it up in his house. He ground some wheat flour, his wife made some bread, and they really liked the bread. They served the bread to friends who came to dinner, then they wanted fresh flour, so he made flour for them. Pretty soon he was delivering flour to people, then a health food store wanted to sell it, so he had a label made, even though he didn't have a company name at all. So he threw the *I-Ching* to help him choose a name. The hexagram

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was "Perseverance Furthers." He was going to name the company "Thomas J. Perseverance" so it would sound like a real person. His brother, who was visiting at the time, said "That's a stupid name. You might as well call it Infinity if you're going to have a dumb name." Howard liked the name Infinity, and decided to name his company The Infinity Co. However, later he did have some labels printed on which Perseverance Foods was the company name–just for fun. He once had a lawyer named Bill Pratt, so he sold "William Pratt Old Barrister" brand honey. One of his children pinched his thumb in the flour mill at home and his wife became concerned that a more serious injury could happen. Moreover everything in the house began to dusted with a thin layer of flour.

Howard started The Infinity Company in about 1965 at 188 Duane Street in New York, in the lower Manhattan neighborhood named Tribecca. It distributed, imported, and manufactured natural foods. George Hannides (pronounced HAN-uh-dees) came to work with him, and he later became a minor working partner.

Howard had a friend who practiced karate in a loft at 188 Duane Street, and his landlord gave Howard a small space that had a desk in it on another floor of the same building. So Howard moved in his mill and started doing business as The Infinity Company. Within 2-4 years Howard incorporated the company and changed the name to The Infinity Food Company. Then the health food stores began asking Howard to make other kinds of fresh flour, such as rye flour or corn meal. He did, and soon the product line had expanded to 250 different products. Eventually he had two 30-inch flour mills plus a 24-inch mill and some little 8-inch ones. He had a room full of mills, and milling was a large part of Infinity's manufacturing business. In addition, at one point, the company was getting truckloads of dried fruit and of fruit juices from California, plus jams and jellies made without sugar from the City of Industry, California.

"Michio Kushi was operating out of a house on Harvard Square in Cambridge. He was selling groceries in the hallway. He had started out in New York, then he ran into some kind of terrible financial trouble. He fled to Cambridge to avoid his creditors. His wife, Aveline, ran the business and he was the guru. In the early days, Michio was Erewhon's biggest asset. He used to go around and lecture, then people would say 'Where can we get this food,' and he'd say 'Go to Erewhon.'" Howard is not sure whether or not he ever sold products to Erewhon in the early days. Howard is not sure whether or not he began importing foods before Erewhon. "Erewhon didn't have any kind of an operation going on when I had my warehouse. They became important later. In the beginning, they may have been getting some products from Ohsawa in Japan at the same time I was. Erewhon was located in the Kushi house in Cambridge, where a few of the real loyal macrobiotics lived with the Kushis and helped to pay the rent. They had sort of a grocery display in the hall, and they sold some foods. In the early days, Erewhon bought miso, tamari and other typical macrobiotic products from Infinity." Continued. Address: 84 MacDougal St., New York, NY 10012. Phone: 212-982-3620.

7848. Silver, Jimmy. 1995. Purchase of the Erewhon and Pure & Simple brand names from John Deming (Interview). *SoyaScan Notes*. Jan. 24. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** From the day that Jimmy began to work for Erewhon–Los Angeles in 1976, he always believed that John Fountain owned the company and that John Deming was only an investor. "For years, John Fountain ran that company into the ground. I have no idea why Deming wasn't paying attention to what was happening. Then Deming showed up and said to me 'Listen, this company really belongs to me, and I need to know what you think about what's happening.' I told him, then he said 'I'm going to get rid of Fountain and I really need to have you stay. It's going to be a great opportunity for you.' But when he found out what was really happening, and there was going to be work involved, he became somewhat dismayed by the whole thing. It was totally bizarre."

So Jimmy stayed on and worked for John Deming, who sacked John Fountain in late 1978 or early 1979. Jimmy then hired Jeffrey Hilgert. In early 1980, Jeffrey negotiated with Shade Foods (a maker of yogurt toppings in Belmont, California) for Erewhon–Los Angeles to buy the Pure & Simple name, plus a few jam products, from Shade. No physical assets were purchased. Payments were made over a period of several years.

Jimmy had recommended to John Fountain that Erewhon–Los Angeles be converted from a wholesale distributor to a master distributor of branded products that were sold nationally. When John Deming came in, he liked the idea and told Jimmy to make the change. So Jimmy arranged for K&L, Nature's Best, and many other distributors to take on the line of products that Erewhon–Los Angeles had formerly distributed for itself. The Erewhon–Los Angeles warehouse and offices were moved from Vernon to Santa Ana, California. The Santa Ana warehouse was much smaller–no more than 8,000 square feet. It housed only the imported Japanese products and Johnson's Spaghetti Sauce.

When Jimmy and Jeff Hilgert bought Erewhon–Los Angeles from John Deming in mid-1980, they basically wanted the right to use two names: Pure & Simple, and Erewhon. Erewhon–Los Angeles was a very small company, with sales of only about $35,000 a month at the time, and there were large debts which Silver and Hilgert agreed to pay off for Deming. "He said, 'I have to have this amount of money'–which was a ridiculous sum. He should have just given us the company and walked away. It wasn't really worth anything, except that it had these two valuable names–

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if it could control them.

"John presumably had an agreement with Michio Kushi which allowed him to use the name Erewhon in exchange for paying royalties–a percentage of the sales of the business–to Michio. This is what all the subsequent problems hinged on. After Erewhon went bankrupt, they informed John (without our knowing it) that they were going to require us to stop using the Erewhon name–because we had no right to it, because Deming had never executed the appropriate documents with Michio and wasn't paying Michio any royalties. The agreement that John had told us he had with Michio–that he had sold us–did not exist! By the time we discovered this, we had already paid him something like $80,000 to $100,000. I didn't find out until much later that Erewhon notified him that they were going to withdraw the use of the name from him. At that point, John came to us and said 'Look, you still owe me several hundred thousand dollars for the business, but I'd like to accelerate the payments because I really need cash, and in exchange I'll reduce the amount of money you owe me to $250,000.' He wanted us to pay the balance due over 6 months rather than over something like 5 or 10 years. So we began accelerating the payments. He knew that both he and we would be sued by Erewhon, but we didn't know it. After we had paid him $180,000 of the $250,000, Erewhon sued us. We we went to John and asked him to defend us against the Erewhon suit since we still believed he had this agreement with Michio. Even though we had paid him $180,000 and were in the process of paying the rest, he refused to defend us. He told us it was our problem, that he didn't think it was a productive use of money, and that he thought he thought we should just walk away from it. So Jimmy hired a lawyer to defend himself, and asked John to produce a copy of his signed contract with Michio. I guess we neglected to scrutinize his agreement with Michio at the beginning because we trusted him and he had been using the Erewhon name for years. John did show us a copy of a written agreement at the time we made the deal, but the agreement had time frames on it, and it had to be renewed and renegotiated, and he said he was in the process of doing that. I learned a lot from this experience, but the tuition was high.

"In June 1980 we signed the agreement to purchase Erewhon–Los Angeles from John Deming, then we renamed it Pure Sales, which had two major lines of branded products: Erewhon, and Pure & Simple–plus Johnson's Spaghetti Sauce. At the same time we were paying Deming, we were also paying Shade Foods for rights to use the Pure & Simple name. We took Deming's business from $35,000 sales a month to about $350,000 a month within about a year.

Concerning names: Erewhon–Los Angeles had been a natural foods distribution company in Vernon, California, run by John Fountain. There was a time when Jimmy used both the names Erewhon–Los Angeles and Erewhon West, then Erewhon West took precedence as a name when the company became a master distributor of branded products and its products began to be distributed nationwide. The name change took place before Erewhon–Boston declared bankruptcy.

"After Erewhon refused to allow us to use the Erewhon name, we had to come up with a new name and re-label all our products in 90 days at a cost of something like $50,000 to $90,000. I called the pasta "Johnson's" and the tamari 'So' Tamari, So' Pasta, etc." John had had his lawyer, Fred Marks, write several very specific sentences into the agreement describing the conditions under which we would not have to pay John. There was a hearing in Boston, Massachusetts, and we had to go before a bankruptcy judge there. When we lost the lawsuit, because there was no valid agreement between Deming and Kushi, our lawyer asked the judge to issue the order in the language that Deming's lawyer had written into our contract. And he did and the judge did. We got a court order losing to Erewhon but it was worded in John's lawyer's language. So we went back to John and said 'We're not going to pay you for the balance due.' We told him we thought he should pay back the $180,000 we had already paid. He refused. After a month or two he sued us for the $50,000. So we counter-sued him for everything that we had paid him plus our costs of relabeling–a total of about $250,000 to $350,000. John came to us and said that he would drop his suit if we would drop ours. We did not pursue our case because we wanted to focus on our booming business and we did not have the resources to prosecute a lawsuit–nor were we willing to go through the emotional energy drain. So we walked away from it. John had lots of money and for him the whole thing was like a monopoly game. Address: President, Pure Sales, P.O. Box 5116, Irvine, California 92716-5116. Phone: 714-540-5455.

7849. Anand, Karen. 1995. In fashionable taste. *Times of India (The) (Bombay)*, Jan. 31, p. 32.

• ***Summary:*** Discusses basic types of food that are popular in the 1990s. The section titled "Vegetarian" begins: "This must be the most 'in' thing that has happened to food. It is great for health. Overseas, vegetarianism is often seen as much the same as health food. Buzz words include: Tamari, a thick soya sauce with a little more flavour than a good brand "of ordinary Chinese soya." Miso, also made from the soya bean, is used to flavour soups. Humous [Hummus] and Pitta [Pita] bread started out as elements of Levantine cuisine, but are now used widely by vegetarians. "Tofu, a soya bean curd," is eaten by many who have lactose intolerance.

Other cuisines discussed are French bistro, Mediterranean, Southern Florida / Creole, and Comfort food.

7850. Brennan, Jennifer. 1995. The emperor's soy sauce. *Gourmet*, Jan. p. 92-93, 135-36.

• ***Summary:*** This noted Anglo-Indian food writer describes her visit to the Goyo-gura in Noda, where Kikkoman still

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makes soy sauce in the traditional way. A Kikkoman guide tells her that the Goyo-gura is "The home of the imperial soy sauce," which is supplied to the emperor of Japan. Noda, located in northwest Chiba prefecture, is cradled between the Tone and Edo rivers.

The buildings remind her of "old London mews houses." The soybeans are steamed in cast-iron kettles called *shikake-gama*. Wheat is roasted with a wooden paddle in a large shallow iron vessel, resembling an oversized wok, by a master roaster (*mugi-iri*). Unrefined salt is dissolved in fresh well water and the resulting brine is boiled and strained to remove any bitterness or impurities. The koji, made with wheat, soybeans and *Aspergillus oryzae* culture, is stirred twice a day. It is mixed with brine to become moromi, which is allowed to ferment in large cedar vats for one year. The room holding these vats "is a visual explosion." A wall of glass separates the viewers from the vats, which hold batches of moromi in varying stages of maturation and are buried up to their rims in the wooden floor. Every surface–floor, walls, and ceiling–is painted a vivid glossy orange. "If one could walk into the center of a pumpkin, this is what it might be like." The orange color has symbolic connections to Shintoism.

In the old days, after the fermentation was finished, the moromi was poured into cotton sacks, which were stacked in a wooden pressing chamber called a *fune*, or boat. The liquid shoyu was pressed out into a tub, then poured into a vessel to be heated to stop the fermentation; finally it was bottled in ceramic containers. To evaluate the quality of the shoyu for color, aroma, consistency, and flavor, professional tasters use small white dishes called *kikimi-zara*.

A room beyond the tasting chamber serves as a small museum. There are ceramic jugs in which soy sauce was first exported to Europe from Nagasaki in the mid-1600s by the Dutch. A porcelain bottle on display, decorated with the raised Kikkoman logo, held the shoyu that was awarded a special prize at the Vienna International Exposition of 1873. A sepia photograph shows the old *takasebune* flatboats on the Edo River carrying shoyu down to the city of Edo–today's Tokyo. Another photo shows members of the imperial family visiting the Goyogura. As she leaves, the author is presented with the "ultimate personal souvenir... It is a scarlet-labeled bottle in a simple beige carton–the emperor's *shoyu*." Her search is complete. Address: Author of several books on Asian cuisine.

7851 Mindell, Earl. 1995. Earl Mindell's soy miracle. New York, NY: Simon & Schuster. A Fireside Book. 256 p. Index. 22 cm. [97 ref]

• ***Summary:*** Contents: Part I: Soy–The miracle food. 1. The soy story: explaining the miracle. 2. Soy by any other name. 3. Does soy prevent cancer? 4. Heart and soy. Part II: Soy for special needs. 5. Just for women: Rx for menopause and osteoporosis. 6. Just for men: Rx for prostate problems. 7. Kids, cancer, and heart disease. 8. Tips for vegetarians. Part III: Not by soy alone. 9. Thirty-seven miracle foods from the Pacific Rim. Earl's pearls: A guide to vitamins and minerals. Part IV: Get more soy in your life. 11. Savvy substitutions. 12. Cooking with soy. 13. Breakfast the soy way. Part V: Seventy super soy recipes (p. 149-230). Glossary. Resources. Selected bibliography.

Pages 12-13 note that soybeans are an abundant source of many different types of phytochemicals, including isoflavones, genistein, protease inhibitors, and phytic acids.

Chapter 2 describes the different types of soy foods. Traditional soy foods: Soy milk, tofu (firm tofu, silken tofu, yakidofu, koyodofu [sic, koya-dofu]), okara, natto, tempeh, miso, soy sauce, kinnoko [sic, kinnako] flour. Soy protein products: Soy protein concentrates, soy protein isolate, soy flour, texturized soy protein, meat analogs. Other soy products: Soy fiber, soybean oil, lecithin. Questions about soy foods: Page 33 asks the question: "If phytochemicals in soybeans are so healthy, why can't they be extracted from food and made into a pill like a vitamin?" Answer: Researchers are not yet certain which phytochemicals are the most important. "There may even be other beneficial compounds in soy that have yet to be identified. Your best bet is to eat the real food." A section titled "Soy's top ten benefits" (p. 36-38) discusses: 1. Antioxidant. 2. Breast cancer. 3. Cholesterol lowering. 4. Colon cancer. 5. Hip fracture. 6. Hot flashes. 7. Immunity. 8. Kidney disease. 9. Lung cancer. 10. Prostate cancer.

Chapter 3, titled "Does soy prevent cancer?" discusses six compounds which cancer researchers believe may be effective in cancer prevention: Isoflavones, genistein, daidzein, protease inhibitors, phytic acid, and saponins. A long section later in the chapter discusses each of these, with special emphasis on genistein.

Note: The author has also written *Earl Mindell's Herb Bible* and *Earl Mindell's Food as Medicine*. He is a newcomer to this field. This book may appeal to those who are looking for miracles from the foods they eat. Most of the information contained in this book can be found in Mark and Virginia Messina's outstanding *The Simple Soybean and Your Health* (1994), and the *First International Symposium on the Role of Soy in Preventing and Treating Chronic Disease: Proceedings from a symposium held in Mesa, Arizona, on February 20-23, 1994*, published in full in *The Journal of Nutrition* Vol. 125, No. 3S, March 1995 Supplement. It was from this symposium and the outline published before the symposium that Mindell got his idea for this popular book.

Dr. Mindell is an R.Ph. (Registered Pharmacist) with a PhD in Nutrition from Pacific Western College in Renton, Washington.

According to a review of *Earl Mindell's New and Revised Vitamin Bible*, by James A. Lowell, PhD. (Nutrition Forum, June 1986) "Mindell claims to hold valid credentials in nutrition. Although he does have a bachelor's degree in

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pharmacy from the University of North Dakota, his Ph.D. is from the University of Beverly Hills, an unaccredited school which lacks a campus or laboratory facilities." Mindell helped to found the Great Earth chain of vitamin and health food stores, numbering about 200 in 1986, America's second largest such chain. Address: R.Ph, PhD, registered pharmacist and Prof. of Nutrition at Pacific Western Univ. in Los Angeles. He lives in Beverly Hills, California.

7852. **Product Name:** Vegan Cajun Burger (On a Bun), and Cajun Tofu Sloppy Joe (The Filling).
Manufacturer's Name: Soy Devine.
Manufacturer's Address: 1881 Fieldbrook Road, Arcata, CA 95519. Phone: 707-849-8430.
Date of Introduction: 1995, January.
Ingredients: Processed organic tofu [frozen], tomato sauce, onions, honey, mustard, cider vinegar, safflower oil, tamari (Westbrae), peanut butter, garlic, miso, spices (incl. paprika, cayenne, allspice).
New Product–Documentation: Talk with Mara Devine 1995 June 1. Cajun Barbecue Style was first introduced in 1987. In Jan. 1995 it was renamed and divided into two products: Vegan Cajun Burger, and Cajun Tofu Sloppy Joe. The latter product is sold as a product in its own right, but also serves as the filling for the burger. She moved from Miranda to Arcata, California, in June 1993.

7853. *New York Times*. 1995. Good eating: Northern lights, south of the park. Feb. 5. p. CY16.
• ***Summary:*** This is a brief restaurant review of China Grill (60 West 53rd St., New York City). "Among starters are steamed mussels with a ginger black bean sauce;..."

"Main courses include grilled aged Sichuan beef tossed with sake, shallots, soy [sauce] and cilantro." Reviewed 19 Nov. 1993.

Note: This is the earliest (and only) document seen (Nov. 2011) that uses the term "ginger black bean sauce" to refer to a sauce made from salted fermented soybeans (fermented black soybeans) and ginger.

7854. Arnold, Kathryn. 1995. The joy of soy. *Delicious!* (*Boulder, Colorado*). Feb. p. 34-36. [3 ref]
• ***Summary:*** The soybean "has long been revered by vegetarians as a nutritional powerhouse. However, the real secret is that soyfoods may help prevent disease." They are cancer fighters and good for the heart. A table (p. 36) lists 12 different types of soyfoods and their uses: Tofu, tempeh, okara, miso, natto, TVP, soymilk, soy grits, soy flour, soy cheese, soy sauce, soy yogurt.

Note: This periodical, which began publication in about 1983, is published for natural products consumers by New Hope Communications in Boulder, Colorado. As of March 1998 some 425,000 copies of Delicious! are distributed each month to over 900 health food retail stores throughout the United States.

7855. Anand, Karen. 1995. Get fresh at TK's: Good food guide. Bon appetit. *Times of India (The)* (*Bombay*). March 7. p. A4.
• ***Summary:*** Top quality ingredients and an informal ambience make it a pleasure to dine at TK's, the Hyatt Regency's new Japanese restaurant. TK's stands for Teppan Yaki Kitchen. Newcomers may wish to wish to choose from one of the four reasonably priced set menus (two are vegetarian), each of which includes 5 courses, such as "Japanese miso soup and dessert." Three sauces comes with grilled dishes; the "soya ginger sauce" is used primarily to season seafood, but it is delicious on many other foods.

7856. **Product Name:** Soy Miracle Ultimate Shake (Chocolate Royale, Creamy Vanilla Almond).
Manufacturer's Name: FreeLife International.
Manufacturer's Address: 354 Woodmont Rd., Suite 5, Milford, Connecticut 06460. Phone: 1-800-882-7240.
Date of Introduction: 1995, March.
Ingredients: Ultra Soy Complex I (Trademark) {An exclusive blend of Supro brand soy protein isolate, soy fiber, soy lecithin, tofu powder, soy flour, tamari soy powder, miso powder, & Cholestatin (Trademark) (mixed soy phytosterols)}, crystalline fructose, complex carbohydrate (maltodextrin), Dutch cocoa powder, natural flavors, xanthan gum, oat fiber, calcium phosphate, magnesium oxide, potassium chloride, siberian ginseng, ascorbic acid, inositol, choline bitartrate, blue-green micro algae, L-carnitine, vitamin E acetate, Spanish bee pollen, apple pectin, citrus bioflavonoid, niacinamide, zinc oxide, invertase (plant enzyme), ferrous fumarate, D-calcium pantothenate, vitamin A palmitate, manganese sulfate, pyridoxine hydrochloride, riboflavin, thiamine hydrochloride, bromelain, papain, folic acid, biotin, vitamin D-3, potassium iodide, chromium, picolinate, sodium selenate, sodium molybdate, cyanocobalamin.
Wt/Vol., Packaging, Price: 15 oz (240 gm).
How Stored: Shelf stable.
Nutrition: Per one level scoop (14 servings per container): Calories 95, calories from fat 0, total fat 0 gm (0% daily value; saturated fat 00 gm), cholesterol 0 mg, sodium 150 mg (6%), potassium 150 mg (4%), total carbohydrate 16 gm (dietary fiber 2 gm, sugars 10 gm), protein 10 gm. Vitamin A 100%, vitamin C 100%, vitamin B-1 100%, vitamin B-2 100%, vitamin B-6 100%, vitamin E 100%, niacinamide 100%, pantothenic acid 100%, folic acid 100%, biotin 100%, vitamin D-3 100%, vitamin B-12 100%, calcium 30%, phosphorus 20%, magnesium 20%, iron 25%, zinc 100%, iodine 100%. Percent daily values are based on a 2,000 calorie diet.
New Product–Documentation: FreeLife leaflet. 1995. "FreeLife: Experience the incredible benefits of FreeLife's

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exclusive Soy Miracle products." "The cornerstone of the Soy Miracle Ultimate Body Program is the fat-free Ultimate Shake. The Ultimate Shake was specially designed to be a great-tasting source of many important nutrients needed to achieve optimal health and to help decrease excess body fat when used as part of the complete Soy Miracle Ultimate Body Program.

"Dr. Mindell's exclusive formula, Ultra Soy Complex I, contains eight of the most powerful soy foods synergistically combined to create the ultimate nutritional shake. These soy foods include the world's best soy protein isolate, soy fiber, soy lecithin, tofu powder, soy flour, tamari powder, miso powder, and mixed soy phytosterols. The Ultimate Shake also contains blue-green micro-algae, Siberian ginseng, Spanish bee pollen, and active enzymes [from the soy flour?] for better absorption.

"The Soy Miracle Ultimate Shake can be used as a complete meal replacement or healthy snack and provides 100% of the USRDA of all essential vitamins and most minerals. For maximum fat-loss results, replace one or two meals each day with a delicious Soy Miracle Shake and eat at least one well-balanced meal. Increase your daily physical activity and supplement your diet with FreeLife's Soy Miracle Ultimate Antioxidant and Ultimate Body Toner."

Label for Chocolate Royale sent by Carolyn Ashman of Napa, California. 1995. May 15. She is a FreeLife distributor. Phone: 707-259-9459. "Directions: As a dietary supplement, add one level scoop (scoop included in can) of Soy Miracle Ultimate Shake (TM) to 8 fl. oz. of skim milk or Westsoy nonfat soy milk and blend or shake until smooth. For best flavor, milk should be very cold. For maximum results" the shake should be used together with the two other products in this line and "the complete Soy Miracle Ultimate Body Program (TM)."

Talk with Luke Taffuri, Vice-President of Operations, FreeLife International (354 Woodmont Rd. #5, Milford, Connecticut 06460. Phone: 1-800-882-7240). 1995. May 30. To buy these products, you must be sponsored by a distributor. Cost: $61.25 for all 4 products incl. shipping. Each can of shake is $18.55. Antioxidant is $19.60. Body toner is $18.55. How much genistein is in these products? If each day you take one serving of a shake and two antioxidant pills plus two body toner pills, you will get 20 mg/day of genistein, plus 16-17 mg/day of daidzein. These products were introduced on 1 Feb. 1995, at the same time as Dr. Mindell's book became available. The company, FreeLife, was started in 1995.

Talk with Karma McLleskey of Fairfax Station, Virginia. 1995. Aug. 18. Luke Taffuri runs the computers at Freelife. The people who know the most about the products are Ray Faltinsky (president) and Kevin Fournier (vice president).

7857 Furuhata, Hideki. 1995. Japanese soyfoods markets. Paper presented at a conference titled "Producing Soybeans for the Soyfoods Market." 9 p. Held 2 March 1995 at Ames, Iowa.

• ***Summary:*** This paper consists of nine very interesting statistical tables, one on each page. Table 1 shows the supply and demand for soybeans in Japan from 1984 to 1992 (in tonne = metric tons). The supply of Japanese-grown soybeans decreased from 126,000 tonnes in 1984 to a low of 73,000 tonnes in 1992, and imports increased from 4,401,000 tonnes in 1984 to 4,725,000 tonnes in 1992. The demand for soybeans from crushers has stayed about steady, ranging from a low of 3,428,000 tonnes in 1991 to a high of 3,928,000 tonnes in 1985. Demand for food uses has increased from 786,000 tonnes in 1984 to a high of 927,000 tonnes in 1992 (up 18%). Demand for use as feed has increased from 55,000 tonnes in 1984 to 95,000 tonnes in 1992.

Table 2 shows soybean utilization in Japan by type of food product from 1987 to 1994. Use of soybeans for tofu and aburage stayed about steady at 498,000 tonnes, by far the largest food use. Use for miso decreased slightly from 180,000 tonnes in 1987 to 170,000 tonnes in 1994. Use for natto grew strongly from 97,000 tons in 1987 to 110,000 tonnes in 1994. Use for kori-tofu (dried-frozen tofu) grew slightly from 29,000 tonnes in 1987 to 30,000 tonnes in 1994. Use for soy sauce grew strongly from 5,350 tonnes in 1987 to a record 25,300 tonnes in 1992, dropping slightly to 23,000 tonnes in 1994. Use for soymilk decreased slightly from 4,000 tonnes in 1987 to 3,100 tonnes in 9994. Total use of soybeans for food in Japan grew slowly from 875,350 tonnes in 1987 to 930,000 tonnes in 1994 (up 6%).

Table 3 shows Japanese population and per capita consumption of soyfoods from 1982 to 1992. Population grew from 103,720,000 to 124,452,000 during this period, while per capita consumption grew from 6.8 to 7.4 kg/capita (up 8.8%).

Table 4 shows per family expenditures and consumption per year on tofu, natto, miso, and soy sauce from 1982 to 1992. For example, expenditures on tofu increased from 2,535 yen in 1982 to 7,992 yen in 1992, while consumption fell from 87.98 cakes to 79.26 cakes. Thus in 1992 the average Japanese family consumed 1 cake of tofu every 4.6 days.

Table 6 shows imports of soybeans for food from the USA, Canada, and China from 1982 to 1992. Imports from the USA are subdivided into IOM, Beeson, and other identified varieties. In 1992 about 88.7% of food-grade soybeans imported to Japan from the USA were IOM. Moreover, of all these soybeans imported for food use in 1992, about 76.6% came from the USA, 21.5% from China, and 1.85% from Canada.

Table 6 shows the amount spent per capita by people of different 5-year age-groups on four soyfood products. The average person in the age 60-64 year group spent ¥2,976 on tofu, ¥1,539 on miso, ¥1,490 on soy sauce, and ¥1,098 on

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natto. The average person in the age 30-34 year group spent ¥1,581 on tofu, ¥603 on miso, ¥508 on soy sauce, and ¥708 on natto.

Table 7 shows the source of soybean used to make four soyfood products in 1984, 1990, and 1992. In 1992, of the 498,000 tonnes of soybeans used in tofu and aburage in Japan, 74.8% of the soybeans were IOM from the USA, 6.0% were Beeson (USA), 8.0% were other U.S. varieties, 3.0% were from China, and 8.0% were grown in Japan. Of the 30,000 tonnes use to make dried-frozen tofu, 86.7% were IOM and the rest were from China. Of the 108,000 tonnes used to make natto, 55.5% were from the USA and Canada, 39.8% were from China, and 4.6% were grown in Japan. Of the 176,000 tonnes of soybeans used to make miso, 88.0% were from China, 5.7% were white-hilum beans from the USA, and 6.25% were grown in Japan.

Table 8 shows that production of soybeans in Japan from 1982 to 1994 has decreased sharply. In 1982 some 262,300 tonnes were produced on 147,000 ha with a yield of 1,782 kg/ha. In 1994 some 98,800 tonnes were produced on 26,500 ha with a yield of 1,620 kg/ha.

Table 9 is two charts showing the distribution system for (1) Imported soybeans from suppliers to end users, and (2) Domestic soybeans from farmer to end users. Farmers sell to the Zenno Nokyo or a collector. Address: Mitsui & Co. Phone: 515-294-0160.

7858. Golbitz, Peter. 1995. Traditional soyfoods: Processing and products. *J. of Nutrition* 125(3S): 570S-572S. March. Supplement: First International Symposium on the Role of Soy in Preventing and Treating Chronic Disease. [9 ref.]
• ***Summary:*** Contents: Introduction. Soymilk. Tofu. Tempeh. Miso. Soy sauce. Address: Soyatech, Inc., Bar Harbor, Maine 04609. Phone: 360-379-9544.

7859. Iowa State University. 1995. Producing soybeans for the soyfood market. Conference schedule and registration (Leaflet). Ames, Iowa. 6 panels.
• ***Summary:*** On Thursday, 2 March 1995, Iowa State University held a 1-day conference titled "Producing Soybeans for the Soyfoods Market" at the Holiday Inn Gateway Center, Ames Iowa. No proceedings were published. Schedule: Wednesday evening: Tour of Iowa State University's Pilot Plant and Center for Crops Utilization and Research. Soyfoods tasting reception follows at the Holiday Inn Gateway Center for conference registrants. Thursday: Morning session: Markets, trade, and policy. 8:30 a.m.–Welcome and introductions, by Lester A. Wilson. 9:00–Japanese soyfoods markets, by Hideki Furuhata, Mitsui & Co. 9:45–Growth potential for soyfood beans in Asian markets, by Lester A. Wilson. 10:30–Break. 10:45–U.S. participation in soyfoods markets in the Pacific Rim, by Robert Neal, Agri-Grain Marketing. 11:30–Trade policy changes and opportunities, by Paul Gallagher. 12:15–Lunch. Afternoon session: Soybean varietal effects on soyfood quality. 1:30 p.m.–The effect of varietal characteristics on perceived soyfood quality, by Keisuke Kitamura, Chief, Legume Breeding Lab, MAFF [Ministry of Agriculture, Forestry and Fisheries], National Agricultural Research Center, 3-1 Kannondai, Tsukuba, Ibaraki 305, Japan. 2:15–Soybean breeder panel discussion, with Keisuke Kitamura, Walter Fehr (ISU), Dennis Strayer (Strayer Seeds), Tom Brumm (MBS Seeds), Clark Jennings (Pioneer Hi-Bred Intl.), Jerry Lorenzen (FTE Genetics). 2:45–ISU research presentations: (1) Soybean varietal and storage effects on tofu processing–Pilot plant study, by Lester A. Wilson and Patricia Murphy. (2) Rapid quality testing with near-infrared whole grain analyzers, by Charles Hurburgh. 3:30–Break. 3:45–Health benefits of soyfoods, by Mark Messina (American Soybean Association health consultant). Isoflavones in soybeans and soyfoods, by Patricia Murphy (ISU Dep. of Food Science and Human Nutrition). 5:00 p.m.–Closing comments and questions.

Conference sponsors: Midwest Agribusiness Trade Research and Information Center (MATRIC, Iowa State Univ.), Center for Crops Utilization Research (ISU), Utilization Center for Agricultural Products (UCAP, ISU), Iowa Soybean Promotion Board, MSGA/MSPRC (Minnesota Soybean Growers Assoc. / Minnesota Soybean Research & Promotion Council). Registration fee: $100 before Feb. 15, or $125 thereafter.

A five-page directory of the 74 attendees is attached. Address: Ames, Iowa.

7860. Mogi, Yuzaburo. 1995. Re: Selection to become President and Chief Executive Officer of Kikkoman. Letter to William Shurtleff at Soyfoods Center, March 3. 1 p. Printed, with signature.
• ***Summary:*** "On February 6th, the Board of Directors selected me to become President and Chief Executive Officer of Kikkoman Corporation, effective that date."

Note: This printed announcement was sent to friends and shareholders of Kikkoman. Address: Tokyo, Japan.

7861. Ontario Soybean Growers' Marketing Board. 1995. Technical soybean mission: Japan, Hong Kong, Malaysia, Singapore. March 10-26, 1995. Chatham, Ontario, Canada. 23 p. 28 cm. [Eng]
• ***Summary:*** Contents: Participating members: Dr. Karen Lapsley, Mr. Ron McDougall, Mr. Michael Loh, Mr. Doug Jessop (food technologist and tofu expert, Harrow Research Station), Mr. Kim Cooper (marketing specialist, OSGMB). Note: This is the first Canadian soybean mission in which a food technologist (Doug Jessop) participated. Background. Mission objectives. Acknowledgements. Mission details–Japan. Canadian embassy.

Japan Miso-Co-op Industrial Association: Japan imports about 250,000 tonnes {metric tons} of soybeans from China

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each year, and about 150,000 tonnes of that amount is for the miso market. The remaining miso soybeans come from Canada, USA, and Japan. The best soybean for making miso comes from the Hokkaido area of Japan. It is a large, white hilum type, perhaps Toyomasuri. Generally the larger the soybean the better for making miso. Japanese miso makers need two types of soybeans from Canada: (1) Normal SQWH (Special Quality White Hilum), average values for color, taste and texture are acceptable though higher values would be preferable; (2) High Premium Soybeans; they would consider paying a premium for better color, taste, and texture.

Azuma Natto Foods Co. Ltd.: This natto company uses 7,000 tonnes/year of soybeans making them the third largest natto maker in Japan. They use 65% USA, 25% Japanese, and 15% Canadian soybeans. There are four sizes of natto: Small natto < 5.5 mm accounts for 72% of the natto market in Japan, Large natto, 5.5 to 6.2, account for 18%. Extra large natto > 8.5 mm account for 18%. Split seed natto account for 10%. Factors in assessing the suitability of soybeans for natto are: Fat content should be less than 19%. Total sugars–Group 1 contains sucrose, fructose, and glucose, group 2 contains raffinose and stachyose. Calcium affects the hardness or softness of natto. The ideal range is 180-250 mg/100 gm. Sanwa Company–Tofu manufacturer.

Wed., March 15–Japan Tofu Association: There are over 20,000 tofu makers in Japan, and 53 of these are members of this association, with half of the 53 being in the Tokyo area. Only 185 tofu manufacturers in Japan have 30 or more employees. Tofu makers consider there are two types of organic soybeans: true organic and semi-organic. The association imports about 2,000 tonnes of each type from the USA, they are OCIA certified.

Home Foods Company Ltd. uses 4,000 metric tons of soybeans a year, mostly a blend of 70% Chinese white hilum and 30% U.S. white hilum. The soys from the USA are I.O.M. soybeans, especially the "High Super" variety. For the more premium market they use a blend of 50% Japanese soys and 50% Harovinton soybeans. They have also just started blending 50% Chinese and 50% Canadian white hilum soybeans. The two most important criteria for their soybeans are high protein and high total sugars. Sugar levels of Chinese soybeans (24-25%) are higher than those of Canadian soybeans (23-24%).

Thursday, March 16–Takeya Miso Co.: Ikuo Fujimori, President. Takeya has two plants employing 100 production workers and using 5,000 to 6,000 tonnes of soybeans yearly. 70-80% of their products are sold in supermarkets. For years they have been using the U.S. soybean variety Kanrich.

Nagano Chushin Agricultural Experiment Station: They have been breeding soybeans since 1957 and in that time have developed and released 17 varieties, the most famous being Enrei. The staff of 34 includes 5 soybean breeders. Dr. Nobuo Takahashi has been breeding soybeans for over 18 years. Japan has domestic soybean area of 370,500 acres (150,000 ha), it is decreasing, so imports are increasing.

Nagano Miso Industrial United Co-operatives: This group consists of 8 local co-ops made up of 160 miso manufacturers, who pay a fee to this group based on sales. There was a detailed discussion of the types of sugars in soybeans necessary for good miso.

Friday March 17–National Food Research Institute, Tsukuba is developing into a science research park, now containing over 200 different research institutes. NFRI, originally founded in 1934 as the Rice Institute, moved to Tsukuba from Tokyo in 1973. Thirty years ago, all tofu in Japan was made with Japanese soybeans. Dr. Toshiro Nagai spoke about natto: In 1992 the natto needs of Japan were met by soybeans from China (45%), USA (38%), Canada (17%), and Japanese domestic (8%). Natto consumption has increased by about 10% for each of the last few years. Dr. Sayuki Nikkuni spoke about miso. In 1992 the miso needs of Japan were met by soybeans from China (87%), USA (6%), Japan (6%), and Canada (1%). Dr. Kaoro Koyama spoke about tofu. In 1992 the soybeans for tofu totaled 490,000 tonnes and came from USA (390,000 tonnes, 80%), Canada (50,000; 10%), Japan (20,000; 4.1%), China (20,000; 4.1%), and South America (10,000, 2.0%).

Asahi Food Processing Co. Ltd. This plant, which has 350 employees and operates 365 days/year, was established in 1972 and produces tofu, fried tofu, natto, noodles, and juices. They use 15 tonnes of soybeans daily or 4,900 tonnes/year, of which 38.8% are grown in Japan and the remaining 61.2% are IOM from the USA. Each day they make 120,000 cakes of tofu, 100,000 pieces of fried tofu, and 20,000 packages of natto. Most of the soybeans they use in production are dehulled. They use about 500 tonnes/year of OCIA certified soybeans from the USA and some semi-organic soybeans from Japan. The prices they pay per kg of soybeans are: IOM 30-40 yen; Vinton, identity preserved varieties, and Harrovinton [Harovinton] 100 yen; organic 120-140 yen; Enrei (Japanese) 400 yen.

Saturday, March 18–Hong Kong. Canadian High Commission. Canada Packers (Hong Kong) Ltd.

Monday, March 20. Shenzhen Economic Zone: This area of 30 square km, just outside the Hong Kong border, contains 1 million people or 60% of the provincial population, all of whom require a special permit to work in the area. This economic zone is booming, basically due to spiralling costs in Hong Kong, where many businesses and factories are closing and moving to this area, where land and labor costs are much lower.

Shenzhen Vitasoy (Guang Dong) Foods & Beverage Co. This plant, which is only one year old, produces a major share of the soymilk for Hong Kong. They are able to import soybeans at a low tariff rate because they ship the majority of their finished products back into Hong Kong. The plant uses Canadian SQWH (Special Quality White Hilum) soybeans.

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but has problems with uneven seed size. They presently receive the soybeans in 45 kg jute bags, but would prefer strong 45 kg poly-lined paper bags. A small percentage of dairy milk is mixed with the soymilk, which is thought to improve its texture and taste

Tuesday, March 21. Dah Chong Hong, Ltd. This was the first company to import Canadian soybeans for food use in the early 1970s. Dah Chong pointed out that Ontario soybeans were experiencing increasing competition from Quebec soybeans, especially in the past two years. The Quebec soybeans are 5-10% less expensive, due to lower basis levels, lower freight costs, and being more aggressive in a new market. Their quality is similar to Ontario, though the seed coat color is somewhat darker. There are about 50 tofu makers in Hong Kong, 10 larger size and 40 smaller size, although there is not a large difference in size. Consumers believe that packaged tofu is not as fresh as that purchased fresh daily from local markets.

Amoy Food Ltd. (Dr. Alain Butler. This plant makes soy sauce and other sauces used in cooking. They use only Canadian soybeans, the Maple Glen variety from Quebec) Wed., March 22. The group visited Hung Tao Soya Bean Products Pty., a traditional Hong Kong tofu and soybean sprout plant in the New Territories

Thursday, March 23–Malaysia. Canadian High Commission. Yeo Hiap Seng (Malaysia) Berhad (Contains excellent details on the company). Chop Lee Kit Heng Sdn. Bhd. (A soybean trader selling to end users in Malaysia)

Friday, March 24–Singapore. Canadian High Commission. Yeo Hiap Seng Ltd. (Singapore). Meeting with nine tofu manufacturers in Singapore. (The name of each company is given. There are 40 tofu makers in Singapore, and the majority now use Canadian soybeans. Tofu growth in the last 5 years has been very rapid and competition is fierce). Asia Corporation Pte. Ltd. (This company accounts for about 70% of the soybeans imported into Singapore and Malaysia. They first brought Canadian soybeans into the area in 1978). Canadec Private Ltd. Sing Yeap Trading Pte. Ltd.

Saturday, March 25–Unicurd Food Company Pte. Ltd. (Mr. Goh gave a tour of his facility and discussed his plans for a new plant in late 1995). Yam Thye & Co. (Warehouse)

Encore Ltd.: Sylvia B. Hollenstein, managing director. This company, based in Switzerland, uses Swiss technology to produce soy yogurts, chocolates, and noodles in Switzerland from Chinese soybeans–mostly for the taste. The products are shipped from Switzerland to the company's 3 retail stores in East Asia; they plan to expand to 10 retail stores by the end of 1995.

Appendixes A through J, issued as a separate document, contain extensive and detailed information and some published documents related to the technical mission. Address: P.O. Box 1199, Chatham, ONT N7M 5L8, Canada Phone: 519-352-7730.

7862. Smith, Paul. 1995. History of Soy Products of Australia Pty. Ltd., and the work of Vincent R. "Ron" Smith Part V. 1980-1995. Bayswater, Victoria, Australia. 6 p. Aug. Unpublished manuscript. Handwritten. Updated by several interviews with and letters to William Shurtleff in March 1995.

• ***Summary:*** In April 1980 Ron and Mabel Smith's eldest son, Paul, abandoned his career as an architect and joined them full time at Soy Products of Australia. Born on 23 January 1949 at Queens Road, South Melbourne, Paul had Architecture, Landscape Design, and Master of Business Administration (MBA) degrees. He had been a director of the company since Aug. 1977. In 1990 Paul became General Manager of the company following Mabel's retirement. In 1981, at the request of William Shurtleff of Soyfoods Center, Paul wrote a brief history of his company (which see). Thereafter, his interest in the company's history steadily grew, and he did extensive research on the subject. Paul is thinking about writing a biography of F.G. Roberts, so he has collected some documents about his life, including articles from *Nature's Path to Health*, published exercise regimes, iridiagnosis charts, and some recipe books. Unfortunately the company has no product catalogs from before 1985. Paul has written parts of the story and he has written an outline article in a 1985 company brochure.

Paul's human sources of information on F.G. Roberts were: His father and mother, Ron and Mabel Smith. Mrs. Gladys Hawken (F.G. Roberts' daughter). Mrs. Esmae Noelene Jackson (1937 -; née Grimes, granddaughter of F.G. Roberts and his wife Gladys, she was reared by both of them). Grahame Newitt (1939 -; chiropractor, grandson of F.G. Roberts, and brother of Esmae). Mr. David Evans, a naturopath who operated F.G. Roberts' clinics at Newcastle and Sydney during the 1930s. Mr. William Pruss, who worked with F.G. Roberts' brother, W.E. "Bill" Roberts in Sydney during the 1930s and 1940s. Nurse Cogan who operated F.G. Roberts' shop and clinic at Ballarat, Victoria, continuously from 1937 until her death in 1993. Numerous patients of F.G. Roberts, including Mr. Shugg (from Surrey Hills, a suburb of Melbourne), Nan Yates (diagnosed with terminal cancer in 1969 and still alive today), and Mrs. Alice Harding (diagnosed with cancer of the liver in 1939, who remarried at age 80 and died in 1987 at age 88)

The "Roberts" brand has been used continuously since F.G. Roberts commenced manufacturing in 1932 at 40a Chapel St., St. Kilda. The "Roberts" brand name applies to numerous other products, developed by Roberts in the 1930s, which have nothing to do with soybeans, e.g. "Molasses," "Alfalfa Tea," "Skin & Healing Ointment," "Vita Balm" (a heat rub), "Malted Bran," cider vinegar, etc., some of which we still manufacture and sell in addition to our soy products.

Apparently many of F.G. Roberts' personal papers and records were either dumped or acquired by Stephen (?) Newitt when Gladys Roberts Hawken sold her home to

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move into Corinella Retirement Village about 2 years ago. At least one complete set of *Nature's Path to Health* from July 1930 to Jan. 1947 still exists, privately owned, bound in five volumes.

Concerning old advertisements for products made by F.G. Roberts, Paul has original issues of *Nature's Path to Health* from 1935 (2 issues), 1936 (2 issues), and 1937, plus the April-May 1949 issue. He has seen later and earlier issues, and from some of these he has been able to photocopy articles and advertisements.

In the company's archives Paul can find no product labels or brochures which predate the move to Bayswater in 1968. All existing old labels have the Power Road, Bayswater, address, but many of them were copies of earlier labels with only the address changed. Some of the artwork goes back to the 1930s and early 1950s in format and design.

Even though F.G. Roberts was baptised a Seventh-day Adventist, attended an SDA college and married a woman who became a devout member of that church, he left the SDA church for many years during the middle of his life due to a mismatch between his views and the more conservative views held by the church and its elders at that time. There was intense competition between Roberts and Sanitarium Foods, owned by the SDA church. Roberts was a proponent of Norman Vincent Peale's "Power of positive thinking, and was very critical of Sanitarium Foods' use of wheat gluten in their meatlike products, nutmeats, etc. He also felt the SDA diet was too high in starch, sugar, and gluten. Ron Smith recalls that Roberts never discussed the matter with him.

Gladys, F.G.R.'s wife, remained a staunch SDA parishioner and member of the church throughout her life, paying out of her own income to send a number of children to SDA colleges in Australia and Fiji. F.G.R. upheld his wife in her religious beliefs and works, often waiting outside in the car while she and the children attended church. Yet F.G.R. was a very spiritual / religious person judging from the memories of those who knew him, and the tone of his magazine, *Nature's Path to Health*. His granddaughter, Esmae Jackson, was brought up in the Seventh-day Adventist religion and is still a devout, active member of the church. F.G.R. and his wife, Gladys, reared Esmae, due to friction between herself, her mother, and her stepfather. They paid Esmae's fees to attend the SDA college in Oxley Rd., Hawthorn (very near the 1954-1968 factory) and later Avondale College (SDA), where she studied to be a teacher. Esmae speaks very highly of the kindness and generosity of her grandparents for paying her school fees, etc. She apparently had a very happy and secure childhood with them. Paul suspects that F.G. Roberts felt that a religious background was not important to his work and it may have alienated some potential customers. He was widely known throughout Australia, and treated many SDA patients, including several people that Paul knows who formerly worked for the company.

Since 1957, Soy Products of Australia Pty. Ltd. has operated in two parts. One part is a flour milling / commodity type operation, producing heat-treated / stabilised / debittered products including Debittered Full Fat Soy Flour and Grits (the grits come in coarse and fine mesh), Lightly Steamed Full Fat Soy Flour, Heat Treated Soy Fibre Flour (from soy hulls), Stabilised Wheat Germ, and Stabilised Wheat Bran. They also produce heat treated wholegrain rice flour, and maize flour. The other part of the business produces specialty retail products under the Roberts' brand name for the health food, diabetic, and coeliac [celiac] markets. This product range, remaining true to Roberts' philosophy of minimally processed whole foods, continues to include such soy-based foods as Soy Compound, Gluten Free Plain Flour, Gluten Free Self Raising Flour, Soy Crunch, and Vita Elm.

They also make some vegetarian burgers. In addition, since 1963, Soy Products of Australia has supplied cleaned and bagged Australian-grown soybeans to various commercial manufacturers of tofu, soy sauce, and other soyfoods in Australia. Since the early 1970s, most of these soybeans have been grown in the Riverina area in southern New South Wales and northern Victoria.

75% of the company's annual turnover relates in some way to soybeans. About 40% of their turnover is sold under the Roberts brand name and the remaining 60% is sold as commercial commodity products. They also do a fair amount of specialist contracting for the food industry, mainly stabilising bran and wheat germ, and milling, sieving, and mixing a variety of food stuffs for human consumption. They also process rice, maize, rye, barley, oats, wheat, and other grains for internal use. They are currently testing buckwheat, lupins, and chickpeas for both internal (i.e., under the Roberts brand) and external use. They propose to use them in conjunction with soy in a variety of applications. They are moving increasingly towards making user-friendly, convenience "health" or healthy foods which meet F.G. Roberts' ideals.

The company has 6 full-time employees and also employs a pool of casuals as required. The mill is highly automated, needing only a single operator. Last year's sales figures are confidential.

As of 1995 Paul Smith is involved in all aspects of the business, including building, plant and equipment selection, design, and development, product development, packaging design, information technology, etc.

V.R. "Ron" Smith is presently the Managing Director and major shareholder of the company; his wife and son Paul own the remaining shares. His main duties now revolve around maintenance and plant installation, with some consultative input on milling, sieving, and general product development. He no longer plays an active role in the day to day running and management of the company.

An excellent 4 by 6 inch black-and-white photo sent by Paul Smith shows F.G. Roberts, dressed in a coat, tie, and

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hat. Address: Director/General Manager, Soy Products of Australia Pty. Ltd., 69 Power Road, Bayswater, VIC 3153, Australia. Phone: (03) 729-1738 or 729-3611.

7863 Kawakami, Kozo. 1995. Tsurezure Nihon shokumotsu-shi: Dai 3 kan [Leisurely history of Japanese foods. Vol. 3] Tokyo: Tokyo Bijutsu. 195 + 3 p. Illust. Index. 21 cm. [Jap]
• ***Summary:*** As the title implies, the author is writing about 50 foods he finds particularly interesting.

Entries containing an asterisk (*) are about or mention soy. About Mr. Kawakami (sensei) by TANAKA Seiichi. Dengaku tofu * (p. 1+). History of dengaku tofu * (p. 3+). Yuba * (p. 8+). Summary of "History of Tofu" * (p. 13+). Abura-age of tofu (Deep-fried tofu pouches) * (p. 17+). Itohiki natto * (p. 21+). Tororo (Grated tororo imo–glutinous yam–is often served atop dishes such as soba = buckwheat noodles) (p. 24+).

Oroshi daikon (Finely grated juicy raw daikon = Giant Japanese white radish) (p. 30+). Oroshi-gane (Grater) (p. 33+). Mentori daikon (One method of cutting the daikon root to keep the shape during the simmering) (p. 37+). Owari daikon and miyashige daikon (Names of daikon varieties) (p. 39+). Gobo (Burdock root) (p. 43+). Sasagaki gobo (burdock root) and sasagaki daikon (Sasagaki is a special shaving/cutting method. End result: the cut vegetables look like bamboo leaves) (p. 48+). Yatara-zuke (A kind of pickles) * (p. 52+). Kaku-ae (p. 55+). Asa-zuke (pickled asa) (p. 57+). Takuan-zuke (Pickled radish) (p. 62+). Osaka-zuke (p. 67+).

Fu, ki-bu, and shofu / sho-fu (Types of baked wheat gluten) (p. 70+). History of the development of fu (Part 1) (p. 76+). History of the development of fu (Part 2). Kanso-fu (dried) and Kaki-fu (Broiled) (p. 81+). Awase-fu and Yose-fu * (p. 86+; tofu is mentioned). Chirimen-fu (p. 88+). Tosa-fu (p. 91+). Shian-fu * (p. 94+; tofu is mentioned). Yamakawa-fu and Chiyo-fu (p. 97+).

Azuki beans and Aka (red) azuki beans (p. 101+). Dainagon azuki (a special variety of azuki beans) (p. 106+). Azuki no suri-jiru (Soup of pureed azuki) (p. 109+).

Hishio–the other name is shoyu no mi (Moromi mash & shoyu presscake) * (p. 115+). Suri-Hishio (ground hishio) * (p. 121+). Ume-bisho and Yubi-hishio * (p. 125+). Hishio and shishi-bishio * (p. 130+). Azuki Kai (Azuki porridge), Aka-kai (Porridge), Uncho-juku (Porridge) (p. 133+). Unzo-kai (Porridge) and Unzo (p. 138+). Kowaii and Seki-han (Rice recipes; Sekihan is red azuki rice) (p. 141+). History of shiso (Shiso leaves are translated as "Beefsteak leaves") (p. 148+).

Asazuki (p. 150+). History of Karashi and Keshi (p. 153+). What is Araragi? ŷ(p. 158+). Tade / Tadé (p. 163+). Itachi hajikami and Inu sansho (p. 167+). History of sansho (Sansho seeds are one type of spice) (p. 170÷). Hajikami and Shoga (Ginger) (p. 174+). History of myoga (A Japanese leafy plant with a strong flavor that is often used for a topping for Hiyayakko Tofu) (p. 178+). Myoga-take (p. 181+).

Sai??? Seki (Chinese Name) and Niragi * (p. 184+). Kawakami sensei and the Rikagagu Kenkyujo (Note: *Rikagaku* means physics and chemistry), by MATSUSHITA Sachiko, Honorary Professor of Chiba University (p. 190+). 96 Years of my father's life by Kozo Kawakami's eldest son (Tadashi? / Tsutomu?) (p. 192+). My father, Kozo Kawakami,–A view from his 2nd son (p. 194+).

A photo (p. 191) shows the members of the Rikagaku Kenkyujo seated together on tatami mats in a room. A separate outline sketch and legend shows the name of each member.

The section titled "Kawakami sensei and the *Rikagaku Kenkyujo.*" by Prof. Matshita states (p. 190): I was able to receive his guidance for 20 years ever since I became a member of the Ryôrisho Genten Kenkyu Kai, a study group that started in 1994. They met at Keio University's old wooden classroom. These people studied old culinary documents together. I listened to his lecture on the *Ryôri Monogatari*. I could not do my present work that involves Edo period culinary literature without his influence.

I also saw him at the members meeting, visited his home, listened to his talks, and took a look at his sketchbooks on many occasions. On those occasions, he enjoyed talking about his experience at Riken (Rikagaku Kenkyusho) before the war and his teacher Dr. SUZUKI Umetaro. His work on the history of Japanese Food History got started after he retired. His work before his retirement was on agricultural chemistry (*nogei-kagaku*). He worked mostly on Vitamin A at Dr. Umetaro SUZUKI's Lab. in Rikagaku Kenkyusho until he moved to Manshu Kokuritsu Tairiku Gakuin in 1937. He received his PhD in Agriculture.

I first met him at a funeral of the late TSUJI Michiyo sensei in June 1989 held at Enmeiji Temple in Urawa. The late TSUJIMURA Michiyo sensei was in the same lab as Kawakami sensei.

The photo on the next page shows the golden age of Riken group who worked under Dr. Suzuki. I made a copy of one of the 3 photos from late TSUJIMURA Michiyo Sensei's album. He didn't have any photos from our days in Manchuria, so I was very happy and drew the picture below. The man in the center in the dark suit is Kawakami sensei.

Letter (e-mail) from Naomichi Ishige, Japanese food historian. 2008. May 18. KAWAKAMI Kozo, who passed away in 1994, was the foremost philologist on Japanese food culture. Thus, his writing is reliable enough. Continued. Address: Japan.

7864 *Ontario Soybean Growers' Marketing Board Newsletter.* 1995. Producing soybeans for the soyfood market. April. p. 3.
• ***Summary:*** In early March, 1995, Iowa State University conducted a seminar titled "Producing Soybeans for the Soyfoods Market." Topics covered included an introduction

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to soyfoods (complete with tasting at Iowa State's Center for Crops Utilization Research facility), a review of Japan's soyfoods market, trade policy changes and challenges, quality assessment, and the effects of varietal characteristics on soyfood quality.

Speaking on Japan's soyfoods market, Hideki Furuhata of Mitsui & Co. reported that consumption of tofu and natto is increasing slowly in Japan, while miso and soy sauce are decreasing. China has been supplying Japan with 250,000 to 300,000 tonnes/year of soybeans, mainly for making miso and natto. Japan imports between 120,000 and 130,000 tonnes/year of identity preserved soybeans, up from 100,000 tonnes 5 years ago. For example, 50,000 tonnes of Vintons were imported in 1994.

Bradley Hildebrand of Cargill in Minneapolis, Minnesota, reported that the U.S. exports about 130 million bushels/year of soybeans to Japan. About 30 million bushels (23% of the total) are used to make soyfoods. Most of the soybeans used for soyfoods in Japan are "IOM" beans because they are grown in Indiana, Ohio, and Michigan. IOM soybeans are not any specific variety or hilum color, but they are generally higher in protein and better in quality than other U.S. soybeans. They trade at a premium of 10-20 cents per bushel over other U.S. soybeans in Japan. IOM soybeans are traded on the Japanese grain exchange. For shipment to Japan, IOM soybeans are railed to Baltimore (Maryland) or Norfolk (Virginia) for shipment via panamax size vessels. They may also be railed to Mobile (Alabama) or New Orleans (Louisiana) for vessel shipment.

Hildebrand reported that IOM soybeans will keep the largest market share due to their low price, however there is a market for variety soybeans. He said that Vinton is the most popular variety for making tofu in Japan, but it does not yield high enough in the field to make it price competitive. "He suggested that breeders need to develop a high-yielding soybean with Vinton's tofu-making characteristics. However he said the market for variety soybeans is not huge and is easily flooded." Address: Box 1199, Chatham, ONT, Canada N7M 5L8.

7865. Yamasa Corporation U.S.A. and its new soy sauce plant in Salem, Oregon (Photographs). 1995.
• ***Summary:*** These six black-and-white photos were sent to Soyfoods Center in April 1995 by Koji Okamoto (Senior Vice President, Administration, Yamasa Corp. USA, 3500 Fairview Industrial Drive, Salem, Oregon 97302). Each glossy photo is 5 by 7 inches. Four photos show the equipment inside the soy sauce plant. Two photos show a large semitrailer (16 wheeler) leaving the plant. On one side is written in large letters: "Here goes another shipment of U.S. made Yamasa Soy Sauce." On the left and write of the sentence is the Yamasa logo.

Fermentation of shoyu at Yamasa's new plant in Salem began at the end of August 1994. The first commercial product was ready for sale in early April 1995. The average fermentation time of each batch will be 6 months.

7866. Yamasa Corporation USA. 1995. Yamasa press kit (Portfolio with news release and photos). Salem, Oregon: Yamasa Corporation USA. Ten inserts. April 14. 30 cm.
• ***Summary:*** On the cover of this purple portfolio is a gold seal (2.75 by 1.75 inches) bearing the Yamasa name and logo. The ten documents enclosed in this portfolio include: (1) A two-page news release titled "First shipment of U.S. manufactured Yamasa soy sauce." Yamasa Corporation U.S.A. has recently begun shipping U.S. made soy sauce from its Salem, Oregon, facility. Yamasa is the world's second largest manufacturer of soy sauce. Mr. Yuzo Seki is director and manager of the production department of Yamasa Japan.

(2) Six black-and-white photos (each 7 by 5 inches) showing the inside and outside of the Yamasa plant at Salem.

A business card from Koji Okamoto, Senior Vice President, Administration & Finance, Yamasa Corporation U.S.A. Address: 3500 Fairview Industrial Drive, Salem, Oregon 97302. Phone: 503-363-8550.

7867. Zoller, Stephen. 1995. New developments at San-J (Interview). *SoyaScan Notes*, May 1. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** San-J recently expanded its soy sauce production capacity by 75%. The company is doing well. They still use Gauger & Silva Inc. as their advertising firm. Their account executive is Kim Marcus. Address: Vice President and General Manager, San-J International Inc., 2880 Sprouse Dr., Richmond, Virginia 23231. Phone: 804-226-8333.

7868. Liu, Keshun; Orthoefer, Frank; Thompson, Keith. 1995. The case for food-grade soybean varieties. *INFORM* (*AOCS*) 6(5): 593-96, 598-99. May. [10 ref.]
• ***Summary:*** Contents: Introduction. Food beans vs. oil beans. Traditional soyfoods: Soymilk, tofu, toasted full-fat soy flour [kinako], soy sprouts, soy sauce, miso, tempeh, natto. Soy protein ingredients: Soy grits and flour, soy protein concentrates, soy protein isolates. Soyfood nutrition. Current size of food bean market. Breeding of food beans. Conclusions.

"Oil/meal beans include all the commonly produced soybeans." The oil is typically used for food and the meal for livestock feed. However the "new varieties of food soybeans" are generally exported to countries in East Asia for preparation of Oriental soyfoods. Table 3 compares the attributes of food beans vs. oil beans. Seed size: Large vs. small to large. Seed uniformity: High vs. no preference. Hull color: White-yellow vs. yellow. Hull quality: Thin, firm vs. no preference. Hilum color: Clear to buff vs. clear to blank. Protein content: High vs. medium to high. Oil content: Low

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to high vs. high. Cleanliness: U.S. Grade 1 or better vs. any grade. Major applications: Tofu, soymilk vs. oil, defatted meal.

In addition to their use in making traditional soyfoods, the "new food-grade varieties," especially those with high protein content, have been marketed for preparation of toasted full-fat soy flour, defatted soy flour, and soy protein concentrates and isolates.

Photos show: (1) Keshun Liu, Frank Orthoefer, and Keith Thompson. (2) Color and size comparison of soybeans for food use and those intended for crushing (color). The "food beans" are larger than the "oil beans."

Note: This is the earliest English-language document seen (July 2001) that contains the term "oil beans" or the term "oil/meal beans," both used in contrast to "food beans" or "food soybeans." This is also the earliest English-language document seen (July 2001) with the term "food-grade" (or "food grade") used in the title to refer to soybeans or soybean varieties. Address: 1. Project Leader, Soyfood Lab., Jacob Hartz Seed Co. Inc., 901 N. Park Ave., Stuttgart, Arkansas 72160; 2. Vice President for research and development, Riceland Foods Inc., P.O. Box 927, Stuttgart, AR 72160; 3. Vice president, International Soyfood Sales, Jacob Hartz Seed Co.

7869. Lazzaro, Don. 1995. History and current status of soymilk in Australia (Interview). *SoyaScan Notes*, June 6. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Ceres Natural Foods is their holding company and Pureharvest is their trading name. They made this name change in 1982 since they found the word Ceres was difficult for many people to pronounce. The first soymilk they imported to Australia was made by Saniku in Japan and imported from Mitoku.

Don is interested in macrobiotics. In early 1979 he took over the running of a small macrobiotic and natural foods retail store in Melbourne named Ceres Wholefoods. The only way he could make it viable was to try to buy at better prices, so in April 1979 he started a wholesale and import company, which he named Ceres Natural Foods, also in Melbourne. There was a company named Real Foods (run by Michael Pels) in New South Wales, Australia, that was importing, through Mitoku in Japan, tamari, soy sauce, miso, tofu, etc. Real Foods was the first company in Australia to import foods from Mitoku in Japan.

Don knew Michael from when they both used to live in Sydney in about 1978. Michael purchased some rice cake machines (the same kind used by Chico-san) through Mitoku from Airin Co. These machines were very poorly engineered and constructed. Michael has already sold 168 of these machines to Quaker.

When Don took over the Ceres Wholefoods retail store in 1979, he approached Michael and asked to be the distributor in Victoria of the food products Michael was importing from Japan through Mitoku. Michael said okay, and Don began distributing. Don asked Michael to import some soymilk from Mitoku, which he did in mid-1980. The stick-on label over the Japanese label said Ceres Natural, in Choc-Malt and Natural flavors. But the first soymilk in Australia was imported from Japan in about 1977-78, through Muso by 3-4 health food stores named Russel's; it was made by Marusan in a stand-up plastic pouch. Not much of it was sold. In about 1980-81, Michael decided to get out of the whole import business in order to focus on making rice cakes. So Mitoku Mr. Kazama and Chris Dawson asked Don to become their importer in Australia. Don also ran a 3rd company, a center that provided information and advice on macrobiotics.

Jim Wilson, who was running Spiral Foods in Australia, had been importing from Mitoku. He convinced Mitoku not to sell to Don, his competitor; Mitoku agreed. Mitoku then approached Saniku, and in about 1981 Don began importing soy milk made by Saniku through Mitoku. Don sold it under the same label he had used before. The Muso started to import some soymilk packaged in Tetra Brik cartons through Spiral Foods. Don got the same product from Kibun, and on it began to use the name Pureharvest.

In short: Four companies pioneered in importing soymilk to Australia: Real Foods, Russel's, Spiral Foods, and Ceres Natural Foods. There was also a little relatively beany Chinese soymilk sold in the ethnic Chinese market. Ceres, as a result of its Tetra Brik package, managed to get fairly good distribution into the grocery / supermarket trade, starting in late 1983 or early 1984. By this time Ceres was by far the biggest seller of soymilk in Australia. They were importing five 20-foot containers per month of the Kibun soymilk product. Ceres was actively promoting this soymilk, doing trade shows, etc.

In 1986 Ceres was approached by a small soymilk maker named Australian Natural Foods (ANF) in Sydney; basically they had old machinery and were in trouble. They approached Don asking if they could make a soymilk for him. They worked out an exclusive deal and formula, and in Nov. 1986 Ceres launched this as Aussie Soy in its first 1 liter package, in Tetra Brik. Sales shot up. It was trucked in a dairy tanker to Bon Lait in Victoria (almost 1,000 miles away) where it was packaged in a dairy that had a Tetra Brick packaging machine. In about 1990-91 ANF first got its own Tetra Brik packaging machine. That same year ANF launched its own soymilk product, named So Natural, to compete with Sanitarium's So Good. It is made from whole soybeans, and is very similar to the Aussie Soy product they have long made for Don.

As early as 1980 Sanitarium Foods was importing Soyalac in tins / cans. They sold it mostly to Seventh-day Adventists through their own retail stores. Then in April 1987 Sanitarium Foods launched their own So Good soymilk (made from a blend of soy protein isolates, made

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and packaged by dairy companies) in Australia. They went into it in a big way, with a national campaign. It was the best thing that ever happened to Don and Ceres, because this campaign grew the market dramatically. By April 1987 Ceres was selling 10,000 cartons / month of their Aussie Soy, not including their Japan imports. One year later the figure had skyrocketed to 60,000 cartons / month, increasing to 152,000 on year after that.

Nevertheless, according to the *Australian Grocery Industry Marketing Guide* (1995), Sanitarium has 71% of the dairylike (unflavored) Australian soymilk market, followed by Vitasoy at 7% (they launched in about 1991, and have done a very aggressive marketing campaign), then So Natural (made by ANF) at 5%, Sun Gold at 5%, and Aussie Soy at 4-5%. Of the total Australian soymilk market, flavored soymilks account for only about 5% of the total; the remaining 95% is dairylike, its a milk alternatives market. Each of the three major supermarket chains in Australia (Woolworth's Safeway, Franklin's, and Cole's) has its own soymilk brand. Franklin's has an isolate soymilk made by ANF, starting about a year ago. Sun Gold, made by Associated Dairies of New South Wales, is almost identical to So Good, made by the dairy company that used to mix Sanitarium's product. In about 1990 Sanitarium set up their own soymilk mixing and packaging factory.

Today the soymilk retail market in Australia is $45 million, with a population of only 17 million people. This is huge on a per capita basis. This market has three main segments: (1) Middle class, educated, with some allergies–70%. (2) Age 50 and older, concerned with cholesterol–20%. (3) Natural foods and vegetarian–10%.

In late 1993 and early 1994 Don approached Berrivale Orchard Ltd. (a cooperative of fruit growers, headquarters in Berri, South Australia) to see if they would be interested in making a soymilk product for Ceres / Pureharvest–because Don's relationship with ANF had become intolerable.

In 1979, to get tofu to sell at his retail store, Don used to go to Chinatown in Melbourne twice a week. He bought it from a little Chinese company (whose name he does not remember) located opposite Victoria Market. He would take a couple of buckets and carry it home in bulk, under water. Address: Pureharvest, 15 Ardena Ct., East Bentleigh, Victoria 3166 Melbourne, Australia.

7870. Krizstan, Jan; Trampus, Mirko. 1995. Re: Update on work with seitan, tofu, and shoyu in Slovenia. Letter (fax) to William Shurtleff at Soyfoods Center, June 19. 3 p.
• ***Summary:*** Jan and Mirko have received and enjoyed reading copies of *Tofu & Soymilk Production*, *The Book of Tempeh*, and *The Simple Soybean and Your Health* sent by Soyfoods Center. We made our first two cauldrons full of tofu on the night of June 12–52 kg of very sweet, aromatic and full bodied firm natural nigari tofu from 32 kg of Mirko's dry organic soybeans. We were so happy. We supply all of our retail outlets (34 of them as of today) with copies of simple introductory ads (some information about what is seitan and tofu, the way of Mirko's organic farming, and some recipes for preparing tofu and seitan). Each customer who comes to a healthy food shop and buys our organic (or other' regular) seitan or tofu gets such a copy for free. We already have very positive feedback–people say that our recipes are very simple and understandable and the meals taste good. Making tofu and seitan is becoming a kind of meditation to us and we agree with the sentence in your *Tofu & Soymilk Production* that 'When the master becomes selfless, the tofu makes itself.' Of course, we found that we are apprentices–the real master is Tofu.

"Since May 19 some very ill people from Republic of Croatia have come here to Metlika to buy our tofu and seitan. We gave them some tofu, seitan and shoyu plus information for preparation of meals using tofu and seitan. Most Slovenian (and Croatian) people have never heard of shoyu or tamari until now. It feels so nice to help ill people with healthy foods." Address: Mestni trg 22/1, 68330 Metlika, Republic of Slovenia. Phone: (386) 068 59 481.

7871. Great Eastern Sun. 1995. Pricelist. Effective June 5, 1995 [Mail order]. Asheville, North Carolina. 37 p. 28 cm.
• ***Summary:*** Contents: Catalog information. Miso Master organic miso (traditional, mellow, or sweet). Sweet cloud organic sweeteners. Haiku organic Japanese tea. GES organic English tea. Emerald Cove sea vegetables. Emperor's Kitchen condiments (soy sauce, vinegars, ume plum products, toasted sesame oil, mirin, dried vegetables, shiitake mushrooms, beans, seeds, grains, dry condiments, Atlantic sun-dried sea salt). Traditional Japanese macro pasta. Traditional Japanese specialty items (misos, candies, seaweed and ume, organic pasta, liquid condiments, specialty products {snow-dried tofu, HamaNatto, Zenryu fu (round cakes of wheat gluten), shonai fu (flat sheets), organic brown rice koji, organic nuka rice bran, organic brown rice dinner with azukis [azuki beans], or with vegs, mochi (4 types), noodles (some or bifun rice noodles), ume products, teas, pickles (incl. natto miso chutney)}, personal care products, kitchenware, knives). Address: 92 McIntosh Road, Asheville, North Carolina 28806. Phone: 704-252-3090.

7872. Jacobi, Dana, ed. 1995. The natural health cookbook: More than 150 recipes to sustain and heal the body. New York, London, Toronto, Sydney, Tokyo, Singapore: Simon & Schuster. 271 p. June. 25 cm.
• ***Summary:*** This is a selection of the best recipes published in *East West Journal*, compiled by Dana Jacobi, Dan Seamens, and the editors or *Natural Health* magazine. The recipes are generally low in fat, free of white sugar and other refined foods, and nutrient dense, based on grains, legumes, and vegetables; some contain fish and shellfish. Chapter 4 is titled "Seitan, tempeh, and tofu." Miso and soy sauce are

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used throughout as seasonings.

Contains recipes for Amasake dressing (p. 153), and Amasake scones (p. 191). Amasake (or Amazake) is defined in the Glossary of ingredients (p. 243). Address: New York City, NY.

7873. *Men's Confidential* (*Emmaus, Pennsylvania*). 1995. Two birds with one soy. June.
• ***Summary:*** Genistein, a chemical component of soybeans, may have protective effects against two major male diseases–prostate cancer and heart disease. New research has evaluated which soy products contain the most genistein per serving. The clear winner? Tofu. Kikkoman Firm, Nasoya Soft, Azumaya Soft, and Vitasoy Silken all contain about 10 times as much genistein as First Alternative soy milk. Contains a recipe for a shake made in a blender with silken or soft tofu, frozen berries, a banana, and a little honey.

7874. Natural lifestyle magazine and mail-order market. 1995. Asheville, North Carolina: Natural Lifestyle Supplies. 55 p. Catalog. 28 cm.
• ***Summary:*** A macrobiotic mail-order catalog with several nice articles. It sells many types of soyfoods and related products, including the full line of Kushi Cuisine, organic soybeans (yellow and black), azuki beans, amazake, Rice Dream, soymilk, soy Malteds (Westbrae), Nasoya Vegi-Dressings, Nayonaise, Farmhouse Tekka, organic soy sauce, fresh tofu, snow-dried tofu, kuzu, and miso. Publisher: Tom Athos. Editor and graphic design: Debbie Athos. Address: 16 Lookout Drive, Asheville, North Carolina 28804-3330. Phone: 1-800-752-2775.

7875. **Product Name:** SJ Grilling Sauce.
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 804-226-8333.
Date of Introduction: 1995. June.
Ingredients: Incl. tamari soy sauce, tomatoes, honey, spices.
Wt/Vol., Packaging, Price: 10 oz bottle. Retails for $2.89 to $3.29.
How Stored: Shelf stable.
New Product–Documentation: Press Release sent by Kim Markus of Gauger & Silva. 1995. June 26. "San-J blends East and West with new SJ Grilling Sauce." The new sauce combines two favorite cooking flavors–tamari and tomato–for a grilling sauce with an Asian twist. It can also be used for marinading, stir-fry, and barbecues and "is a perfect addition to meat, fish, chicken, and vegetables." "A subsidiary of San Jirushi, the world's largest brewer of tamari soy sauce, San-J opened the first tamari brewing plant in the United States in 1987."

Spot with photo in NFM's New Product Review. 1995. Fall. p. 4. "San-J International." The product is certified kosher by Organized Kashruth Labs.

Press Release from Meghan O'Shea of Gauger & Silva. 1996. March 25. "Here comes summer!" The product is called "San-J International's new SJ Grilling Sauce" even though it is 9 months old.

7876. **Product Name:** Soygenol 100.
Manufacturer's Name: FreeLife International.
Manufacturer's Address: 354 Woodmont Rd., Suite 5, Milford, Connecticut 06460. Phone: 1-800-882-7240.
Date of Introduction: 1995. July.
Ingredients: Each Vita-Coat tablet contains: Soygenol (soy-phosphatide-bonded Japanese grape seed extract {2:1 ratio, 100 mg}), green tea standardized extract (30% polyphenols, 100 mg), Ultra Soy Delivery System (soy polysaccharides and plant enzymes, 5000 IU).
Wt/Vol., Packaging, Price: 60 caplets. Sells for $19.95 wholesale, $28.50 retail ($0.47/caplet, or $0.95/day).
How Stored: Shelf stable.
New Product–Documentation: FreeLife leaflet sent by Karma McLeskey of Fairfax Station, Virginia. 1995. Aug. "Soygenol 100. The world's first soy-activated premium Japanese Grape Seed Extract [extracted and sold by Kikkoman using only water and pure grain alcohol] with Green Tea Extract. Developed by the number one nutritionist in America, Dr. Earl Mindell! Research continues to provide us with greater insight into the devastating effects that free radicals can have on our health. Free radicals are small yet destructive unstable molecules which attack and damage the cells of our body and can lead to cancer, arthritis, heart disease and can speed up aging. Fortunately, antioxidants can help fight free radical damage. Two of the most beneficial antioxidants are grape seed extract and decaffeinated green tea extract. Grape seed extract has been shown to be 20 times stronger than vitamin C and 50 times stronger than vitamin E! Green tea extract has been shown to be 200 times stronger than vitamin E!" This product, released in July 1995, is "the next generation in proanthocyanidin (OPC) supplements." Dr. Masquelier is the discoverer of OPCs, which come from grape seeds and pine bark.

Leaflet (6 panels, color) sent by Karma S. McLeskey of Virginia. 1995. Aug. 21. "Soygenol 100. Nature's miracle. The world's first soy-activated premium Japanese Grape Seed Extract with Green Tea Extract."

7877. Read, E.C.K. 1995. England's Worcestershire Sauce: Flavors of the world. *Bon Appetit* 40(7):32-33. July.
• ***Summary:*** Gives a brief, cute, undocumented, copycat (and probably untrue) history of Lea & Perrins' Worcestershire sauce and recipes (by Lane Crowther) for using it.

In a slim bottle at the end of the bar, the anchovy is enshrined with tamarind, vinegar, molasses, garlic, onions, soy [sauce], chili peppers, cloves, and lesser ingredients "in the elixir known as Worcestershire Sauce."

The bartender says he buys the bottles by the case.

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mostly to make Bloody Marys. Worcester (the sauce has always contained anchovies and tamarind) is a city (and the county seat) on the River Severn. The original sauce is said to have been made in the "early 1800s" by John Wheeley Lea and William Perrins, based on a recipe from Marcus Sandys, the British governor in Bengal, India. Their first market outside England was ocean liners. The U.S. maker of Worcestershire Sauce, "Lea & Perrins of Fair Lawn, New Jersey," was formerly John Duncan & Sons of Manhattan [New York City], an early importer of the sauce–which is now used in "such morning-after remedies as Bloody Marys and Prairie Oysters..."

7878. Schwartz, Arthur. 1995. The Schwartz that ate N.Y. Soy vey! Who has great soy dishes. *Daily News (New York)*. Aug. 8. Food section. p. 4.

• ***Summary:*** The title of the left column is a play on words using the Yiddish term "Oy vey!" which means something like "Oh no, not more." The author, is luke-warm about his subject: "Big news. Soybeans are good for us. Like we didn't know it already." A sidebar gives a brief definition of each of the different types of soyfoods.

The right column lists New York City restaurants that serve great soy dishes: Josie's, Golden Unicorn (Chinese), Angelica's Kitchen (macrobiotic), The Fashion Cafe, Zen Palate. Part II is for takeout: Healthy Pleasures, Natural Frontier, Whole Foods.

The recipe of the week is Quick tofu hoisin. A table lists various soyfoods and the amount of protein contained in each.

Note: Arthur hosts a talk show titled "Food Talk" on WOR radio in New York. On Tuesday, Aug. 8, at 12:30 p.m. Dana Jacobi was his guest to talk about soyfoods. She invited listeners to send a SASE to Soyfoods Center for free tofu recipes and a free catalog of publications. About 150 listeners responded.

7879. FreeLife International. 1995. Soygenol 100: Nature's miracle. The world's first soy-activated premium Japanese Grape Seed Extract with Green Tea Extract (Leaflet). Milford, Connecticut. 6 panels.

• ***Summary:*** The front panel states that Soygenol was "Developed by America's number one nutritionist, Dr. Earl Mindell, R.Ph., Ph.D." Contents: Free radicals cause disease and aging. Antioxidants to the rescue. Only Soygenol delivers 100% Proanthocyanidin power you need. One panel, with a color photo showing Dr. Mindell, states: "Dr. Earl Mindell is the world's leading expert on vitamins, dietary supplements and nutrition. For 30 years Dr. Mindell has led a personal crusade to show individuals how to heal themselves and stay healthy naturally. Dr. Mindell is the author of numerous books on health and nutrition, including his 7 million copy bestseller, Earl Mindell's Vitamin Bible. Dr. Mindell appears on more than 300 radio and television programs annually." Another photo shows a bottle of Soygenol (60 tablets, with 3 soybeans in a pod on the front panel).

"FreeLife's grape seed extract is made to Dr. Mindell's exacting specifications in an exclusive association with Kikkoman (TM), one of Japan's largest corporations and the world's most trusted producer of soy and wine grape products. FreeLife is the only company in the United States that has the exclusive right to use the Kikkoman grape seed extract. Kikkoman Japanese Grape Seed Extract is the first and only grape seed extract processed without harsh chemical solvents such as propylene glycol which is found in nail polish remover and antifreeze. You don't want these chemicals in your body. Kikkoman utilizes a proprietary process which uses only water and pure grain alcohol in the extraction process. The grain alcohol is completely removed in the drying process. Our grape seed extract is completely water soluble and bioavailable."

"The soybean is naturally rich in phosphatidylcholine, which is an important component of the cell membranes and also an efficient delivery system of nutrients... Recent research suggests that Soy-activation may increase the biological activity of the grape seed extract 3 fold and increase absorption and activity!... Each Soygenol 100 tablet contains tiny strands of unique fiber derived from the miraculous soybean called soy polysaccharides. Upon ingesting the tablet, these mini-fiber strands act like a sponge, absorbing water into the tablet to speed disintegration, helping to maximize nutrient availability."

"Suggested usage: 2-3 tablets a day for the first week. Double this amount for the next 10-14 days. Then stay at this level or decrease back to 2-3 tablets a day. For maximum results, use Soygenol 100 in conjunction with the Soy Miracle Ultimate Antioxidant, a full-spectrum antioxidant. Always take Soygenol 100 with or after meals." Address: 354 Woodmont Rd., Suite 5, Milford, Connecticut 06460. Phone: (203) 882-7250.

7880. Mountain Ark Trading Company. 1995. Catalog–September-December 1995 [Mail order]. Fayetteville, Arkansas. 30 p. 27 cm.

• ***Summary:*** Soy-related products in this mail order catalog include: Miso, soy sauce, tempeh, tofu, black soybeans, yellow soybeans, tofu dressings, natto miso. Also: Sea vegetables, amaranth, quinoa, teff, blue corn. The general manager is Nick Masullo. Address: P.O. Box 3170, Fayetteville, Akansas 72702. Phone: 1-800-643-8909.

7881. Orthoefer, Frank T.; Liu, Keshun. 1995. Soybeans for food uses. *International Food Marketing & Technology (Germany)* 9(4):4-8, Aug. [5 ref.]

• ***Summary:*** Contents: Introduction. Traditional soy foods: Soy milk, tofu, toasted whole soybeans and full-fat soy flour, soybean sprouts, yuba, soy sauce, tempeh, natto,

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miso. Soy protein ingredients: Soy grits and flour, soy protein concentrates, soy protein isolates. Soy nutrition: Soy protein, fat and calories, phytochemicals. Food bean market. Summary.

Two "different types of soybeans have emerged: oil beans and food beans. This is particularly true in the US soy market..."

Of the fourteen phytochemicals, seven are present in soybeans. These seven are phytates, isoflavones, carotenoids, coumarins, triterpenes, lignans, and phenolic acids. Phytochemicals have been shown to affect human health as much as vitamins and minerals, and many of them have anti-cancer properties. The discovery of phytochemicals may change how the nutritional value of food is assessed.

The world market for soybeans for food use is estimated at about 1 million metric tons (tonnes). In Japan alone about 830,000 tonnes are made into soyfoods as shown in a pie chart as follows: Tofu (552,000 tonnes, 63.4%), miso (180,000 tonnes, 21.5%), natto (90,000 tonnes, 10.7%), soymilk (10,000 tonnes, 1.2%), soy sauce (5,000 tonnes, 0.6%), and others (22,000 tonnes, 2.6%). In the USA the food bean market is estimated at 50,000 tonnes. Other major markets for food beans are in Korea, China, Taiwan, Hong Kong, Singapore, Malaysia, and Thailand. Food-grade soybeans can be sold by the growers at a premium of 5-20% above the base price. The demand for food beans is increasing steadily. Address: 1. Vice President, R&D, Riceland Foods, Stuttgart, Arkansas; 2. Project Leader, Soy Food Lab., Jacob Hartz Seed Co., Stuttgart, Arkansas.

7882. **Product Name:** Spice of Life Meatless Meats [Beef, Ground Beef, Mexican Beef, Teriyaki Beef, Chicken, Chicken Mince, Italian Sausage, Pepperoni, Smoked Ham, Unflavored, Unflavored Mince]
Manufacturer's Name: Spice of Life Meatless Meats.
Manufacturer's Address: Van Nuys, California. Phone: 818-342-6573
Date of Introduction: 1995, August.
Ingredients: Hearthline Meatless Meats, spices and seasonings.
Wt/Vol., Packaging, Price: 8 oz., 5 lb, and 25 lb packs, retail for $2.99, $15.95, and $79.95 (11/95, California).
How Stored: Shelf stable.
New Product–Documentation: Talk with Pam Montanaro of Soy Cubano! (Global Exchange) in San Francisco, 1995, Nov. 1. Spice Williams Crosby has just introduced a meatless jerky and a line of meatless meats.

Talk with Jackie Padgette, 1995, Nov. 1. She is Spice's twin sister. This is a small family-owned company. These are dry products that must be reconstituted by boiling in water for a few minutes. They have a shelf life of one year. Bragg's amino acids are used for the flavoring. She is feeding abused children and homeless people in the Los Angeles area. The products have been in restaurants and health food stores for the last few months. They are sold at only 4-5 health food stores. Spice is an actress and stuntwoman, and has been a vegan for many years. She has a monthly column in Ms Fitness, where she writes on veganism etc. She feeds about 1,000 homeless people each year at very little cost using her products in meatless meals. She got involved in this years ago when she was a musician. She decided to turn her life around, so she started. She had been registered nurse (who cared for elderly people when she was younger) and medical transcriber. She found that one of the best ways to do good things for your mind is to treat your body right. So she went gung ho in her research, and became a vegan. She uses a lot of soy products, and has been a real pioneer in this area for 15-17 years. She has written a booklet titled "Sixty reasons why The Spice of Life will improve your life, your world, and your workout." She mentions the environment, personal health, ethics, spirituality, history and recent epidemiology. She also has lots references.

Spice of Life Total Fitness Catalog, 1995, Nov. 4 panels. Lists prices for the many flavors in retail packs and institutional packs. Send orders to Lumen Foods, 409 Scott Street, Lake Charles, Louisiana 70601.

Talk with Greg Caton, president of Lumen Foods. He uses a slightly different formula when making these products for Spice of Life. In place of soy sauce he uses Bragg's Aminos, which is HVP supplied by A.E. Staley Mfg. Co. in Decatur, Illinois.

7883. Stevens, Jane Ade; Stevens, Roger, ed. and comp. 1995. U.S. soyfoods directory. Lebanon, Indiana: Indiana Soybean Development Council. 31 p. 28 cm.
• ***Summary:*** This first edition of the directory contains more than 270 company listings. The cover is checkerboard red and white. Contents: Forward [sic, Foreword]. How to use the Soyfoods Directory (incl. Internet access). Soyfood descriptions (alphabetical): Edamame (Sweet beans), food use soybeans (whole soybeans), organically grown soybeans, isolated soy proteins, lecithins, meat analogs (meat alternatives), miso, natto, nondairy (soy) frozen desserts, okara, soy cheese & yogurt, soy flour & grits, soy grits, soy meal & flakes, soynuts, soyoil, soy protein concentrates, soy sauces (tamari, shoyu, teriyaki), soymilk, tempeh, textured soy proteins, tofu & products. Composition and nutrient content of soyfoods (large table, p. 7). Soybean products chart: From whole soybeans, from soybean meal, from soyoil and lecithin. Soyfood companies by product (products listed alphabetically).

Soyfood companies (alphabetical by company name. Each listing contains address, contact, phone, soy products, product names, distribution, to locate product, classification) Soyfood companies by state (alphabetical by state; California has by far the most). Professional associations and industry information resources. U.S. soybean facts. Soyfoods directory survey.

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This directory's address on Internet's World Wide Web is http //www.in net/soy. For more information or suggestions, call 1-800-275-7679. Address: Stevens & Associates, 4816 North Pennsylvania Street, Indianapolis, Indiana 46205 Phone: 1-800-275-7679

7884. **Product Name:** Kikkoman Goyogura Shoyu. **Manufacturer's Name:** Corti Brothers (Marketer-Distributor). Imported by Golden Pacific International. Made in Noda, Japan, by Kikkoman Corp. **Manufacturer's Address:** Corti Bros. 5810 Folsom Blvd., Sacramento, CA 95819. Phone 916-736-3800 **Date of Introduction:** 1995, September. **Ingredients:** Soy beans [Whole, grown in Japan], wheat, salt **Wt/Vol., Packaging, Price:** 8.3 oz (250 ml) glass bottle. **How Stored:** Shelf stable; refrigerate after opening. **Nutrition:** Per 1 tablespoon (15 ml): Sodium 890 mg. Calories 10. Protein 1 gm **New Product–Documentation:** Sample (product with Label) sent by Darrell Corti of Corti Brothers in Sacramento Talk with Darrell Corti. 1996. His company started selling this product in Sept. 1995. Corti Brothers is presently the only company in America where one can buy this high-quality natural shoyu. Jennifer Brennan says "Purveyors by appointment to the Imperial Household." Imported by Golden Pacific International, 1580 Tennessee St., San Francisco, California 94107

7885. Truth in Labeling Campaign. 1995. You have the right to know what is in your food. An introduction to Citizen Petition #94P-0444, subsequent legal action, and the Truth in Labeling Campaign. Dairen, Illinois. 7 p. [2 ref]
• ***Summary:*** Contents: Why a petition? The petition. The Truth in Labeling Campaign. Why a petition? "Because the FDA has been unwilling to evaluate toxic potential of monosodium glutamate (MSG) objectively, ... Labeling of MSG would make diagnosis of possible MSG-sensitivity easier... Millions of Americans are sensitive to MSG." "MSG is called glutamic acid when used in supplements." The "glutamate industry" is very powerful. "The FDS's rejection of the FASEB September, 1994 draft final report on the safety of MSG in food was not without precedent."

"The glutamate industry has in place the most aggressive and insidious deceptive campaign to deceive the public into believing that MSG is safe. The International Glutamate Technical Committee (IGTC) structures and supervises research designed to demonstrate that MSG is safe." "Promotion of propaganda is accomplished through the Glutamate Association, the IGTC, the International Life Sciences Institute, and the International Food Information Council (IFIC), if not others."

"Whereas there was a balanced discussion of MSG safety / toxicity in the Wall Street Journal, the Washington Post, the New York Times etc. prior to the airing of a '60 Minutes' segment on MSG in late 1991; only a few objective discussions of the problem have aired in major media in the last three and a half years."

"On December 13, 1994, a Citizen Petition was filed with the U.S. Department of Health and Human Services, Food and Drug Administration to require that Monosodium Glutamate (MSG) be clearly labeled when used in food." "The FDA failed to respond to the petition, as required by law, within 180 days of filing. On August 29, 1995, 29 individuals, including physicians, scientists, and parents on behalf of their children, filed suit in federal court asking the court to intercede on their behalf and require that all MSG in all processed food be labeled." Address: P.O. Box 2532, Dairen, Illinois 60561

7886. Wilson, Lester A. 1995. Soy foods. In: D.R. Erickson, ed. 1995. Practical Handbook of Soybean Processing and Utilization. Champaign, Illinois: American Oil Chemists' Society Press; St. Louis, Missouri: United Soybean Board. viii + 584 p. See p. 428-59. Chap. 22. [41 ref]
• ***Summary:*** Contents: Introduction. Soybean chemical composition. Unfermented soy foods: Soymilk, tofu (momen, kinugoshi or silken, packed tofu, aseptically packaged tofu, deep-fried tofu, kori tofu or dried-frozen tofu), other nonfermented soy foods (yuba, kinako or roasted whole soybean flour, fresh {edamame} and canned soybeans, texturized soy protein-based foods). Fermented soy foods: Miso, shoyu (soy sauce), natto, tempeh, sufu. Japanese Agricultural Standards. Identity preservation and transportation. Soybean quality characteristics. Overview, judging quality (tofu, miso, natto). Note: This is the earliest English-language document seen (Dec. 2005) that contains the term "roasted whole soybean flour."

Tables: 1. Nonfermented soy food products and common names by country. 2. Fermented soy food products and common names by country. 3. Chemical composition of soy foods. 4. Per capita annual consumption of soybeans (kg) in selected Asian countries (China, Indonesia, Japan, Korea, Malaysia, Philippines, Thailand, for the years 1968, 1978, 1988, 1994).

Figures: 1. Flowchart of refrigerated and shelf-stable soymilk production. 2. JAS seal of approval. 3. Diagram of equipment used in large scale tofu production (each piece of equipment is numbered and labeled). 4. Flowchart of regular tofu production. 5. Graph showing percent transmittance of whey versus coagulant concentration for soymilks at 6% solids made from Weber, Vinton, and Amsoy soybeans. A concentration of 0.023 N was selected as the optimum coagulant concentration, since it gave the most transparent whey. 6. Graph showing percent transmittance of whey versus coagulant concentration for Amsoy soymilk at concentrations of 4, 5, and 8% solids. Concentrations of 0.018N, 0.019N, and 0.035N, respectively, were selected

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as optimum coagulant concentrations. 7. Flowchart of kinugoshi (silken) tofu production. 8. Flowchart of packaged tofu production. 9. Flowchart of aseptically packaged tofu production. 10. Flowchart of kori (dried-frozen) tofu production. 11. Diagram of equipment used in large scale production of dried-frozen tofu (each piece of equipment is numbered and labeled). 12. Flowchart of miso production. 13. Diagram of the interactive factors producing the characteristic attributes of miso. 14. Flowchart of tempeh production. Address: Iowa State Univ., Ames, Iowa.

7887 Paine, Heather. 1995. Processing trends in Europe. Paper presented at the Third Bi-Annual SoyAfrica Conference. 14 p. + 11 p. of tables, charts, and graphs. Held 3-5 Oct. 1995 at Johannesburg, South Africa. Organized by Aproma. [10 ref]

• ***Summary:*** Contents: Introduction. History and production. The benefits of soya. Nutrition, functional properties. Products & applications: oil-based products (soya bean oil, soya lecithin), soya protein products (full-fat soya flours, defatted soya flours, soya concentrates, soya isolates), soya fibre products (incl. soy bran), whole soybean products or soya foods (soya milk or drink, tofu, yuba, soya sauce, miso, tempeh, natto). Trends and problems. Growing market for soy protein ingredients, U.S. soyfoods market, soymilk sales, problems of quality and image and legislation. Address: Editor, Soyfoods, England.

7888 **Product Name:** Tree of Life Tamari, and Shoyu.
Manufacturer's Name: Tree of Life, Inc. (Marketer-Distributor). Made in Richmond, Virginia, by San-J International.
Manufacturer's Address: St. Augustine, FL 32084.
Date of Introduction: 1995, October.
Ingredients: Incl. organic soybeans.
How Stored: Shelf stable.
New Product–Documentation: Spot with photo in NFM's New Product Review, 1995, Fall, p. 6. "Tree of Life" has introduced domestically made Organic Wheat Free Tamari and Organic Shoyu. Both new products are made with organic soybeans. The tamari has the sodium content reduced by 25%.

7889 **Product Name:** Tofurky: A Delicious Vegetarian Holiday Feast.
Manufacturer's Name: Turtle Island Foods, Inc.; Simple Living Network (Distributor).
Manufacturer's Address: P.O. Box 176, 601 Industrial Ave., Hood River, OR 97031. Distributor: P.O. Box 233, Trout Lake, WA 98650. Phone: 1-888-TOFURKY (863-8759).
Date of Introduction: 1995, October.
Ingredients: Each Tofurky includes: (1) 2 lbs. seasoned, baked & basted organic tofu roast: Organic tofu (organic soybeans*, water, nigari), nutritional yeast, poultry seasoning, salt, tamari, fresh ginger, organic pear sweetener. (2) 8 tempeh-wild rice & cranberry drumettes: Textured soy protein (soy flour and water), soy tempeh (organic soybeans*, water, apple cider vinegar, starter), grated carrots, organic wild rice*, malt extract, natural flavor, dried cranberries, vegetarian Worcestershire sauce, isolated soy protein, carrageenan, herbs and spices. (3) 1 pint golden nutritional yeast-mushroom gravy: Water, nutritional yeast, chopped fresh mushrooms, canola oil, unbleached white flour, diced onion, shoyu soy sauce, salt, spices; (4) Stuffing: Organic whole wheat bread cubes*, onion, celery, walnuts, dried cranberries, canola oil, sesame oil. * = Organically grown in accordance with Section 26569.11 of the California Health & Safety Code.
Wt/Vol., Packaging, Price: 3 lb 12 oz or 2¼ lb.
How Stored: Frozen.
New Product–Documentation: Audrey Van Buskirk. 1995, Nov. 10. Willamette Week. "A different drumstick." About Tofurky.

Polly Timberman. 1995, Nov. 15. Hood River News. "Soy be it! Tofurky provides a holiday feast for vegetarians."

Leaflet for Thanksgiving 1995. 8½ by 3.75 inches. Printed black on orange paper. No gravy. Two sizes: 2 lb., and 3 lb 12 oz.

Leaflet for Christmas 1995. Same size and color. Now comes with gravy. Two sizes: 2 lb 12 oz, and 4 lb 4 oz.

Ad (2¼ inch square, black and green) in Vegetarian Times, 1996, Nov.: "Vegetarian Times Buyers Mart." Unnumbered pages at back of magazine. "100% vegan. Cooks in minutes. Serves 8 hungry adults. At local natural stores or via mail order. Call Toll Free: 888-Tofurky. Next day US delivery. $49.95 + $7 S&H [shipping and handling]."

Talk with lady from Simple Living Network (SLN), 1996, Oct. 31. This product, made by Turtle Island Foods (in Hood River, Oregon), was launched in October 1995, before Thanksgiving last year. Tofurky is also described on and can be ordered from the SLN Web site: http://www.slnet/CIP/Tofurky. There are 3,000 pages on this Web site.

Talk with Seth Tibbott, founder and owner of Turtle Island Foods, 1996, Nov. 1. See interview titled "History of Tofurky." Talk with (call from) Seth, 1996, Nov. 5. Tofurky will appear on the Today Show on Nov. 12 (Tuesday morning TV).

Leaflet #1 or "rack card" (3 5/8 by 8½, color) titled "Tofurky: A delicious vegetarian holiday feast." Tells all about the product in a question and answer format. Leaflet #2 (8½ by 11 inches), printed black on gray, titled "Tofurky! The meatless stuffed tofu roast." "Tofurky! consists of 3 pounds of basted and baked organic tofu in a 9-inch pie pan filled with a herbed, whole wheat bread crumb" stuffing. "The tender tofu slices can be cut into 8 generous servings."

Press release, 1996, Oct. 20. "Will that be turkey or

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Tofurky."

Box with Label sent by Seth Tibbott. 1996. Nov. 6. The outer box is 13¼ by 10½ by 3¼ inches. Printed red on cardboard color. New weight: 5 lb 15 oz. "The original Tofurky. A delicious vegetarian feast. 100% vegan. Cooks in minutes. Serves 8. Keep frozen or refrigerated. 1% of all sales from this product to Farm Sanctuary Adopt a Turkey Program." The inner box is white. The label is printed black on white. Net weight: 2 lbs. 12 oz. On the label are printed two logos and addresses, and a UPC. The Higher Taste, 2402 SE Belmont Ave., Portland, Oregon 97214. Turtle Island Foods, Inc., PO Box 176, Hood River, Oregon 97031. Vegetarian Journal. 1996. Nov/Dec. p. 8. "Tofurky."

Dinner with Bob & Pattie Gerner to test and give feedback on Tofurky 97. 1997. May 10. A delicious sliceable roast, made mostly of gluten and tofu, may replace the former marinated baked tofu. The roast ingredients are: Water, vital wheat gluten, organic tofu, natural vegetarian seasoning, wild rice blend, shoyu soy sauce, fresh onions, granulated garlic, tomato sauce, molasses, sea salt.

Talk with Seth in early 1997. He sold 800 Tofurky in 1995 and 4,000 in 1996.

7890. United Soybean Board. 1995. The absolutely astounding supermarket soybean search. Chesterfield, Missouri: USB. 6 panels. 28 cm.

• ***Summary:*** This colorful, six-panel foldout contains a panoramic 4½-panel illustration of the inside of a modern supermarket. Each of the aisles and sections are marked. Additional signs show the many places that soy appears in the store.

The bottom half of the first page states: "Ever since the famous American chemist George Washington Carver began exploring the mysteries of this little legume near the turn of the century, the growth in food and technical uses for soybeans has been nothing short of astronomical. Today, every aisle of your local supermarket contains soybean products, and we're not just talking tofu. Take a look at the astounding number of products containing soybeans at the Super Duper Food Store in Anytown, USA."

A sidebar explains four symbols for marking foods made from whole soybeans (circle) or containing soy oil, soy lecithin, and soy protein or soybean meal. For example (moving from left to right): Margarine & spreads. Tofu. Tofu ice cream. Peanut butter (with soy oil). Desserts and Mixes (with soy oil). "Super Soy–Oh Boy" (Soymilk end display, by the case). Cooking oils. Mayonnaise, Salad dressing. New Chips Asoy! Sauces. A sign reading "Think soy." Soya Snax. Soy Joy (in the refrigerated drinks section).

One full page, titled "Believe It," gives a detailed alphabetical listing of 76 categories supermarket items that contain soy, and what type they contain. For example: "Cosmetics: Soybean oil. Crackers: Soybean oil, soybean oil shortening. Croutons: Soybean oil. Diet drinks: Soybean oil, soy lecithin, soy protein isolate." Also included are: Soy sauce. Soy nuts. Tofu. Not mentioned: Miso. Soymilk. Meat alternatives. Address: 16305 Swingley Ridge Dr. #110, Chesterfield, Missouri 63017.

7891. United Soybean Board. 1995. Soybeans: How a little bean becomes an ingredient in thousands of products from margarine to tofu to chicken feed (Brochure). Chesterfield, Missouri: USB. 12 panels + poster. 23 cm.

• ***Summary:*** This attractive color publication is folded so that the first 12 panels are a brochure. However when fully unfolded, a large color poster appears. The brochure notes: In 1992/93 the USA produced 51% of the world's soybeans. An early history of the soybean in the USA [full of errors]. America livestock (including poultry) consume about 22.5 million tons of soybean meal a year. How soybeans are grown. Composition of the soybean. Foods made from soybeans: Edamame, miso, natto, soy milk, soy sauce, tempeh, tofu or soybean curd, full fat flour. Photos (each incorrect) in the brochure show: "1904. The famous American chemist George Washington Carver discovers that soybeans are a valuable source of protein and oil. 1920s. Combines first used to harvest soybeans. 1922: First U.S. soybean processing plant opens. 1929: Soybean pioneer William J. Morse spends two years in China, gathering more than 10,000 soybean varieties for U.S. researchers to study. 1940: Henry Ford takes an ax to a Ford car body to demonstrate the strength of the soybean plastic he has developed."

The color poster (16 by 27 inches) is a cartoon showing how soybeans are processed into various products, including full fat flakes, crude and degummed soybean oil, soy concentrates, soy isolates, soy flours, and defatted soy flakes. A soybean utilization/processing diagram at the bottom of the poster shows 137 different products that can be made from the soybean, including 33 whole soybean products ("Traditional soyfoods" incl. tofu, soymilk, miso, tempeh, soy sauce, natto), 33 soybean meal products (26 edible uses + 7 feed uses), and 71 soy oil products (13 edible uses, 19 industrial uses, and 18 applications for lecithin). The seven types of lecithin applications are: Emulsifying agent (4 applications), nutritional (medical use, dietary use), anti-spattering agent (in margarine manufacture), stabilizing agent (in shortening), anti-foam agent (yeast manufacture, alcohol manufacture), dispersing agent (in paint, ink, and rubber manufacture, and in insecticides), and wetting agent (in cosmetics, paint pigments, and calf milk replacers).

Accompanying the brochure/poster is a note pad with the same slogan across the top of each sheet: "Soybeans–Designed for life." Across the bottom is written: "United Soybean Board–Investing check-off dollars." Address: P.O. Box 419200, St. Louis, Missouri 63141-9200.

7892. Buskirk, Audrey Van. 1995. A different drumstick.

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Willamette Week (Oregon). Nov. 10.
• ***Summary:*** "Only in Oregon ... Two Oregon vegetarian outlets joined forces to produce Tofurky. The 'bird,' created by The Higher Taste, a Portland vegetarian caterer, is made with seasoned organic tofu, filled with a stuffing of cranberries, walnuts and bread crumbs, basted with a honey, ginger and tamari sauce and baked until golden. It comes with four 'dark meat drumettes' made by Hood River's Turtle Island Foods, a soy foods manufacturer, with grated organic tempeh, wild rice and carrots shaped into drumsticks. Think this sounds great? Awful? Taste it for yourself this Saturday, Nov. 11, between 11 and 4 pm, at Food Front, 2375 NW Thurman St."

A large cartoon shows a mother serving a turkey on a platter to her husband and son, seated–with knives and forks upraised–at the table.

7893 Gordon, Jonathan. 1995. Work with soyfoods in England and Australia (Interview). *SoyaScan Notes*. Nov. 16. Conducted by William Shurtleff of Soyfoods Center. [1 ref]
• ***Summary:*** Jonathan's PhD thesis was titled "Improved lactic fermentation of soymilk for the preparation of soya bean curd," a subject closely related to soy yogurt. He submitted this thesis in 1992 at the University of Strathclyde [Glasgow, Scotland], working under Brian Wood. When he was midway through writing his thesis, he won a *Monbusho* [Ministry of Education] scholarship to Japan. Just as he was preparing to go, he and his wife had a baby and he decided not to go. Prior to that the University of Strathclyde had applied for a patent on the process he discovered in his thesis. When he didn't go to Japan, the university did not finish the patent application process. Its present status is unclear. He discovered how to do a lactic fermentation of soymilk that gave a good, low pH in a reasonable period of time. Brian Wood was an expert in lactic acid fermentations; he developed a 6-week miso and soy sauce process which he sold to Nestle. He was very unhappy with the outcome of this sale, because Nestle shut him out of involvement with the company. He expected to be actively involved with the company.

Jonathan's interest in tofu goes back to the late 1970s. A native of England, he spent two years (1979-1981) at Findhorn, a spiritual community in Scotland, where he first heard of tofu and he helped to make tofu once a week. Jonathan thinks that Jacques (a French Canadian) started the tofu operation in Findhorn, before Jonathan arrived. Jacques and Allen (British) were making tofu in 1979 when Jonathan was there. Each Thursday after dinner they would take over the kitchen and make about 30-40 lb of tofu, which was served in the communal dining room the next day. Jonathan left Findhorn in March 1981 and arrived in Australia in about July or August 1981. He traveled in Australia with a girlfriend (Karen James of California, who had just finished a professorship at UCLA) and they lived together at the Homeland Foundation in Upper Thora, Bellingen, New South Wales, where they made tofu with other members of the community. Karen also made tempeh. Upper Thora is a little town in the Bellingen (pronounced BEL-ing-un) valley. Some community members had already been making tofu for a long time before he arrived; the tofu company was a completely established local business, with customers and delivery routes, when he arrived. They made about 300 lb/week of tofu and delivered it themselves to nearby communities in insulated cold boxes (called "Eskis," short for Eskimos) in a van. Homeland was also making tempeh at the time, but Jonathan was not a tempeh maker. He left Australia in 1982 to return to England.

In 1982 Jonathan became the foreman and tofu maker for The Regular Tofu Company (RTC) Ltd. in England, owned by John Holt. Jonathan was not with RTC when it started. John Holt was a "Premmie," a disciple of Guru Maraji, the young guru from India. His tofu shop was located in a house adjacent to the Premmie community house or ashram. He converted the small community kitchen (about 14 feet square) into a tofu shop. It had 2 cauldrons and a grinder. This was John Holt's private business; it was not a source of food and income for the Premmie community. John had a family at the time and he employed Premmies to do his work. At this time the tofu was made in a caldron. Guru Maraji came to that part of England many times. Leicester is one of the "Asian centers" of England; it has the largest immigrant population of any city in the country and there were 2 or 3 "Premmie" houses there. Maraji has a large Indian following, in addition to his Western disciples.

Jonathan also helped John Holt design his new factory in at Hayhill Industrial Estate (Unit 25, Sileby Rd., Barrow Upon Soar, Leicestershire LE12 8LD, England), into which Holt moved in about 1984. John Holt lived in Sileby, the town adjacent to Barrow Upon Soar.

Note: This company began making tofu in Dec. 1981 at 75 Chandos St., Leicester, LE2 1BU, England. In June 1984 (now located at 16 The Halcroft, Syston, Leicester, England LE7 8LD) they introduced 4 soy products under the Soyboy brand. John Holt had venture capital in the business, but they weren't getting a sufficient return on their money, so John had to sell the company to another rather small company named something like Rainbow (they were making soup and burger dry mixes), which later sold it to Haldane.

Jonathan probably has John Holt's home address in Leicestershire. After Holt sold his business, he bought a franchise in a restaurant business (something like a pancake house) in Northampton or Nottingham, England. Jonathan has heard of Michael Cole of Manchester, but he does not know whether or not Michael ever worked for John Holt. Cole won the Entrepreneur Award of something like £50,000, and that enabled him to build a factory. In the early days only two companies in England were distributing semi-nationally–John Holt's and Michael Cole's. Address:

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Director of Operations, White Wave Inc., Boulder, Colorado. Phone 303-443-3917.

7894. **Product Name:** FVP Paste.
Manufacturer's Name: Kikkoman Trading Europe GmbH.
Manufacturer's Address: Heerdter Lohweg 57-59, 40549 Dusseldorf, Germany. Phone: +49 211 596 087.
Date of Introduction: 1995, November.
How Stored: Shelf stable.
New Product–Documentation: Soyafoods (ASA, Europe). 1996, Spring, p. 6. "New soya products at FiE '95." This product, exhibited at the Food Ingredients Europe Exhibition, is Kikkoman's new soy sauce paste which has been developed as a substitute for chemical hydrolyzed vegetable protein and yeast extract. Obtained by enzymatic hydrolysis, FVP Paste is a concentrated vacuum evaporated product. Compared to similar products, it has less aroma and a light color, thus the food it is used to season can better keep its original flavor and color. Applications include sauces, gravies, soups, oriental foods, meat products, stir-fry vegetables, mustard, salad dressings, marinades, etc.

7895. Melina, Vesanto; Davis, Brenda; Harrison, Victoria. 1995. Becoming vegetarian. A complete guide to adopting a healthy vegetarian diet. Summertown, Tennessee: The Book Publishing Co. x + 262 p. Foreword by Suzanne Havala. Index. 26 cm. [20 ref.]
• ***Summary:*** An excellent vegetarian and vegan sourcebook and cookbook by three registered dietitians. Contents: Acknowledgements. Foreword. Introduction. 1. What is a vegetarian? 2. The evidence is in. 3. Without meat–exploding the myths. 4. Without dairy products. 5. Veganism: More food for thought. 6. Fats and oils: A balancing act. 7. Fiber: The gift from plants. 8. The vegetarian food guide: Putting it all together. 9. Vegetarian nutrition in the growing years. 10. Vegetarian diplomacy. 11. From market to meals. 12. Recipes: Simple treasures. Appendixes. 1. Glossary. 2. Nutrition recommendations.

This book contains a wealth of accurate, positive information about many different types of soyfoods (especially tofu) and related subjects, including tofu, soymilk, tempeh, miso, soy yogurt, soy cheese, soy sauce, tamari, and soy oil (incl. omega-3 fatty acids). Plus wheat gluten, seitan, rice milk, sea vegetables, adzuki beans (p. 66, 162), quinoa, amaranth, macrobiotics, phytochemicals, plant estrogens found in tofu and other soy products (p. 75, they may contribute to positive calcium balance and have a protective effect on the bone health of Chinese and Japanese women), dietary fiber.

Talk with Vesanto Melina. 1996, July 22. This book was originally published in Canada in May 1994 by Macmillan Canada in Toronto. A revised U.S. edition was published in Nov. 1995 by The Book Publishing Co. in Summertown, Tennessee. Address: Canada.

7896. **Product Name:** SoyaDelt FlavorPlus, and FlavorBase.
Manufacturer's Name: Miwon Co. Ltd.
Manufacturer's Address: 720 Banghak-Dong, Dobong-Ku, Seoul 132-020, Korea. Phone: +82 2 992 1191.
Date of Introduction: 1995, November.
Ingredients: Incl. soy sauce, amino acids, sugar, nucleotides, and salt.
How Stored: Shelf stable.
New Product–Documentation: Soyafoods (ASA, Europe). 1996, Spring, p. 6. "New soya products at FiE '95." These two products, exhibited at the Food Ingredients Europe Exhibition, can be used to improve the flavor of a wide variety of food products. FlavorPlus is a dehydrated enzymatic soy sauce post-formulated with amino acids, sugar, nucleotides, and salt. It can be used as a flavor enhancer or flavor base in a wide range of savory applications. FlavorBase is an enzymatically hydrolyzed soya protein used to improve flavor in processed products, it can be used to make soy sauce and in various fermentation media.

7897. Caton, Greg. 1995. New developments at Lumen Foods (Interview). *SoyaScan Notes*, Dec. 6. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** In Oct. 1995 Greg started his own TVP plant, which is making his new "Reverence" line of products. He used to buy the extrudite (textured soy flour) from either ADM or Central Soya. He would wash it to remove all of the oligosaccharides (which usually cause flatulence), then flavor it, oil it, cook it, dry it, mix it, etc. He does not use organic soybeans, because he finds that customers are not willing to pay for the end product, which is about twice as expensive. However by putting the product through a multiple washing cycle and using purified water than has been ionized and run through a carbon filter, he partially compensates for the non-organic soybeans.

Greg has at least two private label customers: Spice of Life in California, and Dr. Marvin Goldberg, an M.D. in Michigan who buys in container loads. Greg uses a slightly different formula when making these products for Spice of Life. In place of soy sauce he uses Bragg's Aminos, which is powdered HVP supplied by A.E. Staley Mfg. Co. in Decatur, Illinois, reconstituted in water by Paul Bragg's daughter in Santa Barbara, California, and sold at high prices as Bragg's Aminos. Greg admired Paul Bragg, who had an impeccable reputation. Bragg died tragically roughly 5 years ago at about age 95 while swimming off the coast of Florida; he was caught in an undercurrent and drowned. He was Jack LaLanne's mentor and he followed Vivekananda.

Last year meat analogs [alternatives] were the single fastest growing category in the health food trade. For the last three years Lumen has experienced a growth rate of 50%

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a year in their mail order business. Mail order is currently about 40% of the company's total business; it used to be about 5%. His company is almost becoming a mail-order company, like Harvest Direct.

Greg is a computer programmer and he designed his own site on the World Wide Web. He is a "webmaster" and knows HTML and Java script, which allows things to move on a Web page. He is now spending a great deal of time developing Veggie Net as part of his web site; it will contain pictures with accompanying quotations related to vegetarianism. Address: President, Lumen Food Corp., 409 Scott St., Lake Charles, Louisiana 70602-0350. Phone: 318-436-6748.

7898. Ledvinka, Ferro. 1995. Introducing macrobiotics and soyfoods to Italy (Interview). *SoyaScan Notes*, Dec. 24. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Ferro was a pioneer of macrobiotics in Italy. In the process he also helped to introduce soyfoods, especially to Florence. He first learned about macrobiotics when he read a book on macrobiotics in Italy. He started eating a macrobiotic diet. In Rome there was a macrobiotic center founded and run by Marquesa Parvolo, who had been cured of leukemia or a blood disease by George Ohsawa several years before. In 1971 he heard a lecture at this center in Rome by Rob Dobrin, who gave him Michio Kushi's address in Boston, Massachusetts. In the summer of 1972 he traveled to Boston to study macrobiotics, and there he learned how to make tofu and seitan. After leaving the USA, he returned to Italy, living in Rome. From there he worked to spread macrobiotic food and philosophy to all major Italian cities.

In Jan. 1977 Ferro went to Japan to work with Mr. Kazama at Mitoku, exporting macrobiotic foods to Italy and other European countries. The first Italian company to order these foods (including Japanese miso and tamari) was ProBios in Florence. They were followed by two Italian Macrobiotic Centers, located in Rome and Milan. In Oct. Ferro left Japan, returned to Italy, lived in Rome for a while, then moved to Florence, where he established the pioneering Fondazione Est-Ouest at via de Serragli 4, in Florence. This was a combination macrobiotic restaurant and macrobiotic study center. Ferro also worked for a while with ProBios. He taught various people to make tofu, seitan, and tempeh–but none of the restaurant customers would buy or eat these strange new foods. So Ferro decided to fry them and serve them as a snack, free of charge, before each meal. A Tuscan proverb says that "Even a slipper, if fried, tastes good." In this way people in Florence started to eat these new foods. The restaurant made and served these foods from about 1982 to 1985. Then people who were working in the restaurant moved to another place, became independent, and they started a small food factory named Soyalab. The founder of Soyalab, Matteo Iacovelli, is now the chairman of the Kushi Institute in Milan. Another person who helped a lot on the way was Alfredo Ingannamorte. These people learned how to make tofu and tempeh in Boston. Alfredo studied at the Kushi house in Becket. Matteo worked at a macrobiotic restaurant (Open Sesame) in Brookline Village. Address: Via Pellicceria 6, 50123 Firenze (Florence), Italy. Phone: 055-827 274.

7899. Huang, Hsing-Tsung. 1995. Early history of soybeans and soyfoods in China (Interview). *SoyaScan Notes*, Dec. 28. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The early *jiang* in China was made from meat or fish. The *jiang* used by Confucius was almost surely made from meat and fish. Many of the ancient books were annotated during the Han dynasty in an attempt to explain the meaning of certain words and passages. A very eminent scholar in the late Han dynasty (about 100 A.D.), talking about events in roughly 500 B.C., said that the *jiang* used by Confucius was made from meat and fish.

The soybean was not an important crop in China until the early Han, say 200 to 300 B.C. The soybean is mentioned in the *Book of Odes*, which is the most ancient and most reliable of Chinese books, not as a crop but as a plant that people gathered from the wild. Then is are a series of books that were traditions of the Chou dynasty; these were codified and gathered by about 300 B.C., but in them there are not many references to the soybean. However by the time of the Western (Former) Han (206 B.C. to 8 A.D.) there were references in the literature to cartloads and big urns of *jiang* [Chinese-style miso]; *shi* (fermented fermented black soybeans) was also mentioned many times in the literature. Both these foods had become commodities.

Soy is also found in the Han Tomb No. 1 at Ma-wang-tui (pronounced "ma-wang-DUI"), a big archaeological find in China. A woman ruler was buried here in about 165 B.C. with all the 5-6 major grains, including wheat, barley, rice, 2 kinds of millet, soybean (*shu*), and hemp. Also found in the tomb were several seasonings including "soy sauce (*jiang*), *shi* ('salted darkened beans'), and leaven (*qu*)."

The earliest reference to pasteurization in China concerns pasteurization of wine, around the 11th century, long before the Japanese were pasteurizing shoyu before shipping it to Holland. He is not aware of any early reference to the Chinese pasteurizing soy sauce, but he will look again. However soy sauce is so highly salted that it does not require pasteurization, whereas wine does. The wine was filled into to earthenware jars with a small mouth, which was covered with cloth or leaves, then sealed with mud.

Dr. Huang will travel to China next month (to Foochow, capital of Fujian province) and he hopes to see some of the existing traditional fermentation processes. Soymilk was not an important traditional food in China, but it was becoming important when he traveled there in the 1940s with Dr. Joseph Needham. When they visited northern China, early in the morning people would have a huge iron wok of hot

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soymilk, which they sold for breakfast. Joseph liked the soymilk with bits of *youtiao* (deep-fried bread sticks, W-G *yu t'iao*).

One of the chapters in Dr. Huang's book deals with nutrition in China. The Chinese diet is said to be lacking in calcium. It is well know that for calcium to be absorbed, you need lactose, and the ability to tolerate lactose. Thus, it would be surprising to find higher bioavailability of the calcium in soymilk or tofu. Before the time of Confucius (551-479 B.C.) the Chinese at a lot more animal products than they do now, but the agricultural system developed with the emphasis on grains, less emphasis on animal products, and no emphasis on milk--probably because of the lactose intolerance of the Chinese people. Thus, the Chinese never developed a dairy industry. Mongols are not as lactose tolerant as northern Europeans, but they are heavily dependant on animal milks as a source of food. They get around this problem by converting animal milk into yogurt. This fermentation converts the lactose to lactic acid, which both solves the lactose intolerance problem and extends the life of the product by lowering the pH.

Another interesting problem: Europeans are the only ones who make true cheese, using rennet. The Mongolians and all the pastoral people in Asia rely on various animal milks, including horse's milk to make koumiss, and they even make a type of cheese that is sort of like cottage cheese, coagulated by acid. Dr. Huang thinks the discovery of rennet is one of those major, accidental discoveries that is very rare. If you wash an animal stomach carefully before using it to store milk, that will wash all the rennet away. Another such major discovery is the Chinese discovery of *chu* or koji.
Address: 309 Yoakum Parkway #403, Alexandria, Virginia 22304.

7900. Straus, Karen Cope. 1995. At home with the McCartneys: Share the season's best with Paul and Linda. *Vegetarian Times*. Dec. p. 41-45.
• ***Summary:*** This is largely a selection of lacto-vegetarian recipes from two of Linda McCartney's popular vegetarian cookbooks. Ingredients include TVP granules, soymilk, and soy sauce. Her first cookbook, *Linda McCartney's Home Cooking*, remains "one of the best-selling vegetarian cookbooks published to date." Several nice color photos show Paul and Linda.

7901. **Product Name:** [Kikko Soy Sauce--Seasoned with Ginger and Garlic].
Foreign Name: Kikko Ajoikion.
Manufacturer's Name: Kikko Corporation S.A.
Manufacturer's Address: Calle Robert Fulton No. 115, Lima 3, Peru. Phone: 326-1358 or 326-0955.
Date of Introduction: 1995.
Ingredients: Shoyu, ginger, garlic, and spices.
Wt/Vol., Packaging, Price: 350 ml (11.84 fl oz.) plastic bottle.
How Stored: Shelf stable.
New Product–Documentation: Company history form filled out and label sent by Marco Kamego, a present owner of Kikko Corporation S.A. 1997. Dec. 29. Label: 7.5 by 2.75 inches. Full-color front panel on tan and white. Color illustration of an onion, carrot, tomato, lettuce, and potato. "Soy-sauce seasoning or dressing enriched with natural ginger and garlic."

7902. **Product Name:** [Kikko Shoyu: Premium Soy Sauce].
Foreign Name: Kikko Shoyu. Salsa de Soya.
Manufacturer's Name: Kikko Corporation S.A.
Manufacturer's Address: Calle Robert Fulton No. 115, Lima 3, Peru. Phone: 326-1358 or 326-0955.
Date of Introduction: 1995.
Ingredients: Soybeans, wheat, salt, sugar, caramel color, water, preservative.
Wt/Vol., Packaging, Price: 350 ml (11.84 fl oz.) plastic bottle.
How Stored: Shelf stable.
New Product–Documentation: Company history form filled out and label sent by Marco Kamego, a present owner of Kikko Corporation S.A. 1997. Dec. 29. Label: 7.5 by 3 inches. Full-color front panel on red and white. Color illustration of a turkey and various vegetables. "Concentrated savor, color, and aroma."

7903. **Product Name:** [Kikko Mensi Sauce].
Foreign Name: Kikko Salsa Mensi.
Manufacturer's Name: Kikko Corporation S.A.
Manufacturer's Address: Calle Robert Fulton No. 115, Lima 3, Peru. Phone: 326-1358 or 326-0955.
Date of Introduction: 1995.
Ingredients: Soybean paste, shoyu, garlic, sugar, and wine vinegar.
Wt/Vol., Packaging, Price: 350 ml (11.84 fl oz.) plastic bottle.
How Stored: Shelf stable.
New Product–Documentation: Company history form filled out and label sent by Marco Kamego, a present owner of Kikko Corporation S.A. 1997. Dec. 29. Label: 7.5 by 2.75 inches. Full-color front panel on tan-orange and white. Color illustration of a turkey on a plate surrounded by vegetables. "Sauce for seasoning all types of meats. The ideal sauce for baked turkey" (*Salsa para aderezar todo tipo de carnes. El Adobo ideal para el pavo al horno*).

7904. **Product Name:** Rising Sun Tofu.
Manufacturer's Name: Olive Tree Works.
Manufacturer's Address: 6713 New Hampshire Ave., Takoma Park, MD 20912. Phone: 301-270-5110.
Date of Introduction: 1995.
How Stored: Refrigerated.

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New Product–Documentation: Talk with Yaron Semititsky of Olive Tree, Inc. 1997. July 24. Their fourth soy product, Rising Sun Tofu, was launched in 1995. It is similar to Savory Tofu but with East Asian seasonings, such as ginger and soy sauce.

7905. **Product Name:** San-J Sweet & Tangy: Polynesian Glazing & Dipping. Gluten Free.
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 804-226-8333.
Date of Introduction: 1995.
Ingredients: Honey, water, apple juice concentrate, tamari soy sauce (water, soybeans, salt, alcohol), apple cider vinegar, pineapple juice concentrate, tomato paste, rice vinegar, onion juice (onion juice, vinegar salt), arrowroot, garlic powder, canola oil, xanthan gum, spice.
Wt/Vol., Packaging, Price: 10 fl oz glass bottle.
How Stored: Shelf stable.
New Product–Documentation: E-mail from Misako Binford of San-J. 2012. May 8. An attached Excel spreadsheet gives that date each San-J product was first sold commercially, starting in 1987. This product was first sold in 1995.

Two labels sent by Misako Binford of San-J International. 2012. May 14. Black, red, white, and blue on yellow. Outline of two bended palm trees. The label now reads as shown above. One logo on the front panel: Certified Gluten Free.

7906. Alexander, Victoria, Harris, Genevieve, Dyson, Sharon. 1995. A taste of Australia: the Bathers Pavilion cookbook. Berkeley, California: Ten Speed Press. xiii + 122 p. See p. 36, 72, 78. Illust. (color, incl. photos by Rodney Weidland). 27 cm.
• ***Summary:*** Bathers Pavilion is a restaurant fronting the beach in Sydney, New South Wales, Australia. "Thick, sweet soy sauce (kecap manis) is mentioned on pages 36, 72-73, and 78-79. In the headnotes to the recipe for "Marinated pork fillet with peanut sauce" we read (p. 72): "Kecap manis is a thick, sweet soy sauce from Indonesia. It is sweetened with palm sugar and flavoured with star anise and salam leaves (a little like bay leaves). Do not substitute for kecap manis as no other soy sauce will produce the same results."

Tofu is mentioned on pages 18, 30, and 45.

On pages 78-79 is a recipe for "Venison, tamarind and tempe hot pot," whose headnote begins: "Tempe is made from the remaining soy bean solids after they have been pressed to make soy milk. The solids are then compressed and fermented. Tempe has a wonderful nutty flavour..." Note: This is a description of okara tempe; most tempe is made from whole, dehulled soybeans rather than from okara.

The word "soy" is used to refer to soy sauce on pages 30 (light soy sauce), 42 (Japanese soy sauce), 43, and 52 (dark soy sauce). Address: 1 Owner, The Bathers' Pavilion.

7907. Hayot, Roger, Linderman, Sheila. 1995. Dinner at the Authentic Cafe. New York, NY: Macmillan. 246 p. See p. 14. Illust. 24 cm.
• ***Summary:*** Authentic Cafe is located in Los Angeles, with Roger Hayot as head chef. It is on the site of his father's former butcher shop. Many of the recipes as meatless, except that they might call for chicken stock.

In the glossary (p. 14): "Ketjap manis: This is a thick, sweet soy sauce (made from soy sauce and molasses) from Indonesia. It's great for dipping. Ketjap manis is available in Asian groceries."

Soy is mentioned on 10 pages, incl. p. 14, 17, and 65. Soy sauce is mentioned on 10 pages, incl. p. 14, 17 (glossary definition), 48 (Thai chicken satay, with ketjap manis), 64-65 (Soy-cilantro sauce), and 140. Address: Los Angeles, California.

7908. Herbst, Sharon Tyler, ed. 1995. The new food lover's companion: Comprehensive definitions of over 4000 food, wine, and culinary terms. 2nd ed. Hauppauge, New York: Barrons. xvi + 715 p. 18 cm. 1st ed. published 1990. Barron's Cooking Guide. [325* ref]
• ***Summary:*** This carefully researched and well written dictionary of food terms also contains 21 useful appendixes and a good bibliography. All enquiries should be directed to: Barron's Educational Series Inc., 250 Wireless Blvd., Hauppauge, New York 11778.

Soy and related entries can be found under the following headings: Adzuki bean (also azuki), agedashi, cheese–imitation cheese (generally includes tofu and lecithin), fermented black beans (also called Chinese black beans and salty black beans), flour–gluten flour, kecap manis / ketjap manis, kudzu, milk (see soy milk), miso, natto, okara, queso fresco (also called queso blanco), quinoa, seitan, shoyu (Japanese for soy sauce), soybean, soybean oil, soy flour, soy milk, soy pea (see soybean), soy sauce (light soy sauce, dark soy sauce, Chinese black soy, tamari), tempe or tempeh, tofu (also called soybean curd and bean curd).

7909. Holzen, Heinz Von, Arsana, Lother. 1995. The food of Indonesia: Authentic recipes from the spice islands. Singapore: Periplus Editions; Clarendon, VT: Distributors, United States, Charles E. Tuttle. 120 p. Introduction by Wendy Hutton. Illust. (color photos). Index. 21 x 23 cm. Series: Periplus World Cookbooks.
• ***Summary:*** Recipes by Heinz von Holzen & Lother Arsana; food photography by Heinz von Holzen. Facing each recipe is a full-page glossy color photo. One recipe per page (usually). For each recipe, the Indonesian name is given first, in bold caps, above the English equivalent. The section titled "Indonesian ingredients" (p. 34-39) includes soy sauce (the two types are thick sweet soy sauce–*kecap manis*, and the

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thinner, saltier light soy sauce–*kecap asin*), and tempeh–a Javanese creation.

Soy related: *Sambal kecap*–Sweet soy sauce sambal (with 2 tablespoons sweet soy sauce, p. 44). *Sambal tauco*–Salted soy bean sambal (with ½ cup salted soybeans {tauco}, p. 45). *Gulai tempeh & Sambal goreng tempeh*–Tempeh stew (with 4 fermented soy cakes {tempeh}) & Hot spicy fried tempeh (with 2 fermented soybean cakes, p. 68).

Note: This book calls for an unusually large proportion of meat, fish, and poultry.

7910. Holzen, Heinz Von, Arsana, Lother. 1995. The food of Bali: Authentic recipes from the island of the gods. Singapore: Periplus Editions. 132 p. Introduction by Wendy Hutton. Illust. (color). Index. 20 cm. Series: Periplus World Cookbooks.

• ***Summary:*** Tempeh is mentioned in the text on pages 6, 15 and 16–but it is not mentioned in the glossary of ingredients (p. 25-33) and is not called for in any recipes. The Glossary (p. 35) says that the two types of soy sauce used are "sweet soy sauce (*kecap manis*), and "thin soy sauce (*kecap asin*). As an alternative to sweet soy sauce use dark black Chinese soy sauce, and add brown sugar to sweeten it.

Recipes by Heinz von Holzen & Lother Arsana; food photography by Heinz von Holzen. Rich in graphics; poor in content. Address: 1-2, Grand Hyatt Bali.

7911. Kikkoman International, Inc. 1995. Kikkoman industrial products (Brochure). San Francisco, California. 6 p. 28 cm.

• ***Summary:*** On the cover of this glossy color brochure is a 12 oz bottle of Kikkoman all-purpose soy sauce against a textured beige background. "The world's leading soy sauce manufacturer offers two lines of naturally brewed soy sauce for the industrial market: one liquid and one dehydrated. And that means a world of natural flavor solutions for you." For each product is given the product name and code, description, benefits / applications, and ingredients.

The liquid products are: Soy sauce. Preservative-free soy sauce. Lite soy sauce. Less salt soy sauce. Teriyaki sauce. Premium soy sauce–PTN (Higher total nitrogen than regular soy sauce. Ingredients: Water, soybeans, wheat, and salt).

The dehydrated products are: Dehydrated soy sauce–SN-1 (spray dried). Dehydrated soy sauce–KS-32. Dehydrated soy sauce–RS-50. Dehydrated teriyaki sauce. Natural flavor enhancer. Dehydrated soy sauce–HN. Granulated soy sauce.

On the rear cover is a description of naturally brewed soy sauce, and a comparison of it with non-brewed soy sauce (which "is often opaque with a harsh, overpowering flavor and pronounced chemical aroma"). A table lists other industrial products from Kikkoman. Address: P.O. Box 420784, San Francisco, California 94142-0784. Phone: (415) 956-7750.

7912. Nakano, Makiko, Smith, Kazuko. 1995. Makiko's diary: a merchant wife in 1910 Kyoto. Translated with Introduction and Notes by Kazuko Smith. Stanford, California: Stanford University Press. xii + 256 p. With introduction and notes by Kazuko Smith. Illust. Maps. Index. 24 cm. [100*+ ref]

• ***Summary:*** This diary was written by Makiko Nakano (1890-1978). A somewhat blurry photo of her (taken ca. 1910) faces the title page. Sample pages from her actual diary are shown occasionally (see p. 56). She is married and her parents also both live in Kyoto. Tofu and miso were a regular part of her family's diet.

Jan. 1 [1910] (p. 57). Jan. 1, New Year's day. Black [soy] beans (*kuromame*) are served for lunch.

Feb. 1 (p. 81): "Because it was a cold night with a howling wind outside, I decided it would be a good chance to make frozen tofu. I took the tofu I bought for this purpose out onto the big roof, poured hot water over it, and left it there overnight. It was bitter cold. I thought my ears were going to freeze." Endnote (p. 82): "5. *Kôya-dôfu* or *shimi-dôfu*. Freezing coarsens the tofu, which then takes on a distinctive flavor when cooked in a mixture of soy sauce and sugar."

"The family custom was to serve the same menu on the first day of each month." That menu was miso soup, salad of grated radish and carrots, and broiled mackerel."

Feb. 2. As soon as she awoke in the morning, she thought about the tofu she had left outside the previous night. She hurried up to the roof in spite of the cold. "It was frozen solid. In fact it was so thoroughly frozen and stuck to the board that pouring hot water over it did not help much to loosen it." She was finally able to dislodge it by pounding it with a hammer for some time. She cooked it with *katsuo-dashi* right away and served it to her husband for breakfast. He complained about it (p. 82).

On Feb. 2 she again put out tofu on the roof to freeze. First thing next morning she rushed up to se it. "It was beautiful! I soaked it in hot water first, then cooked it in soy sauce, *sake*, and sugar. It was perfect and he liked it! My experiment was a success."

Kôya-dôfu is mentioned on page 93. Regular tofu is mentioned on pages 10, 24, 25, 60, 68, 87, 89, 93, 117, 227. Soy sauce is mentioned on pages 82, 83, 225, and 252. Miso is listed on about 21 different pages (see index). Address: Kyoto, Japan.

7913. Pankey, Susan M. 1995. Why the brown bean was blue: The story of a soybean frown turned upside down. 2nd ed. Nebraska: Nebraska Foundation for Agricultural Awareness. 32 p. Illust. by Libby Mortensen. No index. 23 cm. 1st ed. 1992.

• ***Summary:*** This is a children's book, written in rhyming verse, about the many things that can be made from

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soybeans. The soybean is "blue" (unhappy) because people don't understand all the great things that it can do. From soybeans we can make soybean oil, mayonnaise, margarine, soap and shampoo, insecticides, varnish and paint, lecithin (used in medicines and chocolate bars), soy flour, hot dogs, soy sauce, tofu, soybean meal for livestock feeds, soy ink, glue.

Also describes how soybeans are grown and crushed to yield soybean oil and meal. This edition is printed with soy ink on recycled paper. Both the first edition (1992) and this second edition were published by the same Nebraska Foundation for Agricultural Awareness with funding from the Nebraska Soybean Board. Project coordinated by Ellen Hellerich, Nebraska Agriculture in the Classroom (Lincoln, Nebraska). Address: Upstate New York

7914. Sass, Lorna J. 1995. Lorna Sass' complete vegetarian kitchen: Where good flavors and good health meet. New York, NY: Hearst Books. xiv + 492 p. Index. 26 cm. [35+* ref]

• ***Summary:*** First published in 1992 as *An Ecological Kitchen: Healthy Meals for You and the Planet* (William Morrow–which see). This innovative vegan cookbook offers 250 cholesterol-free recipes. It features a complete glossary of wholesome ingredients for stocking the vegan pantry (no meat, dairy, or eggs). Address: New York City.

7915. Whitley County Historical Society (Indiana). 1995. Whitley County and its families, 1835-1995. Paducah, Kentucky: Turner Publishing Co. 232 p. See p. 21. Illust. 1 map. 29 cm. *

• ***Summary:*** The entry for "Shinzo Ohki" (p. 21) states: "Shinzo Ohki died at age 84 just after beginning a game of golf–a game he loved.

"Ohki was born in Japan in 1883, one of nine children. He studied English and went to night school, saving enough money to come to the United States. He became acquainted with Mr. and Mrs. William Distin of Columbia City, Indiana, and was employed in their home." In 1907 he graduated from Columbia City High School, and in 1911 from New York University.

Ohki founded the Oriental Show-You Co., in Columbia City, Indiana, "for the production of oriental sauce [soy sauce] and chop suey. He sold the company in 1962 to Beatrice Food Company of Chicago [Illinois]. During its operation there, the company distributed its products throughout the Midwest and employed many people.

"Ohki was a trustee and elder in the Columbia City Presbyterian Church and was an active Rotarian."

7916. Wibisono, Djoko; Wong, David. 1995. The food of Singapore: authentic recipes from the Manhattan of the East. Boston, Massachusetts and Singapore: Periplus. 120 p. See p. 104. Introduction by Lee Geok Boi. Illust. (color by Luca Invernizzi Tettoni). Map. Index. 20 x 23 cm.

• ***Summary:*** In the section on "Poultry," the recipe for "Duck in fragrant soy sauce" (p. 104) has a headnote which begins: "A Teochew favorite sometimes made with goose, this is a simple but very tasty way of simmering duck in soy sauce flavored with 'black' spices (cinnamon, star anise and cloves)." The ingredients include: "4 cups light soy sauce, 3 tablespoons black soy sauce."

Note 1. This is the earliest English-language document seen (April 2012) that contains the term "fragrant soy sauce," which refers to a kitchen preparation rather than to a commercial product."

Note 2. Teochew food, from southern China, is characterized by steaming, light soups and fish dishes (p. 15).

Bean curd is mentioned on pages 10, 27, 48 (dried bean curd), 52 (firm bean curd), 66, 68.

Black soy sauce is mentioned on pages 14, 33, 39, 42, 52, 58, 64, 72, 82, 86, 98, 102, 104. Note: This appears to be a commercial product.

Deep-fried beancurd (*tau foo pok*) is mentioned on page 27.

Note: This is the earliest English-language document seen (May 2012) that contains the term *tau foo pok*.

Fermented bean curd (*nam yee*) is mentioned on page 27.

Soy sauce is mentioned throughout this book, including "light soy sauce" (which is saltier and paler than the dark black variety), "sweet soy sauce" (Indonesian, p. 33 [probably *kecap manis*]), and "black soy sauce."

Yellow bean sauce is mentioned on page 32. Address: 1. Executive Chef, 2. Chef responsible for Chinese cuisine. Both: The Beaufort Sentosa, Singapore.

7917. Agar, Anne. 1995? Good taste guide cookery book. Lea and Perrins. Worcester, England: Lea & Perrins. 28 p. Illust. (color). 22 cm. *

• ***Summary:*** Recipes that call for Lea & Perrins' Worcestershire Sauce. Includes a recipe for Bloody Mary ice cream. Address: New York, NY.

7918. Kushi Macrobiotics Corp. 1996. Kushi Cuisine order form. Stamford, Connecticut. 2 p. Revision #3. Jan. 19.

• ***Summary:*** This 1-page (back-to-back) photocopied order form lists 26 meals, seasonings, and snacks, which range in price from $4.39 to $0.99. Soy-related items include: Buckwheat noodles (soba style) + soy-ginger sauce (4 servings, $4.39). Quick brown rice + red azuki beans & onions (4 servings, $2.59). Instant miso soup + garden & sea vegetables + shiitake mushrooms (12 servings, $3.99). Instant chicken-free vegetarian noodle soup + tofu & mushrooms (6 servings, $3.99). Traditional premium (shoyu style) soy sauce (10 oz, $2.99). Wheat-free premium (tamari style) soy sauce (10 oz, $3.59). Postage for $0 to $10.00 is $4.95. Address: P.O. Box 1434, Stamford, Connecticut

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06904. Phone: 1-800-200-4184.

7919 **Product Name:** [Mansan Tamari Shoyu].
Foreign Name: Tezukuri osashimi tamari.
Manufacturer's Name: Corti Brothers (Marketer-Distributor). Made in Aichi prefecture, Japan, by Mansan Shoten.
Manufacturer's Address: Corti Bros., 5810 Folsom Blvd., Sacramento, CA 95819. Phone: 916-736-3800.
Date of Introduction: 1996, January.
Ingredients: Whole soybeans, well water, salt, sake [to preserve freshness].
Wt/Vol., Packaging, Price: 300 ml glass bottle. Retails for $7.99 (Jan. 1996).
How Stored: Shelf stable, refrigerate after opening.
Nutrition: Per 1 tablespoon (15 ml): Sodium 890 mg. Calories 10. Protein 1 gm.
New Product–Documentation: Sample (product with Label) sent by Darrell Corti of Corti Brothers in Sacramento. Corti Brothers Newsletter. 1996. Winter. p. 5-6. "The Mansan company has been making shoyu since 1874. Both a sake producer and a shoyu brewer, the plant outside Nagoya is a remarkable amalgam of traditional equipment and technology and modern science." Darrell was the first Westerner to visit the plant. He had to remove his shoes and put on clean slippers so as not to introduce foreign microorganisms. "Seeing the battery of enormous cedar casks packed with stones, the daily ladling process, and the scrupulous cleanliness is an extraordinary experience." The processing of this soy sauce takes up to 18 months. Soybean koji is mixed with water and salt, then placed in enormous cedar casks. "A bamboo bucket is inserted into the mash and large flat river stones are piled on top to keep the mash submerged. The fermenting liquid is ladled out of the bucket which acts like a percolator and is poured over the stones daily to trickle down on the rest of the mash, assisting fermentation and concentrating the liquid. With the daily aeration and the long production cycle, the [tamari] shoyu becomes thick and dense. It turns a rich, dark brown color and has an enticing aroma."

Talk with Darrell Corti. 1996. His company started selling this product in Jan. 1996. He visited the factory in Japan in about 1990-91. The company has an excellent laboratory.

7920. GEM Cultures. 1996. Catalog [Mail order]. 30301 Sherwood Rd., Fort Bragg, CA 95437. 10 p. Jan. [4 ref]
• ***Summary:*** New additions include *The Simple Soybean and Your Health*, by Virginia and Mark Messina, and a maple tofu kit. Contents: Soycrafters Section. Tempeh, natto, koji starters, miso, koji, tofu boxes, tofu coagulants (natural nigari, Terra Alba naturally occurring calcium sulfate or gypsum). Books. Bread cultures. Dairy cultures. Tea fungus–Kombucha. Sea vegetables. Kitchen items. Ordering information. Address: Fort Bragg, California. Phone: 707-964-2922.

7921. Lai, Benny. 1996. Dah Chong Hong–A pioneer in using Ontario soybeans. *Canadian Export Soybeans (OSGMB, Chatham, Ontario, Canada)* 9(1):2. Jan.
• ***Summary:*** In the mid-1970s Mr. Lai was working in the Food and Edible Oil Dept. of Dah Chong Hong's head office in Hong Kong. He and co-workers imported 800 bags of Ontario special quality white hilum soybeans into Hong Kong for testing. They distributed the soybeans to more than 30 manufacturers of soybean curds, tofu, soy milk, soy sauce, and other soy products. "The quality was considered not very terrific by most end-users, in terms of 'yield' when manufacturing the soy products, but was acceptable." To further explore development of this imported product, Mr. Lai and Mr. Chi-bun Leung flew to Canada, where they were warmly welcomed and treated Dah Chong Hong's as pioneers. "Since that time Dah Chong Hong has imported Ontario soybeans for the Hong Kong market continuously every month now for more than 20 years. The overall quality of Ontario soybeans has improved over the years, and the quantity has been growing from only one or two containers per month in the mid-1970s, to hundreds of containers per month presently."

In 1984 Dah Chong Hong (Canada) Ltd., a wholly owned subsidiary of the head office in Hong Kong, was established in Vancouver, British Columbia, Canada. "One of our goals is to export more Canadian soybeans to many countries in Asia." The address in BC is: 4211 No. 3 Road, Richmond, BC V6X 2C3. Phone: 604-273-8222. Fax: 604-273-9222. Address: President, Dah Chong Hong (Canada) Ltd., 4211 No. 3 Road, Richmond, BC V6X 2C3, Canada. Phone: 604-273-8222.

7922. Lumen Foods. 1996. Soyfoods never tasted so good! (Ad). *Vegetarian Times*. Jan. p. 95.
• ***Summary:*** Color photos show the labels of five "Heartline Meatless Meats" in Teriyaki Beef Style, Beef Fillet Style, Italian Sausage Style, Chicken Fillet Style, and Ground Beef Style. "29¢. Ask about our new line of unflavored "textured vegetable proteins." A 5 lb. bag costs $4.35 and makes 15 lbs. of "meatless meat." That's $0.29/lb!"

"A proven LDL and triglyceride lowering product as reported in the New England Journal of Medicine."

"Made from pure defatted soy flour, Heartline cooks up in just 10 minutes (just add water!)." A sampler of four 8-oz packets costs $19.95. Each makes about 1 pound. Note: Therefore the cost of the ready-to-eat product is $4.99/lb. "In addition, we'll send you our tenth anniversary, limited edition of The Lumen Book–over 240 pages of facts covering every facet of vegetarianism, 300 scientific studies and research sources, and 60 easy-to-use recipes. This book alone justifies your purchase."

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"Online users: Send orders/messages to: LumenFoods@aol.com. Web users: Catch us at www.lumenfds.com." Address: 409 Scott St., Lake Charles, Louisiana 70601. Phone: 1-800-256-2253.

7923. Soyfoods Center archival collections, from the 1600s ongoing. 1996. Lafayette, California. [6313 ref]
• ***Summary:*** As of 1 Jan. 1996 the Soyfoods Center Archives contains 6,313 unpublished archival documents–mainly correspondence, interviews, photographs, and unpublished manuscripts relating chiefly to the history of soybeans and soyfoods, and to a lesser extent, the history of vegetarianism and natural foods.

Main subject areas include: early history of soybeans and soyfoods; modern soy protein products; soyfoods industry and market; industrial utilization of soybeans; soy pioneers in the U.S., Europe, and worldwide; major U.S. soybean crushers; Seventh-day Adventists worldwide; pioneer U.S. soy protein companies; pioneer U.S. natural food companies and distributors; soybeans, soyfoods, Third World nations, and world hunger; nutritional and medicinal value of soybeans and soyfoods; and soybean production, trade, and marketing.

Document level access is available through the repository's SoyaScan information retrieval system.

Most important specific subject areas: Miso, natural foods, Seventh-day Adventists, soy sauce, soybean, soybean industry, soybean products, soyfoods, soyfoods industry, soymilk, tempeh, tofu, vegetarianism. Address: P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

7924. Hagler, Louise. 1996. Soyfoods cookery: Your road to better health. Summertown, Tennessee: The Book Publishing Co. 160 p. Illust. Index. 21 cm. Introduction by Mark and Virginia Messina.
• ***Summary:*** Contents: Foreword, by Louise Hagler. Introduction, by Mark Messina and Virginia Messina. Introduction, soybeans–a powerhouse of nutrition, soy and cancer (soybeans–a phytochemical factory, genistein and non-hormone cancers, soy and cancer treatment, isoflavones in the diet), soyfoods and heart disease–beyond cholesterol, soyfoods and bone health, soyfoods and kidney disease, menopause, perspective on soyfoods, about the Messinas. Basic soyfoods (glossary): Whole soybeans, fresh green soybeans, soymilk, okara (soy pulp), soymilk powder, soy protein concentrates, soy protein isolates, tofu, freeze-dried tofu, tempeh, textured vegetable protein, miso, soy flour or grits, yuba or bean curd stick or sheet, natto, soy sauce, soy oil, soy lecithin, convenience soyfoods (frozen soyburgers, frozen tamales and burritos, frozen soy hot dogs or wieners, frozen fat-free soy ground meat replacement, frozen soy pizza, tempeh burgers, frozen tofu lasagne, stuffed shells, manicotti, tortellini or ravioli, frozen soy breakfast links or "sausages" or tempeh "bacon," "ground" tofu, meatless chili mixes, meatless burger mixes, soy "cheeses," eggless soy mayonnaise, tofu salad dressings, soy ice creams, frozen pot pies, frozen pocket breads, instant miso soup, eggless soy cake, quick bread, pancake and waffle mixes, liquid soy coffee creamer, smoked or baked tofu). Feeding babies and children soyfoods. Breakfast, brunch & bread. Whole soybeans. Sauces, spreads, dips & dressings. Soup & salad. Main dishes. Desserts. Drinks & yogurt.

No dairy products or eggs are used, honey is called for in some recipes. Optional microwave instructions are sometimes included. Address: Summertown, Tennessee. Phone: 615-964-3571.

7925. Quincannon, Jane. 1996. Sensei Muramoto: A gentle man. *Macrobiotics Today* (*Oroville, California*). Jan/Feb. p. 27-28.
• ***Summary:*** "Sensei" is the Japanese word for teacher. The writer studied and worked with Noboru Muramoto. "This scholarly and energetic man was quiet, humble, and one of the least arrogant persons I have ever known. And the hardest working. Sensei was up at dawn each day to write, study history, science or economics, to weigh grams of Chinese herbs for his teas, to clean his sea salt, produce traditionally fermented foods, and tend his vast garden. His vitality and commitment was inspiring.

"At age 15, Noboro Muramoto met George Ohsawa, the founder of the modern macrobiotic movement, after reading the senior teacher's books on healing. As Sensei tells it, 'I had a very bad condition, was overweight, with Vitamin B deficiency, eye trouble, and always tired. I went to the doctor, got treatment, but never got better. I found George Ohsawa's book. It is amazing what kinds of diseases can be cured just by food.'

"'Immediately I decided to try this diet. Brown rice, miso soup, a pickle–very simple food. Soon I got well. Since that time, I never forgot this diet. At George Ohsawa's classes I learned directly from him, a very interesting person. His subjects were almost always philosophy and principles. I had a great interest in the healing power of food. I was his last student, for a short time, but I still received a big influence.'"

Muramoto "Sensei met Herman and Cornellia Aihara shortly after the 1966 death of George Ohsawa. He first met Michio and Aveline Kushi in 1971, when he was invited to lecture in New York City."

"In 1972, Sensei moved to San Francisco to create, with the Aiharas, the Herb Tea Company" [Rising Sun / Herb-T Company].

"In 1983, Sensei Muramoto, with Lino Stanchich, created Great Life Products Company, in order to manufacture and distribute high quality macrobiotic foods made from his special sea salt. Lino and I had the privilege of working with Sensei for three years making varieties of miso and its by-product, tamari, along with barrels of

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pickled umeboshi plums made with home-grown shiso leaves. Students came to our school, Asunaro, in the hills of Southern California, to study traditional food production and receive Sensei's information and enjoyable teachings... Sensei's dream has been that every macrobiotic household produce such foods as miso, umeboshi, tamari, shoyu, as well as mochi, tofu, tempeh, tekka and other healing, delicious condiments. To that goal he dedicated his life."

"Sensei named his school Asunaro, which is translated from the Japanese to mean 'Tomorrow is perfect.'" "And work he did, up until the last day of this lifetime."

A photo shows Muramoto sensei standing in front of a blackboard, outdoors, at one of the G.O.M.F. French Meadows summer camps. Address: New Jersey

7926. **Product Name:** Thai Peanut Dressing, Honey Curry Dressing, and Tamari Mustard Dressing.
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 804-226-8333.
Date of Introduction: 1996, February.
Ingredients: Tamari-Mustard (4/96): Water, honey, carrot puree, certified organic tamari soy sauce (water, soybeans, salt, alcohol), apple cider vinegar, onion puree, mustard seed, mustard flour, garlic, onion powder, xanthan gum, white pepper.
Wt/Vol., Packaging, Price: 12 oz glass bottle. Suggested retail price: $3.49.
How Stored: Shelf stable.
New Product–Documentation: Press release from Gaugher & Silva. 1996, Feb. 1. "San-J takes a new course and creates unique salad dressings: World's largest tamari soy sauce brewer enters salad market with exotic flavors." "These three all natural low fat and fat free dressings mark San-J's first entry into the salad dressing market." Product with Label sent as a free sample by Gaugher & Silva. 1996, April 20. Back, yellow, orange and gold on white. "Fat free. All natural."

Leaflet (8½ by 11 inches, glossy, color). 1996, Dec. 10. "Lettuce inspire you." Shows Tamari Mustard Dressing being poured from a glass bottle onto salad ingredients in a wok. Also shows bottles of Honey Curry Dressing and Thai Peanut Dressing. The ingredients in each of the 3 dressings are listed on the back of this leaflet. Accompanied by a "Lettuce inspire you" "neckhanger," which contains 4 coupons (for various San-J products) and 4 recipes.

7927. Stacy, Michelle. 1996. Can soy save your life? Michelle Stacy separates hype from hope. *Food & Wine*, Feb. p. 88-94, 96. [1 ref]
• ***Summary:*** This story is based on the study by Dr. James Anderson in the *New England Journal of Medicine* (Aug 1995). "In its cholesterol-busting guise, soy bears an eerie resemblance to another unglamorous food: oat bran."

"A growing body of evidence suggests that it [soy] may help prevent certain cancers, slow calcium loss from bones and moderate symptoms of menopause. Many of these effects, researchers posit, are due to natural substances in soy called isoflavones, which resemble the hormone estrogen and may replicate the many protective effects of estrogen without any of its drawbacks."

But many marketers, including Ronald Paul (president of Technomics, a food-consulting firm in Chicago) believe that soy has a bad image. "It's going to be a marketing challenge to change the public's view of it. I always like to say that if you can make the kiwi a success you can make anything a success." Will companies start to promote their products by advertising on the package "Excellent source of soy!"? Another obstacle to acceptance for some people that tofu reminds them of the health-food era of the 1960s.

Photos show the following packaged soyfoods, each with a brief description: Edamame, soy sauce, soy milk, soy flour, miso, tempeh, roasted soybean powder, tofu. Contains the following recipes, each accompanied by a color photo: Grilled tofu salad. Miso-carrot dressing. Tempeh sandwiches. Chili con tofu. Miso-clam soup. Fried tofu with mushroom gravy. Miso-stuffed chicken. Silken tofu in ginger syrup. A full-page color photo shows green vegetable soybeans in and around one large pod. Small photos show most of the recipes, plus a field of soybeans, and a farmer holding a young soybean plant. Address: Author of *Consumed: Why Americans Love, Hate, and Fear Food* (Simon & Schuster).

7928. Mountain Ark Trading Co.; Macrobiotic Company of America. 1996. The "new" Mountain Ark consumer direct catalog–spring 1996 [Mail order]. 799 Old Leicester Hwy., Asheville, NC 28806. 37 p. March 15. 28 cm.
• ***Summary:*** This is a very comprehensive mail order catalog, with an excellent index, for macrobiotic whole foods, specialty cookware, cookbooks and books on natural healing, futons, furniture, etc. Soy-related products include Aduki beans–precooked, amaranth, amazaki concentrate, amazaki [amazake] pickles, arame (sea vegetable), barley malt, black soybeans, brown rice malt, brown rice syrup, cookbooks, dulse (sea vegetable), fu (dried wheat gluten), green nori flakes, hamanatto, hijiki, Hokkaido azuki beans, Hokkaido black soybeans, Japanese plums (*umeboshi*), jinenjo soba, Job's tears, kamut, kanten bars, kelp granules, kinako, kombu cha, kuzu, miso, mochi, natto miso, natto starter spores, nigari, nori, quinoa, sea palm–California, seaweed sesame shake, seaweed cookbook, seitan, shoyu, soy sauce, tamari, tofu making kit, tofu–dried, wakame. Many of these products are imported from Japan.

Bruce Macdonald of Macrobiotic Company of America acquired the company from Frank Head of Fayetteville, Arkansas, on 1 Feb. 1996. The entire catalog can be viewed on the Internet at http://www.mountainark.com. Address: Asheville, North Carolina. Phone: 1-800-643-8909.

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7929. Nance-Kivell, Greg. 1996. Re: New developments at EarthStar (formerly Chinese Farmhouse Tofu). Letter (fax) to William Shurtleff at Soyfoods Center, March 28 and April 2. 3 p. Typed, with signature on letterhead.

• ***Summary:*** "In Jan. 1991 the Challenge Foundation (a nonprofit organisation working with the disabled) bought a small tofu business called Chinese Farmhouse." It consisted of a plant with one 100 liter gas cooker, two 80-liter round coagulation tubs, one hydraulic press, two 10 kg pressing trays, and a wall-mounted ratchet pressing system.

"A small group of two supervisors and five staff (disabled) made about 60 kg of tofu per day, on a good day, for 3-4 days per week, and cleaned on remaining days. The Foundation had no idea of food manufacturing, but thought that a hands-on manufacturing plant might be suitable for this group of workers. They became alarmed when overheads, establishment and staff costs made the venture non-viable. Workers are paid award-based wages–indexed to the level of disability.

Starting in late 1991, Greg was asked to help, two days a week, as a consultant. They bought more equipment and employed more staff. Sales increased to a break-even point at about 700 kg/week (3,000 kg/month). The overwork fatigue set in and production dropped. Products include: Tofu (hard, organic), tofu (herbed), soya yogurt (3 fruit flavours), soya mayonnaise, and dressings (4 flavours).

At present they are developing an ice cream and related products based on soy yoghurt, and are looking at tamari and shoyu production from whey and okara. Don McCallum is the factory manager.

Enclosed is a label for EarthStar certified organic tofu (750 gm). Note: The letter of 2 April 1996 was handwritten on letterhead with signature–in reply to 7 questions that Shurtleff faxed to Greg about the first letter. Address: Consultant Food Technologist, EarthStar, 5 Kay Street, Murwillumbah (P.O. Box 654), Murwillumbah, NSW 2484, Australia. Phone: (066) 72 5931.

7930. Saekel, Karola. 1996. Tallying the tofu. *San Francisco Chronicle*. April 24. Food section, p. 2, col. 5.

• ***Summary:*** This article gives the results of a special taste panel which rated the flavor and texture of ten brands of tofu sold in the San Francisco Bay Area. The article begins: "Thanks to better nutrition information and the availability of good and easy recipes, tofu has escaped from its niche as a strictly ethnic and/or health fanatics' food and found its way into many Western kitchens."

The rankings: 1. Trader Joe's tofu (19 oz, $0.89 = $0.75/lb!). 2. Hinoichi (14 oz, $1.09). 3. Wo Chong (14 oz, $0.79). 4. Global Protein Foods (12 oz, $1.89). 5. Golden Gate (19 oz, $1.63). 6. Soy Delt (made by Quong Hop & Co., 12 oz, $0.99 to $1.39). 7. Mori-Nu (shelf-stable, 10.5 oz, $0.85 to $1.29). 8. Kikkoman (shelf-stable, 10.5 oz, $1.29). 9. Azumaya (14 oz, $0.98 to $1.19). 10. Wildwood Natural Foods (16 oz, $1.39 to $1.59).

Note: This is the earliest (and only) English-language document seen (April 2003) that uses the term "health fanatics" (or "health fanatic"). Address: Chronicle staff writer.

7931. Spieler, Marlena. 1996. Tofu transformations: Mild-mannered bean curd becomes quick-change artist. *San Francisco Chronicle*. April 24. Food section, p. 1, 5.

• ***Summary:*** In a box above the masthead on the front page of this issue of the Chronicle, is written "Love affair with tofu." The food section of this issue is devoted largely to tofu, and this is the lead article. "Tofu and I go way back. But like all good relationships, this one took a while to blossom into love. In the days when Birkenstocks were chic (the first time around) you could find tofu, but eating it was an ordeal. The dishes were nutritionally correct but seldom delicious. So I ignored tofu and hoped that, along with those clumpy sandals, it would go away.

But over the years, as study after study showed the health benefits of eating soybeans, tofu–one of the easiest, most accessible ways to eat soybeans–could not be ignored." From a friend just returned from Japan, she discovered she liked tofu and the way it made her feel. "It is in vegetarian dishes, however, that tofu shines. At the vegetarian Chinese restaurant Vegi Food, on Clement Street in San Francisco, almost everything comes with tofu in one form or another." She describes many good ways to serve tofu. A large sidebar (p. 1), titled "Quick and easy ideas for adding tofu to your life, gives recipe ideas: Tofu pesto. Tofu, tomatoes and olive plate with nicoise flavors. Tofu and black bean tortas. Super-simple tofu bowl. Mexican tofu and vegetable simmer. Stir-fried cabbage and black mushrooms with tofu and hoisin sauce. Curry tofu in vegetable masala. Sicilian tofu-coffee sweet.

Page 5 contains many enticing full tofu recipes. One sidebar (p. 5) titled "Preparation techniques for a firm, dense texture," describes: Fried tofu. Broiled and dry-baked tofu. Flavored, grilled tofu. Pressed tofu. A second sidebar (p. 5) titled "The many faces of tofu," describes fresh tofu, fried tofu, marinated tofu, and smoked tofu. Photos show tofu dishes from Millennium restaurant. Address: Bay Area food writer, Special to The Chronicle.

7932. Alam, M.S.; Chaudhury, E.H. 1996. Soybean utilization in Bangladesh. In: Alex Buchanan, ed. 1996. Proceedings of the Second International Soybean Processing and Utilization Conference, 8-13 January 1996, Bangkok, Thailand. Bangkok, Thailand: Printed by Funny Publishing Limited Partnership. Distributed by The Institute of Food Research and Product Development, Kasetsart University. xviii + 556 p. See p. 92-95. [6 ref.]

• ***Summary:*** Contents: Abstract. Introduction. Utilization and

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consumption. Conclusion.

"In Bangladesh soybean is not a major oilseed crop but production and utilization have increased in recent years. A government action plan was undertaken for large scale cultivation and product utilization through a Crop Diversification Programme. The main idea of the programme is to alleviate protein calorie malnutrition from cereal-based diets in Bangladesh."

Most of the soybean grown in Bangladesh is used as feed by the poultry and cultivated fish industries. Some soyfood products, such as "soybread, soybiscuit, soyflour, soysauce, noodles, chanachur and tofu," as well as some confectionery beverages, have started to be prepared by some private food companies and are already on the market.

Cultivation of soybean in Bangladesh started when a non-government organization (NGO) named Mennonite Central Committee began demonstrations with farmers in the early 1970s. Research [other than that conducted by MCC] started in 1975 when a Coordinated Soybean Research Project was undertaken by the Bangladesh Agricultural Research Council (BARC).

Fig. 1 shows approximate soybean acreage in Bangladesh (1975-1993). This acreage has increased steadily from less than 100 acres in 1975 to about 2,200 acres in 1988; then it jumped suddenly to about 4,700 acres in 1989, increasing to about 6,200 acres in 1993.

There is presently in Bangladesh a high interest in soybean production and utilization, although utilization has been a problem in the past. "The general human food use is limited, due mostly to food taboos."

Most people in Bangladesh consume soybean oil in their daily dishes because of its high quality and low price compared to traditional mustardseed oil. Soybeans grown in Bangladesh do not have their oil extracted. They are used for feed and food. Address: Oilseed Research Centre, Bangladesh Agricultural Research Inst., Joydebpur, Gazipur 1701, Bangladesh.

7933. Chansa-Ngavej, Kanjana, Niyomrit, Sutthirux, Vethchagarun, Siripen. 1996. Halophilic protease-producing lactic acid bacteria as starter culture in soy sauce fermentation. In: Alex Buchanan, ed. 1996. Proceedings of the Second International Soybean Processing and Utilization Conference: 8-13 January 1996, Bangkok, Thailand. Bangkok, Thailand: Printed by Funny Publishing Limited Partnership. Distributed by The Institute of Food Research and Product Development, Kasetsart University. xviii + 556 p. See p. 288-90. [4 ref.]

• ***Summary:*** "Abstract: From 1993-1995 our research has focused on a novel process of utilizing halophilic protease-producing lactic acid bacteria as starter culture in the moromi stage of soy sauce fermentation." The goal of the research is to increase the protein content of soy sauce for local consumption and for export.

One traditional way to preserve soybeans is to transform them into soy sauce by fermentation, using the mold *Aspergillus oryzae*.

Two photos show transmission electron micrographs of a lactic bacterial isolate (LAB 1.1) grown in two different media. Address: 1-2: Dep. of Microbiology, Faculty of Science, Chulalongkorn Univ., Thailand; 3: Scientific and Technological Research Equipment Centre, Chulalongkorn Univ., Phya Thai Road, Bangkok 10330, Thailand.

7934. Goulart, Frances Sheridan. 1996. Oh, soy! *Fit* (*New York*). March/April. p. 77-79.

• ***Summary:*** On the section titled "A nutritional wonder," the authors notes that soymilk has 15 times more iron than dairy milk, 50% less fat, and no cholesterol. Tofu is one of the two best sources of calcium (yogurt is the other) recommended by the Osteoporosis Foundation for meeting adult calcium needs (1,000 mg/daily). One 4-oz. serving of tofu provides twice as much calcium as one cup of plain yogurt. Soybeans provide the antioxidant vitamins A and E.

A sidebar titled "Your soy shopping list" gives brief definitions of tofu, tempeh, miso, natto, soy milk, soy cheese, soy sauce, and textured vegetable protein (TVP). Address: Connecticut.

7935. Husin, Adinan; Ahmad, Hasimah Hafiz. 1996. Soybean as a consistent industrial resource. In: Alex Buchanan, ed. 1996. Proceedings of the Second International Soybean Processing and Utilization Conference: 8-13 January 1996, Bangkok, Thailand. Bangkok, Thailand: Printed by Funny Publishing Limited Partnership. Distributed by The Institute of Food Research and Product Development, Kasetsart University. xviii + 556 p. See p. 497-507. [30 ref.]

• ***Summary:*** Contents: Abstract. Introduction. Processing of soybean. Food uses of soybean. Processing of soybean oil. Processing of protein products. Flours, protein concentrates, protein isolates, textured protein products. Unfermented soy products: Soy curd/tofu, soymilk, snacks. Fermented products: Tempe, soy sauce, cheese (Commercial cheese alternatives claim to taste, melt, and stretch like regular cheese. Soy cheese now comes in Jalapeno Jack style, Cheddar style, mozzarella style, Garlic-herb style, and Monterey Jack style). Non-food uses ("Soy oils are used in non-food applications such as in the preparation of soaps, paints, varnishes, resins, plastics, lubricants and agrochemicals"). Promoting the use of soybean. Conclusion. Address: Food Technology Research Centre, MARDI, G.P.O. Box 12301, 50774 Kuala Lumpur, Malaysia.

7936. Leelawatcharamas, Vichien. 1996. The effect of soybean type on soy sauce production. In: Alex Buchanan, ed. 1996. Proceedings of the Second International Soybean Processing and Utilization Conference: 8-13 January 1996, Bangkok, Thailand. Bangkok, Thailand: Printed by Funny

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Publishing Limited Partnership. Distributed by The Institute of Food Research and Product Development, Kasetsart University. xviii + 556 p. See p. 183-88. [7 ref] Address: Dep. of Biotechnology, Faculty of Agro-Industry, Kasetsart Univ., Bangkok, 10900, Thailand.

7937. Nakajima, Mitsutoshi; Snape, Jonathan B.; Reddy, K. Kondal; Nabetani, Hiroshi. 1996. Application of membrane technology to soybean processing. In: Alex Buchanan, ed. 1996. Proceedings of the Second International Soybean Processing and Utilization Conference: 8-13 January 1996, Bangkok, Thailand. Bangkok, Thailand: Printed by Funny Publishing Limited Partnership. Distributed by The Institute of Food Research and Product Development, Kasetsart University. xviii + 556 p. See p. 508-14. [15 ref]
• ***Summary:*** The various types of membrane technology include ultrafiltration (UF), microfiltration (MF), nanofiltration (NF), electrodialysis (ED), and reverse osmosis (RO).

Contents: Abstract. Introduction. Soybean oil processing. Solvent recovery (by reverse osmosis), degumming (UF membranes can be used to remove phospholipids from soybean oil in hexane), lipid separations (separation of tri-, di-, and mono-glycerides and fatty acids from soybean oil by membrane technology), removal of contaminants (such as nickel catalysts from hydrogenated oils), removal of pigments (pigments in soybean oils include chlorophyll, carotenoids, xanthophyll, and their derivatives, use of expensive bleaching earth might be eliminated), wastewater treatment (a typical soybean oil extraction plant {1000 tonnes/day} generates 1,000 cubic meters of waste water each day; each liter contains 100 mg of suspended solids). Soybean protein processing and Beta-amylase production. Soybean saccharides processing, soysauce and other seasonings production. Conclusions.

Membrane technology has been widely accepted in many separation processes, including bioseparation. Although only a few industrial membrane processes have been installed for soybean processing, membrane technology has many potential applications in this broad field. One of the main advantages of membrane technology over conventional processing operations is that much lower temperatures can be used. This leads to large saving in energy costs associated with heating, and minimizes the thermal damage to heat-sensitive soybean components. Figure 1 shows how soybean oil might be processed using MF, UF, NF and RO purification near the beginning of the process, and nitrogen with gas separation membrane between the "refined soybean oil" and "packed oil" stages.

Ultrafiltration can be used to remove low molecular substances such as phytic acid. "When soy milk was processed by UF diafiltration, 86% of the oligosaccharides were removed," and the soymilk quality was improved because off-flavors were reduced (Asahi Kogyo Group, 1987). The Kibon [Kibun] Group (1987) has used UF to concentrate soymilk. Soybean has high Beta-amylase activity, and soybean whey has been used for Beta-amylase production. Recently a new industrial plant for Beta-amylase production that uses defatted soybean meal has been installed (Nomura et al. 1994). (p. 512)

Note: This is the earliest document seen (March 2002) that uses the term "nanofiltration" in connection with soy. Address: 1&4. National Food Research Inst., MAFF, Tsukuba, Ibaraki, Japan 305; 2. Nippon Lever B.V., Shibuya, Tokyo, Japan 150; 3. AP Agricultural Univ., Hyderabad, India.

7938. Nguyen, M.H.; Hicks, P.A. 1996. Australian membrane technology for soybean processing. In: Alex Buchanan, ed. 1996. Proceedings of the Second International Soybean Processing and Utilization Conference: 8-13 January 1996, Bangkok, Thailand. Bangkok, Thailand: Printed by Funny Publishing Limited Partnership. Distributed by The Institute of Food Research and Product Development, Kasetsart University. xviii + 556 p. See p. 534-39. [6 ref]
• ***Summary:*** The most common membrane technology processes are microfiltration (MF), ultrafiltration, reverse osmosis (RO–also known as hyperfiltration, HF), and electrodialysis. Contents: Abstract. Introduction. Principles. Simple applications. Ultrafiltration membrane as a membrane reactor. Potential applications: Microfiltration of process water, ultrafiltration of soy whey, nanofiltration for soy whey recovery, advanced applications (counterdiffusion for the desalting of soysauce {fig. 3}, microfiltration, ultrafiltration, osmotic distillation). Address: 1. Senior Lecturer, Univ. of Western Sydney, Hawkesbury, Australia; 2. Agricultural Engineering/Agro Industry Officer, RAP, FAO of the UN, Bangkok, Thailand.

7939. *Soyafoods* (*ASA, Europe*).1996. Kikkoman to build European production plant. 7(1) 2. Spring.
• ***Summary:*** Kikkoman, the world's largest maker of soy sauce, plans to built its first European plant in Hoogezand, the Netherlands. Work is scheduled to start in July 1996 with a completion date of March 1998. The plant will have a capacity of about 4 million liters/year. Kikkoman currently imports about 20 million bottles of soy sauce to the European market from its plant in Singapore.

But Kikkoman may face some new competition. A Japanese company named Wadakan has announced that it also plans to make soy sauce in the Netherlands, in Zoetermeer, starting in Nov. 1996, with initial production of 10 million liters/year.

Kikkoman also has plans to build a second plant in the United States, to complement their existing plant at Walworth, Wisconsin.

7940. *Soyafoods* (*ASA, Europe*).1996. New soya products at

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FiE '95. 7(1):6-7. Spring.
• ***Summary:*** "Every year the Food Ingredients Europe Exhibition seems to get bigger and bigger, with more exhibitors and more visitors." Last year's FiE, held 7-9 November 1995 in Frankfurt, Germany, was no exception, and many soy products–especially soy sauces and related seasonings–were on display.

Miwon Co. Ltd. (Seoul, Korea) has developed a range of ingredients under the brand name SoyaDeli. Products include FiberPro, PeptiPro, FlavorPlus, and FlavorBase.

Kikkoman Trading Europe GmbH (Heerdter Lohweg, Germany) introduced FVP Paste, made by enzymatic hydrolysis and concentrated in a vacuum.

Wan Ja Shan International (Middletown, New York) is one of the largest makers of naturally brewed soy sauce and Oriental sauces in the USA. Their products include soy sauce, preservative-free soy sauce, stir-fry sauce, hoisin sauce, teriyaki sauce, tamari soy sauce, dehydrated soy sauce, dehydrated teriyaki sauce, and clear soy sauce.

Ajinomoto Europe Sales GmbH (Hamburg, Germany) was selling San-J Tamari in both liquid and dried forms.

Nikken Foods (Tokyo, Japan) is a large maker of natural food flavors. Exported mainly in powdered form, these include a wide array of soy sauce, natural flavor enhancers, and other fermented products, including white miso powder and red miso powder.

Inproba BV (Baarn, Netherlands) offers a wide selection of about 160 Oriental products, both at retail and to the food industry. These include various soy sauces and other soy products, and they can also develop custom recipes for their customers.

Upcoming FiE exhibition and conferences: 1996 Nov. 12-14 at Paris, France; 1997 at London, UK; 1998 at Frankfurt, Germany.

7941. Tyler, Jim; Neville, Jan. 1996. Wellspring Natural Food Co. Mail order catalog. Amherst, Massachusetts: Wellspring. 32 p. 28 cm.
• ***Summary:*** This is the first issue of this catalog, and Wellspring started in 1996. Soy-related products include Miso, shoyu, black soybeans (from Hokkaido, Japan), yellow soybeans (organic), azuki beans, snow-dried tofu, kuzu, miso ramen, kinako, natto miso chutney, tekka miso, soymilk, and amasake.

Jim has been a macrobiotic teacher and counselor since 1975-76 and Jennifer was a chef at the Kushi Institute. Main competitors include Gold Mine and other such companies. This catalog is service oriented, easy to use, and more than 80% of the products have lower prices than the competition. Address: P.O. Box 2473, Amherst, Massachusetts 01004. Phone: 1-800-578-5301.

7942. Wang, Zeyuan, Yue, Shaoxian. 1996. Improved quality soybean soysauce using grain amaranth. In: Alex Buchanan, ed. 1996. Proceedings of the Second International Soybean Processing and Utilization Conference: 8-13 January 1996, Bangkok, Thailand. Bangkok, Thailand: Printed by Funny Publishing Limited Partnership. Distributed by The Institute of Food Research and Product Development, Kasetsart University. xviii + 556 p. See p. 245-47. [1 ref]
Address: 1. Agriculture Bureau, Meigu County, Sichuan Province, China; 2. Inst. of Crop Breeding and Cultivation, Chinese Academy of Agricultural Sciences, Beijing 100081, China.

7943. DeAngelis, Lissa; Siple, Molly. 1996. Recipes for change: Gourmet wholefood cooking for health and vitality at menopause. New York, NY: Dutton Signet, A Div. of Penguin Books USA Inc. xvi + 400 p. May. Index. 25 cm. [34* ref]
• ***Summary:*** In the upper right corner of the front cover we read: "Feel great without hormone replacement therapy!" This is a book, with a natural foods and macrobiotic slant, about using foods in place of hormone therapy to help deal with nine problems that occur around the time menopause: Premenstrual syndrome, hot flashes, fatigue, heart palpitations, memory lapses, mood swings, irritability and depression, weight gain, waning interest in sexuality, hypothyroidism. All menu suggestions are divided into two choices: Vegetarian and non-vegetarian (but with many vegetarian dishes). Pages 4-5 note that science has found active ingredients in foods that promote good health during menopause. Soybeans and soy products are "rich in phytohormones... sometimes called phytoestrogens." Four types of food are "off the menu" = should not be consumed: Refined sugars, caffeine and coffee, processed oils, and refined white flour and refined grains. The subsection titled "Phytohormones" (p. 16) lists ten foods, including tofu and brown rice, as good sources. The benefits of phytohormones and soyfoods are also discussed in the section on "Breast cancer" (p. 55-56).

Soy-related recipes include: Miso soup (p. 90). Bean basics (p. 120-23). Tofu teriyaki with vegetables (p. 123-24). Tempeh, green beans, and carrots with mustard sauce (p. 132-33). Tempeh slices for sandwiches (p. 148-49). Tofu alfredo sauce (p. 303).

The recipes also call for: Adzuki beans, almond butter and tahini, almond milk, kudzu, and plums (umeboshi). The last page is titled "About the authors." Photos of Lissa DeAngelis and Molly Siple appear on the inside rear dust jacket. Address: 1. Private nutrition consultant, North Edison, New Jersey; former Assoc. Director of the Natural Gourmet Cookery School in New York City for 10 years; 2. Registered Dietitian, Los Angeles, California.

7944. Messina, Mark; Messina, Virginia. 1996. The dietitian's guide to vegetarian diets: Issues and applications. Gaithersberg, Maryland: Aspen Publishers, Inc. xi + 511 p.

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Index. 24 cm. [1939 ref]

• ***Summary:*** Contents: Preface. Acknowledgments. Part I: An overview of vegetarian diet. 1. Demographics and definitions: History of vegetarianism, profile of vegetarians, types of vegetarian diets. 2. Health consequences of vegetarian diets: Differences in dietary components of vegetarian and nonvegetarian diets, cardiovascular disease, hypertension, cancer, diabetes, obesity, kidney disease, renal stones, gallstones, diverticular disease, other conditions, the dairy connection, phytochemicals, conclusion.

Part II: Vegetarian nutrition. 3. Protein: A historical perspective on protein, protein requirements, vegetarian diets and protein digestibility, assessing protein quality, plant proteins and nitrogen balance, protein complementarity, conclusion. 4. Calcium: Osteoporosis, calcium and osteoporosis, calcium absorption and the RDA, calcium excretion, bone health of vegetarians, meeting the calcium RDA on plant-based diets, plant sources of calcium, other factors that affect bone health/fracture rate, conclusion. 5. Minerals: Iron, zinc, selenium, copper, magnesium, phosphorus, manganese, iodine, sodium, chloride, potassium, fluoride, chromium, molybdenum. 6. Vitamins: Vitamin B_{12} (cobalamin), riboflavin, vitamin D, vitamin B_6, vitamin B_1 (thiamin), niacin, folate, biotin, pantothenic acid, vitamin C (ascorbic acid), vitamin A, vitamin E, vitamin K. 7. Food guides for vegetarians: A history of food guides, developing food guides for vegetarians, vegetarian food guides, appendix 7-A–food guides for vegetarians (food guide for lacto-ovo vegetarians and vegans, the 1-2-3-4-5 vegetarian food guide, American Dietetic Association's vegetarian food guide, the vegetarian food pyramid, the vegetarian food pyramid, macrobiotic food guide).

Part III: Vegetarian diets throughout the life cycle. 8. Pregnancy and lactation: Weight gain and calorie needs in pregnancy, weight gain in pregnant vegetarians, meeting nutrient needs of pregnancy on a vegetarian diet, meal-planning guidelines, adolescent pregnancy, potential complications of pregnancy, common conditions of pregnancy, vegetarians and lactation, appendix 8-A–food guides for pregnant and breast feeding vegetarians (food guide I, food guide II). 9. Vegetarian diets in infancy: Growth in vegetarian infants, vegetarian diets during the first six months of infancy, solid foods for vegetarian infants, comparison of sample menu plans for 9-month old vegan and omnivore infants, potential concerns in infant feeding, macrobiotic diets in infancy, fatty acids in the diet of vegetarian infants, conclusion. 10. Preschool and school-age children: Growth of vegetarian children, diets of vegetarian children, protein, fat, calcium, vitamin D, vitamin B_{12}, iron, zinc, guidelines for meal planning for vegetarian children, milk in the diets of vegetarian children, counseling parents of vegetarian children, vegetarian diets for school-age children, school lunch, bag lunch, appendix 10-A–meal-planning guidelines for children (other food guides). 11. Vegetarian diets for adolescents: Growth of vegetarian adolescents, nutrient needs of vegetarian adolescents, meal-planning guidelines for vegetarian adolescents, eating disorders. 12. Vegetarian diets for older people: Dietary status of older vegetarians, nutrient needs of older vegetarians, meal planning for older people.

Part IV: Practical applications for counseling vegetarians. 13. Counseling vegetarian clients: Dietary assessment, counseling clients to plan menus based on vegetarian food guides, vegetarian diets as dietary therapy, reducing fat in vegetarian diets, reducing food costs on vegetarian diets. 14. Diabetes: Diet therapy for diabetes, vegetarians and diabetes, the diabetic exchange lists, appendix 14-A–exchange lists for meal planning. 15. Vegetarian diets for athletes: Vegetarian diets and athletic performance, nutrition needs of athletes, risks of amenorrhea in female vegetarians and female vegetarian athletes. 16. Vegetarian food preparation: Preparing grains, preparing beans, using tofu, using textured vegetable protein, using egg substitutes, cooking with sweeteners.

Glossary of vegetarian foods. Resources on vegetarian diet. Vegetarian resources for dietitians, resources for vegetarian clients, on-line services, mail-order vegetarian foods.

Appendixes. A. Fiber, cholesterol, and macronutrient intakes of adult vegetarians and nonvegetarians. B. Lipid levels in adult vegetarians and nonvegetarians. C. Blood pressure of adult vegetarians and nonvegetarians. D. Anthropometric data of female adult vegetarians and nonvegetarians. E. Anthropometric data of male adult vegetarians and nonvegetarians. F. Intake ratios of N-6 to N-3 fatty acids on vegetarian and non-vegetarian diets. G. Protein, calcium, phosphorus, sodium and potassium intakes of adult vegetarians and nonvegetarians. H. Iron intake and status of vegetarians and nonvegetarians. I. Mineral intake of adult vegetarians and nonvegetarians. J. Water soluble vitamin intake of adult vegetarians and nonvegetarians. K. Fat soluble vitamin intake of adult vegetarians and nonvegetarians. L. Fiber, cholesterol, and macronutrient intakes of vegetarian and nonvegetarian school-age children and teenagers. M. Water soluble vitamin intakes of vegetarian and nonvegetarian school-aged children and teenagers. N. Fat soluble vitamin intake of vegetarian and nonvegetarian school-aged children and teenagers. O. Mineral intake of vegetarian and nonvegetarian school-aged children and teenagers. P. Fiber, cholesterol, and macronutrient intakes of elderly vegetarians and nonvegetarians. Q. Water soluble vitamin intake of elderly vegetarians and nonvegetarians. R. Mineral intake of elderly vegetarians and nonvegetarians.

The information on vitamin K is excellent and extensive (despite one small error). Table 6-12 (p. 197) gives the vitamin K content of selected foods. The content of soybean oil is 77 micrograms per tablespoon (not milligrams as

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stated). Other rich sources are (per ½ cup cooked): Lentils (261 mcg), kale (179 mcg), spinach (141), broccoli (119). The source of these statistics is: USDA Provisional table on vitamin K content of foods. 1994. Hyattsville, Maryland: USDA.

Index listings for individual soyfoods: Tofu: p. 38-82, 392. Tempeh: p. 391. Soymilk: p. 214-15, 284-85, 391. Miso: p. 389. Soy cheese, soy flour, soy yogurt, soybeans, soynuts, Take Care (fortified soy protein beverage sold in powdered form), tamari: p. 391 (Glossary of vegetarian foods). Address: 1. PhD, 2. MPH, RD. Both: Nutrition Matters, Inc., 1543 Lincoln St., Port Townsend, Washington 98368. Phone: 360-379-9544.

7945. Reed, M.H. 1996. In Pleasantville, serenity and sushi. *New York Times*. June 16. p. WC15.

• ***Summary:*** This is a review of the Japanese restaurant Hanada Sushi in Pleasantville, New York. Recommended dishes include: Seaweed salad, agedofu, and seafood teriyaki.

"Outstanding too was agedofu bathed in a gingery sauce, the silken tofu cube fried quickly and topped with broad shavings of bonito."

7946. Kikkoman Corporation. 1996. Annual report 1995. 339 Noda, Noda-shi, Chiba 278, Japan. 24 p. 28 cm. [Eng]

• ***Summary:*** The information in this English-language annual report is current as of April 1996. Contents: Financial highlights. Profile. A message from the president. Management strategy. Financial section. Corporate history. Global network. Board of directors and officers. Corporate data.

Kikkoman is the world's leading producer of soy sauce. The phrase "all-purpose seasoning" has come to be associated with Kikkoman soy sauce worldwide. However this phrase was first used in connection with Kikkoman soy sauce in 1956 by the *San Francisco Chronicle* [California] when introducing the Japanese product to the American public. It was adopted by Kikkoman the following year.

During 1995, net sales rose 1.1% over the previous fiscal year to 203.3 billion yen, down from a peak of 211.7 billion yen in 1992 (See p. 12). Net income declined 32.8% to 4.4 billion yen, down from a peak of 6.6 billion yen in 1994. In 1993 net income was 4.7 billion, in 1992 it was 4.9 billion, and in 1991 it was 6.2 billion–very volatile. Kikkoman's financial performance was hurt by a very difficult financial for Japan as a whole, including the Great Hanshin Earthquake in Kobe in January. A recent trend in the Japanese food and beverage industry has been the proliferation of low-priced private brands. In response, Kikkoman is hoping that consumers will maintain their brand loyalty and is introducing value-added products such as *Tokusen Marudaizu Shoyu* (Deluxe Shoyu Made from Whole Soybeans). *Tokusen Marudaizu Gen-en Shoyu* (Deluxe Low-Sodium Shoyu Made from Whole Soybeans). Steak Shoyu, and Hon Tsuyu (a new concentrated soy sauce base). Kikkoman is also planning to build a second U.S. plant on the west coast of the United States, and a new plant in the Netherlands.

A bar chart (p. 6) shows that Kikkoman's net sales peaked in 1992 at 148.4 billion yen, dropping steadily to 140.2 billion yen in 1995. Sales of Kikkoman soy sauce have reflected this rise and fall. However overseas sales have grown steadily. A bar chart (p. 7) shows them rising from $330 million in 1991 to a record $434 million in 1995.

Page 22 gives a detailed chronology of Kikkoman from April 1925 to April 1996.

Letter (fax) from Tsutomu Kishi, Manager, Kikkoman General Affairs Dept. 1996. Sept. 2. This is the first English-language annual report that Kikkoman has ever published. Address: Noda, Japan.

7947. Mogi, Yuzaburo. 1996. Re: Moving to new headquarters in Tokyo. Letter to friends of Kikkoman. July. 1 p. Typed, without signature on letterhead.

• ***Summary:*** Kikkoman is moving its Tokyo headquarters at Kanka, Nishiki-cho to Nishi-Shinbashi on Saturday, August 10, 1996. They will be open for business on Monday, August 12, with a new address and telephone numbers. The new address: Kikkoman Corporation, 2-1-1, Nishi-Shinbashi, Minato-ku, Tokyo 105, Japan. Phone: 03-5521-5360. Fax: 03-5521-5359. Address: President and Chief Executive Officer, Kikkoman Corp., 1-25 Kanda Nishiki-cho, Chiyoda-ku, Tokyo 101, Japan. Phone: 03-3233-5605.

7948. Natural lifestyle magazine and mail-order market: Spring-summer '96. 1996. Asheville, North Carolina: Natural Lifestyle Supplies. 63 p. Catalog. 28 cm.

• ***Summary:*** A macrobiotic mail-order catalog with several nice articles, it sells many types of soyfoods and related products, including the full line of Kushi Cuisine, organic soybeans (yellow and black), azuki beans, amazake, Rice Dream, soymilk, Westbrae Malteds, Nasoya Vegi-Dressings, Nayonaise, Farmhouse Tekka [miso], organic soy sauce, fresh tofu, snow-dried tofu, kuzu, and miso. Publisher: Tom Athos. Editor and graphic design: Debbie Athos. Address: 16 Lookout Drive, Asheville, North Carolina 28804-3330. Phone: 1-800-752-2775.

7949. McNabola, Bill. 1996. Brief history of Hercules work with gluten and HVP (Interview). *SoyaScan Notes*. Aug. 20. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Bill has been with Hercules since 1977. Hercules started out as a wheat gluten manufacturer, then evolved into a manufacturer of HVP for use as a flavoring. By 1977 they had gotten out of the gluten business and were only in the HVP business. Address: Director, New Business Development, Hercules Inc., Hercules Plaza, Wilmington,

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Delaware 19894 Phone: 302-594-5000.

7950 Obata, Akio; Matsuura, M ; Kitamura, K. 1996. Dehydration of sulfhydryl groups in soymilk by lipoxygenases during soybean grinding. *Bioscience, Biotechnology, and Biochemistry* 60(8) 1229-32 Aug. [27 ref]
Address: Research & Development Div. of Kikkoman Corp., 399 Noda, Noda City, Chiba prefecture 278, Japan

7951. *Ontario Soybean Growers' Marketing Board Newsletter.*1996. Profile: Harcan Kingsoya Co. Ltd. Aug. p 7.
• ***Summary:*** Harcan Kingsoya began operations Canada in 1991, in Scarborough. The company was formed by Bernard Leung, Michael Cheung, and a Chinese soyfoods manufacturer in the People's Republic of China. The company's first and main product is soya sauce. They also produce tofu, soymilk, and "dried soybean curd." In the future they also plan to produce "veggie-food" products such as burgers, sausage, and ham. Harcan products are marketed under the Veg-A-King and VAK brand names. The company's market was originally Europe, but now they are shipping to local supermarket chains and wholesalers in Ontario. Address: Box 1199, Chatham, ONT, Canada N7M 5L8.

7952. Gaiser, Klaus. 1996. Re: Update on work with seitan and tofu in Germany. Letter (fax) to William Shurtleff at Soyfoods Center, Sept. 21. 3 p. Typed, with signature on letterhead. [Ger]
• ***Summary:*** Klaus founded Topas GmbH in April 1993. Originally the name stood for TO-fu + PA-sta, but after late 1996, as Klaus developed more and more seitan products, it came to mean TO-fu + PA-sta + S-eitan. Klaus sold his company Yamato Tofuhaus [in April 1989] to a firm named Huegli. With the money from the sale he purchased a 300-year old oak-framed farmhouse (with a 2,000 liter fountain in the old vault cellar) for himself, his wife, and 5 children. For the next three years he stayed on to manage Yamato Tofuhaus, but by the end of 1992 he found the work unsatisfying so he left and decided to start another health food business of his own. In the meantime, Huegli bought Heiler, Germany's biggest reform food wholesale company. Heiler was also dealing with tofu, so together Huegli and Heiler sold quite a lot of tofu and tofu products–about 2 metric tons per week of tofu convenience foods by 1992 and maybe another ton of tofu and tofu-varieties such as smoked tofu. Nowadays their annual sales are not that high. Klaus has no exact statistics, but he would estimate they are about two-thirds of 1992 levels.

In early 1995 Klaus tried to find a place for his company in the tofu market again, but her soon realized his place had been taken. "The German health food market was and is so flooded with tofu products that you just have to come with a real big bang to awaken any interest of the retail shop owners in a new tofu product. They just don't see any reason for selling the 23rd variety of tofu-burger and the 17th variety of tofu-spread."

Klaus then remembered an old recipe that used wheat gluten. He saves each and every product development experiment in his computer and has about 800 by now. The gluten was colored with red fermented rice (*beni-koji*, made with *Monascus purpureus*) and thus was very meat-like. In fact, when spiced, it so resembled a sausage that he first thought it was too daring to offer such a product to vegetarians. This product turned out to be the basis for his new business. He called it "Wheaty" and started selling it as a cold cut in late 1995. Since that time, monthly sales have gone up and up. "A mere joy." He could sell much more if he had enough money for costly advertisements, etc. Now his company is selling seven products, based mostly on seitan, with some tofu. Other companies are now starting to try to imitate his most successful product, Wheaty. Klaus believes that seitan has a very bright future in Germany, yet in a new form. The traditional lumps of gluten cooked in soy sauce have not been able to electrify large portions of the population. So Klaus has "re-invented seitan" to resemble familiar German meat products. "And this is the most effective way to convince a greater number of 'normal' people of the value of a vegetarian diet."

One serious problem is that red-fermented rice made with *Monascus purpureus* is not allowed as a food ingredient in Germany; there was a recent ruling by a German court of law. Moreover, as a food coloring, it is classified as a "food additive" so it needs an "E-number" from EC bureaucracy in Brussels, Belgium,–which it has not yet gotten. This is a pity, since it is the only natural heat-resistant meat color, as well as an excellent flavor enhancer, source of vitamin B, and cholesterol reducer. If it were legal, it could be made by Karl Selg-Mann, who is Germany's only manufacturer of soy sauce and miso.

Talk with Klaus by phone, 1996, Sept. 21. He presently does not own a factory; he finds other food companies to make his products. Klaus speaks almost perfect English. He hitch-hiked in England and Scotland in 1975, then lived for a year in China in 1976, arriving 3 days after Mao Tsedong died [Note: Mao died in Sept. 1976]. The BNN (*Bundesverband Naturkost und Naturwaren*), a German organization promoting organic foods, has established regulations concerning wheat gluten; originally they said it could only be made from whole wheat. But they found that was too expansive so now they allow the use of 10% by weight of vital wheat gluten. Address: Founder and owner, Topas GmbH, Bollbergstr. 41, 72116 Oschingen [near Tuebingen], Germany. Phone: 07473/25515. Fax: 07473/8320.

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7953. Sheridan, Margaret. 1996. Is tofu ready for the big leagues? *Los Angeles Times*, Sept. 26, p. H8, H10, H11.
• ***Summary:*** The article begins: "Tofu, the spongy off-white soybean cake that spells B-O-R-I-N-G for so many people, is about to get a marketing makeover. Slick packaging, toll-free consumer hotlines, new products, and a blitz of cookbooks created by chefs rather than earnest vegetarian activists are some of the strategies tofu companies plan to use to bring tofu into the mainstream." A number of second generation tofu products found in supermarkets, and forthcoming cookbooks are listed.

"But some advertising and marketing professionals say that's not enough." The author talks with many such people who dislike tofu for various reasons. "Tofu is a joke... Tofu is a sissy. Bland, white, boring. It needs to take a stand. Become something. And that name! Its terrible." "Tofu goes against the American palate... Very little in American food, except baby food or gelatin, has that texture. Even buying tofu is alien. What else do you buy floating in water? And Americans love convenience. Bean curd is anything but. It's not an open-and-eat product." "I buy tofu but it just sits there, floating in my refrigerator. It makes me feel stupid and guilty. What do you do with it? I end up tossing it out." Hinoichi is America's largest tofu manufacturer. In March 1997 the company plans to move from its present 50,000 square foot plant in Los Angeles to a facility three times that size in Garden Grove. Harry Tanikawa, Hinoichi sales manager, notes that tofu and soy have been helped by good research and press from the medical community. He adds: "When you see fast-food places such as Panda Express in the shopping malls adding more tofu items to the menu, when you can buy a tofu hot dog at Dodger Stadium, you know tofu has arrived." Note: Dodger Stadium is a major league baseball park in Los Angeles.

Worthington Foods has experienced a sales rush in meat alternatives; the category went from nothing four years ago to $150 million a year. The company's best-selling items, sold under the Morningstar Farms brand, are breakfast patties, sausage links, garden burgers, and spicy black bean burgers–according to Don Burke, executive vice president of sales and marketing. The people who buy Worthington products are "the masses, people who want to cut down a little on meat and saturated fat. Most are aging baby boomers who want taste, convenience, and a health benefit."

Tofu "recipes for the mainstream" include: Red flannel hash. Mushroom scrambler. Tofu-stuffed French toast. Tofu slaw. Tofu citrus shake. Tofu cheesecake (p. H11).

The article ends with two sidebars: 16 "Tofu do's and don'ts." Soy food: Its many looks (p. H11)–Defines different soyfoods: Tempeh, miso, textured vegetable protein (TVP), soy milk, soy flour, soy cheese, soy sauce, tamari. Address: Times staff/food writer.

7954. *ASA Today* (*St. Louis, Missouri*). 1996. ASA/Japan hosts 40th anniversary celebration. 2(10):1-2. Sept.
• ***Summary:*** An estimated 175 "Soycomplex Leaders" from throughout Japan attended the ASA [American Soybean Association] /Japan 40th Anniversary celebration in Tokyo, according to ASA/Japan Country Director Kent Nelson. In 1946 ASA started activities in Japan as a member of the Japanese American Soybean Institute (JASI), which included the Japan Oilseed Processors Association (JOPA), the Japan Oil and Fat Importers & Exporters Assoc. (JOFIEA), and the Japanese tofu, soy sauce, and miso associations.

A photo shows ASA Executive Officer George M. Strayer and Mrs. Strayer in October 1955 leaving Waterloo, Iowa, enroute to Japan on a trade mission.

One sidebar (p. 2) titled "Meeting Japan's needs now and in the future," states: Japan imports 97% of its soybeans. Nearly 25% of Japan's imported soybeans are used for food. Japan is projected to import its 5 billionth bushel of soybeans from the USA in the second half of the year 2000. "Japan remains the top single country market in the world (soymeal included) and is expected to remain the largest export market for US producers into the year 2000."

A second sidebar (p. 1) titled "ASA/Japan celebrates 40th anniversary," notes that in 1956, Japan imported 536,000 metric tons of US soybeans. In 1995 Japan imported eight times that amount, over 4 million metric tons. This fall a unified trade team composed of JOPA processors and JOFIEA importers will meet with ASA and United Soybean Board leaders in St. Louis, Missouri, to discuss short, medium, and long-term goals.

7955. Demetrakakes, Pan. 1996. Quality for the ages: A centuries-old brewing process is helping Kikkoman stake out the quality niche of the soy sauce market. Plant report. *Food Processing* (*Chicago*) 57(9):61-62, 65-66. Sept.
• ***Summary:*** At Walworth, Wisconsin, Kikkoman now makes 18 million gallons/year of soy and other sauces–using 300 fermentation tanks. Most of the 134 employees work on the plant's six packaging lines. The company makes 18 different products, and all but one (kotterin) use a soy sauce base. Kikkoman is well positioned to take advantage of two of the biggest trends in American eating habits: (1) Growing interest in ethnic–especially Asian–cuisine, and (2) The rising popularity of eating out, more than half of America's food dollars are now spent on food prepared outside the home. Both the foodservice and the industrial markets have become major users of Kikkoman products. "Kikkoman's main competition is lower-quality, acid-hydrolyzed soy sauce [which is not fermented]. This competition is perhaps most acute in the retail market, whose buyers tend to be less sophisticated than food professionals." Kikkoman stresses the superior color and flavor of its "brewed soy sauce." The shoyu-making process is described. Photos show: (1) Bottles of Kikkoman soy sauce on the bottling line–Kikkoman's most labor-intensive operation. (2) Some of the company's

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more than 300 fermentation tanks; a man on a ladder is climbing up one. (3) Three workers checking the quality of a batch of soy sauce. A sidebar titled "An old tradition for an aged sauce" gives a brief history of soy sauce. Kikkoman, established in 1630, "boasts of being one of the oldest continuously operating food processing companies in the world.

"Soy sauce originated more than 2,500 years ago in China." It came to Japan in about the 6th century with Buddhism. In Japan "it was discovered that adding wheat to the soybeans would yield a richer, more mellow flavor." By the 1600s, "soy sauce as we know it today had largely been developed." Address: Senior Editor.

7956 Hastings, Carl. 1996. Soybean products in human foods. Paper presented at Regional Workshop on Soybean Processing and Utilization for Central America and the Caribbean. 4 p. Held Sept. 15-18 in Jamaica.
• ***Summary:*** Contents: Introduction. Soy sprouts. Whole soybeans: Cooked green beans, cooked soybeans, roasted or deep fat cooked soybeans (soy nuts–salted, flavored, etc., candy coated, salad topping, bakery ingredient or topping, soynut butter, soy coffee) fermented soybeans (tempeh–*Rhizopus*, natto–*Bacillus*, hamanatto–*Aspergillus*). Cereal blends: CSM (Corn-Soy-Milk), WSB (Wheat-Soy-Blend), other (bulgur, oat, sorghum grits).

Refined soy oil. Solvent extracted, physically extracted, uses, lecithin. Soy protein: Soy flour (full fat, defatted), concentrates, isolates, textured, uses. Hulls. Soy fiber. Soy milk: Liquid, powder, uses (plain, flavored, fortified, blends, instant formula, nutritional beverages, tofu, soy cheese, frozen desserts, yogurt, soymilk film (yuba)). Soy sauce. Soy paste (miso). Soy pulp (okara). Address: Relw, Inc., Chesterfield, Missouri.

7957 Jacobi, Dana. 1996. The natural kitchen. Soy! 75 delicious ways to enjoy nature's miracle food. Rocklin, California: Prima Publishing. xii + 244 p. Oct. Index. 22 cm. Series: The natural kitchen. [16 ref.]
• ***Summary:*** Contents: Preface. Acknowledgments. Introduction. Soy and health. All about soyfoods: Traditional soyfoods (tofu, miso, tempeh, soy sauce, soymilk), other Asian soyfoods (okara, yuba, kinako, natto), second-generation soyfoods (soy dairy products, soy deli foods, textured vegetable protein {TVP}, textured soy protein {TSP}, soy isolate (isolated soy protein)), more soy choices (fresh soybeans, dried black soybeans, soy flour, soy grits, soy flakes, soy nuts), cooking with soyfoods (tofu {pressing, freezing, marinating, sautéing and pan-crisping, frying, braising, pureeing, parboiling, storing and handling tofu}, miso, tempeh, soymilk, other soy dairy foods), cook's notes (herbs, spices and flavorings, nuts, oils, produce, stock, sweeteners).

Soups, appetizers, and first courses. Main dishes. Pasta and light dishes. Side dishes and sauces. Salads, burgers, and kebabs. Desserts. Breakfast and beverages. Mail order sources.

The Preface states: "If you are new to soy, you will find descriptions of soyfoods, from tofu to soymilk... If you already cook with soyfoods, the approximately 75 recipes in this book and their variations will expand your repertoire. These recipes will take you across lines that people who cook with soy rarely approach. The dishes bring familiar and satisfying textures along with flavors that are full and deep. Whether ethnic or classic, they are dishes with verve and elegance." The author first tasted tofu, with her parents, in 1953, "at the precocious age of eight," at The Great Shanghai on 125th St. in Manhattan, New York City. Address: Food writer, New York, NY.

7958 Tibbott, Seth. 1996. History of Tofurky (Interview). *SoyaScan Notes*. Nov. 1. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** King Harvest Natural Foods was a vegetarian sandwich company, deli, and juice shop in Portland, Oregon. They made a fresh Tofurkey Sandwich–which was just tofu, slightly browned, maybe marinated in some turkey-like seasoning, with some trimmings. In 1980, when Seth started delivering his tempeh to stores in Portland, he first saw this sandwich, which he enjoyed eating in Portland-area stores. That was when he first heard the word "Tofurkey." In about 1982-83 King Harvest discontinued their Tofurkey Sandwich; they never made it again, though they are still in business making other sandwiches and food products.

The ancestor of Tofurky was created in 1991 by Hans and Rhonda Wrobel of The Higher Taste–one of Seth's customers–a caterer and food manufacturer in Portland, Oregon, with a little deli; they make tempeh & lettuce sandwiches and tofu sandwiches. They started making a vegetarian stuffed Tofu Roast with gravy for their customers at Thanksgiving. They sold about 30 units the first year, 1991, largely to a local audience–including Seth. It was tofu in a pie pan with stuffing in the middle, then another layer of tofu on top. It was basted and baked, and tasted good–but it sold for $30. Seth saw this as a meat alternative that had potential at Thanksgiving. The vegetarian recipes for making mock turkey are too long and complicated for the typical cook.

Seth wanted to use the name "Tofurky" (which he coined) for his new product idea. But before he did, he called the folks at King Harvest and asked them if they had a trademark on or any other rights to the name. They said "No." He then asked them for permission to use that name. They said "Fine–"No problem"–in part because they hadn't made the product for more than ten years.

In October 1995 Turtle Island, together with The Higher Taste (in an informal and unwritten joint venture), introduced the first "Tofurky." Higher Taste made the product's

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centerpiece, a dome-shaped layer of marinated tofu with a whole wheat stuffing inside. Seth had been developing a tempeh burger that tasted more like turkey than burgers, so he got a drumstick form (Holomatic) and started making tempeh drumsticks. He added four of these to the Higher Taste Tofu Roast, and included a recipe for Nutritional Yeast Gravy. Turtle Island, which had good distribution for its tempeh, was responsible for marketing the product. Seth test marketed it as a frozen product in 24 natural food stores and co-ops on the West Coast; it retailed for $24.99 to $27.99 and weighed 3 lb 12 oz. There as also a 2 lb 4 oz size. Seth sent out some press releases and product attracted extensive local media coverage. No products were sold by mail order. Most natural food stores (such as Nature's), to which Seth introduced the product enthusiastically, predicted that it would never sell. But Seth had a strong belief in it. Somebody at the Puget Consumers Co-op (PCC) in Seattle, Washington, took the product, even though they doubted it would do well. Then "it caught fire" at the PCC's seven upscale stores in Seattle. They had to install a special telephone line–a Tofurky Hotline–for all the Tofurky special orders they were getting. Turtle Island did demos in PCC stores which further stoked the demand. After Thanksgiving, Turtle Island was flooded with calls and letters ("fan mail") from happy customers who said things like "Wow! I've been waiting 20 years for this." Usually food manufacturers only hear from customers when they are upset. "The customers believed in the product more than the savvy retailers–who had completely missed this niche." Feedback cards were included in every product, and this feedback indicated that the gravy (originally created by The Farm in Summertown, Tennessee, but greatly improved on by Seth) was what made the product delicious, but consumers wanted the gravy itself–not just the recipe–included with the product. In 1995 about 800 Tofurkys were sold, mostly at Thanksgiving but some at Christmas (with gravy).

Realizing that the product had real potential, Seth contacted a lawyer and registered "Tofurky" as a trademark. This year (1996) the tofu is made by Island Spring in Vashon, Washington. When extra firm tofu was seasoned then baked, it froze quite well. The tofu is sent out in 8-oz blocks (each 3½ by 5 by 3/4 inches)–not in the shape of a turkey or drumsticks. The drumettes are a little spicier, and come with cranberries, wild rice, carrots. This year the product is frozen but they are also test marketing it refrigerated. Several West Coast distributors carry the product. Now the whole package weighs 5 lb 15 oz; the wholesale price is $24.95 to $25.60, so it retails for about $33-$36. Last week, Seth sent out 50 press releases to print, radio, and TV sources. This year (1996) more than 800 have been sold already, and Seth expects total sales to reach 2,000 to 3,000. The 1996 ingredients in the Golden Mushroom gravy are: Water, nutritional yeast, expeller pressed canola oil, unbleached flour, chopped fresh mushrooms, diced onion, shoyu, herbs, spices, non-dairy lactic acid culture. Note: This gravy is delicious! Note: The following number of Tofurkys were sold: 800 in 1995, 4,000 in 1996, 15,000 in 1997, 45,000 in 1998, and an estimated 55,000 to 59,000 in 1999.

Who coined the word Tofurky? Seth didn't, though he was the first to spell it in that way, without an "e"–for two reasons: First, it was the right number of letter for a phone number. And second, he spelled it wrong the first time he wrote it and then kept repeating his mistake. Most people who hear the word for the first time spell it "Tofurkey" so Seth has had to purchase a second Internet domain name spelled "Tofurkey.com." Seth was also the first to register the name (by any spelling) as a trademark.

But at least four other people and groups probably coined the word "Tofurkey" before Seth coined "Tofurky." (1) Jeremiah Ridenour believes that he coined it many years ago. (2) Peter Golbitz sent Seth a photo showing him with long hair and some Tofurky he made. (3) King Harvest Natural Foods in Portland, Oregon (see above). (4) A group of Rastafarians, black from inner-city Tacoma, Washington, had developed a very delicious barbecued tempeh, so Seth was exploring a co-packer arrangement. After the first Tofurky season, when they heard on the news that Seth made Tofurky, they sent him a flaming e-mail saying it was bad karma for him to rip them off because they had invented the word "Tofurkey." They refused to shake Seth's hand. They now took him to be the white devil, so he left under that cloud. Jeremiah and Peter were friendly about it, but Jeremiah likes to joke with Seth about how Seth owes him several million dollars in royalties for use of his name "Tofurky." Seth now sometimes jokingly calls his business "Tofurky Island." Address: Turtle Island Foods, Inc., P.O. Box 176, Hood River, Oregon 97031. Phone: 541-386-7766 OF.

7959. Kikkoman International Inc. 1996. The art of soy sauce: Foodservice recipes, tips, and menu ideas. San Francisco, California. 36 p. Illust. No index. 15 x 22 cm. Spiral bound.

• ***Summary:*** Contents: Introduction–The art of soy sauce. What is soy sauce? Soy sauce and the secrets of flavor enhancement. Kikkoman and the art of soy sauce. Soy sauce infusions (with mushroom, garlic, ginger, shallot, chili). Meet the chefs (with a small portrait photo of each): Tim Cushman, Barbara Tropp, Lawrence Chu, Takayoshi Kawai. The recipes.

Each recipe yields 24 servings and is accompanied by a descriptive quotation from the chef who developed it. Many recipes are accompanied by a full-page color photo. The Introduction begins: "Right now, all across America, a new culinary style is evolving. So new, in fact, it has yet to be named. Some call it 'Asian-inspired.' Some call it Pan-Pacific.' Others simply call it brilliantly eclectic. It's a cuisine without boundaries that draws on the flavors of

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Asia, incorporating them into Western cooking to create fresh flavors and new ideas the world has never seen." The majority of the recipes in this book contain red meat, fish, or poultry. Address: San Francisco, California. Phone: 1-800-944-0600

7960. Duncan, Lindsey. 1996. Overcoming *Candida albicans*. *Conscious Choice* (*Chicago*). Nov/Dec. p. 38-39.
• ***Summary:*** The author (a man) states incorrectly that tofu is a fermented food. "*Candidiasis* is a yeast/fungal infection caused by the toxins given off in abundance by the common yeast *Candida albicans*... It thrives on sugar, yeast, breads, alcohol and food molds found in cheese, grapes, mushrooms, and fermented foods (vinegar, tamari sauce, tofu, etc.)... Candida's main home is in the intestines." It is often caused by the use of systemic antibiotics.

Note: Candidiasis can often be cured by eliminating all sweets and fruits from the diet, taking acidophilus supplements, and using non-dairy protein sources–of which tofu is one of the best. A respected book on the subject is *The Yeast Connection* by Crook. Address: CN, Founder, Home Nutrition Clinic, 1431 7th St., Santa Monica, California 90401. Phone: 310-576-3606.

7961. Fukutake, M.; Takahashi, M.; Ishida, K.; Kawamura, H.; Sugimura, T.; Wakabayashi, K. 1996. Quantification of genistein and genistin in soybeans and soybean products. *Food and Chemical Toxicology* 34(5) 457-461.
• ***Summary:*** Discusses: Soybeans, soy nuts, soy powder, soymilk, tofu, miso, natto, soy sauce, genistein. Address: 1-3,5-6: Biochemistry Div., National Cancer Center Research Inst., 1-1 Tsukiji, 5-chome, Chuo-ku, Tokyo 104; 1,4: Tsumura & Co., 3586 Yoshiwara, Ami-cho, Inashiki-gun, Ibaraki 300-11. All: Japan.

7962. **Product Name:** Soy Sauce.
Manufacturer's Name: King Pappar Products Ltd.
Manufacturer's Address: Hague, P.O. Box 43, Falmouth Tielawany, Jamaica. Phone: 809-954-3681.
Date of Introduction: 1996.
New Product–Documentation: '95-'96 Soya Bluebook Plus, p. 110. The managing director is Dudley Eaton.

7963. Chen, J.D.; Xu, Hong. 1996. Historical development of Chinese dietary patterns and nutrition from the ancient to the modern society. *World Review of Nutrition and Dietetics* 79:133-53. [23 ref]
• ***Summary:*** During the Han and Tang dynasties (206 BC to 907 AD) people in China started to pay attention to vegetarian food and to use vegetable oil. "Bean products, such as bean curd, were already used in recipes" (p. 136).

A famous saying has been handed down from ancient times: "Breakfast should be eaten well, lunch must be in one's fill, and food for dinner should be little."

Generally people eat porridge or millet gruel as the main food for breakfast, with it they eat soybean milk, salted vegetables, eggs (boiled or fried), and deep-fried twisted dough sticks. For lunch and dinner, salt or soy sauce were often added during cooking.

The soybean is mentioned on page 148. Address: 1 Research Div. of Sports Nutrition and Biochemistry, Inst. of Sports Medicine, Beijing Medical Univ.; 2. Dep. of Sports Medicine, Beijing Univ. of Physical Education. Both: Beijing, China.

7964. Danival. 1996. Danival. The environmental approach. Mezin, France. 7 p. 30 cm. Lay-flat comb bound. [Eng]
• ***Summary:*** Contents: Introduction. Map of France (showing Danival in the southwest near the Garonne River valley, in the historical region of Gascony). Danival, Daniel Gevaert and the Pruneaux d'Agen (plums). Danival Atlantic sea salt (incl. nutritional analysis).

"The jury of the 'Enterprise and Environment' competition organized by the French Ministry of the Environment has awarded the Special *Ecoproduit* 1992 prize to Danival for their overall approach to environmental questions.

"The range of organic foods which Danival presented to the jury are manufactured in strict conformity with *Nature et Progres* specifications through the whole production process.

"All packing materials can be re-used and recycled. Preserves are bottled in glass jars with tinplate caps.

"A small hydro-electric generator is powered by the old water mill. In this way, part of the factory's power supply is produced from a renewable source of energy.

"Danival's originality also lies in their know-how in the manufacture of miso and shoyu. These two products are obtained from fermented soya beans and are very rich in easily digested vegetable protein." For the past ten years Daniel Gevaert, the son of Pierre Gevaert, has been farming 60 hectares in the fertile Garonne Valley–also known as the Valley of the Four Seasons. His agricultural methods are exclusively organic. "The farm is Danival's main supplier of raw materials–and this is where Danival has the edge!"

"The company is housed in the Andiran water-mill buildings and employs nine people full time. Today Danival's range of organic products includes 9 varieties of jam, pureed prunes, semi-rehydrated Agen prunes, peach and apple compotes, concentrated tomato puree, ratatouille, tomato ketchup, tomato sauce, bolognaise sauce, spaghetti sauce, sweet-corn, chick peas, azuki beans, lentils, haricot beans, Japanese pumpkin puree, seitan, gluten powder, miso, shoyu, and Atlantic sea-salt from the Ile de Ré."

"All packaging materials can be re-used and recycled. Preserves are bottled in glass jars with tinplate caps.

"A small hydro-electric generator is powered by the old water mill. In this way, part of the factory's power supply is produced from a renewable source of energy.

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"Danival's originality also lies in their technical know-how in the manufacture of miso and shoyu. These two products are obtained from fermented soya beans and are very rich in easily digested vegetable protein." Address: Moulin d'Andiran, 47170 Mézin, France. Phone: +33 5 5397 0023. Fax 5 5397 0010.

7965. Gelles, Carol. 1996. 1,000 vegetarian recipes. New York, NY: MacMillan. [vii] + 598 p. Index. 24 cm.
• ***Summary:*** In the Introduction, a section titled "Soy products" (p. 17-18) includes brief definitions of soybeans, bean curd (tofu), miso, seitan, soy flour, soy milk, soy nuts, soy sauce and tamari, soy sprouts, tempeh, and textured vegetable protein (TVP).

In the chapter on "Entrees" is a section (p. 217-27) is titled: "Tofu, tempeh, seitan, and textured vegetable protein (TVP)."

The index contains 20 entries for tofu, 5 each for tempeh and soybeans, 4 for textured vegetable protein (TVP), 3 for seitan, and 1 for miso.

A table (p. 14) gives the time to cook various types of beans (that have been soaked overnight, the soak water discarded, and fresh water added) in a pot or saucepan (not in a pressure cooker), the adzuki bean takes the shortest time (45 to 90 minutes) while the soybean takes by far the longest time (2½ to 3½ hours [which is not nearly long enough]). Herein lies one key reason that Asians strongly prefer soyfoods to whole soybeans. Address: Author, food stylist and recipe tester, New York City.

7966. Hosking, Richard. 1996. A dictionary of Japanese food: Ingredients & culture. Boston, Rutland, Vermont, Tokyo: Tuttle Publishing. 239 p. Illust. by Richard C. Parker. Index. 21 cm. [16 ref]
• ***Summary:*** This appears to be the same as the original 1972 edition. An excellent, accurate book. The basic entry for each word is given under its Japanese name (thus *daizu* rather than soybeans). Each entry includes the Japanese term in kana (usually hiragana) and (usually) kanji (Chinese characters). One hundred small illustrations are very helpful.

Here is an example: "dengaku (hiragana, kanji) a preparation in which food such as eggplant, taro, konnyaku, or tofu are dressed with a sweetened miso topping and grilled on skewers. Fish *dengaku* is called *gyoden*."

Seventeen appendices (p. 197-235) give detailed discussions of the following important Japanese foods and related items: Chopsticks. Katsuobushi. The kitchen and its utensils. Kombu. The meal. Miso. Saké. Salt. Sansai. Soy sauce. Sushi. Tea. The tea ceremony. Umami and flavor (incl. MSG). Vegetarianism (incl. Buddhism, shôjin ryôri, and fucha ryôri). Wasabi. Wasanbon sugar.

The author has lived in Japan since 1973. He holds an M.A. degree from Cambridge Univ. Address: Prof. of Sociology and English, Hiroshima Shudo Univ., Japan.

7967. Kikkoman K.K. 1996. Dai 78 ki jigyô hôkoku-sho. Heisei 7 nen 1 gatsu 1 nichi–Heisei 7 nen 12 gatsu 31 nichi [78th annual financial report. From 1 Jan. 1995 to 31 Dec. 1995]. Tokyo, Japan: 13 p. [Jap]
• ***Summary:*** Color photos show most of Kikkoman's main products. Address: Tokyo, Japan.

7968. Kleiner, Art. 1996. The age of heretics: Heroes, outlaws, and the forerunners of corporate change. New York, NY: Currency Doubleday. xii + 414 p. See p. 273-89. Illust. Index. 24 cm.
• ***Summary:*** From the rear cover: "Art Kleiner has uncovered a kind of secret history that links the medieval monastic orders, the counterculture of the sixties, and the key agents of corporate change in the modern world. I think its a landmark for people both inside and outside the most influential institution of the modern age–the corporation"– by Howard Rheingold, author of *Virtual Reality, Virtual Communities and Tools for Thought.*

Chapter 8, titled "Millenarians," begins with a history of Erewhon Trading Company (p. 273-89), which makes it appear that Paul Hawken was the only important person in the company. Nevertheless, the history is full of interesting insights, many related to Erewhon's role as a pioneer in the countercultural natural foods industry and (for a while) the largest distributor of natural foods and macrobiotic foods in the United States. Kleiner is a engaging and insightful writer. Erewhon was started by Michio and Aveline Kushi who, in the 1950s, had met at La Maison Ignoramus [literally, The House of Ignorance], a macrobiotic institute founded by renegade philosopher George Ohsawa outside Tokyo. Ohsawa claimed to have cured himself of tuberculosis by eating a diet of brown rice, miso soup, and cooked vegetables (from both land and sea). Ohsawa came to believe that a good (macrobiotic) diet is the foundation of both personal and societal health. The first step is to change your own diet, then to help others change theirs. Ohsawa was a Japanese writer, had lived in Paris in the 1920s, and was deeply interested in world government–as well as in Zen. Ohsawa recruited the Kushis to go abroad (Michio was the first to leave Maison Ignoramus and to do so) to promote world government. Michio and Aveline fell in love in the United States and were married. They eventually started teaching young Americans in Cambridge, Massachusetts. Before long they were prosecuted for practicing acupuncture without a medical license–but they prevailed and stayed. In the mid-1960 macrobiotic diets called for staples that were rarely found in East Coast food stores: brown rice, miso, tamari, etc. The Kushis started to sell food and books out of their home in Cambridge. Then [in April 1966] they moved the little store out of their home into a basement retail space at 303-B Newbury Street–and named the fledgling company Erewhon. "... one of their students, Paul Hawken, took over

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as clerk"—or at least so says this book. Hawken was only eighteen, a lean young man from California. The rest of the story is how Hawken (apparently single-handedly) built Erewhon and the early natural foods movement.

From the publisher's description: "The author explores the nature of effective leadership in times of change and defines its importance to the corporation of the future. He describes a heretic as a visionary who creates change in large-scale companies, balancing the contrary truths they can't deny against their loyalty to their organizations. This book reveals how managers can get stuck in counterproductive ways of doing things and shows why it takes a heretical point of view to get past the deadlock and move forward." Address: Former editor of *The Whole Earth Catalog* and freelance business reporter during the 1980s, Oxford, Ohio.

7969 Mai, Pham. 1996. The best of Vietnamese and Thai cooking: Favorite recipes from the Lemon Grass Restaurant and Cafes. Rocklin, California: Prima Publishing. xii + 274 p. Illust. (Some color photos). Index. 24 cm

• ***Summary:*** The author's family name is "Mai" and her given name is "Pham." She prefers to write and say her name, Asian style (and as in American phone books), with her family name first.

The book is dedicated with a free-verse poem to her father, Xuan Pham, and her mother Thom Vo. Born in Vietnam and raised for ten years in Bangkok, Thailand (where her father was the Vietnamese military attaché to Thailand) Mai Pham (like her sister Denise, and her two brothers) was brought up with food as the center of her family and universe. She came to the U.S. with her family in 1975. "One minute we were in the comfort of our home in Saigon, and the next we were fleeing our country with just the clothes on our backs. After graduating from the University of Maryland with a degree in Journalism in three years, she pursued a career in broadcast journalism. At age 16 she hosted a radio show for American GIs. At age 18 she managed to talk ABC News into giving her her first break as a television reporter. In 1983 she "landed a reporting job as the first Vietnamese-born television journalist in the United States." Just a few years earlier she had been living in a refugee's quagmire. After several years of reporting, she went to work in public relations and then as a speech writer for the governor of California.

When she met her husband-to-be, Trong, her life again changed dramatically. He was a scientist turned entrepreneur who had founded the successful La Bou bakery / cafe chain in Sacramento, California. Trong convinced her to open a restaurant with him. "He talked about the incredible excitement and satisfaction of taking a simple idea and turning it into a successful business. Inspired by his success and encouraged by his infectious enthusiasm, she decided to go for it. So in 1998, with practically no experience in the food industry, a do-or-die kind of commitment, and a strong belief in their unique concept, the two young people opened the Lemon Grass Restaurant. Mai Pham had found a way to express her passion for cooking. Vowing to share with Sacramento the best of Vietnams and Tahi Foods, she worked day and night to adapt to a restaurant setting the recipes handed down from her mother and grandmother (p. x-xiii).

Today, in addition to being chef and owner of the award-winning Lemon Grass Restaurants and Lemon Grass Cafes in Sacramento, California, Mai teaches Southeast Asian cooking. She is married to Trong Nguyen, founder of the Northern California-based La Bou Bakery / Cafe chain and "the biggest cheerleader behind this and almost every major project I have encountered."

As she got deep into her research and reflected on her own experiences, she "became convinced that Vietnamese- and Thai-style cooking could be a healthful alternative to a modern Western diet. The typical Asian diet consists mainly of carbohydrates, vegetables, fish, and very little red meat. To stay full, we eat large portions of inexpensive foods such as rice and noodles and lots of greens, many of which grow in the wild. Meat is served only in garnish-size portions.

Often they enjoyed a typical meal-in-one dish. Vietnamese cooking is influenced by Chinese, Indian, French, and Thai cookery, but is more delicate in its execution. For example, a Vietnamese stir-fry is less greasy than its Chinese counterpart. Instead of salt or soy sauce, Vietnamese cooks season almost every dish with *nuoc mam*, or fish sauce [its Thai counterpart is *nam pla*] (p. 4-5). Almost all meals are planned around rice.

Basic ingredients related to soy: (1) Bean sauce: Made of fermented soy beans, water, and salt, it comes in a chunky form with whole soybeans or as a purée. The author prefers the chunky variety sold in jars by Koon Chun. (2) Hoisin sauce: Made from soybean purée, sugar and caramel sauce. Never serve it strait. Try Koon Chun. (3) Soy sauce. Each brand is different and she uses them all. Kikkoman all-purpose Japanese. Golden Mountain light Thai-style. Sweet soy sauce made from dark soy and caramel, to give a rich, dark color. Chinese-style dark soy sauce containing molasses. Flavored soy sauces such a mushroom or onion, sold in small glass bottles. "Make sure the mouth of the bottle is wiped clean after each use."

Sauce recipes include: Hoisin-peanut sauce (p. 35). Cilantro-lime soy sauce (p. 36).

Chapter 7, titled "Those four days: vegetables" (p. 155-77) begins: "Walk into the Lemongrass kitchen and if it happens to be the 1st 14th, 15th, or 30th day of the lunar month, chances are you will find many of our staff eating vegetarian. By abstaining from meat on those sacred days, they are reaffirming their belief in the teachings of Buddha and rededicating their commitment to a life free of indulgence, greed, and conflict." As a child Mai Pham looked forward to those four days because if her grandmother,

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a devout Buddhist, happened to be visiting, her mother would prepare a sumptuous vegetarian meal for all to enjoy together. One favorite was vegetarian spring rolls, which were no less tasty than their meat counterpart. The family's favorite sweet and sour soup, usually served with shrimp or fresh catfish, was prepared with fresh pineapple, tofu, cabbage, bean sprouts, and chopped saw-leaf herb. Actually, Mai Pham has always preferred the vegetarian version.

When Lemon Grass Restaurant first opened there was only one vegetarian dish on the menu. Now the menu features an entire vegetarian section, with entrees, salad rolls, spring rolls, etc. "To enhance flavor and texture, sometimes a simple ingredient such as tofu is first fried then simmered before being added to the finished dish. Because of the skill required for this specialized cooking, temples–where the monks and nuns eat a strict meatless diet year-round–are known to have the best vegetarian food." In Vietnam, vegetarianism is observed for religious rather than for health or other reasons.

Recipes. Vegetarian fisherman's soup (with "¼ pound extra firm tofu, cubed (fried or plain)"). Vegetarian spring rolls (with "½ pound extra firm tofu, drained and mashed with the back of a fork"). Su Co's delight (with "¼ pound extra firm tofu, drained and cut into 1-inch cubes"). Water spinach and cabbage in garlic-bean sauce (with 1½ tablespoons bean sauce").

Flat noodles with chicken and Chinese broccoli (with 1 tablespoon fermented whole yellow soybeans, p. 180-81. Called *rad na*, this dish "gets its distinctive flavor from the fermented yellow beans. In Bangkok, you can find this dish on practically every street corner and even in hotels"). Steamed striped bass with black beans, ginger, and green onions (with "1 tablespoon drained Chinese-style fermented whole black [soy] beans, chopped," p. 219). Address: Chef and owner, Lemon Grass Restaurant and Cafe, Sacramento, California.

7970. Smith, Andrew F. 1996. Pure ketchup: A history of America's national condiment with recipes. Columbia, South Carolina: University of South Carolina Press. xiii + 242 p. Illust. (some color). Index. 24 cm. [200+* ref]

• ***Summary:*** Part I, "History" is related to the history of soy sauce and the first 3 chapters have the following contents: 1. Introducing ketchup and its polyglot parentage: Introduction, origins, catchup, catsup, or ketchup?, the British. 2. The rise and demise of homemade ketchup: Introduction, mushroom, fish and seafood, and walnut ketchups, pickles, sauces and ketchups, ketchup in 18th-century America, the rise of tomato ketchup, ketchup in 19th-century Britain and America, reason's for ketchup's initial success, ketchup commonalities, homemade ketchup's high-water mark, the fall of homemade ketchup. 3. The commercialization of ketchup: Early tomato ketchup manufacturing, the rapid expansion of commercial ketchup, manufacturing ketchup at the turn of the century [around 1900], commercial nontomato ketchups, America's national condiment.

By the mid-1700s, three general types of ketchup had emerged in England: mushroom, fish, and walnut. "Mushroom ketchup was a particularly successful condiment." The earliest known recipe for mushroom ketchup appeared in 1728 in a book by Richard Bradley (p. 14). By the mid-1700s, many British cookbooks or cookery manuscripts included one or more non-tomato ketchup recipes. The base ingredient in "Harvey Sauce" was mushroom ketchup. "'Worcestershire Sauce' included both walnut and mushroom ketchups, and some receipts employed 'Canton soy' as an ingredient" (p. 17).

In 1804 James Mease (*Domestic Encyclopedia*, Vol. 3, p. 506) wrote: "Love Apples" make "a fine catsup." Then in 1812 Mease published the earliest known tomato ketchup recipe. It consisted of unstrained tomato pulp with spices. Since it was not sieved, it was quite thick. Vinegar was replaced by brandy. The first Anglo-American recipe for tomato sauce was published in 1804 in Great Britain by Alexander Hunter. Initially the terms "tomato sauce" and "tomato ketchup" were not highly differentiated. Ketchup tended to be thicker, contain more tomato solids, and last longer–due to its vinegar content. Address: Brooklyn, New York and Jackson, New Jersey.

7971. Steinkraus, Keith H. ed. 1996. Handbook of indigenous fermented foods. 2nd ed., revised and expanded. New York, Basel, and Hong Kong: Marcel Dekker, Inc. xii + 776 p. Illust. Index. 26 cm. Food Science and Technology Series, Vol. 73. Index. 26 cm. [350 + soy ref]

• ***Summary:*** This 2nd edition is about 108 pages longer than the original 1983 edition. Contents: Introduction to indigenous fermented foods. (1) Indonesian tempe and related fermentations: Protein-rich vegetarian meat substitutes. (2) Indigenous fermented foods involving an acid fermentation: Preserving and enhancing organoleptic and nutritional qualities of fresh foods. (3) Indigenous fermented foods involving an alkaline fermentation. (4) Indigenous fermented foods in which ethanol is a major product: Type and nutritional significance of primitive wines and beers and related alcoholic foods (incl. Chinese koji (big *qu* {bricklike in shape and made from barley or wheat and soybeans, inoculated with *Aspergillus*} molds), and small *qu* ({spherical, plate-circular or rectangular in shape and made from rice or rice bran with various herbs, inoculated with *Mucor* and/or *Rhizopus* molds}, p. 449), Japanese amazake (p. 480-81).

(5) Indigenous amino acid / peptide sauces and pastes with meatlike flavors (p. 509-654): Introduction.

(A) Soy sauces: Japanese shoyu: Koikuchi, usukuchi, and tamari; Chinese chiang-yu, by Tamotsu Yokotsuka (p. 511-17). Biochemistry of *Saccharomyces* (*Zygosaccharomyces*) *rouxii*, by Steinkraus, Franta, and

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Ayres (p. 517-24). Umami flavor, by Kawamura and Kare (p. 524-28). Chinese fermented products related to soy sauce (big *qu*, small *qu*, and jiang, by Chen & Ho, p. 528). Taiwanese soy sauce, by Liu (p. 528-33). Malaysian soy sauce: Kicap, by Ong, Mercian, Poesponegoro and Tanuwidja (p. 531-39). Indonesian soy sauce: Kecap, by Saono, Poesponegoro and Tanuwidja (p. 539-43). Korean soy sauce, by Chang (incl. homemade kanjang and meju, p. 543-44). Taiwanese black bean sauce: Inyu, by Jan et al. (p. 544). Philippine taosi, by Steinkraus (p. 544-45).

(B) Fermented soybean pastes: Japanese miso, by Ebine, Shurtleff and Aoyagi (p. 545-56). Indonesian tauco, by Saono et al. and Winarno (p. 556-59). Korean Doenjang and kochujang, by Chang, Shurtleff and Aoyagi (p. 559-64).

(C) Fermented fish-shrimp sauces and pastes (p. 565-606).

(D) Fish-soy sauce and fish-soy paste, by Ismail, p. 607-11).

(E) Miscellaneous Oriental fermentations. Japanese natto (itohiki natto), by Hayashi and Ota (p. 611-24). Japanese Hama-natto (hamanatto) and related products (incl. yukiwari natto, p. 624-26). Chinese red rice: Anka (Ang-kah), by Lin, Su and Wang. Sooksan and Gongsakdi, and Pichyangkura (p. 626-33). Chinese sufu, by Su and L.-P. Lin (p. 633-41). Preserved duck eggs / Century eggs, Chinese pidan (p. 641-42). Pidan are made by a chemical process, not by fermentation. Note: Chapter 5 contains about 240 references. Much of the text in this chapter is similar to that in the original 1983 edition, although this chapter is 7 pages longer and contains 3-4 new sections.

(6) Mushrooms. Producing single-cell (microbial) protein on lignocellulosic or other food and agricultural wastes.

(7) General papers related to indigenous fermented foods. Address: Inst. of Food Science, Cornell Univ., Geneva, New York.

7972. Tetsudo Unyukyoku. 1996. Shio sato shôyu miso ni kansuru chôsa [Survey concerning salt, sugar, shoyu, and miso]. Tokyo: Yushodo Shuppan. 23 cm. Series: Juyo Kamotsu Jokyo, no. 9. [Jap]*
Address: Japan.

7973. Verreault, Georges. 1996. Diary of prisoner of war in Japan, 1941-1945. Rimouski, Quebec, Canada: Vero. 288 p. See p. 157. Illust. Portraits. 23 cm. *
• ***Summary:*** "Yes we really had fish, cooked the traditional Japanese way, in sweet soya sauce. The three meals of the 6th day of the 10th month of the nineteen hundred and forty-fourth year, are over. Let's forget them!"

Note: The first French edition was published by Les éditions du Septentrion (in Quebec) in 1993. This is a translation of: *Journal d'un prisonnier de guerre au Japon, 1941-1945*. Georges Verreault lived 1920-1966; he died at about age 46.

7974. Winter, Ruth. 1996. Super soy: The miracle bean. New York, NY: Crown Publishers Inc. 192 p. Index. 21 cm. [106 ref]
• ***Summary:*** On the cover is written: "This wonder bean can help fight cholesterol, high blood pressure, blood sugar, cancer, ease menstrual and menopause symptoms, and keep a colon healthy. Includes a cookbook of 50 soy recipes from New York's Natural Gourmet Cookery School."

Contents: Introduction: The Cinderella bean. 1. How soy protects the heart and blood vessels: Full of fiber, the Eskimo secret omega-3 fatty acids, lecithin and vitamin E, preventing strokes, magnificent magnesium, soy and the Mediterranean diet, foam to wash out cholesterol?, cholesterol competitors–phytosterols, is it thyroid hormone [when thyroxine levels rise, cholesterol falls]?, amino acid at work?, could it be the B's?, is it the flavonoids?, the bean and obesity, high blood pressure and the bean, could it be just avoiding meat and dairy products?, summing it up. 2. How soy protects against cancer: Protease inhibitors, trypsin inhibitors, plant estrogens, polyphenols, terpenes–antioxidants, fighting phytates, maybe it's due to low-count amino acid, saponins, inositol–the cancer-fighting phytic acid, which soy products have the most anticancer potential?, potential adverse effects of soybeans. 3. How soy helps ease digestive problems: Promoting regularity, calcium and soybeans. 4. How soy is beneficial in diabetic diets. 5. How soy is proving beneficial to women: The soy and the cycle, other hormonal benefits, magnesium, PMS and pregnancy, contraceptive or fertility inducer?, so "B" it, the bones need it, magnesium and bones, boron and bones, it could be the phytates. 6. Soy and men: Soy and sex, protein power. 7. Soy products and their nutritional value: Soybeans, edamame, soybean sprouts, tofu (also known as bean curd and dou fu-tofu), tempeh, soy milk, yuba, soy cheese, okara, soy yogurt, soy sauce, soy oil, soybean lecithin, soy nuts, miso, natto, soy flour, soy powder, soy protein isolates, concentrates and grits, texturized soy protein, convenience of soy foods. 8. Easy ways to add soy to your diet: Some other easy ways to add soy to your diet, sensible soybean use. 9. Recipes: Appetizers, soups, salads, main dishes/entrées, side dishes/breakfast, sauces/dips, desserts. Glossary. Where to get more information. References. Address: M.S., Health and science writer, Short Hills, New Jersey.

7975. Stevens & Associates, Inc. ed. and comp. 1997. U.S. 1997 soyfoods directory. Lebanon, Indiana: Indiana Soybean Development Council. 47 p. 28 cm. [29 ref]
• ***Summary:*** This second, expanded edition of the directory contains more than 270 company listings. Contents: Foreword. How to use the Soyfoods Directory (incl. Internet access). Daily soyfood guide pyramid (color). Soyfood descriptions (alphabetical): Introduction, green vegetable

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soybeans (edamamé), hydrolyzed vegetable protein (HVP), infant formulas–soy based, lecithin, meat alternatives (meat analogs), miso, natto, nondairy soy frozen dessert, okara (see soy fiber), soy cheese, soy fiber (okara, soy bran, soy isolate fiber), soy flour, soy grits, soy protein concentrate, soy protein isolate, soy protein–textured, soy sauce (tamari, shoyu, teriyaki), soy yogurt, soybeans, soymilk (soy beverages), soynut butter, soynuts, soyoil & products, sprouts–soy, tempeh, tofu & tofu products, whipped toppings (soy based–"similar to other nondairy whipped toppings, except that hydrogenated soyoil is used instead of other vegetable oils"), yuba. Soybean products chart From whole soybeans, from soybean meal, from soyoil and lecithin. Soyfood companies by product (products listed alphabetically).

Composition and nutrient content of soyfoods (large table, p. 14). Soyfood companies (alphabetical by company name. Each listing contains address, contact, phone, soy products, product names, distribution, to locate product, classification). Mail-order soyfoods: Soyfood mail order companies (listed alphabetically by company). Soyfood companies by state (alphabetical by state; California has by far the most). Soybean promotion & research organizations (national, and state). Professional associations and industry information resources. Soy cookbooks (19). Soy resource books (10). Soyfood fact sheets and recipes: 1-2 pages each for meat alternatives, miso, soyoil, soy flour, soymilk, tofu, textured soy protein, whole soybeans. Soyfoods directory survey.

This directory is on the Internet's World Wide Web at http //www soyfoods com. For more information or suggestions, call 1-800-301-3153. The Internet version of the Directory continues to improve. "The first year saw hits to our site increase from 1,000 the first month to more than 8,000 per month now. We have added a new search engine that makes it easier to find information and a new monthly e-mail newsletter, *Soyfoods USA*, designed to inform media sources, dietitians and consumers about the latest soyfoods information. To subscribe to this popular newsletter, just send an e-mail message to soyfoods@ md com with the words "Subscribe Soyfoods USA" in the body or subject field."

Talk with Roger Stevens. 1997 March 10. The 1997 directory was first available in January 1997. About 100,000 copies of this directory were printed, and all but 7,000 have already been sent out free of charge. About 77,000 copies were sent to registered dietitians nationwide; all are members of the American Dietetic Association. Another 10,000 copies were sent to the American Association of Family and Consumer Sciences–basically extension personnel at the Cooperative Extension Service in each county; these people provide a lot of consumer information about foods and agriculture. About 500 copies were sent to each of the 20 state soybean development councils. The remaining 6,000 copies were sent to callers who left their name and address at a toll-free answering service. The next step is to do a media tour in Indiana. Traveling with a registered dietitian, they expect to generate a lot of requests from citizens of Indiana. One of the goals is to show other states that if you promote soyfoods in this manner, you will get a lot of interest. Roger hopes to encourage other states to take a more active role in promoting soyfoods. The directory has generated a tremendous amount of information on the part of dietitians who call the toll-free number and have many questions about soyfoods. Roger tries to refer them to people who have the answers–such as 1-800-Talk-Soy. The Indiana Soybean Council has had to hire a new person just to handle the requests for this directory.

Next Roger plans to do a survey of registered dietitians to learn more about their responses to the 1997 directory. He might ask: Did you receive the book? Do you use it? If so, in what way and how often? How many people do you influence with regards to soyfoods as a result of this book? So if each of the 77,000 dietitians influences, on average, 10 people a year, the directory has reached more than 750,000 people. One major goal of this book is to help dietitians include more soyfoods in their own diets and in the diets of their clients. How can we better help you do this? Do you want a cookbook? A starter kit? Shall we include coupons?

From the focus groups he has already conducted, Roger thinks that future editions of the directory will be presented more like a cookbook or recipe book, with the directory in the back. "People really like the recipes. They just hand them out to their clients. We get requests for 100 books at a time from dietitians, who give the entire book to their clients at classes, in their offices, etc." Roger has the funds to do the research to find out exactly what dietitians want in the way of soyfoods recipes and how they want them organized.

Other possible questions: Which part or parts of the book do you find most valuable? Which do you find least valuable. Is there any information which is not in the book that you wish were included?

Roger would also like to develop for the next edition of this book a graphic presentation of the inside of a typical supermarket showing all the different products which contain soy.

Note: The word "soyoil" is used instead of "soy oil" throughout this directory. Address: Stevens & Associates, 4816 North Pennsylvania Street, Indianapolis, Indiana 46205. Phone: 317-926-6272

7976. Pearce, Jean. 1997. Getting things done: Starting out on soy. *Japan Times* (*Tokyo*), Feb 12, p. 17. Wednesday. [Eng]

• ***Summary:*** "Last week's columns reported on recent research pointing to the dietary benefits of soybean products in relieving complaints associated with menopause." Discusses isoflavones and the isoflavone content (in

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micrograms per gram) of kinako (roasted soy flour, 2,589), roasted soybeans (1,625), edamame (1,354), natto (1,273), regular tofu (509), fried tofu (695), soy milk (357), miso (373), shoyu (16).

Gives several tofu recipes and recommends *The Book of Tofu* by Shurtleff & Aoyagi.

"And finally, kudos to Japan Airlines for creating natto in a palatable form, freeze-dried and flavored ... It has been tremendously successful. In two years, total sales amounted to ¥56 million. Just think of all those isoflavones." A photo shows Jean Pearce. Address: Columnist.

7977. Dawkins, William. 1997. Poisoning scare hits Kikkoman. *Financial Times (London)*, Feb. 25, p. 28.
• ***Summary:*** Kikkoman, the world's largest maker of soy sauce, has 30% of the Japanese market. This year a summer epidemic cause many Japanese to temporarily stop eating in restaurants and to avoid fast food. Soy sauce was not itself implicated in the food poisoning, yet Kikkoman suffered a 22.1% decline in unconsolidated recurring profits. Address: Tokyo.

7978. **Product Name:** [Loyu–Shoyu Made from Sweet Lupin Seeds]
Foreign Name: Loyu (Lupinen-Shoyu)
Manufacturer's Name: Geestland–Paul E. Bremer.
Manufacturer's Address: An der Packhalle V, Nr. 1, 27572 Bremerhaven, West Germany. Phone: (0471) 971 20 63.
Date of Introduction: 1997, February.
Ingredients: Incl. Sweet lupins* * = Organically grown (*aus kontrolliert oekologischem Anbau*).
How Stored: Refrigerated.
New Product–Documentation: This leaflet (6 by 8¼ inches, printed black on yellow) from Biofach, March 1997, contains a list of all 13 lupin products made by the company. It says that Loyu was introduced in Feb. 1997. Six other lupin products introduced in Feb. 1997 were *Lopino-Felafel, Lopino-Cheesy, Lopino-Champignon, Lopino-Zuchini-Ravioli, Lopino-Kräuter-Ravioli, and Lopino-Dinkle-Ravioli.* On the back is a list of 13 reasons to choose Lopino products made from lupins.

7979. Witt, Barbara. 1997. Pan-Asian express: Quick fixes for Asian food fans. New York, NY: Bantam Books. xiii + 194 p. Index. 24 x 14 cm.
• ***Summary:*** The author, who grew up in Connecticut, loved Chinese food and Mott Street in New York City. An excellent writer, she won the James Beard award in 1993. The section on "Seasonings" (p. 8-13) gives descriptions of: Hoisin sauce, sesame seeds, soy sauce (Kikkoman is a good brand; tamari is darker and stronger), soy sauce–dark (sometimes called "black soy". Koon Chun is a good brand), soy sauce–mushroom (flavored with straw mushrooms; Pearl River Bridge is a good brand). Soy sauce–shrimp (The Chinese equivalent of Thai and Vietnamese fish sauce. Pearl River Bridge is a good brand), soy sauce–Indonesian (*Ketjap manis;* not to be confused with the less subtle Chinese sweet soy sauce).

The section on "General packaged goods" (p. 15-18) gives descriptions of: Black beans–Chinese salted (Chinese salted black beans: "The ancient and original soyfood that produced miso and soy sauce looks kind of pitiful. " Good brands are Mee Chun and Pearl River Bridge. Avoid those flavored with five-spice powder), coconut milk (canned is excellent), coconut cream, tofu ("innocuous").

Soy-related recipes include: Seared corn, tomato, and black bean relish (with "chopped Chinese black beans," p. 40-41). Silky tofu walnut dip (p. 50-51). Bean paste soup (*miso shiru*, with red bean paste, p. 91). Romaine salad with lemon soy dressing (with soy sauce, p. 95-96). Tropical fruit, avocado, and tofu salad (p. 110-11). Scallops with pork and black beans (with "Chinese fermented black beans," p. 146-47). Curried mushrooms, peas, and potatoes (p. 171-72). Address: Washington, DC.

7980. DeBona, Don; Chaplin, Paul. 1997. Update on miso in Europe (Interview). *SoyaScan Notes*. March 20. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Don attended Biofach in Germany this month; this is the forth time he has attended. He has had two students who came from Europe to study miso-making with him at American Miso Co. in North Carolina. Jan (pronounced *Yon*) Kerremans, who worked at Lima Andiran in southern France, studied with Don for 2 months, Oct. 1984 to Nov. 1984. Jan was a minority partner with Pierre Gevaert. Jan now still works for Lima, but not as a miso maker, originally Flemish, he married a French woman, lives in Paris, and is Lima's sales rep.

Paul Chaplin from Wales studied with Jan Kerremans at Lima in France during May and June 1984, then with Don for 2 months, in October and November 1985. His miso manufacturing business in Wales is still tiny, but it is growing well. Total turnover (income) in fiscal 1996 (Nov. 1995 to Nov. 1996) was £28,000 (=$44,800). Paul's new address is: Source Foods (Organic Priority) 9 Cwm, Business Centre, Marine Street, Cwm, Ebbw vale, NP3 6TB, Wales, UK.

For both Jan and Paul, Don provided miso-making instruction, as well as room and board, free of charge. Barry Evans did not like Don to be teaching other people to make miso.

Pierre Gevaert was the founder of Lima. His son is named Daniel, and Daniel's wife is Valérie. Daniel studied miso-making with Jan Kerremans in southern France. In early 1990, after Pierre Gevaert died, Daniel and his wife took over Lima's miso company at Andiran in southern France. They changed the company name to Danival from Lima-Andiran. The two of them now make two types of

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miso, and they also sell shoyu and tamari–but it is not known if they make the latter two products or not. Lima and Danival are no longer in contact with one another because there are bad feelings between them; Lima purchases their miso from American Miso Co –much to Danival's chagrin.

Other new miso companies in Europe. Noka, run by Karl Selgmann, in Alzey, Germany. Karl used to be with Mr. Hiroshi Kozaki of Kanta Kozaki in Urbach, that company started in 1990. Paul Chaplin has visited Noka.

Two new miso makers in Yugoslavia are Sladjan Randjelovic and his wife, Vladimirka, of Lion Health Food Co. (Zagorska 12/9, YU-11080 Zemun, Belgrade, Serbia / Yugoslavia). Their business card says: "Belgrade, London, and Beijing." Vladimirka is actively involved in the business. They are both very macrobiotic. They already make *mizuamé* (rice syrup or rice malt). Their miso was of fairly good quality. They also made an interesting miso with added shiitake and kombu.

Hans Weisseneder is making miso for Sojvita in Lichtenwoerth, Austria. He had photos of his vats which are in a wine cellar outside of Vienna.

In Europe, imports of miso from Japan are almost certainly larger than total European miso production. Address: General Manager, American Miso Co., Route 3, Box 541, Rutherfordton, North Carolina 28139. Phone: 704-287-2940.

7981. Danival. 1997. Price List–Danival. 1 March 1997. Mezin, France. 21 p. 30 cm. [Eng]

• ***Summary:*** Contents: Unrefined Atlantic sea salt. Tomato preserves. Vegetable preserves (incl. azuki with hijiki sea weed). Mushroom preserves. New condiments. Fruit purees with no added sugar (but 35% corn syrup for sweetness). Cereal sweeteners (barley malt, wheat syrup, corn syrup, rice syrup, apple syrup). Desserts and fruit juice. Fruit desserts. Agen prunes. Danival's macrobiotic food range: "Europe's leading manufacturer of organic macrobiotic food products. Produced in France, traditional Japanese manufacture. Non genetically engineered soya, grown by Mr. Berjon from his own seed beans since 1991." Brown rice miso* (unpasteurized, 4 sizes), barley miso* (unpasteurized, 4 sizes), young shiro miso* (unpasteurized, 2 sizes), shoyu* (unpasteurized, 5 sizes), tofu*, smoked tofu*, tempeh with shoyu and wakame*, seitan with shoyu and hijiki*, gluten powder*. * = Organically grown, certified by AB-Ecoconcert.

A 4-page French-language color insert (dated March 1997) contains color photos of many of these products, sealed in glass jars–incl. "Bio Miso (*Orge/Gerst*), Sauce Bolognaise Seitan, Raviolis (*Farcies au Seitan*), and Bio Shoyu." Address: Moulin d'Andiran, 47170 Mézin, France. Phone: +33 5 5397 0023. Fax 5 5397 0010.

7982. *Food Product Design*. 1997. Kikkoman kicks up new production facility. March. p. 22-23.

• ***Summary:*** In February, Kikkoman International began construction of its second soy sauce manufacturing plant in Folsom, California. The new facility, expected to cost $35-40 million, will have an initial capacity of 2.6 million gallons/year of soy sauce. The first product shipments are scheduled for the fall of 1998.

Kikkoman's first U.S. plant was built in 1973 in Walworth, Wisconsin. Since that time the plant's production of soy sauce has increased tenfold. For the past decade, Kikkoman soy sauce has experienced double-digit growth in foodservice and industrial sales.

Kikkoman is a multinational corporation with sales of more than $2 billion per year and 4,250 employees.

7983. Viana Naturkost GmbH. 1997. Preise und Neues [Prices and new products]. Euskirchen, Germany. 28 p. 30 cm. [Ger]

• ***Summary:*** This impressive, stylish/classy color catalog from Biofach, March 1997, consists of two parts. The 20-page smaller format (26.5 cm) black-and-white insert gives the prices of all products for 1997. The larger color catalog describes new products. The price list contains the following product categories: Basic and seasoned tofu products. Fresh tofu spreads. Tofu hot dogs. Wheat gluten products. Tofu cutlets. Tempeh. Seitan. Burgers and snacks. Spreads in glass jars. Soy sauce and miso products (organic shoyu, organic tamari, barley miso, brown rice miso). Fresh pates. Deli salads. Soya mayonnaise (Vianaise). Rice drink. Noodles. Fresh pasta stuffed with tofu fillings (Tortellini, Maultaschen). Frozen products (incl. Chili con tofu and spring rolls). Sprouts (11 types & products, not incl. soy sprouts). Spreads from Noka. Canned products (*Konserven*). Address: Willi-Graf-Str. 88, 53881 Euskirchen-Kuchenheim, Germany. Phone: 02251-9446-0.

7984. Fallon, Jackie. 1997. Re: Was soy sauce ever used in Lea and Perrins' Worcestershire sauce? Letter to William Shurtleff at Soyfoods Center, April 7. 1 p. Handwritten, with signature on letterhead.

• ***Summary:*** Jackie is sorry she couldn't be of more help. She was able to clarify only two things and couldn't find any dates.

"From what I understand, the recipe hasn't changed & I don't know where (if at all) soy fits into the picture.

"I threw in a couple of new things I found with dates and sources–hope it helps. Sincerely, . . ."

Printed in red, across the bottom of the letterhead, "Quality Products Since 1835." Address: 15-01 Pollitt Drive, Fair Lawn, New Jersey 07410. Phone: 201-791-1600.

7985. Andoh, Elizabeth. 1997. In Tokyo's ryotei, the art of service [omotenashi]. *New York Times*. April 20. p. XX6, XX24 (Sunday).

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• ***Summary:*** Contains excellent reviews of five of Tokyo's fine, traditional (and often expensive) restaurants: Tatsumura, Tsukiji Tamura, Bon, Kocho, and Saryo Arai.

Bon serves a type of vegetarian cuisine called fucha, which traces its origins to the Buddhist temple food of China. Bon serves "ivory-colored spirals of nama yuba (silky, fresh soybean curd sheets)" and uses kudzu in some dishes. Address: Japan

7986. Labbé, Max. 1997. Ces étonnants aliments végétaux fermentés et lacto-fermentés [Those astonishing fermented and lactic-fermented vegetable foods]. Auvers sur Oise, France: Published by the author. 116 p. Preface by Richard Hwei-Ming Bau. Illust. No index. 21 cm. [Fre]

• ***Summary:*** Part III of this popular book, titled "Asiatic Specialties," contains the following sections and subsections (p. 77-103): Chinese and Japanese fermented foods: Shoyu and tamari, miso, umeboshi, nuka pickles, natto, sufu. Characteristics and way of tempeh. Definition, preparation, arrangement of grains before inoculation. Indonesian tempeh: Preparation of the cakes, preparation of the inoculum. Javanese tapé (tapeh) and its culture. American-style tempeh. A color photo on the rear cover shows Max Labbé. Address: 3 rue Emile Level, F- 75017, Paris

7987. Noble Bean. 1997. Tempeh–Noble Bean (Leaflet). McDonalds Corners, Ontario, Canada. 2 p. Front and back. 28 cm.

• ***Summary:*** The top three-fourths of the front of this black-on-tan leaflet shows six tempeh products (packages and labels) made by Noble Bean. On the bottom quarter is a brief description (left column in French, right in English) of tempeh. On the back is a very brief description (in French and English) of Noble Bean and its history since 1979, an illustration of the countryside production facility (in a trailer), and a recipe for tempeh teriyaki. Address: RR#1, McDonalds Corners, ONT, Canada K0G 1M0. Phone: 613-278-0173.

7988. Raymond, Jennifer. 1997. Fat free & easy: Great meals in minutes! No added fat. No cholesterol. No animal ingredients. Calistoga, California: Heart & Soul Publications. 152 p. Recipe index. 26 cm.

• ***Summary:*** A very useful vegan cookbook. Contents: Introduction. Health consequences of high-fat diets. How much fat should you eat? Calculating your fat intake. Sources of fat in food. Fats are not created equal. Tips for cutting the fat. Meeting your protein needs. Problems with excess protein. Protein myths and facts. Salt. Menu planning and menu ideas. Stocking your pantry. Ingredients that may be new to you. Recipes: Breakfast foods, breads & muffins, sandwiches, sauces & spreads, salads & dressings, soups & stews, vegetables, grains & side dishes, main dishes, sweets.

In this book, all recipes that would typically call for milk (such as smoothies or pancakes), call for "soy milk or rice milk." Many recipes are seasoned with soy sauce. Other soy-related recipes include: Scrambled tofu (p. 33). Missing egg salad (with tofu, p. 47). Creamy cucumber dip (with tofu, p. 49). Cucumbers with creamy dill dressing (with tofu, p. 61, 66). Holiday tofu roast (p. 113). Truly terrific tacos (with Boca Burgers, p. 119). Tofu cheesecake (p. 133). Chocolate tofu pudding (p. 136). Creamy prune pudding (with tofu, p. 139). A photo (p. 151) shows Jennifer Raymond, her husband Stephen Avis, and their five dogs. Address: 1418 Cedar St., Calistoga, California 94515. Phone: 707-942-2180.

7989. Gevaert, Valérie. 1997. Re: Brief history of Danival and current activities. Letter to William Shurtleff at Soyfoods Center, May 13–in reply to inquiry. 2 p. Typed, with signature. [Eng]

• ***Summary:*** "Daniel Gevaert purchased the Lima Andiran site in early 1990–but not the Lima trademark–and established Danival the same year in June. Our miso and shoyu, as well as our fruit and vegetable preserves are prepared with certified organic ingredients, and we also package unrefined Atlantic sea-salt. Our company name is indeed Danival." The address and phone and fax numbers are shown below.

"My full name is Valérie Fenech Saint Gemeys. Daniel and I have been married for 15 years, and we have two sons. Benoit age 14 and Martin age 10.

"We began producing miso as soon as we bought the site, and put it on the market for the first time in 1992, after completing the first 18 month production cycle. Our shoyu products were launched the following year. All Danival's products are prepared on site. We buy 90% of our raw material in France (soya, vegetables, fruits and cereals), giving priority to local producers in our region in the south-west.

"Daniel's skills in preparing miso came to him from his father, who was in charge of miso production for Lima. At the time, Jan Kerremans was an employee whose task was to work on the miso recipe. Daniel himself has had the great privilege of receiving the teaching and guidance of the master-craftsman who is personally responsible for miso preparation within the imperial court of Japan, and who has imported his traditional skills and knowledge to Daniel while visiting Danival or during Daniel's frequent trips to Japan. We are both familiar with your publications and find them of great value."

Note 1. Near the top of the letterhead, below and to the left of the logo and company name, is written "Fabricant de père en fils." In the center of the stationary, in a light half-tone, is a line drawing of a traditional shoyu seller (which also appears in *The Book of Miso*, 2nd ed., by Shurtleff & Aoyagi, p. 262). A printed seal in the lower left corner shows that the company won special mention for the *Prix Écoproduit* 1992, in the "Enterprise and Environment"

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competition organized by the French Ministry of the Environment

Note 2. Enclosed with the letter are five brochures and booklets, some of which are cited separately. Address: Moulin d'Andiran, 47170 Mézin, France. Phone: +33 5 5397 0023. Fax 5 5397 0010.

7990 Seemo (H. Shapira). 1997. Re: History of Dakini Health Foods Pvt. Ltd., in Pune/Puna, India. Letter (fax) to William Shurtleff at Soyfoods Center, May 13–in reply to inquiry. 7 p. Handwritten.

• ***Summary:*** Seemo is Mr. H. Shapira from Israel and Kairava is Mrs. J. Spaelstra from the Netherlands. Seemo is in charge of tempeh, Kairava in charge of tofu & soymilk. They are making the earliest known commercial soybean tempeh in India. For their first letter see Dakini (1997).

Both Seemo and Kairava are devout disciples of Osho (formerly called "Sri Rajneesh"), he since 1984 and she since 1986. They arrived in Pune to stay in about 1988/89. Initially to support themselves, they had a gem and crystal shop, a wholesale new-age jewelry operation, and a motor bike repair shop. Now they have finally found what they want to do for work. "It's love and Zen." Osho died in Pune on 19 Jan. 1990, they returned to India the next day; the fire was still burning at the burning ghat. In the year before his death, his discourses were mostly about Zen. He died in Pune due to heavy metal poisoning and radiation damages done to him by U.S. marshalls in an Oklahoma jail cell, where he was kept unlawfully in 1985.

Their company started with the idea of making white tahini and possibly Turkish halva [halvah] (in which white tahini is a main ingredient). It was extremely difficult to get started. As foreigners doing business in India, they had to register a "Pvt. Ltd." company. Then they could not find a space for the company, since Pune is a rapidly growing city. So Seemo pulled down the back garden in his rented house, constructed a shed with a floor area of 25 square meters, and moved his bedroom up to the second floor. This gave him an additional 24 square meters where the bedroom used to be. They also have a 25 square meter storeroom where they make the tempeh. He got electrical connections then waited for 8 months while a colloid mill (copy of a 1940 model), hot air oven, and filling machine were delivered. The mill proved to be a technical nightmare; he had to totally rebuild it. Finally their small factory started operation. Then they added peanut butter and brown tahini to their product line–with no additives or preservatives. They had to set aside their plan to make halva.

Spicer College, run by Seventh-day Adventists, is located in Pune. They have a health food store and they make peanut butter–nearly edible, with too much sugar and salt, plus other ingredients. Their sesame butter (brown tahini) is gritty, rancid, and inedible. They also produce grape juices (very, very sweet), pastries (Mmmm good). And they make and bottle soy milk in plain and chocolate flavors, but it is loaded with white sugar and Class II permitted preservatives! They also make pretty good tofu; Seemo used to eat it now and then for the last 8 years. "Besides being actually able to taste the Bible in it, I had no reason to complain." This tofu is now served at the Osho commune. "Pune old timers told me that once–20 years ago–the place was managed by an enthusiastic old American woman and the quality of their products was very good.

At Dakini, they now also make hummus in their kitchen, 15 kg/week in summer and 60 kg/week in winter. They pack it in 200 or 400 gm cups and sell it at various shops in town to foreigners and Indians. They like it.

Seemo started developing the tempeh about 8 months ago. Last year a friend of his found a book titled ***Handbook of Indigenous Fermented Foods***, edited by Dr. Keith H. Steinkraus, in a pavement stall for 400 rupees (US$13.00). Since he had been to Bali, Indonesia, many times, he tried making some of the foods but rarely got any edible products. So before leaving Pune, he gave the book to Seemo as a gift. As he read it, Seemo got really excited. He had grown up in a meat-eating family. Even while traveling and living in Europe, he continued to eat meat and junk foods. "Then I understood it was not good for me on all levels, and went vegetarian." Living in Holland later on, he started to learn about tofu, and then tempe, tamari, etc. "So now I was a healthy, well-fed vegetarian." Then he moved to India, but after some years of eating fried foods, lentils and lots of dairy products, he started to eat meat again, 2-3 times a month. "It did not feel too good, but I had no idea how to manage my diet, and living on mostly dairy products did not suit my body. So when Dr. Steinkraus' book fell into my hands, I got excited and realized that it might be possible to make tempe here in India at a small, affordable investment.

"So I first got a small incubator built; its actually like a cool box ½ meter wide and 1½ meters high, made of galvanized sheet metal with insulation and 8 shelves (of which I now use only 3)." At the bottom are heaters, which give 250-540 watts of heat. Two old computer cooling fans distribute the heat, and a thermostat regulates it. "It's not a perfect machine but I can do 5-12 kg/day when I want and, most important, I can produce in it excellent spore powder–since it is difficult to import anything here. Actually, I nearly gave up the project, because I was making sporulated tempeh, then sun-drying it and running in through my spice grinder. The powder looked great. The tempe cakes used to get hot, then very hot, then smelly with funny colors (no white mold). I double-checked everything. In the end, only the grinding was left, so I bought a small hand-turned grain mill (500 rupees = US$15.00). Since then, perfect tempeh has been happening.

"For starter, I first got a packet of spores from Holland. Later I got 1 gram of white tempe starter from an American friend in Goa (she used to make her own supply down there).

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and playing with it I found it a bit more suitable for my use. So most of my spore stock now is from this starter, and some is mixed. I still have to study how to make tempe and starter during the different seasons here. Now it is very hot and dry. Next month is monsoon (wet), followed by a month that is hot and humid, and then the 3-month 'cold' season."

About half of all tempe produced is sold frozen, the other half is sold fresh. Seemo also plans to try making dry tempeh. He gives away lots of tempe as samples; most people love it. Starting this July, it will appear on the menu of one restaurant, possibly two–first as Tempeh Stroganoff and Tempeh Shashlik (steamed, then spiced, then barbecued). "When I get *The Book of Tempeh* I will introduce it to more places. Meanwhile, I have totally forgotten about eating meat. I feel strong and light. I find my vision benefits too, I haven't noticed that with tofu. Now that I am a bit more confident working with the mold, I hope to raise some capital, move to a suitable place (possibly well out of town), and then start to make tamari shoyu, and definitely some miso too. So that's a little of our story. Thank you." Address: Dakim Health Foods Pvt. Ltd., Vidyut Nagar, Plot A2, Kawdewadi, Pune / Puna 411 001, India. Phone: 0091-212-63-1990 (phone and fax).

7991 Liu, KeShun. 1997. Fermented Oriental soyfoods. In: KeShun Liu. 1997. Soybeans: Chemistry, Technology, and Utilization. Florence, Kentucky: Chapman & Hall. xxvi + 532 p. See p. 218-96. Chap. 5. Index. [127 ref]

• ***Summary:*** Contents: Introduction. Fermented soy paste (*jiang* and miso): Varieties of miso and jiang, koji and microorganisms involved, koji starter and its preparation, Chinese jiang preparation (traditional household method, pure culture method, enzymatic method), Japanese miso preparation (rice koji preparation, treatment of soybeans, mixing and mashing, fermentation, pasteurization and packaging), principles of jiang and miso preparation, major factors in jiang and miso making (raw materials, cooking temperature and time, conditions during koji preparation, proportions of ingredients, fermentation conditions, novel processing for special products). Soy sauce (*jiangyou* or shoyu): Varieties of soy sauce, soy sauce processing (traditional Chinese household method, modern Chinese method, processing of Japanese shoyu, comparison of soy sauce and *jiang* or miso preparations), principles of making soy sauce (action of koji enzymes, fermentation by lactic bacteria and yeasts, color and flavor formation, glutaminase and glutamic acid), chemical soy sauce, progress in soy sauce preparation (use of defatted soy grits or flakes, improvements in treating soybeans, development of an automatic koji-making system, application of microorganisms with specific activities, techniques to shorten production time, improvements in soy sauce clarification), chemical composition, quality attributes and standardization, mycotoxins. Tempeh: Varieties of tempeh, preparation (traditional method, pilot plant method, petri dish method), microorganisms involved, factors affecting tempeh fermentation (starter, dehulling and aeration, moisture, temperatures, acidity, losses of solids), changes during fermentation (general changes, protein, lipid, carbohydrates and other constituents), production of vitamins, storage, nutritional value. Natto: Preparation, microorganisms involved, factors affecting natto quality (raw material, soybean cooking conditions, storage), changes during fermentation, trends in research on natto and *B. natto* (development of novel strains of *B. subtilis*, purification and characterization of key enzymes, studies into genes encoding key enzymes of *B. subtilis*, studies of possible physiological roles of natto). Fermented black soybeans (douchi or hamanatto). Sufu: Preparation, types of sufu, microorganisms involved, effect of mold growth, effect of brine aging.

Figures show: (1) Photo of Chinese chiang, and Japanese red and white miso, each on one of three spoons in a shallow white bowl. (2) Flow chart of a Chinese method for making koji starter from whole soybeans and wheat bran. Adapted from Shi and Ren (1993). (3) Flow chart of a pure-culture method for making Chinese jiang from whole soybeans (65%) and wheat flour (35%). Adapted from Shi and Ren (1993). (4) Flow chart of an enzymatic method for making Chinese jiang from whole soybeans (65%) and wheat flour (35%). Adapted from Shi and Ren (1993). (5) Flow chart of the manufacturing process for Japanese rice miso [red miso]. Adapted from Fukushima (1981). (6) Diagram of the interactions of basic miso components during miso fermentation. From Shurtleff and Aoyagi (1983) who adapted it from Shibasaki and Hesseltine (1962). (7) Graph of trichloracetic acid (TCA)-soluble nitrogen (N) contents of miso samples prepared with soybeans cooked at different temperatures for 10 minutes, followed by 0 days or 25 days of fermentation. Adapted from Nikkuni et al. (1988). (8) Graph of temperature and time control curves for different types of Japanese miso during fermentation. Adapted from Shurtleff and Aoyagi (1983). (9) Photo of soy sauce in three different containers: dispenser, small Yamasa bottle, and large Chinese can (Soy, Superior Sauce). (10) Flow chart of a typical manufacturing process for koikuchi shoyu, the most widely used type of Japanese soy sauce. Adapted from Fukushima (1981). (11) Graph (salt content % vs. temperature) Of safety zone for enzymatic digestion of shoyu koji. Protein digestibility and amino acid content in Zone A are better than those in Zone B. From Yokotsuka (1986). (12) Graph of lactic acid fermentation of shoyu mash as a function of time. Adapted from Jose et al. (1976). (13) Flow chart of role of the proteolytic enzymes of koji mold in liberation of amino acids from proteins. Adapted from Fukushima (1985). (14) Chromatogram of organic acids in fermented and chemical [HVP] soy sauce manufactured in the United States. Optical densities vs. retention time. From Fukushima (1979a). (15) Flow chart of traditional

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Indonesian method for making tempeh from whole soybeans. Adapted from Winarno (1989). (16) Four superimposed graphs of change in pH and organic acids as a function of incubation time during accelerated acidification of soybeans at 30°C. Shows acetic acid, lactic acid, citric acid, and pH. Adapted from de Reu et al. (1995a). (17) Graph of water soluble nitrogen content in the fermentation of soybeans with *Rhizopus oligosporus* during the traditional tempeh process at 25, 30, and 37°C, and with the rotating drum reactor at 36°C. (18) Photo of two chopsticks lifting some Japanese natto from a bowl full of natto; the thin strings connecting the natto above and below are clearly visible. (19) Flow chart of typical method for making Japanese natto from whole soybeans. (20) Photo of Chinese fermented black soybeans (*douchi*) on a white plate. (21) Flow chart of typical method for making Chinese fermented black soybeans from whole soybeans. (22) Photo of cubes of sufu (Chinese cheese) in a shallow white bowl. (23) Flow chart for making Chinese sufu from firm tofu.

Tables: (1) Proximate composition of some traditional soyfoods (both fermented and nonfermented). (2) Classification of major types of Japanese miso and their chemical composition. Adapted from Fukushima (1979a). (3) Types of soy sauce recognized by the Japanese government and their chemical composition. (4) Comparison between fermented soy sauce and protein chemical hydrolysate [HVP soy sauce]. Source: Yokotsuka (1986). (5) Relationship between cooking soybeans and nitrogen composition and yield of resultant soy sauce. Source: Fukushima (1979b). (6) Detailed composition of fermented Japanese soy sauce (Koikuchi shoyu). Source: Yokotsuka (1986). Includes inorganic components (minerals), organic components, amino acids, organic acids, sugars, solids, etc. (7) Selected enzymatic activities, soluble nitrogen content, and stringiness of natto samples prepared with soybeans cooked under a pressure of 1.5 kg per square cm for various periods. Adapted from Matsumoto et al. 1995. (8) Major responsible microorganisms isolated from sufu made in different parts of China. Column 1 is the genus and species. Column 2 is areas where the sufu is made, including Taiwan and Hong Kong. Adapted from Shi and Ren (1993). Address: PhD, Soyfood Lab., Hartz Seed, a Unit of Monsanto, P.O. Box 946, Stuttgart, Arkansas 72160-0946. Phone: 870-673-8565

7992. [Shoyu and Holland]. 1997. Noda, Japan: Kikkoman International Institute for Food Culture. 14 p. May. Unpublished manuscript.
Address: Noda, Japan.

7993. Kikkoman Corporation. 1997. Annual report 1996. 339 Noda, Noda-shi, Chiba 278, Japan. 24 p. 28 cm. [Eng]
• ***Summary:*** The information in this English-language annual report is current as of April 1997. Contents: Financial highlights. Profile. A message from the president. The year in review, an emphasis on growth, principal management issues, looking ahead. Overseas operations–A world brand. The Americas, Europe, Asia and Oceania. Financial section. Corporate history. Global network (directory of Kikkoman names, addresses, and phone numbers worldwide). Board of directors and officers. Corporate data.

During fiscal 1996, ended 31 December 1996, consolidated net sales worldwide rose 1.3% over the previous fiscal year to 206.0 billion yen, down from a peak of 211.7 billion yen in 1992. Net income surged 63.8% to a record 7.3 billion yen, up from 4.4 billion yen in 1995. In 1993 net income was 4.7 billion, in 1992 it was 4.9 billion, and in 1991 it was 6.2 billion--very volatile.

Overseas sales jumped 21.8% in 1996 to 54.4 billion yen, and accounted for 26.4% of consolidated net sales, up 4.4 percentage points from fiscal 1995. "Although the declining value of the yen helped boost overseas sales, this impressive result mainly reflects the excellent performance of the company's subsidiaries in the United States." In Japan, difficult conditions resulted in a 4.4% decrease in sales.

During the past year: Kikkoman increased efforts to boost sales of its premium-quality *Marudaizu* Soy Sauce (made from whole soybeans rather than defatted soybean meal). July 1996–Kikkoman starts construction of its first soy sauce manufacturing plant in Europe, located in the city of Hoogezand-Sappemeer, in the northern Netherlands. Aug. 1996–Relocated its Tokyo Head Office to Nishi-Shimbashi in central Tokyo, in a move to expand the role of this office–and introduced E-mail. Feb. 1997 began constructing its second U.S. soy sauce manufacturing plant in Folsom, California, on a 52-acre site; the ground-breaking ceremony took place in March 1997. Feb. 1997–Launched a new *Yakiniku no Tare* (Steak Dipping Sauce) in *Akadare* (Red Label) and *Kurodare* (Black Label) flavors.

"The Americas." Kikkoman's new plant in Folsom, California, is scheduled to come on stream in autumn 1998 with an initial production capacity of 10,000 kiloliters per year (about 2.64 million gallons per year). The plant will be operated by Kikkoman Foods, Inc., the company's wholly-owned Wisconsin-based subsidiary, and approximately 25 local employees will be hired. The plant will supply Kikkoman *Koikuchi Shoyu* (regular soy sauce) to customers in the western United States and Canada. Kikkoman's first shoyu plant outside Japan began operation in Wisconsin in 1973. Kikkoman has increased the production capacity of that plant 10-fold to meet expanding demand. [Note: Since the initial capacity was about 10,000 kiloliters/year, the current capacity must be about 100,000 kiloliters/year or 26.4 million gallons/year.] Over the years, Kikkoman has captured approximately 50% of the market for soy sauce and soy sauce-related seasonings in the USA. A bar chart shows the relative production volume growth at the Wisconsin plant. It has increased 2.4 fold since 1986. In addition to its plant in Wisconsin, Kikkoman has four subsidiaries in

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the USA: (1) Kikkoman International Inc. (San Francisco, California), which markets a broad range of Japanese and Asian foodstuffs, primarily soy sauce, teriyaki sauce, noodle sauce, and tempura sauce. (2) JFC International Inc. (San Francisco), North America's largest importer and distributor of Japanese and other Asian foodstuffs. (3) Japan Food (Hawaii), Inc., which wholesales soy sauce plus other Japanese and Asian foodstuffs in Hawaii. (4) Japan Food Canada Inc., which wholesales soy sauce plus other Japanese and Asian foodstuffs in Canada.

In Europe, Kikkoman's plant in the Netherlands is expected to start deliveries of soy sauce in Oct. 1997. It has an initial production capacity of approximately 4,000 kiloliters per year. "Kikkoman currently supplies the European market with soy sauce produced at its Singapore plant. When operations commence at the Dutch plant, this volume will be available to meet the burgeoning demand for soy sauce in Asia and Oceania."

In Asia and Oceania: Kikkoman has two production plants, in Singapore (est. 1983) and Tainan, Taiwan (President Kikkoman Inc., which makes a sweet soy sauce developed for local tastes, it was established in Feb. 1990 as a joint venture company). "Marketing activities in Asia are performed by Kikkoman Trading (S) Pte. Ltd. of Singapore, and JFC Hong Kong Limited, while in the competitive markets of Australia and New Zealand, Kikkoman Australia Pty. Limited is enhancing the Kikkoman name. The latest addition to Kikkoman's Asian marketing network is Shanghai Kikkoman Trading Co. Ltd., which was established in December 1995" [in China]. Address: Noda, Japan.

7994. **Product Name:** Tofu-Mexi Patties: 2 Baked.
Manufacturer's Name: Tofu Shop Specialty Foods Inc.
Manufacturer's Address: 100 Ericson Ct., Suite 150, Arcata, CA 95521. Phone: 707-822-7409.
Date of Introduction: 1997, June.
Ingredients: Tofu (filtered water, organic whole soybeans*, nigari), fresh jalapeño peppers, carrots, cilantro, garlic, soy sauce (water, organic soybeans*, organic wheat*, salt), lime juice, arrowroot powder, sunflower seeds, celery, green onions, distilled vinegar, chili powder, cumin, salt. * = Grown according to CA Natural Foods Act of 1990.
Wt/Vol., Packaging, Price: 6 oz. vacuum packed.
How Stored: Refrigerated.
New Product–Documentation: Two Labels sent by Matthew Schmit, 2002, Sept. 9. The product was introduced in June 1997. Label #1 of June 1997. 3 inches diameter. Self adhesive. Red, black, and white on yellow. "Perishable, keep refrigerated. Good source of protein. Low in saturated fat. Cholesterol free. Illustration of an adobe pueblo overlooking waves and two stylized native American animals (rabbit and squirrel).

Label #2 of Oct. 2002. "Mexi Patties: Baked Tofu." Red and orange-yellow on white. 3 inches diameter. No adhesive. A handsome, impressionistic watercolor illustration shows a tofu shop on stilts on a cliff with a tree arching overhead. "Good source of protein. Low in saturated fat. Cholesterol free."

7995. Andoh, Elizabeth. 1997. Tea and temple fare in Kamakura. *New York Times*, July 20, p. XX6, XX18 (Sunday).
• ***Summary:*** Contains reviews of restaurants in Kamakura. Saami serves dishes that include wheat gluten, and "soy foods," and a sweet tofu-based pâté known as gizei-dofu [gisei-dofu], plus "goma-dofu, creamy sesame pudding drizzled with soy sauce and topped with a dab of fiery wasabi horseradish."

Kintame uses traditional pickling mediums including "miso paste." Their "house soup is ozoni, a creamy, pale, a miso-thickened broth.

Fushiki An offers shojin ryori, temple-style vegetarian cuisine including goma-dofu and a "clear broth with cubes of silken bean curd..." The chirashi-zushi contained "soy-simmered koya-dofu bean curd..." Address: Tokyo, Japan.

7996. Kikkoman International Inc. 1997. Build a better burger with Kikkoman: Foodservice menu ideas (Brochure). San Francisco, California. 4 p. 15 x 22 cm.
• ***Summary:*** Five burger recipes that use Kikkoman soy sauce. The Kikkoman slogan is now: "The true taste of soy sauce." Address: San Francisco, California. Phone: 1-800-944-0600.

7997. *Soyafoods (ASA, Europe)*.1997. Japanese soy sauce sales hit by food poisoning scare. 8(2):2. Summer.
• ***Summary:*** Kikkoman, the world's larger maker of soy sauce with 30% of the Japanese soy sauce market, suffered a 22.1% decline in unconsolidated recurring profits–in part because of an outbreak last summer of food poisoning (caused by *E. coli*) in Japan. Just over half of Kikkoman's total sales come from soy sauce. Soy sauce was not implicated in the poisoning, but its sales fell when many Japanese temporarily stopped eating in restaurants and avoided fast food.

7998. Myong, Jung. 1997. A Korean food manufacturing company named "Zion" plans to start making soy sauce, tofu, and soy sprouts in America (Interview). *SoyaScan Notes*, Aug. 21. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Jung is Korean. She works for a Korean company named "Zion" which currently makes soy sauce and tofu in Korea. They are planning to start a factory in the USA to make soy sauce, tofu, and soy sprouts. Address: 20973 Glenbrook Dr., Walnut, California 91789-4818. Phone: 909-595-4681.

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7999. Little Tokyo Service Center. 1997. L.A. Tofu Festival, August 9-10. Los Angeles, California. 22 p. Illust. 26 cm. Saddle stitched (stapled).

• ***Summary:*** Contents: 1997 LA [Los Angeles] Tofu Festival committees and volunteers. Schedule of events, Aug. 9-10. Map of events. Letter from Little Tokyo Service Center, with thanks to House Foods / Hinoichi Tofu as the Title Sponsor. List of sponsors by rank. Honorary chairpersons: Sandy Gooch and Rob Fukuzaki. Health education and health benefits of tofu. Tofu: A 2,000 year old health food miracle, compiled by William Shurtleff of Soyfoods Center. 1997 LA Tofu Festival restaurant profiles (20 restaurants, p. 7-9). Aloha Food Factory (Alhambra, CA, started Oct. 1990–Tofu specialty dish: Tofu with cha-shu on stir fried vegetables). Berth 55 (Long Beach, 1988–Tofu poke dish). Buk Chang Dong Soon Du Bu (LA, April 1996–Spicy tofu casserole with oyster, shrimp & clams). Chez Sateau (Arcadia, 1981–Tofu cheesecake, Tofu Caesar Salad. Chef Sato was "Chef of the Year of Los Angeles" and 1980 Chef of the Year of southern California." He was also a member of the 1980 U.S. Team for the Cooking Competition in the Culinary Olympics). Curry House (Beverly Hills, Aug. 1996–Tofu steak {marinated in soy sauce}, Tofu cheesecake). Furaibo (LA, Aug. 1994–Tofu salad with original ginger). Indo Cafe (Los Angeles, 1993–Stuffed tofu cake {tofu filled with ground chicken and shrimp}, Fried tofu {marinated in turmeric and candlenut}). Jozu Restaurant (LA, Dec. 1, 1996–Fried tofu with marinated porkchops). Little Tokyo Lion's Club (LA, 1974–Tofu miso soup, Futomaki sushi). Mr. Ramen (LA, Oct. 1993–Vegetarian {with tofu} ramen). Ocean Seafood Restaurant (LA, 1990–Mabo tofu, Tofu with mixed vegetables, Tofu in clay pot). Papa Jon's Cafe (Long Beach, 1990–Greek tofu salad, Tofu lentil salad, Potato-tofu salad, Sesame tofu salad, Tofu spinach, Lasagna, Tofu broccoli stir-fry, Spaghetti and tofu balls, Tofu/lettuce/tomato {TLT} sandwich, Tofu scramble {breakfast}, Tofu dessert pies, Tofu frosting {on cake}, Tomato basil w/tofu, Teriyaki tofu, and Spinach mushroom pasta w/tofu). Pat Greenberg, "Fitness Gourmet" (Beverly Hills, Renowned instructor of the "Joy of Soy" cooking classes). Southern California Cuisine (LA, 1994–Tofu ravioli served with Curry sauce or traditional marinara sauce). Suehiro Cafe (LA, 1972–Stir-fried eggplant, Bell peppers with tofu braised in miso sauce, Deep-fried tofu with sauce). Three Brothers Restaurant & Catering (Harbor City, 1983–Chinese tofu salad, Tofu seafood salad). Tofutti Brands Inc. (Cranford, New Jersey, 1982–Non-dairy frozen desserts, Tofutti tortellini, Mini ravioli, Tofutti cookies). Unique Catering (Chino Hills, 1995–Tofu patty with shiitake sauce, String beans with tofu dressing, Inari-sushi). Vegetarian Delight (San Gabriel, 1991–Veggie fish in hot braised sauce). Wild Oats Community Market (Santa Monica, 1984–Tofu tempeh deli salad).

Advertisements (p. 10-21), including ads for Tofutti, Patricia Greenberg "The Joy of Soy" cooking classes, JFC International Inc., House Foods America Corporation (full page, inside rear cover). Address: Little Tokyo Service Center (Resource Development Center), 231 East 3rd St., Los Angeles, California 90013. Phone: 213-473-1600.

8000. Fischer, Paul. 1997. History of House of Herbs, and of the Far East line of condiments which includes soy sauce, teriyaki sauce, and hoisin sauce (Interview). *SoyaScan Notes*. Sept. 11 and 15. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** House of Herbs was started in 1939 by Patricia Winters. She was quite a woman, who invented the first under-arm deodorant called Oder-Ono, and she sold that company in 1929. Her husband, Ezra Winters, who was a muralist. He was doing a mural in a post office depicting the use of herbs and spices in medicine, cosmetics, and food. She was retired after selling her business, lived in Connecticut, so she started growing herbs in her back yard. Then she started selling them at the New York Flower Show around 1940-41, and out of that she developed a business, House of Herbs.

Paul has been working for other people in the specialty food business since 1955. He worked for Virginia Deere Extract Co., for a specialty food distributor, and for a packer of Spanish olives. In 1972 he had been for Virginia Deere for about 5 years. He and his wife lived in New Jersey and their plant was in Brooklyn, it was a long commute and he was getting very tired of it. His wife agreed with his desire to go into business. They found a business named House of Herbs (in Greenville, New Hampshire), which was on the verge of bankruptcy, and was now owned by Republic Foods (a mini-conglomerate)–having changed hands 3 or 4 times since Patricia Winters first sold it. In late May 1972 Paul and his wife bought House of Herbs and began running it in New Hampshire. In 1974 they moved the company to 28 Ann Street, Passaic, New Jersey–where it is still located.

House of Herbs presently makes a line of condiments under the Far East brand. The first product in the line was HVP soy sauce. In 1974 House of Herbs was a small specialty food company, that packaged and sold herbs and spices, cooking wine and wine vinegar, which he sold to specialty food distributors. One of these distributors in Atlanta, Georgia, was distributing Kikkoman Soy Sauce. Kikkoman then went direct, so this distributor got very angry and asked Paul if he could make a soy sauce for him. Paul said "Sure I can." So Paul bought some Hercules HVP, got the federal standards or specifications (E-610), and developed an HVP soy sauce which he called "Maestro Brewed Soy Sauce"–even though it was not fermented. That was the first product in the line. The ingredients (shown above) are the same now as they were in the beginning. Also in 1974 Paul developed a Teriyaki Sauce, also under the Maestro Brand. Then he added more (such as Sweet & Sour Spareribs Sauce, Oyster Sauce, Brown Sauce, etc.), since he

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found he needed a line to sell the products. In about 1975 or 1976 he visited San Francisco, California, for a convention. He saw a Far East travel agency, so he took the man's business card and used it to design a new label with the Chinese characters for "Far East" on it. Then he registered it in the U.S. Patent Office as a trademark. In about 1987 he introduced a Hoisin Sauce (which see). He basically cooks, mixes, and bottles the ingredients to make this line; no fermentation is involved. Paul wants to start making Hatcho miso, since fermented soy beans, the main ingredient in his Hoisin sauce, are no longer available from Wah Jah Shan.

Paul will be age 67 in November 1997. "I am not going to retire. I love my little business. It's very exciting. I go to Florida, where I have a little house, in the winter. I'm too young to retire. Business has been very, very good the last 3-4 years and all of a sudden, it has dropped way off. So now I'm looking for a way to make Hoisin Sauce–because nobody makes a good product." Address: Owner, House of Herbs, Inc., 38 Ann St., P.O. Box 178, Passaic, New Jersey. Phone: 201-779-2422.

8001. Fischer, Paul. 1997. History of Wan Ja Shan / Mandarin Soy Sauce Co. (Interview). *SoyaScan Notes*. Sept. 15. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** This company still exists and is very active. Even though they are not listed in the 1997 *Soya Bluebook* in the USA (they are listed as Wan Jia Shian Brewery Company Ltd. in Taipei, Taiwan, manufacturer and exporter of soy sauce; Mr. Wu Jen-chun, president), they are listed twice in the *U.S. 1997 Soyfoods Directory*, under Mandarin Soy Sauce, Inc. (p. 22) and Wan Ja Shan (p. 28), both at 419 N. St., Middletown, New York. They make Wanjashan Soy Sauce and Teriyaki Sauce.

Mr. Wu came from Formosa. Before 1945 he worked for Kikkoman at their factory in Formosa, and that is how he got into the soy sauce business. When the Japanese were thrown out of Formosa, he probably started Wan Jia Shian in Taipei, Taiwan. Paul does not know what happened to the Kikkoman plant in Formosa after 1945.

When Mr. Wu came to America, Paul was still rather new in this business. Paul was involved in trying to make Oriental food products and he thought he might be able to work out a joint venture with Mr. Wu. Paul had a packing and bottle plant and he thought Mr. Wu might be able to make the product. The idea worked, and Paul and Mr. Wu became close friends, with Paul and his wife even being invited by Mr. Wu for dinner at his son's house in Middletown, New York. Before that, Mr. Wu and Paul had gone shopping together for used food equipment–each needed a kettle. Mr. Wu took Paul through his factory and showed him their Fujiwara soy sauce equipment, from Japan. A man named Mr. Lee came over and set up the entire factory. One day Mr. Lee wrote down the recipe for Hoisin Sauce for Paul.

At the time Mr. Wu needed a stainless meter; Paul had one, which he gave them as a present. They were very, very friendly. About 7-9 years ago, Mr. Wu's son, Michael, took over the company. Before that their son-in-law ran the company, but not very successfully. So they sent him up to Albany, New York, where he opened a bakery. Michael now runs the company. He is still very friendly, but starting about 4 years ago, when Paul places an order for fermented soy beans for his Hoisin Sauce–Michael stopped delivering it. Michael wanted to make his own Hoisin Sauce, but he was also upset because Paul had a better recipe. Michael had a problem with syneresis with his starch, which he couldn't overcome. His Hoisin Sauce was like a glob of Jello sitting in a bottle of water. Moreover, it was much too salty. Both companies try to sell to the same customers. So Paul has had to try to figure out how to make Hoisin Sauce on his own.

Paul used to get "fermented soybeans" from Mandarin to make his Hoisin Sauce. About 4-5 years ago, they stopped selling these fermented soybeans to Paul because they started making Hoisin sauce themselves. So Paul's sauce has been off the market for 4-5 years. On the East Coast of the USA, Paul's Hoisin sauce is most widely used on barbecued spareribs, as well as Peking Duck–made with Mexican wheat flour tortillas. All the other brands of Hoisin Sauce are much too salty for Paul's taste. Address: Owner, House of Herbs, Inc., 38 Ann St., P.O. Box 178, Passaic, New Jersey. Phone: 201-779-2422.

8002. Lightlife Foods, Inc. 1997. Now your soy set can be as effective as it is appetizing. Introducing Lightlife's "Eating Healthy Can Be Soy Easy" merchandising program (Leaflet). Greenfield, Massachusetts. 1 p. 28 cm.
• ***Summary:*** This full-color, glossy leaflet shows a shelf set of all of Lightlife's soy products in the produce section, flanked on both sides by celery, lettuce, tomatoes, artichokes, bell peppers, and mushrooms. Products (from top to bottom) include: Smart dogs!, Wunderdogs, Tofu Pups, Lightburgers, Marinated Grilles (barbecue, lemon, tamari), Smart Deli, Lean Links (Italian, breakfast), Soy Gourmet, Gimme Lean (meatless), Tempeh, Savory tempeh strips, and Nasoya tofu. At the top is a booklet (1997) titled "Eating healthy can be soy easy."

The text reads: "As any as 120 million people are on meat restrictive diets–and just about everybody else wants to cut cholesterol and fat. Soyfoods, for many of these people, are becoming one of their basic food groups. These consumers are spending more of their food dollar in the produce department and that's why Lightlife soy set in your produce section makes sense–and sales. Only Lightlife provides a fully integrated, complete merchandising system."

"As a leading producer of meatless soy based products, Lightlife delivers satisfying flavor through an entire line of mouthwatering vegetarian replacements for hot dogs, burgers, sausage, luncheon meats, ground meat, and

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tempeh."

"Why lightlife? Proven category leader. Merchandising support. No spoilage." www.lightlife.com. Address: P.O. Box 870, Greenfield, Massachusetts 01302. Phone: 1-800-274-6001 Ext. 129.

8003 Lightlife Foods, Inc. 1997. Eating healthy can be soy easy (Brochure). Greenfield, Massachusetts. 12 p. 22 cm.
• ***Summary:*** On the cover of this full-color, glossy brochure is a color photo of a meatless burger (between buns, with onion, tomato, and lettuce), a hot dog (in a bun, with a bead of mustard on top), and a plate of stir-fried tempeh with veggies. In the background are rolling soybean fields. In the foreground are three pods of green vegetable soybeans, and 15 whole dry soybeans.

Contents: Ten reasons to include soyfoods and soy protein in your diet (p. 2-3). 1. You will be in good company. 2. Lower your cholesterol. 3. Lower your risk of cancer. 4. Menopausal symptoms. 5. Soyfoods are nutritious. 6. A quality protein source. 7. Save our precious resources. 8. A variety of alternatives and greater availability. 9. Better quality. 10. Soyfoods are "in."

Glossary of common vegetable protein foods (p. 4-5): Tofu, tempeh, meat analogs, soymilk, soy cheese, soy flour, soy protein, textured vegetable protein (TVP), seitan, miso. A table shows each Lightlife product, serving size, and grams of soy protein (soy tempeh has the most at 24 gm per 4 oz serving, followed by Gimme Lean at 18 gm per 4 oz).

Products (with a brief definition of each) and mission statement (p. 6-7): Smart dogs. Tofu pups. Wunderdogs (The first low-fat vegetarian hot dog just for kids). Smart deli slices (fat free). Foney baloney (Kids love it). Lean links sausages. Gimme lean (fat free). Marinated smoky tempeh strips ("Fakin' Bacon"). Fakin' bacon bits. Marinated tempeh "grilles" (soy tempeh patties in Tamari, Lemon, and Barbecue flavors). Lightburgers (fat free). Lightsausages (fat free). Tempeh (in 5 varieties–Soy, Three Grain {millet, brown rice, barley}, Garden Vegetable, Quinoa-Sesame, and Wild Rice). Savory seitan. Vegetarian request (100% vegetarian, all-natural entrees). A color photo shows many products in their packages.

Getting started (p. 8-10, how to use key products). About Lightlife (since 1979). Address: P.O. Box 870, Greenfield, Massachusetts 01302. Phone: 1-800-274-6001 Ext. 129.

8004 Ontario Soybean Growers' Marketing Board (OSGMB). 1997. Overview of the Canadian soyfoods market. Chatham, Ontario, Canada: OSGMB. 44 p. 28 cm.
• ***Summary:*** This excellent, complete, and accurate market study was compiled by the Collège d'Alfred of the University of Guelph, under contract with the Ontario Soybean Growers' Marketing Board (OSGMB). The project leaders were Suzanne Lavoie, Charles Goubau, and Ian Walker. The field research was conducted between Jan. 15 and Aug. 31, 1997. The first study of the Canadian soyfoods market was published in March 1990 (vi + 40 pages).

Contents: Acknowledgments. Summary. Introduction. Research procedures: Methodology, limitations (of the 100 companies in this study, over 75% were visited, interviews were conducted in person, and product samples were collected). The Canadian soyfoods market: History, structure of the Canadian soyfood industry, market highlights by region (The Maritimes, Quebec, Ontario, the Prairies {Manitoba, Saskatchewan, and Alberta}, British Columbia), factors influencing the soyfoods market (A closer look at Canadian demographic trends, a closer look at Canadian immigration trends, a closer look at vegetarianism and family food expenditure trends, research on soyfoods and their health benefits, the American influence). Supply and demand of soybeans for use in soyfoods. Soybean production in Ontario, imports and exports of soybeans, imports and exports of soy products, the soybean crushing industry in Ontario, consumption of whole soybeans by soyfood processors. Opportunities in the Canadian soyfoods market. Soyfood processors and their needs. Market opportunities for food-grade soybeans. Summary comments. Bibliography.

Tables show: (1) Major soyfood companies established in the province of Quebec (p. 13). (2) Major soyfood companies established in the province of Ontario (p. 16). (3) Major soyfood companies established in the province of British Columbia (p. 19).

(4) Percentage of change in units and sales (p. 21). (5) Percentage distribution of population–Canada (p. 22). (6) Percentage distribution of age groups–Canada (p. 22; In the 15-24 age group, 19% did not eat meat in 1992, down from 23% in 1986).

(7) Percentage of population who do not eat meat & share of budget spent on meat, Canada 1986 and 1992 (p. 28). (8) Canadian soybean: Supply and disposition (September–August crop year)–in metric tons (p. 31). (9) Canadian soybean exports by country of destination (p. 32. In 1997-98 some 325,000 tonnes went to the European Union, 145,000 to the USA, 85,000 to Japan, 40,000 to Hong Kong, 75,000 to other Asia, and 15,000 to other places).

(10) Imports and exports–All countries, dollar values (p. 33. The leading imports are soybean meal $202.7 million, crude soybean oil $16.75 million, and whole soybeans for oil extraction $12.59 million. The leading exports are protein concentrates and textured protein substances $9.1 million, soybean meal 6.5 million, and brans, sharps and other residues $4.3 million).

(11) Soybean crushing facilities in Canada (p. 34. All are located in Ontario province, ADM Agri-Industries Ltd., Windsor. Capacity: 3,600 tonnes/day of raw soybeans. CanAmera Foods, Hamilton, 3,000. Helin Oil Packers, Whitby, 250. Started crushing in 1997. Cold Springs Farm Ltd., Thamesford, 100. Started 1995. Sunfield Oil Seeds,

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Wingham, 100. Started 1994. Dennis Jackson Seeds Services Ltd., Dresden, 40. Started 1994. Tri County Protein Corporation, Iroquois, 100. Not in operation yet).

(12) Estimated quantities of soybean utilized by soyfood processors–1996–metric tons (p. 35. Total volume of whole soybeans consumed: 9,650 tonnes, of which 4,780 are for soymilk, 4,775 are for tofu, and 95 are for other soyfood products). Total volume of whole soybeans consumed by province (by soyfood processors): British Columbia 3,825 tonnes, Ontario 3,050 (excluding crushing plants), the Maritimes and Quebec 2,535, and the Prairies 240.

(13) Major foreign companies in the Canadian soyfood market (p. 37. Soy cheese: Soyco Foods, Sharon's Finest, Cemac Foods Corp. {Nu-Tofu}. Frozen desserts: Tofutti Brand, Inc. Tempeh: Turtle Island Foods Inc. Tetra Pak packaged soymilk: Westbrae Natural Foods, Cenat, Pacific Select, Vitasoy USA Inc., Eden Food Inc. Tofu: Mori-Nu, Vitasoy USA Inc. Prepared dishes: Amy's, Sharon's Finest. Meat analogs: Fantastic Food Inc. MGM Brands, Northern Soy, Soy Boy, Turtle Island Foods Inc. Salad dressing: Nasoya Foods. Soy sauce: Eden Foods Inc., Kikkoman Foods Inc.).

The Prairie Provinces (Manitoba, Saskatchewan, and Alberta) contained about 16.6% of Canada's population (4.5 million persons) in 1995. "The province of Alberta [Capital = Edmonton] is different from the other two Prairie provinces, due mainly to its larger population base, its growing Oriental population and its proximity to Vancouver Calgary [a large city in Alberta province] and Edmonton have their own Chinatowns, including small Oriental-owned tofu and soymilk production facilities." Note: According to the Canadian Soyfoods Directory (1997, p. 14), there are 7 soyfoods companies in Alberta province, 2 in Manitoba, and none in Saskatchewan. Address: OSGMB, 180 Riverview Dr., P.O. Box 1199, Chatham, ON N7M 5L8, Canada. Phone: 519-352-7730.

8005. Fitzpatrick, Michael. 1997. Soy far, so good. *Guardian* (*England*), Oct. 25. p. B57.

• ***Summary:*** This article is mostly about soy sauce. "As for promoting longer life, reports of the Japanese press have declared soya beans to be anti-carcinogenic, especially the revolting fermented soya-bean concoction called natto."

American consumers already use vast amounts of soy sauce, but to promote it in Europe, Kikkoman sponsors an annual competition in the UK and Germany named "Kikkoman Masters." Kikkoman asks chefs in these two countries to make their own favorite recipes using Kikkoman soy sauce.

In the UK, Japanese soy sauces are definitely more expensive than their Chinese counterparts, and there are more varieties of Chinese soy sauce on the market to choose from. Yet there are an estimated 7,000 soy sauce makers in Japan–although many of the smaller ones sell only locally or regionally.

The Yamasa company makes and sells three types of soy sauce: regular, table number one with reduced salt, and one made especially for raw fish [sashimi]. Two other brands [owned by other companies] are Higashimaru (from Osaka) and Kurashi-more (declaring itself top grade and expensive).

8006. Madison, Deborah. 1997. Vegetarian cooking for everyone. New York, NY: Broadway Books. x + 742 p. Oct. Illust. Plus 24 full-page color plates. Index. 26 x 21 cm. A tenth anniversary edition was published by Broadway Books in 2007, featuring a new introduction by the author.

• ***Summary:*** One of the most comprehensive vegetarian cookbooks ever published; Contains 1,400 recipes. One chapter, titled "The Soy Pantry" (p. 593-609) has the following contents (with many recipes): Introduction (The soybean is the cow of the Orient). Soy milk. Tofu. Tempeh. A sidebar (p. 594) lists more recipes that include soyfoods, by chapter.

Soy-related recipes (not including those on p. 593-609) include: Soy oil (p. 43). Bechamel sauce (p. 53, dairy-free variation uses soy milk). Tofu "mayonnaise" (p. 60). Tofu garlic "mayonnaise" (p. 60). Sesame sauce with tofu (p. 67). Peanut-tofu sauce (p. 69). Spring rolls with napa cabbage and tofu (p. 107). Tofu salad spread (p. 129). Marinated tofu sandwich (p. 130). Tempeh on rye sandwich (p. 130). TLT–Tempeh, lettuce, and tomato sandwich (p. 130). Buckwheat noodle salad with grilled tofu and roasted peppers (p. 178). Green goddess dressing (p. 190; dairy-free variation with silken tofu). Miso soups (about, plus 5 recipes; p. 231-33). Mushrooms with paprika and sour cream–variation with tofu (p. 255). Thai tofu and winter squash stew (p. 257). Winter vegetable pot pie (p. 259; dairy-free variation can use soymilk).

In the section on "Stir-fries" and stir-frying is a subsection titled "Some essential Chinese ingredients." The last entry (p. 262) is: "Salted and fermented black beans. Black soybeans partially fermented and preserved with salt add a rich flavor to vegetables, especially asparagus, green beans, and broccoli. Crush them with the flat of a knife before adding them to release their flavor. The best come in a plastic bag with ginger and orange peel."

Vegetable stir-fry with fermented black beans (with "2 tablespoons fermented black beans, chopped," p. 263). Mushrooms and tofu in Hoisin sauce (p. 269). Stir-fried broccoli, mushrooms, and peppers with caramelized tofu (p. 270). Dried mushroom, leek, and tofu stir-fry with Chinese barbecue sauce (p. 270). Goat cheese enchiladas with corn and red mole (p. 292; silken tofu can replace a portion of the goat cheese to give a less rich version). Soybeans (about, p. 314). Somen in broth with silken tofu and spinach (p. 482-83). Soba in broth with spinach, purple dulse, and silken tofu (p. 483). Udon with stir-fry and five-spice tofu (p. 484). Smoothies (p. 594). Protein drink for breakfast (p. 617, with

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soy milk). Breakfast burritos with tofu (p. 625). Scrambled tofu (p. 627). Scrambled tofu with herbs and cheese (p. 627). Scrambled tofu with tomatoes and salsa (p. 627). Multigrain waffles (with soy flour, p. 633).

Also used in the recipes are: Quinoa. Sea vegetables. A color photo on the cover shows Deborah Madison.

The dust jacket (and *Jessica's Biscuit Cookbook Catalog*, spring 1998) says: "What Julia Child is to French cooking and Marcella Hazan is to Italian cooking, Deborah Madison is to contemporary vegetarian cooking. At the Greens restaurant in San Francisco [California], where she was the founding chef, and in her two acclaimed vegetarian cookbooks, Madison elevated vegetarian cooking to new heights of sophistication... Madison received the M.F.K. Fisher Mid-Career Award in 1994... She has been a board member of the Santa Fe Area Farmers' Market for the past six years in Santa Fe, where she lives with her husband, Patrick McFarlin."

Marion Cunningham, author of Beard Award winners *The Fannie Farmer Cookbook* and *The Fannie Farmer Baking Book*–"If I could have only one book on the subject of vegetables, *Vegetarian Cooking for Everyone* would be it."

Letter (fax) from Dana Jacobi. 1998 April 26. This cookbook just won the IACP/Julia Child award as the "cookbook of the year" for 1998–the highest honor given, out of 432 books nominated–and a tremendous honor for vegetarianism as well as for Deborah Madison. Note: IACP is the International Association of Culinary Professionals. This book also won the IACP/Julia Child award as the best general cookbook of the year (out of 54 cookbooks nominated, and beating out the new 1997 edition of *The Joy of Cooking*). Two major sets of cookbook awards are given each year. The IACP/Julia Child awards (given in April at a different location each year) and the James Beard awards (given in May in New York City). Each set offers awards in something like 10 different categories. There is surprisingly little overlap among the nominations for both in each category. Address: Santa Fe, New Mexico.

8007. *Soya Bluebook Plus*. 1997. Oilseed glossary: Definitions and terms commonly associated with oilseed products or processing. 1998. p. 354-60.

• ***Summary:*** Acidulated soapstock, activated, amino acids, antioxidant, biodiesel, biotechnology, bleaching, bleaching earth, bolls, Bowman-Birk trypsin inhibitor, bran, break material, cake, canola, canola meal, catalyst, coconut, coconut–desiccated, coconut milk, coconut meal, cold pressed soy oil, cold test, confection sunflower, cooking oil, copra, copra meal, corn bran, corn feed meal, corn flour, corn germ meal (wet milled), corn gluten feed, corn gluten meal, corn grits, cotton linters, cotton plant by-product, cottonseed–glandless, cottonseed cake (or cottonseed flakes)–mechanical extracted, cottonseed meal–solvent extracted, cottonseed screenings, cotyledon, cracked corn, cracking, crude cottonseed oil, crude soy oil, defatted soy flour, degermed, dehulled–dehulling, degummed soy oil, degumming, deodorized, desolventizer-toaster, diglyceride, drying oil, edamame, edible crude soy oil, edible refined soy oil, emulsifier, endosperm, esterification, expanded–expanding, expeller, extracted–mechanical, extracted–solvent, extruded, extruder, extrusion, fat, fatty acid, feed (feedingstuff), feed grade, fermented–fermenting, flaking, flour, free fatty acid (F.F.A.), full-fat soy flour (enzyme active or heated/toasted), fully refined soy oil, genetic engineering, germ, ghee, gossypol, gram, green vegetable soybeans, grits, groundnut, gumming, high-fat flour, hilum, hulls, hydrogenated vegetable oil, hydrogenization [sic, hydrogenation], hydrolyzed corn protein, hydrolyzed soy protein, isolated soy protein, kibbled soybean meal, Kunitz trypsin inhibitor, lecithin, lecithinated soy flour, linseed meal, linters, lipoxygenase, low gossypol cottonseed meal, low-fat soy flour, malto dextrins [maltodextrins], margarine, maturity groups, meat analogs [meat alternatives], meat extenders, melting point, methyl esters, miso, monoglyceride, natto, nutraceuticals, oil, okara, once refined soy oil, oxidation, palm kernel oil, palm olein, palm stearin, peanut hulls, peanut meal, peanut skins, pellets, polymerization, processing or extraction of oilseeds (also called "crushers" or oil mill operations–solvent extraction, continuous pressing, batch pressing), protein, pulses, raffinose, rancidity, rapeseed meal–mechanical extracted, refining, refractive index (R.I.), rolled or rolling, salad oil, shortening, soapstock, solvent extracted, solvent extracted soybean flakes, soy flour, soy grits, soy protein concentrate, soy protein isolate, soy sauce (incl. that hydrolyzed with hydrochloric acid), soy sprouts, soya, soya lecithin, soybean(s), soybean ground, soybean cake, soybean curd, soybean fatty acids, soybean feed–solvent extracted, soybean flakes and 44% protein soybean meal, soybean flakes and high protein or solvent extracted soybean meal, soybean hay sun-cured ground, soybean hulls (or seed coats), soybean meal, soybean meal–dehulled–solvent extracted, soybean meal–dehulled–mechanical extracted, soybean mill feed, soybean mill run, soybean processor, soybean protein product–chemically modified, soybean seeds–extruded ground, soybean seeds–heat processed, soybean solubles–condensed, soybean solubles–dried, soyfoods, soymilk, soynuts, spinning (to texturize soy protein isolate for food or industrial use), stachyose, steepwater, sterols, sunflower hulls, sunflower meal–dehulled–mechanical extraction, sunflower meal–dehulled–solvent extracted, sunflower meal–mechanical extracted, sunflower meal–solvent extracted, sunflower seed–oil varieties, technical grade refined soy oil, tempeh, textured soy concentrate, textured soy flour, textured soy protein, toasting, tofu, transgenic, triglyceride, trypsin inhibitors, unsaponifiable matter, unsaturation, vanaspati–vegetable ghee, wet-milled, whole-pressed cottonseed–mechanical

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extracted, winterized oil, yuba. Address: 318 Main St., P.O. Box 84, Bar Harbor, Maine 04609. Phone: 207-288-4969.

8008. Gonzalez-Watanabe, Yvonne; Watanabe, Joji. 1997. Introducing tofu to Hispanics. Visit to the House Foods America Corp. tofu factory in Garden Grove near Los Angeles (Interview). *SoyaScan Notes*, Nov. 9. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Yvonne and her husband Joji (who first contacted Soyfoods Center on 12 Sept. 1997) are interested in translating *The Book of Tofu* into Spanish and introducing tofu to the Hispanic community, starting in Los Angeles. Yvonne, age 24, was born in the USA, where her parents (who are both from Costa Rica) lived for 30-35 years; her father was a pharmacist. She learned to speak some Spanish at home. Her parents have returned to Costa Rica. Yvonne (who was raised a Catholic) now works in a real estate office and teaches vegan cooking classes at the Kanzeonji Non-Sectarian Buddhist Temple and Shiva Ashram Yoga Center at Mt. Washington in Los Angeles, there both she and Joji practice Zen meditation and yoga. Rev. Ryugen Watanabe, Joji's uncle, is a Soto Zen master, yoga teacher, and the head of this temple. Both Yvonne and Joji are vegetarians, and she is a vegan. Her sister is an editor for El International, a big Spanish language magazine located in Miami, Florida.

Yvonne got interested in vegetarianism and soyfoods through Rev. Watanabe. She had had severe migraine chronic headaches for many years. After trying every possible remedy to no avail, she told her uncle, Rev. Watanabe, about her problem. He said simply but forcefully, "It's your diet." She thought, "He's crazy. I have a great diet." In 1994, although she had been eating meat for 30 years, she tried the vegetarian diet he recommended and got quick relief. Following his advice, she began by giving up red meat and pork, then phased out chicken and fish until after 8-9 months she was consuming a vegan diet. As Yvonne began educating herself about vegetarian nutrition, she was looking for alternatives to meats as a source of protein. Rev. Watanabe told her about tofu, and even taught her how to make it at home from whole soybeans. Now Yvonne teaches other people how to make tofu at home.

Yvonne has great admiration for Rev. Watanabe. "He's really great. He's been teaching Zen and yoga for more than 20 years and he still charges the same, low prices--$2.00 for a yoga class. If you can pay, you pay. If you can't, how about rolling some incense. It's wonderful. I've never seen someone so committed to people."

Yvonne has been a vegan ever since and has not had a headache in almost five years. A friend of Yvonne's had migraine headaches that were so bad, she had to give herself shots. Yvonne suggested that she try switching to a vegetarian diet. She hasn't had a headache in a year. Over the years many of Yvonne's female relatives (her mother, sister, cousin, etc.) have become vegan--largely because they want to lose weight.

Joji, age 36, was born in Tokyo but has lived in the USA since age 6. He speaks Japanese and English and is a financial consultant. Joji graduated from USC, and now works in a corporate environment in real estate financing. His grandmother, Masa Miyai, lives with them. Four years ago they shut down their business selling medical supplies to Latin America. Now they are developing a project to introduce tofu to Hispanics.

On Oct. 18-19 Yvonne and Joji visited Soyfoods Center, where they talked with Bill Shurtleff about their project and book publishing. They photocopied many Spanish-language documents and recipes related to tofu. Upon returning to Los Angeles, they developed a one-page Spanish language brochure on tofu, visited with Margaret Endo in order to arrange for a booth in next summer's Tofu Festival, and began to do research.

Their first research project was a visit to the House Foods America Corp. tofu plant in Garden Grove, Southern California. After a brief meeting with employee Miyuki Nagano, she took them on a walking tour of the plant, so they were able to observe the entire tofu-making process. It is completely automated, except when a worker smooths the curds in the pressing trays before they are pressed. The company employs about 120 people at this facility. Of the 78 workers in the factory (including shipping and receiving), 98% are Hispanic men, but the office workers are all Japanese. The company has its own delivery trucks; its marketing is focused on California, in part because of increased competition from companies outside the state--as in Massachusetts [Nasoya Foods]. The company invites the Hispanic workers to take home tofu, but they don't--probably because they don't know what to do with it. The company has a full test kitchen and laboratory, and Miyuki is interested in developing tofu recipes that Hispanics will like. The company also makes natto at this plant.

Update: Talk with Yvonne, 1997 Nov. 23. Her cousin, Alejandra Jimenez, from Costa Rica has just arrived in Los Angeles to work with her on the tofu project. Alejandra's native language is Spanish but she also speaks perfect English and has a master's degree in English. Another cousin from Costa Rica is part of an all-male rock band, whose members are ages 30-37, all were born and raised in Costa Rica. She served them 3 tofu recipes--which they liked very much: (1) Tofu cubed in miso soup; (2) Chilled tofu, cubed with sesame oil, rice vinegar, and soy sauce; and (3) Crisp freshly deep-fried tofu cubes, with soy sauce. They are interested in using tofu as part of a weight-loss program.

They all went to a Chinese vegetarian restaurant in nearby San Gabriel named Vegetarian Delights. Run by a Chinese-American lady, it served a delicious dish named Roasted Black Bean Fish, that tasted remarkably like fish--but used tofu instead of fish. Yvonne made friends with the owner. Address: 6029 LaPrada St., Los Angeles, California.

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90042. Phone: 213-254-1712.

8009. Eden Foods, Inc. 1997. Eden soy sauces: Traditionally brewed shoyu & tamari (Ad). *Vegetarian Times*. Nov. p. 71.
• ***Summary:*** This 1/3-page color ad shows bottles of the following: Eden organic tamari (soy sauce; Purple label is "Naturally brewed" in the USA for about 6 months; Green label is "Traditionally brewed" for up to 2 years and imported from Japan). Eden organic shoyu. Eden selected shoyu (2 sizes). "Eden Soy Sauces are created just as they have been for centuries by master brewers who are truly artisan craftsmen. They are aged and tended for over two years, creating rare and versatile soy sauces." Address: Clinton, Michigan 49236. Phone: 1-800-248-0320.

8010. Ontario Soybean Growers' Marketing Board (OSGMB). ed. and comp. 1997. Canadian soyfoods directory. Chatham, Ontario, Canada: OSGMB. 27 p. 28 cm.
• ***Summary:*** This excellent, complete, and accurate directory was compiled by the Collège d'Alfred of the University of Guelph, under contract with the Ontario Soybean Growers' Marketing Board (OSGMB). The project leaders were Suzanne Lavoie, Charles Goubau, and Ian Walker. The first Canadian soyfoods directory was published in April 1994 (22 pages).

Contents: Foreword–Ontario Soybean Growers' Marketing Board (OSGMB). Acknowledgements from researchers. Table of contents. Soyfood product descriptions: Green vegetable soybeans–Edamamé, meat analogs, miso, natto, okara, soy cheese, soy flour, soy frozen desserts, soy grits, soy isolate fibre, soy lecithin, soy oil, soy protein concentrate, soy protein isolate, soy pudding, soy sauce, soy sprouts, soy yogurt, soymilk (soy drink and soy beverage), soynuts, tempeh, textured soy flour–TSF, texturized soy protein, tofu, whole dry soybeans, yuba. Soyfoods for your health. Heart disease, cancer, osteoporosis, other conditions. Composition and nutrient value of soyfoods. Soyfood companies by product. Soyfoods companies by province: Alberta (7), British Columbia (21), Manitoba (2), Nova Scotia (2), Ontario (54), Quebec (20). Soyfood companies (105 companies that make or market wholesale soyfoods)–complete listings (address, phone and fax numbers, contact person, products). Soyfoods distributors–complete listings (13). Soybean distributors–complete listings (28). Research information sources–complete listings (24). Soyfoods information sources (23). Canadian soyfoods directory questionnaire.

Spot in *Ontario Soybean Growers' Marketing Board Newsletter*. 1997. Dec. p. 5. The Canadian Soyfoods Directory was launched in November after a two-month delay. "The project was undertaken following numerous information requests from consumers, processors and health professionals." Funded by the Board of OSGMB, it has been mailed to all Registered Dietitians across Canada, and it will soon be available on the Board's website. Address: OSGMB, 180 Riverview Dr., P.O. Box 1199, Chatham, ON N7M 5L8, Canada. Phone: 519-352-7730.

8011. Macdonald, Bruce. 1997. Macrobiotic Company of America is thriving and macrobiotics is making a making a comeback in America (Interview). *SoyaScan Notes*. Dec. 2. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Bruce's company focuses on high quality, macrobiotic foods. Company sales and number of accounts are growing rapidly. When he bought the company in Sept. 1993, they had about 900 accounts; this grew to about 2,500 in 1997 and 5,000 at present. The number of individual/personal accounts is growing the most rapidly. The main individual buyers seem to be aging baby boomers–those from the same generation as the people who founded the movement 30 years ago in the late 1960s and 1970s. Why are they buying? First, macrobiotics has been Americanized and de-mystified. Many of the teachers are now Americans and the heavy Japanese emphasis is disappearing. Second, the baby-boomers are realizing that they had better start eating well or they will soon pay the price in poor health and shorter longevity.

Bruce's best-selling macrobiotic products are kuzu, nori and wasabi powder (for people to make sushi at home), 4-year soy sauce (*nama shoyu*), and Johsen organic shoyu (in quarts or 10 oz bottles). He gets 100-200 catalog requests each week and does no advertising. Lenny Jacobs likes to say that macrobiotics is on the decline, but he doesn't know what he's talking about. Address: President, Macrobiotic Company of America, Asheville, North Carolina 28806. Phone: 704-252-1221.

8012. Kamego, Marco. 1997. Re: History and present status of Kikko Corporation S.A., manufacturer of soy sauce and miso in Peru. Letter to William Shurtleff at Soyfoods Center. Dec. 29. 3 p. [Eng]
• ***Summary:*** Mr. Kamego filled out a 3-page company history form sent by Soyfoods Center. This company was founded in April 1957 in Peru by Mr. Manuel Toshihiko Kamego (Marco's father) and Mr. Alejandro Kioyasu Kamego (Manuel's brother). In 1957 the company, named Fabrica de Siyau Kikko Sociedad de Responsibilidad Limitada, was located at Av. Colombia 171, Pueblo Libre, Lima, Peru. Phone: 32-3754. The company's first two products, Kikko Siyau ("soy" sauce–but made with Peruvian common beans, *Phaseolus vulgaris*, instead of soybeans because the latter were not available) and Miso Kikko (both *shiro miso* {sweet white miso made with rice} and *aka miso* {red miso made with barley}) were both introduced in 1957. These products may have been the world's first shoyu and miso made with common beans instead of soybeans. In 1960 the company first began to use soybeans in its products, they were grown in Tumbes, on the northern coast of Peru.

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From the beginning, the company was dedicated to the traditional, nearly hand-made production of sauces and foods to supply the restaurants and homes of Peruvians of Asian origin through the home delivery system. Marco writes "We are the pioneers of soy sauce manufacturing in Peru. It is through our product that the Peruvian native people have come to know soy sauce, its use and quality. Our company has succeeded because of tenaciousness, as well as adaptation to the requirements of the Peruvian market." The Kamego family originated in Japan. The two Chinese characters (*kanji*) with which the family name are written, can also be pronounced "Kikko" and mean "turtle's shell." This explains the origin of the Kikko brand and emblem/logo. Note: The name and logo is very similar to that of Kikkoman, the world's leading manufacturer of soy sauce.

In 1964 the company introduced its third soy product, Mensi Kikko (in Chinese *mien shih* = sweet wheat-flour fermented black soybeans), obtained from fermentation of whole soybeans; it is known as *mianchi* (*mien shih*) in China and *doenjang* in Korea. In 1979 Ajinomoto, the world's leading manufacturer of seasonings and of MSG, began to produce soy sauce in Peru in competition with Fabrica de Sivau Kikko, but as of 1997 Kikko is still the leader in the Peruvian market, ahead of Ajinomoto.

In July 1994 the company moved its factory and offices to a new location, which is the present address: Jr. Alexander Fleming 432, Ate, Lima 03, Peru.

In 1995 the company was reorganized as Kikko Corporation Sociedad Anonima (S.A.). This new company was formed from the merger of the original company with Sazonadores S.R.L. Note: *Sazonadores* means "seasonings" in Spanish. At this time the company launched three new products: Kikko Shoyu; Salsa de Soya, Salsa Mensi (mensi / *mien shih* seasoned with spices), and Ajoikion (soy sauce seasoned with ginger and garlic; in Peruvian, *kión* means ginger–the Spanish word is *jengibre;* in Spanish, *ajo* means garlic).

Present status. The company now makes each week: 25,000 liters of soy sauce, 2,000 liters of Salsa Mensi, and 2,000 liters of Ajoikion. Their second best-selling product is sweet and sour sauce, but it contains no soy. They still make *shiro miso* (sweet white miso) fermented for 5 months, but have discontinued red miso. The company employs 51 people, including 5 in management, 36 production workers, and 10 office and others. The current owners are Manuel Kamego, Marco Kamego, and Alejando Kamego's heirs. Net sales last year were $1,500,000. The net worth of the business is about $115,000. The company's sales have grown, on average, at about 2% each year over the past 2-3 years. The building is 2,000 square meters in size: 1,800 for production and 200 for office space. As of late 1997 the factory is located at Robert Fulton 115, Lima 3, Peru. Most of the soybeans now used by the company come from Bolivia.

Marco encloses attractive full-color labels for four products: Kikko Shoyu, Salsa Mensi, Ajoikion, and Kikko Siyau. Address: Jr. Alexander Fleming 432, Ate, Lima 03, Peru. Phone: +511 326-0870 or 1200.

8013. Kikko Corporation S.A. 1997. Kikko–Salsas naturales. Siempre lo hace más rico [Kikko–Natural sauces. Always makes it richer]. Lima, Peru: Kikko Corporation S.A. 4 p. 30 cm. [Eng, Spa]

• ***Summary:*** This glossy, full-color brochure is written mostly in English, but with Spanish on the cover. On the cover is the embossed Kikko logo on a blue photograph of sliced vegetables and shrimp on plates. The inside is a two-page spread, with all-English text. The text is superimposed on a color photo of Japanese foods. Across the top in big white-and-black letters: "Kikko, since 1957, leading manufacturer of natural sauces." At the top left is a sidebar telling about the company, its history, and market position. Today the Kikko brand has become a leader in the Peruvian market; it has been the most consumed soy sauce in Peru since 1957. The soy sauce is aged for no less than 6 months. Across the bottom are color photos of each of the company's five bottled sauce products, with a description of each next to the photo. On the back is one photo of all the company's products together. The address of the plant and offices and all phone numbers are given. Address: Jr. Alexander Fleming 432, Ate, Lima 03, Peru. Phone: +511 326-0870 or 1200.

8014. Campbell, Kristine J.; Mermelstein, Neil H. 1997. Microbiology in food systems. Chicago, Illinois: Institute of Food Technologists, The Society for Food Science and Technology. 28 cm. Series: IFT experiments in Food Science. *

• ***Summary:*** "Activity #3: Tempeh, soy sauce, and other mold-fermented foods."

8015. Grogan, Bryanna Clark. 1997. Twenty minutes to dinner: Quick, low-fat, low-calorie vegetarian meals. Summertown, Tennessee: The Book Publishing Co. 192 p. Illust. Index. 21 cm.

• ***Summary:*** This vegan cookbook contains a wealth of soy-related recipes. The glossary mentions tofu, soymilk, soymilk powder, tempeh, miso, soy sauce (shoyu, tamari) textured vegetable protein, Chinese condiments (hoisin sauce, Chinese black bean sauce, Chinese brown bean sauce, Szechuan hot bean paste), seitan, soy bacon bits or chips.

In the section titled "Ingredient substitutions," under "Yeasted products" we read (p. 15): "I can think of no practical substitutes for light miso or certain fermented Chinese products like doufu-ru (Chinese fermented bean curd, which has a strong 'blue cheese' type of flavor)."

The recipe for "Buffalo potato wedgies" (an alternative to "Hot wings") advises: "Dip the crusty wedges into Vegetable Dip (p. 48)–you can add a bit of crumbled, white

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Chinese fermented tofu (doufu-ru) to make it more like traditional blue cheese dressing or dip."

Also includes soy-free options for recipes with tofu and soymilk. Address: Denman Island, east of Vancouver, British Columbia, Canada.

8016 Horii, M. 1997. Soybean and fermented food culture in the world. *Farming Japan* 31(4) 10-12. [Eng]*

8017 Jordan, Michele Anna. 1997. California home cooking: American cooking in the California style. Boston, Massachusetts: Harvard Common Press. xxv + 501 p. See p. 353-54. Illust. Index. 24 cm. [120+* ref]

• ***Summary:*** The recipe for Korean-style grilled steaks (p. 353-54) is an adaptation of *bulgogi*, the well-known Korean barbecue dish that features thin strips of beef. Both San Francisco and Los Angeles have large communities of Korean immigrants, with many Korean restaurants and markets. "Note: To make *samjan* sauce, mix 2 parts *dhwen-jang* [*doen-jang*], or Korean bean paste, with 1 part *gochujang*, or Korean barbecue sauce." Both are available in Asian food stores. Miso may be substituted for dhwen-jang and *sambal ulek* for gochujang.

Note: This is the earliest English-language document seen (March 2009) that uses the word "gochujang" to refer to Korean-style red pepper and soybean paste (miso).

Teriyaki recipes appear on pages 318 and 327.

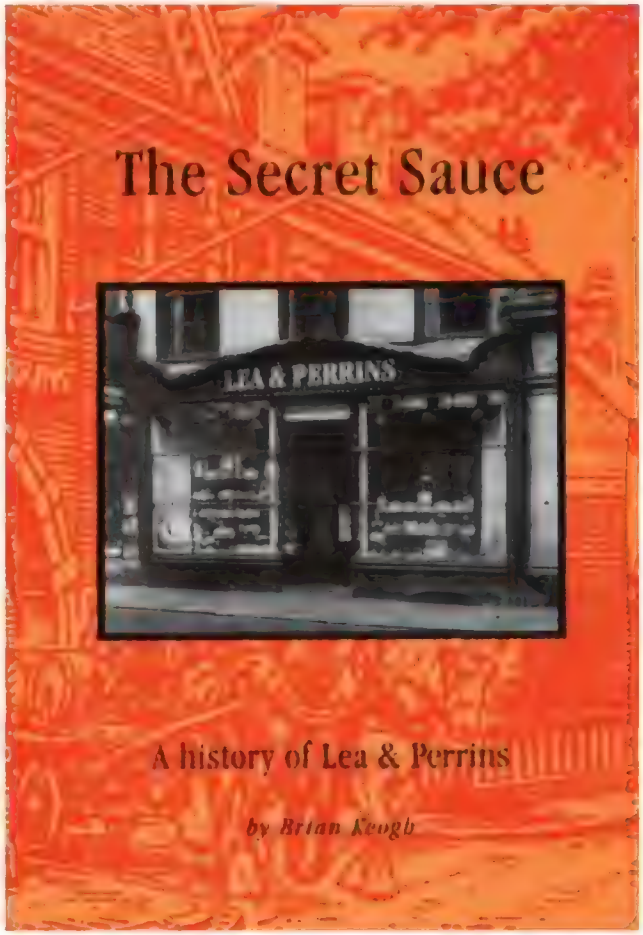
Contains a good bibliography, and many sidebars, on the history of California cooking. Address: California.

8018 Katzen, Mollie. 1997. Vegetable heaven. New York, NY: Hyperion. xv + 223 p. Illust. (Color by Mollie Katzen). Index. 27 cm.

• ***Summary:*** A handsome vegetarian cookbook. Soy-related recipes include: Vietnamese salad rolls (with firm tofu, p. 11). Kung pao lettuce cups (with firm tofu, Northern Chinese, p. 13). Eggflower soup with pasta shells (with firm tofu, p. 32). Potato soup with rosemary and roasted garlic (with silken tofu, p. 33). Coconut-lemon grass soup (with firm tofu, p. 43). Baked coated nuts sweet or savory (with soy sauce, p. 57). Basic soyburgers (with cooked soybeans and tofu, p. 76). Green beans and tofu in crunchy Thai peanut sauce (with firm tofu, p. 103). Magic carrot flans (with milk or soymilk, p. 122). Scalloped potatoes three variations (with milk or soymilk, p. 130). Sandwiches to write home about (with firm tofu, p. 136). Buckwheat soba with squash, smoked tofu, and basil (with smoked tofu and miso, p. 144). Tiny pasta stew (with firm tofu, p. 151). Horseradish aioli (with silken tofu, p. 168). Peanut-chile [chili] dressing (with soy sauce, p. 174). Homemade butterscotch pudding (with milk or soymilk, p. 194). Pumpkin mousse with gingersnap crumbs (with silken tofu, p. 196). Bittersweet chocolate-banana mouse (with silken tofu, p. 197).

A color photo on the rear cover shows Molly Katzen. Address: California.

8019 Keogh, Brian. 1997. The secret sauce: A history of Lea & Perrins. Worcestershire, England: Leaper Books. viii + 135 p. Index. Illust. 21 cm.



• ***Summary:*** The best history to date of Lea and Perrins, with many interesting dates, stories, photographs and reproductions of early documents, by a man who worked for that company as an archivist and accountant his entire working life.

Note: A letter of May 1994 from Pamela Street, Director, International Division, Lea & Perrins International Ltd. (Worcester, England) says: "I have spoken to our Archivist, Mr. Brian Keogh, who has provided the enclosed papers from our archives. I trust they are of interest to you."

Contents: Acknowledgments. Introduction. Before the sauce. John Wheeley Lea & family. William Henry Perrins & family partners. The secret recipe. Sauce making. Trade, a tribute to some diverse activities. Bottles and barnacles. Labels on the bottles. Buildings. Malvern water & Burrow Bros. Fruit juice. "By appointment"–The ultimate accolade for British companies. Workers & wages at Lea & Perrins. A factory at war 1940-1944. Edward Coles Corbett: Eccentric! Hero! Super salesman! John Duncan & the USA. Tales from

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Canada. Central America & the West Indies. Australia & New Zealand. A few saucy stories. Sample adverts from the 1840s to 1950s. Lea & Perrins after 1930.

Although one chapter is titled "The secret recipe (p. 27-34), soy sauce, which was long the main secret ingredient, is not mentioned.

The following is a brief early chronology gleaned from this book:

1823 Jan. 1–Mr. John Wheeley Lea, an established chemist, takes into partnership Mr. William Henry Perrins, at his chemist shop on Broad Street, Worcestershire (p. 1). They prepare a catalog for the occasion which lists over 300 items, including herbs and spices from around the world. The catalogue includes two ingredients of the sauce to be–anchovies and tamarinds. Note: It also includes "India soy."

1837–Lea and Perrins Worcestershire sauce is first made commercially in Worcestershire. The secret formula is developed and first made by Mr. J.W. Lea and Mr. W.H. Perrins in the back of their chemist shop at 68 Broad Street, Worcester (p. vii). Worcester is a thriving commercial town on the River Severn, where it controls the major East-West crossing. For centuries the river had been used to carry goods between Bristol and Cardiff (in the southwest, near the ocean) to the Midlands (in the northeast) (p. 1). "Records suggest that the first three batches were brewed in four-gallon jars, then afterwards in twenty-eight casks. More staff were soon required" to meet the growing demand. "From the beginning the bottles were hand-filled and closed by a cork and sealed." Hand filling continued until 1845 (p. 63).

1840s early–The sauce starts to be "extensively exported" (p. vii).

1843–The earliest advertisement known to the author, from *The Pictorial Times* (no exact date or page is given) is displayed on pages 127-29, together with ads from 1848, 1851, 1897, 1903, 1905, 1907, 1923, and 1934.

1844–Production figures for the year show a record 1,326 dozen 12 oz and 1,314 dozen 6 oz bottles; this totals 31,680 bottles made and bottled in the back of the shop at 68 Broad Street. All bottles are still hand-filled. They soon rented a warehouse on the Quay, then another on Bank St. (p. 64).

1849–The name "John Duncan & Son" first appears on the label of the sauce. However Duncan was not the product's first agent in New York! That honor goes to "Messrs. Innes & Co." whose name appeared on the product's label at an earlier date.

1850–The Great Western is the first railway to arrive in Worcester; mechanical transport begins (p. 2).

1866 Jan. 1–Lea and Perrins have sold their three chemists shops and are now free to concentrate on making and selling their sauce–which is increasingly popular worldwide (p. 65).

The section titled "The Sandy's family" (p. 29-30) debunks the myth of an early and oft-repeated connection between "Lord Sandys" and the invention / discovery of Worcestershire sauce. It states: "... no Lord Sandys (either as Sandys of Hill) was ever a governor of Bengal, or as available records show, ever in India. The identity of the nobleman thus remains an intriguing mystery."

Photos show: (1) Four colorful orange labels (from top left to right): 1. Early 1850s. 2. 1876 Banknote type border started. 3. From 1905 with white signature. 4. Modern label (p. 60). (2) Sample of a Chinese label (p. 61).

Talk with Brian Keogh. 2006. Feb. 23. He is now writing a fictional book about ponies and horses. He is donating his documents and artifacts related to Lea & Perrins to the company so they do not get lost, but nobody there is much interested in the history. Address: 9 Redfern Ave., Worcester WR5 1PZ, England.

8020. Keussink, Ruth. 1997. Soja und Sojaprodukte [Soybeans and soy products]. Bonn, Germany: Auswertungs- und Informationsdienst fuer Ernaehrung, Landwirtschaft und Forsten (aid) e.V. 28 p. Illust. (Color photos). 21 cm. [14 ref. Ger]

• ***Summary:*** Contents: Introduction. Market and utilization. Soya in the diet: Protein, fat, carbohydrates, minerals and trace minerals, vitamins. Overview–Soy products. Whole soybeans, soy sprouts, soy oil, soy beverage, tofu, natto, sufu, tempeh, soy sauces, miso, soy lecithin, soy sausages, TVP. Processing soybeans. Soy ingredients and additives: Soy protein isolate, concentrate, soy bulk / fiber (*sojaballaststoffe*), fatty acids, lecithin, vitamin E (tocopherol). Product safety. Genetically engineered soybeans. Tips for buying and storing. Recipes. Address: Konstantinstr. 124, 53179, Bonn, Germany.

8021. Kikkoman International Inc. 1997. Kikkoman foodservice: Soy sauce is just the beginning (Brochure). San Francisco, California. 4 p. 28 cm.

• ***Summary:*** The inside 2 pages of this color brochure describe and show (in color photos) ten Kikkoman foodservice products, many in half-gallon bottles: Soy sauce. Teriyaki sauce. Teriyaki baste & glaze with honey & pineapple. Stir-fry sauce. Tempura batter mix. Lite soy sauce. Teriyaki glaze. Roasted garlic teriyaki marinade and sauce. Sweet & sour sauce. Panko Japanese style bread crumbs (toasted or untoasted).

On the back page are two tables: Product specifications, and usage guide. Address: San Francisco, California. Phone: 1-800-944-0600.

8022. Kittler, Pamela Goyan; Sucher, Kathryn P. 1997. Food and culture in America: a nutrition handbook. Belmont, California: West/Wadsworth. xiv + 535 p. Illust. (photos). Index. 26 cm. [100+* ref]

• ***Summary:*** What is American food anyway? Does it include sushi, soy sauce, miso soup, or tofu? How about Peking duck

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or pot stickers? How about enchiladas, chile rellenos, or tacos?

This excellent and original work is arranged in chapters by cultural groups or subcultures living in the USA.

The chapter on "Latinos" states under "Foreign influence" (p. 286) that the "demand for Asian ingredients by later immigrants resulted in the introduction of soybean products, .." Under "Regional variations" (p. 290) that Cubans like a chicken dish marinated in lime juice and soy sauce. Under "Meal composition and cycle" (p. 290) that West-African fritters are made from the meal of soybeans .."

The chapter on "Asians," under "Chinese," notes (p 328-30) that "Soybeans are transformed into an amazing array of food products that are indispensible to Chinese cooking," including soy sauce, soy milk, bean curd or tofu, black beans ("made with cooked fermented soybeans preserved with salt and ginger. Black beans are usually added as a flavoring in dishes"), hoisin sauce, and oyster sauce. Soy oil is also used in Chinese cooking. The Hakkas enjoy tofu stuffed with meat (p. 332). Every Chinese meal aims for a good balance of *fan* (grain foods, such as rice or wheat) and *tsai* (side dishes). "The Chinese believe that a good diet is critical for physical and emotional harmony and necessary to strengthen the body against disease" (p. 334). During pregnancy, soy sauce may be avoided to prevent dark skin (p. 335). Chinese who avoid fresh dairy products because of lactose intolerance, may consume soybean curd and soy milk (if fortified with calcium) as alternatives.

Under "Japanese," soy sauce is a traditional food of Japan (photo, p. 341). Soybean products (p. 350) are an important part of the Japanese diet; they include tofu, shoyu (soy sauce), miso, and teriyaki sauce–to name just a few. Second-generation Japanese use more soy sauce than non-Asians (p. 354) but as their diet becomes Americanized, they fall prey to more diseases of affluence. The response to dairy products and lactose intolerance is similar to that of Chinese, with the use of tofu and soy milk.

Under "Koreans" (p. 363, 366) Soybean products are in important part of the diet; they include soy sauce, soy paste, and soybean curd or tobu [sic, *tubu*] (tofu).

Under "Southeast Asians and Pacific islanders." Adobo is a popular Filipino stew, seasoned with soy sauce (p. 389). Soy products include soy milk and tempeh (p. 399, 402, 404, 421-22).

The "Glossary of ethnic ingredients" mentions many soy products including (p. 490) "Black beans, fermented. Black soybeans salted and fermented to produce a piquant condiment. Used in Chinese cooking as a seasoning or combined with garlic, ginger, rice wine, and other ingredients to make black bean sauce." Address: 1. M.S., Food and nutrition education consultant; 2. Dep. of Food and Nutrition, San Jose State Univ., California.

8023. Messina, Virginia Kisch; Messina, Mark. 1997. Soy to the world. In: 1997 Medical and Health Annual. Published by Encyclopedia Britannica, Inc. See p. 197-202.

• ***Summary:*** In the section titled "Diet and Nutrition" is a long subsection on "Soy to the world." Contents: Introduction. Sacred crop (history). Varied and versatile. Whole soybeans (incl. green vegetable soybeans), traditional soyfoods (soymilk, tofu, okara, yuba, tempeh, miso, soy sauce or shoyu), modern soy products (textured soy flour or TVP), "second-generation" soyfoods. One of nature's most nutritious foods. Health benefits: the evidence so far: Cancer, heart disease, osteoporosis, kidney disease, menopause. Tofu on your table (how to incorporate soy into American diets, incl. TVP, soymilk, soy flour, soy nuts). Address: 1. M.P.H., R.D., 2. Ph.D. Both: PhD, 1543 Lincoln St., Port Townsend, Washington 98368. Phone: 360-379-9544.

8024. Nabben, Alexander. 1997. Kochen und Backen mit Tofu. Vegetarische Rezepte ohne tierisches Eiweiss [Cooking and baking with tofu: Vegetarian recipes without animal protein]. Darmstadt, Germany: Pala-Verlag. 139 p. Illust. Recipe index. 21 cm. [Ger]

• ***Summary:*** Contents: Tofu–versatile and healthful. The soybean: Cultural history, production, the world and the soybean, nutritional value of soybeans, soyfood products (soy sauce, miso, tempeh, okara, soy coffee, soynuts, soy sprouts, modern western soy protein products–soybean flour, flakes, textured soy flour, soy protein isolates, defatted soybean meal, industrial soy products), genetically engineered soybeans. Tofu. Tips, tricks, and useful information. How to make soymilk at home. How to make tofu at home. Tofu recipes and marinades. Raw foods and salads. Dressings. Sauces. Soups. Main dishes. Soufflés. Pasta. Patties / burgers. Spreads. Party snacks. Cooking and baking. Desserts and sweet delicacies (*süsse Leckereien*). Ice cream. Address: Weigandufer 38, 12059 Berlin, Germany. Phone: 30 / 6808 0686.

8025. Nutrition Education Service, Sanitarium Health Food Company. 1997. Sensational soy cookbook. Sydney, London, Vancouver, New York: Murdock Books. 64 p. Illust. Index. 20 cm. [32 ref]

• ***Summary:*** A saddle-stitched vegetarian cookbook on glossy paper loaded with color photos and lightweight text. The author and nutritionist is Cathy McDonald of Sanitarium. Recipes developed by Wendy van der Veer of Sanitarium. Contents: The story of soy. The soy family: Miso, soy beans, soy breads & cereals, soy cheese, soy drink, soy flour, soy grits & soy flakes, soy 'meats,' soy pasta, soy sauce, soy snacks, tempeh, TVP, tofu, tofu desserts (ice cream and yoghurt). Breakfasts. Soy for health (isoflavones, menopause, breast cancer, osteoporosis, prostate cancer, heart disease). Light meals. The secrets of soy. Main meals. Soy in perspective. Desserts. Sensational soy (sample menus). Snacks. Know your nutrients. Bibliography.

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Estimated isoflavones in soy foods (table). Address: 1 Sanitarium Drive, Berkeley Vale, NSW 2261, Australia.

8026 Passmore, Jacki. 1997. The vegetarian table: Thailand. San Francisco, California: Chronicle Books. 160 p. Illust. (color photos). Index. 24 cm.

• ***Summary:*** The author dedicates this book to Isobel, her daughter, friend and critic, "who can't pass a day without tofu."

The Introduction notes that Thailand has a strong and living Buddhist tradition. Since Nature provides plenty of food, Thai cuisine has evolved with a moderate use of red meat, following "the Buddhist precepts on the slaughter of animals." But many Thais make an exception for seafood, with this charming rationale: "If a fish is stupid enough to swim into a trap and die, then we may as well eat it!"

This book relies heavily on tofu as a meat alternative. The index has 28 entries at "Tofu," so we will list only a few representative examples below. Contains a wealth of full-page color photos. In place of widely used fermented shrimp and fish pastes, this book uses various salt-fermented soy products such as yellow bean sauce, Chinese bean pastes, fermented tofu in brine, and tempeh (p. 11).

The Glossary defines the following that contain soy: Chili bean paste, fermented tofu, Hoisin sauce, kecap manis [sweet soy sauce], soy sauce (3 types), tempeh, tofu (tao hoo in Thailand). "The soybean is singularly one of the most important food plants in the world." Few other food products can match the versatility and goodness of tofu. Incl. firm tofu, soft tofu, fried tofu and "bean curd sheets" or sticks [yuba], yellow bean sauce.

Soy-related recipes include: Classic Thai rice soup (with 6 oz. firm tofu, p. 74). Sweet and sour pomelo salad (with ¼ cup [3 oz.] cubed tempeh, p. 78). Green vegetable chu chee curry (with tofu or tempeh, p. 97). Vegetarian jungle curry (with fried tofu, p. 102). Tofu and beans with red curry paste (with fried tofu, p. 105). Clay pot of fried tofu and vegetables in brown sauce (p. 107). Stir-fried tempeh with garlic and pepper (p. 108). Stir fry of wheat gluten or tofu with straw mushrooms (p. 109). Tofu & tomato stir fry (p. 131). Thai fried rice with tofu and egg (p. 135). Pineapple fried rice (with firm tofu or tempeh, p. 136). Glutinous rice with peanuts and mushrooms (with diced fried tofu or tempeh, p. 141).

8027 Rombauer, Irma S.; Becker, Marion Rombauer; Becker, Ethan. 1997. The joy of cooking. New York, NY: Simon & Schuster / Scribner. xiv + 1136 p. Illust. Index. 24 cm.

• ***Summary:*** Soy-related subjects include (* = recipe): Soy sauce butter* (p. 77). Asian black bean sauce* (with "3 tablespoons preserved black beans" [fermented black soybeans], p. 83). Japanese wasabi soy sauce* (p. 83-84). Ginger soy sauce* (p. 84). Soy and sherry marinade* (p. 85). Description of miso soups and their role in the Japanese diet (p. 107-08). Light-colored miso soup with simmered vegetables and dark-colored miso soup with sautéed vegetables and Mongolian Hot Pot–a miso soup based dish* (p. 108). Ginger soy vinaigrette* (p. 238).

One long chapter is titled "Beans and Tofu" (p. 270-294). Lentils with spinach and soy sauce* (p. 280). The section titled "soybeans" (p. 287) discusses their nutritional value, health benefits ("They contain substances thought to help prevent breast and other cancers, as well as Omega-3 fatty acids, which reduce the risks of heart disease"), how to cook yellow and black soybeans, how to dry-roast [to make soynuts], many ways of processing, soy milk, okara, fermented black beans, soy sauce, tamari, miso, soy cream cheese, soy sour cream, and soy cheese. There are also substantial subsections describing the following soyfoods: (1) Soy milk, including a recipe for making it at home (p. 287-88). (2) Tofu, including silken tofu, cottage tofu, frozen tofu, sauteed or fried tofu, and smoked tofu (p. 288-89). Recipes containing tofu include: Szechuan spiced tofu, Southeast Asian curried vegetable stew, Smoked tofu burgers, and Brown rice tofu salad with orange sesame dressing (p. 289-90; the latter recipe calls for toasted sesame oil and adzuki beans, with smoked tofu being optional). (3) Tempeh, including recipes for Moo shu tempeh and Szechuan-style "hacked" tempeh. (4) About soy protein, describing textured vegetable protein and textured soy concentrate, with recipes for Dinner loaf Tex-Mex style and Lion's head (p. 292). This is followed by a subsection describing seitan and with recipes for Root vegetable and seitan stew, and Seitan kibbe (p. 293-94).

Asparagus with mustard miso* (p. 343-44). Baby bok choi with soy ginger sauce* (p. 349). Steamed scallops or shrimp with soy sauce* (p. 513). Grilled or broiled whole red snapper with ginger soy vinaigrette* (p. 548-49). Small fish, fillets, or steaks poached in soy sauce* (p. 555-56). Chinese soy-braised chicken* (p. 601-02). The chapter titled "Know your ingredients" (1059-87) includes short descriptions of bean sauce, Hoisin sauce, miso, nori, salted and fermented black beans, sesame oil, sesame paste, soy sauce, tamari, tonkatsu sosu (dark spicy sauce based on soy), wakame, wasabi, vinegars from fruit and grains, margarines (mentions trans fatty acids, but not soy), and shortenings (p. 1065-69).

Subjects related to vegetarianism include: Discussion of vegetarian diets (positive and accurate, in Chapter 1, p. 3). List of vegetarian side-dishes and main courses in this edition (27 recipes, p. 20). Vegetarian chili* (p. 283). Dairy-free chocolate cake* (vegan, p. 932). Ultra-orange cake* (vegan, p. 932-33).

Irma Rombauer (the grandmother of Ethan Becker) first wrote the *Joy of Cooking* in 1931, "when domestic help was fast becoming a thing of the past and women all over the country were once again heading to the kitchen."

Note: This cookbook was written by a committee

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of experts, put together by Maria Guarnaschelli. Many controversies and clashes of opinion arose out of this arrangement. Address: 3. Cockaign, Cincinnati, Ohio.

8028. Saio, K. 1997. Soybean foods: Nutritionally and industrially valuable. In: Napompeth, Banpot, ed. 1997 World Soybean Research Conference V: Proceedings: Soybean Feeds the World. Bangkok, Thailand: Kasetsart University Press. xxiv + 581 p. See p. 521-26. Held at Chiang Mai, Thailand, 21-27 Feb. 1994. [10 ref]
• ***Summary:*** Contents: Abstract. Introduction. Localization of the components seeds and foods. Roles and behavior of the components in soybean food. Physical functionalities of the components. Nutrition and physiological functionalities of the components. Conclusion.

Contains 4 figures (incl. 11 photos and 1 graph) and 4 tables. Table 3, "Chemical composition of main soybean foods (in 100 gm)" includes tofu (regular), abura-age, kori-tofu, yuba, kinako, soybean sprouts, natto, miso (dark yellow), soy sauce (common), TVP [textured soy flour], isolate, soybeans (Japanese). Address: National Agricultural Research Center, 1-1-3 Kannondai, Tsukuba, Ibaraki, Japan 305.

8029. Soy Vay Enterprises, Inc. 1997. Soy Vay "Have we got a taste for you." "This stuff is good!" (Leaflet). Felton, California. 2 p. Front and back. 28 cm.
• ***Summary:*** On the front of this attractive color leaflet is a large photo of the company's five bottled products on a bamboo sushi wrapper surrounded by fresh garlic, onions and leeks, plus wooden chopsticks and a dish of roasted sesame seeds. The products are Soy Vay Veri Veri Teriyaki (7.5 oz or 21 oz; 1983), Cha-Cha Chinese Chicken Salad Dressing & Marinade (13 oz; 1994), Soy Vay Chinese Marinade (22 oz; 1982), and Soy Vay Island Teriyaki (20 oz; 1994).

On the back is a description of each product and its case size. Four of the five products bear a Kosher seal. The date of introduction is handwritten below each. Address: 5969 Hillside Dr., Felton, California 95018.

8030. Srisawat, Pinyo; Jonglertjesdawong, Yingsak. 1997. The vegetarian taste of Thailand: Vegetable, tofu & seafood dishes from Cha Am restaurant. Berkeley, California: SI.G Books. 224 p. Illust. Index. 28 cm.
• ***Summary:*** Cha Am is a popular Thai restaurant which opened in Berkeley, California in 1985. This is a very beautiful and strange book. Beautiful because on every other page is a spectacular full-page color photo, showing the prepared recipes, ingredients, and many lovely scenes from Thailand. Strange because the word "vegetarian" is in the title, yet a large number of recipes call for fish or seafoods (which have never been eaten by vegetarians) as the main ingredient.

Soy-related recipes include: Tau hoo neng: Steamed bean curd (p. 21). Tao hoo nam daeng: Bean curd stew (p. 27). Tao hoo op moor din: Clay pot bean curd (p. 33). Hoi jor name jim boi: "Seafood" rolls with plum sauce (p. 43; the filling is rolled in "bean curd sheets" [probably pressed tofu sheets, but possibly yuba], each 8 inches square). Tom som Tauhoo: Spicy bean curd soup (p. 63). Tao jiao lon: Spicy fermented soy bean dip (p. 185). On pages 212-13 are full-page color photos of various Thai soybeans and soyfoods.

The section titled "Gluten" (p. 214-17) describes this product and shows how to make it at home. Gluten is also used in recipes throughout the book.

The interesting glossary (p. 221-24) includes descriptions of: Bean curd (*tau hoo* is soft tofu, *tao kwa* is firm tofu, used for stir-frying, deep-frying, and braising). Bean curd, fermented (*tau hoo yee;* the two most common types are red and white. The red variety is cured in a brine with fermented red rice flavored with annatto seeds and rice wine). Bean curd, spongy (deep-frying gives tofu a spongy texture, so it can absorb the flavors of any sauce in which it is cooked a second time). Bean sauce (a seasoning made from fermented soybeans, flour, and salt. There are four popular types: yellow bean sauce, brown bean sauce, black bean sauce, and hot bean sauce. The preferred sauce is made from whole soybeans. The ground varieties are often quite salty). Beans, black fermented (also known as salted black beans; these are small black soybeans fermented with salt and spices. They are delicious when combined with garlic, fresh ginger, or chilies. Note: Fermented white soybeans are called *tao jiao*). Soy sauce (*si iu;* These recipes call for the Chinese rather than the Japanese type. The three most widely used soy sauces are light soy sauce {*si iu khao*}, dark soy sauce {*si iu dam*}, and mushroom soy sauce).

Note: This is the earliest English-language document seen (Feb. 2004) that uses the word "tauhoo" to refer to tofu. Address: Bangkok, Thailand.

8031. Sunarlim, N.; Anwarhan, H. 1997. A synthesis of agronomic results of SYGAP II in Indonesia. In: Napompeth, Banpot, ed. 1997. World Soybean Research Conference V: Proceedings: Soybean Feeds the World. Bangkok, Thailand: Kasetsart University Press. xxiv + 581 p. See p. 500-02. Held at Chiang Mai, Thailand, 21-27 Feb. 1994. [5 ref]
• ***Summary:*** SYGAP is the soybean yield gap analysis; it was conducted in three locations in Indonesia. The objectives were to identify and alleviate yield constraints and to develop a package of improved practices–which is described.

In Indonesia, about 70% of the soybeans are used for human consumption, mainly in the forms of tempeh, tofu, soy sauce, and tauco (fermented whole soybeans). Address: Bogor Research Inst. for Food Crops, Tentara Pelajar 3A, Bogor, Indonesia.

8032. Kikkoman International Inc. 1998. Talk about a

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signature sauce! The true taste of soy sauce (Ad). *Nation's Restaurant News* 32(3):47. Jan. 19.

• ***Summary:*** This full-page color ad, targeted at restaurateurs, shows the words "Kikkoman Soy Sauce" on a fish fillet. The text reads: "Don't use just any soy sauce. Start with Kikkoman. Because among leading brands, only Kikkoman is naturally brewed and aged for full flavor. *Your* flavor. Whether that fish dish is Asian or fresh from the American mainstream. Catch our latest recipe ideas. Call 1-800-944-0600."

"The true taste of soy sauce" is a registered trademark, printed in white letters on a red background.

8033. Early soyfoods in China–Chronological (SoyaScan database search report). 1998. 12 p. incl. index. Jan. 23. Unpublished manuscript. [20 ref]

• ***Summary:*** This carefully customized database search was conducted for Mark Messina to document the fact that soyfoods have been widely consumed for a long time in China. Among the 20 records are the earliest Chinese-language and English-language documents that mention or discuss soyfoods in China, with emphasis on soy sauce (15 records), tofu (12 records), and Chinese-style miso (chiang, 6 records). Also includes the earliest English-language records that give significant industry or market statistics on soy sauce or tofu in China.

8034. Early soyfoods in Japan–Chronological (SoyaScan database search report). 1998. 36 p. incl. index. Jan. 23. Unpublished manuscript. [20 ref]

• ***Summary:*** This carefully customized database search was conducted for Mark Messina to document the fact that soyfoods have been widely consumed for a long time in Japan. Among the 47 records are the earliest Japanese-language and English-language documents that mention or discuss soyfoods in Japan, with emphasis on tofu (27 records), soy sauce (26 records), miso (20 records), and soymilk (8 records). Also includes the earliest English-language records that give significant industry or market statistics on tofu, miso, or soy sauce in Japan.

8035. Golbitz, Peter. 1998. Tofu & soyfoods cookery: Delicious foods for a healthy life. Summertown, Tennessee: Book Publishing Co. 176 p. Illust. (3 photos). Recipe index. General index. 21 cm.

• ***Summary:*** Contents: Preface and acknowledgments. The history of soyfoods. A closer look at soybeans. Soybeans and health: Introduction, malnutrition, cardiovascular disease, cancer, osteoporosis, menopause, more to come. Using soyfoods: Whole dry soybeans, tofu, soymilk, soy flour, textured soy protein, green vegetable soybeans, tempeh, miso, soy sauce, soy protein concentrate, soy protein isolates, natto, soybean oil, second generation soyfoods, meat alternatives, cheese alternatives, soy yogurt, nondairy frozen desserts, mayonnaise and dressings, instant soups and other dry mixes, margarine, lecithin, soynuts and soynut butter, soy sprouts, okara or soy pulp. Basic recipes. Breakfast. Bread. Salads & dressings. Soups & sandwiches. Main & side dishes. Desserts & drinks. Glossary. U.S. & Canadian soyfoods companies. Sources of information on soyfoods. Nutrients in soyfoods.

Contains 125 of Peter Golbitz's favorite recipes, selected from the works of some of "the world's leading soyfoods chefs." A list of these "leading vegetarian and soyfoods pioneers" (all of whose books have been published by The Book Publishing Co.) appears on the rear cover. Peter (born in 1952) lives with his wife, Sharyn Kingma, and son on a beautiful island off the coast of northern Maine. A color photo of the family appears on the rear cover. Twenty years ago (in 1978) Peter was "first introduced to tofu and the wonders of soyfoods." A photo of Peter with his book appears in the Book Publishing Catalog of Jan. 1999. Address: President and Founder, Soyatech, Inc., Bar Harbor, Maine. Phone: 207-288-4969.

8036. Greenberg, Patricia; Hartung, Helen Newton. 1998. The whole soy cookbook: 175 delicious, nutritious, easy-to-prepare recipes featuring tofu, tempeh, and various forms of nature's healthiest bean. New York, NY: Three Rivers Press (Crown Publishers / Random House). ix + 221 p. Illust. Index. 24 cm.

• ***Summary:*** Contents. Acknowledgments. Introduction. All about soy: Health benefits of soy (reduces the risk of heart disease, lowers the risk of breast cancer, eases the symptoms of menopause, protects against prostate cancer, prevents digestive disorders {when using whole soybeans or soy products containing high levels of fiber}, eliminates the problem of lactose intolerance, prevents the problems of milk allergy, beneficial in diabetic diets), cooking with soy products (meat analogs or meat substitutes {soy sausage, soy bacon, hamburgers and hot dogs}, miso, okara, soy cheese, soy milk, soy sour cream, soy yogurt, soy flour, whole soybeans, soybeans–green, soybeans–roasted, tempeh, textured vegetable protein (TVP), tofu & silken tofu, Soy-based foods (containing little or no protein): Egg replacers, soy margarine, soy mayonnaise, soybean oil, soy sauce) how to get optimum nutrition from soy (protein, carbohydrates, fat, cholesterol, fiber, sodium), nutrition information. Sample menus (for 3 meals a day, 7 days a week). Recipes: 1. Appetizers, dips, and spreads. 2. Salads and vegetables. 3. Brunch and breads. 4. Pizza and sandwiches. 5. Soups and stews. 6. Main dishes. 7. Pastas and grains. 8. Desserts.

This books contains almost 200 delicious and easy ways to add that essential 25 grams of soy protein to your diet. These recipes (each of which includes a nutritional analysis) are based on more than ten years of experience and experimenting (p. 2). Address: P.O. Box 10853, Beverly Hills, California 90213. Phone: (310) 474-4539.

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8037 Mitchell, Paulette. 1998. The complete soy cookbook: More than 150 simple recipes for good health and great taste. New York, NY: Macmillan Publishing (A Simon & Schuster Macmillan Co.). xlix + 270 p. Illust. Index. 24 cm.
• ***Summary:*** A very attractive vegetarian cookbook. Each recipe is marked with one of three symbols: V = vegan, lo = lacto-ovo vegetarian, and l = lacto vegetarian. Contents: Preface. An ancient Asian secret isn't a secret anymore. Introduction. The whys (cancer, heart disease, osteoporosis, menopause, diabetes), the hows, soy food ingredients (soybeans, sweet beans {edamame}, tofu, tempeh, texturized vegetable protein {TVP}, soy milk, soy flour, soy oil, soy sauce), other soybean products (soybean sprouts, okara, miso, roasted soynuts, isolated soy protein {ISP}, dairy and meat analogs), a note on food allergies. Soy success: Stocking your refrigerator and pantry, using the recipes, kitchen equipment. 1. Appetizers. 2. Soups. 3. Salads. 4. Entrees. 5. Desserts. Appendix: Recipes listed by soy food categories (and within each category by recipe type–such as salads, soups, desserts). Whole soybeans (32 recipes), sweet beans (green vegetable soybeans, 7 recipes), tofu (96), frozen and thawed tofu (14, all entrées), pressed tofu (12), tempeh (14), textured vegetable protein (TVP, 4), soy milk (14). Note that tofu was used in by far the most recipes (96), followed by whole soybeans (32).

Paulette, who lives in Minneapolis, Minnesota, is a cooking instructor, restaurant consultant, and lecturer. Paulette is the author of many Macmillan books, including *The 15-Minute Vegetarian Gourmet*, *The 15-Minute Single Gourmet*, and *The Complete Book of Dressings*. This book is dedicated to her 14-year-old son, Brett. Address: Minneapolis, Minnesota. Phone: 612-941-7576.

8038 **Product Name:** Smoked Tempeh [Savory Herb, Spicy Peanut, Sweet & Tangy].
Manufacturer's Name: Smoke & Fire Natural Foods.
Manufacturer's Address: 1885 North Main St., Sheffield, MA 01257. Phone: 413-528-6891.
Date of Introduction: 1998, January.
Wt/Vol., Packaging, Price: 6 oz vacuum pack. Retails for $2.15 (1998/07, Massachusetts. Range: $1.89 to $2.50).
How Stored: Refrigerated, 90 day shelf life (at 34-36°F).
New Product–Documentation: Talk with then form filled out and Label sent by José Antunes (pronounced jo-ZAY ahn-TU-nays), founder and president, who is Portuguese. 1998, June 29. The idea for this pioneering product was sort of a logical extension of smoking tofu. José likes tempeh very much and he wanted to have more products in his line. An invoice [sent to Soyfoods Center] shows that the Savory Herb flavor was first sold on 26 Jan. 1998 and the Spicy Peanut on March 9. A case of six wholesaled for $12.60 (for each product).

Note: This is the first smoked tempeh product seen worldwide.

Leaflet (8½ by 11 inch) from Natural Products Expo East (Baltimore, Maryland). 1998, Sept. 9-13. The company's new registered trademark is "Soy with Sizzle." Gives the ingredients and product specifications for all the company's products including a new product: Sweet & Tangy Smoked Tempeh. Talk with José. 1998, Sept. 16. His company has discontinued the Spicy Peanut and added a new flavor, Sweet & Tangy Smoked Tempeh, which was launched at the Baltimore show. It is now on the market. Its ingredients: Organic soy tempeh (organically grown soybeans, water, tempeh culture), organic shoyu soy sauce, organic apple cider vinegar, organic ground mustard seeds, organic evaporated cane juice, lemon juice, organic orange rind, granulated onion, granulated garlic, spices & natural wood smoke.

8039 Denby, Leo. 1998. How seitan is made at Sheffield Seitan in Vermont (Interview). *SoyaScan Notes*, Feb. 3. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Leo and Christina, owners of Sheffield Seitan, presently make their seitan as follows: Leo starts by milling hard red spring wheat, purchased from Ted Whitmer in Bloomfield, Montana until 2-3 years ago when he went out of business; he gave his word that his wheat was organically grown, but it was never certified organic. Under the original Meadows stone mill (part of the business since 1979, electrically powered, with an 8 inch diameter stone), he has devised a bran shaker; the finely milled wheat flour and bran falls through the vibrating screen, whereas coarser bran and flakes are separated out.

Christina makes the gluten using an 80-quart Hobart mixer. 7 gallons of water are mixed with 60-70 lb of water in the Hobart's metal bowl than mixed with a dough hook at the slowest speed for 10-15 minutes–until the gluten has formed and set up. Then they turn off the machine and allow it to rest for 10 minutes. Then she adds water, clicks the mixer on then off quickly to just get the dough hook turning, then she bails out the water into a drain with a small pail. Then she adds more water, and clicks the mixer on and off a few more times to get the starch out of the gluten. As the starch starts coming out, there is more room to add more water. Then she will turn the mixer off, leave the lukewarm water in the bowl, and start stretching the dough and hosing out some of the bran–which collects in pockets in the gluten. The final yield per batch is 40-44 pounds of wet gluten from 70 pounds of wheat flour. The small amount of bran left in the gluten is beneficial, allowing it to shear well when chewed. Gluten made from wheat is much better quality than that made from vital wheat gluten. When you chew seitan made from the latter, you get recoil and squeak.

Then put the gluten (about 20 pounds per pail) into 5-gallon pails with water and put the pails in a chest freezer overnight. The gluten gets stiff/tight and more dense but

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never totally freezes–though the water around it freezes. The next day, remove the raw gluten from the freezer, break and remove the ice, and add some fairly warm water to the pail, then after several minutes pour it off. Transfer the gluten to a big metal bowl on a pedestal next to the work table. Add warm water to cover the gluten and leave until the consistency is just right. Then, using a serrated knife, they cut off pieces of the gluten that weigh slightly more than 1 pound. Check the weight on a scale. Squeeze, then knead the gluten in both hands above the bowl to form a ball. For patties, press between sheet pans to the appropriate thickness. Now cook the raw gluten in broth to make seitan. Into a rectangular stainless steel pan cooker (2 feet by 4 feet by 6 inches deep, with a removable lid), pour the seitan broth consisting of approximately 12 gallons water, 2 gallons naturally fermented soy sauce (made by Wan Ja Shan / Mandarin Soy Sauce Co. in New York), and about one-third cup of a mixture of 6 parts garlic powder and 1 part cayenne powder. This will fill the cooker to a depth of about 4 inches. No kombu or ginger are used. This broth is used to make 4 batches of seitan, where a typical batch is thirty 1-pound patties or 90 wheat puffs. Heat the broth using two gas burners. Cook each batch of seitan for about 1 hour (40 minutes on the first side, then flip over each piece). Adjusting the temperature of the broth is critical. Start with hot broth; when you drop in the gluten, it will sink out of sight. Once it starts to float to the top (indicating that the gluten is set), turn down to a simmer. If you cook at too high a temperature for too long, the gluten will become spongy, which is undesirable. Larger pieces take longer to cooker than smaller ones.

To package the finished seitan, remove from the cooker, put the pieces on stainless steel sheet pans (sloping slightly so the broth drains to one end and can be reused) on a rolling rack, and wheel it to near the door. If necessary, press or gently squeeze the seitan pieces to remove excess broth. Open the door a crack to let in some cold winter air to cool it. Exhaust fans running in the shop also help draw in the air and cool it. When the seitan is relatively dry, put each type in its own container. The pounder goes in a poly bag, and the excess of the bag is cinched underneath with a twist so it does not stick out like a plume. Put on the label (self-adhesive, 2 by 3½ inches). All the products except the Wheat Puff are sold frozen. If a store buys Wheat Puffs with frozen products they are shipped in the same box so the frozen products keep the Wheat Puffs cool.

To make the Wheat Puffs use a Fryolating process with canola oil and a water-based tempura batter–which contains no eggs, dairy products, or meat. The batter is made of wheat flour, cornmeal, rice flour (milled in the shop), garlic powder, and cut basil, plus water. After the Wheat Puffs are fried, spread them out on kraft paper on the sheet pans and put a fan on them to cool them, before putting in brown paper kraft bags for delivery. Do not crowd in the bags. These 3-ounce patties are a hand-held food with a coating–no stick. The Wheat Puff is the product most people love best. Address: Owner, Sheffield Seitan, Box 1, Lyndon, Vermont 05849. Phone: 802-748-3327.

8040. Indiana Soybean Board. 1998. Indiana soyfoods locator guide: A guide to finding soyfoods in the supermarket and health food store. Lebanon, Indiana: Indiana Soybean Development Council. 48 p. 28 cm.
• ***Summary:*** This is the first edition of this Guide. On the cover is a paper grocery bag resting on a bed of soybeans and chock full of foods: Veggie Slices (soy cheese), soynut butter, veggie burger, tofu, soymilk, soy flour, plus carrots, celery, and cooking oil. Contents: Food pyramid. Soyfoods descriptions–Meat the Bean: Introduction, green vegetable soybeans (edamame), hydrolyzed vegetable protein (HVP), infant formulas–soy based, lecithin, meat alternatives (meat analogs), miso, natto, nondairy soy frozen desserts, soy cheese, soy fiber (okara, soy bran, soy isolate fiber), soy flour, soy grits, soy protein concentrate, soy protein isolate (isolated soy protein), soy protein–textured (textured soy protein, textured soy flour), soy sauce (tamari, shoyu, teriyaki), soy yogurt, soybeans, soymilk–soy beverages, soynut butter, soynuts, soybean oil & products, sprouts–soy, tempeh, tofu & tofu products, whipped toppings–soy-based, yuba. A taste for health–Scientists are learning about soy's health benefits: Heart disease, osteoporosis, menopause, cancer, isoflavones. Soyfood icon chart. Soyfood facts & recipes: Meat alternatives, soybean oil, textured soy protein, whole soybeans, soy flour, soymilk, tofu. Composition and nutrient content of soyfoods. Soyfood conversion charts: description of one serving of soyfoods, guide to modifying recipes, soyfoods substitution chart. Mail order soyfood companies. Soyfoods Web site packed with information. Soy cookbooks. Soy resource books. 1-800-talksoy. Soyfoods market search map: where to find soyfoods in the supermarket (a two page color layout of a supermarket displaying where soyfoods are located). Soybeans... they're in almost everything. Finding soyfoods at the supermarket (store listings by county). Address: Indianapolis, Indiana 46205-1744. Phone: 1-800-275-7679.

8041. *River Currents: News from South River Miso Company*.1998--. Serial/periodical. South River Farm, Conway, Massachusetts. Vol. 1, No. 1. Winter 1998--. Frequency: Annual. 28 cm.
• ***Summary:*** This newsletter contains: News about the company, with photos. A catalog of its products with current prices and a detailed description of each type of miso and tamari. Order form. Miso recipes. Frequently asked questions about miso. Company mission statement: "Life is sacred. Food is sacred." Address: Conway, Massachusetts.

8042. Stevens & Associates, Inc. ed. and comp. 1998. U.S.

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1998 soyfoods directory. Lebanon, Indiana: Indiana Soybean Development Council. 47 p. 28 cm. [33 ref]
• ***Summary:*** This third edition of the U.S. Soyfoods Directory was produced for the Indiana Soybean Board by Stevens & Associates.

Note: Nasoya Foods has its own listing but Azumaya does not. Azumaya is listed under Vitasoy USA Inc. as a brand. Address: Stevens & Associates, 4816 North Pennsylvania Street, Indianapolis, Indiana 46205. Phone: 317-926-6272.

8043. Kikkoman International Inc. 1998. Asian noodles are surfacing everywhere (Ad). *Nation's Restaurant News*. March 2. p. 29.
• ***Summary:*** This full-page color ad, targeted at restaurateurs, shows a bowl of noodle soup. "They're profitable, they're different, and they're surprisingly easy to add to the menu. All it takes is a few good recipes and one essential seasoning: Kikkoman Soy Sauce. Some soy sauces are harsh and overpowering. But Kikkoman is naturally brewed and aged for full flavor, so it complements and balances all kinds of noodles from Pad Thai to Pasta Primavera and anything in between. For 21 unexpected recipes call 1-800-944-0600."

"The true taste of soy sauce" is a registered trademark, printed in white letters on a red background.

8044. Perry, Charles. 1998. Rot of ages: A medieval rotted sauce lives again. *Los Angeles Times*. April 1. p. H6. Food section.
• ***Summary:*** Murri is a sauce that used to be made by Arabs from lumps of raw barley dough wrapped in fig leaves and allowed to rot / fermented with naturally occurring *Aspergillus* mold for 40 days. Properly made, it smelled distinctly like soy sauce. But it hasn't been made for 400 or 500 years. Why did it die out? Address: Staff Writer, Food Section, Los Angeles Times, California. Phone: 213-237-7806.

8045. Kikkoman International Inc. 1998. Want to build a better burger? The true taste of soy sauce (Ad). *Nation's Restaurant News*. April 27. p. 48.

8046. Brown, Susan; Brown, Allan. 1998. The Noble Bean. *Food for Thought: Newsletter of the Ontario Natural Food Co-op (Canada)* No. 17. p. 6. April.
• ***Summary:*** "Noble Bean is owned and operated by Susan and Allan Brown. We manufacture our products out of a 750 sq. ft. production facility on 10 acres of land near Elphin, Ontario, in the Ottawa Valley. We are 22 miles from the town of Perth and 60 miles from Ottawa. Originally we were based in Toronto 18 years ago. Previously, we had spent many years living in the country and after establishing our market in the city, we had an excellent cottage industry that we could carry on from afar."

"Tempeh had been a part of our diet for years and once we learned how to make this amazing food, we started commercial production in 1980. We made our first major purchase of cooking equipment from a 60-year-old gentleman in Port Perry who had been stocking a few Toronto natural food stores with tempeh for a year. He had a stroke and could no longer continue. With a $500 loan, we paid $200 for a large custom-made cooker, a colander, racks and utensils, which we still use today.

"It was slow going at first, turning the industry and the public on to a new protein source. We made about 48 pounds per day, 4 days a week. While we were based in Kensington Market, we serviced the Toronto stores ourselves. Our production rate steadily increased as people became familiar with this new food. In 1985, when we did make the jump out of the city back to the land, we started producing 120 lbs. per day. It was at this time we took on our first distributor and our product got out much further.

"Through all of these times we were fortunate to be able to make a living at home. Children changed our lives immensely. Our two boys were raised with this business and home-schooled for years as they were growing. They are an integral part of the production line whenever they like and have the opportunity to make some serious pocket money.

"As the demand increased so did our production. We now make 200 lbs. per day, 3 days per week. We offer 6 different tempeh products all made from organically grown ingredients."

Contains 3 tempeh recipes: Ginger tamari tempeh. Lemon broil. Tempeh salad–Our summer favorite! A sidebar describes "What is tempeh?" Address: Owners, Noble Bean, RR# 1, McDonalds Corners, ONT, Canada K0G 1M0. Phone: 613-278-0173.

8047. Sass, Lorna J. 1998. The new soy cookbook: Tempting recipes for tofu, tempeh, soybeans & soymilk. San Francisco, California: Chronicle Books. 120 p. Illust. (25 color photos by Jonelle Weaver). Index. 21 x 23 cm.
• ***Summary:*** Contents: Introduction–The soy of cooking (descriptions of soybeans, black soybeans, soymilk, tofu, tempeh, miso, soy sauce). Appetizers and soups. Entrées. Soy on the side: Vegetables and grains. Salads, slaws and dressings. Scones and a few desserts. Mail order sources. Table of equivalents. A black-and-white photo shows the author. Note: This is not a vegetarian cookbook. Ingredients include swordfish, shrimps, mussels, codfish, clam chowder, etc.

Letter (fax) from then talk with Lorna Sass. 1996 Sept. 8. This trade paperback book, with many full-page color photos, is scheduled to be published in the spring of 1998. Chronicle Books is now publishing a series of books titled *The Vegetarian Table*, with each book featuring the vegetarian cookery of a different country. Address: 46 West 83rd St., New York City, NY 10024. Phone: 212-799-1085.

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8048. Gonzalez-Watanabe, Yvonne. 1998. Introducing tofu and soymilk to Costa Rica. Update on soyfoods work in the Los Angeles area (Interview). *SoyaScan Notes*. May 4. Conducted by William Shurtleff of Soyfoods Center
• ***Summary:*** Yvonne just returned from a month (March 29 to April 24) in her native country of Costa Rica, where she was teaching about and studying tofu and soymilk. She gave 8 classes in people's homes, where she taught them how to make and use soymilk and tofu; about 30-40 people attended, and about half the people attended more than one class. During these classes she developed a recipe for tofu seviché (pronounced say-VEE-chay), which is traditionally made with marinated raw fish but occasionally with green plantain or avocadoes substituted for the fish. Yvonne used tofu in place of the fish, and it was a big hit.

Vegetarianism is now quite popular in San Jose, the capital of Costa Rica, but it goes under the name of macrobiotics. There are a number of "macrobiotic" restaurants in the capital; all serve only vegetarian food.

When Yvonne tried to interview the one existing Chinese-run tofu company, they were very uncooperative. It seemed like they might be going out of business because tofu is now being made on a small scale in many other places. Yohan, the big chain of Japanese-run food stores, now makes fresh tofu each day in the store. Many small Chinese food markets and restaurants also make their own tofu. Kikkoman Tofu, sold in aseptic packages, is fairly widely available.

Yvonne's booth and tofu recipe brochure for the LA Tofu Festival are progressing nicely. Margaret Endo has found advertisers for the booklet, which will enable Yvonne to expand its size. She has also found a Costa Rican celebrity to be the host at her booth–Lily Melgar, a well-known actress and friend of her cousin. Yvonne went to Lily's home and prepared her favorite tofu recipes, which Lily liked very much.

Update: Talk with Yvonne. 1998. July 8. The Southern California Gas Co. will be sponsoring Yvonne's booth at the LA Tofu Fair–which is now set for Saturday and Sunday, August 15-16. They will pay for all the bands, the music, and a Spanish-language flyer–largely because they are interested in reaching the Hispanic population in the Los Angeles area. Yvonne has been meeting a large number of people who are interested in tofu–some of them local celebrities. One Puerto Rican lady who is a musician, goes by the name "La India." Ricky Martin from Mexico is a pop music star. Yvonne has cooked Hispanic vegan tofu recipes for both of them.

Update: Talk with Yvonne. 1998 Dec. 10. She is now the guest chef on a TV show in Los Angeles (KCET–Channel 52) twice a month teaching cooking–vegetarian and soyfoods. She receives no pay for this, but it is very interesting and good exposure. Address: 6029 LaPrada St., Los Angeles, California 90042. Phone: 213-254-1712.

8049. Louie, Elaine. 1998. Vegetarian that's filling. *New York Times*. May 13. p. F8
• ***Summary:*** Julie Sahni, cookbook author and teacher, says that vegetarianism has been an inextricable part of Indian culture since about 500 B.C., when Mahavira, a Hindu philosopher, developed the concept of ahimsa, or non killing. Although meat is scarce in Indian cookery, protein is not. A recipe for Indian chickpea ragout shows this.

A recipe for Bean curd sauté, adapted from Youngin Hyun, calls for "2 pounds extra-firm or firm bean curd" [tofu]. Hyun, a Manhattan [New York City] photographer and talented home cook, says that Koreans, which also have a long and rich tradition of vegetarian cookery, have used beans as a protein source since 107 B.C. In Korea, all beans, including soybeans, are called "the meat of the soil." Koreans began making bean curd (called *du bu*) during the late Koryo Dynasty (918-1392), according to Mrs. Hyun. Today bean curd comes in two consistencies, firm or silken. The silken type can be sliced then drizzled with a mixture of soy sauce, sesame oil, vinegar, sugar, and chopped scallions. The firm kind is used in stews and sautéed dishes. In the decade after the Korean war (which ended in 1953), Koreans ate lots of bean curd as the poor country rebuilt itself.

8050. Japan Tariff Assoc. 1998. Exports of soy sauce (shoyu): No. 2103.10-000. *Japan Exports and Imports: Commodity by Country*. June. No. 618. p. 83. [Eng, jap]
• ***Summary:*** For each country, gives the quantity and value for the current month, and for the cumulative year to date. Address: 4-7-8, Kohji-machi, Chiyoda-ku, Tokyo 102-0083, Japan. Phone: 81-3-3263-7221.

8051. Kikkoman Corporation. 1998. Annual report 1997. 339 Noda, Noda-shi, Chiba 278, Japan. 26 p. 28 cm. [Eng]
• ***Summary:*** The information in this English-language annual report is current as of April 1998. Contents: Financial highlights. Profile. A message from the president (Yuzaburo Mogi): The year in review, foundation, growth, and opportunity, serving a global market, toward the new century. A strong global operating presence. The Americas, Europe, Asia and Oceania, Japan. Operational review. Financial review. Financial section: Consolidated balance sheets, etc. Corporate history (chronology from April 1925 to October 1997). Global network (directory of Kikkoman names, addresses, and phone numbers worldwide). Board of directors and officers. Corporate data.

During fiscal 1997, ended 31 December 1997, consolidated net sales worldwide rose 4.0% over the previous fiscal year to 214.3 billion yen, breaking the record of 211.7 billion yen set in 1992. Yet income decreased by 21.6% to 5,711 billion yen.

Overseas sales expanded 10.6% in 1997 to 60.1 billion yen, and accounted for 28.0% of consolidated net sales.

The Americas: "In June 1998, Kikkoman Foods, Inc.,

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the centerpiece of Kikkoman's expansion in North America, will celebrate 25 years of operations. The number of items produced at the plant has risen to more than 100, and the plant's production has expanded more than 10-fold."

"On April 17, 1998, Kikkoman commenced operations at its second U.S. plant, in Folsom, California. Built at a cost of US $46 million, the plant covers an area of approximately 210,000 square meters and has an initial annual production capacity of 10,000 kiloliters of soy sauce. In autumn 1998, the Company will begin delivering soy sauce produced at its second U.S. plant, in Folsom, California."

"Kikkoman's English-language Internet home page, opened in April 1997, receives approximately 100,000 hits a month, mainly from people in the United States. In particular, the recipes listed on the home page have attracted a great deal of interest, with site visitors frequently requesting further recipe information."

Europe: In Oct. 1997 Kikkoman Foods Europe B.V. began operation of its plant in the Netherlands.

Letter from Keiji Yamazaki of Kikkoman, San Francisco, 1998 Aug. 7. Kikkoman's annual reports are published in mid-June each year. Address: Noda, Japan.

8052. Shimbo-Beitchman, Hiroko. 1998. Magical miso. *Saveur* (*New York, NY*) No. 27. May/June. p. 100-08, 110, 112.

• ***Summary:*** A beautiful article, loaded with glossy color photographs (by Christopher Hirsheimer and Tom Wagner) and recipes. Photos show: (1) Shiromiso in a stylish bowl. (2) A Japanese worker, in clothing with traditional designs, stands on the rim of a miso vat and shovels what will become miso at Yamaki Jôzô, a miso brewery built in 1902 by the Kitani family, in Kamiizumi-mura, Honjô city, Saitama prefecture, 75 miles northwest of Tokyo, Japan (full page). *Yama* means "mountain, *ki* stands for Kitani, and *jôzô* means "brewery. Kazuhiko Morita is the brewery's director. The company has been making three basic types of miso, plus shoyu and tofu, since 1902. Yamaki partially automated in the mid-1980s and today makes about 400 tons of a miso a year, it is not pasteurized and no alcohol is added in packaging as a preservative. (3) Looking down into a bowl of miso soup with tofu and wakame (full page). (4) The exterior of Yamaki Jôzô, a tree bearing bright orange persimmons stands in front of several traditional wooden buildings. (4) Hiroko Shimbo-Beitchman. (5) Mr. Morita, in traditional clothing, smelling the koji in a large, automated, stainless-steel koji incubation room. (6) The man shoveling the finished koji out of the incubation room onto a conveyor belt. (7) Eggplant Dengaku (with red and white miso, full page). (8) Walnuts being ground to a paste in a suribachi. (9) Steaming the soybeans at Yamaki Jôzô; 5,300 pounds of whole soybeans are steamed at a time. The company has two giant steel pressure cookers. For akamiso, the beans are cooked for about 7 hours until soft and yellow. (10) Cooling the cooked soybean on a conveyor belt. Most of the miso's flavor comes from the beans; the aroma and sweetness come from the kôji. (11) Mixing the cooked soybeans and koji, with salt and a little spring water. Then the mixture is forced through a machine like a meat grinder to produce a smooth paste, which will ferment more easily than a chunky one. (12) Putting the ingredients for akamiso into 100-year-old cedar vats, which are covered with plastic sheeting then weighted. After several months it is moved to another set of barrels, then again a few months later. It can age for up to two years. (13) Three packages of commercial Japanese miso: akamiso, akadashi-miso, and shiro miso.

Recipes: Miso soup with tofu and wakame. Eggplant dengaku with two miso sauces. Green beans with miso dressing. Broiled miso-marinated black cod. Panfried miso-marinated beef. Steamed pork with mamemiso. A sidebar describes the different types of miso, with details on akamiso, mamemiso, and shiro miso. The company also makes brown rice miso (unpasteurized), and a kit (with koji and instructions) for making your own miso at home.

Traditionally miso made at home was the source of great family pride. *"Temae miso desu ga,"* one would say–meaning "I don't want to boast about my miso, *but...*" Today Japan's 50 largest miso manufacturers control about 90 percent of the market. But miso connoisseurs prefer miso made by smaller companies in the traditional way; these are painstakingly preserving old-fashioned techniques and regional miso styles. Address: Teacher of Japanese cooking, Hiroko's Kitchen, London, England. Phone: Fax: 44-171-289-0855

8053. Tamang, J.P. 1998. Role of microorganisms in traditional fermented foods. *Indian Food Industry* (*Mysore, India*) 17(3) 162-67. May/June. [32 ref]

• ***Summary:*** This article is mainly about the benefits of fermentation and fermented foods. Contents: Introduction (main microorganisms are filamentous fungi, yeasts and bacteria, especially LAB = lactic acid bacteria). Biopreservation. Bioenrichment. Microorganisms that produce enzymes. Microorganisms that destroy undesirable components. Enrichment of the diet. Mixed starter culture. Traditional fermented foods of medicinal value (koumiss, kvass). Conclusion.

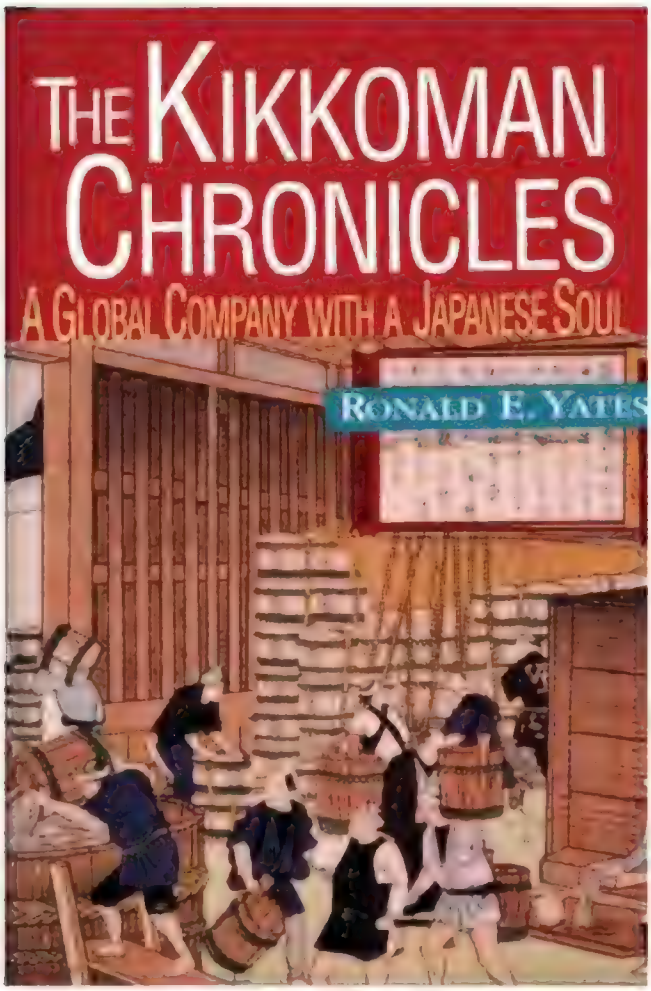
The following fermented soyfoods are mentioned: Kinema, hawaijar, miso, natto, shoyu, tauco, and tempe [tempeh]. Koji is also mentioned.

"Fermented foods are defined as foods that have been subjected to the action of selected microorganisms by which a biochemically and organoleptically modified substrate is produced, resulting in an acceptable product for human consumption." Address: Microbiology Research Lab., Dep. of Botany, Sikkim Government College, Gangtok, Sikkim–737 102, India.

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8054. Yates, Ronald E. 1998. The Kikkoman chronicles: A global company with a Japanese soul. New York, San Francisco & Washington, DC: McGraw-Hill. xviii + 206 p. Illust. Index. 24 cm.



• ***Summary:*** Contents: Preface. Introduction. Acknowledgments. 1. Completing the circle. 2. From Osaka Castle to the Big Foot Prairie: A brief history of Kikkoman. 3. A global company with a Japanese soul. 4. There's no business like shoyu business: A concise soy sauce primer. 5. Diversify or die: Kikkoman's strategies for success. 6. The road to Walworth: Kikkoman's big gamble on the Big Foot Prairie. 7. A soy sauce plant grows in the land of cheese. 8. A culture of selective risk: The enduring secret of Kikkoman's success. 9. High-tech fireflies and a trailblazing orange. 10. Soy sauce meets cyberspace: Big changes on the road to the twenty-first century. 11. Conclusion.

For ten years, during the 1970s and 1980s, Ron Yates was the business correspondent for the *Chicago Tribune* in Japan. He speaks Japanese. This book is generally well-written, but it contains a mixture of fascinating new insights about Kikkoman plus a fair amount of questionable and undocumented information about Kikkoman's origins and early history–for example the story of Shige Maki and the unchallenged idea that Kikkoman's "roots can be traced back to 1630" (p. ix). Page 53 states that shoyu kegs (*taru*) hold 18 liters or 4.75 gallons. Questions about the Shige Maki story are examined in a separate record. Address: Head, Journalism Department, Univ. of Illinois (Urbana).

8055. Yates, Ronald E. 1998. Shinzaburo Mogi in America: Making shoyu in Denver, Colorado, and Toronto, Canada. Work with and investment in the Oriental Show-You Co. in Columbia City, Indiana. In: Ronald E. Yates. 1998. The Kikkoman Chronicles. New York, San Francisco & Washington, DC: McGraw-Hill. xviii + 206 p. See p. 125-32.

• ***Summary:*** "Somewhere in Denver, Colorado, are the remains of what is most likely the first Japanese-built and managed soy sauce plant in the continental United States." It is fairly certain that Shinzaburo Mogi went to Denver in 1892. He was barely 20 years old and had a bold idea–to produce shoyu in the USA (p. 125). "As the fifth son of the Kashiwa branch of the Mogi family, he did not join the family business in Japan. His older brother, Shichirouemon Mogi, became the first president of the Noda Shoyu Co." (p. 129).

Kenzaburo "Ken" Mogi (not to be confused with Yuzaburo Mogi's younger brother, also named Kenzaburo) traveled to Denver in the early 1980s in search of info about his great-granduncle. "Kenzaburo, the son of Katsumi Mogi, who served as Kikkoman's president from 1980 to 1985, had heard the stories of this little-known member of the Mogi clan for years–some of them from Keizaburo Mogi, who served as president of Kikkoman from 1962 to 1974, when he became chairman of the board. Ken Mogi managed to learn that "Shinzaburo Mogi had indeed managed a soy sauce plant in Denver in 1907. Unfortunately the operation was not successful. Kenzaburo learned after meeting with a man who apparently worked with Shinzaburo Mogi at the plant... But failure in Denver didn't stop Shinzaburo Mogi from pursuing his dream of making soy sauce in North America" (p. 130). After Denver, he apparently helped manage a soy sauce plant in Toronto, Canada. Eventually, he settled in Chicago where he was involved in the trading business–including the importing of Japanese (most likely Kikkoman) shoyu to the United States" (p. 130-31).

Note: As of Nov. 2004 Soyfoods Center is aware of very little evidence indicating that Shinzaburo Mogi ever started a plant making fermented soy sauce in Denver, Colorado, or anywhere in the United States. We believe that Kikkoman has spread this unfounded rumor. On 7 Feb. 2005 Kenzaburo Mogi IV, the first person from Kikkoman who tried to find evidence of these existence of this soy sauce plant in Denver, replied to a letter from William Shurtleff asking whether Ken thought the Denver soy sauce plant was a theory or a fact: "I also think it is unfortunate that the theory is told as a fact."

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Address: Head, Journalism Department, Univ. of Illinois (Urbana)

8056. Yates, Ronald E. 1998. The story of the origins of Kikkoman in a woman named Shige Maki (Document part) In Ronald E. Yates 1998. The Kikkoman Chronicles: A Global Company with a Japanese Soul. New York, San Francisco & Washington, DC: McGraw-Hill. xviii + 206 p. See p. x-xi, 13-19, 62.

• ***Summary:*** Before we recount this story, we would like to say that we question its authenticity. Why was Shige Maki not mentioned in Mark Fruin's classic 1983 history of Kikkoman titled *Kikkoman: Company, Clan and Community*, published by Harvard University Press? William Shurtleff asked Dr. Fruin in late 1998 if he had ever heard of Shige Maki and he replied "No." Why has Soyfoods Center never heard this story before? Why does Mr. Yates provide no documentation to support this story–or the story that Kikkoman traces its origins back to 1630–for which we have never seen any credible evidence. We find this all very suspicious.

According to Mr. Yates, Kikkoman now traces its origins back to a woman named Shige Maki, who in 1615 was living in the Shadow of Osaka Castle, where her husband, Yorinori, was a samurai warrior (retainer) serving the warlord Hideyori Toyotomi. Hideyori (1593-1615), whose archrival was Ieyasu Tokugawa, was the son of Hideyoshi Toyotomi, one of Japan's greatest warlords and a man credited with uniting Japan in 1590 by subjugating the five western provinces of Japan's main island, Honshu. In 1586 Hideyoshi built the magnificent Osaka Castle–the largest and most impressive castle in Japan. For the next 5 years, Hideyoshi continued to consolidate his power via a series of battles and castle sieges. In 1591 he issued an edict establishing four distinct classes of people. At the top were samurai, followed by farmers, artisans, and merchants. That rigid social order lasted until 1868, when Japan's emperor Meiji ended feudalism and ushered in the nation's modern era. In 1597 Hideyoshi invaded Korea; he died there in 1598 during the campaign. His Japanese forces withdrew and in 1600 Ieyasu Tokugawa, a senior general in Hideyoshi's army, seized power following the battle of Sekigahara when he defeated an army of Hideyoshi's former vassals and retainers. This move was viewed as betrayal by many of Hideyoshi's men. In 1603 Ieyasu was awarded the titled of shogun by the emperor; he was the first of Japan's powerful line of Tokugawa shoguns that would rule Japan virtually unchallenged until the mid-1800s when Commodore Matthew Perry of the United States and his squadron of black ships forced Japan to open its doors to global politics and commerce.

The Toyotomi family, now led by 19-year old Hideyori, vowed revenge on Ieyasu Tokugawa. Shige Maki and her husband, Yorinori, supported Hideyori. But in June 1615 Hideyori was defeated at Osaka Castle. Yorinori committed suicide; Shige Maki and her young son, Heizaburo, escaped from the castle and fled. For 15 years the two were on the run. "Eventually, Shige Maki and Heizaburo settled in the small farming community of Noda, about 30 miles north of Edo (now Tokyo). In the interim they had changed their name from Maki to Mogi, with Heizaburo altering his first name to Shichizaemon. No descriptions of Shige Maki exist, but she must have been one tough and resourceful lady. Not only did she survive the bloody battle of Osaka Castle and outwit the shogun's henchmen, but she spent years working in the rice fields of Noda" (p. 13-17).

On pages x-xi the author tells the end of this story somewhat differently: Because Shige Maki and "all others who had supported Toyotomi were on Tokugawa Ieyasu's death list, she changed her name to Mogi and blended in with the rice farmers in the area [of Noda]. For 15 years, she and her son cultivated rice and in the process learned the craft of brewing *shoyu*–the Japanese word for soy sauce. Using her new name of Mogi, the resourceful woman... made some refinements in the production process and more than 300 years ago began making the product that the world today knows as Kikkoman."

Continuing on p. 19: "Among the earliest recorded shoyu producers in Noda were Hyozaemon Takanashi and Shichizaemon Mogi [Shige Maki's son]. Local records show that Takanashi was producing fermented shoyu in 1661, while the Mogis were making miso [by 1662].

"A year later, on August 22, 1662, some 47 years after she had escaped from the ruins of Osaka Castle, Shige Maki died. There is no doubt that if Shige Maki had not been as intrepid and resourceful as she was, there would be no Kikkoman Corporation today."

On page 62 Yates tells this story with still another twist: "When Shige Mogi (nee Maki) and her son Schiroemon [sic, Heizaburo] began making miso and shoyu in Noda in the 1600s, it was still very much a farmhouse industry."

Note 1. Soyfoods Center believes, based on three detailed histories of Kikkoman published in Japanese, plus the excellent research of Mark Fruin and others, that Kikkoman cannot trace its connections with soy sauce back farther than 1661, when Hyozaemon Takanashi started to make shoyu in Noda. We want to emphasize that there was no connection between the Takanashi and Mogi families until 1768 (more than 110 years after Hyozaemon Takanashi started to make shoyu in 1661). Mr. Yates presents no evidence that Shige Maki or her son ever made soy sauce (shoyu).

Mr. Yates continues (p. 19-20): In 1768 the eldest son of the Hyozaemon Takanashi clan married the "daughter of the fifth generation of the Shiroemon [sic, Shichizaemon] Mogi line. This was to be only the first of a series of alliances between the Mogi and Takanashi families."

Note 2. According to Fruin (1983, p. 16) Shichizaemon Mogi started to make miso in Noda in 1662. This was

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the Mogi family's earliest connection with foods or condiments made from soybeans. Address: Head, Journalism Department, Univ. of Illinois (Urbana).

8057. Yates, Ronald E. 1998. History of Oriental Show-You Co. in Columbia City, Indiana (Document part). In: Ronald E. Yates. 1998. The Kikkoman Chronicles. New York, San Francisco & Washington, DC: McGraw-Hill. xviii + 206 p. See p. 131-32.

• ***Summary:*** Oriental Show-You Co. was founded by Shinzo Ohki. He was born in 1884 in Kamakura, Japan, the son of a shoemaker and one of eight children. As a boy, Ohki served an apprenticeship in his uncle's saké (rice wine) warehouse. In 1901, barely 17 years of age, he used the money he had saved to emigrate to the United States. He made his way to the Midwest, where he settled in Columbia City, Indiana. There he graduated from high school, later graduating from New York University.

From New York, he moved to Detroit, Michigan, where he established a business importing tea and bulk shoyu [Japanese-style soy sauce] from Japan. He bottled the soy sauce and sold it with his tea. Before long he discovered a large demand for soy sauce from the Asian community in that area.

Returning to Columbia City, Indiana, Ohki recruited a partner, established the Oriental Show-You Company, Inc., and went into business bottling his imported soy sauce in an old canning plant. As demand for his soy sauce continued to grow, Ohki realized he would be more successful if he learned how to make the product himself.

So in 1917 he returned to Japan, learned how to make shoyu, obtained a formula for the naturally fermented product, and (with a wife) returned to Columbia City, where he began to make shoyu.

He received some help from the U.S. Department of Agriculture in obtaining and culturing the necessary microorganisms needed to produce the koji required for traditional, natural shoyu. Soon his shoyu was sold in most Asian grocery stores in the area.

In the 1920s Shinzaburo Mogi (a descendant of Kikkoman's Mogi line), who was now working for the Yamato Trading Co. in Chicago, discovered Oriental Show-You in one such store. Intrigued by the idea of making traditional Japanese shoyu in America, "Mogi traveled to Columbia City to see the operation for himself." He found that Oriental Show-You Co. used a natural aging process that took about 24 months from start to finish. Impressed with Mr. Ohki and his shoyu operation, Mogi invested in the company and became a major stockholder, continuing as such until the start of "World War II when his property (as was the case with all Japanese immigrants) was seized by the U.S. government under the 'Alien Property Custodian Act' [sic].

"Mogi returned to Japan shortly before the beginning of World War II." He showed his daughter, Katsuko, the stock certificates she still owned from the Oriental Show-You Co. "They're worthless now," he said, and tore them up. Shinzaburo Mogi died in 1946 in Japan.

Oriental Show-You Co. continued to make shoyu until 1961, when it was acquired by Beatrice Foods, Inc. and became part of La Choy Food Products. The plant was eventually moved out of Columbia City and the fermentation process was discontinued in favor of the faster and less labor intensive HVP soy sauce process. Today the only evidence of the Oriental Show-You Co. in Columbia City is a few crumbling remnants of the factory's foundation.

At its peak, the Oriental Show-You Co. was making about 30,000 gallons per year of soy sauce. It was "perhaps the first successful Japanese shoyu operation on America's mainland" [sic].

Note: Early Japanese shoyu manufacturing companies were started on the West Coast of the USA in San Jose, California (1897 and 1907), Melrose, California (1908), Fruitvale, California (1908), Los Angeles, California (1908), Portland, Oregon (1909), Oakland, California (1909, two companies), and Stockton, California (1910). Source: Japanese-American Yearbooks.

Shinzaburo Mogi never worked for Noda Shoyu Co., Kikkoman's predecessor, and his efforts on behalf of shoyu in the United States were never sanctioned by Noda Shoyu Co.; his innovative activities abroad were completely independent. Address: Head, Journalism Department, Univ. of Illinois (Urbana).

8058. Cook, Anne. 1998. Kikkoman knows taste of success: Faculty member at UI writes book on soy sauce firm. *News-Gazette (Champaign, Illinois)*. July 4. p. A3. [1 ref.]

• ***Summary:*** Ron Yates, who is now head of the journalism department at the University of Illinois (Urbana) has recently written a book titled *Kikkoman Chronicles*, a history of the world's largest maker of soy sauce, published by McGraw Hill. For ten years, during the 1970s and 1980s, Ron Yates was the business correspondent for the *Chicago Tribune* in Japan. He speaks Japanese. Kikkoman's history started in 1630. This article states (incorrectly) that (1) shoyu had been brewed in Japan since the 6th century, (2) the founder of Kikkoman's plant in Walworth, Wisconsin, Yuzaburo Mogi, came to the United States in the early 1970s as a Columbia University student, he came to the U.S. even though he didn't speak English. The handwriting was on the wall in the 1960s in Japan. The market was saturated. Mogi said he needed to learn about America. A photo shows Ron Yates. Address: Staff writer.

8059. Cooley, Jim; Coral, Mary; Wickberg, Ellen. 1998. How smoked tofu came to America (Interview). *SoyaScan Notes*. July 14. Conducted by William Shurtleff of Soyfoods Center.

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• ***Summary:*** Jim Cooley, founder and owner of Central Soyfoods, made the first commercial smoked tofu in the USA. The idea for this product came from Mary Carol, with whom he still lives. Mary (who was born in 1937) grew up in Venice, California. The grocery store near her home sold tofu, since there was a large Asian-American population working at the truck gardens in Venice. Mary's family was poor, and her mother would buy tofu regularly because it was inexpensive and nutritious. Mary is sure she had eaten tofu by the mid-1940s. After living for several years in New York City, Mary moved with her academic husband to Lawrence, Kansas. As a faculty wife with lots of spare time, Mary learned how to make tofu from Ellen Wickberg, whose husband, Ed (Edgar), was in the Department of History at the East Asian Center at Kansas University in Lawrence. Ellen had traveled with her husband to Taiwan for a year and learned how to make tofu (for her own use at home) by standing outside a tofu factory at the end of a lane and watching. Ellen and Ed had gone to college at the University of California in Berkeley during the 1950s–before they moved to Lawrence. Ellen used to buy tofu at the local co-op in Berkeley. Tofu was not available in 1962 in Lawrence, Kansas (where they lived from 1962-69), so Ellen decided to make her own. She went to the local pharmacist to buy some food-grade gypsum. He didn't want to sell it to her because he said it would set up in her stomach. Eventually Ellen made both tofu and doufu-gan (pressed) tofu in Lawrence, she recalls smoking the doufu-gan.

Mary loved to cook and she collected cookbooks. From one of her Chinese cookbooks (which she can't find), Mary Coral learned how to smoke tofu on a kitchen scale, as follows: Put a whole block of tofu between boards, outside, and press it gradually all day long, until it was about ½ inch thick and very firm. Paint it with soy sauce or a seasoned soy-sauce marinade. Arrange bricks in the back yard to make a stand for a wok. Put pine needles (not a lot; she used blue spruce needles from a tree in her back yard) in the bottom of a dry the wok. Over them place a metal grill or rack and on that arrange slices of the firm, marinated tofu. Light the needles with a match, then snuff the fire for a while by putting the lid on the wok. Steam for 45-60 minutes. "Ellen and I used to do these elaborate meals. We don't eat like that any more. We'd start eating early in the evening and go on for 10 or 12 courses. There wasn't a lot to do in this town!"

Jim learned how to make tofu and smoked tofu from Mary Coral, who was making her own tofu at home in Lawrence, Kansas, by about 1964-65, when Jim first met her. His first commercial smoked tofu was mas made as follows. One of his employees had a family-size backyard smoker on wheels named Mr. Meat Smoker. It was similar to a backyard barbecue grill, but taller and slim. Jim sliced cakes of tofu horizontally into halves, then put them on the grill in the smoker, with the lid on, and smoked them for 45-60 minutes. The smoke came from red-hot charcoal topped with hickory chips, which had been soaked overnight in water to make them smoke better and longer before they finally burned. He smoked 25 lb of tofu in each batch. But slicing the tofu took a lot of time and space, so he tried smoking whole, uncut cakes of tofu with liquid smoke in order to double to amount of tofu that could be smoked in one batch. The resulting flavor and texture were basically unchanged, and the tofu still had grill marks on it. As sales increased, Jim bought a larger smoker–a Sunbeam backyard grill (on wheels with a propane tank), which he adapted to smoking. After someone stole that, he tried having his tofu smoked in a commercial smokehouse that smoked ribs. They smoked the tofu for several years. The cost and flavor were about the same, but the process was inconvenient, because Jim had to deliver the tofu then pick up the finished product. Occasionally, they would not clean their smoker well, and some meat drippings would end up on the tofu–which made it unusable. After the smokehouse went out of business, Jim purchased an army field oven that had been converted to a smoker by the grandfather of one of his employees. He adapted it, by getting the right sized grills and putting in a pan of water so it did not get too hot. Now he can do 48 lb of tofu per batch. The cakes of tofu go in weighing a little more than 1 lb and they come out at about 14 ounces. Both smoking and liquid smoke are still used. People like the product very much. In 1986, shortly after he got his vacuum packing machines, Jim introduced smoked tofu in a larger salad bar pack containing 4 x 14 oz pieces weighing 3½ lb total. Address: 1-2. Central Soyfoods, 11 West 14th St., Lawrence, Kansas 66044; 3. Vancouver, BC, Canada. Phone: 785-843-0653 and 604-733-3602.

8060. *CaliforniaCare News* (*Blue Cross of California*). 1998. I'm soy excited. It's not just tofu anymore. Summer.

• ***Summary:*** "Soy foods come from the soybean." They are turning up everywhere in many forms: Vegetable oil, soy flour, "tofu (soybean curd), soynut butter–a peanut butter alternative that's lower in fat, soy milk, yogurt, cheese, and frozen desserts (good dairy substitutes for the lactose intolerant), meat substitutes, such as soy burgers and soy hot dogs (especially good for those trying to cut down on red meat).

"A healthy choice. Many soy foods are high in protein. Two exceptions are soybean oil, which is high in fat, and soy sauce, which is high in sodium.

"Soybeans also contain a chemical that is similar to the female hormone estrogen. Researchers say this chemical may help prevent and treat some cancers, heart disease, and osteoporosis. It can also relieve the hot flashes associated with menopause."

To learn more, call the United Soybean Board at 1-800-Talk-Soy (825-5769).

A color illustration (cartoon) shows a group of singing soy products: green vegetable soybeans in the pod, soy

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cheese, soy flour, and a soy hot dog in a bun. Address: 21555 Oxnard St., Woodland Hills, California 91367.

8061. Leading Edge Group. 1998. The U.S. health and natural food market: Past performance, current trends, and strategies for the future. 2171 Jericho Turnpike, Suite 200, Commack, NY 11725. 330 p. July. Price $1,995.00. Illust. 29 cm. *

• ***Summary:*** Three past editions of this report have been published by Business Trends Analysts, Inc. (BTA), which is located at the same address as The Leading Edge Group. BTA is the parent company. Since it was founded 20 years ago, it had published reports under two brand names, each of which has a different style. Business Trends Analysts Reports tend to contain mostly secondary research, with an abundance of charts and graphs, and less text and analysis. Leading Edge Reports are conducted by a person with a specialty in that area. The report contains much more primary research and in-depth analysis, and is roughly twice as expensive. This report was conducted by Melina Laverty.

Chapter 5 of this report is titled "Soyfoods and alternative meat products: Market dynamics."

Overall report–Contents: 1. Executive summary. 2. Overall market dynamics (including Soyfoods). 3. The market for soy foods. 4. The market for herbal teas. 5. The market for dairy foods. 6. The market for grains and cereals. 7. The market for frozen foods. 8. The market for snack foods. 9. The market for groceries. 10. The health food consumer. 11. The health/natural food store industry. 12. Competitor profiles. 13. Industry directory. Address: Commack, New York. Phone: 516-462-2410.

8062. Robertson, Robin. 1998. The soy gourmet: Improve your health the natural way with 75 delicious recipes. New York, NY: Penguin/Putnam/Dutton. xv + 191 p. July. Introduction by James W. Anderson, M.D. Index. 21 cm. A Plume book.

• ***Summary:*** Contents: Foreword. Introduction: Health benefits of soy protein, by James W. Anderson, M.D. 1. The soy solution. 2. Soy what? (soybeans, tofu, tempeh, textured soy protein or TVP, soy milk, miso, soy sauce, soy flour, dry-roasted soybeans or soy nuts, soy convenience foods, egg replacers). 3. Making soy protein work for you. 4. Breakfasts. 5. Let's do lunch. 6. What's for dinner? 7. Desserts. 8. Shakes and more. 9. Sample menus. Glossary (In addition to the soy foods described at Chapter 2: Gomasio, soy cheese, soy protein powder, and tamari soy sauce).

The author, who is a woman, worked as a professional chef during the 1980s, when she used large quantities of meat, eggs, and dairy products to prepare dishes in classic cuisines, such as French and Italian. In 1987 she made a dramatic change in her life, when she decided to stop working in professional kitchens, and start to pursue a healthier lifestyle, becoming a vegetarian, eliminating all meat and dairy products from her diet. Having lost both parents to heart disease and stroke, she had a personal interest in helping people learn how to cook and eat properly. Using soy products such as tofu, tempeh, and soy milk, she was able to recreate her favorite old recipes–sautéed dishes with cream sauces, rich pasta dishes, and even delicious cheesecakes–all without cholesterol. But these soy foods actually offered a double benefit, for recent scientific studies show that they actually reduce cholesterol levels.

8063. Kikkoman International Inc. 1998. Holy guacamole! (Ad). *Nation's Restaurant News*. Aug. 10. p. 76.

• ***Summary:*** A large color photo shows a tortilla wrapped around a mixture of meat and vegetables on a plate. On the tortilla is branded: "Kikkoman naturally brewed soy sauce." The text reads: "Kikkoman keeps turning up in the most unexpected places. At one major Mexican chain, they've discovered that nothing brings out the flavor of their fajitas like a marinade of Kikkoman and pineapple juice. That's because unlike some soy sauces, Kikkoman is naturally brewed and aged for full flavor. Your flavor." Address: San Francisco, California. Phone: 415-956-7750.

8064. Little Tokyo Service Center. 1998. The Third Annual L.A. Tofu Festival. August 15-16. Los Angeles, California. 26 p. Illust. 26 cm. Saddle stitched (stapled).

• ***Summary:*** Contents: 1999 LA [Los Angeles] Tofu Festival committee. About Little Tokyo Service Center. Festival sponsors, by rank. Celebrity Co-chairs: Huell Howser and Lilly Melgar. Festival health providers. Schedule of events (orange insert). Map of events (pink insert). *Coma Tofu: El que y porque!* (Eat tofu: The what and why!) in Spanish, with 2 recipes by Yvonne Gonzalez. Tofu: A 2,000 year old health food miracle, compiled by William Shurtleff of Soyfoods Center. Tofu Q&A. 1997 LA Tofu Festival participant profiles (39 restaurants, p. 7-9). Advertisements (p. 13-26), including ads for Vitasoy (incl. Nasoya & Azumaya), Whole Foods Market (incl. White Wave–Vegetarian Cuisine), Yuasa, Inc., Patricia Greenberg and her *Whole Soy Cookbook*, the Indiana Soybean Council and Prang Fun Pro Soybean Crayons, House Foods America Corporation and its Hinoichi tofu (full page, inside rear cover). Address: Little Tokyo Service Center (Resource Development Center), 231 East 3rd St., Los Angeles, California 90013. Phone: 213-473-1600.

8065. Ndungi Khoto, Aubry. 1998. Contribution a l'avant-projet d'une usine de production de *lait de soja* en poudre a Lubumbashi [Contribution to the rough draft for a factory for the production of soymilk at Lubumbashi, Congo]. Civil Engineer thesis. University of Lubumbashi, Polytechnic Faculty, Dep. of Industrial Chemistry. v + 154 + 16 p. Illust. 30 cm. [73 ref. Fre]

• ***Summary:*** Preface and dedication. Introduction. Part

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I: Review of the literature. 1. General information about soya and proteins. 1.1. The soybean (Botanical, origin and history, soybean production and commerce worldwide, soya in the Democratic Republic Republic of the Congo {Congo, formerly Zaire}, structure and composition of soybean seeds, utilization of soybeans {with diagram}, food uses of soybeans {oil and meal, soy flour (4 types), soy concentrates and isolates, textured soy proteins {TVP, thermoplastic extrusion, spun fibers}, soymilk, tofu, other uses (shoyu, miso, tempeh, yuba)}, industrial uses of soybeans {linoleum, plastics, paints, varnishes, etc.}). 1.2. Proteins (in the human body, in foods), the structure of proteins (amino acids, ionization and acid-base properties of amino acids), protein bonds, denaturation. 1.3. Soya proteins (glycinin or globulin 11S, globulin 7S, hemagglutinins or lectins, protein inhibitors and other antinutritional factors, amino acid composition of soy protein). 1.4 Factors affecting the food value of soya. Acceptability problem (food value of raw soybeans), intolerance to soy proteins, off-flavors in soya and their source, inactivation of lipoxygenase, other treatments affecting the food value of soya. Alkalis.

2. Preparation and properties of soymilk. 2.1. Properties. 2.2. Advantages and disadvantages of soymilk compared with cow's milk. 2.3. Preparation. 2.4. Commercial / industrial production using the Alfa-Laval process.

3. Reminder of certain operations required for the preparation of soymilk powder. 3.1. Homogenization. 3.2. pasteurization and sterilization. 3.3. Concentration by evaporation. 3.4. Drying by atomization. 3.5. economies of energy in dewatering operations.

4. Some ideas on the methods of sensory evaluation. 4.1. The different methods. 4.2. Results and interpretations.

5. Important ideas in the study of the market, in determining the capacity of production, and in the economic evaluation of a project: 5.1. Study of the market. 5.2. Determining the capacity of production. 5.3. Economic evaluation of a project, incl. estimating fixed capital by adding capital costs.

Part II: Experimental, industrial calculations, economic calculations. Introduction. 6. Origin and characterization of the raw materials, trials for inactivation of lipoxygenase. 7. Determination of the optimal conditions for the preparation of soymilk. 8. Results of pilot plant trials. 9. Market study and determination of the capacity of production. 10. Description and calculations for the installation. 11. Economic evaluation of the project. General conclusion.

Tables show: (1) Number of people that can be supported for 1 year by the production from one acre devoted to certain crops and animals. Fewest: Beef 190. Pork 319. Poultry 457. Most: Potatoes 5,329. Split peas 6,901. Soybeans 9,075. Algae 43,200–154,000. Yeast 3,275,000. (1.1) Leading soya producing countries in 1985 (worldwide, with area, production, and yield, USA, Brazil, China, Argentina, India). (1.2) Leading soya producing continents in 1985 (North and Central America, South America, Asia, USSR, Europe, Africa, Oceania). (1.3) Leading soya trading countries in 1985. Importers: Japan, Netherlands, R.F.A. (Republique Federal Allemagne = Germany), Spain, Italy. Exporters: USA, Brazil, Argentina, China, Paraguay. (1.4) Production of soya in the Congo, by province 1970-1978 (the leading producer by far in 1978 was Western Kasai). (1.5) Production of soya in Katanga [formerly Shaba, before that Elisabethville] (1990-1994; by far the leading producer is Tanganyka). 1.6 Total production of soya in the Congo (1,000 metric tons) from 1970-1995 (increased from 1.7 in 1970-74 to 18 in 1995). (1.7) Average composition of different parts of the soybean seed. (1.8) Physico-chemical composition of soybean seed (ranges and average). (1.9) Mineral content of soybeans. (1.10) Vitamin content of mature soybean seeds and soybean meal. (1.11) Fatty acid composition of soybean oil. (1.11A) Enzymes in the soybean: Lipoxidase, urease, lipases, beta-amylase. (1.12) Properties and characteristics of the water-soluble fractions of soybean seeds. (1.12A) Variations in the solubility of proteins from defatted soy flour at various pH levels. (1.12B) Amino acid composition of soybean protein. Address: Lubumbashi, Katanga Province, Congo.

8066. Perry, Charles. 1998. Forklore: Got rotted milk? *Los Angeles Times*. Sept. 2. p. H2. Food section.

• ***Summary:*** The Arabs used to take eroted barley and made it into a relative of soy sauce called *murri*. After the mold had grown on the barley, instead of mixing it with water and salt to make a soy sauce, they mixed it with milk. There were poems in praise of this particular condiment–called *kamakh ahmar*. Once the milk had changed color, you could add other things such as onions, herbs, spices, etc. Charles tried making it and it worked well. The enzymes in the molds turned the milk into instant blue cheese (having veins of greenish blue mold). It had a delicious, high flavor. Address: Staff Writer, Food Section, Los Angeles Times, California. Phone: 213-237-7806.

8067. Yates, Ronald. 1998. Behind the scenes: Writing *The Kikkoman Chronicles* (Interview). *SoyaScan Notes*. Sept. 8. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Concerning the story that Kikkoman traces its origins to a woman named Shige Maki, who came to Noda in 1615. Ronald was told this story by Yuzaburo Mogi. He made no attempt to verify or document it; he assumed it was part of the company lore. As far as he knows, it has never appeared before in print–at least in English.

Concerning the activities of Shinzaburo Mogi in the United States (he is said to have started a company that made shoyu briefly in Denver, Colorado in about 1907), Ronald did no original research on this subject. He got most of his information from Ken Mogi.

This book was authorized by Kikkoman, and the

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company set up a committee to read all the text, check the facts and correct any errors. Ronald made the decision to do it this way, avoiding the controversial or dark parts of Kikkoman's history in exchange for the extensive help and cooperation he received. For example, he was asked not to discuss a major conflict between Kikkoman and JFC (Japan Foods Corp. in San Francisco, California) that took place at the time Kikkoman acquired JFC, and the lawsuit that followed. He also avoided discussion of a suicide in the 1980s by a member of the board of directors. He was asked not to mention the fact that the emperor of Japan intervened to help end the Great Noda Strike of 1927-28.

What did Ronald find most interesting in this study of Kikkoman? (1) The way the company manages itself. The continuity and familial environment among management and all employees which creates a fierce loyalty to the company. Yes, employees know that there is a glass ceiling that limits their rise to the very top levels of management, but they deeply appreciate the way Kikkoman respects and listens to each and every employee. Even in Walworth, Wisconsin, there is a very remarkable bond between Kikkoman and the people of this small agrarian community, and between the local workers and the company. (2) The innovative way that Kikkoman created a market in America for a traditional Japanese product–shoyu. (3) Kikkoman's history is filled with extremely interesting characters. Saheiji Mogi created the Kikkoman brand, and promoted it worldwide. Keizaburo Mogi, father of Yuzaburo, took Kikkoman out of the doldrums following World War II by innovative processes of internationalization and product diversification. Yuzaburo Mogi, the current CEO, has been perhaps the most innovative. "He really stuck his neck out to convince the company to start a shoyu factory in America. His father supported him, but some board members were secretly hoping that he would fail." Ronald was very fortunate in being able to spend about 3 weeks with Yuzaburo, starting in Walworth and continuing in the Netherlands and Japan. They spoke mostly in English (Yuzaburo speaks excellent English) and Ronald tape recorded every session. Address: Head, Dep. of Journalism, Univ. of Illinois, Urbana. Phone 217-333-0709.

8068. *SoyaScan Notes.* 1998. Who coined the terms "Chinese Vetches" and "Chinese caravances" (or garavances) (Overview). Sept. 13. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Samuel Bowen probably coined the term "Chinese Vetches," which first appears in May 1767 in an article by Henry Yonge of Georgia. Yonge received these Vetches from Samuel Bowen. The term appears next in connection with soybeans in the minutes of the American Philosophical Society for the Promotion of Useful Knowledge (Philadelphia), which show that on 16 January 1769 Samuel Bowen presented to the Society a "Sample of Chinese Vetches, six bottles of Soy and six pounds of powdered sago..."

James Flint probably coined the term "Chinese caravances" (or "garavances") in connection with soybeans. Benjamin Franklin probably first heard the term from Flint. During the 1700s, the word "caravances" or "garavances" was widely used to refer to all kinds of beans. Then in a letter date 11 January 1770 Benjamin Franklin (who was in London, England) wrote a letter to John Bartram in Philadelphia, describing Chinese caravances (soybeans) which he enclosed. Franklin mentioned that he had learned about these caravances from James Flint.

8069. Ginsberg, Beth; Milken, Mike. 1998. The taste for living cookbook. Mike Milken's favorite recipes for fighting cancer. Santa Monica, California: CaP CURE. Distributed by Time-Life Books. 118 p. Illust. Index. 26 x 27 cm. [2 ref]

• ***Summary:*** This is a gorgeous, low-fat vegetarian cookbook in which about half the recipes use soy as a major ingredient. It is loaded with color photos (many full page), playful graphics, and good advice. Note: 100% of the proceeds from this book are used to fund prostate cancer research. The book is available at bookstores nationwide, or it can be ordered by dialing toll-free 1-877-884-5433 (LIFE). Contents: Introduction, by Michael Milken. Preface, by Beth Ginsberg. Four nutritional principles of CaP CURE to fight prostate cancer and other hormonal cancers: (1) Limit dietary fat to 15% of total energy intake (calories). (2) Eat 5 or more fruit and vegetable servings per day. (3) Consume 25 to 35 grams of dietary fiber a day. (4) Consume 40 to 60 grams of soy protein a day. "Americans have a five times higher incidence of prostate cancer than people living in Asia and eating a traditional diet. Soups. Exercise. Entrees. Soy and soybeans. Sandwiches and sides. Cruciferous vegetables. Breakfasts and shakes. Desserts. Healthy pantry. Afterword, by Donald S. Coffey, PhD, President of the American Assoc. for Cancer Research and Professor of Urology, Oncology, Pharmacology and Molecular Sciences, Johns Hopkins Hospital, Baltimore, Maryland: We are what we eat, how does food cause or protect us from cancer (ROS = reactive oxygen species), how did we lose our way?, how did our diet change ("The great apes were primarily vegetarian, consuming great quantities of vegetables that are high in fiber"), what should we do? About CaP CURE.

Soy-related recipes include: French onion soup (with soy cheese and soy sauce, p. 20). Broccoli potato soup (with grated nonfat cheddar-style soy cheese, p. 22). Shiitake miso soup (with silken tofu and low-sodium tamari sauce, p. 22). Taco salad with a chili lime dressing (with 1½ lb fat-free soy meat, p. 26). Chinese roasted tofu salad (p. 33).

Note: This is the earliest English-language document seen (May 2012) that contains the term "roasted tofu," it refers to grilled tofu.

Orange ginger dressing (with white miso and tamari,

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p. 33). Chef's salad with miso shallot dressing (and Soy Deli Slices, p. 34-35). Thousand island dressing (with tofu, p. 34-35). Chopped vegetable salad (with 1 cup edamame, p. 36). Teriyaki tofu bowl with Chinese vegetables (p. 40). Tofu dog casserole with a pretzel crust (p. 42). Soy and Soybeans (with a sidebar on "understanding tofu," p. 44-45). Lasagne with "soysage" (with fat-free vegetarian sausage, silken tofu, and soy cheese, p. 46). Spinach cannelloni with fresh tomato sauce (plus soy milk and low-fat tofu, p. 48-49). Vegetable fritatta with roasted tomato salsa (and 2 lb tofu, p. 54-55). Enchilada pie with ranchero sauce (and 1 lb soy cheese). Greek spinach pie in a phyllo nest (with tofu, p. 61, remake of spanakopita). Homemade vegetable pizza with soy cheese (p. 62-63). Vegetable reuben (with tempeh bacon strips, p. 68). Tofu egg salad sandwich (p. 72). New Deli (fat-free hot dog, p. 75). VLT with herb mustard (and fat-free tofu bologna slices, p. 76). Broccoli in soy cheese sauce (p. 78-79). Fruit shake (with soy protein isolate, p. 84). Blueberry banana multi-grain pancakes (with soy milk, p. 87). Strawberry shortcake (with soy milk, p. 96). Carrot cake (with silken tofu, p. 100-01). Devil's "food" cake with cocoa frosting (plus silken tofu, p. 104). Tofu cheesecake with fresh berry topping (p. 106-07). Banana cream pie (with 3 cups vanilla soy milk, p. 108). Old fashioned chocolate pudding (with 2 cups cocoa soy milk, p. 109). Maple flan (with 2 cups soy milk, p. 110). Address: CaP CURE, 1250 4th St., Suite 360, Santa Monica, California 90401. Phone: 310-458-2873.

8070. Goldbeck, Nikki; Goldbeck, David. 1998. The healthiest diet in the world: A cookbook and mentor. New York, NY: Dutton (Penguin/Putnam Inc.). xiii + 561 p. Sept. Illust. General index. Recipe index. 25 cm. [840+* ref]
• ***Summary:*** This is an excellent book, with a wonderful title that lives up to its promise. Both authors are real professionals, with 25 years in the field. Contains extensive information about the importance of a wholefoods, natural foods diet, with plenty of fresh fruits, vegetables, beans, and soyfoods as sources of the many recently-discovered phytochemicals, which offer promising health benefits. The authors are fans of soyfoods, which are featured in both the text and recipes throughout the book.

In Part I, "Goldbeck's Golden Guidelines," No. 5 is "Super Soy Foods" (p. 14-15) which encourages readers to "Make soy foods a regular part of your diet."

Part II is the recipe section, titled "In Nikki's kitchen: Healthiest diet recipes." The main soyfoods used in recipes are tofu (48 recipes!), tempeh (15), soy milk (14), miso (8), soybeans, whole dry (3), and soy flour (2). This book contains so many soy-related recipes that we cannot possibly list all of their names. So here are two samplers of such recipes to give a feeling of their diversity, extent, and inviting names. (1) Salad dressings and salads: Creamy miso-mustard coleslaw (p. 178). Tofu mayonnaise (p. 190). Creamy tofu Russian dressing (p. 191). Creamy tofu ranch dressing (p. 191). Lemon-tahini dressing (with soy sauce, p. 192). Creamy miso-mustard dressing (p. 193).

(2) Tempeh recipes: Tempeh strips (p. 31). Tempeh breakfast links (p. 32). Baked Italian tempeh (p. 38). Tempeh burgers (p. 39). Skewered tempeh with orange-nut crust (mini kebabs, p. 61). Maple-pecan tempeh (p. 98). Baked corn-tempeh hash (p. 98-99). Picadillo (Latin American sloppy Joes with tempeh, p. 99). Tempeh mushroom stew (p. 100). Asian grill (with marinated tempeh, p. 101). Tempeh kebabs (p. 102). Shish kebab in a bag (p. 103). Tempeh-bean chili (p. 114-15).

In Part III, "Mentor," one entire chapter is dedicated to soyfoods ("5. In praise of soybeans," p. 408-29). The contents of that chapter: Introduction. Soy's special assets. The phytochemical furor. Protein plus. Soy fiber. Vitamins and minerals. Soy concerns. Soy food selection (incl. Western-style dairy and meat alternatives, soy cheese, soy ice cream, "soy-based imitation meat"). Stick with traditional soy foods: Tofu, tempeh, soy milk, soy nuts, whole soybeans (incl. edamame or green soybeans), soy sprouts, soy flour, soy grits, soy sauce, miso, okara (soy fiber), natto. Soy for health: Introduction, cancer (breast, prostate, and other hormonally influenced cancers), heart disease, diabetes, osteoporosis, women and soy, infant feeding. Nikki's dialog boxes. Mixing and matching soy protein. Just because they call it "milk": Nondairy vs. dairy. The question of salt. How to acquire your anti-cancer soy intake. Twenty-five grams of soy protein a day?

Soybeans are also mentioned in Chapter 6, "The beauty of beans" (see p. 431, 434). The 43-page bibliography of current scientific information on the health benefits of foods is worth the price of the book.

In the chapter titled "Controversial carbohydrates" is a long section about the glycemic index of foods titled "G-Force: A new perspective on carbohydrates" (p. 280-89). It includes a 6-page table showing G-force [glycemic index] ratings for individual foods. "Foods with a high G-Force [55 and above, bad] raise blood sugar levels quickly; this is usually matched by a rapid rise in insulin. Foods with low G-Force cause blood sugar levels to rise gradually, in which case insulin is usually released more evenly." Foods that tend to have a high G-Force are: Desserts and sweets (doughnut 108, graham crackers 106), foods made from refined flours (baguette 136, bagel 103, white wheat bread 100), sweet and refined breakfast cereals (puffed rice 132, Cornflakes 119, Cheerios 106), sugars (maltose 150, glucose 137, sucrose 92). Foods groups that tend to have low G-force are: Fruits (apple 54, apple juice 58, orange juice 63, but watermelon 103), legumes (soybeans 25, chickpeas 47), dairy products (yogurt 20, milk 46), vegetables (non-starchy). Address: Woodstock, New York.

8071. Kikkoman Foods, Inc. 1998. Something's brewing in Folsom: Invitation to grand opening of new Kikkoman plant

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in Folsom, California (Card). Walworth, Wisconsin.
• ***Summary:*** The opening ceremony for Kikkoman's new soy sauce plant in Folsom, California, will take place on Tuesday, October 6, 1998, at 11:30 a.m. to 1:30 p.m. at 1000 Glenn Drive, Folsom, California. There will be a buffet luncheon and festivities immediately following the ceremony.

This invitation packet contains four pieces. (1) An invitation card and description of the event (5 by 7 inches, printed with brown ink on beige paper). "For over 350 years, Kikkoman has been producing the world's finest soy sauce from soybeans and wheat, using a time-honored natural aging process. Now, Kikkoman is bringing the process to California.

"Mr. Yuzaburo Mogi, President and CEO Of Kikkoman Corporation, requests the pleasure of your company at a festive ceremony and luncheon to celebrate the Grand Opening of the new Kikkoman Plant in Folsom, California, at the plant site." (2) A map show how to drive to the plant (off highway 50). (3) A response card (RSVP). (4) An addressed return envelope. Address: Walworth, Wisconsin.

8072. *Soya & Oilseed Bluebook*.1998--. Serial/periodical. Bar Harbor, Maine: Soyatech, Inc. Peter Golbitz, publisher and editor. Frequency: Annual.
• ***Summary:*** Preceded by Soya Bluebook Plus. A directory and information book for the soybean processing and production industries. The first issue (shipped Sept. 1998) is subtitled "The annual directory of the world oilseed industry." On the cover, below a map of the world is printed the date "1999" in large letters, followed by "A Soyatech Publication." Crops featured on the front cover and inside are "soya, corn, cottonseed, canola, rapeseed, sunflowerseed, palm kernel, palm, coconut, and peanut."

Contents (the four main sections are marked with a fold-out tab): Translations of oilseed terminology (English, German, French, Spanish, and Portuguese). Organizations and government agencies. Complete listings by country. Oilseeds and oilseed products: White pages (Index, individual crops), catalog pages, yellow pages (complete company listing by country). Equipment supplies and services. Oilseed statistics. Oilseed reference: Oilseed glossary, standards and specifications, oilseed technical charts and tables. Indexes: Comprehensive index, internet address index, brand name index, advertiser index.

Soy-related terms appearing in the translation section (p 9-15) are: (1) Oilseeds and products: dairy analogs, lecithin–edible, lecithin industrial, meat analogs, miso, organic soy products, soy distillate, soy fiber, soy flakes–defatted–edible, soy flakes–full fat, soy flour–defatted, soy flour–enzyme active, soy flour–full fat, soy flour–low fat, soy flour–roasted, soy flour–textured, soy grits, soy isoflavones, soy livestock feed, soy oil margarine, soy oil shortening, soy oil–crude, soy oil–edible, soy oil–hydrogenated, soy oil–industrial, soy oil–refined, soy oil-based fuel, soy protein concentrate, soy protein isolate, soy protein–hydrolyzed, soy protein–industrial, soy sauce, soy sterols & tocopherols, soy-based foods–other, soybean fatty acids, soybean hulls, soybean meal, soybean meal–full fat, soybean seed breeder, soybean seed (for planting), soybean soapstock, soybeans–food grade, soybeans genetically modified, soybeans–green vegetable, soybeans–identity preserved, soybeans–non-gmo, soybeans–organic, soybeans, whole dry, soymilk beverages, soymilk powder, soynuts, tempeh, tempeh starter cultures, textured vegetable protein, tofu & tofu products, tofu powder. (2) Equipment & services: Coagulants for tofu, soymilk & tofu processing equipment, sprouting equipment. Address: 318 Main St., P.O. Box 84, Bar Harbor, Maine 04609. Phone: 207-288-4969.

8073. Byrd, Deborah. 1998. Soy what? Once-bland products touted as tasty, hearty protein sources. *Contra Costa Times*. Oct. 21. p. G1, G9. [9 ref.]
• ***Summary:*** Includes a brief review of nine new books that contain soy recipes, a discussion of the health benefits of soyfoods, a talk with William Shurtleff of Soyfoods Center, a glossary and brief description of several soyfoods (edamame, dry soybeans, tofu, tempeh, miso), and 5 recipes. Luscious lemon pie (with silken tofu). Tempeh simmered in red wine with *herbes de provence*. Tofu teriyaki. Chocolate velvet pudding (with silken tofu). Mushroom almond spread (with firm silken tofu). A huge color photo shows Chocolate velvet pudding in a stem glass with a sliced peach. Address: California.

8074. Fuller, Glen. 1998. A brief history of Sovex Natural Foods, Hearty Life, McKee Foods, and Fuller Life Inc. (Interview). *SoyaScan Notes*. Oct. 28. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Glen is interested in the history of Sovex, which is now named Fuller Foods, Inc. John Goodbrad did not buy any business from the Hurlingers in Michigan. Rather, he bought their formula for making Sovex spread and the brand name. The word "Sovex" is derived from the words "soy vegetable extract." The soy part of it was real soy sauce, and still is. Glen has heard of the Hurlingers in Holly, Michigan, but they didn't call their company Sovex. Glen does not know the name of the Hurlinger's company, but he thinks he could find it in the company archives. In about 1961 Ruth Goodbrad, John's wife, began making Sovex in their basement. In the early years, Sovex was basically Ruth's business.

In 1962 John Goodbrad called Glen about the granola business. John had an opportunity to buy a formula for granola, which he later did buy. At the time, Glen was a student at Southern Adventist College, where John worked for Collegedale Distributors, and Ruth, was still manufacturing Sovex in their basement. John bought the

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granola formula, under an exclusive arrangement, from a fellow named Layton Gentry–who sold the same formula with the same exclusive rights to at least 6 other individuals or companies who wanted to make granola! Every one of them thought they had an exclusive agreement! For example, the founders of the Bread Shop (in California) bought the formula from Mr. Gentry during the same calendar year. Right after John bought the granola formula, he formed a corporation and named it Sovex Foods Inc. after the spread. After John bought the granola formula, Ruth also manufactured the granola in their basement. Ruth continued making these two products in the basement of their home until about 1966, at which time they moved the food processing up into a building in Collegedale.

On 1 March 1974 McKee Foods acquired the business from Mr. Goodbrad, who didn't really want to sell it. He was a fine and honest man, very much dedicated to his company and involved in it, but he had to sell it for financial reasons. That is usually difficult for an entrepreneur. During his 1980 interview with Soyfoods Center, he may not have mentioned the fact that Sovex was owned by McKee since he was always sensitive to the fact that a health food company was owned by a snack food company.

Goodbrad was president of the company from that day in March 1974 until 30 June 1990. During that time he reported to Glen Fuller, who was vice-president of McKee Foods and responsible for McKee's subsidiaries. On 30 June 1990, when Mr. Goodbrad retired, Glen took over the company and moved his offices from the parent company to Sovex. He retained his position as vice-president of McKee, but also became president and CEO of Sovex. In the early 1990s, Glen changed the company name to Sovex Foods, Inc. from Sovex Natural Foods, Inc.

About 4 years ago, Sovex licensed a local business (named the Village Market) in Collegedale to manufacture the Sovex seasoning spread in their little deli kitchen. There are many other similar products worldwide, such as Marmite, Vegex, Solvex, etc.

Glen has the "Minute Book" for the corporation which goes back to the date it was established in 1962. He could resurrect most of the history from that book, with solid documentation as to dates.

John Goodbrad is deceased, but his wife, Ruth, is still living in Collegedale and very alert. She really started the manufacturing operations.

Glen has never gotten involved in the actual manufacturing of soymilk. He buys the powdered or fresh soymilk he uses from the manufacturer. Some products also use soy isolates or soybeans. Glen does the product formulation and marketing. Glen has a great deal of interest in how his products are manufactured and his company has very strict quality standards. The company is continually inspecting its suppliers, and trying to stay on the cutting edge of product development. Glen knows Elmer Schettler very well; Sovex marketed Elmer's Solait until 30 Sept. 1998, even after Sovex was merged with McKee Foods. There was apparently a falling out and lawsuit between Elmer and Willis Miller, but it was finally settled. Address: Founder, President & CEO, Fuller Life Inc., 1628 Robert C. Jackson Dr., Maryville, Tennessee 37801. Phone 423-681-4171.

8075. Goodbrad, Ruth. 1998. History of Sovex Natural Foods, Inc. (Interview). *SoyaScan Notes*. Oct. 30. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Ruth, who has just turned age 81, is the widow of John Goodbrad and a Seventh-day Adventist. She and John were married for 54½ years and she has only the fondest memories of him. "Oh, he was good looking and he was the best man on earth!" In 1953 Ruth and John moved to Collegedale from Boulder, Colorado. They built a large house and moved into it in 1954. John was called to Collegedale to be assistant business manager for Collegedale Distributors, and he was for 20 years. He was in charge of many different businesses.

Ruth has always heard that her Sovex spread was first developed by the Hurlingers in Holly, Michigan. She has never heard that it was first made by a man named Mr. Sampson in California. Sovex was Ruth's business, she had nothing to do after her son and only child, Johnny (who is now age 55), graduated from college, got married, and moved to Miami. She told John that she needed something to do at home. He never wanted her to work outside their home. So he told Ruth that he had heard about a lady in Michigan who wanted to sell her Sovex spread. Ruth's mother-in-law (John's mother) made a spread similar to Sovex before, it was a concoction of the same ingredients, brewer's yeast and real soy sauce, mixed in about the same way. Ruth learned the recipe from her mother-in-law and made it at home several times for her own use. Ruth and John drove up to Michigan together, spent the weekend, watched the product being mixed and bottled, then had the mixer shipped down to Collegedale. The product wasn't cooked.

John had almost nothing to do with Ruth's Sovex business during the years that she made the seasoning-spread in the basement of their family home in Collegedale. He was busy with his full-time job at Collegedale Distributors. Sovex was a family business, but Ruth did the work. She continued to use real soy sauce, which she bought by the drum. Soon she added granola to the products she was making in her basement. She bought the granola formula from a man named Layton Gentry in Nashville but she changed the formula to make it crunchy and renamed it "Crunchy Granola." Both honey and brown sugar were used as sweeteners. Mr. Gentry later, and in violation of his promise to the Goodbrads, sold his granola formula to about six other people or companies. Soon the granola took off, and Ruth could hardly keep up with the demand–though she loved the work. She had three granola ovens and the Sovex

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mixer in their large recreation-room basement. She hired Mario DeLeon (a Seventh-day Adventist from Panama) as Head Mixer to help her make the food. One especially good customer was Mr. Dimmock, a distributor from Maryland. He would back his van up to the door and load it up with about 500 pounds of granola, in drums. Some of it was sold to Miami Beach, Florida, to large gatherings of young people. By about 1969-71 the business had outgrown the basement–thanks to worldwide granola sales. Ruth's son, Johnny, came home to help with the family business. They bought some land nearby, designed a food production plant, had it built, and moved Ruth's business up and out of the basement. The food plant has since been expanded several times. At one point they had an offer from General Foods to buy their granola business, but they refused because General Foods wanted to move the business away from Nashville. This became the subject of a story in the *Wall Street Journal*. Ruth still has this and other articles about the company.

Ruth knows Glen Fuller well. His first marriage was to her sister's daughter, Carolyn Radford–before he married his second wife, Jeanne. McKee Foods was founded owned by O.D. and Ruth McKee, both Seventh-day Adventists who Ruth knew well and liked very much. They started the company in Chattanooga, then opened a branch in Collegedale after 1953. Their son was Ellsworth McKee; he ran the company after his father retired. After McKee Bakery bought Sovex in 1974, Glen oversaw operations at Sovex, and John reported to him. But in about 1990, after Glen had surgery (a colostomy), Ellsworth McKee had told Glen, when he was in the hospital, that he would not be able to return to his former position at McKee, so he would need to find another job. Glen told John that he would have to leave so that Glen could take over his place. John did not want to retire, but he was told by Glen that either he would retire and go home or Glen would make him do so. Glen wanted John's desk and his job. John was heartbroken. He came home and just sat on the couch, looking out the window with nothing to do. Several years later he had a heart attack. He passed away about a year later on 12 Dec. 1993. Address: Collegedale, Tennessee. Phone: 423-396-2826.

8076. **Product Name:** Kikkoman Soy Sauce.
Manufacturer's Name: Kikkoman Foods Inc. Subsidiary of Kikkoman Shoyu Co. Ltd.
Manufacturer's Address: 1000 Glenn Dr., Folsom, California 95630.
Date of Introduction: 1998, October.
Ingredients: Water, wheat, soybeans, salt, sodium benzoate: Less than 1/10 of 1% as a preservative.
Wt/Vol., Packaging, Price: 10 fluid oz (296 ml).
How Stored: Shelf stable.
New Product–Documentation: Kikkoman Corporation. 1999. Annual report 1998. 30 p. "Corporate history (p 27). "1998 October–The second manufacturing plant of Kikkoman Foods, Inc., in Folsom, California, begins shipments.

8077. Auerbach, Jon G. 1998. Exit the entree: What is turkey day without the bird? Some find it more pleasant dining on pheasant, boar, woodcock or Spaghettios. *Wall Street Journal*. Nov. 25. p. A1, A6.
• ***Summary:*** Although 91% of Americans are expected to eat a turkey this Thanksgiving, many now prefer alternatives to the traditional bird. One man serves ostrich fillets instead, with a dash of soy sauce. "Nationally, People for the Ethical Treatment of Animals [PETA] is promoting Tofurky, a meatless, soy-based (not basted) turkey alternative." According to USDA statistics, turkey production in the USA is expected to drop by 5% this year to about 5.2 billion pounds.

Why do Americans eat turkey at Thanksgiving? In part because a well-documented Pilgrim feast in 1621 included turkey. But animal scientists say turkey really caught on because they could breed big birds with lots of meat–leading to an affordable feast.

What do Americans dislike about turkey? It takes all day to cook, ties up the whole kitchen, and the dark meat (such as the legs) cooks more slowly than the white meat (the breast), so on a big bird, the breast may be dry by the time the legs are cooked. Address: Staff Reporter.

8078. *Soyafoods (ASA, Europe)*.1998. Unilever to buy Shanghai soy sauce brand. 9(3):2. Autumn.
• ***Summary:*** An article in the *Financial Times* (London, 21 July 1998) states that Unilever soon plans to buy Lao Cai, one of Shanghai's leading brands of soy sauce. This will increase Unilever's relatively limited food presence in China–which now comes mostly from sales of Wall's Ice Cream and Lipton's tea. The acquisition of Lao Cai will cost Unilever an estimated £10 million. Since 1986 the company has invested $640 million in 12 joint ventures, employing about 6,500 people.

8079. Stepaniak, Joanne. 1998. The vegan sourcebook. Los Angeles, California: Lowell House. xvi + 352 p. Index. 24 cm. Special nutrition section by Virginia Messina. [196* ref]
• ***Summary:*** Contents: Preface. 1. Vegan roots. 2. The vegan identity. 3. The way the West was weaned. 4. Which came first? 5. Invisible oppression. 6. Environment in crisis. 7. Shooting the myths. 8. Animals and entertainment. 9. Science: Fact, fiction, or fantasy. 10. The compassionate consumer. 11. The body beautiful. 12. Ethics in action. 13. Of principle and practice. 14. Ascent and evolution. 15. Embracing the choice. 16. Reorienting the compass. 17. Challenges, gifts, and offerings. 18. The Vegan table. 19. Secret ingredients. 20. Vegan nutrition. Appendixes: 1. Vegan nutrition charts. 2. Menu planning using the Vegan food pyramid. 3. Special ingredients and Vegan recipes.

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4. The Vegan lifeline: Resources and organizations. 5. Recommended reading. Bibliography.

Soy-related recipes or discussion: Soymilk (p. 188-89) Soy cheese, soy yogurt and sour cream (made from silken tofu), vegan cream, puddings, ice cream, and popsicles (p. 190-91). Use of tofu in place of eggs to bind or thicken (p. 192-93). Miso, tamari and shoyu (p. 256-57). Tofu, regular and silken (p. 258). Quinoa, seitan, tahini (p. 258). Sour cream and onion dip (with tofu, p. 275). Sesame-miso spread (p. 275). Tofu-vegetable spread (p. 277). Miso master dressing (p. 282). Curried tofu salad sandwiches (p. 290). Roasted vegetable pizza with tomato-tinged tofu (p. 300-01). Savory baked tofu (p. 302). Baked potatoes Florentine (with tofu, p. 305). Tofu ricotta (p. 308). Vegan mayonnaise (with tofu, p. 310). Tofu sour cream (p. 310). Creamy fudge frosting (with tofu, p. 315). Address: Swissvale, Pennsylvania.

8080. Karp, Jonathan. 1998. Adding U.S. soybeans to India's spicy diet faces big roadblocks: Protein-loaded legume could help the hungry, if only they'd eat it. Hiding 'that beany taste.' Currying favor? *Wall Street Journal*. Dec. 8. p. A1, A6.

• ***Summary:*** Virgil Miedema, the American Soybean Association's director for South Asia, is the son of a soybean farmer from North Dakota and speaks near-fluent Hindi. He believes that adding American soybeans to Indian diets can do wonders for their health. But there are two problems: (1) India, the world's fifth largest soybean producer, already grows so many soybeans that it exports the soy protein, although the country has a shortage of dietary protein; (2) Indians dislike the beany taste of soy–according to food scientist V.D. Devdhara, who shares Mr. Miedema's mission. The population of India is now growing by 16 million people a year–devouring the gains of the 1960s Green Revolution. Some 53% of Indian children under age 5 are malnourished. Per capita availability of lentil protein is half what it was in 1947, so the Indian government is producing lentil alternatives made of soy protein and wheat flour. The brown pellets, designed to look and taste like dal, contain 60% more protein.

The American Soybean Association (ASA) opened an office in India in 1996. It hired Mr. Miedema who had spent 17 years in South Asia with the Peace Corps and the U.S. Agency for International Development (USAID). His mission is to repeat ASA's success in China, where in just 15 years it helped turn that soybean producer into a major importer. In 1997, China bought $657 million of U.S. soy products. "Of course, the Chinese have been eating soybeans–as soy sauce and tofu, among other things–for millennia." Mr. Miedema's approach is to encourage Indian companies to add soy to everyday Indian foods–such as the wheat flour used to make chapatis.

One company, AFM Foods, Mr. Miedema's first partner, is making soy-fortified flour for chapaties that contains 35% more protein than wheat–"and can reduce the risk of cancer and the aches of menopause."

But attempts to use soy as food in India have failed before. A decade ago the ASA backed three local companies that failed in trying to popularize soymilk. RJR Nabisco Inc. quit making soy oil and Nestle SA (the Swiss food giant) recently withdrew its soymilk powder and soy-based baby food because of poor sales.

Sanjeev Chaudhry (formerly involved with Nabisco's soy oil factory) is head of the India office for Protein Technologies International. He uses Supro brand soy protein isolate to develop turbocharged soy products. He sells about 100 tons a year to 25 customers, mostly food manufacturers.

Large-scale cultivation of soybeans in India began in the 1970s to reduce dependence on imported edible oils. Soy oil still is not popular, and for Indians see soybeans as an evil threat. Ms. Vandana Shiva believes that free trade in agriculture, inevitably controlled by multinational corporations selling expensive genetically engineered seeds, will destroy India's farmers and local foods.

Yet Mr. Verghese Kurien, a famous Indian nationalist from the western town of Anand, has decided to join the soybean forces. As head of India's National Dairy Development Board, he was largely responsible for making India self sufficient in milk and the world's largest producer of cow's milk–while thwarting foreign dairy firms. He then branched out into edible oils to help his country cut costly imports. Though he retired last month, his main project is now developing the lentil alternatives.

The idea has been simmering for a decade, starting with U.S.-funded soybean research at an Indian university. The dairy board, whose sister organization, Amul, is one of India's largest food marketers, accepted the challenge of developing an inexpensive, uniquely Indian protein alternative. Mr. Kurien argues that if soy can be made into chicken and bacon, why not into dal? After years of fine tuning, the product launch is at hand. If it succeeds, the ASA could try for a second wave of products (made from U.S. soybeans) such as "soymilk and tofu, which looks and feels like Indian cottage cheese, called paneer." Indians say that tofu does not taste as good as paneer, but Mr. Miedema responds that its better for you. An illustration (dot-style) shows Mr. Miedema. Address: Staff Reporter.

8081. Hills, Benjamin. 1998. New developments at Lean Green Foods in Hawaii, and moving to Chico, California (Interview). *SoyaScan Notes*. Dec. 21. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Benjamin calls from Walnut Creek, California, and would like to visit. We have lunch together, and enjoy his Ginger Teriyaki Tempeh Burger. In June of this year, Benjamin moved his tempeh manufacturing operations to Oregon, where Seth Tibbott of Turtle Island is now making

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all of Benjamin's tempeh. He intended to keep Lean Green Foods in Hawaii as a tempeh importer and distributor. He is making more money now than when he was making the tempeh himself in Hawaii–but not enough money to live on.

After 6 years in Hawaii, he is planning to move to Chico, California. He will keep his involvement with soy, but not as a manufacturer. He may try to market tempeh burgers at concerts on the West Coast. His girlfriend, Jean Green, a Rolpher and dancer in Hilo, plans to sell her house there and move to Chico with Benjamin.

Tempeh burgers have lost market share to the meat alternative burgers from Gardenburger and Worthington largely because of fat content, but also a little because of flavor, price, and availability (in supermarkets). Though the price difference is small, the meat alternative products are sold at a much bigger margin, which allows the manufacturers to spend much more advertising their products.

His son Bo (Bodhi), age 22, won a full athletic scholarship to Gonzaga University in Spokane, Washington, where he now plays shortstop on the baseball team. He fully expects to get drafted into the major leagues this year after graduation. He has been an outstanding athlete since he was a child, including an excellent tennis player. Address: Lean Green Foods, P.O. Box 534, Volcano, Hawaii 96785. Phone 808-985-8563.

8082. Nikkan Keizai Tsûshin-sha (Nikkan Keizai News Agency). 1998. Miso no shuyô-meka [Japan's largest miso manufacturing companies]. Tokyo, Japan. 1 p. [1 ref. Jap]
• ***Summary:*** This table ranks Japan's top fifty miso manufacturers in descending order of volume produced. For each company it gives the company name, prefecture where the company is located, and tonnes (metric tons) of miso produced in 1993, 1994, 1995, 1996, and 1997.

The top ten companies (with their output in tonnes) for 1997 and 1998 are: (1) Marukome 77,000 / 81,500 (they do not export any). (2) Hanamaruki 38,800 39,200 (they export to Westbrae, Canada). (3) Kanesa 27,300 / 27,800. (4) Marusan-ai 26,230 / 26,800 (they export to Eden Foods). (5) Miyasaka Jozo 19,080 / 18,900. (6) Hikari Miso 14,700 / 16,000. (7) Yamajirushi 15,200 / 15,100 (they export to San-J). (8) Fundôkin Shoyu 13,900 / 14,100. (9) Ichibiki 13,100 / 13,000. (10) Takeya 12,000 / 11,500.

Also: (11) Marudai 11,300 / 11,400. (13) Nagano Miso 9,500 / 9,450. (16) San Jirushi Jozo 8,750 / 1,700. (25) Sendai Miso Shoyu 4,900 / ? (they export to Westbrae).

The total amount of miso produced in Japan by all companies was as follows by year (in tonnes): 1993–561,259. 1994–540,390. 1995–539,427. 1996–542,077. 1997–542,238. 1998–548,750. Address: Japan.

8083. Burnham, Trudie. 1998. Innovative soy cooking. Freedom, California: The Crossing Press. 95 p. No index. 15 x 18 cm.
• ***Summary:*** Contents: Preface. Introduction. Appetizers, snacks, and side orders. Salads. Dressings and toppings. Main dishes. Beverages. Desserts and treats.

The introduction begins: "Let's face it. In a society like ours, obsessed with fast, low-fat food, tofu is the ultimate answer." This is a "user-friendly guide to a soya-based vegetarian diet. Many recipes are vegan, or use a minimum of dairy foods.

The glossary of ingredients includes kelp, kudzu, lecithin, mirin, miso, nutritional yeast, oils (use expeller pressed), sea vegetables, seeds (Sunflower, pumpkin, poppy and sesame are used for eating; alfalfa, radish, red clover, and fenugreek are for sprouting), slippery elm powder, soy milk, soy sauce, soysage, sweeteners, tahini, tempeh, tofu, umeboshi plums, vinegars.

"Missing egg salad: I invented this and word seemed to travel fast and wide, because I saw it in a California deli a year later with the same name." Address: New Zealand.

8084. Ling, Kong Foong. 1998. Food of Asia: authentic recipes from China, India, Indonesia, Japan, Singapore, Malaysia, Thailand and Vietnam. Singapore: Periplus. 160 p. Illust (color). Index. 31 cm.
• ***Summary:*** A very attractive book printed on glossy paper with at least one color photo on almost every page. The introduction and essays are by Kong Foong Ling. The index, which is poor, makes the book hard to use if you are looking for particular foods found throughout Asia such as soybeans, soy sauce, miso, salted / fermented black beans, yuba [bean curd skin], etc.

Contents: The flavors of Asia. Ingredients. The Asian kitchen. China. India. Indonesia. Japan. Malaysia & Singapore. Thailand. Vietnam. Appendix.

The "Ingredients" section includes: Bean curd (incl. cotton or momen tofu, silken bean curd, deep-fried bean curd or aburage, grilled bean curd or yakidofu, fermented bean curd or nam yee). Bean curd skin [yuba]. Black beans, salted (and fermented). Hoisin sauce ("A sweet sauce made of soy beans, with spicy and garlicky overtones"). Miso (incl. red miso and white miso). Salted soy beans (incl. "yellow bean sauce"). Soy sauce (incl. light soy sauce, black soy sauce, red soy sauce, Kikkoman, tamari, thick sweet soy sauce (kecap manis–Indonesian)). Tempeh. Also: Red beans (dried azuki). Seaweed (incl. dried kelp, golden kelp, mozuku, salted dried kelp, laver or nori, wakame). Sesame (black and white seeds, tahina {tahini}). Sesame oil. Sesame rice crackers.

Beancurd or bean curd is mentioned on pages 12, 29-30, 34, 36, 88, 94, 101, 155.

Fermented bean curd: p. 25.

8085. Lotong, Napha. 1998. Koji. In: Brian J.B. Wood, ed. 1998. Microbiology of Fermented Foods. 2nd ed. Vol. 2. London: Blackie Academic & Professional / Thompson

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Science. An imprint of Chapman & Hall. xx + p. 441-852 + 11-117. See p. 658-95. Illust. Index. 24 cm. [165 ref]
• ***Summary:*** Contents: Definition and scope. Soybean koji: Raw materials (soybean wheat), koji preparation (Japanese soy sauce koji, miso-dama, koji produced by natural inoculation, preparation procedures, microorganisms involved, koji enzymes), application of soybean koji (soy sauce fermentation, soybean paste fermentation, sufu fermentation, fish sauce fermentation). Rice koji and similar products: Mould enzymes used in the fermentation of alcoholic foods and beverages (saké rice koji, preparation of rice koji, roles of rice koji in saké brewing, saccharolytic enzymes obtained by using starter cakes as inocula, and their applications, saccharolytic enzymes used in distilling industries in Thailand), ang-kak, miso rice koji. Seed inocula: Tane koji, production of seed inocula for soybean koji in Southeast Asia, preparation of flask-like plastic culture bags, types of seed koji, factory stock cultures, production of seed culture in other South East Asian countries, dry starter cakes (raw materials and method of preparation), spore mass produced on rice adhering to inside surface of flasks. Conclusion. Address: Dep. of Microbiology, Faculty of Science, Kasetsart Univ., 50 Paholyothin Rd., Jatujak, Bangkok 10900, Thailand.

8086. Rinzler, Carol Ann. 1998. The healing power of soy: The enlightened person's guide to nature's wonder food. Rocklin, California: Prima Publishing. xiv + 194 p. Illust. Index. 24 cm. [119 endnotes]
• ***Summary:*** Contents: Preface. Introduction: Not your ordinary bean, the first soybeans (history), how to talk soy (glossary of soyfoods–miso, soybean oil, soy concentrates, soy flour, soy isolates, soy milk, soy "nuts," soy sauce {shoyu, tamari, teriyaki}, tempeh, texturized soy protein {TSP}, tofu). 1. The nutritional wonder bean. Vitamins, minerals, proteins, fats, carbohydrates, fitting soy into your diet, summing up. 2. Something special in the bean. Hormones and people and plants, fabulous phytoestrogens, the safety of phytoestrogens, summing up. 3. Soy and your heart. Heart Disease and its victims, cholesterol and your heart, soy versus cholesterol, soy's cholesterol busters, beyond cholesterol, summing up. 4. Soy, the cancer fighter: The statistics of cancer, diet and hormone-related cancers, the Asian experience, how soy fights cancer, is soy safe?, a practical guide to your personal war on cancer, summing up. 5. Building better bones with soy: Your hormones and your bones, the hormone dilemma, soy and your bones, getting the calcium you need, summing up. 6. Hot news about hot flashes. What a hot flash is, soy and hot flashes, other plants that may relieve hot flashes, vitamins, minerals and hot flashes, simple lifestyle changes, summing up. 7. Cooking with soy: The joy of soy, whole soybeans, tofu, tempeh, texturized soy protein (TSP), soy flour, soy milk, soy sauces, soybean oil, miso. Appendix A: Shopping for soy through the mail. Appendix B: Directory of soy manufacturers. Appendix C: Directory of soy researchers whose studies are included in this book. Sources.

The author has written seventeen books, including *Nutrition for Dummies* (IDG) and *Estrogen and Breast Cancer* (Hunter House Books). A frequent contributor to publications such as *American Health, Woman's Day*, and the *New York Times*, she lives in New York.

Note: Another quick, generic book about soy and good health by one who is not very familiar with the subject–though the footnotes show that she consulted many publications, nothing new. The history chapter is full of errors. Address: New York.

8087. Sinclair, Charles Gordon, comp. 1998. International dictionary of food and cooking. Chicago: Fitzroy Dearborn. 594 p. See p. 234. 24 cm. *
• ***Summary:*** Vietnamese: dau hu: Bean curd; dau hu chien: Fried bean curd; dau hu chung: Bean curd; dau hu ki: Dried [sic, pressed] bean curd (p. 161).

fu jook pin (Chinese): Bean curd sticks [dried yuba sticks] (p. 219)

"*gochujang* (Korean): A chilli paste similar to sambal olek" (p. 234)

Indonesian: Kecap asin is thick, salty, dark colored soy sauce used for coloring and flavor. Kecap bentang manis: See kecap manis. Kecap manis: A sweet, thick, dark colored aromatic soy sauce used as a seasoning and condiment, and for satay. "Also called ketjap sauce, kecap bentang manis, sweet soya sauce" (p. 292)

Ketjap (Ho [Holland, Dutch]) Ketchup. Ketjap sauce. See kecap manis.

The word "soya" appears on 100 pages in this book. For example: Aburage (Japanese): Soya bean pouches made by deep-frying slices of pressed bean curd.

For "soy bean" see "soya bean." For "soy bean oil" see "soya bean oil." For "soy sauce" see "soya sauce."

"Sweet bean paste. A thick brown sauce made from ground fermented soya beans mixed with sugar and brine. Popular in Taiwan as a condiment or seasoning" (p. 530)

8088. Solomon, Charmaine. Solomon, Nina. 1998. Charmaine Solomon's encyclopedia of Asian food. Boston, Massachusetts: Periplus Editions. xiv + 480 p. Color illust. ([28] p. of plates). 29 cm. [67* ref]
• ***Summary:*** An outstanding book; the color illustrations of many ingredients are spectacular and very informative. The author has an insatiable curiosity.

Contents: List of illustrations. Introduction. How to use the *Encyclopedia of Asian Food*. Acknowledgements. A-Z of Asian Food. Bibliography. Illustrated index of selective ingredients. Index of recipes. Index of alternative words and main entries.

Soy related entries: Bean curd (p. 26-28, incl. all the

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different types, yuba, deep-fried tofu types, fermented tofu incl. ch'ou doufu [chou doufu] "Despite its overpowering aroma, slimy texture, unappetizing color and the unfortunate odor it leaves on the breath, those brave enough to partake of it consider it a delicacy")

Bean paste, sweet (p. 29. The three colors and types are red {from adzuki beans}, yellow {from mung beans, husked and split}, or black {from black soy beans}. "The pastes are usually available ready-made sweetened in cans. It is possible to make your own, starting out with dried beans." Name in Chinese: dow sa, tau sa {sweet bean paste}).

Bean paste, yellow (p. 29. Despite what the label says, this thick, salty condiment is brown, not yellow, in color).

Bean sauces (p. 29. "Made from fermented soy beans," they range in color from yellow to brown to black [sweet black bean paste]. Their consistency is more like pastes that must be spooned from the jar than pourable tomato ketchup).

Beans, salted yellow (p. 31. Canned yellow soybeans which have been salted and fermented).

Beef (p. 31-37 incl. Teriyaki steak, Sukiyaki, Beef with black bean sauce, incl. "2 tablespoons canned salted black beans [fermented black soybeans]").

Black bean (p. 43-44. Black soy beans which are fermented and salted. "Some are sold in cans in a salty liquid, others in plastic bags, covered with salt crystals." Also called "preserved black beans").

Flours & starches (p. 157-61). Incl. soy flour, which is "used mostly in Japan [where it is called kinako] and China. In Korea roasted soy bean flour and fermented soy bean flour are used to make a variety of bean pastes."

Legumes & pulses (p. 206-18). A long and interesting section. All entries have a scientific name. Many have an illustration. Those found in many Asian countries (e.g., green bean, green pea) have the name in each country. Includes: Introduction, adzuki bean, asparagus bean (see winged bean), asparagus pea, black-eyed pea (a variety of cowpea), black gram, blue pea, broad bean, butter bean (see lima bean), chick pea, cowpea (see yard-long bean), fenugreek, green bean, green pea, hyacinth bean (see lablab bean), lablab bean, lentil, lima bean, long bean (see yard-long bean), moong bean (see mung bean), moth bean, mung bean, parkia, peanut, pigeon pea, red bean (see adzuki bean), red kidney bean, rice bean, sataw bean (see parkia), snow pea, soy bean (short entry), sugar snap pea, tamarind, white gram (see black gram), winged bean (China: su-ling dou; India: Goa bean; Indonesia: kecipir; Japan: shikakumame; Malaysia: kacang botor; Philippines: sigarilyas; Sri Lanka: dara-dhambala; Thailand: thua pu). Yard-long bean (this is the fresh bean known by a host of names). Recipes: Adzuki bean soup.

Master sauce (p. 232). "Also known as 'flavour pot' or 'lu,' this sauce has a base of soy sauce, water, sugar and Chinese wine or sherry, with a few variable additions..." Cooking with it is similar to 'red-cooking.'

Miso (see soy bean products). Mushrooms & fungi (p. 237-40, incl. recipe for Braised bean curd, cloud ear and vegetables, and Braised soy mushrooms). Natto (see soy bean products).

Oils (p. 258-59, incl. coconut oil, gingelly oil [sesame oil], mustard oil, palm oil, palm kernel oil, peanut oil, perilla oil, sesame oil). Note: Soy oil is not mentioned here! Okara (see soy bean products). Salads, incl. recipe for Indonesian vegetable salad (gado-gado), that calls for 4 oz. fried bean curd. Shoyu (see soy sauce).

Soy bean, dried (349). China: da dau, wong dau, hak dau, tai dau. Indonesia: kacang kedelai. Japan: daizu. Korea: jaa jang. Malaysia: kedelai. Philippines: utaw. Thailand: thua lueang.

Soy bean, fresh. China: mao dau. Indonesia: kacang soja. Japan: edamame. Malaysia: kacang soja. Recipe: Fresh soy beans with bean curd.

Soy bean products (p. 350). Miso (incl. recipe for miso soup). Natto. Soy bean paste (go). Soy milk. Tahuri (Philippine fermented tofu). Tokwa (tokwan; very firm square tofu).

Soy bean sprouts, with recipe for soy bean sprout salad. China: dai dau nga choi. India: bhat. Indonesia: kacang kedele, taugeh. Japan: daizu no moyashi. Korea: Kong namul. Malaysia: kacang soja, taugeh. Philippines: utaw. Thailand: thua-lueang.

Soy sauce (p. 351-52). Chinese soy sauce. Dark soy sauce. Light soy sauce ("Usually labeled 'superior soy'"). Mushroom soy sauce (Dark soy sauce that has been flavored with straw mushrooms). Japanese soy sauces: Koikuchi (regular shoyu), tamari, usukuchi. Korean soy sauce ("About the same colour as Chinese light soy sauce, but not as fiercely salty and with a sweet malted aroma"). Thick and flavoured soy sauces: Kecap asin ("A dark, salty soy sauce, from Indonesia, a little thicker than the dark soy of China"). Kecap manis (A thick, sweet soy sauce from Java, Indonesia). Kicap cair: "The Malaysian equivalent of light soy sauce." Kicap pekat: "The Malaysian equivalent of dark soy sauce, though thicker than the Chinese version, but not as thick as kecap manis." Ponzu shoyu. Toyo mansi (p. 352) "A soy sauce used in the Philippines soured with kalamansi juice."

Note: This is the earliest document seen (April 2012) that uses the term "Kicap cair" or the term "Kicap pekat" to refer to light and dark Malaysian soy sauces, respectively.

Tempeh (p. 386). Incl. recipes for Savoury Tempeh and Thai style tempeh. Tofu (see bean curd).

Also discusses: Adzuki bean, agar-agar (incl. almond bean curd, awayuki), almond, amaranth, cowpea, crab in black bean sauce (recipe at crab), daikon, millet, monosodium glutamate ("I would strongly recommend omitting it"). Nonya (pronounced 'Nyonya.' The unique cookery found in Malaysia and Singapore resulting from the fusion of Malay and Chinese cuisine during the last century).

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peanut, peanut sauce, sago (this palm flowers only once in its life, at about age 15. Just before flowering, it builds up a large reserve of starch in the pith. The tree is felled, the pith scooped out, ground and washed to make sago starch), seaweed (incl. agar-agar, hijiki, kombu / konbu, mozuku, nori / laver, wakame), sesame paste, sesame seed, vegetarian meals ("By far the most important vegetarian food in the Far East... is bean curd"). Address: Australia.

8089. Stacey, Jenny; Keller, Maureen. 1998. The soy sauce cookbook: Explore the flavor-enhancing power of Asia's magic ingredient. New York, Tokyo and London: Kodansha International. 80 p. Illust. Index. 29 x 15 cm.

• ***Summary:*** This stylish, vertically rectangular book, contains many excellent color photos on glossy paper–of both recipes and scenes related to soy sauce. Contents: Introduction–Soy sauce. Light and dark soy sauce, what is soy sauce?, the history of soy sauce, how soy sauce is produced (koji, non-brewed or HVP, Chinese-style), soy sauce today. Savory snacks. Poultry with pizzazz. Sizzling seafood. Rice, pasta, and noodles. Main meat dishes. Sensational salads. Vegetable variations.

Interesting color photos in the Introduction include: (1) A traditional soy sauce ceramic jar with the "Kikkoman" logo and the Chinese characters for "shoyu" on it. (2) A glass bowl of dark soy sauce. (3) Kikkoman's *Goyo-gura*, Noda, Japan. (4) Ancient Japanese illustration showing soy sauce production. (5) A glass bowl of light soy sauce. (6) Another ancient Japanese illustration showing soy sauce production. (7) Shoyu fermenting in vats inside the *Goyu-gura*. (8) Three small, modern soy sauce containers, two glass bottles and one glass dispenser. Note 1. Photos 1, 6 and 7 were courtesy of Kikkoman Corp.

Note 2. The recipes call for "light soy sauce," "dark soy sauce"–terminology that we find confusing. The book contains numerous other factual errors. Address: 1. U.K., 2. Colorado.

8090. Wise, Victoria. 1998. The vegetarian table: Japan. San Francisco: Chronicle Books, London: Hi Marketing. 156 p. Illust. (color photos by Deborah Jones). 22 x 21 cm. Series: The Vegetarian Table.

• ***Summary:*** Contents: Introduction. Basic ingredients and seasonings for the Japanese table. 1. Appetizers and condiments. 2. Soups. 3. Rice. 4. Noodles. 5. Vegetables. 6. Sweets. Table of equivalents.

Ingredients include: Soybeans, soy sauce, tofu (incl. silken tofu, tofu puffs, grilled tofu), miso (red, white, yellow, brown, barley), fresh soybeans, dried soybeans (incl. black soybeans), soybean sprouts, freeze-dried tofu, soybean milk skin (yuba), and soybean curd pulp [okara]. Azuki beans, sea greens [sea vegetables incl. agar, kombu, nori, wakame], sesame seeds, umeboshi (pickled plums), wasabi, saké.

Contains too many soy-related recipes to list them all. The color photos and food styling are superb–perhaps the most beautiful we have ever seen in a cookbook.

Note: Other books in this series (all published by Chronicle Books) are: France, India, Italy, Mexico, and North Africa. Address: Oakland, California.

8091. Wood, Brian J.B. ed. 1998. Microbiology of fermented foods. 2nd ed. 2 vols. London: Blackie Academic & Professional / Thompson Science. An imprint of Chapman & Hall. [300+ ref]

• ***Summary:*** Soybeans are discussed extensively in Vol. 1, especially in the chapter titled "Fermented protein foods in the Orient: shoyu and miso," by Yokotsuka and Sasaki (p. 351-416). This and other chapters that mention soy are cited separately.

Soybeans are also discussed on pages 769-70 (soy idli and dhosa in India), 806 (maize-soybean porridge as a fermented weaning food), and 849-50 (genetic engineering of soybeans). Address: Dep. of Bioscience and Biotechnology, Univ. of Strathclyde, Glasgow, Scotland, UK.

8092. Yokotsuka, Tamotsu; Sasaki, Masaoki. 1998. Fermented protein foods in the Orient: shoyu and miso in Japan. In: Brian J.B. Wood, ed. 1998. Microbiology of Fermented Foods. 2nd ed. Vol. 1. London: Blackie Academic & Professional / Thompson Science. An imprint of Chapman & Hall. xx + 440 + 17 p. Illust. Index. 24 cm. [197 ref]

• ***Summary:*** Contents: Introduction. History. The history of fermented proteinaceous foods in China (chu / koji, chiang / jiang, shi [fermented black soybeans], chiang-yu / soy sauce / tou-yu, shi-tche [the juice or extract of shi]).

Note: "This section was based on material drawn from *Thirty-five Years History of Noda-Shoyu Company* (1955), *The History of Kikkoman* (1970), Sakaguchi (1979) and Wang & Fuang (1981)," the history of shoyu and miso in Japan (hishio or sho or soya or soy, miso or misho, tamari, miso-damari, tare-miso and usudare, shoyu, miso and shoyu of today). Fermented soybean foods in the Orient: shoyu, miso, tempeh and natto. Japanese shoyu (establishment of the Japanese Agricultural Standard {JAS} for shoyu in 1963, production methods, types and grades of shoyu by JAS, quality standard of shoyu exported from Japan, production [statistics], technological contributions by the Japanese government to the shoyu industry, soy sauce produced in Oriental countries other than Japan [Korea, Taiwan, Singapore, Malaysia, Indonesia], miso). Manufacture: Koikuchi shoyu (treatment of raw materials, koji making, mash-making and ageing, pressing of mash, refining), tamari shoyu, miso. Recent progress in shoyu and miso production in Japan: Soybeans and wheat as raw materials (soybeans, wheat), treatment of raw materials (soybeans, wheat), koji moulds, koji-making, mash fermentation (microbes in the mash, chemical changes in shoyu-mash fermentation, temperature of the mash, period of mash fermentation),

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refining (pressing of the mash, pasteurization), material balance in shoyu manufacture, product (color and clarity of koikuchi shoyu, flavour components of shoyu {HEMF, HDMF, HMMF, phenolic compounds, flavour constituents of the top note aroma of pasteurized shoyu}, formation of flavour components during heating for pasteurization, flavour components of shoyu worldwide, relationship between organoleptic evaluation of shoyu and its chemical constituents, nutritional concern about excessive salt intake, safety of fermented shoyu [aflatoxins], microbial stability of shoyu). Discusston.

In the *Ben-Chao-Gong Mu* [*Bencao gangmu*, The great pharmacopoeia, 1596] many types of shi are discussed. In more recent times these have apparently been classified into three types depending on the microorganism used in the fermentation: (1) *Aspergillus oryzae* type. (2) *Mucor* type, usually made in Szechwan. (3) *Bacillus* type. Soak and cook soybeans, then place them in a cloth bag. Cover with straw and ferment for 1-2 days at 25-30°C. "When the beans are covered with viscous substances, Shui-tou-shi is prepared." Mix the sticky beans with ginger and salt, then pack tightly into jars; age for one week. The product [a sort of salted natto with ginger] is now ready to eat. "The organisms responsible for this fermentation have been identified as *Bacillus* species" (p. 356). Address: Research and Development Div., Kikkoman Co. Ltd., 339 Noda, Noda-shi, Chiba-ken, 278 Japan.

8093. Hodgson, Moira. 1999. Spices perk up sea scallops, shrimps or sausages. *New York Times*, Jan. 24. p. CT12.
• ***Summary:*** Includes a recipe for "Spicy shrimps with black beans." The ingredients include "4 tablespoons Chinese preserved black beans,... 2 tablespoons hoisin sauce, ... 1 tablespoon soy sauce." Then: "Rinse the black beans thoroughly under cold running water and chop them fine."

8094. Jack, Alex. 1999. Let food be thy medicine: 750 scientific studies, holistic reports, and personal accounts showing the physical, mental, and environmental benefits of whole foods. 3rd ed. Becket, Massachusetts: One Peaceful World Press. 304 p. Index. 23 cm. [8 ref]
• ***Summary:*** This book, organized alphabetically by subject, is a very original and creative source of information, with hundreds of interesting bibliographic references. The author believes in a natural, whole-foods diet. Includes the following subjects: Alternative medicine, amasake (amazake), Asia Diet Pyramid, azuki beans, bovine growth hormone, cancer, cholesterol, coffee, complex carbohydrates, dairy food, estrogen, evolution, exercise and fitness, fats, fiber, genetically engineered food, genetic model of health and disease, genistein, global warming, heart disease, hiziki, hunza diet, isoflavones, Japanese diet, kombu, kuzu, lignans, longevity, macrobiotics, Mad Cow Disease, meat, menopause, microwave cooking, miso, mochi, natto, nori, osteoporosis, Paleolithic diet, phytochemicals, phytoestrogens, polyps, potatoes, Price–Weston, prostate cancer, protein, rice, Schweitzer–Dr. Albert, sea vegetables, seitan, sesame, shoyu, soy foods, tempeh, tofu, umeboshi plum, vegans, vegetarians, wakame, wartime restricted (diets, incl. World War I and II), whole grains. Resources. About the author. Address: Box 10, Becket, Massachusetts 01223. Phone: (413) 623-5742.

8095. Nutrisoy Pty. Ltd. 1999. Nutrisoy: Fitness food (Sell sheet). Botany, New South Wales, Australia: 1 p. Feb. Front and back. 30 cm.
• ***Summary:*** A large color photo on the bottom half of the front panel shows the company's tofu and tempeh products. Three paragraphs above that are titled: Nutrisoy. Tofu. Tempeh.

The back is titled "Nutrisoy products range." A color photo shows each of the company's products, by category. Plain and pre-marinated tofu: Plain Firm Tofu, Tofu Vegies, Tofu Tempeh, Tofu Herbs. Pre-cooked tofu and tofu burger: Tofu Spicy, Tofu Teriyaki, Tofu Vegies Burger, Tofu Tempeh Burger. Tofu deserts and silken tofu: Tofu cups in strawberry, apricot, mango, and tropical flavors. Silken tofu. Tempeh and tempeh burger: Plain Tempeh, Seasoned Tempeh, Mildly Spiced Tempeh, Tasty Tempeh (marinated in ginger and soy sauce), Tempeh Burger.

An attached, 1-page product list, gives the name and weight of all the company's products, including those under special or private labels such as Soyco, Nutal, and a few Indonesian names. They also sell hommus (hummus), chickpea veg. burger, spirulina juice, and berry juice.

Letter from Tony Wondal of Nutrisoy, 2007 Aug. 3. This leaflet was published in Feb. 1999. Address: 15 Hannon St., Botany NSW 2019, Australia. Phone: +61 2 9316 5171.

8096. Stevens & Associates, Inc. ed. and comp. 1999. U.S. 1999 soyfoods directory. Lebanon, Indiana: Indiana Soybean Development Council. 48 p. 28 cm. [23 ref]
• ***Summary:*** This is the fourth edition of the U.S. Soyfoods Directory. Page 2 states: "And a special thanks goes to the Soy Protein Partnership for sponsoring this project." For a list of farmers and companies that grow soybeans organically, see p. 28. This 1999 Soyfoods directory is now available online at www.talksoy.com. Address: Stevens & Associates, 4816 North Pennsylvania Street, Indianapolis, Indiana 46205. Phone: 317-926-6272.

8097. Kushi Institute. 1999. Kushi Institute store: Food, books, kitchenware, bodycare, video, audio. Spring/summer 1999 (Mail-order catalog). Becket, Massachusetts: 40 p. 28 cm. [8 ref]
• ***Summary:*** A good new source of macrobiotic supplies. Includes: Amazake (from Kendall Food Co.), arame (sea vegetable), azuki beans (from Hokkaido {Japan} and

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organic), barley malt, black soybeans (from Hokkaido and USA), dulse, fu (dried wheat gluten), hato mugi [hatomugi], hijiki, kanten flakes, koji, kombu, kuzu, mirin, miso, mochi (organic, Kendall), natto (organic, Kendall), natto miso, nori, rice syrup, sea palm, sea vegetable kit (8 varieties), shoyu, sunbachi, tamari, tekka, tofu–dried, tofu kit, umeboshi, umeboshi concentrate, wakame, yuba. Address: P.O. Box 500, Becket, Massachusetts 01223-0500. Phone: 1-800-645-8744.

8098. Liu, KeShun. 1999. Oriental soyfoods. In: C.Y.W. Ang, K. Liu, and Y-W. Huang, eds. 1999. Asian Foods: Science & Technology. Lancaster, Pennsylvania: Technomic Publishing Co., Inc. 546 p. See p. 139-99. Chap. 6. March. [60 ref]
• ***Summary:*** Contents: Introduction. Soybeans as a crop, composition and nutritional quality of soybeans, soyfoods–from the east to the west, soyfood classification.

Soymilk: Introduction, traditional soymilk, modern soymilk (techniques for reducing beany flavors, commercial methods, formulation and fortification, homogenization, thermal processing, and packaging), concentrated and powdered soymilk, fermented soymilk (with lactic acid bacteria), soymilk composition and standardization.

Tofu: Introduction, methods of tofu preparation, factors involved in tofu making (soybean varieties, concentration of soymilk, heat process of soymilk, types of coagulants, concentration of coagulants, coagulation temperature, coagulation time, process automation, packaging), varieties of tofu (silken tofu, regular and firm tofu, Chinese semidry tofu {*doufu gan*}, Chinese tofu sheets and tofu noodles, lactone tofu), varieties of tofu products (deep-fried tofu, Japanese grilled tofu, frozen tofu, Japanese dried-frozen tofu, Chinese savory tofu, fermented tofu {Sufu or Chinese cheese, varieties of sufu, preparation methods, preparation principle}).

Soymilk film (yuba). Soybean sprouts. Green vegetable soybeans. Other non-fermented soyfoods: Okara, roasted soy powder.

Fermented soy paste (Jiang and miso): Koji, koji starter, and inoculum (koji, koji starter, inoculum). Chinese jiang (traditional household method, pure culture method, enzymatic method). Japanese miso (preparing rice koji, treating soybeans, mixing and mashing, fermenting, pasteurizing and packaging), principles of making jiang or miso.

Soy sauce (Jiangyou or shoyu): Chinese jiangyou (traditional household method, modern methods), Japanese shoyu (treatment of raw materials, koji making, brine fermentation, pressing, refining), principles of making soy sauce, chemical soy sauce (made by acid hydrolysis; heat with 18% hydrochloric acid for 8-12 hours, then neutralize with sodium carbonate and filter to remove insoluble materials), proximate composition of soy sauce, quality attributes and grades.

Japanese natto: Methods of preparation, principles of preparation.

Indonesian tempeh: Traditional method, pilot plant method, principles of tempeh preparation. Fermented black soybeans (Douchi or Hamanatto): Chinese douchi, Japanese Hamanatto.

Tables: (1) Names (English, Chinese, Japanese, Korean, Indonesian, Malay, Filipino) general description, and utilization of nonfermented Oriental soyfoods. (2) Names (English, Chinese, Japanese, Korean, Indonesian, Malay, Filipino) general description, and utilization of fermented Oriental soyfoods. (3) Proximate composition (gm per 100 gm fresh weight) of some fermented soyfoods.

Figures show: (1) Flowchart: Traditional Chinese method for making soymilk and tofu (from whole soybeans). (2) A commercial processing method (Alfa Laval) for making soybase and a subsequent product–soymilk. (3) Photo of homemade firm tofu. (4) Photo of a dish of tofu and mushrooms. (5) Photo of cubes of sufu (Chinese cheese) on a white plate. (6) Flowchart for making sufu from firm tofu. (7) Photo of two packages of dried yuba sticks (Chinese). (8) Photo of a bowl of soy sprouts. (9) Photo of Chinese chiang, and Japanese red and white miso, each on one of three spoons in a shallow white bowl. (10) Flowchart of a common method for making Japanese rice miso [red miso]. (11) Photo of soy sauce in three different containers: dispenser, small bottle, and large Chinese can. (12) Flowchart of a common method for making Japanese koikuchi shoyu (soy sauce). (13) Photo of two chopsticks lifting some Japanese natto from a bowl full of natto; the thin strings connecting the natto above and below are clearly visible. (14) Flowchart of a common method for making Japanese natto from whole soybeans. (15) Photo of tempeh made in the USA in perforated plastic bags (Courtesy of Mr. Seth Tibbott, Turtle Island Foods, Inc., Hood River, Oregon). (16) Flowchart of traditional Indonesian method for making tempeh from whole soybeans. (17) Photo of Chinese *douchi* (fermented black soybeans) on a white plate.

Note: For a biography of KeShun Liu PhD see p. 544. Address: PhD, Soyfoods Lab., Hartz Seed, A Unit of Monsanto, Stuttgart, Arkansas.

8099. Mangels, Reed. 1999. *Vegetarian Journal's* guide to tofu and tempeh. *Vegetarian Journal* (*Baltimore, Maryland*) 18(2):20-21. March/April.
• ***Summary:*** A full-page table gives the nutritional composition of many different brands and products per 3 ounce serving. Data is given for calories, protein, fat, calcium, and iron. Tofu brands/makers include: Azumaya, Kikkoman, MoriNu. Nate's Easy Tofu (smoked), Nasoya, Smoke & Fire, SoyBoy Baked and seasoned (all varieties), White Wave, Whole Foods. The three tempeh makers are Lightlife, SoyBoy, and White Wave.

For tofu: Calories range from 30 (MoriNu Lite) to 130

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(Nate's). Protein ranges from 20 gm (White Wave baked) to 4 gm (MoriNu Soft). Fat ranges from 1 gm (MoriNu Lite) to 9 gm (White Wave baked). Calcium ranges from 600 gm (Nate's) to 20 gm (MoriNu–4 types). Iron ranges from 0.7 gm (MoriNu–4 types) to 9 gm (Nate's). Address: PhD, RD.

8100. Newman, Jacqueline M. 1999. Cultural aspects of Asian dietary habits. In C.Y.W. Ang, K. Liu, and Y-W. Huang, eds. 1999. Asian Foods: Science & Technology. Lancaster, Pennsylvania: Technomic Publishing Co., Inc. 546 p. See p. 453-85. Chap. 15. [104 ref]

• ***Summary:*** Contents: Introduction. Foods of Bangladesh. Cambodian foods. Chinese foods: Food selection, eating behaviors, intracultural differences, feasts, holidays and special foods. Indian foods. Indonesian foods. Japanese foods. Korean foods. Laotian foods. Malaysian foods. Nepalese foods. Foods of Pakistan. Philippine foods. Thai foods. Vietnamese foods.

In each country and culture, the role and practice of vegetarianism is discussed.

Soyfoods are mentioned as follows: China (p. 458): "For breakfast, Northerners prefer warm soymilk and fried wheat-dough crullers." Vegetarians from both north and south get an important part of their protein "from a sophisticated cuisine based upon considerable use of gluten and tofu," made to look and taste like animal products.

Indonesia (p. 463): "... foods are preferred sweet, even the local soy sauce, kecap manis, is fermented sweetened."

Japan (p. 465): Mentions shoyu and tofu.

Korea (p. 468-69): Mentions tofu.

Malaysia (p. 472): Discusses Chinese who married Malay women (called Nonyas): "their families are called Peranakan or Straits Chinese and their cooking is called Nonya Cuisine. Straits Chinese live mostly in Penang, Malacca, and Singapore, practice Buddhism, and cook their Chinese food with a Malay influence. Their Nonya cuisine is eaten communally, all dishes are served at once,..."

Nepal (p. 473): "During Janai Purnima, a soup called *quantee* is essential; it is made from sprouted soy, chick pea, black beans,..."

Pakistan (p. 476): Pad Thai, a popular lunch dish, is made with tofu. Note: Pad Thai, based on rice noodles, is one of Thailand's national dishes. Address: PhD, R.D., Prof., the Dep. of Family, Nutrition and Exercise Sciences, Queens College-CUNY, Flushing, New York.

8101. Salmon, Margaret B. 1999. Soy expressions: Common-sense way to small food bills. 404 easy soy recipes. Demarest, New Jersey: Techkits, Inc. x + 160 p. Index. 22 cm.

• ***Summary:*** A quickie spiral-bound soy cookbook. It is not vegetarian; recipes call for the use of lean ground beef, chicken, turkey, frankfurters, turkey frankfurters, tuna, salmon, clams. The section at the back titled "Index" is not really an index. Some form of soy appears in every recipe; the main forms are tofu, soymilk, soybean sprouts, cooked soybeans, soy sauce, teriyaki sauce, soybean oil, "Smart Dogs," black soybeans, soybean flour, and soy bacon bits. Contents: Introduction. How safe are soybeans? Hundreds of soy recipes. Soy foods taste good. A new look at soybeans. Recipes: Soups. Salads and vegetables. Main dishes. Omelets. Breads, cookies, muffins and snacks. Sugar free soy desserts. Desserts: Pies & puddings. Shakes and pops.

Margaret is the author of many books on food and nutrition. She was "formerly Research Dietitian on the cystic fibrosis research team at Columbia-Presbyterian Medical Center in New York City, and Chief Dietitian and Director of the Dietetic Traineeship Program at St. Joseph's Hospital and Medical Center in New Jersey. She is President of Salmon Consultants, Consultants to physicians, hospitals, schools and federal nutrition programs, and lecturer for schools, colleges, radio and television.

"She received a degree in food chemistry and nutrition at the University of California at Berkeley, and degrees at Columbia University in the science of nutrition and nutrition education. She also has a Certificate of Hospital Dietetics from Duke University and is listed in Who's Who of American Women and World Who's Who of Women and is a Registered Dietitian." Address: R.D., L.D., P.D., Techkits, Inc., P.O. Box 105, Demarest, New Jersey 07627.

8102. Simonds, Nina. 1999. A spoonful of ginger: Irresistible, health-giving recipes from Asian kitchens. New York, NY: Alfred A. Knopf. xii + 322 p. April. Illust. Index. 24 x 21 cm. [53 ref]

• ***Summary:*** This beautiful hardcover book and cookbook, printed on glossy paper with many color and black-and-white photos, looks at food in two ways: As medicine, and as the source of delicious recipes. The Asian holistic approach is relaxed and non-rigid; it emphasizes balance. Soyfoods appear throughout. Tofu is used to "increase body energy, produce fluids, and lubricate the system. It is said to have yin, or cooling, properties" (p. 23). Miso chicken soup with snow peas and tofu (p. 34). Grilled miso fish fillets (p. 66). Pan-seared halibut with garlicky black bean sauce ("Seasonings: 3 tablespoons fermented or salted black beans, rinsed, drained, and minced, 2 tablespoons minced garlic, 2 tablespoons minced fresh ginger,... p. 71; "Black soybeans have been used by the Chinese for medicinal purposes for over 2,000 years"). Baked black bean shrimp (with "Seasonings: 2 tablespoons fermented black beans, rinsed and drained; 2 tablespoons minced scallions, white part only, 1 tablespoon minced fresh ginger, 1 tablespoon minced garlic; and 1 teaspoon dried chile [chili] flakes." When the oil in a wok is very hot: "Add the Seasonings and stir-fry for about 10 seconds with a slotted spoon or spatula until fragrant." A side note on this page: *The Chinese System of Food Cures*, by Dr. Henry Lu, says that "a regular diet

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of fermented black beans can relieve depression and stress and counteract any toxins," p. 75). Stir-fried saucy shrimp (with sweet bean sauce or *jiang*, one of the earliest Chinese seasonings; if unavailable, substitute hoisin sauce, p. 81). Grilled hoisin scallops (with ½ cup hoisin sauce, p. 83) Spicy grilled squid with warm greens (with ½ cup hoisin sauce, p. 86-87). Broccoli or cauliflower with a soy-lemon dressing (p. 173). Grilled leeks in a garlic-soy dressing (p. 174). Grilled wild mushrooms with a teriyaki dressing (p. 178). Black bean acorn squash (with "2 tablespoons fermented black beans, rinsed, drained, and minced." Describes how to make "black bean sauce," p. 179).

One chapter, titled "Soybeans and tofu" (p. 192-215), begins with a discussion of the work of Dr. Albert Leung, author of various books on Chinese herbs and food, and creator of a computerized database on Chinese herbal medicine for the National Cancer Institute. "Like a growing number of doctors, Dr. Leung feels strongly that an integrated approach should be taken in the treatment of many diseases, one that draws from the strengths of both conventional and alternative therapies. He also concurs with Henry Lu that fortifying the immune system is critical to good health. 'Our immune system is the key to health and longevity and there are many factors that throw off our yin/yang balance,' Dr. Leung says. 'When this happens, Traditional Chinese Medicine often uses herbal tonics and food to help restore the balance.'

"Tofu is such a food. Chinese doctors classify its nature as cool and sweet. It is credited with clearing heat from the body, detoxifying the system, and strengthening the spleen and stomach."

A full-page color photo (p. 192) shows tempeh being fried. Simonds notes that the earliest known recorded use of black soybeans dates back to the middle of the eighth century.

A table titled "Soybeans and their byproducts" (p. 196) lists ten products, how each is used, and how long they will stay fresh in a refrigerator. The foods are: Fresh soybeans [as a green vegetable appetizer], soybean sprouts, miso, soybean milk, silken tofu, soft tofu, firm tofu, extra-firm tofu, 5-spice pressed tofu, and tempeh.

Recipes are from many Asian countries": Japanese-style silken tofu. Soybean sprouts and leeks in hot chile sauce. Rainbow salad with spicy peanut dressing (and tofu). Spicy garlic bean curd noodles. Vegetarian roll-ups (with tofu). Fragrant steamed pearl balls (with tofu and glutinous rice) Spicy ma po tofu. Cantonese style tofu in black bean sauce (incl. fermented black beans, garlic, ginger and hot chile paste). Vegetarian kung pao with broccoli and peanuts (with tofu. Note: Kung pao is a style of food preparation associated with Szechuan and Hunan). Curried tofu. Braised cinnamon tofu. Simmered tofu with black mushrooms. Fried tempeh with sweet and sour sauce. Spicy stir-fried tempeh with basil. Ginger teriyaki tempeh.

Also: Chicken-black bean brown rice (with fermented black [soy] beans, garlic, and fresh ginger, p. 231. Dr. Albert Leung says that making fermented black beans is a complicated process, in which small black soybeans are first soaked in water with mulberry leaves and wormwood herb, then they are fermented with salt). Vegetarian pad thai (with tofu, p. 245). Almond soy jelly with litchees and melon (with soy milk, p. 266). Two-spice vanilla tapioca pudding (with soy milk, p. 269; Soy milk lubricates the body, clears the lungs, and is often prescribed for urinary disorders and constipation). Coconut rice pudding with berries (with soy milk, p. 272). Address: Salem, Massachusetts

8103. Bramblett, Billy. 1999. Update on Wildwood Fairfax and Wildwood Santa Cruz (Interview). *SoyaScan Notes*, May 27. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Wildwood no longer makes any sandwiches. The 65 people employed at the Fairfax facility include all of Wildwood's driving staff, accounting staff, production staff, and support staff. Santa Cruz is basically a production facility, though three drivers and several administrators operate out of Santa Cruz. Santa Cruz produces all the tofu, and the YoSoy traditional soymilk. Second generation products made at Santa Cruz include the bakes, the burgers, and the tofu cutlets. If it comes in a vacuum-packed bag or a water-pack tub it is made in Santa Cruz. If it comes in a cup (as 18 products do), it is made in Fairfax--including 5 flavors of braised tofu, 2 tofu salads, etc.

Wildwood believes that it makes the best-tasting tofu on the West Coast. It has also been innovative in developing many delicious products, which some other companies are now trying to imitate.

Wildwood has long been in a big crunch making 30,000 lb/week of tofu, about half of this is sold as tofu and half goes into making second generation products. But they could sell twice that much tofu if they had the capacity to make it.

Last year Wildwood started making Baba Ganooj for Trader Joe's (TJ). The project started as a sort of side deal to the Hummus, making maybe 700 units a week. Within a month, Wildwood was making 5,000 units as week for TJ. Bill had to add two shifts and make many other arrangements. TJ liked it and asked what other products Wildwood had. They came and visited, and Wildwood showed them its various products. TJ then asked if Wildwood could make baked teriyaki tofu for them. Billy agreed on the condition that they not order more than 5,000 units/week. TJ agreed. Their buyer for that section is a really great person named Kimberly Sprinkle Kruell, who Wildwood trusts. She told Wildwood that she and TJ like Wildwood and their products, and want to work with the company.

So in an effort to make more "secondaries," Wildwood went to tofu makers it knows and trusts, and ordered a pallet (several thousand pounds) of tofu. They couldn't do it; they were unable to come up with the volume, the quality, and the

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shelf life that Wildwood needed. So Wildwood concluded that they have to make the tofu themselves.

Wildwood's fresh soymilk in gable top cartons is now selling well. It looks like they might be doing that for Trader Joe's too. "If that happens, it's gangbusters–outstanding!"

Wildwood was working with Ted Nordquist, who was making their soymilk base; he and Jeremiah have been friends for more than twenty years. But Wildwood "divorced" Ted and went to another supplier of soymilk base. He is very good at making non-dairy products, but he's a character, and working with him is very difficult. He is an enigma, and he doesn't seem to know what he wants. He and Wally Rogers were buddies and partners for many years, and all of a sudden they just split up. Address: Wildwood Natural Foods, 135 Bolinas Rd., Fairfax California 94930. Phone 415-485-3940 X-47.

8104. **Product Name:** Organic Miso Tamari
Manufacturer's Name: American Miso Co., Inc.
Manufacturer's Address: 4225 Maple Creek Rd., Rutherfordton, NC 28139. Phone: 828-287-2940
Date of Introduction: 1999, May.
Wt/Vol., Packaging, Price: 5 oz or 10 oz bottle.
How Stored: Refrigerated
New Product–Documentation: Talk with John Belleme. 1999, Nov. 18. This product was first sold in about May 1999, but it did not appear in the Great Eastern Sun catalog until November.

8105. *River Currents: News from South River Miso Company (Conway, Massachusetts).*1999. Have you tried our tamari? Spring. p. 1.
• ***Summary:*** Miso tamari is the precious, rich liquid that collects in large pools in a vat of miso. "It takes over 2,000 pounds of miso to yield about 5 gallons of miso tamari. Our unpasteurized miso tamari is like liquid gold!... Because of its limited supply, this miso tamari is not commercially available except by direct purchase from South River. We ship miso tamari in sturdy plastic jugs but suggest you transfer it to glass. A recycled wine bottle makes an elegant container for this wonderful treasure."

8106. *River Currents: News from South River Miso Company (Conway, Massachusetts).*1999. South River Miso Company Price list–March 1, 1999. Spring. p. 5.
• ***Summary:*** Varieties of miso–all certified organic: (1) Three year dark miso (aged for a minimum of three full summer seasons): Hearty brown rice (with black soybeans & brown rice), Three-year barley, Black soy barley, Chick pea barley (with barley & chick peas). (2) One year light miso (aged for a minimum of one summer or three months): Sweet tasting brown rice, Chick pea, Azuki bean (with brown rice & azuki beans), Golden millet (with millet and soybeans). Special miso: Dandelion leek, Sweet white miso. Also: Miso tamari, Brown rice koji, Miso samplers.

Beautiful color labels for the 16 oz. package of eight of these miso varieties were sent with the newsletter by Robin Cole of South River.

8107. Schinner, Miyoko Nishimoto. 1999. Japanese cooking: Contemporary & traditional–Simple, delicious, and vegan. Summertown, Tennessee: Book Publishing Co. 176 p. Illust. Index. 21 cm.
• ***Summary:*** Contents: Introduction (incl. Japanese attitudes towards nutrition, vegetarianism and animal rights, the recipes, the Japanese meal). Sample menus (by season). Glossary: Ingredients, kitchen concepts, and tools. Rice dishes. Soups and stews. Cooking with tofu. Fried dishes. Salads and cold vegetables. Noodles. Meals in a pot. Stewed and braised dishes. Meals in a bowl. Everyday favorites. Nouvelle Japanese cuisine.

Terms in the Glossary include: Abura-age, agar agar, atsu-age, azuki, fu (made from wheat gluten), goma (sesame seeds), goma-dofu (a tofu-like cake made from sesame butter), hijiki, Inari-zushi (sushi), kanten, konbu, kuzu & kuzu-ko, miso, mochi, natto, nori, okara, sesame oil (goma abura), shoyu, soba, soy sauce, tofu ("Perhaps the most misunderstood food in Japan. Americans might call it bland; the Japanese prefer to think of it as delicate in flavor"), umeboshi, wakame, yaki-dofu, yuba.

This vegan cookbook is filled with many soy-related recipes, both traditional and new. Examples of new: "Fishy Tempura Tempeh. Crispy Fried Tempeh (Kara-Age)

"Trying to dine out in a strictly vegan fashion in Japan can present challenges. Although dairy products are not found in traditional Japanese cuisine, fish-based stocks appear in a range of dishes from appetizers to soups to entrees... My advice to vegan or vegetarian visitors to Japan find a temple or restaurant that serves traditional *kaiseki*-style *shojin-ryori* (Buddhist vegetarian cooking)–and splurge big time. You won't regret it" (p. 10).

On the rear cover is a biographical sketch of Miyoko. "She was born in Yokohama, Japan, and graduated from St. John's college in Maryland. Her bilingual bicultural background has endowed her with the creativity and originality of the West and the aesthetic sense of the East." She has been a vegetarian since age 12. Address: Owner, Now and Zen Bakery and Vegetarian Restaurant, San Francisco.

8108. **Product Name:** Miso Tamari (Unpasteurized) [Dark, or Light]
Manufacturer's Name: South River Miso Co. Inc.
Manufacturer's Address: South River Farm, Conway, MA 01341. Phone: (413) 369-4057.
Date of Introduction: 1999, May.
Wt/Vol., Packaging, Price: 1 quart bottle.
How Stored: Refrigerated.

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New Product–Documentation: River Currents: News from South River Miso Company (Massachusetts) 1999 Spring p. 1. "Have you tried our tamari."

Talk with lady who calls from Vermont. 1999. Nov. 18. She has a bottle of this product and loves it. It also appears in the most recent South River Miso Co. newsletter under "Holiday gift pack No. 3"–which shows it is now available in pints. The label (photocopied black on white) states: "Collected from the vats of South River Miso. Fermented from deep well water, brown rice, chick peas or soybeans, sun-dried sea salt, and koji culture. Aged in wood for a minimum of 3 months or one summer. Certified organic." Now Christian is making light and dark miso tamari.

8109. Kikkoman Corporation. 1999. Annual report 1998. 339 Noda, Noda-shi, Chiba 278, Japan. 30 p. 28 cm. [Eng]

• ***Summary:*** The information in this English-language annual report is current as of April 1999. Contents: Financial highlights. A message from the president (Yuzaburo Mogi): The year in review, dining pleasure and convenience, serving a global market, a source of variety, seeking new growth opportunities, promoting food culture. Global operations: The Americas, Europe, Asia and Oceania, Japan. Review of operations: Soy sauce, soy sauce derivative products, Del Monte, sake and wine. Research & development. Financial section: Consolidated balance sheets, etc. Corporate history (chronology from April 1925 to October 1998). Global network (directory of Kikkoman names, addresses, and phone numbers worldwide). Board of directors and officers. Corporate data.

Net sales were up slightly (7.1%), but net income was down for the second year in a row. Overseas sales (excluding exports from Japan) grew 15.8%, and have grown dramatically each year since 1994 (p. 16). In 1994 overseas sales accounted for about 15% of consolidated net sales; in 1998 about 28%. And operating income generated overseas accounted for 51% of Kikkoman's consolidated operating income.

In 1998 Kikkoman released *Akadare-to-Kurodare*, a steak dipping sauce based on a blend of their popular Akadare (miso based) and Kurodare (soy sauce based) dipping sauces.

"Serving a global market. In June 1998, Kikkoman Foods, Inc., our first overseas plant, celebrated 25 years of operation, thus marking a major milestone for our international activities. Over the past quarter century, the production capacity of the Kikkoman Foods plant–located in Wisconsin–has expanded more than tenfold. To further augment capacity, in October we commenced operations at our second plant in the United States, in Folsom, California, which is conveniently located near large markets on the West Coast. Similarly, in Europe, we raised the annual production capacity of our plant in the Netherlands to 5,000 kiloliters. Following these additions, total production of soy sauce and its derivative products at our overseas plants surpassed 100,000 kiloliters in 1998. This is approximately the same as the production capacity of the second largest soy sauce manufacturer in Japan."

Kikkoman's share of the soy sauce market in Japan is almost 3 times as large as that of its nearest competitor.

The Americas: On 6 Oct. 1998 Kikkoman had the formal opening of its second U.S. soy sauce manufacturing plant in Folsom, California. The 210,000 square meter facility was built at a cost of US$46 million and has an initial soy sauce production capacity of 10,000 liters per year. The plant began operating in April 1998 and shipments of soy sauce started in October. The Kikkoman plant in Walworth, Wisconsin, is now approaching its annual soy sauce production capacity of 80,000 kiloliters.

Color photos show: Yuzaburo Mogi (president and CEO). The opening ceremony and an outside view of the plant in Folsom, California. Most of the company's products (p. 8-13). Address: Noda, Japan.

8110. Hymowitz, Ted. 1999. Details concerning the early cultivation of soybeans in Georgia from 1765 to 1770 (Interview). *SoyaScan Notes*. Aug. 22. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Question 1: Were soybeans first grown in Georgia in 1765 or 1766? When Bowen arrived in Savannah, Georgia, in 1764 he brought with him soybeans which he had obtained in China–probably a little bag full. He first bought land in Savannah on 14 May 1765–but it may not have been arable. So he gave his soybeans to Henry Yonge to grow out and multiply for him.

Hymowitz and Harlan discussed the question of whether Yonge grew the soybeans in 1765 or 1766. They decided it was probably 1765–but that is not certain. In a letter dated 23 December 1766 to Dr. Peter Templeman, Yonge wrote that the pease or vetch [soybeans] "were planted by me last year at Mr. Bowen's request, and did yield three crops, and had the frost kept off one week longer I should have had a fourth crop, which is a very extraordinary increase...." Clearly Yonge could have grown the soybeans in 1766.

Question 2: Were soybeans ever grown again in Georgia? If so, when, where, and by whom? We have no direct evidence that soybeans were ever grown again in Georgia. Samuel Bowen never mentions growing soybeans himself–yet he never wrote much about anything, he was an entrepreneur, not a writer. We do know that in 1770-71 he exported 162 quarts of soy sauce, so he must have had enough soybeans to make that soy sauce. It must have taken someone, probably Bowen, 2-3 years to further multiply the soybeans originally grown by Yonge to get enough to make soy sauce. Thus, we have indirect evidence that soybeans were grown after 1765 or 1766.

Question 3: How could Yonge have gotten four crops of soybeans in Savannah? Was he growing them for forage

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or to obtain mature seed? To answer this question we must understand maturity groups. The soybeans that Bowen brought the Georgia probably belonged to what is now called maturity group II, they mature very early. They were best adapted to a more northerly latitude–such as Pennsylvania. While such seeds will grow in a southern latitude, such as that of Savannah, the plants, seeds and yield will all be small. Yonge could have planted his first soybeans in March and harvested the mature beans after 85-90 days. He planted the beans he just harvested in late May and harvested his second crop in late July or early August. He planted the beans again and harvest his third crop after 85-90 days in October. He planted a fourth crop in late October or early November and the frost killed it. Ted has written about this idea related to maturity groups in a published article. However we don't know the description of the plant, such as flower color or seed color.

Question 4: Where in China did Bowen get soybeans of maturity group II? Probably in or around Canton, China. The farmers there grow rice during the warm months, then grow soybeans as a winter crop on the banks / bunds around the rice fields. Bowen could have gotten these soybeans from farmers, stashed them away in his seaman's private trunk, and thus taken them out of China. Address: Prof. of Plant Genetics, Dep. of Crop Sciences, Univ. of Illinois, Urbana, Illinois.

8111. Kairava (J. Spaelstra); Seemo (H. Shapira). 1999. Re: Update on Dakini Health Foods Pvt. Ltd. in Pune / Puna, India. Letter (fax) to William Shurtleff at Soyfoods Center, Aug. 22. 1 p. Typed, without signature on letterhead.
• ***Summary:*** Gives details on their work with tofu and tempeh. They do not yet have a recipe book nor do they vacuum pack their tempeh. They are, however, developing a nice label. They have contacted Raj Gupta of ProSoya by e-mail about soymilk equipment.

"The nutrition situation in this country and on all income levels is no good–from severe protein deficiency on the lower income rungs to fancy diseases for the rich. Developing soyfoods production here is most crucial, urgent, and possibly also a good investment!

"At a later stage, to avoid spreading ourselves too thin right now, we are interested in trying our hand at more fermentations such as Taucho, Miso, Soysauce. We are looking for more material to study." A copy of the recent article from *Citadel Pune* (full of errors) is attached. Address: Dakini Health Foods Pvt. Ltd., S.N. 33, Bhowasti, Keshavnagar, Mundhwa, Pune / Puna 411 036, India. Phone: +91 20-613985.

8112. Carmack, Robert. 1999. Soy sauce. *Australian Gourmet Traveller.* Aug. p. 78-83.
• ***Summary:*** Gives brief descriptions of the following types of soy sauce: Thick soy sauce, dark soy sauce, light or thin soy sauce, low-salt soy sauce, koikuchi, usukuchi, saishikomi, marudaizu, shiroshoyu [shiro shoyu], tamari. Most recipes contain meat. Address: Australia.

8113. Grogan, Bryanna Clark. 1999. Soyfoods cooking for a positive menopause. Summertown, Tennessee: Book Publishing Co. 192 p. Sept. Index. 23 cm. [31 + 49 websites ref]
• ***Summary:*** On the front cover: "Reduce the discomforts of menopause naturally. Lower your cholesterol. Reduce your risk of heart disease and cancer. Over 150 family pleasing recipes." Eating a diet rich in soyfoods may alleviate many of the discomforts of menopause.

Content: Introduction. Glossary. 1. The soy prescription. 2. Soy for strong bones and weight loss. 3. Preventing the number one killer of women-heart disease. 4. Can soy prevent cancer? 5. A soyfoods primer. 6. Baking and cooking with soyfoods. 7. Breakfast foods and beverages. 8. Condiments, sauces, dips, dressings, and spreads. 9. Appetizers, salads, and soups. 10. Lunch, supper, and side dishes. 11. Dinner entrees. 12. Desserts. Bibliography and websites. Sources for ingredients.

8114. Ontario Soybean Growers. 1999. Canadian soybeans (Ad). *Soya & Oilseed Bluebook* 2000. p. 104.
• ***Summary:*** This one-third page black-and-white ad states: "High quality, food grade soybeans for the production of tofu, miso, natto, soymilk, soy sprouts, soy sauce, tempeh and other soya products. Soybeans for the crush market. Identify preserved (I.P.)–Specialty soybeans. Organic and transitional soybeans. Container–Bag/bulk. Bulk vessel.

"Trusted, reliable, supplier of soybeans to the world for over 25 years.

"For more information or a list of suppliers contact Canadian Soybean Export Association." Address: P.O. Box 1199, Chatham, Ontario, Canada N7M 5L8. Phone: 519-352-7730.

8115. Iino, Ryoichi. 1999. The history of shoyu (Soy sauce) 1. *Food Culture* (*Kikkoman Inst. for International Food Culture, Noda, Japan*) No. 1. p. 12-15. Oct. 19. http://kiifc.kikkoman.co.jp. [14 ref]
• ***Summary:*** Contents: Shoyu (Soy sauce): The worldwide seasoning. Sho from China. The sho in *Qi Min Yao Shu*. Production of sho in Japan. Japanese sho, made from soybeans. Liquid or mash (moromi)? Sho for making pickles. Mash-style sho. Notes (14).

Note: "Born in Tokyo in 1938, Ryoichi Iino graduated from the department of English literature at Waseda University. He is also a graduate of the History-Geography program at Meiji University." Address: Food historian, and teacher of food history, Hattori Nutrition College, Japan.

8116. Egan, Jeanette Parsons. 1999. Soy! Soy! Soy! Enjoy

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soyfoods' benefits in delicious recipes. Tucson, Arizona: Fisher Books. xxx + 162 p. Oct. Illust. Index. 23 cm. Simply Healthy Series.

• ***Summary:*** This is a soyfoods cookbook. Contents: Dedication. Acknowledgments. Why I love soyfoods. Why eat soyfoods?, soy's health benefits, reduces heart disease, helps prevent cancer, soy for your bones (osteoporosis), to flash or not to flash (menopause), what about soyfoods allergies, how much soy should I eat? (soy protein, isoflavones), where to purchase soyfoods, how to add soy to your diet, important notes about eating soy. A soyfoods glossary. Black soybeans and yellow soybeans, green soybeans (edamame), meat alternatives or analogs, miso, soy cheeses, soy cream cheese, soy flour, soy grits, soy milk (soy beverages), soybean oil, soynuts, soynut butter (roasted soybean butter), soy protein concentrates, soy protein isolates, soy sauces (tamari, shoyu), soy yogurt, tempeh, textured soy protein (TSP), tofu. Appetizers. Soups. Salads. Main dishes. Side dishes. Breads. Breakfast dishes. Desserts. Mail order sources for soyfoods. Other sources.

Contains 8 full-page color photos showing recipes. This is not a vegetarian cookbook. Recipes call for the use of chicken (4 recipes), ground beef, ham, crab meat, etc.

8117. Fallon, Sally; Enig, Mary G. 1999. Nourishing traditions: The cookbook that challenges politically correct nutrition and the diet dictocrats. 2nd ed. Washington, DC: New Trends Publishing Inc. xvi + 668 p. Illust. by Marion Dearth. Subject index. Recipe index. Menu index. 26 cm. [200* ref]

• ***Summary:*** Contains over 700 recipes. Contents: Preface. Introduction. Politically correct nutrition, fats, carbohydrates, proteins, milk & milk products, vitamins, minerals, enzymes, salt, spices & additives, beverages, about food allergies and special diets, parting words, guide to food selection (nourishing traditional foods, compromise foods {such as tofu}, newfangled foods {such as soy protein isolates and commercial soy milk}), a word on equipment, kitchen tips & hints, references (188). Mastering the basics. Great beginnings. The main course. A catalog of vegetables. Luncheon and supper foods. Grains & legumes. Snacks and finger foods. Desserts. Beverages. Feeding babies. Tonics and superfoods. Appendixes (A-F). About the authors.

Some of the basic recommendations in this book fly in the face of modern nutritional science. Eat more meat. Eat dairy products made from raw milk, pasteurization harms the milk. The worst fats are *trans* fatty acids, produced by hydrogenation; cholesterol and saturated fats do not cause heart disease. Consume plenty of enzymes. Meat should be eaten raw, rare, or braised in stock. Moreover, the authors propose a conspiracy in which doctors, researchers, nutritionists, and spokesmen of various government agencies are giving bad nutritional advice to the American public (p. 2). The authors wish, sentimentally, for the return of the small American farm. Moreover, they do not examine some the non-dietary issues related to a diet based on meat and dairy products: What is its impact on the environment? How would it affect the ability of the Earth to feed more than 6 billion people? What right do humans have to kill animals?

However the authors also make a number of recommendations that many people would agree with: Eat more natural, traditional, fresh, and unrefined foods instead of refined and processed foods. Avoid sugar and hydrogenated fats. This book is strongly influenced by the observations of Dr. Weston Price, a dentist, whose important book *Nutrition and physical degeneration: A comparison of primitive and modern diets and their effects*, was published in 1939.

Concerning soyfoods, the authors favor the use of small amounts of fermented soyfoods (such as traditionally fermented soy sauce and miso) but are strongly opposed to the use of non-fermented soyfoods such as tofu and soymilk.

Soy-related recipes and information: Commercial soy formulas are low in saturated fats and devoid of cholesterol (p. 6). Today most of the fats in the American diet are polyunsaturated and derived from vegetable oils such as soy (p. 10). The cheapest oils, such as soy oil, are often hydrogenated, this creates *trans* fatty acids (p. 14-15). Cows lose valuable Activator X when fed high-protein soy-based feeds. Lecithin is found in butter (soy, the main source of lecithin worldwide, is not mentioned). Mother's milk is high in cholesterol because it is essential for growth and development (p. 16-17).

Omega-6 (bad) and omega-3 (good) fatty acids in soybean oil (p. 19). Fermented soy foods contain compounds that resemble vitamin B-12 but they are not absorbed by humans (p. 28). Isolated protein powders made from soy are usually obtained by a high-temperature process that over-denatures the proteins to such an extent that they become essentially useless, while increasing nitrates and other carcinogens. These isolated soy proteins can cause osteoporosis (p. 29).

Beef should not be fed soy meal for protein, but rather animal parts (p. 31). Avoid farm raised fish [aquaculture] that have been fed soy meal (p. 32). Cultured soybean products from Asia, such as natto and miso, are a good source of food enzymes if they are eaten unheated (p. 47). The natural glutamic acid in soy sauce and miso gives these foods their rich, meat-like taste (p. 49). Many processed foods contain MSG or hydrolyzed protein, "especially soy-based concoctions" (p. 50).

Heavily yeasted foods, such as soy sauce and Worcestershire sauce, often exacerbate the symptoms of chronic yeast [candida] infection (p. 56). Beans cause digestive problems because they contain two complex sugars, farrinose [sic, raffinose] and stachyose (p. 60). The macrobiotic diet and soybeans: Use only as fermented products like miso, natto, and tempeh. Problems with tofu.

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soy milk, and phytoestrogens in soy (p. 62). The sickening effect of soy on ruminants (p. 87). In Japan, a typical meal contains miso, soy sauce, and pickles, all fermented products. In Indonesia, they eat tempeh (p. 94).

Ode to naturally brewed tamari soy sauce and teriyaki sauce (p. 147). Soy products increase the body's need for vitamin B-12 (p. 164). Soy in Chinese history. Miso soup. Tofu in fish stock and soy sauce broth (p. 201). Macrobiotic diets (p. 343). Soy foods block zinc absorption (p. 348). Eat natural salmon; farm-raised salmon are fed inappropriate soy meal (p. 418). Problems with soy flour and modern soy products: phytates, antinutrients, omega-3 fatty acids, disagreeable taste, phytoestrogens, phytic acid, enzyme inhibitors (p. 477, 495).

Soybeans are low in two essential amino acids (p. 496). Textured soy protein contains three antinutrients: Phytic acid, trypsin inhibitors, and isoflavones (p. 502). Person fed soybean milk as an infant had a spleen filled with ceroid (p. 546). Infants should not be fed soy-based formulas which contain phytic acid and estrogen compounds (p. 599, 603-04).

Note: The first edition was apparently published in 1995 by ProMotion Publishing (San Diego, California). Address: California. Phone: (877) 707-1776.

8118. **Product Name:** SoyAct (Soy Isoflavones).
Manufacturer's Name: Kikkoman Corporation, Biochemicals Div.
Manufacturer's Address: 1204 Allanson Rd., Mundelein, IL 60060. Phone: 847-247-9319.
Date of Introduction: 1999, October.
Ingredients: Soy isoflavone aglycones (40%) and glucosides (60%).
Wt/Vol., Packaging, Price: Bulk.
How Stored: Shelf stable.
New Product–Documentation: Nutrition Business Journal. 1999, Oct/Nov, p. 5. Earlier in 1999 the Biochemicals Division of Kikkoman Corp. (Mundelein, Illinois) launched SoyAct, an isoflavone aglycone that contains genistein and daidzein. Kikkoman claims that its unique form of aglycone is more easily absorbed than the glucoside form of those isoflavones and has a higher antioxidant activity. SoyAct joins Novasoy (made by ADM) in competing for sales to the supplement and functional foods markets. Talk with Kikkoman Biochemicals Div. in Mundelein, Illinois, 1999, Dec. 8. This product was introduced in Oct. 1999. It is a white powder, packaged in bulk according to the customer's order. It contains 40% aglycones. It was developed in Japan, and is manufactured there.

8119. Great Eastern Sun. 1999. Pricelist. Effective November 15, 1999 [Mail order]. Asheville, North Carolina. 24 + 6 p. 28 cm.
• ***Summary:*** Contents: Catalog information. I Ching reading (hexagram #43), ordering, billing, shipping. Miso Master organic misos (traditional, mellow, sweet, miso tamari). Sweet cloud organic sweeteners. Haiku organic Japanese teas. One world organic classic teas. Mandala organic herbal teas. Organic planet pasta. Emerald Cove sea vegetables. Emperor's Kitchen condiments (Organic Oriental sauces, condiments in bottles, condiments in jars, condiments in bags, Japanese kitchenware). GES variety packs. Also sells coarse nigari in 44 lb or 440 lb lots. Address: 92 McIntosh Road, Asheville, North Carolina 28806. Phone: 704-252-3090.

8120. Pukel, Sandy. 1999. History of interest in macrobiotics, miso, and the Oak Feed Miso Co. Part II. 1975 to Aug. 1979 (Interview). *SoyaScan Notes*, Nov. 20. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Continued: Over the years Michio Kushi had talked about having a factory that made shoyu (natural Japanese-style soy sauce) in the United States. In about 1975, Sandy decided to do something about Michio's dream. He was increasingly an entrepreneur, but only in the sense that he liked to help make things happen. He still did not see himself as a businessman, in that he had little interest in money except insofar as it was important for making things happen. Oak Feed Co. was now a thriving enterprise. But why? "Because we didn't do it to make money, and because nobody took any money out of the company. So all the earnings were put back into the business. My job was to keep the philosophy going." Sandy's living expenses came from other investments. In the early 1970s, most young people Sandy knew who were interested in macrobiotics were dropouts with no money. He lived in a very nice house in Pinecrest (near Miami) and had the money he needed. In 1976 he began looking at the idea of a shoyu factory more seriously, but he soon realized that the complex equipment and buildings would make it too expensive.

Then John Belleme started coming to the macrobiotic cooking classes and other events at Sandy's house on 63rd Avenue. Though he came on his motorcycle, John had a "straight" job in electron microscopy at the Veterans Administration Hospital in Miami. Soon he was deeply interested in macrobiotics and wanted to learn more and more. So Sandy suggested that John go to Boston to study macrobiotics with Michio. John did that, moving into a Ken Burns' study house. He stayed for about a year, then went to Mexico with Frank Head, and finally returned to Miami.

He asked Sandy for a job at the Oak Feed Store, and Sandy said "Fine." He was a responsible and knowledgeable person. John soon became the store manager, while also taking macrobiotic cooking classes at Sandy's house, but he did not see his future in a retail food store, thus he wasn't very happy with the job–though he was a very good worker. John was more a creator than a manager, and he and Jan had become sweethearts–great people and good workers.

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Jan used to make delicious seitan there. One day in about late 1977 John went to Sandy and suggested they do some kind of a project together. One of the ideas that came out of their brainstorming session was starting a miso factory in America.

A new idea was born, and Sandy responded by making John a deal. If John would work in the Oak Feed Store, in retail, for a total of three years (1976-79), Sandy would take care of the money necessary for making a miso factory happen and he would pay John's expenses related to starting the factory, pay for John's trip to Japan to study traditional miso making, and pay for John's share of ownership in the new miso company–$25,000 in shares. John would be responsible for doing the research, learning how to make miso in Japan, etc. John accepted and began to manage the store.

In the fall of 1978 Sandy and John visited Michio in Boston to discuss the idea; Michio was very supportive, but he wanted the miso company to be in Massachusetts–perhaps on land at Becket or Ashburnham. Sandy didn't like the idea of Massachusetts–too much macrobiotic politics and the weather was too cold. Sandy put money from the Oak Feed Store into a separate account that John used to pay his miso-related expenses. Soon he began taking Japanese language lessons.

In 1977 Sandy started the Oak Feed Restaurant, and at about the same time Leon got married. These two events led to the three partners dividing up the properties of the communal LJZ Enterprises. Sandy ended up as the sole owner of the Oak Feed Store and his friends ended up with other businesses. Sandy took in partners in the restaurant, Michael Henry (a friend), and Wayne Neal and his wife. They invested and owned shares in the restaurant. Sandy got Yozo Masuda to be the chef at the restaurant. For many years Yozo had been the right-hand man of Hiroshi Hayashi at Sanae, an early macrobiotic restaurant in Boston. Sandy brought him and his whole family from Japan, and got him a green card so he could cook at the Oak Feed Restaurant.

1979 (early)–At some point, Sandy began looking for land for the miso company–using specifications related to the climate and temperature that John Belleme had given him. But he was also looking for land for another reason–the Oak Feed Land Project. This was Sandy's dream of a macrobiotic educational center where various people would build homes and apprentice with John at the miso plant, and where various macrobiotic retreats and workshops and a summer camp with classes could be held on the land. Sandy spent about two months looking at catalogs, talking to realtors, etc.

1979 Feb.–Oak Feed Miso, Inc. is incorporated. By this time two groups have formed and begun to discuss their potential ownership of shares in the miso company: The Oak Feed group and the Erewhon group. It was agreed that the company would be named the Erewhon Miso Company. In the Erewhon group were Michio and Aveline Kushi, Sendai Miso-Shoyu, and maybe Mr. Kazama of Mitoku. In the Oak feed group were Sandy and John Belleme. It was expected that the Japanese would play a very important role in this company; they would assist the Americans in making miso in the United States. Sandy recalls meeting only once with some representative of Sendai Miso-Shoyu, probably at some natural foods trade show. Michio had most of the contact with them. At about this time the first of many of drafts concerning ownership of shares was placed on the table. None of the drafts was ever signed.

1979 April–Barry Evans becomes a major investor in the miso company.

1979 summer–After extensive research, Sandy flies up to North Carolina (Asheville) alone, looks at several pieces of property that a real estate agent has suggested, finds exactly the piece of land and house he had been looking for, makes a deposit or down payment of $10,000 to $15,000, agrees to assume the mortgage of the previous owners at the Tryon National Bank, North Carolina, and flies home alone the same evening. The roughly 90-95 acres of land in Rutherfordton cost about $100,000 to $120,000. The mortgage payments were $500/month for 30 years. It was a lovely but very rural piece of property with rolling green hills. The Sears-style prefab 5-bedroom house on the property was basically thrown in free of charge. The land had become available because someone had died recently. With the new land and house, Sandy's Macrobiotic Foundation could do things that were impossible in metropolitan Florida.

1979 Aug. 7–Sandy closes / finalizes the purchase of the land for Oak Feed Miso in Rutherfordton, North Carolina. He and John Belleme both sign the closing documents. Now the new miso company would have to find the money to make the monthly mortgage payments, plus additional monthly payments to two officers of the bank totalling $23,000. Barry Evans' money was important in making these payments but it was not essential. The miso company definitely would have been able to pay for the land in Rutherfordton and send John and Jan to Japan without the money Barry invested at this time. The investments Barry made after construction of the factory began in mid-1980 and after Erewhon filed for bankruptcy were more important to the company's survival. Sandy put in the first money; Barry's came later. Sandy told John that if John took care of all the technical matters, Sandy would take care of all the financial matters to make the new company happen. Continued. Address: Owner, Oak Feed Store and Restaurant, 4500 S.W. 63 Ave., Miami, Florida 33133. Phone: 305-446-9036.

8121 Belleme, John. 1999. Update on American Miso Co. (Interview). *SoyaScan Notes*. Nov. 22. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** John has worked for years as a consultant for and vice-president of American Miso Co. John is also on the board of directors. Two days a week, he works closely with

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Greg Gonzales, who has become an excellent maker of koji and miso. Previously Greg had been a dancer from Southern California.

Today their first batch of good corn koji came out. They have been working out the process for six months. He and Greg used it to make a corn miso. Other people who have used corn in miso have used it in place of the soybeans together with a rice koji. As far as John knows, this is first miso made with corn koji. John also goes to Great Eastern Sun where he is developing new miso products, such as a freeze-dried miso soup–in three flavors.

John thinks the American Miso Company might now be the largest manufacturer of hand-made koji in the world; they produce about 600,000 pounds a year of 5-6 different types of koji which end up in 11 different types of miso. The koji types are: Short-term barley koji, long-term barley koji, mellow barley koji, brown rice koji, white rice koji, corn koji, and soybean koji.

Last year they made soybean miso experimentally for the first time–which was extremely difficult because the carbohydrate content of the soybeans is very low. The trick is to keep the soybean koji from being overrun by bacteria and turning into natto. The soybean miso is now aging.

About a year ago American Miso Co. started selling "miso tamari" in 5 oz and 10 oz bottles. Address: Honto Press, P.O. Box 457, Saluda, North Carolina 28773. Phone: 704-749-9537.

8122 Coleman, Joseph. 1999. A sauce fit for the emperor. *Times of India (The)* (*Bombay*), Nov. 24, p. 13.
• ***Summary:*** Describes the way Kikkoman makes soy sauce for the emperor at the Goyogura in Noda, Japan. Noda, a hamlet 35 km north of Tokyo, "has served as the center of Japanese soy sauce production for centuries." Address: Associated Press.

8123 South River Miso Co. 1999. Miso Happy–See You Tamari (T-shirt). South River Farm, Conway, MA 01341.
• ***Summary:*** This handsome T-shirt, made of 100% pre-shrunk, heavy weight cotton, comes three sizes (medium, large, extra-large), various colors (incl. deep plum, forest green, beige, black, brick red, and denim), and styles (short sleeve or long sleeve). On the front, in large uppercase letters, are the words "Miso Happy." On the back is written "See You Tamari." Below those words are the company logo and, in smaller letter, the words "South River Miso." These t-shirts are illustrated and described in the company's spring 2000 catalog (p. 2).

Talk with Robin of South River, 2000 March 20. This t-shirt was first available in Nov. 1999. An earlier version, first available in April 1998, had writing on the front only. Over the left breast was written "Miso Happy" and near that was the company's former logo. Address: Conway, Massachusetts.

8124 Israel, Cocavatiyah Baht. 1999. Re: Update on "Eternity" and Taste of Life vegetarian restaurants in Israel. Letters to William Shurtleff at Soyfoods Center, Dec. 12 and 10 Jan. 2000. 2 p. + 2 p. Handwritten, with signature. Plus leaflet. [1 ref. Eng; Heb]
• ***Summary:*** This group used to be known as "Eternity," an all vegetable ice cream parlor. Now they serve their vegetarian ice cream plus a menu "consisting of many various dishes (vegetable) that include tofu and the vegetable protein product seitan. We are vegan–no animal by-products, no artificial food coloring, no cholesterol. Kosher." They now have a second restaurant at Hakishon St. (across from Magen David), Tiberias, Israel. Phone: 06 671 2133. They also have a factory that produces the ice cream, tofu, and most of the take-out products and carob candies. The main dishes (entrees) and some vegetarian products are made in the restaurant daily. They make tofu at Nature's Gate Ltd., Mivne Taaseya Haradash 76, Box 029, Dimona, Israel 86000. Phone: 972-7-655-7774. Fax: 972-7-655-7769. In 1986 they started to make and sell tofu as tofu. They sell their tofu at about 30 different places outside their two restaurants. Nature's Gate Ltd. own the factory and L'Haiem owns the restaurants.

They also make their own soymilk at Nature's Gate Ltd. Presently they produce the soymilk only for their own use, but in the future they hope to expand.

Enclosed is a one page recipe in Hebrew and English. The 12 food categories are: Desserts (incl. 9 flavors of non-dairy ice cream), candies, beverages (incl. soya milk), dressings, salads, breads, breakfast (incl. tofu links, scrambled tofu), sandwiches (incl. tofu cheese, marinated tofu, okara sticks, tofu falafel, tofu burger, tofu vege burger, stir-fry with tofu, stir-fry with seitan), steamed vegetables, take away (take-out), main entrees (incl. tofu teriyaki, tofu with gravy, tofu medley), a la carte (incl. tofu medley). Address: 60 Ben Yehuda St., Tel Aviv, Israel. Phone: 03 620 3151.

8125 Jaffrey, Madhur. 1999. Holidays with spice girl Madhur Jaffrey. *Times of India (The)* (*Bombay*), Dec. 18, p. 13.
• ***Summary:*** The Sunday Times. A short but excellent biography of the well known actress, writer, cook, wife, mother, and grandmother–written in the first person. Jaffrey was born in Delhi and grew up India. She left India at age 19 to go to drama school in Britain, which is where her love of cooking began. After she married Indian actor Saeed Jaffrey, they lived in New York and took their young kids to Martha's Vineyard [an island south of Cape Cod, Massachusetts]–before the Kennedys started going there and it became fashionable. During the holidays, she likes to cook. She and her husband usually take a winter holiday to Italy, where she and several friends cook Tuscan dishes. "My Chinese friend

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brings her Chinese soy sauce and I bring my spices."

A portrait photo shows Madhur Jaffrey, smiling and looking very happy.

Note 1. She is the author of more than 25 cookery books, including *An Invitation to Indian Cooking* (1973) (James Beard Foundation Awards Cookbook Hall of Fame winner) and *Madhur Jaffrey's World of the East Vegetarian Cooking* (1981) (James Beard Foundation Awards winner)

Note 2. Wikipedia says of her (Jan. 2012) She was born Madhur Bahadur on 13 Aug. 1933 in New Delhi, India. She is an Indian actress and food writer who introduced the Western world to the many cuisines of India. She was educated at Miranda House (of the University of Delhi). After college, she worked for All India Radio. She then attended the Royal Academy of Dramatic Art, from which she graduated with honors in 1957. She then met and married Indian actor Saeed Jaffrey and moved to New York City. She and Saeed divorced in 1965. They have three daughters, Meera, Zia and Sakina Jaffrey. In 1969, she married Sanford Allen, a violinist with the New York Philharmonic Orchestra.

8126. Skiff, James. 1999. New Japanese law concerning labeling of foods made with genetically engineered ingredients (Interview). *SoyaScan Notes*. Dec. 22. Conducted by William Shurtleff of Soyfoods Center

• ***Summary:*** Jim is aware of this Japanese law, which was passed in Oct. 1999 but does not take effect until 1 April 2001. Jim Echle, head of the American Soybean Association office in Tokyo, told Jim about the law; Echle is extremely receptive to the needs of his Japanese customers, such as tofu makers. ASA is also getting more involved with issues involving identity preserved (IP) soybeans; they are organizing an IP conference on Jan. 17 in St. Louis, Missouri.

Skiff then faxes Shurtleff a provisional translation of the labeling guidelines, in the form of a 1-page table. The translation was done by ASA-Tokyo and sent to Skiff by Jim Echle. There are three columns: (1) Classification of food: A. Not equivalent to conventional foods with regard to composition, nutrients, or intended use. B. Equivalent to conventional foods, but modified DNA or protein produced therefrom remains after the manufacturing process. C. Equivalent to conventional foods, but modified DNA or protein produced therefrom is removed or decomposed and no longer exists in the in the final food. (2) Examples of the three types of foods: A. High oleic acid soybean oil. B. Tofu and tofu products, soybean sprouts, natto, soymilk, miso, soybean flour, roasted soybeans, corn, popcorn, potatoes, etc. C. Soy sauce, soybean oil, high fructose corn syrup. (3) Method of labeling: "Soybean (genetically modified), . . ." Address: US Soy, 2808 Thomason Dr., Mattoon, Illinois 61938. Phone: 217-235-1020.

8127. **Product Name:** Organic Veggie Bowl [Teriyaki Rice].
Manufacturer's Name: Cascadian Farm, Inc. (Marketer-Distributor).
Manufacturer's Address: Rockport, Washington 98283.
Date of Introduction: 1999.
Ingredients: Organic brown basmati rice, organic sauce (pineapple juice, water, organic soy sauce, organic sesame oil, organic sugar, organic rice vinegar, corn starch, garlic powder, spice, xanthan gum), organic peas, organic broccoli, organic baked tofu (organic soybeans, water, nigari, natural calcium sulfate, organic soy sauce, soy oil, spices, dehydrated garlic), organic carrots, organic mushrooms.
Wt/Vol., Packaging, Price: 9 oz tray in paperboard box. Retails for $3.69 at Safeway supermarket (1999/06, Lafayette, California).
How Stored: Frozen.
New Product–Documentation: Product with Label purchased at Safeway supermarket in Lafayette, California 1999. June 14. 6 by 5 by 1.75 inch paperboard box. Red, brown, green, and yellow on white a light orange. Cascadian Farm logo–"Since 1972." A color photo shows a dark orange bowl of the product. Front panel text: "A tasty entree with basmati rice, peas, baked tofu, broccoli, carrots and mushrooms in a teriyaki-ginger sauce. Microwavable."

8128. **Product Name:** Tonzu Organic Tofu [Teriyaki].
Manufacturer's Name: The Organic Soy Company, Ltd.
Manufacturer's Address: Unit A, 2 Corban Ave., Henderson, Waitakere City, Auckland 0612, New Zealand.
Date of Introduction: 1999.
Ingredients: Certified organic soybeans (guaranteed to be non-genetically modified), filtered water, natural coagulant nigari (511). Teriyaki flavour sachet: Fermented soy beans, sea salt, cider vinegar, honey, ginger, garlic.
Wt/Vol., Packaging, Price: 275 gm, vacuum packed inside paperboard box.
How Stored: Refrigerate at 4°C or less.
New Product–Documentation: Label sent by Elizabeth Chalmers, owner. 2007. Jan. 22. The product was introduced by this company in 1996, but it was first sold in this paperboard box in 2001. They started using the Tonzu brand name in 2002. Color photo of snowy mountains beyond a deep green valley, on deep blue background. Superb label design. GE [Genetically Engineered] Free logo. Certified Organic logo.

8129. Astuti, Mary. 1999. History of the development of tempeh. In: Sapuan, Noer Sutrisno, and Jonathan Agranoff, compilers and translator. 1999. The Complete Handbook of Tempe: The Unique Fermented Soyfood of Indonesia. Singapore: American Soybean Association. xiv + 186 p. See p. 2-15. [17 ref. Eng]

• ***Summary:*** A superb, landmark history of tempeh in Indonesia. The best seen to date! Contents: Introduction.

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The origin of soybeans in Indonesia. The origin of tempe. Origin of the tempe inoculum. Consumers and producers of tempe. The development of tempe processing technology. Development of tempe inoculum: Leaf inoculum, semi-pure powdered tempe inoculum, pure strain *Rhizopus oligosporus*. Conclusion.

The origin of soybeans in Indonesia: "The modern Indonesian name for soybean is *kedelai*, but according to Winstedt's (1960) dictionary, *kedelai* comes from the Tamil language in southern India. Similarly Wilkinson's (1955) dictionary cites *kedelai*, to mean soybean or mung bean (Tamil)."

"In Javanese literature, the word *kedelai*, (written as *kadele* in Javanese), was first recorded in the Serat Sri Tanjung manuscript, believed to have been written in the 12th or 13th centuries. The manuscript describes the story of Sri Tanjung, wife of Ki Sidapaksa. In the story, Sri Tanjung was accused of committing adultery and, to prove her innocence, she threw herself into the river, from whence rose a beautiful fragrance, proving her innocence. As a reminder, the place where Sri Tanjung lived was given the name Banyuwangi, which means 'fragrant water.' The Sri Tanjung Manuscript (*Serat Sri Tanjung*) represents a legend of the town of Banyuwangi, and includes the mention of soybeans as illustrated in the excerpt below (in ancient Javanese):" A 3-line excerpt, which includes the word "*kadele,*" is given.

"A rough translation of the above is as follows: "The dwelling place of the teachers and the hermits was very beautiful, as were the gardens that were planted with peanuts, taro and sugarcane, soybeans and beans. There were tubers and ivory bananas beside them and 'cintamani' sugarcane as well as 'gunting' bananas that were also laid out in rows."

The word for "soybeans" is also found "in the Serat Centhini manuscript. This manuscript tells the story of Tambangraras, daughter of the king of Giri (a region of East Java near Surabaya), who fled with her brother from Giri when it was threatened by the armies of Mataram under Sultan Agung Anyakraksuma in the 16th century. They traveled with their servant, Centhini, throughout Java. Tambangraras told stories of their experiences and observations on the philosophy and culture of the Javanese which were recorded by Centhini. These stories, or Serat Centhini are also known as Suluk Tambangraras (after the daughter of Sunan Giri) and contain highly detailed analyses of the Javanese people, now regarded as reference works for the basis of Javanese knowledge and culture. In these accounts, they describe not only the regional cultures they came across in different parts of Java, but also the wide range of different foods that they were presented with. Although very little information was documented about how these foods were prepared, the ingredients are described in detail. As skills are largely handed down from generation to generation in Javanese society rather than being formally written down, it would not have been usual for a detailed recipe to be described. The original manuscripts were transcribed by Ronggo Sutrasno of the Palace of Surakarta by the order of Sultan Amengkunagara III. It was quite common at the time for such stories to be recorded by royal families in different areas and this one was also transcribed into verse in the Javanese calendar year 1724, (1814 AD).

"The word for soybeans appears first in section two of the Serat Centhini. This section describes the travels of Cebolang, son of Seh Akadiyat, from Purbalingga to Mataram, stopping at the home of Ki Amongtrustha. Here he was served dinner that consisted of a selection of foods including soybean porridge. In Mataram, Cebolang also obtained information about a special offering that was prepared by parents about to marry off a child. One such ceremony, witnessed by Sriyanto was about the *kacar-kucur*. Kacar-kucur contained kawak beans and mature soybeans, yellow rice, aromatic flowers and shiny metal coins. According to this well preserved ceremony, soybeans had been used in the kacar-kucur for traditional ceremonial purposes for a long time. It also reveals that the savory rice dish *nasi udeg* cooked with coconut for serving with chicken, was also served with fried black soybeans. Black soybeans evidently have a deep significance in Javanese culture."

"Etymology may also hold a clue for us." In Chinese (Cantonese), beans are called *tau* or *tao*. Therefore, in Indonesia, many foods made from beans have names with the prefix *tau* (or *ta*) such as: (1) *tauci / taosi / tau-dji* (modern and former spellings) (salted black soybeans). (2) *tauco / taucho / tautjo* (Indonesian-style miso). (3) *taugé* (bean sprouts). (4) *taujiong / tau-jiong* (soybean jiang). (5) *tahu* (tofu, by shortening *tau-hu*). (6) *tahua* (a by-product of tofu similar to yogurt in consistency). (7) *takua* (firm spiced tofu). Another fermented Indonesian soybean product is *kecap / ketjap* (soy sauce) which is *ke tsiap* in its native China. Notice that tempe, whose name is not derived from Chinese, does not start with the prefix *tau / tao*.

"The origin of tempe. The earliest written record of the word *tempe* comes from the Serat Centhini manuscript, Chapter 3. The excerpt of the manuscript describes the journey of Mas Cebolang when he traveled between Prambanan temple and Pajang, via Tembayat in Klaten regency (in Central Java). Here, Cebolang was served a hefty lunch by the prince of Bayat, which is described in its entirety, to include: *jae santen tempe*, a dish of tempe in coconut cream, and *asem sambel lethokan*, the main ingredient of which is over-fermented *tempe lethokan*. *Sambel lethok*, also known as sambel *tumpang* is nowadays still frequently made by the Javanese.

"Tempe made from soybeans was again mentioned in the Serat Centhini in chapter 12, which describes the journey of Jayengresmi and his group at Bustam village. Here they were hosted by Ki Arsengbudi, who served them a banquet which included *Kadhele tempe srundengan*.

"From the descriptions of the travels through Java of

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the Giri children and Cebolang, plus the numerous banquets served by their hosts, it can be seen that soybeans and tempe only appeared in Central Java. This was in the region of Mataram which includes the villages of Mataram, Mbayat and Bustam. In West Java (Bogor) fish was largely served as it was also in Surabaya (East Java)."

Origin of tempe inoculum: "The method of making ragi tempe was first described by Widagdo in a local magazine called *Guru Desa* (The Village Teacher), published in 1915, from Kulon Progo. According to Widagdo, making ragi tempe was easier than making ragi tape, and that one had to use pre-existing ragi tempe to make more ragi tempe. How the first ragi tempeh came to be is still a mystery..." Continued. Address: Gadjah Mada Univ., Faculty of Agricultural Technology, Jalan Socio Yusticia, Bulaksumur, Yogyakarta, Indonesia.

8130. Bladholm, Linda. 1999. The Asian grocery store demystified: A food lover's guide to all the best ingredients. Los Angeles, California: Renaissance Books. 234 p. Foreword by Jonathan Eismann. Illust. Index. 23 x 13 cm. Series: A Take it With You Guide.

• ***Summary:*** An original, well-researched and well-written book–though some of the terminology (such as "beancurd") is outdated. Soyfood products include: Beancurd noodles (p. 38). Kinako (p. 47). Soy sauce, mushroom soy sauce, kecap manis (p. 53). Hoisin sauce (p. 54).

Chapter 10, titled "Soybean products" (p. 93-99) includes: Black bean sauce, dried soybeans, tempeh, beancurd (pressed beancurd, deep-fried beancurd, savory grilled beancurd {yaki-tofu}, freeze-dried beancurd [sic] {koyadofu}, bean curd sheets {fu pei, yuba, fu jook; the latter are "rolled-up, long, rumpled, cream-colored sticks of bean curd skin, bent in two"}), fermented beans (preserved black beans {fermented black beans, tau see}, bean sauce, toen-jang, chili/hot bean sauce, fermented beancurd), okara, edamame, soybean sprouts, soy milk.

Note: This is the earliest English-language document seen (March 2009) that uses the word "toen-jang" (or "toen jang") to refer to Korean-style soybean jang (miso).

Concerning preserved black beans: "Also called salted or fermented black beans or 'tau see,' this is made by steaming small black soybeans, then fermenting them with salt and spices. Used in a variety of dishes to add a pleasant rich aroma and salty taste... Crush or mash beans slightly to release more flavor or mix with garlic, fresh ginger, or chilies. Available in small glass jars, cans, and plastic bags. They should feel soft and not be dried out... Look for Pearl River Bridge brand labeled 'Yang Jiang Preserved Beans' in a 1-pound yellow canister, and Koon Chun Sauce Factory, Double Parrot, and Zu Miao Trademark brands all in 8-ounce bags." Note: This is the earliest English-language document seen (Nov. 2011) that uses the term "tau see" to refer to Chinese-style fermented black soybeans (preserved black beans).

Concerning bean sauce: "Varieties of this Asian staple include yellow bean sauce, brown bean sauce, bean paste (tau jeong), or sweet bean condiment. All are made from yellow or black soybeans, fermented with salt and in the sweet Northern Chinese type, with sugar-sweetened crushed yellow [soy] beans. Two forms are found: whole beans in a thick sauce and bean paste, which is mashed, ground or pureed beans. The whole bean type has a rounder flavor and adds texture, while the pastes are very salty and should be used sparingly... The yellow bean paste is tau cheo... Sold in glass jars and cans. Look for Koon Chun Sauce Factory, Kon Yick Wah Kee bean sauce, Amoy, or Yeo's.

Chapter 18, titled "Japanese food products" (p. 168-81) includes: Tsukemono (pickled in miso), miso paste, shiromiso, akamiso, mamemiso, natto, miso soup, noodle dipping sauce base (memmi), tamari sauce, teriyaki sauce, tonkatsu sauce.

Interesting non-soy products include: Sesame paste (p. 57). Satay sauce (with peanuts), gado-gado-dressing (p. 58). Peanut oil (p. 64). Sesame oil (p. 65). Amaranth (vegetable, p. 72). Winged beans (p. 76). Pickled wheat gluten (p. 108). Sesame seeds, peanuts, roasted peanuts (p. 118). Red/azuki beans, agar-agar (p. 121). Wheat gluten (p. 127). Sesame candy, peanut roll (p. 136). Sesame seed and peanut cookies (p. 137). Sweet red bean paste (azuki *an*, p. 139). Coix seed (Job's tears, p. 165). Japanese seaweed and kelp (p. 169-70). Umeboshi (p. 171). Fu (dried wheat gluten cakes), mochi (p. 177). Address: Writer, designer, illustrator and photographer, Miami Beach, Florida.

8131. Davidson, Alan. 1999. The Oxford companion to food. New York, NY and Oxford, England: Oxford University Press. xviii + 892 p. Illust. by Soun Vannithone. Index. 29 cm. [1500+* ref]

• ***Summary:*** The 2,650 alphabetical entries in this excellent encyclopedia and cornucopia represent 20 years of Davidson's work. The 175 illustrations by Laotian artist Soun Vannithone are superb. There are 39 longer entries about staple foods such as rice, noodles, and apples. A comprehensive bibliography provides access to further information. The book does not contain recipes.

Soy-related entries include: Bean sprouts (p. 64). Black beans, fermented (*chi*, p. 79). Kecap (Indonesian soy sauce, made "basically from soya beans and palm sugar only." "The word 'kecap' has passed into the English language as catchup or catsup and then as Ketchup, which now means something quite different." p. 429). Ketchup ("probably via the Malay word *kechap*, now spelled *kecap*, which means soy sauce. The word was brought back to Europe by Dutch traders who also brought the oriental sauce itself. The sauce has changed far more than has the word, although the name has appeared in a large number of variations such as catchup and catsup."

Tomato ketchup is now the best known and widely

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used–in fact almost the only ketchup left. Whereas tomato ketchup contains much sugar and vinegar, mushroom ketchup contains neither, and is basically a salted mushroom extract with a liquid, transparent consistency. The British food historian, C. Anne Wilson (1973), believes that mushroom ketchup was the first kind of ketchup in Britain; she argues that people used to pickle mushrooms, intending to use the mushrooms, but then started using the pickle too, and finally began using the pickle by itself.

"Oysters, mussels, walnuts, and many other ingredients have been used to make ketchup, and cold be blended with spices, garlic or onions, wines and spirits to vary the flavour" p. 430-31). Koji (p. 435). Lecithin (p. 447). Miso (p. 509). Natto (p. 530). Soybean (p. 739). Soy milk (p. 739-40). Soy sauce (p. 740). Tempe (or tempeh, p. 788). Tofu (p. 798-99), including plain tofu (doufu in Chinese), pressed tofu (*doufu-kan*, sic, *doufu-gan*), *wu-hsiang kan*, cotton tofu or momendofu, kinugoshi or silk tofu, sui-doufu, freeze-dried tofu [dried frozen tofu], smoked tofu. Cooked forms of tofu: Deep-fried tofu, doufu pok, cha-dofu, abura agé or deep-fried thin slices which can be opened to make Inari-zushi, ganmodoki or deep-fried tofu balls, yaki-dofu or tofu which has been grilled. Fermented tofu: The generic term is doufu-ru. The most popular type is white doufu-ru, and there is red doufu-ru, tsao-doufu, ch'ou doufu [chou doufu], chiang doufu. In the Philippines fermented tofu is called tausi [sic, tahuri, tahuli, tausi is fermented black soybeans] Miscellaneous: A specialty of Japan is *umesutsuke*, "tofu pickled in plum vinegar with a purple exterior." Note: As of Oct. 2011 not one hit / result for umesutsuke can be found on Google. Nor have we ever heard of such a Japanese tofu product.

Dofu nao (literally "bean brain") or smooth curds, yuba or "bean curd skin" or "tofu skin," okara or "presscake" (pulped skins of soya beans) (p. 798-99). Yuba (p. 860-61).

Also discusses: Alfalfa (p. 10). Almond (p. 12-13, incl. "almond milk"). Amaranth (p. 13). American cookbooks, history (p. 15-17). Azuki beans (p. 44-45). Barley, barley breads, and barley sugar (p. 58-60). Beef–BSE (mad cow disease, p. 68). Chia (p. 166). Cowpea (p. 230-31). Chufa (p. 185). English cookery books, history (p. 276-80). Five grains of China (p. 305). Gluten (p. 341). Groundnuts (or peanuts, p. 356-57). Hemp (p. 377-78). Hydrogenation (p. 391). Japanese culinary terms (p. 415-17). Kudzu (p. 437). Linseed (p. 454-55). Lupin (p. 463). Margarine (p. 478-79). Mung bean (p. 518). Nori (p. 534). Noodles of China (p. 537, incl. "Gan si {soya bean noodles}" and "Fen si {also fen-szu} {mung bean vermicelli}."). Oncom (p. 553-54). Quark (p. 644). Quinoa (p. 645). Seaweeds (incl. hijiki, kombu/konbu, nori, wakame, etc., p. 712). Sesame (p. 713). Shortening (p. 721-22). Sprouts (no listing). Tahini (p. 779). Toast (p. 797, incl. Melba toast). Ume and umeboshi (p. 817). Winged bean (p. 849).

The entry for "Fermentation" states that the two main reasons for subjecting a food to fermentation are: (1) To "convert it from a form that will not keep, such a milk, to one which will, such as cheese." (2) To "make foods which are indigestible in their original state, such as wheat or soya beans, digestible by turning them into products such as bread or tempe." Other benefits include improvements in flavour. Many do not realize that fermentation is part of the process of making coffee, cocoa, vanilla, and many kinds of sausage. A brief biography and nice portrait photo of Alan Davidson, a man of extraordinary knowledge in the world of food, appear on the rear dust jacket.

Note: The paperback edition of this book (2002) is titled *The Penguin companion to food*. Address: World's End, Chelsea, London, England.

8132. Klingel, Brigitta. 1999. Gesundheit fuer die Zellen–Soja-Lezithin [Health for the cells–Soya lecithin]. Munich, Germany: Suedwest Verlag GmbH. 96 p. Illust. (color photos). Subject index. Recipe index. 21 cm. [9 ref. Ger]
• ***Summary:*** A popular introduction to lecithin, with basic information about other soyfoods and vegetarian recipes. Contents: Lecithin–The multitalented. Soya lecithin. Help for the heart. Lecithin lowers blood cholesterol. Mental and bodily top fitness. Beauty thanks to lecithin. Soyfood products: Dry soybeans, soymilk, yuba, okara, tofu, tempeh, miso, soy sauce, soy sprouts. Recipes with lecithin. Address: Germany.

8133. Lwin, Claudia Saw. 1999. The food of Burma: authentic recipes from the land of the golden pagodas. Boston, Massachusetts: Periplus; North Clarendon, VT: [Distributed by] Tuttle Pub. 120 p. Introductory articles by Wendy Hutton, San Lwin and Win Pe. Illust. (color photos by Luca Invernizzi Tettoni). Index. 21 x 23 cm.
• ***Summary:*** Contains 75 recipes collected from all over Myanmar. A glossy, full-page photo is on every other page. The most populated "upcountry" region of Myanmar is the Shan Plateau. One of the main foods grown here is soya beans. The soups from this area are often "thickened with powdered soya bean. One example of this is a Shan version of Burmese noodles (*kyaukswe*), which is based on pork in a soup thickened with powdered soya bean..." (p. 12-13).

"The Shan tribes also make a fermented soya bean product similar to the Indonesian *tempe*, which is often dried, pounded and used as a seasoning" (p. 13).

"The soya bean, a native of China, appears in many guises in Myanmar: soy sauce, fermented soya beans (sometimes pressed into a cake and dried) and beancurd [tofu]." The Shan people also make a unique type of tofu from chickpeas. Sprouts are made from several types of beans, including soya beans and mung beans (p. 15).

In Part II, "Cooking in Myanmar," the section on "Burmese ingredients" has three soy-related entries (p. 35): "Soya bean cake (*pè bya*): Dried soya beans are steamed,

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fermented, and made into cakes or wafers, which are roasted or pounded to a powder. This powder is added to curries and soups, or mixed with tomatoes to make a dish similar to Myanmar curried *ngapi.*" A small color illustration shows soya bean cake. "Soy bean preserve (*pè ngapi*): Fermented soya beans are made into a paste and used as a condiment. Tinned soya bean paste is sold outside Myanmar and can sometimes be used as a substitute for the fermented soya bean products."

"Soy Sauce (*pe nganpya yay*):" Light and dark soy sauce are both used in Burmese recipes; the light sauce is saltier and paler in colour."

Soy related recipes: Khayanchinthee pantwepyaw (Tomato sauce, with "2 slices dried fermented soya bean cake, 7 cm (3 inches) in diameter," p. 37). Wether ahchochet (Pork balls cooked in sweet soya bean sauce, with "2 tablespoons sweet soya bean sauce," p. 96-97). Kailun gyaw (Stir-fried kailan, with "1 tablespoon light soy sauce," p. 108).

8134. Miyoshi, Motoharu. 1999. Kore de wakaru honmono mizu shio miso shôyu: mô damasarenai nani ga honmono nanoka sono kijun o zubari to shimeshita [This books enables you to understand real water, salt, miso and shoyu: No more being fooled. What is the real thing? This book shows the nature of real things very directly and truthfully]. Tokyo: Tsukiji Shokan. 122 p. 19 cm. [Jap]*
Address: Japan.

8135. Mowe, Rosalind, ed. 1999. Southeast Asian specialties: A culinary journey through Singapore, Malaysia, and Indonesia. Cologne, Germany: Culinaria Koenemann. 319 p. Illust. (color photos by Günter Beer). Index. 26 x 22 cm.
• ***Summary:*** Translated from the German. Includes headings in Chinese. This book is a feast for the eyes, printed on glossy paper with informative color photos on almost ever page. The structure and content are also creative and very interesting, it has caught the heart and spirit and nuances of the culture. On some pages, however, the type is too small to read. The name of most recipes and ingredients is given in their native language. A 2-page map of Southeast Asia appears near the front. The basic structure: Singapore (p. 12-109). Malaysia (p. 110-215). Indonesia (p. 216-301). Glossary (p. 302-04). Introduction to Chinese nutritional theory, by Andrea Fülling (p. 305-06): Introduction, yin and yang, the three warmers, the warming effect of foods (the five energy states are hot, warm, neutral, refreshing, and cold), the five elements. Acknowledgements. Photo credits. Index.

The contents includes: Healing herbs (p. 26-29). Soup as medicine (p. 30-33). Soybean (in Singapore, p. 40-47). Introduction (familiar forms are sprouts, soy sauce, beancurd, tempeh; new disguises are "vegetable protein," emulsifier," "lecithin," "vegetable oil" which are found in dairy products, canned fish, candies, desserts, and much more), in the West soybeans are "often grown as monocultures, with the disadvantages that this entails, such as the use of chemical fertilizers and pesticides," and genetically engineered soybeans, great nutritional value yet rarely used as whole dry soybeans, most of the harvest in SE Asia is processed into beancurd and tempeh, importance of fermentation, soy milk resembles cow's milk and is an excellent substitute, soy sauce is used throughout this cuisine. Photo of green soybean plants with green pods.

Soybean sprouts: "Black soybeans are imported from Thailand and Myanmar (Burma)." After washing, the beans are spread out in deep baskets and kept in the dark for 6 days. "Before the baskets of sprouts can be sold, the top layer if green leaves is trimmed off. They are used as feed for chickens and ducks. One basket yields 154 lb (70 kg) and the output of a medium-sized business is 60 baskets a day." Soybean "sprouts should never be eaten raw, nor should they be cooked for too long." Mung bean sprouts are better know than soy sprouts, but both can be bought fresh.

Dou ban jiang ("Salted soya bean sauce." Photo of jar and Sinsin label). Dou chi ("Black bean sauce." Photo of jar and Sinsin label). Note 1. Typically Dou chi are named "Salted black beans." Photo of five glasses showing how dry soybeans are transformed into soymilk, then curds.

Tofu: Meat from the fields (p. 42-44). The best tofu is made from special types of soybeans that are different from those that are crushed to make oil and meal. Most of the tofu in Singapore is made from soybeans imported from Canada. Describes the basic process for making commercial pressed tofu or soft tofu, with 7 photos showing the steps. Implies that making yuba is part of the process for making tofu; it "is eventually sold as dried beancurd sticks (*fu chok*).

Soy milk products: Fu pei–dried tofu skin [yuba]. Fu chok–dried tofu sticks [dried yuba sticks]. Tim chok–sweet tofu pieces [sic, sweet dried yuba / ama-yuba].

Note 2. This is the earliest English-language document seen (Feb. 2012) that uses the term "Tim chok" to refer to sweet dried yuba, or that uses the term "dried tofu sticks" to refer to dried yuba sticks.

Tofu fa–soft tofu as a dessert [tofu curds]; a little tapioca flour may be added. "Served warm or cold with a syrup flavored with almond extract." Color photo shows yellow yuba atop hot soymilk, and a woman removing a slab pressed tofu from its mold.

Tofu recipes for every taste (p. 44-45): "Tofu on its own is rather bland in taste, but this is precisely its strength, since when it is combined with different ingredients and condiments it tastes new and different every time. Recipes: Niang dou fu (Fried beancurd pockets). Xia ren dou fu (Stir-fried beancurd with jumbo shrimp). Hong shao dou fu (Braised beancurd). Sui rou zheng dou fu (Steamed soft beancurd with ground pork). Dou hua (Sweet beancurd

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dessert). Zha fu pi juan (fried beancurd skin [yuba] roll). Color photos show the 2nd and last recipes.

Soy sauce (p. 46-47): A naturally fermented product made with mold cultures of *Aspergillus oryzae*. Describes the process for both light and dark soy sauce; the koji is made in shallow round trays, ready after 4 days. It is "then transferred into fiberglass tanks [or earthenware jars], covered with brine, and left to ferment for 3 months," after which the 1st extraction of crude soy sauce takes place [but not through pressure]. More brine is added and a second extraction takes place 1 month later; this process is repeated for the third extraction. "At this point, the paths of the different soy sauces diverge." The saltier, light-colored soy sauce is mixed with a preservative, pasteurized, "and stored in tanks to clarify before bottling." The dark soy sauce is mixed with both a preservative and caramel coloring, is allowed to mature for an additional 4 weeks, then is pasteurized and bottled. Note 3: What happens to the 2nd and third extractions? Color photos show five steps in the process, but a traditional earthenware vat is shown instead of the fiberglass tanks. Dark soy sauce is thicker than light. Recipes: Jiang you ji (Chicken in soy sauce, with marinade). Hong shao niu nan (Braised shoulder of beef).

Oyster sauce (contains no soy). Sesame oil (p. 49, with 7 photos).

Condiments (p. 50-51): Color photos show the front and label of 15 separate jars and bottles with a substantial description under each. Those containing soy are: Hoisin sauce. Dou chi (Fermented bean dried). Dou ban jiang (Tou cheong). Fu ru (Beancurd preserved). Jang qing (light soy sauce). Hei jiang you (Dark soy sauce). Tian jiang (Sweet sauce).

Peking duck (p. 62-65; soybean paste {no Chinese name is given} and Hoisin sauce are ingredients in the sauce). One key is the crisp skin. It is served in thin Mandarin pancakes.

Suckling pig (p. 86-87): Piglets are bred in Hunan province. Slaughtered at the age of 3-4 months. After a dead piglet has been patted dry, it is brushed with soy sauce, then coated with a marinade that includes fermented red bean curd and light soy sauce. As with Peking Duck, suckling pig is prized for its crisp, tasty skin. Six photos show the skewered baby pig.

Symbolic foods (p. 98-101). One of these is Moon Cakes from the mid-autumn festival (15th day of the 8th lunar month). "Traditional fillings include sweet black bean or lotus paste." Is the sweet black bean filling made from soy beans?

Instant cup noodles [instant ramen] (p. 48): Note 4: Wikipedia says at Momofuku Ando. ORS [Order of the Rising Sun], (lived March 5, 1910–Jan. 5, 2007) was the Taiwanese-Japanese businessman who founded Nissin Food Products Co., Ltd. He is famed as the inventor of instant noodles and cup noodles, which he launched on 25 Aug 1958 (at age 48) under the name Chikin Ramen–after months of trial and error experimentation to perfect his flash-frying method. On 18 Sept. 1981 he launched his most famous product, Cup Noodle.

Beansprouts (p. 154-57): With a long introduction, a description of the process, beautiful photos, and recipes: Taugeh goreng kucai (Fried beansprouts with chives). Taugeh masak kerang (Fried beansprouts with baby clams). Tahu goreng (Fried tofu with beansprouts). Bihun goreng (Fried rice noodles). Urap taugeh (Fried beansprouts with grated coconut).

Nasi tumpeng (rice cone) (p. 220). Served with sambal goreng tempe (crisp-fried marinated strips of tempeh). Gudeg (rice with green jackfruit cooked in a sweet sauce, p. 221) is served with a side dish of tahu goreng bacem (tofu cooked with spices, then fried).

Tempeh (p. 228-29), soybeans fermented with *Rhizopus oligosporus* mold. Indonesians consume more tempeh than tofu. The process is described, with 4 color photos. Recipe: Tempe goreng (fried tempeh).

Glossary (p. 302-04) includes: Fermentation. Soy sauce ("Probably the best-known Asian seasoning agent. ") Sticky rice (also known as glutinous rice). Tahu (Indonesian; tofu). Tempeh. Tofu (beancurd, incl. hard, soft, and smoked).

8136. Togano, Meijiro. 1999. Saishin shôyu jôzô-ron [Principles of modern shoyu brewing. 3 vols.]. Tokyo: Ryûkei Shosha. Illust. 22 cm. Series: Meiji Kôki Sangyô Hattatsushi Shiryô, Nos. 459-461. [Jap]*

• ***Summary:*** This is a modern edition of his classic, first published in 1913 and 1914.

8137. Wild Oats Community Market; Alfalfa's Markets. 2000. The joy of soy: Resolve to evolve. This millennium, pick up a good habit. Your guide to soyfoods–True health food. Colorado. 8 panels. [10 ref]

• ***Summary:*** This is a chain store newspaper (published from time to time, copyrighted 1998), with this issue devoted to soyfoods. It contains ads for many soy products sold at the store, many of them on sale. "Soy strategy: 3 New Year's resolutions. 1. Get healthy. 2. Lose weight / cut down on bad fats. 3. Help protect the environment.

A sidebar titled "Cool beans! Top ten reasons to enjoy soy" states: "1. Soy protein helps reduce cholesterol levels, thereby reducing the risk of coronary heart disease, which accounts for more than 500,000 deaths in the U.S. per year.

"2. The soybean is the only vegetable to offer a complete protein profile, equal to both meat and eggs in its protein content.

"3. As a complete protein, soy contains all nine essential amino acids. (The human body needs twenty amino acids, only eleven of which are produced by our bodies).

"4. Soybeans are higher in essential, healthful fats than most vegetable foods.

"5. Soybeans are a good source of several vitamins and

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minerals, including calcium, zinc, copper, magnesium, iron and many of the B vitamins.

"6. One acre of soybeans provides about 30 times more protein than one acre devoted to raising beef.

"7. Soy is also the richest dietary source of isoflavones, which act as phytoestrogens that may help protect against cancer, osteoporosis and menopause.

"8. Soy may increase bone density and reduce the risk of osteoporosis.

"9. Soy may reduce menopausal hot flashes in women–good news for those women who do not wish to take hormone replacement therapy.

"10. Other heart-healthy benefits of soy include low saturated fat, high calcium content, high essential fatty acid (EFA) content, high vitamin E content and no cholesterol."

There are definitions of and information about: Miso, shoyu, tamari, tofu, tempeh, soy milk, soy yogurt, soy cheese, soy desserts, soy oil, soy flour, texturized soy protein, soy grits, soy nuts, edamame (soy in the pod), and meat alternatives.

8138. **Product Name:** Senbei (Rice Crackers) [Soy, Original (Lightly Salted), and Sun Dried Tomato].
Manufacturer's Name: Masuya Naturally (Importer). Made in Japan.
Manufacturer's Address: 730-999 Canada Place, Vancouver, BC, V6C 3E1. Phone: (604) 844-1913.
Date of Introduction: 2000, January.
Ingredients: Incl. glutinous rice flour and soy sauce.
How Stored: Shelf stable.
New Product–Documentation: Card sent by Patricia Smith from Natural Products Expo, Anaheim, 2000 March 27. This postcard advertises Masuya's senbei. On the front is a color illustration of the Buddhist monk Kobo Daishi (St. Kobo) kneeling by a long rectangular hibachi (*naga-hibachi*) and baking rice senbei using the ancient Japanese method. The back notes that Masuya sells three varieties of senbei and gives the company's address, phone, and website.

Talk with Brian R. Elliot at Masuya in Canada, 2000, March 31. This product was introduced in North America in Jan. 2000. It is made in Mie prefecture, Japan and packed in 4 oz foil bags for freshness. The company plans to switch from shoyu to tamari so that the product is free of wheat and gluten.

8139. Purvis, Kathleen. 2000. Say soy! New foods and drinks keep sprouting from these magic beans. *Post-Dispatch* (*St. Louis, Missouri*), Feb. 14.
• ***Summary:*** Perhaps the tastiest form of soy is edamame. These green soybeans, boiled, salted, and served chilled, are the "latest craze in the chi-chi ["chic"] cocktail set." In Japan they are served as snacks with beer or sake.

In the six months before June 1999, sales of soyfoods have grown 34.4%, according to data from SPINS. Sue Havala notes that soymilk is now available at mainstream food stores / supermarkets. A full-page color photo shows bright green edamame, with the pods both opened and closed. Contains four recipes and a glossary of the following: Green soybeans, soymilk, soy flour, soy nuts, canned soybeans, soynut butter, miso, tofu, tempeh, soy sauce. Address: Knight Ridder Newspapers.

8140. Bittman, Mark. 2000. Faster than you can say soup. The minimalist. *New York Times*, March 29, p. F3, or p. B12 (National ed.).
• ***Summary:*** "It would be hard to find a more powerfully complex natural convenience food than miso." Miso, which is more intense than soy sauce, but not saltier, can be used to make dressings and sauces, or toppings for tofu. "But miso's most amazing feat is turning a cup of hot water into soup in about 30 seconds." Contains a recipe for "Nearly instant miso soup," with tofu, carrots and scallions.

8141. Edward & Sons. 2000. A new look and a new variety! Organic vegan. Premier Japan (Sell sheet). Carpenteria, California. 1 p. Single sided.
• ***Summary:*** Shows the front label of four organic bottled sauces: Garlic Tamari, Ginger Tamari, Wasabi Tamari, and Thai Soynut. The first three are 5 oz, the last is 10 oz. On each is a vegan logo. Address: P.O. Box 1326, Carpinteria, California 93014. Phone: 805-684-8500.

8142. **Product Name:** Soy Deli Baked Tofu [Teriyaki, Hickory, Honey Sesame].
Manufacturer's Name: Quong Hop & Co.
Manufacturer's Address: 171 Beacon St., South San Francisco, CA 94080. Phone: 650-553-9900.
Date of Introduction: 2000, March.
Wt/Vol., Packaging, Price: 6 oz.
How Stored: Refrigerated.
New Product–Documentation: Leaflet (glossy, color, two-sided) from Natural Products Expo (Anaheim, California), 2000, March. "The Soy Deli–Hand crafted by tofumasters since 1906." The front shows the labels of 20 Soy Deli brand products made by Quong Hop & Co., including five types of baked tofu. The back gives product specifications for each. Each product is organic.

8143. **Product Name:** Japanese Miso Dressing, Sesame Soy Dressing, Teriyaki Sauce.
Manufacturer's Name: Red Shell Foods Inc. (Marketer-Distributor).
Manufacturer's Address: 825 Baldwin Park Blvd., City of Industry, CA 91746. Phone: 1-800-40-Salad.
Date of Introduction: 2000, March.
Ingredients: Miso dressing: Soy bean oil, rice vinegar, soy bean paste (soy beans, rice, salt), white wine vinegar, sugar, etc.

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Wt/Vol., Packaging, Price: -
How Stored: -
Nutrition: -
New Product–Documentation: Sell sheet sent by Patricia Smith from Natural Products Expo, Anaheim 2000. March.

8144. Seapoint Farms (Formerly Seaside Farms). 2000. The wonder veggie (Leaflet). Huntington Beach, CA 92648. 1 p. Front and back. 28 cm.

• ***Summary:*** Two different glossy color leaflets with this title were distributed at the Natural Products Expo in Anaheim, California, March 2000. The front of this one shows the label of four new frozen Edamame Rice Bowl products: Vegetable Fried Rice, Kung Pao Vegetable, Teriyaki Vegetable, and Szechwan Vegetable. Each 12 oz pack contains green vegetable soybeans mixed with other vegetables and original sauces. Seapoint Farms has trademarked the phrase "The wonder veggie." In the center of each front label is a circle in a square with a large red heart at the center. On the heart is written "Heart Healthy." Around the circle is written: "The Wonder Veggie" and "100% Vegetarian." For questions call (888) 722-7098. Across the bottom of the ad is the FDA health claim for soy protein. One serving of each products contains 7.25 gm of soy protein. The back contains nutrition facts, ingredients, and other information about each of these four edamame products.

The front of this leaflet, "The Wonder Veggie" appeared later as an ad in *Natural Foods Merchandiser*. May. p. 48. Address: Huntington Beach, California 92648. Phone: 1-888-722-7098.

8145. Stephens, Roger; Stephens, Jane Ade, ed. and comp. 2000. Soyfoods guide 2000. Helpful tips and information for using soyfoods. Indianapolis, Indiana: Stevens & Associates, Inc. Distributed by the Soy Protein Partners. 24 p. Illust. No index. 28 cm. [23 ref]

• ***Summary:*** This guide is available only on a limited basis to dietitians and health professionals. Contents: Health: Add soy to diet to reduce heart disease (FDA recommends 25 grams of soy protein a day to reduce blood cholesterol levels), sample day soy meal planner (easy ways to add 25 grams of soy protein). Daily soyfood guide pyramid. Soy and your health–Scientists are learning about soy's health benefits. Isoflavones, heart disease, menopause & osteoporosis, cancer, allergies, diabetes & kidney disease, fat. Soyfood Descriptions: Meet the bean: Green vegetable soybeans (edamame), hydrolyzed vegetable protein (HVP), infant formulas, soy-based, lecithin, meat alternatives (meat analogs), miso, natto, nondairy soy frozen desserts, soy cheese, soy fiber (okara, soy bran, soy isolate fiber), soy flour (50% protein), soy grits, soy protein concentrate, soy protein isolate (isolated soy protein, 90% protein), soy protein, textured (flour or concentrate), soy sauce (tamari, shoyu, teriyaki), soy yogurt, soybeans, soymilk, soy beverages, soynut butter, soynuts, soybean oil & products, sprouts (soy), tamari (see soy sauce), tempeh, Teriyaki sauce (see soy sauce), tofu & tofu products, whipped toppings, soy-based, yuba. Helpful charts: Soyfood substitutions, soyfood isoflavone content. Soyfoods web site. Soyfood composition. Recipes using: Meat alternatives: textured soy protein, whole soybeans, soy flour, soynut butter, soymilk, tofu. Address: 4816 North Pennsylvania Street, Indianapolis, Indiana 46205. Phone: 317-926-6272.

8146. Chen, Ingfei. 2000. Diet wisdom from the East: New research confirms it. The simple, mouthwatering meals that Asians have eaten for centuries hold disease-fighting secrets that we should all take to heart. ***Health***. April. p. 126-31, 177-78.

• ***Summary:*** With recipes by Nina Simonds. Photos by Brooke Slezak. Nina, age 47, lives in a cozy brick home in Salem, Massachusetts. An author and expert on Asian cuisine, she has just prepared a small feast for her husband and a few guests. Walter Willett, head of the nutrition department at the Harvard School of Public Health, is "nibbling on boiled *edamame*, or soybeans. Nina's passion is the health benefits of Asian cuisines, which use less meat, more veggies, and less artery-clogging fat–with meals that are quick, simple, and delicious. These health benefits of an "almost-vegetarian" diet are being proven by the Cornell-Oxford-China study, directed by T. Colin Campbell, with vital assistance from Chen Junshi, a nutritionist from Beijing. They conducted huge studies in 1983 and 1989. The first study showed that the Chinese get only 15% of their calories from fat, compared with 34% in America. Moreover, the Chinese consume three times as much fiber and a third less protein. But 89% of their protein is from plant sources, whereas 70% of U.S. protein is from animal sources other than fish–such as meat, poultry, eggs, and dairy products. The conclusion: Americans out to be eating more plant foods.

In 1994 Willett and his colleagues at Harvard teamed up with the Oldways Preservation and exchange trust in Boston to introduce the traditional Mediterranean diet pyramid. A year letter, in 1995, a rival Asian diet pyramid based largely on Campbell's work, made its debut. They agree on several key points: Eat plenty of grains (ideally whole grains) and veggies, and cut way back on red meat.

Nina Simonds, hoping to ease her passage through perimenopause, has been adding "extra tofu and soy" to her meals. Soy-related recipes include: Wild mushrooms with ginger-soy dressing [with soy sauce]. Photos show: (1) Nina Simonds smiling. (2) Walter Willett nibbling on edamame. (3) A close-up of edamame in the pods.

A sidebar titled "Foods for lifelong health: From the Asian pantry" (p. 129) discusses the importance of balancing the body's yin and yang. One part states: "Soy–Ancient wisdom: Fermented black soybeans are used to treat lung and

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digestive problems. Tofu is said to boost energy, lubricate the intestines, detoxify the body," and prevent vomiting, intoxication, and high blood pressure. Modern research shows that soy protein can lower high blood cholesterol levels. Generous servings of isoflavone-rich soy may partly explain why prostate and breast cancer rates are so low in Asia. These isoflavones also appear to bolster bone density and may ease menopausal symptoms.

8147. Jonas, Steven; Gordon, Sandra J. 2000. 30 secrets of the world's healthiest cuisines: Global eating tips and recipes from China, France, Japan, the Mediterranean, Africa, and Scandinavia. New York, Chichester, Weinheim, Brisbane, Singapore, Toronto: John Wiley & Sons, Inc. ix + 261 p. Index. 24 cm. [80* ref]
• ***Summary:*** This book contains numerous recipes for beef, pork, lamb, chicken, shrimp, salmon, and other meats. Soy-related recipes and topics include: Isoflavones (p. 77, 85-86). Miso (p. 83-84, 86, 186). Soy sauce (p. 36, 51-52, 85, 138). Soyfoods (p. 37, 77, 103, 137). Soyfoods in Japan (p. 83-86). Tofu (p. 83-86, 137). Tofu recipes (150, 173, 182, 185, 188). Vegetarian eating (p. 44-45, 106). Vegetarian recipes (p. 181-97).

Dr. Steven Jonas is a veteran triathlete, a certified professional ski instructor, and a longtime author of books on healthy eating and exercise (he has written 8 books of his own). Address: 1. Prof. of Preventive Medicine, State Univ. of New York, Stony Brook; 2. Freelance health and nutrition writer, Weston, Connecticut.

8148. *Vegetarian Times*.2000. Glossary. April. p. 119
• ***Summary:*** Five of the seven entries are for soyfoods: Hoisin sauce, edamame, miso, tempeh, and tofu. The pronunciation of each is given.

8149. Fort, Matthew. 2000. Braised or roasted, sir: France is shocked by the news that a man has been caught eating his dogs. But why are we so horrified by the idea of cooking our pets? *Guardian (England)*. May 26. p. A6.
• ***Summary:*** Earlier this week a man in France was fined £300 for eating an unknown number of dogs in his care. Unfortunately, we were told nothing about how he cooked them.

"Did he, for example, braise them with soy sauce, sugar, fermented bean curd, dried bean curd [probably *doufu-gan*, which is pressed tofu], water and white wine to make the classic Chinese dish of *hon tsao go zo* (red cooked dog)? Or did he favor the Hawaiian style spatchcocking them and grilling them on the barbecue with sweet potatoes?"

8150. Jacobi, Dana. 2000. The joy of soy: 75 delicious ways to enjoy nature's miracle food. Roseville, California: Prima Publishing. xii + 244 p. May. Illust. Index. 22 cm. Series: The natural kitchen. [16 ref]
• ***Summary:*** This is basically a reprint of Dana's 1996 book titled *Soy! 75 Delicious Ways to Enjoy Nature's Miracle Food*, also published by Prima Publishing. It contains no new text and no new recipes; a few small errors have been corrected and the design of both covers and the title page is new. Address: Food writer, New York, NY.

8151. Carpenter, Joseph. 2000. Living in Boston and on the Oak Feed Miso Co. land in Rutherfordton, North Carolina from 1979 to 1980. Part I (Interview). *SoyaScan Notes*. June 2. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Joseph was born on 5 Aug. 1948 in Oakland, California, at Providence Hospital. He lived with his family in Berkeley until he was age 10, his father, who was a carpenter by trade, died in 1954, when he was still a boy. He and his mother then moved to nearby El Sobrante (by the back gate of De Anza High School–where he graduated from high school). He attended Contra Costa Junior College for two years, moved up to Sonoma State for a year, then dropped out. At age 19-20 (1967-68), he took off to see the world. As a young man, he became a skilled carpenter, learning by doing. Several of the men he worked with were good teachers.

A hippie during the 1960s, he met Patricia Roberts who was born in March 1947 in Queens, New York, and grew up in Rockaway Beach in Queens. Her father was a New York City police officer and detective for 20-25 years. Her parents retired to Florida in the late 1960s or early 1970s. When the kids were at home, they lived in a nice big home at Whitehouse Point, after the kids were gone, they moved to Deerfield Beach. Soon after meeting Patricia, Joseph stopped using psychedelics drugs and alcohol. They picked apples together in Hood River, Oregon, and lived in an old picker's camp. Having been overweight, he lost about 80 pounds in less than 6 months–and felt great. He and Patricia and a girl friend of hers migrated to Tucson, Arizona, where they were planning to pick oranges for the winter. While looking for a place to stay, they came across a macrobiotic bakery, The Granary, run by Jack Garvey. That was their first introduction to macrobiotics. Because of their largely raw food diet, they were somewhat resistant at first, but soon became friends and students of Jack's. In 1973 Joseph and Patricia were married in Arkansas.

1977 Feb.–Joseph arrives in Boston from Northern California, he is very sure of this date. He met Charlie Kendall (a maker of traditional natto, amazake, and mochi), who had just bought a house in Brookline by the railroad tracks; Joseph helped him extensively remodel that building. Charlie's wife, Yoko, was Aveline's sister. Joseph soon became friends with Bill Painter, who was a house painter by trade and also had a small shop in the basement of the Kushi's house. Before long Joseph was working as a carpenter with Bill Eggloff, building a handsome grain bin for Erewhon's retail store on Newbury Street. Using

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red oak and Plexiglas, they worked on it in the basement, which had a garage door that opened onto the alley behind the store. Bill, who lived on Cape Cod, stopped working for Erewhon when the bin was finished. But the store needed more fixtures, so Joseph made a bid, signed a contract, then installed new check-out stands, new shelves, and units to hold the crocks of bulk tamari, barley malt, etc. Joseph had a family to support, and carpentry was his livelihood, so he was paid for all work he did in the Boston area. Later, over 4-day weekend, he worked to tear out old bathrooms and office spaces to open up the cramped front of the Erewhon store. He also did some work on a new Erewhon store in Brookline. After Erewhon moved out of their old 4-story brick warehouse, he worked on the huge modern warehouse that Erewhon moved into. The Kushi's house on 62 Buckminster Road had been the headmaster's house for a private school. Upstairs there was an institutional bathroom. Aveline asked Joseph to remodel it to make a private bathroom–with lots of tile. After about a year of working for the macrobiotic community (always for pay), Joseph got "burned out" and went to work for a regular contractor unconnected to macrobiotics.

1977 Christmas–Joseph and Patricia go to Florida for Christmas, one of many trips they took there. In early 1978 Joseph worked as a carpenter for several months in Sandy Pukel's Oak Feed Restaurant in Coconut Grove, Florida. He had gotten to known Sandy because his wife, Patricia, and Sandy were close friends, they had first met when they both went to a seminar Michio Kushi gave in Coconut Grove. After the restaurant opened, in about May 1978, Joseph and Patricia took a vacation to Jamaica. During the summer and fall of 1978 Sandy came to Boston several times. Each time he and Patricia and Joseph went out to dinner together. Sandy mentioned that he was thinking of starting a miso company and asked if they might be interested in getting involved. They expressed interest, but no definite plans or offers were made.

1979 Feb.–Joseph's second child, Benjamin, is born in Boston to his wife Patricia. The Carpenters took many trips to Florida, especially during the winter, to visit Patricia's parents. In about March 1979, over a long weekend, when Patricia and their two children were vacationing in Florida (visiting her parents), Sandy Pukel paid for Joseph to fly from Boston to South Florida for a meeting to discuss the part that the Carpenters might have in the development of the new miso company. Sandy knew Joseph's skills as a carpenter. Joseph recalls that the meeting was at Edmund Benson's house. Sandy said that he wanted Patricia and Joseph to become part of the miso company. In exchange for their labor, they would be given a share of the business ownership worth $25,000. Joseph does not recall whether they would receive the $25,000 once or each year that they worked–but he definitely recalls the $25,000 offer. Joseph recalls that the talk at this first meeting was very general in terms of what kind of carpentry or construction work he would do for the company.

1979 May (late)–Joseph leaves Boston in his van, headed for North Carolina–after handing over their house to the next renters. On the way, following Sandy's instructions, he stops in Hendersonville, North Carolina, for about a week to check out some real estate. With real estate agents that Sandy Pukel and/or Edmund Benson had found, Joseph looks at property the agents thought might be appropriate for the miso company in the Asheville area and in Rutherford County. As far as he knows, Joseph was the first person to actively look for land for the miso company. They found several properties that Joseph considered borderline, so Sandy (and probably John Belleme and Edmund) flew up from Florida and they all visited these sites together. Finding nothing that was suitable, they left. Joseph continued on to Florida in his van to be with Patricia and their children. Sandy continued to work with local realtors until he found a suitable piece of property. Joseph is quite sure that just before they finally purchased the land in Rutherfordton, Sandy, Michio and he (and perhaps a few other people) all went to see the property at the same time. They walked over the roughly 100 acres of land and through the beautiful house.

During the summer of 1979 Joseph and Patricia met with Sandy and Edmund several times to discuss their living on the miso company land while John and Jan Belleme were away studying miso-making in Japan. Though nothing was put into writing, Joseph and Patricia both recall clearly that their daily expenses would be taken care of, they would work on the land, and, at the end, they would own a part of this new business. They were not given any specific list of tasks or duties they were expected to accomplish. Continued Address: 10655 Lakeshore Dr., Clear Lake, California 95422. Phone: 707-994-3218.

8152 Gonzales, Greg. 2000. Making miso and koji for American Miso Co. Inc. Part II (Interview). *SoyaScan Notes*. June 20-21. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** To enter the original koji room, one had to step up a foot or so from floor level. The koji table was built into the room, and was thus immovable. The original koji room is now used for cold storage of miso tamari from the top of the vats (they bottle and sell it) and for tubs of bulk miso. The company now has two new and larger koji rooms. The floor of each is level with the floor of the building and the door is larger; thus, it is now possible to roll the koji table and racks of koji trays in and out of the room. Two koji tables can fit side by side in one new koji room. Don DeBona had the idea of putting the koji table and racks on wheels. He called it "Reinventing the wheel." Each koji room has about the same floor area as the old one, but the ceiling is 8 feet high rather than 6 feet. The floor of the new rooms is insulated wood

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(rather than cement) to prevent loss of heat and humidity.

After the rice is steamed, it is put into the hopper of a machine where three things happen: Metal fingers break up any clumps, a water-cooled jacket cools it, and a small blower blows spores of koji starter over it. It comes out onto a low table, whence it is shoveled (using a stainless steel shovel) into the koji crib atop the stainless steel table. The koji crib is about 18 inches deep and is lined with organic linen cloths before the cooked rice is put in. The inoculated rice, on the table, is then wheeled into the koji room.

"The hotter it is, the harder it is to make koji," notes Greg. So on very hot days, Greg will spread the grain by hand on the low table to cool it faster and more; then he will inoculate it by hand, and work the inoculant in evenly with his hands.

When the koji in the crib is ready, the crib (on its table) is wheeled out of the koji room. The koji is then scooped onto koji trays using a one *shô* measure. Greg does not stack the koji trays in different ways to conserve or release heat; rather he puts them on rolling racks. Once a koji tray is placed on a rack, it stays in that place on the rack until the koji is ready. When a rack is full, it is wheeled back into the koji room. This saves labor and enables Greg to make much more koji.

Greg makes miso in a three day cycle. He steams the rice on Monday, puts it in trays on Tuesday, and makes the miso on Wednesday. For most of the year, this cycle is repeated twice a week. Making miso twice a week is hard work. During the busiest times of year, the company employs about eleven people–including Greg, five in production and six in packing. Many of the packers are local women who like the miso company work better than that offered by the local mills, because there is less stress, and they can set their own hours as long as the work gets done. Greg is the general manager, in charge of these workers. He really appreciates this challenging opportunity. So far this year, Greg and his coworkers have made 119,250 lb of finished koji.

Most consumers use miso to make soups. They use more miso in the winter than in the summer. So by the beginning of summer, the vats are usually full. By October or November enough vats have been emptied of their miso, that it is time to start making more miso to refill them.

Concerning this work, Greg reflects: "I love it. I don't mind hard work. It offers its own reward. I feel connected to everyone who went before me–part of a lineage. Also, you can't be phony with the koji, or pretend, or get arrogant with it. If you don't look at it carefully, and feel and smell it, then you'll make a mistake. It's dynamic, and it keeps you honest that way. This is an honorable thing to do, and I feel privileged to have found myself in the same wacky way that everything else happened here–to be the baby sitter for a while."

When not making miso, Greg continues to write short stories and poetry. When he learned that Erewhon was connected with this miso company during its formative years, he joked: "That makes perfect sense. 'Erewhon' spelled backwards is 'nowhere,' and this place is out in the middle of nowhere." Recently Louise Hagler of The Farm in Tennessee visited the American Miso Co. for three days. She is writing a miso cookbook, which will contain a brief description of koji and how it is made into miso.

Greg's son, Devin, is now age 8, and his stepson, Keith Fancher (who is into computers and math) is age 16. Manon cares for the kids at home. They are considering home schooling for next year. Both of Greg's parents are still alive. They have found that the corporate world is not a nurturing place. So they have come to respect his choice to follow his own path, and the fact that he is now general manager.

Talk with Barry Evans, owner of American Miso Co. 2000. June 29. Greg Gonzales' right hand man in making (and tending) koji and miso is his brother, Dave Gonzales. Two black guys and a Honduran immigrant also make koji and miso with them. The father of Greg's partner, Manon Fancher, is Hampton Fancher, who is a screen writer; he wrote the script for the well-known movie ***Blade Runner***. Address: 4225 Maple Creek Rd., Rutherfordton, North Carolina 28139. Phone: 828-287-2940.

8153. Troy, John. 2000. Update on Wizard's Cauldron and work with miso (Interview). *SoyaScan Notes*, June 26. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** John's original organization was the Lindenself Foundation, a nonprofit organization involved with Eastern spirituality. The linden tree symbolized the heart. Out of this grew Linden's Elfworks, then Elf Works, Ltd., whose first product was a candy bar named Wizard Baldour's Power Pac introduced in 1976, and containing ginseng. Elf Works, Ltd. was created outside of the nonprofit corporation, and it existed only briefly (1981-1984).

In about 1980, John was first introduced to miso by Joel Dee of Edward & Sons who was introducing his Miso Cup, a dehydrated miso soup. Troy's next product was Wizard Baldour's Hot Stuff (in Regular or Blazing intensities); it was the company's first big success. It contained miso from the day it was launched. Troy first bought this miso from Erewhon (a fairly dark salty rice/red miso), but when Erewhon filed for Chapter 11 bankruptcy in Nov. 1981, Troy started buying his miso from Barry Evans of American Miso Co. It was John Belleme and Barry Evans who really got Troy interested in and involved with miso–before American Miso Co. had any miso for sale, but after their miso plant had been constructed. Troy can't remember how, where, or when he met Barry Evans. Belleme told him about going to Japan and apprenticing with Mr. Onozaki. Later Barry Evans introduced Troy to John Fogg in Charlotte. Troy later worked closely with Fogg. "at first I thought he was arrogant and fussy, but he ended up being a tremendous influence in my life, and taught me so much about marketing... To this day I

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still draw on the wisdom of John Fogg."

Troy now makes almost 100 different products for the natural food trade. Most of these contain miso and/or soy sauce. All of his business is private labeling, so he develops and manufactures products, which other companies market. Across the street from his office is a modern, high speed blending, bottling, labeling plant, with plenty of cold storage. He manufactures and bottles every product he develops. His company, The Wizard's Cauldron, Ltd., run small by a small team of leaders, now does about $2 million a year in annual sales. His products are now almost totally organic–200 ingredients. John has just a handful of customers. The biggest is Whole Foods Markets; he makes all the salad dressings and sauces sold under the Whole Foods label. Second biggest is Joel Dee of Edward & Sons. Troy makes four brands for Joel Dee: Premier Japan, The Wizard's, Troy's, and Rain Forest Organic. Joel's company owns the "Wizard" brand, which Troy gave him in 1987 as part of his "recovery plan" after American Natural Foods went down the tubes. Joel said, "You make it, I'll sell it." At about the same time, they also both developed the Premier Japan brand and line, which is still doing extremely well. In about July 1989 John developed "The Wizard's Worcestershire Sauce," a vegetarian sauce, for Joel Dee. It is now selling better than Hot Stuff. Ponzu is the Japanese equivalent of Worcestershire sauce; they use bonito instead of anchovies. But ponzu originated first, so "Worcestershire sauce is a Western 'knock-off' of ponzu." The Ginger Tamari is still a wonderful product that is doing very well.

Troy's third largest customer is Albert's Organics, America's largest organic produce distributor, for whom he makes a line of fresh, refrigerated organic dressings. Albert's Organics recently merged with UNFI (United Natural Foods, Inc., the collection of distributors that was Stow Mills, Cornucopia, Rainbow, Mountain People's Warehouse, etc.). UNFI is now a big publicly-owned company. Troy's favorite product developed for Albert's is Mellie's Miso Mustard Dressing, launched in 1998 with a mild miso from American Miso Co. Albert's daughter is named Mellie.

John is now developing a line of dressings under the Moosewood Restaurant brand for the people who own that restaurant. John's favorite is the Miso Ginger Salad Dressing. A few days ago he closed a deal with Robert Tepper (formerly of The Farm, in Summertown, Tennessee) to market his Simply Delicious brand of dressings. Robert now has his own company named Sunrise Management, which is a brand management company. Simply Delicious will be the first brand he owns. Robert worked for Natural Nectar, then Blue Sky, then Annie's (which he left in early 2000 to start his own company).

John's main work is still developing new products and naming his creations–the work he enjoys most of all things. "It's really fun." Blessed are those who find a way to do what they love most in life. Address: The Wizard's Cauldron, 8411 Hwy. NC 86 N, Cedar Grove, North Carolina 27231. Phone: 919-732-5294.

8154. Katayama, Osamu. 2000. A dash of Kikkoman: When it comes to soy sauce, the Kikkoman Corporation has its competitors licked. *Look Japan* (*Tokyo*) 46(531):18-19, June. • ***Summary:*** Contains a brief history of shoyu followed by a history of Kikkoman and how the company began to sell, then make shoyu in the USA. Shoyu was first brewed in Japan during the late Muromachi period (1333-1568), and the Mogi and Takanashi families were among the first to make shoyu commercially–both in the town Noda, north of Tokyo. In 1917 their descendants incorporated their brewery as Noda Shoyu Co. Ltd. Today that company is known worldwide as Kikkoman.

Kikkoman's move toward America began in 1957, when a sales company was established in San Francisco, California. Their first U.S. plant came on line in 1973–after years of study and debate. That plant now produces some 80,000 liters/year and accounts for about 50% of the different types of soy sauce sold in the USA. Over the past 26 years, Kikkoman's output of soy sauce has increased 12-fold!

In the year 2001 Kikkoman plans to build a plant in China. Though the Chinese market for Japanese-style soy sauce is small at present, the prospects for growth are large.

Kikkoman has had the hardest time introducing shoyu in Europe, which is more conservative than the USA or Australia. The company began by launching a *teppan-yaki* business in Germany, followed by a sales company in 1979, also in Germany. In 1997 Kikkoman built its first European shoyu plant in the Netherlands. Why is the overseas market for shoyu growing so nicely? Yuzaburo Mogi thinks it is because more and more people are realizing how well shoyu goes with meat.

Photos show: (1) Yuzaburo Mogi. (2) A 19th century woodblock print of Kikkoman's Noda factory. (3) Three bottles of different Kikkoman soy sauces and a table-top dispenser. Kikkoman's logo is composed of an hexagonal tortoise shell ("kikkō") inside of which is the Chinese character / ideogram for 10,000 ("man"). (4) Kikkoman's first U.S. plant at Walworth, Wisconsin.

8155. Kikkoman Corporation. 2000. Annual report 1999. 339 Noda, Noda-shi, Chiba 278, Japan. 33 p. 28 cm. [Eng] • ***Summary:*** The information in this English-language annual report is current as of April 2000. Contents: Financial highlights. A message from the president (Yuzaburo Mogi): Overview of the fiscal year, principal developments, summary of business policy (business principles, medium-term business strategy, business organization, basic policy on distribution of profits, looking to the future, tasks for the coming years, in closing). Global operations: The Americas, Europe, Asia and Oceania, Japan. Review of

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operations: Soy sauce, soy sauce derivative products, Del Monte, sake and wine. Research & development. Financial section: Consolidated balance sheets, etc. Corporate history (chronology from April 1925 to Nov. 1999). Global network (directory of Kikkoman names, addresses, and phone numbers worldwide). Board of directors and officers. Corporate data.

Consolidated net sales fell 3.4%, but net income rose 1.3%. In 1999 overseas operations (excluding exports from Japan) accounted for about 27% of consolidated net sales and 49% of Kikkoman's consolidated operating income.

The Americas. Today more than 100 items are manufactured at Kikkoman's plant in Walworth, Wisconsin. The plant's annual soy sauce production capacity is 80,000 kiloliters. The new Folsom plant had an initial annual soy sauce production capacity of 10,000 kiloliters. There is room to expand this capacity fourfold. In the year 2000 production capacity is expected to reach 15,000 kiloliters. Annual per capita soy sauce consumption in the USA has increased to 700 milliliters, which is less than 8% of the estimated 9,000 milliliters per capita in Japan. U.S. consumption is expected to double within the next ten years.

Color photos show: Yuzaburo Mogi, Kikkoman's new headquarters in Noda, all company products. Address: Noda, Japan.

8156. **Product Name:** Edamame Rice Bowl: Vegetable Fried Rice, Kung Pao Vegetable, Teriyaki Vegetable, and Szechwan Vegetable.
Manufacturer's Name: Seapoint Farms (Formerly Seaside Farms)
Manufacturer's Address: Huntington Beach, CA 92648. Phone: 1-888-722-7098.
Date of Introduction: 2000, June.
Ingredients: Teriyaki Vegetable: Cooked rice (rice, water), edamame (soybeans), teriyaki sauce (water soy sauce {water, wheat, soybeans, salt}, sugar, corn starch {unmodified}, sesame seed oil, xanthan gum, natural hickory smoke flavor), vegetable blend (baby corn, red bell pepper, carrots).
Wt/Vol., Packaging, Price: 11 oz (312 gm).
How Stored: Frozen.
New Product–Documentation: Leaflet (glossy, color, two-sided) from Natural Products Expo in Anaheim, California 2000, March. "The wonder veggie." A large color photo shows each of the four products.

Ad (8½ by 11 inches, full color) in Natural Foods Merchandiser. 2000, May, p. 48. "The wonder veggie." Same as the front of the leaflet.

Talk with Kevin Cross, owner and founder of Seaside Farms. 2000, May 11. He had to change the company name because another company named Seaside was selling beans. The company recently moved its offices from Cardiff by the Sea to Huntington Beach. The four products will be available in stores in June. Kung Pao is the spiciest, followed by Szechwan Vegetable. The word "Soybean" is not part of the product name. He is advertising these four products widely, with ads in *Natural Foods Merchandiser* in May and June, in Vegetarian Times in June and July, and in Delicious in June.

Labels, leaflet, and news release for all four products sent by Seapoint Farms, 2000, Nov. 14. Labels: Each is a color paperboard sleeve, 6.5 by 7.5 inches. On the front panel is a color photo of the dish in a bowel with a rayed green and yellow sun in the background. In the center of each is a square logo, with a red "Heart Healthy" heart at the center surrounded by a circle. Across the top is written "The wonder veggie." Across the bottom: "100% vegetarian." Across the top of the label: "Meatless. High protein." On the back: Nutrition facts, cooking directions, and ingredients. "Seapoint farms edamame is non-GMO."

Leaflet (glossy, color, front and back): "Edamame Rice Bowls: The wonder veggie–Complete meals." A color photo shows each of the four products. The Seapoint Farms news release is dated 14 March 2000. "Taking great meals to heart!"

8157. Stewart, Martha. 2000. Edamamé. Television broadcast, Tuesday, June 13, Martha Stewart's Living program.
• ***Summary:*** The first segment of this TV program is titled "Edamamé" (3 minutes, 20 seconds). Martha Stewart, one of the most famous women in America today and a leading authority on entertaining and cooking, begins by holding a package of Trader Joe's precooked, frozen edamamé and saying: "If you see edamamé in the freezer section of your grocery story, buy a package and try it. It's really fantastic. I'm always looking for healthy, easy-to-prepare snacks that are also nutritious–and these are just the answer." Inside the fuzzy green pods are soybeans. Soy sauce, miso, and tofu are among the many other yummy foods made from soybeans.

Martha demonstrates how to cook the soybeans, following the instructions on the package, by boiling them in heavily salted water for about 5 minutes. Have a bowl of iced water nearby in the sink. "Soybeans like this are packed full of vitamins, nutrients, and unsaturated fats–the kinds of fats that break down cholesterol in your body. As such, I suggest that you try 'em as a snack." Lift the edamamé out with a strainer, then lower the strainer into the iced water. Leave until cool, but not too long, lest they become soggy. Drain in the strainer, then while they are still a little bit damp, sprinkle them generously with natural sea salt–the kind with irregular crystals. Then they are ready to eat. "You just squeeze on the pod, and the little soybean pops out. Mmmm. Really good." "Keep a supply of this edamamé in your freezer, and the next time guests stop by or your children come home from school, you'll be prepared with a really healthy and delicious snack."

Talk with Tak Kimura, 2000, July 11. To prepare precooked, frozen edamamé: After the green pods are picked from the soybean plants, they are rushed to the packaging

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plant, blasted with steam (to clean the surface of the pods), immediately blanched in boiling water for 4-5 minutes (to help them keep their bright green color and good flavor and texture), then quickly frozen and packaged. A large percentage of the edamamé consumed in Japan today are sold frozen like this, so that they can be enjoyed year-round. This new frozen trend started in about 1990; before that Japanese enjoyed edamamé as a seasonal food, fresh during the summer only. Nowadays quite a few companies even freeze the fresh edamamé during the summer, because they find that dealing with fresh foods is a nuisance.

Note: Martha Stewart has been able to turn her own lifestyle into a major industry. A successful model during the late 1950s and early 1960s, she was even more successful as a Wall Street stockbroker, and again very successful in a catering business she started. In 1982 she wrote a best-selling book titled *Entertaining*. Her ideas about gracious living have had a major influence. Address: Westport, Connecticut.

8158. **Product Name:** Kami Bento Box (Ready to Eat).
Manufacturer's Name: Trader Joe's (Distributor-Retailer). Made by Okami, Inc., Sun Valley, CA 91352.
Manufacturer's Address: South Pasadena, CA 91031.
Date of Introduction: 2000, June.
Ingredients: Soba noodles topped with sesame seeds, soba sauce, edamame (peel & eat), tofu pouches filled with vinegared rice [Inari-zushi], thinly sliced fresh gingerroot, shiitake mushroom rolls, Kikkoman lite soy sauce packet, "wasabi" (horseradish, water, artificial food coloring), etc.
Wt/Vol., Packaging, Price: 15 oz (424 gm) on formed plastic tray with clear plastic cover. Retails for $4.29 (2000/07, Lafayette, California).
How Stored: Refrigerated.
New Product–Documentation: Talk with Patricia Smith of Trader Joe's, 2000, June 20. She says this is an excellent new product. Product with Label purchased at Trader Joe's in Lafayette, California, 2000, July 6. Soyfoods Center evaluation: All parts of this Japanese-style Bento Box lunch (8.75 by 7.25 by 1.5 inches, with four compartments) are authentic and delicious, except for the tofu pouches, which have some extremely fiery "blow-your-head-off" spice inside. This is not authentic, and we find it almost inedible. The so-called "wasabi" contains no wasabi at all; thus it is mislabeled. The edamame are wonderful, as are the soba noodles, their sauce, and the mushroom rolls.

8159. **Product Name:** Trader Joe's Organic Baked Tofu [Teriyaki, or Savory].
Manufacturer's Name: Trader Joe's (Marketer-Distributor). Made by Wildwood Natural Foods in California.
Manufacturer's Address: P.O. Box 3270, South Pasadena, CA 91031-6270. Phone: 818-441-1177.
Date of Introduction: 2000, June.
Ingredients: Organic tofu (filtered water, organic soybeans*, nigari {magnesium chloride, a natural firming agent}), soy sauce (water, wheat soybeans, salt), rice vinegar, tomato paste, rice wine, Fruitrim (fruit juice, natural grain dextrins), brown rice syrup, garlic ginger, garlic powder, safflower oil, ginger powder, arrowroot. * = Organically grown and processed in accordance with the California Organic Foods Act of 1990.
Wt/Vol., Packaging, Price: Teriyaki: 7 oz (198 gm) vacuum pack. Retails for $2.99 at Trader Joe's (2001/01, Lafayette, California).
How Stored: Refrigerated.
New Product–Documentation: Product with Label purchased at Trader Joe's in Lafayette, California, 2001, Jan. 25. 4 by 6 inches. Self-adhesive label on plastic bag. Black and white on orange and gray. "Marinated and ready to eat. Perishable. Keep refrigerated." Contains two servings. Soyfoods Center taste test: Delicious!

8160. Wollner, Joel. 2000. Mr. Kitani of Yamaki Co. in Japan has a huge new shoyu and miso factory that uses 100% organically grown ingredients (Interview). *SoyaScan Notes*, July 2. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** In June 2000, on a trip to Japan and China, Joel (together with translator and guide Yoshi Nanabayashi) visited Mr. Tomio Kitani, owner of Yamaki Jôzô K.K. in Saitama prefecture, Japan. He is about age 60 and very healthy and vital. Several years ago he moved from the nearby town into the mountains, where he built a huge new factory where he makes miso, shoyu, tofu (fresh and instant), and pickles. The company's address is (written Japanese-style): Saitama prefecture, Kodama-gun, Kamiizumi Mura, Oaza Shimo, Akuhara 955. Phone: 0274-52-7000. Fax: 0274-52-7001. Plant manager: Morikawa Kazuhiko. The nearest railroad stop is Kodama station.

The company has about 80 huge shoyu vats filled with moromi. Most of his miso is short-term–1 to 3 months. His koji rooms are fully automated. Yamaki Co. is extremely important in the world of organic miso and shoyu in Japan. Joel thinks they make more of these products than Sendai Miso Shoyu, and may be the biggest such manufacturer in Japan. He also bottles and sells water from a spring he owns. His company is flourishing, and growing very rapidly. Some 90-95% of his market is in Japan; the rest is miso and shoyu exported to the USA. He is the 4th of 5th generation owner, and he hopes his son will take over from him within the next ten years or so. The main ingredient he uses is soybeans, but all of his ingredients are organically grown in Japan by MOA (Mokichi Okada International Association), a quasi-religious, quasi-cooperative organic farmers organization and movement. MOA is one of the pioneering and most important organic organizations in Japan.

Joel first visited Yamaki in 1985 when he, Bob Kennedy, and Herman Aihara were setting up Ohsawa America (after

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Kennedy had sold Chico-San to Heinz). Joel later brought in Martin Roth–who is now married, lives in Berkeley, and is head of a marketing company with Kristin Brun (who lives in El Cerrito). Ohsawa America, which traded with Ohsawa Japan, no longer exists. Address: 76 Florida Ave., Berkeley, California 94707. Phone: 510-524-4420.

8161. Taira, Ele, Taira, Terry; et al. 2000. Auntie Aloha's–A taste of soy. Honolulu, Hawaii: Independent Distributors of Nutrition for Life. 92 p. Recipe index. 22 cm.
• ***Summary:*** These are Hawaiian-style recipes that use various NFLI (Nutrition for Life International) meatless soy products made from whole soy flour, such as: Harvest Beanuts, Heartful Gourmet Beef Chunks, Heartful Gourmet Beef Strips, Heartful Gourmet Chicken Chunks, Heartful Gourmet Chicken Strips, Heartful Gourmet Ground Beef, Heartful Gourmet Ground Turkey, Nutri-Flour Blend, Powdered Soymilk, or Vegetable Curls. Recipes also include traditional soyfoods such as shoyu, tofu. The name of the person who developed and submitted each recipe appears below the recipe title.

Contents: Salads. Soups. Pupus. Pasta & rice. Main dishes. Desserts and breads.

Proceeds (less costs) from the book go to HopeLine, the advice line for young people sponsored by Karing for Kids, a Christian charity. The HopeLine currently operates 8 hours/day on average. Its budget will enable 65,000 youths to call and receive help each year. Yet the goal is to make HopeLine available 24 hours a day, every day, year-round.

Letter (fax) from Ele Taira. 2002 Aug. 6. All the NFLI Healthful gourmet product are meatless and made from soy. For details visit the website at www.nutritionforlife.com. Address: Ele Taira, 1015 Ala Napunani Street #701, Honolulu, Hawaii 96818. Phone: 808-836-4994.

8162. Wolf, Walter. 2000. Soy-related documents–Business records (Archival collection). Peoria, Illinois.
• ***Summary:*** In July 2000 Dr. Walter Wolf, as he was preparing to retire from the Northern Center for Agricultural Utilization Research in Peoria, Illinois, sent to Soyfoods Center many file folders of soy-related documents that he had collected between about 1968 and the present. Most are in the field of soy protein, and none are confidential / proprietary. Each one is neatly dated, and the documents are in reverse chronological order in each manila file folder.

Dr. Wolf earned his PhD degree at the University of Minnesota, where he studied soy proteins. He began work at NCAUR in 1956, at that time it was named the Northern Regional Research Center. He worked as a chemist in the Meal Products Research Group. He did mostly pure research, rather than applied. At the time there was little interest in food uses of soy protein. One of his main contributions was collecting and publishing statistics on the annual production and price of soy flour, soy protein isolates, soy protein concentrates, and textured soy protein products.

The following files (listed alphabetically) were received by Soyfoods Center. Unless otherwise stated, only one file on each company or subject was received. A thin file contains less than about 20 sheets of paper, a thick one contains more than 20 sheets: ADM (Archer Daniels Midland Co.; 2 thick files 1970-2000). Anderson Clayton (thin, 1971-81). Cargill (thin, 1970-2000). Central Soya (4 thick files, 1959-1999). Dawson Mills (thick, 1974-1983). Edible Soy Products, Inc. (Hudson, Iowa: Maker of Pronuts; thin, 1971-78). EMI Corp. (Des Plaines, Illinois, thin, 1971-74). Erie Casein Co. (thin, 1966-73). Fuji Oil Co. Ltd. and Fuji Purina Protein Ltd. (of Japan, thick, 1972-1993). Farmland Industries and Far-Mar-Co (thin, 1970-1993). Food Ingredients–Dale Johnson (thick, 1964-1998). Garrison Products (extrusion, thin, 1977-78). General Foods (thin, 1974-1981). General Mills (thick, 1965-1976). Gerber Products (thin, 1969). Grain Processing Corp. (1968-1976). Griffith Laboratories (thick, 1968-1986). Gunther Products (purchased by A.E. Staley, thick, 1963-1975). Honeymead Products (Mankato, Minnesota, thin, 1978-1986). Industrial Grain Products (Montreal, Canada, thin, 1973-1975). Kikkoman (thick, 1972-1997). Kraft, Inc. (1965-1984). Lauhoff Grain (1 thin, 1973-86). Loma Linda Foods (thin, 1969-1986). Miles Laboratories (thick, 1970-83). Nabisco (1974-81). Meals for Millions Foundation (1 thin file, 1976). Protein Advisory Group of the United Nations, PAG Guidelines (thin, 1969-1978). Quaker Oats (thin, 1970-97). Joe Rakosky, consultant (1979-83). Ralston Purina Co. (4 files, very thick, 1962-1999). Soy protein products (2 files, thick, 1970-1986). Soy protein production statistics and estimates (two thick files, 1970-1996). Staley (A.E., 1 thick, 1969-1986). Swift & Co. (thin, 1961-1971). Takeda Chemical Industries (thin, 1970-1984). Textured soy proteins (1 thin, 1969-71). Tofu equipment (thin, 1970s). Tokuji Watanabe tofu studies at Peoria, Illinois (thick, 1960-61). United Nations Industrial Development Organization (UNIDO, thick, proceedings of Nov. 1969 meeting at Peoria, Illinois). Unilever (thin, 1974-79). Wenger Manufacturing Co. (thin, 1975-76). Worthington Foods (thick, 1965-1998). Address: NCAUR, Peoria, Illinois.

8163. Business Communications Co. 2000. Soyfoods: Trends and developments. Norwalk, Connecticut. 137 p. Sept. *
• ***Summary:*** This study of the soyfoods market, No. R2-419, retails for $3,450. One section is titled "Whole soybean products." By type of product: Largest share and fastest growth–Soymilk. Next largest share and fastest growth–Tofu. Good share: Soy sauce. By application: Largest share–Substitute meat products. Fastest growth–Substitute dairy products. Industry structure: Market influences–Consumers, age/gender, media messages, health benefits, retailing outlets. Driving forces–Regulations, technology, price, niche marketing. Most active manufacturers–Market leaders, industry environment.

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The second section is titled "Soyfoods as ingredients–Soy protein, soy fiber, soy isoflavones. By type of product Largest share–Soy flour (defatted). Fastest growth–Soy protein concentrates. Next fastest growth–TSP [Textured Soy Proteins] Good growth: Soy protein isolates. Slow growth–Soy grits, soy fiber. Soy isoflavones. By application: Largest share–Substitute meat products. Fast growth–Substitute dairy products."

The third section is "Soyoil products–Soybean oil and lecithin." Address: Norwalk, Connecticut.

8164. Hagler, Louise. 2000. Soja: Wandelbarste Bohne der Welt. Eine 'coole' Proteinquelle [Soya: The most versatile bean in the world. A 'cool' source of protein]. Aitrang, Germany: Windpferd. 140 p. Illust. Index. 18 cm. [Ger]

• ***Summary:*** Foreword by Peter Golbitz. Foreword by Louise Hagler. Introduction by Dr. Mark and Virginia Messina. Basic soyfoods. Feeding babies and children soyfoods. Breakfast, brunch & bread. Whole soybeans. Sauces, spreads, dips & dressings. Soup & salad. Main dishes. Desserts. Drinks & yogurt.

No dairy products or eggs are used; honey is called for in some recipes. Address: The Farm, Summertown, Tennessee.

8165. Iino, Ryoichi. 2000. The history of shoyu (Soy sauce) 2. *Food Culture* (*Kikkoman Inst. for International Food Culture, Noda, Japan*) No. 2. p. 20-23. Sept. http://kuifc.kikkoman.co.jp. [11 ref]

• ***Summary:*** Contents: Introduction. Abolition of the *Hishio no Tsukasa* (Jan. 808 AD). Establishment of the *Sho-in* (somewhere between 835 and 882). *Sho* section and the manufacture of *sho* (*sho* soybeans were the major ingredient in *sho*). *Sho* and *sai-sho* (*sho* which still contains the dregs). What is *sai-sho?* The decline of liquid *sho*. Notes (11). Address: Food historian, and teacher of food history, Hattori Nutrition College, Japan.

8166. Adie, M. Muchlish, Widowati, S.; Soedarjo, M. 2000. The characteristics of Indonesian soybean varieties, and its importance to the soybean processing. In: Kyoko Saio, ed. 2000. Proceedings–Third International Soybean Processing and Utilization Conference. Tokyo, Japan: Korin Publishing Co., Ltd. [xxiv] + 728 + 8 p. See p. 79-80. [6 ref]

• ***Summary:*** A survey by Indrasari (1991) showed that consumption of tempeh and tofu in Indonesia were 1,065 gm per capita per month, and 866 gm per capita per month, respectively. Address: 1.3 Research Inst. for Legume and Tuber Crops, PO Box 66 Malang, Indonesia; 2. Research Inst. for Food Crops Biotechnology, Jalan Tentara Pelajar 3A Bogor, Indonesia.

8167. Fukushima, Danji. 2000. Recent progress in research and technology for processing and utilization of soybeans. In: Kyoko Saio, ed. 2000. Proceedings–Third International Soybean Processing and Utilization Conference. Tokyo, Japan: Korin Publishing Co., Ltd. [xxiv] + 728 + 8 p. See p. 11-16. [30 ref]

• ***Summary:*** Contents: Abstract. Keywords: soybean, soy food, soy protein, glycinin, beta-conglycinin, three-dimensional structure, saponin, isoflavone, osteoporosis, hypocholesterolemic, breeding, lipoxygenase-free soybean, allergen-less soybean. Introduction. Nutritional and physiological effects of soybean storage proteins and soybean minor constituents: Reevaluation of nutritive value of soybean storage proteins, physiological function of soybean storage proteins. Physicochemical functionalities of soybean storage proteins. Basic structures of beta-conglycinin and glycinin molecules, three-dimensional structures and physicochemical functionalities. Quality improvement of soyfood products: Off flavors and allergenic proteins in soybeans, genetic improvement of soybean qualities. Conclusion. Address: Kikkoman Corp. [Japan].

8168. Ishigami, Takashi. 2000. Contract grow and IP [identity preserved] handling systems for the Japanese food soybean market. In: Kyoko Saio, ed. 2000. Proceedings–Third International Soybean Processing and Utilization Conference. Tokyo, Japan: Korin Publishing Co., Ltd. [xxiv] + 728 + 8 p. See p. 117-120.

• ***Summary:*** Japan is the world's largest soybean importer. Of the 4.9 million tonnes (metric tons) imported, about one million tons (actually 960,000 tonnes or 19.6%, called "food soybeans") are used for making tofu, miso, natto, soysauce, etc. The rest are crushed to make soybean oil and meal.

A table (p. 118) shows the quantity of soybeans obtained from various sources to make each of the major Japanese soyfoods in 1998, 1999, and 2000. In the year 2000, some 512,000 tonnes were used to make tofu, 168,000 tonnes for miso, 125,000 tonnes for natto, 40,000 tonnes to make soy protein and products, 30,000 tonnes to make soysauce (from whole soybeans), 6,000 tons to make soymilk, and 79,000 tons to make other products. Grand total 960,000 tonnes. Address: Marubeni Corp., Japan.

8169. Li, Lite, Li, Shujun. 2000. Reviews on Chinese fermented soybean foods. In: Kyoko Saio, ed. 2000. Proceedings–Third International Soybean Processing and Utilization Conference. Tokyo, Japan: Korin Publishing Co., Ltd. [xxiv] + 728 + 8 p. See p. 701-06. [8 ref]

• ***Summary:*** Contains excellent, original and detailed information about fermented tofu (sufu) and fermented black soybeans (*douchi*).

Contents: Introduction. Developing history of soybean and soybean foods in China: History of soybean cultivation in China (it began about 4-5,000 years ago), distribution and yield of soybean in China, important role of soybean in Chinese food culture and diet, fermented soybean foods.

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Present situation of fermented soybean foods in China: Kinds and distribution of Chinese fermented soybean foods (sufu, douchi, doujiang, soy sauce, etc.), processing technology and applied microorganisms for Chinese traditional fermented soybean foods (Sufu–classification of sufu, processing technology of sufu, microorganisms used in mold cultivation, microorganisms used in fermentation; Douchi–same categories). Developing tendency and countermeasure of fermented soybean foods.

Classification of sufu: (1) According to the color and flavor of product: red sufu, white sufu, green sufu, sauce sufu, colored sufu. According to the morphology of the product: biggest rectangle sufu, big sufu, middle rectangle sufu, chess sufu. Based on the type of microorganism applied in the process: bacterium sufu, mould sufu, halophilic pediococcus sufu.

Figures show: (1) The main soybean producing provinces in China (1996): Heilongjiang 31%, Shandong 9%, Henan 7%, Hebei 6%, Inner Mongolia 6%, Jilin 5%, Other 36%.

Tables show: (1) Steps in two types of sufu production: Mould sufu, and halophilic pediococcus production. (2) Species of microorganisms (16) isolated from sufu and the area of sufu production. (3) Characteristics of main kinds of Mucor applied in Sufu-making (for main kinds; for each kind is given: mycelium, sporangiophore, sporangiospore, spore axis, thick spore suitable temperature). (4) Brief introduction to six famous douchi: Four of the six are made using black soybeans (a) Sichuan province, Santai county: History goes back more than 300 years. Made with *Mucor racemosus* mold (naturally fermenting). (b) Sichuan: Yong Chuan Douchi, a famous brand. Made with Mucor mold. History goes back more than 300 years. (c) Hong chang fa douchi: About 60 year history. (d) Yang jiang douchi (Yangjiang douchi), made with *Aspergillus* mold and black soybeans. Note: Yangjiang is a city in Guangdong province, China. (e) Liu yang douchi (Liuyang douchi), made with *Aspergillus* mold and black soybeans. (f) Lin yi shui douchi, fermented with a bacterium. History goes back more than 130 years. Address: China Agriculture University, Beijing 100083.

8170. Maneepun, Saipin. 2000. Prospect of traditional fermented soybean products in Thailand. In: Kyoko Saito, ed. 2000. Proceedings–Third International Soybean Processing and Utilization Conference. Tokyo, Japan: Korin Publishing Co., Ltd. [xxiv] + 728 + 8 p. See p. 707-10. [8 ref.]
• ***Summary:*** Tables. (1) Traditional fermented soybean products in Thailand.

Soysauce (local name *si-iu*).

Soypaste [Thai miso] (local name *tao-chew*).

Fermented soy curd [fermented tofu] (local name *tao-hu-yi*). Made in central Thailand using bacteria, yeasts and molds (*Actinomucor elegans*) on tofu cubes. They are yellowish or red in color. The yellowish product is eaten directly as a relish, whereas the red product is cooked with vegetables or meat. Making fermented soy curd involved three steps: preparing the tofu, molding, and brine fermentation and aging. First a pure culture of the mold is applied to the surface. Then it is incubated at 20°C for 3-7 days. Finally it is aged in brine for about 40-60 days to develop flavor and aroma. Used as both a main dish and flavoring agent. The product is made in small-scale factories, as well as in soysauce and soypaste factories. The composition is given in Table 2.

Fermented whole soybean (local name *thua-nao*). Made in north Thailand from whole soybeans fermented with bacteria [like Japanese natto]. A paste or solid used as a main dish or flavoring.

Imitation fried pork rind (local name *kap-mu-tiem*). Made in north Thailand from fermented tofu. A solid. Used as a snack. Address: Inst. of Food Research and Product Development, Kasetsart Univ., Bangkok 10903, Thailand.

8171. Mogi, Katsumi. 2000. Makasete, makasazu [Entrust, but keep an eye on it]. Japan. 133 p. Oct. No index. 21 cm. [Jap]
• ***Summary:*** Katsumi was the former vice-president and president of Kikkoman Corp. Address: Former president, Kikkoman Corporation, Japan.

8172. Onishi, Yoshihisa. 2000. Adapting HACCP to Japanese traditional soybean food. In: Kyoko Saio, ed. 2000. Proceedings–Third International Soybean Processing and Utilization Conference. Tokyo, Japan: Korin Publishing Co., Ltd. [xxiv] + 728 + 8 p. See p. 138-141.
• ***Summary:*** In 1996 Japan was hit by a series of intestinal hemorrhagic E. coli O157 cases nationwide. The Japanese are working to adopt HACCP (Hazard Analysis and Critical Control Points) to the soy sauce, miso, and tofu industries. Each food has its unique CCP. Address: Japan Food Industry Centre.

8173. Packaged Facts, Subdivision of Marketresearch.com. 2000. The U.S. soyfoods market. New York, NY. 150+ p. Oct. 28 cm. *
• ***Summary:*** This market study, No. LA595, retails for $2,750. It examines the $2.2 billion soyfoods industry, and the strategies that are used in causing this market to explode, including unique promotional programs, product innovations, and acquisitions. The report covers 5 product categories: Meat alternatives; Dairy alternatives; Snacks, cereals, and breads; Bulk soybeans; Meal replacements/protein powders. It also discusses other soyfoods (including soy sauce and miso) and profiles leading manufacturers. It projects sales trends through 2005 and gives details on distributor trends and consumer attitudes and behaviors. Available from Marketresearch.com, which has a database of over 6,000 reports from 350+ publishers.

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Talk with representative of Packaged Facts. 2000. Oct. 31. Packaged Facts is no longer a subsidiary of FIND/SVP; they separated in about 1997 or 1998. FIND/SVP is, however, a strategic partner which conducts only custom market research; they have no off-the-shelf reports. Address: 625 Ave. of the Americas, New York, NY 10011. Phone: 1-800-346-3787.

8174. Yoshiki, Y.; Kikuchi, T.; Okubo, K.; Otomo, K. 2000. Identification of reactive oxygen scavenger from soy sauce using photon-HPLC analysis. In: Kyoko Saio, ed. 2000 Proceedings–Third International Soybean Processing and Utilization Conference. Tokyo, Japan: Korin Publishing Co., Ltd. [xxiv] + 728 + 8 p. See p. 169-170. [3 ref]
Address: 1-3 Dep. of Environmental Bioremediation, Graduate School of Agricultural Science, Tohoku Univ., 1-1 Tsutsumidori Amamiyamachi, Aoba-ku, Sendai 981-8555, Japan.

8175. Chiang, Cecilia Sun Yun. 2000. Maodou (green vegetable soybeans) in Chinese food culture (Interview). *SoyaScan Notes*. Nov. 6. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** *Maodou* (characters: hair + beans) are widely used in two types of Chinese cooking: (1) As a seasonal vegetable in the cooking of Jiangsu province (Wade-Giles: Kiangsu, southeastern China), whose major culinary cities are Shanghai (now an independent municipality), Nanjing (Nanking), Wuxi (Wu-hsi), and Changzhou; (2) Chinese Buddhist vegetarian cookery (*su-tsai*). *Maodou* is rarely used in northern Chinese cooking, where the people eat a lot of flours. In Shanghai they eat a lot of beans, including *maodou*. Yet *maodou* is almost never found in the cookery of neighboring Guangdong province or in the famous cookery of its capital, Canton.

Cecilia was born in Wu-hsi near Shanghai, one of 13 children in a family of great wealth. Her father was a high government official. When she was age 4, she moved with her family to Peking, where she was raised in luxury (their famous house had been an old palace) and educated from grammar school to university graduate. Her mother cooked only on special occasions. Among the 14 servants and maids, her family had two chefs, one cooked northern Chinese food and the other cooked Shanghai food. Cecilia learned nothing from these two cooks, since she was not allowed to go into the kitchen! In 1943, when the Japanese marched on Beijing (Peking), her family fled south to Chongqing (Chungking / Ch'ung-ch'ing; capital of "Free China" from 1937-1945); there she was married. It was not until 1945, V-J Day, that she first saw the remains of her parents' house at Wuxi. It had been destroyed by Japanese bombings. She and her husband (plus a cook and a few servants) lived near Shanghai for four years, then in April 1949 they fled to Japan when the Communists arrived, eager to confiscate the property of the wealthy. They lived in Japan for 8 years, until 1957, during the hard, lean years after World War II. Then they came to America. Cecilia learned to cook after she came to America.

In the Shanghai area during the summer months *maodou* are as widely found as edamamé in Japan. They are used in many different dishes. For example, shelled, they are cooked with shrimp, or with shrimp, pickled vegetables, and *pai-yeh* (sliced, pressed tofu sheets). A very large number of Buddhist vegetarian dishes contain *maodou*–such as "Vegetable Delight" which Cecilia used to serve at The Mandarin restaurant. When served in the pods, the pods are first boiled in unsalted water, then sesame oil and soy sauce are sprinkled on the pods, and the *maodou* are served in the pods.

Because they are available fresh for only about two months each year, *maodou* are very expensive. Thus, they are certainly not a poor-man's food. Some people (such as her mother) would dry *maodou* during the summer for use as a vegetable during the snowy winter when vegetables are scarce. The dried *maodou* are washed, soaked, then cooked–often with meat.

Cecilia is aware that edamamé are now starting to become quite popular in the USA. She thinks "the Japanese did something very good. Many Japanese restaurants give you a little edamamé to start with."

Cecilia knows nothing about the history of *maodou*, but she is quite sure these characters have been used in Chinese cooking for at least several hundred years.

Today, lots of edamamé are grown in Taiwan but Cecilia thinks this is not a result of the Japanese occupation of Formosa. Rather, the Japanese used Formosa mainly to grow sugar cane and pineapples. Address: Former owner, The Mandarin restaurant, Ghirardelli Square, San Francisco, California.

8176. Lumpkin, Tom. 2000. Update on work with edamamé (green vegetable soybeans) in the state of Washington (Interview). *SoyaScan Notes*. Nov. 22. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** One of the earliest Chinese-language references Tom has seen to soybeans (though he is not sure they are green vegetable soybeans) is in a poem about boiling immature soybeans with the branches of the plant. The poem is told from the viewpoint of the pods, which lament "Why are my brothers, the branches, boiling us?"

Tom has a videotape made in Japan that contains several early Japanese references to edamamé.

The proceedings of the edamamé conference, to be held on 10-12 Aug. 2001 at Washington State University, will be published before the conference. Tom asks Shurtleff to write a worldwide chronology of green vegetable soybeans and edamamé, which Shurtleff agrees to write; Tom will present it at the conference and publish it.

For the past five years, Tom's program has been

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developing ten non-shattering varieties of edamamé; they are at the F-6 stage. The key to breeding edamamé for America is making them machine harvestable. One Japanese and one Thai graduate student are helping him on the project. The varieties do not yet have names, only numbers. The main variables are non-shattering, structure of the plant, seed size, and flavor. Tom's program is also running "microsatellite fingerprinting" and "AFLP fingerprinting" on 150 edamamé varieties. Note: AFLP, which stands for "amplified fragment length polymorphism," is the registered trademark of a Dutch company. Most of the varieties are Chinese, with some Japanese and including their own ten. These new techniques, which give genetic fingerprints of each variety, enable them to: (1) Give precise descriptions of varietal differences, (2) See how much diversity exists among popular varieties, (3) Protect the lines and varieties they are developing; and (4) See who has been stealing varieties from whom. They have already constructed a pedigree, which will appear in an article, probably in *Crop Science* and in the conference proceedings. To get a broad range of offspring, a breeder wants to ideally select parents that are quite different.

Americans find the image of green soybean pods very attractive. Tom is well aware that edamamé are not simply any soybeans harvested at the green stage. He likes to say: "What sweet corn is to field corn, edamamé is to soybeans." They must also be processed in the same way to keep the sugars from changing into starches.

Tom has heard the word *azunda* used to refer to a soup containing edamamé; it is also used in some sweets, and his group has made a nice guacamole containing edamamé.

Tom believes that China will become the world's major grower of edamamé in the near future. Tom is working with Small Planet Foods (formerly Cascadian Farms) in the state of Washington–doing varietal development. Small Planet sells edamamé both in the pods and shelled. Tom also expects that precooked, flavored edamamé (in wasabi, teriyaki, etc. flavors) will become a big item in the near future.

Tom has been department chair at WSU for five years. His administrative duties (with 40 faculty and 70 staff people) make it harder for him to find time to do his own research and write. Just before he accepted this position, he had been accepted to go to the Needham Research Institute (which includes the East Asian History of Science Library) at Cambridge University in England. He would like to do that when he steps down from his current position, and maybe do a book on edamamé at that time. Address: Head, East Asian Crop Development Program, Dep. of Crops and Soil Sciences, Washington State Univ., Pullman, WA 99164-6420. Phone: 509-335-2726.

8177. *Canadian Soybean Bulletin* (*OSG, Chatham, Ontario, Canada*).2000. Incoming Japan soybean mission. 14(2): 1. Nov.

• ***Summary:*** Japan imports 5 million tonnes (metric tons) or 184 million bushels soybeans each year. Of that, about 1 million tonnes (20%, or 37 million bushels) are used to make soyfoods such as tofu, miso, natto, soy sauce, etc. Of the 1 million tons, 500,000 tonnes (50%) are for tofu, 160,000 tonnes (16%) are for miso, and 130,000 tonnes for natto.

Exports of Canadian soybeans have been increasing rapidly, from 36,000 tonnes in 1995, to 75,000 tonnes in 1998, to 175,000 tonnes in 2000.

In Sept. 2000, the Canadian Soybean Export Association and the Ontario Soybean Growers hosted ten Japanese from the soyfoods industry and showed them the Canadian soybean industry. These Japanese were most appreciative "of our efforts to segregate GMO and non-GMO varieties of soybeans using our Identity-Preserved, or IP program."

8178. *SoyaScan Notes*.2000. Chronology of major soy-related events and trends during 2000 (Overview). Dec. 31. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Jan. 8–The Kerry Group (of Wisconsin and Iowa) purchases Solnuts, a pioneer manufacturer of dry-roasted soynuts, in Hudson, Iowa.

Jan.–Kraft Foods Inc. (Illinois) purchases Boca Burger Inc., America's third largest maker of veggie burgers, after Worthington Foods and Gardenburger.

March 6–The Hain Food Group announces that it will acquire the Celestial Seasonings tea company to become the largest natural foods company in the USA.

March 9–The USDA formally approves a rule change allowing soy protein products to completely replace meat products in the Federal School Lunch Program.

March 31–Monsanto, the world's leading agricultural biotech company, merges with Pharmacia & Upjohn (a large pharmaceutical company), and the new company is renamed Pharmacia Corporation.

April–An article by Lon White on tofu and brain aging is published in *J. of the American College of Nutrition*.

June 9–20/20 (ABC) television program, titled "Soy–The untold story," airs on Friday at 10:00 p.m. discusses many of the shortcomings of soyfoods, but in a very fair way.

June 13–Martha Stewart, on her popular nationwide TV program *Living*, has a very positive segment on edamamé.

July 14–Lightlife Foods Inc. (of Turners Falls, Massachusetts) is purchased by ConAgra, Inc., a $25 billion food company based in Omaha, Nebraska–for an undisclosed amount. Lightlife's plant, employees, and management team will stay in place. Lightlife is a leading maker of vegetarian meat alternatives, with 150 employees and about $25 million in annual sales.

July–At a joint meeting of ASA and USB, the International Soy Protein Program (ISPP) was born as ASA and the Illinois Soybean Program Operating Board (ISPOB) formalized their joint commitment to "Increase

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the international consumption of soy protein by humans in new markets–developing countries–and thereby create new opportunities for disappearance of soybeans and provide higher economic returns to U.S. soybean producers." ISPOB and its Executive Director Lyle Roberts were instrumental in conceiving the program and raising its initial funding. This program was later renamed WISHH.

Sept.–Monsanto's patent on glyphosate expires. Glyphosate is the active ingredient in *Roundup*, the world's best-selling herbicide.

Dec.–Sanitarium Foods of Australia acquires the 47% of SoyaWorld owned by Sunrise Soya Foods (Vancouver, BC, Canada).

Trends: 1. This year, the momentum created by the FDA health claim in Oct. 1999 has propelled the soyfoods industry to new heights. Existing companies are growing rapidly, and many new companies (including some of America's biggest food companies) are entering the market with new products.

2. This year, for the first time, soymilk has become a mainstream American beverage. As of May, White Wave Silk soymilk is sold in 24,000 supermarkets nationwide. Edamamé (green vegetable soybeans) have gone mainstream in California, and are rapidly becoming popular on both coasts of the USA.

3. In the United States and Europe, the tide seems to be flowing increasingly against genetic engineering of foods and food plants. More and more companies in the natural foods industry are labeling their products as "non-GMO" or "GMO-free" or "No GMOs." Monsanto has stopped its efforts to develop genetically engineered soybeans for food use and focused its attention instead on livestock feeds. It now seems likely the genetic engineering of plants has a future, but not in the area of foods–at least in developed countries.

4. Interest in "food-grade soybeans" continues to grow in the USA and has increased substantially this year. Canada began focusing on identity-preserved food-grade soybeans 10-15 years before the USA. U.S. interest began to grow in about 1995 with the introduction of genetically engineered soybeans and with the accelerating interest in food uses of soybeans.

5. While pro-soy articles (mostly about health benefits) continue to increase, so do anti-soy articles and Internet sites. The loudest anti-soy voices are those of Sally Fallon and Mary Enig of the USA (they believe traditional fermented soyfoods–such as miso, shoyu, natto, and tempeh–are good, traditional non-fermented soyfoods–such as tofu, soymilk, and edamamé–are not very good, and modern soy protein products–such as soy protein isolates, concentrates, and textured soy flour–are the worst of all, being highly processed with chemicals such as hexane solvent). Also: Richard and Valerie James of New Zealand, and Lon White of Hawaii. Some of the concerns they raise are legitimate and deserve further research, but the majority (we believe) are not. Nevertheless, many of the health claims made for soy in popular articles are exaggerated or somewhat sensational, and not firmly supported by scientific evidence.

6. As we are about to enter a new century and a new millennium on 1 Jan. 2001, soyfoods appear to have a bright future, worldwide. This past year has seen more activity and interest in, and media coverage of, soyfoods than at any time in the history of the United States.

8179. Huang, H.T. 2000. Science and civilisation in China. Vol. 6, Biology and biological technology. Part V. Fermentations and food science. Joseph Needham series. Cambridge, England: Cambridge University Press. xxviii + 741 p. Illust. Index. 26 cm. [200+ soy ref]

• ***Summary:*** This is the most important book on soyfoods in China ever written, and it is especially good on their origins and early history in China. It is also one of the best books seen on food in Chinese culture and history.

The section titled "Soybean processing and fermentation" (p. 292-378) comprises 14.3% of the book's text, and has the following contents: Introduction. Soybean sprouts. Soybean curd and related products: The origin of bean curd, transmission of *tou fu* to Japan, products associated with *tou fu* (soymilk {*tou fu chiang*}, tofu curds {*tou fu hua* or *tou fu nao*}, pressed tofu sheets {*ch'ien chang* or *pai yeh*}, yuba {*tou fu i* or *tou fu p'i*}, deep-fried tofu {*yu tou fu* or *tou fu p'ao*}, pressed tofu {*tou fu kan*}, five-spice pressed tofu {*wu hsiang tou fu kan*}, plain dried tofu [pressed tofu] {*pai tou fu gan*}, smoked tofu {*hsün tou fu*}, dried tofu soaked in brine and fermented {*ch'ou tou fu kan*}, frozen tofu {*tung tou fu*}), making fermented tofu {*fu ju*}, comparison of *tou fu* and cheese, addendum. Fermented soybeans, soy paste, and soy sauce: *Ferments* for food processing, fermented soybeans–*shih*, fermented soy paste–*chiang*, fermented soy sauce–*chiang yu*, soy fermentations in China and Japan.

Note: This is the earliest English-language document seen (Feb. 2004) that uses the term "hsun tou fu" [pinyin: *xun doufu*] to refer to smoked tofu. Soy is also discussed in other parts of the book. Address: Alexandria, Virginia.

8180. Larson, Stephanie. 2000. The soyfoods boom: What's driving the explosion? First in a series. *Soybean Digest*. Dec. p. 10-11.

• ***Summary:*** Mark Messina says the whole market is driven by consumer demand because of health effects. Sales of soyfoods and soy protein products was $2.1 billion in 1999. Of that total, soymilk sales accounted for $300 million, up 38% from 1998. A graph shows soymilk sales (in million dollars) from 1992 to 1999, with projection to 2002. These sales rose from $100 million in 1993 to $300 million in 1999, projected to reach $500 million in 2001.

The United Soybean Board calculated that last year Americans consumed 37 million bushels of soybeans via

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soyfoods. A color photo shows many commercial soyfood products with colorful labels: Bergin Nut Company Soynuts (no salt), Fantastic Foods Tofu Scrambler, MCOA Brown Rice Miso, Spectrum Soy Oil, Health Trip Soynut Butter, Midwest Harvest Textured Soy Protein, Low-Fat Soy Flour, and Firm Tofu, Country Choice Soy Cocoa, Eden Organic Black Soy Beans, and Whole Foods Soy Ginger Sauce.

8181. Shurtleff, William; Aoyagi, Akiko. 2000. Tofu & soymilk production. 3rd ed. Lafayette, California: Soyfoods Center. 336 p. Illust. by Akiko Aoyagi Shurtleff. Index. Dec. 28 cm. [223 ref]
• ***Summary:*** Contains many new advertisements, plus changes on the title page, copyright page, and rear cover of both paperback and hardcover editions (new ISBN for each). Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

8182. Vitasoy USA, Inc. 2000. Nasoya: This could be the filet mignon of baked tofu! (Ad). *Natural Foods Merchandiser.* Dec. p. 16.
• ***Summary:*** This half-page color ad shows the labels of four new types of Nasoya baked tofu: Mesquite Smoke Flavored, Teriyaki, Thai Peanut, and Tex Mex. Each is made with whole organic soybeans and ready to serve. "Offer your customers an exciting new meat alternative with Nasoya Baked Tofu." Address: One New England Way, Ayer, Massachusetts 01432. Phone: 1-800-4-Nasoya or www.viatsoy-usa.com.

8183. Adams, M.R.; Moss, M.O. 2000. Food microbiology. 2nd ed. Cambridge, England: Royal Society of Chemistry. xiv + 479 p. + 16 pages of unnumbered plates. Illust. 24 cm. [439* ref]
• ***Summary:*** This book focuses on general principles, and does not try to mention every fermented food. Chapter 9.12, "Mould fermentations" (p. 363-68) discusses tempeh, soy sauce and rice wine [saké], koji (a mould enzyme preparation), miso, and Chinese chiang [jiang].

Ochratoxin may result from contamination of soya beans by *Aspergillus* species. Address: Univ. of Surrey, Guildford, UK.

8184. Davis, Brenda; Melina, Vesanto. 2000. Becoming vegan: The complete guide to adopting a healthy plant-based diet. Summertown, Tennessee: The Book Publishing Co. v + 281 p. Index. 25 cm. [153 ref]
• ***Summary:*** An excellent vegan sourcebook (not a cookbook) by two registered dietitians. Contents: Acknowledgements. From the authors. 1. Vegan roots. 2. Perspectives on vegan health. 3. Plant protein. 4. Big fat lies. 5. The two faces of carbohydrates. 6. Prospecting for minerals. 7. Vitamins for vegan vigor. 8. Phytochemicals. 9. The vegan food guide. 10. Building vegan dynamos. 11. Growing vegans. 12. The prime of life. 13. Overweight. 14. Eating disorders. 15. Underweight. 16. The vegan athlete. 17. Vegan diplomacy.

This book begins with a good history of veganism and contains (throughout the book) a wealth of accurate, positive information about many different types of soyfoods (especially tofu) and related subjects, including tofu, soymilk, tempeh, soy yogurt, soy cheese, soy sauce, tamari, and soy oil (incl. omega-3 fatty acids). Plus Adventist Health Studies, dietary fiber, phytochemicals and sea vegetables. Address: 1. Kelowna, British Columbia. 2. Langley, British Columbia. Both: Canada.

8185. Evans, K. Lee; Rankin, Chris. 2000. Giant book of tofu cooking. New York, NY: Sterling Publishing Co., Inc. 256 p. Illust. (color photos). Index. 28 cm.
• ***Summary:*** A beautiful vegetarian cookbook, with many color photos on glossy paper, excellent use of standard terminology (except for "freeze-dried tofu"), and 350 healthful, delicious recipes. Contents: Introduction. Tofu basics and techniques. Getting started (buying tofu {soft tofu, firm tofu, extra-firm tofu, silken tofu, marinated tofu, smoked tofu, freeze-dried tofu, fermented tofu}, storing tofu, preparing tofu for your recipes {draining and blotting, pressing, freezing and thawing, blending, cubing and dicing, crumbling, shredding / grating, marinating, boiling slightly sour tofu, frying, deep-frying}), other soy products (edamame, meat alternatives, miso, soy cheese, soy flour, soy ice cream, soy milk, soy sauce, soy sprouts, soy "yogurt," soynut butter, soynuts, tempeh, textured soy protein, whole dry soybeans), tofu and a healthier you (introduction, protein, heart disease, cancer, menopause, osteoporosis, our planet), simple ingredient substitutions (eggs, milk, cheese, butter, salt, sugar {honey, molasses, maple syrup, rice syrup, barley malt syrup}). Ingredient glossary: Incl. arrowroot, balsamic vinegar, bamboo shoots, barley malt syrup, fermented Chinese black beans, filé powder, galangal, garam masala, garbanzo beans, Hoisin sauce, liquid smoke, mirin, miso, nutritional yeast, phylo or filo, pickled ginger, quinoa, rice noodles, rice papers, rice syrup, sake, shoyu, tahini, toasted sesame oil, vegetarian gelatin, vegetarian Worcestershire sauce ("Just like the original, it is made of soy, vinegar, and spices, but without the anchovies"), wakame, wheat germ. Breakfast. Appetizers. Soups. Salads. Lunch and dinner. Dressings, sauces, and spreads. Desserts. Metric conversion chart. Acknowledgments.

8186. Fruehschuetz, Leo. 2000. Soja [Soya]. Schaafheim, Germany: Bio Verlag. 144 p. With recipes by Judith Braun. Illust. Index. 15 cm. [12 ref. Ger]
• ***Summary:*** Contents: Forward: Portrait of the soybean: From China to the entire world, the composition of whole beans, does soya help with cancer?, protein and oil for the world economy. The original soybean and what followed:

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Introduction (there is not much to improve on in the soybean), the "labor-bean" (Monsanto and Roundup-Ready soybeans), the results for farmers, for the environment, for health, politics without results, for trade and the end-users, the forgotten results, soya in animal feeds. Organically grown soya–without genetic engineering and pesticides. Versatile: Soya in the wholefoods kitchen: Soybeans: whole, ground, and sprouted, the fluid bean–milk, yogurt (fermented), and oil, tofu–the meat without bones, tempeh–the noble cultured food from Indonesia, soy sauce–aged in wooden vats, miso–soya for soups, soyameat–saved from the wolf. Recipes: Soymilk, soy flour and flakes, tofu, tempeh, soy meat and granules, miso, soy sprouts. Address: News journalist for natural foods and long-lived people, co-worker with Schrot&Korn.

8187. Hosking, Richard. 2000. At the Japanese table. New York: Oxford University Press. x + 70 p. Illust. (some color). Index. 20 cm. Series: Images of Asia. [19 ref.]
• ***Summary:*** Contents: Acknowledgements (thanks to Dr. Naomichi Ishige). The Japanese and food. Food: the raw and the cooked. Seasonal foods and drinks. Appearance, texture, and flavour. The dining room and kitchen. Meals and menus.

Briefly mentions: Soy sauce (p. 2, 12, 20), bean curd (2), tamari (p. 20), Japanese Worcester sauce (p. 20), other soy bean products (p. 20-21), tofu (p. 21, 25), yuba (p. 21, 36), deep-fried tofu–aburaage, agedofu (p. 21), miso (p. 21), green vegetable soybeans (p. 21), teriyaki sauce (p. 28), miso soup (p. 35).

8188. Komfeld, Myra. 2000. The voluptuous vegan: more than 200 sinfully delicious recipes for meatless, eggless, and dairy-free meals. New York, NY: Three Rivers Press. [xi] + 305 p. Illust. (by Sheila Hamanaka). Index. 24 cm.
• ***Summary:*** A vegan cookbook with some macrobiotic flavor. The excellent glossary includes: adzuki beans, agar-agar, almond butter, barley malt, barley miso, carob powder, edamame, gluten, haricots verts, Hass avocado, hijiki, Hokkaido pumpkin (kabocha squash), kanten, koji, kombu, kudzu, maple sugar (crystallized maple syrup), mirin, miso, MSG, nori, oden, Rice Dream, rice syrup, sambal (Indonesian word for chutney), sea salt, seitan, shiitake, shoyu, soybean, soy milk, Sucanat, tahini, tempeh, umeboshi paste, wakame, wheat gluten, Yannoh coffee. The index contains 29 entries for tofu, 9 for seitan, 5 for tempeh, 2 for miso, 1 for "Cheese"–tofu (p. 214), "Sour cream"–tofu (p. 25), and teriyaki vegetables. Note: Soy milk is called for in many recipes. Address: Professional Chef, New York City.

8189. Kouwenhoven, Arlette; Forrer, Matthi. 2000. Siebold and Japan: His life and work. Leiden, Netherlands: Hotei Publishing. 111 p. Illust. (Incl. color). No index. 27 cm. [40* ref. Eng]
• ***Summary:*** An excellent biography of Philipp Franz von Siebold (1796-1866), a German physician and naturalist who was one of the first Europeans to live in Japan. In 1823 Siebold wrote a letter to the Governor of Batavia requesting professional help at Deshima. In 1825 two men were finally dispatched: (1) Dr. Heinrich Bürger (1804-1858), a scholar, who worked as a pharmacist in Batavia, and who was to assist with scientific research, chemistry and mineralogy; and (2) Carel Hubert von Villeneuve, an auditor and artist.

On 15 Feb. 1826, Siebold departed from Deshima, accompanying the court journey to Edo (today's Tokyo) of *Opperhoofd* Johan Willem de Sturler. Siebold was joined by Dr. Burger in the role of secretary, although Bürger's true purpose was to assist Siebold in his scientific research. These were the only three Dutchmen allowed to make the long journey. Siebold and Bürger were well prepared for the trip, they had gathered all sorts of equipment to take with them, including barometers, thermometers, hygrometers, sextants, chronometers, microscopes, crockery, furniture, silver, fine glassware, and even a piano. Some of these items were intended as gifts. En route, the inquisitive Siebold observed and wrote about practically everything. They arrived in Edo on 10 April 1826, about 2 months after leaving Nagasaki, a trip of about 1,400 km. On 1 May 1826 the three Dutchmen had an audience with the shogun. The delegation finally left Edo on 18 May 1826 and arrived at Deshima on July 7. Note: It was almost certainly on this trip that Siebold and Bürger observed soybeans and recorded their observations in the trip's log.

A 3-page chronology of Siebold (p. 100-02) includes: 1796 Feb. 17. Philipp Franz von Siebold born in Würzburg [in today's Germany]. 1815–Starts study of medicine at the University of Wurzburg; subjects include chemistry, botany, and physics. 1820–Completes his studies in medicine, surgery, and anatomy, obtains his doctorate, and establishes himself as a physician in Heidingsfeld. 1822 June 21–Appointed Surgeon-Major in the Dutch East-Indies Army. 1823 Feb. 13–Arrives in Batavia. On April 18 he is appointed to the post of physician at the trading post on Deshima, near Nagasaki, Japan. He also receives instructions to conduct research into Japanese natural history, laws, and politics.

1823 Aug. 12. Arrives on Deshima and starts teaching almost immediately. That same year he "married" Kusumoto Sonogi, also known as Otaki (1807-1865); she is 11-12 years younger than he. 1824. Starts a botanical garden on Deshima at the request of the government in Batavia. Opens his school in Narutaki, just outside Nagasaki. 1825. Dr. Heinrich Burger arrives from Batavia to help Siebold with his geological research, accompanied by C.H. Villeneuve, the illustrator.

1826 Feb. 15 to July 7. He accompanies *Opperhoofd* De Sturler on the court journey to Edo. Burger, Keiga and several of his Japanese students join the delegation. 1827. The government in Batavia requests his return there, with the possibility that he may have to return to Holland. Also in

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1827 Von Siebold's daughter, Oine (1827-1903) is born.

1828 Sept 18. A severe storm causes the ship, with 89 crates containing Siebold's collection, to run aground on the coast at Nagasaki. The discovery of forbidden objects leads to the detainment of Siebold, Takahashi, and many others. Siebold is placed under house arrest.

1829 Oct. 22. After being subjected to lengthy cross-examination, Siebold is banished from Japan. On Dec. 30 he leaves Japan.

1830 Jan. 18. Arrives in Batavia, then travels to Holland where he arrives on July 7. In Antwerp he meets Dr. Hoffmann, who is later to become the first professor at Leiden University.

Note. 1830. Siebold's first publication on Japanese plants appears (largely in Latin, but with many Japanese characters) in *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen* 12:1-74. See p. 54-57, plus first table at end. He mentions two species of soybeans: *Sooja Japonica*, the cultivated soybean, and *Sooja nomame*, the wild soybean; he says he has seen a living plant specimen of the latter. Soybeans are used to make shoyu, miso, and tofu. A note at the end of table I states that he drafted it at Deshima in November 1827.

1831 April 20. King Willem I agrees to buy Siebold's ethnographic collection and to pay an advance of 12,000 guilders. 1832. Hires a house at 19 Rapenburg in Leiden, Netherlands, where he organises his collection and opens it to the public. He maintains contact with Burger, who still lives on Deshima. Travels to Germany in the autumn. 1833. Returns to The Netherlands in the summer. Presents the first copy of his opus *Nippon* to the Society of Dutch Letters on 26 Nov.

1835. Travels in Germany and Austria. Meets Zuccarini and others. 1836 Aug. 22. Buys the house at 19 Rapenburg. 1839. From now on he spends winters in Germany, where he meets his future wife, Helene von Gagern.

1840. Buys a piece of land at Leiderdorp, where he builds the villa, 'Nippon' and starts a nursery. 1842. Establishes the plant and seed company, Siebold & Co. with Blume and Rodbard. 1845 July 10. He marries the Lady Helene von Gagern (1820-1877) in Berlin; she is 24 years younger than he. Soon four children are born. 1859. Returns to Japan. Arrives in Nagasaki on Aug. 4. 1861 Oct. He is banished from Edo, and Japan itself. 1866 Oct. 18. Von Siebold dies in Munich, Germany; he is buried in the Alten Südlichen graveyard on the Thalkirchner Strasse.

8190. Kulp, Karel; Ponte, Joseph G., Jr. eds. 2000. Handbook of cereal science and technology. 2nd ed., revised and expanded. New York, NY: Marcel Dekker. ix + 790 p. Illust. Index. 29 cm. Series: Food Science and Technology, No. 99.
• ***Summary:*** Chapter 26, "Fermentation and microbiological processes in cereal foods," by Pierre Gélinas and Carole McKinnon (of Food Research and Development Centre, Agriculture and Agri-Food Canada, St. Hyacinthe, Quebec, Canada) (39 refs) (p. 741-54) contains a long table (p. 742-46) titled "List of foods prepared from fermented cereals." The four columns are: (1) Food name (synonym or related food). (2) Food type (characteristics). (3) Area (country or continent). (4) Main microorganisms.

Under "Soybeans" the following foods are listed: Chee-fan, Chinese yeast, Hama-natto, Kenima, Ketjap, Meitauza, Meju, Miso (chiang, doenjang, kochujang, tauco), Natto, Soy sauce (kanjang, kecap, kicap, shoyu, taosi [sic]), Sufu (tahuri, taokoan tao-hu-yi), Tairu (taire–fermented soybean milk, like yogurt, from Malaysia), Taotjo, Tempe (tempeh).

"Chee-fan" is described as "Curd-like" [fermented tofu] from China. Main microorganisms: *Mucor* spp., *Aspergillus glaucus*.

Note 1. Taokoan (listed under Sufu, above) is not a fermented food. It is the Filipino equivalent of Chinese *doufu-gan* or "pressed tofu." Filipino fermented tofu is *tahuri* (also spelled *tahuli*).

Table 2, "List of representative microorganisms associated with fermented cereal foods" (p. 74-48) contains two columns: (1) Type of microorganism (and within type, genus and species, listed alphabetically by genus). (2) Food produced.

Under "Bacteria" are: *Bacillus natto*–Hama-natto [sic], natto. *Lactobacillus delbrueckii*–Miso, soy sauce. *Pediococcus* spp.–Hamanatto. *Pediococcus halophilus*–Soy sauce. *Streptococcus* spp.–Hama-natto.

Under "Bacteria" are: *Actinomucor elegans*–Meitauza, sufu. *Aspergillus glaucus*–Chee-fan. *Aspergillus oryzae*–Hama-natto, ketjap, meju, miso, saké, soy sauce. *Monascus purpureus*–Anka (ang-kak, beni-koji, red rice), hong-ru (lao-hong). *Mucor* spp.–Chee-fan, ruhi, sufu. *Mucor hiemalis*–Sufu. *Rhizopus oligosporus*–Tempe.

Under "Yeasts" are: *Candida* spp.–Soy sauce. *Zygosaccharomyces rouxii*–Miso, soy sauce.

The section on "Major commercial fermentation processes" includes (p. 752-53) soy sauce (from wheat and soybeans) and miso (from rice and soybeans).

Note 2. Koji, the basis of soy sauce, miso, and saké fermentations, is not mentioned in either of the first two tables. However it is mentioned by name on p. 753. Address: 1, American Inst. of Baking, 2, Prof. Emeritus, Kansas State Univ. Both: Manhattan, Kansas.

8191. Liberty, Anne. 2000. Super soy! Protect yourself against bone loss, heart disease, cancer, menopause, high cholesterol. Boca Raton, Florida: American Media Mini Mags Inc. 66 p. 14 cm. [1 ref.]
• ***Summary:*** This mini-book (only 5½ inches high) was sold (for $1.19) next to the tabloid magazines at the checkout stand at Longs Drug Store in Lafayette, California. On the little cover is a color photo of a grey-haired and healthy-looking lady holding a glass of soymilk. Contents: All

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about soy: Inside the soybean (phytoestrogen, isoflavones, genistein, protease inhibitors), eight of soy's top health benefits (antioxidant protection from free radicals, breast cancer protection, cholesterol control, colon cancer protection, strong bones, hot flash reduction, a strong immune system, and kidney disease prevention), different soy products (green soybeans, hydrolyzed vegetable protein {HVP}, infant formula {soy-based}, lecithin, meat alternatives, miso, non-dairy frozen soy ("soy ice cream"), soy cheese, soy flour, soy grits, soy protein (incl. TSP = textured soy protein = textured soy flour), soy sauce, soy yogurt, whole soybeans, soy nut butter, soy nuts, soy oil, soy sprouts, tempeh, tofu, whipped soy-based topping, yuba), nutritional value, how much do you need? Bone loss. Heart disease and cancer. Heart disease, cancer (genistein, isoflavones, phenolic acids, phytates, protease inhibitors). Menopause. Cholesterol. Cooking with soy products. Soy flour, miso, soy milk, soy protein, tofu, tempeh. Delicious soy recipes.

The author frequently refers to Earl Mindell, PhD, but has no real scientific references. Many of the recipes were provided by the United Soybean Board. On the last page are two sources of more information and recipes: The United Soybean Board website www.talksoy.com and the Indiana Soybean Board website www.soyfoods.com.

8192. Rose, Robert, ed. 2000. Beans, lentil & tofu gourmet. Toronto, Ontario, Canada: Robert Rose, Inc. 192 p. Illust. Index. 26 cm.

• ***Summary:*** This is an unusual but attractive book, with no real author or publisher. It was written by "The editors of Robert Rose" and published by Robert Rose Inc., with financial support of the government of Canada. Basically, it is a collection of recipes from other cookbooks. Except in the chapter titled "Meatless" (p. 145-62), many recipes contain meat, poultry, fish, or seafood. The section titled "Contributing authors" lists eight authors, with photos and descriptions of their cookbooks, and statements such as "Recipes from this book are found on pages 23, 38, 69, and 180." The book contains 12 full-page color photos of dishes prepared from the recipes.

Contains 13 tofu recipes and one tempeh recipe: Malay vegetable-stuffed fried bean curd with spicy sweet-and-sour sauce. Bak choy noodle and tofu chicken soup. Curry-fried tofu soup with vegetables and udon noodles. Mixed vegetable herb broth with soft tofu. Chickpea tofu stew. Braised stuffed bean curd. Braised roasted pork with tofu and green onions. Steamed shrimp-stuffed tofu with broccoli. Hoisin stir-fried vegetables and tofu over rice noodles. Barbecued tempeh with basil, hyssop and ginger. Chickpea tofu burgers with coriander mayonnaise. Thai dry vegetable curry (with tofu, p. 162). Pea tops with pancetta and tofu. Soy-braised tofu, cabbage and ginger with cellophane noodles (with soya sauce, p. 172-73). Address: 120 Eglington Ave. E., Suite 1000, Toronto, ONT Canada. Phone: (416) 322-6522.

8193. Wilkinson, Endymion Porter, comp. 2000. Chinese history: A manual. Revised and enlarged. Cambridge, Massachusetts: Harvard University Press / Harvard Yenching Institute. xxiv + 1181 p. Index. 23 cm. Harvard Yenching Institute Monograph Series, 52. 1st ed. 1998. [500+* ref]

• ***Summary:*** A remarkable and extremely valuable book. Partial contents: Introduction: Recent historiographical trends, center and periphery, periodization, the dynasties. I: Basics. 1. Language. 2. Dictionaries. 3. People. 4. Geography. 5. Chronology. 6. Telling the time. 7. Statistics: Numbers and order of magnitude, population, weights and measures, money, prices. 8. Guides and encyclopedias. 9. Locating books. 10. Locating secondary sources. 11. Libraries.

II: Pre-Qin sources. 12. Archaeology. 13. Pre-Qin archaeology. 14. Prehistoric signs and symbols. 15. Oracle bone inscriptions. 16. The characters: Evolution and structure. 17. Epigraphy. 18. From bamboo strips to printed books. 19. Excavated and transmitted texts.

III: Historical genres. 20. Primary and secondary sources. 21. Annals. 22. Standard histories. 23. Topically arranged histories. 24. Miscellaneous histories. 25. Government institutions. 26. Official communications. 27. Law. 28. War.

IV: Other primary sources... 35. Agriculture, food and the environment. 36. Medicine. 37. Technology and science... 42. Foreign accounts of China.

V: Primary sources by period.

In the chapter titled "Agriculture, food and the environment," section 35.2.2 on "Pre-Qin foodstuffs and cooking" (the Qin dynasty, 221-206 B.C., came just before the Han) states that the staple dishes, cooked mainly by boiling or steaming, were typically "accompanied by a savory paste (*jiang, miso* in Japanese) made from hydrolyzed (fermented) meat, fish, crustaceans, or, most important of all, soybeans" (Footnote 8). "The soybean is indigenous to northeast China. Its cultivation began in the Zhou period. It was a major source of protein, especially for peasants and laborers. Starting in the Yangzi valley, it was brined and hydrolyzed into the characteristic Chinese flavoring, soy sauce (*jiangyou*) (9). By the Han, a new process had been discovered; if the production was interrupted half way and the beans dried, they became blackened and delicious. Along with savory pastes (*jiang*) and pickles (*zu*), these fermented soybeans (*chi*) were immensely popular (10)."

Footnote 8: See *Zhongguo shiqian yinshishi* (A history of Chinese prehistoric food and drink), Wang Renxiang, ed. in chief, Qingdao, 1997.

Footnote 9 (p. 638): "The origin of 'soya' in European and other languages is from either *xiyao* [fermented black soybean sauce] or *shôyu* (the Cantonese and Japanese for

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jiangyou [soy sauce] respectively). The early generic word was *shu* (*Glycine max*), later *dou*, and later still *dadou* to distinguish it from post-Han imported pulses."

Footnote 10: "*Chi* used to be pronounced *shi*. Other names for *chi* were *douchi*, *daku*, and *nadou* (*nattô* in Japanese)."

Section 35.2.3 on "New foodstuffs and cooking" covers the period from the beginning of the Han dynasty in 202 B.C. Noodles (*bing*) were introduced. Soybeans (in the forms of jiang and fermented black soybeans {*chi*}) remained an important source of protein. Alfalfa (*musu* or *mushu*), peas (*hudou*, modern *wandou*), and sesame (*huma*, modern *zhima* or *mazi*) are said to have been introduced by Zhang Qian, the emissary from the Former / Western Han dynasty. By the Tang "bitter fermented blackened soy beans" (*huchi*) had been introduced; *hu* means "barbarian." Tofu (*doufu*) is first mentioned in the early Song dynasty. It was imported into Japan and first appeared there in a document dated 1183. "It was used as a substitute for meat and fish in Buddhist vegetarian cooking." New World crops which made their way into China from the 16th century include peanuts (*fandou*, modern *huasheng*), chili, corn, sweet potatoes, and tomato (p. 643).

Note: The author was educated in England. Address: Head of Delegation and Ambassador to China for the European Commission.

8194. Hymowitz, Ted. 2001. When were soybeans first cultivated in Pennsylvania, and by whom? (Interview). *SoyaScan Notes*, Jan. 3. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** On 16 Jan. 1769 Samuel Bowen sent both soybeans and soy sauce to a committee of the Society for the Promotion of Useful Knowledge in Pennsylvania. As secretary of the Society, Charles Thompson would have been aware of these items. The committee then gave the soybeans to eight farmers. Ted has done extensive research trying to find out who these farmers were and whether any of them grew the soybeans. First he looked at later publications of the Society to see if they reported on these soybeans; he found nothing. Then he dug deep into the records of each of these individuals, such as diaries; again nothing. Ted has also looked at everything he could find about John Bartram (to whom Benjamin Franklin sent seeds); no record of him planting soybeans. Maybe the soybeans failed to germinate.

In 1804 Mease made his famous statement: "The Soy-bean bears the climate of Pennsylvania very well. The bean ought therefore to be cultivated." At that time, Mease was Secretary of the Society. We do not know the basis for his statement. Who could have planted these soybeans in Pennsylvania between 1769 and 1804, and from where were they obtained? Probably one of the 8 farmers, who got them from Samuel Bowen. John Bartram was one of these 8 farmers.

Ted believes, based on the wording, that Mease was paraphrasing Charles Thompson (Feb. 1771); both use the word "climate" and both are referring to introduced plants. Yet Thompson uses the term "Chinese Vetch" and Mease uses the term "Soy-bean" to refer to the same plant. Why the change? Thompson, who was secretary of the American Philosophical Society, stated in their Transactions that Chinese Vetch had been introduced to the colonies–not specifically to Pennsylvania. Thompson was almost certainly referring to the soybeans grown by (or for) Bowen in Savannah, Georgia; he knew this through the Minutes of the Society.

Therefore, Ted believes that Mease 1804 is the earliest document seen which states clearly that soybeans have been grown in Pennsylvania. Yet many questions remain. When were these soybeans first grown? By whom? If any of these early soybean were grown, were they the ones sent to Pennsylvania by Bowen or by Franklin?

Update: Talk with Ted Hymowitz, 2005. Nov. 7. Ted has found a record that John Bartram grew soybeans in Philadelphia, but we do not know when; his grandson or great-grandson did his best to document Bartram's work by collecting the little scraps of paper that Bartram left lying around. Bartram (on one of his scraps of paper) called the bean "soi." Both John Bartram (lived 1699-1777) and James Mease (1771-1846) were members of the American Philosophical Society, however Mease was age 6 when Bartram died.

Bartram, who was a farmer and owned a small seed company that exported seeds, bulbs, and cuttings to Europe. Though barely literate, he was a good botanist but he did not keep good records. He was apparently too poor to buy notebooks to record his botanical observations, so he recorded them on little scraps of paper, which he left here and there. He led a chaotic life. He liked to work with his hands in the fields. European gentleman botanists who came to visit his home in Philadelphia, asked if they could please see Mr. Bartram. They thought the man they had just met, whose pants were torn or patched, who had mud on his boots, dirt on his hands, and seemed like he hadn't washed for a week, was Mr. Bartram's gardener.

In conclusion: It seems likely that soybeans were first cultivated in Pennsylvania in 1769, but we have no proof. One of the 8 farmers to whom Bowen's soybeans were distributed probably planted them that year, but Ted can still find no record of that. We have no proof that soybeans were cultivated in Pennsylvania until 1804, when Mease says they were. Address: Prof. of Plant Genetics, Dep. of Crop Sciences, Univ. of Illinois, Urbana, Illinois.

8195. Glenville, Marilyn. 2001. Natural alternatives to HRT* (* hormone replacement therapy) cookbook: Understanding estrogen and foods that benefit your health. Berkeley, California: Ten Speed Press. 192 p. Illust. Index. 24 x 21 cm.

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[37* ref]

• ***Summary:*** Every woman who experiences menopause has probably experienced unpleasant symptoms such as joint pains, mood swings, weight gain, hot flashes, etc. Yet these symptoms can be avoided, or at least alleviated–by simple and safe changes in diet to include more phytoestrogens and isoflavones. This books tells and shows you how. Already a best-seller in the U.K. with over 20,000 copies in print.

Although this is not a vegetarian cookbook (recipes call for the use of fish and shellfish such as crab, mussels, salmon, tuna, etc.), there is extensive discussion of the benefits of soyfoods in a diet for menopausal women and many recipes that use soy (especially tofu). The chapter titled "What you need to eat at menopause" contains a good discussion (p. 17-18) of the benefits of isoflavones / phytoestrogens and natural soyfoods. It is known that "legumes contain good levels of isoflavones, and soy ranks the highest." Phytoestrogens are also good for bone health, and soy protein helps to reduce cholesterol (p. 25).

In the "Introduction to the recipes" is a section on "Soy products" (p. 47) that discusses miso, soy milk, soy sauce, tempeh, and tofu (which is "wonderfully versatile"). Soy-related recipes include: Scrambled tofu (p. 71). Tofu vegetable quiche (p. 90). Russian salad deluxe with tofu dressing (p. 96). Vegetable, bean sprout and tofu stir-fry (p. 104-06). Tofu and mushroom stroganoff (p. 106-07). Herby tofu and oat sausages with nutty mash (p. 112). Austrian bean salad with tofu dressing (p. 130-132). Deluxe kebabs (p. 136). Apricot tofu ice-cream (p. 156). Tofu cheesecake (p. 157). Mixed berry fool (p. 159). Miso broth (p. 176). Soy mayonnaise (p. 179). Sesame tofu dressing (p. 180). Tofu dip for raw vegetables (p. 180). Mocha tofu cream (p. 183). Tofu cream (p. 183).

Marilyn Glenville, PhD, earned her doctorate at Cambridge University and is Chair of the Governing Council for the British Association of Nutritional Therapists. She has practiced nutritional therapy in the U.K. and U.S. for more than twenty years, and specializes in the natural approach to female hormone problems. She practices from three private clinics in London and Kent, including the prestigious Hale Clinic. Address: PhD, nutritional therapist, UK.

8196. *Nutrition Business Journal (San Diego, California)*.2001. Edward & Sons resists would-be acquirors. Service, quality and established supplier relationships are the basis of business for niche-oriented organic food company. 6(2): 16. Feb.

• ***Summary:*** Located in Carpinteria, California, Edward & Sons is a 24-year old firm with annual sales of $8-$10 million, growing at nearly 20% a year. They sell 60 items including misos, sauces, rice crackers, and organic sprinkles. All products are vegetarian and two-thirds of its sales are from organic products.

The company's original product, Miso Cup, a dry instant soup, was developed by founder and president Joel Dee in response to a dearth of instant meals for vegetarians. It remains the company's flagship product. The second product, Brown Rice Snaps, from Japan, were the first wheat-free crackers on the market. The company also introduced the first flavored soy sauces under the Premier Japan brand; they now have several other sauce brands, including Wizard Organic, Troy's, and Rainforest Organic.

8197. **Product Name:** Azumaya Baked Tofu: Mesquite Smoke Flavored, Teriyaki, Spicy Thai Peanut, and Chile Picante.
Manufacturer's Name: Vitasoy USA, Inc.
Manufacturer's Address: 400 Oyster Point Blvd., Suite 201, South San Francisco, California 94080.
Date of Introduction: 2001, February.
Ingredients: Teriyaki: Tofu (water, whole non-genetically modified soybeans, magnesium chloride), soy sauce (water, whole non-genetically modified soybeans, sea salt, whole wheat, alcohol to preserve freshness), cane juice (dried), sea salt, ginger, natural flavors, garlic (dried), caramel color, carrageenan, sesame seeds.
Wt/Vol., Packaging, Price: 2 pieces in 8 oz (227 gm) shrink pack. Teriyaki retails for $1.29 (2001/08, Lafayette, California).
How Stored: Refrigerated.
New Product–Documentation: Products with Labels purchased at Safeway in Lafayette, California. 2001 Aug 15. Teriyaki retails for $1.29 but Mesquite retails for $2.69. Teriyaki Label: 3 by 4¼ inches. Red, black, white, and blue. A color illustration shows a large red Japanese Shinto torii arch standing in water with snow-capped Mt. Fuji in the background. In the right front is a Japanese woman in a kimono holding a fan in one hand and a paper umbrella in the other. On the front panel: "Ready-to-Eat. All natural. No preservatives. Cholesterol free. Pasteurized." On the back of the Teriyaki is written: "Soy protein claim: Azumaya Baked Tofu is an excellent source of soy protein. One 4-ounce serving of Azumaya Baked Tofu contains 19 grams of soy protein." A date code: 11/00 (Nov. 2000) is printed in the lower left corner. Soyfoods Center taste test: Mesquite has grill marks on the outside. Not much flavor penetration: 7. Teriyaki has somewhat better flavor. Label design: Okay.

8198. Stephens, Roger; Stephens, Jane Ade, ed. and comp. 2001. Soyfoods guide 2001: Helpful tips and information for using soyfoods. Indianapolis, Indiana: Stevens & Associates, Inc. Distributed by the Soy Protein Partners. 24 p. Illust. No index. 28 cm. [23 ref]

• ***Summary:*** This guide is available only on a limited basis to dietitians and health professionals. Contents: Foreword. Keep your heart healthy: Super soy protein smoothie. Beans, beans, good for the heart: The more you eat, the better your chances of lowering your blood cholesterol levels.

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Cholesterol: What's in a claim. Sample soy meal planner (4 meals a day for 5 days, to get 25+ grams/day of soy protein). Dietary guidelines for Americans. Composition of soyfoods (table). The healthy bean: Isoflavones, heart disease, menopause and osteoporosis, allergies, diabetes and kidney disease, fat. Isoflavone content of soyfoods (table). The state of soy research. Protein content of soyfoods (table). Soy resources: Web sites, books. Soyfood substitution chart. Descriptions of soyfoods: Traditional soyfoods, soy-based products, soy ingredients. Recipes: Meat alternatives. Textured soy protein. Soy flour. Whole soybeans. Soymilk. Tofu. Soy snacks and smoothies. Soy–Good for your heart.

The Foreword (p. 2) states: "The *2001 Soyfoods Guide* is distributed by the Soy Protein Partners. Partners include state soybean boards from Alabama, Arkansas, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, North Carolina, South Dakota, Tennessee, Texas, Virginia, and Wisconsin. Industry partners include: American Soybean Association, Archer Daniels Midland Company, Central Soya Co., Minnesota Soyfoods Association, Protein Technologies International, Soy Protein Council, Soyfoods Association of North America, Soyfoods Council and the United Soybean Board." Address: 4816 North Pennsylvania Street, Indianapolis, Indiana 46205. Phone: 317-926-6272.

8199. Andoh, Elizabeth. 2001. Sampling seasonal delicacies, at reasonable prices, in Osaka. *New York Times*. April 1. p. TR6, TR18 (Sunday).

• ***Summary:*** Contains reviews of restaurants in Osaka. Yoshino Sushi offers "plump vegetable rolls stuffed with broth- and soy-simmered koya-dofu (dried tofu).

Shiru Yoshi offers "one tofu kaiseki; each menu is $100 a person. Throughout Japan tofu is not synonymous with vegetarian cuisine. At Shiru Yoshi, it means two of the many courses that feature silky bean curd [kinugoshi, silken tofu]: in the winter a hot pot of tofu and mushrooms with a soy-based dip... and agedashi, a deep-fried block of tofu..." A "succulent chunk of miso-marinated fish was also served" to those who ordered the kobachi kaiseki dinner (literally "feast of small dishes"). Address: Tokyo, Japan.

8200. Iino, Ryoichi. 2001. The history of shoyu (Soy sauce) 3. *Food Culture* (*Kikkoman Inst. for International Food Culture, Noda, Japan*) No. 3. p. 20-23. May. http://kiifc.kikkoman.co.jp. [8 ref. Eng]

• ***Summary:*** Contents: *Sho* in the Kamakura period. The development of *nimono*. The appearance of *tare-miso*. Cooking with *tare-miso*. *Tou-miso* in the *Tamonin-nikki*. The appearance of the term *shoyu*. Soy sauce and tamari.

This article begins: "Sho in the Kamakura Period: In the previous issue of *Food Culture*, I noted that both liquid *sho* [pronounced *jiang* in Chinese] and unrefined *sho* [which probably had a consistency like applesauce] were manufactured during the Heian period (794-1185); that the term *sho* was generally used to refer to unrefined *sho;* and that the use of liquid *sho* gradually declined. In this continuation of my article, I would like to discuss the situation in the subsequent period, that is, during the medieval age, up until the appearance of soy sauce."

"*Tare-miso* is a liquid seasoning made by adding water to miso, boiling it down, and then straining the mixture by suspending it in a cloth bag. A method for making *tare-miso* can be found in the *Ryori Monogatari*, compiled in 1643... The same book contains a different recipe for *nama-dare*, which is a form of *tare-miso* prepared without cooking." Yet *tare-miso* is mentioned as early as 1432. Address: Food historian, and teacher of food history, Hattori Nutrition College, Japan.

8201. **Product Name:** Nasoya Baked Tofu. Mesquite Smoke Flavored, Teriyaki, Thai Peanut, and Tex Mex.
Manufacturer's Name: Vitasoy USA, Inc.
Manufacturer's Address: Ayer, Massachusetts. Phone: 1-800-4-Nasoya or www.vitasoy-usa.com.
Date of Introduction: 2001. May.
Wt/Vol., Packaging, Price: 8 oz (227 gm).
How Stored: Refrigerated.
New Product–Documentation: Ad (8½ by 11 inch, color) in *Natural Foods Merchandiser*. Dec. p. 16. "Nasoya. This could be the filet mignon of baked tofu!" "Offer your customers an exciting new meat alternative with Nasoya Baked Tofu." Also appeared in the June 2001 issue of this magazine (p. 40).
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8202. Kanai, Atsuko. 2001. How sushi came to California, and how edamame came to be served there with the sushi (Interview). *SoyaScan Notes*. June 14. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Mutual Trading Company (MTC) was started in 1926 in Los Angeles (L.A.), as a co-op for Japanese immigrants who wanted to consolidate their purchases. It was located at 803 East 1st St., three blocks east of central Little Tokyo. During the 1950s, Noritoshi Kanai, Atsuko's father, exported to MTC from Japan. Then in 1964 he came to America and joined the company. Since that time MTC's forte has been the restaurant trade. Back in the 1960s, Mr. Kanai, thinking about how to best introduce Japanese foods to Caucasian Americans, realized that the retail channel was too difficult; it takes too long (25+ years), makes it hard to introduce authentic Japanese food without "Americanizing" it, and cooking authentic Japanese foods is too challenging for average Americans. It would be much easier and faster to introduce Japanese foods through the restaurant trade because then the Americans could taste the foods that had already been prepared and served, in the way they were intended to be, by Japanese chefs.

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The story goes back to the 1960s and a man named Harry Wolff, Jr. Harry was a huge man ("He looked like Santa Claus."), Jewish, and a confectionery food broker. Mr. Kanai and Mr. Wolff met at a fancy food show. Mr. Wolff asked Mr. Kanai what he sold. The answer: Rice crackers, and thin honey & sesame biscuits. Mr. Wolff observed: "To be successful in the United States, you have to have a good doctor, a good lawyer, and a good Jewish friend. I am a Jewish broker and I know all the distribution channels, so I'll become your friend and team up with you." He helped Mr. Kanai to sell his high-quality honey & sesame "Harvest Cookies" imported from Japan. Together, they made a little fortune. Then competing American companies, such as Nabisco, got smart and started importing cheaper versions from Taiwan–which ruined Mutual's cookie sales.

So in 1966 Mr. Kanai and Harry Wolff decided to take a trip together to Japan to look for something else to sell. They stayed at a hotel in Tokyo and one day they went to a sushi bar across the street. Mr. Kanai explained that most Americans don't like the raw fish in sushi, but Mr. Wolff was intrigued by both the sushi and the rapport that he built with the sushi chef. In typical American restaurants, you never even see the chef. At the end of the week, as they were preparing to leave Tokyo, Mr. Kanai was surprised to receive a bill for 100,000 yen, which was a lot of money in those days. Mr. Wolff had returned to the sushi bar every day, fell in love with sushi (including the raw fish), and learned a lot about it. The 100,000 yen turned out to be an excellent investment for Mr. Kanai; it confirmed his belief that Americans could be taught to love sushi.

Returning to America, Mr. Kanai worked to expand the sushi restaurant trade, geared to both Japanese and Caucasian Americans. The first sushi bar in Southern California was Kawafuku restaurant, started in 1966 in Little Tokyo, Los Angeles. It was owned by Mr. Nakajima and the chefs were Mr. and Mrs. Shigeo Saito. They made a fortune of $30,000. Upon returning to Tokyo, they started a sushi restaurant in Ginza. Word of Kawafuku's success spread quickly in Japan, starting a flood of young Japanese sushi chefs to the USA.

Soon a second sushi bar opened on mid-Wilshire Boulevard, then a third in Santa Monica. Mr. Kanai worked on the sushi retail trade–which took longer to reach takeoff.

Why did sushi spread so quickly in the USA? From the consumers viewpoint, it's a novel cultural experience which is both interesting and fun–rapport with the chef. The food tastes great, is not easy to make at home, and is healthy. From the business viewpoint, it is profitable and requires special skills which are difficult for others to copy.

To make sushi, a restaurant needs three types of things: Hardware (special knives, graters, mats, etc.), food ingredients (nori, wasabi, shoyu), and a sushi master. Mr. Kanai began to imported these from Japan. Originally, only the special sushi rice was available in the USA; Kokuho Rice was developed in 1963 for Koda Farms by Dr. Williams of the University of California at Davis.

Company records show that on 30 July 1966 Mutual Trading imported its first edamamé (2 cases) from Japan as a test, for sale to Japanese restaurants. However there was *no* connection between the 1966 trip to Japan for sushi and the 1966 test import of edamamé. On 1 July 1970 edamamé first appeared in Mutual's restaurant catalog. In 1977 Mutual started to import edamamé from Taiwan, in addition to Japan.

The popularity of edamamé in the U.S. is directly related to the rise in popularity of Japanese food–especially sushi. Many Asian cultures eat soy products, but only the Japanese eat soy as a snack in the vegetable form–as edamamé.

In general, Americans regard sushi as a unique food genre, separate from Japanese food. Before the 1970s, Japanese restaurants in America were visited by Japanese-Americans who were familiar mostly with Kansai/Kyoto style sushi such as Inari-zushi, maki-zushi, and oshi-zushi. They were not familiar with the Edo/Tokyo sushi-bar style of raw-fish sushi. During the 1970s sushi bars in America grew as Japanese businesses in various fields set up offices in Southern California. The Japanese businessmen brought Americans into sushi bars and Japanese-Americans began to become familiar with raw fish.

America's sushi boom began in California in Sept. 1980, when the very popular TV miniseries and epic drama *Shogun*, based on the novel by James Clavell, sparked a great interest in traditional Japanese culture among Americans. With the sushi, they drank Japanese beer (especially Sapporo big bottle) and saké. In America, beer is usually served with peanuts. But, true to tradition, Japanese restaurants served edamamé, free of charge, with the beer. "It was a mass sampling of the edamamé without people having ordered it! So the success of sushi, Japanese beers, Japanese saké, and edamamé, are all tied in together."

In 1985 in the White House, sushi was served as hors d'oeuvres at an official presidential dinner, Ronald Regan was president.

On 27 May 1993 Mutual began to distribute its first edamamé grown in the United States–from Minnesota Edamamé. But there were two big problems with this Minnesota product: (1) the soybeans were the wrong kind, grown for oil extraction and feed, rather than the large-seeded vegetable types; and (2) the harvesting equipment damaged the pods, and some of the beans evens fell out. So the edamamé that Mutual received from Minnesota were not very good quality. After 3-4 shipments, MTC discontinued the product.

Another very important issue is the varieties; today Mutual carries only two edamamé varieties, imported from Taiwan and China. The beans are sweeter, bigger, prettier than most other varieties. Moreover, the flavor changes from one soil type to another, and from year to year.

Another issue is freshness. In Japan, edamamé have

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traditionally been harvested at their peak of flavor (the whole soybean plant is pulled up by the roots), and sold fresh, with the pods still on the branches/stems, and the plants bundled together, roots and all. Edamamé in Japan is always served in the pods because the pods (1) seal in flavor, otherwise lost during the boiling process, and (2) seal in nutrients, also lost in boiling. In fact, some high-class restaurants in Japan serve boiled edamamé, still on the branches–emphasizing their "very fresh" status. Today, during the summer season, most edamamé consumed in Japan are still sold fresh. But during the other three seasons, virtually all are imported frozen.

Commercialization of *fresh* (not frozen) edamamé is impossible in such a large country as the USA because edamamé has only a 3-day window during which it must be picked to be at the peak of flavor–according to MTC's edamamé purchasing manager. If picked before that time, the beans are too small; after that time they start to lose their tenderness and sweetness.

Of the three types of things needed to make sushi, the hardest to find was good sushi masters, so several years ago a Sushi Academy was started in Venice, California, near LA, by Mr. Toshi Sugiura, who owns Hama, a very successful sushi restaurant next door. The California Sushi Academy (phone: 310-581-5272) has courses for both professionals (6 months) and amateurs (weekends) and is very successful. Address: Mutual Trading Co., Inc., 431 Crocker St., Los Angeles, California 90013. Phone: (213) 626-9458.

8203. Kikkoman Corporation. 2001. Annual report 2000. 250 Noda, Noda-shi, Chiba 278-8601, Japan. 39 p. 28 cm. [Eng]
• ***Summary:*** The information in this English-language annual report is current as of April 2001. Contents: Financial highlights. Introduction. Message from the president (Yuzaburo Mogi). Fiscal year in review, operating results, strengthening the competitive business, summary of business policy (business principles {based on consumer satisfaction}, medium-term business strategy, business organization, basic policy on distribution of profits, tasks for the coming years, in closing). Global operations: United States, Europe, Asia, Japan. Topics: Commemorative events held to mark milestones at Singapore and Taiwan plants, Kikkoman takes part in Dutch water resource preservation project. Research and development. Financial review. Operating results. Consolidated balance sheets, etc. Corporate history (chronology from April 1925 to Aug. 2000). Global network (directory of Kikkoman names, addresses, and phone numbers worldwide). Board of directors and officers. Corporate data. Overall, sales and profits remained approximately unchanged from 1999.

Overseas, Kikkoman is benefitting from the growing popularity of soy sauce. Statistics demonstrate this. Over the last 26 years, overseas of Kikkoman soy sauce have grown by an average of more than 10% a year. Last year, overseas sales of soy sauce topped 120 million liters for the first time. Overseas sales (excluding exports from Japan) accounted for about 30% of consolidated net sales and 50% of Kikkoman's consolidated operating income–excluding the Coca-Cola Business. Sales volume in the USA, the company's largest overseas market, rose to 95 million liters, grew steadily, and accounted for 80% of Kikkoman's total overseas sales of soy sauce. Last year, Kikkoman's share of the U.S. home-use market hit an all-time high of 55%. In Europe, production capacity at the plant in the Netherlands is presently being raised to 7 million liters, from 6 million liters, to meet rising demand. In China, Kikkoman is constructing a soy sauce plant, shipments are slated to start in the spring of 2002. The China plant will be the company's third in Asia outside Japan, joining plants in Singapore and Taiwan.

Effective from fiscal 2000, the results of the Tone Coca-Cola Bottling Co., Ltd. and two other companies accounted for by the equity method have been included in the consolidated results, following the introduction of new accounting standards based on the Securities and Exchange Law of Japan. However tables on p. 22 make it easy to compare Kikkoman's 2000 financial performance with that of the year before. Excluding Tone: Sales were down 1.4% but net income (profit) was up 39.6%.

Photos (p. 3 and 7) show Yuzaburo Mogi. Address: Noda, Japan.

8204. Severson, Kim. 2001. One soy sauce changes its ways. *San Francisco Chronicle*, July 25. Food section, p. 4.
• ***Summary:*** Potentially dangerous amounts of 3-MCPD, a suspected carcinogen since 1999, were found in 22 of 100 brands of soy and oyster sauces in the United Kingdom according to results announced last month by the British Food Standards Agency–the UK's equivalent of the U.S. Food and Drug Administration. Some of the products tested were made by Lee Kum Lee, one of the world's largest manufacturers, however a company spokesperson said they may have been tested before the company changed its manufacturing process. The sauces in question use hydrochloric acid in a process that reduces the manufacturing time to six days from the typical 6 months. Address: Staff writer.

8205. Dillman, Erika. 2001. The little soy book. New York, NY: Time Warner. xiii + 190 p. Index. 15 x 16 cm. [58 ref]
• ***Summary:*** Contents: Introduction. 1. It's soy time. 2. Why eat soy? Health benefits of soy? Soy foods. Soy milk, soybean oil, soy sauce, soy meat alternatives, tofu, tempeh, miso, whole soybeans, edamame, soy nuts, soy nut butter, soy sprouts, soy ice cream, soy yogurt, soy cheese, soy flour and grits, textured soy protein (TSP), soy protein concentrate, soy protein isolate, hydrolyzed vegetable protein, infant formula, lecithin, natto, yuba, soy fiber. Cooking with soy (recipes). Notes [references]. Resources [Directory]. Glossary. Address: Seattle, Washington.

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8206 **Product Name:** Trader Joe's Miso Mesquite Sauce. **Manufacturer's Name:** Trader Joe's (Marketer-Distributor).
Manufacturer's Address: Monrovia, CA 91016. Phone: 626-599-3700
Date of Introduction: 2001, July.
Ingredients: Water, catsup (tomato paste, vinegar, high fructose corn syrup, corn syrup, salt, onion powder, spice, natural flavor), sugar, soy sauce (water, wheat, soybeans, salt), miso (fermented soybeans, rice, salt), onion powder, sesame seed oil, modified corn starch, salt, garlic powder, spices, natural hickory smoke flavor, xanthan gum.
Wt/Vol., Packaging, Price: 12 oz (340 gm) glass bottle retails for $1.99 (2001/07, Lafayette, California)
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Product with Label purchased at Trader Joe's in Lafayette, California. 2001, July 13. Pink, apricot, black, white and green. Color photo shows a lady in traditional Japan holding a large paper umbrella, with several more open on the ground behind her. SKU #32666.

8207 Law, Edward. 2001. The origins of the silver trade in Sheffield (Website printout–part). homepage.eircom.net/~lawed/Origins.htm. 6 p. Printed March 23.
• ***Summary:*** The silver trade in Sheffield was established as a direct result of the invention of Sheffield Plate in 1742. The initial discovery of silver plating was made by Thomas Boulsover. "We are fortunate to have information (footnote 53) to be able to consider the firm of Roberts, Cadman & Co. in some detail. The firm was started in 1784 by two young men." Roberts, age 21, had just finished his apprenticeship, while Cadman, who had also served an apprenticeship, was a few years older. Within 2 years of starting business, the firm took a "sleeping partner" named Naylor, who had an equity share but no role in the firm's management.

One of the firm's most interesting records is a stock book from 1787, "perhaps the first stock-taking of the firm following the introduction of Naylor." "The stock in the warehouse shows that from the earliest days the firm was manufacturing all types of wares. It included... dish rings and dish crosses with lamps, sauce, pickle, soy, snuffer and ink boats; tureens; epergnes..."

8208 Gai, Junyi; Guo, Wentao. 2001. History of *maodou* production in China. In: T. Lumpkin, ed. 2001. Second International Vegetable Soybean Conference. Pullman, Washington: Washington State University. 202 p. See p. 41-47. [5 ref]
• ***Summary:*** Two books review the ancient Chinese literature on the history of soybean production: (1) *Dou Lei* (*Legumes*), by Li Chang-Nian, published in 1958, (2) *History of Soybean Cultivation in China*, by Guo Wen-Tao, published in 1993. Both authors are from the Chinese Agricultural Heritage Institute (Nanjing Agricultural University, Nanjing, Jiangsu 210095, China).

The author then cites ten early mentions of soybeans in Chinese literature. The first three are from three different sections of the *Shi Jing* [*Shijing*] (6th century BC); the others are from the *Zhou Shu* (5th to 3rd century BC), *Zhou Li* (3rd century BC), *Meng Zi* (3rd century BC), *Mo Zi* (5th to 4th century BC), *Xun Zi* (3rd century BC), *Li Ji* (1st century BC), and *Zhan Guo Ce* (1st century BC).

Noting that the *Shi Jing* [*Shijing*] contains the oldest Chinese literature, he adds that it "is a collection of poems circulated among the people from the Western Zhou Dynasty to the Spring and Autumn Period. Some of them might be works from the Shang Dynasty [ca 1600-1045 BC]. The book was edited and finished in the middle Spring and Autumn Period (6th century BC). Mao Heng (Western Han Dynasty, 2nd century BC), Zheng Xuan (Eastern Han Dynasty, 2nd century AD), Lu De-Ming (Tang Dynasty, early 7th century AD), and Kong Ying-Da (Tang Dynasty, 642 AD)" each wrote commentaries on the *Shi Jing* to explain its meaning. From the literature listed above, the following points about soybeans can be derived: (1) Soybeans and millet played a significant role among the five or nine major Chinese crops during the period from the Western Zhou Dynasty (6th century BC on) through the Spring and Autumn Period and Warring States, even to the Qin [221-206 BC] and Han [202 BC to 220 AD] dynasties. "This is indicated by statements about gentlemen using stewed soybeans as their major meal and even the emperor [in the *Zhou Shu*, 5th to 3rd centuries BC] taking soybeans taking soybeans and chicken as his major daily food.

"(2) The way to eat soybeans during that time was to stew the seeds as meal and to cook young green leaves as soup. These ways of preparation had a significant influence on the later adoption of eating immature green soybeans (*maodou*).

"(3) In ancient China, proverbs about soybeans existed before relevant Chinese characters were invented. Texts related to soybeans were recorded as soon as relevant characters were created from about 2700-3000 years ago. Oral works from the Shang Dynasty recorded in the Shi Jing date to 3600 years ago. From these records it can be inferred that soybeans existed during the Yan-Huang and Hou-Ji period, 5000 years ago" (p. 41-42). Note 1. The last three sentences are pure speculation and unsupported by any known evidence. The earliest solid evidence for soybean domestication in China dates from about the 11th century BC (Hymowitz 1970, p. 415-17).

The soybean is called "soy, soja, or soya" in Western countries, "which originates from the pronunciation of the Chinese character 'Shu.'" Note 2. Most etymologies of the words "soy," "soybean" and "soya" state (correctly, we believe) that they are derived from the Japanese word *shôyu*

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meaning "soy sauce."

Soybeans were used and processed in 4 different ways in ancient China (for each he gives a citation): (1) The dried seeds were stewed for daily meals and the young leaves were used as a vegetable to make soup. (2) The seeds, stems, leaves, and pods were used as animal feed. (3) The soybean was used for medicinal purposes. (4) Technology was developed for making various kinds of soy foods, such as fermented black soybeans, tofu, doujiang, soybean oil, soybean sprouts, etc.

The section titled "Historical textual research on maodou in ancient China" cites 6 early documents which are said to mention immature green soybeans. Each of these six are cited elsewhere. A 7th was the Jie-An Man-Bi (Ming dynasty, by Li Xu, 16th century) which states: There are some varieties [of maodou] with fragrant flavor and glutinous taste, and some with flavor like ginkgo seeds. Those are new varieties.

"The exact record and time of the initial utilization of green pods and beans has not been discovered in the literature." The practice of picking green pods, shelling them for immature seeds, and even putting them on the market for sale, existed by the 12th century (Song dynasty). The term *maodou* first appeared in the literature during the 17th century (Ming dynasty).

Since then the term *maodou* has appeared extensively in the literature, for example: (1) *Nong-Pu Bian-Lan* (1755). (2) *Qi-Ming Si-Shu* (1846). (3) *Jin-Si Tu-Can Biao-Lue* (1898). (4) *Yong-Chen Tu-Can-Biao* (1899). (5) *Zhi-Wu Ming-She Tu-Kao* (19th century). These texts include statements such as: Green immature soybeans are especially delicious; the fried ones can be served as vegetable dishes. And: Yellow soybeans (*huang-dou*) are now also called *maodou*. There are different varieties. They can be used as a vegetable at an early stage, then as a major food after maturity. They are necessary for the daily life of the people.

From ancient times to the present, green vegetable soybeans (*maodou*) have been most widely cultivated and consumed in the southern half of China, especially in two areas: (1) The lower and middle Yangtze valleys and drainage systems, in the provinces of Jiangsu, Shanghai, Zhejiang, and Anhui. The total area grown here today is about 100,000 ha. (2) Southeast China along the seacoast, including Taiwan, Fujian, and Guangdong provinces. The total area grown here today is about 30,000 ha. Address: 1. Director and Professor, National Center of Soybean Improvement, Ministry of Agriculture, Soybean Research Inst., Nanjing Agricultural Univ., Nanjing, Jiangsu 210095, China. E-mail: sri@mail.njau.edu and nausri@public1.ptt.js.cn.

8209. Jacobi, Dana. 2001. Amazing soy: A complete guide to buying and cooking this nutritional powerhouse, with 240 recipes. New York, NY: William Morrow. An imprint of HarperCollins Publishers. xiv + 364 p. Aug. Index. 24 cm. [50 ref.]

• ***Summary:*** Contents: Introduction. Ingredients and techniques. Breakfast. Smoothies and drinks. Dips and starters. Soups and breads. Salads and dressings. Wraps, burgers, and savory pies. Pizzas and pastas. Stews, casseroles, and chilis. Steaks, chops, skewers, and meat loaf. Stir-fries and curries. Seafood. Mainly vegetables. Desserts. Sources. Bibliography. Address: Food writer, New York, NY.

8210. Mai, Pham. 2001. Pleasures of the Vietnamese table. Recipes and reminiscences from Vietnam's best market kitchens, street cafés, and home cooks. New York, NY: HarperCollins Publishers. xii + 242 p. Aug. Illust. (Photos by Martin Jacobs, some color). Index. 24 cm.

• ***Summary:*** This is a marvelous, very original book, with real passion for food and cookery and a deep curiosity on this subject and desire to learn. It overflows with warmth, devotion, and kindness, and is full of insights about Vietnam, its food, and most of its best cooks–street food cooks. Here we see the origin of the modern restaurant and its chefs. Contains more than 100 authentic recipes and many black-and-white photos.

The Vietnamese eat fresh herbs like vegetables. The Hmong are one of Vietnam's ethnic groups.

The ancestors of today's Vietnamese migrated south from southern China in about 1500 BC. By the 2nd century BC they had annexed the country and introduced their system of government, Confucianism, and Buddhism. Over the centuries they introduced their food traditions–stir-frying, eating with chopsticks, steaming, and such ingredients as soy sauce, tofu, noodles, and ginger.

Vietnam is often divided into three culinary regions: the fertile south, the cooler central region, and the harsh, mountainous north–which suffered most from recent American war.

Important ingredients include: Bean sauce (tuong hot). Hoisin sauce (sot tuong). Soy sauce (nuoc tuong {liquid}; Brands–Pearl River Bridge, Kikkoman. Although not used as widely as fish sauce, soy sauce is a common seasoning in vegetarian and stir-fried dishes).

Soy related recipes: Vietnamese bean dipping sauce (tuong goi cuon, with ¼ cup fermented whole soybeans {tuong hot}, p. 28). Soy-lime dipping sauce (nuoc tuong pha, with 1/3 cup soy sauce, preferably light Chinese style sold under the brands Kim Lan, Bo De, or Pearl River Bridge, p. 29). Sweet soy sauce with chilies and ginger (nuoc tuong den ot, with 3 tablespoons sweet soy sauce, p. 30, 37). About soy sauces (light, dark, and sweet, p. 37. Kikkoman is considered light. There are two types of dark soy: One, also called "black soy," contains molasses and is thick. The other, called sweet soy sauce, is even thicker and sweeter).

Tofu, tomato and chive soup (canh dau hu he, with 6 ounces soft or medium tofu, p. 74). About fermented black

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beans [fermented black soybeans] (tau xi, an ancient Chinese seasoning, also called salted black beans, are sold in 1-pound plastic bags, paper cartons, or earthenware jars. The author prefers Yang Jiang Preserved Beans with Ginger by Pearl River Bridge)

Chapter 7 is "Return to the grandmotherland: Vegetarian favorites and meatless recipes." Of her beloved grandmother (now age 102) she writes: "When my grandfather died years ago at an early age, my grandmother was forced to raise seven kids by herself while running the family plantation. That twist of fate turned her into a vegetarian, in part because vegetarianism is a form of merit-making" (gaining merit, duoc phuoc). "In doing so, one's wishes would be granted. In my grandmother's case she prayed for the well-being of her children." "Many Vietnamese are vegetarians who practice vegetarianism on one level or another... With the shortage of animal protein and the pervasiveness of the Buddhist influence in the culture, it is not uncommon to find many Vietnamese dishes eaten in two ways–*man* (with meat) and *lat* (without meat). Indeed almost every meat dish in this book can be made vegetarian."

Vegetarian recipes (p. 185-99, with tofu unless stated): Salad rolls with jicama, peanuts and basil (bo bia chay, with 1 {6 ounce} piece tofu and 1 tablespoon soy sauce). Salad rolls with tofu and mushrooms. About tofu and *tau hu ky* [yuba or dried yuba sticks]. Cucumber and tofu salad (goi chay). Vegetarian pho noodle soup (pho chay). Vegetable curry (ca ri chay, with 2 pieces dried bean curd skin [yuba]). Spicy lemongrass tofu (dau hu xa ot). Rice noodles with stir-fried vegetables (bun chay). Vegetarian claypot rice with ginger (com tay cam chay). Black mushrooms with bean threads in claypot (nam kho). Water spinach with tofu (rau muong xao). Twice-cooked eggplant with garlic and basil (ca tim xao rau que).

Warm soymilk with pandanus leaf (sua dau nanh, with 1 pound dried soybeans made into fresh soymilk, p. 220-21). The headnote to this interesting recipe begins: "I grew up on soy milk, but never thought of making it fresh until I started until I started going back to Vietnam. There, fresh soy milk is sold at markets and on street corners early in the morning and late at night. Sometimes I can walk into a market and just sniff my way to a soy milk vendor. I definitely have a nose for *sua dau nanh*, especially if its been flavored with pandanus leaf."

Glossary (p. 223-32) includes: Bean sauce (*tuong*). Fermented black beans (*tau xi*). Fermented soybeans (*tuong hot*). Hoisin sauce (*sot hoisin*, incl. soybean puree). Peanuts (*dau phong*). Tofu (*dau hu*).

About the author (with portrait photo on inside rear dust jacket): She was born in Vietnam and raised in both Vietnam and Thailand. She fled Vietnam "just days before Saigon fell to Communist rule on April 30, 1975. We left with the clothes on our backs, fighting our way through the pandemonium at the airport before climbing aboard a plane that would fly us to safety." Six years ago she ventured back to Vietnam for the first time–to be with her grandmother (and give her a modern wheelchair) and to eat *pho*. Her inaugural tour to Vietnam in 2000 was televised internationally by CNN, and was frequently rebroadcast on United and Delta airlines. She has returned about once a year since then, for the same reasons but also to learn about the food and cookery from the best cooks in the country–at market stalls, not fancy restaurants. She is now chef and owner of the acclaimed Lemongrass Restaurant in Sacramento, California. She also writes and teaches. Her first book, ***The Best of Vietnamese and Thai Cooking*** was published in 1996. Address: Chef and owner, Lemon Grass Restaurant, Sacramento, California.

8211. Saia, Rob; Cook, Byron; Terry, Michelle. 2001. The joys of soy: Recipes from the heartland. Topeka, Kansas: Kansas Soybean Association. 39 p. No index. 22 cm.
• ***Summary:*** Contents: Appetizers & dips. Marinades and sauces. Salads & dressings. Entrees. Breads. Breakfast/brunch. Vegetables. Desserts & drinks. Address: Kansas Soybean Assoc., 2930 S.W. Wanamaker Dr., Topeka, Kansas 66614. Phone: (785) 271-1030.

8212. Shurtleff, William; Aoyagi, Akiko. 2001. The book of miso: Savory, high-protein seasoning. 2nd ed. Revised. Berkeley, California: Ten Speed Press. 278 p. Illust. by Akiko Aoyagi Shurtleff. Index. Aug. 28 cm. [223 ref.]
• ***Summary:*** This revision has completely new front and rear covers, designed and illustrated by Akiko. It contains a completely new "Appendix D–Miso Manufacturers in the West" (p. 255, updated to 10 May 2001). The page "About the Authors" (autobiographical) has been updated, and the original photographs have been replaced with more recent ones–reflecting the fact that Bill and Akiko separated in Nov. 1993 and their marriage ended in May 1995.

The last page, "Soyfoods Center," has been updated.

The inside rear cover has been updated, and now includes current information about: (1) ***Miso Production***, a book published by Soyfoods Center about how to start and run a company making miso on any of various scales and budgets. (2) ***Miso and Soybean Chiang: Bibliography and Sourcebook***, published by Soyfoods Center. (3) SoyaScan, the unique computerized database produced by Soyfoods Center. This database now contains more than 62,000 records from 1100 B.C. to the present, and more than 76% of all records have a summary / abstract averaging 146 words in length. A description of the four different types of records (published documents, commercial soy products, original interviews and overviews, and unpublished archival documents), and the number of each type, is given.

The title page, copyright page, and table of contents have been redesigned and updated to give the book a much more contemporary look. Other small changes have been made throughout the book. Still contains 130 vegetarian

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recipes–both western and Indonesian.

Ten Speed Press gave this book a new ISBN 1-58008-336-6. Yet despite the many changes described above, the authors preferred not to have this called a "new edition" or "revised edition." Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

8213 Thym, Jolene. 2001. A twist on tofu: New, tastier food products put the joy in soy. *Oakland Tribune*. Sept. 5. Bay Area Living section. p. 1, 6.

• ***Summary:*** This front-page story contains a long interview with Dana Jacobi, author of *Amazing Soy*, plus a large color photo showing ten different types of soyfoods. The writer has discovered that "there's a whole lot more to soy than plain tofu." A sidebar titled "Name that food" is a glossary including: Edamame, silken tofu, miso, tempeh, fermented bean curd, fried tofu balls, yakidofu, yuba, soynuts, soy sauce, soy milk. Contains four recipes from Jacobi's book. Address: Staff writer.

8214 Lukas, Paul. 2001. Outrageous fortune: Howard Epstein's love of packaging revolutionized Chinese takeout. *Fortune Small Business*. Oct. 4. *

8215 Goldbeck, Nikki; Goldbeck, David. 2001. Eat well the YoChee way: The delicious and easy way to cut fat and calories with natural YoChee (Yogurt Cheese). Woodstock, New York: Ceres Press. xviii + 309 p. Oct. Illust. Index. 23 x 19 cm.

• ***Summary:*** This very interesting and original book is about dairy "yogurt cheese," which has a smooth, creamy texture and is easily made by draining fat-free yogurt in a sieve or colander in the refrigerator overnight. For best results, use a yogurt that contains no thickeners or stabilizers, including modified starch, gelatin, or gums, and which has not been pasteurized or heat treated after processing. "YoChee can help you overcome many of today's most pressing dietary concerns–particularly those linked to calcium, fat, and calories.

Though the full-fat product is an ancient one among nomadic people who make yogurt, the name was coined by the authors to refer to its modern nonfat counterpart. Contains 275 recipes. Soy-related recipes include: Mushroom-tofu paprikash (p. 146). A blurb advising use of "genuine soy sauce" appears on pages where soy sauce is called for as an ingredient (p. 53, 85, 111, 146, 186). Address: P.O. Box 87, Woodstock, New York 12498. Phone: (845) 679-5573.

8216 Watanabe, Koichi. 2001. Re: History of La Soyarie Inc. and list of current products. Letter to William Shurtleff at Soyfoods Center, Nov. 7. 5 p. Typed, with signature on letterhead. [Eng; Fre]

• ***Summary:*** Each page, except the cover letter, has a color heading and is written in two columns, the left one in French, the right one in English. "About us: La Soyarie produces many food products with soya: Tofu (firm, regular, silk), Tofu burger, Soy Nuts, Tofu Nuggets, Vegetarian Pate. We also distribute other products under the following brand names: Yves Veggie Cuisine, Fontaine Sante Foods Ltd., Nutrisoya, Noble Bean. Address, phone, and fax numbers." Mme. Jeanne d'Arc d'Astous is chief administrator.

"Company history: From very modest beginnings, La Soyarie produced its first Tofu in 1978, right in our founder's [Koichi Watanabe's] home kitchen. This product was supplied only to small local health food stores and friends.

"In 1979, we moved into our first real production facility at 25 St. Etienne St., Hull (Quebec). During this period, our production consisted of only 7 batches of tofu a week. Our company had 20 customers, and produced bulk tofu blocks for total sales of $1600 a week.

"La Soyarie was incorporated on the 31st of March, 1982.

"In 1823, La Soyarie Inc. launched new product lines derived from traditional Japanese recipes, and made with tofu: the burgers and nuggets.

"On October, 1st, 1989, the business and offices moved to a brand new location, with 6000 square feet, at 94 Adrien-Robert St. in Hull. From then, the company began to prosper and grow rapidly. We now own the building and use all of its space that is 12000 square feet.

"Today, La Soyarie contracts 13 distributors that serve the regions of Montreal, Quebec and Toronto. We sell to some supermarkets chains and we supply 'Fontaine Sante Foods Ltd', on a weekly basis, for them to make their tofu based products.

"We serve more than 70 other businesses in the Ottawa region: Supermarkets, natural food stores, and some restaurants.

"We use more than 400,000 kg of organically grown Canadian soya beans per year.

"We currently employ 24 persons.

"The name for our company, 'La Soyarie' was selected from the entries in a 'name the business' contest. The winner received a year's supply of tofu.

"The logo represents a soya leaf."

A 1-page list of products shows that the company makes the following: Tofu–Regular water pack, 500 gm. Tofu–Regular vacuum pack, 454 gm. Tofu–Herb vacuum pack, 454 gm. Tofu–Vegetable vacuum pack, 454 gm. Tofu–Silk water pack, 500 gm. Tofu burger fried 300 gm. Miso burger fried 300 gm. Teriyaki burger fried 300 gm. Ganmo burger fried 300 gm. Tofu burger baked 280 gm. Miso burger baked 280 gm. Teriyaki burger baked 280 gm. Ganmo burger baked 280 gm. Imperial burger 150 gm. Oriental burger 150 gm. Nut burger 300 gm (no soya). Pinto burger 300 gm (no soya). Regular tofu nuggets 150 gm. BBQ tofu nuggets 150 gm. Soynuts 250 gm (regular, BBQ, plain, no salt). Tofu cutlets

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(150 gm, or 300 gm). Vege pate 220 gm (yeast free, no soya). Address: President & plant manager, 94 Adrien-Robert St., Hull, Quebec, Canada J8Y 3S2. Phone: (819) 777-6716.

8217. Wilkinson, Endymion. 2001. Chinese culinary history. *China Review International* (*Hawaii*) 8(2): 285-302. Fall. [49 ref]

• ***Summary:*** This article consists of reviews of three books. The first book (p. 285-91) is: H.T. Huang (Huang Hsing-Tsung). *Fermentations and Food Science*. Part 5 of *Biology and Biological Technology*, volume 6 of *Science and Civilization in China*, edited by Joseph Needham. Cambridge: Cambridge University Press, 2000. xxviii, 741 pp. Hardcover. £90. ISBN 521-65270-0. This is an excellent, positive review by a man who is deeply knowledgeable and interested in both Chinese history and Chinese food history. He was European Union Ambassador to China from 1994 to 2001 and author of one of the best books on Chinese history. He begins by noting that this book "goes to the very heart of what makes Chinese food Chinese by tracing the historical development of the chemical basis of the fermentations used in Chinese food processing. Dr. Huang is deeply qualified to write such a study..." He discusses each chapter in order. Concerning chapter (d) on soybean processing and fermentation, he observes: "From the Han to the Tang soybeans were normally cooked into granules (*doufan*) or congees (*douzhou*) and eaten as a staple (*zhushi*). By the Tang, wheat was replacing soybeans, which were increasingly used as a supplemental food (*fushi*)." Because soybeans had an unpleasant beany flavor and required a long time to cook by boiling, the Chinese experimented with other ways of processing them. Sprouting beans (*dadou huangjuan*) had been used as a medicine since at least the Han; soybean sprouts emerged as a foodstuff in the Song. "A form of soybean curd (*doufu* in Chinese, pronounced *tofu* in Japanese) may have been discovered in the Han but it only became a popular foodstuff in the Song (at which time it was imported to Japan by Buddhist monks, who at first called it Chinese curd, *Tôfu*)." Note: The first character, when pronounced *Tô* in Japanese means "China," but when pronounced Tang refers to that Chinese dynasty (618-907) shortly before the Song (960-1279).

"By the Former Han, salted or semi-fermented black beans (*shi*; modern pronunciation, *chi*, *douchi*) were produced by stopping the fermentation process halfway..." Huang believes that soy sauce made from jiang began to emerge during the Han dynasty but did not acquire its modern name of *jiangyou* (soy sauce) until the Song. "(it is only from the Qing [1644-1912] that it became the main condiment and seasoning in Chinese cooking)."

Wilkinson is critical of the series editor for the continued use of Needham's obsolete system of romanization.

The second work is: Xu Hairong, editor in chief. *Zhongguo yinshi shi* (The history of Chinese food and drink). 6 volumes. Beijing: Huaxia Chubanshe, 1999. 4,067 pp. Hardcover. ISBN 7-5080-1958-X. Since the 1980s, much excellent research has been done on Chinese culinary history, and this 6-volume Chinese-language work sums up much of this scholarship. More than 4,000 pages long (with plenty of illustrations), it is by far the largest history of Chinese food and drink available. Most of the authors are professional historians and several have already made important contributions in this field. A brief analysis of each volume is given. Unfortunately, the absence of an index makes this large work difficult to use as a reference. It is followed by an overview of other valuable works (mostly in Chinese) in the field.

The third book is *The Cambridge World History of Food*, 2 vols. (2000). Wilkinson is sharply critical of this work, both because so little material on Chinese culinary history is presented, and because that material contains so many errors and inconsistencies–examples of which he presents one by one for 4 pages! Address: Harvard Univ. [Cambridge, Massachusetts]

8218. Weed, Susun S. 2001. New menopausal years: The wise woman way. Woodstock, New York: Ash Tree Publishing. xxiii + 280 p. Dec. Illust. Index. 22 cm. [102* ref]

• ***Summary:*** Soy is discussed throughout this book but sources are rarely cited. When they are cited, we insert them below. For heavy bleeding (flooding) during the menopausal years: To nourish and tonify, avoid tofu, soy drinks, and soy protein powders (p. 9-10). For uterine fibroids: Consume lignans, which are anti-estrogenic phytoestrogens, found in all whole grains and beans–including soy (p. 15). Building better bones: Exercise regularly, eat calcium-rich foods, and avoid calcium-leaching foods such as soy "milk," tofu, coffee, alcohol, and white flour products (p. 24). Calcium: Caution–"Unfermented soy (e.g. tofu) is especially detrimental to bone health being protein-rich, naturally deficient in calcium, and a calcium antagonist to boot (p. 28). Beware of calcium antagonists, foods that interfere with calcium utilization. Avoid consistent use of unfermented soy products, including tofu, soy beverages, and soy burgers (p. 29, see p. 163).

Phytosterolic, phytoestrogenic foods. Whole grains and beans are good sources. "Caution: Beans must be cooked or fermented to remove anti-nutritional substances. Tofu and soy 'milk' are not recommended" (p. 70).

Red clover has ten times more phytoestrogens than soy, as well as much more bone-building minerals, such as calcium and magnesium (p. 71). Sea vegetables are second only to flax in concentration of lignans. Seaweeds, not soy, are the real secret of health in the Japanese diet (p. 72). "The phytoestrogens in *dong quai*, like those in soy, promote the growth of cancer cells in petri dishes" (p. 73). Phytoestrogenic herbs: Fermented soy products (miso,

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tamari, tempeh), ground flax seeds, whole grains, etc. are rich in hormonal precursors and phytoestrogens. Use daily to ease menopausal symptoms, prevent cancer, and lower heart disease risk (p. 94). Lack of vitamin B-12 doubles the risk of severe depression for older women; tofu and soy beverages interfere with its absorption (Fallon 1999) (p. 114).

Preventing breast cancer: 75% of all breast cancers occur in women over age 50. Reduce use of seed oils, such as soy oil. For each 5 gm of polyunsaturated fat (from vegetable oils), risk of breast cancer rose by 70% (Wolk 1997 [sic, 1998]) (p. 145). Eat more beans: "There is a relationship between the large amount of *fermented* soy products (miso and tamari) in the Japanese diet and low incidence of breast cancer. But no relationship has ever been shown between the consumption of processed, fake, imitation soy foods, and breast cancer reduction. Soy beverage is used moderately, or not at all, depending on the specific Asian country" (p. 146).

Herbal allies: Red clover is everything you thought soy would be with none of soy's drawbacks. It contributes to bone health, normalizes the thyroid, and prevents and counters breast cancer. "So do miso and tamari, but not other soy foods. Red clover contains more active phytoestrogens in greater quantity than soy... Red clover contains all four of the major estrogenic isoflavones, soy has only two of them. A cup of red clover infusion (not tea) contains ten times more phytoestrogens than a cup of soy beverage, is richer in calcium, has less calories, and contains no added sugars" (p. 161).

The section titled "Soy" (p. 163-64) praises fermented soy foods (miso, tamari, tempeh, natto) but is quite critical of tofu, soy milk, and "fake soy foods" (burgers, hot dogs, soy cheese, etc.). Soy can reduce hot flashes and prevent heart disease; fermented soy foods can protect against breast cancer. Soy is not a good source of calcium and it is deficient in fats needed for healthy brain/memory functioning. "Soy protein isolate, textured vegetable protein, isolated isoflavones–processed soy foods come in more forms than I can list. I eat miso and tamari freely, tofu and tempeh occasionally, and other soy products not at all. Dosage: 50-200 grams of isoflavones per day, preferably from food. Caution: Excess soy can cause liver damage and is said to feminize men. Soy may be difficult to digest, may cause allergic reactions."

Interstitial cystitis: Tofu may cause problems (Ford 1999).

Heart healthy: Soy, whole grains, vitamin E (from foods), essential fatty acids, and seaweeds are helpful (p. 210).

Osteoporosis risk factors: Being a vegetarian or vegan who eats a lot of tofu or soy beverage (p. 218). "Eliminate soy products except tamari and miso. (Unfermented soy prevents you from utilizing calcium.)" (p. 220).

Aching joints: A tofu poultice may help (p. 229).

Vitamins and minerals for the menopausal years: Vitamin B-12, calcium, and iron are depleted by unfermented soy products (p. 248, 250-51).

Note: The author does not cite a single scientific publication to support her many criticisms of soyfoods. In fact, the scientific literature does not support her criticisms. It is well known that the author is an admirer of Sally Fallon. Address: P.O. Box 64, Woodstock, New York 12498-0064.

8219. Kiuchi, Kan. 2001. Miso and natto. *Food Culture (Kikkoman Inst. for International Food Culture, Noda, Japan)* No. 3. p. 7-10. http://kiifc.kikkoman.co.jp. [6 ref. Eng]

• ***Summary:*** This article makes several statements that, to us, seem very surprising: (1) "Both *miso* (soybean paste) and *natto* (fermented soybeans) are said to have originated in China, but once introduced into Japan they inspired the development of a variety of unique local soybean based products" (p. 7).

Note 1. We believe that *itohiki-natto*, whose main fermentation organism is *Bacillus subtilis* and which is unsalted, originated in Japan, and that *douchi* (fermented black soybeans), whose main fermentation organism is a mold and which is salted, originated in China, long before *itohiki-natto* is thought to have originated in Japan.

(2) "Whole soybeans are used to make *natto*, and because only a single variety of *natto* mold is used in the fermentation process, the beans retain the original shape" (p. 7).

Note 2. Natto (i.e., *itohiki-natto*) is not made with a mold; it is made with a bacterium.

(3) *Natto* is thought to have originated in China's Yunnan province, although legend has it that *itohiki-natto* (hereinafter simply called "natto") was invented by accident in Japan's Tohoku region in the eleventh century when boiled beans that were going bad were eaten and found to be rather tasty.

"The two main varieties of *natto* are *itohiki-natto* and *shiokara-natto*, which is also known as *tera-natto* and includes *daitokuji-natto* from Kyoto and *hama-natto* from Hamamatsu. A bean koji is made using koji mold" (p. 9).

Note 3. We believe that the statement *"Natto* is thought to have originated in China's Yunnan province...." is very confusing, and that confusion is based on the fact that in Japanese, two completely different and unrelated fermented soyfoods are both referred to as "natto." We would say instead: Natto (i.e., *itohiki-natto*) originated in Japan and *douchi* (called *shiokara-natto in Japan*) originated in China. Address: Ph.D., Prof., Dep. of Food Science and Nutrition, Kyoritsu Women's Univ., Japan.

8220. Lee, Cherl-Ho. 2001. Fermentation technology in Korea. Seoul, Korea: Korea University Press. iii + 330 p.; 26 cm. [Eng]*

• ***Summary:*** Korea has a long history of eating fermented

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soyfoods. Early documents indicate that the cultivation of soybeans originated in Manchuria, which was part of Korea in ancient times.

Contents: 1. Evolution of Korean Dietary Culture. 2. Primitive Pottery Age (B.C. 8000 to about 3000)–the era of fermentation experiments. 3. History of Cereal Fermentation Technology. 4. Korea, the land of soybean fermentation. 5. Effect of soybean fermentation on the protein quality. 6. Kimchi, Korean fermented vegetable food. 7. Fish fermentation technology. 8. Lactic acid fermented foods and their benefit in Asia. 9. Present status and prospect of Korean fermentation industry. Appendix: Collection of research paper abstracts in Korea–I. Alcoholic fermentation. II. Soybean fermentation. III. Kimchi fermentation. IV. Fish Fermentation. V. Other fermentations. Authors index. Address: Graduate School of Biotechnology, CAFST, Korea Univ., Seoul, 136-701, Korea.

8221. **Product Name:** San-J Tamari Sesame Dressing, Tamari Peanut Dressing.
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 804-226-8333.
Date of Introduction: 2001.
Ingredients: Tamari Sesame: Water, tamari soy sauce (water, soybeans, salt, alcohol), rice vinegar, organic sugar, onion juice (onion juice, salt, natural flavors), sesame oil, ground sesame, arrowroot, whole sesame, white pepper. This product is made in a plant inspected by the Gluten-Free Certification Organization (www.gfco.org).
Wt/Vol., Packaging, Price: 8 fl. oz. (237 ml) glass bottle.
How Stored: Refrigerate after opening.
New Product–Documentation: Digital color image of front and back labels for both dressings sent by Misako Binford of San-J, 2012, May 11. In an attached e-mail she says that these products were first sold in 2001 in a "milk jug type" bottle (which looked like it was designed for sauces) rather than the present "banjo-type" bottle. However the copyright on the back of each label is 2009–indicating that the label design was updated.

8222. Tamang, Jyoti Prakash. 2001. Kinema. *Food Culture (Kikkoman Inst. for International Food Culture, Noda, Japan)* No. 3, p. 11-14. http://kiifc.kikkoman.co.jp. [7 ref. Eng]
• ***Summary:*** Contents: Introduction. Hypothesis of the origin of kinema. Methods of preparation. Kinema dishes. Socio-economic factors. Microbiology and nutritive value of kinema. Transition in food culture.

"The common word kinema is derived from 'kinambaa' of the Limboo dialect (Limboo, being one of the major ethnic communities of Nepalis). 'ki' means fermented and 'nambaa' means flavor. The kingdom of 'Limbuwan' (presently the eastern Nepal districts of Therathum, Taplejung, Panchthar, Dhankuta, and Ilam) was established by the Limboo earlier than the seventh century and remained independent till the unification of Nepal in the seventeenth century. Though there is no historical document on the origin of kinema, it is certain that among the Nepalis, the Limboo started production and consumption of this unique fermented flavorful soybean food."

A flow chart shows the traditional method of kinema production practiced in Sikkim–starting with 100 gm dry soybeans. Clean and wash. Soak in water overnight. Drain excess water. Add clean water. Boil. Drain excess water. Crack lightly in a wooden mortar with a wooden pestle. Sprinkle with wood ash (up to 1% by weight). Wrap in fern leaves and keep in a bamboo basket, covered. Allow to ferment at 25-45°C for 2-3 days. Result: About 230 gm kinema.

Photos show: (1) A plate of kinema. (2) A woman pounding cooked soybeans with a heavy, 4 foot long pestle in a large wooden mortar (14 inches wide by 18 inches high). (3) The woman adding firewood ash to the pounded soybeans in the mortar. (4) The cooked soybean grits are placed in the leaves of a local fern (*Glaphylopteriopsis erubescens*) prior to wrapping and fermentation. (5) Wrapped in fern leaves, the grits are kept in a bamboo basket, covered with a jute bag. (6) Kinema curry served in a side dish next to a plate of the ingredients.

(7) Jyoti Prakash Tamang, Ph.D., born in Darjeeling, India, in 1961.

The most common recipe for kinema curry is given. Heat vegetable oil in a frying pan and add 1 chopped onion and fry until it becomes tender. Add 1 sliced tomato and ¼ tablespoon turmeric powder; fry for two minutes. Add 250 gm fresh kinema, 1 teaspoon salt, and 3 sliced green chilies; fry for three to five minutes. Pour in a little water to make a thick curry, and cook for 5-7 minutes more. Kinema curry is now ready for serving with boiled rice.

A map shows kinema diversity in the Eastern Himalayan regions. It is called "kinema in eastern Nepal, the Darjeeling hills, Sikkim and Bhutan, aakhuni in Nagaland, hawaijar in Manipur, turangbai in Meghalaya, and bekanthu in Mizoram... These fermented soybean foods are similar to the natto of Japan, chungkok-jang of Korea, thua-nao of northern Thailand and pe-poke of Myanmar."

Note 1. This is the earliest document seen (Jan. 2012) that mentions "aakkhuni," a close relative of Nepalese kinema and Japanese natto.

Note 2. This is the earliest document seen (Jan. 2012) that mentions "bekanthu," a close relative of Nepalese kinema and Japanese natto.

Note 3. This is the earliest document seen (Jan. 2012) that mentions "turangbai," a close relative of Nepalese kinema and Japanese natto from Meghalaya.

Note 4. This is the earliest document seen (Jan. 2012) that uses the alternative spelling "pe-poke" to refer to pepok.

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a close relative of Nepalese kinema and Japanese natto from Myanmar.

Note 5. This is the earliest English-language document seen (Jan. 2012) that uses the alternative spelling "chungkok-jang" to refer to Korean natto. Address: Ph.D., Professor, Sikkim Government College / Director, Darjeeling Centre for Traditional Food Research.

8223. Bittman, Mark. 2001. The minimalist cooks dinner: More than 100 recipes for fast weeknight meals and casual entertaining. New York, NY: Broadway Books. 211 p. Plus 12 unnumbered pages of color plates. Index. 24 cm.
• ***Summary:*** This book collects two years of recipes from Bittman's popular *New York Times* column "The Minimalist," which cleverly caters to the modern gourmet whose expectations are high but whose time is limited. Includes a recipe for miso soup.

Soy-related recipes: Nearly instant miso soup with tofu (p. 4-5). Curried tofu with soy sauce (with "1 block tofu (about 1 pound) cut into 3/4-inch cubes, p. 18-19). Fish simmered in spicy soy sauce (with "1/3 to ½ cup good soy sauce," p. 102-03). Roast salmon with spicy soy oil (p. 106-07). Salmon with soy and black beans (with "1 tablespoon preserved (Chinese) black beans," p. 107). Soy poached chicken (p. 140-41). Horseradish (or wasabi) and ginger butter with soy [sauce] (p. 157). Pork cutlet with miso-red wine sauce (with "2 tablespoons red miso," p. 178-79). Green salad with soy vinaigrette (p. 197). Rice salad with peas and soy [sauce] ("Substitute shelled *edamame* {fresh or frozen soybeans} for the peas if you like, p. 200).

Note the interesting use / revival of the word "soy" to refer to soy sauce. Address: New York Times food writer.

8224. Davis, Brenda, Grogan, Bryanna Clark; Stepaniak, Joanne. 2001. Dairy-free & delicious. Summertown, Tennessee: The Book Publishing Co. 160 p. Index. 21 x 18 cm.
• ***Summary:*** Contains over 100 creative vegan recipes for managing milk allergy and lactose intolerance. Nutritional information by Brenda Davis, R.D. Recipes by Grogan and Stepaniak. Contents: Introduction. 1. Lactose intolerance. 2. Milk allergy. 3. Building strong, milk-free bodies. 4. Superb substitutes. 5. Dairy-free dining. Travel tips. Natural foods for dairy-free cooking [glossary]: Agar, arrowroot, brown rice syrup, liquid smoke, mirin, miso, nutritional yeast, seitan, soy flour, soy protein isolate powder, soy sauce (tamari), tahini, tempeh, tofu. Dairy-free & delicious recipes: Homemade dairy-free spreads, uncheeses, and milk. Sauces. Breakfast. Salads and dressings. Soups. Main dishes. Desserts.

With this book, you can make any "dairy product" you can imagine without using dairy. The most widely used ingredients are: Tofu (used in more than 70 recipes!). Soymilk, rice milk, and other dairy-free milks. Nutritional yeast.

8225. Geiskopf-Hadler, Susan; Toomay, Mindy. 2001. The complete vegan cookbook: Over 200 tantalizing recipes plus plenty of kitchen wisdom for beginners and experienced cooks. Rocklin, California: Prima Publishing. xvi + 318 p. Illust. Index. 22 cm.
• ***Summary:*** Contains more than 200 vegan recipes, including many recipes for miso (3 recipes), soy cheese (9), tempeh (7), tofu (regular, 22), tofu (silken, 6), and soy yogurt (2). The "Glossary of special ingredients" contains definitions of miso, soy mayonnaise, soy milk, tempeh, and tofu. For nutritional information about soy foods, see p. 20-21. Tamari soy sauce is frequently used as a seasoning.

Contents: Acknowledgements. Introduction. 1. Cooking fundamentals. 2. Stocking the vegan pantry. 3. Menus for entertaining and everyday meals. 4. Appetizers. 5. Salads. 6. Soups and stews. 7. Vegetable side dishes. 8. Pasta dishes. 9. Grain and bean dishes. 10. Sautés and stir fries. 11. Baked and grilled entrées. 12. Sandwiches and wraps. 13. Morning meals. 14. Deserts. 15. Frequently used ingredients. Appendix: Nutrition fundamentals. Glossary of Specialty ingredients. Address: Northern California.

8226. Hayter, Kurumi. 2001. The soy for health cookbook: Recipes with style and taste. Alexandria, Virginia: Time-Life Books. 144 p. Illust. (color). Index. 25 x 19 cm.
• ***Summary:*** This is a beautiful and strange book, designed and produced by Quintet Publishing Ltd. (London). Beautiful in that almost every other page is a stylish full-color photo of a recipe. Strange in that: (1) Tofu is probably the most common soy ingredient used, yet it does not even appear in the index. Nor does tempeh which is also called for. Yet miso is in the index. (2) A number of the soyfood terms are bizarre and unconventional--such as "beancurd pouches" [abura-age or deep-fried tofu pouches], "sticky beans (natto)." (3) On the inside front cover, the book's title is given as "The Tofu for Health Cookbook."

Contents: Introduction. Nutrition and health, lactose (dairy intolerance), prevention against heart disease, prevention against cancer, prevention of other disorders. How to use this book. Glossary of soyfoods and other ingredients. Basic recipes. 1. Soups and stews. 2. Salads and appetizers. 3. Main dishes. 4. Snacks and side dishes. 5. Desserts.

This book is not vegetarian, some recipes call for beef, pork, chicken, fish, etc.--but none call for dairy products.

8227. Hepinstall, Hi So Shin. 2001. Growing up in a Korean kitchen: A cookbook. Berkeley, California: Ten Speed Press. 254 p. Illust. Index. 26 cm.
• ***Summary:*** The best book seen to date for information and recipes on soyfoods in Korea. The author grew up in Cheongju, South Korea, in her ancestral home.

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Families made sauces in earthenware crocks (p. 7). A list of ingredients with descriptions includes: Bean curd (Tubu [tofu]). Beans, dried (K'ong, incl. yellow and black soybeans, mung beans and red [azuki] beans). Koch'ujang (Korean hot red pepper paste [with soybeans]). Kudzu (Ch'ik). Meju (Korean fermented soybean paste block [soybean koji]). Piji (Bean curd dregs [okara]). Red bean paste (P'at komul). Soy sauce (Kanjang). Soybean powder (K'ong karu, a yellow powder sold in 1-lb plastic bags). Soybean sprouts (K'ong namul). Toenjang (Korean fermented soybean paste).

Essential sauces and pastes: Recipe for: "Homemade soy sauce and fermented soybean paste: Kanjang and toenjang." It makes 10 gallons and takes about 2 months to prepare. Unusual ingredients include: 3 pieces oak wood charcoal, 1 gallon white grain syrup (choch'ung), 10 toasted jujubes, and 5 dried hot red peppers. For about 60 days, let the crock stand in the open without a lid; cover when it rains. At the end of 60 days the mash is filtered through a bamboo basket lined with a fine-mesh cloth into a crock to yield two products. The fermented soybean paste (toenjang) remains in the strainer, whereas the soy sauce filters through into the crock. Store the paste in a sterilized crock; sprinkle a thin layer of coarse salt on top. "Pour the soy sauce liquid into a caldron, bring to a boil, and allow to simmer over low heat until it is reduced to one-third of its original volume." Adjust saltiness. The paste and the sauce are now ready to be aged, but we are not told for how long.

Soy sauce at this stage (unaged) is called *ch'ongjang* (clear soy sauce) or *Choson* kanjang (Korean soy sauce). A plain and somewhat salty brown sauce, it is used mostly in base seasonings and clear soups. To make *chin kanjang*, a superior thin, syrupy, jet-black soy sauce, similar to the dark soy sauce sold in today's markets, submerge a large-mesh cloth pouch containing black soybeans, p'yogo mushrooms, and strips of kelp (*Miyok*) in the clear, unaged soy sauce and simmer over low heat for about an hour. The longer it is aged, the mellower it becomes, and the more intense the flavor.

Homemade hot red pepper paste (*Koch'ujang*, with 1 cup fine meju powder and ½ cup soy sauce). Instant fermented soybean paste (*Makjang;* uses 5 cups powdered meju and takes 10 days to mature). Vinegar soy sauce (*Ch'o kanjang*). T'ang soybean paste (*T'anggukjang;* "the best tasting soybean paste among all toenjang). Fermented soybean paste with garlic and bean curd (*Ssamjang;* "Probably the tastiest soybean paste made in the Korean kitchen." p. 32).

Main dishes: Five grain rice (*Ogkpap or Chapgokbap*, with ½ cup dried black soybeans, p. 41. Koreans traditionally eat this dish on the 15th day of the 1st month of the lunar year). Soybean sprouts with steamed rice (*K'ongnamulbap*, p. 44). Ceremonial soup (*T'ang*, with medium firm tofu, p. 62). Seaweed soup (*Miyokguk*, with tofu, p. 65). Kimchi soup (*Kimchiguk*, with tofu and soybean sprouts, p. 67). Soybean porridge (*K'ongjuk*, with 1 cup soybean powder, p. 78). Noodles in chilled soybean milk (*K'ong kuksu*, with 1 quart soy milk, p. 86). Stuffed dumplings (*Mandu*, with medium-firm tofu, p. 90-91). Soy sauce kimchi (*Chang kimchi*, p. 103).

Side dishes: Seasoned soybean sprouts (*K'ong namul*, p. 122, incl. Chilled soybean sprouts, and Soybean sprout soup). Sauteed cabbage kimchi with beancurd and pork (p. 130). Bean curd and vegetable stew with fermented soybean paste (*Tubu toenjang tchigae*, p. 138). Bean curd and vegetable hot pot (p. 152). Soybean pancakes (p. 163). Stuffed pan-fried bean curd (p. 167). Stuffed pan-fried p'yogo mushrooms (with bean curd, p. 168). Stuffed pan-fried peppers (with bean curd, p. 169).

More tofu recipes are on pages 170, 171, 172, 196-97, 199, 200, 204-05, 217. Many recipes call for kelp, kim (laver, nori) or seaweed (see index). Address: Washington, DC.

8228 Hsiung, Deh-Ta. 2001. The Chinese kitchen. New York, NY: St. Martin's Press. 240 p. Foreword by Ken Hom. Illust. (color). 29 cm. [30 ref]

• ***Summary:*** This book focuses on ingredients and essential kitchen tools used in Chinese cooking. For each it gives all or most of the following: Name romanized in Mandarin Chinese and Chinese characters. A glossy color photo of the item. A basic description. Appearance and taste. Method of manufacture. Buying and storing. Culinary uses. 1-2 recipes. The many color photos are very useful, but the index is hard to use.

Soy related: Black bean sauce recipe (p. 33). Soy (soy sauce, *jiang you*, p. 64-67. Recipes are Soy chicken and Soy duck. Mushroom soy sauce is a Cantonese specialty. Chili soy sauce is sold in small bottles).

Seasonings section: Oyster sauce (*haoyou*, p. 79. Soy sauce is a typical ingredient).

Salted black beans (*douchi*, p. 88-89. "They are very popular all over China, especially in rural households in the South." They are also the oldest recorded soy food in Chinese history, and the ancestor of soy sauce. Indeed the water in which salted black beans has been soaked is often used as a substitute for soy sauce by low-income people, to save money. To make douchi: Boil black soybeans until soft, then soak in water overnight. Steam them for 3 hours the next morning. Inoculate them with *Aspergillus oryzae* mold and ferment for 15-21 days. Then cover beans with a brine solution and alcohol, and allow to mature for at least six months. Then spread them out to dry in the sun. Steam them again until soft and spread in the sun to dry. Repeat the last step one more time. The product is, at last, ready to use).

Black bean sauce (*chizhiang*, p. 90-91. "I have a strong suspicion that commercial black bean sauce [liquidized, salted black beans seasoned with soy sauce, salt, sugar and

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spice} is a Hong Kong invention concocted mainly for the convenience of Westerners. I cannot remember ever seeing it in China, nor can I find any mention of its existence in any Chinese publication, past or present." "Commercial black bean sauce is less aromatic that the fresh paste one makes oneself... Some varieties also include added orange peel, ginger, chilies or garlic." A number of different brands are available. The author uses this only for convenience. "One of the most popular variations is black bean and garlic sauce." Recipes include: Steamed spareribs with black bean sauce).

Yellow bean sauce (*huang jiang*, p. 92-93. "Sometimes labeled brown bean sauce or ground bean sauce {*mochi jiang*}, this is the soybean paste made from crushed or ground, salted and fermented yellow soybeans, which are sweeter and less salty than black beans." Spices and other seasonings can be added to this basic bean sauce giving many varieties. In different regions of China, seasonings and spices are added in different proportions. Hoi Sin sauce {p. 94} is one example. Guilin chili sauce {p. 95} and Peking Duck sauce {p. 93} are others. To make: Soak soybeans for 16 hours. Then steam until soft. Ferment beans for about 5 days, stirring and turning every other day. Blend into beans salt, sweet glutinous rice wine, and dark brown sugar. Fill a pottery jar with them–not too tightly, nor too loosely. Seal opening tightly then let jar stand for 2 days. Turn jar upside down in a cool, dry place and ferment beans for 3 more months. The beans are now ready to be used as is, or to be ground and blended with additional seasonings)

Hoi Sin Sauce (*haixian jiang* in Mandarin or *hoisin jaing* in Cantonese, p. 95. This very popular Cantonese specialty, also known as "barbecue sauce," has become almost as popular as soy sauce in most households. To make: Season yellow soybeans with sugar, vinegar, salt, chili, garlic, sesame oil, and red coloring; thicken with flour and water. The author believes that Hoi Sin sauce should not be used with Peking Duck).

Guilin Chili sauce (*Guilin lajiao jiang*, p. 95. Guilin is the capital of Guangxi, located just north of Guangdong {Canton}. To make: Mix fermented and salted beans with fresh red chilies. Then stir in the lesser ingredients: garlic, salt, sugar, and starch. The author's favorite authentic brand, Mount Elephant, is sold in a rustic brown earthenware pot. Recipe: Chicken cubes with chili bean sauce)

Chu Hou bean paste (*chuhou jiang*, p. 96. To make: Use yellow soybeans, wheat flour, sugar, lard or vegetable oil, and sesame. Recipe: Chu Hou chicken).

Sweet bean paste (*dousha*, p. 97. Although there are red and black sweet bean pastes, they are both made from red beans [azuki beans]. "I discovered this unexpected fact only very recently, while researching this book." To make basic red bean paste: Gently boil red [azuki] beans in water until soft. Grind to a pulp, then clean and strain them to get rid of the hull / skin; filter and press. To this basic unsweetened paste, mix in crushed rock sugar. For "sweet black bean paste, add additional sugar with lard or vegetable oil, then heat while stirring until the color turns black. Essence of fragrant flowers, such as roses or sweet-scented osmanthus {*Osmanthus fragrans;* cassia} is usually blended with the black paste, which is shiny black. Sweet bean paste is widely used as a filling for steamed buns {*baozi*}, cakes and other desserts. "In China, sweet black bean paste is far more popular than the red variety, and as a child, I always preferred the sweeter taste of the former." Recipe {served in most non-Cantonese restaurants}: Red bean paste pancakes).

Chili bean paste (*toban jiang*, p. 98. This is distinguished from other thick seasonings in that is made from broad beans rather than soybeans. The most delicious product comes from Pixian County, in the Chengdu Plains near Chengdu–the capital of Sichuan province. Recipe: Home-style braised bean curd).

Fermented bean curd (*doufu nai*, literally "bean-curd milk," p. 102-03. It has often been compared with a strong cheese and is definitely an acquired taste: "you either love it {as does almost everyone in China} or hate it {as does almost everyone else}. But everyone loves it when it is disguised as a seasoning. Also called *jiang doufu*. A legend of its origin states that two immortals told a street bean-curd seller how to make it, starting with molded bean curd. "Since the 15th century Fengdu fermented bean curd has held an excellent reputation." Today the two leading brands are The Immortals and The Two Immortals. To make it: (1) Make bean curd [tofu]. (2) Lay cubes of bean curd on beds of rice straw for about 5 days in spring or 7 days in winter. (3) Dry the mouldy [moldy] bean curd in the sun, then marinate with salt, sorghum spirit and spices. Mature in brine in sealed earthenware urns for at least 6 months. The two basic types are red and white. The red type, which has the milder flavor of the two, has ground red rice added to it instead of spice. In China, it is most widely consumed for breakfast with rice congee. Recipes: Pork chops with red fermented bean curd. Sichuan-style fried green beans)

Vegetables section: Soybean sprouts (*Huang douya, Glycine hispida*, p. 150-51. Soybean sprouts are much more widely used in China than mung bean sprouts. For how to grow at home, see p. 148. Soybean sprouts are almost twice as large as mung bean sprouts both in length and diameter. Soybean sprouts are the main ingredient in Vegetarian stock {p. 71}. Neither soybeans nor their sprouts should ever be eaten raw. Recipes: Soybean sprouts salad {with parboiled soybeans}. Assorted vegetable soup).

Under Lotus root (p. 144) is a recipe for Braised pork with lotus root that calls for "dried bean curd sticks."

Under Ginkgo nut (p. 167) is a recipe for Vegetarian casserole (A slightly simplified version of Buddha's Delight, p. 193) that calls for "3 8 inch long pieces (1 oz.) dried bean curd sticks, soaked."

Note 1. This is the earliest English-language document seen (June 2011) that uses the term "dried bean curd skin

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sticks" to refer to dried yuba sticks. The recipe intends to call for "Three 8-inch long dried bean curd sticks." Later, we are instructed to "Cut the bean curd sticks into short sections, .."

Preserved and processed foods section: Pickles (*Jiang cai*, p. 185, are vegetables pickled in soy sauce-based hydrolysate)

Bean curd (tofu, doufu, p. 196-99. Bean curd was invented in China "and is regarded as the country's national dish..." Proof exists that bean curd, made from soybeans, was sold in markets during the Tang dynasty {618-907}. Until the 17th century, bean curd was eaten exclusively by the poor until Kung Xi {1662-1722}, a Qing dynasty emperor, "discovered it while visiting Suzhou in Jiangsu province when he ventured out incognito to mingle with the people in the streets. When he returned to Peking, the Emperor ordered the chefs of the Palace kitchen to produce bean curd dishes. Overnight, humble bean curd became nobleman's fare and is now popular worldwide." It is off-white in color. Under "Medicinal uses: The nutritional benefits of bean curd cannot be exaggerated." Free of cholesterol, it is ideal for combatting heart disease and high blood pressure. It is also extremely easy to digest, so it is very good for infants, the elderly and invalids. Recipe: Sichuan spicy bean curd {*Ma po doufu*}. Fish and bean curd casserole. Stir-fried shrimp with bean curd. Stuffed bean curd {Popular in Canton and with the Hakka people}).

Deep-fried bean curd (*youzha doufu*, p. 200. Sold in the form of small cubes, large squares, or triangles. Used in soups, stews, casseroles, braised dishes or stuffed triangles).

Pressed bean curd (*doufu-gan*, p. 201. After being pressed it is typically seasoned with soy sauce and a little five-spice, or star anise, or cinnamon).

Dried bean curd skins (*fuzhu, fupi*, p. 202-03. One kind is a thin flat sheet, the other is rolled into a stick. The sticks require much more soaking before use--several hours or overnight. Recipes: Bean curd skin and asparagus soup. Vegetarian bean curd skin roll)

Tofu (in recipes only): p. 75, 139, 189

Non-soy: Gluten (p. 34). Cooking oils (p. 58; soy oil is not mentioned). Sesame seed oil (p. 60). Sesame paste (p. 61). Peanut (p. 164-65).

Note 2. This book was first published in Great Britain in 1999 by Kyle Cathie Limited. This is the first U.S. edition. Address: Author and chef, London.

8229. Hsiung, Deh-Ta; Simonds, Nina; Lowe, Jason. 2001. Food of China. Sydney, NSW, Australia: Murdoch Books. 296 p. Illust. (color). Index. 31 cm. *

• ***Summary:*** An excellent book with many fine color photos. One section titled "Soy" (p. 192-95) discusses: Introduction. Soy sauce. Tofu. Tofu products: Fermented tofu, mouldy tofu, tofu skin [yuba], etc. Northern-style tofu.

Fermented tofu is mentioned on pages 9, 164 (1 tablespoon red fermented tofu), 167, 193. Contains a glossary of Chinese food and cooking (p. 288-89) which includes an entry for "fermented tofu," which is sometimes called "preserved tofu or tofu cheese and is used as a condiment or flavoring."

Photos show: Kung Wo Bean Curd factory in Hong Kong. A soy sauce factory and its canned "Premium Soy Sauce."

8230. Huang, Guiyou, ed. 2001. Asian American autobiographers: A bio-bibliographical critical sourcebook. Westport, Connecticut: Greenwood Press. xiii + 446 p. See p. 281-85. Index. 24 cm. [200+* ref]

• ***Summary:*** Pages 281-85: Contains an excellent biography of Ilhan New (1895-1971), by Seiwoong Oh. New was one of the two founders of La Choy Food Products, Inc. Born in Korea on 15 Jan. 1895, New was the eldest son of a moderately successful entrepreneur who eventually settled in Pyongyang, the present capital of North Korea, where New grew up, as he describes in his autobiography ***When I Was a Boy in Korea.*** Most of his childhood memories are from Pyongyang. The intended audience for the book was American children.

In Pyongyang, New's father started selling imported products and became interested in Western culture and religions; he was eventually baptized as a Christian. Inspired by what missionaries in Pyongyang told him about the West, New's father decided to send his son, now age 9, to live in a Presbyterian household in Kearney, Nebraska, and to receive an American education. During this time his name was accidentally changed to "Ilhan" from "Ilhyung." First in Kearney, then in Hastings, Nebraska, New attended high school, playing center on the football teams and debating on the debate team. In 1919 he graduated from the University of Michigan, with a B.A. degree, then worked for the Michigan Central Railway and General Electric in New York. In 1922, with a friend from the University of Michigan, Wally Smith, he co-founded La Choy Food Products, Inc. in Detroit. The business grew steadily. In 1925 New married Mary Woo, an American-born Chinese, whom he met at the University of Michigan and who later became a physician. In 1926 he and his new wife returned to Korea (which had been ruled and occupied by Japan since 1910), where (like his father) he opened an import company, first in dyeing materials then later in pharmaceutical products. While in Korea, he was asked by Lothrop, Lee and Shepard Publishing Co. to write a book about his childhood. He consented and in 1928 his book, ***When I was a Boy in Korea,*** was published in English. This book later came to be widely recognized as the earliest literary work in English by a Korean American. Yet it was not an autobiography, and contains "little information about the author's life except bits and pieces to be gleaned from his passing remarks."

Note: In 1930 New left La Choy Food Products, probably selling his share to his partner and friend, Wally

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Smith.

In Korea, New's import business grew rapidly. But in 1936, during one of his trips abroad, he decided to stay in California to join the Korean movement for independence from Japan and to study for an M.B.A. [Master of Business Administration] degree from the University of Southern California.

After World War II, in 1946, New returned briefly to Korea, but came back to the USA to study law at Stanford University (in California) and reconsider his future plans. In 1953 he returned to Korea, where his pharmaceutical company had grown steadily in his absence. New resumed his position as chairman and worked to expand the business. By the 1970s his firm's net profit ranked among the top ten in Korea–a remarkable achievement. He had earned a reputation in Korea as a model entrepreneur, who supplied the people with products they strongly wanted and who returned his profits to the public, "as a pioneer in applying modern management science to his business, and as a philanthropist who, among others, founded and fully financed New Han Engineering High School, offering full scholarship for all students.

He died in 1971 at about age 76. In his will, de donated all his money to the Korea Social and Educational Trust Fund, except for $10,000 to be given to his granddaughter for her college tuition. His museum, located in Seoul, houses his personal correspondence, personal possessions, and other historical records of his life.

The bibliography for this chapter (p. 285) cites 5 studies of Ilhan New and his book, from 1929 to 1999. Address: Oh PhD, English Dep., Rider Univ., Lawrenceville, New Jersey.

8231. Ishige, Naomichi. 2001. The history and culture of Japanese food. London, New York, Bahrain: Kegan Paul. x + 273 p. Illust. Maps. No index. 24 cm. [59 ref. Eng]

• ***Summary:*** This book is crippled by the lack of an index. Moreover, the sources of most of the interesting material in the text are not cited. Otherwise it is very well researched and well written.

Contents: Introduction–The historical framework. Part I: The dietary history of Japan. 1. The prehistoric era: The Paleolithic age, the advent of earthenware, Jômon society and dietary culture. 2. Establishment of a rice-growing society: A crop held in special regard, the dissemination and development of rice, rice cooking, sake brewing, fermented fish and flavourings. 3. The formative period of Japanese dietary culture: Historical setting, the taboo on meat eating, the lack of a dairy industry, annual observances and rites of passage, place settings and table settings, cooking and banquet styles, the roles of the monasteries, the popularization of noodles.

4. The age of change: Historical setting, the diffusion of tea, the impact of the 'Southern Barbarians' (*nanban;* first came the Portuguese and Spaniards, Catholics from Iberia, then the Dutch and English, Protestants from northwest Europe called *kômôjin* {"redheads"} to distinguish them from the Iberians, Saint Francis Xavier, introduction of meat eating {beef} by Catholics by 1557 in the town of Oita in northwest Kyushu, expansion of meat eating by non-Christians in Nagasaki and Hirado island {northeast Kyushu}, in 1612 Christianity and meat eating are prohibited by the Tokugawa shogunate but the Chinese colony in Nagasaki is exempted, Dutch traders are the only Europeans allowed to remain in Japan after the country is closed but they are isolated on a tiny island in Nagasaki harbor and barred from contact with ordinary citizens, dishes with nanban influence include fried tofu patties {called *ganmodoki* in the east of Japan, or *hirôsu* or *hiryôzu* in the west}, tempura, nanban confectionary {such as *kasutera*} is especially popular, introduction of new crops by Europeans {incl. sweet potato, two types of pumpkin squash, cayenne pepper, kidney beans, peanuts}), formation of a new style (banquet-style meals {*honzen ryôri*}, *kaiseki*), change in the frequency of meals (from two to three). 5. The maturing of traditional Japanese cuisine: Historical setting town and country, the spread of soy sauce, the emergence of the restaurant, snack shops, books on cooking and restaurants, the Ainu, the Ryukyu Islanders. 6. Changes in the modern age: Historical setting, the resumption of meat eating, milk and dairy products, entry of foreign foods, zenith and nadir, new meal patterns, integration of foreign foods–a model.

Part II: The dietary culture of the Japanese. 7. At the table: Gohan–framework of the meal, the rise of the table, the tabletop as landscape, chopsticks and table manners, etiquette–as you like it. 8. In the kitchen: The secularization of fire and water, from wood fire to electric rice cooker, the knife–a sword in the kitchen, restaurants–the public kitchen. 9. On the menu: Soup and umami flavouring. Sashimi–Cuisine that isn't cooked. Sushi–from preserved food to fast food, sukiyaki and nabemono, tofu and nattô–meat for vegetarians, vegetarian temple food, tempura and oil, noodles and regional tastes, pickled and preserved seafood, mochi, confectionery and tea, the dynamics of sake and tea.

Teriyaki developed during the Edo / Tokugawa period (1600-1867) (p. 116; However no citation for the source of this information is given).

During the Edo period, most commoners living in Japan's cities ate plain and repetitive meals. In Edo (later Tokyo) most had a breakfast of rice, miso soup, and pickles; for lunch and dinner they ate approximately the same thing "with the addition of one dish of simmered vegetables or tofu, or simmered or grilled fish" (p. 113). Address: National Museum of Ethnology, Osaka, Japan.

8232. Ishige, Naomichi. 2001. The spread of soy sauce [and miso]. In: N. Ishige. 2001. The History and Culture of Japanese Food. London, New York, Bahrain: Kegan Paul. x + 273 p. See p. 113-17. [59 ref. Eng]

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• ***Summary:*** Soy sauce and miso are both made by mixing soybeans and miso with a fermenting agent named koji (see Section 2.4, p. 32-35). Prototypes of these fermented soyfoods were probably developed in China during the Han dynasty (c. 200 BCE to CE 200). The earliest record of their use in Japan appears in the Taihô Code of 701. The fermented soyfoods mentioned in those laws are: (1) Miso (2) *Kuki*, which was similar to today's Dantokuji Natto and Hamanatto, in which the beans retain their shape and solidity in the final product. (3) *Hishio*, "a semi-liquid paste or gruel fermented from a mixture of soybean, grains, and sake."

At least 90% of the miso consumed in Japanese households today is used in miso soup, which most people consume once a day. Miso soup is known to have existed as early as the 10th century, when it was mentioned in the *Engi Shiki*. However "during medieval times it was not part of the meals of the common people. This may have been because miso was considered a luxury and hence not made in quantities sufficient for daily cooking. Instead small amounts were typically consumed by eating a side dish of miso or of vegetables pickled with miso." Small amounts were also used as a flavoring. Regional varieties began to develop. In order to improve the appearance of food or to impart a lighter flavor, "miso and water (or a cooked mixture of miso and water) would be placed in a cloth bag and the liquid that trickled out would be collected. This refined miso solution was used in preparing elegant meals for the upper class, and later was replaced by soy sauce."

As noted above, the prototype of soy sauce was *hishio*, a semi-liquid flavoring, which was probably used in Japan as early as the 8th century (Fukuo 1979). Yet it "was probably too expensive to come into general use, for it is harder to make than miso and has a more refined flavour."

Soy sauce (shoyu) is mentioned in several 16th century documents. By the 2nd half of this century shoyu factories had been established in the Osaka-Kyoto (Kansai) area, "and some trading ships were used exclusively to distribute the product to other regions. It was as a factory-made product that soy sauce became popular, initially coming into use at daily meals among the townspeople whose lives depended upon the commodity economy." As Edo (today's Tokyo) grew into a major city, its residents consumed large quantities of soy sauce made in the Osaka-Kyoto (Kansai) area.

Then in the late 1600s, "soy sauce aimed at the Edo market began to be made locally, in the districts that are now called Chôshi and Noda in Chiba Prefecture." In contrast to the lighter-colored and saltier Kansai product (*usukuchi*), the plants around Edo / Tokyo used a larger proportion of wheat to make a rich, fragrant soy sauce called *koikuchi*. This suited the townspeople of Edo well and by the late 1700s, it had taken over the metropolitan market.

In the cities, by the 1700s, "soy sauce had become the principal seasoning for food and miso had come to be used almost exclusively for soup. But in remote rural districts, miso remained in use as a seasoning for daily meals until the early 20th century, while soy sauce, purchased in small quantities from local factories, was eaten [consumed] only at festival meals or when serving special guests. Many farm families made their own miso until the 1950s, whereas those families that made only soy sauce were always a rarity.

"Nothing is wasted in making miso, because all of the ingredients are turned into the paste which is eaten. Making soy sauce not only involves more work but also leaves a substantial amount of inedible lees after the liquid is strained [and the lees pressed]. The lower rate of yield from the raw materials made soy sauce a luxury item which the peasantry could not easily produce at home, and so miso remained the everyday seasoning among the rural population. What soy sauce was used was factory made. Besides the local sake brewery, every area had a small soy sauce brewery until the early 20th century, when major firms with large factories and national distribution networks created an oligopoly market for soy sauce and it came into regular use even in poor rural households. Thus the main flavouring of Japanese cooking shifted from miso to soy sauce over a period of more than two centuries, as urban taste gradually diffused through the countryside."

"Direct use of salt is much less common in Japan than in the West, for much salt is ingested indirectly from soy sauce and miso. A 1980 survey by the Ministry of Health and Welfare determined that soy sauce and miso supplied 27% and 16% respectively of the average daily salt intake, while salt sprinkled on food in the kitchen or at the table accounted for only 13%. In addition to saltiness, of course, soy sauce and miso add other flavour and fragrance to food. Their tastiness results notably from their high content of glutamic acid (discussed in Chapter 2) and their complex flavour structures contain tart and sweet elements as well as alcohol."

"Soy sauce, being a liquid, is easier to use than miso." Its greater convenience and wider range of use are key factors in its growth in popularity, which was "also connected with a change in the style of eating raw fish" (*namasu* or *sashimi*). "Sashimi now means fish that has been sliced and arranged on a plate and served with a smaller plate of soy sauce. . . With this style, skill at cutting and arranging the slices in a pleasing becomes a point of pride with the chef. Besides *sashimi*, such popular and internationally known dishes as sushi (*nigiri-zushi*), tempura and teriyaki, which all developed during the Edo period [1600-1867], are also meant to be eaten with soy sauce."

The "cooks of the Edo period were not very eager to develop new tastes. Their culinary ideal was. . . rather to present the natural taste of the food itself in as pure a way as possible." Soy sauce helped them fulfill this ideal. "Cooking which concentrates on avoiding creativity and complexity in taste, and which seeks to select the finest ingredients and

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to slice and serve them with the most beautiful technique, is what developed among the chefs of the high-class restaurants during the Edo period." Address: National Museum of Ethnology, Osaka, Japan

8233. Miller's glass buyer's guide. 2001. Tenterden, Kent, England: Miller's. A division of Mitchell Beazley, imprints of Octopus Publishing Group Ltd. (London). 320 p. See p. 15-17. Introduction by Jeanette Hayhurst, consultant. Illust. (some color). Index. 28 x 17 cm.

• ***Summary:*** In the section on "Bottles" (p. 14-20) a black and white photo (p. 16) shows: "A pair of blue glass cruet bottles, with gift wine label cartouches, 'Soy' and 'Kyan' [perhaps derived from "kyanite," a variant of cyanite, meaning "dark blue"–or from "cayenne" pepper], gilt faceted, cut ball stoppers, ca. 1790. 4 inches (10 cm) high. £600-660. Som."

Note: For a "Key to illustrations" (including the letters "Som.") see pages 305-07. For a Glossary, see p. 308-10. Address: England.

8234. Namkoong, Joan. 2001. Go home, cook rice: A guide to buying and cooking the fresh foods of Hawaii. Honolulu, Hawaii: Namkoong Pub. 104 p. Illust. (color photos by Rae Huo). Index. 28 cm. *

• ***Summary:*** "A collection of food stories that appeared in the *Honolulu Advertiser* from 1994 to 2001 and information about food products." "Guide to buying and cooking the fresh foods of Hawai'i" (from the publisher).

The section titled "Soy" (p. 67-71) begins with brief definitions of tofu, fresh soybeans [edamame], soy sprouts, miso, natto, and "fermented black beans." Then recipes: Basic miso sauce. Spicy soy beans (with "1 pound soybeans"). Soy bean sprouts (*kong na mul* in Korean). On page 69, more soyfoods are described: Aburage. Fermented bean curd. Fu jook [Dried yuba sticks]. Tempeh. Tofu. Then a recipe for Lemon grass tofu (Vietnamese). Page 71 discusses "Soy bean sauces" such as hoisin, bean sauce, and shoyu (made with koji). Page 72: "The flavors of soy sauces." Chinese soy sauces (tend to be saltier than Japanese shoyu). Tamari. Kecap manis. Light or sodium reduced soy sauces. Dashi soys. How to use soy sauces. Address: Hawaii.

8235. Rodinson, Maxime; Arberry, A.J.; Perry, Charles. 2001. Medieval Arab cookery: Essays and translations. Totnes, Devon, England: Prospect Books. 527 p. Index of foreign words. General Index. 25 cm. [20+* ref]

• ***Summary:*** Contains Arberry's translation of al-Baghdadi's 13th century book, some important essays by Maxime Rodinson from the 1940s and 1950s, Perry's translation of the 14th century book, which is an expanded edition of the 13th century book, and various other essays.

In the introduction to his translation of *The Description of Familiar Foods*, a book composed of two very similar manuscripts (one dating from the 18th or late 17th century and the other from the year 1373–see concordance of recipes, p. 289), Charles Perry discusses two condiments (both now extinct) used as sauces for fish. The first, named *murri* was made–in a two-part fermentation–by inoculating loaves of raw barley dough with *Aspergillus* or *Penicillium* molds, wrapping them in fig leaves [the molds are on the leaves], covering and allowing them to "rot" for several weeks. The decomposed barley was then mixed with flour, salt and water and allowed to ferment further on one's rooftop during late summer–typically for 40 days. Perry translates *murri* as "soy sauce," even though soybeans were never used in making it, *murri* had the characteristic fragrance of soy sauce. "*Murri* probably developed from ancient Mediterranean brine sauces such as the Greek *garos* and the Roman *garum*, which consisted of the brine in which fish had been pickled... The Chinese were mould-culturing soybeans [to make jiang] centuries before there is evidence of *murri* in the Middle East, but there seems to reason to think *murri* was borrowed from China. Soy sauce has always been made from beans, often with a grain extender, but beans were never used in the Middle Eastern product. And *murri* was always a liquid sauce, but it was only in the sixteenth century (when *murri* was already extinct) that a liquid sauce started to be extracted from the fermented bean paste in China. *Murri* was always flavored with spices."

In the section on relishes and condiments (p. 400) is a detailed description of how *murri* is made by people in Iraq. It is called *halmyria* in Greek and *muria* in Latin. Ingredients include fermented barley, wheat flour, salt, fennel, and nigella. Stir twice a day for about 2 weeks. When it starts to bubble, leave it until it settles, then strain it. Add more water and repeat for the second extraction. After straining, if it is too salty, or to make it sweeter, some people add jujubes, or date molasses and honey. At the end, add saffron, cinnamon, and other good spices to make an excellent sauce.

Pages 400-01 describe how to make *al-Murri al-Naqi lil-Maghariba*–the infused sauce of the North Africans (as in Egypt) that resembles soy sauce. The ingredients used in the first part of the two-part fermentation are barley and water. In part two, add to the above: Equal weights of table salt, dry thyme, milled dry coriander, caraway, nigella, fenugreek, anise, and fennel. Put on the rooftop in a wide-mouthed vessel and add water "until its consistency becomes like flowing date molasses." Then toss in one each of broken-up carob, fennel stalks, citron leaves, and the pith of bitter orange branches. Add 2-3 pine cones whose seeds have been removed. Stir with a stick of fig wood with branches. After 40 days in the sun, filter and store in a clay pot, "shielded with oil" (i.e. with a layer of oil on top of the sauce to serve as a seal). Then add chunks of partially baked bread, leave it in the sun for 10 more days, then strain again and put in glass vessels sealed with oil. This first extraction is the best. Save the dregs for use in other dishes.

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A related product *Bunn* is described on pages 403-04. *Murri* (translated as "soy sauce") also appears in recipes (for example) on pages 308, 310, 317-18, 328, and in five vegetarian recipes (p. 446-48).

Talk with Charles Perry. 2001. May 23. The earliest document he has seen that mentions *murri* is a book that was compiled in the 10th century composed mostly of 9th century recipe collections of the caliphs–the spiritual heads of Islam–and kings. So we know that *murri* was being made in the 9th century. Before that, we have no information. It seems to have developed independently in the Arab world. The word *murri* is Greek but the word for the rotted barley and the word for the mash from which the sauce was pressed are both Persian. So it might have developed in the Fertile Crescent (from the southeast Mediterranean to the Persian Gulf) when that area was under both Persian and Greek cultural influence–before the Moslem conquest in the 7th century. In the 15th century the Turks were conquering the area where *murri* had existed. That brought the end of the old Arab aristocracy and their culture. In 1453, Mehmed / Mehmet II (Mehmed the Conqueror) captured Constantinople from the Christians. Now all the wealth was flying to that city, where a new Ottoman culture was being developed. Mehmed made Constantinople one-half Turkish and one-half every other nationality he had conquered or expected to conquer. He was also a great patron of all the arts and of cookery.

In Arabic and Persian, the verb "to rot" refers to food molding processes, whereas "to ferment" refers only to the action of yeasts, as in breads or beers. Charles has made *murri* several times himself, following an ancient recipe, and using fig leaves as the source of the molds. The flavor and appearance of the finished product reminded him very much of soy sauce. Address: 1. French linguist, historian, and sociologist; 2. British arabist and linguist; 3. Los Angeles, California.

8236. Singleton, Paul; Sainsbury, Diana. 2001. Dictionary of microbiology and molecular biology. 3rd ed. Chichester, New York, Weinheim, Brisbane, Singapore & Toronto: John Wiley & Sons, Ltd. xi + 895 p. Illust. 25 cm.
• ***Summary:*** Contains entries for: fermentation, fermented foods, fermenter (fermentor), fungi, miso, natto, ogi, oncom, shoyu (see Soy sauce), soy paste (see Miso), soy sauce (shoyu), sufu, tempeh, tofu (an intermediate in Sufu production). Address: London.

8237. Huang, Hsing-Tsung. 2002. Takamine Jokichi and the transmission of ancient Chinese enzyme technology to the West. In: Alan K.L. Chan, Gregory K. Clancey and Hui-Chieh Loy, eds. 2002. Historical Perspectives on East Asian Science, Technology and Medicine. Singapore: World Scientific Publishing Co. See p. 525-32.
• ***Summary:*** "When we talk of technology transfer in the last hundred years, we tend to think of the traffic as flowing entirely from West to East. Actually, even in the 20th century significant bits of Chinese or East Asian technology were also being transmitted to America and Europe. Of these the most influential and yet least appreciated is the use of microbial enzymes in food processing and related industries."

Most of the enzymes used today are derived from 3 genera of moulds, namely *Aspergillus, Rhizopus* and *Mucor*. In the early 1950s Dr. Huang gained a working knowledge of the enzyme industry in the U.S. when he worked as a research chemist at the Enzyme Research Department of Rohm and Haas Co. (Philadelphia, Pennsylvania).

Table 1 shows microbial enzymes used in food processing in 2002, and Table 2 shows those used in food processing in 1951. Takamine Laboratories (Clifton, New Jersey) made and marketed Takadiastase, a digestive aid. Wallerstein & Co. (New York) produced the enzyme papain for chillproofing of beer. Rohm & Haas pioneered the application of pancreatic enzymes for the bating of hides. All 3 companies were founded at about the turn of the 19th to 20th centuries.

Jokichi Takamine's innovation was based on koji (Chinese: *qu* [pronounced ch'ü]; the Japanese word is written with the ancient Chinese character), which has been used in Japan for centuries to make saké (and other alcoholic drinks), soy sauce, and miso (both soy condiments). "Modern microbiological studies show that the principal organisms in *qu* are grain molds of the genera *Aspergillus, Rhizopus*, and *Mucor*.

"The origin of *qu* is obscure. It was a known entity in the early Zhou (1000 B.C.), but it could have been in existence much earlier, perhaps even before the legendary Xia dynasty (2000 B.C.). According to the *Jiu Gao* (Wine Edict), c. 300 A.D., by Jiang Tong, *qu* was first obtained when steamed rice was inadvertently left in the open and became mouldy [endnote 3 gives the exact Chinese characters]. This view is supported by two pieces of evidence. First, rice was already cultivated extensively and pottery steamers were known around 6000 B.C. in the Hemudu culture near Hangzhou [W.-G. Hang-chou, or Hang-chow, capital of Zhejiang province in eastern China]. Second, this is precisely the way a rudimentary *qu* was prepared and used in making wine in the 1950s by the aborigines in Taiwan. Thus the earliest *qu* probably had rice as the growth substrate. Rice is still the principal substrate in South China today. But during the Zhou [1045-256 B.C.], as barley and wheat (which were considered inferior grains) grew in importance as cultivated crops in North China, they were adopted as the preferred substrates for making *qu*. Endnote 4. For further details on the origin of *qu*, see H.T. Huang's book titled *Fermentations and Food Science* in the *Science and Civilization in China* series.

"The art of using *qu* or koji to make fermented drinks,

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i.e. *sake*, was brought to Japan from South China, probably towards the end of the Han dynasty (Shinoda Osamu 1967, p. 551-74). Their employment in the making of fermented soy condiments, such as *Jiang*, arrived later during the Tang (618-907 A.D.), accompanied by the famous agricultural treatise *Qimin Yaoshu* (Important Arts of the People's Welfare) of 544 A.D. But the Japanese soon developed their own versions of soy condiments such as miso which is quite unlike the fermented *jiang* (soy paste) of China." Modern microbiology has shown that the principal mould in koji is *Aspergillus oryzae*.

"The technology of *qu* was also transmitted, presumably by Chinese immigrants in more recent centuries, to Indonesia. It is called *raggi* [*ragi*] by the natives or *peh-khak* ('white qu') by the Chinese settlers. In the 1890s Dutch scientists determined that the fungi in *raggi* were species of *Mucor* and *Rhizopus*. They tried to exploit the amylolytic activity of these fungi for converting grains to alcohol commercially in Seclan [Seclin], France, and Antwerp, Belgium, but their attempts were unsuccessful."

These early ventures might have remained forgotten were it not for the work Jokichi Takamine in the USA. There follows a summary of Takamine's life to 1890. In his travels in the U.S. Takamine learned how the brewers and distillers there "used malt to hydrolyze grains into sugar so they could be fermented into alcohol. He realized that Japanese *koji* was much more active than malt for the hydrolysis of grains. He studied the production of 'diastase' (amylolytic [starch splitting] enzymes) by the *koji* mold *Aspergillus oryzae* when he returned to Japan. The results convinced him that replacing malt with *koji* enzymes would be a great improvement in the manufacture of whiskey." In 1890, with the help of his wife's parents, Takamine made the fateful decision to move his family to the USA and to start the Takamine Ferment Company in Peoria, Illinois, to produce diastase for a local distillery company. The initial results were very promising.

"However, Takamine's apparent success presented an unwelcome threat to the malt producers in Peoria. They incited local xenophobia [fear and hatred of strangers or foreigners or of anything that is strange or foreign]. One night in 1894 the distillery in which his experiments were being conducted was burned down." Note 1. There is no evidence that he ever sold any of his purified enzymes in Peoria. [Three years later] "He moved his family to Chicago, where he continued to promote his diastase preparation. Fortunately, by this time, he had obtained a patent (U.S. 525,820) on the use of his diastase as a cure for dyspepsia." Parke, Davis & Co. (Michigan) agreed to make and market the product under the brand name Takadiastase. In 1897 he moved his family and research laboratory to New York City. Address: Goodwin House, 4800 Fillmore Ave., Alexandria, Virginia 22311.

8238. Kikkoman International Inc. 2002. Se habla soy sauce! (Ad). *Food Product Design* 11(10) 77. Jan.
• ***Summary:*** A large color photo shows a tortilla wrapped around a mixture of meat and vegetables on a plate. On the tortilla is branded: "Kikkoman naturally brewed soy sauce." The text reads: "There's big news in flavor enhancement, amigo. From fajitas to fish sticks, manufacturers are discovering a surprising natural flavor enhancement solution: Kikkoman Soy Sauce. That's because Kikkoman's naturally occurring amino acids actually intensify the flavors of other ingredients. Naturally brewed and aged for full flavor, Kikkoman is available in every form for every function, from liquid to dry, reduced sodium to preservative free and even clear–the widest selection of any company in the world. So when you think soy sauce, don't just think Asian. Because no matter what cuisine you're working on, Kikkoman speaks your language. Naturally." Address: San Francisco, California. Phone: 415-956-7750.

8239. Tibbott, Seth. 2002. Update on Tofurky (Interview). *SoyaScan Notes*, Feb. 26. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Sales of Tofurky roasts grew nicely during the past year from 82,000 in 2000 to 105,000 in 2001–an increase of 28% during a recession year in the American economy. The product is sold in two forms: Tofurky Roast, and Tofurky Feast (the 26-ounce stuffed roast plus four Tempeh Drumettes, 14 oz. Tofurky "Giblet" Gravy, and Tofurky Jurky Wishstixs). In recent years, Tofurky has been made for Turtle Island in California. Now Seth is planning to move production in-house, which should enable him to reduce production costs dramatically. Address: Turtle Island Foods, Inc., P.O. Box 176, Hood River, Oregon 97031. Phone: 541-386-7766 OF.

8240. Amy's Kitchen Inc. 2002. Amy's bowls: Life is just a bowl of... Amy's good food (Ad). *Natural Foods Merchandiser*. Feb. p. 55.
• ***Summary:*** The top two-thirds of the full-page color ad shows Amy's Teriyaki Bowl, with tofu and vegetables in a sauce on top of white rice. The bottom one-third shows the front panel of four new Amy's Bowls: Stuffed Pasta Shells, Santa Fe Enchilada, Brown Rice and Vegetables, and Teriyaki. All but the Stuffed Pasta Shells contain tofu as a major ingredient. Address: P.O. Box 449, Petaluma, California 94953. Phone: 707-578-7188.

8241. Vaidya, Achutananda. 2002. Re: Answers to questions on soyfoods in Nepal. Letter to William Shurtleff at Soyfoods Center, April 12. 3 p.
• ***Summary:*** On 19 Jan. 1993 William Shurtleff, founder of Soyfoods Center, wrote Mr. Vaidya a series of questions based Mr. Vaidya's last letter. Mr. Vaidya and his uncle seem to be the first people to make tofu in Nepal, so details of their

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work are very interesting from an historical point of view.

"First, questions about the work of your uncle, Raghubir Baidya. (1) Did he ever sell any of his tofu? Even a few cakes? He Must have sold a few cakes if he tried for several months?" Answer. "First he made Tofu for his own consumption only." He did not sell that tofu. At that time none of the Nepali people understood what tofu was, so he had no idea of selling it.

(2) "At what address did he make his tofu at his residence in Kathmandu?" Ans: The address of his residence in Kathmandu was Tripureswar, Kathmandu, Nepal. Now his family address has changed.

(3) "Did your uncle ever mention that tofu was made commercially (= for sale) in Tibet? Have you ever heard that it is?" Ans. "No I never heard my uncle mentioning that Tofu was made commercially in Tibet. He had no idea about it." I heard he had only one Tibetan friend.

(4) "You said he started making tofu for 'domestic consumption.' Does that mean he made it, free of charge (of course) for members of his immediate family? How did they cook and serve it (what kind of recipes?). Did he also give it to members of his extended family such as brothers, nephews? Did you ever taste it? What did you think of it? How was it prepared when you tasted it?" Ans: Yes, at first when he started making Tofu he made it free of charge for members of his family. At first Tofu is fried in oil. And then it is used with vegetables as a delicious food," like pickles etc. "Yes he gave it to his extended family members. Yes. I've tasted it. I think Tofu is an excellent food for helping to solve world food crisis because it is a high quality nutrition food and the cost is very low. I tested it, I thought it was like a vegetable." I studied your book, *The Book of Tofu.*

(4a). "How often did you watch your uncle making tofu?" Ans: "Sometimes I watched him making tofu."

(5) "Did he do a special demonstration just for you to teach you the process or did you just watch him while he was making tofu as usual?" Ans: "He never did a special demonstration to teach me but I learned by watching him as usual."

"My uncle was not interested in Tofu because the Nepalese people were not interested because it was a new product for them." The Nepalese concept of the soybean is that it is very cheap and used only by low-class people. "But I was very interested because it was of high quality nutrition and the cost was very low.

"At first no one knew that Tofu was soybean cakes. My uncle's family also didn't know it. They just called it using the Nepali words *Bhatamass Ko Paneer."* But when my friend Mr. Akifumi Nakamura came to Nepal from Kobe, Japan, in 1972, he suggested to me that I call this product Tofu. "Mr. Nakamura was the one who saw my interest in Tofu and taught me to make tofu. He came to Nepal in 1972" to work with Japan Overseas Cooperation Volunteers (JOCV) for two years. He worked at the Central Food Research Laboratory in Kathmandu. During this time he taught me to make Tofu during his after office hours. Then I learned how to make tofu. I started making tofu commercially in Dec. 1974, first at my own residence to keep my expenses low. I started by selling it to small shops and many other places. Then I developed recipes and sold it to even more people. And slowly the people of my country came to understand it as well. At times Mr. Nakamura would help me and we imported some machines from Japan. Then I started commercially.

"Now I want to ask about your company, Nepal Soya Industries. I think you were a pioneer in Nepal not only with tofu, but also with other soyfoods! (7) In what month and year did you start to SELL each of the following soyfoods commercially in Nepal. And approximately what percentage of your total sales does each account for now? Ans: (7a) Shree Akita Miso = Akadashi Miso. Started Oct. 1986. I made miso and sold it in Japanese hotels and restaurants. Even now no Nepalese people know about miso. It accounted for 15% of total sales. Now it is named Akita Miso.

(7b) Soya sauce. Started in March 1982. When I started to make soy sauce nobody knew what it was. Nowadays some people in the cities know about it. And also some local restaurants used soya sauce. It accounted for about 25% of total sales.

(7c) Dry Tofu. I tried making it but never sold it commercially because there was no interest.

(7d) Soya Milk. At first the Nepalese people had not heard of soya milk, but after a few years one International company started it. They named it Indreni Soyamilk. But after some years they stopped selling it. (7e) Soya Curd. I started making it in 1985. It is a part of Yogurt we used. It is sold commercially. But now lots of dairy companies make it commercially, so I stopped producing it. During the period 1985-1990 it accounted for about 10% of sales.

(7f) Vita Tofu. It started making it Dec. 1974. I stopped making it during 1983-185 because at that time I went to Japan and could not manage my factory. My children could not do the work for me. From 1986 to 2000 we again made Vita Tofu, but last year our country had a crisis–the Royal Family accident. Nowadays Maoists are attacking most parts of our country. And now the Nepalese Government has issued an Emergency. Because of this, tourists have stopped visiting Nepal. My business fully depends on tourists. So last year I had to stop making tofu. It once accounted for 40%. "I am interested in working with soyfoods in any country. If you will arrange it I am always ready for it."

(8) "Please circle each product for which you were the first person in Nepal to make that product commercially." Ans: He is not sure, so he circles only Tofu in 1974.

(9) "Are you making all these products commercially now? Are you making any others? Is making soyfoods your main source of income now?" Ans: Nowadays I produce it

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on a very small scale and this is my main source of income. But now I am retired from my job also [on 15 March 2001 at the Central Food Research Laboratory in Kathmandu and as a food inspector].

(13) "You said that in Japan you learned to make moyashi. Were these soybean sprouts or sprouts from other kinds of seeds?" Ans: They were not soybean sprouts but rather sprouts from some kind of black seeds.

Mr. Vaidya attaches his business card and a 2-page curriculum vitae with a portrait photo attached. He was born on 28 Dec. 1947. Address: Founder and owner, Nepal Soya Industries, 9/374 Bhedashing, Jamaguthi, Kathmandu, Nepal

8242. Steinkraus, Keith H. 2002. Fermentations in world food processing. *Comprehensive Reviews in World Food Science and Food Safety* 1(1):23-32. April. [96 ref]
• ***Summary:*** The section titled "Alkaline fermentations" (p. 28) states that highly alkaline fermentations are generally safe. These include *dawadawa* in Nigeria, *soumbara* in the Ivory Coast, and *iru* in West Africa–each made by fermentation of the soaked and cooked seeds of the African locust bean tree (*Parkia biglobosa*). This is a bacterial fermentation; the bacteria belong to the genus *Bacillus*, typically *Bacillus subtilis*. No inoculum is used.

Soybeans can be substituted for the locust beans.

Protein-rich alkaline fermentations also include several based traditionally on soybeans: natto from Japan, thua-nao from northern Thailand, and kinema from Nepal and environs. In each food, the essential microorganism is *Bacillus subtilis* and related bacilli. The enzymes produced are highly proteolytic; the proteins in the substrate are hydrolyzed to peptides and amino acids. Ammonia is released and the pH rapidly rises to 8.0 or higher. The combination of high pH and free ammonia plus the rapid growth of the essential microorganisms at relatively high temperatures (above 40°C) make it difficult for spoilage microorganisms to grow. Therefore the products are quite stable and well-preserved. They are safe to eat even when made in an unhygienic environment.

The section titled "High salt savory flavored amino / peptide sauces and pastes" (p. 28) discusses sauces and pastes including Chinese soy sauce, Japanese shoyu and miso, Indonesian kecap, Korean kanjang, Taiwanese inyu, and Filipino taosi.

"The ancient discovery of how to transform bland vegetable protein into meat-flavored amino acid / peptide sauces and pastes was an outstanding human accomplishment." Address: Prof. Emeritus, Microbiology and Food Science, Cornell Univ., Ithaca, New York 14853

8243. Treloar, Brigid. 2002. Tofu. Singapore: Periplus Editions (HK) Ltd. Printed in Singapore. 112 p. Illust. (color). Index. 25 x 24 cm. Series: The Essential Kitchen.
• ***Summary:*** This is a beautiful book, with stylish and informative full-page glossy color photos on every other page. It is well researched, comprehensive, and generally uses standard tofu and soyfoods terminology. It is also strange: We are not told in which country the publisher is located (perhaps Hong Kong or Singapore) or where the author lives. It is distributed in North America, Japan and Korea by Tuttle Publishing. On the inside rear dust jacket: www.tuttlepublishing.com. It is clearly targeted at a world market.

Contents: Introduction. Tofu glossary (introduction, firm and soft tofu, firm and regular tofu, fresh tofu, silken tofu, soft tofu, extra firm tofu, powdered tofu {or instant tofu or soy milk powder}, nigari tofu, flavored or dessert tofu, grilled tofu {yaki-dofu}, deep-fried tofu {age}, freeze-dried tofu {koya-dofu}, thin deep-fried tofu {aburaage or usuage}, thick deep-fried tofu {atsuage or namaage}, seasoned tofu pouches {for *inari-zushi*}, tempeh). Creating texture and flavor. How to use tofu. How to cut tofu, making a chrysanthemum flower, how to remove excess moisture, how to change soft tofu into firm, how to prepare tofu for cooking (marinating, grilling, pureeing or blending, parboiling / braising, panfrying / stir-frying, scrambling, steaming, deep-frying, smoking, how to reconstitute freeze-dried tofu, how to prepare deep-fried tofu for cooking, substituting tofu in recipes). Appetizers. Snacks and light meals. Soups. Baked dishes. Stir-fries. Grilled dishes. Noodles, couscous and rice. Vegetables. Salads. Desserts. Glossary (of general ingredients, incl. soy sauce, Teriyaki sauce). Guide to weights and measures.

Note: This is not a vegetarian cookbook. Some recipes call for pork, chicken, fish (salmon, trout, tuna), etc.

Talk with representative of Tuttle Publishing, Vermont. 2004. May 8. Brigid lives in Australia. Periplus, created in 1997 by Tuttle, is located in Singapore and a sister company of Tuttle. Address: Food writer, stylist, consultant, and cooking instructor [Australia].

8244. Severson, Kim. 2002. Global food fight? Why, soytainly! Battle brews over sauce labeling. *San Francisco Chronicle*. Aug. 25. p. 1, A21
• ***Summary:*** The debate concerns classification of soy sauces made by different methods under the rules of the Codex Alimentarius Commission, the powerful regulator of international food trade, which was created in 1962 by two organizations of the United Nations. The Commission sets standards for foods that are imported and exported. Starting September 23, the Codex committee in charge of soy sauce will meet in San Antonio, Texas.

The debate began several years ago when Japanese officials proposed that only "naturally brewed" [fermented] products be allowed to use the term "soy sauce" in international trade. Products made using the quicker hydrolyzed vegetable protein nonbrewed method would have to use another name. The International Hydrolyzed

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Vegetable Protein Council dislikes the proposal; they believe the standard is discriminatory. *Food Chemical News*, a trade publication, has strong views on the subject. The stakes are high since Americans consume almost 3 cups of soy sauce a year.

Leaders of Slow Food, an international organization with 60,000 members dedicated to preservation of natural food products and methods, say the debate is about consumer rights. They believe only brewed soy sauce should have the right to use that name.

However, 30 years ago nonbrewed soy sauce was America's favorite, led by the La Choy and Chun King brands. Then in 1973 Kikkoman entered the picture with a brewed soy sauce. Today La Choy and Chun King are owned by ConAgra Foods, and are much less popular than Kikkoman.

A sidebar titled "Tasters find brewed is best" explains how the Chronicle's food staff compared the taste of Chun King (nonbrewed) and Kikkoman (brewed). Kikkoman won. Address: Staff writer.

8245. American Soybean Assoc. 2002. Cocinando con soya [Cooking with soya]. Mexico City, Mexico: Asociación Americana de Soya. 96 p. Aug. 28 Illust. 28 cm. [Spa]

• ***Summary:*** In July 2001 the first national "Cooking with Soya" contest was held at the Institute of Gastronomy in the University Anáhuac del Sur–sponsored by the American Soybean Association. These recipes are the result of that contest. Each page of the book is devoted to one recipe, with the name of the recipe and its creator, the ingredients, method, nutritional content of 6 portions and of one, symbols, and a color photo (6 cm on a side) of each recipe. Main ingredients used: Tofu, whole dry soybeans, textured soy protein, soy sauce, soy sprouts, okara, soy oil.

Contents: About the contest. Editorial. About the Institute of Gastronomy. Color photos showing: (1) A portrait photo of each participant. (2) Each of the many finalists standing behind his or her recipe. (3) The three winners. Symbols. Salads. Main dish. Desserts. Traditional recipes. Address: Jaime Balmes 8–2° piso, Colonia Los Morales Polanco 11510. Phone: +52 5821 0120/6150.

8246. Kikkoman Corporation. 2002. Annual report 2002. Year ended March 31, 2002. 250 Noda, Noda-shi, Chiba 278-8601, Japan. 30 p. 28 cm. [Eng]

• ***Summary:*** Kikkoman has changed its fiscal year end from Dec. 21 to March 31, April 2001. It is disappointing that so little information about the company's performance and activities is given compared with previous years. Sales and profits were about the same as for the year ended 31 Dec. 2000. As in previous years, growth in overseas sales and profits was much larger than their Japanese counterparts. Address: Noda, Japan.

8247. Stanchich, Lino. 2002. Work with Noboru Muramoto sensei making miso and natural salt in California (Interview). *SoyaScan Notes*, Sept. 11. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Lino was a business partner with Muramoto sensei, first at the Herb-T Company on 11th St. in San Francisco, and later at Great Life Co. in Escondido, California–where they imported sun-dried crude / unrefined salt from Mexico, cleaned it by boiling, washing, and filtering (to remove the pollutants found in sea water), then sold it as different varieties of natural salt and also used the salt to make many different kinds of miso, which they sold commercially. Muramoto moved from Glen Ellen, California, south to Escondido to do research on salt. Lino thinks he moved in about 1980 or 1981. They always lost money on the salt, since it took so much time to remove the pollutants. So they tried to make up for those losses by selling miso. Lino and his wife, Jane, were with Muramoto in Escondido from August 1983 to 1985. Lino helped. Lino was never in Glen Ellen. Muramoto stayed in the USA legally in term of immigration.

The various types of miso and Lino's best guess as to the date of introduction is as follows: Chick Pea Miso (fall 1983). Barley miso (1984). Peanut Miso (1984). Green pea miso (1984). Three-year Hatcho miso (1985). They also sold tamari collected from various types of miso, and they made tamari as a separate product.

As far as Lino knows, Muramoto was the first person to make and sell chick pea miso in the USA. It was a sweet miso that fermented for about one year. The koji was always made with rice, sometimes soybeans were used with the chick peas and koji, whereas at other times no soybeans were used. He sold hundreds of pounds of Chick Pea Miso in 1-lb plastic bags, mostly by mail order, but also through a few natural foods stores–in San Francisco (California), Boston (Massachusetts), and Florida. Muramoto was in charge of food production (he had a few assistants) and Lino was in charge of sales.

Lino was born on the border between Italy and Croatia near Trieste; his first name is Italian and his surname Croatian. Address: 101 Willow Lake Dr., Asheville, North Carolina 28805. Phone: 828-299-8657.

8248. Tadano, Mary; Tadano, Michiko. 2002. History of Showa Shoyu Brewing Co. (Interview). *SoyaScan Notes*, Sept. 17. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** The Tadano family has a long history as farmers in the Glendale area. A history of Glendale, Arizona says that Takeshi Tadano, head of the Tadano family in Glendale, arrived in 1907; however Michiko is quite sure that he arrived several years after that, and she is sure that he was in Glendale–a little horse and buggy town–in 1913.

Takeshi was born in about 1873 in Japan, in Wakuya,

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Miyagi prefecture. He fought with the Japanese army in the Sino-Japanese War (1894-1895) and won some medals. He and his first wife had a family of two boys and two girls, all born in Wakuya, Japan. The boys were: Tadashi (born 15 March 1907, the eldest, who married Michiko, who is now age 90 but very clear of mind) and Takeo (born 7 June 1909). After his youngest daughter was born in about 1912 in Japan, Takeshi moved to the United States with his wife and two sons, settling in Glendale, Arizona, where they began farming. They had a third son named George born 3 July 1919, but, tragically, when he was about 8 months old, the mother passed away in the huge epidemic of Spanish Influenza--leaving the eldest son, Tadashi, to care for their baby. Takeshi later remarried to a woman whose given name was Yaeno (her surname has been forgotten). The couple had two more children, John Tadano (born "Takejiro John Tadano," 18 Sept. 1923) and Joe Tadano (born "Takeji Joe Tadano," 27 April 1925), both born in Phoenix.

However it was difficult to make a living in farming, a part because of anti-Japanese sentiments in the 1920s and acts of anti-Japanese terrorism in 1934-35--which affected the Tadano family directly (see below). Therefore, in the late 1930s, Takeshi decided to start a business making shoyu (fermented Japanese-style soy sauce) in Glendale. There was a shortage of shoyu in the USA at the time and most of it was imported from Japan, with a small amount coming from Hawaii. Leaving his farm under the supervision of his two grown sons, in about mid-1940 he returned to Japan, learned how to make shoyu from a large shoyu manufacturing company (nobody remembers where), then after about one year, returned to the United States in about September 1941, on the last Japanese ship allowed to reach the United States before the Japanese attack on Pearl Harbor.

Arriving in Glendale that fall, he immediately set to work constructing a large wooden building on his farm in which to make shoyu. The wooden vats were commercially made, about 5 feet high and 6 feet in diameter. The finished moromi was pressed out of bags using a hand-turned screw press. It is not clear where they got this specialized equipment. Then Takeshi taught two of his sons, Takeo and George, how to make shoyu. At the shoyu factory on Glendale Ave., the koji was made in the traditional Japanese way, in flat wooden boxes place in a warm incubation room with controlled humidity.

The attack on Pearl Harbor took place on 7 Dec. 1941. The next day some FBI agents came to Takeshi's house at night to get him; they believed he was a Japanese spy. Several days before Takeshi had had a heart attack; his doctor told him to stay in bed for 6 weeks and not to be moved. Since neither Takeshi nor the boys spoke much English, Michiko told the FBI agents what the doctor had said and gave them the doctor's name and phone number in case they wanted to verify her story. The FBI left Takeshi alone for 6 weeks, then they came and took him in an ambulance to the internment camp at Lordsburg, New Mexico. George accompanied his dad as far as El Paso. Takeo, the second son, had come to the USA on a business visa but was found farming, so he was also taken to the Phoenix jail for 2 months and then to the Lordsburg internment camp.

On 19 Feb. 1942 Executive Order No. 9066 was signed; as a result, more than 110,000 Japanese Americans and Japanese nationals living in the western USA were soon sent to internment camps.

Shoyu that had been made by a handful of Japanese factories in the western United States was no longer available.

The city of Phoenix and its environs (including today's suburb of Glendale, located on Grand Ave. about 7 miles northwest of Phoenix city center) was divided down the center diagonally by Grand Avenue, which ran from northwest to southeast. Those Japanese-Americans living on the west side were mostly sent to camps, whereas those living on the east side (such as the Tadanos) were not sent to the camps; many keep farming--but were not allowed to enter "off limits" areas such as Phoenix. Therefore these farmers were not allowed to take their products to market, so they had to hire a Caucasian to do that for them.

Tadashi (Michiko's husband) and John were permitted to stay at home and farm--to feed their wives and relatives. Since George was born in the USA and was therefore a U.S. citizen, he had no problems--even though he was educated in Japan. At the time of Pearl Harbor, John was age 18 and a senior at Glendale High School. For the next two years he went to Phoenix Junior College.

After the Japanese attacked Pearl Harbor, all imports foods and condiments (including shoyu) from Japan to the USA came to an abrupt stop. But by now Takeo and George were making shoyu in the barn on the family farm--located on Lateral 15 at the time, and since renamed 35th Ave. Initially, only the family used this soy sauce, but soon they bottled it in gallon bottles and shared it with other Japanese families in the area, and after a while they began to sell to friends for a low price. News of the new source of shoyu spread by word of mouth, and soon many Japanese were coming to the Tadano farm to buy a gallon bottle of shoyu.

In about Sept. 1943 Takeshi, the head of the Tadano family in Glendale, was allowed to leave the internment camp in New Mexico and return to his family farm because he was very ill and they thought he would not survive. family members drove to New Mexico (via back roads) and brought him home. But with good care and the food he liked, he recovered. Before long, he was working to expand the shoyu company.

So Takeshi and his son, John (who had been born in America, was an American citizen, spoke fluent English, and decided to leave junior college to focus on business) began to expand the company. First they registered the company

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as the Showa Shoyu Brewing Corp., with John as president. They also registered the Marusho brand for their shoyu and had labels printed.

Then, as their business thrived and expanded, they finally had to move to a new location. They rented part of the red brick sugar beet factory at 1150 East Glendale Ave. (which is now located at 51st Ave. and Glendale Ave.; the streets have been renamed) in Glendale, converted it into a shoyu factory, and moved much of the equipment out of the wooden building on the farm into the new space. They also bought new, much larger, wooden vats, about 10 feet high and 10 feet in diameter. [Note: This was probably in about July 1945. See *Soybean Digest*, Aug. 1945, p. 22]. John's name was on all the official documents. First George, then Takeo (who returned from the internment camp in 1944) was in charge of making the shoyu and koji, John was the salesman, and their father Takeshi (who was not as strong as formerly) oversaw the business. Takeshi died of a stroke in on 1 July 1949.

This was a fermented Japanese-style shoyu, made with roughly equal parts soybeans and wheat. The soybeans were cooked in a large metal cooker; it is not clear whether they were pressure cooked or not. Moromi mash was fermented in huge wooden vats (about 10 feet tall) for roughly 2 weeks in a temperature controlled room; it was mixed manually using a special stirring pole. The resultant mash was placed in canvas bags and the shoyu pressed out. It is not known what type of pressing equipment was used. The shoyu was sold only in bottles, either 1 liter or 1 gallon in size. Soon John set up a sales office in Denver, Colorado. There, in 1943, he met Lucy Taguchi, and they became close. Lucy helped distribute his shoyu, and her father, who ran a Japanese grocery company, became a regular customer. When their romance broke up, John married Lucy's sister, Mary, in July 1945. She was a medical technician in Denver. Their first home was on 35th Ave. in Phoenix.

John later set up an office in Los Angeles, California. He sold a large amount of his shoyu to Modern Foods, a Japanese food distribution and trading company in Los Angeles. John also distributed his soy sauce as far east as New York; he often traveled to New York and Chicago (Illinois). Mary believes that John's Marusho Shoyu was the only authentic, fermented Japanese soy sauce sold in the USA during World War II. At one time Best Foods Co. wanted to buy John's recipe and distribution network.

When the shoyu company was doing well, John started a parallel career in the nursery business. But he spent more than he made and before long the shoyu company had to declare bankruptcy. Part of the reason was increased post-war competition from imported shoyu, especially from Yamasa shoyu, which started coming into the USA from Hawaii, and Kikkoman shoyu from Japan. John changed careers at that time. Mary and Michiko each has a bottle of Marusho Shoyu with a label still on it.

Note: According to the book *Glendale–Century of Diversity: An Illustrated History*, by Dean Smith and Paula Hardo (2000, Publ. by City of Glendale, Arizona, 247 p.): (1) Takeshi Tadano came to Glendale in 1907 (Chapter: The convergence of culture, p. 34). (2) "Anti-Japanese sentiments had been festering among the Anglo farmers for over a decade. Jealous of the success of hard-working Japanese farmers, many Anglo farmers pressed for laws to limit Japanese landholdings as far back as 1920... The anti-Japanese terrorism of 1934-35 began. Dynamite bombs exploded outside farmhouses, irrigation headgates were demolished, Japanese families were terrorized. Tadashi Tadano was irrigating his Glendale farm late on the night of September 12, 1934, when six sedans discharged 15 men who brandished pistols, pushed Tadano's truck into the nearby canal, and fired two shots into the vehicle. Panic-stricken Tadano ran for cover, dodging two bullets that whizzed over his head. Many other such terror stories occurred as emotions ran high." (Chapter: Overcoming trying times, p. 74-75).

John T. Tadano passed away on 21 Jan. 1989. Mary is his widow. Joe George Yoneo Tadano died on 4 Jan. 1981. Joe Takeji Tadano died on 24 Nov. 1990. Address: 3539 West Colter St., Phoenix, Arizona. Phone: 602-841-1763.

8249. Schmit, Matthew. 2002. Soy pioneers: Where are they now? (Interview). *SoyaScan Notes*, Sept. 19. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** September 2002 will mark the 25th anniversary of The Tofu Shop, which began in the fall of 1977 in Telluride, Colorado.

Matthew was born on 13 Sept. 1950 in Duluth, Minnesota. His family moved to Florida when he was in high school. In 1972 he received a degree in social work from Florida State University. Upon graduation, he started working for the state of Florida in its drug prevention social work program. Through training programs, he was exposed to healthy alternatives to a drug-oriented lifestyle–vegetarian food, yoga, etc. He became very absorbed with those new philosophies–like many people in the early 1970s. In 1973 he stopped eating red meat and poultry.

He left his job in late 1973, stopped eating fish, became a vegetarian, and traveled to the West Coast, visiting yoga centers, intentional communities, etc. He visited his sister, Marna, in Arcata, where she was about to have a child. She had married Jack Hice from Florida, where she became pregnant. They wanted to have a natural childbirth–which was against the law in Florida–so they loaded up their possessions in a van and headed west. When they got to Arcata, she was so pregnant they couldn't go any further. Arcata had a great free clinic and midwives, so they settled in Arcata and invited Matthew to attend the birth. Aaron was born in late December 1973.

Shortly after the birth, Matthew traveled with Marna

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and Jack's family to a remote ranch on the Smith River near Crescent City, California, just south of the California-Oregon border, there they visited Jack's high-school friend, Jackson Hollomon (and his wife, Valerie, and brother, Henry) who were caretaking the ranch for the winter. Matthew stayed for several "magical" weeks, enjoying the wild scenic beauty, crystal-clear air and water, and whole natural foods. One morning he was introduced tofu, purchased fresh locally, and served on homemade whole-wheat bread (made from freshly ground grains) over a bed of sprouts; the tofu was sliced thick, browned in a cast-iron skillet with a little oil, and had soy sauce sprinkled on top. It was good–no big deal.

After that, Matthew traveled to Jackson Hole, Wyoming, to visit some friends from Florida. Together they formed a food-buying club named Body and Soul, they bought bulk natural foods from a company in Salt Lake City, Utah, had them shipped in, then divided them up. Matthew stayed only for the winter of 1973-74. "I was very young and moving fast." That spring, he traveled southward through Colorado, visiting and Naropa Institute in Boulder during its exciting first summer (Ram Dass and Bhagawan Dass and many other spiritual figures were there), and visiting an aunt in Denver. One of her sons, Matthew's close cousin, was in Telluride (located to the southwest), an old mining town with a 3-year-old ski resort. Matthew visited him in the summer of 1974 and ended up staying. The country was spectacular and young city kids were moving in. Matthew was a member of the group that started the food co-op in Telluride, first as a little food-buying club that grew into a store-front co-op called "Winterstash," located in a mini-mall of five tiny shops below the classical old refurbished Sheridan opera house–built in the 1800s. He was very active in the co-op and was on the board of directors. The co-op was also active in leasing land and growing food using sustainable agriculture, the word "natural" was widely used, and the word "organic" was starting to be used. Matthew was practicing yoga regularly, and making part of his living from teaching yoga classes. Eventually he organized and sponsored a woman named Ma Yogashakti Saraswati to come from India to Telluride to lead a week-long yoga workshop and retreat. She eventually came three times, and each visit was very successful. Matthew became very involved with her and her organization. In about 1976 he moved back to Florida to help her buy some property there and to establish and incorporate a meditative community and business office; it is still there and is very successful. Through such activities, Matthew was developing organizational and business experience. After a year, missing the West and the mountains, he decided to move back to Telluride, arriving in the summer of 1977.

While he was gone, Olof Brentmar and his wife had moved to town. They had learned how to make tofu from *The Book of Tofu*, and they started making it in Telluride at The Upper Crust Bakery–at night after the bakery and restaurant had closed. They sold their tofu at the local co-op–perhaps in little plastic bags; Matthew doubts they had a name for their small business. The Brentmars taught the process to a fellow named Timothy Mecke, and Tim taught Matthew. Just as Matthew arrived in Telluride, Olof was bowing out of the scene, and Tim was making the tofu by himself–about 25 lb.–from about 10:00 night until 3:00 in the morning in the restaurant kitchen. Tim and Matthew made tofu together several times in the restaurant, then found a little shop space near the co-op that was for rent–at 116 North Oak Street; they decided to rent the space, increase production, and "make something out of it." They called it "The Tofu Shop"–a humble name that was a basic description of what they did. Nobody coined the name; people just started calling it that–until it stuck. Matthew and Timothy each invested $500. At the time, Matthew had only $65 to his name. However he was able to borrow $250 from each of two friends, Craig Boykin and Gary Lewin. One of the main reasons Matthew started making tofu was because of his interest in vegetarianism; his yoga teacher was also a vegetarian. The basic idea originally was to make tofu and sell it in Telluride, the restaurant idea came later.

The equipment they inherited from Olof included a wooden pressing box (they put rocks on the lid to press the tofu), a 10-gallon ceramic pot for curding the soymilk, a primitive cedar bucket with holes drilled in (that was lined with cheesecloth for pressing the soymilk from the okara). They borrowed a refrigerator and a typical home kitchen stove. They built the entire kitchen out of wood, including counters, sprout racks above sinks, work tables, etc. They had a handyman make a lever press, hinged to the wall; it had a plunger that fit down into the cedar bucket to press the soymilk from the okara. Address: Tofu Shop Specialty Foods, Inc., 65 Martin Ct., Arcata, California 95521. Phone: 707-822-7401.

8250. Schmit, Matthew. 2002. Soy pioneers: Where are they now? Part II (Interview). *SoyaScan Notes*, Sept. 19. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Continued: Initially, they sold all their tofu to the co-op next door. Then people began to come into the little shop to ask what to do with the tofu; for recipes, they referred them to *The Book of Tofu*. Within a month, they decided to build a little wooden counter (so people couldn't walk into the production area) and began selling tofu directly to consumers out of the shop. The co-op didn't mind. "We were all in it together."

Their original logo was a dragon; a woman artist in Telluride had painted it (copying a Chinese vase), and fired it on four tiles, then framed. Matthew and her husband taught Yoga classes together, and he knew their family very well. Matthew traveled with the husband to Durango; he opened the back door of his van and a box of the finished tiles fell out and were damaged. He picked one up and gave it to Matthew; it was a dragon. Matthew liked it, drew a circle

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around it, and decided to use it as the new company's logo. He hung the four tiles outside the shop door; she then painted "The Tofu Shop" on some new tiles, which were framed and hung below the dragon. The nearest alternative community was in Boulder, about 4 hours by car. They visited The Spinning Kitchen and White Wave, two early tofu shops in Boulder. Once they bought soybeans from Steve Demos of White Wave.

On 8 Dec. 1977 the earliest known article about the little company appeared in the *Telluride Times* on page 11. Titled "Tofu prepared daily in Telluride shop." It gave a brief history of tofu and described the new company, a photo shows Matthew, Susie Imbarrato, and Tim Mecke–all holding a tray of sprouts.

In late 1977 or early 1978, Tim Mecke left the business. Matthew changed the ownership of The Tofu Shop to a worker-owned collective (legally a co-op, if he remembers correctly), although his name was on all legal documents.

About 3 months after the company started, they decided to install a take-out food window. The daily schedule now changed, they made tofu starting at 3:00 in the morning, then cleaned and were out by 10:00 a.m.–when the people who made the restaurant products would show up. They developed a nice little two-sided vegan menu–no animal products. Their first deli items were 3-4 tofu sandwiches. Spinning Kitchen in Boulder made a "Kung Fu" open-face tofu sandwich; Matthew's cousin loved it and brought him the recipe. it was a slab of tofu grilled in a skillet with soy sauce and maybe some sesame seeds on top–very simple. Another was a mock tuna salad sandwich. They also made and sold tofu salads, and a tofu dressing, and soyburgers–made with cooked soybeans rather than tofu. Once a month they would boil big pots of soybeans and of rice, then add carrots, spices, etc., mash it all together, run part of it through a Champion Juicer, shape into patties, fry hundreds and hundreds on a skillet, then freeze them. One year the smoke from frying disrupted the fledgling film festival in the opera upstairs. "We filled the opera house with smoke." The guy who organized the festival rushed down to ask "What are you guys doing?"

Note: This is the earliest English-language document seen (June 2006) that mentions the "Champion Juicer."

In 1978, about 6 months after starting The Tofu Shop, Tim, Matthew's partner, decided that making tofu was not the work for him; he was more of a carpenter. He gave Matthew his half of the company, but Matthew insisted on paying him for it. Years later, Tim popped into Arcata and was pleased to see Matthew making tofu there.

Matthew now started to run the business alone, he quickly felt overwhelmed, having no employees. He needed help. He hired a few people to help him make the tofu. But soon a little group formed around the shop–4-5 people who were loyal to the shop, very interested in tofu, and wanted to come in and learn and work. Matthew has always considered what he is doing as teaching, but he still preferred to pay people in exchange for their work.

The little group of loyal people decided to make The Tofu Shop a worker-owned business. People owned shares, and there was a constitution and by-laws based on a worker-owned restaurant in Santa Fe, New Mexico, that Matthew had learned about; he obtained copies of their documents. Telluride is located on the Uncompahgre Plateau of the Rockies; there is also an Uncompahgre River and an Uncompahgre Peak. So the little group decided to create a new organization named Uncompahgre Natural Foods; it was a legal holding company "that ran The Tofu Shop as a vehicle for its mission, which was developing sustainable vegetarian foods."

Matthew was the "mover and shaker" of the group, he had his name on all the legal and tax documents. He was working full time and putting in lots of hours; most of the others were working part time and were less involved. The new ownership structure worked well. They would have business meeting every Sunday and make decisions based on consensus. Matthew made enough money to live in a nice rented stand-alone home–not an apartment.

At about the same time The Tofu Shop rented first one and then another shop space on both sides to their original space. The co-op also expanded into a second space, so between them they filled the entire mini-mall. The Tofu Shop's three rooms were used for: (1) Production of tofu and deli items. (2) A restaurant in the front space, which they remodeled themselves–with all wood and sit-down tables. (3) Sprout production–alfalfa, mung beans, radish seeds (no soybeans). Initially they grew the sprouts only for use in their sandwiches, but soon they began selling them in the co-op in plastic bags.

Also at about that time they started distributing tofu and sprouts beyond the co-op–starting with a small supermarket in Telluride. Red Hat produce company, which brought the only fresh produce up from Grand Junction once a week, took The Tofu Shop's products back down the mountains, and distributed them to health food stores and co-ops in Montrose, Durango, and Grand Junction. They also flew tofu up to Aspen where they competed with White Wave. "We had the western slope of the Colorado Rockies; White Wave had the eastern slope." Address: Tofu Shop Specialty Foods, Inc., 65 Martin Ct., Arcata, California 95521. Phone: 707-822-7401.

8251. Schmit, Matthew. 2002. Soy pioneers: Where are they now? Part IV (Interview). *SoyaScan Notes*. Sept. 19. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Continued. Matthew and Suzanne had developed a close personal relationship. In favor of their continuing relationship, they decided to get Matthew out of tofu-making because it was burning him out. So, in late 1979, they decided to leave Telluride together–for where

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they did not know–to set up another, better-organized tofu shop in a larger community. There were big meetings with the other owners about how to make the transition. Mathew encouraged the members of the cooperative to sell it in order to pay off debts and dissolve the business. Finally the business was split into three parts and each part sold separately, with one group (Catherine Peterson) getting the restaurant (which she renamed Far Pavilions), another the tofu-making and other food production (Joel Rosenbloom was very disappointed he did not get this part), and a third the sprout growing. The New owners of the sprout business renamed it Mt. Sprouts. They hired an attorney and it was all done carefully and legally. The Tofu Shop had been profitable since almost the first day. Each worker was paid the same rate per hour–but Matthew worked many more hours than the others. This enabled Matthew to live off his share of the profits. The new owners took over all existing debt. Both the tofu and sprout companies folded from poor management shortly after Matthew left, but Far Pavilions continued for many years. A woman named Sharon (about age 40) and her two sons ended up owning the tofu production company.

In 1978 Matthew heard that Spinning Kitchen in Boulder had stopped making tofu. Their shop had been upstairs in a building, and water had leaked through the floor into the restaurant downstairs. A couple had bought their classic tofu equipment, moved it to Carbondale, Colorado (near Aspen), started a small tofu shop, and began making tofu–the reincarnation of The Spinning Kitchen. Matthew also heard that this couple had decided to stop making tofu and that their equipment was for sale.

So in about Oct. 1979 Matthew and Suzanne drove to Carbondale and met the two people, who took them to a storage unit where they had all their possessions (both tofu equipment and personal) in storage: A big cast-iron pot on three legs, capacity about 25 gallons, a hand-made cedar curding barrel (which Matthew still uses as an end table in his living room), an old apple-cider press that was used to press soymilk from the okara; and a great old grinder with metal plates, a hopper on top, a fan belt and an electric motor below, made by C.W. Bell Co. in Ohio. Matthew ended up buying this classic old equipment for several hundred dollars. He brought it back to Telluride. Note: Matthew may have a receipt on which he can verify names of people & Co.

By the fall of 1979 Matthew and Suzanne were looking for a larger community in Colorado–preferably on the east slope of the Rockies. They had obtained a 4-level pizza oven from the Upper Crust Bakery Telluride, and a 6-foot-square walk-in cooler; they hoped to eventually start a small bakery and soy deli–somewhere.

In Oct. 1979 they drove to Durango–which is about 2 hours by car south of Telluride. One of Matthew's customers was there and the city had a great co-op. Matthew and Suzanne actually rented a space to start a tofu shop there, made a deposit, and began converting the building. Then they realized that Durango is surrounded by huge mounds of toxic "mill tailings" from the old mining days. No plants will grow on them. One day they decided that, for their health, they didn't want to stay there. So they lost their deposit and headed back to Telluride. They never settled in Durango and never moved their tofu equipment there.

In Telluride, Matthew helped out at the tofu shop and at the co-op–where he was on the board of directors. But winter was coming on, and he and Suzanne were living in a small travel trailer in the town campground. They had some friends, the Boykins, in Telluride who were planning to go to Point Area, California, located just south of Mendocino. Craig Boykin and his wife, Anne, had rented a U-Haul truck; the tofu equipment, pizza oven, and cooler were loaded onto this truck and Craig drove it to Point Arena, California.

In Nov. 1979, in the midst of a snowstorm, Matthew and Suzanne, now very close, said their farewells, left Telluride in Suuzanne's van, and headed west for California. Arriving in Point Arena, they visited with Craig Boykin, and talked about setting up a tofu shop in Point Arena, but decided they weren't ready yet. They continued up the Pacific Coast looking for a community or town in which to settle, arrived in Arcata and visited Matthew's sister, then continued up the coast to Ashland (Oregon) and on into Washington state. Returning to Arcata in early 1980, they began looking for a job. Suzanne quickly found one with United Naturals, a natural foods distributor in Eureka run by Jethren Phillips–who later founded Spectrum Naturals–the vegetable oil company. Again, Matthew had faith that the universe would take him to where he was supposed to be–a style of decision making not much approved of by his father, a conservative Republican. However his dad, who was executive vice-president for Jeno Paluccci (who founded Chun King in 1945), has been in the food business since the family lived in Duluth, and has long been Matthew's "greatest business advisor." His mom has also been very supportive.

Suzanne and Matthew rented an old farm house on the edge of tofu; their tofu equipment was on the front porch under tarps, but they were no longer pursuing a tofu business. However, when Matthew arrived in Arcata, he joined the group of people he had taught to make tofu–they were still making it. They were now considering renting a shop space. But when it got to the point of signing a lease and making real commitments, "the group just fell apart."

So Matthew got a job as a carpenter for 6-8 weeks remodeling a house. The whole north coast of California was considered a "depressed area," dragged down by the timber industry. Matthew advertised for a job, but was unable to find work. "I became very depressed for several months. I didn't know what to do with myself. On the drive to California I had sworn to myself I was going to try not to get into tofu-making and/or cooking food. But actually, I was straddling two dreams. So I marshaled my enthusiasm and decided that

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I was going to start working on a new tofu company–apart from the group in Arcata. It was just something to keep me busy." Matthew decided to develop a new way to market tofu. The product, called "Tofu Helper," came in a divided plastic tub, with a cake of tofu in the large compartment and a various sauces/marinades in the smaller one. Suzanne said she had seen packaging like that in Europe.

In August 1980 Matthew and Suzanne and Suzanne were married in Arcata, the marriage lasted less than a year.

At about this time Matthew found a job as a cook at The Sprouted Seed, a vegetarian restaurant in Arcata–in part because the owner's cousin was the wife of the guy who owned the Upper Crust Bakery in Telluride, where Matthew started making tofu. Matthew's depression vanished, it was a good experience. The founders of the restaurant, Brain and Debbie, developed a superb Tofu-Tahini Dressing recipe which is still being made for use at the restaurant and also sold refrigerated in glass jars at local natural food stores.

One day in the summer of 1980 a man who sold carrot juice to the vegetarian restaurant told Matthew that the shop space next to his little juice operation had just come up for rent. It was just two blocks from The Sprouted Seed. Matthew looked at the space, thought about it, and talked to Suzanne–who was positive. So they started thinking seriously about setting up a soy deli, bakery, and tofu shop like they had planned in Durango. The focus was on the deli, but Matthew knew he could also sell his tofu at the Arcata Co-op–which was then selling tofu made by Quong Hop & Co. in South San Francisco. The Tofu Shop, located right next to Humboldt State University, opened on 12 December 1980. For his tofu, Matthew used the same label (blue on white with a blue dragon in the middle) he had used in Telluride. He initially bought organic soybeans from United Naturals, then switched to Living Farms in Tracy, Minnesota–his source for many years. Address: Tofu Shop Specialty Foods, Inc., 65 Martin Ct., Arcata, California 95521. Phone: 707-822-7401.

8252. Schmit, Matthew. 2002. Tofu turkey in Telluride, Colorado, and Arcata, California (Interview). *SoyaScan Notes*. Sept. 24. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** The first tofu turkey that Matthew is aware of was made in Telluride, Colorado, in 1978 at Thanksgiving by Craig Boyken, a longtime close friend of Matthew's who loaned him $250 to help start The Tofu Shop in Telluride in the fall of 1977. Craig is an amazing, sort of Renaissance man–an artist, mountain climber, musician–among other things. 1978 Craig and his wife, Anne, were living in Telluride in a studio they had built inside an old deserted brick school building. He used to have big banquets in his studio. Shortly before Thanksgiving of 1978 Matthew brought Craig two large blocks of firm nigari tofu, which he sculpted into the shape of a turkey, basted it with soy sauce and oil, baked it in an oven, and continued to baste it from time to time. He probably fashioned some kind of drumsticks on the side. Matthew does not recall any stuffing inside the turkey. As the turkey baked, it shrunk/contracted and lost its distinctive turkey features. It was carved and served with a vegetarian gravy and probably cranberry sauce and stuffing on the side. It was a potluck Thanksgiving vegetarian banquet, with about 30-40 people present, including all people who worked at The Tofu Shop. It was probably the first "Tofu Turkey Thanksgiving" in American history.

After starting The Tofu Shop in Arcata, California, Matthew continued the turkey tradition each year from Thanksgiving to Christmas, starting in about 1982 or 1983. It was a major event. They started carving the turkey from two large blocks of tofu, they would hollow each out, fill the space with stuffing, then put them together and bake them. It would come out like a loaf; when you sliced it you would get a combination of the white meat plus the stuffing inside. The Tofu Turkey came in three sizes (small, medium, and large–which fed 24 people) and was sold as a special-order product via the deli–either for take-home or as a hot plate (sliced, with gravy, stuffing, and cranberry sauce) to eat at the deli; it was not sold to other retail stores. Their record year, they sold $4,000 worth of Tofu Turkeys including mushroom gravy, and a custom stuffing with okara and miso. People could also special-order tofu pumpkin pies, cranberry sauce, etc –a full meal. The product was last sold by The Tofu Shop in 1993. Bob Meeks now makes it at the Daybreak Cafe in Arcata, but he has improved the recipe. Also, the Arcata Co-op, which has a service deli named Spoons, has for many years made their own Tofu Turkeys in house.

Matthew met Seth Tibbott of Turtle Island Foods (home of Tofurky) years ago when he came down through Arcata doing in-store food demos for his tempeh products, and Matthew has talked with him periodically over the years.

To this day, Matthew is asked to bring Tofu Turkey to his extended family's get-together on Thanksgiving in Arcata–for the vegetarians in the family. Address: Tofu Shop Specialty Foods Inc., 65 Frank Martin Court, Arcata, California 95521. Phone: 707-822-7401.

8253. Noble Bean. 2002. Tempeh–Noble Bean (Leaflet). McDonalds Corners, Ontario, Canada. 2 p. 6 panels. Front and back. 28 cm.

• ***Summary:*** The front 3 panels of this color leaflet are printed with black and yellow on a green background: (1) About the company in English, with an oval color photo of Casey, Marty, Susan, and Allan. "Noble bean is a family-run cottage industry nestled in the rolling hills of the Ottawa Valley. Here on 10 acres of land we produce 100 lbs. of tempeh a day." In 1979 the company was started. (2) Six tempeh products (packages and labels) made by Noble Bean, plus one old and two new photos of the family at work. (3) About the company (in French) with a cartoon illustration of

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the outside of the shop.

The inside 3 panels contain recipes for Tempeh Salad and Tempeh Teriyaki, plus an early photo of Allan and Susan making tempeh. Address: RR#1, McDonalds Corners, ONT, Canada K0G 1M0. Phone: (613) 278-2305. Fax (613) 278-0173.

8254. Yamasa Corporation USA. 2002. Use Yamasa soy sauce in all food formulations (Ad). *Prepared Foods* 171(9):57. Sept.

• ***Summary:*** A full-page color ad. "Reach deep into the past to flavor the future! In the land where soy sauce matters, chefs and food processors trust one brand above all others–Yamasa. Naturally-brewed Yamasa soy sauce. "

"Since 1645." Plus the Yamasa logo. "Winner 2000, 2001 and 2002 American Tasting Institute's Gold Medal for Best Flavor Enhancer." Address: Plant: Salem, Oregon. California sales office: 3480 Torrance Blvd., Suite 226, Torrance, CA 90503.

8255. Battaglia, Evelyn. 2002. Cooking with soy products. *Martha Stewart Living*. Oct. p. 278, 280, 282, 284.

• ***Summary:*** Introduces fresh soybeans (edamame), tofu, soy milk, miso, soy sauce. Includes recipes for: Miso soup with tofu, spinach, and carrots. Sesame marinated tofu with vegetables. Chai tea with soy milk. Edamame succotash.

8256. Stacey, Michelle. 2002. Weighing the health benefits of soy. *Martha Stewart Living*. Oct. p. 90, 92, 94, 96.

• ***Summary:*** Under "the good news" and "the bad news" discusses the benefits and possible (but unclear) disadvantages.

8257. Slater, Nigel. 2002. Recipes: Nigel Slater's cookbook of the month. Thai Food by David Thompson. *Observer* (*London*). Nov. 10. p. 147.

• ***Summary:*** At last we have the definitive book on Thai cooking. David Thompson, who spent years in researching and writing this book, is the Australian chef at Nahm in London's Halkin Hotel, before that he was owner of the Darley Street Thai in Sydney.

Recipes include: Stir-fried Siamese watercress with yellow beans, garlic and chillies (*Pak bung fai dtaeng;* with "2 tbsp yellow bean sauce, rinsed" and "2 tbsp light soy sauce"). "This simple dish can be enhanced with... roast duck and fermented bean curd."

8258. Kadokura, Tania. 2002. In the *Saveur* kitchen: The beef behind sukiyaki. *Saveur* (*New York, NY*) No. 62. p. 89. Nov.

• ***Summary:*** Sukiyaki is thin slices of meat or seafood with tofu and vegetables, simmered in a sweetened soy sauce base; it is Japan's best-known nabe. Contains a recipe and color photo. Address: Tokyo-based cooking teacher.

8259. **Product Name:** Tofu Life Naturally Smoked Tofu Pate [Olives Tomatoes, or Garlic Teriyaki]
Manufacturer's Name: North Coast Distributors.
Manufacturer's Address: 4860 East 2nd St., Benicia, CA 94510. Phone: 707-747-0410
Date of Introduction: 2002.
Ingredients: Organically grown soybeans, water, natural calcium sulfate (as hardener), shoyu (water, wheat, soybeans, salt). All fresh: Onions, ginger, hot pepper, garlic green onions, citric acid, herbs & spices.
Wt/Vol., Packaging, Price: 7.5 oz plastic tub, vacuum packed with nitrogen flush. Retails for $3.49.
How Stored: Refrigerated, 35-40 day shelf life
New Product–Documentation: Product with Label brought by Marina Li of Moraga. 2005. June. It retails for $3.59 at the Natural Grocery Co. in Berkeley. Products with labels and leaflet brought to Soyfoods Center by Hanan Onn. 2006. Feb. 14. He says both were introduced in 2002. His best-selling paté is Olives Tomatoes.

8260. **Product Name:** San-J Asian BBQ: Sweet & Smoky Fusion BBQ Sauce. Gluten Free.
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 804-226-8333.
Date of Introduction: 2002.
Ingredients: Organic sugar, tamari soy sauce (water, soybeans, salt, alcohol), water, tomato paste, rice vinegar, molasses, arrowroot, onion juice (onion juice, vinegar, salt), ginger powder, garlic powder, sesame, canola oil, spices, natural flavor (maltodextrin, hickory smoke flavor), xanthan gum.
Wt/Vol., Packaging, Price: 10 fl. oz bottle.
How Stored: Shelf stable.
New Product–Documentation: E-mail from Misako Binford of San-J. 2012. May 8. An attached Excel spreadsheet gives that date each San-J product was first sold commercially, starting in 1987. This product was first sold in 2002.

Two labels sent by Misako Binford of San-J International. 2012. May 14. Black, red, yellow and white on green. Illustration of a deep iron pot with colored flames coming out the top. The label now reads as shown above. One logo on the front panel: Certified Gluten Free.

8261. Batmanglij, Najmieh. 2002. Silk Road cooking: A vegetarian journey. Washington, DC: Mage Publishers. 336 p. Illust. (color). 30 cm.

• ***Summary:*** This vegetarian cookbook contains beautiful color photos and an extensive glossary. The Glossary includes entries for agar-agar, almond milk, almonds–sweet, hoisin sauce ("made from fermented soybean paste"), soy sauce (Chinese), sprouts (alfalfa, wheat, mung bean, or lentil;

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no soy), tahini paste, tempeh, tofu. Yet the Index shows the soyfoods appearing only in the Glossary, not in the recipes or elsewhere.

However the soybean, bean curd and soy sauce are mentioned on page 41. On page 43 is a magnificent full-page color photo of a Chinese bean-curd seller displaying her wares on a Shanghai street; many different varieties of doufu are shown.

The remarkable story of the Silk Road pioneer, Zhang Qian, is told on pages 24-28. The Han dynasty court (under Emperor Wu Di) dispatched Zhang Qian, a military officer who was familiar with the Xiongnu, to the Western Regions in 138 BCE with a group of ninety-nine members to make contact and build an alliance with the Yuezhi against the Xiongnu. He was accompanied by a guide named Ganfu, a Xiongnu who had been captured in war. The objective of Zhang Qian's first mission was to seek a military alliance with the Yuezhi, in modern Tajikistan. No one knows what route Zhang followed. However to get to the territory of the Yuezhi he was forced to pass through land controlled by the Xiongnu who captured him (as well as Ganfu) and enslaved him for ten years. During this time he married a Xiongnu wife, who bore him a son, and gained the trust of the Xiongnu leader.

On the inside front cover and facing page is a 2-page map of the Silk Road region from Shanghai, China, to Genoa, Italy. The author, a woman, has a brief biography and large color photo on the inside rear dust jacket. Born and raised in Iran, "she received her master's degree in education and art in the United States and France. During the past 25 years she has traveled across much of the ancient Silk Road region, working with regional chefs and home cooks along the way. She is a leading authority on Persian cuisine and the author of the best-selling *New Food of Life*, described by the *Los Angeles Times* as the definitive Iranian cookbook..." Address: Washington, DC.

8262. Charney, Ken. 2002. The bold vegetarian chef: Adventures in flavor with soy, beans, vegetables, and grains. New York, NY: John Wiley & Sons. vi + 313 p. Illust. Index. 23 x 19 cm.

• ***Summary:*** Contents: Acknowledgments. Introduction. Vegetarian delights. 1. Starting off right: Appetizers and snacks. 2. Soups and stocks: Warm beginnings. 3. Breakfast, lunch, and brunch: From scrambles to sandwiches. 4. Burgers, fritters, and loaves: Stars of vegetarian cuisine. 5. Outrageous soy: Tempting tofu and tempeh. 6. A bold way with beans: Powerhouse dishes. 7. Pasta, risotto, and polenta: Comfort carbos. 8. Seitan: The power of wheat meat. 9. Vegetables and grains on the side: All the best accompaniments. 10. Green salads: Crisp and well dressed. 11. Just desserts: Sweetness and light.

On the rear cover is a brief bio of Ken Charney; on the front cover is a color portrait photo. Address: Seattle, Washington.

8263. Emi, Kazuko. 2002. Japanese cooking: The traditions, techniques, ingredients and recipes. London and New York: Hermes House. 256 p. Illust. (color). 31 cm. *

8264. Grant, Amanda. 2002. Fresh & fast vegan pleasures: More than 140 delicious, creative recipes to nourish aspiring and devoted vegans. New York, NY: Marlowe & Company. ix + 230 p. Index. 23 cm.

• ***Summary:*** This vegan cookbook from the UK uses much less soyfoods than its typical counterpart from the USA. The index contains 1 entry each for soy milk/cream and tofu. Soy sauce appears in the title of one recipe. In the headnote to the tofu recipe (p. 114-15) we read: "There are many health benefits to eating this soybean product, not the least of which is its high percentage of protein. It is eaten in vast quantities in Japan, along with other products of the bean such as shoyu and miso." Address: Author and food editor, London.

8265. Khachatourians, George G.; Arora, Dilip K., eds. 2002. Applied mycology and biotechnology. Vol. 2. Agriculture and food production. Amsterdam, New York: Elsevier. xvi + 428 p. Illust. Keyword index. 25 cm.

8266. Kissel, Renate. 2002. Soja & Tofu: Die neue Vitalkueche [Soya & tofu: The new vital cookery]. Frankfurt am Main, Germany: Umschau Buchverlag. 128 p. Illust. (color photos). Recipe index. 24 cm. [Ger]

• ***Summary:*** Contents: Soya–the powerbean for nutrition. 1. Salads and appetizers. 2. Sauces, dips, garnishes, and spreads for bread. 3. Soups. 4. Main dishes. 5. Desserts, baked goods, and drinks. 6. Asian dishes. Glossary. Note: The majority of recipes in this cookbook use tofu.

8267. Kurlansky, Mark. 2002. Salt: A world history. New York, NY: Walker and Co. xii + 484 p. Illust. Maps. Port. Index. 21 cm. [240* ref]

• ***Summary:*** Soy sauce is mentioned on 14 pages: 20, 38, 71, 73, 189, 279, 373, 377, 380, 390, 395-97, and 439.

Soybeans on pages 20 and 21. Jiang, jiangyou and shoyu on p. 20.

Miso on p. 373. Dousi [doushi or douchi, fermented black soybeans] on pages 393 (in two places), 394 and 395. Douban on p. 394 and 395.

This book contains quite a few questionable statements. For example, speaking of the soybean (which he often calls "soy," p. 21): "The bean is so nutritious that a person could be sustained for a considerable period on nothing but water, soy, and salt." Moreover, the word *douchi* is almost never spelled *dousi*. This is the *only* example of this spelling in our entire book! Address: Author, New York City.

8268. Lee, Cherl-Ho; Lee, Sang Sun. 2002. Cereal

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fermentation by fungi. In: George G. Khachatourians and Dilip K. Arora, eds. 2002. Applied Mycology and Biotechnology. Vol. 2. Agriculture and Food Production. Amsterdam, New York: Elsevier. 428 p. See p. 151-70. [50 ref]

• ***Summary:*** Contents: Summary. Introduction. Fermentation starters. History of solid state fermentation starters in northeast Asia, cereal alcoholic fermentation starters, soybean fermentation starters. Fungal fermented foods: Cereal alcoholic products (rice wine, rice beer, alcoholic rice paste, alcoholic rice seasoning), fermented soybean products (Korean kanjang and doenjang, Japanese shoyu and miso, tempe, Chinese sufu), other fermented products (Chinese red rice {Anka}, enzyme foods). Hygienic aspects of fungal fermented foods. Mycotoxins in fermentation raw materials, mycotoxin formed during fermentation. Conclusion.

Page 162: "... soybean sauce, *kanjang*, and soybean paste, *doenjang*, have been used in Korea for more than 2000 years and formed the characteristic flavor of Korean cuisine. The term "Shi" [fermented black soybeans], the Chinese letter indicating *meju*, first appears in *Jijiupian* written in the Han period (206 B.C. to 208 A.D.) of China. *Bowuzhi* of Jin (265-420 A.D.) of China describes that *Shi* [fermented black soybeans] originated in a foreign country, and the letter is a dialect. *Xintangshu* of the Tang period (618-807 A.D.) in China names Shi as a special product of Balhai or Bohai (688-826 A.D.), a nation founded by the refugees from defeated Kokuryo (37 B.C. to 668 A.D.).

"It is generally recognized that Koreans were the first to experiment with soybean fermentation, sparking the beginning of the soy sauce culture of the Orient (Lee 2001). Their traditional fermentation technology was so advanced that they taught their techniques to neighboring countries."

Page 162-63: "***Meju*** [soybean koji], the fermentation starter for Korean soysauce, *kanjang*, is made from soybean... The ripening of *kanjang* mash in the brine is ended in 1-2 months."

Figures: (12) A combination diagram and flowsheet showing the process of making Korean kanjang and doenjang. Address: 1. Graduate School of Biotechnology, CAFST, Korea Univ., Seoul, 136-701, Korea; 2. Dep. of Biology, Korea National Univ. of Education, Chungbuk, 363-791.

8269. Ling, Kong Foong. 2002. Food of Asia: authentic recipes from China, India, Indonesia, Japan, Singapore, Malaysia, Thailand and Vietnam. Singapore: Periplus. 192 p. Illust. (color photos). Index. 31 cm.

• ***Summary:*** This oversized paperback book, loaded with glossy color photos, is an expanded version of the original 1998 edition. The introduction and essays are by Kong Foong Ling. The index, which is poor, makes the book hard to use if you are looking for particular foods found throughout Asia such as soybeans, soy sauce, miso, salted / fermented black beans, yuba [bean curd skin], etc.

Contents: The flavors of Asia. Ingredients. The Asian kitchen. Burma. China. India. Indonesia. Japan. Korea. Malaysia & Singapore. The Philippines. Sri Lanka. Thailand. Vietnam. Appendix.

The "Ingredients" section (p. 10-17) includes: Bean curd (incl. cotton or momen tofu, silken bean curd, deep-fried bean curd or aburage, grilled bean curd or yakidofu, fermented bean curd or nam yee). Bean curd skin [yuba]. Black beans, salted (and fermented). Hoisin sauce ("A sweet sauce made of soy beans, with spicy and garlicky overtones"). Miso (incl. red miso and white miso). Salted soy beans (incl. "yellow bean sauce"). Soy sauce (incl. light soy sauce, black soy sauce, red soy sauce, Kikkoman, tamari, thick sweet soy sauce (kecap manis–Indonesian)). Tempeh. Also: Red beans (dried azuki). Seaweed (incl. dried kelp, golden kelp, mozuku, salted dried kelp, laver or nori, wakame). Sesame (black and white seeds, tahina {tahini}). Sesame oil. Sesame rice crackers.

Korea (p. 109+). Page 110: There are also many fermented pastes and sauces for dipping, called *chang*. Every restaurant and home has its own formula for making chang. Based on a fermented mash of soy beans, the three most common varieties are *kan chang* (dark and liquid), *daen chang* (thick and pungent), and *gochu chang* (fiery and hot).

Soybean is mentioned on pages 8, 11, 68, 89.

Beancurd or bean curd is mentioned on pages 8, 10, 11, 26, 32, 33, 35, 36, 40-42, 68, 70-71, 74, 89, 90, 92, 93, 94, 96, 100, 102, 104, 107, 111, 112, 113, 119, 120, 127, 133, 158, 172, 175, 185, 189, 190, 191, 192.

Bean curd skin [yuba] is mentioned on pages 11, 35, 36.

Bean paste and bean paste sauces, p. 8, 32.

Fragrant soy sauce is mentioned on page 128.

Also: Red bean paste, p. 46 (canned, azuki).

8270. Nguyen, Chi; Monroe, Judy. 2002. Cooking the Vietnamese way. Revised and expanded to include new low-fat and vegetarian recipes. Minneapolis, Minnesota: Lerner Publications. 72 p. Illust. Index. 23 x 20 cm. Series: Easy Menu Ethnic Cookbooks.

• ***Summary:*** This thin hardcover book is an introduction to Vietnamese cooking, but not a vegetarian cookbook–though it contains some vegetarian recipes. Contains many color photos. The section titled "Special ingredients" includes cellophane noodles (made from mung beans), coconut milk, fish sauce (nuoc mam), ginger root, lumpia, mung beans, sesame seeds, soy sauce, and tofu. The Vietnamese use nuoc cham (p. 33) the way diners in many countries use salt: The main ingredients are fish sauce, garlic, red pepper flakes, sugar, vinegar and water. Soy sauce is also widely used as a seasoning–as in fried rice, grilled lemon-grass beef. Soy-related recipes include: Steamed tofu (Dau hui hap, p. 59).

8271. Price, David Clive; Kawana, Masano. 2002. Food of

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Korea: authentic recipes from the land of morning calm. Singapore: Periplus; North Clarendon, Vermont: Distributed by Tuttle Pub. 120 p. Illust. (Color). 21 cm.

• ***Summary:*** In this attractive book, almost every recipe is accompanied by a glossy, full-page photo (usually of a prepared dish in an attractive table setting) on the facing page. The 60+ recipes were created by the chefs of the Sarabol Restaurant in The Shilla Hotel, Seoul.

Page 16: There are also many fermented pastes and sauces for dipping, called *chang*. Every restaurant and home has its own formula for making chang. Based on a fermented mash of soy beans, the three most common varieties are *kan chang* (dark and liquid), *daen chang* (thick and pungent), and *gochu chang* (fiery and hot).

Note: Soy sauce is also spelled *ganjang* (p. 23, 72). Korean-style miso (thick and pungent) is also spelled *doenjang* (p. 30, 60). Korean chili paste (fiery and hot) is also spelled *gochujang* (p. 23, 26, 31, 82, 106).

Bean curd [tofu] is mentioned on pages 9, 19, 24, 30, 44, 50, 56, 58, 60, 66, 68, 70, and 74.

Soybean sprouts (or bean sprouts) are mentioned on pages 6, 10, 11, 24, 40, 46, 64, 106.

Soy beans are mentioned on pages 6, 9-12, 19, 23-26, 30, 31, 44, 46, 50, 62, 106, and 120.

Fermented soybean paste (doenjang) is mentioned on pages 23, 25.

Soy sauce is mentioned on 27 pages (definition on p. 27). The two main types are light and dark.

8272. Sass, Lorna J. 2002. Lorna Sass' complete vegetarian kitchen: Where good flavors and good health meet. New York, NY: William Morrow. An imprint of HarperCollins Publishers. xiv + 494 p. Index. 26 cm. [35*+ ref]

• ***Summary:*** First published in 1992 as *An Ecological Kitchen: Healthy Meals for You and the Planet* (William Morrow). This innovative vegan cookbook offers 250 cholesterol-free recipes. It features a complete glossary of wholesome ingredients for stocking the vegan pantry (no meat, dairy, or eggs). Address: New York City.

8273. Thompson, David. 2002. Thai food (Aharn Thai). Berkeley, California: Ten Speed Press. xiii + 673 p. Illust. Index. 25 cm. [218 ref]

• ***Summary:*** This is a superb, massive, beautiful and unique book–a wholistic study of food in Thai culture overflowing with lovely and expressive color photos by Earl Carter.

Contents: Acknowledgements. Introduction, by David Thompson, and author's notes. Part one: Thailand and food. 1. A history. 2. Culture and society. 3. Regions of Thailand. 4. Rice.

Part two: Fundamentals of Thai cooking. 5. The Thai kitchen. 6. Ingredients and basic preparations. 7. Relishes. 8. Soups. 9. Curries. 10. Salads. 11. Side dishes and accompaniments. 12. Menus.

Part three: Food 'outside' the meal. 13. Snacks. 14. Desserts. Select bibliography (Books in English: Primary sources 23. Secondary sources 65. Cookbooks 18. Total English: 106. Thai sources: Cookbooks 46. Memorial books: 66. Total Thai: 112. Grand total: 218).

Introduction: The author has written this book, in part, to describe this ancient cuisine which "reached an apex in the last decades of the 19th century," and "before it is eroded, altered and modernised." The transliteration is phonetic, it is not the official system devised by King Rama VI.

The section titled "The importance of Buddhism" (p. 38-40) in Thai cookery and culture states: "It is the obligation of every Thai male to become a monk for at least three months, usually around the age of 20,..." This is a rite of passage from childhood to adulthood, it acquaints each young man with the basics of Buddhism and meditation. Strict Buddhists abstain from eating meat and "there is a strong tradition of vegetarianism in Thailand." Meat does not have a primary role in the Thai diet and most Thai believe that forgoing meat earns merit for themselves or another. Some give up meat once a week, or for a prolonged period, or even for an entire year.

Chapter 6, "Ingredients and basic preparations," discusses the following: Bean curd (*dtor huu*): There are several types, from firm to soft. The author prefers the softest kind, sometimes called "silken bean curd."

Fermented bean curd (*dtor huu yii*): Of Chinese origin and fermented with a red mold, it is sold in small jars and comes in two types: "very red, or creamy white veined with pink. The author prefers the latter, which is more versatile and subtle."

Fermented soy bean (*tua nao*): This ancient fermented product was once used extensively in Thai cookery. But it has largely been replaced by shrimp paste, so it is not so common now. "Before *tua nao* is used in a recipe, it is grilled or toasted, then ground."

Soy sauce (*nahm siu uu*): A lighter-style soy sauce is generally preferred by Thai cooks. "Sweet Indonesian soy sauce (*kecap manis*) is used only occasionally."

Yellow bean sauce (*dtow jiaw*): "This is a sauce based on yellow soy beans, which are salted and then fermented with rice mould... [it] tastes delicious, very much like Japanese miso." Its use usually indicates a dish of Chinese influence. There are two basic types: "the first, and more traditional is creamy white; the more common one is honey brown."

Peanuts and wing beans [winged beans] are also discussed in chapter 6.

Soy-related recipes: Murray perch and mushroom soup with yellow beans (*dtom het dtow jiaw;* p. 249). Light soy sauce (p. 341). Fermented bean curd simmered in coconut cream (*lon dtor huu yii;* p. 430-31). Deep-fried bean curd with crab, pork and spring onions (*tor huu yord sai tort;* p. 440-42). Prawns and yellow beans simmered in coconut

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cream (*lon dtao jiaw;* p. 444-46). Pickled ginger with yellow beans (*king dong dtow jiaw;* p. 457). Bean curd stir-fried with bean sprouts (*tor huu pat tua nork;* p. 462). Bean curd and bean sprout soup (*tgeng jeut or huu orn;* p. 469-70). Stir-fried Siamese watercress with yellow beans, garlic and chillies (*pak bung fai dtaeng;* p. 532-33). Yellow bean and ginger sauce (*nam jim dtow jiaw;* p. 545). Spicy yellow bean sauce (*nam jim dtow jiaw;* p. 558). Address: Chef, restaurateur, cookery writer, and preserver of traditional Thai culture. Sydney, Australia.

8274 Treloar, Brigid; Inge, Karen. 2002. Healthy soy: Cooking with soybeans for health and vitality. Hong Kong: Periplus Editions (HK) Ltd. Printed in Singapore. 112 p. Illust. (color). Index. 24 x 22 cm.

• ***Summary:*** This is a beautiful book, with stylish and informative full-page glossy color photos on every other page. It is well researched, comprehensive, and generally uses standard soyfoods terminology. It is also strange: We are not told in which country the publisher is located (perhaps Hong Kong or Singapore) or where the authors live. It is distributed in North America, Japan and Korea by Tuttle Publishing. On the inside rear dust jacket: www.tuttlepublishing.com. It is clearly targeted at a world market.

Contents: Introduction. The health benefits of soy: The heart, cancer, menopause, osteoporosis, weight control, allergies, lactose intolerance, the nutritional value of soy, protein, phytoestrogens, fats, calcium, soluble fiber, vitamins and minerals, energy, carbohydrates, how much soy do we need? (as an exchange for meat), how to use the nutrition table. Nutrition table (for various soyfoods). Soybeans: Green soybeans–fresh and frozen, dried soybeans, how to buy and prepare soybeans (selecting and storing dried soybeans, preparing dried soybeans, soaking, pan-roasting, boiling, pressure cooking, canned). Soy foods: Tofu (selecting and using, storing, freezing), bean curd sheets (yuba), deep-fried tofu (age, seasoned tofu), miso, tempeh, soya sauce (shoyu, regular, low-salt, light, tamari, ketjap manis), soy milk, soy flour, soy nuts, soy germ powder, soy oil, soybean sprouts, soybean paste (fermented), natto, soy dairy products (soy butter, soy spread {margarine}, soy cheese {plain or flavored}, cream cheese, yogurt, mayonnaise), soy meats (meat alternatives), others (soy breads, cereals, pasta, chocolate, chips, health bars, desserts, tofu ice creams), soy grits, tips (tofu, soy dairy products). Compatible soy flavors. Preparation and cooking techniques: Draining and pressing tofu, cutting tofu, deep-frying tofu, how to reconstitute yuba, how to use deep-fried tofu pouches, how to use miso, miso tips. Soups. Appetizers and dips. Light meals and snacks. Main dishes. Seafood. Vegetables. Salads. Desserts. Soy drinks. Glossary. Guide to weights and measures.

Note: This is not a vegetarian cookbook. Some recipes call for chicken, fish (swordfish, tuna, salmon), shrimp, etc. Address: 1. Food writer, stylist, consultant, and cooking instructor [Australia]; 2. Nutritionist and nutrition correspondent for *Good Morning Australia*.

8275 Weil, Andrew; Daley, Rosie. 2002. The healthy kitchen: Recipes for a better body, life, and spirit. New York: Alfred A. Knopf; London: Ebury. xxviii + 325 p. Illust. (color photos by Sang An, Amy Haskell, and Eric Studer). Ports. Index. 24 cm.

• ***Summary:*** Lifelong good health starts in the kitchen. Includes 135 recipes; none require red meat, but not vegetarian. Rosie's introduction encourages: "Don't be afraid to work with new ingredients, such as... using tofu, ..." The section on "Nutrition and health" contains useful information on the glycemic index (p. xx-xxi), the main sources of fat (p. xxi) and protein (p. xxiv) in the American diet. Eat more vegetable protein, especially from soybeans, "and less animal protein, especially from fish and reduced-fat dairy products." The section on "Stocking the pantry" includes Asian foods–soy sauce or tamari, and "miso paste. "Made from soybeans" (p. xxxiii-iv).

Soy related recipes include: "A soy shake," with silken tofu (p. 3, for breakfast). The section "Got (too much) milk?" (p. 34-35) recommends soymilk as a healthful alternative. And in the "Poultry" section (p. 54), Weil suggests substituting baked tofu. Weil has a full page (p. 58) about "Soy sauce: Shoyu and tamari," which also mentions "rice starter (koji)." There are recipes for: "Vegetable nori rolls" with natural soy sauce (p. 72-73). Miso pâté (p. 80). Miso soup (p. 125). Meat and meat substitutes (incl. tofu and gluten) (p. 149-50). Greens with tangy miso dressing (p. 244-45). Address: 1. M.D., Clinical Prof. of Medicine, Univ. of Arizona and Director of its Program of Integrative Medicine. 2. Chef trained at the Cal-a-Vie spa near San Diego, former Oprah Winfrey chef.

8276. **Product Name:** [Organic Shoyu]
Foreign Name: Salsa de Soja (Shoyu) Organico
Manufacturer's Name: M.O.A. Internacional.
Manufacturer's Address: Argentina
Date of Introduction: 2002?
Ingredients: Soybeans, wheat, salt, water.
Wt/Vol., Packaging, Price: 900 cc bottle.
How Stored: Shelf stable.
New Product–Documentation: Visit with Carlos Planes at Soyinfo Center in Lafayette, California. 2012 Feb 23. He brought this label in a scrapbook. Red, black and yellow on green. 2.75 by 4.5 inches. Carlos says MOA is a well-known company in Argentina, owned by Japanese, located on a little farm near Buenos Aires. He does not know when MOA started to make and sell Japanese-style soy sauce (shoyu) but he obtained this label from the product in Argentina in about 2002. MOA also made (and probably still makes) Japanese-style tofu.

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8277. Menzies, Gavin. 2003. 1421. The year China discovered America. New York, NY: William Morrow & Co (Imprint of HarperCollins). xix + 552 p. Illust. Index. 25 cm. [850* ref]

• ***Summary:*** Chapter 3, "The fleets set sail," is describing the events in March 1421, when a Chinese fleet sailed from Tianjin near Beijing across the Yellow Sea. On board was an historian, Ma Huan, to document the voyage. His diaries, *The Overall Survey of the Ocean Shores*, were published in 1433. "The staple foods–soya bean, wheat, millet and rice–were carried in separate grain ships, enabling a fleet to stay at sea for several months without replenishing supplies... Soya beans, grown in tubs all year round, were used in several ways. Soaked in water, they sprouted 'yellow curls' from the green bean. The sprouting process increased the content of ascorbic acid, riboflavin and nicotinic acid, the basis of vitamin C, and protected the crew from the deficiency disease scurvy. The Chinese knew well the dangers of scurvy and the remedies to prevent it" (p. 65).

Note: This is the earliest English-language document seen (Nov. 2008) that uses the term "yellow curls" to refer to soybean sprouts.

When they ran out of fresh vegetables, "the sprouting soya beans were particularly valuable. Soya beans also produced 'milk'. When boiled, it became curd, or tofu, rich in vitamin D, and the fermentation of soya produced soy sauce. Tofu and vegetables were flavored from a sauce made from fermented fish, soy, dried herbs and spices, or glutamate made by chewing wheat flour." Address: London, England.

8278. Mescher, Kelly. 2003. Japanese expand minds and menus to new soyfoods. The Japanese are known for observing tradition. *Iowa Soybean Review* (*Iowa Soybean Association, Urbandale, Iowa*) 14(4) 6. Jan.

• ***Summary:*** Discusses the "Japan Food Soybean Mission, in which the Iowa Soybean Promotion Board (ISPB) staff, board members, and Iowa food grade soybean exporters traveled to meet with soybean processors in Japan and to talk with them about market opportunities."

"The soyfoods seminar provided cooking demonstrations for professional chefs, manufacturers, and food media in Japan." An American chef, Michael Foley, prepared various dishes (whose names are given) using soy ingredients. "They ate everything. There was not a morsel left, and they wanted the recipes," said Linda Funk, executive director of the Soyfoods Council. The Japanese are already fans of soy in its traditional forms, says Foley, "but these recipes were outside the box for them. To finish soups with soymilk, soy yogurt, and soy sauce is new to them... They were surprised at how good it tasted."

One of the highlights was the first Soyfoods Foodservice Seminar. A color photo shows Linda Funk and Jim Stillman (ISPB director) in a downtown market in Tokyo.

8279. Iino, Ryoichi. 2003. The history of shoyu (Soy sauce) 4. *Food Culture* (*Kikkoman Inst. for International Food Culture, Noda, Japan*) No. 5. p. 8-10. Feb. 20. http://kufc.kikkoman.co.jp. [5 ref]

• ***Summary:*** Contents: Edo period–The production and diffusion of shoyu (soy sauce). The manufacture of soy sauce. From barley to wheat. Heating and *niban shoyu* (second soy sauce). Kijoyu (raw soy sauce) and the addition of dilutors. The center of production moves to Kanto (Tokyo area). Exports to Holland. Another name for soy sauce (*oshidashi*). Soy sauce with cooked dishes and soups. Grilled foods and soy sauce. Sashimi (raw fish) and soy sauce.

Another name: "We know that soy sauce became a standard seasoning relatively early in Japan by the fact that it is also began to be called *oshidashi*. The word *oshidashi* is written using the Chinese characters meaning foundation or base. The term was used during the Muromachi Era (1338-1573) to indicate soup stock or broth, which was the basic ingredient for flavoring foods. *Oshidashi* was used in the same way to later refer to soy sauce. There are several written examples of the use of the term *oshidashi* to indicate soy sauce including *Onna Chouhou-ki* (1692), the three-volume *Ukiyo Burou* (1811), *Tokaidouchuu Hizakurige* (1814) and *Kouto Gosui* (1850)." Address: Food historian, and teacher of food history, Hattori Nutrition College, Japan.

8280. **Product Name:** Trader Joe's Organic Baked Thai Tofu.
Manufacturer's Name: Trader Joe's (Marketer-Distributor). Made by Wildwood Natural Foods in California.
Manufacturer's Address: Monrovia, CA 91016
Date of Introduction: 2003. February.
Ingredients: Organic tofu (filtered water, organic soybeans, nigari {magnesium chloride, a natural firming agent}), organic soy sauce (water, organic soybeans, sea salt, organic whole wheat, alcohol {to preserve freshness}), organic lemon juice, Fruitrim (fruit juice, natural grain dextrins), rice wine, organic garlic, organic ginger, organic brown rice syrup, organic cilantro, organic toasted sesame oil, peanut oil, jalapeno peppers, organic cayenne pepper, Thai curry paste (garlic, red chili, lemon grass, galangal, salt, ginger root, onion, pepper), organic lemon grass. Certified organic by Quality Assurance International (QAI). Manufactured in a facility that processes peanuts.
Wt/Vol., Packaging, Price: 7 oz (198 gm) vacuum pack. Retails for $2.99 at Trader Joe's (2003/02, Lafayette, California).
How Stored: Refrigerated.
New Product–Documentation: Trader Joe's Fearless Flyer 2003. Feb. p. 5. "One of the greatest things about tofu, aside from its obvious health benefits, is its ability to absorb the

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flavors of the marinades and spices with which it's cooked. We have two Organic Baked Tofus that will cause you to seriously reconsider how you view tofu."

Product with Label purchased at Trader Joe's in Lafayette, California. 2003. Feb. 16. 4 by 2 inches. Self-adhesive label on plastic bag. Red, purple, black, and white on greenish yellow. "Perishable. Keep refrigerated. Ready to eat." USDA Organic logo. QAI logo. 2 servings. Soyfoods Center taste test. 2003. Feb. 16. Delicious. Not too spicy.

8281. Bittman, Mark. 2003. The minimalist: Move over vinaigrette. *New York Times*. March 26. p. F3.
• ***Summary:*** As always, it is worth buying good soy sauce. "The standard brands (Kikkoman, Yamasa, San-J and so on) are fine, as is any soy sauce that lists as its ingredients only soy [beans], wheat, salt, and 'culture,' the yeast that makes the mixture ferment.

"Homemade ponzu will keep for several days with no loss in quality."

8282. Burke, Dan. 2003. The origins of Pacific Soybean & Grain in San Francisco (Interview). *SoyaScan Notes*. March 28. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Dan founded Pacific Soybean & Grain in 1973 in San Francisco. A number of circumstances led him to establish the company; it was not very intentional. His first soybean customers were all in San Francisco: Wo Chong (tofu manufacturer), Quong Hop (tofu manufacturer), and Wing Nien (maker of both traditional Chinese-style fermented soy sauce and HVP soy sauce).

In July 1978 Dan attended the foundation meeting of the Soycrafters Association of North America, in Ann Arbor, Michigan. He flew to the event with Jack Mizono of Azumaya. In Feb. 1993 his company moved from their address at 495 De Haro St., San Francisco, to their present address. Address: Founder, Pacific Soybean & Grain, One Sutter St., Suite 300, San Francisco, California 94104. Phone: 415-433-0867.

8283. **Product Name:** The Wizard's Organic Vegetarian Worcestershire Sauce (Regular, Wheat Free).
Manufacturer's Name: Edward & Sons Trading Co., Inc.
Manufacturer's Address: P.O. Box 1326, Carpinteria, CA 93014. Made in North Carolina.
Date of Introduction: 2003. March.
Ingredients: Apple cider vinegar*, tamari* (water, wheat, soybeans, salt), molasses*, filtered well water, wheat syrup*, salt, tamarind*, ginger root*, lemon juice concentrate, garlic*, spices*, xanthan gum, shiitake mushrooms*, citrus extracts*, spice extract*, natural smoke flavor.
Wt/Vol., Packaging, Price: 5 oz, 10 oz, and 8.5 oz bottle.
How Stored: Shelf stable.
New Product–Documentation: Sell sheet (8½ by 11 inch, color) sent by Patricia Smith from Natural Products Expo West (Anaheim, California). 2003. March. Shows the bottles of three products: Regular (5 oz, 10 oz), and Wheat Free. On the rear is listed the ingredients and nutrition facts for each product.

8284. **Product Name:** Pete's Tofu 2 Go [Sesame Ginger Tofu with Jazzed Ginger Soy Sauce, Lemon-Pepper with Mango Chipotle Sauce, Santa Fe Sizzle with Pineapple Mango Fusion Sauce, Thai Tango with Mango Wasabi Sauce].
Manufacturer's Name: Sunrise Soya Foods.
Manufacturer's Address: 729 Powell St., Vancouver, BC Canada V6A 1H5. Phone: 1-800-661-2326.
Date of Introduction: 2003. March.
Ingredients: Sesame Ginger: Tofu (water, certified organic soybeans, calcium sulfate), whole sesame seeds, dehydrated ginger, dehydrated garlic, spices, soybean oil, soy sauce (water, wheat, soybeans, salt), vinegar, brown sugar, salt. Jazzed ginger soy sauce: water, soy sauce (water, wheat, soybeans, salt), brown sugar, dehydrated organic ginger, sesame seeds, sesame oil, vinegar, lemon juice, dehydrated onion, dehydrated garlic, citric acid, xanthan gum.
Wt/Vol., Packaging, Price: 14.4 oz (206 gm) in tray inside plastic bag. Retails for $2.79 (2004/03, Lafayette, California).
How Stored: Refrigerated.
New Product–Documentation: Leaflet (8½ by 11 inch, color) from Natural Products Expo West (Anaheim, California). 2003. March. "Pete's Tofu: Taking the guesswork out of tofu!" "Pete's Tofu: A whole new way to enjoy tofu."

Product (Sesame Ginger) with Label purchased at Trader Joe's in Lafayette, California. 2004. March 13. 4¼ by 8½ by 2 inches deep. Brown, green, black, and white on tan. Color photo shows four triangles of tofu around a square pan of the sesame ginger sauce with mint leaves on a red plate. "Made from organic soybeans. Cholesterol free. High in soy protein. High in calcium. No preservatives added. Ready-to-eat tofu with sauce for snacking and more." Contains two 6.2 oz pouches of tofu plus two 1 oz packets of sauce. Logo: "Certified organic by Quality Assurance International (QAI)." Soyfoods Center evaluation: This product comes in innovative packaging. Four tofu triangles (which have been marinated and baked, or deep-fried) are packed two-deep in each of two vacuum pack cubes. These cubes are placed in the two compartments (2½ inches square by 3/8 inch deep) of a plastic tray. The sesame ginger sauce comes in small plastic pouches. These three items are invisible inside the outer plastic bag. To serve: Cut open the vacuum pack cubes. Place tofu triangles in compartments of plastic tray. Cut open pouches and pour sauce over tofu. Eat as a finger food or with a food. Product concept: Excellent. Flavor and texture: Very good, but there is too much liquid in the two vacuum pack cubes; it must be drained off when they are opened.

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8285. Tasty Eats, Inc. 2003. Finally, a meatless jerky with taste (Ad). *Natural Foods Merchandiser.* March. p. 96.
• ***Summary:*** This 8½ by 11 inch color ad shows five packages of the company's product: Soy Jerky–Dry Style: Original, Teriyaki, Ginger, Hot N' Spicy, and Peppered. For more information: www.TastyEats.com.

8286. **Product Name:** Soy Jerky–Dry Style (Original, Teriyaki, Ginger, Hot N' Spicy, or Peppered).
Manufacturer's Name: Tasty Eats, Inc.
Manufacturer's Address: 25 Greystone Manor, Lewes, Delaware 19958. Phone: 302-236-7503.
Date of Introduction: 2003, March.
Ingredients: Ginger. Textured soy protein (non-GMO), water, evaporated cane juice, expeller pressed sesame oil, spices, ginger powder, salt, white pepper, caramel powder (non-GMO cane juice).
Wt/Vol., Packaging, Price: 1.5 oz (42 gm) vacuum pack in paperboard sleeve. Retails for $1.69 (2003/05, Berkeley, California).
How Stored: Shelf stable.
New Product–Documentation: Ad (8½ by 11 inch, color) in *Natural Foods Merchandiser.* 2003. March. p. 96. "Finally, a meatless jerky with taste." Four products with Labels purchased by Loren Clive at Berkeley Bowl Marketplace (California). 2003. May 21. 5.5 by 6.75 inches. Paperboard sleeve. Black, white, and orange on yellow. Front panel: Chinese characters at lower left. "Meatless. 97% fat free. Cholesterol free." Non-GMO logo. Back panel: "No additives. No preservatives. No MSG. No artificial coloring. No artificial flavoring. Product of Malaysia."

8287. Colbin, Annemarie. 2003. Interview with Irma Paule: February 9, 2002. *Macrobiotics Today (Oroville, California).* March/April. p. 10-13.
• ***Summary:*** A biography of Irma Paule, a pioneer in organizing macrobiotics in New York City, starting in about 1959-60, when Alcan Yamaguchi saved her life–free of charge. At the time, she was a young actress and a coffee addict, drinking 30 cups a day. Because she speaks French, she served as George Ohsawa's translator when he spoke in America. Yamaguchi and Herman Aihara had founded the Ohsawa Foundation in New York City. When they left for Chico, California, it fell into Irma's hands willy-nilly. She called it by various names, including the Ohsawa Foundation and the Macrobiotic Foundation. She gave lectures and advised people, but never charged for her services. She rented a small professional apartment at 217 Second Ave. where they had some Ohsawa books and sold organic brown rice, etc.

There was a swank Japanese restaurant named Musubi on West 56th Street, between 5th and 6th avenues. The Sato brothers invested money in that restaurant and Alcan Yamaguchi ran it like a macrobiotic restaurant. There she first saw a machine for making rice cakes. Describes the death of Beth Ann Simon from Irma's recollections. Beth drank "three-fourths of a bottle of tamari soy sauce" shortly before she died. A photo shows Irma Paule. Address: PhD, Founder, Natural Gourmet Cookery School and Inst. for Food and Health, New York City.

8288. Kabourek, Jamie L.; Taylor, Steve L. 2003. Soyfoods and allergies: Separating fact from fiction. *Soy Connection (The) (Jefferson City, Missouri–United Soybean Board)* 11(2):1-2, 6. Spring. [24 ref.]
• ***Summary:*** "True food allergy is an abnormal response of the immune system to certain components, typically naturally occurring proteins in foods." Food intolerances (such as lactose intolerance) are also abnormal reactions to food, but do not involve the immune system. "Food intolerances generally involve more mild symptoms and a lesser degree of sensitivity than true food allergies.

"More than 160 foods have been documented as causing food allergies." The "Big Eight" food groups which cause more than 90% of all true food allergies are: milk, eggs, fish, crustacea, peanuts, tree nuts, wheat, and soybeans.

"The most severe form of food allergy is anaphylaxis that can involve numerous symptoms and result in death due to cardiac or respiratory collapse."

Overall, IgE-mediated food allergy affects 2 to 2.5% of the total U.S. population. While the prevalence of soy allergy is not precisely known, it is less frequently encountered in infants and young children than allergies to eggs, milk, peanuts, and wheat.

"Soy allergy is also known to be a transient allergy of infancy and childhood, often being outgrown by age three. The prevalence of soy allergy in adults is not known but is thought to be less than peanut, tree nuts, fish, and shellfish in the U.S."

"Soy sauce has undergone fermentation and appears to be safe for sensitive individuals." "Soybean is a major allergenic food but is rarely known to induce severe anaphylaxis." Address: 1. M.S., R.D., Resource Manager, 2. PhD, Dep. head, and Co-Director. Both: Food Allergy Research and Resource Program, Dep. of Food Science and Technology, Univ. of Nebraska, Lincoln, NE.

8289. **Product Name:** Trader Joe's Organic Edamame Dip.
Manufacturer's Name: Trader Joe's (Marketer-Distributor).
Manufacturer's Address: Monrovia, CA 91016.
Date of Introduction: 2003, April.
Ingredients: Organic soybeans [edamamé], organic soybean oil, organic garlic, organic sesame seeds, organic lemon juice concentrate, organic tamari soy sauce (water, organic soybeans, salt, alcohol), cultured dextrose (cultured dextrose, silicon dioxide), salt, pepper sauce (vinegar, red peppers,

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salt), spices.
Wt/Vol., Packaging, Price: 7 oz (198 gm) plastic tub. Retails for $3.19 at Trader Joe's (2003/04, Lafayette, California).
How Stored: Refrigerated.
New Product–Documentation: Product with Label purchased at Trader Joe's in Lafayette, California, 2003, April 13. 4.5 inches in diameter, 1.75 inches deep. Printed lid and tub. Green and black on white. "Perishable. Keep refrigerated." USDA Organic logo. QAI logo. 7 servings. "Distributed and sold exclusively by Trader Joe's." Allergy information: Processed in a facility that uses peanuts, milk, wheat & tree nuts." Soyfoods Center taste test, 2003, Feb. 16. Delicious. Flavor and texture similar to hummus. Not too spicy. Too expensive.

8290. Aoyagi, Akiko. 2003. McDonalds in Japan plans to launch a fried tofu burger (Interview). *SoyaScan Notes*, May 2. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Akiko recently saw a program on Japanese TV stating that McDonalds Holdings Co. (Japan) Ltd., the American burger giant, is experiencing lagging sales and decreasing profits for the first time in 29 years in Japan. In response they have decided to start selling a fried tofu burger as a healthy alternative in their Japanese restaurants, and to make other healthy additions to its Japanese menu. The new tofu burger will come with a ginger-flavored soy sauce and sell for $1.91. McDonalds' problems include youth savvy competition from the Freshness Burger chain and fears about Bovine Spongiform Encephalopathy (BSE).

Note: An article in *Bluebook Update* (May 2003, p. 1) stated that On April 23, McDonalds Holdings Co. (Japan) Ltd., a mainstream foodservice company, is adding "tofu hamburgers" to its menu. Address: Walnut Creek, California.

8291. *World Grain*.2003. ADM builds soy plant in China. 21(5):12. May.
• ***Summary:*** ADM is building a soy processing facility in Shanhaiguan, China, in a partnership with Wilmar Holdings. The plant will make ADM's Arcon line of soy protein concentrates, specialty soy flour for soy sauce fermentation, and whole edible soybeans.

In a separate report, China's State Grain Bureau predicted soybean crushing capacity could rise 27% this year, as new plants are built. That increase in capacity will probably increase Chinese demand for soybeans from the USA, Brazil, and Argentina.

China imported 10.385 million tonnes (metric tons) of soybeans in 2001-02 according to the USDA; this number is projected to reach 16 million tonnes in 2002-03.

8292. Hymowitz, Ted. 2003. Samuel Bowen and James Flint. Mung beans (Luk Taw), Chinese vetches, and soybeans (Interview). *SoyaScan Notes*, July 9. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Samuel Bowen coined the term "Chinese vetches" in about 1766 or 1767. We know that he used the term in London before May 1767 when he personally presented as sample of "Chinese vetches" to the Society for the Encouragement of Arts, Manufactures, and Commerce (see Templeman 1767). He also appears to have been the first to use the term "Luk Taw," but (curiously) we have only one record of its use–in the 1767 article by Henry Yonge.

Bowen and Flint first met on the ship *Success*, and sailed together on 13 June 1759 from Canton (site of the East India Company's trading post), via Ningpo north to Tientsin, where Flint disembarked on July 29. Bowen probably disembarked at the same time–but we are not sure. Although they were probably on the same ship for about 6 weeks, we do not know how well they got to know one another. Flint was stationed in China, where he had been an employee of the East India Company since 1736; he was the Company's interpreter and supercargo–a high, well-paid position. Bowen arrived in Canton from London as a lowly seaman on the East India Company's ship *Pitt*.

The two men probably parted in Tientsin, each somehow worked his way back to Canton via the overland route. The *Success* and her crew were lost at sea on the return voyage to Canton. Flint was imprisoned by the Chinese at Macao from Dec. 1759 to Nov. 1762, then banished forever from China. Bowen claimed that he was a prisoner in China for nearly 4 years and was carried from place to place throughout the country's interior. We do not know how long Bowen lived in Canton or southern China, where or how he learned how to make soy sauce, and where or how he got the soybean (and perhaps mung bean) seeds he took to Georgia. So he could have learned the word "Luk Taw" while he was in southern China. Flint, who had a sound knowledge of Chinese culture and language, could have given seeds to Bowen and advised him that they were valuable.

Bowen and Flint apparently returned to London on different ships, but they were both there in late 1763. On 16 Nov. 1763 Bowen petitioned the Court of Directors of the East India Co. for compensation. At about the same time, Flint petitioned the same Court. Ted is sure they met again at this time in London. They must have become close friends, because Flint later visited Bowen in Savannah, Georgia, and two of Bowen's sons bear the name "Flint."

Henry Yonge / Young had no Chinese ancestry or friends. Address: Prof. of Plant Genetics, Dep. of Crop Sciences, Univ. of Illinois, Urbana, Illinois.

8293. Wang, June. 2003. Pioneering work of Tau Wang, founder of First Vegetarian Foods Co., in introducing Chinese vegetarian foods to California (Interview). *SoyaScan Notes*, July 10. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** June's father, Tau Wang, was born in 1935 in

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Shandong province, China. With his elder brother, he moved to Taiwan at age 11, became a veterinarian, married, and started a family. He was a Buddhist and a vegetarian. In 19?? he decided to emigrate to the USA. He knew it would take too much time and money to get another veterinarian's degree in America, so he went through culinary training and cooking school in Taiwan. In the mid-1970s (what year??), while in his 40s, he came to the United States and established what June believes is the first Chinese company to make vegetarian products in California–perhaps in the United States. While his family waited in Taiwan as he created a place for them, he began by working at a Chinese restaurant in Maryland for 1-2 years until he obtained his resident status. Then in the late 1970s (what year??) he moved to Southern California, he liked the semitropical climate and wanted to get away from the cold East Coast climate. In those days, most Chinese still lived in Chinatown in downtown Los Angeles. There he met some Buddhist friends from Buddhist temples. He soon realized that there were almost no Chinese vegetarian foods for them to choose from–other than tofu and vegetables. So he decided to start a company named First Food to make vegetarian foods to supply first the Buddhist temples in Los Angeles, with the hope of soon expanding. His first product was steamed Chinese buns (*mantou*), followed by "Vegetarian Duck" or *Suya* (made by simmering wheat gluten; pinyin: *mianjin;* W.-G. *mien chin*), and steamed and lightly salted wheat gluten (*kaofu*). He experimented with many different vegetarian foods that were not available in Los Angeles. One new product was konnyaku.

June (age 11) and her brother left Taiwan joined their father in Los Angeles in 1979. Mrs. Wang and three more daughters came 6 months later (summer 1980). Soon the whole family was working in the business after school. June recalls: "After school, we kinds would go to work. After work, we would all go home and eat together as a family. Then we'd do our homework. We knew that our life had changed and we all had to pitch in and do whatever we could." When June arrived, she spoke no English. But she learned and graduated from California State Polytechnic University, Pomona, with a degree in accounting.

In about the mid-1980s Mr. Wang introduced his first soy product which was "Vegetarian chicken" called "Suchee" (pinyin: *siji;* Wade-Giles: *ssu-chi*), made out of extra-firm pressed tofu. It was cooked in water seasoned with a little salt, then the water was pressed out and it was sold in the shape of a half-cylinder. When this product was successful, he extended the line with Mushroom Suchee and Savory Suchee (seasoned with soy sauce and his own blend of seasonings). In 1985 he incorporated the company.

Gradually his business expanded to Chinese restaurants, supermarkets, northern California, then to distributors servicing other states. Because of the language barrier, and because it was family-run sole proprietorship where he pretty-much ran the whole show, with the help of his family and a few other workers.

June's father was concerned about what would happen to his business when he retired. Their foods were sold, packaged, and distributed only to the Chinese market. He also hoped it would expand beyond the Chinese market. After working outside the family business for a few years, June bought the business from him on 31 Aug. 1999, with the goal of helping her dad to realize his dream of expanding the business beyond the Chinese community. She invited her younger sister, Saline, to join her as a manager–and a potential shareholder. She soon launched a new line of Hispanic / Mexican hand-held meatless snack products named Starlite Cuisine, including 3 flavors each of Soy Taquitos (rolled in corn tortillas) and Soy Rolled Tacos (rolled in wheat flour tortillas)–both filled with textured soy protein concentrates. She hoped to sell these through Trader Joe's, but after sending many samples to the frozen foods buyer, he stole the product name and idea, and now Trader Joe's has its own Taquitos–Ugh!

A brief biography of Tau Wang's work has been written in Chinese. The company also makes make an abalone alternative based on konnyaku; it contains no soy ingredients. Address: 1429 Virginia Ave., Suite F, Baldwin Park, CA 91706. Phone: 626-338-8233.

8294. Hymowitz, Ted. 2003. Re: Did Samuel Bowen introduce the soybean, the mung bean or both to North America? What about vermicelli. Letter (e-mail) to G. Hou at Univ. of Guelph, Ontario, Canada, July 14. 2 p.

• ***Summary:*** Prof. Hymowitz, after addressing each question in detail concludes: (1) Samuel Bowen introduced the soybean to North America and not the mung bean. (2) Vermicelli was a small business for Bowen compared to sago and soy sauce. Hymowitz cannot find any records of how Bowen made the vermicelli. "Thus I will omit from now on all suggestions that it was soy noodles. It could be that he made the noodles from wheat growing in the colonies and did not need or use mung or soy beans."

"Thus the original hypothesis that Mr. Bowen introduced the soybean into North America in 1765 still holds. Was this the earliest introduction? I do not know! I have already indicated to you that the first 'China Town' in the New World was in Acapulco, Mexico. Most likely the soybean reached the shores of the New World via the Chinese sailors. However finding some evidence is very difficult."

Talk with Prof. Hymowitz, 2003, July 16. Mr. Hou is a graduate student from China who is just finishing his PhD thesis. He has not indicated any interest in pursuing the history of the soybean. Ted thinks that Bowen applied for a patent on vermicelli because it was for plants growing in America, but it is odd because many people knew how to make vermicelli from wheat, he never exported very much, and he never showed or demonstrated the vermicelli to

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anyone in the Colonies. He sent soy sauce, sago powder, and Chinese vetches to Franklin's society in Philadelphia, Pennsylvania; he did not send vermicelli. He got the patent because various people vouched for him; he didn't describe how to make any of the food products he patented. Ted worked with both mung beans and soybeans in Oklahoma. Bruchid beetles eat mung beans voraciously, but they do not eat soybeans. This is a point in favor of the vermicelli not being made from mung beans. Ted does not know if bruchid beetles eat wheat or wheat products.

There are no records concerning soybeans in Acapulco. Most of those records are in Seville, and a few may be in the state archives in Mexico City. Address: Prof. of Plant Genetics, Dep. of Crop Sciences, Univ. of Illinois, Urbana, Illinois.

8295. Katz, Ellix Sandor. 2003. Wild fermentation: The flavor, nutrition, and craft of live-culture foods. White River Junction, Vermont: Chelsea-Green Publishing Co. xv + 187 p. July. Illust. by Robin Wimbiscus. Index. 26 cm. [78 ref]
• ***Summary:*** This book introduces readers to fermented foods from around the world. Contents: List of recipes. Foreword, by Sally Fallon. Acknowledgments. Introduction. Cultural context. The making of a fermentation fetish. 1. Cultural rehabilitation: The health benefits of fermented foods. 2. Cultural theory: Human beings and the phenomenon of fermentation. 3. Cultural homogenization: Standardization, uniformity, and mass production. 4. Cultural manipulation: A do-it-yourself guide. 5. Vegetable ferments. 6. Bean ferments. 7. Dairy ferments (and vegan alternatives). 8. Breads (and pancakes). 9. Fermented-grain porridges and beverages. 10. Wines (including mead, cider, and ginger beer). 11. Beers. 12. Vinegars. 13. Cultural reincarnation: Fermentation in the cycles of life, soil fertility, and social change. Appendix: Cultural resources. Notes. Bibliography. Index.

Chapter 6, "Bean ferments," includes details on miso, miso pickles, koji, tamari, and tempeh–with instructions for making them at home plus recipes. Other chapters discuss: Kefir, cultured soymilk, and Sunflower sour cream (p. 90). Amazake (p. 118-20). Walt Whitman's poem on compost (p. 162). Von Liebig, whose 1845 monograph "laid the groundwork for the chemical agricultural methods that have become standard practice and that are rapidly depleting soils everywhere."

The author believes strongly that fermented foods have helped him and several friends to survive AIDS–a fascinating hypothesis! Address: Short Mountain Sanctuary, in the hills of Tennessee.

8296. *SoyaScan Notes*.2003. Soy sauce cruets on the Web (Overview). Aug. 23. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** A search of the Web using Google and the terms "soy cruet*" or "soy sauce cruet*" yielded the following results: (1) "George III silver 'soy' cruet label. Made by James Hyde in London circa 1785." 2.5 cm wide. Price: £245.00. Note: George III ruled England 1760-1820; he was king during the American Revolution. A "soy cruet label" hangs around the neck of a finely cut glass bottle [cruet] containing soy sauce to identify the contents. The word "soy" is stamped into it.

(2) "George III six bottle soy cruet. Price $9,000. Dealer: Koopman Rare Art. All glass. Made in 1806 by Paul Storr. With tray."

(3) "The G-type soy sauce cruet released by Hakusan Toki in 1958. Masahiro Mori designed the cruet. 2.2 million have been sold to date."

(4) Modern pottery cruets: Greg Stahly, a student at Goshen College, uses the term "soy cruet" to describe a modern, wood-fired soy sauce dispenser. (5) Jennifer Kerr Marsch of Mosquito Mud Pottery, New Smyrna Beach, Florida, makes a "Soy sauce bottle or cruet." $30.00. (6) A set of "Large stoneware rice bowls with a matching soy cruet," by Doug Hirely. Price for the soy cruet only: $19.95.

(6) Bonhams & Butterfields–Sunset Estate Auction held in Los Angeles, California on 28 Sept. 2003, Sunday, at 10 a.m. Lot 7786. "Silver soy cruet frame with associated fittings. Estimate: $250–$500. Bearing marks for JA, London, 1820. Of shaped square form on paw supports, the frame for four same sized bottled centered with a handle, fitted with four associated bottles and stoppers. Height: 7¼ inches by width: 6 inches (14 oz. 10 dwts). Frame showing numerous repairs. Bottles are non matching, with associated stoppers and with damage." Contact: www.butterfields.com / areas / sunset.

8297. Kikkoman Corporation. 2003. Annual report 2003. Year ended March 31, 2003. 250 Noda, Noda-shi, Chiba 278-8601, Japan. 30 p. 28 cm. [Eng]
• ***Summary:*** Consolidated net sales rose 1.7% to $2,854 billion and operating income climbed 19.8% to $69 million. Address: Noda, Japan.

8298. [How Kikkoman introduced soy sauce to America]. 2003. Television broadcast. KTSF (San Francisco–Channel 8 or 26). PBS. Oct. 4. 7-8:00 p.m. Series: Project X Challenges. [Jap; eng]*
• ***Summary:*** This is an excellent Japanese-language documentary with English subtitles.

8299. Welters, Sjon. 2003. Re: Soyfoods in Russia. Letter to William Shurtleff at Soyfoods Center, Sept. 25. 1 p. Typed, with signature.
• ***Summary:*** Sjon found tofu in only one store in Russia, in a supermarket in Moscow, in the dairy case. He encloses the label. "We ate it. It tasted rather salty, and was like an extra-firm calcium chloride tofu, I would say. Not bad... The

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only other soyfoods (not counting Maggi by Nestle) we saw were an Alpro (who else!) soymilk carton in the dairy section of a Moscow supermarket. This particular aseptic one-liter pack was made in Austria. The price was about 60 rubles (30 rubles = $1). The other soyfood was Kikkoman soy sauce, a sweetened and an unsweetened variety, in small 12 fl. oz. bottles. The price was 90 rubles each. That we saw on the way to Samara."

In Russia, the situation concerning soy is "definitely at ground level. Soy is getting bad press in Russia, according to my hostess, as being bad for you. Specifics they could not give me, but it came up whenever they were promoting soy. Genetically engineered soybeans are not liked. That is a plus in my opinion."

Sjon encloses a number of articles and the title pages of several books related to soy; he found them in the ACDI/VOCA office in Moscow.

8300. **Product Name:** Kikkoman Pearl Organic Soymilk (In Aseptic Carton) [Original, Creamy Vanilla, Green Tea], or Pearl Soymilk (Made with Organic Soybeans) [Tropical Delight with 7 Juices].
Manufacturer's Name: Kikkoman International, Inc. (Importer-Distributor). Made in Japan.
Manufacturer's Address: 50 California St., Suite 3600, San Francisco, CA 94111. Phone: 415-956-7750.
Date of Introduction: 2003, September.
Ingredients: Filtered water, whole organic soybeans, organic evaporated cane juice, organic green tea powder, tricalcium phosphate, organic natural flavors (lemon and vanilla), sea salt, carrageenan, vitamin A palmitate, vitamin D2. Certified organic by QAI.
Wt/Vol., Packaging, Price: 32 fl oz (1 quart) Tetra Brik Aseptic Carton.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Ad in *Vegetarian Times*. 2003 Sept. p. 11. Also: During late 2003 and early 2004 this product is advertised by Kikkoman on Japanese language TV in the USA; an Asian-American young person is showing drinking it.

Product with Label sent by Martine Liguori. 2007 Feb. Purchased at Grocery Outlet in Oakland, California. Paid $0.59 for 1 quart of Green Tea. Regular retail price is $2.29 to $3.29/quart.

8301. Kikkoman. 2003. Soymilk for the purist (Ad). *Vegetarian Times*. Sept. p. 11.
• ***Summary:*** Shows five varieties of "Kikkoman Pearl" brand soymilk in 1 quart Aseptic cartons against a pearl-colored background. In the foreground is a glass of soymilk. The organic flavors are Original, Creamy Vanilla, and Green Tea. The Tropical Delight (With 7 Juices) is made with organic soybeans.

8302. Cook, Carla. 2003. Dining out: An Asian trek. A menu large enough to get lost in lets diners chart their own courses. *New York Times*. Oct. 19. p. NJ14.
• ***Summary:*** This is a review of a unique Chinese restaurant Sunny Garden (15 Farber Road, Princeton, New Jersey)–which also serves quite a few Japanese dishes. Recommended dishes include "Duck with black bean and ginger sauce."

This Chinese restaurant also (amazingly) as its own sushi bar. And it serves salmon "surrounded by a shallow pool of sweet-and-sour sauce flavored with miso, mirin, and vinegar." Also Teriyaki shrimp.

8303. Tsai, Ming, Boehm, Arthur. 2003. Simply Ming easy techniques for East-meets-West meals. New York, NY: Random House. *
• ***Summary:*** Recipes include: Hoisin-lime sauce. Roasted Miso-Citrus chicken.

8304. **Product Name:** Organic Teriyaki Sauce.
Manufacturer's Name: The Organic Soy Company, Ltd.
Manufacturer's Address: Unit A, 2 Corban Ave., Henderson, Waitakere City, Auckland 0612, New Zealand.
Date of Introduction: 2003.
Ingredients: Certified organic ingredients: Fermented soy beans, sea salt, cider vinegar, honey, ginger, garlic, water.
Wt/Vol., Packaging, Price: 275 ml glass bottle.
How Stored: Shelf stable.
New Product–Documentation: Label sent by Elizabeth Chalmers, owner. 2007. Jan. 22. The product was introduced by this company in 2003. White, black, and beige on red 2.25 by 6.5 inches. "Ideal as marinade, condiment, or tasty cooking ingredient."

8305. Choe, Ji Sook; Moriyama, Yukiko. 2003. Korean cooking for everyone. Tokyo, Japan: Joie, Inc. 112 p. Illust. (many color). Index. 26 cm.
• ***Summary:*** A cookbook of "quick & easy recipes," each step of which is illustrated by numerous color photos. The Korean name of each recipe is given, written in both Korean characters and Roman letters. Many recipes are seasoned with soy sauce.

Soy related recipes: Assorted vegetables (Namool, with soybean sprouts and toasted sesame seeds, p. 44-45). Stuffed cabbage rolls (Cabbage sam, with firm tofu, p. 54-55). Seafood and vegetable omelet (Cheon, with firm tofu, p. 56-57). Tofu steak (Tuboo steak, with firm tofu, p. 60). Braised tofu (Tuboo chorim, with firm tofu, p. 61). Tofu hot pot (Tuboo cheongol, with firm tofu, p. 62). Tofu casserole with miso (Tuboo toenjang chige, with tofu, red miso and white miso, p. 63). Vegetables and beef on rice (Bibimpap, with soybean sprouts, p. 64). Rice with soybean sprouts (Kongnamul bap, and with light soy sauce, p. 68). Stir-fried rice (Bokkumbap, with soybean sprouts and kochu jang, p.

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69).

In the section titled "Preparation" is a subsection on "How to make kochu jang (hot sauce)" (p. 95). The major soy ingredient is "meju [soybean koji] powder." "No one-pot dish, rice dishes, salads or stews are Korean without this sauce. Each Korean family has its own recipe, but the common method is the 'slow and steady' maturation to form a good harmony of hot, sweet and sour flavors. "Born from the severe weather and environment, *kochu jang* became the Korean's masterpiece of seasonings. Make a large amount and store as it keeps well."

The word "jang" is found in seasonings such as *kan jang* (soy sauce), *toen jang* (miso, soy bean paste), and kochu jang (hot fermented soy bean paste).

Koreans believe that "Food is a medicine." When there is any disorder, the first thing to do is to take revitalizing food, rather than medicine (p. 102).

The glossary of "Ingredients" (p. 107-09) describes miso, nori seaweed, sesame oil, sesame seeds, soybean sprouts, soy sauce, tofu, and wakame seaweed.

8306. Farnworth, Edward R. 2003. Handbook of fermented functional foods. Boca Raton, Florida: CRC Press. 390 p. See p. 227, 295. Index.

• ***Summary:*** An overview, with two chapters on fermented soyfoods (natto and miso) cited separately. Chapter 1, titled "History of fermented foods" (p. 1-25) includes brief and vague histories of "Soy foods" including (p. 18-19) soy sauce, miso, tempeh, natto, and sufu [fermented tofu].

Chapter 4, titled "Kefir: A fermented milk product" (p. 77+) states (p. 85-86) that kefir can be made by growing kefir grains in soybean milk (Abraham and de Antini 1999, p. 327-33).

Chapter 9 is "Natto–A food made by fermented cooked soybeans with *Bacillus subtilis* (*natto*)," (p. 227-245).

Chapter 11 is "Miso: Production, properties, and benefits to health" (p. 277-87). Chapter 12 is "Korean fermented foods: Kimchi and doenjang" (p. 287-305). Soyfoods mentioned on page 289 include ganjang (soy sauce), doenjang (fermented soybean paste), chongkukjang (quick fermented soybean paste), and gochujang (hot chili pepper soybean paste); each of these is a major condiment in Korean cuisine. Address: PhD, Senior Research Scientist, Food Research and Development Centre, Agriculture and Agri-Food Canada, St. Hyacinthe, Quebec, Canada.

8307. Gusman, Jill. 2003. Vegetables from the sea: Everyday cooking with sea greens. New York, NY: William Morrow. ix + 131 p. Illust. (color). Index. 24 x 22 cm.

• ***Summary:*** Learn to identify, buy and prepare sea vegetables. Contents: Introduction: How to use this book, for time-conscious cooks, deep-sea treasures, the history of sea vegetables in world cuisines, how seaweed is cultivated and harvested, sea vegetables in your kitchen. Meet the sea vegetables: Agar, alaria, arame, bullwhip kelp, dulse, fucus tips, grapestone, hijiki, Irish moss, kombu, laver, nori, sea lettuce, sea palm, wakame. Appetizers and meal starters. Soups and stews. Salads. Entrees. Side dishes. Rolls, wraps and sandwiches. Condiments. Sweets and treats. Beauty secrets from the sea. Mail-order sources.

Soy-related recipes include: Soy sauce and tamari (p. 21). Classic miso soup (with wakame and silken tofu, p. 40). Sweet-and-sour tofu stir-fry (with arame, p. 70-71). Age tofu [aburage] in sea palm (p. 77). Hijiki with deep-fried tempeh (p. 82). Contain a large color photos of each of the sea vegetables and each of the recipes. Address: Teacher, Chef's Training Program, Natural Gourmet Cooking School, New York City.

8308. Hosoi, Tomohiro; Kiuchi, Kan. 2003. Natto–A food made by fermenting cooked soybeans with *Bacillus subtilis* (*natto*). In: Edward R. Farnworth. 2003. Handbook of Fermented Functional Foods. Boca Raton, Florida: CRC Press. 390 p. See p. 227-50. [111 ref]

• ***Summary:*** Contents: Fermented soybean foods in Asia. Ingredients of natto: *Bacillus subtilis* (*natto*) spores, soybeans (color, size, protein content, sugar content, washing and storage methods). Natto processing: Washing and soaking of soybeans, steaming of soybeans, inoculation with *Bacillus subtilis* (*natto*) spores, packaging, fermentation, packing for shipment, changes in packages. Assessment of quality: Chemical composition, sensory tests (8 criteria), changes in consumers' preferences (growing preference for larger soybeans and natto with markedly weaker odors and strings). Health benefits: *Bacillus subtilis* (*natto*) cells (effects on intestinal microflora and feed efficiency, effects on the immune system, anti-allergy effect of subtilisin, fibrinolytic activity of subtilisin, role of vitamin K-2 (menaquinoe-7) in the prevention of osteoporosis), phytoestrogens–effects on cancer and osteoporosis. Conclusions.

Natto and related foods are all made by fermentation with the bacterium *Bacillus subtilis* (*natto*). These include sweet dou chi (*xian doushi*) in China (where it is used as a seasoning for Beijing duck [Peking duck]), kinema in Nepal and Myanmar, *tua nao* in Thailand, and *chungkuk-jang* in Korea.

In the year 2000 a total of 10.1 million metric tons of soybeans in Japan were converted directly into foods, more than 80% of these soybeans were imported. Between 1991 and 2000 there was a 13% increase in soybean consumption for natto products.

Natto makers prefer to use certain soybean varieties such as Suzuhime and Suzumaru which are grown in Hokkaido, Kosuzu in Iwate, Miyagi, and Akita Prefectures, and Natto-Shoryo in Ibaraki Prefecture.

Natto makers generally desire the following qualities in soybeans: 1. Extra small or small size (for consumers from

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Tokyo northward). 2. Easily washable. 3. Yellow surfaces and hila. 4. A suitable degree of stickiness when made into natto. 5. Relatively sweet taste. 5. Minimal changes in constituents and appearance during storage.

In Japan, soybeans are classified by diameter into four groups: (1) Extra small is less than 5.5 mm diameter. (2) Small is 5.5 mm to 7.3 mm. (3) Medium is 7.3 mm to 7.9 mm. (4) Large is greater than 7.9 mm in diameter.

Japan's leading natto trade association is called the "Federation of Japan Natto Manufacturers Cooperative Society."

A soybean allergen has been identified as *Gly m* d 28K. This allergen is found in high concentrations in various nonfermented soybean products such as soy protein isolate, tofu, dried frozen tofu, and yuba. However fermented soybean products such as natto, soy sauce and miso do not contain this allergen. "*Bacillus subtilis* (*natto*) produces a serine protease [proteolytic enzyme] of subtilisin NAT during its growth. Subtilisin NAT appears to degrade *Gly m* d 28K."

"Circulating platelets and blood-derived proteins (fibrin) are essential for the formation of blood clots, which prevent bleeding long enough for healing to occur. However, excess coagulation prevents normal physiologic blood flow, which causes thrombotic disorders. Thrombolytic therapy is the most direct means of restoring blood flow. *Bacillus* spp. produce serine proteases called subtilisins, which are known to have fibrinolytic activity" [8 references cited]. Address: 1. PhD, Tokyo Metropolitan Food Research Centre; 2. PhD, Dep. of Food Science and Nutrition, Kyoritsu Women's University. Both: Tokyo, Japan.

8309. Kingsley, Farina Wong. 2003. Asian. New York, NY: Simon & Schuster–Source. 119 p. Illust. (color photos by Maren Caruso). Index. 24 cm. Series: Williams-Sonoma collection.

• ***Summary:*** Facing each recipe is a full-page glossy photo. Soy-related recipes: Udon with tofu and egg (with "4 blocks deep-fried tofu (page 107) each 3 inches (7.5 cm) square," p. 14-15). Miso soup with tofu and seaweed (with "3 by 3 by 5-inch (7.5 by 7.5 by 13-cm) block soft tofu" and "6 tablespoons (3 oz / 90 gm) white miso paste," p. 40-41).

Stir-fried pork in black bean sauce (with "1½ tablespoons fermented black beans, well rinsed," p. 65) has a sidebar titled "Fermented black beans" which states: "Sometimes called salted or preserved black beans, fermented black beans are soybeans that have been dried, salted, and allowed to ferment until they turn black. They are distinctly pungent, have an almost smoky character, and are used mainly in Chinese cooking such as in this simple pork stir-fry. Before using the beans, gently rinse them in a fine-mesh sieve to remove excess salt... Sold in plastic bags, fermented black beans will keep for a year in a cool, dry place."

The "Ingredients" section (p. 106-08) has an entry for tofu. The "Basic recipes" section has a recipe (p. 110) for Ginger-soy dipping sauce.

The Glossary (p. 112-15) contains entries for azuki beans, hoisin sauce, soy sauce, white miso paste.

Note: Recipes and text by Farina Wong Kingsley. General editor: Chuck Williams.

8310. Kwon, Hoonjeong; Kim, Young-Kyung Lee. 2003. Korean fermented foods: Kimchi and doenjang. In: Edward R. Farnworth. 2003. Handbook of Fermented Functional Foods. Boca Raton, Florida: CRC Press. 390 p. See p. 287-304. Chap. 12. [86 ref.]

• ***Summary:*** Contents: Introduction. Kimchi: Changes during fermentation, cancer, cardiovascular disease, nitrosamines and ethyl carbonate.

Doenjang. Cancer (epidemiology, anticarcinogenic and antimutagenic activities in vitro and animal models), cardiovascular disease (inhibition of angiotensin converting enzyme, antithrombotic peptides), isoflavones. Conclusions. Conclusions. Acknowledgments.

Note: Angiotensin is an oligopeptide in the blood that causes vasoconstriction (constriction of blood vessels), increased blood pressure, and release of aldosterone from the adrenal cortex. It is a hormone. The inhibition of angiotensin converting enzyme is thought to help relieve medical conditions such as high blood pressure, heart failure, diabetic nephropathy and type 2 diabetes mellitus.

Table 12.1 titled "Fermented food consumption by the Korean population" (gm per person per day) gives statistics for the following soy based foods:

Ganjang (soy sauce): Overall 6.6, highest 8.0 in persons aged 30-49.

Gochujang (hot pepper-soybean paste): Overall 3.7, highest 5.2 in persons aged 30-49 years.

Doenjang (soybean paste): Overall 5.6, highest 8.0 in persons aged 50-64.

Jajang (black [soy] bean paste): Overall 1.1, highest 1.8 in persons aged 7-12.

Chongkukjang (soybean paste, quick fermented [Korean-style natto]): Overall 1.0, highest 2.4 in persons aged 65 or older.

Mixed bean paste: Overall 1.0, highest 1.5 in persons aged 30-49.

Total: 19.0, highest 24.4 in persons aged 30-49.

Source: Adapted from Ministry of Health and Welfare, Report on 1998 National Health and Nutrition Survey (Dietary Intake Survey), Korea Health Industry Development Industry.

Conclusion: There is presently no conclusive evidence showing human health benefits from consumption of Korean fermented soyfoods. Address: 1. PhD, Food Toxicology Div., Dep. of Food and Nutrition, 2. Research Inst. of Home Ecology. Both: Seoul National Univ., Seoul, Korea.

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8311. Levenstein, Harvey A. 2003. Paradox of plenty: A social history of eating in modern America. Revised ed. Berkeley, California: University of California Press. ix + 353 p. Index. 23 cm. Series: California studies in food and culture No. 8. [1529* endnotes]
• ***Summary:*** This revised edition is identical to the original 1993 edition except that: (1) The publisher and cover are different. (2) It contains a new Epilogue (which updates the book, p. 256-67) after the last chapter, plus 56 endnotes that accompany it. The index appears to be the same. Levenstein was born in 1938. Address: Prof. Emeritus of History, McMaster Univ., Univ. of Hamilton, Ontario, Canada.

8312. Locricchio, Matthew. 2003. The cooking of China. Tarrytown, New York: Marshall Cavendish–Benchmarks Books. 71 p. Illust. (By Janet Hamlin; photos by Jack McConnell). Index. 26 cm. Series: Superchef.
• ***Summary:*** This thin hardcover book, an introduction to the regional cooking of China for young cooks, contains many color photos and illustrations. Soy-related recipes include: Hot and sour soup (*Suan La Tang*, with firm tofu and soy sauce, p. 28-29). Sweet and sour tofu stir-fry (*Tian Suan Dou Fu*, p. 42-43). Stir-fried beef wraps with smoked tofu (*Niu Rou Dou Fu Bao*, p. 52-53).

The section titled "Essential ingredients in the Chinese kitchen" (p. 68-69) includes Hoisin sauce, sesame seeds, shiitake mushrooms, soybeans, soy sauce, and tofu.

8313. Marquard, Walfgang. 2003. Kochen mit Soja-Sauce: die wuerze fuer jede Kueche [Cooking with soy sauce: the seasoning for every kitchen]. Cologne, Germany: DuMont-Monte Verlag; Kikkoman Trading Co., Europe GmbH. 140 p. Illust. 23 cm. [Ger]*
Address: West Germany

8314. Somerville, Annie. 2003. Everyday Greens: Home cooking from Greens, the celebrated vegetarian restaurant. New York, London, Toronto, Sydney, Singapore: Scribner / Simon & Schuster. xix + 395 p. Illust. by Mayumi Oda. Index. 24 x 19 cm. [30+ ref]
• ***Summary:*** A delightful and lovely vegetarian cookbook, filled with the spirit of Greens and Zen Center in San Francisco, California. Soy-related recipes: Crispy spring rolls with spicy dipping sauce (with ½ lb firm tofu brushed with tamari or soy sauce. The refreshing dipping sauce contains ¼ cup tamari or soy sauce, p. 5-6). Vietnamese spring rolls with peanut-hoisin sauce (with 14 oz firm tofu, p. 7-9). Tai's Vietnamese tofu sandwich (with 1 package regular tofu, 14 to 16 oz, fried, p. 129-30. "This warm, braised tofu sandwich is reminiscent of sandwiches sold by street vendors in the cities of Vietnam"). Spring stir-fry with peanut sauce and Thai basil (with ½ lb firm tofu, p. 210-11. For the sauce: "Be sure to use high-quality nonhydrogenated peanut butter, it makes all the difference here"). Udon with miso, shiitake mushrooms, and bok choy (with ½ lb firm tofu, p. 246-48).

"The Asian pantry" (p. 358-60) includes entries for ginger, and "tofu or bean curd" (including silken tofu). "Condiments and seasonings" (p. 360-62) includes coconut milk, hoisin sauce ("This dark, intensely flavored sauce has a perfect balance of sweet and salt; that's what makes it so deliciously addictive"), miso, mushroom soy sauce, tamari, and toasted sesame oil. "The dessert pantry" (p. 363-66) includes various types of chocolate, soy milk ("For desserts and pastries, we prefer vanilla soy milk to plain soy milk; with its smooth vanilla flavor, it's especially good with chocolate"), almond paste ("just plain almonds ground with sugar"). Address: USA.

8315. Vergne, Elisa. 2003. Chinese pavilion: Casual Chinese cooking at home. San Francisco, California: Silverback Books. 119 p. Illust. (color photos by Yves Bagros). Index. 23 cm. *
• ***Summary:*** A recipe for Spinach and tofu calls for "2 tablespoons spicy fermented tofu" (p. 106).

8316. Hymowitz, Ted. 2004. Importance of early documents on soy cruets and soy cruet frames in England (Interview). *SoyaScan Notes*. Jan. 22. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** These early documents add more evidence to and fill out the story of soy sauce in England. By the late 1700s, soy sauce was clearly important enough that it caught the attention of English silversmiths and glassmakers. That is the key. So they made and sold articles of craftsmanship to be used with soy sauce.

Most of this soy sauce was probably imported (more on private ships than on country ships) from East Asia. There must have been a lot of it, but we have no clear idea of how much. Some of the importers bypassed the customs houses. But in the late 1760s and/or early 1770s some of it was imported from the British Colony of Georgia in North America, where it was made by Samuel Bowen. Bowen was a salesman, who traveled back and forth between Georgia and England. Ted imagines (though he has no evidence) that when Bowen went on the ship to England, he took his soy sauce with him. Then he probably took the bottled sauce around personally to various retail stores. Ted knows the name of every single store in England where Bowen sold his soy sauce; he blundered into it in Europe about a year ago. Thus, some of the soy sauce made by Bowen in the Colony of Georgia and exported to England may well have ended up in glass cruets on tables in England.

Ted hires a person (a researcher, historian, vicar, etc.) and pays them by the hour to look into various collections where he has reason to believe documents may be hiding. Many of these are in "trusts" (such as the Wellcome Trust in England), but one needs permission from the trust before one can begin research; it often takes lots of time. Address: Prof.

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of Plant Genetics, Dep. of Crop Sciences, Univ. of Illinois, Urbana, Illinois

8317. Antique Web Galleries. 2004. George II style sterling silver soy ladle (Website printout–part). www.antique webgallery.com. 1 p. Printed March 23.
• ***Summary:*** Dated 1882, this ladle was made in London by Richard Bridgman, with a gilt bowl. Condition: Good. Price: $125.00. Item ID: 20885. A large color photo shows the silver soy ladle.

Fax (letter) from Winston of Trace Mayer Antiques in Louisville, Kentucky. 2004 March 30. The soy ladle is 4½ inches long.

8318. Okazaki, Tetsuki. 2004. The role of the merchant coalition in pre-modern Japanese development: An historical institutional analysis. CIRJE-F-284. www.e.u-tokyo.ac.jp/cirje/research/dp/2004/2004cf284.pdf. 20 + [8] p. March. [59 ref]
• ***Summary:*** Shinbo and Hasegawa (1988, p. 262-63) pointed out that in 1780 a *kabu nakama* [merchant coalition] of merchants trading soy sauce from other regions was established in Kyoto; it formed a distribution system for soy sauce from the other regions and brought about soy sauce production in Tatsuno. This is an example of how a merchant coalition can contribute to forming a distribution network (p. 12).

Commodities whose prices are known during the period 1800 to 1840 in Edo (Tokyo) and Osaka are unpolished rice, polished rice, barley, soybeans, raw cotton, wax, muscovado, miso, soy sauce, and sakė (p. 12-13). Note: Muscovado (also "muscavado") is unrefined or raw sugar obtained from the juice of the sugarcane by evaporation and draining off the molasses. Address: Faculty of Economics, Univ. of Tokyo.

8319. **Product Name:** Soy Natto–Natto Boy Snack Nuts [Plain, or Sea Salt & White Soy Sauce]
Manufacturer's Name: Soy Natto Food Co. (Importer-Distributor). Made in Japan.
Manufacturer's Address: 1015 East Howard Ct., Visalia, CA 93292. Phone: 559-679-9699.
Date of Introduction: 2004, March.
Ingredients: Sea Salt, Soybeans, Subtilis natto, White soy sauce, sea salt.
Wt/Vol., Packaging, Price: 1.06 oz (30 gm) plastic pouch.
How Stored: Shelf stable.
New Product–Documentation: Sell sheet (8½ by 11 inch, color) sent by Patricia Smith from Natural Products Expo West (Anaheim, California) 2004, March. "New generation soy food: Soy natto." "Healthy and happy snack from kids to seniors. Easy to crunch, enjoyable for snacking." Also press release dated March 5, 2004. "Soy Natto Food Company is proud to unveil its new products, 'Soy Natto Snack Nuts', into North America and Europe Markets at Natural Products Expo West at Anaheim, California on March 5, 2004. Soy Natto is a dried food product derived from fermented soy beans. Fermented soy beans, known as 'Natto,' have received positive attention for the natural enzyme, Nattokinase, and ability to help maintain a healthy circulatory system in addition to diversified beneficial functions." Natto has a long history in Japan, going back many centuries. Contact: www.soynatto.com or info@soynatto.com.

Product with Label sent by Mike Masuyama, PhD, of Visalia. 2006, June. 4 by 6 inches plastic pouch. Two flavors. On the front panel is a color cartoon of Natto Boy, a soybean, with a smiling mouth, eyes, 2 hands, and 2 feet. On the sea salt flavor he is wearing a flat-brimmed yellow hat with a red flower in it. Nutrition facts and barcode are also on the front panel; there is no printing on the back of the package. The natto inside have been dried until crunchy, quite like soynuts. Soyfoods Center taste test: The salted ones have a good flavor and texture. The unsalted are quite bland.

Note: K. Mike Masuyama, PhD (Executive Vice President) and Christopher K. Maruyama (Marketing Manager) both sell "Spirit of the Sea" High Mineral Sea Salt. A leaflet (8½ by 11 inches, 3 panels each side) gives details.

8320. **Product Name:** White Tamari (White Soy Sauce), or White Golden Tamari (White Premium Soy Sauce)
Manufacturer's Name: White Soy Sauce Food Co. (Importer-Marketer). Made in Japan.
Manufacturer's Address: 1015 E. Howard Ct., Visalia, CA 93292. Phone: 599-740-8543.
Date of Introduction: 2004, March.
Wt/Vol., Packaging, Price: 300 ml glass bottle.
How Stored: Shelf stable.
New Product–Documentation: Leaflets sent by Patricia Smith from Natural Products Expo West (Anaheim), 2004, March. (1) A letter from Mike Masuyama, on company letterhead (printed in color) describing the product. White Soy Sauce Food Company is the U.S. marketing office of Nitto Jyozo Co., Ltd. of Japan. Both products were introduced to the American market at Natural Products Expo West at Anaheim, California, on March 5, 2004. White soy sauce, a traditional product in Japan, "is a golden color liquid condiment." It has a "fruity aroma and a balance of salty, sweet and savory taste... It is different from conventional, dark or black soy sauce. The taste is a perfect companion for sushi, sashimi, tofu, seafood and natural foods. Unlike dark or black soy sauce, white soy sauce does not overwhelm the delicate flavor or darken the color of delicate foods." "The Ninagawa family in the Mikawa region of [central] Japan [near Okazaki] revitalized the use of white soy sauce in the early 1910s." It is a local seasoning, used mostly in that area.

(2) Color brochure titled "White Tamari (White Soy Sauce), or White Golden Tamari (White Premium Soy Sauce)."

Talk with Mike Masuyama, PhD, executive vice

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president. 2006. June 22. These products are both *shiro shoyu*, imported from Japan, and made in the Nagoya area. It has the lightest color of all types of Japanese shoyu–even lighter than usukuchi–and a slightly sweet taste. Note: In the 1983 U.S. soy sauce standards, it was called "clear shoyu." It should not be confused with tamari.

Packet of materials sent by Mike Masuyama. 2006. June 25. Includes: (1) Five color recipe sheets (each 4 by 6 inches) for using White Tamari. One shows an authentic Arita Porcelain dispenser, with spray pump. Another is a Tofu-mushroom salad. (2) Color photocopy of: "People's Choice Award, International Restaurant & Foodservice Show of New York. Best in Condiment / Ingredient, White Soy Sauce Food Company, March 5-7, 2006, New York, NY." (3) Two-page leaflet titled "Cooking information. White Golden Tamari & White Tamari." (4) Product review from www.thenibble.com. Black gold. The best soy sauces (undated). (5) Menu from JapaVege: Good food to go. Restaurant at 11410 South St., Cerritos, California. All "sushi served with organic rice & white soy sauce (no MSG)." (6) Corti Brothers (Sacramento, CA). (Undated). "Three new products from Japan: White Tamari ($5.99 for 10.2 fl. oz), Golden White Tamari ($7.99 for 10.2 fl. oz), and Yakishio." Plus spray bottles, Arita ware, Gaho potter production ($9.99 each). (7) An authentic Arita Porcelain dispenser, with spray pump (6½ inches tall). Red, white, green, gold and purple.

Note: K. Mike Masuyama, PhD (Executive Vice President) and Christopher K. Maruyama (Marketing Manager) both sell "Spirit of the Sea: High Mineral Sea Salt." A leaflet (8½ by 11 inches, 3 panels each side) gives details.

8321. Ness, Carol. 2004. Kikkoman voted top vanilla soy milk: Taster's choice. *San Francisco Chronicle*. April 28. p. F2. Food section.

• ***Summary:*** Five brands of organic soymilk were tasted and rated in descending order of preference as follows: 1. Kikkoman Pearl (73 points, $2.29/qt at Rainbow). 2. Silk fresh (70 points, $1.99/qt). 3. Pacific Select Low Fat (68, $1.89/qt). 4. Vitasoy Smooth (66, $2.09/qt). 5. Vitasoy Vanilla Delight (58 points, $2.09/qt).

"Also tasted but unranked were Safeway Select Organic, WestSoy Plus, Soy Dream, Silk (boxed), Clover Stornetta, Trader Joe's, Pacific Ultra, Wildwood, 8th Continent, Edensoy, and 365." Address: Staff writer.

8322. **Product Name:** Whole Soymilk, Tofu Blocks, Soy Custard, Braised Tofu, Tofu Puffs, Tofu Noodles, Soy Omelette, Yuba (Tofu Skin), Poached Yuba Loaf
Manufacturer's Name: Basic Soy Beanery (renamed Hodo Soy Beanery in Sept. 2005)
Manufacturer's Address: 1600 S. De Anza Blvd., San Jose, CA 95106. Phone: 408-517-8958.
Date of Introduction: 2004. May.
Ingredients: See below.
Wt/Vol., Packaging, Price: -
How Stored: Refrigerated.
New Product–Documentation: Labels by brought to Soyinfo Center by Min Tsai on 2009. Sept. 16. Ingredients:

Whole Soymilk: Soybeans, filtered water (cane sugar is added to our sweetened soymilk).

Tofu Blocks: Soybeans, filtered water, calcium sulfate.

Soy Custard: Soybeans filtered water, calcium sulfate. Ginger syrup: Filtered water, rock sugar, fresh ginger.

Braised Tofu: Soybeans, filtered water, soy sauce, cinnamon, anise, calcium sulfate.

Tofu Puffs: Soybeans, filtered water, soybean oil, calcium sulfate.

Tofu Noodles: Soybeans, filtered water, calcium sulfate.

Soy Omelette: Soybeans, filtered water, soy sauce, sugar, soybean oil.

Yuba (Tofu Skin): Soybeans, filtered water.

Poached Yuba Loaf: Soybeans, filtered water, soy sauce, white pepper, anise.

8323. *Sushi & Tofu (Free)*.2004. The white soy sauce story. 4(6): May.

• ***Summary:*** Also in this issue is an ad for "White Golden Tamari & White Tamari–White Soy Sauce." Contact www.whitesoysauce.com or Info@whitesoysauce.com.

8324. **Product Name:** Trader Joe's Organic Firm Tofu.
Manufacturer's Name: Trader Joe's (Marketer-Distributor). Made by Wildwood Natural Foods in California.
Manufacturer's Address: P.O. Box 3270, South Pasadena, CA 91031-6270. Phone: 818-441-1177.
Date of Introduction: 2004. May.
Ingredients: Organic soybeans*, filtered water, nigari (an extract of sea water). * = Organically grown and processed in accordance with the California Organic Foods Act of 1990.
Wt/Vol., Packaging, Price: 16 oz. packed in water in molded plastic tray with heat-sealed, peel-off plastic film lid.
How Stored: Refrigerated.
New Product–Documentation: Product with Label purchased at Trader Joe's in Lafayette, California. 2004. Brown, black, yellow, and white.

8325. **Product Name:** TofuTown (Organic Frozen Entrees) [Grilled Tofu Tenders in Tamari]
Manufacturer's Name: White Wave, Inc.
Manufacturer's Address: Boulder, Colorado.
Date of Introduction: 2004. May.
New Product–Documentation: Akasha Richmond. 2004. *Vegetarian Times*. March. p. 31. "Trends." Shows the cover of a package. Below the title: "Add vegetables, pasta, or grains." Talk with Akasha Richmond. 2004. Feb. 11. This product will be demoed at the Anaheim show, but will not

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be in stores until a few months after that. Article in *Natural Foods Merchandiser*. 2004. Sept. p. 1, 9. "Demos to lead combined brands." White Wave has launched its TofuTown line of prepared "tofu tenders."

8326. Kikkoman. 2004. Kikkoman: The original teriyaki. *Gourmet*. June. p. 74-75.
• ***Summary:*** The unique ad (full page, color) consists of three tear-out recipes printed front and back on cardstock paper. On the front, each shows a bottle of a different type of Kikkoman teriyaki sauce with a slogan. Roasted garlic–"Respect the chicken." Marinade & sauce–"Respect the halibut." Toasted sesame–"Respect the tenderloin." On the back of each is the recipe with a color photo of the finished meat.

8327. *Food Processing (Chicago)*.2004. Wellness Foods–New Product Profiles. Two next-generation analogues better simulate full muscle texture. 65(8):s38. Aug. 1.
• ***Summary:*** ADM has introduced NutriSoy Next using soy proteins combined with other vegetable proteins such as wheat gluten or, in some cases, egg whites. Using a twin-screw extruder with the ingredients at relatively high moisture levels of 50-80% locks in flavor and gives them a moist texture.

Garden Protein International has launched Gardein, which is extruded non-GMO soy protein and wheat. It comes in a variety of formats and flavors. "Beef, chicken, and pork analogs are available in small or medium shreds as well as 3/4 inch and 3/8 inch dice. Pre-sauce options include teriyaki, BBQ, sweet and sour, honey garlic as well as roasted garlic and pepper."

8328. *Easy Home Cooking*.2004. A white miracle. White soy sauce. Vol. 12. Aug.

8329. Kikkoman Corporation. 2004. Annual report 2004. Year ended March 31, 2004. 250 Noda, Noda-shi, Chiba 278-8601, Japan. 33 p. 28 cm. [Eng]
• ***Summary:*** This year's annual report is unfortunately a minimal and rather uninteresting version with almost no information about activities in the USA and Japan, and little financial information in dollars–only yen.

Consolidated net sales fell 2.4% to ¥334.656 trillion, operating income fell 4.8% to ¥69 trillion, but net income rose 11.7% to ¥9.287 trillion. Cash dividends per share were up 25%, to ¥10 from ¥8.

Message from the CEO (Yuzaburo Mogi, with color photo). "Summary of business policy. Business principles: The activities of the Kikkoman Group are shaped by three core principles. To pursue the fundamental principle 'consumer oriented.' To provide high-quality products and services and to promote the international exchange of food culture. To become a company whose existence is meaningful to the global society.

"The future performance and prosperity of a company are the direct result of customer satisfaction. Indeed, optimizing satisfaction is the key to future growth and earnings. Accordingly, the Kikkoman Group continues to develop products imbued with value that mirror the ever-changing needs of consumers and that provide opportunities for new culinary experiences."

"In order to earn recognition as a socially responsible company whose existence is meaningful to society, Kikkoman is committed to deepening its involvement in social activities while working to assure that its operations co-exist in harmony with the environment."

"Business strategy: Overseas we are making progress ramping up production capacity at our plants in Wisconsin, U.S.A., the Netherlands and in Singapore. Shipments are also increasing steadily from our plant in China. With these developments, we are creating a foundation to enable us to meet new demand for, and stimulate greater consumption of, soy sauce in markets around the world."

The section titled "Soy sauce division" (p. 7) states: "In Japan the home-use sector, *Tokusen Marudaizu Shoyu* (premium soy sauce), *Gen-en Shoyu* (light soy sauce), *Tokusen Yuki Shoyu* (organic soy sauce) and other products generated strong sales. However, sales in the home-use sector were down year on year due to lower sales of 1-liter bottles of mainstay *Koikuchi Shoyu* (regular soy sauce)."

"From June 2003, Kikkoman progressively switched to using non-genetically modified soybeans for its soy sauce in response to customer calls for safe and reliable products that are free of any concerns surrounding genetically modified ingredients.

"Overseas, in the U.S. and Asia outside Japan, sales were sluggish in the first half of the year due to the Iraq war and fallout from SARS, but results improved in the second half on the back of a recovering economic picture. Sales continued to grow steadily in European soy sauce markets."

Small color photos across the bottom of pages 6-7 show bottles of various Kikkoman soy sauce products.

Note: SARS stands for "severe acute respiratory syndrome," a viral disease in humans. There was a near pandemic between Nov. 2002 (it began in south China) and July 2003, with 8,096 infected cases and 774 deaths. Address: Noda, Japan.

8330. Bryant, Anne. 2004. New developments with HVP soy sauce (Interview). *SoyaScan Notes*. Sept. 15. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** New regulations require that the terms "HVP" and "hydrolyzed vegetable protein(s)" be made more specific; for example: "hydrolyzed soy protein" or "hydrolyzed wheat protein." This is related in part to a new allergy bill.

Concerning the international Codex Alimentarius.

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ConAgra wants its La Choy brand HVP soy sauce to be able to be sold as "soy sauce" worldwide. The U.S. government is attending international meetings in support of ConAgra's position. The Japanese position is that only fermented soy sauce should be able to bear the label "soy sauce." Address Center for Science in the Public Interest, Washington, DC.

8331. Skrzycki, Cindy. 2004. Feud ferments between soy sauce makers. The regulators. *Washington Post*. Sept. 21. p. E1, E4-E5.

• ***Summary:*** The dispute, which began several years ago, involves setting an international standard, under the auspices of the United Nations' food standards program (Codex Alimentarius Commission), that would govern the manufacture and labeling of soy sauce. In 1998, the Japanese asked the Commission to define soy sauce as being fermented ("naturally brewed") and aged.

But the proposal was not well received by the International Hydrolyzed Protein Council; some of its members make HVP soy sauce. The U.S. delegation wants both fermented and HVP soy sauce to be able to bear the label soy sauce. The issue has not yet been finalized.

8332. Soy Online Service. 2004. Uncovering the truth about soy (Website printout–part). www.soyonline service.co.nz. Printed Oct. 28.

• ***Summary:*** A virulently antisoy website, with many links to other sites, anti-soy articles and books, etc. It was clearly initiated in New Zealand by the small group containing Richard and Valerie James and Mike Fitzpatrick. They were soon joined by Sally Fallon in the USA, and others (unknown) in the UK.

Contents: Home page–Site map (7 p.). 1. Introduction (4 p.). 2. History. 3. Hot reading. 4. Phytoestrogens: Soy & DES, the thyroid, male health, your baby, infertility, menopause, birth defects, cancer/leukemia, diabetes Type 1, immune function, your pets, cognitive function [Lon White]. 5. Phytosterols. 6. GM soy. 7. Soy sauce. 8. Other toxins. 9. Doses simplified. 10. Soy allergies. 11. Soy politics. 12. SOS guidance. 13. Downloads. 14. Links. 15. Hot news. 16. Regulators. 17. Big Ugly Bull: Sanitation, FDA-CF-SCAN, Novogen, Abbott, Dr. Brian Strom, USDA, Unilever, NZ MOH (New Zealand Ministry of Health), ANZFA, Plunket, Israeli Officials, USB [United Soybean Board], Solae / DuPont / Bunge. 18. Testimonies. 19. Chicken roost.

A counter near the bottom of the Home Page states that this site has had 476,892 visitors since 27 April 1999. The information on this site cannot be printed unless you select the particular text you wish to print.

8333. Cui, Zhanglin; James, A.T.; Miyazaki, Shoji; Wilson, Richard F.; Carter, Thomas E., Jr. 2004. Breeding specialty soybeans for traditional and new soyfoods. In: KeShun Liu, ed. 2004. Soybeans as Functional Foods and Ingredients. Champaign, Illinois: AOCS Press. xii + 331 p. See p. 264-322. [217 ref.]

• ***Summary:*** Contents: Introduction. Soybean and soyfoods in China: Domestication of soybean, ancient utilization and processing, traditional soyfoods cultivars, current soyfoods markets, modern soyfoods cultivars (cultivars for bean curd {tofu} and soymilk, cultivars for small-seeded soybeans {sprouts, natto}, cultivars for vegetable soybeans {*maodou*}, cultivars for soy sauce, *doujiang*, *douchi*, and medicine, cultivars with improved seed composition).

Soybean and soyfoods in North America: Introduction of soybean, current soyfoods markets, modern soyfoods cultivars, genetic base and diversity of soyfoods cultivars. Soybean and soyfoods in Japan: Introduction of soybean to Japan, traditional soyfoods in Japan, current soyfoods markets, modern soyfoods cultivars (cultivars for tofu {bean curd} and soymilk, cultivars for *miso* {soybean paste}, cultivars for natto {fermented soybean, Japanese cultivars registered with the Ministry of Agriculture, Forestry and Fisheries (MAFF) include Suzumaru, Kosuzu, Natto-shoryu = Natto-Kotsubu}, cultivars for *nimame* {boiled soybean}, cultivars with low allergenic properties).

Soybean and soyfoods in Australia: Current soyfoods markets, modern soyfoods cultivars. Breeding for the soyfoods market. Tofu (environmental influences on tofu yield and solubility of seed dry matter, genotypic effects on tofu yield, seed protein and gelling properties of tofu, seed color, sugar content, undesirable flavors in tofu), natto, *edamame* or *maodou*, soymilk. Designing future soyfoods cultivars. Increasing protein and oil concentration, soybean protein composition (potential for altering protein composition, mutations in 7S storage-protein genes, mutations in 11S storage protein genes, influence of nutrition on storage protein gene expression, association with protein functionality), soybean carbohydrate composition (genetic regulation of oligosaccharide content), soybean fatty acid composition (genetic modification to reduce saturated fatty acid composition, genetic modification to alter unsaturated fatty acid composition, influence of multiple gene combinations on oil composition), Tocopherols and isoflavones in soybean seed (tocopherols, isoflavones). Summary. Acknowledgments.

Figures: (1) Diagram of two-dimensional representation of genetic relationships among 89 soyfood cultivars derived from a two-dimensional multidimensional scaling (MDS) analysis based on coefficient of parentage. (2) Bar chart of distribution of protein concentration among accessions of the USDA soybean germplasm collection. (3) Bar chart of distribution of oil concentration among accessions of the USDA soybean germplasm collection. (4) Diagram of the stachyose and phytic acid synthetic pathways in soybean. (5) Graph of relation of tocopherol concentrations to C18:3 concentration in mature seed of soybean germplasm with altered linolenic acid concentration, based on germplasm

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from the population N93-194 x N85-2176. (6) Graph of relation of total isoflavone and protein concentration among soybean cultivars

Tables: (1) Distribution of releases of 193 public soyfood cultivars developed in China from 1923 to 1995 (2) Origin and description of 193 soyfood cultivars released in China from 1923 to 1995. (3) Distribution of releases of 123 public soyfood cultivars developed in North America from 1956 to 2000. (4) Origin and description of 123 public soyfood cultivars released in North America from 1956 to 2000. (5) Ancestors of North American soybean that contribute to soyfood cultivars but do not contribute significantly to commodity cultivars. (6) Distribution of release of 97 specialty-use public soyfoods cultivars developed in Japan from 1950 to 1995. (7) Origin and description of 97 public soyfood cultivars developed and released in Japan from 1950 to 1995. (8) Cultivars used for soyfood purposes in Australia. (9) Cultivars of Asian origin currently being employed in soyfood breeding in Australia. (10) Desired breeding traits for traditional soyfood cultivars. (11) Ratio of 11S to 7S proteins in seeds of soybean cultivars. (12) Genetic manipulation of soluble carbohydrate concentration in soybeans. Address: 1. North Carolina State Univ., Crop Science Dep., 3127 Ligon St., Raleigh, North Carolina, 27607, USA.

8334. Liu, KeShun. 2004. Edible soybean products in the current market. In: KeShun Liu, ed. 2004. Soybeans as Functional Foods and Ingredients. Champaign, Illinois: AOCS Press. xii + 331 p. See p. 23-51. [76 ref]

• ***Summary:*** Contents: Introduction. Soybean oil. Traditional soyfoods: Nonfermented soyfoods (soymilk, tofu, variety and current market, nutritional value and health benefits, general processing, soymilk film {yuba}, okara, soybean sprouts, vegetable soybeans, roasted {soynuts} or cooked whole soybeans), fermented soyfoods (fermented soy paste {jiang and miso}, soy sauce, Japanese natto, tempeh, sufu or Chinese cheese, fermented black soybeans {douchi or Hamanatto}). Soy protein products: Soy flour, soy protein concentrated, soy protein isolate, textured soy proteins. Modern soyfoods. Soy-enriched products. Functional soy ingredients / dietary supplements: Soy lecithin, oligosaccharides, isoflavones, tocopherols, phytosterols, trypsin inhibitors.

Figures: (1) Photo of traditional soyfoods. (2) Photo of soy flour and defatted meal after crushing. (3) Bar chart of U.S. soyfood sales since 1992. (4) General flow chart of processing soybeans into various edible products. (5) Flow chart of a traditional Chinese method for making soymilk and tofu. (6) Bar chart of U.S. tofu sales since 1980.

(7) Photo of natto, a fermented Japanese soyfood. (8) Flow chart of natto production outline. (9) Photo of soy protein products. (10) Photo of meat analog made by high-moisture extrusion of soybean protein. (11) Photo of new generation of soyfoods in the market. (12) Photo of soy-enriched bakery products. (13) Photo of concentrated soy isoflavone product

Tables: (1) Classification of various edible soy products in the current market. Address: Univ. of Missouri, Columbia, Missouri.

8335. Liu, KeShun. 2004. Soy sauce as a natural seasoning. In: KeShun Liu, ed. 2004. Soybeans as Functional Foods and Ingredients. Champaign, Illinois: AOCS Press. xii + 331 p. See p. 248-263. [33 ref]

• ***Summary:*** Contents: Introduction. Types of Soy Sauce. Production of fermented soy sauce. Treatment of raw materials, koji making, brine fermentation, pressing, refining. Principles of making fermented soy sauce. Action of koji enzymes, fermentation of lactic bacteria and yeasts, color and flavor formation, formation of sugars and alcohols, formation of amino acids, function of salt. Enzymatic method–an alternative to traditional fermentation. Chemical and semichemical soy sauce. Proximate composition, quality attributes, and grades. Application of soy sauce

Figures: (1) Outline of typical preparation process for koikuchi shoyu, the most common Japanese type of soy sauce

Tables: (1) Differences in chemical components between brewed (fermented) and nonbrewed (chemical) soy sauces. (2) Applications of soy sauce on various types of food. Address: Univ. of Missouri, Columbia, Missouri.

8336. Pearlstein, Leo; Messinger, Lisa; eds. 2004. Mrs. Cubbison's best stuffing cookbook: Sensational stuffings for poultry, meats, fish, side dishes, and more. Garden City Park, New York: Square One Publishers. v + 148 p. Illust. Index. 19 x 19 cm.

• ***Summary:*** Includes a brief (and very incomplete) biography of Sophie Cubbison, with a photo of "Cubbison's Health Food Store." Several of the recipes (see p. 60, 88) call for soy sauce. Address: 1. President of Lee & Associates, Inc., Los Angeles; 2. Award-winning cookbook review columnist and food story writer.

8337. Bittman, Mark. 2004. Japan's liquid gold [shoyu]. *Travel & Leisure*. Nov. *

• ***Summary:*** The writer travels to Kyoto, Japan, where he visit's Denkichi Matsuno's shoyu factory. He describes how traditional shoyu is made (including koji and moromi) and discusses possible origins and early history of shoyu and its place in Japanese culture. Regular shoyu (*koikuchi*) is fermented for 18 months and double-fermented (*saishikomi*) is fermented for 2 years. Matsuno's family has been making shoyu since 1805; he is the 6th generation to run the business. He makes 26,000 gallons of shoyu a year whereas the big Kikkoman factory in Noda turns out more than 90,000 gallons a day! Today about 1,600 companies make at

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least 12 different varieties of shoyu in Japan and Kikkoman is the largest.

Bittman then visits Tsukiji, the bustling central fish market in Tokyo, and has sushi (with shoyu) for breakfast. Every piece of fish is glazed with a light sauce of shoyu and mirin just before being served. "This mixture, on which the best chefs pride themselves, is added to daily, often making the base years and years old. My dining companion whispered, 'If there's ever a fire, the shoyu base is the first thing the chef will grab.'"

For dinner, after a hot public bath, he enjoys freshly made soba (buckwheat noodles) served with *soba tsuyu*, a dipping sauce made of shoyu, mirin, and dashi. His friend orders mixed tempura, served with shoyu (of course) followed by *soba yu* the water in which the soba noodles were cooked. They mixed it with leftover *soba tsuyu*, spiked it with chili and shoyu, then drank it like tea–a great tradition. Conclusion: "Shoyu makes everything taste good."

A photo shows a Japanese man pouring fresh koji from a wooden scoop into a wooden koji tray.

8338. **Product Name:** Spicy Braised Tofu, Kung Pao Tofu Salad, Spicy Yuba Syrips.
Manufacturer's Name: Basic Soy Beanery (renamed Hodo Soy Beanery in Sept. 2005)
Manufacturer's Address: 1600 S. De Anza Blvd., San Jose, CA 95106. Phone: 408-517-8958.
Date of Introduction: 2004, December.
Ingredients: See below.
Wt/Vol., Packaging, Price: -
How Stored: Refrigerated.
New Product–Documentation: Labels by brought to Soyinfo Center by Min Tsai on 2009, Sept. 16. Ingredients:

Spicy Braised Tofu: Soybeans, water, calcium sulfate, star anise, teriyaki sauce, vinegar, chili oil.

Kung Pao Tofu Salad: Soybeans, water, calcium sulfate, soy sauce, tea infusion (loaf is smoked over tea leaves), teriyaki sauce, chili oil, vinegar, peanut, cilantro.

Spicy Yuba Syrips: Soybeans water, soy sauce, sugar, soybean oil, teriyaki sauce, vinegar, chili oil.

8339. GEM Cultures. 2004. Catalog [Mail order]. 30301 Sherwood Rd., Fort Bragg, CA 95437-4127. 10 p. Undated. [4 ref]
• ***Summary:*** Contents: Greetings from Northern California. Soycrafters section. Powdered tempeh starter, natto starter, koji starters, fresh koji, seed miso, tofu boxes [kit], coagulants. Bread and crepe cultures: Cultured crepes, cool rise natural leaven, rice or rye sourdough. Dairy cultures: Fil mjolk (subs for piima), viili, kefir. Tea fungus–kombucha. Kitchen items: cheesecloth, super sealers. Ordering information. Address: Fort Bragg, California. Phone: 707-964-2922.

8340. Blussé, Leonard; Viallé, Cynthia; Remmelink, Willem; Daalen, Isabel van, eds. 2004. The Deshima diaries marginalia, 1740-1800. Tokyo: Japan-Netherlands Institute. xl + 898 p. Illust. Maps (some color). Index of ship's names. Index of geographical names. Index of non-Japanese names. Index of Japanese names. Subject index. 27 cm. Series: Scientific Publications of the Japan-Netherlands Institute No. 2. [99 ref]
• ***Summary:*** "The basis for the present text are the Deshima [Japan] *dagregisters...*" of the Nederlandsche Oost-Indische Compagnie, Comptoir, Nagasaki.

Contents: Fold-out color Japanese map of Nagasaki in the 1700s, with numbers and accompany legend inserted for key places by the editors. Three other fold-out color illustrations. Map of the route to and from the Shogun's court in Edo (today's Tokyo), with a circle giving the name of each overnight place. The route to Edo goes across Kyushu then along the southern coast of Japan's main island (Honshu). The route back is largely by boat through the Inland Sea to Shimonoseki, than back across Kyushu. List of illustrations. Contents. Foreword. Editorial note. Introduction. Diary kept for one year (starting in about mid-November or early December) by each *Opperhoofd* (Chief of the Dutch factory on Deshima with the rank of Senior merchant). Appendixes (4; secret diaries and private notes). Sources (with NFJ numbers at the Dutch National Archives, The Hague). Glossary.

The legend to the color fold-old map of Nagasaki Bay and city includes: (6) Dutch ship at harbor. (7) Deshima. (9) Government house. (10) Chinese island (about the same size as Deshima, but just to the south of Deshima). (11) Chinese garden. (12) Junk from Nanjing. (13) Boats of the Shogunal guard. (14) Shogunal guard at Tomachi. (15) Tow boats. (16) Dutch ship arrives. (17) Shogunal guard from Nishidomari. (18) Junk from Fuzhou arrives.

In the index there are many entries under: Chinese–Island. And under Seaweed.

Note: Soy sauce is not mentioned in the Index under "Chinese–Island." Very little has been written in English about the activities of the Chinese traders who lived on this artificial island in Nagasaki harbor–very near the island of Deshima, where the Dutch traders were confined. The Chinese traders at Nagasaki were confined to a walled compound, and their activities, though less strictly controlled than the Dutch, were closely monitored and scrutinized by the Governor of Nagasaki. Many questions arise. What is this island called? What kind of Chinese organization(s) occupied the island? Was it a single private company like the Dutch East India Co., or was it a collection of independent Chinese merchants, or something else? When did the Chinese island compound start to be used as a trading post? When did it cease to be used? Did the Chinese export or import any soy products? If yes, which ones, how much of each per year, from when to when. Where were these products sold? Inside

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China or outside? Address: Netherlands.

8341 Elliot, Rose. 2004. New vegetarian cooking: 120 fast, fresh, and fabulous recipes. New York, London, Toronto, Sydney: Simon & Schuster. 192 p. Illust. (color). 28 cm. Index.
• ***Summary:*** Contains many full-page color photos, mostly of dishes prepared from recipes. Chapter 1: Why I'm a vegetarian: Being a healthy vegetarian or vegan, get slim and stay slim, eating for two, nurturing the next generation, look younger, live longer. Chapter 6 is titled "Tofu, tempeh, and seitan" (p. 138-61). Other soy-related recipes and info include: Soy milk (p. 13, 20, 21, 23, 188). Green soybeans [frozen edamame] (with soba, p. 60, 61). Tofu mayonnaise (p. 66). Breakfast smoothie (p. 118, with soy milk, rice milk, or almond milk). Soy yogurt (p. 119, 188). Soy sauce (p. 153, 188). Soy creamer (p. 169, 188). Also discusses: Sea vegetables (arame, hijiki). Quinoa.

8342 Flanders, Judith. 2004. Inside the Victorian home: A portrait of domestic life in Victorian England. New York & London: W.W. Norton & Company. 416 p. See p. 279. [300+* ref]
• ***Summary:*** In Chapter 7, The dining room, we read (p. 279): "One cookbook recommended as a basic list,.. curry powder, soy, anchovy-sauce, Lucca [i.e., olive] oil,... Chili vinegar, Harvey sauce, tomato sauce,.." Address: Author, London, England.

8343 Fukushima, Danji. 2004. Industrialization of fermented soy sauce production centering around Japanese shoyu. In: Keith H. Steinkraus, ed. 2004. Industrialization of Indigenous Fermented Foods. 2nd ed. Revised and Expanded. New York, NY & Basel, Switzerland: Marcel Dekker. xix + 796 p. See p. 1-98. Chap. 1. [179 ref]
• ***Summary:*** Contents: Introduction. History. Historical development of soy sauce in China (Chiang, shih), introduction of soy sauce in Japan, origin of fermented soy sauce in the United States. Present soy sauce situation: Japan (types of soy sauce, manufacturing, flavor components and quality evaluation), China, Southeast Asia, United States. Change of soy sauce manufacturing methods from indigenous to modern processing: Treatment of soybeans and wheat as materials, koji fermentation, brine fermentation, pressing, pasteurization, refining and bottling. Microbiology and biochemistry: Role of koji as an enzyme source (unique source of enzymes, peptidases in koji, role of proteinases in koji during protein digestion, role of glutaminase in koji in formation of glutamic acid during protein digestion) effect of heat treatment of soybean proteins on their digestibility and nutritive value (enzyme digestibility and yield of soy sauce, enzyme digestibility and nutritive value of protein), microorganisms during brine fermentation in soy sauce (change of microflora during brine fermentation, properties of *Tetragenococcus halophilus*, properties of *Zygosaccharomyces rouxii*, properties of *Candida species*), safety of soy sauce and physiological functional properties (Studies of mycotoxins and safety of soy sauce, studies of mutagens and safety of soy sauce, long-term animal tests and anticarcinogenicity of soy sauce, other physiologically functional properties of soy sauce). Application of new technology for soy sauce manufacture: Manufacture of soy sauce through fermentation by bioreactor with immobilized whole cells, enzymatically hydrolyzed vegetable protein, breeding of koji mold through protoplast fusion. Forecast.

Contains 68 figures and 23 tables.

The section titled "Origin of fermented soy sauce in the United States" states (p. 10) that in 1907 a plant manufacturing fermented soy sauce was opened in the United States by Shinzaburo Mogi–a relative of the Mogi family of Kikkoman fame. Note: The author does not say where this plant was, nor does he cite any evidence to support his claim. As of Jan. 2005, Soyfoods Center has been unable to find any firm evidence that such a plant was opened.

"After that, another soy sauce company named Oriental Show-You Company was promoted in 1917 in Columbia City, Indiana." Shinzaburo Mogi was one of the stockholders in this company. Shinzo Ohki, a Japanese man living in the USA, began to make regular (koikuchi) shoyu in the traditional Japanese way, and at one time was making 30,000 gallons/year. In 1961 the Oriental Show-You Co. was sold to Beatrice Foods, Inc. and subsequently became part of La Choy Food Products which was also owned by Beatrice.

Figure 12 (p. 28) shows imports of soy sauce to the USA from 1947 to 1981. This graph was taken, without citing the source, from: Shurtleff & Aoyagi. 1985. *Soyfoods Industry and Market*, 5th ed. p. 103.

Concerning the soy sauce market in the United States (p. 28-31): In 1973 Kikkoman opened its first plant to make fermented soy sauce at Walworth, Wisconsin. In 1998 Kikkoman opened a 2nd such plant in California. In 2001 these two Kikkoman plants made 85,000 kiloliters and 20,000 kiloliters (kL) of soy sauce respectively, for a total of 105,000 kL. To take advantage of the rapidly growing American market for soy sauce, several other foreign manufactures also opened plants making fermented soy sauce. In about 1980, Wan Ja Shan (Taiwan) opened a plant making regular Japanese-style soy sauce (koikuchi). In 1991 San-J (San Jirushi, Japan) opened a plant making tamari soy sauce. In 1994 Yamasa (Japan) opened a plant in Salem, Oregon. In 2001 the total annual production of these 3 plants was estimated at about 20,000 kL. In addition, HVP soy sauce (unfermented) is made and sold in the USA under brands such as La Choy, Chun King, and Aloha–with total production in 2001 estimated at 15,000 kL. Thus in 2001 total soy sauce production in the USA was estimated at 140,000 kL with the following market shares: Kikkoman

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75%, 3 other makers of fermented soy sauce 14.2%, and HVP 10.7%. Figure 14 shows total U.S. consumption of soy sauce from 1950 to 2001, including total domestic production, total Kikkoman U.S. production, and total imports. Address: Noda Inst. for Scientific Research, Noda-shi, Japan.

8344. Grimaldi, Polly. 2004. Quick and easy soy and tofu recipes. Hayward, California: Bristol Publishing Enterprises. (A Nitty Gritty book). iv + 155 p. Illust. Index. 14 x 21 cm.
• ***Summary:*** Contents: 1. An introduction to tofu and soy. 2. Breakfast. 3. Entrees. 4. Side dishes. 5. Salads. 6. Soups. 7. Sauces, spreads, dips and snacks. 8. Breads. 9. Drinks. 10. Desserts. Address: Hayward, California.

8345. Hottinger, Greg. 2004. The best natural foods on the market today: A yuppie's guide to hippie food. Vol. I. Asheville, North Carolina: Huckleberry Mountain Press. 223 p. Index. 23 cm. [94 ref]
• ***Summary:*** This book looks very commercial because it mentions many natural products by brand name. We wonder if companies paid to be mentioned. Contains scattered recipes for branded products, and scattered sidebars titled "Hippie wisdom." Discusses: Almonds, almond butter, almond milk, American Miso Co., antibiotics (used in agriculture in 4 different ways: prevention, treatment, and control or disease, and growth promotion. In 1998 the European Union banned the use of antibiotics to promote growth in livestock. In Oct. 2000 the FDA proposed a ban on two antibiotics also used to treat humans), antioxidants, Bifidobacterium (bifidus), bovine growth hormone, bovine somatotropin (BST), Bragg Live Foods, Bragg Liquid Aminos, breast cancer, calcium, canola oil, celiac disease, cereal & Kellogg Brothers, cheese alternatives, dulse, edamame, Eden Foods (says "Eden Foods opened shop in 1968. By 1969 they were grinding their own flours and bottling their own oils and nut butters"), FDA, flaxseed oil, Galaxy Foods (says they "started in 1972 when founder Angelo Morini invented a new way to make a cheese product free of saturated fat, cholesterol, and the milk sugar, lactose"), genetically engineered foods, ghee, ginger, gluten sensitivity, glycemic index, GMO [genetically engineered] crops, Graham–Sylvester, heart disease, hippie foods, Horizon Organic, hormones, Lactobacillus, lactose intolerance, Lappe–Francis Moore, Lightlife Foods, magnesium, Maine Coast Sea Vegetables, Messina–Mark, milk–problems with, miso, Miso Master brand, nutritional yeast, oils, olive oil, omega-3 and omega-6 fatty acids, organic farming, palm oil, phytochemicals, phytoestrogens, prostate cancer, protein, Red Star nutritional yeast, quinoa, saturated fat, sodium, soymilk, soy products, soy sauce, soy supplements and concerns, soy yogurts, spelt, Stonyfield Farm, tahini, tamari, tempeh, trans fats (hydrogenated oils), WholeSoy Company. Near the back are many color coupons for the companies mentioned in the book by name. Address: MPH, RD, Asheville, North Carolina.

8346. Steinkraus, Keith H. ed. 2004. Industrialization of indigenous fermented foods. 2nd ed. Revised and expanded. New York, NY & Basel, Switzerland: Marcel Dekker. xix + 796 p. Illust. Pseudo-Index. 24 cm. Series: Food Science and Technology No. 136. [508 soy ref]
• ***Summary:*** This book contains the following chapters on soyfoods: 1. Industrialization of fermented soy sauce production centering around Japanese shoyu, by Danji Fukushima. 2. Industrialization of Japanese miso fermentation, by Hideo Ebine. 4. Industrialization of Japanese natto, by Kan Kiuchi and Sugio Watanabe (incl. yukiwari-natto, a special product of Yamagata prefecture, p. 196). 11. Industrialization of tempeh fermentation, by Kapti Rahayu Kuswanto. 12. Tempe production in Japan, by Michio Kozaki. It also contains chapters on the industrialization of the production of sake, tapai, African beers, magchu, ogi, gari, Mexican pulque, Thai fish sauce (nam pla), Thai fermented fish and related products, and Myanmar fish paste and sauce.

The final chapter is titled "Industrialization of indigenous fermented food processes: Biotechnological aspects."

Soy-related chapters are also cited separately.

Note: Cornell Prof. Emeritus Keith H. Steinkraus died on 13 Nov. 2007 at age 89. He was a specialist in indigenous fermented foods and food microbiology. Address: Inst. of Food Science, Cornell Univ., Geneva, New York.

8347. Stevens, Alan M.; Schmidgall-Tellings, A. Ed. 2004. A comprehensive Indonesian-English dictionary. Athens, Ohio: Ohio University Press. xviii + 1103 p. 27 cm. [Ind, Eng]*

8348. Chajuss, Daniel. 2005. Brief biography and history of his work with soy in the USA and Israel. Part I (Interview). *SoyaScan Notes*. Feb. 19. Followed by numerous e-mails through Dec. 2007. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Daniel was born on 23 Sept. 1936 in Jerusalem, Palestine, the son of Elijah Mathew Chajuss (a flour miller, born on 12 April 1903 in Jerusalem) and Dvora Margaliot, born on 4 April 1908 in Tiberias, a town on the western shore of the Sea of Galilee (which today is in northeast Israel). Both his parents were born before World War I when Palestine was still part of the Ottoman Empire; Turkish (written in Arabic script) was the official language, but Hebrew was the main language of the Jewish population.

The family name was pronounced "Chayes" (or "Hayes") but was written "Chajuss." Within the family and among close friends it was pronounced "Khatuth" or "Khayooth," where the initial "ch" is pronounced like the non-initial German *ch* as in *Bach*. Daniel's mother's family

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had lived in Palestine for at least 9 generations and his father's family for 5 generations. He was the second of three children, with an elder sister and a younger brother.

In 1953, at age 16, he went to the United States to study at Kansas State University (Manhattan, Kansas), focusing on the milling industry and cereal chemistry. In 1956 he began what became a lifelong interest in soy when he learned of the effects of soy flour components on wheat flour; he did some research on soy protein utilization in food systems. He finished his studies in 1956 and graduated in 1957 with a B.S. degree in milling technology. While an undergraduate in the USA, Daniel received lots of help and support from his father and family, but he worked to earn most of his living expenses. After graduation, he returned to Israel, where (in the late 1950s) he worked in the Israel Army Quartermaster Corps, doing food research and development for military purposes.

Eliahu Navot was the first real pioneer of soybean utilization and production in Israel. He devoted much of his life to this work. Daniel met him once or twice in the late 1950s, and was aware of his work. "He impressed me as a person totally devoted to soy and his aim was that the soybean should be grown and used in Israel for many good reasons."

In 1956, the same year his son became interested in soy, Elijah M. Chajuss incorporated a company named "E.M. Chajuss, Ltd." It was a small commercial and trading company, established mainly to trade in grains and foods. Elijah owned 80% of the shares and Daniel owned the remaining 20%. The firm was not very active and it ceased to exist in about 1988.

In 1958 Daniel returned to the United States to do graduate work at Washington State University (at Pullman). He was not yet married. In 1960 he received an MSc degree in food technology; his dissertation was titled "Post mortem tenderization of chicken muscle."

In early 1961 Daniel went to work at the Northern Regional Research Lab. (NRRL) at Peoria, Illinois, as an employee under A.K. Smith; other coworkers included Joseph Rackis, Walter Wolf, Clifford Hesseltine, and Gus Mustakas. His research included work on soy proteins, and specifically work on making soy protein concentrates (SPC) by the aqueous alcohol wash process, which had been developed by Mustakas and coworkers in about 1960 and published in the *Journal of the American Oil Chemists' Society* in 1962. Yet Daniel was most interested in the biologically active soy compounds which were found in the non-SPC solubles, a by-product of this new aqueous alcohol wash process; he would soon call these solubles "soy molasses." Daniel has a sister in the U.S. Their father came to visit them at this time and Daniel showed him around the USDA laboratory at Peoria and explained the work he was doing there.

In 1962, after about a year at NRRL, he decided to return to Israel, where he got registered and certified Chemical Engineering certification.

In 1962 Daniel and his father, Elijah, incorporated Hayes Ashdod Ltd. (Industrial Zone P.O. Box 2230, Ashdod, Israel); all the shares were owned by their family. At the same time they established Hayes General Technology (HGT) Company Ltd. as the first company's R&D arm or division, and an agro-industrial engineering firm; it was not a separate company and was not incorporated at this time. Daniel's father was chairman of the company and a firm believer that proteins were in short supply and that soy proteins with good acceptability would offer an affordable solution to many. Elijah also handled commercial operations. Daniel dealt mainly with the technology, research, product development, and plant operation. Thus, Daniel spent much of his time with HGT, which was located in a separate building on the Hayes Ashdod site. HGT's goal was to do basic research and develop new technologies and know-how in areas not necessarily related to soy protein concentrates.

Ashdod is a city about 3 miles inland from the Mediterranean Sea, 35 miles due west of Jerusalem and about 15 miles north of the northernmost part of the Gaza Strip. Important harbor facilities have been constructed on the coast near Ashdod. In 1990 its population was about 76,600.

But as with all pioneering ventures by entrepreneurs, starting a new business was risky and the future was unknown. Daniel recalls: "When we started the plant in Ashdod my uncle (father's brother) came to me and said (in a teasing, friendly way), 'Daniel, you are doing a criminal thing. You take your money and your father's money and the bankers' money and big loans to make soy protein concentrate. Who needs it?'"

In 1962 Daniel and Hayes Ashdod began an ongoing, long-term collaboration with Israel's leading center for research on the composition and biologically active components of soybeans–the Hebrew University's Faculty of Agriculture at Rehovot [pronounced rei-HO-vot], located only about 13 miles north of Hayes. Daniel worked very closely with Yehudith ("Judith") Birk, co-discoverer of the Bowman-Birk trypsin inhibitor, who also did work on isoflavones, saponins, etc. She was a great pioneer in the field of soy research, she is still [2005] active at about age 75 and a very able and very nice person. Dr. Michael Naim was a pioneer in the field of soy molasses. Other researchers at Rehovot included Bondi, Gertler, Gestetner, Tagiri, and others.

This collaboration was based on mutual interest in the nutritional value of soybeans, unknown growth factors in soybeans, etc. No money changed hands, no contracts were entered into. Daniel did not assign the researchers any specific projects to work on, and no research was done specifically for Daniel or Hayes. Rather, Daniel and the researchers at Rehovot collaborated on research projects of

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mutual interest. Daniel sometimes went to Rehovot when needed and did research there, however most of his research was done in the Hayes' laboratories in Ashdod. His work in Ashdod was mainly to fractionate soy components and evaluate the same at the request or understandings with the workers from the faculty. His visits to Rehovot were mainly to discuss the various ongoing research projects with the people involved, and to visit the large library there. Occasionally researchers from Rehovot visited Daniel and Hayes in Ashdod. Daniel spent the most hours in Rehovot during the 1980s, when for about a year he visited the faculty once a week and stayed all day. After 2004 he went there seldom. No one from Hayes did research at Rehovot on a regular basis.

In addition to his own work, Daniel contributed soy products his company had made at Ashdod, e.g., soy protein concentrates (processed in various ways), soy fibers, hulls, soy molasses and various fractions thereof, etc.

Together they worked, for example, on nutritional aspects of soy molasses components, of the soy protein concentrate in human and calves milk replacers, on antigenic components of the soy and their elimination, on the soy dietetic fibers ("Sobit"), etc.

Many research papers were published in leading scientific journals, and PhD and MSc degrees were obtained because of their mutual work. Daniel believes that grants for the research were provided by the USDA under the P.L. 480 (Food for Peace) program. All of them enjoyed the mutual work very much. This fruitful collaboration continued until a few years ago.

In 1963 Hayes Ashdod began operations. Daniel recalls the general situation with soy in Israel at that time: In 1962 there were several makers of soy food products in Israel. Soybean crushing factories made soy oil for human consumption and toasted soybean meal for animal feeds. However, some of the toasted soybean meal was milled to soy flour for use in households, in the meat processing industry, and in the baking industry. There were also some small cottage industries making various Oriental soy products, such as soy sauce, simply-made toasted and non-toasted full-fat soya flours, roasted soybean coffee, etc.; Daniel does not remember the names of these companies. Continued. Address: Managing Director, Hayes General Technology Company Ltd., Misgav Dov 19, Mobile Post Emek Sorek, 76867 Israel. Phone: (972) 8 592925.

8349 Chajuss, Daniel. 2005. Brief biography and history of his work with soy in the USA and Israel. Part II (Interview). *SoyaScan Notes*. Feb. 19. Followed by numerous e-mails. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Continued: Let us now return to the early, pioneering products introduced by Hayes Ashdod during the 1960s. Hayes Ashdod was one of Israel's first company to make foods from soybeans, and Israel's first manufacturer of modern soy protein products.

In 1963 the company launched its first product, a soy protein concentrate named Haypro. This product was also the first commercial soy protein concentrate manufactured outside the United States.

The main applications for Haypro were as a meat extender, and in hypoallergenic formulas (especially for babies and children allergic to cow's milk). Most of the product was sold outside Israel, mainly in Europe.

Hayes Ashdod was the world's first commercial plant to make "traditional" soy protein concentrate (SPC) and soy molasses by a counter-current aqueous alcohol wash system; that system was developed by Daniel. The plant's initial capacity was about 5,000 metric tons of soy protein concentrate and about 2,500 metric tons of soy protein concentrate per year (each on an as-is wet basis).

Who should get the credit for developing this important new process using alcohol? In Dec. 2007 Daniel wrote: "The credit for developing the process for SPC by aqueous alcohol wash should go to Mustakas and coworkers [at NRRL] in Peoria [1960-62].

"In the early 1960s, aqueous alcohol washed SPC was introduced on a commercial scale by the Central Soya Company's Chemurgy Division in the USA; they developed a immersion aqueous alcohol extraction system to make SPC. At about the same time we introduced in Israel a continuous counter current aqueous alcohol wash system to make SPC. The producers of the 'traditional' alcohol washed SPC generally use the continuous counter current aqueous alcohol wash system today."

Also in 1963 Hayes Ashdod introduced "Soy molasses, a concentrated soy solubles extract, obtained during the production of soy protein concentrate." This product is used in animal feeds and as a source of oligosugars [oligosaccharides] for elderly people to maintain proper [digestive-tract] flora and regularity (mainly in Japan). Note: Daniel Chajuss wrote the above quoted words and date on 14 Jan. 1993 in a letter to William Shurtleff, in response to a question from Shurtleff. On 9 Sept. 1995 he again wrote Shurtleff: "The name 'soy molasses' was coined by me in 1963. It is generally manufactured today in accordance with the contents of my Israeli Patent No. 19168." He recalled in Feb. 2005: "When we got soy molasses, it was a dark, sweet, bitter, viscous, strong-smelling product. It looked very much like molasses. I decided to sell it to the feed mills, which at that time were using beet sugar molasses. So I decided to call it 'soy molasses.' But from my research in Peoria, I knew it contained many very interesting compounds–such as isoflavones and those that prevent perosis in chickens. In 1963 I made an application to the Israeli government to do research on soy molasses. I believed in it very much because of the many interesting components it contained. Now, most of the patents concerning soy isoflavones are about 'soy molasses,' as are most of the scientific articles. So this term

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has become accepted, probably because it is so descriptive. Soy molasses is more like beet sugar molasses than cane sugar molasses.

In 1964 the company introduced Haysoy brand soy flours in full fat and defatted, toasted and untoasted forms, mainly for the baking and fermentation industries.

In 1966 Hayes Ashdod Ltd. introduced texturized soya protein concentrates under the brand names Hayprotex and Contex. Hayprotex was designed for use mainly as a minced meat extender, while Contex was designed mainly for vegetarian analogs.

Hayes Ashdod started making texturized [textured] soy protein concentrate in large part because they were very familiar and friendly with the Katzin family–Sol and Sid Katzin, two brothers, who came to Israel from the USA and who built the Shefa Protein Industries plant in Arat, Israel. They were idealists who made the first textured soy flour in Israel. Sometimes they would buy (from Hayes Ashdod) the fines of the white flakes to texturize. Daniel asked Sol why he didn't texturize soy protein concentrate. Sol replied: "We don't sell taste, we sell nutrition." Sol was a really nice fellow, a nutritionist at heart and in his profession. They were real pioneers, but they had such a difficult time and were often disappointed.

In the early days, after he saw Sol Katzin's extruder, Daniel first did some trials with a Wenger single-screw extruder. With assistance from Oak Smith, Hayes bought a small Wenger extruder. Since Daniel didn't want to compete with his friend, Sol, he decided to extrude soy protein concentrate–but the product was not very successful, and definitely not as successful as Shefa's textured soy flour products. Daniel's product failed largely because of its high price whereas the Katzin's product failed because of its flavor–although its shape was excellent. Daniel is not aware of any company that made textured soy protein concentrates before he did. He knows that another similar product was Response, made by Central Soya.

Note: Concerning early textured soy protein concentrates: Hayes Ashdod introduced Hayprotex and Contex in 1966, Griffith Laboratories introduced GL-219 and GL-9921 in 1974, and Central Soya introduced Response in 1975.

"Hayes Ashdod Ltd. Research and Development Department has developed many soy analogs in various forms ('vegetarian sausages', 'fish-less fish fingers', 'vegetarian sea food analogs', 'vegetarian schnitzels', 'vegetarian nuggets', 'vegetarian gulash', etc.) based on texturized soy protein concentrates (Contex) mainly to promote Hayes Ashdod Ltd. markets and to find customers for its products. These vegetarian analog products were never sold directly to the consumers but were sold to institutions or to various manufacturers / distributors mainly in dry rehydratable forms. They started to appear in the market in about 1966 and still exist today. The usual name was the product name as appears above. Soy protein isolates were made on a pilot plant scale and were never manufactured or sold by Hayes Ashdod Ltd. in any significant quantities."

Also in 1966 Hayes introduced Hyprovit and Promolac, two powdered hypoallergenic soy formulas which were designed to replace milk powder formulas for infants and children allergic to cow's milk.

In 1968 Hayes started producing Haypro-T, a special soy protein concentrate, free of trypsin inhibition and free of antigenicity, for use in calf milk replacers as a substitute of milk proteins.

In 1969 Hayes started to produce Primepro, a more functional and soluble soy protein concentrate, by further treatment of the aqueous alcohol extracted soy protein concentrate (Haypro), for use as substitutes for soy protein isolates and for caseinates in various food systems, especially in the meat processing industries.

Also in 1969 Hayes introduced So-Bit (also spelled Sobit), a fiber product which was removed from the soy protein concentrate by a tail-end dehulling system containing both aqueous alcohol washed hulls and fibers obtained from soybean cotyledons. This product has proven to be beneficial as a source of dietary fiber, especially for diabetic patients. Address: Managing Director, Hayes General Technology Company Ltd., Misgav Dov 19, Mobile Post Emek Sorek, 76867 Israel. Phone: (972) 8 592925.

8350. *Iowa Soybean Review* (*Iowa Soybean Association, Urbandale, Iowa*).2005. Promise of soyfoods inspires Heartland Fields' seed-to-plate business model. 16(6):16 March.

• ***Summary:*** In the year 2000 John Schillinger, PhD, one of the best U.S. breeders, founded Heartland Fields LLC, an Iowa-based farmer-owned soyfoods company. By the end of 2004, "Heartland Fields had shipped 2.5 million of his ready-to-heat frozen Soy Beef & Broccoli and Soy Chicken Teriyaki entrées to U.S. Troops serving in the Iraqi Freedom campaign. The military is offering them to all troops now–not just to vegetarians.

"Schillinger's concept was to breed a soybean specifically for people food, not animal feed..." to create a vertically integrated seed to plate business model.

"As a result more than 100 farmers in Maryland and Illinois have invested in Heartland Fields' research and marketing efforts.

"The result was a non-GMO, identity preserved soybean that had 25 percent more protein than the standard [soy] bean, a appealing flavor profile, and can be produced organically."

The harvested soybeans are processed and sold as High Protein Textured Soy (HPTS) (TM). A color photo shows the front panels of some of its soy-based meals: Soy Beef & Broccoli with Rice, Soy Chicken Alfredo with Broccoli, Soy Chili with Soybeans. A black and white photo shows a

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portrait of John Schillinger.

Note: In 1999 John Schillinger, PhD, "retired" from the presidency of Asgrow Seed Co. to form Schillinger Seed Inc. in Des Moines, Iowa. John is a graduate of the University of Maryland and holds a PhD in Plant Genetics from Michigan State University.

8351 Nutrisoy Pty. Ltd. 2005. Home page and four links (Website printout–part). www.nutrisoy.com.au. 9 p. Printed April 12.

• ***Summary:*** Contents: Home (2 p.). About us (1 p.). Product information (1 p.; tofu and tempeh). Nutrisoy products (2 p.). Soyco products. Where to buy. Recipes. Contact us. Privacy policy. email: info@nutrisoy.com.au.

About us: Nutrisoy is a family owned company established in 1984. "In 1992 Nutrisoy attained the standards set down by Biological Farmers of Australia to become a certified processor of organic tofu and tempeh.

"Nutrisoy uses only the finest Australian Grown Soybean (free from genetically engineered soybean) which is a rich source of isoflavones / phytoestrogens, a substance that could offer protection against and help reduce the risk of a wide range of disease in men and women including prostate, breast and skin cancer, osteoporosis, hot flushes, and heart diseases." A large color photo shows Nutrisoy's many products.

Nutrisoy products: The colorful front panel of each of the following is shown: Plain firm tofu. Tofu vegies [sic]. Tofu tempeh (This tofu has chunky tempeh in it and has been marinated in shoyu and ginger). Tofu herbs. Tofu spicy. Tofu teriyaki. Tofu vegies burger. Tofu tempeh burger. Strawberry tofu (dessert in a cup, with real fruit sauce on top). Apricot tofu (dessert in a cup).

Note: Nutrisoy is the inventor of Tofu tempeh, and Tofu tempeh burger. Address: 15 Hannon St., Botany (suburb), Sydney, NSW 2019 Australia. Phone: +61 2 9316 5171.

8352 Jacobi, Dana. 2005. 12 best foods cookbook: Over 200 delicious recipes featuring the 12 healthiest foods. Emmaus, Pennsylvania: Rodale Press. xv + 336 p. April. Illust. (color photos). Index. 23 cm. [2 soy ref]

• ***Summary:*** Among these 12 foods rich in nutrients and phytonutrients, the author considers soy the best of all. 28 of the 200 recipes include soyfoods.

In Chapter 1 is a section on Soy (p. 17-24) which includes: Introduction. Everyday ways ("Soy is the easiest Best Food to enjoy every day..."). Benefits at a glance. Soy protein in selected foods (Tofu, miso, edamame, soybeans, soynuts, tempeh, soymilk, cultured soy yogurt, soynut butter, soy flour, soy pasta, soy protein powder, soy drink mixes). Guide to soy products: Soymilk, soymilk cooking secrets, more soy dairy (soy cream cheese, soy sour cream, soy cheese, frozen dessert), terrific tofu (regular tofu, silken tofu, baked or smoked tofu), tofu cooking secrets, other soyfoods (black and yellow soybeans, edamame, meat analogs, miso, soy flour, soynuts, soynut butter, soy protein powder and soy drink mixes, soy sauce and tamari, tempeh), baking with soy, cooking with soy.

Chapter 8, titled "Eggs, beans, and soy," contains recipes (p. 196-203), for: Black soybean and butternut squash stew. Black soybeans. Braised black beans with red wine. Braised tofu with kohlrabi and pears. Broccoli, black mushrooms, and edamame with black bean sauce. Asparagus, red pepper, and curried tofu.

Other soy-related recipes: Finger lickin' edamame (p. 50-51). Black bean hummus (with tofu, p. 57). Mushroom crostini (with tempeh, p. 61). Black bean soup (with dried black soybeans, p. 79). Mushroom consommé with sake (and tofu, p. 88). Double miso soup (p. 89). Nine a day salad (with soynuts, p. 100). Southwestern three bean salad (with canned black soybeans, p. 107). Curry dressing (with silken tofu, p. 115-16). Pepper ranch dressing (with soft silken or regular tofu, p. 116-17). Creamy herb dressing (with tofu, p. 118-19). Blue cheese dressing (with tofu, p. 118). Cracked mustard dressing (with tofu, p. 119). Citrus miso splash (p. 119). Soy and honey drizzle (with reduced-sodium soy sauce, p. 151). Whole wheat linguine with arugula and edamame (p. 164-65). Dirty rice (with tempeh, p. 194). Tempeh, lettuce, and tomato sandwich on rye (p. 207). Honey soynut butter sandwich (p. 208). Grilled pizza (with tofu, p. 210). Soycotash (with shelled edamame, p. 238-39). BBQ collard greens with edamame (p. 240). Miso mashed potatoes (p. 241). Key lime tartlets (with tofu, p. 250-51). Blueberry-lemon trifle (with lemon soy yogurt and soy cream cheese, p. 252-53). Brown rice crisp treats (with salted, roasted soynuts, p. 282). Wild blueberry trail mix (with salted soynuts, p. 283).

On the rear cover is a photo of the author and a brief bio: "After apprenticing at three-star restaurants in France, Dana Jacobi opened a catering business and marketed her own line of gourmet sauces. She has since authored five cookbooks ." Address: Food writer, New York, NY.

8353 Bean Me Up, Soya Station, Salad Bar. 2005. Welcome to the Soya Station (Menu). Anjuna/Vagator, Goa, India. 10 p.

• ***Summary:*** Contents: Welcome. Starters. Side dishes (incl. Spiced tofu {deep fried} with peanut or chilly sauce. Tofu or tempeh {pan fried} with peanut or tahini. Baked potato with sour cream, butter, or tofu cream cheese). Just for kids: 12 years and under (incl. Tofu bolognese, served over spaghetti. Tempeh sandwich with tortilla chips). New York Pizza (incl. Indonesian special {tempeh & pineapple}. Veg. special {tofu, onion, capsicum, mushroom & olives}, Additional toppings–tofu, tempeh). Salad bar (Tofu salad–Beet root, carrots, onions, cucumber, tofu cubes & tofunaise {vegan}, Side order of tofu or tempeh, with choice of tahini, peanut, or tomato sauce).

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Good morning–Breakfast (incl. Tofu {scrambled w/ onion capsicum or butter fried w/soya sauce}, Soysage {4 pieces}, Add 10 rupees for soymilk with any breakfast dish) Desserts: Vegan (non-dairy) or dairy. Vegan includes: Soya ice cream in coconut, chocolate, banana, coffee, or berry (seasonal) flavors. Tofu brownie. All desserts served with soya whipped cream. Beverages (incl. soy milk {hot or cold}–Plain unsweetened, vanilla, chocolate, cardamom). Sandwiches (incl. Soya burger, Tofu burger, Tofu (butter fried), Tofu cream cheese {made with garlic & Herbes de Provence}, Tofu scrambled, Tofulafel. Tempeh {fried} in sesame oil & soy sauce. Seitan fried in onion). Dinner menu: All dinners are served with choice of brown rice, baked potato, or spaghetti, and vegetables of the day. Three broad choices (each with one or more of three symbols by it–vegan, dairy, hot 'n' spicy): (1) Tofu–Khadi tofu, Tofu bolognaise, Tofu lasagne, Tofu nori roll, Vegetable tofu quiche (2) Tempeh–Tempeh potato patties, Thai style tempeh with cashew nuts, Indonesian sampler. (3) Seitan–Seitan scallopini in cream sauce (served over spaghetti). Address: 1629 Deulvaddo, Anjuna / Vagator, Goa, India 403-509. Phone: 0091-(0)832-227349.

8354. Hymowitz, Ted. 2005. Samuel Bowen and soy sauce (Interview). *SoyaScan Notes*. July 5. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** By 1776 Bowen was selling his Soy [soy sauce], made in the colony of Georgia, at various establishments in London. Ted has a list of the shops in London that were selling Bowen's soy sauce. Bowen went to England 5-6 times, and his key question initially was: Is there are market in London for soy sauce that is as good as that imported from Asia? When he saw the cruets made especially for soy sauce, he knew there was a market. Address: Prof. of Plant Genetics, Dep. of Crop Sciences, Univ. of Illinois, Urbana, Illinois.

8355. Crain, Liz. 2005. City's soy wranglers offer a totally tofu experience. *Portland Tribune* (*Oregon*), July 15. p. B3.

• ***Summary:*** About Ota Tofu and Dae Han Tofu, both in Portland. At Ota Tofu in southeast Portland, there are 13 workers on a work floor of just over 900 square feet. "Since 1918, the family business has focused on the local market, never expanding outside Portland." Ota tofu is fresh and unpasteurized, curded with a refined form of nigari.

Ota Tofu doesn't deliver or advertise; it doesn't have to. People and businesses who want Ota Tofu come to the shop to pick it up. Today, the restaurants Sweet Basil, the Farm Café, Old Wives' Tales, Fong Chong, and Curry in a Hurry have all stopped by to pick up buckets or water-filled bags of fresh tofu. All day long, vans and trucks from catering services, Asian markets and other restaurants from as far away as northern Washington drive to the front of Ota to load up on tofu.

A large color photo shows Ota employee Wai Yang as she uses long chopsticks to deep-fry tofu pouches (agé) in a rectangular stainless steel fryer.

Dae Han Tofu, owned by Calvin Chun, started in 1993 and now has four employees. Chun, who moved to Portland from South Korea in 1989, rolls up his sleeves and helps with all parts of the work. Dae Han's work space is a bit larger than Ota's and streamlined for higher volume. In addition to regular types of tofu, the company produces specialty tofus such as teriyaki, hot and spicy, extra firm, and low fat (made from dehulled soybeans).

Contact information: Ota Tofu, 812 S.E. Stark St. Phone: 503-232-8947. Dae Han Tofu, 3340 N.W. Yeon Ave. Phone: 503-223-0044.

8356. Kikkoman Corporation. 2005. Annual report 2005. Year ended March 31, 2005. 250 Noda, Noda-shi, Chiba 278-8601, Japan. 35 p. 28 cm. [Eng]

• ***Summary:*** Consolidated net sales rose 3.0% to $3,220 billion, operating income climbed 4.6% to $166 million, and net income rose 2.2% to $88.6 million.

"In March 2005, the Kikkoman Group established Country Life, LLC with Consac Industries, Inc. to manufacture and sell in the U.S. nutritional supplements, health foods, sports foods, personal care and other products." Address: Noda, Japan.

8357. *SoyaScan Notes*.2005. Etymology and definition of the word "seitan" (Overview). Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Etymology: From Japanese *sei-* fresh or raw + *tan* (in tanpaku(shitsu) protein), usually written in the Japanese katakana syllabary to deemphasize the meaning of the Chinese characters, however < Middle Chinese.

The word was coined in 1961 by the founder of macrobiotics, Nyoichi (or Nyoti) Sakurazawa, known in the West as George(s) Ohsawa (1893-1966).

Definition: "A condiment or meat alternative made by simmering fresh wheat gluten in soy sauce, sesame oil, ginger, and kombu."

The word seitan was clearly coined by George Ohsawa in 1961–see authoritative account (interview) of the word's origin by the man (Mr. Kiyoshi Mokutani) who developed and first commercialized seitan in Japan and was with Ohsawa when he coined the term, writing it in the Japanese katakana. This is a key point; he wanted it to be a Japanese word, not a Chinese loan word.

Seitan was first made commercially in Japan in 1962, and was first imported to the Western world (USA) in about 1969 by two macrobiotic trading companies. For most of the first 10 years of its history it was used as a condiment, mainly by those eating a macrobiotic diet; it was much too salty for typical Americans, and was not widely available.

The basic taste and texture of seitan underwent a gradual

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transformation over its first 10 years in the USA. It started as a very salty, black, rather hard or tough (like jerky) condiment, then evolved into a much less salty, more tender, brownish product that might be called a meat alternative. I have never heard anyone–except OED–refer to it as a "textured vegetable protein." The latter term is generally used to refer to products that have been texturized by a machine named an extrusion cooker or extruder. I strongly prefer the term "meat alternative," but only for seitan's later incarnation. The term "meat substitute" has largely been replaced in the USA over the past 10 years "meat alternative"–which has a more neutral connotation.

8358. Hymowitz, Ted. 2005. Early history of soybeans (Interview). *SoyaScan Notes*. Aug. 25. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** James Flint probably provided Samuel Bowen with some of the financial support he needed to buy and run his plantation in Georgia. While Kaempfer was the first westerner to make the clear connection between the soybean and its products, James Mease (1804) was the first to do this in English. Mease (in 1804) was also the first to use the word "soy" in the name of the soybean. Ted has discovered that Mease got his information from John Bartram, to whom Benjamin Franklin sent soybeans, which he called Chinese caravances.

Ted now has 253 references on Samuel Bowen.

In the early 1600s, the Swedish East India Co. imported soy sauce to Sweden from China in amphorae. Address: Retired Prof. of Plant Genetics, Dep. of Crop Sciences, Univ. of Illinois, Urbana, Illinois.

8359. PRNewswire. 2005. Mizkan Americas' parent company, The Mizkan Group, acquires leading Chinese company. Distributor of popular Wadakan brands added to global portfolio (News release). Sept. 20.

• ***Summary:*** "Mt. Prospect, Illinois. Mizkan Americas, Inc., a leading condiment manufacturer, today announced its parent company, the Mizkan Group, has added to its roster of high-quality brands with its acquisition of Wadakan Investment Holding Company, a Beijing-based manufacturer of soy sauce and vinegar products in China."

8360. Barrett, Walter. 2005. Work with soybeans in Central Asia (Interview). *SoyaScan Notes*. Oct. 4 and 6. Conducted by William Shurtleff of Soyfoods Center. Preceded by letter (e-mail) of Oct. 3.

• ***Summary:*** Walter has worked with soybeans in 4 Central Asian nations: Kazakhstan, Uzbekistan, Turkmenistan, and Tajikistan. Kazakhstan and Georgia have the most history with commercial soybean production, because Soviet planners made it happen there. They designated other Central Asian countries for cotton production, in part because cotton needs less water. Latitude is part of the reason. The climate is also very dry, so that all soybeans (and almost all crops) in these countries must be irrigated, but with river water carried by gravity. Of all the Central Asian countries, Kazakhstan has been the most successful at understanding a market economy and making it work.

Walter has many contacts in these countries. He is willing to help Shurtleff try to get a better history of soybeans in each of these countries. First, Shurtleff will send Walter an e-mail containing a table showing the dates he has for the earliest document seen showing soybeans in each in each country, and soybean cultivation in each country. Then the earliest date seen for soybean cultivation in each country. Walter will forward this e-mail to an intermediary (Winrock International or Mercy Corps), who will then mail or phone or hand deliver the message to the network of indigenous researchers Walter has developed over the years. The message will encourage them to contact other researchers who might be interested, then Walter will wait for replies.

Walter believes that Korean communities in at least four of these countries (Turkmenistan, Uzbekistan, southern Kazakhstan, and Tajikistan) were growing soybeans for their own use at an early date–probably since the early 1900s and using them almost entirely for food–such as tofu, soy sprouts, Korean-style miso and soy sauce, green vegetable soybeans, etc. The Koreans raise chickens, for example, but they forage for food and are not fed soybeans. Walter has no idea when, or, why, or how these many Korean communities came to be established in Central Asia. He has no idea where the soybean varieties they grow came from. These Korean communities are all found within a horizontal oval that cuts across national boundaries, and includes the cities of Almaty [Alma-Ata] (in southwest Kazakhstan), Toshkent [Tashkent] (capital of Kyrgyzstan), Dushanbe (capital of Tajikistan), and Ashgabat (capital of Turkmenistan). In this area are numerous Korean restaurants where Walter has eaten; but he has no idea how many Koreans live in this area. Most individual Korean communities grew only one variety, but each Korean community had its own variety. By contrast, there are not many Chinese communities in these areas.

Walter expects his next trip to Central Asia to be in the spring of 2006–probably Uzbekistan and possibly Turkmenistan or Tajikistan. He is given drivers and interpreters by the NGO sponsoring his trip. One of the ongoing problems he faces is the limited abilities of interpreters; communication is often difficult, and it is hard to pursue agricultural or academic questions with farmers. It is less difficult with educated researchers or academicians (best is Tajikistan, followed by Turkmenistan–who might help find others). The researchers in these countries don't talk much with each other, either within a country or among countries. They have few opportunities to travel, and little access to the Internet or e-mail. This is because of government restrictions, difficulty of getting visas or money, etc. Researchers are lucky if they have a working computer,

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but most have a telephone and some have a cell-phone.

Of all Central Asian countries, Kazakhstan is the one in which the soybean is the most important as a commercial crop–by far. They probably have at least several thousand hectares planted to soybeans. The soybeans in Kazakhstan are run through an extruder (extrusion cooker) to make soybean oil and meal. These same extruders are also used to process cottonseed. Soybeans are grown in Central Asia largely because of the demand for meal by the local poultry industry for use in chicken feeds. Poultry is the driving force, and Central Asia is a "protein-poor" region. Walter's main reason for being there is because of poultry and (to a lesser extent) livestock; it is to help educate them about the soybean, its value for producing soybean meal and oil, and about the importance of protein. He helps farmers to grow soybeans and to develop markets for their beans. Actually, there is a ready-made market from poultry growers–who now have to pay a lot of freight to import their soybeans from Kazakhstan, Iran, Turkey, or India. The key is for Walter to serve as the bridge–to help bring the poultry growers and the potential soybean farmers together, to discover that they have a common interest, and then to work out agreements.

NGOs do lots of impact studies; they want their volunteers to work on projects that will have economic impact. They believe that increasing poultry production will have a positive impact on the economy and the people. The oil is also appreciated, and refined using modern technology within each country for use as a high-quality edible oil, sold in bottles at retail stores. Kazakhstan is about one-half the size of the United States, and is quite a progressive country with a market economy, fairly advanced education and technology. Soybeans are grown mostly in the very south. They were major crop during Soviet times (Russia was a major market for the oil and meal), but after Kazakhstan became independent in 1990, soybean production fell off to near zero. The economies off Central Asian countries plunged at about the same time (1989-91). They are now slowing getting back to where they once were.

The second most important country for soybeans (a very distant second, with maybe 300-500 hectares planted to soybeans) is the Republic of Georgia, where the western half is quite moist and the eastern half is very dry. They have a long history of growing soybeans. Walter knows of one company there that is processing soybeans using an extrusion cooker (similar to that made by Insta-Pro).

In third place might be Uzbekistan, followed by Turkmenistan, and Tajikistan–but all with only about several hundred hectares in soybeans.

Walter believes that soybeans could become a valuable double crop in Central Asia, planted after the wheat harvest in June. That would earn farmers more income, improve the soil, and break various insect and disease cycles. They need a legume in the rotation. The government does not help. They seem interested only in short term profit, keeping the status quo, and staying in power, not in innovation or long-term thinking.

In Tajikistan, he met a village farmer, Mr. Mahmadullo, who had the ability to build machines. He already had a small business making wheat flour using two motor-powered millstones. He worked with Walter to build a revolving soybean drum roaster; the outside was heated by natural-gas flames. After roasting a batch of about 20-25 kg of soybeans, he ground them into flour.

In Turkmenistan, Dr. Ashraf spent quite a bit of time working with a Korean community in the town of Dashoguz in making tofu. She also worked a lot with Peace Corps Volunteers (PCVs) in that same town; one of the PCVs was a Korean-American. Walter has not heard of any TVP being made in Central Asia; if its is made, it must be in very small quantity. In Uzbekistan, technologically the most developed, soybeans are being grown–often spread by volunteers.

Address: 2804 Trent Drive, Fort Wayne, Indiana 46815
Phone: 260-484-7493.

8361. Hirayama, Tadao. 2005. Shôyu hattatsu shoshi. Sho kara shôyu e [Brief history of shoyu development. From *sho* to shoyu]. Tokyo: Printed by Hokazu Hachibori. 66 p. 26 cm. [47 ref. Jap]

• ***Summary:*** This excellent history, with many illustrations, is available from the Kikkoman International Institute for Food Culture (KIIFC), Noda, Japan.

Contents: Preface I. Chinese jiang: 1. Jiang was called different names by the raw materials which were used to make various types (p. 1). 2. How to make doujiang ("bean jiang") (p. 2). 3. Doujiang might have been a side dish and had a consistency like moromi (p. 4).

II. Japanese sho (hishio?): 1. From the "fish jiang" (*gyosho*) period to the "grain jiang (*kokusho*) period (p. 5). 2. *Sho* and *misho* were differentiated in the very early period (p. 5). 3. *Sho* was used having a consistency like moromi [quite like applesauce] (p. 7).

III. The birth of shoyu: 1. Various types of *sho* and *misho* as seasonings (p. 9). 2. Characters used to write the word *shoyu* in Chinese documents (p. 10). 3. Kinzanji miso and shoyu (p. 11). 4. Popularization of Zen Buddhism and Tea Ceremony culture (p. 12). 5. *Tare miso* and *To Miso* (p. 13) 6. The birth of shoyu (p. 15).

IV. The path / road to becoming true shoyu: 1. Shoyu and tamari (p. 17). 2. The making of shoyu at Tatsuno: The birth of *sumi shoyu* (p. 18). 3. The process for becoming true shoyu (p. 20). 4. San koji (Scattered means not clustered Koji) and *mochi koji* (p. 21). 5. The birth of the true shoyu after the mid-17th century (p. 22).

V. Shi (kuki) or sho: 1. Shi (kuki) to shoyu (p. 24). 2. Fermentation in solid form and fermentation in liquid form (p. 25). 3. Research in recent years (p. 27-4). From simplicity to complexity; from only one to more varieties (p. 28). 5. Purpose of the production of sho (hishio) (p. 30). 6. Arrival

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of new technology made sho into Shoyu (p. 31).

VI. Production of shoyu in Edo period: 1. Production methods of shoyu from mid- to late 17th century (p. 33). *Ryori Monogatari* (Cooking Story) (p. 33). *Yoshu Fushi* (p. 34). *Honcho Shokkan* (*Honcho Shokukan*) (p. 34). 2. Things we cannot afford not to have in the kitchen *Wakan Sansai Zukan* (p. 35). 3. The best way is: Prepare (*shikomi*) shoyu in summer (during Doyo) and finish (harvest) in fall Bankin Sangyotai (Mankin sangyo bukuro) (p. 37). 4. Shoyu making at home Koekikokusanko (Translator's guess at meaning: Wide profit domestic products ideas?) (p. 39).

VII. Kudari shoyu and Kanto Jimawari Shoyu: 1. Kudari shoyu (p. 41). 2. Ama's (Nuns') namaage shoyu (p. 43). 3. Favorite flavor of people of Edo (p. 44). 4. Kamigata's (Kyoto Kansai area) Dashi (stock) and Edo's Dashi (stock) (p. 47). 5. Edo's Honkobushi (Honkare bushi? Honkosetsu?) (p. 47). 6. Kanto's jimawari shoyu (p. 48). 7. The method in Shinsen Hochotei (Shinsen Hocho Hashigo) (means Newly Selected Knife Ladder) (p. 51). 8. Making shoyu into a commercial product (p. 53).

VIII. Shoyu production in Kansai area. 1. Shoyu production on Shodoshima Island (p. 55). 2. Shoyu production in Tatsuno (p. 56). 3. Adding amazake to moromi to create Tatsuno shoyu's unique flavor (p. 57). 4. In Tatsuno they strongly believed in using Kohamaen (Kohama salt) (p. 59). 5. To make large production of shoyu, they used Ako's Saen (salt) (p. 61).

Conclusions (Summary). Main sources (Bibliography). Address: Japan.

8362. Shurtleff, William; Aoyagi, Akiko. 2005. Wei ceng zhi shu [The book of miso]. Taipei, Taiwan: Persimmon Cultural Enterprise Co., Ltd. 280 p. Nov. 14. Illust. by Akiko Aoyagi. No index. 26 cm. [Chi]

• ***Summary:*** A very attractive, complex character, Chinese-language edition of *The Book of Miso*. Address: 1. Soyfoods Center, P.O. Box 234, Lafayette, California 94549

8363. Santoso, Sinta; Santoso, Sugeng. 2005. History of Primasoy [Tempeh maker in Australia]. Victoria, Australia. 1 p. Dec. 13.

• ***Summary:*** Both Sinta (a woman) and Sugeng (her husband) were born and raised in Malang, East Java, Indonesia. They grew up in Indonesia, where they enjoyed "Tempe Malang" as a staple food, eaten with meals at least once or twice a week. Sugeng writes: "I could remember as a child I was taken by my father, who spoke fluent English, to accompany an American to visit the tempeh village near Malang to see the tempeh production. This must have been in the sixties. I wonder if it was you."

Sinta graduated as a food chemist from Braunschweig University, Germany, and Sugeng as a process engineer from Cologne, Germany. They migrated to Australia in 1982, and were married there in 1983. They initially opened an Indonesian restaurant in Melbourne, where Sugeng met Michael Manser, the first tempeh maker in Melbourne as far as he knows. Michael has since retired; he never went to Indonesia but made excellent tempeh. After the restaurant, they worked for large companies in their professional fields. Sugeng worked for a big supermarket as a quality officer, he realized that he was not destined to work in the corporate world and began researching the tempeh industry in Australia. He came to the conclusion, after Michael retired, that there was no good quality tempeh on the market; he believes that vacuum packing and the addition of vinegar makes the tempeh brown, chewy, watery, and bitter. "This has damaged the image of tempeh in Australia, and therefore tempeh is not very popular here now. I would really like to do some more research to extend the shelf life of tempeh so I can distribute my product interstate within Australia without using vacuum packaging." They spent months perfecting the method of making Tempe Malang in order to produce a high quality, sellable product.

"There are several tempeh manufacturers in Australia at the moment. The last of these, Nutrisoy, is owned by an Indonesian born operator. Then there are smaller operators such as Tally Ho, and Simply Soy and Blue Lotus in Melbourne. There may be more smaller manufacturers in other states which I am not aware of."

2004 July–They rent a small suburban store, close to their home at 2 Dunoon Court, Mulgrave, Victoria; they convert it into a tempeh manufacturing kitchen. The tempeh is made solely by Sinta and Sugeng.

2005 Feb.–Primasoy has its first public debut at *The Age* 'Harvest Picnic at Hanging Rock,' a food festival designed to promote locally made food and beverages. About 30,000 visitors circle the various food stands. Their tempeh was very well received by the public as a new and exciting product.

2005 March–Following the Harvest Picnic success, Primasoy begins promoting their product in selected organic food shops around Melbourne.

2006 Dec.–Sinta and Sugeng are still making tempeh commercially at Primasoy. "Things are very good. We are still experimenting with the MAP vacuum packaging. MAP stands for Modified Atmosphere Packaging. Depending on the product, the atmosphere in the packaging is either nitrogen, carbon dioxide, oxygen, or a mixture of these gases in various ratios. Our experiments show that a mixture of oxygen and nitrogen looks promising. Currently we found pasteurization and light vacuum might be the way to go, but we have not yet validated it. We have been busy doing cooking demos lately and have not been concentrating on shelf life extension." They are now writing a book about tempeh. And they will have two new tempeh products early next year: (1) Tempeh with tamari, ginger and sesame oil. (2) Tempeh with roasted garlic and coriander. "Next project will be okara tempeh (*tempe gembus*) and tempeh burger. I have a leaflet with recipes and I will send it to you."

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They have lost touch with Mike Manser; last they heard he was planning to move to Tasmania. Address: 2 Dunoon Court, Mulgrave 3170, Victoria, Australia.

8364. Lea & Perrins. 2005. About us: Lea & Perrins heritage (Website printout–part). www.leaperrins.com/ about/heritage.php. Printed Dec. 15.

• ***Summary:*** Lea & Perrins Worcestershire sauce began to be produced commercially in 1837. There follows a timeline / chronology (undocumented) with 2 entries in the 1700s, 11 entries in the 1800s and 11 entries in the 20th century. Here are a few samples, starting with the earliest ones:

1791–John Wheeley Lea is born. He was is of one of three sons and four daughters and was raised in a farming family. As a young man he chose to become a chemist."

1793–William Henry Perrins was born... He chose to become a chemist.

1823–Lea & Perrins decide to form a partnership. They have a catalogue prepared and ready for the opening on 1 Jan. 1823 of their shop on Broad Street, Worcester, England. The shop soon becomes successful.

1825–Lea & Perrins open a branch shop in Kidderminster, a town about 20 miles north of Worcester.

1834–They open a shop in Cheltenham, about 25 miles south of Worcester.

1837–Commercial production of Lea & Perrins Worcestershire Sauce begins.

1839–John Duncan, a New York entrepreneur, orders a small quantity of Lea & Perrins Worcestershire sauce. Within a few years, Duncan was importing large shipments to keep up with demand.

1867–William Henry Perrins dies.

1874–John Wheeley Lea dies.

8365. *SoyaScan Notes*.2005. Chronology of major soy-related events and trends during 2005 (Overview). Dec. 31. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Jan.–Monsanto acquires Seminis for $1.4 billion. This gives Monsanto a commanding position in the fast-growing and very profitable vegetable seed market–a segment in which Monsanto previously had no presence. Jan.–*EarthSave News* stops being printed on paper and migrates to the Internet.

Feb. *The Whole Soy Story: The Dark Side of America's Favorite Health Food*, by Kaayla T. Daniel published by New Trends Publishing Inc. (Washington, DC). This is the first entirely anti-soy book.

March 14–Steve Demos, founder of White Wave, Inc., is terminated without cause (forced out) by Dean Foods.

July 7–Galaxy Nutritional Foods announces it will sell its manufacturing assets to Schreiber Foods, Inc. of Green Bay, Wisconsin, a major manufacturer of cheese products. Galaxy has recently suffered large financial losses.

July–Israeli Ministry of Health announces plans to recommend that young children limit soy products to one a day and advised that infants avoid them altogether. The French government recently advised that soy products not be given to children younger than age 3.

Oct. 17–Gardenburger Inc., the company credited with taking veggie burgers into the mainstream, files for Chapter 11 bankruptcy. The company will stay in business but become privately held; the name of the new owner is not yet known. The value of all Gardenburger shares is now zero.

Nov.–Yamasa Corporation purchases San Jirushi Corp. (Kuwana, Japan). San-J plans to build a new tamari plant next to their original plant (which has reached full capacity) in Richmond, Virginia.

During 2004-05 world production of palm oil reached 33.88 million metric tons to pass soybean oil (32.31) for the first time in history and to become the world's leading vegetable oil. Projections show this lead continuing to grow during the next two years (Source: *2007 Soya & Oilseed Bluebook*, p. 348).

8366. **Product Name:** [Organic Shiro-shoyu (clear soy sauce)].
Foreign Name: Shiro shôyu.
Manufacturer's Name: Hichifuku Brewing Co., Ltd.
Manufacturer's Address: 2-7 Yamagami, Hekinan, Aichi 447-0869 Japan. Phone: +81 566-92-5213.
Date of Introduction: 2005.
Ingredients: Wheat, soybeans, salt, culture.
How Stored: Shelf stable.
New Product–Documentation: The website www.pref.aichi.jp lists this company at Certification No. 225. "Japan's only specialized manufacturer of *shiro-shoyu* soy sauce, in Hekinan City, the home of this special ingredient. Executive director: Atsunori Inuzuka. Company outline: Hichifuku [Shichifuku] Brewing is the only company in Japan whose *shiro-shoyu* soy sauce plant is organic–JAS certified. Wheat accounts for 90% of the raw material used to produce this soy sauce. The amber-colored product keeps intact the colors of the other ingredients as they cook. Hichifuku Brewing also manufactures *shiro-dashi* (a combination of shiro-shoyu soy sauce and dashi broth of carefully selected dried bonito, kombu, and shiitake mushrooms)."

8367. **Product Name:** Soyettes [Teriyaki, Barbecue, Jamaican Jerked].
Manufacturer's Name: Soya Foods.
Manufacturer's Address: 8 Frontenac St., Dorchester, MA 02124-3902. Phone: 617-282-1000.
Date of Introduction: 2005.
Ingredients: Tofu.
New Product–Documentation: Gavin, Robert. 2006. "Meat-like qualities whet the US appetite for tofu. Biologist tackles taste, texture issues." *Boston Globe*, Jan. 2. Xiang F. Kong has developed a new tofu product named Tofettes, in

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flavors such as teriyaki, barbecue, and Jamaican jerked.

8368 Andoh, Elizabeth. 2005. Washoku: Recipes from the Japanese home kitchen. Berkeley, California: Ten Speed Press. vii + 320 p. Illust. (many color). Index. 25 x 25 cm.
• ***Summary:*** A beautiful book. Contains a section titled "Tofu and eggs" (p. 268-93), plus many recipes that use miso, shoyu, edamame, kinako, and amazake. Address: Japan.

8369 Bennett, Beverly Lynn; Sammartano, Ray. 2005. The complete idiot's guide to vegan living. New York, NY: Alpha. 360 p.
• ***Summary:*** "It's not a diet–it's a lifestyle." The vegan lifestyle means compassion for all living things. It means eliminating animal foods and animal products from one's diet. True vegans avoid the use of honey, and don't wear animal skin (leather, suede) or fur. Many avoid silk, made by suffocating silkworms inside their cocoons.

Contents: Part 1: Compassion for all. 1. Why be vegan? 2. Vegan 101 (incl. famous vegetarians and vegans, the Vegetarian Society of the UK, the Vegan Society emerges, Donald Watson, coming to America–Dr. Catherine Nimmo and Rubin Abramowitz, Jay Dinshah, ahimsa). 3. Key to good health. 4. Starting your vegan transition. Part 2: Clearing up misconceptions. 5. But you need meat for protein. 6. But you need dairy for calcium. 7. But carbohydrates make you fat. 8. Vegans are all weak and sickly.

Part 3: A vegan survival guide. 9. Nourishing yourself. 10. Seeking supplementation. 11. Raw foodists. Raw and uncut. 12. Oh baby! Bringing up baby. Part 4: Veggin' it; Tips for maintaining a vegan lifestyle. 13. Handling family and friends. 14. Dining, vegan style. 15. Supporting your ideals. 16. Buying your vegan eats.

Part 5: Substitution is the mother of invention. 17. Using protein alternatives (incl. Demistifying soy products: soy sauce, the incredible tofu, tempting with tempeh, playing tricks with TVP). 18. Doing without dairy and cheese. 19. Vegan baking substitutions. Part 6: Vegan food for the soul. 20. Breakfast ideas. 21. Lunch and lighter fare. 22. Main and side dishes. 23. Baked goods and desserts.

Part 7: Vegan lifestyle choices. 24. Body care and personal items. 25. Dressing to impress. 26. Other things to consider. Appendixes. Glossary, resources.

The index contains 17 entries for tofu, 16 for soybeans, 7 for tempeh, 3 for seitan, 2 for TVP, and 1 each for edamame, nondairy milk substitutes, shoyu, soy milk, tahini, tamari, and tofurky.

"This book offers a vegan food pyramid, fifty vegan recipes, tips on finding animal-free products and hints for reading ingredient lists and other labels to find 'hidden' animal ingredients or by products" (publisher's statement). Address: 1. Vegan chef and author, Eugene, Oregon; 2. Musician, web developer, and Beverly's life partner.

8370 Feral, Priscilla; Hall, Lee. 2005. Dining with friends: The art of North American vegan cuisine. Darien, Connecticut: Friends of Animals, Inc. iii + 164 p. Foreword by John Robbins. Illust. (some color). No index. 21 x 23 cm.
• ***Summary:*** The Foreword, by John Robbins, contains this lovely prayer from the Buddhist teacher Thich Nhat Hanh.

"Let us fill our hearts with compassion
"towards ourselves and towards all living beings.
"Let us pray that all living beings realize
"that they are brothers and sisters,
"all nourished from the same source of life.
"Let us pray the we ourselves cease to be
"the cause of suffering to each other.
"Let us please with ourselves to live in a way
"which will not deprive other beings
"of air, water, food, shelter, or the chance to live.
"With humility,
"with awareness of the existence of life,
"and of the sufferings that are going on around us,
"let us pray for the establishment of peace
"in our hearts and on the earth."

This vegan cookbook contains many soy recipes, for example: Scrambled tofu. Believable bacon (with "8 ounces firm tofu, drained, p. 12). Spinach dip for raw vegetables (with "1 cup Tofutti brand Imitation Sour Cream, p. 19). Veggiessoise (with "1 cup soy creamer {such as White Wave's 'Silk' creamer}," p. 36). Tofu spinach lasagne (p. 60). Tofu hummos with toasted cumin seed (with "12 ounces soft tofu," p. 109). Sweet dessert cream (with "1 package {12.3 ounces} Mori-Nu Silken Firm Tofu," p. 126). Key lime pie (with "1 package {12.3 ounces} Mori-Nu Silken Lite Firm Tofu," p. 130). Soy milk is called for in many recipes.

The Glossary (p. 153-61) includes: Antioxidants (steaming causes minimal loss of antioxidants; microwaving causes much loss). Brown rice syrup. Butter substitutes. See vegan margarine. Cheese (Added casein makes most commercial cheese alternative non-vegan; presently, however, Tofutti, Vegan-Rella, and Soymage Grated Soy Parmesan are vegan). Chocolate ("Both Ecco Bella and Paul Newman's brands offer vegan chocolate"). Cholesterol. Egg replacers (Ener-G Egg Replacer). Fruitarian. Gelatin. Genetically modified organisms ("GMO"), genetic engineering ("GE"). Lightlife. Linolenic acid. Miso. Nama shoyu. Nayonaise. Nutritional yeasts. Organics. Ovo-lacto vegetarian. Pareve (parve). Pesco-vegetarian. Protein. Soy milk. Stevia. Tamari. Tempeh. Tofu. Tofutti. Vegan (VEE-gun). Vegan society (www.vegansociety.com).

The Shopping guide" (p. 161-63) describes companies that make or sell vegan products.

On the rear cover we read: "Friends of Animals is an international, non-profit, animal advocacy organization, incorporated in the State of New York in 1957. We work to cultivate a respectful view of nonhuman animals, free-living

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and domestic. Our goal is to free animals from cruelty and institutionalized exploitation around the world."

On the inside rear cover are portrait photos and biographical sketches of Priscilla Feral, president of Friends of Animals, and Lee Hall, legal director for Friends of Animals. Address: 1. President; 2. Legal director. Both: Friends of Animals, New York.

8371. Fu, Peimei. 2005. Peimei shi pu. Di er ce [Pei Mei's Chinese cook book. Vol. II]. Taipei, Taiwan: Ju zi wen hua shi ye you xian gong si. 386 p. Illust. (color). No index. 22 cm. [Chi; Eng]

• ***Summary:*** Fu Pei Mei is considered by many Chinese to be one of the best Chinese chefs alive today. This book, which first appeared in July 1974, contains 110 recipes categorized by ingredients under 11 separate headings, such as chicken, duck, pork, beef, fish, shrimp and seafood. The majority of the recipes in this book are based on meat, poultry, fish or eggs (animal products). Contents: Foreword. Introduction. About the Chinese menu. About Chinese condiments and spices. Glossary includes: 1. Soysauce (made from fermented soybeans, comes in light, medium, and dark colors. Kikkoman is a good example of medium). 9. Hot bean paste ("Made from red hot peppers, flour, soybeans, salt, and other condiments"). 11. MSG. 18. Bean curd. 19. Dried bean curd sheets (skin). 20. Bean sprouts (mung or soy). 21. Bean pastes ("Thick brown pastes prepared from soy bean flour and flavorings. Sweet types have sugar added and resemble pureed dates"). 22. Sweet red bean paste ("Made from red [azuki] beans. Almost all Chinese desserts use this for the filling. Mash the cooked beans in a strainer. The paste will come out leaving the skin"). Contents of recipes. Abbreviations, weights & measures. Contents of color photos. Index of recipes Vol. I. English-Chinese list of foodstuffs. About the author. Copyright.

Seating: The guest of honor sits in the seat at the inner side of the room, facing the entrance, while the seats on the serving side are for the host and hostess. The guest of honor always sits facing the host (p. 10).

After the "abbreviations" page are 4 full-page numbered color photos of Chinese tableware, vegetables, special ingredients, and Chinese individual place setting used in this book, and the numbered name of each item, in both Chinese and English, facing the photo. Among the vegetables is: 27. Fresh soybean (*maodou*). Among the special ingredients is: 2. Beancurd sheet (*doufu-pi*). 14. Bean curd threads (*gansi*). 21. Bean curd (doufu). 26. Fermented black [soy] beans [fermented black soybeans].

For every recipe there is a large (often full-page) color photo with the recipe name in Chinese and English, and the page number of the recipe. All the recipe photos come in a block before the recipes themselves. Each Chinese recipe is on the left page of the 2-page spread, and its English counterpart is on the right page. The ingredients for each recipe are in two rows at the top, in exactly the same relative place, to make finding the Chinese characters easy.

Recipes include: Braised soysauce duck (p. 157). Spareribs with fermented black beans (*Shih chih p'ai ku*, p. 177). Shredded pork with bean sauce (*Ching chiang jou szu*, with 2 tablespoons "sweet bean paste," *t'ien mien chiang* [pinyin: *tian mian jiang*], and soysauce, p. 186-87). Diced fish with fermented black beans (*Shih chih yü ch'iu*, p. 216-17). Steamed fish with fermented black beans and hot pepper (*Tou shih la chiao cheng yu*, with 2 tablespoons *dou shih* / fermented dried black beans," p. 226-27).

The chapter titled "Egg and bean curd" (p. 256-75) contains 10 recipes. Examples of the descriptions of bean curd in the ingredients listing are: "6 squares bean curd (3" x 3") " "8 pcs [pieces] bean curd (1" x 2" x 1") " "4 pcs tender bean curd (3" x 3"). "10 oz. thin dried bean curd strips" (*gansi*). On p. 276 is a half-page description of bean curd and related products.

More recipes: Assorted vegetarian dish (*Lo han chai*, with "1 bean curd stick," *fu chu / fuzhu* [dried yuba sticks], p. 289). Spinach and bean curd soup (*Po ts'ai tou fu keng*, p. 317). Chicken, ham and shrimp with bean curd shreds soup (*San hsien kan szu t'ang*, p. 319). Yu-T'iau ([crullers] p. 335). Noodles with minced pork and bean sauce (*Pei fan cha chiang mien*, with *maodou* / green beans, p. 339). Fried taro dumplings with sweet bean filling (*Tou sha yü tsao*, with "sweet [azuki] bean paste," p. 349).

A good portrait photo of Miss Fu appears on p. 371. Taiwan's popular T.V. chef, she "is also a producer and director. She has demonstrated over 600 different recipes from 1964 to the present. In 1955 Pei Mei's Chinese Cooking Institute was founded. In 1962 Taiwan's first television station was established. She accepted an offer to teach a demonstration cooking program once a week, starting in 1967. In 1969 she wrote her first volume, *Pei Mei's Chinese Cookbook*. The dishes were divided according to the geographical areas of China–North, East, South, and West. In 1977 Miss Fu began a weekly program on Japanese television.

The copyright page states that this book was published in the 80th year, 9th month of the Chinese calendar. Address: Cooking teacher, Taipei, Taiwan.

8372. Fu, Peimei. 2005. Peimei shi pu. Di san ce [Pei Mei's Chinese cook book. Vol. III]. Taipei, Taiwan. Ju zi wen hua shi ye you xian gong si. 388 p. Illust. (color). 22 cm. [Chi, Eng]

• ***Summary:*** Chinese cooking can be divided clearly into five major schools or branches: Shanghainese, Cantonese, Szechuanese, Peking-style, and Hunanese. These correspond roughly to Eastern, Southern, Western, Northern, and Central China. This 3rd volume, containing 130 recipes, consists of nine complete formal Chinese banquet dinners from different provinces: Kiangche (Shanghai style), Canton, Szuchuan

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[Szechwan], Peiping, Hunan, Fuk-ien, Taiwan, Vegetarian style, and Buffet dinner.

The number of special ingredients in the numbered color photo has been increased to 47 from 32. Interesting new ingredients include: 29. Sweet red bean paste [azuki]. 31. Green sea weed. 32. Laver [sheets of nori]. 34. Fresh bean curd skin. 35. Dried bean stick [dried yuba sticks, fuzhu]. 36. Bean curd sheets [dried yuba]. 37. Bean curd, dried [doufu-gan]. 39. Wheat gluten. 40. Steamed wheat gluten. 41. Fried gluten puff.

The basic format of this book is quite similar to that of Vol. II, but the color photos of recipes are arranged together in a group of about 12 pages at the beginning of each of the nine sections, and quite a few pages have two recipes per page.

Recipes include: Sauteed black mushrooms with soy sauce (p. 35). Stir-fried crab with bean sauce (*Chiang pao ch'ing shieh*, with 1 tablespoon "sweet soy bean paste" / *t'ien mien chiang / tian mian jiang*, p. 46-47). Stewed beef with hot bean sauce (*Yu hsiang nyu nan*, with 1 tablespoon "hot bean paste," (*la dou ban jiang*), p. 122-23).

The introduction to the section on vegetarian dishes notes: "Centuries ago in China, devout Buddhists and Taoists followed a strictly vegetarian diet, in keeping with their religious sanctions against the killing of sentient beings." The recipes in this section call for: Soy sauce (almost all). Soy bean soup stock (p. 313). Wheat gluten sticks (*su chang*) (each of which is made by rolling up a big sheet of wheat gluten, p. 315). Pieces of steamed wheat gluten and Pressed bean curd (*dou fu gan*) (p. 317). Cooked green vegetable soybeans (*shu mao dou*, p. 323). Sheets of bean curd skin, fresh or dried [yuba] (*toufu p'i / dou fu pi*, p. 323, 325, 331). Shredded dried bean curd (p. 327). Bean curd (p. 328).

More recipes: Braised beef with brown sauce (with 1 tablespoon "hot bean paste" (*la dou ban jiang*) and ½ tablespoon "soybean paste" (*tian mian jiang*), p. 360-61). Sautéed bean curd balls (p. 369). Two good portrait photos of Fu Pei Mei appear on page 296. Address: Cooking teacher, Taipei, Taiwan.

8373. Fujii, Mari. 2005. The enlightened kitchen: fresh vegetable dishes from the temples of Japan. Translated by Richard Jeffrey. Tokyo, New York, London: Kodansha International. 107 p. Illust. (photos by Tae Hamamura). Index. 26 cm.

• ***Summary:*** This is a lovely Japanese vegan (and vegetarian) cookbook filled with the spirit of kindness and of Zen–and with color photos on almost every page. It discusses and describes the ancient tradition of *shojin ryori*, the plant-based diet which originated in Japan's Buddhist temples. The author, who is the wife of a Buddhist monk, has taught temple cuisine for over 20 years. Her husband, Sotetsu, lived as a monk for ten years in various Buddhist temples; he also trained as the tenzo (head cook).

In this book she presents 60 beautiful, delicious, health-giving, and heart-warming recipes, many adapted to Western kitchens but all true to their roots. A majority of the recipes contain soyfoods in one form or another.

The helpful glossary includes descriptions of edamame beans, hijiki, karashi mustard, konbu, Koyadofu ("freeze-dried tofu"), miso, natto, nori seaweed, pickled plum paste, saké, sesame paste, sesame seeds, shiso (perilla), soy sauce, soybeans, sukikonbu, tofu, umeboshi pickled plum, usu-age tofu, wakame seaweed, wasabi, yuba, yuzu.

The index contains 20 entries for miso, 15 for tofu (p. 15, 24, 29, 32, 39, 41, 42, 48, 51, 53, 56, 62, 71, 100, 104), 6 for soymilk (p. 17, 45, 47, 94, 99, 104) 4 for edamame (p. 16, 35, 68, 99), 3 for deep-fried tofu (p. 32, 42, 71, 104), 3 for natto (p. 44, 50, 100), 2 for teriyaki (p. 48, 62), 2 for Koyadofu (p. 48, 100), 2 for usa-age (thin slices of deep-fried tofu, p. 32, 104), 2 for yuba (p. 47, 104). A small color photo on the inside rear dust jacket shows Mari Fujii. Address: Cooking teacher, Kamakura, Japan.

8374. Hartley, Paul. 2005. The Lea and Perrins Worcestershire Sauce cookbook. London: Absolute Press. 80 p. Illust. (color). 22 cm.

• ***Summary:*** A colorful book of 50 recipes that call for Lea & Perrins' Worcestershire Sauce. Contains many interesting (but undated) full-page color posters (courtesy of Lea & Perrins). A number of interesting historical sidebars, scattered throughout the book, contain vignettees from Lea & Perrin's history. The section titled "A splash of history" (p. 75-79) contains a brief chronology of Lea & Perrins and their Worcestershire sauce. For example:

"Late 1930s–In a show of great business acumen, Lea & Perrins managed to get cases of their sauce onto all ocean liners that came in and out of British waters. A fee was paid to the on-board stewards, who served the sauce in the dining rooms. Passengers tried the sauce, and, intrigued, would then... buy a bottle to take home. It didn't take long for word to get around, and Lea & Perrins' fame grew quickly."

1839–A New York entrepreneur named John Duncan ordered a small quantity of Lea & Perrins Worcestershire Sauce. "He liked the sauce a lot and saw its potential." Within a few years Duncan began to import large amounts to keep up with the demand. Address: Food writer, England.

8375. Hellmiss, Margot. 2005. Mit Soja durch die Wechseljahre [Using soy through the menopause years]. Munich, Germany: Suedwest Verlag. 96 p. Illust. (color). Index. 20 x 18 cm. [Ger]

• ***Summary:*** An attractive book, with many fine color photos on glossy paper. Contents: Soybeans–Tradition and history (Healing plant from China). Productive source of protein, tofu–quark with a longer tradition, triumphal procession around the world, great economic significance, soya and genetic engineering. Fundamental changes of the menopause

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years (What happens during these years?): Hormonal changes, the right attitude helps, the new understanding of women, many hormones influence the body, men also experience menopause, questionable preparations. Hormone Replacement Therapy–Pros and cons. Natural help from soy isoflavones (remarkable phytoestrogens): The active agent of plant hormones, the effectiveness of isoflavones, natural SERMs, safeguard against osteoporosis, estrogen protects the circulatory system, soy hormones as free-radical catchers, the end of hot flashes, strong powers of resistance and smooth skin, isoflavones will take good care of you.

Soyfoods that contain isoflavones (A great variety): Whole dry soybeans, soymilk, tofu, soy oil, soy flour (*Sojamehl*), soy flakes (*Sojaflocken*), soy bran (*Sojakleie*), tempeh, natto, soy granules, soy sauce, shoyu and tamari, miso, lignans. Soybeans: A powerful package for your health (Plant protein as an alternative): Indispensable protein, lecithin, minerals, B vitamins for strong nerves, vitamin E–the fountain of youth. Recipes for enjoying soya (Basic recipes): Hors d'oeuvres and salads, soups, pasta, main dishes, sauces, dips, and bread spreads, mueslis, desserts, and baked goods, beverages.

8376 Hu, Shiu-ying. 2005. Food plants of China. Hong Kong: Chinese University Press. xvi + 844 p. Illust. Index. 26 cm. [350+ ref]

• ***Summary:*** This is a truly remarkable book–the most original and comprehensive book seen to date on the food plants, plant foods, and the economic botany of China. It is the author's supremely valuable life's work.

Contents: Foreword by Richard Evans Schultes (Director, Botanical Museum of Harvard University, Emeritus). Foreword by George W. Staples, III (Bernice P. Bishop Museum, Honolulu, Hawaii). Introduction. Why the book and to whom is it addressed. Illustrations (numbered but on unnumbered pages).

Part I: Cultural aspects of Chinese foods. 1. The sources and nature of information. 2. The production and preparation of Chinese plant food. 3. Selected Chinese food plants with instruction for preparation. 4. Spices and flavoring materials. 5. Health food (*bupin*) and herbal tea (*liangcha*).

Part II: Botanical aspects of Chinese food plants. 6. Nonvascular plants. 7. Vascular plants (incl. spermatophytes {seed-bearing plants} and angiospermae {flowering plants}, incl. monocotyledons and dicotyledons). Bibliography. Latin name index. Chinese name index. English name index.

On the inside front cover and facing right-hand page is a large map of China, with each province shown, and the localities of Shiu-Ying Hu's botanical activities in China clearly show in symbols: white triangle = before and white circle = after 1950. A black triangle or circle = staying 8 or more years. In each triangle or circle is a number, keyed to a list of the names of 65 localities. She did more research in southern China than in northern.

There is no country in the world today "where the value of useful plants is more thoroughly appreciated than in contemporary China" (p. vii, Foreword 1).

Dr. Hu is an expert taxonomist and economic botanist. She "draws on the fields of plant taxonomy, morphology, economic botany, pharmacognosy, and phytochemistry to name a few, yet the text is far from a dry recitation of facts and statistics. What brings the work to life are the numerous anecdotes and personal experiences she shares. Indeed, this latter element gives the book the aspect of a personal memoir." "The major divisions . . . are taxonomic and within each division the plants are arranged alphabetically by scientific name. Also provided are the names in Chinese characters, the transliteration in English of both the Putonghua and Cantonese pronunciations for the Chinese names, common names in English, and a brief commentary" (p. ix-x, Foreword 2).

"The food plants of an area provide the material basis for the survival of its population" and furnish inspiration for its cultural development. "In China, 1,156 species and 274 varieties and/or cultivars of food plants have been recorded and are used" by the people. The preparation of this work began in 1957 and a compilation was distributed at the Ninth Pacific Science Congress. Born in 1908, the author entered a boarding school in Xuzhou, Mary Stevens Girls' High School, run by Presbyterian missionaries. In like manner she went to Ginling College, a small liberal college of arts and sciences in Nanjing. After college she entered Lingnan University (formerly Canton Christian College) in Guangzhou, from which she graduated with the master of science degree in June 1937–a month before the Marco Polo Bridge Incident on July 7, 1937, when the Sino-Japanese War broke out in Beijing. She fled to Chengdu, Sichuan, where in Jan. 1938 she accepted a teaching position in the Department of Biology, West China Union University–also a missionary college. In the late 1930s and early 1940s, Hu had botanized in western Sichuan at a time when only a few men (notably Armand David, Joseph Rock, and E. Wilson) had explored that region. During summer vacations, she took students to botanize around Muping. At West China Union University, Hu continued her field studies, taught courses in botany, and was elected president of the International Women's Club. The vice president of the club, who was a Radcliffe graduate, applied to Radcliffe for a fellowship for Hu.

She left China on 2 Aug. 1946 for graduate work at Radcliffe College; it was like a metamorphosis–the United States was a completely new world. In 1946 she was offered a graduate fellowship for a doctorate (PhD) program at Radcliffe College under Prof. E.D. Merrill, then Director of the Arnold Arboretum (Harvard Univ.) from 1935-1946. Her doctoral dissertation on the genus *Ilex* (Aquifoliaceae) was carried out at the Arnold Arboretum under the direction of E.D. Merrill. After completing the requirements and

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finishing the dissertation for a doctorate degree at Harvard, in April 1949, she became the herbarium assistant at the Arnold Arboretum. From 1953 to 1957 she worked on the Flora of China Project at Arnold Arboretum. Among other things, she became famous for her Chinese dinners with staff and students alike. She officially retired from the Arnold Arboretum on 30 June 1976.

Dr. Hu returned to China in July 1975, after 29 years abroad. Since the normalization of diplomatic relations between the USA and China in 1978, she has made many trips to China, and travelled studied extensively (p. xi-xii, 12-14). As of Aug. 2011 Dr. Hu resides in Hong Kong and is closely associated with the Chinese University of Hong Kong.

A photo (Fig. 1) shows the author in 1941 as a young lady in Tibetan attire; she spent summers in the area formerly called "Eastern Tibet."

Fig. 34, an illustration composed of seven superb line drawings (each with a scale) showing the soybean plant, a flowering branch, the front view of a flower, a lateral (side) view of the same, a fruit (pod with 2 seeds) with one side of the pericarp (outer pod) removed--showing the seeds, a soybean seed showing the acentric hilum, the micropyle and the hypocotyl ridge, soybean sprouts from a market showing the smooth fleshy cotyledons, the hypocotyl and the very small plumule.

Fig. 35. Four black and white photos showing: (1) Two round trays of koji, made of cooked soybeans, roasted wheat flour, and fungal spores, in shelves, to be used for making soy sauce. (2) Large earthen jars with convement hat-like covers, containing the koji, salt and water, placed in the yard of the *jiang-yuan* (2 Cc = Chinese characters given) ("jiang garden"), exposed to the sun during the day and dew at night, covered only when it rains and stirred occasionally. (3) A man stirring hot soymilk in a large shallow cauldron before adding pulverized calcium sulfate for precipitation of the soybean protein, used to make tofu. (4) A wooden frame [curding box], lined with cloth for filtering the coagulated protein and solidifying the mass (under small pressure) to make bean curd.

Soybeans (*Huang-dou*, 2 Cc). Before World War II, the United States was a net importer of soybeans; now she is a net exporter. "Although soybean products have entered American supermarkets, several Chinese uses of soybean can introduce more variety and tastier food into many homes (Figure 35). Included ... are: green immature soybean, soybean curd, soybean sheets [pressed tofu sheets], firm bean curd squares [pressed tofu], soybean skin [yuba], and soybean sprouts." With the exception of soybean sheets, all these items are available in Chinese American grocery stores. "The Food Plants Research Institute, Amherst, Massachusetts, is in the process of introducing soybean sheets (3 Cc) to American markets (p. 118-19).

Hordeum vulgare L. var. *vulgare*–Barley *Da-mai* (W.-G. *Ta-mai*) (2 Cc, 'big grain'). "... also ground with sorghum and soybean for a coarse, healthy, fiber bread flour."

Glycine max (L.) Merrill–Soybean. *Da-dou* (W.-G. *Ta-tou*). (2 Cc) ('giant bean'). *Huang-dou* (W.-G.: *Huang-tou*). (2 Cc) ('yellow bean'). "Seed mixed with *gao-liang* (kaoliang) and barley, ground together for flour, used to be the staple of the rural population in the Yellow River Region; soaked, cooked with salt, served as tidbits in northern China; used as source for all the following forms of Chinese food" (p. 474).

Dou-you (W.-G.: *Tou-yu*). (2 Cc) ('soybean oil'). Cooking oil extracted from the soybean. (p. 474). Address: Botanist, Arnold Arboretum, Harvard University; Honorary Professor of Chinese Medicine, The Chinese University of Hong Kong.

8377. Hu, Shiu-ying. 2005. Fermented soybean foods: Soy sauce (Document part). In: Shiu-ying Hu. 2005. Food Plants of China. Hong Kong: Chinese University Press. xvi + 844 p. See p. 32-34.

• ***Summary:*** This is a truly remarkable, original and comprehensive book. The section on "The use of microbes in Chinese plant food" (p. 32+) notes that, in China, people with lower incomes eat proportionally more fermented foods to help them eat the tasteless cooked rice or steamed bread. Fermented soybean products are widely used in this way. The Chinese term *jiang* is a generic term used to refer to all fermented bean and grain products, particularly those which are a mushy, spicy mass. In modern Chinese cookbooks, the word *jiang* is often translated as "sauce." For example, *la-dou-ban-jiang* (4 Cc = Chinese characters given) is translated as "hot bean sauce," *la-jiao-jiang* (3 Cc) is translated as "hot pepper sauce," *suan-mei-jiang* (4 Cc) is translated as "duck sauce," and *tian-mian-jiang* (4 Cc) is translated as "sweet flour sauce."

The following subsection, titled "Fermented leguminous products" (p. 33+) states that Chinese fermented plant foods come primarily from the soybean (*Glycine max*). The ones most widely used in China are all available in the United States. They are: (1) Soy sauce (2 Cc). (2) Fermented black soybean (2 Cc). (3) Soybean sauce [dou-ban-jiang] (3 Cc). (4) Bean curd cheese [fermented tofu, *dou-fu-ru*] (3 Cc).

In Western China, broad bean sauce is prepared from *Vicia faba* L.

(1) Soy sauce: Soy sauce is the only liquid Chinese fermented food. Making soy sauce is one of the most important food industries in China. Before the 1930s, soy sauce in China was made from fermented soybeans. Now many bottled soy sauce products, especially those in American supermarkets, are chemical combinations with artificial colors [HVP soy sauces with little or no fermentation].

In China, soy sauce is made in almost every city and in nearly all the large, rural market-places. Formerly the

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manufacture of soy sauce was a family business, run by the owner of a store called a jiang garden (*jiang yuan*), which focused exclusively on making and selling fermented and pickled foods. In small towns and rural market-places, soy sauce is made in the back yard of such a store, whereas is large cities it made on the outskirts of the city where land is less expensive. In Hong Kong, for example, most soy sauce is made in the New Territories.

To make soy sauce, soak soybeans overnight, cook with a small amount of cracked wheat, inoculate purposely or naturally with airborne spores, then heap up to enable fermentation. An experienced person can tell by the color of the molds and the textured of the fermented material [koji] when the microbial action is complete. Then transfer the fermented material into "large, top-shaped, thick-walled, earthenware urns about one meter tall and one meter in diameter across the top. Add salt, water and spices, then stir to make a uniform mass."

Note: Spices are not typically added to the basic soy sauce ingredients in either China or Japan.

Arrange the urns in rows in a "jiang garden" [open courtyard] and place beside each urn with a roof-like cover to be used only when it rains. Keep the urns uncovered day and night so the contents are exposed to fresh air, direct sunshine, and dew at night. On clear days, stir the material in each urn uniformly so that the bottom can be exposed to the fresh air, etc. Under these conditions, natural physical, chemical, and microbial changes take place; the color of the mixture gradually changes to a hue between chestnut brown and black, and the texture becomes more homogeneous, uniform and mushy. As soon as these changes have taken place, make a well in the upper surface of the mass [by pushing a woven bamboo basket into it]. Soy sauce will gradually fill the well and can be collected. This first collection is called *yuan-you* (2 Cc) ("prime sauce"). It is the best is excellence, aroma, and nutritional value, and is "said to be used for table dipping in high class restaurants and/or the homes of officials and rich families."

After removing all liquid, add water and salt to the urn and repeat the process of exposure to the fresh air, sun and dew. This time, the resulting soy sauce is called *tou chou* (*t'ou-chou*) (2 Cc) ("first extract"). This is also "good sauce and is used for table dipping in restaurants and/or in the homes of affluent families."

After the first extract is removed, the space in the urn will be larger. So add more water, salt, and spices. The third soy sauce extracted is named *sheng-chou* (2 Cc) ("raw extract"). "It has a much lighter color and is the soy sauce used by most people for cooking. This type is available in Chinese American stores."

To the final puree left in the bottom of the urn, add water, salt, and partially charred brown sugar. Homogenize the mixture and bottle it. This thick, dark reddish-brown liquid [which is not an extract] is named *lao-tou-chou* (*lau t'ou-cho*) (3 Cc) ("old man extract," often shortened to *lao-chou*, 2 Cc). It is also available in the United States.

Note: No miso-like jiang remains in the bottom of the urn.

"The several Chinese cookbooks published in English available to me all mention two types of soy sauce, one light and the other dark. The raw extract and the old man extract are the sauces to which they refer. The old man extract is used to cook pork or chicken dishes to give the desired color."

Extensive research on microbiology in Japan has shown that the main organisms used or found in the manufacture of soy sauce are *Aspergillus soyae* Sakaguchi et Yamada, and *A. oryzae* (Ahlburg) Cohn.

A recipe for "Steamed wisteria flowers" calls for "1 Tbsp soy sauce" and "1 tsp hot soybean sauce" (p. 81).

A recipe for "Vegetarian's *jiao-zi* (*Su-jiao-zi*)" calls for "3 Tbsp soy sauce (*sheng-chou*, 2 Cc)" and (optional) "2 Tbsp hot soybean sauce" (p. 97-98).

Jiang-you (W.-G.: *Chiang-yu*). (2 Cc) ('soy sauce'). "Various types of liquid prepared after the fermentation of soybean with inoculation of *Aspergillus*" (p. 474). Address: Botanist, Arnold Arboretum, Harvard University; Honorary Professor of Chinese Medicine, The Chinese University of Hong Kong.

8378 Kwan, Choi Wah (Guan, Caihua). 2005. Ying Yue zi dian English-Cantonese dictionary: Cantonese in Yale romanization. Hong Kong: The Chinese University Press. 579 p. *

• ***Summary:*** On page 495 are the following Cantonese definitions / words: Soy (noun): baahkdau; wohngdau * soy sauce (noun): sihyauh (M: jeun; di).

Soybean (noun): baahkdau; wohngdau * soybean milk (noun): dauhjeung (M: wun).

8379 Lee, Jeyseon; Lee, Kangjin. 2005. Korean dictionary and phrasebook. New York: Hippocrene Books. 311 p. [17 ref]

• ***Summary:*** This is both a Korean-English and an English-Korean dictionary. Korean characters are given for each word in both parts.

Page 21: *gan-jang* means soy sauce.

Note: This is the earliest English-language document seen (April 2012) that uses the term *gan-jang* to refer to Korean soy sauce.

Page 35: *doen-jang* means soybean paste. *doen-jang jji-gae* means soybean paste stew.

Page 80: *kong-na-mul* means [soy] bean sprouts.

English-Korean–Page 93: The Korean word for "bean" is *kong* and for bean sprout is *kong-na-mul*.

Page 135: The Korean word for "pea" is *kong*.

Page 151: The Korean word "soy sauce" is *gan-jang* and for "soybean" is *kong*.

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Page 260: The Korean word for "bean sprout soup" is *kong-na mul-kkuk* and for "boiled tofu" is *du-bu jo-rim*.

Page 263: The Korean word for "red-pepper paste" is *go-chu-jang*, for "soybean paste" is *doen-jang*, and for soy sauce (again) is *gan-jang*.

Also (p. 263): The Korean word for "sesame oil" is *cham-gi-reum* and for "sesame seed" is *kkae-so-geum*. Address: 1. Lecturer in Korean and supervisor of Korean language courses, Univ. of California at San Diego.

8380. Moriyama, Naomi; Doyle, William. 2005. Japanese women don't get old or fat: Secrets of my mother's Tokyo kitchen. New York, NY: Delacorte Press. 274 p. Illust. Index. 22 cm. [50+ ref]

• ***Summary:*** From the publisher's description: "Japanese-born Moriyama reveals the key to the enduring health and beauty of Japanese women. The Japanese eat one of the most delicious, nutritious, and naturally satisfying cuisines in the world without denial, without guilt, and, yes, without getting fat or looking old. If you think you've eaten Japanese food, you haven't tasted anything yet. Japanese home-style cooking isn't just about sushi and raw fish but good, old-fashioned everyday-Japanese-mom's cooking that's stood the test of time–and waistlines–for decades. Reflected in this are the age-old traditional values of family and the abiding Japanese love of simplicity, nature, and good health. It's the food that millions of Japanese women eat every day to stay healthy, slim, and youthful. Even better, it's fast and easy. If you're tired of counting calories, counting carbs, and counting on diets that don't work and don't satisfy, it's time to discover this."

Traditional Japanese soyfoods are mentioned throughout this book, always in a very positive way and in recipes. Japanese generally eat soyfoods in their more natural and less processed forms such as tofu, miso, natto, and edamame–and rarely in the forms of soy supplements, soy shakes, soy burgers, soy energy bars, etc. that are so popular in the West.

Chapter 5, "The seven pillars of Japanese home cooking," states (p. 122) that they are "fish, vegetables, rice, soy, noodles, tea and fruit." Soy, "The fourth pillar," is discussed very nicely on pages 181+.

Here is the number of pages on which various foods are mentioned: Tofu 56 (incl. silken tofu {kinugoshi}, cotton tofu {momen, regular}, atsu-age {deep-fried tofu cutlets}, usu-age {deep-fried tofu pouches}, yakidofu or broiled tofu). Miso 50 (incl. p. 91-92, 99-100). Soy sauce 50. Edamame 12. Shoyu 3 (p. 75, 114, 121). Natto 2 (p. 184, 188). Okara 1 (p. 184). Yuba 1 (p. 184). Also many reference to sea vegetables (hijiki, kombu, nori). A photo on the inside rear dust jacket shows the authors: she was born in Tokyo, and he is an American who has written or cowritten five books.

Note: The paperback edition of this book (only) mentions "The Japanese Skincare Revolution: How to Have the Most Beautiful Skin" in connection with tofu. Address: Wife and husband live in New York City.

8381. Park, Kun-Young; Jung, Keun-Ok. 2005. Fermented soybean products as functional foods. Functional properties of doenjang (fermented soybean paste). In: John Shi, C.-T. Ho, and F. Shahidi. 2005. Asian Functional Foods. Boca Raton, Florida: CRC Press. xxi + 647 p. See p. 555-96. Chap. 20. [121 ref]

• ***Summary:*** Contents: Introduction. History of Korean soybean fermented foods. Manufacturing methods and characteristics of doenjang fermentation. Functional properties of doenjang: Nutritional and functional components in soybean and doenjang, safety of doenjang, antimutagenic activity of doenjang. Anticancer effect of doenjang. Increased chemopreventive effect of doenjang: Antioxidant effects, reduced cardiovascular diseases (fibrinolytic effect {as in chungkookjang and natto which secrete strong fibrinolytic enzymes}, antihypertensive effects, reduced serum cholesterol level), other possible functions of doenjang. Conclusion.

Doenjang is "Korean fermented soy paste" and kanjang is Korean-style fermented soy sauce that is obtained by filtering off the liquid from doenjang. "Historically soybeans and processed soybean foods have been the main protein sources in the Korean diet" (p. 555). "The medicinal functions of doenjang were first described in the *Dongeuibogam* [*Dongui Bogam* (*RR*), *Tongui Pogam* (*MR*)] (1613 A.D.), which was a popular traditional Korean medical text" [no citation given].

The section titled "History of Korean soybean fermented foods" contains what promises to be a number of references to early and possibly very interesting documents that mention soybeans and soyfoods in Korea. Yet the authors fail to cite any of them properly, so for the time being, we must accept their account of what the documents say. The problems are: (1) None of these documents (except one, Ref. #46) is cited in the long list of references at the end of the chapter. (2) The title of all these documents is given only in Korean, even though at least two should have Chinese titles; one of those two (described as "The Chinese agricultural technology book, *Jeminyosul* {A.D. 530 to 550} written by a governor, Maeeunsa,...") is actually the famous *Qimin Yaoshu*, by Jia Sixie. (3) We are never told in what language the original document referred to is written. (4) The page number(s) on which the ancient, important information appears is not given for any of these documents. (5) For some documents no date is given, whereas for others no author is given. (6) It is not clear what names were used to refer to each of the various soyfoods in the original documents. (7) The authors never tell us whether they examined the original document, or read a contemporary version, or simply got the information from a secondary source.

For example (all dates are A.D.): 99–It has been reported

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[by what document?] that soybeans were cultivated–Where were they cultivated?

530-550–The *Jeminyosul* [*Quimin Yaoshu*] states (in Chinese) that shi [fermented black soybeans], soybeans fermented with bacteria, in Korea were disseminated to China and Japan.

683 Feb.–An article [no title given] by King Sinmoon, that appeared in the 3rd year of his reign (during the Silla dynasty), mentioned the words *jang* (mold-fermented soybeans) and *shi* (bacteria-fermented soybeans).

701–*Daeboyulryong* mentioned the words jang, shi, and maljang, which referred to soybean products.

739–*Jungchang Wonmooseu* also mentioned the word maljang.

Donga (no date given), which was written by Shinjungbaesuk (is that the writer's real name?) in Japan, "indicated that maljang was imported from Korye (the old name of Korea)," it was renamed "miso" (Source: Ref. #46–35th Chronicle of Korea Soy Sauce Industrial Cooperative. 1997. Seoul. p. 27-32). Korean jang is said to have developed into traditional Japanese miso using meju made of soybeans and rice instead of maljang, which was made from soybeans only.

918-1392–During the Korye [Goryeo] dynasty, [in Korea] the name "maljang" changed to "maejyo" and then to "meju" [meaning soybean koji in the shape of balls or cones]; it was soaked in brine in a clay pot and ripened [then filtered]. The liquid was called *kanjang* (soy sauce) and the solid sediment was called *doenjang* (soy paste).

1613–*Donguebogam* [see above], written by Hurjun, described how to make medicinal doenjang using soybeans and how to fix soured doenjang.

1760–*Jungbosan Limkyunge*, written by Yojungim, "introduced 45 different processing methods for soybean foods, describing how many days fermentation for jang, selection of water, salt quality, how to handle the pottery, fixing jang with an off-taste, etc."

1790 ca–*Kyuhap Chongseo*, written by Madam Lee (lived 1759-1824) described the proper methods for making the various types of jang in great detail.

1930 ca.–Commercial production of fermented soybean products ("jang" in Korean) started in Japanese-built jang factories in Korea during the occupation (1909-1945) to supply soybean products for the Japanese in Japan.

1945–After gaining independence from Japan, Koreans took over the factories. Since the Korean war (1950-1953) military personnel and people living in large cities have mostly consumed commercial fermented soybean products, whereas families living in rural areas still prepare their own. Address: Pusan National University, Busan, Korea.

8382. Shi, John; Ho, Chi-Tang; Shahidi, Fereidoon. 2005. Asian functional foods. Boca Raton, Florida: CRC Press. xxi + 647 p. Illust. Index. 24 cm. Series: Nutraceutical Science and Technology.

• ***Summary:*** Contents: Preface. About the editors. Series introduction. Contributors. Table of contents. 1. Functional foods and their impact on nutrition and health: Opportunities in the Asia Pacific. Contains two chapters on fermented soyfoods (Chap. 19, Miso, and Chap. 20, Doenjang) which are cited separately.

The Preface begins (p. v): "Health and 'healing' foods have a long history in Asian cultures." Asians such as the Chinese and Indians have long known that food and medicine come from the same source; they can treat illnesses and build a healthy life. Since ancient times, Chinese have compiled a remarkable amount of information about the materia medica, the use of natural substances–plants, animals, and chemical–to treat illness.

Kudzu (*Pueraria lobata, ge geng*), one of the earliest medicinal plants used in traditional Chinese herbal medicine, is discussed on pages 83-86.

In chapter 7 titled "Traditional Functional Foods in Korea," the section on "Fermented soybean foods" (p. 165-66) states that typical daily per capita consumption of these foods are: Soy sauce 20 ml, soy paste 20 gm, and hot soy paste 10 gm. In recent years there has been a decrease in soy intake due to increased use of Western seasonings such as mayonnaise, tomato ketchup, meat sauces, etc.

In Chapter 8, titled "Evolution of Korean dietary culture and health food concepts," the section on "Food as medicine" begins (p. 210): "In traditional Korean culture, food was regarded as the basic source of health. It was believed that all diseases could be cured by foods. Korean knowledge of the medicinal effects of foods came, not through the sciences of nutrition, medicine, chemistry, or physiology, but through long human experience. Moreover, a key practice and discipline has long been to eat only when hungry, and not to overeat. The enormous size of the health food market in Korea today reflects the country's long tradition of 'food as medicine.'"

Page 229: "Micronutrients." Asian fish sauces are good sources of vitamin B-12 (cobalamine) because they are made from animal protein. Fish sauce from Thailand contains 1.91 mcg (micrograms) per 100 ml. This amount protects the Thai population from megaloblastic anemia caused by vitamin B-12 deficiency. The estimated average requirement for vitamin B-12 is only 2 mcg per day. However fermented soybean sauce contains very little (0.14 mcg per 100 ml); the small amount present is attributed to microbial synthesis.

Page 230: "The high salt problem." Japanese men rank highest in daily per capita sodium intake at 5.4 gm; the United States, Thailand, and New Zealand each average about 3.9 gm.–72% as much, or 28% less. Some cultures consume as little as 0.69 gm / day.

Pages 248-49: "Future potential for fish sauce." It is unclear whether fish sauce was first developed in Asia or Europe. But while it has vanished in Europe, it has become

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a thriving industry in Southeast Asia–perhaps because the extensive use of bland-tasting rice requires a salty and tasty protein-rich seasoning. Several species of anchovy are the preferred raw material for fish sauce. Some say that soy sauce was first developed in Japan. Address: 1. Research Scientist, Federal Dep. of Agriculture and Agri-Food Canada, Ottawa, Ontario, Canada; 2. Rutgers Univ., Rutgers, New Jersey; 3. Memorial Univ. of Newfoundland, St. John's, Newfoundland, Canada.

8383. Trieu, Thi Choi; Isaak, Marcel. 2005. Authentic recipes from Vietnam. Singapore: Periplus Editions. 112 p. Illust. (photos by Heinz von Holzen). Recipe index. 28 cm. Introduction by Annabel Jackson-Doling.

• ***Summary:*** This book often reads as if it were a written to attract tourists to Vietnam. Contents: Food in Vietnam. The imperial cuisine. The ascending dragon. Homestyle Vietnamese cooking. Cooking methods. Authentic Vietnamese ingredients (incl. tofu {p. 23}, pressed tofu {tau kwa or tou gan}, and firm tofu). Recipes.

Vietnam is in the shape of an "S" with the eastern coastline 1,600 miles long from north to south, yet only 30 miles across at the narrowest point. The country fades from cool in the north to tropical in the south. The two main deltas are the Red River Delta in the north and the Mekong Delta in the south. Vietnam is the 3rd largest rice exporter in the world after Thailand and the USA. About 60% of the arable land is devoted to rice production. Hue, in central Vietnam, was the capital of Vietnam from 1802-1945. Today Ho Chi Minh City (formerly Saigon) is the largest city in Vietnam (p. 5-8).

The section titled "The Imperial cuisine" (p. 11) is about Hue, on the banks of the Perfume River in central Vietnam. Now a rather small and sleepy place, Hue traditionally served as a cultural, educational, and religious center. It "is the site of the country's most important Buddhist monasteries and temples. It was also the political capital of Vietnam under the thirteen emperors of the Nguyen Dynasty." Hue "once inspired the creation of the most sophisticated Vietnamese cuisine [under Tu Doc (1848-1883)] and took vegetarian cuisine to even higher heights than those reached by masterful Chinese chefs."

Soy related recipes include: Yellow bean sauce (Nuoc tuong, with "3/4 cup {4 oz / 120 gm} dried yellow soy beans, boiled and drained," p. 26). Soy sauce dip (Nuoc tuong toi ot, with "¼ cup {60 ml} soy sauce," p. 26). Braised mushrooms with soy sauce (Nam xao nuoc tuong, with "2 tablespoons soy sauce," p. 49). Crab soup with tofu and rice noodles (Bun rieu, with "1 cake pressed tofu {about 7 oz / 200 gm}," p. 57). Fried tofu with lemongrass and five spice (with "4 cakes pressed tofu {about 18 oz / 600 gm in total}, halved and pressed between paper towels to remove moisture." p. 64). Stir fried water spinach with yellow bean sauce (Rau muong xao tuong, with "2 tablespoons Yellow Bean Sauce." p. 67).

The word "soy" is mentioned on pages 3, 13, 20, 26, 36, 39, 49, 72, 75, 81, 82, 88, 99, and 111.

8384. Yu, Ki-Yull. 2005. Seed production and distribution in Korea. Seoul, Korea: Sein Pub. Co. 143 p. Illust. 23 cm. [10+ ref]*

• ***Summary:*** Soybean is mentioned on pages 36, 70, 108 and 6 others. Ganjang (soy sauce) is mentioned on page 108.

8385. Gavin, Robert. 2006. Meat-like qualities whet the US appetite for tofu. Biologist tackles taste, texture issues. *Boston Globe*. Jan. 2.

• ***Summary:*** Xiang F. Kong has developed a new tofu product named Tofettes, in flavors such as teriyaki, barbecue, and Jamaican jerked. He starts by making tofu. To achieve a meat-like texture, he employs a press that uses "precise heat and pressure," established through a long process of trial and error. The extra firm tofu is then cut into small pieces and fried briefly in vegetable oil. The resulting tofu has a unique texture and ability to take on new flavors. Address: Globe staff.

8386. Smith, Andrew F. 2006. Soy [sauce] and ketchup / catsup (Interview). *SoyaScan Notes*. Jan. 12. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** William Shurtleff called Smith, who had written a book on the history of ketchup (*Pure Ketchup*), to ask why there were recipes in early American cookbooks titled "Tomato Soy" (Randolph 1838, p. 163) and "Soy" (Beecher 1850, p. 72) which did not call for soy [sauce] as an ingredient and did not even mention "soy" in the body of the recipe.

Smith: The price of the soy sauce imported to America from Asia in the late 1700s and 1800s would have been very high. Importers may have adulterated this soy sauce to obtain more and reduce the price. Andrew thinks that the "soy" called for in early American cookbooks would probably not have been real soy sauce; that is, it may not have been made with soybeans–you don't know for sure. Soy is a generic concept; it's like the term "ketchup," which is also a generic term. "Ketchup" and "soy" were used interchangeably. There were probably only a handful of people in 19th century America who knew was "soy" really was, and most of those did not realize that soy sauce was made from soybeans. And soy was certainly not a major part of the American diet or cookery. Mary Randolph could use the word "soy" in place of ketchup and not even give it a second thought. Ketchup is a sauce that is made from a single food product (such as mushrooms) with added spices. Soy was the same. It wasn't necessarily made from soybeans.

Once a term is adopted, like ketchup in England, it becomes an "in" word, and people then use the word to mean other things. These words are not yet clearly defined.

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In the United States, Noah Webster's *American Dictionary of the English Language* did not appear until 1828. It states "Catchup or Catsup: A liquor extracted from mushrooms, used as a sauce." "Catsup: *see* Catchup, Ketchup." "Ketchup: A sauce. *See* Catchup." "Soy: A kind of sauce used in Japan."

Mary Randolph ran a boarding house. If someone came in with a "Tomato soy" recipe, she would probably have said "Okay, fine."

If a cook goes somewhere and samples or buys a little real soy [sauce], and finds it to be tasty, her / his goal is to go home and try to develop a kitchen recipe for it–just as with ketchup. Ketchup was originally a fermented sauce from Indonesia which included soybeans. When it arrived in England, people tried to duplicate it. Recipes are interesting in that they first show us that people were using the word "soy" to refer to sauce that contained no real soy sauce. People did not feel the need for clear definitions in the area of recipes, and especially with the terms "ketchup" and "soy." It really isn't until sauces become commercialized that clear definitions become necessary.

Concerning terms like "India soy" and "Indian soy," Shurtleff notes: Japan was closed to foreign trade until about 1868. The one exception was the Dutch trading post on the tiny island of Deshima in Nagasaki Bay in southern Japan. From there, Dutch trading ships would transport Japanese shoyu to their own network of trading posts in Southeast Asia, and to the southern tip of India, where they would sell it to the British East India Company. But, of course, they would not tell the British where it was made. So the British began calling it "India Soy" or "Indian Soy," even though (as far as we know) no soy sauce was made in India. Smith adds: The Dutch probably also traded Indonesian ketchup (kecap: Indonesian-style soy sauce, made in Indonesia) with the British, but there is less evidence of this.

In 1684, the British established a settlement on Sumatra named Bencoulin [Benkulen, Bengkulu] (alternatively spelled Bencoelen, Benkulen, Benkoelen). "It served as a center of the British pepper and spice trade during the late 17th and early 18th centuries. At the time of its founding, Bencoulin was the only British settlement in Southeast Asia." In 1825 the settlement was handed over to Dutch control in exchange for the Dutch colony of Malacca on the Malay Peninsula [in today's West Malaysia on the Strait of Malacca].

"Only one ketchup recipe known to have originated in Southeast Asia has survived. It was published by Richard Bradley in the 1732 edition of his *Country Gentleman and Farmer's Monthly Director.* The recipe was titled "Ketchup in Paste" (see Part 2, p. 150) and its main ingredient was kidney beans–which almost certainly referred to soybeans. Rich in spices, it contained no salt or sugar, so it could not have lasted for any length of time. "It appears to have had no influence on subsequent cookery writers." In short, the British first discovered ketchup–and began using the word–on the southwest coast of Sumatra, in today's Indonesia, in Bengkulu, on the Indian Ocean. That ketchup was probably Indonesian-style soy sauce. They tried to duplicate it when they returned to England, but since they didn't have soybeans, and didn't even know it contained soybeans, they developed a host of alternative recipes–based on mushrooms, walnuts, anchovies, etc.

Isn't it strange, that soy sauce was never adopted or became popular in the Netherlands, as it did in England. This raises one real question. Also: Why are there so few early records concerning soy sauce in today's Indonesia? Another question is whether the terms "India soy" and "Indian soy" refer to today's India or to the Dutch East Indies. Address: 135 Eastern Parkway, #11a, Brooklyn, New York 11238.

8387. Shurtleff, William. 2006. Thoughts and questions concerning Dutch traders, the Dutch East India Co. (VOC), soy sauce in the Dutch East Indies and the Netherlands, and the words "catchup," "catsup," "ketchup" and "ketjap" (Editorial). *SoyaScan Notes*. Jan. 15.

• ***Summary:*** During the 1600s and 1700s, traders and merchants of the Dutch East India Co. in Asia greatly preferred Japanese shoyu [soy sauce] to Indonesian kecap / ketchap [soy sauce]. In the 1640s, the Dutch replaced the Portuguese as the only nation allowed by Japan's ruling shoguns to trade with Japan. Dutch traders purchased Japanese shoyu from their trading post at Deshima, then filled orders for it from their many trading posts in the Dutch Indies (today's Indonesia and parts of India), where it was used to season foods. Dutch traders also sold it in India to British East India Co. traders, who shipped it back to England and on to the United States; in both these places it became quite popular–much more popular than it ever became in the Netherlands. The British had no access to Japan; the only way they could obtain Japanese soy sauce was to buy it from the Dutch East India Co. In short, the Dutch were the first foreigners to buy, sell, and use Japanese soy sauce.

It seems very surprising that, during this period, there is almost no evidence that these Dutch traders were importing any kind of soy sauce to the Netherlands.

Soy sauce was in England by 1679, when it was reported by John Locke in his journal. This is also the earliest date seen for soy sauce in Europe. It was not reported in the Netherlands until 1727; that year the German physician and traveler Engelbert Kaempfer wrote: "This *Soeju* [shoyu, or soy sauce] is exported by the Dutch, and brought even into *Holland*."

From 1641 to 1858 there was a Dutch East India Co. trading post on Deshima, an artificial an island in Nagasaki harbor, Kyushu. The earliest date seen for a shipment of shoyu from Deshima by Dutch traders is 1651.

About 20 years earlier, in 1619, the Dutch built Batavia [today's Jakarta] and established a settlement on Java [part of

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today's Indonesia].

When the British started buying "Ketchup" from the Dutch (1) What type of Ketchup was it? Sweet or salty. Perhaps we could find the answer by doing a careful analysis of its early imitations–mushroom, walnut, and oyster ketchup. Were they basically sweet and thick like the more modern kecap manis, or were they thinner and salty–like ketjap asin or like Japanese or Chinese soy sauce? (2) Where in the Dutch East Indies was it made? (3) At which trading post did the Dutch East India Co. sell it to the British East India Co. (4) When did the earliest known sale take place and where is it recorded? (5) In what type of containers was it packaged and shipped?

If only one VOC ship a year was allowed to export Japanese goods (including soy sauce) from Deshima, the VOC would plant that shipment very carefully to maximize profits. Why would they want to sell the soy sauce at wholesale prices to the British East India Co.

The best way to understand what early ketchup was, is to study it together with soy sauce–not by itself, alone.

Did the VOC or the Dutch ever import soy sauce from the Dutch East Indies to the Netherlands? If so, starting when? What did they call it? Did they import different types?

When did soy sauce first appear in Holland / The Netherlands?

What were the characteristics of earliest homemade ketchup recipes in English–make a table of ingredients with date down left column. Did they tend to be sweet or salty? When salty, how was the salty flavor obtained? The savory flavor? Were any early ones fermented? Or just aged? Address: Founder and owner, Soyfoods Center, Lafayette, California. Phone: 925-283-2991.

8388. Welters, Sjon. 2006. Ketjap and soy sauce in the Netherlands (Interview). *SoyaScan Notes*. Jan. 15. Conducted by William Shurtleff of Soyfoods Center

• ***Summary:*** Sjon first became aware of soy sauce as a child in the Netherlands in the late 1950s, when he was introduced to ketjap (sweet Indonesian-style soy sauce). When a person says "ketjap" in the Netherlands (then, as now), they mean "ketjap manis" (pronounced KET-jap MAN-is), the sweet, thick type. People usually say simply "ketjap"; they rarely say "ketjap manis," even though that is the product name on the label. If you asked for "ketjap" in an Indonesian restaurant in the Netherlands, they would almost always bring ketjap manis.

He was first introduced to salty soy sauce years later when he became interested in macrobiotics and Japanese-style soy sauce. Sweet Indonesian-style soy sauce is sold at many supermarkets in the Netherlands, however it is usually in the special section reserved for Indonesian products; salty Indonesian soy sauce is not typically sold in that section. In the Netherlands, ketjap manis is definitely thicker than Japanese soy sauce, but not as thick as American tomato ketchup. It's consistency is more like miso-damari; if you tilt the bottle, it pours by itself. Note: Ketjap manis is fairly similar to *tonkatsu sauce*, very popular in Japan as a seasoning for deep fried foods. *Tonkatsu* means "breaded pork cutlet" (deep-fried)

For more information on ketjap manis and a color photo, go to the Conimex website (www.conimex.com). Conimex, a Dutch company specializing in the import of Indonesian food, was founded in 1932 and is now owned by Unilever. The website states: "It all started with the import of Indonesia's most important basic ingredients like spices, ketjap (sweet soy sauce) and sambal (chili paste)."

In the Netherlands, Maggi (pronounced MA-hi) is very widely used as a seasoning instead of salty Indonesian soy sauce. Made now by Nestlé, it is sold among the regular non-ethnic foods and seasonings in Dutch supermarkets. There is a special flavor in Maggi, called *lavas* (lovage, or "Maggiplant") in Dutch, that Sjon likes very much.

Note: Talk with Anneke de Weerd Shurtleff. The ingredients in Conimex Ketjap Manis are: Sugar, soya sauce (25%, water, soyabeans, salt, wheat), water, molasses, salt, brown sugar, burned sugar syrup, preservative E-202, nutrition acid E-270, aroma (with celery), bay / laurel extract. Store in a cool, dark place. The ingredients in Maggi (a concentrated liquid bouillon seasoning) are: water, hydrolyzed corn gluten and soy protein, salt, artificial flavor. "Improves vegetables, gravies, soups and stews." Address: Founder and owner, Rhapsody [natural foods restaurant], 28 Main St., Montpelier VT 05062. Phone: 802-229-6112.

8389. Tullo, Alex. 2006. Givaudan and IFF [International Flavors & Fragrances] plan to revamp: Moves may be coincidental rather than emblematic of a struggling industry. Flavors and fragrances. *Chemical and Engineering News* 84(3):6. Jan. 16.

• ***Summary:*** Richard A. Goldstein, CEO of IFF, plans to cut 300 jobs. By mid-2007, Givaudan, plans to close plants in New Milford, Connecticut and Oconomowoc, Wisconsin, and to transfer jobs from these sites to plants in Cincinnati, Ohio, and Devon, Kentucky. "The New Milford plant makes savory flavors, including hydrolyzed plant proteins (HPPs)."

Givaudan also plans to discontinue production of "commodity-type savory base-note flavors such as HPPs and yeast extracts. These business generate about $35 million a year in sales.

In 2002 Givaudan acquired Nestle's FIS (Food Ingredients Specialties) unit and is still working to integrate those abundant assets.

8390. Maggi–The company's history (Website printout–part). 2006. www.museedelapub.org/virt/mp/maggi/index_anglais.html. Printed Jan. 17.

• ***Summary:*** A good company timeline with many photos. 1870–Julius Michael Johannes Maggi (1846-1912) [also

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called "Jules Maggi," especially in French], of Switzerland, inherits the family business: a mill in Kemptal, near Zurich.

"1883–Several women were factory workers; thus the time available for housework and the preparation of meals was considerably reduced, and working class families suffered from poor nutrition. In view of this state of affairs, the doctor Schuler recommended the wide use of dried vegetables: peas and beans give their rich nutritive value. Julius Maggi produced appliances [equipment] for roasting and grinding these vegetables, to make flour from peas, beans, lentils, etc., enabling housewives to make a quick nourishing soup. Eventually Maggi put his instant product–vegetable powders–on the market, under his friend Doctor Schuler's patronage. Julius Maggi distinguished his products by a four branches star, with a cross at its heart. The Cross Star trademark was registered."

"1886–Maggi marketed three kinds of powdered 'minute' [instant] soups, presented in a rolled up packet. Industrial fabrication is just beginning, and soon several Maggi depositories opened throughout Europe. Julius Maggi engaged famous artists for his advertising campaigns." Maggi soups were tied to "Women's emancipation."

1889 (Koenig)–[Soybean preparation named "miso" (Made by Jul. Maggi & Co. in Kempthal, sampled in 1888, Study by W. Kisch {personal communication})].

"1890–The Maggi flavour was invented to improve soups. It was composed of vegetable extracts (the same product as today's tablets). Julius Maggi did the drawing on the bottle (which is also the same today)... The *Société Anonyme pour la Fabrication des Produits Alimentaires Maggi* was founded and set up offices throughout Switzerland, Austria, and Germany. Julius Maggi simplified the recipe for bouillon, and made it cheaper. He [then] produced a concentrated bouillon based on meat extracts, first in capsule form, then as a cube."

1895–Firmin Bouisset designed a famous poster for Maggi with a young girl holding up a sign promoting Maggi's products.

1900–At the Universal Exhibition in Paris, Maggi won several medals and grand prizes. Julius Maggi established his headquarters and a factory in Paris.

1912–The Bouillon KUB in bars was launched with a massive promotional campaign. When Julius Maggi died that year the family firm was renamed Société Général Maggi. The first commercial for chick stock, a silent film in black and white, appeared.

1911 (Dahle)–[Shoyu is even used in the well-known Maggi seasoning].

1930–Maggi's star product is the Bouillon KUB. A new Chicken Stock slogan is coined.

1934–A holding company, Alimentaire S.A. takes charge of the business.

1947–Maggi was acquired by Nestlé.

1948–Sopad took over from Nestlé to handle production and marketing of Nestlé and Maggi products in France. Maggi now has 11 factories worldwide. Address: Switzerland.

8391. Global Industry Analysts, Inc. (GIA). 2006. Soy foods–Global strategic business report. 5645 Silver Creek Valley Rd., San Jose, California. 302 p. Jan. *

• ***Summary:*** Publisher description. This report analyzes the worldwide markets for Soy Foods in millions of US$. The specific product segments analyzed are Soy Ingredients, and Soy Oil. The report provides separate comprehensive analytics for the US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Latin America, and Rest of World. Annual forecasts are provided for each region for the period of 2000 through 2010. The report profiles 151 companies including many key and niche players worldwide such as Archer Daniels Midland Company, Dean Foods Company, White Wave, Eden Foods, Inc., Galaxy Nutritional Foods, Inc., Gardenburger, General Mills, Glenn Foods, Greet Spot (Thailand), Griffith Laboratories (UK), H.J. Heinz Co. Hain Celestial Group, Hartz International (Australia), Hazlewood Grocery (UK), Heartland Fields (USA), Hermans Foods (Australia), High Mark Foods (New Zealand), Imagine Foods, Inc., Kerry Group PLC (Ireland), Kerry Ingredients (Australia), Kikkoman (Japan, Australia, USA, Singapore), Kimlan Foods Co. (Taiwan), Kuhne Nederland BV (Netherlands), SoyaWorld, Inc., Turtle Island Foods, Inc., and Vitasoy USA, Inc.

Price: Electronic or hard copy 3,496 euros. Please note: Reports are sold as single-site single-user licenses. The delivery time for hard copies is between 3-5 business days, as each hard copy is custom printed for the organization ordering it. Electronic versions require 24-48 hours as each copy is customized to the client with digital controls and custom watermarks. Address: San Jose, California. Phone: 408-528-9966.

8392. *SoyaScan Notes*.2006. Chronology of the Dutch East India Company (VOC), 1602-1799 (Overview). Feb. 6. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Throughout the 16th century (1500s), Portugal became fabulously wealthy from its monopoly of the spice trade in the East Indies. Like many commercial advantages of the time, this was achieved by control of sea routes, especially domination of the route to the East Indies via the Cape of Good Hope (at the southern tip of Africa).

A well-organized Protestant church movement developed in the Netherlands, and the dissatisfaction with Catholic Spain coincided with the Protestant revolt against the Roman Catholic Church.

1566–Anti-Catholic riots spread across the Spanish Netherlands. Philip II of Spain sends his troops whose harsh actions result in open revolt.

1568–The 80-year war of independence by the Dutch

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against Spain begins (ended 1648).

1579–Signing of the Union / Treaty of Utrecht with Spain marks the foundation of the United Provinces. These are the 7 northern Protestant provinces of Holland, Zeeland, Utrecht, Gelderland, Groningen, Friesland, and Overijssel. The 7 provinces that joined the union would eventually become the Netherlands; the 10 southern Catholic provinces that did not would become Belgium.

1581–The Union of Utrecht (United Provinces) declare independence from Spain.

1596–Dutch merchants begin trading with Jayakarta (today's Jakarta).

1600–The Dutch ship *Liefde* is stranded in Usuki Bay, Japan; the first Dutch contact with Japan.

1600–The Honourable East India Company is established in London, Europe's first such international trading company. The Tokugawa shogunate begins in Japan.

1602 March 20–The Dutch East India Company (*Verenigde Oostindische Compagnie, VOC*–literally "United East Indies Company") is established by Dutch merchants, when the Estates-General of the Netherlands granted it a monopoly to conduct trade, business and colonial activities in Asia. It was the world's first company to issue stocks and the first multinational corporation. The VOC eventually became the world's largest company, in existence for over 200 years. It built over 1,600 ships called East Indiamen.

The VOC consisted of 6 Chambers (*Kamers*) in Amsterdam (with 8 delegates), Middelburg (for Zeeland; 4 delegates), plus Enkhuizen, Delft, Hoorn, and Rotterdam (1 delegate each). Delegates of these chambers convened as the *Heeren XVII* (the Lords Seventeen). Because of its majority 8 delegates, the Amsterdam bloc basically decided policy. The start-up capital was 6.4 million Gulden, raised by the 8 chambers, of which 27% came from Amsterdam. This capital was raised by selling VOC stock to 1,143 subscribers.

1603 Dec. 18–The first VOC fleet of 12 ships sails under the command of Steven vander Hagen.

1605–VOC first lands in Asia. Armed Dutch merchantmen capture the Portuguese fort at Ambon (Amboyna / Amboina, a town and island in the Moluccas, in today's eastern Indonesia) and take control of the island which was the most important of the Moluccas (Spice Islands) at this time. The Portuguese had established a factory here in 1521; it was the source of their clove monopoly. This fort is developed in the VOC's first secure fort. Ambon was the headquarters of the VOC from 1610 to 1619 until the founding of Batavia (now Jakarta) by the Dutch.

1609–VOC factory (comptoir, trading post) established on site of Jacatra / Jakatra (today's Jakarta) by Dutch merchant Jan Pieterszoon Coen. Located at the far western end of the island of Java, it becomes the headquarters of the Dutch East India Company, which gradually extends control over neighboring sultanates and principalities.

1609–First VOC factory (trading post) in Japan established on the island of Hirado (Por. Firando), off Japan's southernmost island of Kyushu (northwest of Nagasaki).

1609–Twelve Years' Truce, signed in Antwerp, calls a halt to hostilities between Spain and the Seventeen Provinces.

1610–Small walled town of Paliacatta (also spelled Paliacatte; today's Pulicat) established on the east coast of southern India. It soon becomes the chief Dutch settlement and headquarters of the VOC factories on the Coromandel Coast. At its center is Fort Geldria, with its permanent garrison of Dutch soldiers, its cannon and armory to protect the various Company trading posts along the Coromandel Coast.

1612–Fort established on Ceylon (today's Sri Lanka).

1613–As early as this year, VOC leaders recognize the importance of direct trade with China. However attempts to establish a settlement on the Chinese coast in the early 1600s are not successful.

1615–Powerful Dutch merchant Isaac Le Maire tries to break the VOC monopoly on trade routes to the Indies by sailing westward through dangerous and uncharted waters around Cape Horn, the southernmost tip of South America and into the Pacific Ocean, avoiding the VOC-controlled Straits of Magellan. The ship arrived in Jakarta in Oct. 1616, to the amazement of Governor-General Jan Coen.

1616–Danish East India Company founded.

1619–The Dutch attack and destroy Jayakarta (Jakarta, Jacatra). East of the ruins they build a new coastal town, which Coen names Batavia (essentially he renamed Jayakarta). Batavia becomes the headquarters of the VOC and of Dutch colonial power in Asia for almost 350 years.

1621–Banda Islands (in today's south central Moluccas, Indonesia) conquered by the VOC, which establishes its monopoly over nutmeg and mace there.

1621–Dutch West India Company founded. In 1624 this Dutch West India company establishes a settlement in New Amsterdam (now Manhattan, New York).

1622–VOC attack on the Portuguese in Macao / Macau fails.

1624–Chinese armies drive the VOC from the Pescadores Islands. A fortified settlement on Formosa (Taiwan) becomes VOC's base for trade with China until 1662.

1633–St. Helena island in the South Atlantic Ocean becomes a supply station.

1635–The Portuguese blockade Malacca (until 1640).

1638–Goa (capital of Portuguese India) blockaded by Dutch fleets (until 1644).

1638–Beginning of VOC's conquest of the coast of Ceylon near Kandy.

1639–The Portuguese are expelled from Japan by the shogun.

1641–The Dutch put a blockade on Melaca / Malacca

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(the city in today's Malaysia that controls the crucial Straits of Malacca) then seize the city from the Portuguese after 6 months. They keep this hold on Melaka for the next 150 years.

1641–The VOC trading post on Hirado (closed in 1640 by the shogun) is moved to the tiny artificial island of Deshima in Nagasaki Bay, where the men are kept as virtual prisoners (with more severe restrictions than before Shimabara Revolt and the seclusion {*sakoku*} of Japan in 1641) and allowed only one trading ship a year. The Dutch are the only Europeans allowed to trade with Japan for the next 200 years–until 1853.

1648–Treaty of Muenster ends the 80-years' war; Spain recognizes the sovereignty of the Dutch Republic, which is now the foremost commercial and maritime power in Europe, and Amsterdam is the financial center of the continent.

1651–Repeat of the war with Portugal in the Indies–in Ceylon and on the Malabar Coast of southwest India.

1652–Jan van Riebeeck establishes a supply station at Table Bay, the first European settlement near the Cape of Good Hope (on the southern tip of today's South Africa). This post later became a full-fledged Dutch colony, the Cape Colony.

1652-54–First English-Dutch sea war.

1658–Dutch replace Portuguese in Sinhalese kingdom (Ceylon) as the occupying power.

1661–Beginning of the definitive campaign (completed in 1663) to drive the Portuguese out of the Malabar Coast and to control their production of pepper.

During the 1600s (17th century), British and Dutch traders became bitter rivals in international commerce.

1662–VOC is driven out of Formosa / Taiwan by Ming Chinese troops under the command of Cheng Ch'eng-Kung, known to Europeans as Koxinga. In 1684 Manchu troops occupy Formosa.

1664–French East India Company founded.

1665-67–Second English-Dutch sea war.

1667–Dutch seize town of Macassar (Ujung Pandung) and develop trade monopoly in Makassar Strait (in today's Indonesia between East Borneo and West Sulawesi).

1667–VOC takes trading post at Achem (Aceh), the native kingdom of Sumatra.

1669–The VOC is now the richest private company the world has ever seen, with over 150 merchant ships, 40 warships, 50,000 employees, a private army of 10,000 soldiers, and a dividend payment of 40%. By now, the company is in almost constant conflict with the English. Moreover, the VOC has now grown to become a state within a state.

1682–Dutch seize Bantam in West Java. VOC outposts were also established in Persia (today's Iran), Bengal (now Bangladesh), Siam (now Thailand), and mainland China (Canton).

Dutch policy encourages monoculture of the fine spices they controlled: Amboyna for cloves, Timor for sandalwood, the Banda Islands for mace and nutmeg, and Ceylon for cinnamon.

During the 17th century, the VOC was the most important European company in the Asia trade, and Amsterdam became Europe's most important market. It took a Dutch ship 3 to 6 months to travel from Holland to Batavia. The trip was risky, in part because of the inherent dangers of bad weather and uncertain navigation, but also because no reliable method of determining longitude was discovered until the 1770s (by John Harrison in England) and measures to prevent scurvy (carrying fresh fruit, vegetables, and sauerkraut) were not put in place until the period 1772-1795.

The 17th century has been called the Dutch Golden Age, in which Dutch trade, science, and art were among the most acclaimed in the world. This Golden Age was caused by wealth, tolerance, and a new national consciousness.

1731–The Swedish East India Company founded.

1780-1784–Fourth war between the United Provinces and England; England wins, capturing many VOC ships and imposing peace terms that enabled it to trade without hindrance from the VOC and to take over key VOC settlements in Asia. After this war, the VOC is in deep financial trouble.

1795 Jan 19–The seven provinces which have comprised the Republic of the Seven United Netherlands proclaim the ***Bataafse Republiek*** (Batavian Republic), rendering the Netherlands a unitary state–one country. From 1795 to 1806, the Batavian Republic designated the Netherlands as a republic modelled after the French Republic.

1799 Dec. 31–The bankrupt Dutch East India Company is nationalized, dissolved and liquidated; its huge debt of 219 million Dutch guilders and all of its property are taken over by the Dutch government.

From 1806 to 1810, the ***Koninkrijk Holland*** (Kingdom of Holland) is set up by Napoleon Bonaparte as a puppet kingdom governed by his brother Louis Bonaparte in order to control the Netherlands more effectively. The name of the leading province, Holland, was used for the whole country. French domination lasted until 1815 when the "United Kingdom of the Netherlands" was formed by the Congress of Vienna at the end of the Napoleonic Wars.

8393. **Product Name:** Re: Ethnic Koreans growing soybeans in Tajikistan or Turkmenistan, and her work introducing soyfoods to these countries.
Manufacturer's Address: Letter (e-mail) to William Shurtleff at Soyfoods Center, Feb. 18.
Date of Introduction: 2006, February.
New Product–Documentation: In Tajikistan she met a couple who lived near Dushanbe. The husband, Victor, was planning to grow soybeans. She gave him some seed grade soybeans to grow, although she had the impression that he

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hadn't grown soybeans before. She sensed that he wanted to grow them because of increased interest in soybeans–for reasons she does not understand. She gave him the seeds that Walter Barrett had given her, because the soybeans she had found in Tajikistan were not of good quality.

Victor led her to a Korean tofu maker, a woman who didn't speak Korean. She supplied tofu to a Chinese restaurant in Dushanbe. She told Helen that she bought her soybeans from Uzbekistan, and said they were expensive. Helen did not ask the woman when she had started to make tofu commercially or what the name of her small business was. Helen does not recall exactly where it was located.

Vera, Victor's wife, sold Korean salads at a green bazaar in Dushanbe. She and other Korean salad vendors at the green markets sold a type of dish made from Chinese TVP, which is white in color and imported from China.

At an import supermarket called Holland Market in Dushanbe, Helen found several Russian-made TVP products and soymilk powder. She also saw soymilk sold in Tetra Pak cartons.

In Ashgabat, Turkmenistan, two Korean men came to talk with Helen at the Winrock office about a soymilk machine.

In the Dashoguz region of Turkmenistan, Helen met two different groups of Koreans (a least 30 people total) who wanted to see her presentation and demonstration of soymilk and tofu production using a SoyJoy machine, along with a display of soy products such as tofu (in a Tetra Pak carton), TVP, soynuts, soy flour, soy protein isolates, energy bars, soy sauce, etc. In some presentations at farms or for women's groups (including the Korean groups), she also prepared soyfoods or Turkmen foods that included whole soybeans.

In Tajikistan, she gave 3 presentations / demonstrations. One at "Salsa Restaurant" in downtown Dushanbe, and two at a cafeteria and at the meat processing lab of the Khujand branch of the Technical College of Tajikistan. She usually ended her presentations with a meal with the participants. Her menu included Pulov [pilaf] (rice with some meat, soybeans, carrots, and onions), soup, salad, and a crepe (using a mixture of wheat flour, soy flour, and some type of local jam).

At the Agricultural University of Tajikistan in Dushanbe, and at the Khujand branch of the Technical College of Tajikistan, she gave technical presentations using an overhead projector with PowerPoint slides showing the nutritional composition of soybeans, and techniques for the preparation of traditional soyfoods and commercial products such as soy oil, soy protein, lecithin, etc.

In Turkmenistan. She gave food preparation presentations. (1) At a farm in the Mary district. (2) At apartment style homes in the cities (Mary district, and Dashoguz). (3) At the Winrock office in Dashoguz for different groups of women. (4) For 2 groups of Peace Corps volunteers in Dashoguz. "Peace Corps was interested in soyfoods because it was suspected that the protein intake of PCVs in that country was not sufficient."

While in Tajikistan and Turkmenistan, Helen did not see any soybeans being cultivated, nor any bundles of soybean plants harvested for green vegetable soybeans.

After her visit: (1) Her soy recipes were translated into the Turkmen language by Winrock staff, but (as far as she knows) they were not printed or reproduced. (2) A 30-page Russian-language brochure on soybeans was created (using desktop publishing) by a group of Peace Corps volunteers in the Dashoguz area. It included planting information and recipes, with colorful pictures and diagrams; about 200 to 300 copies were printed. The produced was funded by the Peace Corps and Helen, however Helen does not have a copy with her in Mexico. (3) Helen prepared a trip report, which is now the property of Winrock International. She did not write much about Koreans in that report.

She includes a Russian-language article on soy a from the newspaper *Asia-Plus* (23 Sept. 2004, p. 4).

Note: This document mentions the earliest known commercial soy products in both Tajikistan and Turkmenistan.

8394. *SoyaScan Notes*.2006. What words for "ketchup" appear in early American newspapers? How often and from when to when? (Overview). Feb. 24. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** An online database titled "Early American Newspapers" (EAN) contains almost all early U.S. newspapers, from 1690 to about 1915 in digitized, computer-searchable form.

The words "ketchup" or "ketchups" appear in about 6,815 issues (mostly in classified ads) from Sept. 1740 to April 1886. Clearly "ketchup" is by far the most commonly used word.

The words "catsup" or "catsups" appear in about 2,756 issues from Nov. 1781 to Sept. 1915.

The words "catchup" or "catchups" appear in about 1,063 issues from 1752 to 1886.

The words "kitchup" or "kitchups" appear in about 104 issues from Nov. 1762 to July 1816.

Other words (listed alphabetically) that produce a small number of hits are: Catchap (2), catchop (6), catsap (12), catshup (9), catsop (18), katchap (2), katchop (1), katchup (23), katch-up (1), ketchap (31), ketchop (36), ketsup (6), and kitchap (5).

The word "soy" appears in a surprisingly large percentage of these ads, often immediately before or after the "ketchup" word.

8395. Krukar, Rudolph. 2006. History of hydrolyzed vegetable proteins (HVP) (Interview). *SoyaScan Notes*. March 7. Conducted by William Shurtleff of Soyfoods Center.

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Address: 757 Birdie View Point, Sanibel, Florida 33957. Phone 239-472-8451.

8396. Krukar, Rudolph. 2006. Personal history and history of his work with hydrolyzed vegetable proteins (HVP) (Interview). *SoyaScan Notes*. March 7. Conducted by William Shurtleff of Soyfoods Center.
Address: 757 Birdie View Point, Sanibel, Florida 33957. Phone 239-472-8451.

8397. Manley, Charles H. 2006. History of hydrolyzed vegetable proteins (HVP) (Interview). *SoyaScan Notes*. March 7. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Discusses: Justus Liebig (developed basic chemistry), Julius Maggi (commercialized the product in Switzerland with many products), Nestle (acquired Maggi in the 1930s), Unilever, World War II (Maggi built HVP plant at New Milford, Connecticut in USA), wheat, corn and soybeans, Aji-no-moto and Suzuki, monosodium glutamate, Japanese fermentation process, Huron, process flavors (started in late 1960s with Dr. May, a Brit who worked for Unilever). Address: PhD, Vice President, Science and Technology, Takasago International Corp. (USA), 4 Volvo Dr., Rockleigh, New Jersey 07647. Phone 201-784-7305.

8398. INTSOY. 2006. Processing and marketing soybeans: Meat, dairy and baking applications, May 1-5, 2006 (Leaflet). Urbana, Illinois. 8 panels. Front and back. 22 x 36 cm.
• ***Summary:*** This glossy leaflet (green and black on white) announces a 5-day course ($1,800) plus the course and an extended workshop schedule ($2,400). The program now has 15 corporate sponsors: The Solae Co., Staeta, Insta-Pro, Proviant, BAR, N.A., Inc., SOI, ADM, Assoy, Wenger, Microsoy Corporation, US Soy, Silk, Kikkoman, Cargill, and Buehler. Course schedule: Welcome, international soymilk processing, success stories, soymilk, and soy products, marketing, soy flour, soy and meat, hot topics (soy infant formula, soy and reduction of chronic disease, soy allergies, quality and stability of soybean oil, specialty soybean varieties, biotechnology of soybeans). A list of featured speakers are given, many are from the corporate sponsors!

Talk with INTSOY employee. 2005. The "short course" has been discontinued; it was established through a grant, has come to an end. The course is now under the aegis of NSRL. In the year 2000 the 4-day course attracted 28-30 people.
Address: National Soybean Research Lab. (NSRL), 1101 W. Peabody Dr., Urbana, Illinois 61801. Phone: (217) 244-1706.

8399. Aihara, Cornellia. 2006. The secret of cooking, from *The Do of Cooking*. *Macrobiotics Today* (*Oroville, California*) 46(3):22-27. May/June.
• ***Summary:*** Contents: Eat locally grown foods in season. Do not waste. The yin yang game / principle in selection of foods. The three stages of cooking (beginner, skillful, master). Don't hurry. Basic suggestions (Main foods should be whole grains. For seasonings use traditional, naturally fermented miso and soy sauce. Tekka, gomashio, hiziki [hijiki], shio kombu). Condiments and spices (incl. soy sauce and miso). Food combination (based on yin and yang). Lunchbox and other tips. Kitchen hints.

Photos show: (1) Portrait of Cornellia. (2) Lima Ohsawa and Cornellia standing together. (3) Cornellia teaching foot massage to David Hammon.

8400. Masuyama, Mike K. 2006. Re: Shiro (white) soy sauce. Letter (e-mail) to William Shurtleff at Soyfoods Center, July 3--in reply to inquiry. 1 p.
• ***Summary:*** Hello Bill. I would like to share the info that Mr. Ninagawa has sent me. 1. Ninagawa does not know the exact first name of Mr. Endo, guessing probably "Yoshinao".

2. There is an association of white soy sauce manufacturers, Tokai Shiro Shoyu Association" (1-16-7 Sakae, Naka-ku, Nagoya, 400-0008, Japan, Phone 011-81-52-221-9501, No e-mail address listed). This organization is not a trade organization but one with volunteer memberships. It holds 2-3 friendly meetings a year for traditional greeting or some news exchanges. It does not represent the whole white soy sauce industry and does not do any publication of statistics or government-public relation activities.

3. According to Ninagawa, there are 9 manufacturers of white soy sauce in Aichi-Mie prefecture area: Yamashin, Nitto Jyozo, Ohtaya (under the brand name of Morita), Shichifuku, Hatoya, Sato, Yamadai, Nakari, Isekura.

There are four manufacturers outside Aichi-Mie prefecture area: Kinoene (under Kikkoman, Chiba), Shoda (Gunma), Chiba (Chiba), Honmurasaki (Hiroshima).

4. The Shoyu Information Center www.soysauce.or.jp is the only one organization to provide info to public. According to Ninagawa, there are no statistics on white soy sauce there.

I pay respect to your comment on our business. I will answer you technical questions as follows.

1. Since white soy sauce darkens through photo-chemical reaction, we use amber or green bottles to minimize darkening. Yamashin appears not to be concerned with the natural reaction in clear bottles. There is no safety issue there but appearance and taste concerns.

2. A very small amount of alcohol may be produced in white soy sauce fermentation process. The alcohol listed as an ingredient is alcohol originating from another fermentation that is added for preservation and flavor stabilization.

"I hope you will make contacts with the Tokai Shiro Shoyu Association or Shoyu Information Center for further inquiries. Happy 4th of July. Mike Masuyama." Address: Visalia, California.

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8401. Sato, Takashi. 2006. Sale of San Jirushi to Yamasa. Plan to build a new plant in Richmond, Virginia (Interview) *SoyaScan Notes*. July 13. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** In Nov. 2005 Yamasa Corporation purchased San Jirushi Corp. and San-J International (Kuwana, Japan; and Richmond, Virginia). San-J International had reached the production capacity of their tamari plant in Richmond, Virginia, and they needed about $40 million to build a second plant on the same property as their first plant.

They like being purchased by Yamasa because Yamasa is owned by one family (just like San Jirushi, which is owned by the Sato family) and that family and their family are related at the level of cousins. San-J is has not publicized the acquisition in the USA because they wish to keep their separate identity.

Note 1. As of Sept. 2010 Soyinfo Center has been unable to find even a single article in any U.S. newspaper or magazine announcing or discussing this acquisition.

Note 2. E-mail from Misako Binford of Yamasa Co. 2012. May 7. She says that Yamasa Co. purchased San-J International (Richmond, Virginia) in April 2004, then purchased the parent company, San Jirushi (Kuwana, Japan) in Nov. 2005. She cannot find any newspaper or magazine articles that give information about the acquisition. Address: President, San-J International, Inc., 2880 Sprouse Dr., Richmond, Virginia 23231. Phone: 804-226-8333.

8402. AP WorldStream English. 2006. Chinese soy sauce Giant, Lee Kum Kee, tries to avoid the perils of leadership succession (News release). July 23.

• ***Summary:*** Xinhui, China. Company chairman Eddy Lee is haunted by a famous Chinese saying: "Wealth doesn't go beyond the third generation."

The family firm was founded in 1888 near Canton in Guandong province of southern China. Le Kum Kee's first product was oyster sauce. In 1946 the company moved to Hong Kong and quickly began to expand its business, selling the luxury product to wealthy Chinese living in San Francisco, London, New York, and Hawaii. Today Lee Kum Kee sells nearly 300 varieties of sauces and condiments, including soy sauce.

The company is making a big push to become the leader in the huge soy sauce market in China—and then in the world. They are now No. 2 in China.

Le Kum Kee now makes about 100,000 metric tons of soy each year at its plant in Xinhui, which employs about 1,400 people.

8403. Patterson, Daniel. 2006. The way we eat: I can't believe its tofu. *New York Times Magazine*. Aug. 6. Sunday.

• ***Summary:*** The writer never thought he could love a soy product. He could probably muster admiration, certainly respect, but never infatuation. So he was quite surprised when dining at Kappo Sakamoto in Kyoto, Japan, that he swooned over a dish of yuba. It was served in a handmade box, simmering in water over a piece of glowing charcoal. He lifted the opaque sheets from the bubbling water, dipped them into a sauce (made from soy sauce, dashi, mirin, and fresh wasabi) and wow! A mildly sweet flavor and tender texture he had never experienced before. Here was tofu's sexy and elegant cousin. He returned to the USA in search of yuba.

By good fortune, Ryuta Sakamoto, the son of Kappo Sakamoto's chef, was a partner in a San Francisco restaurant name "Medicine," that served (among other things) yuba! He explained that "yuba is one of the purest expressions of Kyoto cuisine. It is exquisitely simple, so its magic lies in the quality of the ingredients and the skill with which they are handled." Just as a film forms atop milk when it is heated, so yuba forms atop soymilk. Each batch of soymilk will yield about 7-8 layers of yuba. The first 4-5 are the best quality; the last 2-3 sheets are generally dried. "Yuba is best just after it is made" and will keep for only about 5 days.

Can you make yuba at home? Yes, but not with commercial soymilk. The protein content is too low.

Then Sakamoto directed the writer to Minh Tsai, the owner of Hodo Soy Beanery, a Bay Area company that makes soyfoods using only organic ingredients that are not genetically engineered. Tsai sells his yuba and other soy products at farmer's markets around the Bay Area and will also ship yuba in the U.S. The writer bought some and rushed back to his restaurant to try it. Modest success. But when he deep fried the yuba it was pure bliss.

8404. Kikkoman Corporation. 2006. Annual report 2006. Year ended March 31, 2006. 250 Noda, Noda-shi, Chiba 278-8601, Japan. 37 p. 28 cm. [Eng]

• ***Summary:*** Consolidated net sales rose 4.4% to $3,076 billion, operating income climbed 4.0% to $158 million, and net income rose 6.7% to $86.5 million. Note: Some dollar values actually fell due to changing foreign exchange rates.

"In terms of capital and business alliances, we are collaborating with Higeta Shoyu Co., Ltd. on jointly purchasing raw ingredients and effectively sharing each other's manufacturing facilities, while fostering closer cooperation in the foodservice- and industrial-use markets... We are also reinforcing our alliance with the Kibun Foods Group." In April 2006 Kikkoman "transferred" [sold?] its *shochu* [a clear alcoholic beverage] business. A nice photo shows Yuzaburo Mogi (Chairman of the Board and CEO) and Takashi Ushiku (President and COO). Address: Noda, Japan.

8405. Hymowitz, Ted. 2006. Why did the West (Europe and the Middle East) know so little about China in the 12th and 13th centuries? (Interview). *SoyaScan Notes*. Sept. 1.

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Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Because the Arabs blocked most European travel over the Silk Road / Route from about the 7th century until the 12th or 13th century. The Arab conquest blocked the overland route, in part to control the trade. There were actually two phases in the history of the Silk Road. The first phase ended in about the 6th or 7th century, before the origin of Islam.

Note: Both of these "Silk Roads" was actually a series of interconnected routes than ran from about Xian (Chang'an) in eastern China, along the northern part of China, branching into today's Central Asia, south of the Caspian Sea, through today's Turkmenistan, Iran (formerly Persia), and Iraq, to Damascus (today's Syria) and Antioch (in today's Turkey). The first famous and documented Chinese traveler, Zhang Qian (W.-G. Chang Ch'ien) led two expeditions to the Western Regions in the 2nd century BC, during the Former / Western Han dynasty.

As early as the 1st century AD, there were already some oceanic routes that were part of the "Silk Road." They hugged the coast from central China, around India, into the Persian Gulf and the Red Sea, then on to Italy!

This Arab blockade was one of the reasons for the search for a water route to China. The blockade began to fail as sea routes were developed. For example, in May 1498, Vasco da Gama was the first European to discover a sea route to India.

Another reason it took so long for information about the soybean to reach Europe from China was that the soybean is unlike rice, wheat, and maize / corn, where the product of the crop is associated very closely with what is growing in the field, everyone knows what rice, wheat and corn look like because they are so widely consumed as food. The main products of the soybean, especially those in commerce (such as soy sauce), bear no resemblance to the seed or plant from which they are made. It took a long time before Europeans realized that soy sauce (for example), which was known in Europe by the late 1600s, was made from the soybean–which did not arrive in Europe until the late 1730s. Even in Asia, the various names of the soybean were very different from the names of its major products. For example in China: Soybean is *dadou* or *huangdou*, soy sauce is *jiangyou*, tofu is *doufu*, and soymilk is *dounai* or *doujiang*. In Japan: Soybean is *daizu*, soy sauce is shoyu, tofu is tofu, soymilk is *tonyu*, miso is miso, natto is natto, and green vegetable soybeans are edamamé. In Indonesia, tempé is tempeh. Even in the Western World today, many of these traditional foods and condiments do not have "soy" as part of their name. Moreover, the foods look totally different from the seed / bean from which they are made.

The first European to understand the connection between the soybean and its products was Engelbert Kaempfer; he made this clear in his book *Amoenitatum exoticarum*... vol. 5. Yet most Westerners did not understand this connection until more than a century later, and quite a few even today don't realize that tofu (for example) is made from soybeans.

Ted is convinced that Marco Polo and the various early Western missionaries who traveled to China probably tasted soyfoods over and over again–but they didn't realize they were made from soybeans. A good example is milk. The early Western travelers in China often mentioned that Chinese drank milk; in some cases they were probably drinking soymilk. Address: Prof. of Plant Genetics (retired), Dep. of Crop Sciences, Univ. of Illinois, Urbana, Illinois.

8406. Fruin, W. Mark. 2006. Thoughts on the early history of soy sauce and kecap / ketjap (Interview). *SoyaScan Notes*. Oct. 6. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Mark knows a woman professor Tashiro in Japan who is doing research on the early history of soy sauce (e-mail shiro@flet.kweio.ac.jp). She and others she knows are interested in the "leaky sieve" theory which basically says "Yes, we had this very controlled system during the Tokugawa / Edo period, but lots of things were going on that were not official–such as exporting outside of Deshima. You could call them pirates or extra-legal exports. Many of these exports went to places like Korea, or the Korean islands between the Korean mainland and Japan, all of which were near Japan. Mark suggests I write her and mention his name.

Remember that there is a difference between Kansai shoyu (lighter in color and saltier, *usukuchi*) and Kanto shoyu (darker in color, *koikuchi*). Whatever they shipped out of Deshima and Nagasaki was more likely to be Kansai shoyu than Kanto shoyu.

Also remember that soy sauce was widely made locally by small makers. One of the bigger castle towns (*jôka-machi;* "castle + under") or commercial towns (*shukuba-machi*) of Kyushu or southern Japan probably provided the early shoyu exported by the Dutch East India Co. (VOC). These were the two types of cities in Tokugawa Japan; there had to be one castle per fiefdom (*han*). Address: Palo Alto, California.

8407. Hymowitz, Ted. 2006. Re: Earliest clear reference to soy. Letter (e-mail) to William Shurtleff at Soyfoods Center, Oct. 13. 1 p.
• ***Summary:*** Ted has just finished all the literature reviewing he plans to do for the first chapter in his book on Samuel Bowen. "Except for indirect references there is very little in the European and Arabic literature about soy in the 1200s, 1300s, and 1400s."

The earliest indirect reference to the soybean he has goes back to the 1200s. "The monk said he only ate on Sunday, when this lady sent him a meal of cooked dough with vinegar to drink." The dish is *mien* which is seasoned with soy sauce.

"My poor eyeballs have gone through literally dozens of diaries of monks and assorted travelers to China (e.g. Marco Polo) and have found zilch about soy."

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For the next two weeks Ted intends to update his references in his computerized database, and then to focus on writing the Bowen book. Address: Prof. of Plant Genetics (retired), Dep. of Crop Sciences, Univ. of Illinois, Urbana, Illinois.

8408. Hymowitz, Ted. 2006. Re: Why are "India Soy" and "Indian Soy" early names for soy sauce? Letter (e-mail) to William Shurtleff at Soyfoods Center, Oct. 21. 2 p.
• ***Summary:*** Ted's guess as to why "India Soy" or "Indian Soy" were used as names for soy sauce is that it was imported into England by the Honourable East India Company. Remember, the EIC traded in China and what is today Southeast Asia. More importantly, "East India" covers more than India. Soy Sauce was probably picked up in Asia by British ships and transported to Calcutta. From there it was transshipped to England.

For the British, the main transshipment cities for Southeast Asia and greater India (what is now India, Pakistan, Sri Lanka, Bangladesh, Burma, Nepal, etc.) were Calcutta in the west, Madras in the south, and Bombay in the west. For the Spanish, Manila was a main transshipment city; goods were shipped from there to Acapulco and the Americas.

The name "ketchup" probably comes from the imports by the Dutch East India Company. Address: Prof. of Plant Genetics (retired), Dep. of Crop Sciences, Univ. of Illinois, Urbana, Illinois.

8409. Dee, Joel. 2006. History and present status of Edward & Sons Trading Co. (his company) and of his work with miso and tamari (Interview). *SoyaScan Notes*. Oct. 23. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** A far-ranging interview on his many important innovations and success. Joel appears to have been the first person in the Western world to add flavor to soy sauce, with Lemon Tamari (Aug. 1985), Ginger Tamari (Feb. 1988), and many other related products.

Joel developed the Premier Japan line because he believed the two main importers from Japan (Eden Foods and Westbrae) both defined their market too narrowly–as macrobiotic. He soon came up with the tagline "Traditional Gourmet," just as the specialty foods market was taking off in the USA. But the macrobiotics criticized this line as not being "medicinal quality" so it never took off in the macro or natural foods markets.

Joel does not supply Trader Joe's with their Instant Miso Soup; he is not at liberty to reveal the name of the supplier. The TJ product contains dextrose, clam extract, and bonito powder (all for flavor) which Joel's Miso Cup does not contain.

The main segments of his company are now: Soy seasonings (miso and tamari), rice crackers, organic canned foods (coconut milk, pineapple, etc.), candy, and baked goods. Address: President, P.O. Box 1326, Carpinteria, California 93014-1326. Phone: 805-684-8500.

8410. Hymowitz, Ted. 2006. Re: Note on "India Soy" and "Indian Soy" as early names for soy sauce. Letter (e-mail) to William Shurtleff at Soyfoods Center, Oct. 31. 2 p.
• ***Summary:*** "Looking through gobs of historical documents it is obvious that certain cities in Asia were centers of trade within and between Asian countries and with the west.

"For example, when the Spanish started trade with the Philippines in 1560 they recorded what was brought back to Mexico. I was amazed at the stuff that came from China, Japan, etc.

"I was puzzled by the diversity of items in the Spanish trade. However, when I visited the Pescadores Islands a little snooping about solved my Manila problem. During the day the fishing boats were out fishing. However, at night they were also gone. Aha, the boats were loaded with electronics for trade with Mainland China. The fishing boats would meet with boats from mainland China somewhere mid-point between the Islands and China and exchange goods. Probably exchanges were made by family contacts.

"Manila was a trading city as was Calcutta and places in Indonesia. Thus India soy was the name given to soy that arrived from Calcutta. Obviously it was not made in Calcutta but rather was brought there via local trading ships. Thus soy sauce was shipped to Calcutta and from there transported to England. Now the Dutch had their own contacts in India, Japan and Indonesia. Thus soy sauce reached the Netherlands via the Dutch ships who transported the sauce via the Dutch East India ships. The Dutch were the main importers of ketchup since it was made in the Malaysia Area where they had extensive contacts.

"Was soy sauce made in China? In 1711 Lockyer says so. But I suspect most of the stuff in international trade came from Japan via the Dutch.

"The first English factory in India was in Surat. Could very well be that Surat was or had been the transshipping point of soy sauce to England."

Note: This e-mail was a reply to one that Shurtleff had written Hymowitz the day before.

Not much soy sauce was made in China in the 1600s and 1700s, and several travelers in Asia from that period say that Chinese "soy" was not nearly as good as Japanese soy. The reasons were simple:

(1) The Chinese saw making soy sauce as wasteful; what were they going to do with all that residue, except feed it to pigs. So they spent little effort in trying to improve the process and the product.

(2) Chinese soy sauce, to this day, is usually made with soybeans only, and little or no grain; it is basically the same as Japanese tamari–a product with a tiny niche market in Japan and worldwide. The standard Japanese formula calls for equal parts soybeans and roasted wheat. The wheat is

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hydrolyzed by the koji enzymes into alcohol and many fragrant and volatile compounds, such as esters, giving Japanese shoyu a real "bouquet."

So I ask again, where do you think the Chinese got the soy sauce that they shipped to India? China? The Dutch East Indies (they had a small base there)? Address: Prof. of Plant Genetics (retired), Dep. of Crop Sciences, Univ. of Illinois, Urbana, Illinois

8411. *SoyaScan Notes*.2006. Soymilk, non-dairy beverages, and cow's milk prices at The Natural Grocery Co., Berkeley, California (Overview). Dec 14. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Since Dec. 1983, approximately every other year, Soyfoods Center has conducted a survey of the prices of soymilk and cow's milk in California. Cindy La reports the following retail prices. (Note: oz = fluid ounces; 32 fl oz = 1 quart, 33.8 fl oz = 1 liter, 2 quarts = one half gallon). All soymilk products at Berkeley Natural Grocery Co. are now organic or largely organic = Org. MOS = Made with organic soybeans. NON ORG = Non Organic.

Shelf-stable / Aseptic soymilks: Westsoy Light and Plus all flavors (MOS) $2.39/quart. Westsoy Nonfat (MOS) $1.99/quart. Westsoy original creamy (95% Org) $2.29/quart or $1.79 on special. Westsoy shakes (MOS) $2.49/quart.

Edensoy Original (95% Org) $2.79/liter. Edensoy Enriched (95% Org) $2.89/liter. Eden Blend Rice & Soy (95% Org) $2.65/liter. Edensoy Dream 3-pack (75-95% Org) $2.89/3 x 8 oz.

Vitasoy Original (75-95% Org) $2.65/quart or $2.09 on special. Vitasoy Light (75-95% Org) $2.65/quart or $2.09 on special. Vitasoy Enriched (75-95% Org) $2.65/quart or $2.09 on special. Vitasoy Holiday Drinks (95% Org) $2.99/quart or $2.19 on special.

Soy Dream Regular or Enriched (Hain) (75-95% Org) $2.65/quart. Soy Dream 3-pack (75-95% Org) $3.09/3 x 8 oz. Pacific Foods (95% Org) $2.89. Kikkoman Pearl (75-95% Org) $2.59. White Wave Silk (95% Org) $2.49. Silk 3-pack (75-95% Org) $3.39/3 x 8 oz.

Refrigerated / Fresh soymilks (in gable-top cartons): Wildwood (95% Org) $2.39/quart or $3.99/half gallon. White Wave Silk Plain (95% Org) $1.99/quart or $3.69/half gallon. White Wave Silk Vanilla (75-95% Org) $3.69/half gallon. Soy Dream Enriched (75-95% Org) $3.89/half gallon.

Rice drinks: Rice Dream (75-95% Org) $2.59/quart. Lundberg (75-95% Org) $2.69/quart. Pacific Foods (75-95% Org) $2.19/quart.

Refrigerated cow's milk. Clover Stornetta $1.29/quart, or $2.19/half gallon or $3.99/gallon. Clover Stornetta 100% Organic $1.99/quart, or $3.49/half gallon or $6.39/gallon. Straus 100% Organic in glass bottle $2.49/quart or $3.99/half gallon. Claravale Raw Milk non-organic $3.99/quart. Organic Valley 100% Organic $1.99/quart or $3.99/half gallon. Meyenber Goat Milk non-organic $3.49/quart. Lactaid Milk non-organic $2.19//quart.

8412. Cwiertka, Katarzyna J. 2006. The soy sauce industry in Korea: Scrutinising the legacy of Japanese colonialism. *Asian Studies Review* 30(4) 389-410. Dec. [81 + 27 endnotes. Eng]

• ***Summary:*** Excellent; very original, carefully researched, well documented, and well written! Contents: Introduction. Fermented soyfoods in Korea. The soy sauce industry in Japan. The Japanese soy industry in colonial Korea. The soy sauce industry in South Korea. The hidden legacy of Japanese colonialism. Address: Centre for Japanese and Korean Studies, Leiden Univ., P.O. Box 9515, 2300 RA Leiden, The Netherlands. Phone: +31 71 527 2599.

8413. Kikkoman Inst. for International Food Culture. 2006. Identifying the true character of Kansai soy sauce. Report on our "Edo Soy Sauce" revival project. *Food Culture (Kikkoman Inst. for International Food Culture, Noda, Japan)* No. 11, p. 10-13. http://kinfc.kikkoman.co.jp. [5 ref]

• ***Summary:*** Contents: Kansai soy sauce. Examination of "Edo Soy Sauce" and Kansai Soy Sauce. Contains many color photos.

8414. Tanaka, Norihito; Taylor, Marilyn L.; Claterbos, Joyce A. 2006. Case 17–Kikkoman Corporation in the mid-1990s: Market maturity, diversification, and globalization. In: R. Duane Ireland, Robert E. Hoskisson, and Michael A. Hitt, eds. 2006. Understanding Business Strategy: Concepts and Cases. Mason, Ohio: Thomson Higher Education. 576 p. See p. 171-89. Name index. Company index. Subject index. *

• ***Summary:*** The larger book contains a glossary at the end. Address: 1. Kanagawa Univ., Japan; 2. Univ. of Missouri at Kansas City.; University of Kansas.

8415. Beebe, Lewis; Beebe, John M. 2006. Prisoner of the rising sun: the lost diary of Brig. Gen. Lewis Beebe (Internet resource). College Station, Texas: Texas A&M University Press. xii + 253 p. Introduction by Stanley Falk. Series: Texas A&M Military History No. 103. *

• ***Summary:*** This book shows the treatment accorded officers and shows how the prisoners in Corregidor fared as World War II progressed.

Page 162: "Incidentally, this Japanese canned meat ration is something new to me and very good. It appeared to be beef, cut in small slices, and cooked in a gravy made of soya sauce, sugar, and salt added to the natural meat juice."

Page 184: "The issue of rice is holding up very well and most of us are getting about all the rice we can eat. We have miso in the soup almost every morning and that is a help. I may be putting on a little weight.."

Page 185: "The regular issue of rice dropped to the point where we barely averaged a teacup level full for each meal, and on several occasions there was less than a cupful. The

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soup also fell off in quality, as we are not receiving as much miso, cooking oil, etc. There was no meat in the soup today (Sunday) as there usually is."

Page 215: "There is frequently nothing in the morning soup except miso—no vegetables."

Note: The diary was written by Lewis Beebe (1891-1951). This book was edited by John M. Beebe.

8416. Davidson, Alan; Jaine, Tom. 2006. The Oxford companion to food. New York, NY and Oxford, England: Oxford University Press. xxviii + 907 p. Illust. by Soun Vanmithone. Index. 29 cm. [1500+* ref]

• ***Summary:*** The first edition of this remarkable book (1999) is already a "classic." "Alan Davidson famously wrote eighty percent of the first edition, which was praised for its wit as well as its wisdom. Tom Jaine, editor of the second edition, worked closely with Jane Davidson and Helen Saberi to ensure that new contributions continue in the same style... The text has been updated where necessary" and there are many new entries. The front matter, which is 10 pages longer, begins with "Alan Davidson: A tribute" (p. vii; he died in 2003) followed by a "Preface to the Second edition" by Tom Jaine. Entries in the 1st edition are generally on a different page in this edition. Tofu, for example, formerly on pages 798-99, is now on pages 801-02; however the information is the same. The marvelous illustrations in both editions are by the same artist. The last page of this edition is page 907 compared with page 902 in the 1st edition. Address: World's End, Chelsea, London, England.

8417. Golbitz, Peter; Jordan, Joe. 2006. Soyfoods: Market and products. In: Mian A. Riaz, ed. 2006. Soy Applications in Food. Boca Raton, Florida, London, New York: CRC Press (Taylor & Francis Group). [x] + 288 p. See p. 1-21.

• ***Summary:*** Contents: History of soyfoods: Growth and development in the Western world, soybean industry blossoms in the United States, soybeans grow around the world. Soybean production and utilization for food: Soyfoods in Asia, soyfoods in Europe, soyfoods in Africa, soyfoods in the United States. Development of the U.S. soyfoods industry. Americanization of soyfoods. Soybean nutritional components: Soy protein, soy oil, carbohydrates and fiber, vitamins and minerals, isoflavones. Soyfoods and protein ingredients: Whole dry soybeans, tofu, soymilk, tempeh, soymilk yogurt, miso, soy sauce, okara, natto, soynuts, meat alternatives, cheese alternatives, nondairy frozen desserts, green vegetable soybeans (edamame), soy sprouts, full-fat soy flour, defatted soy flour, textured soy flour, soy protein concentrate, soy protein isolate. Conclusions.

Tables: (1) World soybean production by major producers. (2) Annual per capita consumption (2001) of soybeans for direct food. (3) U.S. soyfoods market (1996 to 2005).

This chapter suffers from a lack of references, and contains several basic errors concerning the early history of the soybean. Contrary to what Mr. Golbitz says: (1) The Chinese have not considered the soybean a basic source of nutrition for almost 5000 years (see Hymowitz 1970, "On the domestication of the soybean"). For "a little more than 3000 years" would be much more accurate. (2) The first reference to soybeans in Chinese literature does not date back to 2853 B.C. (see Hymowitz 1970, and Hymowitz and Shurtleff 2005, "Debunking soybean myths and legends in the historical and popular literature"). It dates back to about 1100 B.C. (3) Natto was not developed at least 3000 years ago in Japan (the earliest known document that mentions natto dates from 1450 CE—or about 560 years ago). Address: Soyatech, Inc., Bar Harbor, Maine.

8418. Moey, S.C. 2006. Chinese feasts & festivals: A cookbook. Singapore: Periplus Editions. 144 p. See p. 28. Illust. by the author (Color). 31 cm.

• ***Summary:*** A colorful book with marvelous, creative illustrations. The recipe for "Pork and taro bowl" (p. 28) has a headnote which begins: "This is a festive Hakka dish, obligatory for every Hakka celebration... Red preserved bean curd (nam yee) has a pungent flavor rather like strong cheese. It comes in cubes packed in jars or bottles and is available in Asian food stores."

The recipe calls for "2 tablespoons red preserved bean curd (nam yee)."

Note 1. This is the earliest English-language document seen (Oct. 2010) that uses the term "red preserved bean curd" to refer to a type of fermented tofu.

The recipe for "Five spice rolls" (p. 29) notes that these rolls are a Fukienese favorite. "Dried sheets of bean curd skin [yuba] are traditionally used to wrap them and can be bought from health food stores or Chinese grocers." The recipe calls for "4 large sheets dried bean skin." The directions read: "2. Wipe the dried bean curd skins with a damp cloth to soften them, then cut the sheets in to sixteen 6-inch (15-cm) squares. Set aside."

The recipe for "'Good luck' spring rolls" (p. 45) calls for "10 sheets dried bean curd skin."

The recipe for "Braised assorted vegetables" (p. 52) is an adaptation of the traditional Buddhist vegetarian dish *Lohanzai*. Popular additions include "dried bean curd sticks." The basic recipe calls for "1 tablespoon red preserved bean curd" [nam yee].

Six recipes call for "black soy sauce."

In the "Vital ingredients" section [glossary] (p. 134-41) are entries for the following soy-related ingredients: Dried bean curd skin [dried yuba]. Hoisin sauce (a sweet brown sauce based on yellow soybeans). Hot bean sauce or chili bean sauce ("a smooth red sauce made from yellow bean sauce mixed with chilies"). Oyster sauce (contains soy sauce). Preserved bean curd ("has the consistency and pungency of strong smelling cheese." The two main varieties

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are red (colored with red rice) or brown; chili and rice wine are often added. "Red preserved bean curd (*nam yee*) has chili and hoisin sauce added to it during fermentation"). Soy sauce (The two main varieties for cooking are light and black soy sauce. Regular soy sauce {light} is saltier and thinner, and is used as a seasoning in cooking and as a table dip. "Black soy sauce is darker, thicker and richer in color, and is slightly sweeter in taste. Used as a browning agent for roasting or braising meats, it contributed color as well as flavor. Also available are mushroom-flavored soy sauces, seasoned soy sauces for seafood and chili soy sauces"). Yellow bean paste ("*tau cheo* in Hokkien is also known as fermented bean paste or black bean paste and is similar to Japanese miso"). Address: Freelance writer, artist and cook, Penang, Malaysia.

8419. Nguyen, Andrea Quynhgiao. 2006. Into the Vietnamese kitchen: Treasured foodways, modern flavors. Berkeley, California: Ten Speed Press. vii + 344 p. Foreword by Bruce Cost. Illust. (color photos by Leigh Beisch). Index. 25 x 24 cm. [58 ref]

• ***Summary:*** This is a very attractive book, well written and very engaging. Soy related recipes include: Baguette sandwich (with seared or grilled firm tofu, p. 34-35). Mock turtle stew of pork, plantain, and fried tofu (p. 153-55). Panfried stuffed tofu with fresh tomato sauce (Dau hu nhoi thit xot ca, p. 188-90). Deep-fried tofu simmered with scallion (Dau hu chien tam hanh la, p. 191).

In the "Guide to ingredients" chapter are substantial entries for: Hoisin sauce (tuong hoi xin, made from soybeans, p. 329). Soy sauce (nuoc tuong, xi dau, p. 333. "Soy sauces are not all the same. There are many kinds and they all taste different." The author prefers Pearl River Bridge, dark, golden label).

From the publisher's description: "When author Andrea Nguyen's family was airlifted out of Saigon in 1975, one of the few belongings that her mother hurriedly packed for the journey was her small orange notebook of recipes." The family fled together by air in April 1975. Andrea was only six years old. Seven days later Saigon fell to the communist North Vietnamese / Viet Cong. Her father had many connections: he was a former military governor in the administration of President Ngo Dinh Diem (1901-1963; his family name is Ngo), the first president of South Vietnam. They arrived in Camp Pendleton (the Marine Corps base) in southern California and were soon living in San Clemente. Of the 58 recipes, 39 are in English and 19 in Vietnamese. Address: Food writer, Santa Cruz, California.

8420. Null, Gary. 2006. Gary Null's power foods: the 15 best foods for your health. New York, NY: New American Library. 327 p. Plus 8 unnumbered pages of color plates. Illust. No index. 24 cm.

• ***Summary:*** A vegan cookbook. Gary has eaten a vegan diet for more than 30 years. He owns a juice bar named Gary Null's Uptown Whole Foods in New York City. He advocates eating soybeans and soy products, because of their "extensive and well researched health benefits" and because it comes in such a wide variety of forms, from "tofu and tempeh, to nondairy products like milks, cottage cheese, cheese, yogurt and ice creams. No other legume can be used in so many delicious ways" (p. 10, 24-25). One of his 15 "power foods" is soy (p. 13). He likes juicing and raw foods; in the chapter on beverages he sometimes adds 1-2 tablespoons soy protein powder, or a cup or so of soymilk or rice milk, or soy yogurt. For dips, he likes silken tofu. The chapter on "Entrees" (p. 240-88) includes 13 recipes that call for tofu, and 8 that call for tempeh. Edamame, whole soybeans, tamari, and soy cheese are included. His daughter, Shelly Null, is a gourmet chef. The book has no index. Address: Author of more than 70 books, New York City.

8421. Oseland, James. 2006. Cradle of flavor: home cooking from the spice islands of Indonesia, Malaysia, and Singapore. New York and London: W.W. Norton & Co. 384 p. + 16 unnumbered pages of plates. Illust. (some color). Maps. Index. 26 x 21 cm. [41 ref]

• ***Summary:*** Lavishly praised. "James Beard Foundation Book Award Winner: Asian Cooking."

In Chapter 3, "At the market, ingredients" (which has many fine color photos) is a long, interesting entry for "Indonesian sweet soy sauce (*kecap manis*, p. 72). "Sweet soy sauce is hugely popular in the cooking of Indonesia and, to a lesser extent, Malaysia and Singapore. (The word *kecap*, by the way, is derived from the Cantonese *koe-chiap*, or 'sauce,' from which we get the word *ketchup*. It was probably handed over by traders from southern China who long ago traveled extensively to the Indonesian islands.)" Its main use is as a table condiment or dipping sauce, although cooks also use it in marinades and to flavor stews. When Indonesian sweet soy sauce is mixed with sliced red chiles and lime juice, it becomes the widely used *sos kecap rawit*. In the U.S., the two most widely available brands, both imported from Indonesia, are Cap Bango (which the author prefers) and ABC.

There are also entries for "Soy sauce (*kecap*, p. 87. Of the two types, the first is called simply soy sauce, whereas the second "is double-black soy sauce, which has been aged longer and mixed with a small quantity of molasses." It has a more robust flavor than regular soy sauce). Sweet soybean paste (*tauco* or *taucheo*, p. 88-89, a Hokkien word. A "thick, golden brown, misolike condiment made of fermented soybeans, rice flour, sugar, and salt). Tempeh (p. 90-91, "one of Indonesia's great gifts to the culinary world"). Tofu (*tahu*, p. 91-92).

Chapter 13 (p. 318-35), titled "Tempeh, tofu, eggs," has a long and very interesting introduction about the author's visit to Rahmat, a traditional tempeh maker and his shop

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in Yogyakarta, Java; he wanted to learns how tempeh is made. Recipes: Garlic-marinated tempeh (*Tempe goreng, Indonesia*). Tempeh sambal with lemon basil (*Sambal tempe, Bali, Indonesia*). Carmelized tempeh with chiles (*Tempe kering, Central Java, Indonesia*). Tofu and summer vegetables in coconut milk (*Soyur lodeh, Malaysia*). Twice cooked tofu with coriander (*Tahu goreng bacem, Central Java, Indonesia*).

Tempeh, tofu, soy sauce, and sweet soy sauce are also discussed in many places throughout the book. Address: Executive editor of *Saveur*, New York City.

8422. Packaged Facts. 2006. Market trends: food flavors and ingredients outlook 2006. Rockville, Maryland: Packaged Facts. Digital PDF file. *

• ***Summary:*** This report contains sections on: Protein. Seaweed. Nori. Miso. White soy sauce. Organic ingredients. Kosher ingredients. Heirloom vegetables. Tofu. Edamame. Omega 3. Whole grains. Probiotics. Glycemic index. Quinoa.

8423. Planck, Nina. 2006. Real food: What to eat and why. New York and London: Bloomsbury Publishing. [viii] + 343 p. Index. 22 cm. [30+ ref]

• ***Summary:*** This book is carefully researched and very well, thoughtfully and fairly written; the author has written for *Time* magazine and comes with very good credentials for this book. Born in 1971 in Buffalo, New York. "She was a speechwriter to the U.S. ambassador to Britain when she opened the first farmers' market in London on June 6, 1999. Six months later she quit her job to open ten more markets, write *The Farmers' Market Cookbook*, and host a British television series on local food. In 2003 Nina created the Mount Pleasant Local Food Market in Washington, D.C. In New York City she ran Greenmarket, the largest network of farmers' markets in the United States. Nina's new company, Real Food, runs markets for farmers and purveyors of regional and traditional foods" ("About the author," p. 344).

The author advocates the following: (1) Eat real, traditional foods rather than more modern "industrial foods." These real foods include plenty of meat, fish, poultry, eggs, and dairy products made from whole raw (unpasteurized) milk from cows grazed outdoors on grass (rather than corn and soybeans, which cows were not designed by eat by nature) without synthetic hormones–plus real, organically grown fruits, vegetables, whole grains and legumes (including traditional soy foods), real salt, and dark chocolate.

(2) Eat real fats–including butter, beef fat, coconut oil, lard, and extra-virgin olive oil, including saturated fats and cholesterol. Avoid industrial fats–such as margarine, polyunsaturated vegetable oils (including soybean, corn, and sunflower oil), and shortening. (3) Go beyond and disregard the cholesterol myth; the evidence supporting it is weak. (4) Stop eating a vegetarian diet, and especially a vegan diet (which no traditional society has ever practiced).

To start with the section on soy foods: In the Chapter 8, titled "Other real foods," the section on soy foods is titled "Traditional and industrial soy are different" (p. 225-34). Traditional soy foods are those that have a long history in the diet, and are still made in pretty much the way they used to be. Her information on the early history of the soybean and soy foods (p. 225-26) contains many errors, as well as some interesting observations. Some of the earliest soyfoods were fermented (starting with soy nuggets and jiang in China). She lists five health benefits of fermentation. Fermentation (along with cooking) helps to reduce the phytic acid in soybeans. Soy foods do not contain reliable vitamin B-12. The author states several times that soy protein is not complete protein. Most nutritionists for the past 50 years have correctly avoided this "is" vs. "is not" labeling and instead have listed all foods along a continuum from high quality to low quality. By the latest measures of protein quality, soy protein (by itself, without supplementation by cereal grains) has about the same quality as beef, but lower than that of eggs or milk. While noting that about 85% of all soybeans are genetically engineered, she fails to mention that most traditional soyfoods in the USA are made from organic, non-GE soybeans. She discusses the important part that soy plays in the Okinawan diet, where the people have the highest longevity in the world. Yet soy "should be viewed as part of a diverse diet, not as a nutritional silver bullet." We heartily agree. She lists the many traditional soyfoods (p. 231-32), made in basically the traditional way, including: Bean sauce (jiang), miso, natto, soy milk (non-industrial), soy sauce, sufu (fermented tofu, incl. Filipino tahuri), tofuyo (fermented tofu from Okinawa), tamari (liquid left after miso is made), tempeh, tofu, and edamame. She recommends that we avoid modern soy protein products made from defatted soybean meal (typically extracted with hexane solvent), including soy protein isolate, "industrial soy milk," soy based infant formula, and soy sauce which uses defatted soybean meal instead of whole soybeans. But what would she do with all the oil left over after using whole soybeans?

Concerning a diet rich in fish, meat, and poultry. She partly ignores the ethical issues involved in killing billions of those animals each year and the environmental issues involved in raising them. These are both huge issues. Several complex issues that she addresses head-on and in a fair, interesting way: (1) Is milk good for humans (p. 39-86).

One of the basic hopes / agendas behind this book is that people will start to leave cities, buy a piece of land (as the author's own family did when she was age 2), grow their own food and raise their own animals for milk, meat, and eggs. There is a steadily growing number of books advocating this traditional way of life.

The Glossary (p. 306-15) contains many good definitions that most people will be able to understand. The bibliography (p. 316-21) is substantial, and there are also

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endnotes (p. 290-303) but the book would be better if more of its controversial or historical statements cited authoritative sources. Address: USA.

8424 Sugano, Michihiro. 2006. Nutritional implications of soy. In: Michihiro Sugano, ed. 2006. Soy in Health and Disease Prevention. Boca Raton, Florida: Taylor & Francis. [xii] + 313 p. See p. 1-16. [10 ref]

• ***Summary:*** Contents: Introduction. Structure of soybean. Components of soybean: Proteins, oil, carbohydrates, minerals, vitamins. Composition of soy products. Nutritional aspects of soy products: Protein, peptide, oil, oligosaccharide, vitamins, other components. From "A Meat in the Field" to "A Treasure Box of Functionality."

Tables. (1) Major soybean components and their health effects. Two columns: Components and functions. (2) Nutrient contents of dried soybean (incl. minerals and vitamins). (3) Nutrient contents of soybean products (gm per 100 gm): Kinako (parched soybean flour, full-fat), Tofu (bean curd), Abura-age (fried bean curd), Kori-tofu (frozen bean curd), Natto (fermented soybean), Okara (Tofu refuse), Tonyu (soymilk), Yuba (Soymilk skin), Tempe, Miso (bean paste), Shoyu (soy sauce), Soy protein isolate. (4) Mineral contents of soybean products (sodium, potassium, calcium, magnesium, phosphorus, iron, zinc, copper, manganese; same products as in Table 3). (5) Vitamin contents of soybean products (retinol, carotene, D, E, K, B-1, B-2, niacin, B-6, B-12, folic, pantothenic, C; same products as in Table 3). (6) Amino acid and protein composition of Japanese soybean products. (7) Proposed patterns for essential amino acid requirements and composition of soybean proteins (soy protein concentrates and isolates). (8) Fatty acid composition of soybean oils (% of total fatty acids) (Products: Refined soybean oil, genetically modified oils, low linolenic, high oleic, low palmitic, low saturated fatty acid, high palmitic, high stearic).

Figures. (1) Pie chart of intake of soybean and its products in Japan (gm per day of tofu {38.2 gm}, fried tofu {7.9 gm}, natto {6.9 gm}, whole soybeans {2.0 gm}, other {2.3 gm}; Total 57.3 gm per day). (2) Bar chart: Amino acid score of dietary proteins in humans (casein 1.0, egg white 1.0, soy protein concentrate 9.9, soy protein isolate 9.5, beef 9.5). (3) Graph and bar chart: Soybean protein lowers liver delta-6 desaturase activity and liver phospholipid delta-6 desaturation index in rats–relative to casein. Address: Director, Fuji Foundation for Protein Research, Japan; Professor Emeritus Kyushu University and President, Prefectural Univ. of Kumamoto, Japan.

8425 Sumi, Hiroyuki, Yatagai, Chieko. 2006. Fermented soybean components and disease prevention. In: Michihiro Sugano, ed. 2006. Soy in Health and Disease Prevention. Boca Raton, Florida: Taylor & Francis. [xii] + 313 p. See p. 251-278. [76 ref]

• ***Summary:*** Contents: Introduction. Natto: Antibacterial activity of natto and natto bacillus, fibrinolytic enzyme substances contained in natto, depressor effects, carcinostatic effects, and dissipation of the effects of alcoholic drinks, preventive effects for osteoporosis. Tempeh: Strong antibacterial activity and effectiveness against intestinal disorders, antioxidant, antiallergic, and beauty care effects, starters for tempeh and high nutritional value. Shoyu (soy sauce): Antibacterial, antioxidation, and depressor effect, antitumor effects. Miso (soybean paste): Effectiveness of soybean paste for cancer prevention, depressor effects, antioxidation and antiradioactivity effects. Tofuyo.

Tables. (1) Dipicolic acid in natto and *Bacillus subtilis* natto. (2) Fibrinolytic activity in human plasma after the intake of natto. (3) Expired gas and intestinal gas after intake of tempeh. (4) Isoflavone content in tempeh. (5) Antioxidation activity of the aromatic components of shoyu (soy sauce). (6) Functional effects of melanoidine contained in shoyu (soy sauce) and miso (soybean paste).

Figures. (1) Graph of the effects on *O-157* as a result of the addition of natto bacillus. (2) Graph of the effects on *H. pylori* (Sydney strain) resulting from the addition of natto extracts. (3) Photo of fibrinolytic activity of natto. A piece of natto commonly sold on the market was placed in a petri dish with artificial thrombus. (4) The molecular structure of nattokinase. (5) Photo of fibrinolytic activity of nattokinase. (6) 3 graphs of changes in the fibrinolytic parameters in the blood after oral administration of nattokinase to human volunteers. (7) Graph of the effects of natto extracts on blood pressure. (8) Graph of the inhibitor activity of platelet aggregation. (9) 2 graphs of the concentration of vitamin K_2 in human blood after the intake of natto. (10) Bar chart of change in the concentration of menaquinone-7 in plasma after ingestion of natto. (11) Graph of the effects of the tempeh bacteria on aflatoxin-producing bacteria. (12) Diagrams of the aromatic components of shoyu (soy sauce). (13) Bar chart of the effects of the concentration of nitrous acid on the antitumor activity of shoyu (soy sauce). (14) Chart of the carcinogenesis inhibitor effects of HEMF against proventriculus tumors induced by benzo[a]pyrene. (15) Bar chart of standardized mortality from stomach cancer relative to the level of frequency of eating miso soup. (16) Graph of changes in blood pressure by oral administration of miso (soybean paste) extracts. (17) Graph of reaction between coloring degree of miso and its antioxidative activity. Address: Dep. of Physiological Chemistry, Kurashiki Univ. of Science and the Arts, Kurashiki, Japan.

8426 Wall, Cynthia Sundberg. 2006. The prose of things: Transformations of description in the eighteenth century. Chicago, Illinois: University of Chicago Press. 316 p. See p. 169. [400+* ref]

• ***Summary:*** In the section on "Auctions and catalogs," in the description of Mr. Christie's (London) catalogs, we read:

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"A gentleman 'lately returned from India' has decided to sell his 'Dressing Boxes, fine India paper, Muslin, Soy, [and] fine Batavia Arrack' (30 November 1767)." Address: Assoc. Prof. of English, Univ. of Virginia.

8427 Ishige, Naomichi. 2007. Re: Early history of the word "teriyaki." Letter (e-mail) to William Shurtleff at Soyinfo Center, Jan. 5. 1 p. [Eng]
• ***Summary:*** "The following is my answer to your question of teriyaki.

"As far as I know, the first appearance of the word 'teriyaki' was in 1813, when *Shijûhachi Kuse* [48 habits], written by Shikitei Sanba, was published. The word appeared in the second volume of the novel as 'shrimp teriyaki'. The original text was a block book, so the page number was unknown. However, according to the reprinted edition, the details are as follows: *Ukiyodoko: Shijûhachi Kuse* in *Shincho Nippon Kotenshusei 52*, Honda Yasuo (corrections and notes). Tokyo: Shincho-sha, 1982. p. 237.

It is assumed that teriyaki's recipe already existed in the Edo period before the word of teriyaki appeared in a book. For instance, the way to cook *unagi no kabayaki* ("charcoal broiled eel"), which went around from the middle of the Edo period onward, is the same as teriyaki, its sauce is the mixture of soy sauce and mirin or sake. Eel is covered by the sauce and baked. In the 19th century, the use of mirin in the sauce became more popular than the use of sake, because it gave good gloss (*teri*) to the eel when it was cooked. As a result, I suppose, 'teriyaki' became a generic term for the style of cooking that fish was grilled with soy sauce and mirin.

A Happy New Year! Best wishes, Naomichi Ishige.

Note: In his book *The History and Culture of Japanese Food* (Kegan Paul, 2001, p. 116), Ishige says that teriyaki developed during the Edo / Tokugawa period (1600-1867), however no citation for the source of this information is given. Address: National Museum of Ethnology, Osaka, Japan.

8428 Gugino, Sam. 2007. The Joy of soy. In the kitchen. *Wine Spectator*. Jan. 15. p. 21-22.
• ***Summary:*** A basic introduction. A large color photo shows bottles of: Kikkoman Naturally Brewed Tamari. Pearl River Bridge Superior Dark Soy Sauce. Pearl River Bridge Mushroom Flavored Superior Dark Soy Sauce. Shiro Shoyu. Address: Food writer.

8429 Chalmers, Elizabeth. 2007. Business history of the Chalmers family. Making soyfoods in New Zealand (Interview). *SoyaScan Notes*. Jan. 16. Conducted by William Shurtleff of Soyinfo Center.
• ***Summary:*** On Easter 1980 Rick & Elizabeth Chalmers, together with Rick's brother Greg (his formal name is "Stephen"), opened Harvest Wholefoods, 403 Richmond Road, Grey Lynn, Auckland. They borrowed the money from Elizabeth's mother, and were all equal owners. It was New Zealand's first wholefoods / natural foods store as well as the country's first macrobiotic foods retail store. They were idealists and purists, refusing to sell any vitamins, or minerals, or dairy products.

They started the store partly as a result of becoming interested in macrobiotics, and partly because Elizabeth and Rick had a 3 year old son (Daniel) who could not tolerate dairy products. As the Chalmers could not get the food they wanted anywhere, they thought that they would open a shop to also provide it to others. Moreover, Greg, who had been overseas in London (where he had worked in a restaurant) and the USA, was a pioneer in bringing macrobiotics to New Zealand. "He brought home miso and some seaweeds–foods we had never seen before."

After about six months, in Oct. 1980, in order to attract customers to the shop, they started to make nigari tofu (for their own store only) in a small room at the back of the store, designated just for that purpose. They made the simple equipment themselves, and they learned the process from *The Book of Tofu*, by Shurtleff and Aoyagi.

After another six months they were inundated with other store owners, and cafe & restaurant owners from all over New Zealand wanting to buy their tofu. "It was just amazing." The tofu was completely unpackaged and they sold under water it in bulk buckets only. So in about April 1981 they started to sell their tofu outside of Harvest Whole Foods. "Sometimes they would pick it up, and sometimes we would deliver it."

Sanitarium Health Food Co. was making many kinds of breakfast cereals and canned nut meats, but no soyfoods. Several Chinese restaurants were making tofu (they called it "bean curd"), but only for use in their own restaurants, they did not sell it elsewhere. One of these was named Sun Sun, located in Khyber Pass, Auckland.

Their daughter, Jesse, was born on 1st October 1981, and by this time it was becoming difficult to manage both the shop and making tofu. So they sold the shop and with the capital gained they brought in special tofu making equipment from Japan, moved to new premises at 1 Wallingford St., Auckland, and started Harvest Soyfoods. Harvest Whole Foods is still at its same original location today; it is going strong and doing well financially.

Harvest Soyfoods' first product was nigari tofu; to this they soon added Tofu Spreads (Feb. 1981) then Tempeh (April 1981). The business grew very rapidly, and during this period Greg also had a child, so they all had very young children and were trying to manage their lives as well as an extremely rapidly increasing business.

Greg's partner decided that she wanted to leave Auckland, and as they could not picture another partner in his place and were feeling very overloaded anyway they decided in 1983 to sell the business to Paul and Trevor

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Johnston, who renamed it Bean Supreme. The Johnstons paid half the money at the time of sale and the remainder a year later. Elizabeth and Rick Chalmers worked for the Johnstons during that year. This business is also still in existence, although it was bought out by Sanitarium Health Food Co. in about Aug. 1986. Note: Trevor is no longer with the company; Paul sold the company to Sanitarium Health Foods.

From 1983 to 1986 Rick and Elizabeth had a commercial cleaning business, which suited the family structure very well, but was very unsatisfying workwise and environmentally.

In about 1980 or 1981 Austin Holden had started a largely macrobiotic import and wholesale business, Kiaora Naturals, at 374 West Coast Road, Glen Eden, in west Auckland. Holden soon started a very small shop in the corner of his warehouse and called it East West Wholefoods. For the first few years, his only customer was Harvest Wholefoods. "We kept him going."

Then in 1986 Rick and Elizabeth started East West Organics, taking over the building (and business) formerly occupied by Austin Holden and Kiaora Naturals. They knocked out all the walls, resulting in a much larger shop that specialised in organic food, with a big emphasis on fruit and vegetables.

They had no intention of making soyfoods. However there was suddenly an influx of Asian immigrants to New Zealand and Asian Tofu (usually made with calcium sulfate in aluminum pots) became widely available. By this time organics was really growing in New Zealand. Elizabeth and Rick wanted to stock organic tofu in their store, but they couldn't find a source. They talked with Trevor and Paul Johnston about making it for them, but the brothers felt there was no future in it, so they declined to do it.

So in 1996 Elizabeth and Rick started The Organic Soy Company, again in a small food factory out the back of East West Organics. They started making nigari tofu again–for their own store only. For the first time, they started to use organic soybeans, and as many other organic ingredients as they needed and could get. "We were right back where we started. And then exactly the same thing happened again. Once the word got out that organic nigari tofu was available again, people started coming from everywhere to buy it. It was not our intention to get back into the soyfoods business; we'd already sold our company. But we wanted the quality, so we had to make it ourselves." East West Organics is still operating today, although out of new premises (outgrew old one), and has just moved up the road slightly.

Their son Daniel joined them in January 1998, and in October of 1998, they sold East West Organics and moved the Organic Soy Company to their current premises at Unit A, 2 Corban Avenue, Henderson, Auckland.

Elizabeth and Rick separated the same year, but continued on in the family business together. In 2001 their daughter Jesse returned from Europe and also joined us in the business. Later that same year Rick left the business to go to University and currently, Elizabeth, Daniel and Jesse are in joint ownership, with Rick still having a 10% share. They started using the brand names (the first being Tonzu) in 2002.

The business is growing slowly, currently producing tofu, tempeh, soy yoghurt, tofu burgers and teriyaki sauce, all 100% organic. Elizabeth has moved to part time as the younger generation are taking on the responsibility for the business. They currently have 3 full time employees as well as themselves, so are still reasonably small.

"We see a great future for the business and will probably outgrow our current premises within the next few years. We love making traditional soy products, and eventually hope to make miso and tamari, which will be export products as well as for the domestic market."

First sold commercially by the organic soy company: Tofu (1996), Teriyaki Tofu (1999), Tempeh (1999), Tofu Burgers (2001), Teriyaki sauce (2003).

All current labels and packaging are new, and have changed very much from the original. They once made two tofu spreads, one teriyaki and the other curry flavour. However it was hard to get a good enough shelf life out of them to make them viable, so reluctantly they discontinued them. They have also changed their burgers significantly. When they first produced a burger in 2001, they had 3 varieties: Garlic and Cheese, Sundried Tomato, and Feta, and Vegan. They have discontinued them all and now just make one that is actually Vegan, although they do not call it that. The burgers did not sell well; they are not certain why that was, maybe they were too expensive with all the organic ingredients and very labour intensive. So they have simplified and streamlined our current burger making the whole process more viable.

As the population of the whole of New Zealand is around 4 million and only 15% of them are vegetarian, they are playing to quite a small market, this can sometimes be quite a challenge. In the long term it will be sensible to develop products that they can export. Address: Founder and owner, The Organic Soy Company, Ltd., Unit A, 2 Corban Ave., Henderson, Waitakere, Auckland 0612, New Zealand. Phone: +64 9 835 3617.

8430. Takesuye, Betty. 2007. Four generations of Tadanos hold reunion in Phoenix. *Asian SUNews* (*Asian Chamber of Commerce*) 13(9):1, 4, Jan. 16.

• ***Summary:*** "The Tadano family recently [28 Dec. 2006] held a reunion in Phoenix [in the Japanese Free Methodist Church] to share family history with the children and grandchildren, to reconnect with one another,... Four generations of Tadanos attended."

Takeshi Tadano came to the United States from Wakuya [Miyagi prefecture, northern Honshu], Japan about 1915. He left his sons Tadashi and Takeo in Japan but they soon

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followed him to the U.S. where they farmed in the Phoenix area. His other sons, Yoneo, John, and Joe were born in Arizona.

"Takeshi had two daughters whom he left in Japan to live a more comfortable life than he could give them in America."

"Pictures of the farm on Lateral 15, now known as 35th Avenue as well as the farm on Lateral 18, now called 59th Avenue brought back memories of farm life..." "The senior member of each family attending included Michiko Tadano (Tadashi)... Photos of Takeshi and his family throughout the years were assembled in a heritage album which everyone enjoyed seeing."

Note: The famous shoyu (soy sauce) company founded by John Tadano is not mentioned. Address: Newspaper: 7217 N 6th Way, Phoenix, Arizona 85020. Phone: 602-222-2009.

8431 Tibbott, Seth, comp. 2007. Tofurky brand products overview. Natural foods segment. Hood River, Oregon: Turtle Island Foods, Inc. [36] p. 28 cm. [1 ref]

• ***Summary:*** A full-color booklet bound with a handsome, black ProClick plastic spine. On the front cover: "1980-2006: 26th anniversary Turtle Island Foods, Inc." "Sales data from: SPINscan Natural and SPINscan Conventional. 52 weeks ending December 30, 2006. All statistics are for the total U.S. market.

Contents (unnumbered pages): (1) "Turtle Island Foods honored by Inc. magazine: 2,240th fastest growing small business in the USA (of 6 million total). 159.7% growth rate over last 4 years. 57th fastest growing food and beverage company in the USA. 19th fastest growing food processor.

(2) About Tofurky products: 100% vegan. Based on organic soy products. Use non hexane extracted proteins. VejNews: Winner veggie awards–Best meat substitute.

(3) Natural foods market without Whole Foods (which no longer shares sales info with the industry). Growth of top ten brands ranked by dollar volume. Frozen and refrigerated meat alternatives. 52 weeks ended Feb. 24, 2007. Category: $35.5 million. Growth: 4.7%. Turtle Island is the fastest-growing brand: 16.1%, followed by Quorn, Nates, Amys Kitchen, Morningstar Farms, Gardenburger, and Yves. Lightlife, Boca Foods, and White Wave all have negative growth.

(4) Natural foods market. Frozen and refrigerated meat alternatives. Top ten of 478 items by dollar volume. 52 weeks ending Dec. 30, 2006. #1. Quorn Chicken Style Nuggets. 10.6 oz. $1,507,537. 5.6%. #2. Turtle Island Tofurky Italian Sausage (organic) 14 oz. $1,262,616. 25.7%. #3. Quorn Chicken Style Patties. #4. Lightlife Gimme Lean Sausage. #5. Quorn Veg. Naked Chicken Cutlet. #6. Turtle Island Tofurky Deli Slices, Hickory Smoked. 5.5 oz. $1,131,760. 19.2%. #7. Lightlife Smart Dogs. #8. Boca Original Patties Chicken Natural (4-pack). #9. Amys Burger California Veggie. #10. Quorn Meat Free Chicken Tenders.

(5) Natural foods market. Refrigerated meat alternatives. Top 10 of 260 items by dollar volume. 52 weeks ending Dec. 30, 2006. Turtle Island currently as the #1, #3, #9 and #10 best selling items among the 260. They are: Tofurky Italian Sausage. Tofurky Deli Slices Hickory Smoked. Tofurky Deli Slices Oven Roasted. Tofurky Kielbasa (sausages).

(6) Tofurky deli slices: Six features, incl. "Organic tofu based." The six types of deli slices are: Oven roasted, Hickory smoked, Peppered, Italian deli, Cranberry & Stuffing, "Philly-style" steak.

(7) Tofurky deli slices. Bar charts of refrigerated meatless deli sales, 2001-2006. For each year are given: Competitor #1. Competitor #2. Turtle Island. Overall category. "While the competition sales have been flat, Turtle Island has grown the subcategory 72 and has become the #1 brand.

(8) Deli slice standings. (9) Tofurky gourmet sausages. (10) Frozen and refrigerated meat alternatives. (11) Tofurky Jurky: 5 features.

(12) Top 10 jerky items (meat and meatless)–SPINscan natural channel. 52 weeks 2ndng Feb. 24, 2007. The category is 8.3 million. There are three vegetarian jerkys among the top 10. Tofurky Jurky Original is the #2 seller and Tufurky Jurky Peppered is #7. The other vegetarian brand (#6 seller) is Primal Strips Seitan Teriyaki.

(13) Tofurky "foot long" veggie dogs: 5 features, incl. organic tofu based. (14) "Open mouth, insert foot."

(15-17) Turtle Island tempeh: Five features.

(18-22) Happy Tofurky Day: Five features.

(23-35) Glossy color sell sheets, printed on both sides, with the following titles. (23-24) Happy Tofurky Day! (25-26) Brave New Tempeh. (27-28) Tofurky Jurkey. (29-30) Frankly speaking Tofurky Franks & Links are the best! (31-32) There's 3 big new dogs in the house. (33-34) Go beyond the bun: Introducing Tofurky 'foot long' veggie dogs. (35-36) Tofurky deli slices. New look. Other Turtle Island glossy color sell sheets. Address: Founder and President, Turtle Island Foods, P.O. Box 176, Hood River, Oregon 97031.

8432 Vialle, Cynthia. 2007. Re: In 1637 the Dutch exported ten barrels of *moersackij* (shoyu) from Japan. Letter (e-mail) to William Shurtleff at Soyinfo Center, Feb. 19. 1 p.

• ***Summary:*** "About soy. Do you know that soy was also called murasaki? Sakijmoer or moersakij in the Dutch records. I have a reference of 1637 that ten barrels of moersakij were shipped from Japan to Siam or Batavia. Two Japanese historians told me that moersakij is murasaki, soy. It's nothing to do with the history of the word, but I thought it might be of some interest to you."

On March 28 Cynthia sent the following citation: "10 vaten moersackij" = 10 barrels of murasaki [soy sauce]. "Hirado, 27 Nov. 1637. Shipped in the *Aeckersloot* sailing from Hirado to Siam and Batavia.

Source of document: "Nationaal Archief, The Hague,

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Archive of the Dutch Factory in Japan, record number 837." Address: Leiden Univ., Netherlands.

8433. Huang, H.T. (Hsing-Tsung). 2007. Re: First and second drawing of soy sauce in China. Name and use of the residue or dregs. Letter (e-mail) to William Shurtleff at Soyinfo Center, March 10. 1 p.

• ***Summary:*** The first batch of soy sauce drawn from the large earthenware jars (where it collected in a finely-woven deep cylindrical bamboo tube or basket and was ladled out) is known as *xianchou* ("early draw"), the first batch drawn from the old mash, after addition of salt water and further incubation, is known as *laochou* ("old draw").

Dr. Huang does not know the Chinese word for the residue or dregs left over after making soy sauce. In China, the latter may be used to marinate tofu and other foods, or may be fed to pigs (or other animals). Address: PhD., Alexandria, Virginia.

8434. Conklin, Dave. 2007. History of Japanese food in Portland, Oregon until 1941 (Interview). *SoyaScan Notes*, March 23. Conducted by William Shurtleff of Soyinfo Center.

• ***Summary:*** Dave is writing his master's thesis at Portland State University on the social history of Japanese food in Oregon; it looks at the Japanese culture through the lens of food. He has been reading Japanese-language newspapers in Portland and he found an ad that mentioned Ota Tofu (at 86½ N. 5th Street, Portland) on 1 Jan. 1915 in the *Oshû Nippô* (*The Oregon News*). It mentions "Ota Kyodai" (Ota brothers), as if they owned the shop at that time. The newspaper started about 1908 and was published in Portland 6 days a week, usually 6 pages per issue, and he found the 1915 issues on a roll of microfilm from the University of Washington. This special New Year's Day issue was about 30 pages long. He has most issues of the *Oshu Nippo* printed between 1917 and 1928. Using a grant, they were recently put on a CD for the Oregon Nikkei Legacy Center in Portland (NW 2nd St.); they are not digitized. The center is open most weekdays. Becky Patchett is the archivist.

After the Japanese invaded Manchuria and China in the 1930s, there was a great deal of conflict between Japanese and Chinese in Portland. The children would have to walk to school on opposite sides of the street. They weren't allowed to play with each other. However certain Chinese grocers would still sell particular foods, such as bean sprouts, to Japanese customers. The Japanese wouldn't eat at the Chinese restaurants–maybe because they wouldn't be served. So Japanese restaurants started serving Chinese food. In the 1920s *Shina udon* ("China noodles," which we now call "ramen noodles") was common in all the Japanese restaurants–as shown by ads. But by the late 1930s this food was no longer mentioned in ads by Japanese restaurants.

Dave is also interested in how American anti-Japanese racism played out through food. In 1924 Congress passed the National Origins Act (also known as the Immigration Act of 1924, the Asian Exclusion Act, or the Johnson-Reed Act). A sweeping law to keep out "undesirables," it limited the number of immigrants who could be admitted from any country in any given year to 2% of the number of people from that country living in the United States in 1890, according to the 1890 U.S. census. Essentially, it put an end to all immigration from Asia. Moreover, all Asians were forbidden from being naturalized as citizens, and it had the effect of preventing Japanese Americans from legally owning land. From 1924 on anti-Japanese racism rose steadily in the USA even though Japanese were making huge contributions to American life and the economy in areas such as farming. They also paid taxes. The Seattle City Council [in Washington state], for example, passed laws attempting to put Chinese hog farmers out of existence. Other laws made it illegal for Japanese to fish for salmon in the Columbia River, or to obtain hunting licenses. The whole Pacific oyster industry came from Japan; laws shut it down. Dave is not sure why they did this. It could have been resentment that they were successful, or it could have been harassment.

Nobuo Harada is a leading Japanese food scholar, who writes mostly in Japanese; his focus is the mid-Edo period. He has one article in English titled "Culinary Culture and its Transmission in the Late Edo Period," in *Written Texts–Visual Texts: Woodblock-Printed Media in Early Modern Japan*, edited by Susanne Formanek and Sepp Linhart (2005, p. 141-158).

Dave has studied numerous editions of *Zaibei Nippon-jin Kan* (*Directory of Japanese in the USA*), published by Shin Sekai-sha. The 1912 edition is at Waseda University in Tokyo. The 1916, 1928, and 1936 editions are at University of Washington (Seattle). Several other universities (UCLA, Univ. of Oregon) also have the 1936 edition. He has not seen the 1922 ed.

Another interesting source of information are the old guide books for coming to the USA; they were published in Japan, mostly in Japanese but with some English-language ads from hotels, food suppliers and importers, and labor contractors in the USA. Until 1912 the rice consumed in Oregon was grown in either Hawaii or Japan; then in 1912 Japanese-style rice started to be grown in commercial quantities in and around Sacramento, California. Rice had been milled in California since about the 1860s.

Hood River is a city on the Columbia River about 60 miles east of Portland. The Yasui Brothers Store (a general store) existed in Hood River from about 1907 until the internment in 1941. The store was the center of the Japanese community. Masuo Yasui, who owned the store with his brother, never threw any documents away for his entire life. He kept order sheets, cancelled checks, letters, telegrams–everything. These documents are now at the Oregon Historical Society, but they are just starting to be cataloged.

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Several scholarly books about this Yasui family have been published in English, such as *Stubborn Twig: Three Generations in the Life of a Japanese American Family*, by Lauren Kessler (1993).

Early soyfoods manufacturers in Portland that David has found include: (1) Asahi Tofu, 52 North 3rd St. Source: Oshû Nippo. 1922. May 4. p. 5. (2) Sanyo Co., which advertised miso (from Jan. 1915) and shoyu, and probably made them. (3) Kuge Tofu in the late 1930s and early 1940s until the internment.

Good books on Japanese rice in America are: (1) *A History of the American Rice Industry, 1685-1985* by Henry C. Dethloff (1988). (2) *Rice in California*, by Jack H. Willson (1979). Address: Portland, Oregon.

8435. Ness, Carol. 2007. Top tamari balances sweet and salty: Taster's choice. *San Francisco Chronicle*. March 28. p. F2. Food section.

• ***Summary:*** Seven brands of tamari sold in San Francisco were tasted and rated in descending order of preference as follows: 1. Eden (organic, imported green label) (69 points, $5.69 for 10 oz. at Rainbow). 2. Mitoku imported (60 points, $7.99 for 10 oz. at Rainbow). 3. Eden (55 points, organic, plum-colored label, not imported. $4.19 for 10 oz. at Whole Foods). 4. Kikkoman (53 points, made in Japan, $3.89 for 10 oz). 5. San-J (45 points, black label, $2.59 for 10 oz. at Rainbow). (6) Ohsawa (35 points). (7). San-J gold label 14 points.

Tamari is a Japanese-style soy sauce "made mainly from soy beans with little or no wheat, which gives it a richer taste than regular soy sauce." Tasters commented mainly about the color, saltines, sweetness, and (above all) the balance of saltiness and sweetness. "The panel looked for a smooth, rich flavor balanced by the right amount of salt. Common problems were harsh or sweet notes, or too much salt." Address: Staff writer.

8436. Chow, Cheryl, Chow, James. 2007. Hypoglycemia for dummies. 2nd ed. Hoboken, New Jersey: John Wiley & Sons. xii + 274 p. Illust. Index. 24 cm.

• ***Summary:*** Hypoglycemia (low blood sugar) is difficult to diagnose and to treat; it may be linked to or confused with other health problems.

Soyfoods are a good source of protein in the diets of those suffering from hypoglycemia (low blood sugar). Soy is mentioned on pages 37 (Soy is one of 8 foods to which people are most often allergic), 38 (if you have a food reaction, try eliminating one of these 8 potential allergens from your diet. Go on an elimination diet for 2 weeks and keep a food journal), 41 (If you think you have candidiasis, try going on a hypoglycemic diet. In addition, avoid fermented foods or those that contain yeast, including soy sauce), 91 (MSG is also called hydrolyzed protein, soy extract, meat tenderizer, Accent, Ajinomoto), 104, 106 (milk substitutes, including soy milk, should not contain added sweetener), 107 (Foods such as tofu {bean curd}, tempeh and natto are good sources of protein, but intake should be limited to 2-3 servings of whole soy foods a day), 196, (unsweetened soy milk is good to drink), 250 (soy products make good meat substitutes), and 258 ("Noshing on nourishment": Vegetables such as edamame make excellent, nutrient-packed snacks).

Concerning natto (p. 250): "These sticky, fermented [soy] beans are a great vegetarian source of protein... In Japan natto is often eaten over rice for breakfast." However natto has a strong odor which takes some time to get used to. Address: 1. Writer and editor; 2. MD. Practicing physician. Director, Nihon Clinic [with branches in Manhattan, New York, Atlanta, Chicago and San Diego].

8437. *SoyaScan Notes*.2007. Early Dutch exports of soy sauce from Japan, and early documents that mention soy sauce in Europe (Overview). June 10. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** 1647–Documents show that the Dutch East India Co. (VOC) began exporting soy sauce from Japan, from their tiny artificial harbor in Nagasaki harbor, and exported some almost every year from 1751 on. Most of this soy sauce was sent and used at to their trading posts in Southeast Asia.

Concerning early documents that mention soy sauce in Europe:

1679–John Locke (England) mentions "saio" in his journal.

1688–William Dampier (England) mentions "Soy" in his journal.

1690–E.B. (England). The canting crew: "Catchup, a high East-India Sauce."

1696–Ovington, Suratt (England). "Bambou and Mangoe Achar [pickle], Souy the choicest of all Sawces, are always ready to whet the Appetite."

1705–Samuel Dale (England). "3. Soia *Offic.* [probably Officinarum] Phaseolus Japonicus ex quo Japonesium Soia, qui intinctus species est, conficitur ***Herm.*** Species Phaseoli parvi albi, è Japonia allata, è qua conficiunt condimentum ***Ketchup*** dictum, duum generum, liquidum nimirum & solidum.

1736–The first Dutch soy sauce, exported from Japan via Batavia in the Dutch East Indies, arrives in Holland.

1750–Soy sauce first arrives in the Unites States (actually the British colonies of North America) in New York City. It is imported from Europe and advertised as being on sale in a retail store.

8438. Shurtleff, William. 2007. Thoughts and questions concerning Chinese traders in Nagasaki, Japan. Could they have exported soy sauce? Could they have sold that soy sauce to British East India Co. merchants? *SoyaScan Notes*.

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July 15. Compiled by William Shurtleff of Soyinfo Center.
• ***Summary:*** In about 1600 the Chinese obtained an official trade permit and settled in Nagasaki. At the peak of Chinese activity there, about a century later, as many as 190 Chinese ships a year were visiting Nagasaki, and one-sixth of the town's population hailed from the East Asian mainland. Address: Founder and owner, Soyfoods Center, Lafayette, California. Phone: 925-283-2991.

8439. Kikkoman Corporation. 2007. Annual report 2007. Year ended March 31, 2007. 250 Noda, Noda-shi, Chiba 278-8601, Japan. 37 p. 28 cm. [Eng]
• ***Summary:*** Consolidated net sales rose 9.1% year on year to $3,327 billion, operating income climbed 16.6% to $183 million, and net income rose 16.6% to $91.1 million. All three were record figures for Kikkoman. Note: Some dollar values actually fell due to changing foreign exchange rates.

Page 1, titled "A golden heritage: Kikkoman's 50th anniversary in America," begins: "In 2007 we celebrate the 50th anniversary of our full-scale entry into the U.S. market. Over the ensuing 50 years, we have aimed to make soy sauce a more integral part of the American food culture... Sales volume of soy sauce overseas during fiscal 2007 grew to some 157,000 kiloliters." A map shows North American production and sales bases. A bar chart shows "Overseas sales volume," which has grown from about 10,000 kl in 1974 to 35,000 kl in 1986 to 92,000 kl in 1996 to 158 kl in 2006; it has increased dramatically and exponentially. Kikkoman's two soy sauce factories in the USA, at Walworth, Wisconsin, and Folsom, California (northeast of Sacramento, California, near Folsom Lake) "now ship over 110,000 kiloliters of soy sauce throughout North America."

A photo (p. 2) shows Yuzaburo Mogi (Chairman of the Board and CEO) and Takashi Ushiku (President and COO). Address: Noda, Japan.

8440. Kikkoman Corp. 2007. Kikkoman–A golden heritage: Kikkoman's 50th anniversary in America. *Arigato, America* (Ad). *New York Times*, Sept. 19. p. A13.
• ***Summary:*** A full-page color ad. The top half is a message from Mr. Yuzaburo Mogi, Chairman and CEO, Kikkoman Corporation. It begins: "Thank you, America, for 50 great years.

"Thank you for making Kikkoman one of America's best-loved food brands. We are honored and humbled by the generous welcome you have extended to us since we started marketing our soy sauce in America 50 years ago.

"A lot has changed since then, but one thing remains the same. Our core product, naturally brewed soy sauce, is still made just as it was more than 300 years ago–slowly fermented and aged for full flavor like a fine wine." Below the message is Mr. Mogi's signature. In the bottom half of the ad is a large color photo of Mr. Mogi, a bottle of Kikkoman soy sauce, and the logo of Kikkoman's 50th anniversary in America (1957-2007). In smaller red letters we read: "A member of the family that founded the company more than three centuries ago, Mr. Yuzaburo Mogi has helped make Kikkoman one of the world's leading food brands."

At the bottom of the ad is an announcement of Kikkoman's 50th anniversary sweepstakes, which ends Sept. 30, and includes a trip to Japan. To enter and for official rules go to www.kikkoman50.com.

8441. Keller, Elizabeth. 2007. Professor Emeritus Keith H. Steinkraus dies at age 89 (Web article). *www.news.cornell.edu/stories/Nov07/obit.Steinkraus.html.*
• ***Summary:*** "Cornell Professor Emeritus Keith H. Steinkraus, a specialist in indigenous fermented foods and food microbiology, died Oct. 23. He was 89.

"Steinkraus, who joined the faculty of the New York State Agricultural Experiment Station in 1952, graduated cum laude from the University of Minnesota in 1939 and earned a Ph.D. in microbiology in 1951 from Iowa State University. He was promoted to full professor in 1962 and retired as professor emeritus in 1988, although he remained active in his field and at Cornell for many years afterward.

"At Cornell, the experience of mentoring international students who had come from Asia, Central America and Africa to study the microbiology of their native foods prompted Steinkraus to study fermented foods, including tempe, tape, trahanas, idli/dosa and the fermented fish sauces and soy products of the Far East, including miso and tofu.

"In 1959 Steinkraus was invited by the Interdepartmental Committee for Nutrition for National Defense to participate in surveys of the nutritional status of military personnel, their dependents and the general populations of South Vietnam, Ecuador and Burma. The project was later extended to include Indonesia, the Philippines, Korea, Taiwan, Thailand and Malaysia.

"Over the course of his career, Steinkraus maintained and developed his connections with Asia as a consultant on food processing issues in Indonesia and as a teacher and researcher at the University of the Philippines College of Agriculture. He lectured in Indonesia, Thailand, Singapore, London, Germany and Switzerland. His *Handbook of Indigenous Fermented Foods*, published in 1983, was the first comprehensive and authoritative book on the subject.

"Steinkraus was the American delegate to the United Nations Environmental Program, United Nations Educational, Scientific and Cultural Organization and International Cell Research Organization panel on applied microbiology and biotechnology and worked as a consultant to the United Nations Industrial Development Organization to determine how genetic engineering and biotechnology could be used to help developing countries in Africa. He was honored in 1985 with the Institute of Food Technologists' International Award and was a fellow of the American

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Association for the Advancement of Science and the American Academy of Microbiology.

"A memorial service will be held Sunday, June 8, at 2 p.m. in Sage Chapel." Address: Part-time writer for the College of Agriculture and Life Sciences, Cornell Univ.

8442. Belleme, John; Belleme, Jan. 2007. Japanese foods that heal: Using traditional ingredients to promote health, longevity, and well-being. Tokyo, Rutland, Vermont, Singapore: Tuttle Publishing. 224 p. Illust. Index. 26 cm.
• ***Summary:*** On the dedication page is a portrait photo of Takamichi Onozaki. Contents. Pronunciation guide. Foreword, by Christina Pirela. Preface, by John and Jan Belleme. Introduction. Food is medicine. 1. Miso: A health secret to savor. 2. Toasted sesame oil: The cooking oil supreme. 3. Shoyu: King of condiments. 4. Tamari: Wheat-free soy sauce. 5. Amazake: Sweet ambrosia. 6. Kuzu: The wonder root. 7. Brown rice vinegar. 8. Shiitake: Miracle mushroom. 9. Brown rice malt syrup: Heavenly sweet water. 10. Umeboshi: Venerable pickled plumbs. 11. Mochi: Sweet rice cakes. 12. Noodles. 13. Tofu: The square egg. 14. Seitan: The vegetarian alternative. 15. Sea vegetables: Underwater harvest. 16. Mirin: Sweet rice wine. 17. Maitake: The king of mushrooms. 18. Japanese tea: A healthy tonic. Acknowledgments. Shopping resources. Glossary. Recipe index.

Note: Tuttle Publishing is an imprint of Periplus Editions (HK) Ltd., with editorial offices at 364 Innovation Dr., North Clarendon, Vermont, 05759. Address: P.O. Box 457, Saluda, North Carolina 28773.

8443. **Product Name:** Sesame Yuba Strips, Cilantro Tofu Salad
Manufacturer's Name: Hodo Soy Beanery
Manufacturer's Address: 1600 S. De Anza Blvd., San Jose, CA 95106. Phone: 408-517-8958.
Date of Introduction: 2007, December
Ingredients: See below.
Wt/Vol., Packaging, Price: -
How Stored: Refrigerated
New Product–Documentation: Labels by brought to Soyinfo Center by Min Tsai on 2009, Sept. 16. Ingredients: Sesame Yuba Strips: Soybeans, filtered water, teriyaki sauce, rice vinegar, sesame paste, soy sauce, sugar, soybean oil, black sesame seeds.

Cilantro Tofu Salad: Soybeans, water, calcium sulfate, rice vinegar, mushroom powder, sesame oil, cilantro, sugar, salt, black pepper.

8444. **Product Name:** San-J Tamari Ginger Dressing
Manufacturer's Name: San-J International, Inc.
Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 804-226-8333
Date of Introduction: 2007.
Ingredients: Tamari Sesame: Water, tamari soy sauce (water, soybeans, salt, alcohol), rice vinegar, organic sugar, onion juice (onion juice, salt, natural flavors), sesame oil, ground sesame, arrowroot, whole sesame, white pepper. This product is made in a plant inspected by the Gluten-Free Certification Organization (www.gfco.org)
Wt/Vol., Packaging, Price: 8 fl. oz. (237 ml) glass bottle.
How Stored: Refrigerate after opening.
New Product–Documentation: Digital color image of front and back label sent by Misako Binford of San-J, 2012, May 11. In an attached e-mail she says that this product was first sold in 2007. However the copyright on the back of each label is 2009--indicating that the label design was updated.

8445. 1001 foods to die for. 2007. Kansas City, Missouri: Andrews McMeel Publishing LLC, Madison Books. 960 p. Introduction by Corby Kummer. Illust. (color). Index. 22 cm.
*

8446. Bittman, Mark. 2007. How to cook everything vegetarian: simple meatless recipes for great food. Hoboken, New Jersey: John Wiley & Sons, Inc. xii + 996 p. Illust. Index. 24 cm.
• ***Summary:*** The chapter titled "Tofu, vegetable burgers, and other high-protein foods" (p. 637-78) has this contents: Introduction. The umami factor (savory-ness). The basics of tofu. The tofu lexicon (regular tofu, silken tofu, pressed or extra-firm tofu, smoked tofu, fried tofu, baked tofu, fermented or pickled tofu, tofu skins {dried bean stick, yuba, bean curd sheets or skins}). Buying and storing tofu. Preparing tofu (freezing, squeezing, pureeing, ...), then come a wealth of recipes.

The index contains 129 entries for tofu, 32 for miso, 26 for tempeh, 25 for soy sauce, 24 for edamame, 23 for seitan, 11 for soybeans, 7 for black beans (fermented [soy nuggets]), 4 for teriyaki sauce, 6 for tofu skins (yuba and dried yuba sticks), 3 for milk substitutes, 2 each for meatballs (vegetarian), and 1 each for bean sprouts (soy), black soybeans, meatless meat sauce, soybean oil, soy flour, soy milk, soy nuts, soy pasta, soy protein isolate, textured vegetable protein, tofu noodles, and Worcestershire sauce (hold the anchovies).

There are also recipes for adzuki beans [sic], tahini, vegan cookery--and much more. Address: New York Times food writer.

8447. Bittman, Mark. 2007. Mark Bittman's quick and easy recipes from the New York Times. New York, NY: Broadway Books. An imprint of Random House. x + 340 p. Index. 23 x 20 cm.
• ***Summary:*** This book collects 350 recipes from Bittman's popular *New York Times* column "The Minimalist," which cleverly caters to the modern gourmet whose expectations are high but whose time is limited.

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Soy related recipes: Nearly instant miso soup with tofu (p. 7). Soy vinaigrette (with soy sauce, p. 44). Rice salad with peas and soy (with soy sauce, p. 58). Steamed clams with soy (sauce, p. 65). Soy-dipped shrimp (p. 78-79). Miso-broiled scallops (p. 80). Simplest steamed fish with soy (p. 95). Salmon with soy and black beans (with "1 tablespoon preserved (Chinese) black beans," p. 110-11). Soy duck (p. 142). Soy poached chicken (p. 154-55). Grilled soy-and-ginger boneless lamb leg (p. 193). Pork chops with miso-red wine sauce ("Miso is a superb thickener, adding a rich, creamy consistency," p. 201). Roast asparagus with soy and sesame (p. 217). Grilled asparagus with soy-ginger dressing (p. 218). Curried tofu with soy sauce (p. 243). Simmered tofu with ground pork (Ma-Po tofu, p. 244). Address: New York Times food writer

8448. Blereau, Jude. 2007. Wholefood: heal–nourish–delight. Philadelphia, Pennsylvania: Running Press. 332 p. Illust. Index. 23 x 19 cm. [8 ref]

• ***Summary:*** This cookbook is not vegetarian. Vegan recipes are so labeled. One chapter, titled "Soy" (p. 92-110) is divided into two parts: Tofu and tempeh. The index contains 18 entries for tofu, 14 for tempeh, 3 each for miso and tamari, 2 each for miso soup, soy beans, 2 and soy milk, and 1 each for soy flour, teriyaki marinade, and textured vegetable protein.

"Jude Blereau is a natural foods chef, food coach, and cooking teacher who has been involved with the organic and wholefoods industry for more than 15 years. She first became involved in the natural food industry while living in the U.S. in the late 1980s. In 1997, Jude co-founded The Earth Market, a much loved wholefood store and cafe, in Perth, Western Australia. Her focus is on helping people learn about good food-what it truly is, where to get it, how to use it-and to give them the tools and information to make healthy eating a part of their everyday lives. Blereau lives in Australia." From publisher's description. Address: Natural Foods Chef, Australia.

8449. Esselstyn, Caldwell B., Jr. 2007. Prevent and reverse heart disease: the revolutionary, scientifically proven, nutrition-based cure. New York, NY: Avery. A member of the Penguin Group (USA) Inc. xii + 308 p. Plus 8 unnumbered pages of plates. Foreword by T. Colin Campbell, Ph.D. Illust. (some color). Index. 24 cm. [27 ref]

• ***Summary:*** A remarkable, milestone book! Every person with a heart should read this book. Advocates a plant-based diet with no oil or nuts. On the cover: "Based on the findings of a now 20-year study first published in the *American Journal of Cardiology* [in Dec. 1995]. With more than 150 great-tasting recipes."

Contents: Foreword, by T. Colin Campbell. Introduction. Part I. The heart of the matter. 1. Eating to live. 2. "Someday, we'll have to get smarter." 3. Seeking the cure. 4. A primer on heart disease. 5. Moderation kills. 6. Living, breathing proof. 7. Why didn't anyone tell me? 8. Simple steps. 9. Frequently asked questions. 10. Why can't I have "heart healthy" oils? 11. Kindred spirits. 12. Brave new world. 13. You are in control.

Part II. The joy of eating. 14. Simple strategies. 15. Advice from Ann Crile Esselstyn. 16. Breaking the fast. 17. Feasting on salads. 18. Sauces, dips, dressings and gravies. 19. Vegetables, plain and fancy. 20. Soups, thick and delicious. 21. Sandwiches for all occasions. 22. The main course. 23. Wonderful, easy desserts.

This book is based on a 20 plus year study of coronary artery disease using diet and lifestyle modifications; it reports the results of that study. President Bill Clinton has spoken (in public and on TV) very highly of this book and of Dr. Esselstyn (pronounced ES-sul-stun, not ES-sul-stine), the name is Dutch.

The dietary rules (p. 120-21): 1. Don't eat any meat, chicken or fish. 2. Do not eat *any* dairy products. 3. Do not eat eggs; that includes egg whites and even egg substitutes that include egg whites. 4. Do not consume any oil at all–Not even virgin olive oil or canola oil. 5. Use only whole grain products, including brown rice. That means no white flour products. 6. Do not drink fruit juice–but its fine to eat fruit. 7. Do not eat any nuts. 8. Do not eat avocadoes (or guacamole). 9. Do not eat coconut. 10. "Eat soy products cautiously. Many are highly processed and high in fat. Use 'light' tofu. Avoid soy cheese, which almost always contains oil and casein." 11. Read *The China Study*, by T. Colin Campbell.

After having cautioned the reader to "Eat soy products cautiously," the plant-based recipe section of the book (p. 119-286), by Ann Crile Esselstyn, calls for soyfoods in many recipes. Some of the breakfast cereals call for plantmilk using a standard format: "2 cups oat, multigrain, almond, or nonfat soymilk" (p. 129-32, 162, 231, 276, 283). A comparison of the caloric, fat, sodium, and sugar content of nine plantmilks (six of them containing soy) is given on pages 136-37. "Low-sodium tamari" and Bragg Liquid Aminos (which contain sodium by no salt) are widely used in small amounts for seasoning (p. 128, 158-59, 165-66, 168, 170-72, 177, 179, 184, 251, etc.). White miso is used occasionally as a combination seasoning and sweetener (p. 163, 191). Seitan (made from wheat gluten) is occasionally used as a meat substitute (p. 213, 250-51). Light silken tofu or light extra-firm tofu (often one 12.3-ounce package) is used as a dairy alternative in dessert recipes such as Chocolate mousse (p. 272-73). Blueberry purple passion (p. 273). Pineapple paradise (p. 274). Lemon whipped topping (p. 275). Pineapple frosting (p. 278). Creamy fudge frosting (p. 279).

Sweeteners are used in moderation and the chapter on "Desserts" begins: "Its best not to eat dessert every night. Make it a rare treat, when there are lots of people around–and no temptation to eat too much." Many fruits are naturally

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sweet and make good desserts. One format is: "3 tablespoons maple syrup, honey, agar nectar, or sugar."

Acknowledgments (p. 287): "Kindred spirits in the transition to healthier living have my gratitude for their own inspiring work. Among them: Neal Barnard, Colin Campbell, Antonia Demas, Hans Diehl, Joel Fuhrman, Mladen Galubic, Alan Holdhamer, William Harris, Michael Jacobson, Michael Klaper, Robert Kradjian, Doug Lisle, Howard Lyman, John McDougall, Jeff Nelson, Dean Ornish, John Robbins."

"My late father, Caldwell B. Esseltyn, M.D... And long before it became fashionable, he argued that the only way out of the impossible health-care burden that confronts the United States is to teach people how to live healthier lives" (p. 288).

Publisher's summary: "Heart disease remains the leading cause of death in this country for men and women. And while we spend millions of dollars each year developing treatments, traditional procedures fail patients by focusing only on the symptoms of the disease, not the underlying causes. In *Prevent and Reverse Heart Disease*, Dr. Caldwell B. Esselstyn, Jr., a former surgeon, researcher, and clinician at the Cleveland Clinic, challenges conventional cardiology by posing a compelling, revolutionary idea–that we can, in fact, abolish the heart disease epidemic by changing our diets.

"The proof is in the incredible results of the patients who have followed Dr. Esselstyn's ground-breaking program. The men and women in his twenty-year nutritional study–the most comprehensive study of its kind–came to him with advanced coronary disease. Despite the aggressive traditional treatment they received-including bypasses and angioplasties–a number had been told by their cardiologists that they had less than a year to live. Within months of following a plant based, oil free diet, their angina symptoms eased, their cholesterol levels dropped significantly and they experienced a marked improvement in blood flow to the heart. Twenty years later they remain free of symptoms. Drawing on the results of this revolutionary study and his ongoing work with patients all over the country, Dr. Esselstyn convincingly argues that plant based, oil free nutrition can not only prevent and stop the progression of heart disease, but also reverse its effects.

"Furthermore, it can eliminate the need for expensive and invasive surgical intervention except in acute emergencies, no matter how far the disease has progressed. Prevent and Reverse Heart Disease explains the science behind these dramatic results, and offers readers the same, simple plan that has changed the lives of Dr. Esselstyn's patients forever. In addition, the book offers more than 150 delicious recipes developed by Ann Crile Esselstyn, that the Esselstyns and their patients have enjoyed for years. Clearly written and backed by irrefutable scientific evidence, startling photos of angiograms and inspiring personal stories, this book will empower readers to take charge of their heart health. It is an important call for a paradigm shift in heart disease therapy."

About the author: Caldwell Blakeman Esselstyn Jr., M.D., (born December 12, 1933) is an American physician, author, and former Olympic rowing champion. His color portrait photo appears on the front dust jacket. Esselstyn graduated from Deerfield Academy and in 1956 graduated from Yale University, where he was a member of Skull and Bones. Caldwell Esselstyn competed at the 1956 Summer Olympics in Melbourne, where he won a gold medal in eights with the American team. On 1 May 1961 his engagement to Ann Crile was announced by the *New York Times;* they were married on 18 June 1961. 1961–He received his M.D. from Western Reserve University. 1985–He began his famous study at the Cleveland Clinic of 22 patients who had previously had heart attacks. 1988–He and his family began to move toward a plant-based diet. Dr. Esselstyn and his wife, Ann Crile Esselstyn, have mostly followed a vegan diet since the mid-1980s. He attributes the success of his 12 year trial with heart patients to low mean levels of both total cholesterol (145 mg/dl) and LDL cholesterol (82 mg/dl). In 2010 after cardiac surgery, former U.S. president Bill Clinton mostly adopted the plant-based diet recommended by Caldwell Esselstyn, Dean Ornish and T. Colin Campbell. Source: Wikipedia, at Caldwell Esselstyn, May 2011.

Dr. Esselstyne and Ann Krile were married on 18 June 1961 in Cleveland, Ohio. They have four grown children Rip (born in 1963), Ted (1964), Jane (1965), and Zeb (1967). Three are married, and Dr. Esselstyn and Ann have six grandchildren (p. 288). In 1988 the Esselstyn family joined together in moving toward eliminating dairy products, meats, and oils from their diet. Their eldest son, Rip, became an all-American swimmer at the University of Texas at Austin, after graduating he was a professional triathlete for 11 years. Today (2011) he is a teacher and writer about diet and health–advocating a "plant-strong diet." Their second son, Ted, set a 200-yard backstroke record at Yale University, and their daughter, Jane, won the Big Ten 200-yard backstroke championship while attending the university of Michigan. Their youngest son, Zeb, as an Ohio high school junior, was the state butterfly swimming champion. And Ann, now in her early seventies, runs for 40 to 70 minutes almost every day. Clearly their plant-based diet provides them with plenty of strength and energy (p. 78-79). Address: M.D., former surgeon, researcher and clinician, Cleveland Clinic, Ohio–for 35+ years.

8450. Esselstyn, Caldwell B., Jr. 2007. Prevent and reverse heart disease: the revolutionary, scientifically proven, nutrition-based cure (Continued, Part II). New York, NY: Avery. A member of the Penguin Group (USA) Inc. xii + 308 p. Plus 8 unnumbered pages of plates. Foreword by T. Colin Campbell, Ph.D. Illust. (some color). Index. 24 cm. [27 ref]

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• ***Summary:*** Continued: Basic biography: Caldwell Esselstyn, M.D., received his B.A. from Yale University and his M.D. from Western Reserve University. In 1956 he received a gold medal as a member of the Olympic rowing team. He trained as a surgeon at the Cleveland Clinic and at St. George's Hospital in London. In 1968 as an army surgeon in Vietnam he was awarded the Bronze Star. Dr. Esselstyn has been associated with the Cleveland Clinic since 1968, having served as staff president and on its board of governors. He chaired the Clinic's Breast Cancer Task Force. In 1991 Dr. Esselstyn served as president of the American Association of Endocrine Surgeons, and in the fall of 1991 he organized "The First National Conference on the Elimination of Coronary Artery Disease" in Tucson, Arizona. He invited Dr. T. Colin Campbell to speak at this conference. In 2005 Dr. Esselstyn became the first recipient of the Benjamin Spock award for compassion in medicine. His website is heartattackproof.com.

Heart disease is the leading cause of death of men and women the United States, with more than 500,000 deaths each year. Three times that number suffer a known heart attack and 3 million more have a "silent heart attack." Dr. Esselstyn believes this is all unnecessary. There doesn't have to be any heart disease at all. He calls it a "toothless paper tiger that need never ever exist. And should it exist, it need never ever progress." His views are based on the global epidemiology of this disease and also on his research. When you look globally, there are still cultures on this planet where heart disease is virtually unknown–the rural Chinese, the Papua Highlanders in Papua New Guinea, the people in Central Africa, and the Tarahumara Indians of northern Mexico (known for their long-distance running). This is largely because, by culture, heritage, and tradition, they consume a largely plant-based diet that does not contain any of the "atherosclerotic lynchpins," which are dairy products, meat, and processed oils. By contrast, in the USA, by age 12 our children begin to have thickening of those major carotid arteries which go to our brain. If they live until age 20 and they happen to die in combat, as was known in Korea and Vietnam 40-50 years ago, roughly 80% of these young G.I.s already have gross evidence of coronary artery disease–visible even without a microscope. A more recent study, done in 1999, of those who happened to die of accidents, homicides, and suicides, between the ages of 16 and 34, found that 100% of these people have coronary artery disease. This is the background of why Dr. Esselstyn wanted to do research in this area. His research started in about 1985 and he has concluded that the major cause of coronary artery disease is the standard American diet.

A sampling of the many priceless gems in this book: "Can I change?" It is difficult, but "The key is to remember that the rewards are greater than the frustration . . . after 12 weeks of eating no animal foods, dairy, or added oils, you lose your craving for fat" (p. 76).

The typical Western diet gets 37% of its calories from fat. This diet recommends about 10% of the calories from fat–which is ideal for good health (both heart disease and cancer). And this diet provides about 50-70 gm of protein a day (p. 77).

"Will I have enough strength and energy?" "The truth is that excessive consumption of animal protein badly weakens our bodies. Among other things, it accelerates the loss of calcium through the kidneys, leading to the brittle, porous bone condition called osteoporosis." "And look at the examples that nature offers." The elephant, the bull, etc. They eat a plant-based diet–as do many great athletes, such as Carl Lewis (1991) and many others.

"What if my cholesterol won't go below 150 mg/dL? A tiny minority of the population, no more than 5% of all Americans, has an inherited cholesterol disorder that makes it impossible for them to reduce total cholesterol below 400 to 500 mg/dL, even with careful nutrition. Such patients need to be monitored by highly qualified cholesterol specialists" (p. 79).

A plant-based diet should contain "large quantities of natural antioxidants, which prevent the body from oxidizing LDL cholesterol into its most dangerous, artery-clogging form."

"Don't my genes predetermine whether or not I'll get heart disease?" The "answer is an emphatic NO. If you maintain a cholesterol level under 150 mg/dL, or LDL under 80 mg/dL, you–and all other relatives who inherited these genes–will be free of heart disease" (p. 80).

"Why can't I have 'heart-healthy oils?" The idea of heart-healthy oils and the Mediterranean Diet was based on the Lyon Diet Heart Study, and was widely praised by the media and in books. But "By the end of the study, nearly four years after its start, fully 25% of the subjects on the Mediterranean diet–one out of four–had either died or experienced a new cardiovascular event. I feel these are wretched results for a nonmalignant disease. We can do much better." "In fact the medical literature is filled with evidence of the harmful effects of monounsaturated oils" as is Dr. Esselstyn's personal experience (p. 84-86).

"T. Colin Campbell, the Cornell University professor who directed and cowrote *The China Study*, observes that there are 'two worlds' of medicine–two radically different visions of how to approach health. 'One consensus favors drugs as the cure, the other favors food,' he explains. Western medicine, for the most part, has chosen drugs. As I see it, we got it wrong.' I agree."

Chapter 11, "Kindred spirits," summarizes the pioneering work of some mentioned previously in the "Acknowledgments" section of this book: T. Colin Campbell, Nathan Pritikin, Hans Diehl, John McDougall, Dean Ornish (whose program is most similar to Esselstyn's). "Among the wide variety of programs promoting cardiovascular health, his and mine are the only ones I am aware of that are based

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on peer-reviewed research that demonstrates arrest and reversal of heart disease." Dr. Esselstyn's 12-year study started in 1985; Dr. Ornish's study started in 1986. Dr. Ornish "did not use cholesterol-lowering medication. Like mine, Dr. Ornish's patients had three-vessel coronary heart disease. And Dr. Ornish insisted that, in addition to adopting a plant-based diet, his patients must use relaxation and meditation techniques and participate in a structured exercise program. Finally Dr. Ornish had a control group of patients with similar disease severity, but who followed a traditional program of cardiac care"). Dr. Charles Atwood (a longtime pediatrician with an extremely busy practice, his focus on children was very important [not to be confused with Dr. Robert Atkins of low-carb diet fame]), and Antonia Demas.

"And yet with all the research that demonstrates the wisdom and benefits of plant-based nutrition, its growing ranks of opponents still face a formidable array of opponents from the titans of the animal food industry to the medical establishment itself. My colleague Dean Ornish succinctly sums up the dilemma faced by those of us who believe in this healthy way of eating. 'I don't understand why asking people to eat a well-balanced vegetarian diet is considered drastic, while it is medically conservative to cut people open.' Well said" (p. 93). Address: M.D. former surgeon, researcher and clinician, Cleveland Clinic, Ohio–for 35+ years.

8451. Kurihara, Harumi. 2007. Harumi's Japanese home cooking. 1st American ed. New York, NY: Home Books. A division of the Penguin Group (USA) Inc. 160 p. Illust. (color). No index. 26 cm.

• ***Summary:*** A translation of *Kurihara Harumi no japaniizu hoomu kukkingu*. One chapter is titled "Soup, eggs & tofu." The book (which is crippled by the lack of an index) contains 7 recipes for miso, 5 for tofu, 2 for teriyaki sauce, and 1 for edamame. Soy sauce is used as an ingredient in many recipes such as Chicken with soy and balsamic dressing. The short glossary mentions Kochujan (Korean miso).

Harumi Kurihara, a housewife, is Japan's most popular cooking expert. Her first book in English, *Harumi's Japanese Cooking* won the Gourmand World Cookbook award in 2004. Address: Japan.

8452. Losso, Jack N.; Shahidi, Fereidoon; Bagchi, Debasis. 2007. Anti-angiogenic functional and medicinal foods. Boca Raton, Florida: CRC Press. 715 p. See p. 131. Illust. 24 cm. [30+ ref]*

• ***Summary:*** Section 6.2.2 "Fermented soy foods (Doenjang, chonggukjang, and ganjang)" has the following contents: 1. General characteristics of doenjang, chonggukjang, and ganjang. 2. Health promoting effects of doenjang, chonggukjang, and ganjang.

Doenjang is Korean soy paste [somewhat like Korean miso]; it is made from meju (a fermented mass of cooked soybeans [soybean koji]) and takes several months to ferment. In traditional meju the main microorganisms are *Aspergillus oryzae, Aspergillus sojae* and *Bacillus subtilis*. "In the past, doenjang was obtained by separating the soy sauce (ganjang) after fermentation of meju in brine for several months. However, commercial doenjang is now produced as a sole product without separation of ganjang, and other cereals are often added to soybeans as a substrate [as is also the case for Japanese miso]. Modern meju is prepared on an industrial scale by inoculating" the substrate with *Aspergillus oryzae* "and *Bacillus* rather than depending on natural contaminant flora."

Chonggukjang is another type of fermented soybean paste, in Korea it is typically consumed as the basis of a soup and takes only a few days to ferment. The fermented soybeans are typically mixed with salt, garlic, ginger, and red chili pepper before being used as a soup base. Chonggukjang was first mentioned in the *Sanlim Gyongje*, by Hong Man-Sun, an agricultural encyclopedia published in 1715. Note: It could be called Korean natto.

Ganjang is Korean soy sauce. Traditionally it was made by separation of the liquid from doenjang [From Google Books Preview].

8453. Oliveira, Karla. 2007. Tassajara cookbook: lunches, picnics & appetizers. Layton, Utah: Gibbs Smith. 224 p. Illust. (color). Index. 26 cm. [1 ref]

• ***Summary:*** From the Tassajara Zen Mountain Center, a beautiful Buddhist monastery north of the Carmel Valley, in California's Ventana Wilderness of Los Padres National Forest in the Santa Lucia Mountains. Full-page color photos accompany many recipes. On page 15 is a color photo of the lovely Tassajara kitchen building with natural stone walls 18 inches thick and entire trees for rafters.

Soy related recipes: Artichoke Walnut Spread (with ½ cup firm silken tofu, or ricotta cheese, p. 25). Creamy tempeh [spread] with garlic and dill (p. 62). Tempeh spread with capers and onions (p. 66). Western-style shira-ae (with 6 ounces soft tofu, mashed, p. 65). Creamy tofu dip (p. 66). Pâté tempeh (p. 76).

One chapter is titled "Tofu, tempeh & egg salad sandwich fillings" (p. 85-95). Herb-crusted tofu. Happy tuna salad (with tempeh). Eggless egg salad (with tofu). No egg salad (with tofu). Tofu salad sandwich spread. Mexican tempeh salad. Tofu mayonnaise. Tempeh salad (p. 94).

Tofu "bits" in Kosho's secret tenzo sauce (p. 95). Miso sauce (p. 109).

Another chapter is "Marinades for tofu, tempeh & vegetables" (p. 117-26; speaks of a "block" of tofu): Orange balsamic marinated tofu. The Tassajara marinated tofu. Tofu teriyaki. Tofu marinated with parsley and olive oil. Honey-mustard tofu. Hoisin marinade (with soy sauce).

Edamame salad (p. 132). Cabbage salad with miso "floating cloud" dressing (p. 140). Japanese marinated salad with diced tofu (p. 141).

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In the Index is a long entry for "Vegan cookies" and another for "Vegan spreads." Address: M.S., R.D., Nutritionist and professional chef, San Francisco Bay Area.

8454. Reinfeld, Mark; Rinaldi, Bo. 2007. Vegan fusion world cuisine: extraordinary recipes & timeless wisdom from the celebrated Blossoming Lotus restaurants. New York, NY: Beaufort Books. 243 p. Foreword by Dr. Jane Goodall. Illust. (color photos). Index. 26 cm.

• ***Summary:*** A beautiful, inspirational book. Chapter 8 is titled "Tempeh, tofu & seitan" (p. 114-33). The index contains 28 entries for tofu, 13 for tempeh, 4 for seitan, 3 for soymilk, and 2 for miso.

Includes a resource guide, a good glossary with entries for miso, nama shoyu, seitan, shoyu, soy milk, tamari, tempeh, textured vegetable protein, and tofu.

Note: Unfortunately the quotation near the beginning, supposedly by Albert Einstein, is a mish-mash by various wise writers including Albert Schweitzer. Address: 1. Founding chef, Blossoming Lotus Restaurant (Kaua'i, Hawaii), and author. 2. Author and teacher. Both: Kaua'i, Hawaii.

8455. Roseboro, Ken. 2008. The 2008 non-GMO sourcebook: A buyers guide to global suppliers of non-GMO and organic seeds, grains, ingredients, and foods. Fairfield, Iowa: Writing Solutions, Inc. 102 p. Illust. (both color, and blue and white photos). Index. 28 cm.

• ***Summary:*** Contents: Editor's introduction (by Ken Roseboro, publisher and editor). Suppliers of non-GMO products: United States, Canada, Europe, Africa / Middle East, Asia / Australia, Latin / South America. The Non-GMO Project special section (The Non-GMO Project rises to forefront of natural food industry, Verification aims to protect natural and organic foods from GMOs, assure consumers, The Non-GMO Project facts, Michael Funk [President and CEO of United Natural Foods, Inc., UNFI]: "Time has come" for The Non-GMO Project, Company profile: Straus Family Creamery becomes first company to be verified through Non-GMO Project). Related products, services, and organizations. Indexes: Index of non-GMO suppliers by product category: Seeds, grains and oilseeds (incl. soybeans {identity preserved, specialty, food- and feed-grade}, soybeans–organic), canola / rapeseed products, corn products, soy products (phytosterols, soy flakes, soy flour, soy germ concentrate, soy grits, soy lecithin {including organic}, soy meal {including organic}, soy nuts, soy oil {including organic}, soy oil–low linolenic, soy protein, isolates and concentrates, soy protein–textured, soymilk, soymilk powder, soy sauce, vitamin E / tocopherols), other ingredients and processing aids (citric acid, dairy ingredients, enzymes, flavors, food colors, organic sweeteners, etc.), food products, animal feed. Index of related products, services and organizations. Index of related products, services, and organizations. Comprehensive index. Order form for *The Organic & Non-GMO Report.*

This comprehensive book gives the single best picture of the growing industry, worldwide, opposed to genetic engineering of foods and feeds. Address: Editor / Publisher. Phone: 1-800-854-0586.

8456. Cook, Anne. 2008. Digging for a story: Urbana author got interested in crop during explorations of Illinois rural life. *News-Gazette* (*Champaign, Illinois*). Feb. 3. p. E-3. [1 ref.]

• ***Summary:*** Raymond Bial has written a new 40-page full color children's book titled "The Super Soybean." An Urbana, Illinois, author, he has written more than 100 books, most of them for younger audiences. The publisher's website states that the book is for age levels 8-11, grades 3-6. He also shot most of the photos for the book. In China and Japan, soybeans were known as "yellow jewels."

"Curiously, according to Bial's research, a man named Samuel Bowen brought [soy] beans from China via London to Savannah, Georgia, in about 1765. Even more curiously he grew them on his plantation to make soy sauce and vermicelli to export to England."

George Washing Carver is presented as an important figure in the history of the soybean. A photo shows Bial smiling, holding up the cover of his book. Address: Staff writer.

8457. Lee, Jennifer 8. 2008. The fortune cookie chronicles: Adventures in the world of Chinese food. New York, NY: Twelve (Hachette Book Group USA). x + 307 p. 24 cm. [75+ endnotes]

• ***Summary:*** Contents: Prologue. 1. American-born Chinese. 2. The menu wars. 3. A cookie wrapped in mystery inside an enigma. 4. The biggest culinary joke played by one culture on another. 5. The long march of General Tso. 6. The bean sprout people are in the same boat we are. 7. Why chow mein is the chosen food of the chosen people, or, The kosher duck scandal of 1989. 8. The Golden Venture: restaurant workers to go. 9. Take-out takeaways. 10. The oldest surviving fortune cookies in the world? 11. The mystery of the missing Chinese deliveryman. 12. The soy sauce trade dispute. 13. Waizhou, U.S.A. 14. The greatest Chinese restaurant in the world. 15. American stir-fry. 16. Tsujiura Senbei. 17. Open-source Chinese restaurants. 18. So what did Confucius really say?

The basic history: Fortune cookies were invented in Japan by the 1870s (they were called *Tsujira senbei*), then brought to California by Japanese immigrants. Before World War II they were called *senbei* and the fortunes were usually written in Japanese. Makoto Fujiwara served these senbei in 1894 in San Francisco at the Japanese Tea Garden (of which he was superintendent), it was built as part of the World's Fair, the Midwinter International Exposition. In San

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Francisco, there was a 9-fot fortune cookie manufacturing machine in the basement of Benkyodo, a Japanese sweets and food store still in operation.

Starting in early 1942, and during World War II, when basically all 110,000 West Coast Japanese were sent to internment camps, Chinese living in America took over the business of manufacturing fortune cookies (in Los Angeles and San Francisco)–in part because Chinese restaurants needed them. "By the 1940s English-language fortune cookies were already commonplace in Chinese restaurants in San Francisco and southern California. Historically, Chinese have never baked and are not known in the West for their desserts–which use little sugar and fat, but plenty of red [azuki] beans, lotus, peanuts, sesame seeds, soybeans and almonds. The Chinese built automated factories and when the Japanese were freed from the camps after the war, they were unable to get back into the industry. Today, the major fortune cookie manufacturing companies in the USA are owned and run by Chinese Americans.

Chapter 12 is about a company named Kari-Out, located in the quasi-industrial town of Totowa, New Jersey. Kari-Out–which was founded in the late 1960s by Howard Epstein, a Bronx-born businessman with a "passion for what he called 'small-unit packaging'"–makes the millions of tiny transparent packets of brown-black liquid that are distributed every year for free in Asian take-out meals and products (like ramen noodles). It is called "soy sauce" but its main ingredients are water, hydrolyzed vegetable protein, caramel coloring, and corn syrup. So, where's the soy? Asian manufacturers of traditional fermented soy sauce, in which soybeans are one of the main ingredients, have begun a global campaign to prevent products like that made by Kari-Out from being classified as "soy sauce." Through the government of Japan, they have submitted a proposal to the Codex Alimentarius Commission, the "forum for international food-definition battles." The Asian makers of soy sauce wanted to have soy sauce classified into four types: long-term brewed, short-term brewed, nonbrewed, and mixed. But the debate has heated up because La Choy, founded in America, also makes this same kind of HVP soy sauce. Suddenly the International Hydrolyzed Protein Council and the USDA were defending La Choy's HVP soy sauce. In the end, the Americans wrestled the definition of "soy sauce" away from the Asian makers. In 2005 the Japanese government quietly withdrew its proposal.

Note 1. From the publisher's description of this book: "If you think McDonald's is the most ubiquitous restaurant experience in America, consider that there are more Chinese restaurants in America than McDonalds, Burger Kings, and Wendy's combined. New York Times reporter and Chinese-American (or American-born Chinese). In her search, Jennifer 8. Lee traces the history of Chinese-American experience through the lens of the food. In a compelling blend of sociology and history, Jenny Lee exposes the indentured servitude Chinese restaurants expect from illegal immigrant chefs, investigates the relationship between Jews and Chinese food, and weaves a personal narrative about her own relationship with Chinese food. The Fortune Cookie Chronicles speaks to the immigrant experience as a whole, and the way it has shaped our country."

Note 2. The author was born in 1976. "Jennifer 8. Lee, the daughter of Chinese immigrants and a fluent speaker of Mandarin Chinese herself, grew up eating her mother's authentic Chinese food in her family's New York City kitchen before graduating from Harvard in 1999 with a degree in Applied Mathematics and economics and studying at Beijing University. At the age of 24, she was hired by the New York Times, where she is a metro reporter and has written a variety of stories on culture, poverty, and technology." A color photo on the rear dusk jacket shows Jennifer 8. Lee. Address: Harlem, Manhattan, New York City, New York

8458. Liu, KeShun. 2008. Food use of whole soybeans. In: Lawrence A. Johnson et al. eds. 2008. Soybeans: Chemistry, Production, Processing, and Utilization. Urbana, Illinois: AOCS Press. viii + 842 p. See p. 441-481. Chap. 14. [85 ref]
• ***Summary:*** Contents: Introduction. Non-fermented soyfoods: Soymilk (traditional soymilk, modern soymilk {techniques to reduce beany flavors, formulation and fortification, homogenization, thermal processing, and packaging}), tofu (preparation methods, factors involved in tofu-making {soybean varieties, storage and pretreatment, solids concentration, heating, type of coagulants, coagulant concentration, coagulation temperature, coagulation time, process automation, packaging}, varieties of tofu {silken tofu, regular and firm tofus, varieties of tofu products}), green vegetable soybeans, soybean sprouts, yuba, okara, roasted or cooked soybeans. Fermented soyfoods: Terms (Koji {fermentation, koji starter, inoculum}), fermented soy paste (preparation method {preparing rice koji, treating soybeans, mixing and mashing, fermenting, pasteurizing and packaging}, processing principles), soy sauce (preparation method {treating raw materials, koji making, brine fermentation, pressing, refining}, processing principles, chemical soy sauce), Japanese natto (preparation method, processing principles), Indonesia tempeh (processing method, processing principles), fermented soymilk, fermented tofu (preparation method, processing principles), fermented black soybeans (Chinese douchi, Japanese hamanatto). Conclusion.

Figures show: (1) Flowchart of a traditional Chinese method for making soymilk and tofu. (2) Photo of savory tofu dices. (3) Photo of soy sprouts. (4) Photo of yuba (soymilk film). (5) Photo of Chinese jiang and Japanese white and red miso. (6) Flow chart of a common method for making Japanese rice miso. (7) Photo of Japanese natto. (8) Flow chart of a traditional Indonesian method for making

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tempeh. (9) Photo of Chinese douchi (fermented black soybeans or fermented whole soybeans). Address: Research Chemist, U.S. Dep. of Agriculture, Agricultural Research Service, Grain Chemistry and Utilization Lab., Aberdeen, Idaho 83210.

8459. Takesuye, Betty Tadano. 2008. Re: John Tadano, Joe Tadano, and the family shoyu factory in Glendale, Arizona. Letter (e-mail) to William Shurtleff at Soyinfo Center, July 15. 1 p.

• ***Summary:*** It was Betty's uncle John Tadano, not Joe Tadano, who was the brother in charge of the shoyu factory. The other brothers also were involved in one way or another.

"Takeshi Tadano was born in Wakuya, Miyagi-ken, Japan, on May 7, 1876.

"I have a couple of photos of John which I can copy and send you. I do not have a copy of the building while it was housing the shoyu factory. The building is still in existence in Glendale. Do you want a photo of it as it is stands today? I can take one–there are other buildings in the area that have been erected since the factory was used in the 1940s so it won't have the same appearance as before."

John and Mary have two daughters, one here in Arizona and the other in Utah. Both were born in the late 1940's. They might have photos you would be interested in, although they would not have any memories of the factory. It is possible that they could relate anecdotes told them by John. Address: 807 N. 73 Place, Scottsdale, AZ 85257.

8460. Peters, Barbara Y. 2008. Recollections of her father, John T. Tadano, founder of Showa Shoyu Brewing Co. in Glendale, Arizona (Interview). *SoyaScan Notes*, July 21. Conducted by William Shurtleff of Soyinfo Center.

• ***Summary:*** John T. Tadano was Barbara's father; her mother was Mariko ("Mary") Taguchi Tadano. In the large 1948 photo ad of the shoyu factory from the *Chicago Japanese American Year Book*, only the front building (facing Glendale Ave.) is the shoyu factory. The larger, taller building behind it was a soda pop factory.

Takeshi Tadano, John Tadano's father and Barbara's grandfather, was the real founder of the shoyu company; he had the recipe for making shoyu and he knew the process. On the day the Japanese bombed Pearl Harbor, Takeshi and his wife were living in the home of John Tadano and his family. The next day he was arrested as a prisoner of war and taken away; the family was not told where he was taken. John (his son), like the rest of Takeshi's other sons, tried to locate Takeshi, so he looked for Takeshi along his delivery route as he went southward. In El Paso, John almost got lynched because he was Japanese. John finally found his father, Takeshi, at the World War II internment camp in Crystal City, Texas.

Before coming to the USA, Takeshi had served as a messenger for the Emperor of Japan (Hirohito), delivering messages to various persons in Japan.

The verb "ki-Bei suru" means "to return to America." Barbara understands it to refer to a person who is sent from the USA to Japan, to be educated in Japan. The eldest son in a family is often educated in this way, but in this family it was Frank Tadano [sic, George Yoneo Tadano] who was sent. The eldest son, Takeshi, who married Michiko, was not sent.

Takeshi had been a target for the U.S. government for two main reasons: (1) He had been a messenger for the Emperor of Japan; (2) He had sent one of his children back to Japan to be educated.

Frank (the ki-Bei) was later imprisoned with Takeshi–and his wife and family decided to go with him, even though they didn't have to. Takeshi had guards with drawn bayonets surrounding him; they still hate Japanese there. Before the end of World War II, Takeshi (Barbara's grandfather) developed heart problems so he was released from the camp in Crystal City, Texas.

The Tadashi sons are from two different mothers, but the same father. This split lineage is essential to understanding the history of this family and of the shoyu factory. John Tadano was a born entrepreneur. His family (wife and children) was the only family that did not live on Takeshi's ranch; all of the other brothers, with their wives and families, lived on the ranch. One reason John did not live on the ranch was because of his wife, Mariko, who grew up in Colorado. Her father was not in agriculture; he owned his own Japanese store in Rocky Ford, Colorado. John hated agriculture; he didn't want any of his children to work in the fields–even though they did so from time to time–to help out. Joe Tadano, who was the youngest son, moved off the ranch later in his life. Barbara thinks Joe had nothing to do with the shoyu business. None of the employees except Ben Yubuto were Tadano family members or relatives. Barbara was a toddler (age 2-4) at the time the shoyu plant was in operation; she went there many times but has only vague memories of the fermenting room, the corn syrup (or molasses) room, the rooms full of big vats, the distillery (with glass tubing and glass bottles) in her father's office, etc. Japanese kids work, and she did real work at the plant. John was very bright [intelligent]; he did some amazing things.

Some artifacts from the shoyu plant still exist. Barbara is quite sure she can locate both full and empty bottles of John's shoyu. Michiko used to have a whole case of them. "It doesn't taste like anything that's currently on the market. It was much thicker, much denser–more like the tamari that's sold at health food stores. It tended to get better with age, and something would settle to the bottom."

John did not have to go to an internment camp. In fact, he ran the commissaries at the two internment camps in Arizona: Poston and Gila River War Relocation Centers. He would deliver Japanese food. He was a produce broker (including for the ranch) and later a food broker for Japan.

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Foods. He also delivered rice; that is how he met his wife to be in Colorado.

After World War II, John Tadano's shoyu factory was shut down. Either General Foods or Best Foods [or perhaps Beatrice Foods, which in 1943 purchased Oriental Show-You Co., which made fermented shoyu] tried to buy it, but Takeshi did not want to sell the recipes. John also had a thriving business with a grocery store that was very famous.

There has long been a problem with money in the family. When Takeshi died, he left no will; so all of the land wealth went to the first born (Tadashi); the other children got nothing. John had his own business, so he didn't really care about it, but the other brothers who lived on the farm got nothing.

Betty Takesuye is Barbara's cousin; Michiko was Barbara's aunt. Michiko had the best memory. Ben Yubuto is still alive and he ran the factory when John Tadano was away; but John and his father (Takeshi) were the only people who knew the actual process. Takeshi didn't trust his other sons with the process; that was a sore spot. Barbara is not sure who founded the company; it was Takeshi's recipe (he made soy sauce in Japan before he came to the USA), but John may have raised the money. Takeshi was the banker for the Japanese community in Phoenix.

John Tadano died about 13 years ago (i.e., about 1995); Barbara knew him as one adult to another. Some books have been written in which John Tadano is mentioned. John's wife was not much involved in her father's business. Barbara worked for her father from the age of 2 until he died; she graduated from Harvard University in about 1971. At one point she was going to write a cookbook, so she collected many cookbooks. Ben Tadano (Betty's brother) is another person who knew John Tadano well; he worked a bit in the shoyu factory. Joe Tadano and all of his brothers died by age 67. Joe was something of a womanizer. Address: Signature Real Estate Group, 1776 Park Ave., Suite 209, P.O. Box 681777, Park City, Utah 84068.

8461. Takesuye, Betty Tadano. 2008. Re: John Tadano the Tadano family shoyu factory in Glendale, Arizona. Letter (e-mail) to William Shurtleff at Soyinfo Center, July 21. 1 p.
• ***Summary:*** "Kibei refers to Japanese who were born in the U.S. but were raised / educated in Japan before returning to the U.S. Frank was not a Kibei but the younger brother. George Yonco was the Kibei in the Tadano family.

"My grandfather Takeshi Tadano went to Japan in 1939/1941 to learn the shoyu making process. He was on the last ship out of Japan back to the U.S. before war broke out. He intended to make shoyu in Arizona.

"Ben Yabuno worked for John Tadano. He has passed away. I do know the whereabouts of his daughter. I would have to ask her permission for you to contact her, however.

"I do not have any knowledge of articles or books in which uncle John is mentioned. I would be interested in whatever you have been able to uncover.

"I know of two intact bottles of Marusho Shoyu. I have not seen either of them so I do not know the condition of the bottle or label. I think they both are the small size. I don't know if they are still full."

A color photo taken by Betty Takesuye shows the big old sugar beet building on the left and the Tadano Shoyu factory on the right. But are unoccupied red brick buildings behind a chain link fence. Address: 807 N. 73 Place, Scottsdale, AZ 85257.

8462. *SoyaScan Notes*.2008. Xiamen (Amoy), Hokkien, and the word "ketchup" (kiô-chap) (Overview). Aug. 8. Compiled by William Shurtleff of Soyinfo Center.
• ***Summary:*** In 1541, European traders (mainly Portuguese) first visited Xiamen (also known as Amoy), which was China's main port in the nineteenth century for exporting tea. As a result, the Hokkien dialect (also known as the Amoy dialect) had a major influence on how Chinese terminology was translated into English and other European languages. For example, the words "Amoy", "tea" (tê), "ketchup" (kiô-chap), "Pekoe" (peh-hô), kowtow (khàu-thàu), and possibly Japan (Jit-pún) originated from the Hokkien.

It seems likely that the Indonesian word for soy sauce (ketjap, kecap) also originated in or around Hokkien of southeast China.

8463. Kikkoman Corporation. 2008. Annual report 2008. Year ended March 31, 2008. 250 Noda, Noda-shi, Chiba 278-8601, Japan. 41 p. 28 cm. [Eng]
• ***Summary:*** Consolidated net sales rose 5.4% to $4,139 billion, operating income climbed 10.2% to $238.5 million, and net income rose 6.6% to $114.4 million. "Sales growth was hampered, however, by lackluster performance from Kibun Food Chemifa's soy milk drinks." Note: Dollar values may have changed at different percentage rates due to changing foreign exchange rates.

Page 1 is titled "Kikkoman Group global launch of new corporate brand logo and slogan. Written in orange, it is: "kikkoman: season your life." Above and to the right of the word "kikkoman" is the old hexagonal Kikkoman logo with the Japanese character meaning "man = 10,000" inside. "Kikkoman introduced its previous corporate logo in the Japanese market in 1987. In the two decades since then, Kikkoman has steadily globalized its operations and generates half of its operating profit in markets outside Japan." The new corporate brand logo represents the Group's "determination to harness both tradition and innovation in its business activities."

A photo (p. 7) shows Yuzaburo Mogi (Chairman of the Board and CEO) and Mitsuo Someya (President and COO).

Pages 8-9 show color photos of Japanese soy sauce products including *Tokusen Marudaizu Shoyu* (Premium shoyu made from whole soybeans–rather than the usual

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defatted soybean meal) and *Tokusen Yuki Shoyu* (Premium organic shoyu, certified by Japanese Agricultural Standards, JAS). Address: Noda, Japan.

8464. Cwiertka, Katarzyna J.; Moriya, Akiko. 2008. Fermented soyfoods in South Korea: The industrialization of tradition. In: Christine M. Du Bois, C.-B. Tan, and S.W. Mintz, eds. 2008. Urbana, Illinois: University of Illinois Press. viii + 337 p. See p. 161-181. [47 ref]
• ***Summary:*** Contents: Introduction. The soul of Korean cuisine. The industrialization of *Chang* manufacture. Conclusion–*Chang* and Korean identity. Notes.

Photos show: (1) One of the Starbucks outlets in Korea's capital. (2) Industrially produced soybean paste and hot red pepper paste on shelves in a modern retail store. (3) A traditional home in the Hahoe Folk Village near Andong. Meju [soybean koji] is hanging under the eaves and sauce pots stand in the courtyard. Liquid soy sauce is *kanjang*. Korean miso is *toenjang* or *doen jang*. Hot red pepper miso is *koch'ujang*, which was first mentioned in the 2nd half of the 17th century.

Although foreign foods are widely consumed in Korea today, soybeans and soyfoods remain a fundamental part of the Korean diet, and appear in a wide range for forms. Whole soybeans are boiled with other beans, rice, and other cereals to make *k'ongbap* [*kongbap*]. Whole soybeans are also mashed or ground into a creamy soup called *k'ongguksu* [*kongguksu*] which is served in the summer with noodles, soymilk, and julienned cucumber. Soybean sprouts (*k'ongnamul*), long a favorite in Korea, are used as an ingredient in a variety of soups, stews, and stir-fried. Seasoned soy sprouts (*k'ongnamul much'im* [*kongnamul muchim*]), a popular dish at many Korean meals, is made with blanched soybean sprouts seasoned with green onions, garlic, salt (or sometimes soy sauce), sesame oil, and crushed sesame seeds. Several kinds of tofu (*tubu*) are used in Korean cooking, they can be fried, braised, or simmered. To make Tofu kimchi (*tubu kimch'i*), cut fresh tofu into squares and arrange with pieces of kimchi; it serves as a popular snack with alcoholic beverages. Minced or mashed tofu mixed with minced meat can be used as a filling for dumplings called *mandu* [like Japanese manju], which are then fried or steamed. Roasted soybeans (*pokkun k'ong*) and roasted soybean flour (*k'ongaru*) are indispensable ingredients in many traditional desserts such as *kwaja* and *ttok*. During the last two decades, soymilk has become a popular product in Korea.

Footnote 16 describes the four basic types of Korean soy sauce: *ch'ong kanjan, chung kanjan, chin kanjang*, and *chin kanjang* (written with a different ideogram than no. 3). There is also *honhap kanjang* (a mixture of Japanese soy sauce and its chemical counterpart) and *choson kanjang* (a product manufactured on the basis of traditional Korean methods) (p. 172-73). Address: 1. Leiden Univ., Netherlands, lecturer at the Centre for Japanese and Korean Studies.

8465. Mintz, Sidney W. 2008. Fermented beans and western taste. In: Christine M. Du Bois, C.-B. Tan, and S.W. Mintz, eds. 2008. Urbana, Illinois: University of Illinois Press. viii + 337 p. See p. 56-73. [37 ref]
• ***Summary:*** Contents: Introduction. The distribution of fermented legumes in local food systems. The absence of fermented legumes from Western food history. The future of fermented legumes in the West. Address: Johns Hopkins Univ., USA, emeritus professor of anthropology.

8466. Nguyen, Can Van. 2008. Tofu in Vietnamese life. Translated by Duong Thanh Nguyen. In: Christine M. Du Bois, C.-B. Tan, and S.W. Mintz, eds. 2008. Urbana, Illinois: University of Illinois Press. viii + 337 p. See p. 182-194. [7 ref]
• ***Summary:*** Contents: The origins of tofu in Vietnam: Oral history and direct documentary evidence, evidence for the earlier diffusion of tofu. The role of tofu in Vietnamese life. Tofu in Vietnamese cuisine. Other soybean uses. A photo shows a man making tofu in Hanoi, Vietnam.

Tofu is a popular daily food throughout Vietnam. It would be difficult to find anyone who eats rice but never eats tofu. "Most Vietnamese consider tofu a traditional, cheap, and well-liked dish."

In Vietnam, certain villages have long specialized in tofu production. "Elderly informants told us that it is a hereditary trade, handed down from generation to generation for a long time." But these elders do not know when or how this skill came to Vietnam.

In Vietnam, it is hard to find early documents that mention tofu or soybeans, for after so many decades of war, many of the old scripts and documents have been lost. For example, the *Dai Viet Su Ky Toan Thu* (*Complete Set of Dai Viet History*) is thought to be the most reliable history of Vietnam. The introductory chapter of the 1983 edition states that it was written by Le Van Huu (lived AD 1230-1322), finished in 1272, and consisted of thirty volumes. But no original is known to exist today, and some scholars doubt that there ever were 30 volumes. The original of the 1983 version was edited and printed in 1697 by historians who lived some 400 years after the original edition was first printed.

Two early Vietnamese books that mention soybeans and tofu have been found. Both are available in modern editions. (1) *Van Dai Loai Ngu*, by Le Quy Don (lived AD 1723-1783); modern edition published 1962. In his discussion of grains, he mentions soybean (*dai dau*). (2) *Nu Cong Thank Lam*, by Le Huu Trac (lived AD 1720-1791); modern edition 1971. He stated that the soybean (*dau nanh*) has a sweet and warm nature, and "is good for recovery after an injury, for the beauty of women, for bone marrow, for vitality, and as an antidote for ingested toxins. He noted the tofu contains

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nourishing substances (known today as amino acids and vitamins)." He described two methods of separating liquid soymilk from the solid residue and then of curding the soymilk to make tofu, and he gave eight vegetarian dishes made with tofu–including Tofu soaked in soy sauce, Wine fermented tofu Grilled vegetarian tofu chao.

Le Quy Don and Le Hu Trac are two famous 18th century Vietnamese polymaths. Since both men were born in the early 1700s, it seems quite likely that tofu existed in Vietnam during the 1600s.

However, some scholars believe that tofu arrived in Vietnam much earlier, in the 10th to 11th centuries. These scholars given four reasons for their belief–all based on circumstantial evidence.

(1) Early relations and mass migrations: China and Vietnam have had relations for more than 2,000 years. Chinese imperial envoys imparted cultural information to small groups of Vietnamese leaders. Moreover, there were many wars between China and Vietnam throughout their ancient history. The migration of thousands of people during these times also spread cultural knowledge–such as (perhaps) how to make tofu.

(2) Migrations of Chinese and Vietnamese Buddhists: Because Buddhists have traditionally been vegetarians, they have long been interested in soybeans and soyfoods. A book titled *Thien Uyen Tap Anh*, considered to have first appeared in the 13th to 14th centuries AD, states that "the Buddhist master Vo Ngon Thong (?-AD 826) came from Quang Dong (Guangdong [Canton]), China... In December 1820 he came to Kien So temple (now in Gia Lam district, Hanoi) to meditate and founded the 'Vo Ngon Thong' sect in Vietnam" (Vietnam Buddhist Church 1990). Elsewhere the book describes how two other Chinese Buddhist masters came to Vietnam during the periods 1054-1071 and 1091-1170. In addition, the monks who were students of these masters went to China during this period to meditate. The Vietnamese may well have learned how to make and use tofu during this time either in Vietnam or in China.

(3) Exchanges between the imperial governments of China and Vietnam: There were frequent high-level exchanges. The *Complete Set of Dai Viet History* mentions that in the year 1007 the Vietnamese emperor sent two envoys to Song dynasty China, they returned in 1009. In the year 1020 another envoy went to China and returned. These envoys may have eaten tofu while in China, and they may have asked for training in how to make it.

(4) Vietnamese folk songs and sayings: "These suggest an ancient origin for tofu in Vietnam." The words to one song say: "If you want to enjoy tofu with traditional Chinese soy sauce, sharpen your knife and scissors, shave your head, and become a monk." This suggests that tofu first appeared in Vietnam in Buddhist temples–during the Northern Song dynasty in China, and the Ly and Tran dynasties in Vietnam. Nevertheless, these are only theories.

Since ancient times, Vietnamese have eaten "vegetarian dishes every day, including tofu, in accord with their beliefs that vegetarian food is clean and promotes tranquility."

In Vietnam today, various types of tofu are sold including: Firm tofu, grilled tofu, deep-fried tofu, fermented tofu, and soft tofu. It is used in four basic categories of dishes: vegetarian, nonvegetarian, vegetarian soups, and nonvegetarian soups. The two most popular dishes cooked in Vietnamese homes are: Boiled tofu with sauce (*dau phu luoc*). Tofu cooked with tomatoes and ginger (*dau phu sot ca chua*).

Other foods made from soybeans: (1) Soymilk, served sweetened with sugar. Before carbonated beverages / soft drinks became popular, during the hot summer months, soymilk was the favorite drink in Vietnam. Today some families still make soymilk at home. (2) Soy sauce (dau tuong). (3) Sweet silken tofu, curded with calcium sulfate (*tao pho*). (4) Meat alternatives made from tofu. Address: National Academy of Social Sciences and Humanities, Hanoi, Vietnam, researcher at Chinese Studies Institute.

8467. Ozeki, Erino. 2008. Fermented soybean products and Japanese standard taste. In: Christine M. Du Bois, C.-B. Tan, and S.W. Mintz, eds. 2008. Urbana, Illinois: University of Illinois Press. viii + 337 p. See p. 144-160. [26 ref]
• ***Summary:*** Contents: Standard taste as a cultural model. Standard taste–the Japanese case. Origin of the components. The persistent nature of the standard taste. Ongoing and prospective changes. Address: Osaka International Univ., Japan, associate professor of anthropology.

8468. *Food Service Director*.2008. Teriyaki chicken & edamame rice bowls. 21(10):52. Oct. 15.
• ***Summary:*** Contains a recipe from the USA Rice Federation that includes "3 cups frozen edamame, thawed."

8469. Edge, John T. 2008. Kentucky bloodlines in a new soy sauce. *New York Times*. Oct. 22. p. D3.
• ***Summary:*** Matt Jamie is making artisanal shoyu in Louisville, Kentucky. In 2003, while thinking about career opportunities, he realized that nobody in the USA was making "small batch soy sauce." He buys local soybeans that are not genetically engineered, uses limestone filtered water from a nearby spring, and ages his soy sauce in old whiskey barrels, purchased from two distilleries. Its shoyu with an "impeccable Kentucky pedigree."

In August 2008 his first batch of Bluegrass Soy Sauce hit the market–$5 for a five-ounce bottle. A photo shows Matt Jamie holding a bottle of his soy sauce.

Note: As of March 2011 Bluegrass Soy Sauce is sold at Whole Foods. The URL is www.bourbon barrelfoods.com. A video on the website shows Matt, his shop and his process.

8470. Huang, H.T. (Hsing-Tsung). 2008. Re: Various types

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of black bean sauce and soy sauce in China. Letter (e-mail) to William Shurtleff at Soyinfo Center, Oct. 30. 2 p.
• ***Summary:*** William Shurtleff writes: "I have been reading quite a few Chinese cookbooks and articles about Chinese foods during the period 1960 to the present. I am confused about the meaning of several widely-used terms in Chinese cookery. In all of the following the 'black beans' are actually black soybeans.

A common term is "Black Bean Sauce." This sauce is usually made in the kitchen by crushing (for example) 4 tablespoons of salty, fermented black beans with 3 tablespoons dry sherry or shao hsing wine. The two key points for me are: (1) It is not an extract like Kikkoman soy sauce, the whole salted black beans end up in the final sauce. (2) It can be made in the kitchen as part of a recipe, quickly and easily; just combine and mash. It is most widely used to add a delicious flavor to recipes for chicken, shrimps, clams, fish, etc.

Question 1. What is THIS "Black bean sauce" called in Mandarin, pinyin, and Cantonese?

"Answer 1. It seems to me this sauce is not the invention of a particular chef; it is not a commercial product.

"Then there is a canned product that is sometimes sold as "Black Bean Paste." I have seen the Chinese names *hei chiang* (*pinyin: heijiang*) *or hei touban chiang* (*pinyin: hei douban jiang*).

"Question 2. Is this canned product basically the same as product #1, which can be made so easily in the kitchen–but in convenient canned form? Or are there some differences?

"Answer 2. This is simply *jiang* (pinyin) or *chiang* (W.-G.). *Hei chiang* is simply black chiang.

Question 3. What is the canned product called in Cantonese? Answer 3: "If I remember right, "jiang" is pronounced "jiong" in Cantonese.

"Question 4. How is *Tou chiang* (pinyin: *doujiang*) related to product No. 2? Answer 4. They are the same product.

"Then there are two extracts–like our typical "soy sauce," where the residue is separated and either discarded or used as a low-value product. Shizhi (pinyin) / Shi Chih (W.-G.) is an ancient extract of chih = fermented, salted black soybeans. Shiyou (pinyin) / Shih-yu (W.-G.), Shi-yau, (Cantonese), or (Japanese) Kuki-jiru is an extract of fermented black beans.

Note: This is the earliest English-language document seen (Nov. 2011) that contains the term "Shizhi" in connection with this type of soy sauce.

"Question 5. Am I basically correct in saying that products 1 and 2 are closely related and that products 3 and 4 are also closely related but are very different from products 1 and 2.

"Answer 5. Product 1 is a chef's concoction. 2. is a commercial product. When you extract shi with water you get Shih Chih. When you ferment shi further, the run-off juice is shiyou.

"Question 6. Am I basically correct that product 3 is now extinct and that product 4 is no longer very widely made or used? Or is it still made in certain regions of China?

Answer 6: Check my book in the Needham series (2000, pages 365-66). Both shiyou and jiangyou are translated as soy sauce. Both are made in China. The term "shiyou" is more popular in south China. In Fujian it is preferred. In Guangdong the product is called "shiyu" but it is often made from jiang.

Basically, shiyou is "tamari" and chiangyou / jiangyou is shoyu. Address: PhD, Alexandria, Virginia.

8471. *Organic and Non-GMO Report (The)* (*Fairfield, Iowa*).2008. Japanese company to triple non-GMO soy production in Canada. Market news. 8(9):9. Oct.
• ***Summary:*** In a few years, Kanematsu Corporation (Japan) plans to triple planting of non-GMO (not genetically engineered) soybeans for food use on 50,000 acres on Prince Edward Island, Canada.

Next year, PEI's soybean production is expected to be 15,000 metric tons grown on 15,000 acres–all for shipment to Japan. PEI farmers are shifting to growing organic soybeans from potatoes, which require high pesticide use and are less profitable due to falling demand.

Japanese makers of tofu, soy sauce, and other food processors use about 1 million tons a year of non-GE soybeans from overseas in addition to domestic organic soybeans. Kanematsu provides about 10% of those non-GE imports.

8472. O'Connor, Anahad. 2008. Really?: The tongue is mapped into four areas of taste. *New York Times*, Nov. 11. p. D6.
• ***Summary:*** Many high school textbooks contain a map of the tongue, dividing it into four areas based on what it can taste (taste receptors). But now we know of a 5th taste–umami, a Japanese word that means "savory," and can be detected in miso and soy sauce. We have also learned that receptors for different tastes are not confined to certain parts of the tongue. Address: New York Times.

8473. **Product Name:** [Lima tamari soy sauce]
Manufacturer's Name: Lima Foods
Manufacturer's Address: Maldegem, Belgium.
Date of Introduction: 2008, November.
How Stored: Shelf stable.
New Product–Documentation: Tamari bottle neckhanger sent by Sjon Welter from the Netherlands. 2008, Nov. 15. The full-color neckhanger, written in French, Dutch, and German, has 4 panels on both the front and back. On the back side are recipes only. On the front panel: New. 25% less salt. Tamari soy sauce. www.limafood.com. Note: It is not clear from this: (1) Whether this tamari is made in Europe

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or imported–it is probably imported. (2) The name of the manufacturer Lima is owned by the Hain-Celestial Group The website states Today, Lima has 49 employees, sales of 17 million euros, mainly from the European market, sells a range of 200 products, and makes 155 million rice cakes a year.

8474. Bennett, Beverly Lynn; Sammartano, Ray. 2008. The complete idiot's guide to vegan cooking. New York, NY: Alpha Books. Published by the Penguin Group. xix + 328 p. Illust. Index. 23 x 19 cm

• ***Summary:*** Dedicated: "To those who are guided by the open heart and open mind of compassion."

Being vegan is "not about being on some trendy new diet, it is a lifestyle" (p. 85)

The index contains 48 entries for tofu, 37 for tamari, 30 for soymilk, 8 for tempeh, 6 for TVP, 4 each for miso, soy yogurt, tofu cream cheese, and seitan, 2 for silken tofu and Soyrizo, and 1 each for edamame, soynut butter, and Soyatoo (natural nondairy whipped topping).

"There are so many reasons to go vegan-health and nutrition, weight loss, green and sustainable living, and prevention of cruelty to animals. With over 200 mouth-watering recipes and tips for converting meat- and dairybased dishes into vegan ones, The Complete Idiot's Guide to Vegan Cooking will help readers enjoy a healthy vegan diet without sacrificing taste" (publisher's description). Address: 1. Vegan chef, author, and host of veganchef.com since 1999; 2. Long-time vegan cook and "foodie"

8475. Chiang, Cecilia; Weiss, Lisa. 2008. Seventh daughter: My culinary journey from Beijing to San Francisco. Berkeley, California: Ten Speed Press. x + 246 p. Foreword by Alice Waters. Introduction by Lisa Weiss. Illust. (mostly color photos). Index. 24 x 20 cm. [1 ref]

• ***Summary:*** Cecilia (Sun Yun) was born on 18 September 1920 in Wuxi, near Shanghai, China–when her mother was age 38 and 17 years after the birth of her oldest sister. Cecilia was the 7th daughter in a family of ten children. In China, everyone considers themselves a year older on New Year's day. Her mother, Sun Shueh Yun Hui, gave birth to twelve children–nine girls and three boys–over the course of 24 years, but two did not survive. Her father, Sun Long Guang ("unofficial" or familiar name Yung Xiao), born in 1878, was a gentle, progressive, scholarly man who had been schooled in France in the early 20th century, after the overthrow of the Qing Dynasty in 1911. Like many intellectuals in his generation, he worked to bring Western liberal ideas and modernization to China. He retired from his engineering job with the railway at age 50 so he could tend the gardens he loved, listen to music, and read. He was unusual in having no concubines, and all in his family were proud of him for that.

Her mother (whom she called "Um-ma") had tiny, four-inch-long bound feet, which were very painful to her. Between ages 5 and 7, when her foot bones were still fairly sift and malleable, they were broken. "The toes were folded down under the ball of the and the arch folded in half, then the whole food was wrapped tightly in gauze bandages so that it would essentially stop growing. The smaller the foot, the more desirable the woman, and thus the more marriageable she would be. It was an unbelievably lengthy and painful process, and often girls died from the resulting infection" (p. 49). Cecilia's father absolutely forbade the binding of his daughters' feet. So they grew up being able to run, dance, play tennis and ice skate. Cecelia rode her bicycle daily to the Fu-Jen Catholic University. Cecilia's mother tottered around the family home, overseeing the servants, nannies, and cooks. By the late 1930s in China, "in all but the most rural areas, the custom of foot binding became a thing of the past" (p. 50).

When Cecilia was age 4, the whole family moved from Wuxi to Beijing, the capital of China. In those days it was very unusual for a family to move such a long distance, from one province to another. However, her parents were "drawn to the capital because of its intellectual and cultural offerings." They moved into a huge walled compound with enormous red gates. It was "an actual palace that took up an entire city block and had been built in the 16th century for a minister to one of the last emperors of the Ming dynasty. It had 52 rooms and six bathrooms in seven parallel buildings" (p. 50). The dining room was the most important room in their home that was where their family life took place. Her "mother was so short, she needed to stand on a stool to see into the pots on the stove." Yet she ran the kitchen with absolute authority. "Like all upper-class Chinese women of her time, she did not actually cook." "She instructed her chefs as to how she wanted things done." This included "making her own soy sauce, a few bottles of which contained shrimp roe–though those are the ones she brought out only for special occasions" (p. 51). Her mother was a perfectionist.

They were served breakfast, typically rice congee–a kind of rice porridge–with assorted condiments including sausage, dried fish, thousand-year eggs, vegetables pickled in jiang, and fermented bean curd [stinky tofu; *chou doufu*].

In 1937 the Japanese finally arrived at Beijing, the city had been bracing for their arrival since 1931 when they had invaded Manchuria. Almost overnight, food (including soy sauce and fresh dofu / tofu) became scarce and life became difficult. In 1940 the Japanese moved in and occupied their home, but let them stay in a small part of the building. Soon Cecilia and Teresa (sister #5, Qin) began to think about leaving Beijing for Chongqing (W.-G. Chungking, in Sichuan province), where Chiang Kai-shek had moved the nationalist government headquarters after the fall of Nanjing, his previous capital. In Jan. 1942 they fled in disguise for Free China, calling their adventure "The Long Walk." After

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many amazing adventures, they arrived in Chongqing in June 1942. Soon she was seriously dating two men. She decided to marry the businessman, Chiang Liang. They were married in May 1945 in Chongqing. China was still divided by war. In China, the groom's family pays for the wedding. A few days after the Japanese surrender to the Allies on 15 Aug 1945, her husband announced that he wanted them to move to Shanghai, so they took the scenic 1,500 mile trip down the Yangtze from Chongqing to Shanghai; it took them 2 weeks.

1946 June–Their first child, a daughter named May, was born in Shanghai. At about this time, Chiang Kai-Shek moved the Nationalist capital back to Nanjing, which is close to Shanghai. The civil war with the Communists resumed.

1949 Jan.–Communist forces capture Beijing.

1949 May 25–Communist forces capture Shanghai, shortly after Cecilia, her husband, and the eldest of their two children have flown to Tokyo (April 29), where they stayed at the Chinese Mission. But Cecilia was soon homesick for Chinese food.

1951 fall–She (with a small group of Chinese friends) opens a large (400-seat) Chinese restaurant in Tokyo named The Forbidden City; it was a huge success from the very beginning.

1960–Cecilia moves to San Francisco from Tokyo and opens The Mandarin (for details see Chapter 1). 1961–Her husband comes to check out her restaurant, then dismisses The Mandarin as insignificant; he had expected something much grander. She realized right then their marriage was over.

1962–Her two children, Philip and May, come to live with her in San Francisco. The restaurant prospers and grows.

1968–She moves The Mandarin to larger quarters at Ghirardelli Square; to do so she takes out a $750,000 personal loan. It opens in June 1968 with "special little round cruets for soy sauce that looked like perfume bottles" (p. 22).

1974–Cecilia open The Mandarin in Beverly Hills.

1975 July–Cecilia travels to Beijing to visit her ailing father; it is their last visit.

Cecilia's Pantry (p. 5-7), soy-related items. "Bean sauce–Made from ground, salted, and fermented yellow soybeans mixed with seasonings." "Black bean sauce: A prepared sauce sold in a jar and made from salted black [soy] beans mixed with soy [sauce], salt, sugar,..." "Hoisin sauce–This thick, sweet-spicy sauce, made from ground soybeans mixed with sugar, flour, and vinegar,..." Soy sauce: Cecilia likes the Lee Kum Kee brand, but also uses Pearl River Bridge mushroom soy sauce, "which has a nice, rich, earthy flavor." Tofu–Also called dofu or bean curd. Of the various kinds, pressed tofu is often called "seasoned." If you are unable to buy seasoned tofu [also called five-spice pressed tofu, *wu-xiang doufu-gan*], it's easy to make your own at home, a recipe is given (p. 7).

Soy-related recipes: Hot and sour soup (with firm tofu, *suan la tang*, p. 43). Tofu and spinach soup (*bo cai dou fu tang*, p. 58-59). Mapo dofu (p. 142). California congee with condiments (inc. fermented tofu; *xi fan he xiao cai*, p. 160-61). Clams in black bean sauce (*dou chi chao xian*, p. 210-11). Shrimp with edamame (*mao dou chao xia ren*, p. 235). Spinach with bean curd (*bo cai ban dou fu*, p. 237).

Photos show: (A) Cecilia at The Mandarin at Ghirardelli Square (San Francisco, 1972, p. 8). (B) Cecilia and Number Six sister, Sophie, (Shanghai, China, 1947, p. 10). (C) Cecilia and husband, Chiang Liang (1945, p. 13). (D) Cecilia at The Mandarin on Polk Street, (San Francisco, 1964, p. 14). (1) Cecilia, age 12 (Beijing, 1932, p. 46). (2) A family photo [in 1942], with her mother, father, and all their children at their home in Beijing (p. 48). (3) Cecilia's parents in 1928 in the courtyard of their home in Beijing (p. 68). This photo was found after Mao's Red Guards destroyed the house. (4) Cecilia at The Mandarin at Ghirardelli Square, San Francisco, 1972. (4a) Cecelia [front row center] with two sisters and one brother (Beijing, 1928 [actually 1926], p. 92. In back row left is sister no. 1; in back row right is a cousin). (5) Six sisters (numbers 3-8) at home in Beijing, 1940. (6) Cecilia and her sister, Teresa, 1940. (7) Cecilia and friend in 1944. (8) Wedding photo, Cecilia and Chiang Liang, Chongqing, China, 1945. (9) Cecilia and her husband at Nara National Park, Kyoto, Japan, 1952. (10) Cecilia's father standing at doorway of Beijing home, late 1930s. (11) Cecilia with her father during her last visit with him in Beijing, 1975. (12) Cecilia and Alice Waters, Oct. 1981. (13) Cecilia and Julia Child, Italy, 1994. Address: San Francisco, California.

8476. Chung, Taekyung; Samuels, Debra. 2008. The Korean table: from barbecue to bibimbap. 100 easy-to-prepare recipes. North Clarendon, Vermont: Tuttle Publishing. 159 p. Illust. (color photos by Heath Robbins). Index. 27 x 24 cm. [4 ref.]

• ***Summary:*** A stylish book is printed in Singapore entirely on glossy paper with many large color photos. The section titled "The ingredients: Stocking your Korean pantry," includes information about: Miso (Korean miso is doenjang). Seaweed (*Miyeok*). Sesame paste (*Chamkkae anggeum*). Sesame seeds (*Chamkkae anggeum*). Soy sauce (*Ganjang*). Soybean sprouts and mung bean sprouts (*Kongnamul and Sookjoo namul*). Tofu (*Dubu or tubu*).

In Chapter 1, "Starters and snacks," we find Sweet and salty glazed soybeans (with edamame) (*Kong jorim*) (p. 45).

Chapter 6 (p. 121-29) titled "Vegetables & tofu," includes: Braised tofu (*Dubu jorim*). Pan-fried tofu with mushrooms (*Dubu jeon*). Vegetable and miso porridge (*Kongnamul sigeumchi doenjang jook*). Another tofu recipe is a dessert: Crusty tofu sherbet (with soymilk) (*Yooja dubu sherbet*).

Many recipes call for soy-based sauces such as: Soy dipping sauce (*Cho ganjang*) (p. 30). Sweet soy sauce base

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(*Jomi Ganjang*) (p. 31) The main ingredient is soy sauce, to which is added water, garlic, sliced fresh gingerroot, crushed black peppercorns, light brown sugar, and wine. Soy scallion dipping sauce (*Yangnyum ganjang*) (p. 32). Spicy miso dip (*Ssam jang*) (p. 33).

8477. Fiore, Toni. 2008. Totally vegetarian: easy, fast, comforting food for every kind of vegetarian. Philadelphia, Pennsylvania: Da Capo / Life Long. xi + 273 p. + 16 pages of unnumbered plates. Illust. (some color). Index. 24 cm.
• ***Summary:*** A mostly vegan cookbook; each recipe that calls for milk as an ingredient gives soy milk as an alternative. Rarely, if ever, have we seen such a dazzling and delicious variety of vegetarian soy recipes and information in one book. One purpose of this book is to demystify the world of vegetarian cookery and vegetarianism–especially for non-vegetarians.

The Introduction tells the story of the author's gradual transition from typical meat eater (living in Europe), to animal rights activist in Maine, to vegetarian. She advises: Buy locally, eat seasonally, buy organic, use your intuition (and imagination).

The chapter "Stocking the pantry" contains basic information (p. 39-42, 45-46) about sea vegetables, seitan, and soy products, including edamame, miso, tempeh, textured vegetable protein (TVP), tofu, and soy sauce (Light Chinese soy sauce, shoyu, and tamari), and Worcestershire sauce (vegetarian, without anchovies).

Soy related: Golden tofu bites (with one 14-ounce package firm tofu, frozen, then thawed . . . p. 50). Red pepper tofu dip (p. 67). Vegetarian Caesar salad (with "silken soft tofu, p. 76). Edamame and apple salad (p. 81; kids love edamame). Boiled edamame pods. Curried lima bean and rice salad with tempeh (p. 92). Tofu lime dressing (with silken tofu, p. 102). Spinach and tofu soup (p. 108). Miso soup. Hot and sour soup (with firm tofu, p. 109). Roasted pumpkin bisque (with soy milk, p. 114). Corn bread (with soy milk, p. 130).

One chapter is titled "Tofu" (p. 145-53): Seared tofu. Tofu sour cream. Baked tofu meatballs. Tofu with parsley sauce. Tofu kebabs with tamari-ginger sauce. Tofu pot pie.

The next chapter is "Tempeh and seitan" (p. 155-69): Best braised tempeh (with sweet and spicy marinade, p. 197). Tamari tempeh. Barbequed tempeh. Jamaican jerk tempeh. Malaysian curried tempeh. Greek stuffed cabbage (with lemon cream sauce and tempeh). Tempeh and cabbage Moroccan stew. Tempeh cacciatore. Tempeh fajitas. Tempeh marsala. Homemade seitan (from bulk vital wheat gluten). Penne with onions and vegetarian bacon (p. 175). Spaghetti tofunese (p. 176). Tofu ravioli with butter and sage (p. 181-82). Bechamel (with soy milk, p. 184). Tofu lasagna (p. 185-86). Vegetable lasagna (with tofu filling, p. 187). No-egg salad sandwiches (with tofu). Mock fish salad sandwiches (with tempeh). Mock Maryland crab cakes (with tofu, p. 196). Tempeh club sandwiches (p. 197). Cornhusker's reubens (with tempeh, p. 198). New York hot dogs and onions (with vegetarian hot dogs, p. 199). Soysage-pepper sandwiches (with Italian-style vegetarian sausage links, p. 200). Eggplant meatballs (with tofu, p. 214). Stuffed sugar pumpkins (with tempeh, p. 215). Fluffy mashed potatoes (with soy milk, p. 219). Spinach tortillas with potatoes (and seitan, p. 228). Pfannkuchen (with soy milk, p. 239). Rye bread French toast (with soy milk, p. 240). Loaded bagel (with tofu cream cheese, p. 243). Tofu cannoli (p. 250). Tofu coconut cream pie (p. 251). Basmati rice pudding (with soy milk, p. 252). Banana chocolate chip cake (with soy milk, p. 256).

About the author: "A vegetarian for over 20 years, Fiore is a self-taught chef who first embraced Mediterranean culinary techniques and philosophy while growing up in Italy." But she spent the first six years of her life in Germany. Address: Portland, Maine. Host of the national public television show Delicious TV's Totally Vegetarian.

8478. Pettid, Michael J. 2008. Korean cuisine: An illustrated history. London: Reaktion Books. 223 p. Illust. (color). Maps. Index. 23 cm. [118 + 110 endnotes]
• ***Summary:*** This is the best book seen to date on this subject. "Korean words are transliterated into English using the McCune-Reischauer system and Chinese words by the Pinyin system." The book uses Korean words liberally, which we find very helpful. The many color photos on glossy paper also help to clarify the text. Contents: Daily foods. Ritual and seasonal foods. Regional specialties. Drinks. Foods of the royal palace. The kitchen space and utensils. Food in contemporary Korea.

Page 36: Rice mixed with beans (*k'ong pap*) was another way to stretch the rice supply; today it is common in many homes and restaurants. Black [soy] beans were generally used to make this dish. They were soaked overnight before being cooked with the rice. However, on the Harvest Festival (*Ch'usok*), the 15th day of the 8th lunar month, beans that are not quite fully ripened are added to the rice and cooked as is–to make the special holiday dish named *ch'ongdae k'ong pap*.

Pages 38-39, 101: The popular rice dish, Pipim pap [Bibim pap], probably developed from foods eaten by farmers when cooked rice (or other grains) was mixed with whatever vegetables were at hand. Nowadays, soybean sprouts (*k'ong namul*) are an essential ingredient.

Page 107, 109: In Pyongyang Province of today's North Korea, one of the most famous foods is *mandu* dumplings; in this area they are stuffed with beef, pork, kimch'i, [soy] bean sprouts, and the like.

Page 109: In Hamgyong Province, which occupies the northernmost reaches of the Korean Peninsula, the climate is harsh and the winter are long and cold. Rice is rarely grown here, but dry-field crops such as soybeans, millet and

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potatoes are grown in abundance.

The foods of northern Korea tend to be less spicy than those grown in the south. "Perhaps most important to the flavour of Korean foods are the seasonings made from soybeans: toenjang (soybean paste) and kanjang (soy sauce). Sprouts from soybeans (*k'ong namul*) are eaten as a side-dish or added to soups and stews..." (p. 40).

Note: We find it interesting that in this detailed book on Korean cuisine, no mention is made of *chungkukjang / chongkukjang* (Korean natto). This is probably an indication that this food is no longer of much importance in Korean culture. Address: Asst. Prof of Korean, Dep. of German, Russian, and East Asian Languages, Binghampton Univ., England.

8479. Pettid, Michael J. 2008. Korean cuisine: An illustrated history. Korean-style soy sauce, miso, and red pepper sauce (Document part). London: Reaktion Books. 223 p. [118 + 110 endnotes]

• ***Summary:*** This is the best book seen to date on this subject. There are many records of the early Korean kingdoms using soy products; for example a record of 683 CE states Korean-style jang (*toenjang*) and soy sauce (*kanjang*) were among the presents exchanged in a royal wedding (p. 40, endnote 15. See: Kim Pusik, *Samguk sagi* {"History of the Three Kingdoms"} translated into modern Korean, Yi Pyongdo {Seoul, 1996}, Vol. 1, p. 201).

The section on "Condiments and seasonings" (p. 42) begins: An old Korean proverb states, "Food is only as good as the *jang*" (sauces based on soybeans).

Korean cookery has a wide range of flavors which include the stronger flavors of soybean paste stew (*toenjang tchigae*) and *kimch'i*. Moreover, even among the soy sauces (*kanjang*) and Korean-style misos (*toenchang*) there is a tremendous range of varieties and regional specialties, with many distinctive flavors.

A work titled *Chungbo sallim kyonje* (Farm management, supplemented and enlarged), written in the early 1800s points out the importance of *jang*.

"*Jang* is the source of all flavors. If the taste of a house's *jang* is not good, even if there are good vegetables or flavorful meats, one cannot prepare good food. The household head must always keep in mind the fermentation of *jang*, and through this will be able to have well-aged and good *jang*."

Likewise, Yi Pinghogak (1759-1824) in her *Kyuhap ch'ongso* ("Encyclopedia for Women's Daily Life") discusses the best days to make *jang* and also the importance of having the *changdoktae*, the terrace upon which earthenware jars of soy sauce and other *jang* are kept, face in an auspicious direction, as determined by the yearly calendar.

The three main types of *jang* are *toenjang*, *kanjang* and *koch'ujang*. The suffix *-jang* refers to a fermented sauce based on soybeans; *toenjang* means 'thick' soybean sauce and *kanjang* means 'salty' liquid soybean sauce.

The basic ingredient used to make both these sauces is soybean koji (*meju*) which was traditionally made in the late autumn and allowed to ferment until past the lunar New Year, about 3 months in all. The blocks of *meju* were then soaked in large earthenware pots of brine to make *jang* and *toenjang*.

In Korea, there are three basic types of soy sauce (*kanjang*): (1) a strong-flavored sauce with a dark color (*chin kanjang*), (2) a medium-flavored sauce with a light-brown color (*chung kanjang*), and (3) a weak-flavored sauce with a light, clear color (*mulgun kanjang*). Type (1) requires at least five years of fermentation, and because of its sweet flavor and dark color it is used for boiling, fermenting, or as a seasoning in medicinal rice (*yak pap*). Type (2) was traditionally used as a seasoning for vegetables or stews, whereas type (3) which was fermented for 1-2 years used mainly as a seasoning for soups.

Given the importance of soy sauce in Korea, it us no surprise that recipe books of the Choson

Joseon period (1392-1910) offer dozens of variations on the basic recipe. For example, *Sallim kyongje* ("Farm management") alone offers some 25 variations.

In each household, soy sauce was prepared with great care, and each step in the process was carefully followed according to the family tradition. If a daughter-in-law failed to match the preferred taste of the soy sauce in her husband's household, it was seen as a bad omen for the family. Many families even made small ritual offerings to the household gods when making soy sauce in order to ensure success. Other customs such as hanging gold-colored thread, red chili peppers, or traditional socks–all believed to repel malevolent spirits–around the earthenware pots of soy sauce were done to keep away malicious spirits.

During the period 1910-1945, when Korea was a colony of Japan, Japanese-style shoyu was introduced to Korea and mass-produced in factories. However the flavor of this new soy sauce did not match the tastes of the Korean people, so despite the rationing of crops for the military, Koreans continued to make their traditional soy sauce, thereby preserving this important element of Korean food culture.

A detailed discussion of Korean-style miso (*toenjang*) is given next, followed by a shorter discussion of *koch'ujang* which is made by mixing *meju* powder, glutinous rice or regular boiled rice, and red chilli pepper powder–and then fermenting the entire mixture. Address: Asst. Prof of Korean, Dep. of German, Russian, and East Asian Languages, Binghampton Univ., England.

8480. Longone, Janice B. 2009. The remarkable life of Ilhan New after he left La Choy Food Products Co. in about 1930 (Interview). *SoyaScan Notes*, Jan. 23. Conducted by William Shurtleff of Soyinfo Center.

• ***Summary:*** The Korean gentleman (Ilhan New) and the American gentleman (Wally Smith) were students at the

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Univ. of Michigan, where they became friends. Wally Smith's family had a grocery store, and they were looking for local fresh food. So New and Smith decided to grow mung bean sprouts. That is now La Choy started. They worked together for many years. In 1925 he married an American-born Chinese woman, who later became a physician.

Then [in about 1930] Mr. New sold his share in La Choy to Smith, returned to Korea [the land of his birth] and he became a multi-millionaire. In Korea he made money in some sort of business, such a importing or engineering company. His business became very profitable and he started the New Han Engineering High School, its goal was to teach Koreans to be good in modern things like science, engineering, and business practices. Students could attend his university free of charge. "When he died–and this is the thing that grabs me–he left all of his money to the Korea Social and Educational Trust Fund, except for the money he left to his granddaughter, to get a college education."

There is a biographical dictionary of Korean leaders in which there is an entry for him. Jan will try to find a more specific reference. Address: Curator, William L. Clements Library, The Univ. of Michigan, 909 S. University Ave., Ann Arbor, MI 48109-1190. Phone: 734-764-2347.

8481. Uyttenhove, Chantal. 2009. Re: Lima Seasalt was being sold by 1957. Letter (e-mail) to William Shurtleff at Soyinfo Center, Jan. 27. 1 p.

• ***Summary:*** "Indeed, we were the exporters of Lima seasalt to the US. As far as I can remember, Eden Foods did import the salt and before that, it was Pierre Gevaert himself who had contacts with Erewhon. EdenSoy has long be produced with Lima sea salt and yes, we delivered salt to the American Miso company.

"In those days, Lima seasalt came from France, from the Isle of Noirmoutier. The so called 'grey' seasalt because it is/was harvested from handmade clay pans–*salières*. The gray clay interacts with the salt and thus gives it its color. Today, we still have Lima seasalt but years ago, I decided to step away from Noirmoutier salt because of some issues we had. Today, the Lima seasalt comes from South Portugal, from a company who, years ago, decided to repair and restore century-old *salinas* [salt fields] and started cultivating sea salt the old way. They have hand harvested salt, traditionally sun dried and have been rewarded as a 'slow food company' several times. Their 'Fleur de sel' is a real 'delice.'

"The only difference: the salt is white. There is a much longer harvesting season in Portugal so that they don't have to scrape the salt to the bottom of the salinas. And so, the salt stays pure white because it does not interact with the clay. That company in Portugal is a real beauty." Note: Chantal encloses two color photos of the white seasalt being harvested in Portugal.

Update: Jan. 29 e-mail. "I started working for Lima in January 1985. Since Lima started in 1957, there is a lot of history before me.

"We are planning on moving to a new building at the end of this year–an ecological friendly building with the least possible footprint–so, I'm in charge to make sure we don't throw away the old things. I'm sitting on the first ever Lima-Tamari packaging (brown plastic bottle, actually a cosmetic bottle) and all sorts of things. There are a lot of old documents that I still have to go through. There is also a very old movie from before my time which needs to be digitalised. (When finished, I can send you that if you are interested. There is a French and a Flemish version).

"The oldest document I have referring to the sea salt is a handwritten order from 1962. So my guess is that we started with the salt even before that as we have contracts older than that. I did not go through old invoices nor do I have a price list but I'm sure we have that somewhere. Later this year, those things will 'surface' again."

Follow-up e-mail from Chantal. 2009 Feb. 2. "Dear Bill, We do have a well documented history–there is the start of a book; it begins with the engagement of the father of Pierre, Edgar Gevaert, his work for world peace, first contacts with Ohsawa–and with the start of the Lima production in the kitchen and the opening of the first store to the start the company Lima. One catch: it's all in Flemish ! I'm so sorry.

"Here it says that Pierre Gevaert made a trip to Ile de Ré in France to buy seasalt and that only later, in 1957, he bought machinery. That would mean he started even before 1957 with buying seasalt for the production of tahini and gomashio which was produced in the kitchen.

"The history is so rich Bill, that I could put my job aside and do only this. Unfortunately, that is not possible. I wish more was available in another language but then Flemish and French were the languages at the time so all the documents are in those languages.

"Should something come up during the move, of course we'll think of you. Thank you and kindest regards, Chantal." Address: Purchasing Manager, Hain Celestial Europe [Belgium] (formerly Lima Foods N.V.).

8482. Clearspring, Ltd. 2009. Clearspring (Website printout–part). www.clear spring.co.uk. Printed Jan. 28.

• ***Summary:*** Contents: Home page. About us. Awards. Glossary. FAQ. News. Books. Links. Stocklists. Trade. Contact. Food quality. Producers. Health. Recipes. Where to buy.

"Introducing the chairman: Christopher Dawson was born 19 September 1953, at New Plymouth Hospital, New Zealand and grew up in Opunake, a rural town in New Zealand. He is the third son of William Geoffrey and Joan Dawson.

"Education: He did his primary, secondary and tertiary education in New Zealand. He first started independently studying vegetarianism and organic agriculture at the age

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of 18. In 1974 he came to London to further his studies of organic agriculture, both at the Henry Doubleday Horticulture and Nutrition Research Centre in Braintree and the Bio Dynamic Agriculture section at the Rudolf Steiner Emerson College, Sussex.

"Beginning Organic Food Distribution: In 1977, he opened and managed the East West Natural Foods Store at the Community Health Foundation, Old Street, London. He developed this shop into a distribution centre for traditional natural / macrobiotic foods, sourced from both local organic farms and from abroad, especially from Japan.

"From August 1978 through to January 1980 he traveled extensively throughout Europe, America, Australia and Asia, investigating the traditional dietary practices and food-processing techniques. He studied at the East West Foundation in Boston, Massachusetts, U.S.A. about Far Eastern philosophical principles and traditions and studied the distribution network of the natural foods movement in both America & Europe, as well as Australia and New Zealand.

"Eighteen Years in Japan: Christopher made his first trip to Japan in July 1979, visiting natural food enterprises throughout Japan with Mr. A. Kazama, president of Mitoku Co. Ltd. He returned to Japan in January 1980 and began extensive studies into the daily life and cultural and dietary practices of the Japanese people.

"At the end of 1980 he commenced full-time employment at Mitoku Co. Ltd., the major exporter of traditional, natural Japanese foods. During the eighteen years he spent with the company Christopher studied Japanese Foods & production, worked with the producers to develop products to suit the needs of customers abroad and help the producers become compliant with EU organic certification. He also travelled extensively to introduce the foods to markets worldwide, with the intention to see if Japanese foods could really become international foods.

"Building Clearspring in the UK, Europe and the Middle East: In September 1993, Christopher bought the Clearspring Ltd. company, which was then a London based wholesaler with one shop, the very shop that Christopher started in 1977! By 1998, he felt he had sufficient knowledge of traditional, top quality Japanese food and decided it was the right time to come back to UK and to focus on marketing organic and authentic Japanese foods under the Clearspring brand.

"Recognition from the Japanese government: On 25 May 2007, Christopher received the Award for Overseas Promotion of Japanese Food 2007 from the Ministry of Agriculture, Forestry and Fisheries of Japan, for his distinguished contribution to the promotion of Japanese organic food worldwide."

Down the right side of this page are the following photos: (1) Christopher seated at a desk, writing in a notebook, looking very happy, at an early age (about 6), already a promoter of the written word. (2) Christopher at the East West Natural Foods Store in 1977. (3) Christopher with his mother at home in New Zealand. (4) Christopher at Mitoku in Japan (with Mr. Kazama and staff) in the late 1980s. (5) Photo taken 11 Oct. 1990 with Lima Ohsawa, then 91, the wife of macrobiotic teacher George Ohsawa and Aveline Kushi, then 67, the wife of macrobiotic teacher Michio Kushi. (6) Christopher with his young family (Japanese wife and 3 children) in Japan in the early 1990s. (7) Christopher, with his wife and two sons in Spain in 2006. (8) Christopher now regularly visits Clearspring's suppliers in Japan, here with team of Sendai Miso Shoyu Company and Mr. Yoshida from Mitoku. (9) Christopher in Japan with Onozaki san, miso producer. (10) Christopher at the Organic & Natural Products Show, London 2007. (11) Special vegetarian foods prepared at the Dawson household, to celebrate the New Year. Address: 19A Acton Park Estate, London W3 7QE, UK. Phone: +44 (0)20 8749 1781.

8483. Fish, Peter. 2009. Tofu: The staple of hippie cuisine goes mainstream. Sunset new essential No. 5. *Sunset (Menlo Park, California)*, Jan. p. 108.

• ***Summary:*** Many will remember their first encounter with tofu, "a tremulous white cube doused in soy sauce." Your mother probably said it was good for you.

"Cut to 2009, and the low-caloric, high-protein soybean curd is as mainstream here as the Quarter Pounder"–for tofu is deeply Western. Tofu was being made in San Francisco as early as 1878. Today, House Foods of Garden Grove, California, makes 150,000 packages of tofu each day. "And tofu has vaulted from health food to haute cuisine... Like mom, we always know a good thing (eventually) when we see one."

A large color photo shows four pieces of tofu, each a different size and shape.

8484. Roseboro, Ken. 2009. The 2009 non-GMO sourcebook: A buyers guide to global suppliers of non-GMO and organic seeds, grains, ingredients, and foods. Eugene, Oregon: Evergreen Publishing, Inc. 106 p. Illust. (both color, and blue and white photos). Index. 28 cm.

• ***Summary:*** Contents: Editor's introduction (by Ken Roseboro, publisher and editor). Suppliers of non-GMO products: United States, Canada, Europe, Africa / Middle East, Asia / Australia, Latin / South America. The Non-GMO Project special section (Non-GMO verification of organic foods begins, Non-GMO Project facts, Non-GMO corn chips create a niche for healthy snack foods, Grain suppliers express concern about the Non-GMO Project, First inspector training for non-GMO verification held). Related products, services, and organizations. Indexes: Index of non-GMO suppliers by product category: Seeds, grains and oilseeds, specialty grains and crops, canola / rapeseed products and ingredients, corn / maize products and ingredients, soy

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products and ingredients (phytosterols, soy flakes, soy flour, soy germ concentrate, soy grits, soy lecithin {including organic}, soy meal {including organic}, soy nuts, soy oil {including organic}, soy oil–low linolenic, soy protein, isolates and concentrates, soy protein–textured, soymilk, soymilk powder, soy sauce, vitamin E / tocopherols), other ingredients and processing aids (citric acid, dairy ingredients ...), sweeteners, food products, animal feed. Index of related products, services and organizations. Complete index of listings. Order form for *The Organic & Non-GMO Report*.

This comprehensive book gives the single best picture of the growing industry, worldwide, opposed to genetic engineering of foods and feeds. Address: Editor / Publisher, P.O. Box 51137, Eugene, Oregon 97405. Phone: 1-541-343-2272.

8485. Sanders, Rebecca L. 2009. New life may be near for old beet-factory site: West Valley. *Arizona Republic*, March 17.

• ***Summary:*** A large photo shows the old, five-story sugar beet factory in Downtown Glendale, Arizona. Built in 1906, it has been closed since 1985 and is surrounded by chain-link and barbed-wire fences. In the right foreground, also inside the fences, is the old Marusho soy sauce factory, run by the Tadano family.

Glendale's director of economic development is talking with a developer about breathing new life into the building, which has been on the National Register of Historic Places for 31 years. The shoyu factory is not mentioned in the article.

8486. Soy Bean Company. 2009. SBC–Tempeh, soy, soyproducts (Website printout). tempehproducts.com/pagina/home_tempeh_soy_products_uk_holland/index.html. Printed March 31. [Eng]

• ***Summary:*** Contents: Home, soybeans, tempeh, recipes, contact. On the homepage of the SBC is a brief definition of tempeh. Color photos show: (1) Outside front of the company. (2) Two views of the inside of the company.

Soybeans: Introduction (click link for Q+A Are there special concerns related to soy foods? Provided by the George Mateljan Foundation), a health-promoting meat replacer, stay lean with soy, soy lowers blood pressure and cholesterol in men, beneficial effects on cholesterol levels and platelets.

Tempeh: Same as home page. Recipes: For Tijuana tempeh, Tempeh teriyaki, Tangy tempeh with portobello mushrooms.

E-mail in Dutch: croci*a*htnet.nl. E-mail in English: soybeancompany*a*htnet.nl.

Note: This is a minimalist website, with no company history and very little interesting information. Yet *History of Tempeh*, by Shurtleff & Aoyagi (1985, p. 29) states that this was Europe's third earliest commercial tempeh company, founded in 1969. In Jan. 1972 the thriving company moved to Kerkrade from Rotterdam. In June 1980 the company bought a $1,000,000 modern factory in Kerkrade and expanded production greatly. By mid-1982 it was the largest tempeh company in the world, making 6,000 to 8,000 lb of tempeh a week. Address: Tunnelstraat 107, 6468 EJ Kerkrade (Limburg), Netherlands. Phone: 045 567 0583 or 0584.

8487. Centraalbureau vor Schimmelcultures. 2009. CBS Fungal Biodiversity Centre (Website printout–part). www.cbs.knaw.nl. Printed April 6.

• ***Summary:*** This culture collection organization is similar to the National Center for Agricultural Research Utilization (NCAUR) in Peoria, Illinois. Contents: Home (incl. current news, biodiversity). About CBS. Research. Collections. Databases (18). Publications. Service. Links.

When we searched the 1st database, the "Filamentous fungi database," it was very slow to load and to search. It "contains data on more than 38,000 strains in the CBS collection," we got interesting results searching for: (1) Tempeh–14 hits = records found. In each record, tempeh appears in the field "Substrate." The "Taxon name" (scientific name) of *Rhizopus oligosporus* has been changed to *Rhizopus microsporus var. oligosporus* (Saito) Schipper & Stalpers. In some records the name of the collector and date collected are given. Country and locality (where collected): Indonesia.

Other organisms used to make tempeh are: *Rhizopus oryzae Went & Prinsen Geerligs, Rhizopus stolonifer var. stolonifer, Cladosporium oxysporum Berkeley & M.A. Curtis, Rhizopus azygosporus G.F. Yuan & S.C. Jong*. One culture typically costs "150 Euro (65.0 Euro for Academies, Universities, Education)."

(2) *Rhizopus oligosporus:* 5 hits.

(3) Miso: 3 hits. One substrate was soy sauce and another was koji starter culture. The fungi were: *Aspergillus oryzae var. oryzae, Aspergillus sojae Sakaguchi & K. Yamada ex Murakami*.

(4) Soy sauce: 13 hits. In addition to the two molds used to make miso, there was also: *Aspergillus oryzae var. effusus (Tiraboschi) Y. Ohara*.

(5) Chinese cheese: No hits.

(6) Fermented tofu: No hits.

(7) Sufu: 9 hits. The molds used are: *Mucor racemosus f. racemosus, Mucor indicus Lendner, Mucor hiemalis Wehmer, Actinomucor elegans (Eidam) C.R. Benjamin & Hesseltine, Mucor circinelloides f. circinelloides, Rhizopus microsporus var. microsporus Tieghem*.

(8) Douchi or doushi or doushih or dowsee or dowsi or toushih or tou-shih or fermented black beans or preserved black beans: No hits.

(9) Aspergillus: 1,213 hits.

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(10) Soybeans: 1 hit. Substrate: Soybeans. Taxon name: *Aspergillus wentii Wehmer*. Country and locality: Indonesia, Java.

(11) Soybean: 18 hits. Substrate is usually "soil from soybean field." Molds are Penicillium and Aspergillus species.

(12) Koji: 36 hits. Molds: *Aspergillus oryzae var. oryzae. Aspergillus oryzae var. brunneus Murakami. Aspergillus tamarii Kita. Rhizopus microsporus var. tuberosus R.Y. Zheng & G.Q. Chen* (koji from China). Address: Utrecht, Netherlands. Phone: +31 (0)30 212-2600.

8488. Shurtleff, William. 2009. Re: Research on soy sauce in the archives of the Dutch East India in the Hague, Netherlands. Letter (e-mail) to Dana Jacobi, food writer, New York City, Aug. 1. 1 p.

• ***Summary:*** "Did I tell you that I hired an expert in Dutch archival research for two years to send me documents showing how the Dutch brought 'soy' [sauce] from the Dutch East Indies to Amsterdam–when they were sent and sold everywhere by Dutch and British merchants with ships.

"Soy sauce was being sold in retail shops in New York City by 1750–the first form of soy to arrive in the British North America, even before the soybean itself. Of course nobody but Samuel Bowen realized that 'soy' was made from soybeans. Bowen was the first to actually make commercial soy sauce in the British North America.

"He had worked at the archives of the Dutch East India Co. for years and could read the handwritten Old Dutch that appears in the letters, logs, manifests, etc. He sent me both photocopies of the originals and his translations into English of the relevant parts.

"He made a breakthrough when we realized that by 1637 the Japanese were using the ancient word for soy sauce–Murasaki--which means 'deep purple.'

"The only Japanese food item that the Dutch loved more than soy was–guess what–sake! The more things change, the more they stay the same. The Dutch also ordered lots of miso, umeboshi, and pickled vegetables for their personal tables at Dutch trading posts in the East Indies.

"That story, now ready to be published, is filled with interesting and unexpected twists and turns. I hope to have a it published as part of the History of Soy Sauce on our website within the next 12 months." Address: Founder and Director, Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

8489. Shurtleff, William. 2009. Re: Research on and questions about the early history of ketchup. Letter (e-mail) to Dana Jacobi, food writer, New York City, Aug. 1. 1 p.

• ***Summary:*** "I have been doing serious research on a soy-related food problem for the last 5 years: Ketchup.

"Andrew Smith has written a good book about it, but I feel he misses the key point concerning its origin.

"Ketchup–also spelled ketjap, ketchap, or kecap in Malay or Indonesian–means 'soy sauce.'

"Yet ketjap manis ('sweet soy sauce') is thick and sweet (with herbs and spices), rather like today's tomato ketchup, yet expensive (since it had to be imported by the Dutch from the Dutch East Indies) and made with an ingredient (the soybean) that was largely unknown in Europe at the time.

"Soon the British and Dutch were at work making less expensive imitations: Walnut ketchup, tomato ketchup, mushroom ketchup, oyster ketchup, etc.

"I have more than 30 ads from newspapers of the 1700s showing 'soy' (as soy sauce was then called) in ads from New York and other North American ports advertised right next to ketchup.

"And lots more–its an amazing story. 'How ketchup came to the West.' Kind of like your mustard blog story but much harder to work out its history. I wish I had a year to spend on only this esoteric puzzle. I'd go to the Hague, find an expert helper, and search the archives of the Dutch East India company. I'm quite sure I could make the link and rewrite the early history of ketchup." Address: Founder and Director, Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

8490. Kikkoman Corporation. 2009. Annual report 2009. Year ended March 31, 2009. 250 Noda, Noda-shi, Chiba 278-8601, Japan. 41 p. 28 cm. [Eng]

• ***Summary:*** Largely as a result of the global financial crisis, starting in the fall of 2008: Consolidated net sales decreased 0.3% to $4.210 billion, operating income fell 14.6% to $207.8 million, and net income declined by 76.0% to $28.0 million. Note: Dollar values may have changed at different percentage rates due to changing foreign exchange rates.

Page 1 is titled "Kikkoman Corporation shifts to a holding company structure." The shift will be effective 1 Oct. 2009. "The transition will entail the creation of several new spin-offs to operate the Group's existing businesses. A chart shows the holding company structure after 1 Oct. 2009. Under Kikkoman Corporation (the holding company) are eight divisions: 1. Kikkoman Business Services Company (new). 2. Overseas business. 3. Other domestic businesses. 4. Fodchemifa Co., Ltd. 5. Manns Wine Co., Ltd. 6. Nippon Del Monte Corporation. 7. Kikkoman Beverage Company (new). 8. Kikkoman Food Products Company (new).

"We have revised our business principles based on the following three principles: (1) To pursue the fundamental principle 'consumer oriented.' (2) To promote the international exchange of food culture. (3) To become a company whose existence is meaningful to the global society."

A photo (p. 7) shows Yuzaburo Mogi (Chairman of the Board and CEO) and Mitsuo Someya (President and COO).

Pages 8-9 show color photos of Japanese and overseas soy sauce products including *Tokusen Marudaizu Shoyu*

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(Premium shoyu made from whole soybeans–rather than the usual defatted soybean meal) and *Tokusen Yuki Shoyu* (Premium organic shoyu, certified by Japanese Agricultural Standards, JAS). Overseas: Less Sodium Soy Sauce (North America). Teriyaki Sauce (3 types) (North America). Sweetened Soy Sauce (Europe) (*Sauce Soja Sucrée*). Herbal Soy Sauce (Asia; made in Singapore with a fragrant blend of sweetness and herbs). Address: Noda, Japan.

8491 **Product Name:** Bro Dan's Hawaiian Teriyaki Sauce, Asian Sesame Ginger Sauce, Volcanic Hot Sauce.
Manufacturer's Name: Bro Dan's Specialty Sauces.
Manufacturer's Address: P.O. Box 7988, Surprise, AZ 85374. Phone: 623-544-9873.
Date of Introduction: 2009, November.
Ingredients: Hawaiian Teriyaki Sauce: Soy sauce (water, wheat, soybeans, salt, sodium benzoate: less than 1/10 of 1% as a preservative), sugar, crushed pineapple (pineapple, pineapple juice), distilled vinegar, corn starch, fresh sweet onions, fresh garlic, fresh ginger, black pepper). Contains: Wheat, soy.
Wt/Vol., Packaging, Price: 16 oz. glass bottles.
New Product–Documentation: Talk with Bro Dan Swafford about the history of his work. 2009, Nov. 20. Letter (on letterhead, with business card) from Bro Dan. "As stated, I am just a start up company, but taken off very well..." He and his family in Hawaii have been making similar sauces for more than 40 years. Soy sauce forms the basis of each sauce, all of his major ingredients are fresh: pineapple juice, ginger, garlic, onions, etc. "Shake well. Refrigerate after opening."

As of 24 April 2012 his sauces are in some Safeway stores and in Maui Wowi. His website is now down for renovation. Neither an e-mail nor a website appear on his letterhead. But a website (www.BroDansSpecialtySauces

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com) does appear on each label.

1 May 2012. One bottle of each of four sauces (incl Sweet Jamaican Island Jerk Sauce, introduced in about 2010) and two extra labels of each sent by Dan Swafford (with letter on new letterhead). Each label is very attractive and nicely designed. The central graphic on each is a stylized brown and green pineapple on a dark blue vertical oval. Hawaiian Teriyaki is yellow and black on peach. Asian Sesame Ginger is purple and black on light purple, the first five ingredients are soy sauce, honey, mirin wine, sesame oil, and sugar. Volcanic Hot is orange and black on light orange, the first five ingredients are cayenne pepper sauce, corn oil, water, salt, and monosodium glutamate. Sweet Jamaican Island Jerk is green and black on light green; the first five ingredients are cayenne pepper sauce, brown sugar, water, butter flavored oil (partially hydrogenated soybean oil), and salt.

Note: Neither of the last two sauces contains any soy sauce.

8492 Brackman, Agnes de Keijzer, Brackman, Cathay 2009. The complete Indonesian cookbook. Singapore: Marshall Cavendish Cuisine. 184 p. Illust. (color). 24 cm. *

8493 Esselstyn, Rip. 2009. The Engine 2 diet: the Texas firefighter's 28-day save-your-life plan that lowers cholesterol and burns away the pounds. New York, NY: Wellness Central. xiii + 273 p. Foreword by T. Colin Campbell, PhD. Illust. Index. 24 cm.

• ***Summary:*** A very interesting, readable, and innovative book that advocates a sound, healthy diet that can last a lifetime. "Rip managed to convert a firehouse full of committed firefighters to a plant-based diet. Rip (born in 1963) is the eldest son of Caldwell B. Esselstyn, Jr., M.D., who has become famous for his ground-breaking book ***How to Prevent and Reverse Heart Disease***. This book is both similar and different. It is similar in that the basic whole foods, plant-based diets advocated by father and son are 98% the same (and please focus on practicing that 98% and not squabbling about the 2%). It is different in that Rip is from a younger generation, is not a physician but an athlete and firefighter, and is trying to help people who want help in lowering their high cholesterol levels and their weight. He is not primarily trying to help people who have had at least one heart attack, are a death's door, and are (generally) willing to do almost anything to save their lives.

In Chapter 2, "My story," we read that while in school, Rip was an outstanding athlete. He set many high school swimming records (he still holds a national record in the 200 meter medley relay); he was a top player in his high school tennis team and co-captain of the water polo team.

At the University of Texas at Austin, he was a three-time All American swimmer and an Olympic trials qualifier in the 100- and 200-meter backstroke and freestyle events. In 1986 he graduated from the University of Texas and within six months he was competing as a professional triathlete–which required a 1-mile swim, a 24.9 mile bike ride, and a 6.2 mile run. In the Hawaii Ironman Triathlon he competed against six-time Ironman Champion Dave Scott, who was powered by a plant-based diet–Rip lost. So in 1987, because of the influence of his father and of Dave Scott, Rip changed to a healthy, whole foods, plant-based diet. In 1997 he decided to become a fire fighter in Austin, Texas. He continued to compete and won many events and set many records. For example, in May 2008 he set the National Record at the U.S. Masters Swimming Championship in the 200 yard backstroke (1:56.55). Rip is married to Jill Kolasinski, and they have a son, Kole.

Rip's commitment to a healthy plant-based diet has resulted in many people asking him to help them with their diets. So in 2007, he devised the six-week Engine 2 Pilot Study in which 62 people agreed to eat a plant-strong diet, he put them through a gauntlet of tests before and after study to quantify the results–which were spectacular. Then in May 2008 he initiated a similar 4-week (28 day) study in which 15 people participated, 13 Engine 2 firefighters and two civilians. Again careful before and after records were kept. The average participant saw his total cholesterol drop 62 points (from 197 to 135), his average LDL (bad) cholesterol fall 50 points (from 125 to 74), and his weight drop 14 pounds (from 203 to 189). And all this in only 4 weeks! This book is based on the latter plan.

Rip makes much more use of soyfoods in his plant-based diet than does his father. The index contains 16 entries for tofu, 4 for tempeh, 4 for seitan, 2 for milk substitutes ("soy, rice, almond, and oat milk, for example"), 1 each tofu sour cream (p. 239), soy milk, soy yogurt (Silk or WholeSoy).

Soy related recipes include: Migas especiales (with 1 lb firm tofu, p. 154). Breakfast tacos (with "½ tube vegetarian breakfast sausage {we like Gimme Lean}," or use scrambled tofu (p. 155). E2 omelet (with "12 ounces Silken Lite Firm Tofu," p. 156). Lemon cornmeal pancakes (with "2 cups soy milk" and "½ cup soy yogurt, p. 157). Tofu steaks and mushrooms with mashed potatoes and green peas (with "1 pound extra-firm tofu," p. 180).

Linguine and creamy alfredo sauce (with "1 package Silken Lite firm tofu" and "2 cups unsweetened soy milk," p. 195). Lynn's meatloaf (with "10 ounces firm tofu," p. 204). Vegetable stir-fry with brown rice (with "1 pound seitan" and "two tablespoons low-sodium tamari," p. 208). Tempeh-mushroom stir-fry and soba noodles (with "1 package tempeh," and "3 tablespoons low-sodium tamari," p. 209). Red vegetable curry and brown rice (with "1 pound extra-firm tofu," p. 210).

Pad Thai (with "1 pound broiled tofu cubes {see p. 210}," p. 211). The great wooden bowl salad (with "1 pound extra-firm tofu," p. 214-15). Tofu vegetable spread (with

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"½ pound extra-firm tofu," p. 238). E2 sour cream (with "1 package Silken Lite firm tofu," p. 239) Asian marinade (with "3 tablespoons soy sauce, p. 241). Island marinade (with "4 tablespoons soy sauce," p. 241). Add tofu and allow to marinate refrigerated for 30 minutes to 4 hours (p. 241) Rip's favorite snacks include "4. Soy yogurt: I'm particularly fond of the Westsoy... cherry" (p. 243). E2 Basics chocolate pudding (with "1 package Silken Lite tofu," p. 245) Fruit bowl with soy drizzle (with "4-6 ounce container of soy yogurt," p. 249). Fruit mousse (with "1 package extra-firm Silken Lite tofu," p. 255) Maple sour cream dream (with "1 vanilla soy yogurt," p. 256)

Many recipes call for "Bragg Liquid Aminos" which are simply HVP (hydrolyzed vegetable protein) made by a quick and unnatural / artificial process; soybeans, wheat, and/or corn are immersed in hydrochloric acid until, after 1-3 days, the acid has broken down the protein into its constituent amino acids Fermentation (as of soy sauce) can do the same thing naturally in 4-6 months. HVP is a source of flavor without salt, but that flavor is generally considered to not nearly as good as the flavor of soy sauce

Rip has an exercise component to his "Engine 2" 28 day plan.

And Rip gives people a choice as they start the 28 day plan; one can be a Fire Cadet or a Firefighter (p. 22) The "Fire Cadet option is for those who prefer a more gradual approach." In week 1 Cadets must stop eating dairy products and processed / refined foods (such as refined sugar, white flour, etc.). In week 2 Cadets must stop eating meat, poultry, fish and eggs. In week 3 Cadets must do without added or extracted oils–even vegetable oils such as olive oil. In week 4 Cadets and Firefighters eat the total E2 diet, a healthy, whole-foods, plant-based diet A Firefighter (the plan Rip recommends) requires that a give up all of these unhealthy foods from the start of the program. "Americans consume a staggering 50 percent of their calories from refined and processed foods."

Cholesterol-lowering drugs (such as statins: Rip, who is not a physician, does not use them).

Salt and sodium Rip advocates a low-sodium diet

Support groups after the 4-week program: Optional. People who wish to can create or find one themselves (p. 92).

Meditation and relaxation to reduce stress. Not part of the program.

Sugar and sweets. Avoid refined sugars, high fructose corn syrups, and things such as sodas, candy to which they are added Instead choose natural sugars such as those in whole naturally-sweet fruits (p. 114-15, 134). In desserts, Rip often calls for up to 3-4 tablespoons maple syrup or agave nectar, yet a recipe for Brownies (p. 247) calls for "½ cup light brown sugar, packed" and "½ cup raw sugar." And a recipe for "Oatmeal raisin cookies" (p. 253) calls for even more refined sugar Rip admits he has a sweet tooth Some of his desserts violate the basic principles of the Engine 2 diet: they contain large amounts of refined sugars–unlike the recipes (developed by his mother) in his father's book. Moreover, his mother strongly suggests that desserts be saved for special occasions

This is a sound, healthy diet and anyone who stays on it for 28 days will see dramatic improvements in their overall health and weight.

The Engine 2 diet is a good, practical diet for the rest of your life But go easy on the desserts and try to avoid the ones with refined sugar. Address: Austin, Texas.

8494. Nguyen, Andrea Quynhgiao. 2009. Asian dumplings. Mastering gyôza, spring rolls, samosas, and more. Berkeley, California: Ten Speed Press. 234 p. Illust. (color photos by Penny De Los Santos). Index. 28 x 19 cm. [38 ref]

• ***Summary:*** Another very attractive book and well-written book by Andrea Nguyen. In the Introduction, the section titled "Ingredients" (p. 8+) discusses soy sauce (p. 16) and tofu (p. 16-17).

Soy related recipes include: Steamed vegetable dumplings [vegetarian] (Zhengjiao, Chinese, with 3 oz brown pressed tofu filling, and light (regular) soy sauce, p. 35-36). Kimchi dumplings (Kimchi mandu, Korean, with 10 oz firm tofu, p. 44-45) Korean meat and vegetable dumplings (Gun mandu, with 6 oz firm tofu, p. 46-47). Steamed filled buns (Zheng bao, Chinese, with Vegetable and tofu bun filling {p. 101}, p. 95-96). Baked filled buns (Ju bao, or Guk bao in Cantonese, Chinese, with Vegetable and tofu bun filling {p. 101}, p. 97-99). Vegetable and tofu bun filling (Cai bao, Chinese, p. 101).

Chapter 9, "Sauces, Seasonings, .." contains several soy dipping sauces: Tangy soy dipping sauce (great with Chinese jiaozi or Japanese gyôza, p. 215). Korean dipping sauce (for Korean Mandu, p. 215). Sweet soy sauce (good with Cantonese steamed rice rolls {p. 156-60}, p. 217). Address: Food writer, Santa Cruz, California.

8495. Silverstone, Alicia. 2009. The kind diet: a simple guide to feeling great, losing weight, and saving the planet. Emmaus, Pennsylvania: Rodale Press. Distributed to the trade by Macmillan. xi + 308 p. Foreword by Neal Barnard. Illust. (color photos by Victoria Pearson). Index. 24 cm. [17 + 71 endnotes*]

• ***Summary:*** On the cover: "New York Times Bestseller." A powerful, very popular book about a plant-based (vegan) lifestyle and diet, which calls for only "real food," with some nice macrobiotic flavor–A whole grain dish should be at the center of every meal, use of seasonal foods organically grown, azuki beans, daikon, kuzu, kabocha, miso, mochi, nori, sea vegetables, seitan, shoyu, no white or cane sugar (a "crazy making" food), tamari, umeboshi, etc

By a well known actress who first became widely known for the film *Clueless*, a 1995 American comedy film loosely based on Jane Austen's 1815 novel, Emma.

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She dedicates the book to Sampson, a stray dog she picked up on the streets of Los Angeles, to all animals who suffer needlessly, and to all "who do their best to tread lightly on the earth."

The index contains 16 entries for tofu, 14 for miso, 11 for seitan, 4 for soybeans (whole dry), 3 for soy milk, 2 each for edamame and tempeh, 1 each for butter substitute (soy-based margarine, p. 142-43), cheesecake–tofu, cheese–vegan (p. 143), shoyu (p. 142), sour cream–soy (p. 143), soy candles (p. 134), and tamari (p. 142).

Some good quotations from a fine writer: "And what about your health?... What if I told you that, by eating a plant-based diet, you will strengthen your immune system, beautify your skin, increase your energy, and reduce your risk (significantly) of cancer, heart disease, diabetes, arthritis, osteoporosis, allergies, asthma, and almost every other disease? What if I said that I feel myself getting younger, more powerful, and more beautiful as I age simply because of *what I eat*?... If you want to lose weight, you've come to the right place (p. 1).

"Eating a plant-based diet is the most ecologically friendly thing you can do... Every time you purchase organic plant-based food, you are protecting the quality of the soil and participating in a more equitable distribution of resources. Conversely, every time you buy a mass-produced steak–packaged in Styrofoam and plastic–you are feeding a huge, unsustainable, toxic death machine. This may sound harsh, but its the truth! There's a whole world of consequences behind every decision we make" (p. 131).

A large color photo on the cover shows lovely Alicia Silverstone, seated, with a bowl of food in one hand. The book contains many fine color photos on glossy paper. Address: Actress, activist, and committed conservationist. Los Angeles, California.

8496. Walters, Terry. 2009. Clean food: a seasonal guide to eating close to the source, with more than 200 recipes for a healthy and sustainable you. New York, NY: Sterling. 290 p. Illust. (Color). Index. 24 cm.
• ***Summary:*** This vegan cookbook, with a strong macrobiotic flavor and 223 recipes (arranged by season), shows you how to eat seasonal, unprocessed, and locally-grown foods that are good for people and the environment.

On pages 17-18 is a section titled "Soy" in which the author describes her belief that "there is so much information about whether soy is healthy or not." We have rarely seen a short section on soy containing so many clearly false or misleading statements as this one–too many to list. Clearly she gets her information about the nutritional value of soy from the Web rather than from scientific journals. Nevertheless she recommends and uses miso, tempeh, tamari / shoyu, and tofu.

The glossary of foods likewise contains many errors. For example: Aduki beans: Misspelled. Fermented black beans: She fails to mention that these are soybeans. Gomasio: Misspelled. Tempeh: "Made from pressed and fermented soybeans." Tofu: "Made from soybean curd."

The index contains 23 recipes for tofu, 9 each for miso, and tempeh, 3 for shoyu, and 4 for tamari. Address: Connecticut.

8497. Yagihashi, Takashi, Salat, Harris. 2009. Takashi's noodles. Berkeley, California: Ten Speed Press. An imprint of Crown Publishing Group, a division of Random House. vii + 168 p. Illust. (photos by Tylhe Barbosa). Index. 25 cm.
• ***Summary:*** A very original, beautifully designed book. "A collection of 75 recipes from James Beard Award-winning chef Takashi Yagihashi for both traditional and inventive hot and cold Japanese noodle dishes" (from the publisher).

Contents: Acknowledgments. Introduction. 1. Ramen. 2. Soba. 3. Udon. 4. Somen. 5. Asian noodles. 6. Pasta. 7. Appetizers. Ingredients glossary.

The cover photo shows a photo of "Natto soba." The headnotes to the recipe for "Natto soba" (p. 46-47) state: "My hometown of Mito is known throughout Japan as 'Natto City' in recognition of our devotion to these fermented soybeans. Natto has a wonderful nutty flavor and aroma, and I've loved it since I was a kid. Serving it with soba is a terrific introduction to this nutritious and ancient naturally preserved ingredient. When you open a packet of natto, the beans will be sticky and thready, but don't let that put you off. This dish makes a beautiful presentation when it's served. Just make sure you mix together all the ingredients very well before you eat to combine the flavors." On the facing page is a full-page color photo of the dish with cold soba broth being poured over the top.

The brief Glossary (p. 161-63) includes: Abura-age, goma paste, hoisin sauce, kombu, mirin, miso (red, white, or brown), natto, nori, soy sauce, sunchang kochujang, tobanjan, tofu, umeboshi, wakame, wasabi, yamaimo, and yuzu.

The word "soy" appears on 51 pages in this book, "soy sauce" on 43 pages, "Japanese soy sauce" on 39 pages, "miso" on 15 pages, "tofu" on 14 pages, "abura-age" on 7 pages, "natto" on 6 pages, "soybeans" on 2 pages, and "soybean" on 1 page. "Japanese soy sauce" is called for in dashi, in all other noodle broths, and in most recipes. Meat, poultry, fish, shellfish, and eggs are used throughout the book.

Several photo portraits show youthful, handsome Takashi. Harris Salat writes about food and culture. Address: USA.

8498. Shurtleff, William. 2010. Do the English words "ketchup," "catchup," and "catsup" trace their origin back to Chinese (Cantonese) or to Malay? (Editorial). *SoyaScan Notes*. Jan. 16.
• ***Summary:*** If the English words for "ketchup" trace their

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origin back to Chinese, then they probably trace their origin back to the Cantonese, because Cantonese speakers (from Canton / Guangzhou in southern China) made up the great majority of emigrants from China starting during and after the Mongol Dynasty (also called Yuan Dynasty, 1279-1368) when the Mongols ruled China.

In Cantonese, there is a word that sounds very similar to the English word "ketchup." Written with two characters, it is pronounced "ke-tsup." The first character means "tomato," and the second character means "sauce," "juice," or "liquid."

Thus, the Cantonese word seems in both sound and meaning to be very similar to the English word "ketchup."

Written Cantonese is used primarily in Hong Kong and in overseas Chinese communities. It uses characters not found in the Standard Mandarin, and is not easily intelligible to Mandarin speakers.

Romanization: Cantonese romanization systems are based on the accent of Canton and Hong Kong, and have helped define the concept of Standard Cantonese. The major systems are Barnett-Chao, Meyer-Wempe, the Chinese government's Guangdong romanization, Yale and Jyutping. While they do not differ greatly, Yale [New Haven, Connecticut] is the one most commonly seen in the West today. The Hong Kong linguist Sidney Lau modified the Yale system for his popular Cantonese-as-a-second-language course, so that is another system used today by contemporary Cantonese learners. And there is the International Phonetic Alphabet (IPA).

In Malay–the language of today's Indonesia (which includes Java)–the word for soy sauce was written *ketjap* and is today written *kecap*. The sound is very similar to the Cantonese sound but the meaning is very different.

By the way, none of the three English words for "ketchup" (nor any words with similar sounds) is found in the book ***Hobson-Jobson: a glossary of colloquial Anglo-Indian words and phrases,...***, by Sir Henry Yule, and Arthur Coke Burnell.

As the Cantonese left China for overseas destinations (both near and far), they almost surely took soybeans and soy sauce technology with them.

Since Java and Indonesia are closer to Canton than are Australia or New Zealand, it seems likely that more Cantonese settled there. More important, Java and Indonesia have much longer cultural and economic ties to Asia than do Australia or New Zealand, so it is more likely that Cantonese foodways would take root in Java.

A product named "Ketchup" (spelled in various ways) had arrived in Europe by the late 1600s and early 1700s. It was probably imported from Southeast Asia. Yet when ketchup arrived in Australia and New Zealand, a century later, it was imported not from nearby Southeast Asia, but from far-away Europe. Address: Founder and owner, Soyfoods Center, Lafayette, California. Phone: 925-283-2991.

8499. ***BaySpo: The Japanese Weekly Entertainment Paper (San Francisco Bay Area)***.2010. Gurume jiji tankenka: Fuyu no ichidai ibent. Fanshii Fuudo Shoo ni itte kita zoi no maki [Gourmet old-guy explorer: The biggest winter gourmet event. This article is: "I went to the fancy food show"]. Jan. 29. No. 1106. p. 15. [Jap]

• ***Summary:*** Over 80,000 items were exhibited. There were familiar goods too. Showed the possibilities of Japanese foods. Photos show: (1) The Kikkoman booth. (2) Marukome miso. (3) A tea both. (4) Minami Satoh standing, in traditional Japanese clothes, discussing and demonstrating his natto. (6) A Caucasian blonde girl: "A lot of Americans who attended said they liked the taste of natto." (7) Members of a miso company and a plastic container of their miso. Address: California.

8500. Roseboro, Ken. 2010. The 2010 non-GMO sourcebook: A buyers guide to global suppliers of non-GMO and organic seeds, grains, ingredients, and foods. Fairfield, Iowa: Evergreen Publishing, Inc. 106 p. Illust. (both color, and blue and white photos). Index. 28 cm.

• ***Summary:*** Contents: Editor's introduction (by Ken Roseboro, publisher and editor). Suppliers of non-GMO products: United States, Canada, Europe, Africa / Middle East, Asia / Australia, Latin / South America. The Non-GMO Project special section (includes comments by Michael Potter and Nature's Path {in Canada}). Related products, services, and organizations. rBGH-free dairy processors in the US. Index of non-GMO suppliers by product category: Seeds (corn, soybeans), canola / rapeseed, processed canola / rapeseed products, corn / maize, processed corn / maize products, soybeans (identity preserved, specialty, organic), processed soy products (flakes, flour, germ concentrate, grits, lecithin, meal, nuts, oil, low linolenic oil, phytosterols, protein, textured protein, soymilk, soymilk powder, soy sauce, tofu, vitamin E / tocopherols), other grains / oilseeds and processed products (alfalfa / hay, barley, cotton, ...), other ingredients and processing aids (citric acid, dairy ingredients, ...), sweeteners, food products, food supplements, animal feed. Index of related products, services and organizations. Complete index of listings. Index of advertisers.

Note 1. In the Suppliers section, many company entries have the Non-GMO Project logo (with an orange and black butterfly on a green leaf) next to their company name (e.g., Eden Foods, p. 17, WholeSoy & Company, p. 42).

This comprehensive book gives the single best picture of the growing industry, worldwide, opposed to genetic engineering. Address: Editor / Publisher, P.O. Box 436, Fairfield, Iowa 52556. Phone: 1-800-854-0586.

8501. Wu, Ta Yeong; Kan, Mun Seng; Siow, Lee Fong; Palniandy, Lithness Kalaivani. 2010. Effect of temperature

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on moromi fermentation of soy sauce with intermittent aeration. *African J. of Biotechnology* 9(5):702-06. Feb. 1. [20 ref]

• ***Summary:*** Soy sauce has long been a traditional fermented food in Malaysia, where there are many different varieties such as dark soy sauce, light soy sauces, *Kicap lemak manis* [sweet and thick], *Kicap lemak masin* [salty and thinner], etc. In Malaysia, soy sauce is produced on a small scale in cottage industries using traditional methods and equipment / technology.

Note: This is the earliest English-language document seen (April 2012) that uses the term *Kicap lemak manis* or the term *Kicap lemak masin* to refer to Malaysian sweet or salty soy sauces. Address: 1&4. Chemical and Sustainable Process Engineering Research Group, School of Engineering. 2-3. School of Science. All: Monash Univ., Jalan Lagoon Selatan, Bandar Sunway, 46150, Selangor Darul Ihsan, Malaysia.

8502. Shurtleff, William. 2010. Thoughts about George Ohsawa. *SoyaScan Notes.* Feb. 5. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** There are six things I greatly admire about George Ohsawa. (1) He had a tremendous sense of gratitude for life itself and for all things. (2) He emphasized the oneness of all things (nonduality) and showed that the pairs of opposites are more deeply one. (3) He had a marvelous love of life and sense of humor. People remember him as a deeply happy and charismatic man. (4) He had a very original and creative mind–especially for a Japanese man of his time. (5) He introduced many fine Japanese foods into Western diets that Caucasians now actually eat on a regular basis–miso, tofu, shoyu / tamari, umeboshi, kuzu, sea vegetables, seitan, natto, and many more–and in doing so played a major role in starting the natural foods movement in America. (6) He played a leading role in introducing brown rice into American food culture, starting in the 1960s. Address: Founder and owner, Soyinfo Center, Lafayette, California. Phone: 925-283-2991.

8503. **Product Name:** Amy's Teriyaki Wrap (With Organic Tofu, Brown Rice & Vegetables).
Manufacturer's Name: Amy's Kitchen Inc.
Manufacturer's Address: P.O. Box 449, Petaluma, CA 94953. Phone: 707-762-6194.
Date of Introduction: 2010. March.
Ingredients: (Vegan): Organic brown rice, filtered water, organic wheat and whole wheat flour, organic tofu (filtered water, organic soybeans, nigari {magnesium chloride, a natural firming agent}), organic broccoli, pineapple juice, organic tamari...
Wt/Vol., Packaging, Price: 5.5 oz (156 gm) in plastic bag. Retails for $3.29.
How Stored: Frozen.
New Product–Documentation: Product with Label purchased at Diablo Foods in Lafayette. 2010. March 7 by 3 inch plastic bag. Dark blue, green, white and red. On front panel: "Non-dairy. Keep frozen. Non GMOs."

8504. Nguyen, Hoang Quoc. 2010. Re: Soyfoods and soybeans in Vietnam. Letters (e-mails) to William Shurtleff at Soyinfo Center, May 4-12. 1 p. each.

• ***Summary:*** Mr. Nguyen is the father of Andrea Nguyen, author of *Into the Vietnamese Kitchen* (2006, Ten Speed Press) and was kindly introduced to Soyinfo Center by Andrea, who is now writing a book about tofu in Asia.

Mr. Nguyen was born and raised in Vietnam, and lived there with his wife and family until April 1975 when he fled to the USA just before the fall of Saigon and the American defeat in what Vietnamese call the "American War."

He was governor and military sector commander of two provinces in the Mekong Delta of Vietnam (Vinh Binh {now called Tra Vinh} from 1956, and Kien Phong {now called Dong Thap Muoi} from 1956-1960), and of Binh Thuan, in the south of central Vietnam, from 1960-1963. While he is not a specialist in Vietnamese food, he knows as much about it (or more) as the typical person born and raised in that country.

Question: Do Vietnamese eat soybeans as a green vegetable (green vegetable soybeans, edamame)? Ans: No, and there is no specific name for them.

Question: Please tell me about soymilk in Vietnam. Ans: Its name in Vietnamese is *sua dau nanh* (with diacritical marks). It was very popular, but mostly in the cities (as we were in Viet Nam before 1975). Don't know exactly at the present time. Use it at breakfast or at any time during the day as a beverage. It is sold in a plastic container, at tofu shops or at marketplaces. Nobody made it at home at our time in Viet Nam (before 1975). But soybean milk machines are now on the market at non-expensive prices. Probably some people are making it at home for freshness. It is typically served sweetened or plain; not salty. It has a fairly long history. Its popularity is increasing with the propagation of the soybean's benefits.

Question: Please tell me about yuba (the film that forms atop soymilk when it is heated) in Vietnam. It is often called beancurd skin or (when dried) beancurd sticks in Vietnamese cookbooks. Ans: It is called *phu chuc* (dried rolled yuba; dried yuba sticks) in north Viet Nam, and *tau hu ky* in south Viet Nam. [Called Fuchu or fuzhu in Chinese] Fresh dry yuba is *tau hu ky tuoi* (it needs to be frozen or refrigerated and thawed before using) and regular dry yuba is *tau hu ky kho*.

All Vietnamese (north, center, and south) use only one language but there are differences in tone and accent in pronunciation, and also in the naming of some things and objects. The phonetic adaptation from Chinese or French words are also different, it may be the reason of Tau Hu Ky

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for Fu Pi and Phu Chuc for Fu Zu.

Yuba is very popular, used in households, market stalls, and restaurants–especially in place of meat in vegetarian dishes and diets (influenced by Buddhism). It is sold in dry form, either unfried or fried, in a package at any market place. It is made only by special factories of Chinese origin. It is served as a wrapper for shrimp or meat, then fried. Also in soup–fried and served with broken steamed rice, and many other dishes at home and restaurants from selected to street corners. It is especially useful in the preparation of vegetarian dishes as a substitute for real meat. In one popular dish (called *Chan Thien Ky*), *tau hu ky* [yuba] is wrapped around minced shrimp to make a little packet, which is deep-fried; it is somewhat like the Cantonese dim sum item of shrimp in "tofu skin" but Viet people commonly serve it as a side dish on rice plates. Another popular yuba recipe in Vietnam is *Com Tam Tau Hu Ky Suon Bi* (Broken rice with yuba wrapped around shrimp, pork chop, and pork skin). Note: A Google search for "tau hu ky" will bring up many other recipes, images, and videos in Vietnamese and English. Yuba has a long history in Viet Nam, being introduced along with Chinese cuisine. Today its use is increasing along with the demand for new recipes and awareness of the benefits of consuming foods made from soybeans. Yet it is still not an item in everyday meals, but is reserved for special occasions, whether at home, in a restaurant, or at parties.

Question: When the French divided today's Vietnam into Tonkin (north), Annam (middle) and Cochinchina (south), were there any cultural or language differences between the three? Were the divisions based on these cultural and language differences or not? Ans: No major difference in culture or language existed between the three regions at that time. The French made the division just for more efficiency and convenience in their colonization of Viet Nam. The French split Viet Nam up into many areas with different administrative systems so as to maintain the division, in order to make their occupation more efficient [and to try to prevent or limit the growth of nationalist or resistance movements].

Question: Please tell me about soybean cultivation in Vietnam. Ans: At this present time, because of the huge demand of soybean for edible oil and meal or cake for animal feeds, milk for human consumption, large areas in the South (east and west parts) are being used for cultivation of soybean. Production in the North and Central regions, due to limitation of available lands, may be sufficient only for regional production of Tuong and Tofu. Five different kinds of seeds are being introduced and tested and yield/ha are much better. Areas in the south-west (Mekong delta) will produce 3 crops per year.

For centuries soybeans have been cultivated in Viet Nam. Before the vegetable oil from soybean was introduced, each region produced what people need for daily consumption. This has been changed completely because of the demand for soybean oil, milk, sub-products for animal feeds.

Soybeans are cultivated along the hillsides or high level areas not submerged by water, or in between the rice crops seasons. In the south western region (Mekong delta) where the field is submerged under the water every year for 4 months, farmers can now plant soybean after the rice crop harvest. They burn the hay, make holes and put the seeds down, cover with hay, let it grow, fertilize (chemical), use pesticides and herbicides. After 75-82 days they can harvest (still by hand), or use a machine to pull out the beans, then dry them. Viet Nam is presently divided into 62 provinces and towns; soybean is planted in 43 of them. At the present time, no information is available about large size farms using complete machinery like in the USA, but an area like the Mekong Delta may open up and introduce this kind of large farming process. The highlands in Viet Nam offer tremendous opportunities for development of modern farming (mechanized) but require enormous investments in knowledge, experience, and quick flexibility of action and funds. A state economy system cannot afford to let that happen, I would say.

Viet Nam still has to import 400,000 to 500,000 tons of soybean every year from China, Kampuchea [Cambodia], Thailand, Canada and the USA.

Today, soybeans are most widely used as a food in the south of Vietnam. My estimate of the amount of soybeans used in traditional foods (in descending order of popularity) is: Tofu, soy milk, tuong (a thick fermented soy sauce), chao (fermented tofu), soy sauce (liquid), tau hu ky (yuba).

Additional remarks: Tuong should be considered in this study, as tuong is a sauce made and used only in Viet Nam. It is made from rice and soybean, plus salt, in a very delicate way, serving as sauce for eating and cooking. Long ago the northern Viet term for soybeans was "dou," as in Chinese. But soybeans were also called "dou tuong" because they were so widely used in Vietnam to produce the popular fermented sauce "tuong." That's why today the Vietnamese term for soy sauce is either "nuoc tuong" [sauce + tuong, a lingering reference] or "xi dau," from the Cantonese phonetic.

All the Vietnamese (old generation, of north and center origin) living in the US, miss "tuong" very much as the Tuong Cu Da being sold in the market places here is not the real thing–in terms of composition, taste and flavor. The three best kinds of Tuong are: (1) Tuong Cu Da, (2) Tuong Ban, in north Viet Nam, and (3) Tuong Nam Dan, in Nghe An (central Viet Nam).

Note: Andrea adds: "These are really cool tuong sauces!" Address: San Clemente, California.

8505. *SoyaScan Notes*,2010. The Jakarta Post. The best source of current English-language information on soybeans and soyfoods in Indonesia (Overview). May 16. Compiled by

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William Shurtleff of Soyinfo Center.

• ***Summary:*** Indonesia is the largest producer and user of soybeans in Southeast Asia. *The Jakarta Post* has digital archives of its daily issues going back to 1999. A search for soybeans or soybean gets hundreds of hits, as do searches for tempe, tempeh, tahu, tofu, kecap, soy sauce, kecap manis, etc.

The Jakarta Post, an English-language daily, is Indonesia's largest English-circulation, with an average circulation of about 50,000 copies. Launched on 25 April 1983, its head office is in Jakarta. The Jakarta Post is a small but influential newspaper oriented towards local English-speaking expatriates and the diplomatic community. In many ways, it acts as an unofficial mouthpiece of the Indonesian government into the international community. Go to: www.thejakartapost.com.

8506. Astuti, Mary. 2010. Re: When did the term "ketjap manis" first appear in Indonesia? Letter (e-mail) to William Shurtleff at Soyinfo Center. May 31. [Eng]

• ***Summary:*** "... according to me, ketjap manis has been used for centuries. I was born in 1948 and when I was a kid I used to eat rice gruel with ketjap manis. Bango soy sauce factory in West Java has been producing ketjap manis since 1932 and another factory in East Java has been making it for more than 100 years. The word 'ketjap' is now spelled 'kecap.' Best regards." Address: Indonesia.

8507. *SoyaScan Notes*.2010. What words for "ketchup" appear in "Eighteenth Century Collections Online" (ECCO) documents (from Gale / Cengage)? How often and from when to when? (Overview). Aug. 4. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** An online database titled "ECCO," produced by Gale / Cengage contains more than 180,000 titles, mostly from Great Britain, from the period 1680 to 1799 in digitized, computer-searchable form.

The word "catchup" appears in about 284 documents from 1707 to 1800.

The word "ketchup" appears in about 211 documents from 1678 to 1800.

The word "catsup" appears in about 80 documents from 1735 to 1800.

The word "katchup" appears in about 29 documents from 1732 to 1795.

The word "catchups" appears in about 24 documents from 1718 to 1800.

The word "catchap" appears in about 18 documents from 1741 to 1798.

The word "catchop" appears in about 18 documents from 1737 to 1799.

The word "ketchups" appears in about 3 documents from 1792 to 1800.

The word "catsups" appears in about 2 documents from 1799 to 1800.

Clearly "catchup" is the most commonly used word. Other words that appear are "katchop" (in 8 documents), "katch-up" (in 2), "ketchop" (in 9), "ketchap" (in 3), "kichap" (in 1), "kitchap" (in 3), and "catsap" (in 1).

The word "soy" appears in quite a few of these documents near the word for ketchup.

8508. Heck, Wolfgang Rainer. 2010. Re: Brief history of Life Food GmbH–Taifun Tofurei. Letter (e-mail) to William Shurtleff at Soyinfo Center. Aug. 14. Updated on 18 Nov. 2011. 2 p.

• ***Summary:*** I have looked again at the early documents which show that Life Food was officially started on 10 April 1985. At that time the company only made sprouts. As you know, Klaus Kempff (who was born in 1935) started the first steps in producing Tofu in a cellar. At this time he grew sprouts and he sold a small range of sprout varieties at the big cathedral-market in Freiburg. He named his business Life Food.

In 1986 he first began experiments making tofu and after getting good results (your book helped him) he produced a few kilos of tofu and sold it to his sprout clients. He produced it together with the members of his "patchwork-family."

I first met Klaus in the summer of 1986 at a [drumming] workshop in Greece. After this workshop we went together to the Netherlands to have a look at a bigger soyfood production operation initiated by sanyassins [Disciples of Sri Rajneesh / Osho], they made burgers and rolls with tofu and vegetables. When we came home he had trouble with the official bureau for hygiene in Freiburg. They did not allow production of food in a cellar.

Klaus was really shocked by this information and he had two options--to cancel everything or to move to a new location. At this time I found an empty store and proposed to Klaus that we use it together as the new production place. He invited me to go to work with him and his growing tofu business. Together with the people of his family we renovated the old store by ourselves. So we became partners. Now the tofu became legal and we could develop our equipment and process / technology.

In the beginning of 1987 I founded the enterprise Taifun (that was the exact name) as a personal company. I rented a small place in a market-hall in Freiburg, and sold tofu made by Klaus at the new production place. He delivered it to me every morning. I sold part of it as fresh tofu (stored in fresh, cold water in an aquarium), and I prepared salads and meals using the rest. For two years everyday I cooked a fresh tofu meal for about 50 people.

Note: When people tasted plain, unseasoned tofu they didn't like it at all. But when they tasted pan-fried tofu, seasoned with a little shoyu / soy sauce, almost all of them liked it very much.

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Klaus and his crew produced the tofu for me and for other gastronomic businesses. He developed the smoked- and the sprouted soy-tofu. The big idea was to bring Life Food and Taifun together some day as a GmbH (this is typical German and maybe similar to a corporation).

In 1989 the space for the production became too small and we had some trouble with the neighbours. The smell of the tofu and the fried tofu products was very intense. So we decided to relocate again, we rented a new production-hall in the industrial area of Freiburg. Now we had a good place and we were able to process 111 kg (244 lb, 4 5 sacks) of soybeans a day. This means about 190-200 kg tofu a day. So we produced 1,000 kg a week. I quit my job in the market hall. We tried to produce for the organic shops in our region. Taifun became the brand name and Life Food the name of the organization. On 29 December 1989 we [Wolfgang, Klaus Kempff, and Silvia Notbohm-Kempff] integrated the brand name Taifun into our organisation name–as a result we created the corporation Life Food GmbH / Taifun-Tofuprodukte.

At this time we had 400 square meters of floor space and we developed a big range of different tofu specialties. There was also a change in the crew. Klaus' "family people" [including Silvia Notbohm-Kempff] stopped working for the company and in Feb. 1990 Günter Klein joined Life Food.

Now we started to work more professionally and we built up an efficient organisation for all the departments.

In 1991 at age 56, Klaus Kempff told us that he also wanted to realize other things in his life, in part because the speed of development in Life Food was very fast. He worked on the development of his own awareness and of healing methods. He soon focused on healing work.

On 9 Dec. 1991 Klaus quit has job as managing director of the corporation (*Geschäftsführer*). At this time Günter Klein and I became equal full partners (*Gesellschafter*); we made a contract with Klaus and bought his shares of the corporation. Klaus went on to do some social projects with older people.

At the end of 1994 we moved into Bebelstrasse 8, which is our present location–in Freiburg's Hochdorf Industrial Estate. Here we found a big production place with more than 2,600 square meters of floor space. First we rented it and 4 years later we had the chance to buy the land. We started in the Bebelstrasse making about 1,200 kg per day of tofu.

In January 1995 Alfons Graf entered the company.

In 2004 Günter Klein asked for a sabbatical year and went for this time to the Amazon to experience shamanism. One year later, he came back with new ideas.

In 2007 we invested in a Logistic Center for our cool products 400 meters from the production place. Our own shuttle bus is running there 10 times a day with the products and other things.

In October 2009 Günter Klein left the company, he decided to follow his interests related to shamanism totally.

2010 Aug. 14–We now make about 14,400 kg/day of tofu–about have 12 times more than we made in 1994. Günter Klein is the plant manager–in charge of production and equipment. I develop the organisation and products, and manage the sales activities.

This year Klaus Kempff visited us two or three times. He is really proud of the present situation, because his former vision of less meat and more vegetable protein has became much more a reality. Klaus is now 74 years old and always engaged in social action and very active against genetically engineered plants and animals–GMO.

Update: 18 Nov. 2011–Until November 2011 I worked together with 3 heads of the business units. Each one of them is responsible for some departments. In early November 2011 we arranged the first step of changing the organisation once more. Since 1 November 2011 Alfons Graf has worked together with me as co-managing director (Geschäftsführung). Meanwhile we have about more than 160 employers with 35 different Tofu-specialities. We need about 2000-2200 metric tons of soybeans a year and we produce about 70 tons of tofu a week and 40 different tofu specialty products. This year we had 1,400 tons of soybeans from Germany, France and Austria. We are expanding this time and next year is the 25th birthday of the brand Taifun.

I hope this information will help you to answer your questions. Thank you for the Rilke words. By the way: I like Rainer Maria Rilke very much and maybe you can understand the words which are written down in my office \... *es handelt sich darum, alles zu leben.*

Wenn man die Fragen lebt,
lebt man sich allmählich,
ohne es zu merken, eines fremden Tages
in die Antwort hinein. Address: Managing Director, Life Food GmbH

8509. Kikkoman Corporation. 2010. Annual report 2010. Year ended March 31, 2010. 250 Noda, Noda-shi, Chiba 278-8601, Japan. 41 p. 28 cm. [Eng]

• ***Summary:*** Consolidated net sales decreased 30.8% to $3.071 billion, operating income rose 3.9%% to $226.7 million, and net income increased 213.2% to $92.49 million. Note: Dollar values may have changed at different percentage rates due to changing foreign exchange rates.

Page 2 is titled "Kikkoman exhibits at Japan industry pavilion, Expo 2010, Shanghai, China." A *ryôtei* is a Japanese restaurant that serves *kaiseki-ryori*, an ultimate form of Japanese cuisine. Kikkoman's booth was named Ryôtei Murasaki.

A photo (p. 3) shows Yuzaburo Mogi (Chairman of the Board and CEO) and Mitsuo Someya (President and COO). Address: Noda, Japan.

8510. Andoh, Elizabeth. 2010. Kansha: Celebrating Japan's vegan and vegetarian traditions. Berkeley, California: Ten

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Speed Press. vii + 296 p. Illust. (color photos by Leigh Beisch). Index. 25 x 25 cm.

• ***Summary:*** A beautiful book, and a major contribution toward understanding Japanese cuisine, culture, and the pervasive spirit of gratitude / appreciation. In Japanese, *kansha* means appreciation or gratitude. Contents: Acknowledgments. Introduction: A historical perspective on kansha (*shojin ryori* is vegan), recent developments, putting theory into practice, practicing kansha, meal planning, some final thoughts, a note about language. Rice. Noodles. Stocks and soups. Fresh from the market. The well-stocked pantry. Mostly soy. Tsukémono [pickles]. Desserts. A guide to the kansha kitchen. A catalog of tools and techniques. A catalog of ingredients [glossary]–with entries that include the following: daikon, edamame, flours (kinako), kudzu, herbs, spices and seasonings (ao nori, sansho, shiso, togarashi, wasabi), kabocha, dried beans (adzuki [sic], daizu {dried soybeans–the most important legumes in the Japanese pantry}), dried soy foods [sic] (hoshi yuba {dried yuba}, koya-dofu / kori-dofu). Dried vegetables from the land (dried shiitake mushrooms). Dried vegetables from the sea (arame, hijiki, kanten, kombu [konbu]). Dried wheat gluten. Kasu (sake dregs). Konnyaku and shirataki. Matcha. Miso (red miso, white miso, genmai miso). Mushrooms. Natto. Nigari. Nuka. Okara. Pickles. Rice. Roots and tubers. Saké. Salt. Sesame (seeds, sesame paste, sesame oil). Soy milk [sic]. Soy sauce. Sweeteners (ama-zaké, kuro-zato, mirin, mizu amé). Tofu (firm tofu, silken tofu, grilled tofu, thin fried tofu {abura agé}, thick fried tofu {atsu agé}).

Tsukemono (pickles). Umeboshi (pickled plums). Vinegar. Yuzu. Yuba.

Note: This is the earliest English-language document seen (May 2012) that uses the term "thin fried tofu" to refer to abura agé / deep-fried tofu pouches, or the term "thick fried tofu" to refer to atsu agé / deep-fried tofu cutlets.

Contains many recipes that use tofu, miso, soy sauce, edamame, natto, etc. Address: Japan

8511. **Product Name:** San-J Orange Sauce: Asian Glaze & Stir Fry

Manufacturer's Name: San-J International, Inc.

Manufacturer's Address: 2880 Sprouse Dr., Richmond, VA 23231. Phone: 804-226-8333.

Date of Introduction: 2010.

Ingredients: Organic sugar, water, tamari soy sauce (water, soybeans, salt, alcohol), orange juice concentrate, rice vinegar, apple cider vinegar, tomato paste, honey, arrowroot, garlic powder, canola oil, xanthan gum, red pepper.

Wt/Vol., Packaging, Price: 10 fl oz bottle.

How Stored: Shelf stable.

New Product–Documentation: E-mail from Misako Binford of San-J. 2012. May 8. An attached Excel spreadsheet gives that date each San-J product was first sold commercially, starting in 1987. This product was first sold in 2010.

Two labels sent by Misako Binford of San-J International. 2012. May 14. Red, gold, white, and black on orange. Outline of an Asian pagoda. The label now reads as shown above. One logo on the front panel: Certified Gluten Free. "New: Make authentic orange chicken at home."

8512. Nagai, Toushirou, Tamang, Jyoti Prakash. 2010. Fermented legumes: Soybean and non-soybean products. In Jyoti P. Tamang and K. Kailasapathy, eds. 2010. Fermented Foods and Beverages of the World. Boca Raton, Florida: CRC Press / Taylor & Francis. xii + 448 p. See p. 191-224. [125 ref]

• ***Summary:*** An ethnic fermented food is one used by a certain ethnic group. Contents: Introduction. Fermented soybean foods: Bacilli-fermented, sticky and nonsalty soybean foods (natto, kinema, thua nao, chungkokjang, hawaijar, tungrymbai, aakhone, bekang, peruyaan, pepok, sieng), mold-fermented soybean foods (tempe, douchi, sufu, doenjang, miso, shoyu / soy sauce, tauco).

Fermented non-soybean legume foods: Dawadawa (preparation and culinary, microbiology), ugba (preparation and culinary, microbiology), masecura (preparation and culinary, microbiology), wari (preparation and culinary, microbiology), oncom (preparation and culinary, microbiology), dhokla and khaman (preparation and culinary, microbiology). Conclusion.

Among the Bacilli-fermented, sticky and nonsalty soybean foods, natto, for example, has the following contents (p. 194-96): Introduction, history, preparation and culinary, socioeconomy, microbiology and food safety, biochemistry, nutritional composition, and functional properties. Kinema and thua-nao similarly subdivided, however some lesser-known soyfoods and some non-soy foods are described in less detail.

The Introduction (p. 192-93) discusses Dr. Tamang's revised "KNT triangle" theory, with two maps: "Within the proposed triangle-bound countries, many fermented sticky nonsalty soybean foods are consumed by the different ethnic groups of people in Cambodia, Laos, Vietnam, Darjeeling hills and Northeast states of India, eastern part of Nepal, southern part of Bhutan, Myanmar, and southern parts of China (Figure 6.2). Beyond this hypothetical 'KNT triangle' there is no report of kinema-like products that are sticky and ammonia-flavored fermented soybean foods, and the proposed 'KNT triangle' does not include salted, nonsticky and non-bacilli fermented soybean products such as *tempe, miso, sufu, soy sauce,* etc. (Tamang 2010)."

Fermented soyfoods can be classified in various ways: (1) Those fermented by bacteria (primarily *Bacillus subtilis*), such as natto, thua nao, kinema, etc. (all have a characteristic stickiness), and those fermented by molds, such as soy sauce, miso, tempeh, etc. (2) Nonsalted (those to which no salt has been added, such as natto, kinema, tempeh), and salted

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(such as soy sauce, miso, douchi, etc.) (p. 194). Pepok (p. 207) is an ethnic fermented soyfood from northern Myanmar (formerly Burma). To make pepok: Soak soybeans in water overnight, drain, and bring to a boil. Then wrap in leaves and allow to ferment for 2-4 days. Mash the fermented beans with salt and hot chili pepper, roll out into disks, and dry in the sun. Use as a seasoning or consume after roasting.

Sieng (p. 207) is a traditional fermented soyfood from Cambodia. To make sieng: Soak soybeans in water overnight, drain, and bring to a boil. Spread in shallow bamboo baskets and allow to ferment naturally for 2 days by bacteria adhering to the baskets or suspended in the air. Then immediately transfer the fermented soybeans to salt water and soak for 5-7 days; occasionally tree sap or enzymes are added to the salt water. Use with salt and spices as a seasoning.

Tables: (1) Nutritional composition of boiled soybeans (as a control), natto, and tempe [incl. vitamins, minerals, and fatty acids]. (2) Nutritional composition of kinema and raw soybeans.

Figures (photos unless described otherwise): (1) Map of the natto triangle (based on Nakano 1972). (2) Stylized map of the KNT (kinema–natto–thua nao) triangle. (3) Chopsticks lifting up natto from a polystyrene paper package. *Bacillus subtilis* (natto) produces a polyglutamate, a viscous material, which is called *ito*, meaning "string," in Japanese. (4) Natto in a classical package made of rice straw. (5) A bowl of kinema–freshly fermented. (6) Kinema curry in a bowl and on a plate. (7) Thua nao in a plastic bag, with the label in Thai. (8a) The front of a package of chungkokjang, labeled in Korean, with a photo on the label of the product in a thick spicy stew (*chigae*). (8b-c) Top view and side view of a mound of chungkokjang. (9a) The front of a package of Rusto's Tempeh. (9b-c) Top view and side view of a cake of tempe. The spaces between soybean cotyledons are packed tightly with white mycelia of *Rhizopus oligosporus*. Address: 1. Genebank, National Inst. of Agrobiological Sciences, Tsukuba, Japan; 2. Food Microbiology Lab., Sikkim Government College, Sikkim Univ., Gangtok, Sikkim, India.

8513. Nishimura, Mayumi. 2010. Mayumi's kitchen: Macrobiotic cooking for body and soul. Tokyo, New York: Kodansha International. 157 p. Illust. (mainly color). Index. 26 cm. [15 ref]

• ***Summary:*** This is Mayumi's first English-language book. Madonna (of worldwide musical fame) wrote her a letter that appears in this book (p. 7): "Dear Mayumi, Congratulations on your fabulous book!... Not only are you the best chef in the world, you are part of our family, and we thank you for your love and warmth.

"In the seven years you lived with us and cooked for us, your amazing food helped me to be a happier, healthier person, balanced in body and mind. I feel better than I did 20 years ago. I am very grateful to you for this."

The index of this stylish book contains 24 entries for tofu (some in the chapter titled "Protein dishes"–p. 97-104), 20 for miso, 14 for seitan, and 11 for tempeh. How nice to find a Japanese cookbook that calls for the use of brown rice (basic recipe, p. 67).

The centerpiece of Mayumi's book is her 10-day detox diet.

Also contains specific recipes for: Nabe (with "2 pieces abura-age {deep-fried tofu skins}, halved or cut open on one side to form pouches," p. 67). Soybean and millet croquettes with beet sauce (with "15 oz {425 gm} canned soybeans, drained," p. 84). Seitan pot stickers (with seitan and tofu, p. 113). Smoked tofu salad (with "7 oz {200 gm} firm tofu," p. 104). Black soybean tea (p. 113).

The Glossary (p. 140-49) includes entries for: abura-age, adzuki beans, brown rice, brown rice mochi, edamame, hijiki, kombu, koyadofu, kuzu, mirin, miso, nori, rice milk, rice syrup, seitan, sesame oil, shiso, shoyu (incl. soy sauce and tamari), soba, soy meat nuggets (TVP), soymilk, tahini, tempeh, tofu, umeboshi plum, umeboshi plum paste, wakame, wasabi, whole-wheat flour.

About the author (inside rear dust jacket): "Mayumi Nishimura was born on the small island of Shinojima in Aichi Prefecture [in Mikawa Bay Quasi-National Park]. In 1982 she moved to the U.S. and began studying macrobiotics under Michio Kushi–the leading authority in the field–at the Kushi Institute. Later she worked at the school as head cooking instructor. In 2001 Mayumi became Madonna's private macrobiotic chef, joining her on her Drowned World Tour. Between 2001 and 2008 she cooked for the superstar full-time. Currently Mayumi travels between Japan, where she writes and lectures on macrobiotics, and the U.S." She has written four books published in Japanese. A large color photo of Mayumi appears on the front dust jacket.

The book is dedicated to Mayumi's children, Lisa and Norihiko, to her parents, and to Michio Kushi and his wife, Midori.

8514. Quinlivan, Rachel. 2010. Cooking light: Way to cook vegetarian. Birmingham, Alabama: Oxmoor House. 424 p. Illust. (color). 24 cm.

• ***Summary:*** An excellent, gorgeous vegetarian cookbook, printed entirely on semi-gloss paper with many color photos.

One very creative chapter (p. 206-43) is titled "Tofu & tempeh." The contents (not including recipes): Tofu (description). Tofu varieties: Silken tofu, water-packed tofu, flavored tofu. Tempeh. Tempeh varieties (with a good color photo of each): Wild rice, soy, flax, garden vegetable, multigrain, original. How to press tofu. How to bread and pan-fry tofu. How to fry in a healthier way. How to saute tofu. How to marinate tofu. How to broil tofu. How to prepare lemongrass. How to peel and grate gingerroot.

The index contains 18 entries for tofu, 9 for tempeh, 2 for edamame, 2 for soy and 1 each for soy sauce (low-

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sodium tamari), black bean garlic sauce (such as Lee Kum Kee) and seitan. Address: R.D., editor.

8515. Reinfeld, Mark; Murray, Jennifer. 2010. The 30 minute vegan's taste of the East: 150 Asian-inspired recipes–from soba noodles to summer rolls. Cambridge, Massachusetts: Da Capo Press. xix + 266 p. Plus 16 unnumbered pages of color plates. Illust. (color photos). Index. 24 x 18 cm. [28 ref]
• ***Summary:*** The index contains 22 entries for tofu, 8 each for tempeh and for seitan, 3 for miso, 2 for edamame, and 1 each for tamari and for soy sauce (Noodles with sweet soybean sauce, pad siew).

Includes a good glossary with entries for miso, nama shoyu, seitan, shoyu, soy milk, soy sauce, tamari, tempeh, tofu. Address: 1. Founding chef, Blossoming Lotus Restaurant, and author. 2. Author and teacher. Both: Kaua'i, Hawaii.

8516. Richmond, Simon. 2010. Lonely Planet Korea. 8th ed. Footscray, Victoria, Australia; Oakland, California: Lonely Planet. 440 p. See p. 188. Illust. (some color). Maps (some color). Index. 20 cm.
• ***Summary:*** This is a guidebook to Korea, including North Korea. 110 maps. Korean characters are given for the names of most places and foods–which we find very helpful. "In the year 2000 the Korean government adopted a new method of romanising the Korean language. Most of the old romanisation system was retained. The new system is used throughout this book (p. 411).

Ganjang (soy sauce) is mentioned on pages 68, 69, 70, 75, 178 and 188.

Page 188: In Gangwon-do, "Gangneung's prized specialty is *sundubu* (3 Kc = Korean characters given), soft or uncurdled tofu [soymilk curds] made with sea water in Chodang, the 'tofu village.' At its plainest, *sundubu* is served warm in a bowl, with *ganjang* (soy sauce) on the side. It can also be prepared in *jjigae* (5 Kc, stew) or *jeongol* (5 Kc, casserole)."

In Chodang, there are about 20 restaurants, one of the best-known of which is Chodang Halmeoni.

Sundubu (soymilk curds or soft uncurdled tofu) is mentioned on pages 72, 78, 186, 188 and 189.

Doenjang (fermented soybean paste) is mentioned on pages 56, 68, 70, 78, 134, 188, 246, 257 (spelled *twenjang*) and 346.

Doenjang jjigae (soybean paste stew) is mentioned on pages 78, 134, 188, and 246.

Tofu (*dubu*) is mentioned on pages 70-74, 78, 127, 134, 136, 179, 188, 294, and 388.

Soft tofu is mentioned on pages 204, 257, 299.

8517. Sugawara, Etsuko. 2010. Fermented soybean pastes miso and shoyu with reference to aroma. In: Jyoti P. Tamang and K. Kailasapathy, eds. 2010. Fermented Foods and Beverages of the World. Boca Raton, Florida: CRC Press / Taylor & Francis. xii + 448 p. See p. 225-45. [29 ref]
• ***Summary:*** Contents: Introduction. Aroma compounds of miso and shoyu. Brewing of miso. Brewing of shoyu. Identification of important aromatic compounds that exist together in miso and shoyu. Changes in the concentration of HEMF during fermentation. Formation mechanism of HEMF by yeast cultivation in model media. Effects of the type of yeast and growth conditions on the formation of HEMF. HEMF formation pathway by yeast in miso and shoyu (Contribution of ribose and glycine to HEMF structure, contribution of glucose to the ethyl group of HEMF). Conclusion. Acknowledgments.

HEMF is 4-hydroxy-2(or 5)-methyl-3(2H)- furanone.

More than 300 aroma components have been determined in shoyu and miso.

Figures show: (1) Quantitatively important aroma compounds in miso and shoyu: 1-Hexanol, Maltol, 2-Furfural, HDMF, 2-phenylethanol, HEMF, 4EG(4-ethylguaiacol), Methionol. (2) Simplified manufacturing process [flow sheet] for a fermented soybean paste (red salty rice miso) (with the halotolerant yeast *Zygosaccharomyces rouxii* and/or *Candida versatilis* added). (3) Simplified manufacturing process [flow sheet] of shoyu (with the halotolerant yeasts *Zygosaccharomyces rouxii* and *Candida versatilis* added). (4) Effects of nitrogenous compounds in the media of the formation of HMF by the yeast. C1: polypeptone. C2: casamino acid. C3: glutamic acid. C4: threonine. C5: serine. C6: alanine. (5) Effects of medium preparation on the formation of HMF by *Z. rouxii* 061. (6) Effect of glucose concentration and NaCl concentration in the medium on the formation of HEMF by *Z. rouxii* 061. (7) Hypothetical formation pathway of HEMF by yeast. Note: The title of this chapter seems unusual: miso is a fermented soybean paste but shoyu (soy sauce) is a liquid. However the author states (p. 227): "The original meaning of *miso* in Japanese is 'immature shoyu.'" Address: Faculty of Education, Iwate Univ., Morioka, Japan.

8518. Tamang, Jyoti Prakash. 2010. Himalayan fermented foods: Microbiology, nutrition, and ethnic values. Boca Raton, Florida: CRC Press. xix + 295 p. See p. 65-78, 230-31, 233. Illust. 25 cm. [584 ref]
• ***Summary:*** This is a very interesting, original, well researched and well written book. It is also the best source of detailed, well documented information on kinema and its close relatives seen to date.

The word Sanskrit word Himalayas means literally "abode of the snows." This region is the home of over 65 million people. Those in the eastern Himalayas are of Mongolian ethnicity and ancestry.

Chapter 3, titled "Fermented legumes," includes a section titled "3.1 Important fermented soybean foods" which states (p. 65): "Some of the common ethnic nonsalted

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sticky fermented soybean foods of the eastern Himalayas are *kinema* (Nepal, Darjeeling hills, Sikkim, and South Bhutan), *hawaijar* (Manipur), *tungrymbai* (Meghalaya; food of the Khasi and Garo peoples), *bekang* (Mizoram; food of the Mizo people), *aakhone* (also called *axone*, Nagaland; food of the Sema Naga), and *peruyyan* (Arunachal Pradesh). Manipur, Meghalaya, Mizoram, Nagaland, and Arunachal Pradesh are small states in northeastern India.

All of these foods are similar to *kinema*.

Note: As a guide to the Seven Sister states of North East India, we are including a color map of the area created for Soyinfo Center.

For all these six foods is given: The name of the food, a close-up photo of the food, indigenous knowledge of preparation, a flow chart showing the indigenous method of making the food, culinary practices (how the food is prepared / cooked and eaten), economy (its role in the local economy), microorganisms (dominant and secondary).

Section 3.3 is "Microbiology" (of fermented legumes): Kinema (microorganisms, source of inoculation in kinema production optimization of fermentation period, in situ fermentation of kinema, selection of starter culture, monoculture fermentation of kinema, development of pulverized starter for kinema production, phylogenetic similarity of *Bacillus* strains from Asian fermented soybeans), other fermented soybean foods of north east India.

Section 3.4 is "Nutritive value" (table 3.1 compares the nutritional composition of raw soybean and kinema). And section 3.5 is "Conclusion."

The long and very interesting section (9.1.1) on the "Antiquity of kinema" (p. 230-34) states that it is a food of the Kirat ethnic group (to which the Limboo belong) of eastern Nepal. The origin of the word "kinema" can be traced back to the word *kinaba* of the Limboo language (*ki* = fermented; *namba* = flavor). It is not clear whether *kinema* appeared first, then was disseminated and diversified, or vice versa. The Limboo believe that their discovery and domestication of the soybean (which they named *chembi*) is mentioned in one of their oral myths known as *mundhums*. This myth, which is described here in detail, might have been written between 2500 and 100 BC (p. 231).

Kinema is made by fermenting whole soybeans, without inoculation, with strains of *Bacillus subtilis* bacteria. It is alkaline in nature / pH, has a sticky, stringy texture and a strong flavor.

Natto [salty natto, not itohiki natto] is believed to have been introduced to Japan from China during the Nara period around 710-714 AD (Ito et al. 1996; Kiuchi 2001). Kinema might have originated in east Nepal around 600 B.C. to 100 A.D. during the Kirat dynasty.

Products closely resembling kinema are popular foods in many non-Brahmin communities in the eastern Himalayas. "The Lepcha [the aboriginal inhabitants of today's Sikkim] call it *satlyangser;* the Tibetans and Bhutia [of Bhutan and Sikkim] call it *bari;* the Khasi [of Meghalaya] call it *tungrymbai;* the Meitei [of Manipur] call it *hawaijar;* the Mizo [of Mizoram] call it *bekang;* the Sema Naga [of Nagaland] call it *aakhone;* and the Apatani [of Arunachal Pradesh] call it *peruyyan.*"

Soybean products closely resembling kinema outside of the Himalaya region are *natto* of Japan, *chungkokjang* of Korea, and *thua-nao* of Thailand [From Google Books Preview].

Dr. Sasuke Nakao (1972) coined the term "natto triangle," but Dr. Tamang proposes that the hypothetical triangle be renamed "Kinema–Natto–Thua-nao triangle" (or KNT triangle).

Note: Four facts support Dr. Tamang's elegant new triangle:

(1) Indonesia and its mold-fermented tempeh should not have been part of the original natto triangle.

(2) Nakano (1972) guessed that natto might have come to Japan from Java during the Muromachi period, however extensive research on natto and tempeh after 1972 offers no support to his guess.

(3) Many new relatives of natto have been discovered since 1988, many of them by Dr. Tamang and co-workers. All of these (except the relatives of dawadawa made from soybeans found in West Africa) fall within the KNT triangle.

(4) No mold-fermented soyfoods–such as tempeh, miso, soy sauce, jiang, or fermented tofu–fall within the new KNT triangle.

An illustration / map (Fig. 9.1) shows this improved triangle with Japan (natto), Nepal-India-Bhutan (kinema), and Thailand (thua nao) at its three vertices / corners; it also includes chungkokjang (Korea), pepok (Myanmar), sieng (Thailand), and [incorrectly, mold-fermented] *douche* [*douchi*] from south China. These mildly alkaline, sticky fermented foods are popular among the peoples of Mongolian origin. This may be due to their typical flavor called *umami* (Kawamura and Kara 1987). This flavor is developed during the hydrolysis of soy protein (by protease enzymes) into amino acids during fermentation. Have people of Mongolian origin evolved or developed particular senses which incline them to enjoy the umami flavor? In the eastern Himalayas green vegetable soybeans are also boiled and eaten.

Section 10.3, "Commercialization through ethnic food tourism," suggests that just as tourists visit the vineyards of France, tempeh shops in Indonesia, and artisans or factories that make shoyu or sake in Japan, there are potential tourist sites for experiencing how traditional foods are made in the Himalayan villages. For kinema, try visiting Aho village in Sikkim.

About the author (p. xix): A good biography and portrait photo are given. In the "Acknowledgments" (p xvii) he writes: "I am thankful to my wife Dr. Namrata

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Thapa for constant support and technical assistance in the preparation of this book. Over the past 16 years the team of brilliant Ph.D. students that I have recruited from the Food Microbiology Laboratory, Sikkim Government College, Gangtok, has been the real driving force in researching and identifying the scientific mechanisms of ethnic Himalayan fermented foods." He then lists their names. Address: Food Microbiology Lab., Sikkim Government College, Gangtok, Sikkim 737 102, India

8519 Tamang, Jyoti Prakash; Kailasapathy, Kasipathy; eds. 2010. Fermented foods and beverages of the world. Boca Raton, Florida: CRC Press / Taylor & Francis. xii + 448 p. Illust. 25 cm. Series: Food science and technology.
• ***Summary:*** Includes a directory of "Contributors" (p. xi-xii). Among the many interesting, carefully researched and documented chapters, those that mention soy include: Chapter 1. "Dietary culture and antiquity of fermented foods and beverages," by J.P. Tamang and D. Samuel (p. 1-40, for soy see the section titled "Fermented soybeans and non-soybean legumes," p. 11).

Chapter 2. "Diversity of fermented foods," by J.P. Tamang (p. 41-84, for soy see the section titled "Fermented soybeans and non-soybean legumes," p. 50-52, plus p. 71).

Chapter 6. "Fermented legumes: soybean and non-soybean products," by Toshirou Nagai and J.P. Tamang (p. 191-224, cited separately).

Chapter 7, "Fermented soybean pastes miso and shoyu with reference to aroma," by Etsuko Sugawara (p. 225-45, cited separately).

Chapter 15. "Health aspects of fermented foods," by Mariam Farhad, K. Kailasapathy, and J.P. Tamang (p. 391-414).

On page 282 is a section about viili, the Finnish fermented milk product, traditionally made in the summer as a way of preserving excess milk.

Table 12.4, "Some important vegetable foods of Africa" (p. 326) mentions dawadawa or iru, produced and consumed throughout most of West Africa, especially in the northern parts. It was traditionally made from the African locust bean (the seed of the leguminous tree *Parkia biglobosa*) but is now also widely made from soybeans. The bacterial fermentation is caused mainly by *Bacillus subtilis* and *Bacillus licheniformis*.

A flow sheet is given (p. 333) for the preparation of dawadawa / iru. A bibliography of the writings of the Nigerian microbiologist S.A. Odunfa appears on p. 348. Address: 1. Food Microbiology Lab., Sikkim Government College, Sikkim Univ., Gangtok, Sikkim, India. 2. School of Natural Sciences, Univ. of Western Sydney, Sidney, NSW, Australia.

8520 Tamang, Jyoti Prakash; Samuel, Delwen. 2010. Dietary cultures and antiquity of fermented foods and beverages. In: Jyoti P. Tamang and K. Kailasapathy, eds. 2010. Fermented Foods and Beverages of the World. Boca Raton, Florida: CRC Press / Taylor & Francis. xii + 448 p. See p. 1-40. [188 ref]
• ***Summary:*** Contents: Cultural foods: Hindu foods, Buddhist foods, Christian foods, Muslim foods. World dietary culture: Use of hands, use of chopsticks, use of cutlery, evolution of dietary culture. Antiquity and cultural aspects: Fermented vegetables, fermented soybeans and non-soybean legumes, fermented cereals, fermented milks, fermented fish, fermented meats, fermented beverages and alcoholic drinks. Conclusion.

Section 1.3.2 titled "Fermented soybeans and non-soybean legumes," begins with a concise and well documented paragraph on the origin of the domesticated soybean in the eastern half of north China around the 11th century BC around the end of the Shang dynasty (ca. 1700 to 1100 BC), then its dissemination / spread from this primary soybean gene pool to central and south China, and the Korean peninsula. The soybean then spread to Japan, and throughout Southeast Asia and into northern India during the following centuries.

The next paragraph discusses the two earliest Chinese fermented soyfoods: *chi* (*shi*) [fermented black soybeans] and *jiang* (*chiang*) [Chinese-style miso]. *Chi*, now known as *douchi* was "next to salt use in China."

Note: Actually, salt was rarely used directly to season food in China, in the early days jiang, and later soy sauce had that honor. Yet salt was a major ingredient in both jiang and soy sauce.

Recipes for making 3 different types of *chi* and 14 different types of *jiang* are given in the *Qimin Yaoshu* (6th century B.C.). Soy sauce is presently an essential seasoning in Chinese cooking, "but it was not an ancient and deliberate preparation. It developed as a by-product of some jiang relishes and did not become of culinary importance until the Song dynasty (960-1279) (Sabban 1988)."

There follows a discussion of the early development of fermented soyfoods in Japan, including the Taiho Laws (AD 701) and the *Engishiki* (AD 906). Salted fermented black soybeans, which originated in China, took root in central Japan, where they were known by various names such as *hama-natto* and *daitokuji-natto;* in Taiwan they were known as *in-shi* (Yokotsuka 1991).

The subsequent few paragraphs contain three statements which we believe are incorrect and are not found in the sources cited: (1) "*Natto*, a fermented sticky soybean, was introduced to Japan from China by Buddhist priests during the Nara period around AD 710-794 (Ito et al. 1996, Kiuchi 2001 [p. 9]). Note: This statement is based on a misinterpretation of the documents cited and on the confusion resulting from the fact that the Japanese word "natto" can be used to refer to two very different foods, natto and fermented black soybeans. Both documents are referring

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to the introduction to Japan (by a Buddhist priest) of salted, fermented black soybeans (*douchi*) and not of *itohiki* natto. For example, Kiuchi (2001, p. 9, written in English) states: "The two main varieties of *natto* [in Japanese] are *itohiki-natto* and *shiokara-natto*, which [referring only to the latter] was introduced to Japan from China during the Nara period (790-794) by a Buddhist priest."

(2) "The production of shoyu and miso in China was recorded around 1000 BC, with the transfer of the indigenous knowledge to Japan happening at around AD 600 (Yokotsuka 1985). Yokotsuka is perhaps the world's leading authority on this subject. However nowhere in this excellent chapter by Yokotsuka can we find anything that would justify the surprising statement (especially the date 1000 B.C. for shoyu) above.

(3) "Tempe made in present day Indonesia was originally introduced by ethnic Chinese centuries ago." No source is cited. Address: 1. Food Microbiology Lab., Sikkim Government College, Sikkim Univ., Gangtok, Sikkim, India; 2. Div. of Nutritional Sciences, Kings College London, London, United Kingdom.

8521. Tamang, Jyoti Prakash. 2010. Diversity of fermented foods. In: Jyoti P. Tamang and K. Kailasapathy, eds. 2010. Fermented Foods and Beverages of the World. Boca Raton, Florida: CRC Press / Taylor & Francis. xii + 448 p. See p. 41-40. [228 ref.]

• ***Summary:*** In the section titled "Types of fermented foods" (p. 46-67) is a subsection on "Fermented soybeans and non-soybean legumes." About 90% of fermented legumes are soybean-based foods while the rest are non-soy. Fermented soyfoods have long been made in Asia, especially by Chinese, Nepalis, Japanese, Thais, Koreans, Indonesians, and many minor ethnic groups. Consumption of ethnic fermented soyfoods "is not part of the traditional food culture of non-Mongoloid races."

Table 2.2, "Some fermented legume products of the world," has six columns: (1) Name of fermented food (alphabetical). (2) Substrate (e.g., soybean, Locust bean). (3) Sensory property and nature (e.g., alkaline, sticky, paste). (4) Culinary (e.g., side dish, condiment). (5) Microorganisms. (6) Country. Those having soybean as a substrate are aakhone, bekang, chee-fan, chiang [jiang], chungkokjang, douchi, doenjang, furu, hawaijar, kecap, ketjap, kinema, meitauza, meju, miso, natto, pepok, peruyaan, sieng, shoyu, soy sauce, sufu, tauco, tempe, thua nao, tofu si? [China, Japan], and tungrymbai. Address: Food Microbiology Lab., Sikkim Government College, Sikkim Univ., Gangtok, Sikkim, India.

8522. Young, Jean Allison. 2011. Chronology of interests in macrobiotics and work with Erewhon (Interview). *SoyaScan Notes*, Feb. 10. Conducted by William Shurtleff of Soyinfo Center.

• ***Summary:*** Chronology: 1945 June 1–Jean is born in St. Paul, Minnesota. She has two brothers. Her father was killed in a traffic accident when she was 18 months old. Her mother went into the hospital for about 2 years. Her mother later came back into their lives, but her father's parents were suing for custody of the children. So her mother married her stepfather (who turned out to be a nice guy) and in 1949 the two of them moved with the 3 children to Los Angeles when Jean was age 4–to get away from the custody lawsuit.

1959 Aug. 22–The family moves to the Hawaiian Islands the day they became a state of the USA. Jean goes to high school in Hilo, on the island of Hawaii, and graduates in 1963 with honors.

1963 early summer–Jean leaves Hawaii to work for the summer at Army/Navy Supply House in San Francisco, California, as a secretary. In the fall she enters San Francisco State College while continuing her job part time during the fall. During college she also worked in several temporary jobs ranging from tax work and insurance to general office work. During 1965-66 she worked part time at Wilson's Advertising Agency in San Francisco as a secretary. She did not graduate from college (this was a time of turmoil, strikes, and protests at San Francisco State) but she does have a 4½ year education in Liberal Arts. Like many students, Jean did participate in the protests.

At the college, Jean was involved in acting, and through that she met both Paul Hawken and Bill Tara, who were doing theater in San Francisco and the psychedelic "drug scene" at that time.

1963-1967–Jean, Paul Hawken and Bill Tara grew to know one another well during the six years when they lived (often together) in San Francisco. In the early spring of 1966, shortly after rock concerts began at the Fillmore Auditorium [at the corner of Fillmore St. and Geary Blvd.] in San Francisco, they rented an old abandoned firehouse [fire station] at 3767 Sacramento Street, north of the Haight-Ashbury district in the Sunset District. Jean, Paul and Bill all lived in the firehouse the entire time they were there. Jean was Bill's girlfriend. They organized and hosted live musical performances and dancing with some of the original street bands in San Francisco–Sopwith Camel, The Charlatans, Big Brother and the Holding Co. (including Janis Joplin), etc. The firehouse held about 100 people, and the door was kept "closed," admitting people only in small groups. The resulting noise was kept carefully under control so as not to disturb the residential neighborhood. People paid a mandatory "donation" [one ticket shows: "Donation $2.00"] to hear the performance, and the hosts did not make change. No one sat, as there were no chairs, so everyone danced–although it was usually so crowded that no one could dance.

Concerts were held at the firehouse for at least 3 months [Feb. 12 to April 2]. "Since the last concert was the Wreckers Ball, I would assume that we had been told by the landlord that the place was to be raised and he wanted us out." "It was

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a wonderful and exciting time–to be there at the beginning of the rock and roll music scene in San Francisco." Jean thinks they moved from the firehouse directly to the warehouse south of Market Street, but she is not sure.

Note: This Firehouse is now part of early rock and roll legend in San Francisco. See the long blog titled Rockarchaeology101. See also: http://www.chickenona unicycle.com/Firehouse%20History.htm.

"The rest of the time we were dealing and using drugs." The only LSD they could get in those days was the real Sandoz LSD. Several days in advance of each trip, they carefully prepared their minds, bodies, and the environment. They had someone who was not taking it who was in the room with them to ground them. They did it the right way because it was "a spiritual experience."

They soon moved into and rented one floor of a warehouse on an alley [65 Harriet St.] south of Market Street, between 6th and 7th streets. They pooled the money to pay the rent. "The warehouse was actually an old factory for making the pre-packaged small half-pies that you could buy at a convenience store. Initially, we had a wicked problem with rats and mice (a house cat took care of that) but had so many cockroaches that we use to have a monthly 'cockroach killing party' with Raid and beer. Great fun."

"We lived communally in a huge warehouse space, except for a single room in the back. We each set up our own bedroom area–but shared the living room area (defined by a sofa, chairs and a rug) and open kitchen (defined by a table, stove, refrig and cupboards). Bill lived there, I lived there but moved out before Bill, and Paul lived there for a time also."

"The word 'studio' fits to a certain degree. Bill Tara and I were a couple for several years although we broke up at about the time we started the macrobiotic diet–which was Renee came along. Michio and Aveline Kushi made several attempts to get us back together as a couple as they wanted to send us off as a 'teaching team.'"

Jean thinks that Paul Hawken was the first of the group to learn about macrobiotics in about 1967, perhaps from little yellow book that he was given by Roger Hillyard, who was doing light shows in San Francisco at the time. "My memory says that we were pretty much off of drugs by then. As a group we were pretty disgusted with the whole 'flower child' movement of the late 1960's–the indiscriminate use of drugs just to get as high as you could. We were also more cautious about the drugs that were available at that time, they were cut [diluted] with just about anything that came to hand. You couldn't be sure about the quality. So I would expect that we started with the exact diet as proposed by Ohsawa–brown rice for X number of weeks, gradually adding miso, shoyu, veges [vegies], etc. Alcohol was never a big deal with any of us, so I expect we just stopped. As to sugar, you know how hard that one is!! But, I expect we all tried hard. Very idealistic. I also think we were several months in to the diet–close to a year, before we left for Boston." Continued.

Address: Chatham, Massachusetts.

8523. Sharp, Carolyn Heidenry. 2011. Re: Erewhon, Michio and Aveline, and the Boston macrobiotic scene (Continued, Part VI). Letter to William Shurtleff at Soyinfo Center. Feb. 15. 11 p.

• ***Summary:*** Continued: "Given all of the above I suppose it was inevitable that Erewhon should fall.

"Many people would have had difficulty filling the shoes of president. Not an easy job. Probably no one, among the community of friends and associates that Michio and Aveline knew, and from whom they would have selected a president, had the experience or training to handle the job. And most anyone would have had some successes, and also made some mistakes. However, if Tom DeSilva or Evan Root had been president of Erewhon, I don't think either of them would have tolerated too-high salaries, too-low profit margins, or hired Tom Williams as comptroller. Or taken out $10,000 loans from the company.

"After the collapse of Erewhon, Michio once said that if ever he began a food company again, he would make it a very simple operation, selling grains, beans, sea vegetables, Condiments, miso, soy sauce, noodles, etc. of very good quality, rather than the hundreds of items (thousands I think) that Erewhon carried before it died.

"So, about 12 years later (in about 1994), I was very disappointed and puzzled when he began KFC–Kushi Food Corp. And not sorry when it folded. Michio often had a short memory.

Note: The company was originally named "Kushi Macrobiotic Corporation" (KMC). It was listed on Nasdaq as KMAC as early as 7 Nov. 1995 and as late as 23 Aug. 1996. But by Feb. 1996 it had been renamed (probably for wider appeal) to "Kushi Natural Foods Corporation." On 26 Sept. 1996 its merger with American Phoenix Group, Inc. was completed.

"When I met the CEO that Michio and Fred Sternau selected to run the company, I was stunned. I mentioned my misgivings firmly to Michio and Fred, separately, when I next saw them. They both seemed strangely casual and not too concerned about it, and didn't seem to realize the huge impact this person would have on the company.

"One final note. In all the years I worked for Michio and Aveline and in all the time I lived at their home, I never heard either of them say one word that could be construed as anti-semitic. In fact, there were so many Jewish people working for them in their various enterprises and organizations, that I remember the Kushis being criticized for having too many Jewish people running things. Michio's secretary for several years, Donna Cowan, was also Jewish. Michio's lawyer for several decades, Morris Kirsner, was Jewish. And many students and employees were Jewish or half Jewish. Michio seemed too evolved to carry around prejudice of any kind. He was, and is, a great friend of

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humanity. All humanity." Address: P.O. Box 125, Hinsdale, Massachusetts 01235.

8524. *SoyaScan Notes*.2011. Updated USDA database on the isoflavone levels in foods, commercial ingredients, soybeans and soyfoods (Overview). April 23. Compiled by William Shurtleff of Soyinfo Center. [1 ref]
• ***Summary:*** The link is now http://www.ars.usda.gov/SP2UserFiles/Place/12354500/Data/isoflav/Isoflav_R2.pdf. "Legumes and legume products" starts on p. 16. Start by going to page 24, which is where the soy section begins. Then you can do a PDF search for fermented soyfoods such as: Tempeh, miso, soy sauce, natto, or Sufu (fermented tofu)--and you will see that they are NOT lower in total (or specific isoflavones) than nonfermented soyfoods such as Tofu, soymilk, soybeans (immature), soybeans (mature), etc.

8525. Earle, Steve. 2011. Re: Takayoshi Sato has written a history of San-J, based on his recollections, mostly about the period after 1981. Letter (e-mail) to William Shurtleff at Soyinfo Center, April 28. 1 p. [1 ref]
• ***Summary:*** A couple of years ago Takayoshi Sato, the younger of the two San-Jirushi brothers, put together a history of San-J based on his recollections; he was kind enough to send me a copy and it was quite well done, despite a few mistakes. This was written for an internal (company) audience and I would not feel right about passing it on without his permission, but suggest that you contact his son, Takashi Sato, current president of San-J in Richmond. Address: Assistance, Richmond, Virginia.

8526. Takesuye, Betty Tadano. 2011. The Tadano family and the Showa Shoyu Brewing Co. (Interview). *SoyaScan Notes*, May 2. Conducted by William Shurtleff of Soyinfo Center.
• ***Summary:*** During World War II, Takeo Frank Tadano ended up in the internment camp at Crystal City, Texas. Betty thinks he was gone for about four years. His family went and joined him there; they stayed with him until he was released.

Note: Crystal City, Texas, "was home to the largest of the World War II internment camps, having housed American civilians of German, Japanese, and Italian ancestry. However, the majority of internees were South American citizens. The camp was administered by the INS [Immigration and Naturalization Service] and the Department of Justice. To reduce hardships during internment and to reunite families, the INS originally intended to detain only Japanese at Crystal City,..." (Source: Wikipedia, at Crystal City, Texas, May 2011)

Betty's grandfather, Takeshi Tadano, was also taken away to Lordsburg, New Mexico. But he had a very serious heart condition, so the family had to go after him and brought him home.

The family farm was originally in Phoenix; they moved it to Glendale in about 1936. The two locations are only about 6 miles apart. Betty's older brother was born in 1936, in Phoenix hospital, but she does not know if he was born before or after the move.

Betty's grandfather, Takeshi, went to Japan to learn how to make koji. Betty's sister has an original small bottle of Marusho Shoyu. Address: 807 N. 73 Place, Scottsdale, AZ 85257.

8527. Timberlake, Sean. 2011. SFoodies 92: No. 10, Oboro Tofu at Eiji (Web article). http://blogs.sfweekly.com/foodie/2011/05/eiji_oboro_tofu_sfoodies_92_favorite_dishes_2011.php. May 4.
• ***Summary:*** This blog is: "SFoodie's countdown of our 92 favorite things to eat and drink in San Francisco, 2011 edition." A large color photo shows Oboro tofu in a ceramic bowl (with garnishes on top); $9.25 for two. The blog describes the experience of being served. The curds are apparently made by stirring nigari (a coagulant) into hot soymilk at the table. "The texture is otherworldly." The garnishes, in a second bowl, are: sesame seeds, sliced scallions, fresh and pickled ginger, shaved bonito flakes, a chiffonade of shiso leaf. But as she spoons a wedge of the tofu into your bowl, she suggests you try it first--plain. A little real tamari (made without wheat) is also served.

On the table is a quote (titled "Home made tofu") about oboro from *The Book of Tofu*, by Shurtleff and Aoyagi. "Like the clouds it resembles in so many other ways, *oboro* is transient; in a few moments it will be gone, only to reappear as tofu. But before it vanishes or changes form, it may be tasted. As soft as the most delicate custard, warm fresh curds have the richness of cream and a wonderful subtle sweetness."

Eiji is at 317 Sanchez (at 16th St.), San Francisco. Phone: 415-558-8149. They have been serving oboro since at least Jan. 2007. On 13 May 2008 the *San Francisco Bay Guardian* did an online video a story titled "Heavenly oboro: SFBG goes to Eiji." The restaurant opened in mid-June 2006. Address: San Francisco blogger.

8528. *Nichi Bei Weekly*.2011. Northern California Soy & Tofu Festival: Come discover the joy of soy. June 2-8. p. 5-7. Cover story.
• ***Summary:*** This issue announces the first Northern California Soy & Tofu Festival to be held on June 11, in San Francisco Japantown, Peace Plaza, 11 am--4 pm. It is sponsored by the Nichi Bei Foundation and many large corporate sponsors. Gold sponsor: Pacific Gas and Electric Company. Silver sponsors: Kikkoman, Union Bank.

The main article on page 6 is titled "Soy to the world: Small businesses explore varied tastes, textures," by Akiko Minaga (Nichi Bei Weekly Contributor). It discusses Megumi Natto, Hodo Soy Beanery, San Jose Tofu, and Sacramento Tofu.

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A second article by her (on the same page) titled "Soy, the magic bean. The many benefits of soy" discusses tofu, soymilk, beauty treatments, soy clothing, soy ink, etc.

A sidebar is titled "Tofu: A brief 2,000 year history," by William Shurtleff of Soyinfo Center.

Photos show: (1) Chester Nozaki and his wife, Amy, owners of San Jose Tofu. (2) Alvin and Dorothy Kunishi, owners of Sacramento Tofu. (3) Min Tsai, owner of Hodo Soy Beanery. Address: P.O. Box 15693, San Francisco, California 94115. Phone: (415) 673-1009.

8529. Shurtleff, William. 2011. Comparison of the macrobiotic diet and Dr. Caldwell Esselstyn's whole foods, plant-based diet (Editorial). *SoyaScan Notes*. July 2.
• ***Summary:*** Meat: Macrobiotic diets allow consumption of fish, shellfish, and other seafoods, whereas the Esselstyn diet (which is designed to prevent and reverse coronary artery disease / heart disease) allows no animal products.

Dairy: The Esselstyn diet prohibits consumption of dairy products, the macrobiotic diet discourages their consumption. Note: Actually nothing is prohibited by macrobiotic diets; as taught by George Ohsawa, they are broad, flexible, and nondogmatic.

Refined carbohydrates, such as white sugar, white rice, and white flour. Both diets discourage their use except that the Esselstyn diet uses white sugar (in large amounts) in a small percentage of desserts. For example, in the book *Prevent and Reverse Heart Disease* (2007), the recipe for Birthday Cake (p. 276) calls for "1 cup (or less) sugar." Chocolate Red Devil Cake (p. 278) calls for "1 cup sugar." Luscious Lemon Cake (p. 280) calls for "3/4 cup (or less) brown sugar plus granulated sugar sprinkled over the cake."

Salt: The salt content of the macrobiotic diet (like the traditional Japanese diet) is high, provided by such condiments as miso, soy sauce (tamari), and gomashio, whereas the Esselstyn diet aims to use as little salt as possible–since many of the patients have both cardiovascular disease and hypertension. "If you *still* miss salt, try adding a little Bragg Liquid Aminos" (a salt alternative) or small amounts of "South River Sweet White Miso or low-sodium tamari. Try to limit sodium consumption to 2,000 mg a day." A table shows the amount of sodium in salt and four condiments (p. 122).

Soyfoods: Macrobiotic diets uses soyfoods abundantly; in addition to miso and tamari, they enjoy tempeh, natto, and small amounts of tofu. The Esselstyn diet advises: "Eat soy products cautiously. Many are highly processed and high in fat" (p. 121).

Fruits: Macrobiotic diets use fruits sparingly, since most are classified as very "yin." However apples (the most yang fruit) are used quite freely. The Esselstyn diet encourages the use of all fresh, whole fruits except avocadoes (which are high in fat).

Grain vs. vegetables: The macrobiotic diet is based on the central idea of a primary food (such as brown rice or other whole grains) and secondary foods (such as cooked vegetables). The Esselstyn diet encourages the use of all fresh, whole vegetables. One might say that the center of the Esselstyn diet is fresh fruits and vegetables.

Macrobiotic diets strongly discourages consumption of foods which are members of the nightshade family–potatoes, tomatoes, and eggplants. The Esselstyn diet encourages the consumption of whole (unpeeled) potatoes and tomatoes.

Macrobiotic diets resembles a Japanese diet, whereas the Esselstyn diet resembles an American diet.

Use of local, seasonal foods: Macrobiotic diets emphasizes this somewhat more than the Esselstyn diet.

Use of added oil: The Esselstyn diet strongly discourages this, whereas the macrobiotic diet focuses more on the quality of the oil, but while still advising moderation in quantity, includes recipes for deep-fried foods (such as tempura).

The term "macrobiotic diets" is short, whereas the term "whole-foods, plant based diet" is descriptive but too long, and in need of a shorter name. Address: Founder and owner, Soyfoods Center, Lafayette, California. Phone: 925-283-2991.

8530. Shurtleff, William; Aoyagi, Akiko. comps. 2011. How Japanese and Japanese-Americans brought soyfoods to the United States and the Hawaiian Islands–A history (1851-2011): Extensively annotated bibliography and sourcebook. Lafayette, California: Soyinfo Center. 328 p. Subject/geographical index. Printed 12 July 2011. 28 cm. [1259 ref]
• ***Summary:*** Begins with a chronology of how Japanese and Japanese-Americans brought soyfoods to the United States and the Hawaiian Islands. Contains 110 historical photos and illustrations (some in color), graphs, and tables. http://www.soyinfocenter.com/books/146. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

8531. Kushi, Michio. 2011. Kushi Institute International Aveline Award presented to William Shurtleff and Akiko Aoyagi.
• ***Summary:*** The plaque reads: "In recognition for your enduring support of macrobiotics. Your teachings and writings have brought hope and healing to people around the world. With this award Michio Kushi expresses his gratitude to you for your important contribution to macrobiotics, humanity, and the world."

Signed, Michio Kushi.

"Presented on August 4, 2011, at the International Macrobiotic Summer Conference."

Note: The award was presented in absentia since Shurtleff was unable to be present at the award ceremony. The plaque is 10½ by 13 inches, with a leather border. The body of the plaque is the printed paper covered by a sheet of glass. The blue logo of the Kushi Institute International is

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near the top of the sheet of paper. Address: Massachusetts.

8532. Astuti, Mary. 2011. Re: Yayasan Tempe Indonesia (Indonesian Tempe Foundation). Researching a book on black soybeans. Letter (e-mail) to William Shurtleff at Soyinfo Center, May 31. [Eng]
• ***Summary:*** "Yayasan Tempe Indonesia (Indonesian Tempe Foundation) was established at Jakarta on April 11, 1995 and the book of 'Bunga Rampai Tempe' [Anthology of Indonesian tempeh], was published in 1996 in Indonesian.

Indonesian Tempe Foundation was supported by Indonesia's Ministry of Food. I am sorry to tell you that the Indonesian Tempe Foundation is no longer active because (1) there is no support from the government and (2) Dr. Sapuan, the head of this foundation, has retired.

"Through the support of the American Soybean Association (ASA) there is Forum Tempe Indonesia (Indonesian Tempe Forum). I have been involved in Yayasan Tempe Indonesia and Tempe Forum Indonesia.

"I am in the process of researching and writing a book about black soybeans, including the black soybean products such as sweet soysauce, tempe, tofu and crackers. I hope it will be finished by the end of this year." Address: Indonesia.

8533. Shurtleff, William; Aoyagi, Akiko. comps. 2011. History of fermented black soybeans (165 B.C. to 2011): Extensively annotated bibliography and sourcebook. Lafayette, California: Soyinfo Center. 398 p. Subject/geographical index. Printed 11 Dec. 2011. 28 cm. [754 ref]
• ***Summary:*** Begins with an attempt to answer the question "What are fermented black soybeans," followed by a brief chronology of fermented black soybeans. Contains 54 historical photos (most in color), graphs, and illustrations. http://www.soyinfocenter.com/books/150. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

8534. *SoyaScan Notes*.2011. Why seitan has not become as popular as tofu as a source of plant protein in the USA (Overview). Dec. 21. Compiled by William Shurtleff of Soyinfo Center.
• ***Summary:*** 1. Historical: Tofu has been a basic food in all countries of East Asia for at least 1,000 years. This includes China, Japan, Korea, Vietnam, and Indonesia. So wherever people with ancestry from these countries live, tofu is made. It has no class affiliation and is inexpensive, so it is eaten by people of all classes and income levels from these countries. And it appears in virtually all cookbooks for these cultures. So there has long been a large demand for tofu in the USA.

2. Tofu manufacturers in the USA: Since 1900 there have been plenty of tofu shops to supply the demand. Between 1905 and 1975 at least 528 different Japanese-owned tofu manufacturers were established in the USA. Probably at least that many Chinese-owned tofu makers also started.

3. Seitan historical: It was invented in about 1962 by George Ohsawa, the macrobiotic teacher, together with Mr. Kiyoshi Mokutani, the owner of a small soy sauce company (Marushima shoyu) in Japan. So it has a very short history. And originally (starting in 1969) it was all imported from Japan.

4. Macrobiotics: Seitan has been limited mostly to macrobiotic community. Wikipedia says incorrectly that seitan is another name for wheat gluten. Not true. Seitan is a product made from wheat gluten just like tofu burgers are made from tofu.

5. Evolution of the meaning of the word: Seitan was originally a salty seasoning, not a protein source. But over the years the meaning of the word gradually changed; it came to refer to any wheat gluten seasoned with soy sauce.

6. Not widely made in the USA since not much demand.

7. Very expensive compared with tofu, in part because not widely available so had to be sent by UPS or mail.

8. Wasteful process. It is made from wheat by discarding all but about 14% of the original wheat and using only the protein. Or, if you start with "vital wheat gluten" (a powder) the quality of the seitan is not nearly as good as if you start with whole wheat flour.

9. Process causes pollution: Dumping all of that starch into any sewage system pollutes the system and usually leads to either a fixed fee or a fine on the manufacturer.

10. Few books about seitan, and no much press coverage or information. Only 3 books about seitan (with "seitan" in the title) have ever been published in English: Jacobs 1987, Wingate 1988, and Bates 1993. Just the opposite with tofu.

8535. Jamieson, Alexandra. 2011. Vegan cooking for dummies. Hoboken, New Jersey: Wiley Publishing, Inc. xx + 364 p. Illust. (some color). Index. 24 cm.
• ***Summary:*** A fun, well written, and very informative book. Contains more than 160 healthy vegan recipes. The index contains 22 entries for tofu, 14 for tempeh, 11 for soy foods, 5 for seitan, 3 for edamame, 2 each for milk replacements (soy milk), miso, soy sauce, soy yogurt, and 1 for TVP (textured vegetable protein).

Also mentions macrobiotics, mochi, raw foods diet, sea vegetables, sesame oil, sesame seeds, etc. Address: Professionally trained vegan chef and board certified holistic health counselor (CHHC), and member American Association of Drugless Practitioners (AADP), New York City.

8536. Vos, Heidemarie. 2011. Passions of a foodie: An international kitchen companion, A to Z. Durham, Connecticut: Eloquent Books. An imprint of Strategic Book Group. 598 p. 26 cm.
• ***Summary:*** Best-selling author Heidemarie Vos recounts a fascinating story and her journey of putting together the

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world's first cross-referenced book regarding food-using more than five languages. This cookbook [which contains no recipes] will become an invaluable resource for your kitchen (from the publisher).

The Introduction states: "There are 7922 entries, 300,017 words... based on my own travels to 6 continents and over 40 countries." Note: This is somewhere between a dictionary (in 5+ languages) or brief encyclopedia of food names. It immediately sets the language and cultural context for each word, and ends with broader or narrower terms. For example: "Aburage: Japanese cooking = A fried bean curd... Also see Bean Curd." It contains more than its share of errors and outdated terminology and spellings. It is a "print on demand" book.

It includes: Aburage. Adzuki beans [sic], Agé. Aji Nomoto [sic], see monosodium glutamate. Aka miso–red bean paste. See Miso. Almond milk. Almond oil. Arachide / Arachis. See Peanut. Arachide oil. See Peanut oil. Bean cake, fermented: Chinese cooking, "fu yu" [fermented tofu]. Bean curd, pickled: Chinese cooking. [What is it?]. Bean curd cheese, red: Chinese cooking, "nam yu" or "nan yu" [red fermented tofu]. Bean curd: Oriental cooking. Known as "tofu" in Japanese or "dow fu" in Chinese. Pressed bean curd is "dow fu kon" [doufu-gan, pressed tofu]

"Bean curd, dried [yuba]: Chinese cooking = Known as 'tiem jook' [sweet yuba] / 'fu jook pei', other dialects are 't'ien ch'u' and 'fu pi chi'. It is soybean milk residue, which comes in a thin rectangular sheet or is curled into round sticks. They are usually tan- or cream-coloured with a shiny, glossy smooth texture."

Bean paste, red: Chinese cooking. "Made from soybeans and sugar mashed together then fried and dried out until it resembles sand." Used to fill Chinese moon cakes. Bean sauce, Chinese: Chinese and Asian cookery. Many types including "min see jiong" or "do bahn jiang." Incl. "Black bean sauce." Beans, black: Chinese cooking. "A pulse [sic] known as 'wu dow' / 'wu do' [Black soybeans]

"Beans, black salted fermented: Chinese cooking = Known as 'dow si / dou shih,' used as a vegetable or spice. Known as 'wu dow' dried and salted. They are dull, wrinkled, moist and tender and have an appetising fragrance, yet are pungent with a tangy salty flavor. Used as a flavor enhancer in dark sauces." Keep covered so they do not dry out... "Must be rinsed prior to use to avoid over-salting. Store in a closed jar in the refrigerator after opening."

Bean sprouts. Asian cooking [small green are mung bean sprouts, large yellow soybean sprouts]. Benne seeds: Sesame seeds are used to make sesame oil and tahini (sesame paste). Black beans, Chinese. Also known as 'salted black beans' or 'fermented black beans' and as 'dow si' (Chinese). China beans: See Soya / soy bean. Earth nut: See Peanut. Edamame: Japanese cooking. "Fresh soybean in or out of the pod." Firm tofu. Fried tofu puffs. Ground nut: See peanut. Hard tofu. Hydrogenated fats. See fats. Miso. Naahm yu: Chinese term. "A cheesy-looking bright red bean curd sauce" [Red fermented tofu]. Nam yu / Nan yu: See Bean curd cheese, red. Shoyu: Japanese cooking. Japanese soy sauce. Soy bean / Soya bean. *Glycine soja*, also known as "'China beans,' 'Butter Beans' and 'Haricot de Java' (French)." Soy bean jam / condiment. See Main see. Silken tofu. Silken firm tofu. Soya oil. Soya sauce. Soy sauce. Tamari soy sauce. Tofu. Tofu tempeh [sic].

Not listed: Amazake. Lecithin. Daitokuji natto. Fermented black beans. Hamanatto. Kudzu. Kuzu. Meat alternatives. Meat substitutes. Milk alternatives or substitutes. Milk, nondairy. Milk, soy. Natto. Seitan. Soy milk. Soy protein concentrate. Soy protein isolate. Soy protein, textured. Tempeh. Teriyaki sauce. Yuba.

Errors: Arame is not also known as "Hijiki." Address: Port Elizabeth, South Africa.

8537 Troy, John. 2012. Update on life and work since the year 2000 (Interview). *SoyaScan Notes*. March 7. Conducted by William Shurtleff of Soyinfo Center.

• ***Summary:*** John is now age 72, retired, and still married to Carol. They live on 20 acres of land in Cedar Grove, North Carolina, in a home that he has been building for the last 16 years or so. His ancestors came from North Carolina, and when he was growing up he spent a lot of time hiking in the Great Smoky Mountains.

In 2006 John sold his sauce manufacturing and bottling company for $7 million to an investment company named Dogwood Equity. He was making and bottling about 500 different products (SKUs) at the time, most for other people / companies. Everyone he asked said he would be less happy after he sold it than he was at the time, but he sold it anyway. Dogwood changed the name from The Wizard's Cauldron Ltd. to a name that was not as good, diversified into the wrong products, and generally messed things up. It was an "asset purchase" and they bought the rights to make the products. Many of the companies who were John's customers are no longer with Dogwood.

Why did John name his company "Wizard's Cauldron"? His wife, Carol, threw the *I Ching* (using special coins) and got Hexagram #50, the Cauldron. Then she threw it again and got the same hexagram. So "Cauldron" became a key word in his company's name.

His original company was named American Natural Foods. Pure and Simple (owned in part by Jimmy Silver) was his distributor and had a large inventory of his products. When Pure and Simple went down the tubes (bankrupt), John's company did too.

John is now very much involved with travel and spiritual practice. He also has a radio program, "Conversations with Avant-Garde Sages," on WCOM 103.5 FM in Chapel Hill, North Carolina, or Cyber Satsang via live streaming audio (www.thewizardllc.com). Every Tuesday, Eastern Time from noon until 1 pm. He has hosted people such as Norio Kushi

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(who has written a book).

Where does creativity and everything else come from? "It all emerges out of silence." "The 'I' thought is the big mistake and the problem." John once asked Doug Greene, who founded *Natural Foods Merchandiser*, what he felt was the secret to his life and work. John said: "I just went with what wanted to happen."

John has written one book titled "Wisdom's Soft Whisper" and another titled "The Human Gospel of Ramana Maharshi." Address: 5134 Boone Village Trail, Cedar Grove, North Carolina 27231.

8538. Shurtleff, William; Aoyagi, Akiko, comps. 2012. History of Worcestershire sauce (1837-2012): Extensively annotated bibliography and sourcebook. Lafayette, California: Soyinfo Center. 213 p. Subject/geographical index. Printed 23 March 2012. 28 cm. [1934 ref]
• ***Summary:*** Begins with a detailed chronology of Worcestershire sauce based on published documents. Contains 42 historical illustrations and photos (most in color). http://www.soyinfocenter.com/books/152. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

8539. Katz, Ellix Sandor. 2012. The art of fermentation: An in-depth exploration of essential concepts and process from around the world. White River Junction, Vermont: Chelsea-Green Publishing Co. xxiii + 498 p. April. Illust. (photos and illustrations). Index. 25 cm. [109 (Chap. 10 + 11) ref]
• ***Summary:*** A marvelous book by self-described "fermentation revivalist" Sandor Katz, whose books and lectures have inspired thousands to rediscover the ancient art of fermentation.

In this book Katz redefines an old noun "ferment" (no longer used to mean enzyme) to mean fermented food(s). It works quite nicely. For example, "The Japanese soy ferment *natto* contains an enzyme called *nattokinase*." Although information on fermented soyfoods is found throughout the book (see the excellent index), most of it is found in two chapters, 10 and 11 (p. 274-335). The contents of these two: 10. Growing mold cultures: Introduction. Incubation chambers for growing molds (oven method, aquarium method, temperature controller, dedicated incubator designs). Making tempeh. Cooking with tempeh. Propagating tempeh spores. Making koji. Amazake. Plant sources of mold cultures. Troubleshooting. Sidebars: Microorganisms in my bed, a poem by qilo. Sculpting with tempeh. Ode to tempeh, by Spiky. Tempeh variations (chickpea tempeh, etc.).

11. Fermenting beans, seeds, and nuts: Introduction. Spontaneous fermentation of beans. Idli / Dhokla / Khaman... Soybeans. Miso. Using miso. Soy sauce. Fermented soy "nuggets" [fermented black soybeans]. Hamanatto and douchi. Natto. Dawadawa and related West African fermented seed condiments. Fermenting tofu. Troubleshooting. Sidebars: Dosa variations. Miso generic proportions. Miso soup with William Shurtleff. In the middle of this chapter are 15 pages of very helpful color photos. Address: Short Mountain Sanctuary, in the hills of Tennessee.

8540. Spots. Soy sauce. 2012.
• ***Summary:*** (1) View using the "Google Ngram Viewer" of the relative frequency of appearance in books digitized by Google, from 1800 to 2000 of the three case-sensitive terms "soy" (the most frequent), "soy sauce," and "shoyu" (increasing in use since about 1980).

Note that "soy" changed its meaning in about the 1980s. Originally it had referred to soy sauce. Then, as "soy sauce" began to replace, it came to be used as a general term for soybeans, soyfoods, and the "essence" of both. For example: "The health benefits of soy."

(2) Soy jar, used for storing soy sauce, from Santa Cruz, California.

(3) A traditional illustration of Japanese men probably pouring moromi into a vat so it can start fermenting.

(4) Japanese men working around large fermentation vats bound with braided bamboo hoops.

(5) A pottery jar that once held soy [sauce] manufactured by Sollonyama, Nagasaki, Japan.

(6-7) A wide illustration (divided vertically into halves) of a Noda Shoyu (later Kikkoman) soy sauce brewery at the turn of the century (1900). For an explanation see *The Book of Miso*, by Shurtleff & Aoyagi (1976, p. 222-23).

8541. Spots. Tempeh, fermented tofu, and other fermented foods. 2012.
• ***Summary:*** (b) Red fermented tofu. (c) White fermented tofu. (d) Hoisin sauce. (e) Fermented tofu in jar (Beancurd preserved). (f) Fresh thick tempeh at a market in Indonesia wrapped in banana leaves. (g) Freshly sliced thick tempeh. Fermented tofu. Tofuyo. (Source: Wiki at Tempeh)

8542. Spots. Worcestershire sauce, or Worcester sauce. 2012.
• ***Summary:*** (1) View using the "Google Ngram Viewer" of the relative frequency of appearance in books digitized by Google, from 1800 to 2000 of the four case-sensitive terms "Worcestershire sauce" (the most frequent), "Worcester sauce," "Worcestershire Sauce," and "worcestershire sauce" (never widely used).

Note the rapid rise and fall of the word "Worcestershire sauce" with peaks in about 1917, 1950, and 1985.

8543. *SoyaScan Notes*.2012. Soyfoods historical research and writing wish list (Overview). Compiled by William Shurtleff of Soyinfo Center.
• ***Summary:*** 1. Early history of Chinese soyfoods companies and products in America and Europe. Especially Chinese tofu manufacturers in San Francisco and Los Angeles from

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1850 to 1910.

2. Statistics on soyfoods in China during the 1980s.

3. The Swedish trading mission in Canton during the 1700s and 1800s and its work with soy sauce.

4. A lengthy, scholarly history (with an extensive bibliography) of soybeans and soyfoods in China written by a Chinese.

5. A lengthy, scholarly history (with an extensive bibliography) of soybeans and soyfoods in Japan written by a Japanese.

6. A lengthy, scholarly history (with an extensive bibliography) of soybeans and soyfoods in Korea written by a Korean.

7. A history of the health foods industry in America, 1930-1980.

8. A book on mochi or how mochi came to the West, with a clear chronology of commercial mochi manufacturers in the western world.

9. A scholarly history (with an extensive bibliography) of each of the following soyfoods in Japan, written by a Japanese with a long-term involvement in the field: natto, miso, shoyu, tofu.

10. Explain why Linnaeus stated in *Hortus Cliffortianus* (1737, p. 499) that the soy bean was grown in the colony of Virginia in North America.

11. A lengthy, scholarly history (with a good bibliography) of Chinese growing and processing soybeans in California. They must have grown them between 1849 and 1899! (13 Sept. 1991)

12. Visit the best libraries and centers in Germany for doing research on soybeans and soyfoods (See #37465) and try to get missing old documents.

13. Try to document the statement that the soybean was used as a coffee substitute during the Civil War in the USA (1861-1865).

14. Use the Coker family archives in South Carolina to write a history of the company's pioneering work with the soybean.

15. A history of early experimental gardens such as those that the Portuguese developed on the Cape Verde Islands, the British at Kew, Nairobi, Singapore, and the colony of Georgia (the Trustees' Garden of Georgia, a government experimental farm at Savannah, laid out in 1733), the Spanish (under Cortez / Cortés) in today's Mexico, etc. Did soybeans appear in any of them? When did they first appear in each?

16. Learn much more about Korean natto. Did it exist in Korea before Korea became a Japanese colony? Try to find some references, as in early studies of food in Korea. How widely was it made and used? Try to find some estimates of annual production. How was it served? What was its distribution in Korea in 1900? 1950? 2000?

17. A scholarly biography of Clifford E. Clinton of Los Angeles.

8544. *SoyaScan Notes*.2012. Commercial soyfoods products wish list (Overview). Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** 1. Organic, non-GE soy protein isolates (2002/03). 2. A very low calorie soy beverage for weight loss in hospitals. Must be able to be used as a sole source of nutrition. 3. More smoked tofu in America.

4. Meatless pepperoni, sausage shaped, for use atop a meatless pizza. 5. Natural shoyu brewed in America, ideally as part of a joint venture with a Japanese shoyu company. 6. A vegetarian Worcestershire sauce, with no anchovies (John Troy developed "The Wizard's Worcestershire Sauce" for Joel Dee's Premier Japan line in about 1995; it was vegetarian).

7. A low-calorie, low-fat tofu. Fat and calorie content should be at least 30% lower than that made from whole soybeans. The easiest way to make this product would be to run soymilk made from whole soybeans through a decanting centrifuge (like a cream separator) to remove the desired amount of fat, just like the dairy industry does to make low-fat or non-fat milk. There is a big potential market for such a product since 1% fat milk has now passed low-fat milk (2%) as the best-seller in American supermarkets (11 Sept. 1991). 8. Bland soymilk base (11 July 1997). Presently no company (including International ProSoya Corp. of Canada, Pacific Foods of Oregon, and Ted Nordquist dba TAN Industries, Inc. etc.) offers this product.

9. A soy-based kefir made from authentic kefir grains/cultures plus FOS (fructooligosaccharides), a dietary fiber derived from chicory roots. FOS feeds and increases the level of "good guy bifidobacteria by up to five times in the gastrointestinal tract, and boosts the body's absorption of calcium and other minerals by up to 50 percent." See article in *Ag Innovation News* (April 1999, p. 3, 14).

8545. *SoyaScan Notes*.2012. Soyfoods big ventures wish list (Overview). Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** The Soyfoods Association should team up with other interested parties (such as Protein Technologies International) and petition the FDA to outlaw the use of the term "non-dairy" on the label of (or otherwise in connection with) products which contain sodium caseinate or any other product derived from cow's milk. This would open the way to many new soy-based dairylike products.

A joint venture with a Japanese company such as Sendai Miso Shoyu to brew Japanese-style shoyu in America in the traditional way. Large amounts are now imported from Japan.

8546. *SoyaScan Notes*.2012. Chronology of Soyfoods Center: The work of William Shurtleff and Akiko Aoyagi. Compiled by William Shurtleff of Soyinfo Center.

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• ***Summary:*** 1. Introducing soyfoods to the West: Popular books (1972 Oct.–1979 July).

The Book of Tofu:

1972 Oct. 22–First visit to San-gen-ya tofu shop in Tokyo. Mr. Toshio Arai begins to teach William Shurtleff the traditional art of making tofu.

1972 Dec. 22–Meet Nahum Stiskin of Autumn Press. Start to write tofu booklet.

1973 Jan. 13–Sign contract for *Book of Tofu* with Autumn Press.

1973 March 2–Visit Sasa-no-yuki tofu restaurant in Tokyo.

1975 Dec. 12–*The Book of Tofu** published by Autumn Press.

* = Book illustrated by Akiko Aoyagi.

1978 Dec. 22–*The Book of Tofu** published by Ballantine Books in a mass-market pocketbook edition that retails for $2.95.

The Book of Miso

1974 Feb/March–Study miso and shoyu in Japan on trip with Bob Gerner, head of Westbrae Natural Foods.

1974 May 7–Start to write *The Book of Miso*, table of contents.

1975 April–Autumn Press accepts idea of publishing *The Book of Miso*. Contract signed Aug. 18.

1976 Sept. 23–*The Book of Miso** published by Autumn Press.

1976 Sept. 29–1977 Feb. 3–Tofu & Miso America Tour. We do 70 public programs, many TV and radio interviews, drive our van 15,000 miles in 17 weeks.

The Book of Tempeh

1977 May–To Indonesia for one month of tempeh research.

1978 Feb. 27–Sign contract with Harper & Row.

1979 July 14–*The Book of Tempeh** published by Harper & Row.

2. Working to build a soyfoods industry in the Western world (1977 April–present)

1977 April 5–Establish Takai Tofu and Soymilk Equipment Co.

1977 Aug. 16–First Takai catalog of tofu and soymilk equipment published.

1977 Aug. 16–*Miso Production** published by Soyfoods Center–the first book we self-published.

1978 July 28-30–The Soycrafters' Association of North America is founded in Ann Arbor, Michigan. William Shurtleff helps to organize the inaugural meeting, is a founding member, and a member of the first board of directors.

1978–Soyfoods Center starts to develop a mailing list (typed so as to fit on pressure sensitive labels) of all people who have purchased books or contacted us.

1979 July 15–*Tofu and Soymilk Production** published by Soyfoods Center.

1979 July–The first issue of *Soycraft* magazine is published by Richard Leviton, director of Soycrafters' Association in Massachusetts. Each mailing is based on the use of Soyfood Center's mailing list–free of charge.

1980 March 10–*Tempeh Production** published by Soyfoods Center.

1980 Sept.-Dec.–Our mailing list of about 5,000 names and addresses, divided into 70 coded categories, is computerized by Parallel Procedures in San Francisco. This was done primarily to help Richard Leviton of *Soycraft* magazine.

1981 Dec.–There are now 10,900 names on our computerized Soyfoods mailing list, rising to 13,800 names by May 1982.

3. Documenting the history of soybeans and soyfoods (1980 Oct.–present)

1980 Sept. 10–Start to build what we hope will become a large library at Soyfoods Center with regular trips to the University of California at Berkeley library system.

1980 Oct. 22–Start writing *History of Soybeans and Soyfoods*.

1984 June 1–History book manuscript is now completely in our word processor: 2,500+ pages, 70+ chapters.

1984 June 21–Soyfood Center's annual summer intern program begins. Irene Yen, a Stanford student starting he senior year, is our first summer intern.

1984 July 17–*History of Tempeh published*–our first history book.

4. Studying the burgeoning soyfoods industry and market (1982 Sept.–1985 Feb.)

1982 May 16–*Soyfoods Directory and Databook* (1st edition) published. Renamed *Soyfoods Industry and Market: Directory and Databook* on 26 Feb. 1983. 3rd edition.

1982 Sept. 10–*Soyfoods Labels, Posters, and Other Graphics* published.

1984 Feb. 25–*Soymilk Industry and Market* published.

1985 Feb. 22–*Tofutti and Other Soy Ice Creams* published.

1990 May 8–*Tofu Industry and Market in Europe* published.

1990 July 17–*Soymilk Industry and Market in Europe* published.

1994 Jan.–*Soyfoods Industry and Market: Bibliography and Sourcebook* published.

5. Foreign language editions of our books are published (1980 -)

1980 July–*Das Miso Buch** (hardcover and paperback) published by Ahorn Verlag (Wolfgang and Gabriella Furth-Kuby) in Germany.

1981 Aug.–*Das Tofu Buch** (hardcover) published by Ahorn Verlag in Germany.

1988 Nov.–*Das Tempeh Buch** (hardcover) published by Ahorn Verlag in Germany–6 years after the project started.

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1988 Nov.–New German pocketbook editions of *Das Tofu Buch* and *Das Miso Buch* (paperback) published by Goldmann Verlag.

6. Developing a computerized information center (1980 Dec –present)

1980 Dec. 12–Mailing lists of Soyfoods Center and Soyfoods magazine merged and computerized by Parallel Procedures in San Francisco. 5,500 names in 50 categories

1983 Sept. 28–Install first computer at Soyfoods Center. IBM-PC with 20 MB hard disk and word processing software to use for writing our book on *History of Soybeans and Soyfoods*.

1985 May 9–Install Revelation database manager software for developing a computerized bibliographic database on soya.

1985 July 31–Finish keying all 6,677 file cards (3x5 inch) into our computerized database. Our library is now computerized

1985 Aug. 30–Our computerized database, containing 9,500 bibliographic records, is now available for use by the public.

1986 Sept. 1-16–The first of many trips to do library research at the USDA National Agricultural Library, Library of Congress, and National Library of Medicine–America's three national libraries, all located in and about Washington, DC.

1987 July 6–Start entering Commercial Soy Products into our database

1987 Oct. 11–*Bibliography of Soymilk, from 1578 to 1987: With 1,584 References* published–our first bibliography

1987 Oct. 19–Coin the name SoyaScan, start using it to refer to our computerized database, and apply for a registered trademark, which we are issued on 19 July 1988.

1993 Feb.–Install a Novell 5-user network to link our various computers

1995 Feb. 11–We enter the 50,000th record into our SoyaScan database.

1997 Nov. 24–We enter the 55,000th record into our SoyaScan database

7. Current status of computerized information–2000 January 1

SoyaScan database now contains 59,440 records from 1100 B.C. to the present, including 48,318 published documents, 12,683 commercial soy products, 4,628 original interviews and overviews, and 41,584 unpublished archival documents.

More than 75% of all SoyaScan records have a summary/abstract averaging 143 words in length

More than 26,000 records (44% of the total) are for documents published before 1970.

Thirty five major books in the series Bibliographies and Sourcebooks on Soya, produced from the SoyaScan database, are now available, published by Soyfoods Center.

Soyfoods Center Library owns about 54,000 documents, almost all of which have a record in the SoyaScan database.

SoyaScan Directory now contains the name, address, and phone number of 17,300 people and organizations worldwide actively involved with soyfoods and soybeans Each entry is coded to show the type of activity, e.g. 2A = Tofu manufacturers.

8. Collecting and Publishing Information on Vegetarianism and Other Non-Soy Food Products that can Replace Animal Products

1984 Oct. 31–Create our first vegetarian keyword (subject heading) VegeAnim = Vegetarian Diets and Animal Rights.

1988 Feb. 21–*Amazake and Amazake Frozen Desserts: Industry and Market in North America* published. Updated bibliographic supplement published in March 1995.

1992 Oct.–Start actively collecting information specifically on vegetarianism and veganism, and entering it into our new VegeScan database.

1992 March 4–*Bibliography of Vegetarianism: 1,755 References from A.D. 1170 to 1992, Extensively Annotated* published (360 p. large format, preliminary edition).

1992 June 12–*Sourcebook on Wheat Gluten Foods and Seitan* published. Expanded edition published in Jan. 1994

2000 Jan. 1–VegeScan database now contains 5,500 bibliographic records on vegetarianism and veganism from 238 B.C. to the present

Best selling books from Soyfoods Center (English-language editions only, as of Jan. 2000)

The Book of Tofu–557,000 copies sold

The Book of Miso–115,900 copies sold

The Book of Tempeh–47,950 copies sold.

Tofu & Soymilk Production–5,020 copies sold.

Other–9,200 copies sold.

Total–775,070 copies sold. Address: Lafayette, California. Phone: 925-283-2991.

8547. *SoyaScan Notes*.2012. Definition of HVP soy sauce (Overview). Compiled by William Shurtleff of Soyinfo Center

• ***Summary:*** HVP soy sauce is prepared from hydrolyzed vegetable protein, which is made by mixing defatted soybeans (and sometimes wheat or corn) with hydrochloric acid. It is usually not fermented. Rather, its flavor and color come from additives such as corn syrup, caramel, and salt. Water is also added. Since it takes only a day or two to prepare, it costs less to produce, and thus its price is usually lower than that of fermented soy sauce. Sample brands are La Choy and Chun King. HVP was developed in about 1907 in Europe and used to make Maggi Soup Cubes. Address Soyfoods Center.

8548. *SoyaScan Notes*.2012. Chronology of Kikkoman Corporation. Compiled by William Shurtleff of Soyinfo

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Center.

• ***Summary:*** This chronology is based largely on the excellent chronologies near the back of Kikkoman annual reports, dates in "Kikkoman Today & Tomorrow" (1972, p. 1), and dates in Fruin (1983). "Ideally situated close to soybean-growing regions as well as the Edo River, which provided a convenient transportation route for consumers in or near Edo, or present-day Tokyo, Noda has been well-known for its soy sauce (shoyu) production since the Edo period. Noda is located about 30 miles northeast of Tokyo in Chiba prefecture.

"Kikkoman Soy Sauce first went on the market in 1661 when the Takanashi and Mogi families constructed breweries and started the brewing of soy sauce."

1914–When World War I started, excessive competition arose between Japan's many shoyu producers because of the wartime economy, causing a very confused market situation.

1917 Dec –With these conditions as a background, eight Mogi and Takanashi family companies, the leading shoyu producers in the Noda area, merged to form Noda Shoyu Co., Ltd., a company with capital of ¥7 million and the predecessor of Kikkoman Corporation.

1925 April–Noda Shoyu Co., Ltd. absorbs Noda Shoyu Jozo Co., Ltd., Manjo Mirin Co., Ltd., and Nippon Shoyu Co., Ltd., through a merger. 1926–Kikkoman No. 7 shoyu brewing plant constructed.

1930 August–The Takasago soy sauce production plant (formerly the Kansai Plant) is constructed near Osaka and completed in 1931.

1936–Kikkoman Worcestershire Sauce plant completed

1939–With the start of World War II, government controls on the price of soy sauce are established.

1946–Kikkoman stock first becomes available to the public.

1949–Export of Kikkoman soy sauce is reestablished after the war.

1950–Wartime soy sauce controls end and free competition resumes.

1957 June–Kikkoman International Inc. (KII) is established in San Francisco, California, in the United States

1958–The first KII branch is established in Los Angeles.

1960–The second KII branch is established in New York.

1961 July–Kikko Food Corporation is established (later renamed Kikko Food Industries Co., Ltd.). In July 1991, the company becomes Nippon Del Monte Corporation

1961–Seishin Pharmaceutical Co., Ltd. established.

1962 February–Tone Beverage Co., Ltd., is established. In February 1963, the company becomes Tone Coca-Cola Bottling Co., Ltd.

1962 October–Katsunuma Yoshu Co., Ltd., is established in Japan. In March 1964, the company becomes Mann's Wine Co., Ltd. 1963–Japan Calpak Co., Ltd. established.

1964 October–Noda Shoyu Co., Ltd., is renamed Kikkoman Shoyu Co., Ltd.

1965–The third KII branch is established in Chicago, Illinois.

1966–Sales of Higeta brand products assumed by Kikkoman.

1968–Bottling of Kikkoman Soy Sauce for the American market begins at the Leslie Foods plant in Oakland, California.

1969 June–Kikkoman invests in and merges with Japan Food corporation, the biggest distributor of Oriental food in the United States. In June 1978 the company becomes JFC International Inc.

1970 March–Kikkoman invests in and merges with Pacific Trading Co., Ltd., a sister company of Japan Food Corporation.

1972 March–Kikkoman Foods, Inc. (KFI), is established in Walworth, Wisconsin (USA) for the purpose of manufacturing soy sauce and teriyaki sauce. Shipping is scheduled to start in early 1973.

1972 August–Kikkoman + Daitokai (Europe) GmbH is established in Dusseldorf, in Germany.

1974 February–Kikkoman Restaurant, Inc. is established.

1979 March–Kikkoman Trading Europe GmbH is established in Neuss, in Germany.

1980 October–Kikkoman Shoyu Co., Ltd. is renamed Kikkoman Corporation–the company's present name.

1983 January–Kikkoman Ajinomingei Co., Ltd., is established.

1983 June–Kikkoman (S) Pte. Ltd., a production facility, is established in Singapore.

1983 October–Kikkoman Business Development Inc. is established.

1986 August–New shoyu production facilities come on stream at Kikkoman's Chitose Plant, in Hokkaido.

1990 January–Kikkoman buys perpetual marketing rights for the Del Monte brand in the Asian-Pacific region, excluding the Philippines.

1990 February–A joint venture company, President Kikkoman Inc. is established to produce soy sauce in Tainan, in Taiwan.

1996 April–Kikkoman establishes Kikkoman Foods Europe B.V., Europe's first soy sauce manufacturer, located in Hoogezand-Sappemeer, in the Netherlands.

1996 May–Production of *Shochu* a clear Japanese spirit, commences at a new facility of the Ojima Plant.

1997 March–Kikkoman holds a ground-breaking ceremony for its second U.S. soy sauce production plant, in Folsom, California, in the United States.

1997 October–Kikkoman Foods Europe B.V. begins operations at its plant [in Hoogezand-Sappemeer, the Netherlands]

1998 October–The second shoyu manufacturing plant

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of Kikkoman Foods, Inc., in Folsom, California, begins shipments.

1999 July–Kikkoman opens its new headquarters in Noda, Chiba prefecture, to commemorate the Company's 80th anniversary.

1999 October–Kikkoman Institute for International Food Culture is opened at the Company's new headquarters.

1999 November–Kikkoman announces a joint venture with its partner in Taiwan [Uni-President Enterprises, Taiwan's largest food manufacturer] to build a soy sauce plant in China [In Kunshan, near Shanghai].

2000 May–Kunshan President Kikkoman Biotechnology Co., Ltd. (a joint-venture company) is established.

2000 Aug.–Construction starts on a soy sauce plant in China. The first shipments are slated for spring 2002.

2002 May–The China plant Kunshan President Kikkoman Biotechnology Co., Ltd., holds its grand opening.

2003 May–Kikkoman Foods, Inc. (with its plant at Walworth, Wisconsin) holds its 30th anniversary ceremony.

2004 March–Kikkoman invests in Higeta Shoyu Co., Ltd. and Kibun Food Chemifa Co., Ltd. (The latter makes soymilk).

2006 June–Kibun Food Chemifa Co., Ltd. becomes a consolidated subsidiary of Kikkoman.

2007–Kikkoman celebrates its 50th anniversary in the U.S.

2008–Kikkoman rolls out its new corporate brand logo and slogan globally.

2009 Oct.–Kikkoman shifts to a holding company structure.

8549. *SoyaScan Notes*.2012. Chronology of miso and soybean chiang. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** 1st century B.C.–Soybean chiang is first mentioned in China in the *Shih chi* [*Historical records*] by Ssu-ma Ch'ien, and in the *Chi chiu p'ien* [*Primer on addressing matters*], by Shih Yu.

535 A.D.–The *Ch'i min yao shu* in China gives the first detailed descriptions of making soybean chiang–and other soyfoods.

701–Soybean hishio, miso, and soy nuggets start to be made in Japan by the *Hishio Tsukasa*, a government bureau. References to these seasonings are found in documents published between 730 and 748.

901-08–The modern word for *miso* first appears in Japan in the *Sandai Jitsuroku*.

927–The *Engi Shiki* gives the first details about the production of soybean hishio-miso in Japan.

1597–Miso is first mentioned by a Westerner, the Florentine Francesco Carletti; he calls it *misol*.

1712–Englebert Kaempfer, a German who lived in Japan, is the first European to give detailed descriptions of how miso and shoyu are made in Japan. Also mentions koji.

1727–Miso is first mentioned in an English-language publications, *The History of Japan*, by E. Kaempfer. He spells it "*Midsu*, a mealy Pap, which they dress their Victuals withal, as we do butter."

1779–The word "miso" ("that is used as butter") first appears in an English-language publication, the *Encyclopaedia Britannica*. 1847–The word "miso" first appears in print in the United States, in a letter from T.W.H. of Cambridge, Massachusetts, to the *Farmers' Cabinet and Herd Book*.

1908–Miso is first made commercially in the continental United States by the Fujimoto Co. of San Francisco, California. Brand name: Kanemasa Miso.

1921–The term "bean paste" is first used to refer to miso by J.L. North of England in the *Illustrated London News*.

1929–Amano Brothers, Canada's first commercial miso maker, starts in Vancouver, British Columbia. Founder: Mr. Teiichi Amano. 1960–Dr. C.W. Hesseltine and K. Shibasaki, of the Northern Regional Research Laboratory in Peoria, Illinois, publish the first of many important scientific articles on miso.

1963–Michio and Aveline Kushi, teachers of macrobiotics in Boston, start to teach Americans about miso.

1966 April–Aveline Kushi (with Evan Root) starts Erewhon, a pioneering retailer in Boston, that soon starts selling miso.

1968–Erewhon expands to become an importer and distributor of natural and macrobiotic food. Their first two misos, Mugi Miso and Hacho Miso, are imported from Japan.

1976 June–Miyako Oriental Foods, a division of Yamajirushi Miso Co. in Japan, starts making miso in Los Angeles. Owned by Noritoshi Kanai. Brands: Yamajirushi, Kanemasa, Yamaizumi.

1976 Sept.–*The Book of Miso*, by Shurtleff and Aoyagi, is published by Autumn Press of Hayama, Japan. This is the first book about miso in the Western world.

1978 Oct.–The Ohio Miso Co., the first Caucasian-run miso company in the Western world, is founded by Thom Leonard and Richard Kluding. They begin miso production on 13 March 1979.

1978 Nov.–Joel Dee of Edward & Sons (New Jersey) launches Natural Instant Miso Cup, an instant miso soup made with freeze-dried miso from Japan.

1978 Dec.–Miyako Oriental Foods of Los Angeles introduces Cold Mountain Firm Granular Rice Koji, the first koji sold commercially in the USA. In 1979 they start selling Cold Mountain Miso, the first miso with an American-style brand.

1979 Oct.–John and Jan Belleme arrive in Japan to study traditional miso–and koji-making with the Onozaki family in Yaita, Japan. They are the first Caucasians to do this, and then to return to the West to start making miso commercially. From 1981 on they write many superb articles about miso.

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1979 April–Shin-Mei-Do Miso is founded by Lulu and Yasuo Yoshihara in British Columbia, Canada.

1981 April–John Troy of Elf Works, Ltd. in Chapel Hill, North Carolina, launches Hot Stuff, an early and very successful American miso product. He first learned about miso from Joel Dee.

1981 Aug.–John and Jan Belleme begin full-time, large-scale production of miso and koji at Erewhon Miso Co. in Rutherfordton, North Carolina. By early 1982 their company is renamed American Miso Co. with Barry Evans as the new owner.

1982 Oct. 25–Christian and Gaella Elwell start making miso and koji at South River Miso Co. in Conway, Massachusetts. Earlier that year they purchased The Ohio Miso Co. Address: Lafayette, California. Phone: 925-283-2991.

8550. *SoyaScan Notes*. 2012. Definition of teriyaki and teriyaki sauce (Overview). Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** Etymology: Formed from the Japanese verbs *teru* "to shine or be glossy or bright" and *yaku* "to grill or broil" (traditionally over charcoal or coals, using a hibachi, a small, usually round charcoal brazier).

Teriyaki, a Japanese appetizer, is said to have originated in Japan during the Edo period (1600-1867, see *The History and Culture of Japanese Food*, by Naomichi Ishige, 2001, p. 116; he does not cite his source). The word "teriyaki" originally referred to fish (or occasionally poultry), cut into small pieces, marinated in a Mirin-Shoyu sauce, skewered on bamboo skewers, grilled on the hibachi, and basted / brushed occasionally with the sauce; the mirin was considered the key to the glossy appearance. Note: Mirin is sweetened sake for cooking or seasoning. Shoyu is regular Japanese-style soy sauce.

As the recipe became Westernized in the early 1950s, it was transformed; the mirin was often omitted, garlic (ideally fresh, crushed), and a small amount of sweetener (such as sugar or pineapple juice) were added, and chunks or thin strips of beef were often used in place of fish. The teriyaki sauce was used initially as a marinade, then later in the cooking process for basting while grilling.

Although teriyaki originated in Japan, it came to the United States largely from Hawaii in the early 1950s, and was soon viewed by Americans as an Hawaiian recipe and dish. American versions may skewer chunks of fruit (such as pineapple) or vegetables (green or red bell peppers) alternatively with chunks of meat. Vegetarian versions usually use pressed firm tofu or seitan in place of meat. Address: Soyfoods Center.

8551. *SoyaScan Questions*. 2012. Questions about the history of soybeans and soyfoods in Canada. Further research needed. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** (1) Try to find out when and from whom Mr. Bruce (of John A. Bruce & Co.) in Hamilton, Ontario, obtained the soja beans which he sent in 1881 to Canada's Central Experimental Farm at Ottawa. Which library in Canada or the USA has the best collection of John A. Bruce & Co.'s seed catalogs? Look at these starting in the year 1881, going backward, then forward to see if the company ever sold soybeans in its seed catalog. Has a history of this seed company or of its founders ever been written? Is there an archival collection anywhere for this seed company? Has anyone written a genealogy of this branch of the Bruce family which includes its founders?

(2) What was the relationship between the company in Toronto that made Sunsoy (Soy Bean (Sunsoy) Products Ltd. Renamed Sunsoy Products Ltd. in about 1939) and Victory Mills Ltd.? Both were subsidiaries of Canadian Breweries Ltd. When, why and by whom was Soy Bean Products Ltd. founded? What kind of a company was it–a soybean crushing company? A maker of whole (full-fat) soy flour? Did it import any soybeans or soyfoods? What products did it make and what was the name of each?

(3) When, where, and by whom were soybeans first cultivated in Quebec? Where did Leonard Klinck get the soybeans he cultivated? When did he first cultivate them?

(4) When and where was soy sauce first imported to Canada?–probably during the period 1750 to 1800? In what newspaper or book (and in what language–French or English) is this information first recorded? Which were Quebec's earliest surviving newspapers? Have they been digitized? What were the various early names of soy sauce in Canadian French and English?

(5) When and where were soybeans first grown in Quebec (probably at Macdonald College). When and from where did Leonard Klinck obtain his first soybeans? The Quebec No. 92 was originated by selection by Dr. L. S. Klinck, when in charge of the agronomy work at Macdonald College, Quebec.

8552. *SoyaScan Questions*. 2012. Questions about the history of Worcestershire sauce. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** The history of this sauce has never been well documented and there are some interesting unanswered questions and contradictions in the history as it is popularly presented.

To answer these questions it would be best to travel to Worcester, England, and to spend at least 1-2 weeks there.

Have any local newspapers or magazines (near Worcester) been digitized so that they can be searched electronically for information on this subject. If yes, which ones and for what years? Ideally we would start by searching publications dating back to the 1830s.

In what year and month did Lea and Perrins first sell

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their Worcestershire sauce (about 1837)?

Did they make and sell the first seasoning named "Worcestershire sauce"?

What was the name and address of the second company to make "Worcestershire sauce?"

If the Worcestershire sauce made in Worcester used soy sauce as a major ingredient, when did it start to be used? From the very first batch?

In what foreign country (Japan, China) was Lea and Perrins' soy sauce made? By which company? Did the same company (and only one company) make this soy sauce up until World War II?

How was this soy sauce transported to Worcestershire? Was it first transported by boat? Up the River Severn?

When did the transportation switch from boat to train / rail? Were any photos ever taken of the soy sauce being unloaded from the vehicle in which it was transported. Or were any news stories ever published of the arrival of a shipment of unknown goods from East Asia?

Try to locate the company John Duncan's Sons or John Duncan & Sons (or their archives) of New York. Do they have any records showing when they first imported Worcestershire sauce? Do they have any early labels or records showing ingredients?

Which organizations or individuals in Worcestershire know the most about or are most interested in the history of Lea and Perrins and / or of Worcestershire sauce? From Web: (1) Worcestershire Historical Society, Tettenhall, Wolverhampton. (2) Worcester and District Industrial Archaeology / local History Society, Redditch, Worcestershire. (3) Worcestershire Local History Forum, Trinity Street, Worcestershire. Has this story ever been told in any histories of Worcester or Worcestershire? Have any articles ever been published on this subject? (See a local Worcester library)

When did soy sauce switch from being shipped in wooden kegs / casks to more modern containers such as barrels or drums?

Did Lea & Perrins ever make its own fermented soy sauce? If so, starting when? Where? How did they learn the process? How long was it fermented.

What year and month (during World War II) did Lea and Perrins stop using fermented soy sauce from Asia and start using HVP? But note that about April 1978, when Craig Claiborne of *The New York Times* visited the plant in Fair Lawn, New Jersey, he was told that "soy" (probably referring to the soybean hydrolysate in HVP) was one of the ingredients, and that the mixture was fermented. He noted a pleasant smell around the 35 giant wooden curing vats–each holding a total of 6,000 gallons. No one would tell him how long the base for the sauces is aged, but he estimated a minimum of two years.

How long has Lea & Perrin's sauce been fermented at different points in its history? Is it fermented now? In New Jersey? If so, for how long? If not, when did fermentation stop?

8553. *SoyaScan Questions*.2012. Questions about the history of soybeans and soyfoods in the Hawaiian Islands (Hawaii) Further research needed. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** (1) When was soy sauce first made commercially in the Hawaiian Islands? Was it Japanese-style or Chinese-style? Try to find the name and address of the manufacturer, and a brief history.

(2) What was the first commercial soyfood product made in the Hawaiian Islands? When was it first sold commercially? Try to find the name and address of the manufacturer, and a brief history. (3) If we look at the first earliest 20 soyfood products made in the Hawaiian islands, were most of them made by Japanese-owned or Chinese-owned companies?

8554. *SoyaScan Questions*.2012. Questions about the history of soybeans and soyfoods in South Asia. Further research needed. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** (1) The term "Indian Soy" was the earliest name given to soy sauce imported to the British colonies of North America; it was first used in 1750 to refer to the product sold in retail stores (starting in New York) and widely advertised in newspapers along with other imported goods in ports up and down the East Coast of the British colonies. But what does it mean? Where was it made? In Japan? In China? In India? (unlikely). Was it actually shipped to India? To which port and by what company?

(2) The same questions for the term "India Soy" which started to be used in 1801 for a new retail product.

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Alfa-Laval (Lund, Sweden). 6485, 6960, 7115, 7470, 7800

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Alfalfa Sprouts (*Medicago sativa*). 5071, 5468, 5695, 8250

Alfalfa or Lucerne - Lucern (*Medicago sativa*). Other Uses for Human Food or Drink, Including Tea, Flour, Tablets, and Leaf Protein Concentrate (LPC). See Also Alfalfa Sprouts. 3038, 4570, 4948, 4987, 5125, 5282, 5946, 6139, 6358, 6428, 6814, 7191, 7236, 7762, 8131, 8193, 8416

Alfalfa or Lucerne - Lucern (*Medicago sativa*). 994, 1021, 1101, 1199, 1497, 1763, 2072, 2084, 2330, 2915, 3038, 3403, 3843, 5071, 5197, 5413, 5468, 5590, 5695, 6255, 6403, 7449, 7450, 8250, 8524

Alkaline food, ash, reaction, or balance in diet and health. *See* Nutrition–Acid-Base Balance

All-India Research Project on Soyabean (ICAR). *See* Asia, South–India - Work of the Indian Council of Agricultural Research (ICAR)

Allergies. *See* Nutrition–Biologically Active Phytochemicals–Allergens

Allied Mills, Inc. Including (by July 1929) American Milling Co. (Peoria, Illinois) and Wayne Feed Mills (Chicago, Peoria, or Taylorville, Illinois). 3045, 3391, 4533

Allis-Chalmers Manufacturing Co. (Milwaukee, Wisconsin). Made Farm Equipment (Tractors, Combines) and Soybean Processing Equipment (Driers, Rolling and Flaking Mills, Solvent Extraction Units). 4470

Almond Butter or Almond Paste. 434, 1450, 2823, 2958, 2979, 3090, 3343, 4987, 5282, 5946, 6139, 7436, 7604, 7605, 7726, 7914, 7943, 8272, 8345

Almond Milk and Cream. See also: Almonds Used to Flavor Soymilk, Rice Milk, etc. 434, 1258, 1450, 2243, 2246, 2490, 2569, 2623, 2650, 2652, 2846, 3415, 3520, 4398, 5234, 5242, 6032, 7454, 7491, 7593, 7789, 7943, 8131, 8345, 8416

Almond Oil. 877, 930, 999, 1497, 1815, 2246, 3038, 6857

Almonds Used to Flavor Commercial Soymilk, Soy Ice Cream, Soy Cheese, Amazake, Rice Milk, or Other Commercial Non-Dairy Products. 3327, 6053, 7856

Almonds (*Prunus dulcis* syn. *P. amygdalus*)–Especially Origin and Early History of the Almond, Including Almond Bread, Almond Meal, and Almonds Seasoned with Soy Sauce - Tamari. 41, 434, 981, 994, 999, 1101, 1199, 1212, 1335, 1368, 1390, 1394, 1450, 1474, 1497, 1604, 1671, 1885, 1898, 2330, 2331, 2489, 2491, 2915, 2958, 3038, 3162, 4396, 4792, 4832, 4834, 4929, 4973, 5071, 5125, 5134, 5282, 5674, 5717, 5718, 5946, 6139, 6919, 7016, 8224, 8225, 8345

Alpro (Wevelgem, Belgium), Including the Provamel and Belsoy Brands Sold in Health Foods Stores. 6485, 6492, 6633, 6909, 6958, 6959, 7115, 7193, 7208, 7311, 7334, 7348, 7453, 7470, 7645, 7675, 7800

Alternative medicine. *See* Medicine–Alternative

Aluminum in the Diet and Cooking Utensils–Problems. Soy Is Not Mentioned. 2823, 3038, 3078, 3296, 3481, 5153, 5850, 6865

Amaranth, Grown for Grain - Seed (*Amaranthus hypochondriacus*, *A. caudatus*, and *A. cruentus*. Genus formerly spelled *Amarantus*). 2330, 6257, 7030, 7048, 7053, 7284, 7624, 7712, 7726, 7789, 7880, 7895, 7914, 7928, 7942, 8131, 8272, 8416

Amazake. *See* Rice Milk (Non-Dairy)

American Lecithin Corp. (Incorporated 1930), American Lecithin Company (Re-incorporated 1934-35), and Joseph Eichberg, President of Both. 3152, 3391

American Milling Co. *See* Allied Mills, Inc.

American Miso Co. (Rutherfordton, North Carolina). 5794, 6127, 6574, 6657, 6794, 6808, 7041, 7132, 7171, 7238, 7356, 7427, 7552, 7695, 7712, 7871, 7980, 8104, 8119, 8120, 8121, 8151, 8152, 8153, 8345, 8481, 8549

American Natural Snacks (St. Augustine, Florida). 7065, 7712, 7809

American Philosophical Society (Philadelphia). *See* Franklin, Benjamin

American Soy Products (Michigan). *See* Natural Foods Distributors and Manufacturers in the USA–Eden Foods

American Soy Products (Saline, Michigan). Started Nov. 1986. 4672, 7383, 7557, 7683, 8530

American Soybean Association (ASA)–Activities in the United States and Canada, and General Information (Headquarters in St. Louis, Missouri. Established 3 Sept. 1920. Named National Soybean Growers' Association until 1925). 2587, 2680, 3152, 3296, 4231, 4395, 5287, 5289, 6575

American Soybean Association (ASA)–Activities, Offices, and Influence Worldwide (General). 3918

American Soybean Association (ASA)–Activities, Offices, and Influence in Asia. 3895, 3918, 3924, 3936, 3989, 3995, 4029, 4037, 4043, 4082, 4110, 4122, 4153, 4171, 4176, 4185, 4186, 4194, 4257, 4352, 4429, 4452, 4489, 4526, 4589, 4598, 4673, 5663, 5826, 6337, 6566, 6765, 7229, 7442, 7708, 7954, 8080, 8126, 8532

American Soybean Association (ASA)–Activities, Offices, and Influence in Europe (Western and Eastern). 6635, 7214, 7398

American Soybean Association (ASA)–Activities, Offices, and Influence in Latin America. 8245

American Soybean Association (ASA). Funding and Fundraising Before Checkoff Program or 1971. Voluntary or from USDA (FAS or ARS). 3924, 4029, 4043, 4176

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American Soybean Association (ASA)–Japanese-American Soybean Institute (JASI) 3924, 3936, 3983, 3989, 3995, 4037, 4110, 4122, 4153, 4171, 4176, 4224, 4242, 4257, 4352, 4429, 4489, 4526, 4598, 4673, 7954

American Soybean Association (ASA)–Meetings / Conventions (Annual) and Meeting Sites. 2549, 2734, 3436, 4395

American Soybean Association (ASA)–Officers, Directors (Board), and Special Committees 2549, 2790

American Soybean Association (ASA)–Periodicals, Including Soybean Digest, Proceedings of the American Soybean Assoc., Soybean Blue Book, Soya Bluebook, Late News, etc. 3530, 3531, 3989, 4151, 4231, 6815, 7415

American Soybean Association (ASA)–Soybean Council of America (June 1956-1969). Replaced by American Soybean Institute (Est 11 July 1969). 4532

American Soybean Association (ASA)–State Soybean Associations and Boards (Starting with Minnesota in 1962). 4558, 7801, 7859, 7883, 7913, 7975, 8040, 8042, 8096, 8145, 8198, 8211, 8278

American Soybean Association (ASA)–State Soybean Associations and United Soybean Board–Activities Related to Food Uses of Soybeans / Soyfoods, or Soy Nutrition, in the United States (Not Including Soy Oil or Edible Oil Products) 2549, 3044, 3045, 3152, 3176, 3201, 3436, 3486, 3530, 4231, 4558, 5004, 5457, 5530, 5942, 6849, 7759, 7801, 7802, 7804, 7859, 7883, 7890, 7891, 7913, 7975, 8040, 8042, 8060, 8096, 8145, 8180, 8191, 8198, 8211, 8278

American Soybean Association (ASA)–Strayer. *See* Strayer Family of Iowa

American Soybean Association (ASA)–United Soybean Board (USB. Established 1991, Chesterfield, Missouri). 7801, 7802, 7890, 7891, 7954, 8060, 8191, 8198, 8332

American Soybean Association (ASA) or United Soybean Board Activities Related to Food Uses of Soybeans / Soyfoods, or Soy Nutrition, Outside the United States (Not Including Soy Oil). 3895, 3918, 3995, 4029, 4037, 4110, 4122, 4153, 4171, 4257, 4352, 4429, 4452, 4489, 4526, 4589, 4673, 5471, 5663, 6566, 6633, 6635, 6765, 7214, 7229, 7345, 7398, 7708, 7722, 7828

Amino Acids and Amino Acid Composition and Content. See also Nutrition–Protein Quality; Soy Sauce, HVP Type 1703, 2044, 2143, 2165, 2243, 2303, 2473, 2555, 2820, 2822, 2874, 3106, 3128, 3256, 3488, 3559, 3663, 3684, 3720, 3721, 3996, 4125, 4193, 4220, 4232, 4257, 4332, 4336, 4359, 4482, 4494, 4499, 4602, 4604, 4728, 4735, 4812, 4916, 4941, 4964, 5031, 5036, 5049, 5056, 5093, 5115, 5152, 5155, 5239, 5240, 5246, 5259, 5260, 5261, 5262, 5321, 5364, 5372, 5436, 5458, 5636, 5788, 5795, 5847, 5945, 6171, 6251, 6264, 6301, 6317, 6437, 6610, 6641, 6908, 6923, 6971, 6992, 6995, 7129, 7165, 7220, 7326, 7403, 7753, 7971, 7974, 8065, 8238

Anatomy, soybean. *See* Soybean–Morphology, Structure, and Anatomy

Anderson International Corp. (Cleveland, Ohio). Manufacturer of Expellers for Soybean Crushing and Extrusion Cooking Equipment. Formerly VD Anderson Co. and Anderson IBEC 1769, 2518, 2789

Ang-kak or angkak. *See* Koji, Red Rice

Ang-kak. *See* Koji, Red Rice

Animal Rights / Liberation. Avoidance of Exploitation of Animals by Humans 4117, 5199, 6037, 6455, 7581, 8077

Animal Welfare (Including Protection and Cruel Treatment of Animals). See also: Animal Rights 1103

Antarctica. 5459, 5669

Antinutritional Factors (General). See also: Allergens, Estrogens, Goitrogens, Hemagglutinins (Lectins), Trypsin / Protease Inhibitors. See also: Phytic Acid. 4435, 4965, 5049, 5246, 5589, 6024, 6208, 6843, 7410, 7577, 7753

Antioxidants and Antioxidant / Antioxidative Activity (Especially in Soybeans and Soyfoods). 3201, 4177, 4178, 4914, 5246, 6071, 6212, 7049, 7569, 7570, 7610, 7753, 7851, 7856, 7876, 7879, 7934, 7974, 8007, 8118, 8191

Appliances. *See* Blender, Juicer

Appropriate Foods, Inc. (Brooklyn, New York). Founded by Robert Werz and David Sibek in Nov. 1980. Incl. Tempeh Brothers and Soy Source 5928, 6115, 6314, 6527, 6530, 6561, 6681, 7030, 7072

APV Systems, Soya Technology Division. Named Danish Turnkey Dairies Ltd., Soya Technology Division until 1987 (Aarhus, Denmark; DTD / STS). 6337, 6485, 6960, 7005, 7297, 7470, 7719

Aquaculture. *See* Fish or Crustaceans (e.g. Shrimp) Fed Soybean Meal Using Aquaculture or Mariculture

Archaeology and Archaeological Discoveries of Soybeans or Soyfoods. 4438, 4708, 5259, 5260, 5261, 5316, 5440, 5840, 7119, 7276, 7539, 7588, 7729, 7899, 8193

Archer Daniels Midland Co. (ADM) (Decatur, Illinois; Minneapolis, Minnesota until 1969). 3152, 3321, 3335, 3391, 3945, 4231, 4337, 4535, 4591, 5120, 5244, 5287, 5308, 5309, 5438, 5572, 5675, 5678, 5743, 5810, 6174, 6447, 6492, 6631, 6648, 6856, 6909, 6914, 6981, 7090, 7466, 7468, 7470, 7487, 7581, 7592, 7631, 7662, 7800, 7828, 7893, 7897, 8004, 8162, 8198, 8291, 8327, 8391, 8398

Argentina. *See* Latin America, South America–Argentina

Arkady, British. *See* British Arkady Co. Ltd.

Arkansas Grain Corp. *See* Riceland Foods

Arlington Experimental Farm. *See* United States Department of Agriculture (USDA)–Arlington Experimental Farm

Arrowhead Mills (Hereford, Deaf Smith County, Texas).

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Established in Aug. 1960 by Frank Ford. Including Arrowhead Distributing. 3730, 4570, 4670, 4671, 4672, 4712, 4720, 4750, 4817, 4823, 4832, 4881, 4912, 4972, 4987, 4988, 5024, 5026, 5054, 5055, 5107, 5108, 5153, 5169, 5189, 5197, 5198, 5206, 5234, 5282, 5283, 5531, 5534, 5631, 5707, 6059, 6091, 6092, 6113, 6336, 6468, 7034, 7235, 7236, 7341, 7589, 7668, 7762, 7822, 7880, 8061

Asahimatsu Shokuhin (Japan). 6107, 6337

Asgrow (Des Moines, Iowa). Incl. Associated Seed Growers, Inc. Acquired in Feb. 1997 by Monsanto Co. from Empresas La Moderna, S.A. (ELM). 3485, 3531

Asia (General, Including East, Southeast, South, Middle East, and Central). 3297, 5590, 6602, 7765, 7780, 7782, 7790, 7794, 7959, 8086, 8088

Asia, Central (General). 1161, 2137, 8360

Asia, Central–Kazakhstan / Kazakstan (Formerly Kazakh SSR, a Central Asian Soviet Republic from 1917 to Dec. 1991). 8360

Asia, Central–Tajikistan (Formerly Tadzhik SSR, a Central Asian Soviet Republic from 1917 to Dec. 1991. Also spelled Tadzhikistan). 8360, 8393

Asia, Central–Turkistan / Turkestan. Its Western Part (Russian Turkestan or West Turkestan) late 1800s to 1924. Its Eastern Part (Chinese Turkestan, Kashgaria, or East Turkestan) 1700s to ca. 1884, when it Became Sinkiang. 3297, 5316

Asia, Central–Turkmenistan (Formerly Turkmen SSR, a Central Asian Soviet Republic from 1917 to Dec. 1991). 2310, 8360, 8393, 8405

Asia, Central–Uzbekistan (Formerly Uzbek SSR, a Central Asian Soviet Republic from 1917 to Dec. 1991). 8360, 8393

Asia, East (General). 431, 1314, 1410, 1513, 1571, 1650, 1758, 1923, 2150, 2151, 2205, 2276, 2549, 2679, 2740, 2842, 2896, 3234, 3525, 3554, 3556, 3894, 4231, 4379, 4477, 4634, 4646, 4768, 4799, 4916, 4941, 4950, 4966, 5028, 5120, 5209, 5245, 5247, 5350, 5359, 5373, 5465, 5473, 5513, 5567, 5584, 5805, 5824, 5845, 6018, 6106, 6255, 6445, 6449, 6524, 6633, 6635, 6735, 6755, 6866, 7101, 7102, 7107, 7111, 7191, 7270, 7365, 7443, 7491, 7642, 7643, 7662, 7750, 8043, 8084, 8100, 8130, 8146, 8269, 8382, 8454, 8515

Asia, East–China (People's Republic of China, Including Tibet. Zhonghua Renmin Gonghe Guo). 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 39, 40, 41, 42, 43, 51, 74, 84, 85, 88, 98, 99, 102, 112, 115, 116, 126, 142, 143, 152, 153, 157, 169, 171, 181, 188, 197, 199, 200, 203, 210, 222, 236, 237, 260, 293, 368, 385, 387, 431, 435, 436, 437, 443, 466, 480, 483, 492, 497, 501, 504, 518, 525, 527, 533, 546, 554, 557, 576, 577, 582, 584, 589, 593, 601, 603, 619, 633, 641, 643, 656, 657, 661, 664, 671, 679, 684, 686, 688, 689, 691, 692, 701, 704, 708, 714, 716, 717, 722, 727, 728, 729, 736, 738, 742, 743, 750, 758, 762, 768, 772, 783, 785, 793, 801, 805, 807, 808, 809, 813, 822, 823, 854, 877, 881, 885, 893, 904, 911, 912, 913, 918, 921, 923, 934, 937, 952, 961, 963, 964, 965, 968, 970, 981, 994, 1004, 1009, 1018, 1020, 1021, 1022, 1023, 1030, 1033, 1034, 1038, 1041, 1047, 1048, 1049, 1052, 1057, 1071, 1076, 1088, 1092, 1095, 1096, 1098, 1100, 1112, 1118, 1122, 1135, 1136, 1137, 1144, 1146, 1147, 1148, 1149, 1150, 1151, 1154, 1155, 1161, 1167, 1168, 1169, 1175, 1179, 1184, 1185, 1188, 1190, 1191, 1192, 1195, 1199, 1200, 1201, 1204, 1205, 1209, 1211, 1212, 1215, 1230, 1239, 1240, 1241, 1244, 1245, 1246, 1247, 1249, 1251, 1256, 1257, 1258, 1260, 1264, 1265, 1268, 1270, 1280, 1281, 1282, 1283, 1291, 1298, 1301, 1316, 1323, 1325, 1326, 1327, 1328, 1337, 1339, 1342, 1350, 1351, 1361, 1364, 1373, 1375, 1376, 1377, 1379, 1381, 1382, 1386, 1387, 1388, 1391, 1395, 1396, 1398, 1403, 1405, 1409, 1414, 1418, 1423, 1425, 1429, 1430, 1433, 1436, 1437, 1438, 1440, 1459, 1468, 1469, 1472, 1476, 1477, 1478, 1484, 1488, 1491, 1499, 1501, 1502, 1503, 1511, 1517, 1520, 1523, 1529, 1533, 1536, 1542, 1543, 1549, 1564, 1567, 1569, 1573, 1578, 1581, 1582, 1588, 1592, 1597, 1601, 1602, 1603, 1640, 1654, 1656, 1665, 1667, 1694, 1708, 1716, 1718, 1721, 1723, 1724, 1725, 1743, 1746, 1747, 1748, 1750, 1751, 1756, 1763, 1767, 1774, 1780, 1784, 1787, 1791, 1803, 1804, 1805, 1822, 1825, 1830, 1838, 1850, 1851, 1856, 1857, 1864, 1866, 1867, 1869, 1872, 1873, 1875, 1876, 1878, 1879, 1880, 1881, 1882, 1883, 1888, 1900, 1905, 1907, 1910, 1912, 1913, 1923, 1928, 1934, 1935, 1940, 1944, 1946, 1947, 1967, 1973, 1974, 1975, 1985, 1989, 1994, 1997, 2010, 2022, 2025, 2027, 2048, 2050, 2055, 2075, 2079, 2081, 2082, 2088, 2089, 2091, 2106, 2108, 2127, 2131, 2134, 2137, 2145, 2156, 2158, 2164, 2168, 2177, 2179, 2191, 2193, 2216, 2217, 2220, 2223, 2226, 2231, 2240, 2242, 2243, 2244, 2246, 2254, 2255, 2257, 2258, 2264, 2268, 2270, 2271, 2274, 2276, 2277, 2287, 2288, 2289, 2290, 2298, 2302, 2305, 2310, 2311, 2315, 2316, 2318, 2321, 2332, 2336, 2337, 2338, 2348, 2352, 2355, 2356, 2357, 2370, 2375, 2378, 2379, 2382, 2390, 2400, 2403, 2406, 2408, 2416, 2419, 2428, 2435, 2443, 2447, 2448, 2456, 2459, 2460, 2463, 2465, 2477, 2481, 2486, 2488, 2489, 2492, 2493, 2494, 2497, 2500, 2508, 2519, 2534, 2536, 2552, 2571, 2579, 2590, 2595, 2623, 2624, 2625, 2627, 2631, 2635, 2649, 2653, 2657, 2676, 2680, 2705, 2723, 2728, 2740, 2766, 2770, 2772, 2774, 2778, 2781, 2782, 2784, 2787, 2788, 2789, 2792, 2793, 2824, 2827, 2830, 2845, 2848, 2865, 2871, 2872, 2874, 2883, 2889, 2894, 2908, 2913, 2917, 2925, 2934, 2963, 2972, 2978, 2986, 2987, 3014, 3030, 3041, 3045, 3060, 3079, 3081, 3082, 3095, 3101, 3102, 3112, 3146, 3152, 3153, 3157, 3159, 3162, 3169, 3171, 3172, 3185, 3187, 3190, 3191, 3199, 3235, 3236, 3245, 3257, 3297, 3303, 3323, 3330, 3331, 3356, 3366, 3373, 3412, 3416, 3438, 3441, 3461, 3476, 3487, 3489, 3492, 3493, 3495, 3504, 3512, 3513, 3516, 3530, 3535, 3537, 3538, 3543, 3545, 3554, 3555, 3556, 3558, 3559, 3563, 3564, 3579, 3580, 3581, 3582, 3583, 3584, 3585, 3589, 3603, 3607, 3615, 3616, 3620, 3627, 3629, 3652, 3679, 3680, 3682, 3683, 3689, 3690, 3722, 3723, 3741, 3754, 3773, 3837, 3876, 3895, 3896, 3902, 3905, 3918, 3926, 3936, 3941, 3945, 3946, 3989, 4006, 4066, 4072, 4117, 4126, 4127, 4149, 4169, 4176, 4208, 4246, 4265, 4289, 4314, 4342, 4350, 4362, 4367, 4373, 4375, 4396, 4404, 4408, 4416, 4418, 4450, 4469, 4470, 4471, 4475, 4494, 4509, 4513, 4514, 4515, 4568, 4589, 4620, 4621, 4647, 4671, 4708, 4729, 4760, 4851, 4864, 4880, 4964, 4998, 5032, 5057, 5061, 5064, 5066, 5087, 5093, 5099, 5111, 5120, 5185, 5211, 5213, 5233, 5239, 5240, 5244, 5259, 5260, 5261, 5267, 5276, 5286, 5290, 5291, 5292, 5293, 5297, 5299, 5304, 5305, 5316, 5318, 5326, 5328, 5341, 5347, 5350, 5369, 5438, 5439, 5440, 5445, 5453, 5454, 5458, 5460, 5466, 5493, 5571, 5584, 5603, 5604, 5609, 5614, 5620, 5647, 5658, 5679, 5686, 5693, 5699, 5763, 5765, 5803, 5820, 5823, 5828, 5840, 5855, 5857, 5876, 5890, 5900, 5926, 5933, 5964, 5969, 6010, 6012, 6024, 6073, 6116, 6125, 6193, 6204, 6233, 6239, 6255, 6263, 6266, 6279, 6301, 6305, 6306, 6308, 6309, 6329, 6331, 6337, 6338,

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Asia, East–China–Chinese Restaurants Outside China, or Soy Ingredients Used in Chinese-Style Recipes, Food Products, or Dishes Outside China. 1460, 1479, 1550, 1553, 1568, 1628, 1695, 1768, 1970, 1991, 2096, 2117, 2122, 2198, 2264, 2349, 2411, 2501, 2656, 2849, 2886, 2909, 2914, 2918, 2926, 2961, 3082, 3092, 3149, 3194, 3382, 3450, 3468, 3483, 3500, 3658, 3660, 3674, 3754, 3826, 3887, 3917, 3988, 4045, 4064, 4099, 4133, 4181, 4217, 4218, 4219, 4241, 4249, 4250, 4253, 4255, 4274, 4388, 4392, 4393, 4394, 4407, 4455, 4462, 4481, 4498, 4516, 4538, 4620, 4621, 4661, 4730, 4740, 4741, 4769, 4833, 4838, 4877, 4878, 4892, 4939, 4978, 5077, 5091, 5095, 5121, 5167, 5242, 5270, 5271, 5276, 5280, 5294, 5297, 5318, 5319, 5334, 5337, 5401, 5464, 5518, 5525, 5585, 5668, 5698, 5715, 5734, 5768, 5841, 5903, 6016, 6233, 6259, 6304, 6423, 6426, 6620, 6691, 6743, 6792, 6803, 6902, 7020, 7212, 7269, 7296, 7429, 7438, 7730, 7792, 8093, 8214, 8228, 8229, 8302, 8309, 8315, 8371, 8372, 8418, 8475

Asia, East–China–Early Foreign Travelers in–Before 1850. 188, 197, 237, 443, 554, 714, 1230, 6385, 7200

Asia, East–China–English-Language Documents that Contain Cantonese Romanization, Transliteration, or Pronunciation of Numerous Soyfood Names. There Is No Standard Way of Romanizing Cantonese. 912, 934, 970, 981, 1018, 1071, 1098, 1112, 1361, 1716, 1748, 2025, 3500, 3674, 3944, 4064, 4133, 4392, 4509, 4516, 4769, 5828, 6012, 6239, 6424, 6602, 8376, 8378

Asia, East–China–Shennong / Shén Nung / Shen Nung–The Heavenly Husbandman and Mythical Early Emperor of China. 4, 40, 965, 1323, 1382, 2287, 2352, 2408, 2766, 2842, 3104, 3210, 3403, 4362, 5244, 5803

Asia, East–China–Soybean Production, Area and Stocks–Statistics, Trends, and Analyses. 1888, 2447, 2488, 2766, 3187, 8072, 8169

Asia, East–Chinese overseas. *See* Chinese Overseas, Especially Work with Soy (Including Chinese from Taiwan, Hong Kong, Singapore, etc.)

Asia, East–Hong Kong Special Administrative Region (SAR) (British Colony until 1 July 1997, then returned to China). 774, 799, 1041, 1180, 1218, 1484, 1664, 1734, 1767, 1805, 1857, 1962, 1981, 2777, 2827, 3014, 3185, 3235, 3245, 3310, 3558, 4023, 4092, 4283, 4288, 4289, 4295, 4297, 4305, 4307, 4308, 4310, 4314, 4321, 4325, 4396, 4421, 4535, 4990, 5122, 5316, 5585, 5903, 6038, 6145, 6193, 6337, 6402, 6424, 6436, 6456, 6485, 6486, 6500, 6502, 6524, 6565, 6569, 6744, 6891, 6960, 7044, 7115, 7120, 7161, 7173, 7225, 7253, 7379, 7383, 7443, 7455, 7473, 7507, 7685, 7861, 7881, 7921, 7993, 8004, 8051, 8109, 8548

Asia, East–Introduction of Soy Products to. Earliest document seen concerning soybean products in a certain East Asian country. Soybeans as such have not yet been reported in this country. 55, 1326

Asia, East–Introduction of Soy Products to. This document contains the earliest date seen for soybean products in a certain East Asian country. Soybeans as such had not yet been reported by that date in this country. 55

Asia, East–Introduction of Soybeans to or Dissemination of Soybeans from. Other or general information and leads concerning East Asia. 1767

Asia, East–Introduction of Soybeans to. Earliest document seen concerning soybeans in a certain East Asian country. 1041, 1245

Asia, East–Introduction of Soybeans to. Earliest document seen concerning the cultivation of soybeans in a certain East Asian country. 1245

Asia, East–Introduction of Soybeans to. This document contains the earliest date seen for soybeans in a certain East Asian country. 1041, 1245

Asia, East–Introduction of Soybeans to. This document contains the earliest date seen for the cultivation of soybeans in a certain East Asian country. 22, 1245

Asia, East–Japan (Nihon or Nippon). 19, 21, 22, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 85, 86, 88, 89, 90, 91, 93, 95, 96, 97, 98, 99, 100, 101, 103, 105, 106, 107, 111, 112, 115, 116, 118, 120, 124, 125, 126, 128, 130, 137, 139, 140, 141, 145, 152, 153, 154, 155, 158, 162, 166, 167, 168, 172, 174, 176, 183, 187, 188, 190, 197, 198, 200, 204, 205, 206, 207, 219, 222, 225, 235, 236, 237, 245, 246, 264, 288, 294, 317, 324, 342, 343, 347, 351, 365, 369, 372, 373, 374, 376, 377, 378, 384, 385, 386, 399, 411, 417, 424, 428, 431, 435, 438, 439, 440, 443, 448, 466, 467, 480, 489, 490, 492, 502, 503, 504, 512, 518, 520, 522, 525, 533, 538, 539, 544, 545, 546, 550, 556, 557, 560, 569, 570, 571, 573, 578, 582, 583, 591, 592, 593, 597, 599, 602, 603, 604, 615, 624, 625, 626, 632, 633, 641, 643, 647, 658, 664, 667, 668, 669, 671, 674, 675, 677, 679, 684, 689, 691, 692, 700, 703, 704, 705, 715, 720, 724, 727, 730, 735, 736, 738, 739, 742, 758, 768, 769, 770, 785, 792, 797, 803, 807, 808, 813, 829, 832, 833, 851, 853, 854, 855, 865, 868, 874, 876, 877, 881, 892, 894, 903, 904, 905, 906, 908, 909, 929, 930, 931, 933, 935, 937, 938, 939, 945, 951, 962, 963, 968, 973, 979, 981, 989, 994, 997, 998, 999, 1000, 1001, 1004, 1005, 1006, 1008, 1009, 1027, 1028, 1030, 1032, 1037, 1039, 1040, 1041, 1042, 1044,

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Asia, Middle East–Introduction of Soy Products to. This document contains the earliest date seen for soybean products in a certain Middle Eastern country. Soybeans as such had not yet been reported by that date in this country. 1803, 3014, 6055

Asia, Middle East–Introduction of Soybeans to. Earliest document seen concerning soybeans in a certain Middle Eastern country. 3153, 3679

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Asia, Middle East–Introduction of Soybeans to. This document contains the earliest date seen for soybeans in a certain Middle Eastern country. 3679

Asia, Middle East–Introduction of Soybeans to. This document contains the earliest date seen for the cultivation of soybeans in a certain Middle Eastern country. 3679

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Asia, South--Introduction of Soybeans to. Earliest document seen concerning soybeans (but only wild perennial relatives of soybeans) in a certain South Asian country; cultivated soybeans have not yet been reported. 324

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Asia, South--Introduction of Soybeans to. This document contains the earliest date seen for soybeans in a certain South Asian country. 443

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Azuki Bean. *Vigna angularis* (Willd.) Ohwi & H. Ohashi. Also called Adzuki, Aduki, Adsuki, Adzinki, Red Bean, Chinese Red Bean, Red Mung Bean, Small Red Bean, Japanese Kintoki, Komame, Shôzu, Chinese Xiaodou, Chixiaodou, Hsiao Tou [Small Bean], Ch'ih Hsiao Tou [Red Small Bean]. Former scientific names: *Phaseolus radiatus* (L.), *Dolichos angularis* (Willd.), *Phaseolus angularis* (Willd.) Wight, or *Azukia angularis* (Willd.) Ohwi. 2, 4, 5, 6, 7, 8, 20, 22, 23, 24, 40, 41, 42, 43, 46, 103, 118, 125, 431, 435, 677, 877, 881, 905, 938, 997, 1039, 1042, 1055, 1089, 1090, 1113, 1132, 1151, 1153, 1170, 1173, 1191, 1221, 1244, 1246, 1259, 1263, 1276, 1323, 1333, 1351, 1356, 1359, 1364, 1382, 1384, 1385, 1386, 1387, 1431, 1451, 1492, 1498, 1503, 1514, 1516, 1523, 1562, 1597, 1643, 1649, 1654, 1718, 1746, 1750, 1780, 1824, 1833, 1899, 1976, 1993, 2075, 2088, 2091, 2106, 2117, 2121, 2128, 2134, 2167, 2177, 2223, 2247, 2287, 2302, 2314, 2373, 2394, 2447, 2448, 2457, 2497, 2616, 2618, 2650, 2668, 2676, 2680, 2724, 2734, 2867, 2868, 2934, 3001, 3081, 3157, 3161, 3289, 3417, 3500, 3555, 3631, 3690, 3724, 3777, 3857, 3902, 3903, 3944, 3982, 4128, 4139, 4154, 4155, 4172, 4195, 4212, 4216, 4218, 4219, 4274, 4349, 4360, 4391, 4394, 4396, 4401, 4402, 4430, 4442, 4448, 4457, 4463, 4475, 4478, 4492, 4513, 4514, 4516, 4517, 4539, 4549, 4574, 4616, 4620, 4677, 4690, 4697, 4698, 4704, 4712, 4720, 4736, 4766, 4769, 4772, 4786, 4817, 4820, 4830, 4832, 4843, 4861, 4865, 4903, 4910, 4913, 4915, 4916, 4932, 4934, 4939, 4941, 4961, 4972, 4975, 4987, 4997, 5024, 5026, 5027, 5038, 5044, 5046, 5047, 5051, 5053, 5060, 5061, 5063, 5087, 5096, 5119, 5143, 5151, 5154, 5157, 5197, 5198, 5206, 5234, 5282, 5318, 5334, 5337, 5343, 5348, 5382, 5439, 5440, 5461, 5464, 5494, 5509, 5565, 5570, 5583, 5585, 5661, 5691, 5707, 5714, 5744, 5794, 5852, 5859, 5874, 5917, 5946, 5959, 5966, 6024, 6032, 6034, 6039, 6041, 6096, 6116, 6117, 6139, 6162, 6204, 6206, 6257, 6358, 6360, 6421, 6428, 6436, 6440, 6447, 6448, 6452, 6484, 6494, 6602, 6608, 6613, 6627, 6647, 6652, 6691, 6741, 6743, 6745, 6746, 6749, 6751, 6802, 6808, 6833, 6865, 6902, 6914, 6916, 6917, 6918, 6931, 7040, 7063, 7100, 7111, 7232, 7270, 7274, 7275, 7313, 7331, 7381, 7443, 7465, 7515, 7542, 7585, 7587, 7601, 7624, 7642, 7643, 7654, 7691, 7726, 7783, 7787, 7789, 7791, 7792, 7793, 7811, 7814, 7829, 7863, 7871, 7874, 7895, 7908, 7914, 7918, 7928, 7941, 7943, 7948, 7964, 7965, 7979, 7981, 8027, 8084, 8088, 8090, 8094, 8097, 8106, 8107, 8119, 8130, 8131, 8188, 8225, 8227, 8228, 8262, 8269, 8272, 8309, 8371, 8372, 8416, 8446, 8457, 8478, 8495, 8496, 8510, 8513, 8536

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Bacteria in intestines, beneficial. *See* Intestinal Flora / Bacteria

Baker, Bill (1873-1942). Health Foods Pioneer, Famous Baker, Ojai, California. 3038, 3090, 3195, 3327

Balanced Foods, Inc. (New York City, and North Bergen, New Jersey). Wholesale Distributor of Health Foods and Natural Foods. Founded in 1939 by Maurice "Doc" Shefferman, Sam and Will Reiser. Purchased in Dec. 1986 by Tree of Life. 4671, 7594

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Battle Creek Sanitarium Health Food Co. *See* Kellogg, John Harvey (M.D.) as a Health Food Pioneer

Bean curd skin. *See* Yuba

Bean curd sticks, dried. *See* Yuba–Dried Yuba Sticks

Bean curd. *See* Tofu

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Beef alternatives. *See* Meat Alternatives–Beef Alternatives, Including Beef Jerky, etc. See also Meatless Burgers

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Bibliographies and or Reviews of the Literature (Contains More Than 50 References or Citations) 1128, 1147, 1724, 1965, 1997, 2137, 2242, 2243, 2379, 2447, 2460, 2492, 2534, 2662, 2668, 2702, 2719, 2766, 2775, 3011, 3026, 3141, 3153, 3187, 3190, 3204, 3297, 3345, 3388, 3600, 3626, 3643, 3667, 3672, 3722, 3814, 3947, 3969, 4004, 4033, 4063, 4073, 4080, 4222, 4232, 4273, 4362, 4399, 4403, 4435, 4447, 4479, 4494, 4499, 4624, 4625, 4665, 4695, 4715, 4769, 4771, 4826, 4858, 4866, 4946, 4956, 4959, 4964, 4965, 4968, 5019, 5049, 5156, 5159, 5161, 5199, 5211, 5213, 5246, 5286, 5290, 5292, 5352, 5398, 5415, 5439, 5450, 5471, 5473, 5508, 5511, 5569, 5583, 5589, 5604, 5609, 5641, 5642, 5647, 5650, 5692, 5695, 5706, 5713, 5742, 5760, 5793, 5836, 5850, 5900, 5920, 5935, 6005, 6021, 6032, 6073, 6108, 6205, 6208, 6218, 6225, 6235, 6240, 6242, 6272, 6301, 6345, 6347, 6359, 6373, 6420, 6430, 6434, 6439, 6445, 6446, 6485, 6511, 6599, 6619, 6624, 6648, 6650, 6669, 6736, 6747, 6758, 6762, 6766, 6847, 6905, 6924, 6927, 6937, 6998, 7027, 7036, 7115, 7156, 7175, 7287, 7329, 7397, 7402, 7416, 7517, 7547, 7577, 7662, 7753, 7754, 7800, 7821, 7851, 7971, 8091, 8092, 8179, 8181, 8205, 8212, 8231, 8346, 8362

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Biotechnology applied to soybeans *See* Genetic Engineering, Biotechnology (Biotech), and Transgenic Plants

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Black Bean Sauce or Black Soybean Sauce Occasionally Called Black Bean Paste Traditionally Made in the Kitchen by Crushing Salted, Fermented Black Soybeans, Usually with Minced Ginger, Garlic, Chilis and or Chinese-style Wine Typically Not a Commercial Product or Sauce See Also Black Soybean Jiang (a Commercial Product). 3868, 4064, 4072, 4133, 4392, 4393, 4394, 4509, 4741, 4769, 4833, 4892, 4939, 5233, 5270, 5297, 5341, 5447, 5518, 5698, 5715, 5768, 5828, 5833, 6012, 6034, 6038, 6207, 6233, 6423, 6424, 6456, 6746, 6764, 6792, 6803, 7019, 7020, 7120, 7269, 7296, 7344, 7490, 7535, 7642, 7730, 7839, 7853, 8015, 8027, 8030, 8088, 8102, 8130, 8135, 8210, 8228, 8352, 8470, 8475, 8533

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Black Gram or Urd *Vigna mungo*. Formerly *Phaseolus mungo* 1368, 1763, 3690, 4916, 4941

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Black soybeans. *See* Soybean Seeds–Black, Soybean Seeds–Black in Color, Soybean Seeds–Black in Color–Etymology

Black-eyed pea *See* Cowpea–*Vigna unguiculata*

Blaw-Knox Co. (Pittsburgh, Pennsylvania) Maker of Soybean Crushing Equipment, Especially the Rotocel 5049

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Blender, Electric (Kitchen Appliance) Including Liquefier, Liquidizer, Liquifier, Osterizer, Waring Blender, Waring Blendor, Waring Mixer, Whiz-Mix, Vitamix–Early Records Only. 3327, 3343, 3501, 3518, 3520, 3912, 4388, 4704, 4907, 5046, 5627, 5631, 5937, 5956, 6048, 7110

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Breeding soybeans for food uses. *See* Soybean Production–Variety Development, Breeding, Selection, Evaluation, Growing, or Handling of Soybeans for Food Uses

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British Arkady Company Ltd. and British Arkady Holdings Ltd. (Manchester, England). Subsidiary of ADM of the USA. Including the Haldane Foods Group. 4337, 4409, 4535, 5810, 6174, 7470

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Broad Bean. *Vicia faba* L., formerly *Faba vulgaris*, Mönch. Also called Faba Bean, Fava Bean, Horse Bean. Chinese–Candou ("silkworm bean"). Japanese–Soramame. German–Saubohne or Buschbohne. French–Grosse Fève, Fève de Marais, Féverole, Faverole, Gourgane. 23, 39, 116, 1042, 1114, 1124, 1151, 1161, 1170, 1263, 1323, 1382, 1386, 1451, 1498, 1640, 1763, 1817, 2287, 3500, 3926, 3944, 4388, 4514, 4916, 4941, 5438, 5440, 5642, 5650, 5856, 6228, 6447, 6934, 7117

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Canada–Introduction of Soy Products to. This document contains the earliest date seen for soybean products in Canada. Soybeans as such had not yet been reported by that date. 680, 756, 966, 1123

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Cape Verde. *See* Africa–Cape Verde or Cape Verde Islands (Ilhas do Cabo Verde, Republica de Cabo Verde)

Carbohydrates (General). See also: Starch, Dietary Fiber, and Oligosaccharides (Complex Sugars). 1042, 1285, 1316, 1329, 1457, 1543, 1656, 1710, 1776, 1782, 1786, 1797, 1840, 1926, 1982, 1988, 2143, 2239, 2365, 2447, 2624, 2845, 3231, 3719, 3720, 3930, 3945, 4010, 4179, 4260, 4277, 4339, 4600, 4601, 4884, 5262, 5295, 5427

Carbohydrates–Dietary Fiber (Including Complex Carbohydrates, Bran, Water-Soluble and Water-Insoluble Fiber). 1041, 1114, 1132, 1148, 1175, 1269, 1290, 1316, 1338, 1384, 1430, 2214, 2216, 2393, 2394, 2491, 2622, 2899, 2965, 3121, 3132, 3135, 3219, 3226, 3268, 3271, 3280, 3281, 3293, 3654, 3655, 3786, 5262, 5321, 6447, 6551, 7186, 7895, 8069, 8184, 8544

Carbohydrates–Glycemic Index and Glycemic Load. 8345

Cardiovascular Disease and Diet Therapy, Especially Heart Disease and Stroke, But Including Cholesterol Reduction, and Hypertension (High Blood Pressure). Soy Is Not Always Mentioned. 2400, 4130, 5235, 8449, 8450, 8493

Cargill, Inc. (Minneapolis, Minneapolis). 5120, 6551, 6648, 7476, 7864, 8162, 8398

Caribbean. *See* Latin America–Caribbean

Carque, Otto (1867-1935) Author, Pioneer, Advocate, Retailer and Manufacturer of Health Food Products and Vegetarian Products in Los Angeles. Also spelled Carqué. 2479, 2569, 2652, 2823, 2958, 3000, 3059, 3078, 3150, 3163, 3340, 3343

Cartoons or Cartoon Characters. 3474, 3507, 3727, 3781, 4184, 4248, 5611, 7891, 7892, 8060, 8253

Carver, George Washington (ca. 1864-1943, Tuskegee Inst., Alabama)–Work with Soybeans, Soyfoods, Peanuts, or Chemurgy, and the Carver Laboratory in Dearborn, Michigan. 2377, 2384, 7890, 7891

Casein or Caseinates. Problems in So-Called Non-Dairy Products. 8545

Catchup / Catsup etymology. *See* Ketchup / Catsup / Catchup–Etymology

Catering. *See* Foodservice and Institutional Feeding or Catering

Catsup or Catchup. *See* Ketchup, Catsup, Catchup, Ketchop, Ketchap, Katchup, etc. Word Mentioned in Document

Catsup. *See* Ketchup–Western-Style, Other, Ketchup, Mushroom (Mushroom Ketchup, Western-Style), Ketchup, Oyster (Oyster Ketchup, Western-Style), Ketchup, Tomato (Tomato Ketchup, Western-Style), Ketchup, Walnut (Walnut Ketchup, Western-Style)

Cattle, Bullocks, Bulls, Steers, or Cows for Beef / Meat or Unspecified Uses Fed Soybeans, Soybean Forage, or Soybean Cake or Meal as Feed. 1167, 1170, 1171, 1257, 1258, 1323, 1342, 1529, 1806, 1962, 2007, 2118, 2774, 2784, 2791, 3741

Cauldron Foods Ltd. (Bristol, England). Owned by Rayner Burgess Ltd. Member of the Hero Group. 6172, 6173, 6174, 6584, 6585, 6909, 7255, 7256, 7470, 7490, 7807, 7816

Celebrities–vegetarians. *See* Vegetarian Celebrities–Noted Personalities and Famous People

Cenex. *See* CHS Cooperatives

Central America, soyfoods movement in. *See* Soyfoods Movement in Mexico and Central America

Central America. *See* Latin America–Central America

Central Soya Co. (Fort Wayne, Indiana; Acquired in Oct. 1987 by the Ferruzzi Group in Ravenna, Italy. In 1991 became part of CSY Agri-Processing, Inc. [a holding company], operating as a member of the Eridania / Beghin-Say agro-industrial group, within Ferruzzi-Montedison). Acquired in Oct. 2002 by Bunge. 3391, 4535, 4557, 4964, 5049, 5120, 5443, 5947, 6551, 6648, 7455, 7828, 7897, 8162, 8198, 8348, 8349

Cereol. *See* Ferruzzi-Montedison (Italy)

Ceres (Colorado Springs, Colorado). 5055, 5153, 5283, 7671

Certification of soybean seeds. *See* Seed Certification (Soybeans)

Ceylon. *See* Asia, South–Sri Lanka

Cheese–Non-Soy Dairy-Based Cheeses. 7899

Cheese–Non-Soy Non-Dairy Cheeses Made from Plants (Such as Peanut / Groundnut Cheese, Almond Cheese, etc.). 1856, 2246, 2377, 2384, 3296, 4707, 5942, 5943, 7842

Cheese, cream. *See* Soy Cream Cheese

Cheese. *See* Soy Cheese, Soy Cheese or Cheese Alternatives

Cheesecake or cream pie. *See* Soy Cheesecake or Cream Pie

Chemical / Nutritional Composition or Analysis (Of Seeds, Plants, Foods, Feeds, Nutritional Components, for Animals (Incl. Humans)). 1041, 1114, 1124, 1132, 1136, 1142, 1147, 1148, 1159, 1169, 1170, 1175, 1177, 1178, 1181, 1212, 1221, 1228, 1246, 1257, 1266, 1269, 1271, 1290, 1291, 1294, 1303, 1304, 1306, 1310, 1316, 1317, 1319, 1320, 1327, 1330, 1334, 1356, 1363, 1365, 1369, 1370, 1376, 1384, 1385, 1389, 1390, 1391, 1395, 1400, 1407, 1408, 1416, 1430, 1452, 1458, 1459, 1466, 1488, 1503, 1520, 1522, 1528, 1530, 1533, 1536, 1540, 1541, 1543, 1554, 1574, 1579, 1601, 1603, 1604, 1606, 1611, 1613, 1614, 1649, 1654, 1655, 1656, 1657, 1665, 1671, 1674, 1689, 1700, 1703, 1707, 1710, 1749, 1753, 1769, 1783, 1786, 1791, 1796, 1802, 1815, 1817, 1824, 1838, 1840, 1843, 1855, 1856, 1882, 1887, 1888, 1889, 1910, 1913, 1919, 1923, 1928, 1937, 1944, 1972, 1982, 1985, 1989, 1990, 1997, 2007, 2010, 2022, 2037, 2042, 2045, 2068, 2108, 2144, 2146, 2164, 2180, 2199, 2216, 2226, 2241, 2243, 2246, 2254, 2256, 2279, 2285, 2303, 2352, 2360, 2393, 2394,

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2400, 2401, 2403, 2447, 2461, 2499, 2534, 2605, 2623, 2625, 2627, 2628, 2645, 2650, 2668, 2676, 2702, 2740, 2839, 2876, 2879, 2880, 2890, 2915, 2933, 2946, 2974, 2975, 2983, 2986, 2996, 2997, 3033, 3038, 3058, 3108, 3115, 3184, 3190, 3234, 3254, 3297, 3353, 3356, 3412, 3439, 3463, 3479, 3503, 3536, 3626, 3636, 3638, 3814, 3861, 3945, 3968, 4029, 4193, 4232, 4513, 4735, 4965, 5372, 5589, 5815, 5850, 6030, 6124, 6442, 6610, 6714, 6849, 7036, 8028

Chemistry and Soils, Bureau. *See* United States Department of Agriculture (USDA)–Bureau of Agricultural and Industrial Chemistry

Chemurgy, the Farm Chemurgic Movement, and the Farm Chemurgic Council (USA, 1930s to 1950s, Including Wheeler McMillen, William J. Hale, and Francis P. Garvan). 3094, 3095, 3110, 3260, 3501, 4964, 7662, 8349

Chenopodium quinoa Willd. *See* Quinoa

Chiang, soybean (from China) *See* Jiang–Chinese-Style Fermented Soybean Paste

Chiang *See* Jiang–Early Non-Soy Paste Made with Meat of Fish in China or Japan

Chicago Board of Trade (CBOT, organized in April 1848). 3110, 3843

Chicken, meatless. *See* Meat Alternatives–Meatless Chicken, Goose, Duck, and Related Poultry Products. See also Meatless Turkey

Chickens (esp. Layers & Broilers) Fed Soybeans, Soybean Forage, or Soybean Cake or Meal as Feed. 1128, 1420, 2196, 2887, 3104, 3116, 3152, 5049, 5886, 7891

Chickpea / Chickpeas / Chick-Peas, Garbanzo / Garbanza Beans, *Cicer arietinum* L. Including Hummus / Hummous. 324, 341, 1095, 1260, 1263, 1323, 1368, 1525, 1572, 1817, 2074, 2179, 2652, 3038, 3090, 3343, 3415, 3690, 4154, 4155, 4195, 4360, 4430, 4442, 4478, 4549, 4677, 4712, 4720, 4916, 4938, 4941, 4987, 4997, 5034, 5044, 5051, 5144, 5199, 5232, 5469, 5642, 5650, 5676, 5703, 5794, 5946, 6053, 6139, 6176, 6267, 6360, 6415, 6421, 6519, 6520, 6522, 6581, 6696, 6763, 6925, 6928, 7030, 7430, 7450, 7541, 7542, 7603, 7770, 7862, 7964, 7990, 8049, 8070, 8095, 8103, 8106, 8108, 8185, 8192, 8215, 8247

Chickpea / Chickpeas / Chick-Peas, Garbanzo / Garbanza Beans, *Cicer arietinum* L. Including Hummus / Hummous. Etymology of These Terms and Their Cognates Relatives in Various Languages. 324, 1323

Chico-San Inc. (Chico, California). Maker of Macrobiotic and Natural Foods. Founded in March 1962. 3642, 4272, 4345, 4356, 4360, 4442, 4487, 4539, 4544, 4574, 4590, 4616, 4654, 4677, 4681, 4712, 4720, 4792, 4798, 4821, 4832, 4837, 4841, 4843, 4869, 4873, 4875, 4883, 4890, 4910, 4913, 4929, 4932, 4969, 4975, 4987, 5018, 5026, 5027, 5055, 5080, 5081, 5086, 5178, 5179, 5193, 5197, 5206, 5282, 5370, 5378, 5382, 5631, 5707, 5769, 5822, 5849, 5874, 6059, 6077, 6079, 6081, 6091, 6092, 6093, 6096, 6097, 6098, 6117, 6151, 6152, 6156, 6157, 6243, 6248, 6252, 6253, 6260, 6261, 6262, 6287, 6288, 6289, 6291, 6295, 6307, 6310, 6319, 6327, 6359, 6367, 6374, 6465, 6468, 6472, 6543, 6646, 6657, 6672, 6701, 6760, 6851, 7017, 7132, 7383, 7589, 7594, 7654, 7655, 7656, 7670, 7674, 7696, 7827, 8160

China. *See* Asia, East–China

Chinese Medicine, Traditional, Including Heating-Cooling or Hot-Cold Foods and Medicines. 4, 10, 11, 13, 14, 15, 40, 41, 42, 43, 99, 106, 808, 964, 1144, 1597, 1718, 1825, 1856, 1973, 1974, 1975, 2287, 2408, 2448, 2497, 2827, 3045, 3157, 4475, 5061, 5458, 6116, 6428, 6741, 7789, 8102, 8146

Chinese Overseas, Especially Work with Soy (Including Chinese from Taiwan, Hong Kong, Singapore, etc.). 466, 597, 675, 962, 972, 984, 1012, 1206, 1253, 1314, 1420, 1442, 1465, 1503, 1535, 1554, 1556, 1566, 1632, 1660, 1689, 1730, 1765, 1825, 1826, 1828, 1830, 1835, 1875, 1885, 1886, 1909, 1916, 1922, 1933, 1937, 1940, 1942, 1982, 1985, 1989, 1997, 2010, 2022, 2048, 2129, 2153, 2157, 2178, 2181, 2187, 2191, 2194, 2197, 2210, 2211, 2212, 2217, 2220, 2253, 2267, 2270, 2283, 2311, 2354, 2361, 2373, 2379, 2387, 2408, 2412, 2482, 2506, 2509, 2570, 2591, 2593, 2625, 2667, 2780, 2786, 2794, 2831, 2843, 2850, 2891, 2911, 2929, 2964, 2995, 3079, 3119, 3149, 3167, 3189, 3342, 3351, 3372, 3378, 3379, 3391, 3408, 3411, 3440, 3473, 3484, 3493, 3504, 3509, 3534, 3550, 3589, 3597, 3635, 3695, 3787, 3832, 3851, 3855, 3859, 3868, 3888, 3944, 3945, 3946, 4007, 4023, 4067, 4079, 4109, 4132, 4277, 4314, 4340, 4342, 4355, 4451, 4456, 4473, 4505, 4571, 4600, 4601, 4744, 4766, 4862, 4897, 4939, 4994, 5012, 5048, 5091, 5149, 5150, 5236, 5266, 5336, 5352, 5426, 5439, 5493, 5497, 5547, 5561, 5565, 5579, 5602, 5609, 5622, 5699, 5713, 5730, 5733, 5743, 5790, 5800, 5814, 5820, 5843, 5862, 5878, 5925, 5968, 6027, 6038, 6075, 6166, 6178, 6240, 6350, 6404, 6453, 6471, 6473, 6474, 6479, 6482, 6501, 6550, 6558, 6686, 6746, 6764, 6781, 6787, 6826, 6839, 6913, 6933, 7125, 7253, 7264, 7265, 7369, 7383, 7396, 7448, 7452, 7457, 7588, 7625, 7694, 7763, 7808, 7833, 7839, 7844, 8008, 8022, 8048, 8142, 8293, 8457

Chinese Soybean Types and Varieties–Early, with Names. 4, 809, 1386, 2288, 2497

Chinese restaurants outside China, or Chinese recipes that use soy ingredients outside China. *See* Asia, East–China–Chinese Restaurants Outside China

Chinese-style soy sauce made with a significant proportion of wheat. *See* Soy Sauce, Chinese Style–Made with a Significant

Chocolate substitute made from roasted peanuts. *See* Peanut Chocolate

Chocolate substitute made from roasted soybeans. *See* Soy Chocolate

Cholesterol. *See* Lipids–Effects on Blood Lipids, Protein–Effects on Blood Lipids

Chou doufu. *See* Tofu, Fermented–Stinky Tofu (pinyin: Chou Doufu (W.-G. Ch'ou Toufu)

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Chronology / Timeline. 22, 45, 103, 202, 1005, 1524, 2341, 2617, 3322, 3639, 3642, 4096, 4272, 4487, 4570, 4670, 4671, 4672, 4699, 4823, 4875, 5358, 5528, 5747, 6577, 6615, 6627, 6708, 6759, 7559, 7589, 7590, 7703, 7734, 8178, 8365, 8392, 8522, 8546, 8548, 8549

CHS Cooperatives, Including Cenex, Inc. and Harvest States Cooperatives (Which Includes Honeymead). 8162

Chufa / Chufas (*Cyperus esculentus*). Also Called Earth Almond, Tiger Nuts, Tigernut, Nut Grass, Ground Almond, Hognut, Earth Nut, Rush Nut, Zulu Nut, French: Souchet, German: Erdmandel, Italian: Cipero comestible. 994, 999, 1009, 1028, 1198, 1199, 1246, 1364, 1390, 1523, 1763, 1976, 2330, 2569, 3038, 8131, 8416

Chun King. 3548, 3625, 3751, 3801, 3826, 3877, 3929, 3988, 4035, 4045, 4075, 4087, 4787, 5416, 5728, 5731, 5953, 6095, 6105, 6328, 6483, 6705, 7008, 7161, 7203, 7234, 7288, 7307, 7333, 7370, 7476, 7505, 7508, 7733, 8244, 8251, 8343, 8547

Chungkook-Jang. *See* Natto, Korean-Style–Chungkook-Jang / Chung Kook Jang / Chungkuk Jang

Cicer arietinum. *See* Chickpeas or Garbanzo Beans

Civil War in USA (1861-1865). 1053, 1179, 2087, 2145, 2518, 2845

Claim or Claims of Health Benefits–Usually Authorized by the U.S Food and Drug Administration (FDA). 8144, 8178, 8198

Cleaning soybean seeds. *See* Seed Cleaning–Especially for Food or Seed Uses

Cliffrose, Green Mountain Commodities, Inter-Natural Trading, Mountain Rose, Shadowfax, and Other Small Natural Food Distributors in the United States. 7671

Cliffrose. *See* Natural Food Distributors and Master Distributors–General and Other Smaller: Cliffrose, Shadowfax, etc

Climate change. *See* Global Warming / Climate Change as Environmental Issues

Clubb, Henry Stephen (Rev.) (1827-1921). Vegetarian Pioneer in England and Philadelphia, USA. 1450, 1650

Coconut Milk and Cream. Or Coconuts Used to Flavor Soymilk, Rice Milk, etc. 2652, 3415, 5242, 5517, 5641, 5642, 5647, 5650, 6018, 6032, 6073, 6373, 6436, 7050, 7051, 7517, 7547, 7593, 7979, 8007, 8181, 8270

Coffee. Problems with or Prohibitions against the Consumption of Coffee, Initially Because it Was Considered a Stimulant, Later Because of the Harmful Effects of Caffeine. 2400, 2823, 3078, 7943, 8218

Coffee Creamer, Whitener or Lightener (Non-Dairy–Usually Contains Soy). 7585, 7924

Coffee Substitutes or Adulterants, Non-Soy–Usually Made from Roasted Cereals, Chicory, and / or Other Legumes. 814, 1009, 1199, 1212, 1246, 1390, 1414, 2224, 2243, 2283, 2367, 2384, 2400, 2979, 3090, 4195, 4360, 4430, 4442, 4478, 4539, 4690, 4697, 4712, 4720, 4832, 4843, 4910, 5140, 5154, 5197, 5198, 5249, 5959, 7686

Coffee, soy. *See* Soy Coffee

Cognitive / Brain Function, Including Alzheimer's Disease. 8178

Coix lachryma-jobi. *See* Job's Tears

Coker Pedigreed Seed Co. (Hartsville, South Carolina). 3578, 7225

Color of soybean seeds. *See* Seed Color (Soybeans), Specific Varieties), Soybean Seeds (of different colors)

Combines. Also called the Combined Harvester-Thresher in the 1920s and 1930s (Combine). 2492, 2738, 2789, 3019, 7010

Commercial Soy Products–New Products, Mostly Foods. 47, 50, 66, 67, 198, 202, 204, 205, 245, 317, 374, 502, 668, 719, 803, 1062, 1307, 1346, 1446, 1470, 1542, 1577, 1642, 1644, 1645, 1646, 1681, 1711, 1712, 1713, 1714, 1715, 1728, 1755, 1760, 1795, 1798, 1799, 1800, 1801, 1890, 1895, 1933, 1955, 1956, 1992, 2013, 2018, 2020, 2060, 2067, 2115, 2233, 2237, 2293, 2294, 2327, 2328, 2363, 2372, 2374, 2404, 2428, 2429, 2432, 2434, 2440, 2482, 2522, 2525, 2535, 2537, 2538, 2561, 2562, 2641, 2745, 2798, 2811, 2812, 2818, 2819, 2848, 2905, 2957, 3062, 3077, 3129, 3130, 3147, 3164, 3232, 3276, 3304, 3311, 3324, 3328, 3329, 3335, 3336, 3337, 3364, 3368, 3377, 3405, 3407, 3408, 3434, 3437, 3470, 3471, 3490, 3499, 3505, 3517, 3528, 3546, 3547, 3548, 3549, 3550, 3551, 3552, 3568, 3571, 3590, 3591, 3592, 3593, 3594, 3633, 3647, 3668, 3687, 3688, 3709, 3713, 3717, 3730, 3731, 3735, 3782, 3806, 3846, 3849, 3851, 3864, 3885, 3942, 3999, 4002, 4041, 4059, 4060, 4061, 4062, 4092, 4094, 4107, 4124, 4159, 4163, 4201, 4204, 4207, 4281, 4282, 4283, 4284, 4285, 4286, 4287, 4288, 4290, 4295, 4296, 4297, 4298, 4299, 4300, 4301, 4302, 4303, 4304, 4305, 4306, 4307, 4308, 4309, 4310, 4311, 4312, 4313, 4315, 4316, 4317, 4318, 4319, 4320, 4321, 4322, 4323, 4324, 4325, 4345, 4356, 4420, 4432, 4466, 4504, 4560, 4562, 4663, 4668, 4681, 4682, 4685, 4686, 4717, 4721, 4722, 4756, 4757, 4760, 4792, 4834, 4835, 4844, 4847, 4848, 4851, 4869, 4907, 4908, 4919, 4929, 4973, 4993, 5088, 5116, 5118, 5122, 5125, 5127, 5128, 5129, 5132, 5133, 5134, 5135, 5173, 5174, 5177, 5184, 5187, 5202, 5203, 5204, 5205, 5207, 5216, 5221, 5223, 5224, 5269, 5308, 5309, 5310, 5311, 5366, 5368, 5374, 5375, 5378, 5383, 5384, 5395, 5396, 5413, 5419, 5422, 5423, 5424, 5425, 5426, 5430, 5431, 5432, 5433, 5434, 5500, 5522, 5523, 5529, 5534, 5543, 5548, 5556, 5557, 5560, 5561, 5563, 5564, 5573, 5596, 5600, 5602, 5607, 5629, 5637, 5644, 5645, 5646, 5652, 5653, 5654, 5655, 5666, 5671, 5674, 5675, 5676, 5677, 5678, 5681, 5683, 5684, 5687, 5688, 5689, 5708, 5709, 5717, 5718, 5730, 5739, 5741, 5750, 5752, 5753, 5754, 5756, 5759, 5761, 5762, 5766, 5807, 5808, 5809, 5810, 5812, 5813, 5814, 5816, 5817, 5818, 5819, 5820, 5862, 5865, 5866, 5867, 5868, 5869, 5877, 5879, 5880, 5892, 5893, 5895, 5898, 5902, 5904, 5909, 5914, 5924, 5928, 5932, 5939, 5948, 5950, 5952, 5965, 5979, 5981, 5983, 5986, 5987, 5988, 5989, 5991, 5992, 5993, 5995, 5996, 5997, 5998, 5999, 6001, 6002, 6003, 6004, 6042, 6044, 6045, 6046, 6050, 6053, 6066, 6067, 6068, 6069, 6070, 6072, 6074, 6084, 6085, 6088, 6099, 6104, 6109, 6111, 6112, 6115, 6128, 6129, 6130, 6131, 6133, 6134, 6138, 6140, 6141, 6150, 6151, 6153, 6154, 6163, 6164, 6167, 6168, 6172, 6173, 6174, 6178, 6179, 6180, 6181, 6182, 6185, 6187, 6189, 6190, 6191, 6192, 6194,

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Cowpea / Cowpeas / Black-Eyed Peas–Etymology of These Terms and Their Cognates / Relatives in Various Languages. 905, 4916, 4941

Cowpea or Black-Eyed Pea. *Vigna unguiculata* (L.) Walp. Formerly spelled Cow Pea. Also called Blackeye Pea, Pea Bean, Yardlong Cowpea. Chinese: Jiangdou. Previous scientific names: *Vigna sinensis* (L.) (1890s-1970s), *Vigna catjang* (1898-1920), *Vigna Katiang* (1889). 260, 905, 1003, 1005, 1151, 1170, 1182, 1259, 1385, 1386, 1387, 1536, 1588, 1763, 1902, 1976, 1997, 2074, 2097, 2145, 2246, 2265, 2287, 2322, 2330, 2360, 2447, 2458, 2724, 2740, 2942, 3112, 3288, 3289, 3412, 3690, 3814, 3869, 4491, 4916, 4941, 5156, 5642, 5650, 5886, 6228, 6925, 6928, 7783, 8088, 8131, 8416

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Cream, sour, alternative. *See* Sour Cream Alternatives

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Dairylike Non-dairy Soy-based Products, Other (Cottage Cheese, Sour Cream, and Icing). See also Non-dairy Whip Topping, Soy Ice Cream, Soy Yogurt, Soy Cheese, Cream Cheese or Cheesecakes, Coffee Creamer / Whitener or Cream, and Sour Cream. 2970, 2971, 3296, 5153, 5211, 5213, 6357, 8224

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Equipment for making tofu. *See* Tofu Equipment

Equipment for soybean crushing–manufacturers. *See* Anderson International Corp., Blaw-Knox Co. and Rotocel, French Oil Mill Machinery Co

Erewhon (Boston, Massachusetts). Founded April 1966 by Aveline and Michio Kushi in Boston. Merged with U.S. Mills in 1986. 3642, 4356, 4487, 4607, 4654, 4663, 4670, 4671, 4672, 4681, 4712, 4720, 4721, 4817, 4821, 4823, 4832, 4834, 4835, 4890, 4907, 4912, 4915, 4971, 4987, 5024, 5026, 5027, 5055, 5078, 5080, 5081, 5082, 5096, 5108, 5125, 5153, 5196, 5197, 5198, 5200, 5206, 5253, 5282, 5287, 5289, 5367, 5382, 5392, 5393, 5502, 5665, 5707, 5917, 5970, 6057, 6059, 6060, 6077, 6082, 6091, 6092, 6101, 6137, 6149, 6162, 6248, 6253, 6307, 6310, 6358, 6359, 6374, 6384, 6466, 6472, 6481, 6576, 6701, 6776, 7041, 7180, 7235, 7236, 7317, 7435, 7581, 7582, 7594, 7608, 7609, 7651, 7654, 7655, 7656, 7657, 7658, 7668, 7669, 7670, 7671, 7673, 7674, 7682, 7691, 7703, 7715, 7762, 7847, 7848, 7968, 8120, 8151, 8153, 8481, 8522, 8523, 8530, 8549

Erewhon–Los Angeles / West / West Coast. Established Sept. 1969. Purchased from Erewhon (Boston) by John Fountain & John Deming on 1 Aug. 1975. Named Mondo in Oct. 1976. Then Broken Up and Re-Sold in 1979. Part Became Erewhon West. 4750, 4890, 4912, 5026, 5027, 5108, 5189, 5198, 5382, 5573, 5631, 6059, 6092, 6307, 6481, 6701, 7608, 7609, 7654, 7655, 7656, 7657, 7658, 7670, 7671, 7762, 7848, 8522

Ernst, Andrew H. (1796-1860)–Pioneer Horticulturalist and Nurseryman of Cincinnati, Ohio. 2457

Erosion of soils. *See* Soil Science. Soil Conservation or Soil Erosion

Essene Traditional Foods (Philadelphia, Pennsylvania). 4796, 4890, 6059, 7658, 7703

Estrogens in plants. *See* Phytoestrogens

Ethanol (ethyl alcohol). *See* Solvents

Etymology (General) of Soybean Products or Closely Related Terms (Such as "Protein"). 7330, 7742

Etymology of the Word "Soy" and its Cognates / Relatives in English. 4533

Etymology of the Word "Soyfoods" and its Cognates / Relatives in Various Languages. 1466, 1554, 2243, 2846, 3348, 3358, 4752, 5504, 5521, 5642, 5650, 6648, 7750

Etymology of the Words "Soya," "Soy," and "Soybean" and their Cognates / Relatives in Various Languages. 3, 11, 17, 24, 46, 103,

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118, 125, 128, 197, 219, 236, 237, 246, 294, 324, 373, 384, 385, 431, 440, 466, 503, 512, 518, 569, 615, 625, 664, 677, 700, 741, 876, 881, 919, 945, 981, 994, 997, 1009, 1023, 1030, 1039, 1041, 1042, 1057, 1135, 1144, 1167, 1170, 1171, 1172, 1179, 1182, 1186, 1197, 1205, 1224, 1230, 1264, 1276, 1290, 1323, 1324, 1326, 1327, 1341, 1342, 1356, 1359, 1385, 1386, 1391, 1392, 1395, 1396, 1419, 1452, 1458, 1476, 1481, 1520, 1522, 1556, 1561, 1582, 1597, 1604, 1657, 1707, 1753, 1767, 1780, 1805, 1808, 1835, 1836, 1837, 1843, 1856, 1879, 1885, 1912, 2129, 2137, 2178, 2189, 2265, 2270, 2273, 2287, 2311, 2334, 2381, 2408, 2447, 2457, 2518, 2648, 2845, 2879, 2942, 2974, 2997, 3079, 3101, 3153, 3234, 3366, 3412, 3501, 3675, 3680, 3689, 3741, 3947, 4093, 4209, 4536, 5305, 5440, 5831, 5926, 6110, 6119, 6385, 7119, 7339, 7412, 8068

Etymology of vegetarianism. *See* Vegetarianism–Etymology

Etymology. *See* the specific product concerned (e.g. soybeans, tofu, soybean meal, etc.)

Euronature (Paris, France). *See* Lima N.V. / Lima Foods (Sint-Martens-Latem, Belgium; and Mezin, France)

Europe. European Union (EU) or European Economic Community (EEC, also known as the Common Market), renamed the European Community (Headquarters: Brussels, Belgium). 5947, 6633, 7952, 8004, 8217, 8345

Europe–Soybean crushers (general). *See* Soybean Crushers (Europe)

Europe, Eastern (General). 5120

Europe, Eastern–Bulgaria. 2523, 2589, 3297, 3679, 6692

Europe, Eastern–Croatia (Hrvatska; Declared Independence from Yugoslavia on 21 June 1991; Includes Istria or Istrian Peninsula and Rijeka (formerly Fiume)). 1161, 1241, 2243, 3297, 7870

Europe, Eastern–Czech Republic (Ceská Republika; Including Bohemia or Cechy, and Moravia or Morava. From 1918 until 1 Jan. 1993, Western Part of Czechoslovakia, which also included Slovakia or Slovensko). 1096, 1136, 1137, 1161, 1167, 1182, 1291, 1317, 1710, 1997, 2242, 2623, 2627, 4354

Europe, Eastern–Czechoslovakia (From 1918 until 1 Jan. 1993; then divided into The Czech Republic [formerly Bohemia and Moravia], and Slovakia [officially "The Slovak Republic"]). 2623, 2627, 3153, 3190, 3234, 3373, 3679, 4354, 6692, 7651

Europe, Eastern–Hungary (Magyar Köztársaság). 1042, 1096, 1128, 1136, 1137, 1147, 1149, 1159, 1167, 1175, 1181, 1182, 1183, 1192, 1241, 1246, 1323, 1335, 1364, 1375, 1395, 1440, 1452, 1494, 1523, 1785, 1856, 1997, 2042, 2137, 2243, 2447, 3153, 3297, 3356, 3373, 3679, 5120, 7651, 7763

Europe, Eastern–Introduction of Soybeans to. Earliest document seen concerning soybeans in a certain Eastern European country. 1096, 2231

Europe, Eastern–Introduction of Soybeans to. Earliest document seen concerning soybeans or soyfoods in connection with (but not yet in) a certain Eastern European country. 578, 1042

Europe, Eastern–Introduction of Soybeans to. Earliest document seen concerning the cultivation of soybeans in a certain Eastern European country. 1096

Europe, Eastern–Introduction of Soybeans to. This document contains the earliest date seen for soybeans in a certain Eastern European country. 1096, 1530, 2231

Europe, Eastern–Introduction of Soybeans to. This document contains the earliest date seen for the cultivation of soybeans in a certain Eastern European country. 1096, 1530

Europe, Eastern–Macedonia (Formerly Yugoslav Republic of Macedonia. Officially Republika Makedonija. Declared Independence from Yugoslavia on 8 Sept. 1991). 6692

Europe, Eastern–Moldova (Moldavia until Aug. 1991; Formerly Moldavian SSR, a Soviet Republic from 1917 to 26 Dec. 1991) 3373, 3679, 6692

Europe, Eastern–Poland. 1096, 1124, 1128, 1142, 1182, 1226, 1530, 2137, 2447, 3153, 3190, 3297, 3373, 3679, 4368, 5120, 7225, 7651, 7763

Europe, Eastern–Romania (Including Moldavia and Bessarabia until 1940-44) Also spelled Rumania. 2137, 3153, 3297, 3373, 3679, 6692

Europe, Eastern–Russia (Russian Federation; Formerly Russian SFSR, a Soviet Republic from 1917 to Dec. 1991). 325, 578, 591, 1005, 1009, 1149, 1161, 1184, 1190, 1204, 1211, 1327, 1529, 1530, 1579, 1781, 1786, 1803, 1806, 1815, 1835, 1836, 1838, 1851, 1865, 1876, 1879, 1880, 1883, 1913, 1923, 1926, 1972, 1997, 2042, 2097, 2137, 2196, 2231, 2310, 2488, 2842, 2846, 3159, 3169, 3187, 3236, 3297, 3356, 3513, 3579, 3679, 6116, 6692, 6994, 7225, 7469, 7673, 7830, 8299, 8543

Europe, Eastern–Serbia and Montenegro (Named Yugoslavia before 13 March 2002). Composed of Serbia and Montenegro (Plus Autonomous Provinces of Vojvodina and Kosovo) since 17 April 1992. 7980

Europe, Eastern–Slovakia (Slovak Republic, or Slovensko; Eastern Part of Czechoslovakia from 1918 until 1 Jan. 1993) 3234

Europe, Eastern–Slovenia (Slovenija; Declared Independence from Yugoslavia on 21 June 1991). 1161, 2243, 3297, 7166, 7751, 7825, 7870

Europe, Eastern–Soybean Production, Area and Stocks–Statistics, Trends, and Analyses. 3530

Europe, Eastern–USSR (Union of Soviet Socialist Republics or Soviet Union; called Russia before 1917. Ceased to exist in Dec 1991). 2231, 2447, 2488, 2649, 2651, 2653, 2705, 2842, 2846, 3153, 3159, 3169, 3187, 3190, 3297, 3373, 3501, 3513, 3579, 3679, 3722, 4532, 4613, 5032, 5120, 5609, 6116, 6125, 6692, 6994, 7225,

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Europe, Eastern–Ukraine (Ukrayina; Formerly Ukranian SSR, a Soviet Republic from 1917 to Dec. 1991). 1529, 1530, 1710, 1767, 1856, 1916, 1997, 2137, 3297, 3373, 3679, 6692

Europe, Eastern–Yugoslavia. Composed of Serbia and Montenegro from 17 April 1992 to 13 March 2002. From 1918-1991 included the 6 Republics of Serbia / Servia, Croatia, Bosnia and Herzegovina, Slovenia, Macedonia, and Montenegro. Included Carnaro, Fiume / Rijeka / Rieka 1947-1992; Formerly Also Spelled Jugoslavia. See also Serbia and Montenegro. 3297, 3679, 6692, 7166, 7651, 7980

Europe, Western–Andorra, Principality of. 7651

Europe, Western–Austria (Österreich). 443, 1042, 1088, 1093, 1096, 1104, 1114, 1124, 1128, 1136, 1137, 1142, 1144, 1147, 1149, 1159, 1167, 1169, 1175, 1181, 1182, 1192, 1228, 1241, 1246, 1304, 1309, 1319, 1323, 1335, 1364, 1375, 1391, 1395, 1420, 1452, 1474, 1475, 1513, 1523, 1524, 1529, 1530, 1555, 1649, 1725, 1726, 1840, 1856, 1866, 1900, 1901, 1923, 1967, 1997, 2137, 2144, 2146, 2196, 2242, 2243, 2282, 2367, 2390, 2403, 2447, 2457, 2488, 2842, 3153, 3187, 3190, 3233, 3297, 3361, 3373, 3679, 3680, 4664, 5055, 6430, 6512, 6634, 6653, 6802, 6880, 6881, 7231, 7263, 7295, 7336, 7340, 7451, 7651, 7850, 7980, 8189

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Europe, Western–Denmark (Danmark; Including the Province of Greenland [Kalaallit Nunaat]). 691, 1803, 1875, 1882, 1900, 1910, 1923, 2003, 2137, 2447, 2488, 2766, 2785, 2876, 3026, 3187, 3297, 3481, 3501, 4890, 4950, 5055, 5357, 5678, 6044, 6045, 6046, 6089, 6220, 6273, 6377, 6485, 6893, 7005, 7115, 7174, 7336, 7340, 7528, 7563

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Europe, Western–Germany (Deutschland; Including East and West Germany, Oct. 1949–July 1990). 118, 125, 188, 219, 236, 237, 341, 417, 443, 457, 473, 605, 677, 693, 739, 741, 813, 862, 881, 908, 951, 1009, 1028, 1041, 1042, 1069, 1088, 1101, 1104, 1107, 1111, 1114, 1115, 1120, 1124, 1128, 1133, 1142, 1144, 1148, 1149, 1159, 1161, 1181, 1182, 1192, 1197, 1198, 1210, 1212, 1214, 1216, 1226, 1248, 1263, 1271, 1290, 1291, 1292, 1293, 1300, 1310, 1311, 1312, 1316, 1319, 1320, 1321, 1323, 1324, 1325, 1331, 1334, 1335, 1338, 1339, 1352, 1353, 1384, 1389, 1390, 1410, 1416, 1421, 1422, 1428, 1434, 1436, 1438, 1446, 1450, 1454, 1458, 1474, 1475, 1488, 1494, 1502, 1522, 1524, 1555, 1559, 1579, 1580, 1584, 1587, 1603, 1606, 1654, 1656, 1686, 1688, 1699, 1701, 1703, 1720, 1724, 1725, 1726, 1743, 1767, 1770, 1783, 1784, 1787, 1803, 1820, 1824, 1829, 1835, 1836, 1838, 1840, 1854, 1866, 1872, 1875, 1879, 1880, 1888, 1889, 1923, 1924, 1926, 1928, 1931, 1944, 1952, 1976, 1990, 2001, 2003, 2035, 2039, 2046, 2047, 2048, 2053, 2054, 2055, 2056, 2060, 2079, 2089, 2099, 2102, 2103, 2106, 2117, 2124, 2131, 2137, 2146, 2150, 2151, 2172, 2178, 2195, 2196, 2199, 2242, 2243, 2252, 2273, 2274, 2287, 2336, 2367, 2369, 2390, 2447, 2457, 2477, 2488, 2492, 2516, 2534, 2582, 2589, 2616, 2618, 2622, 2623, 2625, 2641, 2766, 2788, 2842, 2876, 2930, 3026, 3032, 3105, 3114, 3153, 3159, 3185, 3187, 3190, 3191, 3234, 3236, 3260, 3297, 3325, 3361, 3416, 3501, 3502, 3542, 3556, 3557, 3680, 3691, 3760, 3944, 3945, 3978, 4026, 4195, 4334, 4360, 4442, 4457, 4507, 4513, 4628, 4710, 4756, 4890, 4952, 5025, 5035, 5039, 5055, 5120, 5239, 5240, 5250, 5357, 5373, 5389, 5444, 5520, 5556, 5700, 5763, 5822, 5938, 5947, 6015, 6042, 6046, 6055, 6089, 6263, 6273, 6317, 6334, 6341, 6433, 6434, 6514, 6564, 6579, 6613, 6622, 6630, 6636, 6637, 6688, 6689, 6731, 6750, 6755, 6761, 6774, 6780, 6802, 6812, 6815, 6816, 6842, 6849, 6942, 6943, 6944, 6945, 6946, 6967, 7005, 7011, 7028, 7038, 7056, 7057, 7108, 7118, 7150, 7161, 7183, 7184, 7208, 7230, 7239, 7257, 7258, 7271, 7273, 7274, 7297, 7336, 7340, 7347, 7359, 7360, 7366, 7391, 7395, 7417, 7418, 7419, 7420, 7421, 7422, 7423, 7425, 7433, 7439, 7446,

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Europe, Western–Greece (Hellenic Republic–Ellinikí Dimokratía–Hellas. Including Crete, Kríti, or Creta, and Epirus or Epeiros). 873, 1444, 3297, 3501, 4766, 5565, 7323, 7645

Europe, Western–Iceland (Lýdhveldidh or Lyoveldio Island). 7651

Europe, Western–Introduction of Soy Products to. Earliest document seen concerning soybean products in a certain western European country. Soybeans as such have not yet been reported in this country. 81, 200, 567, 1803

Europe, Western–Introduction of Soy Products to. This document contains the earliest date seen for soybean products in a certain Western European country. Soybeans as such had not yet been reported by that date in this country. 567

Europe, Western–Introduction of Soybeans to or Dissemination of Soybeans from. Other or general information and leads concerning Western Europe. 1169, 1177, 1875

Europe, Western–Introduction of Soybeans to. Earliest document seen concerning soybeans in a certain Western European country. 1009, 1468, 1780, 1882, 3080

Europe, Western–Introduction of Soybeans to. Earliest document seen concerning soybeans or soyfoods in connection with (but not yet in) a certain Western European country. 46, 118, 950, 986

Europe, Western–Introduction of Soybeans to. Earliest document seen concerning the cultivation of soybeans in a certain Western European country. 1468, 1832, 3080

Europe, Western–Introduction of Soybeans to. This document contains the earliest date seen for soybeans in a certain Western European country. 1009, 1149, 1468, 1832, 2332, 3080

Europe, Western–Introduction of Soybeans to. This document contains the earliest date seen for the cultivation of soybeans in a certain Western European country. 1149, 1468, 1832, 2332, 3080

Europe, Western–Ireland, Republic of (Éire; Also Called Irish Republic). 160, 219, 227, 235, 246, 383, 891, 901, 942, 958, 976, 1061, 1444, 1803, 5055, 6089, 6273, 6293, 7651, 8149

Europe, Western–Italy (Repubblica Italiana). 430, 567, 873, 901, 1009, 1149, 1169, 1175, 1192, 1214, 1246, 1248, 1375, 1710, 1746, 1767, 1803, 1838, 1864, 1872, 1923, 1926, 2026, 2035, 2137, 2187, 2196, 2332, 2375, 2403, 2447, 2488, 2500, 2519, 2618, 2702, 2788, 2842, 3026, 3095, 3153, 3187, 3190, 3297, 3501, 3578, 3626, 3814, 4195, 4360, 4368, 4435, 4442, 4507, 4532, 4890, 4985, 5055, 5120, 5357, 5363, 5438, 5706, 5708, 5709, 5822, 5938, 5947, 6208, 6273, 7007, 7214, 7225, 7302, 7336, 7340, 7401, 7466, 7467, 7470, 7526, 7544, 7567, 7614, 7650, 7651, 7717, 7771, 7898

Europe, Western–Netherlands, Kingdom of the (Koninkrijk der Nederlanden), Including Holland. 48, 51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 82, 85, 86, 124, 125, 137, 139, 140, 141, 145, 154, 155, 158, 162, 166, 167, 172, 176, 187, 190, 200, 207, 376, 377, 378, 411, 428, 431, 435, 448, 546, 556, 571, 625, 648, 658, 675, 677, 691, 739, 758, 801, 833, 854, 904, 908, 909, 931, 968, 972, 1005, 1061, 1205, 1282, 1296, 1312, 1327, 1335, 1362, 1375, 1392, 1395, 1396, 1420, 1430, 1436, 1438, 1477, 1540, 1541, 1543, 1554, 1556, 1605, 1689, 1803, 1808, 1838, 1866, 1913, 1919, 1923, 1997, 2007, 2059, 2081, 2082, 2137, 2210, 2211, 2216, 2219, 2285, 2403, 2447, 2481, 2488, 2492, 2493, 2546, 2618, 2648, 2766, 2842, 2865, 2866, 2873, 2875, 2876, 3026, 3050, 3063, 3079, 3153, 3185, 3187, 3190, 3236, 3287, 3297, 3322, 3370, 3371, 3501, 3516, 3600, 3665, 3675, 3679, 3691, 3774, 3906, 3910, 4059, 4060, 4061, 4062, 4136, 4416, 4567, 4625, 4714, 4890, 5012, 5055, 5139, 5223, 5305, 5357, 5443, 5619, 5678, 5716, 5859, 5926, 6044, 6045, 6046, 6055, 6089, 6155, 6161, 6218, 6263, 6271, 6273, 6275, 6299, 6336, 6388, 6416, 6417, 6430, 6458, 6502, 6568, 6569, 6572, 6612, 6616, 6633, 6635, 6710, 6815, 7013, 7124, 7172, 7193, 7199, 7248, 7268, 7311, 7334, 7336, 7340, 7348, 7349, 7355, 7404, 7413, 7447, 7451, 7452, 7473, 7546, 7581, 7640, 7664, 7665, 7666, 7667, 7727, 7731, 7745, 7800, 7809, 7828, 7838, 7850, 7880, 7899, 7939, 7940, 7946, 7992, 7993, 8051, 8065, 8067, 8109, 8131, 8154, 8189, 8203, 8237, 8329, 8340, 8386, 8387, 8388, 8392, 8416, 8432, 8437, 8486, 8487, 8488, 8489, 8498, 8548

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Europe, Western–Portugal (República Portuguesa; Including Macao / Macau {Until 1999} and the Azores). 46, 385, 417, 554, 833, 2010, 3080, 3233, 4209, 4890, 5012, 5055, 5250, 5357, 5831, 6089, 6273, 6385, 7336, 7340, 7431, 7447, 7651, 8072

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Fermented Black Soybeans. Whole Soybeans Fermented with Salt. Also called Fermented Black Beans, Salted Black Beans, Salty Black Beans, Black Fermented Beans, Black Beans, Black Bean Sauce, Black Bean and Ginger Sauce, Chinese Black Beans, Preserved Black Beans or Preserved Chinese Black Beans. In Chinese (Mandarin): Shi, Doushi, or Douchi (pinyin). Tou-shih, Toushih, or Tou-ch'ih (Wade-Giles). Cantonese: Dow see, Dow si, Dow-si, Dowsi, or Do shih. In Japan: Hamanatto, Daitokuji Natto, Shiokara Natto, or Tera Natto. In the Philippines: Tausi or Taosi / Tao-si. In Malaysia or Thailand: Tao si. In Indonesia: Tao dji, Tao-dji, or Tao-djie. 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 20, 22, 23, 25, 28, 33, 37, 39, 40, 41, 43, 84, 102, 103, 116, 169, 199, 387, 554, 809, 874, 912, 970, 981, 1018, 1020, 1038, 1052, 1071, 1098, 1100, 1112, 1147, 1178, 1218, 1244, 1253, 1255, 1264, 1342, 1361, 1364, 1382, 1395, 1396, 1400, 1477, 1511, 1517, 1523, 1543, 1553, 1556, 1581, 1582, 1689, 1716, 1721, 1730, 1748, 1796, 1965, 1973, 1975, 1991, 1997, 2025, 2089, 2287, 2311, 2447, 2448, 2458, 2497, 2506, 2534, 2546, 2569, 2571, 2595, 2648, 2668, 2728, 2768, 2781, 2782, 2865, 2866, 2886, 2909, 2913, 2958, 3082, 3101, 3153, 3157, 3187, 3210, 3288, 3409, 3429, 3441, 3489, 3500, 3525, 3545, 3600, 3603, 3607, 3615, 3620, 3674, 3682, 3683, 3722, 3807, 3855, 3868, 3896, 3923, 3944, 4006, 4023, 4029, 4064, 4072, 4112, 4133, 4199, 4217, 4219, 4239, 4241, 4246, 4265, 4266, 4274, 4388, 4392, 4393, 4394, 4399, 4435, 4450, 4470, 4471, 4472, 4473, 4474, 4475, 4498, 4501, 4509, 4514, 4516, 4534, 4540, 4620, 4621, 4624, 4625, 4634, 4647, 4661, 4676, 4688, 4715, 4729, 4741, 4769, 4833, 4838, 4856, 4865, 4866, 4867, 4877, 4880, 4892, 4917, 4937, 4939, 4946, 4958, 4964, 4965, 4978, 5035, 5049, 5050, 5059, 5061, 5077, 5095, 5106, 5111, 5121, 5122, 5124, 5149, 5150, 5167, 5211, 5213, 5215, 5230, 5233, 5239, 5240, 5242, 5247, 5256, 5259, 5260, 5261, 5262, 5267, 5270, 5280, 5291, 5294, 5297, 5305, 5318, 5334, 5336, 5337, 5341, 5345, 5349, 5350, 5352, 5373, 5401, 5407, 5421, 5438, 5439, 5447, 5458, 5464, 5466, 5491, 5495, 5497, 5514, 5518, 5526, 5536, 5558, 5568, 5584, 5585, 5589, 5603, 5604, 5614, 5668, 5679, 5685, 5686, 5693, 5698, 5699, 5701, 5705, 5712, 5713, 5715, 5730, 5733, 5751, 5768, 5799, 5800, 5801, 5803, 5821, 5828, 5833, 5835, 5838, 5840, 5841, 5854, 5856, 5871, 5878, 5890, 5900, 5908, 5925, 6012, 6016, 6017, 6024, 6034, 6038, 6086, 6107, 6116, 6119, 6122, 6124, 6204, 6212, 6218, 6224, 6226, 6233, 6239, 6240, 6301, 6304, 6306, 6329, 6338, 6423, 6424, 6426, 6428, 6453, 6456, 6486, 6501, 6524, 6533, 6566, 6602, 6603, 6604, 6610, 6627, 6635, 6669, 6734, 6741, 6743, 6746, 6756, 6764, 6766, 6792, 6803, 6867, 6891, 6903, 6905, 6912, 6925, 6927, 6928, 6933, 6934, 7019, 7020, 7036, 7101, 7102, 7117, 7119, 7120, 7166, 7267, 7269, 7270, 7278, 7296, 7344, 7345, 7365, 7400, 7401, 7403, 7404, 7405, 7409, 7416, 7473, 7479, 7490, 7535, 7573, 7587, 7642, 7643, 7647, 7674, 7721, 7726, 7730, 7753, 7780, 7792, 7839, 7853, 7871, 7899, 7908, 7914, 7928, 7956, 7969, 7971, 7979, 7991, 8006, 8008, 8012, 8015, 8022, 8027, 8030, 8084, 8088, 8093, 8098, 8102, 8129, 8130, 8131, 8135, 8146, 8166, 8169, 8179, 8185, 8190, 8193, 8208, 8210, 8217, 8219, 8223, 8228, 8232, 8234, 8267, 8268, 8269, 8272, 8302, 8308, 8309, 8333, 8334, 8343, 8346, 8352, 8361, 8371, 8381, 8416, 8446, 8447, 8458, 8465, 8470, 8475, 8487, 8496, 8533, 8536

Fermented Black Soybeans from The Philippines. Tau-si, Tausi, Tao-si, Taosi. 3288, 3545, 3600, 3807, 3923, 4265, 4450, 4474, 4729, 5050, 5059, 5247, 5256, 5447, 5514, 5568, 5713, 5751, 5800,

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5803, 5878, 6086, 6119, 6207, 6218, 6226, 6301, 6501, 6635, 6905, 6925, 6927, 6928, 7101, 7278, 7642, 7643, 7721, 7780, 7971, 8130, 8131, 8533

Fermented Black Soybeans from Japan–Kuki. 8, 22, 33, 874, 1400, 1965, 4399, 5259, 5466, 6204, 8232, 8361, 8470, 8533

Fermented Black Soybeans from Japan–Other Names (Tera Natto, Shiokara Natto, Jofukuji Natto). 22, 33, 37, 4867, 5239, 5240, 5256, 5259, 5262, 6212, 6533, 6610, 8219, 8533

Fermented Black Soybeans, Homemade–How to Make at Home or on a Laboratory Scale, by Hand. 5, 4388, 4634, 4769, 4946, 6208, 7991, 8533

Fermented Black Soybeans, Unsalted or Bland (Soybean Koji)–Whole Soybeans Fermented without Salt in China (Danshi / Danchi in pinyin, or Tanshih, Tan-shih, or Tan-ch'ih in Wade-Giles). 5, 6, 41, 169, 4958, 6116, 6867, 7403, 8308, 8533

Fermented Soyfoods and Their Fermentation (General). See also Microbiology and Bacteriology–History of Early Discoveries. 1069, 1111, 1316, 1416, 1421, 1475, 1555, 1559, 1610, 1900, 1901, 1929, 1967, 2046, 2102, 2146, 2216, 2341, 2393, 2394, 2445, 2460, 2461, 2462, 2620, 2679, 2712, 2719, 2775, 3114, 3345, 3489, 3492, 3607, 3667, 3954, 3969, 3978, 4063, 4137, 4221, 4353, 4450, 4477, 4501, 4506, 4540, 4567, 4568, 4569, 4573, 4594, 4634, 4666, 4676, 4703, 4710, 4729, 4765, 4778, 4801, 4856, 4858, 4891, 4900, 4946, 4954, 4956, 4960, 4965, 5049, 5059, 5176, 5182, 5219, 5245, 5247, 5254, 5256, 5284, 5286, 5290, 5292, 5299, 5403, 5414, 5450, 5465, 5513, 5567, 5568, 5574, 5582, 5589, 5590, 5591, 5597, 5603, 5616, 5617, 5700, 5704, 5705, 5713, 5751, 5758, 5779, 5858, 5878, 5918, 5925, 5945, 6015, 6036, 6040, 6205, 6218, 6225, 6226, 6227, 6234, 6235, 6240, 6298, 6301, 6355, 6434, 6449, 6450, 6451, 6453, 6612, 6616, 6618, 6669, 6694, 6734, 6735, 6736, 6762, 6783, 6831, 6847, 6891, 6903, 6908, 6910, 6911, 6912, 6913, 6925, 6927, 6928, 6929, 6933, 6934, 6936, 7101, 7102, 7116, 7272, 7280, 7405, 7406, 7410, 7416, 7441, 7540, 7548, 7623, 7646, 7647, 7971, 7986, 8014, 8016, 8053, 8091, 8183, 8236, 8242, 8295, 8306, 8346, 8362, 8441, 8465, 8512, 8517, 8519, 8520, 8521, 8539

Fermented Specialty Soyfoods–Soy Wine, Cantonese Wine Starter (Kiu-Tsee / Tsée), Soy Fermentation Pellicle or Bean Ferment (Tou Huang), Soyidli, Dosa / Dosai, Dhokla, and Soy Ogi. 4, 6, 7, 8, 40, 41, 43, 1147, 1178, 1244, 1311, 1364, 1523, 1974, 1989, 1997, 2287, 2546, 2680, 2865, 2866, 3157, 3297, 4450, 4475, 4634, 4695, 4856, 5354, 5641, 5650, 5705, 5758, 6226, 6240, 6301, 6450, 6734, 6741, 6763, 6927, 7036, 7106, 7116, 7306, 7405, 7416, 7753, 7971, 8346

Fermented Tofu, Homemade–How to Make at Home or on a Laboratory or Community Scale, by Hand. 3493, 5059

Fermented tofu, commercial production. *See* Tofu, Fermented–Production

Fermented tofu. *See* Tofu, Fermented

Fermented whole soybeans. *See* Natto, Dawa-dawa, Kinema, Thua-nao

Ferruzzi-Montedison (Italy). Purchased Central Soya Co. (USA) in Oct. 1987. European crushing operations renamed Cereol on 1 Jan. 1990. Cereol acquired by Bunge in April 2003. 7828

Fertilizer, soybean meal used as. *See* Soybean Meal / Cake, Fiber (as from Okara), or Shoyu Presscake as a Fertilizer or Manure for the Soil

Fertilizers / Fertilizer (Incl. Foliar Sprays), Fertilization, Plant Nutrition, Mineral Needs, and Nutritional / Physiological Disorders of Soybeans (Including Chlorosis). 1042, 1384, 1385, 1876, 1881, 2081, 2082, 2265, 3032, 3433, 4695, 5700, 6965

Fiber–Okara or Soy Pulp–Etymology of This Term and Its Cognates / Relatives in Various Languages. 997, 1052, 1259, 1276, 1384, 1613, 1649, 1654, 2256, 2593, 2793, 2946, 3033, 3161, 3296, 3297, 3724, 4786, 7383

Fiber–Okara or Soy Pulp, Used as an Ingredient in Commercial Soyfood Products. 5529, 5596, 5644, 5739, 5756, 5880, 5924, 5932, 6129, 6185, 6194, 6245, 6269, 6270, 6324, 6392, 6522, 6673, 6688, 6689, 6772, 6812, 6877, 6890, 7093, 7096, 7176, 7219, 7231, 7247, 7525

Fiber–Okara or Soy Pulp, from Making Soymilk or Tofu–Value Added Uses (Not Including Livestock Feeds) and Solutions to Disposal Problems. 1649, 2283, 2946, 3741, 4408, 5093, 5211, 5213, 5327, 5529, 7050

Fiber–Okara or Soy Pulp, the Residue Left from Making Soymilk or Tofu. Also called Bean Curd Residue, Soybean Curd Residue, Dou-fu-zha (Pinyin). 41, 997, 1005, 1052, 1158, 1221, 1222, 1259, 1271, 1276, 1334, 1384, 1395, 1420, 1468, 1488, 1514, 1517, 1613, 1614, 1649, 1654, 1656, 1707, 1746, 1749, 1756, 1833, 1850, 1912, 1982, 1997, 2022, 2027, 2182, 2210, 2226, 2255, 2256, 2270, 2274, 2283, 2352, 2360, 2403, 2447, 2593, 2616, 2617, 2668, 2676, 2774, 2784, 2793, 2946, 3013, 3033, 3161, 3162, 3296, 3297, 3348, 3358, 3481, 3482, 3516, 3724, 3725, 3728, 3741, 3945, 4068, 4128, 4277, 4388, 4408, 4471, 4513, 4600, 4601, 4786, 4861, 4883, 4916, 4932, 4933, 4934, 4941, 5046, 5048, 5054, 5059, 5083, 5093, 5154, 5157, 5211, 5213, 5215, 5234, 5254, 5262, 5272, 5303, 5327, 5335, 5336, 5352, 5445, 5547, 5554, 5576, 5588, 5604, 5609, 5641, 5642, 5647, 5650, 5661, 5673, 5691, 5707, 5737, 5794, 5859, 5934, 5947, 6006, 6013, 6024, 6037, 6073, 6103, 6176, 6216, 6221, 6293, 6323, 6338, 6373, 6421, 6432, 6455, 6533, 6604, 6607, 6610, 6613, 6638, 6662, 6750, 6754, 6856, 6865, 6908, 6919, 6925, 6928, 6933, 6934, 7005, 7030, 7036, 7050, 7051, 7052, 7053, 7190, 7246, 7274, 7319, 7365, 7383, 7450, 7517, 7552, 7555, 7577, 7587, 7593, 7624, 7625, 7712, 7726, 7741, 7752, 7851, 7854, 7883, 7887, 7908, 7914, 7924, 7929, 7956, 7957, 7974, 7975, 8007, 8010, 8023, 8024, 8027, 8035, 8036, 8037, 8040, 8069, 8070, 8083, 8090, 8107, 8124, 8130, 8132, 8145, 8150, 8164, 8181, 8209, 8245, 8249, 8251, 8252, 8272, 8334, 8353, 8363, 8380, 8424

Fiber–Presscake, Residue or Dregs from Making Soy Sauce. 961, 1113, 1132, 1146, 1148, 1199, 1292, 1321, 1324, 1334, 1384, 1416, 1421, 1430, 1488, 1524, 1554, 1556, 1597, 1603, 1796, 1814, 1888, 1990, 2055, 2086, 2129, 2389, 2397, 2461, 2593, 2723, 2986, 3288, 3388, 3516, 4069, 4070, 4403, 4471, 5649, 6030, 6827, 8433

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Fiber–Seventh-day Adventist Writings or Products (Especially Early) Related to Dietary Fiber. 2073, 2400, 2491, 2965, 2979, 3655, 7789, 7862

Fiber–Soy Cotyledon Fiber / Polysaccharides (from Making Soy Protein Isolates). 7828, 7876, 7879

Fiber, Soy–Bran (Pulverized Soybean Hulls / Seed Coats) and Other Uses of Soybean Hulls. 2447, 3157, 4073, 4965, 5589, 6741, 6909, 7365, 7956

Fiber, Soy–Bran–Etymology of This Term and Its Cognates / Relatives in Various Languages. 2447, 3157

Fiber, Soy–General, for Food Use (Specific Type Unknown). 2073, 3090, 6257, 7456

Fiber, Soy–Okara, Soy Bran (from Pulverized Soybean Hulls, or Isolate Fiber)–Industry and Market Statistics, Trends, and Analyses–Individual Companies. 5596, 5932

Fiber. *See* Carbohydrates–Dietary Fiber

Fibers (Artificial Wool or Textiles Made from Spun Soy Protein Fiber, Including Azlon, Soylon, and Soy Silk / Soysilk). Industrial Uses of Soy Proteins. 1930, 1940, 2022, 3094, 3095, 3153, 3321, 3334, 4964, 7662, 8007

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Fish or Crustaceans (e.g., Shrimp) Fed Soybean Meal or Oil as Feed Using Aquaculture or Mariculture. 8117

Fish or Crustaceans raised by Aquaculture / Fish Culture / Pisiculture–Early–Soy Is Not Mentioned. 6, 7, 8, 1076, 5454, 5458

Fish, meatless. *See* Meat Alternatives–Meatless Fish, Shellfish, and Other Seafood-like Products

Fitness. *See* Physical Fitness, Physical Culture, and Exercise

Five-spice pressed tofu. *See* Tofu, Five-Spice Pressed (*Wu-hsiang Toufukan / Wuxiang Doufugan*)

Flakes, from whole soybeans. *See* Whole Soy Flakes

Flatulence or Intestinal Gas–Caused by Complex Sugars (As the Oligosaccharides Raffinose and Stachyose in Soybeans), by Fiber, or by Lactose in Milk. 1918, 2214, 2393, 2394, 2638, 2840, 4656, 5954, 7173, 7542, 7753, 7861, 7897, 7937, 8007, 8117

Flavor Problems and Ways of Solving Them (Especially Beany Off-Flavors in Soy Oil, Soymilk, Tofu, Whole Dry Soybeans, or Soy Protein Products, and Ways of Masking or Eliminating Them). 1096, 1395, 1671, 1916, 1986, 2187, 2268, 2270, 2283, 2352, 2627, 3033, 3037, 3102, 3146, 3433, 3516, 3698, 3703, 3757, 3796, 3799, 3882, 3945, 3947, 4069, 4352, 4368, 4429, 4734, 5049, 5056, 5073, 5159, 5175, 5246, 6215, 6468, 6502, 6539, 7087, 7335, 7352, 7453, 7862, 8080, 8167, 8217

Flax plant or flaxseed. *See* Linseed Oil, Linseed Cake / Meal, or the Flax / Flaxseed Plant

Flint, James. Translator, Agent and Resident Administrator (Supercargo) in China of the East India Company (England) in the Late 1700s. Died 1793. Chinese Name–Hung Jen. See also, Samuel Bowen. 714, 805, 918, 6385, 7200, 7779, 8068, 8292

Flour, soy–Imports, Exports. *See* Soy Flour–Imports, Exports, International Trade

Flour, soy. *See* Soy Flour

Fluoridation of Municipal Drinking Water with Fluorine. 5039, 5850, 7944

Fodder, soybean. *See* Feeds / Forage from Soybean Plants or Full-Fat Seeds

Food Production and Distribution Administration of USDA. *See* United States Department of Agriculture (USDA)–War Food Administration (WFA)

Food and Drug Administration (FDA, U.S. Dept. of Health and Human Services). 2569, 3642, 3756, 4492, 4672, 5627, 5637, 5726, 5822, 5850, 5942, 5960, 6359, 7337, 7362, 7370, 7434, 7504, 7656, 7784, 8144, 8145, 8178, 8204, 8311, 8332, 8345, 8545

Food for Life (Illinois). 5026, 5108, 5153, 6059

Food uses of soybeans in the USA, early. *See* Historical–Documents about Food Uses of Soybeans in the USA before 1900

Food uses of soybeans, breeding for. *See* Variety Development, Breeding, Selection, Evaluation, Growing, or Handling of Soybeans for Food Uses

Foodservice and Institutional Feeding or Catering, Including Quantity or Bulk Recipes. 2056, 5743, 6087, 6176, 6552, 6709, 6835, 7052, 7337, 7603, 7688, 7755, 7756, 7959, 7996, 8021

Foodservice and institutional feeding or catering. *See* School Lunch Program

Forage, soybean. *See* Feeds / Forage from Soybean Plants, Feeds / Forage from Soybean Plants or Full-Fat Seeds

Ford, Henry (1863-1947), and His Researchers' Work with Soy. Robert Boyer, Frank Calvert, William Atkinson, Edsel Ruddiman, Bob Smith, Holton W. "Rex" Diamond, and Jan Willemse. 2384, 2920, 2984, 3026, 3032, 3037, 3093, 3097, 3099, 3105, 3110, 3115, 3152, 3187, 3207, 3234, 3260, 3321, 3385, 3403, 3501, 3503, 3504, 4395, 4533, 5611, 5613, 7010, 7061, 7143, 7662, 7715, 7891

Foreign Agricultural Service of USDA. *See* United States Department of Agriculture (USDA)–Foreign Agricultural Service (FAS)

Formulas (early) for basic food ingredients. *See* Cookery Books

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Foundry cores, binder. *See* Binder for Sand Foundry Cores

Fouts Family of Indiana. Incl. Taylor Fouts (1880-1952), His Brothers Noah Fouts (1864-1938) and Finis Fouts (1866-1943), Their Soyland Farm (1918-1928), and Their Father Solomon Fouts (1826-1907). 2549, 2738, 3501

France. *See* Europe, Western–France

Frankfurters, hot dogs, or wieners–meatless. *See* Meat Alternatives–Meatless Sausages

Franklin, Benjamin (1706-1790, American Statesman and Philosopher), Charles Thomson, and the American Philosophical Society (APS–Philadelphia, Pennsylvania). 1230, 3504, 5198, 6361, 6385, 6950, 7339, 7715, 8068, 8194, 8358

French Oil Mill Machinery Co. (Piqua, Ohio). Maker of Soybean Crushing Equipment. Also Named French Oil Machinery Co. 2789, 4151

French Polynesia. *See* Oceania

Frozen desserts, non-dairy. *See* Soy Ice Cream

Frozen tofu. *See* Tofu, Frozen or Dried-Frozen

Fruitarianism. *See* Vegetarianism–Fruitarianism

Fuji Oil Co., Ltd. (Osaka, Japan). Incl. Fuji Purina Protein Ltd. 4472, 5120, 5443, 8162

Fuller Life Inc. (Maryville, Tennessee). Formerly Sovex Natural Foods of Collegedale, Tennessee; a Division of McKee Foods Corp. Name Changed to Blue Planet Foods in 2004. 3505, 3806, 4432, 4707, 4910, 5576, 5791, 5816, 5817, 5818, 7712, 8074, 8075

Functional Foods, Nutraceuticals / Nutriceuticals, Designer Foods, or Medicinal Foods. 8007

Funk Brothers Seed Co. (Bloomington, Illinois). Founded in 1901 by Eugene D. Funk, Sr. (1867-1944). Started selling soybeans in 1903. Started Crushing Soybeans in 1924. Renamed Funk Seeds International by 1983. 3152, 3391, 3485, 3531, 3578, 3945, 7225

Galactina S.A. (Belp, Switzerland). 6485, 6711, 7470

Galaxy Nutritional Foods, Inc. and its Soyco Foods Div. (Orlando, Florida). 7688, 8004

Gandhi, Mohandas K. ("Mahatma") (1869-1948). Vegetarian Pioneer Worldwide, and in India and England. 3187, 4082, 5079, 5228, 6282, 6708

Ganmodoki. *See* Tofu, Fried

Garbanzo beans, etymology. *See* Chickpea, Etymology

Garden Protein International (GPI). Maker of Meat Alternatives (Founded by Yves Potvin, 2003, Vancouver, British Columbia, Canada). 8327

Gardner, Henry A. *See* Paint Manufacturers' Association of the U.S.

Gas, intestinal. *See* Flatulence or Intestinal Gas

Geese, Ducks, Pheasants, and Other Poultry Fed Soybeans, Soybean Forage, or Soybean Cake or Meal as Feed. 4, 1395, 1420

Gene banks. *See* Germplasm Collections and Resources, and Gene Banks

Genealogy and Family History. See Also, Obituaries, Biographies. 3, 10, 22, 39, 45, 81, 112, 125, 188, 197, 198, 200, 205, 237, 245, 437, 443, 457, 467, 504, 512, 533, 554, 570, 571, 578, 591, 602, 604, 605, 616, 617, 624, 625, 640, 646, 647, 664, 666, 667, 676, 691, 693, 699, 714, 727, 739, 772, 808, 809, 879, 881, 1005, 1020, 1030, 1042, 1056, 1091, 1101, 1133, 1144, 1149, 1153, 1176, 1179, 1199, 1201, 1228, 1230, 1263, 1264, 1296, 1336, 1341, 1352, 1361, 1381, 1391, 1444, 1520, 1571, 1582, 1597, 1865, 1880, 2025, 2172, 2174, 2246, 2281, 2367, 2390, 2438, 2447, 2479, 2487, 2489, 2491, 2493, 2546, 2617, 2780, 3234, 3236, 3587, 3861, 4478, 4852, 5039, 5072, 5153, 5211, 5213, 5286, 5290, 5292, 5455, 5763, 5822, 5933, 6015, 6028, 6345, 6385, 6462, 6547, 6750, 6754, 7002, 7013, 7230, 7542, 7559, 8212, 8362

General Mills, Inc. (Minneapolis, Minneapolis). 4151, 4699, 4707, 5049, 5120, 5749, 7031, 7032, 7307, 7607, 7764, 8162, 8391

Genetic Engineering, Biotechnology (Biotech), and Transgenic Plants. 8007, 8080, 8126, 8178, 8455, 8484, 8500

Genetics, soybean. *See* Breeding of Soybeans and Classical Genetics

Georgeson, Charles Christian (1851-1931) of Kansas and Alaska. 1359, 1452, 2108, 2457, 3504, 3680

Germany. *See* Europe, Western–Germany

Germination / viability of seeds. *See* Seed Germination or Viability - Not Including Soy Sprouts

Germplasm Collections and Resources, Gene Banks, and Seed Stores. 5552, 6744, 7225, 7782

Ghidden Co. (The) (Chicago, Illinois, and Cleveland, Ohio). See also, Julian, Percy. 3043, 3062, 3115, 3391, 3430, 3501, 3672, 3722, 4395, 4533, 4964, 4965, 5589, 7662

Global Protein Foods (Valley Cottage, New York; and Newark, New Jersey). And Parent Company, Kyoto Tanpaku K.K. of Kyoto, Japan. 7602, 7930

Global Warming - Climate Change as Environmental Issues. 8094

Gluten, wheat. *See* Wheat Gluten

Gluten. *See* Wheat Gluten

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Glycemic Index. *See* Carbohydrates–Glycemic Index and Glycemic Load

Glycerine, explosives made from. *See* Explosives Made from Glycerine

Glycine javanica or Glycine wightii. *See* Neonotonia wightii

Glycine soja. *See* Wild Annual Soybean

Glycine species, wild perennial. *See* Wild, Perennial Relatives of the Soybean

Goats Fed Soybeans, Soybean Forage, or Soybean Cake or Meal as Feed. 961, 1151, 2908

Goitrogens / Goitrogenic Substances (Which Can Affect Thyroid Function and Cause Goiter). 3690, 6445, 6904, 7789, 8218, 8332

Golbitz, Peter. *See* Soyatech (Bar Harbor, Maine)

Government policies and programs effecting soybeans. *See* Policies and programs

Grades and grading of soybeans. *See* Seed Quality of Soybeans–Condition, Grading, and Grades (Moisture, Foreign Material, Damage, etc.)

Graham, Sylvester (1794-1851) American Health Reformer and Vegetarian (Actually Vegan) (New York). 593, 2400, 2489, 2491, 7002

Grain Farmers of Ontario (GFO). *See* Ontario Soybean Growers (Canada)

Grain Processing Corporation (GPC–Muscatine, Iowa). 7445, 8162

Grainaissance, Inc. (Emeryville, California). 5548, 6255, 6343

Granose Foods Ltd. (Newport Pagnell, Buckinghamshire [Bucks.], England). Founded in 1899 under the name The International Health Association Ltd. Renamed Granose Foods Ltd. in 1926. Acquired by Haldane Foods Group in Jan. 1991. 1563, 3335, 4564, 5308, 5309, 5678, 5810, 6631, 6909

Granules, from whole soybeans. *See* Whole Soy Flakes

Granum. *See* Natural Foods Distributors and Master Distributors in the USA–Janus

Grazing green soybean plants. *See* Feeds / Forage from Soybean Plants–Pasture, Grazing or Foraging

Great Eastern Sun and Macrobiotic Wholesale Co. (North Carolina). 6468, 6574, 6657, 6776, 7041, 7069, 7191, 7194, 7195, 7213, 7227, 7356, 7383, 7427, 7601, 7651, 7712, 7871, 8104, 8119, 8121

Green Manure, Use of Soybeans as, by Plowing / Turning In / Under a Crop of Immature / Green Soybean Plants for Soil Improvement. 1057, 1452, 1640, 1696, 1746, 1767, 1810, 1823, 1851, 1943, 1962, 1981, 2037, 2097, 2203, 2265, 2447, 2534, 2734, 2795, 2852, 2894, 2931, 2942, 2974, 2997, 3026, 3112, 3233, 3373, 3412, 3474, 3507, 3579, 3679, 3947, 4505

Green Vegetable Soybeans (Edamamé)–Machinery or Equipment Used for Harvesting or Picking, Sorting, Cleaning, and / or Shelling, Threshing, or Depodding. 8176, 8202

Green Vegetable Soybeans–Etymology of This Term and Its Cognates / Relatives in Various Languages. 1375, 2089, 2134, 2265, 2381, 2668, 2768, 2790, 2791, 2908, 2931, 2933, 2946, 2974, 3044, 3346, 3861, 4343, 7722, 7868

Green Vegetable Soybeans–Horticulture–How to Grow as a Garden Vegetable or Commercially. 1146, 1246, 1364, 1523, 1856, 1997, 2736, 3237, 3557, 3945, 4277, 4600, 4601, 5048, 5345, 5547, 7384

Green Vegetable Soybeans–Large-Seeded Vegetable-Type or Edible Soybeans, General Information About, Not Including Use As Green Vegetable Soybeans. 1356, 1421, 3485, 5301, 6500, 6569, 6614, 7868

Green Vegetable Soybeans–Leaves of the Soybean Plant Used as Food or Medicine. Called *Huo* in Chinese. 14, 40, 1973, 2497, 2865, 3045, 3741

Green Vegetable Soybeans, Marketing of. 8144

Green Vegetable Soybeans, Soybean Seedlings or Their Leaves Served as a Tender Vegetable. Called *Doumiao* or *Tou Miao* in Chinese. 40, 2865, 3079

Green Vegetable Soybeans–The Word Edamame (Japanese-Style, in the Pods), Usually Grown Using Vegetable-Type Soybeans–Appearance in European-Language Documents. 1359, 2668, 2946, 3358, 3724, 4093, 4379, 4470, 4471, 4511, 4704, 5151, 5211, 5213, 5352, 5536, 5792, 5859, 5925, 6533, 6931, 7365, 7378, 7587, 7632, 7883, 7886, 7891, 7927, 7974, 7975, 7976, 8007, 8010, 8037, 8040, 8069, 8070, 8073, 8116, 8130, 8139, 8144, 8145, 8146, 8148, 8156, 8157, 8158, 8175, 8176, 8178, 8185, 8202, 8205, 8213, 8255, 8256, 8289, 8345, 8368, 8405, 8417, 8422, 8468

Green Vegetable Soybeans–Vegetable-Type, Garden-Type, or Edible of Food-Grade Soybeans, General Information About, Including Use As Green Vegetable Soybeans. 2265, 3190, 3346, 3348, 3433, 3488, 3741, 3945, 4239, 4277, 4600, 5242, 7537, 8202

Green Vegetable Soybeans Industry and Market Statistics, Trends, and Analyses–By Geographical Region. 2852, 3321, 5098

Green Vegetable Soybeans, Usually Grown Using Vegetable-Type Soybeans. 20, 809, 997, 1095, 1142, 1144, 1146, 1147, 1149, 1172, 1178, 1192, 1246, 1283, 1287, 1349, 1351, 1352, 1359, 1364, 1375, 1391, 1458, 1468, 1492, 1516, 1520, 1522, 1523, 1525, 1556, 1597, 1640, 1654, 1696, 1767, 1785, 1792, 1808, 1819, 1840, 1851, 1856, 1887, 1965, 1973, 1997, 2022, 2045, 2074, 2088, 2089, 2092, 2118, 2134, 2173, 2193, 2203, 2205, 2207, 2209, 2213, 2217, 2218, 2222, 2224, 2256, 2257, 2260, 2263, 2265, 2268, 2270, 2271, 2277, 2283,

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2291, 2360, 2375, 2381, 2401, 2447, 2479, 2623, 2627, 2652, 2668, 2676, 2734, 2735, 2736, 2740, 2768, 2774, 2779, 2781, 2784, 2789, 2790, 2791, 2852, 2871, 2885, 2908, 2913, 2931, 2933, 2946, 2963, 2973, 2974, 2984, 2997, 3026, 3032, 3033, 3037, 3044, 3045, 3058, 3113, 3152, 3153, 3171, 3172, 3173, 3177, 3190, 3234, 3236, 3237, 3288, 3297, 3321, 3330, 3346, 3348, 3353, 3356, 3358, 3360, 3373, 3382, 3388, 3391, 3410, 3414, 3433, 3436, 3439, 3444, 3474, 3475, 3482, 3486, 3488, 3501, 3507, 3513, 3519, 3520, 3526, 3530, 3533, 3537, 3545, 3553, 3557, 3579, 3588, 3600, 3619, 3644, 3679, 3684, 3690, 3724, 3741, 3776, 3861, 3862, 3908, 3923, 3945, 3947, 4068, 4093, 4218, 4277, 4343, 4376, 4379, 4395, 4398, 4401, 4409, 4436, 4470, 4471, 4475, 4491, 4511, 4600, 4601, 4622, 4623, 4691, 4695, 4704, 4715, 4785, 4865, 4874, 4916, 4949, 4965, 4974, 4994, 5000, 5035, 5048, 5098, 5144, 5151, 5156, 5185, 5211, 5213, 5215, 5228, 5230, 5242, 5262, 5303, 5304, 5336, 5345, 5352, 5445, 5536, 5539, 5542, 5547, 5552, 5570, 5583, 5585, 5589, 5604, 5605, 5606, 5609, 5642, 5650, 5658, 5692, 5792, 5805, 5833, 5849, 5859, 5908, 5925, 6008, 6018, 6107, 6122, 6224, 6233, 6338, 6432, 6433, 6499, 6508, 6533, 6566, 6610, 6635, 6662, 6744, 6842, 6865, 6905, 6926, 6930, 6931, 7025, 7036, 7141, 7143, 7278, 7284, 7345, 7365, 7378, 7384, 7537, 7564, 7587, 7632, 7660, 7722, 7752, 7820, 7883, 7886, 7891, 7924, 7927, 7966, 7974, 7975, 7976, 8003, 8007, 8010, 8023, 8035, 8037, 8040, 8042, 8047, 8060, 8069, 8070, 8072, 8073, 8088, 8090, 8096, 8098, 8102, 8113, 8116, 8130, 8137, 8139, 8144, 8145, 8146, 8148, 8156, 8157, 8158, 8164, 8175, 8176, 8178, 8185, 8191, 8198, 8202, 8205, 8208, 8213, 8255, 8256, 8274, 8289, 8334, 8341, 8345, 8352, 8360, 8368, 8372, 8373, 8380, 8393, 8405, 8417, 8422, 8453, 8458, 8468, 8476, 8504, 8510, 8513, 8514, 8518, 8536

Green soybeans. *See* Soybean Seeds, Green

Griffith Laboratories (Chicago and Alsip, Illinois). 3391, 3512, 4359, 5048, 5547, 7758, 8162

Grilled tofu. *See* Tofu, Grilled, Chinese; Tofu, Grilled, Japanese-Style

Grits, roasted soy. *See* Roasted Whole Soy Flour (Kinako, Dark Roasted with Dry Heat, Full-Fat) and Grits

Groundnuts. *See* Peanut, Peanuts

Guam. *See* Oceania, Guam

Gunther Products, Inc. (Galesburg, Illinois. Founded by J.K. Gunter in 1949. Started in 1950. Acquired in April 1995 by Quest International, a Unit of Unilever). 5195, 5721, 6709, 8162

HVP, Bragg Liquid Aminos. *See* Bragg Liquid Aminos

HVP type soy sauce. *See* Soy Sauce, HVP Type (Non-Fermented or Semi-Fermented)

HVP. *See* Hydrolyzed Vegetable Protein (Non-Soy), or Soy Protein, Hydrolyzed (General)

Haage & Schmidt (Erfurt, Germany). 1767, 2137

Haberlandt soybean variety. *See* Soybean Varieties USA–Haberlandt

Haberlandt, Friedrich J. (1826-1878, *Hochschule fuer Bodenkultur*, Vienna, Austria). 1088, 1096, 1104, 1114, 1115, 1124, 1128, 1135, 1142, 1147, 1149, 1159, 1161, 1178, 1181, 1182, 1184, 1190, 1212, 1214, 1244, 1248, 1263, 1291, 1311, 1335, 1452, 1474, 1494, 1496, 1530, 1710, 1725, 1726, 1767, 1785, 1889, 2196, 2242, 2243, 2282, 2390, 2403, 2447, 2457

Hackleman, Jay C. (1888-1970, Extension Agronomist, Univ. of Illinois). 2549, 2738

Hain Celestial Group, Inc. (Uniondale, New York). Hain Food Group, Inc. before 30 May 2000. Hain Pure Food Co. since Nov. 1931. Founded in Oct. 1926 by Harold Hain as Hain Health Foods. 3090, 3195, 4093, 4798, 4823, 5056, 5206, 5631, 5651, 5707, 5771, 6633, 6850, 8082, 8178, 8391, 8411, 8473, 8546

Haldane Foods Group Ltd. (Newport Pagnell, Buckinghamshire, England). Including Regular Tofu Co., Realeat Foods, Direct Foods, Haldane Foods, Vegetarian Feasts, Vegetarian Cuisine, Genice, Unisoy, and Granose Foods Ltd. Acquired by The Hain Celestial Group in fall 2006. 3335, 4591, 5308, 5309, 5678, 5810, 6447, 6492, 6631, 6909, 6914, 7090, 7466, 7468, 7470, 7487, 7581, 7800, 7893

Hamanatto / Hamananatto. *See* Hamanatto Fermented Black Soybeans–from Japan

Hamanatto Fermented Black Soybeans–from Japan. In Japan called Hamanatto or (formerly) Hamananatto. 103, 2447, 2458, 2534, 2569, 2668, 2728, 2768, 2913, 2958, 3187, 3722, 4029, 4112, 4199, 4239, 4435, 4450, 4470, 4471, 4472, 4534, 4540, 4634, 4647, 4676, 4715, 4729, 4856, 4867, 4946, 4964, 5035, 5049, 5059, 5211, 5215, 5230, 5247, 5259, 5260, 5261, 5291, 5349, 5352, 5373, 5421, 5514, 5526, 5568, 5603, 5685, 5705, 5712, 5713, 5751, 5835, 5871, 5878, 5925, 6024, 6107, 6119, 6212, 6218, 6226, 6240, 6301, 6453, 6501, 6533, 6566, 6604, 6635, 6734, 6756, 6912, 6934, 7101, 7102, 7365, 7401, 7403, 7405, 7406, 7587, 7647, 7674, 7753, 7871, 7928, 7956, 7971, 7991, 8098, 8190, 8219, 8232, 8334, 8458, 8533

Hansa Muehle AG. *See* Oelmuehle Hamburg AG (Hamburg, Germany)

Hartz (Jacob) Seed Co. (Stuttgart, Arkansas). Founded by Jacob Hartz, Sr. (1888-1963) in 1942. Continued by Jake Hartz, Jr. (1920-). Acquired by Monsanto in April 1983. Headquarters at Des Moines, Iowa, since Jan. 1998. 7708, 7868, 7881, 8098

Harvesting and Threshing Soybeans (Including Use of Chemical Defoliation and Defoliants to Facilitate Harvesting). 1147, 1159, 1452, 1494, 1556, 1603, 1710, 1803, 1806, 1851, 1863, 1904, 1912, 1962, 1972, 1981, 1997, 2042, 2209, 2258, 2265, 2270, 2274, 2287, 2298, 2403, 2447, 2456, 2492, 2549, 2738, 2768, 2789, 2790, 2879, 2974, 2997, 3026, 3032, 3159, 3173, 3373, 3412, 3439, 3444, 3501, 3545, 4268, 4476, 4695, 5229, 5345, 5354, 6756, 6909, 7010, 7722, 7810

Harvey's Sauce. With Soy Sauce Used as an Ingredient. 670, 672, 694, 725, 737, 767, 771, 842, 919, 974, 1011, 1578, 1581, 2104, 2168, 4771, 4785

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Harvey's Sauce / Harvey Sauce (Soy Sauce Was Long a Major Ingredient). 413, 486, 523, 567, 575, 581, 585, 598, 620, 623, 634, 670, 672, 682, 694, 723, 725, 737, 755, 759, 760, 761, 767, 771, 804, 817, 818, 823, 828, 842, 843, 852, 858, 861, 863, 882, 902, 919, 974, 991, 1011, 1060, 1086, 1187, 1242, 1279, 1379, 1401, 1413, 1578, 1581, 1827, 1949, 2041, 2104, 2168, 2331, 2467, 2502, 2979, 4507, 4619, 4771, 4785, 5137, 6237, 7970, 8342

Hauser, Gayelord (1895-1984). Health foods pioneer, author, and lecturer in Los Angeles, California. 3090, 3520, 3760

Hawaii. *See* United States–States–Hawaii

Hay, soybean. *See* Feeds / Forage from Soybean Plants–Hay

Hayes Ashdod Ltd. (renamed Solbar Hatzor Ltd. in April 1987) and Hayes General Technology (Israel). 7828, 8348, 8349

Healing arts, alternative. *See* Medicine–Alternative

Health–Domestic science. *See* Domestic Science / Home Economics Movement in the United States

Health Food Company of New York (Started in 1875 by Frank Fuller). 1231, 1277, 1299

Health Foods–Manufacturers. 1231, 1277, 1299, 2539, 2569, 2823, 2965, 3078, 3152, 3163, 3276, 3311, 3328, 3391, 3501, 4093, 5942, 8025

Health Foods Distributors and Wholesalers–General and Other (1890s to 1960s). 5283, 7594

Health Foods Industry–Trade Associations–Natural Products Association (NPA). Named National Nutritional Foods Association (NNFA) from 1970 until 15 July 2006. Founded in 1937 as the National Health Foods Association by Anthony Berhalter of Chicago. Renamed NNFA in 1970. 6129, 6343

Health Foods Movement and Industry in United Kingdom. 1563, 1906, 2992, 3335, 3490, 4409, 4985

Health Foods Movement and Industry in the United States–General (Started in the 1890s by Seventh-day Adventists). 2470, 2846, 2877, 3238, 3343, 3697, 3889, 3892, 3908, 4093, 4544, 4712, 4985, 5047, 5610, 5707, 5771, 5899, 6041, 8111

Health Foods Restaurants, Cafeterias, and Cafés / Cafes (1890s to 1960s). 2823, 3078

Health Foods Stores / Shops (mostly USA)–Early (1877 to 1970s). 2539, 3038, 3090, 3152, 3195, 3327, 3391, 3455, 3481, 3501, 3532, 3798, 4395, 4409, 4539, 4791, 4807, 4828, 4836, 4875, 4944, 4969, 4994, 4997, 5227, 5338, 6446, 7594, 7784, 7990, 8040, 8336

Health Foods, Inc. (Des Plaines, Illinois). Wholesale Distributor of Health Foods and Natural Foods. Founded in 1936 by Samuel Middell. 5283, 7594

Health Valley (Los Angeles, then Montebello, California). Acquired by Natural Nutrition Group. Acquired by Hain Food Group of Uniondale, New York, on 18 May 1999. 5629, 5707, 7041, 7497, 8411

Health and Dietary / Food Reform Movements, especially from 1830 to the 1930s. 5072, 5830, 6211, 6344, 6359, 6963, 7002

Health claims. *See* Claim or Claims of Health Benefits–Usually Authorized by the FDA

Health food companies in England. *See* Pitman Health Food Company

Health foods distributors and wholesalers. *See* Balanced Foods, Inc. (New York City, and New Jersey). Health Foods, Inc. (Illinois). Kahan & Lessin Co. (California). Landstrom Co. (California)

Health foods manufacturers. *See* Baker, Bill, Cubbison, Sophie, El Molino Mills, Health Food Company of New York

Health foods movement in Los Angeles, California. *See* Baker, Bill, Bragg, Paul Chapprus, Carque, Otto, Cubbison, Sophie, Davis, Adelle, El Molino Mills, Hauser, Gayelord

Health foods movement in Midwest and East Coasto of USA. *See* Kellogg, John Harvey as a Health Food Pioneer

Heart disease and diet. *See* Cardiovascular Disease, Especially Heart Disease and Stroke

Hemagglutinins (Lectins or Soyin) (Proteins Which Agglutinate Red Blood Cells). 6445, 7753

Hemp Oil or Hempseed Oil (from the seeds of *Cannabis sativa*). 808, 999, 1021, 1244, 1472, 1497, 1517, 1815, 2497

Hemp (*Cannabis sativa*)–Used as a Source of Fiber for Textiles or Paper, Protein (Edestin), or Seeds (*Asanomi*). Includes Marijuana / Marihuana. See Also Hemp Oil or Hempseed Oil. Does NOT include Wild Hemp (*Sesbania macrocarpa*) or Sunn Hemp (*Crotolaria juncea*) or Manila hemp (*Musa textilis*, a species of plantain). 2, 4, 7, 20, 23, 24, 220, 425, 465, 507, 515, 665, 758, 808, 968, 999, 1021, 1061, 1113, 1156, 1244, 1323, 1324, 1387, 1472, 1497, 1718, 1736, 1865, 2330, 2400, 2668, 5440, 7119, 7267, 7537, 7899, 8131, 8416

Henselwerk GmbH (Magstadt near Stuttgart, Germany). 7422

Herbicides. *See* Weeds–Control and Herbicide Use

Heuschen-Schrouff B.V. (Landgraaf, Netherlands). Including Its Subsidiary SoFine Foods (The Latter Acquired by Vandemoortele Group on 23 June 2006). 7336, 7348, 7452

Hexane. *See* Solvents

Higashimaru. *See* Soy Sauce Companies (Asia)

Higeta. *See* Soy Sauce Companies (Asia)

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Hinoichi : Hinode, House Foods & Yamauchi Inc *See* House Foods America Corporation (Los Angeles, California)

Historical Documents (Published After 1923) About Soybeans or Soyfoods Before 1900. 2332, 2567, 2769, 3865, 4514, 4565, 5857, 6385, 7200, 7268, 7280, 7534, 7546, 7640, 7664, 7665, 7666, 7667, 7727, 7731, 7863, 8110, 8179, 8193, 8208, 8340, 8361, 8405, 8426

Historical–Documents (Published After 1923) About Soybeans or Soyfoods from 1900 to 1923 7117

Historical Documents about Food Uses of Soybeans in the USA before 1900. 201, 202, 211, 215, 219, 220, 225, 235, 246, 248, 252, 255, 256, 259, 373, 503, 512, 533, 603, 664, 750, 785, 797, 876, 878, 879, 881, 905, 911, 968, 1051, 1057, 1144, 1176, 1177, 1179, 1182, 1230, 1326, 1346, 1385, 1396, 1440, 1458, 1466, 1470, 1503, 1522

Historical–Documents on Soybeans or Soyfoods Published Before 1900. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 127, 128, 129, 130, 131, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 145, 146, 147, 148, 149, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 176, 178, 179, 180, 181, 182, 183, 185, 186, 187, 188, 189, 190, 191, 192, 193, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 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Imagine Foods, Inc. (Palo Alto & San Carlos, California). Rice Dream - Beverage Manufactured by California Natural Products (CNP, Manteca, California). 5289, 6704, 7436, 7827, 7874, 7948, 8411

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Imports. *See* Trade of Soybeans, Oil & Meal, or see Individual Soyfoods Imported

INARI, Ltd. *See* Sycamore Creek Co

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India. *See* Asia, South–India

Indian Council of Agricultural Research (ICAR). *See* Asia, South India. Work of the Indian Council of Agricultural Research (ICAR)

Indian Institute of Science. *See* Asia, South–India. Work of the Indian Institute of Science (Bangalore) with Soyabeans in India

Indiana Soy Pioneers. *See* Central Soya Co., Fouts Family, Meharry

Indiana. *See* United States–States–Indiana

Indonesia. *See* Asia, Southeast. Indonesia

Indonesian restaurants outside Indonesia, or Indonesian recipes that use soy ingredients outside Indonesia. *See* Asia, Southeast–Indonesia. Indonesian Restaurants Outside Indonesia and Soy Ingredients Used in Indonesian-Style Recipes Restaurants Outside Japan

Indonesian soy sauce, etymology. *See* Soy Sauce, Indonesian Style Etymology

Indonesian-style fermented soybean paste. *See* Tauco. Indonesian-Style Fermented Soybean Paste

Indonesian-style miso, etymology of. *See* Miso, Indonesian-Style

Indonesian-style soy sauce. *See* Soy Sauce, Indonesian Style or from the Dutch East Indies (Kecap, Kécap, Kechap, Ketjap, Kétjap) Ketchup / Catsup

Indonesians Overseas, Especially Work with Soy. 4059, 4258, 4419, 4753, 5287, 5289, 5987, 5988, 5990, 6218, 6572, 6612, 8363, 8388

Industrial Uses of Soy Oil (General) 1837, 1904, 2118, 2137, 2210, 2211, 2252, 2254, 2282, 2401, 2518, 2785, 2876, 3016, 3045, 3049, 3097, 3105, 3319, 3321, 3355, 3373, 3385, 3463, 3503, 3947, 4343, 5049, 7662

Industrial Uses of Soy Proteins–Etymology of This Term and Its Cognates / Relatives in Various Languages. 1940, 3095

Industrial Uses of Soy Proteins–General and Minor Uses–Galalith, Sojalith, Cosmetics (Lotions and Soaps), Rubber Substitutes, Insecticides, etc. See also Culture Media as for Antibiotics Industry 1940, 1942, 1982, 2008, 2022, 2099, 2118, 2210, 2211, 2393, 2394, 2403, 2518, 2534, 2735, 2779, 2876, 3016, 3049, 3079, 3105, 3152, 3319, 3334, 3352, 3355, 3373, 3385, 3403, 3409, 3430, 3463, 3503, 3680, 4343, 4421, 4494, 4505

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Industrial uses of soy oil as a drying oil. *See* Adhesives, Asphalt Preservation Agents, Caulking Compounds, Artificial Leather, and Other Minor or General Uses, Ink for Printing, Paints, Varnishes, Enamels, Lacquers, and Other Protective / Decorative Coatings, Rubber Substitutes or Artificial / Synthetic Rubber (Factice)

Industrial uses of soy oil as a non-drying oil. *See* Lubricants, Lubricating Agents, and Axle Grease for Carts

Industrial uses of soy oil. *See* Fatty Acids for Non-Drying or Drying Applications (As in Hot-Melt Glues or the Curing Component of Epoxy Glues)

Industrial uses of soy proteins (including soy flour). *See* Adhesives or Glues for Plywood, Other Woods, Wallpaper, or Building Materials

Industrial uses of soy proteins. *See* Fibers (Artificial Wool or Textiles Made from Spun Soy Protein Fibers, Including Azlon, Soylon, and Soy Silk / Soysilk), Paints (Especially Water-Based Latex Paints), Paper Coatings or Sizings, or Textile Sizing, Plastics (Including Molded Plastic Parts, Plastic Film, Disposable Eating Utensils and Tableware From Spoons to Plates, and Packaging Materials)

Industrial uses of soybeans or soy products. *See* Culture Media / Medium (for Growing Microorganisms)

Industrial uses of soybeans. *See* Chemurgy, the Farm Chemurgic Movement, and the Farm Chemurgic Council (USA, 1930s to 1950s) Including, Lecithin, Soy–Industrial Uses, Soybean Meal / Cake, Fiber (as from Okara), or Shoyu Presscake as a Fertilizer or Manure for the Soil

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Infinity Food Co. Renamed Infinity Company by 1973 (New York City, New York). 4487, 4798, 4890, 4987, 5026, 5153, 6059, 6091, 6092, 6359, 7608, 7609, 7654, 7658, 7674, 7847

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Information. *See* Libraries with a Significant Interest in Soy, Library Science and Services Related to Soy, Reference Books and Other Reference Resources

Ink for Printing. Industrial Uses of Soy Oil as a Drying Oil. 1972, 2205, 2265, 2291, 2390, 2497, 2785, 2879, 2887, 2913, 3079, 3104, 3105, 3115, 3196, 3352, 4628, 7767

Innoval / Sojalpe (Affiliate of Les Silos de Valence–Valence, France). 7121, 7453, 7470, 7800

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International Institute of Agriculture (IIA) (Rome). 2203, 3112, 3153, 3187

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International Vegetarian Union (IVU. Founded 1908; and its British Predecessor the Vegetarian Federal Union, founded 1889), and Other International Vegetarian Societies, Conferences, Congresses, and Unions. 4488, 5192

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Internment / relocation camps in the United States. *See* Japanese the the United States–Work with Soy in Internment / Relocation Camps during World War II

Intestinal Flora / Bacteria and Toxemia–Incl. Changing and Reforming (*L. Acidophilus, Bifidus, L. Bulgaricus* etc.). 2650, 2788, 3478, 5239, 5240, 6301, 7817

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Iodine number. *See* Soy Oil Constants–Iodine Number

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Island Spring, Inc. (Vashon, Washington). 5368, 6110, 6119, 6511, 6648, 6695, 7307, 7555, 7607, 7800, 7889, 7958

Isoflavone or Phytoestrogen Content of Soyfoods, Soy-based Products, Soy Ingredients, and Soybean Varieties (Esp. Genistein, Daidzein, and Glycitein). 6052, 7434, 7765, 7817, 7961, 8524

Isoflavones in soybeans and soyfoods. *See* Estrogens, Incl. Genistein, Daidzein, etc.

Isolated soy proteins. *See* Soy Proteins–Isolates

Israel. *See* Asia, Middle East–Israel and Judaism

Ito San soybean variety. *See* Soybean Varieties USA–Ito San

Itona (Wigan, Lancashire, England). Maker of Soymilk, Soymilk Products, Soynuts, and Meat Alternatives. 5199

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Jack Bean. *Canavalia ensiformis* (L.) D.C. Also Called Sword Bean (Erroneously, it is *Canavalia gladiata*) and Horse Bean (Rarely). Chinese–Daodou (pinyin); formerly Tao-tou (Wade-Giles). 23, 1386, 1451, 1498, 3690, 4514, 4916, 4941, 5642, 5650, 6228, 6908

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Jang Korean-Style Fermented Soybean Paste. Includes Doenjang / Toenjang / Doen Jang / Daen Chang (Soybean Miso), and Kochujang / Koch'ujang / Gochujang / Kochu Jang / Ko Chu Jang / Kochu Chang (Red-Pepper and Soybean Paste). 1207, 1491, 1547, 2223, 2737, 3502, 3619, 3676, 4102, 4203, 4215, 4532, 4651, 4652, 4754, 4772, 4858, 4954, 4956, 4964, 5098, 5163, 5211, 5230, 5286, 5291, 5292, 5300, 5313, 5373, 5402, 5450, 5466, 5488, 5679, 5693, 5751, 5860, 5878, 5900, 5905, 6018, 6223, 6242, 6301, 6345, 6436, 6484, 6494, 6751, 6752, 6827, 6867, 6934, 7036, 7112, 7114, 7275, 7346, 7365, 7647, 7720, 7786, 7971, 8012, 8017, 8087, 8130, 8212, 8227, 8265, 8268, 8271, 8305, 8306, 8310, 8362, 8379, 8381, 8382, 8452, 8464, 8478, 8516

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Japan Shokuhin Sogo Kenkyujo. *See* National Food Research Institute (NFRI) (Tsukuba, Ibaraki-ken, Japan)

Japan Trade (Imports or Exports) of Soybeans, Soy Oil, and / or Soybean Meal Statistics See also Trade (International), 1880

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Japanese restaurants outside Japan, or Japanese recipes that use soy ingredients outside Japan. *See* Asia, East–Japan–Japanese

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Restaurants or Grocery Stores Outside Japan

Jerky, Soy. Including Jerky-Flavored Soy Products. See also: Tofu, Flavored / Seasoned and Baked, Grilled, Braised or Roasted. 5647, 5757, 5904, 6073, 6216, 6373, 7006, 7215, 7517, 7749, 7882, 8181, 8285, 8286

Jerky, tofu. *See* Tofu, Flavored / Seasoned and Baked, Broiled, Grilled, Braised or Roasted

Jiang (Chinese-Style Fermented Soybean Paste), Made with a Significant Proportion of Wheat or Barley. 8, 23, 42, 102, 2497

Jiang, Chinese-Style Fermented Soybean Paste / Miso (Soybean Jiang {doujiang} or Chiang / Tou Chiang [Wade-Giles]). Includes *Tuong* from Indochina, Tao-Tjiung and Tao-Tjiong from Indonesia. 4, 6, 7, 8, 9, 11, 13, 14, 15, 17, 18, 20, 22, 23, 25, 28, 37, 39, 40, 41, 42, 43, 84, 102, 116, 169, 199, 554, 912, 981, 1071, 1184, 1361, 1382, 1438, 1484, 1517, 1542, 1572, 1649, 1652, 1707, 1719, 1756, 1838, 1862, 1912, 1923, 1975, 1985, 1989, 1997, 2025, 2045, 2079, 2131, 2137, 2240, 2241, 2274, 2277, 2279, 2285, 2287, 2360, 2375, 2390, 2497, 2571, 2590, 2649, 2657, 2766, 2782, 2828, 2842, 2871, 2890, 3077, 3080, 3153, 3157, 3177, 3184, 3441, 3556, 3563, 3582, 3583, 3620, 3626, 3674, 3814, 3868, 3896, 4099, 4108, 4117, 4170, 4218, 4392, 4396, 4399, 4407, 4455, 4509, 4513, 4514, 4568, 4620, 4621, 4659, 4695, 4880, 4911, 4939, 5064, 5111, 5121, 5259, 5260, 5261, 5266, 5267, 5271, 5280, 5291, 5297, 5305, 5326, 5458, 5585, 5603, 5637, 5715, 5735, 5751, 5763, 5800, 5840, 5856, 5857, 5872, 5878, 5890, 5903, 5971, 5978, 5985, 6024, 6065, 6100, 6125, 6329, 6490, 6524, 6691, 6741, 6746, 6902, 6933, 6934, 7117, 7230, 7267, 7270, 7280, 7629, 7647, 7794, 7899, 7991, 8033, 8098, 8169, 8179, 8193, 8208, 8217, 8237, 8267, 8343, 8361, 8371, 8372, 8418, 8458, 8465, 8467, 8470, 8504, 8549

Jiang–Early Non-Soy Pase Made with Meat or Fish in China or Japan. 2, 199, 1052, 3682, 3683

Job's Tears (*Coix lachryma-jobi;* formerly *Coix lacryma*). Called *Hatomugi* or *Hato Mugi* in Japanese, and Adlay in South Asia. Sometimes mistakenly called "Pearl Barley" (Since it is unrelated to Barley). 677, 808, 994, 1199, 1244, 1387, 1431, 2330, 2448, 2915, 5458, 6808, 7029, 7726, 7789, 7914, 7928, 8097, 8130, 8272

Johnson Family of Stryker, Williams County, Ohio. Including (1) Edward Franklin "E.F. Soybean" Johnson (1889-1961) of Johnson Seed Farms (Stryker, Ohio), Delphos Grain and Soya Processing Co. (Ohio), and Ralston Purina Company (Missouri); (2) Elmer Solomon Johnson (1879-1920); (3) Perhaps E.C. Johnson and Hon Solomon Johnson (1850-1918). 3019, 3485, 3531

Jonathan P.V.B.A. (Kapellen, Belgium). 5395, 5396, 5752, 5753, 5754, 5807, 5898, 5915, 5991, 6089, 6099, 6250, 6273, 6802, 6805, 6875, 6876, 7193, 7232, 7259, 7260, 7348, 7470, 7675

Juicer: Etymology of This Term and Its Cognates / Relatives in Various Languages. 4910, 8250

Juicer, Electric or Manual (Kitchen Appliance / Utensil): Early Records Only. 3078, 3327, 3343, 4910, 5631, 8250

Kaempfer, Engelbert (1651-1716)–German physician and traveler. 118, 125, 172, 188, 219, 225, 235, 237, 246, 294, 324, 373, 384, 385, 417, 440, 443, 512, 518, 569, 615, 739, 741, 797, 1005, 1114, 1147, 1246, 1298, 1364, 1523, 1856, 1928, 2447, 2493, 3079, 3691, 8549

Kahan & Lessin Co. (Los Angeles then Compton, California). Wholesale Distributor of Health Foods and Natural Foods. Formed in 1945 by Merger of Two Companies Founded in 1932 and 1935 Respectively. 5283, 7589, 7594, 7608, 7848

Kanjang / Ganjang–Korean-Style Fermented Soy Sauce. Also spelled Kan Jang / Gan Jang. 1196, 1491, 1495, 1547, 1549, 1717, 2223, 2737, 3502, 3588, 3619, 3676, 3997, 3998, 4000, 4001, 4054, 4055, 4056, 4057, 4102, 4123, 4125, 4203, 4215, 4246, 4263, 4344, 4346, 4347, 4348, 4380, 4381, 4383, 4384, 4385, 4386, 4387, 4405, 4422, 4449, 4465, 4467, 4559, 4561, 4609, 4683, 4684, 4687, 4755, 4761, 4762, 4763, 4764, 4772, 4845, 4846, 4857, 4858, 4896, 4898, 4923, 4954, 4956, 5098, 5117, 5130, 5163, 5218, 5256, 5265, 5286, 5292, 5300, 5350, 5352, 5402, 5450, 5488, 5679, 5693, 5713, 5751, 5860, 5878, 5905, 5998, 6055, 6095, 6171, 6193, 6218, 6220, 6242, 6301, 6345, 6347, 6484, 6494, 6501, 6524, 6635, 6717, 6751, 6752, 6766, 6809, 6827, 6867, 6934, 7036, 7101, 7112, 7114, 7145, 7275, 7346, 7720, 7786, 7971, 7998, 8084, 8088, 8190, 8212, 8220, 8227, 8242, 8265, 8268, 8269, 8271, 8305, 8306, 8310, 8362, 8379, 8381, 8384, 8412, 8452, 8464, 8476, 8478, 8479, 8516

Kecap manis. *See* Soy Sauce, Indonesian Sweet, Kecap Manis / Ketjap Manis

Kecap, Kechap, Ketjap, Ketchup. *See* Soy Sauce, Indonesian Style or from the Dutch East Indies (Kecap, Kecap, Kechap, Ketjap, Ketjap)

Kefir, soy. *See* Soymilk, Fermented–Kefir

Kellogg Co. (breakfast cereals, Battle Creek, Michigan). *See* Kellogg, Will Keith, / Kellogg Company

Kellogg, John Harvey (M.D.) as a Health Food Pioneer. 1277

Kellogg, John Harvey (M.D.), Sanitas Nut Food Co. and Battle Creek Food Co. (Battle Creek, Michigan). Battle Creek Foods Was Acquired by Worthington Foods in 1960. 1277, 1450, 1591, 2073, 2119, 2311, 2337, 2348, 2382, 2400, 2401, 2402, 2489, 2490, 2491, 2539, 2650, 2788, 2796, 2823, 2833, 2979, 3078, 3152, 3158, 3163, 3175, 3179, 3195, 3391, 3455, 3589, 4844, 5224, 7862, 8345

Kellogg, Will Keith, Kellogg's Toasted Corn Flake Co. Later Kellogg Company (of breakfast cereal fame, Battle Creek, Michigan). 8345

Ketchup (Western Style, without Soy), Homemade–How to Make at Home or on a Laboratory Scale, by Hand. Including Mushroom Ketchup, Walnut Ketchup, etc. 129, 132, 148, 149, 161, 163, 164, 173, 178, 193, 271, 359, 434, 516, 519, 676, 1029, 1277, 2089, 2087, 2120, 5225

Ketchup, Western-Style, Other, Such as Anchovy-, Apple-, Cockle-, Cockle & Mussel-, Cucumber-, English-, Grape-, Lemon-, Lobster-,

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Mussel-, Pontac- or Pontack-, Pudding-, Sea-, Shallot-, Tartarian-, White-, Windermere-, Wolfram-, etc. 131, 144, 149, 151, 163, 173, 178, 192, 321, 337, 347, 353, 354, 393, 400, 404, 415, 453, 478, 507, 516, 519, 526, 532, 537, 558, 561, 570, 572, 579, 594, 647, 670, 676, 678, 737, 767, 840, 987, 1091, 1299, 1425, 1578, 2168, 3756, 6166, 6523, 6690

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Ketchup and Soy Sauce, relationship. *See* Soy Sauce and Ketchup: Key Records Concerning the Relationship between the Two

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Ketchup, Mushroom (Mushroom Ketchup, Western-Style), or Ketchup in which Mushrooms are the Main Ingredient. 129, 131, 132, 135, 144, 148, 161, 164, 173, 271, 319, 323, 330, 332, 350, 375, 383, 394, 397, 398, 399, 402, 405, 407, 408, 412, 418, 421, 422, 426, 427, 433, 442, 452, 453, 454, 464, 475, 478, 479, 481, 482, 486, 487, 500, 506, 507, 509, 511, 513, 515, 516, 519, 521, 524, 526, 531, 535, 542, 547, 551, 555, 561, 562, 570, 572, 574, 575, 579, 587, 601, 604, 612, 613, 617, 622, 628, 637, 639, 640, 645, 647, 654, 657, 659, 663, 670, 672, 676, 678, 682, 687, 694, 697, 707, 710, 717, 721, 722, 725, 737, 744, 749, 755, 762, 765, 766, 767, 771, 773, 778, 780, 788, 817, 818, 823, 828, 830, 831, 835, 843, 852, 863, 869, 871, 882, 893, 919, 930, 939, 940, 960, 974, 975, 978, 985, 987, 988, 990, 991, 1010, 1026, 1047, 1091, 1097, 1125, 1145, 1166, 1225, 1242, 1256, 1265, 1267, 1279, 1284, 1299, 1347, 1379, 1398, 1401, 1404, 1417, 1423, 1439, 1447, 1476, 1572, 1578, 1581, 1694, 1898, 1961, 1976, 1983, 2168, 2467, 3247, 3756, 4276, 4785, 6061, 6166, 6523, 6690, 7970, 8131, 8386, 8387, 8416, 8489

Ketchup, Oyster (Oyster Ketchup, Western-Style), or Ketchup in which Oysters are the Main Ingredient. 271, 330, 337, 340, 354, 359, 393, 394, 398, 399, 402, 407, 427, 442, 452, 454, 464, 475, 478, 524, 570, 604, 647, 676, 737, 767, 987, 1299, 1578, 6166, 6690, 8131, 8387, 8489

Ketchup, Tomato (Tomato / Tomata Ketchup, Western-Style), or Ketchup in which Tomatoes are the Main Ingredient. 570, 654, 682, 697, 717, 721, 737, 762, 766, 767, 788, 817, 818, 827, 828, 831, 840, 857, 869, 882, 884, 893, 895, 930, 1029, 1054, 1085, 1123, 1225, 1277, 1279, 1299, 1402, 1426, 1476, 1572, 1578, 1581, 1898, 1961, 1976, 2009, 2087, 2120, 2168, 2268, 2471, 3756, 4270, 4394, 4771, 4783, 4794, 5040, 5225, 5318, 5362, 5649, 6523, 6690, 7270, 7964, 7970, 8088, 8131, 8382, 8386, 8388, 8416, 8489, 8498

Ketchup, Walnut (Walnut Ketchup, Western-Style), or Ketchup in which Walnuts are the Main Ingredient. 193, 271, 330, 337, 346, 350, 359, 392, 394, 398, 399, 405, 408, 418, 427, 433, 434, 442, 452, 460, 464, 475, 478, 479, 482, 486, 487, 500, 511, 516, 519, 524, 526, 535, 547, 551, 555, 561, 562, 570, 572, 574, 579, 587, 601, 604, 612, 613, 617, 622, 628, 639, 640, 645, 647, 654, 657, 659, 663, 670, 672, 676, 682, 687, 697, 707, 710, 717, 725, 737, 740, 744, 749, 752, 755, 762, 765, 766, 767, 771, 778, 779, 780, 788, 827, 830, 831, 840, 843, 852, 857, 861, 863, 869, 882, 884, 893, 919, 930, 940, 960, 974, 978, 985, 987, 991, 1010, 1026, 1046, 1047, 1054, 1225, 1242, 1256, 1265, 1267, 1279, 1284, 1299, 1347, 1379, 1398, 1401, 1404, 1415, 1417, 1423, 1439, 1447, 1476, 1578, 1581, 1667, 1694, 1897, 1949, 1961, 2041, 2087, 2104, 2168, 2467,

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Ketchup, price of. *See* Price of Ketchup / Catsup

Ketjap manis. *See* Soy Sauce, Indonesian Sweet, Kecap Manis / Ketjap Manis

Kibun. *See* Soymilk Companies (Asia)

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Kikkoman Corporation (Tokyo, Walworth, Wisconsin; and Worldwide). Incl. 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8203, 8210, 8219, 8222, 8232, 8238, 8244, 8246, 8248, 8269, 8279, 8281, 8297, 8298, 8299, 8300, 8301, 8313, 8321, 8326, 8329, 8337, 8343, 8346, 8356, 8361, 8371, 8391, 8398, 8400, 8404, 8411, 8412, 8413, 8414, 8439, 8440, 8463, 8490, 8499, 8509, 8528, 8530, 8548

Kinako. *See* Roasted Whole Soy Flour (Kinako–Dark Roasted with Dry Heat, Full-Fat) and Grits

Kinema (Whole Soybeans Fermented with *Bacillus subtilis* strains from Eastern Nepal, Darjeeling Hills, Sikkim, and South Bhutan). Occasionally spelled Kenima. Close relatives are from Northeast India are. *Aakhone, Akhoni, Akhuni* (Nagaland). *Bekang* (Mizoram). *Hawaijar* (Manipur). *Peruyyan* (Arunachal Pradesh). *Tungrymbai* (Meghalaya). 4715, 4958, 5552, 6119, 6122, 6224, 6225, 6866, 6867, 6925, 6927, 6928, 6934, 7101, 7102, 7107, 7109, 7405, 7647, 7750, 7753, 8053, 8190, 8222, 8308, 8512, 8518, 8519, 8521

Kiribati. *See* Oceania

Kloss, Jethro (1863-1946) and his Book *Back to Eden*. 2970, 2971, 3152, 3296, 5791, 6216, 7789

Kloss, Jethro. *See* Seventh-day Adventists–Cookbooks and Their Authors

Koji (Cereal Grains {Especially Rice or Barley} and / or Soybeans Fermented with a Mold, Especially *Aspergillus oryzae*) or Koji Starter. Chinese *Qu* / Pinyin or Ch'u / Wade-Giles. 1, 4, 6, 7, 8, 19, 22, 40, 41, 43, 46, 49, 95, 118, 324, 341, 968, 997, 1039, 1055, 1090, 1108, 1111, 1129, 1132, 1136, 1146, 1148, 1164, 1172, 1190, 1213, 1221, 1226, 1259, 1263, 1271, 1276, 1310, 1316, 1322, 1324,

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Koji, Red Rice (Also Called Fermented Red Rice, Ang-Kak / Angkak, Hongzao or Hong Qu / Hongqu in Chinese / Pinyin, Hung Ch'u in Chinese / Wade-Giles, or Beni-Koji in Japanese) Made with the Mold *Monascus purpureus* Went, and Used as a Natural Red Coloring Agent (as with Fermented Tofu) 23, 39, 42, 84, 1597, 2287, 2289, 2355, 2371, 2679, 3493, 3773, 3807, 4394, 4450, 4474, 4568, 4576, 4729, 4939, 5247, 5285, 5513, 5568, 5621, 5713, 5800, 5856, 6226, 6240, 6301, 6903, 6934, 7401, 7611, 7753, 7952, 7971, 8030, 8169, 8190, 8228, 8268, 8418

Koji, Soybean (Soybeans Fermented with a Mold, Especially *Aspergillus oryzae*), Such as Miso-dama or Meju, 5, 6, 8, 11, 22, 23, 25, 40, 41, 116, 169, 601, 1556, 2046, 2391, 2617, 2737, 3761, 4000, 4048, 4055, 4056, 4121, 4123, 4203, 4235, 4344, 4347, 4348, 4384, 4385, 4450, 4651, 4652, 4755, 4764, 4956, 5259, 5286, 5292, 5355, 5402, 5488, 5514, 5679, 5693, 5713, 5900, 6017, 6030, 6220, 6223, 6301, 6610, 6747, 6751, 6752, 6827, 6867, 6934, 7114, 7148, 7403, 7633, 7634, 7720, 7786, 7919, 8121, 8227, 8452, 8464

Korea *See* Asia, East–Korea

Korean-style fermented soy sauce *See* Kanjang–Korean-Style Fermented Soy Sauce

Korean-style fermented soybean paste *See* Jang–Korean-Style Fermented Soybean Paste

Korean-style miso, etymology of, *See* Miso, Korean-Style

Korean-style natto, etymology, *See* Natto, Korean- Style

Korean-style natto, *See* Natto, Korean-Style–Chungkook-Jang / Chung Kook Jang / Chungkuk Jang

Korean-style recipes, soyfoods used in *See* Asia, East–Korea–Soy Ingredients Used in Korean-Style Recipes

Koreans Overseas, Especially Work with Soy, 1668, 2428, 2482, 2848, 3378, 3465, 3559, 3787, 4504, 4905, 5251, 5265, 5368, 5969, 6095, 6105, 6328, 6343, 6496, 6674, 6676, 6771, 6954, 6955, 7008, 7072, 7085, 7152, 7161, 7170, 7203, 7234, 7247, 7261, 7288, 7307, 7383, 7507, 7555, 7607, 7998, 8355, 8360

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Kraft Foods Inc. (Work with Soy), Including Anderson Clayton, Boca Burger, and Balance Bar 5743, 6160, 7153, 7297, 7307, 8162, 8178

Kudzu or Kuzu (*Pueraria montana* var. *lobata*, Formerly *Pueraria lobata, Pueraria thunbergiana, Pachyrhizus thunbergianus, Dolichos lobatus*), For Rhodesian Kudzu Vine see *Neonotonia wightii*, See also Tropical Kudzu or Puero (*Pueraria phaseoloides*) 118, 677, 994, 1030, 1090, 1113, 1120, 1132, 1170, 1188, 1220, 1224, 1235, 1244, 1246, 1263, 1271, 1303, 1323, 1334, 1364, 1386, 1431, 1514, 1523, 1562, 1581, 1654, 1723, 2084, 2448, 2740, 2915, 4195, 4360, 4430, 4442, 4457, 4478, 4539, 4590, 4591, 4677, 4690, 4697, 4698, 4712, 4720, 4766, 4832, 4837, 4841, 4843, 4865, 4873, 4883, 4932, 4933, 4934, 4949, 4972, 4975, 4987, 5018, 5046, 5061,

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Kuki. *See* Fermented Black Soybeans from Japan–Kuki

Kushi, Michio and Aveline–Their Life and Work with Macrobiotics, and Organizations They Founded or Inspired 3642, 4457, 4487, 4549, 4607, 4654, 4690, 4821, 4823, 4875, 4909, 4987, 5026, 5027, 5051, 5055, 5078, 5080, 5082, 5189, 5198, 5287, 5382, 5391, 5392, 5395, 5413, 5502, 5535, 5557, 5661, 5775, 5794, 5940, 5970, 6053, 6057, 6059, 6060, 6077, 6081, 6082, 6089, 6091, 6092, 6156, 6157, 6159, 6165, 6219, 6230, 6248, 6307, 6310, 6347, 6359, 6440, 6481, 6521, 6574, 6652, 6657, 6680, 6701, 6745, 6776, 6802, 6994, 7017, 7197, 7288, 7383, 7477, 7608, 7651, 7654, 7655, 7656, 7658, 7669, 7670, 7671, 7672, 7673, 7674, 7675, 7679, 7680, 7703, 7706, 7836, 7847, 7848, 7874, 7898, 7918, 7941, 7948, 7968, 8094, 8097, 8120, 8151, 8482, 8522, 8523, 8530, 8531, 8549

Kuzu. *See* Kudzu or Kuzu (*Pueraria...*)

Kyoto Food Corp. USA (Terre Haute, Indiana). 7602

La Choy Food Products, Inc. Purchased in Sept. 1943 by Beatrice Creamery Co. 2428, 2496, 2513, 2545, 2552, 2568, 2570, 2594, 2630, 2678, 2704, 2710, 2848, 2887, 2891, 2894, 2911, 2979, 2980, 2995, 2999, 3028, 3104, 3116, 3189, 3342, 3343, 3378, 3411, 3428, 3429, 3465, 3469, 3485, 3517, 3531, 3559, 3578, 3635, 3664, 3729, 3787, 3841, 3859, 3885, 4007, 4067, 4132, 4233, 4355, 4363, 4365, 4375, 4406, 4504, 4768, 4787, 4905, 4992, 5236, 5251, 5416, 5538, 5731, 5882, 5889, 5953, 5955, 5964, 5967, 5969, 6078, 6080, 6095, 6105, 6265, 6328, 6340, 6362, 6463, 6496, 6638, 6674, 6771, 7008, 7085, 7161, 7196, 7202, 7203, 7225, 7234, 7261, 7288, 7307, 7310, 7370, 7383, 7396, 7538, 7733, 7788, 8057, 8230, 8244, 8330, 8343, 8457, 8480, 8547

La Sierra Industries (La Sierra, California). *See* Van Gundy, Theodore A., and La Sierra Industries

Lablab purpureus or Lablab bean. *See* Hyacinth Bean

Lactose Intolerance or Lactase Deficiency 5760, 7899, 8036

Lager, Mildred (Los Angeles, California). 3038, 3059, 3090, 3162, 3195, 3327, 3501, 3798, 3889, 3892, 3908, 4395, 4436, 4623

Land O'Lakes, Inc. 8162

Landstrom Co. (San Francisco, California). Wholesale Distributor of Health Foods and Natural Foods. Founded in 1931 by Wesley Landstrom. 4570, 5283, 7589, 7594

Large-seeded soybeans. *See* Green Vegetable Soybeans. Large-Seeded Vegetable-Type or Edible Soybeans

Latin America (General). 2894, 3474, 5120, 5352, 5901, 6485, 6524, 7115, 8070, 8391

Latin America–Caribbean–Antigua and Barbuda (Including Redonda). 3153

Latin America–Caribbean–Barbados. 3153

Latin America–Caribbean–Bermuda (A British Dependent Territory). 3153

Latin America–Caribbean–British Dependent Territories–Anguilla, Cayman Islands, British Virgin Islands, Montserrat, Turks and Caicos Islands. See also Bermuda. 3153

Latin America–Caribbean–Cuba. 2381, 2447, 2784, 2791, 2889, 2973, 3116, 3153, 3172, 7407, 7707

Latin America–Caribbean–Dominican Republic (Santo Domingo or San Domingo before 1844). 3153, 5352, 5609

Latin America–Caribbean–French Overseas Departments–Guadeloupe, and Martinique (French West Indies). Guadeloupe (consisting of two large islands, Basse-Terre and Grande-Terre) administers 5 smaller dependencies–Marie-Galante, Les Saintes, La Désirade, St.-Barthélemy, and St. Martin (shared with Netherlands Antilles). 2779, 3153, 7598, 7599

Latin America–Caribbean–Haiti. 5352, 5609

Latin America–Caribbean–Introduction of Soybeans to. Earliest document seen concerning soybeans or soyfoods in connection with (but not yet in) a certain Caribbean country. 209, 260

Latin America–Caribbean–Introduction of Soybeans to. This document contains the earliest date seen for soybeans in a certain Caribbean country. 7707

Latin America–Caribbean–Introduction of Soybeans to. This document contains the earliest date seen for the cultivation of soybeans in a certain Caribbean country. 7707

Latin America–Caribbean–Jamaica. 260, 2917, 2922, 3153, 5265, 5352, 5609, 6055, 7096, 7956, 7962

Latin America–Caribbean–Lesser Antilles–Virgin Islands (Including British Virgin Islands and Virgin Islands of the United States–St. Croix, St. John, and St. Thomas), Leeward Islands (Anguilla, Antigua and Barbuda [Including Redonda], Dominica, Guadeloupe, Montserrat, Saint Kitts [formerly Saint Christopher] and Nevis), Windward Islands (Barbados, Grenada, Martinique, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago), and Netherlands Dependencies (Including Aruba, Curaçao or Curacao, and Bonaire off Venezuela, and Saba, St. Eustatius, and southern St. Martin / Maarten in the Lesser Antilles). Note: Guadeloupe and Martinique and the five dependencies of Guadeloupe, which are French Overseas Departments in the Lesser Antilles, are also called the French West Indies, French Antilles, or Antilles françaises. 2735, 2779, 2824, 3153, 4491, 4889, 5352, 5609, 6055, 7566, 7598, 7599

Latin America–Caribbean–Netherlands Dependencies–Netherlands

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Natto from Nepal. *See* Kinema

Natto from Thailand. *See* Thua-nao

Natto, Daitokuji / Daitoku-ji natto. *See* Daitokuji Fermented Black Soybeans–from Japan

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Phytoestrogen content. *See* Isoflavone or Phytoestrogen Content of Soyfoods, Soy Ingredients, and Soybean Varieties

Phytoestrogens (Estrogens in Plants, Especially in Soybeans and Soyfoods), Including Isoflavones (Including Genistein, Daidzein, Glycetein, Coumestrol, Genistin, and Daidzin), Lignans, and Coumestans. 2921, 6052, 6064, 6071, 6445, 6608, 6886, 7335, 7434, 7577, 7736, 7765, 7802, 7814, 7817, 7851, 7856, 7859, 7873, 7881, 7895, 7924, 7927, 7943, 7949, 7961, 7974, 7976, 8025, 8040, 8060, 8070, 8072, 8086, 8094, 8116, 8117, 8118, 8145, 8146, 8147, 8163, 8191, 8195, 8198, 8218, 8274, 8332, 8345, 8348, 8349, 8351, 8375, 8417, 8524

Pigeon Pea, Pigeonpea or Red Gram. *Cajanus cajan* (L.) Millspaugh. Formerly *Cytisus cajan*. 1368, 1902, 2865, 4916, 4941,

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5156, 5642, 5650, 6868, 6908, 7543

Pigs, Hogs, Swine, Sows, Boars, Gilts, or Shoats / Shotes Fed Soybeans, Soybean Forage, or Soybean Cake or Meal as Feed to Make Pork. 4, 877, 1192, 1452, 1529, 1649, 1786, 1854, 1863, 2097, 2240, 2352, 2403, 2447, 2774, 2784, 2791, 3305, 4514, 5857

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San Jirushi Corp., and San-J International (Kuwana, Japan; and Richmond, Virginia). Purchased in Nov. 2005 by Yamasa Corporation. 502, 5162, 5648, 5684, 5707, 5719, 5731, 5738, 5764, 5780, 5891, 5893, 5923, 5929, 5974, 5999, 6000, 6029, 6030, 6101, 6137, 6152, 6243, 6246, 6296, 6322, 6323, 6332, 6343, 6346, 6374, 6381, 6386, 6400, 6470, 6472, 6485, 6524, 6556, 6621, 6784, 6820, 6821, 6864, 6974, 7009, 7026, 7029, 7032, 7034, 7039, 7041, 7045, 7082, 7115, 7129, 7132, 7133, 7146, 7148, 7167, 7180, 7202, 7211, 7220, 7221, 7223, 7227, 7234, 7240, 7241, 7246, 7289, 7290, 7291, 7292, 7293, 7294, 7303, 7309, 7316, 7341, 7357, 7370, 7383, 7426, 7428, 7437, 7445, 7527, 7545, 7552, 7554, 7595, 7601, 7613, 7652, 7671, 7695, 7759, 7775, 7815, 7821, 7822, 7867, 7875, 7888, 7905, 7926, 7940, 8061, 8082, 8221, 8260, 8281, 8343, 8365, 8401, 8444, 8511, 8525, 8530

Sandoz AG (Basel, Switzerland). Merged with Ciba-Geigy in March 1996 to Become Novartis. 4409, 4535, 6089, 6273, 6300, 6487, 6640, 6800, 6801, 6975, 7217, 7243, 7324, 7382, 7432, 7562, 7800

Sanitarium Health Food Company (Wahroonga, NSW, Australia). In 2002 they acquired SoyaWorld of British Columbia, Canada. 4707, 4848, 5132, 5133, 7862, 7869, 8025, 8178, 8429

Sanitation and spoilage of food. *See* Microbiological Problems (Food Spoilage, Sanitation, and Contamination)

Saponins (Bitter Carbohydrates / Glucosides That Cause Foaming) 12, 2915, 3169, 3197, 3690, 4368, 7509, 7524, 7851, 7974

Sauce, Quin's. *See* Quin's Sauce / Quin Sauce

Sauce, soy nugget. *See* Fermented Black Soybean Extract

Sausages, meatless. *See* Meat Alternatives–Meatless Sausages

School Lunch Program. 6171, 7168, 7307, 7944, 8178

Scotland. *See* Europe, Western–Scotland (Part of United Kingdom)

Screw presses. *See* Soybean Crushing–Equipment–Screw Presses and Expellers

Sea Vegetables–Imports, Exports, International Trade. 1899, 2128

Sea Vegetables or Edible Seaweeds, Often Used with Soyfoods. 324, 387, 450, 677, 981, 994, 999, 1008, 1023, 1076, 1090, 1113, 1132, 1148, 1153, 1156, 1170, 1171, 1199, 1201, 1212, 1213, 1219, 1224, 1235, 1258, 1263, 1271, 1323, 1333, 1351, 1411, 1477, 1531, 1540, 1541, 1573, 1590, 1594, 1607, 1617, 1652, 1654, 1686, 1688, 1718, 1743, 1763, 1919, 1946, 2117, 2128, 2246, 2247, 2330, 2359, 2400, 2448, 2493, 2652, 2668, 2734, 2946, 2979, 3033, 3090, 3161, 3163, 3237, 3288, 3296, 3327, 3415, 3520, 3527, 3639, 3647, 3707, 3730, 3818, 3873, 3888, 3903, 4008, 4023, 4070, 4109, 4128, 4154, 4155, 4195, 4212, 4280, 4328, 4349, 4360, 4396, 4401, 4430, 4442, 4469, 4471, 4513, 4517, 4539, 4556, 4574, 4625, 4677, 4690, 4697, 4698, 4699, 4704, 4712, 4720, 4796, 4798, 4813, 4822, 4832, 4837, 4843, 4861, 4865, 4873, 4880, 4883, 4890, 4907, 4910, 4913, 4916, 4932, 4933, 4934, 4941, 4949, 4961, 4969, 4974, 4975, 4987, 4988, 5018, 5034, 5037, 5044, 5046, 5047, 5054, 5055, 5071, 5094, 5119, 5149, 5150, 5154, 5157, 5169, 5189, 5197, 5198, 5211, 5213, 5233, 5234, 5238, 5253, 5265, 5267, 5276, 5282, 5286, 5287, 5288, 5289, 5290, 5292, 5310, 5322, 5336, 5342, 5343, 5350, 5360, 5366, 5367, 5393, 5395, 5396, 5416, 5452, 5458, 5489, 5494, 5509, 5515, 5520, 5524, 5536, 5540, 5541, 5544, 5549, 5554, 5557, 5586, 5612, 5638, 5639, 5646, 5647, 5653, 5661, 5683, 5691, 5695, 5707, 5744, 5750, 5752, 5753, 5754, 5760, 5773, 5782, 5785, 5786, 5787, 5788, 5794, 5807, 5833, 5844, 5845, 5850, 5852, 5854, 5859, 5874, 5880, 5898, 5914, 5917, 5940, 5946, 5959, 5966, 5975, 5991, 6001, 6005, 6018, 6032, 6041, 6053, 6054, 6056, 6073, 6096, 6107, 6117, 6139, 6162, 6170, 6179, 6180, 6199, 6210, 6219, 6232, 6251, 6275, 6281, 6307, 6330, 6336, 6341, 6358, 6373, 6380, 6382, 6408, 6409, 6410, 6413, 6414, 6428, 6429, 6436, 6440, 6441, 6446, 6447, 6448, 6452, 6454, 6461, 6472, 6484, 6521, 6538, 6543, 6557, 6560, 6576, 6578, 6597, 6606, 6608, 6630, 6632, 6637, 6640, 6647, 6652, 6655, 6659, 6660, 6671, 6672, 6675, 6733, 6737, 6748, 6760, 6794, 6797, 6805, 6808, 6816, 6836, 6837, 6858, 6859, 6862, 6904, 6916, 6918, 6919, 6948, 6976, 6994, 6999, 7016, 7037, 7040, 7050, 7052, 7060, 7063, 7069, 7077, 7086, 7124, 7129, 7134, 7135, 7136, 7137, 7138, 7139, 7152, 7171, 7172, 7183, 7184, 7226, 7235, 7236, 7242, 7248, 7260, 7270, 7311, 7313, 7314, 7319, 7321, 7323, 7331, 7334, 7342, 7343, 7347, 7360, 7379, 7381, 7440, 7444, 7463, 7465, 7480, 7485, 7496, 7515, 7517, 7531, 7541, 7542, 7547, 7557, 7583, 7585, 7587, 7593, 7599, 7601, 7604, 7605, 7606, 7618, 7624, 7628, 7652, 7656, 7661, 7673, 7679, 7686, 7689, 7691, 7696, 7698, 7699, 7703, 7720, 7726, 7739, 7751, 7761, 7786, 7789, 7811, 7814, 7825, 7836, 7842, 7871, 7880,

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Seafood, meatless. *See* Meat Alternatives–Meatless Fish, Shellfish, and Other Seafood-like Products

Seaweeds, edible. *See* Sea Vegetables

Second Generation Soyfood Products. 5647, 5934, 6073, 6088, 6323, 6373, 7517, 7688, 8181

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Seed Cleaning–Especially for Food or Seed Planting Uses. 6, 7, 8, 41, 1912, 1930, 1937, 2022, 2311, 2456, 3895, 3918, 4029, 7403

Seed Color (Soybeans)–Gives the Color of Seed (and Often Hilum) for Various Specific Varieties. See also: Soybean Seeds of Different Colors. 1009, 1151, 1205, 1244, 1263, 1323, 1386, 1452, 1562, 1851, 2199, 2223, 2257, 2403, 3173, 7782

Seed Companies and Seedsmen, Early Soybean, Worldwide (Especially Before 1925)–Including Siebold & Co., Vilmorin-Andrieux, Wood & Sons, Haage & Schmidt, Dammann & Co., Peter Henderson, Thorburn & Co., Mark W. Johnson, Johnson & Stokes, Harry N. Hammond, Burpee, E.E. Evans, Funk Bros. Seed Co. 908, 909, 1057, 1136, 1137, 1149, 1167, 1169, 1176, 1182, 1188, 1191, 1244, 1246, 1291, 1336, 1359, 1385, 1710, 1767, 1785, 1851, 1856, 1972, 2137, 2401, 2518, 3044, 3080, 3173, 3246, 3485, 3535, 3578, 7225

Seed Companies, Soybean–Other (Small) and Lists–Especially USA, Not Very Early. 3531, 3578

Seed Germination or Viability–Not Including Soy Sprouts. 1520, 1972, 1997, 2082, 2262, 2265, 2285, 2360, 2488

Seed Quality of Soybeans–Condition, Grading, and Grades (Moisture, Foreign Material, Damage, etc.). 2534, 2894, 3501, 3530, 3680, 3764, 3895, 3918, 4029, 4289, 4965, 4966, 5589, 6765, 7173, 7677

Seed Quality, Composition, and Component / Value-Based Pricing (Percentage and Quality of Protein, Oil, Fatty Acids, etc.). 7859

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Seed and plant introduction to the USA. *See* United States Department of Agriculture (USDA)–United States Department of Agriculture (USDA)–Section of Foreign Seed and Plant Introduction

Seed companies–Thompson. *See* Thompson (W.G.) & Sons Limited, Blenheim, Ontario, Canada

Seed companies, soybean. *See* Asgrow (Des Moines, Iowa), Coker Pedigreed Seed Co. (Hartsville, South Carolina), Dammann & Co. (San Giovanni a Teduccio {near Naples}, Italy), DuPont (E.I. Du Pont de Nemours & Co., Inc.) (Wilmington, Delaware), Evans Seed Co. (West Branch, Ogemaw County, Michigan) and Mr. Edward Ellsworth Evans (1864-1928), Funk Brothers Seed Co. (Bloomington, Illinois), Haage & Schmidt (Erfurt, Germany), Hartz (Jacob) Seed Co. (Stuttgart, Arkansas), Monsanto Co. (St. Louis, Missouri), Peter Henderson & Co. (New York City), Pioneer Hi-Bred International, Inc. (Des Moines, Iowa), Vilmorin-Andrieux & Co. (France), Wannamaker (John E.) (St. Matthews, South Carolina), Wing Seed Co. (Mechanicsburg, Champaign County, Ohio)

Seed, Food or Feed Composition–High-Speed Measurement Techniques, such as Near Infrared Reflectance (NIR) or Transmittance (NIT) Anlysis and Spectrophotometry. 7859

Seedlings, soybean. *See* Green Vegetable Soybeans–Soybean Seedlings or Their Leaves Served as a Tender Vegetable, Called *Doumiao* in Chinese

Seeds, soybean–Variety development and breeding of soybeans. *See* Variety Development and Breeding

Seitan. *See* Wheat Gluten Made into Seitan

Sensory evaluation. *See* Taste Panel, Taste Test Results, or Sensory / Organoleptic Evaluation

Serbia and Montenegro. *See* Europe, Eastern–Serbia and Montenegro

Sesame / Sesamum / Benné or Benne / Gingelly or Gingili / Til or Teel–Etymology of These Terms and Their Cognates Relatives in Various Languages. 219, 246, 256, 714, 1071, 1148, 3343, 3912

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Sesame Meal or Cake (Defatted). 1132, 1148, 4070

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Sesame Milk. 4974, 5045, 5592, 6032

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Sesame Seed (*Sesamum indicum*, formerly *Sesamum orientale*). (Also Called Ajonjoli, Benne, Benni, Benniseed, Gingelly, Gingely, Gingelie, Jinjili, Sesamum, Simsim, Teel, Til) Including Sesame as an Oilseed, Sesame Flour, and Sesame Salt / Gomashio. See also Sesame Butter / Tahini, Sesame Cake or Meal, Sesame Milk, and Sesame Oil. 1, 2, 4, 17, 18, 22, 23, 24, 84, 95, 169, 219, 246, 256, 259, 677, 714, 758, 805, 841, 877, 918, 930, 965, 981, 994, 998, 1021, 1023, 1028, 1030, 1042, 1071, 1113, 1148, 1151, 1153, 1176, 1198, 1199, 1209, 1210, 1212, 1221, 1233, 1244, 1245, 1263, 1271, 1316, 1323, 1333, 1334, 1339, 1361, 1362, 1381, 1387, 1390, 1396, 1410, 1421, 1431, 1474, 1491, 1502, 1540, 1541, 1590, 1656, 1689, 1718, 1719, 1736, 1746, 1815, 1822, 1838, 1912, 1970, 2024, 2025, 2035, 2045, 2051, 2082, 2088, 2117, 2173, 2240, 2243, 2246, 2274, 2279, 2330, 2335, 2343, 2359, 2369, 2385, 2400, 2435, 2448, 2488, 2497, 2625, 2655, 2668, 2676, 2913, 2915, 2946, 2961, 3038, 3090, 3195, 3288, 3339, 3343, 3444, 3500, 3631, 3642, 3674, 3690, 3770, 3855, 3903, 3912, 3926, 3944, 4068, 4070, 4116, 4128, 4154, 4155, 4172, 4195, 4212, 4249, 4257, 4272, 4328, 4349, 4360, 4391, 4394, 4396, 4401, 4421, 4430, 4442, 4457, 4473, 4483, 4492, 4509, 4514, 4539, 4580, 4590, 4591, 4620, 4659, 4677, 4690, 4697, 4704, 4712, 4720, 4756, 4785, 4821, 4826, 4832, 4835, 4843, 4865, 4873, 4874, 4883, 4898, 4910, 4913, 4916, 4932, 4939, 4941, 4974, 4978, 4997, 5018, 5045, 5054, 5071, 5076, 5081, 5086, 5108, 5111, 5144, 5154, 5157, 5163, 5197, 5206, 5211, 5213, 5228, 5242, 5277, 5280, 5282, 5291, 5292, 5315, 5320, 5336, 5343, 5346, 5350, 5368, 5375, 5397, 5400, 5413, 5433, 5445, 5454, 5458, 5468, 5469, 5492, 5503, 5584, 5589, 5592, 5642, 5644, 5646, 5650, 5654, 5655, 5661, 5668, 5673, 5680, 5681, 5689, 5698, 5708, 5709, 5734, 5756, 5770, 5794, 5804, 5817, 5818, 5849, 5852, 5874, 5905, 5924, 5934, 5938, 5946, 5981, 5986, 5987, 5988, 6003, 6018, 6032, 6034, 6066, 6089, 6099, 6113, 6117, 6121, 6128, 6139, 6162, 6176, 6194, 6210, 6249, 6253, 6255, 6267, 6270, 6285, 6294, 6322, 6358, 6375, 6385, 6404, 6405, 6415, 6436, 6461, 6464, 6522, 6560, 6564, 6599, 6628, 6688, 6689, 6695, 6738, 6751, 6774, 6802, 6804, 6808, 6882, 6896, 6902, 6916, 6923, 6931, 6954, 6955, 6957, 6974, 6976, 6979, 7022, 7030, 7050, 7051, 7052, 7053, 7063, 7064, 7075, 7088, 7089, 7111, 7112, 7135, 7137, 7139, 7150, 7152, 7158, 7171, 7183, 7190, 7226, 7232, 7250, 7251, 7263, 7264, 7275, 7308, 7313, 7344, 7389, 7392, 7393, 7400, 7418, 7454, 7458, 7459, 7463, 7498, 7515, 7525, 7531, 7532, 7542, 7557, 7572, 7594, 7601, 7604, 7605, 7614, 7620, 7634, 7643, 7654, 7655, 7657, 7675, 7678, 7693, 7695, 7706, 7720, 7726, 7744, 7779, 7789, 7811, 7831, 7836, 7871, 7889, 7914, 7928, 7979, 7995, 7999, 8003, 8006, 8008, 8027, 8029, 8049, 8062, 8084, 8090, 8094, 8107, 8127, 8130, 8131, 8142, 8143, 8156, 8158, 8175, 8185, 8193, 8195, 8197, 8202, 8206, 8224, 8225, 8228, 8250, 8255, 8269, 8270, 8272, 8280, 8284, 8286, 8289, 8305, 8312, 8326, 8353, 8357, 8363, 8379, 8399, 8416, 8443, 8457, 8464, 8481, 8496, 8510, 8527, 8535

Sesamum indicum. *See* Sesame Seed

Seventh-day Adventist work with vegetarianism. *See* Vegetarianism–Seventh-day Adventist Work with

Seventh-day Adventist writings or products (especially early) related to dietary fiber. *See* Fiber–Seventh-day Adventist Writings or Products

Seventh-day Adventist writings or products (especially early) related to peanut butter. *See* Peanut Butter–Seventh-day Adventist Writings or Products

Seventh-day Adventists–Adventist Small Food Companies in the USA. Including Butler Food Products, Cedar Lake Foods, Lange Foods, Millstone Foods, Texas Protein Sales. See also Battle Creek Foods, Loma Linda Foods, La Sierra Industries, Madison Foods, or Sovex Natural Foods (Fully Life Inc.). 5173, 5174, 5202, 5203, 5204, 5205, 5422, 5423, 5424, 5425, 5707, 5791, 5942, 5943, 5944, 6720

Seventh-day Adventists–Cookbooks and Their Authors. Dietitians and Nutritionists–Ella E.A. Kellogg (1852-1920), Anna L. Colcord (1860?-1940?), Jethro Kloss (1863-1946), Almeda Lambert (1864-1921), Lenna Frances Cooper (1875-1961), Julius G. White (1878-1955), Frances Dittes (1891-1979), Edyth Cottrell (1900-1995), Dorothea Van Gundy Jones (1903-1979), Philip S. Chen (1903-1978), Frank & Rosalie Hurd (1936-), etc. 2073, 2119, 3033, 3162, 3296, 3481, 3501, 3636, 3728, 3908, 3945, 4277, 4395, 4429, 4436, 4600, 4601, 4623, 4707, 5048, 5547, 5576, 6011, 6216, 7491, 8025

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Seventh-day Adventists–Overseas Companies Making Soyfoods (Europe). *See* DE-VAU-GE Gesundkostwerk GmbH (Lueneburg, Germany), Granose Foods Ltd. (Bucks., England)

Seventh-day Adventists–Overseas Companies Making Soyfoods (Europe, Asia, and Latin America) Other, Including Alimentos Colpac, Nutana, Samiku / San-iku Foods, Spicer Memorial College, Superbom. 3179, 5308, 5309, 5678, 6044, 6045, 6046, 7096, 7348, 7485, 7651, 7862, 7990

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Seventh-day Adventists–Overseas Companies Making Soyfoods (Oceania) *See* Sanitarium Health Food Company (Wahroonga, Australia)

Seventh-day Adventists. *See* Fuller Life Inc., Kellogg, John Harvey (M.D.), Sanitas Nut Food Co. and Battle Creek Food Co., Kellogg, Will Keith... Kellogg Co., Kloss, Jethro (1863-1946) and his Book *Back to Eden*, Loma Linda Foods (Riverside, California), Loma Linda University (Loma Linda, California), Madison Foods and Madison College (Madison, Tennessee), Miller, Harry W. (M.D.) (1879-1977), Van Gundy, Theodore A., and La Sierra Industries (La Sierra, California), White, Ellen G (1827-1915), Worthington Foods, Inc. (Worthington, Ohio)

Shadowfax. *See* Natural Food Distributors and Master Distributors–General and Other Smaller: Cliffrose, Shadowfax, etc.

Shakes–Made with Soymilk, Tofu, Amazake, Soy Protein, etc.–Etymology of These Terms and Their Cognates / Relatives in Various Languages. 3162, 3482, 5211, 5213

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Sheep, Lambs, Ewes, or Rams Fed Soybeans, Soybean Forage, or Soybean Cake or Meal as Feed to Make Wool or Mutton. 961, 1113, 1128, 1151, 1167, 1192, 1290, 1889, 2447, 2456

Shellabarger Grain Co. / Shellabarger Soybean Mills (Decatur, Illinois). 3152, 4533

Shennong / Shen Nung. *See* Asia, East–China–Shennong / Shèn Nung / Shen Nung

Shiokara-natto. *See* Fermented Black Soybeans from Japan–Other Names

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Soy Oil Constants–Iodine Number / Value. 1440, 1769, 1831, 1928, 2155, 2173, 2189, 2254, 2880, 2983, 2996, 3110, 5049

Soy Oil Constants: Includes Index of Refraction, Refractive Index, Solidification Point (*Erstarrungspunkt*), Specific Gravity. See also Iodine Number. 1440, 1769, 2155, 2983, 2996, 8007

Soy Oil as a Commodity, Product, or Ingredient for Food Use (in Cookery or Foods): Its Manufacture, Refining, Trade, and Use. See Also: Industrial Uses of Soy Oil, and Nutrition: Lipids. 14, 15, 40, 43, 675, 809, 877, 961, 981, 994, 1021, 1030, 1041, 1095, 1114, 1118, 1128, 1142, 1144, 1147, 1151, 1161, 1169, 1175, 1178, 1185, 1188, 1190, 1192, 1200, 1211, 1215, 1241, 1244, 1246, 1248, 1257, 1258, 1260, 1263, 1283, 1298, 1301, 1311, 1326, 1336, 1341, 1342, 1349, 1357, 1361, 1364, 1373, 1375, 1377, 1382, 1386, 1395, 1414, 1431, 1440, 1468, 1474, 1478, 1488, 1491, 1497, 1499, 1502, 1523, 1529, 1597, 1603, 1640, 1654, 1696, 1707, 1719, 1723, 1743, 1746, 1749, 1750, 1756, 1763, 1769, 1784, 1785, 1786, 1787, 1791, 1803, 1804, 1806, 1815, 1826, 1828, 1830, 1831, 1832, 1833, 1836, 1837, 1838, 1851, 1863, 1880, 1888, 1889, 1904, 1905, 1907, 1908, 1912, 1913, 1919, 1921, 1923, 1926, 1928, 1932, 1935, 1940, 1950, 1962, 1972, 1973, 1981, 1994, 1997, 1999, 2007, 2008, 2022, 2025, 2026, 2035, 2037, 2045, 2048, 2050, 2051, 2088, 2089, 2091, 2092, 2099, 2106, 2108, 2118, 2126, 2131, 2137, 2144, 2149, 2150, 2151, 2156, 2159, 2167, 2177, 2187, 2189, 2193, 2196, 2199, 2203, 2205, 2206, 2209, 2213, 2218, 2223, 2240, 2241, 2242, 2243, 2252, 2254, 2255, 2256, 2257, 2262, 2268, 2270, 2272, 2274, 2277, 2279, 2282, 2283, 2287, 2288, 2291, 2298, 2302, 2315, 2316, 2322, 2330, 2332, 2335, 2337, 2343, 2352, 2369, 2370, 2375, 2378, 2381, 2382, 2389, 2393, 2394, 2403, 2408, 2435, 2442, 2447, 2448, 2456, 2458, 2468, 2474, 2477, 2488, 2492, 2518, 2549, 2569, 2587, 2617, 2623, 2625, 2626, 2627, 2640, 2649, 2651, 2652, 2668, 2680, 2702, 2723, 2734, 2735, 2763, 2766, 2774, 2778, 2779, 2781, 2784, 2789, 2791, 2804, 2827, 2835, 2852, 2855, 2871, 2876, 2879, 2880, 2883, 2887, 2894, 2895, 2908, 2925, 2931, 2963, 2973, 2974, 2975, 2976, 2983, 2996, 2997, 3014, 3015, 3016, 3019, 3025, 3026, 3032, 3037, 3038, 3043, 3045, 3053, 3058, 3061, 3062, 3089, 3090, 3093, 3100, 3104, 3108, 3110, 3113, 3115, 3116, 3152, 3157, 3159, 3162, 3163, 3168, 3169, 3172, 3173, 3179, 3184, 3185, 3187, 3190, 3195, 3201, 3207, 3215, 3233, 3234, 3235, 3238, 3246, 3296, 3297, 3305, 3312, 3321, 3346, 3353, 3373, 3389, 3403, 3410, 3412, 3416, 3444, 3452, 3463, 3474, 3475, 3482, 3500, 3501, 3503, 3507, 3513, 3515, 3519, 3537, 3542, 3544, 3557, 3579, 3609, 3615, 3620, 3639, 3644, 3650, 3678, 3679, 3680, 3684, 3695, 3776, 3861, 3862, 3926, 3944, 3945, 3947, 4026, 4093, 4110, 4112, 4130, 4137, 4139, 4153, 4231, 4246, 4257, 4277, 4289, 4314, 4330, 4337, 4338, 4343, 4352, 4361, 4404, 4408, 4427, 4475, 4489, 4494, 4505, 4509, 4514, 4600, 4601, 4622, 4628, 4644, 4691, 4695, 4714, 4849, 4850, 4910, 4912, 4943, 4964, 4965, 4966, 5007,

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5019, 5026, 5032, 5035, 5047, 5048, 5049, 5056, 5061, 5156, 5201, 5211, 5213, 5229, 5235, 5298, 5316, 5338, 5369, 5418, 5439, 5443, 5457, 5488, 5547, 5589, 5599, 5604, 5725, 5857, 5886, 5908, 5954, 5980, 6006, 6274, 6329, 6337, 6428, 6435, 6468, 6495, 6497, 6499, 6522, 6573, 6604, 6607, 6614, 6615, 6627, 6648, 6662, 6744, 6750, 6765, 6842, 6845, 6849, 6856, 6905, 6909, 6968, 6970, 7005, 7036, 7065, 7070, 7108, 7119, 7140, 7173, 7186, 7189, 7201, 7214, 7284, 7306, 7330, 7354, 7364, 7385, 7398, 7415, 7443, 7455, 7456, 7542, 7660, 7719, 7722, 7742, 7752, 7798, 7799, 7804, 7810, 7814, 7883, 7887, 7890, 7891, 7895, 7908, 7913, 7935, 7975, 8004, 8007, 8065, 8163, 8164, 8186, 8191, 8211, 8266, 8344, 8376, 8391, 8417

Soy Plant (The) (Ann Arbor, Michigan). *See* Tofu International Ltd.

Soy Products of Australia Pty. Ltd. (Bayswater, Victoria, Australia). Formerly F.G. Roberts Health Food Products (Melbourne). 7862

Soy Protein Concentrates, Textured. 5866, 6551, 7252, 7463, 7494, 7495, 7828, 8007, 8027, 8293, 8349

Soy Protein Council (Food Protein Council from 1971 to Dec 1981). 5613, 8198

Soy Protein Isolates, Concentrates, or Textured Soy Protein Products–Industry and Market Statistics, Trends, and Analyses–By Geographical Region. 4421, 5246, 5369, 5908, 5912, 5980, 5982, 6633, 6648, 6668, 7186, 7307, 7455, 7708, 7800, 7828, 8163, 8168

Soy Protein Isolates, Concentrates, or Textured Soy Protein Products–Industry and Market Statistics, Trends, and Analyses–Individual Companies. 5120, 5374, 5943, 6648, 6709, 7800, 7897

Soy Protein Isolates, Textured (For Food Use Only, Including Spun Soy Protein Fibers or Soy Isolate Gels). See also: Industrial Uses of Soy Proteins–Fibers (Artificial Wool Made from Spun Soy Protein Fibers). 4533, 4629, 4664, 4756, 4902, 5048, 5049, 5120, 5211, 5213, 5246, 5308, 5309, 5443, 5547, 5556, 5583, 6042, 6044, 6045, 6046, 6445, 7189, 7610, 7719, 8007, 8065

Soy Protein Products (General, or Modern Products). See also: Nutrition–Protein, Protein Quality, and Amino Acid Composition. 1907, 2099, 2403, 2623, 2627, 3403, 3672, 4239, 4421, 4444, 4557, 4629, 4635, 4715, 4734, 4902, 4943, 4964, 4965, 4979, 5120, 5138, 5159, 5229, 5246, 5345, 5369, 5471, 5491, 5589, 5620, 5692, 5721, 5901, 5947, 6110, 6119, 6142, 6272, 6445, 6511, 6533, 6551, 6635, 6648, 6662, 6663, 6668, 6750, 6842, 6905, 6957, 6984, 7140, 7186, 7418, 7419, 7484, 7600, 7678, 7800, 7890, 8027, 8162, 8180, 8391

Soy Protein and Proteins–Etymology of These Terms and Their Cognates / Relatives in Various Languages. 1049, 1132, 1144, 1175, 1285, 1290, 1327, 1335, 1710, 1930, 2037, 3488, 4093, 4232

Soy Proteins–Concentrates–Etymology of These Terms and Their Cognates / Relatives in Various Languages. 4239

Soy Proteins–Concentrates. 4239, 4421, 4533, 4557, 4629, 4665, 4691, 4965, 4966, 5048, 5049, 5211, 5213, 5246, 5351, 5547, 5583, 5589, 5805, 5908, 5912, 5980, 5982, 6071, 6433, 6445, 6633, 6677, 6709, 6835, 6842, 6865, 6905, 6959, 7036, 7065, 7325, 7346, 7453, 7498, 7499, 7719, 7721, 7765, 7799, 7801, 7802, 7851, 7868, 7881, 7883, 7887, 7891, 7924, 7935, 7956, 7974, 7975, 8010, 8020, 8035, 8040, 8065, 8086, 8116, 8145, 8162, 8163, 8164, 8178, 8205, 8291, 8293, 8348, 8349

Soy Proteins–Detection When Added to Other Food Products (Such as Meat or Dairy Products, Wheat Flour or Baked Goods). 3026, 3478, 3672

Soy Proteins–Hydrolyzed and Hydrolysates (General), as in Flavourings, HVP, Cosmetics, Personal Care Products, Predigested Milk Replacers, etc. 3512, 3959, 3960, 3961, 4042, 4359, 5533, 5727, 6935, 7757, 7796, 7896

Soy Proteins–Isolates–Enzyme-Modified Soy Protein with Whipping / Foaming Properties Used to Replace Egg Albumen, and Early Related Whipping / Aerating Agents or Products. 3501, 3530, 3672, 3722, 4533, 4943, 5195, 5721, 5827, 6709, 8162

Soy Proteins–Isolates–Etymology of These Terms and Their Cognates / Relatives in Various Languages. 2008, 3501, 4232, 4343

Soy Proteins–Isolates, for Food Use. See also: Isolates, for Industrial (Non-Food) Use. 1930, 1940, 2393, 2394, 2447, 3353, 3672, 3722, 3945, 4029, 4073, 4163, 4231, 4232, 4239, 4368, 4395, 4421, 4499, 4557, 4629, 4664, 4665, 4691, 4831, 4866, 4965, 4966, 4996, 5019, 5035, 5048, 5049, 5112, 5228, 5229, 5230, 5246, 5323, 5349, 5351, 5443, 5547, 5583, 5589, 5630, 5712, 5908, 5912, 5947, 5980, 5982, 6008, 6034, 6052, 6122, 6224, 6445, 6485, 6633, 6662, 6670, 6677, 6810, 6815, 6865, 6905, 6954, 6955, 6959, 7036, 7046, 7065, 7115, 7164, 7189, 7201, 7284, 7346, 7409, 7455, 7463, 7503, 7510, 7678, 7719, 7721, 7722, 7741, 7765, 7798, 7800, 7801, 7802, 7851, 7856, 7868, 7869, 7881, 7883, 7887, 7889, 7890, 7891, 7896, 7924, 7935, 7956, 7957, 7974, 7975, 8007, 8010, 8020, 8024, 8035, 8037, 8040, 8042, 8069, 8072, 8074, 8080, 8086, 8096, 8116, 8117, 8145, 8150, 8162, 8163, 8164, 8178, 8198, 8205, 8209, 8218, 8224, 8308, 8314, 8334, 8349, 8393, 8417, 8423, 8424, 8455, 8484, 8544

Soy Proteins–Isolates, for Industrial (Non-Food) Use. See also: Isolates, for Food Use. 1930, 1937, 1940, 2022, 2393, 2394, 3153, 3672, 4421

Soy Proteins–Properties (Including Types {Globulins, Glycinin, Beta- and Gamma-Conglycinin} Protein Fractions and Subunits, Sedimentation Coefficients, Nitrogen Solubility, and Rheology). 1132, 1148, 1192, 1214, 1226, 1248, 1263, 1323, 1325, 1395, 1430, 1432, 1447, 1654, 2022, 2108, 2216, 2393, 2394, 3381, 3672, 4076, 4077, 4445, 4453, 4460, 4588, 4596, 4597, 4627, 4635, 4643, 4656, 4748, 4802, 4955, 4965, 4966, 4996, 5246, 5255, 5295, 5333, 5589, 6439, 6445, 7036, 7630, 8065, 8167

Soy Proteins–Textured, in Dry Cereal-Soy Blends. 6977

Soy Proteins, Textured (General). 4707, 4965, 4979, 5195, 5229, 5369, 5539, 5589, 5629, 5805, 5904, 6045, 6052, 6492, 6499, 6554, 6720, 6731, 6909, 7036, 7065, 7307, 7365, 7607, 7678, 7688, 7719, 7935, 8004, 8163, 8191, 8286

Soy Puddings, Custards, Parfaits, or Mousses (Usually made from Soymilk or Tofu). See also Soy Yogurt–Not Fermented. 2217, 2270, 2283, 2352, 2408, 2477, 2766, 2908, 2913, 3033, 3152, 3162, 3296,

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3391, 3415, 3501, 3520, 4212, 4349, 4826, 4938, 5081, 5149, 5150, 5153, 5192, 5211, 5213, 5343, 5350, 5451, 5505, 5554, 5647, 6018, 6073, 6216, 6232, 6293, 6373, 6436, 6492, 6566, 6808, 6909, 6919, 7106, 7166, 7193, 7278, 7307, 7334, 7348, 7454, 7515, 7517, 7547, 7988, 8010, 8018, 8069, 8073, 8079, 8101, 8102, 8181

Soy Sauce (Including Shoyu and Worcestershire Sauce)–Imports, Exports, International Trade 51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 85, 86, 101, 103, 115, 125, 137, 139, 140, 141, 145, 154, 155, 158, 162, 167, 168, 171, 173, 176, 187, 197, 200, 201, 207, 208, 209, 213, 215, 218, 220, 221, 222, 223, 228, 229, 230, 231, 232, 233, 234, 238, 239, 240, 242, 243, 244, 251, 252, 253, 255, 256, 258, 259, 263, 265, 266, 268, 269, 270, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 288, 289, 290, 291, 292, 295, 296, 298, 299, 300, 301, 304, 306, 307, 308, 309, 310, 312, 313, 314, 315, 316, 318, 319, 320, 321, 322, 323, 327, 328, 332, 333, 335, 336, 338, 339, 340, 345, 346, 347, 349, 352, 353, 355, 356, 357, 358, 361, 362, 363, 364, 366, 367, 368, 370, 375, 376, 377, 378, 379, 381, 382, 388, 390, 391, 392, 393, 395, 397, 398, 401, 402, 404, 405, 406, 407, 410, 411, 412, 414, 415, 416, 418, 419, 420, 421, 422, 423, 424, 425, 426, 429, 431, 432, 433, 435, 443, 444, 445, 448, 449, 450, 453, 454, 455, 458, 459, 460, 462, 463, 464, 465, 468, 469, 471, 474, 476, 480, 484, 486, 487, 494, 500, 503, 505, 506, 507, 509, 510, 512, 514, 515, 528, 529, 531, 532, 536, 537, 540, 542, 544, 546, 547, 549, 556, 558, 564, 568, 573, 574, 575, 583, 586, 589, 591, 592, 594, 597, 603, 611, 614, 627, 629, 631, 638, 639, 644, 654, 660, 662, 665, 669, 675, 686, 689, 692, 695, 697, 702, 704, 709, 710, 712, 717, 722, 729, 731, 732, 752, 758, 765, 768, 775, 777, 783, 785, 797, 807, 808, 813, 820, 834, 848, 854, 865, 867, 877, 894, 904, 913, 931, 950, 957, 960, 968, 981, 991, 1005, 1023, 1028, 1030, 1035, 1048, 1051, 1061, 1088, 1093, 1101, 1114, 1128, 1142, 1193, 1197, 1198, 1200, 1206, 1233, 1236, 1292, 1317, 1337, 1339, 1354, 1380, 1388, 1395, 1396, 1410, 1420, 1446, 1457, 1473, 1505, 1546, 1564, 1574, 1581, 1583, 1595, 1599, 1609, 1648, 1651, 1657, 1659, 1660, 1663, 1678, 1684, 1691, 1723, 1727, 1734, 1736, 1737, 1743, 1746, 1751, 1757, 1765, 1766, 1771, 1791, 1803, 1805, 1811, 1812, 1813, 1818, 1821, 1833, 1852, 1854, 1857, 1858, 1860, 1861, 1865, 1866, 1867, 1868, 1872, 1888, 1921, 1928, 1934, 1939, 1943, 1962, 1966, 1969, 1970, 1975, 1977, 2004, 2005, 2028, 2034, 2038, 2040, 2057, 2071, 2076, 2085, 2086, 2107, 2108, 2123, 2130, 2133, 2148, 2152, 2181, 2230, 2231, 2275, 2276, 2283, 2335, 2340, 2351, 2354, 2370, 2376, 2389, 2390, 2396, 2405, 2409, 2414, 2417, 2428, 2467, 2481, 2497, 2502, 2535, 2539, 2635, 2723, 2742, 2825, 2827, 2836, 2874, 2966, 2999, 3014, 3061, 3063, 3185, 3191, 3235, 3322, 3337, 3349, 3359, 3495, 3545, 3558, 3565, 3566, 3569, 3570, 3572, 3574, 3575, 3576, 3577, 3598, 3605, 3630, 3685, 3686, 3732, 3733, 3734, 3736, 3737, 3738, 3894, 3910, 3948, 3955, 3956, 4062, 4094, 4345, 4584, 4586, 4624, 4625, 4663, 4668, 4682, 4712, 4717, 4720, 4774, 4776, 4777, 4779, 4792, 4929, 4952, 4971, 4984, 4998, 5012, 5055, 5056, 5114, 5118, 5135, 5196, 5223, 5248, 5302, 5312, 5360, 5366, 5378, 5536, 5553, 5607, 5688, 5741, 5778, 5893, 5902, 5952, 5968, 5999, 6055, 6083, 6093, 6096, 6151, 6163, 6165, 6168, 6178, 6201, 6248, 6252, 6253, 6287, 6288, 6289, 6290, 6291, 6295, 6333, 6377, 6385, 6400, 6402, 6407, 6465, 6507, 6536, 6586, 6623, 6666, 6667, 6701, 6730, 6795, 6798, 6884, 6885, 6894, 6895, 6896, 6897, 6898, 6907, 6970, 7013, 7028, 7033, 7034, 7042, 7045, 7059, 7062, 7073, 7080, 7082, 7123, 7129, 7133, 7134, 7137, 7138, 7146, 7148, 7157, 7161, 7177, 7185, 7187, 7188, 7194, 7195, 7198, 7202, 7204, 7206, 7213, 7216, 7222, 7227, 7234, 7235, 7236, 7253, 7268, 7288, 7311, 7317, 7326, 7334, 7354, 7355, 7357, 7366, 7383, 7404, 7425, 7426, 7428, 7447, 7450, 7451, 7452, 7473, 7507, 7556, 7559, 7582, 7594, 7619, 7664, 7665, 7666, 7667, 7692, 7704, 7731, 7739, 7797, 7806, 7884, 7992, 8050, 8136, 8340, 8387, 8432, 8437, 8438, 8545

Soy Sauce (Including Shoyu), Homemade–How to Make at Home or on a Laboratory Scale, by Hand 42, 102, 261, 359, 490, 570, 601, 657, 684, 806, 831, 978, 1423, 1526, 1661, 2009, 3493, 3516, 4634, 4935, 5115, 5130, 5191, 6208, 6345, 7786, 8227

Soy Sauce (Including Shoyu) See Also Tamari, Teriyaki Sauce, and Traditional Worcestershire Sauce 2, 6, 8, 9, 10, 12, 13, 16, 17, 18, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 84, 85, 86, 87, 88, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 105, 106, 107, 109, 110, 111, 112, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 145, 146, 147, 148, 149, 151, 152, 153, 154, 155, 156, 157, 158, 160, 162, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 176, 178, 179, 180, 181, 182, 183, 186, 187, 188, 189, 190, 191, 192, 193, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 217, 218, 219, 220, 221, 222, 223, 224, 225, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 447, 448, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 500, 501, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 544, 545, 546, 547, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 582, 583, 584, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 597, 599, 600, 601, 602, 603, 604, 605, 607, 608, 609, 611, 612, 614, 615, 616, 617, 618, 619, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 635, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 652, 653, 654, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704.

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7131, 7132, 7133, 7134, 7137, 7140, 7141, 7142, 7143, 7144, 7147, 7149, 7150, 7151, 7152, 7154, 7155, 7156, 7157, 7158, 7159, 7160, 7161, 7163, 7165, 7166, 7168, 7169, 7172, 7173, 7174, 7175, 7177, 7179, 7181, 7182, 7186, 7188, 7189, 7190, 7191, 7192, 7193, 7194, 7195, 7196, 7197, 7198, 7199, 7200, 7201, 7203, 7204, 7205, 7206, 7207, 7208, 7209, 7212, 7213, 7214, 7216, 7218, 7220, 7222, 7223, 7224, 7227, 7229, 7230, 7232, 7233, 7234, 7235, 7236, 7237, 7238, 7240, 7241, 7245, 7246, 7248, 7249, 7253, 7254, 7261, 7263, 7266, 7267, 7268, 7269, 7270, 7271, 7272, 7273, 7274, 7275, 7276, 7277, 7278, 7279, 7280, 7281, 7282, 7283, 7284, 7285, 7287, 7288, 7293, 7294, 7295, 7297, 7298, 7299, 7300, 7301, 7302, 7303, 7304, 7305, 7306, 7307, 7310, 7311, 7313, 7314, 7316, 7317, 7318, 7319, 7320, 7322, 7323, 7326, 7329, 7330, 7331, 7332, 7333, 7334, 7336, 7338, 7339, 7340, 7341, 7345, 7346, 7348, 7349, 7353, 7354, 7355, 7356, 7357, 7361, 7364, 7365, 7366, 7367, 7368, 7370, 7372, 7374, 7375, 7376, 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7636, 7638, 7639, 7640, 7642, 7643, 7644, 7645, 7647, 7648, 7651, 7653, 7654, 7655, 7656, 7657, 7658, 7659, 7660, 7661, 7662, 7663, 7664, 7665, 7666, 7667, 7668, 7669, 7670, 7671, 7672, 7673, 7674, 7675, 7677, 7679, 7680, 7681, 7682, 7683, 7684, 7685, 7686, 7687, 7688, 7689, 7691, 7692, 7693, 7694, 7695, 7696, 7697, 7698, 7699, 7700, 7703, 7704, 7706, 7707, 7708, 7710, 7711, 7712, 7713, 7714, 7718, 7719, 7720, 7721, 7722, 7723, 7724, 7725, 7726, 7727, 7728, 7729, 7730, 7731, 7732, 7733, 7734, 7735, 7737, 7739, 7740, 7741, 7742, 7743, 7745, 7746, 7747, 7752, 7753, 7754, 7760, 7763, 7764, 7765, 7767, 7769, 7770, 7772, 7777, 7778, 7779, 7780, 7781, 7782, 7783, 7784, 7786, 7787, 7789, 7790, 7791, 7792, 7793, 7794, 7795, 7797, 7798, 7799, 7800, 7801, 7802, 7803, 7804, 7805, 7806, 7807, 7808, 7810, 7811, 7812, 7813, 7814, 7815, 7816, 7818, 7819, 7820, 7821, 7822, 7823, 7824, 7826, 7827, 7828, 7829, 7832, 7833, 7835, 7836, 7838, 7839, 7841, 7843, 7844, 7845, 7847, 7849, 7850, 7851, 7853, 7854, 7855, 7857, 7858, 7859, 7860, 7861, 7862, 7863, 7864, 7865, 7866, 7867, 7868, 7869, 7870, 7871, 7872, 7874, 7880, 7881, 7882, 7883, 7884, 7886, 7887, 7888, 7890, 7891, 7893, 7894, 7895, 7896, 7899, 7900, 7901, 7902, 7903, 7904, 7906, 7907, 7908, 7909, 7910, 7911, 7912, 7913, 7914, 7915, 7916, 7918, 7920, 7921, 7923, 7924, 7925, 7926, 7927, 7928, 7932, 7933, 7934, 7935, 7936, 7937, 7938, 7939, 7940, 7941, 7942, 7946, 7947, 7948, 7951, 7952, 7953, 7954, 7955, 7956, 7957, 7958, 7959, 7961, 7962, 7963, 7964, 7966, 7967, 7969, 7970, 7971, 7972, 7973, 7974, 7975, 7976, 7977, 7979, 7980, 7981, 7982, 7983, 7985, 7986, 7988, 7989, 7991, 7992, 7993, 7995, 7996, 7997, 7999, 8000, 8001, 8004, 8005, 8007, 8008, 8009, 8010, 8011, 8012, 8013, 8014, 8016, 8018, 8020, 8021, 8022, 8023, 8024, 8025, 8026, 8027, 8028, 8030, 8031, 8032, 8033, 8034, 8035, 8036, 8037, 8039, 8040, 8042, 8043, 8044, 8045, 8047, 8049, 8050, 8051, 8052, 8053, 8054, 8055, 8056, 8057, 8058, 8059, 8060, 8061, 8062, 8063, 8065, 8066, 8067, 8068, 8069, 8070, 8071, 8072, 8074, 8075, 8076, 8077, 8078, 8079, 8080, 8083, 8084, 8085, 8086, 8087, 8088, 8089, 8090, 8091, 8092, 8094, 8096, 8097, 8098, 8100, 8101, 8102, 8107, 8109, 8110, 8111, 8112, 8113, 8114, 8115, 8116, 8117, 8119, 8120, 8122, 8125, 8126, 8129, 8130, 8131, 8132, 8133, 8134, 8135, 8136, 8137, 8139, 8140, 8141, 8143, 8145, 8146, 8147, 8149, 8150, 8153, 8154, 8155, 8157, 8160, 8161, 8163, 8164, 8165, 8166, 8168, 8169, 8170, 8171, 8172, 8173, 8174, 8175, 8177, 8178, 8179, 8180, 8181, 8183, 8184, 8185, 8186, 8187, 8188, 8189, 8190, 8191, 8193, 8194, 8195, 8196, 8198, 8199, 8200, 8202, 8203, 8204, 8205, 8207, 8208, 8209, 8210, 8211, 8212, 8213, 8214, 8215, 8217, 8220, 8223, 8224, 8225, 8226, 8227, 8228, 8229, 8231, 8232, 8233, 8234, 8235, 8236, 8237, 8238, 8239, 8241, 8242, 8243, 8244, 8245, 8246, 8248, 8249, 8250, 8252, 8254, 8255, 8257, 8258, 8263, 8264, 8266, 8267, 8268, 8269, 8270, 8271, 8272, 8273, 8274, 8275, 8276, 8277, 8278, 8279, 8281, 8282, 8287, 8288, 8290, 8291, 8292, 8293, 8294, 8296, 8297, 8298, 8299, 8304, 8305, 8306, 8308, 8309, 8310, 8311, 8312, 8313, 8314, 8315, 8316, 8317, 8318, 8320, 8322, 8329, 8331, 8332, 8333, 8334, 8335, 8336, 8337, 8338, 8339, 8340, 8341, 8342, 8343, 8344, 8345, 8346, 8347, 8348, 8349, 8351, 8352, 8353, 8354, 8356, 8357, 8358, 8359, 8360, 8361, 8362, 8368, 8369, 8370, 8371, 8372, 8373, 8375, 8376, 8377, 8378, 8379, 8380, 8381, 8382, 8383, 8384, 8386, 8387, 8388, 8390, 8391, 8392, 8393, 8399, 8401, 8402, 8403, 8404, 8405, 8406, 8407, 8408, 8409, 8410, 8413, 8414, 8415, 8416, 8417, 8418, 8419, 8421, 8422, 8423, 8424, 8425, 8426, 8427, 8428, 8430, 8432, 8433, 8434, 8435, 8436, 8437, 8438, 8439, 8440, 8441, 8442, 8445, 8446, 8447, 8452, 8454, 8455, 8456, 8457, 8458, 8459, 8460, 8461, 8462, 8463, 8464, 8465, 8466, 8467, 8469, 8470, 8471, 8472, 8473, 8475, 8476, 8477, 8478, 8479, 8482, 8483, 8484, 8485, 8487, 8488, 8489, 8490, 8492, 8493, 8494, 8495, 8496, 8497, 8498, 8500, 8501, 8502, 8504, 8505, 8506, 8508, 8509, 8510, 8512, 8513, 8515, 8516, 8517, 8518, 8519, 8520, 8521, 8522, 8523, 8524, 8525, 8526, 8529, 8530, 8532, 8534, 8535, 8536, 8537, 8540, 8543, 8544, 8545, 8546, 8547, 8548, 8549, 8550, 8551, 8552, 8553, 8554

Soy Sauce–Saishikomi Shoyu (Twice-Brewed). 2777, 3577, 3738, 4070, 4625, 5614, 5731, 5764, 5847, 5896, 6051, 6083, 6119, 6242, 6366, 6537, 6619, 6729, 6937, 6962, 8112, 8337

Soy Sauce–Taiwanese Black Bean Sauce (*Inyu*), Made from Black Soybean Koji. A Type of Fermented Black Soybean Sauce. 1923, 3477, 4917, 5124, 5407, 5558, 5686, 5821, 5838, 5856, 6017, 6242, 6301, 6867, 6925, 6927, 6928, 7971, 8242

Soy Sauce Companies (Asia)–Important Japanese Shoyu Manufacturers Other Than Kikkoman and Yamasa–Higashimaru, Marukin, Choshi, Higeta. 45, 47, 103, 1005, 1524, 1546, 1557, 1864, 1865, 1870, 1918, 2034, 2079, 2127, 2167, 2467, 2476, 2507, 2723, 3001, 3191, 3230, 3299, 3322, 3633, 3656, 3711, 3716, 3718, 3832, 3939, 3955, 4072, 4084, 4085, 4135, 4138, 4185, 4194, 4196, 4220, 4224, 4336, 4472, 4519, 4520, 4550, 4551, 4552, 4586, 4625, 4645, 4657, 4669, 4726, 4731, 4777, 4804, 4814, 4816, 4829, 4951, 4967, 4980, 5387, 5427, 5436, 5722, 5732, 5855, 6058, 6430, 6431, 6513, 6516, 6517, 6518, 6524, 6535, 6549, 6732, 6766, 6938, 6939, 6940, 6947, 7126, 7179, 7288, 7473, 7568, 7821, 7838, 8005, 8404, 8548

Soy Sauce Industry and Market Statistics, Trends, and Analyses–By Geographical Region. 201, 252, 256, 259, 546, 603, 692, 785, 877,

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1005, 1023, 1028, 1121, 1217, 1352, 1377, 1387, 1416, 1435, 1457, 1468, 1609, 1640, 1657, 1724, 1737, 1745, 1746, 1831, 1832, 1857, 1858, 1860, 1861, 1868, 1880, 1939, 2004, 2005, 2079, 2108, 2109, 2110, 2146, 2149, 2152, 2167, 2169, 2230, 2231, 2243, 2283, 2481, 2500, 2618, 2852, 3061, 3112, 3185, 3191, 3235, 3359, 3495, 3558, 3580, 3630, 3638, 3679, 3863, 3893, 3894, 3895, 3983, 3984, 4081, 4153, 4171, 4212, 4224, 4230, 4242, 4257, 4415, 4416, 4418, 4421, 4439, 4469, 4489, 4589, 4630, 4639, 4763, 4787, 4857, 4900, 4902, 4954, 4971, 5014, 5015, 5098, 5123, 5124, 5160, 5299, 5352, 5354, 5355, 5407, 5414, 5456, 5470, 5477, 5488, 5649, 5665, 5686, 5772, 5835, 5838, 5840, 5847, 5856, 5860, 5893, 5896, 5908, 5912, 5953, 5980, 5999, 6064, 6083, 6105, 6149, 6178, 6215, 6242, 6258, 6263, 6298, 6328, 6331, 6430, 6434, 6469, 6480, 6518, 6524, 6558, 6569, 6573, 6615, 6625, 6645, 6648, 6649, 6685, 6784, 6828, 6837, 6849, 6878, 6968, 7008, 7045, 7058, 7147, 7161, 7180, 7192, 7205, 7221, 7222, 7234, 7249, 7253, 7288, 7302, 7307, 7320, 7326, 7341, 7346, 7353, 7354, 7415, 7442, 7455, 7456, 7489, 7492, 7507, 7519, 7575, 7583, 7600, 7612, 7615, 7677, 7688, 7699, 7708, 7733, 7745, 7800, 7806, 7818, 7821, 7822, 7838, 7857, 8050, 8061, 8109, 8136, 8154, 8155, 8168, 8203, 8310, 8343, 8382

Soy Sauce Industry and Market Statistics, Trends, and Analyses Individual Companies. 66, 1646, 1681, 1714, 1866, 1867, 1872, 2167, 2429, 2481, 2535, 2709, 2711, 2715, 2771, 3368, 3615, 3618, 3685, 3906, 4005, 4584, 4787, 4851, 4876, 4952, 4984, 4998, 5004, 5005, 5131, 5158, 5279, 5302, 5538, 5665, 5746, 5755, 5953, 5962, 5968, 6020, 6055, 6105, 6147, 6177, 6258, 6266, 6328, 6430, 6493, 6496, 6517, 6518, 6524, 6549, 6556, 6648, 6707, 6915, 6961, 6992, 7008, 7009, 7039, 7045, 7073, 7129, 7133, 7147, 7154, 7165, 7180, 7202, 7233, 7234, 7291, 7304, 7326, 7357, 7428, 7514, 7733, 7769, 7800, 7807, 7818, 7819, 7823, 7824, 7838, 7843, 7867, 7939, 7946, 7977, 7993, 7997, 8051, 8109, 8154, 8155, 8203, 8548

Soy Sauce Production–How to Make Soy Sauce on a Commercial Scale. 1069, 1142, 1226, 1227, 1243, 1272, 1317, 1412, 1724, 2108, 2168, 2461, 2928, 3418, 3722, 4329, 5402, 5513, 5614, 6007, 6283, 6789, 6925, 7843

Soy Sauce and Ketchup–Key Records Concerning the Relationship between the Two. 87, 94, 106, 110, 115, 117, 126, 129, 132, 142, 143, 146, 161, 168, 183, 192, 219, 222, 231, 247, 266, 311, 383, 394, 555, 573, 619, 704, 881, 1023, 1052, 1396, 1754, 2168, 2305, 8131, 8387, 8489

Soy Sauce and Shoyu–Etymology of These Terms and Their Cognates / Relatives in Various Languages. 2, 9, 17, 18, 25, 33, 34, 36, 38, 42, 43, 44, 46, 48, 51, 53, 54, 57, 58, 59, 60, 70, 76, 81, 92, 94, 101, 106, 107, 115, 118, 125, 128, 140, 152, 168, 169, 174, 181, 182, 183, 186, 200, 201, 219, 237, 266, 288, 294, 331, 336, 341, 372, 384, 387, 394, 413, 424, 431, 435, 437, 473, 488, 497, 503, 518, 533, 555, 566, 585, 586, 605, 625, 641, 667, 689, 691, 705, 715, 728, 768, 813, 816, 876, 881, 884, 908, 934, 951, 968, 972, 981, 997, 1009, 1018, 1023, 1030, 1038, 1039, 1042, 1048, 1052, 1055, 1069, 1071, 1086, 1089, 1090, 1092, 1094, 1097, 1098, 1101, 1113, 1147, 1148, 1151, 1167, 1177, 1186, 1213, 1221, 1226, 1229, 1231, 1244, 1259, 1314, 1315, 1324, 1328, 1342, 1396, 1400, 1416, 1427, 1445, 1454, 1460, 1465, 1476, 1477, 1502, 1511, 1515, 1517, 1528, 1547, 1562, 1582, 1594, 1657, 1708, 1710, 1748, 1783, 1843, 1882, 1907, 1912, 1947, 1948, 1985, 2008, 2010, 2041, 2096, 2117, 2137, 2142, 2172, 2212, 2216, 2305, 2318, 2325, 2334, 2335, 2361, 2381, 2407, 2535, 2595, 2702, 2728, 2737, 2872, 2993, 3036, 3233, 3317, 3359, 3381, 3382, 3441, 3500, 3651, 3659, 3684, 3785, 3909, 3925, 3941, 4008, 4064, 4071, 4133, 4215, 4216, 4351, 4373, 4392, 4416, 4509, 4688, 4697, 4808, 4855, 4901, 4956, 5105, 5305, 5336, 5355, 5401, 5410, 5614, 5673, 5747, 5881, 5926, 5949, 6116, 6166, 6218, 6242, 6259, 6334, 6524, 6589, 6620, 6766, 7106, 7112, 7196, 7383, 7412, 7567, 7902, 8088, 8129, 8133, 8379, 8462, 8501

Soy Sauce in Second Generation Products, Documents About. 672, 698, 2055, 4275, 4784, 4787, 5811, 6470, 6784, 6864, 7009, 7203

Soy Sauce, Chinese Style, Made with a Significant Proportion of Wheat or Barley. 42, 43, 102, 153, 169, 260, 492, 525, 546, 601, 633, 641, 656, 657, 664, 729, 736, 813, 877, 893, 1004, 1048, 1118, 1190, 1244, 1283, 1377, 1382, 1423, 1578, 1597, 1975, 2010, 2168, 2315, 2318, 2497

Soy Sauce, HVP Type (Non-Fermented or Semi-Fermented, Made with Acid-Hydrolyzed Vegetable Protein; an Amino Acid Seasoning Solution Rich in Glutamic Acid) Also Called Pejoratively Chemical Soy Sauce. 719, 1389, 1713, 1928, 2060, 2428, 2617, 2622, 2627, 2629, 2641, 2723, 2752, 2777, 2792, 2807, 2838, 2848, 2860, 2888, 2905, 2955, 2957, 2987, 3035, 3036, 3060, 3087, 3105, 3162, 3175, 3191, 3193, 3201, 3214, 3219, 3230, 3239, 3243, 3248, 3249, 3259, 3269, 3270, 3274, 3282, 3290, 3291, 3295, 3301, 3307, 3316, 3325, 3326, 3331, 3335, 3341, 3354, 3361, 3401, 3402, 3419, 3466, 3471, 3495, 3505, 3512, 3539, 3546, 3548, 3559, 3586, 3590, 3594, 3610, 3627, 3630, 3638, 3639, 3640, 3646, 3647, 3668, 3672, 3674, 3694, 3709, 3730, 3769, 3806, 3808, 3820, 3830, 3855, 3880, 3882, 3894, 3929, 3942, 3944, 3949, 3954, 3958, 3959, 3960, 3961, 3965, 3966, 3968, 3973, 3990, 3991, 4001, 4031, 4032, 4034, 4041, 4042, 4047, 4058, 4069, 4070, 4084, 4085, 4091, 4136, 4143, 4146, 4182, 4201, 4202, 4205, 4206, 4214, 4260, 4261, 4262, 4278, 4279, 4291, 4293, 4333, 4359, 4392, 4397, 4403, 4414, 4416, 4420, 4432, 4447, 4507, 4536, 4588, 4615, 4627, 4656, 4679, 4685, 4693, 4694, 4701, 4722, 4734, 4789, 4790, 4884, 4922, 4936, 4946, 4999, 5039, 5066, 5073, 5117, 5120, 5159, 5160, 5161, 5176, 5211, 5291, 5309, 5347, 5428, 5477, 5506, 5533, 5555, 5588, 5614, 5619, 5675, 5721, 5727, 5730, 5731, 5732, 5764, 5772, 5810, 5827, 5840, 5848, 5856, 5866, 5867, 5868, 5869, 5889, 5896, 5944, 5967, 5969, 6010, 6021, 6051, 6063, 6071, 6078, 6080, 6095, 6122, 6146, 6169, 6215, 6258, 6260, 6263, 6265, 6326, 6328, 6331, 6339, 6340, 6366, 6478, 6491, 6551, 6552, 6638, 6709, 6857, 6865, 6869, 6872, 6907, 6924, 6935, 7047, 7147, 7156, 7203, 7204, 7208, 7306, 7348, 7353, 7370, 7371, 7383, 7440, 7471, 7480, 7515, 7530, 7536, 7584, 7647, 7726, 7757, 7758, 7833, 7842, 7882, 7897, 7914, 7949, 7955, 7991, 8000, 8007, 8057, 8089, 8117, 8145, 8204, 8205, 8228, 8244, 8272, 8282, 8330, 8331, 8335, 8345, 8377, 8397, 8457, 8458, 8493, 8547, 8552

Soy Sauce, Indonesian Style–Etymology of These Terms and Their Cognates / Relatives in Various Languages. 4059, 4141, 4193, 4413, 4688, 4794, 5350, 7684

Soy Sauce, Indonesian Style or from the Dutch East Indies (Kecap, Kécap, Kechap, Ketjap, Kétjap) See also Ketchup / Catsup. 83, 87, 94, 104, 106, 108, 113, 117, 119, 126, 127, 129, 132, 133, 135, 138, 142, 143, 144, 146, 148, 149, 150, 159, 160, 161, 163, 164, 170, 172, 173, 177, 178, 185, 189, 194, 195, 196, 216, 219, 222, 223, 226, 228, 229, 231, 232, 233, 238, 239, 240, 242, 244, 246, 251, 253, 258, 263, 265, 266, 267, 268, 269, 272, 273, 274, 275, 277,

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Soy Sauce, Indonesian Sweet, Kecap Manis / Ketjap Manis. Indonesian Sweet Thick Spicy Soy Sauce / Indonesian Thick Sweet Soy Sauce. 1023, 1566, 4059, 4141, 4193, 4211, 4595, 4688, 4742, 4780, 4783, 4794, 4855, 5059, 5139, 5166, 5350, 5361, 5379, 5417, 5493, 5516, 5517, 5584, 5595, 5625, 5633, 5641, 5642, 5649, 5767, 5776, 5870, 5910, 5987, 6022, 6031, 6034, 6166, 6297, 6335, 6436, 6523, 6542, 6571, 6602, 6644, 6690, 6722, 6925, 7111, 7199, 7270, 7334, 7348, 7452, 7473, 7642, 7643, 7684, 7906, 7907, 7908, 7909, 7910, 7916, 7979, 8026, 8084, 8087, 8088, 8100, 8130, 8234, 8269, 8273, 8274, 8387, 8388, 8421, 8489, 8501, 8505, 8506

Soy Sauce, Non-Soy Relatives. 884, 987, 1451, 1498, 2009, 2120, 2303, 2384, 2464, 3243, 3802, 4479, 4536, 5141, 6868, 7978, 8044, 8066, 8235

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Soy bran. *See* Fiber, Soy

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Soy fiber. *See* Fiber

Soy flour companies (Europe). *See* Spillers Premier Products Ltd. (Puckeridge, Ware, Hertfordshire, England)

Soy flour companies (Oceania). *See* Soy Products of Australia Pty Ltd

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Soy sauce–Korean-style. *See* Kanjang–Korean-Style Fermented Soy Sauce

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Soy sauce companies (international). *See* Kikkoman Corporation (Tokyo, Walworth, Wisconsin, and Worldwide)

Soy sauce companies or brands (USA). *See* Chun King, La Choy, Oriental Show-You Co.

Soy sauce companies. *See* Showa Shoyu Brewing Co. (Glendale, Arizona)

Soy sauce residue or dregs. *See* Fiber–Residue or Dregs from

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Making Soy Sauce

Soy sauce served in cruets with cruet frames. *See* Cruets (Glass Bottles)

Soy sauce used in Harvey's sauce. *See* Harvey's Sauce–With Soy Sauce Used as an Ingredient

Soy sauce used in Worcestershire sauce. *See* Worcestershire Sauce–With Soy Sauce Used as an Ingredient

Soy sauce, price of. *See* Price of Soy Sauce, Worcestershire Sauce, or Early So-Called Ketchup (Which Was Usually Indonesian Soy Sauce)

Soy sauce. *See* Harvey's Sauce, Hoisin / Haisien Sauce, Quin's Sauce, Tamari, Teriyaki Sauce and Teriyaki (Soy Sauce is the Main Sauce Ingredient), Worcestershire Sauce

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Soybean Crushers (Canada), Early (Started Before 1941)–Milton Oil Refineries Ltd. (Milton, Ontario; March 1930–Renamed Canadian Soyabeans Ltd. by March 1935), Dominion Linseed Oil Co. (Baden, ONT; 1932), Soy Bean Oil and Meal Co-operative Company of Canada, Ltd. (Chatham, ONT; 1932), Dominion Soya Industries / Dominion Soya Products Co. (Montreal, Quebec, spring 1935), Soya Mills Limited (Stratford, ONT, Jan. 1936), Edgar Soya Products (Belle River, Ontario; 1936), Toronto Elevators Ltd. (Toronto, ONT; 1938). 3026

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Soybean Crushers (USA), Early–Pacific Oil Mills and Albers

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Brothers Milling Co. (Seattle, Washington; 1911), Elizabeth City Oil and Fertilizer Co. (Elizabeth City, North Carolina; 1915. By 1917 six other North Carolina oil mills were crushing soybeans), Chicago Heights Oil Mfg. Co. (Chicago Heights, Illinois, 1920), A.E. Staley Mfg. Co. (Decatur, Illinois, 1922), Piatt County Cooperative Soy Bean Co. (Monticello, Illinois, 1923–batch solvent), Blish Milling Co. (Seymour and Crothersville, Indiana, 1923), Eastern Cotton Oil Co. (Norfolk, Virginia; 1924–continuous solvent). 2189, 2199, 2254, 2424, 2738

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Soymilk, Soy Drinks / Beverages, Soy-Based Infant Formulas, and Nogs (Liquid, Non-Fermented) Note–For Soymilk Products See Tofu, Yuba, Shakes, Soy Ice Cream, Soy Yogurt, and Soy Cheese or Cheese Alternatives. 26, 1090, 1169, 1283, 1291, 1340, 1375, 1380, 1395, 1420, 1430, 1436, 1440, 1458, 1466, 1468, 1486, 1499, 1503, 1522, 1533, 1536, 1556, 1601, 1620, 1654, 1665, 1686, 1696, 1756, 1785, 1786, 1796, 1809, 1825, 1828, 1830, 1835, 1838, 1843, 1851, 1863, 1875, 1886, 1907, 1908, 1912, 1913, 1930, 1932, 1935, 1937, 1940, 1942, 1944, 1962, 1976, 1981, 1982, 1985, 1986, 1997, 2007, 2008, 2022, 2037, 2047, 2048, 2054, 2055, 2074, 2084, 2089, 2092, 2108, 2118, 2137, 2144, 2146, 2150, 2151, 2173, 2178, 2180, 2182, 2186, 2187, 2191, 2199, 2203, 2204, 2205, 2206, 2207, 2209, 2210, 2211, 2213, 2216, 2217, 2219, 2220, 2222, 2224, 2226, 2241, 2242, 2243, 2246, 2254, 2255, 2256, 2258, 2260, 2263, 2265, 2266, 2268, 2270, 2271, 2272, 2274, 2283, 2287, 2291, 2295, 2302, 2311, 2322, 2332, 2337, 2343, 2348, 2352, 2360, 2367, 2369, 2370, 2375, 2378, 2381, 2390, 2400, 2401, 2403, 2408, 2413, 2445, 2447, 2456, 2458, 2477, 2479, 2488, 2490, 2492, 2497, 2499, 2500, 2518, 2519, 2523, 2534, 2549, 2569, 2589, 2593, 2616, 2617, 2622, 2623, 2625, 2627, 2649, 2650, 2652, 2655, 2668, 2676, 2680, 2702, 2735, 2736, 2738, 2766, 2768, 2774, 2779, 2781, 2784, 2785, 2788, 2789, 2791, 2793, 2827, 2833, 2839, 2840, 2842, 2845, 2846, 2875, 2879, 2880, 2887, 2889, 2894, 2896, 2908, 2913, 2915, 2917, 2920, 2922, 2925, 2931, 2933, 2946, 2958, 2963, 2970, 2971, 2972, 2973, 2974, 2984, 2997, 3000, 3013, 3016, 3024, 3032, 3033, 3038, 3045, 3049, 3058, 3079, 3080, 3089, 3090, 3097, 3099, 3100, 3102, 3104, 3108, 3113, 3115, 3116, 3119, 3150, 3152, 3153, 3159, 3162, 3163, 3171, 3172, 3173, 3174, 3177, 3179, 3184, 3187, 3190, 3195, 3201, 3233, 3234, 3238, 3240, 3246, 3254, 3260, 3288, 3296, 3297, 3305, 3310, 3312, 3314, 3315, 3319, 3321, 3323, 3330, 3340, 3343, 3346, 3348, 3353, 3355, 3356, 3360, 3367, 3373, 3382, 3385, 3389, 3391, 3409, 3412, 3415, 3416, 3433, 3436, 3439, 3441, 3444, 3463, 3472, 3474, 3475, 3479, 3481, 3482, 3488, 3501, 3503, 3507, 3513, 3516, 3519, 3520, 3530, 3532, 3533, 3534, 3535, 3536, 3542, 3545, 3553, 3557, 3589, 3606, 3609, 3615, 3619, 3620, 3626, 3628, 3637, 3673, 3678, 3684, 3690, 3695, 3722, 3725, 3728, 3741, 3776, 3814, 3861, 3908, 3912, 3923, 3926, 3945, 3946, 3947, 4026, 4029, 4033, 4068, 4072, 4101, 4112, 4139, 4151, 4199, 4208, 4231, 4232, 4239, 4246, 4257, 4267, 4277, 4314, 4334, 4338, 4343, 4352, 4361, 4374, 4388, 4389, 4395, 4398, 4404, 4408, 4409, 4421, 4430, 4436, 4471, 4475, 4488, 4494, 4499, 4505, 4507, 4511, 4513, 4517, 4532, 4535, 4600, 4601, 4611, 4620, 4621, 4623, 4628, 4629, 4644, 4646, 4659, 4665, 4670, 4671, 4672, 4691, 4695, 4715, 4749, 4752, 4768, 4785, 4786, 4791, 4831, 4866, 4898, 4916, 4935, 4941, 4944, 4964, 4965, 4966, 4974, 4979, 4994, 5000, 5019, 5035, 5045, 5046, 5048, 5049, 5054, 5057, 5075, 5078, 5079, 5080, 5081, 5087, 5093, 5111, 5138, 5144, 5147, 5151, 5156, 5159, 5164, 5168, 5192, 5199, 5206, 5209, 5213, 5228, 5229, 5230, 5232, 5234, 5242, 5244, 5262, 5300, 5322, 5327, 5335, 5336, 5338, 5340, 5346, 5349, 5351, 5352, 5354, 5369, 5373, 5418, 5438, 5439, 5457, 5469, 5472, 5488, 5491, 5520, 5521, 5530, 5542, 5547, 5552, 5554, 5575, 5576, 5589, 5592, 5599, 5604, 5605, 5609, 5611, 5613, 5631, 5642, 5647, 5650, 5658, 5692, 5693, 5696, 5701, 5706, 5707, 5708, 5709, 5712, 5720, 5748, 5760, 5771, 5791, 5805, 5824, 5826, 5832, 5833, 5846, 5849, 5850, 5863, 5871, 5896, 5899, 5901, 5908, 5921, 5925, 5937, 5938, 5947, 5954, 5956, 5959, 5961, 5973, 5980, 6005, 6006, 6008, 6011, 6018, 6032, 6034, 6037, 6039, 6048, 6073, 6076, 6086, 6089, 6103, 6106, 6107, 6110, 6118, 6119, 6121, 6122, 6142, 6176, 6210, 6216, 6219, 6224, 6272, 6273, 6275, 6282, 6293, 6317, 6323, 6329, 6332, 6337, 6338, 6343, 6346, 6373, 6381, 6421, 6428, 6432, 6433, 6440, 6446, 6453, 6455, 6456, 6472, 6485, 6486, 6492, 6493, 6495, 6498, 6500, 6502, 6508, 6511, 6533, 6548, 6565, 6566, 6569, 6574, 6575, 6576, 6579, 6600, 6601, 6604, 6607, 6608, 6610, 6613, 6615, 6633, 6635, 6638, 6648, 6652, 6662, 6663, 6670, 6677, 6706, 6744, 6750, 6756, 6761, 6765, 6770, 6779, 6782, 6796, 6806, 6815, 6833, 6835, 6840, 6842, 6843, 6844, 6845, 6849, 6856, 6865, 6902, 6905, 6909, 6913, 6914, 6918, 6926, 6930, 6958, 6959, 6960, 6984, 6994, 7029, 7030, 7036, 7041, 7044, 7050, 7051, 7052, 7053, 7061, 7063, 7065, 7070, 7103, 7108, 7112, 7115, 7118, 7122, 7132, 7140, 7141, 7143, 7146, 7166, 7186, 7189, 7191, 7193, 7201, 7205, 7207, 7208, 7209, 7227, 7229, 7235, 7236, 7246, 7249, 7254, 7267, 7270, 7274, 7278, 7284, 7287, 7295, 7297, 7305, 7306, 7311, 7319, 7329, 7330, 7334, 7335, 7338, 7341, 7345, 7346, 7348, 7356, 7364, 7365, 7367, 7374, 7381, 7383, 7385, 7397, 7407, 7408, 7415, 7434, 7439, 7449, 7453, 7454, 7455, 7456, 7462, 7465, 7466, 7470, 7472, 7479, 7485, 7489, 7491, 7503, 7505, 7508, 7517, 7519, 7526, 7537, 7539, 7542, 7544, 7547, 7552, 7557, 7563, 7575, 7577, 7583, 7585, 7587, 7593, 7608, 7609, 7628, 7630, 7643, 7645, 7648, 7660, 7662, 7675, 7677, 7683, 7686, 7688, 7699, 7707, 7708, 7712, 7713, 7718, 7719, 7721, 7722, 7725, 7729, 7735, 7737, 7742, 7746, 7752, 7759, 7764, 7765, 7772, 7778, 7780, 7794, 7798, 7800, 7801, 7802, 7804, 7810, 7811, 7814, 7817, 7820, 7822, 7839, 7842, 7844, 7845, 7851, 7854, 7857, 7858, 7868, 7869, 7872, 7874, 7881, 7883, 7886, 7887, 7890, 7891, 7895, 7899, 7900, 7908, 7921, 7923, 7924, 7927, 7934, 7935, 7937, 7941, 7944, 7948, 7950, 7951, 7953, 7956, 7957, 7961, 7963, 7974, 7975, 7976, 7988, 7990, 8003, 8004, 8006, 8007, 8010, 8015, 8018, 8020, 8023, 8024, 8025, 8027, 8034, 8035, 8036, 8037, 8040, 8042, 8047, 8048, 8049, 8060, 8061, 8062, 8065, 8069, 8070, 8072, 8074, 8079, 8080, 8083, 8086, 8088, 8090, 8096, 8098, 8100, 8101, 8102, 8103, 8111, 8113, 8114, 8116, 8117, 8124, 8126, 8131, 8132, 8135, 8137, 8139, 8145, 8150, 8163, 8164, 8166, 8178, 8179, 8180, 8181, 8184, 8186, 8191, 8195, 8198, 8205, 8209, 8210, 8213, 8218, 8224, 8225, 8227, 8241, 8255, 8256, 8274, 8275, 8278, 8299, 8300, 8301, 8314, 8321, 8322, 8334, 8338, 8341, 8344, 8345, 8352, 8353, 8370, 8373, 8375, 8378, 8391, 8393, 8398, 8405, 8411, 8416, 8417, 8423, 8424, 8448, 8449, 8450, 8455, 8458, 8464, 8484, 8495, 8500, 8504, 8544, 8546

Soymilk, Spray-Dried or Powdered 1828, 1923, 1982, 1997, 2403, 2447, 2492, 2622, 2623, 2627, 2846, 2876, 2908, 2913, 2925, 2974, 2997, 3323, 4193, 4421, 4535, 4748, 4806, 4974, 5047, 5143, 5192, 5234, 5352, 5472, 5569, 5661, 5770, 5896, 6005, 6011, 6600, 6835, 7053, 7542, 7712, 7721, 7828, 7924, 8072, 8074, 8080, 8161, 8243, 8393

Soymilk, Used as an Ingredient in Non-Beverage Commercial Products Such as Ice Creams, Yogurts, Cheeses, Desserts, or Entrees 5522, 5529, 5756, 5932, 6001, 6185, 6245, 6270, 6541, 6772, 6805, 6877, 6883, 7022, 7046

Soymilk *See* Calf, Lamb, or Pig Milk Replacers

Soynut Butter (Soynuts / Roasted Soybeans Ground to a Paste Resembling Peanut Butter, May Also Be Made from Soy Flour Mixed with a Little Oil) 2970, 3038, 3090, 3113, 3162, 3195, 3297, 3314, 3315, 3501, 3908, 4395, 4874, 5192, 5232, 5418, 5576, 5980, 7365, 7956, 7975, 8035, 8040, 8060, 8116, 8139, 8145, 8180, 8191, 8205, 8352

Soynut Butter–Etymology of This Term and Its Cognates / Relatives in Various Languages 3297

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Soynut companies (Europe & USA). *See* Solnuts B V (Tilburg, The Netherlands; and Hudson, Iowa) Including Edible Soy Products

Soynut companies (USA). *See* Sycamore Creek Co. (Mason, Michigan) Before 1993, INARI, Ltd

Soynuts (Oil Roasted or Dry Roasted Toasted). Incl. *Irimame* Used in Bean-Scattering (*Mame-Maki*) Ceremony at Setsubun (Lunar New Year) in Japan and Parched Soybeans. 14, 15, 19, 22, 95, 385, 417, 769, 809, 1182, 1254, 1276, 1316, 1341, 1351, 1421, 1516, 1557, 1889, 1916, 2074, 2205, 2207, 2226, 2256, 2283, 2360, 2401, 2412, 2447, 2615, 2680, 2727, 2734, 2774, 2784, 2788, 2790, 2835, 2871, 2913, 2914, 2931, 2974, 2984, 2997, 3001, 3019, 3024, 3033, 3037, 3038, 3058, 3080, 3090, 3093, 3109, 3113, 3152, 3162, 3174, 3176, 3177, 3234, 3238, 3297, 3312, 3314, 3315, 3327, 3360, 3433, 3463, 3469, 3475, 3482, 3486, 3488, 3490, 3501, 3519, 3520, 3530, 3545, 3600, 3619, 3620, 3689, 3861, 3862, 3908, 3945, 3947, 4064, 4102, 4212, 4219, 4246, 4436, 4475, 4511, 4623, 4677, 4715, 4786, 4807, 4834, 4859, 4895, 4903, 4908, 4910, 4932, 4938, 4945, 4948, 4973, 4974, 4977, 4994, 5000, 5045, 5054, 5056, 5125, 5140, 5163, 5164, 5192, 5206, 5211, 5213, 5230, 5242, 5322, 5338, 5346, 5352, 5418, 5439, 5457, 5488, 5542, 5552, 5572, 5583, 5592, 5604, 5606, 5609, 5613, 5627, 5631, 5642, 5650, 5658, 5707, 5743, 5748, 5832, 5850, 5901, 5908, 5946, 5980, 6018, 6076, 6110, 6119, 6122, 6142, 6206, 6224, 6232, 6233, 6272, 6293, 6337, 6499, 6511, 6533, 6566, 6607, 6614, 6627, 6635, 6638, 6648, 6662, 6744, 6750, 6815, 6838, 6842, 6856, 6865, 6943, 7010, 7065, 7140, 7141, 7143, 7186, 7209, 7249, 7284, 7295, 7306, 7311, 7334, 7348, 7365, 7453, 7455, 7577, 7658, 7668, 7687, 7688, 7765, 7781, 7800, 7801, 7802, 7804, 7822, 7881, 7883, 7890, 7944, 7956, 7957, 7961, 7974, 7975, 7976, 8007, 8010, 8023, 8024, 8037, 8042, 8061, 8062, 8070, 8072, 8086, 8096, 8116, 8126, 8137, 8145, 8150, 8161, 8185, 8191, 8198, 8209, 8213, 8216, 8256, 8274, 8319, 8334, 8344, 8352, 8393, 8417, 8455, 8464, 8484

Soynuts–Etymology of This Term and Its Cognates Relatives in Various Languages. 1421, 1916, 2226, 2788, 2974, 3177, 3297, 3482, 7334

Soynuts Industry and Market Statistics, Trends, and Analyses–By Geographical Region. 5901, 5908, 5980, 6648, 7455, 7800

Soynuts Industry and Market Statistics, Trends, and Analyses–Individual Companies. 6648, 7800

Soynuts, Used as an Ingredient in Second Generation Commercial Products Such as Trail Mixes, Granola, Cookies, Candy Bars, etc (Not Including Seasoned, Flavored, or Coated Soynuts). 5125, 5717

Space Travel or NASA Bioregenerative Life Support Systems. 6118

Spectrophotometry. *See* Seed Composition–High-Speed Measurement Techniques, such as Near Infrared Reflectance (NIR) Anlysis and Spectrophotometry

Spencer Kellogg & Sons, Inc. (Buffalo, New York). 3391

Spillers Premier Products Ltd. (Puckeridge, Ware, Hertfordshire, England) Including Soya Foods Ltd [Named Soya Flour Manufacturing Co. Ltd. (1929-42), and Soya Foods Ltd. (1933)]. And incorporating British Soya Products (1932). 2887, 2894, 2908, 2933, 3032, 3115, 3152, 3187, 3207, 4409, 4535, 7828

Sprouts, Non-Soy. See also Soy Sprouts. 5071, 5468, 5695, 6121, 8250

Sprouts. *See* Soy Sprouts

Spun soy protein fibers. *See* Soy Proteins–Textured Soy Protein Isolates

Sri Lanka. *See* Asia, South Sri Lanka

Staley (A.E.) Manufacturing Co. (Decatur, Illinois, Acquired by Tate & Lyle PLC in June 1988). 2428, 2518, 2738, 2848, 2957, 2972, 3025, 3152, 3260, 3379, 3381, 3391, 3610, 3621, 3894, 3942, 4533, 4914, 5120, 5195, 5287, 5721, 5743, 5866, 5867, 5868, 5869, 5889, 5969, 6071, 6078, 6095, 6265, 6551, 6648, 6709, 6710, 7758, 7882, 7897, 8162

Standardization of nomenclature of soybean varieties. *See* Nomenclature of Soybean Varieties Standardization of and Confusion

Standards for soyfoods. *See* Individual foods, e.g., Tofu Standards

Standards, Applied to Soybeans or Soy Products 1332, 3530, 3895, 3918, 4965, 4966, 5065, 5252, 5506, 5589, 6110, 6119, 6214, 6272, 6283, 6348, 6366, 6374, 6478, 6511, 6635, 6648, 6765, 7036, 7094, 7800

Starch (Its Presence or Absence, Especially in Soybean Seeds). 1041, 1069, 1148, 1169, 1226, 1228, 1327, 1335, 1359, 1395

Starter culture for tempeh. *See* Tempeh Starter Culture, Spores, or Inoculum

Statistics on crushing of soybeans, soy oil and meal production and consumption. *See* individual geographic regions (such as Asia, Europe, Latin America, United States, World, etc.) and nations within each region

Statistics on soybean production, area and stocks. *See* individual geographic regions (such as Asia, Europe, Latin America, United States, etc.) and nations within each region

Statistics on soybean production. *See* Soybean Production and Trade Industry and Market Statistics.

Statistics on soybean yields. *See* Yield Statistics, Soybean

Statistics. *See* Industry and Market Analyses and Statistics, the specific product concerned, e.g. Tofu Industry and Market Statistics

Stephens, Arran and Ratana. *See* Lifestream Natural Foods Ltd and Nature's Path (BC, Canada)

Sterols or Steroid Hormones in Soybeans (Phytosterols Including Beta-Sitosterol, Campesterol, and Stigmasterol from Which

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Steroids Such as Progesterone, Hydrocortisone, and Cortisone Can Be Made). 2923, 2954, 2977, 3047, 4368, 4494, 6741, 6865

Stinky tofu, etymology. *See* Tofu, Fermented–Stinky Tofu (*Chou Doufu*), Etymology of This Term

Stinky tofu. *See* Tofu, Fermented–Stinky Tofu (*Chou Doufu*), Etymology of This Term

Storage of Seeds, Viability and Life-Span During Storage or Storability, and Drying of Soybeans. 1972, 2360, 2447, 2534, 2768, 2824, 3032, 3373, 3439, 4644, 4695, 5345, 6756, 6909

Stow Mills, Inc. Including Llama Toucan & Crow (Brattleboro, Vermont), and Lama Trading Co. 5282, 5287, 5289, 6059, 6101, 6137, 8153

Straw, soybean. *See* Feeds / Forage from Soybean Plants–Straw

Strayer Family of Iowa–Incl. George Strayer (1910-1981; executive officer of the American Soybean Association 1940-1967), His Father Bert Strayer (1880-1941), and His Nephew Dennis Strayer (born 1938). 3485, 3501, 3531, 3895, 3918, 3945, 4186, 4196, 5287, 5743, 7859, 7954

Subtilisin, a Strong Proteolytic Enzyme from Natto (Whole Soybeans Fermented with *Bacillus natto*). 8308

Sufu. *See* Tofu, Fermented

Sugars, complex, such as raffinose, stachyose, and verbacose. *See* Oligosaccharides

Sukiyaki–Famous Japanese Recipe and Dish. Its Basic Ingredients Include Tofu (Usually Grilled) and Soy Sauce. 2308, 2359, 2591, 2927, 3001, 3029, 3051, 3081, 3170, 3192, 3332, 3357, 3526, 3546, 3547, 3619, 3631, 3671, 3724, 3739, 3747, 3770, 3785, 3810, 3835, 3858, 3873, 3903, 3912, 3916, 3921, 3922, 3932, 3955, 3986, 4018, 4024, 4030, 4051, 4068, 4072, 4126, 4128, 4139, 4140, 4154, 4155, 4175, 4195, 4212, 4213, 4328, 4340, 4349, 4360, 4401, 4402, 4415, 4441, 4442, 4451, 4452, 4458, 4483, 4485, 4486, 4493, 4500, 4525, 4547, 4581, 4593, 4599, 4622, 4640, 4655, 4667, 4698, 4704, 4727, 4732, 4733, 4743, 4776, 4786, 4826, 4981, 4989, 4991, 4995, 5001, 5157, 5171, 5211, 5213, 5214, 5257, 5317, 5461, 5467, 5545, 5832, 5881, 6178, 6181, 6350, 6491, 6716, 6916, 7024, 7137, 7155, 7283, 7818, 8231, 8258

Sunflower Oil / Sunflowerseed Oil / Sunoil. 2173, 4910, 6815, 7542

Sunflower Seeds and Sunflowers (*Helianthus annuus*)–Including Sunflowerseed Oil, Cake, and Meal. Once called the Heliotrope, Heliotropion, and Heliotropium. 623, 1879, 2088, 2254, 2447, 3501, 3690, 3697, 3912, 4073, 4720, 4721, 4826, 4832, 4834, 4874, 4908, 4910, 4916, 4929, 4941, 4972, 4973, 4987, 4988, 5024, 5055, 5125, 5144, 5197, 5198, 5207, 5282, 5589, 5610, 5631, 5673, 5674, 5707, 5717, 5718, 5744, 5770, 5946, 6139, 6322, 6344, 6358, 6487, 6757, 6815, 6943, 7051, 7052, 7063, 7331, 7348, 7449, 7491, 7542, 7578, 7614, 7668, 7717, 8007, 8072, 8295, 8539

Sunrise Markets Inc. (Vancouver, BC, Canada). 5820, 7264, 7265, 7746, 8178, 8284

Sunsoy Products Ltd. *See* Victory Soya Mills Ltd

Suzuki Shoten (Suzuki & Co.). *See* Hohnen Oil Co., Ltd. (Tokyo, Japan)

Swan Food Corp. (Miami, Florida). Started in 1977 by Robert Brooks and Mary Pung. 5430, 5431, 5432, 5433, 5434, 5554, 6087, 7764

Swan Gardens Inc. and Soya Kaas Inc. (Atlanta, Georgia). 6133, 6531, 6532, 6596, 7065, 7712, 7809

Sweet Black Soybean Paste (Non-Fermented), Also Called Black Bean Paste or Sweet Black Bean Paste. Like Sweet Red / Azuki Bean Paste (*An*), But Made with Black Soybeans. May Be Used As a Filling for Chinese Cakes / Pastries. 4394, 6902, 8088

Sweet Oil. 296, 304, 311, 321, 333, 347, 423, 506, 1301, 2412, 2913, 5460

Swift & Co. (Chicago, Champaign, and Oak Brook, Illinois). 3391, 5049, 5120, 8162

Sword Bean. *Canavalia gladiata* (Jacq.) D.C. Also Known as the Knife Bean, Saber Bean. 1151

Sycamore Creek Co. (Mason, Michigan). Before 1993, INARI, Ltd.–International Nutrition and Resources Inc. Purchased by W.G. Thompson & Sons Ltd. of Canada, Jan. 1999. 5743, 6638

TKW (Germany). *See* Tofukost-Werk GmbH

Tadano, John. *See* Showa Shoyu Brewing Co. (Glendale, Arizona). Founded by John Tadano

Tahini or tahina or tahin. *See* Sesame Butter

Taifun-Produkte (Freiburg, Germany). *See* Life Food GmbH

Taiwan. *See* Asia, East–Taiwan

Taiwanese black bean sauce. *See* Soy Sauce–Taiwanese Black Bean Sauce (*Inyu*)

Takamine, Jokichi (1854-1922; Introduced Koji, Commercial Enzyme Production, and Taka-Diastase to the USA). He Also Isolated Adrenalin–Adrenaline. 1513, 1555, 1901, 1967, 2109, 2110, 2308, 2326, 2620, 2624, 2851, 3114, 3345, 3790, 3920, 4137, 4477, 4693, 5567, 6735, 6906, 7101, 7631, 8237

Tamari, Including Real Tamari (Soy Sauce Which Contains Little or No Wheat) or the Macrobiotic Word Tamari Meaning Traditional Shoyu. 19, 21, 22, 29, 33, 35, 45, 46, 89, 103, 112, 116, 502, 1387, 1400, 1407, 1492, 1724, 1744, 1782, 1783, 1802, 1829, 1892, 1920, 1929, 1990, 2011, 2044, 2046, 2102, 2136, 2143, 2166, 2167, 2326, 2379, 2534, 2580, 2581, 2586, 2625, 2627, 2682, 2686, 2713, 2829, 2864, 2996, 3047, 3107, 3114, 3215, 3345, 3492, 3666, 3753, 3766, 3767, 3768, 3809, 3819, 3827, 3828, 3834, 3840, 3849, 4048, 4069,

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4070, 4085, 4088, 4124, 4129, 4137, 4172, 4195, 4209, 4235, 4237, 4272, 4333, 4345, 4360, 4403, 4416, 4430, 4442, 4450, 4457, 4477, 4511, 4539, 4544, 4549, 4562, 4570, 4574, 4580, 4590, 4592, 4607, 4616, 4625, 4636, 4663, 4668, 4670, 4677, 4682, 4690, 4694, 4697, 4705, 4710, 4717, 4721, 4728, 4781, 4792, 4795, 4796, 4797, 4798, 4817, 4820, 4821, 4823, 4824, 4828, 4832, 4834, 4836, 4839, 4840, 4842, 4843, 4869, 4872, 4875, 4881, 4886, 4890, 4895, 4899, 4903, 4906, 4908, 4909, 4910, 4913, 4915, 4929, 4933, 4935, 4938, 4943, 4944, 4948, 4958, 4961, 4971, 4972, 4973, 4974, 4975, 4977, 4983, 4987, 4988, 4994, 5000, 5013, 5019, 5023, 5024, 5026, 5027, 5028, 5044, 5045, 5046, 5049, 5051, 5053, 5054, 5055, 5056, 5070, 5071, 5072, 5079, 5080, 5082, 5086, 5094, 5096, 5108, 5113, 5115, 5116, 5118, 5125, 5127, 5134, 5140, 5144, 5153, 5162, 5169, 5177, 5181, 5189, 5192, 5193, 5196, 5197, 5198, 5200, 5207, 5208, 5210, 5214, 5223, 5227, 5232, 5234, 5241, 5253, 5258, 5259, 5260, 5261, 5272, 5277, 5282, 5286, 5290, 5292, 5293, 5302, 5311, 5321, 5322, 5324, 5329, 5332, 5360, 5363, 5366, 5367, 5378, 5382, 5391, 5393, 5395, 5397, 5410, 5413, 5421, 5432, 5435, 5451, 5465, 5468, 5474, 5475, 5489, 5492, 5494, 5498, 5499, 5502, 5509, 5514, 5524, 5531, 5534, 5544, 5554, 5563, 5569, 5572, 5574, 5575, 5580, 5583, 5592, 5597, 5598, 5603, 5607, 5608, 5610, 5612, 5614, 5629, 5631, 5638, 5639, 5640, 5648, 5661, 5672, 5673, 5674, 5680, 5683, 5688, 5689, 5691, 5703, 5707, 5708, 5709, 5717, 5718, 5719, 5731, 5732, 5738, 5741, 5744, 5746, 5747, 5760, 5764, 5773, 5775, 5778, 5780, 5785, 5786, 5787, 5794, 5822, 5830, 5832, 5836, 5837, 5845, 5846, 5847, 5848, 5849, 5852, 5853, 5854, 5859, 5861, 5873, 5879, 5891, 5892, 5893, 5894, 5896, 5899, 5900, 5902, 5906, 5907, 5914, 5915, 5916, 5923, 5932, 5940, 5941, 5946, 5949, 5959, 5961, 5963, 5970, 5974, 5980, 5997, 5999, 6000, 6005, 6024, 6027, 6029, 6030, 6032, 6034, 6037, 6041, 6049, 6053, 6054, 6057, 6059, 6077, 6079, 6083, 6089, 6091, 6094, 6096, 6097, 6098, 6101, 6106, 6113, 6116, 6117, 6119, 6121, 6122, 6129, 6137, 6139, 6142, 6148, 6149, 6151, 6152, 6156, 6157, 6161, 6162, 6163, 6165, 6169, 6170, 6176, 6187, 6188, 6204, 6211, 6224, 6230, 6232, 6241, 6242, 6243, 6246, 6253, 6257, 6260, 6275, 6281, 6287, 6290, 6293, 6301, 6307, 6315, 6322, 6323, 6333, 6334, 6336, 6341, 6345, 6347, 6348, 6353, 6356, 6358, 6366, 6371, 6378, 6384, 6398, 6400, 6411, 6416, 6421, 6428, 6429, 6431, 6440, 6443, 6447, 6454, 6461, 6466, 6470, 6477, 6481, 6487, 6492, 6509, 6510, 6521, 6524, 6530, 6548, 6552, 6556, 6557, 6574, 6586, 6597, 6599, 6601, 6604, 6606, 6607, 6617, 6619, 6621, 6623, 6627, 6647, 6651, 6652, 6659, 6660, 6667, 6670, 6675, 6692, 6694, 6696, 6734, 6738, 6740, 6745, 6749, 6758, 6766, 6776, 6779, 6780, 6784, 6786, 6794, 6795, 6796, 6798, 6808, 6814, 6817, 6820, 6836, 6851, 6861, 6865, 6884, 6885, 6886, 6893, 6894, 6897, 6898, 6912, 6919, 6931, 6934, 6937, 6939, 6941, 6947, 6948, 6962, 6963, 6967, 6969, 6970, 6983, 6997, 6999, 7002, 7007, 7009, 7026, 7027, 7030, 7032, 7034, 7039, 7040, 7041, 7045, 7047, 7050, 7051, 7052, 7060, 7063, 7082, 7108, 7117, 7127, 7129, 7133, 7138, 7146, 7148, 7149, 7157, 7167, 7172, 7177, 7180, 7191, 7193, 7195, 7202, 7205, 7207, 7211, 7218, 7220, 7221, 7223, 7227, 7231, 7240, 7241, 7270, 7271, 7279, 7283, 7284, 7289, 7290, 7291, 7292, 7293, 7295, 7303, 7309, 7313, 7314, 7316, 7319, 7323, 7329, 7331, 7334, 7342, 7348, 7356, 7357, 7364, 7370, 7372, 7374, 7383, 7384, 7390, 7395, 7397, 7398, 7403, 7408, 7424, 7426, 7427, 7428, 7437, 7444, 7445, 7453, 7462, 7465, 7472, 7477, 7489, 7496, 7503, 7515, 7541, 7542, 7545, 7547, 7548, 7552, 7559, 7577, 7581, 7582, 7583, 7585, 7590, 7593, 7595, 7601, 7603, 7604, 7605, 7606, 7608, 7609, 7613, 7619, 7620, 7624, 7633, 7634, 7635, 7637, 7643, 7644, 7645, 7647, 7649, 7650, 7654, 7655, 7656, 7657, 7669, 7671, 7673, 7675, 7683, 7686, 7690, 7698, 7699, 7706, 7711, 7716, 7726, 7734, 7737, 7741, 7743, 7747, 7751, 7762, 7769, 7774, 7775, 7777, 7809, 7811, 7815, 7821, 7825, 7829, 7832, 7842, 7847, 7848, 7849, 7856, 7867, 7869, 7870, 7875, 7883, 7888, 7892, 7895, 7898, 7905, 7908, 7914, 7918, 7919, 7925, 7926, 7928, 7929, 7940, 7944, 7953, 7960, 7965, 7968, 7971, 7975, 7979, 7980, 7983, 7986, 7990, 8002, 8003, 8009, 8015, 8027, 8040, 8041, 8042, 8046, 8062, 8069, 8079, 8084, 8086, 8088, 8092, 8096, 8097, 8104, 8105, 8106, 8108, 8112, 8116, 8117, 8119, 8121, 8123, 8130, 8137, 8138, 8145, 8151, 8152, 8153, 8184, 8187, 8198, 8200, 8212, 8218, 8221, 8224, 8225, 8234, 8247, 8256, 8260, 8266, 8269, 8272, 8274, 8275, 8287, 8295, 8307, 8314, 8320, 8323, 8325, 8343, 8345, 8352, 8361, 8362, 8363, 8365, 8369, 8370, 8375, 8401, 8409, 8410, 8420, 8423, 8429, 8442, 8444, 8448, 8449, 8450, 8454, 8467, 8470, 8473, 8474, 8477, 8481, 8482, 8487, 8493, 8495, 8496, 8502, 8511, 8513, 8514, 8515, 8525, 8527, 8529, 8531, 8536, 8539

Tamari, Tamari Shoyu, and Tamari Soy Sauce–Etymology of These Terms and Their Cognates / Relatives in Various Languages. 46, 1387, 1802, 2143, 2996, 4172, 4430, 5080, 5674, 5719, 5741, 5764, 6334

Tanshi, Tan-shih, or Tan-ch'ih (Wade-Giles). *See* Fermented Black Soybeans, Unsalted or Bland

Taosi or tao-si or tausi or tau-si. *See* Fermented Black Soybeans–from The Philippines

Tariffs, duties, embargoes. *See* Trade Policies (International) Concerning Soybeans, Soy Products, or Soyfoods–Tariffs, Duties, Embargoes, Moratoriums, and Other Trade Barriers or Subsidies

Taste Panel, Taste Test Results, or Sensory / Organoleptic Evaluation of the Quality of Foods and Beverages. 2874, 4354, 4416, 4529, 4553, 4554, 4575, 4579, 4638, 4648, 4649, 4678, 4679, 4718, 5101, 5931, 6852

Tauco–Indonesian-Style Fermented Soybean Paste. Also Spelled Taucho, Taucco, Tau Chiow, Taoco, Tao-Tjo, Taotjo, Taocho, Taoetjo. 1430, 1436, 1438, 1543, 1554, 1556, 1689, 2059, 2081, 2082, 2216, 2285, 2492, 2546, 2648, 2865, 2866, 2873, 2875, 3063, 3153, 3516, 3600, 3673, 3675, 3677, 3953, 4193, 4423, 4450, 4505, 4513, 4566, 4729, 4780, 4964, 4976, 5101, 5123, 5230, 5254, 5268, 5286, 5291, 5292, 5303, 5307, 5335, 5350, 5354, 5373, 5420, 5447, 5582, 5642, 5650, 5713, 5751, 5800, 5803, 5815, 5885, 5900, 6013, 6024, 6226, 6229, 6345, 6347, 6499, 6811, 6834, 6867, 6926, 6934, 6965, 7365, 7386, 7400, 7442, 7452, 7473, 7647, 8031, 8111, 8129, 8212, 8362

Taxonomy. *See* Soybean–Taxonomy

Tempeh (Spelled *Témpé* in Malay-Indonesian). 1335, 1430, 1436, 1540, 1541, 1543, 1554, 1556, 1689, 1808, 1919, 2059, 2081, 2082, 2216, 2219, 2285, 2492, 2546, 2648, 2680, 2865, 2866, 2873, 2875, 3054, 3079, 3153, 3287, 3370, 3516, 3600, 3667, 3675, 3677, 3690, 3926, 3953, 4033, 4121, 4193, 4199, 4231, 4232, 4239, 4258, 4268, 4337, 4353, 4368, 4374, 4389, 4423, 4424, 4425, 4435, 4450, 4459, 4476, 4499, 4501, 4505, 4513, 4532, 4533, 4534, 4535, 4540, 4566, 4567, 4568, 4569, 4617, 4628, 4634, 4647, 4665, 4676, 4691, 4703, 4708, 4710, 4714, 4715, 4729, 4753, 4780, 4856, 4866, 4901, 4916, 4941, 4946, 4950, 4958, 4964, 4965, 4966, 4976, 5019, 5035, 5049, 5059, 5083, 5093, 5101, 5123, 5139, 5144, 5156, 5176, 5182, 5209,

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5211, 5212, 5213, 5219, 5222, 5230, 5244, 5246, 5254, 5256, 5268, 5285, 5287, 5288, 5289, 5303, 5307, 5325, 5327, 5335, 5340, 5344, 5345, 5349, 5352, 5354, 5359, 5373, 5392, 5420, 5429, 5442, 5465, 5472, 5491, 5494, 5508, 5513, 5521, 5530, 5539, 5542, 5551, 5567, 5568, 5574, 5582, 5583, 5587, 5589, 5590, 5591, 5592, 5597, 5604, 5605, 5609, 5613, 5616, 5617, 5618, 5621, 5626, 5641, 5642, 5648, 5650, 5661, 5667, 5673, 5682, 5692, 5700, 5705, 5707, 5712, 5713, 5716, 5743, 5748, 5750, 5751, 5757, 5758, 5760, 5765, 5779, 5789, 5790, 5793, 5794, 5796, 5798, 5803, 5805, 5815, 5825, 5826, 5835, 5836, 5845, 5846, 5849, 5851, 5863, 5871, 5878, 5896, 5897, 5899, 5901, 5908, 5918, 5925, 5927, 5937, 5938, 5940, 5941, 5947, 5954, 5956, 5961, 5980, 5990, 6001, 6005, 6013, 6015, 6018, 6024, 6031, 6034, 6036, 6039, 6048, 6049, 6057, 6064, 6076, 6087, 6089, 6106, 6110, 6119, 6122, 6132, 6142, 6155, 6159, 6160, 6161, 6171, 6208, 6209, 6210, 6216, 6218, 6219, 6221, 6224, 6225, 6226, 6228, 6229, 6230, 6234, 6235, 6236, 6240, 6257, 6272, 6273, 6293, 6296, 6298, 6301, 6317, 6323, 6328, 6337, 6343, 6344, 6355, 6358, 6359, 6371, 6421, 6422, 6428, 6429, 6433, 6434, 6436, 6440, 6446, 6449, 6450, 6451, 6452, 6453, 6472, 6488, 6492, 6499, 6500, 6501, 6508, 6509, 6511, 6528, 6533, 6550, 6552, 6563, 6566, 6568, 6570, 6572, 6577, 6600, 6601, 6604, 6606, 6607, 6612, 6614, 6616, 6618, 6619, 6633, 6635, 6638, 6647, 6648, 6649, 6652, 6662, 6663, 6668, 6669, 6670, 6675, 6677, 6696, 6704, 6734, 6736, 6737, 6744, 6745, 6748, 6750, 6756, 6763, 6770, 6779, 6783, 6806, 6808, 6811, 6815, 6817, 6826, 6829, 6830, 6831, 6834, 6838, 6840, 6845, 6846, 6849, 6856, 6865, 6866, 6867, 6876, 6904, 6905, 6906, 6908, 6910, 6911, 6912, 6913, 6918, 6919, 6926, 6927, 6934, 6936, 6958, 6959, 6965, 6984, 7007, 7025, 7036, 7040, 7047, 7050, 7051, 7052, 7053, 7061, 7063, 7065, 7070, 7100, 7101, 7102, 7103, 7106, 7108, 7111, 7116, 7124, 7141, 7158, 7166, 7172, 7174, 7189, 7191, 7193, 7201, 7205, 7207, 7208, 7209, 7229, 7238, 7246, 7248, 7249, 7254, 7263, 7271, 7272, 7279, 7284, 7287, 7295, 7313, 7314, 7319, 7329, 7330, 7336, 7338, 7341, 7348, 7359, 7364, 7365, 7367, 7374, 7381, 7382, 7385, 7386, 7395, 7397, 7400, 7405, 7406, 7408, 7409, 7410, 7415, 7416, 7439, 7442, 7446, 7450, 7452, 7453, 7455, 7456, 7462, 7473, 7479, 7489, 7492, 7496, 7503, 7515, 7535, 7537, 7539, 7541, 7542, 7543, 7547, 7548, 7552, 7577, 7581, 7583, 7585, 7593, 7595, 7612, 7624, 7628, 7630, 7631, 7642, 7643, 7647, 7660, 7661, 7662, 7677, 7686, 7688, 7698, 7699, 7701, 7711, 7712, 7719, 7721, 7725, 7726, 7728, 7735, 7740, 7741, 7742, 7748, 7750, 7752, 7753, 7755, 7756, 7764, 7765, 7767, 7778, 7780, 7789, 7798, 7800, 7801, 7802, 7804, 7810, 7814, 7820, 7822, 7830, 7831, 7842, 7845, 7851, 7854, 7858, 7868, 7870, 7872, 7880, 7881, 7883, 7886, 7887, 7889, 7891, 7892, 7893, 7895, 7898, 7906, 7908, 7909, 7910, 7914, 7920, 7923, 7924, 7927, 7934, 7935, 7943, 7944, 7953, 7956, 7957, 7958, 7965, 7971, 7974, 7975, 7981, 7983, 7986, 7987, 7990, 7991, 7999, 8002, 8003, 8004, 8006, 8007, 8010, 8014, 8015, 8020, 8023, 8024, 8025, 8026, 8027, 8031, 8035, 8036, 8037, 8038, 8040, 8042, 8046, 8047, 8053, 8061, 8062, 8065, 8069, 8070, 8072, 8073, 8081, 8083, 8084, 8086, 8088, 8094, 8095, 8096, 8098, 8099, 8102, 8107, 8111, 8113, 8114, 8116, 8117, 8129, 8130, 8131, 8132, 8133, 8135, 8137, 8139, 8145, 8148, 8150, 8164, 8166, 8179, 8183, 8184, 8185, 8186, 8188, 8191, 8192, 8195, 8198, 8205, 8209, 8213, 8218, 8224, 8225, 8226, 8236, 8239, 8242, 8243, 8252, 8253, 8256, 8262, 8266, 8268, 8269, 8272, 8274, 8295, 8306, 8307, 8334, 8339, 8341, 8344, 8345, 8346, 8351, 8352, 8353, 8363, 8369, 8375, 8405, 8416, 8417, 8420, 8421, 8423, 8424, 8425, 8429, 8431, 8446, 8448, 8453, 8454, 8458, 8465, 8474, 8477, 8486, 8487, 8492, 8493, 8495, 8496, 8505, 8513, 8514, 8515, 8518, 8519, 8524, 8529, 8532, 8535, 8539, 8541, 8546

Tempeh. Etymology of This Term and Its Cognates / Relatives in Various Languages. 1335, 1436, 1543, 2219, 2865, 3153, 4389, 5209, 5938, 7382

Tempeh. Rhizopus Molds Are Discussed Without Mentioning Tempeh. 1610, 1829, 1954, 2516, 3275, 4610, 4680, 4719, 6116

Tempeh Industry and Market Statistics, Trends, and Analyses–By Geographical Region. 5123, 5354, 5901, 5908, 5980, 6110, 6119, 6272, 6434, 6511, 6566, 6648, 6649, 6670, 6846, 7205, 7415, 7455, 7492, 7800, 8166, 8431

Tempeh Industry and Market Statistics, Trends, and Analyses Larger Companies. 5877, 6155, 6272, 6511, 6564, 6648, 6670, 7030, 7053, 7450, 7595, 7800, 8431

Tempeh Production–How to Make Tempeh on a Commercial Scale. 1543, 4258, 5641

Tempeh Starter Culture, Spores, or Inoculum (Called *Ragi Tempe* or *Usar* in Indonesia). 4353, 5212, 5442, 5641, 5642, 5750, 5796, 6669

Tempeh companies (Canada). *See* Noble Bean (Ontario, Canada)

Tempeh companies (USA). *See* Appropriate Foods, Inc. (Brooklyn, New York), Soyfoods Unlimited, Inc. (San Leandro, California)

Tempeh companies. *See* Turtle Island Foods, Inc. (Hood River, Oregon. Maker of Tofurky and Tempeh)

Tempeh in Second Generation Products, Documents About. 5641, 5642, 5650, 7030, 7958

Tempeh, Homemade–How to Make at Home or on a Laboratory Scale, by Hand. 5212, 5442, 5641, 6421, 6652, 6734, 6770, 7364, 8295, 8539

Tempeh, Non-Soy Relatives. Onchom (Oncom, Ontjom). A cake of Peanut Presscake or Okara (Oncom Tahu) Fermented with *Neurospora* (*Monilia sitophila* = *Oidium lupuli*) molds. 1430, 1556, 1571, 1954, 1967, 2059, 2142, 2216, 2516, 2546, 2648, 2865, 2866, 3054, 3153, 3667, 3675, 4121, 4193, 4199, 4368, 4450, 4540, 4708, 4729, 4916, 4946, 4964, 4976, 5019, 5083, 5176, 5230, 5254, 5256, 5303, 5325, 5327, 5335, 5352, 5354, 5568, 5590, 5621, 5641, 5642, 5650, 5751, 5758, 5878, 6013, 6221, 6225, 6226, 6228, 6240, 6449, 6600, 6734, 6763, 6826, 6830, 6834, 6855, 6911, 6912, 6926, 6927, 6934, 7109, 7116, 7365, 7403, 7405, 7612, 7643, 7647, 7753, 8131, 8236, 8416

Tempeh, Non-Soy Relatives. Other Substrates Such as Winged Beans, Lupins, Velvet Beans, Brown Rice, Cassava, etc. 4647, 4916, 5083, 5641, 5642, 5650, 6228, 6763, 6908, 6979, 7537, 7543

Tempeh, Non-Soy Relatives. Tempeh Bongkrek–A Cake of Fermented Coconut Presscake or Grated Coconut. 1430, 1543, 4121, 4450, 5083, 5176, 5327, 5591, 5621, 5642, 5650, 5751, 6221, 6228, 6908, 7102, 7330, 7742, 7753

Tempeh, Okara (Okara Tempeh). Incl. Mei Dou Za, Mei-Tou-

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Cha, Meitauza from China, and Tempe Gembus (from Central and Eastern Java). 3504, 4450, 4647, 4729, 5059, 5083, 5254, 5327, 5352, 5568, 5609, 5642, 6013, 6024, 6221, 6225, 6604, 6908, 6925, 6928, 6933, 6934, 7101, 7102, 8363

Tempeh, Used as an Ingredient in Second Generation Commercial Products Such as Entrees, etc. 5812, 5813, 5877, 5928, 5950, 5981, 5983, 5988, 5997, 6001, 6066, 6067, 6069, 6070, 6115, 6134, 6185, 6196, 6314, 6320, 6325, 6387, 6391, 6403, 6405, 6406, 6412, 6464, 6475, 6476, 6526, 6564, 6592, 6596, 6654, 6681, 6719, 6727, 6773, 6790, 6797, 6850, 6854, 6875, 6880, 6881, 6882, 6883, 6890, 6946, 6978, 6979, 6989, 6990, 6991, 7022, 7075, 7086, 7160, 7178, 7210, 7251, 7315, 7327, 7328, 7351, 7358, 7382, 7391, 7529, 7558, 7611, 7617, 7676, 7889

Tempehworks. *See* Lightlife Foods, Inc.

Temperance movement (abstaining from alcohol) and vegetarianism. *See* Vegetarianism and the Temperance Movement Worldwide

Teranatto or Tera-Natto. *See* Fermented Black Soybeans from Japan–Other Names

Teriyaki Sauce and Teriyaki (Soy Sauce is the Main Sauce Ingredient) 1315, 1492, 1658, 2128, 2190, 2934, 3645, 3659, 3661, 3662, 3696, 3724, 3742, 3759, 3775, 3778, 3780, 3785, 3797, 3810, 3891, 3932, 3951, 3971, 3980, 4019, 4068, 4069, 4071, 4072, 4105, 4165, 4175, 4188, 4236, 4251, 4349, 4401, 4402, 4428, 4441, 4466, 4480, 4486, 4504, 4525, 4547, 4581, 4584, 4586, 4599, 4640, 4650, 4667, 4685, 4698, 4704, 4776, 4787, 4814, 4859, 4879, 4942, 4947, 4984, 5001, 5009, 5011, 5088, 5099, 5129, 5157, 5171, 5215, 5216, 5221, 5231, 5257, 5279, 5341, 5343, 5380, 5386, 5390, 5464, 5515, 5532, 5584, 5604, 5622, 5647, 5651, 5714, 5757, 5771, 5777, 5792, 5811, 5814, 5850, 5853, 5859, 5884, 5892, 5893, 5904, 5927, 5951, 5999, 6029, 6035, 6062, 6064, 6073, 6087, 6102, 6105, 6178, 6181, 6231, 6232, 6249, 6254, 6265, 6294, 6322, 6340, 6350, 6352, 6373, 6396, 6400, 6404, 6438, 6470, 6472, 6489, 6491, 6540, 6544, 6602, 6619, 6643, 6658, 6679, 6696, 6704, 6730, 6738, 6784, 6798, 6803, 6807, 6818, 6825, 6899, 6923, 6931, 6952, 6973, 6985, 6992, 6996, 7012, 7014, 7031, 7045, 7053, 7074, 7082, 7084, 7085, 7091, 7097, 7111, 7125, 7134, 7147, 7158, 7161, 7185, 7187, 7192, 7196, 7203, 7210, 7233, 7247, 7264, 7282, 7286, 7302, 7304, 7309, 7318, 7350, 7351, 7352, 7373, 7378, 7380, 7426, 7468, 7473, 7483, 7491, 7507, 7517, 7525, 7535, 7547, 7555, 7560, 7601, 7622, 7642, 7676, 7712, 7738, 7755, 7756, 7761, 7764, 7787, 7830, 7831, 7834, 7846, 7882, 7883, 7911, 7922, 7940, 7943, 7945, 7975, 7987, 7993, 7999, 8000, 8001, 8017, 8021, 8022, 8029, 8040, 8042, 8051, 8064, 8069, 8073, 8081, 8086, 8088, 8095, 8096, 8101, 8102, 8103, 8117, 8124, 8127, 8128, 8130, 8142, 8143, 8144, 8145, 8156, 8159, 8176, 8181, 8182, 8187, 8188, 8197, 8198, 8201, 8216, 8231, 8232, 8240, 8243, 8253, 8259, 8262, 8285, 8286, 8302, 8304, 8324, 8326, 8327, 8338, 8350, 8351, 8355, 8367, 8373, 8385, 8427, 8429, 8431, 8443, 8446, 8448, 8451, 8453, 8468, 8486, 8490, 8503, 8536, 8548, 8550

Teriyaki Sauce, Homemade Recipe–How to Make at Home or on a Laboratory Scale, by Hand 2190, 2934, 3645, 3659, 3724, 3759, 3775, 3932, 3951, 3971, 4019, 4072, 4704, 5859, 7111, 8088, 8446

Terminology for soybeans–Fanciful. *See* Soybean–Terminology and Nomenclature–Fanciful Terms and Names

Tetra Pak International (Lund, Sweden) 4535, 4672, 4752, 6381, 6485, 6486, 6633, 6782, 7041, 7162, 7173, 7227, 7470, 7508, 7759, 7800

Textiles made from spun soy protein fibers. *See* Fibers (Artificial Wool or Textiles Made from Spun Soy Protein Fibers, Including Azlon, Soylon, and Soy Silk / Soysilk)

Textured soy flours. *See* Soy Flours, Textured (Including TVP, Textured Vegetable Protein)

Textured soy protein concentrates. *See* Soy Protein Concentrates, Textured

Textured soy protein isolates. *See* Soy Protein Isolates, Textured (For Food Use Only) Including Spun Fibers

Textured soy proteins. *See* Soy Proteins, Textured

Thai restaurants outside Japan, or Thai recipes that use soy ingredients outside Thailand. *See* Asia, Southeast–Thailand–Thai Restaurants–Grocery Stores Outside Thailand

Therapeutic uses / aspects of soybeans, general. *See* Medical / Medicinal-Therapeutic Uses / Aspects, General

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Third World / Developing Nations 3373, 3690, 5700

Thompsons Limited. Before Jan. 2004 named Thompson (W.G.) & Sons Limited, Blenheim, Ontario, Canada. Before 1963 W.G. Thompson. Founded in 1924 by Wesley G. "Tommy" Thompson. 7455

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Tivall (Tivol), Maker of Meat Alternatives (Ashrat, Israel). 7252, 7325, 7341, 7498, 7499

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Tofu companies (Canada). *See* Sunrise Markets Inc. (Vancouver, BC, Canada), Victor Food Products, Ltd. (Scarborough, Ontario, Canada)

Tofu companies (Europe). *See* Cauldron Foods Ltd. (Bristol, England), Heuschen-Schrouff B.V. (Landgraaf, Netherlands), Sojadoc (Clermond-Ferrand, France), Sojarei Vollwertkost GmbH (Traiskirchen, near Vienna, Austria) Formerly Sojarei Ebner-Prosl, Soyastern Naturkost GmbH - Dorstener Tofu Produktions GmbH (Dorsten, Germany), Tofukost-Werk TKW GmbH (Wadersloh, Germany), Tofurei Svadesha Naturkost Produkte GmbH (Munich, Germany), Including Byodo Naturkost

Tofu companies (USA). *See* Azumaya, Inc. (San Francisco, California), Global Protein Foods (Valley Cottage, New York) And Parent Company, Kyoto Tanpaku K.K. of Kyoto, Japan, House Foods America Corporation (Los Angeles, California), Island Spring, Inc. (Vashon, Washington), Kyoto Food Corp. USA (Terre Haute, Indiana), Legume, Inc. (Fairfield, New Jersey), Mainland Express (Spring Park, Minnesota), Morinaga Nutritional Foods, Inc., and Morinaga Nyûgyô (Torrance, California, and Tokyo, Japan), Nasoya Foods, Inc. (Leominster, Massachusetts), Subsidiary of Vitasoy, Northern Soy, Inc. (Rochester, New York), Ota Tofu Co. (Portland, Oregon. Founded in 1911), Quong Hop & Co. (South San Francisco, California), Swan Gardens Inc. and Soya Kaas Inc. (Atlanta, Georgia), Tofu International Ltd. and Rosewood Products Inc. (Ann Arbor, Michigan), Tofu Shop (The) (Telluride, Colorado, and Arcata, California) and Tofu Shop Specialty Foods Inc., Tomsun Foods, Inc. (Greenfield, Massachusetts, Port Washington, New York, Wildwood Harvest, Inc.

Tofu curds. *See* Curds Made from Soymilk

Tofu in Second Generation Products, Documents About 1982, 5211, 5213, 5651, 5901, 6209, 6323, 6343, 6386, 6472, 6550, 6704, 6820, 6825, 7030, 7050, 7051, 7052, 7053, 7149, 7201, 7772, 7958, 8182, 8239, 8240, 8367

Tofu, Braised, Grilled Broiled, or Roasted (*Jian-doufu* in Chinese), Chinese-Style, Prepared in the Kitchen or at Home 20, 1184, 5585, 6259

Tofu, Criticism of, Making Fun of, or Image Problems 964, 3102, 7318, 7930, 7931, 7953, 8213

Tofu, Fermented (Also Called *Doufu-ru, Toufu-ru, Furu, Fuyu, Tahuri, Tahuli, Tajure, Tao-hu-yi*, or Sufu), Production How to Make Fermented Tofu Commercially 7401

Tofu, Fermented (Also Called *Doufu-ru, Toufu-ru, Furu, Fuyu, Tahuri, Tahuli, Tajure, Tao-hu-yi*, or Sufu) See also *Tofu-yo* 40, 84, 169, 387, 964, 1128, 1147, 1178, 1183, 1195, 1206, 1237, 1283, 1298, 1361, 1364, 1459, 1523, 1542, 1597, 1756, 1789, 1900, 1930, 1937, 1940, 1982, 1997, 2022, 2025, 2217, 2246, 2253, 2261, 2267, 2283, 2287, 2289, 2311, 2337, 2355, 2356, 2371, 2390, 2447, 2460, 2462, 2534, 2595, 2653, 2676, 2679, 2680, 2735, 2770, 2779, 2781, 2785, 2865, 2871, 2883, 2913, 2914, 2931, 3037, 3077, 3081, 3114, 3119, 3152, 3153, 3167, 3184, 3225, 3260, 3288, 3330, 3409, 3441, 3472, 3473, 3484, 3493, 3504, 3513, 3515, 3525, 3545, 3563, 3564, 3582, 3607, 3615, 3616, 3620, 3624, 3628, 3667, 3671, 3674, 3690, 3770, 3773, 3807, 3855, 4006, 4029, 4064, 4072, 4093, 4133, 4181, 4208, 4216, 4217, 4219, 4246, 4253, 4265, 4266, 4274, 4289, 4342, 4392, 4393, 4394, 4396, 4435, 4450, 4459, 4464, 4470, 4473, 4474, 4509, 4516, 4534, 4540, 4568, 4569, 4571, 4576, 4606, 4617, 4620, 4621, 4634, 4647, 4676, 4695, 4715, 4729, 4751, 4767, 4769, 4785, 4856, 4862, 4866, 4880, 4901, 4946, 4947, 4950, 4965, 4979, 5019, 5035, 5049, 5050, 5059, 5060, 5076, 5078, 5087, 5111, 5137, 5149, 5150, 5155, 5209, 5211, 5213, 5230, 5233, 5244, 5247, 5254, 5256, 5267, 5285, 5336, 5341, 5345, 5352, 5373, 5438, 5445, 5458, 5464, 5513, 5567, 5568, 5574, 5579, 5585, 5589, 5604, 5609, 5614, 5618, 5621, 5622, 5647, 5686, 5693, 5696, 5698, 5699, 5701, 5704, 5705, 5712, 5713, 5715, 5751, 5779, 5790, 5799, 5800, 5801, 5805, 5823, 5828, 5833, 5835, 5841, 5843, 5856, 5858, 5871, 5876, 5878, 5890, 5896, 5908, 5925, 5947, 6012, 6015, 6016, 6018, 6024, 6034, 6073, 6086, 6119, 6122, 6208, 6210, 6224, 6225, 6226, 6233, 6239, 6240, 6301, 6304, 6306, 6308, 6317, 6329, 6338, 6355, 6373, 6423, 6424, 6426, 6433, 6436, 6446, 6453, 6486, 6501, 6509, 6533, 6566, 6603, 6604, 6624, 6633, 6635, 6648, 6669, 6734, 6746, 6764, 6783, 6806, 6824, 6835, 6838, 6842, 6865, 6866, 6891, 6903, 6905, 6911, 6912, 6927, 6930, 6933, 6934, 7036, 7101, 7102, 7108, 7116, 7120, 7166, 7212, 7254, 7267, 7270, 7272, 7345, 7365, 7401, 7405, 7406, 7409, 7410, 7434, 7438, 7441, 7479, 7517, 7537, 7540, 7582, 7629, 7642, 7643, 7647, 7719, 7721, 7753, 7767, 7780, 7783, 7792, 7793, 7794, 7800, 7839, 7886, 7916, 7935, 7971, 7986, 7991, 8015, 8020, 8026, 8030, 8084, 8088, 8092, 8098, 8130, 8131, 8135, 8149, 8169, 8170, 8179, 8181, 8185, 8190, 8213, 8228, 8229, 8234, 8236, 8257, 8268, 8269, 8273, 8306, 8315, 8334, 8376, 8416, 8418, 8423, 8425, 8445, 8446, 8458, 8465, 8466, 8475, 8487, 8504, 8518, 8524, 8541

Tofu, Fermented–Etymology of This Term and Its Cognates / Relatives in Various Languages 84, 1206, 1361, 1597, 1789, 1940, 2283, 2289, 2534, 2679, 2931, 3119, 3473, 3504, 3513, 3545, 3564, 3616, 3674, 3690, 3770, 3773, 3807, 4072, 4246, 4450, 4576, 4621, 4751, 4901, 5087, 5150, 5373, 5604, 5856, 6486, 8418

Tofu, Fermented Imports, Exports, International Trade 2311, 2913

Tofu, Fermented Stinky Tofu (pinyin: Chou Doufu (W.-G. Ch'ou Toufu). Also Called, Stinking, Smelly or Redolent Tofu / Bean Curd) 84, 1361, 2871, 2883, 4435, 5445, 5856, 5871, 6208, 6210, 6233, 6930, 6934, 7267, 8088, 8131, 8416, 8475

Tofu, Fermented Stinky Tofu (*Chou Doufu*), Etymology of This Term and Its Cognates / Relatives in Various Languages 1361, 2871, 2883, 5445, 5856, 6210

Tofu, Fermented Tofuyo from Okinawa, Japan (Made with Red Rice {*Beni-Koji*} Containing *Monascus purpureus*) 5686, 7647, 8423, 8425, 8541

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Tofu, Firm (Incl. Doufu-gan). 6022

Tofu, Five-Spice Pressed (*Wu-hsiang Toufukan / Wuxiang Doufugan*). 964, 4509, 5211, 5213, 5561, 5602, 5647, 5833, 5994, 6073, 6090, 6373, 6887, 7125, 7517, 8006, 8181

Tofu, Flavored / Seasoned / Marinated and Baked, Broiled, Grilled, Braised, or Roasted. Including Tofu Jerky and Savory Baked Tofu. 5432, 5500, 5554, 5602, 5647, 5673, 5757, 5759, 5794, 6068, 6073, 6133, 6154, 6197, 6199, 6294, 6373, 6397, 6532, 6562, 6580, 6775, 6886, 6887, 6899, 6919, 6953, 6976, 7052, 7215, 7286, 7393, 7517, 7579, 7712, 7749, 7924, 7931, 8079, 8142, 8159, 8181, 8182, 8197, 8201, 8280, 8324

Tofu, Flavored, Seasoned, or Marinated, but not Baked, Broiled, Grilled, Braised, or Roasted. Including most Five-Spice Pressed Tofu (*wu-hsiang toufukan / wuxiang doufugan*). 964, 5211, 5213, 5368, 5433, 5561, 5655, 5762, 5814, 5820, 5833, 6074, 6141, 6376, 6396, 6416, 6512, 6630, 6643, 6711, 6945, 6973, 6983, 7050, 7056, 7057, 7125, 7154, 7239, 7247, 7255, 7264, 7389, 7417, 7422, 7470, 7528, 7650, 7756, 7846, 7904, 7983, 8006

Tofu, Fried (Especially Deep-Fried Tofu Pouches, Puffs, Cutlets, or Burgers. Agé or Aburagé. Aburaagé. Usu-agé. Atsu-agé or Nama-agé. Ganmodoki or Ganmo. Hiryôzu / Hiryozu). 20, 46, 95, 803, 964, 997, 1005, 1039, 1190, 1258, 1259, 1276, 1285, 1492, 1503, 1613, 1614, 1654, 1656, 1721, 2000, 2080, 2117, 2121, 2128, 2246, 2256, 2270, 2287, 2288, 2295, 2359, 2370, 2447, 2494, 2514, 2534, 2616, 2625, 2668, 2793, 2842, 2867, 2868, 2913, 2946, 2962, 3149, 3161, 3187, 3289, 3358, 3417, 3473, 3500, 3601, 3631, 3707, 3724, 3777, 3857, 3903, 3944, 4029, 4068, 4116, 4128, 4153, 4154, 4155, 4199, 4209, 4212, 4216, 4217, 4219, 4231, 4257, 4349, 4351, 4360, 4376, 4388, 4401, 4402, 4418, 4430, 4469, 4470, 4471, 4472, 4509, 4511, 4513, 4589, 4617, 4622, 4674, 4688, 4698, 4704, 4736, 4766, 4855, 4861, 4866, 4883, 4902, 4909, 4932, 4934, 4935, 4966, 5001, 5019, 5028, 5035, 5036, 5044, 5060, 5078, 5080, 5081, 5099, 5115, 5119, 5150, 5154, 5157, 5159, 5188, 5211, 5213, 5214, 5215, 5233, 5262, 5270, 5318, 5334, 5336, 5337, 5341, 5343, 5350, 5352, 5371, 5373, 5386, 5394, 5447, 5477, 5488, 5507, 5545, 5554, 5565, 5584, 5585, 5602, 5604, 5622, 5647, 5651, 5661, 5664, 5691, 5692, 5695, 5698, 5699, 5701, 5714, 5757, 5777, 5792, 5794, 5828, 5831, 5833, 5835, 5859, 5870, 5881, 5890, 5896, 5910, 5937, 5956, 5975, 5978, 6006, 6012, 6016, 6018, 6024, 6048, 6073, 6087, 6089, 6099, 6103, 6114, 6119, 6122, 6172, 6173, 6174, 6176, 6213, 6224, 6232, 6241, 6267, 6274, 6300, 6308, 6309, 6317, 6329, 6331, 6373, 6380, 6382, 6403, 6424, 6426, 6432, 6433, 6436, 6438, 6455, 6487, 6489, 6533, 6542, 6584, 6585, 6610, 6615, 6636, 6640, 6652, 6654, 6673, 6688, 6695, 6733, 6738, 6743, 6754, 6755, 6764, 6767, 6774, 6780, 6802, 6820, 6833, 6835, 6862, 6865, 6874, 6909, 6916, 6931, 6932, 6942, 6944, 6945, 6957, 6983, 7020, 7056, 7057, 7097, 7118, 7184, 7243, 7256, 7278, 7307, 7343, 7345, 7351, 7361, 7369, 7373, 7400, 7411, 7449, 7450, 7468, 7470, 7517, 7525, 7537, 7552, 7555, 7560, 7585, 7587, 7602, 7607, 7629, 7630, 7632, 7642, 7643, 7677, 7701, 7712, 7719, 7720, 7728, 7746, 7783, 7787, 7792, 7805, 7857, 7861, 7863, 7886, 7916, 7931, 7976, 7999, 8008, 8026, 8027, 8028, 8030, 8084, 8087, 8088, 8090, 8098, 8103, 8107, 8130, 8131, 8135, 8158, 8179, 8181, 8187, 8202, 8213, 8216, 8226, 8228, 8231, 8234, 8243, 8269, 8273, 8274, 8290, 8307, 8309, 8322, 8355, 8361, 8373, 8380, 8383, 8385, 8416, 8419, 8424, 8446, 8464, 8466, 8497, 8508, 8510, 8513, 8536

Tofu, Fried or Deep-Fried–Etymology of This Term and Its Cognates / Relatives in Various Languages. 997, 1259, 1613, 1656, 1721, 2121, 2128, 2288, 2514, 2668, 2867, 2868, 3417, 3473, 3500, 3631, 3724, 3777, 3857, 4128, 4219, 4471, 4511, 4674, 4883, 5028, 5081, 5099, 5211, 5213, 5215, 5334, 5447, 5604, 5792, 5859, 6308, 7400, 7916, 8510

Tofu, Fried, Used as an Ingredient in Commercial Soyfood Products. 803, 6767

Tofu, Frozen or Dried-Frozen–Etymology of This Term and Its Cognates / Relatives in Various Languages. 49, 1132, 1148, 1224, 1263, 1325, 1391, 1554, 1613, 1806, 1843, 1889, 1912, 2108, 2256, 2668, 2734, 4511, 5078, 5209, 5211, 5213, 5871, 6754

Tofu, Frozen or Dried-Frozen, Used as an Ingredient in Commercial Soyfood Products. 6330, 6655, 7092, 7621, 7652, 7852

Tofu, Frozen, Dried-frozen, or Dried Whole (Not Powdered). 35, 45, 49, 52, 84, 99, 102, 169, 387, 1132, 1148, 1190, 1211, 1212, 1219, 1221, 1222, 1224, 1263, 1325, 1373, 1384, 1387, 1391, 1440, 1458, 1466, 1488, 1496, 1522, 1524, 1533, 1554, 1606, 1613, 1614, 1654, 1656, 1661, 1725, 1746, 1803, 1806, 1843, 1888, 1889, 1907, 1912, 1951, 2037, 2080, 2089, 2108, 2243, 2246, 2256, 2274, 2336, 2343, 2360, 2370, 2416, 2447, 2492, 2534, 2616, 2617, 2625, 2627, 2668, 2734, 2867, 2868, 2913, 3187, 3249, 3417, 3513, 3678, 3724, 3777, 3857, 4023, 4029, 4093, 4110, 4111, 4122, 4153, 4171, 4176, 4199, 4212, 4231, 4239, 4242, 4257, 4334, 4349, 4352, 4368, 4388, 4469, 4470, 4471, 4472, 4484, 4489, 4513, 4526, 4535, 4589, 4617, 4629, 4677, 4699, 4769, 4883, 4902, 4930, 4933, 4966, 5035, 5036, 5044, 5078, 5080, 5081, 5119, 5154, 5159, 5206, 5209, 5211, 5213, 5246, 5262, 5328, 5343, 5352, 5373, 5456, 5477, 5554, 5604, 5626, 5647, 5656, 5661, 5691, 5692, 5707, 5725, 5737, 5833, 5835, 5859, 5871, 5896, 5937, 5948, 5956, 5975, 5982, 6003, 6005, 6006, 6048, 6073, 6107, 6171, 6317, 6373, 6382, 6433, 6492, 6495, 6498, 6533, 6610, 6615, 6630, 6749, 6754, 6833, 6862, 6865, 6874, 6916, 6932, 7010, 7063, 7065, 7173, 7311, 7318, 7334, 7365, 7454, 7465, 7491, 7517, 7519, 7542, 7593, 7600, 7601, 7630, 7677, 7706, 7719, 7829, 7851, 7857, 7871, 7874, 7886, 7912, 7924, 7941, 7948, 7951, 7957, 7995, 8027, 8028, 8037, 8090, 8130, 8179, 8181, 8185, 8199, 8243, 8424

Tofu, Grilled, Braised, Broiled, or Roasted (*Yaki-dôfu* in Japanese) A Japanese-Style Commercial Product. 95, 103, 467, 1184, 1387, 1492, 1824, 2343, 2514, 2867, 2868, 3417, 3724, 3777, 3857, 4093, 4128, 4199, 4212, 4401, 4402, 4471, 4511, 4622, 4865, 4916, 5067, 5151, 5154, 5157, 5211, 5213, 5214, 5215, 5262, 5343, 5352, 5371, 5604, 5647, 5714, 5792, 5794, 5833, 5859, 6068, 6073, 6119, 6122, 6141, 6171, 6176, 6224, 6233, 6373, 6421, 6472, 6533, 6610, 6733, 6775, 6916, 6931, 6997, 7344, 7392, 7411, 7517, 7532, 7535, 7547, 7629, 7632, 7642, 7643, 7851, 7927, 7931, 8006, 8069, 8084, 8088, 8090, 8098, 8103, 8107, 8130, 8131, 8181, 8192, 8213, 8228, 8243, 8269, 8305, 8314, 8322, 8325, 8338, 8352, 8380, 8466, 8476, 8493, 8510

Tofu, Grilled, Broiled, Braised, or Roasted–Etymology of This Term and Its Cognates / Relatives in Various Languages. 2514, 3724, 4402, 4865, 5154, 5585, 5794, 8069

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Tofu, Homemade–How to Make at Home or on a Laboratory or Community Scale, by Hand 41, 1661, 2256, 2617, 3553, 4267, 4388, 4780, 4883, 4890, 4935, 4948, 5054, 5059, 5115, 5154, 5157, 5164, 5191, 5211, 5213, 5242, 5272, 5287, 5289, 5321, 5324, 5329, 5348, 5494, 5604, 5661, 5794, 5913, 6024, 6087, 6208, 6231, 6241, 6652, 7632, 7920, 7928, 8097

Tofu, Non-Soy Relatives (Such as Winged Bean Tofu or Peanut Tofu) 40, 41, 43, 1556, 2377

Tofu, Pressed, Chinese-Style (*Toufukan / Doufugan / Dougan*) 84, 102, 387, 1020, 2595, 2787, 5525, 5828, 6012, 6308, 6424, 8149

Tofu, Silken (Kinugoshi)–Etymology of This Term and Its Cognates / Relatives in Various Languages 4916, 4941, 5211, 5213, 5343

Tofu, Silken (Kinugoshi), Made without Separation of Curds and Whey 4916, 4941, 5081, 5099, 5211, 5213, 5262, 5343, 5352, 5373, 5592, 5604, 5609, 5647, 5859, 5896, 6056, 6073, 6102, 6171, 6357, 6373, 6610, 6633, 6683, 6698, 6715, 6716, 6778, 6909, 6916, 6949, 7024, 7153, 7162, 7169, 7244, 7307, 7326, 7383, 7439, 7473, 7506, 7517, 7585, 7597, 7602, 7624, 7677, 7719, 7768, 7817, 7851, 7873, 7886, 7927, 7930, 7945, 8006, 8018, 8027, 8036, 8049, 8069, 8073, 8079, 8102, 8181, 8213, 8216, 8225, 8243, 8273, 8344, 8380, 8449, 8450

Tofu, Smoked–Etymology of This Term and Its Cognates / Relatives in Various Languages 5211, 5213, 5647, 6073, 6373, 7517, 8179, 8181

Tofu, Smoked 84, 102, 387, 964, 1830, 1930, 1937, 1982, 1997, 2022, 2283, 2403, 2416, 2625, 2649, 2676, 2931, 3102, 3240, 3260, 3472, 5035, 5647, 5890, 6073, 6373, 6514, 6630, 6634, 6835, 6893, 6975, 7011, 7215, 7227, 7247, 7295, 7334, 7348, 7350, 7408, 7449, 7450, 7517, 7593, 7650, 7659, 7738, 7772, 7834, 7924, 7931, 7952, 7981, 8018, 8027, 8059, 8099, 8179, 8181, 8259, 8544

Tofu, Spray-dried or Powdered, Used as an Ingredient in Second Generation Commercial Products Such as Ice Creams, Beverages, etc. 7856

Tofu, Spray-dried or Powdered 1930, 6219, 7311, 7334, 7844, 7928, 8097

Tofu, Used as an Ingredient in Second Generation Commercial Products Such as Dressings, Entrees, Ice Creams, etc. 3328, 3336, 5368, 5413, 5430, 5431, 5432, 5433, 5434, 5522, 5523, 5548, 5602, 5645, 5646, 5652, 5653, 5654, 5655, 5671, 5676, 5681, 5687, 5759, 5762, 5808, 5809, 5814, 5819, 5879, 5880, 5892, 5895, 5909, 5939, 5948, 6002, 6003, 6050, 6068, 6072, 6074, 6099, 6129, 6131, 6133, 6138, 6141, 6150, 6154, 6164, 6167, 6172, 6173, 6174, 6189, 6190, 6191, 6197, 6199, 6269, 6280, 6294, 6300, 6318, 6321, 6325, 6341, 6368, 6375, 6376, 6389, 6390, 6395, 6396, 6397, 6403, 6416, 6471, 6473, 6474, 6487, 6512, 6514, 6527, 6531, 6532, 6541, 6554, 6561, 6562, 6580, 6581, 6582, 6584, 6585, 6590, 6595, 6622, 6626, 6630, 6634, 6636, 6640, 6643, 6653, 6654, 6657, 6673, 6682, 6688, 6689, 6695, 6702, 6703, 6725, 6772, 6774, 6775, 6780, 6785, 6800, 6801, 6805, 6810, 6812, 6816, 6860, 6871, 6874, 6886, 6887, 6893, 6899, 6944, 6945, 6946, 6953, 6954, 6955, 6957, 6967, 6973, 6976, 6981, 6982, 6983, 6993, 7011, 7015, 7016, 7035, 7038, 7046, 7056, 7064, 7088, 7089, 7097, 7121, 7125, 7164, 7176, 7183, 7184, 7215, 7217, 7226, 7228, 7239, 7243, 7247, 7250, 7251, 7255, 7256, 7257, 7262, 7264, 7265, 7286, 7308, 7312, 7324, 7337, 7343, 7344, 7347, 7350, 7351, 7373, 7389, 7392, 7393, 7417, 7421, 7422, 7432, 7468, 7480, 7481, 7484, 7490, 7497, 7500, 7501, 7502, 7504, 7510, 7511, 7518, 7520, 7521, 7522, 7525, 7528, 7532, 7560, 7579, 7598, 7616, 7702, 7738, 7744, 7749, 7766, 7771, 7834, 7846, 7889, 7904, 7994, 8142, 8159, 8197, 8201, 8259, 8280, 8284, 8324, 8325, 8338, 8443, 8503

Tofu, baked or broiled at flavored / seasoned marinated. *See* Tofu, Flavored Seasoned Marinated and Baked, Broiled, Grilled, Braised, or Roasted

Tofukost-Werk TKW GmbH (Wadersloh, Germany) 6755

Tofurei Svadesha Naturkost Produkte GmbH (Munich, Germany), Including Byodo Naturkost 6089, 6273, 6564, 6622, 6774, 6944, 6945, 6946, 7208, 7417

Tofutown.com (formerly Viana Naturkost GmbH) and Bernd Drosihn (Wiesbaum / Vulkaneifel, Germany) 7359, 7360, 7391, 7433, 7529, 7770, 7777, 7983

Tofutti Brands, Inc. (Cranford, New Jersey)–Soy Ice Cream Company. Mintz's Buffet Until Jan. 1982 5937, 5956, 6048, 6472, 6550, 6575, 6633, 6670, 6782, 6960, 7140, 7307, 7607, 7712, 7765, 7999, 8004, 8546

Tolstoy, Leo (1828-1910), Vegetarian Pioneer in Russia, Also known as Count Lev Nikolayevich Tolstoy / Lyeff Nikolaevitch Tolstoi 1906, 2479, 6037

Tomato ketchup. *See* Ketchup, Tomato (Tomato Ketchup, Western-Style)

Tomsun Foods, Inc. (Greenfield, Massachusetts; Port Washington, New York. Named New England Soy Dairy from 1978-1983) 5287, 5289, 5451, 5505, 5707, 5993, 5994, 6090, 6110, 6119, 6296, 6343, 6508, 6511, 6550, 6575, 6648, 7051, 7307, 7361, 7607

Tonga. *See* Oceania

Touchi or tou ch'i. *See* Fermented Black Soybeans

Toxins and Toxicity in Foods and Feeds (General) 1806, 3296, 4567, 4765, 5388, 5657, 6193, 6302, 6777, 6832, 6922, 7004, 7023, 7071, 7142, 7471, 7584, 8204

Toxins and Toxicity in Foods and Feeds–Aflatoxins (Caused by certain strains of *Aspergillus flavus* and *A. parasiticus* molds) 4497, 4501, 4523, 4531, 4534, 4535, 4555, 4556, 4563, 4573, 4594, 4651, 4652, 4754, 4778, 4812, 5246, 5499, 5601, 5723, 5797, 5799, 5878, 5885, 5887, 6015, 6040, 6063, 6365, 6642, 6735, 6937, 7540, 7767

Toxins and Toxicity in Foods and Feeds–Bongkrek Poisoning, Caused by Either Bongkrek Acid or Toxoflavin Produced in Some Coconut Tempeh by the Aerobic Bacteria *Pseudomonas cocovenenans* 1430, 1543, 4121, 4450, 5621, 5642, 5650, 6221, 6228

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Toxins and Toxicity in Foods and Feeds–Microorganisms, Especially Bacteria (Such as *Escherichia coli, Salmonella, Clostridium botulinum*), that Cause Food Poisoning. See also: Aflatoxins (produced by molds) and Bongkrek Poisoning (produced in coconut by bacteria). 3487, 6568, 6921, 7362, 7977, 7997

Tractors. 2311, 2789, 3032

Trade (International–Imports, Exports) of Soybeans, Soy Oil, and / or Soybean Meal. See also Trade–Tariffs and Duties. 1088, 1185, 1190, 1192, 1296, 1327, 1335, 1351, 1386, 1387, 1409, 1474, 1491, 1495, 1502, 1524, 1556, 1588, 1654, 1696, 1719, 1736, 1743, 1750, 1773, 1780, 1781, 1784, 1786, 1787, 1791, 1803, 1805, 1806, 1810, 1815, 1823, 1830, 1832, 1833, 1835, 1836, 1838, 1850, 1852, 1854, 1873, 1875, 1876, 1879, 1880, 1881, 1882, 1883, 1888, 1904, 1905, 1910, 1912, 1913, 1923, 1926, 1943, 1950, 1962, 1972, 1981, 1993, 1994, 2007, 2010, 2048, 2050, 2059, 2077, 2082, 2084, 2088, 2097, 2106, 2118, 2127, 2129, 2137, 2170, 2171, 2177, 2178, 2179, 2189, 2193, 2196, 2199, 2203, 2209, 2230, 2231, 2240, 2241, 2242, 2243, 2252, 2254, 2274, 2277, 2282, 2283, 2285, 2298, 2302, 2360, 2369, 2370, 2378, 2381, 2389, 2393, 2403, 2409, 2413, 2417, 2424, 2442, 2447, 2456, 2458, 2477, 2488, 2492, 2497, 2518, 2534, 2635, 2668, 2738, 2766, 2768, 2771, 2781, 2785, 2790, 2827, 2828, 2852, 2873, 2875, 2887, 2894, 2895, 2963, 3014, 3015, 3016, 3026, 3032, 3061, 3063, 3079, 3097, 3099, 3104, 3112, 3115, 3152, 3153, 3159, 3169, 3184, 3185, 3187, 3207, 3235, 3359, 3373, 3491, 3503, 3519, 3545, 3588, 3600, 3663, 3679, 3764, 3895, 3918, 3924, 3936, 4026, 4029, 4110, 4245, 4314, 4352, 4361, 4367, 4368, 4427, 4439, 4469, 4494, 4535, 4582, 4644, 4659, 4695, 4699, 4811, 5014, 5017, 5032, 5093, 5098, 5352, 5369, 5394, 5456, 5599, 5982, 6049, 6106, 6494, 6497, 6499, 6500, 6502, 6566, 6569, 6573, 6649, 6815, 6905, 6965, 6968, 6972, 7010, 7154, 7173, 7229, 7354, 7377, 7442, 7443, 7455, 7469, 7612, 7677, 7683, 7721, 7798, 7799, 7921, 7954, 8065, 8072, 8135, 8177

Trade Policies (International) Concerning Soybeans, Soy Products, or Soyfoods–Tariffs, Duties, Embargoes, Moratoriums, and Other Trade Barriers or Subsidies. 813, 1061, 1093, 1339, 1505, 1599, 1765, 1803, 1854, 1880, 1921, 1926, 2137, 2148, 2178, 2243, 2370, 2635, 2827, 2887, 2894, 3016, 3032, 3491, 4699, 4969, 5007, 5008, 5014, 5015, 5016, 5017, 5025, 5725, 7354, 7455, 7677, 7838, 7861, 8050

Trade of Soyfoods (Import and Export, not Including Soy Oil or Soybean Meal, but Including Lecithin and Margarine) or Soyfoods Manufacturing Equipment. See also: Soy Sauce–Imports, Exports; Miso–Imports, Exports. 81, 101, 103, 125, 197, 200, 201, 215, 220, 221, 252, 255, 259, 431, 435, 443, 503, 512, 546, 603, 608, 692, 729, 758, 768, 785, 797, 807, 808, 813, 877, 878, 904, 911, 913, 957, 968, 981, 1005, 1023, 1028, 1030, 1048, 1051, 1061, 1088, 1093, 1101, 1114, 1128, 1142, 1189, 1197, 1198, 1200, 1233, 1236, 1292, 1317, 1337, 1339, 1395, 1396, 1410, 1420, 1446, 1457, 1472, 1546, 1574, 1597, 1599, 1645, 1646, 1651, 1657, 1681, 1723, 1734, 1736, 1743, 1746, 1751, 1791, 1803, 1805, 1833, 1852, 1854, 1857, 1858, 1860, 1861, 1865, 1866, 1867, 1868, 1872, 1888, 1921, 1928, 1939, 1943, 1962, 1970, 1973, 1975, 2004, 2005, 2086, 2108, 2130, 2152, 2230, 2231, 2283, 2335, 2354, 2370, 2376, 2389, 2390, 2428, 2481, 2497, 2535, 2635, 2742, 2827, 2836, 3014, 3061, 3063, 3185, 3191, 3235, 3322, 3337, 3359, 3495, 3558, 3630, 3685, 3722, 3894, 3910, 3948, 4062, 4081, 4094, 4345, 4535, 4584, 4622, 4624, 4625, 4663, 4668, 4682, 4712, 4717, 4720, 4792, 4832, 4929, 4952, 4971, 4984, 4993, 4998, 5012, 5055, 5056, 5114, 5118, 5135, 5196, 5197, 5198, 5223, 5248, 5253, 5282, 5302, 5312, 5360, 5366, 5378, 5393, 5536, 5553, 5607, 5665, 5688, 5741, 5778, 5893, 5902, 5917, 5952, 5968, 5986, 5999, 6046, 6055, 6083, 6093, 6096, 6151, 6163, 6165, 6168, 6178, 6201, 6248, 6252, 6253, 6287, 6288, 6289, 6290, 6291, 6295, 6332, 6333, 6358, 6377, 6385, 6400, 6402, 6407, 6408, 6409, 6410, 6465, 6485, 6486, 6507, 6536, 6537, 6586, 6623, 6655, 6664, 6665, 6666, 6667, 6697, 6698, 6701, 6729, 6730, 6753, 6767, 6795, 6798, 6884, 6885, 6894, 6895, 6896, 6897, 6898, 6970, 6994, 7009, 7013, 7024, 7028, 7034, 7042, 7044, 7045, 7059, 7062, 7073, 7080, 7082, 7115, 7123, 7129, 7133, 7134, 7135, 7136, 7137, 7138, 7139, 7148, 7157, 7161, 7162, 7169, 7170, 7177, 7180, 7185, 7187, 7188, 7191, 7194, 7195, 7198, 7202, 7204, 7206, 7213, 7216, 7222, 7227, 7234, 7235, 7236, 7262, 7288, 7311, 7317, 7326, 7334, 7340, 7354, 7355, 7356, 7357, 7366, 7383, 7404, 7425, 7426, 7428, 7447, 7450, 7451, 7452, 7473, 7507, 7526, 7556, 7559, 7581, 7582, 7594, 7618, 7619, 7692, 7704, 7739, 7768, 7797, 7806, 7884, 8050, 8136, 8300, 8545

Trade statistics, Canada. *See* Canada–Trade (Imports or Exports) of Soybeans, Soy Oil, and / or Soybean Meal–Statistics

Trade statistics, Central America. *See* Latin America–Central America–Trade (Imports or Exports) of Soybeans, Soy Oil, and / or Soybean Meal–Statistics

Trade statistics, East Asia. *See* Asia, East–Trade (Imports or Exports) of Soybeans, Soy Oil, and / or Soybean Meal–Statistics

Trade statistics, Japan. *See* Japan–Trade (Imports or Exports) of Soybeans, Soy Oil, and / or Soybean Meal–Statistics

Trade statistics, Manchuria. *See* Manchuria–Trade (Imports or Exports) of Soybeans, Soy Oil, and / or Soybean Meal–Statistics

Trade statistics, South America. *See* Latin America–South America–Trade (Imports or Exports) of Soybeans, Soy Oil, and / or Soybean Meal–Statistics

Trade statistics, Southeast Asia. *See* Asia, Southeast–Trade (Imports or Exports) of Soybeans, Soy Oil, and / or Soybean Meal–Statistics

Trade statistics, USA. *See* United States of America (USA)–Trade (Imports or Exports) of Soybeans, Soy Oil, and / or Soybean Meal–Statistics

Trains, special. *See* Railroads / Railways and Special Trains Used to Promote Soybeans and Soybean Production

Trall, Russell Thacher (1812-1877). American Health Reformer and Vegetarian (New York). 7002

Trans Fatty Acids. 7801, 7802

Transcaucasia. *See* Asia, Transcaucasia (Presently Armenia, Azerbaijan, and Georgia)

Transportation of Soybeans or Soy Products to Market by Railroad

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/ Railway / Rail within a Particular Country or Region. See also Railroads / Railways and Special Trains Used to Promote Soybeans and Soybean Production. 1780, 1791, 1836, 1870, 1871, 2088, 2442, 2492, 2534, 2771, 3513, 3579, 3679, 6266, 7687

Transportation of Soybeans or Soy Products to Market by Roads or Highways Using Trucks, Carts, etc. within a Particular Country or Region. 1780, 2456, 2534, 2734, 2789, 2790, 3032, 3171, 3172, 7865

Transportation of Soybeans or Soy Products to Market by Water (Rivers, Lakes) Using Junks, Barges, etc. within a Particular Country or Region. 312, 961, 1188, 1258, 1870, 1871, 2252, 2456, 4220, 4471, 4644, 6513, 6517, 7180, 7664, 8019, 8548, 8552

Treatment of seeds. *See* Seed Treatment with Chemicals (Usually Fungicides) for Protection

Tree of Life (St. Augustine, Florida). Purchased in Dec. 1985 by Netherlands-based Royal Wessanen NV Co. 5108, 5153, 5197, 5198, 5902, 6154, 6296, 6776, 7288, 7383, 7426, 7651, 7655, 7765, 7809, 7888

Tri-County Soy Bean Co-operative Association. *See* Dawson Mills

Triballat (Noyal-sur-Vilaine, France). Makers of Sojasun, and its Affiliate Bonneterre (Rungis Cedex, France). 7453, 7470

Triple "F" and Insta-Pro. *See* Extruders and Extrusion Cooking, Low Cost Including Triple "F"

Tropical and Subtropical Countries, Soybean Production in (Mostly in the Third World / developing countries). 1391, 1603, 2084, 2203, 2768, 2896, 4268, 4476, 5156, 5349

Troy, John. *See* Miso Products Companies (USA)–Wizard's Cauldron Ltd. (Cedar Grove, North Carolina)

Trucks or Carts used to transport soybeans. *See* Transportation of Soybeans or Soy Products to Market by Roads or Highways

Trypsin / Protease / Proteinase Inhibitors. 3672, 4232, 4499, 5246, 5459, 6024, 6437, 6440, 6445, 7577, 7753, 7851, 7974, 8007, 8065, 8117, 8191, 8348, 8349

Turkey, meatless. *See* Meat Alternatives–Meatless Turkey

Turkey. *See* Asia, Middle East–Turkey

Turkeys Fed Soybeans, Soybean Forage, or Soybean Cake or Meal as Feed. 3152

Turkistan / Turkestan. *See* Asia, Central–Turkistan / Turkestan

Turtle Island Foods, Inc. (Hood River, Oregon). Maker of Tofurky and Tempeh. 5927, 6476, 7552, 7676, 7712, 7889, 7892, 7958, 8004, 8077, 8081, 8239, 8252, 8391, 8431

Tuvalu. *See* Oceania

TVP. *See* Soy Flours, Textured (Including TVP, Textured Vegetable Protein)

Ultrafiltration. *See* Membrane Technology Processes

Umeboshi (Salt Plums)–Etymology of This Term and Its Cognates / Relatives in Various Languages. 997, 1224, 2668, 4457, 4539, 4843

Umeboshi or ume-boshi (Japanese salt plums / pickled plums), Plum Products, and the Japanese Plum Tree (*Prunus mume*) from whose fruit they are made. 63, 64, 78, 79, 82, 909, 997, 1008, 1115, 1224, 1235, 1244, 2448, 2616, 2668, 3161, 3670, 3950, 4195, 4212, 4360, 4442, 4457, 4478, 4513, 4539, 4591, 4677, 4690, 4697, 4704, 4712, 4720, 4766, 4798, 4832, 4843, 4865, 4910, 4913, 4972, 4975, 4987, 4988, 5028, 5037, 5047, 5079, 5086, 5169, 5189, 5193, 5197, 5198, 5258, 5267, 5282, 5343, 5438, 5453, 5541, 5554, 5565, 5661, 5707, 5744, 5794, 5874, 5946, 5959, 6117, 6139, 6162, 6170, 6447, 6520, 6576, 6597, 6598, 6794, 6808, 6919, 7017, 7040, 7050, 7073, 7124, 7331, 7465, 7557, 7587, 7634, 7654, 7655, 7673, 7691, 7695, 7706, 7726, 7789, 7811, 7842, 7871, 7914, 7928, 7943, 7986, 8083, 8090, 8094, 8097, 8107, 8130, 8131, 8272, 8416, 8502

Unfair Practices Including Possible Deceptive / Misleading Labeling, Advertising, etc. See also Adulteration. 866, 943, 1074, 1189, 1866, 1880, 5250, 7428, 7481, 7502, 7656, 8158

Unilever Corp., Lever Brothers Co., Unimills B.V. (Netherlands), and Margarine Union. 1863, 1912, 1972, 2118, 2274, 2335, 2360, 5120, 5619, 7297, 7807, 7828, 8078, 8162, 8332

Unisoy Milk 'n' By-Products (Stockport, Cheshire, England). 7466

United Kingdom, health foods movement and industry. *See* Health Foods Movement and Industry in United Kingdom

United Kingdom. *See* Europe, Western–United Kingdom

United Nations (Including UNICEF, FAO, UNDP, UNESCO, and UNRRA) Work with Soy. 3626, 3722, 3814, 4121, 4368, 4374, 4435, 4532, 4535, 4664, 4674, 4695, 4856, 4900, 4916, 4941, 5078, 5299, 5352, 5552, 5590, 6208, 7007, 7122, 7401, 7628, 7719, 7750, 7938, 8162

United Natural Foods, Inc. (UNFI, Auburn, Washington state). Formed in 1995. Includes Mountain People's Warehouse (Nevada City, California), Cornucopia Natural Foods (Connecticut) and Stow Mills (Vermont and New Hampshire), Rainbow Natural Foods, Albert's Organics, and Hershey Imports Co. 5282, 5287, 5289, 6059, 6101, 6137, 7555, 8153

United Soybean Board. *See* American Soybean Association (ASA) / United Soybean Board

United States–States–Alabama. 1077, 1419, 2189, 2377, 2384, 2458, 3388, 3680, 5400, 7764, 7765, 7864, 8198

United States–States–Alaska. 1141, 2894, 4890, 5060, 5283

United States–States–Arizona. 2030, 2587, 3017, 3374, 3395, 3397, 3404, 3407, 3421, 3432, 3453, 3454, 3494, 3496, 3578, 3601, 3657,

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3775, 4890, 5108, 5153, 5743, 7655, 7724, 8151, 8248, 8275, 8430, 8459, 8460, 8461, 8485, 8491, 8526

United States–States–Arkansas. 1767, 3422, 3578, 4151, 4890, 5026, 5027, 5107, 5108, 5134, 5197, 5198, 5234, 5283, 5287, 5289, 5576, 5589, 5819, 5924, 6059, 6091, 6197, 6256, 6336, 6346, 6378, 6452, 6536, 6537, 6815, 7036, 7225, 7670, 7868, 7880, 7881, 7928, 7991, 8098, 8198

United States–States–California. 1134, 1154, 1203, 1252, 1302, 1313, 1345, 1394, 1405, 1435, 1450, 1467, 1470, 1503, 1504, 1506, 1510, 1533, 1535, 1539, 1560, 1564, 1628, 1644, 1647, 1648, 1653, 1659, 1660, 1662, 1684, 1687, 1690, 1691, 1692, 1715, 1722, 1727, 1728, 1742, 1750, 1755, 1757, 1759, 1760, 1761, 1765, 1768, 1775, 1799, 1801, 1811, 1812, 1813, 1818, 1819, 1821, 1866, 1868, 1898, 1903, 1932, 1934, 1935, 1959, 1966, 1969, 1977, 1978, 2021, 2028, 2029, 2030, 2033, 2034, 2038, 2057, 2071, 2076, 2080, 2085, 2107, 2126, 2133, 2134, 2145, 2156, 2167, 2172, 2176, 2199, 2284, 2292, 2293, 2294, 2296, 2305, 2312, 2331, 2340, 2354, 2355, 2373, 2374, 2387, 2396, 2404, 2405, 2409, 2411, 2414, 2417, 2432, 2434, 2438, 2439, 2440, 2467, 2470, 2479, 2481, 2502, 2508, 2515, 2537, 2538, 2539, 2569, 2587, 2634, 2652, 2667, 2678, 2777, 2780, 2792, 2794, 2798, 2812, 2819, 2823, 2825, 2826, 2828, 2840, 2846, 2848, 2872, 2877, 2878, 2905, 2914, 2958, 2966, 3000, 3017, 3029, 3038, 3043, 3059, 3078, 3090, 3150, 3162, 3163, 3164, 3167, 3195, 3238, 3304, 3312, 3314, 3327, 3339, 3340, 3343, 3347, 3349, 3350, 3351, 3359, 3366, 3379, 3382, 3384, 3387, 3391, 3393, 3396, 3397, 3399, 3400, 3401, 3402, 3408, 3415, 3419, 3420, 3423, 3425, 3426, 3427, 3431, 3457, 3469, 3499, 3501, 3505, 3513, 3518, 3520, 3528, 3532, 3539, 3553, 3565, 3566, 3567, 3568, 3569, 3570, 3571, 3572, 3573, 3574, 3575, 3576, 3577, 3589, 3599, 3601, 3605, 3606, 3624, 3625, 3636, 3642, 3647, 3671, 3686, 3688, 3696, 3706, 3709, 3717, 3722, 3730, 3731, 3732, 3733, 3734, 3736, 3737, 3738, 3742, 3758, 3760, 3770, 3775, 3780, 3782, 3785, 3798, 3806, 3832, 3837, 3860, 3887, 3889, 3892, 3902, 3908, 3948, 3968, 3971, 3987, 4023, 4024, 4051, 4065, 4072, 4094, 4096, 4097, 4098, 4100, 4103, 4104, 4105, 4107, 4116, 4118, 4140, 4142, 4145, 4148, 4150, 4158, 4160, 4161, 4162, 4163, 4165, 4166, 4173, 4174, 4175, 4180, 4181, 4184, 4187, 4188, 4191, 4192, 4195, 4197, 4198, 4223, 4272, 4345, 4359, 4360, 4391, 4392, 4393, 4394, 4395, 4426, 4428, 4429, 4430, 4432, 4436, 4440, 4441, 4442, 4448, 4463, 4470, 4471, 4472, 4473, 4480, 4487, 4492, 4493, 4494, 4498, 4517, 4538, 4539, 4541, 4549, 4562, 4574, 4584, 4586, 4587, 4590, 4595, 4616, 4618, 4620, 4622, 4623, 4624, 4625, 4645, 4650, 4654, 4670, 4671, 4672, 4677, 4681, 4696, 4698, 4707, 4712, 4720, 4731, 4733, 4742, 4750, 4751, 4774, 4776, 4777, 4779, 4789, 4792, 4799, 4800, 4808, 4813, 4814, 4816, 4821, 4826, 4828, 4832, 4833, 4837, 4838, 4841, 4843, 4847, 4852, 4859, 4869, 4872, 4873, 4874, 4875, 4876, 4883, 4890, 4892, 4899, 4904, 4912, 4913, 4929, 4932, 4933, 4934, 4935, 4943, 4945, 4947, 4948, 4952, 4975, 4978, 4980, 4984, 4987, 4989, 4991, 4995, 4997, 4998, 5001, 5011, 5018, 5026, 5027, 5034, 5039, 5044, 5051, 5054, 5055, 5058, 5070, 5071, 5075, 5080, 5081, 5082, 5085, 5086, 5095, 5099, 5100, 5107, 5108, 5110, 5115, 5119, 5135, 5143, 5153, 5178, 5179, 5188, 5189, 5197, 5198, 5206, 5208, 5211, 5212, 5213, 5214, 5227, 5228, 5231, 5233, 5234, 5241, 5253, 5275, 5282, 5283, 5286, 5287, 5288, 5289, 5290, 5291, 5292, 5293, 5294, 5322, 5346, 5353, 5359, 5365, 5370, 5371, 5372, 5377, 5378, 5382, 5387, 5393, 5397, 5400, 5413, 5416, 5417, 5419, 5438, 5453, 5458, 5474, 5489, 5494, 5496, 5498, 5518, 5523, 5524, 5530, 5536, 5537, 5539, 5542, 5544, 5548, 5554, 5561, 5569, 5573, 5576, 5579, 5580, 5598, 5600, 5602, 5604, 5605, 5607, 5608, 5610, 5612, 5622, 5623, 5626, 5629, 5632, 5638, 5639, 5641, 5642, 5643, 5647, 5648, 5650, 5651, 5652, 5656, 5664, 5671, 5676, 5683, 5687, 5688, 5689, 5691, 5707, 5717, 5718, 5728, 5730, 5731, 5732, 5733, 5736, 5743, 5744, 5750, 5757, 5762, 5763, 5764, 5769, 5771, 5773, 5778, 5783, 5785, 5786, 5787, 5789, 5803, 5808, 5809, 5814, 5830, 5843, 5850, 5853, 5854, 5861, 5870, 5871, 5874, 5877, 5879, 5880, 5895, 5900, 5901, 5904, 5908, 5909, 5910, 5912, 5913, 5919, 5932, 5933, 5944, 5948, 5949, 5950, 5952, 5954, 5965, 5968, 5970, 5975, 5980, 5983, 5984, 5987, 5988, 5990, 6002, 6003, 6004, 6008, 6011, 6016, 6027, 6035, 6054, 6059, 6060, 6062, 6066, 6067, 6068, 6069, 6070, 6072, 6073, 6075, 6079, 6081, 6087, 6088, 6091, 6092, 6093, 6096, 6097, 6098, 6105, 6110, 6117, 6119, 6121, 6130, 6132, 6137, 6138, 6142, 6148, 6150, 6151, 6152, 6156, 6157, 6164, 6167, 6177, 6178, 6181, 6182, 6187, 6188, 6192, 6195, 6196, 6199, 6201, 6206, 6210, 6211, 6216, 6217, 6239, 6243, 6247, 6248, 6252, 6253, 6254, 6255, 6258, 6260, 6261, 6262, 6266, 6267, 6268, 6272, 6282, 6285, 6286, 6287, 6288, 6289, 6290, 6291, 6294, 6295, 6297, 6307, 6316, 6318, 6319, 6321, 6323, 6325, 6327, 6333, 6337, 6338, 6340, 6343, 6345, 6346, 6347, 6356, 6357, 6359, 6360, 6366, 6367, 6368, 6369, 6373, 6374, 6380, 6381, 6382, 6386, 6394, 6397, 6398, 6403, 6404, 6407, 6408, 6409, 6410, 6411, 6413, 6414, 6415, 6429, 6430, 6441, 6443, 6446, 6454, 6456, 6461, 6465, 6473, 6474, 6475, 6477, 6480, 6484, 6485, 6486, 6491, 6493, 6507, 6508, 6511, 6513, 6516, 6517, 6518, 6519, 6520, 6524, 6535, 6541, 6542, 6543, 6549, 6552, 6557, 6577, 6587, 6597, 6598, 6606, 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United States Department of Agriculture (USDA)–Bureau of Agricultural and Industrial Chemistry (1943-1953). Including Bureau of Agricultural Chemistry and Engineering (1938-1943), Bureau of Chemistry and Soils (1927-1938), and Bureau of Chemistry (1901-1927). Transferred to the Agricultural Research Service (ARS) in 1953. 1855, 2108, 2253, 2296, 2301, 2312, 2325, 2342, 2354, 2355, 2356, 2371, 2376, 2379, 2407, 2445, 2460, 2461, 2462, 2463, 2464, 2465, 2472, 2569, 2620, 3152, 3196, 3204, 3316, 3418, 3515, 3538, 3563, 3581, 3583, 3585, 3620

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United States Department of Agriculture (USDA)–Bureau of Plant Industry, Soils, and Agricultural Engineering (1943-1953). Including Bureau of Plant Industry (1901-1943), Office of Plant Industry (1900-1901), and Division of Agrostology (1895-1901). Transferred to Agricultural Research Service in 1953. 1452, 1767, 1776, 1810, 2045, 2097, 2134, 2156, 2158, 2196, 2214, 2223, 2257, 2265, 2282, 2283, 2311, 2336, 2381, 2401, 2406, 2412, 2447, 2456, 2457, 2458, 2459, 2460, 2490, 2549, 2587, 2635, 2654, 2680, 2681, 2722, 2723, 2724, 2725, 2726, 2727, 2728, 2729, 2731, 2734, 2737, 2739, 2741, 2771, 2772, 2774, 2777, 2778, 2782, 2784, 2787, 2789, 2790, 2791, 2793, 2795, 2829, 2830, 2835, 2842, 2852, 2876, 2917, 2963, 2973, 2986, 3044, 3045, 3109, 3152, 3171, 3172, 3236, 3237, 3331, 3391, 3403, 3433, 3436, 3486, 3504, 3513, 3537, 3545, 3578, 3579, 3589, 3679, 3680, 3689, 3741, 3764, 3945, 4395, 5933, 7721

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United States Department of Agriculture (USDA). Section of Foreign Seed and Plant Introduction (Established 1898 within the USDA with David Fairchild in Charge). Transferred to Bureau of Plant Industry (1 July 1901). Later Referred to as the Office of Foreign Seed and Plant Introduction and then the Office of Foreign Plant Introduction. 1693, 1767, 2134, 2156, 2158, 2223, 2257, 2282, 2283, 2310, 2406, 2412, 2456, 2459, 2680, 2722, 2726, 2727, 2729, 2737, 2778, 2782, 2787, 2788, 2790, 2795, 2829, 2830, 2835, 3236, 3237, 3504, 3578, 3589

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Vegetarianism–Vegetarian Societies in North America–Vegetarian Society of America (June 1886–1905). 1450, 1650

Vegetarianism and the Temperance Movement (Abstaining from Alcohol / Alcoholic Beverages) Worldwide. Incl. Teetotalism. 673, 1572, 2569, 3078

Vegetarianism, Athletics / Sports, and Athletes. 2489, 2491, 6845, 7688, 7944, 8184, 8449

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Vegetarianism. *See* Bible Christian Church in England and the USA

Vegetarianism: Meat / Flesh Food Consumption–Statistics, Problems (Such as Diseases in or Caused by Flesh Foods), or Trends in Documents Not About Vegetarianism. See Also Vegetarianism–Spongiform Encephalopathies / Diseases. 2217, 2311, 7587

Velvet Bean. *Mucuna pruriens* (L.) DC. Formerly: *Mucuna utilis*. Formerly called Banana Bean (Rarely) or Velvetbean. 2865, 3690, 4916, 4941, 5083, 5642, 5650, 6908, 7537

Vereenigde Ost-Indische Compagnie. *See* Dutch East India Company

Vestro Foods, Inc. *See* Westbrae Natural Foods

Viability and life-span of soybean seeds. *See* Storage of Seeds

Viana Naturkost GmbH. *See* Tofutown.com

Victor Food Products, Ltd. (Scarborough, Ontario, Canada). Founded by Stephen Yu in 1978. 6062, 6485, 7448

Victory Soya Mills Ltd. (Toronto, Ontario, Canada. Started in Nov. 1944 as Victory Mills Ltd. Named Sunsoy Products Ltd. from 1936 to 1945. Renamed Victory Mills, Ltd. from 1945 to 1954. Owned by (Subsidiary of) Canadian Breweries Ltd., then by Procter & Gamble from 1954, then by Central Soya Co. from 1985). 5712, 7455

Videotapes or References to Video Tapes. 3415, 6833, 7407, 7610, 8176

Vietnamese Overseas, Especially Work with Soy. 5627, 5637, 5971, 6065, 6100, 6490, 7763, 8270, 8419, 8494

Vietnamese restaurants outside Vietnam, or Vietnamese recipes that use soy ingredients outside Vietnam. *See* Asia, Southeast–Vietnam–Vietnamese Restaurants Grocery Stores Outside Vietnam

Vigna mungo. *See* Black gram or urd

Vigna sesquipedalis. *See* Yard-Long Bean or Asparagus Bean

Vigna unguiculata or V. sinensis. *See* Cowpea or Black-Eyed Pea

Vilt. *See* Soymilk, Fermented

Vilmorin-Andrieux & Co. (France). In 1975 Vilmorin joined the Limagrain Group (*Groupe Limagrain*) and is now officially named Vilmorin s.a. 1136, 1137, 1149, 1167, 1169, 1188, 1191, 1244, 1246, 1291, 1710, 1767, 1851, 1856, 2137, 3080, 3246, 3535

Vitamins (General). 2447, 2766, 2804, 2855, 2875, 2882, 2923, 2947, 2954, 3169, 3229, 3310, 3388, 3488, 3501, 3684, 3704, 3761, 3814, 3879, 3945, 3979, 4203, 4277, 4421, 4600, 4601, 4752, 4965, 5056, 5262, 5589, 5657, 5942, 6486, 6845, 6846, 6926, 7142, 7248

Vitamins B-12 (Cyanocobalamin, Cobalamins). 3900, 3933, 4137, 5105, 5360, 5520, 5551, 5696, 5760, 6032, 6039, 6167, 6221, 6865, 7124, 7172, 7370, 7503, 7591, 7789, 8117, 8218

Vitamins E (Tocopherols, Natural Powerful Antioxidant). 2839, 6353, 7142, 7189, 7610, 7944, 7974

Vitamins K (Coagulant, Needed for Normal Clotting of the Blood,

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Fat Soluble). 3710, 7944

Vitamins in a vegetarian diet. *See* Vegetarian Diets–Nutrition : Nutritional Aspects: Vitamins

Vitasoy International Holdings Ltd. (Hong Kong Soya Bean Products Co. Ltd. before 24 Sept. 1990), and Vitasoy (USA) Inc., (Brisbane, California–south of San Francisco). Including Nasoya Foods (from Aug. 1990) and Azumaya Inc. (from May 1993). Founded by K S. Lo (Lived 1910 to 1995), in Hong Kong. Started in March 1940. 3310, 3690, 4421, 4535, 5211, 5213, 5604, 5647, 6073, 6145, 6296, 6337, 6373, 6381, 6472, 6485, 6486, 6550, 6565, 6670, 7044, 7115, 7173, 7227, 7448, 7455, 7489, 7517, 7552, 7712, 7746, 7800, 7861, 7873, 8004, 8042, 8064, 8181, 8182, 8197, 8201, 8411

Voandzeia subterranea or Voandzou. *See* Bambarra groundnuts

Walnut Acres (Penns Creek, Pensylvania). Grower of Organic Foods. Miller of Stone-Ground Flours and Cereals. Seller (in Store and by Mail Order) of Natural Foods. Founded about 1946-1949 by Paul and Betty Keene. 5026, 5108, 5153, 5234, 5849, 6091, 6257, 7654, 7674

Walnut ketchup. *See* Ketchup, Walnut (Walnut Ketchup, Western-Style)

Wannamaker (John E.) (St. Matthews, South Carolina). 3578

War Food Administration of USDA. *See* United States Department of Agriculture (USDA). War Food Administration (WFA)

War, Civil, USA. *See* Civil War in USA (1861-1865)

War, Russo-Japanese. *See* Russo-Japanese War (1904-1905)–Soybeans and Soyfoods

War, Sino-Japanese. *See* Sino-Japanese War (1894-1895). Soybeans and Soyfoods

War, world. *See* World War I–Soybeans and Soyfoods. World War II. Soybeans and Soyfoods

Waste Management, Treatment, and Disposal. See also: Environmental Issues and Concerns. 2977, 5112, 5327, 6714, 7156

Water Issues and Vegetarianism. 4826, 5854

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Waterproof goods or cloth. *See* Linoleum, Floor Coverings, Oilcloth, and Waterproof Goods

Websites or Information on the World Wide Web or Internet. 7883, 7889, 7897, 7922, 7928, 7958, 7975, 8002, 8010, 8040, 8051, 8072, 8096, 8113, 8138, 8145, 8161, 8178, 8191, 8198, 8207, 8243, 8274, 8285, 8296, 8317, 8319, 8320, 8323, 8332, 8351, 8360, 8365, 8366, 8388, 8390, 8400, 8524, 8552

Wedge presses. *See* Soybean Crushing–Equipment–Wedge Presses

Weeds–Control and Herbicide Use. 1257, 1556, 2332, 2456, 3153, 4373, 4695, 6494, 8178

Weight of soybean seeds. *See* Seed Weight : Size (Soybeans) Weight of 100 Seeds in Grams, or Number of Seeds Per Pound

Well (The), Pure & Simple, and New Age Distributing Co. (San Jose, California). 4875, 4988, 5055, 5080, 5081, 5094, 5113, 5153, 5197, 5198, 5253, 5282, 5283, 5393, 5503, 6059, 6060, 6101, 6137, 6187, 6188, 7589, 7608, 7609, 7655, 7657, 7762, 7848

Wenger International Inc. *See* Extruder : Extrusion Cooker Manufacturers: Wenger International Inc.

Wessanen (Royal), NV Co. (Based in the Netherlands). Acquired Tree of Life in Dec. 1985 and Balanced Foods in Dec. 1986. 7809

Westbrae Natural Foods, Inc. (Berkeley, California). Founded in Feb. 1971 by Bob Gerner. Later in Carson. Subsidiary of Vestro Foods, Inc. Acquired by the Hain Food Group of Uniondale, New York, 14 Oct. 1997. 4487, 4929, 5080, 5081, 5135, 5370, 5489, 5494, 5524, 5544, 5610, 5612, 5638, 5639, 5640, 5688, 5689, 5744, 5773, 5785, 5786, 5787, 5946, 5952, 6054, 6059, 6101, 6137, 6139, 6162, 6201, 6257, 6290, 6310, 6323, 6366, 6374, 6407, 6408, 6409, 6410, 6411, 6454, 6461, 6468, 6472, 6477, 6493, 6557, 6597, 6623, 6655, 6657, 6659, 6660, 6729, 6730, 6740, 6776, 6813, 6820, 6836, 6894, 6895, 6896, 6897, 6898, 6948, 6999, 7034, 7044, 7060, 7069, 7146, 7157, 7177, 7191, 7227, 7288, 7301, 7331, 7356, 7357, 7383, 7426, 7489, 7530, 7531, 7552, 7589, 7590, 7651, 7687, 7746, 7800, 7874, 7948, 8004, 8082, 8321, 8411

Western Samoa. *See* Oceania–Samoa

Wheat Gluten–Historical Documents Published before 1900. 14, 20, 23, 26, 39, 102, 199, 387, 677, 877, 930, 964, 1216, 1263, 1323, 1468, 1514, 4475

Wheat Gluten Made into Seitan (Including Wheatmeat, Tan Pups, and Tan Pops). 4356, 4539, 4590, 4681, 4690, 4712, 4720, 4766, 4843, 4883, 4907, 4932, 4934, 5044, 5115, 5116, 5154, 5177, 5184, 5187, 5269, 5395, 5396, 5419, 5492, 5535, 5543, 5557, 5565, 5661, 5666, 5680, 5683, 5691, 5707, 5716, 5754, 5761, 5794, 5807, 5854, 5865, 5914, 5915, 5959, 5965, 5991, 6053, 6089, 6153, 6155, 6162, 6219, 6247, 6255, 6256, 6273, 6275, 6281, 6336, 6401, 6421, 6428, 6521, 6630, 6637, 6647, 6653, 6686, 6723, 6737, 6745, 6750, 6796, 6802, 6808, 6838, 6861, 6889, 6994, 7037, 7040, 7063, 7077, 7183, 7193, 7242, 7260, 7271, 7283, 7311, 7321, 7334, 7348, 7355, 7360, 7374, 7379, 7427, 7444, 7446, 7485, 7515, 7535, 7541, 7574, 7578, 7585, 7598, 7599, 7601, 7603, 7604, 7605, 7606, 7610, 7622, 7624, 7655, 7659, 7672, 7675, 7679, 7680, 7682, 7689, 7693, 7694, 7696, 7697, 7711, 7717, 7726, 7737, 7743, 7751, 7755, 7756, 7761, 7771, 7776, 7789, 7811, 7814, 7825, 7836, 7842, 7870, 7872, 7880, 7895, 7898, 7908, 7914, 7928, 7952, 7964, 7965, 7981, 7983, 8003, 8015, 8027, 8039, 8079, 8094, 8120, 8124, 8188, 8224, 8262, 8272, 8341, 8353, 8357, 8369, 8431, 8442, 8446, 8449, 8454, 8474, 8477, 8493, 8495, 8502, 8514, 8515, 8534, 8535, 8536, 8546, 8550

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Wheat Gluten. Chinese–Pinyin: Mianjin / Mian-jin. Wade-Giles: Mienchin / Mien-chin. 14, 20, 23, 26, 39, 102, 199, 387, 677, 877, 930, 964, 1216, 1220, 1263, 1323, 1387, 1468, 1514, 1531, 1585, 1604, 1655, 1671, 1686, 1688, 1756, 1968, 2022, 2073, 2120, 2172, 2173, 2400, 2448, 2497, 2616, 2676, 2738, 2827, 2887, 2915, 2946, 2979, 2987, 3033, 3038, 3090, 3104, 3115, 3116, 3157, 3162, 3163, 3201, 3276, 3296, 3323, 3324, 3327, 3328, 3331, 3335, 3348, 3364, 3415, 3500, 3501, 3512, 3520, 3586, 3606, 3637, 3908, 3934, 3944, 3945, 3957, 3965, 4042, 4044, 4047, 4052, 4068, 4073, 4137, 4159, 4163, 4207, 4349, 4359, 4414, 4416, 4450, 4475, 4482, 4513, 4564, 4647, 4696, 4704, 4707, 4729, 4756, 4769, 4844, 4847, 4848, 4861, 4865, 4922, 4934, 4974, 4997, 5044, 5047, 5061, 5067, 5132, 5133, 5152, 5154, 5157, 5159, 5160, 5173, 5174, 5195, 5202, 5203, 5204, 5205, 5224, 5234, 5267, 5276, 5309, 5310, 5322, 5336, 5337, 5343, 5346, 5422, 5423, 5424, 5425, 5556, 5563, 5583, 5658, 5788, 5833, 5859, 5942, 5943, 5944, 5979, 5982, 6018, 6032, 6042, 6045, 6128, 6179, 6180, 6239, 6257, 6436, 6452, 6631, 6743, 6749, 6810, 6833, 6930, 6931, 7096, 7252, 7257, 7325, 7337, 7388, 7419, 7463, 7465, 7472, 7484, 7485, 7491, 7494, 7495, 7497, 7498, 7499, 7500, 7501, 7504, 7512, 7536, 7587, 7593, 7594, 7610, 7624, 7652, 7678, 7697, 7744, 7758, 7836, 7862, 7871, 7889, 7949, 7995, 8030, 8097, 8107, 8130, 8131, 8293, 8330, 8345, 8416, 8502, 8546

Wheat used in Chinese-style soy sauce. *See* Soy Sauce, Chinese Style, Made with a Significant Proportion of Wheat or Barley

Whip Topping (Non-Dairy–Resembles Whipped Cream or Whipping Cream and Contains Soy Protein). 3530, 3722, 4533, 5046, 5080, 5081, 5211, 5213, 5647, 6073, 6373, 7517, 7547, 7975, 8042, 8096, 8145, 8181, 8198

Whipping or foaming in soy proteins. *See* Soy Proteins–Isolates–Enzyme-Modified Soy Protein Isolates with Whipping / Foaming Properties Used to Replace Egg Albumen

White Wave, Inc. (Boulder, Colorado). Including Soyfoods Unlimited. Owned by Dean Foods Co. since 8 May 2002. 5529, 5564, 5647, 5653, 5654, 5655, 5673, 5674, 5743, 5939, 5950, 6073, 6110, 6119, 6196, 6272, 6343, 6346, 6373, 6412, 6472, 6475, 6511, 6550, 6648, 6663, 6727, 6820, 6854, 6979, 7050, 7051, 7052, 7053, 7158, 7160, 7178, 7191, 7210, 7307, 7315, 7327, 7328, 7337, 7504, 7517, 7558, 7579, 7595, 7607, 7702, 7712, 7741, 7743, 7744, 7755, 7756, 7800, 7893, 8064, 8099, 8178, 8181, 8250, 8321, 8325, 8365, 8391, 8411, 8431

White soybeans. *See* Soybean Seeds–White

White, Ellen G. (1827-1915). Co-Founder of Seventh-day Adventist Church. 5791

Whole Dry Soybean Flakes. *See* Microsoy Corp., Formerly Nichii Company

Whole Dry Soybeans (Used Unprocessed as Food). 3, 11, 385, 417, 648, 797, 809, 997, 1039, 1057, 1147, 1159, 1178, 1181, 1182, 1259, 1263, 1276, 1323, 1364, 1494, 1503, 1523, 1525, 1604, 1649, 1654, 1753, 1785, 1803, 1863, 1885, 1912, 1916, 1973, 1976, 1989, 1997, 2074, 2094, 2095, 2111, 2180, 2209, 2210, 2218, 2220, 2221, 2222, 2224, 2226, 2252, 2254, 2256, 2258, 2260, 2263, 2264, 2266, 2268, 2271, 2274, 2283, 2291, 2333, 2367, 2375, 2381, 2401, 2418, 2447, 2489, 2490, 2491, 2536, 2569, 2589, 2623, 2627, 2640, 2649, 2650, 2676, 2680, 2702, 2734, 2774, 2784, 2789, 2791, 2833, 2885, 2913, 2931, 2933, 2958, 2962, 2974, 2997, 3000, 3032, 3033, 3058, 3078, 3079, 3090, 3113, 3150, 3153, 3162, 3173, 3195, 3238, 3276, 3297, 3311, 3312, 3314, 3315, 3321, 3324, 3328, 3339, 3340, 3343, 3373, 3385, 3388, 3403, 3436, 3439, 3448, 3452, 3455, 3459, 3463, 3469, 3475, 3481, 3482, 3501, 3519, 3520, 3526, 3529, 3533, 3537, 3542, 3545, 3553, 3609, 3636, 3644, 3697, 3728, 3741, 3775, 3776, 3814, 3860, 3869, 3903, 3908, 3923, 3945, 3947, 4029, 4033, 4093, 4102, 4139, 4195, 4257, 4277, 4360, 4401, 4418, 4429, 4430, 4436, 4442, 4491, 4505, 4513, 4517, 4574, 4600, 4601, 4623, 4646, 4677, 4696, 4707, 4766, 4773, 4781, 4807, 4826, 4832, 4848, 4859, 4861, 4895, 4915, 4932, 4933, 4938, 4945, 4948, 4949, 4974, 4987, 4994, 4997, 5000, 5024, 5034, 5045, 5048, 5053, 5054, 5056, 5062, 5063, 5067, 5070, 5085, 5093, 5096, 5107, 5110, 5140, 5143, 5144, 5154, 5163, 5192, 5197, 5198, 5201, 5211, 5213, 5215, 5227, 5228, 5234, 5241, 5242, 5244, 5253, 5282, 5283, 5316, 5317, 5321, 5322, 5324, 5338, 5345, 5348, 5354, 5393, 5397, 5418, 5457, 5461, 5472, 5509, 5542, 5547, 5552, 5565, 5566, 5569, 5572, 5575, 5576, 5580, 5586, 5592, 5604, 5605, 5606, 5609, 5661, 5672, 5692, 5711, 5832, 5833, 5837, 5849, 5908, 5917, 5921, 5934, 6008, 6032, 6035, 6037, 6041, 6103, 6206, 6251, 6282, 6331, 6337, 6338, 6358, 6371, 6432, 6435, 6440, 6452, 6455, 6492, 6495, 6500, 6508, 6604, 6607, 6613, 6652, 6662, 6738, 6750, 6760, 6842, 6845, 6865, 6905, 6923, 6926, 6970, 7025, 7047, 7141, 7143, 7166, 7189, 7190, 7270, 7274, 7278, 7346, 7348, 7352, 7365, 7384, 7386, 7388, 7439, 7503, 7526, 7541, 7542, 7544, 7660, 7729, 7752, 7862, 7872, 7883, 7966, 7975, 8010, 8018, 8020, 8037, 8040, 8042, 8047, 8070, 8080, 8096, 8101, 8139, 8145, 8164, 8186, 8191, 8198, 8205, 8448, 8464

Whole Dry Soybeans–Etymology of This Term and Its Cognates / Relatives in Various Languages. 997, 1597

Whole Dry Soybeans Cooked with Plenty of Water for a Long Time to Make Soybean Congee or Gruel. 16, 20, 24, 1973, 8217

Whole Dry Soybeans for Food Uses–Industry and Market Statistics, Trends, and Analyses–By Geographical Region. 2283

Whole Dry Soybeans, Ground or Mashed to a Paste After Boiling, or Ground Raw with Water to a Fresh Puree or Slurry (Including Japanese Gô). 1291, 2094, 2984, 3033, 3314, 3315, 3415, 3488, 3606, 3912, 4707, 4756, 4874, 5211, 5213, 5242, 5346, 5488, 5604, 5706, 5770, 6011, 6233, 6891

Whole Dry Soybeans, Ground to a Paste, Puree, or Slurry, Then Used as an Ingredient in Commercial Food Products. 4562, 5752,

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5753, 5754, 5898, 7816

Whole Dry Soybeans, Used as an Ingredient in Commercial Food Products. 5644

Whole Soy Flakes (Flaked Soybeans), Grits, Granules, or Textured Products, Made from Whole Dry Soybeans (Not Defatted). See Also: Soy Flour: Whole or Full-fat. 5054, 5107, 5283, 6213, 6232, 6435, 7295

WholeSoy & Co. (subsidiary of TAN Industries, Inc.), Modesto WholeSoy Co. (California), and Aros Sojaprodukter (Örsundsbro, then Enkoeping, Sweden; Founded by Ted Nordquist. Started Feb. 1981). 6056, 6273, 8103, 8544

Wild Annual Soybean (*Glycine soja* Siebold & Zuccarini, formerly named *G. ussuriensis* Regel & Maack, and *G. angustifolia* Miquel). 504, 677, 909, 1239, 1257, 1341, 1383, 1391, 1452, 1488, 1561, 1767, 1836, 5838, 7059

Wild Soybeans (General). 431, 727, 994, 2676, 2778, 3863, 5349

Wild, Perennial Relatives of the Soybean–Glycine Species (*Glycine albicans, G. aphyonota, G. arenaria, G. argyrea, G. canescens, G. clandestina, G. curvata, G. cyrtoloba, G. falcata, G. gracei, G. hirticaulis, G. lactovirens, G. latifolia, G. latrobeana, G. montis-douglas, G. mycrophylla, G. peratosa, G. pindanica, G. G. rubiginosa, G. stenophita, G. syndetika, G. tabacina, G. pullenii tomentella*) (Former Names and Synonyms Include *G. sericea, and G. tomentosa*). 324, 1257, 1561, 7059, 7537

Wild, perennial relatives of the soybean. *See* Neonotonia wightii

Wildwood Harvest, Inc. Formed on 24 Aug. 2001 by the merger of Wildwood Natural Foods, Inc. (Santa Cruz and Fairfax, California; started Nov. 1977) and Midwest Harvest, Inc. (Grinnell, Iowa; started Jan. 1999). 5413, 5548, 5681, 5743, 5879, 5880, 5895, 5909, 5939, 6004, 6325, 6381, 6413, 6414, 6415, 6508, 6657, 6899, 6978, 7097, 7226, 7228, 7286, 7392, 7393, 7430, 7489, 7532, 7834, 7846, 7930, 8103, 8159, 8280, 8324, 8411

Wildwood Natural Foods, Inc. *See* Wildwood Harvest, Inc.

Wiley, Harvey Washington (1884-1930). Father of the Pure Food and Drug Act and the Meat Inspection Act (1906) and of the U.S. Food and Drug Administration. 2125, 2569, 3033

Wilson soybean variety. *See* Soybean Varieties USA–Mammoth Yellow

Wing Seed Co. (Mechanicsburg, Champaign County, Ohio). Founded 1909. Including Joseph Elwyn Wing (1861-1915), Charles Bullard Wing (1878-1949), and David Grant Wing (1896-1984). 2209

Winged Bean (*Psophocarpus tetragonolobus*) (Also Called Four-Angled Bean, Goa Bean, Goabean, Asparagus Bean, Asparagus Pea, Segidilla, Seguidilla or Seguidillas Bean, Square Podded Pea, Square Podded Crimson Pea, *Botor tetragonoloba, Dolichos-*, or *Lotus tetragonolobus*, Pois Carré, Kecipir or Ketjeper, Calamismis or Kalamismis). 324, 385, 994, 1009, 1056, 1199, 1391, 1540, 1541, 1817, 1902, 2084, 2129, 2203, 2330, 2740, 3288, 3675, 3690, 4435, 4916, 4941, 5642, 5650, 6024, 6228, 6908, 7400, 7726, 7914, 8130, 8131, 8272, 8416

Wizard's Cauldron, Ltd. (Cedar Grove, North Carolina). Formerly Linden's Elfworks, then Elf Works, Ltd., then American Natural Foods. Founded by John Troy. 6560, 6578, 6651, 6814, 7135, 7601, 7620, 7695, 8153, 8196, 8537, 8549

Woodworth, C.M. (1888-1960, Plant Breeder, Univ. of Illinois). 2549

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Worcestershire Sauce–Brands Made by Companies Other than Lea & Perrins. 991, 1062, 1289, 1307, 1308, 1355, 1378, 1417, 1425, 1461, 1483, 1537, 1641, 2049, 2420, 3059, 4776, 4919, 5020, 5040, 6547, 6914, 7342, 8283, 8538, 8548

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Worcestershire Sauce–With Soy Sauce Used as an Ingredient. 719, 843, 1047, 1089, 1123, 1180, 1200, 1253, 1265, 1288, 1398, 1409, 1423, 1462, 1485, 1508, 1568, 1572, 1588, 1589, 1603, 1694, 1706, 1747, 1816, 1822, 1828, 1838, 1932, 1948, 1976, 1986, 2003, 2007, 2056, 2072, 2075, 2091, 2104, 2108, 2117, 2132, 2150, 2191, 2204, 2211, 2212, 2250, 2255, 2262, 2266, 2270, 2283, 2311, 2325, 2377, 2390, 2421, 2460, 2471, 2487, 2494, 2520, 2624, 2842, 2874, 2892, 2893, 2896, 2925, 2968, 3032, 3099, 3247, 3260, 3317, 3319, 3320, 3330, 3355, 3389, 3418, 3433, 3495, 3557, 3644, 3781, 3861, 3862, 4217, 4276, 4490, 4784, 4785, 5501, 5871, 5889, 6210, 7342, 7541, 7877, 7970, 8153, 8185, 8283, 8537, 8538, 8548

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Worcestershire Sauce, Homemade–How to Make at Home or on a Laboratory Scale, by Hand. 1047, 1123, 1265, 1398, 1423, 1508, 1592, 1694, 1706, 1948, 1976, 2104, 2421, 2471, 2487, 2520, 3247, 3317, 3320, 8538

World–Soybean Crushing–Soy Oil and Meal Production and Consumption–Statistics, Trends, and Analyses. 1803

World–Soybean Production, Area and Stocks–Statistics, Trends, and Analyses. 2766, 3187, 3530, 5589, 5700, 8072

World War I–Soybeans and Soyfoods. Also known as the "First World War" and "The Great War". 2089, 2150, 2151, 2179, 2189, 2217, 2226, 2228, 2242, 2243, 2254, 2276, 2277, 2281, 2292, 2295, 2302, 2311, 2322, 2337, 2352, 2390, 2477, 2488, 2500, 2549, 2622, 2625, 3032, 3114, 3236, 3260, 3481, 3579, 3679, 3697, 3760, 4507, 4964, 5158, 5249, 6434, 7536, 8094, 8548

World War II–Soybeans and Soyfoods. Also Called the "Second World War". 2481, 3310, 3348, 3361, 3374, 3378, 3382, 3384, 3387, 3393, 3394, 3395, 3396, 3397, 3399, 3400, 3401, 3402, 3403, 3404, 3416, 3419, 3420, 3421, 3422, 3423, 3425, 3426, 3427, 3431, 3432, 3433, 3436, 3445, 3446, 3447, 3451, 3452, 3453, 3454, 3457, 3458, 3462, 3469, 3480, 3488, 3491, 3495, 3501, 3513, 3526, 3596, 3599, 3601, 3620, 3639, 3663, 3679, 3680, 3706, 3707, 3722, 3781, 3787, 3893, 3912, 3946, 3989, 4065, 4081, 4131, 4176, 4220, 4224, 4416, 4456, 4469, 4491, 4533, 4624, 4634, 4659, 4699, 4863, 4905, 4951, 4959, 4998, 5058, 5159, 5200, 5245, 5250, 5416, 5456, 5800, 5827, 5911, 5945, 5954, 5955, 5969, 6080, 6120, 6244, 6342, 6359, 6425, 6496, 6533, 6587, 6669, 6680, 6759, 6776, 7148, 7179, 7188, 7222, 7336, 7488, 7651, 7767, 7784, 7807, 7863, 8057, 8067, 8094, 8248, 8397, 8457, 8460, 8461, 8526, 8548, 8552

World problems–Environmental issues & concerns. *See* Environmental Issues, Concerns, and Protection (General, Including Deep Ecology, Pollution of the Environment, Global Warming, etc.)

World problems. *See* Hunger, Malnutrition, Famine, Food Shortages, and Mortality, Nuclear Power, Weapons, War, Fallout, or Radioactivity, Population Growth (Human) and Related Problems (Including Poverty), Protein Resources and Shortages, and the "World Protein Crisis / Gap / Problem" of 1950-1979, Resource Shortages (Including Water and Energy), Economic Growth, Pollution, Appropriate Technology

World. 1997, 2330, 2447, 2768, 2873, 3153, 3190, 3236, 3503, 3679, 4112, 4421, 4507, 4532, 4805, 4953, 4964, 4965, 5120, 5165, 5192, 5353, 5448, 5471, 5589, 5590, 5693, 5700, 5710, 5982, 6210, 6485, 6576, 6617, 6744, 6849, 7005, 7010, 7102, 7115, 7367, 7537, 7729, 8023, 8072, 8131, 8267, 8296, 8330, 8395, 8396, 8397, 8416, 8455, 8463, 8484, 8490, 8500, 8509, 8536

Worthington Foods, Inc. (Worthington, Ohio). Including Battle Creek Foods (Michigan) from 1960, and Madison Foods (Tennessee) from 1964. A subsidiary of Miles Laboratories from March 1970 to Oct. 1982. Including Loma Linda Foods from Jan. 1990. 3364, 3391, 3514, 3517, 3529, 3655, 4159, 4207, 4533, 4707, 4844, 4974, 5120, 5569, 5707, 5743, 5850, 5944, 6323, 6485, 7041, 7115, 7318, 7494, 7495, 7672, 7712, 7800, 7953, 8162

Yamasa Corporation (Choshi, Japan; and Salem, Oregon). 50, 103, 1005, 1223, 1352, 1444, 1524, 1757, 1819, 1865, 1870, 1872, 2079, 2142, 2167, 2467, 2507, 2534, 2612, 2723, 2881, 2966, 3001, 3118, 3191, 3200, 3587, 3688, 3693, 3832, 3867, 3938, 4093, 4135, 4200, 4224, 4592, 4593, 4674, 4774, 4951, 5085, 5358, 5537, 5732, 5936, 6285, 6431, 6513, 6516, 6524, 6549, 6553, 6559, 6645, 6837, 6952, 7001, 7179, 7196, 7234, 7288, 7818, 7819, 7821, 7823, 7824, 7826, 7838, 7843, 7865, 7866, 7991, 8005, 8248, 8254, 8281, 8343, 8365, 8401, 8530

Yamato Tofuhaus Sojaprodukte GmbH. *See* Huegli Nachrmittel A.G. (Steinach-Arbon, Switzerland)

Yard-Long Bean or Asparagus Bean–*Vigna sesquipedalis* (L.) Fruw. 2097, 2287, 4916, 4941

Yellow soybeans. *See* Soybean Seeds–Yellow

Yeo Hiap Seng Ltd. (Singapore and Malaysia) and Affiliates. 1542, 3077, 4323, 4752, 6203, 6419, 6456, 6486, 7173, 7455, 7505, 7508, 7861

Yield Statistics, Soybean. 1057, 1142, 1167, 1192, 1356, 1359, 1387, 1440, 1452, 1468, 1474, 1488, 1494, 1499, 1524, 1548, 1603, 1710, 1746, 1806, 1810, 1833, 1852, 1856, 1863, 1876, 1912, 1943, 1962, 1972, 1981, 1997, 2007, 2037, 2042, 2045, 2080, 2118, 2129, 2137, 2170, 2180, 2196, 2209, 2221, 2274, 2332, 2360, 2418, 2424, 2447, 2654, 2734, 2738, 2790, 2879, 2942, 2974, 2997, 3019, 3026, 3153, 3159, 3246, 3353, 3373, 3433, 3519, 3530, 3619, 3843, 3926, 3947, 4373, 4491, 4510, 4695, 5229, 5300, 5301, 5303, 5345, 5354, 5552, 5570, 6615, 6692, 6905, 6972, 7455, 7721, 7780, 7782, 7794, 7857

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Yogurt (From Dairy / Cow's Milk)–Its Market or the Product Compared with the Market for Tofu or Other Soyfoods, or the Soyfoods Themselves. 7934

Yogurt–Non-Soy Non-Dairy Yogurts Made from Plants (Such as Peanut / Groundnut Yogurt, Cashew Nut Yogurt, Lupin Yogurt, etc.). 5234

Yogurt, soy. *See* Soy Yogurt

Yuba (The Film That Forms Atop Soymilk When It Is Heated). In Chinese (Mandarin): Doufu Pi ("Tofu Skin") or Doufu Yi ("Tofu Robes," pinyin), Toufu P'i or Toufu I (Wade-Giles). English-Language Chinese Cookbooks and Restaurants: "Bean Curd Skin". 40, 98, 99, 116, 387, 582, 964, 984, 997, 1012, 1039, 1052, 1055, 1090, 1113, 1145, 1148, 1190, 1206, 1221, 1222, 1224, 1237, 1255, 1259, 1263, 1276, 1325, 1391, 1431, 1458, 1466, 1484, 1492, 1496, 1503, 1514, 1517, 1522, 1533, 1536, 1543, 1548, 1579, 1601, 1613, 1614, 1654, 1656, 1665, 1686, 1688, 1707, 1725, 1726, 1749, 1785, 1843, 1878, 1887, 1904, 1912, 1944, 1951, 1965, 1972, 1976, 2022, 2074, 2080, 2108, 2128, 2131, 2217, 2220, 2229, 2255, 2256, 2266, 2274, 2287, 2288, 2298, 2336, 2370, 2447, 2458, 2499, 2534, 2569, 2616, 2623, 2627, 2668, 2676, 2680, 2734, 2768, 2781, 2867, 2868, 2871, 2913, 2914, 2925, 2958, 3013, 3024, 3108, 3153, 3177, 3187, 3234, 3246, 3409, 3417, 3473, 3500, 3615, 3631, 3674, 3695, 3722, 3754, 3777, 3855, 3857, 3896, 3903, 3944, 3945, 4068, 4112, 4195, 4199, 4208, 4218, 4231, 4239, 4246, 4274, 4314, 4360, 4392, 4394, 4408, 4442, 4453, 4469, 4470, 4471, 4472, 4509, 4511, 4513, 4516, 4533, 4620, 4621, 4646, 4674, 4715, 4769, 4855, 4861, 4865, 4866, 4878, 4880, 4916, 4939, 4941, 4949, 4965, 4966, 5019, 5035, 5036, 5078, 5080, 5081, 5087, 5091, 5111, 5121, 5146, 5149, 5150, 5151, 5209, 5211, 5213, 5215, 5230, 5233, 5244, 5262, 5267, 5318, 5328, 5329, 5334, 5336, 5343, 5352, 5354, 5373, 5438, 5472, 5491, 5542, 5584, 5585, 5589, 5604, 5605, 5609, 5642, 5647, 5650, 5658, 5661, 5692, 5693, 5698, 5701, 5737, 5792, 5794, 5805, 5833, 5835, 5841, 5859, 5871, 5890, 5896, 5908, 5925, 5947, 6006, 6018, 6034, 6038, 6049, 6073, 6075, 6076, 6107, 6110, 6119, 6122, 6208, 6224, 6233, 6293, 6306, 6308, 6317, 6329, 6338, 6342, 6373, 6421, 6426, 6432, 6433, 6436, 6446, 6453, 6488, 6501, 6533, 6565, 6566, 6569, 6600, 6609, 6610, 6635, 6652, 6743, 6746, 6754, 6764, 6833, 6835, 6840, 6926, 6930, 6931, 7010, 7036, 7103, 7117, 7141, 7229, 7254, 7270, 7345, 7365, 7383, 7385, 7401, 7429, 7434, 7485, 7517, 7519, 7578, 7587, 7600, 7629, 7630, 7632, 7642, 7643, 7677, 7725, 7783, 7792, 7805, 7829, 7845, 7863, 7881, 7886, 7887, 7924, 7956, 7957, 7966, 7974, 7975, 7985, 8007, 8010, 8023, 8026, 8028, 8040, 8065, 8084, 8087, 8088, 8090, 8097, 8098, 8113, 8130, 8131, 8132, 8135, 8145, 8150, 8164, 8179, 8181, 8187, 8191, 8205, 8209, 8210, 8213, 8228, 8229, 8269, 8274, 8308, 8322, 8334, 8338, 8344, 8371, 8372, 8373, 8380, 8403, 8416, 8418, 8424, 8443, 8446, 8458, 8504, 8510, 8536

Yuba–Dried Yuba Sticks or Rolls, and Sweet Dried Yuba–Chinese-Style. In Chinese (Mandarin): Fuzhu (pinyin; zhu = "bamboo"). Fu Chu (Wade-Giles). In Cantonese Chinese Foo Jook / Fu Jook / Joke or Tiem Jook / Tim Jook / Tiem Joke. Also: Bean Curd Sticks, Bean Curd Bamboo. 582, 584, 671, 984, 1012, 1020, 1206, 1255, 2370, 2506, 3177, 3409, 3473, 3624, 3674, 3754, 4064, 4219, 4274, 4392, 4394, 4509, 4516, 4769, 5111, 5336, 5337, 5491, 5579, 5585, 5658, 5693, 5701, 5871, 5890, 6308, 6426, 6602, 6743, 6835, 7629, 7642, 8087, 8098, 8135, 8228, 8234, 8371, 8372, 8376, 8446, 8504, 8536

Yuba–Etymology of This Term and Its Cognates / Relatives in Various Languages. 40, 582, 984, 997, 1012, 1052, 1221, 1237, 1263, 1325, 1543, 1843, 1878, 1912, 2288, 2871, 2914, 3674, 3754, 4064, 4394, 4509, 4620, 4769, 5091, 5585, 6329, 6436, 6835, 7383, 7629, 7632, 8179, 8228

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Yugoslavia. *See* Europe, Eastern–Serbia and Montenegro

Yukiwari natto. *See* Natto, Yukiwari

Yves Fine Foods (Founded by Yves Potvin, Feb. 1985, Vancouver, BC, Canada). Renamed Yves Veggie Cuisine in 1992. Acquired by Hain Celestial Group in June 2001. 7484, 7678, 7746, 8216, 8431

Zaire. *See* Africa–Congo (formerly Zaire). Officially Democratic Republic of the Congo. Also known as Congo-Kinshasa

Zavitz, Charles Ambrose (1863-1942) of Ontario Agricultural College, Canada. 1548, 2072

Zea mays. *See* Corn / Maize

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